U.S. Department of Housing and Urban Development
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Washington, DC 20410
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Environmental Assessment
Determinations and Compliance Findings for HUD-assisted Projects
24 CFR Part 58

Project Information

Project Name: PHSU Academic Building. Application PR-IPG-000683 (PHSU)

Responsible Entity: PR DEP OF HOUSING (PDOH)

Grant Recipient Tiber Health Public Benefit Corporation dba Ponce Health Sciences University

State/Local Identifier: PONCE, PUERTO RICO

Preparers:

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Project Location:
388 Zona Industrial Reparada 2, Ponce, PR 00716 (Attachment XVII:A) Project Coordinates: Laltitude: 17.995159° ,Longitude: -66.618670°
(Cadastral Number): 412-011-783-27/412-002-783-07-001/ 412-002-783-08-001

Description of the Proposed Project [24 CFR 50.12 & 58.32; 40 CFR 1508.25]**:**
(Supplied by PHSU)

Phases seeking CDBG-DR Funding:

Phase 2:

Phase 2 work includes demolishing buildings replaced by the academic tower and creating an outdoor plaza. The buildings to be demolished are the current PHSU Administration Building as well as the President's Office Building. Both of these demolitions are authorized in the approved Construction Permit granted by the OGPe for the original Academic Building construction, but are not currently funded by the Phase 1A financing. The proposed outdoor plaza is intended as an open space to be used as both a passive park as well as a recreational area for students, faculty and staff.

Phase 3:

Phase 3 work is the renovation work on the three existing buildings, located in the Damas lot being purchased and that will be used for the dental program. There are two (2) single-story concrete buildings of approximately 11,600 sf and 14,300 sf in area and one (1) single story concrete and aluminum building of approximately 4,500 sf in area. The lot is approximately 7,800 square meters in size.

Renovation work includes retrofitting water and air lines necessary to operate dental clinic equipment and construction of the clinic, classrooms, and faculty offices. Includes interior work including mechanical, electrical, plumbing, partitions, finishes as well as FF&E and dental equipment to outfit the dental clinic, classrooms and faculty offices.

It is important to note that there has been no acquisitions of property at this current time; however, PHSU is in an option agreement to purchase the land previously mentioned from Fundación Damas, Inc (Phase 3). The option agreement is set to vest on August 31st, 2022.

Timing of the execution of these plans is dependent on the funding in which the university is currently seeking. All future construction or use of CDBG funds will be delineated by separate contracts outlining scope of work and project schedules. See Funding Information section below for proposed sources and uses.

Statement of Purpose and Need for the Proposal [40 CFR 1508.9(b)]:

(Supplied by PHSU)

Founded in 1977 and located along the southern coast of Puerto Rico, Ponce Health Sciences University (PHSU), formerly Ponce School of Medicine and Health Sciences, is a graduate level health science institution, PHSU offers programs in the disciplines of Medicine, Clinical Psychology, Biomedical Sciences and Public Health. The Project comes as a call-to-action in addressing the need for qualified medical and healthcare practitioners across the region. The expansion will result in student capacity increasing by over 150% while allowing PHSU to increase doctorate, masters and certificate programs specifically designed to fill service gaps within the profession and increase the number of health care providers in this medically underserved region.

Due to the devastation in the wake of hurricane Maria and the earthquakes that took place in January of 2020, it was essential for PHSU to replace outdated facilities that were heavily damaged. The damage caused by both catastrophic events had an adverse effect on cash flow and institutional resources whereby the PHSU administration decided to use existing funds to first repair existing facilities and provide further services to the surrounding communities in the southern region of Puerto Rico. This imperative decision caused a delay in the planning and resource allocation of the new expansion project due to the decision to reevaluate the masterplan in order to plan and invest in an infrastructure designed to withstand the natural elements and disasters that effect the region. PHSU has committed a direct investment of $78 million into our expansion with estimates of the complete expansion project totaling $128 million.

Based upon estimates developed by Estudios Técnicos, Inc. (can be supplied by PHSU upon request), the construction phase in total is expected to generate $299.9 million in additional economic activity, supporting/creating 2,470 jobs for a total payroll of $65.3 million; taxes paid during the construction of both phases are expected to total $15.9 million. The operations phase (at present value) are expected to generate $134.7 million in economic activity, creating/supporting over 961 additional employees for a total payroll of $33 million and generating over $7.3 million in taxes paid.

The campus expansion plan is composed of three (3) phases which are all an integral component of the revitalization of the main Campus in Ponce Puerto Rico. On June 19th, 2020, Ponce Health Sciences University broke ground on the first component, of a phased expansion project by breaking ground on the 130,000 square foot academic tower. This expansion project will increase the number of medical and other health professionals providing care to underserved communities in Puerto Rico, specifically in the southern region, and aid both the local economy and healthcare landscape by playing a key role in the retention of healthcare professionals in Puerto Rico. The modern facilities will provide an environment that will enhance innovation and the quality of medical care to these communities.

Existing Conditions and Trends [24 CFR 58.40(a)]:

PHSU is located adjacent to Puerto Rico State Road PR-2 and in close proximity to important hospitals and other medical institutions and medical offices in the municipality of Ponce, Puerto Rico. PHSU play a crucial role in the development of the medical discipline in Puerto Rico and the enhancement of the medical services in the region. Its academic offering includes higher education programs in the disciplines of Medicine, Clinical Psychology, Biomedical Sciences and Public Health.

The project also avoid/reduce the adverse impacts on natural areas as it's being developed in several already developed parcels with existing infrastructure and utilities. The main parcel, where a new main building is now under construction, contained several buildings which were demolished. Two of the buildings remain in their original condition and are proposed to be demolished to build an outdoor plaza. Three additional existing buildings located in an adjacent parcel (East of the main project site) are proposed to be remodeled. Tasks before spread over several buildings will be concentrated in new and better facilities. New buildings and rehabilitation of other distressed properties can build community pride and confidence in their neighborhood.

The proposed enhancement and expansion will result in an increment of student capacity and will allow PHSU to provide more graduate and certificate programs alternatives directed to fill service gaps within the profession and rise the number of health care providers in the Ponce and southern Puerto Rico region. Upon completion, PHSU will almost double the size of the institution and considerably expand its economic and social development footprint in the Region. The new additions will not only spur economic activity in the municipality of Ponce, the region, and the Island as a whole, but will also support innovation in the U.S. health care arena.

This expansion project will increase the number of medical and other health professionals providing care to underserved communities in Puerto Rico, specifically in the southern region, and aid both the local economy and healthcare landscape by playing a key role in the retention of healthcare professionals in Puerto Rico. The modern facilities will provide an environment that will enhance innovation and the quality of medical care to these communities.

Funding Information

Grant Number	HUD Program	Funding Amount
B-17-DM-72-0001	CDBG-DR-IPG	$800,000,000.00
B-18-DP-72-0001		

Estimated Total HUD Funded Amount:

The estimated total funds from HUD are twenty-seven million nine hundred forty-two thousand two hundred eighty-four dollars ($27,942,284.00). Below is a breakdown of funds' allocation furnished by PHSU.

Project	FUNDS
LAND & BUILDINGS - Damas Property	$ 2,850,000.00
PLAZA AND EXTERIOR	$ 1,596,000.00
SITE DEMO & ADD'L PHASE I SITEWORK	$ 554,000.00
DENTAL CLINIC @Damas Property	$ 22,942,283.50
TOTAL	**$ 27,942,284**

Estimated Total Project Cost (HUD and non-HUD funds) [24 CFR 58.32(d)]**:**

(Supplied by PHSU)

"PHSU has committed a direct investment of seventy-eight million five hundred sixty-five thousand four hundred seven dollars ($78,565,407.00) into our expansion with estimates of the complete expansion project totaling one hundred twenty-eight million five hundred sixty-five thousand four hundred six dollars ($128,565,406.00)"

Compliance with 24 CFR 50.4, 58.5, and 58.6 Laws and Authorities

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 and 58.6		
Airport Hazards 24 CFR Part 51 Subpart D	Yes ☐ No X	There are no Civil Airports within 2,500 feet of the location. Additionally, the only Military Airport is the Luis Munoz Marin in San Juan (far beyond the 15,000 feet for compliance issues). Therefore, this topic is in compliance with HUD regulations. See Information and Figures attached at Attachment I of this report.
Coastal Barrier Resources Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]	Yes ☐ No X	A USFWS Coastal Barrier Resources System Mapper Documentation Map is included showing that the project site is not included in nor affected by Coastal Barrier Resources System (CBRS) boundaries. The nearest CBRS Unit is over 4,000 meters away. Therefore, this topic is in compliance with HUD regulations. See Information and Figures attached at Attachment II of this report.
Flood Insurance Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a]	Yes ☐ No X	A FEMA Flood Insurance Rate Map (FIRM) (72000C2030J, 11/18/2019) shows that the project is located in a Special Flood Hazard Area. The area is included in the PR National Flood Program. The Grant Recipient supplied two flood insurance policy quotations indicating were obtained for the Phases 2-3. The Grant Recipient needs and will maintain a valid Flood Insurance Policy to be in compliance with this section. Therefore, if required conditions are followed, this topic is in compliance with HUD regulations. See Information and/or Figures attached at Attachment III of this report.

STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 & 58.5		
Clean Air Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93	Yes ☐ No X	The project area is not identified in the Criteria Pollutant Nonattainment Summary Report _ Green Book _ US EPA (attached). The project must also comply with the Construction Permit and Unique Incidental Permit conditions regarding the control of fugitive dust, erosion control and storm water control. Therefore, this topic is in compliance with HUD regulations. See Information and/or Figures attached at Attachment VI of this report.
Coastal Zone Management Coastal Zone Management Act, sections 307(c) & (d)	Yes ☐ No X	The proposed project is not inside and is not expected to affect the Puerto Rico's coastal zone. A map depicting the relation of the project to the Coastal Zone limits is included (PR Coastal Management Zone Limits obtained from https://gis.pr.gov/Pages/default.aspx.) Therefore, this topic is in compliance with HUD regulations. See Information and/or Figures attached at Attachment V of this report.
Contamination and Toxic Substances 24 CFR Part 50.3(i) & 58.5(i)(2)	Yes X No ☐	The NEPAssist Tool [accessed on Dec-15-2022 and again on June-28-2023 (0.5 miles and 500' radius)] did not identify the project site as a hazardous waste (RCRA) facility or a toxics release facility. However, several (17) hazardous waste (RCRA) facilities were identified within the 500 m radius and two (2) facilities within the 500' radius. The EPA-ECHO Tool (June-28-2023) showed these facilities are in compliance with RCRA. Based upon a review of the sites, there appear to be no impact to the project site from these facilities. Information is included in Attachment VI of this report. The Phase I Environmental Site Assessment (ESA) included is for reference purposes only. The (May-2018) ASTM Phase I ESA report (attached) for Phases 1a, 1b and 2, concluded that no RECs were identified at the project site and no facilities within the 500 m radius were of concern. The only identified area on site is an abandoned Septic Tank observed at the south boundary of the property and was identified as a de minimis condition. Closure of Septic Tank will have to comply with current PR underground injection control regulations. An additional letter from Eng. Axel Bonilla stated that is unlikely that Toxics/hazardous substances were present at Phase 3 Parcel (No ASTM Phase I ESA study was made available to the preparer for this parcel).

		The Asbestos and Lead Based Paint Study performed for Phases 1a, 1b and 2, reported the presence of asbestos in one of the buildings (Building-A as identified in the study) to be demolished in Phase 2. Before starting the demolition work on this building, the Grant Recipient must conduct the appropriate mitigation work and obtain a certification that the building is free of material containing asbestos. The Grant Recipient must obtain a certification that the buildings to be remodeled in Phase 3 are free of material containing Asbestos and Lead Based Paint. Therefore, conditioned to the information above, according with the information provided by the Grant Recipient, this topic is in compliance with HUD regulations. See Information and/or Figures attached at Attachment VI of this report. Mitigation is required for closure of the septic system and for the LBP and Asbestos abatement.
Endangered Species Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	Yes No ☐ X	Although the USFWS IpaC tool identified the potential presence of *Chilabothrus. inornatus* (Puerto Rican Boa) the species was not found at the Phase 2 Site. A protocol to avoid/minimize impacts to the species or its habitat is provided. If a Puerto Rican Boa is found in the project activity area, work shall cease until the Boa moves off on its own. If the Boa does not move off, the CM shall contact the PR Department of Natural and Environmental Resources and ask for them to relocate the Boa. A Flora and Fauna Assessment performed at the project site did not find endangered species, or its habitat, that may be impacted by the proposed project. A PRDNER Natural Habitat Certification classified the site (Phases 1a-1b and 2) as Category 6 (Low probability of having or developing ecological value). Phase 3 of the proposed project comprises only the remodel of existing buildings. The proposed project is not likely to adversely affect Puerto Rican boas. Therefore,if required conditions are met,this topic is in compliance with HUD regulations. See Information and/or Figures attached at Attachment VII of this report.
Explosive and Flammable Hazards 24 CFR Part 51 Subpart C	Yes No ☐ X	This project will not increase residential densities in the area. The grant recipient supplied a letter and other documents describing existing fuel tank (at Phases 1a-1b site) and related conditions and mitigation measures developed to pursue compliance with the applicable regulations in this section. According with this information and if the required mitigation measures are implemented, this topic is in compliance with HUD regulations. See Information and/or Figures attached at Attachment VIII of this report.
Farmlands Protection Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658	Yes No ☐ X	The proposed project is located in an already developed urban parcel. A recent satellite image (Puerto Rico Planning Board) and the Ponce Area Zoning Map are included. Therefore, this topic is in compliance with HUD regulations. See Information and/or

		Figures attached at Attachment IX of this report.
Floodplain Management Executive Order 11988, particularly section 2(a); 24 CFR Part 55	Yes No ☐ X	The proposed project is located on a floodplain. A 5-Step Process is applicable per 55.12(a)(1-3). Phase 2 include the demolition of two existing buildings and the construction of an outdoor plaza. Phase 3 Proposed activities will remodel three existing buildings, which were not substantially damaged. This phase does not include the construction of new buildings nor increasing the print of existing buildings to be remodeled. No additional impacts to the floodplain are anticipated. Therefore, this topic is in compliance with HUD regulations. See Information and/or Figures attached at Attachment X of this report.
Historic Preservation National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800	Yes No ☐ X	The State Historic Preservation Office stated on its letter of May-11-2023 that proposed project "will have no adverse effect on PR-IPG-000683 Ponce". The grant recipient shall comply with all conditions included in the mentioned letter. Therefore, this topic is in compliance with HUD regulations. See Information and/or Figures attached at Attachment XI of this report.
Noise Abatement and Control Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B	Yes No ☐ X	A noise study was prepared for Phases 1a, 1b, and Phase 2. Phase 3 will include the remodel of existing building. No increase of the existing noise levels is expected.The grant recipient must follow the noise survey report recommendations PR-Environmental Compliance Resolution and all applicale permits and regulations on this matter. Therefore, conditioned to the included above,this topic is in compliance with HUD regulations. See Information and/or Figures attached at Attachment XII of this report.

Sole Source Aquifers Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149	Yes No ☐ X	There are no Sole Source Aquifers identified in PR. EPA maps for Sole Source Aquifers are provided. Therefore, this topic is in compliance with HUD regulations. See Information and/or Figures attached at Attachment XIII of this report.
Wetlands Protection Executive Order 11990, particularly sections 2 and 5	Yes No ☐ X	No wetlands were identified inside the project limits. A USFWS National Wetland Inventory Map is attached. Therefore, this topic is in compliance with HUD regulations. See Information and/or Figures attached at Attachment XIV of this report.
Wild and Scenic Rivers Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)	Yes No ☐ X	As per US Forest Service Geospatial Data Discovery, Puerto Rico's Designated National Wild and Scenic Rivers are located more than 50 miles northeast of the proposed project site. Therefore, this topic is in compliance with HUD regulations. See Information and/or Figures attached at Attachment XV of this report.
ENVIRONMENTAL JUSTICE		
Environmental Justice Executive Order 12898	Yes No ☐ X	No study regarding this resource have been supplied to the preparer.The proposal calls for the development of an outdoor plaza and a dental clinic and acquisition of land at the Ponce Health Sciences University. Based upon the project scope, there should be no adverse impact relating to Climate Change. To the best of our knowledge and information available to the preparer, there are no environmental findings (based upon the findings of this EA) that could affect the minority and/or low-income population around the area of the project site. Therefore, this topic is in compliance with HUD regulations. See Information and/or Figures attached at Attachment XVI of this report.

Environmental Assessment Factors [24 CFR 58.40; Ref. 40 CFR 1508.8 &1508.27] Recorded below is the qualitative and quantitative significance of the effects of the proposal on the character, features and resources of the project area. Each factor has been evaluated and documented, as appropriate and in proportion to its relevance to the proposed action. Verifiable source documentation has been provided and described in support of each determination, as appropriate. Credible, traceable and supportive source documentation for each authority has been provided. Where applicable, the necessary reviews or consultations have been completed and applicable permits of approvals have been obtained or noted. Citations, dates/names/titles of contacts, and page references are clear. Additional documentation is

attached, as appropriate. **All conditions, attenuation or mitigation measures have been clearly identified.**

Impact Codes: Use an impact code from the following list to make the determination of impact for each factor.
(1) Minor beneficial impact
(2) No impact anticipated
(3) Minor Adverse Impact – May require mitigation
(4) Significant or potentially significant impact requiring avoidance or modification which may require an Environmental Impact Statement

Environmental Assessment Factor	Impact Code	Impact Evaluation
LAND DEVELOPMENT		
Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design	2	As per information provided by the grant recipient, the project (Phase 2) is in compliance with existing zoning (EV-4) and no variations, exceptions nor land use consultation from the Puerto Rico Planning Board were required.(Phase 2 is included in the Construction Permit 2019- 255909-PCOC-004867 in Attachment XVII: F). Proposed Phase 3 will include the remodeling of existing buildings. Zoning of this parcel is also EV.4
Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	2	Geotechnical studies and a Landslide risk assessment were prepared containing design guides and recommendations. Both the PR Environmental Compliance Resolution (2019-274617-DEA-003177-2063499) and the Construction Permit (2019-255909-PCOC-004867) required following those recommendations.(See Attachment XVII: E and F)
Hazards and Nuisances including Site Safety and Noise	2	A Noise study (Attachment XII) was prepared for phases 1a, 1b, and 2, describing existing conditions and recommendations. Both the PR Environmental Compliance Resolution (2019-274617-DEA-003177-2063499) and the Construction Permit (2019-255909-PCOC-004867) required following those recommendations. (See Attachment XVII: E and F) Prior to be granted the permit to use the new facilities the project must obtain a certification of compliance with health and safety (fire) parameters.
Energy Consumption	2	The project received the endorsement from the Puerto Rico Energy and Power Authority (PREPA 2019-255909-SRI- 022539). For Phase 3, the grant recipient provided a letter from Eng. Axel Bonilla station that this phase will have negligible effect on the resource however this phase must obtain recommendations from the agency.(See Attachment XVII: R and L)

Environmental Assessment Factor	Impact Code	Impact Evaluation
SOCIOECONOMIC		This information is part of the document prepared the university. Intake Form #PR-IPG-000683 For Economic Development Investment Portfolio for Growth Program.
Employment and Income Patterns	**1**	The project is not likely to affect but may improve employment and income opportunities in the PHSU and the surrounding community. The construction phase would generate an estimated $123.5 million in economic activity and support 1,105 direct jobs for a payroll of $26.1 million. The operational phase would support 235 direct jobs and 958 when indirect and induced jobs are factored in. In total, 1,340 direct jobs are created and supported in the construction and operational phases of the Project with $41.6 million in payroll and $8.9 million in taxes.
Demographic Character Changes, Displacement	**2**	The project is not expected to adversely affect demographic character nor cause demographic displacement. The project is re-developing an already developed area and enhancing the work and educational offer for the medical community that is already attending the existing institution. As the overall project will have a limited construction timeframe and anticipates the use of local labor, the project is not expected to adversely affect the local physical, social, and psychological values of the Ponce community. The project is not expected to displace any population because the subject parcel is already developed, the proposed project will result in an enhancement of the present use and it is not anticipated to cause gentrification or significantly alter property values or rents. (No study regarding this resource have been supplied to the preparer)

Environmental Assessment Factor	Impact Code	Impact Evaluation
COMMUNITY FACILITIES AND SERVICES		
Educational and Cultural Facilities	1	The project is enhancing existing facilities of a superior education institution. It is expected to improve the educational opportunities and experiences in the area an in Puerto Rico. (No study regarding this resource have been supplied to the preparer)
Commercial Facilities	2	The project is expected to preserve or increase the demand for commercial activities in the area. . (No study regarding this resource have been supplied to the preparer)
Health Care and Social Services	1	The project is a higher education institution. It is expected to enhance health care, social services and health sciences academic offer by building new facilities, laboratories and clinics with state of the art equipment and technology. A map depicting the locations of the closest Police, Fire, Hospital, Urgent Care, is included in Attachment XVII: W (No study regarding this resource have been supplied to the preparer)
Solid Waste Disposal / Recycling	2	The PRDNER (letter 4/OCT/2019, items 8. and 9.) required that the project must comply with applicable laws and regulations for collecting, disposing and recycling solid waste. In both the PR Environmental Compliance Resolution (2019-274617-DEA-003177-2063499) and the Construction

		Permit (2019-255909-PCOC-004867) (Attachment XVII: E and F) the project is required to comply with applicable regulations and laws for collecting, disposing and recycling solid and biomedical waste. See also the authorized activities related to this section in the PUI Permit **2019-255909-PUI-000660** (Attachment XVII: H). For Phase 3, the grant recipient provided a letter from Eng. Axel Bonilla station that this phase will have negligible effect on the resource however this phase must obtain recommendations from the agency. (See Attachment XVII: R)
Waste Water / Sanitary Sewers	2	On 06/JUN/2019, the project received the endorsement (2019-255909-SRI-022539) from the Puerto Rico Aqueducts and Sewers Authority (PRASA). For Phase 3, the grant recipient provided a letter from Eng. Axel Bonilla station that this phase will have negligible effect on the resource however this phase must obtain recommendations from the agency (See Attachment XVII: M).
Water Supply	2	On 06/JUN/2019, the project received the endorsement (2019-255909-SRI-022539) from the Puerto Rico Aqueducts and Sewers Authority (PRASA). For Phase 3, the grant recipient provided a letter from Eng. Axel Bonilla station that this phase will have negligible effect on the resource however this phase must obtain recommendations from the agency (See Attachment XVII: M).
Public Safety - Police, Fire and Emergency Medical	2	The proposed project is a superior education facility specialized in Health Sciences and will implement all the necessary measures to guarantee public safety. In both the PR Environmental Compliance Resolution (2019-274617-DEA-003177-2063499) and the Construction Permit (2019-255909-PCOC-004867) (Attachment XVII: E and F) the project is required to comply with applicable regulations and laws for this section. For Phase 3, the grant recipient provided a letter from Eng. Axel Bonilla station that this phase will have negligible effect on the resource (See Attachment XVII: R) Prior to be granted the authorization to use the facilities ("Permiso de Uso") the project must pass PR Government inspections and be certified in compliance with all applicable aspect of Health and Safety including Fire. The proposed activity will not significantly increase the burden on Police, Fire and Emergency Medical as the facility already exists.A map depicting the locations of the closest Police, Fire, Hospital, Urgent Care, is included in Attachment XVII: W.
Parks, Open Space and Recreation	1	The proposed project is being developed in an already developed parcel. It will create a new building with enhanced facilities (Phases 1a-1b), remodel existing buildings (Phase 3) and create a new outdoor plaza with passive recreation spaces (Phase 2). Will also comply with the tree planting

		authorization from the PR-OGPe.(2019-255909-PUI-000660) (see Attachment XVII: H)
Transportation and Accessibility	2	PHSU is located adjacent to the State Road PR-2, a very important transportation artery for the city and for visitors from neighboring municipalities. A traffic study was prepared for the projects Phases 1a, 1b, 2. (Attachment XVII: V). The proposed project will follow the study recommendations and will comply with all laws and regulations to guarantee appropriate accessibility for students, academic personnel and visitors. The project will provide a total of 542 parking spaces (including 2 cargo spaces, 11 handicapped parking spaces and 115 regular parking spaces available in a nearby parcel) PHSU may be accessed by using the SITRAS (http://visitponce.com/sitras/) public transportation System (Ponce Municipality "Sistema Integrado de Transportación del Sur"), private carriers and taxis. For Phase 3, the grand recipient provided a letter from Eng. Axel Bonilla station that this phase will have negligible effect on the resource however this phase must obtain recommendations from the agencies.

Environmental Assessment Factor	Impact Code	Impact Evaluation
NATURAL FEATURES		
Unique Natural Features, Water Resources	2	The proposed project is located in an already developed area. No Unique natural features nor water resources are expected to be affected by the project.
Vegetation, Wildlife	2	The proposed project is located in an already developed area. A Flora and Fauna Assessment was prepared for the site. No natural vegetation communities nor sensitive wildlife are likely to be affected by the project. A protocol to avoid/minimize adverse effect to the Puerto Rican Boa must be implemented (see Attachment VII).
Other Factors	2	To our best knowledge, no additional factors of concerns have been identified.

Additional Studies Performed:

a) Phase I Site Environmental Assessment (PHSU Phases 1a, 1b and 2) (Attachment VI)
b) Lead and Asbestos Study (PHSU Phases 1a, 1b and 2) (Attachment VI)
c) Flora and Fauna Assessment (PHSU Phases 1a, 1b and 2) (Attachment VII)
d) Natural Habitat Categorization (PHSU Phases 1a, 1b and 2) (Attachment XVII: Q)
e) Tree Inventory and Reforestation Plan (PHSU Phases 1a, 1b and 2) (Attachment XVII: H [A portion of the PUI Permit])
f) Geotechnical Study (PHSU Phases 1a, 1b and 2) (Attachment XVII: S, T and U)
g) Traffic Study (PHSU Phases 1a, 1b and 2) (Attachment XVII: V)

h) Noise Study (PHSU Phases 1a, 1b and 2) (Attachment XII)
i) Archaeological Study (PHSU Phases 1a, 1b and 2) (Attachment XI)

Field Inspection:

28 June 2022 (Sr. José Arreseigor and Plan. Laredo Gonzalez) Main Building under construction, no work performed on building to be demolished at the south of the main building, no work performed on buildings to be remodeled at the east of the main building, a 19,944 gals above the ground tank was installed southeast of the main building (this tank is proposed to contain diesel to supply an emergency electric generator) See Pictures in Attachment XVII.

List of Sources, Agencies and Persons Consulted [40 CFR 1508.9(b)]**:**

a) OGPe (Several Ogpe divisions revised and commented the conditions and proposed actions of the project, OGPe also issued the Environmental Compliance Resolution 2019-274617-DEA-003177, the Construction Permit 2019-255909-PCOC-004867, the Single Incidental and Operational Permit "PUI" 2019-255909-PUI-000660 and the Tree Planting Authorization "ACP" included in the 2019-255909-PUI-000660)
b) PREPA (2019-255909-SRI-022539)
c) PRASA (2019-255909-SRI-022539)
d) PRICP ("Instituto de Cultura Puertorriqueño and PR Historic Preservation Office) (2019-274617-REA-003429-1661584 and 2019-274617-REA-003429-1663054)
e) NETPR – Puerto Rico Telecommunications Bureau (2019-255909-SRI-022539)
f) PRHTA – Puerto Rico Highway and Transportation Authority (Endorsement)
g) Health Dept (Must inspect for compliance and approve the completed facilities)
h) Fire Dept (recommendation) (Must inspect for compliance and approve the completed facilities)
i) PRDNER (Natural Habitat Certification O-SE-CCH01-SJ-01515-09042019)
j) NPDES – National Pollutant Discharge Elimination System NPDES ID PRR1000A4 NOI 7/24/2020-2/15/2022)
k) Ing. Ladislao Ortiz (LOA Ingenieros)
l) Sr. José Arreseigor.

List of Permits and Endorsements Obtained (Attachment XVII):

All permits and authorizations were obtained through the OGPe (Puerto Rico Permit Management Office for Phases 1a, 1b and 2). Due to the nature of the proposed works in Phase 3, it is likely to be considered a Categorical Exclusion in order to comply with the PR Environmental Law, yet all the applicable endorsements, recommendations, authorizations and permits must be obtained before commencing any work in this Phase.

- 2019-255909-PCOC-004254-Demolition
- 2019-255909-PCOC-004867_Building Permit Approved_05_10_2021
- 2019-255909-PUI-000660_PUI Approved_PHSU_12aug2020
- 2019-255909-SRI-031335_AAA Carta Endoso Planos_PHSU_24mar2020
- 2019-255909-SRI-031345-AEE_2020-06-16-Plano Endosado
- Tree Mitigation_2019-255909-PCM-005964-2093643
- Signed_PHSU ELEVATION CERTIFICATE - Dated March 18 2021

- NPDES ID PRR1000A4 NOI 7/24/2020-2/15/2022
- Natural Habitat Categorization (O-SE-CCH01-SJ-01515-09042019)
- NETPR – Puerto Rico Telecommunications Bureau (2019-255909-SRI-031361 / NETPR-2019-RI-0062)
- PRHTA- *2019-255909-SRI-031326 (Approved with recommendations)*
- *Health Dept 2019-255909-SRS-031286*
- *Fire Dept 2019-255909-SRS-031285*
- *OGPe-DECA- DEA - Determination of Environmental Compliance 2019-274617-DEA-003177.*

Public Outreach [24 CFR 50.23 & 58.43]**:**

Due to the nature of the project, there is no PR requirements to publish or conduct public hearings. However, the electronic file for the Environmental Document is available at the OGPe (Puerto Rico Permit Management Office). Besides, this document will be available for public inquiries in the manner HUD and the PR Housing Authority require.

Cumulative Impact Analysis [24 CFR 58.32]**:**

Although no Cumulative Impact Analysis for these activities have been supplied to the preparer:

a) The area where the project is proposed is already developed and as well as the surrounding parcels. The proposed work is not transforming or fragmenting natural areas like wetlands, forests or grass prairies.
b) The area was determined by the PRDNER (O-SE-CCH01-SJ-01515-09042019) as having low potential of developing habitat of ecological value.
c) The main building under construction is replacing several existing buildings which were demolished. PHSU activities that were spread over several buildings will now be concentrated in new and better facilities.
d) As more activities are reunited in the new building now under construction, two remaining buildings in the main project parcel will be demolished and a new outdoor plaza will be developed.
e) In Phase 3, the three existing buildings in the eastern parcel are proposed to remain and remodeled to develop the proposed activities.

Alternatives [24 CFR 58.40(e); 40 CFR 1508.9]

Two alternatives were considered:

A) No Action Alternative
B) Develop the proposed project.
The proposed project will remove, substitute or remodel dated existing buildings of limited capacity. It will also develop a new outdoor plaza which will improve life quality in the campus.

The proposed actions are expected to promote a significant quantitative and qualitative growth of the PHSU offerings and will enhance educational, health care and life quality in the area and for the student, medical and other members of the community.

No Action Alternative [24 CFR 58.40(e)]:

If the proposed PHSU project is not completely developed it may affect the necessary quantitative and qualitative growth in academic and health care offers in the southern region of Puerto Rico. It may also limit the positive impact in the development of new health sciences students, medical personnel and health care to other members of the community.

Summary of Findings and Conclusions:

Taking into account the available information contained in this EA and if the Grant Recipient fulfill the applicable requirements of the federal and PR agencies and comply with all applicable federal, state and local laws and regulations, we consider, to the best of our knowledge, that the project is not likely to have a significant environmental impact

Mitigation Measures and Conditions [40 CFR 1505.2(c)]

Summarize below all mitigation measures adopted by the Responsible Entity to reduce, avoid, or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/conditions must be incorporated into project contracts, development agreements, and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

Law, Authority, or Factor	Mitigation Measure
Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	Project must implement approved protocol to avoid/minimize impact on Puerto Rican Boa (*Chilabothrus inornatus*)
Contamination and Toxic Substances 24 CFR Part 50.3(i) & 58.5(i)(2)	The Asbestos and Lead Based Paint Study performed for Phases 1a, 1b and 2, reported the presence of asbestos in one of the buildings (Building-A as identified in the study) to be demolished in Phase 2. Before with the demolition work on this building the Grant Recipient must conduct the appropriate mitigation, work and obtain a certification that the above-mentioned building is free of material containing asbestos. The existing Septic Tank will be closed in accordance with PR regulations. The Grant Recipient must also obtain a certification that the buildings to be remodeled in Phase3 are free of material containing Asbestos and Lead Based Paint. Closure of this Septic Tank will have to comply with current PR underground injection control regulations.

	An additional letter from Eng. Axel Bonilla stated that is unlikely that Toxics/hazardous substances were present at Phase 3 Parcel (No ASTM Phase I ESA study was made available to the preparer or this parcel).
Floodplain Management Executive Order 11988, particularly section 2(a); 24 CFR Part 55	The proponent will ensure that all mitigation measures, if any, indicated in the 5 steps analysis and the worksheet will be adhered to.
Flood Insurance 24 CFR 50.4(b)(1) and 24 CFR 58.6(a) and (b); 24 CFR 55.1(b).	A valid Flood Insurance policy will be maintained by the Grant Recipient.
Explosive and Flammable Hazards 24 CFR Part 51 Subpart C	There is a diesel tank for the diesel emergency power generator located North of Phase 2. A letter describing mitigation measures for this section is attached in Attachment VIII of this report. The grant recipient will implement this and all other required mitigation measures and will prepare a Spill Prevention Control and Countermeasures Plan (SPCC) according with the PRDNER requirements.
36 CFR 800 "Protection of Historic Properties"	The State Historic Preservation Office stated on its letter of May-11-2023 that proposed project "will have no adverse effect on PR-IPG-000683 Ponce". The grant recipient shall comply with all conditions included in the mentioned letter.

Determination:

X **Finding of No Significant Impact** [24 CFR 58.40(g)(1); 40 CFR 1508.27]
The project will not result in a significant impact on the quality of the human environment.

☐ **Finding of Significant Impact** [24 CFR 58.40(g)(2); 40 CFR 1508.27]
The project may significantly affect the quality of the human environment.

Preparer Signature: _____/_____Date:_May/15/2023_

Name/Title/Organization: _Plan. Laredo GonzÃ¡lez (GBA) and Ing. Ladislao Ortiz (LOA)

Certifying Officer Signature: _____Date: 6/30/2023

Name/Title: Janette I. Cambrelén, Permit and Environmental Compliance Specialist

This original, signed document and related supporting material must be retained on file by the Responsible Entity in an Environmental Review Record (ERR) for the activity/project (ref: 24 CFR Part 58.38) and in accordance with recordkeeping requirements for the HUD program(s).

Attachments

Attachment I: Airport Hazards 24 CFR Part 51 Subpart D 23

Attachment II: Coastal Barrier Resources Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501] 24

Attachment III: Flood Insurance Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a]..... 25

Attachment IV: Clean Air Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93..... 26

Attachment V: Coastal Zone Management Coastal Zone Management Act, sections 307(c) & (d) 27

Attachment VI: Contamination and Toxic Substances 24 CFR Part 50.3(i) & 58.5(i)(2)..... 28

Attachment VII: Endangered Species Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402..... 29

Attachment VIII: Explosive and Flammable Hazards 24 CFR Part 51 Subpart C..... 30

Attachment IX: Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658..... 31

Attachment X: Floodplain Management Executive Order 11988, particularly section 2(a); 24 CFR Part 55..... 32

Attachment XI: Historic Preservation National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800..... 33

Attachment XII: Noise Abatement and Control Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B..... 34

Attachment XIII: Sole Source Aquifers Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149 35

Attachment XIV: Wetlands Protection Executive Order 11990, particularly sections 2 and 5.... 36

Attachment XV: Wild and Scenic Rivers Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c) 37

Attachment XVI: Environmental Justice Executive Order 12898..... 38

Attachment XVII: LOCAL PERMITS AND ENDORSEMENTS AND ADDITIONAL STUDIES. 39

A.- PONCE HEALTH LOCATION MAP 40

B.- ZONIFICACION FASES 1a-1b-2 BY ADV 41

C.- ZONING Ponce064 42

D.- Environmental Compliance 2019-274617-DEA-003177-1807468 PONCE..... 43

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E.- Environmental Compliance OGPe 2019-274617-DEA-003177-2063499 44

F.- Construction Permit 2019-255909-PCOC-004867 45

G.- Demolition Permit 2019-255909-PCOC-004254 46
H.- PUI 2019-255909-PUI-000660 47
I.- 2019-274617-REA-003429-1661584 authorization ICP 48
J.- 2019-274617-REA-003429-1663054 no objection ICP 49
K.- 2019-274617-REA-003429-1734728 DRNA REA 50
L.- 2019-255909-SRI-022539_Carta de Evaluation PREPA 51
M.- 2019-255909-SRI-022539_Carta Recommendation AAA_2019_06_06 52
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Q.- Natural Habitat 17150_PRDNER 20190423 56
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Attachment I: Airport Hazards 24 CFR Part 51 Subpart D

Airport Hazards (CEST and EA) worksheet

General policy	Legislation	Regulation
It is HUD's policy to apply standards to prevent incompatible development around civil airports and military airfields.		24 CFR Part 51 Subpart D
References		
https://www.hudexchange.info/environmental-review/airport-hazards		

1. **To ensure compatible land use development, you must determine your site's proximity to civil and military airports. Is your project within 15,000 feet of a military airport or 2,500 feet of a civilian airport?**

   ☒No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing that the site is not within the applicable distances to a military or civilian airport.*

   ☐Yes → *Continue to Question 2.*

2. **Is your project located within a Runway Potential Zone/Clear Zone (RPZ/CZ) or Accident Potential Zone (APZ)?**

   ☐Yes, project is in an APZ → *Continue to Question 3.*

   ☐Yes, project is an RPZ/CZ → *Project cannot proceed at this location.*

   ☐No, project is not within an APZ or RPZ/CZ

   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing that the site is not within either zone.*

3. **Is the project in conformance with DOD guidelines for APZ?**

   ☐Yes, project is consistent with DOD guidelines without further action.

   Explain how you determined that the project is consistent:

   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documentation supporting this determination.*

☐No, the project cannot be brought into conformance with DOD guidelines and has not been approved. → *Project cannot proceed at this location.*

☐Project is not consistent with DOD guidelines, but it has been approved by Certifying Officer or HUD Approving Official.

Explain approval process:

If mitigation measures have been or will be taken, explain in detail the proposed measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documentation supporting this determination.*

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

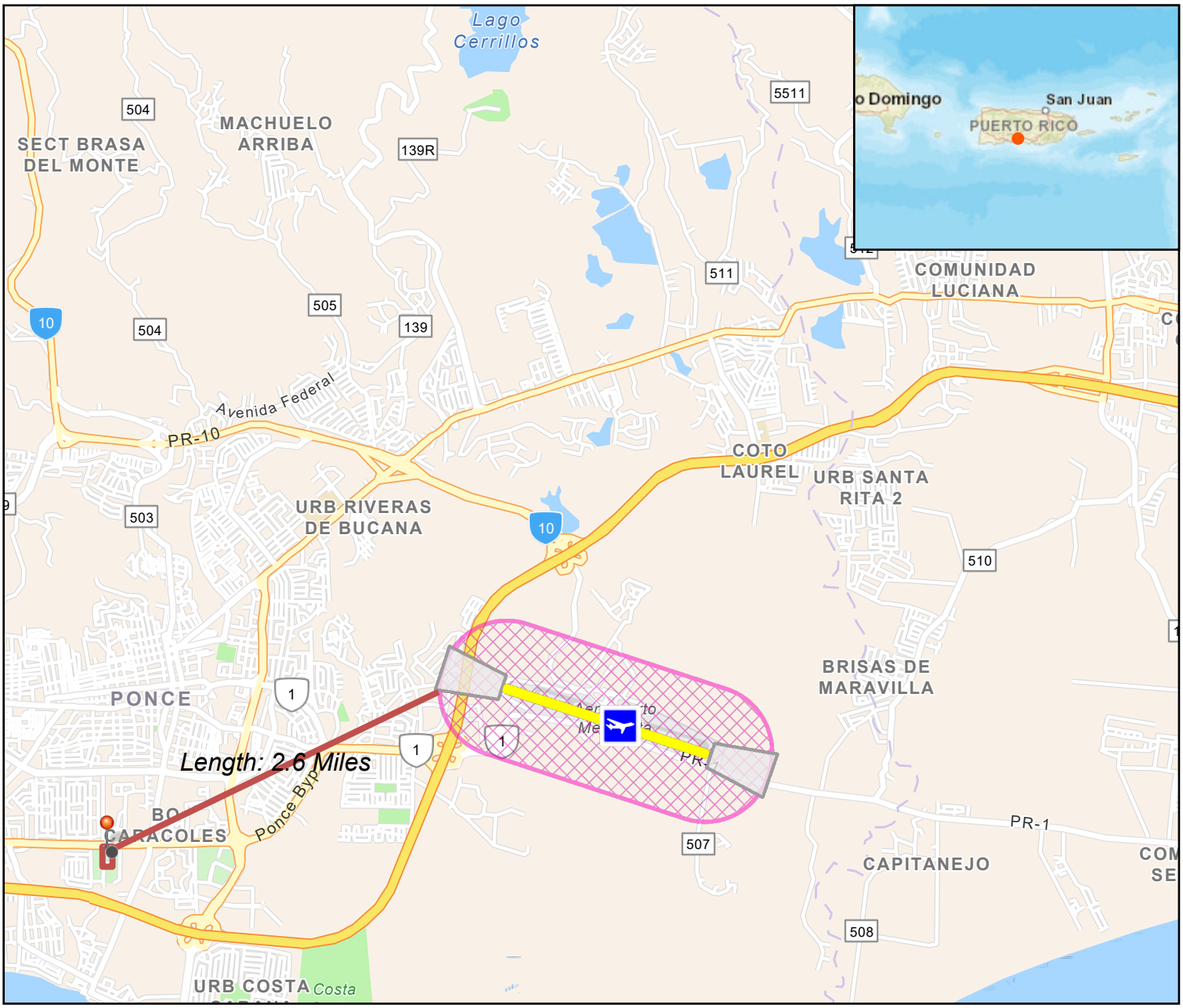
There are no Civil Airports within 2,500 feet of the location. Additionally, the only Military Airport is the Luis Munoz Marin in San Juan (far beyond the 15,000 feet for compliance issues). Therefore, this topic is in compliance with HUD regulations. See Information and Figures attached

Are formal compliance steps or mitigation required?

☐ Yes ☒ No

IPG000683
Ponce Health Sciences University

Airports Runway Clear Zone



Legend

- Military Airports 15,000ft Buffer
- Civilian Airports 2,500ft Buffer
- Military Accident Potential Zones APZ 2
- Military Accident Potential Zones APZ 1
- Runway Protection Zones
- Airport Runways
- Major
- Minor Airport

0 0.5 1 2 mi

N
W E
S

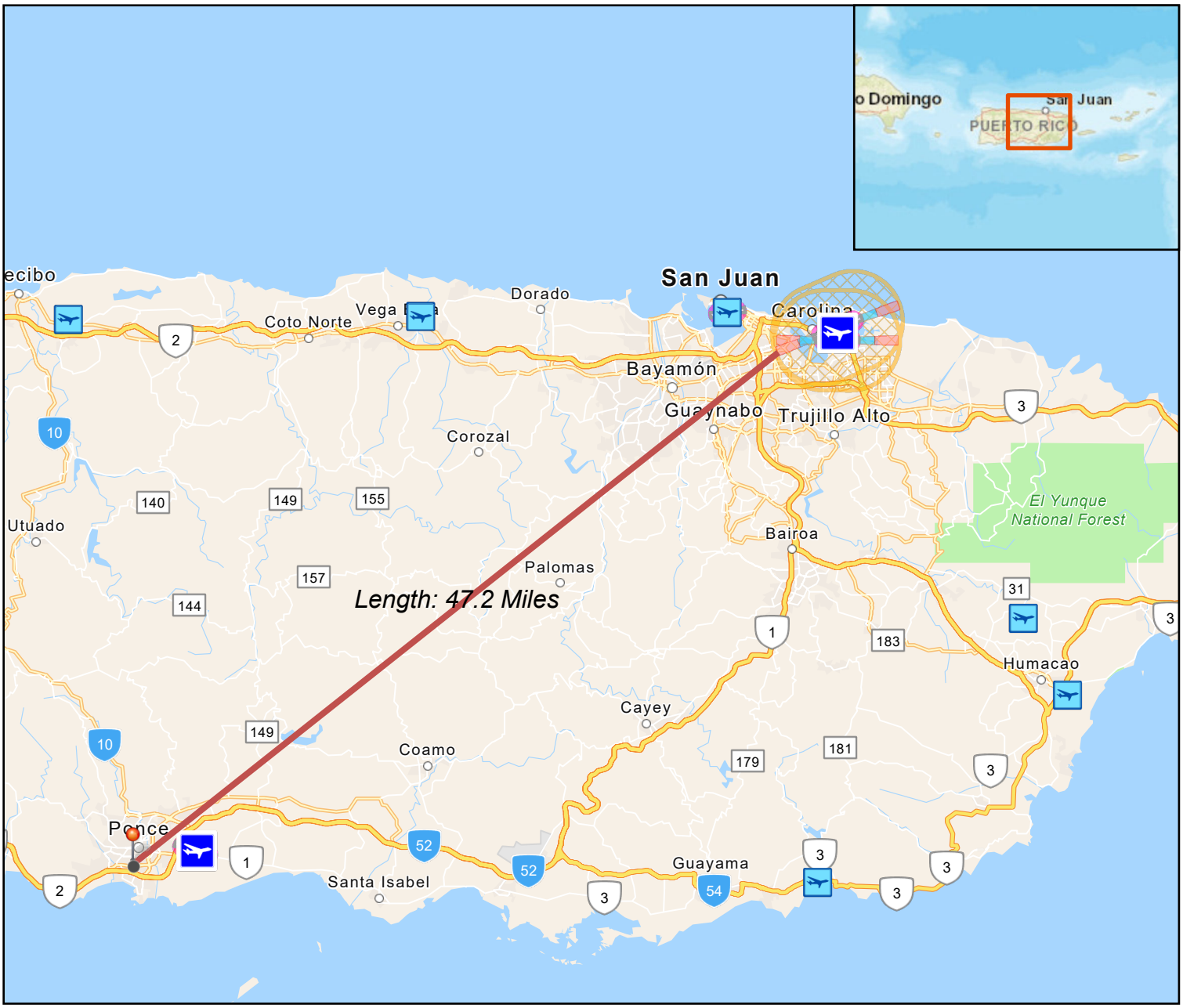
Source:

https://arcgis.horne.com/portal/apps/experiencebuilder/

GABRIEL BERRIZ&ASSOCIATES
Plan. Laredo González
APR/2022

IPG000683
Ponce Health Sciences University

Airports Accident Potential Zone



Legend

- Dynamic Print Text
- Military Airports 15,000ft Buffer
- Civilian Airports 2,500ft Buffer
- Military Accident Potential Zones APZ 2
- Military Accident Potential Zones APZ 1
- Runway Protection Zones
- Airport Runways
- Major
- Minor Airport

0 5 10 20 mi

N W E S

Source:

https://arcgis.horne.com/portal/apps/experiencebuilder/

GABRIEL BERRIZ&ASSOCIATES
Plan. Laredo González
APR/2022

Attachment II: Coastal Barrier Resources Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]

Coastal Barrier Resources (CEST and EA)

General requirements	Legislation	Regulation
HUD financial assistance may not be used for most activities in units of the Coastal Barrier Resources System (CBRS). See 16 USC 3504 for limitations on federal expenditures affecting the CBRS.	Coastal Barrier Resources Act (CBRA) of 1982, as amended by the Coastal Barrier Improvement Act of 1990 (16 USC 3501)	
References		
https://www.hudexchange.info/environmental-review/coastal-barrier-resources		

Projects located in the following states must complete this form.

Alabama	Georgia	Massachusetts	New Jersey	Puerto Rico	Virgin Islands
Connecticut	Louisiana	Michigan	New York	Rhode Island	Virginia
Delaware	Maine	Minnesota	North Carolina	South Carolina	Wisconsin
Florida	Maryland	Mississippi	Ohio	Texas	

1. Is the project located in a CBRS Unit?

☒No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing that the site is not within a CBRS Unit.*

☐Yes → *Continue to Question 2.*

> Federal assistance for most activities may not be used at this location. You must either choose an alternate site or cancel the project. In very rare cases, federal monies can be spent within CBRS units for certain exempted activities (e.g., a nature trail), after consultation with the Fish and Wildlife Service (FWS) (see 16 USC 3505 for exceptions to limitations on expenditures).

2. Indicate your selected course of action.

☐ After consultation with the FWS the project was given approval to continue

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map and documentation of a FWS approval.*

☐ Project was not given approval

Project cannot proceed at this location.

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

A USFWS Coastal Barrier Resources System Mapper Documentation Map is included showing that the project site is not included in nor affected by Coastal Barrier Resources System (CBRS) boundaries. Therefore, this topic is in compliance with HUD regulations. See Information and Figures attached at Attachment II of this report.

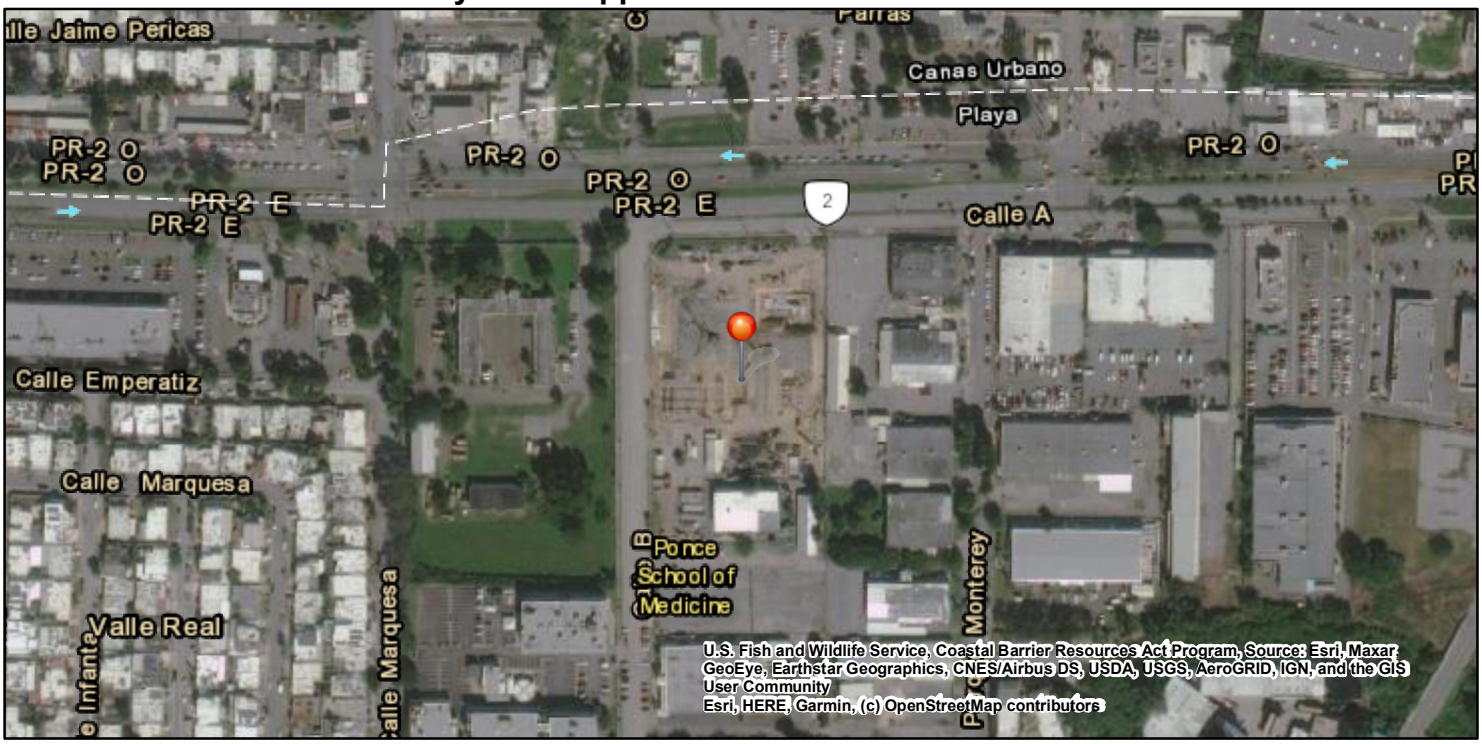
Are formal compliance steps or mitigation required?

☐ Yes

☒ No

U.S. Fish and Wildlife Service

Coastal Barrier Resources System Mapper Documentation



CBRS Units

Otherwise Protected Area
System Unit
CBRS Buffer Zone
-66.619058, 17.994949

0 65 130 260 390 ft

1:4,514

The pin location displayed on the map is a point selected by the user. Failure of the user to ensure that the pin location displayed on this map correctly corresponds with the user supplied address/location description below may result in an invalid federal flood insurance policy. **The U.S. Fish and Wildlife Service (Service) has not validated the pin location with respect to the user supplied address/location description below. The Service recommends that all pin locations be verified by federal agencies prior to use of this map for the provision or denial of federal funding or financial assistance** . Please note that a structure bisected by the Coastal Barrier Resources System (CBRS) boundary (i.e., both "partially in" and "partially out") is within the CBRS and therefore affected by CBRA's restrictions on federal flood insurance. A pin placed on a bisected structure must be placed on the portion of the structure within the unit (including any attached features such as a deck or stairs).

User Name: PONCE HEALTH UNIVERSITY
User Organization: PONCE HEALTH UNIVERSITY
User Supplied Address/Location Description: STATE ROAD PR-2, PONCE, PUERTO RICO
Pin Location: Outside CBRS
Pin Flood Insurance Prohibition Date: N/A
Pin System Unit Establishment Date: N/A

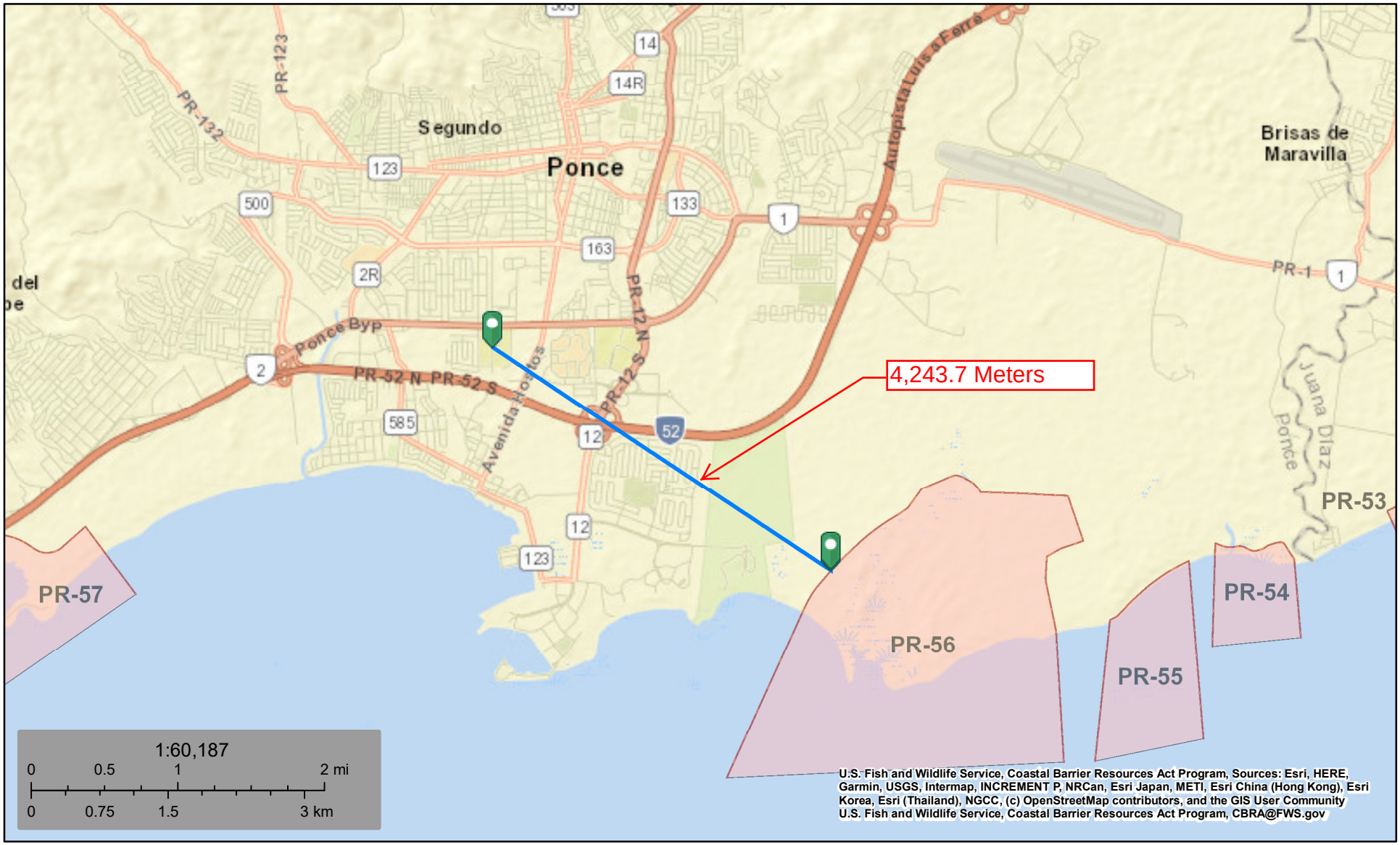
The user placed pin location is not within the CBRS. For the nearest official CBRS map depicting this area, please see the map numbered 72-014A, dated 11/15/2016. The official CBRS maps are accessible at https://www.fws.gov/library/collections/official-coastal-barrier-resources-system-maps .

The CBRS information is derived directly from the CBRS web service provided by the Service. This map was exported on 4/13/2022 and does not reflect changes or amendments subsequent to this date. The CBRS boundaries on this map may become superseded by new boundaries over time.

This map image may be void if one or more of the following map elements do not appear: basemap imagery, CBRS unit labels, prohibition date labels, legend, scale bar, map creation date. For additional information about flood insurance and the CBRS, visit: https://www.fws.gov/node/263838 .

U.S. Fish and Wildlife Service
Coastal Barrier Resources System

PHSU, Ponce Puerto Rico



February 18, 2023

CBRS Buffer Zone

System Unit

CBRS Units

Otherwise Protected Area

This map is for general reference only. The Coastal Barrier Resources System (CBRS) boundaries depicted on this map are representations of the controlling CBRS boundaries, which are shown on the official maps, accessible at https://www.fws.gov/library/collections/official-coastal-barrier-resources-system-maps. All CBRS related data should be used in accordance with the layer metadata found on the CBRS Mapper website.

The CBRS Buffer Zone represents the area immediately adjacent to the CBRS boundary where users are advised to contact the Service for an official determination (https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation) as to whether the property or project site is located "in" or "out" of the CBRS.

CBRS Units normally extend seaward out to the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward

Attachment III: Flood Insurance Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a]

Flood Insurance (CEST and EA)

General requirements	Legislation	Regulation
Certain types of federal financial assistance may not be used in floodplains unless the community participates in National Flood Insurance Program and flood insurance is both obtained and maintained.	Flood Disaster Protection Act of 1973 as amended (42 USC 4001-4128)	24 CFR 50.4(b)(1) and 24 CFR 58.6(a) and (b); 24 CFR 55.1(b).
Reference		
https://www.hudexchange.info/environmental-review/flood-insurance		

1. **Does this project involve mortgage insurance, refinance, acquisition, repairs, construction, or rehabilitation of a structure, mobile home, or insurable personal property?**

   ☐No. This project does not require flood insurance or is excepted from flood insurance. → *Continue to the Worksheet Summary.*

   ☒Yes → *Continue to Question 2.*

2. **Provide a FEMA/FIRM map showing the site.**

   The Federal Emergency Management Agency (FEMA) designates floodplains. The FEMA Map Service Center provides this information in the form of FEMA Flood Insurance Rate Maps (FIRMs). For projects in areas not mapped by FEMA, use the best available information to determine floodplain information. Include documentation, including a discussion of why this is the best available information for the site. Provide FEMA/FIRM floodplain zone designation, panel number, and date within your documentation.

   Is the structure, part of the structure, or insurable property located in a FEMA-designated Special Flood Hazard Area?

   ☐No → *Continue to the Worksheet Summary.*

   ☒Yes → *Continue to Question 3.*

3. **Is the community participating in the National Flood Insurance Program *or* has less than one year passed since FEMA notification of Special Flood Hazards?**

   ☒Yes, the community is participating in the National Flood Insurance Program.

   For loans, loan insurance or loan guarantees, flood insurance coverage must be continued for the term of the loan. For grants and other non-loan forms of financial assistance, flood insurance coverage must be continued for the life of the building irrespective of the transfer of ownership. The amount of coverage must equal the total project cost or the maximum coverage limit of the National Flood Insurance Program, whichever is less

   Provide a copy of the flood insurance policy declaration or a paid receipt for the current annual flood insurance premium and a copy of the application for flood insurance.

   → *Continue to the Worksheet Summary.*

☐Yes, less than one year has passed since FEMA notification of Special Flood Hazards.
If less than one year has passed since notification of Special Flood Hazards, no flood Insurance is required.

→ *Continue to the Worksheet Summary.*

☐No. The community is not participating, or its participation has been suspended.
Federal assistance may not be used at this location. Cancel the project at this location.

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

A FEMA Flood Insurance Rate Map (FIRM) (72000C2030J, 11/18/2019) shows that the project is located in a Special Flood Hazard Area. The area is included in the PR National Flood Program. The Grant Recipient supplied two flood insurance policy quotations indicating were obtained for the Phases 2-3. The Grant Recipient needs and will maintain a valid Flood Insurance Policy to be in compliance with this section. Therefore, conditioned to the statements above, this topic is in compliance with HUD regulations. See Information and/or Figures attached.

Are formal compliance steps or mitigation required?

_Yes

X No

National Flood Hazard Layer FIRMette

FEMA

66°37'28"W 17°59'55"N



66°36'50"W 17°59'21"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

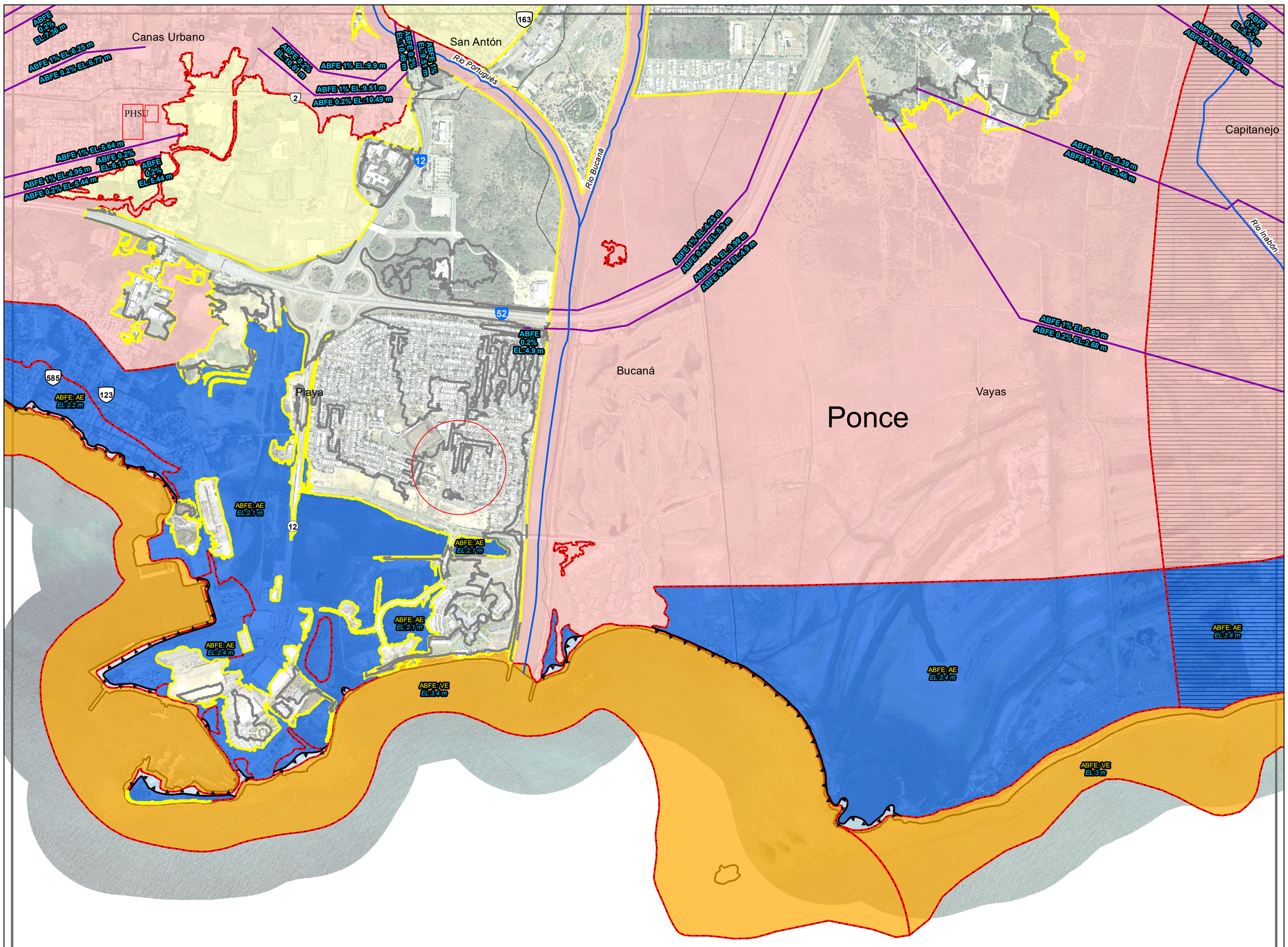
N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 4/13/2022 at 6:11 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



MAPAS DE NIVELES DE INUNDACIÓN BASE RECOMENDADOS

Estos mapas de niveles de inundación base recomendados (Advisory Maps) desarrollados por FEMA para Puerto Rico identifican que áreas se encuentran en nuevas zonas inundables recomendadas del 1% y 0.2% de probabilidad, así como niveles de inundación base recomendados (ABFE, por sus siglas en inglés) que pueden afectar las prácticas de construcción.

Como parte del esfuerzo de recuperación de la Isla, estos mapas son una herramienta para las agencias, los desarrolladores, diseñadores, técnicos de permisos de construcción, oficiales federales, estatales y municipales y dueños de propiedad, para tomar decisiones informadas de manera que se mitigue por eventos de inundación, se proteja la vida y propiedad, así como la inversión pública y privada.

El propósito de estos mapas es asesorar sobre como las nuevas construcciones, reconstrucciones y mejoras sustanciales deben ser elevadas o diseñadas para minimizar los daños por inundaciones futuras, en base a la mejor información disponible. Además, busca orientar a la ciudadanía sobre el riesgo a inundación al que pudiera estar expuesto.

Para información sobre cómo estos mapas fueron desarrollados y sus limitaciones, puede acceder al documento "Puerto Rico Advisory Data and Products" disponible en la página web de la Junta de Planificación.

Recuerde que antes de una construcción, usted debe consultar con los funcionarios de las oficinas municipales de permiso, las oficinas regionales de permisos (OGPe) o con la Junta de Planificación para determinar las elevaciones obligatorias para su hogar, negocio u otra propiedad.

UTILIZACIÓN

Las elevaciones mostradas en estos mapas son consideradas la mejor información disponible hasta que se desarrollen Mapas de Tasas del Seguro de Inundación (FIRM, por sus siglas en inglés) actualizados.

Estos mapas NO han sido desarrollados para tomar determinaciones respecto al seguro de inundación del Programa Nacional del Seguro de Inundación (NFIP, por sus siglas en inglés). Para propósitos del seguro de inundación, se debe hacer referencia a los FIRMs vigentes para Puerto Rico y disponibles en http://msc.fema.gov o en la herramienta MiPR de la Junta de Planificación (http://gis.pr.gov/mipr/)

LEYENDA

- Hidrografía
- Nivel de Inundación Base Recomendado
- Límite de Acción Moderada de la Ola (LiMWA)
- 1% Probabilidad Anual de Inundación
- 0.2% Probabilidad Anual de Inundación
- Límite ABFE

Zona Inundable

- 0.2% Probabilidad Anual de Inundacion
- A
- AE
- AO
- A Costera
- VE
- Cauce Mayor
- Panel
- Límite Municipal
- Límite de Barrio

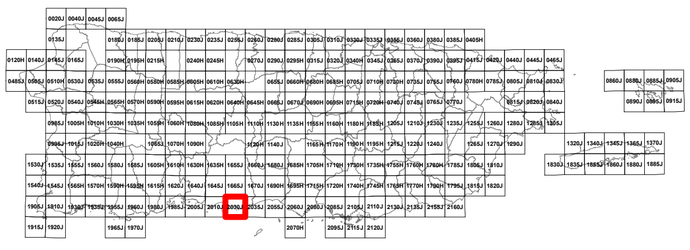
NOTAS

1. Elevaciones medidas en metros relativos al Puerto Rico Vertical Datum de 2002 (PRVD02)
2. Zonas idientificadas como A costera o áreas afectadas por acción moderada de las olas (MoWA, por sus siglas en inglés) muestran las áreas donde la altura de la ola fluctúa entre 1.5 a 3 pies, Nueva construcción o mejora sustancial en estas zonas debe utilizar los parámetros establecidos para las zonas VE en el Reglamento de Planificación Núm, 13, vigente, Reglamento sobre áreas Especiales de Riesgo a Inundación. Puede accederlo en el siguiente enlace http://jp.pr.gov/Reglamentos/Relamentos-Planificacioón.

Panel: 72000C2030J Fecha de efectividad: 13/abril/2018

Fecha de revisión del geodato 12/mayo/2018

MAPA DE REFERENCIA



Fecha de mapa (pdf): 25/mayo/2018

FEMA

0 20 40 80 120 160 Kilómetros

Community Status Book Report

Communities Participating in the National Flood Program



PUERTO RICO

CID	Community Name	County	Init FHBM Identified	Init FIRM Identified	Curr Eff Map Date	Reg-Emer Date	Tribal	CRS Entry Date	Curr Eff Date	Curr Class	% Disc SFHA	% Disc Non SFHA
720034#	AUTONOMOUS MUNICIPALITY OF GUAYNABO	GUAYNABO MUNICIPIO		11/18/09	11/18/09	02/01/13	No					
720100#	BAYAMON, MUNICIPALITY OF	BAYAMO'N MUNICIPIO		08/01/78	11/18/09	08/01/78	No					
	USE THE COMMONWEALTH OF PUERTO RICO [720000] FIRM											
720102J	CAROLINA, MUNICIPALITY OF	CAROLINA MUNICIPIO		11/18/09	11/18/09	05/22/15	No					
720101#	PONCE, MUNCIPALITY OF	PONCE MUNICIPIO		08/01/78	11/18/09	09/24/99	No	10/01/09	10/01/09	9	05%	05%
	USE PUERTO RICO FIRM (720000) DATED 6-2-99, PANELS 160, 217, 218, 219, 221, 222,223,224,276,277,281,282, and 284.											
720000#	PUERTO RICO, COMMONWEALTH OF	ADJUNTAS MUNICIPIO		08/01/78	11/18/09	08/01/78	No					
	All areas within the Commonwealth of Puerto Rico are eligible for NFIP policies. If the property is not located in one of the 4 jurisdictions listed above use this CID.											

Summary:

Total In Flood Program	5
Total In Emergency Program	0
Total In the Regular Program	5
Total In Regular Program with No Special Flood Hazard	0
Total In Regular Program But Minimally Flood Prone	0

Legend:

(E)	Indicates Entry In Emergency Program
NSFHA	No Special Flood Hazard Area - All Zone C
(>)	Date of Current Effective Map is after the Date of This Report
N/A	Not Applicable At This Time
(S)	Suspended Community
(W)	Withdrawn Community
(M)	No Elevation Determined - All Zone A, C and X
(L)	Original FIRM by Letter - All Zone A, C and X

Submission Packet

From: SEGUROS SANTIAGO RAMOS, INC, P377 SEGUROS SANTIAGO RAMOS, INC
To: UNIVERSAL INSURANCE COMPANY
PO BOX 71338
SAN JUAN, PR 00936-8438

Phone: (787) 706-7372

Regarding Application Tracking Number: 1500010472 - TIBER HEALTH PUBLIC BENEFIT CORP

The following documentation is required before the policy can be issued and may be directly uploaded to the policy by accessing the website.

Electronic Application:

☐ Full Annual Premium payment.

Online payments can be submitted using either of the following payment methods:

- Credit Card
- Electronic Check

If the payment is mailed, a copy of the application must be provided with the check.

Elevation Certificate Requires Review

- Elevation Certificate
- Building Photographs that meet the following requirements:
  - Minimum of two photographs must be provided.
  - The date the photographs were taken must be provided.
  - The photographs must have been taken within 90 days from the date the premium is submitted.
  - The photographs must show the front and back of the building being insured.
  - The photographs must be at least 3"x3" and provide a clear image of the building.
  - For buildings with split level or multi-level areas at ground level, two additional photographs are required.

Replacement Cost Requires Review

Documentation verifying the replacement cost value for the building (including the cost of the foundation) must be submitted. Supporting documentation may include a recent property valuation report stating the value of the building and its foundation on a Replacement Cost Value basis.

UNIVERSAL
Insurance

SEGUROS SANTIAGO RAMOS, INC
PO BOX 331110
PONCE, PR 00733

Agency:
SEGUROS SANTIAGO RAMOS, INC
PO BOX 331110
PONCE,PR 00733

TIBER HEALTH PUBLIC BENEFIT CORP PONCE CAMPUS DEVELOPMENT, LLC - BUILDING Q

PO BOX 7004
PONCE, PR 00732

Agent:
P377 SEGUROS SANTIAGO RAMOS, INC
Phone Number: (787) 841-0384
Email: RICARDO.RAMOS@AYA.YALE.EDU

New Application Invoice

Application Number : 1500010472
Policy Expiration Date : 03/17/2024
Application ID : 000014533992
Billing ID : 000181729893

Insured Property Location :
URB ZONA INDUSTRIAL REPARADA
291 CALLE MONTERREY
PONCE, PR 00716-0376

	Coverage	Deductible
Building	$500,000	$1,250
Contents	$0	$0

Payment Options :

Premium Total Due : $3,249.00

- **ACH or Credit Card :** Call our Payment Processing Center at (787) 706-7372.
- **Check :** Follow the instructions noted on the bottom of this invoice.
  Please don't forget to include the application number on your check.
- **On-Line :** Visit https://universalpr.manageflood.com and select "Pay New Application Online."

Please be aware that this application is subject to a full underwriting review of all documentation and rates may change based on that review.

IF PAYING BY CHECK PLEASE DETACH HERE AND SEND THIS PORTION WITH YOUR PAYMENT.

UNIVERSAL
Insurance

Insured Name : TIBER HEALTH PUBLIC BENEFIT CORP
Effective Date : 03/17/2023
Application No : 1500010472
Application ID : 000014533992
Billing ID : 000181729893

To pay by check or money order :

- Make payment for the exact premium amount due.
- Full payment is required.
- Write your application number on your check.
- Mail this stub and the payment to the address below.

Amount Enclosed : $ ☐☐☐☐☐☐☐.00

Make check payable to :
UNIVERSAL INSURANCE COMPANY
PO BOX 71338
SAN JUAN, PR 00936-8438

000014533992 000181729893 1

UNIVERSAL Insurance

SEGUROS SANTIAGO RAMOS, INC
PO BOX 331110
PONCE, PR 00733

Standard Flood Insurance Policy Application

General Property Form

Date	Type	Application Number	Effective Date	Expiration Date	Waiting Period
02/15/2023	New	1500010472	03/17/2023	03/17/2024	Standard 30 Day Wait

Insured Name(s)	Mailing Address and Phone	Property Address	Agency Name, Address, and Phone
TIBER HEALTH PUBLIC BENEFIT CORP PONCE CAMPUS DEVELOPMENT, LLC - BUILDING Q	PO BOX 7004 PONCE, PR 00732 Home Phone: Work Phone: Cell Phone: N/A Email: N/A	URB ZONA INDUSTRIAL REPARADA 291 CALLE MONTERREY PONCE, PR 00716-0376 Property Address Type:	SEGUROS SANTIAGO RAMOS, INC PO BOX 331110 PONCE, PR 00733 Email: RICARDO.RAMOS@AYA.YALE.EDU Phone Number: 787-841-0384 Agent Name: P377 SEGUROS SANTIAGO RAMOS, INC

Applicant Type: Business
Other Policy Number:
Prior Policy Number:
Prior Company Name:
Prior Company NAIC:
Renewal Billing: Insured
Potential Duplicate Policy: N/A

1st Mortgagee	2nd Mortgagee	Additional Interest	Disaster Agency
			Phone Number:
Phone Number:	Phone Number:	Phone Number:	Fax Number:
Fax Number:	Fax Number:	Fax Number:	Loan Number:
Loan Number:	Loan Number:	Loan Number:	Case Number:

Current Community Information		Prior Community Information	
Community Name:	PONCE, MUNCIPALITY OF	Community Number:	N/A
Community Number:	720101	Map Panel:	N/A
Map Panel:	2030	Map Panel Suffix:	N/A
Map Panel Suffix:	J	Flood Zone:	N/A
Current Flood Zone:	AO	FIRM Date:	N/A
FIRM Date:	08/01/1978	Has This Property Been Remapped?:	No
Program:	Regular Direct Entry	Map Revision Date:	N/A
Program Status:	Active and participating		
County:	N/A		
Current Map Date:	11/18/2009		
Rating Map Date:	11/18/2009		

Construction/Substantial Improvement Date		Property Ownership Information	
Date of Original Construction:	01/01/1990	Coverage for Owner or Tenant:	Tenant
Building Substantially Improved:	No	Building a Rental Property:	Yes
Building is on list of Historic Buildings:	N/A	Is the policyholder a condominium association?	No
Post-FIRM Construction:	Yes		
Substantial Improvement Date:	N/A		

Prior NFIP Coverage			
Did the applicant purchase the building within the last 365 days?	No	Did the applicant have a prior NFIP policy for the building that lapsed?	N/A
Prior Owner Policy Number:	N/A	Was the policy receiving a Pre-FIRM or Newly Mapped discount when it lapsed?	N/A
Prior Owner Company Name:	N/A	Did the policy lapse for a valid reason?	N/A

Building Information

Building Located In CBRS/OPA:	No	Building Located Over Water:	Not Over Water
CBRS/OPA Designation Date:	N/A	Building in Course of Construction:	No
If the building is in the buffer zone, did USFWS issue an official determination showing the building outside the system unit or OPA?	N/A	Building Construction Type:	None
		Construction Type Description:	N/A
		Estimated Building Replacement Cost:	$603,646
Is the building use consistent with the protected area purpose?	N/A	Replacement Cost Value Returned By FEMA:	N/A
Prior NFIP Claims:	N/A	Total sq. footage of the building:	4,290
Building Severe Repetitive Loss (SRL) Property:	No	Total # of floors in building:	1
		What floor is the unit located on?	N/A
Property on NFIP SRL list, document(s) provided indicating non-SRL:	N/A	Number of Detached Structures:	0
		Building Located on Federal Land:	No
Coverage Req'd for Disaster Assistance:	No	Is the policy force-placed by the lender?	N/A

Occupancy Information

Occupancy Type:	Non-Residential Building	Number Of Units In Building:	1
		Is the insured a nonprofit entity?	No
Is this the Applicant's Primary Residence:	No	Building Description:	Other Non-Residential Type
		"Other" Description:	BUILDING Q
Is the insured a small business with less than 100 employees?	No		

Foundation Information

Foundation:	Slab on grade (non-elevated)
Enclosure/Crawlspace Size:	N/A
Number of Elevators:	N/A

Mobilehome/Travel Trailer Information

On Permanent Foundation:	N/A
Anchored By:	none
Serial Number:	N/A

Venting Information

Enclosure/Crawlspace Has Valid Flood Openings:	No	Area of Permanent Openings (Sq. In.):	0
		Has Engineered Openings:	No
Number of Openings:	0		

Machinery, Equipment and Appliances

Does the building contain appliances?	No	Does the building contain machinery and equipment servicing the building?	Yes
Are all appliances elevated above the first floor?	N/A	Is all machinery and equipment servicing the building, located inside or outside the building, elevated above the first floor?	No

Elevation Certificate Information

Elevation Certificate Section Used:	Section C	Flood Proofing Certificate:	N/A
Elevation Certificate Date:	08/17/2022	Flood Proofing Elevation:	N/A
Diagram Number:	1B	Lowest (Rating) Floor Elevation:	18.3
Top of Bottom Floor:	18.3	Elevation Certificate First Floor Height:	1.9
Top of Next Higher Floor:	N/A	FEMA First Floor Height:	1.9
Lowest Adjacent Grade (LAG):	16.4	First Floor Height Method Used:	EC

Premium Calculations

RATING ENGINE	COVERAGE	DEDUCTIBLE
BUILDING	$500,000	$1,250
CONTENTS	$0	$0

COMPONENTS OF THE TOTAL AMOUNT DUE

BUILDING PREMIUM:	$2,574.00
CONTENTS PREMIUM:	$0.00
INCREASED COST OF COMPLIANCE (ICC) PREMIUM:	$49.00
MITIGATION DISCOUNT:	($0.00)
COMMUNITY RATING SYSTEM REDUCTION:	($121.00)
FULL RISK PREMIUM:	$2,502.00
ANNUAL INCREASE CAP DISCOUNT:	($0.00)
STATUTORY DISCOUNTS:	($0.00)
DISCOUNTED PREMIUM:	$2,502.00
RESERVE FUND ASSESSMENT:	$450.00
HFIAA SURCHARGE:	$250.00
FEDERAL POLICY FEE:	$47.00
PROBATION SURCHARGE:	$0.00
TOTAL AMOUNT DUE:	$3,249.00

A separate flood insurance policy is required for each building with the following exception: Under the Standard Flood Insurance Policy Dwelling Form, appurtenant structure coverage may apply to a detached garage at the described location provided the detached garage is not used for dwelling, business, or farming purposes. Coverage is limited to 10% of the limit of liability on the dwelling and reduces the building limit of liability.

The above statements are correct to the best of my knowledge. I understand that any fraudulent statements may be punishable by fine or imprisonment under the applicable federal law. The Federal EmergencyManagement Agency (FEMA) provides flood insurance under the terms of the National Flood Insurance Act of 1968 and its Amendments, and Title 44 of the Code of Federal Regulations. The premium shown above must comply with FEMA rules and rates and may be revised in accordance with applicable policy provisions.

Signatures

Signature of Agent/Producer	02/15/2023 Date	Signature of Insured (Optional)

This policy is not subject to cancellation for reasons other than those set forth in the National Flood Insurance Program rules and regulations. In matters involving billing disputes, cancellation is not available other than for billing processing error or fraud.

PDF Creation: 02/15/2023 10:49 AM Pacific Standard Time

Application Produced For: UNIVERSAL INSURANCE COMPANY

NOTICE OF OUR PRIVACY POLICY

We at UNIVERSAL GROUP take seriously our responsibility of maintaining the privacy of our customers.

Because we value our relationship with you as our customer, we will not sell your information nor share it with any entity apart from the affiliated companies that belong to **UNIVERSAL GROUP.**

The law requires of us that every year we notify our customers about our Privacy Policy.

Your right to privacy has always been very important to us at **UNIVERSAL GROUP**. We have established such physical, electronic and organizational safeguards as to protect our customers' information.

We are continuously reviewing our policies and practices, supervising our computer systems and carrying out effectiveness test of our security in order to duly protect our customers' information.

A. Collected Information:

Such personal information that may include name, address and telephone, employment history, financial status and the history of health and claims to other insurance companies.

The information is collected from your insurance application or from other transactions made with us. We also receive it from consumer report agencies, public records and from agencies that also collect data that you have previously provided.

If your relationship with us ends, your personal information will remain protected, as required by local and federal laws and according to our practices, as described in this notice.

UNIVERSAL GROUP will not share nor use information about your health status included in our records without your previous written authorization or as permitted by law and federal and state rules that apply to us. When you have signed and dated your consent form, which we will send whenever you request it, it will be valid for one year, but you can revoke it at any moment by a written communication signed and dated for such purposes.

B. With whom do we share information:

We will only share your personal information with our affiliates in the strictest confidentiality. You may receive some benefits including, but not limited to, information about new products, easy access to information about your insurance policies, etc.

Nevertheless, as permitted by law and without previous authorization, we may provide information about you from our records to people or organizations such as: agencies that offer support related to insurance; agencies that perform actuarial studies or other studies; other insurance companies in order to conduct their functions regarding insurance transactions you have requested; ruling authorities or of public order; and to people that request information according to a legal procedure or court order from an administrative agency. In such cases, we will only share necessary information to accomplish the purposes above mentioned. In addition to this, we also demand from such agencies that they maintain the confidentiality of the information and limit its use strictly for the reasons that they were provided for.

Subject to the Opt-Out Right, **UNIVERSAL GROUP** may share your personal information with third parties as described in the following:

• Financial services providers, such as banks, mortgage companies, mortgage brokers, agencies that offer consumer information, insurance companies, investment consultants and similar companies, real estate agents, brokers and appraisers.

• Non financial companies, such as discount clubs for consumer purchases, consumer products companies and consumer services companies.

• Others, such as voluntary organizations and associations.

Even if you submit your Opt-Out Right, we may share your information with some third parties, as stated by law or applicable rule. This may include, but not limited to, sharing information to use with your insurance application form with our lawyers, accountants, auditors, rulers, counselors and consultants in the quality control area, if we suspect fraud or to protect our rights related to your insurance.

Your Opt-Out Right will only apply to the insurance number or specific account that you provide us in your Opt-Out Request Form. Your Opt-Out Right will only apply to you and any other co-signer.

C. Security measures agreed upon to ensure the privacy of information:

We have established physical, electronic and organizational safeguards in order to protect our customers' information.

We have limited the access to information to those employees that need to provide services and products. Our employees are oriented about the need to comply with our Privacy Policy and we take disciplinary action against those employees that do not comply with it.

D. Opt-Out Right:

If you don't want us to share such personal information that is not public about you to non-affiliated third parties, you may execute your Opt-Out Right and ask us not to do so (except what is permitted by law and stated above). You may do so by mailing us the following Opt-Out Request Form to the following address: Customer Service Department P.O. Box 71338, San Juan, Puerto Rico 00936-8438.

E. Modifications:

We reserve the right to modify or substitute this Privacy Policy at any moment. If we make significant changes, we will provide our current customers with a reviewed notice that describes our new practices.

OPT-OUT REQUEST FORM

First Name: _____ Initial: ____ Last Name: _____ Maiden's Name: _____ Mailing Address: _____

Policy Number: _____

E-mail: _____

It may take approximately thirty (30) days for this application form to be processed.
All agreement terms and conditions that you have with **UNIVERSAL GROUP** will remain unaltered.

Signature: _____ Date: _____

Please do not include any other type of correspondence when you return this application.

NOTIFICACIÓN DE NUESTRA POLÍTICA DE PRIVACIDAD

En **UNIVERSAL GROUP** tomamos muy en serio nuestra responsabilidad de mantener la privacidad de la información personal de nuestros clientes.

Porque valoramos la relación que tenemos con usted como cliente nuestro, no vendemos información suya ni la compartimos con entidad fuera de la familia de compañías que forman parte de **UNIVERSAL GROUP**.

La ley nos requiere que cada año estemos notificando nuestra política de privacidad.

Su derecho a la privacidad siempre ha sido importante para **UNIVERSAL GROUP.** Hemos implantado salvaguardas físicas, electrónicas y organizacionales para proteger la información de nuestros clientes.

Continuamente revisamos nuestras políticas y prácticas, supervisamos nuestros sistemas de computadoras y hacemos pruebas de la efectividad de nuestra seguridad para que la información sobre nuestros clientes esté adecuadamente protegida.

A. Información Recopilada:

Información personal que puede incluir el nombre, dirección y teléfono, historial de empleo, circunstancias financieras e historial de salud y de reclamaciones a aseguradoras.

Esta información se obtiene de su solicitud de seguro o de otras transacciones que usted realiza con nosotros. También la obtenemos de agencias que ofrecen información sobre el consumidor, de récord públicos y de agencias que recopilan datos que usted nos ha provisto previamente.

Si su relación con nosotros termina, su información personal permanecerá protegida, según lo requieren las leyes locales y federales y de acuerdo con nuestras prácticas, según se han descrito en esta notificación.

UNIVERSAL GROUP no divulgará ni utilizará información sobre su estado de salud que obre en nuestros récords sin que medie su previa autorización escrita o sea permitido de conformidad con las leyes y reglamentos federales y estatales que nos aplican. Cuando usted haya firmado y fechado el formulario para dar su consentimiento, el cual le enviaremos cuando nos lo solicite, éste será válido por un año, pero usted podrá revocarlo en cualquier momento mediante comunicación escrita firmada y fechada a esos efectos.

B. Con quién compartimos la información:

Sólo compartimos su información personal con nuestras subsidiarias lo que haremos con la más estricta confidencialidad. Podrá recibir algunos beneficios incluyendo, pero sin limitarse a, información sobre productos nuevos, fácil acceso a información sobre sus pólizas de seguros, etc.

Sin embargo, según la ley y sin su autorización previa, podemos proveer información sobre usted que obre en nuestros récords a personas u organizaciones tales como: personas que realizan negocios con nosotros; organizaciones que brindan apoyo relacionado con seguros; organizaciones que realizan estudios actuariales u otros estudios; otras compañías aseguradoras para que puedan efectuar sus funciones en transacciones de seguros que usted haya solicitado; autoridades reglamentadoras o del orden público; y a personas que soliciten información de acuerdo con un requerimiento judicial o por orden de un tribunal o de una agencia administrativa. En este caso, sólo compartimos la información necesaria para lograr los propósitos antes mencionados. Además, le requerimos a dichas entidades que mantengan la confidencialidad de la información y limiten su utilización exclusivamente a los fines para los cuales fue provista.

Sujeto a su Derecho de Exclusión, **UNIVERSAL GROUP** puede divulgar su información personal a terceras personas como las que se describen a continuación:

• Proveedores de servicios financieros, tales como bancos, compañías hipotecarias, corredores hipotecarios, agencias que ofrecen información sobre el consumidor, compañías de seguros, consejeros de inversiones y compañías similares, agentes de bienes raíces, corredores y tasadores.

• Compañías no financieras, tales como clubes de descuento para compras de los consumidores, compañías de productos al consumidor y compañías de servicios al consumidor.

• Otras, tales como organizaciones de voluntarios y asociaciones.

Aunque usted ejerza su Derecho de Exclusión, nosotros podemos compartir información con ciertos terceros, según lo permite la ley o la reglamentación aplicable. Esto puede incluir, pero no se limita a, divulgar información para atender su solicitud de seguros, a nuestros abogados, contadores, auditores, reguladores, consejeros y consultores en el área de control de calidad, si sospechamos que ha habido fraude o para proteger nuestros derechos con relación a sus seguros.

Su Derecho de Exclusión aplicará solamente al número de seguro o cuenta específica que nos provea en el formulario de Solicitud de Exclusión. Su Derecho de Exclusión aplicará a usted y a cualquier co-firmante de la solicitud.

C. Medidas de seguridad con que contamos para asegurar la privacidad de la información:

Hemos implantado salvaguardas físicas, electrónicas y organizacionales para proteger la información de nuestros clientes.

Limitamos el acceso a información a aquellos empleados que la necesitan para proveerle servicios y productos. Nuestros empleados son orientados sobre la necesidad de cumplir con nuestra Política de Privacidad y tomamos medidas disciplinarias para imponerle responsabilidad a los empleados que no cumplan con la misma.

D. Derecho a Exclusión:

Si usted no quiere que divulguemos información personal suya que no es pública, sobre usted a terceros no afiliados, usted puede ejercer su Derecho de Exclusión y solicitarnos que no lo hagamos (excepto lo permitido por ley y según lo antes descrito). Usted podrá hacerlo remitiéndonos el formulario de Exclusión de Divulgación que se le incluye, "Solicitud de Exclusión" a la siguiente dirección: Departamento de Servicio al Cliente PO Box 71338, San Juan, Puerto Rico 00936-8438.

E. Reserva:

Nos reservamos el derecho de modificar o sustituir esta política de privacidad en cualquier momento. Si le hacemos cambios materiales proveeremos a nuestros clientes actuales una notificación revisada que describa nuestra nueva práctica.

SOLICITUD DE EXCLUSIÓN

Nombre: _____ Inicial: ____ Apellido Paterno: _____ Apellido Materno: _____

Dirección Postal: _____

Número de Póliza: _____

Dirección electrónica: _____

Esta solicitud toma alrededor de (30) días en procesarse.
Todos los términos y las condiciones de los acuerdos que usted mantiene con **UNIVERSAL GROUP** permanecen inalterados.

Firma: _____ Fecha: _____

No incluya ninguna otra correspondencia cuando devuelva esta solicitud.

Submission Packet

From: SEGUROS SANTIAGO RAMOS, INC, P377 SEGUROS SANTIAGO RAMOS, INC
To: UNIVERSAL INSURANCE COMPANY
PO BOX 71338
SAN JUAN, PR 00936-8438

Phone: (787) 706-7372

Regarding Application Tracking Number: 1500010473 - TIBER HEALTH PUBLIC BENEFIT CORP

The following documentation is required before the policy can be issued and may be directly uploaded to the policy by accessing the website.

Electronic Application:

☐ Full Annual Premium payment.

Online payments can be submitted using either of the following payment methods:

- Credit Card
- Electronic Check

If the payment is mailed, a copy of the application must be provided with the check.

Elevation Certificate Requires Review

- Elevation Certificate
- Building Photographs that meet the following requirements:
  - Minimum of two photographs must be provided.
  - The date the photographs were taken must be provided.
  - The photographs must have been taken within 90 days from the date the premium is submitted.
  - The photographs must show the front and back of the building being insured.
  - The photographs must be at least 3"x3" and provide a clear image of the building.
  - For buildings with split level or multi-level areas at ground level, two additional photographs are required.

Replacement Cost Requires Review

Documentation verifying the replacement cost value for the building (including the cost of the foundation) must be submitted. Supporting documentation may include a recent property valuation report stating the value of the building and its foundation on a Replacement Cost Value basis.

UNIVERSAL
Insurance

SEGUROS SANTIAGO RAMOS, INC
PO BOX 331110
PONCE, PR 00733

Agency:
SEGUROS SANTIAGO RAMOS, INC
PO BOX 331110
PONCE,PR 00733

TIBER HEALTH PUBLIC BENEFIT CORP PONCE CAMPUS DEVELOPMENT, LLC - BUILDING R & S

PO BOX 7004
PONCE, PR 00732

Agent:
P377 SEGUROS SANTIAGO RAMOS, INC
Phone Number: (787) 841-0384
Email: RICARDO.RAMOS@AYA.YALE.EDU

New Application Invoice

Application Number : 1500010473
Policy Expiration Date : 03/17/2024
Application ID : 000014534034
Billing ID : 000181730066

Insured Property Location :
URB ZONA INDUSTRIAL REPARADA
291 CALLE MONTERREY
PONCE, PR 00716-0376

	Coverage	Deductible
Building	$500,000	$1,250
Contents	$0	$0

Payment Options :

Premium Total Due : $3,871.00

- **ACH or Credit Card :** Call our Payment Processing Center at (787) 706-7372.
- **Check :** Follow the instructions noted on the bottom of this invoice.
  Please don't forget to include the application number on your check.
- **On-Line :** Visit https://universalpr.manageflood.com and select "Pay New Application Online."

Please be aware that this application is subject to a full underwriting review of all documentation and rates may change based on that review.

IF PAYING BY CHECK PLEASE DETACH HERE AND SEND THIS PORTION WITH YOUR PAYMENT.

UNIVERSAL
Insurance

Insured Name : TIBER HEALTH PUBLIC BENEFIT CORP
Effective Date : 03/17/2023
Application No : 1500010473
Application ID : 000014534034
Billing ID : 000181730066

To pay by check or money order :

- Make payment for the exact premium amount due.
- Full payment is required.
- Write your application number on your check.
- Mail this stub and the payment to the address below.

Amount Enclosed : $ ☐☐☐☐☐☐☐.00

Make check payable to :
UNIVERSAL INSURANCE COMPANY
PO BOX 71338
SAN JUAN, PR 00936-8438

000014534034 000181730066 3

UNIVERSAL Insurance

SEGUROS SANTIAGO RAMOS, INC
PO BOX 331110
PONCE, PR 00733

Standard Flood Insurance Policy Application

General Property Form

Date	Type	Application Number	Effective Date	Expiration Date	Waiting Period
02/15/2023	New	1500010473	03/17/2023	03/17/2024	Standard 30 Day Wait

Insured Name(s)	Mailing Address and Phone	Property Address	Agency Name, Address, and Phone
TIBER HEALTH PUBLIC BENEFIT CORP PONCE CAMPUS DEVELOPMENT, LLC - BUILDING R & S	PO BOX 7004 PONCE, PR 00732 Home Phone: Work Phone: Cell Phone: N/A Email: N/A	URB ZONA INDUSTRIAL REPARADA 291 CALLE MONTERREY PONCE, PR 00716-0376 Property Address Type:	SEGUROS SANTIAGO RAMOS, INC PO BOX 331110 PONCE, PR 00733 Email: RICARDO.RAMOS@AYA.YALE.EDU Phone Number: 787-841-0384 Agent Name: P377 SEGUROS SANTIAGO RAMOS, INC

Applicant Type: Business
Other Policy Number:
Prior Policy Number:
Prior Company Name:
Prior Company NAIC:
Renewal Billing: Insured
Potential Duplicate Policy: N/A

1st Mortgagee	2nd Mortgagee	Additional Interest	Disaster Agency
			Phone Number:
Phone Number:	Phone Number:	Phone Number:	Fax Number:
Fax Number:	Fax Number:	Fax Number:	Loan Number:
Loan Number:	Loan Number:	Loan Number:	Case Number:

Current Community Information		Prior Community Information	
Community Name:	PONCE, MUNCIPALITY OF	Community Number:	N/A
Community Number:	720101	Map Panel:	N/A
Map Panel:	2030	Map Panel Suffix:	N/A
Map Panel Suffix:	J	Flood Zone:	N/A
Current Flood Zone:	AO	FIRM Date:	N/A
FIRM Date:	08/01/1978	Has This Property Been Remapped?:	No
Program:	Regular Direct Entry	Map Revision Date:	N/A
Program Status:	Active and participating		
County:	N/A		
Current Map Date:	11/18/2009		
Rating Map Date:	11/18/2009		

Construction/Substantial Improvement Date		Property Ownership Information	
Date of Original Construction:	01/01/1990	Coverage for Owner or Tenant:	Tenant
Building Substantially Improved:	No	Building a Rental Property:	Yes
Building is on list of Historic Buildings:	N/A	Is the policyholder a condominium association?	No
Post-FIRM Construction:	Yes		
Substantial Improvement Date:	N/A		

Prior NFIP Coverage			
Did the applicant purchase the building within the last 365 days?	No	Did the applicant have a prior NFIP policy for the building that lapsed?	N/A
Prior Owner Policy Number:	N/A	Was the policy receiving a Pre-FIRM or Newly Mapped discount when it lapsed?	N/A
Prior Owner Company Name:	N/A	Did the policy lapse for a valid reason?	N/A

Building Information

Building Located In CBRS/OPA:	No	Building Located Over Water:	Not Over Water
CBRS/OPA Designation Date:	N/A	Building in Course of Construction:	No
If the building is in the buffer zone, did USFWS issue an official determination showing the building outside the system unit or OPA?	N/A	Building Construction Type:	None
		Construction Type Description:	N/A
		Estimated Building Replacement Cost:	$2,179,634
Is the building use consistent with the protected area purpose?	N/A	Replacement Cost Value Returned By FEMA:	N/A
Prior NFIP Claims:	N/A	Total sq. footage of the building:	27,225
Building Severe Repetitive Loss (SRL) Property:	No	Total # of floors in building:	1
		What floor is the unit located on?	N/A
Property on NFIP SRL list, document(s) provided indicating non-SRL:	N/A	Number of Detached Structures:	0
		Building Located on Federal Land:	No
Coverage Req'd for Disaster Assistance:	No	Is the policy force-placed by the lender?	N/A

Occupancy Information

Occupancy Type:	Non-Residential Building	Number Of Units In Building:	2
		Is the insured a nonprofit entity?	No
Is this the Applicant's Primary Residence:	No	Building Description:	Other Non-Residential Type
		"Other" Description:	BUILDING R AND BUILDING S
Is the insured a small business with less than 100 employees?	No		

Foundation Information

Foundation:	Slab on grade (non-elevated)
Enclosure/Crawlspace Size:	N/A
Number of Elevators:	N/A

Mobilehome/Travel Trailer Information

On Permanent Foundation:	N/A
Anchored By:	none
Serial Number:	N/A

Venting Information

Enclosure/Crawlspace Has Valid Flood Openings:	No	Area of Permanent Openings (Sq. In.):	0
		Has Engineered Openings:	No
Number of Openings:	0		

Machinery, Equipment and Appliances

Does the building contain appliances?	No	Does the building contain machinery and equipment servicing the building?	Yes
Are all appliances elevated above the first floor?	N/A	Is all machinery and equipment servicing the building, located inside or outside the building, elevated above the first floor?	No

Elevation Certificate Information

Elevation Certificate Section Used:	Section C	Flood Proofing Certificate:	N/A
Elevation Certificate Date:	08/17/2022	Flood Proofing Elevation:	N/A
Diagram Number:	1B	Lowest (Rating) Floor Elevation:	20.9
Top of Bottom Floor:	20.9	Elevation Certificate First Floor Height:	3.2
Top of Next Higher Floor:	N/A	FEMA First Floor Height:	3.2
Lowest Adjacent Grade (LAG):	17.7	First Floor Height Method Used:	EC

Premium Calculations

RATING ENGINE	COVERAGE	DEDUCTIBLE
BUILDING	$500,000	$1,250
CONTENTS	$0	$0

COMPONENTS OF THE TOTAL AMOUNT DUE

BUILDING PREMIUM:	$3,119.00
CONTENTS PREMIUM:	$0.00
INCREASED COST OF COMPLIANCE (ICC) PREMIUM:	$59.00
MITIGATION DISCOUNT:	($0.00)
COMMUNITY RATING SYSTEM REDUCTION:	($149.00)
FULL RISK PREMIUM:	$3,029.00
ANNUAL INCREASE CAP DISCOUNT:	($0.00)
STATUTORY DISCOUNTS:	($0.00)
DISCOUNTED PREMIUM:	$3,029.00
RESERVE FUND ASSESSMENT:	$545.00
HFIAA SURCHARGE:	$250.00
FEDERAL POLICY FEE:	$47.00
PROBATION SURCHARGE:	$0.00
TOTAL AMOUNT DUE:	$3,871.00

A separate flood insurance policy is required for each building with the following exception: Under the Standard Flood Insurance Policy Dwelling Form, appurtenant structure coverage may apply to a detached garage at the described location provided the detached garage is not used for dwelling, business, or farming purposes. Coverage is limited to 10% of the limit of liability on the dwelling and reduces the building limit of liability.

The above statements are correct to the best of my knowledge. I understand that any fraudulent statements may be punishable by fine or imprisonment under the applicable federal law. The Federal EmergencyManagement Agency (FEMA) provides flood insurance under the terms of the National Flood Insurance Act of 1968 and its Amendments, and Title 44 of the Code of Federal Regulations. The premium shown above must comply with FEMA rules and rates and may be revised in accordance with applicable policy provisions.

Signatures

Signature of Agent/Producer	02/15/2023 Date	Signature of Insured (Optional)

This policy is not subject to cancellation for reasons other than those set forth in the National Flood Insurance Program rules and regulations. In matters involving billing disputes, cancellation is not available other than for billing processing error or fraud.

PDF Creation: 02/15/2023 10:52 AM Pacific Standard Time

Application Produced For: UNIVERSAL INSURANCE COMPANY

NOTICE OF OUR PRIVACY POLICY

We at UNIVERSAL GROUP take seriously our responsibility of maintaining the privacy of our customers.

Because we value our relationship with you as our customer, we will not sell your information nor share it with any entity apart from the affiliated companies that belong to **UNIVERSAL GROUP.**

The law requires of us that every year we notify our customers about our Privacy Policy.

Your right to privacy has always been very important to us at **UNIVERSAL GROUP**. We have established such physical, electronic and organizational safeguards as to protect our customers' information.

We are continuously reviewing our policies and practices, supervising our computer systems and carrying out effectiveness test of our security in order to duly protect our customers' information.

A. Collected Information:

Such personal information that may include name, address and telephone, employment history, financial status and the history of health and claims to other insurance companies.

The information is collected from your insurance application or from other transactions made with us. We also receive it from consumer report agencies, public records and from agencies that also collect data that you have previously provided.

If your relationship with us ends, your personal information will remain protected, as required by local and federal laws and according to our practices, as described in this notice.

UNIVERSAL GROUP will not share nor use information about your health status included in our records without your previous written authorization or as permitted by law and federal and state rules that apply to us. When you have signed and dated your consent form, which we will send whenever you request it, it will be valid for one year, but you can revoke it at any moment by a written communication signed and dated for such purposes.

B. With whom do we share information:

We will only share your personal information with our affiliates in the strictest confidentiality. You may receive some benefits including, but not limited to, information about new products, easy access to information about your insurance policies, etc.

Nevertheless, as permitted by law and without previous authorization, we may provide information about you from our records to people or organizations such as: agencies that offer support related to insurance; agencies that perform actuarial studies or other studies; other insurance companies in order to conduct their functions regarding insurance transactions you have requested; ruling authorities or of public order; and to people that request information according to a legal procedure or court order from an administrative agency. In such cases, we will only share necessary information to accomplish the purposes above mentioned. In addition to this, we also demand from such agencies that they maintain the confidentiality of the information and limit its use strictly for the reasons that they were provided for.

Subject to the Opt-Out Right, **UNIVERSAL GROUP** may share your personal information with third parties as described in the following:

• Financial services providers, such as banks, mortgage companies, mortgage brokers, agencies that offer consumer information, insurance companies, investment consultants and similar companies, real estate agents, brokers and appraisers.

• Non financial companies, such as discount clubs for consumer purchases, consumer products companies and consumer services companies.

• Others, such as voluntary organizations and associations.

Even if you submit your Opt-Out Right, we may share your information with some third parties, as stated by law or applicable rule. This may include, but not limited to, sharing information to use with your insurance application form with our lawyers, accountants, auditors, rulers, counselors and consultants in the quality control area, if we suspect fraud or to protect our rights related to your insurance.

Your Opt-Out Right will only apply to the insurance number or specific account that you provide us in your Opt-Out Request Form. Your Opt-Out Right will only apply to you and any other co-signer.

C. Security measures agreed upon to ensure the privacy of information:

We have established physical, electronic and organizational safeguards in order to protect our customers' information.

We have limited the access to information to those employees that need to provide services and products. Our employees are oriented about the need to comply with our Privacy Policy and we take disciplinary action against those employees that do not comply with it.

D. Opt-Out Right:

If you don't want us to share such personal information that is not public about you to non-affiliated third parties, you may execute your Opt-Out Right and ask us not to do so (except what is permitted by law and stated above). You may do so by mailing us the following Opt-Out Request Form to the following address: Customer Service Department P.O. Box 71338, San Juan, Puerto Rico 00936-8438.

E. Modifications:

We reserve the right to modify or substitute this Privacy Policy at any moment. If we make significant changes, we will provide our current customers with a reviewed notice that describes our new practices.

OPT-OUT REQUEST FORM

First Name: _____ Initial: ____ Last Name: _____ Maiden's Name: _____ Mailing Address: _____

Policy Number: _____

E-mail: _____

It may take approximately thirty (30) days for this application form to be processed.
All agreement terms and conditions that you have with **UNIVERSAL GROUP** will remain unaltered.

Signature: _____ Date: _____

Please do not include any other type of correspondence when you return this application.

NOTIFICACIÓN DE NUESTRA POLÍTICA DE PRIVACIDAD

En **UNIVERSAL GROUP** tomamos muy en serio nuestra responsabilidad de mantener la privacidad de la información personal de nuestros clientes.

Porque valoramos la relación que tenemos con usted como cliente nuestro, no vendemos información suya ni la compartimos con entidad fuera de la familia de compañías que forman parte de **UNIVERSAL GROUP**.

La ley nos requiere que cada año estemos notificando nuestra política de privacidad.

Su derecho a la privacidad siempre ha sido importante para **UNIVERSAL GROUP.** Hemos implantado salvaguardas físicas, electrónicas y organizacionales para proteger la información de nuestros clientes.

Continuamente revisamos nuestras políticas y prácticas, supervisamos nuestros sistemas de computadoras y hacemos pruebas de la efectividad de nuestra seguridad para que la información sobre nuestros clientes esté adecuadamente protegida.

A. Información Recopilada:

Información personal que puede incluir el nombre, dirección y teléfono, historial de empleo, circunstancias financieras e historial de salud y de reclamaciones a aseguradoras.

Esta información se obtiene de su solicitud de seguro o de otras transacciones que usted realiza con nosotros. También la obtenemos de agencias que ofrecen información sobre el consumidor, de récord públicos y de agencias que recopilan datos que usted nos ha provisto previamente.

Si su relación con nosotros termina, su información personal permanecerá protegida, según lo requieren las leyes locales y federales y de acuerdo con nuestras prácticas, según se han descrito en esta notificación.

UNIVERSAL GROUP no divulgará ni utilizará información sobre su estado de salud que obre en nuestros récords sin que medie su previa autorización escrita o sea permitido de conformidad con las leyes y reglamentos federales y estatales que nos aplican. Cuando usted haya firmado y fechado el formulario para dar su consentimiento, el cual le enviaremos cuando nos lo solicite, éste será válido por un año, pero usted podrá revocarlo en cualquier momento mediante comunicación escrita firmada y fechada a esos efectos.

B. Con quién compartimos la información:

Sólo compartimos su información personal con nuestras subsidiarias lo que haremos con la más estricta confidencialidad. Podrá recibir algunos beneficios incluyendo, pero sin limitarse a, información sobre productos nuevos, fácil acceso a información sobre sus pólizas de seguros, etc.

Sin embargo, según la ley y sin su autorización previa, podemos proveer información sobre usted que obre en nuestros récords a personas u organizaciones tales como: personas que realizan negocios con nosotros; organizaciones que brindan apoyo relacionado con seguros; organizaciones que realizan estudios actuariales u otros estudios; otras compañías aseguradoras para que puedan efectuar sus funciones en transacciones de seguros que usted haya solicitado; autoridades reglamentadoras o del orden público; y a personas que soliciten información de acuerdo con un requerimiento judicial o por orden de un tribunal o de una agencia administrativa. En este caso, sólo compartimos la información necesaria para lograr los propósitos antes mencionados. Además, le requerimos a dichas entidades que mantengan la confidencialidad de la información y limiten su utilización exclusivamente a los fines para los cuales fue provista.

Sujeto a su Derecho de Exclusión, **UNIVERSAL GROUP** puede divulgar su información personal a terceras personas como las que se describen a continuación:

• Proveedores de servicios financieros, tales como bancos, compañías hipotecarias, corredores hipotecarios, agencias que ofrecen información sobre el consumidor, compañías de seguros, consejeros de inversiones y compañías similares, agentes de bienes raíces, corredores y tasadores.

• Compañías no financieras, tales como clubes de descuento para compras de los consumidores, compañías de productos al consumidor y compañías de servicios al consumidor.

• Otras, tales como organizaciones de voluntarios y asociaciones.

Aunque usted ejerza su Derecho de Exclusión, nosotros podemos compartir información con ciertos terceros, según lo permite la ley o la reglamentación aplicable. Esto puede incluir, pero no se limita a, divulgar información para atender su solicitud de seguros, a nuestros abogados, contadores, auditores, reguladores, consejeros y consultores en el área de control de calidad, si sospechamos que ha habido fraude o para proteger nuestros derechos con relación a sus seguros.

Su Derecho de Exclusión aplicará solamente al número de seguro o cuenta específica que nos provea en el formulario de Solicitud de Exclusión. Su Derecho de Exclusión aplicará a usted y a cualquier co-firmante de la solicitud.

C. Medidas de seguridad con que contamos para asegurar la privacidad de la información:

Hemos implantado salvaguardas físicas, electrónicas y organizacionales para proteger la información de nuestros clientes.

Limitamos el acceso a información a aquellos empleados que la necesitan para proveerle servicios y productos. Nuestros empleados son orientados sobre la necesidad de cumplir con nuestra Política de Privacidad y tomamos medidas disciplinarias para imponerle responsabilidad a los empleados que no cumplan con la misma.

D. Derecho a Exclusión:

Si usted no quiere que divulguemos información personal suya que no es pública, sobre usted a terceros no afiliados, usted puede ejercer su Derecho de Exclusión y solicitarnos que no lo hagamos (excepto lo permitido por ley y según lo antes descrito). Usted podrá hacerlo remitiéndonos el formulario de Exclusión de Divulgación que se le incluye, "Solicitud de Exclusión" a la siguiente dirección: Departamento de Servicio al Cliente PO Box 71338, San Juan, Puerto Rico 00936-8438.

E. Reserva:

Nos reservamos el derecho de modificar o sustituir esta política de privacidad en cualquier momento. Si le hacemos cambios materiales proveeremos a nuestros clientes actuales una notificación revisada que describa nuestra nueva práctica.

SOLICITUD DE EXCLUSIÓN

Nombre: _____ Inicial: ____ Apellido Paterno: _____ Apellido Materno: _____

Dirección Postal: _____

Número de Póliza: _____

Dirección electrónica: _____

Esta solicitud toma alrededor de (30) días en procesarse.
Todos los términos y las condiciones de los acuerdos que usted mantiene con **UNIVERSAL GROUP** permanecen inalterados.

Firma: _____ Fecha: _____

No incluya ninguna otra correspondencia cuando devuelva esta solicitud.

Attachment IV: Clean Air Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93

Air Quality (CEST and EA)

General Requirements	Legislation	Regulation
The Clean Air Act is administered by the U.S. Environmental Protection Agency (EPA), which sets national standards on ambient pollutants. In addition, the Clean Air Act is administered by States, which must develop State Implementation Plans (SIPs) to regulate their state air quality. Projects funded by HUD must demonstrate that they conform to the appropriate SIP.	Clean Air Act (42 USC 7401 et seq.) as amended particularly Section 176(c) and (d) (42 USC 7506(c) and (d))	40 CFR Parts 6, 51 and 93
Reference		
https://www.hudexchange.info/environmental-review/air-quality		

Scope of Work

1. **Does your project include new construction or conversion of land use facilitating the development of public, commercial, or industrial facilities OR five or more dwelling units?**

   ☒ Yes

   → *Continue to Question 2.*

   ☐ No

   Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.

Air Quality Attainment Status of Project's County or Air Quality Management District

2. **Is your project's air quality management district or county in non-attainment or maintenance status for any criteria pollutants?**
   Follow the link below to determine compliance status of project county or air quality management district:
   http://www.epa.gov/oaqps001/greenbk/

   ☒ No, project's county or air quality management district is in attainment status for all criteria pollutants

   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.*

☐ Yes, project's management district or county is in non-attainment or maintenance status for one or more criteria pollutants.

Describe the findings:

Puerto Rico Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants (Data is current as of March 31, 2022) does not include project's county nor air management district. (a copy is attached)

→ *Continue to Question 3.*

3. **Determine the <u>estimated emissions levels of your project for each of those criteria pollutants</u> that are in non-attainment or maintenance status on your project area. Will your project exceed any of the *de minimis or threshold* emissions levels of non-attainment and maintenance level pollutants or exceed the screening levels established by the state or air quality management district?**

☐ No, the project will not exceed *de minimis* or threshold emissions levels or screening levels

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Explain how you determined that the project would not exceed de minimis or threshold emissions.*

☐ Yes, the project exceeds *de minimis* emissions levels or screening levels.

→ *Continue to Question 4. Explain how you determined that the project would not exceed de minimis or threshold emissions in the Worksheet Summary.*

4. **For the project to be brought into compliance with this section, all adverse impacts must be mitigated. Explain in detail the exact measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.**

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

The project area is not identified in the Criteria Pollutant Nonattainment Summary Report _ Green Book _ US EPA (attached)
The project must comply with the Construction Permit and Unique Incidental Permit conditions regarding the control of fugitive dust, erosion control and storm water control.
The NEPAssist Tool (accessed on Dec-15-2022) does not identify the site as air emissions facility However, air emissions facilities were identified within the 500 m radius
Therefore, this topic is in compliance with HUD regulations. See Information and/or Figures attached

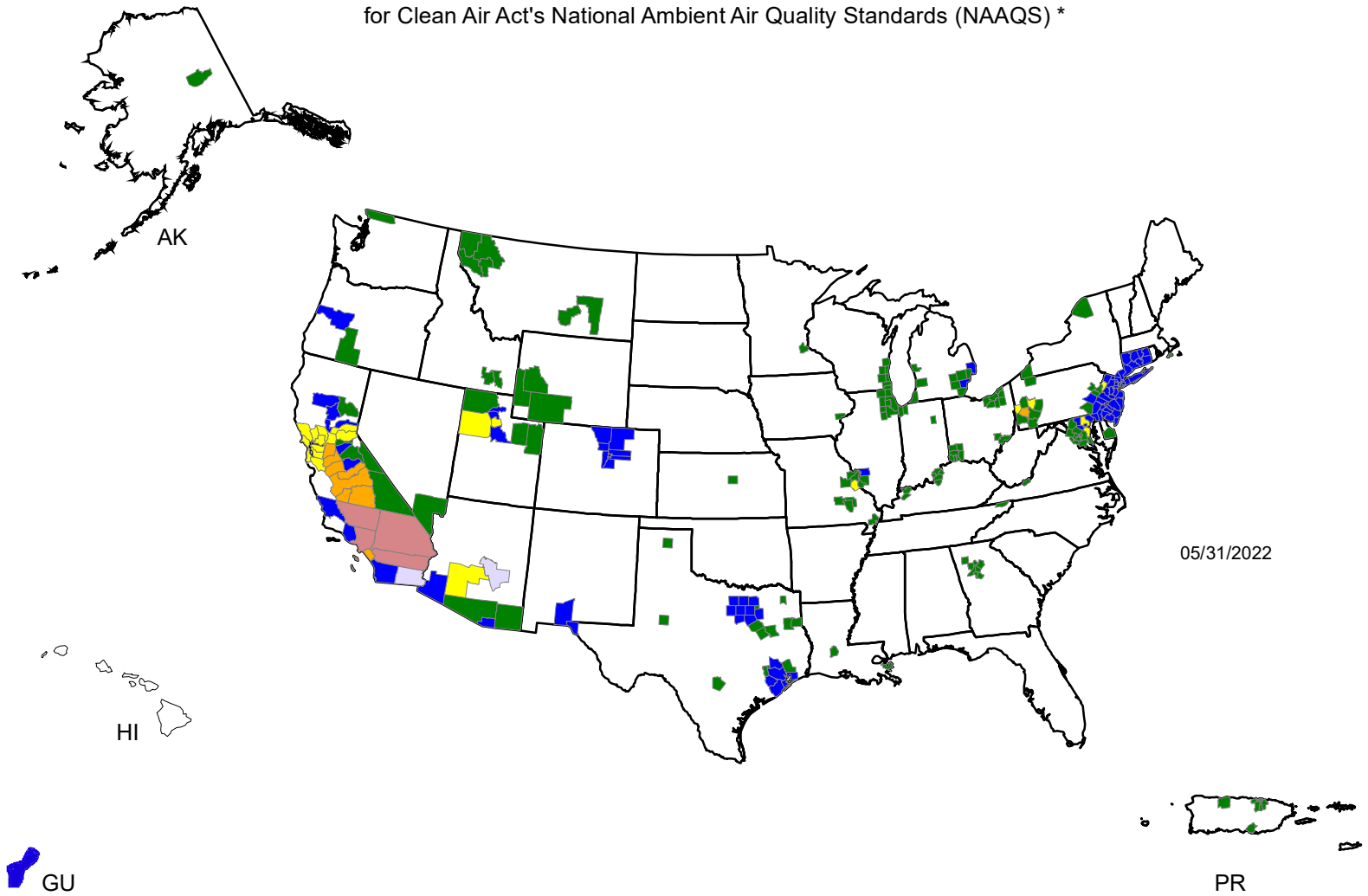
Are formal compliance steps or mitigation required?

☐ Yes

☒ No

Counties Designated "Nonattainment"

for Clean Air Act's National Ambient Air Quality Standards (NAAQS) *



Legend **

- County Designated Nonattainment for 6 NAAQS Pollutants
- County Designated Nonattainment for 5 NAAQS Pollutants
- County Designated Nonattainment for 4 NAAQS Pollutants
- County Designated Nonattainment for 3 NAAQS Pollutants
- County Designated Nonattainment for 2 NAAQS Pollutants
- County Designated Nonattainment for 1 NAAQS Pollutant

* The National Ambient Air Quality Standards (NAAQS) are health standards for Carbon Monoxide, Lead (1978 and 2008), Nitrogen Dioxide, 8-hour Ozone (2008), Particulate Matter (PM-10 and PM-2.5 (1997, 2006 and 2012), and Sulfur Dioxide.(1971 and 2010)

** Included in the counts are counties designated for NAAQS and revised NAAQS pollutants. Revoked 1-hour (1979) and 8-hour Ozone (1997) are excluded. Partial counties, those with part of the county designated nonattainment and part attainment, are shown as full counties on the map.

Criteria Pollutant Nonattainment Summary Report

Data is current as of May 31, 2022

The NO_2 nonattainment area became a maintenance area on September 22, 1998. The 8-hour Ozone (1997) standard was revoked on April 6, 2015 and the 1-hour Ozone (1979) standard was revoked on June 15, 2005. All Carbon Monoxide areas were redesignated to maintenance areas as of September 27, 2010.

Mouse over the underlined number of counties to see the area name; click to see the associated counties. | View Report Footnotes

Download National Dataset: dbf | xls | Data dictionary (PDF)

		8-Hour Ozone (2015)			8-Hour Ozone (2008)			PM-2.5 (2012)			PM-2.5 (2006)			PM-2.5 (1997)			PM-10 (1987)			SO2 (2010)			SO2 (1971)			LEAD (2008)		
State(s)	General Area Name	2010 Pop.	No. Ctys	Cat./ Class	2010 Pop.	No. Ctys	Cat./ Class	2010 Pop.	No. Ctys	Cat./ Class	2010 Pop.	No. Ctys	Cat./ Class	2010 Pop.	No. Ctys	Cat./ Class	2010 Pop.	No. Ctys	Cat./ Class	2010 Pop.	No. Ctys	Cat./ Class	2010 Pop.	No. Ctys	Cat./ Class	2010 Pop.	No. Ctys	Cat./ Class
AK	Fairbanks										87	1	Ser															
AZ	Douglas/Paul Spur (Cochise County)																17	1	Mod									
AZ	Hayden/Miami																11	2	Mod	5	2	NonAtt	5	1	NonAtt	5	2	NonAtt
																	15	2	Mod	15	1	NonAtt						
AZ	Nogales										31	1	Mod				30	1	Mod									
AZ	Phoenix-Mesa	3,945	3	Mar	3,850	2	Mod										3,853	2	Ser									
AZ	Rillito (Pima County)																1	1	Mod									
AZ	West Pinal										52	1	Mod				283	1	Ser									
AZ	Yuma	87	1	Mar													101	1	Mod									
CA	Amador and Calaveras Cos (Central Mountain Cos)	46	1	Mar																								
		38	1	Mar	46	1	Mar																					
CA	Chico	220	1	Mar	220	1	Mar																					
CA	Imperial County	175	1	Mar	175	1	Mod	154	1	Mod	154	1	Mod															
CA	Los Angeles-South Coast Air Basin	15,703	4	Ext	15,719	4	Ext	15,716	4	Ser	15,716	4	Ser	15,716	4	Mod										9,437	1	NonAtt
		1	1	Ser	1	1	Ser																					
		1	2	Mar	3	2	Mod																					
CA	Mariposa and Tuolumne Cos (Southern Mountain Cos)	55	1	Mar																								
		18	1	Mar	18	1	Mod																					
CA	Mono County																0	1	Mod									
CA	Nevada Co. (Western Part)	82	1	Ser	82	1	Ser																					
CA	Owens Valley																7	1	Ser									

		8-Hour Ozone (2015)			8-Hour Ozone (2008)			PM-2.5 (2012)			PM-2.5 (2006)			PM-2.5 (1997)			PM-10 (1987)			SO2 (2010)			SO2 (1971)			LEAD (2008)		
CA	Plumas County							6	1	Mod																	
CA	Sacramento Metro	2,240	6	Ser	2,241	6	Sev5				2,206	5	Mod														
CA	San Diego	3,077	1	Sev5	3,095	1	Sev5																				
CA	San Francisco-Bay Area	6,969	9	Mar	6,973	9	Mar				6,971	9	Mod														
CA	San Joaquin Valley	95	1	Ser	95	1	Sev5																				
		3,842	8	Ext	3,842	8	Ext	3,842	8	Ser	3,842	8	Ser	3,842	8	Ser	126	1	Ser								
CA	San Luis Obispo	1	1	Mar	2	1	Mar																				
CA	Searles Valley																4	1	Mod								
CA	Southeast Desert Modified AQMA																258	1	Ser								
		425	1	Sev5	426	1	Sev5										237	1	Mod								
		867	2	Sev5	868	2	Sev5																				
CA	Tuscan Buttes	0	1	Mar	0	1	Mar																				
CA	Ventura County	821	1	Ser	823	1	Ser																				
CA	Yuba City	0	1	Mar																							
CO	Denver-Boulder-Greeley-Ft. Collins-Loveland	3,331	9	Mar	3,330	9	Ser																				
CT	Greater Connecticut	1,629	5	Mar	1,629	5	Ser																				
DC-MD-VA	Washington	5,136	15	Mar																							
GA	Atlanta	3,669	7	Mar																							
GU	Piti-Cabras																			6	1	NonAtt	1	1	NonAtt		
GU	Tanguisson Power Plant																						1	1	NonAtt		
IA	Muscatine County																			30	1	NonAtt					
ID	Pocatello																1	2	Mod								
IL-IN-WI	Chicago-Joliet-Napier	9,075	11	Mar																							
IN	Fort Wayne-Huntington-Auburn																			21	1	NonAtt					
KS	Salina																									0	1	NonAtt
KY	Henderson-Webster Counties																			7	2	NonAtt					
KY-IN	Louisville	1,061	5	Mar																							
LA	Evangeline Parish																			0	1	NonAtt					

		8-Hour Ozone (2015)			8-Hour Ozone (2008)			PM-2.5 (2012)			PM-2.5 (2006)			PM-2.5 (1997)			PM-10 (1987)			SO2 (2010)			SO2 (1971)			LEAD (2008)		
LA	New Orleans																			36	1	NonAtt						
MA-NH	Boston-Worcester-Manchester				17	1	Mar																					
MD	Baltimore	2,663	6	Mar	2,663	6	Mod													990	2	NonAtt						
MI	Allegan County	47	1	Mar																								
MI	Benton Harbor	157	1	Mar																								
MI	Detroit-Ann Arbor																			52	1	NonAtt						
		4,705	7	Mar																254	1	NonAtt						
MI	Muskegon	147	1	Mar																								
MN	Minneapolis-St. Paul																									9	1	NonAtt
MO	Iron, Dent, and Reynolds Counties																									0	3	NonAtt
MO	New Madrid County																			0	1	NonAtt						
MO-IL	St. Louis																			0	1	NonAtt						
		2,488	8	Mar																						5	1	NonAtt
MT	Billings/Laurel																						7	1	NonAtt			
MT	Lame Deer																1	1	Mod									
MT	Libby													9	1	Mod												
MT	Polson (Lake County)																4	1	Mod									
MT	Ronan (Lake County)																3	1	Mod									
MT	Thompson Falls																1	1	Mod									
MT	Whitefish (Flathead County)																6	1	Mod									
NV	Las Vegas	1,892	1	Mar																								
NY	Jamestown				135	1	Mar																					
NY	St. Lawrence County																			12	1	NonAtt						
NY-NJ-CT	New York-N. New Jersey-Long Island	20,217	24	Mod	20,217	24	Ser										1,586	1	Mod									
OH	Cleveland-Akron-Elyria	2,780	7	Mar																								
OH-KY-IN	Cincinnati-Middletown-Wilmington	1,929	7	Mar																								
OR	Klamath Falls										47	1	Mod															
OR	Oakridge										4	1	Mod				4	1	Mod									
PA	Clearfield and Indiana Counties																			93	2	NonAtt						
PA	Lancaster				519	1	Mar																					

		8-Hour Ozone (2015)			8-Hour Ozone (2008)			PM-2.5 (2012)			PM-2.5 (2006)			PM-2.5 (1997)			PM-10 (1987)			SO2 (2010)			SO2 (1971)			LEAD (2008)		
PA	Pittsburgh-New Castle				2,356	7	Mar	1,223	1	Mod	21	1	Mod	21	1	Mod				15	1	NonAtt				18	1	NonAtt
																				127	1	NonAtt	5	1	NonAtt			
PA	Reading																									29	1	NonAtt
					411	1	Mar																			19	1	NonAtt
PA	Warren County																			18	1	NonAtt						
PA-NJ	Allentown-Bethlehem-Easton				712	3	Mar																109	1	NonAtt			
PA-NJ-DE-MD	Philadelphia-Wilmington-Atlantic City				197	1	Mar																					
		7,437	16	Mar	7,437	16	Mar																					
PR	Arecibo																									32	1	NonAtt
PR	Guayama-Salinas																			23	1	NonAtt						
PR	San Juan																			275	5	NonAtt						
TN	Johnson City-Kingsport-Bristol																			15	1	NonAtt						
TX	Dallas-Fort Worth	6,202	9	Mar	6,280	10	Ser																					
TX	Fairfield																			4	2	NonAtt						
TX	Houston-Sugar Land-Baytown	5,773	6	Mar	5,892	8	Ser																					
TX	Howard County																			0	1	NonAtt						
TX	Hutchinson County																			15	1	NonAtt						
TX	Mount Pleasant																			0	1	NonAtt						
TX	Navarro County																			2	1	NonAtt						
TX	San Antonio	1,715	1	Mar																								
TX	Tatum																			2	2	NonAtt						
TX-NM	El Paso-Las Cruces																3	1	Mod									
		813	2	Mar													649	1	Mod									
UT	Provo	516	1	Mar							518	1	Ser															
UT	Salt Lake City	1,616	4	Mar							1,665	5	Ser										1,030	1	NonAtt			
UT	Tooele County																						58	1	NonAtt			
UT	Uinta Basin	47	2	Mar																								
VA	Giles County																			0	1	NonAtt						
WA	Whatcom County																			0	1	NonAtt						
WI	Milwaukee-Racine	1,648	5	Mar																								
WI	Sheboygan	68	1	Mar																								
WV-OH	Parkersburg-Marietta																			4	2	NonAtt						

		8-Hour Ozone (2015)			8-Hour Ozone (2008)			PM-2.5 (2012)			PM-2.5 (2006)			PM-2.5 (1997)			PM-10 (1987)			SO2 (2010)			SO2 (1971)			LEAD (2008)		
WY	Upper Green River Basin				11	3	Mar																				

The area population is displayed in 1000's. 'Cat.' is Category.

Area Name:

The "State(s) Area Name" column contains a common or general name for the nonattainment areas on the row, but may not reflect the exact name of any area on the row. This column cannot be exact since the nonattainment area for one pollutant may not contain the same counties, cities, or states as the nonattainment area for another pollutant on the same row. to see the area name or click on them to see the associated counties. The abbreviations listed in the "State(s)" column reflect all states identified in row. However, some states on a row may be nonattainment for some pollutants and not for others in the general area.

Split Area:

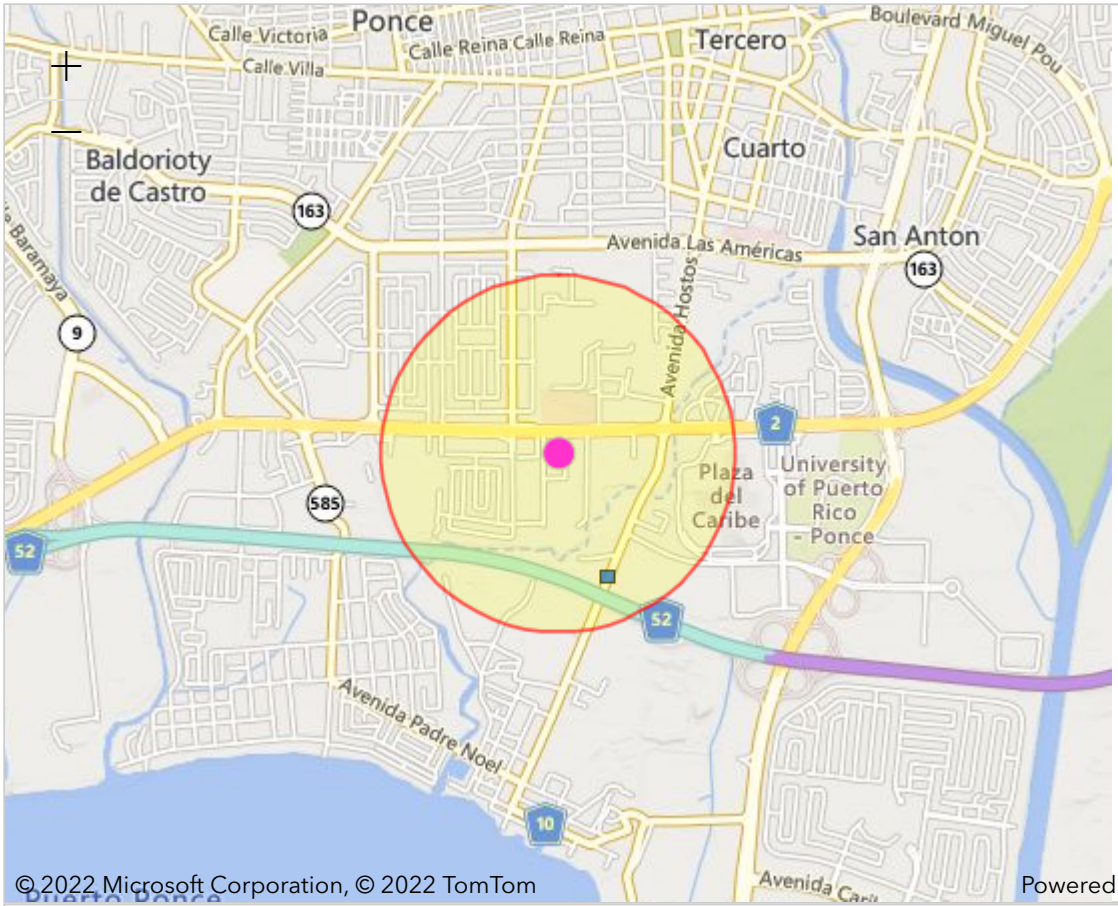
'Split' in the No. Ctys column indicates that the multi-state area has states that have been redesignated but the area does not become a maintenance area until all states in the area are redesignated. The whole area population is displayed in this report. Clicking on a "Split" No. Ctys will display information for the state(s) that have not been redesignated.

NEPAssist Report

PONCE HEALTH SCIENCES UNIVERSITY

Project Location	17.994967,-66.618966
Within 0.5 miles of an Ozone 8-hr (1997 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of an Ozone 8-hr (2008 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a Lead (2008 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a SO2 1-hr (2010 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a PM2.5 24hr (2006 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a PM2.5 Annual (1997 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a PM2.5 Annual (2012 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a PM10 (1987 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a Federal Land?	no
Within 0.5 miles of an impaired stream?	no
Within 0.5 miles of an impaired waterbody?	no
Within 0.5 miles of a waterbody?	yes
Within 0.5 miles of a stream?	yes
Within 0.5 miles of an NWI wetland?	Available Online
Within 0.5 miles of a Brownfields site?	no
Within 0.5 miles of a Superfund site?	no
Within 0.5 miles of a Toxic Release Inventory (TRI) site?	no
Within 0.5 miles of a water discharger (NPDES)?	yes
Within 0.5 miles of a hazardous waste (RCRA) facility?	yes
Within 0.5 miles of an air emission facility?	yes
Within 0.5 miles of a school?	yes
Within 0.5 miles of an airport?	no
Within 0.5 miles of a hospital?	yes
Within 0.5 miles of a designated sole source aquifer?	no
Within 0.5 miles of a historic property on the National Register of Historic Places?	yes
Within 0.5 miles of a Toxic Substances Control Act (TSCA) site?	no
Within 0.5 miles of a Land Cession Boundary?	no
Within 0.5 miles of a tribal area (lower 48 states)?	no
Within 0.5 miles of the service area of a mitigation or conservation bank?	no
Within 0.5 miles of the service area of an In-Lieu-Fee Program?	no
Within 0.5 miles of a Public Property Boundary of the Formerly Used Defense Sites?	no
Within 0.5 miles of a Munitions Response Site?	no
Within 0.5 miles of an Essential Fish Habitat (EFH)?	no
Within 0.5 miles of a Habitat Area of Particular Concern (HAPC)?	no
Within 0.5 miles of an EFH Area Protected from Fishing (EFHA)?	yes
Within 0.5 miles of a Bureau of Land Management Area of Critical Environmental Concern?	no
Within 0.5 miles of an ESA-designated Critical Habitat Area per U.S. Fish & Wildlife Service?	no
Within 0.5 miles of an ESA-designated Critical Habitat river, stream or water feature per U.S. Fish & Wildlife Service?	no

Created on: 12/15/2022 9:16:05 AM



Report question: ***Within 0.5 of a Air emissions site?*** **yes**

Modify question by entering a new buffer distance and unit for the selected study area:

0.5 miles Submit

Name	Distance
☐ TERRAZOS PICO INC (PONCE,PR) (https://enviro.epa.gov/enviro/airsquery.detail_plt_view?p_id=PR0000007211300003)	0.37 miles

REGISTRY_ID: 110001660015
LATITUDE: 17.98995
LONGITUDE: -66.61684
PGM_SYS_ACRNM: AIR
PGM_SYS_ID: PR0000007211300003
LOCATION_ADDRESS: 170 HOSTOS AVE
CITY_NAME: PONCE
COUNTY_NAME:
STATE_CODE: PR
EPA_REGION: Region 2
POSTAL_CODE: 00731
FIPS_CODE: PR113
HUC_CODE:

Name	Distance
☐ PONCE CONCRETE BLK 1 (PONCE,PR) (https://enviro.epa.gov/enviro/airsquery.detail_plt_view?p_id=PR0000007211300027) **REGISTRY_ID:** 110006623001 **LATITUDE:** 17.98995 **LONGITUDE:** -66.61684 **PGM_SYS_ACRNM:** AIR **PGM_SYS_ID:** PR0000007211300027 **LOCATION_ADDRESS:** HOSTOS AVE **CITY_NAME:** PONCE **COUNTY_NAME:** **STATE_CODE:** PR **EPA_REGION:** Region 2 **POSTAL_CODE:** 00731 **FIPS_CODE:** PR113 **HUC_CODE:**	0.37 miles

Attachment V: Coastal Zone Management Coastal Zone Management Act, sections 307(c) & (d)

Coastal Zone Management Act (CEST and EA)

General requirements	Legislation	Regulation
Federal assistance to applicant agencies for activities affecting any coastal use or resource is granted only when such activities are consistent with federally approved State Coastal Zone Management Act Plans.	Coastal Zone Management Act (16 USC 1451-1464), particularly section 307(c) and (d) (16 USC 1456(c) and (d))	15 CFR Part 930
References		
https://www.onecpd.info/environmental-review/coastal-zone-management		

Projects located in the following states must complete this form.

Alabama	Florida	Louisiana	Mississippi	Ohio	Texas
Alaska	Georgia	Maine	New Hampshire	Oregon	Virgin Islands
American Samona	Guam	Maryland	New Jersey	Pennsylvania	Virginia
California	Hawaii	Massachusetts	New York	Puerto Rico	Washington
Connecticut	Illinois	Michigan	North Carolina	Rhode Island	Wisconsin
Delaware	Indiana	Minnesota	Northern Mariana Islands	South Carolina	

1. **Is the project located in, or does it affect, a Coastal Zone as defined in your state Coastal Management Plan?**

   ☐Yes → *Continue to Question 2.*

   ☒No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing that the site is not within a Coastal Zone.*

2. **Does this project include activities that are subject to state review**?

   ☐Yes → *Continue to Question 3.*

   ☐No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination.*

3. **Has this project been determined to be consistent with the State Coastal Management Program**?

   ☐Yes, with mitigation. → *Continue to Question 4.*

   ☐Yes, without mitigation. → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination.*

☐No, project must be canceled.

Project cannot proceed at this location.

4. Explain in detail the proposed measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.

A map showing the relation of the project to the PR Coastal Zone Limits is attached. If requested, a Certificate of Consistence with the Coastal Management Program can be obtained.

→ *Continue to the Worksheet Summary below. Provide documentation of the consultation (including the State Coastal Management Program letter of consistency) and any other documentation used to make your determination.*

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

The proposed project is not inside and is not expected to affect the Puerto Rico's coastal zone. A map depicting the relation of the project to the Coastal Zone limits is included. (PR Coastal Management Zone Limits obtained from https://gis.pr.gov/Pages/default.aspx.) Therefore, this topic is in compliance with HUD regulations. See Information and/or Figures attached

Are formal compliance steps or mitigation required?

☐ Yes

☒ No



N
W E
S

RELATION OF THE SITE WITH THE PR COASTAL ZONE LIMITS

0 275 550 1,100 1,650 2,200 Meters

1:10,000

PONCE HEALTH SCIENCES UNIVERSITY
STATE ROAD PR-2
PONCE, PUERTO RICO

GABRIEL BERRIZ&ASSOCIATES
Plan. Laredo González
APR/2022

Attachment VI: Contamination and Toxic Substances 24 CFR Part 50.3(i) & 58.5(i)(2)

Contamination and Toxic Substances (Multifamily and Non-Residential Properties)

General requirements	Legislation	Regulations
It is HUD policy that all properties that are being proposed for use in HUD programs be free of hazardous materials, contamination, toxic chemicals and gases, and radioactive substances, where a hazard could affect the health and safety of the occupants or conflict with the intended utilization of the property.		24 CFR 58.5(i)(2) 24 CFR 50.3(i)
Reference		
https://www.hudexchange.info/programs/environmental-review/site-contamination		

1. **How was site contamination evaluated?** [1] **Select all that apply.**

   ☒ ASTM Phase I ESA
   ☐ ASTM Phase II ESA
   ☐ Remediation or clean-up plan
   ☐ ASTM Vapor Encroachment Screening
   x None of the above

   → *Provide documentation and reports and include an explanation of how site contamination was evaluated in the Worksheet Summary.*
   Continue to Question 2.

2. **Were any on-site or nearby toxic, hazardous, or radioactive substances found that could affect the health and safety of project occupants or conflict with the intended use of the property? (Were any recognized environmental conditions or RECs identified in a Phase I ESA and confirmed in a Phase II ESA?)**

   ☒ No

   Explain:

   The ASTM Phase I ESA prepared for the main site (attached) Concluded that no RECs were identified at the project site. An additional letter (attached) from Eng. Axel Bonilla stated that is unlikely that Toxics/hazardous substances were present at Phase 3 Parcel.

[1] HUD regulations at 24 CFR § 58.5(i)(2)(ii) require that the environmental review for multifamily housing with five or more dwelling units or non-residential property include the evaluation of previous uses of the site or other evidence of contamination on or near the site. For acquisition and new construction of multifamily and nonresidential properties HUD strongly advises the review include an ASTM Phase I Environmental Site Assessment (ESA) to meet real estate transaction standards of due diligence and to help ensure compliance with HUD's toxic policy at 24 CFR §58.5(i) and 24 CFR §50.3(i). Also note that some HUD programs require an ASTM Phase I ESA.

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

☐ Yes.

→ *Describe the findings, including any recognized environmental conditions (RECs), in Worksheet Summary below. Continue to Question 3.*

3. Mitigation

Document the mitigation needed according to the requirements of the appropriate federal, state, tribal, or local oversight agency. If the adverse environmental effects cannot be mitigated, then HUD assistance may not be used for the project at this site.

Can adverse environmental impacts be mitigated?

☐ Adverse environmental impacts cannot feasibly be mitigated

→ Project cannot proceed at this location.

☐ Yes, adverse environmental impacts can be eliminated through mitigation.

→ *Provide all mitigation requirements[2] and documents. Continue to Question 4.*

4. Describe how compliance was achieved. Include any of the following that apply: State Voluntary Clean-up Program, a No Further Action letter, use of engineering controls[3], or use of institutional controls[4].

[2] Mitigation requirements include all clean-up actions required by applicable federal, state, tribal, or local law. Additionally, provide, as applicable, the long-term operations and maintenance plan, Remedial Action Work Plan, and other equivalent documents.

[3] Engineering controls are any physical mechanism used to contain or stabilize contamination or ensure the effectiveness of a remedial action. Engineering controls may include, without limitation, caps, covers, dikes, trenches, leachate collection systems, signs, fences, physical access controls, ground water monitoring systems and ground water containment systems including, without limitation, slurry walls and ground water pumping systems.

[4] Institutional controls are mechanisms used to limit human activities at or near a contaminated site, or to ensure the effectiveness of the remedial action over time, when contaminants remain at a site at levels above the applicable remediation standard which would allow for unrestricted use of the property. Institutional controls may include structure, land, and natural resource use restrictions, well restriction areas, classification exception areas, deed notices, and declarations of environmental restrictions.

If a remediation plan or clean-up program was necessary, which standard does it follow?

☐ Complete removal

→ *Continue to the Worksheet Summary.*

☐ Risk-based corrective action (RBCA)

→ *Continue to the Worksheet Summary.*

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

The NEPAssist Tool [accessed on Dec-15-2022 and again on June-28-2023 (0.5 miles and 500' radius)] did not identify the project site as a hazardous waste (RCRA) facility or a toxics release facility. However, several (17) hazardous waste (RCRA) facilities were identified within the 500 m radius and two (2) facilities within the 500' radius. The EPA-ECHO Tool (June-28-2023) showed these facilities are in compliance with RCRA. Based upon a review of the sites, there appear to be no impact to the project site from these facilities. Information is included in Attachment VI of this report. The Phase I Environmental Site Assessment (ESA) included is for reference purposes only. The (May-2018) ASTM Phase I ESA report (attached) for Phases 1a, 1b and 2, concluded that no RECs were identified at the project site and no facilities within the 500 m radius were of concern. The only identified area on site is an abandoned Septic Tank observed at the south boundary of the property and was identified as a de minimis condition. Closure of this system will have to comply with current PR underground injection control regulations. An additional letter from Eng. Axel Bonilla stated that is unlikely that Toxics/hazardous substances were present at Phase 3 Parcel (No ASTM Phase I ESA study was made available to the preparer for this parcel). The Asbestos and Lead Based Paint Study performed for Phases 1a, 1b and 2, reported the presence of asbestos in one of the buildings (Building-A as identified in the study) to be demolished in Phase 2. Before starting the demolition work on this building, the Grant Recipient must conduct the appropriate mitigation work and obtain a certification that the building is free of material containing asbestos. The Grant Recipient must obtain a certification that the buildings to be remodeled in Phase 3 are free of material containing Asbestos and Lead Based Paint. Therefore, conditioned to the information above, according with the information provided by the Grant Recipient, this topic is in compliance with HUD regulations. See Information and/or Figures attached at Attachment VI of this report. Mitigation is required for closure of the septic system and for the LBP and Asbestos abatement.

Are formal compliance steps or mitigation required?

X Yes

_ No

AXEL BONILLA CORTES
INGENIEROS CONSULTORES
P. O. BOX 334145
PONCE, P. R. 00733-4145
TEL Y FAX 787-842-0503

August 1, 2022

Mr. Carlos Rojas
Chief Financial Officer
Ponce Health Sciences University

Re: Phase I Environmental Site Assessment Requirement
PHSU Phase III
Damas Leased Property
Ponce, PR

Dear Mr. Rojas:

As part of the due diligence necessary for the CDBG Environmental Review, we have evaluated the need of a Phase I Environmental Site Assessment for the buildings located in the Damas Leased Property adjacent to the East side of the PHSU Academic Building Lot.

In my professional opinion, the information provided by the Phase I ESA prepared by Winston R. Estevez, P.E. dated December 16, 2019, for the larger adjacent property and site of the new Academic Building currently under construction, may provide relevant information regarding the conditions on this property as well.

As indicated in the Winston R. Estevez report, no Recognized Environmental Conditions (RECs), Controlled Recognized Environmental Conditions (CRECs) or Historical Recognized Environmental Conditions (HRECs) were identified. The report concludes that "based on the information obtained and evaluated during this Phase I ESA, there is a low potential for a material environmental impact on the property by the findings identified."

As no facilities, properties or sources of toxic/hazardous substances were identified in properties adjacent to Main Building Parcel, nor at the search radius maps, we believe it is unlikely to find on this parcel, conditions which may require the preparation Phase I Environmental Site Assessment at this time.

Submitted by:



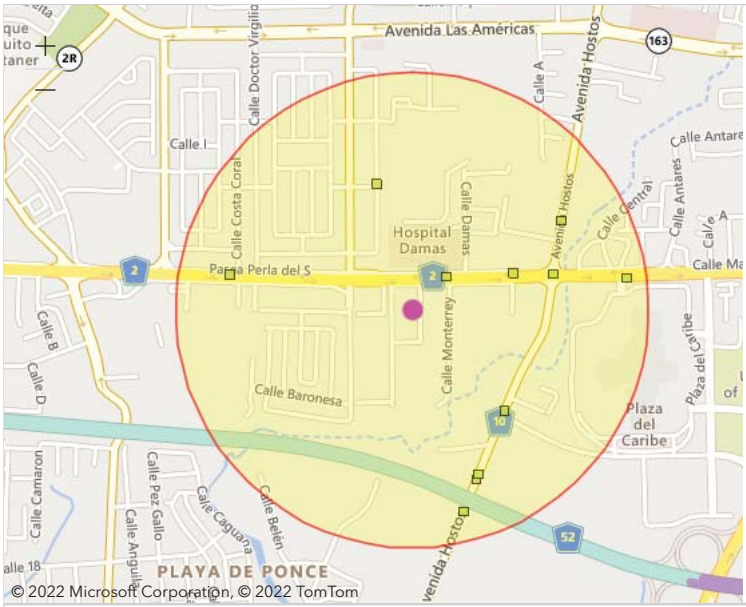
Axel Bonilla Cortés. P. E.
Lic. #8839

NEPA t Repo t

PONCE EALT SCIENCES NIVERSITY

Project Location	17.994967,-66.618966
Within 0.5 miles of an Ozone 8-hr (1997 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of an Ozone 8-hr (2008 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a Lead (2008 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a SO2 1-hr (2010 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a PM2.5 24hr (2006 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a PM2.5 Annual (1997 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a PM2.5 Annual (2012 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a PM10 (1987 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a Federal Land?	no
Within 0.5 miles of an impaired stream?	no
Within 0.5 miles of an impaired waterbody?	no
Within 0.5 miles of a waterbody?	yes
Within 0.5 miles of a stream?	yes
Within 0.5 miles of an NWI wetland?	Available Online
Within 0.5 miles of a Brownfields site?	no
Within 0.5 miles of a Superfund site?	no
Within 0.5 miles of a Toxic Release Inventory (TRI) site?	no
Within 0.5 miles of a water discharger (NPDES)?	yes
Within 0.5 miles of a hazardous waste (RCRA) facility?	yes
Within 0.5 miles of an air emission facility?	yes
Within 0.5 miles of a school?	yes
Within 0.5 miles of an airport?	no
Within 0.5 miles of a hospital?	yes
Within 0.5 miles of a designated sole source aquifer?	no
Within 0.5 miles of a historic property on the National Register of Historic Places?	yes
Within 0.5 miles of a Toxic Substances Control Act (TSCA) site?	no
Within 0.5 miles of a Land Cession Boundary?	no
Within 0.5 miles of a tribal area (lower 48 states)?	no
Within 0.5 miles of the service area of a mitigation or conservation bank?	no
Within 0.5 miles of the service area of an In-Lieu-Fee Program?	no
Within 0.5 miles of a Public Property Boundary of the Formerly Used Defense Sites?	no
Within 0.5 miles of a Munitions Response Site?	no
Within 0.5 miles of an Essential Fish Habitat (EFH)?	no
Within 0.5 miles of a Habitat Area of Particular Concern (HAPC)?	no
Within 0.5 miles of an EFH Area Protected from Fishing (EFHA)?	yes
Within 0.5 miles of a Bureau of Land Management Area of Critical Environmental Concern?	no
Within 0.5 miles of an ESA-designated Critical Habitat Area per U.S. Fish & Wildlife Service?	no
Within 0.5 miles of an ESA-designated Critical Habitat river, stream or water feature per U.S. Fish & Wildlife Service?	no

Created on: 12/15/2022 9:16:05 AM



Powered by Esri (http://www.esri.com/)

Repo t e t on *Within 0.5 of a Hazardous waste site?* ye

Modify question by entering a new buffer distance and unit for the selected study area:

0.5 miles Submit

Name

☐ HOSPITAL DAMAS (PONCE,PR) (https://enviro.epa.gov/enviro/efsystemquery.rcrainfo?

fac_search=handler_id&fac_search_type=Equal+To&postal_code=&location_address=&add_search_type=Beginning+With&city_name=&county_name=&state_code=&naics_type=Equal+to&naics_to=&univ_search=0&univA=

REGISTRY_ID: 110012243786
LATITUDE: 17.99599
LONGITUDE: -66.61786
PGM_SYS_ACRNM: RCRAINFO
PGM_SYS_ID: PRR000014928
LOCATION_ADDRESS: 2213 PONCE BYPASS
CITY_NAME: PONCE
COUNTY_NAME: PONCE
STATE_CODE: PR
EPA_REGION: Region 2
POSTAL_CODE: 00717-1318
FIPS_CODE: 72113
HUC_CODE:

☐ MAACO AUTOPAINTING & BODYWORKS (PONCE,PR) (https://enviro.epa.gov/enviro/efsystemquery.rcrainfo?

fac_search=handler_id&fac_search_type=Equal+To&postal_code=&location_address=&add_search_type=Beginning+With&city_name=&county_name=&state_code=&naics_type=Equal+to&naics_to=&univ_search=0&univA=

REGISTRY_ID: 110004893223
LATITUDE: 17.99771
LONGITUDE: -66.61418
PGM_SYS_ACRNM: RCRAINFO
PGM_SYS_ID: PRR000006817
LOCATION_ADDRESS: AVENIDA HOSTOS 88
CITY_NAME: PONCE
COUNTY_NAME: PONCE
STATE_CODE: PR
EPA_REGION: Region 2
POSTAL_CODE: 00731
FIPS_CODE: 72113
HUC_CODE:

☐ TRANSPORTES PERLA DEL SUR (PONCE,PR) (https://enviro.epa.gov/enviro/efsystemquery.rcrainfo?

fac_search=handler_id&fac_search_type=Equal+To&postal_code=&location_address=&add_search_type=Beginning+With&city_name=&county_name=&state_code=&naics_type=Equal+to&naics_to=&univ_search=0&univA=

REGISTRY_ID: 110004889256
LATITUDE: 17.99771
LONGITUDE: -66.61418
PGM_SYS_ACRNM: RCRAINFO
PGM_SYS_ID: PRD980644587
LOCATION_ADDRESS: AVE HOSTOS 78
CITY_NAME: PONCE
COUNTY_NAME: PONCE
STATE_CODE: PR
EPA_REGION: Region 2
POSTAL_CODE: 00731
FIPS_CODE: 72113
HUC_CODE:

Name

☐ CARIBBEAN CAN MANUFACTURING - AMMONIA RELEASE EMERGENCY RESPONSE (PONCE,PR) (https://enviro.epa.gov/enviro/efsystemquery.rcrainfo?

fac_search=handler_id&fac_search_type=Equal+To&postal_code=&location_address=&add_search_type=Beginning+With&city_name=&county_name=&state_code=&naics_type=Equal+to&naics_to=&univ_search=0&univA=
REGISTRY_ID: 110066978355
LATITUDE: 17.99189
LONGITUDE: -66.616003
PGM_SYS_ACRNM: RCRAINFO
PGM_SYS_ID: PRR000025601
LOCATION_ADDRESS: 1029 HOSTOS AVE
CITY_NAME: PONCE
COUNTY_NAME: PONCE
STATE_CODE: PR
EPA_REGION: Region 2
POSTAL_CODE: 00717
FIPS_CODE: 72113
HUC_CODE:

☐ SEARS #1945 (PONCE,PR) (https://enviro.epa.gov/enviro/efsystemquery.rcrainfo?

fac_search=handler_id&fac_search_type=Equal+To&postal_code=&location_address=&add_search_type=Beginning+With&city_name=&county_name=&state_code=&naics_type=Equal+to&naics_to=&univ_search=0&univA=
REGISTRY_ID: 110007817256
LATITUDE: 17.996078
LONGITUDE: -66.614438
PGM_SYS_ACRNM: RCRAINFO
PGM_SYS_ID: PRR000002808
LOCATION_ADDRESS: STATE RD 2 KM 227.9 - PLAZA
CITY_NAME: PONCE
COUNTY_NAME: PONCE
STATE_CODE: PR
EPA_REGION: Region 2
POSTAL_CODE: 00731
FIPS_CODE: 72113
HUC_CODE:

☐ EMPRESAS TOMOS GIOVANNETTI TORRES INC (PONCE,PR) (https://enviro.epa.gov/enviro/efsystemquery.rcrainfo?

fac_search=handler_id&fac_search_type=Equal+To&postal_code=&location_address=&add_search_type=Beginning+With&city_name=&county_name=&state_code=&naics_type=Equal+to&naics_to=&univ_search=0&univA=
REGISTRY_ID: 110004890896
LATITUDE: 17.99771
LONGITUDE: -66.61418
PGM_SYS_ACRNM: RCRAINFO
PGM_SYS_ID: PRO007001290
LOCATION_ADDRESS: AVE HOSTOS 2
CITY_NAME: PONCE
COUNTY_NAME: PONCE
STATE_CODE: PR
EPA_REGION: Region 2
POSTAL_CODE: 00731
FIPS_CODE: 72113
HUC_CODE:

☐ CAPTAIN PEDRO J PARRA - USAR CENTER (PONCE,PR) (https://enviro.epa.gov/enviro/efsystemquery.rcrainfo?

fac_search=handler_id&fac_search_type=Equal+To&postal_code=&location_address=&add_search_type=Beginning+With&city_name=&county_name=&state_code=&naics_type=Equal+to&naics_to=&univ_search=0&univA=
REGISTRY_ID: 110006868782
LATITUDE: 17.996051
LONGITUDE: -66.624821
PGM_SYS_ACRNM: RCRAINFO
PGM_SYS_ID: PR0001003961
LOCATION_ADDRESS: HWY 2 KM 226.8
CITY_NAME: PONCE
COUNTY_NAME: PONCE
STATE_CODE: PR
EPA_REGION: Region 2
POSTAL_CODE: 00732-7601
FIPS_CODE: 72113
HUC_CODE:

☐ INSTITUTO TECNOLOGICO DE PONCE (PONCE,PR) (https://enviro.epa.gov/enviro/efsystemquery.rcrainfo?

fac_search=handler_id&fac_search_type=Equal+To&postal_code=&location_address=&add_search_type=Beginning+With&city_name=&county_name=&state_code=&naics_type=Equal+to&naics_to=&univ_search=0&univA=
REGISTRY_ID: 110007822339
LATITUDE: 17.996099
LONGITUDE: -66.615713
PGM_SYS_ACRNM: RCRAINFO
PGM_SYS_ID: PRR000011510
LOCATION_ADDRESS: PONCE BYPASS RD 2 KM 226.8
CITY_NAME: PONCE
COUNTY_NAME: PONCE
STATE_CODE: PR
EPA_REGION: Region 2
POSTAL_CODE: 00732-7284
FIPS_CODE: 72113
HUC_CODE:

☐ PROFESIONAL BODY SHOP (PONCE,PR) (https://enviro.epa.gov/enviro/efsystemquery.rcrainfo?

fac_search=handler_id&fac_search_type=Equal+To&postal_code=&location_address=&add_search_type=Beginning+With&city_name=&county_name=&state_code=&naics_type=Equal+to&naics_to=&univ_search=0&univA=
REGISTRY_ID: 110014362082
LATITUDE: 17.989798
LONGITUDE: -66.616906
PGM_SYS_ACRNM: RCRAINFO
PGM_SYS_ID: PRN008010209
LOCATION_ADDRESS: 209 HOSTO ST PLAYA PONCE
CITY_NAME: PONCE
COUNTY_NAME: PONCE
STATE_CODE: PR
EPA_REGION: Region 2
POSTAL_CODE: 00731
FIPS_CODE: 72113
HUC_CODE:

Name

☐ CENTRO SERVICIO JAPONES (PONCE,PR) (https://enviro.epa.gov/enviro/efsystemquery.rcrainfo?

fac_search=handler_id&fac_search_type=Equal+To&postal_code=&location_address=&add_search_type=Beginning+With&city_name=&county_name=&state_code=&naics_type=Equal+to&naics_to=&univ_search=0&univA=
REGISTRY_ID: 110007814650
LATITUDE: 17.99771
LONGITUDE: -66.61418
PGM_SYS_ACRNM: RCRAINFO
PGM_SYS_ID: PRO007001449
LOCATION_ADDRESS: AVE HOSTOS 54
CITY_NAME: PONCE
COUNTY_NAME: SAN SEBASTIAN
STATE_CODE: PR
EPA_REGION: Region 2
POSTAL_CODE: 99999
FIPS_CODE: 72131
HUC_CODE:

☐ NEGRO GOMAS (PONCE,PR) (https://enviro.epa.gov/enviro/efsystemquery.rcrainfo?

fac_search=handler_id&fac_search_type=Equal+To&postal_code=&location_address=&add_search_type=Beginning+With&city_name=&county_name=&state_code=&naics_type=Equal+to&naics_to=&univ_search=0&univA=
REGISTRY_ID: 110014362073
LATITUDE: 17.988818
LONGITUDE: -66.617317
PGM_SYS_ACRNM: RCRAINFO
PGM_SYS_ID: PRN008010191
LOCATION_ADDRESS: 146 HOSTOS AVE
CITY_NAME: PONCE
COUNTY_NAME: PONCE
STATE_CODE: PR
EPA_REGION: Region 2
POSTAL_CODE: 00716
FIPS_CODE: 72113
HUC_CODE:

☐ PONCE AUTO SERVICES INC (PONCE,PR) (https://enviro.epa.gov/enviro/efsystemquery.rcrainfo?

fac_search=handler_id&fac_search_type=Equal+To&postal_code=&location_address=&add_search_type=Beginning+With&city_name=&county_name=&state_code=&naics_type=Equal+to&naics_to=&univ_search=0&univA=
REGISTRY_ID: 110004890887
LATITUDE: 17.99771
LONGITUDE: -66.61418
PGM_SYS_ACRNM: RCRAINFO
PGM_SYS_ID: PRO007001282
LOCATION_ADDRESS: AVE HOSTOS 34
CITY_NAME: PONCE
COUNTY_NAME: PONCE
STATE_CODE: PR
EPA_REGION: Region 2
POSTAL_CODE: 00731
FIPS_CODE: 72113
HUC_CODE:

☐ READY MIX CONCRETE INC PLANT 11 (PONCE,PR) (https://enviro.epa.gov/enviro/efsystemquery.rcrainfo?

fac_search=handler_id&fac_search_type=Equal+To&postal_code=&location_address=&add_search_type=Beginning+With&city_name=&county_name=&state_code=&naics_type=Equal+to&naics_to=&univ_search=0&univA=
REGISTRY_ID: 110006623001
LATITUDE: 17.98995
LONGITUDE: -66.61684
PGM_SYS_ACRNM: RCRAINFO
PGM_SYS_ID: PRD987367133
LOCATION_ADDRESS: AVE HOSTOS 170
CITY_NAME: PONCE
COUNTY_NAME: PONCE
STATE_CODE: PR
EPA_REGION: Region 2
POSTAL_CODE: 00730
FIPS_CODE: 72113
HUC_CODE:

☐ ESCUELA DE TECNOLOGIA MEDICA-PONTIFICIA UNIVERSIDAD CATOLICA DE PR (PONCE,PR) (https://enviro.epa.gov/enviro/efsystemquery.rcrainfo?

fac_search=handler_id&fac_search_type=Equal+To&postal_code=&location_address=&add_search_type=Beginning+With&city_name=&county_name=&state_code=&naics_type=Equal+to&naics_to=&univ_search=0&univA=
REGISTRY_ID: 110041679305
LATITUDE: 17.998821
LONGITUDE: -66.62011
PGM_SYS_ACRNM: RCRAINFO
PGM_SYS_ID: PRR000022699
LOCATION_ADDRESS: 2322 CALLE UNIVERSIDAD
CITY_NAME: PONCE
COUNTY_NAME: PONCE
STATE_CODE: PR
EPA_REGION: Region 2
POSTAL_CODE: 00717-9997
FIPS_CODE: 72113
HUC_CODE:

☐ CENTRO AUTO DE PONCE (PONCE,PR) (https://enviro.epa.gov/enviro/efsystemquery.rcrainfo?

fac_search=handler_id&fac_search_type=Equal+To&postal_code=&location_address=&add_search_type=Beginning+With&city_name=&county_name=&state_code=&naics_type=Equal+to&naics_to=&univ_search=0&univA=
REGISTRY_ID: 110004890967
LATITUDE: 17.99771
LONGITUDE: -66.61418
PGM_SYS_ACRNM: RCRAINFO
PGM_SYS_ID: PRO007001456
LOCATION_ADDRESS: AVE HOSTOS 56
CITY_NAME: PONCE
COUNTY_NAME: PONCE
STATE_CODE: PR
EPA_REGION: Region 2
POSTAL_CODE: 00731
FIPS_CODE: 72113
HUC_CODE:

Name

MACYS PLAZA DEL CARIBE #806 (PONCE,PR) (https://enviro.epa.gov/enviro/efsystemquery.rcrainfo?fac_search=handler_id&fac_search_type=Equal+To&postal_code=&location_address=&add_search_type=Beginning+With&city_name=&county_name=&state_code=&naics_type=Equal+to&naics_to=&univ_search=0&univA=

REGISTRY_ID: 110020889608
LATITUDE: 17.995957
LONGITUDE: -66.612083
PGM_SYS_ACRNM: RCRAINFO
PGM_SYS_ID: PRR000017533
LOCATION_ADDRESS: 2050 PONCE BYPASS
CITY_NAME: PONCE
COUNTY_NAME: PONCE
STATE_CODE: PR
EPA_REGION: Region 2
POSTAL_CODE: 00717
FIPS_CODE: 72113
HUC_CODE:

LEYVA TOYOTA AUTO SALES INC (PONCE,PR) (https://enviro.epa.gov/enviro/efsystemquery.rcrainfo?fac_search=handler_id&fac_search_type=Equal+To&postal_code=&location_address=&add_search_type=Beginning+With&city_name=&county_name=&state_code=&naics_type=Equal+to&naics_to=&univ_search=0&univA=

REGISTRY_ID: 110004890958
LATITUDE: 17.99771
LONGITUDE: -66.61418
PGM_SYS_ACRNM: RCRAINFO
PGM_SYS_ID: PRO007001431
LOCATION_ADDRESS: AVE HOSTOS 121
CITY_NAME: PONCE
COUNTY_NAME: PONCE
STATE_CODE: PR
EPA_REGION: Region 2
POSTAL_CODE: 00731
FIPS_CODE: 72113
HUC_CODE:

NEPAssist Report

PONCE HEALTH SCIENCES UNIVERSITY



June 28, 2023

Project Buffer

PONCE HEALTH SCIENCES UNIVERSITY

1:22,931

0 0.28 0.55 1.1 mi

0 0.42 0.85 1.7 km

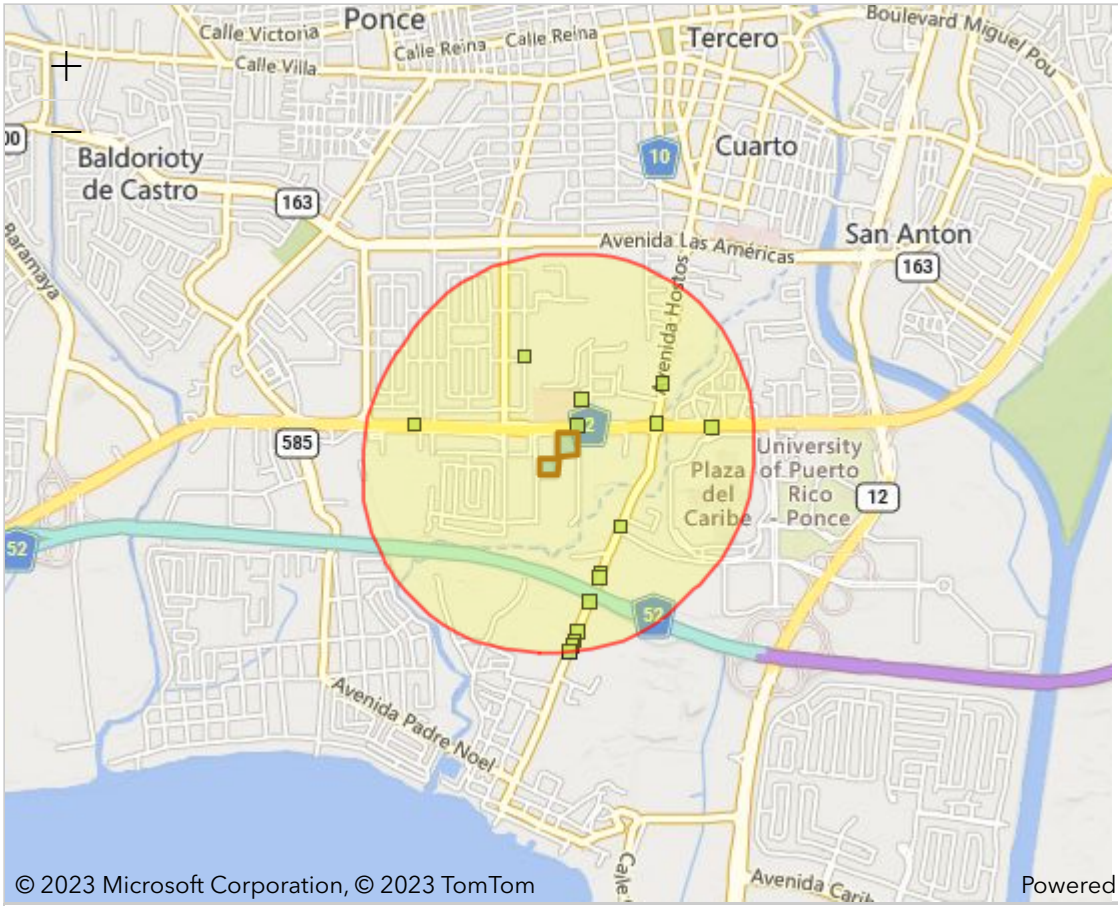
© 2023 Microsoft Corporation © 2023 Maxar ©CNES (2023) Distribution Airbus DS © 2023 TomTom

Input Coordinates: 17.994655,-66.619439,17.994665,-66.618677,17.995706,-66.618677,17.995726,-66.617851,17.994777,-66.617872,17.994767,-66.618570,17.994012,-66.618666,17.994012,-66.619460,17.994655,-66.619439

Project Area	0.01 sq mi
Within 0.5 miles of an Ozone 8-hr (1997 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of an Ozone 8-hr (2008 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a Lead (2008 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a SO2 1-hr (2010 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a PM2.5 24hr (2006 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a PM2.5 Annual (1997 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a PM2.5 Annual (2012 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a PM10 (1987 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a Federal Land?	no
Within 0.5 miles of an impaired stream?	no
Within 0.5 miles of an impaired waterbody?	no
Within 0.5 miles of a waterbody?	yes
Within 0.5 miles of a stream?	yes
Within 0.5 miles of an NWI wetland?	Available Online
Within 0.5 miles of a Brownfields site?	no
Within 0.5 miles of a Superfund site?	no
Within 0.5 miles of a Toxic Release Inventory (TRI) site?	no
Within 0.5 miles of a water discharger (NPDES)?	yes

Within 0.5 miles of a hazardous waste (RCRA) facility?	yes
Within 0.5 miles of an air emission facility?	yes
Within 0.5 miles of a school?	yes
Within 0.5 miles of an airport?	no
Within 0.5 miles of a hospital?	yes
Within 0.5 miles of a designated sole source aquifer?	no
Within 0.5 miles of a historic property on the National Register of Historic Places?	yes
Within 0.5 miles of a Toxic Substances Control Act (TSCA) site?	no
Within 0.5 miles of a Land Cession Boundary?	no
Within 0.5 miles of a tribal area (lower 48 states)?	no
Within 0.5 miles of the service area of a mitigation or conservation bank?	no
Within 0.5 miles of the service area of an In-Lieu-Fee Program?	no
Within 0.5 miles of a Public Property Boundary of the Formerly Used Defense Sites?	no
Within 0.5 miles of a Munitions Response Site?	no
Within 0.5 miles of an Essential Fish Habitat (EFH)?	no
Within 0.5 miles of a Habitat Area of Particular Concern (HAPC)?	no
Within 0.5 miles of an EFH Area Protected from Fishing (EFHA)?	yes
Within 0.5 miles of a Bureau of Land Management Area of Critical Environmental Concern?	no
Within 0.5 miles of an ESA-designated Critical Habitat Area per U.S. Fish & Wildlife Service?	no
Within 0.5 miles of an ESA-designated Critical Habitat river, stream or water feature per U.S. Fish & Wildlife Service?	no

Created on: 6/28/2023 4:02:02 PM



Report question: ***Within 0.5 of a Hazardous waste site?*** **yes**

Modify question by entering a new buffer distance and unit for the selected study area:

0.5 miles Submit

Name	Distance
PREPA - CONSERVACION DE SUBESTACIONES SU (PONCE,PR) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=PRR000020206)	0.44 miles

REGISTRY_ID: 110032659031
LATITUDE: 17.9876
LONGITUDE: -66.61783
PGM_SYS_ACRNM: RCRAINFO
PGM_SYS_ID: PRR000020206
LOCATION_ADDRESS: 139 HOSTOS AVE
CITY_NAME: PONCE
COUNTY_NAME: PONCE
STATE_CODE: PR
EPA_REGION: Region 2
POSTAL_CODE: 00732
FIPS_CODE: 72113
HUC_CODE:

Name	Distance
☐ EMPRESAS TOMOS GIOVANNETTI TORRES INC (PONCE,PR) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=PRO007001290)	0.28 miles

REGISTRY_ID: 110004890896
LATITUDE: 17.99771
LONGITUDE: -66.61418
PGM_SYS_ACRNM: RCRAINFO
PGM_SYS_ID: PRO007001290
LOCATION_ADDRESS: AVE HOSTOS 2
CITY_NAME: PONCE
COUNTY_NAME: PONCE
STATE_CODE: PR
EPA_REGION: Region 2
POSTAL_CODE: 00731
FIPS_CODE: 72113
HUC_CODE:

☐ HOSPITAL DAMAS (PONCE,PR) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=PRR000014928) 0.02 miles

REGISTRY_ID: 110012243786
LATITUDE: 17.99599
LONGITUDE: -66.61786
PGM_SYS_ACRNM: RCRAINFO
PGM_SYS_ID: PRR000014928
LOCATION_ADDRESS: 2213 PONCE BYPASS
CITY_NAME: PONCE
COUNTY_NAME: PONCE
STATE_CODE: PR
EPA_REGION: Region 2
POSTAL_CODE: 00717-1318
FIPS_CODE: 72113
HUC_CODE:

☐ PONCE AUTO SERVICES INC (PONCE,PR) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=PRO007001282) 0.28 miles

REGISTRY_ID: 110004890887
LATITUDE: 17.99771
LONGITUDE: -66.61418
PGM_SYS_ACRNM: RCRAINFO
PGM_SYS_ID: PRO007001282
LOCATION_ADDRESS: AVE HOSTOS 34
CITY_NAME: PONCE
COUNTY_NAME: PONCE
STATE_CODE: PR
EPA_REGION: Region 2
POSTAL_CODE: 00731
FIPS_CODE: 72113
HUC_CODE:

☐ SEARS #1945 (PONCE,PR) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=PRR000002808) 0.23 miles

REGISTRY_ID: 110007817256
LATITUDE: 17.996078
LONGITUDE: -66.614438
PGM_SYS_ACRNM: RCRAINFO
PGM_SYS_ID: PRR000002808
LOCATION_ADDRESS: STATE RD 2 KM 227.9 - PLAZA
CITY_NAME: PONCE
COUNTY_NAME: PONCE
STATE_CODE: PR
EPA_REGION: Region 2
POSTAL_CODE: 00731
FIPS_CODE: 72113
HUC_CODE:

Name	Distance
☐ CAPTAIN PEDRO J PARRA - USAR CENTER (PONCE,PR) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=PR0001003961) **REGISTRY_ID:** 110006868782 **LATITUDE:** 17.996051 **LONGITUDE:** -66.624821 **PGM_SYS_ACRNM:** RCRAINFO **PGM_SYS_ID:** PR0001003961 **LOCATION_ADDRESS:** HWY 2 KM 226.8 **CITY_NAME:** PONCE **COUNTY_NAME:** PONCE **STATE_CODE:** PR **EPA_REGION:** Region 2 **POSTAL_CODE:** 00732-7601 **FIPS_CODE:** 72113 **HUC_CODE:**	0.37 miles
☐ READY MIX CONCRETE INC PLANT 11 (PONCE,PR) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=PRD987367133) **REGISTRY_ID:** 110006623001 **LATITUDE:** 17.98995 **LONGITUDE:** -66.61684 **PGM_SYS_ACRNM:** RCRAINFO **PGM_SYS_ID:** PRD987367133 **LOCATION_ADDRESS:** AVE HOSTOS 170 **CITY_NAME:** PONCE **COUNTY_NAME:** PONCE **STATE_CODE:** PR **EPA_REGION:** Region 2 **POSTAL_CODE:** 00730 **FIPS_CODE:** 72113 **HUC_CODE:**	0.30 miles
☐ CENTRO SERVICIO JAPONES (PONCE,PR) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=PRO007001449) **REGISTRY_ID:** 110007814650 **LATITUDE:** 17.99771 **LONGITUDE:** -66.61418 **PGM_SYS_ACRNM:** RCRAINFO **PGM_SYS_ID:** PRO007001449 **LOCATION_ADDRESS:** AVE HOSTOS 54 **CITY_NAME:** PONCE **COUNTY_NAME:** SAN SEBASTIAN **STATE_CODE:** PR **EPA_REGION:** Region 2 **POSTAL_CODE:** 99999 **FIPS_CODE:** 72131 **HUC_CODE:**	0.28 miles
☐ NEGRO GOMAS (PONCE,PR) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=PRN008010191) **REGISTRY_ID:** 110014362073 **LATITUDE:** 17.988818 **LONGITUDE:** -66.617317 **PGM_SYS_ACRNM:** RCRAINFO **PGM_SYS_ID:** PRN008010191 **LOCATION_ADDRESS:** 146 HOSTOS AVE **CITY_NAME:** PONCE **COUNTY_NAME:** PONCE **STATE_CODE:** PR **EPA_REGION:** Region 2 **POSTAL_CODE:** 00716 **FIPS_CODE:** 72113 **HUC_CODE:**	0.37 miles

Name	Distance
☐ R S OIL EQUIPMENT CONTRACTORS (PONCE,PR) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=PRR000014142) **REGISTRY_ID:** 110012259527 **LATITUDE:** 17.98724 **LONGITUDE:** -66.61798 **PGM_SYS_ACRNM:** RCRAINFO **PGM_SYS_ID:** PRR000014142 **LOCATION_ADDRESS:** 112 HOSTOS AVE - PLAYA **CITY_NAME:** PONCE **COUNTY_NAME:** PONCE **STATE_CODE:** PR **EPA_REGION:** Region 2 **POSTAL_CODE:** 00734 **FIPS_CODE:** 72113 **HUC_CODE:**	0.47 miles
☐ TRANSPORTES PERLA DEL SUR (PONCE,PR) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=PRD980644587) **REGISTRY_ID:** 110004889256 **LATITUDE:** 17.99771 **LONGITUDE:** -66.61418 **PGM_SYS_ACRNM:** RCRAINFO **PGM_SYS_ID:** PRD980644587 **LOCATION_ADDRESS:** AVE HOSTOS 78 **CITY_NAME:** PONCE **COUNTY_NAME:** PONCE **STATE_CODE:** PR **EPA_REGION:** Region 2 **POSTAL_CODE:** 00731 **FIPS_CODE:** 72113 **HUC_CODE:**	0.28 miles
☐ MACYS PLAZA DEL CARIBE #806 (PONCE,PR) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=PRR000017533) **REGISTRY_ID:** 110020889608 **LATITUDE:** 17.995957 **LONGITUDE:** -66.612083 **PGM_SYS_ACRNM:** RCRAINFO **PGM_SYS_ID:** PRR000017533 **LOCATION_ADDRESS:** 2050 PONCE BYPASS **CITY_NAME:** PONCE **COUNTY_NAME:** PONCE **STATE_CODE:** PR **EPA_REGION:** Region 2 **POSTAL_CODE:** 00717 **FIPS_CODE:** 72113 **HUC_CODE:**	0.38 miles
☐ DEPT OF PATHOLOGY - HOSPITAL DAMAS (PONCE,PR) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=PRR000027573) **REGISTRY_ID:** 110071140135 **LATITUDE:** 17.997057 **LONGITUDE:** -66.617658 **PGM_SYS_ACRNM:** RCRAINFO **PGM_SYS_ID:** PRR000027573 **LOCATION_ADDRESS:** 2213 PONCE BY PASS 2DO PISO HOSPITAL DAMAS **CITY_NAME:** PONCE **COUNTY_NAME:** PONCE **STATE_CODE:** PR **EPA_REGION:** Region 2 **POSTAL_CODE:** 00717 **FIPS_CODE:** 72113 **HUC_CODE:**	0.09 miles

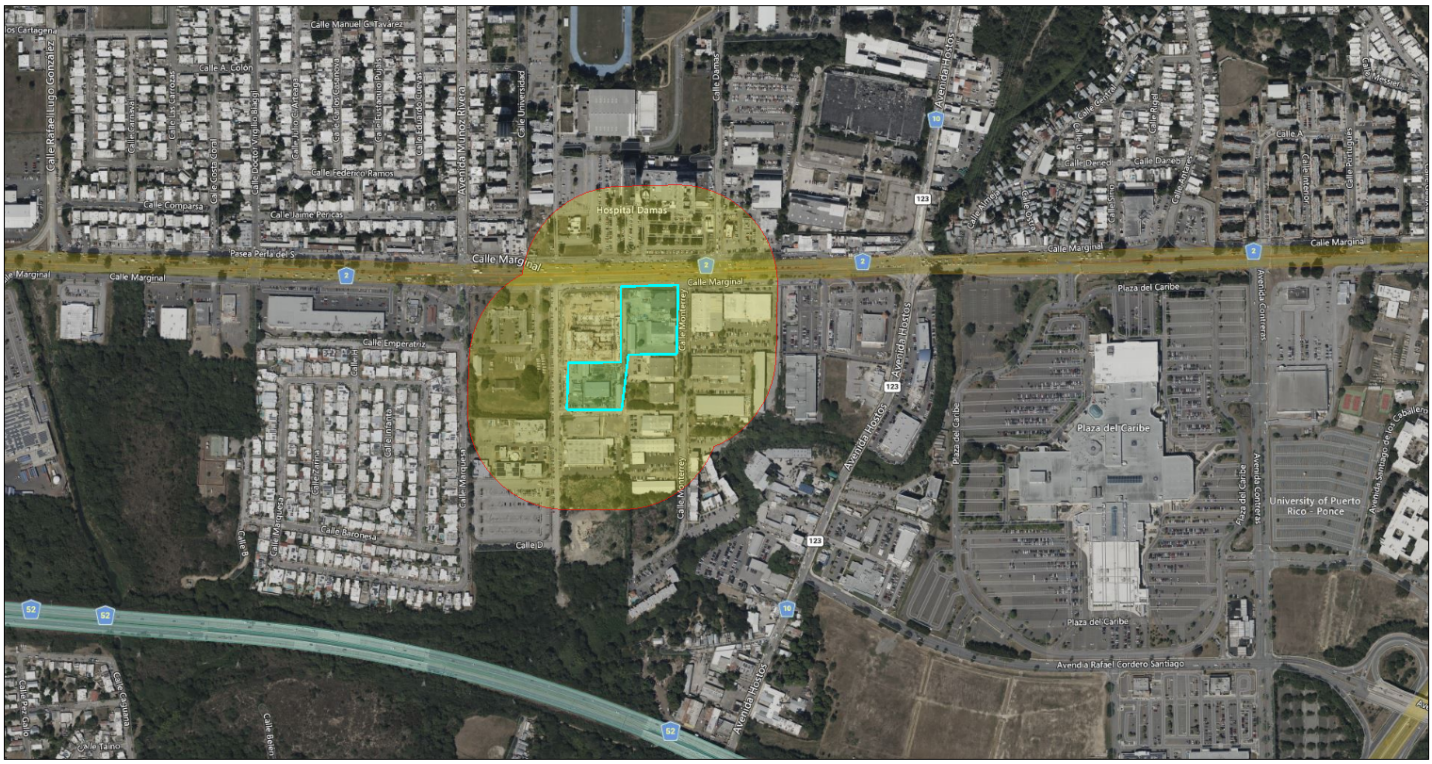
Name	Distance
☐ SERVICENTRO AUTOMOTIVE DEL SUR INC (PONCE,PR) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=PRO007001316) **REGISTRY_ID:** 110004890912 **LATITUDE:** 17.987055 **LONGITUDE:** -66.618064 **PGM_SYS_ACRNM:** RCRAINFO **PGM_SYS_ID:** PRO007001316 **LOCATION_ADDRESS:** 111-B HOSTOS AVE **CITY_NAME:** PONCE **COUNTY_NAME:** PONCE **STATE_CODE:** PR **EPA_REGION:** Region 2 **POSTAL_CODE:** 00731 **FIPS_CODE:** 72113 **HUC_CODE:**	0.48 miles
☐ PROFESIONAL BODY SHOP (PONCE,PR) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=PRN008010209) **REGISTRY_ID:** 110014362082 **LATITUDE:** 17.989798 **LONGITUDE:** -66.616906 **PGM_SYS_ACRNM:** RCRAINFO **PGM_SYS_ID:** PRN008010209 **LOCATION_ADDRESS:** 209 HOSTO ST PLAYA PONCE **CITY_NAME:** PONCE **COUNTY_NAME:** PONCE **STATE_CODE:** PR **EPA_REGION:** Region 2 **POSTAL_CODE:** 00731 **FIPS_CODE:** 72113 **HUC_CODE:**	0.31 miles
☐ CARLOS MESA TRUCK SUPPLY (PONCE,PR) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=PRR000009159) **REGISTRY_ID:** 110004894197 **LATITUDE:** 17.986763 **LONGITUDE:** -66.618233 **PGM_SYS_ACRNM:** RCRAINFO **PGM_SYS_ID:** PRR000009159 **LOCATION_ADDRESS:** AVE DE HOSTOS 160 **CITY_NAME:** PONCE **COUNTY_NAME:** PONCE **STATE_CODE:** PR **EPA_REGION:** Region 2 **POSTAL_CODE:** 00731 **FIPS_CODE:** 72113 **HUC_CODE:**	0.50 miles
☐ ESCUELA DE TECNOLOGIA MEDICA-PONTIFICIA UNIVERSIDAD CATOLICA DE PR (PONCE,PR) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=PRR000022699) **REGISTRY_ID:** 110041679305 **LATITUDE:** 17.998821 **LONGITUDE:** -66.62011 **PGM_SYS_ACRNM:** RCRAINFO **PGM_SYS_ID:** PRR000022699 **LOCATION_ADDRESS:** 2322 CALLE UNIVERSIDAD **CITY_NAME:** PONCE **COUNTY_NAME:** PONCE **STATE_CODE:** PR **EPA_REGION:** Region 2 **POSTAL_CODE:** 00717-9997 **FIPS_CODE:** 72113 **HUC_CODE:**	0.23 miles

Name	Distance
☐ CRIME LAB REGIONAL PONCE (PONCE,PR) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=PRR000007914) **REGISTRY_ID:** 110004893624 **LATITUDE:** 17.986805 **LONGITUDE:** -66.618172 **PGM_SYS_ACRNM:** RCRAINFO **PGM_SYS_ID:** PRR000007914 **LOCATION_ADDRESS:** 104 HOSTOS AVE **CITY_NAME:** PONCE **COUNTY_NAME:** PONCE **STATE_CODE:** PR **EPA_REGION:** Region 2 **POSTAL_CODE:** 00732 **FIPS_CODE:** 72113 **HUC_CODE:**	0.50 miles
☐ INSTITUTO TECNOLOGICO DE PONCE (PONCE,PR) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=PRR000011510) **REGISTRY_ID:** 110007822339 **LATITUDE:** 17.996051 **LONGITUDE:** -66.624821 **PGM_SYS_ACRNM:** RCRAINFO **PGM_SYS_ID:** PRR000011510 **LOCATION_ADDRESS:** PONCE BYPASS RD 2 KM 226.8 **CITY_NAME:** PONCE **COUNTY_NAME:** PONCE **STATE_CODE:** PR **EPA_REGION:** Region 2 **POSTAL_CODE:** 00732-7284 **FIPS_CODE:** 72113 **HUC_CODE:**	0.37 miles
☐ CARIBBEAN CAN MANUFACTURING - AMMONIA RELEASE EMERGENCY RESPONSE (PONCE,PR) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=PRR000025601) **REGISTRY_ID:** 110066978355 **LATITUDE:** 17.99189 **LONGITUDE:** -66.616003 **PGM_SYS_ACRNM:** RCRAINFO **PGM_SYS_ID:** PRR000025601 **LOCATION_ADDRESS:** 1029 HOSTOS AVE **CITY_NAME:** PONCE **COUNTY_NAME:** PONCE **STATE_CODE:** PR **EPA_REGION:** Region 2 **POSTAL_CODE:** 00717 **FIPS_CODE:** 72113 **HUC_CODE:**	0.23 miles
☐ CENTRO AUTO DE PONCE (PONCE,PR) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=PRO007001456) **REGISTRY_ID:** 110004890967 **LATITUDE:** 17.99771 **LONGITUDE:** -66.61418 **PGM_SYS_ACRNM:** RCRAINFO **PGM_SYS_ID:** PRO007001456 **LOCATION_ADDRESS:** AVE HOSTOS 56 **CITY_NAME:** PONCE **COUNTY_NAME:** PONCE **STATE_CODE:** PR **EPA_REGION:** Region 2 **POSTAL_CODE:** 00731 **FIPS_CODE:** 72113 **HUC_CODE:**	0.28 miles

Name	Distance
☐ MAACO AUTOPAINTING & BODYWORKS (PONCE,PR) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=PRR000006817) **REGISTRY_ID:** 110004893223 **LATITUDE:** 17.99771 **LONGITUDE:** -66.61418 **PGM_SYS_ACRNM:** RCRAINFO **PGM_SYS_ID:** PRR000006817 **LOCATION_ADDRESS:** AVENIDA HOSTOS 88 **CITY_NAME:** PONCE **COUNTY_NAME:** PONCE **STATE_CODE:** PR **EPA_REGION:** Region 2 **POSTAL_CODE:** 00731 **FIPS_CODE:** 72113 **HUC_CODE:**	0.28 miles
☐ LEYVA TOYOTA AUTO SALES INC (PONCE,PR) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=PRO007001431) **REGISTRY_ID:** 110004890958 **LATITUDE:** 17.99771 **LONGITUDE:** -66.61418 **PGM_SYS_ACRNM:** RCRAINFO **PGM_SYS_ID:** PRO007001431 **LOCATION_ADDRESS:** AVE HOSTOS 121 **CITY_NAME:** PONCE **COUNTY_NAME:** PONCE **STATE_CODE:** PR **EPA_REGION:** Region 2 **POSTAL_CODE:** 00731 **FIPS_CODE:** 72113 **HUC_CODE:**	0.28 miles

NEPAssist Report

PONCE HEALTH SCIENCES UNIVERSITY



June 28, 2023

Project Buffer

PONCE HEALTH SCIENCES UNIVERSITY

1:5,733

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

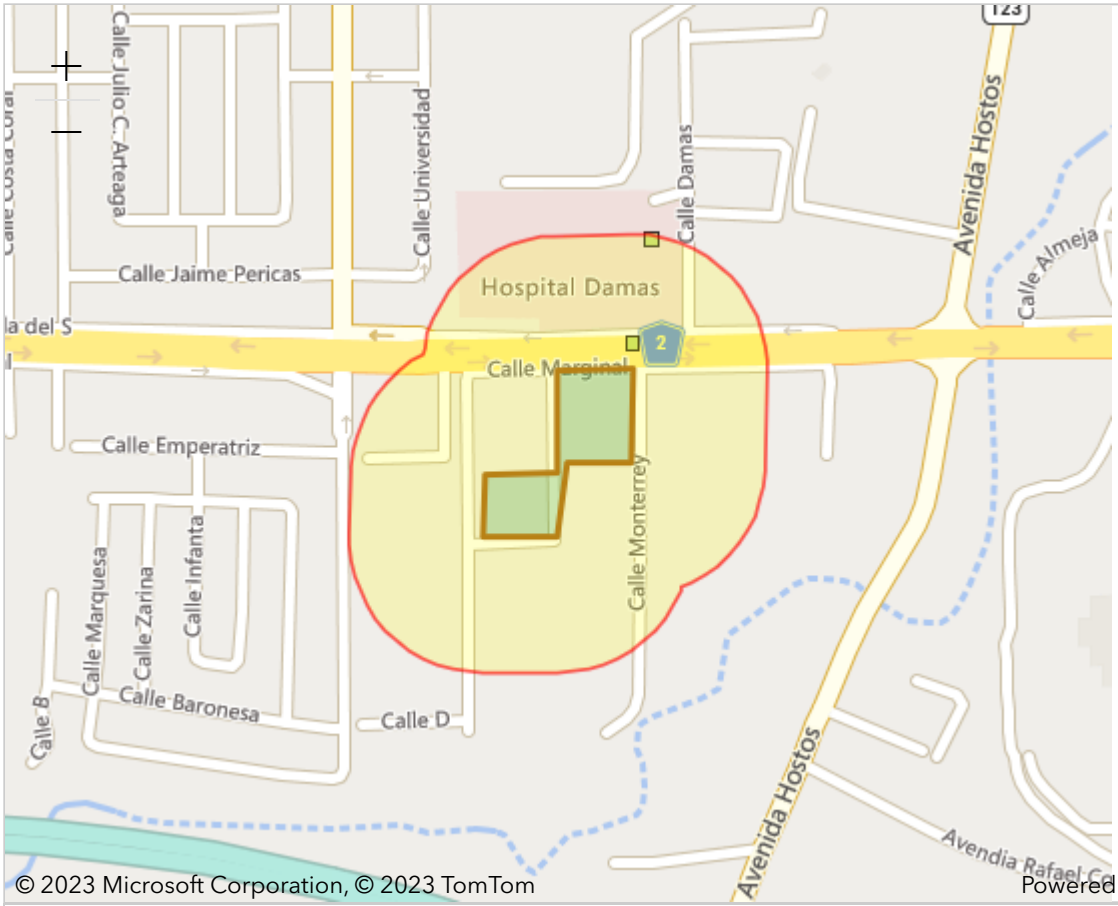
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Input Coordinates: 17.994655,-66.619439,17.994665,-66.618677,17.995706,-66.618677,17.995726,-66.617851,17.994777,-66.617872,17.994767,-66.618570,17.994012,-66.618666,17.994012,-66.619460,17.994655,-66.619439

Project Area	0.01 sq mi
Within 500 feet of an Ozone 8-hr (1997 standard) Non-Attainment/Maintenance Area?	no
Within 500 feet of an Ozone 8-hr (2008 standard) Non-Attainment/Maintenance Area?	no
Within 500 feet of a Lead (2008 standard) Non-Attainment/Maintenance Area?	no
Within 500 feet of a SO2 1-hr (2010 standard) Non-Attainment/Maintenance Area?	no
Within 500 feet of a PM2.5 24hr (2006 standard) Non-Attainment/Maintenance Area?	no
Within 500 feet of a PM2.5 Annual (1997 standard) Non-Attainment/Maintenance Area?	no
Within 500 feet of a PM2.5 Annual (2012 standard) Non-Attainment/Maintenance Area?	no
Within 500 feet of a PM10 (1987 standard) Non-Attainment/Maintenance Area?	no
Within 500 feet of a Federal Land?	no
Within 500 feet of an impaired stream?	no
Within 500 feet of an impaired waterbody?	no
Within 500 feet of a waterbody?	no
Within 500 feet of a stream?	no
Within 500 feet of an NWI wetland?	Available Online
Within 500 feet of a Brownfields site?	no
Within 500 feet of a Superfund site?	no
Within 500 feet of a Toxic Release Inventory (TRI) site?	no
Within 500 feet of a water discharger (NPDES)?	yes

Within 500 feet of a hazardous waste (RCRA) facility?	yes
Within 500 feet of an air emission facility?	no
Within 500 feet of a school?	yes
Within 500 feet of an airport?	no
Within 500 feet of a hospital?	no
Within 500 feet of a designated sole source aquifer?	no
Within 500 feet of a historic property on the National Register of Historic Places?	no
Within 500 feet of a Toxic Substances Control Act (TSCA) site?	no
Within 500 feet of a Land Cession Boundary?	no
Within 500 feet of a tribal area (lower 48 states)?	no
Within 500 feet of the service area of a mitigation or conservation bank?	no
Within 500 feet of the service area of an In-Lieu-Fee Program?	no
Within 500 feet of a Public Property Boundary of the Formerly Used Defense Sites?	no
Within 500 feet of a Munitions Response Site?	no
Within 500 feet of an Essential Fish Habitat (EFH)?	no
Within 500 feet of a Habitat Area of Particular Concern (HAPC)?	no
Within 500 feet of an EFH Area Protected from Fishing (EFHA)?	yes
Within 500 feet of a Bureau of Land Management Area of Critical Environmental Concern?	no
Within 500 feet of an ESA-designated Critical Habitat Area per U.S. Fish & Wildlife Service?	no
Within 500 feet of an ESA-designated Critical Habitat river, stream or water feature per U.S. Fish & Wildlife Service?	no

Created on: 6/28/2023 4:13:51 PM



Report question: *Within 500 of a Hazardous waste site?* yes

Modify question by entering a new buffer distance and unit for the selected study area:

500 feet Submit

Name	Distance
HOSPITAL DAMAS (PONCE,PR) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=PRR000014928)	95.91 feet

REGISTRY_ID: 110012243786
LATITUDE: 17.99599
LONGITUDE: -66.61786
PGM_SYS_ACRNM: RCRAINFO
PGM_SYS_ID: PRR000014928
LOCATION_ADDRESS: 2213 PONCE BYPASS
CITY_NAME: PONCE
COUNTY_NAME: PONCE
STATE_CODE: PR
EPA_REGION: Region 2
POSTAL_CODE: 00717-1318
FIPS_CODE: 72113
HUC_CODE:

Name	Distance
☐ DEPT OF PATHOLOGY - HOSPITAL DAMAS (PONCE,PR) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=PRR000027573) **REGISTRY_ID:** 110071140135 **LATITUDE:** 17.997057 **LONGITUDE:** -66.617658 **PGM_SYS_ACRNM:** RCRAINFO **PGM_SYS_ID:** PRR000027573 **LOCATION_ADDRESS:** 2213 PONCE BY PASS 2DO PISO HOSPITAL DAMAS **CITY_NAME:** PONCE **COUNTY_NAME:** PONCE **STATE_CODE:** PR **EPA_REGION:** Region 2 **POSTAL_CODE:** 00717 **FIPS_CODE:** 72113 **HUC_CODE:**	487.95 feet

Detailed Facility Report



Detailed Facility Report

Facility Summary

HOSPITAL DAMAS

2213 PONCE BYPASS, PONCE, PR 00717

FRS (Facility Registry Service) ID: 110012243786
EPA Region: 02
Latitude: 17.99599
Longitude: -66.61786
Locational Data Source: FRS
Industries: --
Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	12/17/2009
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Statute	SDWA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	--
Compliance Status	Violation Identified
Qtrs in Noncompliance (of 12)	6
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	4
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information

Clean Water Act (CWA): No Information

Resource Conservation and Recovery Act (RCRA): Active VSQG, (PRR000014928)

Safe Drinking Water Act (SDWA): OWNER: Private, SOURCE: Ground water, TYPE: Non-Transient non-community system Permit Active (PR0458114)

Go To Enforcement/Compliance Details
Known Data Problems

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information

Greenhouse Gas Emissions (eGGRT): No Information

Toxic Releases (TRI): No Information

Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110012243786					N	17.99599	-66.61786
RCRAInfo	RCRA	PRR000014928	VSQG	Active (H)			N	18.001624	-66.597716
SDWIS	SDWA	PR0458114	OWNER: Private, SOURCE: Ground water, TYPE: Non-Transient non-community system	Active	Population Served: 1306		N		

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110012243786	HOSPITAL DAMAS	2213 PONCE BYPASS, PONCE, PR 00717	Ponce Municipio
RCRAInfo	RCRA	PRR000014928	HOSPITAL DAMAS	2213 PONCE BYPASS, PONCE, PR 00717-1318	Ponce Municipio
SDWIS	SDWA	PR0458114	HOSPITAL DE DAMAS	PR	

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description

No data records returned

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description

No data records returned

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)

No data records returned

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)
SDWA	*PR0458114*	*SDWIS*		*Sanitary Survey, Complete*	*State*	*08/21/2018*	

Entries in italics are not counted as EPA official inspections.

SDWA (Safe Drinking Water Act) Sanitary Survey Results (5 Years)

Source ID	Date	Type	Agency	Data Verification	Distribution	Management Operation	Finished Water Storage	Operator Compliance	Other Evaluation	Pumps	Security	Source	Financial	Treatment
PR0458114	08/21/2018	Sanitary Survey, Complete	State	Z (Not Applicable)	Z (Not Applicable)	Z (Not Applicable)	Z (Not Applicable)	Z (Not Applicable)	Z (Not Applicable)	Z (Not Applicable)	Z (Not Applicable)	Z (Not Applicable)	Z (Not Applicable)	Z (Not Applicable)

Sanitary survey result codes:

S = Significant Deficiencies
M = Minor Deficiencies
R = Recommendations Made
N = No Deficiencies or Recommendations
X = Not Evaluated
Z = Not Applicable
D = Sanitary Defect
-- = Not Reported to EPA

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	PRR000014928	No	06/24/2023	0	06/23/2023
SDWA	PR0458114	No	12/31/2022	6	04/05/2023

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type		QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: PRR000014928)			07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22	01/01-03/31/23	04/01-06/30/23
	Facility-Level Status		No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation	Agency												

Statute	Violation Type/Category		QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12	QTR 13*
SDWA (Source ID: PR0458114)			01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22	01/01-03/31/23
	Facility-Level Status		No Violation	No Violation	Violation	Violation	No Violation	No Violation	No Violation	No Violation	Violation	Violation	Violation	Violation	In Progress
	Category	Violation Type													

Statute	Violation Type/Category		QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12	QTR 13*
SDWA	MR (Monitoring and Reporting)	Lead and Copper Rule			07/01/2020	12/31/2020					01/01/2022	→	→	→	→

*Quarter 13 data is voluntarily entered and/or incomplete, and may not form a complete picture for that quarter. Read more

SDWA Compliance Data Last Reported: 12/31/2022

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date
SDWA	SDWIS	PR0458114	State Formal Notice of Violation issued	State	02/25/2022
SDWA	SDWIS	PR0458114	State Formal Notice of Violation issued	State	05/03/2021
SDWA	SDWIS	PR0458114	State Formal Notice of Violation issued	State	02/07/2020
SDWA	SDWIS	PR0458114	State Formal Notice of Violation issued	State	11/16/2018

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Value	Comp Action Cost

No data records returned

SDWA (Safe Drinking Water Act) Violations and Enforcement Actions (5 Years)

Violations											Enforcement Actions			
Source ID	Noncompliance Period	Violation ID	Federal Rule	Contaminant	Category	Description	Measured Value	State MCL (Maximum Contaminant Level)	Federal MCL (Maximum Contaminant Level)	Status	Date	Category	Description	Agency
PR0458114	01/01/2022 →	7117986	Lead and Copper Rule	Lead and Copper Rule	MR	Monitoring and Reporting	--	--	--	Unaddressed	02/25/2022	Informal	State Formal Notice of Violation issued	State
PR0458114	07/01/2020 - 12/31/2020	7117983	Lead and Copper Rule	Lead and Copper Rule	MR	Monitoring and Reporting	--	--	--	Resolved	05/03/2021 12/31/2020	Informal Resolving	State Formal Notice of Violation issued State Compliance achieved	State State

Violations											Enforcement Actions			
PR0458114	07/01/2019 - 09/30/2019	7117982	Nitrates	Nitrate	MR	Monitoring and Reporting	--	--	--	Resolved	03/31/2020 02/07/2020	Resolving Informal	State Compliance achieved State Formal Notice of Violation issued	State State
PR0458114	01/01/2019 - 09/30/2019	7117978	Lead and Copper Rule	Lead and Copper Rule	MR	Monitoring and Reporting	--	--	--	Resolved	09/30/2019 06/30/2019 11/16/2018	Resolving Resolving Informal	State Compliance achieved State Compliance achieved State Formal Notice of Violation issued	State State State

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (RAD (Reach Address Database))	WBD (Watershed Boundary Dataset) Subwatershed Name (RAD (Reach Address Database))	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?

No data records returned

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use

No data records returned

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)

No data records returned

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers

No data records returned

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name

No data records returned

Community

Environmental Justice

This section shows indexes from EJScreen, EPA's screening tool for environmental justice (EJ) concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. Use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

EJScreen Indexes Shown

Compare to ◉ US ○ State

Index Type ○ Environmental Justice ◉ Supplemental

Related Reports

EJScreen Report

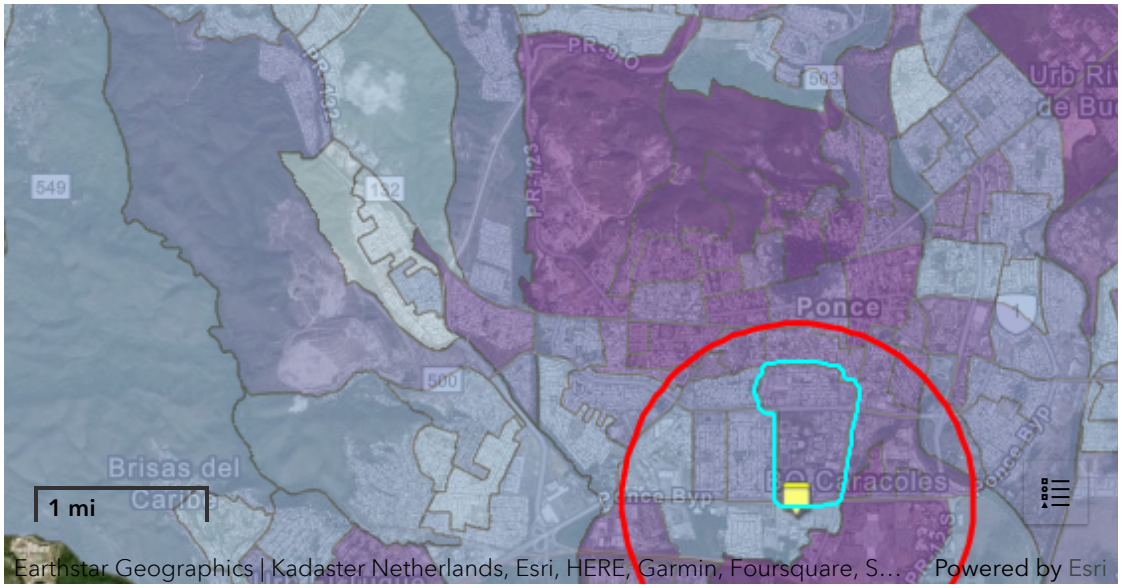
Download Data

Census Block Group ID: 721130717001	US (Percentile)	
Supplemental Indexes	**Facility Census Block Group**	**1-mile Max**
Count of Indexes At or Above 80th Percentile	**7**	**8**
Particulate Matter 2.5	--	--
Ozone	--	--
Diesel Particulate Matter	26	43
Air Toxics Cancer Risk	70	! 94
Air Toxics Respiratory Hazard Index	40	69
Traffic Proximity	! 95	! 99
Lead Paint	! 92	! 99

○ Facility 1-mile Radius ☐ Facility Census Block Group



Census Block Group ID: 721130717001	US (Percentile)	
Risk Management Plan (RMP) Facility Proximity	97	99
Hazardous Waste Proximity	96	99
Superfund Proximity	97	99
Underground Storage Tanks (UST)	95	99
Wastewater Discharge	96	99



Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2016 - 2020 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	18,280
Population Density	5,920/sq.mi.
Housing Units in Area	9,203

General Statistics (ACS (American Community Survey))	
Total Persons	14,850
Percent People of Color	100%
Households in Area	6,497
Households on Public Assistance	1,144
Persons With Low Income	11,460
Percent With Low Income	79%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	17.99599

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	1,205 (7%)
Minors 17 years and younger	4,243 (23%)
Adults 18 years and older	14,037 (77%)
Seniors 65 years and older	3,348 (18%)

Race Breakdown (U.S. Census) - Persons (%)	
White	14,579 (80%)
African-American	1,927 (11%)
Hispanic-Origin	18,079 (99%)
Asian/Pacific Islander	39 (0%)
American Indian	109 (1%)
Other/Multiracial	1,626 (9%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	1,379 (13.47%)

Geography	
Center Longitude	-66.61786
Land Area	99%
Water Area	1%
Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	3,722 (57.31%)
$15,000 - $25,000	949 (14.61%)
$25,000 - $50,000	1,107 (17.04%)
$50,000 - $75,000	313 (4.82%)
Greater than $75,000	404 (6.22%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
9th through 12th Grade	898 (8.77%)
High School Diploma	3,261 (31.85%)
Some College/2-year	789 (7.71%)
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	2,999 (29.29%)

LAST UPDATED ON SEPTEMBER 21, 2022

DATA REFRESH INFORMATION

Detailed Facility Report



Detailed Facility Report

Facility Summary

DEPT OF PATHOLOGY - HOSPITAL DAMAS

2213 PONCE BY PASS 2DO PISO HOSPITAL DAMAS, PONCE, PR 00717

FRS (Facility Registry Service) ID: 110071140135
EPA Region: 02
Latitude: 17.997057
Longitude: -66.617658
Locational Data Source: RCRAINFO
Industries: Ambulatory Health Care Services
Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	--
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information

Clean Water Act (CWA): No Information

Resource Conservation and Recovery Act (RCRA): Active SQG, (PRR000027573)

Safe Drinking Water Act (SDWA): No Information

Go To Enforcement/Compliance Details

Known Data Problems

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information

Greenhouse Gas Emissions (eGGRT): No Information

Toxic Releases (TRI): No Information

Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110071140135					N	17.997057	-66.617658
RCRAInfo	RCRA	PRR000027573	SQG	Active (H)			N	17.997057	-66.617658

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110071140135	DEPT OF PATHOLOGY - HOSPITAL DAMAS	2213 PONCE BY PASS 2DO PISO HOSPITAL DAMAS, PONCE, PR 00717	Ponce Municipio
RCRAInfo	RCRA	PRR000027573	DEPT OF PATHOLOGY - HOSPITAL DAMAS	2213 PONCE BY PASS 2DO PISO HOSPITAL DAMAS, PONCE, PR 00717	Ponce Municipio

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description

No data records returned

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
RCRAInfo	PRR000027573	621511	Medical Laboratories

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)

No data records returned

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)

No data records returned

Entries in italics are not counted as EPA official inspections.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	PRR000027573	No	06/24/2023	0	06/23/2023

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type		QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: PRR000027573)			07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22	01/01-03/31/23	04/01-06/30/23
	Facility-Level Status		No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation	Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date

No data records returned

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Value	Comp Action Cost

No data records returned

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (RAD (Reach Address Database))	WBD (Watershed Boundary Dataset) Subwatershed Name (RAD (Reach Address Database))	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?

No data records returned

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use

No data records returned

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)

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Pollutants

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EJScreen Indexes Shown

Compare to ◉ US ○ State

Index Type ○ Environmental Justice ◉ Supplemental

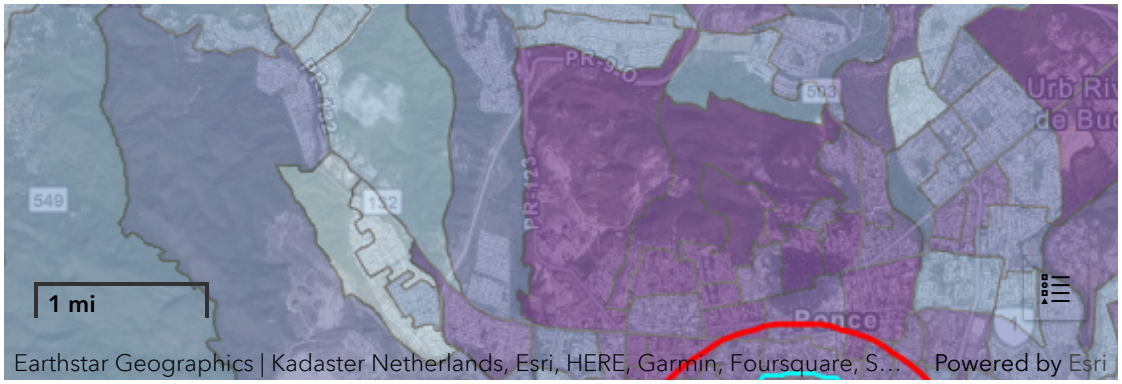
Related Reports

EJScreen Report

Download Data

○ Facility 1-mile Radius ☐ Facility Census Block Group

Census Block Group ID: 721130717001	US (Percentile)	
Supplemental Indexes	**Facility Census Block Group**	**1-mile Max**
Count of Indexes At or Above 80th Percentile	**7**	**8**
Particulate Matter 2.5	--	--
Ozone	--	--
Diesel Particulate Matter	26	43
Air Toxics Cancer Risk	70	! 94
Air Toxics Respiratory Hazard Index	40	69
Traffic Proximity	! 95	! 99
Lead Paint	! 92	! 99
Risk Management Plan (RMP) Facility Proximity	! 97	! 99
Hazardous Waste Proximity	! 96	! 99
Superfund Proximity	! 97	! 99
Underground Storage Tanks (UST)	! 95	! 99
Wastewater Discharge	! 96	! 99



Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2016 - 2020 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	19,100
Population Density	6,170/sq.mi.
Housing Units in Area	9,728

General Statistics (ACS (American Community Survey))	
Total Persons	15,656
Percent People of Color	100%
Households in Area	6,852
Households on Public Assistance	1,213
Persons With Low Income	12,119
Percent With Low Income	79%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	17.997057
Center Longitude	-66.617658
Land Area	99%
Water Area	1%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	3,914 (57.13%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	1,267 (7%)
Minors 17 years and younger	4,440 (23%)
Adults 18 years and older	14,660 (77%)
Seniors 65 years and older	3,537 (19%)

Race Breakdown (U.S. Census) - Persons (%)	
White	15,247 (80%)
African-American	2,006 (11%)
Hispanic-Origin	18,891 (99%)
Asian/Pacific Islander	39 (0%)
American Indian	112 (1%)
Other/Multiracial	1,697 (9%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	1,460 (13.49%)
9th through 12th Grade	940 (8.69%)
High School Diploma	3,452 (31.9%)
Some College/2-year	834 (7.71%)
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	3,147 (29.09%)

Income Breakdown (ACS (American Community Survey)) - Households (%)	
$15,000 - $25,000	1,020 (14.89%)
$25,000 - $50,000	1,167 (17.03%)
$50,000 - $75,000	338 (4.93%)
Greater than $75,000	412 (6.01%)

LAST UPDATED ON SEPTEMBER 21, 2022

DATA REFRESH INFORMATION

RECEIVED
16 DEC 2019
LOA Management

Winston R. Esteves, P.E.
Environmental Consultant

Phase I Environmental Site Assessment



PHSU Property
Km 227.2 State Road PR-2
Ponce, Puerto Rico 00716

Issuance Date: December 16, 2019
Viability Date: June 2, 2020
WRE Project 19-073

Prepared for:

Oriental Bank

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Appendix 4 PR Environmental Quality Board. Information Request Letter, December 4, 2019
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Confidentiality Statement

Because this Phase I ESA may contain confidential information, its contents or any part thereof should not be reproduced, copied, loaned, transferred, nor disclosed to any person, directly or indirectly, without the prior written consent of WRE. It may not be used for any purpose by any person -other than the party to whom it is addressed-without the prior written consent of WRE, and in any event, only in its entirety.

Introduction

Purpose

As requested, Winston R. Esteves, P.E. (WRE) conducted this Phase I Environmental Site Assessment (Phase I ESA) for part of an institutional property- Ponce Health Sciences University (PHSU)- located at Km 227.2 State Road PR-2, Canas Ward, Ponce, Puerto Rico. The main purpose was to identify any Recognized Environmental Conditions (RECs) in connection with the subject property.

A REC is defined as the presence or likely presence of any hazardous substances or petroleum products in, on or at property: (1) due to a release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. The term is not intended to include *de minimis* conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of the appropriate governmental agencies.

Two terms related to a REC include:

- Controlled Recognized Environmental Condition (CREC) - a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.

- Historical Recognized Environmental Condition (HREC) - a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority, without subjecting the property to any required controls. Before calling a past release a HREC, the environmental professional (EP) must determine whether the past release is a REC at the time the Phase I ESA is conducted e.g., consider if there has been a change in regulatory criteria.

Scope/Methodology

WRE's Scope of Work for this Phase I ESA consisted of the standard scope items and four components required by ASTM International (ASTM) Standard E 1527-13 "Standard Practice for Environmental Site Assessments: Phase I Environmental Site

Assessment". The four components; their purpose and methodology can be described as follows:

- **Records review**
  The purpose of the records review is to obtain and examine available and readily ascertainable environmental, physical and historical use information that will help identify RECs in connection with the subject property. Some of the records to be reviewed pertain not just to the property but also to certain facilities within approximate minimum search distances (adjoining, half-mile and one mile). The information must be obtained from Standard Sources of Information.

- **Property reconnaissance**
  The objective of the property reconnaissance is to obtain information indicating the likelihood of identifying RECs in connection with its use. During this reconnaissance, the subject property is visited. The land parcel and all structures on it are visually and physically observed (exterior and interior) to identify specific environmental aspects e.g., storage tanks, polychlorinated biphenyls (PCBs), odors, and containers. It is not expected that more than one site visit to the property shall be made in connection with a Phase I ESA.

- **Interviews**
  Subject property owners, occupants, operators and government officials are interviewed to obtain information indicating RECs in connection with the subject property. The interviews can be in person, by telephone or in writing. The interviews can take place before, during or after the subject property visit.

- **Evaluation and reporting**
  During this phase, all information obtained regarding RECs in connection with the property is evaluated, documented and presented in a recommended report format.

Special Terms and Conditions

WRE was authorized to proceed with this Phase I ESA through the execution of Proposal Agreement 19-073 dated December 4, 2019. The Proposal Agreement specified terms and conditions for the delivery of services, work products, and payment for services.

Definitions

For the purposes of this report, the words "property or subject

property" are used to address the area that includes the two parcels of land and improvements that are the subject of this Phase I ESA. Otherwise, this report adopts by reference and uses the same definitions, description of terms and acronyms utilized in ASTM Standard Practice E 1527-13.

Reliance

The information, results and conclusions in this report have been prepared exclusively for Oriental Bank, the party seeking to use this Phase I ESA i.e., the "User" of this report.

WRE is not responsible for the use of this information by any other parties at any time unless that party has received prior written authorization from WRE. Furthermore, WRE is not responsible for the independent conclusions, opinions, or recommendations made by others based on the information, results and conclusions presented in this report.

Third-party entities may only rely on this Phase I ESA Report trough a reliance letter that will be issued at WRE's sole discretion under separate cover and subject to the same terms and conditions of the original contract, including potential additional compensation.

Viability

Any use of this report beyond the validity period specified by ASTM Standard Practice E 1527-13 is at the sole risk of the user.

Property Location

General

The subject property is located in an industrial park (Canas Urbano Industrial Park[CUIP] also known as the Reparada Industrial Subdivision [RIS]) developed by the Puerto Rico Industrial Company (PRIDCO) in the south coast of the island of Puerto Rico, Canas Ward, Municipality of Ponce. This is about 110 miles southwest of San Juan. See Figure 1 for the Property Location Map.

Address

Km 227.2 State Road PR-2
Canas Ward
Ponce, Puerto Rico 00716

Geographic Coordinates

17°59'41.11" N / 66°37'8.91"W

Property Tax Number

412-011-783-27

Property Description

Size

The subject property's total reported surface area is approximately 18,539 square meters.

Shape

The property has a rectangular shape in a north to south orientation. Figure 2 shows its layout and approximate boundaries.

Improvements

The property is part of a fourteen-lot PRIDCO industrial park (L-027-0-54-00), also known as Canas Urbano Industrial Park. It consists of two adjoining lots- Lot 10 and Lot 11, both occupied by PHSU. See Figure 3.

It is improved with four detached one story main structures including an administration building, an administration annex building, a cafeteria and a student services building. Other amenities include open paved parking areas along the east and west sides of the property, perimeter fence with access gates at the west and north sides, a guard house, two emergency generators and three pad-mounted electrical substations.

Abutters/ Nearby Properties

North: Marginal street to State Road PR-2; further north is State Road PR-2 and Hospital Damas. No environmental concerns were visually observed from the subject property boundary.

South: Hospital Damas helipad (Lot 12 of the CUIP); further south are other buildings of the PHSU (Lot 14 of the CUIP). No environmental concerns were visually observed from the subject property boundary.

East: Lots 5-8 of the CUIP; Lot 5 was observed vacant, Lot 6 occupied by Gogo Pediatric Institute, Lot 7 occupied also by PHSU and Lot 8 occupied by Rubber and Gasket Engineered Rubber Products. No environmental concerns were visually observed from the subject property boundary.

West: Municipal street; further west is the Puerto Rico Army National Guard Armory (PRANG). No environmental

concerns were visually observed from the subject property boundary.

Physical Setting

Topography

The property has a level topography with a gentle slope to the south. Approximate elevation according to the US Geological Survey (USGS) Topographic Map is about 17-feet above mean sea level. See Figure 1.

Drainage

Drainage from the property flows overland and into grated inlets that discharge to the surrounding streets and adjoining properties.

Soils

Although the soils of the property have not been classified by the US Soil Conservation Service, Constancia silty clay (Ct) is the dominant soil composition of the general area of the property. This is a nearly level soil (0-2 percent slopes) on alluvial fans along rivers and streams of semi-arid areas.

Geology

The US Geological Survey (USGS) Geologic Map for the Ponce Playa Quadrangle, Puerto Rico, indicates that the subject property is underlain by Alluvial Fans (Qf) of the Pleistocene and Holocene periods. This geologic unit is described as composed of crudely and irregularly bedded, fresh to moderately weathered gravel, sand, silt, and some clay.

Hydrogeology

The USGS has divided the Ponce Municipality into six hydrologic terranes (PonHT). The subject property is located in the Ponce hydrogeologic terrane 1 (PonHT1) - this hydrogeologic terrane consists mostly of fan delta alluvium and terrace deposits of the Quaternary age and underlying limestone of the middle Tertiary age. The soil cover thickness ranges from 28 to 68 inches. The depth to the water table is less than 10 feet below land surface in the coastal portions. The topographic slope is generally less than 15 degrees (about 17 percent slopes). See Figure 3.

Surface Water

There are no surface water bodies within the property boundaries. The Portugues River is located about 600-feet to the east.

Ground Water

Groundwater depth at the property, if any, is unknown. Although the actual groundwater flow direction cannot be accurately determined without site-specific information obtained through the installation of groundwater monitoring wells it is generally assumed to the south i.e., towards the Caribbean Sea.

User-Occupant Provided Information

Owner, Key Property Manager, Occupant(s)

Present owner – Arist Medical Sciences University Public Benefit Corporation d/b/a PHSU.
Key Property Manager / Occupant – Mrs. Rosanne West, Facilities and Security Director / PHSU

To meet the requirements of 40 CFR 312.20 and 312.25, a search for the existence of environmental liens and activity and use limitations (AULs) that are filed or recorded against the property must be conducted.

Environmental liens and AULs are legally distinct instruments and have very different purposes and both can commonly be found within recorded land title records. The types of title reports that may disclose environmental liens and AULs include Preliminary Title Reports, Title Commitments, Condition of Title, and Title Abstracts. Chain of title reports will not normally disclose environmental liens or AULs. Environmental liens and AULs that are imposed by judicial authorities may be recorded or filed in judicial records only. In jurisdictions where environmental liens or AULs are only recorded or filed in judicial records, the judicial records must be searched for environmental liens and AULs.

Any environmental liens and AULs known to the User should be reported to the EP conducting a Phase I ESA.

PHSU provided copy of a 2018 title study for each of the two adjoining lots that comprise the property; these title studies did not identify filed or recorded environmental liens and/or AULs.

Liens or Activity and Use Limitations Regarding Environmental Matters

No environmental liens or AULs encumbering the property were identified by PHSU during the performance of this Phase I ESA.

Specialized Knowledge or Experience

PHSU informed not having special knowledge or experience in connection with the property.

Actual Knowledge

PHSU informed not having actual knowledge of environmental contamination or problems in connection with the property.

Other Knowledge or Experience

PHSU did not inform other knowledge or experience about the property.

Valuation Reduction

No valuation reduction for environmental issues or knowledge that

	the appraisal value of the subject property is significantly less than the value of comparable properties was informed by the User or PHSU.
Commonly Known or Reasonably Ascertainable Information	PHSU informed not having awareness about commonly known or reasonably ascertainable information about RECs at the property.
Reason for Performing Phase I	Perform environmental due diligence prior to a financial transaction involving the property as collateral.
Operator and Occupant(s)	PHSU is the exclusive operator and occupant of the property.
Proceedings Involving the Property	None identified or informed. PHSU informed no present, threatened or past litigation relevant to hazardous substances or petroleum products in, on, or from the subject property; knowledge of any other pending, threatened or past administrative proceedings relevant to hazardous substances or petroleum products in or from the subject property; knowledge of any other notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products.
Prior Assessments	Copy of a 2014 Phase I ESA report prepared for the four parcels comprising the larger PHSU campus was made available to WRE. This previous Phase I ESA was reportedly prepared following ASTM Standard 1527-13 however, the report does not identify or discuss mandatory elements e.g., prior assessments, deviations, limiting conditions, data gaps, or historical / controlled RECs or *de minimis* conditions. Furthermore, the 2014 Phase I ESA did not include a review of essential government records: the Environmental Quality Board's underground storage tank (UST) and leaking underground storage tank (LUST) databases. Because of this deviation from the records review requirement of the ASTM 1527-13 Standard, the 2014 report failed to identify and discuss relevant facilities located within minimum search distances of the property - two UST facilities (the PRANG at the adjoining property to the west and Hospital Damas to the north) and one still active LUST facility located across State Road PR-2 to the northwest - a Shell service station readily visible from the subject property and initially listed by the PREQB in 2001. Although the 2014 report lists several RECs, some not involving hazardous substances or petroleum products, the reasoning for making such determinations is not provided. The potential presence of PCBs in electrical equipment located at the subject

property appears to be the only significant potential REC identified in the 2014 Phase I ESA.

Questionnaire

No Environmental Questionnaire was completed because the User is not taking title of the property.

Environmental Record Sources

Adjustments

The minimum search distances for the records reviewed per ASTM Standard E 1527-13 (half-mile and one mile) were not reduced.

Standard Records

A regulatory database search report was provided by Environmental Data Resources, Inc. (EDR) - the EDR Radius Map™ Report with GeoCheck®. The database search involves researching a series of Federal, State, Local and other databases for certain facilities that are located within minimum search distances from the subject property. It includes a computer-generated map that depicts the locations of any facilities identified as having potential environmental risks within the specified approximate search distances from the property. WRE makes no warranty regarding the accuracy of the database report information.

The EDR Radius Map™ Report did not identify findings for the subject property, it identified two facilities of interest within the minimum ASTM search distances on the databases researched:

- Caribbean Can Manufacturing, LLC, reportedly located about 1500-feet southeast of the property is identified in the US Environmental Protection Agency's (USEPA) Superfund Enterprise Management System (SEMS) as a former Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) facility with identification number PRR000025601. CERCLIS included potentially hazardous waste sites that have been reported to USEPA and which were in the screening and assessment phase for possible inclusion in the Superfund National Priorities List (NPL). This hydraulically down-gradient facility is described as one where removal of the hazardous wastes has been completed and no site assessment work is needed, therefore this finding does not represent a concern for the property.

- Gulf service station #0178 (now Puma) located about 2400-feet northeast of the property is listed as a LUST facility with

identification number 86-0196. This LUST has not been released yet from further investigation and remedial actions by the Puerto Rico Environmental Quality Board (PREQB). Because it is located hydraulically cross-gradient from the subject property, it should not represent a concern.

The EDR Radius Map™ Report with GeoCheck® also identified five Orphan / Non-Locatable facilities for which a geographic location could not be determined because of insufficient information on the address. One of these orphans, Shell service station #0426 is an active LUST facility with identification number 86-1050 that is located about 400-feet northwest and hydraulically cross-gradient of the property. Based on field verification, our review of available public records, the distances from the property and/or groundwater flow direction inferred from surface topography, none of the Orphan / Non-Locatable Facilities identified in the EDR Radius Map™ Report with GeoCheck® appears to be located at or in the immediate vicinity of the property or have the potential to adversely impact the soil or groundwater of the property at this time

See Appendix 1 for a copy of the EDR Radius Map™ with GeoCheck® Report.

Environmental Quality Board

The publicly- available PREQB UST and LUST lists reviewed did include two additional relevant findings within minimum ASTM search distances to those of the EDR Radius Map™ with GeoCheck® Report for the subject property. Hospital Damas is identified as an hydraulically up-gradient UST facility with identification number 90-0078 that is located about 200-feet to the north of the subject property, the PRANG is identified as an hydraulically cross-gradient UST facility with identification number 94-0010 that adjoins the subject property by the west. Based on their current status as non LUSTs and / or relative location to the subject property, these facilities are not expected to have a potential impact on the subject property.

According to available PREQB file information for LUST 86-1050 Shell service station #0426 is an active LUST with identification number 86-1050 that is located about 400 feet west-northwest of the subject property. This correlates with the information provided for this facility by the EDR Radius Map™ Report with GeoCheck®. WRE requested access to the PREQB file for this facility but authorization has not been granted at the time of completion of this report. Due to recent changes after the consolidation of the PREQB with the PR Department of Natural

Resources and Environment (DNRE), the authorization (now requiring clearance by DRNA's legal division) will take longer, particularly during this time of the year, thus making this information not readily ascertainable within the time constraints imposed by the User.

PRIDCO

After vetting by its legal division, on December 13, 2019 PRIDCO provided access to their files for the CUIP. Information was provided only for the still unsold lots of the CUIP- Lots 4,7 and 9. Information was not available for other lots of the CUIP, including the subject property (Lots 10-11). A review of the available information at PRIDCO did not reveal the potential for RECs associated with the historical uses of the PRIDCO lots adjoining the property.

Other Sources

A search of the US Environmental Protection Agency (USEPA) - Envirofacts / Superfund Site Information / Region 2 Cleanup and Corrective Action Facility Information Databases did not identify additional findings at the subject property, adjoining properties or facilities within a half-mile or one mile distance of the subject property.

Aerial Photographs

1936

The property, adjoining properties and surrounding area appear to be part of Hacienda Reparada and used as cultivated farmland, probably sugarcane. No environmental concerns were noted with respect to this photograph. See Plate 1.

1962

State Road PR-2 can be observed to the north of the property that appears devoid of structures. The PRANG has been constructed to the west of the property. Buildings have been constructed also on Lots 1-6 of the CUIP to the east. The adjoining properties to the south are vacant. No environmental concerns were noted with respect to this photograph. See Plate 2.

1971

Buildings have been constructed on Lots 7-9 and 13 of the CUIP. Two buildings have been constructed at the property- an elongated rectangular one on Lot 10 and a smaller square one on Lot 11. A smaller building has been constructed on Lot 11. No environmental concerns were noted with respect to this photograph. See Plate 3.

1977

The property and adjoining properties appear similar to 1971. No environmental concerns were noted with respect to this photograph. See Plate 4.

1983 The property and adjoining properties appear similar to 1977. No environmental concerns were noted with respect to this photograph. See Plate 5.

1993 The property and adjoining properties appear similar to the 1983 photograph. A building has been constructed on Lot 14. No environmental concerns were noted with respect to this photograph. See Plate 6.

2003 The property and adjoining properties look similar to the 1993 photograph. A heliport marking can be observed on the west side of Lot 12. No environmental concerns were noted with respect to this photograph. See Plate 7.

2012 The property and adjoining properties look similar to the 2003 photograph. No environmental concerns were noted with respect to this photograph. See Plate 8.

2019 The layout of the property and adjoining properties is consistent with the observations made during the Phase I ESA reconnaissance task. No environmental concerns were noted with respect to this photograph. See Plate 9.

Comments Due to the scale and resolution of the aerial photographs obtained, specific property features are difficult to discern. No additional environmentally-significant historical uses were identified from the review of the historical aerial photographs.

Other Historical Sources

Topographic Maps The available historical USGS Topographic Maps for the area (1945-2013) show the first building structures of the CUIP in 1958, the PRANG is shown first in 1962. Most of the lots of the CUIP are shown occupied by building structures in 1982; the property is identified as a school. This is consistent with the aerial photographs for the same period. No environmental concerns were noted with respect to this historical source. See Appendix 2.

Fire Insurance Maps No Sanborn fire insurance maps are available for the subject property. See Appendix 3.

Historical Use-Property/Adjoining Properties/Surrounding Area		
Property	**Present**	At the time of this Phase I ESA, the property was occupied by buildings used as the administrative offices, cafeteria and student services facilities of the PHSU. Observations and findings at the property during a reconnaissance visit are described elsewhere in this report.
	Past	The property was part of the Hacienda Reparada sugar cane plantation before the 60s. It was subsequently developed by PRIDCO as part of the Reparada Industrial Subdivision. The only known historical uses of the property have been as a PRIDCO office and educational institutions-Instituto Tecnologico, Universidad Interamericana and later Ponce Medical School / PHSU.
Adjoining Properties	**Present**	As discussed in the Property Description section above, public roadways and other lots of the CUIP adjoin the property.
	Past	According to the available information, the adjoining properties to the east (Lots 5-8) have been occupied by unremarkable light industrial manufacturing and warehousing concerns, including: Air Caribe Corp, American Red Cross, P.R. Needle Craft, Inc., Jane Lingerie, Life Uniform Corp. , Brunswick Royal, Inc., National Packing Company, Granada Shoe Corp., Borinquen Gloves, Inc., Seven Eleven, Inc., Life Uniform Corp., Computer Instrumentation P.R. , Oximetrix, Inc., Wiring Devices of P.R., Horizon International Corp. Panamerican Pharmaceutical, Inc., Urethane Molding, Rex-Le Wire Products, Administracion de Fomento y Desarrollo Agricola and Bendora & Co.
Surrounding Area	**Present**	The immediate vicinity is a mixture of public roads, residential, commercial, institutional, service and shuttered light industrial uses. Puma and Shell service stations are located to the north-northwest in close proximity to the subject property. Besides the Shell station, no environmentally- significant uses were identified in close proximity to the property e.g. chemical manufacturing or distribution, heavy industrial manufacturing, or drycleaners.

Past

The known historical uses of the surrounding area include commercial, light industrial and institutional uses similar to present ones. Besides two adjacent gasoline service stations, no historic environmentally- significant uses were identified in close proximity to the property e.g. chemical manufacturing or distribution, heavy industrial manufacturing, or drycleaners.

Property Reconnaissance

Date

Monday, December 9, 2019.

Time/Weather

The property reconnaissance was conducted by Winston R. Esteves, P.E. during morning hours. Calm wind and sunny weather conditions prevailed.

Methodology and Limiting Conditions

WRE confirmed the property boundaries and performed a walking reconnaissance around its accessible perimeter and interior areas but did not look at areas where gaining access may have presented health and/or safety hazards. The adjoining and adjacent properties were viewed from the property and/or public roadways for visual evidence of significant chemical storage, improper waste disposal or other indications of adverse environmental conditions.

Three pad-mounted electrical substations at the property were fenced off or enclosed and could not be observed in close proximity. No additional significant limiting conditions were encountered during the performance of the property reconnaissance activities of this Phase I ESA.

Escort

Engineer Luis G. Chardon, representing the owner, provided escort during the property reconnaissance.

General Observations

At the time of the property reconnaissance, it was used as part of an educational institution- PHSU. Its building structures, used as administrative offices, cafeteria and student services center, still exhibited some damage from hurricane Maria. No overgrown vegetation or indications of unauthorized access, illegal waste dumping or disposal were observed.

Hazardous Substances and Petroleum Products

Material or bulk quantities of hazardous substances were not observed at the property. Diesel fuel for two on-site emergency generators is stored in dedicated above ground storage tanks.

Based on the known previous uses of the property, material quantities of hazardous substances or petroleum products are not likely to should have been present and used at the property.

Migration Potential

A general analysis of the information available regarding the historical use of the property and adjoining properties indicate a low potential for the migration of hazardous substances or petroleum products into the property.

Roads

The property has no hidden roads, trails or paths with no apparent outlet that would likely have been used as an avenue for the disposal of hazardous substances or petroleum products.

Power Supply

Electrical power is provided by the Puerto Rico Electric Power Authority. Two diesel-fuelled emergency generators were observed at the property- one (50 kW) at the southwest corner of the administration building and the other (300 kW) at the east facade of the student services building. Both generators were observed in good condition.

Water Supply

Potable water service is provided by the Puerto Rico Aqueduct & Sewers Authority (PRASA). An abandoned water well, identified by the USGS as "Instituto Tecnologico" was identified at the northwest corner of the subject property.

Sewage Disposal

Sanitary sewage is reportedly discharged directly to the PRASA sanitary sewer system.

Wastewater Treatment and Disposal

No wastewater treatment or disposal systems were observed.

Storm Water Discharges

As indicated in the Drainage Section above, storm water runoff from the property flows overland and into grated inlets that discharge to the surrounding streets and adjoining properties of the CUIP. No storm water retention ponds or controls were identified at the subject property.

Storage Tanks

Two double wall sub-base above ground horizontal diesel storage tanks made of steel were observed at the property. These tanks, with 600 and 180 gallon capacities each, supply the two emergency generators described elsewhere in this report. These tanks were observed to be in good condition and no indications of leaks or overfills were observed in connection with them.

No underground storage tanks, fill lines, manholes, dispensers or

	vent pipes were observed at the property or the adjoining properties.
Noxious Odors	Noxious odors were not detected at the property.
Pools of Liquid	Pools of liquid were not observed at the property.
Drums / Cylinders	Suspect or abandoned drums or cylinders were not observed at the property.
Containers	Suspect or abandoned containers were not observed at the property.
PCBs	Three pad-mounted electrical substations with oil-filled transformers were observed at the subject property- two within a chain link fence and one inside a closed metal enclosure. The three transformers of one substation were smothered with vines and creepers; however, the observable exterior of all transformers and the metal enclosure appeared to be in good condition and no external indications of leakage were observed. According to information provided by the PHSU representatives, all oil-filled transformers are non-PCB. No in-ground hydraulic lifts, traction elevators, hydraulic / electrical equipment -pole mounted or otherwise- or indications of the presence of regulated PCBs or suspect significant PCB containing equipment or oil spills were observed within the property boundaries.
Heating/Cooling/ Steam	No heating, cooling or steam equipment requiring liquid fuels was observed at the property.
Building Stains or Corrosion	Significant staining or corrosion of building structures was not observed at the property.
Drains and Sumps	No suspect floor drains or sumps were observed.
Pits, Ponds, Lagoons	No suspect pits, ponds or lagoons were identified at the property or adjoining properties.
Stained Soil or Pavement	No significantly stained soil or pavement surfaces were observed at the property.
Stressed Vegetation	No stressed vegetation (other than for the lack of water) was observed at the property.

Solid Waste

No significant accumulations of solid wastes were observed. Fills, excavations or depressions that may be filled or graded by non-natural causes or filled with material of unknown origin suggesting on-site disposal of solid wastes were not observed during the property visit or identified from the examination of historical aerial photographs.

Other Wells

No dry wells, monitoring wells, irrigation wells, injection wells or other types of wells were identified at the subject property.

Septic Systems

No septic systems were reported by PHSU. A 13-feet diameter in-ground concrete structure and a similar but smaller partially collapsed nearby structure, suspect of being part of an abandoned septic system, were observed at the south boundary of the property. PHSU representatives could not provide plans, permits or other relevant information about this finding which, based on the historical use of the property, should not be material. PHSU representatives where informed that if the suspect structures are part of an abandoned septic system, its closure will likely have to comply with current PREQB underground injection control (UIC) regulations.

Underground Injection

Besides the suspect septic system described above, no additional underground injection systems were identified or observed at the subject property.

Interviews

Past and Present Owners and Operators

WRE interviewed Mrs. Rossane West- PHSU Facilities and Security Director, Mr. Juan Rivera PHSU- Facilities Supervisor, Eng. Axel Bonilla- External Project Consultant and Eng. Luis G. Chardon- External Project Consultant as representatives of the current property owner. Karen W. Fornés Perez, PRIDCO Environmental Evaluation and Audits Officer was also contacted as representative of a past owner and operator. All indicated not being aware of any underground storage tanks or material releases of hazardous substances or petroleum products associated with the property.

Property Manager

Mrs. Rossane West was interviewed as property manager during the visit to perform the reconnaissance of the property.

Occupants

The property was exclusively occupied by PHSU at the time of this Phase I ESA.

Government Officials

As part of this Phase I ESA, a records request letter was sent to the PREQB to obtain information that would help identify RECs connected to the property. A formal PREQB response had not been received as of the date of completion of this Report. See Appendix 4 for a copy of the PREQB information request letter.

Findings

RECs

No recognized environmental conditions were identified.

CRECs

No Controlled Recognized Environmental Conditions were identified.

HRECs

No Historical Recognized Environmental Conditions were identified.

***De minimis* Conditions**

The suspect abandoned septic system observed at the south boundary of the property is considered as a business environmental risk or as a *de minimis* condition.

Opinion

As explained in the Further Inquiry Section below, based on the information obtained and evaluated during this Phase I ESA, there is a low potential for a material environmental impact on the property by the findings identified.

Further Inquiry

Based on the information obtained and evaluated, further studies or investigations are not warranted at this time. The User is cautioned that the closure of the suspect abandoned septic system may be subject to compliance with UIC regulatory requirements.

Data Gaps and Significance

No significant data gaps were identified during the performance of this Phase I ESA.

Conclusions

WRE performed a Phase I Environmental Site Assessment of the subject property in conformance with the scope and limitations of ASTM Standard E 1527-13. Any exceptions to, or deletions from this practice are described in the Deviations Section of this Report below. This assessment has revealed no material evidence of RECs in connection with the property.

Additional Services

Additional services to the normal scope of ASTM Standard E 1527-13 were not contracted for between the client and WRE. A broader scope of assessment, more detailed conclusions, liability / risk evaluations, recommendations for Phase II testing, remediation techniques, asbestos-containing materials, lead – based paint, lead in drinking water, wetlands, ozone depleting substances, mold, industrial hygiene, indoor air quality,vapor intrusion, air emission source permits and / or environmental regulatory compliance (this list is not all-inclusive) are beyond the scope of ASTM and were not specified in the terms of engagement between the client and WRE.

Deviations

No material deviations from the requirements of ASTM E 1527-13 were taken in conducting this Phase I ESA.

Signature

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in 40 CFR 312.10 and that I have the specific qualifications based on education, training and experience to assess a property of the nature, history and setting of the subject property. I have developed and performed the all-appropriate inquiries in conformance with the standards and practices set forth in 40 CFR 312.



Winston R. Esteves
PE, BCEE, QEP, CHMM

Qualifications

Winston R. Esteves conducted the records review, property reconnaissance, interviews and prepared the report for this Phase I ESA. He is a Licensed Professional Engineer in Puerto Rico and Texas- with over 30 years of professional experience, Board Certified Environmental Engineer*, Qualified Environmental Professional*,Certified Hazardous Materials Manager* (Master Level) and Registered Environmental Property Assessor.

Mr. Esteves is a member of ASTM Committee E 50 on Environmental Assessment, Risk Management and Corrective Action. He has received training directly from ASTM on Environmental Site Assessment Standards E 1528: Transaction Screen Process; E 1527 Phase I Environmental Site Assessments; and E-1903 Phase II Environmental Site Assessments and has been involved in environmental site assessments of undeveloped, industrial, commercial and institutional properties in Puerto Rico and the US Virgin Islands since 1987.A more detailed statement of his professional qualifications is included in Appendix 5**.**

* Board certifications accredited by the Council of Engineering and Scientific Specialty Boards (CESB)

Limitations

All Appropriate Inquiry does not mean an exhaustive assessment of a clean property. When performing a Phase I ESA, a balance is established between the competing goals of limiting the costs and time demands inherent in performing an environmental site assessment and a reduction of uncertainty about unknown conditions resulting from additional information. Even the most rigorous professional assessment may fail to identify all environmental conditions at a site.

A finding of no recognized environmental condition is not a warranty or guarantee that the property remains free from contamination. No environmental site assessment can wholly eliminate the uncertainty regarding the potential for recognized environmental conditions in connection with a property. Recognizing reasonable time and cost limitations, performance of a Phase I ESA is intended to reduce, but not eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property.

All Phase I ESAs are inherently limited in the sense that conclusions are drawn and recommendations developed from information obtained from limited search and property evaluation at a specific time. The passage of time may result in a change in environmental circumstances at this property and surrounding properties. Hazardous materials beneath the surface or covered by debris may be present but undetectable during a Phase I ESA property investigation. Sampling or testing of materials was not part of the requirements of this Phase I ESA.

An evaluation of business environmental risks (BERs) associated with a parcel of commercial real estate may necessitate investigation beyond that intended by a Phase I ESA. A BER can have a material environmental or environmentally-driven impact on a business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in a Phase I ESA, for example litigation from exposure by tenants and occupants, abatement costs, loss of tenants, adverse publicity and loss of property value. Therefore the User may desire to expand the scope of pre-purchase due diligence to address other BERs that exist beyond CERCLA liability associated with

the property. A BER may include one or more of the non-scope issues contained in the Additional Services section of this report.

The statements, conclusions and opinions included in this report are based upon reasonably ascertainable information obtained during the course of the assessment, property observations and interviews, and our understanding of applicable environmental regulations and are only intended to give approximations of the environmental conditions of the property found at the time of this investigation, limited to the particular environmental issues actually targeted by WRE in the agreed-upon scope of work. No representations or warranties are made concerning the nature or quality of the air, soil, water, building materials or any other substances on the property, other than the visual observations as stated in this report. Sites not listed on the reviewed regulatory agencies' databases or hidden sources of potential liability cannot be detected by the methods used for this Phase I ESA. If additional information that might impact our conclusions becomes available, we reserve the right to review the information, reassess the potential concerns, and modify our opinions, if warranted.

The conclusions presented by WRE in this report are based upon, and limited by, the government data, documents and other information available to WRE and upon a computer search of government environmental databases obtained from Environmental Data Resources. While WRE used reasonable care to avoid reliance upon faulty or incomplete information, WRE is not able or required to verify the accuracy of all data and information provided by governmental entities and third parties. WRE did not detect inconsistencies or omissions of a nature that might question the validity of the information. WRE assumes no responsibility for any consequence arising from any information or condition that was inaccurate, concealed, withheld, misrepresented or otherwise not fully disclosed or available to WRE from third parties.

This assessment has been undertaken and conducted in a professional manner, in accordance with an agreed-upon scope of work and generally accepted engineering and scientific practices, using the degree of skill and care ordinarily exercised by reputable environmental consultants under similar circumstances. This warranty is in lieu of all

other warranties, expressed or implied.

This Phase I ESA may or may not address the requirements of federal or local laws other than specific all appropriate inquiry provisions of CERCLA's landowner defences. The user is cautioned that federal and local laws may impose environmental obligations that are beyond the scope of this Phase I ESA. The user should also be aware that there are likely to be other legal obligations with regard to hazardous substances or petroleum products discovered on the property that are not addressed in this Phase I ESA and that may pose risks of civil and / or criminal sanctions for non compliance.

The owner or operator of the property investigated under this Phase I ESA retains the sole responsibility for the prompt reporting of any regulated environmental conditions, including without limitation, the discovery of releases of hazardous substances at the subject property to the appropriate public authorities in accordance with applicable laws.

This Report does not constitute legal advice. In addition, WRE makes no determination or recommendations regarding the decision to taking the property as collateral and/or foreclose, lease, purchase, sell or provide financing for it.

Information Sources

ASTM International Standard E 1527-13. Standard Practice for Environmental Site Assessment: Phase I Environmental Site Assessment Process.

Direct Marketing & Media Group, Inc. Puerto Rico Industrial Directory 2001-2002.

Environmental Data Resources, Inc., EDR Radius Map™ Report with GeoCheck®, PHSU Property Km227.2 State Road PR-2 Ponce, PR 00716. Inquiry Number: 5893780.2S. December 5, 2019.

EDR Certified Sanborn® Map Report, PHSU Property Km227.2 State Road PR-2 Ponce, PR 00716. Inquiry Number: 5893780.3. December 5, 2019.

EDR Historical Topographic Map Report with QuadMatch™, PHSU Property Km227.2 State Road PR-2 Ponce, PR 00716. Inquiry Number: 5893780.5. December 5, 2019.

Environmental Resource Technologies. Phase I Environmental Property Site Assessment (Phase I EPSA) Report. Ponce School of Medicine and Health Sciences. Ponce, Puerto Rico. February 7, 2014.

Google Earth. Aerial Photographs- Subject Property and Vicinity, Canas Ward, Ponce, Puerto Rico – 1993,2003, 2012, 2019.

McCloskey, Mulet & Bonnin Appraisers, P.S.C. Appraisal Report Ponce Health Science University Facilities Reparada and Canas Industrial Parks, Canas Ward, Ponce, Puerto Rico. April 1, 2019.

Puerto Rico Department of Transportation and Public Works. Highways and Transportation Authority. Office of Photogrametry. Aerial Photographs- Canas Ward and Vicinity, Ponce, Puerto Rico- 1936, 1962, 1971, 1977, 1983.

PREQB, List of Registered Underground Storage Tanks, August, 2008.

PREQB. Active Sites LUST List, 2018.

PREQB. Inactive Sites LUST List, 2018.

PRIDCO. Informe de Evaluación Ambiental. Cruz Roja Americana Edificio T-0419-057[Lot 4]. 13 de octubre 1999.

PRIDCO. Informe de la Situación Ambiental Ponce School of Medicine. Edificio T-0779-066 [Lot 9] Ponce, Puerto Rico. Caso 011020. 3 de mayo 2001.

PRIDCO. Informe de Evaluación Ambiental Horizons International Manufacturing Corp. Edificio T-0587-0-62 L-22 [Lot 7], Ponce Puerto Rico. Caso 021065. 27 de junio 2002.

PRIDCO. Inspección Subestaciones Parque Industrial Canas Urbano, Ponce Puerto Rico. 4 de octubre 2002.

PRIDCO. Informe de Inspección a Horizons International Manufacturing. Edificio T-0587-0-62 [Lot 7]. 8 de septiembre 2006.

PRIDCO. Informe de la Situación Ambiental Horizons International Manufacturing Corp. Edificio T-0587-0-62 / L-27 Ponce, Puerto Rico. Caso 061039. 29 de enero 2007.

Puerto Rico Solid Waste Authority, List of Solid Waste Landfill Locations. July 2008.

Title Solutions Corp. Title Studies (2) for Subject Property. October 19, 2018.

USEPA. Corrective Action Facility Information Database Search, December 2019.

USEPA. Enforcement and Compliance History Online (ECHO) Database Search List, December 2019.

USEPA. Envirofacts / Superfund Site Information / EPA Region 2 Cleanup Database Search List, December 2019.

USGS, 1970, 7.5 Minute Series Topographic Map, Playa de Ponce, Puerto Rico, Photo revised 1982.

USGS, 1982, Geohydrologic Descriptions of Selected Solid Waste Disposal Sites in Puerto Rico, Open-file Report 81-490.

USGS, 1996, Atlas of Ground- Water Resources in Puerto Rico and the U.S. Virgin Islands, Water Resources Investigations Report 94-4198.

USGS, 2005, Surface – Water, Water – Quality, and Ground- Water Assessment of the Municipio of Ponce, Puerto Rico, 2002-2004. Scientific Investigations Resources Investigations Report 2005-5243.

FIGURES

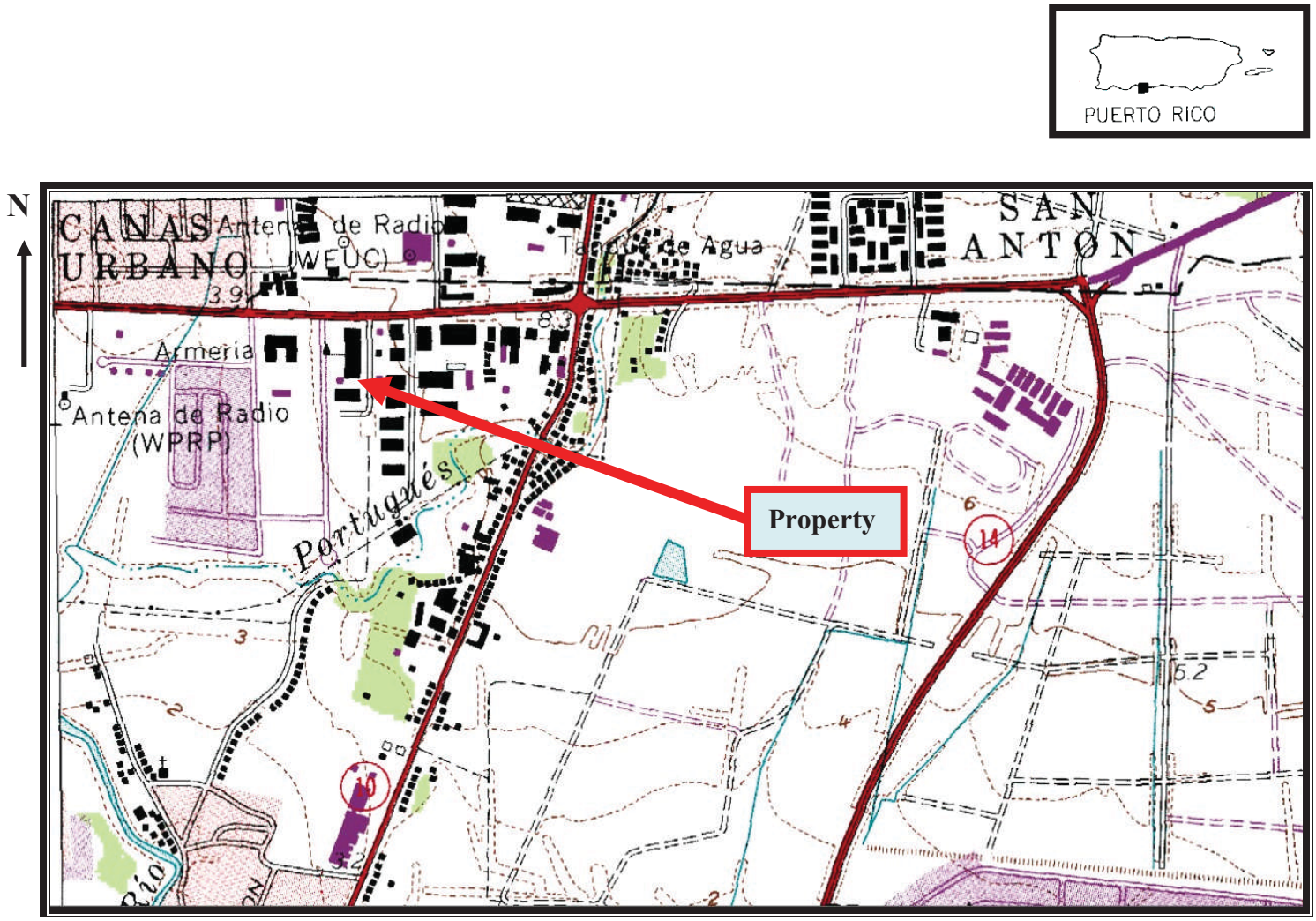


FIGURE 1 Property Location Map

Winston R. Esteves, P.E.
Environmental Consultant

PHSU Property
Km 227.2 SR PR-2
Ponce, Puerto Rico



FIGURE 2 Property Layout and Approximate Boundaries

Winston R. Esteves, P.E.
Environmental Consultant

PHSU Property
Km 227.2 SR PR-2
Ponce, Puerto Rico

FIGURE 3 PRIDCO Canas Urbano Industrial Park Layout

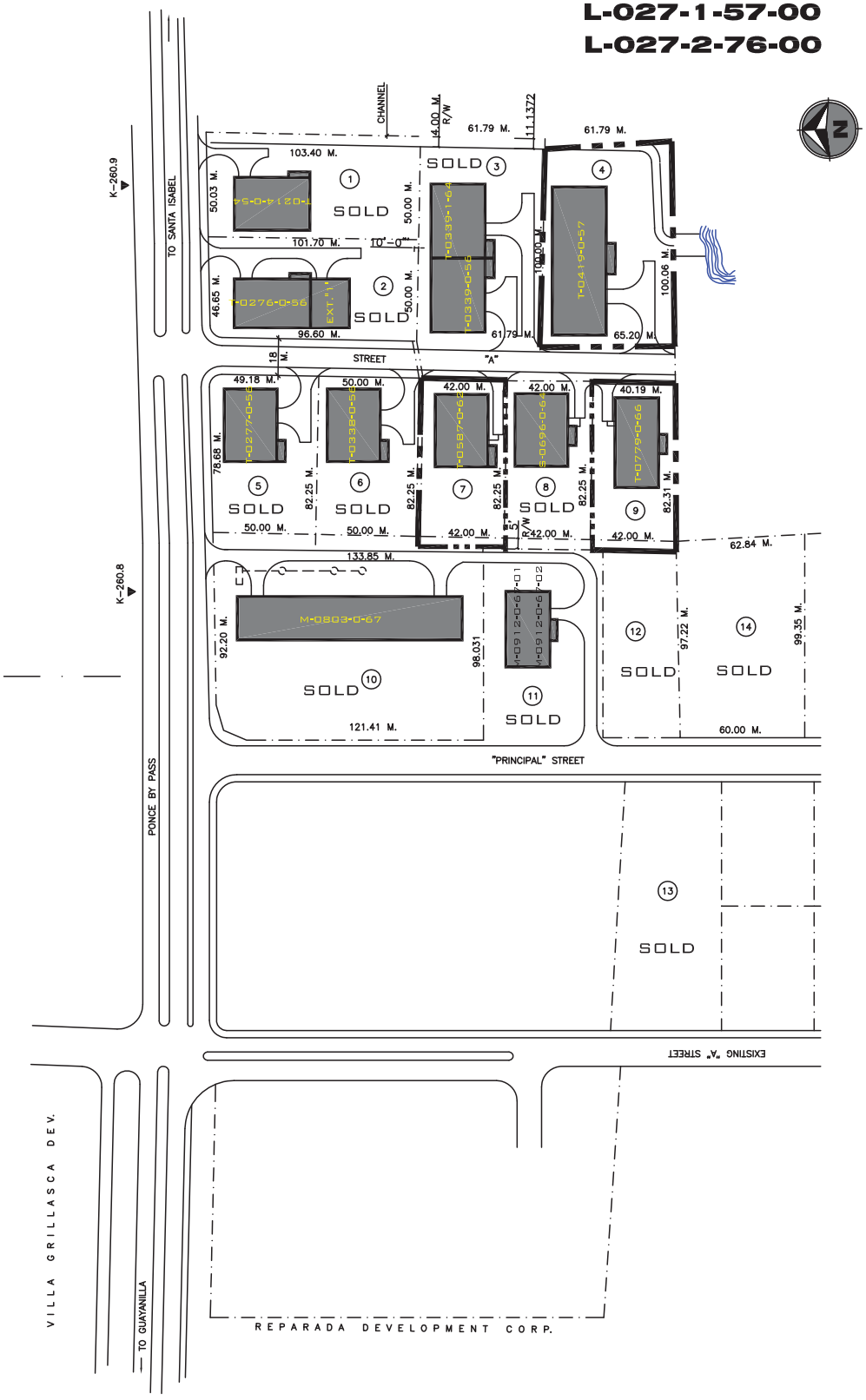
Winston R. Esteves, P.E.
Environmental Consultant

PHSU Property
Km 227.2 SR PR-2
Ponce, Puerto Rico

MUNICIPALITY OF PONCE
CANAS URBAN

L-027-0-54-00

L-027-1-57-00
L-027-2-76-00



LEGEND:

- LOT LIMIT
- PRIDCO PROPERTY LIMIT
- BUILDING
- ROADS OR CURB SIDE

CADASTRE NUMBER				
MUNICIPALITY	MAP 1:10,000	MAP 1:1,000	BLOCK	PARCEL
63	412	011-012	783	0

SCALE NOT TO SCALE REV. DATE Julio - 2018

DRAW DATE NOV - 12 - 1959 ZONNING I - 1

PRIDCO
PUERTO RICO INDUSTRIAL DEVELOPMENT COMPANY

MUNICIPALITY OF PONCE
CANAS URBAN

L-027-0-54-00

L-027-1-57-00
L-027-2-76-00

SOLD–PONCE MEDICAL SCHOOL–4/3/91

	LOT NO.	AREA SQ. MTS.	AREA CUERDAS	BLDG. NO.	BLDG. AREA SQ. FEET	GENERAL INFORMATION
L-027-0-54	1	5,062.68	1.2880	T–0214–0–54	11,522.00	SOLD–SUCRS. TRUJILLO & GUBIÑA – 4/21/58
	2	4,974.94	1.2657	T–0276–0–56	11,522.00	SOLD–JUAN C. TORRES , INC.–7/12/68
				T–0276–1–64	5,541.00	SOLD–JUAN C. TORRES , INC.–7/12/68
	3	6,178.97	1.5721	T–0339–0–56	11,436.45	SOLD–DAMAS FOUNDATIONS , INC.–6/25/02
				T–0339–1–64	11,534.04	SOLD–DAMAS FOUNDATIONS , INC.–6/25/02
	4	6,349.55	1.6155	T–0419–0–57	22,541.50	PONCE MEDICAL SCHOOL FOUND. INC.
	5	4,117.43	1.0475	T–0277–0–56	11,522.00	SOLD–BORINQUEN ASBESTOS CEMENT CORP.–8/28/70
	6	4,112.37	1.0463	T–0338–0–56	11,522.00	SOLD–FORD GUM & MACHINE –6/19/66
	7	3,454.42	0.8789	T–0587–0–62	11,571.71	PONCE MEDICAL SCHOOL FOUND. INC.
	8	3,847.46	0.9789	S–0696–0–64	11,453.44	SOLD–RUBBER GASKET CO. –6/30/97
	9	3,420.62	0.8703	T–0779–0–66	11,049.98	PONCE MEDICAL SCHOOL FOUND. INC.
L-027-1-57	10	13,214.14	3.3620	M–0803–0–67	25,860.53	SOLD–PONCE MEDICAL SCHOOL–6/23/98
	11	5,324.50	1.3547	M–0912–0–67–01	4,350.00	SOLD–PONCE MEDICAL SCHOOL–4/3/91
				M–0912–0–67–02	4,394.00	SOLD–PONCE MEDICAL SCHOOL–4/3/91
	12	3,617.53	0.9204			SOLD–DAMAS FOUNDATIONS , INC.–6/25/93
	13	4,198.05	1.0681			EXCHANGE–INDECS – 8/9/76
L-027-2-76	14	6,036.69	1.5359			SOLD–DAMAS FOUNDATIONS , INC.– 12/29/88
	Street "A"	4,918.52	1.2514			CEDED–THE MUNICIPALITY PONCE 6/27/97

LEGEND:

- LOT LIMIT
- PRIDCO PROPERTY LIMIT
- BUILDING
- ROADS OR CURB SIDE

CADASTRE NUMBER

MUNICIPALITY	MAP 1:10,000	MAP 1:1,000	BLOCK	PARCEL
63	412	011-012	783	0

SCALE NOT TO SCALE REV. DATE Julio - 2018

DRAW DATE NOV - 12 - 1959 ZONNING I - 1

PRIDCO
PUERTO RICO INDUSTRIAL DEVELOPMENT COMPANY

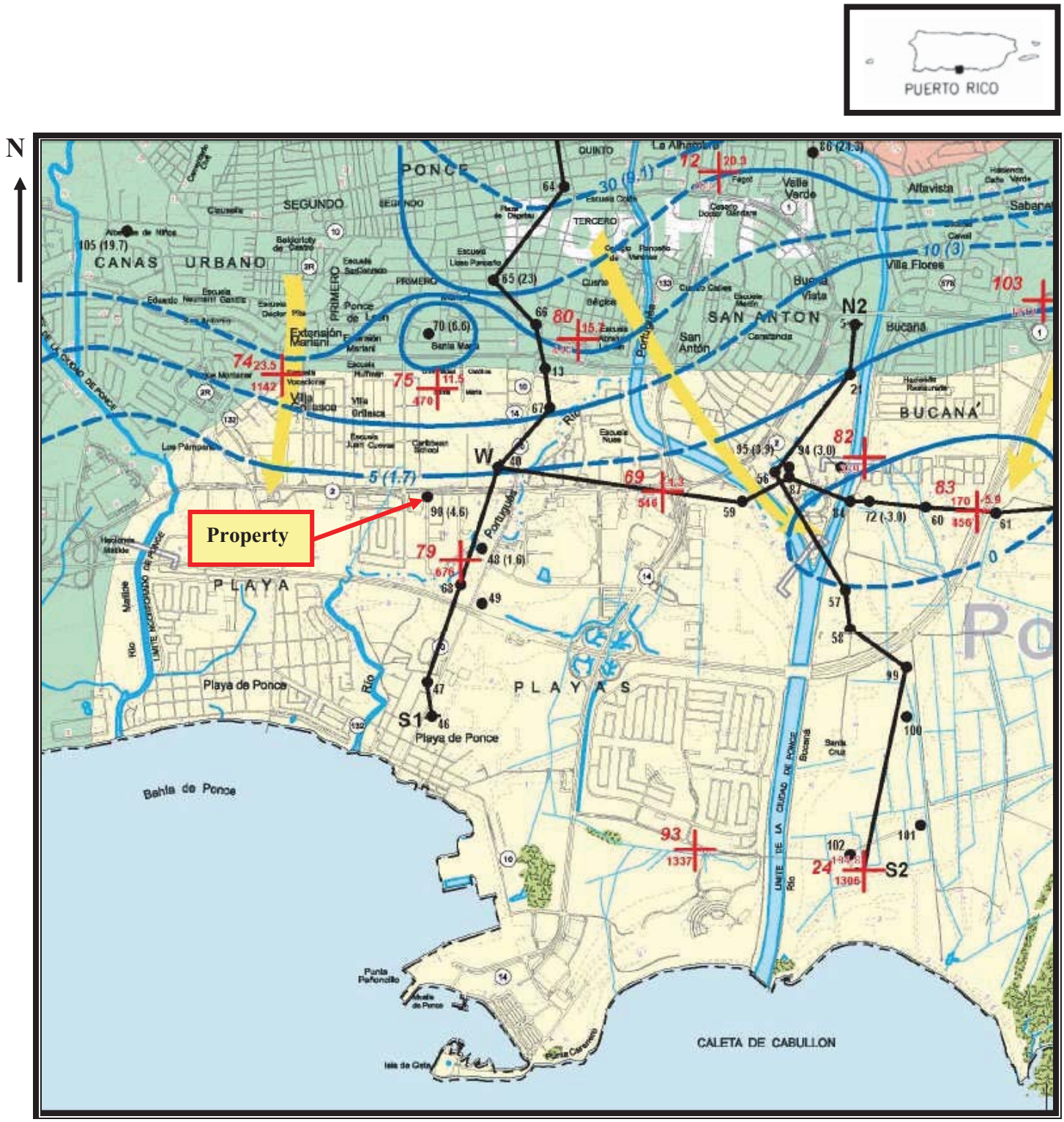


FIGURE 4 Hydrogeologic Terrane and Ground Water Flow (Approximate Property Boundaries)

Winston R. Esteves, P.E.
Environmental Consultant

PHSU Property
Km 227.2 SR PR-2
Ponce, Puerto Rico

PLATES

N



PLATE 1 Aerial Photograph, 1936

Winston R. Esteves, P.E.
Environmental Consultant

PHSU Property
Km 227.2 SR PR-2
Ponce, Puerto Rico

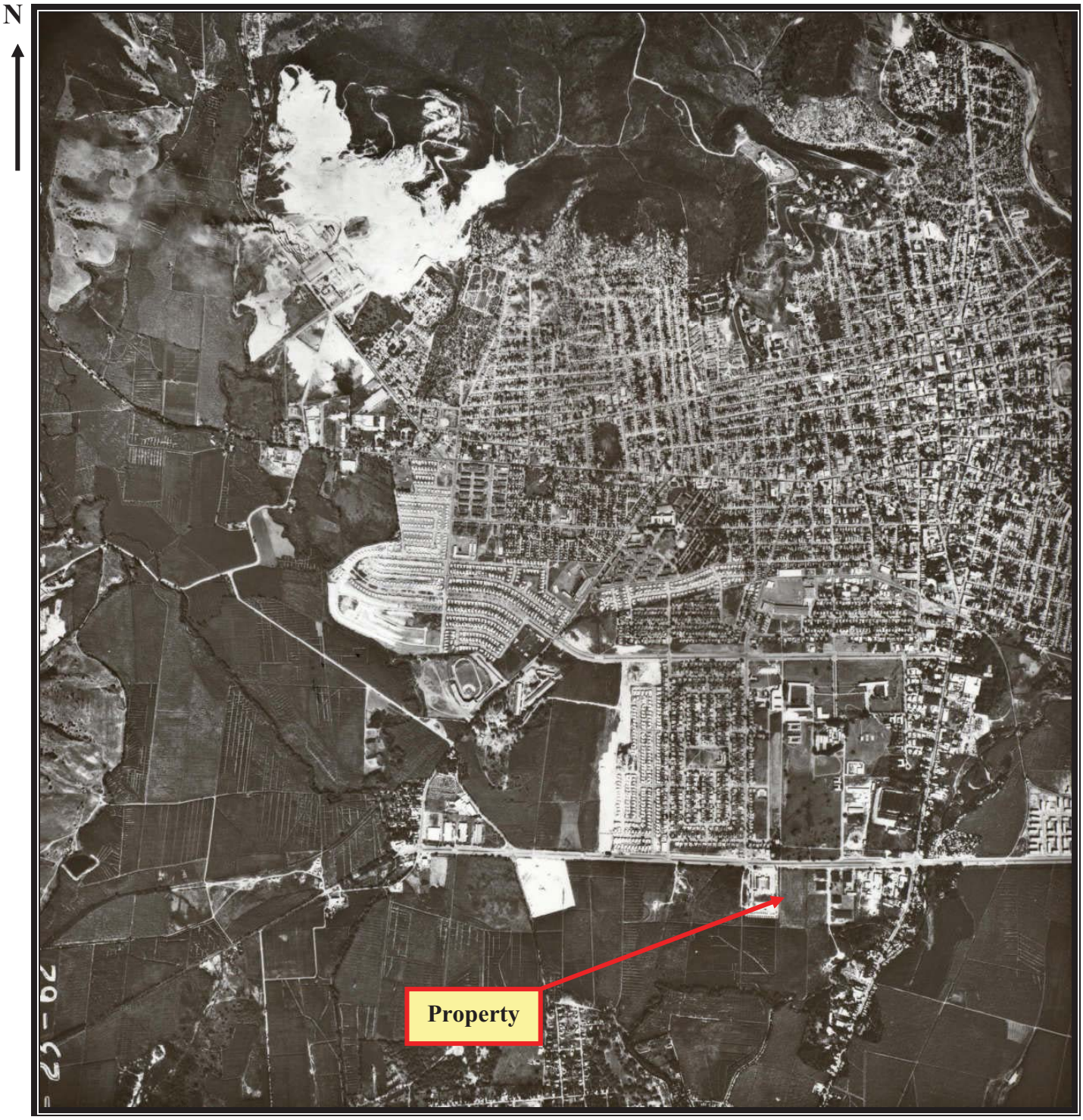


PLATE 2 Aerial Photograph, 1962

Winston R. Esteves, P.E.
Environmental Consultant

PHSU Property
Km 227.2 SR PR-2
Ponce, Puerto Rico

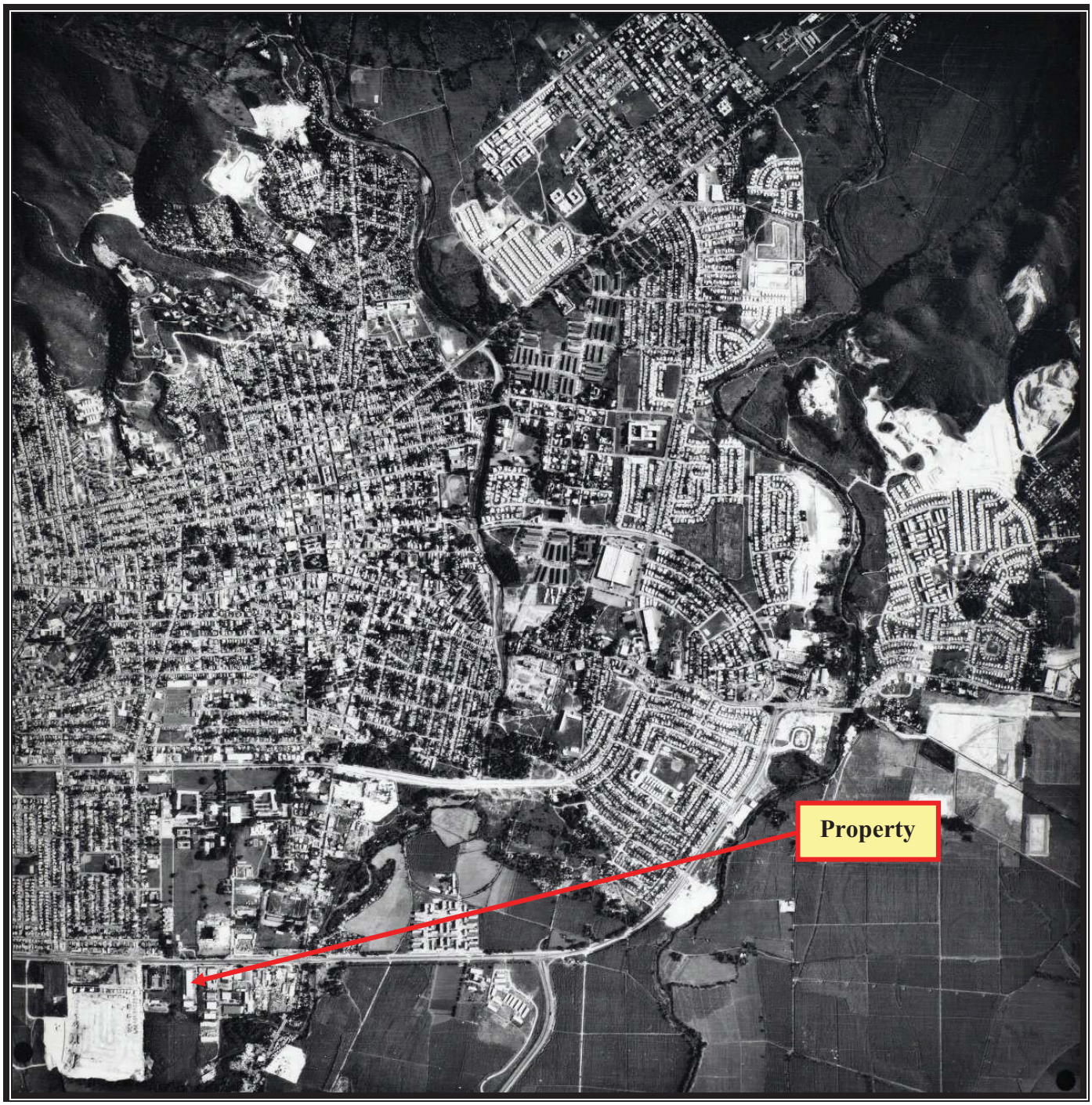


PLATE 3 Aerial Photograph, 1971

Winston R. Esteves, P.E.
Environmental Consultant

PHSU Property
Km 227.2 SR PR-2
Ponce, Puerto Rico



PLATE 4 Aerial Photograph, 1977

Winston R. Esteves, P.E.
Environmental Consultant

PHSU Property
Km 227.2 SR PR-2
Ponce, Puerto Rico

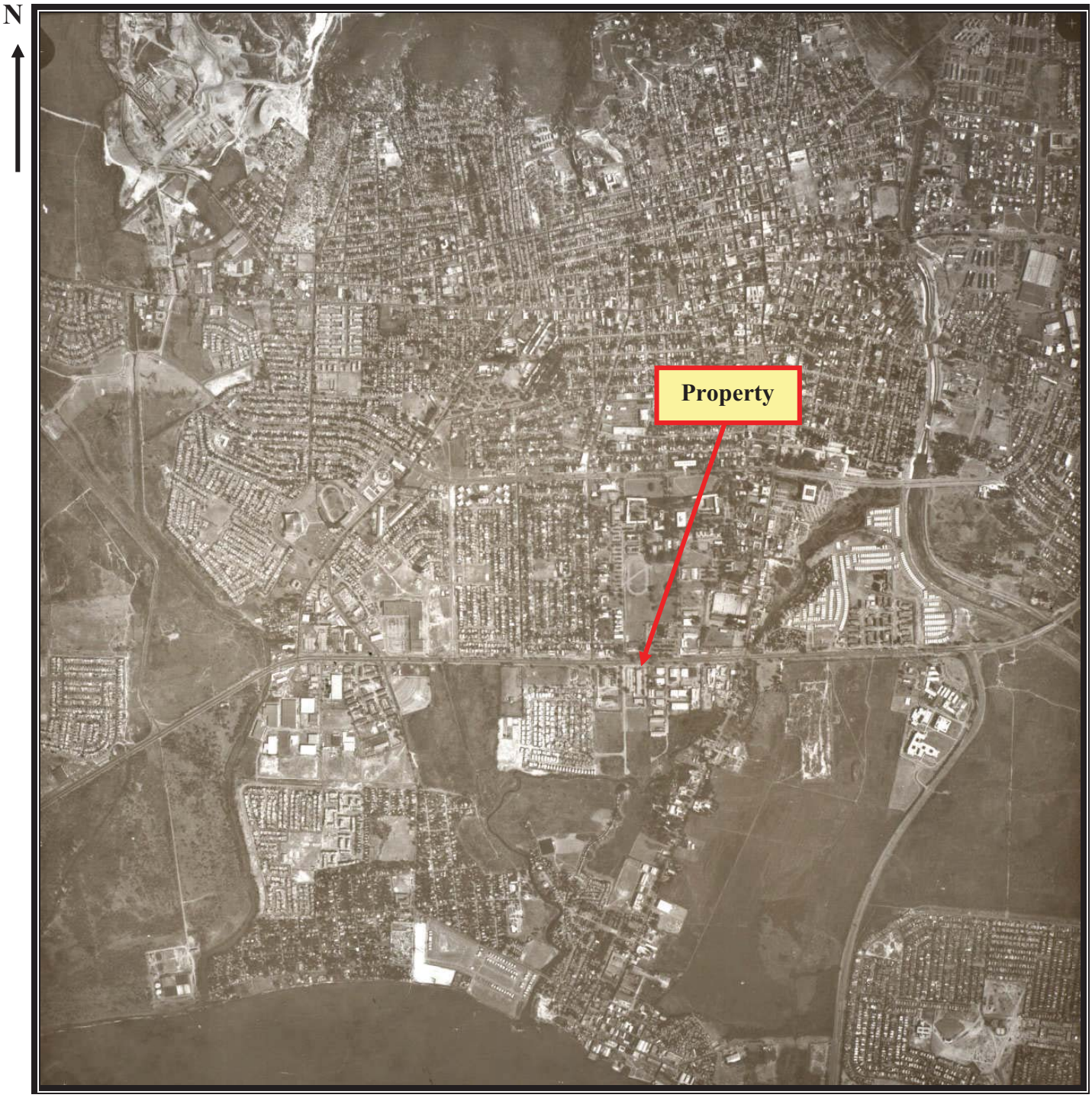


PLATE 5 Aerial Photograph, 1983

Winston R. Esteves, P.E.
Environmental Consultant

PHSU Property
Km 227.2 SR PR-2
Ponce, Puerto Rico



PLATE 6 Aerial Photograph, 1993

Winston R. Esteves, P.E.
Environmental Consultant

PHSU Property
Km 227.2 SR PR-2
Ponce, Puerto Rico

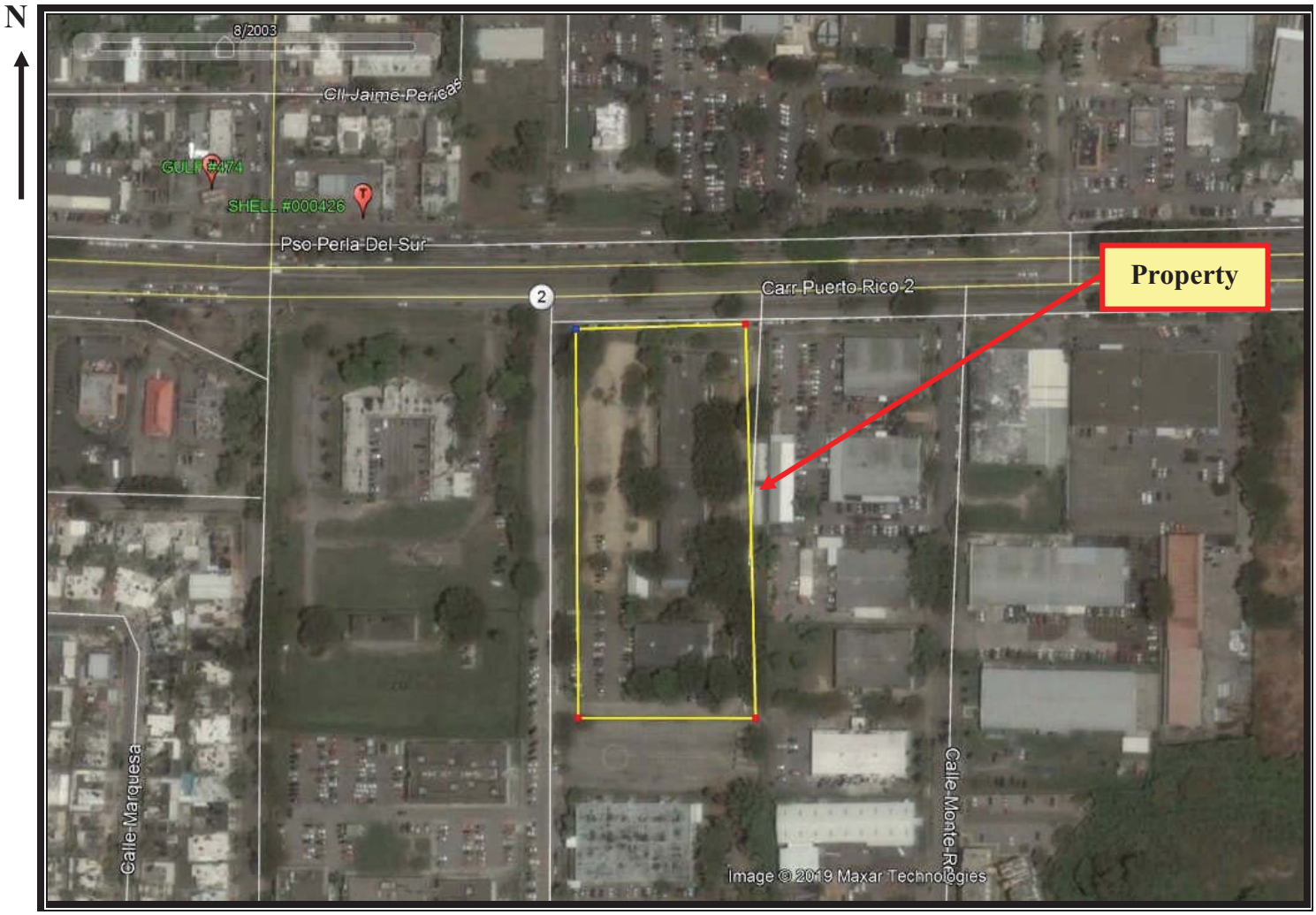


PLATE 7 Aerial Photograph, 2003

Winston R. Esteves, P.E.
Environmental Consultant

PHSU Property
Km 227.2 SR PR-2
Ponce, Puerto Rico

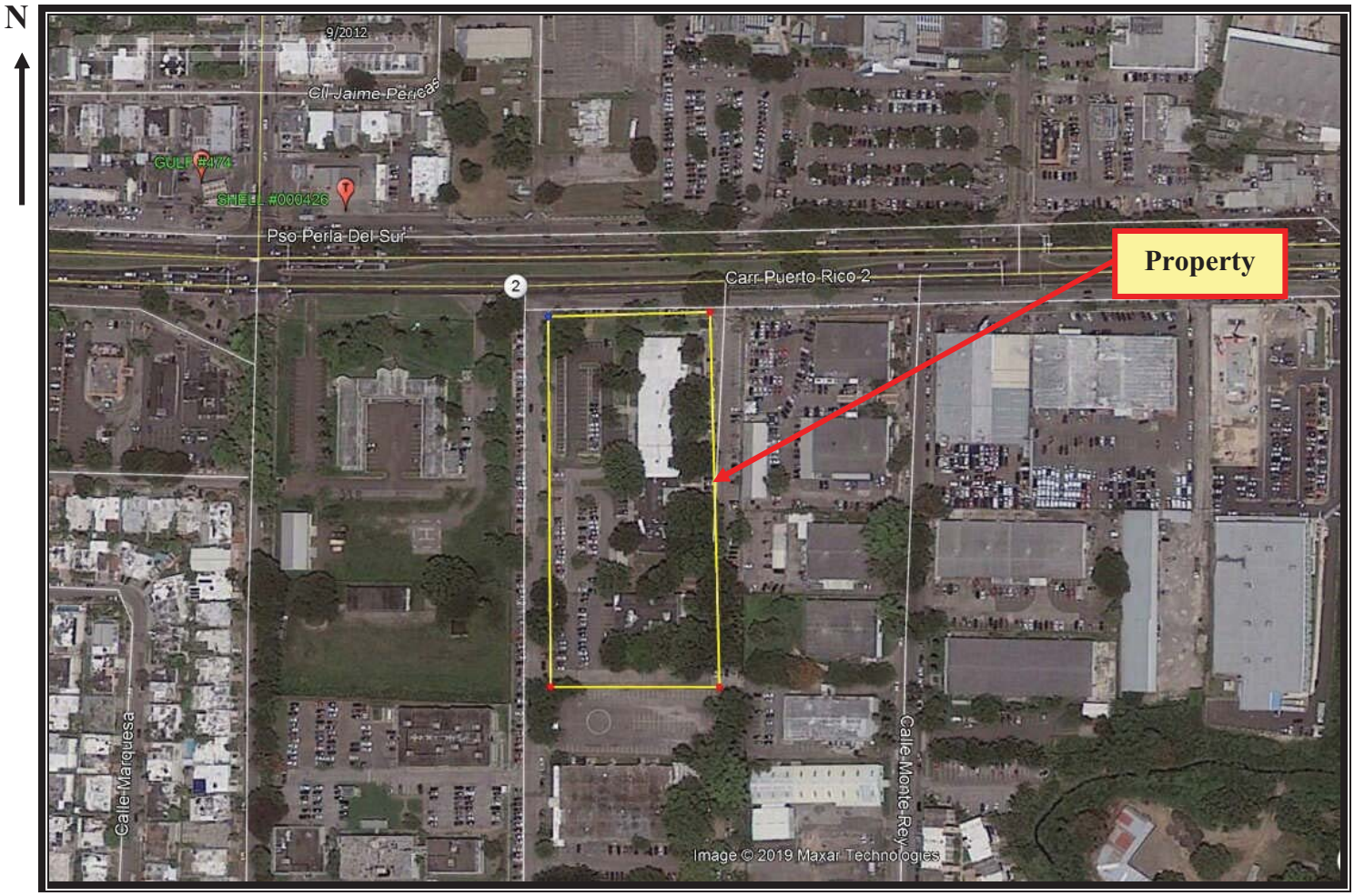


PLATE 8 Aerial Photograph, 2012

Winston R. Esteves, P.E.
Environmental Consultant

PHSU Property
Km 227.2 SR PR-2
Ponce, Puerto Rico



PLATE 9 Aerial Photograph, 2019

Winston R. Esteves, P.E.
Environmental Consultant

PHSU Property
Km 227.2 SR PR-2
Ponce, Puerto Rico



PLATE 10 South Facade of Administration Building

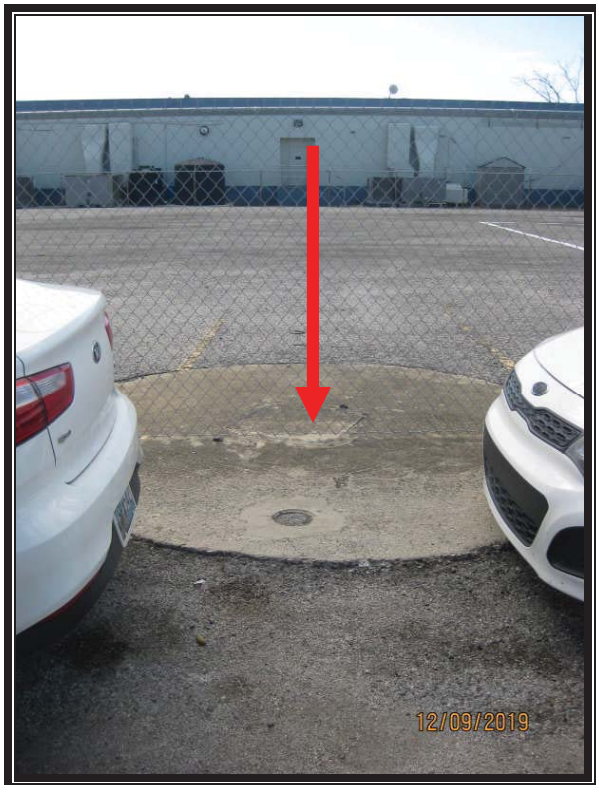


PLATE 11 Suspect Abandoned Septic System



PLATE 12 View of Administration Annex Building



PLATE 13 Generator and Storage Tank-Administration Building



PLATE 14 Transformers - East of Administration Building



PLATE 15 Transformers - North of Administration Building



PLATE 16 Transformers - East Facade of Student Services Building



PLATE 17 Generator and Storage Tank - East Facade of Student Services Building



PLATE 18 North Facade of Student Services Building



PLATE 19 Abandoned Water Well at Northwest Corner of Property



PLATE 20 Interior View- Student Services Building



PLATE 21 Interior View- Administration Building

APPENDIXES

APPENDIX 1
Environmental Data Resources, Inc.
EDR Radius Map™ Report
with GeoCheck®
December 5, 2019

PHSU Property
Km 227.2 State Road PR-2
Ponce, PR 00716

Inquiry Number: 5893780.2s
December 05, 2019

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Executive Summary	ES1
Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	7
Orphan Summary	36
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting Source Map	A-8
Physical Setting Source Map Findings	A-9
Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

KM 227.2 STATE ROAD PR-2
PONCE, PR 00716

COORDINATES

Latitude (North):	17.9947530 - 17° 59' 41.11''
Longitude (West):	66.6191420 - 66° 37' 8.91''
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	752114.1
UTM Y (Meters):	1991103.9
Elevation:	10 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5964484 PLAYA DE PONCE, PR
Version Date:	2013
Northeast Map:	5964470 PONCE, PR
Version Date:	2013
Southwest Map:	5964556 PUNTA CUCHARAS, PR
Version Date:	2013
Northwest Map:	5964552 PENUELAS, PR
Version Date:	2013

MAPPED SITES SUMMARY

Target Property Address:
KM 227.2 STATE ROAD PR-2
PONCE, PR 00716

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	HOSPITAL DAMAS	2213 PONCE BYPASS	RCRA-VSQG, FINDS, ECHO, NJ MANIFEST	Higher	632, 0.120, NE
2	CARIBBEAN CAN MANUFA	1029 HOSTOS AVE	SEMS, RCRA NonGen / NLR, PRP, FINDS, ECHO	Higher	1508, 0.286, SE
3	GULF #178	AVE. HOSTOS #80	PR LUST	Higher	2386, 0.452, NE

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROL ---------- Sites with Institutional Controls

Federal ERNS list

ERNS ---------- Emergency Response Notification System

State- and tribal - equivalent CERCLIS

PR SHWS ---- This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.

State and tribal leaking storage tank lists

INDIAN LUST ---- Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

FEMA UST ---- Underground Storage Tank Listing
PR UST ---- Underground Storage Tank Facilities
INDIAN UST ---- Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

INDIAN VCP ---- Voluntary Cleanup Priority Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI ---- Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9 ---- Torres Martinez Reservation Illegal Dump Site Locations
ODI ---- Open Dump Inventory
IHS OPEN DUMPS ---- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---- Delisted National Clandestine Laboratory Register
US CDL ---- National Clandestine Laboratory Register

Local Land Records

LIENS 2 ---- CERCLA Lien Information

Records of Emergency Release Reports

HMIRS ---- Hazardous Materials Information Reporting System

Other Ascertainable Records

FUDS ---- Formerly Used Defense Sites
DOD ---- Department of Defense Sites
SCRD DRYCLEANERS ---- State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ---- Financial Assurance Information
EPA WATCH LIST ---- EPA WATCH LIST
2020 COR ACTION ---- 2020 Corrective Action Program List

EXECUTIVE SUMMARY

TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
ABANDONED MINES	Abandoned Mines
DOCKET HWC	Hazardous Waste Compliance Docket Listing
UXO	Unexploded Ordnance Sites
FUELS PROGRAM	EPA Fuels Program Registered Listing
MINES MRDS	Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	EDR Proprietary Manufactured Gas Plants
EDR Hist Auto	EDR Exclusive Historical Auto Stations
EDR Hist Cleaner	EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

PR RGA LUST	Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

STANDARD ENVIRONMENTAL RECORDS

Federal CERCLIS list

SEMS: SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

A review of the SEMS list, as provided by EDR, and dated 10/25/2019 has revealed that there is 1 SEMS site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CARIBBEAN CAN MANUFA	***1029 HOSTOS AVE***	***SE 1/4 - 1/2 (0.286 mi.)***	***2***	***32***

Federal RCRA generators list

RCRA-VSQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-VSQG list, as provided by EDR, and dated 06/24/2019 has revealed that there is 1 RCRA-VSQG site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
HOSPITAL DAMAS EPA ID:: PRR000014928	***2213 PONCE BYPASS***	***NE 0 - 1/8 (0.120 mi.)***	***1***	***7***

State and tribal leaking storage tank lists

PR LUST: Leaking Underground Storage Tanks.

A review of the PR LUST list, as provided by EDR, and dated 07/27/2018 has revealed that there is 1 PR LUST site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GULF #178 Facility Id: 86-0196	AVE. HOSTOS #80	NE 1/4 - 1/2 (0.452 mi.)	3	35

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

NJ MANIFEST: Hazardous waste manifest information.

A review of the NJ MANIFEST list, as provided by EDR, and dated 12/31/2018 has revealed that there is 1 NJ MANIFEST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
HOSPITAL DAMAS EPA Id: PRR000014928	***2213 PONCE BYPASS***	***NE 0 - 1/8 (0.120 mi.)***	***1***	***7***

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 5 records.

Site Name	Database(s)
TALLER DE MECANICA	PR LUST
PICO SUBIRA LOT	PR LUST
CASHER, INC.	PR LUST
TEXACO S/S #801	PR LUST
SHELL #0426	PR LUST

OVERVIEW MAP - 5893780.2S



0 1/4 1/2 1 Miles

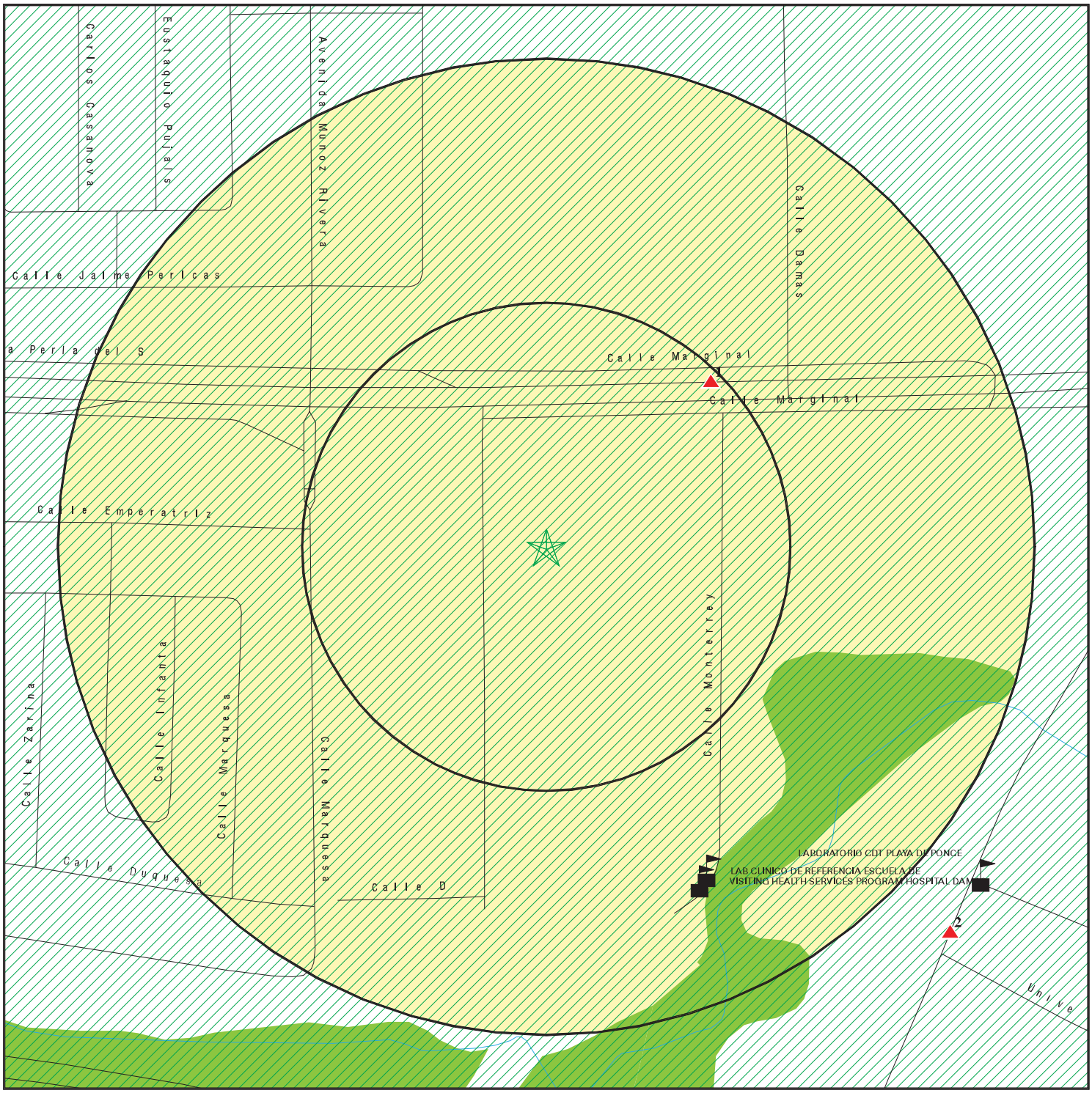
- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	PHSU Property	CLIENT:	ECA Environmental Consulting
ADDRESS:	Km 227.2 State Road PR-2 Ponce PR 00716	CONTACT:	Winston Esteves
LAT/LONG:	17.994753 / 66.619142	INQUIRY #:	5893780.2s
		DATE:	December 05, 2019 8:30 am

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DETAIL MAP - 5893780.2S



0 1/16 1/8 1/4 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: PHSU Property	CLIENT: ECA Environmental Consulting
ADDRESS: Km 227.2 State Road PR-2 Ponce PR 00716	CONTACT: Winston Esteves INQUIRY #: 5893780.2s
LAT/LONG: 17.994753 / 66.619142	DATE: December 05, 2019 8:31 am

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	1	NR	NR	1
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		1	0	NR	NR	NR	1
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
PR SHWS	N/A		N/A	N/A	N/A	N/A	N/A	N/A
State and tribal leaking storage tank lists								
PR LUST	0.500		0	0	1	NR	NR	1
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
PR UST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
MINES MRDS	TP		NR	NR	NR	NR	NR	0
NJ MANIFEST	0.250		1	0	NR	NR	NR	1
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
PR RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		0	2	0	2	0	0	4

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

N/A = This State does not maintain a SHWS list. See the Federal CERCLIS list.

1
NE
< 1/8
0.120 mi.
632 ft.

HOSPITAL DAMAS
2213 PONCE BYPASS
PONCE, PR 00717

RCRA-VSQG
FINDS
ECHO
NJ MANIFEST

1005444709
PRR000014928

Relative:
Higher

Actual:
23 ft.

RCRA-VSQG:

Date form received by agency:	2008-01-01 00:00:00.0
Facility name:	HOSPITAL DAMAS
Facility address:	2213 PONCE BYPASS PONCE, PR 00717-1318
EPA ID:	PRR000014928
Mailing address:	PONCE BYPASS PONCE, PR 00717-1318
Contact:	JOSE COLON SANTINI
Contact address:	PONCE BYPASS PONCE, PR 00717-1318
Contact country:	US
Contact telephone:	787-840-8686
Contact email:	Not reported
EPA Region:	02
Land type:	Private
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	DAMAS FOUNDATION
Owner/operator address:	2213 PONCE BYPASS PONCE, PR 00717
Owner/operator country:	US
Owner/operator telephone:	787-840-8686
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	2001-01-01 00:00:00.0
Owner/Op end date:	Not reported

Owner/operator name:	DAMAS FOUNDATION
Owner/operator address:	2213 PONCE BYPASS PONCE, PR 00717
Owner/operator country:	US
Owner/operator telephone:	787-840-8686
Owner/operator email:	Not reported
Owner/operator fax:	Not reported

HOSPITAL DAMAS (Continued) **1005444709**

Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 2001-01-01 00:00:00.0
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 2006-01-01 00:00:00.0
Site name: HOSPITAL DAMAS
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 2002-04-30 00:00:00.0
Site name: HOSPITAL DAMAS
Classification: Small Quantity Generator

Hazardous Waste Summary:

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: U122
. Waste name: FORMALDEHYDE

HOSPITAL DAMAS (Continued) **1005444709**

Facility Has Received Notices of Violations:

Regulation violated:	Not reported
Area of violation:	TSD IS-Container Use and Management
Date violation determined:	2010-02-02 00:00:00.0
Date achieved compliance:	2010-07-09 00:00:00.0
Violation lead agency:	State
Enforcement action:	WRITTEN INFORMAL
Enforcement action date:	2010-02-02 00:00:00.0
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	State
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported

Regulation violated:	Not reported
Area of violation:	Generators - Pre-transport
Date violation determined:	2010-02-02 00:00:00.0
Date achieved compliance:	2010-07-09 00:00:00.0
Violation lead agency:	State
Enforcement action:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date:	2010-07-09 00:00:00.0
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	State
Proposed penalty amount:	Not reported
Final penalty amount:	3200
Paid penalty amount:	Not reported

Regulation violated:	Not reported
Area of violation:	Generators - Pre-transport
Date violation determined:	2010-02-02 00:00:00.0
Date achieved compliance:	2010-07-09 00:00:00.0
Violation lead agency:	State
Enforcement action:	WRITTEN INFORMAL
Enforcement action date:	2010-02-02 00:00:00.0
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	State
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported

Regulation violated:	Not reported
Area of violation:	Generators - Pre-transport
Date violation determined:	2010-02-02 00:00:00.0
Date achieved compliance:	2010-07-09 00:00:00.0
Violation lead agency:	State
Enforcement action:	INITIAL 3008(A) COMPLIANCE
Enforcement action date:	2010-04-22 00:00:00.0
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	State
Proposed penalty amount:	5000
Final penalty amount:	Not reported
Paid penalty amount:	Not reported

HOSPITAL DAMAS (Continued) **1005444709**

Regulation violated: Not reported
Area of violation: TSD IS-Container Use and Management
Date violation determined: 2010-02-02 00:00:00.0
Date achieved compliance: 2010-07-09 00:00:00.0
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 2010-04-22 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 5000
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD IS-Container Use and Management
Date violation determined: 2010-02-02 00:00:00.0
Date achieved compliance: 2010-07-09 00:00:00.0
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 2010-07-09 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 3200
Paid penalty amount: Not reported

Regulation violated: SR - rule 504a(1)
Area of violation: Generators - General
Date violation determined: 2004-01-30 00:00:00.0
Date achieved compliance: 2006-03-28 00:00:00.0
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 2004-01-30 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - rule I803 d(3)
Area of violation: Generators - General
Date violation determined: 2004-01-30 00:00:00.0
Date achieved compliance: 2006-03-28 00:00:00.0
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 2004-01-30 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - rule 704d(4)(D)(ii)(a)(b)(c)

HOSPITAL DAMAS (Continued) **1005444709**

Area of violation: Generators - General
Date violation determined: 2004-01-30 00:00:00.0
Date achieved compliance: 2006-03-28 00:00:00.0
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 2004-07-29 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 13000
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - rule 703f
Area of violation: Generators - General
Date violation determined: 2004-01-30 00:00:00.0
Date achieved compliance: 2006-03-28 00:00:00.0
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 2004-01-30 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - rule I803 d(3)
Area of violation: Generators - General
Date violation determined: 2004-01-30 00:00:00.0
Date achieved compliance: 2006-03-28 00:00:00.0
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 2006-03-28 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 17000
Final penalty amount: 13250
Paid penalty amount: Not reported

Regulation violated: SR - rule 703f
Area of violation: Generators - General
Date violation determined: 2004-01-30 00:00:00.0
Date achieved compliance: 2006-03-28 00:00:00.0
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 2006-03-28 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 17000
Final penalty amount: 13250
Paid penalty amount: Not reported

Regulation violated: SR - rule 704d(1)(b)(c)
Area of violation: Generators - General

HOSPITAL DAMAS (Continued) **1005444709**

Date violation determined: 2004-01-30 00:00:00.0
Date achieved compliance: 2006-03-28 00:00:00.0
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 2004-07-29 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 13000
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - rule 504a(1)
Area of violation: Generators - General
Date violation determined: 2004-01-30 00:00:00.0
Date achieved compliance: 2006-03-28 00:00:00.0
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 2004-07-29 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 13000
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - rule 703f
Area of violation: Generators - General
Date violation determined: 2004-01-30 00:00:00.0
Date achieved compliance: 2006-03-28 00:00:00.0
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 2004-07-29 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 13000
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - rule 704d(1)(b)(c)
Area of violation: Generators - General
Date violation determined: 2004-01-30 00:00:00.0
Date achieved compliance: 2006-03-28 00:00:00.0
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 2004-01-30 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - rule 504a(1)
Area of violation: Generators - General
Date violation determined: 2004-01-30 00:00:00.0

HOSPITAL DAMAS (Continued) **1005444709**

Date achieved compliance: 2006-03-28 00:00:00.0
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 2006-03-28 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 17000
Final penalty amount: 13250
Paid penalty amount: Not reported

Regulation violated: SR - rule I803 d(3)
Area of violation: Generators - General
Date violation determined: 2004-01-30 00:00:00.0
Date achieved compliance: 2006-03-28 00:00:00.0
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 2004-07-29 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 13000
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - rule 704d(4)(D)(ii)(a)(b)(c)
Area of violation: Generators - General
Date violation determined: 2004-01-30 00:00:00.0
Date achieved compliance: 2006-03-28 00:00:00.0
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 2006-03-28 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 17000
Final penalty amount: 13250
Paid penalty amount: Not reported

Regulation violated: SR - rule 704d(1)(b)(c)
Area of violation: Generators - General
Date violation determined: 2004-01-30 00:00:00.0
Date achieved compliance: 2006-03-28 00:00:00.0
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 2006-03-28 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 17000
Final penalty amount: 13250
Paid penalty amount: Not reported

Regulation violated: SR - rule 704d(4)(D)(ii)(a)(b)(c)
Area of violation: Generators - General
Date violation determined: 2004-01-30 00:00:00.0
Date achieved compliance: 2006-03-28 00:00:00.0

HOSPITAL DAMAS (Continued) **1005444709**

Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 2004-01-30 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 2014-05-14 00:00:00.0
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2010-07-09 00:00:00.0
Evaluation: NOT A SIGNIFICANT NON-COMPLIER
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2010-02-02 00:00:00.0
Evaluation: SIGNIFICANT NON-COMPLIER
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2009-12-17 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Pre-transport
Date achieved compliance: 2010-07-09 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2009-12-17 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD IS-Container Use and Management
Date achieved compliance: 2010-07-09 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2006-09-12 00:00:00.0
Evaluation: COMPLIANCE SCHEDULE EVALUATION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2006-03-28 00:00:00.0
Evaluation: NOT A SIGNIFICANT NON-COMPLIER
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2004-12-01 00:00:00.0
Evaluation: COMPLIANCE SCHEDULE EVALUATION
Area of violation: Not reported
Date achieved compliance: Not reported

HOSPITAL DAMAS (Continued) **1005444709**

Evaluation lead agency: State

Evaluation date: 2003-11-18 00:00:00.0
Evaluation: SIGNIFICANT NON-COMPLIER
Area of violation: Generators - General
Date achieved compliance: 2006-03-28 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2003-11-18 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Registry ID: 110012243786

Environmental Interest/Information System

NCDB (National Compliance Data Base) supports implementation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Toxic Substances Control Act (TSCA). The system tracks inspections in regions and states with cooperative agreements, enforcement actions, and settlements.

WATER TREATMENT PLANT

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

NON-TRANSIENT NON-COMMUNITY WATER SYSTEM

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid: 1005444709
Registry ID: 110012243786
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110012243786

NJ MANIFEST:

EPA Id: PRR000014928
Mail Address: 2213 PONCE BYPASS
Mail City/State/Zip: PONCE 007171318
Facility Phone: 7878408686
Emergency Phone: Not reported
Contact: CARMEN PEREZ
Comments: Not reported
SIC Code: Not reported
County: 00
Municipal: 00
Previous EPA Id: Not reported

HOSPITAL DAMAS (Continued) **1005444709**

Gen Flag:	X
Trans Flag:	Not reported
TSDF Flag:	Not reported
Name Change:	Not reported
Date Change:	Not reported

Manifest:

Manifest Number:	NJA5267112
EPA ID:	PRR000014928
Date Shipped:	06/28/2005
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	PRD987381746
Transporter 2 EPA ID:	PR0000939678
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	06/28/2005
Date Trans2 Transported Waste:	07/01/2005
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	07/19/2005
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	11220522
Was Load Rejected:	PONCE 007171318
Reason Load Was Rejected:	Not reported

Manifest Number:	NJA5262894
EPA ID:	PRR000014928
Date Shipped:	01/20/2006
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	PRD987381746
Transporter 2 EPA ID:	PR0000939678
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported

HOSPITAL DAMAS (Continued) **1005444709**

Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	01/20/2006
Date Trans2 Transported Waste:	01/24/2006
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	02/14/2006
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	04240621
Was Load Rejected:	PONCE 007171318
Reason Load Was Rejected:	Not reported

Manifest Number:	NJA5318969
EPA ID:	PRR000014928
Date Shipped:	08/03/2006
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	PRD987381746
Transporter 2 EPA ID:	PR0000939678
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	08/03/2006
Date Trans2 Transported Waste:	08/09/2006
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	08/23/2006
TSDF EPA Facility Name:	Not reported

HOSPITAL DAMAS (Continued) **1005444709**

QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	09270622
Was Load Rejected:	PONCE 007171318
Reason Load Was Rejected:	Not reported
Manifest Number:	000083776VES
EPA ID:	PRR000014928
Date Shipped:	07/21/2008
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	PRD987381746
Transporter 2 EPA ID:	PR0000939678
Transporter 3 EPA ID:	PRD090559360
Transporter 4 EPA ID:	NJD000692061
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	07/21/2008
Date Trans2 Transported Waste:	07/24/2008
Date Trans3 Transported Waste:	07/24/2008
Date Trans4 Transported Waste:	08/05/2008
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	08/06/2008
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	PONCE 007171318
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported

HOSPITAL DAMAS (Continued) **1005444709**

Waste Code:	D001
Hand Code:	H141
Quantity:	10 P
Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H141
Quantity:	480 P
Manifest Year:	Not reported
Waste Code:	D002
Hand Code:	H141
Quantity:	10 P
Manifest Year:	Not reported
Waste Code:	F003
Hand Code:	H141
Quantity:	180 P
Manifest Number:	000080297VES
EPA ID:	PRR000014928
Date Shipped:	02/23/2007
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	PRD987381746
Transporter 2 EPA ID:	PR0000939678
Transporter 3 EPA ID:	PRD090559360
Transporter 4 EPA ID:	NJD000692061
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	02/23/2007
Date Trans2 Transported Waste:	02/26/2007
Date Trans3 Transported Waste:	02/27/2007
Date Trans4 Transported Waste:	03/15/2007
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	03/15/2007
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported

HOSPITAL DAMAS (Continued) **1005444709**

Data Entry Number: Not reported
Was Load Rejected: PONCE 007171318
Reason Load Was Rejected: Not reported

Waste:
Manifest Year: Not reported
Waste Code: D001
Hand Code: H14
Quantity: 21 P

Manifest Year: Not reported
Waste Code: F003
Hand Code: H14
Quantity: 310 P

Manifest Number: 000080397VES
EPA ID: PRR000014928
Date Shipped: 03/15/2007
TSDF EPA ID: NJD980536593
Transporter EPA ID: PRD987381746
Transporter 2 EPA ID: PR0000939678
Transporter 3 EPA ID: PRD090559360
Transporter 4 EPA ID: NJD000692061
Transporter 5 EPA ID: Not reported
Transporter 6 EPA ID: Not reported
Transporter 7 EPA ID: Not reported
Transporter 8 EPA ID: Not reported
Transporter 9 EPA ID: Not reported
Transporter 10 EPA ID: Not reported
Date Trans1 Transported Waste: 03/15/2007
Date Trans2 Transported Waste: 03/19/2007
Date Trans3 Transported Waste: 03/19/2007
Date Trans4 Transported Waste: 04/03/2007
Date Trans5 Transported Waste: Not reported
Date Trans6 Transported Waste: Not reported
Date Trans7 Transported Waste: Not reported
Date Trans8 Transported Waste: Not reported
Date Trans9 Transported Waste: Not reported
Date Trans10 Transported Waste: Not reported
Date TSDF Received Waste: 04/05/2007
TSDF EPA Facility Name: Not reported
QTY Units: Not reported
Transporter SEQ ID: Not reported
Transporter-1 Date: Not reported
Waste SEQ ID: Not reported
Waste Type Code 2: Not reported
Waste Type Code 3: Not reported
Waste Type Code 4: Not reported
Waste Type Code 5: Not reported
Waste Type Code 6: Not reported
Date Accepted: Not reported
Manifest Discrepancy Type: Not reported
Data Entry Number: Not reported
Was Load Rejected: PONCE 007171318
Reason Load Was Rejected: Not reported

Waste:

HOSPITAL DAMAS (Continued) **1005444709**

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H14
Quantity:	180 P
Manifest Year:	Not reported
Waste Code:	F003
Hand Code:	H14
Quantity:	217 P
Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H14
Quantity:	60 P
Manifest Number:	NJA5267380
EPA ID:	PRR000014928
Date Shipped:	08/26/2005
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	PRD987381746
Transporter 2 EPA ID:	PR0000939678
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	08/26/2005
Date Trans2 Transported Waste:	08/26/2005
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	09/14/2005
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	01040621
Was Load Rejected:	PONCE 007171318
Reason Load Was Rejected:	Not reported

HOSPITAL DAMAS (Continued) **1005444709**

Manifest Number:	NJA5017775
EPA ID:	PRR000014928
Date Shipped:	10/11/2004
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	PRD987381746
Transporter 2 EPA ID:	PR0000939678
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	10/11/2004
Date Trans2 Transported Waste:	10/14/2004
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	11/01/2004
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	01180525
Was Load Rejected:	PONCE 007171318
Reason Load Was Rejected:	Not reported

Manifest Number:	000081395VES
EPA ID:	PRR000014928
Date Shipped:	02/27/2009
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	PRD987381746
Transporter 2 EPA ID:	PR0000939678
Transporter 3 EPA ID:	PRD090559360
Transporter 4 EPA ID:	NJD000692061
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	02/27/2009
Date Trans2 Transported Waste:	03/05/2009

HOSPITAL DAMAS (Continued) **1005444709**

Date Trans3 Transported Waste:	03/05/2009
Date Trans4 Transported Waste:	03/20/2009
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	03/24/2009
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	PONCE 007171318
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H141
Quantity:	120 P

Manifest Year:	Not reported
Waste Code:	F003
Hand Code:	H141
Quantity:	400 P

Manifest Number:	000083961VES
EPA ID:	PRR000014928
Date Shipped:	11/19/2008
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	PRD987381746
Transporter 2 EPA ID:	PR0000939678
Transporter 3 EPA ID:	PRD090559360
Transporter 4 EPA ID:	NJD000692061
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	11/19/2008
Date Trans2 Transported Waste:	11/26/2008
Date Trans3 Transported Waste:	11/28/2008
Date Trans4 Transported Waste:	12/22/2008
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported

HOSPITAL DAMAS (Continued) **1005444709**

Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	12/23/2008
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	PONCE 007171318
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	F003
Hand Code:	H141
Quantity:	400 P

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H141
Quantity:	250 P

Manifest Number:	000081883VES
EPA ID:	PRR000014928
Date Shipped:	07/09/2007
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	PRD987381746
Transporter 2 EPA ID:	PR0000939678
Transporter 3 EPA ID:	PRD090559360
Transporter 4 EPA ID:	NJD000692061
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	07/09/2007
Date Trans2 Transported Waste:	07/16/2007
Date Trans3 Transported Waste:	07/16/2007
Date Trans4 Transported Waste:	08/02/2007
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	08/03/2007
TSDF EPA Facility Name:	Not reported

HOSPITAL DAMAS (Continued) **1005444709**

QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	PONCE 007171318
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	F003
Hand Code:	H14
Quantity:	350 P

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H14
Quantity:	270 P

Manifest Number:	NJA5018198
EPA ID:	PRR000014928
Date Shipped:	05/03/2005
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	PRD987381746
Transporter 2 EPA ID:	PR0000939678
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	05/03/2005
Date Trans2 Transported Waste:	05/10/2005
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	06/01/2005
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported

HOSPITAL DAMAS (Continued) **1005444709**

Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	08030521
Was Load Rejected:	PONCE 007171318
Reason Load Was Rejected:	Not reported
Manifest Number:	NJA4121634
EPA ID:	PRR000014928
Date Shipped:	05/10/2004
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	PRD987381746
Transporter 2 EPA ID:	PR0000939678
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	05/10/2004
Date Trans2 Transported Waste:	05/14/2004
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	06/10/2004
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	07060421
Was Load Rejected:	PONCE 007171318
Reason Load Was Rejected:	Not reported
Manifest Number:	NJA5017684
EPA ID:	PRR000014928
Date Shipped:	11/19/2004
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	PRD987381746
Transporter 2 EPA ID:	PR0000939678

HOSPITAL DAMAS (Continued) **1005444709**

Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	11/19/2004
Date Trans2 Transported Waste:	11/22/2004
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	12/09/2004
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	02030521
Was Load Rejected:	PONCE 007171318
Reason Load Was Rejected:	Not reported
Manifest Number:	NJA5260841
EPA ID:	PRR000014928
Date Shipped:	11/28/2005
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	PRD987381746
Transporter 2 EPA ID:	PR0000939678
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	11/28/2005
Date Trans2 Transported Waste:	12/06/2005
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported

HOSPITAL DAMAS (Continued) **1005444709**

Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	12/29/2005
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	03090635
Was Load Rejected:	PONCE 007171318
Reason Load Was Rejected:	Not reported

Manifest Number:	NJA5017426
EPA ID:	PRR000014928
Date Shipped:	01/14/2005
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	PRD987381746
Transporter 2 EPA ID:	PR0000939678
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	01/14/2005
Date Trans2 Transported Waste:	01/14/2005
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	02/09/2005
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	05230521

HOSPITAL DAMAS (Continued) **1005444709**

Was Load Rejected:	PONCE 007171318
Reason Load Was Rejected:	Not reported
Manifest Number:	000349050VES
EPA ID:	PRR000014928
Date Shipped:	10/20/2009
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	PRD987381746
Transporter 2 EPA ID:	PR0000939678
Transporter 3 EPA ID:	PRD090559360
Transporter 4 EPA ID:	NJD071629976
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	10/20/2009
Date Trans2 Transported Waste:	10/22/2009
Date Trans3 Transported Waste:	10/22/2009
Date Trans4 Transported Waste:	11/05/2009
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	11/09/2009
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	PONCE 007171318
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D002
Hand Code:	H141
Quantity:	10 P
Manifest Year:	Not reported
Waste Code:	D003
Hand Code:	H141
Quantity:	10 P
Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H141

HOSPITAL DAMAS (Continued) **1005444709**

Quantity:	10 P
Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H141
Quantity:	360 P
Manifest Year:	Not reported
Waste Code:	U154
Hand Code:	H141
Quantity:	10 P
Manifest Number:	NJA4121750
EPA ID:	PRR000014928
Date Shipped:	03/26/2004
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	PRD987381746
Transporter 2 EPA ID:	PR0000939678
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	03/26/2004
Date Trans2 Transported Waste:	03/31/2004
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	04/14/2004
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	05180421
Was Load Rejected:	PONCE 007171318
Reason Load Was Rejected:	Not reported
Manifest Number:	000285170VES
EPA ID:	PRR000014928
Date Shipped:	1/5/2011

HOSPITAL DAMAS (Continued) **1005444709**

TSDF EPA ID:	NJD980536593
Transporter EPA ID:	PRD987381746
Transporter 2 EPA ID:	PR0000939678
Transporter 3 EPA ID:	PRD090559360
Transporter 4 EPA ID:	NJD071629976
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	Not reported
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	Not reported
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	PONCE 007171318
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H141
Quantity:	405.00 Pounds
Manifest Year:	Not reported
Waste Code:	F003
Hand Code:	H141
Quantity:	90.00 Pounds
Manifest Number:	000351015VES
EPA ID:	PRR000014928
Date Shipped:	03/05/2010
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	PRD987381746
Transporter 2 EPA ID:	PR0000939678
Transporter 3 EPA ID:	PRD090559360
Transporter 4 EPA ID:	NJD071629976

HOSPITAL DAMAS (Continued) **1005444709**

Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	03/05/2010
Date Trans2 Transported Waste:	03/12/2010
Date Trans3 Transported Waste:	03/15/2010
Date Trans4 Transported Waste:	03/26/2010
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	03/26/2010
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	PONCE 007171318
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H141
Quantity:	300 P

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2 **CARIBBEAN CAN MANUFACTURING - AMMONIA RELEASE EMER** **SEMS** **1018149249**
SE **1029 HOSTOS AVE** **RCRA NonGen / NLR** **PRR000025601**
1/4-1/2 **PONCE, PR 00717** **PRP**
0.286 mi. **FINDS**
1508 ft. **ECHO**

Relative:
Higher

Actual:
23 ft.

SEMS:

Site ID:	0202583
EPA ID:	PRR000025601
Cong District:	Not reported
FIPS Code:	72113
Latitude:	Not reported
Longitude:	Not reported
FF:	N
NPL:	Not on the NPL
Non NPL Status:	Removal Only Site (No Site Assessment Work Needed)

CARIBBEAN CAN MANUFACTURING - AMMONIA RELEASE EMERGENCY RESP (Continued) **1018149249**

SEMS Detail:

Region:	02
Site ID:	0202583
EPA ID:	PRR000025601
Site Name:	CARIBBEAN CAN MANUFACTURING, LLC
NPL:	N
FF:	N
OU:	00
Action Code:	PJ
Action Name:	RP EM REM
SEQ:	1
Start Date:	2015-10-08 04:00:00
Finish Date:	10/25/2015 4:00:00 AM
Qual:	Not reported
Current Action Lead:	EPA Ovrsght

RCRA NonGen / NLR:

Date form received by agency:	2017-04-18 00:00:00.0
Facility name:	CARIBBEAN CAN MANUFACTURING - AMMONIA RELEASE EMERGENCY RESPONSE
Facility address:	1029 HOSTOS AVE PONCE, PR 00717
EPA ID:	PRR000025601
Mailing address:	PO BOX 51985 TOA BAJA, PR 00959
Contact:	JORGE RIVERA
Contact address:	PO BOX 1298 SABANA SECA, PR 00952
Contact country:	US
Contact telephone:	787-795-3151
Contact email:	JORGE.RICLEM@GMAIL.COM
EPA Region:	02
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	CARIBBEAN CAN MANUFACTURING
Owner/operator address:	Not reported Not reported
Owner/operator country:	US
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	2014-09-01 00:00:00.0
Owner/Op end date:	Not reported

Owner/operator name:	CARIBBEAN CAN MANUFACTURING
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported

CARIBBEAN CAN MANUFACTURING - AMMONIA RELEASE EMERGENCY RESP (Continued) **1018149249**

Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 2014-09-01 00:00:00.0
Owner/Op end date: Not reported

Owner/operator name: PUERTO RICO INDUSTRIAL DEVELOPMENT CORP
Owner/operator address: PO BOX 362350
HATO REY, PR 00936
Owner/operator country: US
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: State
Owner/Operator Type: Owner
Owner/Op start date: 1976-01-01 00:00:00.0
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 2015-10-22 00:00:00.0
Site name: CARIBBEAN CAN MANUFACTURING - AMMONIA RELEASE EMERGENCY RESPONSE
Classification: Small Quantity Generator

Hazardous Waste Summary:

. Waste code: D002
. Waste name: CORROSIVE WASTE

Violation Status: No violations found

PRP:
EPAID: PRR000025601
Site ID: 0202583
Name: "CARIBBEAN CAN MANUFACTURING, LLC"
Address: 1129 HOSTOS AVENUE
City,State,Zip: PONCE, PR 00717
NPL Status: Not on the NPL
NPL Status Short Name: Removal Only Site (No Site Assessment Work Needed)

CARIBBEAN CAN MANUFACTURING - AMMONIA RELEASE EMERGENCY RESP (Continued) **1018149249**

PRP Name:	CARIBBEAN CAN MANUFACTURING COMPANY LLC
PRP Address:	Road 172 Km 9.1 Barrio Certenejas
PRP City:	CIDRA
PRP State:	PR
PRP Zip:	00739
Data Type:	SETTLEMENT DATE
Action Date:	11/9/2016
Settlement Code:	CA-1
Settlement:	CON AGMT

FINDS:

Registry ID: 110066978355

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1018149249
Registry ID:	110067349550
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110067349550

Envid:	1018149249
Registry ID:	110066978355
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110066978355

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3 **GULF #178** **PR LUST** **S104539977**
NE **AVE. HOSTOS #80** **N/A**
1/4-1/2 **PONCE, PR**
0.452 mi.
2386 ft.

Relative:
Higher

Actual:
32 ft.

PR LUST:

Facility ID:	86-0196
Status:	ACTIVE
Released:	No
Released Date:	Not reported
How Known:	high values
Date Known:	16-Jun-93
Owner Name:	Caribbean Petroleum

Count: 5 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
PONCE	S103553855	TALLER DE MECANICA	AVE HOSTOS 37		PR LUST
PONCE	S123161976	PICO SUBIRA LOT	AVE. HOSTOS #210		PR LUST
PONCE	S104904914	CASHER, INC.	AVE. HOSTOS #19		PR LUST
PONCE	S106917749	TEXACO S/S #801	CALLE FERROCARRIL, ESQ. CALLE		PR LUST
PONCE	S105073579	SHELL #0426	BY PASS ESQ. MUNOZ RIVERA		PR LUST

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 11/07/2019
Date Made Active in Reports: 11/20/2019
Number of Days to Update: 13

Source: EPA
Telephone: N/A
Last EDR Contact: 11/07/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 11/07/2019
Date Made Active in Reports: 11/20/2019
Number of Days to Update: 13

Source: EPA
Telephone: N/A
Last EDR Contact: 11/07/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 11/07/2019
Date Made Active in Reports: 11/20/2019
Number of Days to Update: 13

Source: EPA
Telephone: N/A
Last EDR Contact: 11/07/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 04/03/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 10/04/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 11/07/2019
Date Made Active in Reports: 11/21/2019
Number of Days to Update: 14

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 11/07/2019
Next Scheduled EDR Contact: 01/27/2020
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 11/07/2019
Date Made Active in Reports: 11/21/2019
Number of Days to Update: 14

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 11/07/2019
Next Scheduled EDR Contact: 01/27/2020
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 06/24/2019
Date Data Arrived at EDR: 06/26/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 113

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 10/28/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 06/24/2019
Date Data Arrived at EDR: 06/26/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 113

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 10/28/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/24/2019
Date Data Arrived at EDR: 06/26/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 113

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 10/28/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 06/24/2019
Date Data Arrived at EDR: 06/26/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 113

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 10/28/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/24/2019
Date Data Arrived at EDR: 06/26/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 113

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 10/28/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 08/13/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 08/26/2019
Number of Days to Update: 6

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 11/07/2019
Next Scheduled EDR Contact: 02/24/2020
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 08/19/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 08/26/2019
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 11/22/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 08/19/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 08/26/2019
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 11/22/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 14

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

SHWS: This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: Environmental Quality Board
Telephone: 787-767-8181
Last EDR Contact: 08/22/2005
Next Scheduled EDR Contact: 11/21/2005
Data Release Frequency: N/A

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tanks

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 07/27/2018
Date Data Arrived at EDR: 11/08/2018
Date Made Active in Reports: 01/03/2019
Number of Days to Update: 56

Source: Environmental Quality Board
Telephone: 787-767-8056
Last EDR Contact: 11/04/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 04/12/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 80

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 12/03/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/08/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 79

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/11/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 80

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 05/02/2019
Date Data Arrived at EDR: 10/22/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 20

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/16/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 80

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 80

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 10/25/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/08/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 80

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 07/02/2019
Date Data Arrived at EDR: 10/16/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 8

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 08/27/2019
Date Data Arrived at EDR: 08/28/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 75

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 10/11/2019
Next Scheduled EDR Contact: 01/20/2020
Data Release Frequency: Varies

UST: Underground Storage Tank Facilities
Underground storage tank site locations.

Date of Government Version: 01/01/2008
Date Data Arrived at EDR: 03/26/2008
Date Made Active in Reports: 04/23/2008
Number of Days to Update: 28

Source: Environmental Quality Board
Telephone: 787-767-8056
Last EDR Contact: 11/04/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Semi-Annually

INDIAN UST R4: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 04/12/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 80

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 12/03/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/08/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 80

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 80

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/16/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 79

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/08/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 80

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/11/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 79

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 05/02/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 80

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 05/02/2019
Date Data Arrived at EDR: 10/22/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 20

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 09/19/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/03/2019
Date Data Arrived at EDR: 06/04/2019
Date Made Active in Reports: 08/26/2019
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/19/2019
Next Scheduled EDR Contact: 12/30/2019
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 10/28/2019
Next Scheduled EDR Contact: 02/10/2020
Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 10/17/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 11/01/2019
Next Scheduled EDR Contact: 02/10/2020
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 06/11/2019
Date Data Arrived at EDR: 06/13/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/20/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 06/11/2019
Date Data Arrived at EDR: 06/13/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/20/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: Quarterly

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 11/07/2019
Date Made Active in Reports: 11/20/2019
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 11/07/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/24/2019
Date Data Arrived at EDR: 06/26/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 89

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 09/24/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 06/24/2019
Date Data Arrived at EDR: 06/26/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 113

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 10/28/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 05/15/2019
Date Data Arrived at EDR: 05/21/2019
Date Made Active in Reports: 08/08/2019
Number of Days to Update: 79

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 11/19/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 10/11/2019
Next Scheduled EDR Contact: 01/20/2020
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/07/2019
Next Scheduled EDR Contact: 01/20/2020
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 12/02/2019
Next Scheduled EDR Contact: 02/24/2020
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 06/24/2019
Date Data Arrived at EDR: 06/26/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 89

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 09/24/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 10/31/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 11/08/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/19/2019
Next Scheduled EDR Contact: 12/30/2019
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 11/16/2018
Date Made Active in Reports: 11/21/2019
Number of Days to Update: 370

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 11/22/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 09/30/2018
Date Data Arrived at EDR: 04/24/2019
Date Made Active in Reports: 08/08/2019
Number of Days to Update: 106

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 10/23/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 11/07/2019
Date Made Active in Reports: 11/20/2019
Number of Days to Update: 13

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 11/07/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 04/25/2019
Date Data Arrived at EDR: 05/02/2019
Date Made Active in Reports: 05/23/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 10/21/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 11/07/2019
Date Made Active in Reports: 11/21/2019
Number of Days to Update: 14

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 11/07/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 03/20/2019
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 34

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 10/11/2019
Next Scheduled EDR Contact: 01/20/2020
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 10/07/2019
Next Scheduled EDR Contact: 01/20/2020
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 06/20/2019
Date Data Arrived at EDR: 06/20/2019
Date Made Active in Reports: 08/08/2019
Number of Days to Update: 49
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 10/25/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 11/25/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 05/24/2017
Date Data Arrived at EDR: 11/30/2017
Date Made Active in Reports: 12/15/2017
Number of Days to Update: 15
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 11/06/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 11/12/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/31/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 85

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 10/29/2019
Next Scheduled EDR Contact: 02/10/2020
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2019
Date Data Arrived at EDR: 07/16/2019
Date Made Active in Reports: 10/02/2019
Number of Days to Update: 78

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 10/02/2019
Next Scheduled EDR Contact: 01/20/2020
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 09/16/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/06/2019
Next Scheduled EDR Contact: 01/19/2020
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 11/04/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/01/2019
Date Data Arrived at EDR: 08/21/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 82

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 11/15/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 11/07/2019
Date Made Active in Reports: 11/20/2019
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 11/07/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data
A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

MINES VIOLATIONS: MSHA Violation Assessment Data
Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 09/17/2019
Date Data Arrived at EDR: 09/18/2019
Date Made Active in Reports: 12/03/2019
Number of Days to Update: 76

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 12/02/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Quarterly

US MINES: Mines Master Index File
Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/01/2019
Date Data Arrived at EDR: 08/27/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 76

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 08/27/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing
This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/22/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing
Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/22/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines
An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 09/10/2019
Date Data Arrived at EDR: 09/10/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 37

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 03/23/2020
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 08/12/2019
Date Data Arrived at EDR: 09/04/2019
Date Made Active in Reports: 12/03/2019
Number of Days to Update: 90

Source: EPA
Telephone: (212) 637-3000
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/17/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 74

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 10/10/2019
Next Scheduled EDR Contact: 01/27/2020
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 07/06/2019
Date Data Arrived at EDR: 07/09/2019
Date Made Active in Reports: 10/02/2019
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 10/08/2019
Next Scheduled EDR Contact: 01/20/2020
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 07/26/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 71

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 11/20/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 08/19/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 83

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 11/19/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: Quarterly

MINES MRDS: Mineral Resources Data System

Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 11/22/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Environmental Quality Board in Puerto Rico.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/04/2014
Number of Days to Update: 187

Source: Environmental Quality Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 10/02/2019
Next Scheduled EDR Contact: 01/20/2020
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 02/23/2018
Date Made Active in Reports: 04/09/2018
Number of Days to Update: 45

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 11/14/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: Annually

Oil/Gas Pipelines

Source: Endeavor Business Media

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data

Source: Endeavor Business Media

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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

PHSU PROPERTY
KM 227.2 STATE ROAD PR-2
PONCE, PR 00716

TARGET PROPERTY COORDINATES

Latitude (North):	17.994753 - 17° 59' 41.11"
Longitude (West):	66.619142 - 66° 37' 8.91"
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	752114.1
UTM Y (Meters):	1991103.9
Elevation:	10 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5964484 PLAYA DE PONCE, PR
Version Date:	2013
Northeast Map:	5964470 PONCE, PR
Version Date:	2013
Southwest Map:	5964556 PUNTA CUCHARAS, PR
Version Date:	2013
Northwest Map:	5964552 PENUELAS, PR
Version Date:	2013

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

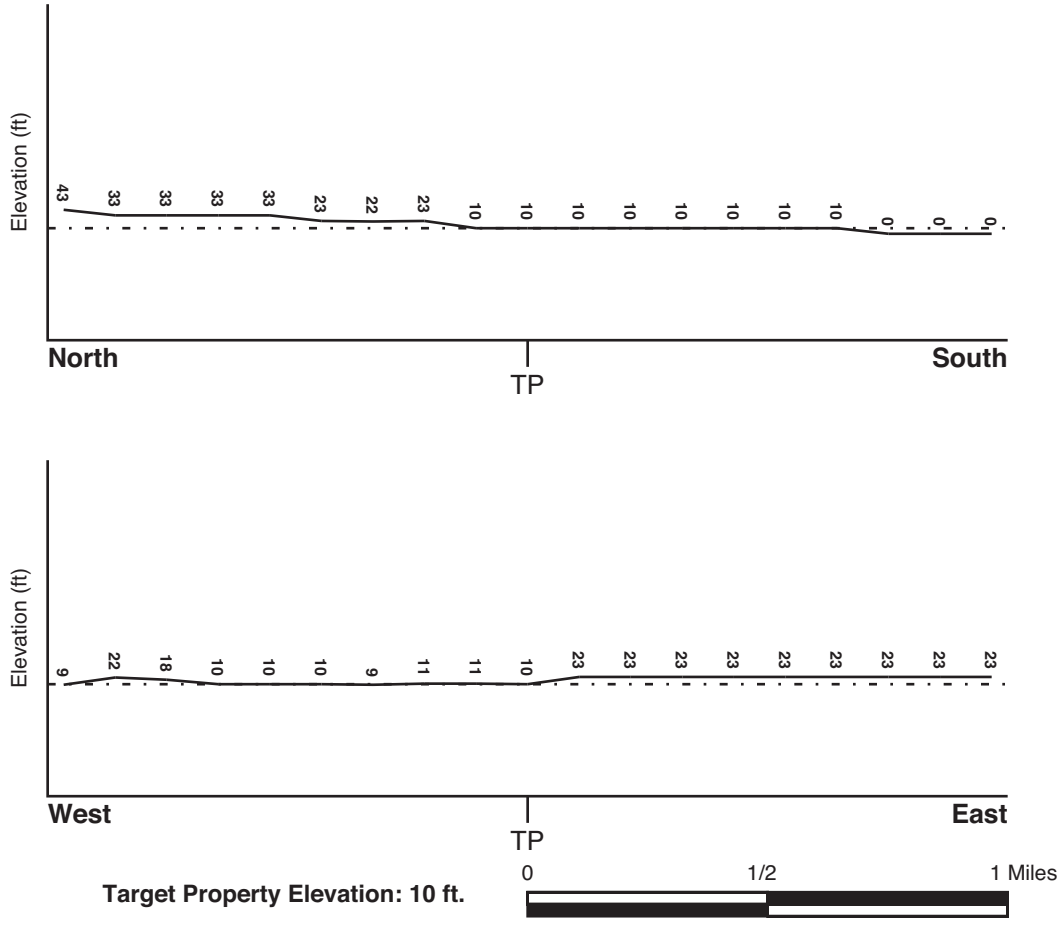
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
7200000281C	FEMA Q3 Flood data

Additional Panels in search area:	FEMA Source Type
7200000219B	FEMA Q3 Flood data
7200000223B	FEMA Q3 Flood data
7200000277C	FEMA Q3 Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
NOT AVAILABLE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	-
System:	-
Series:	-
Code:	N/A *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: -

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	CONSTANCIA
Soil Surface Texture:	silty clay
Hydrologic Group:	Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.
Soil Drainage Class:	Somewhat poorly. Soils commonly have a layer with low hydraulic conductivity, wet state high in profile, etc. Depth to water table is 1 to 3 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel:	HIGH
Depth to Bedrock Min:	> 60 inches
Depth to Bedrock Max:	> 60 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	12 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 0.06 Min: 0.00	Max: 8.40 Min: 7.40
2	12 inches	65 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 0.06 Min: 0.00	Max: 8.40 Min: 7.40

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: silty clay loam
clay loam
clay
loam
sand

Surficial Soil Types: silty clay loam
clay loam
clay
loam
sand

Shallow Soil Types: silty clay loam
sandy loam
sandy clay loam

Deeper Soil Types: very cobbly - loam
clay loam
clay
silty clay loam
stratified
sand

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	USGS40001042413	1/8 - 1/4 Mile NNE
A2	USGS40001042389	1/8 - 1/4 Mile ENE
3	USGS40001042291	1/4 - 1/2 Mile ESE
4	USGS40001042340	1/4 - 1/2 Mile East
B5	USGS40001042236	1/4 - 1/2 Mile SSE
A6	USGS40001042412	1/4 - 1/2 Mile NE
B7	USGS40001042224	1/4 - 1/2 Mile SSE
A8	USGS40001042425	1/4 - 1/2 Mile NE
C9	USGS40001042388	1/4 - 1/2 Mile ENE
C10	USGS40001042411	1/4 - 1/2 Mile ENE
11	USGS40001042206	1/4 - 1/2 Mile SSW
D12	USGS40001042326	1/4 - 1/2 Mile East
E13	USGS40001042468	1/4 - 1/2 Mile NE
D14	USGS40001042319	1/4 - 1/2 Mile East
15	USGS40001042567	1/4 - 1/2 Mile North
E16	USGS40001042472	1/4 - 1/2 Mile NE
17	USGS40001042230	1/4 - 1/2 Mile SE
18	USGS40001042373	1/4 - 1/2 Mile ENE
19	USGS40001042177	1/2 - 1 Mile SSW
20	USGS40001042536	1/2 - 1 Mile NW
F21	USGS40001042526	1/2 - 1 Mile NE
22	USGS40001042625	1/2 - 1 Mile North
23	USGS40001042141	1/2 - 1 Mile SSW
24	USGS40001042577	1/2 - 1 Mile NNE
F25	USGS40001042535	1/2 - 1 Mile NE
26	USGS40001042558	1/2 - 1 Mile NE
G27	USGS40001042643	1/2 - 1 Mile NNE
G28	USGS40001042634	1/2 - 1 Mile NNE
H29	USGS40001042624	1/2 - 1 Mile NE
H30	USGS40001042623	1/2 - 1 Mile NE
G31	USGS40001042672	1/2 - 1 Mile NNE
H32	USGS40001042652	1/2 - 1 Mile NE
33	USGS40001042480	1/2 - 1 Mile ENE
34	USGS40001042651	1/2 - 1 Mile NE
35	USGS40001042616	1/2 - 1 Mile NW
I36	USGS40001042705	1/2 - 1 Mile NNE
J37	USGS40001042049	1/2 - 1 Mile South
J38	USGS40001042050	1/2 - 1 Mile South
I39	USGS40001042704	1/2 - 1 Mile NNE
I40	USGS40001042703	1/2 - 1 Mile NNE
41	USGS40001042128	1/2 - 1 Mile SE
J42	USGS40001042043	1/2 - 1 Mile South

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
43	USGS40001042740	1/2 - 1 Mile NNE
K44	USGS40001042717	1/2 - 1 Mile NNE
45	USGS40001042512	1/2 - 1 Mile ENE
L46	USGS40001042760	1/2 - 1 Mile NNE
L47	USGS40001042771	1/2 - 1 Mile NNE
48	USGS40001042578	1/2 - 1 Mile WNW
49	USGS40001042804	1/2 - 1 Mile North
K50	USGS40001042716	1/2 - 1 Mile NE
M51	USGS40001042803	1/2 - 1 Mile NNE
52	USGS40001042481	1/2 - 1 Mile WNW
53	USGS40001042287	1/2 - 1 Mile East
54	USGS40001042349	1/2 - 1 Mile West
55	USGS40001042399	1/2 - 1 Mile West
M56	USGS40001042814	1/2 - 1 Mile NNE
57	USGS40001041984	1/2 - 1 Mile South
58	USGS40001042669	1/2 - 1 Mile NE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

PHYSICAL SETTING SOURCE MAP - 5893780.2s



County Boundary
Major Roads
Contour Lines
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

Groundwater Flow Direction
GI Indeterminate Groundwater Flow at Location
GV Groundwater Flow Varies at Location

SITE NAME:	PHSU Property	CLIENT:	ECA Environmental Consulting
ADDRESS:	Km 227.2 State Road PR-2 Ponce PR 00716	CONTACT:	Winston Esteves
LAT/LONG:	17.994753 / 66.619142	INQUIRY #:	5893780.2s
		DATE:	December 05, 2019 8:31 am

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
NNE **FED USGS** **USGS40001042413**
1/8 - 1/4 Mile
Higher

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	HDAM WELL, PONCE, PR	Type:	Well
Description:	GROUND WATER SITE INVENTORY (DNR-FRANCHISE)		
HUC:	21010004	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Not Reported
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

A2
ENE **FED USGS** **USGS40001042389**
1/8 - 1/4 Mile
Higher

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	HANES 2 WELL, PONCE, PR	Type:	Well
Description:	DF	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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3
ESE **FED USGS** **USGS40001042291**
1/4 - 1/2 Mile
Higher

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	PCON WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1944
Well Depth:	60	Well Depth Units:	ft
Well Hole Depth:	60	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	1	Level reading date:	1944
Feet below surface:	10.0	Feet to sea level:	Not Reported
Note:	Not Reported		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

4
East
1/4 - 1/2 Mile
Higher

FED USGS **USGS40001042340**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	PCON 2 WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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B5
SSE
1/4 - 1/2 Mile
Higher

FED USGS **USGS40001042236**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	ALI WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	194506
Well Depth:	60	Well Depth Units:	ft
Well Hole Depth:	76	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	1	Level reading date:	1958-07-08
Feet below surface:	5.74	Feet to sea level:	Not Reported
Note:	Not Reported		

A6
NE
1/4 - 1/2 Mile
Higher

FED USGS **USGS40001042412**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	INDIAN HEAD WELL, PONCE, PR		
Type:	Well	Description:	HS
HUC:	21010004	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Not Reported
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19461007	Well Depth:	150
Well Depth Units:	ft	Well Hole Depth:	150
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	2	Level reading date:	1946-10-28
Feet below surface:	7.0	Feet to sea level:	Not Reported

Note:	Not Reported		
Level reading date:	1946-10-28	Feet below surface:	7.0
Feet to sea level:	Not Reported	Note:	Not Reported

B7
SSE **FED USGS** **USGS40001042224**
1/4 - 1/2 Mile
Higher

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	MESA WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1950
Well Depth:	150	Well Depth Units:	ft
Well Hole Depth:	150	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	1	Level reading date:	1950
Feet below surface:	12.0	Feet to sea level:	Not Reported
Note:	Not Reported		

A8
NE **FED USGS** **USGS40001042425**
1/4 - 1/2 Mile
Higher

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	HANES 1 WELL, PONCE, PR	Type:	Well
Description:	DF	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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C9
ENE **FED USGS** **USGS40001042388**
1/4 - 1/2 Mile
Higher

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	TA WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

C10
ENE
1/4 - 1/2 Mile
Higher | **FED USGS** | **USGS40001042411**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	WILO 1 WELL, PONCE, PR	Type:	Well
Description:	HS	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1962
Well Depth:	100	Well Depth Units:	ft
Well Hole Depth:	125	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	56	Level reading date:	1965-07-25
Feet below surface:	16.71	Feet to sea level:	Not Reported
Note:	Not Reported		

Level reading date:	1965-07-25	Feet below surface:	16.71
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-07-13	Feet below surface:	18.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-07-13	Feet below surface:	16.9
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-07-13	Feet below surface:	18.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-07-13	Feet below surface:	16.9
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-06-29	Feet below surface:	17.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-06-29	Feet below surface:	17.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-06-14	Feet below surface:	18.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-06-14	Feet below surface:	19.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-06-14	Feet below surface:	19.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-06-14	Feet below surface:	18.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-05-27	Feet below surface:	19.12
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-05-27	Feet below surface:	19.12
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1965-05-10	Feet below surface:	20.86
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-05-10	Feet below surface:	20.86
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-04-30	Feet below surface:	26.80
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-04-30	Feet below surface:	26.80
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-04-07	Feet below surface:	21.82
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-04-07	Feet below surface:	21.82
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-03-22	Feet below surface:	20.71
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-03-22	Feet below surface:	20.71
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-03-22	Feet below surface:	23.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-03-22	Feet below surface:	23.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-03-10	Feet below surface:	20.76
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-03-10	Feet below surface:	20.76
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-02-24	Feet below surface:	19.02
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-02-24	Feet below surface:	19.02
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-02-08	Feet below surface:	19.25
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-02-08	Feet below surface:	19.25
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-01-26	Feet below surface:	19.22
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-01-26	Feet below surface:	19.22
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-01-12	Feet below surface:	18.36
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-01-12	Feet below surface:	18.36
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-12-27	Feet below surface:	16.29
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1964-12-27	Feet below surface:	16.29
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-12-16	Feet below surface:	17.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-12-16	Feet below surface:	18.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-12-16	Feet below surface:	18.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-12-16	Feet below surface:	17.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-12-02	Feet below surface:	17.9
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-12-02	Feet below surface:	17.9
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-11-11	Feet below surface:	16.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-11-11	Feet below surface:	17.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-11-11	Feet below surface:	16.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-11-11	Feet below surface:	17.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-10-15	Feet below surface:	15.42
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-10-15	Feet below surface:	15.42
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-10-02	Feet below surface:	14.95
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-10-02	Feet below surface:	14.95
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-08-26	Feet below surface:	17.17
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-08-26	Feet below surface:	17.17
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-05-21	Feet below surface:	18.47
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-05-21	Feet below surface:	18.47
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1962	Feet below surface:	10.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1962	Feet below surface:	10.0
Feet to sea level:	Not Reported	Note:	Not Reported

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

11
SSW
1/4 - 1/2 Mile
Higher

FED USGS **USGS40001042206**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	VILARO WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

D12
East
1/4 - 1/2 Mile
Higher

FED USGS **USGS40001042326**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	PONCE WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

E13
NE
1/4 - 1/2 Mile
Higher

FED USGS **USGS40001042468**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	DEL 1 WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1928
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	190	Well Hole Depth Units:	ft

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

D14
East
1/4 - 1/2 Mile
Higher | **FED USGS** | **USGS40001042319**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	CONSTANCIA P9 WELL, PONCE, PR		
Type:	Well	Description:	Not Reported
HUC:	21010004	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Not Reported
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	195410	Well Depth:	185
Well Depth Units:	ft	Well Hole Depth:	185
Well Hole Depth Units:	ft		

15
North
1/4 - 1/2 Mile
Higher | **FED USGS** | **USGS40001042567**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	UCAT 1 WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1949
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	145	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	2	Level reading date:	1949
Feet below surface:	5.0	Feet to sea level:	Not Reported
Note:	Not Reported		

Level reading date:	1949	Feet below surface:	5.0
Feet to sea level:	Not Reported	Note:	Not Reported

E16
NE
1/4 - 1/2 Mile
Higher | **FED USGS** | **USGS40001042472**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	DEL 2 WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1942
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	225	Well Hole Depth Units:	ft

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

17
SE
1/4 - 1/2 Mile
Higher | **FED USGS** | **USGS40001042230**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	CONSTANCIA 3 WELL, PONCE, PR		
Type:	Well	Description:	NA PT
HUC:	21010004	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	South Coast aquifer (Puerto Rico)
Formation Type:	South Coastal Plain Alluvial Aquifer		
Aquifer Type:	Unconfined single aquifer	Construction Date:	193105
Well Depth:	144	Well Depth Units:	ft
Well Hole Depth:	150	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	74	Level reading date:	2005-02-16
Feet below surface:	10.49	Feet to sea level:	Not Reported
Note:	Not Reported		
Level reading date:	2004-12-02	Feet below surface:	9.65
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2004-10-07	Feet below surface:	9.84
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2004-08-11	Feet below surface:	12.21
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2004-07-14	Feet below surface:	12.45
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2004-04-21	Feet below surface:	11.14
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2004-02-11	Feet below surface:	10.14
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2003-12-10	Feet below surface:	7.67
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2003-10-01	Feet below surface:	11.96
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2003-08-13	Feet below surface:	12.71
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2003-06-04	Feet below surface:	11.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2003-04-09	Feet below surface:	12.76
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	2003-02-13	Feet below surface:	13.69
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2002-12-05	Feet below surface:	13.42

Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2002-10-02	Feet below surface:	13.51
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2002-08-14	Feet below surface:	13.56
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2002-04-30	Feet below surface:	13.28
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2002-03-19	Feet below surface:	14.13
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2002-02-07	Feet below surface:	13.45
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2001-10-18	Feet below surface:	13.10
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	2001-09-21	Feet below surface:	13.65
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	2001-06-07	Feet below surface:	14.10
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	2001-05-21	Feet below surface:	13.73
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	2001-04-11	Feet below surface:	13.22
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	2001-03-12	Feet below surface:	12.39
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	2001-02-22	Feet below surface:	11.85
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	2001-01-23	Feet below surface:	10.98
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2000-12-14	Feet below surface:	10.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2000-11-20	Feet below surface:	9.71
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	2000-10-20	Feet below surface:	9.71
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2000-10-20	Feet below surface:	9.71
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		

Level reading date:	2000-08-08	Feet below surface:	12.69
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2000-06-08	Feet below surface:	12.24
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	2000-05-25	Feet below surface:	12.49
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2000-04-18	Feet below surface:	13.37
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2000-03-31	Feet below surface:	13.11
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2000-02-25	Feet below surface:	12.42
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	2000-01-27	Feet below surface:	11.91
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1999-12-07	Feet below surface:	10.97
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1999-11-10	Feet below surface:	11.44
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1999-10-15	Feet below surface:	11.95
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1999-09-23	Feet below surface:	13.37
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1999-08-05	Feet below surface:	15.41
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1999-07-10	Feet below surface:	15.14
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1999-06-04	Feet below surface:	14.96
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1999-05-05	Feet below surface:	14.16
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1999-04-08	Feet below surface:	13.37
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1999-03-10	Feet below surface:	12.66
Feet to sea level:	Not Reported		

Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1999-01-21	Feet below surface:	11.81
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1998-11-19	Feet below surface:	11.29
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1998-09-11	Feet below surface:	13.66
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1998-07-23	Feet below surface:	15.45
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1998-06-04	Feet below surface:	16.07
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1998-05-07	Feet below surface:	15.96
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1998-04-16	Feet below surface:	16.00
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1998-03-09	Feet below surface:	16.37
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1998-02-12	Feet below surface:	16.21
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1997-12-16	Feet below surface:	16.33
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1997-11-13	Feet below surface:	16.00
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1997-10-23	Feet below surface:	17.30
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1997-09-10	Feet below surface:	17.27
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1997-08-12	Feet below surface:	17.72
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1997-07-10	Feet below surface:	17.81
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1997-04-09	Feet below surface:	15.21

Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1997-03-19	Feet below surface:	15.01
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1997-02-26	Feet below surface:	14.62
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1997-01-30	Feet below surface:	14.05
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1996-12-17	Feet below surface:	13.59
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1996-10-02	Feet below surface:	14.55
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1996-09-03	Feet below surface:	16.11
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1996-08-07	Feet below surface:	16.49
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1996-07-07	Feet below surface:	16.49
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1996-05-30	Feet below surface:	17.63
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1931-06-18	Feet below surface:	7.0
Feet to sea level:	Not Reported	Note:	Not Reported

18
ENE
1/4 - 1/2 Mile
Higher

FED USGS **USGS40001042373**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	SAN ANTON SOUTH WELL, PONCE, PR		
Type:	Well	Description:	Not Reported
HUC:	21010004	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Not Reported
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

19
SSW
1/2 - 1 Mile
Lower

FED USGS **USGS40001042177**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	RIO PORTUGUES WELL, PONCE, PR		
Type:	Well	Description:	Not Reported
HUC:	21010004	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Not Reported
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

20
NW
1/2 - 1 Mile
Higher

FED USGS **USGS40001042536**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	REPARADA 4 WELL, PONCE, PR		
Type:	Well	Description:	Not Reported
HUC:	21010004	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Not Reported
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	1950	Well Depth:	250
Well Depth Units:	ft	Well Hole Depth:	390
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	2	Level reading date:	1950
Feet below surface:	20.0	Feet to sea level:	Not Reported
Note:	Not Reported		

Level reading date:	1950	Feet below surface:	20.0
Feet to sea level:	Not Reported	Note:	Not Reported

F21
NE
1/2 - 1 Mile
Higher

FED USGS **USGS40001042526**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	PICO WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1950
Well Depth:	140	Well Depth Units:	ft
Well Hole Depth:	175	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	2	Level reading date:	1950
Feet below surface:	15.0	Feet to sea level:	Not Reported
Note:	Not Reported		
Level reading date:	1950	Feet below surface:	15.0
Feet to sea level:	Not Reported	Note:	Not Reported

22
North
1/2 - 1 Mile
Higher

FED USGS **USGS40001042625**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	COCO WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1962
Well Depth:	125	Well Depth Units:	ft
Well Hole Depth:	135	Well Hole Depth Units:	ft
Ground water levels,Number of Measurements:	2	Level reading date:	1962
Feet below surface:	6.0	Feet to sea level:	Not Reported
Note:	Not Reported		
Level reading date:	1962	Feet below surface:	6.0
Feet to sea level:	Not Reported	Note:	Not Reported

23
SSW
1/2 - 1 Mile
Lower

FED USGS **USGS40001042141**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	POLI WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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24
NNE
1/2 - 1 Mile
Higher

FED USGS **USGS40001042577**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	REPARADA 1 WELL, PONCE, PR		
Type:	Well	Description:	Not Reported
HUC:	21010004	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported

Contrib Drainage Area Unts:	Not Reported	Aquifer:	Not Reported
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19381123	Well Depth:	152
Well Depth Units:	ft	Well Hole Depth:	170
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:		2	Level reading date:		1938-11-23
Feet below surface:	6.0		Feet to sea level:		Not Reported
Note:	Not Reported				

Level reading date:	1938-11-23	Feet below surface:	6.0
Feet to sea level:	Not Reported	Note:	Not Reported

F25
NE
1/2 - 1 Mile
Higher

FED USGS **USGS40001042535**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	JTOR WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1962
Well Depth:	100	Well Depth Units:	ft
Well Hole Depth:	100	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:		2	Level reading date:		1962
Feet below surface:	15.0		Feet to sea level:		Not Reported
Note:	Not Reported				

Level reading date:	1962	Feet below surface:	15.0
Feet to sea level:	Not Reported	Note:	Not Reported

26
NE
1/2 - 1 Mile
Higher

FED USGS **USGS40001042558**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	PUBLIC SERVICE WELL, PONCE, PR		
Type:	Well	Description:	Not Reported
HUC:	21010004	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Not Reported
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	191512	Well Depth:	100
Well Depth Units:	ft	Well Hole Depth:	104
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:		2	Level reading date:		1915-12
Feet below surface:	8.0		Feet to sea level:		Not Reported
Note:	Not Reported				

Level reading date:	1915-12	Feet below surface:	8.0
Feet to sea level:	Not Reported	Note:	Not Reported

G27
NNE
1/2 - 1 Mile
Higher

FED USGS **USGS40001042643**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	AWIRSH 2 WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	South Coast aquifer (Puerto Rico)		
Formation Type:	South Coastal Plain Alluvial Aquifer		
Aquifer Type:	Not Reported	Construction Date:	196401
Well Depth:	110	Well Depth Units:	ft
Well Hole Depth:	115	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	2	Level reading date:	1964-01
Feet below surface:	11.0	Feet to sea level:	Not Reported
Note:	Not Reported		

Level reading date:	1964-01	Feet below surface:	11.0
Feet to sea level:	Not Reported	Note:	Not Reported

G28
NNE
1/2 - 1 Mile
Higher

FED USGS **USGS40001042634**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	REPARADA BTR WELL, PONCE, PR		
Type:	Well	Description:	Not Reported
HUC:	21010004	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Not Reported
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	191506	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	2	Level reading date:	1915-06
Feet below surface:	5.0	Feet to sea level:	Not Reported
Note:	Not Reported		

Level reading date:	1915-06	Feet below surface:	5.0
Feet to sea level:	Not Reported	Note:	Not Reported

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

H29
NE
1/2 - 1 Mile
Higher

FED USGS **USGS40001042624**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	CAF 1 WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19420609
Well Depth:	105.5	Well Depth Units:	ft
Well Hole Depth:	110	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	2	Level reading date:	1942-06-10
Feet below surface:	10.0	Feet to sea level:	Not Reported
Note:	Not Reported		

Level reading date:	1942-06-10	Feet below surface:	10.0
Feet to sea level:	Not Reported	Note:	Not Reported

H30
NE
1/2 - 1 Mile
Higher

FED USGS **USGS40001042623**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	CAFS 2 WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1953
Well Depth:	100	Well Depth Units:	ft
Well Hole Depth:	175	Well Hole Depth Units:	ft

G31
NNE
1/2 - 1 Mile
Higher

FED USGS **USGS40001042672**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	AWIRSH 1 WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	196401
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	120	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	2	Level reading date:	1964-01
Feet below surface:	7.5	Feet to sea level:	Not Reported
Note:	Not Reported		
Level reading date:	1964-01	Feet below surface:	7.5
Feet to sea level:	Not Reported	Note:	Not Reported

H32
NE
1/2 - 1 Mile
Higher

FED USGS **USGS40001042652**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	AWIRSH 3 WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	60	Well Hole Depth Units:	ft

33
ENE
1/2 - 1 Mile
Higher

FED USGS **USGS40001042480**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	ESTRELLA 1 WELL, PONCE, PR		
Type:	Well	Description:	Not Reported
HUC:	21010004	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Not Reported
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	192805	Well Depth:	367
Well Depth Units:	ft	Well Hole Depth:	367
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	2	Level reading date:	1958-06-26
Feet below surface:	14.0	Feet to sea level:	Not Reported
Note:	Not Reported		
Level reading date:	1958-06-26	Feet below surface:	14.0
Feet to sea level:	Not Reported	Note:	Not Reported

34
NE
1/2 - 1 Mile
Higher

FED USGS **USGS40001042651**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	DPIL EAST WELL, PONCE, PR	Type:	Well
Description:	GROUND WATER SITE INVENTORY (DNR-FRANCHISE)		
HUC:	21010004	Drainage Area:	Not Reported

Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Not Reported
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

35
NW
1/2 - 1 Mile
Higher

FED USGS **USGS40001042616**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	REPARADA 3 WELL, PONCE, PR		
Type:	Well	Description:	Not Reported
HUC:	21010004	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Not Reported
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	195807	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	235
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	2	Level reading date:	1958-07-31
Feet below surface:	2.0	Feet to sea level:	Not Reported
Note:	Not Reported		

Level reading date:	1958-07-31	Feet below surface:	2.0
Feet to sea level:	Not Reported	Note:	Not Reported

I36
NNE
1/2 - 1 Mile
Higher

FED USGS **USGS40001042705**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	FERRAN 1 WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19630401
Well Depth:	120	Well Depth Units:	ft
Well Hole Depth:	125	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	1	Level reading date:	1963-04-01
Feet below surface:	15.0	Feet to sea level:	Not Reported
Note:	Not Reported		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

J37
South
1/2 - 1 Mile
Higher

FED USGS **USGS40001042049**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	IWOR 2 WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1939
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1984-10-25
Feet below surface:	5.35	Feet to sea level:	Not Reported
Note:	The site had been pumped recently.		

J38
South
1/2 - 1 Mile
Higher

FED USGS **USGS40001042050**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	IWOR 1 WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1939
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	160	Well Hole Depth Units:	ft

I39
NNE
1/2 - 1 Mile
Higher

FED USGS **USGS40001042704**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	UNIVERSITARIO WELL, PONCE, PR		
Type:	Well	Description:	Not Reported
HUC:	21010004	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Not Reported
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	65
Well Depth Units:	ft	Well Hole Depth:	110
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	1	Level reading date:	1962
Feet below surface:	9.0	Feet to sea level:	Not Reported

Note: Not Reported

I40
NNE **FED USGS** **USGS40001042703**
1/2 - 1 Mile
Higher

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	TORO 1 WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	195008
Well Depth:	496	Well Depth Units:	ft
Well Hole Depth:	500	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	1	Level reading date:	1950-08-15
Feet below surface:	14.0	Feet to sea level:	Not Reported
Note:	Not Reported		

41
SE **FED USGS** **USGS40001042128**
1/2 - 1 Mile
Higher

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	CONSTANCIA 2 WELL, PONCE, PR		
Type:	Well	Description:	Not Reported
HUC:	21010004	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Not Reported
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	1933	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

J42
South **FED USGS** **USGS40001042043**
1/2 - 1 Mile
Higher

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	IWOR 3 WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1984-10-25

Feet below surface:	5.0	Feet to sea level:	Not Reported
Note:	Not Reported		

43
NNE **FED USGS** **USGS40001042740**
1/2 - 1 Mile
Higher

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	RAILROAD 1 WELL, PONCE, PR		
Type:	Well	Description:	Not Reported
HUC:	21010004	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Not Reported
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	1915	Well Depth:	103
Well Depth Units:	ft	Well Hole Depth:	250
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	1	Level reading date:	1915
Feet below surface:	8.0	Feet to sea level:	Not Reported
Note:	Not Reported		

K44
NNE **FED USGS** **USGS40001042717**
1/2 - 1 Mile
Higher

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	ABOLITION 1 WELL, PONCE, PR		
Type:	Well	Description:	Not Reported
HUC:	21010004	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Not Reported
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	1962	Well Depth:	85
Well Depth Units:	ft	Well Hole Depth:	105
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	25	Level reading date:	1965-07-25
Feet below surface:	13.25	Feet to sea level:	Not Reported
Note:	Not Reported		
Level reading date:	1965-07-13	Feet below surface:	14.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-07-13	Feet below surface:	15.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-06-29	Feet below surface:	14.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-06-14	Feet below surface:	18.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-05-27	Feet below surface:	19.90

Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-04-30	Feet below surface:	21.87
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-04-07	Feet below surface:	23.32
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-03-22	Feet below surface:	21.37
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-03-10	Feet below surface:	20.67
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-02-24	Feet below surface:	19.35
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-02-08	Feet below surface:	18.21
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-01-25	Feet below surface:	17.11
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-01-12	Feet below surface:	17.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-01-12	Feet below surface:	16.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-12-27	Feet below surface:	15.10
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-12-16	Feet below surface:	15.92
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-12-02	Feet below surface:	16.20
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-11-11	Feet below surface:	12.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-11-11	Feet below surface:	14.11
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-10-15	Feet below surface:	13.45
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-10-02	Feet below surface:	14.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-08-26	Feet below surface:	17.12
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-05-19	Feet below surface:	18.52
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1962	Feet below surface:	6.0
Feet to sea level:	Not Reported	Note:	Not Reported

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

45
ENE
1/2 - 1 Mile
Higher | **FED USGS** | **USGS40001042512**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	ESTRELLA 2 WELL, PONCE, PR		
Type:	Well	Description:	Not Reported
HUC:	21010004	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Not Reported
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	192803	Well Depth:	104
Well Depth Units:	ft	Well Hole Depth:	164
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	44	Level reading date:	1965-08-11
Feet below surface:	13.33	Feet to sea level:	Not Reported
Note:	Not Reported		

Level reading date:	1965-08-11	Feet below surface:	13.33
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-07-25	Feet below surface:	12.24
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-07-25	Feet below surface:	12.24
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-07-12	Feet below surface:	10.74
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-07-12	Feet below surface:	10.74
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-06-29	Feet below surface:	11.79
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-06-29	Feet below surface:	11.79
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-06-14	Feet below surface:	14.05
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-06-14	Feet below surface:	14.05
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-05-27	Feet below surface:	16.68
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-05-27	Feet below surface:	16.68
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-05-17	Feet below surface:	17.95
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-05-17	Feet below surface:	17.95
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1965-05-10	Feet below surface:	18.21
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-05-10	Feet below surface:	18.21
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-04-24	Feet below surface:	21.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-04-24	Feet below surface:	21.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-04-07	Feet below surface:	20.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-04-07	Feet below surface:	20.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-03-21	Feet below surface:	19.05
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-03-21	Feet below surface:	19.05
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-03-08	Feet below surface:	65.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-03-08	Feet below surface:	65.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-02-25	Feet below surface:	17.42
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-02-25	Feet below surface:	17.42
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-02-12	Feet below surface:	62.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-02-12	Feet below surface:	62.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-02-08	Feet below surface:	61.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-02-08	Feet below surface:	61.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-01-27	Feet below surface:	55.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-01-27	Feet below surface:	55.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-01-26	Feet below surface:	15.21
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-01-26	Feet below surface:	15.21
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-01-13	Feet below surface:	19.55
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1965-01-13	Feet below surface:	19.55
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-12-30	Feet below surface:	19.85
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-12-30	Feet below surface:	19.85
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-12-16	Feet below surface:	19.52
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1964-12-16	Feet below surface:	19.52
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1928-03-28	Feet below surface:	18.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1928-03-28	Feet below surface:	18.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1928-03	Feet below surface:	15.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1928-03	Feet below surface:	15.0
Feet to sea level:	Not Reported	Note:	Not Reported

L46
NNE
1/2 - 1 Mile
Higher

FED USGS **USGS40001042760**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	HODAM WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19650207
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	130	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	1	Level reading date:	1965-02-07
Feet below surface:	19.0	Feet to sea level:	Not Reported
Note:	Not Reported		

L47
NNE
1/2 - 1 Mile
Higher

FED USGS **USGS40001042771**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	ANTONSANTI 296 WELL, PONCE, PR		
Type:	Well	Description:	Not Reported
HUC:	21010004	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Not Reported

Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19310227	Well Depth:	87
Well Depth Units:	ft	Well Hole Depth:	95
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	1	Level reading date:	1931-02-27
Feet below surface:	5.5	Feet to sea level:	Not Reported
Note:	Not Reported		

48
WNW
1/2 - 1 Mile
Higher

FED USGS **USGS40001042578**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	REPARADA DOMESTIC WELL, PONCE, PR		
Type:	Well	Description:	Not Reported
HUC:	21010004	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Not Reported
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

49
North
1/2 - 1 Mile
Higher

FED USGS **USGS40001042804**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	JCHA 1 WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	160	Well Depth Units:	ft
Well Hole Depth:	160	Well Hole Depth Units:	ft

K50
NE
1/2 - 1 Mile
Higher

FED USGS **USGS40001042716**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	CAM WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	196104
Well Depth:	45	Well Depth Units:	ft

Well Hole Depth:	45	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	1	Level reading date:	1961-04
Feet below surface:	10.0	Feet to sea level:	Not Reported
Note:	Not Reported		

M51
NNE **FED USGS** **USGS40001042803**
1/2 - 1 Mile
Higher

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	PIETRI 1 WELL, PONCE, PR	Type:	Well
Description:	OWNER-MR. GILGORE (WELL IS ABANDONED)		
HUC:	21010004	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Not Reported
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	194606	Well Depth:	108
Well Depth Units:	ft	Well Hole Depth:	120
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	2	Level reading date:	2003-01-22
Feet below surface:	13.21	Feet to sea level:	Not Reported
Note:	Not Reported		

Level reading date:	1946-06-26	Feet below surface:	6.4
Feet to sea level:	Not Reported	Note:	Not Reported

52
WNW **FED USGS** **USGS40001042481**
1/2 - 1 Mile
Higher

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	LOPEZ 1 WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	100	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	2	Level reading date:	1964-10-27
Feet below surface:	18.35	Feet to sea level:	Not Reported
Note:	Not Reported		

Level reading date:	1964-10-27	Feet below surface:	18.35
Feet to sea level:	Not Reported	Note:	Not Reported

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

53
East
1/2 - 1 Mile
Higher

FED USGS **USGS40001042287**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	ESTRELLA WELL, PONCE, PR	Type:	Well
Description:	BATTERY OF 4 WELLS.	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1956
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1958-06-24
Feet below surface:	5.7	Feet to sea level:	Not Reported
Note:	Not Reported		

54
West
1/2 - 1 Mile
Higher

FED USGS **USGS40001042349**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	MANHATTAN 1 WELL, PONCE, PR		
Type:	Well	Description:	Not Reported
HUC:	21010004	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Not Reported
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	196107	Well Depth:	145
Well Depth Units:	ft	Well Hole Depth:	200
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	2	Level reading date:	1961-07
Feet below surface:	16.0	Feet to sea level:	Not Reported
Note:	Not Reported		

Level reading date:	1961-07	Feet below surface:	16.0
Feet to sea level:	Not Reported	Note:	Not Reported

55
West
1/2 - 1 Mile
Higher

FED USGS **USGS40001042399**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	SPRAGUE WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported

Aquifer Type:	Not Reported	Construction Date:	196501
Well Depth:	218	Well Depth Units:	ft
Well Hole Depth:	220	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	2	Level reading date:	1965-01-12
Feet below surface:	22.30	Feet to sea level:	Not Reported
Note:	Not Reported		

Level reading date:	1965-01-12	Feet below surface:	22.30
Feet to sea level:	Not Reported	Note:	Not Reported

M56
NNE **FED USGS** **USGS40001042814**
1/2 - 1 Mile
Higher

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	PHLI WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	193004
Well Depth:	63	Well Depth Units:	ft
Well Hole Depth:	95	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	1	Level reading date:	1962-05-02
Feet below surface:	15.04	Feet to sea level:	Not Reported
Note:	Not Reported		

57
South **FED USGS** **USGS40001041984**
1/2 - 1 Mile
Lower

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	FIDEOS WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	140	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	1	Level reading date:	1958-07-08
Feet below surface:	2.39	Feet to sea level:	Not Reported
Note:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
FED USGS	**USGS40001042669**

58
NE
1/2 - 1 Mile
Higher

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	LUCIANO 1 WELL, PONCE, PR	Type:	Well
Description:	Not Reported	HUC:	21010004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19580101
Well Depth:	90	Well Depth Units:	ft
Well Hole Depth:	90	Well Hole Depth Units:	ft

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

OTHER STATE DATABASE INFORMATION

RADON

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

STREET AND ADDRESS INFORMATION

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APPENDIX 2
Environmental Data Resources, Inc.
Historical Topo Map Report
with QuadMatch™
December 5, 2019

PHSU Property
Km 227.2 State Road PR-2
Ponce, PR 00716

Inquiry Number: 5893780.5
December 05, 2019

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

12/05/19

Site Name:

PHSU Property
Km 227.2 State Road PR-2
Ponce, PR 00716
EDR Inquiry # 5893780.5

Client Name:

ECA Environmental Consulting
P.O. Box 195597
San Juan, PR 00919-5597
Contact: Winston Esteves

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by ECA Environmental Consulting were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# NA
Project: NA

Coordinates:

Latitude:	17.994753 17° 59' 41" North
Longitude:	-66.619142 -66° 37' 9" West
UTM Zone:	Zone 19 North
UTM X Meters:	752110.43
UTM Y Meters:	1991223.90
Elevation:	10.67' above sea level

Maps Provided:

2013
1982
1964
1962
1958
1952
1945, 1946

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Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2013 Source Sheets



Penuelas

7.5-minute, 20000



Ponce

7.5-minute, 20000



Punta Cucharas

7.5-minute, 20000



Playa De Ponce

7.5-minute, 20000

1982 Source Sheets



Punta Cucharas

7.5-minute, 20000
Aerial Photo Revised 1977



Ponce

7.5-minute, 20000
Aerial Photo Revised 1977



Playa De Ponce

7.5-minute, 20000
Aerial Photo Revised 1977



Penuelas

7.5-minute, 20000
Aerial Photo Revised 1977

1964 Source Sheets



Penuelas

7.5-minute, 20000
Aerial Photo Revised 1941



Ponce

7.5-minute, 20000
Aerial Photo Revised 1941

1962 Source Sheets



Playa De Ponce

7.5-minute, 20000
Aerial Photo Revised 1941



Punta Cucharas

7.5-minute, 20000
Aerial Photo Revised 1941

Topo Sheet Key

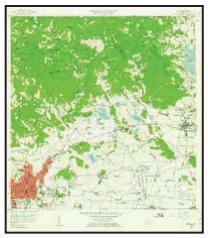
This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1958 Source Sheets



Playa De Ponce

7.5-minute, 20000
Aerial Photo Revised 1941



Ponce

7.5-minute, 20000
Aerial Photo Revised 1941



Penuelas

7.5-minute, 20000
Aerial Photo Revised 1941



Punta Cucharas

7.5-minute, 20000
Aerial Photo Revised 1941

1952 Source Sheets



Playa De Ponce

7.5-minute, 30000
Aerial Photo Revised 1941



Penuelas

7.5-minute, 30000
Aerial Photo Revised 1941



Punta Cuchara

7.5-minute, 30000
Aerial Photo Revised 1941



Ponce

7.5-minute, 30000
Aerial Photo Revised 1941

1945, 1946 Source Sheets



Ponce

7.5-minute, 30000



Playa De Ponce

7.5-minute, 30000



Penuelas

7.5-minute, 30000



Punta Cuchara

7.5-minute, 30000



This report includes information from the following map sheet(s).

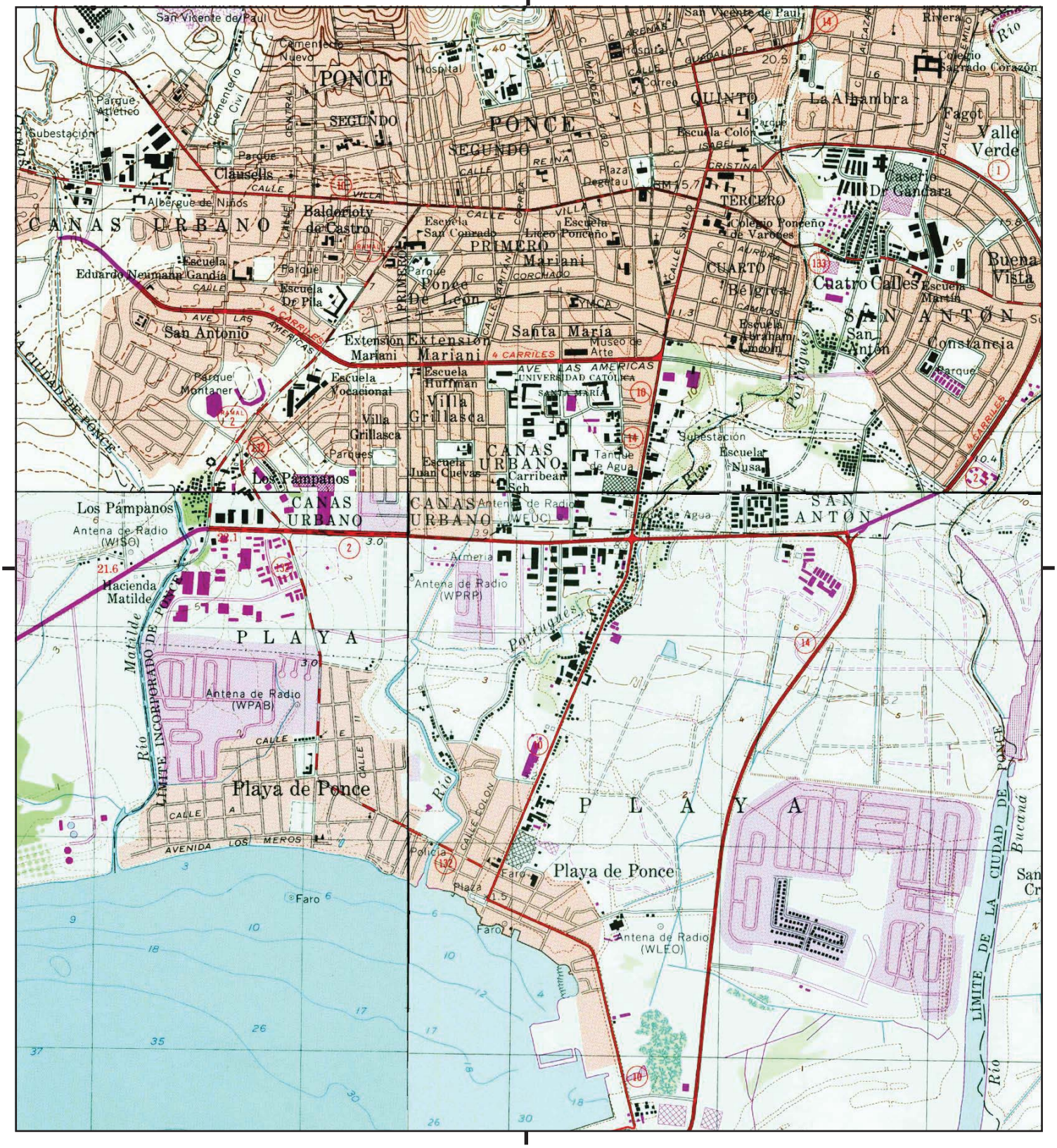
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Playa De Ponce, 2013, 7.5-minute
NE, Ponce, 2013, 7.5-minute
SW, Punta Cucharas, 2013, 7.5-minute
NW, Penuelas, 2013, 7.5-minute

SITE NAME: PHSU Property
ADDRESS: Km 227.2 State Road PR-2
Ponce, PR 00716
CLIENT: ECA Environmental Consulting

N



This report includes information from the following map sheet(s).

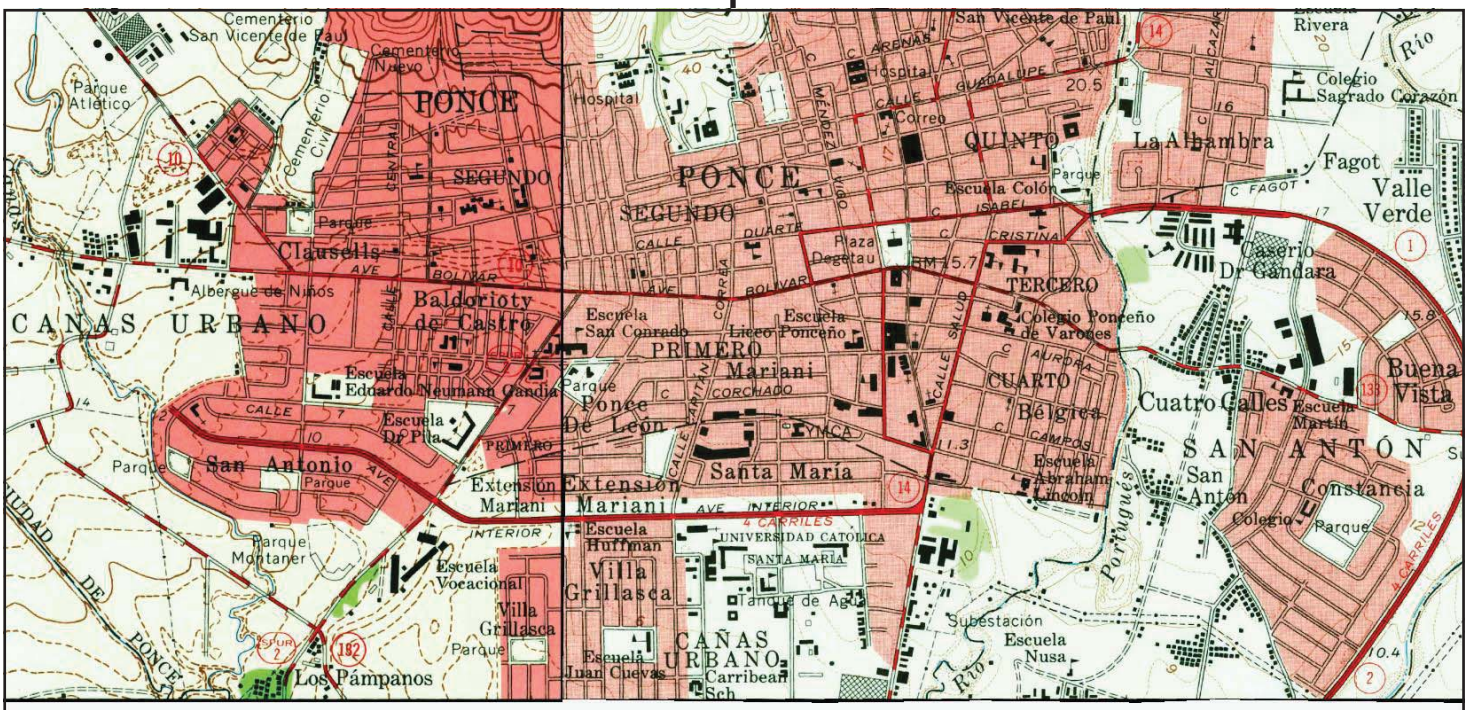
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Playa De Ponce, 1982, 7.5-minute
NE, Ponce, 1982, 7.5-minute
SW, Punta Cucharas, 1982, 7.5-minute
NW, Penuelas, 1982, 7.5-minute

SITE NAME: PHSU Property
ADDRESS: Km 227.2 State Road PR-2
Ponce, PR 00716
CLIENT: ECA Environmental Consulting

N



UNMAPPED

This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

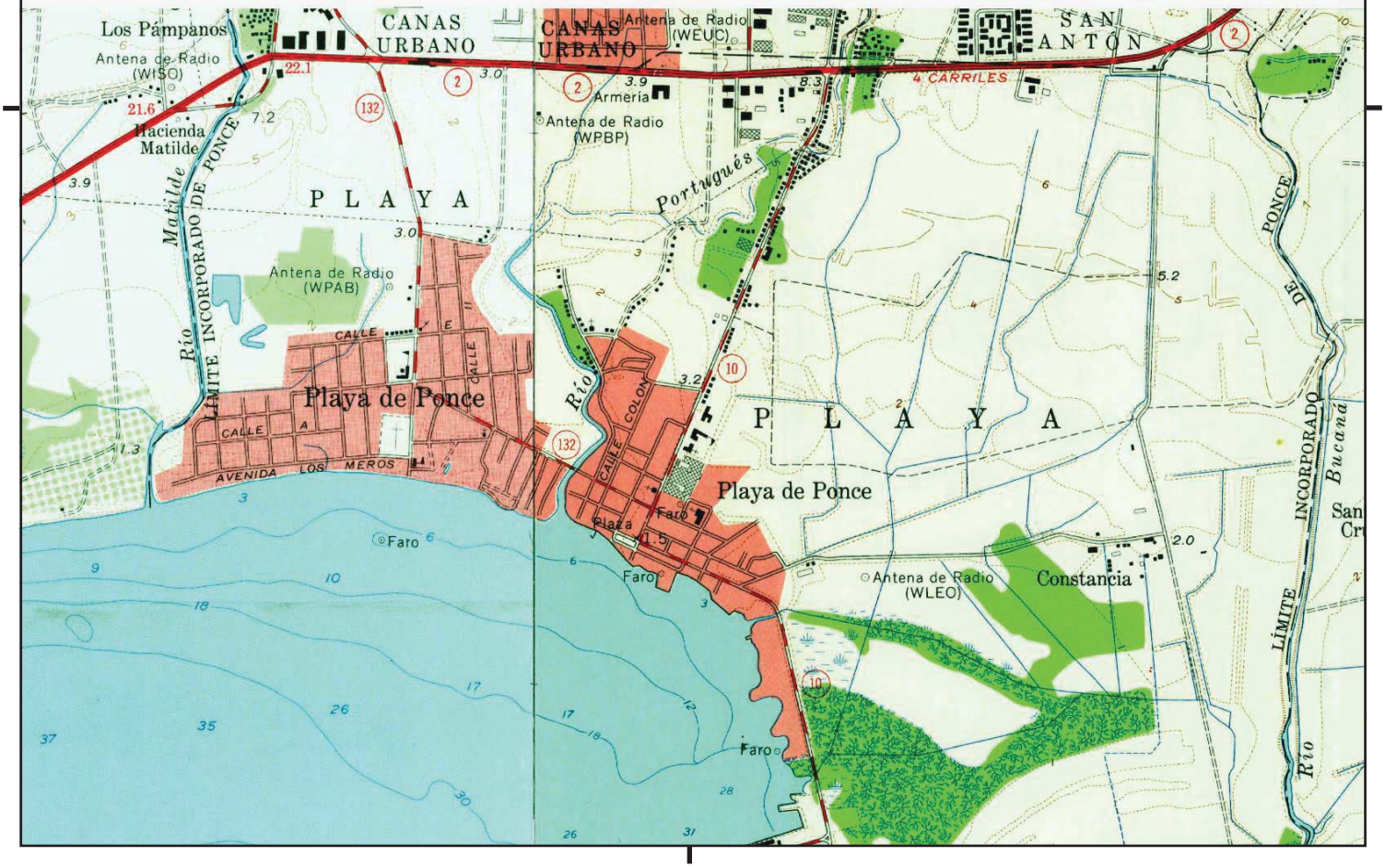
NW N NE
W E
SW S SE

NE, Ponce, 1964, 7.5-minute
NW, Penuelas, 1964, 7.5-minute

SITE NAME: PHSU Property
ADDRESS: Km 227.2 State Road PR-2
Ponce, PR 00716
CLIENT: ECA Environmental Consulting

N

UNMAPPED



This report includes information from the following map sheet(s).

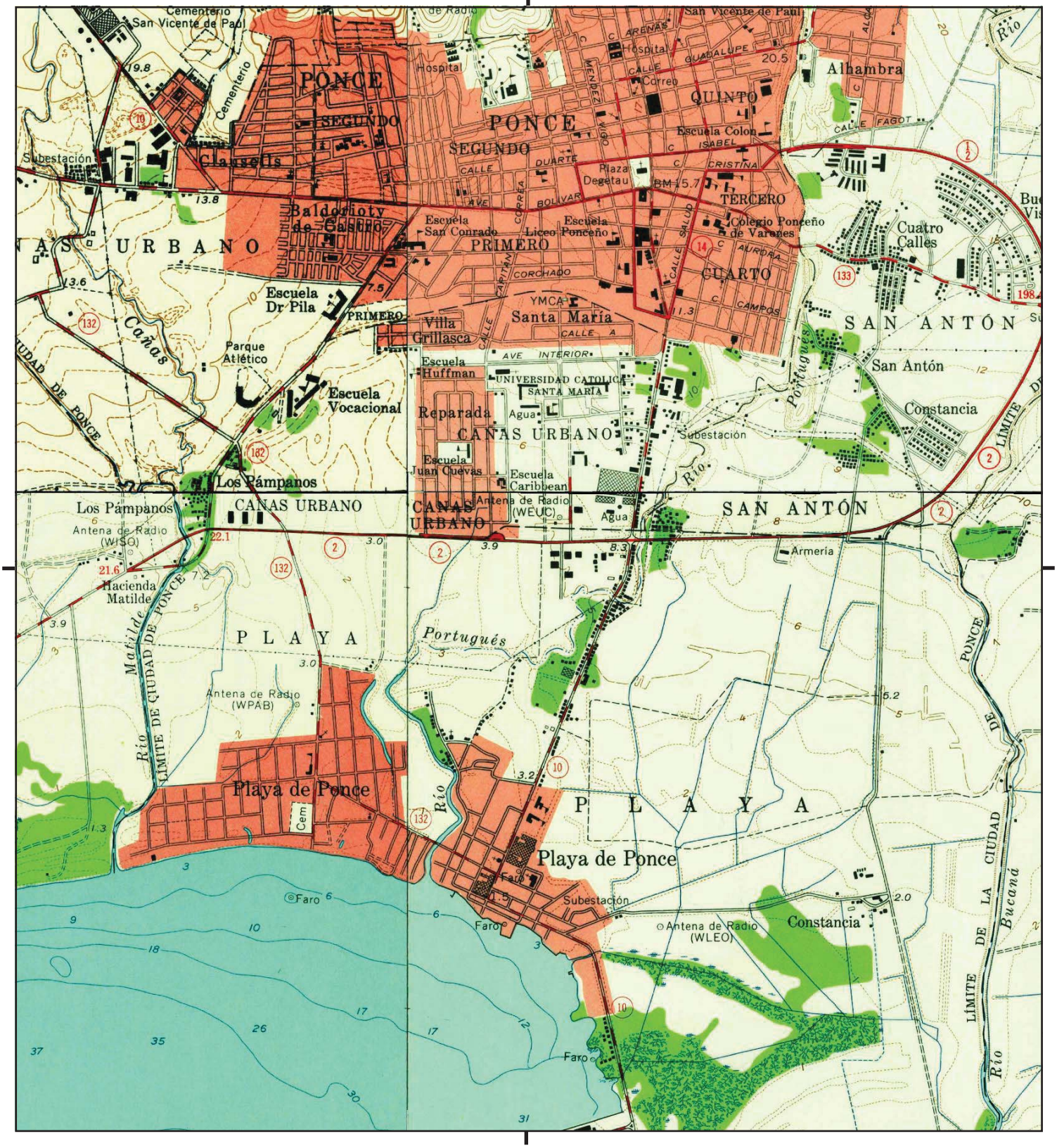
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Playa De Ponce, 1962, 7.5-minute
SW, Punta Cucharas, 1962, 7.5-minute

SITE NAME: PHSU Property
ADDRESS: Km 227.2 State Road PR-2
Ponce, PR 00716
CLIENT: ECA Environmental Consulting

N



This report includes information from the following map sheet(s).

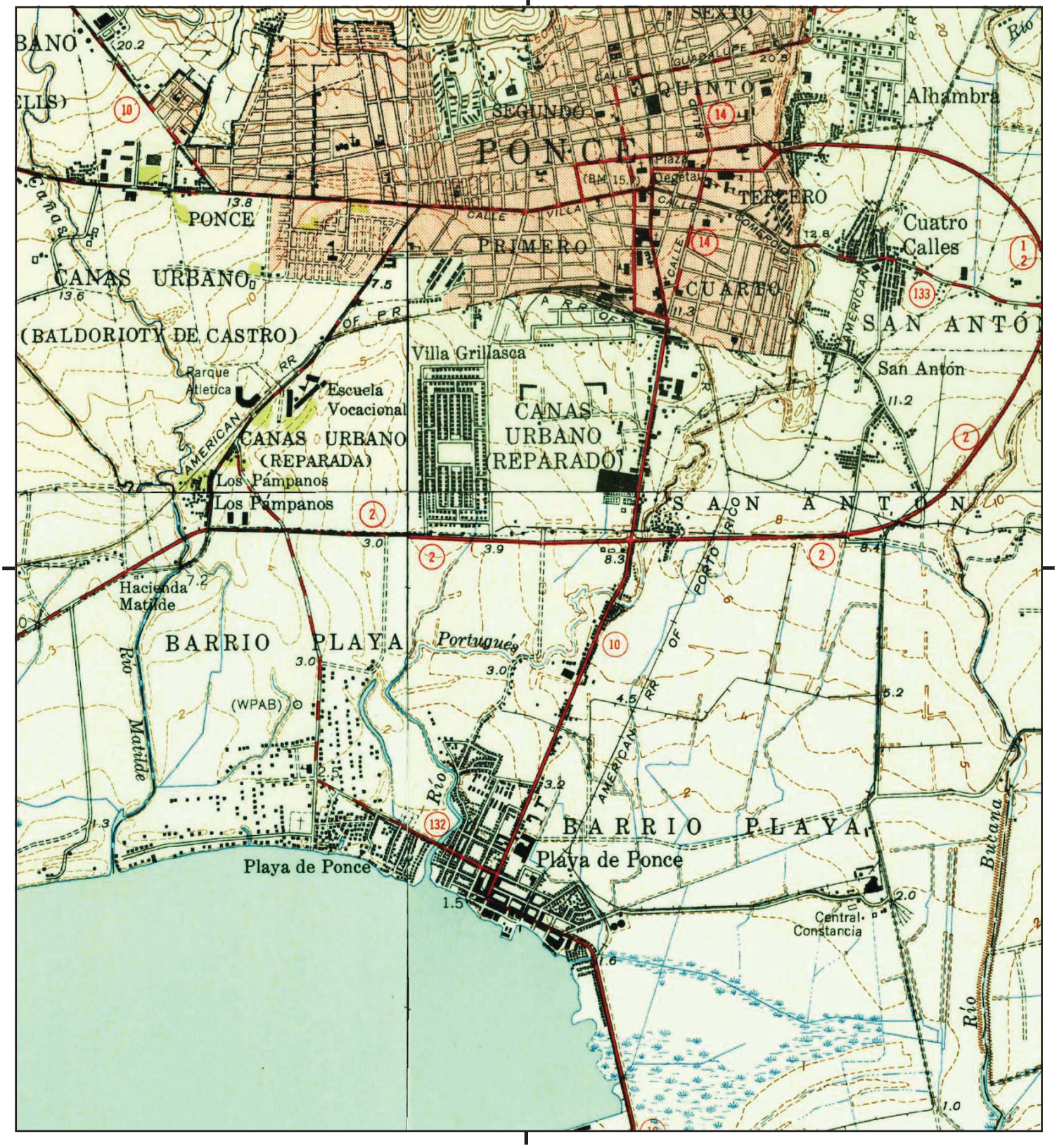
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Playa De Ponce, 1958, 7.5-minute
NE, Ponce, 1958, 7.5-minute
SW, Punta Cucharas, 1958, 7.5-minute
NW, Penuelas, 1958, 7.5-minute

SITE NAME: PHSU Property
ADDRESS: Km 227.2 State Road PR-2
Ponce, PR 00716
CLIENT: ECA Environmental Consulting

N



This report includes information from the following map sheet(s).

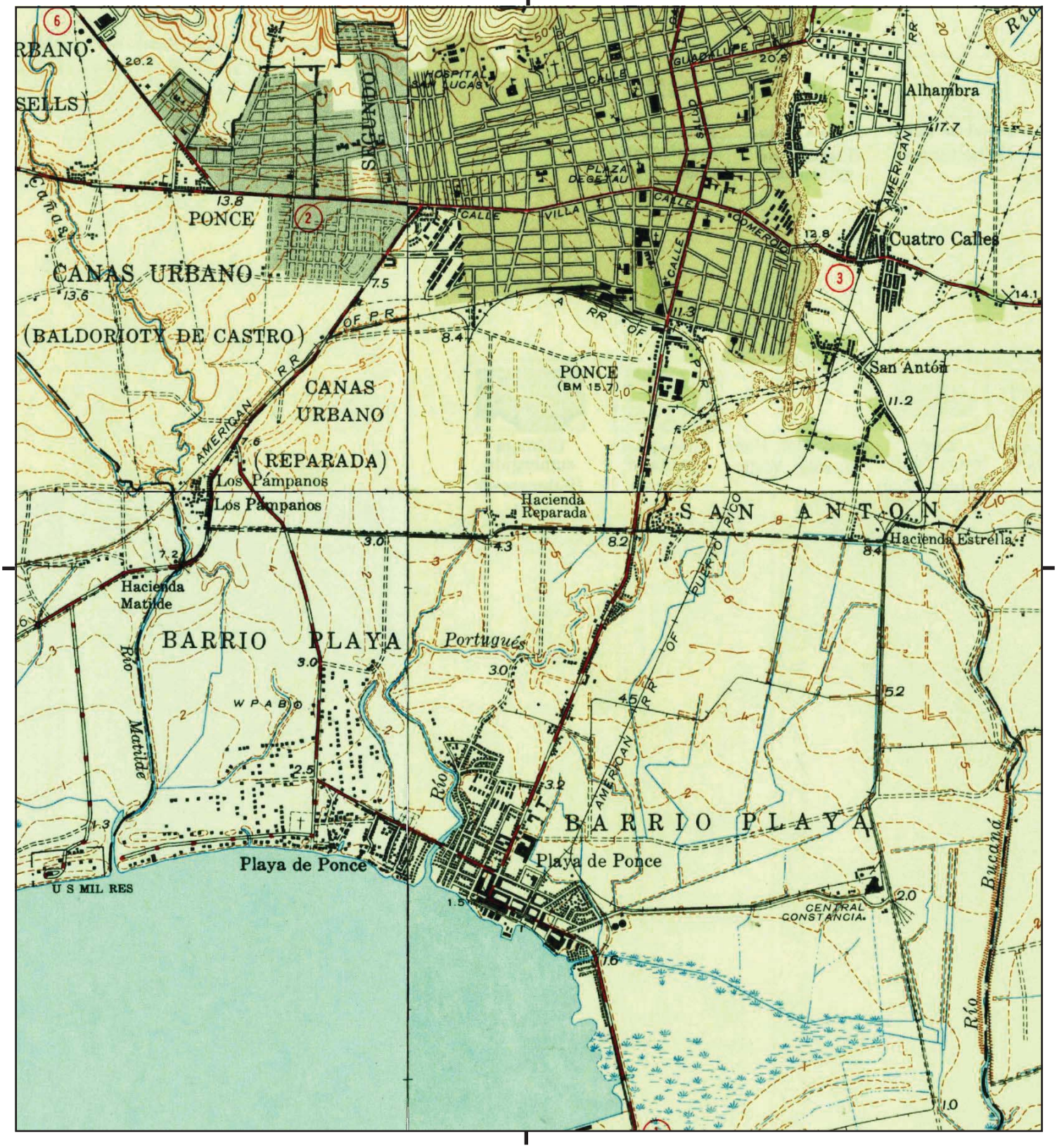
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Playa De Ponce, 1952, 7.5-minute
NE, Ponce, 1952, 7.5-minute
SW, Punta Cuchara, 1952, 7.5-minute
NW, Penuelas, 1952, 7.5-minute

SITE NAME: PHSU Property
ADDRESS: Km 227.2 State Road PR-2
Ponce, PR 00716
CLIENT: ECA Environmental Consulting

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Playa De Ponce, 1945, 7.5-minute
NE, Ponce, 1945, 7.5-minute
SW, Punta Cuchara, 1946, 7.5-minute
NW, Penuelas, 1946, 7.5-minute

SITE NAME: PHSU Property
ADDRESS: Km 227.2 State Road PR-2
Ponce, PR 00716
CLIENT: ECA Environmental Consulting

N

APPENDIX 3
EDR Certified Sanborn® Map Report
December 5, 2019

PHSU Property
Km 227.2 State Road PR-2
Ponce, PR 00716

Inquiry Number: 5893780.3
December 05, 2019

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

12/05/19

Site Name:

PHSU Property
Km 227.2 State Road PR-2
Ponce, PR 00716
EDR Inquiry # 5893780.3

Client Name:

ECA Environmental Consulting
P.O. Box 195597
San Juan, PR 00919-5597
Contact: Winston Esteves

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The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # ED64-4A43-B511

PO # NA

Project NA

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: ED64-4A43-B511

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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APPENDIX 4
Information Request Letter
Environmental Quality Board
December 4, 2019

Winston R. Esteves
Environmental Consultant

December 4, 2019

RCVD JCA RADICACIONES

10 DEC'19 AM10:27

Directors,
Water Quality / Land Pollution
/ Environmental Emergencies-Superfund
Environmental Quality Board
PO Box 11488
Santurce, Puerto Rico 00910

Dear All:

Winston R. Esteves, PE (WRE) is presently conducting a Phase I Environmental Site Assessment of the following property:

Ponce Health Sciences University
Km 227.2 State Road PR-2
Ponce, Puerto Rico 00716

We are specifically requesting the following information about the property and adjoining properties within one (1) mile radius:

- Hazardous Waste Sites Identified for Investigation or Remediation
- Landfills and/or Solid Waste Disposal Sites
- Leaking Underground Storage Tanks (LUSTs): 86-0196 / 86-1050
- Registered Underground Storage Tanks (USTs): 94-0010 / 94-0078
- Underground Injection Control (UIC) Systems
- Hazardous Materials Releases or Spill Notifications

A location map of the property is attached. If you have questions or need further information, please call me.

Thank you for your kind attention to this request.

Cordially,

Winston R. Esteves
PE, BCEE, QEP, CHMM
Consulting Principal

PO Box 195597, San Juan, PR 00919-5597
Phone (787) 790-7931 Mobile (787) 644-5684 e-mail: esteves_w@yahoo.com

APPENDIX 6
Qualifications of Environmental Professional

Winston R. Esteves, PE, BCEE, QEP, CHMM
Environmental Professional Qualifications

Education

M.S., Sanitary Engineering
Georgia Institute of Technology
Atlanta, Georgia

B.S., Civil Engineering
University of Puerto Rico
Mayaguez, Puerto Rico

Professional Licenses, Registrations, Certifications and Qualifications

Licensed Professional Engineer - Puerto Rico and Texas
Board Certified Environmental Engineer* - American Academy of Environmental Engineers
Qualified Environmental Professional* – Institute of Professional Environmental Practice

* Board Certifications accredited by the Council of Engineering and Scientific Specialty Boards

Professional Affiliations

American Academy of Environmental Engineers
ASTM International
Colegio de Ingenieros y Agrimensores de Puerto Rico
Institute of Professional Engineering Practice
Texas Board of Professional Engineers

Environmental Site Assessment Experience (1986 – Present)

Agricultural
Bulk Chemical Terminals
Commercial
Hospitality
Pharmaceuticals
Service Stations
Telecommunications
Undeveloped / Rural

Auto Dealerships
Chemical Manufacturing
Health Care
Institutional
Residential Developments
Shopping Centers
Trust Properties
Warehousing / Distribution

Qualified Environmental Professional

Banco de Desarrollo Económico para Puerto Rico
Banco Santander Puerto Rico
Firstbank
Scotiabank de Puerto Rico

Banco Popular Puerto Rico
Banesco
Oriental Group

ASBESTOS and LEAD BASED PAINT

Inspection Report

For

Ponce Health Sciences University
Buildings "A", "B", "H" & "I"

388 Zona Industrial Reparada 2,
Ponce, Puerto Rico, 00716

Contact person: Rosanne West, PHSU

Client Name: LOA Management, PSC
PO Box 270122
San Juan, PR 00927-0122





Inspectors:	Juan Enrique Santiago	Norma I. Torres
Asb. PREQB I.D. #	*0318-0199-SI*	*0318-0200-SI*
LBP PREQB I.D. #	*1287-0718-LI-021*	*5211-0118-LI-007*

NORTOL'S PREQB Lead Firm #: 6547-0218-LF-001
NORTOL'S USEPA Lead Firm #: NAF-F121771-1
XRF-direct reading Instrument: Heuresis Pb200i Alpha (serial # 1142)

Survey Date(s): August 13 and 22, 2018

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- Regulatory Review

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- Survey Protocol and Sampling Procedures
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Attachment 1 – Representative pictures

Attachment 2 – Asbestos Positive Areas Diagram or Map

Attachment 3 – Asbestos Laboratory Report and Chain of Custody

Attachment 4 – LBP XRF Tabulated Results

Attachment 5 – Inspectors, XRF-Instrument and Laboratory Accreditations

I. INTRODUCTION

Ponce Health Sciences University (PHSU), as part of their environmental due diligence compliance, required an Asbestos and Lead Based Paint inspection for their buildings "A", "B", "H" and "I" located at #388 Zona Industrial Reparada 2, Ponce, P.R. The field work was performed on August 13 and 22, 2018 by accredited inspectors from Nortol Environmental and Occupational Safety, Inc. (NEOSI). Access to the site was granted by Ms. Rosanne West as PHSU's representative. Previous asbestos or lead-based paint survey information was not currently available for this project.

Some bulk samples related to vinyl floor tiles in the building "A" were positive to Asbestos. Lead-based paint (as current definition) is not present in the building's components according to the XRF-direct instrument readings. The scope of work included the following tasks:

- Inspection, sampling and assessment of suspected Asbestos Containing Materials and Lead Based Paint;
- Determine the overall composition of the collected samples by means of Polarized Light Microscopy (PLM) analysis and Paint's lead contents by X-Ray direct reading instrument;
- Prepare this Inspection Report with findings and suggestions.

II. SUMMARY OF FINDINGS

Bulk samples of suspect asbestos-containing building materials were collected and analyzed by the Polarized Light Microscopy method. The old (original layers) of the vinyl floor tiles/mastic of the building "A" are positive to asbestos.

The painted components of the project were assessed using the XRF- direct reading instrument to determine its lead concentration. None component was found to be above the established threshold for the classification of Lead-Based Paint bearing per the Housing and Urban Development guideline of $\geq$1.0 mg/cm^2.

III. DESCRIPTION OF THE PROPERTY

The subject site includes several pre-1980 one-story buildings currently used for academic and/or administrative purposes. The assessed buildings during this survey are described as follow:

Building	Description
A	Administration building. One-story concrete and metal building constructed as PR Industrial Development (PRIDCO) codes. Occupied at the time of the survey. About 9,600 square feet.
B	President's office building. One-story annex wood building with metal ceiling. Occupied at the time of the survey. About 3,600 square feet.
H	Student's and patient's building. One-story concrete building with metal ceiling. Semi-occupied at the time of the survey. About 27,750 square feet.
I	Cafeteria building. One-story concrete and metal building. Occupied at the time of the survey. About 1,440 square feet.

These buildings were affected by the Hurricane Maria and are proposed for total or partial demolition. The interior functional spaces include cafeteria, offices, service areas, classrooms, storages, educational spaces, kitchenets, and restrooms. Some interior floors have 12" x 12" vinyl floor tiles, hard tiles, or bare concrete. Other building details are metal or wood doors, ceiling tiles, gypsum or cardboard partitions. The roofs were recently impermeabilized. Attachment 1 includes representative photos of the property at the time of this survey.

IV. ASBESTOS SURVEY REPORT

A. Asbestos-Containing Findings:

During this survey, following materials from the PHSU assessed buildings were considered as suspect asbestos containing materials:

Table 1.0

Material	Location	Classification/Assessment	Asbestos Result	Approx. Amount *
Vinyl floor tile & mastic	Building "A"	Miscellaneous, Category 1, Non-friable material in acceptable condition	2% chrysotile in tile and/or mastic	8,375 ft^2
Vinyl floor tile & mastic	Building "B"	Miscellaneous, Category 1, Non-friable material in acceptable condition	None detected	N/A
Vinyl floor tile & mastic	Building "H"	Miscellaneous, Category 1, Non-friable material in acceptable condition	None detected	N/A
Vinyl floor tile & mastic	Building "I"	Miscellaneous, Category 1, Non-friable material in acceptable condition	None detected	N/A

* Needs to be confirmed on site.

The diagrams included as Attachment 2 show the approximated positive areas to asbestos. Twenty (20) analyses from the different layers of bulk samples were done by the accredited laboratory for the suspect asbestos-containing building materials. Laboratory results and field chain of custody for the bulk samples are in Attachment 3.

Other existing materials as concrete, metals, cardboard or gypsum-board are non-suspect for asbestos.

B. Survey Protocol:

This activity was in accordance with the latest protocol for assessing materials suspected of containing asbestos as defined by the U.S. Environmental Protection Agency (EPA). It involved a visual walk-through inspection of the accessible areas of the subject project to develop an inventory of Suspect asbestos-containing material (ACM) homogeneous materials.

C. Regulatory Review:

According to NESHAP's standards (40 CFR 61.141), Asbestos Containing Building Materials are classified into three categories: Category I-Nonfriable asbestos-containing material, Category II–other Nonfriable, and Regulated asbestos-containing material.

According to EPA-AHERA/ASHARA's standards (40 CFR Part 763), ACBM's are classified into three categories: Surfacing material, Thermal System Insulation (TSI) and Miscellaneous material. TSI materials were not found in this project. Once the inspector has identified the suspect ACM in a building, he or she must perform a physical assessment of TSI and friable materials.

The PR Environmental Quality Board (Regulation for the Control of Atmospheric Pollution-Rule 422) enacted in 1996, required all commercial and public building, including industries to identify asbestos containing building materials in their structures and take appropriate actions to control the release of asbestos fiber. Asbestos inspection is part of the permitting application process for any future project in the buildings, which may include renovation or demolition activities regulated by the PREQB and/or State/Municipal Offices. To obtain a General Consolidated Permit in PR is necessary to include a certificate (OGP-PGC-009) stating that there is no asbestos containing material in the project.

V. LEAD BASED PAINT SURVEY REPORT

A. Lead Based Paint Findings

By definition set forth in "*24 CFR Part § 35.86: Lead-Based Paint means paint or other surface coatings that contain lead equal to or in excess of 1.0 milligram per square centimeter or 0.5 percent by weight.*"

None of the assessed components in this project has Lead Based Paint as per current definition. Results were compared to a reference standard limit of 1.0 mg/cm^2. Attachment 4 identifies the surveyed components.

B. Survey Protocol and Sampling Procedure

The survey was conducted following the *HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing (1997 Revision, Chapter 7)*. The technique used for sampling the suspected painted components was the XRF instrument. The following guidelines were used to perform LBP testing:

1. Achieve inventory of painted surfaces.
2. Select areas to be tested.
3. Perform XRF testing.
4. Review and evaluate the data.
5. Report findings

The XRF instrument was set at Standard Paint Mode showing reading "Positive" or "Negative" with a 95% confident reading. The result is reported in mg/cm^2.

The letters A, B, C, and D used in the survey refers to:

A ⇒ Main entrance side orientation
B ⇒ Left side orientation
C ⇒ Rear side orientation
D ⇒ Right side orientation

C. Lead Based Paint Background and Regulatory Review

Overexposure to lead is one of the most common situations found in industry. It is also a major potential public health risk. Lead poisoning is the leading environmentally induced illness in children. At greatest risk are children under the age of six because they are undergoing rapid neurological and physical development. In general, population, lead may be present at hazardous concentrations in food, water, and air. Sources include Lead-Based Paint, urban soil and dust, and drinking water.

Lead is commonly added to industrial paints because of its characteristic to resist corrosion. Industries with particularly high potential exposures include: construction work involving welding, cutting, brazing, blasting, etc., on lead paint surfaces; most smelter operations either as a trace contaminant or as a major product; secondary lead smelters where lead is recovered from batteries; radiator repair shops; and firing ranges. Oral ingestion may represent a major route of exposure in contaminated workplaces. Once in the blood, lead is distributed primarily among three routes - blood, soft tissue (kidney, bone marrow, liver, and brain) and mineralizing tissue (bones and teeth).

Hazard of lead in paint has been defined by the Department of Housing and Urban Development as 1.0 mg/cm^2 as measured by an XRF instrument, or Atomic Absorption Spectroscopy (AAS); or 0.5% by weight (or 5,000 ppm) as measured by AAS, or Inductive Coupled Plasma (ICP). The same level was adopted by EPA in 1992, under Title X.

Although Occupational Safety and Health Administration (OSHA) regulations for occupational lead exposure have been in effect since 1971 for the construction and general industries, the agency recognized the need to provide better protection and revised the regulations for general industry in 1978. The 1978 lead standard, however, excluded the construction industry from coverage because of insufficient information regarding lead use in construction.

In 1990, the National Institute for Occupational Safety and Health (NIOSH) set a national goal to eliminate worker exposures resulting in blood lead concentrations greater than 25 micrograms per deciliter (25 µg/dl) of whole blood. Consequently, OSHA began developing a proposal for a comprehensive standard regulating occupational exposure to lead in construction. In October 1992, the Congress passed Section 1031 of Title X of the Housing and Community Development Act of 1992 (P. L. 102-550) requiring OSHA to issue an interim final lead standard for the construction industry, effective until OSHA issues a final standard. The interim final rule, published on May 4, 1993, amends the OSHA standards for occupational health and environmental controls in Subpart D of Title 29 *Code of Federal Regulations* (CFR) 1926 by adding a new section 1926.62, containing employee protection requirements for construction workers exposed to lead.

On July 1998 the PR Environmental Quality Board regulations regarding to Lead Based Paint was created to issue permits, accredit institutions and certificate persons involved in Lead Based Paint activities in Puerto Rico. Local regulations require all lead to be managed as a special waste. To obtain a General Consolidated Permit in Puerto Rico is necessary to get a certificate (OGP-PGC-010) stating that there is no LBP in the project.

VI. CONCLUSION

Asbestos Containing Materials were identified in the vinyl floor tiles/mastic installed in Ponce Health Sciences University-Building "A". Lead-based paints were not found in the subject building's component.

Removal of Asbestos Containing Material has the widest applicability. It also is the only truly permanent solution, since no building or equipment containing asbestos can be demolished or renovated without first removing the ACM. If a proposed demolition plan is in schedule, please refer to 29 CFR 1926.1101, Construction Industry Standard, National Emissions Standards for Hazardous Air Pollutants (NESHAP) (40 CFR 61), and the Environmental Quality Board for procedures concerning to asbestos removal prior to commencement of any renovation and/or demolition activity.

However, according to the current asbestos regulations, Asbestos Containing Material need not be removed if: it is in good condition; and/or it is not scheduled demolition or renovation actions that may affect the material.

An Operation & Maintenance Plan shall be developed to allow timely response to maintenance or repairing of asbestos materials. The program will allow for minor repair procedures where they are appropriate in compliance with current OSHA and EQB requirements. This program will be used as required during typical maintenance activities in the building.

VII. LIMITATIONS

The results, findings, and conclusions expressed in this report are based only on conditions that were noted during the August 13 and 22, 2018 assessment of the Ponce Health Sciences University-Buildings "A", "B", "H" and "I", Ponce, P.R. Any conditions or materials that could not be visually identified on the surface were not inspected and may differ from those conditions or materials noted. It was not within the scope of the inspection to remove surface materials to investigate portions of the structure or materials that lay beneath the surface.

Selection of sample locations and frequency of sampling was based on inspector observations and the assumption that like materials in the same area are homogeneous in content. If during any future demolition within the subject scope of work, some material or component that was not accessible during the inspection is exposed and it is considered suspected of containing asbestos or lead-based paint, it must be characterized prior to handling and disposal.

The report is designed to aid the building owner, architect, construction manager, general contractors, and potential asbestos or lead abatement contractors in locating ACMs or lead. Under no circumstances is the report to be utilized as a solely bidding document or as a project specification document given that abatement bidders are responsible for visiting the project.

Attachment 5 includes the accreditations related to the laboratory, XRF-instrument and inspectors. The Certification Form PGC-009 or equivalent will be provided as soon as evidence of the EQB approved asbestos abatement project be provided. The PGC-010 for non-presence of Lead Based Paint, as required for renovation/demolition was separately submitted.

Attachment 1

Representative pictures





PHSU - Building (A)
Exterior components
NEGATIVE to Lead Based Paint







PHSU - Building (A)
Vinyl Floor Tiles and black mastic
POSITIVE to asbestos









PHSU - Building (A)
Ceiling tiles and A/C ducts
Non – suspect to asbestos containing materials







PHSU - Building (A)
Walls (mostly gypsum boards), doors, door frames and other components
NEGATIVE to Lead Based Paint









PHSU - Building (B)
Walls, wood panels, wood frames, door, door frames
NEGATIVE to Lead Based Paint







PHSU - Building (B)
Vinyl Floor Tiles
NEGATIVE to asbestos



PHSU - Building (B)
Ceiling Tiles
Non-suspect to asbestos containing materials



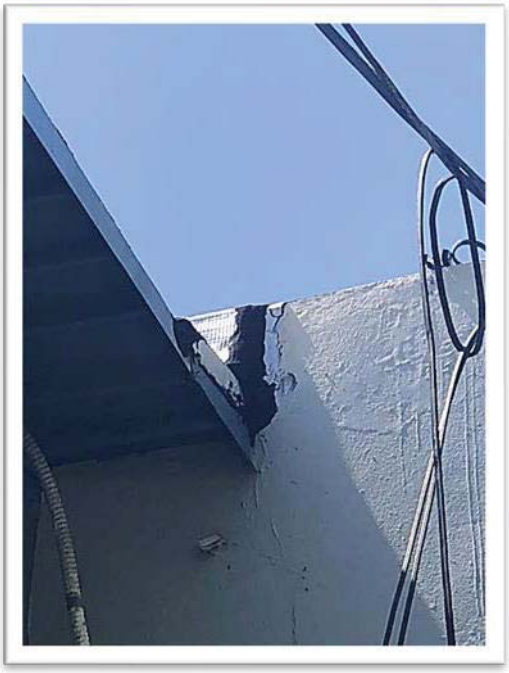


PHSU - Building (H)
Exteriors walls, columns, handrails and other components
NEGATIVE to Lead Based Paint





PHSU - Building (H)
Air Handler Units, A/C ducts
Non-suspect to asbestos containing materials





PHSU - Building (H)
New installation: Roofing materials, AHU pipes, A/C ducts
Non-suspect to asbestos containing materials







PHSU - Building (H)
Ceiling tiles
Non-suspect to asbestos containing materials



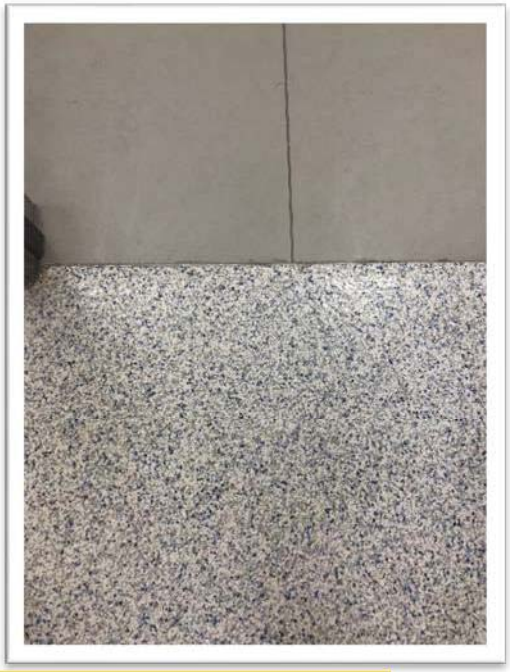






PHSU - Building (H)
Vinyl Floor Tiles
NEGATIVE to asbestos





PHSU - Building (H)
Floor tiles, epoxy
Negative and/or non-suspect to asbestos containing materials





PHSU - Building (H)
Walls (mostly gypsum boards), doors, door frames and other components
NEGATIVE to Lead Based Paint







PHSU - Building (I)
Walls (interior and exterior), columns
NEGATIVE to Lead Based Paint









PHSU - Building (I)
Roof panels
NEGATIVE to Lead Based Paint







PHSU - Building (I)
Vinyl Floor Tiles, Ceiling Tiles, A/C ducts
NEGATIVE and/or non-suspect to asbestos containing materials

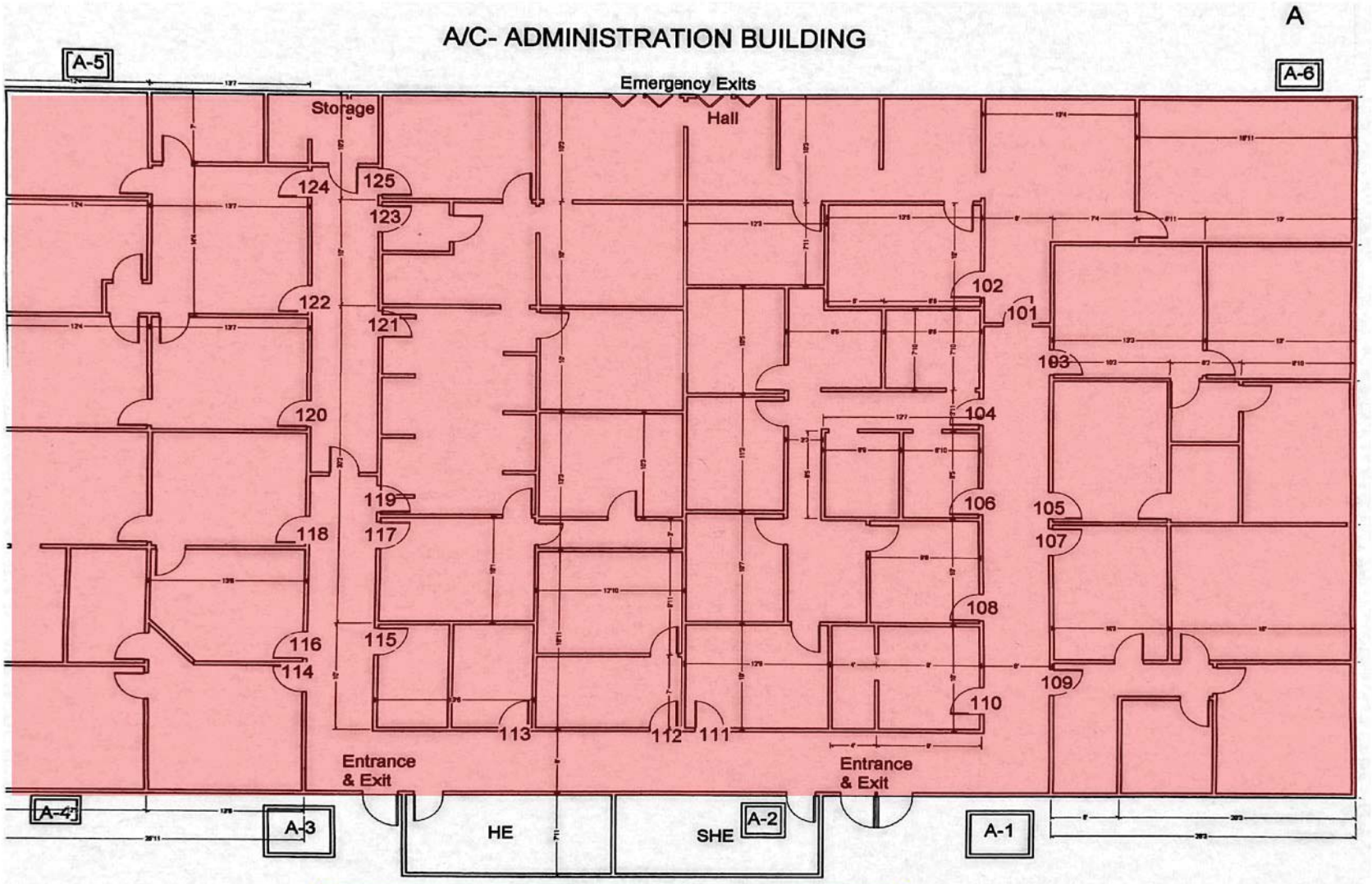
Attachment 2

Asbestos Positive Diagrams

(for reference only)

Ponce Health Sciences University, Ponce, PR
Building A - Administration
Components positive to asbestos
approximated location

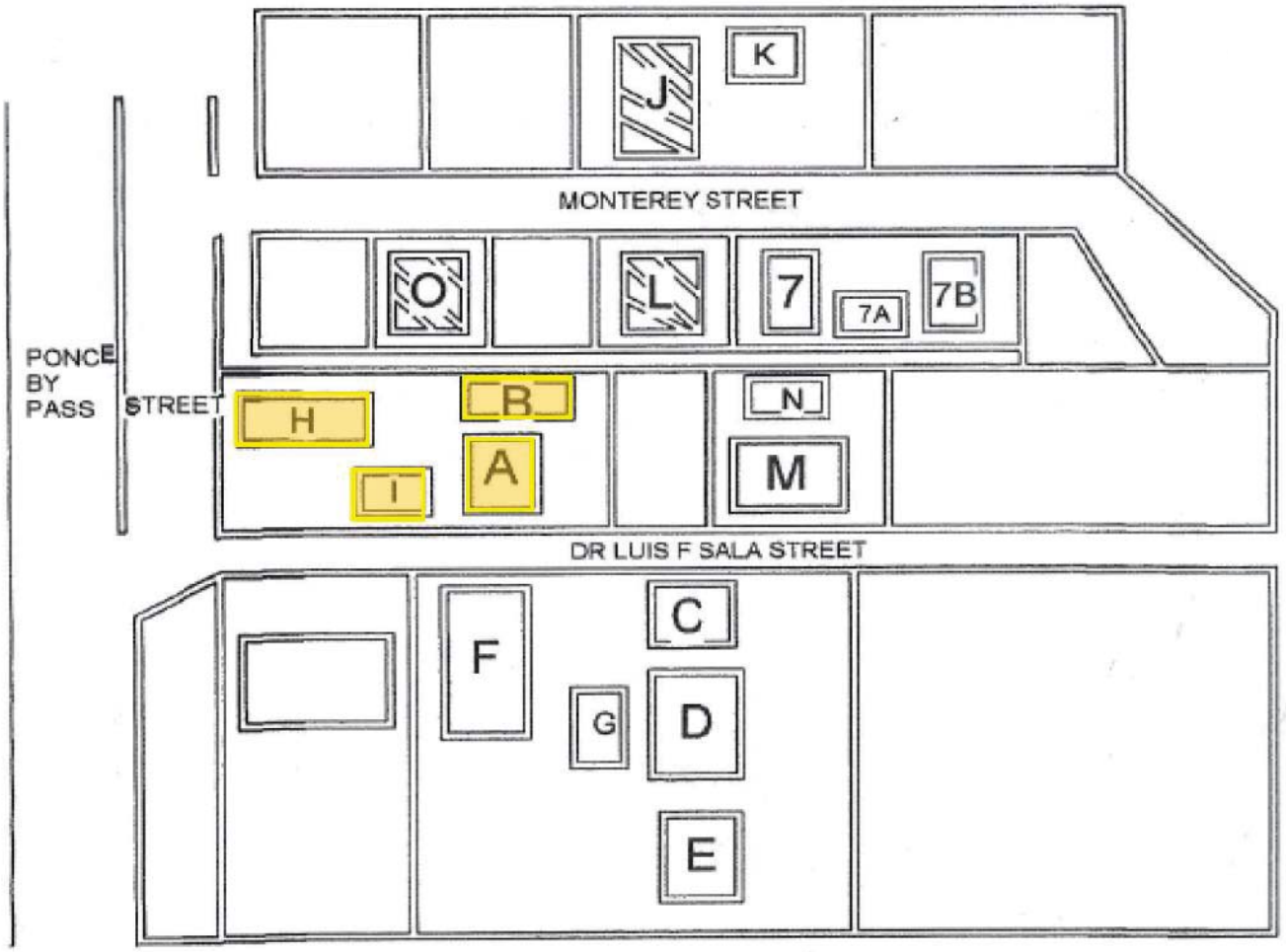
SNAPSHOT FROM MAP
PROVIDED BY CLIENT



Asbestos vinyl floor tiles and/or black mastic

Ponce Health Sciences University, Ponce, PR
Buildings A, B, H and I
Assessed for Asbestos and Lead-based paint
August 2018

SNAPSHOT FROM MAP
PROVIDED BY CLIENT



Attachment 3

Asbestos Laboratory Report and Chain of Custody

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August 17, 2018

Nortol Environmental & Occupational Safety, Inc.
PO Box 366457
San Juan, PR 00936-6457

CLIENT PROJECT: Ponce Health Sciences; Ponce, PR
CEI LAB CODE: A188991

Dear Customer:

Enclosed are asbestos analysis results for PLM Bulk samples received at our laboratory on August 16, 2018. The samples were analyzed for asbestos using polarizing light microscopy (PLM) per the EPA 600 Method.

Sample results containing >1% asbestos are considered asbestos-containing materials (ACMs) per EPA regulatory requirements. The detection limit for the EPA 600 Method is <1% asbestos by weight as determined by visual estimation.

Thank you for your business and we look forward to continuing good relations. If you have any questions, please feel free to call our office at 919-481-1413.

Kind Regards,

Tianbao Bai, Ph.D., CIH
Laboratory Director

NVLAP® TESTING
NVLAP LAB CODE 101768-0

eurofins | CEI

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: Ponce Health Sciences; Ponce, PR **LAB CODE:** A188991

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
PHS-01		A78777A	Beige	Vinyl Floor Tile	Chrysotile 2%
		A78777B	Black	Mastic	Chrysotile 2%
PHS-02		A78778A	Beige	Vinyl Floor Tile	Chrysotile 2%
		A78778B	Black	Mastic	Chrysotile 2%
PHS-03		A78779A	Beige	Vinyl Floor Tile	Chrysotile 2%
		A78779B	Black	Mastic	Chrysotile 2%
PHS-04		A78780A	Beige	Vinyl Floor Tile	Chrysotile 2%
		A78780B	Black	Mastic	None Detected
PHS-05		A78781A	Beige	Vinyl Floor Tile	None Detected
		A78781B	Tan	Mastic	None Detected
PHS-06		A78782A	Beige	Vinyl Floor Tile	None Detected
		A78782B	Tan	Mastic	None Detected
PHS-07		A78783A	Beige	Vinyl Floor Tile	None Detected
		A78783B	Tan	Mastic	None Detected
PHS-08		A78784A	Beige	Vinyl Floor Tile	None Detected
		A78784B	Tan	Mastic	None Detected
PHS-09		A78785A	Beige	Vinyl Floor Tile	None Detected
		A78785B	Tan	Mastic	None Detected
PHS-10		A78786A	Beige	Vinyl Floor Tile	None Detected
		A78786B	Tan	Mastic	None Detected

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ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Nortol Environmental & Occupational Safety, Inc.
PO Box 366457
San Juan, PR 00936-6457

Lab Code: A188991
Date Received: 08-16-18
Date Analyzed: 08-17-18
Date Reported: 08-17-18

Project: Ponce Health Sciences; Ponce, PR

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous	Non-Fibrous		ASBESTOS %
PHS-01 A78777A	Vinyl Floor Tile	Heterogeneous Beige Fibrous Bound		65% 33%	Vinyl Silicates	2% Chrysotile
A78777B	Mastic	Heterogeneous Black Fibrous Bound		98%	Mastic	2% Chrysotile
PHS-02 A78778A	Vinyl Floor Tile	Heterogeneous Beige Fibrous Bound		65% 33%	Vinyl Silicates	2% Chrysotile
A78778B	Mastic	Heterogeneous Black Fibrous Bound		98%	Mastic	2% Chrysotile
PHS-03 A78779A	Vinyl Floor Tile	Heterogeneous Beige Fibrous Bound		65% 33%	Vinyl Silicates	2% Chrysotile
A78779B	Mastic	Heterogeneous Black Fibrous Bound		98%	Mastic	2% Chrysotile
PHS-04 A78780A	Vinyl Floor Tile	Heterogeneous Beige Fibrous Bound		65% 33%	Vinyl Silicates	2% Chrysotile

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ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Nortol Environmental & Occupational Safety, Inc.
PO Box 366457
San Juan, PR 00936-6457

Lab Code: A188991
Date Received: 08-16-18
Date Analyzed: 08-17-18
Date Reported: 08-17-18

Project: Ponce Health Sciences; Ponce, PR

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous	Non-Fibrous	ASBESTOS %
A78780B	Mastic	Heterogeneous Black Fibrous Bound		100% Mastic	None Detected
PHS-05 A78781A	Vinyl Floor Tile	Heterogeneous Beige Fibrous Bound		65% Vinyl 35% Silicates	None Detected
A78781B	Mastic	Heterogeneous Tan Fibrous Bound		100% Mastic	None Detected
PHS-06 A78782A	Vinyl Floor Tile	Heterogeneous Beige Fibrous Bound		65% Vinyl 35% Silicates	None Detected
A78782B	Mastic	Heterogeneous Tan Fibrous Bound		100% Mastic	None Detected
PHS-07 A78783A	Vinyl Floor Tile	Heterogeneous Beige Fibrous Bound		65% Vinyl 35% Silicates	None Detected
A78783B	Mastic	Heterogeneous Tan Fibrous Bound		100% Mastic	None Detected

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ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Nortol Environmental & Occupational Safety, Inc.
PO Box 366457
San Juan, PR 00936-6457

Lab Code: A188991
Date Received: 08-16-18
Date Analyzed: 08-17-18
Date Reported: 08-17-18

Project: Ponce Health Sciences; Ponce, PR

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous	Non-Fibrous		ASBESTOS %
PHS-08 A78784A	Vinyl Floor Tile	Heterogeneous Beige Fibrous Bound		65% 35%	Vinyl Silicates	None Detected
A78784B	Mastic	Heterogeneous Tan Fibrous Bound		100%	Mastic	None Detected
PHS-09 A78785A	Vinyl Floor Tile	Heterogeneous Beige Fibrous Bound		65% 35%	Vinyl Silicates	None Detected
A78785B	Mastic	Heterogeneous Tan Fibrous Bound		100%	Mastic	None Detected
PHS-10 A78786A	Vinyl Floor Tile	Heterogeneous Beige Fibrous Bound		65% 35%	Vinyl Silicates	None Detected
A78786B	Mastic	Heterogeneous Tan Fibrous Bound		100%	Mastic	None Detected

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LEGEND:

Non-Anth	= Non-Asbestiform Anthophyllite
Non-Trem	= Non-Asbestiform Tremolite
Calc Carb	= Calcium Carbonate

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

REPORTING LIMIT: <1% by visual estimation

REPORTING LIMIT FOR POINT COUNTS: 0.25% by 400 Points or 0.1% by 1,000 Points

REGULATORY LIMIT: >1% by weight

Due to the limitations of the EPA 600 method, nonfriable organically bound materials (NOBs) such as vinyl floor tiles can be difficult to analyze via polarized light microscopy (PLM). EPA recommends that all NOBs analyzed by PLM, and found not to contain asbestos, be further analyzed by Transmission Electron Microscopy (TEM). Please note that PLM analysis of dust and soil samples for asbestos is not covered under NVLAP accreditation. Estimated measurement of uncertainty is available on request.

This report relates only to the samples tested or analyzed and may not be reproduced, except in full, without written approval by Eurofins CEI. Eurofins CEI makes no warranty representation regarding the accuracy of client submitted information in preparing and presenting analytical results. Interpretation of the analytical results is the sole responsibility of the client. Samples were received in acceptable condition unless otherwise noted. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. Government.

ANALYST: Carly Goodman

Carly Goodman

APPROVED BY: Tianbao Bai

Tianbao Bai, Ph.D., CIH
Laboratory Director

NVLAP® TESTING
NVLAP LAB CODE 101768-0

A188991 (10)
A178777-A178786

730 SE Maynard Road, Cary, NC 27511
Tel: 866-481-1412; Fax: 919-481-1442

eurofins | CEI

CHAIN OF CUSTODY

LAB USE ONLY:
CEI Lab Code:
CEI Lab I.D. Range:

COMPANY CONTACT INFORMATION	
Company: **NORTOL ENVIRONMENTAL**	Client #:
Address: **PO BOX 366457**	Job Contact:
SAN JUAN, PR 00936-6457	Email: **nortol@prmail.net**
	Tel: **(787) 420-0220**
Project Name: **PONCE HEALTH SCIENCES**	Fax: N/A
Location: **PONCE, PR**	P.O. #: 20180815-B

ASBESTOS	METHOD	TURN AROUND TIME			
		SAME DAY	24-hrs	2 DAY	5 DAY
PLM BULK	EPA 600	☐	☒	☐	☐
PLM POINT COINT (400)	EPA 600	☐	☐	☐	☐
PLM POINT COINT (1000)	EPA 600	☐	☐	☐	☐
TEM BULK	CHATFIELD	☐	☐	☐	☐

REMARKS: None

☑ Accept Samples
☐ Reject Samples

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME/ AREA	COMMENTS
PHS-01	VINYL FLOOR TILE / BUILDING A	N/A	
PHS-02	VINYL FLOOR TILE / BUILDING A	N/A	
PHS-03	VINYL FLOOR TILE / BUILDING A	N/A	
PHS-04	VINYL FLOOR TILE / BUILDING A	N/A	
PHS-05	VINYL FLOOR TILE / BUILDING B	N/A	
PHS-06	VINYL FLOOR TILE / BUILDING H	N/A	
PHS-07	VINYL FLOOR TILE / BUILDING H	N/A	
PHS-08	VINYL FLOOR TILE / BUILDING H	N/A	
PHS-09	VINYL FLOOR TILE / BUILDING I	N/A	
PHS-10	VINYL FLOOR TILE / BUILDING I	N/A	

Relinquished By:	Date/Time	Received By:
M. Toro	8/5/18/800	8/16/18 9:10

*Call to confirm RUSH analysis.

Samples will be disposed of 30 days after analysis

EUROFINS CEI, INC
SAMPLES ACCEPTED

Attachment 4

LBP XRF Tabulated Results

Lead Based Paint - XRF Testing Results

Project: PONCE HEALTH SCIENCES UNIVERSITY-BUILDING A
Location: PONCE PR
Client: LOA MANAGEMENT

Date: August 13 or 22, 2018
Inspector: KS/NT
XRF instrument: Heuresis Pb200i Alpha (serial # 1142)

I.D. #	Location	Floor	Side	Room	Structure	Substrate	Color	XRF (mg/cm^2)	Comments
	CALIBRATION	-	-	-	-	-	-	1.00	
	CALIBRATION	-	-	-	-	-	-	0.03	
	CALIBRATION	-	-	-	-	-	-	1.00	
1	EXTERIOR	1	C	EXTERIOR	WALL 1	CONCRETE	BEIGE	<1.0	
2	EXTERIOR	1	C	EXTERIOR	COLUMN 1	METAL	BLUE	<1.0	
3	EXTERIOR	1	C	EXTERIOR	COLUMN 1 BASE	CONCRETE	BLUE	<1.0	
4	EXTERIOR	1	C	EXTERIOR	BURGLAR FENCE	METAL	BEIGE	<1.0	
5	EXTERIOR	1	C	EXTERIOR	WALL 2	CONCRETE	BEIGE	<1.0	
6	EXTERIOR	1	C	EXTERIOR	COLUMN 2	METAL	BLUE	<1.0	
7	EXTERIOR	1	C	EXTERIOR	COLUMN 2 BASE	CONCRETE	BLUE	<1.0	
8	EXTERIOR	1	D	EXTERIOR	BURGLAR FENCE	METAL	BEIGE	<1.0	
9	EXTERIOR	1	C	EXTERIOR	DOOR 1	METAL	BLUE	<1.0	
10	EXTERIOR	1	C	EXTERIOR	DOORFRAME 1	METAL	BLUE	<1.0	
11	EXTERIOR	1	-	EXTERIOR	HANDRAIL	METAL	BLUE	<1.0	
12	EXTERIOR	1	C	EXTERIOR	COLUMN	CONCRETE	BLUE	<1.0	
13	EXTERIOR	1	D	EXTERIOR	WALL 1	CONCRETE	BEIGE	<1.0	
14	EXTERIOR	1	D	EXTERIOR	COLUMN 3	METAL	BLUE	<1.0	
15	EXTERIOR	1	D	EXTERIOR	COLUMN 3 BASE	CONCRETE	BLUE	<1.0	
16	EXTERIOR	1	A	EXTERIOR	WALL 1	CONCRETE	BEIGE	<1.0	
17	INTERIOR	1	B	INTERIOR	MAIN WALL	CONCRETE	BEIGE	<1.0	
18	INTERIOR	1	-	INTERIOR	PARTITION	GYPSUM	BEIGE	<1.0	
19	INTERIOR	1	-	HALLWAY	COLUMN	METAL	BEIGE	<1.0	

Lead Based Paint - XRF Testing Results

Project: PONCE HEALTH SCIENCES UNIVERSITY-BUILDING A
Location: PONCE PR
Client: LOA MANAGEMENT

Date: August 13 or 22, 2018
Inspector: KS/NT
XRF instrument: Heuresis Pb200i Alpha (serial # 1142)

I.D. #	Location	Floor	Side	Room	Structure	Substrate	Color	XRF (mg/cm^2)	Comments
20	INTERIOR	1	A	HALLWAY	WALL	CONCRETE	BEIGE	<1.0	
21	INTERIOR	1	-	INTERIOR	DOOR 1	WOOD	BROWN	<1.0	
22	INTERIOR	1	-	INTERIOR	DOORFRAME 1	WOOD	BROWN	<1.0	
23	INTERIOR	1	A	LADIES RESTROOM	WALL	CONCRETE	BEIGE	<1.0	
24	INTERIOR	1	B	LADIES RESTROOM	WALL	CONCRETE	BEIGE	<1.0	
25	INTERIOR	1	C	LADIES RESTROOM	WALL	CONCRETE	BEIGE	<1.0	
26	INTERIOR	1	D	LADIES RESTROOM	WALL	CONCRETE	BEIGE	<1.0	
27	INTERIOR	1	A	LADIES RESTROOM	DOOR	METAL	BEIGE	<1.0	
28	INTERIOR	1	A	LADIES RESTROOM	DOORFRAME	METAL	BEIGE	<1.0	
29	INTERIOR	1	A	MEN RESTROOM	WALL	CONCRETE	BEIGE	<1.0	
30	INTERIOR	1	B	MEN RESTROOM	WALL	CONCRETE	BEIGE	<1.0	
31	INTERIOR	1	C	MEN RESTROOM	WALL	CONCRETE	BEIGE	<1.0	
32	INTERIOR	1	D	MEN RESTROOM	WALL	CONCRETE	BEIGE	<1.0	
33	INTERIOR	1	A	MEN RESTROOM 2	WALL	CONCRETE	BEIGE	<1.0	
34	INTERIOR	1	B	MEN RESTROOM 2	WALL	CONCRETE	BEIGE	<1.0	
35	INTERIOR	1	C	MEN RESTROOM 2	WALL	CONCRETE	BEIGE	<1.0	
36	INTERIOR	1	D	MEN RESTROOM 2	WALL	CONCRETE	BEIGE	<1.0	
37	INTERIOR	1	A	MEN RESTROOM 2	DOOR	METAL	BEIGE	<1.0	
38	INTERIOR	1	A	MEN RESTROOM 2	DOORFRAME	METAL	BEIGE	<1.0	
39	INTERIOR	1	C	HALLWAY	WALL	GYPSUM	BLUE	<1.0	CLADDED
40	INTERIOR	1	C	INTERIOR	DOORFRAME 2	WOOD	BROWN	<1.0	

Lead Based Paint - XRF Testing Results

Project: PONCE HEALTH SCIENCES UNIVERSITY-BUILDING A
Location: PONCE PR
Client: LOA MANAGEMENT

Date: August 13 or 22, 2018
Inspector: KS/NT
XRF instrument: Heuresis Pb200i Alpha (serial # 1142)

I.D. #	Location	Floor	Side	Room	Structure	Substrate	Color	XRF (mg/cm^2)	Comments
41	INTERIOR	1	C	INTERIOR	DOOR 2	WOOD	BROWN	<1.0	
42	INTERIOR	1	-	INTERIOR	ELECTRIC BOX	METAL	BEIGE	<1.0	
43	INTERIOR	1	C	OFFICE TO NW	WALL	CONCRETE	GREEN	<1.0	
44	INTERIOR	1	D	OFFICE TO NW	WALL	CONCRETE	WHITE	<1.0	
45	INTERIOR	1	B	OFFICE TO NW	WALL	CONCRETE	GREEN	<1.0	
46	INTERIOR	1	-	INTERIOR	PARTITION	GYPSUM	WHITE	<1.0	
47	INTERIOR	1	A	HALLWAY	PARTITION	CONCRETE	BLUE	<1.0	
48	INTERIOR	1	-	INTERIOR	DOOR 3	WOOD	BROWN	<1.0	
49	INTERIOR	1	-	INTERIOR	DOORFRAME 3	WOOD	BROWN	<1.0	
	CALIBRATION	-	-	-	-	-	-	1.00	
	CALIBRATION	-	-	-	-	-	-	1.00	
	CALIBRATION	-	-	-	-	-	-	0.30	

Lead Based Paint - XRF Testing Results

Project: PONCE HEALTH SCIENCES UNIVERSITY-BUILDING B
Location: PONCE PR
Client: LOA MANAGEMENT

Date: Monday, August 13, 2018
Inspector: KS/NT
XRF instrument: Heuresis Pb200i Alpha (serial # 1142)

I.D. #	Location	Floor	Side	Room	Structure	Substrate	Color	XRF (mg/cm^2)	Comments
	CALIBRATION	-	-	-	-	-	-	1.00	
	CALIBRATION	-	-	-	-	-	-	0.03	
	CALIBRATION	-	-	-	-	-	-	1.00	
1	INTERIOR	1	A	OFFICE 1	WALL	GYPSUM	WHITE	<1.0	
2	INTERIOR	1	B	OFFICE 1	WALL	GYPSUM	WHITE	<1.0	
3	INTERIOR	1	C	OFFICE 1	WALL	GYPSUM	WHITE	<1.0	
4	INTERIOR	1	D	OFFICE 1	WALL	GYPSUM	WHITE	<1.0	
5	EXTERIOR	1	A	EXTERIOR	WALL	WOOD	BEIGE	<1.0	
6	EXTERIOR	1	A	EXTERIOR	BASE	CONCRETE	BEIGE	<1.0	
7	EXTERIOR	1	B	EXTERIOR	BEAM	WOOD	BEIGE	<1.0	
8	EXTERIOR	1	B	EXTERIOR	WALL	WOOD	BEIGE	<1.0	
9	EXTERIOR	1	B	EXTERIOR	BASE	CONCRETE	BEIGE	<1.0	
10	EXTERIOR	1	C	EXTERIOR	WALL	WOOD	BEIGE	<1.0	
11	EXTERIOR	1	D	EXTERIOR	WALL	WOOD	BEIGE	<1.0	
12	EXTERIOR	1	D	EXTERIOR	BASE	CONCRETE	BEIGE	<1.0	
13	EXTERIOR	1	D	EXTERIOR	BURGLAR FENCE	METAL	WHITE	<1.0	
14	INTERIOR	1	A	OFFICE 2	WALL	GYPSUM	BEIGE	<1.0	
15	INTERIOR	1	B	OFFICE 2	WALL	GYPSUM	BEIGE	<1.0	
16	INTERIOR	1	C	OFFICE 2	WALL	GYPSUM	BLUE	<1.0	
17	INTERIOR	1	D	OFFICE 2	WALL	GYPSUM	BEIGE	<1.0	
18	INTERIOR	1	A	OFFICE 3	WALL	GYPSUM	BEIGE	<1.0	
19	INTERIOR	1	B	OFFICE 3	WALL	GYPSUM	BEIGE	<1.0	

Lead Based Paint - XRF Testing Results

Project: PONCE HEALTH SCIENCES UNIVERSITY-BUILDING B
Location: PONCE PR
Client: LOA MANAGEMENT

Date: Monday, August 13, 2018
Inspector: KS/NT
XRF instrument: Heuresis Pb200i Alpha (serial # 1142)

I.D. #	Location	Floor	Side	Room	Structure	Substrate	Color	XRF (mg/cm^2)	Comments
20	INTERIOR	1	C	OFFICE 3	WALL	GYPSUM	BLUE	<1.0	
21	INTERIOR	1	D	OFFICE 3	WALL	GYPSUM	BEIGE	<1.0	
22	INTERIOR	1	A	KITCHENET	WALL	GYPSUM	BEIGE	<1.0	
23	INTERIOR	1	B	KITCHENET	WALL	GYPSUM	BEIGE	<1.0	
24	INTERIOR	1	C	KITCHENET	WALL	GYPSUM	BEIGE	<1.0	
25	INTERIOR	1	D	KITCHENET	WALL	GYPSUM	BEIGE	<1.0	
	CALIBRATION	-	-	-	-	-	-	0.30	
	CALIBRATION	-	-	-	-	-	-	1.00	
	CALIBRATION	-	-	-	-	-	-	0.30	

Lead Based Paint - XRF Testing Results

Project: PONCE HEALTH SCIENCES UNIVERSITY-BUILDING H
Location: PONCE PR
Client: LOA MANAGEMENT

Date: Monday, August 13, 2018
Inspector: KS/NT
XRF instrument: Heuresis Pb200i Alpha (serial # 1142)

I.D. #	Location	Floor	Side	Room	Structure	Substrate	Color	XRF (mg/cm^2)	Comments
	CALIBRATION	-	-	-	-	-	-	1.00	
	CALIBRATION	-	-	-	-	-	-	0.03	
	CALIBRATION	-	-	-	-	-	-	1.00	
1	INTERIOR	1	A	HUGE ZONE 1	WALL	GYPSUM	WHITE	<1.0	CLADDED
2	INTERIOR	1	-	HUGE ZONE 1	PARTITION	GYPSUM	WHITE	<1.0	
3	INTERIOR	1	C	HUGE ZONE 1	WALL	GYPSUM	WHITE	<1.0	
4	INTERIOR	1	-	HUGE ZONE 1	DOORFRAME	METAL	WHITE	<1.0	
5	INTERIOR	1	D	HUGE ZONE 1	WALL	GYPSUM	WHITE	<1.0	
6	INTERIOR	1	-	HUGE ZONE 1	PARTITION	GYPSUM	GREEN	<1.0	
7	INTERIOR	1	-	HUGE ZONE 1	DOORFRAME	METAL	WHITE	<1.0	
8	INTERIOR	1	A	LADIES RESTROOM 1	WALL	CONCRETE	BEIGE	<1.0	
9	INTERIOR	1	B	LADIES RESTROOM 1	WALL	CONCRETE	BEIGE	<1.0	
10	INTERIOR	1	D	LADIES RESTROOM 1	WALL	CONCRETE	BEIGE	<1.0	
11	INTERIOR	1	C	LADIES RESTROOM 1	WALL	CONCRETE	BEIGE	<1.0	
12	INTERIOR	1	A	LADIES RESTROOM 1	DOOR	WOOD	BROWN	<1.0	
13	INTERIOR	1	A	LADIES RESTROOM 1	DOORFRAME	WOOD	BROWN	<1.0	
14	INTERIOR	1	A	LADIES RESTROOM 2	WALL	CONCRETE	BEIGE	<1.0	
15	INTERIOR	1	A	LADIES RESTROOM 2	DOOR	WOOD	BROWN	<1.0	
16	INTERIOR	1	A	LADIES RESTROOM 2	DOORFRAME	WOOD	BROWN	<1.0	
17	INTERIOR	1	B	LADIES RESTROOM 2	WALL	CONCRETE	BEIGE	<1.0	
18	INTERIOR	1	C	LADIES RESTROOM 2	WALL	CONCRETE	BEIGE	<1.0	
19	INTERIOR	1	D	LADIES RESTROOM 2	WALL	CONCRETE	BEIGE	<1.0	

Lead Based Paint - XRF Testing Results

Project: PONCE HEALTH SCIENCES UNIVERSITY-BUILDING H
Location: PONCE PR
Client: LOA MANAGEMENT

Date: Monday, August 13, 2018
Inspector: KS/NT
XRF instrument: Heuresis Pb200i Alpha (serial # 1142)

I.D. #	Location	Floor	Side	Room	Structure	Substrate	Color	XRF (mg/cm^2)	Comments
20	INTERIOR	1	A	MEN RESTROOM 1	DOOR	WOOD	BROWN	<1.0	
21	INTERIOR	1	A	MEN RESTROOM 1	DOORFRAME	WOOD	BROWN	<1.0	
22	INTERIOR	1	A	MEN RESTROOM 1	WALL	CONCRETE	BEIGE	<1.0	
23	INTERIOR	1	B	MEN RESTROOM 1	WALL	CONCRETE	BEIGE	<1.0	
24	INTERIOR	1	C	MEN RESTROOM 1	WALL	CONCRETE	BEIGE	<1.0	
25	INTERIOR	1	D	MEN RESTROOM 1	WALL	CONCRETE	BEIGE	<1.0	
26	INTERIOR	1	A	MEN RESTROOM 2	WALL	CONCRETE	BEIGE	<1.0	
27	INTERIOR	1	B	MEN RESTROOM 2	WALL	CONCRETE	BEIGE	<1.0	
28	INTERIOR	1	C	MEN RESTROOM 2	WALL	CONCRETE	BEIGE	<1.0	
29	INTERIOR	1	D	MEN RESTROOM 2	WALL	CONCRETE	BEIGE	<1.0	
30	INTERIOR	1	A	MEN RESTROOM 2	DOOR	WOOD	BROWN	<1.0	
31	INTERIOR	1	A	MEN RESTROOM 2	DOORFRAME	WOOD	BROWN	<1.0	
32	INTERIOR	1	C	HALLWAY TO RESTROOMS	DOOR 1	METAL	GRAY	<1.0	
33	INTERIOR	1	C	HALLWAY TO RESTROOMS	DOORFRAME 1	METAL	GRAY	<1.0	
34	INTERIOR	1	C	HALLWAY TO RESTROOMS	DOOR 2	METAL	GRAY	<1.0	
35	INTERIOR	1	C	HALLWAY TO RESTROOMS	DOORFRAME 2	METAL	GRAY	<1.0	
36	EXTERIOR	1	B	EXTERIOR	WALL 1	CONCRETE	GRAY	<1.0	
37	EXTERIOR	1	B	EXTERIOR	COLUMN 1	METAL	BLUE	<1.0	
38	EXTERIOR	1	B	EXTERIOR	WALL 2	CONCRETE	GRAY	<1.0	
39	EXTERIOR	1	B	EXTERIOR	COLUMN 2	METAL	BLUE	<1.0	
40	EXTERIOR	1	D	EXTERIOR	WALL 1	CONCRETE	GRAY	<1.0	

Lead Based Paint - XRF Testing Results

Project: PONCE HEALTH SCIENCES UNIVERSITY-BUILDING H
Location: PONCE PR
Client: LOA MANAGEMENT

Date: Monday, August 13, 2018
Inspector: KS/NT
XRF instrument: Heuresis Pb200i Alpha (serial # 1142)

I.D. #	Location	Floor	Side	Room	Structure	Substrate	Color	XRF (mg/cm^2)	Comments
41	EXTERIOR	1	D	EXTERIOR	COLUMN 1	METAL	BLUE	<1.0	
42	EXTERIOR	1	D	EXTERIOR	WALL 2	CONCRETE	GRAY	<1.0	
43	EXTERIOR	1	D	EXTERIOR	COLUMN 2	METAL	BLUE	<1.0	
44	EXTERIOR	1	D	EXTERIOR	HANDRAIL	METAL	BEIGE	<1.0	
45	INTERIOR	1	C	ZONE 2	WALL	CONCRETE	GREEN	<1.0	
46	INTERIOR	1	D	RESTROOM 1	WALL	GYPSUM	BEIGE	<1.0	
47	INTERIOR	1	A	RESTROOM 1	WALL	GYPSUM	BEIGE	<1.0	
48	INTERIOR	1	B	RESTROOM 1	WALL	GYPSUM	BEIGE	<1.0	
49	INTERIOR	1	C	RESTROOM 1	WALL	GYPSUM	BLUE	<1.0	
50	INTERIOR	1	D	RESTROOM 2	WALL	GYPSUM	BEIGE	<1.0	
51	INTERIOR	1	A	RESTROOM 2	WALL	GYPSUM	BEIGE	<1.0	
52	INTERIOR	1	B	RESTROOM 2	WALL	GYPSUM	BEIGE	<1.0	
53	INTERIOR	1	C	RESTROOM 2	WALL	GYPSUM	BEIGE	<1.0	
54	INTERIOR	1	-	HALLWAY	WALL	CONCRETE	BROWN	<1.0	
55	INTERIOR	1	-	ZONE 3	DOOR 2	METAL	GREEN	<1.0	
56	INTERIOR	1	-	ZONE 3	DOORFRAME 2	METAL	GREEN	<1.0	
57	INTERIOR	1	-	ZONE 3	WALL	CONCRETE	WHITE	<1.0	
58	INTERIOR	1	-	ZONE 3	BEAM	CONCRETE	WHITE	<1.0	
59	INTERIOR	1	-	CUBICLES AREA	DOOR	METAL	GRAY	<1.0	
60	INTERIOR	1	-	CUBICLES AREA	DOORFRAME	METAL	GRAY	<1.0	
61	INTERIOR	1	-	OFFICE	DOOR	METAL	GRAY	<1.0	

Lead Based Paint - XRF Testing Results

Project: PONCE HEALTH SCIENCES UNIVERSITY-BUILDING H
Location: PONCE PR
Client: LOA MANAGEMENT

Date: Monday, August 13, 2018
Inspector: KS/NT
XRF instrument: Heuresis Pb200i Alpha (serial # 1142)

I.D. #	Location	Floor	Side	Room	Structure	Substrate	Color	XRF (mg/cm^2)	Comments
62	INTERIOR	1	-	OFFICE	DOORFRAME	METAL	GRAY	<1.0	
63	INTERIOR	1	A	VAULT	WALL	CONCRETE	WHITE	<1.0	
64	INTERIOR	1	A	VAULT	DOORFRAME	METAL	GRAY	<1.0	
65	INTERIOR	1	B	VAULT	WALL	CONCRETE	WHITE	<1.0	
66	INTERIOR	1	C	VAULT	WALL	CONCRETE	WHITE	<1.0	
67	INTERIOR	1	D	VAULT	WALL	CONCRETE	WHITE	<1.0	
68	INTERIOR	1	-	ZONE 4	WALL	CONCRETE	WHITE	<1.0	
69	INTERIOR	1	-	ZONE 4	DOOR 1	METAL	GRAY	<1.0	
70	INTERIOR	1	-	ZONE 4	DOORFRAME 1	METAL	GRAY	<1.0	
71	INTERIOR	1	-	ZONE 4	DOOR 2	METAL	GRAY	<1.0	
72	INTERIOR	1	-	ZONE 4	DOORFRAME 2	METAL	GRAY	<1.0	
73	INTERIOR	1	A	KITCHENNETTE	DOORFRAME	METAL	GRAY	<1.0	
74	INTERIOR	1	B	KITCHENNETTE	WALL	CONCRETE	WHITE	<1.0	
75	INTERIOR	1	C	KITCHENNETTE	WALL	CONCRETE	WHITE	<1.0	
76	INTERIOR	1	D	KITCHENNETTE	WALL	CONCRETE	WHITE	<1.0	
77	INTERIOR	1	D	KITCHENNETTE	DOOR	METAL	GRAY	<1.0	
78	INTERIOR	1	D	KITCHENNETTE	DOORFRAME	METAL	GRAY	<1.0	
79	EXTERIOR	1	B	EXTERIOR	WALL 3	CONCRETE	BEIGE	<1.0	
80	EXTERIOR	1	B	EXTERIOR	COLUMN 3	CONCRETE	BLUE	<1.0	
81	EXTERIOR	1	B	EXTERIOR	HANDRAIL	METAL	BEIGE	<1.0	
82	EXTERIOR	1	B	EXTERIOR	HANDRAIL	CONCRETE	WHITE	<1.0	

Lead Based Paint - XRF Testing Results

Project: PONCE HEALTH SCIENCES UNIVERSITY-BUILDING H
Location: PONCE PR
Client: LOA MANAGEMENT

Date: Monday, August 13, 2018
Inspector: KS/NT
XRF instrument: Heuresis Pb200i Alpha (serial # 1142)

I.D. #	Location	Floor	Side	Room	Structure	Substrate	Color	XRF (mg/cm^2)	Comments
83	INTERIOR	1	A	LOBBY RESTROOMS 3 & 4	WALL	GYPSUM	GRAY	<1.0	
84	INTERIOR	1	B	LOBBY RESTROOMS 3 & 4	WALL	GYPSUM	GRAY	<1.0	
85	INTERIOR	1	C	LOBBY RESTROOMS 3 & 4	WALL	GYPSUM	GRAY	<1.0	
86	INTERIOR	1	D	LOBBY RESTROOMS 3 & 4	WALL	GYPSUM	GRAY	<1.0	
87	INTERIOR	1	A	RESTROOM 3	WALL	CONCRETE	BEIGE	<1.0	
88	INTERIOR	1	A	RESTROOM 3	DOOR	METAL	GRAY	<1.0	
89	INTERIOR	1	A	RESTROOM 3	DOORFRAME	METAL	GRAY	<1.0	
90	INTERIOR	1	D	RESTROOM 1	WALL	CONCRETE	BEIGE	<1.0	
91	INTERIOR	1	B	RESTROOM 3	WALL	CONCRETE	BEIGE	<1.0	
92	INTERIOR	1	C	RESTROOM 3	WALL	CONCRETE	BEIGE	<1.0	
93	INTERIOR	1	D	RESTROOM 4	WALL	CONCRETE	BEIGE	<1.0	
94	INTERIOR	1	A	RESTROOM 4	WALL	CONCRETE	BEIGE	<1.0	
95	INTERIOR	1	B	RESTROOM 4	WALL	CONCRETE	BEIGE	<1.0	
96	INTERIOR	1	C	RESTROOM 4	WALL	CONCRETE	BEIGE	<1.0	
97	INTERIOR	1	A	CLASSROOM 2A	WALL	GYPSUM	BEIGE	<1.0	
98	INTERIOR	1	B	CLASSROOM 2A	WALL	GYPSUM	BEIGE	<1.0	
99	INTERIOR	1	C	CLASSROOM 2A	DOOR 1	METAL	GRAY	<1.0	
100	INTERIOR	1	C	CLASSROOM 2A	DOORFRAME 1	METAL	GRAY	<1.0	
101	INTERIOR	1	C	CLASSROOM 2A	DOOR 2	METAL	GRAY	<1.0	
102	INTERIOR	1	C	CLASSROOM 2A	DOORFRAME 2	METAL	GRAY	<1.0	
103	INTERIOR	1	C	CLASSROOM 2A	WALL	GYPSUM	BEIGE	<1.0	

Lead Based Paint - XRF Testing Results

Project: PONCE HEALTH SCIENCES UNIVERSITY-BUILDING H
Location: PONCE PR
Client: LOA MANAGEMENT

Date: Monday, August 13, 2018
Inspector: KS/NT
XRF instrument: Heuresis Pb200i Alpha (serial # 1142)

I.D. #	Location	Floor	Side	Room	Structure	Substrate	Color	XRF (mg/cm^2)	Comments
104	INTERIOR	1	D	CLASSROOM 2A	WALL	GYPSUM	BEIGE	<1.0	
105	EXTERIOR	1	D	EXTERIOR	WALL 3	CONCRETE	BEIGE	<1.0	
106	EXTERIOR	1	D	EXTERIOR	COLUMN 3	CONCRETE	BLUE	<1.0	
107	EXTERIOR	1	A	EXTERIOR	WALL 1	CONCRETE	BEIGE	<1.0	
108	EXTERIOR	1	A	EXTERIOR	WALL 2	CONCRETE	BEIGE	<1.0	
	CALIBRATION	-	-	-	-	-	-	0.30	
	CALIBRATION	-	-	-	-	-	-	1.00	
	CALIBRATION	-	-	-	-	-	-	0.30	

Lead Based Paint - XRF Testing Results

Project: PONCE HEALTH SCIENCES UNIVERSITY-BUILDING I
Location: PONCE PR
Client: LOA MANAGEMENT

Date: Monday, August 13, 2018
Inspector: KS/NT
XRF instrument: Heuresis Pb200i Alpha (serial # 1142)

I.D. #	Location	Floor	Side	Room	Structure	Substrate	Color	XRF (mg/cm^2)	Comments
	CALIBRATION	-	-	-	-	-	-	1.00	
	CALIBRATION	-	-	-	-	-	-	0.03	
	CALIBRATION	-	-	-	-	-	-	1.00	
1	INTERIOR	1	A	SEATING AREA	WALL	CONCRETE	WHITE	<1.0	
2	INTERIOR	1	A	SEATING AREA	COLUMN 1	METAL	BEIGE	<1.0	
3	INTERIOR	1	A	SEATING AREA	DOOR 1	METAL	BLUE	<1.0	
4	INTERIOR	1	A	SEATING AREA	DOORFRAME 1	METAL	BLUE	<1.0	
5	INTERIOR	1	B	SEATING AREA	WALL	CONCRETE	WHITE	<1.0	
6	INTERIOR	1	C	SEATING AREA	WALL	CONCRETE	WHITE	<1.0	
7	INTERIOR	1	C	SEATING AREA	COLUMN 1	METAL	BEIGE	<1.0	
8	INTERIOR	1	D	SEATING AREA	WALL	CONCRETE	WHITE	<1.0	
9	INTERIOR	1	A	SMALL ROOM	WALL	CONCRETE	BEIGE	<1.0	
10	INTERIOR	1	B	SMALL ROOM	WALL	CONCRETE	BEIGE	<1.0	
11	INTERIOR	1	C	SMALL ROOM	WALL	CONCRETE	BEIGE	<1.0	
12	INTERIOR	1	D	SMALL ROOM	WALL	CONCRETE	BEIGE	<1.0	
13	INTERIOR	1	A	SEATING AREA	DOOR 2	METAL	BLUE	<1.0	
14	INTERIOR	1	A	SEATING AREA	DOORFRAME 2	METAL	BLUE	<1.0	
15	EXTERIOR	1	A	EXTERIOR	WALL	CONCRETE	BEIGE	<1.0	
16	EXTERIOR	1	A	EXTERIOR	COLUMN 1	METAL	BLUE	<1.0	
17	EXTERIOR	1	A	EXTERIOR	BASE	CONCRETE	BEIGE	<1.0	
18	EXTERIOR	1	A	EXTERIOR	DOOR 3	METAL	BLUE	<1.0	
19	EXTERIOR	1	A	EXTERIOR	DOORFRAME 3	METAL	BLUE	<1.0	

Lead Based Paint - XRF Testing Results

Project: PONCE HEALTH SCIENCES UNIVERSITY-BUILDING I
Location: PONCE PR
Client: LOA MANAGEMENT

Date: Monday, August 13, 2018
Inspector: KS/NT
XRF instrument: Heuresis Pb200i Alpha (serial # 1142)

I.D. #	Location	Floor	Side	Room	Structure	Substrate	Color	XRF (mg/cm^2)	Comments
20	EXTERIOR	1	D	EXTERIOR	WALL	CONCRETE	BEIGE	<1.0	
21	EXTERIOR	1	D	EXTERIOR	BASE	CONCRETE	BEIGE	<1.0	
22	EXTERIOR	1	D	EXTERIOR	COLUMN 1	METAL	BLUE	<1.0	
23	EXTERIOR	1	B	EXTERIOR	WALL	CONCRETE	BEIGE	<1.0	
24	EXTERIOR	1	C	EXTERIOR	BASE	CONCRETE	BEIGE	<1.0	
25	EXTERIOR	1	C	EXTERIOR	WALL	CONCRETE	BEIGE	<1.0	
26	EXTERIOR	1	C	EXTERIOR	WINDOW FRAME	CONCRETE	BEIGE	<1.0	
	CALIBRATION	-	-	-	-	-	-	0.30	
	CALIBRATION	-	-	-	-	-	-	1.00	
	CALIBRATION	-	-	-	-	-	-	0.30	

Attachment 5

Inspectors, XRF Instrument and Laboratory Accreditations



Asbestos Inspectors –PREQB



National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

Eurofins CEI, Inc.
730 SE Maynard Road
Cary, NC 27511
Dr. Tianbao Bai
Phone: 919-481-1413 Fax: 919-481-1442
Email: tianbaobai@eurofinsus.com
http://www.ceilabs.com

ASBESTOS FIBER ANALYSIS — NVLAP LAB CODE 101768-0

Bulk Asbestos Analysis

Code	*Description*
18/A01	EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

Airborne Asbestos Analysis

Code	*Description*
18/A02	U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and Nonmandatory-and Mandatory Section to Determine Completion of Response Actions" as found in 40 CFR, Part 763, Subpart E, Appendix A.

For the National Voluntary Laboratory Accreditation Program

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101768-0

Eurofins CEI, Inc.

Cary, NC

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Asbestos Fiber Analysis

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2018-04-01 through 2019-03-31

Effective Dates

DEPARTMENT OF COMMERCE · UNITED STATES OF AMERICA

For the National Voluntary Laboratory Accreditation Program





PR Environmental Quality Board
Lead-based Paint Inspectors and Company Accreditations

ESTADO LIBRE ASOCIADO DE PUERTO RICO
OFICINA DEL GOBERNADOR
JUNTA DE CALIDAD AMBIENTAL

JCA
JUNTA DE CALIDAD AMBIENTAL
ESTADO LIBRE ASOCIADO DE PUERTO RICO

Este certificado es otorgado a:

Nortol Environmental & Occupational Safety, Inc.
(# s.social: 54-2076063)

Por haber cumplido con los requisitos establecidos en el Capítulo V, Regla 1541, sección B(2) del Reglamento para el Control de Actividades de Mitigación de Pintura con Base de Plomo. Se le otorga una certificación en la disciplina de

Empresa

Para llevar a cabo actividades de mitigación de pintura con base de plomo en la jurisdicción de Puerto Rico

Número de Certificado
6547 - 0218 – LF - 001

Este certificado está sujeto a ser revocado, suspendido, modificado o enmendado debido a causas que incluyan evidencia de no cumplimiento, información falsa provista en la solicitud o por cualquier alteración que afecte la habilidad de llevar a cabo las tareas efectivamente

Fecha de emisión: 05 de marzo de 2018
Fecha de expiración: 04 de marzo de 2019

Tania Vázquez Rivera
Directora Ejecutiva

Performance Characteristic Sheet

EFFECTIVE DATE: **December 1, 2015**

MANUFACTURER AND MODEL:

Make: ***Heuresis***
Models: ***Model Pb200i***
Source: ***^{57}Co, 5 mCi (nominal – new source)***

FIELD OPERATION GUIDANCE

OPERATING PARAMETERS:

Action Level mode

XRF CALIBRATION CHECK LIMITS:

0.8 to 1.2 mg/cm^2 (inclusive)

SUBSTRATE CORRECTION:

Not applicable

INCONCLUSIVE RANGE OR THRESHOLD:

ACTION LEVEL MODE READING DESCRIPTION	SUBSTRATE	THRESHOLD (mg/cm^2)
Results not corrected for substrate bias on any substrate	Brick Concrete Drywall Metal Plaster Wood	1.0 1.0 1.0 1.0 1.0 1.0

BACKGROUND INFORMATION

EVALUATION DATA SOURCE AND DATE:

This sheet is supplemental information to be used in conjunction with Chapter 7 of the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* ("HUD Guidelines"). Performance parameters shown on this sheet are calculated using test results on building components in the HUD archive. Testing was conducted on 146 test samples in November 2015, with two separate instruments running software version 2.1-2 in Action Level test mode. The actual source strength of each instrument on the day of testing was approximately 2.0 mCi; source ages were approximately one year.

OPERATING PARAMETERS

Performance parameters shown in this sheet are applicable only when properly operating the instrument using the manufacturer's instructions and procedures described in Chapter 7 of the HUD Guidelines.

XRF CALIBRATION CHECK:

The calibration of the XRF instrument should be checked using the paint film nearest 1.0 mg/cm^2 in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm^2 film).

If the average (rounded to 1 decimal place) of three readings is outside the acceptable calibration check range, follow the manufacturer's instructions to bring the instrument into control before XRF testing proceeds.

SUBSTRATE CORRECTION VALUE COMPUTATION:

Chapter 7 of the HUD Guidelines provides guidance on correcting XRF results for substrate bias. Supplemental guidance for using the paint film nearest 1.0 mg/cm^2 for substrate correction is provided:

XRF results are corrected for substrate bias by subtracting from each XRF result a correction value determined separately in each house for single-family housing or in each development for multifamily housing, for each substrate. The correction value is an average of XRF readings taken over the NIST SRM paint film nearest to 1.0 mg/cm^2 at test locations that have been scraped bare of their paint covering. Compute the correction values as follows:

> Using the same XRF instrument, take three readings on a bare substrate area covered with the NIST SRM paint film nearest 1 mg/cm^2. Repeat this procedure by taking three more readings on a second bare substrate area of the same substrate covered with the NIST SRM.
>
> Compute the correction value for each substrate type where XRF readings indicate substrate correction is needed by computing the average of all six readings as shown below.
>
> For each substrate type (the 1.02 mg/cm^2 NIST SRM is shown in this example; use the actual lead loading of the NIST SRM used for substrate correction):
>
> Correction value = (1st + 2nd + 3rd + 4th + 5th + 6th *Reading*)/6 - 1.02 mg/cm^2
>
> Repeat this procedure for each substrate requiring substrate correction in the house or housing development.

EVALUATING THE QUALITY OF XRF TESTING:

Randomly select ten testing combinations for retesting from each house or from two randomly selected units in multifamily housing.

Conduct XRF re-testing at the ten testing combinations selected for retesting.

Determine if the XRF testing in the units or house passed or failed the test by applying the steps below. Compute the Retest Tolerance Limit by the following steps:

Determine XRF results for the original and retest XRF readings. Do not correct the original or retest results for substrate bias. In single-family and multi-family housing, a result is defined as a single reading. Therefore, there will be ten original and ten retest XRF results for each house or for the two selected units.

Calculate the average of the original XRF result and the retest XRF result for each testing combination.

Square the average for each testing combination.

Add the ten squared averages together. Call this quantity C.

Multiply the number C by 0.0072. Call this quantity D.

Add the number 0.032 to D. Call this quantity E.

Take the square root of E. Call this quantity F.

Multiply F by 1.645. The result is the Retest Tolerance Limit.

Compute the average of all ten original XRF readings.

Compute the average of all ten re-test XRF readings.

Find the absolute difference of the two averages.

If the difference is less than the Retest Tolerance Limit, the inspection has passed the retest. If the difference of the overall averages equals or exceeds the Retest Tolerance Limit, this procedure should be repeated with ten new testing combinations. If the difference of the overall averages is equal to or greater than the Retest Tolerance Limit a second time, then the inspection should be considered deficient.

Use of this procedure is estimated to produce a spurious result approximately 1% of the time. That is, results of this procedure will call for further examination when no examination is warranted in approximately 1 out of 100 dwelling units tested.

TESTING TIMES:

In the Action Level paint test mode, the instrument takes the longest time to complete readings close to the Federal standard of 1.0 mg/cm^2. The table below shows the mean and standard deviation of actual reading times by reading level for paint samples during the November 2015 archive testing. The tested instruments reported readings to one decimal place. No significant differences in reading times by substrate were observed. These times apply only to instruments with the same source strength as those tested (2.0 mCi). Instruments with stronger sources will have shorter reading times and those with weaker sources, longer reading times, than those in the table.

Mean and Standard Deviation of Reading Times in Action Level Mode by Reading Level		
Reading (mg/cm^2)	**Mean Reading Time (seconds)**	**Standard Deviation (seconds)**
< 0.7	3.48	0.47
0.7	7.29	1.92
0.8	13.95	1.78
0.9 – 1.2	15.25	0.66
1.3 – 1.4	6.08	2.50
≥ 1.5	3.32	0.05

CLASSIFICATION OF RESULTS:

XRF results are classified as **positive** if they are **greater than or equal** to the stated threshold for the instrument (1.0 mg/cm^2), and *negative* if they are *less than* the threshold.

DOCUMENTATION:

A report titled *Methodology for XRF Performance Characteristic Sheets* (EPA 747-R-95-008) provides an explanation of the statistical methodology used to construct the data in the sheets, and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. The report may be downloaded at http://www2.epa.gov/lead/methodology-xrf-performance-characteristic-sheets-epa-747-r-95-008-september-1997.

This XRF Performance Characteristic Sheet (PCS) was developed by QuanTech, Inc., under a contract with the XRF manufacturer.

Attachment VII: Endangered Species Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402

Endangered Species Act (CEST and EA)

General requirements	ESA Legislation	Regulations
Section 7 of the Endangered Species Act (ESA) mandates that federal agencies ensure that actions that they authorize, fund, or carry out shall not jeopardize the continued existence of federally listed plants and animals or result in the adverse modification or destruction of designated critical habitat. Where their actions may affect resources protected by the ESA, agencies must consult with the Fish and Wildlife Service and/or the National Marine Fisheries Service ("FWS" and "NMFS" or "the Services").	The Endangered Species Act of 1973 (16 U.S.C. 1531 *et seq*.); particularly section 7 (16 USC 1536).	50 CFR Part 402
References		
https://www.hudexchange.info/environmental-review/endangered-species		

1. **Does the project involve any activities that have the potential to affect species or habitats?**

☒No, the project will have No Effect due to the nature of the activities involved in the project.

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.*

☐No, the project will have No Effect based on a letter of understanding, memorandum of agreement, programmatic agreement, or checklist provided by local HUD office.

Explain your determination:

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.*

☒Yes, the activities involved in the project have the potential to affect species and/or habitats. → *Continue to Question 2.*

2. **Are federally listed species or designated critical habitats present in the action area?**

Obtain a list of protected species from the Services. This information is available on the FWS Website or you may contact your local FWS and/or NMFS offices directly.

☒No, the project will have No Effect due to the absence of federally listed species and designated critical habitat.

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination. Documentation*

may include letters from the Services, species lists from the Services' websites, surveys or other documents and analysis showing that there are no species in the action area.

☐Yes, there are federally listed species or designated critical habitats present in the action area. → *Continue to Question 3.*

3. What effects, if any, will your project have on federally listed species or designated critical habitat?

☐No Effect: Based on the specifics of both the project and any federally listed species in the action area, you have determined that the project will have absolutely no effect on listed species or critical habitat.

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination. Documentation should include a species list and explanation of your conclusion, and may require maps, photographs, and surveys as appropriate.*

☐May Affect, Not Likely to Adversely Affect: Any effects that the project may have on federally listed species or critical habitats would be beneficial, discountable, or insignificant.

→ *Continue to Question 4, Informal Consultation.*

☐Likely to Adversely Affect: The project may have negative effects on one or more listed species or critical habitat.

→ *Continue to Question 5, Formal Consultation.*

4. Informal Consultation is required

Section 7 of ESA (16 USC. 1536) mandates consultation to resolve potential impacts to endangered and threatened species and critical habitats. If a HUD-assisted project may affect any federally listed endangered or threatened species or critical habitat, then compliance is required with Section 7. See 50 CFR Part 402 Subpart B Consultation Procedures.

Did the Service(s) concur with the finding that the project is Not Likely to Adversely Affect?

☐Yes, the Service(s) concurred with the finding.

→ *Based on the response, the review is in compliance with this section. Continue to Question 6 and provide the following:*

(1) A biological evaluation or equivalent document
(2) Concurrence(s) from FWS and/or NMFS
(3) Any other documentation of informal consultation

Exception: If finding was made based on procedures provided by a letter of understanding, memorandum of agreement, programmatic agreement, or checklist provided by local HUD office, provide whatever documentation is mandated by that agreement.

☐No, the Service(s) did not concur with the finding. → *Continue to Question 5.*

5. Formal consultation is required

Section 7 of ESA (16 USC 1536) mandates consultation to resolve potential impacts to federally listed endangered and threatened species and critical habitats. If a HUD assisted project may affect any endangered or threatened species or critical habitat, then compliance is required with Section 7. See 50 CFR Part 402 Subpart B Consultation Procedures.

→ *Once consultation is complete, the review is in compliance with this section. Continue to Question 6 and provide the following:*

(1) A biological assessment, evaluation, or equivalent document

(2) Biological opinion(s) issued by FWS and/or NMFS

(3) Any other documentation of formal consultation

6. For the project to be brought into compliance with this section, all adverse impacts must be mitigated. Explain in detail the proposed measures that will be implemented to mitigate for the impact or effect, including the timeline for implementation.

☐Mitigation as follows will be implemented:

☐No mitigation is necessary.

Explain why mitigation will not be made here:

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

Although the USFWS IpaC tool identified the potential presence of Chilabothrus. inornatus (Puerto Rican Boa) the species was not found at the Phase 2 Site. A protocol to avoid/ minimize impacts to the species or its habitat is provided. If a Puerto Rican Boa is found in the project activity area, work shall cease until the Boa moves off on its own. If the Boa does not move off, the CM shall contact the PR Department of Natural and Environmental Resources and ask for them to relocate the Boa. A Flora and Fauna Assessment performed at the project (Phases 1a, 1b and 2) site did not find endangered species, or its habitat, that may be impacted by the proposed project.

A PRDNER Natural Habitat Certification classified the site (Phases 1a-1b and 2) as Category 6 (Low probability of having or developing ecological value). Phase 3 of the proposed project comprises only the remodel of existing buildings. The proposed project is not likely to adversely affect Puerto Rican boas. Therefore,if required conditions are met,this topic is in compliance with HUD regulations. See Information and/or Figures attached

Are formal compliance steps or mitigation required?

− Yes

X No

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Caribbean Ecological Services
Field Office
P.O. Box 491
Boqueron, PR 00622

In Reply Refer To:
FWS/R4/CESFO/BKT/HUD

JAN 14 2013

Mr. Efrain Maldonado
Field Office Director
U.S. Department of Housing and Urban Development
235 Federico Costa Street, Suite 200
San Juan, Puerto Rico 00918

Re: Blanket Clearance Letter for Federally sponsored projects, Housing and Urban Development

Dear Mr. Maldonado:

The U.S. Fish and Wildlife Service (USFWS) is one of two lead Federal Agencies responsible for the protection and conservation of Federal Trust Resources, including threatened or endangered species listed under the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.) (ESA). In the U.S. Caribbean, the USFWS has jurisdiction over terrestrial plants and animals, the Antillean manatee and sea turtles when nesting. The National Marine Fisheries Service has jurisdiction over marine species, except for the manatee. The ESA directs all Federal agencies to participate in conserving these species. Specially, section 7 of the ESA requires Federal agencies to consult with the USFWS to ensure that actions they fund authorize, permit, or otherwise carry out will not jeopardize the continued existence of any listed species or adversely modify designated critical habitat. The USFWS issued regulations in 1986 detailing the consultation process. As part of this consultation process, the USFWS review development projects to assist Federal agencies on the compliance of the ESA.

The U.S. Department of Housing and Urban Development (HUD) typically allocate grant funds for rural and urban development projects. Obligations under the ESA, as well as the National Environmental Policy Act (NEPA), require HUD to perform consultation and an environmental impact review prior to the project's authorization. Primarily, these projects involve repair or reconstruction of existing facilities associated with developed land.

In order to expedite the consultation process, the Caribbean Ecological Services Field Office has developed this Blanket Clearance Letter (BCL) to cover for activities and projects that typically result in no adverse effects to federally-listed species under our jurisdiction. If projects comply with the project criteria discussed below, no further consultation with the USFWS is needed.

Project Criteria

1. Street resurfacing.
2. Construction of gutters and sidewalks along existing roads.
3. Reconstruction or emergency repairs of existing buildings, facilities and homes.
4. Rehabilitation of existing occupied single family homes, and buildings; provided that equipment storage or staging areas are not located on vacant property harboring a wetland and/or forested vegetation and that the lighting associated to the new facilities is not visible directly or indirectly from a beach.
5. Demolition of dilapidated single family homes or buildings; provided that the demolition debris is disposed in certified receiving facilities; equipment storage or staging areas are not located on vacant property harboring a wetland and/or forested vegetation.
6. Rebuilding of demolished single family homes or buildings, provided that the new construction is within the existing footprint of the previous structure and/or within pre-existing grassed or paved areas, and that the lighting associated to the new facilities are not visible directly or indirectly from a beach.
7. Activities within existing Right of Ways (ROWs) of roads, bridges and highways, when limited to actions that do not involve cutting native vegetation or mayor earth moving; and are not located within, or adjacent to, drainages, wetlands, or aquatic systems. These activities include the installation of potable water and sanitary pipelines.
8. Improvements to existing recreational facilities, including the installation of roofs to existing basketball courts, provided that the lighting associated to the facilities are not visible directly or indirectly from the beach.
9. Construction of electric underground systems in existing towns and communities, provided that the property is not a wetland area and the lighting associated to the facilities are not visible directly or indirectly from the beach.
10. Construction of facilities on vacant properties covered with grasses in urban areas, provided that the lighting associated to the facilities are not visible directly or indirectly from the beach.
11. Construction of houses, buildings or acquiring lands in urban areas covered by grass for relocation of low income families and/or facilities that have been affected by weather conditions.

Determination:

Based on the nature of the projects described above and habitat characteristics described on project criteria, we have determined that the actions and type of projects described above may be conducted within this BCL without adversely affecting federally-listed

species under our jurisdiction. Thus, consultation under Section 7 of the Endangered Species Act is not required.

In all situations, HUD, and the municipalities are expected to implement Best Management Practices, where applicable, to ensure that impacts from erosion and stream sedimentation are appropriately minimized.

The Service encourages your agency to enhance the conservation of our trust resources (i.e.; listed species, wetlands, aquatic habitats, migratory birds and marine mammals). We therefore, provide the following recommendations that have proven to help in this way.

Water Crossing Structures:

1. Use of bottomless culverts or single span bridges instead of traditional box or RCP culverts or any other water crossing structure that impacts the stream bottom, particularly in streams which support native fish. The use of bottomless culverts or a short span bridge would provide a more stable crossing and would not alter the stream habitat. However, if bottomless structures or bridges are not feasible due to cost or engineering constraints, we recommend the following criteria be used to maintain good habitat in the streams:

    a. The stream should not be widened to fit the bridge since this can lead to sedimentation during low flows and possible bank erosion during high flows. Rather, the bridge should be designed to fit the stream channel at the point of crossing. Culverts should be sized to carry natural bank full flow. Additional flow can be capture by culverts placed at a higher elevation so as not to impact bank full flows.
    b. Bridge abutments, wing walls or any other structures should not intrude into the active stream channel.
    c. All culvert footings must be countersunk into the stream channel at both the invert and outlet ends at a minimum of 10% of the culvert height. This will align the water crossing structure with the slope of the stream.
    d. Waterways must not be blocked as to impede the free movement of water and fish. Materials moved during construction, such as grubbing, earth fills, and earth cut materials must not be piled where they can fall back into the stream and block the drainage courses.
    e. Appropriate erosion and/or sedimentation controls measures are to be undertaken to protect water quality until riverbanks are re-vegetated. It has been our experience that appropriate erosion and/or sedimentation control measures are not implemented properly by project contractors. In order to function properly, silt fences need to be buried 6" (proper depth is marked by a line on the silt fence) and supported at regular intervals by wood stakes. For that reason we are recommending that

the enclosed drawing of proper silt fence installation is included in all final project construction plans.

f. Upon completion of a water crossing construction, any temporary fill, must be removed from the construction area and disposed in a landfill.

Limitations:

Actions that do not meet the above project criteria, such as actions requiring placement of fill, disturbance, or modification to land outside of an existing access road or ROW; actions that occur on vacant property harboring a wetland and/or forest vegetation; actions requiring excavation, clearing of native vegetation, or alteration of storm water drainage patterns; or actions that require lighting which can be directly or indirectly seen from a beach, must be individually coordinated through the Caribbean Ecological Services Field Office and will be evaluated on a case by case basis.

The Service reserves the right to revoke or modify this BCL if:

1. New information reveals that the categories of work covered in this BCL may affect listed or designated critical habitat in a manner, or to an extent, not previously considered.
2. The categories of work included in this BCL are subsequently modified to include activities not considered in this review.
3. New species are listed or critical habitat designated that may be affected.

It is our mission to work with others, to conserve, protect and enhance fish wildlife and plants and their habitats for the continuing benefit of our people.

To obtain additional information on threatened and endangered species, you may visit our website http://www.fws.gov/caribbean/ES where you will also find the Map of the Species by Municipality and the Map of Critical Habitat. The USFWS has also developed a web based tool called IPac. Please visit http://www.ecos.fws.gov/ipac and familiarize yourself with the features we offer. We encourage you to begin your project planning process by requesting an **Official Species List** for your individual project that will include all species that may occur in the vicinity of the action area and includes a map of the action area. The site will also identify designated critical habitat, or other natural resources of concern that may be affected by your proposed project. At this time, best management practices or conservation measures are not available at the site but we expect the site to continue growing in its offering.

These maps provide information on the species/habitat relations within a municipality and could provide the applicants an insight if the proposed action is covered under this BCL or may affect a species, thus requiring individual review.

If you have any additional question regarding this BCL, please do not hesitate to contact Marelisa Rivera, Deputy Field Supervisor, at 787-851-7297 extension 206.

Sincerely yours,

Edwin E. Muñiz
Field Supervisor

Enclosures (Fact Sheets)

cc: OCAM, San Juan
Office of Federal Funds, 78 Municipalities of Puerto Rico
AAA
PRFAA
DNER

US Fish and Wildlife Service

Ecological Services in the Caribbean

Caribbean Field Office

Project evaluation



Our mission is to conserve, protect and enhance fish and wildlife and their habitats through consultation, cooperation and communication for the continuing benefit of the American people.

Legal authorities:

- Endangered Species Act (ESA)
- Fish and Wildlife Coordination Act
- Migratory Bird Treaty Act
- Coastal Barriers Act

Roles and Responsibilities:

- Provide technical assistance to Federal and Commonwealth agencies to minimize possible impacts of land and water projects to our trust resources
  - *Wetlands and other aquatic habitats
  - *Endangered Species and their habitats
  - *Migratory Birds
  - *Critical Wildlife Areas
  - *Coastal Barriers
- Assist with ESA Section 7 compliance through informal and formal consultation processes

How do we assist others?

- Determine presence / absence of wetland resources, threatened and endangered species habitat, coastal barriers, important wildlife areas within the action area
- Evaluate possible direct, indirect and cumulative impacts
- Provide conservation recommendations to avoid, minimize and/or mitigate impacts
- General recommendations for habitat enhancement

Minimum requirements for the evaluation of projects:

- An 8.5 by 11 inch copy of the specific site location on a USGS topographic map (1:20,000) marked with an arrow (➡)
- Project description
- Aerial photo of the project site
- Latitude and Longitude (degrees, minutes and seconds or decimal degrees)
- Environmental Documents (EA and EIS)
- Specific studies (by qualified personnel)



For more information:

US Fish and Wildlife Service
Caribbean Field Office
Raod 301, Km. 5.1
Bo. Corozo
Boquerón, PR 00622
http://www.fws.gov
http://www.fws.gov/caribbean/es

US Fish and Wildlife Service

Caribbean Ecological Services Field Office

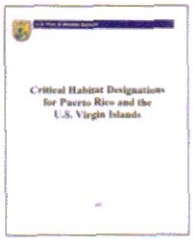
Endangered Species Lists Using Web-based Tools

The U.S. Fish and Wildlife Service's Caribbean Ecological Services Field Office (CESFO) provides technical assistance to private individuals and organizations, as well as Federal, state, and local agencies pursuant to the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.). To assist project sponsors or applicants with the process of determining whether a Federally-listed species and/or "critical habitat" may occur within their proposed project area, we have developed Web-based tools. These tools were developed primarily to assist Federal agencies that are consulting with us under Section 7(a)(2) of the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

IPaC. The US Fish& Wildlife Service (USFWS) has a tool named IPaC. IPaC stands for Information, Planning, and Conservation. This system is designed for easy, public access to the natural resources information for which the USFWS has trust or regulatory responsibility. Examples include Threatened and Endangered species, migratory birds, National Refuge lands, Coastal Barrier Resource Units, and the management of invasive species. One of the primary goals of the IPaC system is to provide information in a manner that assists individuals in planning their activities within the context of natural resource conservation. The IPaC system also assists people through the various regulatory consultation, permitting and approval processes administered by the USFWS, helping achieve more effective and efficient results for both the project proponents and natural resources. Through IPaC, you can get a preliminary USFWS species list in addition to links to species life history information, the USFWS Migratory Bird program, and more. You can access IPaC at: http://ecos.fws.gov/ipac

CESFO List of Threatened & Endangered Species and Critical Habitat Designations: CESFO has developed another tool (Species Map) that can be used as a quick reference to find out where the Federally-listed species





are known to occur, as well as those likely to occur, in any given municipality in Puerto Rico and island in the U.S. Virgin islands. It identifies general areas where the species may be located. However, it does not represent the absolute distribution of the species and does not constitute a recommendation or comment issued by our agency in reference to a proposed project. This list represents the best available information regarding known or likely occurrences of Federally-listed species and is subject to change as new information becomes available. You can access this database at http://www.fws.gov/caribbean/es/PDF/Map/pdf



Be aware that Section 9 of the ESA prohibits unauthorized taking of listed species and applies to Federal and non-Federal activities. Under the Act, it is illegal for any person subject to the jurisdiction of the United States to take (includes harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect; or to attempt any of these), import or export, ship in interstate or foreign commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any endangered fish or wildlife species and most threatened fish and wildlife species. It is also illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. "Harm" includes any act which actually kills or injures fish or wildlife, and case law has clarified that such acts may include significant habitat modification or degradation that significantly impairs

essential behavioral patterns of fish or wildlife. For projects not authorized, funded, or carried out by a Federal agency, consultation with the Service pursuant to Section 7(a)(2) of the ESA is not required. However, no person is authorized to "take[1]" any listed species without appropriate authorizations from the Service. Therefore, we provide technical assistance to individuals and agencies to assist with project planning to avoid the potential for "take," or when appropriate, to provide assistance with their application for an incidental take permit pursuant to Section 10(a)(1)(B) of the ESA.

If the project is within the distribution of the species, additional information may be needed to determine the presence of habitat. In some cases, specialized surveys may be needed to determine the presence or absence of the species in a particular area.

For additional information on fish and wildlife resources or State-listed species, we suggest contacting the Puerto Rico Department of Natural and Environmental Resources and the U.S. Virgin Islands Department of Planning and Natural Resources.

For further assistance, please feel free to contact us at (787) 851-7297 or visit our Web page at www.fws.gov/caribbean/es if you need further assistance.

For further information visit our national websites at:
http://www.fws.gov
http://ecos.fws.gov

U.S. Fish & Wildlife Service

Consultations with Federal Agencies

Section 7 of the Endangered Species Act

The purposes of the Endangered Species Act are to provide a means for conserving the ecosystems upon which endangered and threatened species depend and a program for the conservation of such species. The ESA directs all Federal agencies to participate in conserving these species. Specifically, section 7 (a)(1) of the ESA charges Federal agencies to aid in the conservation of listed species, and section 7 (a)(2) requires the agencies to ensure that their activities are not likely to jeopardize the continued existence of listed species or adversely modify designated critical habitats.



USGS

In response to requests for consultations from the U. S. Coast Guard with regard to manatees and sea turtles, the South Florida Office of the U. S. Fish and Wildlife Service has provided guidance about events such as firework displays, regattas, boat parades and races, and fishing tournaments.

How does the consultation process support the recovery of species and their ecosystems?

The Endangered Species Program of the U.S. Fish and Wildlife Service uses section 7 tools in partnership with other Service programs and other Federal agencies to collaboratively solve conservation challenges, as well as create opportunities, using section 7 consultations, to recover the ecosystems of listed species. Consultations also provide ways to implement recovery tasks by addressing threats to listed species that may result from Federal agency programs and activities.

What is the consultation process that occurs under section 7(a)(2)?

The provision under section 7 that is most often associated with the Service and other Federal agencies is section 7(a)(2). It requires Federal agencies to consult with the Service to ensure that actions they fund, authorize, permit, or otherwise carry out will not jeopardize the continued existence of any listed species or adversely modify designated critical habitats. The Service issued regulations in 1986 detailing the consultation process, and we have since completed a handbook describing the process in detail. The handbook is available on our web site at http://www.fws.gov/endangered/esa-library/pdf/esa_section7_handbook.pdf.

What is the Service doing to facilitate the consultation process?

Designing projects in ways that are compatible with the conservation needs of listed species and their ecosystems is among the most effective methods of ensuring a more rapid and efficient section 7 consultation process, as well as species' recovery. The Information, Planning, and Conservation System is an emerging tool for action agencies, their applicants, and other project proponents to use during the initial phases of project development and assessment. The system will allow for more effective integration of listed resource conservation needs and the eventual streamlining of section 7(a)(2) consultation.

How does a consultation get started?

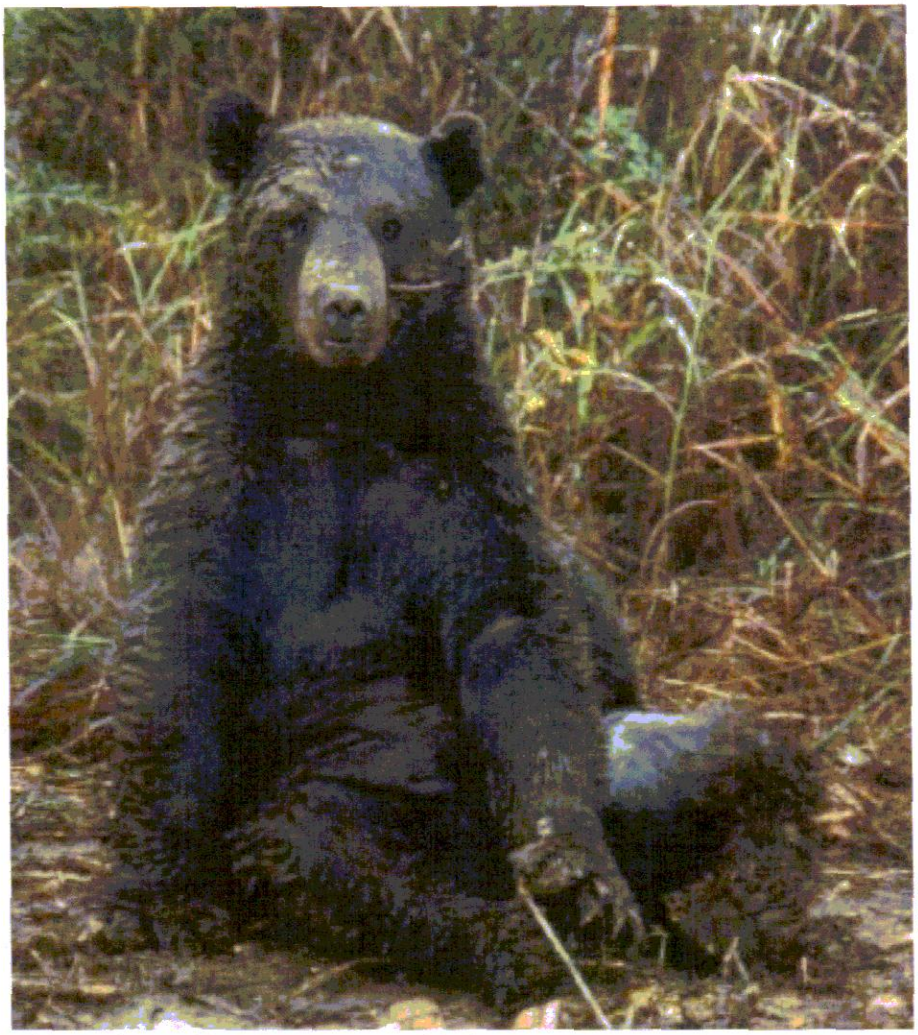
Early coordination is one of the most effective methods of (1) streamlining section 7 consultation, (2) reducing the need to make project modifications during the consultation process, and (3) improving the ability of section 7 to fulfill its role as a recovery tool. Federal agencies, applicants, and the Service engage in early coordination to develop methods of integrating proposed activities with the conservation needs of listed resources before the proposed actions are fully designed.

Before initiating an action, the Federal agency or its non-Federal permit applicant should coordinate with the Service as to the species that may be within their action area. If a listed species is present, the Federal agency must determine whether the project may affect it. If so, consultation may be required. If the action agency determines (and the Service agrees) that the project is not likely to adversely affect a listed species or designated critical habitat, and the Service concurs in writing, then the consultation (informal to this point) is concluded.

What happens if a Federal project may adversely affect a listed species?

If the Federal agency determines that a project is likely to adversely affect a listed species or designated critical habitat, the agency initiates formal consultation by providing information with regard to the nature of the anticipated effects. The ESA requires that consultation be completed within 90 days, and the regulations allow an additional 45 days for the Service to prepare a biological opinion. The analysis of whether or not the proposed action is likely to jeopardize the continued existence of the species or adversely modify designated critical habitat is contained in a biological opinion. If a jeopardy or adverse modification determination is made, the biological opinion must identify any reasonable and prudent alternatives that could allow the project to move forward.

The Service must anticipate any incidental take that may result from the proposed project and, provided that such take will not jeopardize the continued existence of the listed species, authorize that take in an incidental take statement. The latter contains clear terms and conditions designed to reduce the impact of the anticipated take to the species involved. The authorization of incidental take is contingent upon the Federal agency carrying out the terms and conditions. If the Service issues either a non-jeopardy opinion or a jeopardy opinion that contains reasonable and prudent alternatives, it may include an incidental take statement.



Dan Anderson/USFWS

This Louisiana black bear was one of the largest ever captured on Tensas River National Wildlife Refuge, weighing in at over 400 pounds. The bear was trapped using a leg-hold cable snare that does not injure the animal. The biological information obtained, including weight, sex, a tooth for aging, and other measurements, is part of the Service's ongoing research efforts to aid in the recovery of this threatened subspecies. Afterwards, the bear was released on site.

What is the consultation workload?

In Fiscal Year 2010, the Service assisted Federal agencies in carrying out their responsibilities under section 7 on more than 30,000 occasions. The vast majority of the workload was technical assistance to Federal agencies and informal consultations on actions that were not likely to adversely affect listed species or their designated critical habitat. A large percentage of projects, as initially planned, would have had adverse impacts to listed species, but were dealt with through informal consultation. In these situations, the Federal agency made changes to the project design so that adverse impacts to listed species were avoided.

What type of guidance is available for other Federal agencies?

Guidance is available on our section 7 web site at http://www.fws.gov/endangered/what-we-do/consultations-overview.html. Please call us at 703-358-2171 if you have any questions, or see our Endangered Species Program Contacts at http://www.fws.gov/endangered/regions/index.html to locate a Service office in your area.

U. S. Fish and Wildlife Service
Endangered Species Program
4401 N. Fairfax Drive, Room 420
Arlington, VA 22203
703-358-2171
http://www.fws.gov/endangered/

April 2011

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Ponce County, Puerto Rico



Local office

Caribbean Ecological Services Field Office

(787) 851-7297
(787) 851-7440

MAILING ADDRESS
Post Office Box 491
Boqueron, PR 00622-0491

PHYSICAL ADDRESS
Carr 301, Km 5.1, Bo Corozo
Boqueron, PR 00622-0510

http://www.fws.gov/caribbean/es

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Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act requires Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are not shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Reptiles

NAME	STATUS
Puerto Rican Boa Epicrates inornatus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6628	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

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- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

THERE ARE NO MIGRATORY BIRDS OF CONSERVATION CONCERN EXPECTED TO OCCUR AT THIS LOCATION.

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

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If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME
This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

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Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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U.S. FISH AND WILDLIFE SERVICE
CARIBBEAN ECOLOGICAL SERVICES FIELD OFFICE

Conservation Measures for the Puerto Rican boa (*Chilabothrus inornatus*)

Section 7 (a)(1) of the Endangered Species Act (ESA) charges Federal agencies to aid in the conservation of listed species, and section 7 (a)(2) requires the agencies, through consultation with the U.S. Fish and Wildlife Service (Service), to ensure their activities are not likely to jeopardize the continued existence of listed species or adversely modify designated critical habitats. Section 7 applies to the management of Federal lands as well as Federal actions that may affect listed species, such as Federal approval of private activities through the issuance of Federal funding, permits, licenses, or other actions. Any person that injures, captures, or kills a Puerto Rico boa is subject to penalties under the ESA. If Federal funds or permits are needed, the funding or permitting agency should initiate Section 7 consultation with the Service. To initiate a consultation under the Section 7 of the ESA, you must submit a project package with the established minimum requirements. These conservation measures should be incorporated into the project plans to minimize possible impacts to the species.

The endangered Puerto Rican (PR) boa (*Chilabothrus inornatus*, formerly *Epicrates inornatus*) is the largest endemic snake species that inhabits Puerto Rico. The PR boa is non-venomous and does not pose any life threatening danger to humans, but some individuals may try to bite if disturbed or during capture or handling. Its body color ranges from tan to dark brown with irregular diffuse marking on the dorsum, but some individuals lack marking and are uniformly dark. Juveniles may have a reddish color with more pronounced markings. In general, as they mature, their body color tends to darken.



Adult PR boa – *Chilabothrus inornatus*
Photo: Puerto Rico by JP Zegarra

Last Revised: November 2020

The Puerto Rican boa was federally listed in 1970. Currently, the species has an island-wide distribution and occurs in a wide variety of habitat types ranging from wet montane to subtropical dry forest, and can be found from mature forest to areas with different degrees of human disturbance like roadsides or houses, especially if near their habitat in rural areas. This boa is considered mostly nocturnal, remaining less active, concealed or basking under the sun during the day.

The Service has developed the following conservation measures with the purpose of assisting others to avoid or minimize adverse effects to the PR boa and its habitat. These recommendations may be incorporated into new project plans and under certain circumstances into existing projects. Depending on the project, additional conservation measures can be implemented besides the ones presented in this document.

Conservation Measures:

1. Inform all project personnel about the potential presence of the PR boa in areas where the proposed work will be conducted. A pre-construction meeting should be conducted to inform all project personnel about the need to avoid harming the species as well as penalties for harassing or harming PR boas. An educational poster or sign with photo or illustration of the species should be displayed at the project site.

2. Prior to any construction activity, including removal of vegetation and earth movements, the boundaries of the project and areas to be excluded and protected should be clearly marked in the project plan and in the field in order to avoid further habitat degradation into forested and conservation areas.

3. Once areas are clearly marked, and prior to the use of heavy machinery and any construction activity (including removal of vegetation and earth movement), a biologist or personnel with experience on this species should survey the areas to be cleared to verify the presence of any PR boa within the work area.

4. The PR boa is considered more active at night. Thus, in order to maximize its detection, the species should be searched at nights prior to habitat disturbance.

5. Once the area has been searched for PR boas, vegetation should first be cleared by hand to the maximum extent possible. Vegetation should be cut about one meter above ground prior to the use of heavy machinery for land clearing. Cutting vegetation by hand will allow boas present on site to move away on their own to adjacent available habitat. Any stone walls or naturally occurring rock piles must be carefully dismantled by hand as these are refuges for the snake. This will allow any boas present to vacate the site without injury.

6. For all boa sightings (dead or alive), record the time and date of the sighting and the specific location where it was found. PR boa data should also include a photo of the animal (dead or alive), site GPS coordinates, the time and date, and comments on how the animal was detected and its behavior.

Last Revised: November 2020

7. If a PR boa is found within any of the working or construction areas, activities should stop at that area and information recorded (see #6). **Do not capture the boa.** If boas need to be moved out of harm's way, designated personnel shall immediately contact the Puerto Rico Department of Natural and Environmental Resources (PRDNER) Rangers for safe capture and relocation of the animal (PRDNER phone #s: ((787) 724-5700, (787) 230-5550, (787) 771-1124). If immediate relocation is not an option, project-related activities at this area must stop until the boa moves out of harm's way on its own. Activities at other work sites, where no boas have been found after surveying the area, may continue.

8. If a PR boa is captured by the PRDNER, record the name of the PRDNER staff and information on where the PR boa will be taken. This information should be reported to the Service.

9. Measures should be taken to avoid and minimize PR boa casualties by heavy machinery or motor vehicles being used on site. Any heavy machinery left on site (staging) or near potential PR boa habitat (within 50 meters of potential boa habitat), needs to be thoroughly inspected each morning before work starts to ensure that no boas have sheltered within engine compartments or other areas of the equipment. If PR boas are found within vehicles or equipment, do not capture the animal and let it move on its own or call PRDNER Rangers for safe capture and relocation of the animal (see #7). If not possible, the animal should be left alone until it leaves the vehicle on its own.

10. PR boas may seek shelter in debris piles. Measures should be taken to avoid and minimize boa casualties associated with sheltering in debris piles as a result of project activities. Debris piles should be placed far away from forested areas. Prior to moving, disposing or shredding, debris piles should be carefully inspected for the presence of boas. If debris piles will be left on site, we recommend they be placed in areas that will not be disturbed in the future.

11. If a dead PR boa is found, immediately cease all work in that area and record the information accordingly (see #6). If the PR boa was accidentally? killed as part of the project actions, please include information on what conservation measures had been implemented and what actions that will be taken to avoid further killings. A dead boa report should be sent by email (see contacts below) to the Service within 48 hours of the event.

12. Projects must comply with all state laws and regulations. Please contact the PRDNER for further guidance.

If you have any questions regarding the above conservation measures, please contact the Service:

- Marelisa Rivera, Deputy Field Supervisor
  - Email: marelisa_rivera@fws.gov
  - Office phone (786) 244-0081 or mobile (305) 304-1814
- José Cruz-Burgos, Endangered Species Coordinator
  - Email: jose_cruz-burgos@fws.gov
  - Office phone (786) 244-0081 or mobile (305) 304-1386

Last Revised: November 2020

FLORA AND FAUNA INVENTORY

FOR

PONCE HEALTH SCIENCES UNIVERSITY, PONCE, PUERTO RICO.



Gabriel Berriz y Asociados, Inc.
TALLER ECOPAISAJISTA

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MARCH 2019

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Introduction:

Flora and Fauna assessments are a key element in the environmental planning and permitting processes of any construction project. Flora and Fauna inventories provide relevant information regarding these important components of the environment.

The purpose of this document is to collect the necessary information to produce an inventory of the distinctive Flora and Fauna elements at the proposed project site.

The site:

Ponce Health Sciences University site is located on Marginal PR-2, Canas Urbano ward, municipality of Ponce, Puerto Rico (Attachment I). The proposed project site (NAD 83 centroid: x=180,323.838, y=217,834.227) is property of Arist Medical Sciences University, Public Benefit Corporation and comprises a track of land of an approximately total area of 13,214.45 sqm (about 3.3620 cuerdas). The property boundaries are as follows: North: Marginal street of PR-2, East: Lots property of (North to South): Bigas Baking Co., Rodriguez Hernandez, Adain, Compañ a de Fomento Industrial de Puerto Rico, Rubber and Gaskets Co. of Puerto Rico and Tiber Health Public Benefit Co. West: Municipal street and the tracks of land property of the Puerto Rico Housing Department and Tiber Health Public Benefit Co., and South: with Tiber Health Public Benefit Co. and then with Fundación Damas Inc.

The site is totally developed and covered by structures, parking lots, internal vials, other pavements and planting spaces. Planting spaces are wrapping and interspersed among the structures and paved spaces. Many are covered with gravel and some are planted with mature trees, palms and ornamental shrubs.

The Study Area:

The study site is positioned on the Subtropical Dry Forest climatic zone in Puerto Rico (Ewel & Whitmore, 1973; Gould & et. al., 2008). The site where the project is proposed is fully developed (Attachment II). The lot is accessed from a marginal street of PR-2 from the north and from a municipal street from the west. The proposed project include the construction of a new Clinic and Retail building, new buildings for Academic and Housing purpose and parking spaces (Attachment IIa).

The Portugués River old course runs at about 170m from the east property boundary and 220 m from the south property line (Attachment II). The lot is about 1,400 m north from the southern coastline of Puerto Rico.

Land Zoning:

The proposed site is classified as SU and Zoned as EV.4 by the Ponce Zoning Map dated 28/Dec/2003. (Attachment IIb)

Geology and soils:

The site occurs on a wide zone of alluvial aquifers with intergranular unit overlying fissured rock unit (Attachment III) The site soils are composed by: 10.4% of the area classified as Constancia Silty Clay and 89.6% of soils not classified by the survey (Attachment IIIa).

From USDA Soil Survey Ponce Area:

Ct—Constancia silty clay. This is a nearly level soil on alluvial fans along the rivers and streams in the semiarid area. It generally is in areas of about 50 to 200 acres. Slopes are 0 to 2 percent.

Included in mapping are a few small areas of Machuelo clay and San Anton clay loam and a few spots of soils that have coarse textured material below a depth of 2 feet.

Runoff is slow; this soil is not subject to erosion. If it is properly drained and irrigated, it can be cropped intensively without soil loss. It is subject to flooding in some years, generally from August to October. Because of slow permeability, this soil may be saturated after heavy rains. Occasionally there are long periods of drought.

Workability of this soil is poor. Land leveling and smoothing are costly and difficult because the clay is sticky and plastic. Tillage should be done and machinery should be used at the optimum moisture content. Crops respond well to fertilizer.

If properly drained and irrigated, this soil can be planted to sugarcane and rice.

Capability units IIw–1, irrigated, and IIIc–2 nonirrigated; not in a woodland suitability group.

The lot is not included in the karst special planning area (APE-ZC), the karst restricted planning area (APE-RC) nor its buffer zone (Attachment IIIb)

Water resources:

The area is located within the former Portugués River watershed and receive an average of about 28-35 cubic inches of rain per year (Attachment IV) but around 27-29 cubic inches are loosed due to evapotranspiration (Attachment IVa). It is important to consider these soils have slow permeability and may be subject to saturation and flooding during heavy rain events.

The site is located in the AO flooding zone (FEMA) with a base level of inundation of 0.7m (Attachment V) which implies risk of moderate flooding. Revised flood maps are included also.

Methods:

Gabriel Bérriz and Associates (GBA) personnel visited the site during March 2019 to collect field information. Searches were made following a systematic survey pattern (Sutherland, 1998; McDiarmid, Foster, Guyer, Gibbons, & Chernoff, 2012) recording visual encounters with plants and animals during a continuous transect around each site. Identification was carried out in the field and later over samples taken to the office.

All Geographic Information System (GIS) mapping and analysis were performed using ArcGis 10.3 and AutoCad Civil 3D R15. Field positions are referred to Datum NAD 83 for Puerto Rico and US Virgin Islands. The base plan used was the survey plan provided by the Client.

Field data and bibliographic information were used to elaborate the inventory tables and associated comments.

Results:

The site is not reported to contain endangered species or its habitats (Attachment VI). Not potential wetland areas are identified within it (Attachment VIa).

Flora and Vegetation:

As can be noted in the available satellite imagery (Attachment II), the site is already impacted and it is fully developed. Arboreal vegetation (Palms and Trees) is scattered and growing mainly in confined planting spaces. No understory is present. Some spaces contain ornamental herbs, shrubs and weeds.

Table 1	Family	Species
1	ACANTHACEAE	2
2	AGAVACEAE	8
3	AMARANTHACEAE	1
4	ANACARDIACEAE	1
5	ANNONACEAE	1
6	APOCYNACEAE	2
7	ARACEAE	4
8	ARALIACEAE	2
9	ASPARAGACEAE	5
10	ASTERACEAE	3
11	BIGNONIACEAE	2
12	BORAGINACEAE	1
13	BROMELIACEAE	1
14	COMBRETACEAE	3
15	COMMELINACEAE	2
16	COMPOSITAE	1
17	CRASSULACEAE	2
18	CUCURBITACEAE	1
19	CYCADACEAE	1
20	CYPERACEAE	3
21	EQUISETACEAE	1
22	EUPHORBIACEA	1
23	EUPHORBIACEAE	5
24	FABACEAE	3
25	GUTTIFERACEAE	1
26	LEGUMINOSAE-CAESALPINOIDEAE	1
27	LEGUMINOSAE-MIMOSOIDEAE	3
28	LILIACEAE	4
29	LYTHRACEAE	2
30	MALVACEAE	2
31	MARANTHACEAE	1
32	MELIACEAE	2
33	MORACEAE	3
34	NYCTAGINACEAE	1

Table 1 (cont.)	Family	Species
35	OLEACEAE	1
36	PALMACEAE	6
37	PANDANACEAE	2
38	PHYTOLACCACEAE	1
39	POACEAE	7
40	PODOCARPACEAE	1
41	POLYPODIACEAE	3
42	PORTULACACEAE	1
43	SAPOTACEAE	1
44	SOLANACEAE	2
45	STERCULIACEAE	1
46	URTICACEAE	1
47	VERBENACEAE	1
48	VITACEAE	1
49	XANTHORRHOEACEAE	1
	TOTAL	106

Table 1: Flora family composition.

A total of 106 species and 49 families of plants (Table 1) were identified at the project site (Attachment VII, VIIa and VIIb). Many of the green areas at the project site are mulched with gravel and contain a combination trees and/or palms and a mixture of ornamental herbaceous plants and low shrubs (Table 2). Most of the tree specimens growing at the site are very large mature trees and were subjected to severe topping or heading prune, probably after the 2017 hurricane season (Attachment VIIc and VIId). This pruning practice may open the door to pest and diseases which could cause eventual decay and death of the specimens. A close follow up of the tree health and a pest and diseases control program implementation is advised.

TREE	22%
PALM	6%
HERB	25%
VINE	5%
SHRUB	39%
FERN	3%
EPIPHYTES	1%
TOTAL	100%

Table 2: Vegetal type composition.

No endangered species of plants were observed at the site.

Fauna:

A total of 35 species of animals were recorded. They are distributed in 4 classes, 12 orders and 27 families (Tables 3 to 5) (Attachment VIII and VIIIa). Most of the faunal richness is due to the birds (74%, 28 species). Most of them were observed overflying the site and nearby areas.

	CLASS	SPECIES	%
1	MAMMALIA	2	5%
2	AVES	28	74%
3	REPTILIA	6	16%
4	AMPHIBIA	2	5%
	TOTAL	38	100%

Table 3: Fauna classes composition.

	ORDER	ESPECIES
1	ANURA	2
2	APODIFORMES	1
3	CAPRIMULGIFORMES	1
4	CARNIVORA	1
5	CICONIIFORMES	1
6	COLUMBIFORMES	4
7	CUCULIFORMES	1
8	FALCONIFORMES	5
9	PASSERIFORMES	14
10	PSITTACIFORMES	1
11	RODENTIA	1
12	SQUAMATA	6
	TOTAL	38

Table 4: Fauna orders composition.

Table 5	FAMILY	SPECIES
1	ACCIPITRIDAE	3
2	ARDEIDAE	1
3	BUFONIDAE	1
4	COEREBIDAE	1
5	COLUBRIDAE	1
6	COLUMBIDAE	4
7	CUCULIDAE	1
8	EMBERIZIDAE	1
9	ESTRILDIDAE	2
10	FALCONIDAE	2
11	CAPRIMULGIDAE	1
12	ICTERIDAE	2
13	IGUANIDAE	3
14	LEPTODACTYLIDAE	1
15	MIMIDAE	2
16	MURIDAE	1
17	PARULIDAE	1
18	TROCHILIDAE	1
19	HIRUNDINIDAE	1

Table 5 (cont.)	FAMILY	SPECIES
20	PLOCEIDAE	1
21	PSITTACIDAE	1
22	VIVERRIDAE	1
23	TEIDAE	1
24	TURDIDAE	1
25	TYRANNIDAE	1
26	GECONIDAE	1
27	PASSERIDAE	1
	TOTAL	38

Table 5: Fauna family's composition.

No endangered species were detected. However a protocol to prevent, minimize or avoid potential impact to individuals of Puerto Rican Boa (*Epicrates inornatus*) is included below.

Epicrates inornatus Protocol:

No specimens of Puerto Rican Boa were detected during the field work and due to the site characteristics, the probability that the species could be using those spaces is very low. However, considering the wide distribution of this species, we are including here a protocol to prevent, minimize or avoid potential impact to individuals of this species which may enter the project site:

a) Previous to initiate any vegetation clearing and earthwork, qualified personal should perform an initial inspection to assess presence/absence of the species. If the species is detected go to point (d).
b) Clearing of tall/dense shrubby and tall grass vegetation, if any, should be done by manual means and a silt fence should be installed at the proposed site perimeter.
c) Every morning and previous to the starting any vehicle or heavy motor equipment that remained at the site overnight, project workers should inspect the interior and around the motor in search for Puerto Rican Boa specimens.
d) If the species is detected all work in the place of the finding should be stopped and Project Manager will contact the DNER Rangers (Cuerpo de Vigilantes del Departamento de Recursos Naturales y Ambientales). Work may continue in other areas. Any contact with the species should be avoided until qualified personnel arrives.
e) A list of relevant phone numbers should be available at the field construction office.

Conclusions:

a) The proposed project site is totally developed.

b) The implementation of a tree health program is advised.

c) No endangered species were found on the sites.

d) A protocol to prevent/minimize/avoid impacts or disturbance to *Epicrates inornatus* is included.

Bibliography

Alberts, A., Carter, R., Hayes, W., & Martins, E. (2004). *IGUANAS: BIOLOGY AND CONSERVATION.* BERKELEY: UNIVERSITY OF CALIFORNIA PRESS.

Axelrod, F. S. (2011). *A systematic Vademecum to the Vascular Plants of Puerto Rico.* Texas: Brit Press.

Biaggi, V. (1997). *Las Aves de Puerto Rico.* San Juan: Editorial de la Universidad de Puerto Rico.

Buckley, L., de Queiroz, K., Etheridge, R., Hollingworth, B., Iverson, J., Pasachnik, S., & Stephen, C. (2016). A CHECKLIST OF THE IGUANAS OF THE WORLD (IGUANIDAE; IGUANINAE). *IGUANA WORKING GROUP, 11*(6), 4-46.

Ewel, J. J., & Whitmore, J. L. (1973). *The ecological life zones of Puerto Rico and the U.S. Virgin Islands.* San Juan: U.S. Department of Agriculture.

Gould, W. A., & et. al. (2008). *The Puerto Rico Gap Analysis Project.* San Juan: USDA.

Heyer, W., Donnelly, M. A., McDiarmid, R. W., Hayek, L.-A. C., & Foster, M. S. (1994). *Measuring and Monitoring Biological Diversity. Standard Methods for Amphibians.* Washington and London: Smithsonian Institution.

Joglar, R. L. (1998). *Los Coquíes de Puerto Rico: Su Historia Natural y COnservación.* San Juan: Editorial de la Universidad de Puerto Rico.

Liogier, H. A. (1985). *Descriptive Flora of Puerto Rico and Adjacent Islands.* San Juan: Editorial de la Universidad de Puerto Rico.

Little, E. L., & Wadsworth, F. H. (1964). *Common Trees of Puerto Rico and the Virgin Islands I.* Washingto D.C.: US FOrest Service Agricultural Handbook No. 249.

Little, E. L., Woodbury, R. O., & Wadsworth, F. H. (1974). *Trees of Puerto Rico and the Virgin Islands II.* Washington DC: US FOrest Service Agriculture Handbook No. 449.

McDiarmid, R., Foster, M., Guyer, C., Gibbons, W., & Chernoff, N. (2012). *REPTILE BIODIVERSITY: STANDARD METHODS FOR INVENTORY AND MONITORING.* LONDON: UNIVERSITY OF CALIFORNIA PRESS.

Oberle, M. W. (2010). *Puerto Rico's Birds in Photographs: A complete Guide and CD-ROm including the Virgin Islands.* Seattle: Editorial Humanitas.

Raffaele, H. A. (1989). *A Guide to the birs of Puerto Rico and the Virgin Islands.* London: Princeton.

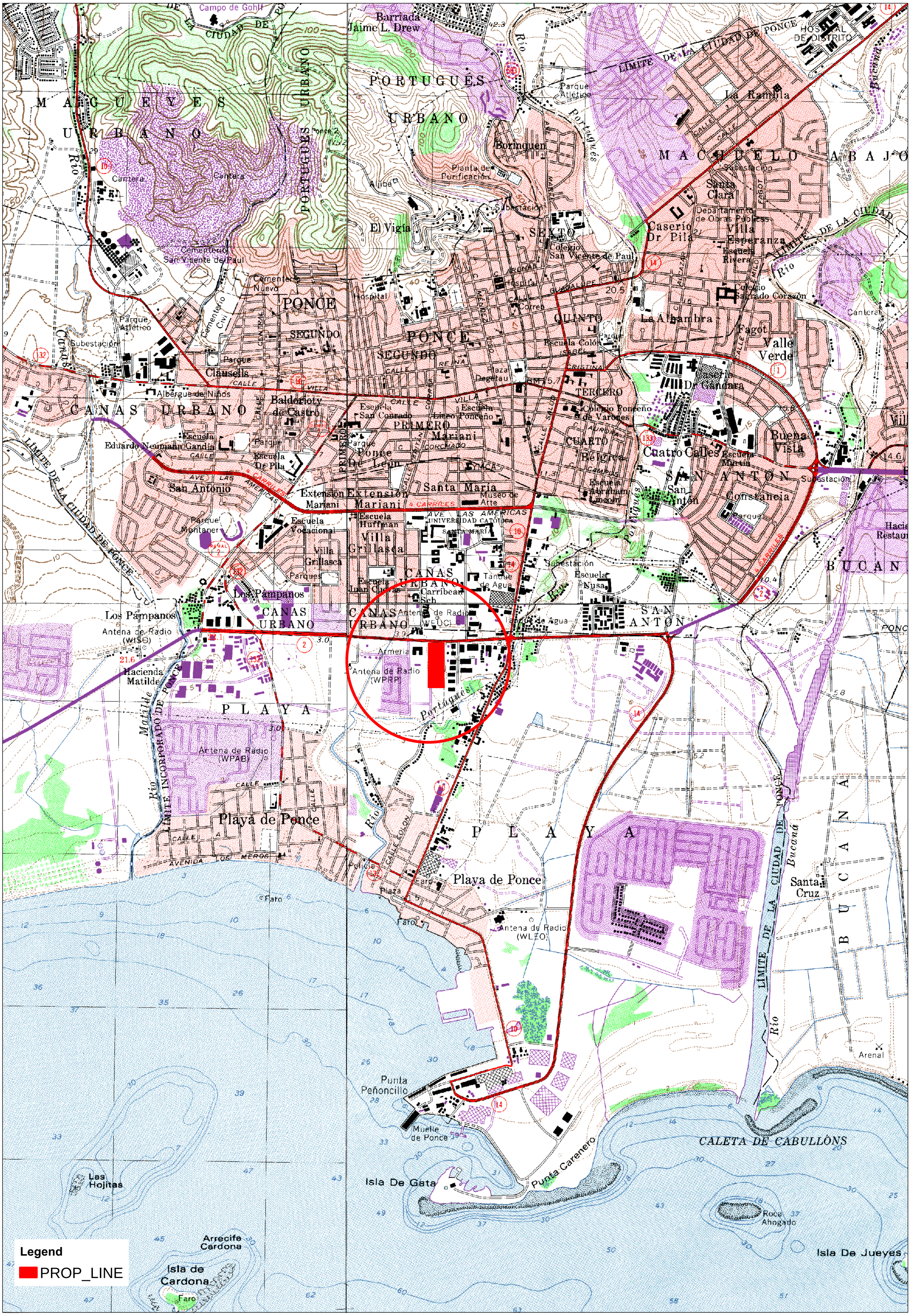
Raffaele, H., Wiley, J., Garrido, O., Keith, A., & Raffaele, J. (1998). *A guide to the Birds of the West Indies.* New Jersey: Princeton University Press.

Rivero, J. (1998). *THE AMPHIBIANS AND REPTILES OF PUERTO RICO* (2nd ed.). SAN JUAN: UNIVERSITY OF PUERTO RICO.

Rodda, G. (1992). *The Mating Behavior of Iguana iguana.* Washington DC: Smithsonian Institution Press.

Sutherland, W. J. (1998). *Ecological Census Techniques.* Cambridge: Cambridge University Press.

ATTACHMENT I: LOCATION MAP



Legend

PROP_LINE

0 265 530 1,060 1,590 2,120 Meters

1:10,000

N W E S

LOCATION MAP

PONCE HEALTH SCIENCES UNIVERSITY,
PONCE CAMPUS,
PONCE, PUERTO RICO

P.R.&US.V.I. NAD 83
G.B.A.
Plan. Laredo González
MAR, 2019

ATTACHMENT Ia: LOCATION MAP, WARD



WARDS AND MUNICIPALITY MAP

1:2,000

PONCE HEALTH SCIENCES UNIVERSITY,
PONCE CAMPUS,
PONCE, PUERTO RICO

P.R.&US.V.I. NAD 83
G.B.A.
Plan. Laredo González
MAR, 2019

ATTACHMENT II: JUN-2018 SATELITE IMAGE



ATTACHMENT IIa: PROPOSED PROJECT

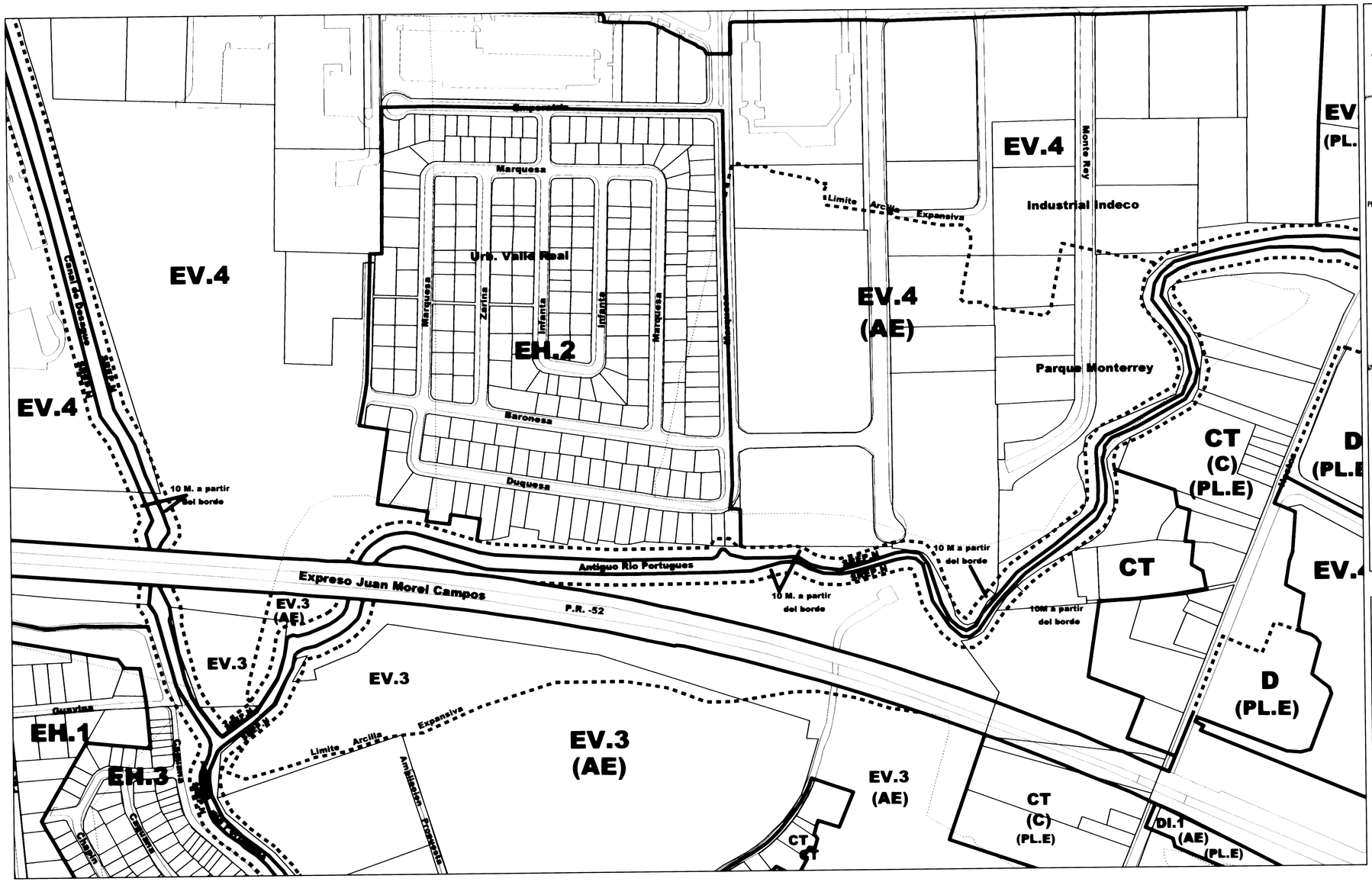
ACADEMIC CAMPUS

PROGRAM

A. Clinic / Retail
B. Parking
C. Housing
D. Academic



ATTACHMENT IIb: ZONING MAP



MAPA INDICE, ESCALA 1:130,000

LEYENDA

- DISTRITOS DE ORDENACION
- DISTRITOS SOBREPUESTOS Y LIMITES VIRTUALES
- SISTEMA VIAL
- PARCELAS
- CENTRO DE QUEBRADAS
- TOPOGRAFIA, @ 10 METROS
- LAGOS, LAGUNAS Y CANALES

PLANO DE ORDENACION NUMERO : 064

APROBACION

APROBADO POR LA LEGISLATURA MUNICIPAL
DEL MUNICIPIO AUTONOMO DE PONCE
MEDIANTE ORDENANZA
NUM. 26 SERIE 2002 - 2003
EN PONCE, PUERTO RICO EL
14 DE ENERO DE 2003

HON. GUILLERMO JIMENEZ
SECRETARIO DE LA LEGISLATURA MUNICIPAL

HON. LUIS A. (WITO) MORALES
PRESIDENTE DE LA LEGISLATURA MUNICIPAL

CERTIFICACION

FIRMADA LA ORDENANZA Y APROBADA EN PONCE, PUERTO RICO EL
16 DE ENERO DE 2003

HON. RAFAEL CORDERO SANTIAGO
ALCALDE
MUNICIPIO AUTONOMO DE PONCE

ADOPCION

ADOPTADO POR LA JUNTA DE PLANIFICACION

EN SU REUNION DEL 18 DE DICIEMBRE DE 2003
MEDIANTE RESOLUCION NUM. JP-PT-63-RI-01

ANGEL D. RODRIGUEZ - PRESIDENTE
JUNTA DE PLANIFICACION DE PUERTO RICO

CERTIFICO ADOPTADA HOY 18 DE DICIEMBRE 2003

CARMEN TORRES MELENDEZ - SECRETARIA
VIGENCIA 28 de diciembre de 2003

ESCALA 1:2,000

METROS 0 50 100 200 300 400
PIES 0 250 500 1,000 1,500 2,000

N W E S

PLAN DE ORDENACION TERRITORIAL

MUNICIPIO AUTONOMO DE PONCE
OFICINA DE ORDENACION TERRITORIAL

PLANO DE ORDENACION NUMERO : 064

ATTACHMENT III: HYDROGEOLOGIC.

RIO PORTUGUES

RIO PORTUGUES

RIO PORTUGUES

Legend

PROP_LINE

pozos_082404

II_Sumideros

CREEKS

rios-principales-2006

TYPE

Acuiferos aluviales

Acuiferos calizos con baja permeabilidad o agua salobre

Acuiferos de rocas volcaniclasticas, igneas y sedimentarias

Confinamiento local, depositos marinos y organicos

0 130 260 520 780 1,040

Meters

1:5,000

N

W E

S

HIDRO-GEOLOGIC MAP

PONCE HEALTH SCIENCES UNIVERSITY,
PONCE CAMPUS,
PONCE, PUERTO RICO

P.R.&US.V.I. NAD 83
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MAR, 2019

ATTACHMENT IIIa: SOIL MAP

URB

Cortada silty clay loam

Constancia silty clay

Constancia silty clay

Cortada silty clay loam

Constancia silty clay

Cortada silty clay loam

Constancia silty clay

Teresa clay

Cortada silty clay loam

Constancia silty clay

Teresa clay

Hydraquents

Tidal Flats

Hydraquents, saline

Tidal Flats

Legend

PROP_LINE

t po _ elo _n _ e

<all other values>

M NAME

- Constancia silty clay
- Cortada silty clay loam
- Hydraquents
- Hydraquents, frequently flooded
- Hydraquents, saline
- Teresa clay
- Tidal Flats

0 130 260 520 780 1,040

Meters

1:5,000

N

W E

S

SOIL MAP

PONCE HEALTH SCIENCES UNIVERSITY,
PONCE CAMPUS,
PONCE, PUERTO RICO

P.R.&US.V.I. NAD 83
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Plan. Laredo González
MAR, 2019

ATTACHMENT IIIb: RELATION TO KARSTIC ZONES

Legend

PROP_LINE

APE_RC (Area de Planificacion Restringida del Carso)

CARSO BUFFER 50m

APE_ZC (Area de Planificacion Especial del Carso)

0 130 260 520 780 1,040 Meters

1:5,000

N W E S

KARST SPECIAL PLANNING AREAS MAP

PONCE HEALTH SCIENCES UNIVERSITY,
PONCE CAMPUS,
PONCE, PUERTO RICO

P.R.&US.V.I. NAD 83
G.B.A.
Plan. Laredo González
MAR, 2019

ATTACHMENT IV: PRECIPITATION



PRECIPITATION MAP

0 265 530 1,060 1,590 2,120 Meters

1:10,000

PONCE HEALTH SCIENCES UNIVERSITY,
PONCE CAMPUS,
PONCE, PUERTO RICO

P.R.&US.V.I. NAD 83
G.B.A.
Plan. Laredo González
MAR, 2019

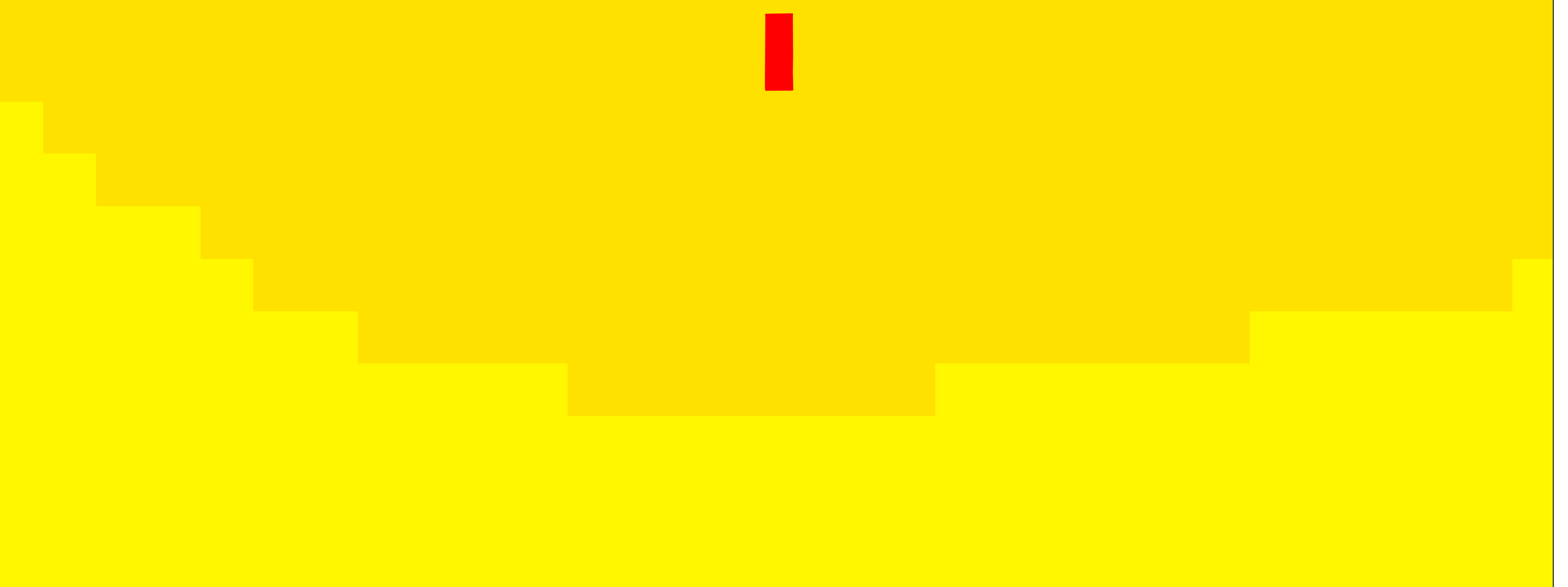
Legend

PROP_LINE

135sta_5w_20p_RECIPITATION CUBIC INCHES

- 1.89 - 10.19
- 10.2 - 20.55
- 20.56 - 28.84
- 28.85 - 35.75
- 35.76 - 42.67
- 42.68 - 48.89
- 48.9 - 55.1
- 55.11 - 62.02
- 62.03 - 68.93
- 68.94 - 75.15
- 75.16 - 81.37
- 81.38 - 87.59
- 87.6 - 93.8
- 93.81 - 100.02
- 100.03 - 109.01
- 109.02 - 120.76
- 120.77 - 133.2
- 133.21 - 147.02
- 147.03 - 161.53
- 161.54 - 178.12

ATTACHMENT IVa: EVAPOTRANSPIRATION



N
W E
S

0 265 530 1,060 1,590 2,120
Meters

1:10,000

EVAPOTRANSPIRATION MAP

PONCE HEALTH SCIENCES UNIVERSITY,
PONCE CAMPUS,
PONCE, PUERTO RICO

P.R.&US.V.I. NAD 83
G.B.A.
Plan. Laredo González
MAR, 2019

ATTACHMENT V: FEMA FIRMETTE FLOODING MAP

National Flood Hazard Layer FIRMette

FEMA



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN — Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 — Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- 513 — Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

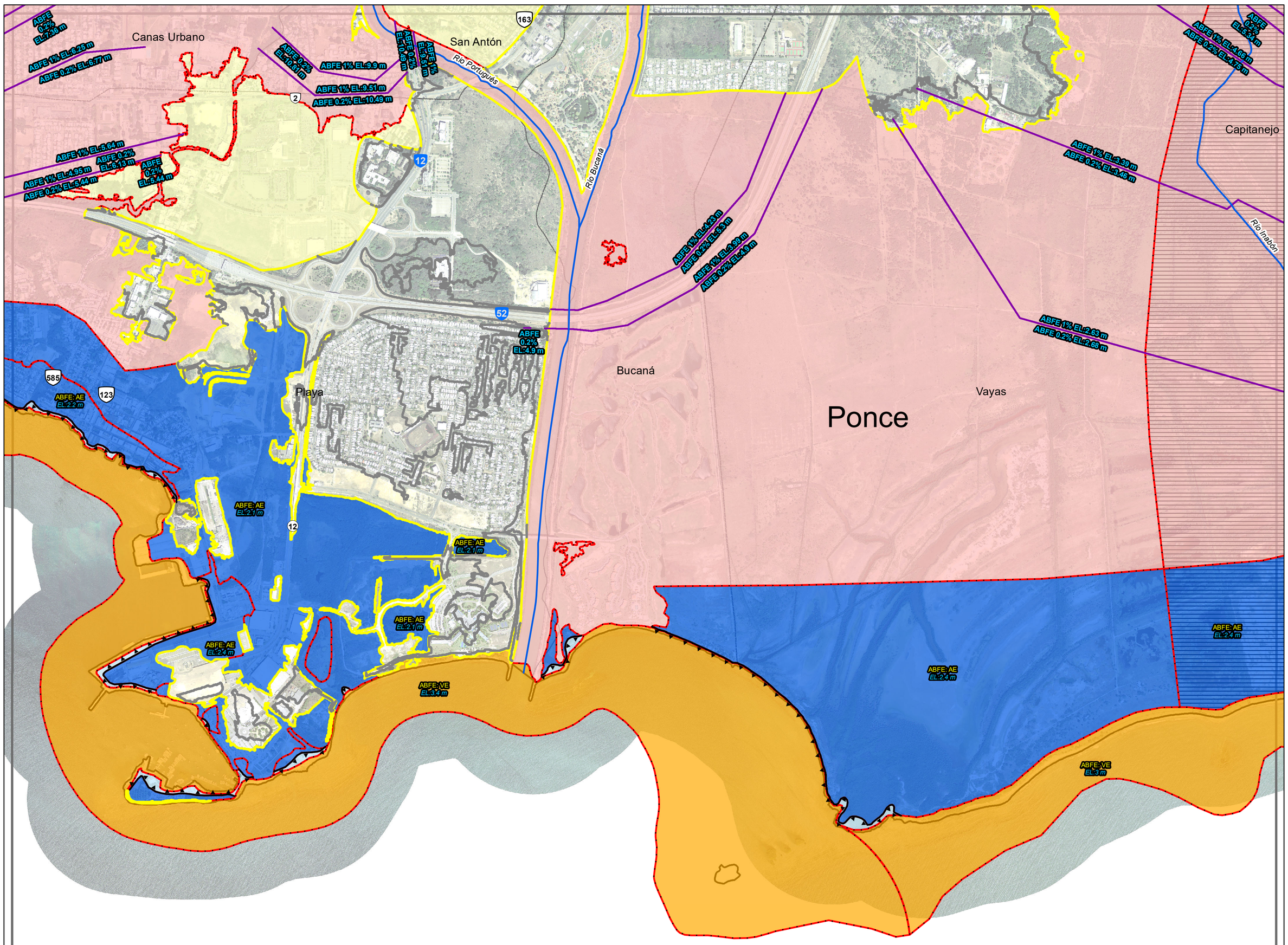
N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/8/2019 at 12:11:11 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



MAPAS DE NIVELES DE INUNDACIÓN BASE RECOMENDADOS

Estos mapas de niveles de inundación base recomendados (Advisory Maps) desarrollados por FEMA para Puerto Rico identifican que áreas se encuentran en nuevas zonas inundables recomendadas del 1% y 0.2% de probabilidad, así como niveles de inundación base recomendados (ABFE, por sus siglas en inglés) que pueden afectar las prácticas de construcción.

Como parte del esfuerzo de recuperación de la Isla, estos mapas son una herramienta para las agencias, los desarrolladores, diseñadores, técnicos de permisos de construcción, oficiales federales, estatales y municipales y dueños de propiedad, para tomar decisiones informadas de manera que se mitigue por eventos de inundación, se proteja la vida y propiedad, así como la inversión pública y privada.

El propósito de estos mapas es asesorar sobre como las nuevas construcciones, reconstrucciones y mejoras sustanciales deben ser elevadas o diseñadas para minimizar los daños por inundaciones futuras, en base a la mejor información disponible. Además, busca orientar a la ciudadanía sobre el riesgo a inundación al que pudiera estar expuesto.

Para información sobre cómo estos mapas fueron desarrollados y sus limitaciones, puede acceder al documento "Puerto Rico Advisory Data and Products" disponible en la página web de la Junta de Planificación.

Recuerde que antes de una construcción, usted debe consultar con los funcionarios de las oficinas municipales de permiso, las oficinas regionales de permisos (OGPe) o con la Junta de Planificación para determinar las elevaciones obligatorias para su hogar, negocio u otra propiedad.

UTILIZACIÓN

Las elevaciones mostradas en estos mapas son consideradas la mejor información disponible hasta que se desarrollen Mapas de Tasas del Seguro de Inundación (FIRM, por sus siglas en inglés) actualizados.

Estos mapas NO han sido desarrollados para tomar determinaciones respecto al seguro de inundación del Programa Nacional del Seguro de Inundación (NFIP, por sus siglas en inglés). Para propósitos del seguro de inundación, se debe hacer referencia a los FIRMs vigentes para Puerto Rico y disponibles en http://msc.fema.gov o en la herramienta MiPR de la Junta de Planificación (http://gis.pr.gov/mipr/)

LEYENDA

- Hidrografía
- Nivel de Inundación Base Recomendado
- Límite de Acción Moderada de la Ola (LiMWA)
- 1% Probabilidad Anual de Inundación
- 0.2% Probabilidad Anual de Inundación
- Límite ABFE

Zona Inundable

- 0.2% Probabilidad Anual de Inundacion
- A
- AE
- AO
- A Costera
- VE
- Cauce Mayor
- Panel
- Límite Municipal
- Límite de Barrio

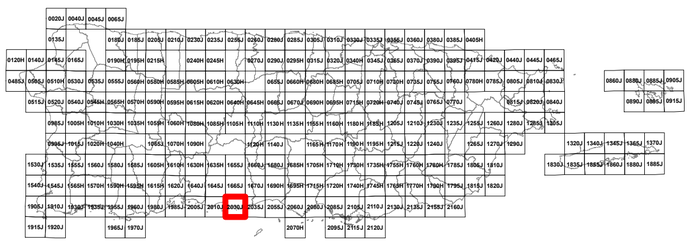
NOTAS

1. Elevaciones medidas en metros relativos al Puerto Rico Vertical Datum de 2002 (PRVD02)
2. Zonas idientificadas como A costera o áreas afectadas por acción moderada de las olas (MoWA, por sus siglas en inglés) muestran las áreas donde la altura de la ola fluctúa entre 1.5 a 3 pies, Nueva construcción o mejora sustancial en estas zonas debe utilizar los parámetros establecidos para las zonas VE en el Reglamento de Planificación Núm, 13, vigente, Reglamento sobre áreas Especiales de Riesgo a Inundación. Puede accederlo en el siguiente enlace http://jp.pr.gov/Reglamentos/Relamentos-Planificacioón.

Panel: 72000C2030J Fecha de efectividad: 13/abril/2018

Fecha de revisión del geodato 12/mayo/2018

MAPA DE REFERENCIA



Fecha de mapa (pdf): 25/mayo/2018

FEMA

0 20 40 80 120 160 Kilómetros

ATTACHMENT VI: ESI MAP



0 130 260 520 780 1,040 Meters

1:5,000

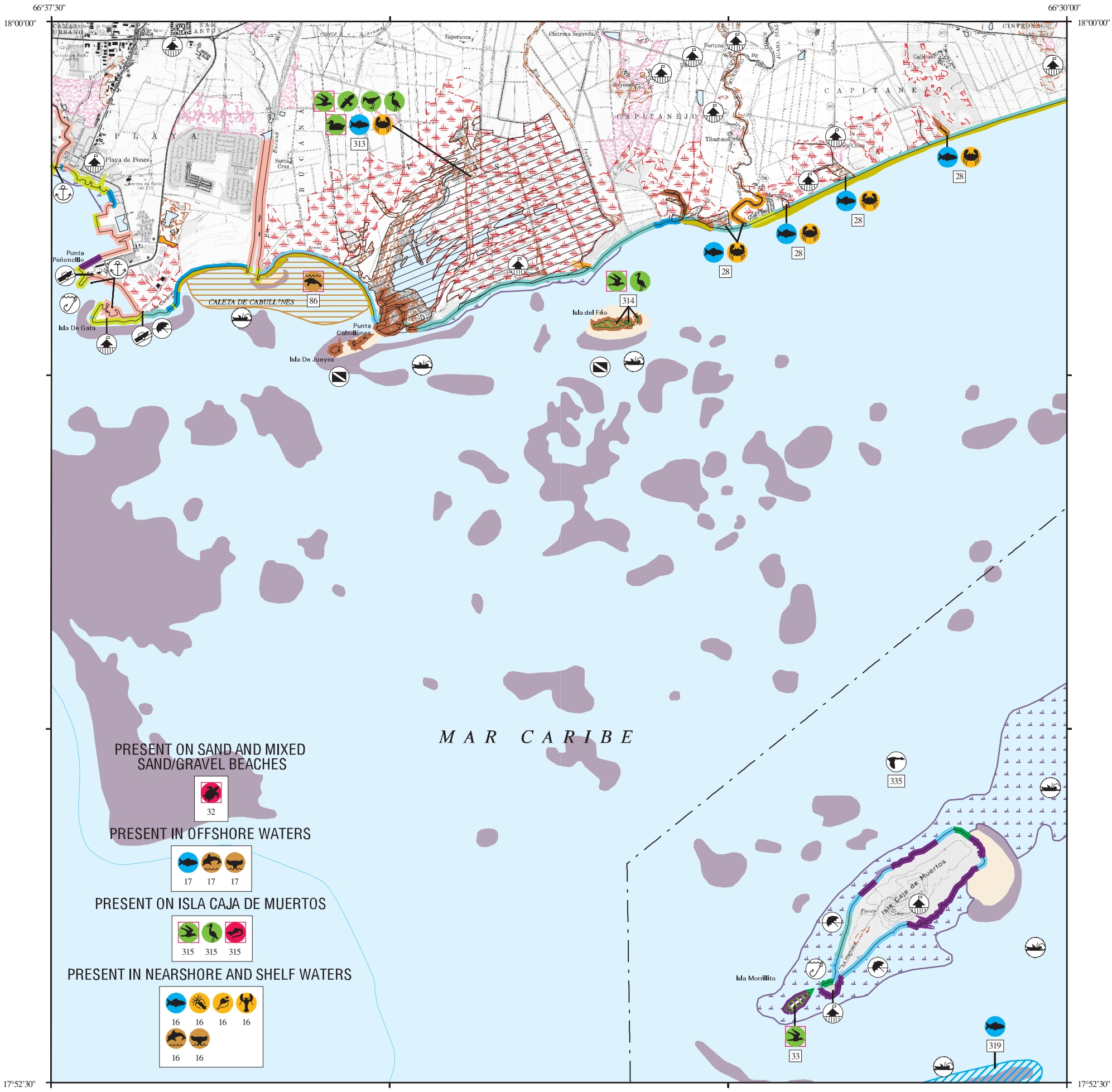
N
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PR ESI ELEMENTS MAP

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ENVIRONMENTAL SENSITIVITY INDEX MAP



SHORELINE HABITATS (ESI)

- 1A EXPOSED ROCKY CLIFFS
- 1B EXPOSED, SOLID MAN–MADE STRUCTURES
- 2A EXPOSED WAVE–CUT PLATFORMS IN BEDROCK
- 2B SCARPS AND STEEP SLOPES IN MUDDY SEDIMENTS
- 3A FINE– TO MEDIUM–GRAINED SAND BEACHES
- 4 COARSE–GRAINED SAND BEACHES
- 5 MIXED SAND AND GRAVEL BEACHES
- 6A GRAVEL BEACHES
- 6B RIPRAP
- 7 EXPOSED TIDAL FLATS
- 8A SHELTERED ROCKY SHORES
- 8B SHELTERED, SOLID MAN–MADE STRUCTURES
- 9A SHELTERED TIDAL FLATS
- 9B SHELTERED VEGETATED LOW BANKS
- 10D MANGROVES
- SALT– AND BRACKISH–WATER MARSHES
- FRESHWATER MARSHES
- FRESHWATER SWAMPS
- FRESHWATER SCRUB/SHRUB

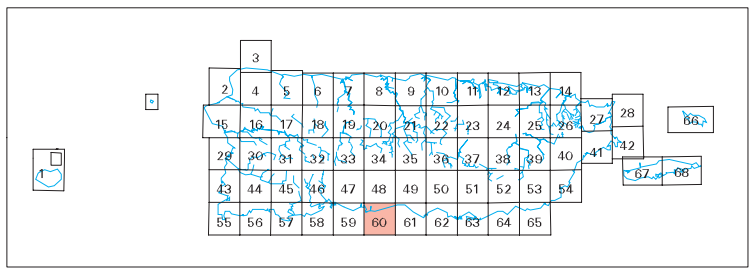
STREAM REACHES (RSI)

- 1 QUIET POOL; LOW–SENSITIVE BANKS
- 2 STRAIGHT CHANNEL WITH CURRENTS; LOW–SENSITIVE BANKS (MUD DOMINANT)
- 3 MEANDERING CHANNEL; SAND POINT BARS
- 4 MEANDERING CHANNEL; VEGETATED POINT BARS
- 5 RAPIDS OVER BEDROCK
- 6 MEANDERING CHANNEL; SAND AND GRAVEL POINT BARS
- 7 SPLIT CHANNEL WITH COARSE GRAVEL; SOME RAPIDS
- 8 SMALL FALLS; BOULDERS IN CHANNEL
- 9 LARGE FALLS; BOULDERS IN CHANNEL
- 10 CHANNELS WITH ASSOCIATED VULNERABLE WETLANDS
- KARST

SCALE 1:55000

1 .5 0 1 KILOMETER

1 .5 0 1 MILE



Not For Navigation

Published: May 2000

Published at Seattle, Washington
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Response and Restoration
Hazardous Materials Response Division

PLAYA DE PONCE, P.R. (1982) **PR-60**

PUERTO RICO - ESIMAP 60

BIOLOGICAL RESOURCES:

BIRD:

RAR#	Species	S/F	T/E	Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting
33	Brown pelican	S/F	E/E		X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC
313	American coot			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-
	Blue-winged teal			HIGH	X	X	X	X						X	X	X	-
	Brown pelican	S/F	E/E	HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-
	Caribbean coot	S	T	HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-
	Clapper rail			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-
	Common moorhen				X	X	X	X	X	X	X	X	X	X	X	X	-
	Common snipe			HIGH	X	X	X	X						X	X	X	-
	Green-winged teal			HIGH	X	X	X							X	X	X	-
	Lesser scaup			HIGH	X	X	X								X	X	-
	Merlin				X	X	X							X	X	X	-
	Osprey				X	X	X	X					X	X	X	X	-
	Ring-necked duck			HIGH	X	X	X							X	X	X	-
	Sora			HIGH	X	X	X	X						X	X	X	-
	Wading birds			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-
	Waterfowl			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-
	White-cheeked pintail			MEDIUM	X	X	X	X	X	X	X	X	X	X	X	X	-
314	Brown pelican	S/F	E/E		X	X	X	X	X	X	X	X	X	X	X	X	-
	Wading birds				X	X	X	X	X	X	X	X	X	X	X	X	-
315	Brown booby				X	X	X	X	X	X	X	X	X	X	X	X	-
	Brown pelican	S/F	E/E		X	X	X	X	X	X	X	X	X	X	X	X	-
	Wading birds				X	X	X	X	X	X	X	X	X	X	X	X	-
	White-tailed tropicbird						X	X	X	X	X						MAR-JUL

FISH:

RAR#	Species	S/F	T/E	Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Spawning	Eggs	Larvae	Juveniles	Adults
16	Pelagic fish				X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC	JAN-DEC	JAN-DEC	JAN-DEC	JAN-DEC
	Reef fish				X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC	JAN-DEC	JAN-DEC	JAN-DEC	JAN-DEC
17	Pelagic fish				X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC	JAN-DEC	JAN-DEC	JAN-DEC	JAN-DEC
28	Nursery fish				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
	Snook				X	X	X	X	X	X	X	X	X	X	X	X	APR-FEB	APR-FEB	JAN-DEC	JAN-DEC	JAN-DEC
	Tarpon				X	X	X	X	X	X	X	X	X	X	X	X	-	-	MAY-DEC	JAN-DEC	JAN-DEC
313	Nursery fish				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
	Snook				X	X	X	X	X	X	X	X	X	X	X	X	APR-FEB	APR-FEB	JAN-DEC	JAN-DEC	JAN-DEC
	Tarpon				X	X	X	X	X	X	X	X	X	X	X	X	-	-	MAY-DEC	JAN-DEC	JAN-DEC
319	Red hind				X	X	X									X	JAN-MAR	JAN-MAR	JAN-MAR	-	DEC-MAR

INVERTEBRATE:

RAR#	Species	S/F	T/E	Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Spawning	Eggs	Larvae	Juveniles	Adults
16	Caribbean spiny lobster				X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC	JAN-DEC	JAN-DEC	JAN-DEC	JAN-DEC
	Octopus				X	X	X	X	X	X	X	X	X	X	X	X	DEC-MAR	DEC-APR	-	JAN-DEC	JAN-DEC
	Queen conch				X	X	X	X	X	X	X	X	X	X	X	X	APR-OCT	APR-OCT	APR-OCT	JAN-DEC	JAN-DEC
28	Blue land crab				X	X	X	X	X	X	X	X	X	X	X	X	JUL-AUG	JUL-AUG	JUL-SEP	JAN-DEC	JAN-DEC
313	Blue land crab				X	X	X	X	X	X	X	X	X	X	X	X	JUL-AUG	JUL-AUG	JUL-SEP	JAN-DEC	JAN-DEC

MARINE MAMMAL:

RAR#	Species	S/F	T/E	Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Mating	Calving
16	Dolphins				X	X	X	X	X	X	X	X	X	X	X	X	-	-
	Whales				X	X	X	X	X	X	X	X	X	X	X	X	-	-
17	Dolphins				X	X	X	X	X	X	X	X	X	X	X	X	-	-
	Whales				X	X	X	X	X	X	X	X	X	X	X	X	-	-
86	West Indian manatee	S/F	E/E		X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC	JAN-DEC

REPTILE:

RAR#	Species	S/F	T/E	Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Hatching	Internesting	Juveniles	Adults
32	Green sea turtle	S/F	E/T		X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC	JAN-DEC	-	JAN-DEC	JAN-DEC
	Hawksbill sea turtle	S/F	E/E		X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC	JAN-DEC	-	JAN-DEC	JAN-DEC
	Leatherback sea turtle	S/F	E/E			X	X	X	X	X	X	X					FEB-JUN	APR-SEP	-	APR-SEP	FEB-JUN
315	Cook's anole	S	T		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Mabuya	S	T		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC

HUMAN USE RESOURCES:

WILDLIFE REFUGE:

HUN#	Name	Owner/Manager	Contact	Phone
335	RESERVA NATURAL ISLA DE CAJA DE MUERTOS	DRNA	DIVISION DE RESERVAS NATURALES Y REFUGIOS DE VIDA SILVESTRE	787/724-2816

Biological information shown on the maps represents known concentration areas or occurrences, but does not necessarily represent the full distribution or range of each species. This is particularly important to recognize when considering potential impacts to protected species.

ATTACHMENT VIa: WETLAND MAP

Legend

PROP_LINE

PRVI_wet_poly

WETLAND_TY

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine

0 130 260 520 780 1,040 Meters

1:5,000

N W E S

POTENTIAL WETLANDS MAP

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MAR, 2019

ATTACHMENT VII: FLORA INVENTORY

INVENTARIO DE FLORA			
PONCE HEALTH SCIENCES UNIVERSITY, PONCE, PUERTO RICO			
No.	FAMILIA	NOMBRE CIENTIFICO	NOMBRE COMUN
1	ACANTHACEAE	Afelandra squarrosa	CEBRA
2	ACANTHACEAE	Barleria prionitis	ESPINOSA AMARILLA
3	AGAVACEAE	Agave americana	AGAVE AZUL
4	AGAVACEAE	*Agave americana "marginata"*	AGAVE AMERICANO VARIEGADO
5	AGAVACEAE	*Agave angustifolia*	AGAVE DE HUEVO
6	AGAVACEAE	Agave attenuata	AGAVE DE HOJA ANCHA
7	AGAVACEAE	Agave desmettiana	AGAVE ONDULADO
8	AGAVACEAE	Agave desmettiana "variegated"	AGAVE ONDULADO VARIEGADO
9	AGAVACEAE	Agave lophantha"variegated	AGAVE LOPHANTHA VARIEGADO
10	AGAVACEAE	*Cordyline fruticosa*	CORDYLINE
11	AMARANTHACEAE	Amaranthus spinosus	BLERO
12	ANACARDIACEAE	Mangifera indica	MANGO
13	ANNONACEAE	Annona reticulata	CORAZON
14	APOCYNACEAE	*Adenium obesum*	ROSA DEL DESIERTO
15	APOCYNACEAE	Tabernaemontana divaricata	TABERNAMONTANA
16	ARACEAE	*Monstera deliciosa*	MONSTERA
17	ARACEAE	*Philodendron bipinnatifidium*	PHILODENDRON SELLOUM
18	ARACEAE	Spathiphyllum sp. "sensation"	LIRIO DE PAZ
19	ARACEAE	Zamioculcas zamiifolia	ZZ PLANT
20	ARALIACEAE	*Aralia exelsa*	ARALIA EXCELSA
21	ARALIACEAE	Schefflera arboricola	SHEFLERA ENANA
22	ASPARAGACEAE	Asparagus densiflorus	ASPARRAGO MEYER
23	ASPARAGACEAE	*Asparagus sprengeri*	ASPARRAGO
24	ASPARAGACEAE	Dracaena reflexa	PLEOMELE VARIEGADA
25	ASPARAGACEAE	Dracaena reflexa"green"	PLEOMELE VERDE
26	ASPARAGACEAE	Furcraea foetida	FALSO AGAVE VARIEGADO
27	ASTERACEAE	Cyanthillium cinereum	RABO DE BUEY
28	ASTERACEAE	Parthenium hyserophorus	ESCOBA AMARGA
29	ASTERACEAE	Wedelia trilobata	MARGARITA DE PLAYA
30	BIGNONIACEAE	*Tabebuia argentea*	ROBLE PLATEADO
31	BIGNONIACEAE	Tabebuia heterophylla	ROBLE BLANCO
32	BORAGINACEAE	*Cordia sebestena*	VOMITEL COLORADO
33	BROMELIACEAE	Neoregelia fireball	BROMELIA VOLADORA
34	COMBRETACEAE	Bucida buceras	UCAR
35	COMBRETACEAE	Conocarpus erectus	MANGLE BOTON

36	COMBRETACEAE	*Conocarpus erectus*	MANGLE PLATEADO
37	COMMELINACEAE	Commelina diffusa	COHITRE AZUL
38	COMMELINACEAE	*Rhoeo spathacea*	SANGUINARIA REGULAR
39	COMPOSITAE	Bidens pilosa	ROMERILLO
40	CRASSULACEAE	Echeveria pollux	FLOR DE MARMOL
41	CRASSULACEAE	Sedum pallidum	SEDUM
42	CUCURBITACEAE	Momordica charantia	CUNDEAMOR
43	CYCADACEAE	*Cycas circinalis*	CYCA ELEGANTE
44	CYPERACEAE	Cyperus odoratus	CYPERUS DE OLOR
45	CYPERACEAE	Cyperus rotundus	COQUI
46	CYPERACEAE	Kyllinga brevifolia	KYLLINGA
47	EQUISETACEAE	Equisettum hyemale	SNAKE GRASS
48	EUPHORBIACEA	*Acalypha wilkesiana*	ACALIFA
49	EUPHORBIACEAE	Chamaesyce hirta	LECHECILLO DE JARDIN
50	EUPHORBIACEAE	Euphorbia lactea	CARDON DE CERCA
51	EUPHORBIACEAE	*Phyllanthus niruri*	QUININO DE POBRE
52	EUPHORBIACEAE	Ricinus comunis	HIGUERETA
53	EUPHORBIACEAE	Tragia volubilis	PRINGAMOZA
54	FABACEAE	Andira inermis	MOCA
55	FABACEAE	Macroptilium lathyroides	HABICHUELA PARADA
56	FABACEAE	Pterocarpus macrocarpus	PTEROCARPUS
57	GUTTIFERACEAE	Calophyllum calaba	MARIA
58	LEGUMINOSAE-CAESALPINOIDEAE	*Delonix regia*	FLAMBOYAN
59	LEGUMINOSAE-MIMOSOIDEAE	Leucaena leucocephala	ZARCILLA
60	LEGUMINOSAE-MIMOSOIDEAE	Mimosa pudica	MORIVIVI
61	LEGUMINOSAE-MIMOSOIDEAE	Pithecellobium dulce	GUAMA AMERICANO
62	LILIACEAE	Liriope mucari	LIRIOPE VERDE
63	LILIACEAE	Liriope muscari "aztec grass"	LIRIOPE VARIEGADO
64	LILIACEAE	*Sansevieria trifasciata*	LENGUA DE VACA
65	LILIACEAE	*Yucca aloifolia*	BAYONETA ESPANOLA
66	LYTHRACEAE	Lagerstroemia indica	ASTROMELIA
67	LYTHRACEAE	Lagerstroemia speciosa	REINA DE LAS FLORES
68	MALVACEAE	Sida acuta	ESCOBITA DULCE
69	MALVACEAE	*Urena lobata*	CADILLO
70	MARANTHACEAE	*Calathea ornata "sanderiana"*	CALATHEA SANDERIANA
71	MELIACEAE	Swietenia mahagoni	CAOBA DOMINICANA
72	MELIACEAE	Swietenia mahagoni x macrophyla	CAOBA SANTA CRUZ
73	MORACEAE	Ficus elastica	ARBOL DE GOMA

74	MORACEAE	*Ficus microcarpa "green island"*	FICUS GREEN ISLAND
75	MORACEAE	Ficus retusa	LAUREL DE LA INDIA
76	NYCTAGINACEAE	*Bouganvillea spectabilis*	TRINITARIA
77	OLEACEAE	Jazminum fluminense	JAZMIN DE ARBOL
78	PALMACEAE	Areca catechu	PALMA CATECHU
79	PALMACEAE	Chrysalidocarpus lutescens	PALMA ARECA
80	PALMACEAE	Phoenix roebelenii	PALMA ROBELINI
81	PALMACEAE	Roystonea borinquena	PALMA REAL
82	PALMACEAE	Veitchia merrillii	ADONIDIA
83	PALMACEAE	*Wodyetia bifurcata*	PALMA RABO DE ZORRA
84	PANDANACEAE	Pandanus baptisii	PANDANUS
85	PANDANACEAE	Pandanus utilis	PANDANO VERDE
86	PHYTOLACCACEAE	Trichostigma octandrum	BEJUCO DE PALOMA
87	POACEAE	Chloris inflata	PARAGUITA
88	POACEAE	Eleusine indica	PATA DE GALLINA
89	POACEAE	Pennisetum rubrum	PENISETUM ROJO
90	POACEAE	*Pennisetum setaceum*	PENISETUM VERDE
91	POACEAE	Sporobolus indicus	CERRILLO
92	POACEAE	Urochloa maxima	YERBA DE GUINEA
93	POACEAE	Zoysia matrella	GRAMA ZOYSIA
94	PODOCARPACEAE	*Podocarpus macrophyllus*	PODOCARPUS
95	POLYPODIACEAE	Nephrolepis exaltata	HELECHO DE BOSTON
96	POLYPODIACEAE	*Nephrolepis falcata*	HELECHO MACHO
97	POLYPODIACEAE	Thelypteris sp	HELECHO
98	PORTULACACEAE	*Portulaca oleracea*	VERDOLAGA COMUN
99	SAPOTACEAE	Chrysophyllum argenteum	LECHECILLO
100	SOLANACEAE	Capsicum annuun	AJI CABALLERO
101	SOLANACEAE	Solanum torvum	BERENGENA CIMARRONA
102	STERCULIACEAE	*Guazuma ulmifolia*	GUACIMA
103	URTICACEAE	*Soleirolia soleirolii*	SUSPIRO DE ANGEL
104	VERBENACEAE	*Citharexylum fruticosum*	PENDULA
105	VITACEAE	Leea coccinea "rubra"	LEEA ROJA
106	XANTHORRHOEACEAE	Dianella tasmanica	DIANELLA

ATTACHMENT VIIa: LAND COVER MAP

Legend
EXIST_TREE
GREEN_AREAS
DEVELOPED AREAS

0 10 20 40 60 80 Meters

1:400

N
W E
S

LAND USE MAP

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PONCE, PUERTO RICO

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MAR, 2019

ATTACHMENT VIIb: VEGETATION MAP

Legend
EXIST_TREE
GREEN_AREAS
PROP_LINE

0 10 20 40 60 80 Meters

1:400

N
W E
S

VEGETATION MAP

PONCE HEALTH SCIENCES UNIVERSITY,
PONCE CAMPUS,
PONCE, PUERTO RICO

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MAR, 2019

ATTACHMENT VIIc: TREE INVENTORY MAP

Legend
EXIST_TREE
PROP_LINE

0 10 20 40 60 80 Meters

1:400

N
W E
S

TREE INVENTORY MAP

PONCE HEALTH SCIENCES UNIVERSITY,
PONCE CAMPUS,
PONCE, PUERTO RICO

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MAR, 2019

ATTACHMENT VIId: TREE INVENTORY TABLE

Proyecto : PONCE HEALTH SCIENCES UNIVERSITY

Localizacion: PONCE, PUERTO RICO
Fecha: MARZO/2019

INVENTARIO DE ARBOLES

REFERENCIA	CONSECUTIV	ID	Especie	DBH	Altura	ESTADO GEN.	NOTAS
TREE-INV MAR 2019	1	1	CAOBA DOMINICANA	38.00	18.00	REG-BAD	TOPPING
TREE-INV MAR 2019	2	2	CAOBA DOMINICANA	29.00	18.00	REG-BAD	TOPPING
TREE-INV MAR 2019	3	3	CAOBA DOMINICANA	28.00	18.00	REG-BAD	TOPPING
TREE-INV MAR 2019	4	4	CAOBA DOMINICANA	11.00	18.00	REG-BAD	TOPPING
TREE-INV MAR 2019	5	5	CAOBA DOMINICANA	25.00	18.00	REG-BAD	TOPPING
TREE-INV MAR 2019	6	6	CAOBA DOMINICANA	33.00	18.00	REG-BAD	TOPPING
TREE-INV MAR 2019	7	7	CAOBA DOMINICANA	10.00	8.00	REG-BAD	TOPPING
TREE-INV MAR 2019	8	8	REINA DE LAS FLORES	10.00	7.00	FAIR	IND
TREE-INV MAR 2019	9	9	PTEROCARPUS	44.00	25.00	FAIR	IND
TREE-INV MAR 2019	10	10	PALMA ADONIDIA	7.00	12.00	GOOD	IND
TREE-INV MAR 2019	11	11	VOMITEL COLORADO	8.00	20.00	FAIR	IND
TREE-INV MAR 2019	12	12	PALMA DATILERA ENANA	6.00	10.00	FAIR	DOBLE
TREE-INV MAR 2019	13	13	UCAR	15.50	30.00	REG-BAD	TOPPING
TREE-INV MAR 2019	14	14	UCAR	22.00	30.00	REG-BAD	TOPPING
TREE-INV MAR 2019	15	15	UCAR	24.50	15.00	REG-BAD	TOPPING
TREE-INV MAR 2019	16	16	UCAR	40.00	18.00	REG-BAD	TOPPING
TREE-INV MAR 2019	17	17	MELALEUCA	26.00	9.00	FAIR	IND
TREE-INV MAR 2019	18	18	UCAR	35.00	20.00	REG-BAD	TOPPING
TREE-INV MAR 2019	19	19	UCAR	30.50	15.00	REG-BAD	TOPPING
TREE-INV MAR 2019	20	20	UCAR	28.00	18.00	REG-BAD	TOPPING
TREE-INV MAR 2019	21	21	LAUREL DE LA INDIA	6.50	9.00	FAIR	TOPIARY
TREE-INV MAR 2019	22	22	CORAZON	5.00	15.00	FAIR	IND
TREE-INV MAR 2019	23	23	UCAR	22.00	18.00	REG-BAD	TOPPING
TREE-INV MAR 2019	24	24	PALMA RABO DE ZORRA	8.00	8.00	FAIR	IND
TREE-INV MAR 2019	25	25	PALMA CATECHU	6.00	14.00	FAIR	IND
TREE-INV MAR 2019	26	26	PALMA CATECHU	6.00	14.00	FAIR	IND
TREE-INV MAR 2019	27	27	UCAR	29.00	18.00	BAD	TOPPING
TREE-INV MAR 2019	28	28	PTEROCARPUS	32.00	30.00	BAD	TOPPING
TREE-INV MAR 2019	29	29	ROBLE PLATEADO	9.00	20.00	BAD	IND
TREE-INV MAR 2019	30	30	ROBLE PLATEADO	9.50	20.00	BAD	IND
TREE-INV MAR 2019	31	31	ROBLE PLATEADO	8.00	10.00	BAD	IND
TREE-INV MAR 2019	32	32	PALMA RABO DE ZORRA	7.00	12.00	BAD	IND
TREE-INV MAR 2019	33	33	PALMA RABO DE ZORRA	3.00	7.00	BAD	IND
TREE-INV MAR 2019	34	34	PALMA RABO DE ZORRA	6.00	12.00	BAD	IND
TREE-INV MAR 2019	35	35	CAOBA SANTA CRUZ	47.00	35.00	REG-BAD	TOPPING
TREE-INV MAR 2019	36	36	PALMA RABO DE ZORRA	8.00	15.00	BAD	IND
TREE-INV MAR 2019	37	37	PTEROCARPUS	13.50	30.00	REG-BAD	IND
TREE-INV MAR 2019	38	38	PALMA RABO DE ZORRA	6.50	8.00	BAD	IND
TREE-INV MAR 2019	39	39	PALMA RABO DE ZORRA	4.25	7.00	BAD	IND
TREE-INV MAR 2019	40	40	PALMA RABO DE ZORRA	7.00	10.00	BAD	IND
TREE-INV MAR 2019	41	41	PALMA RABO DE ZORRA	7.00	14.00	FAIR	IND
TREE-INV MAR 2019	42	42	PTEROCARPUS	31.00	18.00	BAD	IND
TREE-INV MAR 2019	43	43	PTEROCARPUS	22.00	30.00	REG-BAD	IND
TREE-INV MAR 2019	44	44	PTEROCARPUS	21.00	15.00	BAD	IND
TREE-INV MAR 2019	45	45	PTEROCARPUS	46.00	20.00	BAD	IND
TREE-INV MAR 2019	46	46	REINA DE LAS FLORES	16.00	15.00	BAD	IND
TREE-INV MAR 2019	47	47	FLAMBOYAN	30.50	30.00	REG-BAD	IND
TREE-INV MAR 2019	48	48	MARIA	22.50	30.00	REG-BAD	IND
TREE-INV MAR 2019	49	49	PALMA RABO DE ZORRA	7.50	15.00	FAIR	IND
TREE-INV MAR 2019	50	50	PALMA RABO DE ZORRA	8.75	15.00	FAIR	IND
TREE-INV MAR 2019	51	51	PALMA RABO DE ZORRA	7.00	12.00	FAIR	IND
TREE-INV MAR 2019	52	52	PTEROCARPUS	32.00	25.00	FAIR	IND
TREE-INV MAR 2019	53	53	CAOBA SANTA CRUZ	63.00	18.00	BAD	IND
TREE-INV MAR 2019	54	54	CAOBA SANTA CRUZ	41.00	30.00	BAD	IND
TREE-INV MAR 2019	55	55	CAOBA SANTA CRUZ	76.00	20.00	REG-BAD	IND
TREE-INV MAR 2019	56	56	ROBLE PLATEADO	3.50	12.00	BAD	STUMP
TREE-INV MAR 2019	57	57	ROBLE PLATEADO	8.00	25.00	FAIR	IND
TREE-INV MAR 2019	58	58	CAOBA SANTA CRUZ	45.00	35.00	BAD	TOPPING
TREE-INV MAR 2019	59	59	CAOBA SANTA CRUZ	39.00	35.00	BAD	TOPPING
TREE-INV MAR 2019	60	60	CAOBA SANTA CRUZ	34.00	35.00	BAD	TOPPING
TREE-INV MAR 2019	61	61	CAOBA SANTA CRUZ	21.00	25.00	BAD	TOPPING
TREE-INV MAR 2019	62	62	CAOBA SANTA CRUZ	37.50	30.00	BAD	TOPPING
TREE-INV MAR 2019	63	63	CAOBA SANTA CRUZ	44.00	35.00	BAD	TOPPING
TREE-INV MAR 2019	64	64	CAOBA SANTA CRUZ	18.00	20.00	BAD	TOPPING
TREE-INV MAR 2019	65	65	CAOBA SANTA CRUZ	55.00	35.00	BAD	TOPPING
TREE-INV MAR 2019	66	66	MANGO	39.00	30.00	FAIR	AEE
TREE-INV MAR 2019	67	67	ROBLE NATIVO	13.00	18.00	FAIR	AEE
TREE-INV MAR 2019	68	68	REINA DE LAS FLORES	13.00	8.00	FAIR	IND

ATTACHMENT VIII: FAUNA INVENTORY

INVENTARIO DE FAUNA

PONCE HEALTH SCIENCES UNIVERSITY, PONCE, PUERTO RICO

No.	CLASE	ORDEN	FAMILIA	NOMBRE CIENTIFICO	NOMBRE COMUN
1	AMPHIBIA	ANURA	BUFONIDAE	Bufo marinus	SAPO COMUN
2	AMPHIBIA	ANURA	LEPTODACTYLIDAE	Leptodactylus albilabris	RANA DE LABIOS BLANCOS
3	AVES	APODIFORMES	TROCHILIDAE	Chlorostilbon maugaeus	ZUMBADORCITO DE PUERTO RICO
4	AVES	CAPRIMULGIFORMES	CAPRIMULGIDAE	Chordeiles gundlachii gundlachii	QUEREQUEQUÉ
5	AVES	CICONIIFORMES	ARDEIDAE	Bubulcus ibis ibis	GARZA GANADERA
6	AVES	COLUMBIFORMES	COLUMBIDAE	Columba livia	PALOMA DOMÉSTICA
7	AVES	COLUMBIFORMES	COLUMBIDAE	Columbina passerina portoricensis, exigua	ROLITA
8	AVES	COLUMBIFORMES	COLUMBIDAE	Zenaida asiatica	TÓRTOLA ALIBLANCA
9	AVES	COLUMBIFORMES	COLUMBIDAE	Zenaida aurita zenaida	TÓRTOLA CARDOSANTERA
10	AVES	CUCULIFORMES	CUCULIDAE	Coccyzus minor	PÁJARO BOBO MENOR
11	AVES	FALCONIFORMES	ACCIPITRIDAE	Buteo jamaicensis jamaicensis	GUARAGUAO COLIRROJO
12	AVES	FALCONIFORMES	ACCIPITRIDAE	Pandion haliaetus ridgwayi?	ÁGUILA PESCADORA
13	AVES	FALCONIFORMES	FALCONIDAE	Falco columbarius	FALCÓN MIGRATORIO
14	AVES	FALCONIFORMES	FALCONIDAE	Falco sparverius caribaearum	FALCÓN COMÚN
15	AVES	FALCONIFORMES	ACCIPITRIDAE	Pandion haliaetus	ÁGUILA PESCADORA
16	AVES	PASSERIFORMES	COEREBIDAE	Coereba flaveola portoricensis, sanctithomae	REINITA COMÚN
17	AVES	PASSERIFORMES	EMBERIZIDAE	Tiaris bicolor omissus	GORRIÓN NEGRO
18	AVES	PASSERIFORMES	ESTRILDIDAE	Lonchura cucullata	DIABLITO
19	AVES	PASSERIFORMES	ESTRILDIDAE	Vidua macroura	VIUDA COLICINTA
20	AVES	PASSERIFORMES	HIRUNDINIDAE	Petrochelidon fulva puertoricensis	GOLONDRINA DE CUEVAS
21	AVES	PASSERIFORMES	ICTERIDAE	Molothrus bonariensis	TORDO LUSTROSO
22	AVES	PASSERIFORMES	ICTERIDAE	Quiscalus niger brachypterus	MOZAMBIQUE
23	AVES	PASSERIFORMES	MIMIDAE	Margarops fuscatus fuscatus	ZORZAL PARDO
24	AVES	PASSERIFORMES	MIMIDAE	Mimus polyglottos orpheus	RUISEÑOR
25	AVES	PASSERIFORMES	PARULIDAE	Dendroica adelaidae	REINITA MARIPOSERA
26	AVES	PASSERIFORMES	PASSERIDAE	Passer domesticus	GORRIÓN DOMÉSTICO
27	AVES	PASSERIFORMES	PLOCEIDAE	Euplectes franciscanus	OBISPO ANARANJADO
28	AVES	PASSERIFORMES	TURDIDAE	Turdus plumbeus ardosiaceus	ZORZAL PATIRROJO
29	AVES	PASSERIFORMES	TYRANNIDAE	Tyrannus dominicensis dominicensis	PITIRRE
30	AVES	PSITTACIFORMES	PSITTACIDAE	Brotogeris versicolurus	PERIQUITO ALIBLANCO
31	MAMMALIA	CARNIVORA	VIVERRIDAE	Herpestes javanicus	MANGOSTA, ARDILLA
32	MAMMALIA	RODENTIA	MURIDAE	Rattus norvegicus	RATA PARDA
33	REPTILIA	SQUAMATA	COLUBRIDAE	Alsophis portoricensis portoricensis	CULEBRA CORREDORA
34	REPTILIA	SQUAMATA	GECONIDAE	Hemidactylus brooki haitianus	SALAMANQUESA
35	REPTILIA	SQUAMATA	IGUANIDAE	Anolis cristatellus cristatellus	LAGARTIJO COMUN
36	REPTILIA	SQUAMATA	IGUANIDAE	Anolis pulchellus	LAGARTIJO JARDINERO
37	REPTILIA	SQUAMATA	IGUANIDAE	Iguana iguana	IGUANA VERDE
38	REPTILIA	SQUAMATA	TEIDAE	Ameiva exul	SIGUANA COMUN

ATTACHMENT IX: FIELD PICTURES



































GOBIERNO DE PUERTO RICO

Departamento de Recursos Naturales y Ambientales

APR 2 3 2019

ING LADISLAO ORTIZ
P O BOX 270122
SAN JUAN PR 00928-2922

Estimado ingeniero Ortiz:

Certificación para Categorización de
Hábitats Naturales para Vida Silvestre
Ponce Health Sciences University
Calle Marginal Sur a Ave. Ponce By-Pass
Urb. Industrial Reparada 2
Bo. Canas Urbano, Ponce
O-SE-CCH01-SJ-01515-09042019

El Departamento de Recursos Naturales y Ambientales (DRNA) evaluó una Solicitud de Certificación para Categorización de Hábitats Naturales para la Vida Silvestre para el proyecto de epígrafe. La misma fue evaluada de acuerdo con las disposiciones relacionadas con la fauna y la flora de la Ley 416 del 2004, según enmendada (*Ley Sobre Política Pública Ambiental*), su Reglamento 7948 de 2010 (*Reglamento de evaluación y trámite de documentos ambientales de la Junta de Calidad Ambiental*), la Ley 23 del 1972, según enmendada (*Ley Orgánica del Departamento de Recursos Naturales y Ambientales de Puerto Rico*), de la Ley 241 del 1999, según enmendada (*Nueva Ley de vida silvestre de Puerto Rico*) y sus Reglamentos 6765 de 2004 (*Reglamento para regir la conservación y el manejo de la vida silvestre, las especies exóticas y la caza en el Estado Libre Asociado de Puerto Rico*) y 6766 del 2004 (*Reglamento para regir las especies vulnerables y en peligro de extinción en el Estado Libre Asociado de Puerto Rico*), así como de la Orden Administrativa del DRNA 2010-09.

El predio del proyecto ocupa unas 3.4 cdas. Es un predio urbano industrial completamente desarrollado e impermeabilizado, ocupado por dos estructuras abandonadas a ser demolidas para dar paso al proyecto propuesto. Se propone la construcción de dos estructuras institucionales educativas e infraestructura relacionada. No hay reportes de especies amenazadas ni en peligro de extinción.

Como resultado de dicha evaluación, hemos categorizado el predio como **Hábitat Natural con Bajo Potencial de Convertirse en Hábitat Esencial, de Alto Valor Ecológico o de Valor Ecológico (Categoría 6).** El Artículo 2.03 del Reglamento 6765, *supra*, establece lo siguiente para esta Categoría:

"La meta de la mitigación es minimizar el impacto al hábitat... y que evite el impacto a otro hábitat fuera del área a impactarse".

Este documento es una cualificación de los hábitats naturales sitos en el predio de epígrafe, requerida por los estatutos legales vigentes. **No constituye un permiso para la construcción u operación del proyecto propuesto.**

Esta certificación es solamente aplicable a la situación de hechos y los datos según presentados y evaluados en el caso y la Secretaria se reserva el derecho de evaluar, variar o modificar el mismo en cualquier momento anterior a la emisión del permiso o la acción administrativa correspondiente por parte de la agencia solicitante o proponente de surgir nueva información oficial específica estableciendo que el derecho aplicable o las condiciones ambientales en el predio han cambiado sustancialmente o cuando la certificación original se emitió bajo premisas falsas o fraudulentas.

Si tiene alguna pregunta o necesita orientación sobre este asunto, puede escribirnos a la dirección indicada o comunicarse al teléfono 787-999-2200 extensiones 2834 y 2846.

Cordialmente,

Joanna C. Cepeda Díaz
Secretaria Auxiliar Interina de Permisos, Endosos y Servicios Especializados

JCCD/fgr

Attachment VIII: Explosive and Flammable Hazards 24 CFR Part 51 Subpart C

Explosive and Flammable Hazards (CEST and EA)

General requirements	Legislation	Regulation
HUD-assisted projects must meet Acceptable Separation Distance (ASD) requirements to protect them from explosive and flammable hazards.	N/A	24 CFR Part 51 Subpart C
Reference		
https://www.hudexchange.info/environmental-review/explosive-and-flammable-facilities		

1. **Is the proposed HUD-assisted project itself the development of a hazardous facility (a facility that mainly stores, handles or processes flammable or combustible chemicals such as bulk fuel storage facilities and refineries)?**

   ☒ No

   → *Continue to Question 2.*

   ☐ Yes

   Explain:

   → *Go directly to Question 5.*

2. **Does this project include any of the following activities: development, construction, rehabilitation that will increase residential densities, or conversion?**

   ☒ No

   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

   ☐ Yes

   → *Continue to Question 3.*

3. **Within 1 mile of the project site, are there any current *or planned* stationary aboveground storage containers that are covered by 24 CFR 51C? Containers that are NOT covered under the regulation include:**
   - **Containers 100 gallons or less in capacity, containing common liquid industrial fuels OR**
   - **Containers of liquified petroleum gas (LPG) or propane with a water volume capacity of 1,000 gallons or less that meet the requirements of the 2017 version of National Fire Protection Association (NFPA) Code 58.**

   If all containers within the search area fit the above criteria, answer "no." For any other type of aboveground storage container within the search area that holds one of the

flammable or explosive materials listed in Appendix I of 24 CFR part 51 subpart C, answer "yes."

☐ No

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide all documents used to make your determination.*

☐ Yes

→ *Continue to Question 4.*

4. **Visit HUD's website to identify the appropriate tank or tanks to assess and to calculate the required separation distance using the electronic assessment tool. To document this step in the analysis, please attach the following supporting documents to this screen:**
   - **Map identifying the tank selected for assessment, and showing the distance from the tank to the proposed HUD-assisted project site; and**
   - **Electronic assessment tool calculation of the required separation distance.**

   Based on the analysis, is the proposed HUD-assisted project site located at or beyond the required separation distance from all covered tanks?

   ☐ Yes

   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

   ☐ No

   → *Go directly to Question 6.*

5. **Is the hazardous facility located at an acceptable separation distance from residences and any other facility or area where people may congregate or be present?**

   Please visit HUD's website for information on calculating Acceptable Separation Distance.

   ☐ Yes

   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide map(s) showing the location of the project site relative to residences and any other facility or area where people congregate or are present and your separation distance calculations.*

   ☐ No

   → *Provide map(s) showing the location of the project site relative to residences and any other facility or area where people congregate or are present and your separation distance calculations.*
   Continue to Question 6.

6. **For the project to be brought into compliance with this section, all adverse impacts must be mitigated. Mitigation measures may include both natural and manmade barriers, modification of the project design, burial or removal of the hazard, or other engineered solutions. Describe selected mitigation measures, including the timeline for implementation, and attach an implementation plan. If negative effects cannot be mitigated, cancel the project at this location.**
   Note that only licensed professional engineers should design and implement blast barriers. If a barrier will be used or the project will be modified to compensate for an unacceptable separation distance, provide approval from a licensed professional engineer.

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

This project will not increase residential densities in the area. The grant recipient supplied a letter and other documents describing existing fuel tank (at Phases 1a-1b site) and related conditions and mitigation measures developed to pursue compliance with the applicable regulations in this section. The grant recipient will prepare a Spill Prevention Control and Countermeasures Plan. According with this information and if the required mitigation measures are implemented, this topic is in compliance with HUD regulations. See Information and/or Figures attached

Are formal compliance steps or mitigation required?

☐ Yes

x No

CSAGROUP
EST • 1956

September 27, 2022

Mr. Carlos Rojas
Ponce Health Sciences University,
Ponce, PR

Re: Diesel Tank, PHSU Phase II, Ponce, PR

Mr. Rojas:

As part of the due diligence necessary for the CDBG Environmental Review, we have evaluated the compliance of HUD regulations for the diesel tank installation located on the Southeast side of the PHSU Academic Building Lot.

The Diesel design complies with NFPA-30 standards for Flammable and Combustible Liquids Code. The diesel tank is designed to hold a maximum of 19,944 gallons (see attached specifications from Alonso & Carus) and is located inside a dike with interior dimensions of 40'-6" x 19'-8" x 6'-0" equivalent to 35,749 gallons. The dike, in turn, is located inside a utility yard that provides no access to the public with a 10' high concrete retaining wall to the West dividing the campus from the utility yard. In addition, to the East the yard has a surrounding fence to provide access to maintenance crews in an area not accessible to the public (see attached drawing CS-102). HUD guidelines establish an Acceptable Separation Distance (ASD) of 142 feet, which the project does not meet, as the closest building is located 74' from the tank. There is also an outdoors plaza located at approximately 42' from the tank. However, HUD allows for installation of barriers to mitigate the situation in the cases that the ASD is not met. In the case of PHSU, the retaining wall and the dike provide a double layer of protection acting as barrier.

In addition to the diesel tank, inside the utility yard there is also a propane tank storage location. PHSU has confirmed that the tanks will not exceed the 100 gallons limit established by HUD for compliance.

Outside the scope of the project, I am not aware of any identifiable above ground neighboring tanks in the vicinity of the site that would not meet ASD requirements.

Annette Alfonso, RA
Project Manager

Cc: Jose Arreseigor
Attach.

PROPERTY SERVICES

PHSU PONCE HEALTH SCIENCES UNIVERSITY

VENEGAS CONSTRUCTION

PONCE HEALTH SCIENCES UNIVERSITY
NEW ACADEMIC BUILDING, PONCE CAMPUS

231000.10A RESUBMITTAL HVAC DIESEL STORAGE TANK

TO:	Annette Alfonso, RA, CAAPPR			**DATE:**	May 28, 2021
PAGES: (INC. COVER)	3	**PHONE:**	787-641-6800 x 1612 787-398-8735	**EMAIL:**	aalfonso@csagroup.com

SUBJECT: 231000.10 HVAC DIESEL STORAGE TANK

SPECS SECTION: 23000 HEATING, VENTILATION AND AIR CONDITIONING (HVAC) *

DRAWING NO.: Mechanical (MP601.0)

PROJECT: PHSU New Academic Building
Urb. Industrial Reparada, 388 Calle Luis F. Sala
Ponce, PR 00716

REMARKS: FOR APPROVAL

SUPPLIER: Alonso & Carus.

SUBMITTED TO: Annette Alfonso, RA, CAAPPR
Senior Project Manager, CSA

SUBMITTED BY: Francisco Sanchez, BSEE
Venegas Construction Corp.

RECEIVED BY: _____

DATE: _____

*SPECIFICATION NOT INCLUDED IN SET RECEIVED JULY 2020 "ISSUED FOR CONSTRUCTION"

West LLC
PO Box 13849
San Juan, PR 00681
Tel. 787-831-1918
Fax 787-833-1512

SUBMITTAL FORM

		Date:	05/26/2021
Project Name:	Ponce Health Sciences University	Item Number:	
Project Number:	21-02	Code Number:	
Specification Number	230000	**SUBMITTAL No.**	2102-23-029rev1
Date Submittal Received by the Resident Construction Engineer:			

Action Party Assigned Responsibility for this Submittal:

Supplier Name:	Alonzo & Carus
Supplier Address:	Catano, P.R.
Supplier Phone No:	787-788-1065
Submittal Description: Diesel Storage Tank	

Action Key: ***A*** *– Approve* ***R*** *– Review* ***C*** *– Comment* ***I*** *- Information*

Action Party	Key	Date Received	Date Completed	Reviewer Signature	Date Scheduled
Designer					
Contractor's Quality Control Manager					
Inspection Firm (Resident Engineer)					

Designer Recommendation:

☐ **Approved**

☐ **Approved as Noted**

☐ **Revise and Resubmit**

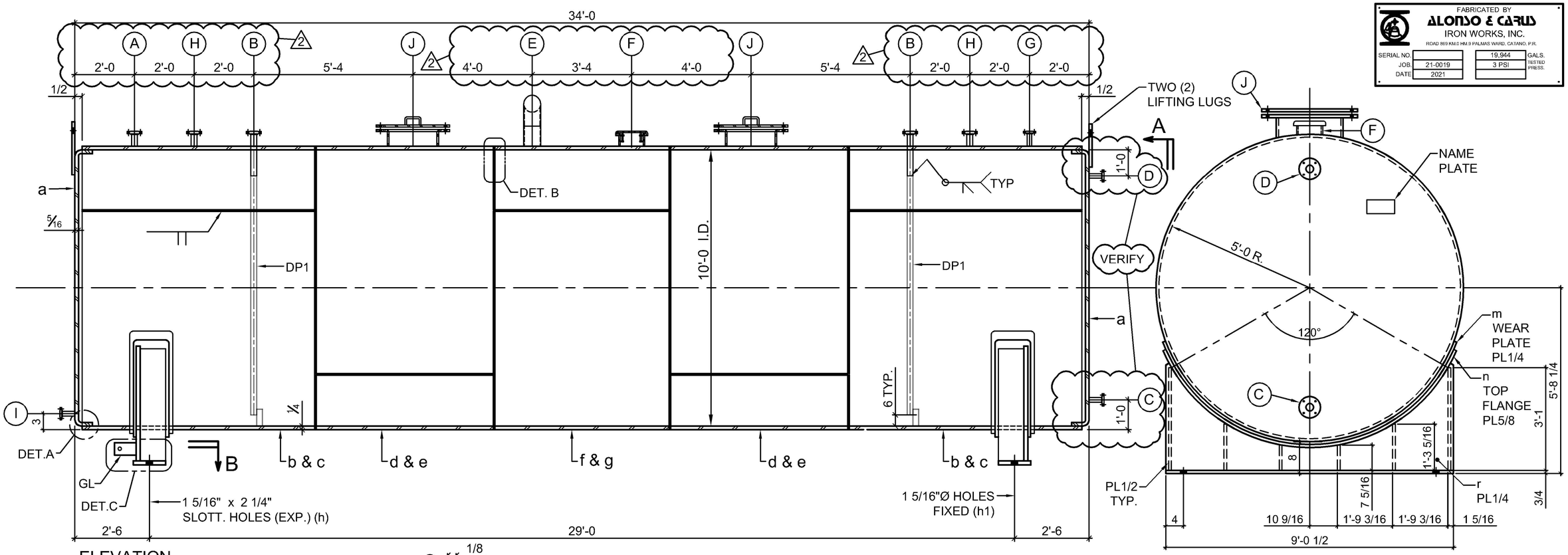
☐ **Not Approved**

***Inspection Firm (Resident Engineer) Recommendation*:**

☐ **Approved**

☐ **Non-Compliant**

Owner or the Owner's Representative review will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and approved drawings and specifications developed by Contractor and be compatible with the design concept of the completed Project as a functioning whole as indicted by the Contract Documents.



FABRICATED BY
ALONSO & CARUS
IRON WORKS, INC.
ROAD 869 KM.0 HM.9 PALMAS WARD, CATAÑO, P.R.

SERIAL NO.		19,944	GALS.
JOB.	21-0019	3 PSI	TESTED PRESS.
DATE	2021		

FOR APPROVAL

KINDLY CHECK AND CONFIRM OR CORRECT ALL DIMENSIONS AND DETALIS. RETURN ONE SET SIGNED AND APPROVED.

MAY 24 20121

FABRICATION WILL NOT START UNTIL WE RECEIVE YOUR WRITTEN APPROVAL

ALONSO & CARUS, INC.

MARK.	SIZE.	RATING.	TYPE.	SERVICE.	QTY.	SHT.
A	2	150#	RFSO	INLET	1	
B	1 1/2	150#	RFSO	SUCTION W/ DEEP TUBE	2	
C	1 1/2	150#	RFSO	LOW LEVEL TRANSMITTER	1	
D	1 1/2	150#	RFSO	HIGH LEVEL ALARM	1	
E	6	MFR'S	STD	GOOSENECK NORMAL VENT	1	
F	10	MFR'S	STD	EMERGENCY VENT	1	
G	1 1/2	150#	RFSO	RETURN	1	
H	2	150#	RFSO	SPARE	2	
I	1 1/2	150#	RFSO	DRAIN	1	
J	24	MFR'S	STD	MANHOLE	2	

NOZZLES SCHEDULE.

SHOP PAINT.	SEE NOTE
GASKETS.	1/8 FIBER KORK
BOLTING EXTERNAL.	
BOLTING INTERNAL	
EXTERNAL PIPING.	
INTERNAL PIPING.	
FORGINGS FLGS.	
EXTERNAL CLIPS.	
ANGLE LEGS.	
STRUCTURAL SHAPES.	
INTERNAL BAFFLES.	
BOLTING BARS.	
TRAYS. RINGS.	
TRAYS.	
LINING.	
CLADDING.	
SHELL & HEADS.	A36

MATERIALS A.S.T.M.

FIELD PAINT.	
FIELD TEST.	
CODE TEST	3 PSI
EXTERNAL PRESSURE.	ATMOS
RADIOGRAPHING.	
STRESS RELIEVING.	
JOINT EFFICIENCY.	
Noz. and M.H.	
Head Wall.	
Vessel Wall.	
CORROSION. (min.)	
Design. TEMPERATURE.	AMBIENT
Operating.	AMBIENT
Design. INTERNAL PRESSURE.	ATMOS
Operating.	ATMOS
SPECIFICATIONS.	
CODE.	U.L. 142

DESIGN.

PAINT & SURFACE:
A. INTERIOR: NONE

B.EXTERIOR: SHOTBLASTED TO A COMMERCIAL GRAADE AS PER SSPC-SP6, FOLLOWED BY THE APPLICATION OF ONE (1) COAT OF MACROPOXY 240, ONE (1) COAT OF MACROPOXY 646 AND ONE (1) COAT OF ACROLON 218 HS FROM SHERWIN WILLIAMS, FOR A TOTAL OF 12 MILS DFT MINIMUM.

THIS DRAWING IS PROPERTY OF ALONSO & CARUS IRON WORKS,INC.AND SHALL BE RETURNED UPON REQUEST. IT SHOULD NOT BE COPIED OR USED WITHOUT WRITTEN CONSENT OF ALONSO & CARUS.

CAPACITY.	19,944	GALS.
WEIGHT FULL OF WATER.	181,843	LBS.
OPERATING WEIGHT.	181,843	LBS.
ERECTION WEIGHT.	15,510	LBS.

WEIGHT & CAPACITY.

NO	DATE	DESCRIPTION	NAME
2	05/21/21	NOZZLES LOCATION (REV.)	ORL
1	05/19/21	OWNER REV.	ORL

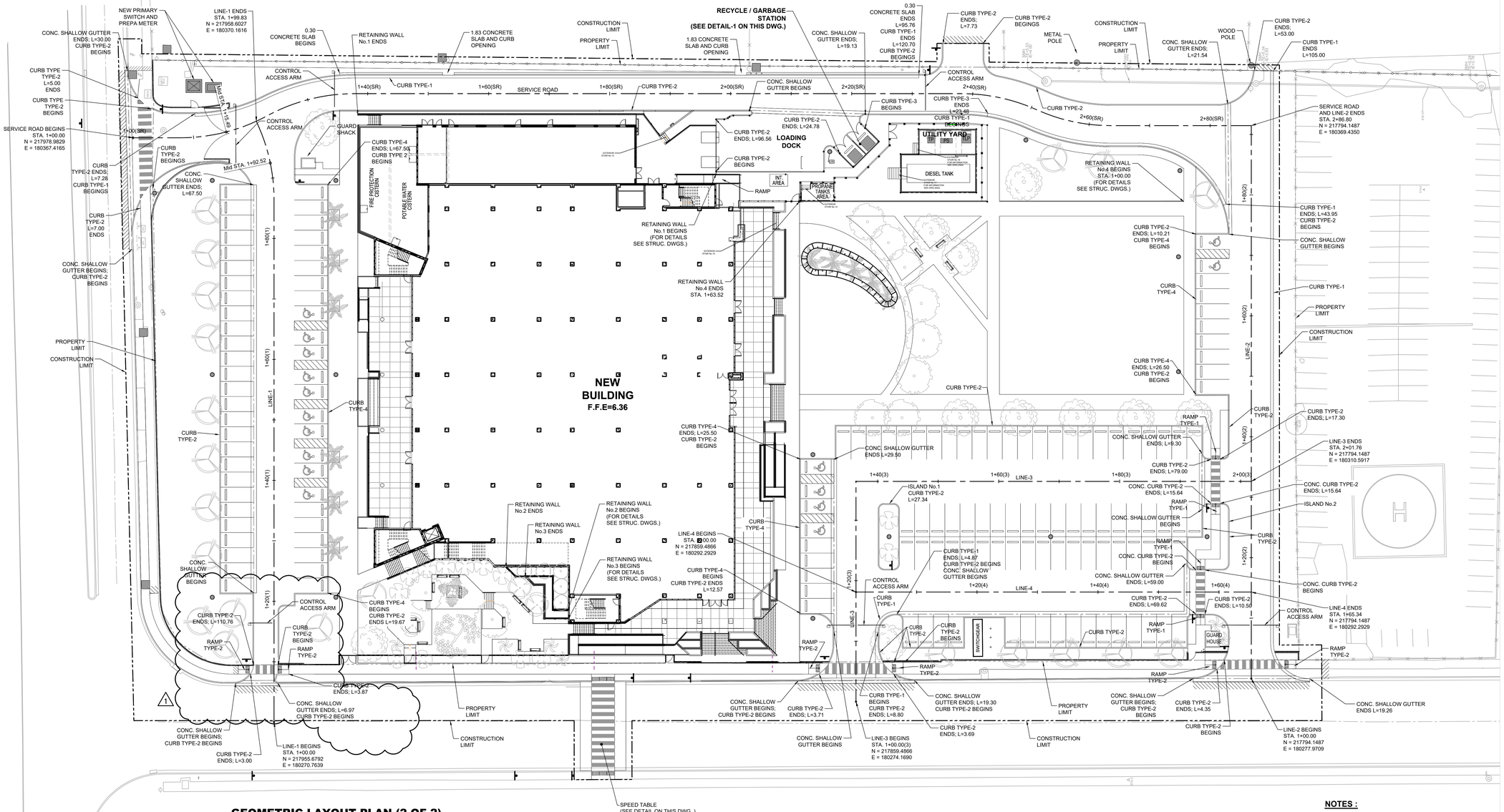
REVISIONS

AISC CERTIFIED FABRICATOR

ALONSO & CARUS IRON WORKS INC.
P.O. BOX 566, CATAÑO, PUERTO RICO 00963
ROAD 869 KM. 0.9, PALMAS WARD, CATAÑO, PUERTO RICO
PHONE (787) 788-1065 FAX NO. (787) 788-0350
Email: sales@alonsocarus.com

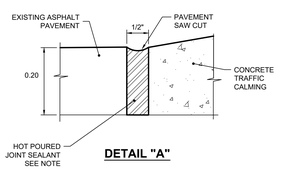
HECHO EN PUERTO RICO

CONTRACTORS OR OWNER	WEST ELECTRIC CORP.
PROJECT	20,000 GLS. HORIZONTAL SINGLE WALL TANK, PONCE HEALTH SCIENCES UNIV., PONCE, PR
DESCRIPTION	ELEVATION & SECTION
PROJ.NO.	
DESIGNER	
CHK'D BY	
APR'D BY	
DRW. BY	O.RAMIREZ
DATE	MARCH 10, 2021
JOB NO.	21-0019
DRW. NO.	P-421-20-B520
	1



GEOMETRIC LAYOUT PLAN (2 OF 2)

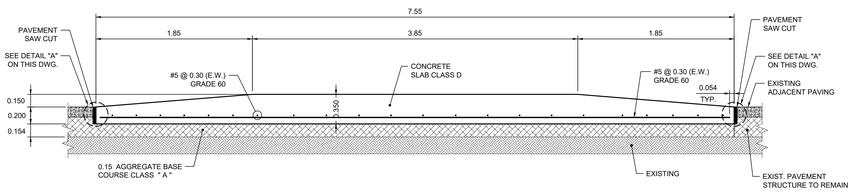
SCALE:1: 250



DETAIL "A"

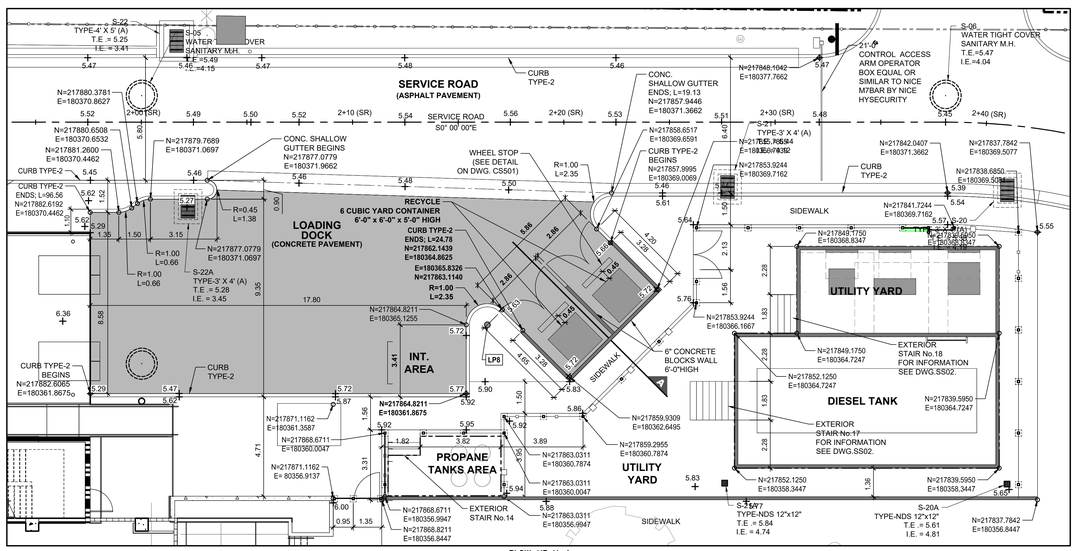
SPEED TABLE NOTES:

THE HOT POURED JOINT SEALANT (SPEC. 507-002) SHALL BE SINGLE COMPONENT, HOT-APPLIED POLYMER MODIFIED, ASPHALT BASE JOINT SEALANT TO FILL JOINT AND CRACKS IN BITUMINOUS AND PORTLAND CEMENT CONCRETE PAVEMENTS IN HOT CLIMATES. THE HOT POURED JOINT SEALANT SHALL MEET THE REQUIREMENTS OF ASSHTO M301 AND ASTM D 3405.



SPEED TABLE DETAIL

SCALE:1:25



BLOW–UP No.1 DETAIL

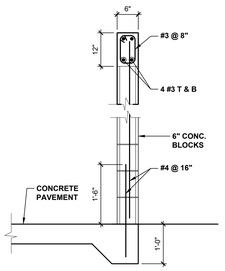
CS102 SCALE:1: 100

NOTES :

1. FOR CURB AND GUTTER DETAILS, SEE DWG. CS501.

LEGEND:

- LP1 — LIGHTING POLE ID
- PROP. LIGHTING POLE
- PROP. POWER POLE
- CP2 — POWER POLE ID
- PROPERTY LIMIT
- CONSTRUCTION LIMIT
- 5.56 — PROP. SPOT ELEVATION



SECTION

CS102 SCALE:N. T.S.

PHSU
PONCE HEALTH SCIENCES UNIVERSITY
Tomás Discenden Est. Quomdiu Vivas

Project

PONCE HEALTH SCIENCES UNIVERSITY
388 ZONA INDUSTRIAL REPARADA 2
PONCE, PUERTO RICO 00716

ISSUED FOR CONSTRUCTION

MAY / 11 / 2020

Hellmuth, Obata + Kassabaum, Inc.
10 South Broadway, Suite 200
St. Louis, MO 63102 USA
t +1 314 421 2000 f +1 314 421 6073

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In Association with

CSA Architects & Engineers, LLP
1511 Ponce de León Avenue, Suite 23
San Juan, Puerto Rico 00909
tel. : (787) 641-6800
fax : (787) 641-6850
web : www.csagroup.com

YO,
CERTIFICO QUE SOY EL PROFESIONAL QUE [CONFECCIONÓ, DISEÑÓ O PREPARÓ] ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIÉN, CERTIFICO QUE ENTIENDO QUE DICHOS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CÓDIGOS DE CONSTRUCCIÓN VIGENTES DE LAS AGENCIAS, JUNTAS REGLAMENTADORAS O CORPORACIONES PÚBLICAS CON JURISDICCIÓN. CERTIFICO, ADEMÁS, QUE EN LA[PREPARACIÓN DE ESTOS PLANOS Y ESPECIFICACIONES] SE HA CUMPLIDO CABALMENTE CON LO DISPUESTO EN LA LEY NÚM. 14 DE 8 DE ENERO DE 2004, SEGÚN ENMENDADA, CONOCIDO COMO LA "LEY PARA LA INVERSIÓN POR LA INDUSTRIA PUERTORRIQUEÑA" Y CON LA LEY NÚM. 313 DE 15 DE MAYO DE 1998, SEGÚN ENMENDADA; LEY NÚM. 96 DE 6 DE JULIO DE 1978, SEGÚN ENMENDADA, SEGÚN APLIQUE). RECONOZCO QUE CUALQUIER DECLARACIÓN FALSA O FALSIFICACIÓN DE LOS HECHOS QUE SE HAYA PROCUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MÍ, MIS AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCIÓN JUDICIAL Y DISCIPLINARIA POR LA OGPE

Key Plan

Professional Seals

No.	Description	Date
1	ACT ENDORSEMENT REVISION	2020-07-31

Project No:

Sheet Title

GEOMETRIC LAYOUT (2 OF 2)

Original drawing is 48 x 36 Do not scale contents of this drawing

Sheet Number

CS102.01

Attachment IX: Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658

Farmlands Protection (CEST and EA)

General requirements	Legislation	Regulation
The Farmland Protection Policy Act (FPPA) discourages federal activities that would convert farmland to nonagricultural purposes.	Farmland Protection Policy Act of 1981 (7 U.S.C. 4201 et seq.)	7 CFR Part 658
Reference		
https://www.hudexchange.info/environmental-review/farmlands-protection		

1. **Does your project include any activities, including new construction, acquisition of undeveloped land or conversion, that could convert agricultural land to a non-agricultural use?**

   X Yes → *Continue to Question 2.*

   ☐No

   Explain how you determined that agricultural land would not be converted:

   The proposed project will be carried in an already developed urban parcel.

   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documentation supporting your determination.*

2. **Does "important farmland," including prime farmland, unique farmland, or farmland of statewide or local importance regulated under the Farmland Protection Policy Act, occur on the project site?**

   You may use the links below to determine important farmland occurs on the project site:

   - Utilize USDA Natural Resources Conservation Service's (NRCS) Web Soil Survey http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm
   - Check with your city or county's planning department and ask them to document if the project is on land regulated by the FPPA (zoning important farmland as non-agricultural does not exempt it from FPPA requirements)
   - Contact NRCS at the local USDA service center http://offices.sc.egov.usda.gov/locator/app?agency=nrcs or your NRCS state soil scientist http://soils.usda.gov/contact/state_offices/ for assistance

   X No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.*

   ☐Yes → *Continue to Question 3.*

3. **Consider alternatives to completing the project on important farmland and means of avoiding impacts to important farmland.**
   - Complete form **AD-1006**, "Farmland Conversion Impact Rating" http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1045394.pdf and contact the state soil scientist before sending it to the local NRCS District Conservationist.
     (NOTE: for corridor type projects, use instead form **NRCS-CPA-106**, "Farmland Conversion Impact Rating for Corridor Type Projects: http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1045395.pdf.)
   - Work with NRCS to minimize the impact of the project on the protected farmland. When you have finished with your analysis, return a copy of form AD-1006 (or form NRCS-CPA-106 if applicable) to the USDA-NRCS State Soil Scientist or his/her designee informing them of your determination.

Document your conclusion:

☐Project will proceed with mitigation.

Explain in detail the proposed measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide form AD-1006 and all other documents used to make your determination.*

☐Project will proceed without mitigation.

Explain why mitigation will not be made here:

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide form AD-1006 and all other documents used to make your determination.*

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

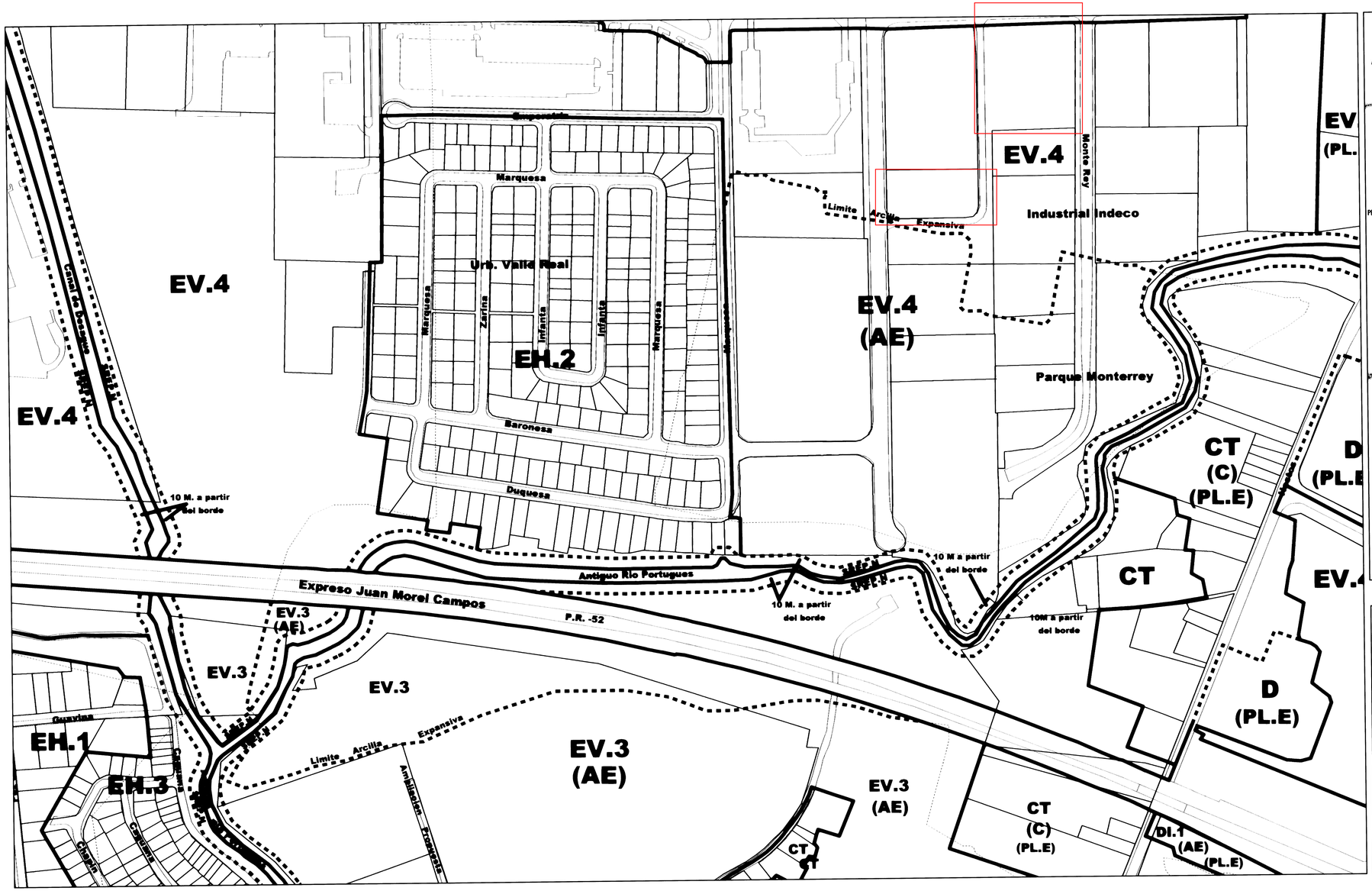
- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

The proposed project will be carried in an already developed urban parcel. A recent satellite image (Puerto Rico CRIM) and the Ponce Area Zoning Map are included.
Natural Resources Conservation Service's (NRCS) Web Soil Survey http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm map did not identify the area as Prime Farm Land.
Therefore, this topic is in compliance with HUD regulations. See Information and/or Figures attached

Are formal compliance steps or mitigation required?

☐ Yes

☒ No



MAPA INDICE, ESCALA 1:130,000

LEYENDA

- DISTRITOS DE ORDENACION
- DISTRITOS SOBREPUESTOS Y LIMITES VIRTUALES
- SISTEMA VIAL
- PARCELAS
- CENTRO DE QUEBRADAS
- TOPOGRAFIA, @ 10 METROS
- LAGOS, LAGUNAS Y CANALES

PLANO DE ORDENACION NUMERO : 064

APROBACION

APROBADO POR LA LEGISLATURA MUNICIPAL
DEL MUNICIPIO AUTONOMO DE PONCE
MEDIANTE ORDENANZA
NUM. 26 SERIE 2002 - 2003
EN PONCE, PUERTO RICO EL
14 DE ENERO DE 2003

HON. GUILLERMO JIMENEZ
SECRETARIO DE LA LEGISLATURA MUNICIPAL

HON. LUIS A. (WITO) MORALES
PRESIDENTE DE LA LEGISLATURA MUNICIPAL

CERTIFICACION

FIRMADA LA ORDENANZA Y APROBADA EN PONCE, PUERTO RICO EL
16 DE ENERO DE 2003

HON. RAFAEL CORDERO SANTIAGO
ALCALDE
MUNICIPIO AUTONOMO DE PONCE

ADOPCION

ADOPTADO POR LA JUNTA DE PLANIFICACION

EN SU REUNION DEL 18 DE DICIEMBRE DE 2003
MEDIANTE RESOLUCION NUM. JP-PT-63-RT-01

ANGEL D. RODRIGUEZ - PRESIDENTE
JUNTA DE PLANIFICACION DE PUERTO RICO

CERTIFICO ADOPTADA HOY 18 DE DICIEMBRE 2003

CARMEN TORRES MELENDEZ - SECRETARIA
VIGENCIA 28 de diciembre de 2003

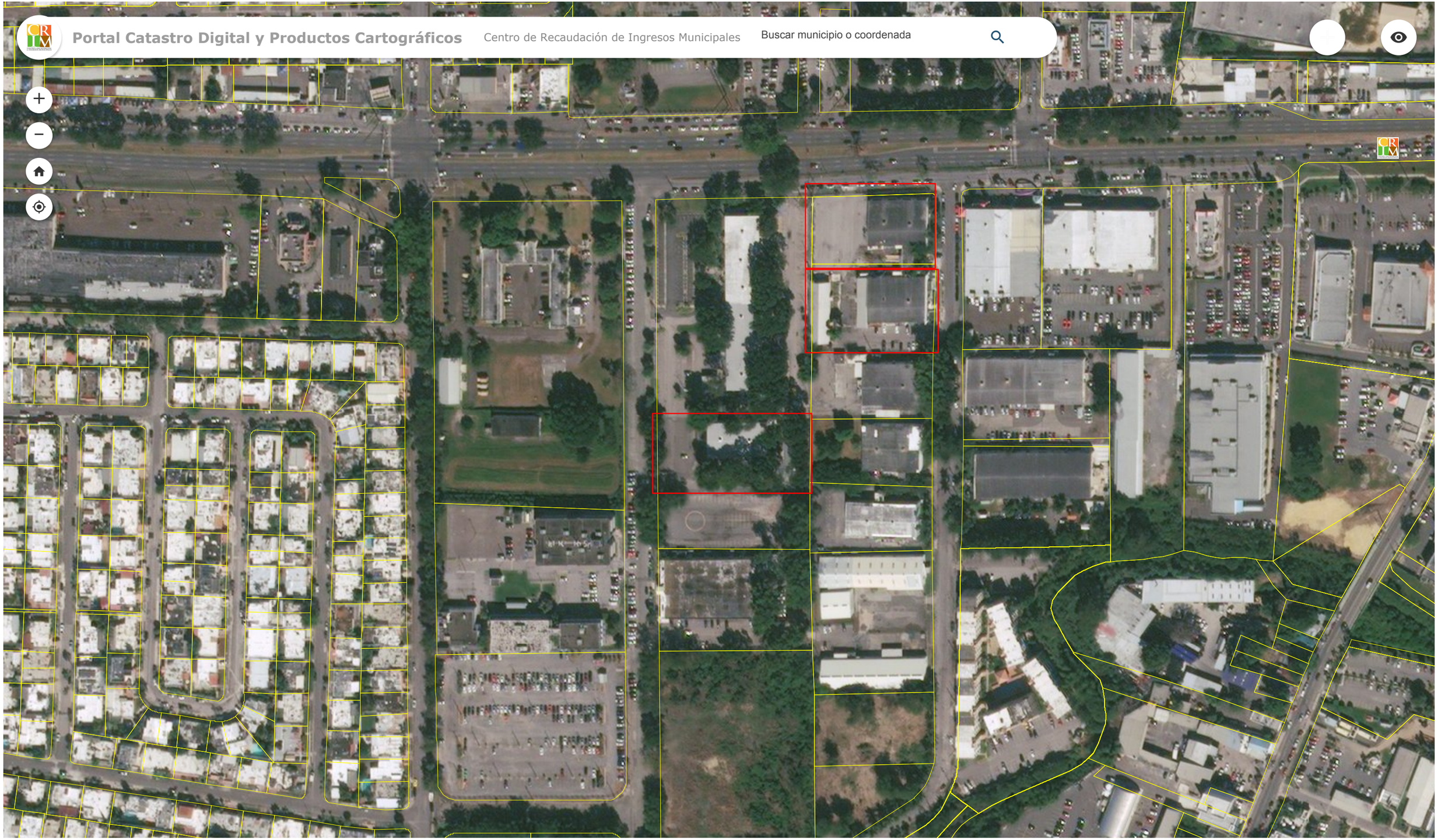
ESCALA 1:2,000

METROS 0 50 100 200 300 400
PIES 0 250 500 1,000 1,500 2,000

PLAN DE ORDENACION TERRITORIAL

MUNICIPIO AUTONOMO DE PONCE
OFICINA DE ORDENACION TERRITORIAL

PLANO DE ORDENACION NUMERO : 064


Portal Catastro Digital y Productos Cartográficos
Centro de Recaudación de Ingresos Municipales
Buscar municipio o coordenada
17.993 -66.619 Degrees
0 30 60m

Soil Map—Ponce Area, Puerto Rico Southern Part
(PHSU Phases 2-3, Ponce, PR)



Map Scale: 1:1,450 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 20 40 80 120

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Ponce Area, Puerto Rico Southern Part
Survey Area Data: Version 17, Sep 13, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 23, 2022—Mar 1, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
UI	Urban land	3.6	100.0%
Totals for Area of Interest		**3.6**	**100.0%**

Farmland Classification—Ponce Area, Puerto Rico Southern Part
(PHSU Phases 2-3, Ponce, PR)



Map Scale: 1:1,450 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 20 40 80 120

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

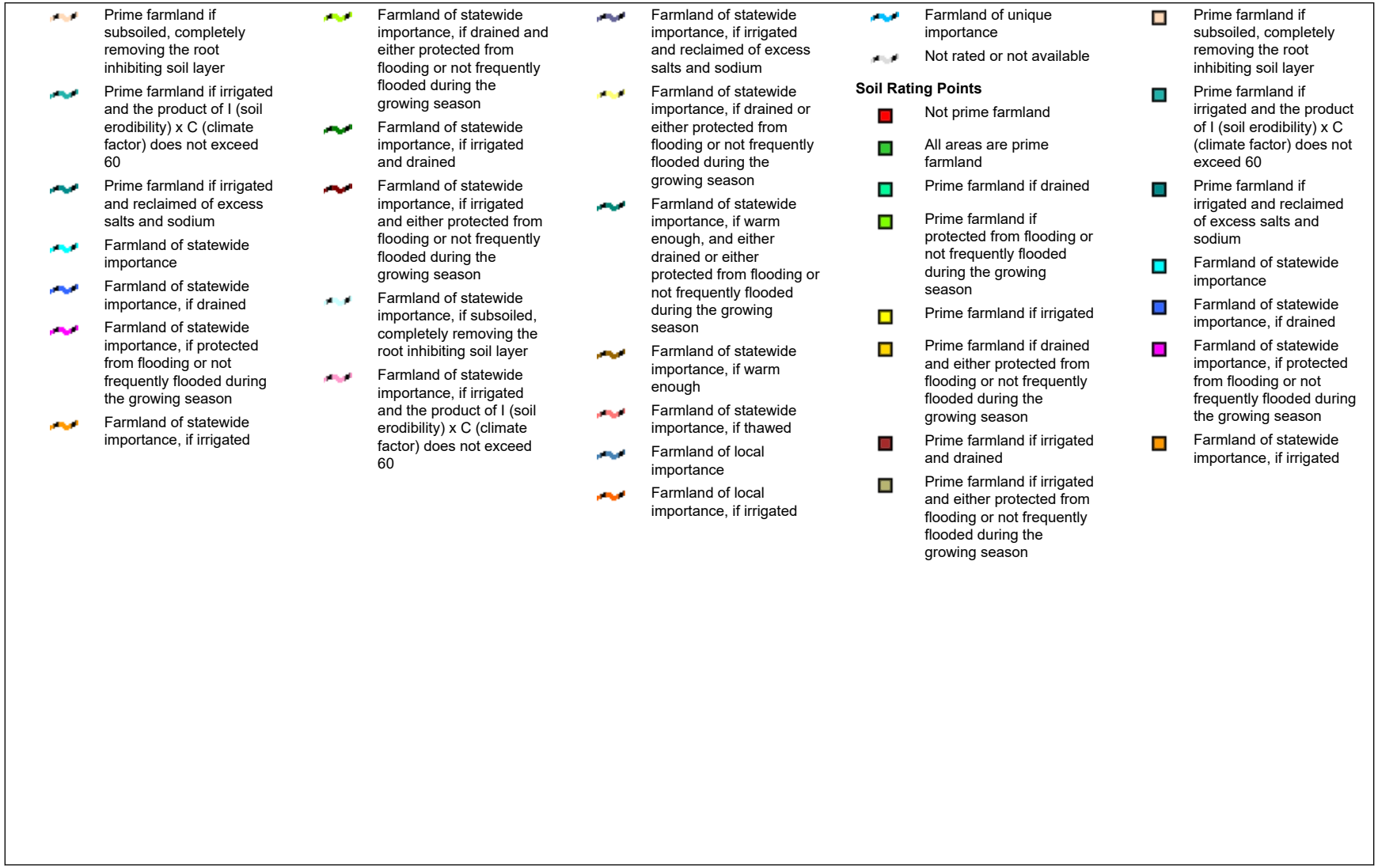
Soils

Soil Rating Polygons

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of statewide importance, if drained
- Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated
- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Soil Rating Lines

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season


Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated
Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated and drained
Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough
Farmland of statewide importance, if thawed
Farmland of local importance
Farmland of local importance, if irrigated
Farmland of unique importance
Not rated or not available
Soil Rating Points
Not prime farmland
All areas are prime farmland
Prime farmland if drained
Prime farmland if protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated
Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated and drained
Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated

- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

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Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Ponce Area, Puerto Rico Southern Part
Survey Area Data: Version 17, Sep 13, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 23, 2022—Mar 1, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Farmland Classification

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
UI	Urban land	Not prime farmland	3.6	100.0%
Totals for Area of Interest			**3.6**	**100.0%**

Description

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Rating Options

Aggregation Method: No Aggregation Necessary

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The majority of soil attributes are associated with a component of a map unit, and such an attribute has to be aggregated to the map unit level before a thematic map can be rendered. Map units, however, also have their own attributes. An attribute of a map unit does not have to be aggregated in order to render a corresponding thematic map. Therefore, the "aggregation method" for any attribute of a map unit is referred to as "No Aggregation Necessary".

Tie-break Rule: Lower

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

Attachment X: Floodplain Management Executive Order 11988, particularly section 2(a); 24 CFR Part 55

Floodplain Management (CEST and EA)

General Requirements	Legislation	Regulation
Executive Order 11988, Floodplain Management, requires Federal activities to avoid impacts to floodplains and to avoid direct and indirect support of floodplain development to the extent practicable.	Executive Order 11988	24 CFR 55
Reference		
https://www.hudexchange.info/environmental-review/floodplain-management		

1. **Does 24 CFR 55.12(c) exempt this project from compliance with HUD's floodplain management regulations in Part 55?**

   ☐ Yes

   Provide the applicable citation at 24 CFR 55.12(c) here. If project is exempt under 55.12(c)(7) or (8), provide supporting documentation.

   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

   ☒ No → *Continue to Question 2.*

2. **Provide a FEMA/FIRM or ABFE map showing the site.**

   The Federal Emergency Management Agency (FEMA) designates floodplains. The FEMA Map Service Center provides this information in the form of FEMA Flood Insurance Rate Maps (FIRMs) or Advisory Base Flood Elevations (ABFEs). For projects in areas not mapped by FEMA, use the best available information to determine floodplain information. Include documentation, including a discussion of why this is the best available information for the site.

   Does your project occur in a floodplain?

   ☐ No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

   ☒ Yes

   Select the applicable floodplain using the FEMA map or the best available information:

   ☐ Floodway → *Continue to Question 3, Floodways*

☐ Coastal High Hazard Area (V Zone) → *Continue to Question 4, Coastal High Hazard Areas*

☐ 500-year floodplain (B Zone or shaded X Zone) → *Continue to Question 5, 500-year Floodplains*

☒ 100-year floodplain (A Zone) → *The 8-Step Process is required. Continue to Question 6, 8-Step Process*

3. Floodways

Is this a functionally dependent use?

☐ Yes

The 8-Step Process is required. Work with your HUD FEO to determine a way to satisfactorily continue with this project. Provide a completed 8-Step Process, including the early public notice and the final notice.

→*Continue to Question 6, 8-Step Process*

☐ No

Federal assistance may not be used at this location *unless a 55.12(c) exception applies*. You must either choose an alternate site or cancel the project at this location.

4. Coastal High Hazard Area

Is this a critical action?

☐ Yes

Critical actions are prohibited in coastal high hazard areas. Federal assistance may not be used at this location. Unless the action is excepted at 24 CFR 55.12(c), you must either choose an alternate site or cancel the project.

☐ No

Does this action include construction that is not a functionally dependent use, existing construction (including improvements), or reconstruction following destruction caused by a disaster?

☐ Yes, there is new construction.

New construction is prohibited in V Zones ((24 CFR 55.1(c)(3)).

☐ No, this action concerns only a functionally dependent use, existing construction(including improvements), or reconstruction following destruction caused by a disaster.

This construction must have met FEMA elevation and construction standards for a coastal high hazard area or other standards applicable at the time of construction.

→ *Continue to Question 6, 8-Step Process*

5. **500-year Floodplain**

Is this a critical action?

☐ No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

☐Yes → *Continue to Question 6, 8-Step Process*

6. **8-Step Process**.

Does the 8-Step Process apply? Select one of the following options:

☐ 8-Step Process applies.

Provide a completed 8-Step Process, including the early public notice and the final notice.

→ *Continue to Question 7, Mitigation*

☒ 5-Step Process is applicable per 55.12(a)(1-3).

Provide documentation of 5-Step Process.

Select the applicable citation:

☐ *55.12(a)(1)* HUD actions involving the disposition of HUD-acquired multifamily housing projects or "bulk sales" of HUD-acquired one- to four-family properties in communities that are in the Regular Program of the National Flood Insurance Program (NFIP) and in good standing (i.e., not suspended from program eligibility or placed on probation under 44 CFR 59.24).

☐ *55.12(a)(2)* HUD's actions under the National Housing Act (12 U.S.C. 1701) for the purchase or refinancing of existing multifamily housing projects, hospitals, nursing homes, assisted living facilities, board and care facilities, and intermediate care facilities, in communities that are in good standing under the NFIP.

☐ *55.12(a)(3)* HUD's or the recipient's actions under any HUD program involving the repair, rehabilitation, modernization, weatherization, or improvement of existing multifamily housing projects, hospitals, nursing homes, assisted living facilities, board and care facilities, intermediate care facilities, and one- to four-family properties, in communities that are in the Regular Program of the National Flood Insurance Program (NFIP) and are in good standing, provided that the number of units is not increased more than 20 percent, the action does not involve a conversion from nonresidential to residential land use, the action does not meet the thresholds for "substantial improvement" under § 55.2(b)(10), and the footprint of the structure and paved areas is not significantly increased.

☒ *55.12(a)(4)* HUD's (or the recipient's) actions under any HUD program involving the repair, rehabilitation, modernization, weatherization, or improvement of existing nonresidential buildings and structures, in communities that are in the

Regular Program of the NFIP and are in good standing, provided that the action does not meet the thresholds for "substantial improvement" under § 55.2(b)(10) and that the footprint of the structure and paved areas is not significantly increased.

→ *Continue to Question 7, Mitigation*

☐ 8-Step Process is inapplicable per 55.12(b)(1-4).

Select the applicable citation:

☐ *55.12(b)(1)* HUD's mortgage insurance actions and other financial assistance for the purchasing, mortgaging or refinancing of existing one- to four-family properties in communities that are in the Regular Program of the National Flood Insurance Program (NFIP) and in good standing (i.e., not suspended from program eligibility or placed on probation under 44 CFR 59.24), where the action is not a critical action and the property is not located in a floodway or coastal high hazard area.

☐ *55.12(b)(2)* Financial assistance for minor repairs or improvements on one- to four-family properties that do not meet the thresholds for "substantial improvement" under § 55.2(b)(10)

☐ *55.12(b)(3)* HUD actions involving the disposition of individual HUD-acquired, one-to four-family properties.

☐ *55.12(b)(4)* HUD guarantees under the Loan Guarantee Recovery Fund Program (24 CFR part 573) of loans that refinance existing loans and mortgages, where any new construction or rehabilitation financed by the existing loan or mortgage has been completed prior to the filing of an application under the program, and the refinancing will not allow further construction or rehabilitation, nor result in any physical impacts or changes except for routine maintenance.

☐ *55.12(b)(5)* The approval of financial assistance to lease an existing structure located within the floodplain, but only if—

(i) The structure is located outside the floodway or Coastal High Hazard Area, and is in a community that is in the Regular Program of the NFIP and in good standing (i.e., not suspended from program eligibility or placed on probation under 44 CFR 59.24);

(ii) The project is not a critical action; and

(iii) The entire structure is or will be fully insured or insured to the maximum under the NFIP for at least the term of the lease.

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

7. <u>Mitigation</u>

For the project to be brought into compliance with this section, all adverse impacts must be mitigated. Explain in detail the exact measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.

The requested fund are requested to perform interior works inside a non-residential building being constructed, demolition of two existing buildings and remodel of existing structures without changing the footprint. The building being constructed was designed in compliance with the PR flood areas regulations (compliance information is attached). The funds recipient will maintain, all the time, a valid Flood Insurance Policy (a copy of the policy is attached)

Which of the following mitigation/minimization measures have been identified for this project in the 8-Step or 5-Step Process? Select all that apply.

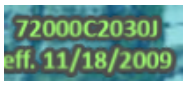
- ☒ Permeable surfaces
- ☐ Natural landscape enhancements that maintain or restore natural hydrology
- ☒ Planting or restoring native plant species
- ☐ Bioswales
- ☒ Evapotranspiration
- ☐ Stormwater capture and reuse
- ☐ Green or vegetative roofs with drainage provisions
- ☐ Natural Resources Conservation Service conservation easements or similar easements
- ☐ Floodproofing of structures
- ☐ Elevating structures including free boarding above the required base flood elevations
- ☐ Other

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates 

- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

The proposed project is located on a floodplain. A 5-Step Process is applicable per 55.12(a) (1-3). Phase 2 include the demolition of two existing buildings and the construction of an outdoor plaza. Phase 3 Proposed activities will remodel three existing buildings, which were not substantially damaged. This phase does not include the construction of new buildings nor increasing the print of existing buildings. No additional impacts to the floodplain are anticipated. Therefore, this topic is in compliance with HUD regulations. See Information and/or Figures attached

Are formal compliance steps or mitigation required?

- ☐ Yes
- ☒ No

EXECUTIVE ORDER 11988 – FLOODPLAIN

MANAGEMENT FIVE-STEP PROCESS

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

COMMUNITY DEVELOPMENT BLOCK GRANT – DISASTER RELIEF (CDBG-DR) PROGRAM

- PHSU Phases 1a, 1b, 2 and 3, Ponce, Puerto Rico

-Decision Process for Executive Order 11988 as Provided by 24 CFR §55.20

Step 1: ***Determine whether the action is located in a 100-year floodplain (or a 500-year floodplain for critical actions).***

The project is located at 388 Zona Industrial Reparada 2, Ponce, Puerto Rico 00716. The project is located entirely within the 100-year floodplain. The property is within the AO flood zone (area of special flood hazard with water surface elevations determined to be 0.7m). The property is located on Flood Insurance Rate Map (FIRM) Panel 72000C2030J, revised November 19, 2009. Executive Order (EO) 11988 within HUD Regulations 24 CFR Part 55 details floodplain management. The purpose of EO 11988 is "to avoid to the extent possible the long and short term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative." The project is located within the 100-year floodplain and for this reason, EO 11988 applies. An evaluation of direct and indirect impacts associated with construction, occupancy, and modification of the floodplain is required.

The proposed project includes:

- Phase 2: Funds are seek for the demolition of two buildings and creating of an outdoor plaza.
- Phase 3: Funds are seek for the will be used to exercise $2.85m purchase option to acquire Damas land and three buildings on the property. The three buildings will house the dental program. Funding will also be used for soft costs necessary for architectural drawings, permits, inspections and taxes for the renovation of the three Damas buildings and converting them to a dental clinic and classroom space. Phase 3 work will also include the renovation work itself on the three buildings to be used for the dental program. Renovation work includes retrofitting water and air lines necessary to operate dental clinic equipment and construction of the clinic, classrooms, and faculty offices. Phase 3 also includes FFE and dental equipment to outfit the dental clinic, classrooms and faculty offices.

Proposed activities will , demolish two existing buildings and remodel three existing buildings, which were not substantially damaged and creating an outdoor plaza with green areas

therefore, per 24 CFR 55.12(a)(4), public notification of the proposed activity (Step 2), identification and evaluation of practicable alternatives (Step 3) and the determination of no practicable alternative and publication of a final notice (Step 7) do not need to be conducted.

Step 2: ***Notify the public for early review of the proposal and involve the affected and interested public in the decision making process.***

Proposed activities will demolish two existing buildings and remodel three existing buildings, which were not substantially damaged and creating an outdoor plaza; therefore, per 24 CFR 55.12(a)(4), public notification of the proposed activity (Step 2), identification and evaluation of practicable alternatives (Step 3) and the determination of no practicable alternative and publication of a final notice (Step 7) do not need to be conducted.

Step 3: ***Identify and evaluate practicable alternatives to locating in the base floodplain.***

Proposed activities will demolish two existing buildings and remodel three existing buildings, which were not substantially damaged and creating an outdoor plaza; therefore, per 24 CFR 55.12(a)(4), public notification of the proposed activity (Step 2), identification and evaluation of practicable alternatives (Step 3) and the determination of no practicable alternative and publication of a final notice (Step 7) do not need to be conducted.

Step 4: ***Identify Potential Direct and Indirect Impacts of Associated with Floodplain Development.***

Descriptions of the potential impacts from the proposed action is below:

Option A (Proposed Action) – Proposed activities will demolish two existing buildings and remodel three existing buildings, which were not substantially damaged and creating an outdoor plaza. The proposal does not include the construction of a new building nor changing the print of the existing buildings to be remodeled); therefore, no additional impacts to the floodplain are anticipated from the project.

Step 5: ***Where practicable, design or modify the proposed action to minimize the potential adverse impacts to lives, property, and natural values within the floodplain and to restore, and preserve the values of the floodplain.***

Because the property was not substantially damaged, elevation certificate is not required.

Step 6: ***Reevaluate the Proposed Action.***

Option A: Proposed activities will demolish two existing buildings and remodel three existing buildings, which were not substantially damaged and creating an outdoor plaza. The proposal does not include the construction of a new building nor changing the print of the buildings to be remodeled); therefore, no additional impacts to the floodplain are anticipated from the project.

Step 7: *Determination of No Practicable Alternative*

Proposed activities will demolish two existing buildings and remodel three existing buildings, which were not substantially damaged and creating an outdoor plaza. The proposal does not include the construction of a new building nor changing the print of the buildings to be remodeled. Therefore, per 24 CFR 55.12(a)(4), the determination of no practicable alternative and publication of a final notice (Step 7 of the 8-Step Process) does not need to be conducted.

Step 8: *Implement the Proposed Action*

Step eight is implementation of the proposed action. The proponent will ensure that all mitigation measures, if any, prescribed in the steps above and the worksheet will be adhered to.

National Flood Hazard Layer FIRMette

FEMA

66°37'28"W 17°59'55"N



66°36'50"W 17°59'21"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

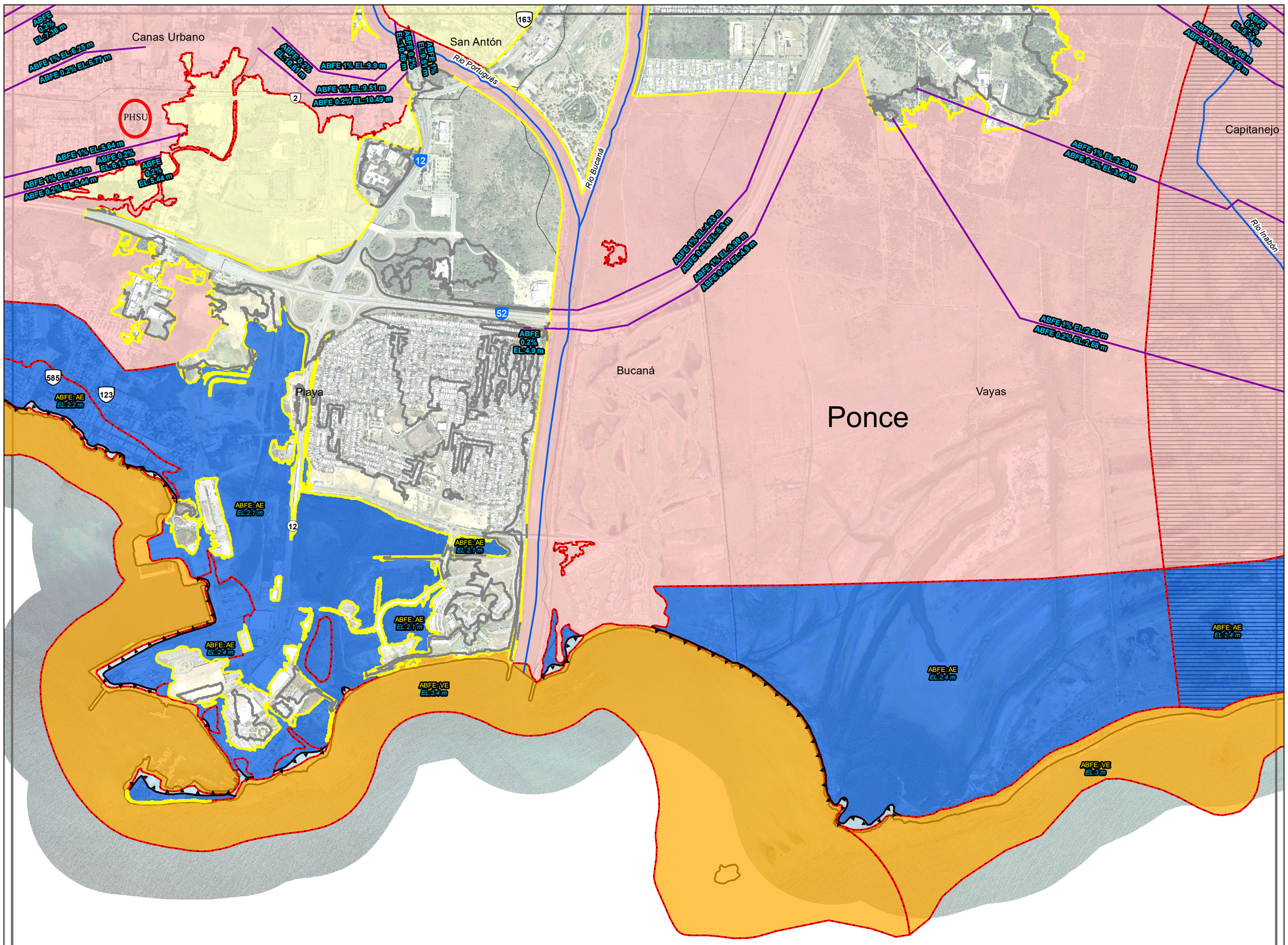
N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 4/13/2022 at 6:11 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



MAPAS DE NIVELES DE INUNDACIÓN BASE RECOMENDADOS

Estos mapas de niveles de inundación base recomendados (Advisory Maps) desarrollados por FEMA para Puerto Rico identifican que áreas se encuentran en nuevas zonas inundables recomendadas del 1% y 0.2% de probabilidad, así como niveles de inundación base recomendados (ABFE, por sus siglas en inglés) que pueden afectar las prácticas de construcción.

Como parte del esfuerzo de recuperación de la Isla, estos mapas son una herramienta para las agencias, los desarrolladores, diseñadores, técnicos de permisos de construcción, oficiales federales, estatales y municipales y dueños de propiedad, para tomar decisiones informadas de manera que se mitigue por eventos de inundación, se proteja la vida y propiedad, así como la inversión pública y privada.

El propósito de estos mapas es asesorar sobre como las nuevas construcciones, reconstrucciones y mejoras sustanciales deben ser elevadas o diseñadas para minimizar los daños por inundaciones futuras, en base a la mejor información disponible. Además, busca orientar a la ciudadanía sobre el riesgo a inundación al que pudiera estar expuesto.

Para información sobre cómo estos mapas fueron desarrollados y sus limitaciones, puede acceder al documento "Puerto Rico Advisory Data and Products" disponible en la página web de la Junta de Planificación.

Recuerde que antes de una construcción, usted debe consultar con los funcionarios de las oficinas municipales de permiso, las oficinas regionales de permisos (OGPe) o con la Junta de Planificación para determinar las elevaciones obligatorias para su hogar, negocio u otra propiedad.

UTILIZACIÓN

Las elevaciones mostradas en estos mapas son consideradas la mejor información disponible hasta que se desarrollen Mapas de Tasas del Seguro de Inundación (FIRM, por sus siglas en inglés) actualizados.

Estos mapas NO han sido desarrollados para tomar determinaciones respecto al seguro de inundación del Programa Nacional del Seguro de Inundación (NFIP, por sus siglas en inglés). Para propósitos del seguro de inundación, se debe hacer referencia a los FIRMs vigentes para Puerto Rico y disponibles en http://msc.fema.gov o en la herramienta MiPR de la Junta de Planificación (http://gis.pr.gov/mipr/)

LEYENDA

- Hidrografía
- Nivel de Inundación Base Recomendado
- Límite de Acción Moderada de la Ola (LiMWA)
- 1% Probabilidad Anual de Inundación
- 0.2% Probabilidad Anual de Inundación
- Límite ABFE

Zona Inundable

- 0.2% Probabilidad Anual de Inundacion
- A
- AE
- AO
- A Costera
- VE
- Cauce Mayor
- Panel
- Límite Municipal
- Límite de Barrio

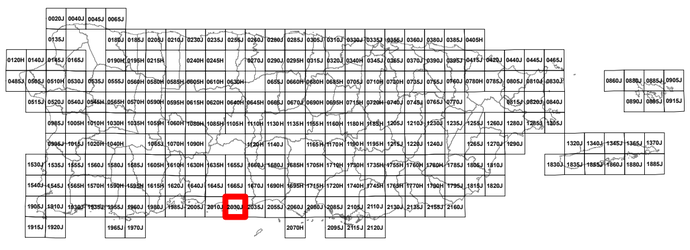
NOTAS

1. Elevaciones medidas en metros relativos al Puerto Rico Vertical Datum de 2002 (PRVD02)
2. Zonas idientificadas como A costera o áreas afectadas por acción moderada de las olas (MoWA, por sus siglas en inglés) muestran las áreas donde la altura de la ola fluctúa entre 1.5 a 3 pies, Nueva construcción o mejora sustancial en estas zonas debe utilizar los parámetros establecidos para las zonas VE en el Reglamento de Planificación Núm, 13, vigente, Reglamento sobre áreas Especiales de Riesgo a Inundación. Puede accederlo en el siguiente enlace http://jp.pr.gov/Reglamentos/Relamentos-Planificacioón.

Panel: 72000C2030J Fecha de efectividad: 13/abril/2018

Fecha de revisión del geodato 12/mayo/2018

MAPA DE REFERENCIA



Fecha de mapa (pdf): 25/mayo/2018

FEMA

0 20 40 80 120 160 Kilómetros

Attachment XI: Historic Preservation National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800

Historic Preservation (CEST and EA)

General requirements	Legislation	Regulation
Regulations under Section 106 of the National Historic Preservation Act (NHPA) require a consultative process to identify historic properties, assess project impacts on them, and avoid, minimize, or mitigate adverse effects	Section 106 of the National Historic Preservation Act (16 U.S.C. 470f)	36 CFR 800 "Protection of Historic Properties"
References		
https://www.hudexchange.info/environmental-review/historic-preservation		

Threshold

Is Section 106 review required for your project?

☐ No, because the project consists solely of activities listed as exempt in a Programmatic Agreement (PA). (See the PA Database to find applicable PAs.)
Either provide the PA itself or a link to it here. Mark the applicable exemptions or include the text here:

→ *Continue to the Worksheet Summary.*

☐No, because the project consists solely of activities included in a No Potential to Cause Effects memo or other determination [36 CFR 800.3(a)(1)].
Either provide the memo itself or a link to it here. Explain and justify the other determination here:

·Direct Effect: No historic properties are present within the Direct APE" ·Indirect Effect: No historic properties are present within the Indirect/Visual APE" Based on the results of historic property identification efforts, no previously identified historic properties are present within the Direct APE or the Indirect/ Visual APE. The project area has a low probability for the presence of intact cultural deposits.

→ *Continue to the Worksheet Summary.*

x Yes, because the project includes activities with potential to cause effects (direct or indirect). → *Continue to Step 1.*

The Section 106 Process
After determining the need to do a Section 106 review, initiate consultation with regulatory and other interested parties, identify and evaluate historic properties, assess effects of the project on properties listed on or eligible for the National Register of Historic Places, and resolve any adverse effects through project design modifications or mitigation.
Note that consultation continues through all phases of the review.
Step 1: Initiate consultation
Step 2: Identify and evaluate historic properties
Step 3: Assess effects of the project on historic properties
Step 4: Resolve any adverse effects

Step 1 - Initiate Consultation

The following parties are entitled to participate in Section 106 reviews: Advisory Council on Historic Preservation; State Historic Preservation Officers (SHPOs); federally recognized Indian tribes/Tribal Historic Preservation Officers (THPOs); Native Hawaiian Organizations (NHOs); local governments; and project grantees. The general public and individuals and organizations with a demonstrated interest in a project may participate as consulting parties at the discretion of the RE or HUD official. Participation varies with the nature and scope of a project. Refer to HUD's website for guidance on consultation, including the required timeframes for response. Consultation should begin early to enable full consideration of preservation options.

Use the When To Consult With Tribes checklist within Notice CPD-12-006: Process for Tribal Consultation to determine if you should invite tribes to consult on a particular project. Use the Tribal Directory Assessment Tool (TDAT) to identify tribes that may have an interest in the area where the project is located. Note that consultants may not initiate consultation with Tribes.

Select all consulting parties below (check all that apply):

☒ State Historic Preservation Officer (SHPO)
☐ Advisory Council on Historic Preservation
☐ Indian Tribes, including Tribal Historic Preservation Officers (THPOs) or Native
☐ Hawaiian Organizations (NHOs)

List all tribes that were consulted here and their status of consultation:

☒ Other Consulting Parties

List all consulting parties that were consulted here and their status of consultation:

Puerto Rico Culture Institute and Historic Preservation. An Archeological Study was prepared for the western parcel (Phases 1a, 1b and 2) and the PR ICP Issued Authorization Letters. (see attachments below)

Provide all correspondence, notices, and notes (including comments and objections received) and continue to Step 2.

Step 2 - Identify and Evaluate Historic Properties

Define the Area of Potential Effect (APE), either by entering the address(es) or providing a map depicting the APE. Attach an additional page if necessary.

(see attachments below)

Gather information about known historic properties in the APE. Historic buildings, districts and archeological sites may have been identified in local, state, and national surveys and registers, local historic districts, municipal plans, town and county histories, and local history websites. If not already listed on the National Register of Historic Places, identified properties are then evaluated to see if they are eligible for the National Register.
Refer to HUD's website for guidance on identifying and evaluating historic properties.

In the space below, list historic properties identified and evaluated in the APE.
Every historic property that may be affected by the project should be listed. For each historic property or district, include the National Register status, whether the SHPO has concurred with the finding, and whether information on the site is sensitive. Attach an additional page if necessary.

see attachments below)

Provide the documentation (survey forms, Register nominations, concurrence(s) and/or objection(s), notes, and photos) that justify your National Register Status determination.

Was a survey of historic buildings and/or archeological sites done as part of the project?
If the APE contains previously unsurveyed buildings or structures over 50 years old, or there is a likely presence of previously unsurveyed archeological sites, a survey may be necessary. For Archeological surveys, refer to HP Fact Sheet #6, Guidance on Archeological Investigations in HUD Projects.

☒ Yes → *Provide survey(s) and report(s) and continue to Step 3.*
Additional notes:

An Archeological Study was prepared for the western parcel (Phases 1a, 1b and 2) and the PR ICP Issued Authorization Letters. (see Sand attachments below)

☐ No → *Continue to Step 3.*

Step 3 - Assess Effects of the Project on Historic Properties

Only properties that are listed on or eligible for the National Register of Historic Places receive further consideration under Section 106. Assess the effect(s) of the project by applying the Criteria of Adverse Effect. (36 CFR 800.5)] Consider direct and indirect effects as applicable as per HUD guidance.

Choose one of the findings below - No Historic Properties Affected, No Adverse Effect, or Adverse Effect; and seek concurrence from consulting parties.

☒ No Historic Properties Affected
Document reason for finding:

☒ No historic properties present. → *Provide concurrence(s) or objection(s) and continue to the Worksheet Summary.*

☐ Historic properties present, but project will have no effect upon them. → *Provide concurrence(s) or objection(s) and continue to the Worksheet Summary.*

If consulting parties concur or fail to respond to user's request for concurrence, project is in compliance with this section. No further review is required. If consulting parties object, refer to (36 CFR 800.4(d)(1)) and consult further to try to resolve objection(s).

x_ No Adverse Effect

Document reason for finding:

Does the No Adverse Effect finding contain conditions?

x Yes

Check all that apply: (check all that apply)

☐ Avoidance

☐ Modification of project

x Other

Describe conditions here:

1. Any changes, exterior and interior, not specified in this document, including changes to windows and doors, be submitted to the PRSHPO to ensure they are appropriate for these historic buildings.
2. Once preliminary design drawings are available, they will be submitted to the PRSHPO for review.

→ *Monitor satisfactory implementation of conditions. Provide concurrence(s) or objection(s) and continue to the Worksheet Summary.*

☒ No → *Provide concurrence(s) or objection(s) and continue to the Worksheet Summary.*

If consulting parties concur or fail to respond to user's request for concurrence, project is in compliance with this section. No further review is required. If consulting parties object, refer to (36 CFR 800.5(c)(2)) and consult further to try to resolve objection(s).

☐ Adverse Effect

Document reason for finding:

Copy and paste applicable Criteria into text box with summary and justification.
Criteria of Adverse Effect: 36 CFR 800.5]

Notify the Advisory Council on Historic Preservation of the Adverse Effect and provide the documentation outlined in 36 CFR 800.11(e). The Council has 15 days to decide whether to enter the consultation (Not required for projects covered by a Programmatic Agreement).

→ *Continue to Step 4.*

Step 4 - Resolve Adverse Effects

Work with consulting parties to try to avoid, minimize or mitigate adverse effects. Refer to HUD guidance and 36 CFR 800.6 and 800.7.

Were the Adverse Effects resolved?

☐ Yes

Describe the resolution of Adverse Effects, including consultation efforts and participation by the Advisory Council on Historic Preservation:

For the project to be brought into compliance with this section, all adverse impacts must be mitigated. Explain in detail the exact measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.

→ *Provide signed Memorandum of Agreement (MOA) or Standard Mitigation Measures Agreement (SMMA). Continue to the Worksheet Summary.*

☐ No

The project must be cancelled unless the "Head of Agency" approves it. Either provide approval from the "Head of Agency" or cancel the project at this location.

Describe the failure to resolve Adverse Effects, including consultation efforts and participation by the Advisory Council on Historic Preservation and "Head of the Agency":

Explain in detail the exact conditions or measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.

→ *Provide correspondence, comments, documentation of decision, and "Head of Agency" approval. Continue to the Worksheet Summary.*

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

After a review of all the documentation provided, the PRSHPO agrees that the proposed project will have **no adverse effect** on PR-IPG-000683 Ponce, upon complying with the following conditions:

1. Any changes, exterior and interior, not specified in this document, including changes to windows and doors, be submitted to the PRSHPO to ensure they are appropriate for these historic buildings.
2. Once preliminary design drawings are available, they will be submitted to the PRSHPO for review.

Therefore, this topic is in compliance with HUD regulations. See attachments below.

Are formal compliance steps or mitigation required?

☐ Yes

☒ No

GOVERNMENT OF PUERTO RICO
STATE HISTORIC PRESERVATION OFFICE
Executive Director I Carlos A. Rubio-Cancela I carubio@prshpo.pr.gov

Thursday, May 11, 2023

Lauren Bair Poche
HORNE- Architectural Historian Manager
10000 Perkins Rowe, Suite 610 Bldg. G
Baton Rouge, LA 70810

SHPO: 02-23-23-02 PONCE, PUERTO RICO DISASTER RECOVERY, CDBG-DR PROGRAM: INVESTMENT PORTFOLIO FOR GROWTH (IPG), PR-IPG-000683, PONCE HEALTH SCIENCES UNIVERSITY – PHSU ACADEMIC BUILDING, 388 ZONA INDUSTRIAL REPARADA 2, PONCE, PUERTO RICO

Dear Ms. Poche,

Our Office has received and reviewed the above referenced project in accordance with 54 USC 306108 (commonly known as Section 106 of the *National Historic Preservation Act, as amended)* and 36 CFR Part 800: *Protection of Historic Properties* from the Advisory Council on Historic Preservation. The State Historic Preservation Officer (SHPO) is to advise and assist federal agencies and other responsible entities when identifying historic properties, assessing effects upon them, and considering alternatives to avoid or reduce the project's effects.

After a review of all the documentation provided, the PRSHPO agrees that the proposed project will have **no adverse effect** on PR-IPG-000683 Ponce, upon complying with the following conditions:

1. Any changes, exterior and interior, not specified in this document, including changes to windows and doors, be submitted to the PRSHPO to ensure they are appropriate for these historic buildings.
2. Once preliminary design drawings are available, they will be submitted to the PRSHPO for review.

After the close of the 30 day review period and if no consulting party has objected, you may proceed with the undertaking in accordance with §800.5(d)(1). Implementing the undertaking according to the documented finding fulfills the agency official's responsibilities under Section 106. However, if the agency official will not conduct the undertaking as proposed in the finding, the agency official must reopen consultation under §800.5(a).

SHPO OECH
OFICINA ESTATAL DE CONSERVACIÓN HISTÓRICA
OFICINA DEL GOBERNADOR
STATE HISTORIC PRESERVATION OFFICE
OFFICE OF THE GOVERNOR

If you have any questions concerning our comments, do not hesitate to contact our Office.

Sincerely,

Carlos A. Rubio-Cancela
State Historic Preservation Officer
CARC/GMO/EVR

May 2, 2023

Carlos A. Rubio Cancela
State Historic Preservation Officer
Puerto Rico State Historic Preservation Office
Cuartel de Ballajá (Tercer Piso)
San Juan, PR 00902-3935

Puerto Rico Disaster Recovery, CDBG-DR Investment Portfolio for Growth (IPG) Program

Re: SHPO 02-23-23-02: PR-IPG-000683, Ponce Health Sciences University – PHSU Academic Building, 388 Zona Industrial Reparada 2, Ponce, Puerto Rico – Response to Additional Requested Information – *No Adverse Effect*

Dear Architect Rubio Cancela,

On behalf of PRDOH, and the subrecipient for this project, Tiber Health Public Benefit Corporation dba Ponce Health Sciences University, we are submitting additional information as requested in a letter from your office dated Tuesday, March 21, 2023.

The letter stated that your records supported our finding of **no historic properties affected** within the area of potential effects for what was defined as Phase 2 of the proposed project in the submitted NHPA Effect Determination Form.

Regarding Phase 3 as defined in the NHPA Effect Determination Form, which involved the repair and renovation of the Puerto Rico Industrial Development Corp (PRIDCO) buildings into the Ponce Health Sciences University new Dentistry School, the following information was requested in order for SHPO to fulfill its legal responsibilities:

(1) A detailed written description of the project, including related activities to be carried out in conjunction with the project. Please provide a copy of the application submitted for Federal funding, licenses, or permits.
(2) Schematic or preliminary drawings (floor plans, elevations, sections) that show the proposed project design saved as a PDF file and included with printed copies, size 11”x17”. Digital copies of maps and plans/drawings may substitute printed ones.

The requested application made by the subrecipient to the IPG Program has been provided as requested (see **PRDOH_Investment Portolio For Growth Program_PR-IPG-000683_Ponce Health Science University_Intake Form**)

The subrecipient has yet to produce final design drawings and a detailed scope of work prepared for this project, as part of the funding they are seeking to receive through the IPG Program will involve the as-built and architectural design drawings. However, at this time conceptual drawings and anticipated scope of work can be provided.

In the NHPA Determination Effect Form, the undertaking for Phase 3 was defined as the following:

> *Phase 3 work is the renovation work on the three buildings (1940-1960), located in the Damas lot being purchased, that will be used for the dental program. There are two (2) single-story concrete buildings of approximately 11,600 sf and 14,300 sf in area and one (1) single story concrete and aluminum building of approximately 4,500 sf in area. The lot is approximately 7,800 square meters in size. (See page 3, Photos 1-4.) Renovation work includes retrofitting water and air lines necessary to operate dental clinic equipment and construction of the clinic, classrooms, and faculty offices. Includes interior work including mechanical, electrical, plumbing, partitions, finishes as well as FF&E and dental equipment to outfit the dental clinic, classrooms and faculty offices.*

At this time, we can provide your office with the following information regarding the proposed work to the mid-century PRIDCO buildings (Building #01 and #02; see **Figure 1** Building #02 [Phase 3 Photography's Key from the NHPA Effect Determination Form]). We are providing your office with the conceptual layouts depicted in the documents **PRDOH_Investment Portolio For Growth Program_PR-IPG-000683_Ponce Health Science University_Conceptual Design** and **PRDOH_Investment Portolio For Growth Program_PR-IPG-000683_Ponce Health Science University_Conceptual Design Windows.** The intent of the subrecipient is to retain the exterior as is, although there is the possibility of additional structural repairs; that will be determined when additional funds are available to conduct those assessments. It is anticipated at this time that exterior doors and windows will most likely need to be replaced to comply with new building codes. The subrecipient proposes to consult with the PRSHPO in the event this is necessary. The interior of both the buildings will be reconfigured and adapted to house the dentistry school. New walls will be erected, existing walls painted, and the flooring most likely replaced. Electrical work and plumbing will be upgraded and expanded. Additional photographs of the buildings, both interior and exterior, are included at the end of this letter.

In the main building (Building #02), the space will be renovated to have visitors enter a lobby situated in the southeast section of the building. This will consist of a reception area, information desks, a sitting area, and exhibition walls (see **PHSU – Ponce Health Science University_Conceptual Design,** page 5). Behind this area will be the administrative section, which will consist of seven distinct spaces that are both private offices and open spaces for meetings (see **PHSU – Ponce Health Science University_Conceptual Design,** page 6). Directly behind the administrative section, in the northeast corner of Building #02, will be several rooms dedicated to faculty and mentors so that they have private workstations and a conference room. Building #02 will also have a Diagnosis and Radiology Zone, a Surgical and Sedation Area, Sterilization and Dispensing Rooms, and two Laboratories (see **PHSU – Ponce Health Science University_Conceptual Design,** pages 9 to 12). Additional rooms in the building will include a student and faculty kitchenette, bathrooms and lockers, mechanical rooms, and archival storage (see **PHSU – Ponce Health Science University_Conceptual Design,** page 13 and 14).

Building #01 is completely dedicated to the establishment of 68 individual dental stations for the students (see **PHSU – Ponce Health Science University_Conceptual Design,** page 7). Buildings #01 and #02 are connected through a hallway with several rooms off it. These rooms will be devoted to professor and student meetings rooms and study areas. Computers, writing boards, and monitors will be installed so electronic health records and the library database for literature searches can be accessed (see **PHSU – Ponce Health Science University_Conceptual Design,** page 6). Areas dedicated to Student Control stations will be established in both buildings (see **PHSU – Ponce Health Science University_Conceptual Design,** page 8).

We acknowledge that these two mid-twentieth buildings are reflective of the Puerto Rico Industrial Development Company's prototype plan and are as such eligible for inclusion in the National Register of Historic Places under not only Criteria A but also Criteria C, for their contribution in the areas of Commerce, Community Planning & Development, Economics, Industry, Social History and Architecture. The buildings still retain the aspects of location, design, materials, workmanship, feeling, and association regarding their historic integrity. The setting has been impacted over the years through the development of the land around it and the construction of new buildings, especially to the immediate west.

Based on the information provided by the subrecipient regarding the renovation and adaptive reuse of the PRIDCO buildings, we believe a finding of **no adverse effect** to historic properties is appropriate for this undertaking and respectfully ask for your concurrence. As funding for design plans are included in the proposed project activities, we propose that this finding be conditioned to any exterior changes not specified in this document, including changes to windows and doors, be submitted to the PRSHPO to ensure they are appropriate for these historic buildings.

Please contact me by email at lauren.poche@horne.com or phone at 225-405-7676 with any questions or concerns.

Kindest regards,



Lauren Bair Poche, M.A.
Architectural Historian, Historic Preservation Senior Manager

Attachments

Figure 1: Phase 3 Photography's Key from the NHPA Effect Determination

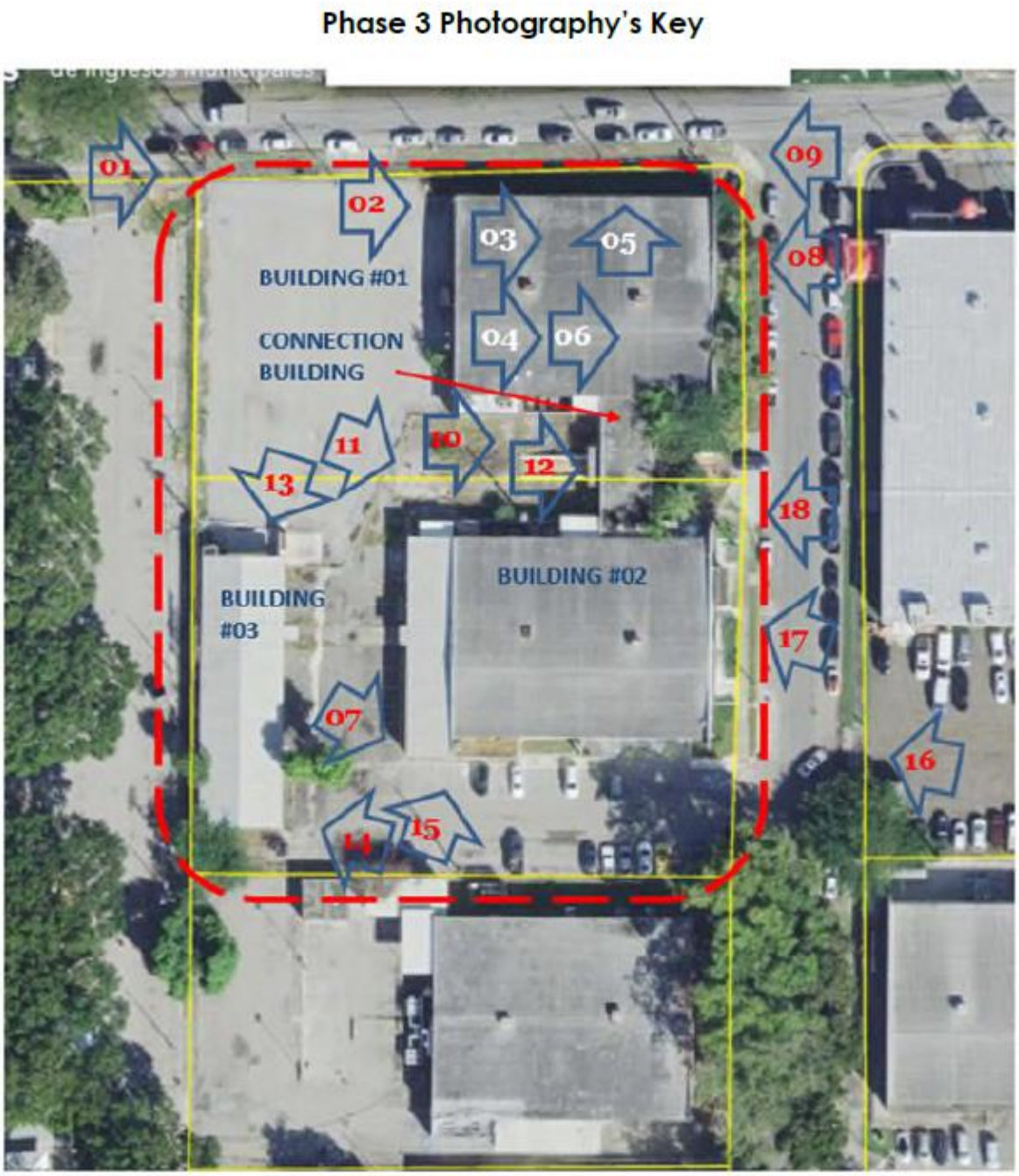




Photo #: 1	**Description (include direction):**
Date: March 2023	Building 1, oblique featuring the north and west elevations, facing east-southeast.



Photo #: 2	**Description (include direction):**
Date: March 2023	Oblique featuring the north elevation of Building 1 and existing windows, facing east-southeast.



Photo #: 3	**Description (include direction):**
Date: March 2023	East elevation of Building 1, facing northwest.



Photo #: 4	**Description (include direction):**
Date: March 2023	East elevation of Building 1, facing north-northwest.



Photo #: 5	**Description (include direction):**
Date: March 2023	South elevation of Building 2.



Photo #: 6	**Description (include direction):**
Date: March 2023	Oblique featuring the west and south elevations of Building 2.



Photo #: 7	**Description (include direction):**
Date: March 2023	West elevation of Building 2, facing southeast.



Photo #: 8	**Description (include direction):**
Date: March 2023	North elevation of Building 2, facing east-southeast.



Photo #: 9	**Description (include direction):**
Date: March 2023	West elevation of the hallway area between Buildings 1 and 2, facing east.



Photo #: 10	**Description (include direction):**
Date: March 2023	Closeup of the west elevation of the hallway area between Buildings 1 and 2, facing east.



Photo #: 11	**Description (include direction):**
Date: March 2023	Interior in the hallway area, facing east.



Photo #: 12	**Description (include direction):**
Date: March 2023	Interior in the hallway area, facing north.

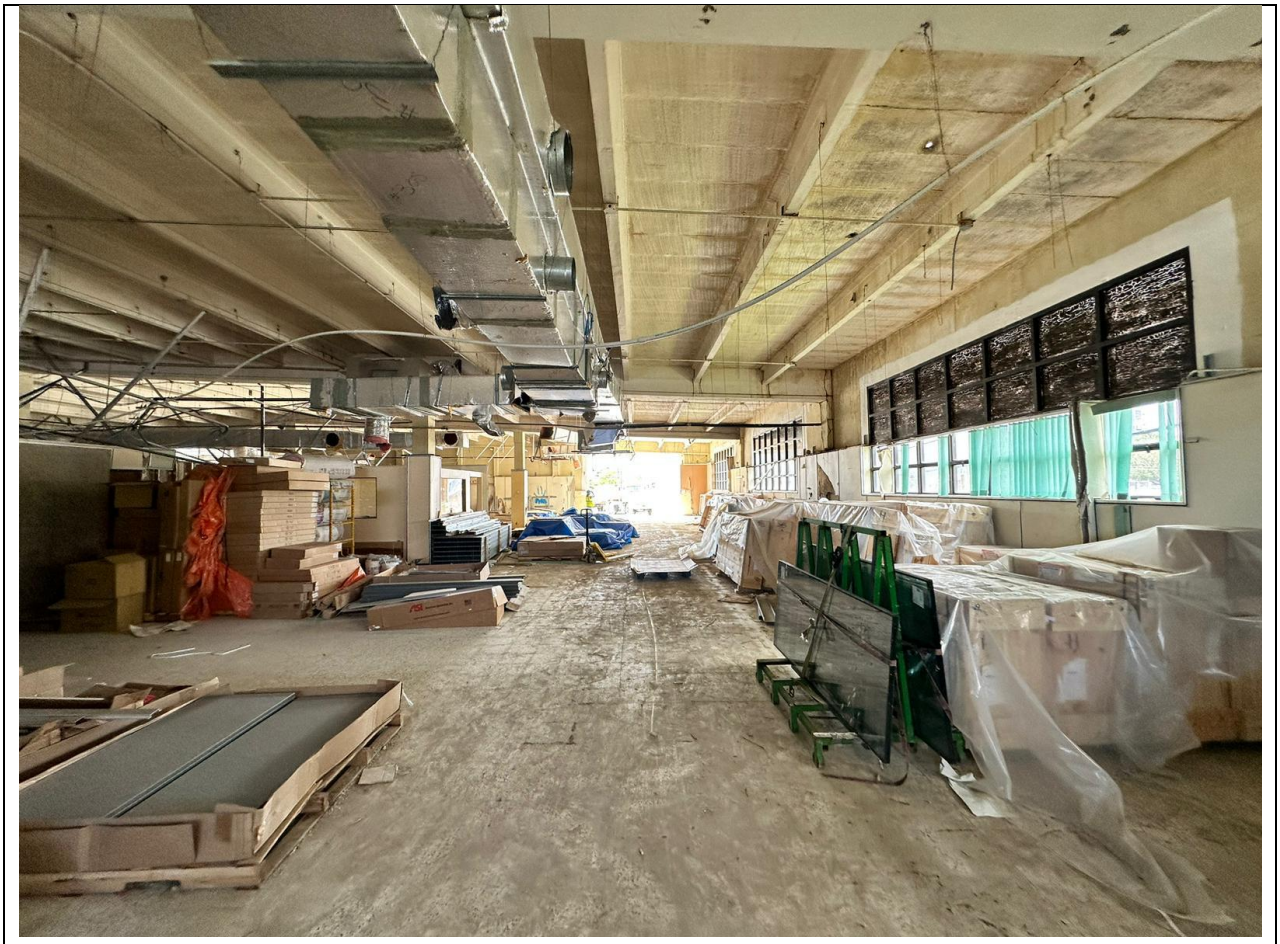


Photo #: 13	**Description (include direction):**
Date: March 2023	Building 1, interior.



Photo #: 14	**Description (include direction):**
Date: March 2023	Building 1, interior.



Photo #: 15	**Description (include direction):**
Date: March 2023	Building 1, interior.



Photo #: 16	**Description (include direction):**
Date: March 2023	General interior photograph.



Photo #: 17	**Description (include direction):**
Date: March 2023	General interior photograph.

CDBG-DR

Intake Form #PR-IPG-000683 For Economic Development Investment Portfolio for Growth Program

1. Program Overview

The Investment Portfolio for Growth (IPG) Program seeks to alleviate the exacerbated economic effects of the Hurricanes Irma and María, through large-scale development projects that are transformative in nature and create/retain Low-to-Moderate Income (LMI) jobs and/or cascading economic impacts. The IPG Program intends to award gap funding for large-scale commercial and industrial development in a broad-ranging category of activities that cover a wide variety of economic revitalization initiatives. This may include but is not limited to the development/redevelopment of Commercial Developments, Mixed-use Developments and Infrastructure Development in support of an economic development investment. The IPG Program has allocated a total of eight hundred million dollars (**$800,000,000**) in the Puerto Rico CDBG-DR Action Plan, as amended.

IPG projects must meet CDBG-DR Program eligibility and underwriting criteria, include other committed sources of financing, meet cost reasonableness requirements, and meet a National Objective with an emphasis on the creation and/or retention of LMI jobs. Additional requirements are disclosed in the Program Guidelines. The applicant entity must submit or complete the application form online at www.cdbg-dr.pr.gov by registering and submitting the online submission form. Submissions must be received by PRDOH by 9/20/21. PRDOH will issue requests for further information or clarification, as needed.

Program Guideline Amendments: PRDOH reserves the right to modify the policies established in the Program Guidelines, including but not limited to award terms, eligibility criteria, and application process.

2. Applicant Information

2.1 Applicant Information

Entity/Applicant's Name (Company, Organization, or Individuals):

Tiber Health Public Benefit Corporation DBA: Ponce Health Sciences University

Type of Entity/Organization

For-profit Business

Application Tax Identification Type

EIN

Application Tax Identification Number (EIN, SSN or ITIN)

452847914

2.2 Primary Contact Information

Preferred Prefix

Mr.

Position Title

Vice President of Strategic Planning and Institutional Development

First Name of Primary Contact

Israel

Middle Name of Primary Contact

Alexander

Both Last Names of Primary Contact

Ruiz Soto

Cell Phone of Primary Contact

(917) 209-3090

Email Address of Primary Contact

iruiz@psm.edu

2.3 Alternate Contact Information

Preferred Prefix

Mr.

Position Title

Vice President of Strategic Planning and Institutional Development

First Name of Primary Contact

Israel

Middle Name of Primary Contact

Alexander

Both Last Names of Primary Contact

Ruiz Soto

Cell Phone of Primary Contact

(917) 209-3090

Email Address of Primary Contact

iruiz@psm.edu

2.4 Applicant Contact Information

Telephone

(787) 840-2575

Entity Email

info@psm.edu

Physical Address Line 1

388 Dr. Luis F. Sala Street

Physical City	Physical State	Physical Zip Code
Ponce	PR	00716

Physical Address is the same as the Mailing Address

- ○ Yes
- ◉ No

Mailing Address Line 1

P.O Box 7004

Mailing City	Mailing State	Mailing Zip Code
Ponce	PR	00732

Website

www.psm.edu

2.5 Applicant Background

Is the applicant project a start-up company?

- ○ Yes
- ◉ No

If no, how long has the business been in operation?

Ponce Health Sciences University, formerly Ponce School of Medicine and Health Sciences, was founded in 1977.

Is this entity is a subsidiary or affiliate of another?

- ○ Yes
- ◉ No

Federal Income Tax Status and Filing of Business:

- ○ Sole Proprietorship (IRS Form 1040 Schedule C)
- ○ Partnership (IRS Form 1065 w/Schedule K 1)
- ○ S Corporation (IRS Form 1120S)
- ◉ C Corporation (IRS Form 1120)
- ○ Non-Profit (Section 501(c) 3)
- ○ Unit of General Local Government
- ○ Government Agency/Authority/Trust/Board
- ○ Public Private Partnership
- ○ Community Development Financial Institution
- ○ Other

Federal Tax I.D. Number

45-2847914

Domestic Or Authorized In PR

- ◉ Yes
- ○ No

DUNS Number

079640911

Are you registered in the Federal System of Award Management system (SAM)?

- ◉ Yes
- ○ No

if yes please provide your SAM number.

EFPSN2GR1XS8

Entity Shareholders/Owners :

Please enter all owners in the table below that have 25% or more ownership stake in the organization. Please note a minimum credit score of 600 is required for owners with twenty-five (25%) or more ownership interest or guarantors.

Entity Shareholder/Owner: 1

First and Middle Name

Tiber Ponce Holdings, LLC

Both Last Names

-

Percent Ownership

88.4

Office / Title

-

Social Security Number

464-79-0430

NOTE: PERSONAL CREDIT CHECKS ON THE OWNERS/GUARANTORS **WILL BE MADE.**

Board Member Information:

Please enter names of all board members in the table below. Skip this step if there is no board.

Board Member Information: 1

First and Middle Name

Aracelis

Both Last Names

Vidal Rivera

Office / Title

Board Member

Board Member Information: 2

First and Middle Name

Charles P.

Both Last Names

Rose

Office / Title

Attorney | Hogan Marren Babbo & Rose, Ltd.

Board Member Information: 3

First and Middle Name

Daniel

Both Last Names

Pianko

Office / Title

Chair of the Board | Managing Director, University Ventures

Board Member Information: 4

First and Middle Name

David V.

Both Last Names

Lenihan

Office / Title

PHSU President and Chief Executive Officer

Board Member Information: 5

First and Middle Name
David

Both Last Names
Boodt

Office / Title
Board Member | Attorney, Strada Education Network

Board Member Information: 6

First and Middle Name
Francisco

Both Last Names
Cerra-Fernández

Office / Title
Board Member | Physiatrist, MD Private Office

Board Member Information: 7

First and Middle Name
Gregg

Both Last Names
Roshenthal

Office / Title
Board Member | Managing Director, University Ventures

Board Member Information: 8

First and Middle Name
Guillermo R.

Both Last Names
Picó

Office / Title
Secretary | Attorney, Picó Advisors LLC

Board Member Information: 9

First and Middle Name
Ramón

Both Last Names

Torres

Office / Title

Board Member | Associate Professor, InterAmerican University

Board Member Information: 10

First and Middle Name

Ryan

Both Last Names

Craig

Office / Title

Chair of the Board | Managing Director, University Ventures

Interested Parties:

Please enter all persons and entities with a reportable financial interest in the project. Interested parties exclude entity shareholders, owners and board members listed above.

Person With a Reportable Financial Interest in the Project: 1

Social Security # or Employer Identification #

821656072

Type of Participation in Project

Member of the project development entity

Contract Execution Date

Aug-29-2019

Financial Interest In Project $

$ 1.00

Financial Interest In Project %

5

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3. Job Creation

Indicate the anticipated number of direct permanent jobs to be created as a result of the proposed project. Do not include temporary jobs related to project construction. Describe the types of positions to be created and any other information pertinent to how the project will spur long-term job creation with a focus on creating high-valued jobs (see program guidelines). In the next section you will be required to provide detailed jobs data.

The construction phase would generate an estimated $123.5 million in economic activity and support 1,105 direct jobs for a payroll of $26.1 million. The operational phase would support 235 direct jobs and 958 when indirect and induced jobs are factored in. In total, 1,340 direct jobs are created and supported in the construction and operational phases of the Project with $41.6 million in payroll and $8.9 million in taxes.

4. LMI Form

Low-Moderate Income Positions

Occupation Classification	Hours per Week	Hourly Wage	Annual Payroll	Weeks Paid
administrative support	40.00	$ 13.46	52.00	$ 27,990.55
administrative support	40.00	$ 13.46	52.00	$ 27,990.55
administrative support	40.00	$ 13.46	52.00	$ 27,990.55
administrative support	40.00	$ 13.46	52.00	$ 27,990.55
administrative support	40.00	$ 13.46	52.00	$ 27,990.55
administrative support	40.00	$ 13.46	52.00	$ 27,990.55
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administrative support	40.00	$ 13.46	52.00	$ 27,990.55
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administrative support	40.00	$ 13.46	52.00	$ 27,990.55
administrative support	40.00	$ 13.46	52.00	$ 27,990.55
administrative	40.00	$ 13.46	52.00	$ 27,990.55

support				
administrative support	40.00	$ 13.46	52.00	$ 27,990.55
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administrative support	40.00	$ 13.46	52.00	$ 27,990.55
facilities support	40.00	$ 10.00	52.00	$ 20,800.00
facilities support	40.00	$ 10.00	52.00	$ 20,800.00
facilities support	40.00	$ 10.00	52.00	$ 20,800.00
facilities support	40.00	$ 10.00	52.00	$ 20,800.00
facilities support	40.00	$ 10.00	52.00	$ 20,800.00
facilities support	40.00	$ 10.00	52.00	$ 20,800.00
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facilities support	40.00	$ 10.00	52.00	$ 20,800.00
facilities support	40.00	$ 10.00	52.00	$ 20,800.00

facilities support	40.00	$ 10.00	52.00	$ 20,800.00

Non Low-Moderate Income Positions

Occupation Classification	Hours per Week	Hourly Wage	Annual Payroll	Weeks Paid
academic support	40.00	$ 18.68	52.00	$ 38,845.22
academic support	40.00	$ 18.68	52.00	$ 38,845.22
academic support	40.00	$ 18.68	52.00	$ 38,845.22
academic support	40.00	$ 18.68	52.00	$ 38,845.22
academic support	40.00	$ 18.68	52.00	$ 38,845.22
academic support	40.00	$ 18.68	52.00	$ 38,845.22
academic support	40.00	$ 18.68	52.00	$ 38,845.22
academic support	40.00	$ 18.68	52.00	$ 38,845.22
academic support	40.00	$ 18.68	52.00	$ 38,845.22
academic support	40.00	$ 18.68	52.00	$ 38,845.22
academic support	40.00	$ 18.68	52.00	$ 38,845.22
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academic support	40.00	$ 18.68	52.00	$ 38,845.22
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academic support	40.00	$ 18.68	52.00	$ 38,845.22
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academic support	40.00	$ 18.68	52.00	$ 38,845.22
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academic support	40.00	$ 18.68	52.00	$ 38,845.22
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Please specify method of recruiting, hiring, and training.

PHSU will recruit, hire and train new faculty and non faculty as outlined in institutional policy 100.17. Policy 100.17 was established to administer all hiring procedures, and subsequent policies, without discrimination with regard to race, religion, color, national origin, age, sex, mental/physical handicap, social origin or marital status. PHSU's Human Resources Department will conduct searches based on job descriptions provided by direct supervisors and heads of the corresponding departments depending on hiring needs. When filling needs and identifying gaps in PHSU's organizational structure PHSU will use different methods of recruitment based on market conditions, immediate needs and budget allocations. If there is an internal candidate in which the division or department has in mind, all resumes must be forwarded to human resources promptly. If there are no internal candidates for a position an external search will done using internet forums (Ex, Indeed.com, LinkedIn), or recruitment firms depending on market conditions. PHSU will use best practices in hiring all positions in accordance with local laws and best practices. Human Resources will lead the hiring and onboarding process of all new employees within the institution. PHSU offers benefits including paid vacation, sick days, maternity leave, paternity leave, family and medical leave, life insurance, and health insurance.

5. Applicant Experience

5.1 Organization's experience

Please provide a description of the organization's experience and accomplishments similar to the proposed project.

Founded in 1977 with 28 students, Ponce Health Sciences University, formerly Ponce School of Medicine and Health Sciences, is a graduate level health science institution. With a student body of roughly 1700 students, PHSU educates and creates opportunities for students in the disciplines of Medicine, Psychology, Biomedical Sciences, Nursing and Public Health; the founding of the university established the first school of medicine in the southern region of Puerto Rico and the university has expanded its student body and services to the community exponentially since its humble beginnings 43 years ago. Throughout that time many capital projects have come to fruition in order to expand programmatic offerings, hire and retain more faculty and staff, expand research programs and create an infrastructure that can better serve the surrounding community. First, PHSU has experience expanding its facilities locally by renovating laboratories, classrooms, research facilities, and other administrative spaces. In 2001 the university established our Wellness Center, a community oriented clinic focusing on mental health and primary care. Our PHSU Wellness Center sees roughly 3,500-5,000 patients monthly while approximately 70% of those patients are from lower socio economic backgrounds. Since 2014, to the beginning of our expansion, PHSU invested roughly $10.4 Million in improving our existing infrastructure including a new student lounge, renovations of our wellness center and expansion of classroom spaces. on June 19, 2020 PHSU broke ground on the first component of expansion by investing $78 million dollars to construct a new Academic Tower to provide a facility conducive to our student growth and to provide a facility equipped to provide services for the surrounding community of Ponce and southern region of Puerto Rico. The current Academic Tower construction is 38% complete with an expected substantial completion date of October 2022.

6. Project Information

6.1 Proposed Project

Proposed Project Name:

Ponce Health Sciences University - Campus Expansion Project

NAICS Industry Code

Please enter primary NAICS code for project:

Primary NAIC Code for Project:

611310

Additional NAICS Industry Code(s):

621330, 541380, 621498

Indicate the North American Industry Classification System (NAICS) industry classification code(s)for the proposed business(es) that operate as a result of your proposed project. Input as many as are pertinent, to the extent known at this time. Please input at least one NAICS code for the anchor business of your development.

North American Industry Classification System website:
https://www.naics.com/search/

6.2 Proposed Project Location

Please input the primary street address of the target project location. If the project does not have a definite street address, please input the approximate street address or nearest cross-street of the central point of the project.

Indicate if the project has multiple locations:

- (●) Yes
- ( ) No

Project Location Number: 1

Address:	388 Dr. Luis F. Sala Street	
Municipality:	Ponce	
GPS Coordinates:	**Latitude:** 17.99351	**Longitude:** -66.61917
Status of Target Property:	Already owned by Applicant (include date of acquisition)	
Date of adquisition	04 Sep 2014	

Attachments

Attach maps that illustrate the following:

The entire project area with the project site and elements/improvements marked,

Existing Conditions: [Provide a detailed map of the existing conditions],

Proposed Improvements: Provide a detailed map showing the location, sizes, etc. of the proposed improvements,

Census tracts and/or block groups contained in the project's concentration area,

Photographs of the project area/specific sites,

For larger sites, please include a map or vector image of the project site boundaries (in addition to cadastral numbers).

If land acquisition is required, please attach the following:

Property acquisition and ownership documentation

URA Applicability Form

Download

Document Name
PHSU Campus Expansion Project Sept 1 2021.jpeg
20008-2021.09.15-Predevelopment Presentation REV.pdf
Siteplan September 1 2020.JPG

Project Location Number: 2

Address:	84 Av. Hostos, Ponce, 00716	
Municipality:	Ponce	
GPS Coordinates:	**Latitude:** 17.99518	**Longitude:** -66.61797
Status of Target Property:	Option Contract	

Attachments

Attach maps that illustrate the following:

The entire project area with the project site and elements/improvements marked,

Existing Conditions: [Provide a detailed map of the existing conditions],

Proposed Improvements: Provide a detailed map showing the location, sizes, etc. of the proposed improvements,

Census tracts and/or block groups contained in the project's concentration area,

Photographs of the project area/specific sites,

For larger sites, please include a map or vector image of the project site boundaries (in addition to cadastral numbers).

If land acquisition is required, please attach the following:

Property acquisition and ownership documentation

URA Applicability Form

Download

Document Name
GM UNIFORM URA APPLICABILITY FORM signed DVL (2).pdf
FD - Tiber Health - Lease and Option to Purchase Agreement (1).PDF
Proposed PHSU Aquisition Property- Currently owned by Damas.JPG

6.3 Project Description

Project Overview

Describe the proposed development and construction-related aspects of the project.

The PHSU's Campus Expansion Project (the "Project"), currently under construction, is a vital health, economic and social infrastructure project for the Ponce region, with island-wide and national ramifications. PHSU's project will play a critical role in the offering of first-class culturally competent health sciences education, supporting a broader pool of healthcare talent, fostering healthcare innovation, supporting a healthier and more resilient community, and providing for a stronger and diversified local and regional economy.

The Project proposes the infrastructure to increase PHSU's student capacity by 150%, expanding medical specialization programs while transforming the Ponce region into a Health Science Education and Innovation Hub. The Project allows PHSU to access important medical and clinical research grant projects including through a strategic collaboration with Damas Hospital.

PHSU is pursuing a two-phase $260 million master development project to become a world-class academic medical center. The first phase comprises a new state-of-the-art Academic Center. The second phase includes development of a General Medical Clinic, a Wellness Center, a Dental Clinic, an Outpatient Clinic, an Emergency Response, Research and Innovation Center, Student Housing Project, an Energy Microgrid and a Connecting Bridge with the Damas Hospital.

PHSU is leveraging a $78 million initial investment from Oriental Bank, New Market Tax Credits, and own equity investments. First phase project costs sum to $128 million while the second phase requires a $131 million investment. As critical components of Phase 1 of the Project remain unfunded, due to increased construction costs and expanded infrastructure needs, the Project will critically benefit from Investment Portfolio for Growth (IPG) funds to fulfill funding shortfalls in Phase 1 to make the master development vision, a reality.

PHSU seeks $49 million from IPG funds for (1) the completion of the Academic Center (including FF&E) in the amount of $44.5 million; and (2) a new land acquisition and demolition work to be undertaken in Phase 1 in an amount of $4.5 million. This land will make viable the Wellness Center, a Diagnostic Laboratory, a Job Placement and Accelerator Center, and the Emergency Response, Research and Innovation Center which will be developed in Phase 2 with other sources of funds.

The Academic Center will stand as an iconic campus center, the premier medical education, research, and technology facility for PHSU. The four-story academic building will include modern classrooms, a 750-seat auditorium, laboratories, a student center, a food hall, healthcare clinics, and administrative offices. IPG funds are also requested to cover for land acquisition and demolition work where the future Wellness Center, Diagnostic Laboratory, Job Placement and Accelerator Center, and the Emergency Response, Research and Innovation Center will be further developed in Phase 2.

Project Area/Size

The Academic Building & Auditorium under construction has an area of 129,531.00 square feet. The property that will be acquired from Damas Hospital, further explained below, has an area of 88,586.23 square feet.

With respect to the new Academic Center, the first floor will have all student support services, admissions, registrar, library, and a food hall. The second floor focuses on academic, and research uses with 20 modern classrooms, including for dentistry, nursing, psychology, and undergraduate biology, and a 750-seat state-of-the-art auditorium. The third floor will include anatomy labs and a simulation center providing experiential learning for medical and nursing students. The fourth floor will house administrative offices.

Property Area

See above.

Gross Building Area

See above.

Cadastral Numbers

The cadastral number for the properties of the proposed project are:
1) Academic Center
412-011-783-27-000

2) Properties that will be acquired.
412-002-783-07-001
412-002-783-08-001

Please select from the following list of project milestones that have been completed:

- [x] Planning Studies
- [x] Permits
- [x] Environmental Review
- [x] Design
- [x] Construction Documents

Please describe the project status based on the milestones indicated as completed above.

The Academic Building is currently under construction. Construction began on June 19,2020 and as of this date, September 20, 2021 the building is roughly 38% complete. We estimate that substantial completion of the building by October 2022. PHSU has accomplished all of the described milestones, including environmental review, design, governmental permits, current progress schedule, and construction documents.

On March 1st, 2021 PHSU entered into a lease and option to purchase agreement with Fundacion Damas, Inc. to lease and acquire the property adjacent to the Academic Building under construction. The Option Lease will expire on August 31, 2022 in which PHSU plans to exercise the purchase option for the property.

Upload completed milestone documents.

Document Name
Unique Permit Approved 12aug2020.pdf
Servitas LOI.pdf
Building Permit Approved 05.10.2021.pdf
PHSU Academic Building Progress.xlsx

Environmental Assessment

Is the project within a flood zone other than Zone X (Minimal Flood Hazard)? If so, identify all flood zones that may intersect the project.

The project is in a Flood Zone A.

Is the project in an Historic District or Traditional Urban Center in accordance with the State Historic Preservation Office?

The project is not a Historic District or a Traditional Urban Center.

Is the project within a Coastal High Hazard Area (VE Zone) as identified on FEMA Flood Insurance Rate Maps (FIRM)?

The project is considered an AO Zone by the Federal Emergency Management System.

Is the project location within a Coastal Barrier Resource Unit location?

The project is not located within a Coastal Barrier Resource Unit location.

Is the project a Critical Action (an activity that could contain occupants that may not be sufficiently mobile to avoid injury during flood or storm events, such as hospitals or residential care facilities)?

Components of the project (the dental clinic and family clinic facility) could be considered Critical Action as PHSU delivers, and plans to continue delivering, services to the community.

Do any of the buildings within the project area intend to store or maintain hazardous materials?

PHSU and the developer do not expect that the proposed construction project will use, store or maintain hazardous materials. Once the project is completed, PHSU expects to use and store materials that are incidental to its operations (i.e. laboratories and medical clinics). Additionally, the proposed project will include a generator for emergency purposes that will require the storage and use of diesel or other compatible fuels. Some of those materials could be designated as Hazardous Materials by applicable law or regulation. It is expected that PHSU will acquire, transport, store and use such materials in compliance with applicable laws.

Furthermore, the proposed project is an extension of the existing PHSU's facilities. Therefore, any Hazardous Materials that may be used or stored in the buildings within the project area should be the same as those currently used in PHSU's facilities, which have all of the necessary permits and the processes to handle and dispose of any hazardous materials that may be used or accumulated through the natural day to day operations of operating a health sciences university.

Other Project Details

Indicate whether the project will require acquisition of property, easements, or rights-of-way and the approximate number of parcels to be acquired

The Project will require adjacent property acquisitions owned by a third-party. Currently, PHSU has entered into an option contract with Fundacion Damas, Inc., current owner of the target parcel, to first rent then purchase property adjacent to the current campus. This property will be used for the development in the near future of the PHSU's proposed Wellness Center, Diagnostic Laboratory for the community, a Job Placement and Accelerator Center and an Emergency Response, Research and Innovation Center in partnership with the Municipality of Ponce and house other operations for the university.

Project site occupancy: please provide information regarding the known/estimated residential and commercial occupants (who are not the applicant entity) of any property related to the project.

There are no occupants on the current construction site nor are there residential or commercial occupants in the property to be acquired by PHSU.

Please describe your plan to utilize locally manufactured goods and suppliers and/or any other information that you would like to include for IPG Program consideration.

The proposed project is being sourced and developed through M Property Services PR, LLC, a local Project Management Company, and through Venegas Construction, a local contractor. Their priority and intentions are to utilize locally manufactured goods and suppliers as much as possible. Currently, the following local suppliers are providing services or goods the proposed project: West, Electic Fuentes Piling, Marxuach, Technical Distributors, Dantzler, and others.

Market/Feasibility Study

Please provide a market/feasibility study to support the proposed project/development.

Document Name
Market Feasibility- Cover Letter.pdf
07-09-2021 Letter of Endorsement- a Ponce Health Sciences University-IPG.pdf
Dental Program Feasibility Study.pdf
Economic Report- PHSU 9.19.2021.docx

6.4 Estimated Project Budget

Funding sources

Please describe the current operating budget and revenues.

PHSU's operating budget is derived from revenue generating activities such as tuition, wellness center revenue and partnership agreements. The annual Budget is prepared by Budget Department and the board of Directors is the body responsible for approving it. The revenues and expenses are estimated based on enrollment projections by program. All the estimates used in the preparation of the budget are done with the input of the program deans and the department directors. The board-approved budget is available to Directors prior to the beginning of the fiscal year. The Budget Department is responsible for monitoring expenses are carried out in accordance with the corresponding approved departmental budget. Budget amounts are assigned to departments based on forecasted expenses plus additional requests for growth and non-recurring events. The department directors will allocate the assigned budget at their discretion.

Please elaborate on financial reporting, accounting and record keeping systems.

PHSU uses Jenzabar EX for the accounting records. Accounts Receivables, Accounts Payables, General Ledger and Purchasing process are held in Jenzabar. The Academic Modules as well as financial aid modules are also held in Jenzabar, that allows for automatic interfaces for revenue recognition process. The payroll is processed through a third-party system, ADP. Jenzabar also has a portal where students can access their accounts an validate registration. In the same portal the employees can submit the purchase requisition. The access to Jenzabar and to the portal is granted by IT department, subject to PHSU policies and procedures and based in user tasks.

Please indicate the anticipated total dollar amount of funding and the anticipated source of funding in the table below. All funding sources (federal, private, etc.) that will be used to complete the project will be confirmed.

Funding Type	Amount	Source of Funds	Local Funds	Committed?
CDBG-DR Funds (IPG)	$49,999,990.00	Federal	Yes	☐
Private Equity/Investor(s)	$19,041,664.00	Private	Yes	☑
Commercial Lender(s)	$52,172,944.00	Private	Yes	☑
Non-Commercial Lender(s)	$7,350,800.00	Private	No	☑
Other Public/Non-profit Source(s)	$0.00			☐
Other CDBG-DR Program Funds	$0.00			☐
Other Pending/Requested Funding Sources (please specify type of funding)	$0.00			☐
Total	**$128,565,398.00**			

Upload proof of committed funding for all funding sources.

Document Name
016 - WF Ponce - Source Loan - Promissory Note [Executed].pdf
025 - Wf Ponce - Direct Loan - Promissory Note-$37,672,944.00 [Executed].pdf

Please provide a cost estimate from a certified or licensed engineer or architect (who is authorized to do business in Puerto Rico)

$ 128,565,398.00

Document Name
DEPARTAMENTO DE ESTADO.pdf
CERTIFICADOS.pdf

Sources and uses

Please indicate the sources and uses for the proposed project funding by inserting dollar amounts in the appropriate spaces below.

	Private Equity/ Investors	Commercial Lender(s)	Non-Commercial Lender(s)	Public/ Non-profit Sources	IPG Program CDBG-DR Funds	Other CDBG Funds	Other Pending Funds	TOTAL
Land Acquisition	$0.00	$0.00	$0.00	$0.00	$4,500,000.00	$0.00	$0.00	$4,500,000.00
Building Acquisition	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Building Construction	$13,099,761.00	$28,643,350.00	$7,350,800.00	$0.00	$11,357,428.00	$0.00	$0.00	$60,451,339.00
Building Renovation	$0.00	$0.00	$0.00	$0.00	$7,972,948.00	$0.00	$0.00	$7,972,948.00
Construction Soft Costs	$5,941,903.00	$23,529,594.00	$0.00	$0.00	$10,312,778.00	$0.00	$0.00	$39,784,275.00
Capital Equipment	$0.00	$0.00	$0.00	$0.00	$15,856,836.00	$0.00	$0.00	$15,856,836.00
Net Inventory	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Total	$19,041,664.00	$52,172,944.00	$7,350,800.00	$0.00	$49,999,990.00	$0.00	$0.00	$128,565,398.00

Interest Reserve costs may be listed in "Other" and must be specified. Interest Reserve costs may be eligible in certain circumstances as evaluated in the underwriting process.

6.5 Project Timeline

Upload proof of committed funding for all funding sources.

Document Name
016 - WF Ponce - Source Loan - Promissory Note [Executed].pdf
025 - Wf Ponce - Direct Loan - Promissory Note-$37,672,944.00 [Executed].pdf

Please estimate the following dates as best as possible, in month/day/year format. Please assume an award date of January 1st, 2022. If unknown at this time, click "Unknown".

	Date	Unknown
Environmental Review Completed	Sep-18-2021	☐
Acquisition Completed (if applicable)	N/A	☑
Additional Acquisition Date	Jan-01-2022	☐
Planning Studies Completed	Sep-18-2021	☐
Project Design Completed	Sep-18-2021	☐
Applicable Permits Obtained	Sep-18-2021	☐
Construction Documents Completed	Sep-18-2021	☐
Construction Start Date	Sep-18-2021	☐

6.6 Financial Statements and Projections

Financial Statements *

Existing Businesses:
1) Please provide the previous 3 years income statements and balance sheets (signed).
2) For existing businesses with owners with 25% or more of ownership: Please provide the owners' previous 3 years income statements and balance sheets (signed).
3) Start-Up Businesses: Please provide the owners' previous 3 years income statements and balance sheets (signed).

Document Name
Audited Financial Statetemts FY 2018.pdf
Audited Financial Statements FY 2019.pdf
Audited Financial Statements FY 2020.pdf
Part II 7-2 - Audited financial statements THC 2019.pdf
Part II 7-2 - Audited Financial Statements THC 2020.pdf
Part II 7-2 - Unaudited financial statements THC 2018.pdf

Pro Forma Financial Statements *

Please provide the following project projections for the proposed project:
2 Year monthly projections.
5 Years annual projections from the project start date(income statements, balance sheets and cash flow statements)

Document Name
MO pro forma P&L Y1 & Y2.xlsx
7YR Forecast PHSU v13.xlsx

Tax Returns *

Please provide
1) Signed federal and/or Puerto Rico tax returns for existing businesses including all schedules for the prior three (3) years.
2) Signed federal and/or Puerto Rico tax returns for all twenty-five percent (25%) or more owners or for owners from start-up businesses including all schedules for the prior three (3) years.

Document Name
Part II 9-1 -1120 2017 - 2018 PHSU.pdf
Part II 9-1 - 480.20 2018 - 2019 PHSU.pdf
Part II 9-1 - 480.20 2019 - 2020 PHSU.pdf
Part II 9-1 - 1120 2019 - 2020 PHSU.pdf
Part II 9-1 - 1120 2018 - 2019 PHSU.pdf
Part II 9-1 - 480.20 2017 - 2018 PHSU.pdf
Part II 9-2 1120 2018-2019 THC.pdf
Part II 9-2 1120 2019-2020 THC.pdf
Part II 9-2 1120 2017-2018 THC.pdf

7. Project Benefits

7.1 Disaster Recovery Rationale

Explain the economic development needs to be addressed by the proposed project.

The Project complies with the CDBG-DR Investment Portfolio for Growth (IPG) Program Objectives, which is to promote the sustainable revitalization of the economy and address the urgent needs of the community. The economic impacts of the Project in terms of economic activity, job, wages and fiscal revenue are material to the economy of the greater Ponce region. The construction phase would generate an estimated $123.5 million in economic activity and support 1,105 direct jobs for a payroll of $26.1 million. In addition, taxes generated directly from the construction activity amount to $6.3 million. The total economic impact (i.e., direct, indirect and induced) for this phase of the project is $299.9 million in economic activity, 2,470 jobs, $65.3 million in payroll, and $15.9 million in taxes paid.

The operational phase would support 235 direct jobs and 958 when indirect and induced jobs are factored in. By 2027 all clinical operations will stabilize, student housing and the others non-clinical operation will stabilize around the second year of operation. The project would generate around $15.5 million in direct payroll and approximately $2.6 million in taxes paid. The aggregate economic impact in the operational phase (i.e., direct, indirect and induced impacts) is estimated at $132.17 million in economic activity, 958 jobs, $32.9 million in payroll, and $7.2 million in taxes paid. (Dollar values were discounted to 2021 prices).

In total, 1,340 direct jobs are created and supported in the construction and operational phases of the Project with $41.6 million in payroll and $8.9 million in taxes. The economic activity to be generated from both phases of the project amount to $168.7 million which is an important contribution in an economic region severely affected by Hurricane Maria and the earthquakes of 2020.

Parallel to the economic impact on construction and operations, PHSU is in the business of training the next generation of healthcare professionals in Puerto Rico and will expand not only the medical student class but medical specializations in behavioral science, nursing, and a new dental school. This is fully and strategically aligned with the public interest and public policy of the Government to safeguard and promote the health and socio-economic well-being of its population. The Project advances innovation and medical research through a strategic collaboration with Damas Hospital, which will also solidify its financial and operational positions and, most importantly, its healthcare service to the community. The Project will transform the Ponce region into a nationally-recognized academic medical center and a destination for academic and medical tourism. The foregoing has unquantifiable economic benefits for Puerto Rico.

Upon completion, PHSU will almost double in size and considerably expand its economic and social development footprint in the Region as reflected in attached the Economic Impact Study.

Provide the storm connection rationale.

Hurricane María upended not only PHSU's previously-planned expansion plans, but significantly affected Puerto Rico's already fragile economy and healthcare system infrastructure. The hurricane's wake left over $17 million in damages to PHSU's campus, it disrupted classes and business operations as well affected the critical healthcare services the university provides to the surrounding community. The Project proposes to reconstruct damaged infrastructure, expand its student class size and programs, and enhance its community healthcare services, including mental health services.

The Project comes as a call to action plan to address the critical need for qualified medical practitioners in Puerto Rico, exacerbated after the hurricane. According to PR Institute of Statistics, from 2010 to 2019, approximately 138 physicians left the island per year, almost 12% of the total physician population. It has been reported that 72 of the 78 municipalities are medically underserved. This is coupled with the fact that Puerto Rico has a low retention rate of recent medical student graduates. There is a critical need to increase and improve the medical education offering in Puerto Rico. PHSU proposes to fulfill the need for qualified healthcare practitioners by increasing its medical student class size and expansion of specialized health disciplines.

Following the hurricane, public healthcare services were limited, and mental health was significantly impacted. PHSU provided critical community support and healthcare services following the 2017 hurricanes, including mental health services. In the weeks and months following the hurricane, PHSU's Outpatient Clinic, provided direct relief to affected communities and residents, especially those from lower incomes and socio-economic backgrounds. The Outpatient Clinic saw more than 11,000 patient visits. University's faculty and students did over 6,000 patient visits directly in their communities. PHSU provided medical supplies, food, toiletries, and other household goods at no cost to the communities it decided to help. PHSU provided staffing assistance to local educational institutions and pharmaceutical and health industries to help maintain workforce stability in south central Puerto Rico. PHSU also coordinated transportation of doctors and other health workers from U.S. mainland to Puerto Rico who provided care to those who did not have the means to leave their homes. The Project will further solidify PHSU's commitment and quality of healthcare services and community resilience support it provides to the surrounding communities, especially in the aftermath of natural disasters.

This IGP funding will enable PHSU and the surrounding community to be more resilient and better prepared for natural disasters in the future and build a transformative infrastructure that will better serve the healthcare needs of surrounding communities and Puerto Rico as a whole.

Describe the types of services the development will offer. Does the business provide an essential and/or important service to the recovery area?

PHSU is fully committed with three critical roles and essential services: provide a world-class, culturally competent, health sciences education to its students; foster academic research and innovation; and provide crucial and essential healthcare services, including mental health services, to an underprivileged and underserved population, particularly in the surrounding communities.

As it known, Puerto Rico is medically underserved in comparison to the U.S. mainland. However, the communities in Ponce suffer greater disadvantages and have critical access to adequate medical services. The Ponce Region is served by 7 hospitals that serve a population base of 475,462 persons, or 1.47 hospitals per 100,000 persons. This is lower than the Island's average ratio of 1.63 hospitals per 100,000 persons. Additionally, the Ponce Region has 1,150 hospital beds, or 242 beds per 100,000 persons. This is 16 beds per 100,000 persons less than Puerto Rico, which has 258 beds per 100,000 persons. A similar disparity is also observed in medical offices. The Ponce Region has fewer medical offices per 100,000 persons and less workers in medical offices per 100,000 persons than in Puerto Rico as a whole.

In view of this reality, PHSU's medical services, educational offerings, and community efforts are indispensable to the community. By expanding PHSU's campus operations, the university will be able to further expand these services and enable adequate access to healthcare services for even more communities. With this expansion, PHSU will be able to expand its clinical services by offering pediatric neurological services, a dental clinic that will be used both as a training site for students and faculty, while also serving as training site for all dentists in Puerto Rico by offering continuing education courses and seminars.

Describe the companies and/or businesses that will reside in the proposed development. Are these new businesses? Existing businesses being relocated? Etc.

Ponce Health Sciences University will house all of its academic and research functions and student engagement in the campus facilities. The Job Placement and Accelerator Center and the Emergency Response, Research and Innovation Center will be developed in Phase 2 with the support and/or collaboration from PHSU's affiliate, Puerto Rico Research Institute (PRI), the Damas Hospital, the Department of Economic Development and Commerce of Puerto Rico, the U.S. Economic Development Administration (EDA) and the Municipality of Ponce. Additional strategic partnerships may be further pursued with professional and trade organizations, pharmaceutical and medical device industry, non-profit organizations, and economic development firms.

Please describe if the project will export services or goods.

PHSU is proud to expand the Ponce Health Sciences University educational offerings and brand to the U.S. mainland through the expansion of a second medical sciences university campus in St. Louis, Missouri, announced in August 2021. As PHSU Ponce Campus will continue to be the principal headquarters and main campus for operations, the Ponce Campus Administration will provide support services to its St. Louis branch campus.

Please describe how the project will contribute to the overall health of the community in which it is located.

PHSU is much more than a medical and health sciences university, it is a committed corporate citizen and healthcare provider to the surrounding community and Puerto Rico.

PHSU trains the next generation of medical doctors, nurses, and healthcare professionals, in critical need in Puerto Rico, to sustain and solidify its fragile healthcare system. Through its Outpatient Clinic, PHSU has treated, and continues to treat, thousands of patients from the surrounding economically-depressed communities. PHSU's community engagement and outreach program forms part of its core values, exemplified by its active collaboration and support of communities in need after Hurricane María, the 2020 earthquakes and most recently, with the pandemic, as further explained below.

PHSU is actively engaged in improving the surrounding community's well-being and participating in important social initiatives and needs. PHSU aided its community in the aftermath of Hurricane María by providing healthcare services to 11,000 patient visits at its Outpatient Clinic, in addition to over 6,000 patient visits to isolated communities. PHSU and its affiliates were vital community leaders in response to the seismic events of 2020 and, more recently, acting as a leader in the testing, research, and vaccination efforts in connection with COVID-19. In the aftermath of the seismic events, PHSU provided services to more than 600 patients, impacted 40 communities, delivered over $200,000 in donations, and provided 2,000 pounds of emergency supplies. During the COVID-19 pandemic, a team of epidemiologists from PHSU developed the only syndromic surveillance platform currently in use for the tracking of COVID-19 based on patient self-report of symptoms. The Puerto Rico Research Institute, under the leadership of Dr. Kenira Thompson, a member of the Governor's Scientific Coalition for COVID-19, were the first to research and discover the first variant of COVID-19 in Puerto Rico.

Furthermore, note that PHSU collaborates with Damas Hospital to enhance the university's clinical research and medical student residency program, strengthening the university's research capacity and opening the door for more research grants and the hospital's healthcare offering. This will have a direct effect on the quality and quantity of the healthcare services that will be available for the communities of Ponce and adjacent regions.

These contributions and efforts demonstrate how PHSU is instrumental to its community and are a testament of its future contributions to Ponce and the southern region, aside from the important role of graduating the next generation of healthcare professionals in Puerto Rico. The Campus Expansion Project will only solidify and further enhance its commitment to be an important healthcare stakeholder and community leader for the general health and well-being of Puerto Rico.

7.2 National Objective and Beneficiaries

For future reference, it is important to note that PRDOH is required to meet one of the following national objectives for each project funded with HUD funds:

- Activities Benefiting Low/Moderate Income (LMI) Persons
- Prevention/Elimination of Slums or Blight
- Address an Urgent Need

Please describe which national objective will be met and provide the associated documentation below.

☐ Benefit Low-and Moderate-Income persons

☐ Prevention or Elimination of Slums or Blight

☑ Urgent Need

Provide information on contribution to a disaster-related impact identified in the Action Plan.

The Project qualifies under the Urgent Need category of the IPG application in several important ways. The Project addresses (i) the "economic challenges" of the region, (ii) the "outmigration of workers", particularly in the health sector, and (iii) the general welfare of the surrounding low income community, with compromised access to healthcare and support services, particularly in mental health, during the aftermath of natural disasters, all of which shall be considered essential services.

The Project is an important regional revitalization and resilience project, meets the growing need of healthcare professionals who serve Puerto Rico and solidifies and expands its healthcare and support services to the community.

Today, PHSU's Outpatient Clinic sees between 3,500 and 5,000 patients from surrounding communities, mostly low-income (Medicaid/Vital Plan), per month. Following natural disasters such as Hurricane María and the recent earthquakes, the Clinic's patient load swelled to more than 11,000. The Clinic is providing urgent coronavirus services including research, testing and vaccinations. Maintaining continued operations of the facility is critical to the physical and mental healthcare needs of the region.

The number of people seeking treatment for psychological and traumatic stress conditions spikes significantly following natural disasters. This was particularly true in Ponce after Hurricane María, the 2020 earthquakes and now with COVID-19. PHSU trains behavioral health professionals and, through its clinics, provides important behavioral health treatment and counseling for area residents coping with these stresses, which is of urgent need.

There is also a known inadequate access to dental and oral healthcare services. PHSU will add a School of Dentistry to train and graduate a future stream of dentists to serve the island's population. PHSU will have the facilities onsite to provide urgently needed dental and oral healthcare to residents throughout the region.

PHSU graduates approximately 400 physicians, nurses, and mental health professionals of which around 70% stay in Puerto Rico. From 2010 to 2019, 1,950 physicians and surgeons left Puerto Rico. According to the PR Institute of Statistics, Puerto Rico loses approximately 138 physicians annually, or approximately 12% of its physicians per year. These numbers are now heightened because of Hurricane Maria and the recent earthquakes. With CDBG-DR support, the PHSU expansion will dramatically build upon its current graduation rates and help reverse this troubling trend.

PHSU has also partnered with the City of Ponce to provide for an emergency communications and operations center on campus. It is important to note that the entire project has been designed to survive a cat 5 hurricane structurally and PHSU's and its internal Micro-Grid will provide for these operations as well as to support the City's disaster response efforts.

For reference, National Objective information can be found at 24 CFR 570.208, or https://www.hud.gov/sites/documents/DOC_16472.PDF

8. Compliance and Legal

Provide a statement of whether there is any pending or recent, within the past five (5) years, litigation, sanction and/or administrative complaint against the Applicant and/or its subcontractors. Please include the final litigation citation or case number.

The following are the active and pending cases against the Ponce Health Science University ("PHSU"). Both are in the Court of First Instance of Puerto Rico.

1) Jeyleen Ortiz Ortiz v. Aseguradora ABC, Hospital Menonita De Aibonito, International Educational Programs, Ponce Health Sciences University, Sistema De Salud Menonita, and Universidad Autónoma De Guadalajara, for breach of contract, injunction, and declaratory sentence (PO2019CV00554).

2) Nayra Rodríguez Homedo v. Ponce Health Sciences University, for wrongful termination of employment (PO2019CV03544).

These cases are part of the ordinary course of business and are not material to PHSU's operations. Please see below, for counsel's opinions regarding theses cases, attesting to the fact that these claims will not have any effect in PHSU's performance under a CDBG-DR Loan Agreement.

M Property Services PR, LLC, the Project Management Company of the proposed project, does not have any active or pending cases against it.

If there are any pending or recent, within the past five (5) years, litigation, sanction and/or administrative complaint against the Applicant, an Opinion of a counsel as to the degree of risk presented by said litigation and whether it will impair the Applicant's performance must be uploaded. (Max size 25MB)

Document Name
ELF Certification Letter CDBG.pdf
MPV Certification Letter CDBG.pdf

Such requirements include but are not limited to:

- Title VI of the Civil Rights Acts of 1964 (Non-discrimination; 41 U.S.C. § 2000d and 24 C.F.R. § 570.602 for CDBG-DR specific requirements
- Uniform Relocation Assistance and Property Acquisition Policies Act of 1970, as amended (URA) (49 C.F.R. Part 24, 24 C.F.R. § 570.606)
- Section 504 of the Rehabilitation Act of 1973 (24 C.F.R. Part 8)
- Conflict of Interest (24 C.F.R. § 570.611)
- Section 3 of the Housing and Urban Development Act of 1968 (24 C.F.R. Part 135)
- Fair Labor Standards Act (29 U.S.C. § 201, et seq.)
- Program Income (24 C.F.R. § 570.504 and 24 CFR 570.489(e))
- Insurance (2 C.F.R. § 200.310)
- Management of Assets (2 C.F.R. § 200.310-200.316)
- Recordkeeping (24 CFR § 570.506, 2 C.F.R. § 570.490 and 2 C.F.R. § 200.333-200.337)
- Any other federal requirements.

Applicant must certify they will comply with federal policy and procedural requirements applicable to CDBG-DR funds.



9. Conflict of Interest (COI)

Conflict of Interest:
Please download and sign the Conflict of Interest (COI) Forms and upload a signed version by the Authorized representative on behalf of the organization, and for each owner that has 25% or more ownership stake in the organization. One COI form will be completed by the organization to determine Organizational Conflict of Interest, and additional COI forms will be completed by owners with 25% share or greater to determine Individual Conflicts of Interest.

NOTE:
By signing this form, the Entity certifies that, to the best of its knowledge and belief, there are no relevant facts or circumstances that could give rise to an organizational or personal conflict of interest, for the organization or any of its staff, and that the Entity, subcontractor, employee, or consultant has disclosed all such relevant information if such a conflict of interest appears to exist to a reasonable person with knowledge of the relevant facts (or if such a person would question the impartiality of the Entity, subcontractor, employee, or consultant).

REMINDER to upload revised forms here:

Document Name
Non-Conflict of Interest Certification.pdf

10. Acknowledgment of Application Submission

By completing and signing of this application, I affirm that I have read and understand this document or have had someone explain it to my satisfaction. I also attest that I sign this document acknowledging and consenting, willingly and voluntarily, to the following:

- Explicitly allow, consent, and authorize PRDOH and/or their designees to request and obtain from any third party the information necessary to determine my eligibility and continued participation in the IPG Program.
- I acknowledge and understand that this information will be used to determine if I am eligible for assistance under the IPG Program, the amount of assistance for which I could be eligible and to verify the information I provide in my application.
- Specifically, I authorize the release of such information to the appropriate Federal, state, and local agencies.
- I authorize PRDOH, the IPG Program and/or its designee(s), to share my application information with personnel, contractors and subcontractors who have a need to know, in order to determine eligibility, complete underwriting and any other necessary activity leading to the final determination of the assistance under the IPG Program.
- PRDOH may request at its discretion additional documents deemed necessary for evaluating and adequately completing an underwriting review.
- PRDOH may obtain credit reports from a credit reporting agency, for applicant entity shareholders and/or owners as identified in this application.
- The applicant agrees the model contract used for the loan agreement will be provided by PRDOH.
- Any person who knowingly makes a false claim or statement to HUD may be subject to civil or criminal penalties under 18 U.S.C. 287, 1001 and 31 U.S.C. 3729.
- I acknowledge that I have been informed and understand the penalties for making a materially false or misleading statement to obtain CDBG-DR funds under IPG Program or any other CDBG-DR Programs.

ACKNOWLEDGEMENT

Authorized Representative Signature:



Printed Name

David Lenihan

Title

President / CEO

Submitted On

Sep-20-2021

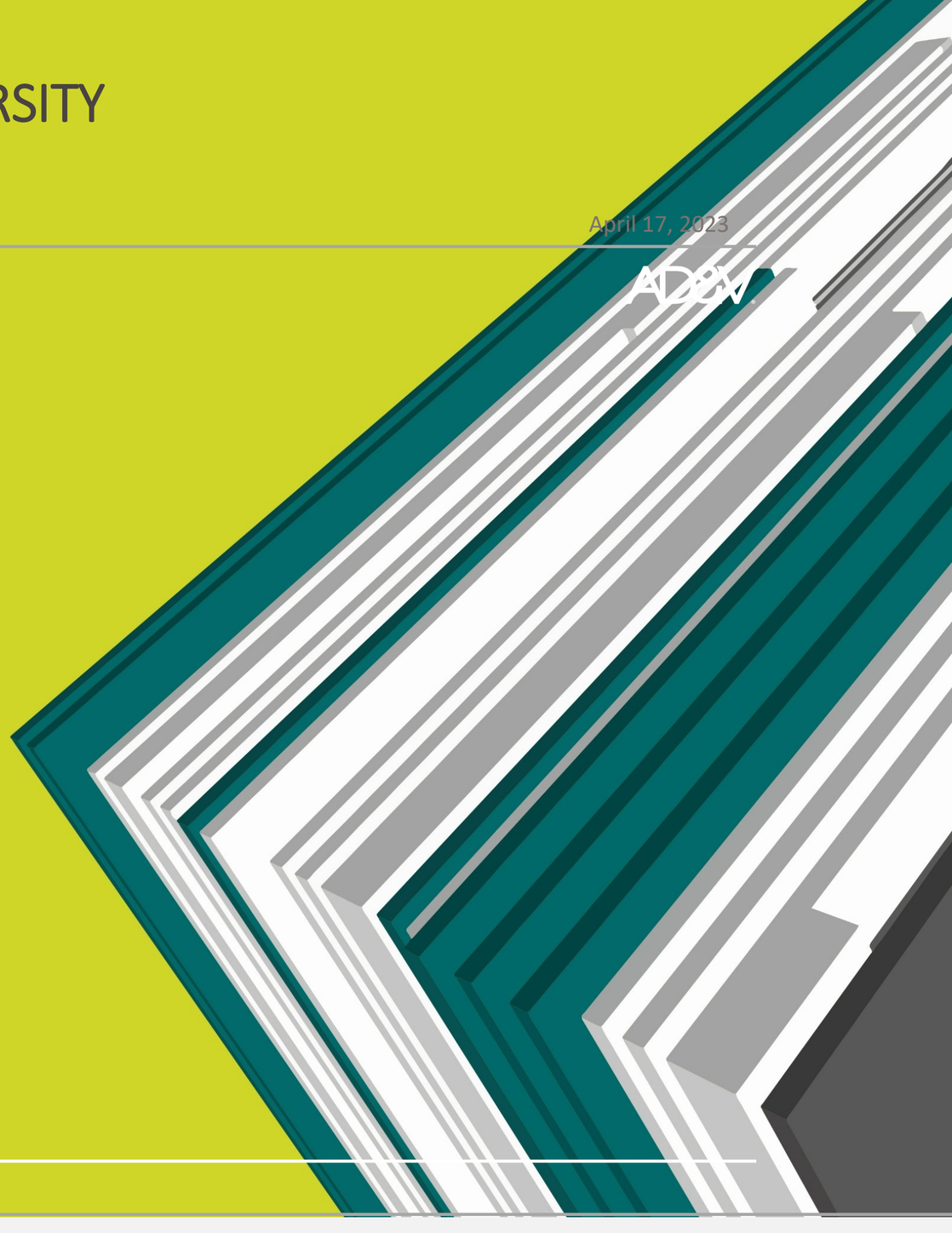
PHSU – PONCE HEALTH SCIENCE UNIVERSITY

CONCEPTUAL DESIGN

388 ZONA INDUSTRIAL REPARADA #2 PONCE, PUERTO RICO 00716

April 17, 2023

SAN JUAN | THE HUB 200 CONVENTION BLVD. SUITE 201 SAN JUAN, PR 00907 T: 787.754.1381
MIAMI | 9000 NW 15TH ST., UNIT 5, DORAL, FL 33172 T: 786.703.5737
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2.0.1 DENTISTRY SCHOOL FLOOR PLAN

PROPOSED LAYOUT ON EXISTING BUILDINGS

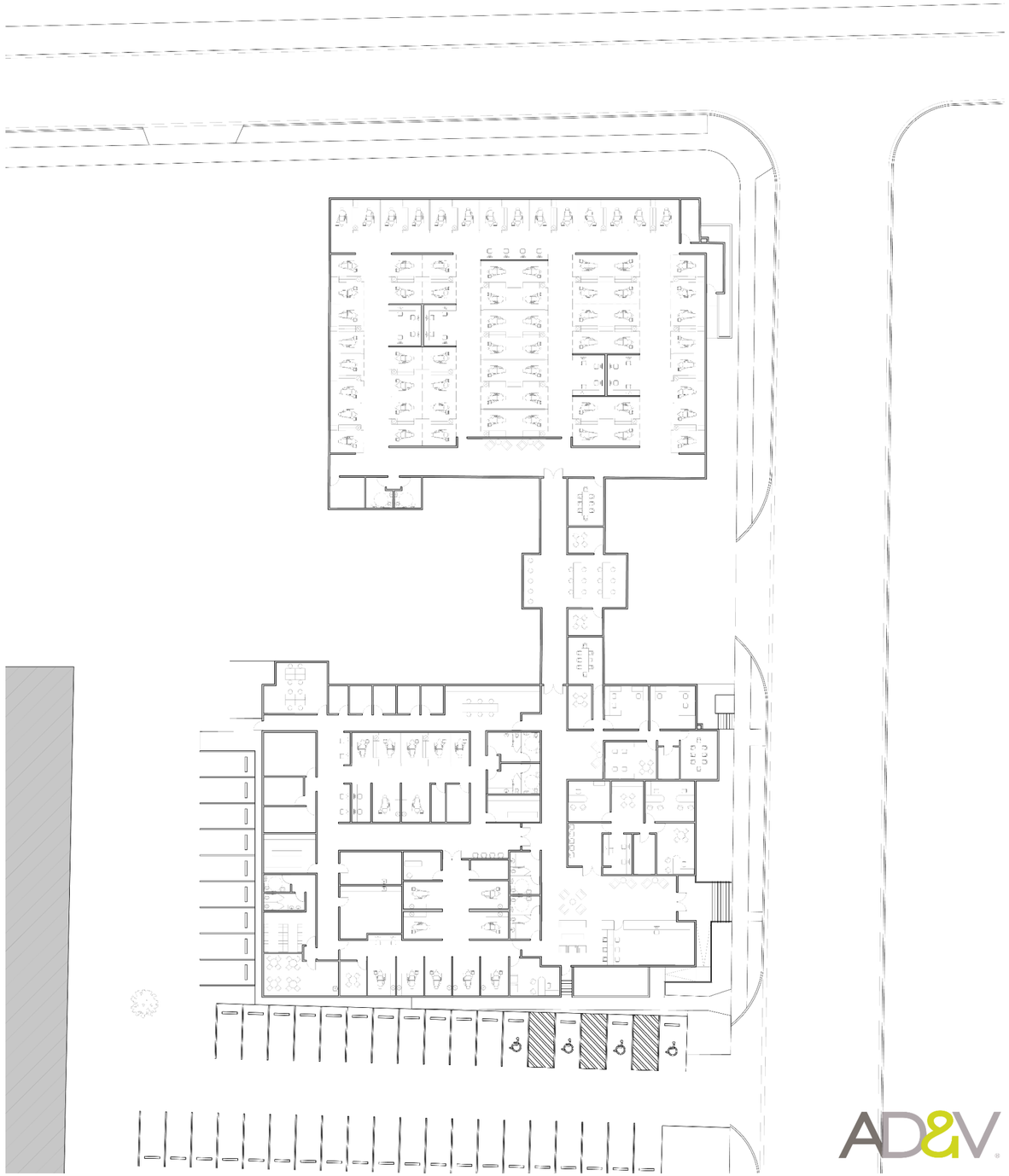
CONTEXT DIAGRAM

NOT TO SCALE

THREE EXISTING BUILDINGS WILL BE REUSE AS THE NEW PHSU SDM DENTAL CLINIC.

MULTIPLE SPACES ARE PROVIDED IN THE CENTER OF THE CLINIC FOR SMALL GROUP DISCUSSION AND ARE SUITABLE FOR PRIVATE CONFIDENTIAL MEETINGS BETWEEN PATIENTS AND STUDENTS, FACULTY AND STUDENTS, AND PATIENTS-STUDENTS-FACULTY. ALL PARTITIONS WILL BE IN GLASS AS VISIBILITY HAS BEEN ALSO A PRIORITY IN OUR DESIGN. FACILITIES FOR THE PROPER USE OF COMPUTERS AND THE ELECTRONIC HEALTH RECORDS ARE DISTRIBUTED IN THE CLINIC WITH THE PROPER SAFEGUARDS OF SECURITY AND CONFIDENTIALITY THAT HIPAA REQUIRES.

THE PROGRAM INCLUDES DEDICATED ZONES TO OPTIMIZED THE COLLABORATIVE AND ACADEMIC ENVIRONMENT WITHIN THE COMMUNITY.



N

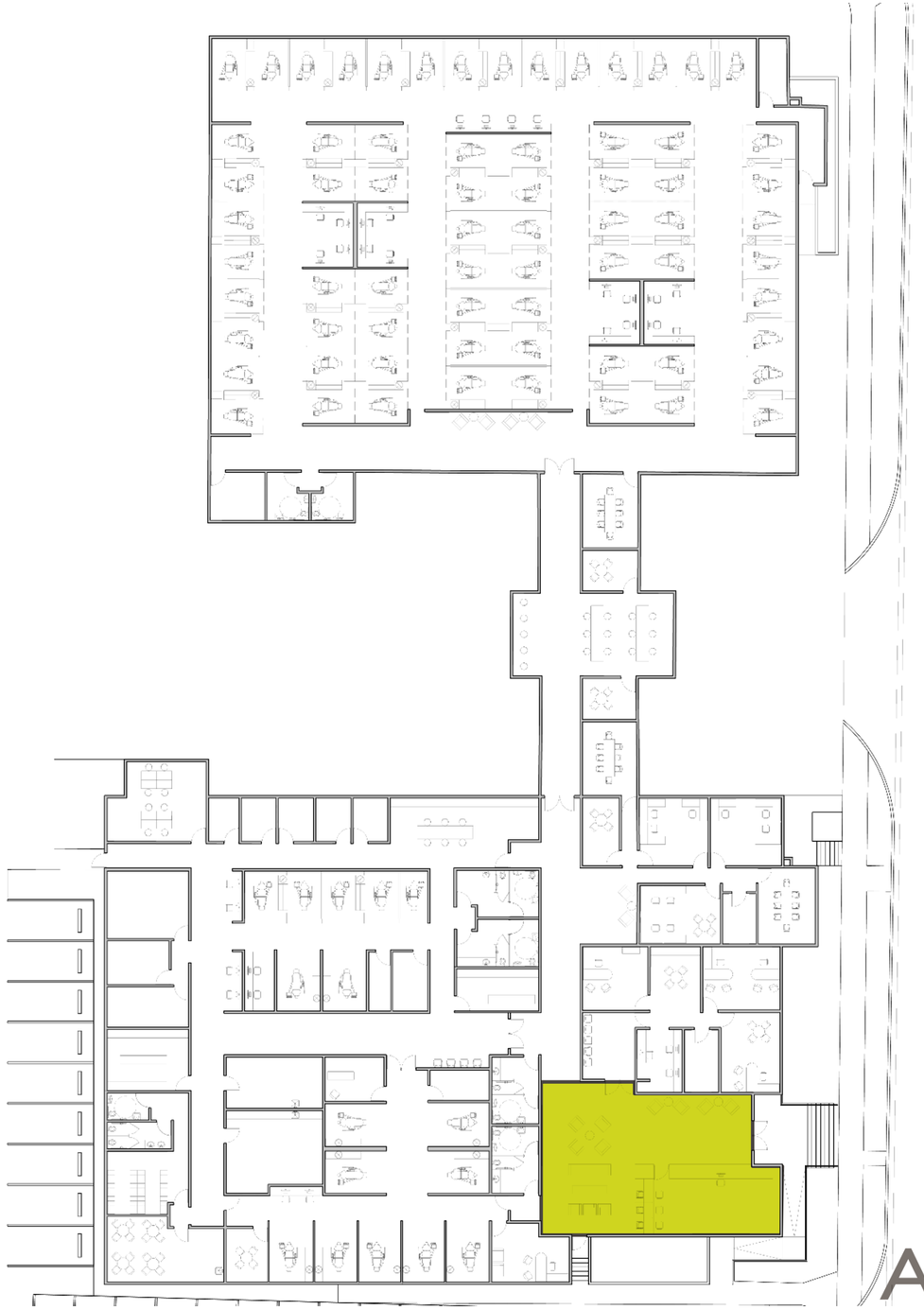
2.1.1 DENTISTRY SCHOOL FLOOR PLAN

MAIN ENTRANCE AND LOBBY

PROGRAM DIAGRAM

NOT TO SCALE

THE NEW PHSU DENTISTRY SCHOOL WILL HAVE A PROPER MAIN ENTRANCE WITH A RECEPTIONIST, INFORMATION DESKS, SITTING AREA AND EXHIBITION WALLS TO PROMOTE A SENSE OF PLACE AND WELCOME FACULTY, STUDENTS AND PATIENTS TO A STATE-OF-THE-ART FACILITY.



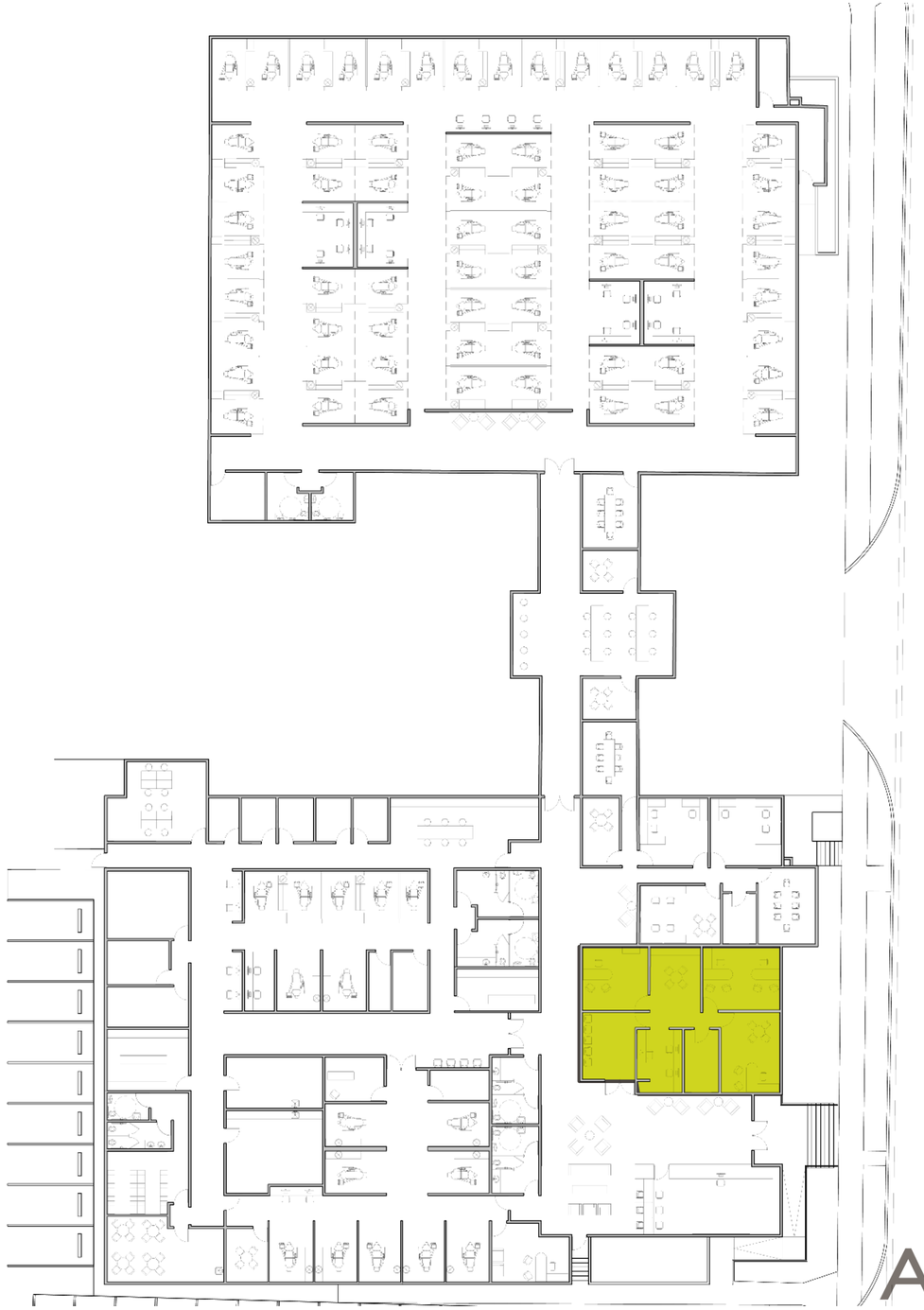
2.1.2 DENTISTRY SCHOOL FLOOR PLAN

ADMINISTRATION AREA

PROGRAM DIAGRAM

NOT TO SCALE

THE INSTITUTION'S ADMINISTRATION WILL BE PROVIDED WITH A DEDICATED AND PRIVATE AREA, INCLUDING OPEN SPACE FOR MEETINGS.



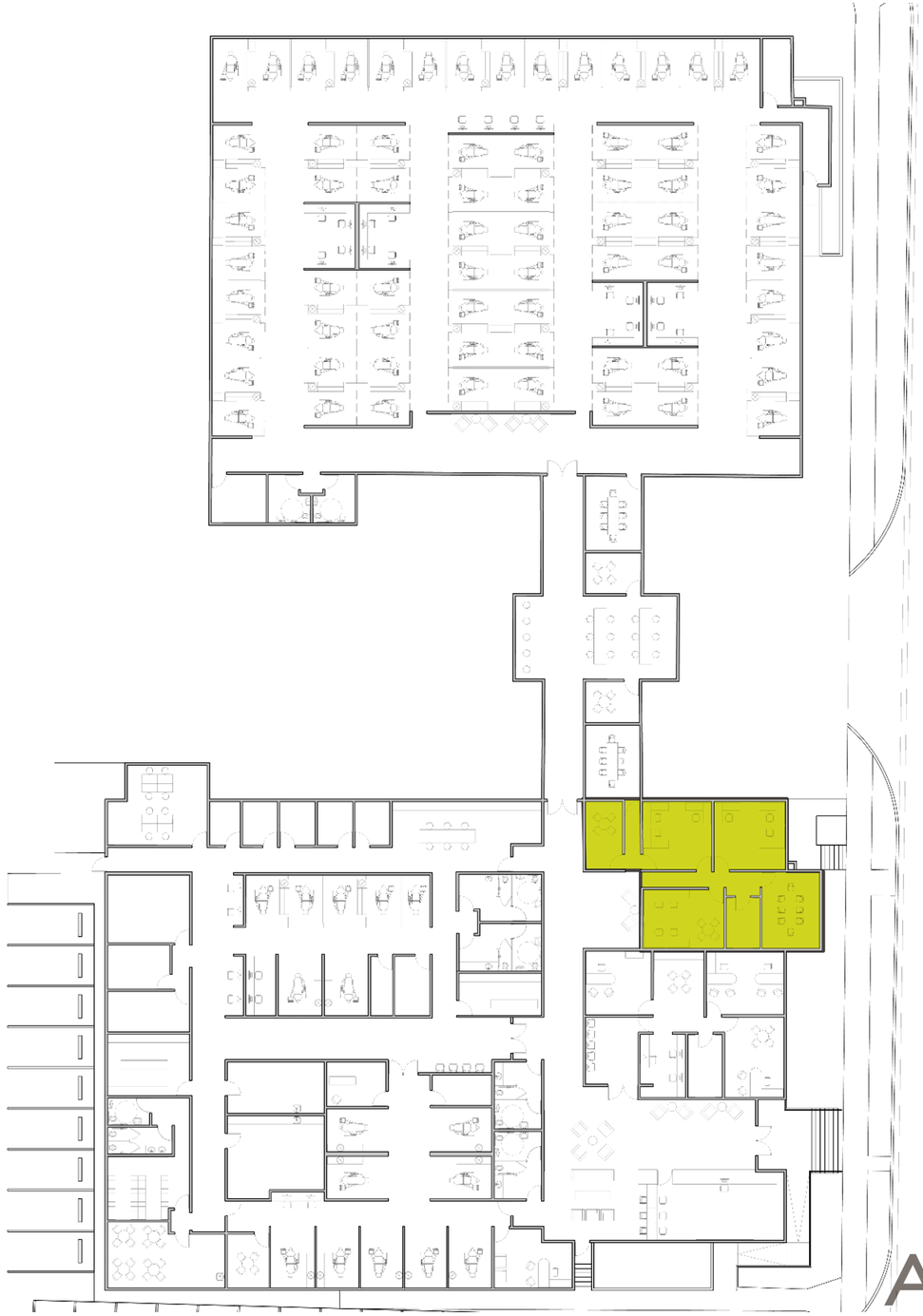
2.1.3 DENTISTRY SCHOOL FLOOR PLAN

FACULTY OFFICES

PROGRAM DIAGRAM

NOT TO SCALE

FACULTY AND MENTORS WILL BE PROVIDED WITH DEDICATED PRIVATE WORKSTATIONS CONFERENCE ROOM.



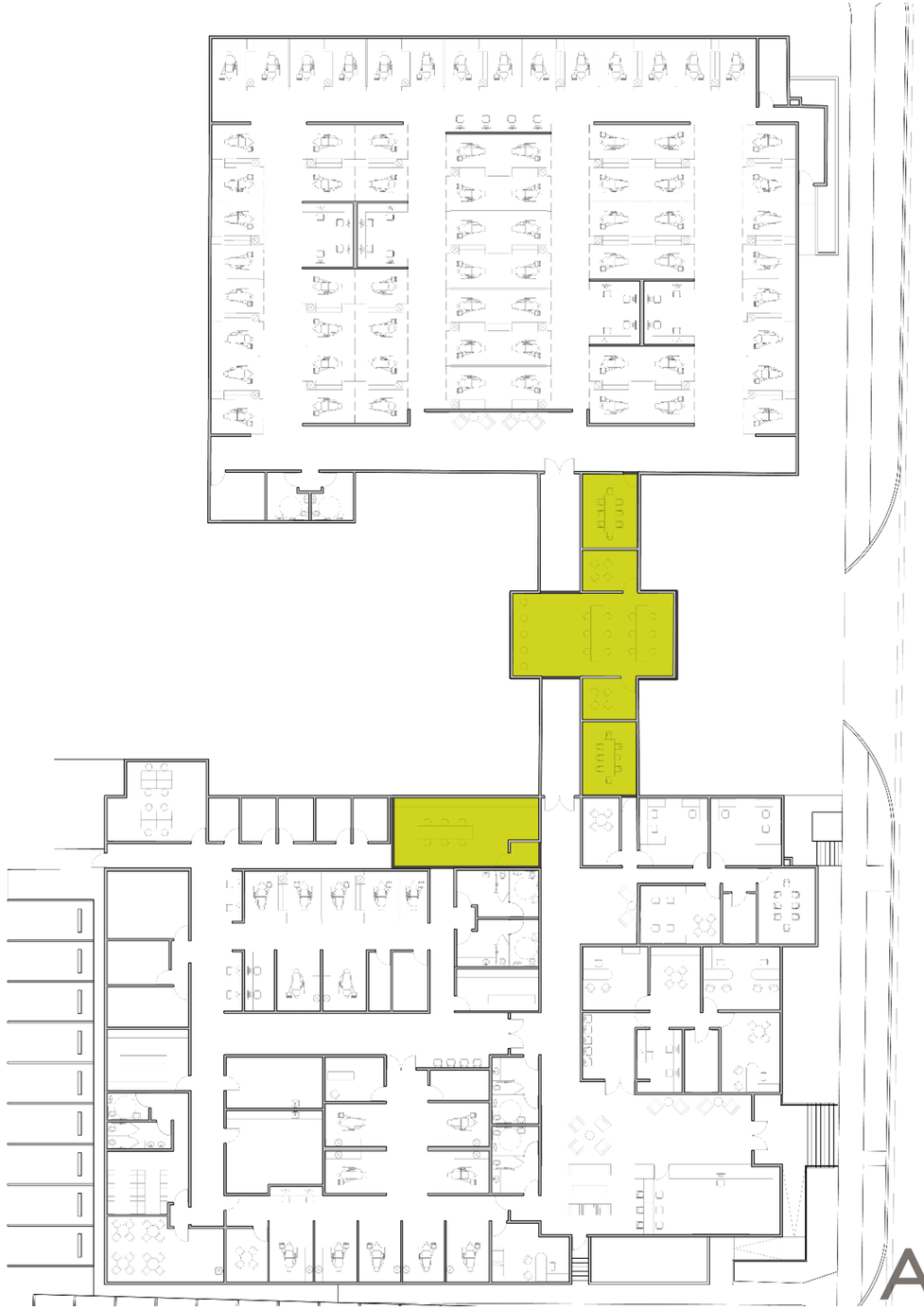
2.1.4 DENTISTRY SCHOOL FLOOR PLAN

PROFESSORS AND STUDENTS MEETING HUB | STUDY AREAS

PROGRAM DIAGRAM

NOT TO SCALE

THE MEETING HUB WILL BE A PLACE FOR THE FACULTY AND STUDENTS TO GATHER AND DISCUSS CASES, PROCEDURES AMONG OTHER EXPERIENCES. SEVERAL SMALL, PRIVATE CONFERENCE AREASWILL BE PROVIDED. COMPUTERS, WRITING BOARDS, MONITORS WILL BE AVAILABLE TO ACCESS THE ELECTRONIC HEALTH RECORD AND THE LIBRARY DATABASE FOR LITERATURE SEARCHES. AUDIOVISUAL AIDS WILL BE FOUND TO EDUCATE PATIENTS.



2.1.5 DENTISTRY SCHOOL FLOOR PLAN

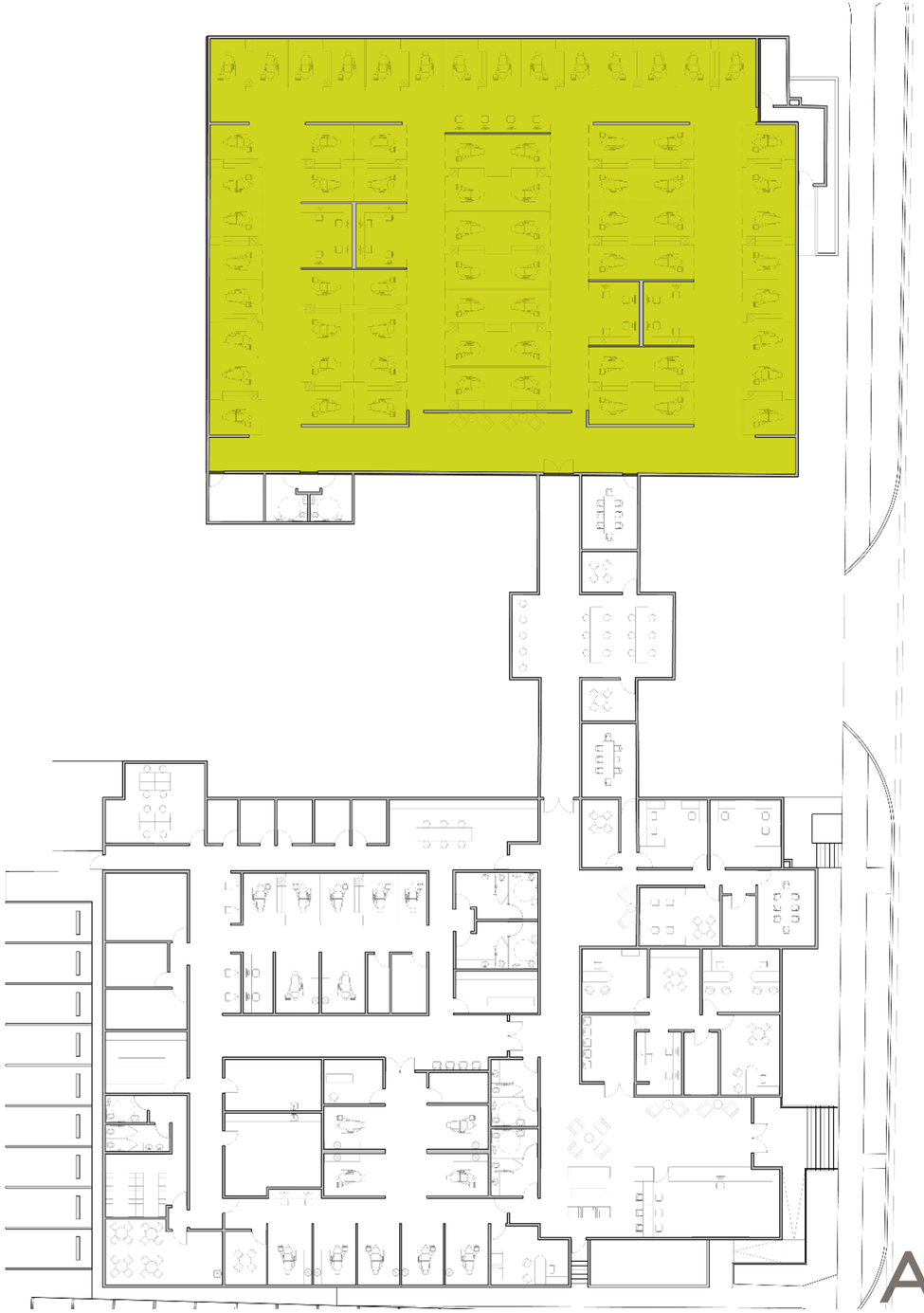
DENTAL STATIONS

PROGRAM DIAGRAM

NOT TO SCALE

SIXTY-EIGHT GENERAL OPERATORIES WILL BE AVAILABLE FOR THE REGULAR USE OF THE STUDENTS AT THE DENTAL CLINICAL STATIONS EQUIPPED WITH STATE-OF-THE-ART TECHNOLOGY. THIS WILL MAXIMIZED THE ACADEMIC ENVIRONMENT AND ALSO THE HIGH STANDARDS OF INFECTION CONTROL, HIPAA, IONIZATION PROTECTION ETC.

OFTEN, STUDENTS WORK IN PAIRS. THEREFORE, GROUPS CAN BE SIMULTANEOUSLY WORKING IN THE SPECIALIZED SURGICAL OR DIAGNOSIS AREAS AS WELL AS THE GENERAL DENTAL STATIONS; STUDENTS ALSO HAVE THE OPORTUNITY TO ROTATE IN EXTERNAL CLINICS.



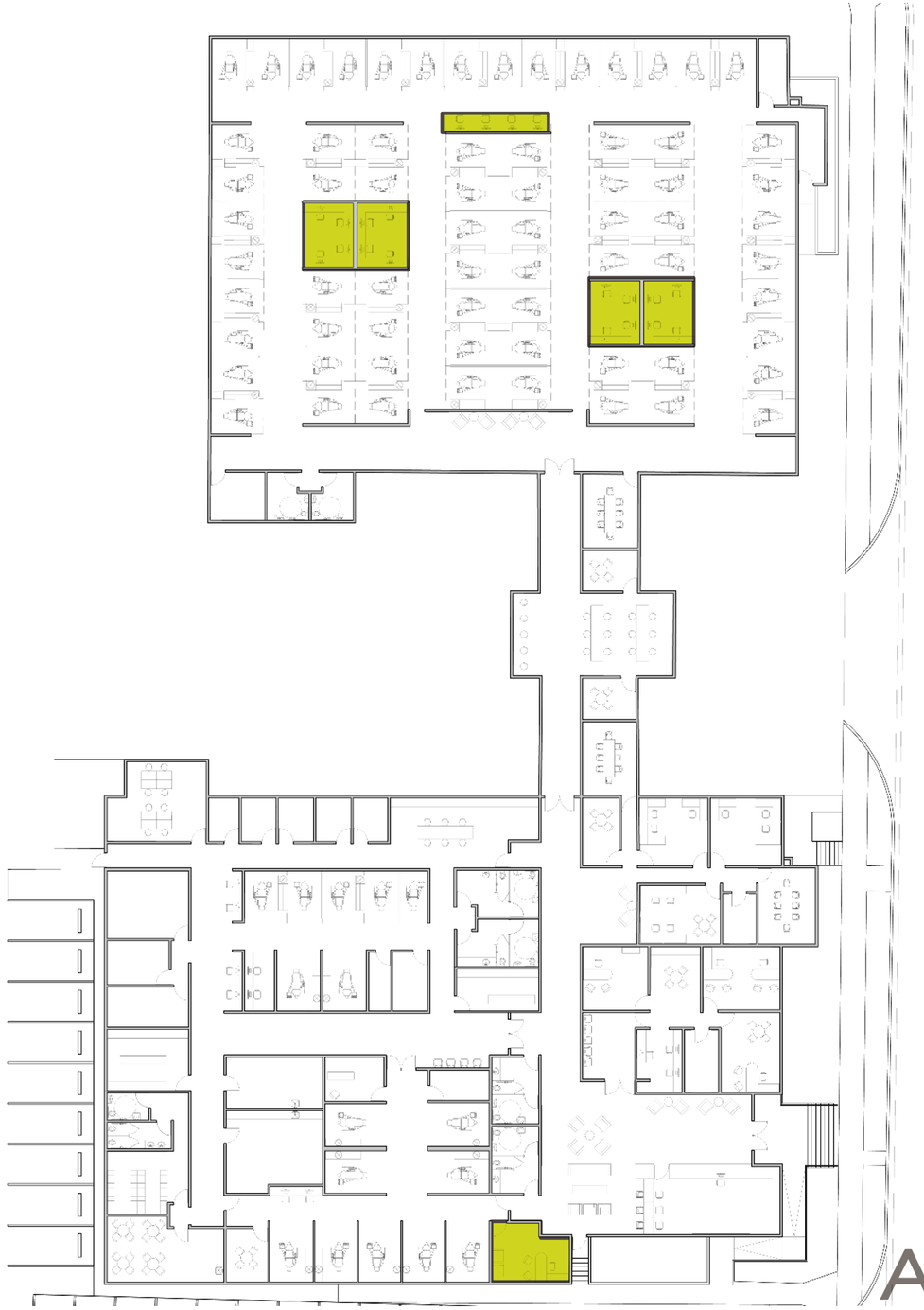
2.1.6 DENTISTRY SCHOOL FLOOR PLAN

PROFESSOR | STUDENT CONTROL STATIONS

PROGRAM DIAGRAM

NOT TO SCALE

DEDICATED CONTROL STATIONS ARE GOING TO BE DISTRIBUTED FOR OPTIMAL SUPERVISION PROFESSOR-STUDENT-PATIENTS. THIS SPACES WILL OVERSEE THE CLINIC OPERATION. THE FLOOR LEVEL WILL BE SLIGHTLY HIGHER AND COMPUTER FACILITIES WILL BE AVAILABLE. WE EXPECT THAT THE CLINICAL TEAM COORDINATORS WILL BE MOSTLY USING THESE CONTROL STATIONS.



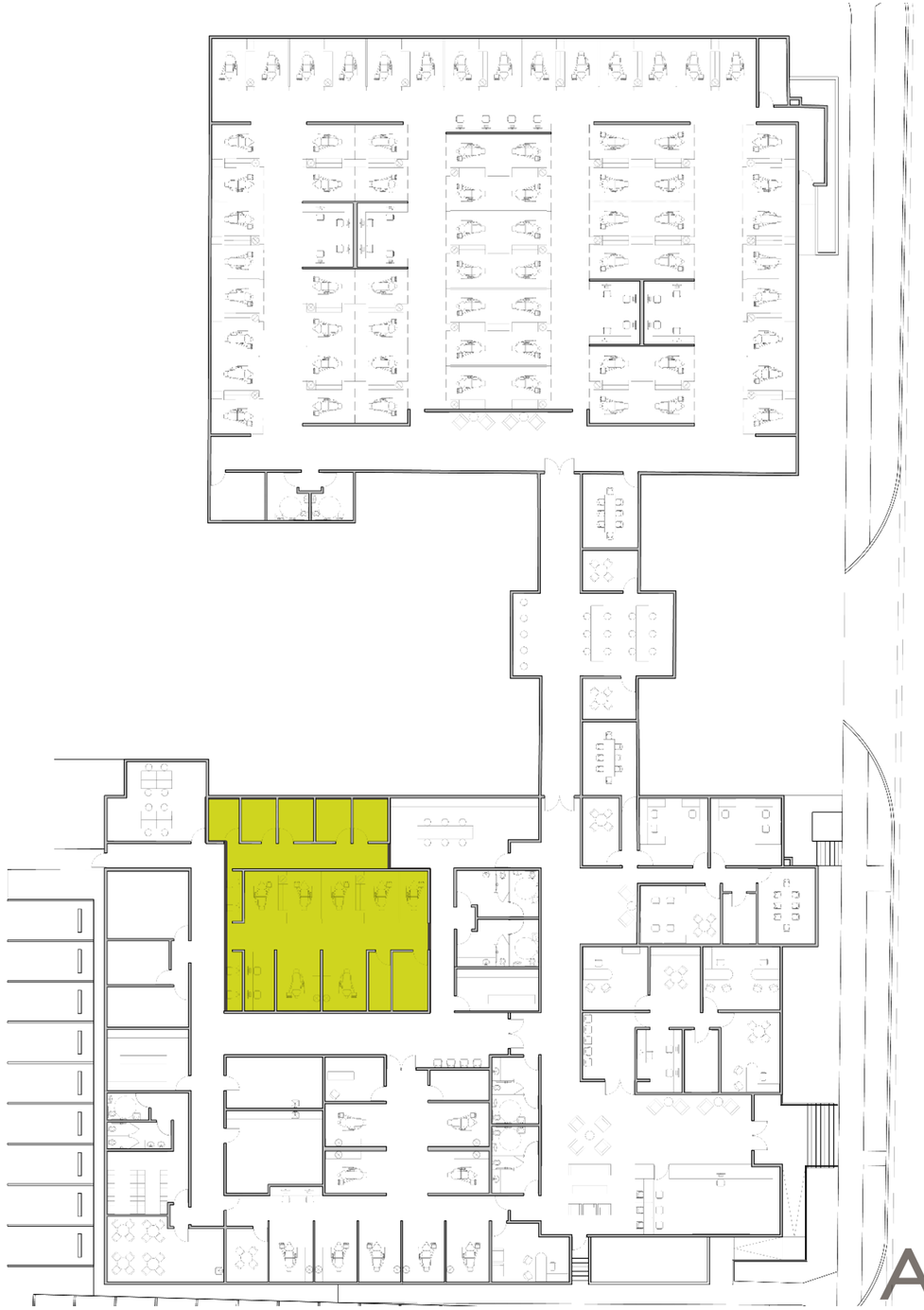
2.1.7 DENTISTRY SCHOOL FLOOR PLAN

DIAGNOSIS AND RADIOLOGY ZONE

PROGRAM DIAGRAM

NOT TO SCALE

THE DIAGNOSIS AND RADIOLOGY AREA HAS SEVEN (7) OPERATORIES WILL BE USED MOSTLY FOR SCREENING, DIAGNOSIS, AND EMERGENCY VISITS. IN THIS AREA WE INCLUDED TWO OPERATORIES THAT ARE CLOSED AND SPECIALLY DESIGN FOR SPECIAL NEEDS PATIENTS. AT LEAST ONE WILL BE DESIGNED FOR THE COMFORT OF PATIENTS WITH AUTISM DISORDERS. SEVERAL SPACES FOR PANORAMIC/CEPHALOMETRIC, CONE-BEAM COMPUTERIZED TOMOGRAPHY AND PERIAPICAL RADIOLOGY ARE AVAILABLE.



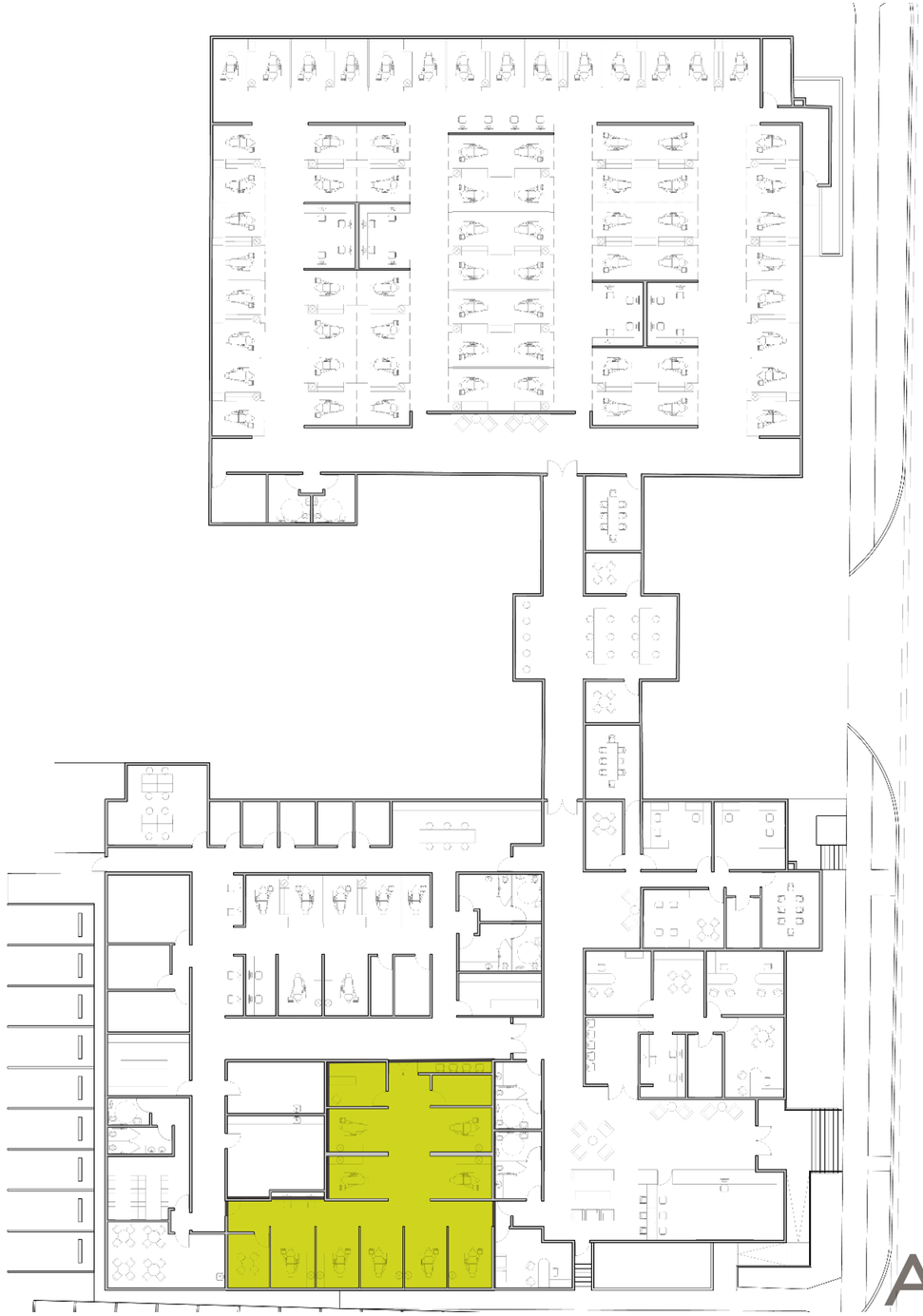
2.1.8 DENTISTRY SCHOOL FLOOR PLAN

SURGICAL AND SEDATION AREA

PROGRAM DIAGRAM

NOT TO SCALE

THE SURGICAL AND SEDATION AREA WILL BE ALLOW FOR SURGICAL COMPLEX PROCEDURES AND GENERAL ANESTHESIA APPLICATION WITHIN THE CLINIC. NINE (9) OPERATORIES WILL BE USED FOR SURGICAL PROCEDURES, PEDIATRIC PATIENTS' SEDATION, ADULT AND GERIATRIC PATIENTS' SEDATION, NITROUS OXIDE, PERIODONTAL SURGERY, ENDODONTIC CASES REQUIRING MICROSCOPE AND OTHER CASES THAT REQUIRE ISOLATION, NEGATIVE PRESSURE AND/OR CONTROLLED SCENARIO. ONE OPERATORY WILL HAVE THE EQUIPMENT AND FACILITIES TO TREAT PATIENTS UNDER GENERAL ANESTHESIA WITH AN ADJACENT RECOVERY ROOM.



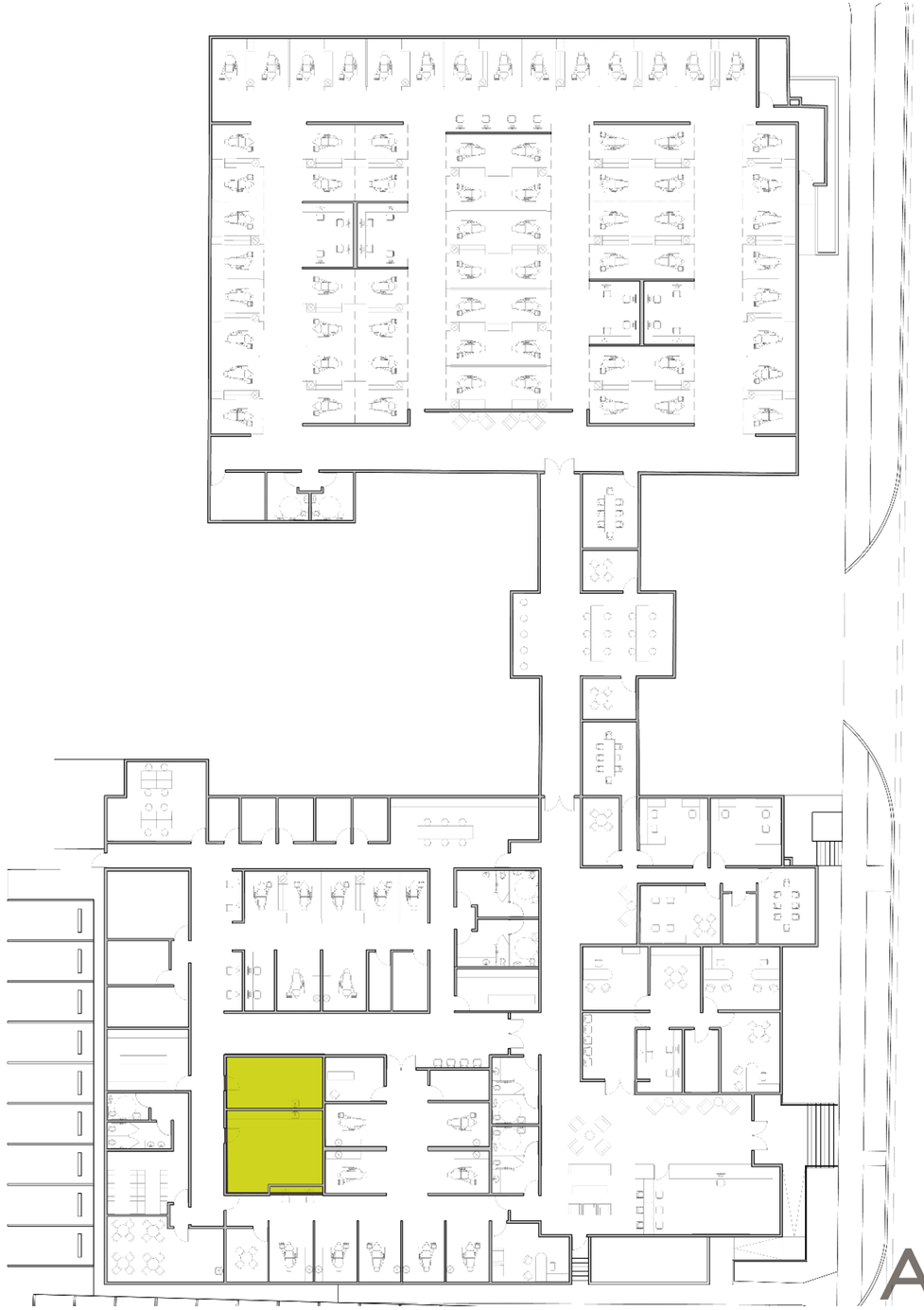
2.1.9 DENTISTRY SCHOOL FLOOR PLAN

STERILIZATION AND DISPENSING ROOMS

PROGRAM DIAGRAM

NOT TO SCALE

THE INSTRUMENTS AND SUPPLIES MANAGEMENT CENTER, ALTHOUGH A RESTRICTED AREA, WILL BE ACCESSIBLE FROM THE SURGICAL |DIAGNOSTIC AREAS. IT HAS THREE MAIN SECTIONS. FIRST, THE CLEANING AREA WITH SEVERAL SINKS, ULTRASONIC MACHINES, INSTRUMENT CLEANING APPLIANCE AND MATERIALS, AND COUNTERS TO WRAP TRAYS AND INSTRUMENTS. THE SECTION IS AMPLE TO HAVE SEVERAL STUDENTS WORKING AT THE SAME TIME. SECOND, THE STERILIZATION AREA, RESTRICTED ONLY TO BE MANAGED BY PHSU SDM STAFF WITH SPACE FOR TWO HOSPITAL TYPE AUTOCLAVES, AND BENCHES TO MANAGE CLEAN INSTRUMENTS IS AVAILABLE. CLEAN INSTRUMENTS/TRAYS ARE THEN TRANSFERRED TO THE THIRD AREA, THE DISPENSING ROOM WHERE STUDENTS WILL APPROACH THOUGH A WINDOW TO GET THEIR INSTRUMENTS AND MATERIALS.



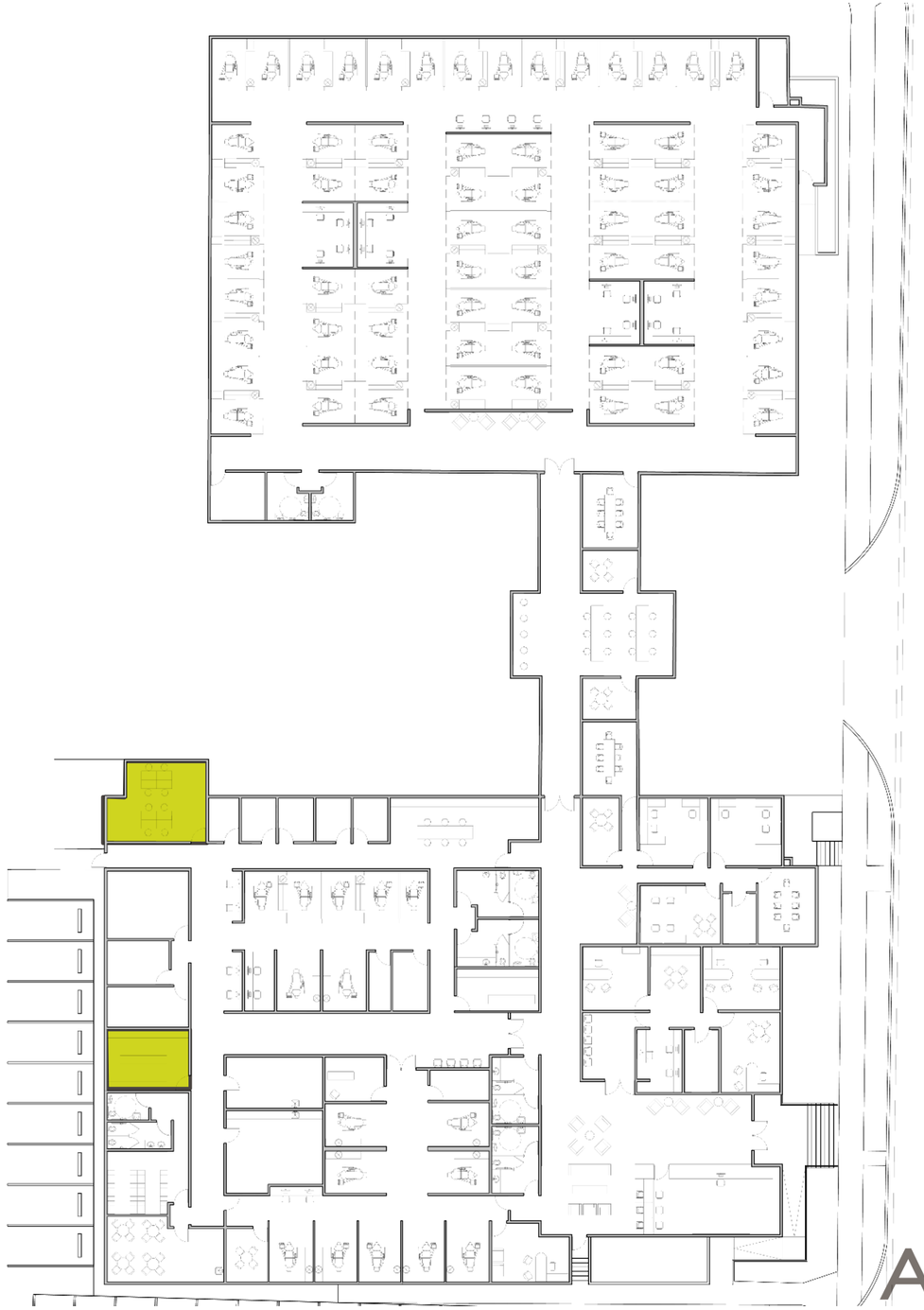
2.1.10 DENTISTRY SCHOOL FLOOR PLAN

LABORATORIES

PROGRAM DIAGRAM

NOT TO SCALE

LABORATORIES WITH SPECIALIZED EQUIPMENT WILL BE CLOSE TO EACH CLINICAL AREA TO SUPPORT ITS FACILITIES.



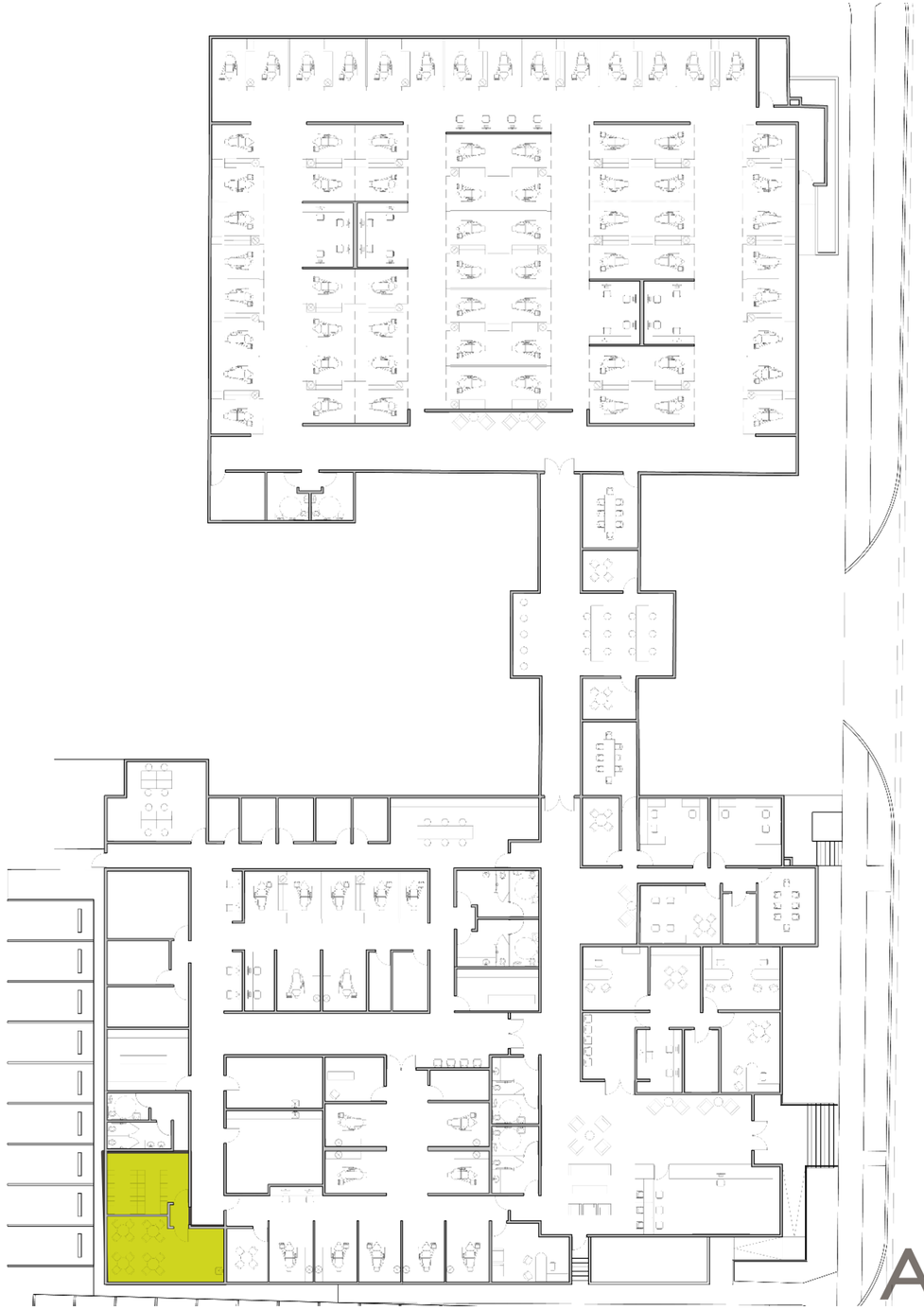
2.1.11 DENTISTRY SCHOOL FLOOR PLAN

PROPOSED LAYOUT ON EXISTING BUILDINGS

PROGRAM DIAGRAM

NOT TO SCALE

NEAR THE SURGICAL AREA THERE WILL BE AREAS NOT TO BE ACCESSED BY PATIENTS. THESE AREAS WILL INCLUDE STUDENT AND FACULTY KITCHENETTE, BATHROOMS AND LOCKERS.



2.1.12 DENTISTRY SCHOOL FLOOR PLAN

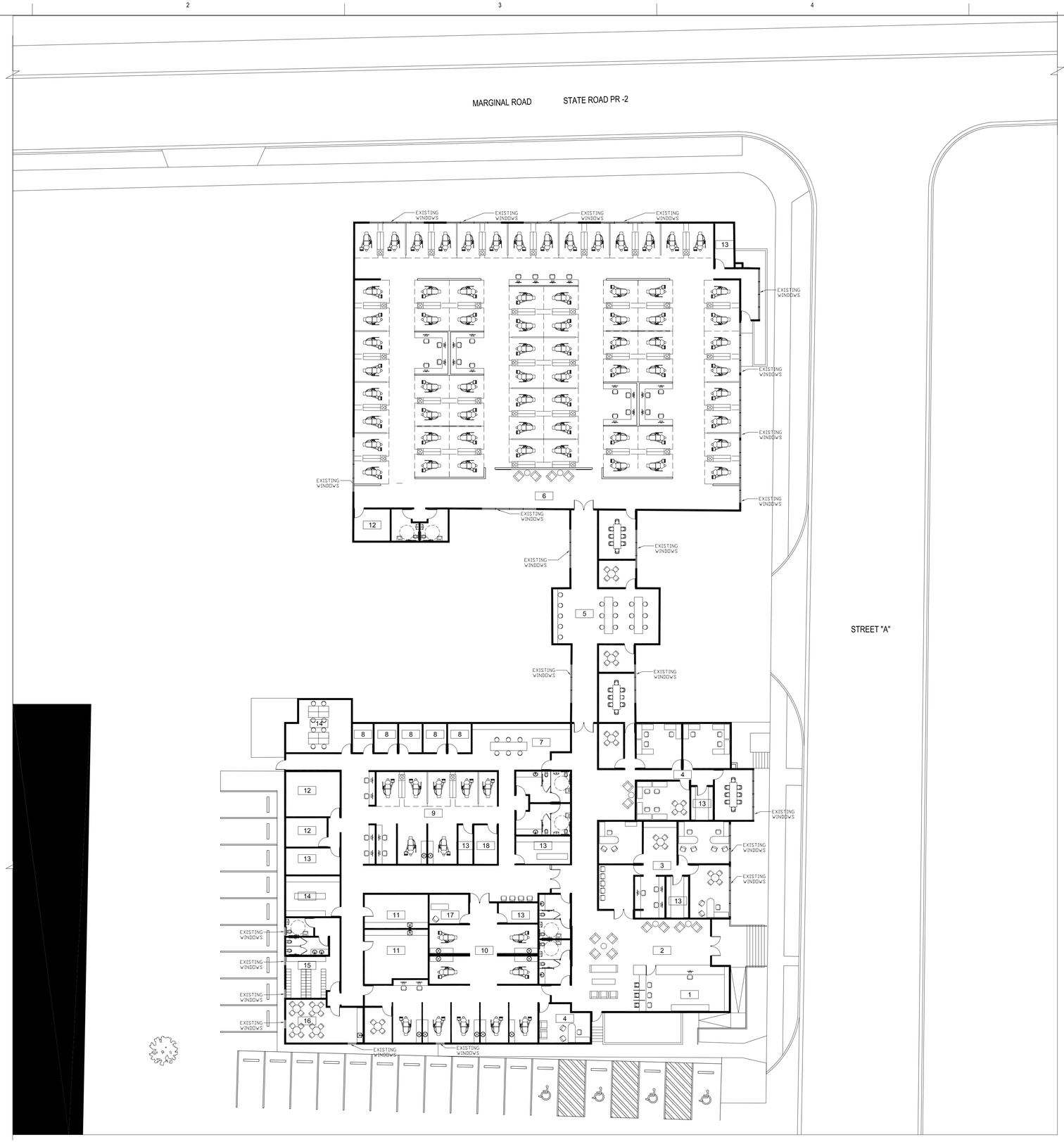
BATHROOMS | STORAGE | MECHANICAL ROOMS

PROGRAM DIAGRAM

NOT TO SCALE

EACH ZONE WILL BE PROVIDED WITH DEDICATED STORAGE| ARCHIVE ROOMS AND ACCESIBLE BATHROOMS.





A1 PROPOSED FLOOR PLAN
SCALE: 1/16"=1'-0"

LEGEND & SHEET NOTES

LEGEND

EXISTING BUILDINGS

GENERAL SHEET NOTES

1. ALL DIMENSIONS ARE APPROXIMATIONS.
2. EXISTING WINDOWS ARE TO BE REPLACED WITH EQUAL OR SIMILAR WINDOWS IN COMPLIANCE WITH CURRENT CODE REQUIREMENTS.

SHEET KEYNOTES (⬭)

01 RECEPTION
02 LOBBY
03 ADMINISTRATION
04 FACULTY OFFICES
05 MEETING HUB
06 DENTAIL CHAIRS ZONE
07 LOUNGE - STUDY
08 RADIOLOGY
09 DIAGNOSTIC
10 SEDATION - OP ROOMS
11 DISPENSING - STERILIZING
12 MECHANICAL ROOM
13 STORAGE
14 LABORATORY
15 LOCKER ROOM
16 BREAK ROOM
17 RECOVERY
18 CONE BEAM

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ARCHITECTURE | INTERIOR DESIGN
AR Puerto Rico Convention Center District
The Hub 200 Convention Boulevard Suite 201
San Juan, PR 00907
P (787) 754-1381
alvarezdiazvillalon.com
info@advfirm.com

CONSULTANT

OWNER

SEAL

YO, XXXXXXXX , LIC. #XXXXX,
CERTIFICO QUE SOY EL PROFESIONAL QUE CONFECCIONÓ Y/O DISEÑÓ Y/O PREPARÓ ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIÉN CERTIFICO QUE ENTIENDO QUE DICHOS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CÓDIGOS DE CONSTRUCCIÓN VIGENTES DE LAS AGENCIAS, JUNTAS REGLAMENTADORAS O CORPORACIONES PÚBLICAS CON JURISDICCIÓN. CERTIFICO, ADEMÁS, QUE EN LA PREPARACIÓN DE ESTOS PLANOS Y ESPECIFICACIONES SE HA CUMPLIDO CABALMENTE CON LO DISPUESTO EN LA LEY NÚM. 14 DEL 8 DE ENERO DE 2004, SEGÚN ENMENDADA, CONOCIDA COMO LEY PARA LA INVERSIÓN POR LA INDUSTRIA PUERTORRIQUEÑA Y CON LA (LEY NÚM. 319 DEL 15 MAYO DE 1938 , SEGÚN ENMENDADA; LEY NÚM. 96 DEL 6 DE JULIO DE 1978, SEGÚN ENMENDADA; SEGÚN APLIQUE). RECONOZCO QUE CUALQUIER DECLARACIÓN FALSA O FALSIFICACIONES DE LOS HECHOS QUE SE HAYA PRODUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MÍ, MIS AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCIÓN JUDICIAL Y DISCIPLINARIA POR LA OGPE.

PROJECT INFORMATION

PHSU DENTISTRY SCHOOL BUILDING
STATE ROAD PR - 2
BO. PLAYA, PONCE, PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE
	XXXXX	XX.XX.XXX

DATE ISSUED:	04.13.2023
REVIEWED BY:	NATASHA YORDAN
DRAWN BY:	LAURIE RIVERA
DESIGNED BY:	NATASHA YORDAN
PROJECT NUMBER:	23012

SHEET TITLE

ARCHITECTURAL FLOOR PLAN

SHEET ID

A100

4/13/2023 12:03:43 PM

SCHEMATIC DESIGN

October 20, 2022

Arch. Carlos A. Rubio Cancela
Executive Director
State Historic Preservation Officer
Cuartel de Ballajá Bldg.
San Juan, Puerto Rico

Re: Authorization to Submit Documents

Dear Arch. Rubio Cancela:

The U.S. Department of Housing (HUD) approved the allocations of Community Development Block Grant (CDBG-DR) funds on February 9, 2018. It also approved the allocation of Community Development Block Grant Mitigation (CDBG-MIT) funds on January 27, 2020. The purpose of these allocations is to address unsatisfied needs as a result of Hurricanes Irma and Maria in September 2017; and to carry out strategic and high-impact activities to mitigate disaster risks and reduce future losses.

To comply with the environmental requirements established by HUD, the Department of Housing of Puerto Rico (PRDOH) contracted Horne Federal LLC to provide environmental registry review services, among others, that will support the objectives of the agenda for both CDBG-DR and CDBG -MIT Programs.

In line to expedite the processes, Horne Federal LLC, is authorized to submit to the State Historic Preservation Officer, documentation of projects related to both the CDBG-DR and CDBG-MIT on behalf of PRDOH.

Cordially,

Juan C. Pérez Bofill, P.E. M.Eng
Director of Disaster Recovery
CDBG DR-MIT

GOVERNMENT OF PUERTO RICO
STATE HISTORIC PRESERVATION OFFICE
Executive Director I Carlos A. Rubio-Cancela I carubio@prshpo.pr.gov

Tuesday, March 21, 2023

Lauren Bair Poche
HORNE- Architectural Historian Manager
10000 Perkins Rowe, Suite 610 Bldg. G
Baton Rouge, LA 70810

SHPO: 02-23-23-02 PONCE, PUERTO RICO DISASTER RECOVERY, CDBG-DR PROGRAM: INVESTMENT PORTFOLIO FOR GROWTH (IPG), PR-IPG-000683, PONCE HEALTH SCIENCES UNIVERSITY – PHSU ACADEMIC BUILDING, 388 ZONA INDUSTRIAL REPARADA 2, PONCE, PUERTO RICO

Dear Ms. Poche,

Our Office has received and reviewed the above referenced project in accordance with 54 USC 306108 (commonly known as Section 106 of the *National Historic Preservation Act, as amended)* and 36 CFR Part 800: *Protection of Historic Properties* from the Advisory Council on Historic Preservation. The State Historic Preservation Officer (SHPO) is to advise and assist federal agencies and other responsible entities when identifying historic properties, assessing effects upon them, and considering alternatives to avoid or reduce the project's effects.

After a review of all the documentation provided, these are our comments for the following phases:

- Phase 2:

Our records support your finding of **no historic properties affected** within the project's area of potential effects.

- Phase 3:

In order for the SHPO to fulfill its legal responsibilities, it is necessary that you provide us with the following documentation:

1. A detailed written description of the project, including related activities to be carried out in conjunction with the project. Please provide a copy of the application submitted for Federal funding, licenses, or permits.

SHPO OECH
OFICINA ESTATAL DE CONSERVACIÓN HISTÓRICA
OFICINA DEL GOBERNADOR
STATE HISTORIC PRESERVATION OFFICE
OFFICE OF THE GOVERNOR

2. Schematic or preliminary drawings (floor plans, elevations, sections) that show the proposed project design saved as a PDF file and included with printed copies, size 11"x17". Digital copies of maps and plans/drawings may substitute printed ones.

The SHPO will have 30 days to respond after receiving an adequately documented finding or determination made by the Federal agency or legal responsible entity, as per 36 CFR 800.3(c)(4), § 800.4(d)(1), § 800.5(c) and § 800.11. However, additional information may be required after initiating the section 106 process.

If you have any questions concerning our comments, do not hesitate to contact our Office.

Sincerely,

por Carlos A. Rubio-Cancela
State Historic Preservation Officer
CARC/GMO/EVR/LGC

February 23, 2023

Carlos A. Rubio Cancela
Director Ejecutivo
Oficina Estatal de Conservación Histórica
Cuartel de Ballajá (Tercer Piso)
San Juan, PR 00902-3935

Puerto Rico Disaster Recovery, CDBG-DR Investment Portfolio for Growth (IPG) Program

Section 106 NHPA Effect Determination Submittal for PR-IPG-000683, Ponce Health Sciences University – PHSU Academic Building, 388 Zona Industrial Reparada 2, Ponce, Puerto Rico – *No Historic Properties Affected*

Dear Architect Rubio Cancela,

On February 9, 2018, an allocation of Community Development Block Grant - Disaster Recovery (CDBG-DR) funds was approved by the United States Department of Housing and Urban Development (HUD) under the Federal Register Volume 83, No. 28, 83 FR 5844, to assist the Commonwealth of Puerto Rico in meeting unmet needs in the wake of Hurricanes Irma and Maria. On August 14, 2018, an additional $8.22 billion recovery allocation was allocated to Puerto Rico under the Federal Register Volume 83, No. 157, 83 FR 40314. With these funding allocations, the Puerto Rico Department of Housing (PRDOH) aims to lead a comprehensive and transparent recovery for the benefit of Puerto Rico residents. To faithfully comply with HUD's environmental requirements, the Puerto Rico Department of Housing contracted Horne Federal, LLC (HORNE) to provide environmental records review services that will support the Department's objectives for Puerto Rico Housing (PRDOH) regarding CDBG-DR.

The Investment Portfolio for Growth (IPG) Program seeks to alleviate the exacerbated economic effects of hurricanes Irma and Maria through large-scale development projects that are transformative in nature and create or retain Low-to-Moderate Income (LMI) jobs and cascading economic impacts. The IPG Program intends to award gap funding for large-scale commercial and industrial development for a broad-ranging set of economic revitalization initiatives. This may include but is not limited to the development or redevelopment of commercial, mixed-use and infrastructure projects through a significant investment to support local economy.

On behalf of PRDOH, and the subrecipient for this project, Tiber Health Public Benefit Corporation dba Ponce Health Sciences University, we are submitting documentation for a multi-phase project seeking CDBG-DR funds. Phase 2 consists of the demolition of two circa 1980 buildings to be replaced by an academic tower and an outdoor plaza, while Phase 3 consists of the renovation of three mid-century buildings. The full scope is described in the NHPA Effect Determination Form, which includes mapping and photographs. Based on the provided documentation prepared by SOI-qualified professionals Architect Carlos Ferrán and Archaeologist Fernando Alvarado, the Program requests concurrence that a determination that “No Historic Properties Affected” is appropriate for this undertaking.

Please contact me by email at lauren.poche@horne.com or phone at 225-405-7676 with any questions or concerns.

Kindest regards,



Lauren Bair Poche, M.A.

Architectural Historian, Historic Preservation Senior Manager

Enclosures

PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM **INVESTMENT PORTFOLIO FOR GROWTH PROGRAM (IPG)** **Section 106 NHPA Effect Determination**	
Subrecipient: Tiber Health Public Benefit Corporation dba Ponce Health Sciences University	
Program ID Number: PR-IPG-000683	
Project Name: PHSU Academic Building	

Project Location:	388 Zona Industrial Reparada 2, Ponce, PR 00716
Project Coordinates:	**Lat. 17.995172° long. -66.618648°**
TPID (Cadastral Number)**:**	**412-011-783-27/412-002-783-07-001/ 412-002-783-08-001**
Type of Undertaking: ☒ Renovations ☒ Demolition/New Construction	
Construction Date (AH est.): Phase 2: 1980 Phase 3: 1940-1960	**Property Size** (acres)**:** 1.9265 acres Phase 2 4.5811 acres Phase 3

SOI-Qualified Architect/Architectural Historian: Arch. Carlos Ferrán
Date Reviewed: **December 19, 2022**
SOI-Qualified Archaeologist: Archaeo. Fernando Alvarado
Date Reviewed: **December 19, 2022**

In compliance with Section 106 of the National Historic Preservation Act (NHPA), the Program is responsible for identifying historic properties listed in the National Register of Historic Places (NRHP) and any properties not listed that would be considered eligible for listing that are located within the geographic area of potential effects (APE) of the proposed project and assessing the potential effects of its undertakings on these historic properties.

Project Description (Undertaking)

Overview of Campus Expansion Project:

Founded in 1977 and located along the southern coast of Puerto Rico, Ponce Health Sciences University (PHSU), formerly Ponce School of Medicine and Health Sciences, is a graduate level health science institution, PHSU offers programs in the disciplines of Medicine, Clinical Psychology, Biomedical Sciences and Public Health. The Project comes as a call-to-action in addressing the need for qualified medical practitioners across the region. The expansion, as a result of the Project, will result in student capacity increasing by over 150% while allowing PHSU to increase doctorate, master and certificate programs specifically designed to fill service gaps within the profession and increase the number of health care providers in this medically underserved, targeted state.

On June 19th, 2020, Ponce Health Sciences University broke ground on the first component, phase 1-a, of a phased expansion project by breaking ground on the 130,000 square foot academic tower. It was essential for PHSU to replace outdated facilities that were heavily damaged by both Hurricane Maria and the earthquakes that took place in January of 2020. PHSU has committed a direct investment of $78 million into our expansion. This expansion project will increase the

number of medical and other health professionals providing care to underserved communities in Puerto Rico, specifically in the southern region, and aid both the local economy and healthcare landscape by playing a key role in the retention of healthcare professionals in Puerto Rico. The modern facilities will provide an environment that will enhance innovation and the quality of medical care to these communities.

Future Phases seeking CDBG-DR Funding:

Phase 2:

Phase 2 work is demolishing two circa 1980 buildings to be replaced by the academic tower and creating an outdoor plaza. The buildings to be demolished are the current PHSU Administration Building as well as the President's Office Building. Both of these demolitions are included in the approved Construction Permit submitted to OGPe for the original Academic Building construction but are not currently funded by the Phase 1A financing. The outdoor plaza is intended as an open space to be used as both a passive park as well as a recreational area for students, faculty and staff.

Phase 3:

Phase 3 work is the renovation work on the three buildings (1940-1960), located in the Damas lot being purchased, that will be used for the dental program. There are two (2) single-story concrete buildings of approximately 11,600 sf and 14,300 sf in area and one (1) single story concrete and aluminum building of approximately 4,500 sf in area. The lot is approximately 7,800 square meters in size. (See page 3, Photos 1-4.)

Renovation work includes retrofitting water and air lines necessary to operate dental clinic equipment and construction of the clinic, classrooms, and faculty offices. Includes interior work including mechanical, electrical, plumbing, partitions, finishes as well as FF&E and dental equipment to outfit the dental clinic, classrooms and faculty offices.

It is important to note that there have been no acquisitions of property at this current time; however, PHSU is in an option agreement to purchase the land previously mentioned from Fundación Damas, Inc. The option agreement is set to vest on August 31st, 2022. Phases 1-B, 2 and 3 are currently part of the expansion of the university.

Timing of the execution of these plans is dependent on the funding in which the university is currently seeking. All future construction or use of CDBG funds will be delineated by separate contracts outlining scope of work and project schedules.

Phase 3 Buildings to be Renovated

Photo 1



Photo 2



Photo 3



Photo 4



Area of Potential Effects

As defined in 36 CFR §800.16(d), the area of potential effects (APE) is the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties if any such properties exist. Based on this definition and the nature and scope of the Undertaking, the Program has determined that the direct APE for this project is limited to the boundaries of the following parcels (412-011-783-27/412-002-783-07-001/ 412-002-783-08-001) and is situated between the State Road PR-2 marginal street (North), Southern boundaries of the above mentioned parcels, the Street A (East) and the street B (West), located in the "Urbanización Reparto" Industrial (Industrial Park) Playa ward in Ponce. The APE of the project is 1.9265 acres (phase 2) and, 4.5821 acres (phase 3). The visual APE is the view shed of the proposed project. As expected and due to the area having enough space inside, all equipment or material will be stored within the project footprint. No other property or structure will be appropriated or used for purposes or the creation and development of the project.

Identification of Historic Properties – Archaeology

A Brief Historic Summary of the project area:

According to historical information during the Spanish colonial period the project area lands were used for sugar cane cultivation. The lands form part of the Hacienda Restaurada. This sugar hacienda first belonged to don Ramon Cortada and in 1883 was acquired by J. Gallart. Later the lands passed to the Land Authority (Autoridad de Tierras) and then, to PRIDCO. In the area are located PRIDCO storage facilities created between 1940 -60's for light and medium industrial purposes inside the Industrial Park. Basically, consisting in a square plan with open abundant space area which offered the possibility of multipurpose arrangements in the interiors. In Phase 2, area of basically modern structures built in 1980, for classrooms and office areas. In Phase 3, the structure consists of a PRIDCO storage facility built in 1940-50, modernized over the years.

Central Restaurada-Ponce (1888-1903)

"Hacienda Restaurada was one of the first haciendas in the Ponce area dating back to the 1700s. It was in Barrio Vayas and was originally owned by the Ortiz Matos family of Ponce who sold it to Spanish immigrant from Catalonia José Pica (-1831) in 1825. Upon Pica's death, the hacienda was inherited by his daughter Josefa Pica who married an also Catalonian Luis Font, who managed the hacienda. Despite having only 65 cuerdas, in 1845 Font increased its sugar production making it a very efficient and successful operation. Font sold the estate ca. 1875 to

Spanish immigrant from Vinaroz, Valencian Community, Miguel Arribas Escribano (1834-1897) and upon his death was inherited by his daughter Hortensia Arribas Villoch (1869-) and her Barcelona born husband and attorney Desiderio Canals Pujadas. From documentation reviewed, we understand Desiderio and Hortensia lived in Barcelona at the time. That being the case, we believe that upon its closure, Central Restaurada was dismantled, and its machinery sold to be installed at Central Cambalache."[1]

Since the project is in a previously disturbed industrial area the possibilities for having unknow cultural resources are very low. This project no will affect any known archaeological resources. Is our recommendation that no additional archaeological studies should be required for this project. After evaluating the existing structures and the project's scope work in all its components, we have concluded that no historic structure will be involved. As a result of the analysis, we can conclude there are no cultural resources within the APE of the project to be directly or indirectly affected. No undisturbed cultural remains are expected to be impacted or adversely affected by the proposed works.

Existing information on previously identified historic properties has been reviewed to determine if any such properties are located within the APE of this undertaking. The review of this existing information, evidence that the only one archaeological report completed in this area of Ponce is the Phase IA made by Arql Fernando Alvarado in 2019 in the parcel where project's Phase 2 is included. This archaeological report is the only archaeological evaluation in the project area. This research produced negative results for the presence of cultural resources on this property (Table 2).

Study Investigations	Type	Author	Result & Recommendations	Distance
Ponce Health Science University	IA Phase	Fernando Alvarado	Negative	1 meter west

In the conclusions section of the 2019 study Phase IA, Alvarado points to the following archaeological resources.

"The archaeological closest site reported to the parcel subject to this evaluation turns out to be the so-called P-10 (Caracoles), which is a pre- Columbian site that has been known since at least 1916, when the American archaeologist Samuel H. Lothrop made an inventory of archaeological sites for Puerto Rico and mentions the existence of an archaeological site in that place. This site is located about 800 meters east of the parcel studied. However, we must

[1] https://jaimemontilla.com/sugar-mills

point out that the nearest historical site turns out to be the so-called PO 0200028 (it says Bridge 492, it is Bridge 145, Portuguese River Bridge), which is the old bridge of Calle Real, current Ave. Hostos (named in 1903) or PR-10 road, which is located about 400 meters to the southeast. Bridge 145 was built in 1933.

Other relatively nearby places are located as historic structures on Ponce Beach (The former Ferré Companies building, the Puerto Rico Iron Works, the Municipal Beach Building and the Methodist Church), which are located about 1,200 meters to the south, the closest; and pre-Columbian and historical places in the city of Ponce itself, such as the pre-Columbian site that was discovered when the underground of the utilities was being carried out on Concordia Street in Ponce, by archaeologist Pedro Alvarado. This archaeological site is located about 950 meters northeast of the property now studied.

Similarly, archaeologist Jesús Figueroa worked in 1987 in a Phase II in the Plaza del Mercado Isabel II, located about 2.3 kilometers also to the northeast of the property now investigated, and worked in 2007 in the Casimiro Berenguer Padilla Tomb-Mausoleum in the Baldorioty de Castro National Pantheon, on De la Torre Street. About 2.5 kilometers north-northeast of the project, finding historical materials. On the other hand, the site called "Plaza Gelpí", was the subject of an Archaeological Evaluation Phase II during the years 1996-97, by archaeologist Marisol J. Meléndez Maíz, where materials and artifacts of a historical nature were in an urban domestic context of the nineteenth and twentieth centuries. This place, which was in the Streets Salud, esq. Isabel (southwest corner of the intersection), is located about 2.25 kilometers northeast of the project.

The place where the project structures are located were originally vacant lots, then pasture farms and later, by the early nineteenth century, pieces of sugar cane from the old Hacienda El Quemado. Then this place was called Hacienda Reparada. The buildings and other structures of this hacienda were located about 200 meters northwest of the evaluated site. All of them were destroyed when urbanization Villa Grillasca was built. Other nearby structures as the university facilities built in the 1940s and the PR-2 highway (Ponce Bypass) built in the early1950s.[2]

[2] AM Group, Alvarado Munoz, Fernando, Phase IA Ponce Health Science University, 2019. Pages 69-70.

Based on the research and data obtained from the Institute of Puerto Rican Culture and the State Historic Preservation Office and following the quarter mile project extension, two cultural resources are reported (Figure #1).

Table 2: Previous Recorded Cultural Resources

Previous Recorded Cultural Resources	PR-SHPO tag	Deposit	Cultural Context	Distance from the project
1. Bridge 492, over Portugués River	PO0200028	Historical Bridge	It is the old bridge of Calle Real, current Ave. Hostos (named like that in 1903) or highway PR-10, which is located about 400 meters to the southeast. The current bridge (the 145 Bridge) was built in 1933.	0.16 mile
2. Caracoles	PO0100010	Indigenous deposit	It is a pre-Columbian place that has been known at least since 1916, when the North American archaeologist Samuel H. Lothrop made an inventory of archaeological sites for Puerto Rico and mentions the existence of an archaeological site in that place.	0.24 mile

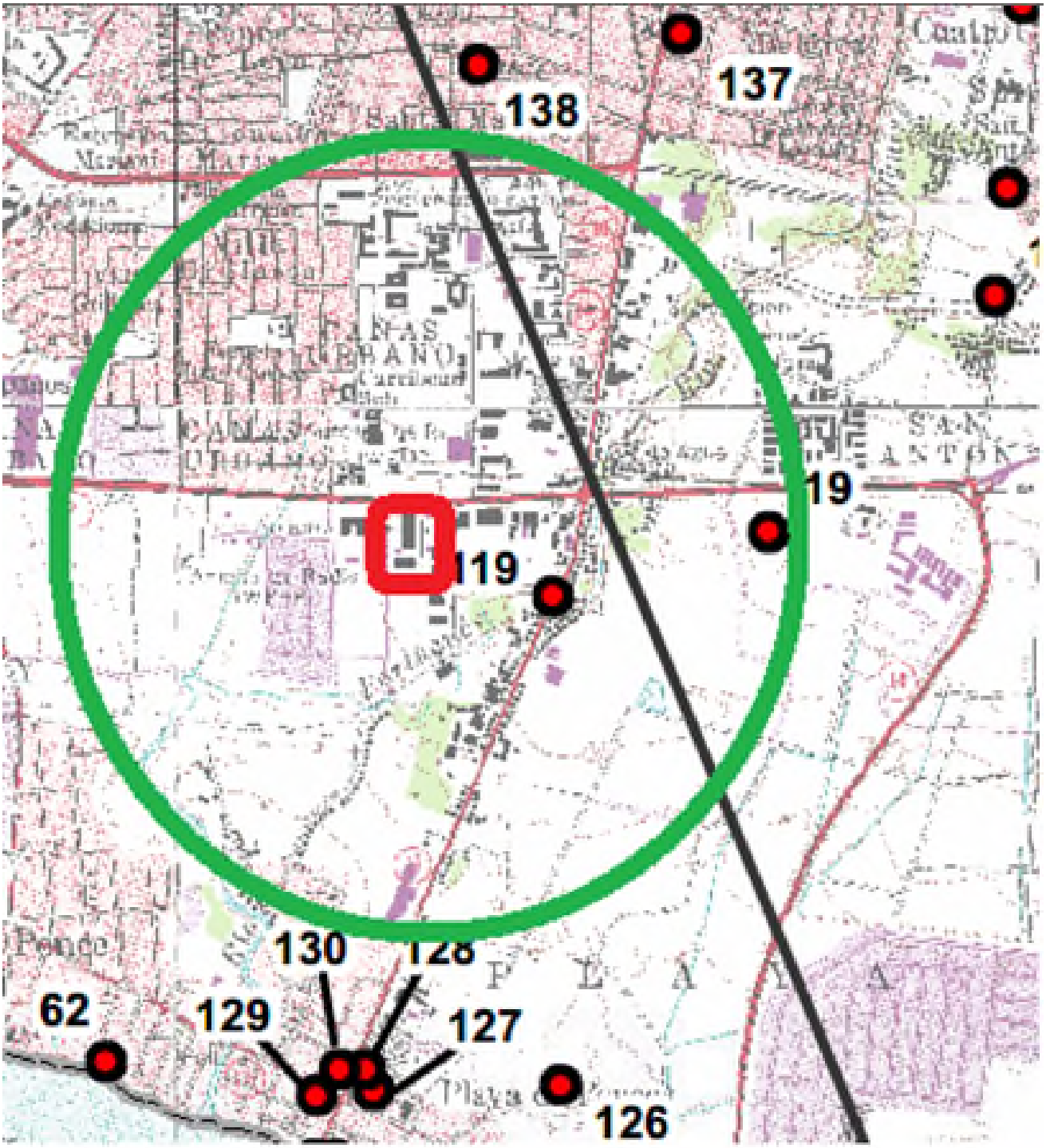
1. Bridge 492, over Portugués River (PO0200028)- Locate 0.16 miles to the southeast of the Project parcel. Is a historic bridge over the former course of the Río Portugués in barrio Playa in the municipality of Ponce, Puerto Rico. The bridge was added to the U.S. National Register of Historic Places in 2015. The bridge is prominent as "the oldest longitudinal steel beams / reinforced concrete bridge built within the historic Carretera Central". It is located on Avenida Hostos, just south of its intersection with Ponce By Pass. The bridge would be known as Principe de Asturias Bridge or Principe Alfonso Bridge. The bridge opened in 1862. However, in 1864, there were floods that raze and destroyed it. In 1876, the first non-wooden bridge built at the site was brought from France, christened with the name Alfonso XII, and installed that year. This metal bridged was used for 23 years until the river knocked it off as a result of the rising waters from Hurricane San Ciriaco in 1899. In 1903 a contract was awarded to Carlos Clausells for a wooden submersible bridge over the Portugués River. Thirty-four years after the hurricane, in 1933, the current bridge, Puente Rio Portugues, was inaugurated. A steel plaque identifies the sitting governor and other officials at the time. It was built at a cost of $48,484.

2. Caracoles (PO0100010)- Locate 0.24 miles to the to the East of the Project parcel.
Caracoles is an extensive and shallow pre-Columbian site that lies under a shopping center. It was studied by many researchers from the 30s to the late 90s. The artifacts that were identified in phase II of Miguel Rodríguez were shell trigonolitos, well-crafted snail ornaments, earmuffs made of green stone, fragments of dentures carved in shell, coal, ashes, ceramics, human bones and monoliths. In phase III carried out by Luis Rodríguez and Juan González, a pre-Columbian cemetery area, a fire pit area, remains of housing "socos", "bateyes" area and two more burial areas were identified, inside houses and inside garbage dumps. In the monitoring made by Diana López and Daniel Molina it was established that the site was a village of great importance for its strategic location between two rivers of the first order, as well as a village with great hierarchy since the ceremonial space was integrated into the housing area. It was established that the site had an occupation as early as 600 to D until the nineteenth century since in this last phase of evaluation vestiges of haciendas and sugar mills, irrigation canals, remains of machinery and historical ceramics were observed.

Aerial Photographs analysis

The analysis of the aerial photographs clearly shows that the project parcel turns from agricultural lands to an industrial area between 1951 and 1971 (Figures 2 and 3).

Figure 1: Two documented Cultural Resources in a quarter mile extension



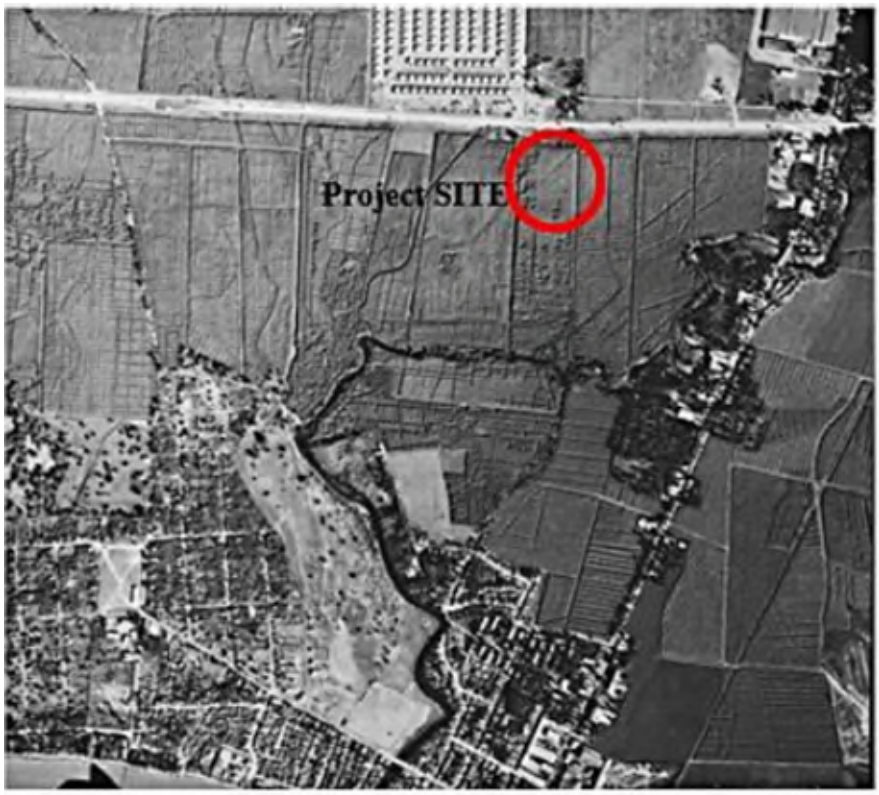


Figure 2: Aereal photo 1951.



Figure 3: Aereal photo, 1971.

Identification of Historic Properties - Architecture

Existing information on previously identified historic properties has been reviewed to determine if any such properties are located within the APE of this undertaking. The review of this existing information, by a Program contracted Historic Preservation Specialist meeting the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61), shows that the project area is not in or adjacent to a National Register of Historic Places (NRHP) listed or eligible Historic District.

According to the information obtained by the proposer, the projects will only impact the footprint of the Puerto Rico Industrial Development Corp (PRIDCO) storage, located in Lot #7 in the Reparada 2 Urbanization. Phase 2 includes the demolition of two existing non-historical buildings built between 1940-1950, to create a new outdoor plaza. For the proposed works of the rehabilitation of the buildings in Phase 3, only internal demolitions and selective work on external walls are contemplated for the installation of doors, windows or accesses, thus maintaining the present architectural form and presence of the building, it will not be engaged beyond the building footprint, which we already mentioned, has previously disturbed.

1. Does PRIDCO building meet the characteristics in the NRHP nomination of PRIDCO building?

a. A new submission for the inclusion into the National Registration of Historic Places for Multiple Property Documentation Form regarding the eligibility of the PRIDCO Manufacturing Plants was formally presented by Architect Jorge Rigau on June 13th, 2012, and approved by the Certifying State Preservation Official from the State Historic Preservation Office (SHPO), Architect Carlos A. Rubio Cancela on June 18th, 2012.[3]

b. From the SHPO Multiple Registration Document, it can be concluded that a recognition of the importance that these properties are associated with events that have made a significant contribution to the Island's history, simultaneously embodying the distinctive characteristics of a particular "Functionalistic Modern" architectural type, which meets the Criterion A and C.

c. It seems that considering the original prototypes are mostly altered throughout the course of history, only a few were nominated which it can be understood that they are still representative of the genesis of the design.

d. The nominated buildings are in Cidra, Florida and Luquillo towns of Puerto Rico. (Table No. 3, Page 68 of the Nomination Document).

[3] Rigau, Jorge, Early prototypes for manufacturing plants in Puerto Rico: 1948-1958, NRHP, 2012

e. It can be stated that even though the rest of the PRIDCO plants were not nominated, it can be recognized as a potential property that still maintains a significance historical value and could be a registration candidate in the future.

2. The structures to be renovated (PHASE 3)/ demolished (PHASE 2) must be addressed here and the information as to why or why they are not eligible needs to be clearly discussed.

a. These are typical structures developed by Fomento Industrial (PRIDCO) which were created between 1940-60's for light and medium industrial purposes within Industrial Parks. Basically, a square plan with open ample space area which offered the possibility of multipurpose arrangements in the interior.
b. They were built with a structural composition of concrete beams and bearing walls, with fewer columns in the interior area with large and continuous metal and glass windows openings on their façades. No significant architectural details or expressions, with a pragmatic scope of design.
c. In the case presented in Phase 3, it is considered a renovation/ rehabilitation project, which considers selective demolitions for the adequation of the design program. A restriction of maintaining the original features as the main entrance façade and the exterior fenestrations of the rest of the façade's building, should be considered In the project proposal.

According to the guidelines of the Department of the Interior, the building to be Intervened at this time does not meet any of the four criteria to be considered of historical value.[4]

CRITERION A: Properties associated with events that have contributed substantially to the broad patterns of our history.
CRITERION B: Properties associated with the life of an important person(s) from our past.
CRITERION C: Properties that possess distinctive characteristics of a type, period, or method of construction, or that represent the work of a master; or that have artistic value; or representing an important and distinctive entity, the components of which lack individual distinction.
CRITERION D: Properties that contain the potential to reveal important information about history or prehistory.

[4] https://oech.pr.gov/ProgramaConservacionHistorica/RNLH/Pages/Criterios-de-Inclusi%C3%B3n.aspx

After the evaluation performed and knowing that in this same lot, during the past time, several structures have been already built and, since the project is planned as one of rehabilitation, its aur understand that there are no structures in the project site to be considered of historical-architectural value to be affected the project. The PRIDCO storage located in Phase 2 was built circa 1980 and Phase 3, was built circa 1940-60. The building has several modifications and restorations, both inside and outside, such as windows, doors, and roof during the uses. No historical, architectural or prehistorical remains its located in the buildings in Phase 2 and Phase 3 or direct surroundings.

Determination

The following historic properties have been identified within the APE:

- Direct Effect: No historic properties are present within the Direct APE"
- Indirect Effect: No historic properties are present within the Indirect/Visual APE"

Based on the results of historic property identification efforts, no previously identified historic properties are present within the Direct APE or the Indirect/Visual APE. The project area has a low probability for the presence of intact cultural archaeological deposits. The project parcel is a previously disturbed area, the possibilities for containing unknow cultural resources are low. The analysis of the aerial photographs clearly shows that the project parcel turns from agricultural lands to an industrial area between 1951 and 1971. The proposed project no will affect any archaeological resources directly or indirectly. Is our recommendation that no additional archaeological studies should be required for this project.

According to the information obtain by the proposer, the projects only impact the footprint of the Puerto Rico Industrial Development Corp (PRIDCO) storage located in the Lot #7 in the Reparada Urbanization. The building proposed for rehabilitation (Phase 3) and, for demolitions (Phase 2) do not meet the minimum criteria of historical value according to the guidelines of the Department of the Interior. After the archaeological and architectural evaluations and knowing that, in this same lot, several structures have already been built and since, the project is planned as one of rehabilitation, there is no structure considered to have historical value to be affected.

Since the project is in a previously disturbed industrial area the possibilities for having unknow cultural resources are very low. This project no will affect any known archaeological resources. Is our recommendation that no additional archaeological studies should be required for this project. After evaluating the existing structures and the project's scope work in all its components, we have concluded that no historic structure will be involved. As a result of the analysis, we can conclude there are no cultural resources within the APE of the project to be directly or indirectly affected. No undisturbed cultural remains are expected to be impacted or adversely affected by the proposed works.

PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM **INVESTMENT PORTFOLIO FOR GROWTH PROGRAM (IPG)** **Section 106 NHPA Effect Determination**		
Subrecipient: Tiber Health Public Benefit Corporation dba Ponce Health Sciences University		
Program ID Number: PR-IPG-000683		
Project Name: PHSU Academic Building		

Recommendation

The Puerto Rico Department of Housing requests that the Puerto Rico SHPO concur that the following determination is appropriate for the undertaking (Choose One):

[X] No Historic Properties Affected

☐ No Adverse Effect

Condition (if applicable):

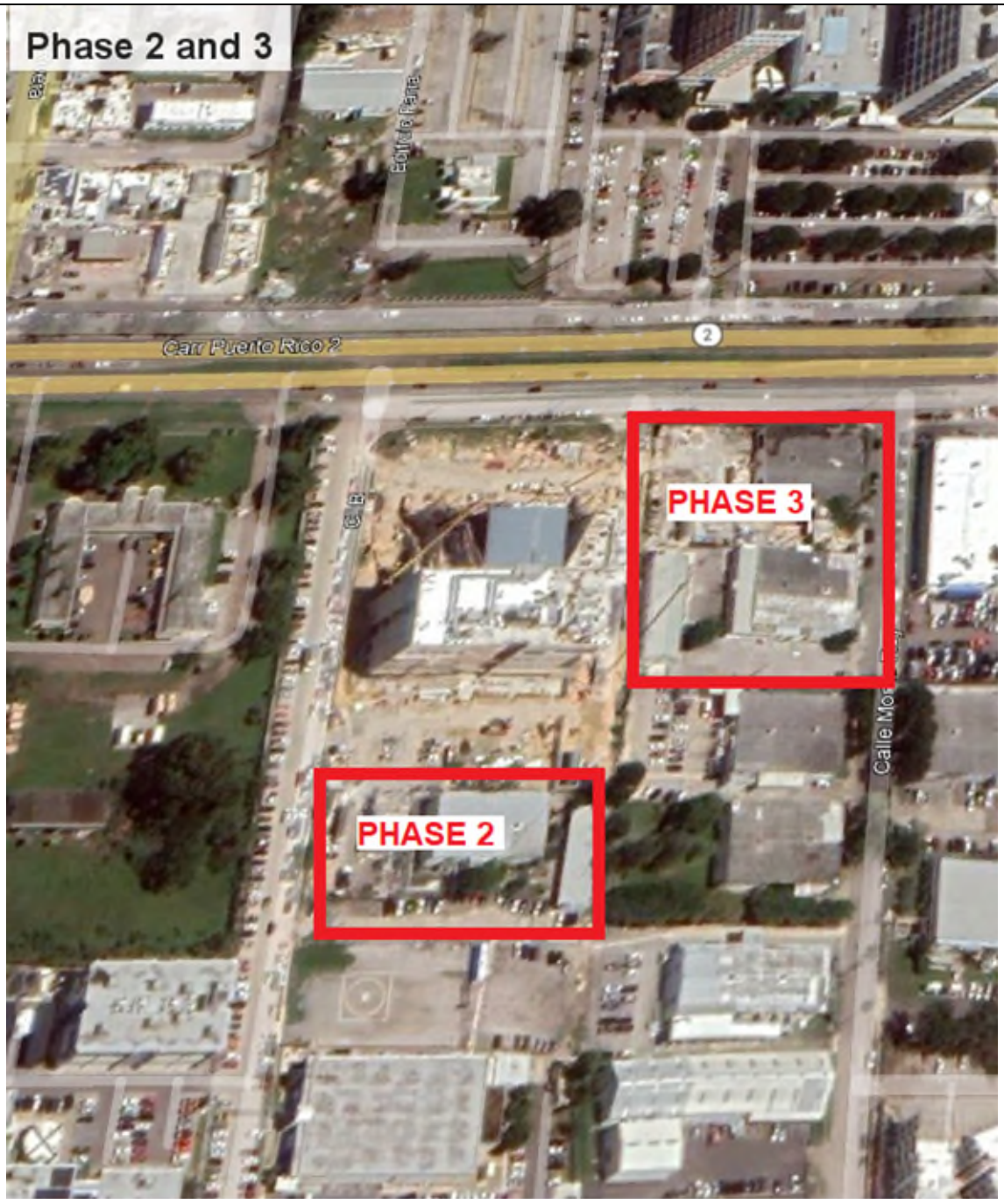
☐ Adverse Effect

Proposed Resolution (if appliable)

This Section is to be Completed by SHPO Staff Only

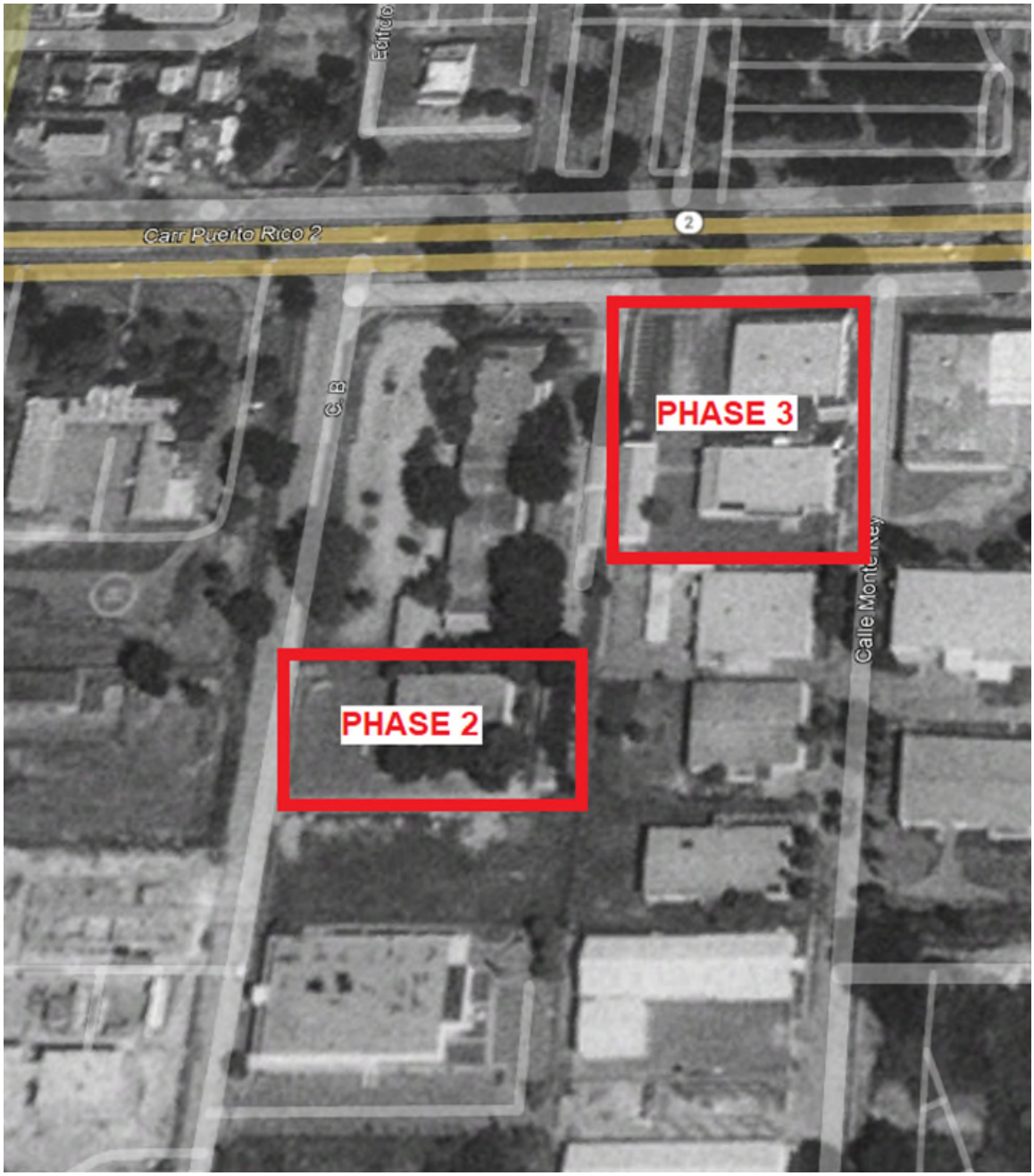
The Puerto Rico State Historic Preservation Office has reviewed the above information and: ☐ **Concurs** with the information provided. ☐ **Does not concur** with the information provided.	
Comments:	
Carlos Rubio-Cancela State Historic Preservation Officer	Date:

Project (Phases 2 and 3 Parcels) Location – Area of Potential Effect Map (Aerial)



Satellite view by Google Earth, february, 2023

Project (Phase 2 and Phase 3 Parcel) Location - Aerial Map



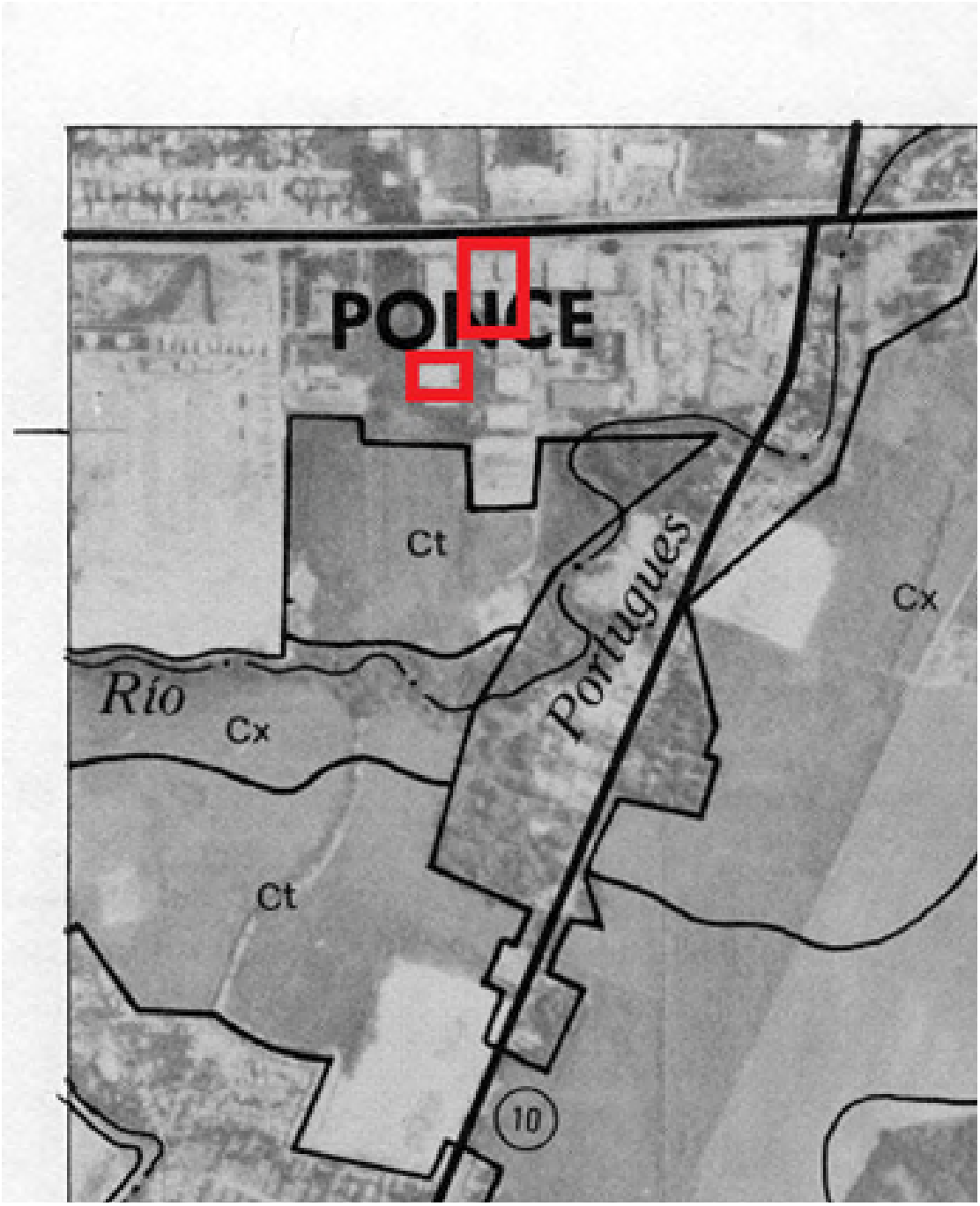
Satellite view by Google Earth, October, 1993

Project (Phase 2 and Phase 3 Parcel) Location - USGS Topographic Map



Project (Phase 2 and 3 Parcel) Location – Soils Map

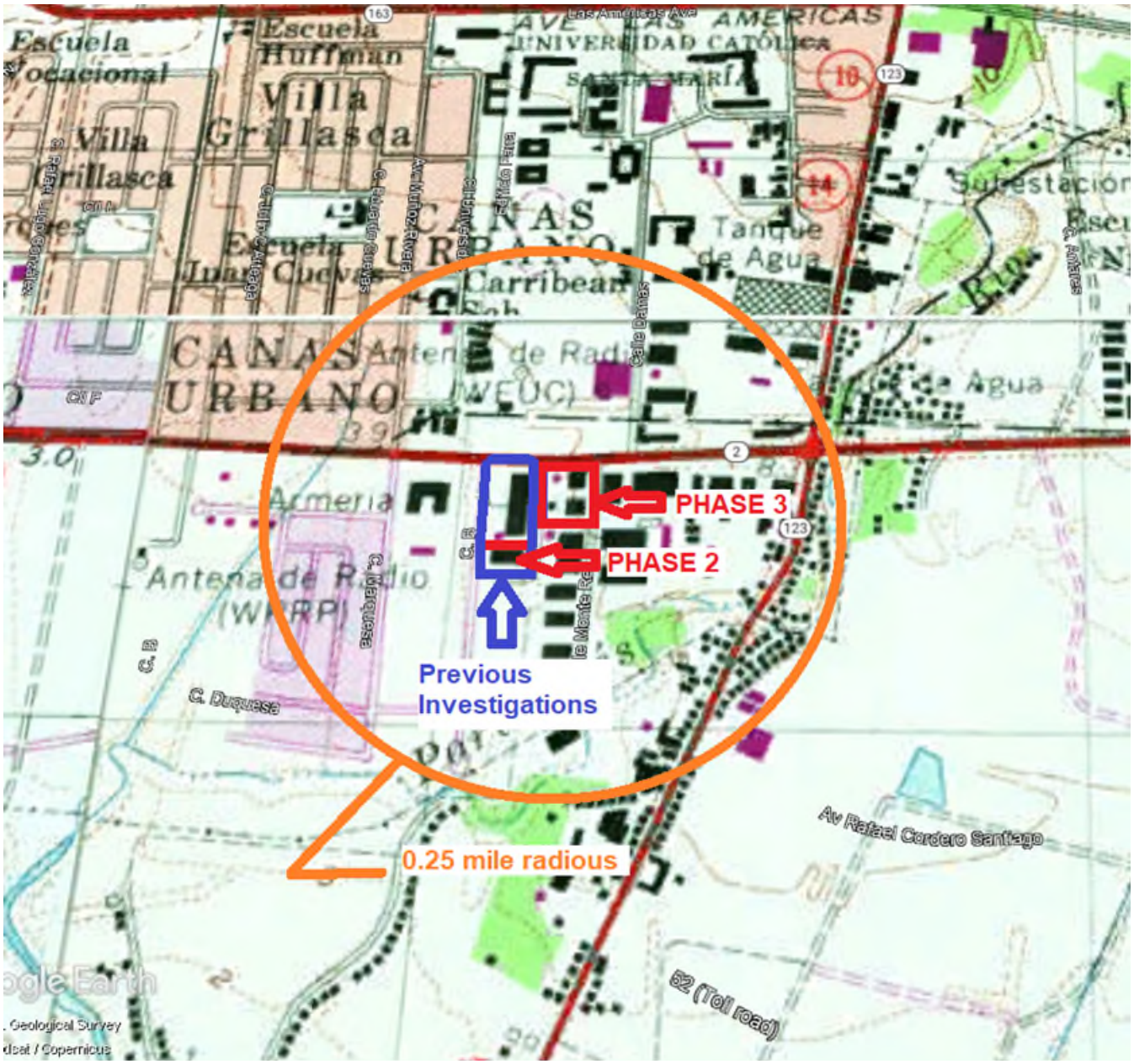
8



Project (Parcel) Location with Previous Investigations and Recorded Historic Properties - Aerial Map



Project (Parcel) Location with Previous Investigations and Recorded Historic Properties - USGS Topographic Map



Phase 2 Photography's Key



Phase 2 Parcel



Photo #:01 **Date:** 10/03/19	**Description (include direction):** View of space at north of the structure of Phase 2, taken from previous archaeological report



Photo #:2 **Date:** 10/03/19	**Description (include direction):** Phase 2 Parcel: View to the east of the north side of the structure, taken from previous archaeological report

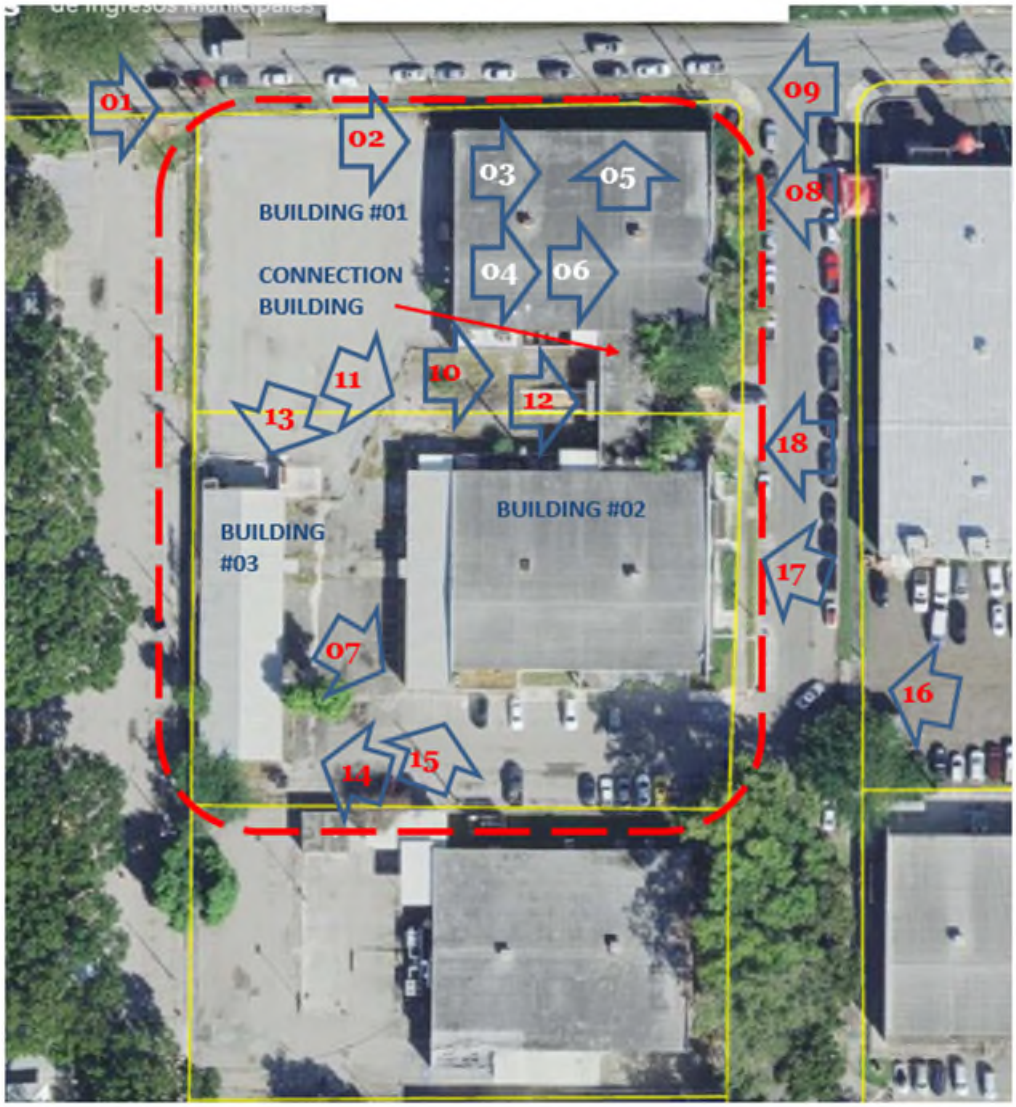


Photo #03: **Date:** 10/03/19	**Description (include direction):** Phase 2 Parcel: East side of the structure to the south of the main building, taken from previous archaeological report



Photo #04: **Date:** 10/03/19	**Description (include direction):** Phase 2 Parcel: View of the east side of the small structure to the southeast, taken from previous archaeological report

Phase 3 Photography's Key



Phase 3 Parcel



Photo #:01 **Date:** 12/06/22	**Description (include direction):** Phase 3 Parcel: East view, Main Entrance Elevation of Building #01



Photo #:2 **Date:** 12/06/22	**Description (include direction):** Phase 3 Parcel: East view corner of Northwest Elevations of Building #01



Photo #03: **Date:** 12/06/22	**Description (include direction):** Phase 3 Parcel: East side view of Building #01, interior, ceiling roof structure of concrete beams and air conditioning system ducts remains**.**



Photo #04: **Date:** 12/06/22	**Description (include direction):** Phase 3 Parcel: East side view of Building #01, interior, concrete beams ceiling of roof structure.



Photo #:05 **Date:** 12/06/22	**Description (include direction):** Phase 3 Parcel: North side of Building #01, interior, steel and glass windows panels.



Photo #:06 **Date:** 12/06/22	**Description (include direction):** Phase 3 Parcel: Floor Finish: Terrazzo Tiles of Building #01.



Photo #:07 **Date:** 12/06/22	**Description (include direction):** Phase 3 Parcel: South view corner of Southwest Elevation of Building #02.



Photo #:08 **Date:** 12/06/22	**Description (include direction):** Phase 3 Parcel: East view, corner of Northeast Elevation of Building #01.



Photo #:09 **Date:** 12/06/22	**Description (include direction):** Phase 3 Parcel: North Side Elevation of Building #01



Photo #:10 **Date:** 12/06/22	**Description (include direction):** Phase 3 Parcel: South Elevation of Building #01 and Connection Building.



Photo #:11 **Date:** 12/06/22	**Description (include direction):** Phase 3 Parcel: North Elevation of Building #02



Photo #:12 **Date:** 12/06/22	**Description (include direction):** Phase 3 Parcel: West side interior of Connection Building. Ceiling with plywood panels over steel beam's structure



Photo #:13 **Date:** 12/06/22	**Description (include direction):** Phase 3 Parcel: North Elevation of Building #03.



Photo #:14 **Date:** 12/06/22	**Description (include direction):** Phase 3 Parcel: East Partial Elevation of Building #03.



Photo #:15 **Date:** 12/06/22	**Description (include direction):** Phase 3 Parcel: Southwest corner of Building #02.



Photo #:16 **Date:** 12/06/22	**Description (include direction):** Phase 3 Parcel: East Partial Elevation of Building #02.



Photo #:17 **Date:** 12/06/22	**Description (include direction):** Phase 3 Parcel: East Partial Elevation of Building #02, showing entrance from street.



Photo #:18 **Date:** 12/06/22	**Description (include direction):** Phase 3 Parcel: East Partial Elevation. Entrance of Connection Building between Buildings #01 and #02.

October 20, 2022

Arch. Carlos A. Rubio Cancela
Executive Director
State Historic Preservation Officer
Cuartel de Ballajá Bldg.
San Juan, Puerto Rico

Re: Authorization to Submit Documents

Dear Arch. Rubio Cancela:

The U.S. Department of Housing (HUD) approved the allocations of Community Development Block Grant (CDBG-DR) funds on February 9, 2018. It also approved the allocation of Community Development Block Grant Mitigation (CDBG-MIT) funds on January 27, 2020. The purpose of these allocations is to address unsatisfied needs as a result of Hurricanes Irma and Maria in September 2017; and to carry out strategic and high-impact activities to mitigate disaster risks and reduce future losses.

To comply with the environmental requirements established by HUD, the Department of Housing of Puerto Rico (PRDOH) contracted Horne Federal LLC to provide environmental registry review services, among others, that will support the objectives of the agenda for both CDBG-DR and CDBG -MIT Programs.

In line to expedite the processes, Horne Federal LLC, is authorized to submit to the State Historic Preservation Officer, documentation of projects related to both the CDBG-DR and CDBG-MIT on behalf of PRDOH.

Cordially,

Juan C. Pérez Bofill, P.E. M.Eng
Director of Disaster Recovery
CDBG DR-MIT

Ponce Health Science University
388 Zona Industrial Reparada #2
Barrio Playa, Ponce By Pass
Ponce Puerto Rico

Estudio Arqueológico Fase IA

Sometida a:

LOA MANAGEMENT, PSC
c/o Ladislao Ortiz, Jr.
PO Box 270122
San Juan, PR 00928-2922

Realizado por:

AM GROUP

SERVICIOS DE CONSULTORIA ARQUEOLOGICA
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RECEIVED
28 MAR 2019
LOA Management

28 de marzo del 2019

Ponce Health Science University
388 Zona Industrial Reparada #2
Barrio Playa, Ponce By Pass
Ponce Puerto Rico

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SERVICIOS DE CONSULTORIA ARQUEOLOGICA

Arql. Fernando Alvarado Muñoz
Arqueólogo Principal



Arql. Eduardo Questell Rodriguez
Arqueólogo y Co-Autor
28 de marzo del 2019

RECEIVED
28 MAR 2019
LOA Management

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INFORME DE ESTUDIO ARQUEOLÓGICO
FASE I

PONCE HEALTH SCIENCE UNIVERSITY

388 ZONA INDUSTRIAL REPARADA 2
BARRIO PLAYA, PONCE BYPASS,
PONCE, PUERTO RICO

INTRODUCCIÓN

El presente informe muestra los resultados de un Estudio Arqueológico, Fase I, del terreno donde está planificado la construcción de unas instalaciones médico-institucionales que estarían ubicadas en la carretera PR-2, Km 227.2, Barrio Playa, en la zona industrial Reparada 2 del Municipio de Ponce (ver la localización en la figura núm. 1, y una foto aérea ubicando el proyecto en la figura núm. 2).

El proyecto contempla la construcción de instalaciones médico -institucionales de 130,000 pies cuadrados en un lugar donde en el pasado hubo actividad industrial y actualmente se utiliza como instalaciones educacionales (médico-institucionales). El lote es de forma rectangular alargado corriendo de norte a sur. La propiedad tiene como colindancias: por el norte, la carretera PR-2 (Ponce Bypass); por el oeste, la calle Marquesa de la zona industrial Reparada 2; por el Sur, la calle Duquesa de la misma zona industrial; y por el este, otra calle de la indicada zona industrial (ver el plano esquemático al final del informe).

Este estudio ha sido preparado para la firma LOA Management, PSC c/o Ladislao Ortiz, Jr., a los fines de cumplir con los requisitos que puedan exigir las agencias que velan por los recursos culturales en nuestro país, a saber: El Instituto de Cultura Puertorriqueña, por medio del Consejo de Arqueología Terrestre y la Oficina Estatal de Conservación Histórica (SHPO), la cual actúa siguiendo la Sección 106 del Nacional Historic Preservation Act de 1966 (Public Law 102-575), según enmendada en 1992, y el Código de Reglamentos Federales (36 CFR Part 800).



Figura Núm. 1

Localización del proyecto. Cuadrángulo de Playa de Ponce.



Figura Núm. 2

Foto aérea localizando el proyecto (en rosa).

Específicamente, dichas agencias podrían requerir para el proyecto, como mínimo, un estudio arqueológico Fase I. Dicha fase de investigación arqueológica ha sido definida por el arqueólogo John Vetten de la Agencia Federal de Protección Ambiental (EPA), región de Nueva York, de la siguiente forma:

> "Stage IA: Literature and Sensibility Study
>
> The stage IA is the initial level of survey and requires comprehensive documentary research designed to identify any known or potential historical, architectural and / or archaeological resources within a project area. A primary objective of the study, is to evaluate the differential sensibility of the project area for the presence of cultural resources, this information will be used to guide the field investigation that follows.
>
> In carrying out the literature search, sources at the State Historic Preservation Office (S.H.P.O), universities, local libraries, museums, historical societies and the like, are to be consulted.
>
> In addition, the nature and extend of the proposed project is evaluated, and initial walkover reconnaissance and surface inspection is completed and the effect of prior ground disturbance on the probability of identifying cultural resources is ascended.
>
> The final document must focus on the project area and minimally included:
>
> - a brief project description
> - a description of the environmental setting as it pertains to actual or potential cultural resources locations;
> - a synthesis of prehistoric and historic and cultural development and land use patterns;
> - and a definition of sensitivity zones with explicit criteria for ranking".

En nuestro informe hemos seguido la Guía Para Hacer Investigaciones Arqueológicas de la Oficina Estatal de Conservación Histórica y el Reglamento Para la Radicación y Evaluación Arqueológica de Proyectos de Construcción y Desarrollo del Consejo para la Protección del Patrimonio Arqueológico Terrestre de Puerto Rico, adscrito al Instituto de Cultura Puertorriqueña.

INVESTIGACION FASE IA

Como queda establecido, la Fase IA de una evaluación arqueológica incluye: una descripción del proyecto; una reseña del marco ambiental del sitio estudiado; una síntesis del desarrollo cultural prehistórico y/o histórico del área general del proyecto, con un estudio de sensibilidad para el terreno investigado y el patrón de uso del terreno. Esta fase también incluye un reconocimiento a pie de toda la propiedad evaluada, inspeccionando la superficie y tratando de descubrir evidencia material de recursos culturales sobre ésta.

Descripción del proyecto

El proyecto contempla el desarrollo de un solar de 130,000 pies cuadrados, localizado en la carretera PR-2 (Ponce Bypass), Km 227.2, en el 388 de la Zona Industrial Reparada 2, Barrio Playa del Municipio de Ponce, con el propósito de construir instalaciones médico-institucionales para el Ponce Health Sciences University, conocida como Escuela de Medicina de Ponce.

Marco Ambiental

La figura núm. 1 ilustra la localización del proyecto, que se ubica en el barrio Playa del Municipio de Ponce. La topografía a lo largo del terreno del proyecto es llana, con una muy leve inclinación hacia el Sur. El punto más alto se localiza cerca de 8.0 metros sobre el nivel del mar, en el lado Norte de la propiedad. El río Portugués cruzaba a unos 500 metros al Este de los terrenos (antes de ser canalizado, ahora está más lejos).

El área de Ponce, en general, tiene un clima semi-árido en la costa y menos árido hacia las montañas del interior. La temperatura promedio anual se mantiene alrededor de 78.9 grados F y la precipitación pluvial promedio es de 36 pulgadas anuales (R. Picó, 1964, pp. 5-6).

La velocidad del viento tiene una máxima vespertina de alrededor de 12 mph (J. A. Colón, 1977, pp. 60-61). La porción Sur del municipio pertenece a la región geográfica denominada "Llano Costero del Sur" (R. Picó, *Op. Cit*., p. 11), mientras que la parte central pertenece a las llamadas "Colinas Semiáridas del Sur" y la parte más al norte a las "Montañas Lluviosas del Oeste" (*Ibid*).

La geología del cuadrángulo de Ponce, que es inmediato al norte del cuadrángulo de Playa de Ponce, que es donde se localiza el proyecto, y la de los cuadrángulos de Peñuelas y Punta Cuchara, que son inmediatos al oeste, fueron realizadas por Richard D. Krushensky y Watson H. Monroe en 1975 y 1978, respectivamente. Estos geólogos nos indican que la única roca en los terrenos del proyecto probablemente consiste de depósitos aluviales (Qa). Estos consisten de grava, arena, limo, y arcilla arenosa en capas de espesor variable, pero que estos depósitos pueden ser de tanto como 50 metros en el área al suroeste de Ponce. Son de edad Holoceno.

Los suelos de la zona fueron estudiados por Roberto E. Gierbolini en 1979 (*Soil Survey of the Ponce Area of Southern Puerto Rico*). Este nos señala (hoja núm. 38) que los suelos en el área específica del proyecto no fueros estudiados por caer en zona urbana, pero entendemos que por la localización del solar del proyecto el suelo en el área podría ser el Constancia Arcilloso Limoso (Ct). La serie Constancia consiste de suelos algo pobremente drenados, calcáreos, nivelados que se encuentran en la planicie de inundación de las áreas semiáridas. Se forma de sedimentos recientes de textura fina de origen mixto que se lavan de las colinas de rocas calizas y volcánicas. El nivel freático se encuentra de 36 a 60 pulgadas de profundidad. Muestran estos suelos una permeabilidad lenta. La capacidad de retención de agua es de moderada a alta y la fertilidad natural es alta, Son suelos difíciles de trabajar, que tienen una escorrentía lenta. Los suelos de la zona están ilustrados en la figura núm. 3.

La flora y la fauna predominantes son típicas de los centros urbanos del sur de Puerto Rico. No obstante, se observan árboles de caoba (que fueron cortados, o podados, desde hace más de un año, ver las fotos) y numerosas palmas y plantas ornamentales. También se observaron palomas caseras, rolitas, reinitas, lagartijos y una iguana.

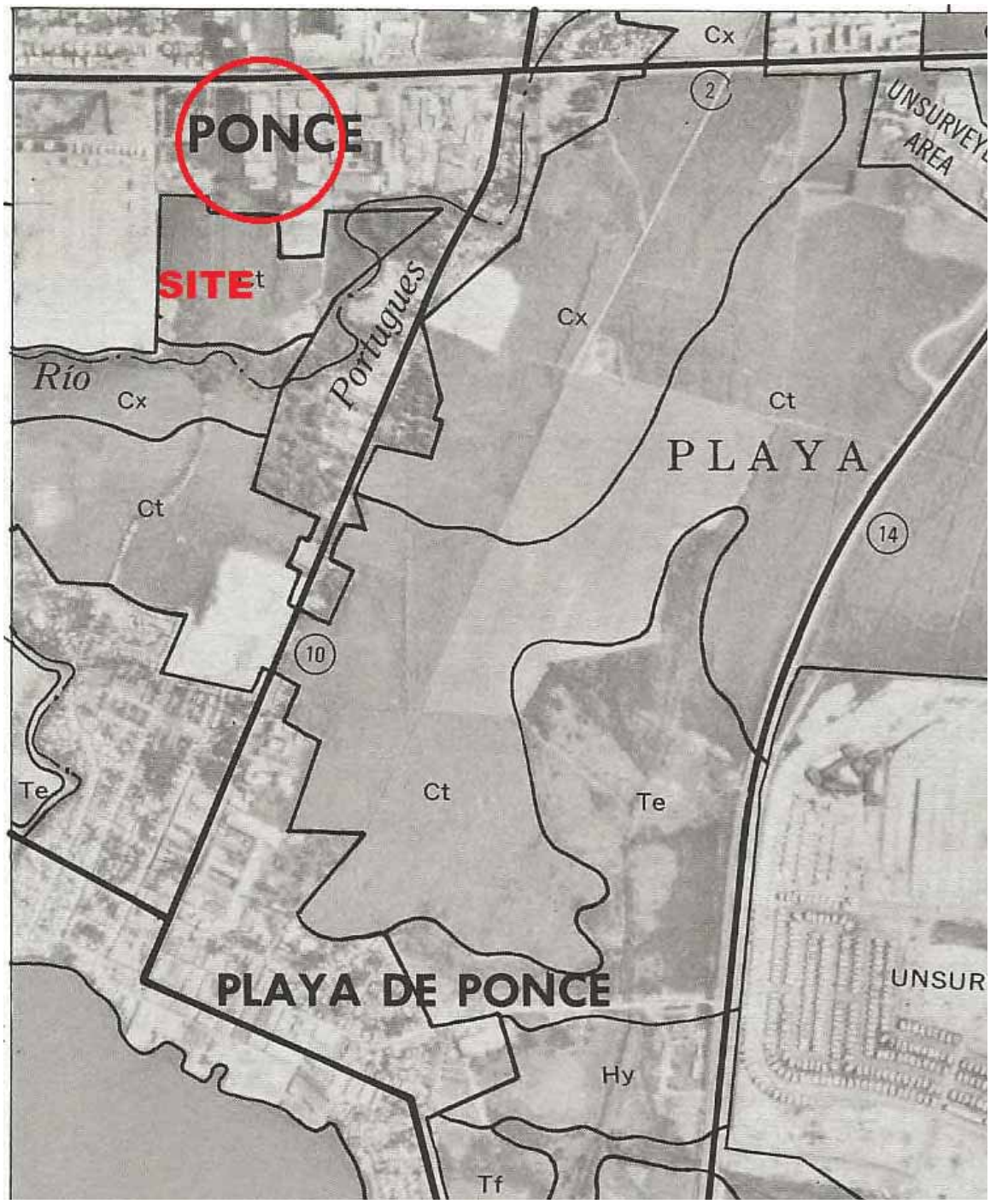


Figura Núm. 3

Suelos en el área del proyecto.

Síntesis del Desarrollo Cultural

Entre los investigadores más destacados que concentraron sus trabajos arqueológicos sistemáticos y sus pesquisas en la costa sur de Puerto Rico (de la que Ponce forma parte), desde finales del siglo XIX y las primeras décadas del siglo XX se encuentra: El Padre Nazario en los años de la década del 1920 (Rouse: 1952: 515); J.W Fewkes (1907) en 1904; Lothrop en 1915; Brinton en 1930 (Rouse: Ibíd.); Mason (1941: 269-270); R.S. Prescott; (Rouse: Ibíd.); Montalvo Guenard (1933: 382-389); Spinder en 1916 (Rouse: Ibíd.); F.G. Rainey 1934-1935 (Rainey 1940: 3) e Irving B. Rouse desde 1936 al 1938 (Rouse: 1952: 516).

Tan temprano como 1854 se menciona la existencia de "objetos pre-históricos" en la región de Ponce. Esto fue en la "Memoria Descriptiva de la Primera Exposición Pública de la Industria de la Agricultura y Bellas Artes de la Isla de Puerto Rico" en junio de 1854, presentada por el secretario de la Real Junta de Fomento, Don Andrés Viña (citado por Cayetano Coll y Toste en el tomo III de su *Boletín Histórico de Puerto Rico*, Págs. 173, 209, 210, 222). Al respecto tenemos lo siguiente:

> *También el Sr. José Julián Acosta presentó varios objetos pertenecientes a los indios de Puerto Rico...*
> *...-un símbolo de piedra que representa una figura extraña, porque en su conjunto participa la del hombre y el mono. Lo encontró un negro sembrando caña en la hacienda San Isidro que pertenece a Don Juan Conde, vecino de Ponce-*
> *...una piedra en forma de hierro de hacha que pudo servir de instrumento cortante en manos de los indios; se encontró en Ponce* (subrayado nuestro; pp. 209-210).

En el libro de José Ramón Abad *Puerto Rico en la Feria Exposición de Ponce en 1882* también hace referencia a la existencia de: "objetos de uso de los indios". En la página 154 de su libro informa Abad que el Sr. R. Aquiles Colón expuso en la feria lo siguiente:

> *Una colección de objetos de uso de los indios y encontrados en la Isla, compuesta de las siguientes piezas: diez fragmentos de vasos de taza y otros objetos de uso doméstico entre los primeros habitantes de la Isla. Seis trozos de piedras bruñidas, que se supo eran las hachas que usaban los indios.*

En el libro *Prehistoria de Puerto Rico* (1897) menciona Cayetano Coll y Toste la existencia en su colección de objetos "indos antillanos" un "hacha de piedra pulimentaria de pedernal", largo 9 cms, ancho 4 cms, encontrada en Ponce (subrayado nuestro, p. 31). Dicho autor indica que para el año 1899 el historiador ponceño Eduardo Neumann Gandía poseía una colección de "objetos prehistóricos", la cual donó al Smithsonian Institute of Washington (Coll y Toste 1975, p. 28).

En 1907 se publicó la obra *The Aborígenes of Puerto Rico and Neighboring Islands*, del etnólogo norteamericano Jessie W. Fewkes, el cual fue comisionado por el "Bureau of American Ethnology" del Smithsonian Institute para visitar la Isla durante los años 1904-1904. En dicha obra se menciona la existencia de varias pictografías (sic) en Ponce (p. 157):

> *Near the Hacienda Barranca, not far from the military road of Porto Rico from Ponce to Juana Díaz, there are some instructive pictographs, the situation of wish is just peculiar. On the side of the cliff overlooking the river are numerous small caves, some of which are were niches in the rock... Upon the surface of the rock there are several pictographs...*

El trabajo del Dr. Fewkes estableció las bases para un verdadero estudio científico integral del área antillana. Al referirse a Puerto Rico como punto de partida Fewkes hace referencia a toda el área, puesto que la cultura taina fue común a casi todo el sector. La labor de Brinton al estudiar la lengua arahuaca de la Guayanas (1871) pudo servir de base a Fewkes (1907) para establecer la posibilidad de una unidad prehistórica antillana-continental con el Norte de Sur América.

En el año de 1916, el arqueólogo norteamericano Samuel H. Lothrop confeccionó un inventario de sitios arqueológicos para Puerto Rico y menciona la existencia de un sitio arqueológico en Ponce, el cual describe de la siguiente manera: "There is a large shell heap southwest of the town near the ice-house". A pesar de ser tan breve esta descripción, es muy posible que el lugar sea el que era conocido como "Caracoles", al Sur de la carretera PR 2.

Hacia 1933 publicó el Dr. Montalvo Guenard su libro *Rectificaciones Históricas, el descubrimiento de Borinquen.* En dicha publicación el Dr. Guenard reportó la

existencia de los siguientes sitios arqueológicos para Ponce: Caracoles, Canas I, Canas II, Canas III, Machuelo Abajo, El Recreo e Isabel (Mercedita). Es importante señalar que fue este destacado investigador el primero en reportar la existencia de la cerámica pintada blanco sobre rojo en Puerto Rico, la cual fue posteriormente ubicada dentro de la Serie Saladoide, cuya manifestación representa, entre otras cosas, el desplazamiento de grupos poblacionales de la costa nor-oriental de Venezuela hacia Las Antillas Menores y Puerto Rico, y constituyeron las primeras poblaciones agroalfareras de dicha área.

Para 1934, el entonces estudiante graduado de la Universidad de Yale, F. G. Rainey realizó, en el lugar conocido como Canas, la primera excavación sistemática en el área de Ponce. Este destacado investigador introduce por primera vez el método de excavar por niveles artificiales y define también estratigráficamente y por primera vez en Puerto Rico la existencia de dos culturas precolombinas. Rainey levantó una secuencia en Canas la cual define dos componentes culturales los cuales llamó "Crab Culture" (cultura del cangrejo) al más antiguo y "Shell Culture" (cultura de la concha) al más tardío. Los trabajos del Dr. Rainey representan ya, de una manera definitiva, el comienzo de una arqueología científica en Puerto Rico. El Dr. Rainey consideró que el componente denominado "Shell Culture" correspondía a nuevos grupos poblacionales distintos a los grupos del "Crab Culture" que provenían probablemente de Sur América.

A pesar de la gran labor realizada por los anteriores investigadores, fue el Dr., Irving B. Rouse, como parte del "Scientific Survey of Porto Rico and the Virgin Islands", el que llevo a cabo durante los años 1936-38 un programa de excavaciones estratigráficas con el propósito de definir secuencias cronológicas y estilísticas para Puerto Rico. En la actualidad su marco cronológico espacial que comprende los períodos y series arqueológicas para Puerto Rico y el Caribe es el instrumento sobre el cual continúan apoyándose las investigaciones arqueológicas.

Como parte de su "survey", el Dr. Rouse excavó y visitó en la costa sur, durante los años 1936-38, los siguientes sitios:

1. Abra (Guánica 10)
2. Buenos Aires (Coamo 3)
3. Cana (Ponce 2)

4. Carmen (Salinas 1)
5. Cayito (Santa Isabel 1)
6. Collores (Juana Díaz 2)
7. Diego Hernández (Yauco 2)
8. Jobos (Guayama 3)
9. Papayos (Lajas 10)
10. Pitahaya (Arroyo 1)

Para el Dr. Rouse, la Costa Sur se define como una región larga y angosta, la cual comprende todas las tierras bajas que drenan hacia el Mar Caribe, con 140 kilómetros de costa y se extiende tierra adentro 10 kilómetros junto con el llano costanero y la parte baja de las colinas. Su tamaño comprende 1,400 kilómetros cuadrados siendo la tercera región más grande entre las que dividió a Puerto Rico para los propósitos de su "survey". Como parte de dicho reconocimiento Ponce lógicamente fue incluido en la costa sur. Entre 1936-38 el Dr. Rouse visitó, junto al Dr. Montalvo Guenard los siguientes sitios en el área de Ponce:

1. Caracoles 15 de septiembre 1936
2. Canas I 15 de septiembre 1936
3. Canas II 15 de septiembre 1936
4. Canas III 15 de septiembre 1936
5. Machuelo Abajo I 15 de septiembre 1936
6. El Recreo 8 de julio de 1938
7. Finca Mercado II 8 de julio de 1938
8. Machuelo Abajo II 8 de julio de 1938
9. Machuelo Abajo III 8 de julio de 1938
10. La Cueva del Judío 8 de julio de 1938

El Dr. Rouse visitó el lugar de Canas junto al Dr. Montalvo Guenard el 15 de septiembre de 1936, basando su análisis del sitio en el material previamente excavado por el Dr. F.G Rainey en 1934.

El Dr. Rainey postuló, como ya indicamos, la hipótesis de que la secuencia encontrada en el sitio Canas (de dos componentes culturales "Crab Culture" y el "Shell Culture") representaba la emigración de dos grupos distintos con un posible punto de origen común. Los trabajos posteriores del Dr. Rouse lograron demostrar que en el caso de Puerto Rico y Canas el componente "Shell Culture" correspondía a un desarrollo, el cual había evolucionado a partir del "Crab Culture". En otras palabras, al trabajar las secuencias estilísticas y cronológicas para Puerto Rico logró demostrar una transición estilística entre sus llamados Períodos IIb y IIIa. El problema estratigráfico de Canas consistía en la presencia de una capa estéril entre ambos depósitos, indicando un vacío ("gap") en la deposición del sitio, el cual correspondía a los Períodos IIb y IIIa. Fundamentalmente, fue la capa estéril entre ambos depósitos y la diferencia en los restos alimenticios lo que hizo pensar al Dr. Rainey en dos emigraciones. Como ya indicamos, trabajos posteriores demostraron para Puerto Rico la transición entre el Período IIb y IIIa y no una nueva emigración de grupos humanos precolombinos.

Resumiendo, las secuencias definidas para la costa sur por el Dr. Rouse, tenemos que como parte de su reconocimiento éste encontró una ocupación que iba desde el Período I (pre-cerámico) hasta el Período IVb en el sitio Cayito, de Santa Isabel. A pesar de que el material para el Período I no estuvo en una secuencia estratigráfica, la parte sur mostraba cronológicamente un largo período de ocupación precolombina.

Para los años de principio de la década de 1950, el lugar de Canas fue excavado por el Dr. Ricardo E. Alegría y en la década de los años 1960 por el profesor Héctor Moya.

En los últimos 10 años la región de Ponce ha sido objeto de varios reconocimientos e investigaciones sistemáticas que han arrojado un cuadro muy complejo en cuanto a la distribución espacial y cronológica de una gran cantidad de nuevos sitios arqueológicos reportados. Estos reconocimientos han concentrado su atención principalmente a lo largo de las cuencas de los ríos Portugués y Bucaná-Cerrillos y el litoral costero, como parte de la canalización de dichos ríos y la construcción de dos represas por parte del cuerpo de Ingenieros del Ejercito de los Estados Unidos. Referimos al lector a la bibliografía.

Algunos grupos locales, investigadores independientes y compañías bajo contrato ("Contract Archaeology") con el Cuerpo de Ingenieros, han efectuado trabajos sistemáticos: Sociedad Guaynía de Arqueología e Historia en el sitio llamado Tibes desde 1975, el reconocimiento de los ríos Bucaná (Cerrillos) y Portugués realizado por la Fundación Arqueológica, Antropológica e Histórica de Puerto Rico, dirigida por el Arqueólogo. A. Gus Pantel en 1979, las excavaciones en el sitio conocido como el bronce por el arqueólogo Gary S. Vescellious y Asociados, el Arqueólogo Carlos Solis Magaña de OSM Archaeological Consultants, Inc; Mark T. Swanson y Patrice M. Thomas Jr., del New World Research Inc.; el arqueólogo Edgar J Maíz, en el sitio denominado P-13 (sitio Hernández Colón) como parte de su tesis de maestría para el Centro de Estudios Avanzados de Puerto Rico y el Caribe; la compañía Garrow & Associates Inc.; el Dr. Marcio Veloz Maggiolo; la Universidad Católica de Puerto Rico; los arqueólogos Jesús Figueroa (sitio Maruca), Juan González, Harry Alemán, etc.

Siguiendo el esquema clasificatorio y el marco temporal espacial que corresponde a los períodos y series arqueológicas para Puerto Rico y el Caribe establecido por Rouse (1964, 1982) comentaremos varios aspectos de la prehistoria de Ponce.

La evidencia actual parece indicar que la ocupación del municipio de Ponce comenzó cronológicamente durante el Período I (2,000 a.C. – 100 d.C.). El sitio denominado como P-30 (Río Pastillo, en el barrio Canas), en el inventario de sitios en poder de la Oficina Estatal de Conservación Histórica (S.H.P.O) parece indicar la presencia de un poblador pre-cerámico. Por otro lado, el sitio de Maruca, descubierto por el arqueólogo Jesús Figueroa, definitivamente confirma dicha ocupación durante el período arcaico. Durante este período se postula la existencia de bandas recolectores marinos pre-cerámicos ligados al litoral costero, a las áreas de mangles, estuarios etc. Practicaban también la pequeña cacería y la recolección de frutas y semillas silvestres.

Para Puerto Rico su existencia esta documentada en los sitios conocidos como: Cueva Maria de La Cruz (Loíza, 40 d.C.); Cayo Cofresí (325 a.C.) en las cercanías de la bahía de Jobos en Salinas; Cerrillos en Cabo Rojo, cueva de los Gemelos en Morovis, Caño Hondo (1600 a.C. – 1500 a.C.) y los yacimientos designados como Verdiales 3 (12VPr-2-33) y Yanuel 9 (12VPr-2-220) con fechas que van desde 1500 a.C. – 200 a.C. en la isla de Vieques.

En Puerto Rico se han descubierto varios lugares arqueológicos no cerámicos, con fechados de 3,000 años a.C. para el mencionado sitio Maruca, en Ponce, y de 4,300 a.C. para el sitio Angostura, en Barceloneta. Ambos lugares se caracterizan por la presencia de una industria lítica de piedra tallada o lasqueada, con ausencia de piedra pulimentada. El origen de estas bandas sigue siendo motivo de controversia entre los especialistas, generalmente se postula la posibilidad de tres rutas de migración hacia la isla: la primera ruta supone un tránsito desde el sur de los Estados Unidos hacia Las Antillas, la segunda desde Centro América (Belice) y la tercera desde el norte de Sur América.

La ocupación agroalfarera del Municipio de Ponce comienza cronológicamente durante el Período IIa (100 d.C. – 400 d.C.) con el estilo Hacienda Grande, definido en la secuencia del sitio Canas ya ampliamente discutido en este trabajo. Continúa dicha ocupación tardíamente en el estilo Cuevas durante el Período IIb (400 d.C. – 600 d.C.) cuyo componente ha sido definido en Canas, Tibes (P-1), Hernández Colón (P-3) y posiblemente en otros sitios dentro del Municipio.

Son los grupos asociados a la Serie Saladoide y específicamente a las sub-series "Cedrosan Saladoids" y "Huecan Saladoids" (Rouse-*Migrations in Prehistory*, 1968, p. 139 y otros), los que introducen por primera vez en las Antillas Menores, Puerto Rico y posiblemente Santo Domingo, la vida sedentaria, la agricultura, la cerámica y el "stock" arawako, a partir del comienzo de la era cristiana aproximadamente. La sub-serie Cedrosan, llamada así después del complejo Cedros, al suroeste de Trinidad, es considerada la representación agroalfarera más temprana de las Antillas. La evidencia actual parece indicar que la serie Saladoide se origina en el Orinoco Medio, desplazándose posteriormente hacia el Bajo Orinoco, la costa nororiental de Venezuela, la costa de la Guyana, las Antillas Menores, Puerto Rico, y posiblemente hasta la República Dominicana.

La manifestación Antillana ha sido ubicada estilísticamente bajo la sub-serie "Cedrosan Saladoids" (Rouse, *Ibid*.). Como ya hemos mencionado estos pobladores son portadores de una excelente tradición ceramista, destacándose su cerámica por una decoración pintadas blanco sobre rojo, incisiones rellenas con pintura y el entrecruzado en zona como algunos de los elementos estilísticos más tempranos.

Ubicados en Puerto Rico bajo el estilo Hacienda Grande, durante el Período IIa (100 d.C.- 400 d.C.), sus manifestaciones estilísticas más tardías se ubican bajo el estilo Cuevas del Período IIb (400 d.C.- 600 d.C.) quedando en algunas ocasiones solo el blanco el blanco sobre rojo, rojo sobre crudo y las vasijas en forma de campana invertida. Su economía, basada en la producción de alimentos, estaba fundamentada en el cultivo de la yuca y la explotación de los recursos del litoral marino como moluscos, cangrejos, peces, aves, pequeños roedores, etc. Las primeras oleadas se asientan en los ambientes del litoral costero; observándose un desplazamiento hacia las regiones del interior tardíamente durante el Período IIb. Según el Dr. Rouse son los grupos humanos asociados arqueológicamente a la sub-serie "Cedrosan Saladoids" los que introducen el zemiismo en las Antillas y concluye (Rouse 1982-p. 52):

> *It is beginning to look as though we may distinguish two climaxes of religious art in the Antilles, one known as Igneri during period IIa (Hacienda Grande of the Saladoid) and the other known as Taino Period IV* (Chicoid).

Por otro lado, junto con el grupo anterior, o quizás antes, llegó otro grupo llamado "huecoide" que elaboraba una cerámica sin pintura y amuletos que posiblemente representen el cóndor andino y que tendría un origen en los Andes venezolanos. Los huecoides se han documentado en los yacimientos de La Hueca en la isla de Vieques y en el sitio llamado Punta Candelero en Humacao. Nos indica el arqueólogo Dr. Osvaldo García Goyco que algunos arqueólogos agrupan a los huecoides con los saladoides y difieren en cuanto a la interpretación en cuanto a que los amuletos ornitomorfos sean cóndores y que por lo tanto reflejen una emigración que viene originalmente desde la Cordillera Andina. Los huecoides se caracterizaban también por la manufactura de cuentas y adornos hechos con piedras semipreciosas y madreperla.

Cronológicamente, durante el período III (600 d.C. - 1200 d.C.) se desarrollan en Puerto Rico las sub-series "Elenan Ostionoid" en el área del Pasaje de Vieques y la "Ostionan Ostionoid" en el área del Pasaje de la Mona. Ambas sub-series se desarrollan estilísticamente hablando a partir del estilo Cuevas de la sub-serie "Cedrosan Saladoid".

Rouse (1986, p. 143), ubica las manifestaciones estilísticas post-saladoides en las Antillas Mayores bajo la serie arqueológica llamada “Ostionoid” y la subdivide en cuatro sub-series: “Elenan Ostionoid”, “Meillacan Ostionoid”, “Ostionan Ostionoid” y “Chican Ostionoid”. Por el momento nos interesan las sub-series “Elenan Ostionoid” y “Chican Ostionoid” del Período III. Sobre las diferencias estilísticas entre ambas sub-series nos dice al respecto Rouse (1986, p. 143):

> *Both new sub-series retained the technology and shapes of the final Cedrosan Pottery, as well as its tabular lugs, on which modeled-incised figures have previously been placed, and its red-painted areas, on which the earlier potters has pointed white designs.*
>
> *The Elenan Ostionoid artisan gradually made their pottery thicker, coarser, and rougher and simplified its shape. The Ostionoid potters were more conservative. They continued to produce relatively thin, fine, and smooth pottery and retained all the previous shaped.*

Culturalmente los grupos humanos de este Período III son conocidos como sub-taínos y se consideran portadores de los elementos y rasgos que posteriormente caracterizan a la sociedad taína del tiempo del contacto histórico. Se postula para este período un gran crecimiento demográfico y la aparición de los bateyes o juegos de bola. Dependían de la agricultura y la explotación de los habitats marinos, explotando otros nichos y poblando definitivamente las regiones del interior de la isla.

Son los grupos “Ostionan Ostionoids” los que se desplazan hacia la Española, Jamaica y Cuba durante el Período III y dan origen a las sub-series “Meillacan Ostionoid” y “Chican Ostionoid”. De acuerdo a la hipótesis del Dr. Rouse los pobladores de la sub-serie “Elenan Ostionoid” sobreviven hasta tiempos históricos en las “Windward Island”, y los cuales pueden ser correlacionados con los sub-taínos; con los cuales interaccionaban los Caribes.

De acuerdo a los expedientes en poder del S.H.P.O y del Consejo de Arqueología Terrestre del Instituto de Cultura Puertorriqueña, varios lugares dentro del territorio del Municipio de Ponce parecen contener cerámica asociada estilísticamente con la sub-serie “Ostionan Ostionoids” y “Elenan Ostionoids”, ambos desarrollados cronológicamente durante el Periodo III.

Estos son: P-1 (Tibes), P-8 (Canas), P-2 (Tibes II), P-3 (Tibes III), P-5 (El Tuque), P-7 (Los Caobos), P-9 (Tiburones), P-10 (Caracoles), P-11 (El Bronce, P-12 (Maragüez), P-13 (Hernández Colón), P-14 (Tizol), P-15 (Holiday Inn), P-21 (Maragüez), P-23 (Maragüez), P-29 (Bo. Tibes), y P-31 (Bo. Cerrillos).

La cerámica Ostionoide se caracteriza, entre otras cosas, por ser fina, con engobe rojo y vasijas naviculares como alguna de sus rasgos estilísticos tempranos (Período IIIa-Rouse "Pure Ostiones"), observándose como sus manifestaciones más tardías (Período IIIb- "Modified Ostiones") ya el modelado inciso y las incisiones.

La cerámica de la Serie Elenoide tiende a ser burda, conteniendo asas acintadas durante el Período IIIa. Dichas asas desaparecen durante el Período IIIb, quedando del asa acintada solo los vestigios en el hombro de las vasijas. También durante el Período IIIb se continúa la práctica de engobe rojo y el pulimento de parte o de la totalidad de la vasija como en los estilos Saladoides. Esta práctica desaparece durante el Período IIIb. En el Período IIIB reaparece el modelo inciso, pero los diseños incisos tienden a ser crudos, restiliniales y frecuentemente acompañados por tiras de barro en "applique".

La presencia de estas dos series arqueológicas en Ponce durante el Período III podría indicar una zona de posible contacto e interacción cultural, ya que ambas series se desarrollan geográficamente en dos regiones distintas.

Durante el Período IV (1200 d.C.-1500 d.C.) se desarrolla la sub-serie arqueológica conocida como "Chican Ostionoid" con los estilos Capá en el oeste y Esperanza en el este como sus manifestaciones estilísticas en Puerto Rico. Esta sub-serie se asocia culturalmente con la Sociedad Taína del tiempo del contacto histórico. El taíno se considera el grupo social mas avanzado que pobló el ámbito Antillano y se caracterizaba, entre otras cosas, por su gran dominio del medio ambiente y de la agricultura; por el juego de pelota con sus plazas, por la institución política conocida como el cacicazgo, por un alto grado de ceremonialismo, según lo indica la presencia de cemíes, codos, collares de piedra, dujos, espátulas vómicas, ídolos de piedra, madera y algodón y de shamanes o bujities. En fin, los rasgos culturales típicos del área circuncaribe definida por Steward. Sobre el particular nos dice el Dr. Rouse (1986, p. 148):

> *At the beginning of period IV, - about 1200 A.D.; the Ostionan Ostionoids in the Eastern half of the Dominican Republic transformed themselves into Chican Ostionoids by developing a new form of pottery, which was the most advanced of it's time in the Caribbean area…. It constitutes a second climax of ceramic art, following the decline during period III….*
> ……
>
> *During the course of period IV, the manufacture of Chican Ostionoids pottery spread west into the Windward Passage Area and East ward thought Puerto Rico into the Vieques South Area.*

Según el Dr. Rouse la presencia del culto al cemí, los templos y la existencia de sacerdotes o shamanes e ídolos hacen que este grupo avance desde la Era Cerámica hacia la Era Formativa. (Rouse – *Ibid*, p. 148).

Con relación al origen y difusión de las plazas y bateyes nos dice (Rouse, *Ibid*, p. 149):

> *Ball courts and dance plazas originated in the Mona Passage area during Period III and accompanied Chican Ostionoids pottery in its spread from that area during period IV.*

Y también añade (Rouse –*Ibid*):

> *Chican Ostionoid pottery and associated ball courts and ceremonial paraphernalia can be ascribed to the classic Taino Indians. These remains are stylistically similar to artefacts obtained by the conquistadors from the Taino Indians and finds in sites where the Spanish settlers first interacted with the Indians, at La Navidad in Northern Haiti and Isabela on the North coast of the Dominican Republic.*

De acuerdo con el inventario en poder de S.H.P.O., los sitios designados como P-2 (Tibes II), P-6 (Punto Oro), P-10 (Caracoles) y P-16 (Tito Castro), parecen contener cerámica que estilísticamente pueden asociarse al estilo Capá del Período IV.

Los datos anteriormente expuestos señalan para la región de Ponce un largo período de ocupación precolombina que parece iniciarse cronológicamente durante el Período I y continuar ininterrumpidamente hasta el Período IV asociado al tiempo de contacto histórico.

La presencia en su territorio de sitios estratificados y multicomponentes, donde claramente se nota la presencia de grandes aldeas, como es el caso de Canas (P-8), Tibes (P-1), Caracoles (P-10) y Hernández Colon (P-13) entre otros, indica la importancia de su territorio desde tiempos precolombinos y la oportunidad de que su estudio sistemático arroje luz sobre los procesos del desarrollo cultural de nuestras sociedades precolombinas.

En cuanto al aspecto histórico, tenemos que la región sur de Puerto Rico fue colonizada por los conquistadores españoles desde los primeros años de nuestra historia. Tan temprano como para el año 1510 Don Cristóbal de Sotomayor estableció un poblado llamado Tavora en los terrenos del actual pueblo de Guánica, el cual fue abandonado poco tiempo después (Aurelio Tió, 1961, p. 200). Posteriormente, en el año 1556, los vecinos de San Germán del área de Añasco se mudaron a la región de Guayanilla "donde pertenecieron hasta la séptima década del siglo XVI" (Francisco Lluch Mora, 1971, p. 3). También encontramos en la llamada "Memoria de Malgarejo" el dato de que en las riberas del Río Jacaguas ya habitaban algunos vecinos para el año 1582, (Cayetano Coll y Toste, BHPR, Tomo I, 1814, p. 82).

Hacia mediados del siglo XVII ya se mencionaba Ponce como un sitio con dicho nombre. En los Sinodales del Obispado y en relación con la parte que trata de las iglesias y capellanías que existían en Puerto Rico en el año 1646 encontramos lo siguiente:

> *Extiéndase su jurisdicción la de la Villa de San Germán por la banda del Sur hasta el Rió Yacaguas (sic) como quince leguas, en cuyos campos hay criaderos de ganado y el sitio se llama Ponce, y desde el dicho Río Yacaguas comienza la jurisdicción de Coamo* (Fortuño Janeiro, 1963, p. 6)

Tenemos pues que el núcleo original de la ciudad de Ponce se formó de los vecinos del Jacaguas y otros lugares cercanos, que utilizando como base la ganadería y otras labores agrícolas fueron formando un centro urbano desde el siglo XVII.

El desarrollo histórico de Ponce siguió un patrón sumamente lento hasta finales del siglo XVIII. Hacia el año 1765 la población del partido era de 3,314 habitantes, de los cuales 354 (o sea cerca del 10%) eran esclavos (Eduardo Neumann, 1913, pp. 63-64).

Para esa época los principales productos agrícolas eran el café (5000 arrobas), el tabaco (4,000 arrobas) y el algodón (300 arrobas) (*Ibid*). El desarrollo agrícola, sobre todo el café, aumentó considerablemente durante las últimas décadas del siglo XVIII.

Escribió Iñigo Abbad y Lasierra en 1782:

> *La principal cosecha del pueblo de Ponce es de café: asciende algunos años a 187,932 arrobas. Toda la tierra que se extiende a lo largo de la costa, esta poblada de haciendas de café, que fructifica pasmosamente... en las faldas de las montañas y tienen algunos planteles de caña, algodón, tabaco y legumbres, y aunque son algo escasos los frutos, son de mejor gusto y mas sustancia, que en los demás de la isla, especialmente la caña, los melones y las sandias* (Iñigo Abbad, 1979, pp. 142-143).

La población del partido había aumentado y para 1776 ascendía a 5,674 habitantes, de los cuales 530 (el 9.34 %) era esclava (Eduardo Neumann, 1913, p. 65). En ese año habían "561 estancias, 14 hatos, 251 cuerdas de caña en cultivo, 500 de plátanos, 184,812, palos de café y 550 arbustos de algodón, se contaban 2,908 cabezas de ganado vacuno, 149 mulas, 95 caballos y 7,523 cabezas de ganado menor" (*Ibid*).

Para el año 1800 los habitantes de Ponce sumaban 7,234 de los cuales la mayoría residía en los barrios rurales (*Ibid*, p. 66). El partido estaba dividido en cotos (productivas estancias o tierras labrantías), en donde se cosechaba café, caña dulce, tabaco y frutos menores (*Ibid*, p. 67). De la caña de azúcar se extraía guarapo, aguardiente y melao para el consumo. El principal producto de exportación seguía siendo el café. Los hatos consistían de terrenos para el ganado vacuno, así como los criaderos donde existían piaras de cerdos y ganado ovejuno y cabrio en terrenos para este fin (*Ibid*).

Durante los años desde el 1815 en adelante la economía ponceña cambió súbitamente hacia el monocultivo azucarero (Francisco Scarano, *Inmigración y Clases Sociales*, Ediciones Huracán, 1981, p. 24). Las fértiles llanuras comprendidas entre los ríos Canas y Jacaguas fueron convertidas de tierra de agricultura campesina y ganadería extensiva a una campiña cañera (*Ibid*, p. 25). Citando textualmente a Scarano encontramos que:

> *Hacia mediados del siglo XIX, concluido el período de frenéticos cambios, Ponce contaría con la mayor concentración territorial de Haciendas en todo Puerto Rico y produciría, en menos de una tercera parte de su territorio municipal actual, de 116 millas cuadradas, parte del azúcar enviado desde Puerto Rico a los mercados europeos y norteamericanos* (1981, p. 25).

Nos indica Manuel Úbeda y Delgado que para el año 1878 existían en Ponce 28 haciendas de caña de azúcar con maquinas de vapor y trece con trapiches de bueyes (p. 217). Una de dichas haciendas era "Reparada", a la cual pertenecían los terrenos ahora estudiados y que será discutida más adelante.

Regresando en el tiempo, tenemos que el domingo 27 de febrero de 1820 se desarrolló un voraz incendio que destruyó 106 casas, de lo mejor de Ponce, y redujo a la más simple expresión su riqueza urbana dejando sin albergue dos terceras partes del vecindario (Neumann, p. 73). Las pérdidas montaron a $600,000, según cálculos del comandante militar D. Francisco Vassallo (*Ibid*). El único auxilio que proporcionó el Gobierno fue condonar el pago de contribuciones a los propietarios que perdieron sus casas en el siniestro; sin embargo, el Sr. Vassallo pudo levantar una suscripción voluntaria en aquellos críticos momentos para socorrer a los infelices que carecían de todo recurso (*Ibid*). Luego se comisionó a Don Alejandro Ordóñez para el arreglo del pueblo y se abrieron nuevas calles, como la del León y la de la Aurora, y el callejón del Amor; la de la Salud quedó también trazada en su parte septentrional; en 1827 comenzó a poblarse la calle de la Concordia (*Ibid*). Los siguientes datos históricos, a menos que se indique otro autor, fueron tomados del libro *Historia de los Pueblos de Puerto Rico*, de José A. Toro Sugrañes (Editorial Edil, 1995, pp. 316-319).

Ya para el 1828 este pueblo tenía una población de 14,927 habitantes lo que incluía a 3,204 esclavos. Esa cantidad de habitantes lo clasificaba tercero en la Isla detrás de San Germán y de Mayagüez. Se incluía en su población unos 401 extranjeros. Había 121 casas y 178 bohíos en el pueblo.

Para el 1848 le dan categoría de Villa y puede tener su cabildo [nuevamente]. Para la época tenía Casa del Rey en mampostería, una pirámide en el centro de la plaza con la inscripción: Plaza Real; un cementerio con verja en mampostería y un pozo para abastecer de agua al vecindario.

Ponce fue el segundo pueblo después de la Capital en tener imprenta. La trajo el farmacéutico Mateo Carvaihon. Poco después D. Francisco Vidal trajo otra. Durante este siglo [XIX] se publicaron varios periódicos: “El Ponceño” (1852), “El Fénix” (1855), “El Crepúsculo” (1866), “El Anunciador” (1867), y otros.

La epidemia de cólera le dio muy duro a Ponce en los años 1855-56, causándole más de mil muertes. Para el Grito de Lares hubo repercusiones en esta municipalidad pues se creía había alguna sociedad secreta de apoyo a los rebeldes. Tras el golpe, la Villa fue una de las que pidió amnistía para los imputados.

La abolición de la esclavitud [1873] se llevó a cabo en Ponce dejando en libertad a varios cientos de esclavos, sin que ocurrieran hechos notables de rebeldía por ninguna de las partes envueltas.

Esta municipalidad fue declarada Ciudad en 1877, y en 1894 se le da el título de “Excelentísimo Ayuntamiento”. Ciertamente era Ponce el centro cultural y social de nuestro País entonces.

En 1882 se celebró la Gran Feria Exposición de Ponce. Esta contó con exhibiciones de toda índole en los aspectos culturales, agrícolas e industriales. Se celebraron grandes bailes, retretas, corridas de toros, etc. Hubo afluencia de público de toda la Isla.

Ponce fue cede en marzo de 1887 de la fundación del Partido Autonomista. El acto político, el más importante celebrado hasta entonces en Puerto Rico, se celebró en el teatro La Perla. Contó con delegados de casi todos los pueblos de Puerto Rico. Para presidir el partido fue seleccionado D. Román Baldorioty de Castro, en esos días residente en Ponce, donde descansan sus restos.

Llegado el año de 1898 Ponce fue testigo, por su puerto, de la invasión de Puerto Rico por una potencia extraña. Las tropas de los EE. UU. Entraron por Ponce y sentaron cuartel aquí para su campaña hacia el este, centro y norte de la Isla. Con el cambio de soberanía no solo hubo que reorientar la política, sino también la economía y como resultado de ellos la sociedad en general.

Para el año 1899 Ponce tenía una población de 55,477 habitantes. Era el municipio más poblado de la Isla. Ponce a diferencia de San Juan, que era bastión militar, fue creado con más calma y con más arte.

Por eso en su creación hubo más sentido social y estético que en la ciudad murada. Al no estar rodeada de murallas su perímetro fue mucho más amplio, sus calles y patios más espaciosos. Esta fue la razón que le permitió ser el centro cultural de Puerto Rico para fines del siglo XIX.

En 1911 se fundó el periódico "El Día". Ese mismo año se fundó, en el teatro La Perla, La Asociación de Maestros de Puerto Rico. Hubo delegados de toda la Isla, viajando en tren. Ya desde el 1906 había quedado enlazado con San Juan mediante el tren de pasajeros que recorriendo la costa oeste y norte llegaba a San Juan en poco más de siete horas.

El terremoto de 1918 se dejó sentir bastante en esta ciudad. Destruyó parcialmente el Teatro La Perla y averió bastante la Catedral. Ambos fueron reconstruidos, aunque el teatro no fue reabierto hasta el 1941.

Durante la primera mitad del siglo XX, Ponce, como otras ciudades y pueblos de la costa sur sufrieron la migración en masa hacia la Capital y hacia el norte [Estados Unidos]. Se empezó a distanciar Ponce de San Juan como centro urbano y cultural.

Para el 1950 Ponce contaba con 126,808 habitantes, pero Río Piedras tenía 143,989 y San Juan 368,194. Para el censo de 1990 la ciudad de Ponce obtuvo 195,217, quedó clasificado como tercera detrás de San Juan y de Bayamón.

En los años ochenta del siglo XX se comenzó con el programa "Ponce en Marcha", que es un esfuerzo conjunto de los gobiernos municipal y estatal para rescatar a la "Ciudad Señorial" del deterioro en que estaba cayendo y situarla como la segunda ciudad del País. A esos efectos se comenzó por reconstruir su zona histórica; se hicieron grandes mejoras a su aeropuerto y a su puerto, el cual es operado por el municipio. Se construyeron áreas de recreación y se mejoraron los accesos al municipio. Esto estimuló la construcción de nuevos hoteles turísticos y centros comerciales. Se aprovechó la nueva Ley de Municipios y Ponce se convirtió en el primer municipio autónomo de Puerto Rico.

La historia específica del área donde se localiza el terreno del proyecto, junto con el desarrollo de las estructuras que se encuentran en éste, es discutida más adelante en otra sección de este informe.

Investigación de Archivo

Para la investigación de archivo se recurrió a las siguientes fuentes:

1- Archivos, Mapas topográficos e información del Consejo para la Protección del Patrimonio Arqueológico Terrestre de Puerto Rico, adscrito al Instituto de Cultura Puertorriqueña.
2- Archivos, mapas topográficos e información de la Oficina Estatal de Conservación Histórica (S.H.P.O).
3- Archivo Histórico Municipal de Ponce.
4- Biblioteca General, U.P.R., Colección Puertorriqueña.
5- Biblioteca Universidad Católica de Puerto Rico, Colección Puertorriqueña.
6- "Arqueological Sites in Puerto Rico" – S.K. Lothrop, manuscrito original en los archivos del Yale Peabody Museum, New Haven.
7- Libros, revistas, manuscritos e informes con información arqueológica e histórica relacionada con el Municipio de Ponce.
8- Informantes de la localidad.

El inventario de sitios arqueológicos en poder del Consejo de Arqueología Terrestre revela la existencia de por lo menos 40 lugares precolombinos o históricos dentro de los límites territoriales del actual municipio de Ponce. Por otro lado, indica la Oficina Estatal de Conservación Histórica (SHPO) que: "Al combinar los componentes históricos y precolombinos, el total de sitios registrados en el inventario de recursos culturales de Ponce suma a ciento ochenta y dos, de estos, treinta y nueve están incluidos en el Registro Nacional de Lugares Históricos del Departamento de lo Interior".

A continuación, se desglosan los 40 sitios mencionados y algunos aspectos que consideramos relevantes para los propósitos del presente trabajo:

1. P-1 (Vega de Taní-Tibes) - Cuevas/Ostiones (Bo. Tibes)
2. P-2 (Tibes II) - Ostiones/Chicoide (Bo. Tibes)
3. P-3 (Tibes III) – Ostiones
4. P-4 (Tibes IV) – (Bo. Tibes)
5. P-5 (El Tuque) – Ostiones (Parcelas El Tuque)

6. P-6 (Punto Oro) – Chicoide (Bo. Canas)
7. P-7 (Los Caobos) – Ostiones (Sector Los Caobos)
8. P-8 (Canas) – Cuevas/Ostiones (Bo. Canas)
9. P-9 (Tiburones) – Ostiones (Bo. Capitanejo)
10. P-10 (Caracoles) – Ostiones/ Chicoide (Bo. Playa)
11. P-11 (El Bronce) – Ostiones (Sector Bronce)
12. P-12 (Maragüez) – Ostiones (Bo. Maragüez)
13. P-13 (Hernández Colón) - Cuevas/Ostiones (Bo. Cerrillos)
14. P-14 (Tizol) - Ostiones (Bo. Cerrillos)
15. P-15 (Holiday Inn) – Ostiones (Sector Las Cucharas)
16. P-16 (Tito Castro-La Rita) – Cueva con petroglifos/ pictografías
17. P-17 (La Josefa) – (Bo. Quebrada Limón)
18. P-18 (Estancia Los Fondos) – Histórico (Bo. Maragüez)
19. P-19 (Finca Reyes) – Histórico
20. P-20 (Finca Silem) – Histórico
21. P-21 ( ) – Pretaíno
22. P-22 (Hacienda Victoria) – Histórico
23. P-23 ( ) – Cuevas/ Ostiones
24. P-24 (Hacienda María Andrea) – Histórico
25. P-25 (Hacienda Tibes) – Histórico (Bo. Maragüez)
26. P-26 (Hacienda Santaella) – Histórico (Bo. Maragüez)
27. P-27 (Sugar Facilities) – prehistórico (Bo. Maragüez)
28. P-28 (Bakery) – Histórico (Bo. Maragüez)
29. P-29 (Rodríguez Soler) – Cuevas (Bo. Tibes)
30. P-30 (Río Pastillo) – Arcaico (Bo. Canas)
31. P-31 (Lago Gely) – Elenoide/Histórico (Bo. Cerrillos)
32. P-32 ( ) – Prehistórico/Histórico (Bo. Cerrillos)
33. P-33 (Hacienda Ana María) – Histórico (Bo. Cerrillos)
34. P-34 (Calle Aurora) – Histórico
35. P-35
36. P-36

37. P-37
38. P-38 (Parking Site) – Bo. Maragüez
39. P-39 (La Iglesia de Maragüez) – Ostionoide/Elenoide/Chicoide
40. P-40 (Maruca) – Arcaico (Bo. Canas)

En la sección de la síntesis del desarrollo cultural de Ponce ya se discutió y analizó las posibles implicaciones cronológicas y estilísticas de algunos de los lugares arqueológicos mencionados.

De acuerdo a los anteriores datos expuestos, el lugar arqueológico reportado más cercano al terreno objeto de esta evaluación resulta ser el denominado P-10 (Caracoles), que es un lugar precolombino que se conoce por lo menos desde el año de 1916, cuando el arqueólogo norteamericano Samuel H. Lothrop confeccionó un inventario de sitios arqueológicos para Puerto Rico y menciona la existencia de un sitio arqueológico en dicho lugar. Este sitio se ubica a unos 800 metros al este de la propiedad ahora estudiada.

El sitio "Caracoles" (PO0100010) es descrito en la Oficina de Conservación Histórica de la siguiente manera:

> *Caracoles es un yacimiento precolombino extenso y de poca profundidad que yace* [actualmente] *bajo un centro comercial. Fue estudiado por muchos investigadores desde la década del 30* [sic] *hasta finales de la década del 90. Los artefactos que se identificaron en la fase II de Miguel Rodríguez fueron, trigonolitos en concha, adornos de caracol bien elaborados, orejeras realizadas en piedra verde, fragmentos de dentaduras talladas en concha, carbón, cenizas, cerámica, huesos humanos y monolitos. En la fase III realizada por Luis Rodríguez* [Gracia] *y Juan González* [Colón]*, se identificó un área de cementerio precolombino, un área de fogón, restos de socos de viviendas, áreas de bateyes y dos áreas más de enterramientos, dentro de viviendas y dentro de basureros. En la monitoría hecha por Diana López y Daniel Molina se estableció que el sitio fue una aldea de gran importancia por su ubicación estratégica entre dos ríos de primer orden, así como también, una aldea de gran jerarquía ya que el espacio ceremonial estaba integrado al área habitacional. Se estableció que el sitio tuvo una ocupación tan temprana como 600 aD* [sic] *hasta el siglo XIX ya que en esta última fase de evaluación se observaron vestigios de haciendas y centrales azucareras* [sic]*, canales de riego, restos de maquinaria y cerámica histórica.*

Otros lugares relativamente cercanos se encuentran como estructuras históricas en la Playa de Ponce (El antiguo edificio de las Empresas Ferré, la Puerto Rico Iron Works, el edificio Municipal de la Playa y la Iglesia Metodista), que se ubican a unos 1,200 metros al sur, el más cercano; y lugares precolombinos e históricos en la ciudad de Ponce propiamente, como el sitio precolombino que se descubrió cuando se estaba realizando el soterrado de las utilidades en la Calle Concordia de Ponce, por el arqueólogo Pedro Alvarado. Este último sitio se ubica a unos 950 metros al noreste de la propiedad ahora estudiada.

De igual forma, el arqueólogo Jesús Figueroa trabajó en el 1987 en una Fase II en la Plaza del Mercado Isabel II, ubicada a unos 2.3 kilómetros también hacia el noreste de la propiedad ahora investigada, y laboró en el año 2007 en la Tumba-Mausoleo Casimiro Berenguer Padilla en el Panteón Nacional Baldorioty de Castro, en la calle De la Torre, a unos 2.5 kilómetros al norte-noreste del proyecto, encontrando materiales históricos. Por otro lado, el sitio denominado "Plaza Gelpí", fue objeto de una Evaluación Arqueológica Fase II durante los años 1996-97, por la arqueóloga Marisol J. Meléndez Maíz, donde se localizaron materiales y artefactos de carácter histórico en un contexto doméstico urbano de los siglos XIX y XX. Dicho lugar, que se localizaba en las Calles Salud, esq. Isabel (esquina suroeste de la intersección), se ubica a unos 2.25 kilómetros hacia el noreste del proyecto.

Otro sitio, igualmente relativamente cercano y aproximadamente a la misma distancia del proyecto ahora estudiado (2.25 kilómetros), también en dicha intersección (esquina noreste), fue motivo de una investigación del arqueólogo Luis A. Rodríguez Gracia, en julio de 1996. Se trata esta vez de un pozo en el solar de la casa Serrallés (Calle Salud # 108) que contenía materiales relativamente modernos, pero cuya construcción lo acredita como de valor histórico.

Según el listado de Propiedades Incluidas en el Registro Nacional de Lugares Históricos, revisado a enero del 2017, existían 39 lugares registrados para Ponce, ninguno de los cuales serían impactados por el proyecto, estando todos a una distancia de más de 1.0 kilómetros del solar ahora estudiado.

No obstante, tenemos que señalar que el sitio histórico más cercano resulta ser el llamado PO 0200028 (dice Puente 492, en realidad es Puente 145, Puente del río

Portugués), que es el antiguo puente de la *Calle Real*, actual Ave. Hostos (nombrada así en 1903) o carretera PR-10, que se localiza a unos 400 metros al sureste. El actual puente (el Puente 145) fue construido en 1933.

Indica el profesor universitario Elí D. Oquendo Rodríguez (*A orillas del Mar Caribe. Boceto histórico de la Playa de Ponce. Desde sus primeros habitantes hasta principios del siglo XIX*, Editorial Akelarre, Lajas, 2017) que: "Cronistas y viajeros de los siglos XVIII y XIX destacaron la lejanía existente entre el pueblo de Ponce y su puerto… Esa ruta hacia la Playa era considerada camino real lo cual implicaba que era más ancho que los demás, que estaba apto para carruajes y que el Estado debía mantenerlo a sus expensas", *Ibíd*, p.44).

Señala también el profesor que, según el acta del ayuntamiento de Ponce del 2 de diciembre de 1841, "el alcalde trajo a colación el proyecto para la construcción de un puente en el paso de río que había entre la población y el puerto" (p. 52). O sea, que para entonces y posiblemente por mucho tiempo, había un paso del río, pero no había puente.

Añade Oquendo Rodríguez que, "… en 1852 tras el paso de un temporal [San Lorenzo, el 5 de septiembre], queda evidente la urgente necesidad de construir un puente…" ya que "Cuando el río [Portugués] tenía grandes avenidas dejaba totalmente incomunicado al poblado de la Playa pues no se podía viajar hacia el pueblo…" (p. 55, el profesor cita al periódico *El Ponceño*, Año I, Núm. 12, sábado 25 de septiembre de 1852, p. 1).

Para el 1856, "las cosas no habían cambiado mucho…", porque "… en su trayecto hacia el Puerto en el camino aún se tenía que atravesar un paso de río. Las carretas y carruajes no tenían problemas en cruzar cuando el río no estaba crecido, pero la gente de a pie lo hacían usando un tablón que estaba agarrado en ambas orillas con cadenas, pero solía suceder que cuando la corriente aumentaba rompía las cadenas y arrastraba el tablón río abajo" (p. 56).

Puntualiza el profesor que, "… finalmente el ayuntamiento… en la sesión del 23 de noviembre de 1856… acordó nombrar una comisión constituida por los regidores D. Domingo Paoli y D. Mariano de León quienes formarían un presupuesto para las obras que sustituirían el tablón o puente provisional como se le solía llamar" (p. 57).

Se cita al AHMP, Ayuntamiento, Secretaría, Obras Públicas, Proyectos, Vías Públicas, Años 1854-1860, caja S-328, Expediente 328-13. *Villa de Ponce, Año de 1856, 1ra Pieza. Espediente* [sic] *sobre la construcción del puente Príncipe de Asturias últimamente Príncipe Alfonzo, sobre el río que se halla entre esta población i* [sic] *la de la Marina.*

Con relación a este puente, -señala Oquendo Rodríguez- "Por instrucción del gobernador debía descartarse un puente de piedra sino diseñar uno de madera con estribos y muro en ala de fábrica. En la memoria, que incluye al menos el presupuesto pues el plano no está, se da detallada cuenta de todos los pormenores de como habría de fabricarse esta estructura" (pp. 58-59). Sigue indicando el profesor que:

> *El 25 de junio de 1857 la Junta de Subasta abrió en la ciudad Capital el período para someter licitaciones y otorgar el proyecto al mejor postor. En el caso del puente sobre el río de Ponce se sometió una sola propuesta por parte del italiano D. Juan Bertoli quien ofrecía construir el puente por la suma de 12,400 pesos y el remate se aprobó a su favor… Éste se abriría al público a mediados de 1862 luego de haber realizado las pruebas de rigor y redactarse el acta que certificaba la terminación y entrega de la obra. Pero* [el historiador D. Eduardo] *Neumann registra que en 1864 hubo una gran crecida del río Portugués y arrasó con el puente. Se construyó entonces, al parecer, uno de madera* (p. 59).

Añade nuevamente el profesor Oquendo Rodríguez que:

> *Cuando casi concluía la década de 1860 se pensó sustituir ese puente de madera por uno de hierro. El 19 de enero de 1869 en* La Gaceta*, el periódico oficial del gobierno, la* Ynspección [sic] de Obras Públicas *colocó un anuncio invitando a participar en la subasta para el puente de hierro. Incluso se invitó al Ayuntamiento de Ponce para que como cualquier otro particular participara con tal que luego allegara recursos para realizar el proyecto. Sin embargo, el municipio declinó tal invitación y así lo estableció en un acuerdo pues afirmaba no tener los recursos para emprender dicha fábrica en carácter de contratista. No obstante, el puente fue construido y una vez más el río lo derrumbó y todavía en tiempos que Neumann publicara su libro* [1913]*, a comienzos del siglo XX, el mismo permanecía tirado a un lado de la carretera. Nuevamente, otro puente de madera vino a sustituirle* [al de metal] (p. 60).

Ese último puente de madera, que fue inaugurado en octubre de 1892, a ciencia cierta fue también destruido cuando azotó la isla el huracán San Ciriaco en 1899. Pero algún otro seguramente fue ubicado en el sitio. De todos modos, el puente de la Avenida Hostos (PR-10) sobre el río Portugués, denominado Puente 145, no se encuentra entre los llamados "Puentes Históricos de Puerto Rico", en la publicación del Ing. Luis F. Pumarada O'Neill de 1991. Tampoco lo encontramos en los denominados "Historical Bridges", en el "Puerto Rico Bridge Inventory", preparado por la Oficina de Estudios de Puentes, del Área de Planificación, de la Autoridad de Carreteras y Transportación del Gobierno de Puerto Rico en mayo del año 2001.

Donde sí se encuentra el Puente 145 es en el indicado inventario preparado por la Oficina de Estudios de Puentes en el 2001, bajo la denominación de "Federal System". Indica dicha publicación que el Puente 145 se ubica en Ponce, en el kilómetro 2.97 de la carretera PR-10, que es un puente construido de vigas maestras en acero y hormigón con múltiples pilastras ("Steel Stringer/Multi-Beam or Girder"), que fue construido en 1933 y se encuentra sobre el río Portugués. Amplían que mide 59.40 metros de largo, que tiene tres tramos de a 10.0 metros y un ancho de 10.50 metros (p. 3 del inventario en el indicado "Federal System").

Indica el ingeniero Pumarada que; "Aunque esta forma de construcción se usó en el siglo 19 en puentes de madera, todos los que quedan hoy en pie son de acero y hormigón y pertenecen al presente siglo [20]. En la mayoría de los puentes de este estilo las vigas de acero se recubrían de hormigón para preservarlas de la corrosión" (p. 122 de su publicación). Añade que: "Dado que un puente de vigas de acero sostenidas cada diez metros por pilastras sobre pilotes conllevaba un diseño y construcción que se hicieron casi rutinarios, de los muchos puentes de este tipo que quedan en pie se designó un puente típico representativo. Esa designación recayó sobre el puente 261 [en Maricao]" (p. 123 de su publicación). Por tal razón, entendemos, no se registra como "histórico" el Puente 145, aunque lo es.

Durante los últimos años se desarrolló un amplio proyecto del soterrado de las utilidades en el centro urbano de Ponce, con la correspondiente monitoría arqueológica durante las excavaciones de las calles incluidas en el indicado soterrado.

Patrón de uso del terreno y datos de la carretera PR-2 o Ponce Bypass

Para poder realizar un adecuado patrón de uso del terreno para este caso en particular hemos recurrido a los documentos, planos y mapas antiguos de la zona del llamado Bypass de Ponce, algunos de los cuales se encuentran en el Archivo Histórico Municipal de dicha ciudad; y a otros libros y referencias que se indicarán.

El secretario de gobierno y de la capitanía general de Puerto Rico, Don Fernando Miyares González, escribió entre 1778 y 1779 sus *Noticias particulares de la Isla y plaza de San Juan Bautista de Puerto Rico*, donde facilita noticias concretas sobre el Ponce urbano de aquella época (p. 81):

> *Esta población* [Ponce] *siguió en el tiempo* [a] *la de Aguada, situada en la parte del sur, distante del mar poco más de una legua. Tiene una buena iglesia parroquial y aunque no hay unidas en la plaza más de setenta casas, pasan de cuatrocientas las establecidas a mucha legua en contorno, cuya proximidad de unas a otras no se ve en ninguna parte de la Isla. Hay algunos vecinos en Tallaboa. Tiene dos compañías de infantería del cuerpo de Milicias Disciplinadas con su casa de alojamiento y en el pueblo un cañón del calibre de a seis, montado.*
>
> *A un cuarto de legua del lugar se ve en un barranco una mina de yeso, bastantemente abundante y continuada por larga distancia y tan descarnada que no costará mucho sacarlo.*

Por otro lado, nos indica el ya citado historiador ponceño Eduardo Neumann Gandía (*Verdadera y Auténtica Historia de la Ciudad de Ponce*, 1913), que;

> *A principios del siglo XIX era Ponce un villorrio con humildes viviendas que rodeaban la plaza; todo lo demás hoy fabricado era una pradera donde se apacentaba ganado. En aquella época solo se veía una que otra casa de madera del país, las más eran inconfortables bohíos de paja o yagua. En todo el partido solo había una tienda mista* [sic]*, una pulpería y algunos ventorrillos. No había caminos, sino las veredas de los tiempos primitivos* (pp. 65-66).

Una de esas veredas de los tiempos primitivos sin duda alguna era la que yendo hacia el norte llegaba desde el poblado hasta las canteras de yeso y piedra caliza que seguramente se utilizaron para extraer las piedras con la que se construyeron a la larga las casas de mampostería, las calles y el encintado de éstas en el partido.

Uno de los mapas antiguos que hemos localizado para el área general estudiada es el plano de Claudio Coello de 1850. El arquitecto Aníbal Sepúlveda Rivera ofrece sus comentarios sobre dicho plano:

> *El plano de Claudio Coello publicado en 1850 ha sido reproducido numerosas veces en textos relacionados con la historia de Ponce. Tiene una escala proporcional de 1:50,000 y dibuja el territorio del pueblo. Describe a Ponce en forma gráfica con la red de caminos existentes, los sembradíos y los espacios construidos de forma más esquemática que el plano de 1846…*

En dicho plano, cuya copia ampliada es nuestra figura 4, se puede ver la Hacienda Quemado, cuyos terrenos formaron muchos años después el solar que nos ocupa. El historiador Francisco A. Scarano ofrece una temprana visión de esos terrenos (*Haciendas y Barracones: Azúcar y Esclavitud en Ponce Puerto Rico 1800-1850*. Ediciones Huracán, Río Piedras, 1993)

> *La fertilidad del valle de Ponce atrajo pobladores ya desde la segunda mitad del siglo XVI, pero por largo tiempo fue un área subpoblada, marginal, en comparación con otros asentamientos de los pueblos nucleares de San Juan y San Germán o sus cercanías… Durante el primer siglo de su existencia, más o menos, la economía de pastoreo predominó en el asentamiento. Los primeros pobladores se dedicaron principalmente a la crianza de ganado y cerdos, y una parte de la producción se exportaba con facilidad por medio del tráfico ilícito que tenía lugar en los puertos desguarnecidos de la costa sur. Las unidades productivas predominantes eran los llamados hatos y criaderos, enormes fincas de pastoreo que con frecuencia ocupaban varios miles de acres, donde por ley, tradición y razones económicas apenas se permitía un mínimo de agricultura… A orilla de los hatos y criaderos existían grupos de unidades agrícolas llamadas estancias, pero por lo general éstas eran marginales a la economía de pastoreo, aun en la bajura donde el terreno era mucho más apropiado para la labranza que para el apacentamiento* (pp. 83-84).

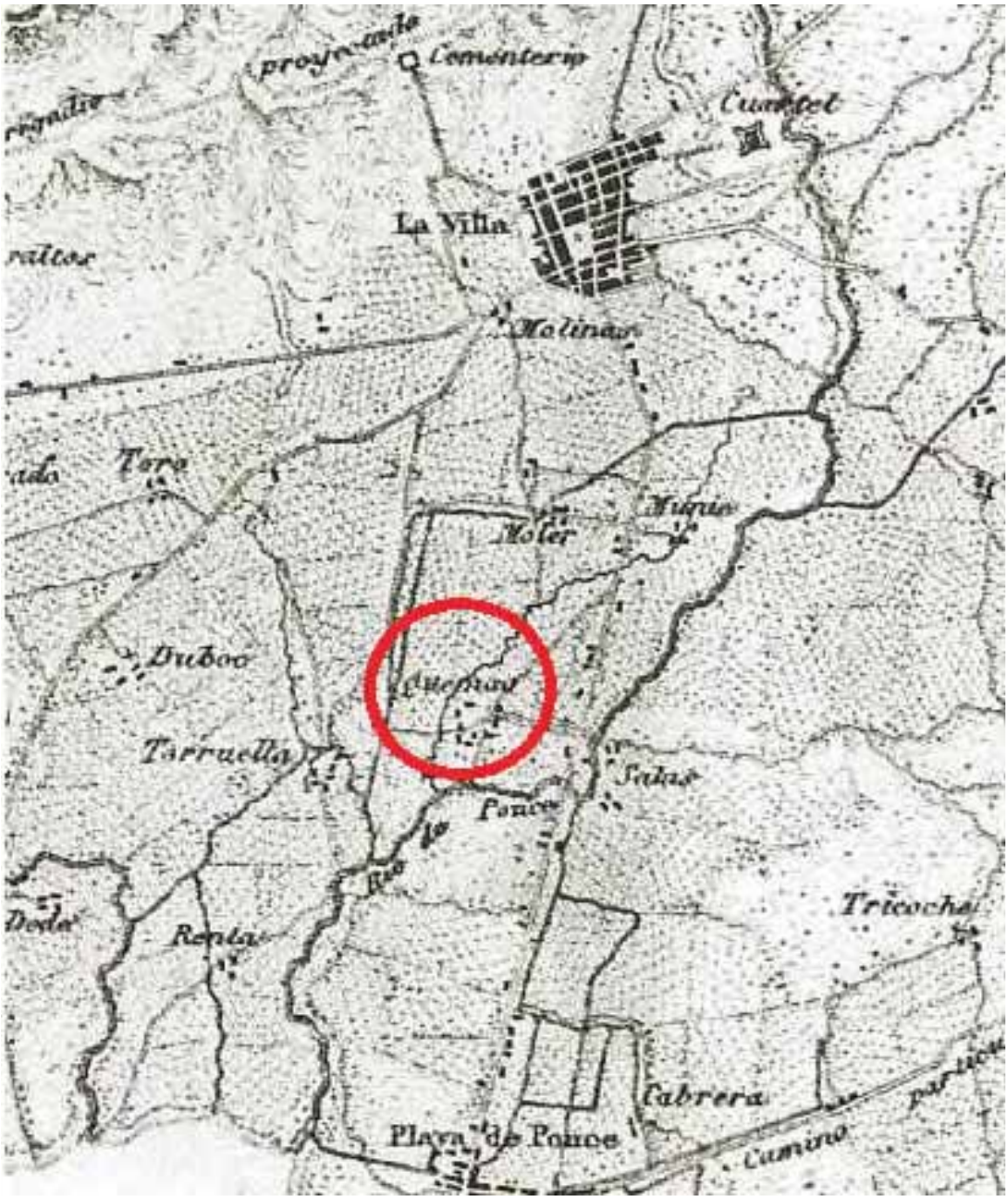


FIGURA 4

CONTORNOS DE PONCE, CLAUDIO COELLO, *ATLAS DE ESPAÑA*, 1850
Aníbal Sepúlveda Rivera, *Puerto Rico Urbano, CARIMAR, Vol. 2, 2004, p. 137*

> *El cambio gradual hacia la agricultura; el inicio del cultivo del café; la concesión de derechos de propiedad sobre la tierra; la distribución de los antiguos hatos y criaderos en forma desigual entre la población; y la llegada de inmigrantes procedentes de España, La Española (tanto francesa como española) y la Tierra Firme, todos estos procesos concurrentes dieron inicio, mucho antes del 1815, a la intensificación gradual de las divisiones sociales que el auge azucarero fortalecería y aceleraría con posteridad* (p. 85).
>
> *Al principio, la producción de caña de azúcar en las plantaciones evolucionó de manera gradual, a partir de la producción insignificante de los terratenientes. Las descripciones de las fincas de caña en las inscripciones notariales trasmiten una idea general de las unidades campesinas y la transición antes del 1815, período para el cual no existe otra información. Para esa época, la mayor parte de los terrenos sembrados de caña -trescientas a cuatrocientas cuerdas- pertenecía a pequeñas estancias que combinaban el cultivo de la caña con cultivos de subsistencia, café y ganadería* (p. 87).
>
> *Había menos de media docena de haciendas, pero a excepción de la gran hacienda Quemado, propiedad de José Gutiérrez del Arroyo, deán de la Catedral de San Juan, éstas apenas merecían el nombre… Hasta principios de la década de 1840, entonces, la industria azucarera creció por reproducción extensiva: nuevas haciendas, más tierras y un mayor número de esclavos produjeron más azúcar y generaron mayores ingresos* (pp. 87-88 y 92).

Sobre la hacienda El Quemado y su propietario el Presbítero José Gutiérrez del Arroyo, escribió la historiadora Ivette Pérez Vega lo siguiente ("El hacendado José Gutiérrez del Arroyo", *El cielo y la tierra en sus manos*. Ediciones Huracán, Río Piedras, 1985):

> *A los pocos años de llegar a Ponce en 1802, Gutiérrez del Arroyo dispone de los suficientes recursos como para hacerse de una hacienda azucarera. La misma constaba de 195 cuerdas de tierra de la mejor calidad. Estaba enclavada en el sitio denominado Quemado, un valle cerca del río Portugués. Esta región era perfecta para la siembra de caña de azúcar y contaba con todos los atributos necesarios para ser explotada con el máximo rendimiento.*

> *Gutiérrez adquiere la propiedad por 8 mil pesos al contado, de otro cura establecido en Ponce, el presbítero Pablo Rodríguez. Así comienza el sorprendente desarrollo de una gran hacienda, que en el escaso término de siete años pasará a convertirse en la primera productora azucarera del partido y posiblemente de todo Puerto Rico… Según una mensura de 1803, Quemado contaba "con casa de vivienda con instalación de agua, cocina, almacén, horno, hornallas con tres fondos de hierro, trapiche con casa, cañaverales, frutos, pastos, …"* (pp. 49-51).
>
> *Pronto, el cura le agrega a Quemado 200 cuerdas de tierras contiguas a las primeras. En dos años (1805), ésta tiene un valor de veintiséis mil pesos, un precio bastante elevado para una hacienda en Puerto Rico en esos días* (p. 51).

El presbítero Gutiérrez del Arroyo, con diferentes administradores, se mantuvo como dueño de la propiedad hasta su muerte en 1851. Conocemos que para el 1883 la finca de la Hacienda Restaurada, pertenecía a J. Gallart, el cual la adquirió en dicho año de Ramón Cortada. El escritor J. Ferreras Pagán, en su libro *Biografía de las riquezas de Puerto Rico* (Tipografía de Luis Ferreras, San Juan, 1902), ofrece unas breves notas de la entonces Central Restaurada para dicho año:

> *Central Restaurada Ponce, P.R. Propiedad de Sucesión J. Gallart. Está situada en el barrio 1ro de la ciudad, O. del camino que conduce á la Playa, hacia el frente de la planta eléctrica del Tranvía americano.*
>
> *Su anterior dueño fue don Ramón Cortada del cual pasó al poder del señor Gallart, el 1883.*
>
> *Sus edificios y maquinarias lo constituyen:*
> *El que pertenece á fábrica, de mampostería; casa de administración, de madera; casa para mayordomo y cuartel para peones; 1 trapiche con su máquina motriz; un aparato* Sodal *para cocinar el guarapo; 1 tacho al vacío; 6 centrífugas; 3 calderas multitubulares y 1 horno de quemar bagazo verde; aparatos accesorios; 1 alambique Saval capaz para destilar 5 y 6 bocoyes de ron de 25 en 12 horas; 4 toneles para ron de cabida de 5,500 galones cada uno y baterías pertenecientes.*
>
> *Posee vía férrea y wagones* [sic] *para conducir la caña. Además, la romería tiene luz eléctrica derivada de la Compañía del Trolley.*

> *Consta de 1,100 cuerdas de extensión más o menos de las cuales finca 800 de caña.*
>
> *Tiene concesión de agua del río* Portugués *y del* Canas *y de un caño; 2 bombas de vapor para riego.*
>
> *El ron de esta fábrica está reputado como el mejor de la Isla.*
>
> *Está administrada por don Justo Barros y don Domingo Berasain* (p. 82).

El historiador y profesor universitario Elí D. Oquendo Rodríguez, en su boceto histórico de la Playa de Ponce (p. 48), puntualiza que: "La plaza de la hacienda *el Quemado* donde estaba la casona, la casa de calderas, los ranchones de esclavos, la tienda y otras estructuras se encontraba en el perímetro de lo que es en la actualidad el Edificio Parra, la emisora Católica Radio, el estacionamiento al sur del Complejo Deportivo y algún otro espacio por esa zona ocupado por edificios en y fuera de la Pontificia Universidad Católica".

Nuestra figura 5 es copia de parte de un plano de Ponce de cerca del 1898 cuyo autor, Manuel P. Cadenas lo preparó para acompañar la "Memoria descriptiva que sirve de complemento al proyecto de tranvía eléctrico que se pretende construir en la ciudad de Ponce y sus barrios". El plano lo hemos tomado del Vol. 3 de la obra *Puerto Rico Urbano* del arquitecto Aníbal Sepúlveda Rivera (p. 302). Son dignas de notarse las estructuras que componen la hacienda y la cantidad de cañaverales que la rodean, que por el lado sur cruzan el río Portugués y por el norte llegan hasta el sureste del pueblo.

La figura 6 es una ampliación de un plano de 1903 de Ponce y su Playa, de autor desconocido, donde se ilustran muy bien las estructuras de la Hacienda Reparada y los caminos entre las piezas de cañas, uno de los cuales formará muchos años después el Ponce Bypass. Nuevamente, el plano lo hemos tomado de la obra citada del arquitecto Sepúlveda Rivera (Vol. 3, p. 308).



FIGURA 5

PLANO DE PONCE, MANUEL P. CADENAS, c.1898
Aníbal Sepúlveda Rivera, *Puerto Rico Urbano, CARIMAR, Vol. 3, 2004, p. 302*
El sur está arriba en el plano (invertido).

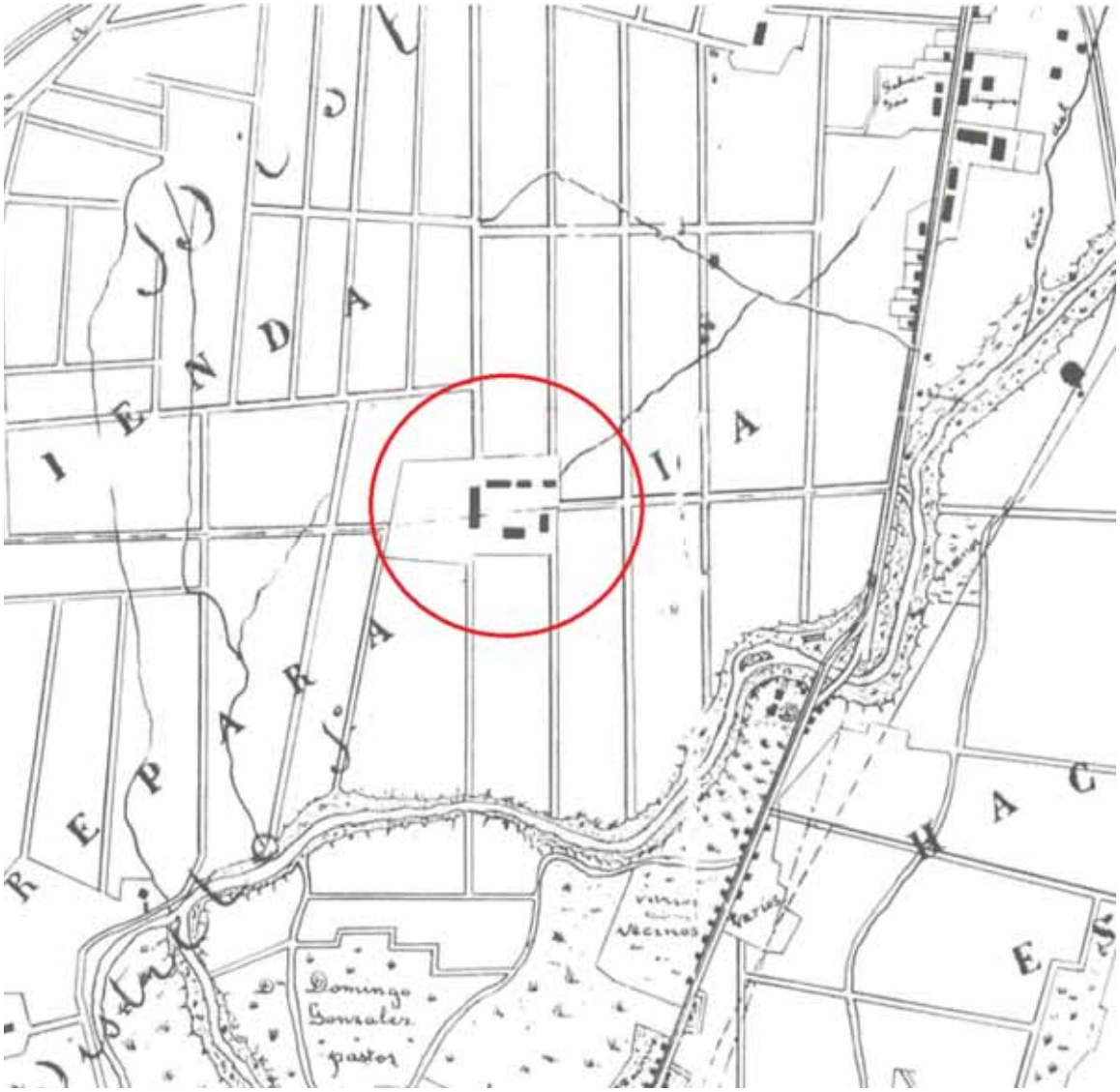


FIGURA 6

AMPLIACION DE UN PLANO DE PONCE, AUTOR DESCONOCIDO, 1903
Aníbal Sepúlveda Rivera, *Puerto Rico Urbano, CARIMAR, Vol. 2, 2004, p. 137*

Otros mapas históricos

Por otro lado, entre los mapas antiguos que hemos localizado para el área estudiada (US Geological Survey, Playa de Ponce Quadrangle, 1945, 1:30,000), encontramos que específicamente la carretera que hoy conocemos como PR-2 o Ponce Bypass, no existía en dicho año y apenas un camino de tierra cruzaba de este a oeste por donde luego pasaría dicha carretera. En el sitio concreto donde hoy se localiza el solar que nos interesa no había entonces estructura alguna. Nuestra figura 7, que es una copia ampliada de parte del indicado cuadrángulo de Playa de Ponce, ilustra el área del actual proyecto (destacada por un círculo rojo).

La figura Núm. 8 ilustra la misma área anterior, también como parte de un cuadrángulo histórico ampliado de la Playa de Ponce, pero del año 1962 (a escala 1:20,000). Es de notar que la carretera PR-2 (Ponce Bypass) ya existe al norte del terreno que nos interesa. Conocemos que el puente de dicha carretera sobre el río Portugués (Puente 584), fue construido en el año 1951, por lo que se entiende que dicha carretera debe ser de la misma época. Es de notar que, para entonces, aunque ya existían algunas estructuras al este del terreno que nos interesa (que entendemos eran edificios de Fomento), todavía no existía estructura alguna en el local específico del proyecto. Destacamos nuevamente con un círculo rojo el área aproximada que nos concierne.

De igual forma, la figura Núm. 9 es parte ampliada del cuadrángulo de la Playa de Ponce, pero del año 1970 (con datos del 1967), a escala 1:20,000. Se pueden ver que en terreno que nos interesa existe un edificio alargado norte-sur, que conocemos originalmente era una fábrica de Fomento, pero que ese momento muestra el símbolo de una bandera, por lo que entendemos era entonces en Ponce parte de la Universidad Interamericana. Este edificio resulta ser la actual sede de la Escuela de Medicina de Ponce y su localización se destaca igualmente con un círculo rojo alrededor.



FIGURA 7
Parte ampliada del cuadrángulo de la Playa de Ponce (1945) ilustrando el área general del terreno del proyecto.

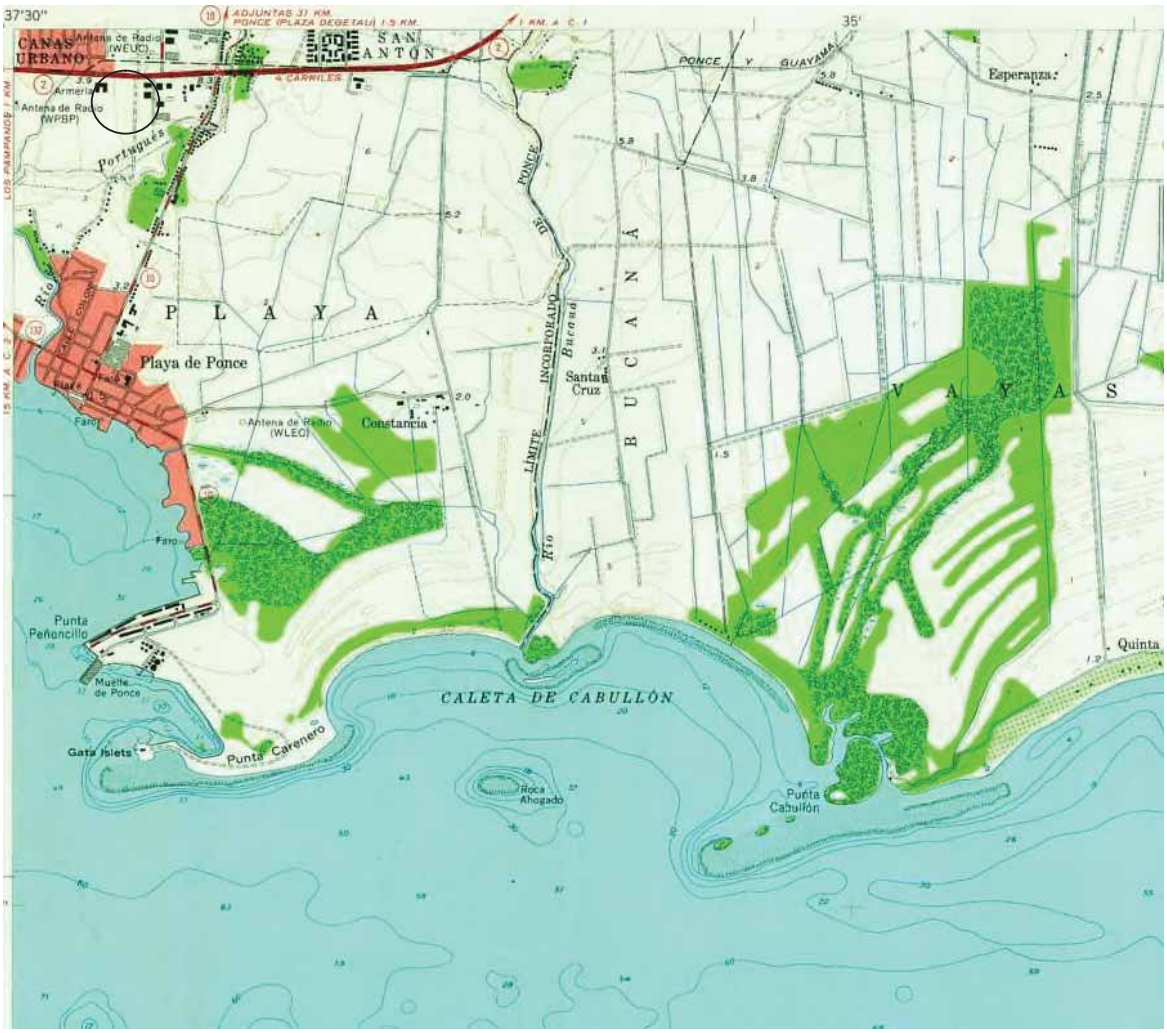


FIGURA 8
Parte ampliada del cuadrángulo de la Playa de Ponce (1962) ilustrando el área general del terreno del proyecto.

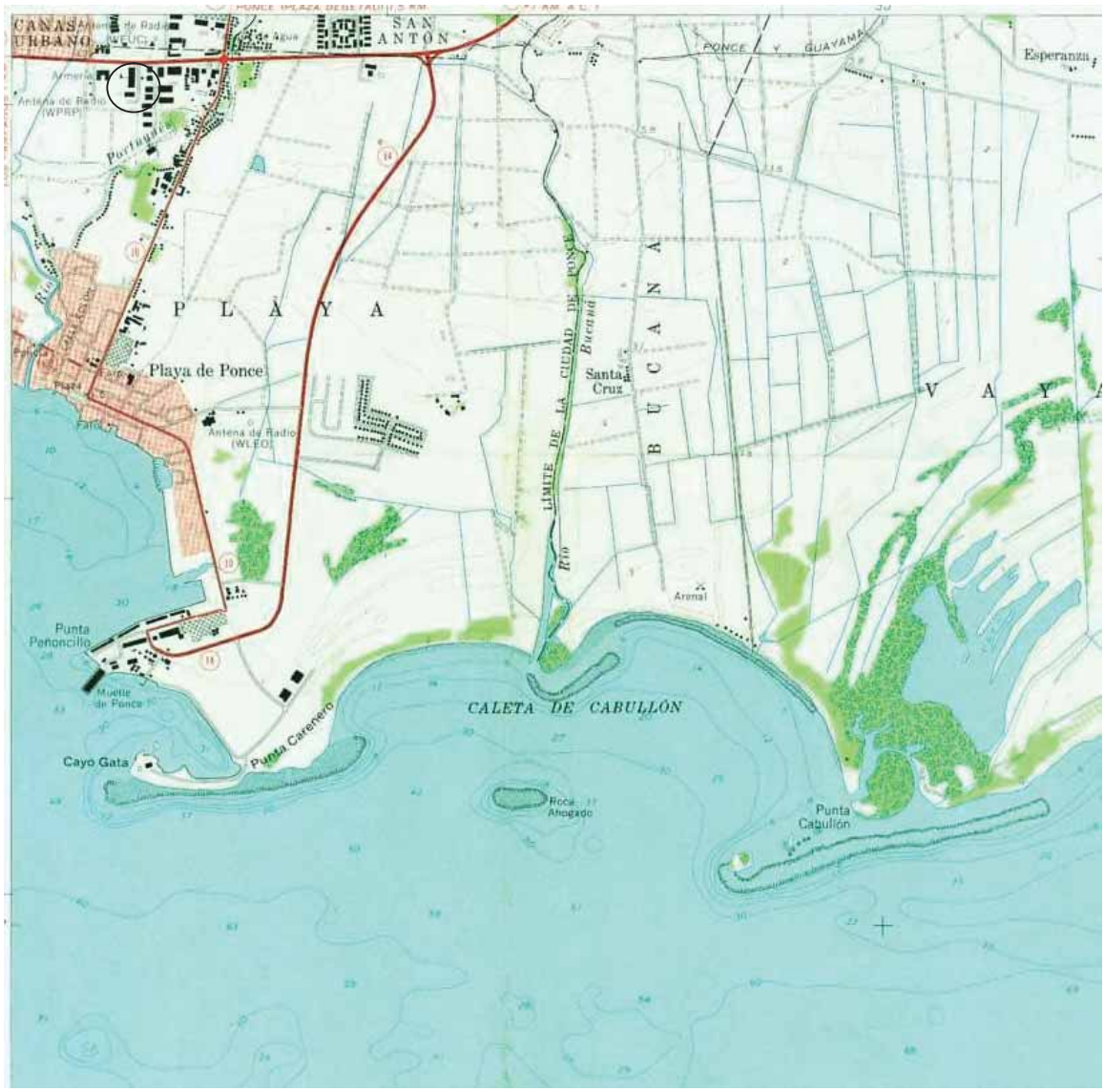


FIGURA 9
Parte ampliada del cuadrángulo de la Playa de Ponce (1970) ilustrando el área general del terreno del proyecto.

Fotografías aéreas

La primera foto aérea (ver la figura núm. 10), tiene la fecha del 28 de marzo de 1936 (K-21-39). Se observa claramente la Hacienda Restaurada, con los terrenos sembrados alrededor y los caminos entre las piezas de caña. Se puede ver que la carretera PR-2 (Ponce Bypass) aun no había sido construida y que el terreno del proyecto estaba ocupado por sembradíos de caña de azúcar. El cauce del río Portugués esta bien definido al este y sur de la propiedad. La localización aproximada del lote donde se localiza el proyecto está identificada por un círculo de color rojo.

La segunda foto aérea (ver la figura núm. 11), tiene la fecha del 20 de enero de 1951 (GS-LR-1011). Se observa que ya no existen las estructuras de la Hacienda Restaurada, que estaban localizadas inmediatas y en la parte sureste de la urbanización Villa Grillasca. Se puede ver que se estaba construyendo la carretera PR-2 (Ponce Bypass). El terreno que nos ocupa ahora está limpio, sin sembradío alguno y tampoco muestra construcción o estructura de ninguna clase. De nuevo la localización aproximada del lote donde se localiza el proyecto está identificada por un círculo de color rojo.

La tercera foto aérea (ver la figura núm. 12), fechada 15 de noviembre de 1971, muestra ya la construcción completa de la carretera PR-2 (Ponce Bypass). El lote que nos ocupa muestra una estructura alargada en dirección norte-sur. Se pueden ver numerosos cambios en el sector (nuevas calles y carreteras, así como nuevas residencias y estructuras en las inmediaciones) que demuestran un amplio y continuo desarrollo urbano. De igual forma, la localización aproximada del lote donde se localiza el proyecto está identificada por un círculo de color rojo.



FIGURA 10

Foto aérea del 28 de marzo de 1936



FIGURA 11

Foto aérea del 20 de enero de 1951



FIGURA 12

Foto aérea de 15 de noviembre de 1971

Fotos de satélite (Google Earth)

Como parte de nuestra investigación del solar del proyecto, estudiamos y comparamos seis fotos de satélite escogidas (Google Earth) que ilustran el área. La ubicación específica del solar está identificada en cada foto por un círculo negro.

La primera, fechada octubre de 1993, nos permite ver que para entonces ya existían las estructuras en el solar que nos interesa. También se observa que las edificaciones están rodeadas por árboles y vegetación. La segunda, de la fecha noviembre del 2006, es una excelente foto de satélite de toda el área que permite ver los cambios efectuados en la zona duraran esos años. La tercera, de agosto del 2009, aunque un poco oscura, ilustra los nuevos cambios ocurridos para entonces.

La cuarta foto de satélite, fechada septiembre del 2012, aunque un poco borrosa y a dos tonos de color, permite ver los cambios efectuados, especialmente en el techo del edificio de nuestro interés. La quinta foto, de la fecha noviembre del 2017, apenas un mes después del Huracán María, permite ver claramente el efecto del meteoro sobre la vegetación colindante con el edificio en el solar investigado. Muchos de los árboles de ven deshojados y con sus copas bastante destruidas.

La sexta y última foto ilustra el lugar en una fecha bastante reciente: noviembre de 2018. Se ven claramente los árboles podados, especialmente en el lado este del edificio en el solar que nos ocupa, que según parece no sufrió muchos daños como consecuencia del huracán. Se puede ver el edificio principal alargado norte-sur, con una carpa inmediatamente al suroeste. Luego una estructura pequeña inmediata al sureste del edificio principal y finalmente otra estructura rectangular con eje mayor este-oeste, al sur de las otras edificaciones.

Inspección de Superficie y estudio de sensibilidad

Visitamos el terreno objeto de la investigación el martes 19 de marzo de 2019 con el propósito de determinar valores de sensibilidad para ésta. La propiedad consiste mayormente de un terreno llano con una vegetación de árboles mayormente podados, palmas y plantas ornamentales (ver las fotos). Las fotos, desde la núm. 1 hasta la 14 ilustran el edificio principal desde el lado oeste, pasando por el lado norte, el lado este, el

lado sur y regresando al lado oeste. La foto núm. 15 ilustra el espacio al sur del edificio principal, donde existe un piso de concreto y una carpa. Las fotos, desde la núm. 16 hasta la 18 ilustran las estructuras más pequeñas al sur y suroeste del edificio principal. Las fotos núm. 19 y 20 ilustran el estacionamiento al oeste.

Los edificios son estructuras de acero y concreto, que seguramente han sido intervenidos en múltiples ocasiones para corresponder a sus funciones, primero como fábrica de Fomento, luego universidad regular (sede en Ponce de parte de la Universidad Interamericana) y también escuela de medicina. Las estructuras originales deben haber sido construidas entre 1962 y 1967. La carretera al norte data de principios de la década del 1950.

El lugar donde se ubican las estructuras eran originalmente terrenos baldíos, luego fincas de pastos y más tarde, para principios del siglo XIX, piezas de cañas de azúcar de la antigua Hacienda *El Quemado*. Luego dicho lugar se denominó Hacienda *Reparada.* Los edificios y otras estructuras de dicha hacienda se localizaban a unos 200 metros al noroeste del solar donde se ubica el proyecto. Todas ellas fueron destruidas cuando se construyeron la urbanización Villa Grillasca, las facilidades universitarias cercanas en la década de 1940 y la carretera PR-2 (Ponce Bypass) a principio de la década del 1950.

El sitio arqueológico precolombino más cercano, el llamado “Caracoles” (P-10), que se localiza a unos 800 metros al este del proyecto, fue objeto de varios estudios e investigaciones y actualmente la mayor parte de él se encuentra bajo el asfalto del estacionamiento del centro comercial Plaza del Caribe.

Entendemos que la sensibilidad arqueológica del solar, que pudo haber sido alta desde el punto de vista histórico y precolombino, por la relativa cercanía de las estructuras de la hacienda y el sitio “Caracoles” mencionados, resulta ser actualmente muy baja por los desarrollos urbanos mencionados que han impactado los lugares de valor culturar mencionados.



PRIMERA FOTO DE SATÉLITE

Octubre 1993



SEGUNDA FOTO DE SATÉLITE

Noviembre 2006



TERCERA FOTO DE SATÉLITE

Agosto 2009



CUARTA FOTO DE SATÉLITE

Septiembre 2012



QUINTA FOTO DE SATÉLITE

Octubre 2017



SEXTA FOTO DE SATÉLITE

Noviembre 2018



Foto núm. 1
Vista hacia el sur mostrando el lado oeste del edificio principal.



Foto núm. 2
Vista hacia el este mostrando el lado norte del edificio principal.



Foto núm. 3
Fachada norte del edificio principal.



Foto núm. 4
Vista hacia el oeste del lado norte del edificio principal.



Foto núm. 5
Vista hacia el sur de parte del lado este del edificio principal.



Foto núm. 6
Otra vista del lado este del edificio principal.



Foto núm. 7
Vista hacia el oeste de parte del lado este del edificio principal.



Foto núm. 8
Mostrando los árboles podados en el lado este.



Foto núm. 9
Vista hacia el oeste del lado sur del edificio principal.



Foto núm. 10
Vista hacia el norte del lado sur del edificio principal.



Foto núm. 11
Vista hacia el este del lado sur del edificio principal.



Foto núm. 12
Vista hacia el norte del lado oeste del edificio principal.



Foto núm. 13

Otra vista del lado oeste del edificio principal



Foto núm. 14

Entrada al edificio principal por su lado oeste.



Foto núm. 15

Espacio al sur del edificio principal con una carpa.



Foto núm. 16.

Vista hacia el este del lado norte de la estructura al sur.



Foto núm. 17
Lado este de la estructura al sur del edificio principal.



Foto núm. 18.

Vista del lado este de la estructura pequeña al sureste.



Foto núm. 19.

Entrada al estacionamiento, lado este.



Foto núm. 20.

Vista hacia el norte de parte del estacionamiento.

CONCLUSIONES Y RECOMENDACIONES

Hemos llevado a cabo un Estudio Arqueológico Fase IA (Archaeological Study, Stage IA) del terreno o solar donde está planificado la construcción de unas instalaciones médico-institucionales que estarían ubicadas en la carretera PR-2, Km 227.2, Barrio Playa, en la zona industrial Reparada 2 del Municipio de Ponce. El proyecto contempla la construcción de instalaciones médico-institucionales de 130,000 pies cuadrados en un lugar donde en el pasado hubo actividad industrial y actualmente se utiliza como instalaciones educacionales (médico-institucionales).

El lugar arqueológico reportado más cercano al terreno objeto de esta evaluación resulta ser el denominado P-10 (Caracoles), que es un lugar precolombino que se conoce por lo menos desde el año de 1916, cuando el arqueólogo norteamericano Samuel H. Lothrop confeccionó un inventario de sitios arqueológicos para Puerto Rico y menciona la existencia de un sitio arqueológico en dicho lugar. Este sitio se ubica a unos 800 metros al este de la propiedad ahora estudiada.

No obstante, tenemos que señalar que el sitio histórico más cercano resulta ser el llamado PO 0200028 (dice Puente 492, en realidad es Puente 145, Puente del río Portugués), que es el antiguo puente de la *Calle Real*, actual Ave. Hostos (nombrada así en 1903) o carretera PR-10, que se localiza a unos 400 metros al sureste. El actual puente (el Puente 145) fue construido en 1933.

Otros lugares relativamente cercanos se encuentran como estructuras históricas en la Playa de Ponce (El antiguo edificio de las Empresas Ferré, la Puerto Rico Iron Works, el edificio Municipal de la Playa y la Iglesia Metodista), que se ubican a unos 1,200 metros al sur, el más cercano; y lugares precolombinos e históricos en la ciudad de Ponce propiamente, como el sitio precolombino que se descubrió cuando se estaba realizando el soterrado de las utilidades en la Calle Concordia de Ponce, por el arqueólogo Pedro Alvarado. Este último sitio se ubica a unos 950 metros al noreste de la propiedad ahora estudiada.

De igual forma, el arqueólogo Jesús Figueroa trabajó en el 1987 en una Fase II en la Plaza del Mercado Isabel II, ubicada a unos 2.3 kilómetros también hacia el noreste de la propiedad ahora investigada, y laboró en el año 2007 en la Tumba-Mausoleo Casimiro

Berenguer Padilla en el Panteón Nacional Baldorioty de Castro, en la calle De la Torre, a unos 2.5 kilómetros al norte-noreste del proyecto, encontrando materiales históricos. Por otro lado, el sitio denominado "Plaza Gelpí", fue objeto de una Evaluación Arqueológica Fase II durante los años 1996-97, por la arqueóloga Marisol J. Meléndez Maíz, donde se localizaron materiales y artefactos de carácter histórico en un contexto doméstico urbano de los siglos XIX y XX. Dicho lugar, que se localizaba en las Calles Salud, esq. Isabel (esquina suroeste de la intersección), se ubica a unos 2.25 kilómetros hacia el noreste del proyecto.

Según el listado de Propiedades Incluidas en el Registro Nacional de Lugares Históricos, revisado a enero del 2017, existían 39 lugares registrados para Ponce, ninguno de los cuales serían impactados por el proyecto, estando todos a una distancia de más de 1.0 kilómetros del solar ahora estudiado. En el Apéndice A se ilustran los lugares arqueológicos cercanos a los terrenos del proyecto.

Toda la información conseguida en los archivos, libros, revistas, artículos y documentos consultados, ofrecen un panorama bastante claro de la historia del desarrollo del predio que serían utilizados para el proyecto que nos ocupa.

A principios del siglo XIX Ponce era un villorrio con algunas casas alrededor de su plaza. Todo el resto del territorio era una llanura donde apacentaba ganado y se sembraba frutos menores, sobre todo café. Hacia el año 1818 los terrenos al oeste desde la plaza de recreo de Ponce eran cañaverales y pastos de la Hacienda Molina, del español Joseph Molina.

Al sur del pueblo, desde bien al principio del siglo XIX ya existía la Hacienda *el Quemado*, en cuyos terrenos de piezas de caña de azúcar se ubicaría muchos años después el solar que nos interesa. Sobre la hacienda el Quemado y su propietario el Presbítero José Gutiérrez del Arroyo, se han escrito varios trabajos históricos, especialmente el de la historiadora Ivette Pérez Vega: "El hacendado José Gutiérrez del Arroyo", *El cielo y la tierra en sus manos*. (Ediciones Huracán, Río Piedras, 1985).

Son varios los mapas y planos de Ponce donde se ilustran los terrenos la hacienda, que luego se denominaría Hacienda *Restaurada*, algunos de los cuales son incluidos en el presente trabajo. Conocemos que para el 1883 la propiedad de la Hacienda *Restaurada*, pertenecía a J. Gallart, el cual la adquirió en dicho año de Ramón Cortada.

Nuestra figura 5 es copia de parte de un plano de Ponce de cerca del 1898 cuyo autor, Manuel P. Cadenas lo preparó para acompañar la "Memoria descriptiva que sirve de complemento al proyecto de tranvía eléctrico que se pretende construir en la ciudad de Ponce y sus barrios". El plano lo hemos tomado del Vol. 3 de la obra *Puerto Rico Urbano* del arquitecto Aníbal Sepúlveda Rivera (p. 302). Son dignas de notarse las estructuras que componen la hacienda y la cantidad de cañaverales que la rodean, que por el lado sur cruzan el río Portugués y por el norte llegan hasta el sureste del pueblo.

El historiador y profesor universitario Elí D. Oquendo Rodríguez, en su boceto histórico de la Playa de Ponce, puntualiza que: "La plaza de la hacienda *el Quemado* donde estaba la casona, la casa de calderas, los ranchones de esclavos, la tienda y otras estructuras se encontraba en el perímetro de lo que es en la actualidad el Edificio Parra, la emisora Católica Radio, el estacionamiento al sur del Complejo Deportivo y algún otro espacio por esa zona ocupado por edificios en y fuera de la Pontificia Universidad Católica".

Por otro lado, entre los mapas antiguos que hemos localizado para el área estudiada (US Geological Survey, Playa de Ponce Quadrangle, 1945, 1:30,000), encontramos que específicamente la carretera que hoy conocemos como PR-2 o Ponce Bypass, no existía en dicho año y apenas un camino de tierra cruzaba de este a oeste por donde luego pasaría dicha carretera. En el sitio concreto donde hoy se localiza el solar que nos interesa no había entonces estructura alguna. Nuestra figura 7, que es una copia ampliada de parte del indicado cuadrángulo de Playa de Ponce, ilustra el área del actual proyecto (destacada por un círculo rojo).

La figura Núm. 8 ilustra la misma área anterior, también como parte de un cuadrángulo histórico ampliado de la Playa de Ponce, pero del año 1962 (a escala 1:20,000). Es de notar que la carretera PR-2 (Ponce Bypass) ya existe al norte del terreno que nos interesa. Conocemos que el puente de dicha carretera sobre el río Portugués (Puente 584), fue construido en el año 1951, por lo que se entiende que dicha carretera debe ser de la misma época. Es de notar que, para entonces, aunque ya existían algunas estructuras al este del terreno que nos interesa (que entendemos eran edificios de Fomento), todavía no existía estructura alguna en el local específico del proyecto. Destacamos nuevamente con un círculo rojo el área aproximada que nos concierne.

De igual forma, la figura Núm. 9 es parte ampliada del cuadrángulo de la Playa de Ponce, pero del año 1970 (con datos del 1967), a escala 1:20,000. Se pueden ver que en terreno que nos interesa existe un edificio alargado norte-sur, que conocemos originalmente era una fábrica de Fomento, pero que ese momento muestra el símbolo de una bandera, por lo que entendemos era entonces en Ponce parte de la Universidad Interamericana. Este edificio resulta ser la actual sede de la Escuela de Medicina de Ponce y su localización se destaca igualmente con un círculo rojo alrededor.

La segunda foto aérea que hemos incluido en el informe (ver la figura núm. 11), tiene la fecha del 20 de enero de 1951 (GS-LR-1011). Se observa que ya no existen las estructuras de la Hacienda *Restaurada*, que estaban localizadas inmediatas y en la parte sureste de la urbanización Villa Grillasca. Se puede ver que se estaba construyendo la carretera PR-2 (Ponce Bypass). El terreno que ahora nos ocupa está limpio, sin sembradío alguno y tampoco muestra construcción o estructura de ninguna clase. De nuevo la localización aproximada del lote donde se localiza el proyecto está identificada por un círculo de color rojo.

Como parte de nuestra investigación del solar del proyecto, estudiamos y comparamos seis fotos de satélite escogidas (Google Earth) que ilustran el área. La ubicación específica del solar está identificada en cada foto por un círculo negro.

Visitamos el terreno objeto de la investigación el martes 19 de marzo de 2019 con el propósito de determinar valores de sensibilidad para ésta. La propiedad consiste mayormente de un terreno llano con una vegetación de árboles mayormente podados, palmas y plantas ornamentales (ver las fotos). Las fotos, desde la núm. 1 hasta la 14 ilustran el edificio principal desde el lado oeste, pasando por el lado norte, el lado este, el lado sur y regresando al lado oeste. La foto núm. 15 ilustra el espacio al sur del edificio principal, donde existe un piso de concreto y una carpa. Las fotos, desde la núm. 16 hasta la 18 ilustran las estructuras más pequeñas al sur y suroeste del edificio principal. Las fotos núm. 19 y 20 ilustran el estacionamiento al oeste.

Los edificios son estructuras de acero y concreto, que seguramente han sido intervenidos en múltiples ocasiones para corresponder a sus funciones, primero como fábrica de Fomento, luego universidad regular (sede en Ponce de parte de la Universidad Interamericana) y también escuela de medicina. Las estructuras originales deben haber

sido construidas entre 1962 y 1967. La carretera al norte data de principios de la década del 1950.

El lugar donde se ubican las estructuras eran originalmente terrenos baldíos, luego fincas de pastos y más tarde, para principios del siglo XIX, piezas de cañas de azúcar de la antigua Hacienda *El Quemado*. Luego dicho lugar se denominó Hacienda *Reparada.* Los edificios y otras estructuras de dicha hacienda se localizaban a unos 200 metros al noroeste del solar donde se ubica el proyecto. Todas ellas fueron destruidas cuando se construyeron la urbanización Villa Grillasca, las facilidades universitarias cercanas en la década de 1940 y la carretera PR-2 (Ponce Bypass) a principio de la década del 1950.

En la visita del terreno no se detectó evidencia de actividad cultural superficial alguna, ni basura moderna significativa. Es nuestra opinión que la destrucción de las estructuras de la antigua hacienda en la década de 1940 excluye la posibilidad de poderse obtener datos suficientes para poder asociar el solar que nos ocupa con dicho recurso. El otro recurso en la zona, el Puente 145, queda lejos y no será impactado para nada. No recomendamos estudios adicionales.

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BIBLIOGRAFÍA

Abbad y Lasierra, Fray Agustín Iñigo: *Historia Geográfica, Civil y Natural de la Isla de San Juan Bautista de Puerto Rico*, Editorial Universitaria, Universidad de Puerto Rico, Río Piedras, 1979.

Alegría, Ricardo E.: "On Puerto Rican Archaeology", *American Antiquity*, 31: 246-249, 1965.

Alegría Ricardo E.: "Apuntes para el estudio de los caciques de Puerto Rico", Separata de la *Revista del Instituto de Cultura Puertorriqueña*, núm. 85, 1979.

Alemán Crespo, Harry, Eduardo Questell Rodríguez y Edgar J. Maíz López: *Informe de Evaluación Cultural, Proyecto Residencial Hacienda La Mallorquina*, Fase IA-IB, Sibanacán, 1985.

Alemán Crespo, Harry, Edgar J. Maíz López y Eduardo Questell Rodríguez: *Improvement of the Aqueduct System to the West of Ponce, Puerto Rico (Phase "B")*, Archaeological Field Survey (Stage I-B), Sibanacán, June 1986.

Alemán Crespo, Harry: *Segregación de Doce Lotes de Terreno, Bo. Coto Laurel, Ponce, Puerto Rico*, Investigación Arqueológica, Fase IA-IB, 2000.

Alemán Crespo, Harry: *Construcción de Facilidades Parque Pasivo Tabaiba, Barrio Playa, Sector Los Huesitos, Ponce, Puerto Rico.* Investigación Arqueológica, Fase IA-IB. Febrero, 2015.

Alvarado Muñoz, Fernando: *Machuelo Cell Site, PR-505, Km. 2.2 interior, Bo. Machuelo, Ponce, Puerto Rico.* Investigación Arqueológica, Fase IA-IB. Mayo, 2015.

Archivo Histórico Municipal de Ponce: Información histórica de censos, planos, etc.

Cheek, Charles D., and Others: *An Archaeological and Architectural Investigation of Public, Residential, and Hydrological Features at the Mid-Nineteenth Century Quintana Thermal Baths Ponce, Puerto Rico*, 1987.

Córdova, Pedro Tomás de: *Memorias Geográficas, Históricas, Económicas y Estadísticas de la Isla de Puerto Rico*, Instituto de Cultura Puertorriqueña, San Juan de Puerto Rico, 1968, 6 tomos.

De la Peña Marazuela, M. Teresa: *Inventario de la Serie Fomento de Puerto Rico*, Archivo Histórico Nacional, Sección de Ultramar, Madrid, España, 1972.

Del Toro Robledo, Ilia: *Actas del Cabildo de Ponce, Puerto Rico, 1812-1823*, Gobierno Municipal Autónomo de Ponce, Tipografía Porvenir, 1992.

Ferreras Pagán, J.: *Biografía de las Riquezas de Puerto Rico*, Tomo II Riqueza Azucarera, Tipografía de Luis Ferreras, San Juan, Puerto Rico, 1902.

Fewkes, Jesse W.: "The Aborigines of Puerto Rico and the Neighboring Islands", *25th Annual Report of the Bureau of American Ethnology, 1903-1904*, Washington, D.C., 1907.

Figueroa Lugo, Jesús S.: *Antigua Plaza del Mercado (Isabel Segunda), Ponce, Puerto Rico*, Evaluación Arqueológica Fase II, 30 de marzo de 1987.

Figueroa Lugo, Jesús S.: *Evaluación Arqueológica Fase II, 4ta Extensión Urb. El Monte, Bo. Coto Laurel, Ponce, Puerto Rico*, 1990.

Figueroa Lugo, Jesús S.: *Soterrado de Tendido Eléctrico, Calle Salud esquina Abolición, Ponce, Puerto Rico*, Evaluación Cultural, Monitoreo, 5 de diciembre de 2004.

Figueroa Lugo, Jesús S.: *Proyecto Tumba-Mausoleo Casimiro Berenguer Padilla Panteón Nacional Román Baldorioty de Castro, Calle Torres, Ponce, Puerto Rico*, Evaluación Arqueológica Fase IA-IB, 23 de abril de 2007.

Font Negrón, Aramis: *Determinación de Recursos Culturales, Fase IA-IB, Mejoras al Sistema Regional de Acueductos de los Municipios de Villalba, Juana Díaz, Ponce, Coamo y Santa Isabel*, 1999.

Fortuño Janeiro, Luis: *Álbum Histórico de Ponce*, Ponce, Puerto Rico, Julio de 1934.

Girón, Socorro: *Ponce, el teatro La Perla y La Campana de La Almudaina*, Gobierno Municipal de Ponce, Ponce, Puerto Rico, 1992.

Guierbolini, R.E.: *Soil Survey of Ponce Area of Southern Puerto Rico*, US Soil Conservation Services, 1979.

Historic American Engineering Record (HAER), UPR, San Juan, 1977. Copia del inventario en poder de SHPO.

Inventario Histórico de Ingeniería e Industria de Puerto Rico, Oficina del Presidente, Universidad de Puerto Rico, San Juan, 1977. Manuscrito en la Oficina Estatal de Conservación Histórica (SHPO).

King, Thomas F.: "The Archaeological Survey, Methods and Uses", *Heritage*, Conservation and Recreation Service, US Department of the Interior, Washington, D. C., 1978, pág. 87.

Krushensky, Richard D. y Watson H. Monroe: *Geologic Map of the Ponce Quadrangle, Puerto Rico*, USGS Map I-863, 1975.

Lothrop, S. K.: "Archaeological Sites in Puerto Rico", 1916, manuscrito en el archive de Yale Peabody Museum, New Haven.

Maíz López, Edgar: *Informe de Evaluación Cultural Fase IA-IB, Cerrillos Pump Station, Intake, Pump Station & Transmition Line, Bos. Maraguez y Machuelo Arriba, Ponce, Puerto Rico*, 2002.

Maíz López, Edgar: *Trocal Sanitaria PR-14 Fase II y Troncal Sanitaria de Coto Laurel*, Informe de Evaluación Cultural, Fase IA-IB, marzo-mayo 2003.

Marín, Ramón: *La Villa de Ponce considerada en tres distintas épocas*, Ponce Puerto Rico, establecimiento tipográfico "El Vapor", 1877.

Matos Bernier, Félix (Fray Justo): *Cromos Ponceños*, Ponce, Tip. "La Libertad", 1896.

Meléndez Maíz, Marisol J.: *Proyecto Plaza Gelpí, anexo al Museo de la Historia de Ponce, Calle Salud esquina Isabel, Ponce*, Informe Final, Evaluación Arqueológica Fase II, 10 de febrero de 1997.

Miyares González, Fernando: *Noticias particulares de la Isla y Plaza de San Juan Bautista de Puerto Rico*, Universidad de Puerto Rico, San Juan, 1957.

Morel Campos, Ramón: *Guía Local de Comercio de la Ciudad de Ponce*, Imprenta El Telégrafo, Ponce, 1895.

Neumann Gandía, Eduardo: *Verdadera y Auténtica Historia de la Ciudad de Ponce*, San Juan, Puerto Rico, 1913.

Oficina Estatal de Conservación Histórica (SHPO), *Registro Nacional de Lugares Históricos*, 2017.

Pantel, A. Gus: *Phase II Archaeological Assessment, Las Mercedes Memorial Park, Ponce, Puerto Rico*, 1988.

Pantel, A. Gus: *Proyecto Ponce Plaza, Zona Urbana, Municipio Autónomo de Ponce, Puerto Rico*, Evaluación Arqueológica, Fase IA, abril de 2004.

Pantel, A. Gus: *Proyecto Ponce Plaza, Zona Urbana, Municipio Autónomo de Ponce, Puerto Rico*, Reconocimiento Arqueológico, Fase IB, abril de 2004.

Picó, Rafael: *Geografía de Puerto Rico*, Editorial Universitaria, Universidad de Puerto Rico, 1964.

Questell Rodríguez, Eduardo: *Segregación de 69 Solares, PR-14, KM 7.9 interior, Barrio Cerrillos, Ponce, Puerto Rico*, octubre-noviembre, 2005.

Questell Rodríguez, Eduardo: *Construcción de Edificio y Estacionamiento, Pontificia Universidad Católica de Puerto Rico, Ponce, Puerto Rico, APME 8192*, Informe de Estudio Arqueológico, Fase IA, febrero-junio 2006.

Questell Rodríguez, Eduardo y Fernando Alvarado Muñoz: *Residencial Turístico Villas El Tuque*, *PR-2, KM 220.0, Barrio Canas, Ponce, Puerto Rico*, Informe de Evaluación Arqueológica, Fase IA-IB, octubre 2006-marzo 2007.

Questell Rodríguez, Eduardo: *Desarrollo Comercial, PR-14, KM 7.9, Bo. Cerrillos, Ponce, Puerto Rico*, Informe de Evaluación Arqueológica, Fase IA-IB, julio 2008.

Questell Rodríguez, Eduardo: *Rehabilitación Estructura Calle Mayor esquina Castillo y Construcción de Estructura en Calle Mayor # 50, Ponce, Puerto Rico*, Fundación Biblioteca Rafael Hernández Colón, Informe de Evaluación Arqueológica Fase IA, marzo-abril 2010.

Questell Rodríguez, Eduardo: *Rehabilitación Estructura Calle Mayor esquina Castillo y Construcción de Estructura en Calle Mayor # 50, Ponce, Puerto Rico*, Fundación Biblioteca Rafael Hernández Colón, Informe de Evaluación Arqueológica Fase IB, agosto-septiembre 2010.

Quintero Rivera, Ángel G.: *Ponce: La Capital Alterna*, Ponceños de Verdad, Centro de Investigaciones Sociales de la Universidad de Puerto Rico, Ponce, Puerto Rico, 2003.

Rainey, Froehlich G.: "Porto Rican Archaeology", *Scientific Survey of Porto Rico and the Virgin Islands*, New York Academy of Sciences, 18 (1), 1940.

Roberts, R. C. y otros: *Soil Survey of Puerto Rico*, USDA, Series 1936, No. 8, 1942.

Rodríguez Gracia, Luis A.: *Casa Serrallés, Pozo: Reconocimiento Arqueológico*, División de Arqueología, Instituto de Cultura Puertorriqueña, 24 de julio de 1997.

Rodríguez Gracia, Luis A.: *Terminal de Vehículos Públicos: Calle Marina, Esq. Luna y Comercio, Ponce, Puerto Rico*, Evaluación Arqueológica, Fase IA-IB, 1988.

Roskams, Steve, "Excavation", *Cambridge Manuals in Archaeology*. Cambridge: Cambridge University Press, 2001.

Rouse, Irving: "Porto Rican Prehistory: Introduction: Excavations in the Interior, South and East", *Scientific Survey of Porto Rico and the Virgin Islands*, vol XVIII, parte 4, págs. 465-512.

Rouse, Irving: "Migrations in Prehistory"", Inferring Population movements from Cultural Remains, Yale University Press, New Haven, 1986.

Sepúlveda Rivera, Aníbal: *Puerto Rico Urbano, Atlas Histórico de la Ciudad Puertorriqueña*, CARIMAR, Tomos 2 y 3, 2004.

Solís Magaña, Carlos, *Colonial Archaeology of San Juan, Puerto Rico: Excavations at the Casa Rosa scarp Wall, San Juan National Historic Site, Puerto Rico*, January 1988.

Swanson, Mark T. y Prentice M. Thomas Jr.: *Archaeological Excavations at Hacienda Ana María (PO-33), Ponce, Puerto Rico*, 1986.

Thomas Jr., Prentice M. y Mark T. Swanson: *A Cultural Resources Reconnaissance and Testing Program of a 100 Acre Clay Borrow Area, Ponce, Puerto Rico*, 1986.

Úbeda y Delgado, Manuel: *Isla de Puerto Rico*, Establecimiento Tipográfico del Boletín, San Juan, Puerto Rico, 1878.

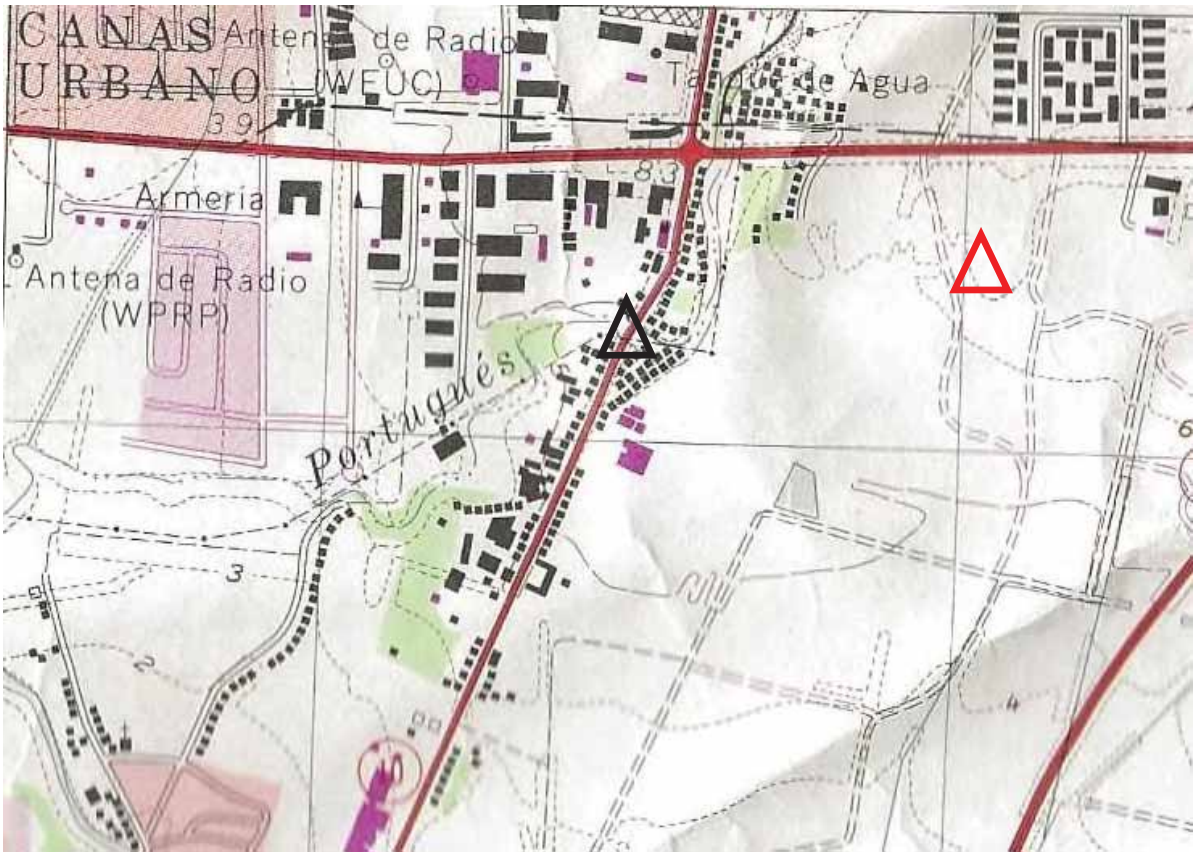
USGS: Playa de Ponce Quadrangle, 1: 20,000.

Vélez, Jaime G.: *Proyecto Plaza San Cristóbal, Barrio Coto Laurel, Ponce, Puerto Rico*, Evaluación Arqueológica, Fase IA, 2001.

Vidal Armstrong, Mariano: *Ponce: Notas para su Historia*, Ponce, 1984.

Walker, Iain C., *Excavation with a Backhoe*, Canadian Historic Sites Division, Ottawa, January 26, 1967. Tomado de la Internet (http://www.ontarioarchaeology.on.ca/publications/pdf/oa10-2-walker.pdf)

APÉNDICES



△ Puente 145

△ PO-10

APÉNDICE A

Localización de los sitios arqueológicos cercanos

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NOTIFICACIÓN DE AUTORIZACIÓN

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CASO OGPE #2019-274617-REA-003429

Estimado ingeniero Hernández:

El **Programa de Arqueología y Etnohistoria** del Instituto de Cultura Puertorriqueña evaluó los documentos relacionados al proyecto de referencia, recibidos a través de la División de Arqueología y Conservación Histórica de la Oficina de Gerencia de Permisos (OGPe).

La evaluación realizada sugiere que, basado en los datos existentes al presente, las probabilidades de impactar un recurso arqueológico, según definido por la Ley 112 del 20 de julio de 1988, según enmendada, son mínimas.

Por lo tanto, en lo concerniente a recursos culturales de naturaleza arqueológica, **no tenemos objeción** al proyecto según fue radicado y evaluado.

Le notificamos que esta autorización es parcial y el proponente queda sujeto a las responsabilidades y obligaciones que impone la Ley 112 del 20 de julio de 1988, según enmendada. Esta establece que, **se deberá paralizar todo tipo de actividad de excavación, movimiento y remoción de la corteza terrestre, y notificar en un plazo de veinticuatro (24) horas al Programa de Arqueología y Etnohistoria, en caso de que, durante el desarrollo del proyecto, se descubra o impacte algún depósito, elemento, estructura o vestigio de naturaleza arqueológica.**

Se le apercibe que el incumplimiento de estos requerimientos será objeto de sanciones administrativas según lo establecido en las citadas leyes.

Esta autorización tiene **vigencia de (1) año**.

Cordialmente,

Dr. Carlos Pérez Merced
Director Interino
Programa de Arqueología y Etnohistoria

CPM/GOE/mgb

16 de septiembre de 2019

Ing. Gabriel Hernández Rodríguez
Secretario Auxiliar
DEPARTAMENTO DE DESARROLLO ECONÓMICO Y COMERCIO
Oficina de Gerencia de Permisos
PO Box 41179
San Juan, Puerto Rico 00940-1179

RECOMENDACIÓN AMBIENTAL
NO OBJECIÓN

CASO OGPe:	**2019-274617-REA-003429**
DESCRIPCIÓN:	EDIFICIO MULTIPISOS PARA UNIVERSIDAD ESPECIALIZADA
MUNICIPIO:	PONCE
UBICACIÓN:	CAMPUS DE PONCE HEALTH SCIENCES UNIVERSITY 388 ZONA INDUSTRIAL REPARADA 2 BARRIO CANAS URBANO, PONCE, PR 00716
CATASTRO:	63-412-011-783-27-000
CALIFICACIÓN:	EV.4
PROPIETARIO:	TIBER HEALTH PUBLIC BENEFIT CORP.
PROPONENTE:	HELLMUTH OBATA & KASSABAUM ARCHITECTS

Estimados señores:

El Instituto de Cultura Puertorriqueña (ICP), por medio de su Programa de Patrimonio Histórico Edificado (ICP-PHE), ha examinado el proyecto de referencia para determinar si afecta Propiedades de Valor Histórico y Arquitectónico que estén protegidas, o sean elegibles a serlo, bajo las leyes y reglamentos que nuestra agencia tiene responsabilidad de administrar, como agencia primaria, endosante o recomendante. Estas leyes y reglamentos incluyen, entre otros:

1. La ley 89 del 21 de junio de 1955 S.E., Ley Orgánica del Instituto de Cultura Puertorriqueña, en especial el inciso 4(a)(7), "Determinar que edificios o estructuras son de valor histórico o artístico en Puerto Rico. (...)" y el inciso 4(a)(8), "Asesorar a la Junta de Planificación en la reglamentación de construcción en aquellas zonas que determine como zonas de valor histórico. (...)".
2. La ley 89 del 21 de junio de 1955 S.E., Ley Orgánica del Instituto de Cultura Puertorriqueña, en su inciso 4(b)(3) según enmendado por la ley 119 del 26 de septiembre de 2005, que permite "adoptar, enmendar o derogar, por conducto de su Junta de Directores, las reglas que gobiernen [el] funcionamiento y el descargo de los poderes" concedidos e impuestos al ICP por ley, y la imposición de multas administrativas y/u otras sanciones por su incumplimiento o violación.
3. El **Reglamento Conjunto para la Evaluación y Expedición de Permisos Relacionados al Desarrollo, Uso de Terrenos y Operación de Negocios**, Reglamento 38 de la Junta de Planificación ("Reglamento Conjunto") con vigencia del 7 de junio de 2019, en todos los incisos aplicables a zonas y sitios históricos, en especial el Tomo X (10), "Conservación de Recursos Históricos" – incluyendo, en las zonas históricas, edificios elegibles, no elegibles, solares vacíos y espacios públicos.
4. Las zonificaciones S-H, antes CR-H o SH, cubiertas por el Tomo VI, Capítulo 6.1 "Áreas Calificadas", Regla 6.1.21 del Reglamento Conjunto.
5. Las disposiciones del Tomo X, Capítulo 10.2 "Conservación de Sitios y Zonas Históricas", Sección 10.2.5.4 y Reglas 10.2.7 y 10.2.8 del Reglamento Conjunto, las que establecen, para los Centros Fundacionales de los Pueblos, así como para las Plazas, Plazuelas y Plazas de Recreo, las reglas de protección del Patrimonio Histórico.
6. La disposición del Tomo X, Capítulo 10.2 "Conservación de Sitios y Zonas Históricas", Sección 10.2.2.4, "Obras Exentas de Permisos", del Reglamento Conjunto la que establece el requerimiento de la Recomendación del ICP en las reparaciones y construcciones misceláneas de carácter menor, incluyendo

aplicación de pintura y la limpieza rutinaria o de mantenimiento de la edificación que no conlleve el uso de maquinaría, químicos o abrasivos y no afecte la integridad de la misma, en los centros fundacionales, sitios y zonas Históricas de Puerto Rico.

7. La Resolución JPE-047 de 1994, la cual requiere evaluación del ICP para consultas y usos a darse a edificios públicos construidos anteriores a 1960.
8. La exigencia de endoso o comentario del ICP aplicable a propiedades designadas de valor histórico y arquitectónico por otros medios, tales como:

    a. Resolución de la Asamblea Legislativa
    b. Monumentos Históricos designados por la Junta de Directores del ICP
    c. Propiedades designadas por un plan de ordenamiento territorial de un Municipio Autónomo y que esté en vigor, o por el Plan de Uso de Terrenos de Puerto Rico
    d. Ser declaradas históricas en un plan especial de zonificación.
    e. Otras propiedades referidas por cualquier componente del Sistema Unificado de Información (SUI), la Oficina de Permisos de un Municipio Autónomo con poder de otorgar permisos, la Junta de Planificación, el Programa de Arqueología y Etnohistoria del ICP, u otra agencia o entidad de gobierno con poder reglamentario.

9. Petición a solicitud voluntaria de un propietario o derechohabiente de una propiedad.

De acuerdo a nuestros expedientes y la información provista:

1. Esta propiedad **no** es **Sitio Histórico** designado, ni es parte de una **Zona Histórica** según estos conceptos están definidos por el tomo XII (12), parte III, definiciones S-63, Z-11 y Z-12, y elaborados en el tomo X (10), del Reglamento Conjunto. Tampoco queda en otro lugar sujeto a la reglamentación sobre patrimonio edificado por parte del ICP. El terreno no presenta componentes visibles sobre la tierra con valor histórico evidente o potencial.
2. No tiene efecto adverso a lugares adyacentes o cercanos que sean actualmente o puedan ser en el futuro sitios históricos o zonas históricas.
3. Se solicita construir un edificio multipisos de cuatro niveles, con aulas, auditorio, laboratorios, administración, estacionamiento, desahogo y otras actividades relacionadas con las funciones pedagógicas e investigativas de la Ponce Health Sciences University (anteriormente Escuela de Medicina de Ponce). Esto queda dentro de un solar que actualmente posee varias estructuras temporeras y permanentes a ser demolidas. Ninguna de estas tiene valor histórico o arquitectónico.

Luego de la evaluación del caso se hace, desde el punto de vista de protección del patrimonio edificado, una determinación de **NO OBJECIÓN** a la acción propuesta.

Este proyecto debe ser revisado para determinar cumplimiento con la Ley de Patrimonio Arqueológico Terrestre, Ley 112 del 12 de agosto de 1988 según enmendada. Se debe establecer contacto con nuestro Programa de Arqueología y Etnohistoria para mayor información.

Este documento tiene vigencia de un (1) año a partir de su emisión.

Sin otro particular, quedamos.

Mildred González Valentín, M. Arch.
Subdirectora de Conservación
Programa de Patrimonio Histórico Edificado
Instituto de Cultura Puertorriqueña

MGV/JOC/jo

c: Expediente caso PPHE, ICP
Pablo Ojeda O'Neill, Director, PPHE-ICP

Attachment XII: Noise Abatement and Control Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B

Noise (EA Level Reviews)

General requirements	Legislation	Regulation
HUD's noise regulations protect residential properties from excessive noise exposure. HUD encourages mitigation as appropriate.	Noise Control Act of 1972 General Services Administration Federal Management Circular 75-2: "Compatible Land Uses at Federal Airfields"	Title 24 CFR 51 Subpart B
References		
https://www.hudexchange.info/programs/environmental-review/noise-abatement-and-control		

1. **What activities does your project involve? Check all that apply:**

☐ New construction for residential use
NOTE: HUD assistance to new construction projects is generally prohibited if they are located in an Unacceptable zone, and HUD discourages assistance for new construction projects in Normally Unacceptable zones. See 24 CFR 51.101(a)(3) for further details.
→ *Continue to Question 2.*

☐ Rehabilitation of an existing residential property
NOTE: For major or substantial rehabilitation in Normally Unacceptable zones, HUD encourages mitigation to reduce levels to acceptable compliance standards. For major rehabilitation in Unacceptable zones, HUD strongly encourages mitigation to reduce levels to acceptable compliance standards. See 24 CFR 51 Subpart B for further details.
→ *Continue to Question 2.*

☐ A research demonstration project which does not result in new construction or reconstruction, interstate, land sales registration, or any timely emergency assistance under disaster assistance provisions or appropriations which are provided to save lives, protect property, protect public health and safety, remove debris and wreckage, or assistance that has the effect of restoring facilities substantially as they existed prior to the disaster
→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

☒ None of the above
→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

2. **Complete the Preliminary Screening to identify potential noise generators in the vicinity (1000' from a major road, 3000' from a railroad, or 15 miles from an airport). Indicate the findings of the Preliminary Screening below:**

☐ There are no noise generators found within the threshold distances above.

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing the location of the project relative to any noise generators.*

☐ Noise generators were found within the threshold distances.

→ *Continue to Question 3.*

3. **Complete the Noise Assessment Guidelines to quantify the noise exposure. Indicate the findings of the Noise Assessment below:**

☐ Acceptable: (65 decibels or less; the ceiling may be shifted to 70 decibels in circumstances described in §24 CFR 51.105(a))

Indicate noise level here: ☐

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide noise analysis, including noise level and data used to complete the analysis.*

☐ Normally Unacceptable: (Above 65 decibels but not exceeding 75 decibels; the floor may be shifted to 70 decibels in circumstances described in 24 CFR 51.105(a))

Indicate noise level here: ☐

<u>If project is rehabilitation:</u>

→ *Continue to Question 4. Provide noise analysis, including noise level and data used to complete the analysis.*

<u>If project is new construction:</u>

Is the project in a largely undeveloped area[1]?

☐ No

→ *Continue to Question 4. Provide noise analysis, including noise level and data used to complete the analysis, and any other relevant information.*

[1] A largely undeveloped area means the area within 2 miles of the project site is less than 50 percent developed with urban uses or does not have water and sewer capacity to serve the project.

☐ Yes

→*Your project requires completion of an Environmental Impact Statement (EIS) pursuant to 51.104(b)(1)(i). Elevate this review to an EIS-level review.*

☐ Unacceptable: (Above 75 decibels)

Indicate noise level here: [ ]

If project is rehabilitation:

HUD strongly encourages conversion of noise-exposed sites to land uses compatible with high noise levels. Consider converting this property to a non-residential use compatible with high noise levels.

→ *Continue to Question 4. Provide noise analysis, including noise level and data used to complete the analysis, and any other relevant information.*

If project is new construction:

Your project requires completion of an Environmental Impact Statement (EIS) pursuant to 51.104(b)(1)(i). You may either complete an EIS or provide a waiver signed by the appropriate authority. Indicate your choice:

☐ Convert to an EIS

→ *Provide noise analysis, including noise level and data used to complete the analysis.*

Continue to Question 4.

☐ Provide waiver

→ *Provide an Environmental Impact Statement waiver from the Certifying Officer or the Assistant Secretary for Community Planning and Development per 24 CFR 51.104(b)(2) and noise analysis, including noise level and data used to complete the analysis.*

Continue to Question 4.

4. **HUD strongly encourages mitigation be used to eliminate adverse noise impacts. Explain in detail the exact measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation. This information will be automatically included in the Mitigation summary for the environmental review.**

☐ Mitigation as follows will be implemented:

→ *Provide drawings, specifications, and other materials as needed to describe the project's noise mitigation measures. Continue to the Worksheet Summary.*

☐ No mitigation is necessary.

Explain why mitigation will not be made here:

→ *Continue to the Worksheet Summary.*

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

A noise study was prepared for Phases 1a, 1b, and Phase 2. Phase 3 will include the remodel of existing building. No increase of the existing noise levels is expected. The grant recipient must follow the noise survey report recommendations PR-Environmental Compliance Resolution and all applicale permits and regulations on this matter. Therefore, conditioned to the included above,this topic is in compliance with HUD regulations. See Information and/or Figures attached

Are formal compliance steps or mitigation required?

☐ Yes

☒ No



BASELINE NOISE SURVEY REPORT

PONCE HEALTH SCIENCES UNIVERSITY

MARCH 2019

BY: MORENO ASSOCIATES

PMB 179, 1353 RD.19

GUAYNABO, PUERTO RICO, 00966

RECEIVED
15 MAR 2019
LOA Ingenieros, CSP

BASELINE NOISE SURVEY REPORT

PONCE HEALTH SCIENCES UNIVERSITY

PONCE, PUERTO RICO

PREPARED BY:

MORENO ASSOCIATES

ENVIRONMENTAL AND ENGINEERING CONSULTANTS

MARCH 2019

RECEIVED
15 MAR 2019
LOA Ingenieros, CSP

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APPENDIX

1 COPY OF PROJECT CONCEPTUAL DRAWINGS
2 COPY OF CERTIFICATES OF CALIBRATION OF SOUND LEVEL METER AND ACOUSTICAL CALIBRATOR
3 NOISE SURVEY RESULTS PER STATION
4 PHOTOGRAPHIC LOG OF NOISE SURVEY ACTIVITIES

RECEIVED
15 MAR 2019
LOA Ingenieros, CSP

1.0 Introduction

This report summarizes the results of the noise survey conducted on March 6, 2019, as part of the planning studies being performed for the proposed construction of new structures aimed to improve the current academic offerings of the **Ponce Health Sciences University** (**PHSU**). The **PHSU,** currently owns the structures and land of its campus which are located at state road PR-2, km. 227.2, Ponce, Puerto Rico. **Figure 1** illustrates the project location in a portion of a topographic quadrangle map for Playa de Ponce published by the U.S. Geological Survey.

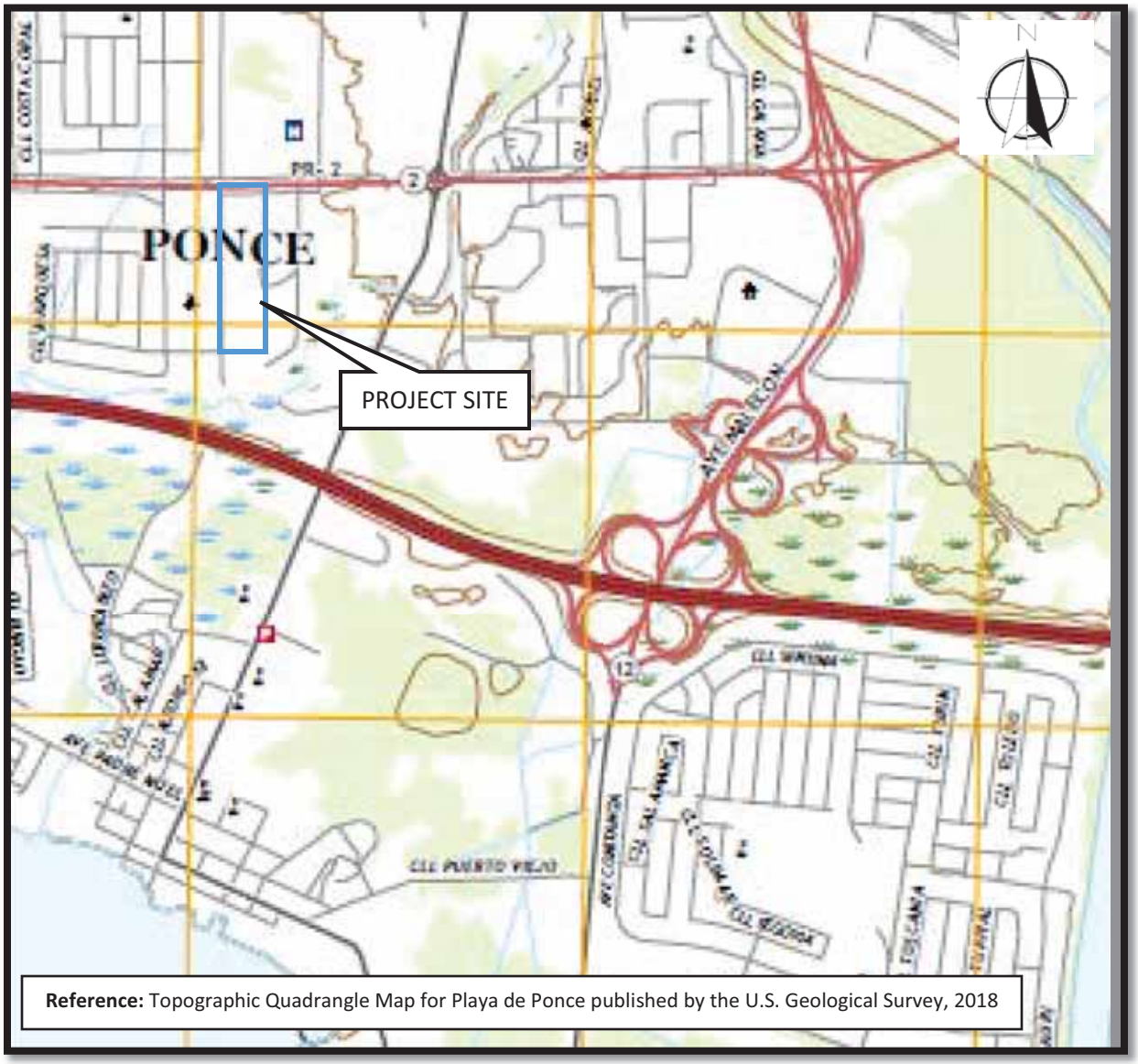


Figure 1: Location Map

The existing structures, although capable of providing support to the **PHSU** current academic needs, were not intended nor designed for their present use since they were built by the **Puerto Rico Development Corporation** (**PRIDCO**) in order to promote the industrial development of the Island. Therefore, they have become obsolete. This condition was exacerbated as a result of the damages caused by Hurricane María. As a result of this situation, and with the mission to enhance and grow the size of the class size, the **PHSU** requested and obtained a conditional authorization from the **Liaison Committee on Medical Education** (**LCME**) to increase the size of its current class size from 90 to 150 students per class. This increase is contingent upon the capacity of the university to provide adequate resources to support the entire student's population. This initiative, will position the **PHSU** as the most attended medical school in Puerto Rico. The physical distribution of the facilities that will be affected by the proposed project is illustrated in **Figure 2,** in an aerial photograph obtained from Google Earth.



Figure 2: Layout of Existing PHSU Campus Subject to Proposed Improvements

In order to attain the above-mentioned goal, the **PHSU** has retained a team of architects, contractors and engineers for the design and construction of the enhanced facilities. As a result of the planned improvements, the footprint of the existing facilities will be increased and rearranged. Copy of drawings for the proposed improvements has been included in **Appendix 1**.

The results of this survey will serve to establish a baseline of the current environmental noise condition of the site, which may be useful for planning purposes. This initial work will serve to characterize the existing noise environment of the project site. Since the **Puerto Rico Environmental Quality Board** (**EQB**) is the local entity with legal authority to enforce noise compliance policies through the application of the **Regulation for Control of Noise Pollution** (May 2011), the results of this survey will be used to draw some general observations.

2.0 Basic Noise Concepts

2.1 Fundamentals of Noise

Noise is usually considered as an unwanted type of sound. Sound, is what we hear when our ears are exposed to small pressure fluctuations in the air. Although there are many ways to generate or cause pressure fluctuations, they are typically the result of a vibrating movement of a solid object. It propagates in the form of waves. From a technical perspective, there is no physical difference between "noise" and "sound". For this reason, the discussions of the technical aspects that govern noise make use of the terms sound and noise interchangeably. Noise can be described in terms of three (3) variables:

- **Amplitude (loud or soft)**

  The loudness of a sound depends on the amplitude of the fluctuations above and below atmospheric pressure associated with a particular sound wave. The mean value of the alternating positive and negative pressure fluctuations is the static atmospheric pressure, which is not a useful descriptor of sound. However, the effective magnitude of the sound pressure in a sound wave can be expressed by the "root mean square" (rms) of the oscillating pressure measured in Pascals, a unit named after Blaise Pascal, a 17th century French mathematician. In calculating the "rms", the values of the sound pressure are squared to make them all positive and time-averaged to smooth out variations. The "rms" is the square root of this time averaged value.

  The quietest sound that can be heard by most humans, which is known as the threshold of hearing, is a sound pressure of about 20 microPascals, and the loudest sounds typically found in our environment range up to 20 million microPascals. Due to the difficulty in dealing with such extreme range of numbers, acousticians use a compressed scale based on logarithms of the ratio of the sound energy contained in the wave related to the square of sound pressures, instead of the sound pressures themselves, resulting in the use of the term "sound pressure level" in decibels (dB). The "B" in dB is always capitalized because is a unit named after Alexander Graham Bell, a leading 19th century innovator in communications. Sound level pressure L_p is defined as:

  $L_p = 10 \log_{10} (p^2 \text{ rms}/p^2 \text{ ref}) = 20 \log_{10} (p_{rms}/p_{ref})$ dB, where p_{ref} = 20 microPascals

Substituting the range of sound pressure values in the equation, results in the threshold of hearing at 20 microPascals at 0 dB and a typical loudest sound of 20 million microPascals is 120 dB.

- **Frequency (pitch)**

  Since sound is a fluctuation of sound pressure, the number of times the fluctuation occurs in one second is called its frequency. In acoustics, frequency is quantified in cycles per seconds, or Hertz (abbreviated as Hz), named after Heinrich Hertz, a famous 19th century German physicist. Some type of sounds, such as whistle, are associated with a single frequency, and are referred to as a "pure tone". More often, however, noise is made of many frequencies, all blended together in a spectrum. Human hearing is adapted to a frequency range of 20 Hz to 20,000 Hz. When the sound spectrum is dominated by many low frequency components, the noise will have a characteristic like the rumble of a thunder.

- **Time Pattern (variability)**

  The third important characteristic of noise it its variation with time. Environmental noise in general derives from a conglomeration of distant noise sources. Such sources may include distant traffic, wind in trees, and distant industrial or farm activities that form part of our daily lives. These distant sources create a low level "background noise" in which no particular individual source is identifiable. This noise is often constant from moment to moment, but varies slowly from hour to hour as natural forces change or as a human activity follows its daily cycle.

It is possible to describe all of these fluctuating noises in the environment using a single number descriptor. This allows to manage measurements, computations, and impact assessments.

2.2 Descriptor of Noise

As earlier indicated, a single number descriptor is capable of defining noise related measurements, and assessment. This terminology is on common use not only in the United States but in other countries around the world. When dealing with noise studies, there are two (2) commonly used noise descriptors. They are:

Hourly Equivalent Sound Level (Leq): describes a receiver's cumulative noise exposure from all events over a one-hour period.

Noise Level that is Exceeded during a 10 % of the Measurement Period (L_{10}): describe the noise environment as the noise level that is exceeded a 10% during the time of data collection.

Even though that both of the mentioned descriptors of noise were collected as part of this survey, the L_{10} one is the one pertinent for its discussion in this report since it is the one used by the **EQB** to enforce its regulation.

3.0 Regulatory Background

As previously indicated, the **EQB** is the local agency empowered by law to enforce noise related regulations. **EQB** regulations requires that noise levels shall be recorded for a minimum of 30 minutes per location in order to be compatible with the provisions of the **Regulation for the Control of Noise Pollution** (**RCNP**). Current regulation establishes maximum allowable noise level which that are a function of the analysis of both the emission source and the receiver. This allows to determine if a particular location is exposed to excessive noise levels capable of causing adverse impacts on the receiver. **Table 1**, which was obtained from the **RCNP,** summarizes the maximum noise levels permitted between noise interacting zones. It shall be indicated that these exterior noise levels.

Table 1: Maximum Sound Levels between Zones as per EQB Regulation

Emission Source	Receiving Zones							
	Zone I		Zone II		Zone III		Zone IV	
	Day	Night	Day	Night	Day	Night	Day	Night
Zone I (Residential)	60	50	65	55	70	60	55	50
Zone II (Commercial)	65	50	70	60	75	65	55	50
Zone III (Industrial)	65	50	70	65	75	75	55	50
Zone IV (Tranquility)	65	50	70	65	75	75	55	50

Notes:

1- Indicated sound levels refers to the levels that is exceeded during 10% of the noise measuring period (L_{10})
2- Daytime period comprehends the time between 7:00 A.M. and 10:00 P.M. of any day of the week.
3- Nighttime period comprehends the time between 10:01 P.M. and 6:59 A.M. of any day of the week.
4- These levels may receive an adjustment, provided that it is demonstrated that an existing background condition exceeds the established level. To demonstrate this may require to measure levels at a time at which the operation of the facility is completely halted.

The **U.S. Environmental Agency (EPA**) as well as other government entities have published information pertaining to common noise levels that may be expected as a function of the location of the receiver and its environmental setting. This information is useful to understand the results of this survey in the context of the property location. An example of this type of educational material publicly available has been included in **Figure 3** for illustrative purposes (https://www.epa.nsw.gov.au/~/media/EPA/Corporate%20Site/resources/noise/130127NGLGPart2.ashx).

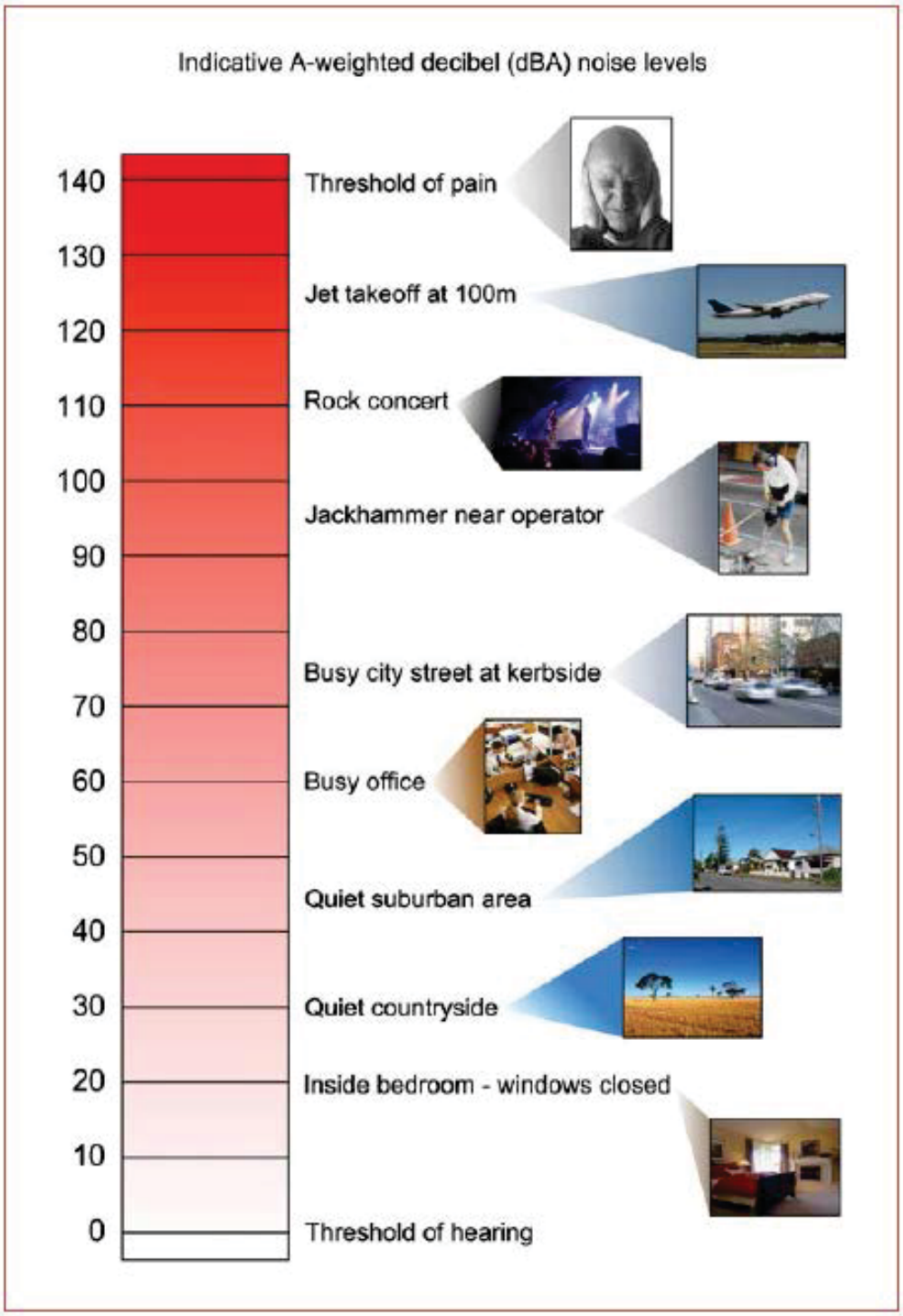


Figure 3: Indicative A-Weighted Noise Levels (dBA)

A receiver impacted by noise levels exceeding the regulatory maximum, may be exposed to administrative and legal actions from the **EQB**. Also, the knowledge of these noise levels serves in the planning of projects that may be located close to noise sensitive locations. It is important to indicate that this is an environmental regulation which has a different scope than the ones applicable for worker exposure to high noise environments established by the **Occupational Safety and Health Administration** (**OSHA**).

4.0 Screening for Establishing Noise Monitoring Stations

The first step in performing a noise survey, is to define the noise sensitive land uses adjacent to the property subject of the investigation. The identification of locations such as residential areas, hospitals, schools close to the property or potential noise emission source, usually suggests the need to establish a noise monitoring station at that particular location.

For this project, is was observed that no residential uses exist adjacent to this site. As a matter of fact, the closest residential use is found toward the southeast side of the **PHSU** campus, at an approximate distance of 100 meters (Parque Monterrey III). State road PR-2 and a marginal street bounds the site towards the north, while the National Guard and additional **PHSU** facilities are observed to the west side boundary. The south boundary is currently vacant.

In consideration of the site conditions, it was deemed appropriate to establish one noise monitoring station at each of the property boundaries for a total of four (4). The location of the monitoring stations as well as nearby land uses has been illustrated in **Figure 3**.

5.0 Existing Noise Measurements

Existing ambient noise levels were characterized by direct measurement at each side of the property as indicated in the previous section on March 6 and 7, 2019. The determination of the existing noise levels provides valuable information regarding to the current noise environment of the property and serves to identify external sources of noise as well as to identify nearby areas sensitive to excessive noise levels originated from the project site. The knowledge of this information may be used in the planning for the location of potential sources of noise pollution, away from sensitive adjacent or nearby sensitive area. Noise measurements were made at each of the monitoring stations using an ANSI Standard S1.4 compliant sound level meter. Prior to the noise monitoring event, equipment calibration traceable to the **U.S. National Institute of Standards and Technology** (**NIST**) was performed using an acoustical calibrator. The calibrator and the sound level meter calibration certificates are included in **Appendix 2**. This calibration is performed on an annual basis.

Measurements of noise were made using a microphone protected with a windscreen and mounted on a tripod at a height of 4 to 6 feet above the ground. The microphone arrangement was made in a way that served to characterize the exposure of the site to the principal noise sources found near the area. Special care was taken to minimize acoustic shielding from structures such as walls and fences. Although the noise descriptor of interest is L_{10} as per the **EQB** regulation, additional descriptor such as L_{eq} was also determined.

Results of the existing ambient noise measurements have been summarized in **Table 2**. They will constitute the basis for determining existing noise conditions at the property subject of this survey.

The location of each of the noise monitoring stations with its corresponding measured L_{10} noise levels has been illustrated in **Figure 4.** Copy for each of the noise measurements stations reports has been included in **Appendix 3. A summary of** major observations made at each one of the monitored stations have been included in **Table 2** while the results of the noise survey are summarized in **Table 3**. Photographs of each one of the noise monitoring stations are included in **Appendix 4.**



Figure 4: Location Map of Noise Monitoring Stations

Table 2: Description of Noise Survey Stations General Observations

Station ID	Description of the Area
PHSU-1	This station was located in the north boundary of the property facing state road PR-2. This roadway is part of the Strategic Highway Network of Puerto Rico. Vehicular traffic noise is highly noticeable at this station as expected, given its proximity to this source of noise. The noise survey during daytime was performed between 1:45 P.M. through 2:15 P.M. For the nighttime period, the surveyed data collection was performed between 10:01 P.M. and 10:31 P.M. (NAD 83 site coordinates are: N= 217,973.03, E= 180,327.96.)
PSHU-2	This station was located approximately in the middle of the west boundary. Access to the PHSU as well as other buildings located within this area are made through an internal road that runs parallel to the west boundary that ends in the marginal street near PR-2. A National Guard facility is also observed at this side of the property. The station was located within the parking lot used by students. Vehicular traffic noise is perceived highly attenuated at this station. For the daytime part of the survey, data collection was performed between 2:20 P.M. through 2:51 P.M. During the nighttime period, the survey was performed between 10:35 P.M. through 11:05 P.M. (NAD 83 site coordinates were: N= 217,850.90, E= 180,300.98.)
PHSU-3	This station was located toward the south boundary of the property facing a vacant lot. It is located near the Wellness Center (building M). As with the previous station, although traffic noise can be perceived at this location, it is barely noticeable, while noise caused by the wind blowing through the trees and birdsong are highly noticeable. Occasionally, the noise caused by the entrance/exit of vehicles to the building parking lot is also noted. Noise survey for the daytime was performed from 2:56 P.M. through 3:26 P.M. while for nighttime period noise was surveyed from 11:11 P.M. through 11:42 P.M. (NAD 83 site coordinates are: N= 217,694.37, E= 180,318.19.)
PHSU-4	This station was located toward the east boundary of the property. A Pediatric Emergency operated by the San Lucas Hospital, building O of the PHSU and an industrial lot owned by Rubber Gasket Co. of Puerto Rico are located at this side of the property. All of them appear to be in operation during the time of the noise survey performance. It is interesting to note that there are various Air Conditioning compressors located near this side of the building. The noise caused by its operation was noticeable during the daytime survey period. As with monitoring Station PHSU-2, occasional vehicular traffic noise can be perceived at this location. Noise survey for this station was performed from 3:36 P.M. to 4:07 P.M. for daytime and from 11:46 P.M. through 12:17 A.M. during the nighttime period. (NAD 83 site coordinates are: N= 217,852.84, E= 180,364.85.)

Table 3: Noise Survey Results

Station ID	Survey Results		EQB Standard		Difference	
	Day	Night	Day	Night	Day	Night
1	65.8	66.0	55	50	+ 10.8	+ 11.0
2	52.4	51.9	55	50	- 2.6	+ 1.9
3	56.7	48.4	55	50	+ 1.7	- 1.6
4	58.3	49.3	55	50	+ 3.3	- 0.7

Important Notes:

1- Colum identified as EQB Standard refers to the RCNP most critical noise level which applies to a Tranquility Zone (IV) applicable to clinics, elderly homes, hospitals, nurseries, courtrooms, and schools. However, these levels apply to external activities and is being added as a reference for comparison purposes.
2- There are no residential uses adjacent to the project site.

The results of the noise survey monitoring activities have been summarized and illustrated in **Figure 5.**

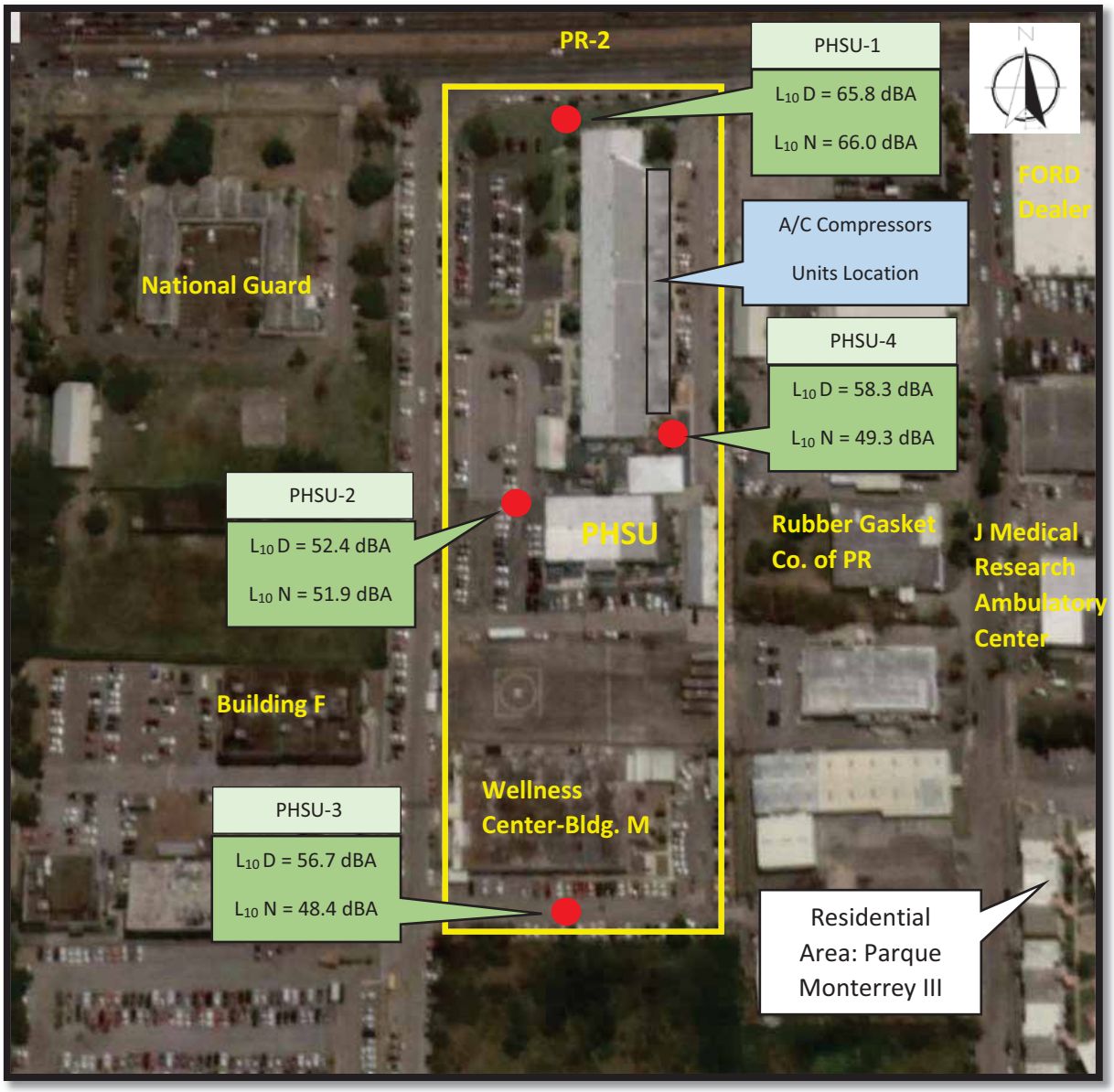


Figure 5: Graphical Illustration of Noise Survey Results

6.0 Analysis of Noise Survey Results

A review of the results of the noise survey allows to reach to the following observations:

- In general, existing noise environment are consistent to those associated with properties located in urbanized areas, in particular the parts of the property that faces a highway corridor (such as the one of PR-2). The Federal Highway Administration (FHWA) has established through studies, that the noise levels perceived by a receiver located close to a highway is reduced as a function of the distance between the highway and receiver, among other factors such as the volume of vehicular traffic, type of soil, speed of vehicles, types of vehicles (autos, trucks, etc.), and traffic volume (FHWA, **Noise Barrier Design,** February 2000). This means that the larger the distance, the greater the noise reduction achieved by the attenuation caused by the mentioned factors.

- Measured L_{10} noise levels results varied from 52.4 dBA to 65.8 dBA during the daytime period.

- Measured L10 noise levels results varied from 48.4 dBA to 66.0 dBA during the nighttime period.

- The highest noise level was measured at noise monitoring station PHSU-1 both during daytime and nighttime. However, its variability is basically non-existent since the value ranged from 65.8 to 66.0 dBA. These results serve to provide support to the fact that this part of the property is impacted by the noise caused by the noise generated by the vehicular traffic of PR-2.

- The lowest daytime L_{10} noise level was measured at noise monitoring station PHSU-2.

- The lowest nighttime L_{10} noise level was measured at noise monitoring station PHSU-3.

- Noise generated by vehicular traffic along **PR-2** constitute the predominant source of noise within the area. This condition was exacerbated as a result of the noise caused by vehicles crossing over a pneumatic line attached to a traffic counting device installed exactly in front of the property. Observations of the variations in noise measurements during actual surveying activities allow to estimate that this device caused an increase of approximately 1 to 2 dBA.

- All noise measurements from this survey reflect actual exterior conditions. Interior noise levels are expected to be approximately 10 dBA lower due to the absorption of sound by the building walls and windows. The actual noise reduction will be a function of the Sound Transmission Class (STC) of the building construction materials.

- There is a good correlation between spatial location of the monitoring stations and actual the result of the noise measurements.

Based on the results of the noise survey, it is concluded and/or recommended that:

- The existing noise levels are consistent with those located in an urban environment affected by external noise generating sources of noise such as state road PR-2, internal operation of access roads and mechanical equipment (A/C units).
- There are no residential uses adjacent to the project site that may result directly impacted during the proposed construction activities.
- The proposed project will not cause a change in the current land use for the area but may result in a limited increase in its intensity.
- To the extent possible, construction activities shall be conducted during the daytime period to minimize negative impacts on existing adjacent land uses such as the emergency room operation observed toward the east boundary of the property.
- The installation of new sources of noise such as A/C, compressor, etc., shall be ideally located far from the property boundaries, and if possible, provided with enclosures capable of reducing their noise emission levels. The equipment manufacturer may be consulted about this subject.
- The possibility of using windows with thick glasses is recommended to help in the mitigation of noise levels to be perceived by the building occupants, in particular those facing the north boundary (toward PR-2).

7.0 References

- Puerto Rico Environmental Quality Board, Regulation for the Control of Noise Pollution, May 2011

- U.S. Environmental Protection Agency, Noise Guide for Local Government

- U.S. Federal Highway Administration, Noise Barrier Guide, February 2000

- U.S. Geological Survey, Topographic Quadrangle Map, Playa de Ponce, 2018

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APPENDIX

APPENDIX 1

COPY OF PROPOSED CONCEPTUAL DRAWINGS

EXISTING CAMPUS



ACADEMIC CAMPUS

PROGRAM

A. Clinic / Retail
B. Parking
C. Housing
D. Academic



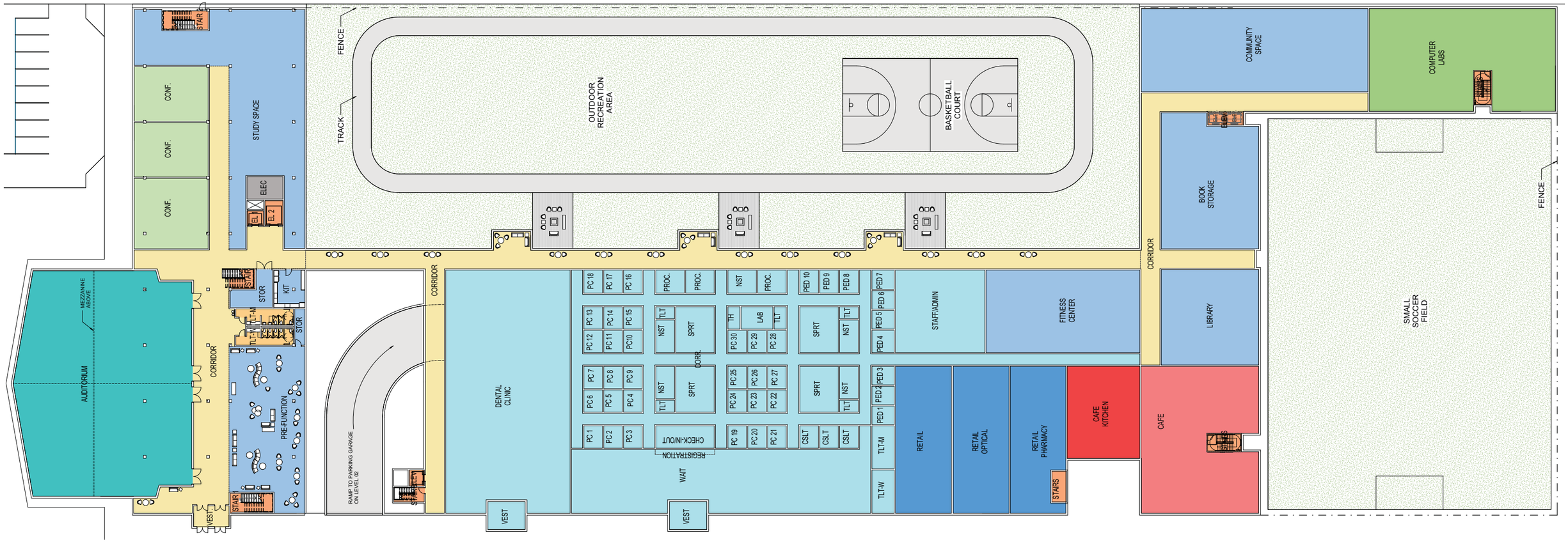
ACADEMIC CAMPUS

PROGRAM

A. Clinic / Retail
B. Parking
C. Housing
D. Academic



FLOOR PLANS - LEVEL 01



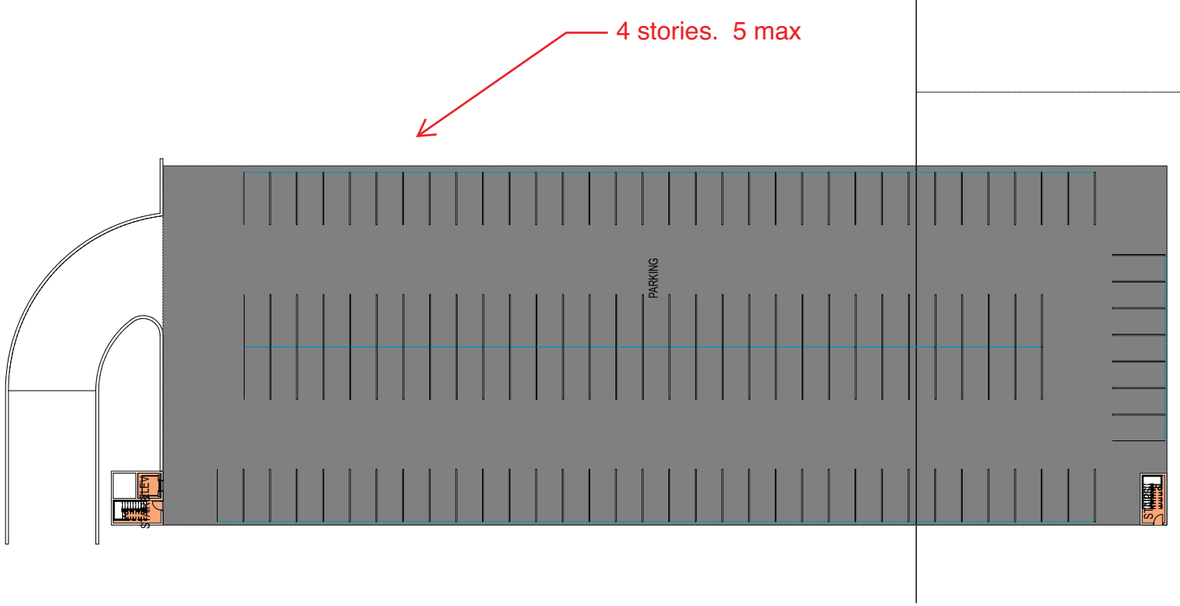
SPACE USE LEGEND **LEVEL 01**

A - AMENITY	9,763 SF	G - AMENITY	3,658 SF	H - AMENITY	11,738 SF
A - AUDITORIUM	10,748 SF	G - BUILDING CIRCULATION	321 SF	H - BUILDING CIRCULATION	501 SF
A - BUILDING	486 SF	G - CAFE KITCHEN	1,931 SF	H - CAFE	4,708 SF
A - BUILDING CIRCULATION	825 SF	G - CLINIC	33,002 SF	H - LAB	5,300 SF
A - CLASSROOM	3,828 SF	G - PUBLIC	6,418 SF	H - PUBLIC	3,088 SF
A - PUBLIC	5,422 SF	G - RETAIL	6,952 SF		
A - SUPPORT	232 SF				

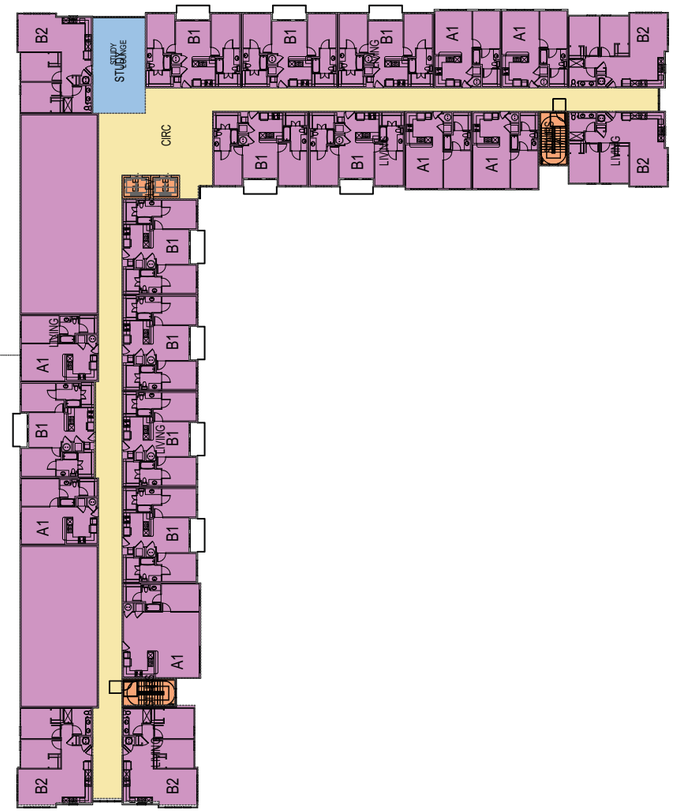
FLOOR PLANS - LEVEL 02



4 stories. 5 max



4 stories. 5 max



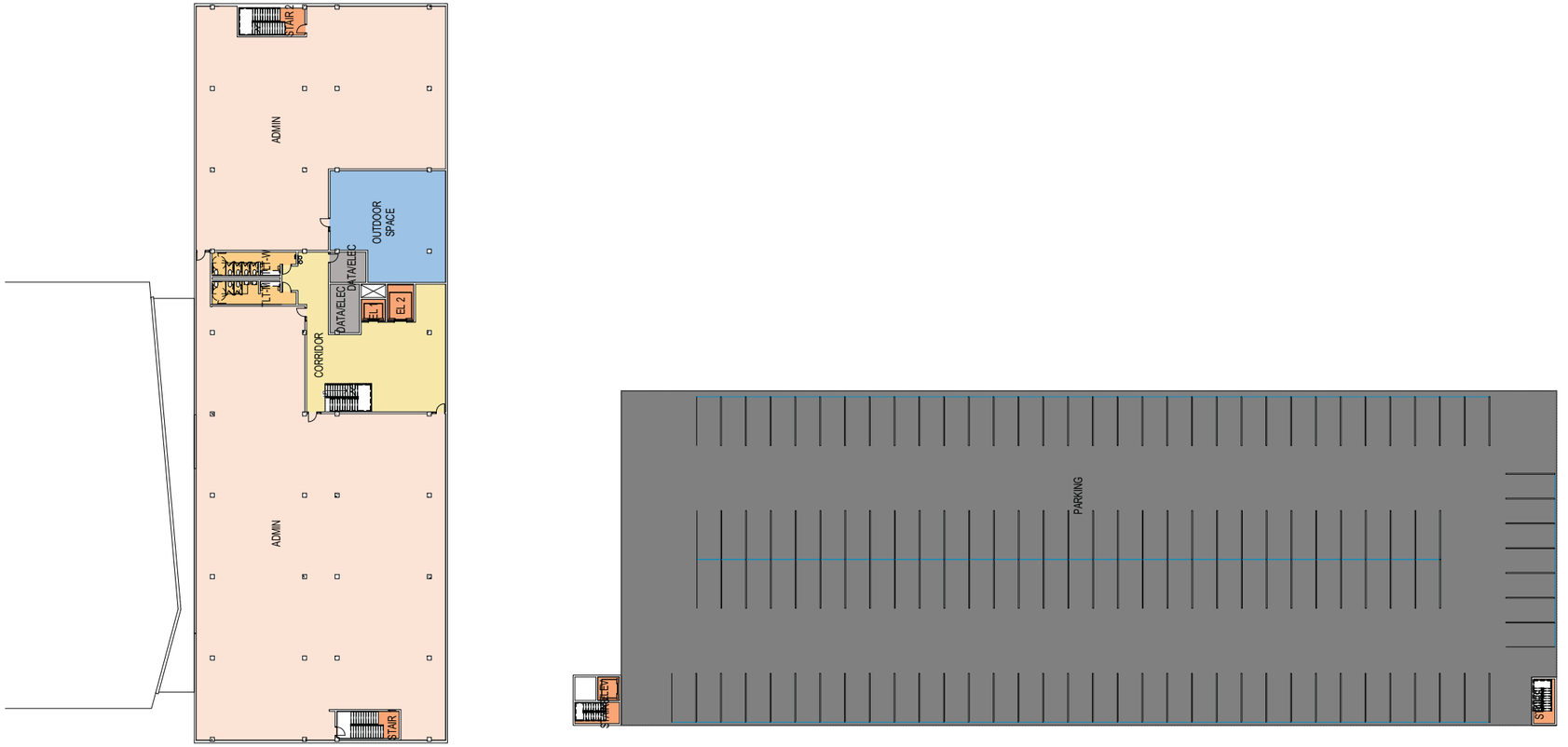
4 stories. 5 max

SPACE USE LEGEND

LEVEL 02

A - ADMIN/ OFFICES	1,721 SF
A - AMENITY	1,864 SF
A - AUDITORIUM	3,206 SF
A - BUILDING	581 SF
A - BUILDING CIRCULATION	676 SF
A - CLASSROOM	12,399 SF
A - PUBLIC	3,788 SF
A - SUPPORT	339 SF
G - BUILDING CIRCULATION	327 SF
G - PARKING	42,369 SF
H - AMENITY	598 SF
H - BUILDING CIRCULATION	521 SF
H - LIVING	20,367 SF
H - PUBLIC	4,173 SF

FLOOR PLANS - LEVEL 03

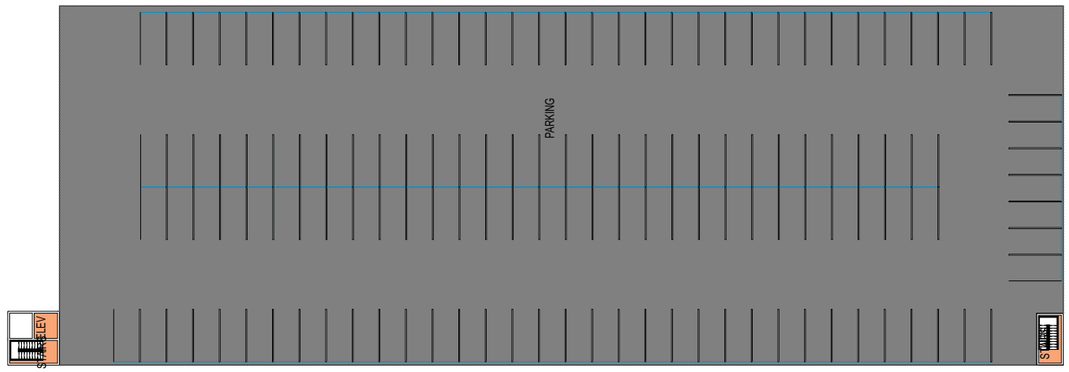


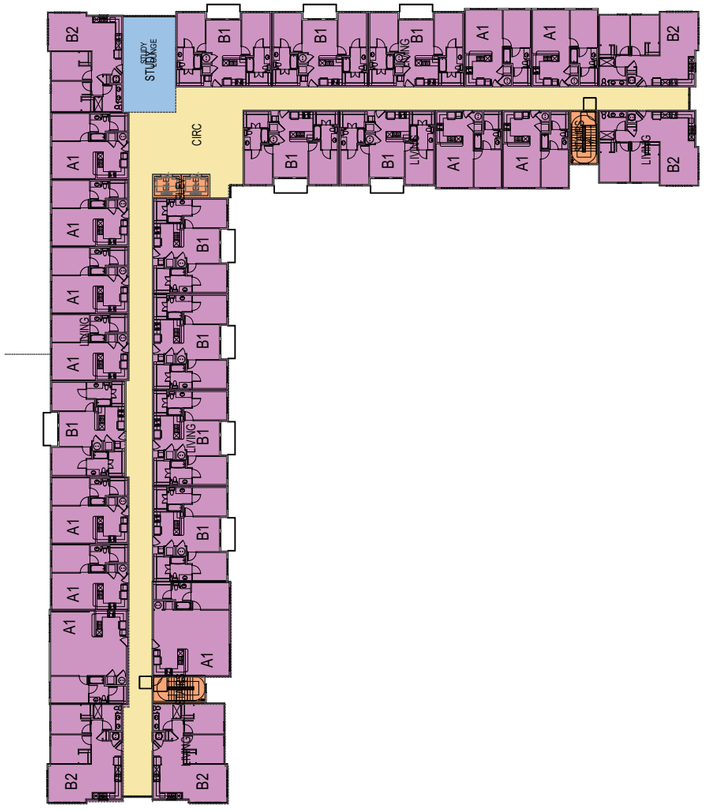
SPACE USE LEGEND **LEVEL 03**

A - ADMIN/ OFFICES	19,125 SF
A - AMENITY	1,585 SF
A - BUILDING	479 SF
A - BUILDING CIRCULATION	676 SF
A - PUBLIC	1,935 SF
A - SUPPORT	339 SF
G - BUILDING CIRCULATION	327 SF
G - PARKING	42,369 SF
H - AMENITY	598 SF
H - BUILDING CIRCULATION	521 SF
H - LIVING	20,367 SF
H - PUBLIC	4,173 SF

FLOOR PLANS - LEVEL 04







SPACE USE LEGEND

LEVEL 04

A - ADMIN/ OFFICES	1,199 SF
A - AMENITY	834 SF
A - BUILDING	581 SF
A - BUILDING CIRCULATION	676 SF
A - CLASSROOM	2,674 SF
A - PUBLIC	3,721 SF
A - SUPPORT	335 SF
A - TEACHING LAB	13,613 SF
G - BUILDING CIRCULATION	327 SF
G - PARKING	42,369 SF
H - AMENITY	598 SF
H - BUILDING CIRCULATION	521 SF
H - LIVING	20,367 SF
H - PUBLIC	4,173 SF

EXTERIOR DESIGN NARRATIVE

The Auditorium Façade

The auditorium façade will be composed of high-pressure laminate panels of varying size and color. The north portion of the auditorium will display PHSU signage and graphics clearly visible from the Ponce By Pass that serve as the identifier for main campus.

The Parking Structure

The parking structure is envisioned to be a concrete structure with retail and clinic space below.

Campus Housing Façade

The facades on the campus housing will be comprised of high-pressure laminated panels in varying size and color punctuated with hurricane resistant window systems to allow for naturally day lit interior spaces and ventilation.

Exterior Canopies and Walkways

A cantilevered steel structure canopy at the main level of the clinic will invite visitors into the clinic entrance on the north and University entrance on the west.

A covered walkway will connect the clinic to campus housing with a covered walkways that runs through the parking structure. A direct path will allow students to travel back and forth and provides quick and easy access to educational spaces.

Continuous pedestrian walkways will divide the expansive landscaped campus. Precast pavers will create the walking paths that provide ample circulation and encourage student interaction on campus.

Roof Membrane

A Thermoplastic Polyolefin (TPO) roof membrane system is envisioned for all major roof expanses. A structural frame will support a grid of photovoltaic panels suspended above the roof membrane.

- Mechanically attached or fully adhered single ply, 60 mil, TPO membrane over extruded polystyrene insulation board.
- Recovery board between roof membrane and insulation.
- Tapered insulation or sloped structure with a minimum slope of ¼" per 1' – 0".
- Vapor barrier at deck side of insulation.

The Auditorium roof design will include a green roof, sedum system with synthetic drainage. Native plantings are envisioned to have a media depth of 2 ½ - 4 inches.

Primary Exterior Wall Types

Wall Type W-1 Precast Concrete Frame with glazing and Trespa high-pressure laminate panel infill

Wall Type W-2 Aluminum Storefront Glazing System

Wall Type W-3 Trespa high-pressure laminate panel

Wall Type W-4 Trespa high-pressure laminate panel with glazing and polycarbonate infill

Wall Type W-5 Precast panels with punched openings

Wall Type W-6 Fabric screen

Exterior Façade Materials

Precast Concrete Wall Panels- 40% of exterior
- Wall panels, sizes will vary
- Smooth finish, painted
- Panels could range from 4"-8" thick

Glass- 20% of exterior
- Aluminum storefront system includes high performance 1" insulated glazing units.
- Low E coated
- Low reflectivity

Polycarbonate- 15% of exterior
- Impact resistant to hurricane force winds
- Delivers diffused light and protects against UV rays

High-pressure laminate panel- 25% of exterior
- Trespa high-pressure compact laminate panels.
- Various size and colors
- Concealed fastener attachment



SECTION 7: STRUCTURAL NARRATIVE

7.1 Structural Design

7.2 Structural System

7.3 Structural Criteria

STRUCTURAL SYSTEMS

STRUCTURAL DESIGN

General:

The project will be designed to use the 2016 Puerto Rico Building Code which is based on the 2009 International Building Code.

Typical floor live loading is 50 PSF for classrooms/offices and 80 PSF for corridors above the first floor in accordance with ASCE 7-05. Mechanical rooms will need to be designed based on the type of equipment used and the layout. Heavier live loads on the prder of 150 psf in mechanical rooms are anticipated. Uniform Live Loads of 100 psf or less will be reduced as permitted by the building code. Live loads exceeding 100 psf will be reduced in design of columns and supporting foundations as permitted by the Building Code.

Superimposed dead and miscellaneous loading is as follows:

Ceiling allowance	5 psf
Ductwork and piping allowance - general	10 psf

Floors will be designed for a 1000 pound point load to be applied on any 2.5 square foot floor area or the live loadings as noted, whichever is the most stringent.

Current vibration criteria is as per AISC Design Guide 11 and is limited to a peak acceleration of 0.5%g as for a typical classroom/office.

Design for wind: The drift (sway) limitation is not specified by the building code. From experience, buildings designed within the limit of h/500 rarely disturb occupants.

The Exposure Classification considers the influence of the adjacent terrain and adjacent buildings on the wind approaching the building. Rough terrain reduces wind loading.

Due to their function, some buildings must stay in operation during high wind periods and endure little or no damage. Examples include health care facilities with surgery or emergency treatment facilities, fire, rescue and police stations, jails and detention facilities, chemical plants, and theatres. The Importance Factor increases the design wind loading for these building types. The basic level is 1.0.

Design for seismic: The Site Classification considers the type and density of the soil below the building. The lateral movement of rock during a seismic event is different from that of softer soils. The final Site Classification shall be determined by the geotechnical engineer. For unknown conditions at the site ASCE 7 recommends utilizing a site classification of site class D. Further geotechnical testing is recommended to clarify the site conditions including liquefaction, soil properties, height of water table earth pressure on retaining walls, foundation recommendations and any anticipated settlements.

During an earthquake, the ground moves laterally and to a lesser extent vertically. These movements are translated to ground accelerations and published by the United States Geological Survey, October 29, 2003, as Ss and S1.

Drift (sway) limitations are specified by the building code and depend on the usage of the building.

The importance Factor serves the same purpose as discussed under the wind loading parameters.

STRUCTURAL SYSTEMS

STRUCTURAL SYSTEM:

Foundation System:

The primary foundation for the building columns and reinforced concrete shear walls are anticipated to utilize drilled piers interconnected with grade beams to tie the tops of the drilled piers together. For the single story clinic, shallow foundations for the building columns may be an appropriate foundation solution.
Slab on grade construction will consist of a 5 inch thick normal weight concrete slab reinforced with 6 x 6 W5xW5 WWR over 15 mm vapor retarder on 6" compacted granular fill. A turned down edge will be provided at the slab perimeter.

Typical Floor: The gravity system consists of 3" thickness of normal weight concrete on 2" galvanized metal deck supported on composite steel beams. The floor system is supported on cast in place concrete columns and cast in place concrete walls. Refer to figure 1.

Roof Structure: The gravity system consists of normal weight concrete on galvanized metal deck supported on composite steel beams.

Lateral System: The proposed lateral system consists of normal weight concrete shear walls and they will be detailed as special reinforced concrete shear walls. Based on current project information this building is categorized as Seismic Design Category 'D'.

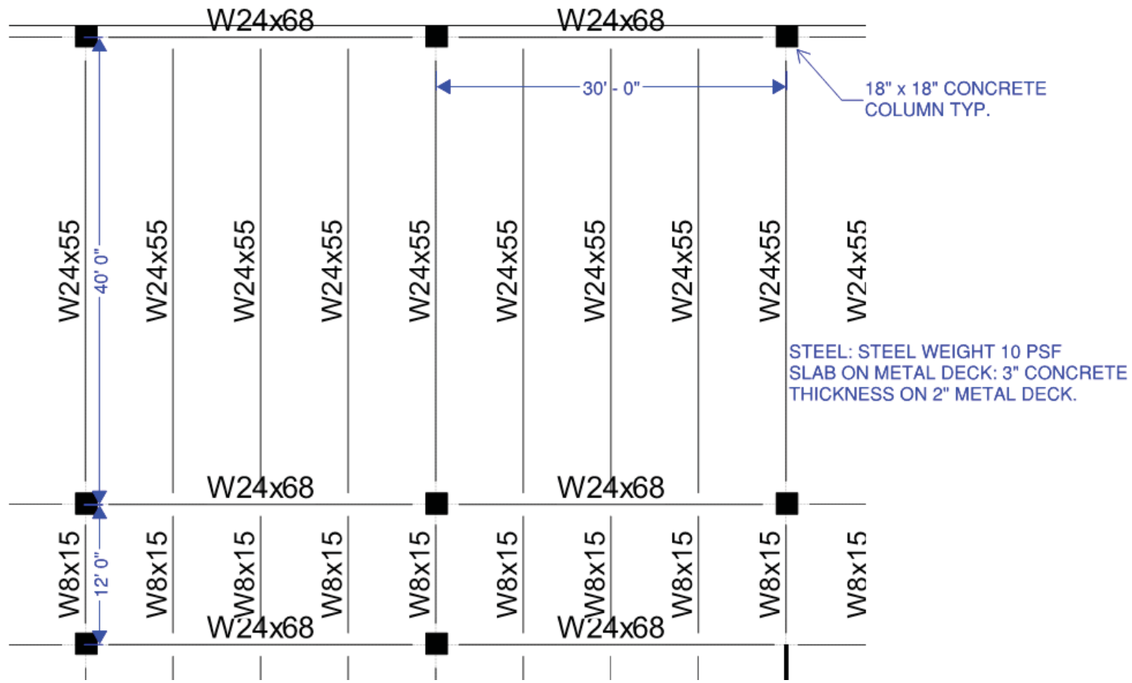


Figure 1 - Typical Framing at Elevated Floor

STRUCTURAL SYSTEMS

STRUCTURAL CRITERIA

Codes

International Building Code, 2009, as modified by Puerto Rico, 2016, amendments

ASCE 7, "Minimum Design Loads for Buildings and Other Structures," 2005

AISC 360, "Specification for Structural Steel Buildings," 2005

ACI 318, "Building Code Requirements for Structural Concrete," 2008

ACI 530, "Building Code Requirements for Masonry Structures," 2008

ACI 530.1, "Specifications for Masonry Structures," 2008

General

Building Occupancy Category:	III

Deflection & Drift Limits

Steel Composite Interior:	
Construction Dead:	< 1"
Post Composite Live	Span / 360 < 1"
Post Composite Superimposed:	Span / 300
Net Total:	Span / 240
Steel Composite Spandrel:	
Construction Dead:	< 1"
Post Composite Live	Span / 720 < 0.25"
Post Composite Superimposed:	Span / 600 < 0.375"
Net Total:	Span / 480
Steel Non-Composite Interior:	
Dead:	< 1"
Live	Span / 360 < 1"
Net Total:	Span / 240
Steel Non-Composite Spandrel:	
Dead:	< 1"
Live	Span / 720 < 0.25"
Net Total:	Span / 480
Elevators:	
Machine beam supports	Span / 1666 (excluding impact), Span / 833 (including impact)
Divider beams	1/8" laterally TBC w/elevator manufacturer
Lateral Wind Drift:	Allowable inter story drift ratio: Δ_a = H / 500 = 0.002 ≤ 0.375" for wind load with a 10 year MRI.
Lateral Seismic Drift:	Allowable inelastic inter-story drift ratio: Δ_a = 0.015hsx

Vibration Criteria

Guideline:	AISC Design Guide No. 11 "Floor Vibrations Due to Human Activity"
Typical Offices and Labs:	
Activity:	Walking
Criteria:	0.5% g
Damping: 2%	
Dead / Live / Collateral Load:	4 psf / 4 psf / 8 psf

Material

Concrete:	
Typical:	f`c = 4000 psi, normal weight
Slabs on Grade:	f`c = 4000 psi, normal weight
Columns:	f`c = 4000 psi, normal weight
Elevated Concrete Floor:	f`c = 4000 psi, normal weight
Slab on Steel Deck:	f`c = 3500 psi, normal weight

STRUCTURAL SYSTEMS

Masonry:	f'm = 2000 psi, normal weight
Reinforcing:	
Typical:	A615, Gr. 60, deformed
Structural Steel:	
W:	A992
Angles, Channels, Plates:	A36
HSS: Rectangular	A500, Gr. B
HSS: Round	A500, Gr. B (Fy = 42 ksi)
Pipe:	A53, Gr. B
Threaded Rod:	A36
Anchor Rods:	F1554, Gr. 36
Bolts:	A325N
Electrodes:	70 ksi

Geotechnical (Pending Geotechical Report)

Shallow Foundation:	Minimum footing depth: TBD Allowable net bearing: TBD psf
Modulus of Subgrade Reaction:	Sustained load: TBD pci Peak Load: TBD pci

Snow Load (Not Applicable To Puerto Rico)

Ground Snow Load:	N/A
Terrain Category:	N/A
Roof Exposure:	N/A
Exposure Factor:	N/A
Thermal Factor:	N/A
Importance Factor:	N/A

Wind Load

Basic Wind Speed:	V = 145 MPH
Exposure Category:	B
Importance Factor:	IW = 1.15
Enclosure Classification:	Enclosed building GCpi = +/- 0.18
Directionality Factor:	Kd = 0.85

Seismic Load

Mapped Coefficient:	SS = 1.05g (per Puerto Rico amendment)
Mapped Coefficient:	S1 = 0.34g (per Puerto Rico amendment)
Site Class:	D (Assumed from ASCE 7)
Design Coefficient:	SDS = 0.75
Design Coefficient:	SD1 = 0.39
Seismic Design Category:	D
Importance Factor:	IE = 1.25
Seismic System:	Special Reinforced Concrete Shear Walls
R:	5
Ω_o:	2 ½
C_d:	5
Analysis Procedure:	Equivalent Lateral Force

Live Loads

Classrooms/Offices	50 psf (including partitions)
Corridors above first floor	80 psf
Mechanical	150 psf
Roof	20 psf

APPENDIX 2

COPY OF SOUND LEVEL METER AND ACOUSTIC CALIBRATOR CERTIFICATES OF CALIBRATION

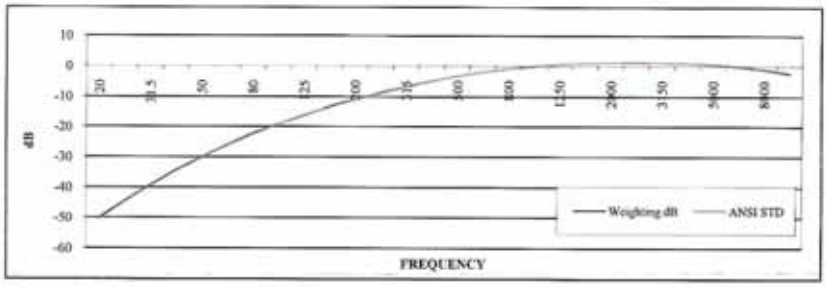
CIH EQUIPMENT COMPANY, INC.

CERTIFICATE OF CALIBRATION

Sound Level Meter Type 2

Manufacturer:	Quest	**Calibration Date:**	April 10, 2018
Model Number:	SoundPro	**Date Due:**	April 10, 2019
Serial Number:	BGR030001	**Temperature:**	73.0 °F
Service Order:	26221	**Relative Humidity:**	55 %
Reference Number:	26221-SoundPro-BGR030001	**Barometric Pressure:**	29.95 inHg

Frequency (HZ)	Meter Actual Display (dB)	Meter Weighting dB	ANSI STD	Tolerance	Relative Difference
20	64.1	-49.9	-50.5	± 3	0.6
25	69.5	-44.5	-44.7	± 3	0.2
31.5	74.8	-39.2	-39.4	± 3	0.2
40	79.7	-34.3	-34.6	± 2	0.3
50	84.0	-30.0	-30.2	± 2	0.2
63	87.9	-26.1	-26.2	± 2	0.1
80	91.8	-22.2	-22.5	± 2	0.3
100	95.0	-19.0	-19.1	± 1.5	0.1
125	97.8	-16.2	-16.1	± 1.5	-0.1
160	100.8	-13.2	-13.4	± 1.5	0.2
200	103.2	-10.8	-10.9	± 1.5	0.1
250	105.3	-8.7	-8.6	± 1.5	-0.1
315	107.4	-6.6	-6.6	± 1.5	0.0
400	109.2	-4.8	-4.8	± 1.5	0.0
500	110.8	-3.2	-3.2	± 1.5	0.0
630	112.1	-1.9	-1.9	± 1.5	0.0
800	113.2	-0.8	-0.8	± 1.5	0.0
1000	114.0	0.0	0.0	± 1.5	0.0
1250	114.6	0.6	0.6	± 1.5	0.0
1600	115.0	1.0	1.0	± 2	0.0
2000	115.2	1.2	1.2	± 2	0.0
2500	115.2	1.2	1.3	± 2.5	-0.1
3150	115.2	1.2	1.2	± 2.5	0.0
4000	115.0	1.0	1.0	± 3	0.0
5000	114.6	0.6	0.5	± 3.5	0.1
6300	114.0	0.0	-0.1	± 4.5	0.1
8000	113.0	-1.0	-1.1	± 5	0.1
10000	111.7	-2.3	-2.5	+ 5 to -∞	0.2



STANDARDS

Manufacturer	Description	Model	Serial Number	Certificate Number	Due Date
GRAS	Piston Phone	42AA	16295	38921	7/5/2018
Stanford Research	Function Generator	DS360	33001	A2621445	10/10/2018

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Calibrated By: _____ Date: 04/10/18

Jonathan Terry - Calibration Technician

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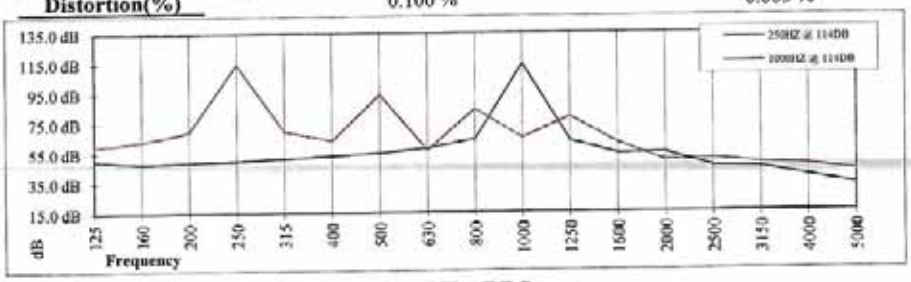
CIH EQUIPMENT COMPANY, INC.

CERTIFICATE OF CALIBRATION

Acoustical Calibrator

Manufacturer:	Quest	**Calibration Date:**	April 10, 2018
Model Number:	AC-300	**Date Due:**	April 10, 2019
Serial Number:	AC300008961	**Temperature:**	73.0 °F
Service Order:	26221	**Relative Humidity:**	55 %
Reference Number	26221-AC300-AC300008961	**Barometric Pressure:**	29.95 inHg

Frequency (HZ)	250Hz @ 114dB, Linear dB	1000Hz @ 114dB, Linear dB
125	59.2 dB	50.0 dB
160	62.6 dB	47.7 dB
200	69.2 dB	48.8 dB
250	114.1 dB	49.8 dB
315	69.4 dB	51.3 dB
400	63.1 dB	52.9 dB
500	93.6 dB	54.8 dB
630	56.6 dB	58.0 dB
800	83.7 dB	64.1 dB
1000	64.5 dB	114.2 dB
1250	78.5 dB	62.6 dB
1600	60.9 dB	54.1 dB
2000	49.1 dB	54.7 dB
2500	50.2 dB	44.9 dB
3150	46.8 dB	44.0 dB
4000	45.5 dB	38.1 dB
5000	41.5 dB	32.5 dB
Center Frequency (HZ)	251.20 Hz	1000.00 Hz
Distortion(%)	0.100 %	0.005 %



STANDARDS

Manufacturer	Description	Model	Serial Number	Certificate Number	Due Date
GRAS	Piston Phone	42AA	16295	38921	7/5/2018
Stanford Research	Function Generator	DS360	33001	A2621445	10/10/2018
Fluke	Multimeter	8840A/AF	407041	A2609434	9/29/2018
PCB	Microphone	377A07	157013	401685	3/28/2019
E-MU	DAQ	EM8740A	874005000064BH	N/A	4/3/2019
Virtins Technology	Spectrum Analyzer	Pro v3.2	B0D1DD6C	N/A	4/3/2019

This report may not be reproduced except in full. CIH Calibration Laboratory certifies that the instrument specified above meets the manufacturer's specifications and was calibrated using standards and instruments also listed where the accuracy is traceable to National Institute of Standards and Technology (NIST), or have been derived from accepted values of natural physical constants or have been derived by the ratio type of self-calibration techniques. The calibration system & records are in compliance with ANSI S1.40-1983(R2006)

Calibrated By: _____ Date: 04/10/18

Jonathan Terry - Calibration Technician

1806 South Highland Ave • Clearwater, FL 33756-1762 • USA • PH: (727) 584-5063 • FX: (727) 581-5921
Toll Free: (888) 873-2443 • Website: http://www.cihequipment.com

APPENDIX 4

COPY OF NOISE MEASUREMENTS RESULTS BY STATION

DAYTIME NOISE SURVEY RESULTS

Session Report

3/7/2019

Information Panel

Name	Ponce Health Sciences University
Start Time	3/6/2019 1:42:04 PM
Stop Time	3/6/2019 2:12:27 PM
Device Name	BGR030001
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	Noise Monitoring Station PHSU-1 Daytime

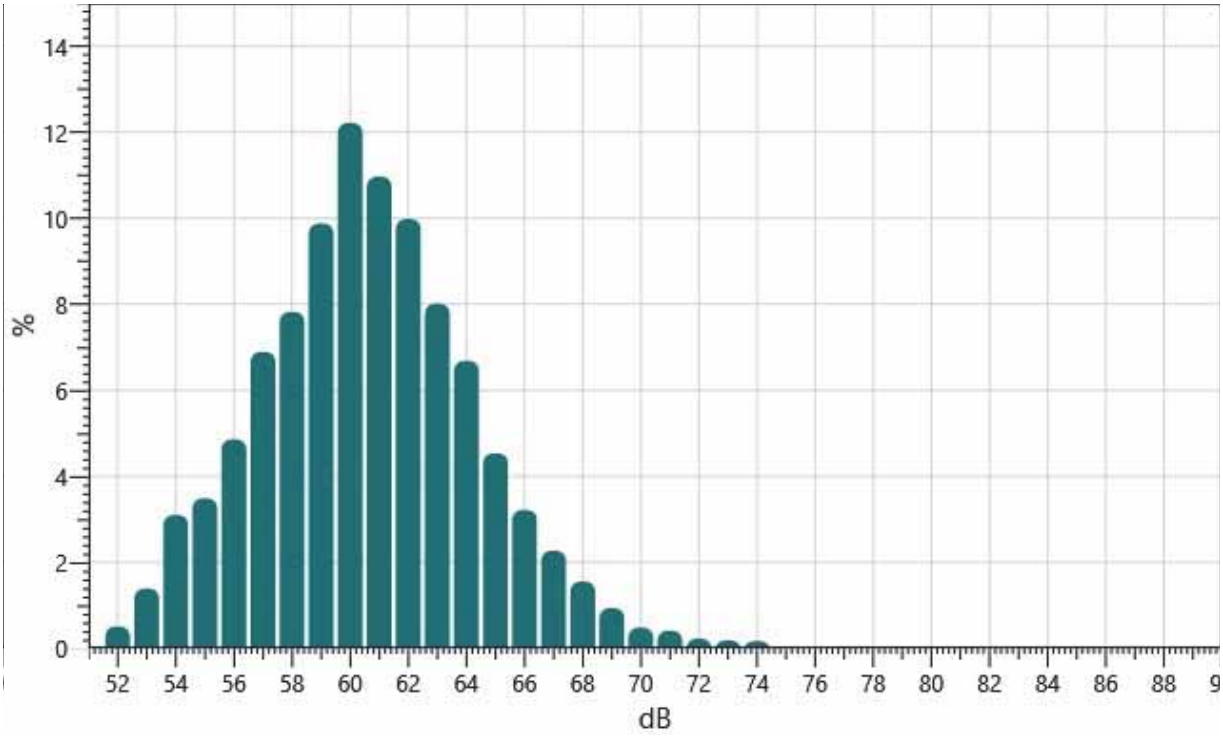
Summary Data Panel

Description	Meter	Value	Description	Meter	Value
L10	1	65.8 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	FAST	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	FAST			



Statistics Chart

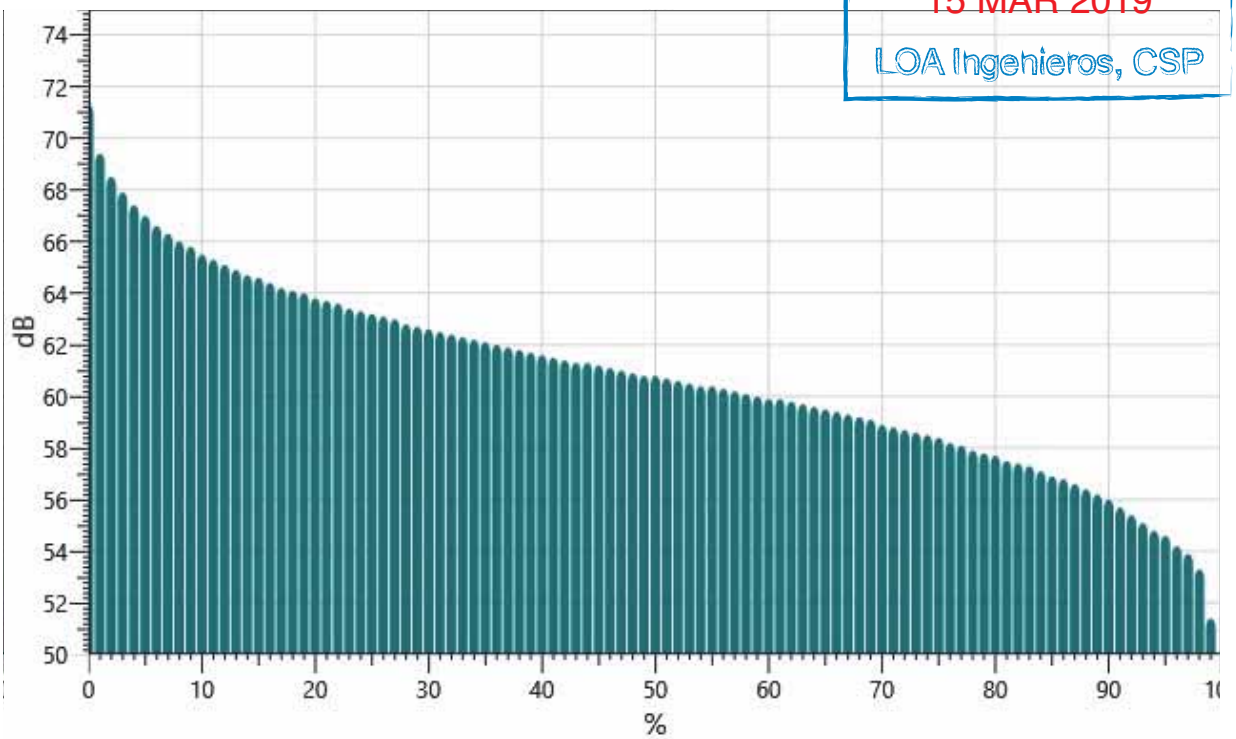
S075_BGR030001_07032019_085819: Statistics Chart



Exceedance Chart

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S075_BGR030001_07032019_085819: Exceedance Chart



Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
51:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.04
52:	0.01	0.03	0.04	0.04	0.04	0.05	0.06	0.06	0.09	0.09	0.51
53:	0.09	0.10	0.09	0.13	0.15	0.16	0.14	0.14	0.16	0.22	1.39
54:	0.23	0.30	0.27	0.30	0.28	0.32	0.32	0.34	0.35	0.38	3.10
55:	0.38	0.35	0.34	0.36	0.36	0.34	0.32	0.33	0.36	0.36	3.49
56:	0.32	0.40	0.45	0.47	0.48	0.51	0.52	0.56	0.54	0.60	4.86
57:	0.62	0.64	0.67	0.68	0.72	0.67	0.70	0.71	0.72	0.77	6.89
58:	0.75	0.82	0.51	0.79	0.81	0.80	0.83	0.82	0.81	0.87	7.82
59:	0.92	0.88	0.87	0.90	0.94	1.07	1.06	1.04	1.09	1.12	9.88
60:	1.12	1.15	1.17	1.19	1.24	1.22	1.25	1.31	1.26	1.29	12.21
61:	1.33	1.34	0.78	1.20	1.18	1.01	0.99	1.03	1.02	1.07	10.96
62:	1.00	1.00	1.04	0.99	1.01	1.02	0.99	1.02	0.99	0.92	9.98
63:	0.85	0.88	0.83	0.79	0.84	0.77	0.77	0.80	0.73	0.76	8.01
64:	0.79	0.86	0.50	0.72	0.69	0.63	0.67	0.64	0.60	0.59	6.68
65:	0.57	0.55	0.48	0.49	0.47	0.44	0.39	0.39	0.38	0.37	4.53
66:	0.37	0.38	0.41	0.32	0.32	0.32	0.30	0.28	0.26	0.25	3.22
67:	0.26	0.30	0.17	0.22	0.24	0.24	0.21	0.21	0.20	0.21	2.27
68:	0.17	0.17	0.20	0.17	0.14	0.17	0.14	0.15	0.13	0.11	1.55
69:	0.11	0.11	0.11	0.11	0.08	0.09	0.07	0.08	0.09	0.08	0.94
70:	0.05	0.07	0.05	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.48
71:	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.04	0.04	0.03	0.41
72:	0.03	0.03	0.03	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.23
73:	0.02	0.02	0.01	0.02	0.02	0.01	0.03	0.02	0.02	0.02	0.19
74:	0.02	0.03	0.02	0.03	0.03	0.02	0.01	0.01	0.01	0.00	0.17
75:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
76:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
77:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.03
78:	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
79:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.03
80:	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.04
81:	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.02

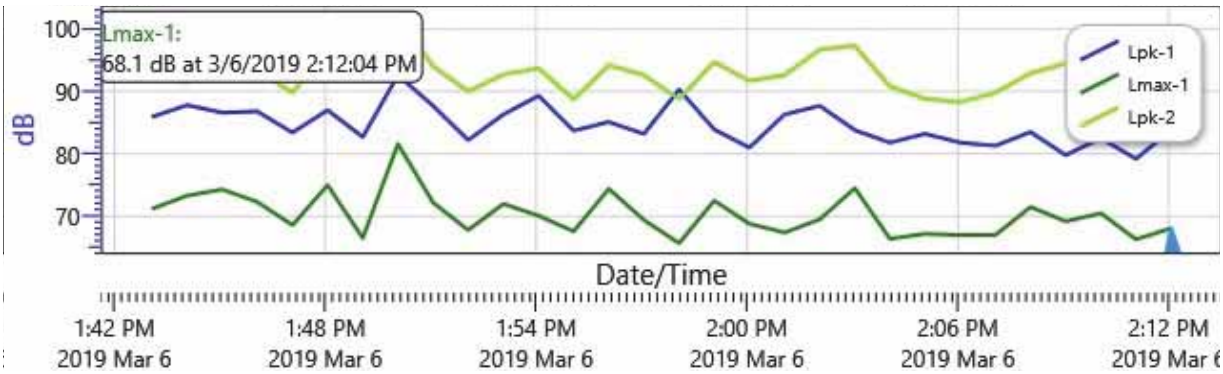
Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		71.3	69.4	68.5	67.9	67.4	67.0	66.6	66.3	66.0
10%:	65.8	65.5	65.3	65.1	64.9	64.7	64.6	64.4	64.2	64.1

20%:	64.0	63.8	63.7	63.6	63.4	63.3	63.2	63.1	63.0	62.8
30%:	62.7	62.6	62.5	62.4	62.3	62.2	62.1	62.0	61.9	61.8
40%:	61.7	61.6	61.5	61.4	61.3	61.3	61.2	61.1	61.0	60.9
50%:	60.8	60.8	60.7	60.6	60.5	60.4	60.4	60.3	60.2	60.1
60%:	60.0	59.9	59.9	59.8	59.7	59.6	59.5	59.4	59.3	59.2
70%:	59.1	58.9	58.8	58.7	58.6	58.5	58.4	58.2	58.1	57.9
80%:	57.8	57.7	57.5	57.4	57.3	57.1	56.9	56.8	56.6	56.4
90%:	56.2	56.0	55.7	55.4	55.1	54.8	54.6	54.2	53.9	53.3
100%:	51.4									

Logged Data Chart

S075_BGR030001_07032019_085819: Logged Data Chart



Session Report

3/7/2019

Information Panel

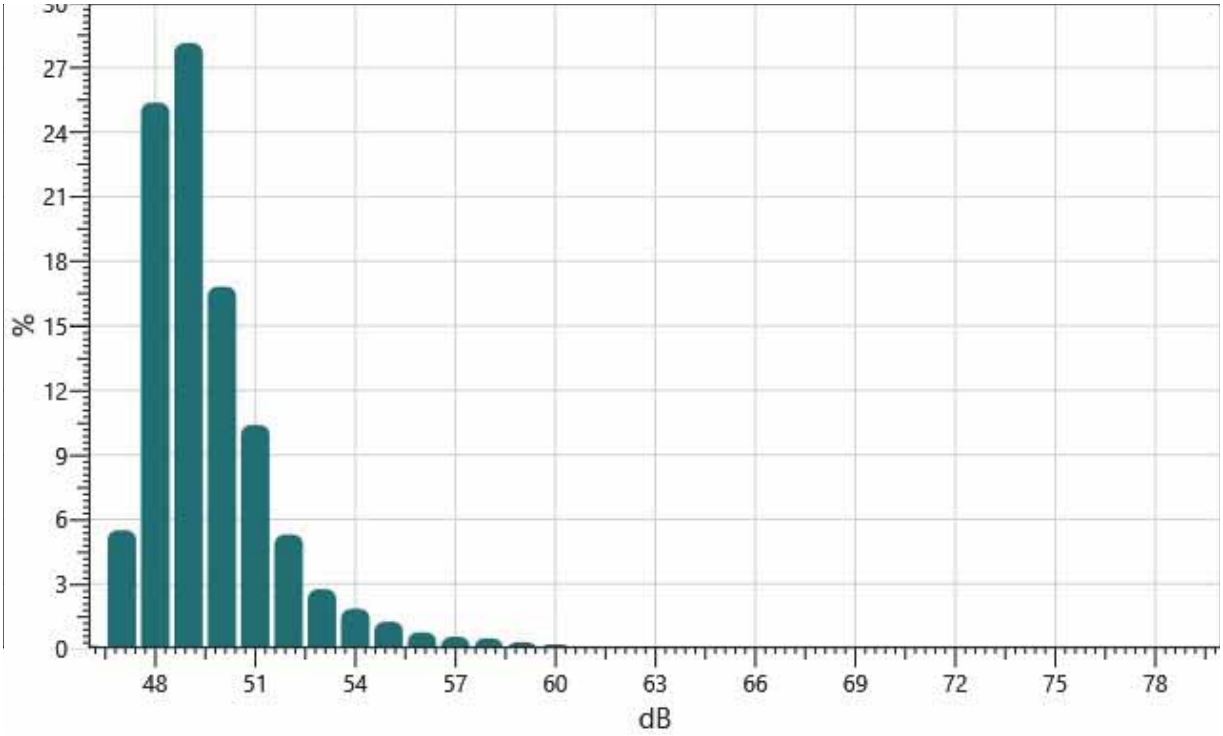
Name	Ponce Health Sciences University
Start Time	3/6/2019 2:17:33 PM
Stop Time	3/6/2019 2:48:38 PM
Device Name	BGR030001
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	Noise Monitoring Station PHSU-2 Daytime

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
L10	1	52.4 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	FAST	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	FAST			

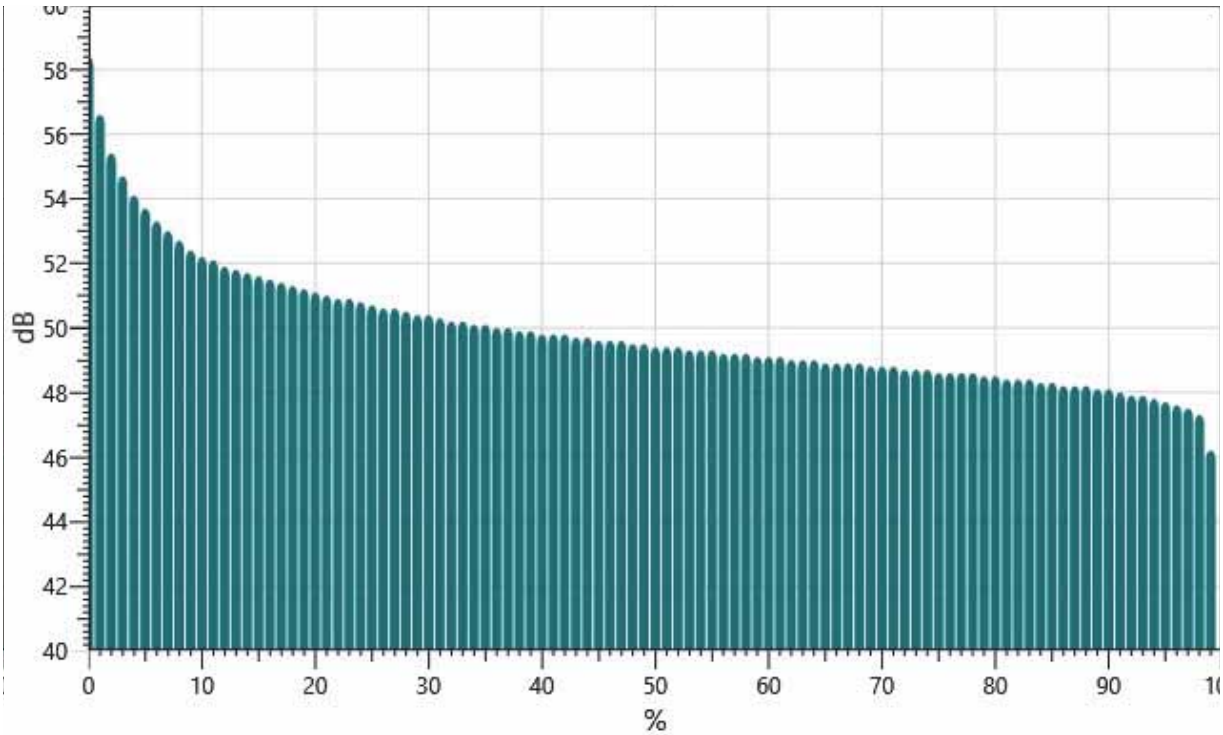
Statistics Chart

S076_BGR030001_07032019_085824: Statistics Chart



Exceedance Chart

S076_BGR030001_07032019_085824: Exceedance Chart



Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
46:	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.03	0.06	0.14
47:	0.08	0.15	0.23	0.27	0.38	0.52	0.71	0.86	1.05	1.24	5.49
48:	1.52	1.68	1.97	2.21	2.43	2.61	2.92	3.17	3.27	3.59	25.37
49:	3.61	2.54	3.23	3.07	2.96	2.86	2.59	2.52	2.46	2.30	28.13
50:	2.18	2.01	1.88	1.83	1.68	1.64	1.53	1.42	1.33	1.29	16.82
51:	1.26	1.18	1.21	1.14	1.07	1.02	0.92	0.89	0.86	0.85	10.39
52:	0.85	0.61	0.61	0.60	0.57	0.45	0.44	0.40	0.39	0.37	5.29
53:	0.36	0.29	0.29	0.28	0.30	0.29	0.26	0.23	0.23	0.20	2.75
54:	0.24	0.21	0.19	0.20	0.20	0.16	0.18	0.17	0.14	0.14	1.84
55:	0.17	0.16	0.14	0.12	0.11	0.12	0.11	0.10	0.10	0.10	1.24
56:	0.10	0.08	0.08	0.07	0.06	0.07	0.08	0.06	0.08	0.07	0.74
57:	0.08	0.06	0.04	0.05	0.04	0.04	0.06	0.05	0.05	0.07	0.54
58:	0.07	0.06	0.04	0.05	0.04	0.05	0.05	0.04	0.03	0.04	0.46
59:	0.03	0.03	0.03	0.02	0.02	0.03	0.03	0.04	0.02	0.02	0.28
60:	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.19
61:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.08
62:	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.07
63:	0.01	0.01	0.02	0.01	0.01	0.00	0.01	0.01	0.01	0.01	0.09
64:	0.01	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.03
65:	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.02
66:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
67:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
68:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
69:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
70:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
71:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
72:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

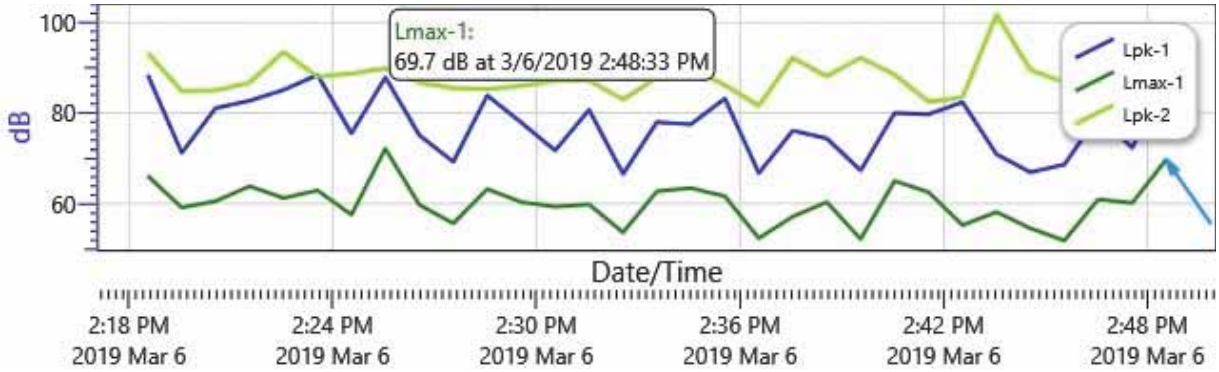
Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		58.4	56.6	55.4	54.7	54.1	53.7	53.3	53.0	52.7
10%:	52.4	52.2	52.1	51.9	51.8	51.7	51.6	51.5	51.4	51.3
20%:	51.2	51.1	51.0	50.9	50.9	50.8	50.7	50.6	50.6	50.5
30%:	50.4	50.4	50.3	50.2	50.2	50.1	50.1	50.0	50.0	49.9
40%:	49.9	49.8	49.8	49.8	49.7	49.7	49.6	49.6	49.6	49.5
50%:	49.5	49.4	49.4	49.4	49.3	49.3	49.3	49.2	49.2	49.2

60%:	49.1	49.1	49.1	49.0	49.0	49.0	48.9	48.9	48.9	48.9
70%:	48.8	48.8	48.8	48.7	48.7	48.7	48.6	48.6	48.6	48.6
80%:	48.5	48.5	48.4	48.4	48.4	48.3	48.3	48.2	48.2	48.2
90%:	48.1	48.1	48.0	47.9	47.9	47.8	47.7	47.6	47.5	47.3
100%:	46.2									

Logged Data Chart

S076_BGR030001_07032019_085824: Logged Data Chart



Session Report

3/7/2019

Information Panel

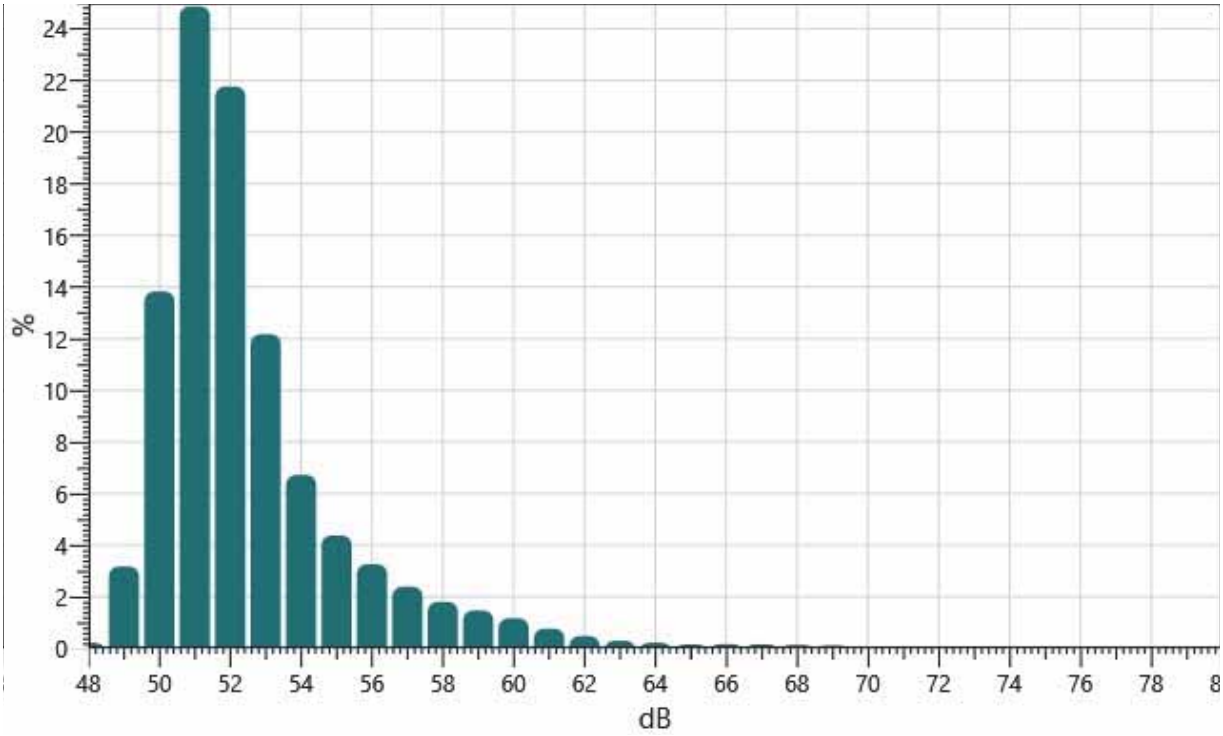
Name	Ponce Health Sciences University
Start Time	3/6/2019 2:53:45 PM
Stop Time	3/6/2019 3:26:16 PM
Device Name	BGR030001
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	Noise Monitoring Station PHSU-03 Daytime

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
L10	1	56.7 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	FAST	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	FAST			

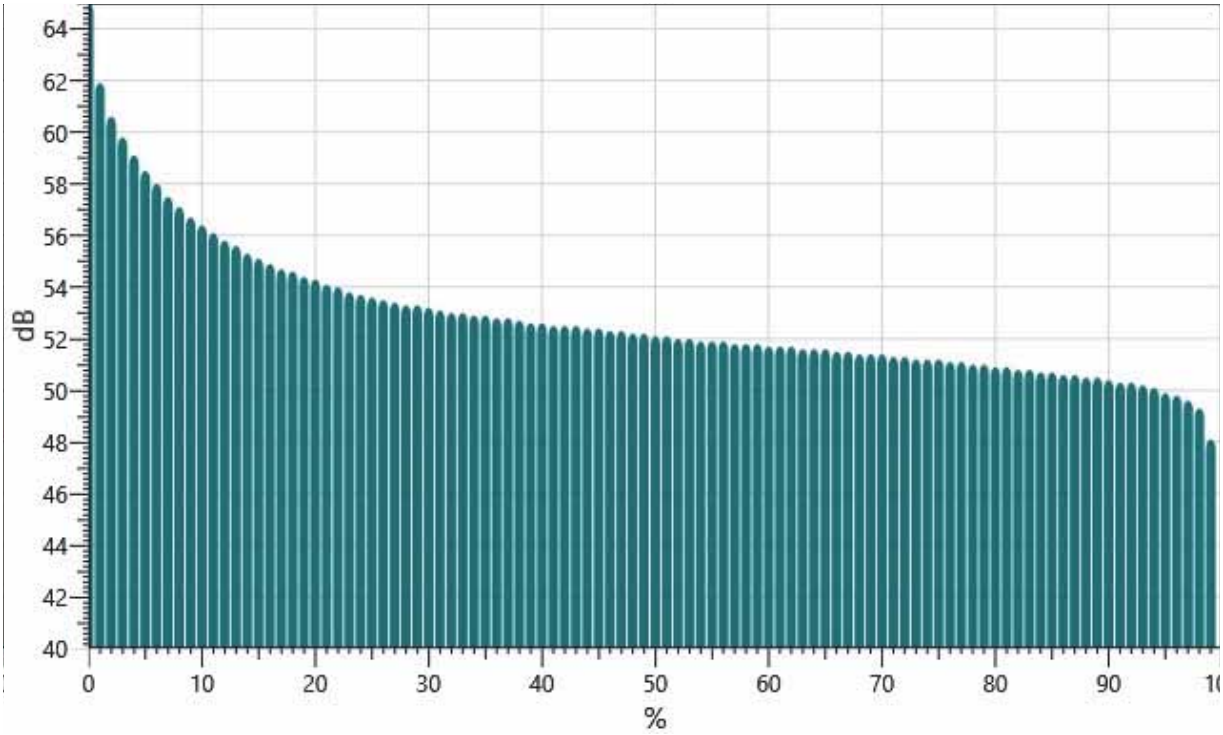
Statistics Chart

S077_BGR030001_07032019_085829: Statistics Chart



Exceedance Chart

S077_BGR030001_07032019_085829: Exceedance Chart



Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
48:	0.00	0.00	0.00	0.00	0.01	0.01	0.03	0.03	0.05	0.08	0.22
49:	0.12	0.10	0.16	0.21	0.24	0.30	0.38	0.47	0.52	0.68	3.17
50:	0.69	0.83	0.90	1.06	1.22	1.51	1.65	1.88	2.00	2.09	13.82
51:	2.22	2.28	2.27	2.35	2.47	2.51	2.63	2.61	2.68	2.88	24.88
52:	2.92	2.21	2.16	2.19	2.16	2.15	2.12	2.01	1.97	1.87	21.77
53:	1.67	1.66	1.49	1.27	1.18	1.14	1.02	0.97	0.89	0.88	12.17
54:	0.80	0.74	0.69	0.65	0.62	0.65	0.62	0.67	0.65	0.63	6.72
55:	0.59	0.53	0.42	0.43	0.44	0.42	0.38	0.38	0.38	0.40	4.38
56:	0.35	0.35	0.34	0.31	0.31	0.33	0.33	0.35	0.28	0.30	3.26
57:	0.28	0.26	0.27	0.24	0.21	0.22	0.23	0.21	0.22	0.25	2.39
58:	0.22	0.23	0.13	0.19	0.18	0.16	0.17	0.16	0.17	0.18	1.80
59:	0.18	0.19	0.16	0.16	0.12	0.12	0.13	0.13	0.14	0.14	1.47
60:	0.14	0.12	0.14	0.13	0.12	0.10	0.10	0.10	0.10	0.10	1.17
61:	0.12	0.10	0.05	0.09	0.07	0.07	0.08	0.07	0.06	0.06	0.77
62:	0.07	0.06	0.06	0.05	0.04	0.05	0.04	0.04	0.04	0.04	0.48
63:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.04	0.30
64:	0.02	0.03	0.01	0.02	0.02	0.02	0.02	0.03	0.02	0.02	0.22
65:	0.02	0.01	0.01	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.16
66:	0.02	0.02	0.01	0.02	0.02	0.01	0.01	0.02	0.02	0.02	0.17
67:	0.02	0.02	0.01	0.02	0.02	0.01	0.02	0.01	0.01	0.01	0.16
68:	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.01	0.01	0.01	0.14
69:	0.02	0.02	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.12
70:	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.03
71:	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
72:	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.04
73:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
74:	0.01	0.00	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.05
75:	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.04
76:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
77:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
78:	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.02

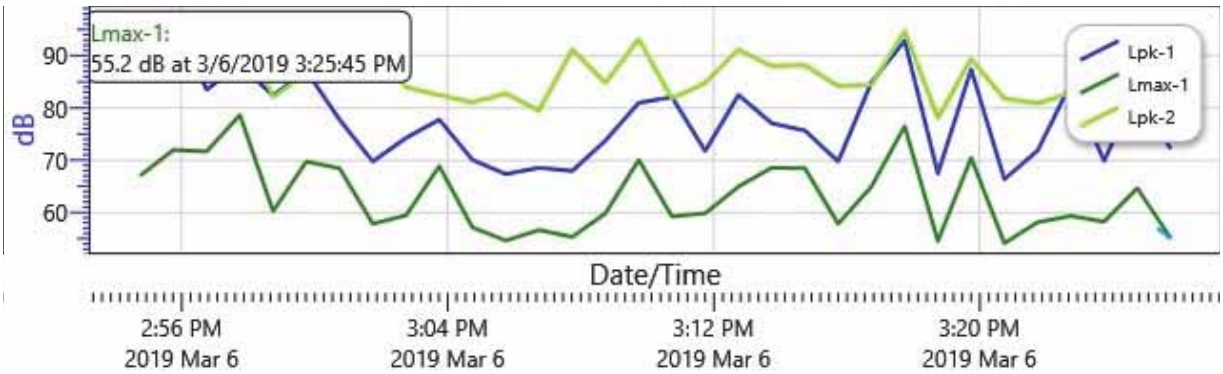
Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		65.0	61.9	60.6	59.8	59.1	58.5	58.0	57.5	57.1
10%:	56.7	56.4	56.1	55.8	55.6	55.3	55.1	54.9	54.7	54.6

20%:	54.4	54.3	54.1	54.0	53.8	53.7	53.6	53.5	53.4	53.3
30%:	53.3	53.2	53.1	53.0	53.0	52.9	52.9	52.8	52.8	52.7
40%:	52.6	52.6	52.5	52.5	52.5	52.4	52.4	52.3	52.3	52.2
50%:	52.2	52.1	52.1	52.0	52.0	51.9	51.9	51.9	51.8	51.8
60%:	51.8	51.7	51.7	51.7	51.6	51.6	51.6	51.5	51.5	51.4
70%:	51.4	51.4	51.3	51.3	51.2	51.2	51.2	51.1	51.1	51.0
80%:	51.0	50.9	50.9	50.8	50.8	50.7	50.7	50.6	50.6	50.5
90%:	50.5	50.4	50.3	50.3	50.2	50.1	49.9	49.8	49.6	49.3
100%:	48.1									

Logged Data Chart

S077_BGR030001_07032019_085829: Logged Data Chart



Session Report

3/7/2019

Information Panel

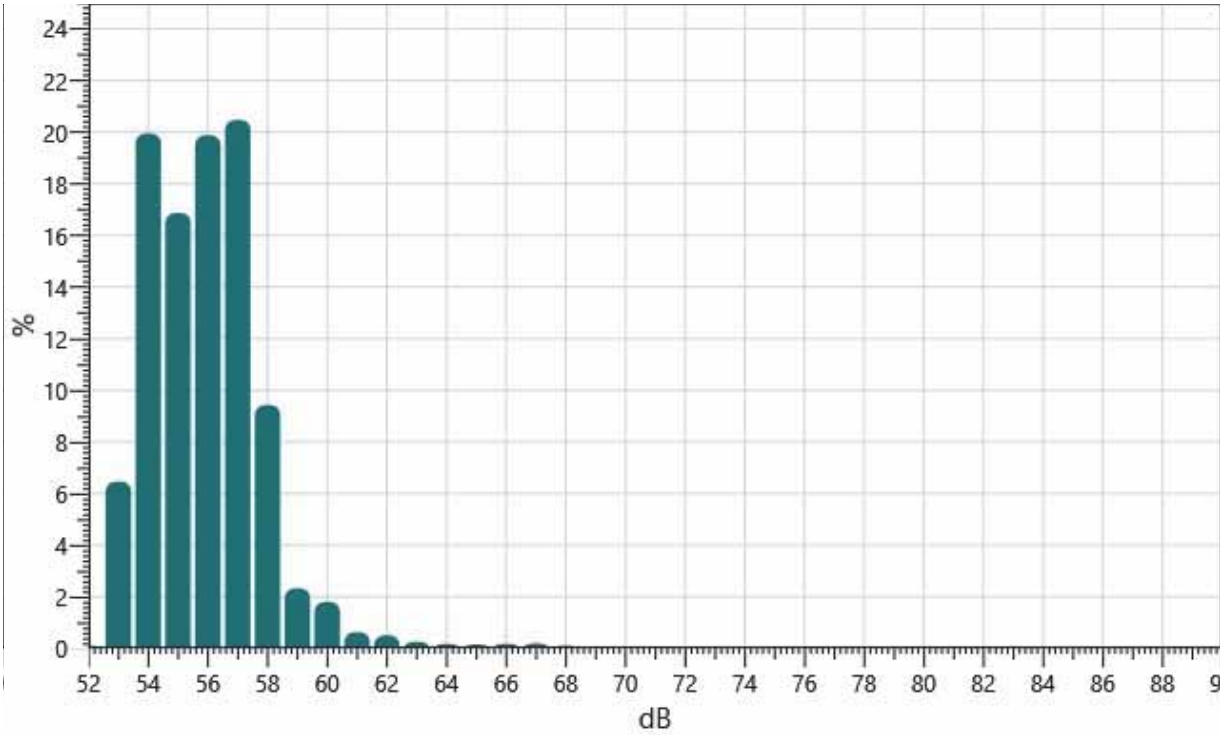
Name	Ponce Health Sceinces University 3/6/2019
Start Time	3:33:53 PM
Stop Time	3/6/2019 4:04:28 PM
Device Name	BGR030001
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	Noise Monitoring Station PHSU- 4 Daytime

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
L10	1	58.3 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	FAST	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	FAST			

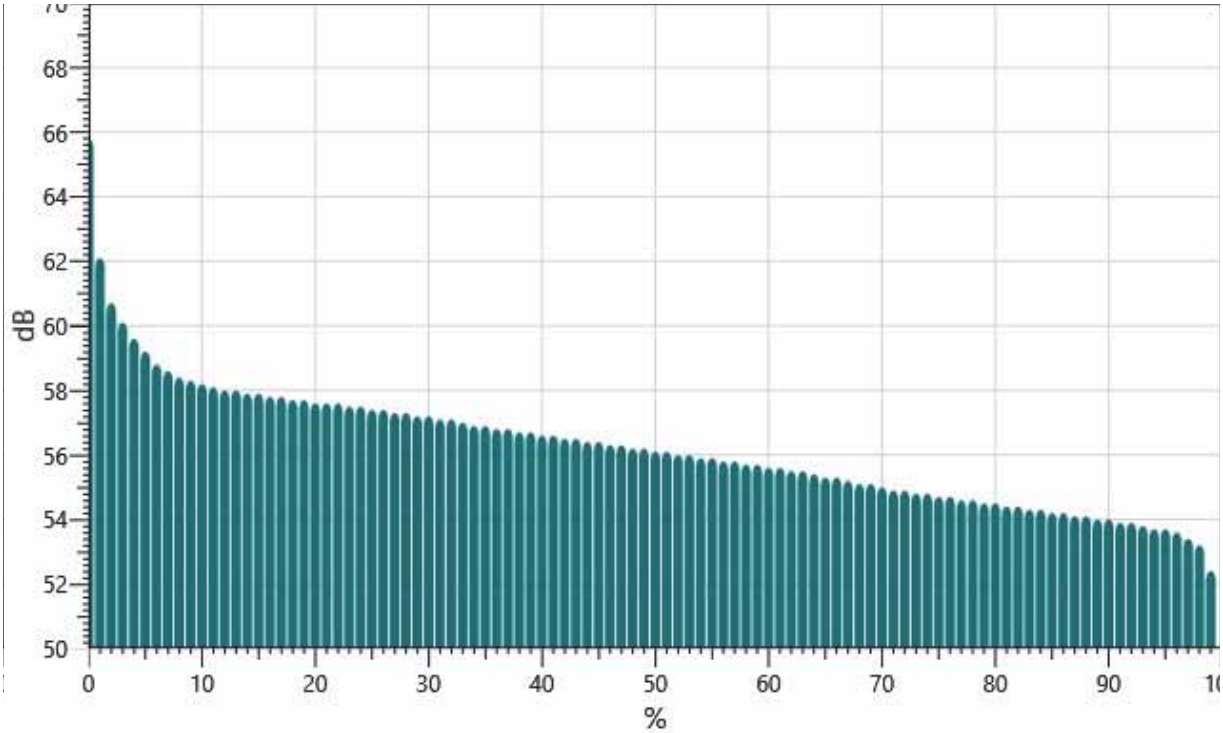
Statistics Chart

S078_BGR030001_07032019_085834: Statistics Chart



Exceedance Chart

S078_BGR030001_07032019_085834: Exceedance Chart



Statistics Table

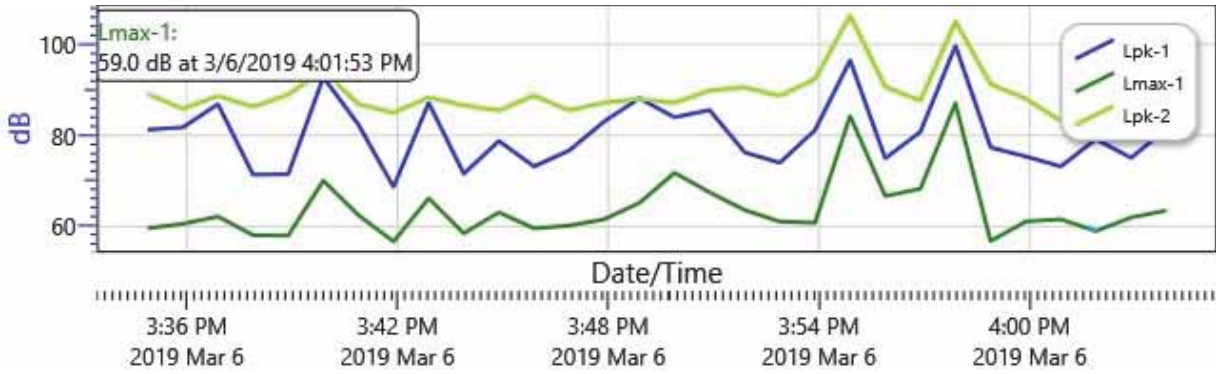
dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
52:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.06	0.11
53:	0.11	0.16	0.27	0.38	0.47	0.56	0.77	0.98	1.24	1.52	6.46
54:	1.71	1.85	1.97	2.10	2.12	2.08	2.19	2.16	1.98	1.79	19.94
55:	1.82	1.52	1.30	1.47	1.63	1.65	1.75	1.89	1.98	1.87	16.87
56:	1.96	1.94	2.00	2.01	2.01	1.96	2.01	2.02	2.04	1.94	19.88
57:	1.86	1.84	1.89	1.94	1.98	2.04	2.12	2.25	2.31	2.23	20.47
58:	2.10	1.85	1.00	1.18	0.87	0.73	0.53	0.43	0.40	0.33	9.42
59:	0.30	0.26	0.27	0.26	0.24	0.23	0.21	0.19	0.19	0.18	2.33
60:	0.18	0.18	0.19	0.18	0.17	0.18	0.21	0.21	0.18	0.13	1.80
61:	0.11	0.10	0.06	0.07	0.06	0.06	0.05	0.04	0.05	0.03	0.63
62:	0.04	0.04	0.04	0.06	0.05	0.06	0.06	0.04	0.05	0.07	0.50
63:	0.04	0.03	0.03	0.02	0.02	0.02	0.03	0.02	0.02	0.02	0.26
64:	0.02	0.02	0.01	0.01	0.02	0.01	0.02	0.02	0.02	0.02	0.17
65:	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.03	0.03	0.16
66:	0.03	0.02	0.03	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.18
67:	0.01	0.01	0.01	0.02	0.01	0.02	0.02	0.02	0.03	0.03	0.19
68:	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.11
69:	0.01	0.01	0.00	0.01	0.01	0.00	0.01	0.01	0.01	0.00	0.05
70:	0.00	0.01	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01	0.05
71:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.00	0.07
72:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.03
73:	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
74:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
75:	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.03
76:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
77:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
78:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
79:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
80:	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.02
81:	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.03
82:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
83:	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.03
84:	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
85:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
86:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.03
87:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		65.8	62.1	60.7	60.1	59.6	59.2	58.8	58.6	58.4
10%:	58.3	58.2	58.1	58.0	58.0	57.9	57.9	57.8	57.8	57.7
20%:	57.7	57.6	57.6	57.6	57.5	57.5	57.4	57.4	57.3	57.3
30%:	57.2	57.2	57.1	57.1	57.0	56.9	56.9	56.8	56.8	56.7
40%:	56.7	56.6	56.6	56.5	56.5	56.4	56.4	56.3	56.3	56.2
50%:	56.2	56.1	56.1	56.0	56.0	55.9	55.9	55.8	55.8	55.7
60%:	55.7	55.6	55.6	55.5	55.5	55.4	55.3	55.3	55.2	55.1
70%:	55.1	55.0	54.9	54.9	54.8	54.8	54.7	54.7	54.6	54.6
80%:	54.5	54.5	54.4	54.4	54.3	54.3	54.2	54.2	54.1	54.1
90%:	54.0	54.0	53.9	53.9	53.8	53.7	53.7	53.6	53.4	53.2
100%:	52.4									

Logged Data Chart

S078_BGR030001_07032019_085834: Logged Data Chart



NIGHTTIME NOISE SURVEY RESULTS

Session Report

3/7/2019

Information Panel

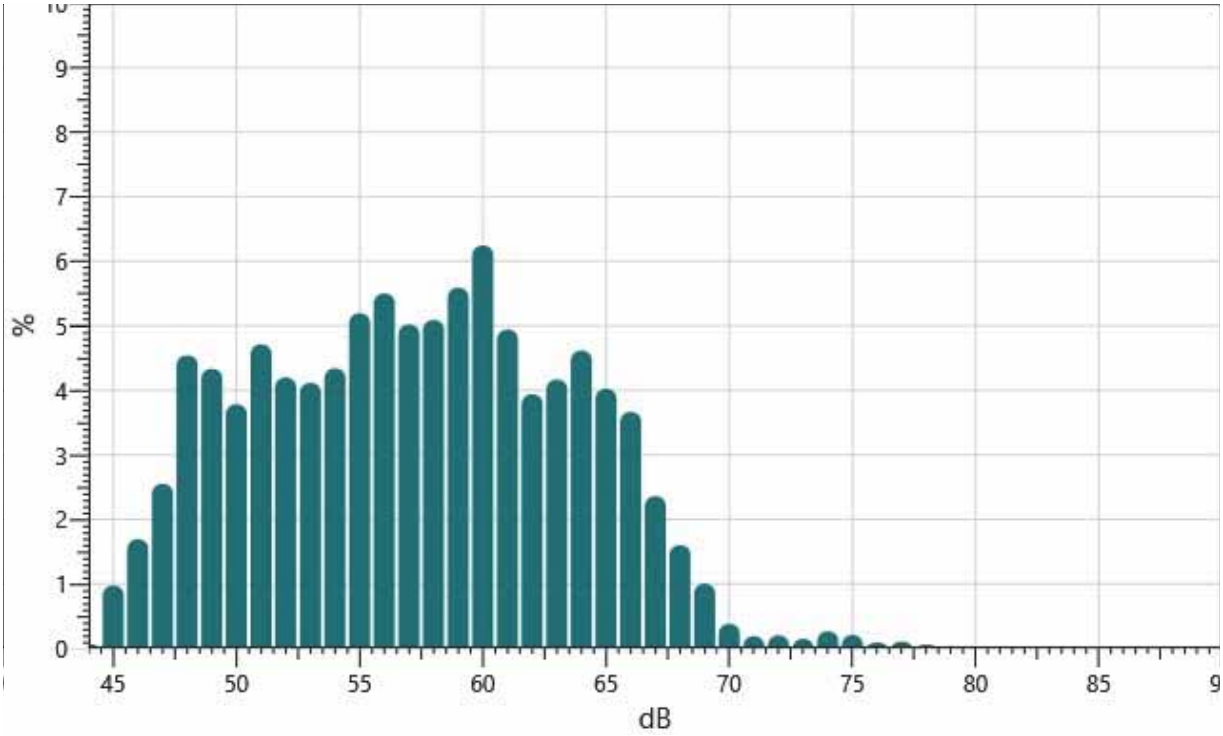
Name	Ponce Health Sciences University
Start Time	3/6/2019 9:58:58 PM
Stop Time	3/6/2019 10:30:41 PM
Device Name	BGR030001
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	Noise Monitoring Station PHSU-01 Nighttime

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
L10	1	66.0 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	FAST	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	FAST			

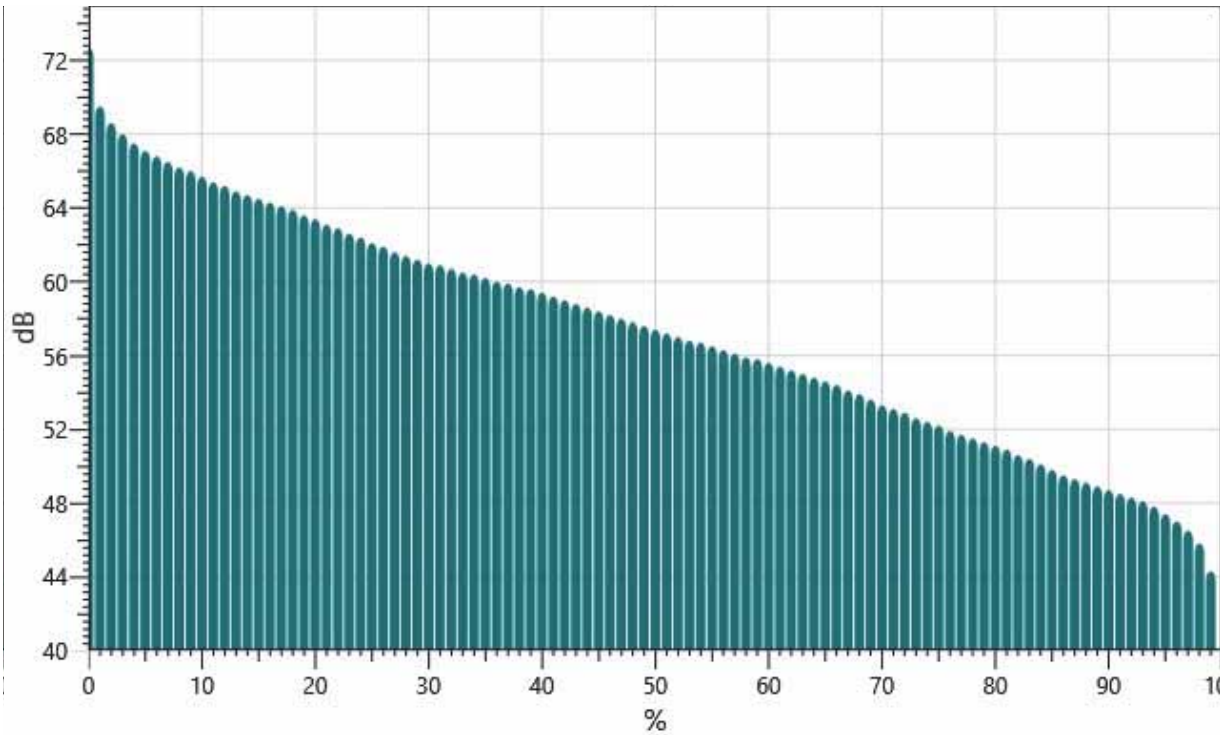
Statistics Chart

S079_BGR030001_07032019_085838: Statistics Chart



Exceedance Chart

S079_BGR030001_07032019_085838: Exceedance Chart



Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
44:	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.02	0.07
45:	0.03	0.06	0.06	0.07	0.10	0.11	0.13	0.13	0.15	0.13	0.97
46:	0.15	0.12	0.16	0.16	0.18	0.18	0.15	0.21	0.19	0.19	1.69
47:	0.22	0.23	0.25	0.24	0.21	0.26	0.26	0.28	0.31	0.31	2.55
48:	0.32	0.34	0.39	0.42	0.48	0.53	0.54	0.50	0.50	0.52	4.54
49:	0.54	0.36	0.50	0.50	0.46	0.44	0.41	0.39	0.38	0.36	4.33
50:	0.36	0.35	0.33	0.37	0.36	0.40	0.40	0.39	0.40	0.42	3.78
51:	0.41	0.43	0.43	0.41	0.52	0.48	0.48	0.46	0.56	0.52	4.71
52:	0.55	0.37	0.38	0.44	0.45	0.42	0.41	0.37	0.40	0.41	4.20
53:	0.43	0.45	0.46	0.46	0.41	0.38	0.39	0.39	0.40	0.35	4.11
54:	0.37	0.40	0.39	0.40	0.41	0.43	0.44	0.53	0.50	0.48	4.34
55:	0.49	0.43	0.37	0.54	0.51	0.55	0.52	0.57	0.58	0.64	5.19
56:	0.61	0.67	0.59	0.54	0.51	0.53	0.48	0.50	0.51	0.55	5.50
57:	0.56	0.55	0.54	0.51	0.48	0.47	0.46	0.48	0.43	0.54	5.02
58:	0.48	0.54	0.38	0.60	0.61	0.54	0.51	0.48	0.46	0.50	5.09
59:	0.52	0.51	0.50	0.52	0.51	0.58	0.56	0.63	0.60	0.66	5.59
60:	0.68	0.68	0.67	0.60	0.60	0.62	0.57	0.61	0.60	0.61	6.24
61:	0.62	0.62	0.35	0.49	0.56	0.52	0.48	0.45	0.43	0.41	4.94
62:	0.42	0.36	0.37	0.38	0.39	0.40	0.40	0.41	0.39	0.42	3.94
63:	0.38	0.41	0.40	0.38	0.43	0.43	0.42	0.43	0.43	0.46	4.17
64:	0.48	0.53	0.33	0.46	0.49	0.52	0.49	0.46	0.43	0.44	4.61
65:	0.40	0.39	0.41	0.44	0.43	0.42	0.41	0.39	0.37	0.36	4.02
66:	0.33	0.36	0.36	0.36	0.37	0.38	0.37	0.39	0.38	0.39	3.67
67:	0.33	0.34	0.22	0.26	0.24	0.22	0.21	0.19	0.18	0.17	2.36
68:	0.19	0.18	0.19	0.19	0.18	0.16	0.14	0.14	0.13	0.12	1.60
69:	0.11	0.12	0.12	0.10	0.11	0.10	0.09	0.09	0.08	0.07	1.00
70:	0.06	0.06	0.02	0.04	0.04	0.04	0.04	0.03	0.03	0.02	0.38
71:	0.02	0.02	0.03	0.02	0.01	0.02	0.02	0.02	0.02	0.02	0.19
72:	0.01	0.02	0.02	0.02	0.02	0.02	0.01	0.03	0.02	0.03	0.20
73:	0.02	0.02	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.02	0.15
74:	0.02	0.02	0.02	0.02	0.03	0.04	0.03	0.02	0.04	0.03	0.27
75:	0.03	0.02	0.02	0.02	0.02	0.01	0.03	0.02	0.01	0.02	0.21
76:	0.02	0.01	0.01	0.00	0.01	0.01	0.00	0.01	0.01	0.01	0.09
77:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.11
78:	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.06
79:	0.00	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.04
80:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02

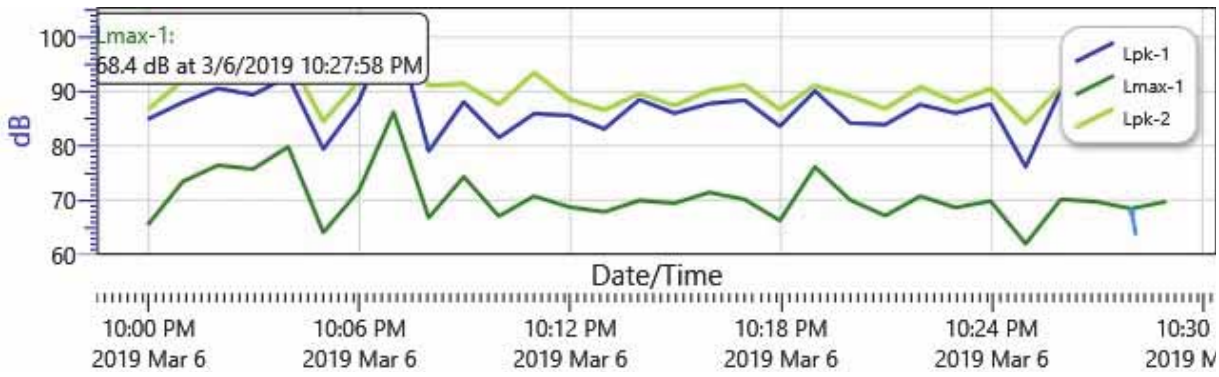
81:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
82:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
83:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
84:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
85:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
86:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		72.7	69.5	68.6	68.0	67.5	67.1	66.8	66.5	66.2
10%:	66.0	65.7	65.4	65.2	64.9	64.7	64.5	64.3	64.1	63.9
20%:	63.6	63.4	63.1	62.9	62.6	62.4	62.1	61.9	61.6	61.4
30%:	61.2	61.0	60.9	60.7	60.5	60.4	60.2	60.0	59.9	59.7
40%:	59.6	59.4	59.2	59.0	58.8	58.6	58.4	58.2	58.0	57.8
50%:	57.6	57.4	57.2	57.0	56.8	56.7	56.5	56.3	56.1	55.9
60%:	55.8	55.6	55.4	55.2	55.0	54.8	54.6	54.4	54.1	53.9
70%:	53.6	53.3	53.1	52.9	52.6	52.4	52.2	51.9	51.7	51.5
80%:	51.3	51.1	50.9	50.6	50.4	50.1	49.8	49.5	49.3	49.1
90%:	48.9	48.7	48.5	48.3	48.1	47.8	47.4	47.0	46.5	45.8
100%:	44.3									

Logged Data Chart

S079_BGR030001_07032019_085838: Logged Data Chart



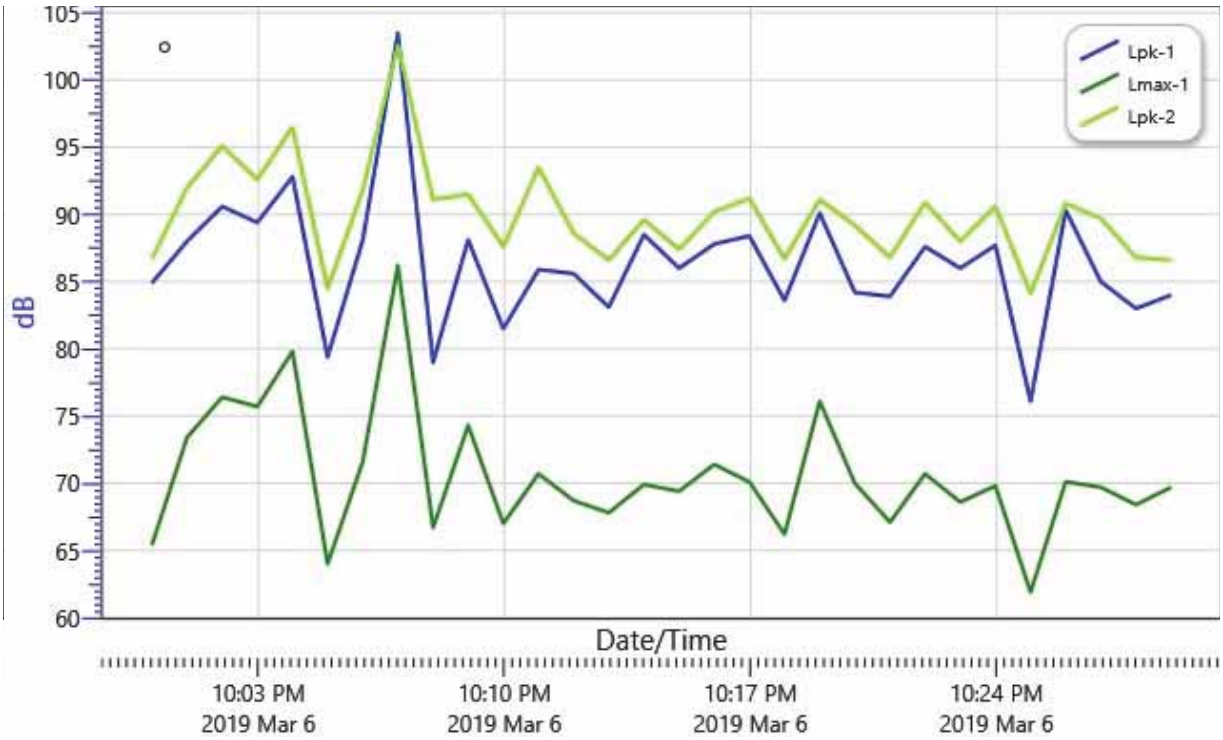
Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Dose	1	0 %	Lpk	1	103.5 dB
Lmax	1	86.2 dB			
Weighting	1	A	Response	1	FAST

Bandwidth	1	OFF	Exchange Rate	1	3 dB
Integrating Threshold	1	100 dB	Log Rate	1	60 s
Exchange Rate	2	3 dB	Integrating Threshold	2	100 dB
Weighting	2	C	Response	2	FAST

Logged Data Chart

Study 1: Logged Data Chart



Session Report

3/7/2019

Information Panel

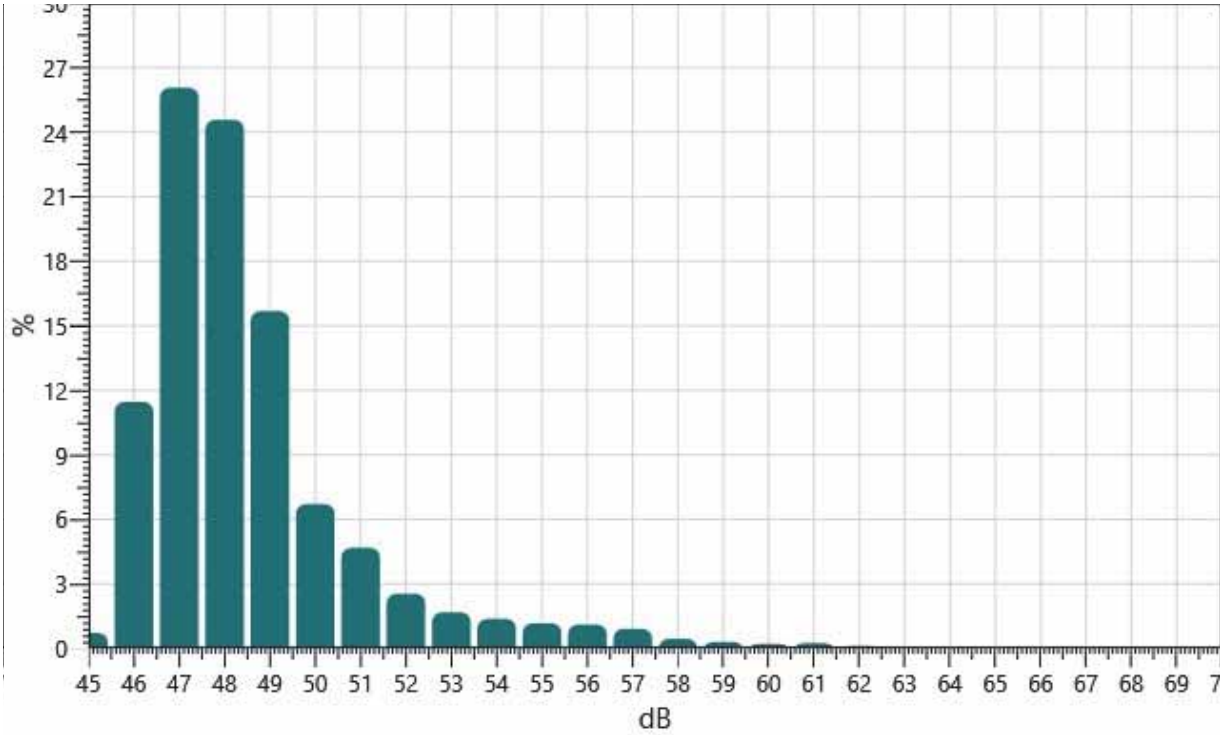
Name	Ponce Health Sciences University 3/6/2019
Start Time	10:33:23 PM
Stop Time	3/6/2019 11:03:40 PM BGR030001
Device Name	SoundPro DL
Model Type	R.13H
Device Firmware Rev	Noise Monitoring Station PHSU-2 Nighttime
Comments	

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
L10	1	51.9 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	FAST	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	FAST			

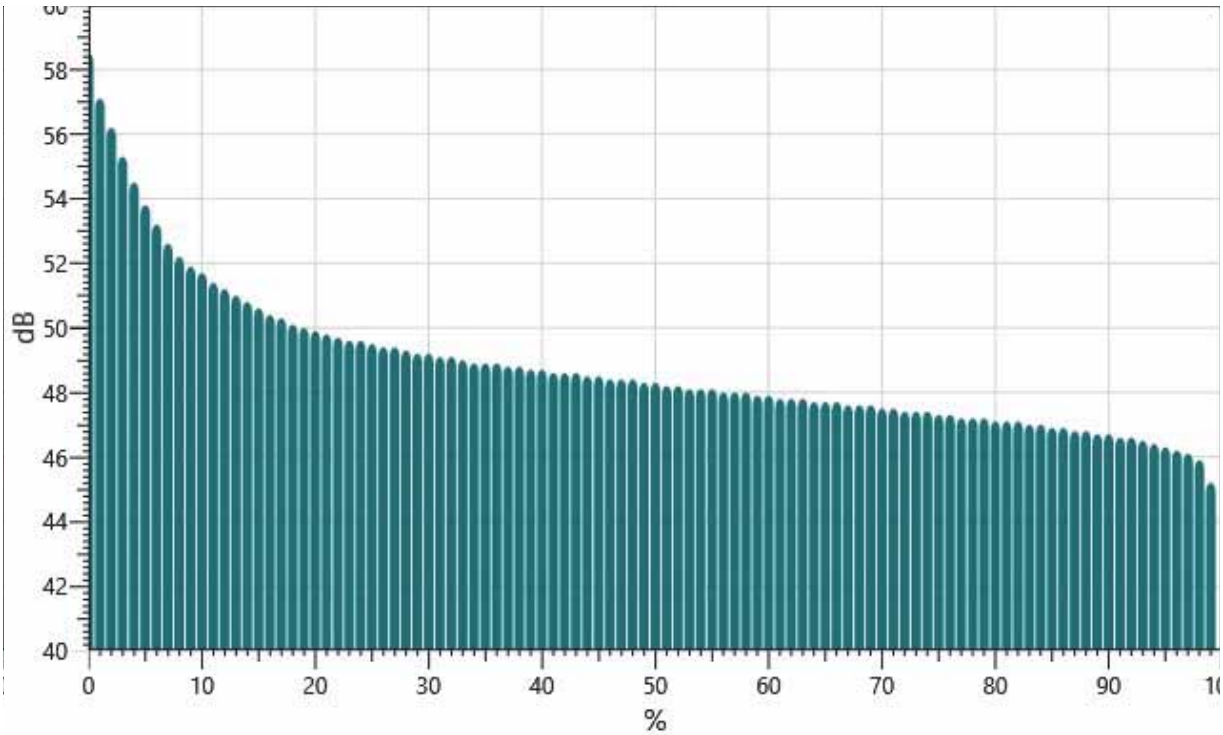
Statistics Chart

S080_BGR030001_07032019_085843: Statistics Chart



Exceedance Chart

S080_BGR030001_07032019_085843: Exceedance Chart



Statistics Table

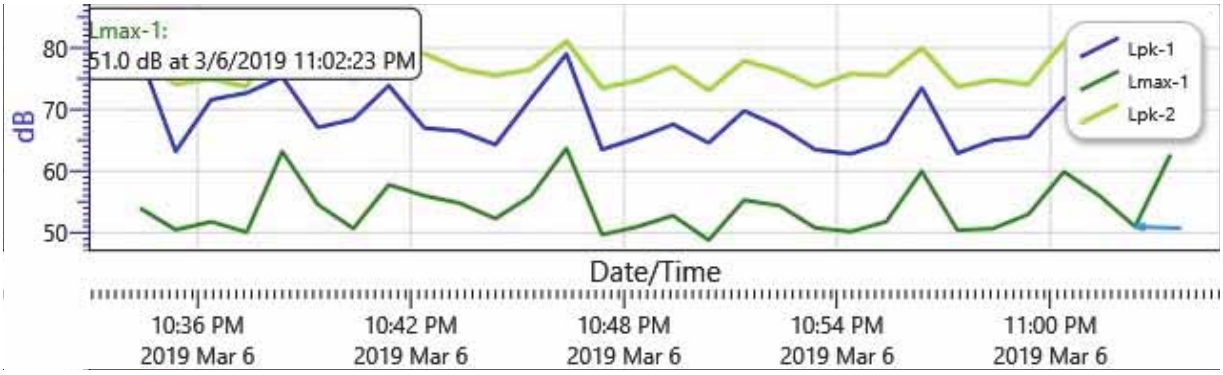
dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
45:	0.00	0.00	0.00	0.00	0.01	0.02	0.05	0.11	0.22	0.30	0.72
46:	0.48	0.40	0.69	0.84	1.01	1.17	1.33	1.61	1.94	1.99	11.46
47:	2.25	2.44	2.55	2.65	2.60	2.62	2.71	2.81	2.72	2.72	26.07
48:	2.69	2.69	2.53	2.38	2.32	2.42	2.46	2.33	2.43	2.32	24.57
49:	2.29	1.57	1.87	1.70	1.61	1.44	1.41	1.37	1.32	1.09	15.68
50:	1.00	0.89	0.75	0.74	0.61	0.56	0.52	0.54	0.54	0.56	6.71
51:	0.53	0.48	0.49	0.46	0.50	0.48	0.46	0.36	0.43	0.48	4.68
52:	0.45	0.27	0.24	0.27	0.24	0.23	0.23	0.22	0.20	0.18	2.54
53:	0.19	0.19	0.17	0.18	0.16	0.19	0.17	0.16	0.14	0.13	1.68
54:	0.12	0.12	0.14	0.11	0.14	0.14	0.13	0.17	0.14	0.15	1.37
55:	0.17	0.12	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.11	1.17
56:	0.12	0.10	0.10	0.10	0.10	0.13	0.11	0.12	0.12	0.12	1.11
57:	0.13	0.11	0.10	0.10	0.10	0.08	0.07	0.07	0.07	0.08	0.91
58:	0.09	0.07	0.04	0.05	0.05	0.04	0.03	0.03	0.02	0.03	0.44
59:	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.30
60:	0.02	0.01	0.01	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.22
61:	0.03	0.03	0.01	0.02	0.03	0.03	0.03	0.02	0.03	0.02	0.25
62:	0.02	0.03	0.02	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.12
63:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01

Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		58.5	57.1	56.2	55.3	54.5	53.8	53.2	52.6	52.2
10%:	51.9	51.7	51.4	51.2	51.0	50.8	50.6	50.4	50.3	50.1
20%:	50.0	49.9	49.8	49.7	49.6	49.6	49.5	49.4	49.4	49.3
30%:	49.2	49.2	49.1	49.1	49.0	48.9	48.9	48.9	48.8	48.8
40%:	48.7	48.7	48.6	48.6	48.6	48.5	48.5	48.4	48.4	48.4
50%:	48.3	48.3	48.2	48.2	48.1	48.1	48.1	48.0	48.0	48.0
60%:	47.9	47.9	47.8	47.8	47.8	47.7	47.7	47.7	47.6	47.6
70%:	47.6	47.5	47.5	47.4	47.4	47.4	47.3	47.3	47.2	47.2
80%:	47.2	47.1	47.1	47.1	47.0	47.0	46.9	46.9	46.8	46.8
90%:	46.7	46.7	46.6	46.6	46.5	46.4	46.3	46.2	46.1	45.9
100%:	45.2									

Logged Data Chart

S080_BGR030001_07032019_085843: Logged Data Chart



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Session Report

3/7/2019

Information Panel

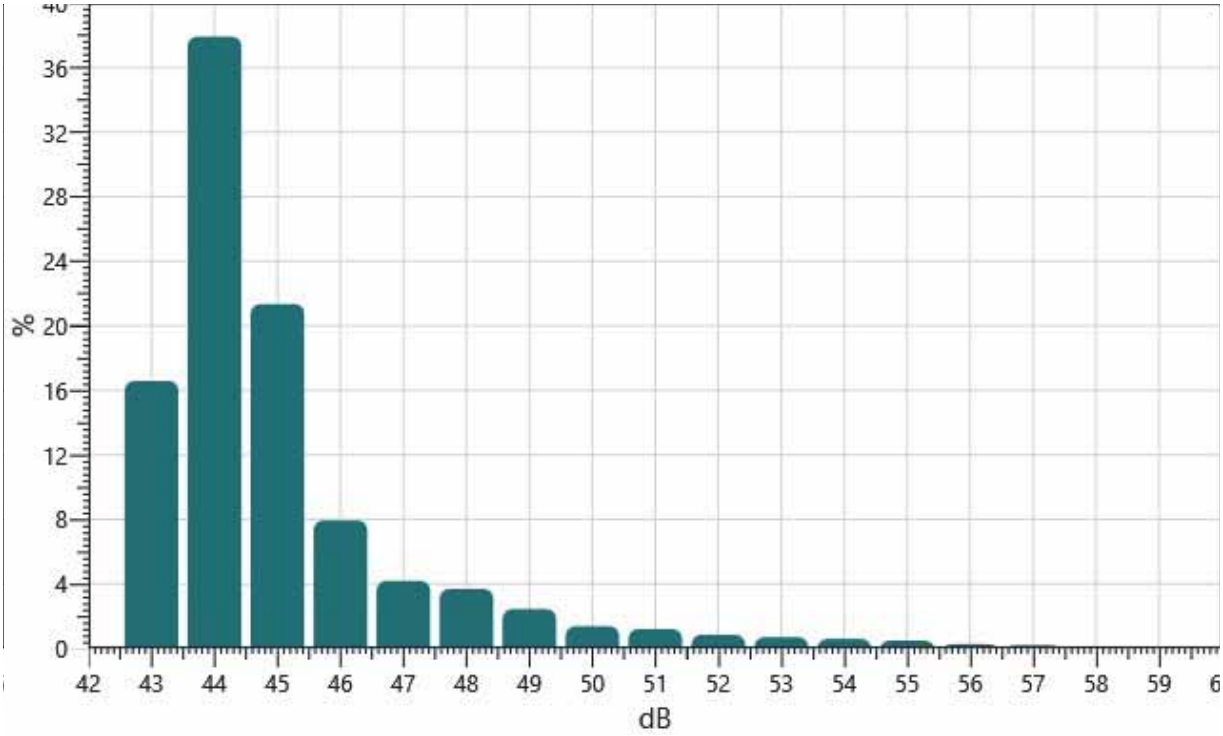
Name	Ponce Health Sciences University 3/6/2019
Start Time	11:09:18 PM
Stop Time	3/6/2019 11:39:33 PM
Device Name	BGR030001
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	Noise Monitoring Station PHSU-3 Nighttime

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
L10	1	48.4 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	FAST	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	FAST			

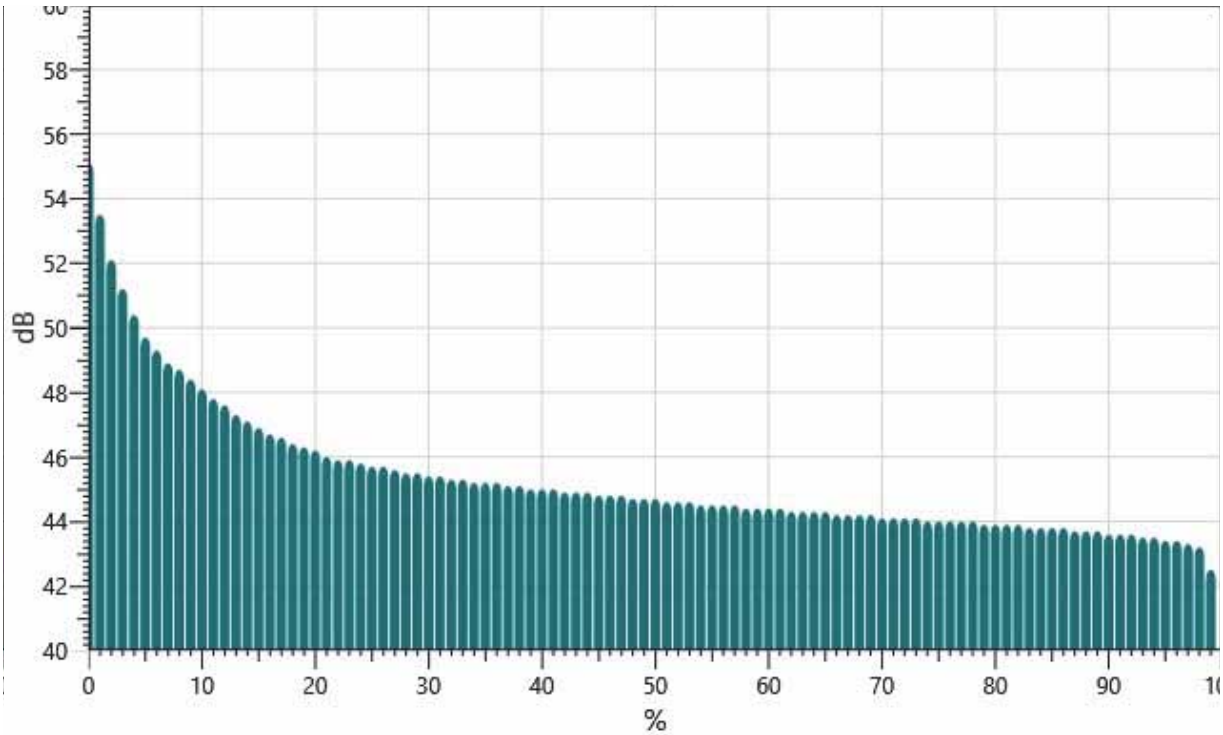
Statistics Chart

S081_BGR030001_07032019_085848: Statistics Chart



Exceedance Chart

S081_BGR030001_07032019_085848: Exceedance Chart



Statistics Table

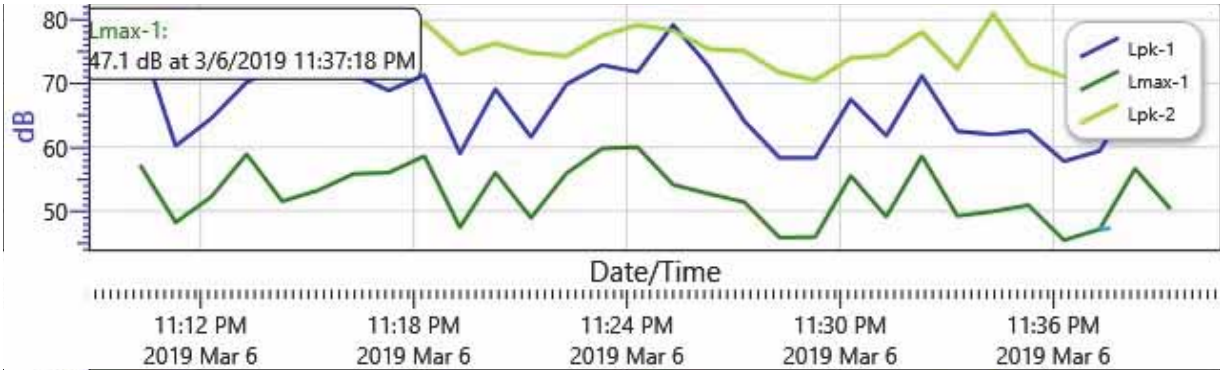
dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
42:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.06	0.09
43:	0.15	0.13	0.44	0.76	1.10	1.67	2.26	2.89	3.39	3.80	16.58
44:	4.17	4.47	4.28	4.26	4.10	3.82	3.56	3.28	3.13	2.86	37.92
45:	2.88	2.65	2.51	2.38	2.16	2.09	1.90	1.71	1.59	1.47	21.34
46:	1.33	0.74	0.85	0.76	0.77	0.80	0.73	0.67	0.66	0.61	7.93
47:	0.51	0.43	0.42	0.49	0.45	0.43	0.39	0.37	0.36	0.35	4.19
48:	0.37	0.37	0.35	0.33	0.36	0.40	0.42	0.34	0.38	0.37	3.69
49:	0.34	0.26	0.30	0.28	0.26	0.25	0.20	0.21	0.18	0.16	2.44
50:	0.16	0.18	0.16	0.13	0.11	0.13	0.11	0.14	0.12	0.13	1.37
51:	0.11	0.13	0.10	0.11	0.10	0.12	0.14	0.14	0.12	0.13	1.20
52:	0.10	0.09	0.09	0.10	0.07	0.08	0.08	0.08	0.08	0.08	0.84
53:	0.07	0.07	0.06	0.06	0.06	0.08	0.09	0.08	0.08	0.06	0.70
54:	0.07	0.07	0.06	0.07	0.06	0.05	0.03	0.04	0.07	0.06	0.59
55:	0.06	0.06	0.04	0.05	0.05	0.04	0.06	0.05	0.03	0.03	0.49
56:	0.03	0.03	0.03	0.03	0.02	0.03	0.02	0.02	0.03	0.03	0.26
57:	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.02	0.20
58:	0.02	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.12
59:	0.01	0.01	0.01	0.01	0.00	0.01	0.00	0.01	0.01	0.00	0.05
60:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		55.1	53.5	52.1	51.2	50.4	49.7	49.3	48.9	48.7
10%:	48.4	48.1	47.8	47.6	47.3	47.1	46.9	46.7	46.6	46.4
20%:	46.3	46.2	46.0	45.9	45.9	45.8	45.7	45.7	45.6	45.5
30%:	45.5	45.4	45.4	45.3	45.3	45.2	45.2	45.2	45.1	45.1
40%:	45.0	45.0	45.0	44.9	44.9	44.9	44.8	44.8	44.8	44.7
50%:	44.7	44.7	44.6	44.6	44.6	44.5	44.5	44.5	44.5	44.4
60%:	44.4	44.4	44.4	44.3	44.3	44.3	44.3	44.2	44.2	44.2
70%:	44.2	44.1	44.1	44.1	44.1	44.0	44.0	44.0	44.0	44.0
80%:	43.9	43.9	43.9	43.9	43.8	43.8	43.8	43.8	43.7	43.7
90%:	43.7	43.6	43.6	43.6	43.5	43.5	43.4	43.4	43.3	43.2
100%:	42.5									

Logged Data Chart

S081_BGR030001_07032019_085848: Logged Data Chart



Session Report

3/7/2019

Information Panel

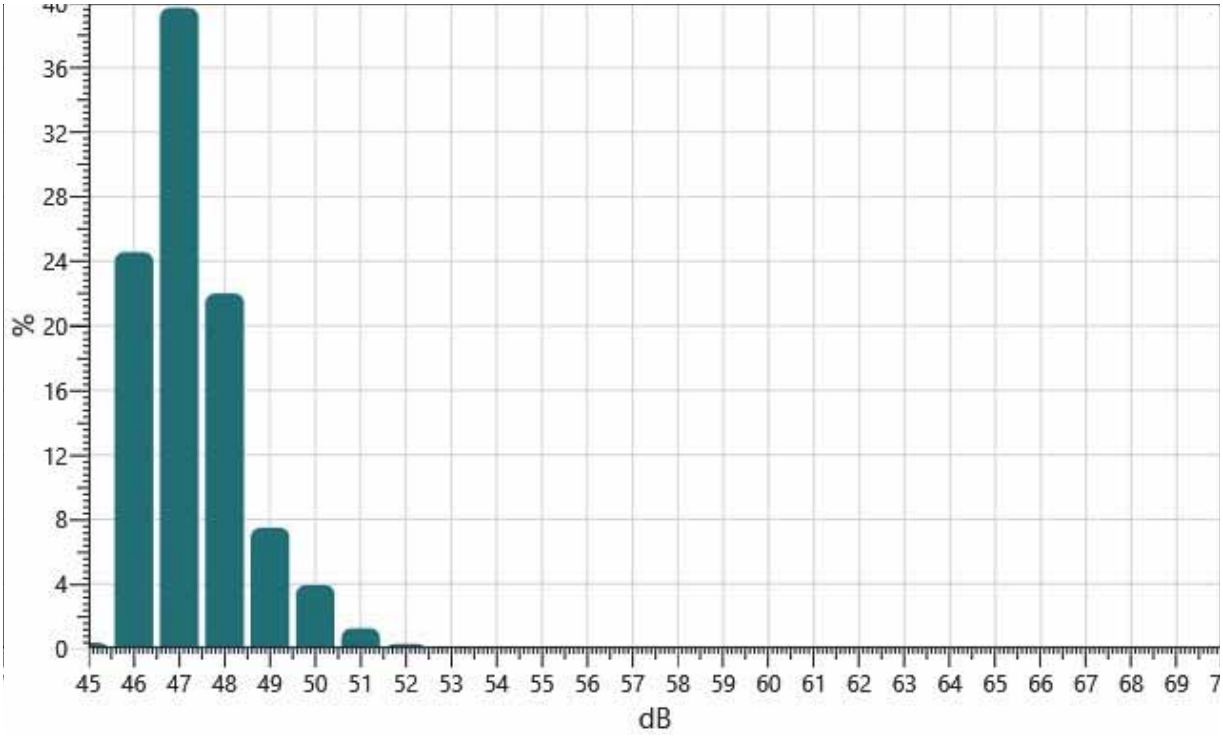
Name	Ponce Health Sciences University
Start Time	3/6/2019 11:45:13 PM
Stop Time	3/7/2019 12:15:46 AM
Device Name	BGR030001
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	Noise Monitoring Station PHSU-4 Nighttime

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
L10	1	49.3 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	FAST	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	FAST			

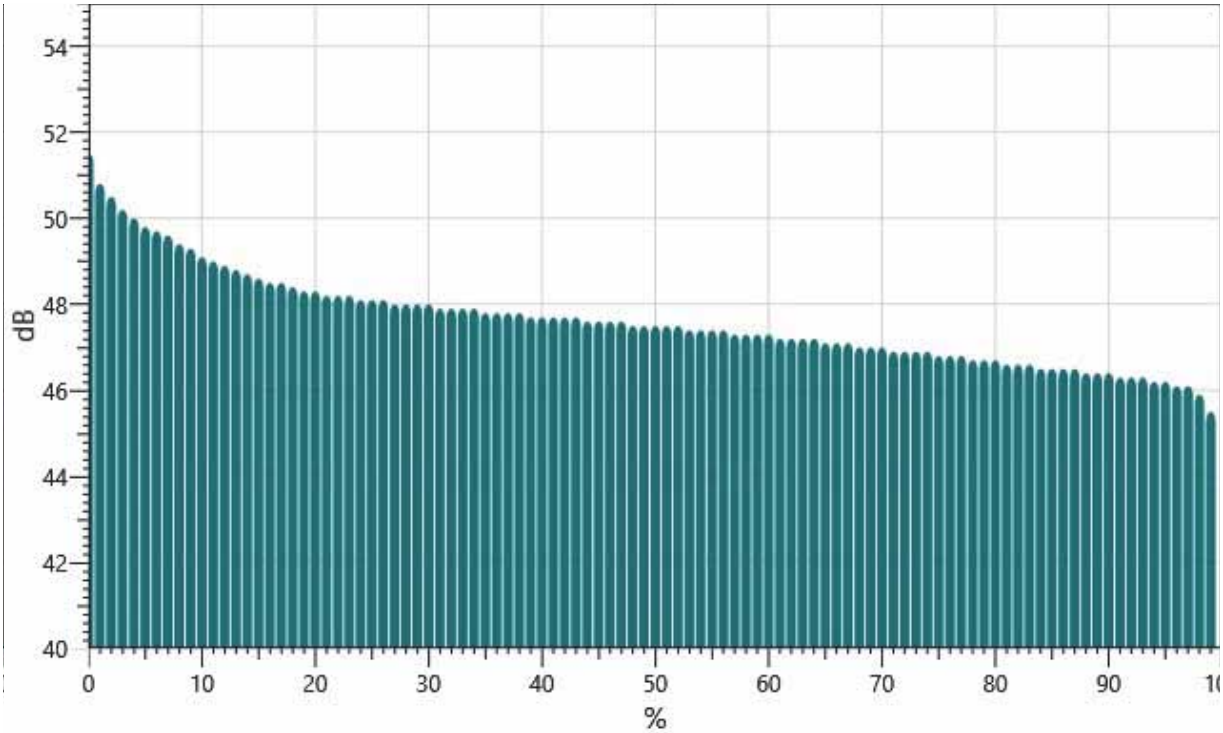
Statistics Chart

S082_BGR030001_07032019_085853: Statistics Chart



Exceedance Chart

S082_BGR030001_07032019_085853: Exceedance Chart



Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
45:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.07	0.26	0.35
46:	0.72	0.76	1.58	2.31	2.92	3.29	3.37	3.39	3.10	3.13	24.57
47:	3.23	3.30	3.45	3.73	3.98	4.30	4.47	4.50	4.47	4.28	39.71
48:	3.92	3.57	3.22	2.77	2.10	1.67	1.38	1.17	1.11	1.08	22.00
49:	1.07	0.65	0.69	0.66	0.66	0.66	0.74	0.79	0.77	0.79	7.48
50:	0.68	0.58	0.43	0.38	0.36	0.40	0.33	0.31	0.23	0.23	3.94
51:	0.19	0.18	0.16	0.14	0.10	0.10	0.09	0.11	0.10	0.08	1.25
52:	0.06	0.04	0.03	0.02	0.03	0.03	0.02	0.02	0.02	0.02	0.28
53:	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.12
54:	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.09
55:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.06
56:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
57:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
58:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
59:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.02
60:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02
61:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
62:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
63:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
64:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
65:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
66:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
67:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

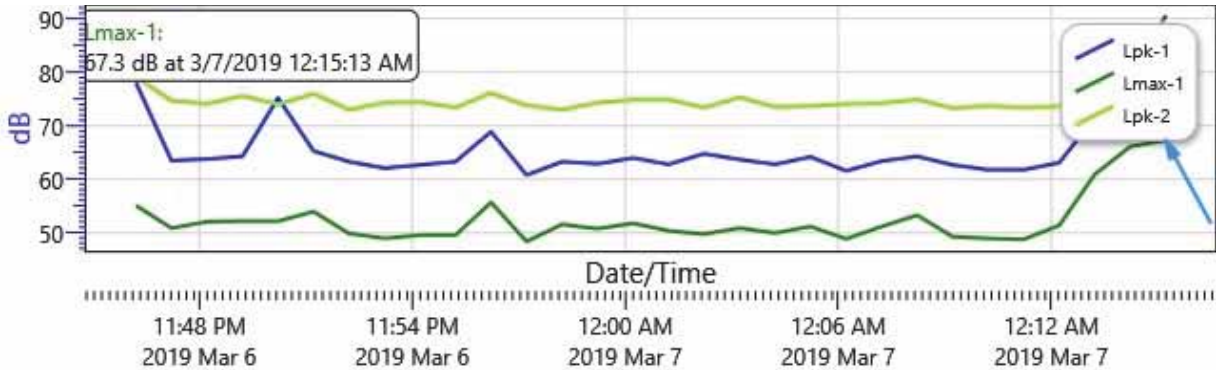
Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		51.5	50.8	50.5	50.2	50.0	49.8	49.7	49.6	49.4
10%:	49.3	49.1	49.0	48.9	48.8	48.7	48.6	48.5	48.5	48.4
20%:	48.3	48.3	48.2	48.2	48.2	48.1	48.1	48.1	48.0	48.0
30%:	48.0	48.0	47.9	47.9	47.9	47.9	47.8	47.8	47.8	47.8
40%:	47.7	47.7	47.7	47.7	47.7	47.6	47.6	47.6	47.6	47.5
50%:	47.5	47.5	47.5	47.5	47.4	47.4	47.4	47.4	47.3	47.3
60%:	47.3	47.3	47.2	47.2	47.2	47.2	47.1	47.1	47.1	47.0
70%:	47.0	47.0	46.9	46.9	46.9	46.9	46.8	46.8	46.8	46.7
80%:	46.7	46.7	46.6	46.6	46.6	46.5	46.5	46.5	46.5	46.4
90%:	46.4	46.4	46.3	46.3	46.3	46.2	46.2	46.1	46.1	45.9

100%: 45.5

Logged Data Chart

S082_BGR030001_07032019_085853: Logged Data Chart



APPENDIX 5

PHOTOGRAPHS OF NOISE MONITORING STATIONS

PHOTOGRAPHIC LOG OF NOISE MONITORING STATIONS

PONCE HEALTH SCIENCES UNIVERSITY CONSTRUCTION PROJECT

Client:	**Project Location:**	**Project No.**
PHSU	**Ponce, Puerto Rico**	**19-627**

Photo Log	**Date:**
1	**3/6/2019**

Description:

Photograph of noise monitoring station **PHSU-1** (daytime).



This station corresponds to the north boundary of the property. It faces state road PR-2.



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Photo Log	**Date:**
2	**3/6/2019**

Description:

Photograph of noise monitoring station **PHSU-2** (daytime). This station is located toward the west boundary of the property.



Photograph of the National Guard facility located toward the west side of the property.



Photo Log	**Date:**
3	**3/6/2019**

Description:

Photograph of noise monitoring station **PHSU-3** (daytime) located toward the south boundary of the property. The building observed in the photograph is the Wellness Center.



Photograph of the vacant lot that adjoins the property toward the south.



Photo No.	Date:
4	3/6/2019

Description:

View of noise monitoring station **PHSU-4** (daytime) located at the east side boundary of the property.



Photograph showing the presence of Air conditioning compressors located toward the east side of the property.



Photo No.	Date:
5	3/6/2019

Description:

Photograph of the results of the noise survey at station **PHSU-1** (nighttime).



Photograph of the results of the noise survey at station **PHSU-2** (nighttime).



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Photos Log	**Date:**
6	**3/6/2019**

Description:

Photograph of the results of the noise survey at station **PHSU-3** (nighttime).



Photograph of the results of the noise survey at station **PHSU-4** (nighttime).



Photos Log	Date:
7	3/6/2019

Description:

Photograph of the west side boundary northbound.



Photograph of the traffic count device installed at PR-2.



Attachment XIII: Sole Source Aquifers Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149

Sole Source Aquifers (CEST and EA)

General requirements	Legislation	Regulation
The Safe Drinking Water Act of 1974 protects drinking water systems which are the sole or principal drinking water source for an area and which, if contaminated, would create a significant hazard to public health.	Safe Drinking Water Act of 1974 (42 U.S.C. 201, 300f et seq., and 21 U.S.C. 349)	40 CFR Part 149
Reference		
https://www.hudexchange.info/environmental-review/sole-source-aquifers		

1. **Does your project consist solely of acquisition, leasing, or rehabilitation of an existing building(s)?**

   ☐Yes → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

   ☒No → *Continue to Question 2.*

2. **Is the project located on a sole source aquifer (SSA)[1]?**

   ☒No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination, such as a map of your project (or jurisdiction, if appropriate) in relation to the nearest SSA and its source area.*

   ☐Yes → *Continue to Question 3.*

3. **Does your region have a memorandum of understanding (MOU) or other working agreement with EPA for HUD projects impacting a sole source aquifer?**

   Contact your Field or Regional Environmental Officer or visit the HUD webpage at the link above to determine if an MOU or agreement exists in your area.

   ☐Yes → *Provide the MOU or agreement as part of your supporting documentation. Continue to Question 4.*

   ☐No → *Continue to Question 5.*

4. **Does your MOU or working agreement exclude your project from further review?**

   ☐Yes → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination and document where your project fits within the MOU or agreement.*

[1] A sole source aquifer is defined as an aquifer that supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer. This includes streamflow source areas, which are upstream areas of losing streams that flow into the recharge area.

☐No → *Continue to Question 5.*

5. **Will the proposed project contaminate the aquifer and create a significant hazard to public health?**

   Consult with your Regional EPA Office. Your consultation request should include detailed information about your proposed project and its relationship to the aquifer and associated streamflow source area. EPA will also want to know about water, storm water and waste water at the proposed project. Follow your MOU or working agreement or contact your Regional EPA office for specific information you may need to provide. EPA may request additional information if impacts to the aquifer are questionable after this information is submitted for review.

   ☐No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide your correspondence with the EPA and all documents used to make your determination*.

   ☐Yes → *Work with EPA to develop mitigation measures. If mitigation measures are approved, attach correspondence with EPA and include the mitigation measures in your environmental review documents and project contracts. <u>If EPA determines that the project continues to pose a significant risk to the aquifer, federal financial assistance must be denied.</u> Continue to Question 6.*

6. **In order to continue with the project, any threat must be mitigated, and all mitigation must be approved by the EPA. Explain in detail the proposed measures that can be implemented to mitigate for the impact or effect, including the timeline for implementation.**

   → *Continue to the Worksheet Summary below. Provide documentation of the consultation (including the Managing Agency's concurrence) and any other documentation used to make your determination.*

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

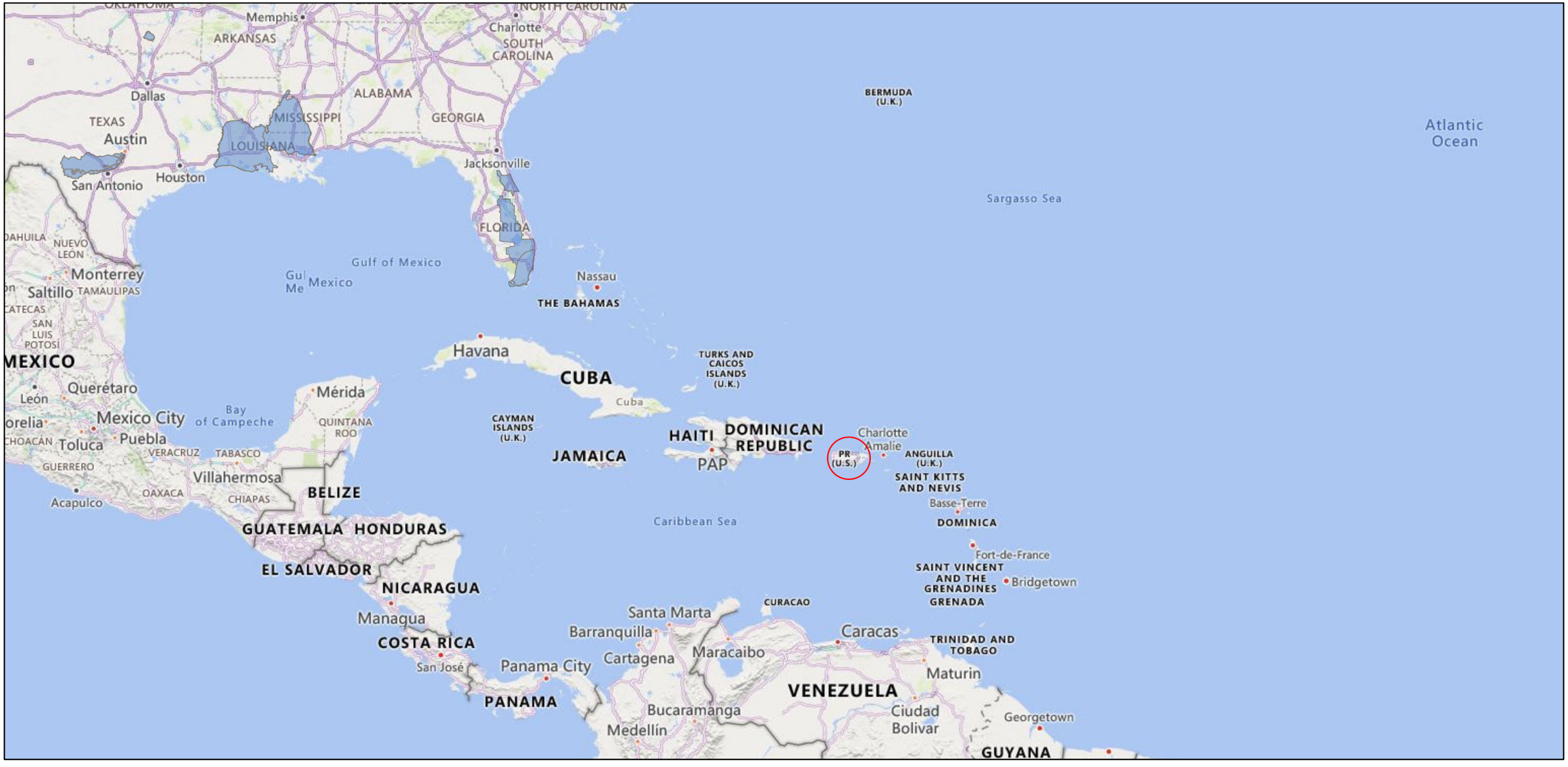
There are no sole source aquifers identified in PR. EPA maps for Sole Source Aquifers are provided. Therefore, this topic is in compliance with HUD regulations. See Information and/ or Figures

Are formal compliance steps or mitigation required?

☐ Yes

☒ No

PHSU (Phases 2-3) Ponce, Puerto Rico



5/19/2023, 1:20:24 PM

Sole_Source_Aquifers

1:18,489,298

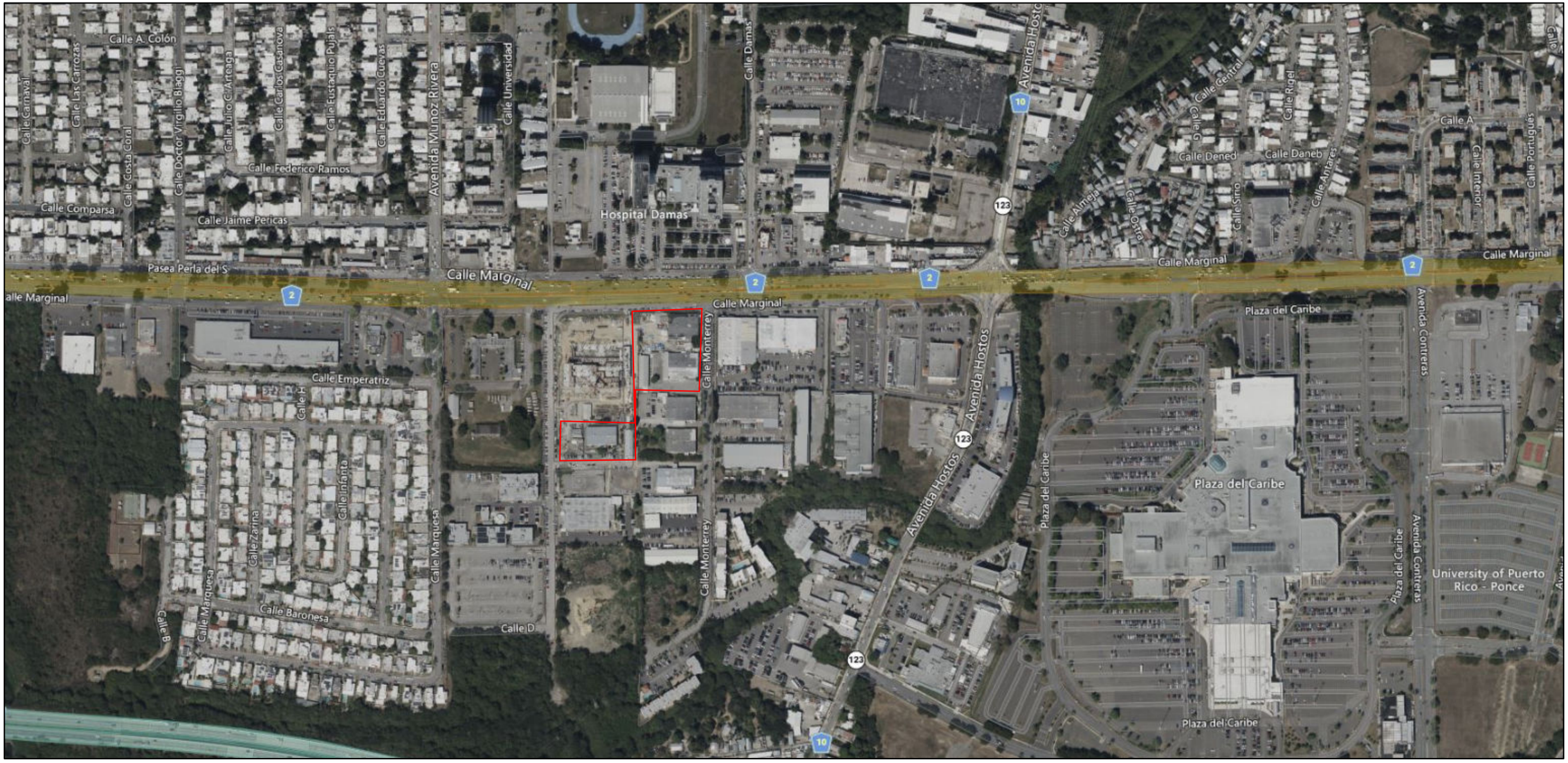
0 210 420 840 mi

0 325 650 1,300 km

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U.S. Environmental Protection Agency

PHSU (Phases 2-3) Ponce, Puerto Rico



5/19/2023, 1:16:55 PM

1:5,000

0 0.05 0.1 0.2 mi

0 0.07 0.15 0.3 km

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Attachment XIV: Wetlands Protection Executive Order 11990, particularly sections 2 and 5

Wetlands (CEST and EA)

General requirements	Legislation	Regulation
Executive Order 11990 discourages that direct or indirect support of new construction impacting wetlands wherever there is a practicable alternative. The Fish and Wildlife Service's National Wetlands Inventory can be used as a primary screening tool, but observed or known wetlands not indicated on NWI maps must also be processed. Off-site impacts that result in draining, impounding, or destroying wetlands must also be processed.	Executive Order 11990	24 CFR 55.20 can be used for general guidance regarding the 8 Step Process.
References		
https://www.hudexchange.info/environmental-review/wetlands-protection		

1. **Does this project involve new construction as defined in Executive Order 11990, expansion of a building's footprint, or ground disturbance?**
   The term "new construction" shall include draining, dredging, channelizing, filling, diking, impounding, and related activities and any structures or facilities begun or authorized after the effective date of the Order.

   ☐ No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

   ☒ Yes → *Continue to Question 2.*

2. **Will the new construction or other ground disturbance impact an on- or off-site wetland?**
   The term "wetlands" means those areas that are inundated by surface or ground water with a frequency sufficient to support, and under normal circumstances does or would support, a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds. Wetlands under E.O. 11990 include isolated and non-jurisdictional wetlands.

   ☒ No, a wetland will not be impacted in terms of E.O. 11990's definition of new construction.
   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map or any other relevant documentation to explain your determination.*

   ☐ Yes, there is a wetland that be impacted in terms of E.O. 11990's definition of new construction.

→*You must determine that there are no practicable alternatives to wetlands development by completing the 8-Step Process.*
Provide a completed 8-Step Process as well as all documents used to make your determination, including a map. Be sure to include the early public notice and the final notice with your documentation.
Continue to Question 3.

3. **For the project to be brought into compliance with this section, all adverse impacts must be mitigated. Explain in detail the exact measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.**

Which of the following mitigation actions have been or will be taken? Select all that apply:

- ☐ Permeable surfaces
- ☐ Natural landscape enhancements that maintain or restore natural hydrology through infiltration
- ☐ Native plant species
- ☐ Bioswales
- ☐ Evapotranspiration
- ☐ Stormwater capture and reuse
- ☐ Green or vegetative roofs with drainage provisions
- ☐ Natural Resources Conservation Service conservation easements
- ☐ Compensatory mitigation

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

No wetlands were identified inside the project limits. A USFWS National Wetland Inventory Map is attached. Therefore, this topic is in compliance with HUD regulations. See Information and/or Figures attached

Are formal compliance steps or mitigation required?

☐ Yes

☒ No

U.S. Fish and Wildlife Service

National Wetlands Inventory

PONCE HEALTH SCIENCES UNIV, , PON



May 19, 2022

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Attachment XV: Wild and Scenic Rivers Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)

Wild and Scenic Rivers (CEST and EA)

General requirements	Legislation	Regulation
The Wild and Scenic Rivers Act provides federal protection for certain free-flowing, wild, scenic and recreational rivers designated as components or potential components of the National Wild and Scenic Rivers System (NWSRS) from the effects of construction or development.	The Wild and Scenic Rivers Act (16 U.S.C. 1271-1287), particularly section 7(b) and (c) (16 U.S.C. 1278(b) and (c))	36 CFR Part 297
References		
https://www.hudexchange.info/environmental-review/wild-and-scenic-rivers		

1. **Is your project within proximity of a NWSRS river as defined below?**
   Wild & Scenic Rivers: These rivers or river segments have been designated by Congress or by states (with the concurrence of the Secretary of the Interior) as wild, scenic, or recreational
   Study Rivers: These rivers or river segments are being studied as a potential component of the Wild & Scenic River system.
   Nationwide Rivers Inventory (NRI): The National Park Service has compiled and maintains the NRI, a register of river segments that potentially qualify as national wild, scenic, or recreational river areas

   ☒ No
   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination, such as a map identifying the project site and its surrounding area or a list of rivers in your region in the Screen Summary at the conclusion of this screen.*

   ☐ Yes, the project is in proximity of a Nationwide Rivers Inventory (NRI) River.
   → *Continue to Question 2.*

2. **Could the project do *any* of the following?**
   - Have a direct and adverse effect within Wild and Scenic River Boundaries,
   - Invade the area or unreasonably diminish the river outside Wild and Scenic River Boundaries, or
   - Have an adverse effect on the natural, cultural, and/or recreational values of a NRI segment.

Consultation with the appropriate federal/state/local/tribal Managing Agency(s) is required, pursuant to Section 7 of the Act, to determine if the proposed project may have an adverse effect on a Wild & Scenic River or a Study River and, if so, to determine the appropriate avoidance or mitigation measures.
Note: Concurrence may be assumed if the Managing Agency does not respond within 30 days; however, you are still obligated to avoid or mitigate adverse effects on the rivers identified in the NWSRS

☐ No, the Managing Agency has concurred that the proposed project will not alter, directly, or indirectly, any of the characteristics that qualifies or potentially qualifies the river for inclusion in the NWSRS.

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation of the consultation (including the Managing Agency's concurrence) and any other documentation used to make your determination.*

☐ Yes, the Managing Agency was consulted and the proposed project may alter, directly, or indirectly, any of the characteristics that qualifies or potentially qualifies the river for inclusion in the NWSRS.

→ *Continue to Question 3.*

3. For the project to be brought into compliance with this section, all adverse impacts must be mitigated. Explain in detail the proposed measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.

→ *Continue to the Worksheet Summary below. Provide documentation of the consultation (including the Managing Agency's concurrence) and any other documentation used to make your determination.*

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

The project site is located approximately 200m northwest of the old basin alignment of the Portugués River (Rio Portugués) which was channelized in the past and will not be affected by the proposed works.

As per US Forest Service Geospatial Data Discovery, Puerto Rico's Designated National Wild and Scenic Rivers are located more than 50 miles northeast of the proposed project site. Therefore, this topic is in compliance with HUD regulations. The proposed project:

- Will not have a direct and adverse effect within wild and scenic river boundaries
- Will not invade the area or unreasonably diminish the river outside wild and scenic river boundaries
- Will not have an adverse effect on the natural, cultural, and/or recreational values of an NRI segment

In Puerto Rico there are three designated rivers (Rio Mameyes, Rio de la Mina and Rio Icacos). They are located at over 50 miles northeast of the project site.

Also, the US National Park Service list eight river segments and tributaries (possessing wild, recreational, fish, wildlife and scenic attributes) of Rio Espiritu Santo (Fajardo), Rio Fajardo (Fajardo) and Rio Sabana (Naguabo), all located to the eastern portion of Puerto Rico.

We are including here copies of:

a) Nationwide Scenic Rivers Inventory (Puerto Rico)
b) National Wild and Scenic Rivers Map (Puerto Rico)
c) Printout of the current list of wild and scenic river studies.
d) US National Park Service river list
e) PRDNER Designation of Patrimonial Rivers (Ríos Patrimoniales) of 2016.

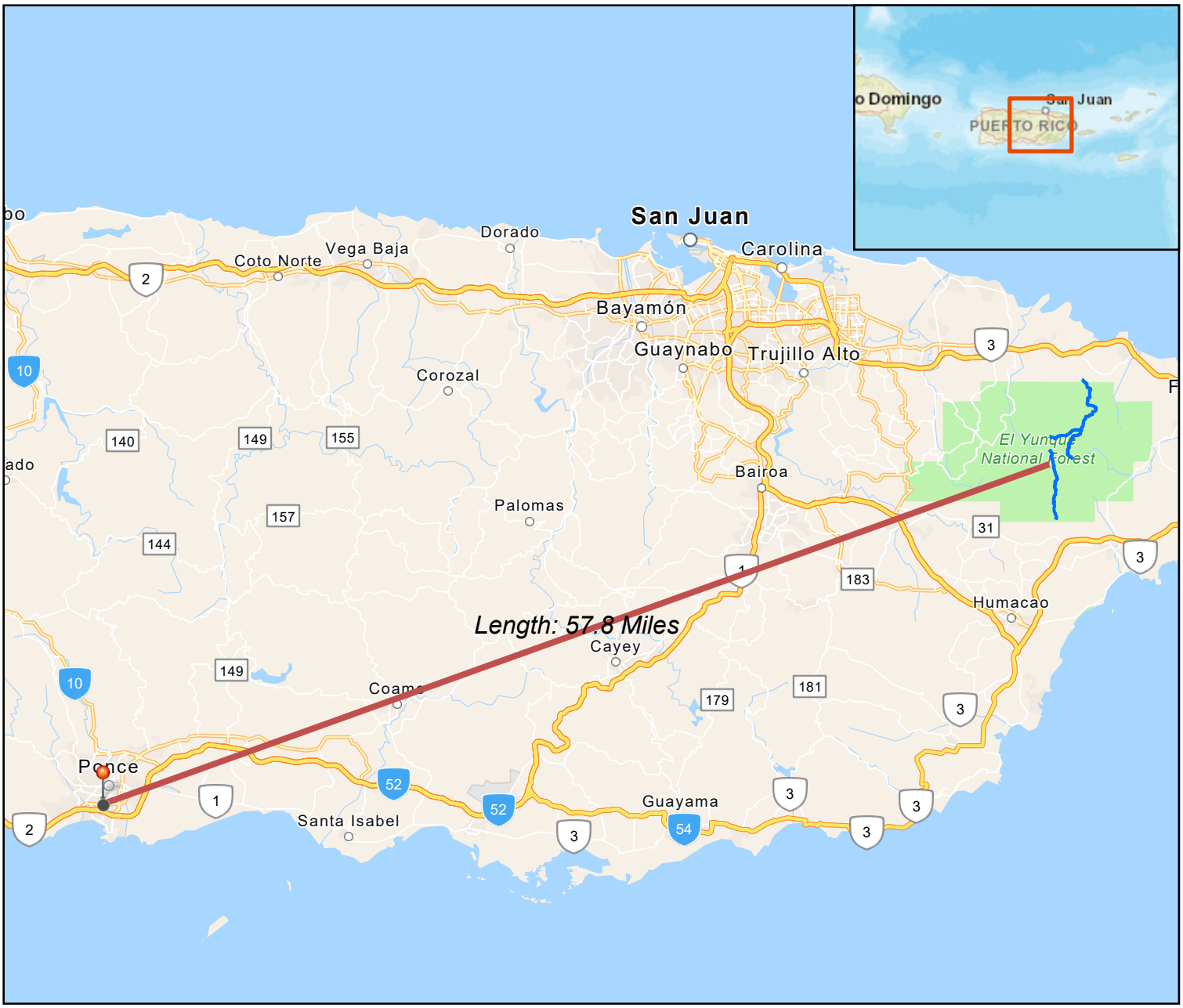
Are formal compliance steps or mitigation required?

☐ Yes

☒ No

IPG000683
Ponce Health Sciences University

Wild and Scenic Rivers



Legend

- Wild and Scenic Rivers
- Dynamic Print Text

0 5 10 20 mi

N W E S

Source:

https://apps.fs.usda.gov/arcx/rest/services/EDW/

GABRIEL BERRIZ&ASSOCIATES
Plan. Laredo González
APR/2022

National Wild and Scenic Rivers (Feature Layer)

Authoritative

USFS Enterprise Content
U.S. Forest Service

Summary

A depiction of areas designated as Wild and Scenic Rivers.

View Full Details

Details

Dataset
Feature Layer

September 29, 2017
Info Updated

Weekly
Data Updated: April 23, 2019

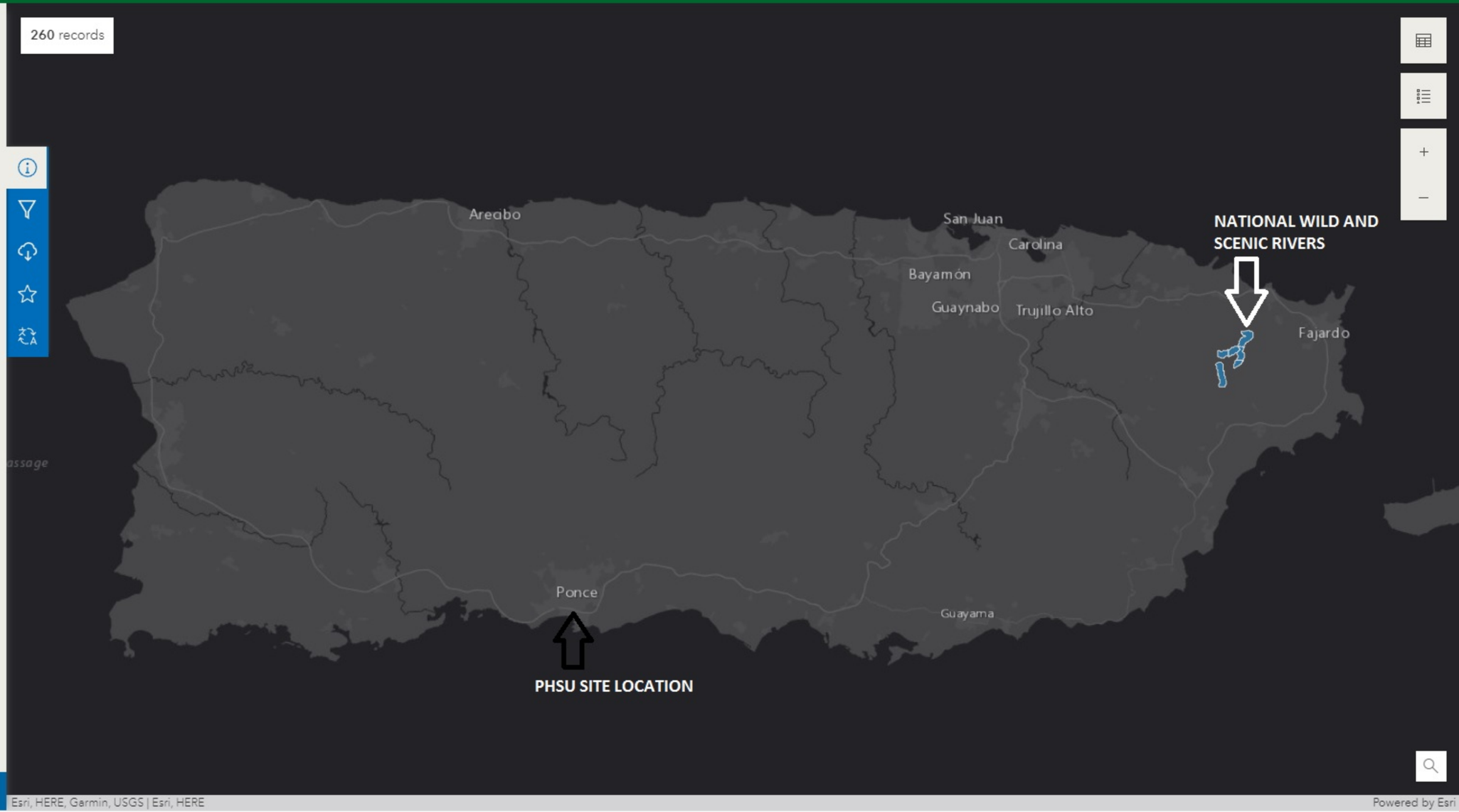
December 27, 2015, 6:38 AM
Published Date

260 Records
View data table

Public
Anyone can see this content

CC0 License
View license details

I want to use this



Nationwide Rivers Inventory

This is a listing of more than 3,200 free-flowing river segments in the U.S. that are believed to possess one or more "outstandingly remarkable" values.

National Park Service
U.S. Department of the Interior



Rivers

Puerto Rico

River	County	Reach	Length (miles)	Description	Potential Classification	ORVs	Watershed (HUC Code 8)	Year Listed/ Updated	Other State
Río Espíritu Santo	Rio Grande	Headwaters to water supply intake immediately upstream from FDR 12 road crossing.	3	Through jumbles of gigantic rocks and massive rock outcrops which create innumerable waterfalls, rapids, and pools. Dense tropical ìvegetation on steep, canyon-like banks. Excellent habitat for ìgoby, unique fish species, and endangered species.	Wild	Fish, Scenic, Wildlife	Eastern Puerto Rico	1993	
Río Espíritu Santo	Rio Grande	Water supply intake on Rio Espiritu Santo near FDR 12 to 100 yards south of Route 186	0	Through jumbles of gigantic rocks and massive rock outcrops which create innumerable waterfalls, rapids, and pools. Dense tropical ìvegetation on steep, canyon-like banks. Excellent habitat for ìgoby, unique fish species, and endangered species.	Scenic	Fish, Scenic, Wildlife	Eastern Puerto Rico	1993	

Río Espíritu Santo	Rio Grande	100 yards south of Route 186 north to Forest boundary.	3	Through jumbles of gigantic rocks and massive rock outcrops which create innumerable waterfalls, rapids, and pools. Dense tropical ìvegetation on steep, canyon-like banks. Excellent habitat for ìgoby, unique fish species, and endangered species.	Recreational	Fish, Scenic, Wildlife	Eastern Puerto Rico	1993
Río Espíritu Santo (tributary)	Rio Grande	Headwaters of both Quebradas Sonadora tributaries to 100 yards south of Route 186	3	Through jumbles of gigantic rocks and massive rock outcrops which create innumerable waterfalls, rapids, and pools. Dense tropical ìvegetation on steep, canyon-like banks. Excellent habitat for ìgoby, unique fish species, and endangered species.	Wild	Fish, Scenic, Wildlife	Eastern Puerto Rico	1993
Río Espíritu Santo (tributary)	Rio Grande	Quebrada Sonadora tributaries from 100 yards south of Route 186 north to Rio Espiritu Santo	1	Through jumbles of gigantic rocks and massive rock outcrops which create innumerable waterfalls, rapids, and pools. Dense tropical ìvegetation on steep, canyon-like banks. Excellent habitat for ìgoby, unique fish species, and endangered species.	Recreational	Fish, Scenic, Wildlife	Eastern Puerto Rico	1993
Río Fajardo	Fajardo	Headwaters approx. 1/2 mile north of West Peak to Forest boundary approx. 1/2 mile east of East Peak	5	One of most remote and isolated rivers on Forest. Huge boulders ìwith high volume of water flow create remarkably scenic landscape ìof waterfalls, water chutes, and pools.	Wild	Scenic	Eastern Puerto Rico	1993

Río Sabana	Naguabo	Headwaters approx. 3/4 mile east of El Cacique Peak to 1/4 mile north of Road 191 crossing near southern Forest boundary	2	Remote and isolated river with rapids and pools among rocks. Large beds of spagnum moss. Excellent quality aquatic habitat.	Wild	Recreational, Scenic, Other	Eastern Puerto Rico	1993
Río Sabana	Naguabo	Approx. 1/4 mile north of Road 191 crossing to Forest Boundary	0	Remote and isolated river with rapids and pools among rocks. Large beds of spagnum moss. Excellent quality aquatic habitat.	Recreational	Recreational, Scenic, Other	Eastern Puerto Rico	1993

Last updated: November 30, 2016

Was this page helpful?

Yes

No

An official form of the United States government. Provided by **Touchpoints**

Attachment XVI: Environmental Justice Executive Order 12898

Environmental Justice (CEST and EA)

General requirements	Legislation	Regulation
Determine if the project creates adverse environmental impacts upon a low-income or minority community. If it does, engage the community in meaningful participation about mitigating the impacts or move the project.	Executive Order 12898	
References		
https://www.hudexchange.info/environmental-review/environmental-justice		

1. **Were any adverse environmental impacts identified in any other compliance review portion of this project's total environmental review?**

   ☐Yes → *Continue to Question 2.*

   ☒No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

2. **Were these adverse environmental impacts disproportionately high for low-income and/or minority communities?**

   ☐Yes

   Explain:

   → *Continue to Question 3. Provide any supporting documentation.*

   ☐No

   Explain:

   The project location is located in a Zone AO floodplain. Flood insurance is required and should be mainatain. The main building have an elevation certificate. There is no adverse impact to low-income or minor communities.

   → *Continue to the Worksheet Summary and provide any supporting documentation.*

3. **All adverse impacts should be mitigated. Explain in detail the proposed measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.**

☐Mitigation as follows will be implemented:

→ *Continue to Question 4.*

☐No mitigation is necessary.

Explain why mitigation will not be made here:

→ *Continue to Question 4.*

4. Describe how the affected low-income or minority community was engaged or meaningfully involved in the decision on what mitigation actions, if any, will be taken.

→ *Continue to the Worksheet Summary and provide any supporting documentation.*

<u>Worksheet Summary</u>

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

No study regarding this resource have been supplied to the preparer.The proposal calls for the development of an outdoor plaza and a dental clinic and acquisition of land at the Ponce Health Sciences University. Based upon the project scope, there should be no adverse impact relating to Climate Change. To the best of our knowledge and information available to the preparer, there are no environmental findings (based upon the findings of this EA) that could affect the minority and/or low-income population around the area of the project site. Therefore, thistopic is in compliance with HUD regulations. See Information and/or Figures attached

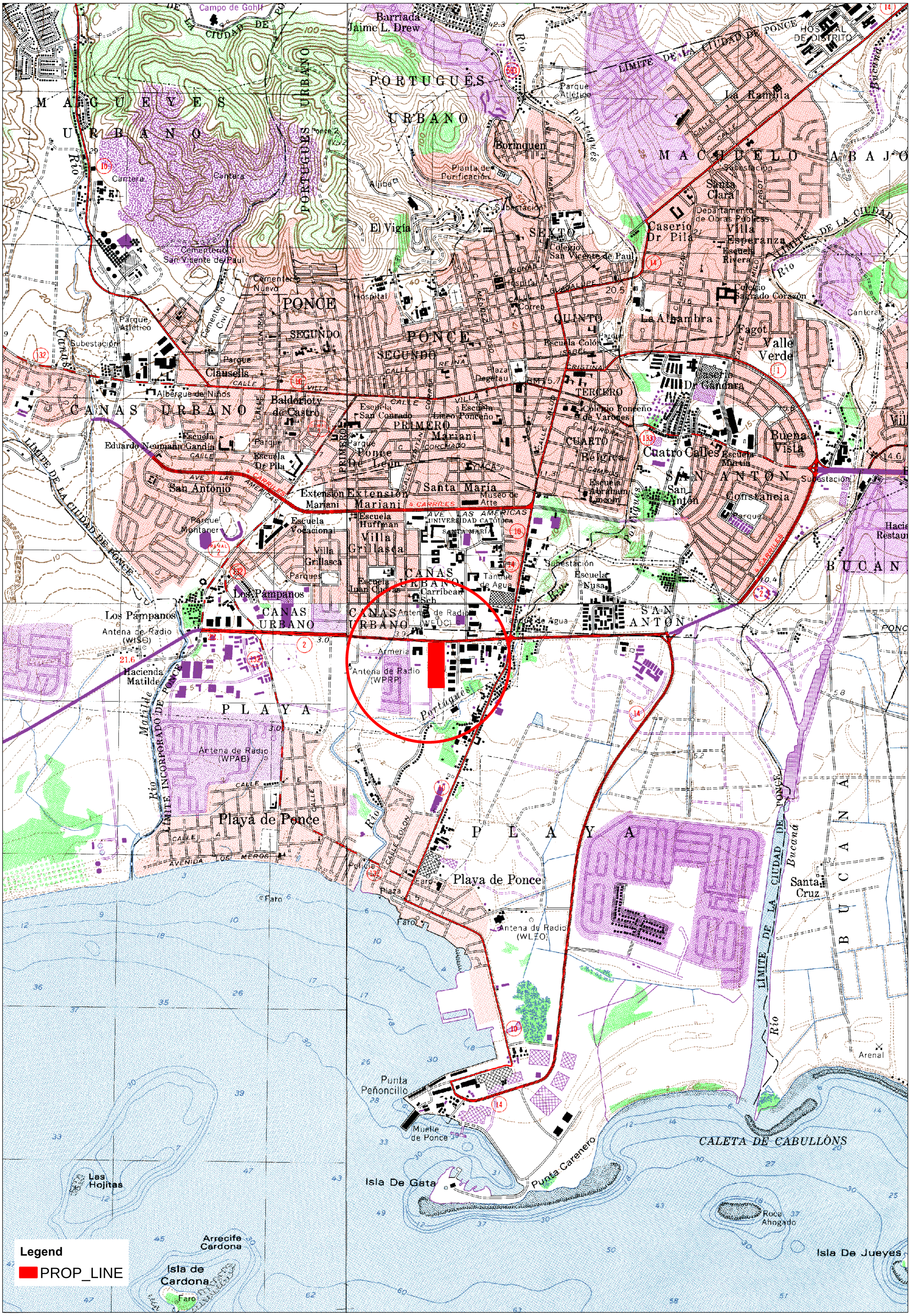
Are formal compliance steps or mitigation required?

☐ Yes

☒ No

Attachment XVII: LOCAL PERMITS AND ENDORSEMENTS AND ADDITIONAL STUDIES.

A.- PONCE HEALTH LOCATION MAP



Legend

PROP_LINE

0 265 530 1,060 1,590 2,120 Meters

1:10,000

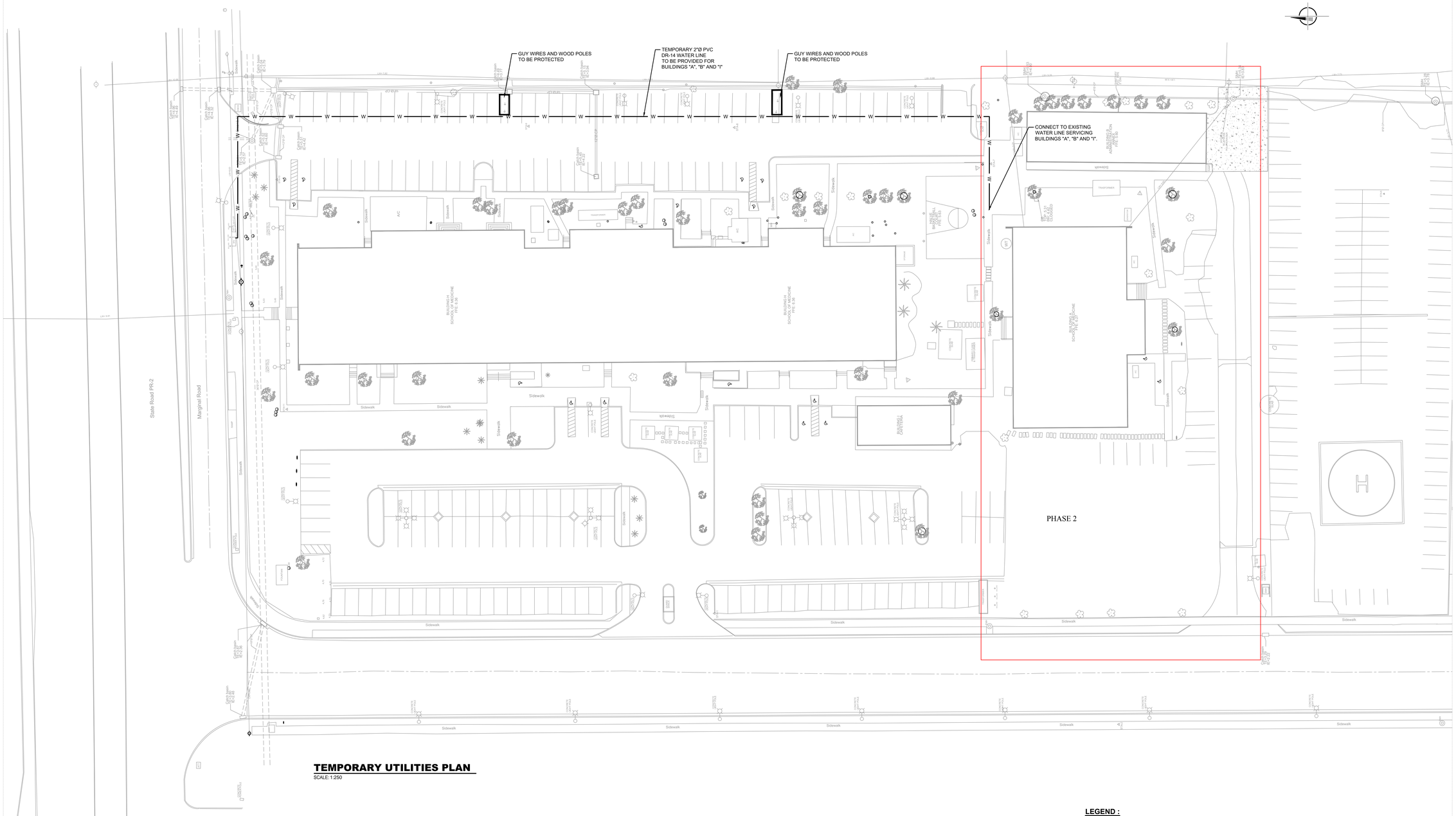
N W E S

LOCATION MAP

PONCE HEALTH SCIENCES UNIVERSITY,
PONCE CAMPUS,
PONCE, PUERTO RICO

P.R.&US.V.I. NAD 83
G.B.A.
Plan. Laredo González
MAR, 2019

PHASE 1A, 1B (Northern) and Phase 2 (Southern) PARCEL: EXISTING CONDITIONS BEFORE DEMOLITION



TEMPORARY UTILITIES PLAN

SCALE: 1:250

LEGEND :

W —— W — TEMPORARY WATER LINE

GUY WIRES AND WOOD POLES PROTECTION

PHSU
PONCE HEALTH SCIENCES UNIVERSITY
Tenebis Discendum Est. Quomodo Vivas

Project
PONCE HEALTH SCIENCES UNIVERSITY
388 ZONA INDUSTRIAL REPARADA 2
PONCE, PUERTO RICO 00716

Hellmuth, Obata + Kassabaum, Inc.
10 South Broadway, Suite 200
St. Louis, MO 63102 USA
t +1 314 421 2000 *f* +1 314 421 6073

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San Juan, Puerto Rico 00909
tel. : (787) 641-6800
fax : (787) 641-6850
web : www.csagroup.com

YO,
CERTIFICO QUE SOY EL PROFESIONAL QUE DISEÑO ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIÉN CERTIFICO QUE ENTIENDO QUE DICHOS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CÓDIGOS DE LAS AGENCIAS, JUNTAS REGLAMENTADORAS O CORPORACIONES PÚBLICAS CON JURISDICCIÓN. RECONOZCO QUE CUALQUIER DECLARACIÓN FALSA O FALSIFICACIÓN DE LOS HECHOS QUE SE HAYA PRODUCIDO SIN CONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MÍ, MIS AGENTES O EMPLEADOS O POR OTRAS PERSONAS CON MI CONSENTIMIENTO HACEN RESPONSABLE (CIVIL, PENAL O ACCIÓN JUDICIAL) Y DISCIPLINARIA POR LA OGPE Y OTRAS AUTORIDADES COMPETENTES, INCLUYENDO, PERO SIN LIMITARSE, A LA TERMINACIÓN DE LA PARTICIPACIÓN EN LOS PROCEDIMIENTOS DE CERTIFICACIÓN PROFESIONAL EN LA OIGPE.

Key Plan

Professional Seals

NOT FOR CONSTRUCTION

No.	Description	Date
A	PROGRESS SET	2019 / 07 / 01

Project No:

Sheet Title

TEMPORARY UTILITIES PLAN

Original drawing is 48 x 36 Do not scale contents of this drawing

Sheet Number

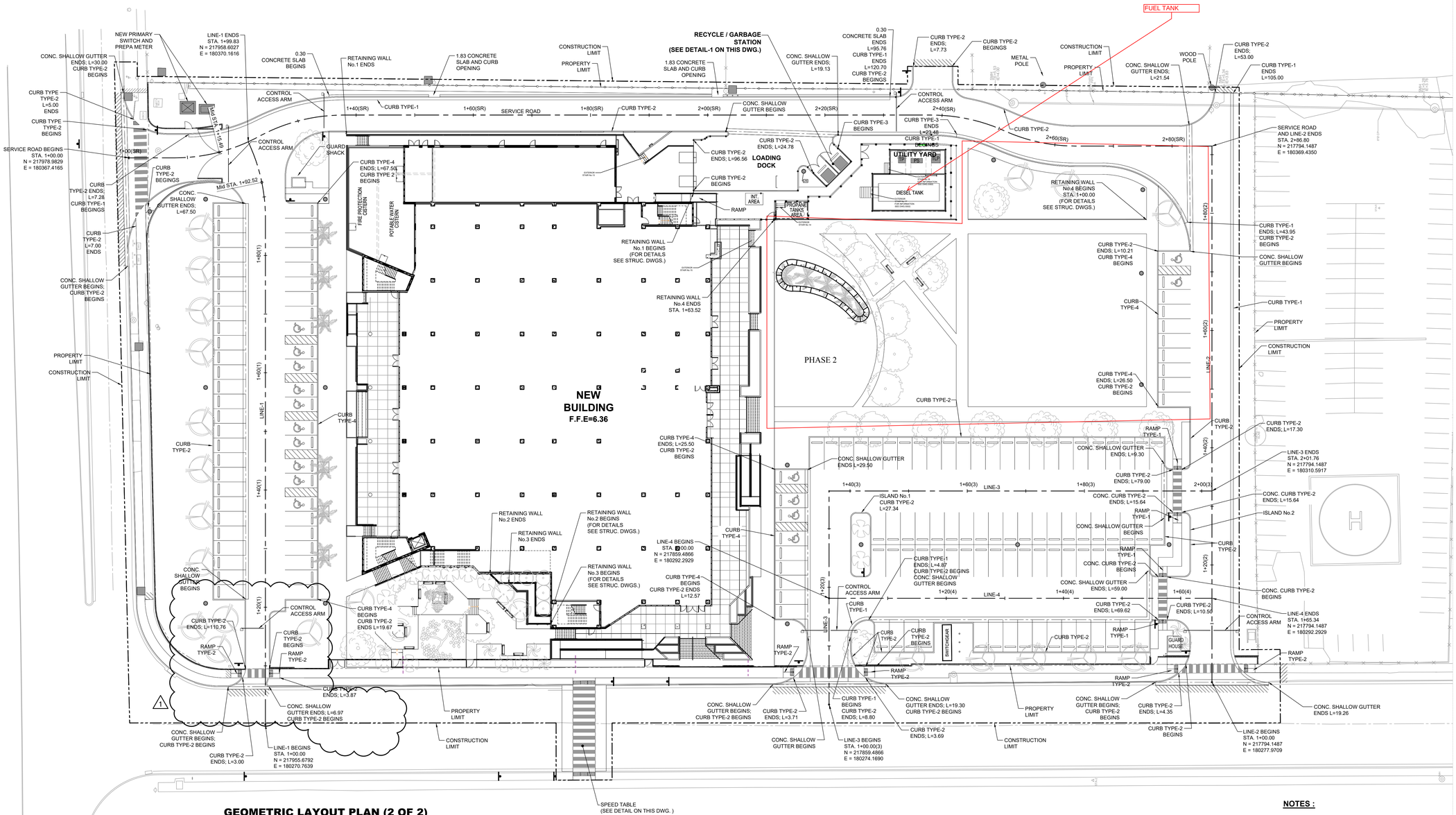
CU102

PHASE 2 (SOUTHERN PORTIONS OF THE PARCEL): PROPOSED SITE PLAN

- New Main Building is under construction (Phases 1a-1b).

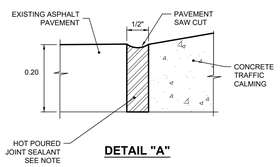
(NORTHERN PORTION OF THE PARCEL)

-Buildings "A" and "B" (See existing conditions) are pending to be demolished and the proposed Outdoor Plaza is pending to be developed (Phase 2)



GEOMETRIC LAYOUT PLAN (2 OF 2)

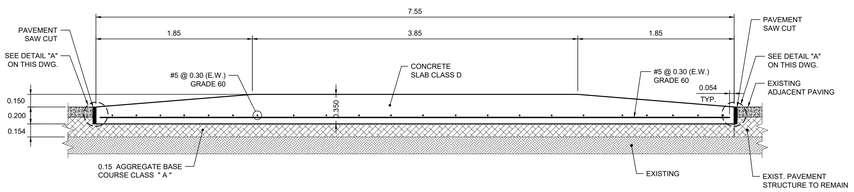
SCALE:1: 250



DETAIL "A"

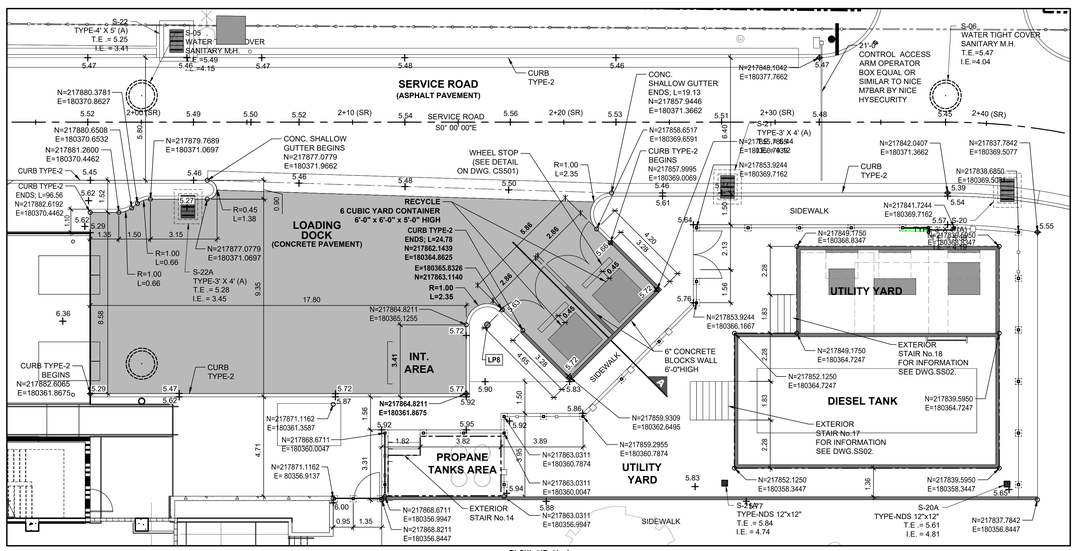
SPEED TABLE NOTES:

THE HOT POURED JOINT SEALANT (SPEC. 507-002) SHALL BE SINGLE COMPONENT, HOT-APPLIED POLYMER MODIFIED, ASPHALT BASE JOINT SEALANT TO FILL JOINT AND CRACKS IN BITUMINOUS AND PORTLAND CEMENT CONCRETE PAVEMENTS IN HOT CLIMATES. THE HOT POURED JOINT SEALANT SHALL MEET THE REQUIREMENTS OF ASSHTO M301 AND ASTM D 3405.



SPEED TABLE DETAIL

SCALE:1:25



BLOW–UP No.1 DETAIL

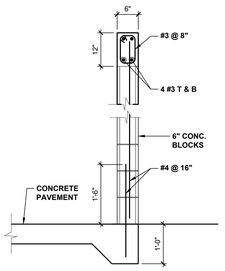
CS102 SCALE:1:100

NOTES :

1. FOR CURB AND GUTTER DETAILS, SEE DWG. CS501.

LEGEND:

- LP1 — LIGHTING POLE ID — PROP. LIGHTING POLE
- CP2 — POWER POLE ID — PROP. POWER POLE
- PROPERTY LIMIT
- CONSTRUCTION LIMIT
- 5.56 — PROP. SPOT ELEVATION



SECTION

CS102 SCALE:N. T.S.

PHSU
PONCE HEALTH SCIENCES UNIVERSITY
Tomás Discenza Est. Quamdiu Vivas

Project
PONCE HEALTH SCIENCES UNIVERSITY
388 ZONA INDUSTRIAL REPARADA 2
PONCE, PUERTO RICO 00716

ISSUED FOR CONSTRUCTION

MAY / 11 / 2020

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fax : (787) 641-6850
web : www.csagroup.com

YO,
CERTIFICO QUE SOY EL PROFESIONAL QUE [CONFECCIONÓ, DISEÑÓ O PREPARÓ] ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIÉN, CERTIFICO QUE ENTIENDO QUE DICHOS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CÓDIGOS DE CONSTRUCCIÓN VIGENTES DE LAS AGENCIAS, JUNTAS REGLAMENTADORAS O CORPORACIONES PÚBLICAS CON JURISDICCIÓN. CERTIFICO, ADEMÁS, QUE EN LA[PREPARACIÓN DE ESTOS PLANOS Y ESPECIFICACIONES SE HA CUMPLIDO CABALMENTE CON LO DISPUESTO EN LA LEY NÚM. 14 DE 8 DE ENERO DE 2004, SEGÚN ENMENDADA, CONOCIDO COMO LA "LEY PARA LA INVERSIÓN POR LA INDUSTRIA PUERTORRIQUEÑA" Y CON LA LEY NÚM. 313 DE 15 DE MAYO DE 1998, SEGÚN ENMENDADA; LEY NÚM. 96 DE 6 DE JULIO DE 1978, SEGÚN ENMENDADA, SEGÚN APLIQUE). RECONOZCO QUE CUALQUIER DECLARACIÓN FALSA O FALSIFICACIÓN DE LOS HECHOS QUE SE HAYA PROCUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MÍ, MIS AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCIÓN JUDICIAL Y DISCIPLINARIA POR LA OGPE.

Key Plan

Professional Seals

No.	Description	Date
1	ACT ENDORSEMENT REVISION	2020-07-31

Project No:

Sheet Title

GEOMETRIC LAYOUT (2 OF 2)

Original drawing is 48 x 36 Do not scale contents of this drawing

Sheet Number

CS102.01

PHASE 3: EXISTING BUILDINGS PROPOSED TO BE REMODELED

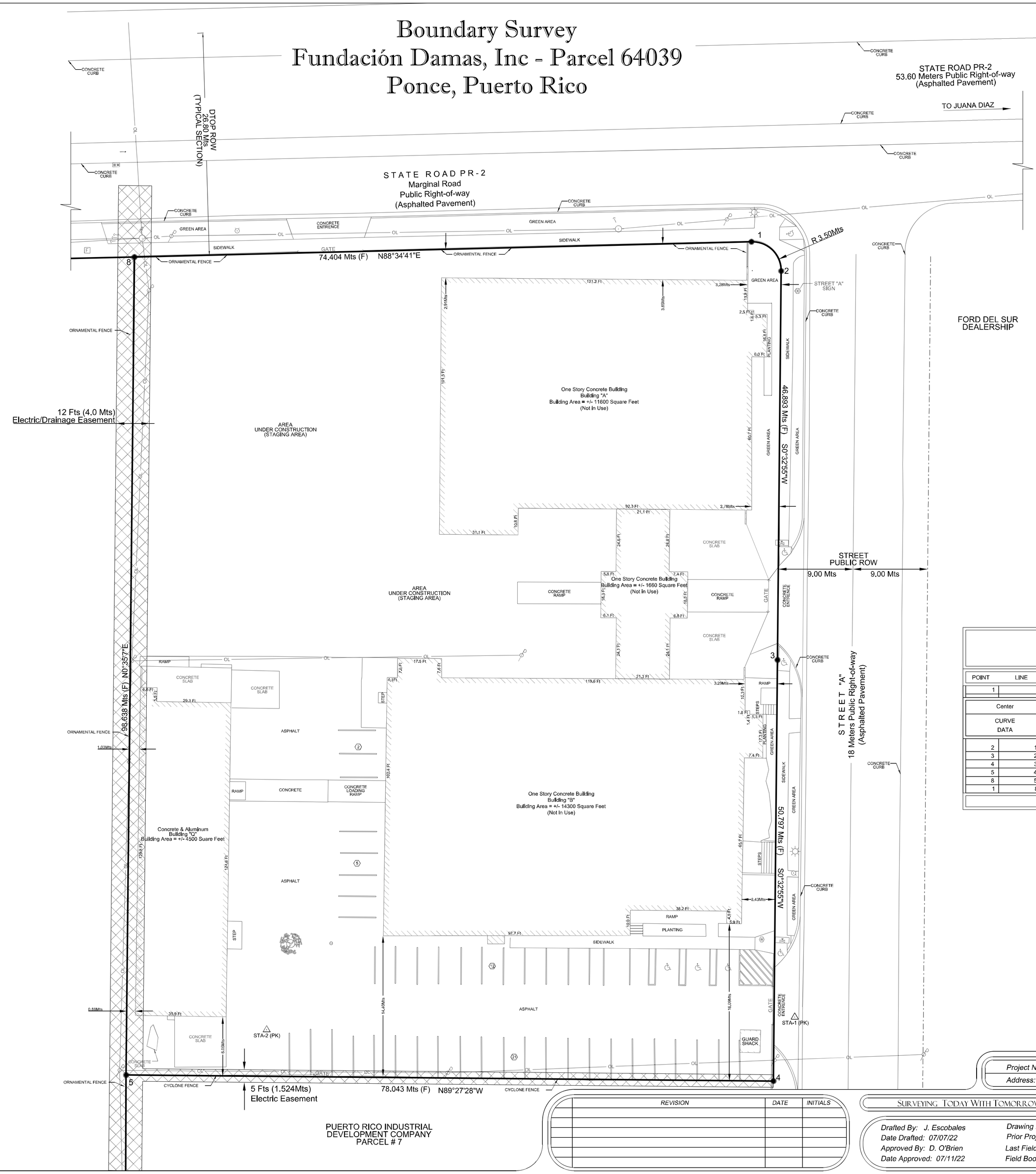
Boundary Survey
Fundación Damas, Inc - Parcel 64039
Ponce, Puerto Rico

Legend of Symbols & Abbreviations

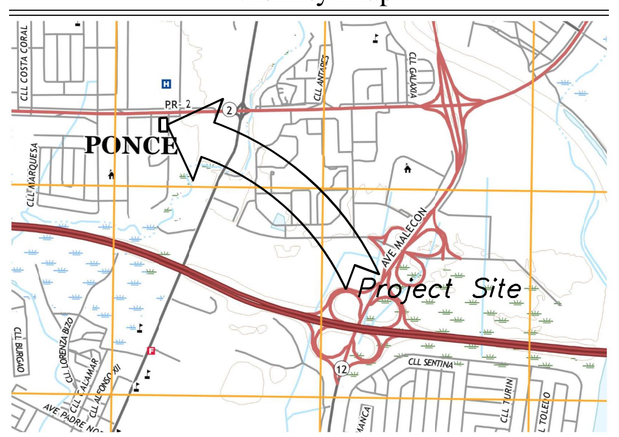
Horizontal Control	Overhead Utility Lines
Set Nail & Disk	Fiber Optic Pull Box
Property Corner Point	Fire Hydrant
(M ± s) Meters	Sign
(F ± t) US Feet	Tree (Mango)
(F) Field Measurement	Clean Out
(D) Deed Reference	Water Meter
Power Pole	Water Valve
Light Pole	Fence
Guy Wire	Catch Basin
Communication Pole	

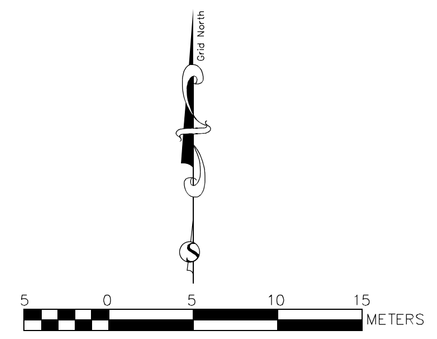
Horizontal Control

Control	Plane Coordinates (NAD 83 2011 Epoch 2010.00)		
	North (Mt)	East (Mt)	Description
STA 1	217884.099	180459.889	PK-Nail
STA 2	217882.561	180396.230	PK-Nail



Vicinity Map





Property Registry Information

Parcel 64039, Book 2079, Page 177,
Municipality of Ponce, Puerto Rico.

URBAN: Parcel of the "Urbanizacion Industrial Reparada" located in Barrio Canas in the municipality of Ponce, Puerto Rico. It has a surface area of eight thousand two hundred twenty-nine point ninety-three square meters (8,229.93 m.c.). On boundaries: North, marginal street of the aforementioned Industrial Park; SOUTH, with lot number seven (7) of said Industrial Park; EAST, with the main street of said Industrial Park; WEST, with land belonging to the Reparada Development Corporation, formerly, today the Puerto Rico Industrial Development Company.

Flood Zone Information:

Subject property is located in Flood Zone "AO"
Flood Insurance Rate Map: 72000C2030J
Panel No.: 2030J
Community Name: Barrio Canas
Effective Date: Abril 13, 2018.

Surveyor's Notes

1.) Paper copies of this survey are not valid without the original signature and seal of a Puerto Rico Licensed Surveyor and Mapper. Digital copies are not valid without the digital signature of a Puerto Rico Surveyor and Mapper.

2.) The horizontal datum utilized for this project is based on the Lambert Projection for Puerto Rico and the US Virgin Island, and referenced to North American Datum (NAD 1983 2011 Epoch 2010.00) in meters. The control utilized to establish said datum was "C1012 & C1024" being NGS (National Geodetic Survey) Horizontal Control Station. Said datum was established by utilizing the VRS System PR, Inc.

3.) All utilities depicted hereon are from visible evidence only. Surveyor did not contact subsurface utility locator service.

4.) No underground foundations or footers were excavated or located for this survey.

5.) This Survey has been performed without benefit of inscription maps, title policy or abstract. Therefore, surveyor can make no guarantees to ownership or encumbrances. There may be additional easements and restrictions that can be found within the PR utilities company.

6.) This Survey shows the existing conditions of the Parcel 64039. On the north and east boundary, No evidence of boundary were found and was utilized the existing sidewalk and roads right of way for property limits. On the west boundary, was utilized the Consolidation Map sign and seal by Javier O Escobales Medina, dated March 12, 2020. And the south boundary was determinate utilizing the existing fence between Lot-7 and Lot-8.

7.) The total number of non-handicap striped parking spaces located on the subject property is 39, and the total number of handicap striped parking spaces located on the subject property is 3.

SURVEY DATA

Fundación Damas, Inc - Parcel 64039

POINT	LINE	(Y) NORTH	(X) EAST	DISTANCE	BEARINGS	DESCRIPTION
1	—	217977.5919	180454.6743	—	—	PC,Concrete Fence
Center		217974.0930	180454.7598	—	—	Center coord
CURVE DATA		ANGLE 91°56'56"	RADIUS 3.500	TANGENT 3.821	EXTERNA 1.536	ARC LENGHT 5.617
2	1-2	217974.0595	180458.2597	5.033	S 45°25'33" E	PT,Sidewalk
3	2-3	217927.1685	180457.8107	46.893	S 00°32'55" W	Sidewalk
4	3-4	217876.3743	180457.3245	50.797	S 00°32'55" W	Concrete Fence
5	4-5	217877.1130	180379.2850	78.043	N 89°27'28" W	Concrete Wall
8	5-8	217975.7456	180380.2928	98.638	N 00°35'07" E	Concrete Fence
1	8-1	217977.5919	180454.6743	74.404	N 88°34'41" E	PC,Concrete Fence

AREA = 7796.2737 sq mt. =O= 1,9836 cdas.

Surveyor's Certification:

The undersigned, Registered Surveyor License No. 22651 authorized to exercise his profession in Puerto Rico does hereby certify that the above bearing and distances hereon drawn are true representation of the existing condition at the time of the survey.

JAVIER O. ESCOBALES MEDINA AGRIMENSOR LICENCIADO LIC. 22651 PUERTO RICO

7/12/2022

Javier O Escobales Medina PLS No. 22651
SurvTech Solutions, Inc.

Project Name: Fundación Damas, Inc - Parcel 64039	Project No.: 221461
Address: 291 PR-2 00716	City: Ponce State: Puerto Rico

REVISION	DATE	INITIALS

SURVEYING TODAY WITH TOMORROWS TECHNOLOGY

Drafted By: J. Escobales
Date Drafted: 07/07/22
Approved By: D. O'Brien
Date Approved: 07/11/22
Drawing Name: 221461_A
Prior Project No.: N/A
Last Field Date: 06/24/22
Field Book/Page: 22-01/02-07

SURVTECH SOLUTIONS, INC.
10220 U.S. Highway 92 East
Tampa, FL 33610
phone: (813)-621-4929
fax: (813)-621-7194
email: jescobales@survtechsolutions.com
http://www.survtechsolutions.com

Date Plotted: 07/08/2022 8:30:25 AM By: JAVIER ESCOBALES

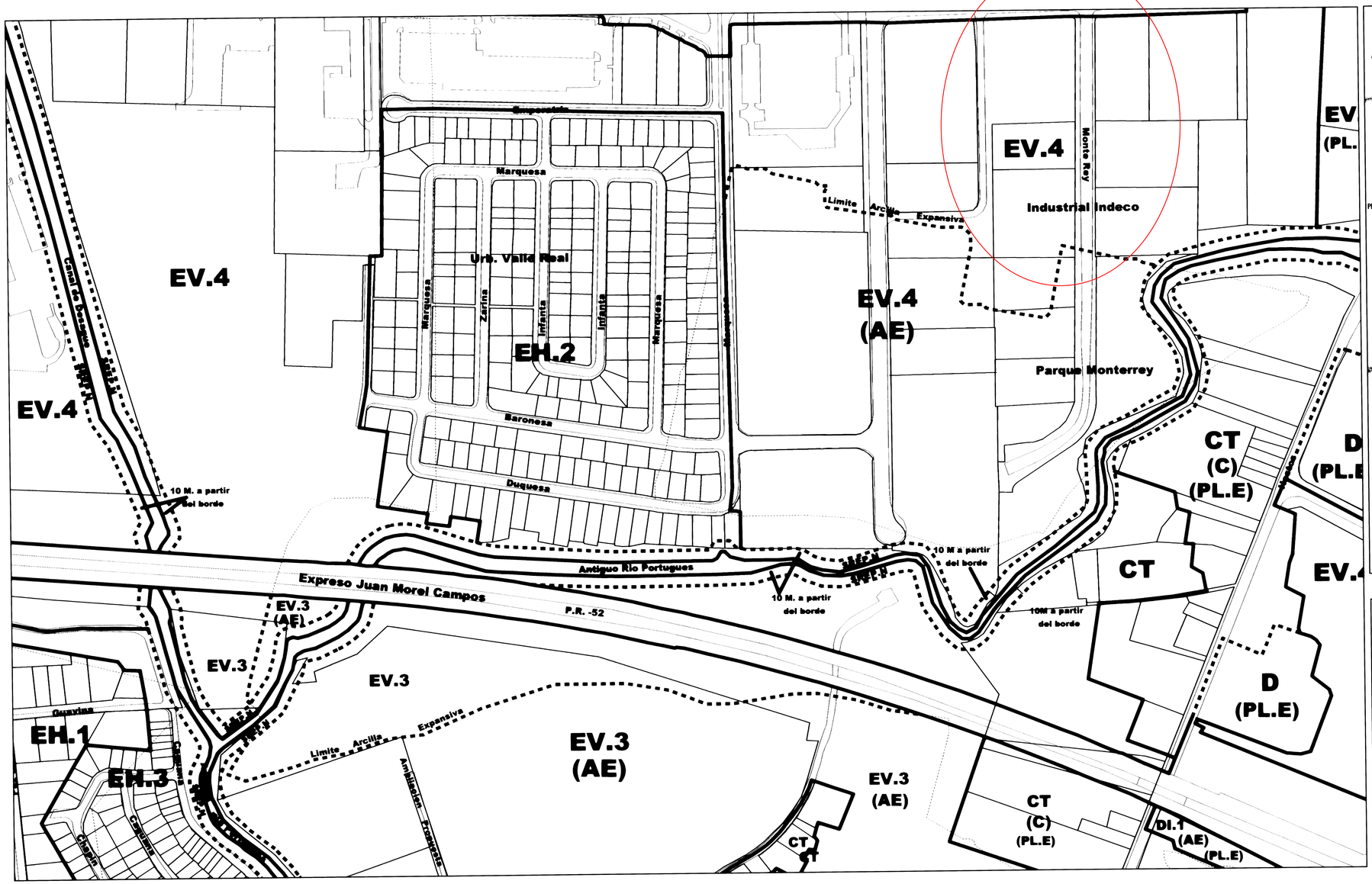
B.- ZONIFICACION FHASES 1a-1b-2 BY ADV

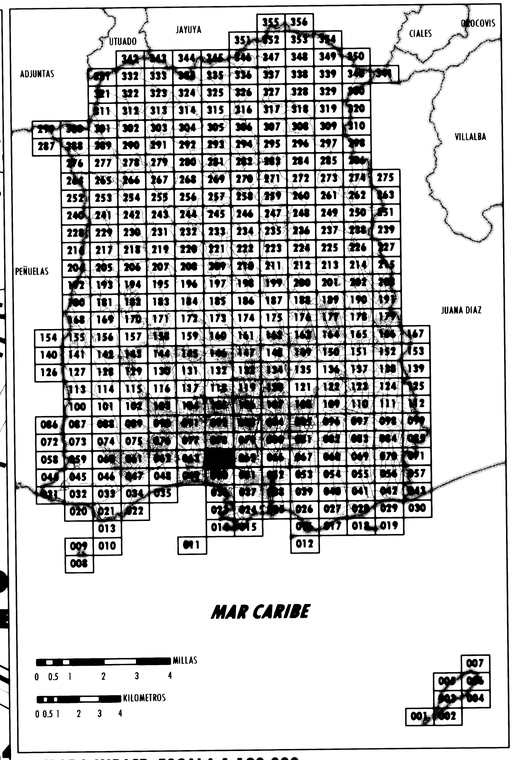
Nombre de Proyecto | Ponce Health Science University
Fecha | 30 de septiembre de 2019
Re: | Tabla de Análisis de Parámetros Requeridos según Zonificación

REQUISITOS DE ZONIFICACIÓN						
REFERENCIA	Reglamento conjunto para la evaluación y expedición de permisos relacionados al desarrollo de uso de terrenos y operación de negocios					
MUNICIPIO	Municipio Autónomo de Ponce					
PARÁMETRO	REQUISITOS	EXISTENTE	PROPUESTO	REGLAMENTO		VARIACIÓN
				SEC.	PAG.	
Clasificación De Uso	-	CI	CI	6.1.1.4.i	278	NO
Clasificación de Suelo	-	SU	SU	6.1.1.5	288	NO
Cabida min. del Solar	450 mc min.	18,512 mc	18,512 mc	T-6.40	319	NO
Área De Ocupación	15,735 mc max. (85% del solar)	3,669 mc	3,994.6 mc	T-6.41	321	NO
Área Bruta de Piso	94,411 mc max. (510% del solar)	3,669 mc	13,650 mc	T-6.42	321	NO
Ancho Mínimo	15 m	103.6 m	106.3 m	T-6.40	319	NO
Altura	27 m (2 veces el ancho de la vía)	6 m	21.64 m	6.1.1.11. d.1.c	294	NO
PATIOS						
Frontal	4.33 m (1/5 parte de la altura)	37 m	58.4 m	T-6.40	319	NO
Posterior	4.33 m (1/5 parte de la altura)	55 m	127.67 m	T-6.40	319	NO
Derecho	4.33 m (1/5 parte de la altura)	46 m	11.16 m	T-6.40	319	NO
Izquierdo	4.33 m (1/5 parte de la altura)	29 m	17.82 m	T-6.40	319	NO
OTROS PARAMETROS						
Verjas	Frontal = 2m max. Lateral y posterior = 2m. max.	-	Frontal = 2m Lateral = 2m	8.3.2.2	461	NO

USOS	ESTACIONAMIENTOS					
Estacionamientos	484	-	539	8.5.3.1.m	475	NO
Impedidos	9	-	11	8.5.3.2	476	NO
Bicicletas	54	-	54	8.5.3.3	477	NO
Área de Carga y Descarga Edificios de oficina	1 por cada 5,000mc = 3 espacios min.	0	3	8.5.3.4 5.11.8	477 133	NO

C.- ZONING Ponce064





MAPA INDICE, ESCALA 1:130,000

LEYENDA

- DISTRITOS DE ORDENACION
- DISTRITOS SOBREPUESTOS Y LIMITES VIRTUALES
- SISTEMA VIAL
- PARCELAS
- CENTRO DE QUEBRADAS
- TOPOGRAFIA, @ 10 METROS
- LAGOS, LAGUNAS Y CANALES

PLANO DE ORDENACION NUMERO : 064

APROBACION

APROBADO POR LA LEGISLATURA MUNICIPAL
DEL MUNICIPIO AUTONOMO DE PONCE
MEDIANTE ORDENANZA
NUM. 26 SERIE 2002 - 2003
EN PONCE, PUERTO RICO EL
14 DE ENERO DE 2003

HON. GUILLERMO JIMENEZ
SECRETARIO DE LA LEGISLATURA MUNICIPAL

HON. LUIS A. (WITO) MORALES
PRESIDENTE DE LA LEGISLATURA MUNICIPAL

CERTIFICACION

FIRMADA LA ORDENANZA Y APROBADA EN PONCE, PUERTO RICO EL
16 DE ENERO DE 2003

HON. RAFAEL CORDERO SANTIAGO
ALCALDE
MUNICIPIO AUTONOMO DE PONCE

ADOPCION

ADOPTADO POR LA JUNTA DE PLANIFICACION

EN SU REUNION DEL 18 DE DICIEMBRE DE 2003
MEDIANTE RESOLUCION NUM. JP-PT-63-RI-01

ANGEL D. RODRIGUEZ - PRESIDENTE
JUNTA DE PLANIFICACION DE PUERTO RICO

CERTIFICO ADOPTADA HOY 18 DE DICIEMBRE 2003

CARMEN TORRES MELENDEZ - SECRETARIA
VIGENCIA 28 de diciembre de 2003

ESCALA 1:2,000

METROS 0 50 100 200 300 400
PIES 0 250 500 1,000 1,500 2,000

PLAN DE ORDENACION TERRITORIAL

MUNICIPIO AUTONOMO DE PONCE
OFICINA DE ORDENACION TERRITORIAL

PLANO DE ORDENACION NUMERO : 064

D.- Environmental Compliance 2019-274617-DEA-003177-1807468 PONCE MUNICIPALITY

Gobierno de Puerto Rico

Municipio Autónomo de Ponce

28 de octubre de 2019

Ing. Gabriel Hernández Rodríguez
Secretaria Auxiliar Interina de la OGPe, DDEC
PO Box 41179
San Juan, Puerto Rico 00940-1179

Estimado ingeniero Hernández:

Evaluación Ambiental
Caso Núm. 2019-274617-DEA-003177
Caso de Referencia: 2019-274617-REA-003429

El proyecto de referencia consiste en un documento ambiental para la construcción de un nuevo edificio académico para la escuela de medicina en el Municipio de Ponce.

Entendemos que el Documento Ambiental presentado cumple con todos los parámetros de una Evaluación Ambiental de acuerdo al Reglamento de Evaluación y Trámite de Documentos Ambientales de la Junta de Calidad Ambiental. Por lo que le referimos el mismo para su acción correspondiente.

Cualquier duda o pregunta, favor comunicarse a la Oficina de Permisos al teléfono (787) 259-2210. Estaremos en la mejor disposición de servirle.

Cordialmente,

Félix Camacho Nogués, PE
Director
Oficina de Permisos

CERTIFICACION

Yo, Ing. Félix Camacho Nogués *funcionario responsable designado*
Nombre
de la Oficina de Permisos del Municipio Autónomo de Ponce, *he evaluado,*
Agencia o Departamento
revisado y aceptado la información en el documento ambiental realizada

para la construcción de un nuevo edificio académico para la escuela de medicina en el Municipio de Ponce

En relación al proyecto antes mencionado y su correspondiente documento ambiental, ***CERTIFICO QUE:***

1. *Toda la información vertida en el documento ambiental es* ***CIERTA, CORRECTA y COMPLETA*** *a mi mejor saber y entender.*
2. ***AFIRMO y RECONOZCO*** *las consecuencias de incluir y someter información incompleta, inconclusa o falsa en dicho documento.*

Y para que así conste, firmo la presente certificación en Ponce

Puerto Rico, hoy 28 de octubre de 2019.

Félix D. Camacho Nogués
Firma

E.- Environmental Compliance OGPe 2019-274617-DEA-003177-2063499

Determinación de Cumplimiento Ambiental para Evaluación Ambiental

PONCE HEALTH SCIENCES UNIVERSITY

Fecha de Expedición:

22/JAN/2020

Datos de Determinación

Presentado por

Municipio Autónomo de Ponce

Número de Caso

2019-274617-DEA-003177

Dirección Física

EXT URB INDUSTRIAL REPARADA
Ponce Puerto Rico, 00732

Casos de Referencia

2019-274617-REA-003429

Número(s) de Catastro

412-011-783-27

Acción Propuesta

La Acción Propuesta consiste en un proyecto: Privada en el Distrito de Clasificación identificado a continuación. El mismo tiene los siguientes componentes:

Calificación

Distrito(s) de Calificación:

EV.4

Distrito en el Mapa de Inundabilidad:

AO

Tipo de Suelo:

SNS (89.6%), Ct (10.4%)

Movimiento de Tierra

Volumen: 10000 metros cúbicos

Volumen de corte: 7000 metros cúbicos

Volumen de relleno: 3000 metros cúbicos

Demolición

Conlleva demolición: Sí

Conlleva explosivos: No

Cabida del proyecto (Área Total Según

21844.7 metros cuadrados

Instalación de Generadores de Electricidad

Conlleva generadores: Sí

Capacidad: 3000 kW

Tanque: 20000 galones

Servidumbres Existentes

Acueductos (AAA), Alcantarillado (AAA), Electricidad (AEE), Telecomunicaciones (PRTC)

Desperdicios Sólidos

Volumen en construcción: 11120 yardas cúbicas

Tipo: NP

Volumen en operación: 5380 yardas cúbicas

Tipo: NP

Descripción

Se propone la construcción de un nuevo edificio para la escuela de medicina Ponce Health Sciences University en el municipio de Ponce. La Universidad va a ampliar los programas de enfermería, salud pública y psicología. El predio cuenta con una cabida aproximada de 13,214 metros cuadrados (3.3620 cuerdas) y ubica en la carretera PR-2 del Barrio Playa en el municipio de Ponce. El proyecto consiste en la construcción de un edificio de cinco pisos donde se incluye área de concesiones, salones de clase, auditorios, laboratorios y oficinas administrativas. El proyecto también contará con estacionamientos y áreas verdes, entre otros. Como parte del proyecto será necesaria la demolición de estructuras existentes. El área cuenta con facilidades de agua potable, alcantarillado sanitario, energía eléctrica y acceso.

Determinación de Cumplimiento Ambiental para Evaluación Ambiental

Impactos al Ambiente y Medidas de Mitigación

El proyecto no contempla impactos ambientales significativos, ya que ubica en un predio urbano completamente desarrollado, ocupado por estructuras a ser demolidas. El predio cuenta con la Certificación para Categorización de Hábitats Naturales para Vida Silvestre del DRNA, emitida el 23 de abril de 2019, donde se categoriza el predio como Hábitat Natural con Bajo Potencial de Convertirse en Hábitat Esencial, de Alto Valor Ecológico o de Valor Ecológico (Categoría 6). Se tomarán las correspondientes medidas para disminuir cualquier impacto. Entre las medidas para disminuir cualquier impacto asociado al ruido durante la construcción, se trabajará en horario diurno, se proveerá mantenimiento adecuado a los equipos, entre otros. Durante la operación se velará por el mantenimiento de equipos y generadores eléctricos para el funcionamiento adecuado en cuanto a los controles de ruido y emisiones. El proyecto contará con diversas medidas a implantarse durante la construcción y demolición para evitar cualquier impacto tales como; colocación de pacas de heno, verjas de control de sedimentos, rociadores, entre otros. Se obtendrán los correspondientes permisos relacionados a la extracción, permiso general consolidado, corte y poda. También se implementará un plan de prevención y control de contaminación de escorrentía. La demolición se realizará en cumplimiento con la reglamentación correspondiente. Con respecto a los desperdicios sólidos no peligrosos a ser generados durante la construcción y operación; los materiales que resulten tener naturaleza reciclable serán procesados por compañías de reciclaje. El resto de los desperdicios serán transportados hasta un sistema de relleno sanitario autorizado por la JCA por una compañía de acarreo autorizada siguiendo los requerimientos de la Autoridad de Desperdicios Sólidos. Los desperdicios biomédicos que sean generados durante la operación serán manejados a través de Consolidated Waste Services Corp. El proyecto cumplirá con la reglamentación y los requerimientos de las agencias concernientes.

Determinación

Luego de revisado y analizado el expediente administrativo y discutidos todos los méritos del documento ambiental, al amparo de los poderes y facultades que le confiere a esta Oficina de Gerencia de Permisos, (en adelante “OGPe”) la Ley Núm. 161 - 2009, según enmendada y el Reglamento para el Proceso de Evaluación Ambiental de la Junta de Calidad Ambiental (en adelante “RPEA”), RESOLVEMOS:

- La Evaluación Ambiental (en adelante, “EA”) sometida por la Agencia Proponente para la acción propuesta, cumple con todos los requisitos de la Ley sobre Política Pública Ambiental, Ley Número 416 - 2004, según enmendada, y con el RPEA. En dicho documento ambiental fueron adecuadamente considerados y analizados los impactos ambientales que conlleva la acción, por lo que se aprueba el mismo, dando así por terminado el proceso de evaluación ambiental.

- De conformidad con el RPEA, las medidas de mitigación contenidas en el documento ambiental serán obligatorias y constituirán las medidas mínimas a tomarse en consideración para proteger el ambiente. La Agencia Proponente requerirá a las agencias con jurisdicción que incluyan las medidas de mitigación como condición indispensable de sus permisos.

- La Agencia Proponente deberá procurar que al momento de llevarse a cabo el desarrollo del Proyecto, las recomendaciones emitidas por los Gerentes de Permisos de la OGPe sean adecuadamente observadas y consideradas. Asimismo, la Agencia Proponente será responsable de velar que la acción, de llevarse a cabo, se desarrolle acorde con la información suministrada en el documento ambiental presentado apercibiéndosele que, los permisos que administran las entidades gubernamentales en relación al cumplimiento de las mismas están supeditados a la información y datos contenidos en documento ambiental.

- Si luego de haberse dado cumplimiento con el Artículo 4 de la Ley Núm. 416, supra, surgieran variaciones sustanciales en la acción propuesta, según definida en el RPEA, la Agencia Proponente será responsable de evaluar dichos impactos mediante el documento ambiental que entienda correspondiente.

- Se le apercibe que esta determinación de cumplimiento ambiental no será revisable hasta tanto se emita una determinación final, cuyo componente sea la presente determinación.

Recomendación y/o Comentarios del Director de la División de Cumplimiento Ambiental

Determinación de Cumplimiento Ambiental para Evaluación Ambiental

Recomendación y/o Comentarios del Director de la División de Cumplimiento Ambiental

1. Tendrá que obtener de la OGPe el Permiso Único Incidental Operacional, a tenor con la Regla 3.4.1 del Reglamento Conjunto para la Evaluación y Expedición de Permisos Relacionados al Desarrollo, Uso de Terrenos y Operación de Negocios del 7 de junio de 2019.

2. Cumplir con las disposiciones del Reglamento sobre Áreas Especiales de Riesgo a Inundación (Reglamento Núm. 13) de la Junta de Planificación.

3. Si como parte de la demolición es necesario la remoción de material con contenido de asbesto y/o plomo; tendrán que solicitar y obtener el Permiso General para Actividades de Mitigación de Pintura con Base de Plomo y/o el Permiso General para el Manejo de Materiales con Contenido de Asbesto, que establece el Reglamento para el Trámite de los Permisos Generales de la Junta de Calidad Ambiental

4. Respecto a los desperdicios biomédicos, tendrá que manejar y disponer los mismos, conforme a las disposiciones del Reglamento para el Manejo y Disposición de los Desperdicios Biomédicos Regulados de la Junta de Calidad Ambiental. Además, deberá solicitar un Número de Generador de desperdicios biomédicos regulados en el Área Control Calidad de Terrenos de la Junta de Calidad Ambiental.

5. Cumplir con los requerimientos de las agencias concernientes y con las recomendaciones emitidas (2019-274617-REA-003429, 2019-255909-SRI-022539) para el proyecto.

6. Tendrán que someter el Permiso General que establece el Reglamento para el Trámite de los Permisos Generales que incluye un Permiso para Fuente de Emisión (PFE) en el caso de generadores de electricidad con capacidad mayor de diez (10) caballos de fuerza y una operación no mayor de quinientas horas al año. De tener el generador una operación mayor de quinientas horas al año, tendrán que radicar y obtener los correspondientes permisos otorgados por el Área de Calidad de Aire del Departamento de Recursos Naturales y Ambientales.

7. Someter al Área de Calidad de Agua del Departamento de Recursos Naturales y Ambientales un Plan de Emergencia, a tenor con el Reglamento de Estándares de Calidad de Agua para prevenir y controlar derrames, parar los tanques para el almacenamiento de combustible de los generadores.

8. Seguir las recomendaciones del estudio geológico realizado para el proyecto.

9. Cumplir con el Reglamento para el Control de la Contaminación Lumínica y el Reglamento para el Control de la Contaminación de Ruido.

10. El almacenaje, manejo y disposición de los desperdicios sólidos tiene que realizarse en conformidad con el Reglamento para el Manejo de los Desperdicios Sólidos No Peligrosos del Departamento de Recursos Naturales y Ambientales.

11. Tomar las medidas necesarias para evitar que residuos de sustancias orgánicas e inorgánicas tales como: aceites, combustibles u otras sustancias químicas, puedan ser arrastradas por la escorrentía y ganen acceso a cualquier cuerpo de agua o al sistema pluvial.

12. Las recomendaciones y requisitos presentados en esta comunicación, no eximen de cualquier otro requerimiento o permiso de esta Oficina u otras agencias concernidas, que sean aplicables a la acción propuesta.

Firma / Sellos

Determinación de Cumplimiento Ambiental para Evaluación Ambiental

Firma / Sellos

CERTIFICO: Que he notificado copia fiel y exacta de la presente determinación con sus anejos, bajo mi firma, a la Agencia Proponente.

Fecha de Expedición:
22/JAN/2020

Ing. Gabriel Hernández
Secretario Auxiliar
Departamento de Desarrollo Económico y Comercio de Puerto Rico
Oficina de Gerencia de Permisos

SBP SINGLE BUSINESS PORTAL

F.- Construction Permit 2019-255909-PCOC-004867

Permiso de Construcción

Fecha de Expedición:
07/may/2021

Nombre del Proyecto:
Ponce Health Sciences University - New Academic and Clinic Buildings

Fecha de Expiración:
07/may/2023

Descripción del Proyecto

Aprobar

Datos de Localización

De conformidad con las disposiciones contenidas en las Leyes y los Reglamentos vigentes, se expide el presente Permiso de Construcción, Privado para las Obras de Obra de Construcción a realizarse en un predio de terreno ubicado en:

Dirección Física:
388 ZONA INDUSTRIAL REPARADA 2 Ponce, Puerto Rico, 00716

Número(s) de Catastro(s):
412-011-783-27

Distritos de Calificación:
EV.4

Distritos de Clasificación:
NA

Zona de Inundabilidad:
AO

Dueño(s):
Ponce Health Sciences University

Casos de Referencia:
2019-255909-PCOC-004254,2019-255909-SRS-031285,2019-255909-SRS-031286,2019-274617-DEA-003177,AAA-RS-19-58-0002 (2019-255909-SRI-031335),ACT/DTOP 2019-255909-SRI-031326,AEE 99-3-440B1 WR5281397 (2019-255909-SRI-031345),NETPR-2019-RI-0062 (2019-255909-SRI-031361)

Tipo de Uso Propuesto:
Institucional

Datos del Proyecto

Proyectista:
Arquitecto - Annette Alfonso Díaz - 12304 - Arquitectónica

Inspector:
Ingeniero Civil - Axel Bonilla Cortes - 8839 - Other

Especialista:
Arquitecto - Edith Calzadilla González - 11391 - Arquitectónica

Datos del Permiso

Costo Estimado (Original)	$41,801,910
Costo Estimado (OGPe)	$0

Cabida de los Desarrollos: 18538.99m²

Área Bruta de Construcción: 129,538.0000p²

Permiso de Construcción

Costo Estimado (Original)

Costo Estimado (OGPe)

Obras de Urbanización

null

Volumen a Rellenar o Excavar: nullm³

Obras de Construcción

Nombre de la Estructura:

New Academic Building

Materiales:

Hormigón Armado
Hormigón Armado y Bloques
Acero Estructural

Patios:

Patio Mínimo Delantero:	58.4m
Patio Mínimo Lateral Derecho:	11.16m
Patio Mínimo Lateral Izquierdo:	17.82m
Patio Mínimo Posterior:	127.26m
Patio Mínimo Interior:	6.05m

Tipo(s) de Usos:

Datos Adicionales Propuestos:

Aguas:

Abastecimiento de Agua Potable:	Público
Disposición de Desperdicios Sólidos:	Privado
Disposicón de Aguas Servidas:	Alcantarillado Sanitario-Colectivo

Parámetros de Construcción:

Cantidad de Plantas:	4
Altura Máxima:	22.37m
Área del Solar:	18,512.0000m²
Área de Ocupación:	3,994.6000m²
Área Bruta del Piso:	13,650.0000m²
Cantidad de Niveles del Sótano:	0
Densidad Poblacional:	0.00m²/uvb

Facilidades:

Estacionamientos:

	Regular	Compact
Cantidad para Residentes:	0	0
Cantidad para Empleados:	135	0
Cantidad para Visitantes:	0	0
Cantidad para Impedidos:	16	0
Total de Espacios de Carga y Descarga:	3	

Sub-estaciones Eléctricas:

Potencia Máxima de la Sub-estación eléctrica:	0kVA
Cantidad de Unidades de Sub-estación eléctrica:	0

Calle:

Ancho de Calles:	0.00m
Ancho de Aceras:	0.00m
Ancho de Rodaje:	0.00m
Ancho de Faja de Siembra:	0.00m
Ancho de Encintado:	0.00m

Permiso de Construcción

Institucional:

Área Bruta de Construcción para uso Institucional:	129,538.0000 p²
Cantidad de Pisos:	4

Hospital:

Habitaciones:	0
Laboratorios:	0
Otros:	0

Institución Docente:

Aulas / Salones:	0
Cefeterias:	0
Facilidades Recreativas:	0
Laboratorios:	0

Estructuras Religiosas:

Estructuras Religiosas:	0

Teatros:

Estructuras Teatrales:	0

Centros Culturales:

Centros Culturales:	0

Baños:

Cantidad de Baños:	46

Facilidades Recreativas y Culturales:

Área para Recreación Activa:	0.0000
Área para Recreación Pásiva:	0.0000
Área para Reuniones:	0.0000
Área para Recreación de Niños:	0.0000

SBP SINGLE BUSINESS PORTAL

Permiso de Construcción

Condiciones Generales

Permiso de Construcción

1. Este permiso deberá estar expuesto en todo momento en un lugar visible al público dentro de las instalaciones para el cual fue otorgado.

2. El llevar a cabo cualquier construcción no autorizada en este Permiso estará sujeto a que se presenten recursos extraordinarios para la demolición o paralización de las obras de obras no autorizadas y/o revocación de permisos, según se establece en la Ley Núm. 161-2009, según enmendada y conocida como “Ley para la Reforma del Proceso de Permisos de Puerto Rico”.

3. Este permiso no legaliza ni autoriza de manera alguna la construcción de obras, ni autoriza aquellas ya construidas y que estén sujetas a un permiso.

4. El cumplir con los requerimientos de éste o cualquier otro permiso emitido al amparo de la Ley Núm. 161-2009, según enmendada y conocida como “Ley para la Reforma del Proceso de Permisos de Puerto Rico y/o el Reglamento Conjunto de Permisos para Obras de Construcción y Usos de Terrenos, no exime al concesionario de cumplir con cualesquiera otros requisitos de disposiciones legales estatales y federales aplicables, tales como, pero sin limitarse a Fair Housing Act y Americans with Disabilities Act y la Ley Sobre Política Pública Ambiental.

5. Las disposiciones aplicables de Ley Núm. 161-2009, según enmendada y conocida como “Ley para la Reforma del Proceso de Permisos de Puerto Rico y/o el Reglamento Conjunto vigente se incorporan aquí por referencia y serán condiciones exigibles bajo este Permiso.

6. La adjudicación de un permiso no tiene el propósito ni alcance de validar o anular cualquier restricción privada, incluyendo, servidumbres en equidad o prohibiciones que resulten inconsistentes con el permiso aquí concedido. La OGPe no cuenta con jurisdicción para adjudicar la vigencia de estas restricciones.

Si la concesión de un permiso resulta en un menoscabo de cualquier restricción o prohibición impuesta, la parte afectada podrá llevar aquellas acciones que en derecho procedan contra el concesionario del permiso; disponiéndose que, la OGPe o el Municipio Autónomo, según aplique, queda relevada de responsabilidad por tal alegación.

7. El Concesionario de este Permiso deberá cumplir con cualesquiera otros requisitos legales aplicables del Reglamento Conjunto vigente, el Código de Rentas Internas de Puerto Rico o cualesquiera otros reglamentos aplicables del Departamento de Hacienda y/o Departamento de Transportación y Obras Públicas.

8. A petición fundamentada del concesionario del permiso, acompañado de una certificación del proyectista y/o especialista de que el proyecto de construcción aún continúa conforme con las leyes y reglamentos aplicables, y no se le han incorporado cambios, siempre y cuando no se considere tal extensión contraria al interés público, se podrá prorrogar un permiso vigente. De otorgarse la prórroga, la vigencia del Permiso será de un (1) año.

9. El concesionario del Permiso deberá instalar un rótulo dentro de los dos (2) días siguientes a la radicación de la solicitud. Dicho rótulo será ubicado en la entrada principal de la propiedad donde se llevará a cabo la obra y deberá mantenerse instalado hasta que culmine la actividad. Dentro de los tres (3) días a partir de su instalación, deberá certificar en el sistema electrónico de la Oficina de Gerencia de Permisos que el rótulo fue instalado conforme a lo dispuesto en el Reglamento Conjunto de Permisos para Obras de Construcción y Usos de Terrenos; dicha certificación deberá estar acompañada de una foto digital a ser cargada en el sistema.

10. La autorización para construir contenida en este Permiso bajo las disposiciones del Reglamento Conjunto tendrá una vigencia de dos (2) años a partir de su expedición para que las obras autorizadas dichas obras una vez comenzadas, no fuesen terminadas dentro del término prescrito en el mismo o no se cumpla con disposiciones establecidas por la OGPe o el Municipio Autónomo, o la Junta de Planificación, según aplique.

11. Todo permiso de construcción expedido bajo las disposiciones del Reglamento Conjunto vigente, quedará sin efecto si las obras certificadas no fuesen comenzadas dentro del término de dos (2) años a partir de la

fecha de su expedición o si dichas obras una vez comenzadas, no fuesen terminadas dentro del término prescrito en el mismo o no se cumpla con disposiciones establecidas por la Oficina de Gerencia de Permisos o la Junta de Planificación.

12. Este permiso es expedido por la Oficina de Gerencia de Permisos o el Municipio Autónomo, según aplique, bajo la certificación del Ingeniero o Arquitecto licenciado de que los planos, proyectos de obras y demás documentos fueron presentados de conformidad con las leyes y reglamentos aplicables, al amparo de las disposiciones de la Ley Núm. 135 de 15 de junio de 1967, según enmendada, relacionada a la certificación de planos y obras en Puerto Rico y la Ley Núm. 7 de 19 de julio de 1985, según enmendada, conocida como “Ley de Certificación de Planos”, así como las leyes y reglamentos de planificación.

De identificarse que alguna información ofrecida resulte falsa, el diseño de la obra no se ajusta a los reglamentos, indique hechos o dimensiones que no sean ciertas y correctas, suministre hechos o información falsos u ocultare información; se procederá con las acciones o medidas correctivas establecidas en los artículos 7 y 8 de la Ley Núm. 135, supra, artículos 8 y 9 de la Ley Núm. 7, supra así como con las establecidas en la Ley 161-2009, según enmendada, conocida como “Ley para la Reforma del Proceso de Permiso de Puerto Rico”, según aplique.

13. De identificarse que el costo estimado de la obra ha sido calculado incorrectamente, la Oficina de Gerencia de Permisos, mediante Orden a tales efectos, calculará el mismo y exigirá al Concesionario que se paguen los derechos de conformidad.

14. En aquellos casos en que no se hayan utilizado las guías adoptadas por la Oficina de Gerencia de Permisos, se exigirá el pago adicional de un diez porciento (10 %) sobre la diferencia del costo de aranceles y la cancelación de estampillas del total indebidamente estimado.

15. En toda obra de construcción, cuyo costo total final de construcción resulte mayor al costo estimado, el solicitante efectuará el pago del arancel correspondiente y se cancelaran estampillas originales por la diferencia.

16. En aquellos casos en que no se hayan utilizados las guías adoptadas por la Oficina de Gerencia de Permisos y el valor final de la obra representara una diferencia de un diez porciento (10 %) adicional al costo estimado original, el solicitante efectuará el pago del arancel correspondiente y se cancelarán estampillas adicionales sobre el total de la diferencia más un veinte por ciento (20%) de dicha diferencia del costo de los aranceles y la cancelación de estampillas no pagadas como penalidad inicial por un estimado de costo incorrecto.

Apercibimiento Fiscalización:

De conformidad con lo anterior y las disposiciones de la Ley Núm. 161-2009, según enmendada y conocida como “Ley para la Reforma del Proceso de Permisos de Puerto Rico”, la Junta de Planificación fiscalizará el cumplimiento del Permiso emitido por la Oficina de Gerencia de Permisos.

Apercibimiento Revisión:

Se apercibe que, la parte adversamente afectada por una actuación, determinación final o resolución de la Oficina de Gerencia de Permisos, Profesional Autorizado o un Municipio Autónomo con Jerarquía de la I a la V, podrá presentar una solicitud de revisión administrativa ante la División de Revisiones Administrativas, dentro del término jurisdiccional de veinte (20) días contados a partir de la fecha de archivo en autos, de copia de la notificación de la actuación, determinación final o resolución.

La parte recurrente utilizará el mecanismo que proveerá el SBP al presentar el recurso electrónicamente ante la División de Revisiones Administrativas para notificar simultáneamente a la Oficina de Gerencia de Permisos, a la Junta Adjudicativa, los Municipios Autónomos con la Jerarquía de la I a la V, o al Profesional Autorizado, según aplique. Además, la parte recurrente notificará copia de la solicitud de revisión administrativa, por correo certificado con acuse de recibo u mediante otro mecanismo dispuesto por reglamento, a las partes, incluyendo a la OGPe, y a los interventores, dentro del término de cuarenta y ocho (48) horas desde la presentación de la solicitud. La oportuna notificación es un requisito de carácter jurisdiccional y su cumplimiento deberá ser certificado y evidenciado oportunamente ante la División de Revisiones Administrativas.

El Juez Administrativo de la División de Revisiones Administrativas tendrá un término de quince (15) días

para determinar si acoge la misma. Si en este término se denegase o no se emitiese una determinación a esos fines, en cuyo caso se entenderá rechazada de plano, perderá jurisdicción sobre la misma y comenzará a decursar el término de treinta (30) días para recurrir al Tribunal de Apelaciones desde que se notifique la denegatoria o desde que expiren esos quince (15) días, según sea el caso.

La División de Revisiones Administrativas dispondrá de las solicitudes acogidas ante su consideración dentro de un periodo de noventa (90) días naturales desde su presentación. Dicho término podrá ser prorrogado por treinta (30) días adicionales contados a partir de la fecha de vencimiento, en casos excepcionales. Si la División de Revisiones Administrativas no adjudicara la solicitud dentro del término aquí dispuesto, dicho foro perderá jurisdicción sobre la misma y comenzará a decursar el término de treinta (30) días para recurrir al Tribunal de Apelaciones. Las resoluciones de la División de Revisiones Administrativas serán consideradas determinaciones finales de la Oficina de Gerencia de Permisos.

La presentación de una solicitud de revisión administrativa no es un requisito jurisdiccional previo a la presentación de una solicitud de revisión de decisión administrativa ante el Tribunal de Apelaciones. No obstante, su oportuna presentación paralizará los términos para recurrir ante dicho Tribunal.

Cualquier parte adversamente afectada por una determinación final, permiso o resolución de la Oficina de Gerencia de Permisos podrá presentar una solicitud de revisión ante el Tribunal de Apelaciones, dentro de un término de treinta (30) días contados a partir de la fecha del archivo en autos de la copia de la notificación de la determinación final, permiso o resolución de la agencia o a partir de la fecha aplicable cuando el término para solicitar la revisión judicial haya sido interrumpido mediante la presentación oportuna de una solicitud de revisión administrativa. La parte notificará la presentación de la solicitud de revisión a la agencia y a todas las partes dentro del término para solicitar dicha revisión. La notificación podrá hacerse por correo.

Condiciones Especiales

NINGUNA

Aviso

Si la OGPe determinara que el costo estimado del valor de la obra ha sido calculado incorrectamente, la OGPe, mediante orden a tales efectos, calculará el mismo y exigirá al solicitante que se paguen los derechos de conformidad con ese

En aquellos casos en que no se hayan utilizado las guías adoptadas por la OGPe se exigirá el pago adicional de un diez por ciento (10%) sobre la diferencia del costo de aranceles y la cancelación de estampillas del total indebidamente estimado.

En toda obra de construcción, cuyo costo total final de construcción resulte mayor al costo estimado, el solicitante efectuará el pago del arancel y se cancelarán estampillas adicionales por la diferencia.

En aquellos casos en que no se hayan utilizado las guías adoptadas por la OGPe y el valor final de la obra representará una diferencia de un diez por ciento (10%) adicional al costo estimado original, el solicitante efectuará el pago de arancel y se cancelarán estampillas adicionales sobre el total de la diferencia más un veinte por ciento (20%) de dicha diferencia del costo de los aranceles y la cancelación de estampillas no pagada como penalidad inicial por un estimado de costo incorrecto.

Permiso de Construcción

Firma / Sellos

Fecha de Expedición:

07/may/2021

Director Oficina de Permisos
Municipio Autónomo de Ponce

SBP SINGLE BUSINESS PORTAL

G.- Demolition Permit 2019-255909-PCOC-004254

Permiso de Construcción

Fecha de Expedición:
22/jun/2020

Nombre del Proyecto:
Ponce Health Sciences University - New Academic and Clinic Buildings

Fecha de Expiración:
22/jun/2022

Descripción del Proyecto

Se aprueba Permiso de Construcción

Datos de Localización

De conformidad con las disposiciones contenidas en las Leyes y los Reglamentos vigentes, se expide el presente Permiso de Construcción, Privado para las Obras de Obra de Demolición a realizarse en un predio de terreno ubicado en:

Dirección Física:
388 ZONA INDUSTRIAL REPARADA 2 Ponce, Puerto Rico, 00716

Dueño(s):
Ponce Health Sciences University

Casos de Referencia:
2019-274617-DEA-003177,2019-274617-REA-003429

Número(s) de Catastro(s):
412-011-783-27

Tipo de Uso Propuesto:
Institucional

Distritos de Calificación:
EV.4

Distritos de Clasificación:
NA

Zona de Inundabilidad:
AO

Datos del Proyecto

Proyectista:	Inspector:
Arquitecto - Annette Alfonso Díaz - 12304 - Arquitectónica	Ingeniero Civil - Axel Bonilla Cortés - 8839 - Civil

Especialista:
Ingeniero Civil - Carol Enid Ruiz Morales - 18197 - Civil

Datos del Permiso

Costo Estimado (Original)	$0
Costo Estimado (OGPe)	null

Cabida de los Desarrollos: 18512.14m²

Área Bruta de Construcción: 28,961.4200p²

Obras de Urbanización

null

Volumen a Rellenar o Excavar: nullm³

Permiso de Construcción

Obras de Construcción

Obras de Demolición

Nombre de la Estructura:
Edificio H

Materiale(s):
Hormigón Armado
Hormigón Armado y Bloques
Acero Estructural
Gypsum Board

Número de Pisos o Niveles de la Estructura: 1

Largo de Estructura: 360.89p
Ancho de la Estructura: 80.25p
Altura de la Estructura: 15.00p

¿Éste proyecto requiere el uso de explosivos? No

¿Éste proyecto contiene Asbesto? No

¿Éste proyecto contiene pintura con contenido de plomo? No

Condiciones Generales

Permiso de Construcción

1. Este permiso deberá estar expuesto en todo momento en un lugar visible al público dentro de las instalaciones para el cual fue otorgado.

2. El llevar a cabo cualquier construcción no autorizada en este Permiso estará sujeto a que se presenten recursos extraordinarios para la demolición o paralización de las obras de obras no autorizadas y/o revocación de permisos, según se establece en la Ley Núm. 161-2009, según enmendada y conocida como “Ley para la Reforma del Proceso de Permisos de Puerto Rico”.

3. Este permiso no legaliza ni autoriza de manera alguna la construcción de obras, ni autoriza aquellas ya construidas y que estén sujetas a un permiso.

4. El cumplir con los requerimientos de éste o cualquier otro permiso emitido al amparo de la Ley Núm. 161-2009, según enmendada y conocida como “Ley para la Reforma del Proceso de Permisos de Puerto Rico y/o el Reglamento Conjunto de Permisos para Obras de Construcción y Usos de Terrenos, no exime al concesionario de cumplir con cualesquiera otros requisitos de disposiciones legales estatales y federales aplicables, tales como, pero sin limitarse a Fair Housing Act y Americans with Disabilities Act y la Ley Sobre Política Pública Ambiental.

5. Las disposiciones aplicables de Ley Núm. 161-2009, según enmendada y conocida como “Ley para la Reforma del Proceso de Permisos de Puerto Rico y/o el Reglamento Conjunto vigente se incorporan aquí por referencia y serán condiciones exigibles bajo este Permiso.

6. La adjudicación de un permiso no tiene el propósito ni alcance de validar o anular cualquier restricción privada, incluyendo, servidumbres en equidad o prohibiciones que resulten inconsistentes con el permiso aquí concedido. La OGPe no cuenta con jurisdicción para adjudicar la vigencia de estas restricciones.

Si la concesión de un permiso resulta en un menoscabo de cualquier restricción o prohibición impuesta, la parte afectada podrá llevar aquellas acciones que en derecho procedan contra el concesionario del permiso; disponiéndose que, la OGPe o el Municipio Autónomo, según aplique, queda relevada de responsabilidad por tal alegación.

7. El Concesionario de este Permiso deberá cumplir con cualesquiera otros requisitos legales aplicables del Reglamento Conjunto vigente, el Código de Rentas Internas de Puerto Rico o cualesquiera otros reglamentos aplicables del Departamento de Hacienda y/o Departamento de Transportación y Obras Públicas.

8. A petición fundamentada del concesionario del permiso, acompañado de una certificación del proyectista

y/o especialista de que el proyecto de construcción aún continúa conforme con las leyes y reglamentos aplicables, y no se le han incorporado cambios, siempre y cuando no se considere tal extensión contraria al interés público, se podrá prorrogar un permiso vigente. De otorgarse la prórroga, la vigencia del Permiso será de un (1) año.

9. El concesionario del Permiso deberá instalar un rótulo dentro de los dos (2) días siguientes a la radicación de la solicitud. Dicho rótulo será ubicado en la entrada principal de la propiedad donde se llevará a cabo la obra y deberá mantenerse instalado hasta que culmine la actividad. Dentro de los tres (3) días a partir de su instalación, deberá certificar en el sistema electrónico de la Oficina de Gerencia de Permisos que el rótulo fue instalado conforme a lo dispuesto en el Reglamento Conjunto de Permisos para Obras de Construcción y Usos de Terrenos; dicha certificación deberá estar acompañada de una foto digital a ser cargada en el sistema.

10. La autorización para construir contenida en este Permiso bajo las disposiciones del Reglamento Conjunto tendrá una vigencia de dos (2) años a partir de su expedición para que las obras autorizadas dichas obras una vez comenzadas, no fuesen terminadas dentro del término prescrito en el mismo o no se cumpla con disposiciones establecidas por la OGPe o el Municipio Autónomo, o la Junta de Planificación, según aplique.

11. Todo permiso de construcción expedido bajo las disposiciones del Reglamento Conjunto vigente, quedará sin efecto si las obras certificadas no fuesen comenzadas dentro del término de dos (2) años a partir de la fecha de su expedición o si dichas obras una vez comenzadas, no fuesen terminadas dentro del término prescrito en el mismo o no se cumpla con disposiciones establecidas por la Oficina de Gerencia de Permisos o la Junta de Planificación.

12. Este permiso es expedido por la Oficina de Gerencia de Permisos o el Municipio Autónomo, según aplique, bajo la certificación del Ingeniero o Arquitecto licenciado de que los planos, proyectos de obras y demás documentos fueron presentados de conformidad con las leyes y reglamentos aplicables, al amparo de las disposiciones de la Ley Núm. 135 de 15 de junio de 1967, según enmendada, relacionada a la certificación de planos y obras en Puerto Rico y la Ley Núm. 7 de 19 de julio de 1985, según enmendada, conocida como “Ley de Certificación de Planos”, así como las leyes y reglamentos de planificación.

De identificarse que alguna información ofrecida resulte falsa, el diseño de la obra no se ajusta a los reglamentos, indique hechos o dimensiones que no sean ciertas y correctas, suministre hechos o información falsos u ocultare información; se procederá con las acciones o medidas correctivas establecidas en los artículos 7 y 8 de la Ley Núm. 135, supra, artículos 8 y 9 de la Ley Núm. 7, supra así como con las establecidas en la Ley 161-2009, según enmendada, conocida como “Ley para la Reforma del Proceso de Permiso de Puerto Rico”, según aplique.

13. De identificarse que el costo estimado de la obra ha sido calculado incorrectamente, la Oficina de Gerencia de Permisos, mediante Orden a tales efectos, calculará el mismo y exigirá al Concesionario que se paguen los derechos de conformidad.

14. En aquellos casos en que no se hayan utilizado las guías adoptadas por la Oficina de Gerencia de Permisos, se exigirá el pago adicional de un diez porciento (10 %) sobre la diferencia del costo de aranceles y la cancelación de estampillas del total indebidamente estimado.

15. En toda obra de construcción, cuyo costo total final de construcción resulte mayor al costo estimado, el solicitante efectuará el pago del arancel correspondiente y se cancelaran estampillas originales por la diferencia.

16. En aquellos casos en que no se hayan utilizados las guías adoptadas por la Oficina de Gerencia de Permisos y el valor final de la obra representara una diferencia de un diez porciento (10 %) adicional al costo estimado original, el solicitante efectuará el pago del arancel correspondiente y se cancelarán estampillas adicionales sobre el total de la diferencia más un veinte por ciento (20%) de dicha diferencia del costo de los aranceles y la cancelación de estampillas no pagadas como penalidad inicial por un estimado de costo incorrecto.

Apercibimiento Fiscalización:

De conformidad con lo anterior y las disposiciones de la Ley Núm. 161-2009, según enmendada y conocida como “Ley para la Reforma del Proceso de Permisos de Puerto Rico”, la Junta de Planificación fiscalizará el cumplimiento del Permiso emitido por la Oficina de Gerencia de Permisos.

Permiso de Construcción

Apercibimiento Revisión:

Se apercibe que, la parte adversamente afectada por una actuación, determinación final o resolución de la Oficina de Gerencia de Permisos, Profesional Autorizado o un Municipio Autónomo con Jerarquía de la I a la V, podrá presentar una solicitud de revisión administrativa ante la División de Revisiones Administrativas, dentro del término jurisdiccional de veinte (20) días contados a partir de la fecha de archivo en autos, de copia de la notificación de la actuación, determinación final o resolución.

La parte recurrente utilizará el mecanismo que proveerá el SBP al presentar el recurso electrónicamente ante la División de Revisiones Administrativas para notificar simultáneamente a la Oficina de Gerencia de Permisos, a la Junta Adjudicativa, los Municipios Autónomos con la Jerarquía de la I a la V, o al Profesional Autorizado, según aplique. Además, la parte recurrente notificará copia de la solicitud de revisión administrativa, por correo certificado con acuse de recibo u mediante otro mecanismo dispuesto por reglamento, a las partes, incluyendo a la OGPe, y a los interventores, dentro del término de cuarenta y ocho (48) horas desde la presentación de la solicitud. La oportuna notificación es un requisito de carácter jurisdiccional y su cumplimiento deberá ser certificado y evidenciado oportunamente ante la División de Revisiones Administrativas.

El Juez Administrativo de la División de Revisiones Administrativas tendrá un término de quince (15) días para determinar si acoge la misma. Si en este término se denegase o no se emitiese una determinación a esos fines, en cuyo caso se entenderá rechazada de plano, perderá jurisdicción sobre la misma y comenzará a decursar el término de treinta (30) días para recurrir al Tribunal de Apelaciones desde que se notifique la denegatoria o desde que expiren esos quince (15) días, según sea el caso.

La División de Revisiones Administrativas dispondrá de las solicitudes acogidas ante su consideración dentro de un periodo de noventa (90) días naturales desde su presentación. Dicho término podrá ser prorrogado por treinta (30) días adicionales contados a partir de la fecha de vencimiento, en casos excepcionales. Si la División de Revisiones Administrativas no adjudicara la solicitud dentro del término aquí dispuesto, dicho foro perderá jurisdicción sobre la misma y comenzará a decursar el término de treinta (30) días para recurrir al Tribunal de Apelaciones. Las resoluciones de la División de Revisiones Administrativas serán consideradas determinaciones finales de la Oficina de Gerencia de Permisos.

La presentación de una solicitud de revisión administrativa no es un requisito jurisdiccional previo a la presentación de una solicitud de revisión de decisión administrativa ante el Tribunal de Apelaciones. No obstante, su oportuna presentación paralizará los términos para recurrir ante dicho Tribunal.

Cualquier parte adversamente afectada por una determinación final, permiso o resolución de la Oficina de Gerencia de Permisos podrá presentar una solicitud de revisión ante el Tribunal de Apelaciones, dentro de un término de treinta (30) días contados a partir de la fecha del archivo en autos de la copia de la notificación de la determinación final, permiso o resolución de la agencia o a partir de la fecha aplicable cuando el término para solicitar la revisión judicial haya sido interrumpido mediante la presentación oportuna de una solicitud de revisión administrativa. La parte notificará la presentación de la solicitud de revisión a la agencia y a todas las partes dentro del término para solicitar dicha revisión. La notificación podrá hacerse por correo.

Condiciones Especiales

NINGUNA

Aviso

Si la OGPe determinara que el costo estimado del valor de la obra ha sido calculado incorrectamente, la OGPe, mediante orden a tales efectos, calculará el mismo y exigirá al solicitante que se paguen los derechos de conformidad con ese

En aquellos casos en que no se hayan utilizado las guías adoptadas por la OGPe se exigirá el pago adicional de un diez por ciento (10%) sobre la diferencia del costo de aranceles y la cancelación de estampillas del total indebidamente estimado.

En toda obra de construcción, cuyo costo total final de construcción resulte mayor al costo estimado, el solicitante efectuará el pago del arancel y se cancelarán estampillas adicionales por la diferencia.

Permiso de Construcción

Si la OGPe determinara que el costo estimado del valor de la obra ha sido calculado incorrectamente, la OGPe, mediante orden a tales efectos, calculará el mismo y exigirá al solicitante que se paguen los derechos de conformidad con ese

En aquellos casos en que no se hayan utilizado las guías adoptadas por la OGPe se exigirá el pago adicional de un diez por ciento (10%) sobre la diferencia del costo de aranceles y la cancelación de estampillas del total indebidamente estimado.

En toda obra de construcción, cuyo costo total final de construcción resulte mayor al costo estimado, el solicitante efectuará el pago del arancel y se cancelarán estampillas adicionales por la diferencia.

En aquellos casos en que no se hayan utilizado las guías adoptadas por la OGPe y el valor final de la obra representará una diferencia de un diez por ciento (10%) adicional al costo estimado original, el solicitante efectuará el pago de arancel y se cancelarán estampillas adicionales sobre el total de la diferencia más un veinte por ciento (20%) de dicha diferencia del costo de los aranceles y la cancelación de estampillas no pagada como penalidad inicial por un estimado de costo incorrecto.

Firma / Sellos

Fecha de Expedición:

22/jun/2020

Director Oficina de Permisos
Municipio Autónomo de Ponce

H.- PUI 2019-255909-PUI-000660

GOBIERNO DE PUERTO RICO
Departamento de Desarrollo Económico y Comercio
Oficina de Gerencia de Permisos

Número de Trámite:
2019-255909-PUI-000660

Permiso Único Incidental Operacional

Fecha de Expedición: 08/12/2020

Nombre del Proyecto
Ponce Health Sciences University - New Academic and Clinic Buildings

Fecha de Expiración: 08/12/2025

Tipo de Trámite: Nuevo

Actividad(es) Autorizada(s)

Permiso de Actividad Incidental a una Obra Autorizada por OGPe (POA), Autorización de Corte, Poda, Transplante y Siembra de Árboles (ACP), Permiso General Consolidado (PGC)

Datos de Localización

De conformidad con las disposiciones contenidas en las Leyes y los Reglamentos vigentes, se expide el presente **Permiso Único Incidental**, Privado para un predio de terreno ubicado en:

Dirección Física:
388 ZONA INDUSTRIAL REPARADA 2
Ponce, Puerto Rico, 00716

Número(s) de Catastro(s):
412-011-783-27

Distritos de Calificación: EV.4

Distritos de Clasificación: NA

Zona de Inundabilidad: AO

Dueño(s): Ponce Health Sciences University

Arrendatario: N/A

Cabida según 21494.01 m^2

Cabida según 21494.01 m^2

Casos de Referencia: 2019-255909-pcoc-004867
2019-274617-dea-003177
2019-255909-PCOC-004254

Datos de Proyecto

Proyectista:
Arquitecto - Annette Alfonso Díaz - 12304 - Arquitectónica

Contratista:
Emilio Venegas

Inspector Encargado de la Implantación del Plan Ces:
Ingeniero Civil - Axel Bonilla Cortés - 8839 - Arquitectónica
Inspector Encargado de la Implantación del Plan Ces:
Ingeniero Civil - Axel Bonilla Cortés - 8839 - Arquitectónica
Supervisor de Siembra y Forestación:
Plan de Mitigación - Laredo González Sánchez - 0130-ISF-00430

Inspector de Siembra y Forestación:
Plan de Mitigación - Laredo González Sánchez - 0130-ISF-00430
Inspector de Siembra y Forestación:
Plan de Mitigación - Laredo González Sánchez - 0130-ISF-00430
Especialista Adicional:
Ingeniero Civil - Carol Enid Ruiz Morales - 18197 - Other

Permiso Único Incidental Operacional

Inspector de Siembra y Forestación:
Plan de Mitigación - Laredo González Sánchez - 0130-ISF-00430

Datos del Permiso

Tipos de Obras a Realizar

Construcción;Demolición

Tipo de facilidad a construir: Escuela de Medicina

Cantidad de unidades a: 1

Area Total

Lugar del proyecto: 21,844.7000 m^2

Obras a realizarse: 13,214.0000 m^2

Fecha Estimada

Inicio de obras: 19-06-2020

Terminación de obras: 20-04-2022

Uso de Explosivos: No

Tipo de Procedimiento: null

Demolición

Volumen de material a generar: 382.2700 m^3

Tipo de material: Concreto, Acero, Gypsum

Componentes de la Corteza Terrestre a:

Volumen total a remover: 7,000.0000 m^3

Volumen total a almacenar: 0.0000 m^3

Volumen total a rellenar: 3,000.0000 m^3

Volumen total a extraer: 7,000.0000 m^3

Volumen total a disponer: 4,000.0000 m^3

Material Excedente: No

Desperdicios Solidos

Volumen total a generar: 11,120.0000 yd^3

Número de Permiso DS-1: SR-02-0030-RA

Empresa que ofrecerá el servicio de transportación y recolección de los desperdicios sólidos no peligrosos: PBP Waste Corporation

Instalación de disposición final: Peñuelas Valley Landfill

Tipo de material a transportarse: Desperdicios Sólidos No Peligrosos

Instalación Tuberías y/o Cables Soterrados

Distancia lineal: 63.0000 (pies)

Permiso Único Incidental Operacional

Corte de Árboles
Especie de árboles: Mangifera indica
Cantidad Total: 1

Corte de Árboles
Especie de árboles: Calophyllum antillarum
Cantidad Total: 1

Corte de Árboles
Especie de árboles: Veitchia merrillii
Cantidad Total: 1

Corte de Árboles
Especie de árboles: Bucida buceras
Cantidad Total: 9

Corte de Árboles
Especie de árboles: Pterocarpus macrocarpus
Cantidad Total: 8

Corte de Árboles
Especie de árboles: Areca catechu
Cantidad Total: 2

Corte de Árboles
Especie de árboles: Swietenia mahagoni x macrophyla
Cantidad Total: 12

Corte de Árboles
Especie de árboles: Cordia sebestena
Cantidad Total: 1

Corte de Árboles
Especie de árboles: Wodietia bifurcata
Cantidad Total: 11

Corte de Árboles
Especie de árboles: Ficus benjamina
Cantidad Total: 1

Corte de Árboles
Especie de árboles: Lagerstroemia speciosa
Cantidad Total: 3

Corte de Árboles
Especie de árboles: Melaleuca quinquenervia
Cantidad Total: 1

Corte de Árboles
Especie de árboles: Tabebuia heterophylla
Cantidad Total: 1

Corte de Árboles
Especie de árboles: Phoenix roebelenii
Cantidad Total: 1

Corte de Árboles
Especie de árboles: Annona reticulata
Cantidad Total: 1

Corte de Árboles
Especie de árboles: Swietenia mahagoni
Cantidad Total: 7

Corte de Árboles
Especie de árboles: Tabebuia argentea
Cantidad Total: 4

Corte de Árboles
Especie de árboles: Delonix regia
Cantidad Total: 1

Plan de Mitigación

Cantidad de árboles por mitigación mínimas de siembra por cuerdas: 0

Cantidad de árboles por mitigación por corte: 171

Cantidad de árboles por corte en la servidumbre de vigilancia de litoral: 0

Cantidad de árboles por corte en la Zona Marítimo Terrestre: 0

Cantidad de árboles por concepto de unidad(Familia) y formación de solares: 0

Total de árboles por mitigación: 233

Cantidad de árboles por concepto de estacionamiento: 62

Condiciones Especiales

Autorización de Corte y Poda (ACP):

1. Se requiere la siembra de 171 árboles por concepto de corte y 62 árboles por concepto de

estacionamiento, lo que hace en total una mitigación de 233 árboles.

2. Deberá cumplir con el Plan de Forestación presentado en la Solicitud Núm. 2019-255909-PUI-000660. Además, deberá cumplir con el Código Civil de Puerto Rico, Edición de 1930 según enmendado con las siguientes Reglas y Secciones del Reglamento Conjunto para la Evaluación y Expedición de Permisos Relacionados al Desarrollo y Uso de Terrenos y Operación de Negocios (7 de junio 2019):

A) Artículo 527.-Árboles (31 L.P.R.A §1803)

B) Sección 3.4.1.3.d.3 - Certificación del Plan de Forestación o Compensación El Inspector Autorizado de Siembra autorizado por la OGPe y contratado por el dueño del proyecto, deberá cargar al caso radicado en el SUI dos (2) certificaciones en cumplimiento con el Permiso Único, una al cincuenta por ciento (50%) del proyecto y la otra al cien por ciento (100%) del proyecto, expresando que la misma fue inspeccionada por él y que está en cumplimiento con lo expresado en el Permiso Único Incidental Operacional y el Plan de Forestación o Compensación correspondiente.

C) Sección 3.4.1.3.d.4 - Requisitos para el Trasplante De Árboles El éxito del trasplante de un árbol depende de varios criterios los cuales deben ser satisfechos para garantizar no tan sólo la supervivencia de los árboles, sino también la seguridad del área donde los mismos serán establecidos. Al escoger las plantas o árboles capaces de ser trasplantados se deben considerar plantas vigorosas y saludables, con una estructura fuerte, libre de daños mecánicos y de plagas y enfermedades. De no sobrevivir, el árbol trasplantado se mitigará según dispuesto en la Regla 3.4.2.

D) Regla 3.4.3 - Estándares de Siembra.

a) Todo árbol a sembrarse tendrá un mínimo de seis pies (6') de altura y deberá alcanzar el tamaño de un árbol pequeño, mediano o grande en su etapa adulta.

b) Al momento de la siembra, el árbol deberá poseer las siguientes características:

I. El follaje estará distribuido en las dos terceras (2/3) partes del árbol y no solo en su sección superior, con excepción de las palmas.

II. El árbol deberá contar con un tallo principal que no tenga daños causados por herramientas u otros objetos.

III. El follaje estará verde y libre de insectos o enfermedad alguna.

IV. El sistema radicular del árbol será en forma de bola, protegida contra la sequedad.

c) Para proyectos de interés social, los árboles a sembrarse tendrán una altura minima de cuatro pies (4').

d) Las especies a seleccionarse tendrán las siguientes proporciones:

I. Un máximo de doce por ciento (12%) de palmas y un mínimo de un diez por ciento (10%) de especies que provean alimento a la vida silvestre, un sesenta por ciento (60%) de especies nativas y endémicas y, por último, exóticas.

II. Las especies que provean alimento para la vida silvestre serán seleccionadas de la lista incluida en la Ley Núm. 97 del 24 de junio de 1998, mejor conocida como la Ley para Fomentar la Siembra de Árboles Cuyas Frutas o Semillas Provean Alimento a Especies de Aves Silvestres de Puerto Rico.

E) Sección 3.4.3.2 - Áreas de Siembra

Inciso (c) Como medida de seguridad, se deberá cumplir con lo siguiente:

I. Distancia entre Árboles y Esquinas de las Calles: no se permitirá la siembra de árboles o arbustos a menos de 30 pies de las esquinas de las calles, medidas desde el punto de intersección más cercano.

II. Distancia entre Árboles y Bombas Contra Incendio: No se permitirá la siembra de árbol alguno, a menos de diez pies (10') de distancia de una bomba contra incendio.

III. Distancia minima entre Árboles y Estructuras Existentes o Propuestas:

Se deberá guardar las distancias que a continuación se expresan, dependiendo de las estructuras existentes o las propuestas:

a) Árboles pequeños – guardarán una distancia mín. de cinco pies (5').

b) Árboles medianos – guardarán una distancia mín. de siete pies (7').

c) Árboles grandes – guardarán una distancia mín. de diez pies (10')

IV. Distancia entre árboles y cables eléctricos: Dentro de las franjas de servidumbres de paso para sistemas aéreos de energía eléctrica no se permitirá la siembra de árboles.

a) Cualquier árbol o sus ramas, sembrado en las inmediaciones de líneas eléctricas, deberá quedar retirado de la misma, a una distancia mínima de quince pies (15) de la línea más cercana, cuando el árbol alcance su crecimiento máximo, fuera de la servidumbre de paso de la AEE.

b) La siembra de árboles en franjas de servidumbres, para sistemas soterrados de energía eléctrica, no está permitida.

V. Distancia entre árboles y colindancia:

a) Si se optara por sembrar un árbol pequeño, la distancia entre árboles será de diez pies (10') lineales a lo largo de la colindancia del predio objeto del Proyecto (no de la finca principal) y a una distancia mínima de seis pies con siete pulgadas (6'-7") o 2 metros (2m), medidos desde la colindancia.

b) Si se optara por sembrar árboles medianos, la distancia mínima entre árboles será de veinte pies (20') lineales y para árboles grandes treinta pies (30') lineales a una distancia mínima de diez pies (10') o tres metros (3m), medidos desde la colindancia.

Permiso de Actividad Incidental a una Obra Autorizada (POA):

Hemos evaluado la solicitud de Permiso de Actividad Incidental a una Obra Autorizada por la Oficina de Permisos del Municipio de Bayamón para la extracción de materiales de la corteza terrestre con relación al proyecto de referencia. La Oficina de Permisos del Municipio de Ponce aprobó el 22 de junio de 2020, el Permiso de Construcción 2019-255909-PCOC-004254 para el proyecto de Ponce Health Sciences University - New Academic and Clinic Buildings en una finca ubicada en la Núm. 388 Zona Industrial Reparada 2 del Imunicipio de Ponce.

El Departamento de Recursos Naturales y Ambientales (DRNA) tiene jurisdicción para regular y fiscalizar las actividades de extracción, excavación, remoción y dragado de materiales de corteza terrestre. Artículo 1 de la Ley Núm. 132 de 25 de junio de 1968, según enmendada, conocida como "Ley de Arena, Grava y Piedra" ("Ley 132"), 28 L.P.R.A. § 206. Véanse, además, Mun. De Loíza v. Sucns. Suárez, et al., 154 D.P.R. 333, 354 (2001); y Díaz v. Depto. Rec. Nat., 147 D.P.R. 410, 419 (1999). Específicamente, sobre aquellos componentes de la corteza terrestre "...llamados arena, grava, piedra, tierra, sílice, calcita, arcilla y cualquier otro similar... que no esté reglamentado como mineral económico en terrenos públicos y privados." Artículo 1 de la Ley 132, supra.

La Ley Núm. 161 del 1 de diciembre de 2009, según enmendada, conocida como "Ley para la Reforma del Proceso de Permisos de Puerto Rico" establece el marco legal y administrativo que regirá la solicitud, evaluación, concesión y denegación de Puerto Rico.

La OGPe, en virtud de las facultades que le confiere el Artículo 2.3 y 2.6 de la Ley Núm. 161, supra, puede establecer convenios o acuerdos necesarios y convenientes a los fines de alcanzar los objetivos de la agencia, con organismo del gobierno estatal, federal y municipal, con otros departamentos, agencias o instrumentalidades del Gobierno de Puerto Rico y con instituciones particulares.

El inciso (a)(1) Actividad Incidental a una Obra Autorizada de la Sección 3.4.1.2 Aplicabilidad de la Regla 3.4.1 del Capítulo 3.4 Permiso Único Incidental Operacional del Reglamento Conjunto para la Evaluación y Expedición de Permisos Relacionados al Desarrollo, Uso de Terrenos y Operación de Negocios del 7 de junio de 2019, (en adelante el Reglamento) indica lo siguiente:

(a) Actividad incidental a una obra autorizada - Toda extracción, excavación, remoción y dragado de los

componentes de la corteza terrestre a obras autorizadas, que exceda los cuarenta (40) metros cúbicos, que cumpla con uno o más de los siguientes criterios, y que no cualifique para una exención, requerirá un Permiso Único Incidental Operacional que incluya la Actividad Incidental a una Obra Autorizada:

1. Que la actividad propuesta se lleve a cabo en terrenos privados o en cauces privados de cuerpos de agua sitos en terrenos privados o en terrenos patrimoniales del Estado.

2. [...]

Considerando lo anterior, y bajo el amparo del inciso (a)(1) Actividad Incidental a una Obra Autorizada de la Sección 3.4.1.2 Aplicabilidad de la Regla 3.4.1 del Capítulo 3.4 Permiso Único Incidental Operacional del Reglamento se concede un permiso de extracción o remoción de material de la corteza terrestre, única y exclusivamente para el movimiento de la corteza terrestre para el proyecto según aprobado el 22 de junio de 2020, el Permiso de Construcción 2019-255909-PCOC-004254, por este ser un movimiento incidental a la obra, proyecto o construcción que ha sido autorizado por la OGPe, conforme lo disponen las leyes y reglamentos que rigen el desarrollo de terrenos en Puerto Rico.

No obstante, deberá cumplir con las siguientes condiciones:

1. Este permiso aplica única y exclusivamente al movimiento de terreno necesario para la preparación del terreno, conforme la descripción del proyecto aprobado. La información suministrada indica que el movimiento de tierra será un corte de 7,000 metros cúbicos de material dentro de los límites del proyecto. Se autoriza el acarreo de los materiales de la corteza terrestre a Peñuela Valley Landfill.

2. PÓLIZA: El Concesionario será responsable de cualquier daño a personas o propiedades que se causare como resultado de la operación aquí autorizada. A tales efectos, adquirirá una Póliza de Responsabilidad Pública con una compañía de seguros autorizada a negociar en Puerto Rico, que incluya al Concesionario y como asegurados adicionales (Additional Insured) el Estado Libre Asociado de Puerto Rico, la OGPe y el DRNA, por las siguientes partidas:

a. Daños a la Propiedad (cubierta separada): $200,000.00
b. Daños Personales (cubierta separada): $200,000.00

3. NO se procederá con la extracción de los componentes de los materiales de la corteza terrestre sin la Póliza de Responsabilidad Pública indicado en la Condición Especial anterior. Dicha Póliza deberá estar presente en el lugar autorizado mientras que se lleven a cabo las labores de extracción de los materiales de la corteza terrestre.

4. Será responsabilidad del Concesionario mantener vigente en todo momento la Póliza de Responsabilidad Pública; indicada en el inciso 2, resultando en la suspensión inmediata de este Permiso, la cancelación y/o vencimiento de la póliza, así como omisión, por parte del Concesionario.

5. La limpieza, desmonte y/o excavación se limitará a aquellas áreas que han de ser utilizadas con carácter inmediato en el proyecto. Permanecerán sin ser deforestadas en toda su extensión aquellas áreas que no estén consideradas en el proyecto aprobado. Deberá cumplir con las disposiciones de la Autorización de Corte, Poda, Trasplante y Siembra de árboles expedida en éste Permiso Único Incidental Operacional.

6. El concesionario deberá obtener y mantener en vigor el permiso para el Control de la Erosión y Sedimentación (Permiso CES) que emite el DRNA para minimizar la erosión hacia los cuerpos de agua cercanos al proyecto. Además, deberá obtener de esa Agencia el Permiso de Fuente de Emisión para controlar el polvo fugitivo durante la etapa de construcción.

7. Durante el desarrollo del proyecto se llevarán a cabo los controles escorrentías, contemplados en el Permiso para el Control de la Erosión y Sedimentación y que sean necesarios para minimizar la sedimentación hacia terrenos bajos.

8. De necesitarse el uso de explosivos como mecanismo de extracción, se deberá solicitar una enmienda a la autorización expedida por la OGPe para el uso de explosivos en este proyecto.

9. Durante la etapa de construcción se deberán tomar las medidas necesarias para evitar que residuos de sustancias orgánicas e inorgánicas puedan ser arrastradas por las escorrentías y tomar acceso a terrenos adyacentes.

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10. Los escombros productos de la extracción no podrán depositarse en desagües pluviales o cuerpos de agua existentes; deberán colocarse donde no obstruyan el libre flujo de las aguas.

11. De encontrarse durante el movimiento de material cualquier tallado de piedra, cerámica, caracol o madera de valor histórico o arqueológico, los cuales son propiedad del Estado, deberá suspender inmediatamente las obras en ese lugar y notificar el hallazgo al Instituto de Cultura Puertorriqueña.

12. Horario: Lunes a Viernes de 6:00 am a 6:00 pm.

13. La OGPe se reserva su derecho de iniciar o continuar cualquier acción legal que estime necesaria por violaciones previas o futuras a las leyes que administra, por acciones del concesionario.

Condiciones Generales

Permiso Único Incidental:

Condiciones Generales relacionadas a los trámites ACP, PGC, PIE, POA:

El Concesionario, por sí o por sus empleados y representantes, estará obligado a cumplir con todas las condiciones impuestas en este Permiso, según adelante se detallan, así como las disposiciones de los reglamentos sustantivos aplicables.

1. Se deberá instalar un rótulo en la entrada del proyecto inmediatamente sea expedido el Permiso Único Incidental (PUI). Este rótulo deberá ser de un tamaño mínimo de 4 pies por 8 pies que incluya el nombre del proyecto y el número del Permiso PUI. El tamaño mínimo de las letras será de 3 pulgadas.

2. Permitirá a los funcionarios de Oficina de Gerencia de Permisos, el Departamento de Recursos Naturales y Ambientales o la Junta de Planificación, según aplique o sus representantes autorizados, la entrada a la instalación para inspeccionar y verificar el cumplimiento con los reglamentos sustantivos y procesales aplicables.

3. La concesión de este Permiso no lo exime de la responsabilidad de obtener cualquier otro(s) permiso(s) que pueda(n) ser requerido(s) por cualquier otra agencia federal, estatal o municipal.

4. Al recibo del Permiso, el concesionario y el personal asignado al proyecto, deberán reunirse con el proyectista o contratista a cargo de los trabajos de construcción y discutir los pormenores de esta autorización.

5. Deberá tener en el Proyecto, copia de este Permiso en y durante el transcurso de las obras a realizarse y dará conocimiento a todos los supervisores de obra de las actividades autorizadas y las condiciones correspondientes.

6. En el lugar donde se llevan a cabo las obras, en horas y días laborales o según requerido por la Oficina de Gerencia de Permisos, el Departamento de Recursos Naturales y Ambientales o la Junta de Planificación, según aplique habrá personal disponible, para brindar acceso, recibir documentos y atender cualquier requerimiento de estas entidades.

7. De interesar continuar la actividad para la cual se expidió este Permiso con posterioridad a la fecha de expiración del mismo, deberá someter la correspondiente Solicitud de Renovación a tenor con las disposiciones reglamentarias aplicables. Esta solicitud deberá presentarse utilizando la Forma provista para estos fines, por lo menos noventa (90) días antes de la fecha de expiración de este Permiso.

8. Toda información, especificación y documentos sometidos en esta solicitud forman parte de su Permiso. Será considerado como modificación cualquier cambio que se realice a la solicitud originalmente presentada. Cualquier cambio o variación a la actividad aquí aprobada requerirá la previa autorización escrita de la OGPe.

9. Ninguna modificación realizada al Permiso alterará su vigencia.

10. La Oficina de Gerencia de Permisos, la Junta de Planificación y el Departamento de Recursos Naturales y Ambientales, según aplique, podrá emitir cualesquiera órdenes y/o recursos necesarios dentro de las facultades otorgadas por las leyes que administra, cuando no se haya cumplido con las condiciones de este permiso. Los funcionarios del Departamento de Recursos Naturales y Ambientales, de la Oficina de Gerencia de Permisos (OGPe) y de la Junta de Planificación (JP) podrán, a su juicio, intervenir los expedientes físicos y digitales de la firma concesionaria del permiso y ordenar auditorías independientes, de ser necesario.

11. El otorgamiento de este Permiso, no releva al Concesionario de su responsabilidad de obtener permisos o autorizaciones adicionales requeridas por el Departamento de Recursos Naturales y Ambientales u Oficina de Gerencia de Permisos, según requerido por ley, ni debe considerarse como una autorización para llevar a cabo actividades que no están específicamente cubiertas en el mismo, las cuales pueden causar contaminación de los recursos naturales.

12. La Oficina de Gerencia de Permisos, el Departamento de Recursos Naturales y Ambientales o la Junta de Planificación, según aplique, podrán solicitar al Concesionario de este permiso que dentro de un término razonable provea cualquier información para determinar si existe causa para modificar, revocar, o para determinar si se está cumpliendo con sus términos.

13. La Oficina de Gerencia de Permisos, el Departamento de Recursos Naturales y Ambientales o la Junta de Planificación, según aplique, sujeto a su jurisdicción, se reservan el derecho de intervenir con este proyecto en otros aspectos no cubiertos en este permiso.

14. Cada condición de este Permiso es considerada independientemente de las demás. Si la aplicación de cualquier condición de este Permiso quedara sin efecto debido a cualquier circunstancia, las restantes condiciones de este Permiso no se verán afectadas.

15. Durante la operación del proyecto, se deberá cumplir con todas las regulaciones aplicables, incluyendo las relacionadas al control de contaminación por ruidos del Departamento de Recursos Naturales y Ambientales.

Permiso de Actividad Incidental a una Obra Autorizada por OGPe(POA)

Condiciones relacionadas al POA:

1. Exportación: Todo material extraído de esta operación, será utilizado únicamente en la jurisdicción territorial de Puerto Rico, entendiéndose que no se podrá exportar dicho material sin previamente obtener una autorización por escrito del Secretario del Departamento de Recursos Naturales y Ambientales.

2. Seguridad: Tomará todas las medidas de seguridad necesarias para proteger la ciudadanía, de manera que no se menoscabe la salud, seguridad y/o comodidad de ésta.

3. Cambios en procedimientos de extracción: El Secretario del Departamento de Recursos Naturales y Ambientales o sus representantes autorizados podrán fiscalizar la cantidad de material de la extracción aquí autorizada.

4. Cumplimiento con leyes y reglamentos: El Concesionario estará obligado a cumplir con todas las leyes y reglamentos federales y estatales vigentes en Puerto Rico, incluyendo las ordenanzas municipales vigentes en aquellos municipios que regulen algunas de las fases derivadas de este tipo de operación.

5. Curso de las aguas: No practicará labores ni construirá obras que puedan hacer variar el curso de las aguas.

6. Uso de agua: De interesar utilizar agua de algún cuerpo de agua (rio, quebrada o pozo) natural para el procesamiento de material que extraiga mediante este Permiso, deberá solicitar a la División de Franquicias de Agua del Departamento de Recursos Naturales y Ambientales una

franquicia para la utilización de dichas aguas. Será entera responsabilidad del Concesionario cumplir adecuadamente con este requisito.

7. Restauración: Será responsable de sembrar la vegetación adecuada, cuando así lo exija el Departamento de Recursos Naturales y Ambientales.

8. Hallazgo de valor histórico o arqueológico: Cuando encontrare cualquier tallado de piedra, cerámica, caracol o madera de valor histórico o arqueológico, los cuales serán propiedad del Estado, deberá suspender inmediatamente la extracción en ese lugar y notificar el hallazgo al Instituto de Cultura Puertorriqueña y al Departamento de Recursos Naturales y Ambientales.

9. Evitará la remoción de la vegetación de aquellos sectores que no estén sujetos a extracción inmediata hasta tanto sea necesario su utilización.

10. Vías públicas: Será responsable de mantener las vías públicas libres de material suelto, procesado o sin procesar, que puedan caer al pavimento y de reparar cualquier daño causado a las mismas por las operaciones de extracción y acarreo como la creación de depresiones.

11. Si tuviera que utilizar lugares de acceso, desde o hacia el área de operaciones, cuyo propietario no fuera el Gobierno de Puerto Rico, se verá obligado a obtener los permisos necesarios para su uso, entendiéndose que este Permiso no le faculta a utilizar aquellos terrenos de propiedad particular, si no existe una autorización previa del dueño de los mismos.

12. Declives: Deberá proveer los declives apropiados en las áreas extraídas para evitar el estancamiento de las aguas superficiales.

13. Evitará en todo momento, la creación de depresiones en el camino de acceso al área de operaciones.

14. Deberá mantener húmedo el camino que da acceso a la operación, para disminuir la creación de polvo tomará todas las medidas necesarias para evitar que durante la operación autorizada se levante polvo excesivo que pueda perjudicar la salud y el bienestar de los que se encuentre en las áreas circundantes.

15. Almacenamiento: No permitirá que se almacene un volumen de material mayor del que se va a disponer diariamente, de manera que se evite el que éste sea erosionado hacia las partes bajas, desagües naturales o que se afecten las propiedades colindantes.

16. Organización: La extracción se deberá realizar en forma ordenada y sistemática de manera que se evite la acumulación de montículos de material dispersos en el área y el que haya varios lugares de extracción dentro de la finca.

17. Contaminantes: Deberá tomar las medidas necesarias para evitar que residuos de sustancias orgánicas e inorgánicas, tales como aceite, combustible u otras sustancias químicas, puedan ser arrastradas por la escorrentía y ganen acceso a un cuerpo de agua.

18. Será entera responsabilidad de los acarreadores de materiales de la corteza terrestre producto de este Permiso cumplir con los requisitos de todas las leyes y reglamentos aplicables, incluyendo, pero sin limitarse a la Ley Núm. 22 - 2000, (Ley de Tránsito), que regula el peso de los camiones que usan las vías públicas del País que administra el Departamento de Transportación y Obras Públicas, la Comisión de Servicio Público y la Agencia Federal de Protección Ambiental.

19. Las operaciones de extracción de material autorizada bajo este Permiso no podrán afectar cualquier servidumbre a la cual se pueda encontrar sujeta en el área de operación.

20. Una vez finalizada la operación, el Concesionario dejará el área de operaciones totalmente libre de fragmentos y/o cualquier otro material que resulte sobrante del proceso de extracción.

21. Será responsabilidad del Concesionario observar las disposiciones de la Ley Núm.111 - 1985, según enmendada, conocida como “Ley para la Protección y Conservación de Cuevas, Cavernas y Sumideros en Puerto Rico.

22. De interesar crear algún tipo de charca de sedimentación para el procesamiento del material

y/o expandir las existentes deberá presentar un endoso del Departamento de Recursos Naturales y Ambientales para dicha actividad. La misma no se podrá crear a una distancia menor de cincuenta (50) metros de cuerpos de agua naturales o vías de comunicación terrestre. Será entera responsabilidad del Concesionario asegurar que la ubicación y el funcionamiento de las charcas existentes cumplan con los criterios operacionales presentados ante y aprobado por el Departamento de Recursos Naturales y Ambientales.

23. Este Permiso no exime al Concesionario de la responsabilidad y deber de obtener y cumplir con cualesquiera otros permisos relacionados que puedan ser requeridos por otras entidades gubernamentales estatales y federales.

24. Se deberá cumplir con las disposiciones del Reglamento Conjunto de Permisos para Obras de Construcción y Usos de Terrenos, según facultado por la Ley Núm. 161 - 2009, incluyendo las relacionadas a Exacción por Impacto. El cumplimiento con las disposiciones de dicho Reglamento no eximen al solicitante de cumplir con cualquier otra disposición aplicable a su obra, necesaria para asegurar el control de la contaminación ambiental o la protección de los recursos naturales, bajo la jurisdicción de otras agencias estatales y federales, como el Departamento de Recursos Naturales y Ambientales, la Agencia Federal de Protección Ambiental (EPA, por sus siglas en ingles) y el Cuerpo de Ingenieros del Ejército de los Estados Unidos (USACE, por sus siglas en inglés), entre otras.

Autorización de Corte, Poda, Transplante y Siembra de Árboles (ACP)

Condiciones relacionadas al ACP:

1. Cuando las actividades autorizadas en esta autorización requieran movimiento de tierra deberá obtener un Permiso de Actividad Incidental a una Obra Autorizada o un Permiso de Actividad Incidental a una Obra de Infraestructura Pública.

2. Las actividades autorizadas en esta autorización deberán ser realizadas y supervisadas por un Inspector Autorizado de Siembra (ISF).

3. El Inspector Autorizado de Siembra (ISF) de Siembra autorizado por la OGPe y contratado por el concesionario, deberá cargar al caso radicado en el SUI dos (2) certificaciones en cumplimiento con el Permiso Único, una al cincuenta por ciento (50%) del proyecto y la otra al cien por ciento (100%) del proyecto, expresando que la misma fue inspeccionada por él y que está en cumplimiento con lo expresado en el Permiso Único Incidental Operacional y el Plan de Forestación o Compensación correspondiente.

4. Implantará el Plan de Mantenimiento para los árboles sembrados el cual tendrá una duración mínima de seis (6) meses luego de terminada la implantación del Plan de Mitigación autorizado.

5. De existir un cuerpo de agua, el movimiento de tierra y el corte de árboles se realizará fuera de la faja verde de cinco (5) metros de anchos, colindantes con el mismo. La faja verde permanecerá en su estado natural.

6. Deberá solicitar la renovación de esta autorización con al menos noventa (90) días de antelación a la fecha de vencimiento; luego de este término deberá someter una solicitud de autorización nueva que cumpla con las leyes y reglamentos vigentes.

7. Se deberá informar por escrito a OGPe la fecha en la cual se haya terminado la obra de construcción propuesta dentro de un término de diez (10) días laborables, luego de pasada la misma. De no someter información el proponente estará sujeto a penalidad.

8. La OGPe, la Junta de Planificación y/o el Departamento de Recursos Naturales y Ambientales podrá realizar una inspección al predio y/o auditoría de los documentos y certificaciones radicadas para el caso para verificar la veracidad de la información presentada.

9. Si de la inspección o auditoría realizada surge que la documentación presentada debe ser corregida, se procederá a notificar al Inspector Autorizado de Siembra (ISF) que certificó la información y la autorización quedará sin efecto hasta que se corrijan las deficiencias. Ello, sin

menoscabo de las demás acciones que pueda tomar la OGPe, el Departamento de Recursos Naturales y Ambientales y/o la Junta de Planificación a tenor con las facultades que le fueran conferidas por la Ley Núm. 161, supra y los reglamentos adoptados a su amparo.

10. Cumplirá con las disposiciones de la Ley Núm. 133 de 1975, conocida como la Ley de Bosques para Puerto Rico, incluyendo, pero sin limitarse al Artículo 9 (c) el cual dispone "[s]e prohíbe cortar, talar, descortezar o, de otra forma, afectar un árbol antes de que la autorización o el permiso otorgado sea final, firme e inapelable. La actividad para la cual se otorgó la autorización o el permiso antes mencionado se podrá realizar sólo durante días laborables, entiéndase lunes a viernes, en el horario de 6 a.m. hasta las 6 p.m."

Permiso General Consolidado (PGC)

Condiciones relacionadas al PGC:

Control de Erosión y Prevención Sedimentación

1. Copia de este Permiso, así como del Plan CES autorizado por el mismo, deberá estar disponible en el lugar del proyecto.

2. Deberá implantar en todas sus partes el Plan para el Control de Erosión y Prevención Sedimentación autorizado por este Permiso y mantener en buenas condiciones de operación todas las medidas de control de erosión y sedimentación y otras medidas de protección identificadas en el Plano de Control de Erosión y Prevención Sedimentación o donde se haya identificado por el DRNA y/o el Proyectista, sean necesarias.

3. Las medidas de control además de estar correctamente instaladas, deberán ser efectivas. Aquellas medidas de control que se encuentren deterioradas, deberán ser inmediatamente reemplazadas.

4. Todas las medidas de control de erosión y sedimentación deberán ser seleccionadas, instaladas y mantenidas de acuerdo al Manual de Puerto Rico para el Control de la Erosión y Sedimentación en Áreas de Desarrollo y a cualquier especificación relevante del manufacturero y las mejores prácticas de la ingeniería.

5. Los sedimentos de las trampas de sedimentos y charcas de sedimentación deberán ser removidos cuando se alcance el 50% de la capacidad de diseño de las mismas, según especificado en el Plan para el Control de Erosión y Prevención Sedimentación.

6. Se deberán instalar medidas de control en aquellas áreas donde se hayan cesado temporera o permanentemente las actividades autorizadas en este Permiso o se identifique la necesidad de instalarlas.

7. De ser necesario realizar una modificación en las obras autorizadas en este permiso, según definida en el Reglamento para el Control de la Erosión y Prevención de la Sedimentación, el dueño, agente o representante autorizado deberá presentar la correspondiente solicitud de modificación acompañada de todos los documentos correspondientes que requieren reflejar la modificación antes de implantar la misma.

8. El inspector designado deberá ser un ingeniero o arquitecto autorizado a ejercer la profesión en Puerto Rico. Deberá someter los informes periódicos sobre la implantación del Plan para el Control de Erosión y Prevención Sedimentación el desarrollo de sus actividades. El primer informe deberá ser sometido no más tarde del quinto (5to) día laborable a partir de la fecha de inicio de las obras. El mismo deberá ser acompañado de la Certificación del Inspector. Los informes subsiguientes deberán someterse mensualmente a partir de la fecha en que sea sometido el 1erinforme.

9. Todos los informes sometidos, según requeridos en las condiciones de este Permiso deberán incluir fotografías con un tamaño mínimo de 4 pulgadas por 6 pulgadas a colores que evidencien las medidas de control de erosión provisionales y permanentes implantadas.

10. En un término no mayor de treinta (30) días a partir de la finalización de las actividades que requieren un Plan CES, deberá someter un informe final de cierre que evidencie la culminación de las mismas y la implantación de las medidas de control de erosión permanentes aplicables.

Manejo de desperdicios sólidos no peligrosos

11. Las actividades contenidas en un Permiso General Consolidado requieren que el concesionario de este Permiso tenga un Plan de Operación para el manejo de los desperdicios sólidos no peligrosos.

12. Toda disposición de desperdicios sólidos no peligrosos generado como parte de las actividades autorizadas en este Permiso será enviado única y exclusivamente a una instalación de disposición final (Relleno Sanitario). El manifiesto a utilizarse será el formulario oficial provisto por el Departamento de Recursos Naturales y Ambientales. Ninguna finca privada deberá ser utilizada para disponer finalmente de tales desperdicios.

13. Todo desperdicio generado será transportado para su disposición final por una compañía o empresa debidamente autorizada por el Departamento de Recursos Naturales y Ambientales para transportar desperdicios sólidos no peligrosos, acompañado de un manifiesto de disposición en el formulario oficial aprobado por el Departamento de Recursos Naturales y Ambientales para esos efectos.

14. Los manifiestos originados y devueltos por la instalación de disposición final deberán someterse de manera electrónica los primeros cinco (5) días de cada mes.

15. Las áreas de acceso al lugar donde se llevan a cabo las obras deberá ser estabilizadas en piedra o concreto y tener estaciones de lavado para limpieza de neumáticos y otras partes de los vehículos. El depósito de tierra lodo, polvo, sustancias pegajosas, basura, o material viscoso o extraño en las vías públicas provenientes del lugar donde se llevan a cabo las obras aquí autorizadas, constituye un incumplimiento con las condiciones de este Permiso.

16. De ser necesario modificar el Plan de Operación, el dueño, agente o representante autorizado deberá someter una Solicitud de Modificación junto al Plan enmendado antes de implantar la modificación.

Control de Contaminantes Atmosféricos

17. En el lugar de las obras y en especial, mientras se realizan movimientos de terreno, deberán proveer y utilizar un sistema para controlar las emisiones de polvo fugitivo en todo el proyecto para evitar en todo momento el levantamiento de materia particulada.

18. Deberán cubrir con toldos o encerados los camiones de acarreo de material de relleno y escombros durante los viajes de carga y descarga.

19. No se permitirá la quema de arbustos, árboles o la quema de basura en el proceso de limpieza de los predios de la construcción.

20. No se permitirá la emisión visible de contaminación de aire provenientes de vehículos de motor (equipo pesado) impulsados por combustible diésel, estando fijos y estacionados con una opacidad mayor al 20% por más de cinco (5) segundos consecutivos.

Apercibimientos:

Apercibimiento Fiscalización:

El Permiso Único Incidental incluye y consolida en un solo trámite permisos de la Oficina de Gerencia de Permisos y el Departamento de Recursos Naturales y Ambientales. De conformidad con lo anterior y las disposiciones de la Ley Núm. 161-2009, según enmendada y conocida como “Ley para la Reforma del Proceso de Permisos de Puerto Rico”, la Junta de Planificación o el

Permiso Único Incidental Operacional

Departamento de Recursos Naturales y Ambientales, según aplique, fiscalizará el cumplimiento del Permiso Único Incidental emitido por la Oficina de Gerencia de Permisos.

Apercibimiento Revisión:

La parte adversamente afectada por una actuación, determinación final o resolución de la OGPe, Profesional Autorizado o un Municipio Autónomo con Jerarquía de la I a la V, podrá presentar una solicitud de revisión administrativa ante la División de Revisiones Administrativas, dentro del término jurisdiccional de veinte (20) días contados a partir de la fecha de archivo en autos, de copia de la notificación de la actuación, determinación final o resolución.

La parte recurrente utilizará el mecanismo que proveerá el Sistema Unificado de Información al presentar el recurso electrónicamente ante la División de Revisiones Administrativas para notificar simultáneamente a la Oficina de Gerencia de Permisos, a la Junta Adjudicativa, los Municipios Autónomos con la Jerarquía de la I a la V, o al Profesional Autorizado, según aplique. Además, la parte recurrente notificará copia de la solicitud de revisión administrativa, por correo certificado con acuse de recibo u mediante otro mecanismo dispuesto por reglamento, a las partes, incluyendo a la OGPe, y a los interventores, dentro del término de cuarenta y ocho (48) horas desde la presentación de la solicitud. La oportuna notificación es un requisito de carácter jurisdiccional y su cumplimiento deberá ser certificado y evidenciado oportunamente ante la División de Revisiones Administrativas.

El Juez Administrativo de la División de Revisiones Administrativas tendrá un término de quince (15) días para determinar si acoge la misma. Si en este término se denegase o no se emitiese una determinación a esos fines, en cuyo caso se entenderá rechazada de plano, perderá jurisdicción sobre la misma y comenzará a decursar el término de treinta (30) días para recurrir al Tribunal de Apelaciones desde que se notifique la denegatoria o desde que expiren esos quince (15) días, según sea el caso.

La División de Revisiones Administrativas dispondrá de las solicitudes acogidas ante su consideración dentro de un periodo de noventa (90) días naturales desde su presentación. Dicho término podrá ser prorrogado por treinta (30) días adicionales contados a partir de la fecha de vencimiento, en casos excepcionales. Si la División de Revisiones Administrativas no adjudicara la solicitud dentro del término aquí dispuesto, dicho foro perderá jurisdicción sobre la misma y comenzará a decursar el término de treinta (30) días para recurrir al Tribunal de Apelaciones. Las resoluciones de la División de Revisiones Administrativas serán consideradas determinaciones finales de la Oficina de Gerencia de Permisos.
La presentación de una solicitud de revisión administrativa no es un requisito jurisdiccional previo a la presentación de una solicitud de revisión de decisión administrativa ante el Tribunal de Apelaciones. No obstante, su oportuna presentación paralizará los términos para recurrir ante dicho Tribunal.

Cualquier parte adversamente afectada por una determinación final, permiso o resolución de la Oficina de Gerencia de Permisos podrá presentar una solicitud de revisión ante el Tribunal de Apelaciones, dentro de un término de treinta (30) días contados a partir de la fecha del archivo en autos de la copia de la notificación de la determinación final, permiso o resolución de la agencia o a partir de la fecha aplicable cuando el término para solicitar la revisión judicial haya sido interrumpido mediante la presentación oportuna de una solicitud de revisión administrativa. La parte notificará la presentación de la solicitud de revisión a la agencia y a todas las partes dentro del término para solicitar dicha revisión. La notificación podrá hacerse por correo.

Permiso Único Incidental Operacional

Firma / Sellos

Fecha de Expedición:

08/12/2020

El Permiso General Consolidado es autorizado por la Junta de Calidad Ambiental:

Rafael A. Machargo Maldonado
Secretario
Departamento de Recursos Naturales y Ambientales

El Permiso de Actividad Incidental a una Obra Autorizada por OGPe (POA), Autorización de Corte, Poda, Transplante y Siembra de Árboles (ACP) es autorizado por la Oficina de Gerencia de Permisos:

Ing. Gabriel Hernández
Secretario Auxiliar
Departamento de Desarrollo Económico y Comercio de Puerto Rico
Oficina de Gerencia de Permisos

Rafael A. Machargo Maldonado

Secretario del DRNA

SBP SINGLE BUSINESS PORTAL

I.- 2019-274617-REA-003429-1661584 authorization ICP

16 de septiembre de 2019

NOTIFICACIÓN DE AUTORIZACIÓN

Ing. Gabriel Hernández Rodríguez
Sistema Integrado de Permisos
PO Box 41118
San Juan, PR 00940

PONCE HEALTH SCIENCES UNIVERSITY
PR-2, KM 227.2, REPARTO INDUSTRIAL REPARADA
BO. CANAS URBANO, PONCE
CASO OGPE #2019-274617-REA-003429

Estimado ingeniero Hernández:

El **Programa de Arqueología y Etnohistoria** del Instituto de Cultura Puertorriqueña evaluó los documentos relacionados al proyecto de referencia, recibidos a través de la División de Arqueología y Conservación Histórica de la Oficina de Gerencia de Permisos (OGPe).

La evaluación realizada sugiere que, basado en los datos existentes al presente, las probabilidades de impactar un recurso arqueológico, según definido por la Ley 112 del 20 de julio de 1988, según enmendada, son mínimas.

Por lo tanto, en lo concerniente a recursos culturales de naturaleza arqueológica, **no tenemos objeción** al proyecto según fue radicado y evaluado.

Le notificamos que esta autorización es parcial y el proponente queda sujeto a las responsabilidades y obligaciones que impone la Ley 112 del 20 de julio de 1988, según enmendada. Esta establece que, **se deberá paralizar todo tipo de actividad de excavación, movimiento y remoción de la corteza terrestre, y notificar en un plazo de veinticuatro (24) horas al Programa de Arqueología y Etnohistoria, en caso de que, durante el desarrollo del proyecto, se descubra o impacte algún depósito, elemento, estructura o vestigio de naturaleza arqueológica.**

Se le apercibe que el incumplimiento de estos requerimientos será objeto de sanciones administrativas según lo establecido en las citadas leyes.

Esta autorización tiene **vigencia de (1) año**.

Cordialmente,

Dr. Carlos Pérez Merced
Director Interino
Programa de Arqueología y Etnohistoria

CPM/GOE/mgb

J.- 2019-274617-REA-003429-1663054 no objection ICP

16 de septiembre de 2019

Ing. Gabriel Hernández Rodríguez
Secretario Auxiliar
DEPARTAMENTO DE DESARROLLO ECONÓMICO Y COMERCIO
Oficina de Gerencia de Permisos
PO Box 41179
San Juan, Puerto Rico 00940-1179

RECOMENDACIÓN AMBIENTAL
NO OBJECIÓN

CASO OGPe:	**2019-274617-REA-003429**
DESCRIPCIÓN:	EDIFICIO MULTIPISOS PARA UNIVERSIDAD ESPECIALIZADA
MUNICIPIO:	PONCE
UBICACIÓN:	CAMPUS DE PONCE HEALTH SCIENCES UNIVERSITY 388 ZONA INDUSTRIAL REPARADA 2 BARRIO CANAS URBANO, PONCE, PR 00716
CATASTRO:	63-412-011-783-27-000
CALIFICACIÓN:	EV.4
PROPIETARIO:	TIBER HEALTH PUBLIC BENEFIT CORP.
PROPONENTE:	HELLMUTH OBATA & KASSABAUM ARCHITECTS

Estimados señores:

El Instituto de Cultura Puertorriqueña (ICP), por medio de su Programa de Patrimonio Histórico Edificado (ICP-PHE), ha examinado el proyecto de referencia para determinar si afecta Propiedades de Valor Histórico y Arquitectónico que estén protegidas, o sean elegibles a serlo, bajo las leyes y reglamentos que nuestra agencia tiene responsabilidad de administrar, como agencia primaria, endosante o recomendante. Estas leyes y reglamentos incluyen, entre otros:

1. La ley 89 del 21 de junio de 1955 S.E., Ley Orgánica del Instituto de Cultura Puertorriqueña, en especial el inciso 4(a)(7), "Determinar que edificios o estructuras son de valor histórico o artístico en Puerto Rico. (...)" y el inciso 4(a)(8), "Asesorar a la Junta de Planificación en la reglamentación de construcción en aquellas zonas que determine como zonas de valor histórico. (...)".
2. La ley 89 del 21 de junio de 1955 S.E., Ley Orgánica del Instituto de Cultura Puertorriqueña, en su inciso 4(b)(3) según enmendado por la ley 119 del 26 de septiembre de 2005, que permite "adoptar, enmendar o derogar, por conducto de su Junta de Directores, las reglas que gobiernen [el] funcionamiento y el descargo de los poderes" concedidos e impuestos al ICP por ley, y la imposición de multas administrativas y/u otras sanciones por su incumplimiento o violación.
3. El **Reglamento Conjunto para la Evaluación y Expedición de Permisos Relacionados al Desarrollo, Uso de Terrenos y Operación de Negocios**, Reglamento 38 de la Junta de Planificación ("Reglamento Conjunto") con vigencia del 7 de junio de 2019, en todos los incisos aplicables a zonas y sitios históricos, en especial el Tomo X (10), "Conservación de Recursos Históricos" – incluyendo, en las zonas históricas, edificios elegibles, no elegibles, solares vacíos y espacios públicos.
4. Las zonificaciones S-H, antes CR-H o SH, cubiertas por el Tomo VI, Capítulo 6.1 "Áreas Calificadas", Regla 6.1.21 del Reglamento Conjunto.
5. Las disposiciones del Tomo X, Capítulo 10.2 "Conservación de Sitios y Zonas Históricas", Sección 10.2.5.4 y Reglas 10.2.7 y 10.2.8 del Reglamento Conjunto, las que establecen, para los Centros Fundacionales de los Pueblos, así como para las Plazas, Plazuelas y Plazas de Recreo, las reglas de protección del Patrimonio Histórico.
6. La disposición del Tomo X, Capítulo 10.2 "Conservación de Sitios y Zonas Históricas", Sección 10.2.2.4, "Obras Exentas de Permisos", del Reglamento Conjunto la que establece el requerimiento de la Recomendación del ICP en las reparaciones y construcciones misceláneas de carácter menor, incluyendo

aplicación de pintura y la limpieza rutinaria o de mantenimiento de la edificación que no conlleve el uso de maquinaría, químicos o abrasivos y no afecte la integridad de la misma, en los centros fundacionales, sitios y zonas Históricas de Puerto Rico.

7. La Resolución JPE-047 de 1994, la cual requiere evaluación del ICP para consultas y usos a darse a edificios públicos construidos anteriores a 1960.
8. La exigencia de endoso o comentario del ICP aplicable a propiedades designadas de valor histórico y arquitectónico por otros medios, tales como:

    a. Resolución de la Asamblea Legislativa
    b. Monumentos Históricos designados por la Junta de Directores del ICP
    c. Propiedades designadas por un plan de ordenamiento territorial de un Municipio Autónomo y que esté en vigor, o por el Plan de Uso de Terrenos de Puerto Rico
    d. Ser declaradas históricas en un plan especial de zonificación.
    e. Otras propiedades referidas por cualquier componente del Sistema Unificado de Información (SUI), la Oficina de Permisos de un Municipio Autónomo con poder de otorgar permisos, la Junta de Planificación, el Programa de Arqueología y Etnohistoria del ICP, u otra agencia o entidad de gobierno con poder reglamentario.

9. Petición a solicitud voluntaria de un propietario o derechohabiente de una propiedad.

De acuerdo a nuestros expedientes y la información provista:

1. Esta propiedad **no** es **Sitio Histórico** designado, ni es parte de una **Zona Histórica** según estos conceptos están definidos por el tomo XII (12), parte III, definiciones S-63, Z-11 y Z-12, y elaborados en el tomo X (10), del Reglamento Conjunto. Tampoco queda en otro lugar sujeto a la reglamentación sobre patrimonio edificado por parte del ICP. El terreno no presenta componentes visibles sobre la tierra con valor histórico evidente o potencial.
2. No tiene efecto adverso a lugares adyacentes o cercanos que sean actualmente o puedan ser en el futuro sitios históricos o zonas históricas.
3. Se solicita construir un edificio multipisos de cuatro niveles, con aulas, auditorio, laboratorios, administración, estacionamiento, desahogo y otras actividades relacionadas con las funciones pedagógicas e investigativas de la Ponce Health Sciences University (anteriormente Escuela de Medicina de Ponce). Esto queda dentro de un solar que actualmente posee varias estructuras temporeras y permanentes a ser demolidas. Ninguna de estas tiene valor histórico o arquitectónico.

Luego de la evaluación del caso se hace, desde el punto de vista de protección del patrimonio edificado, una determinación de **NO OBJECIÓN** a la acción propuesta.

Este proyecto debe ser revisado para determinar cumplimiento con la Ley de Patrimonio Arqueológico Terrestre, Ley 112 del 12 de agosto de 1988 según enmendada. Se debe establecer contacto con nuestro Programa de Arqueología y Etnohistoria para mayor información.

Este documento tiene vigencia de un (1) año a partir de su emisión.

Sin otro particular, quedamos.

Mildred González Valentín, M. Arch.
Subdirectora de Conservación
Programa de Patrimonio Histórico Edificado
Instituto de Cultura Puertorriqueña

MGV/JOC/jo

c: Expediente caso PPHE, ICP
Pablo Ojeda O'Neill, Director, PPHE-ICP

K.- 2019-274617-REA-003429-1734728 DRNA REA

GOBIERNO DE PUERTO RICO

Departamento de Recursos Naturales y Ambientales

04 OCT 2019

EA-19-0328 (OGPE)

Ing. Gabriel Hernández Rodríguez
Oficina de Gerencia de Permisos
P.O. Box 41179
San Juan, PR 00940-1179

Consulta	2019-274617-REA-003429
Proyecto	Ponce Health University (Escuela de Medicina) – Nuevo Edificio
Localización	PR-2, Km. 227.2, Marginal, Barrio Canas Urbano, Ponce
Descripción	Se propone la demolición de estructuras existentes para la construcción de un nuevo edificio académico con cinco (5) niveles y 165 estacionamientos para la Escuela de Medicina, en un predio con cabida de 3.3620 cuerdas.

Estimado ingeniero Hernández:

El Departamento de Recursos Naturales y Ambientales (DRNA) ha evaluado la recomendación de evaluación ambiental (REA) referida electrónicamente por la Oficina de Gerencia de Permisos (OGPe) relacionada al proyecto mencionado en referencia. La información ha sido evaluada en conformidad con lo dispuesto en la Regla 117, Inciso I del Reglamento Núm. 8858 del 23 de noviembre de 2016, conocido como el "Reglamento para el Proceso de Evaluación Ambiental" (RPEA) y en conformidad con la Regla 14.8 de la Ley 161-2009, según enmendada, conocida como Ley para la Reforma del Proceso de Permisos en Puerto Rico.

Se propone un edificio institucional educativo de 131,000 pies cuadrados, con cinco (5) niveles, ocupando un área de 4,081 metros cuadrados, para oficinas administrativas y las actividades académicas de enfermería, salud pública y programas de psicología. El resto de 9,133.45 metros cuadrados se utilizará para el estacionamiento, vías internas y áreas verdes.

De acuerdo a la información sometida en la REA, la Secretaría Auxiliar de Cumplimiento Ambiental del DRNA emite las siguientes recomendaciones:

1. La REA se somete ante la OGPe según lo dispuesto en la Regla 116 del RPEA, como parte del procedimiento requerido para la acción propuesta. El documento ambiental que finalmente se someta ante la OGPe, deberá cumplir con las Reglas 118 y 120 del RPEA, en cuanto a formato y contenido, respectivamente.

2. Previo a dar comienzo a las actividades de demolición y construcción del proyecto o efectuar algún movimiento de tierra, deberán solicitar y obtener a través de la OGPe, el Permiso Único Incidental Operacional (PUI), a tenor con la Regla 3.4.1 del Reglamento Número 9081,

conocido como "Reglamento Conjunto para la Evaluación y Expedición de Permisos Relacionados al Desarrollo, Uso de Terrenos y Operación de Negocios" del 7 de junio de 2019.

3. Si las estructuras a demolerse tienen material con contenido de asbesto, previo a realizar alguna demolición deberán obtener en el DRNA, el Permiso General para el Manejo de Materiales con Contenido de Asbesto que establece el Reglamento Núm. 7308 del 1 de marzo de 2007, conocido como el "Reglamento para el Trámite de los Permisos Generales".

4. Si las estructuras a demolerse contienen pintura con base de plomo, previo a realizar alguna demolición deberán obtener en el DRNA, el Permiso General para Actividades de Mitigación de Pintura con Base de Plomo que establece el Reglamento para el Trámite de los Permisos Generales.

5. Deberán tomar las medidas necesarias para evitar que residuos de sustancias orgánicas e inorgánicas como aceites, combustibles u otras sustancias químicas generadas durante la construcción propuesta, puedan ser arrastradas por la escorrentía y ganen acceso a algún cuerpo de agua o al sistema pluvial del área.

6. Previo a instalar y operar generadores de electricidad con capacidad mayor de diez (10) caballos de fuerza y una operación no mayor de quinientas (500) horas al año durante la construcción o la operación del proyecto, deberán obtener a través de la OGPe, el Permiso General que establece el mencionado Reglamento para el Trámite de los Permisos Generales, que incluye el Permiso de Fuente de Emisión.

7. Para utilizar tanques de almacenamiento de combustible para abastecer a los generadores o para cualquier otro equipo durante la construcción y operación del proyecto, deberán presentar un Plan de Emergencia ante el Área de Calidad de Agua del DRNA, a tenor con la Regla 1306.5 del Reglamento Núm. 9079 del 26 de abril de 2019, conocido como el "Reglamento de Estándares de Calidad de Agua", informando la acción a tomar para evitar, controlar y remediar derrames.

8. El almacenamiento, manejo, transportación y disposición de los desperdicios a generarse durante la construcción del proyecto, debe realizarse en conformidad con el Reglamento Núm. 5717 del 14 de noviembre de 1997, conocido como el "Reglamento para el Manejo de los Desperdicios Sólidos No Peligrosos".

9. Los camiones de acarreo de desperdicios deberán contar con el Permiso para Operar Servicios de Recolección o Transportación de Desperdicios Sólidos No Peligrosos (Permiso DS-1) emitido por el DRNA, para transportarlos hasta una instalación de disposición final o de reciclaje.

10. Deberán tomar las medidas necesarias para controlar el área durante la construcción, para evitar exponer a los vehículos a recoger lodo, polvo, sustancias pegajosas o material viscoso en las ruedas u otras partes del vehículo, los cuales a su vez puedan ser depositados en las

04 OCT 2019

calles u otro sitio público. Deberán mantener las vías públicas y alrededores del proyecto libres de acumulación de escombros y desechos de construcción.

11. Deberán mantener los camiones de carga que se utilicen para transportar materiales y desechos de construcción cubiertos con toldos mientras estén en movimiento, para evitar emisiones de partículas al aire.

12. Deberán cumplir con el Reglamento Núm. 8493 del 27 de junio de 2014, conocido como el "Reglamento para el Control y la Prevención de la Contaminación Lumínica", en cuanto a la instalación de fuentes emisoras de iluminación exterior y demás requisitos aplicables al proyecto que disponga dicho reglamento.

13. Durante la construcción y operación del proyecto deberán cumplir con el Reglamento Núm. 8019 del 9 de mayo de 2011, conocido como "Reglamento para el Control de la Contaminación por Ruido", en cuanto al nivel de sonido máximo permitido.

Las recomendaciones presentadas en esta comunicación, no eximen de cumplir con cualquier otro requerimiento o permiso del DRNA, que sean aplicables a la acción propuesta.

Cordialmente,

Tania Vázquez Rivera
Secretaria

ODM/odm

L.- 2019-255909-SRI-022539_Carta de Evaluation PREPA

ESTADO LIBRE ASOCIADO DE PUERTO RICO
AUTORIDAD DE ENERGÍA ELÉCTRICA DE PUERTO RICO
INGENIERÍA DE DISTRIBUCIÓN
REGIÓN DE PONCE

PO BOX 7355
Ponce, PR 00732

Teléfono: 787- 812-8545
Fax: 787-812-8613

24 de junio de 2019

Sra. Iliana Garay Oh
Gerente Interina de Infraestructura, OGPe
PO Box 41179
Santurce, PR 00940-1179
garay_i@ogpe.pr.gov

Estimada señora Garay:

Proyecto: PHSU – New Academic and Clinic Buildings
Localización: PR 2 km 227.2, Marginal Sur Ponce By-Pass, Ponce
AEE Núm.: 99-3-440B1 WR 5281397 Carga: 2,150 (1,025 Exist.) kVA
Caso: 2019-255909-SRI-022539

Nos referimos a su solicitud de información con la cual nos incluía el plano de situación y localización del proyecto de referencia. Para punto de conexión y condiciones para los planos de diseño requeridos, refiérase al croquis y a las notas incluidas.

Se requiere presentar cómputos de carga, tensión y flecha para los sistemas aéreos. Se requiere presentar cómputos de caída de voltaje para diseños de sistemas soterrados. Será responsabilidad del dueño, indicar la localización exacta y coordinar la reubicación de líneas eléctricas, de ser necesario. Todas las coordenadas indicadas en esta evaluación son en el sistema *North American Datum 83, unidades en metros.*

Incluimos información gráfica sobre las facilidades eléctricas y la siguiente información:

1. Servicio existente a un voltaje de 13.2 kV a dos subestaciones de 500 kVA y 300 kVA respectivamente. En adición, existe subestación de 225 kVA a un voltaje de 4.16 kV para una carga total existente de 1,025 kVA.

2. La subestación propuesta de acuerdo al diseñador es de 2,000 kVA trifásica para la carga del edificio a construir y una subestación independiente de 150 kVA para una bomba del sistema de agua de incendio. La carga del sistema de incendio no es coincidente con la carga normal del edificio. Para una capacidad máxima de 2.0 MVA, la demanda máxima de corriente es de 95 amperios. El aumento neto en carga adicional a la existente, es de 60 amperios máximo.

"Somos un patrono con igualdad de oportunidades en el empleo y no discriminamos por razón de raza, color, sexo, edad, origen social o nacional, condición social, afiliación política, ideas políticas o religiosas; por ser víctima o ser percibida víctima de violencia doméstica, agresión sexual o acecho; por impedimento físico, mental o ambos o condición de veterano."

3. El voltaje de alimentación será de 13.2 kV (A5011-03) desde el punto de conexión (180381.75, 217979.73) indicado en el croquis adjunto. Para servir el proyecto la AEE remplazará el poste de madera existente en el punto de conexión con un poste de hormigón autosostenido de 55 pies de altura. Se instalará interceptando la línea de 13 kV y de forma alineada al ramal trifásico de 4.16 kV que discurre a lo largo de la colindancia del proyecto. Al remplazar el poste de madera, toda infraestructura innecesaria será retirada. Coordinar detalles y costos de conexión con el Ingeniero de Distrito de Ponce.

   Esta conexión y servicio a voltaje de 13.2 kV está condicionada a realizar las mejoras necesarias en los alimentadores A5011-03 y A5011-05 a la salida de la subestación 5011 Hostos 13kV. Se transferirá del alimentador A5011-03 al A5011-05 la carga correspondiente a la Urbanización Star Light y Residencial López Nussa. Incluir notas al efecto en los planos de diseño.

5. El dueño del proyecto aportará a la AEE **$36,025.^{00}** para realizar las mejoras necesarias al sistema eléctrico. Dicha mejora consiste en la extensión del alimentador A5011-05 desde la salida de la subestación hasta la calle Antares de Urb. Star Light para dividir y transferir carga del alimentador A5011-03 según descrito en el inciso anterior. **El cómputo de la aportación está basado en 1,125 kVA adicionales solicitados al cargo base correspondiente. Cualquier cambio en la carga solicitada requerirá una nueva evaluación y cómputo de la aportación.** Incluya nota especial al efecto en los planos de diseño.

6. El punto de conexión indicado se denomina como *Punto de Entrega*. No se transferirá a la AEE la infraestructura eléctrica desde este punto. El servicio que se deriva del mismo es considerado como exclusivo y privado, por lo que el mantenimiento y remplazo del sistema es responsabilidad del dueño o administrador del proyecto.

7. El dueño será responsable de extender el alimentador primario trifásico desde la acometida soterrada requerida en el punto de conexión hasta el proyecto y de retirar la toma primaria existente. Además debe conseguir los permisos y servidumbres correspondientes, de parte de los propietarios o agencias afectadas. Incluya nota al efecto en los planos de diseño.

8. Deberá tomar las debidas precauciones, utilizar equipo protector y seguir las reglas de seguridad necesarias al trabajar cerca de líneas eléctricas energizadas. Deberá coordinar con el Ingeniero de Distrito de Ponce la desconexión de energía en las líneas vivas cuando la proximidad de los trabajos a éstas sean de alto riesgo y exposición. Deberá coordinar con la AEE la instalación de cubierta aislante en conductores energizados cuando sea necesario.

9. Se requerirá instalar desconectivos con protección de fusibles a la entrada del proyecto en el punto de conexión. Incluya detalles al respecto en los planos de diseño.

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10. Todo transformador a ser conectado al sistema de la AEE deberá ser diseñado y construido con características de pérdidas mejoradas. El dueño del proyecto deberá coordinar con el Ingeniero de Distrito de Ponce el voltaje primario a ser utilizado previo a la compra de los transformadores. Incluya nota al efecto en los planos de diseño.

11. **Toda construcción de líneas de distribución en el desarrollo de nuevas urbanizaciones, centros y áreas comerciales, industriales y toda lotificación deberá realizarse de forma SOTERRADA de acuerdo al COMUNICADO TECNICO 12-01. Incluya detalles en los planos de diseño.**

12. **Como regla general, la Autoridad no permite el uso de sus servidumbres. No obstante en casos donde no existan alternativas para el desarrollo de un proyecto, la Autoridad puede otorgar un permiso condicionado para uso estrictamente de estacionamiento, siempre y cuando se cumplan con todos los requisitos de seguridad y normas de la Autoridad. El uso de las servidumbres de paso de la AEE deberá coordinarse con la División de Distribución Eléctrica previo al endoso de los planos de diseño**.

13. Este proyecto está afectado por líneas eléctricas de 13.2 kV (A5011-03) y de 4.16 (A5001-03). Cualquier trabajo de reubicación de líneas eléctricas energizadas, será realizado por la AEE con cargos al dueño y deberá coordinarse con el Ingeniero de Distrito de Ponce.

El dueño del proyecto es responsable de cumplir con los requisitos establecidos en el Reglamento de Servidumbre de la AEE con relación a las nuevas servidumbres a establecerse o constituirse como parte del proyecto y a las servidumbres asociadas a instalaciones eléctricas existentes en el área del proyecto.

Mostrar las líneas eléctricas a tránsito y respetar las servidumbres de paso de aquellas que pasen por el proyecto. Debe indicar claramente los límites del proyecto. El dueño del proyecto es responsable de cumplir con los requisitos establecidos en el Reglamento de Servidumbre de la AEE con relación a:

a. Las nuevas servidumbres a establecerse o constituirse como parte del proyecto.
b. Las servidumbres correspondientes cuando existan instalaciones eléctricas en el área del proyecto.
c. el ancho de servidumbre para líneas eléctricas primarias y secundarias aéreas es de10 pies, 5 pies a cada lado del eje central así como 10 pies de ancho por un mínimo de largo igual a la distancia entre la estructura y el ancla del tensor.

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d. el ancho de servidumbre para líneas eléctricas primarias y secundarias soterradas es de 5 pies, 2.5 pies a cada lado del eje central de la trinchera.
e. Toda porción de la servidumbre de las facilidades eléctricas que ubique fuera de los espacios públicos afectando a lotes existentes y propuestos deberá marcarse como servidumbre a inscribir. Deberá indicar los propietarios afectados.

16. La aportación económica aplicable y el costo estimado por concepto de trabajos a realizarse por la AEE especificados en esta evaluación, se acreditarán a las cuentas ***CIG-419.06 y CIS-419.05*** respectivamente. El pago deberá realizarse en la Oficina Comercial más cercana con dos meses de anticipación al comienzo del proyecto y podrá ser en efectivo, giro o cheque certificado. Incluya nota al efecto en los planos de diseño.

17. La radicación de los planos finales del proyecto deberá incluya cómputos de carga y las coordenadas Lambert correspondientes a la ubicación del proyecto. Las coordenadas deberán aparecer impresas en el plano a ser radicado, bajo el esquema de localización (1:20,000) y la copia del mismo en formato dwg deberá estar georeferenciado según estas coordenadas. **Deberá cumplir cabalmente con el Comunicado Técnico 08-05**.

18. El dueño del proyecto o su representante deberá notificarle a la Sección de Inspecciones de AEE Ponce el comienzo de la obra previo a los trabajos eléctricos del proyecto para la requerida inspección, aprobación y coordinación necesaria. Incluya nota al efecto en los planos de diseño.

19. Al someter los planos para endoso deberá incluya la resolución vigente de la Oficina de Gerencia de Permisos. Se requerirá una nota que estipule que el plano coincide con el sometido ante la Oficina de Permisos, haciendo referencia al número de caso de dicha oficina.

Este proyecto requiere medición primaria por lo que deberá coordinar con la Oficina de Mediciones de Ponce la disponibilidad de los equipos y/o metros a ser suplidos por la AEE previo a la compra de cualquier equipo o material relacionado a la medición. Incluya nota importante en los planos de diseño según estipula el COMUNICADO TÉCNICO 13-05:

"Este proyecto requiere contrato de cuentas al por mayor, el cual es requisito que se firme previo a la energización del proyecto. El tipo de medición, los equipos a utilizarse y la ubicación del equipo de medición fue coordinada con el supervisor de la Oficina de Irregularidades en el Consumo de Energía Eléctrica - Medición de la Región de Ponce."

21. Todo plano a presentarse para endoso de la AEE deberá cumplir con **todo** los documentos requeridos por la Autoridad según se especifica en el COMUNICADO 15-01. Además, deberá incluir las *Notas Generales* según se estipula en el

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COMUNICADO 09-03. Todo proyecto que no cumpla con estas disposiciones no será evaluado para endoso y será devuelto al solicitante hasta tanto cumpla con estos requisitos.

22. Esta evaluación del punto de conexión no constituye una revisión al plano del proyecto. El diseñador es responsable de cumplir con los códigos, reglamentos, manuales, estándares y normas aplicables vigentes para los sistemas eléctricos en Puerto Rico. Además, deberá cumplir con los Reglamentos de Ordenación de la Infraestructura en el Espacio Público, según exigido por la Oficina de Gerencia de Permisos (OGPe). El diseñador de la fase eléctrica tiene que ser un ingeniero o arquitecto licenciado y colegiado, autorizado en ley para ejercer su profesión en Puerto Rico.

23. Esta evaluación tiene vigencia de un año a partir de la fecha de expedición.

Cordialmente,

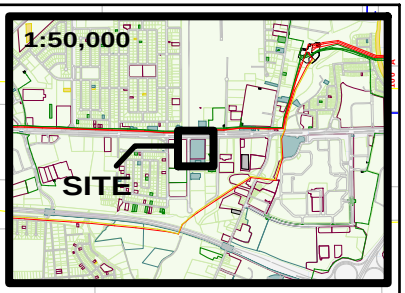
Eduardo Rodríguez
Ingeniero Supervisor

Anejos

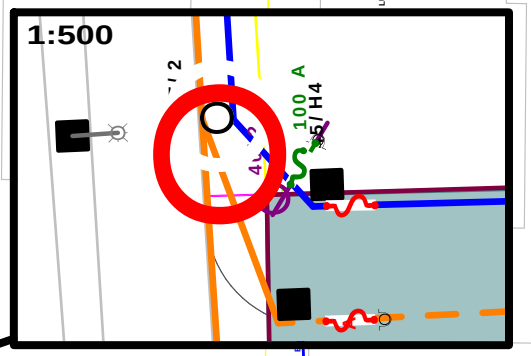
c Arq. Annette Alfonso
1511 Ponce de Léon Ave., Suite 23
San Juan, PR 00909
csapermitspr@csagroup.com

"Somos un patrono con igualdad de oportunidades en el empleo y no discriminamos por razón de raza, color, sexo, edad, origen social o nacional, condición social, afiliación política, ideas políticas o religiosas; por ser víctima o ser percibida víctima de violencia doméstica, agresión sexual o acecho; por impedimento físico, mental o ambos o condición de veterano."

Proyecto: PHSU - New Academic and Clinic Buildings
Localización: PR 2 km. 227.2, Ponce By-Pass Marginal, Ponce
AEE Núm.: 99-3-440B1 WR 5281397 Carga: 2,150 (1,025 Exist.) kVA
Caso: 2019-255909-SRI-022539



Punto de Conexión



LOCALIZACIÓN PROYECTO

CALLE B

M.- 2019-255909-SRI-022539_Carta Recommendation AAA_2019_06_06

06 de junio de 2019

Arq. María R. Cintrón Flores
Secretaria Auxiliar
Oficina de Gerencia de Permisos (OGPe)
PO BOX 41179
San Juan, Puerto Rico 00940-1179

Arquitecta Cintrón Flores:

AAA-RS-19-58-0002; PONCE – PONCE HEALTH SCIENCES UNIVERSITY
NEW ACADEMIC AND CLINIC BUILDING
CARR. PR 2 KM. 227.2 - PONCE BY PASS
OGPE: 2019-255909-SRI-022539
(RECOMENDACIÓN)

Nos referimos al proyecto de epígrafe, sometido ante nuestra consideración para que se informe en cuanto a las facilidades de los servicios de agua y alcantarillado sanitario existentes, que puedan servir al mismo. De acuerdo al memorial explicativo el proyecto propuesto consiste de la construcción de un edificio de 131,000 pies cuadrados de 4 pisos con posibilidad de añadir un piso adicional en el futuro.

Sistema de Acueductos

El servicio de agua podrá ser prestado mediante conexión a la línea de 6" existente en la calle marginal hacia la Carr. PR 2 frente al proyecto.

- *Deberá instalar un contador de servicio de agua de diámetro adecuado.*
- *Deberá instalar válvula sostenedora antes de la caja de contador de servicio de agua doméstico.*
- *Se requiere la instalación de un sistema hidroneumático de presión de agua ya que el proyecto es de multi pisos y el sistema de distribución de agua no permite el servicio por gravedad a todos los pisos del proyecto, este sistema será operado, conservado y mantenido por el dueño del proyecto.*
- *De requerir contador de sistema de control de incendios se deberá instalar un contador de diámetro adecuado con un "double check valve" en caso de ser de 2" o un "fire control back flow prevention device" en caso de ser mayor de 2".*

Será necesario que el desarrollador del proyecto pague a esta Autoridad, la cantidad de quinientos ($500.00) dólares por cada unidad o su equivalente a conectarse, para hacer uso del sistema de distribución de agua existente.

Sistema de alcantarillado sanitario

El servicio de alcantarillado sanitario, para este proyecto, podrá ser prestado mediante conexión a la tubería de 8" diámetro existente en la calle Dr. Luis. F. Sala.

- *Deberá relocalizar tubería sanitaria que pueda ser impactada por la construcción del proyecto.*
- *Deberá incluir documentación de servidumbre de alcantarillado sanitario localizada en la parcela del proyecto y dentro de cualquier otro predio que de servicio al solar del proyecto.*

Autoridad de Acueductos y Alcantarillados

Será necesario que el desarrollador del proyecto pague a esta Autoridad, la cantidad de quinientos ($500.00) dólares por cada unidad de vivienda o su equivalente a conectarse, para hacer uso del sistema de alcantarillado sanitario existente.

Antes de iniciar el proceso de construcción, deberán radicar a través de la Oficina de Gerencia de Permisos (OGPe) los planos de las obras de acueducto y alcantarillado sanitario para la aprobación de la AAA, los cuales deberán estar sellados y firmados por el profesional responsable de los mismos.

Estos incluyen, según aplique al caso, planos que contemplen:

- Sistemas de distribución de agua y su conexión a los sistemas de la AAA
- Relocalización o extensión de obras de acueducto
- Obras Extramuros e Instalaciones para ser transferidas a la AAA para su operación

Deberá cumplirse con los requisitos establecidos en el *Reglamento Conjunto de Permisos para Obras de Construcción y Usos de Terrenos.*

Los planos deberán ser sometidos y aprobados por esta Autoridad, de acuerdo al Reglamento para la Certificación de Planos de Construcción, antes de proceder con la construcción de las obras.

Al someter el plano final para aprobación, se deberá cumplir también con los siguientes requisitos:

1. Someter los documentos de certificación del ingeniero o arquitecto debidamente cumplimentados

    a. AAA-972 (Solicitud de Aprobación de Planos de Construcción)
    b. AAA-1294 (Certificación de Ingeniero o Arquitecto)

El cómputo final de las unidades equivalentes estará basado en lo que, al presentar los planos hidráulicos, resulte ser la demanda requerida para el proyecto propuesto. Si las unidades equivalentes, resultan ser diferente a lo contemplado para fines de esta evaluación, esta Autoridad se reserva el derecho de modificar los términos de esta recomendación.

Estas recomendaciones estarán vigentes por el término de dos (2) años, a partir de la fecha de esta comunicación, al cabo del cual, de no haberse sometido planos de construcción de las obras de acueducto y alcantarillado sanitario , el proyecto deberá someterse nuevamente ante la consideración de esta Autoridad.

Cordialmente,

Ing. Ausberto Santisteban Rodríguez, PE
Gerente Técnico

ASR/JGV/gtb

c: expediente, Archivo de Lectura, Director de Área, Agencia Comercial, Desarrollador

N.- 2019-255909-SRI-022539_Recomendacion NETPR

GOBIERNO DE PUERTO RICO

Negociado de Telecomunicaciones
Sección de Infraestructura y Tecnologías de Telecomunicaciones

SECRETARIA Recibido 12/03/2019 NETPR

11 de marzo de 2019

Arq. María R. Cintrón Flores
Secretaria Auxiliar
Oficina de Gerencia de Permisos
Departamento de Desarrollo Económico y Comercio
P. O. Box 41179
San Juan, Puerto Rico 00940-1179

Asunto: Punto de Conexión para Infraestructura de Telecomunicaciones

Número de Caso: NETPR-2019-RI-0062 (OGPe: 2019-255909-SRI-022539)

Proyecto: Ponce Health Sciences University - New Academic and Clinic Buildings

Dirección: 388 ZONA INDUSTRIAL REPARADA 2, Ponce, Puerto Rico

Catastro: 412-011-783-27

Estimada arquitecta Cintrón Flores:

El Negociado de Telecomunicaciones de Puerto Rico (NET), evaluó los documentos presentados sobre el proyecto en el epígrafe. Adjunto le devolvemos una copia del plano, donde se indica en rojo el punto de conexión, que deberá incluir en los planos finales, para la infraestructura de telecomunicaciones.

Una vez se incorporen las recomendaciones a los planos, la Parte Proponente está obligada a preparar el plano final de infraestructura de telecomunicaciones, conforme a la Ley Número 161 de 1 de diciembre de 2009, según enmendada, conocida como la Ley para la Reforma del Proceso de Permisos de Puerto Rico (Ley 161); y el Reglamento para el Endoso de Planos de Infraestructura y Servidumbres para Facilidades de Telecomunicaciones y Televisión por Cable del NET, (Reglamento 7393, revisado). De manera supletoria, es de aplicación el Reglamento Conjunto de Permisos para Obras de Construcción y Usos de Terrenos de 29 de noviembre de 2010, (Reglamento Conjunto, enmendado).

Este documento no constituye un endoso a la referida acción, ni representa un relevo de cumplimiento respecto a todos los reglamentos aplicables. En esta etapa, se impone la obligación de tramitar, ante la Oficina de Gerencia de Permisos (OGPe), una nueva Solicitud de Recomendaciones para Infraestructura de Telecomunicaciones, mediante el Formulario NETPR F-101, que está disponible en la sección de Infraestructura (Endosos – Formularios) de nuestra página de Internet: http://www.jrtpr.pr.gov/endosos-formularios/.

EWR

Junta Reglamentadora de Telecomunicaciones de Puerto Rico

500 Ave. Roberto H. Todd (Parada 18- Santurce) San Juan 00907-3941
Tel. 787.756.0804 • Fax. 787.756.0814

De ser requerido, la propuesta incluirá el deslinde y la descripción para una Servidumbre de Infraestructura Soterrada de Telecomunicaciones. Este diseño se realizará de conformidad con el citado Reglamento enmendado 7393, del NET. El dueño o su representante constituirán, mediante Plano de Inscripción y Escritura, la Servidumbre de Infraestructura Soterrada de Telecomunicaciones, en estricto cumplimiento con las disposiciones del citado reglamento. Este requisito es de observancia específica, y constituye un requisito estatutario, para que la Parte Proponente pueda obtener un Permiso de Construcción. Es una obligación previa al otorgamiento del Permiso de Construcción, presentar a la consideración del NET, el Plano de Infraestructura de Telecomunicaciones, para Aprobación Final.

El Proponente deberá coordinar con los proveedores de las utilidades de telecomunicaciones (teléfono, televisión por cable) la localización e identificación de cualquiera de estas facilidades que puedan existir en el área del proyecto. **En cuanto al posible impacto del proyecto, cualquier remoción, modificación y relocalización de las instalaciones de telecomunicaciones existentes, deberá ser coordinada con los proveedores de estos servicios.**

A la fecha de comienzo de las Obras de Construcción, el dueño y/o el contratista solicitarán una reunión de preinspección del proyecto. Una vez complete la construcción del proyecto, y para el endoso final de la obra construida, deberá proceder, conforme a la Sección 5.02.6 sobre Solicitud de Endosos de Obras de Infraestructura Construidas del Reglamento 7393, según revisado. Para solicitar el Permiso de Uso, que emite la OGPe, es un requisito mandatorio cumplir con la Certificación de Obras Construidas (COC), utilizando el Formulario NETPR F-102, que también lo encontrará en la descrita dirección electrónica.

En el descargue de los deberes delegados, el NET pasará juicio en torno a la veracidad de los hechos que surjan del expediente administrativo. Se notificarán las acciones administrativas que correspondan, de acuerdo con la etapa del proyecto en referencia. Agradeceremos que toda la documentación requerida, tanto para la Aprobación Final como para la Inspección y Endoso de Obras Construidas, sea tramitada a través del *Single Business Portal* (SBP) de la OGPe.

Estamos disponibles para contestar sus preguntas. Puede comunicarse, a su conveniencia, al teléfono (787) 756-0804, extensión 3047.

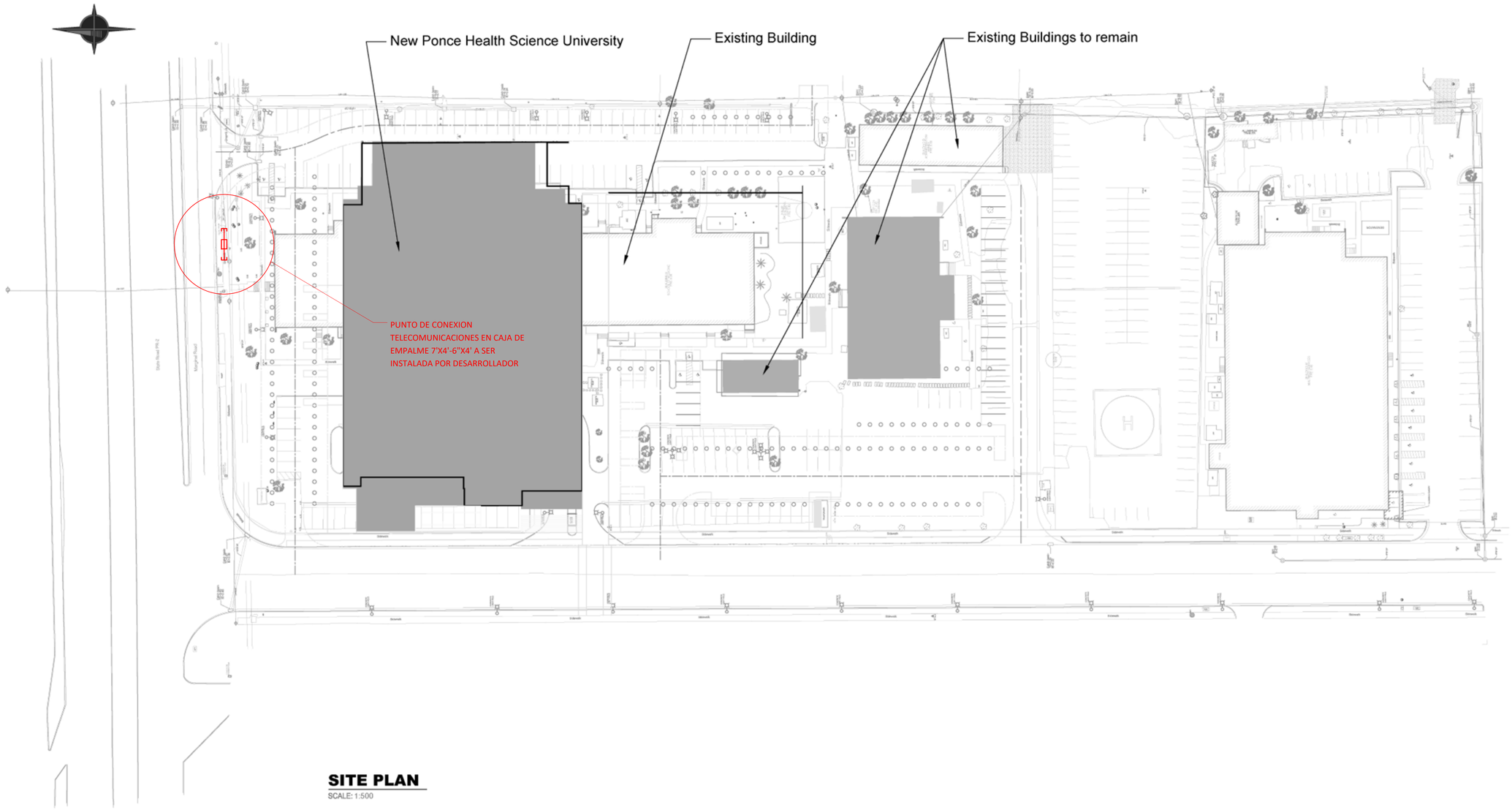
Recomendado por:

Lisa N. Portell Castro, EIT
Ingeniera

Aprobado por:

Sr. Emanuel Nazario Ramírez
Director de Servicios Administrativos

Anejo



SITE PLAN
SCALE: 1:500

CSA Architects & Engineers, LLP
1511 Ponce de León Avenue, Suite 23
San Juan, Puerto Rico 00909
tel. : (787) 641-6800
fax : (787) 641-6850
web : www.csagroup.com

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IN ASSOCIATION WITH:

REV	DATE	DESCRIPTION

DISCIPLINE INFORMATION:

PRIME PROFESIONAL:

PROFESSIONAL OF RECORD:

STAFF DESIGNER:

G.C. AUDITOR:

PRINCIPAL CAD TECHNICIAN:

PROFESSIONAL'S:

YO,

NUM. LIC.

CERTIFICO QUE SOY EL PROFESIONAL QUE CONFECCIONÓ Y/O DISEÑÓ Y/O PREPARÓ ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIÉN CERTIFICO QUE ENTIENDO QUE DICHOS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CÓDIGOS DE CONSTRUCCIÓN VIGENTES DE LAS AGENCIAS, JUNTAS REGLAMENTADORAS O CORPORACIONES PÚBLICAS CON JURISDICCIÓN. RECONOZCO QUE CUALQUIER DECLARACIÓN FALSA O FALSIFICACIÓN DE LOS HECHOS YA SEA POR MÍ, MIS AGENTES O EMPLEADOS, ME PUEDEN HACER RESPONSABLE DE CUALQUIER ACCIÓN JUDICIAL Y DISCIPLINARIA POR LA OGPE.

PROJECT:

Ponce Health Science University
Ponce, PR

DATE	ISSUE DESCRIPTION

DRAWING INFORMATION:

SITE PLAN 1A

SCALE:

DELIVERY DATE:	PROJECT NUMBER:
PRINT DATE & TIME: Feb. 21, 19 11:11 AM	CAD FILE NAME: CS101-utility-recommendatic
DRAWING LOCATION:	
SHEET NO.	

NETPR-2019-RI-0062

CS101-utility-recommendation

SECRETARY
NETPR
Recibido
2019

O.- AAA LETTER 24 march 2020

24 de marzo de 2020

Ing. Gabriel Hernández Rodríguez
Secretario Auxiliar
Oficina de Gerencia de Permisos (OGPe)
PO BOX 41179
San Juan, Puerto Rico 00940-1179

Ingeniero Hernández Rodríguez:

AAA-RS-19-58-0002; PONCE – PONCE HEALTH SCIENCES UNIVERSITY
NEW ACADEMIC AND CLINIC BUILDING
CARR. PR 2 KM. 227.2 - PONCE BY PASS
181 UNIDADES EQUIVALENTES
OGPe; 2019-255909-SRI-031335
APROBACION DE PLANOS

Deseamos informarle que los planos para el proyecto de referencia sometidos por el Ingeniero Peter L. Martínez han sido aprobados por esta Autoridad sujeto a las condiciones aplicables que se enumeran a continuación:

SISTEMA DE DISTRIBUCION DE AGUA

1. La interconexión para el servicio de agua será de 6" de diámetro y se localizará, según se indica en los planos aprobados. El punto de conexión será a la tubería de 6" de diámetro que discurre en la calle marginal hacia la Carr. PR 2 frente al proyecto.
2. Las acometidas para el servicio de agua mencionadas en la condición número 1 se subdividirán en 2 acometidas una de 4" de diámetro para el sistema doméstico y una de 2"de diámetro para el sistema de control de incendio.
3. El dueño del proyecto suplirá e instalará los contadores de 4" y 2" de diámetro. El dueño o desarrollador del proyecto suplirá e instalará la(s) cajas de hormigón armado con marco y tapa de hierro fundido tamaño estándar para la protección de cada contador en la línea a ser instalada. Estas cajas y demás accesorios de dichas instalaciones pasarán a ser propiedad de esta Autoridad.
4. Las cajas de contador serán instaladas fuera de área de rodaje, estacionamiento o rampas de acceso. Además las mismas deberán estar instaladas fuera del límite de la propiedad.
5. El dueño del proyecto deberá pagar a esta Autoridad la cantidad de $500.00 por cada unidad de o su equivalente a conectarse y hacer uso del sistema de acueducto existente.
6. El cargo por incorporación del proyecto al sistema de acueductos de esta Autoridad será de $5,914.20, o el costo vigente al momento de la inspección e incorporación del proyecto.
7. Antes de proceder a la instalación de la tubería, el urbanizador suministrará a la Autoridad de Acueductos y Alcantarillado, un certificado del fabricante de la misma incluyendo las piezas de conexión, haciendo constar que la inspección y todas las pruebas requeridas en las antes mencionadas

especificaciones han sido debidamente efectuadas en la fábrica habiéndose llenado todos los requisitos exigidos en dichas especificaciones.

8. El urbanizador realizará la prueba de presión hidráulica, la cual se hará en secciones y a una presión de 150 libras. Tiene que avisarse a esta Agencia con suficiente anticipación para enviar un representante a presenciar dicha prueba. La perdida de agua en las pruebas de presión hidráulica en las cañerías del sistema de distribución no será mayor de 62.5 galones cada 24 horas, o por milla y por pulgada de diámetro, para tubos de 18 pies de longitud, a base de una presión de 150 libras por pulgada cuadrada.
9. Las nuevas instalaciones no podrán ser conectadas hasta tanto se realice la desinfección y se emitan los resultados de la mismas.
10. Una vez sufragado el costo de incorporación y sea recibido el resultado de desinfección negativo, la Oficina de Proyectos Públicos y Privados emitirá orden de conexión a la Oficina Operacional en Ponce.
11. La distancia entre las instalaciones de servicio de agua y las instalaciones eléctricas serán mayor o igual a 5 pies. Cualquier situación que no permitiese el cumplimiento de esta distancia, deberá ser consultada con esta Oficina para aprobar alternativas que garanticen la seguridad de nuestros empleados.
12. La tubería para el servicio de agua potable será instalada a una profundidad mínima de 0.75 metros medido desde la superficie del pavimento hasta la parte superior del tubo y a una distancia de 1.5 metros del sardinel.
13. Las piezas de conexión a utilizarse para la instalación de acometidas, serán de tipo “Flare”, rosca en caso de ser de cobre flexible tipo “K” o rosca en caso de construirse en bronce. No se permitirán conexiones realizadas con piezas soldadas.
14. Deberá proveerse un acodalamiento adecuado (“THRUST BLOCKS”) en hormigón cuando ocurra un cambio de dirección en las tuberías.
15. Todas las piezas de conexión como “TEE”, válvulas, tapón, etc. serán de hierro fundido.
16. El agua suministrada al edificio descargará a un tanque receptor del cual se succionará mediante bombas de capacidad adecuada para el servicio general de dicho edificio.
17. Se tiene que instalar una cinta detectable sobre la tubería de PVC a instalarse en el sistema de distribución de agua de este proyecto, igual o similar a la manufacturada por la compañía “Reef Industries, Inc.”. Dicha cinta tiene que ser instalada directamente sobre y paralela a la tubería a una profundidad de 12” bajo la superficie del terreno.

SISTEMA DE ALCANTARILLADO SANITARIO

1. El punto de conexión sanitario del proyecto será realizado al sistema de alcantarillado sanitario que discurre en las instalaciones internas del solar contiguo al sur del proyecto que a su vez tiene conexión a la tubería de 8”de diámetro en la calle Dr. Luis F. Sala. Esta conexión esta contingente a la presentación de la documentación de la constitución de la servidumbre sanitaria en el mencionado solar.

2. El dueño del proyecto deberá pagar a esta Autoridad la cantidad de $500.00 por cada unidad de o su equivalente a conectarse y hacer uso del sistema de alcantarillado sanitario del proyecto.
3. Esta Autoridad no se hará cargo de la operación y mantenimiento de la instalación para el servicio de alcantarillado sanitario en este proyecto, lo cual será responsabilidad del dueño del mismo.
4. Aunque el propuesto sistema de alcantarillado sanitario más allá del punto indicado en el inciso 3 será de operación y mantenimiento privado, esta Autoridad se reserva el derecho de verificar los mismos y someterlos a las pruebas correspondientes.
5. Los registros de limpieza deberán estar localizados fuera de áreas de rodaje, rampas y estacionamiento. En el caso de que los mismos no puedan instalarse según indicado anteriormente, estos serán del tipo “heavy traffic”.
6. Toda tubería que no llene los requisitos de las pruebas, será reparada por el contratista y sometida a prueba hasta que sea aprobada definitivamente por el inspector de la Oficina de Proyectos Públicos y Privados.
7. La distancia entre las instalaciones de servicio de alcantarillado sanitario y las instalaciones eléctricas será mayor o igual a 5 pies. Cualquier situación que no permitiese el cumplimiento de esta distancia, deberá ser consultada con esta Oficina para aprobar alternativas que garanticen la seguridad de nuestros empleados.
8. El sistema de alcantarillado sanitario que se conecte a nuestro sistema general de este sector se usará únicamente para la descarga de agua doméstica. La descarga de residuos no domésticos estará sujeta a nuestra aprobación y de resultar la misma perjudicial a nuestro sistema de alcantarillado sanitario el dueño del proyecto proveerá tratamiento previo y adecuado a dichas aguas, lo cual tendrá que someterse también a la aprobación de esta Autoridad.
9. Esta Autoridad no se hará cargo de la operación y mantenimiento de la instalación para el servicio de alcantarillado sanitario en este proyecto, lo cual será responsabilidad del dueño del mismo.

CONDICIONES GENERALES

Regirán las condiciones especiales indicadas en el “exhibit” “A”, además, regirán las siguientes condiciones:

1. Todas las conexiones serán realizadas por un maestro plomero o bajo la supervisión de este.
2. Los equipos para realizar las pruebas de presión deberán ser provistos por el contratista o plomero del proyecto. Para presiones de 150 psi la escala del manómetro no debe exceder de 200 psi.
3. Solamente personal técnico de la oficina de Proyectos Públicos y Privados podrán aprobar las instalaciones construidas.
4. La Autoridad no vendrá obligada a suministrar el servicio de acueductos a una presión determinada. Los interesados en servicios que necesiten mayor presión a aquella existente, deberán proveerse por su cuenta de los medios necesarios para ello. Cualquier aparato, equipo o instalación que se utilice a esos fines deberá ser previamente aprobado por la Autoridad.

5. De surgir alguna diferencia entre lo indicado en el plano y este documento prevalecerá lo que indique este documento y/o lo que determine esta Oficina.
6. Esta validación de planos del referido proyecto será efectiva por un término de dos (2) años a partir de la fecha de esta comunicación: al cabo del cual, de no haberse comenzado la construcción de las obras de acueductos y/o alcantarillado sanitario, el proponente tiene que someter nuevamente el proyecto a la consideración de esta Autoridad, tan pronto esté en condiciones de ejecutar dichas obras, de todo lo cual queda apercibido del interesado.
7. Si existiera una cañería de la Autoridad de Acueductos y Alcantarillados en uso, a la cual por su situación lógicamente debería conectarse el sistema de distribución de agua y alcantarillado sanitario, según fuera el caso del referido proyecto y dicha cañería fuera inadecuada a los fines de proveer medios eficientes de servicio, o si la misma no existiera, la Autoridad no vendrá obligada en forma alguna a facilitar libre de costo el debido funcionamiento de dichos sistemas.
8. La Autoridad de Acueductos y Alcantarillados se reserva el derecho de requerir cualquier mejora pertinente que por omisión involuntaria no se haya incluido en el proyecto, y a su juicio, sea necesaria para el buen funcionamiento de los sistemas de distribución de agua y/o alcantarillado sanitario propuestos.
9. Antes de proceder al traspaso de los sistemas de distribución de agua y/o alcantarillado sanitario a esta Agencia, el urbanizador tiene que suministrar un inventario completo de dichos sistemas, así como un plano de inscripción final del proyecto y también tiene que legalizar la cesión de servidumbre de paso y terrenos adquiridos, si las hubiese.
10. El urbanizador tiene que notificar a la Oficina Regional de Ponce de Proyectos Públicos y Privados de esta Autoridad tan pronto se comiencen las obras de acueductos y/o alcantarillado sanitario en el referido proyecto.

Cordialmente,



Ing. Ausberto Santisteban Rodríguez, PE

Gerente Técnico Proyecto Públicos y Privados

ASR

c expediente, archivo de lectura, Director de Área, Agencia Comercial, Desarrollador

EXHIBIT "A" (Condiciones Adicionales)

Vigencia & Disposiciones Generales

1. El dueño del proyecto, el ingeniero que certificó los planos para la instalación de los sistemas de acueducto y alcantarillado sanitario, el inspector designado por el dueño y el contratista deberán cumplir con el "*Reglamento de Certificación y Planos de Construcción",* adoptado por esta Autoridad de acuerdo con la Ley número 7 del 19 de julio de 1985.
2. Una vez se inactive este proyecto por más de dos años, la aprobación del mismo quedará sin efecto. **La inactividad del proyecto se refiere a que no se reflejen acciones en el expediente de trabajo de la AAA.**
3. Las cartas de recomendaciones vigentes y las condiciones indicadas en las mismas, serán parte de la aprobación de este proyecto. Los dueños del proyecto serán responsables de cumplir con estas condiciones y cualquier omisión nuestra, en esta aprobación, no los releva de realizarlas. Para todos los efectos, se considerarán como incluidas en esta aprobación.
4. Todas las conexiones, (temporeras o permanentes) se solicitarán a la Oficina de Proyectos Públicos y Privados.
5. Los pagos de los cargos por conexión, cargos especiales por agua de construcción y los cargos de desinfección de cañerías se harán en las Oficinas Comerciales correspondientes. Las facturas relacionadas a dichos cargos serán emitidas por la oficina de Proyectos Públicos y Privados. La evidencia de pago será el recibo emitido por la Oficina Comercial.

Servicios temporeros durante la construcción

6. El método de provisión de agua de construcción deberá ser propuesto por el desarrollador y aprobado por la Oficina de Proyectos Públicos y Privados antes de iniciar la construcción del proyecto. Resaltamos que cualquier persona que hiciera uso del servicio de agua o alcantarillado sin que medie un servicio registrado con la Autoridad, será responsable del pago de los servicios utilizados, del cumplimiento con las normas o reglamentos aplicables y las disposiciones del Código sobre Tomas o Descargas Clandestinas, Hurto de Agua, Manipulación de Contadores u otros Accesorios Propiedad de la Autoridad de Acueductos y Alcantarillados.
7. Para la provisión de estos servicios, siempre prevalecerá el método de lectura sobre cualquier método donde el consumo tenga que ser estimado.
8. La(s) acometida(s) temporera(s) para agua durante el proceso de agua de construcción deberán ser solicitadas formalmente a la Oficina de Proyectos Públicos y Privados (PPP), antes de iniciar las obras de construcción del proyecto. La Oficina de PPP emitirá la factura relacionada al trabajo de conexión de dicha acometida, así como la autorización de conexión, y la autorización para registrar temporeramente el servicio solicitado.
9. Deberá solicitar un servicio aparte para las oficinas temporeras del proyecto.
10. Proyectos que por su configuración, no puedan suministrar el agua de construcción con un método de lectura, estarán sujetos al pago por unidad establecido para dichos fines al momento de que se emita el endoso final para permiso de uso. Destacamos que el método de provisión de agua de

construcción deberá ser propuesto por el desarrollador y aprobado por la Oficina de Proyectos Públicos y Privados antes de iniciar la construcción del proyecto.

Inspección de Obras

11. Deberá someter a las Oficinas de Proyectos Públicos y Privados dos (2) copias del "set" de planos aprobados (sello de la AAA incluido) en tamaño 24" x 36", antes del inicio de construcción del proyecto.
12. Deberá solicitar una reunión pre-construcción antes de solicitar la primera inspección del proyecto. A la misma debe asistir el inspector designado por el dueño, y el representante del dueño.
13. El inspector designado en la forma de AAA-881 será responsable de cumplir con las disposiciones de la sección 4.0 del Reglamento para permisos de planos de la AAA.
14. El inspector designado, según indicado en la AAA-881, será responsable de someter ante esta Oficina reportes rutinarios de las obras realizadas y fotos de las tuberías instaladas. Estos reportes deberán ser sellados y firmados por el inspector.
15. Las solicitudes para inspección deberán realizarse por escrito a nuestras Oficinas y deberán ser precedidas por el informe del inspector designado por el dueño. Los informes de inspección deben detallar los elementos o pruebas realizadas así como el resultado de las mismas. En el caso de pruebas se debe describir el método utilizado para realizar la misma. Asimismo, se deben incluir fotografías de los elementos inspeccionados.
16. El inspector designado deberá estar presente en las inspecciones.

Cambios al Plano Aprobado

17. Se deberá presentar un plano revisado donde se indique cualquier cambio del sistema de agua y sanitario. Estos cambios al plano inicialmente aprobado, deberán ser aprobados antes de proceder con los mismos. Toda solicitud para enmienda de un plano aprobado deberá incluir: un memorial explicativo discutiendo los cambios, los formularios AAA-1294 (Certificación del Diseñador) y AAA-972 (Solicitud de aprobación de planos de construcción)
18. Cualquier cambio/enmienda al plano originalmente aprobado deberá ser presentado a través de una petición de servicio para tales fines a través de la Oficina de Gerencia de Permisos (OGPe).

Otros

19. Como parte del proceso de endoso y aceptación final del proyecto deberán ser remitidos a nuestra Oficina los siguientes formularios: Formulario AAA-177 (Informe de Terminación de Obra), Formulario AAA-1268 (Documento de Cesión y Traspaso), Formulario AAA-1351 (Declaración y Certificación), Formulario AAA-1294-A (Certificación del Contratista) y la Certificación Final del Inspector Designado.
20. El trámite para constituir las servidumbres de paso que sean necesarias deberá haber sido finalizado antes de solicitar el/los endoso(s) final(es) para permiso de uso relacionados al proyecto.
21. El desarrollador, urbanizador o dueño del proyecto será responsable de toda obra de infraestructura de acueductos y alcantarillado hasta tanto, no haya obtenido una aceptación final de parte de la AAA. Toda deficiencia encontrada en los sistemas de distribución de agua y alcantarillado sanitario

será de entera responsabilidad de los mismos y deberá ser corregida.

P.- 2019-255909-SRI-022539_OGPe Recommendation Infrastructure

Recomendaciones

Ponce Health Sciences University - New Academic and Clinic Buildings

Datos de Localización

De acuerdo a la información suministrada se propone una actividad: Privada en:

Dirección Física

388 ZONA INDUSTRIAL REPARADA 2
Ponce Puerto Rico, 00716

Número(s) de Catastro

412-011-783-27

Calificación

Distrito(s) de Calificación: EV.4

Distrito en el Mapa de Inundabilidad: AO

Tipo de Suelo: SNS (90.1%), Ct (9.9%)

Dueño

Ponce Health Sciences University

Certificado por

Arquitecto: Annette Alfonso, Lic. No. 12304

Cabida

Cabida según escritura: 21494.01 metros cuadrados

Infraestructura

RECOMENDACIÓN INFRAESTRUCTURA:

AUTORIDAD DE ENERGÍA ELÉCTRICA:
La Autoridad de Energía Eléctrica incluye recomendaciones, al expediente digital del caso en referencia, con fecha de 24 de junio de 2019.

AUTORIDAD DE ACUEDUCTOS Y ALCANTARILLADOS:
La Autoridad de Acueductos y Alcantarillados incluye recomendaciones, al expediente digital del caso en referencia, con fecha de 6 de junio de 2019.

EL NEGOCIADO DE TELECOMUNICACIONES (ANTES JUNTA REGLAMENTADORA DE TELECOMUNICACIONES DE PR):
NETPR 2019-RI-0062 (OGPE 2019-255909-SRI-022539)_Carta con Punto de Conexión en Rojo_NETPR_EL NEGOCIADO DE TELECOMUNICACIONES de PR (ANTES JUNTA REGLAMENTADORA DE TELECOMUNICACIONES DE PR) adjuntó Carta con Punto de Conexión en Rojo al expediente digital con fecha de 11 de marzo de 2019. Este documento no constituye una aprobación de los planos, por parte del NETPR. Previo a la solicitud del permiso de construcción deberá solicitar a la OGPE la aprobación de los planos de la infraestructura de telecomunicaciones y televisión por cable. Asimismo, antes de la otorgación del permiso de uso, se requiere la inspección de obras mediante la Certificación de Obras Construidas, la cual debe tramitar ante la Junta, pero a través de OGPE. El proponente gestionará la Escritura para la Constitución de Servidumbre, que se debe otorgar previo a la aprobación del plano de inscripción del proyecto, por OGPE. El NETPR tiene la facultad de auditar el cumplimiento de la otorgación de permisos e imponer multas y penalidades.

Condiciones Especiales

NINGUNA

Condiciones Generales

Esta recomendación es solamente aplicable a la situación de hechos y los datos según presentados y evaluados en el caso. La OGPe se reserva el derecho de reevaluar, variar o modificar el mismo en cualquier momento anterior a la emisión del permiso o la acción administrativa correspondiente por parte de la agencia solicitante o proponente cuando surja nueva información oficial específica estableciendo que el derecho aplicable o las condiciones ambientales en el predio han cambiado sustancialmente, o cuando la recomendación original se emitió bajo premisas falsas o fraudulentas.

PO Box 41179 San Juan, Puerto Rico 00940-1179 • 787-721-8282

Recomendaciones

Ponce Health Sciences University - New Academic and Clinic Buildings

Las vigencias de las diferentes agencias del proceso de recomendación serán las establecidas en los comunicados que estas emiten conforme a sus reglamentos.

Firma / Sellos

Fecha de Expedición:

25/JUN/2019

Arq. Maria R. Cintrón Flores
Secretaria Auxiliar
Departamento de Desarrollo Económico y Comercio de Puerto Rico
Oficina de Gerencia de Permisos

Arq. María R. Cintrón Flores

Secretaria Auxiliar de la OGPe, DDEC

PO Box 41179 San Juan, Puerto Rico 00940-1179 • 787-721-8282

Q.- Natural Habitat 17150_PRDNER 20190423

GOBIERNO DE PUERTO RICO

Departamento de Recursos Naturales y Ambientales

APR 2 3 2019

ING LADISLAO ORTIZ
P O BOX 270122
SAN JUAN PR 00928-2922

Estimado ingeniero Ortiz:

Certificación para Categorización de
Hábitats Naturales para Vida Silvestre
Ponce Health Sciences University
Calle Marginal Sur a Ave. Ponce By-Pass
Urb. Industrial Reparada 2
Bo. Canas Urbano, Ponce
O-SE-CCH01-SJ-01515-09042019

El Departamento de Recursos Naturales y Ambientales (DRNA) evaluó una Solicitud de Certificación para Categorización de Hábitats Naturales para la Vida Silvestre para el proyecto de epígrafe. La misma fue evaluada de acuerdo con las disposiciones relacionadas con la fauna y la flora de la Ley 416 del 2004, según enmendada (*Ley Sobre Política Pública Ambiental*), su Reglamento 7948 de 2010 (*Reglamento de evaluación y trámite de documentos ambientales de la Junta de Calidad Ambiental*), la Ley 23 del 1972, según enmendada (*Ley Orgánica del Departamento de Recursos Naturales y Ambientales de Puerto Rico*), de la Ley 241 del 1999, según enmendada (*Nueva Ley de vida silvestre de Puerto Rico*) y sus Reglamentos 6765 de 2004 (*Reglamento para regir la conservación y el manejo de la vida silvestre, las especies exóticas y la caza en el Estado Libre Asociado de Puerto Rico*) y 6766 del 2004 (*Reglamento para regir las especies vulnerables y en peligro de extinción en el Estado Libre Asociado de Puerto Rico*), así como de la Orden Administrativa del DRNA 2010-09.

El predio del proyecto ocupa unas 3.4 cdas. Es un predio urbano industrial completamente desarrollado e impermeabilizado, ocupado por dos estructuras abandonadas a ser demolidas para dar paso al proyecto propuesto. Se propone la construcción de dos estructuras institucionales educativas e infraestructura relacionada. No hay reportes de especies amenazadas ni en peligro de extinción.

Como resultado de dicha evaluación, hemos categorizado el predio como **Hábitat Natural con Bajo Potencial de Convertirse en Hábitat Esencial, de Alto Valor Ecológico o de Valor Ecológico (Categoría 6).** El Artículo 2.03 del Reglamento 6765, *supra*, establece lo siguiente para esta Categoría:

"La meta de la mitigación es minimizar el impacto al hábitat... y que evite el impacto a otro hábitat fuera del área a impactarse".

Este documento es una cualificación de los hábitats naturales sitos en el predio de epígrafe, requerida por los estatutos legales vigentes. **No constituye un permiso para la construcción u operación del proyecto propuesto.**

Esta certificación es solamente aplicable a la situación de hechos y los datos según presentados y evaluados en el caso y la Secretaria se reserva el derecho de evaluar, variar o modificar el mismo en cualquier momento anterior a la emisión del permiso o la acción administrativa correspondiente por parte de la agencia solicitante o proponente de surgir nueva información oficial específica estableciendo que el derecho aplicable o las condiciones ambientales en el predio han cambiado sustancialmente o cuando la certificación original se emitió bajo premisas falsas o fraudulentas.

Si tiene alguna pregunta o necesita orientación sobre este asunto, puede escribirnos a la dirección indicada o comunicarse al teléfono 787-999-2200 extensiones 2834 y 2846.

Cordialmente,

Joanna C. Cepeda Díaz
Secretaria Auxiliar Interina de Permisos, Endosos y Servicios Especializados

JCCD/fgr

R.- Letter Eng. Axel Bonilla Phase 3

AXEL BONILLA CORTES
INGENIEROS CONSULTORES
P. O. BOX 334145
PONCE, P. R. 00733-4145
TEL Y FAX 787-842-0503

August 1, 2022

Mr. Carlos Rojas
Chief Financial Officer
Ponce Health Sciences University

Re: Infrastructure
PHSU Phase III
Damas Leased Property
Ponce, PR

Dear Mr. Rojas:

As part of the due diligence necessary for the CDBG Environmental Review, we have prepared a professional opinion of the infrastructure needs of the buildings located in the Damas Leased Property adjacent to the East side of the PHSU Academic Building Lot.

Although originally built for manufacturing services, the latest use of the buildings has been for health services by San Lucas Hospital and later the Gogo Foundation. As the projected future use of the buildings once remodeled will remain as health services, is it expected that the infrastructure impact for such items as power, water, sewer, traffic, etc. will be negligible. The fact that the projection is to connect these facilities to the existing PHSU facilities could actually cause a reduction in infrastructure impact due to duplicity.

Final determination of these matters is to be made by the appropriate local permitting agencies once the construction drawings are submitted for permitting, but we don't project any major infrastructure issues for the remodeling process of these existing buildings.

Submitted by:

AXEL BONILLA CORTES
INGENIERO
LICENCIADO
PUERTO RICO

Axel Bonilla Cortés, P. E.
Lic. #8839

S.- Geotechnical analysis

ADDITIONAL GEOTECHNICAL EVALUATION
FOR THE LATEST REVISION OF THE
PROPOSED PONCE HEALTH SCIENCES UNIVERSITY
BY PASS (STATE ROAD NO. 2)
PONCE, PUERTO RICO

VICTOR E. RIVERA ASSOCIATES
GEOTECHNICAL ENGINEERS
& CONCRETE TESTING LABORATORIES

Main Office:
Road No. 2 - Km. 221.8
El Tuque, Ponce P.R.
P.O. Box 32198
Ponce, P.R. 00732-2198
Tels. (787)-259-1410 / 843-6538
Fax: (787)-259-1604

RECEIVED
19 JUN 2019
LOA Management

Mayagüez Office:
Road # 114, Km. 0.3 (Int.)
Guanajibo, Mayagüez, P.R.
P.O. Box 7999 - PMB 360
Mayagüez, P.R. 00681
Tels. (787)-986-1400 / 986-1410
Fax: (787)-986-6538

ADDITIONAL GEOTECHNICAL EVALUATION FOR THE LATEST REVISION OF THE PROPOSED PONCE HEALTH SCIENCES UNIVERSITY BY PASS (STATE ROAD NO. 2) PONCE, PUERTO RICO (VERA Job No. 19-4467)

Submitted To:

LOA MANAGEMENT, PSC
PO BOX 270122
SAN JUAN PR 00928-2922

Attention
MR. LADISLAO ORTIZ, JR., P.E.
PRINCIPAL
email: lortiz@loamanagement.com

By:

VICTOR E. RIVERA ROLDAN, PE, MBA
VICTOR E. RIVERA ASSOCIATES
GEOTECHNICAL ENGINEERS



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19 JUN 2019
LOA Management

JUNE 14, 2019

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DIGITAL COPY OF REPORT (see back pocket)	

AAP AASHTO R18 ACCREDITED

INTRODUCTION

This report presents the results of the additional geotechnical evaluation performed along the site of the latest revision made to the proposed physical facilities (campus) for the Ponce Health Sciences University to be erected at actual University premises, in turn located at Ponce By-Pass (State Road No. 2), Ponce, Puerto Rico.

This evaluation was performed in accordance to our proposal dated March 27, 2019, duly authorized as per kindly written notification of April 10, 2029.

This additional or supplementary evaluation follow the latest revision made to the project as referred to the earlier concept evaluated as per our written report of November 30, 2018, entitled "Preliminary Geotechnical Evaluation, Proposed Ponce health Sciences University- By Pass (State Road No. 2), Ponce, Puerto Rico", (VERA Job No. 18-4341). This latest revision calls for a main six (6) story hi building located along the University premises northernmost sector facing the By Pass (State Road No. 2). Just two (2) borings pertaining the earlier report were now incorporated to this evaluation (Borings no. 7 and 8).

Besides, erection of two (2) – ±28'ø x 32'H diesel fuel steel tanks close to southeast corner facade of the main building are contemplated.

SCOPE AND FIELD WORK

The evaluation was conducted with the aim of deciphering the engineering and geologic characteristics of the subsoil underlain the subject site, and use the data thus gathered in formulating the most adequate geotechnical recommendations for:

A. Building and Tanks Foundations;
B. Temporary Loads and Seismic Design Parameters;
C. Alternative Foundation Solution;
D. Ground Floor Slab
E. Site Development;

AASHTO R18 ACCREDITED

F. Foundation Excavations and Backfilling;

G. Underground Utilities;

H. Ground Level Parking Pavement Design and Construction Parameters; and

I. Dewatering of Excavations, if any.

To comply with the before discussed scope, a grand total of nine (9) test borings advanced by means of powered hollow stem augers were drilled at the approximate locations shown on the enclosed plan as per exhibit A, "*Site Location and Geologic Maps; Site and Borings Location Plan, and Logs*". Borings are identified as no. 101 thru 109. Borings no. 101 thru 108 are scattered within the building footprint, while no. 109 is at the tanks site. The depths of the borings vary from 100.0 to 115.5 ft. with a total aggregate footage of 919.5 lineal feet of boring been drilled at the subject site.

All soil sampling was achieved by means of the universally adopted standard penetration test (SPT).

All samples secured were visual-manually described and examined for the detection of any weak and/or secondary plane, or foreign/organic matter contain that could undermine it shearing strength, thus it load carrying capacity and compressibility as well. Routine laboratory tests as moisture content (w_n) and unconfined compressive strength (Qu) tests were ran when ever possible.

Please, find on attached exhibit B, "*Routine Field and Laboratory Testing Procedures*", a full description of the methods followed in the routine testing program.

Besides, additional non-routine laboratory testing was conducted on selected soil samples aimed at a better assessment of the index properties of the underlain soil stratigraphic units encountered. These tests correspond to Atterberg Limits [Liquid Limit (LL); Plastic Limit (PL), and Plasticity Index (PI)], the determination of the soil fraction finer than no. 200 sieve (%<200), and the samples classification as per the American Association of State Highway and Transportation Officials (AASHTO) M145 standard and the American Society for Testing and Materials (ASTM) D2487 standard [Unified Soil Classification System (USCS)]. See results attained from this non-routine testing program attached to corresponding boring log.

All depths mentioned on this report are referred to the existing ground surface at the time our field exploration was conducted (April 25 thru May 10, 2019). Elevations are referred to the project vertical control as given on a "as built" drawing submitted to our office by yours. All physical evidence point-out the topography shown on said drawing remain unchanged as per today.

SITE LOCATION AND PROJECT DESCRIPTION

The site location is shown on attached exhibit A. Presently, it harbors the University Campus consisting of several one (1) story hi and other light buildings to be eventually razed down to make room for the new facilities. Some sections are either asphaltic paved and used as ground level parking facilities, or others unpaved as green areas. Actual ground surface gently downgrades southward at a ratio below 0.5%.

The project as now encompassed within our scope of work consist in the construction of one (1) - six (6) story-hi building, to harbor clinic-retails, housing and academic facilities. An associated lesser structure three (3) story-hi, is to lean-to north facade of the building, while two (2) – ±28'ǿ x 32'H diesel fuel steel tanks are contemplated close to the southeast corner facade. Above ground parking and access streets, and underground utilities are to be also provided. No basement level is contemplated but the finished elevation of the ground level should be very close to the existing lot elevations. Therefore, no deep excavations are actually considered, but just those corresponding to foundations, elevator cores and underground utilities installations purposes. According to existing elevations, some little earthwork (filling) is anticipated for ground grading purposes. Nevertheless, building(s) finished floor elevation has been established at 6.36 m. Allowing 15 cm for ground slab thickness, permanent fill to potentially lay to bear ground floor slab at borings locations is as given below.

Table I: Fill Thickness for Ground Floor at Borings Locations

Boring No.	Actual Ground Surface Elevation (m)	Finished Floor Elevation (m)	Fill Thickness	
			(m)	(ft.)
101	5.83	6.36	0.38	1.2
102	5.28	6.36	0.91	3.0
103	5.44	6.36	0.77	2.5
104	4.43	6.36	1.78	6.8
105	4.78	6.36	1.43	4.7
106	5.41	6.36	0.80	2.6
107	5.58	6.36	0.63	2.1
108	4.40	6.36	1.81	5.9
B7	5.39	6.36	0.82	2.7
B8	5.10	6.36	1.11	3.6

The structure could be erected of structural steel with cast in-place reinforced concrete slabs, or all of steel reinforced cast in-place concrete. The main gravitary loads carrying members could correspond to columns and bearing walls. Diesel tanks should nest over either a mat or a foundation ring.

Underground utilities should lay at depths not exceeding 5.0 ft. beneath any final grade, and all should work as gravitary lines.

Please, bear in mind the before given general description is aimed as an assistance for a better understanding of the project and of this report content by the user. In no case it constitutes a precise and complete description of the project, but most of it highlights as forehanded to this office. Complete information pertaining earthwork and all other project details for quantification and cost estimates must be obtained on corresponding construction final drawings once they become available.

GEOLOGIC SETTING (Quoted from Preliminary Evaluation)

According to the US Geological Survey Map MF-886, "*Surficial Geologic Map of the Playa de Ponce and Santa Isabel Quadrangles, Puerto Rico*", prepared by Lynn Glover, III, Maurice H. Pease, and Theodore Arnow (1977), one (1) main geologic unit should surficially prevail at the project site and vicinity. Description given is as follow:

> Q_p – *Piedmont Alluvial Plain Deposits (Holocene and Pleistocene?) – sand, silt, and gravel, unconsolidated, thickness unknown.*

Certainly, the prevailing soil units correspond to those typically underlain the flood plain throughout most of the valley floor the city of Ponce and the site lays over. These soils, transported by water during past flooding periods, were deposited once the carrying streams overflow it banks inundating the valley floor, thus losing it velocity and debris (load) carrying capacity allowing for the deposition of the load. Though laminar flows carrying soils debris scoured and eroded along the higher terrains at north and northwest of the site and some unnamed local small streams has also played a role on the formation of this deposit, there is no doubt the streams that mainly contributed to the formation of the alluvial deposit are "Rio Portugues", Rio Bucana", and "Rio Matilde".

"Rio Portugues" old course is ±0.2 km. southeast of the site. This course was channelized on the past and re-aligned ±1.5 km. further east, and both alignments are flowing south. "Rio Bucana" found at ±2.0 km. east of the site, was also channelized following the earlier course and also flows south. "Rio Matilde" is found also flowing south at ±3.0 km. west of the site.

Down to the drilled depth, the alluvial deposit can be categorized in three (3) main sub-horizons as per depositional stages; alluvial of more recent deposition; lacustrine soils; and those alluvial of older deposition. Formation of the sub-horizons of recent and older deposition has been as before explained. However, the lacustrine has been formed by the deposition of the soil debris on stagnant waters or lakes that later becomes extinguished. Water sources in playing a role in this formation could be from fluvial or sea origins.

Besides, a man-made fill of variable thickness is blanketing the site. Each is described on the following item.

GENERALIZED SUBSOIL CONDITIONS

- **Man-made fill** thickness is as given in Table II below. It correspond to clay, silt, sand, and gravel (gravel always refers to limestone fragments) blended in variable proportions. Consistency whenever cohesive ranges from medium stiff to stiff, occasionally very stiff. Packing whenever the non-cohesive behavior prevails varies from medium loose to medium. Classification met as per AASHTO/USCS standards are: A-4/SC; A-4/CL; A-6/SC; and A-2-4/GC. This fill correspond to "caliche" brought in for the site preparation to later receive the existing structures and substructures, and was placed over 35 years ago to the best of our personal knowledge.

Table II: Man-Made Fill Thickness

Boring No.	Thickness (ft.)	Boring No.	Thickness (ft.)
101	9.0	107	9.0
102	6.0	108	4.0
103	6.0	109	9.0
104	4.0	B7	8.5
105	6.0	B8	4.0
106	6.0	–	–

- Below the fill at all borings location, the uppermost **alluvial** sub-horizon corresponding to the **more recent deposition** was found. Thickness recorded as well as depth and elevation ranges shown are listed on Table III ahead. Its composed mainly of clay or silt blended in variable proportions with sand and occasionally with traces to some fine gravel. Consistency ranges from medium soft to stiff, occasionally very stiff.

Classification met as per AASHTO/ASTM standards varies from A-6 or A-7-6, and as CL or CH, respectively. Plasticity as per A. Casagrande Plasticity Chart ranges from medium to high. Exception is taken at Boring no. 103 from a depth of 13.0 to 19.0 ft. Here, the alluvial become as sandy silt with traces of fine gravel of loose packing and classifies as A-4(6)/ML as per AASHTO/USCS standards. A cross-reference among liquid limits and actual moisture contents, infer this deposit is normally loaded, i.e., it ever has been subjected to vertical stresses greater than those actual throughout it geologic history, but rather hardened because dissection.

Table III: Alluvial Soils of Recent Deposition
Thickness, and Depth and Elevation Ranges

Boring No.	Thickness (ft.)	Ranges	
		Depth (ft.)	Elevation (m)
101	17.0	9.0 @ 26.0	3.09 @ -2.09
102	26.0	6.0 @ 32.0	3.45 @ -4.48
103	26.0	6.0 @ 32.0	3.61 @ -4.32
104	24.0	4.0 @ 28.0	3.21 @ -4.11
105	26.0	6.0 @ 32.0	2.95 @ -5.04
106	36.0	6.0 @ 42.0	3.58 @ -7.49
107	28.0	9.0 @ 37.0	2.84 @ 5.70
108	34.0	4.0 @ 38.0	3.18 @ -7:16
109	23.0	9.0 @ 32.0	2.99 @ -4.03
B7	29.0	8.0 @ 37.0	2.95 @ -5.89
B8	29.0	4.0 @ 33.0	3.58 @ -5.35

- The **lacustrine soils** sub-horizon found immediately below the uppermost sub-horizon of more recent deposition shows thickness, and depth and elevation ranges as given in Table IV below. Its is composed of an irregular horizontal arrangement of layers of clay, silt, sand, gravel and peat (decaying organic matter) blended in variable proportions. Whenever clayey behavior (cohesive)

prevails, consistency ranges from medium soft to stiff, while when granular (non-cohesive), packing varies from very loose to medium loose.

The clayey layers classify as A-6 and A-7/CL and CH as per AASHTO and USCS standards, respectively. Plasticity ranges from medium to high as per A. Casagrande Chart.

Noteworthy to mention is the variable amount of peat found at certain depths, i.e., from 58.0 to 77.0 ft. at boring no. 101; from 32.0 to 46.0 ft. at no. 102; from 28.0 to 49.0, and from 63.0 to 78.0 ft. at no. 104; from 46.0 to 54.0 ft. and from 58.0 to 73.0 at no. 105; from 47.0 to 58.0 ft. and from 58.0 to 78.0 ft. at no. 106; from 42.0 to 57.0 ft. at no. 108, and finally from 32.0 to 42.0 ft., from 54.0 to 68.0 ft., and from 72.0 to 80.0 ft., at no. 109. The highest proportion of peat was hit at boring no. 106 from 63.0 to 68.0 ft. The layer is described as peat, over-consolidated with natural moisture (wn) content of 162.0%, otherwise amount or proportion of peat is characterized as very few to few small intrusions.

The whole deposit of clayey, silty, sandy and gravel soils seems to be normally loaded as the cross-reference among liquid limits (LL) and actual moisture contents infer.

Table IV: Lacustrine Deposit Thickness, and Depth and Elevation Ranges

Boring No.	Thickness (ft.)	Ranges	
		Depth (ft.)	Elevation (m)
101	51.0	26.0 @ 77.0	-2.09 @ -17.64
102	41.0	32.0 @ 73.0	-4.48 @ -16.98
103	46.0	32.0 @ 78.0	-4.32 @ -18.34
104	50.0	28.0 @ 78.0	-4.11 @ -19.35
105	47.0	32.0 @ 79.0	-5.04 @ -19.37
106	36.0	42.0 @ 78.0	-7.39 @ -18.37
107	42.0	37.0 @ 79.0	-5.70 @ -18.51
108	40.0	38.0 @ 78.0	-7.16 @ -19.38
109	48.0	32.0 @ 80.0	-4.03 @ -18.66
B7	45.0	37.0 @ 82.0	-5.89 @ 19.61
B8	39.0	33.0 @ 72.0	-5.35 @ -17.16

- The lowermost sub-horizon uncovered corresponding to the **alluvial of older deposition**, begins immediately below the lacustrine one and at all instances extends throughout the drilled depths. It consist of multilayered system in-turn composed of sandy clay, gravelly clayey sand, silty and fine to medium sand with some weathered fine gravel. Layers where the clay prevails classify as A-6/CL or A-7/CL, and consistency shown ranges from stiff to hard.

  The more granular layers exhibits packing varying from medium to very dense. This lowermost sub-horizon is considered the firmer strata of the local profile.

  The lowermost few feet drilled at borings no. 101, 104, 105, 107, 109, and 7 almost reached refusal when sampling was attempted.

  It is noteworthy a medium stiff silty clay layer found from a depth of 79.0 @ 85.0 ft. at boring no. 105, and the soft clay layer hit from a depth of 88.0 @ 93.0 ft at boring no. 107.

The before given description of the soil profile uncovered, correspond to a generalized one. For a more detailed description of each soil stratigraphic units encountered, field and laboratory tests results, please refer to enclosed boring logs as per exhibit A and corresponding attached classification tests.

GROUND WATER LEVEL

The site ground water level was recorded during the normal drilling and sampling process and after a monitoring period not exceeding 12 hours once the power augers were retrieved at the below listed depths and elevations as per Table V. We recognize said monitoring period as too short to accurately determine the permanent position of a ground water level, particularly when dealing with a generalized soil profile where the fine soils are very common, and that the recorded levels should vary according to the local dry and wet seasonal changes.

Nevertheless, taking in consideration the actual site topography and anticipated grading, and given the project description before, we feel comfortable in assuming the initially recorded levels as permanent for all this report purposes.

Table V: Ground Water Level Depth and Elevation

Boring No.	Depth (ft.) [a	Elevation (m) [a	Depth [b	Elevation (m) [b
101	13.0	1.87	10.0	2.28
102	15.0	0.70	11.0	1.92
103	13.0	1.48	10.0	2.39
104	15.0	-0.14	11.0	1.07
105	16.0	-0.09	10.0	1.73
106	15.0	0.84	10.0	2.36
107	15.0	1.01	11.0	2.22
108	14.0	0.13	10.0	1.35
109	15.0	1.16	10.0	2.68
B7	19.0	-0.40	17.0	0.20
B8	15.0	0.22	12.0	1.13

where: [a = depth/elevations levels were recorded during normal drilling and sampling process

[b = depth/elevations levels stabilized several hours after power augers were retrieved, thus inferring an artesian condition

ENGINEERING CONSIDERATIONS

The local profile utmost features correspond to the medium soft to medium consistency shown by the lacustrine deposit as well as the presence of variable amounts of peat intrusions, and depths the ground water level was recorded. Moreover, a cross-reference among actual natural moisture contents (w_n) and corresponding liquid limits (LL) attained from tested samples of these soils make us to conclude the local profile can be considered as normally loaded. By normally loaded is meant the underlain soil strata has ever been submitted to larger stresses than the actual ones throughout it history. The profile is saturated from depths that begins as shallow as 15.0 ft. below ground

surface. Therefore, these soils are considered settlement prompt because of consolidation under the application of the project structural and expected permanent fill foundation loads thus triggering the execution of settlement analysis due consolidation be thoroughly evaluated. Settlement because liquefaction is of no concern on strata before discussed, thus no related analyses were performed.

SETTLEMENT ANALYSES DUE CONSOLIDATION

When a load is applied to a saturated compressible soil mass, the load is carried by the water in the pores because the water is relatively incompressible when compared with the soil structure. The pressure, which results in the water because of the load increment, is called hydrostatic excess pressure (pore pressure). If the water drains from the soil pores, the hydrostatic excess pressure and its gradient gradually decreases and the load increment is shifted to the soil structure. The load increment and expulsion of excess water, are accompanied by a change in volume of the soil mass equal to the volume of water drained. This process is known as consolidation.

The consolidation settlement evaluation at building footprint was conducted for each boring location and adopting the structure be erected over a mat foundation. Two (2) different loading scenario were analyzed. The first corresponding to the depth of permanent fill required at each boring location; and the second, combining the permanent fill weight and the load to be transmitted by the mat. A representative mat portion of 50'L x 50'W was analyzed for each case assuming a permanent fill weight of 130 pounds per cubic foot (PCF); a uniform distributed load of 1,000 pounds per sq. ft. (psf) to account for the structure nesting over a mat foundation at a foundation depth of 1.0 ft. below final grade, and consolidation parameters obtained from correlations with the soil index properties.

The analysis was performed using a PC compatible program developed by GeoSoft named SETTLE/G, "Settlement and Stress Distribution Analysis". The increase in effective stress at each soil layer underneathing is calculated as per both Boussinesq and Westergaard theories, and then settlements are calculated as per both stress distribution. Settlements outcomes as per both approaches were averaged and results attained are given in Table VI ahead.

The following correlations were used in estimating soils compressibility:

$C_c = 0.30\ (e_o - 0.27)$ (Hough, 1975)

$C\acute{c} = C_c/1+e_o$

$e_o = w_n Gs$

$C\acute{n} = 1-\mu^2/\ Es$

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where: C_c = compression index
$C\acute{c}$ and $C\acute{n}$ = soil compressibility
e_o = initial void ratio
w_n = in-situ moisture content
Gs = specific gravity
μ = Poisson ratio
Es = modulus of elasticity

Table VI: Predicted Settlement Schedule

Boring No. / Settlement at	101		102		103		104		105		106		107		108		109
	d	e	d	e	d	e	d	e	d	e	d	e	d	e	d	e	f
point a	0.3	3.0	1.0	3.1	0.7	2.5	2.2	4.7	1.6	3.9	0.9	2.5	0.4	3.4	2.1	4.2	2.9
point b	0.6	6.9	2.5	7.2	1.9	6.1	5.3	10.3	4.1	8.9	2.1	6.8	1.1	7.9	4.8	9.2	5.4
point c	0.4	4.5	1.6	4.7	1.2	3.9	3.4	7.1	2.4	5.9	1.3	4.4	0.6	5.2	3.1	6.2	5.0

notes:
1. all settlements in inches
2. settlement point at mat:
   a = at corner; b = at mid center; c = at mid edges;
3. loading schedule

   d = due fill weight
   e = due combination of permanent fill plus a mat inducing 1000 PSF
   f = duo diesel tanks loading only

Needless to say, the anticipated settlements are not acceptable, even if weight is removed allowing the building loads only, therefore, a deep foundation solution to transfer the structure loads to the underlain soils is a must. The mat(s) supporting the diesel tanks predicted settlement are 5.4 inches at mid points, and ranging from 2.9 to 5.0 at edges close by. These settlements are also unacceptable.

The alluvial of older deposition is considered the firmer strata of the local profile, though loads could be carry by the lacustrine and/or alluvial of recent deposition through friction.

Bear in mind since time is of essence, other soil ground improvements technique pursuing the ground floor slab be directly pour over the resultant grade as a stabilization program by means of a temporary surcharge vertical wick drains assisted to accelerate the process is not allowed.

An alternative providing all ground slabs be self supported, thus deleting any permanent fill underneathing, is judge not feasible because the increase in cost in designing/constructing the slab as a structural element, and the increase in foundation loads produced by said structural element to call either for a larger number of piles, piles of larger diameter, or a combination of both for a larger pile loading capacity. Permanent fill as contemplated must be re-considered taking in to account the anticipated settlements due the corresponding wet weight only. Not only settlements are unacceptable, but if finally occur, a great deal of the deep foundations load carrying capacity is to be taken away because the drag down force (negative skin friction) fostering the use of more piling loading capacity. In conclusion, an alternate solution to deal with the ground floor must be seek.

RECOMMENDATIONS

A. Building and Tanks Foundations

Precast steel reinforced concrete driven piles 12-inches uniform diameter can be used. Similarly, augered cast in-place (ACIP) reinforced concrete piles 14-inches in diameter can be also considered. Piles, regardless of the final section and type chosen are to develop it loads carrying capacity mostly by friction. For all cases, allowable friction load equal to 90% of the aggregate values given in compression must be adopted. Piles driven or installed at lengths (depth) of 100.0, 95.0, 95.0, 110.0, 93.0 and 85.0 ft. at borings no. 101, 104, 105, 107, 109 and 7, respectively, are most likely to meet refusal. By refusal is meant a blow count of 120 or more per foot of penetration with a specified hammer delivering a given energy per blow. Pile hammer energy is related to pile cross-section and

to piles and load profile characteristic, as well as the corresponding bearing capacity and how this going to be developed. Piles schedule and loading for each boring location are given as per Figures no. 1 thru 18 attached at the end of this report, as per exhibit C, "*Pile Loading Schedule*".

Whenever refusal is met as recorded by driven piles, then allowable compression load carrying capacity can be increase across to 100 and 120 tons for the 12" and 14" uniform diameter piles, respectively.

Noteworthy to bear in mind if refusal is pursued, borings must be taken to greater depth than those reached to confirm the presence of the hard strata provoking the refusal, otherwise, pile allowable carrying capacity must be limited to those given as per Figures no. 1 thru 18 as per exhibit C.

Piles lateral loading, besides the structural strength of the piles as per corresponding structural properties, are to be arrested by passive pressure to be mobilized along piles effective length of embedment. These pressures, as well as resulting lateral displacement of the piles, are to be figure-out as per horizontal modulus of subgrade reaction (K_H) values given in Table VI ahead. The values given have been conservatively estimated based on cross reference of the soil strata strength, granulometry index properties, and visual and manual description, and published literature (Bawls, 5th Edition, 1996).

Table VII: Horizontal Modulus of Subgrade Reaction (K_H) vs. Depth Ranges

Boring No.	Depth Range (ft.)	K_H	Boring No.	Depth Range (ft.)	K_H
101	0 @ 5	negligible	102	0 @ 6	negligible
	5 @ 9	900		6 @ 8	700
	9 @ 26	600		32 @ 73	450
	26 @ 77	450		73 @ 85	700
	77 @ 100	1200		85 @ 100	1500

Boring No.	Depth Range (ft.)	K_H	Boring No.	Depth Range (ft.)	K_H
103	0 @ 6	negligible	107	37 @ 79	450
	6 @ 32	700		79 @ 88	7000
	32 @ 78	450		88 @ 93	250
	78 @ 94	700		93 @ 104	1200
	94 @ 100	1500		104 @ 108	750
104	0 @ 4	negligible		108 @ 115	1700
	4 @ 28	650	108	0 @ 4	negligible
	28 @ 78	450		4 @ 38	650
	78 @ 88	750		38 @ 78	450
	88 @ 100	1500		78 @ 84	650
105	0 @ 6	negligible		84 @ 88	300
	6 @ 22	700		88 @ 100	1200
	22 @ 38	600	109	0 @ 5	negligible
	38 @ 85	450		5 @ 9	1000
	85 @ 100	1500		9 @ 32	750
106	0 @ 6	negligible		32 @ 80	450
	6 @ 42	650		80 @ 93	600
	42 @ 58	450		93 @ 100	1500
	58 @ 63	1000	7	0 @ 4	negligible
	63 @ 68	250		4 @ 28	800
	68 @ 78	450		0 @ 37	600
	78 @ 92	700		37 @ 82	450
	92 @ 97	1100		82 @ 90	2200
	97 @ 100	1200	8	0 @ 4	negligible
107	0 @ 5	negligible		4 @ 37	600
	5 @ 9	1000		37 @ 72	450
	9 @ 37	650		72 @ 85	800

where: K_H is in kips per cubic foot (kcf)

Modulus given correspond to those to be mobilized because soil-pile interaction. Structurally, piles must be proportioned (reinforced) to safely carry the compression, tension, and lateral loads to be finally applied.

Also, the piling driving/installations must comply with the following specifications/guidelines:

a. For the construction stage, at least nine (9) piles for testing purposes (no production) shall be driven/installed as test piles (TP's), i.e., one test pile as close as possible to each of the test borings location. Once driving/installation is over, the results attained are to be carefully analyzed by the project geotechnical engineer.

b. Double acting pile hammer delivering an energy of not less than 18,000 ft.-pounds/blow at a striking rate of not less than 50 blows per minute must be used for driving the 12"ϕ or square section piles.

c. The driving/installation shall be observed by this office to conduct proper evaluation. Based on said evaluation, additional TP's could be selected and driven/installed to lengths as per the geotechnical engineer judgment. This pile(s) could be load tested and the driving/installation criteria be developed based upon the results attained from the driving/installation process, load test(s), and borings data available.

d. We highly suggest to include the performance of a minimum of two (2) tests on project contract documents. The tests loading procedure shall be in cycles. Load increments shall be 25 tons. Total aggregate load shall reach twice the working load in compression or failure, whichever comes first. In no case the load test(s) is to be conducted earlier than 7 days after the pile(s) to be tested was/were driven/installed. The static load test(s) could be performed following the Quick Load Test Method of Standard Test Method for Pile Under Static Axial Compressive Load (ASTM D-1143). Dynamic tests could be also considered.

e. No information of the piles cut-off depth is available as per today, however, as far as said depth is equal or shallower than 6.0 ft., no revision is deemed necessary for the recommended pile lengths.

f. Vibration by the piles driving/installation process are to be induced. It is highly suggested to carefully visual inspect any surrounding structures including taking photos and/or videos recording conditions of said structures before any pile driving installation is attempted. By doing so, frivolous damage claims against all concerned parties could be avoided in the future, and if not avoided, the proper documentation said photos and/or videos shall constitute, should serve in proofing against any such claim. Previous experiences gained driving precast piles at the close Parra Medical Building monitored throughout our office were very favorable, nevertheless, the monitoring program shall be conducted.

g. All the pile driving/installation operation process, i.e., from the very beginning when the TP's to be attempted are chosen, to the completion of all production piles driving/installation shall be conducted closely and permanently supervised by the project geotechnical engineer. This is a very delicate professional matter and is not to be delegated to anyone else. The geotechnical engineer shall evaluate all piles driven/installed, and reject or approve, as the case may be, one or all piles. No construction shall be allowed to proceed over until the corresponding piles are in such fashion certified.

B. Temporary Loads and Seismic Design Parameters

The allowable loads for the pile foundations can be increased 20% of the given values to deal with short term loading conditions due to earthquake and/or winds. According to the International Building Code, the designer should consider a soil profile type E (soft soil profile) in designing the structure and foundations for seismic considerations. An earthquake magnitude of 7 on the Richter Scale ® and a ground acceleration of 0.3 g (gravitary acceleration) can be incorporated on related analyses and proportioning, or on the other hand, a specific site evaluation be conducted as suggested by the latest revision to building code (2018).

C. Alternative Foundation Solution

As an alternative foundation solution to piling, a ground improvement program could be considered. This improvement must be implemented below the structures and tanks footprint in order to minimize potential settlements due compression and consolidation.

The ground improvement technique could consist on reinforcing the underlying soils below the structures footprint by means of rammed aggregate piers (RAP's) or vibro piers (VP's) thus allowing the construction of th structure over either a mat foundation or spread, continuous, and/or combined spread footing system.

The RAP's/VP's system consist in the pre-auguring holes most commonly up to 30" in diameter, to a designed depth below the base of the footings. The holes are later backfilled with engineered controlled compacted aggregate. Each lift is tampered or vibrated using a vertical impact ramming energy and/or by vibration using a vibrator probe which densifies or improve the soil surrounding the piers by increasing the soils strength and stiffness. Crushed stone backfill is introduced in lifts either from the ground surface (top feed) or from the upper end of the probe (bottom feed). The horizontal forces of the tampering or vibration laterally compacts the aggregate lifts against the surrounding soil. The process is follow up to ground surface forming a pier column stone.

The use of these techniques will result in a settlement reduction within the structures and in an increased soil allowable bearing pressure. Typical values of allowable soil bearing pressure increases reaching anywhere from 4.0 to 7.0 kips per sq. ft. (KSF), depending on structural loads to be transferred and actual soil conditions.

The above recommended reinforcement soil techniques are a specialized matter that must be designed by the piers suppliers which shall determine the piers spacing and lengths to be installed below the buildings based on the structural loads and foundation plans, and structural settlement tolerance. All drawings and specifications produced by these suppliers shall be signed by a P.R. licensed professional engineer authorized to render this kind of specialty. Geopiers TM and Vibropier TM are two locally available suppliers.

The following general guidelines must be met prior and during to the aggregate pier's installation operation:

1. Once the feasibility of this solution has been positively evaluated, the piers installer shall submit construction drawings prepared by the pier's designer for review by the owner, design team, and project geotechnical consultant. A submittal containing the final design of the reinforcement system must be submitted prior to installer mobilization. Submittal must include, but not limited to: a) quantity and location of elements, b) design length of elements as referred to the final grade and corresponding effective length, c) type of aggregate to be used (open- or well-graded), d) aggregate grading and abrasion specifications, e) piers installation guidelines, f) bottom stabilization (BST) and modulus tests quantity, suggested locations, and methodology, and g) technical data of both the auger and ramming tools to be use, among other pertinent information. Stabilization tests through the piers effective lengths are to be also conducted as production piers move forward. Frequency and depths these tests are to be conducted shall be determined as per geotechnical consultant permanent supervision personnel, but in no case less than those required by the piers designer.

2. The aggregate to be used shall be submitted for approval by the design team and project geotechnical consultant before any is hauled in, and determine if corresponding specification as issued by the piers designer is comply with.

3. For the construction stage, test piers (TP's) shall be installed. Location of these piers shall be as close as possible to the test borings made. These piers shall be installed to the design lengths and give the geotechnical/pier design engineers the opportunity to cross reference cuttings from the piers drilling operation and closest test boring.

4. The installation results obtained shall be evaluated by both the designer/geotechnical engineering office. Based on said evaluation, additional elements could be selected and installed to a length as per the pier's designer and project geotechnical engineer judgments. Upon a thorough

evaluation of the recorded data, the project geotechnical engineer jointly with the pier's designer are to determine the location and number of load (modulus) tests to be conducted at the project. The performance of at least one (1) modulus test shall be included in contract documents. Additional cost per extra modulus tests must be incorporated also in such documents.

5. The modulus test(s) is(are) to be conducted after the TP's are installed and prior to the commencement of production piers (PP's) installation. The test(s) is(are) to be conducted following the recommendations of the designer. Installation of PP's shall start once the modulus test(s) results has been analyzed by the geotechnical engineer/piers designer and are found in compliance with design recommendations and ultimately, after installation criteria has been issued.

6. Acceptance (installation) criteria of piers is based on bottom stabilization tests (BST's) performed during the installation of the modulus test pier(s). Additional testing as required by the pier designer/inspecting agency shall be performed on selected PP's to compare results with the modulus or load test pier. The BST shall be performed at the beginning of each production day to provide quantitative information on pier stabilization, and not less than 30% of the piers installed each day.

7. It is strongly suggested not to allow PP's installation until the modulus test(s) and subsequent criteria for the installation have been issued.

8. All the pier installation operation process, i.e., from the very beginning when the TP's to be attempted are chosen up to the completion of all PP's installation, shall be conducted closely and permanently supervised by the project geotechnical engineer. This is a very delicate professional matter and is not to be delegated to anyone else. The geotechnical engineer shall evaluate all piers installation records, and reject or approve, as the case may be, all piers. No construction shall be allowed until the corresponding piers are in such fashion certified.

9. Theoretical volume per pier must be cross-reference with actual volume poured. A reasonable comparison of volumes, i.e., ratio of actual volume to theoretical volume called volume factor is a highly useful resource in evaluating integrity of the installed piers. Adequate volume factor must be reasonably specified by the prior designer. The factor is to be determined throughout physical measurements of volumes by the project permanent inspection whom is to oversee the compliance with the specified factor.

10. It is highly suggested to carefully visually inspect any surrounding structures including taking photos and/or videos recording, of the conditions of said structures before any aggregate pier operation is attempted. By doing so, frivolous damage claims against all concerned parties could be avoided in the future, and if not avoided, the proper documentation of said photos and/or videos should serve in proving against any such claim. Monitoring of the vibrations to be induced by the aggregate pier installation equipment shall be continuously executed because of the closeness of various existing structures. If excess wave velocities are recorded, the project geotechnical engineer shall formulate the recommendations to mitigate the risk any excess vibration could pose to the surrounding structures.

Once the installation of the piers is completed and the footings cast, all excavations backfill shall be conducted under an engineered quality control. Notice that the compaction equipment here should be a small roll or damper, thus the backfill lift thickness is not to exceed 6 inches. Each lift shall be compacted to not less than 95% of the backfill maximum dry density (MDD) as obtained by means of laboratory compaction curve tests conducted as per ASTM D1557 standard (Modified Proctor).

D. Building Ground Floor Slab

Combining the depth of permanent fill called to reach the established FFE of 6.36 m, and the promptness of the underlain compressible soil to consolidate, we recommend the use of a light type of aggregate or "geofoam" whenever the new fill is to exceed 2.0 ft. in thickness. The light aggregate is not to weight more than 20 pounds per cubic foot (PCF) when properly placed and

compacted. Geofoam is defined as "block or planar low-density cellular plastic foam solid used in geotechnical application" (after Formal Polystyrene Alliance). Different types of foam weight could range from 1.4 to 3.0 pounds per cubic foot (PCF). Such light weight is to avert any potential settlement because of consolidation.

Provider of light weight aggregate or geofoam must recommend the ground slab design parameters. Of utmost importance is to be aware the use of this light filling materials is a must regardless if piling or piers are chosen as final foundation solution.

In any case, the light fill supplier(s), either for light aggregate or geofoam must be consulted in preparation of area to receive this special material.

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E. Site Development

Though a very little earth work is anticipated, the following guidelines are intended to produce a more suitable ground surface for the construction of the parking pavement directly above ground. All earthwork performed shall fully comply with the following specifications.

1. For the entire site, remove all asphalt pavement and any other foreign matter, and/or construction debris that might be found until a clear and clean surface is attained. Exception is taken at pavement areas calling for more than 1.0 ft. of permanent fill to reach the designed pavement invert elevation. The existing pavement structure here can be proof rolled and left "as it is", except if any soft/unstable spot is uncovered during the proof rolling. Similarly, areas outsite the building footprint calling for less than 1.0 ft. is to be proof rolled once the existing asphalt carpet is removed, and any soft spot be treated as detailed on item 2 ahead. A ±18 cubic yard end dump – dual tandem truck fully loaded with soil must be used for proof rolling purposes.

2. Before any placement of additional fill/backfill is made, roll the clean and neat exposed grade all throughout and compact the same until a minimum percent of compaction of 90% of the corresponding maximum dry density (MDD) of the exposed soil is imparted. Maximum dry

density of the existing natural soil, and of any either imported shall always be determined by laboratory tests conducted as per ASTM D1557 standard, "Modified Proctor Test". If any weak or soft spot is uncovered, it shall be fully excavated and backfilled. Notice all areas proof rolled duly approved by the geotechnical engineer is to be "left on site", and fill proceed over.

3. Start filling/backfilling. The fill/backfill material shall possess no swelling/shrinkage properties nor contain any foreign or organic matter and should classify as an A-2 according to AASHTO standard specification M-145.

4. All backfill and additional filling operations must be conducted in adequate moisture condition. In no case fill placement under excess water is allowed.

5. The fill/backfill material(s) shall be evenly spread in layers or lifts not exceeding eight (8) inches, loose measured, and each layer shall be imparted with a minimum percent of compaction of 95% of the corresponding maximum dry density (MDD).

6. The fill/backfill material shall exhibit a moisture content 2 to 4% higher than the corresponding optimum moisture content (OMC) by the time compaction is attempted.

7. No fill/backfill material shall be placed, spread nor rolled during unfavorable weather conditions. When the work is interrupted by heavy rains, fill/backfill operations shall not be resumed until the field tests made by the geotechnical engineer or his/her representative indicates that the moisture content and density of the fill/backfill are as previously specified.

8. This procedure shall be followed until final grades are reached.

9. All filling/backfilling operations shall be supervised by a geotechnical engineer or his representative whom is to certify the quality degree achieved and shall submit his professional opinion predicting the would be deep fill layers behavior under the action of the anticipated floors/pavements loads.

10. If compaction is to be imparted with a vibratory roll, vibration to be induced must be monitored as similarly as specified for the piles driving/installation operations.

F. Foundation Excavations and Backfilling

The foundation (pile caps) excavations can be very satisfactorily performed as for the underground utilities trenches purposes, using a small hydraulic excavator commonly called "digger". Backfill shall be always conducted under an engineered quality control. Notice that the compaction equipment here should be a small roll or damper, thus the backfill lift thickness is not to exceed four (4) inches. Each lift shall be compacted to not less than 95% of the backfill maximum dry density (MDD) as obtained by means of laboratory compaction curves tests conducted as per ASTM D1557 standard (Modified Proctor).

Also to bear is that fill for foundation excavations is anticipated just on top of the pile cap, since concrete for the caps is to be poured against the excavations walls as recommended on preceding item "A", pp 10, second paragraph.

G. Underground Utilities

All project underground utilities can be safely designed resting by its normal bearing over the resultant grade at all areas provided an engineered bedding is lay down to receive the utilities.

Excavations down to the maximum anticipated depth of 5.0 ft. either into natural soils or fill, should be also easily achieved by means of a "digger". Backfilling is always to be conducted as specified on the preceding item "Foundations Excavations and Backfilling".

Temporary side slopes can be made vertical whenever excavation depths do not exceed 5.0 ft. The geotechnical engineer could issue an opinion modifying the geometry after a thorough evaluation of the matter. Otherwise, it must be temporarily protected by any adequate means as shoring or by safety boxes or shields.

H. Ground Level Parking Pavement, Construction Guidelines, and Design Parameters

Either a flexible or rigid type of pavement, can be adopted for the parking building. Pavement design parameters as bearing ratio (CBR) and modulus of subgrade reaction (Ks) should be determined by proper field tests, or on the other hand, conservatively assumed. The new fill to be placed to serve as the new pavement base must correspond to a soil aggregate mixture classifying as A-2-4 or better according to the AASHTO M145 standard. In no case said improvement is to be less than 0.5 ft. thick and shall be placed and compacted as specified previously. Bear in mind the existing pavement where sound and stable could be part of the improvement, all according to the finished grade and proof rolling finally to result.

I. Dewatering of Excavations

No dewatering problems are anticipated during the phase of excavations, except the resulting from rain and/or surface run-off waters. Any water entering the excavations can be pumped out directly from sumps located at the sides of them and the dampened soil be removed before any concrete pour, bedding placement, or the like is attempted.

ADDITIONAL COMMENTS AND RECOMMENDATIONS

In the preceding discussions we have presented our preliminary conclusions and recommendations based upon results attained from our limited field exploration made by means of test borings, visual inspection of the site area, soil parameter assumptions, and other limited information advanced to this office. It is our understanding best geotechnical engineering practices were adopted in achieving said goals.

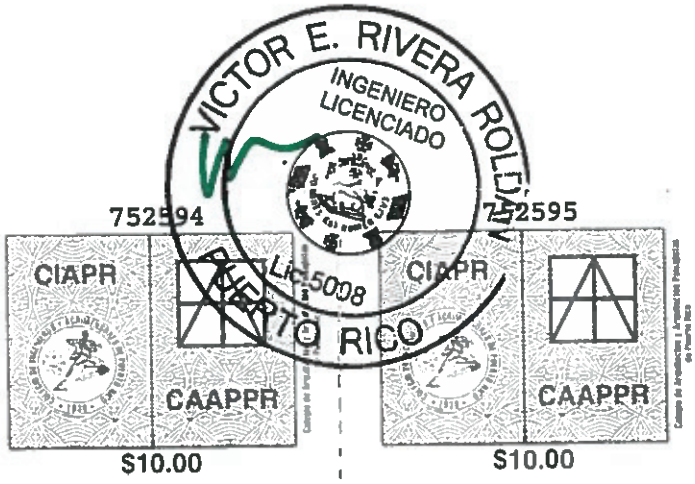
Differing conditions could arise among borings locations as the field work progresses. If any such differing conditions arise, the project geotechnical engineer must carry-out the pertinent evaluation and produce, at his own risk, the recommendations to deal with such event.

All fill/backfill operations must be conducted in strict accordance to best engineering practice. The degree of quality excellence achieved in the construction of the fill/backfill deposit as well as to judge the fill/backfill deposit as a load carrying element whenever so is to take place, is to be certify by a professional geotechnical engineer. The non-compliance with these supervision requirements means that this office shall not be held responsible for any or all pertinent related recommendations given on this report.

A cross-reference among depth vs. allowable piles loading capacities as shown on Figures no. 1 thru 18 shows variations of loading as referred to same depth. With the execution of the supplementary geotechnical exploration depth vs. loading uniformity is to be pursued, even through project sectors, to facilitate project engineering and construction.

Respectfully submitted,

Victor E. Rivera Roldan, PE, MBA
President
vmr





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EXHIBIT "A"

SITE LOCATION AND GEOLOGIC MAPS;

SITE AND BORINGS LOCATION PLAN, AND LOGS

FOR THE LATEST REVISION OF THE

PROPOSED PONCE HEALTH SCIENCES UNIVERSITY

BY PASS (STATE ROAD NO. 2)

PONCE, PUERTO RICO

(VERA Job No. 19-4467)

By:

VICTOR E. RIVERA ROLDAN, PE, MBA

VICTOR E. RIVERA ASSOCIATES

GEOTECHNICAL ENGINEERS

VICTOR E. RIVERA ROLDAN
INGENIERO LICENCIADO
Lic. 5008
PUERTO RICO

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19 JUN 2019
LOA Management

JUNE 14, 2019

AAP AASHTO R18 ACCREDITED

SITE LOCATION PHOTO

After Google Earth®



Additional Geotechnical Evaluation **Ponce Health Sciences University** **Ponce By-Pass, Ponce, Puerto Rico** LOA Management, PSC	DATE:L 06-14-19 JOB NO.: 19-4467 SCALE: N.T.S.

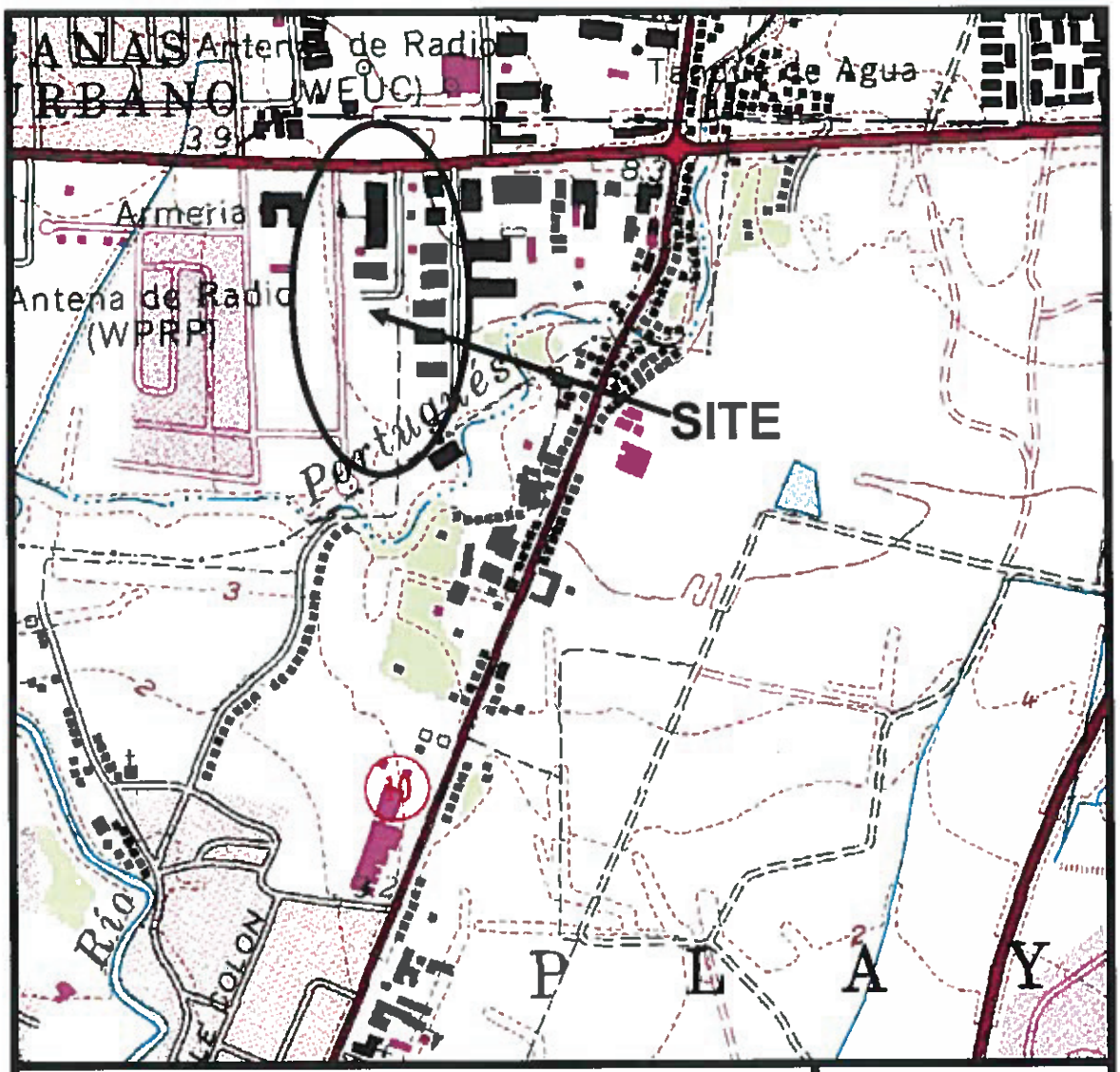
VICTOR E. RIVERA ASSOCIATES, LLC
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& CONCRETE TESTING LABORATORIES

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Road #2 Km. 221.8 • El Tuque - PO Box 32198 • Ponce PR 00732-2198 • Tel. (787) 259-1410 / 843-6538 • Fax: 787-259-1604 • email: verivera@prtc.net

SITE LOCATION MAP

After US Geological Survey



Additional Geotechnical Evaluation **Ponce Health Sciences University** **Ponce By-Pass, Ponce, Puerto Rico** LOA Management, PSC	DATE: 06-14-19 JOB NO.: 19-4467 SCALE: NTS

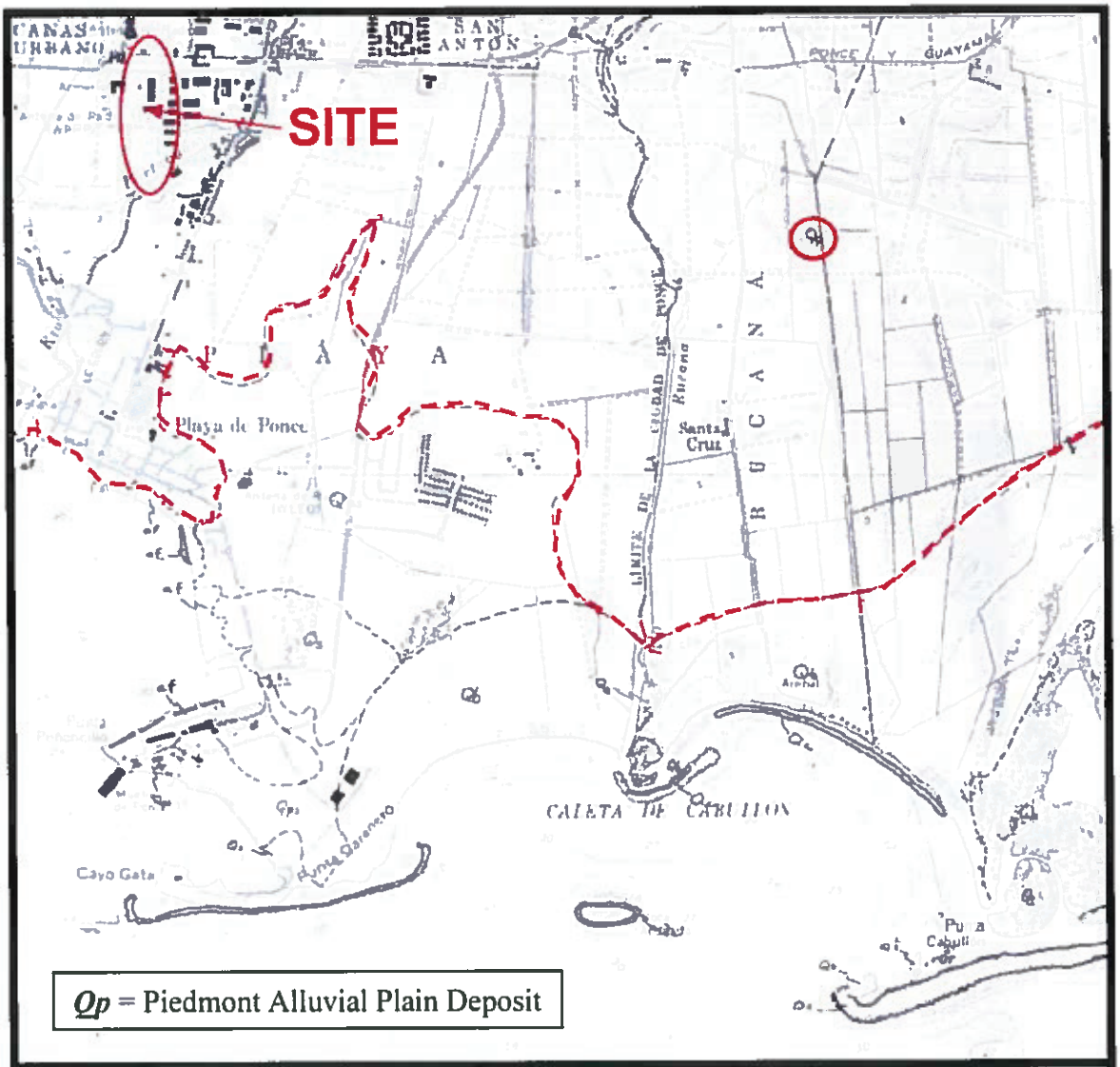
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GEOLOGIC MAP

After US Geological Survey Map MF-886



Additional Geotechnical Evaluation
Ponce Health Sciences University
Ponce By-Pass, Ponce, Puerto Rico

LOA Management, PSC

DATE: 06-14-19

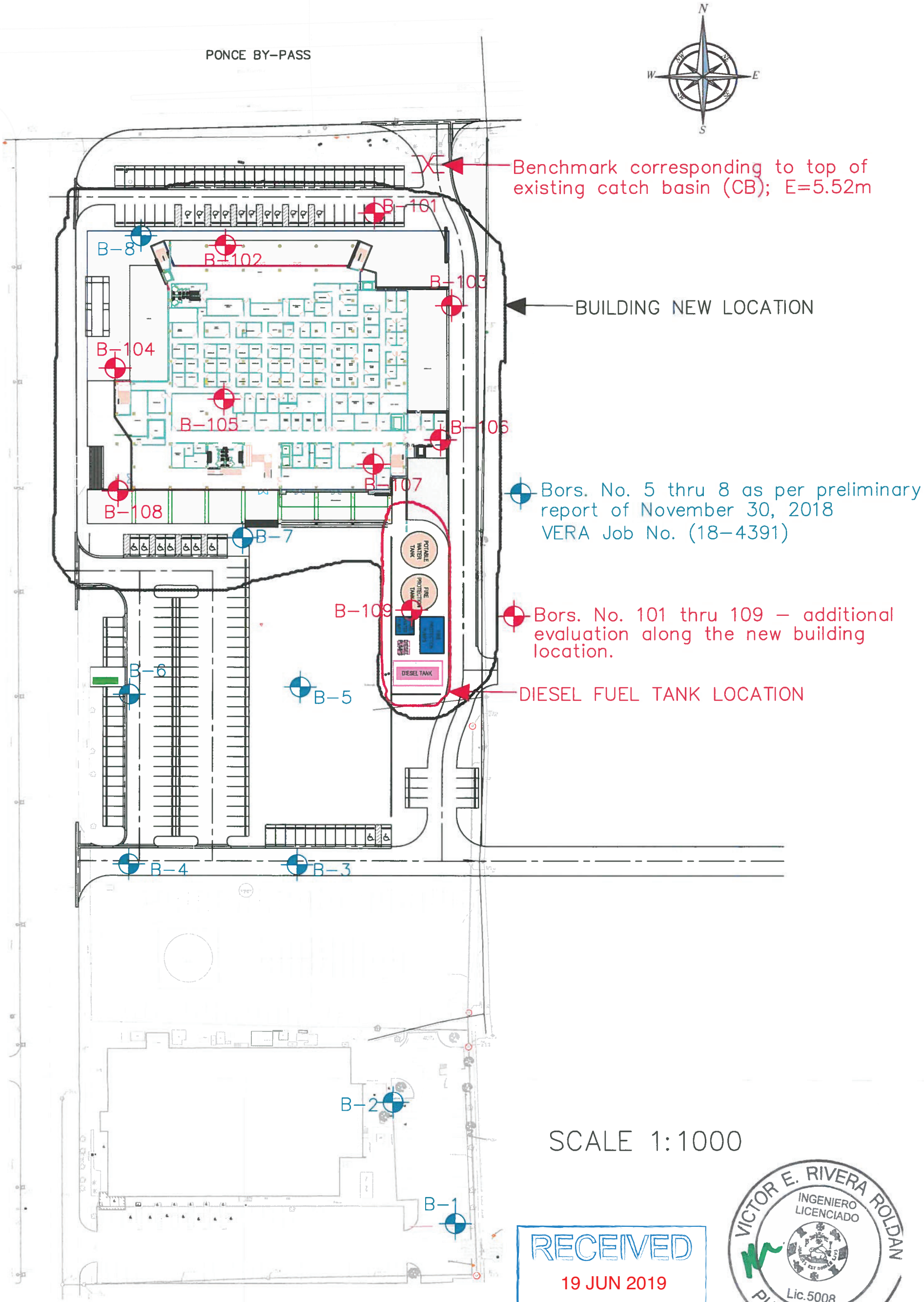
JOB NO.: 19-4467

SCALE: N.T.S.

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Lic.5008
PUERTO RICO

1		DRAWN BY: V.M.B.	ADDITIONAL GEOTECHNICAL EVALUATION PROPOSED ADDITIONAL TEST BORINGS PONCE HEALTH SCIENCES UNIVERSITY PONCE BY-PASS, PONCE PR TO: LOA Management, PSC
1		CHECKED BY: V.E.R.R	
		DATE: 06/14/19	
		JOB NO.: 19-4467	

REVISION		
NUM.	DATE	DESCRIPTION

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PROJECT: Proposed Ponce Health Science University Improvements to Ponce Campus — BORING NO.: 101 — SHEET NO.: 1/3

LOCATION: By-Pass (PR-2), Ponce, Puerto Rico — CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán — DRILLER: A. Maldonado — WORK STARTED: 5-10-19 — WORK FINISHED: 5-10-19

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON — HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" — DRILLING FLUID: NONE — CORE DATA-TYPE BARREL: ----- — TYPE & SIZE BIT: -----

GROUND WATER: DATE AND DEPTH: ▽ 13.0'; E=1.87m [05-10-19] — DRILL MANUFACTURER TYPE & NO.: CME-55

"X" COORDINATE: ----- — "Y" COORDINATE: ----- — ELEVATION: 5.83m — JOB NO.: 19-4467

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
1	5.53	1 – 3	Clay, medium stiff, blackish brown (topsoil) (a) -1.0'	7	27.9	---				
2		4 – 6								
3		8 – 11		23	12.5	---				
4		12 – 8					22	4	35.5	
5		9 – 8	Silt, sand and limestone gravel, cohesionless, medium	17	12.8	---	A-4(1) / SC-SM			
6		7 – 7	– yellow ("caliche") (a)							
7		7 – 6		11	15.1	---				
8		5								
9	3.09		-9.0							
10		2 – 4		8	31.7	0.53				
11		4 – 4								
12										
13	▽		Clayey silt, trace fine sand, medium soft to medium, medium compressibility– brown / occasionally grayish (b)							
14										
15		1/12"		3	33.1	0.43				
16		2 – 2								
17										A
18			γ = 112.3pcf				43	17	87.0	
19							A-7-6(16) / ML			
20		1 – 2		5	30.9	1.43				
21		3 – 4								
22										
23										
24										
25		2 – 3		6	31.8	1.76				
26	-2.09	3 – 4	-26.0'							
27										
28										
29										
30		1 – 1	Clay, some fine sand, medium plasticity, medium to	4	37.5	1.21				
31		3	medium stiff, dark olive gray (c)							
32			γ = 112.8pcf				43	20	80.1	
33							A-7-6(16) / CL			
34										
35		1 – 1 – 3		4	35.0	1.09				

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 75
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 75

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

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PROJECT: Proposed Ponce Health Science University — Improvements to Ponce Campus | BORING NO.: 101 | SHEET NO.: 2/3

LOCATION: By-Pass (PR-2), Ponce, Puerto Rico | CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán | DRILLER: A. Maldonado | WORK STARTED: 5-10-19 | WORK FINISHED: 5-10-19

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON | HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" | DRILLING FLUID: NONE | CORE DATA-TYPE BARREL: ----- | TYPE & SIZE BIT: -----

GROUND WATER: DATE AND DEPTH: ▼ 13.0'; E=1.87m [05-10-19] | DRILL MANUFACTURER TYPE & NO.: CME-55

"X" COORDINATE: ----- | "Y" COORDINATE: ----- | ELEVATION: 5.83m | JOB NO.: 19-4467

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
36										
37										
38			Clay, some fine sand, medium plasticity, medium to							
39			medium stiff, dark olive gray (c)							
40		WH	γ = 112.8pcf	WH	32.9	0.82				
41										
42	-6.97		-42.0							
43										
44										
45		WH		WH	38.3	0.76				
46										
47										
48										
49			Silty clay, some fine sand, medium plasticity, medium							
50		WH	soft to medium – dark olive gray (c)	WH	34.5	---	34	13	82.9	
51			γ = 113.5pcf				A-6(10) / CL			
52										A
53										
54										
55		WH		WH	33.5	---				
56										
57										
58	-11.85		-58.0'							
59										
60		WH		WH	31.9	---				
61										
62										
63										
64			Clay, trace to some fine sand, few small peaty pockets,							
65		WH	medium plasticity, medium to stiff – dark olive gray (c)	WH	51.0	1.13	33	11	86.8	
66		3	γ = 115.3pcf				A-6(9) / CL			
67										
68										
69										
70		WH		WH	41.6	---				

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
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W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
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(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 75
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 75

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

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PROJECT: Proposed Ponce Health Science University — Improvements to Ponce Campus | BORING NO.: 101 | SHEET NO.: 3/3

LOCATION: By-Pass (PR-2), Ponce, Puerto Rico | CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán | DRILLER: A. Maldonado | WORK STARTED: 5-10-19 | WORK FINISHED: 5-10-19

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON | HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" | DRILLING FLUID: NONE | CORE DATA-TYPE BARREL: ----- | TYPE & SIZE BIT: -----

GROUND WATER: DATE AND DEPTH: ▼ 13.0'; E=1.87m [05-10-19] | DRILL MANUFACTURER TYPE & NO.: CME-55

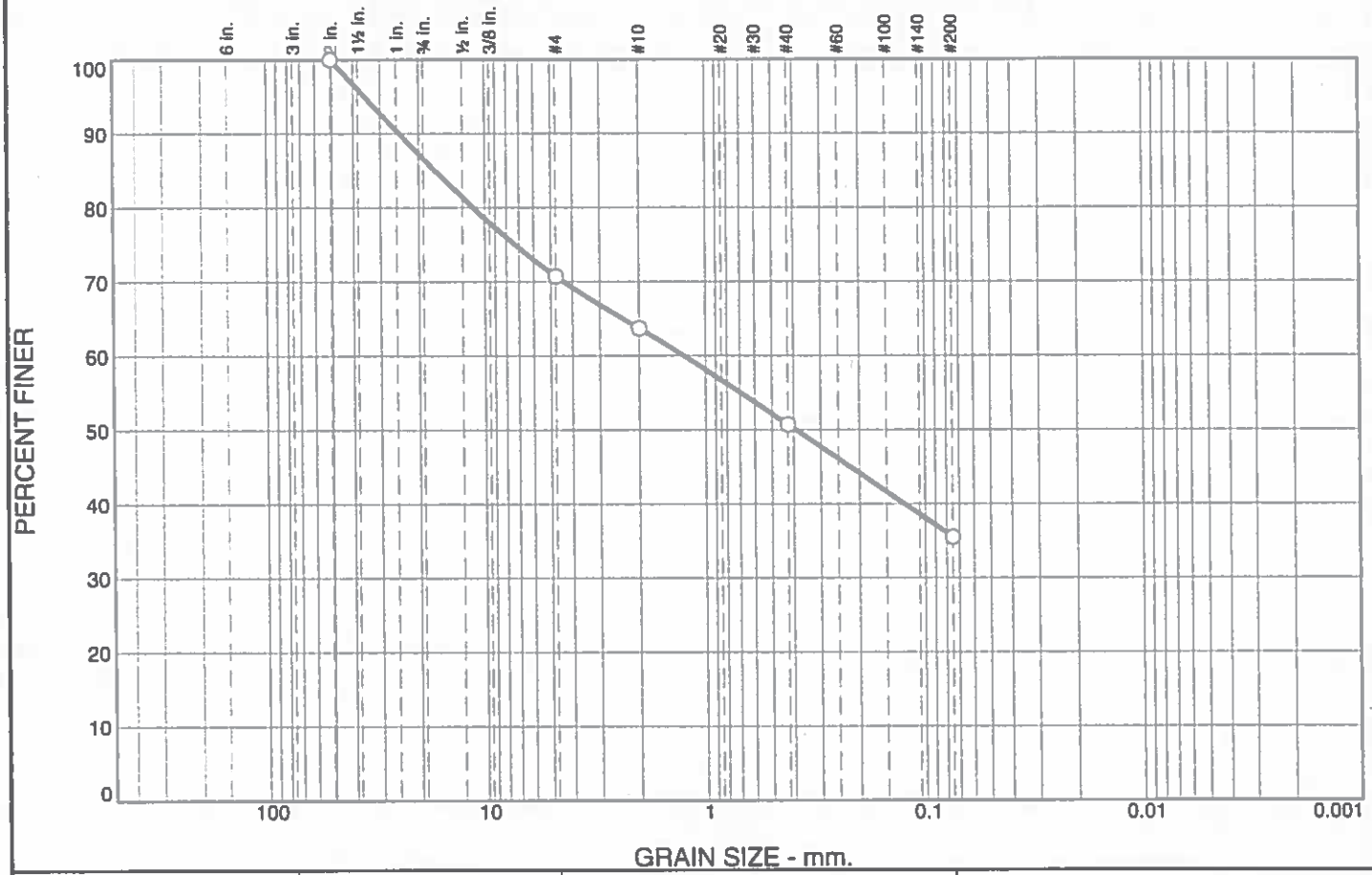
"X" COORDINATE: ----- | "Y" COORDINATE: ----- | ELEVATION: 5.83m | JOB NO.: 19-4467

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
71										
72										
73			Clay, trace to some fine sand, few small peaty pockets,							
74			medium plasticity, medium to stiff – dark olive gray (c)							
75		WH	γ = 115.3pcf	WH	39.6	0.88				
76		4								
77	-17.64		-77.0'							
78										
79										
80		4 – 5	γ = 117.8pcf	13	16.4	---				
81		8 – 9								
82										
83										
84										
85		3 – 5		16	35.4	1.64				
86		11								
87										A
88			Clay, some fine sand, stiff to very stiff (hard lowermost							
89			feet) – grayish / orange brown (d)							
90		5 – 7		15	30.6	2.86				
91		8								
92										
93										
94										
95		5 – 10	γ = 135.1pcf	25	20.6	5.12				
96		15								
97										
98										
99										
100	-24.66	12 – 33 – 44	-100.5'	77	22.9	4.25				
101			END OF BORING							
102			(a) - man-made fill							
103			(b) - alluvial of recent deposition							
104			(c) - lacustrine							
105			(d) - alluvial of older deposition							

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 75
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 75

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	13.4	15.9	7.0	13.0	15.2	35.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
#4	70.7		
#10	63.7		
#40	50.7		
#200	35.5		

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Lic.5008
PUERTO RICO

* (no specification provided)

Material Description

silty sand and limestone gravel, cohesionless ("caliche")

Atterberg Limits

PL= 18 LL= 22 PI= 4

Coefficients

D_{90}= 24.6580 D_{85}= 16.9102 D_{60}= 1.2623
D_{50}= 0.3922 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SC-SM AASHTO= A-4(0)

Remarks

Source of Sample: BORING NO. 101 **Depth:** 1'@9'
Sample Number: 101-1

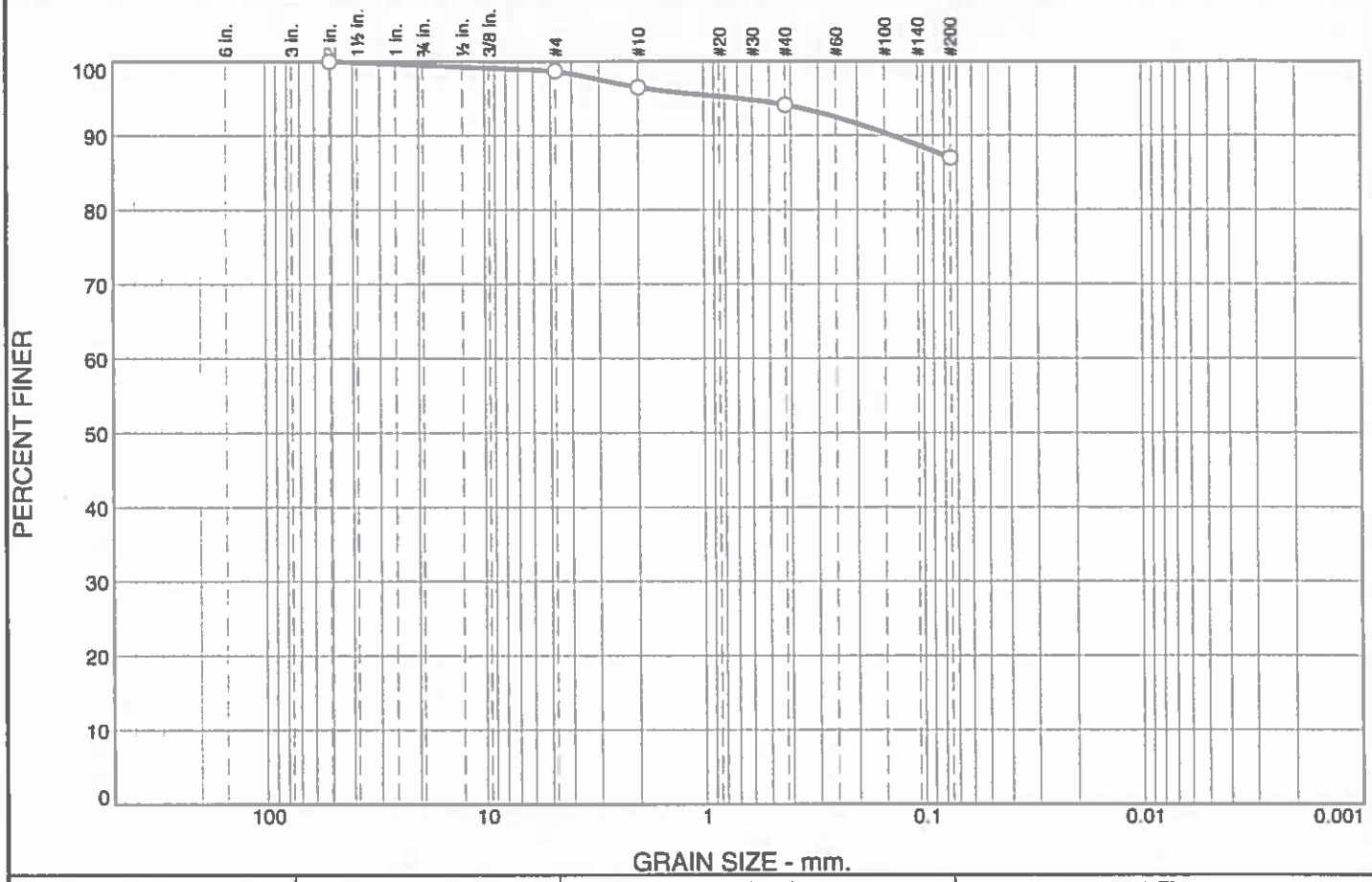
AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.5	0.8	2.2	2.4	7.1	87.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
#4	98.7		
#10	96.5		
#40	94.1		
#200	87.0		

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Lic. 5008
PUERTO RICO

* (no specification provided)

Material Description

clayey silt, trace fine sand, medium compressibility

Atterberg Limits

PL= 27 LL= 43 PI= 16

Coefficients

D_{90}= 0.1395 D_{85}= D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= ML AASHTO= A-7-6(16)

Remarks

Source of Sample: BORING NO. 101 **Depth:** 14'@25'
Sample Number: 101-2

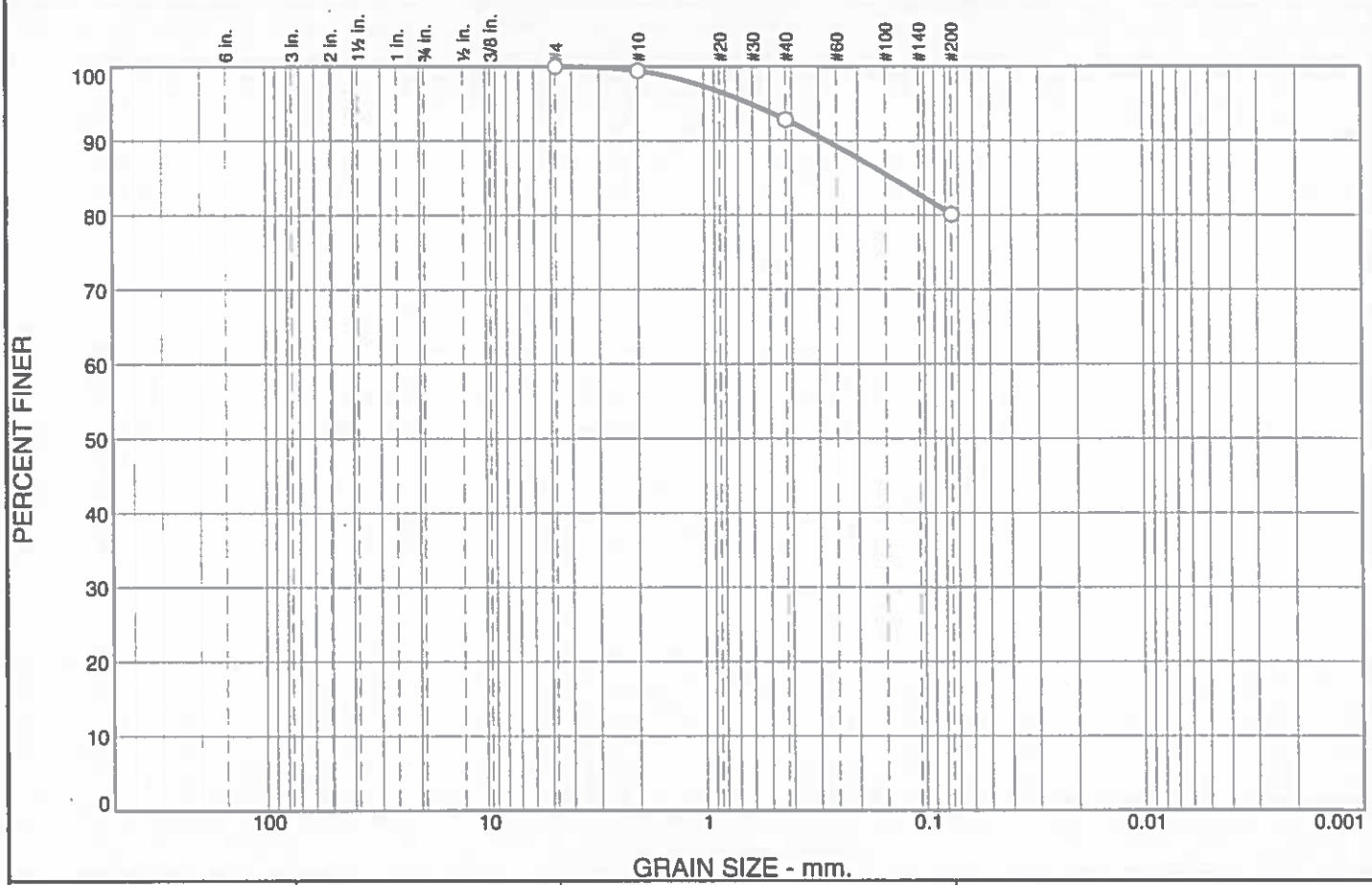
AASHTO R18 ACCREDITED

Date: 06/03/19

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Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.6	6.6	12.7	80.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.4		
#40	92.8		
#200	80.1		

* (no specification provided)

Material Description

clay, some fine sand, medium plasticity

Atterberg Limits

PL= 23 LL= 43 PI= 20

Coefficients

D_{90}= 0.2780 D_{85}= 0.1406 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-7-6(16)

Remarks

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Lic.5008
PUERTO RICO

Source of Sample: BORING NO. 101 **Depth:** 29'@40'
Sample Number: 101-3

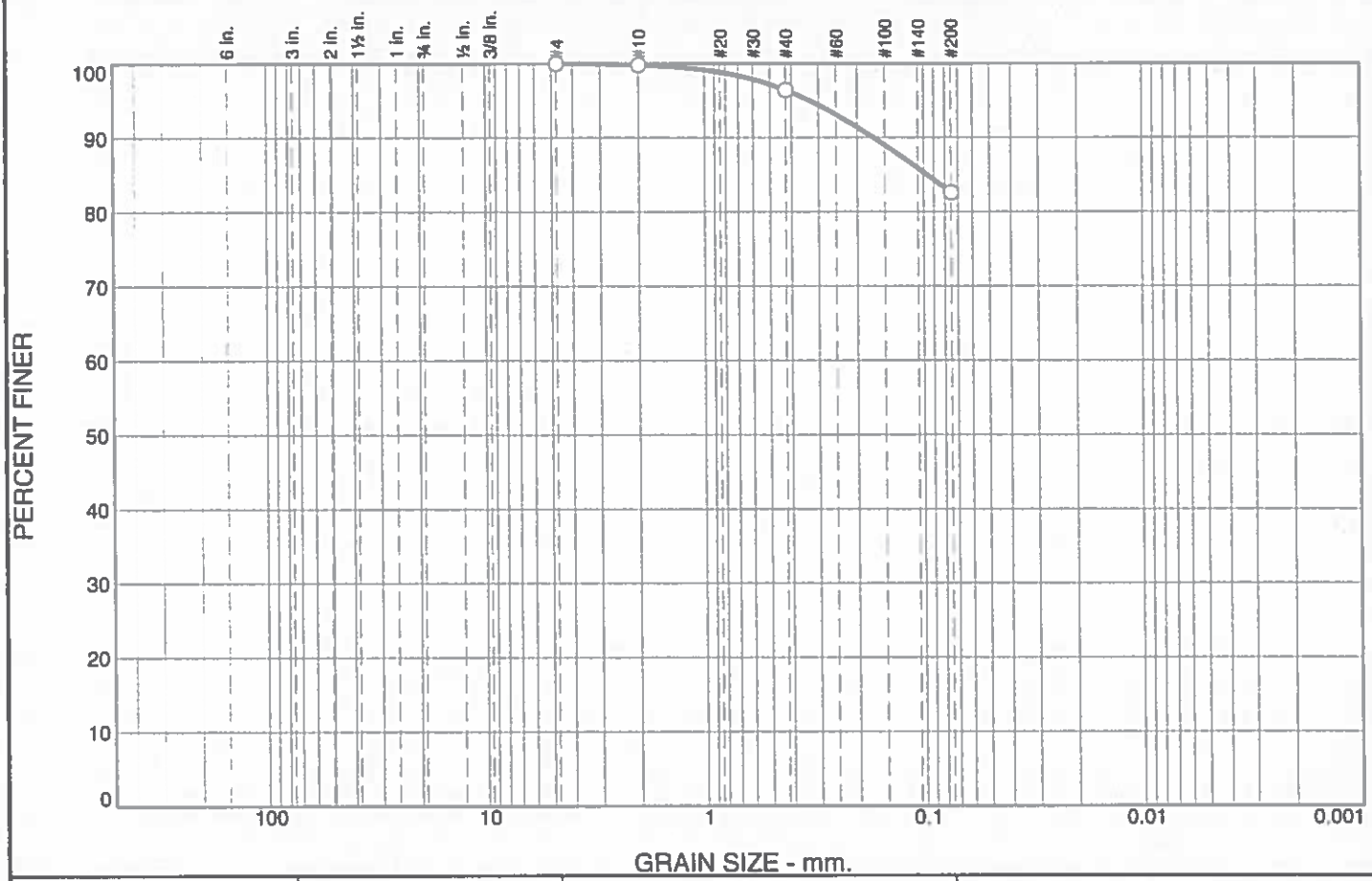
AAP AASHTO R18 ACCREDITED

Date: 06/03/19

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Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.2	3.4	13.8	82.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.8		
#40	96.4		
#200	82.6		

* (no specification provided)

Material Description

silty clay, some fine sand, medium plasticity

Atterberg Limits

PL= 21 LL= 34 PI= 13

Coefficients

D_{90}= 0.1691 D_{85}= 0.0968 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-6(10)

Remarks

VICTOR E. RIVERA ROLDAN INGENIERO LICENCIADO Lic.5008 PUERTO RICO

Source of Sample: BORING NO. 101 **Depth:** 44'@56'
Sample Number: 101-4

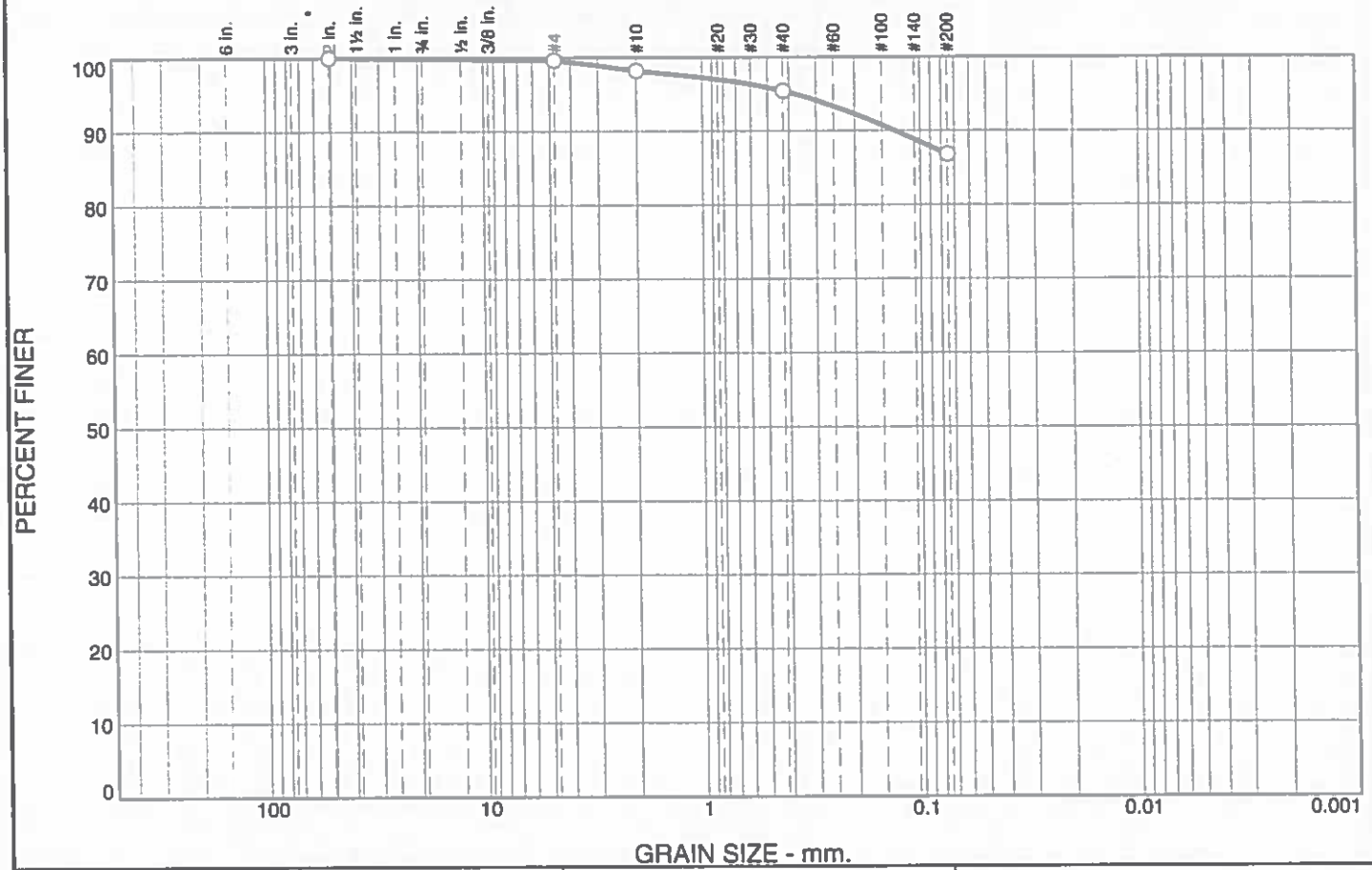
AASHTO R18 ACCREDITED

Date: 06/03/19

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Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.2	0.2	1.4	2.8	8.6	86.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
#4	99.6		
#10	98.2		
#40	95.4		
#200	86.8		

Material Description

clay, trace to some fine sand, mediu plasticity

Atterberg Limits

LL= 33 PI= 11

Coefficients

D_{90}= 0.1306 D_{85}= D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-6(9)

Remarks

VICTOR E. RIVERA RODRIGUEZ INGENIERO LICENCIADO Lic.5008 PUERTO RICO

* (no specification provided)

Source of Sample: BORING NO. 101 **Depth:** 59'@70'
Sample Number: 101-5

AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

PO Box 32198
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VICTOR E. RIVERA ASSOCIATES, LLC

Geotechnical Engineers

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PROJECT: Proposed Ponce Health Science University Improvements to Ponce Campus — BORING NO.: 102 — SHEET NO.: 1/3

LOCATION: By-Pass (PR-2), Ponce, Puerto Rico — CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán — DRILLER: A. Maldonado — WORK STARTED: 4-25-19 — WORK FINISHED: 4-26-19

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON — HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" — DRILLING FLUID: NONE — CORE DATA-TYPE BARREL: ----- — TYPE & SIZE BIT: -----

GROUND WATER: DATE AND DEPTH: ▼ 15.0'; E=0.71m [04-25-19] — DRILL MANUFACTURER TYPE & NO.: CME-55

"X" COORDINATE: ----- — "Y" COORDINATE: ----- — ELEVATION: 5.28m — JOB NO.: 19-4467

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
1		1 - 3		7	16.0	---				
2		4 – 11								
3		7 – 7	Silt, sand and limestone gravel, cohesionless, medium	14	9.1	---				
4		7 – 6	loose to medium – yellow ("caliche") (a)							
5		4 – 3		10	25.5	---				
6	3.45	7 – 7	-6.0'							
7		4 – 4		9	5.5	2.52				
8		5								
9			Silty clay, stiff – brown / grayish (b)							
10		1 – 2		5	22.4	2.48				
11	1.93	3 – 5	-11.0'							
12										
13										
14			Sandy clay, medium plasticity, medium – brown /							
15 ▼		1 – 1	grayish (b)	3	32.4	---	38	13	76.0	
16		2 – 1					A-6(10) / CL			
17										A
18	-0.20		-18.0'							
19										
20		2 – 3		8	34.0	2.26				
21		5 – 6								
22										
23										
24										
25		Push 18"	Clay, high plasticity, stiff – olive gray / brown (b)	WH	36.4	1.59	55	28	96.8	
26		5	γ = 108.9pcf				A-7-6(32) / CH			
27										
28										
29										
30		1 – 2		4	31.6	1.59				
31		2 – 3								
32	-4.48		-32.0'							
33										
34			Clay, some fine sand, medium plasticity, occasionally							
35		WH	very few small peaty, pockets, medium – olive / gray (c)	WH	37.2	0.25				

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 75
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 75

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

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E-mail: verivera@prtc.net

PROJECT: Proposed Ponce Health Science University — Improvements to Ponce Campus | BORING NO.: 102 | SHEET NO.: 2/3

LOCATION: By-Pass (PR-2), Ponce, Puerto Rico | CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán | DRILLER: A. Maldonado | WORK STARTED: 4-25-19 | WORK FINISHED: 4-26-19

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON | HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" | DRILLING FLUID: NONE | CORE DATA-TYPE BARREL: ----- | TYPE & SIZE BIT: -----

GROUND WATER: DATE AND DEPTH: ▽15.0'; E=0.71m [04-25-19] | DRILL MANUFACTURER TYPE & NO.: CME-55

"X" COORDINATE: ----- | "Y" COORDINATE: ----- | ELEVATION: 5.28m | JOB NO.: 19-4467

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
36										
37										
38							32	10	84.4	
39								A-4(8) / CL		
40		1/12"	Clay, some fine sand, medium plasticity, occasionally	3	33.0	0.42				
41		2 – 3	very few small peaty, pockets, medium – olive / gray (c)							
42			γ = 114.2pcf							
43										
44										
45		1/18"		WH	32.7	---				
46	-8.75	4	-46.0'							
47										
48										
49										
50		WH/12"		WH	37.7	0.92				
51		1								
52										A
53			Silty clay, medium plasticity, medium to medium stiff –							
54			dark olive gray (c)							
55		WH		WH	38.5	0.88	39	16	79.5	
56								A-6(13) / CL		
57										
58										
59										
60		1 – 2		10	30.6	---				
61	-13.31	8 – 3	-61.0'							
62										
63										
64										
65		1 – 2		5	34.2	---				
66		3 – 5	Silt, some fine sand, low compressibility, loose – olive							
67			gray / orange mottled (c)				29	5	87.0	
68			γ = 108.5pcf					A-4(4) / ML		
69										
70		Push 24"		WH	35.8	0.71				

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 75
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 75

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

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PROJECT: Proposed Ponce Health Science University — Improvements to Ponce Campus — BORING NO.: 102 — SHEET NO.: 3/3

LOCATION: By-Pass (PR-2), Ponce, Puerto Rico — CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán — DRILLER: A. Maldonado — WORK STARTED: 4-25-19 — WORK FINISHED: 4-26-19

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON — HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" — DRILLING FLUID: NONE — CORE DATA-TYPE BARREL: ----- — TYPE & SIZE BIT: -----

GROUND WATER: DATE AND DEPTH: ▽15.0'; E=0.71m [04-25-19] — DRILL MANUFACTURER TYPE & NO.: CME-55

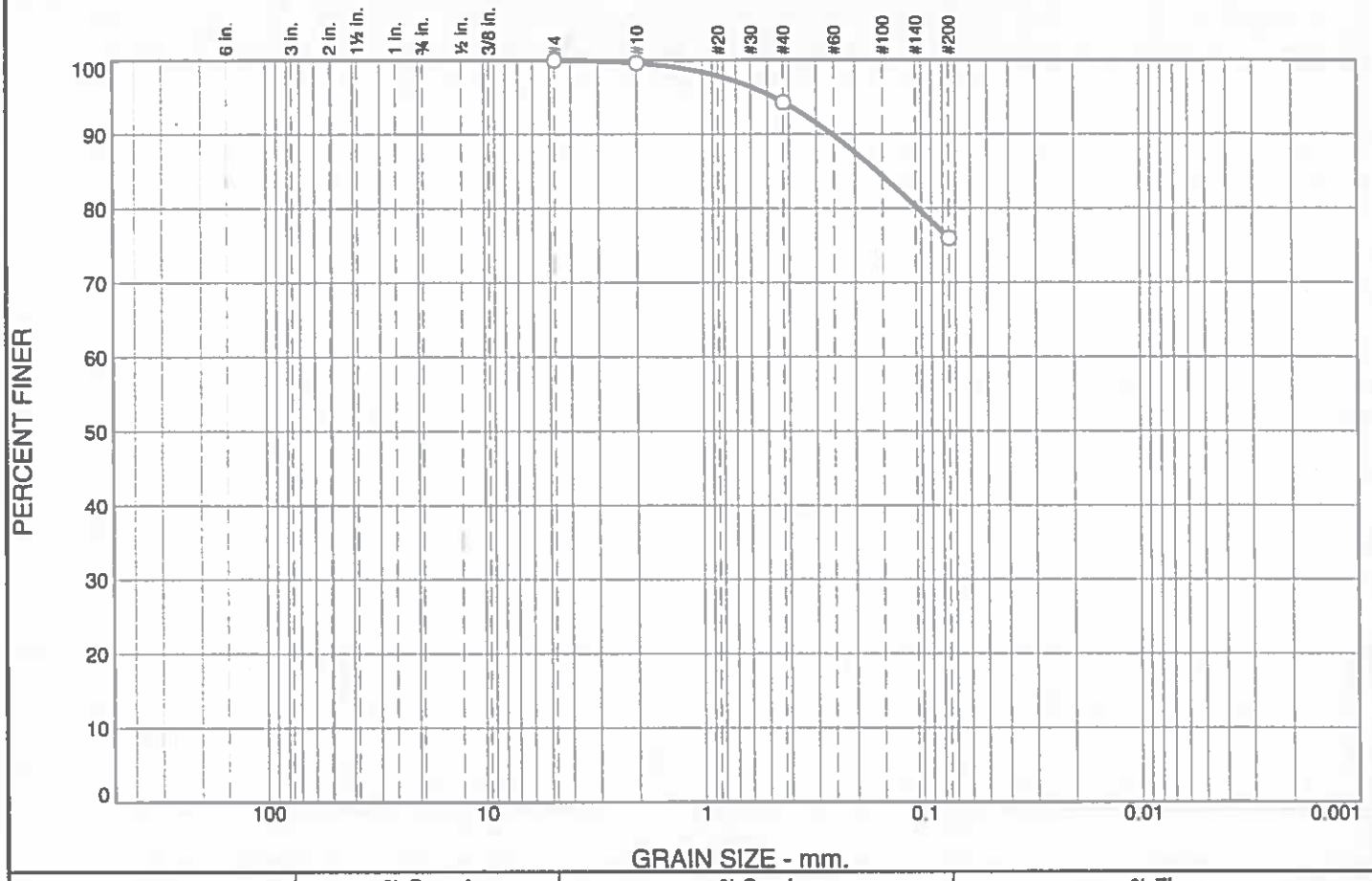
"X" COORDINATE: ----- — "Y" COORDINATE: ----- — ELEVATION: 5.28m — JOB NO.: 19-4467

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
71			Silt, some fine sand, low compressibility, loose – olive gray / orange mottled (c) γ = 108.5pcf							
72										
73	-16.98		-73.0'							
74										
75		2 – 2		4	31.8	1.84				
76		2 – 3								
77							43	21	96.5	
78							A-7-6(22) / CL			
79			Clay, medium to high plasticity, stiff – pale olive brown							
80		1 – 4	(d)	9	34.0	---				
81		5 – 4								
82										
83										
84										
85	-20.63	Push 12"	-85.0'	WH	22.2	1.12				
86		9 – 11		20						
87										A
88										
89										
90		14 – 8		14	21.3	---				
91		6								
92			Medium grained sand, some fine grained sand, medium							
93			dense – brown / gray (d)							
94										
95		12 – 11		22	31.0	---				
96		11								
97										
98										
99										
100	-25.20	7–13-13-14	-101.0'	26	11.0	---				
101			**END OF BORING**							
102			(a) - man-made fill							
103			(b) - alluvial of recent deposition							
104			(c) - lacustrine							
105			(d) - alluvial of older deposition							

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 75
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 75

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.4	5.3	18.3	76.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.6		
#40	94.3		
#200	76.0		

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Lic.5008
PUERTO RICO

(no specification provided)

Material Description

sandy clay, medium plasticity

Atterberg Limits

PL= 25 LL= 38 PI= 13

Coefficients

D_{90}= 0.2551 D_{85}= 0.1589 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-6(10)

Remarks

Source of Sample: BORING NO. 102 **Depth:** 14'@16'
Sample Number: 102-6

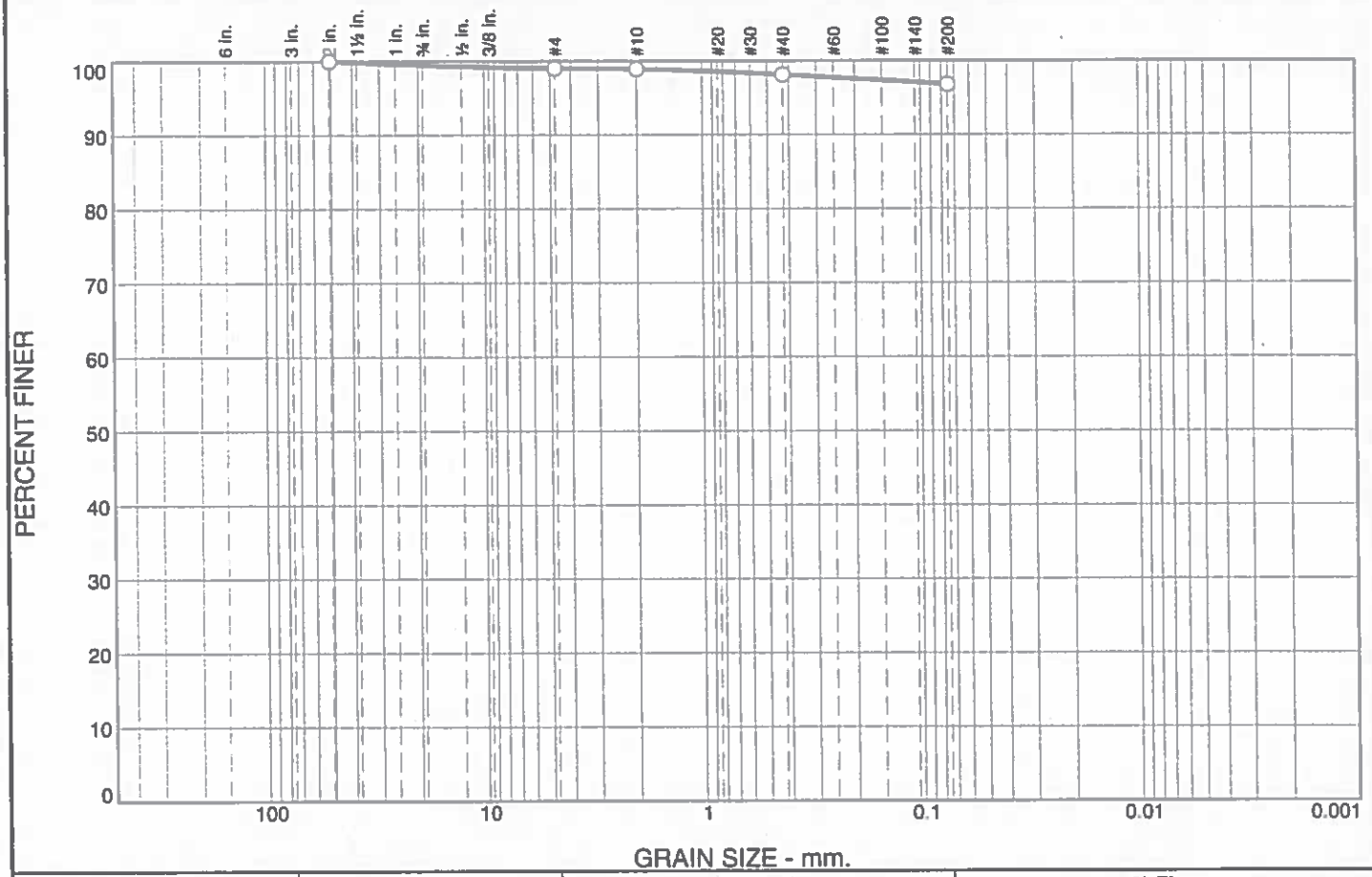
AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.5	0.5	0.1	0.8	1.3	96.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
#4	99.0		
#10	98.9		
#40	98.1		
#200	96.8		

VICTOR E. RIVERA ROLDÁN
INGENIERO LICENCIADO
Lic.5008
PUERTO RICO

* (no specification provided)

Material Description

clay, high plasticity

Atterberg Limits

PL= 27 LL= 55 PI= 28

Coefficients

D_{90}= D_{85}= D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CH AASHTO= A-7-6(32)

Remarks

Source of Sample: BORING NO. 102 **Depth:** 19'@26'
Sample Number: 102-7

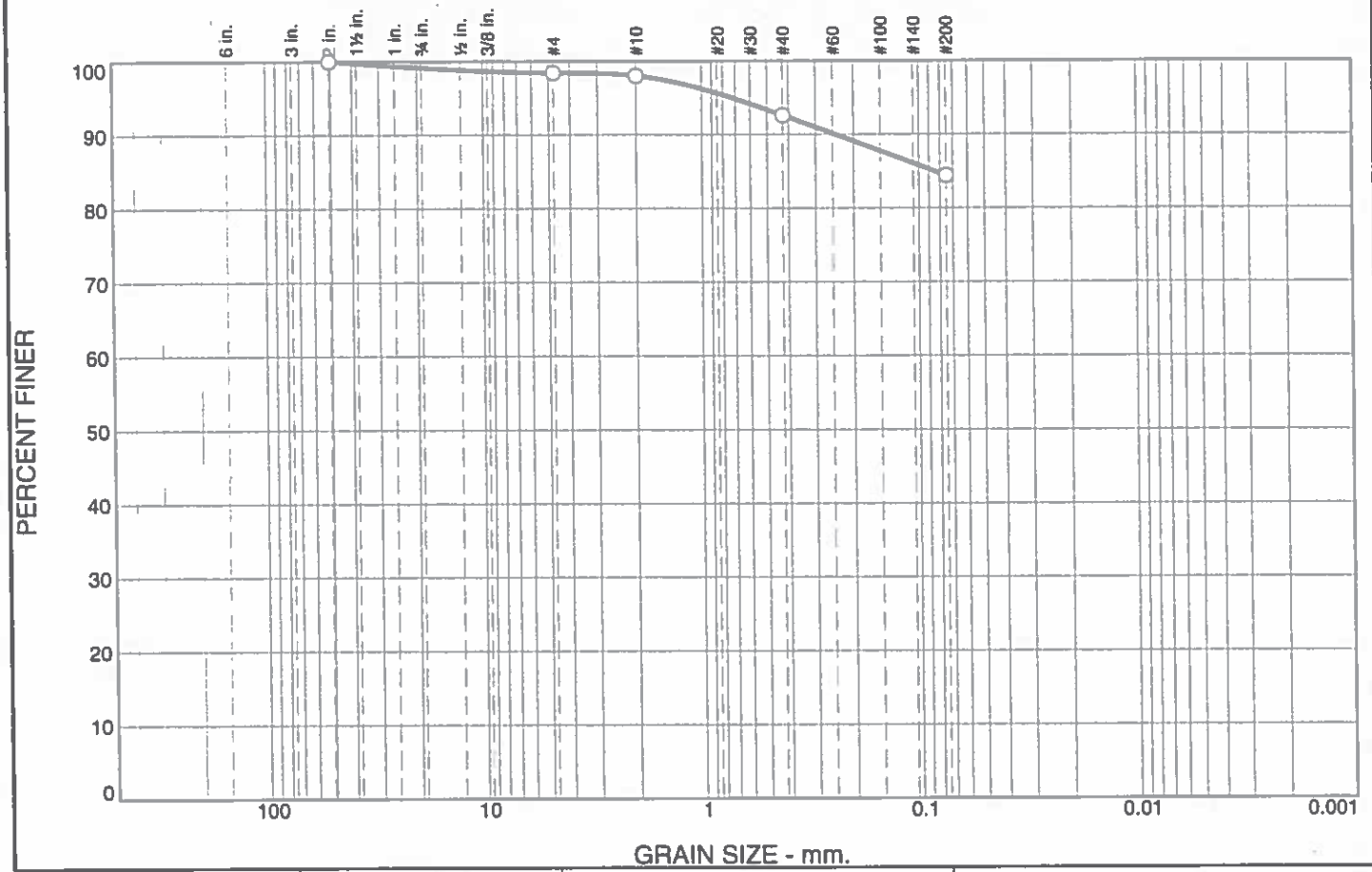
AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.9	0.7	0.4	5.4	8.2	84.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
#4	98.4		
#10	98.0		
#40	92.6		
#200	84.4		

VICTOR E. RIVERA ROLDAN INGENIERO LICENCIADO Lic.5008 PUERTO RICO

* (no specification provided)

Material Description

clay, some fine sand, medium plasticity

Atterberg Limits

PL= 22 LL= 32 PI= 10

Coefficients

D_{90}= 0.2430 D_{85}= 0.0850 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-4(8)

Remarks

Source of Sample: BORING NO. 102 **Depth:** 34'@46'
Sample Number: 102-8

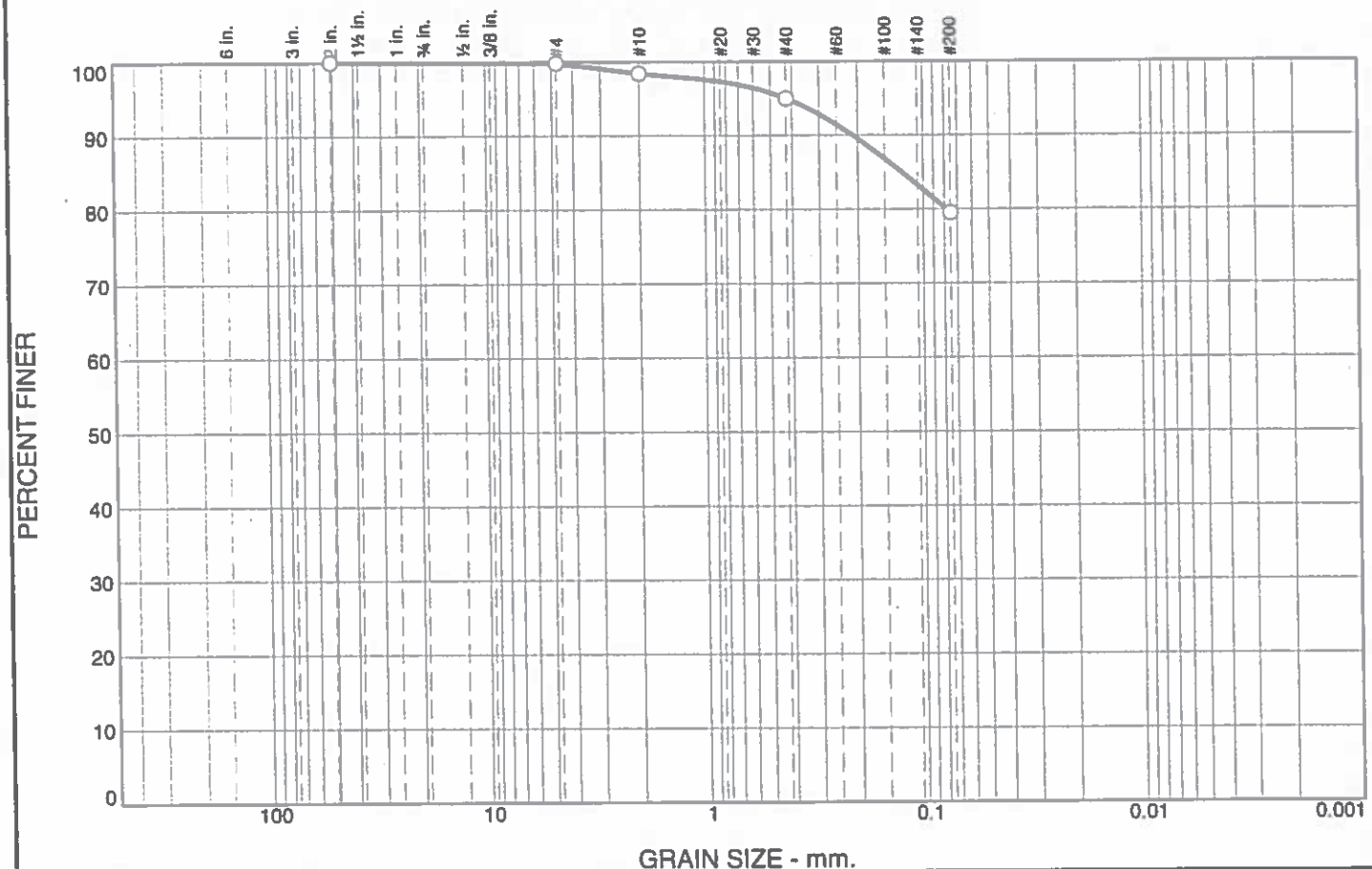
AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.1	0.1	1.4	3.4	15.5	79.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
#4	99.8		
#10	98.4		
#40	95.0		
#200	79.5		

* (no specification provided)

Material Description

sandy clay, medium plasticity

Atterberg Limits

PL= 23 LL= 39 PI= 16

Coefficients

D_{90}= 0.2109 D_{85}= 0.1256 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-6(13)

Remarks

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Source of Sample: BORING NO. 102 **Depth:** 49'@59'
Sample Number: 102-9

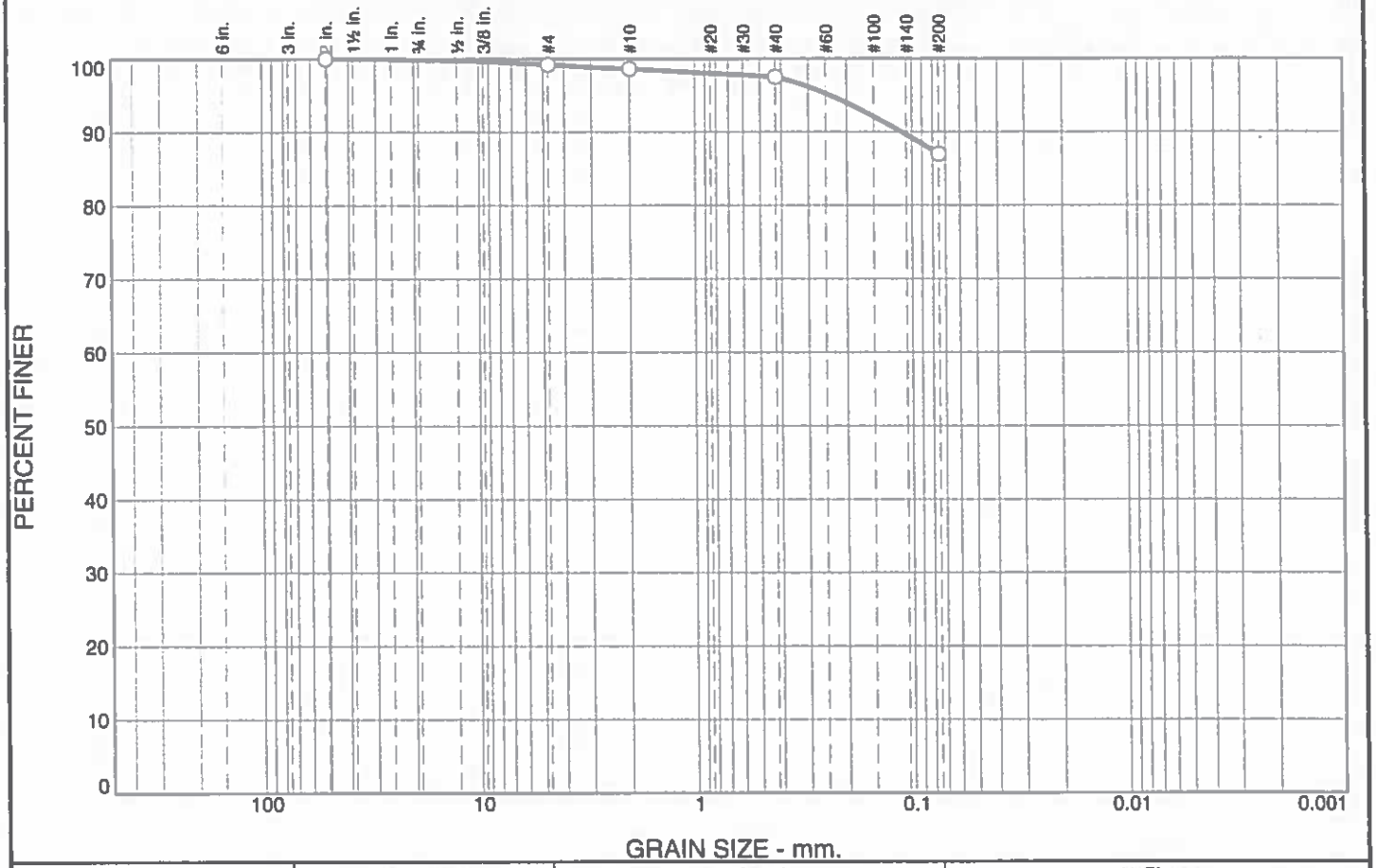
AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.1	0.7	0.6	1.1	10.5	87.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
#4	99.2		
#10	98.6		
#40	97.5		
#200	87.0		

* (no specification provided)

Material Description

silt, some fine sand, low compressibility

Atterberg Limits

PL= 24 LL= 29 PI= 5

Coefficients

D_{90}= 0.1119 D_{85}= D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= ML AASHTO= A-4(4)

Remarks

VICTOR E. RIVERA ROLDAN INGENIERO LICENCIADO Lic.5008 PUERTO RICO

Source of Sample: BORING NO. 102 **Depth:** 64'@71'
Sample Number: 102-10

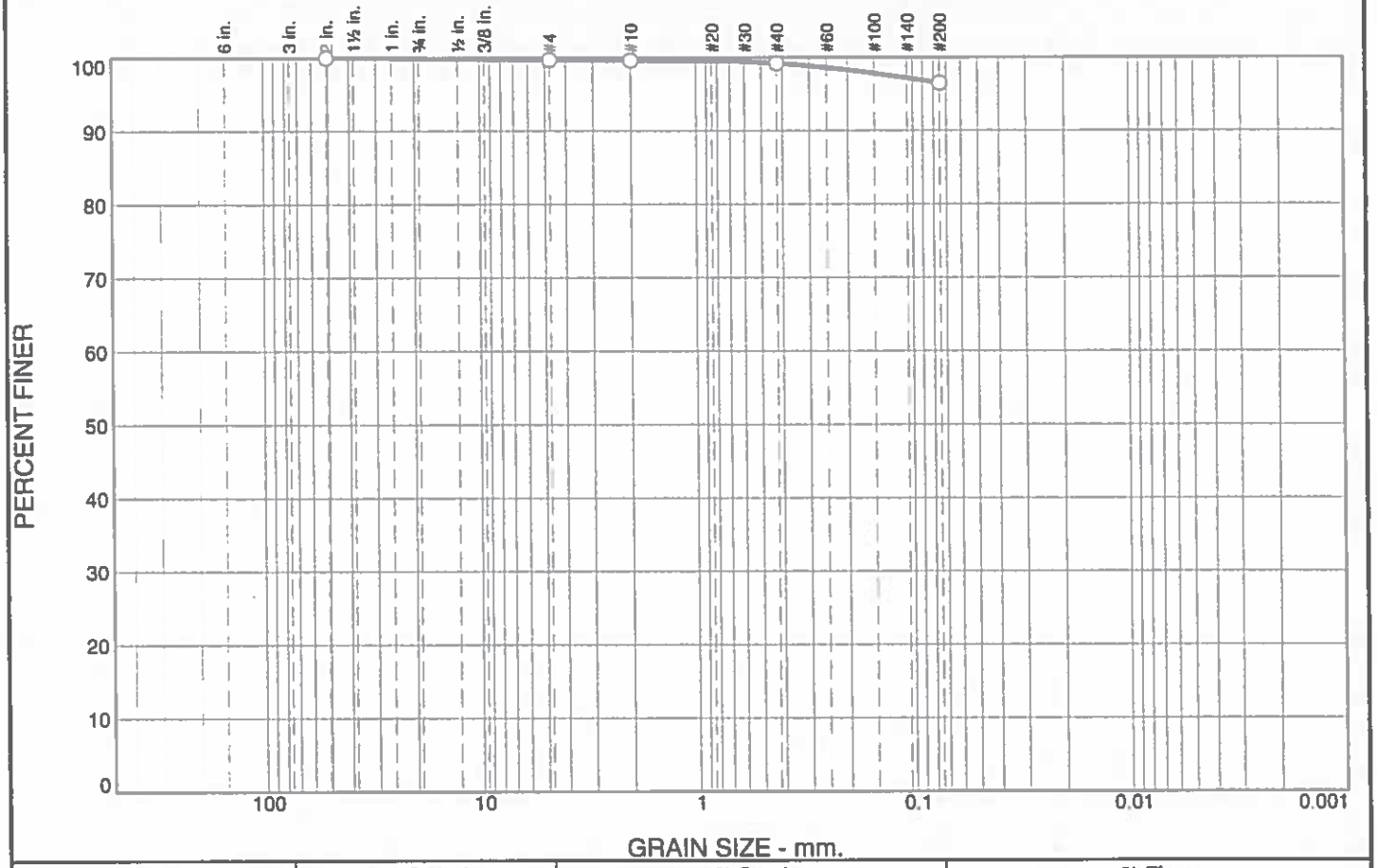
AAR AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.1	0.2	0.1	0.4	2.7	96.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
#4	99.7		
#10	99.6		
#40	99.2		
#200	96.5		

* (no specification provided)

Material Description

clay, medium to high plasticity

Atterberg Limits

PL= 22 LL= 43 PI= 21

Coefficients

D_{90}= D_{85}= D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-7-6(22)

Remarks

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PUERTO RICO

Source of Sample: BORING NO. 102 **Depth:** 74'@84'
Sample Number: 102-11

AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

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Ponce, PR 00732-2198

VICTOR E. RIVERA ASSOCIATES, LLC
Geotechnical Engineers

Tels.: (787) 259-1410
E-mail: verivera@prtc.net

PROJECT: Proposed Ponce Health Science University Improvements to Ponce Campus — BORING NO.: 103 — SHEET NO.: 1/3

LOCATION: By-Pass (PR-2), Ponce, Puerto Rico — CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán — DRILLER: A. Maldonado — WORK STARTED: 5-09-19 — WORK FINISHED: 5-09-19

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON — HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" — DRILLING FLUID: NONE — CORE DATA-TYPE BARREL: ------ — TYPE & SIZE BIT: ------

GROUND WATER: DATE AND DEPTH: ▼ 13.0'; E=1.48m [05-09-19] — DRILL MANUFACTURER TYPE & NO.: CME-55

"X" COORDINATE: ----- — "Y" COORDINATE: ----- — ELEVATION: 5.44m — JOB NO.: 19-4467

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
1		16 – 17		23	10.8	---				
2		11 – 7								
3		9 – 9	Sandy clay and limestone gravel, low plasticity, stiff -	16	11.3	---	25	8	38.2	
4		7 – 5	yellow ("caliche") (a)				A-4(10) / SC			
5		4 – 3		6	14.6	---				
6	3.61	3 – 3	-6.0'							
7		4 – 5		11	25.8	3.86				
8		6								
9										
10		1 – 2	Silty clay, stiff to very stiff – brown (b)	5	27.2	1.47				
11		3 – 2	γ = 106.5pcf							
12										
13	▼ 1.48		-13.0'							
14										
15		WH		1	32.7	---	34	10	69.9	
16		1	Sandy silt, trace fine gravel, medium compressibility				A-4(6) / ML			
17			loose – brown / olive (b)							A
18			γ = 108.5pcf							
19	-0.35		-19.0'							
20		2 – 4		8	30.5	1.59				
21		4 – 5								
22										
23							48	33	79.3	
24							A-7-6(25) / CL			
25		1 – 2	Clay, some fine sand, medium to high plasticity,	5	30.6	---				
26		3 – 4	Stiff – brown / olive mottled (b)							
27			γ = 107.3pcf							
28										
29										
30		6 – 3		6	33.5	1.76				
31		3 – 4								
32	-4.32		-32.0'							
33										
34			Clay, some fine sand, medium plasticity, medium -							
35		WH	dark olive gray (c) γ = 117.6pcf	WH	33.0	0.97				

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 75
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 75

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

PO Box 32198
Ponce, PR 00732-2198

VICTOR E. RIVERA ASSOCIATES, LLC
Geotechnical Engineers

Tels.: (787) 259-1410
E-mail: verivera@prtc.net

PROJECT: Proposed Ponce Health Science University Improvements to Ponce Campus — BORING NO.: 103 — SHEET NO.: 2/3

LOCATION: By-Pass (PR-2), Ponce, Puerto Rico — CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán — DRILLER: A. Maldonado — WORK STARTED: 5-09-19 — WORK FINISHED: 5-09-19

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON — HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" — DRILLING FLUID: NONE — CORE DATA-TYPE BARREL: ----- — TYPE & SIZE BIT: -----

GROUND WATER: DATE AND DEPTH: ▽ 13.0'; E=1.48m [05-09-19] — DRILL MANUFACTURER TYPE & NO.: CME-55

"X" COORDINATE: ----- — "Y" COORDINATE: ----- — ELEVATION: 5.44m — JOB NO.: 19-4467

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
36										
37							41	18	84.4	
38							A-7-6(16) / CL			
39										
40		WH		WH	34.2	---				
41			Clay, some fine sand, medium plasticity, medium - dark olive gray (c)							
42										
43			γ = 117.6pcf							
44										
45		WH		WH	35.5	0.76				
46										
47										
48	-9.19		-48.0'							
49										
50		WH		WH	29.3	---	32	12	68.4	
51							A-6(6) / CL			
52										A
53			Sandy clay, medium plasticity, medium to stiff – dark							
54			olive gray (c)							
55		WH/12"	γ = 110.8pcf	2	32.4	---	33	15	75.0	
56		2 – 2					A-6(8) / CL			
57										
58	-12.24		-58.0'							
59										
60		9 – 16	Coarse sand, some fine gravel, dense – dark olive gray	30	14.9	---				
61		14	(c)							
62	-13.46		-62.0'							
63										
64										
65		WH/6" – 1		3	39.9	0.59				
66		2	Silty clay, occasionally sandy seams, medium stiff -							
67			dark olive gray (c)							
68			γ = 118.1pcf							
69										
70		2 – 2 – 2 – 2		4	33.3	0.88				

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 75
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 75

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

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Geotechnical Engineers

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PROJECT: Proposed Ponce Health Science University — Improvements to Ponce Campus | BORING NO.: 103 | SHEET NO.: 3/3

LOCATION: By-Pass (PR-2), Ponce, Puerto Rico | CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán | DRILLER: A. Maldonado | WORK STARTED: 5-09-19 | WORK FINISHED: 5-09-19

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON | HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" | DRILLING FLUID: NONE | CORE DATA-TYPE BARREL: ----- | TYPE & SIZE BIT: -----

GROUND WATER: DATE AND DEPTH: ▼ 13.0'; E=1.48m [05-09-19] | DRILL MANUFACTURER TYPE & NO.: CME-55

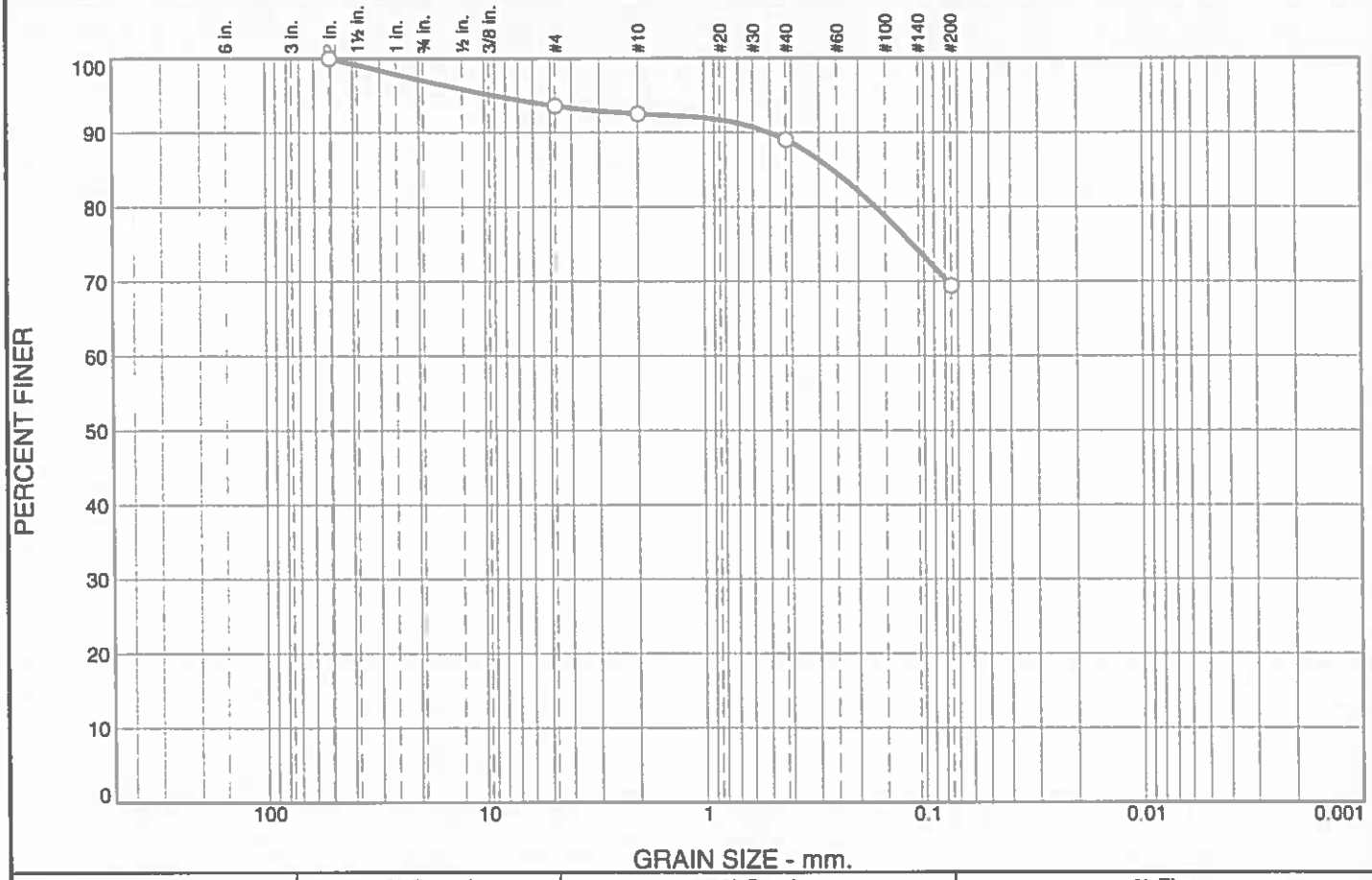
"X" COORDINATE: ----- | "Y" COORDINATE: ----- | ELEVATION: 5.44m | JOB NO.: 19-4467

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
71										
72										
73										
74			Silty clay, occasionally sandy seams, medium stiff - dark olive gray (c)							
75		WH	γ = 118.1pcf	WH	27.8	---				
76										
77										
78	-18.34		-78.0'							
79										
80		3 – 5		11	24.4	1.76				
81		6 – 7								
82										
83			Silty sandy clay, very stiff – orange brown (d)							
84										
85		3 – 7		16	31.5	---				
86		9								
87										A
88	-21.39		-88.0'							
89										
90		4 – 9		18	30.3	3.02				
91		9	Clay, very stiff – orange brown (d)							
92										
93										
94	-23.22		-94.0'							
95		4 – 7		16	27.9	2.94				
96		9								
97			Gravelly clay, trace to some sand, hard – orange brown (d)							
98										
99										
100	-25.20	9 – 16 – 17	-100.5'	33	20.7	4.11				
101			**END OF BORING**							
102			(a) - man-made fill							
103			(b) - alluvial of recent deposition							
104			(c) - lacustrine							
105			(d) - alluvial of older deposition							

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 75
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 75

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	3.0	3.4	1.1	3.5	19.6	69.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
#4	93.6		
#10	92.5		
#40	89.0		
#200	69.4		

* (no specification provided)

Material Description

sandy silt, trace fine gravel, medium compressibility

Atterberg Limits

PL= 24 LL= 34 PI= 10

Coefficients

D_{90}= 0.5078 D_{85}= 0.2614 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-4(6)

Remarks

VICTOR E. RIVERA ROLDAN INGENIERO LICENCIADO Lic.5008 PUERTO RICO

Source of Sample: BORING NO. 103 **Depth:** 14'@16'
Sample Number: 103-13

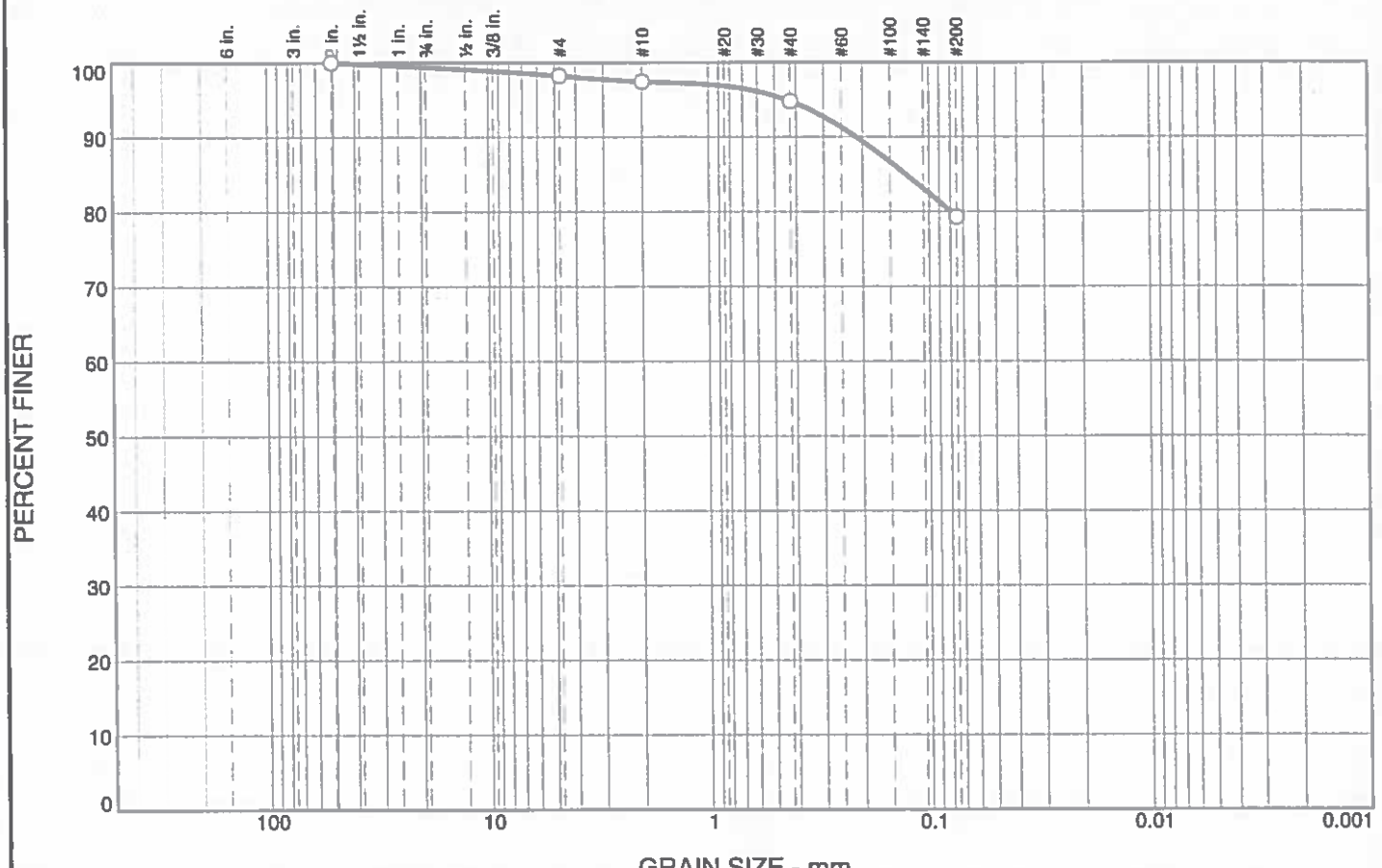
AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.6	1.2	0.8	2.6	15.5	79.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
#4	98.2		
#10	97.4		
#40	94.8		
#200	79.3		

* (no specification provided)

Material Description

clay, some fine sand, medium to high plasticiy

Atterberg Limits

PL= 15 LL= 48 PI= 33

Coefficients

D_{90}= 0.2139 D_{85}= 0.1274 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-7-6(25)

Remarks

VICTOR E. RIVERA ROLDAN INGENIERO LICENCIADO Lic. 5008 PUERTO RICO

Source of Sample: BORING NO. 103 **Depth:** 19'@31'
Sample Number: 103-14

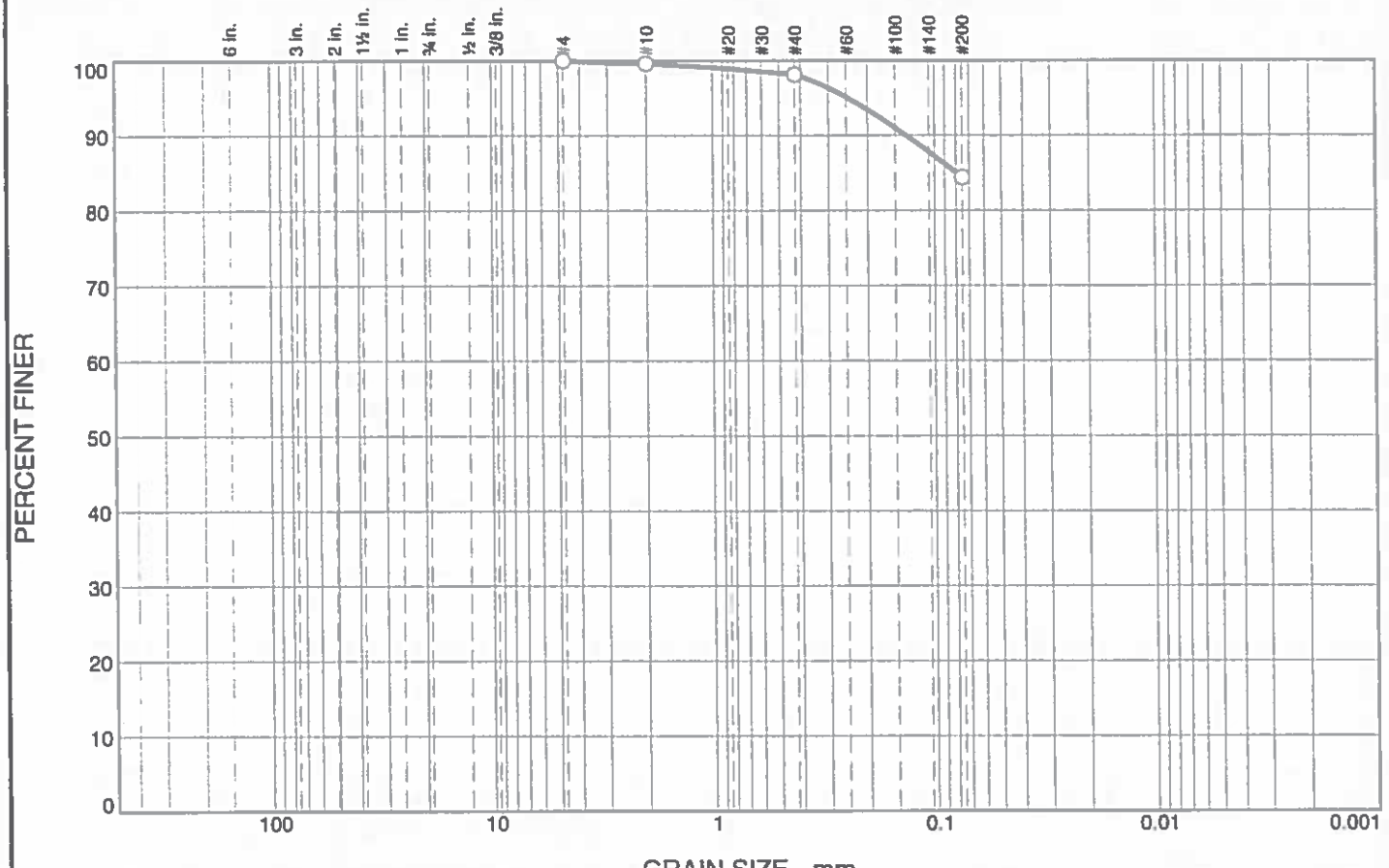
AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.4	1.5	13.7	84.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.6		
#40	98.1		
#200	84.4		

* (no specification provided)

Material Description

clay, some fine sand, medium plasticity

Atterberg Limits

PL= 23 LL= 41 PI= 18

Coefficients

D_{90}= 0.1343 D_{85}= 0.0797 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-7-6(16)

Remarks

VICTOR E. RIVERA ROLLA — INGENIERO LICENCIADO — Lic.5008 — PUERTO RICO

Source of Sample: BORING NO. 103 **Depth:** 34'@46'
Sample Number: 103-15

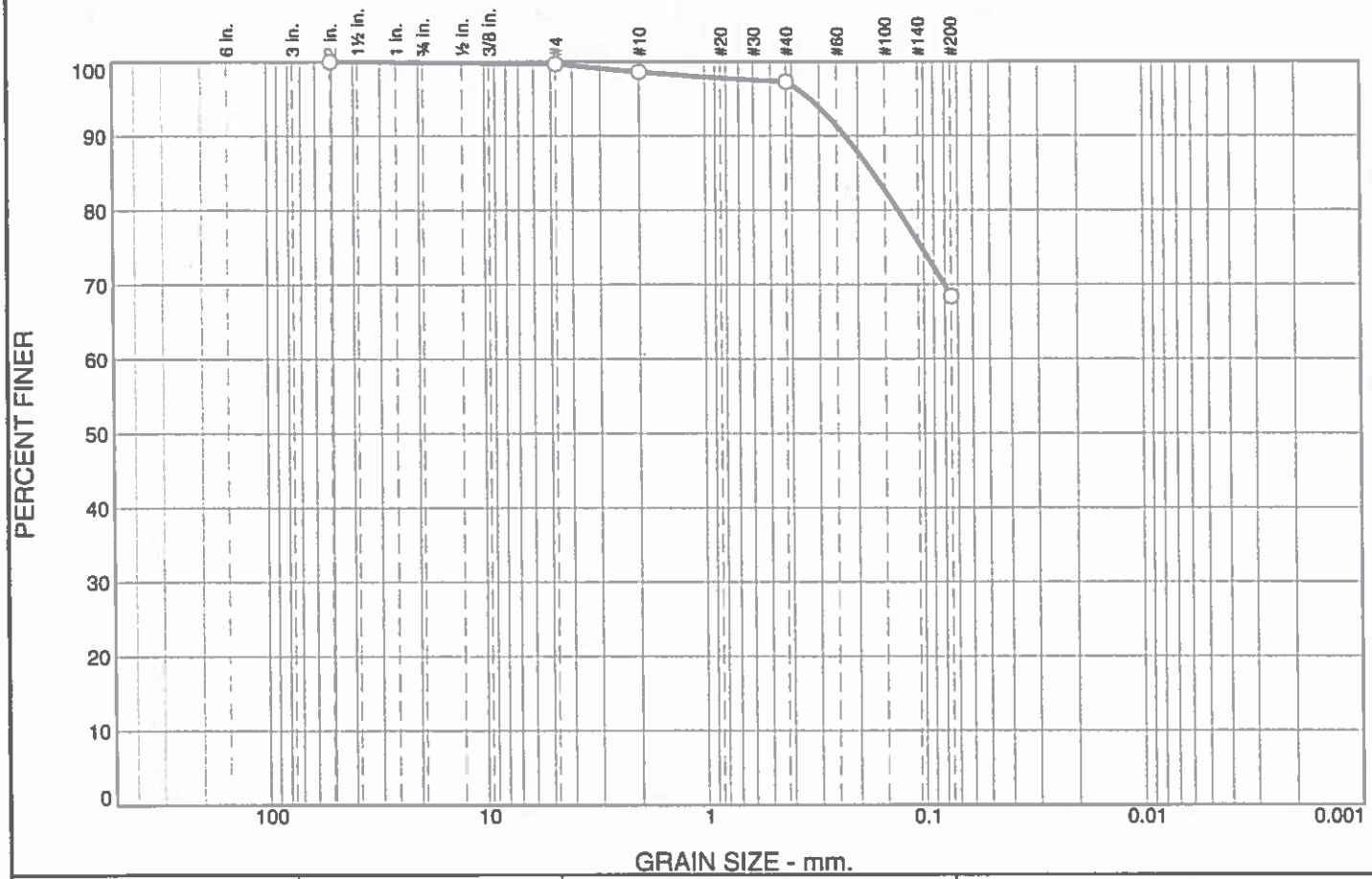
AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.1	0.2	1.1	1.3	28.9	68.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
#4	99.7		
#10	98.6		
#40	97.3		
#200	68.4		

* (no specification provided)

Material Description

sandy clay, medium plasticity

Atterberg Limits

PL= 20 LL= 32 PI= 12

Coefficients

D_{90}= 0.2291 D_{85}= 0.1705 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-6(6)

Remarks

VICTOR E. RIVERA ROLDAN INGENIERO LICENCIADO Lic. 5008 PUERTO RICO

Source of Sample: BORING NO. 103 **Depth:** 49'@54'
Sample Number: 103-16

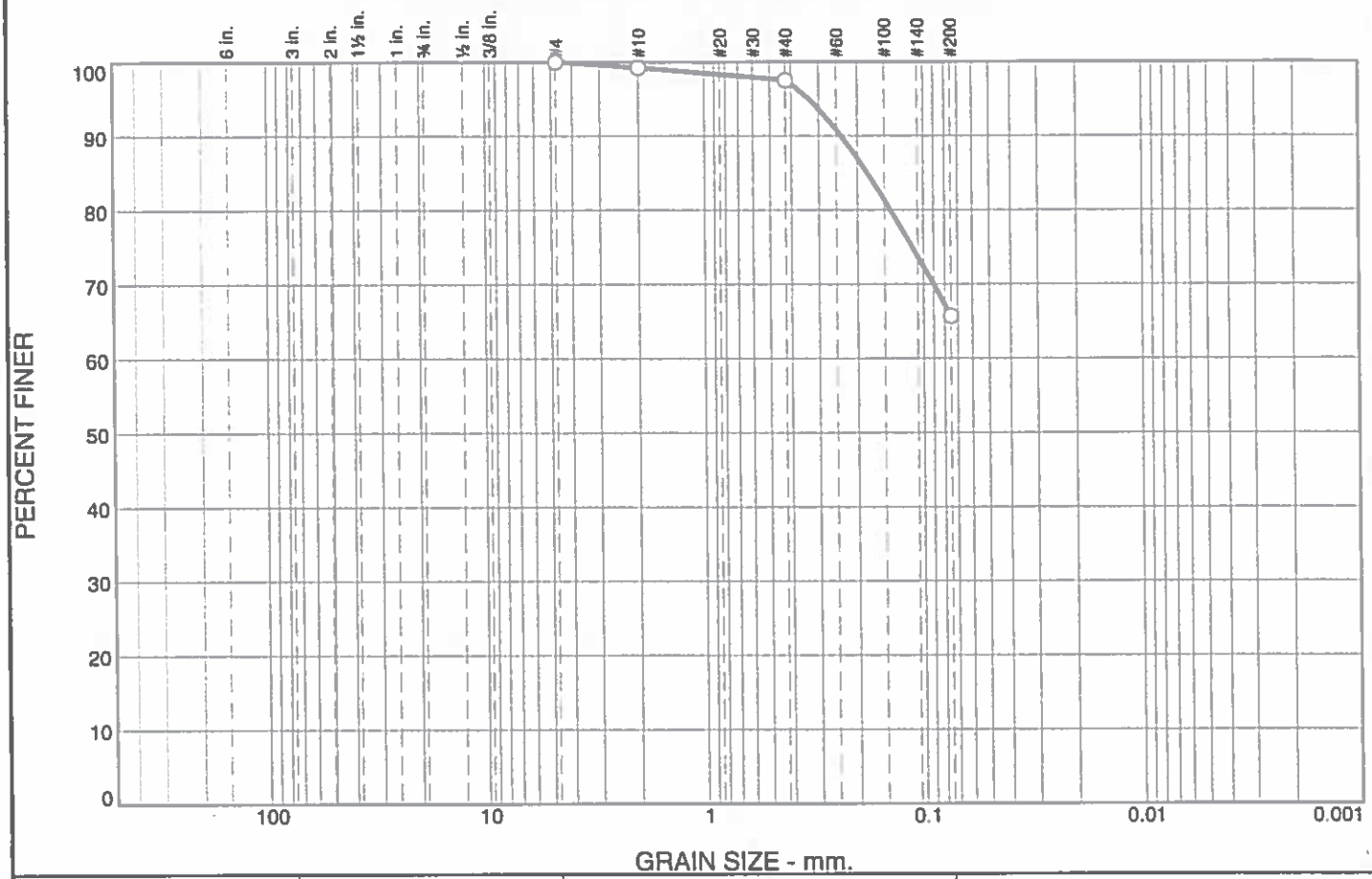
AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.8	1.7	31.8	65.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.2		
#40	97.5		
#200	65.7		

* (no specification provided)

VICTOR E. RIVERA ROLON — INGENIERO LICENCIADO — Lic. 6008 — PUERTO RICO

Material Description

sandy clay, medium plasticity

Atterberg Limits

PL= 18 LL= 33 PI= 15

Coefficients

D_{90}= 0.2376 D_{85}= 0.1804 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-6(8)

Remarks

Source of Sample: BORING NO. 103 **Depth:** 54'@56'
Sample Number: 103-17

AAP AASHTO R 18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

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VICTOR E. RIVERA ASSOCIATES, LLC

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PROJECT: Proposed Ponce Health Science University
Improvements to Ponce Campus
BORING NO.: 104 SHEET NO.: 1/3

LOCATION: By-Pass (PR-2), Ponce, Puerto Rico CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán DRILLER: A. Maldonado WORK STARTED: 4-26-19 WORK FINISHED: 4-29-19

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES 1 3/8" I.D. SPLIT SPOON HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" DRILLING FLUID: NONE CORE DATA-TYPE BARREL: ----- TYPE & SIZE BIT: -----

GROUND WATER: DATE AND DEPTH: ▼ 15.0'; E=-0.14m [04-29-19] DRILL MANUFACTURER TYPE & NO. CME-55

"X" COORDINATE: ----- "Y" COORDINATE: ----- ELEVATION: 4.43m JOB NO.: 19-4467

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
1		9 – 4		4	13.8	---				
2		7 – 9	Sandy clay and limestone gravel, low plasticity,				29	10	54.1	
3		6 – 7	medium - yellow ("caliche") (a)	14	16.9	---	A-4(3) / CL			
4	3.21	7 – 4	-4.0'							
5		3 – 6		12	30.2	2.86				
6		6 – 9								
7		8 – 7		13	34.8	---				
8		6								
9										
10		2 – 2		5	29.5	0.84	42	17	90.3	
11		3 – 4					A-7-6(17) /CL			
12										
13										
14										
15	▼	2 – 3	Clay, trace to some fine sand, medium plasticity,	7	39.3	0.97				
16		4 – 4	medium to stiff – brown / orange mottled (b)							
17			γ = 108.4pcf							A
18										
19										
20		2 – 3		7	32.0	1.51				
21		4 – 3								
22										
23							48	23	86.9	
24							A-7-6(22) / CL			
25		2 – 3		8	37.4	1.34				
26		5 – 5								
27										
28	-4.11		-28.0'							
29										
30		1 – 2		5	35.5	1.64				
31		3 – 2	Clay, few small peaty pockets, medium to high				49	25	98.7	
32			plasticity, medium to stiff – dark olive gray (c)				A-7-6(28) / CL			
33			γ = 106.7pcf							
34										
35		WH		WH	42.6	0.76				

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 75
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 75

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

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Geotechnical Engineers

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PROJECT: Proposed Ponce Health Science University Improvements to Ponce Campus — BORING NO.: 104 — SHEET NO.: 2/3

LOCATION: By-Pass (PR-2), Ponce, Puerto Rico — CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán — DRILLER: A. Maldonado — WORK STARTED: 4-26-19 — WORK FINISHED: 4-29-19

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON — HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" — DRILLING FLUID: NONE — CORE DATA-TYPE BARREL: ------ — TYPE & SIZE BIT: ------

GROUND WATER: DATE AND DEPTH: ▼ 15.0'; E=-0.14m [04-29-19] — DRILL MANUFACTURER TYPE & NO.: CME-55

"X" COORDINATE: ----- — "Y" COORDINATE: ----- — ELEVATION: 4.43m — JOB NO.: 19-4467

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
36										
37										
38										
39										
40		WH		WH	34.7	---				
41			Clay, few small peaty pockets, sandy seams, medium to high plasticity, medium to stiff – dark olive gray (c) γ = 106.7pcf							
42										
43										
44										
45		WH/6" - 2		3	38.1	---				
46		1								
47										
48										
49	-10.51		-49.0'							
50		WH/6" - 1		4	35.2	1.04				
51		3								
52										A
53										
54										
55		WH	Clay, some fine sand, medium plasticity, medium - dark gray / bluish (c) γ = 112.7pcf	WH	33.4	0.71	37	14	83.7	
56							A-6(12) / CL			
57										
58										
59										
60		WH		WH	49.1	0.71				
61										
62										
63	-14.78		-63.0'							
64										
65		WH		WH	37.7	0.79				
66			Sandy clay, very few small peat intrusions, medium plasticity, medium – olive gray (c) γ = 102.3pcf							
67							34	14	77.0	
68							A-6(10) / CL			
69										
70		WH		WH	30.7	---				

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 75
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 75

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
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% = PERCENT FINER THAN NO. 200 SIEVE

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Ponce, PR 00732-2198

VICTOR E. RIVERA ASSOCIATES, LLC
Geotechnical Engineers

Tels.: (787) 259-1410
E-mail: verivera@prtc.net

PROJECT: **Proposed Ponce Health Science University Improvements to Ponce Campus** BORING NO.: **104** SHEET NO.: **3/3**

LOCATION: **By-Pass (PR-2), Ponce, Puerto Rico** CLIENT: **LOA Management, PSC**

INSPECTOR: **V. Rivera Roldán** DRILLER: **A. Maldonado** WORK STARTED: **4-26-19** WORK FINISHED: **4-29-19**

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES **1 3/8" I.D. SPLIT SPOON** HAMMER WGT: **140 POUNDS**

HAMMER DROP: **30"** DRILLING FLUID: **NONE** CORE DATA-TYPE BARREL: **-----** TYPE & SIZE BIT: **-----**

GROUND WATER: DATE AND DEPTH: ▼ **15.0'; E=-0.14m [04-29-19]** DRILL MANUFACTURER TYPE & NO. **CME-55**

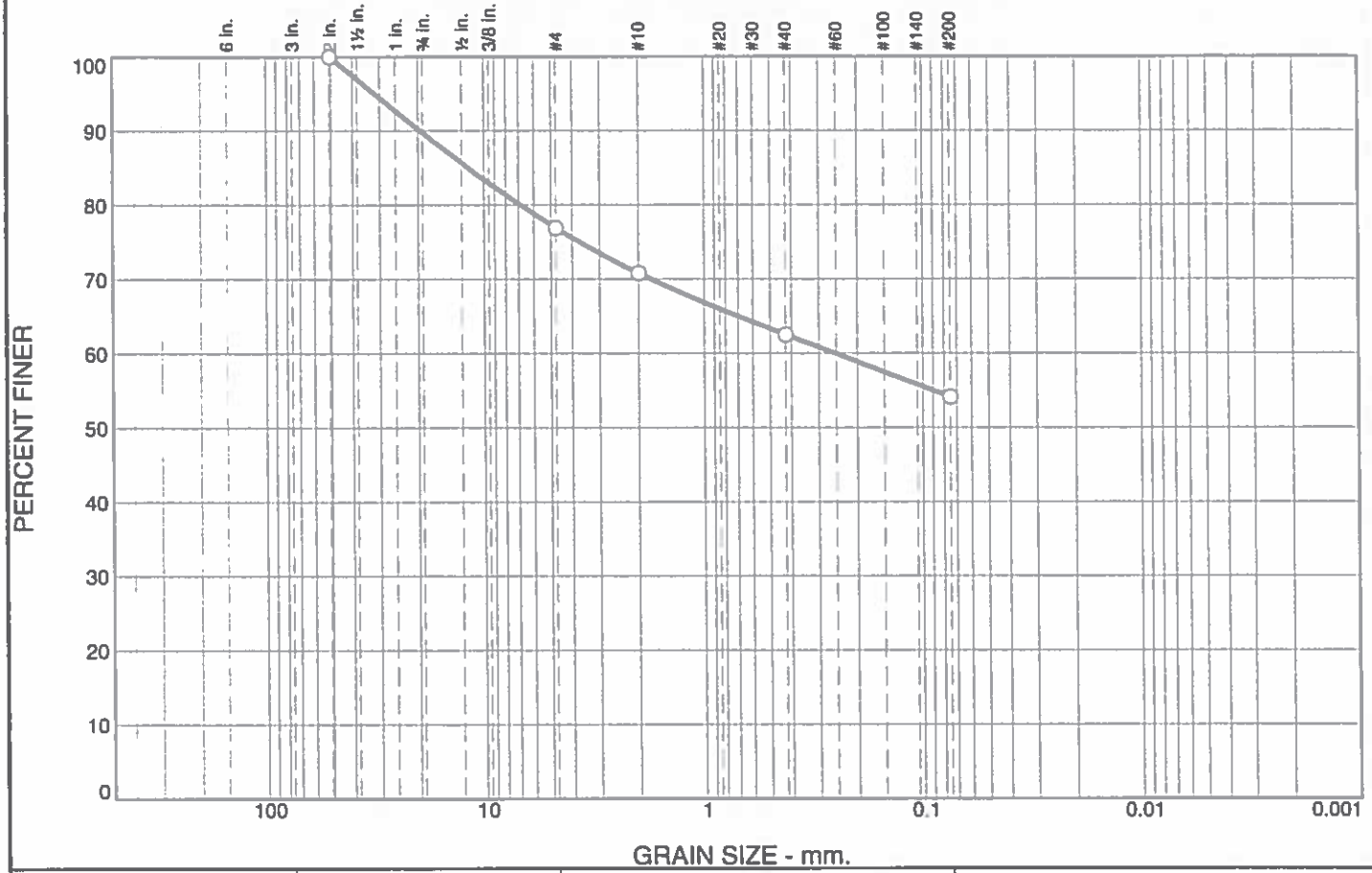
"X" COORDINATE: **-----** "Y" COORDINATE: **-----** ELEVATION: **4.43m** JOB NO.: **19-4467**

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
71										
72										
73			Silty clay, very few small peat intrusions, medium plasticity, medium – olive gray (c)							
74										
75		WH	γ = 102.3pcf	WH	31.2	---				
76										
77										
78	-19.35		-78.0'							
79										
80		2 – 3		6	31.2	1.51				
81		3 – 5								
82										
83			Clay, some fine sand, few fine gravel, stiff – brown orange (d)							
84										
85		3 – 3		7	24.5	1.61				
86		4 – 5								
87										A
88	-22.40		-88.0'							
89										
90		9 – 12		23	11.6	---				
91		11								
92										
93										
94			Coarse sand and fine gravel, trace to some silt, medium							
95		11 – 22	dense to dense – brown (d)	57	12.2	---				
96		35								
97										
98										
99										
100	-26.21	12 – 10 – 20	-100.5'	30	10.4	---				
101			**END OF BORING**							
102			(a) - man-made fill							
103			(b) - alluvial of recent deposition							
104			(c) - lacustrine							
105			(d) - alluvial of older deposition							

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 75
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 75

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	10.3	12.8	6.1	8.3	8.4	54.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
#4	76.9		
#10	70.8		
#40	62.5		
#200	54.1		

* (no specification provided)

VICTOR E. RIVERA ROLDAN INGENIERO LICENCIADO Lic.5008 PUERTO RICO

Material Description

sandy clay and limestone gravel, low plasticity

Atterberg Limits

PL= 19 LL= 29 PI= 10

Coefficients

D_{90}= 19.6031 D_{85}= 11.8546 D_{60}= 0.2543
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-4(3)

Remarks

Source of Sample: BORING NO. 104 **Depth:** 0'@4'
Sample Number: 104-18

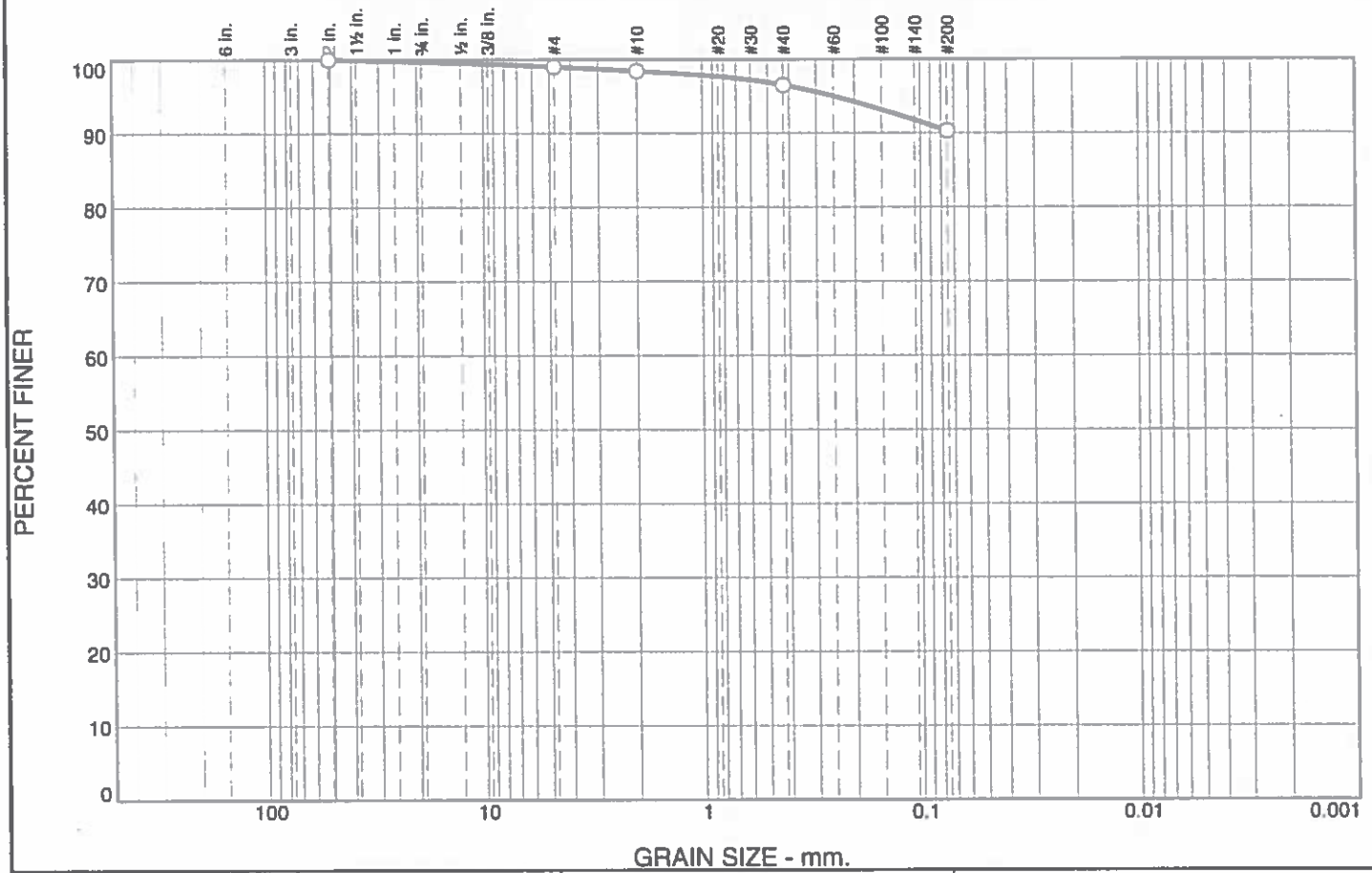
AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.3	0.7	0.6	1.9	6.2	90.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
#4	99.0		
#10	98.4		
#40	96.5		
#200	90.3		

* (no specification provided)

Material Description

clay, trace fine sand, medium plasticity

Atterberg Limits

PL= 25 LL= 42 PI= 17

Coefficients

D_{90}= D_{85}= D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-7-6(17)

Remarks

VICTOR E. RIVERA ROLDAN INGENIERO LICENCIADO Lic.5008 PUERTO RICO

AASHTO R18 ACCREDITED

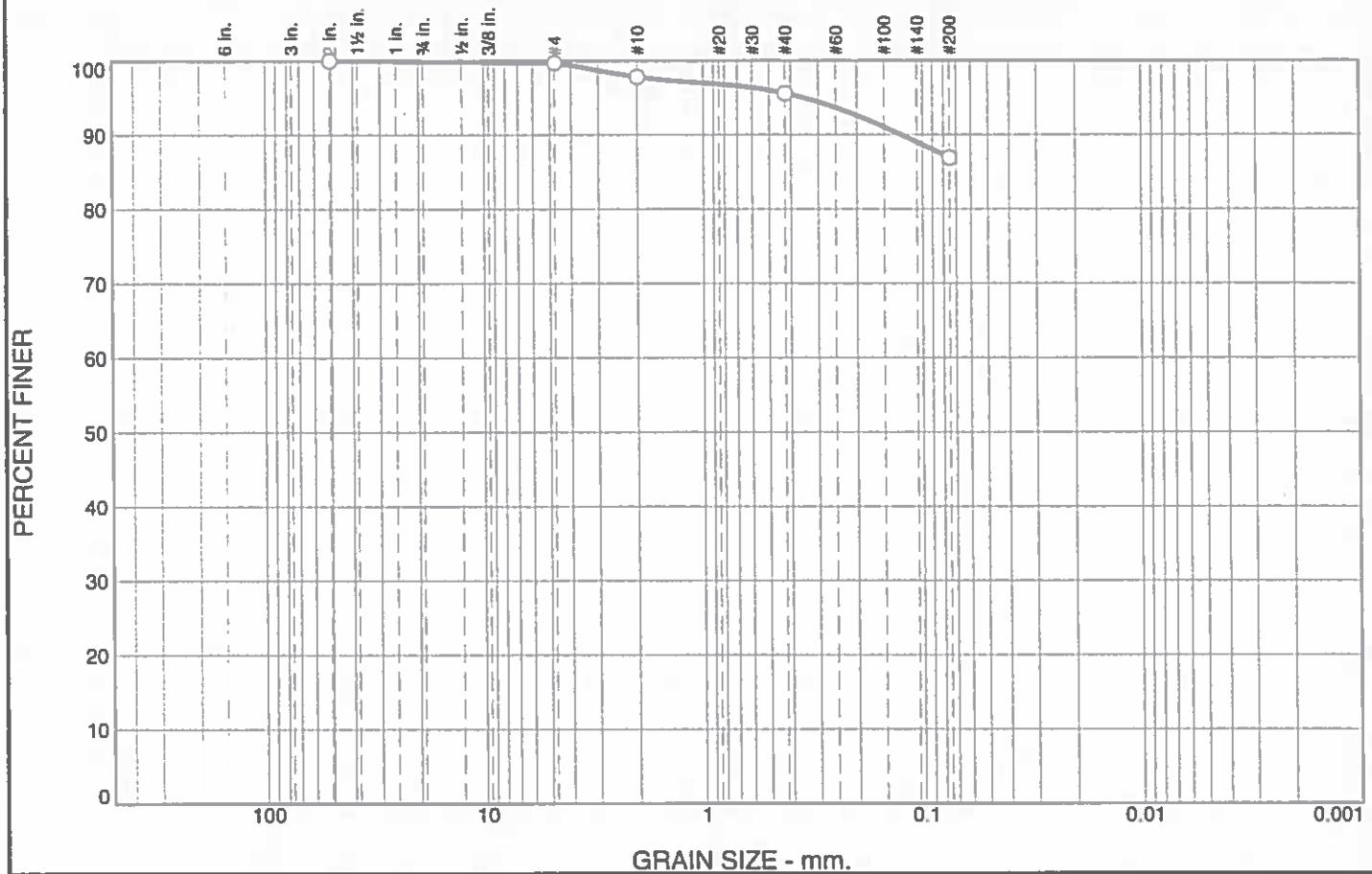
Source of Sample: BORING NO. 104 **Depth:** 6'@16'
Sample Number: 104-19

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.1	0.2	1.9	2.2	8.7	86.9	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
#4	99.7		
#10	97.8		
#40	95.6		
#200	86.9		

* (no specification provided)

VICTOR E. RIVERA ROLDAN
INGENIERO LICENCIADO
Lic.5008
PUERTO RICO

Material Description

clay, trace to some fine sand, medium to high plasticity

Atterberg Limits

PL= 25 LL= 48 PI= 23

Coefficients

D_{90}= 0.1252 D_{85}= D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-7-6(22)

Remarks

Source of Sample: BORING NO. 104 **Depth:** 19'@26'
Sample Number: 104-20

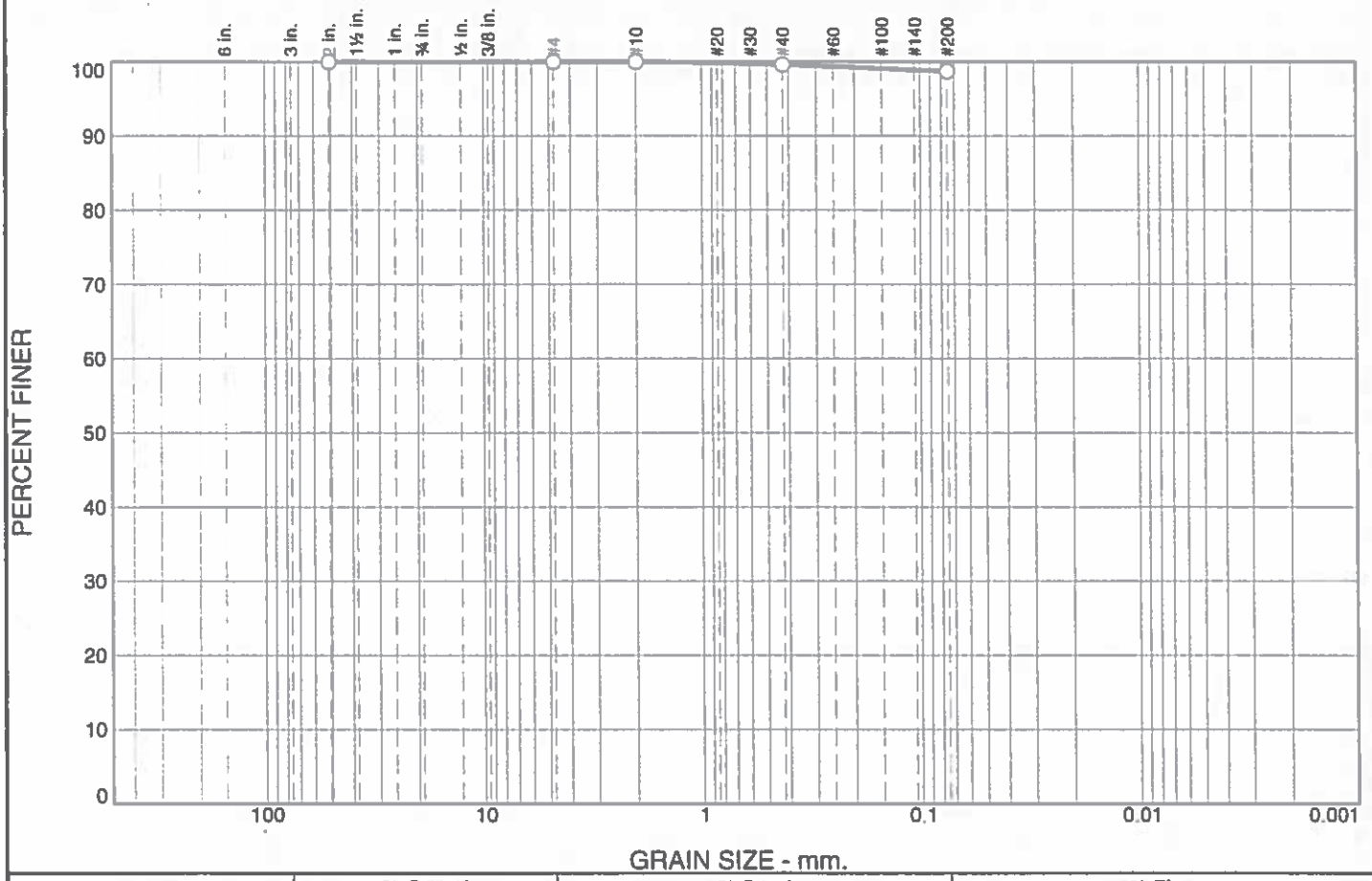
AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.4	0.9	98.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
#4	100.0		
#10	100.0		
#40	99.6		
#200	98.7		

VICTOR E. RIVERA ROLDAN
INGENIERO LICENCIADO
Lic.5008
PUERTO RICO

* (no specification provided)

Material Description

clay, medium to high plasticity

Atterberg Limits

PL= 24 LL= 49 PI= 25

Coefficients

D_{90}= D_{85}= D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-7-6(28)

Remarks

Source of Sample: BORING NO. 104 **Depth:** 29'@35-1/2'
Sample Number: 104-21

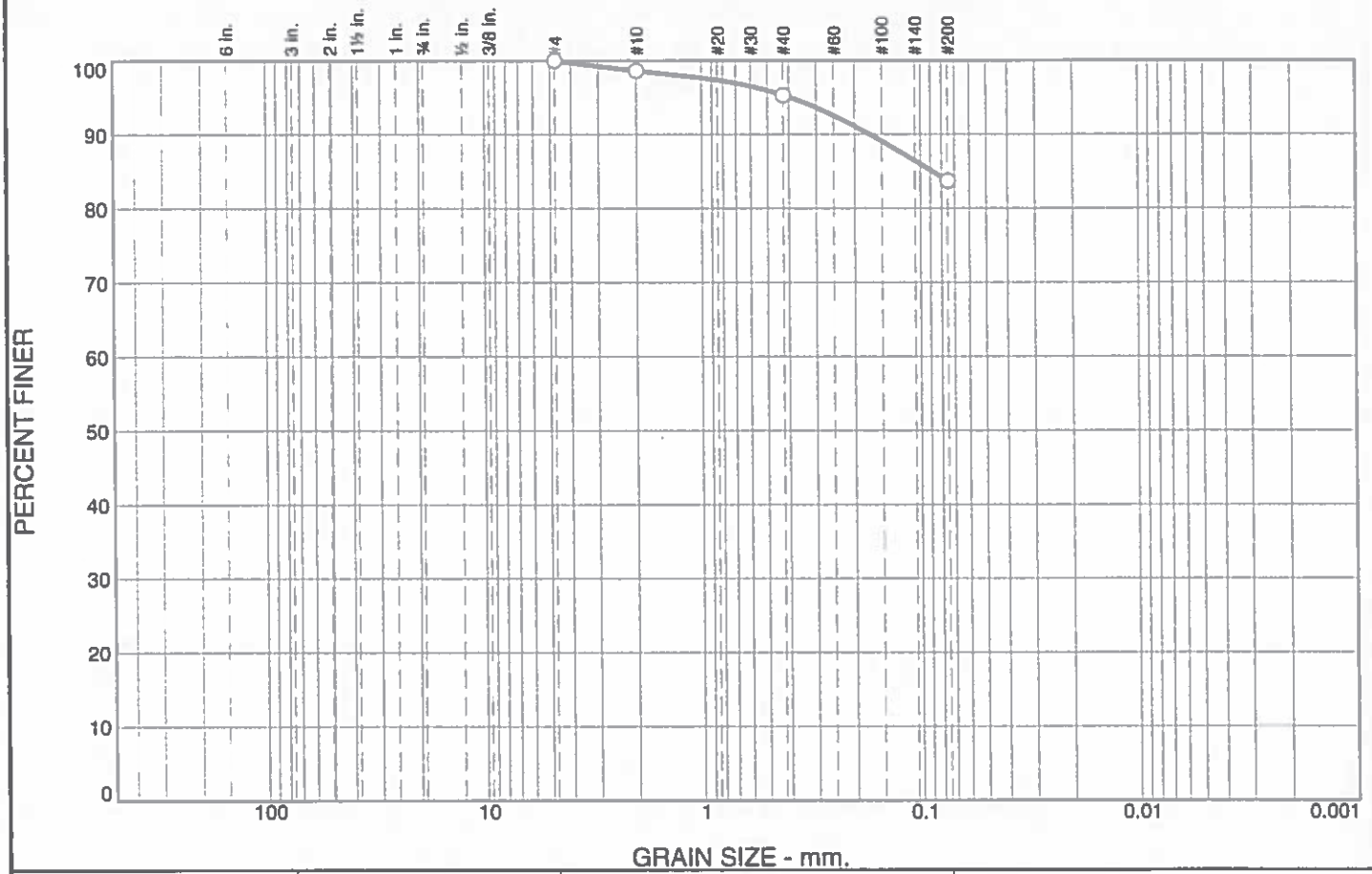
AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	1.4	3.3	11.6	83.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	98.6		
#40	95.3		
#200	83.7		

VICTOR E. RIVERA ROLON
INGENIERO LICENCIADO
Lic.5008
PUERTO RICO

* (no specification provided)

Material Description

clay, some fine sand, medium plasticity

Atterberg Limits

PL= 23 LL= 37 PI= 14

Coefficients

D_{90}= 0.1707 D_{85}= 0.0884 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-6(12)

Remarks

Source of Sample: BORING NO. 104 **Depth:** 49'@61'
Sample Number: 104-22

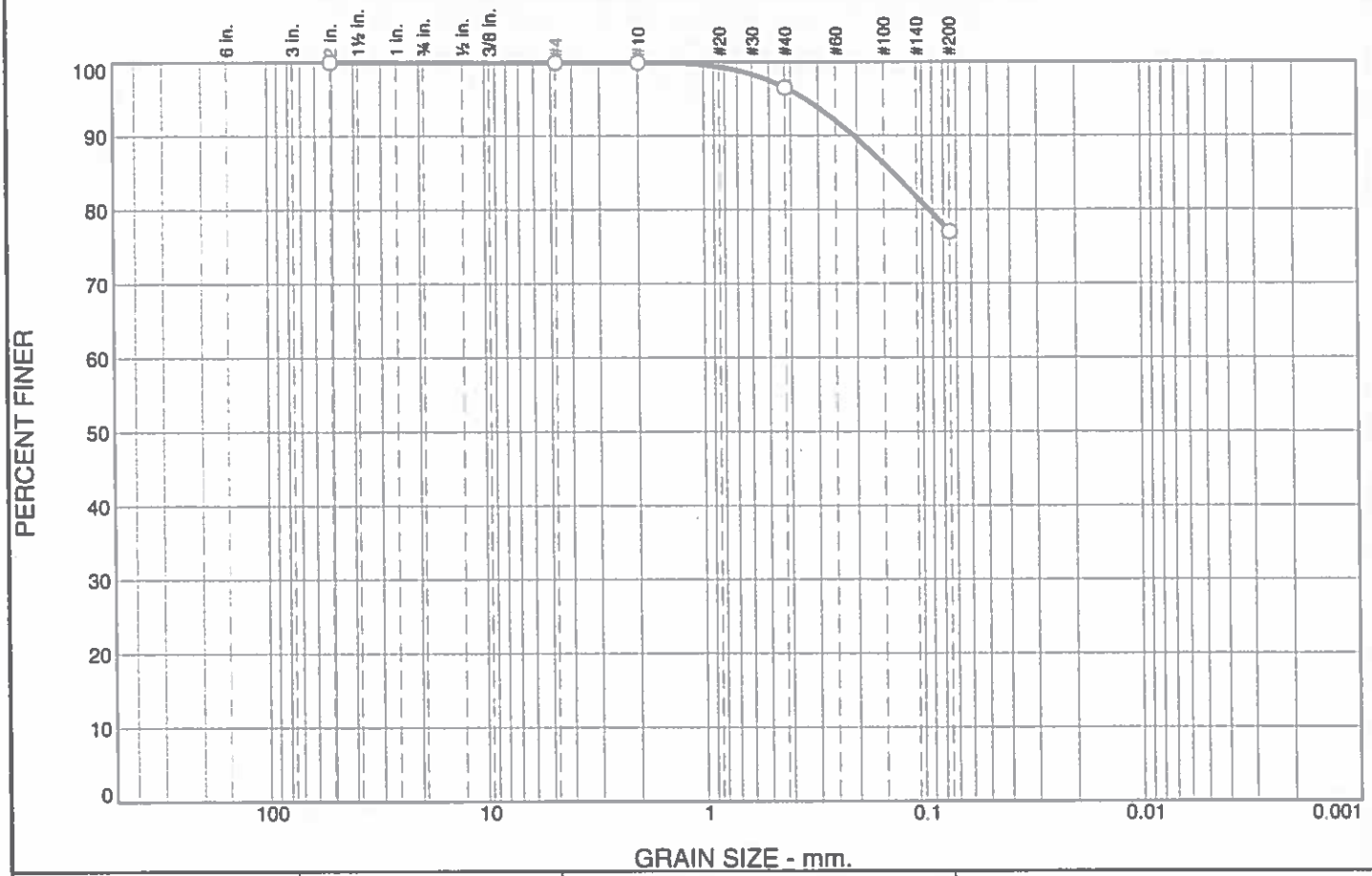
AASHTO ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.1	0.0	0.0	3.4	19.5	77.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
#4	99.9		
#10	99.9		
#40	96.5		
#200	77.0		

* (no specification provided)

Material Description

sandy clay, medium plasticity

Atterberg Limits

PL= 20 LL= 34 PI= 14

Coefficients

D_{90}= 0.2069 D_{85}= 0.1366 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-6(10)

Remarks

VICTOR E. RIVERA FOLCH INGENIERO LICENCIADO Lic.5006 PUERTO RICO

Source of Sample: BORING NO. 104 **Depth:** 64'@76'
Sample Number: 104-23

AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

PO Box 32198
Ponce, PR 00732-2198

VICTOR E. RIVERA ASSOCIATES, LLC

Geotechnical Engineers

Tels.: (787) 259-1410
E-mail: verivera@prtc.net

PROJECT: Proposed Ponce Health Science University — Improvements to Ponce Campus | BORING NO.: 105 | SHEET NO.: 1/3

LOCATION: By-Pass (PR-2), Ponce, Puerto Rico | CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán | DRILLER: A. Maldonado | WORK STARTED: 4-29-19 | WORK FINISHED: 4-30-19

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON | HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" | DRILLING FLUID: NONE | CORE DATA-TYPE BARREL: ----- | TYPE & SIZE BIT: -----

GROUND WATER: DATE AND DEPTH: ▼ 16.0'; E=-0.09m [04-29-19] | DRILL MANUFACTURER TYPE & NO.: CME-55

"X" COORDINATE: ----- | "Y" COORDINATE: ----- | ELEVATION: 4.78m | JOB NO.: 19-4467

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
1		6 – 4		11	21.6	---				
2		7 – 6								
3		7 – 4	Silt, sand and limestone gravel, cohesionless, medium	8	18.9	---				
4		4 – 4	loose to medium, cohesionless – yellow ("caliche") (a)							
5		4 – 3		7	22.9	---				
6	2.95	4 – 4	-6.0'							
7		4 – 6		13	26.5	3.19				
8		7								
9										
10		2 – 2		7	32.5	2.69				
11		5 – 5								
12										
13							52	25	87.0	
14			Clay, trace to some fine sand, high plasticity stiff to very stiff– brown / orange and gray mottled (b)				A-7-6(24) / CH			
15	▼	2 – 2	γ = 108.1pcf	5	29.9	2.18				
16		3 – 3								
17										A
18										
19										
20		2 – 3		7	34.3	1.85				
21		4 – 6								
22	-1.99		-22.0'							
23										
24										
25		Wh/12"		4	34.7	2.02				
26		3 – 3								
27			Clay, some fine sand, medium plasticity, stiff –				45	22	91.1	
28			orange / gray (b)				A-7-6(22) / CL			
29			γ = 110.9pcf							
30		WH/12"		4	37.4	1.01				
31		3 – 3								
32	-5.04		-32.0'							
33										
34			Clay, some fine sand, medium plasticity, soft -							
35		WH	dark olive gray (c) γ = 116.5pcf	WH	47.1	0.38				

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 75
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 75

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

PO Box 32198
Ponce, PR 00732-2198

VICTOR E. RIVERA ASSOCIATES, LLC

Geotechnical Engineers

Tels.: (787) 259-1410
E-mail: verivera@prtc.net

PROJECT: Proposed Ponce Health Science University Improvements to Ponce Campus | BORING NO.: 105 | SHEET NO.: 2/3

LOCATION: By-Pass (PR-2), Ponce, Puerto Rico | CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán | DRILLER: A. Maldonado | WORK STARTED: 4-29-19 | WORK FINISHED: 4-30-19

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON | HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" | DRILLING FLUID: NONE | CORE DATA-TYPE BARREL: ------ | TYPE & SIZE BIT: ------

GROUND WATER: DATE AND DEPTH: ▼ 16.0'; E=-0.09m [04-29-19] | DRILL MANUFACTURER TYPE & NO.: CME-55

"X" COORDINATE: ---- | "Y" COORDINATE: ---- | ELEVATION: 4.75m | JOB NO.: 19-4467

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
36										
37										
38							41	17	82.6	
39							A-7-6(15) / CL			
40		WH	Clay, some fine sand, medium plasticity, soft - dark olive gray (c)	WH	37.6	0.24				
41			γ = 116.5pcf							
42										
43										
44										
45		1/12"		3	38.3	0.51				
46	-9.30	2 – 2	-46.0'							
47										
48										
49										
50		WH	Sandy silt, some small peat pockets, medium compressibility, loose - dark olive gray (c)	WH	34.2	----	34	9	72.5	
51							A-4(6) / ML			
52										A
53										
54	-11.74		-54.0'							
55		1/12"		3	57.4	---	NV	NP	32.1	
56		2 – 8	Silt, sand and fine gravel, cohesionless, medium loose – dark gray (c)				A-2-4(0) / SM			
57										
58	-12.97		-58.0'							
59										
60		WH/12"		2	35.7	0.42				
61		1 – 3								
62										
63										
64			Clay, some fine sand, occasionally peaty pockets							
65		3 – 3	medium plasticity, medium to stiff – dark olive gray (c)	5	37.0	1.09				
66		2 – 2	γ = 119.6pcf							
67										
68							35	13	79.3	
69							A-6(10) / CL			
70		WH		WH	38.5	---				

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 75
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 75

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

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Ponce, PR 00732-2198

VICTOR E. RIVERA ASSOCIATES, LLC

Geotechnical Engineers

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E-mail: verivera@prtc.net

PROJECT: Proposed Ponce Health Science University Improvements to Ponce Campus — BORING NO.: 105 — SHEET NO.: 3/3

LOCATION: By-Pass (PR-2), Ponce, Puerto Rico — CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán — DRILLER: A. Maldonado — WORK STARTED: 4-29-19 — WORK FINISHED: 4-30-19

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON — HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" — DRILLING FLUID: NONE — CORE DATA-TYPE BARREL: ------ — TYPE & SIZE BIT: ------

GROUND WATER: DATE AND DEPTH: ▼ 16.0'; E=-0.09m [04-29-19] — DRILL MANUFACTURER TYPE & NO.: CME-55

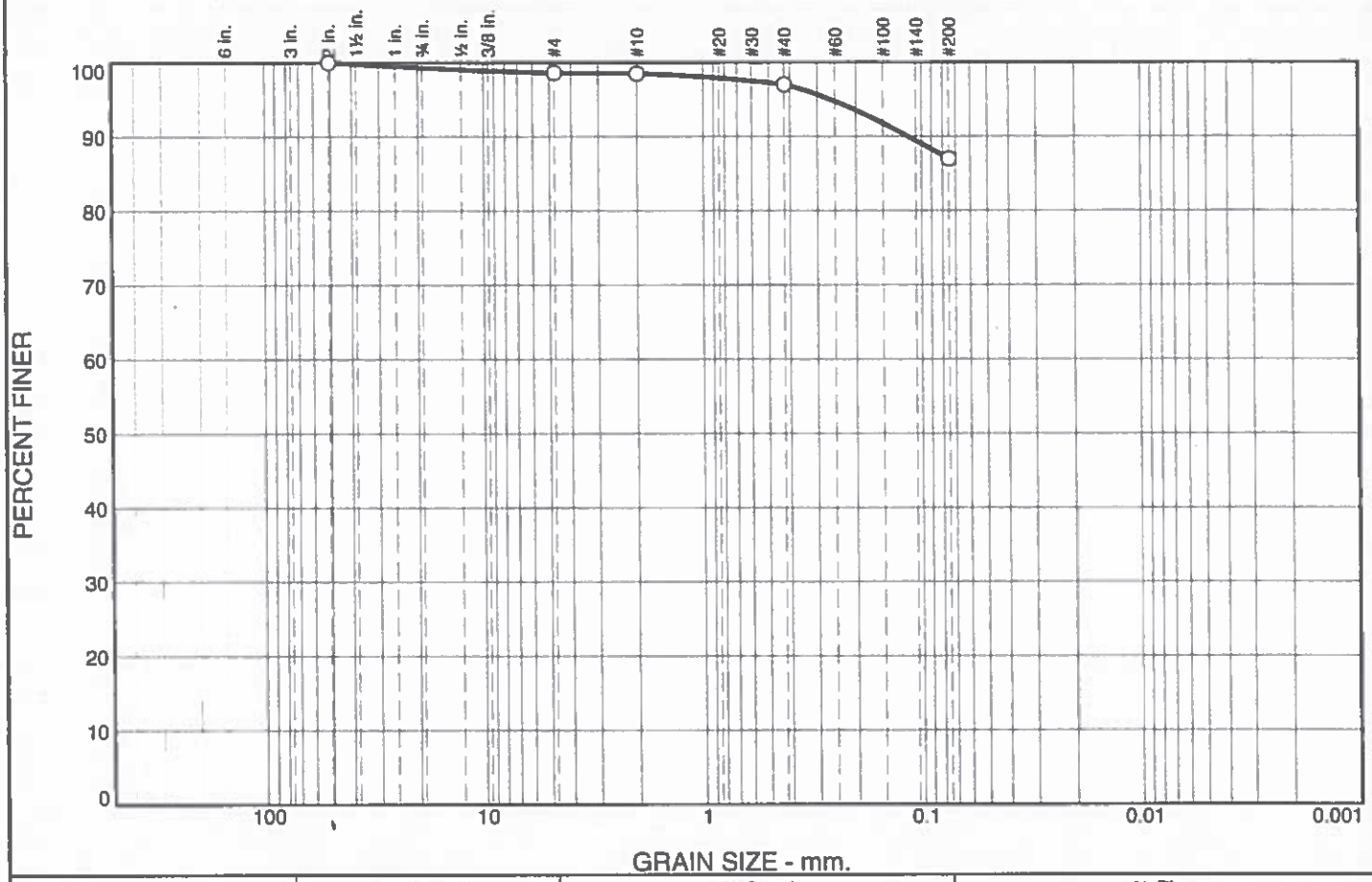
"X" COORDINATE: ----- — "Y" COORDINATE: ----- — ELEVATION: 4.75m — JOB NO.: 19-4467

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
71			Clay, some fine sand, occasionally peaty pockets medium plasticity, medium to stiff – dark olive gray (c)							
72										
73	-17.54		-73.0'							
74										
75		1/12"		8	23.5	---				
76		7 – 4	Clayey sand, medium loose – bluish gray (c)							
77										
78										
79	-19.37		-79.0'							
80		Push 18"		WH	35.4	0.91				
81		6								
82			Silty clay, medium stiff – orange (d)							
83										
84										
85	-21.19	4 – 11	-85.0'	25	22.4	---				
86		14								
87										A
88										
89										
90		10 – 11		22	12.7	---				
91		11								
92			Medium to coarse grained sand and fine grained sand, trace to some silt, medium to very dense – brown / orange (d)							
93										
94										
95		32 – 40		76	11.9	---				
96		36								
97										B
98										
99										
100	-25.92	13 – 23 – 31	-100.5'	54	12.0	----				
101			**END OF BORING**							
102			(a) - man-made fill							
103			(b) - alluvial of recent deposition							
104			(c) - lacustrine							
105			(d) - alluvial of older deposition							

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 75
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 75

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.7	0.7	0.1	1.5	10.0	87.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
#4	98.6		
#10	98.5		
#40	97.0		
#200	87.0		

* (no specification provided)

Material Description

clay, trace to some fine sand, high plasticity

Atterberg Limits

PL= 27 LL= 52 PI= 25

Coefficients

D_{90}= 0.1153 D_{85}= D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CH AASHTO= A-7-6(24)

Remarks

VICTOR E. RIVERA ROLDAN
INGENIERO LICENCIADO
Lic.5008
PUERTO RICO

Source of Sample: BORING NO. 105 **Depth:** 9'@20'
Sample Number: 105-24

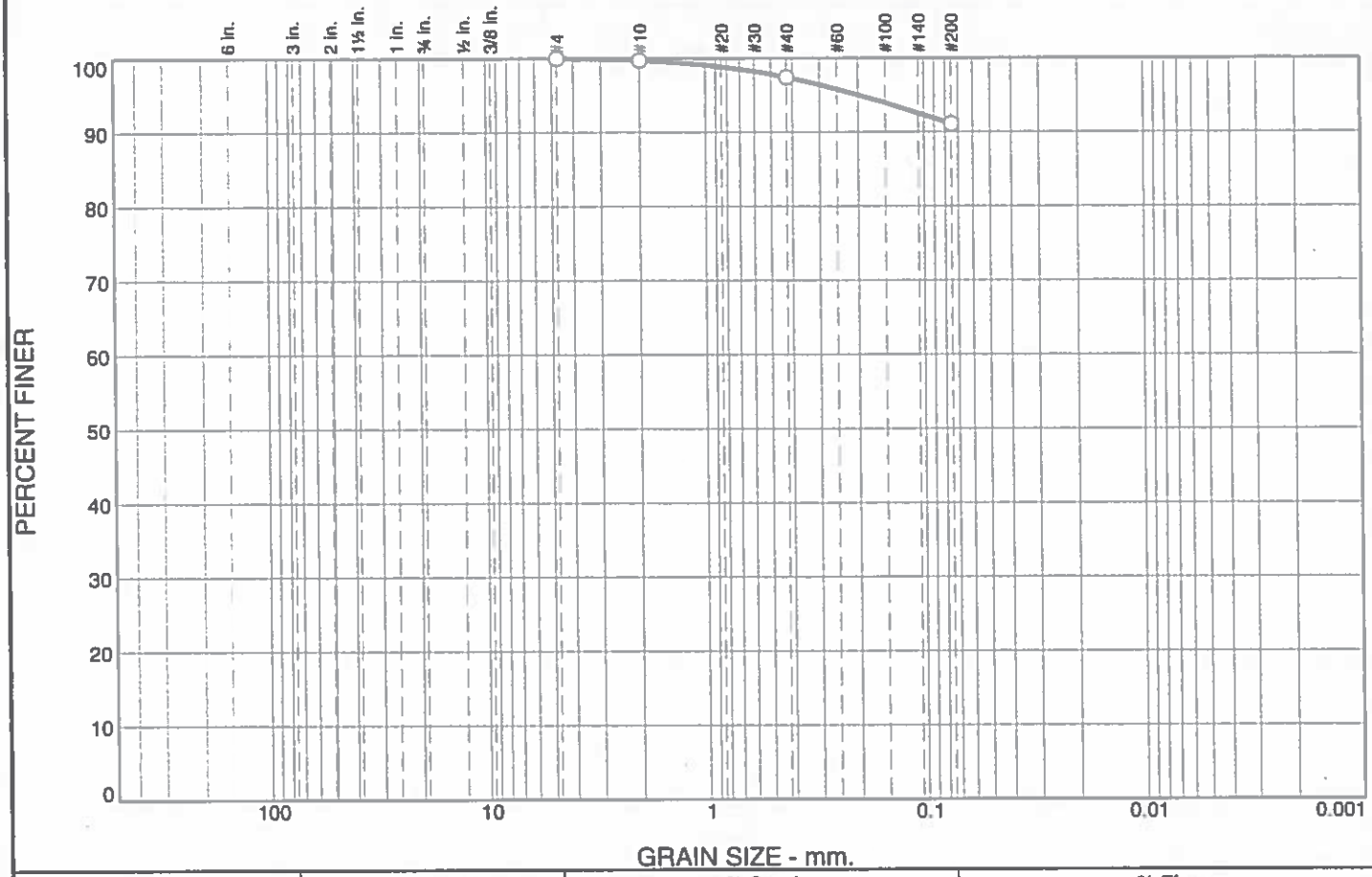
AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.3	2.3	6.3	91.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.7		
#40	97.4		
#200	91.1		

* (no specification provided)

Material Description

clay, some fine sand, medium plasticity

Atterberg Limits

PL= 23 LL= 45 PI= 22

Coefficients

D_{90}= D_{85}= D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-7-6(22)

Remarks

VICTOR E. RIVERA RULLAN
INGENIERO LICENCIADO
Lic.5008
PUERTO RICO

Source of Sample: BORING NO. 105 **Depth:** 24'@31'
Sample Number: 105-25

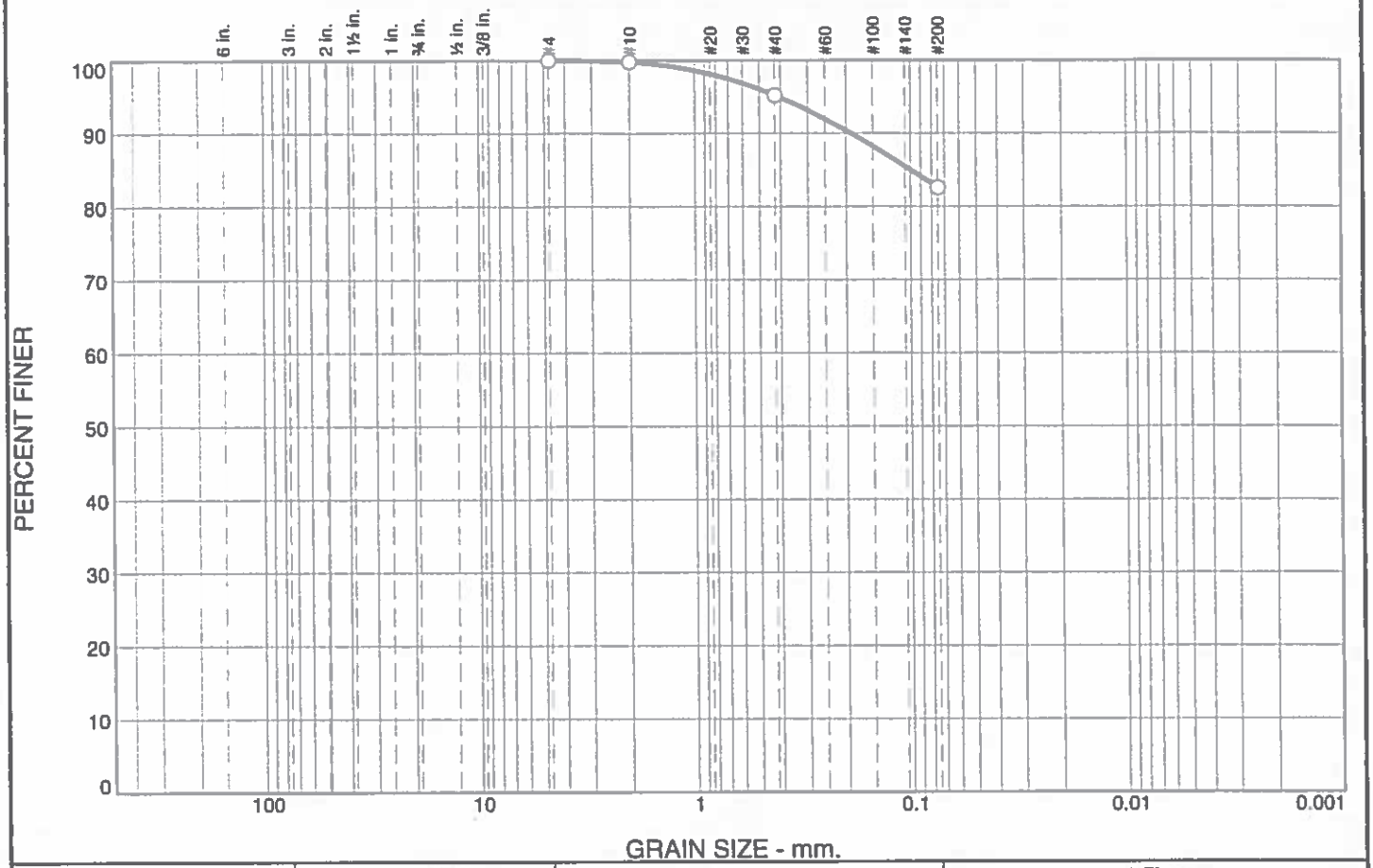
AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.2	4.6	12.6	82.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.8		
#40	95.2		
#200	82.6		

* (no specification provided)

VICTOR E. RIVERA ROLON
INGENIERO
LICENCIADO
Lic.5008
PUERTO RICO

Material Description

clay, some fine sand, medium plasticity

Atterberg Limits

PL= 24 LL= 41 PI= 17

Coefficients

D_{90}= 0.1900 D_{85}= 0.1005 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-7-6(15)

Remarks

Source of Sample: BORING NO. 105 **Depth:** 34'@46'
Sample Number: 105-26

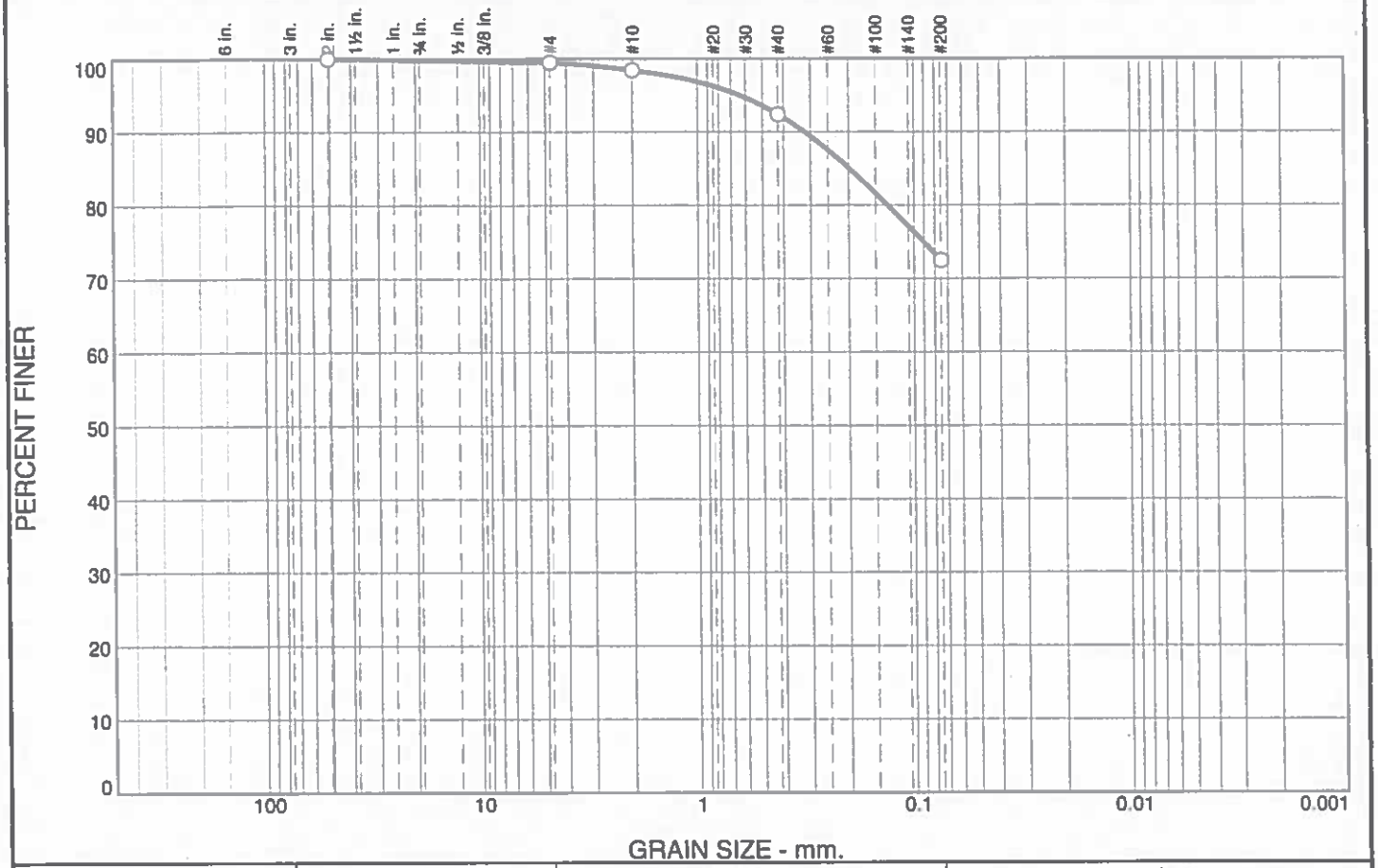
AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.2	0.3	1.1	6.0	19.9	72.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
#4	99.5		
#10	98.4		
#40	92.4		
#200	72.5		

VICTOR E. RIVERA ROLON
INGENIERO LICENCIADO
Lic.5008
PUERTO RICO

* (no specification provided)

Material Description

sandy silt, medium compressibility

Atterberg Limits

PL= 25 LL= 34 PI= 9

Coefficients

D_{90}= 0.3203 D_{85}= 0.1991 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= ML AASHTO= A-4(6)

Remarks

Source of Sample: BORING NO. 105 **Depth:** 49'@50'; 59'@60'
Sample Number: 105-27

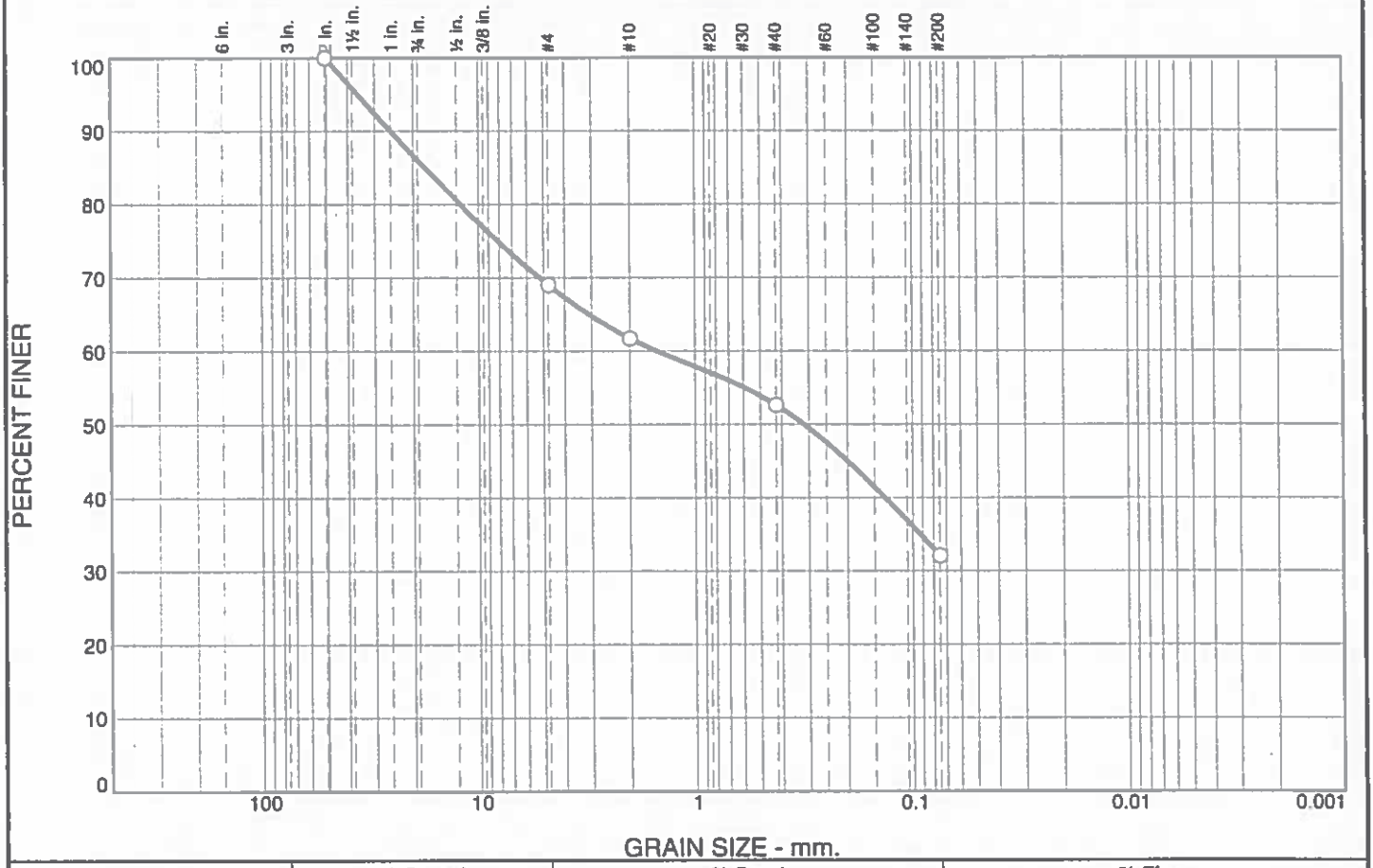
AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	14.0	17.0	7.3	9.1	20.5	32.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
#4	69.0		
#10	61.7		
#40	52.6		
#200	32.1		

* (no specification provided)

Material Description

silt, sand and fine gravel, cohessionless

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 25.3833 D_{85}= 17.7311 D_{60}= 1.5080
D_{50}= 0.3178 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

VICTOR E. RIVERA ROLON INGENIERO LICENCIADO Lic.5008 PUERTO RICO

Source of Sample: BORING NO. 105 **Depth:** 54'@56'
Sample Number: 105-28

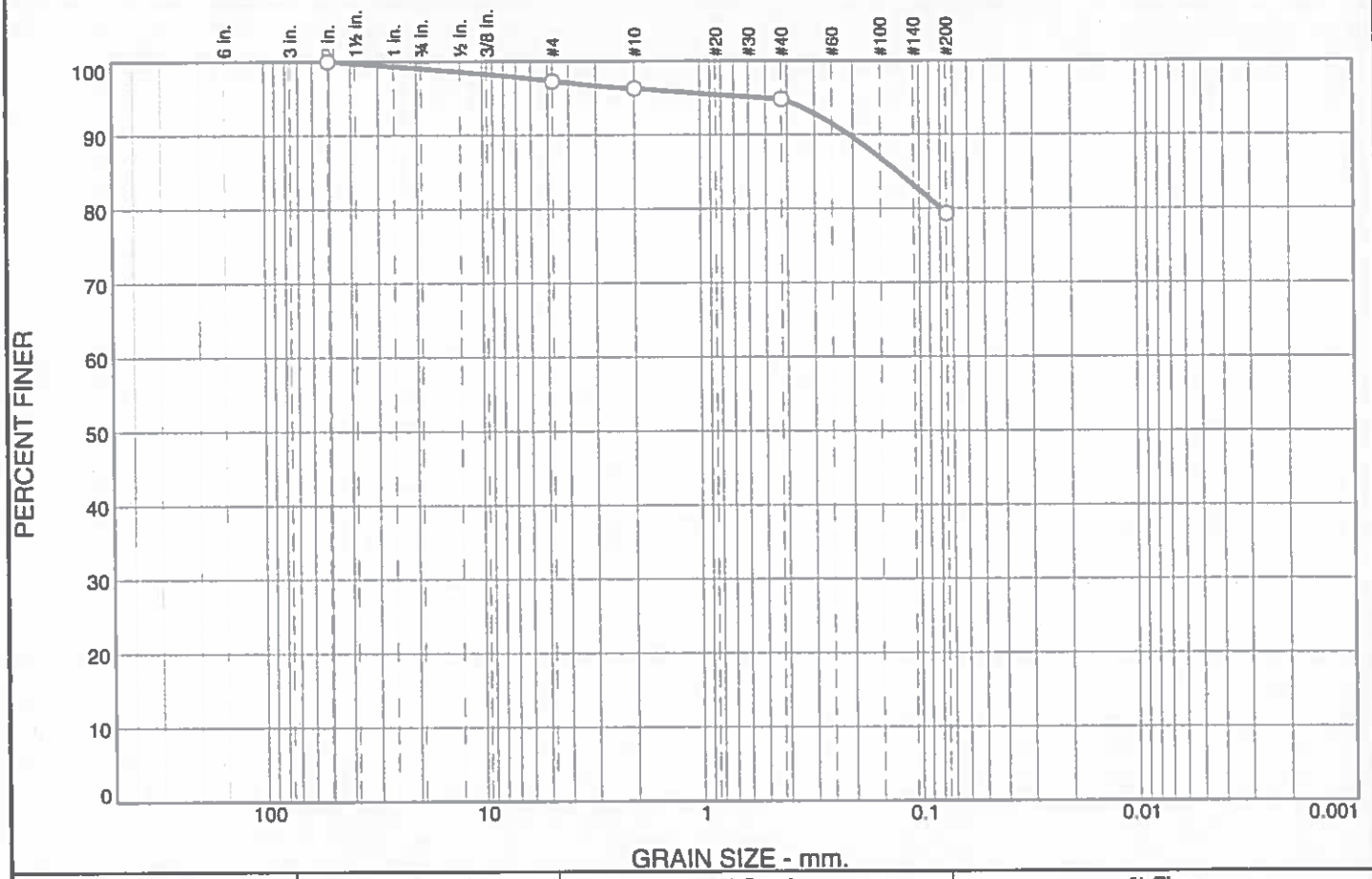
AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	1.0	1.7	1.0	1.5	15.5	79.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
#4	97.3		
#10	96.3		
#40	94.8		
#200	79.3		

* (no specification provided)

Material Description

clay, some fine sand, medium plasticity

Atterberg Limits

PL= 22 LL= 35 PI= 13

Coefficients

D_{90}= 0.2092 D_{85}= 0.1257 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-6(10)

Remarks

VICTOR E. RIVERA ROLLA
INGENIERO LICENCIADO
Lic.5008
PUERTO RICO

Source of Sample: BORING NO. 105 **Depth:** 64'@71'
Sample Number: 105-29

AAP AASHTO R18 ACCREDITED **Date:** 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

PO Box 32198
Ponce, PR 00732-2198

VICTOR E. RIVERA ASSOCIATES, LLC

Geotechnical Engineers

Tels.: (787) 259-1410
E-mail: verivera@prtc.net

PROJECT: Proposed Ponce Health Science University — Improvements to Ponce Campus | BORING NO.: 106 | SHEET NO.: 1/3

LOCATION: By-Pass (PR-2), Ponce, Puerto Rico | CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán | DRILLER: A. Maldonado | WORK STARTED: 5-06-19 | WORK FINISHED: 5-07-19

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON | HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" | DRILLING FLUID: NONE | CORE DATA-TYPE BARREL: ----- | TYPE & SIZE BIT: -----

GROUND WATER: DATE AND DEPTH: ▼ 15.0'; E=0.84m [05-07-19] | DRILL MANUFACTURER TYPE & NO.: CME-55

"X" COORDINATE: ----- | "Y" COORDINATE: ----- | ELEVATION: 5.41m | JOB NO.: 19-4467

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
1		20 – 10		'23	11.5	---				
2		13 – 10					27	11	41.4	
3		7 – 12	Clayey sand and limestone gravel, low plasticity,	19	13.0	---	A-6(1) / SC			
4		7 – 7	medium – yellow "caliche" (a)							
5		5 – 6		10	13.1	---				
6	3.58	4 – 2	-6.0'							
7		2 – 2		5	22.0	3.42				
8		3 - 7	Clay, some sand, medium plasticity, stiff to very				43	20	80.2	
9			stiff – dark brown (b)				A-7-6(16) / CL			
10		WH – 2	γ = 104.9pcf	4	25.4	1.51				
11	2.06	2 – 3	-11.0'							
12										
13										
14										
15	▼	1 – 1		3	29.3	1.18				
16		2 – 2								
17										A
18										
19										
20		1 – 3		7	30.3	2.23	46	22	94.4	
21		4 – 5	Clay, trace sand, medium to high plasticity, stiff -				A-7-6(23) / CL			
22			pale olive brown / gray (b)							
23			γ = 111.0pcf							
24										
25		WH – 2		5	32.4	---				
26		3 – 3								
27										
28										
29										
30		WH – 3		7	36.8	1.39				
31		4 – 4								
32										
33										
34										
35		2 – 3 – 3 – 4		6	37.4	1.22				

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19 JUN 2019
LOA Management

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 75
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 75

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

PO Box 32198
Ponce, PR 00732-2198

VICTOR E. RIVERA ASSOCIATES, LLC
Geotechnical Engineers

Tels.: (787) 259-1410
E-mail: verivera@prtc.net

PROJECT: Proposed Ponce Health Science University — Improvements to Ponce Campus | BORING NO.: 106 | SHEET NO.: 2/3

LOCATION: By-Pass (PR-2), Ponce, Puerto Rico | CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán | DRILLER: A. Maldonado | WORK STARTED: 5-06-19 | WORK FINISHED: 5-07-19

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON | HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" | DRILLING FLUID: NONE | CORE DATA-TYPE BARREL: ----- | TYPE & SIZE BIT: -----

GROUND WATER: DATE AND DEPTH: ▼ 15.0'; E=2.36m [05-07-19] | DRILL MANUFACTURER TYPE & NO.: CME-55

"X" COORDINATE: ----- | "Y" COORDINATE: ----- | ELEVATION: 5.41m | JOB NO.: 19-4467

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
36							44	20	90.1	
37							A-7-6(20) / CL			
38			Clay, trace fine sand, medium to high plasticity, stiff - pale olive brown / gray (b)							
39										
40		WH – 1	γ = 111.0pcf	2	32.1	0.92				
41		1 – 2								
42	-7.39		-42.0'							
43										
44			Silt, some very fine sand, low to medium compressibility							
45		1 – 2	very loose – dark olive gray (c)	3	33.8	---	32	8	84.3	
46		2 – 2	γ = 109.8pcf				A-4(6) / ML			
47	-8.92		-47.0'							
48										
49										
50		WH		WH	30.5	0.46				
51							38	16	72.1	
52			Sandy clay, some small peat pockets, medium				A-6(11) / CL			A
53			plasticity, soft to medium - dark olive gray (c)							
54										
55		WH		WH	58.5	0.26				
56										
57										
58	-12.27		-58.0'							
59										
60		6 – 15	Medium to coarse sand, some pebbles, medium dense	24	13.3	---				
61		9	- dark olive gray (c)							
62										
63	-13.80		-63.0'							
64										
65		1 – 1		3	162.0	---				
66		2 – 2	Peat, overconsolidated – black (c)							
67										
68	-15.32		-68.0							
69			Silty clay, few small peat intrusions, medium to stiff -							
70		1/12" – 2 – 2	dark olive gray (c); γ = 116.8pcf	3	31.5	1.47				

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 75
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 75

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

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VICTOR E. RIVERA ASSOCIATES, LLC

Geotechnical Engineers

Tels.: (787) 259-1410
E-mail: verivera@prtc.net

PROJECT: Proposed Ponce Health Science University Improvements to Ponce Campus — BORING NO.: 106 — SHEET NO.: 3/3

LOCATION: By-Pass (PR-2), Ponce, Puerto Rico — CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán — DRILLER: A. Maldonado — WORK STARTED: 5-06-19 — WORK FINISHED: 5-07-19

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON — HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" — DRILLING FLUID: NONE — CORE DATA-TYPE BARREL: ----- — TYPE & SIZE BIT: -----

GROUND WATER: DATE AND DEPTH: ▼ 15.0'; E=2.36m [05-07-19] — DRILL MANUFACTURER TYPE & NO.: CME-55

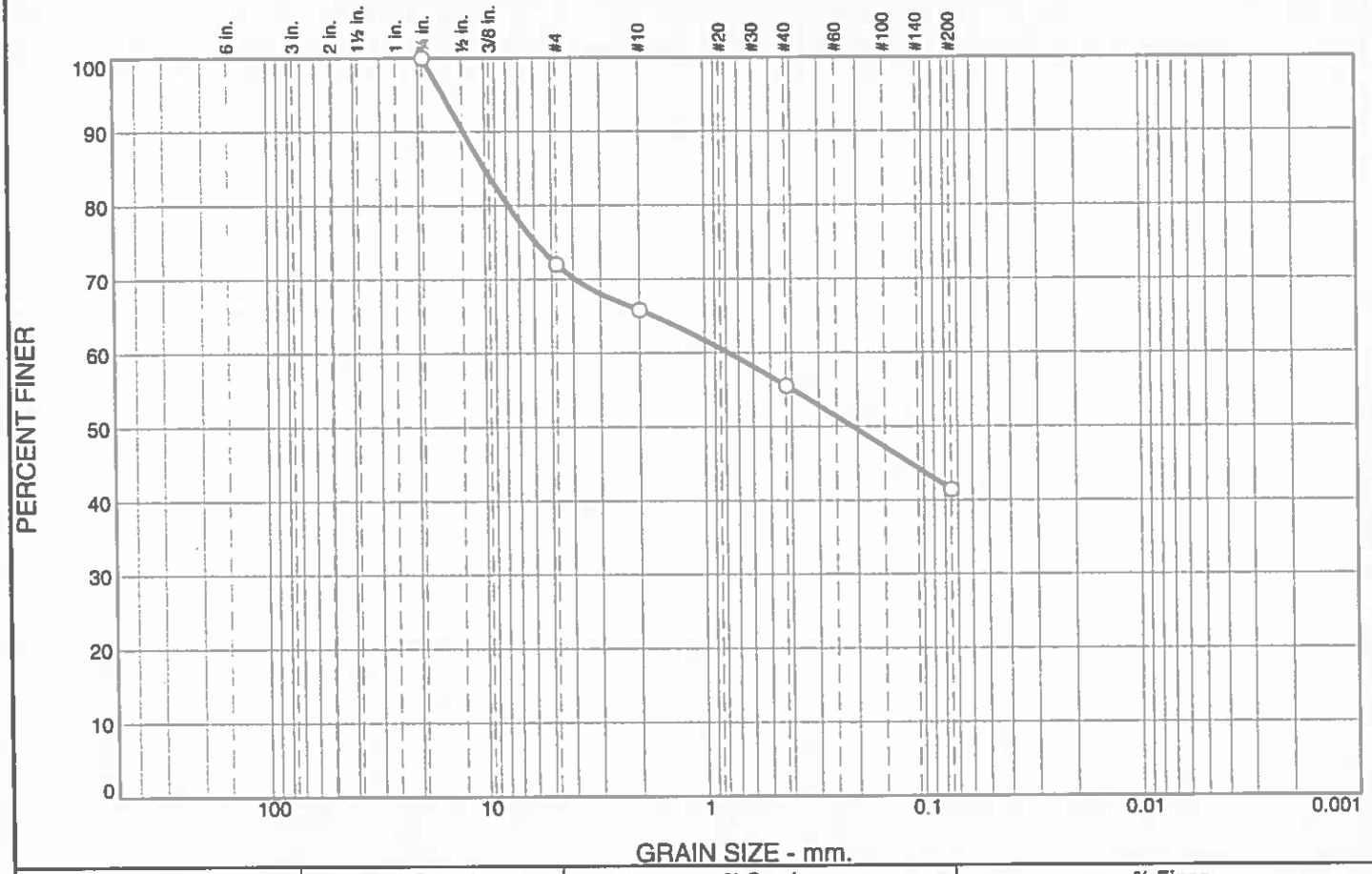
"X" COORDINATE: ----- — "Y" COORDINATE: ----- — ELEVATION: 5.41m — JOB NO.: 19-4467

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
71										
72										
73										
74										
75		WH	Silty clay, few small peat intrusions, medium to stiff - dark olive gray (c)	WH	33.3	0.71				
76			γ = 116.8pcf							
77										
78	-18.37		-78.0'							
79			Sandy clay, few fine gravel, very stiff – orange brown							
80		4 – 8	(d)	19	15.6	2.23				
81	-19.29	11	-81.0'							
82										
83										
84										
85		5 – 4		9	30.5	2.27				
86		5	Clay, stiff – orange brown (d)							
87			γ = 114.7pcf							A
88										
89										
90		3 – 5		12	34.0	1.93				
91		7 – 11								
92	-22.64		-92.0'							
93										
94										
95		7 – 10	Clay, hard – orange brown (d)	22	24.7	4.36				
96		12	γ = 120.2pcf							
97	-24.16		-97.0'							
98										
99			Silty very fine sand, dense – orange brown (d)							
100	-25.23	7 – 15 – 21	-100.5'	36	22.0	---				
101			**END OF BORING**							
102			(a) - man-made fill							
103			(b) - alluvial of recent deposition							
104			(c) - lacustrine							
105			(d) - alluvial of older deposition							

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 75
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 75

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	28.0	6.2	10.3	14.1	41.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4"	100.0		
#4	72.0		
#10	65.8		
#40	55.5		
#200	41.4		

* (no specification provided)

Material Description

clayey sand and limestone gravel, low plasticity

Atterberg Limits

PL= 16 LL= 27 PI= 11

Coefficients

D_{90}= 12.5346 D_{85}= 10.0314 D_{60}= 0.7840
D_{50}= 0.2119 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SC AASHTO= A-6(1)

Remarks

VICTOR E. RIVERA ROLDAN INGENIERO LICENCIADO Lic.5008 PUERTO RICO

Source of Sample: BORING NO. 106 **Depth:** 2'@6
Sample Number: 106-30

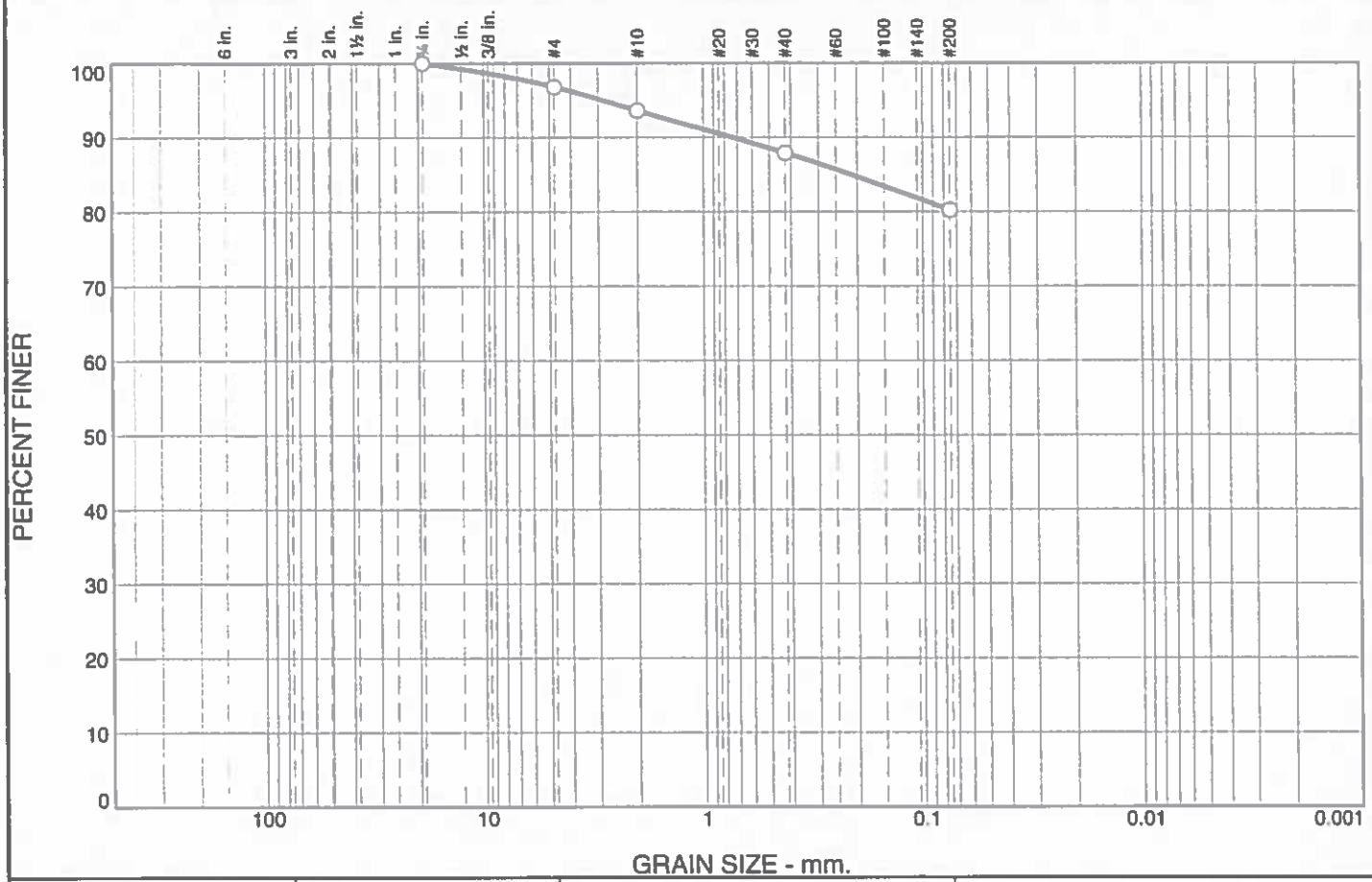
AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	3.2	3.2	5.7	7.7	80.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4"	100.0		
#4	96.8		
#10	93.6		
#40	87.9		
#200	80.2		

* (no specification provided)

Material Description

clay, some fine sand, medium plasticity

Atterberg Limits

PL= 23 LL= 43 PI= 20

Coefficients

D_{90}= 0.7426 D_{85}= 0.2132 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-7-6(16)

Remarks

VICTOR E. RIVERA ROLON
INGENIERO
LICENCIADO
Lic.5008
PUERTO RICO

Source of Sample: BORING NO. 106 **Depth:** 6'@11
Sample Number: 106-31

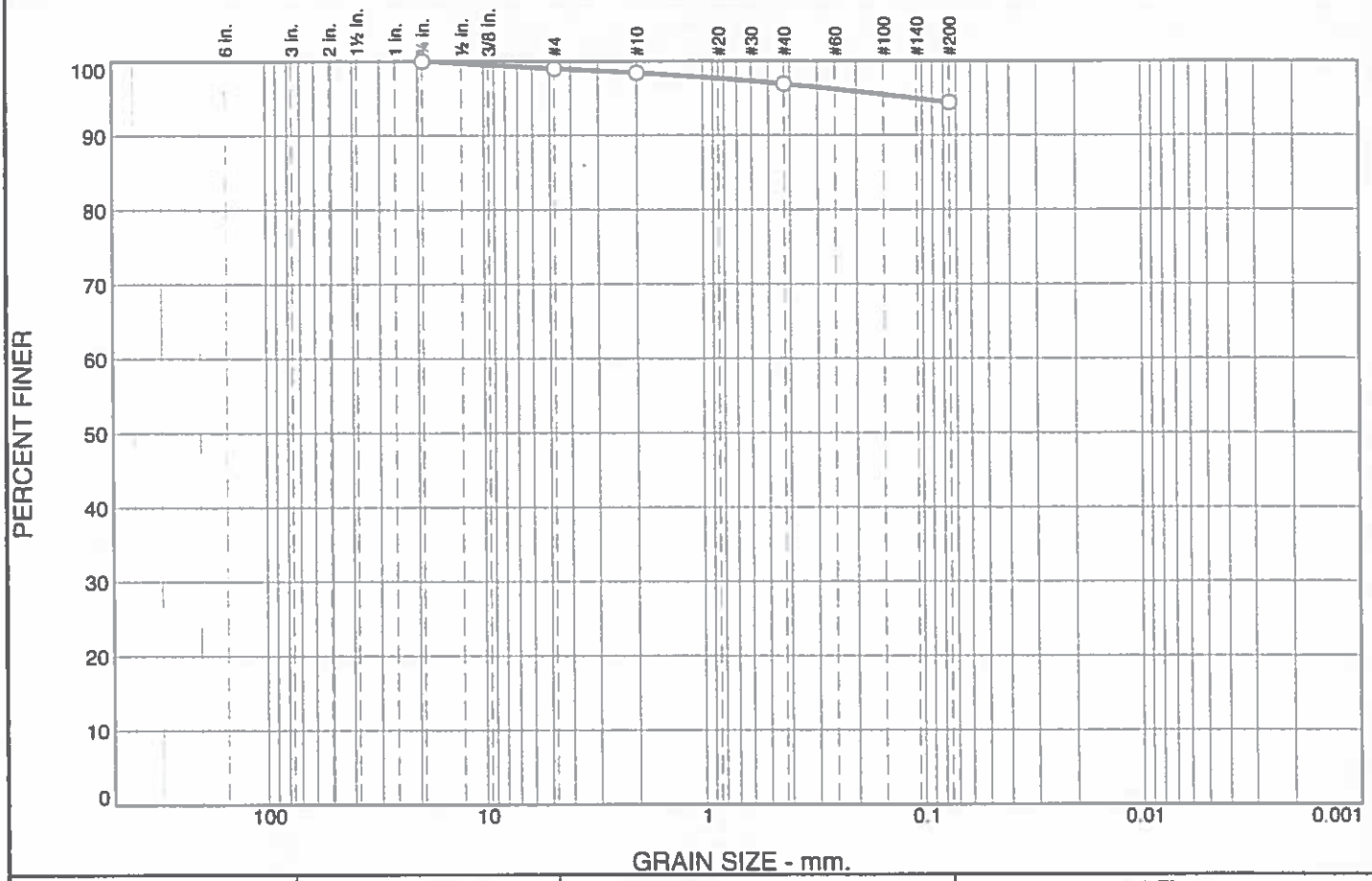
AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	1.0	0.6	1.5	2.5	94.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4"	100.0		
#4	99.0		
#10	98.4		
#40	96.9		
#200	94.4		

* (no specification provided)

Material Description

clay, trace fine sand medium to high plasticity

Atterberg Limits

PL= 24 LL= 46 PI= 22

Coefficients

D_{90}= D_{85}= D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-7-6(23)

Remarks

VICTOR E. RIVERA ROLDAN INGENIERO LICENCIADO Lic. 5008 PUERTO RICO

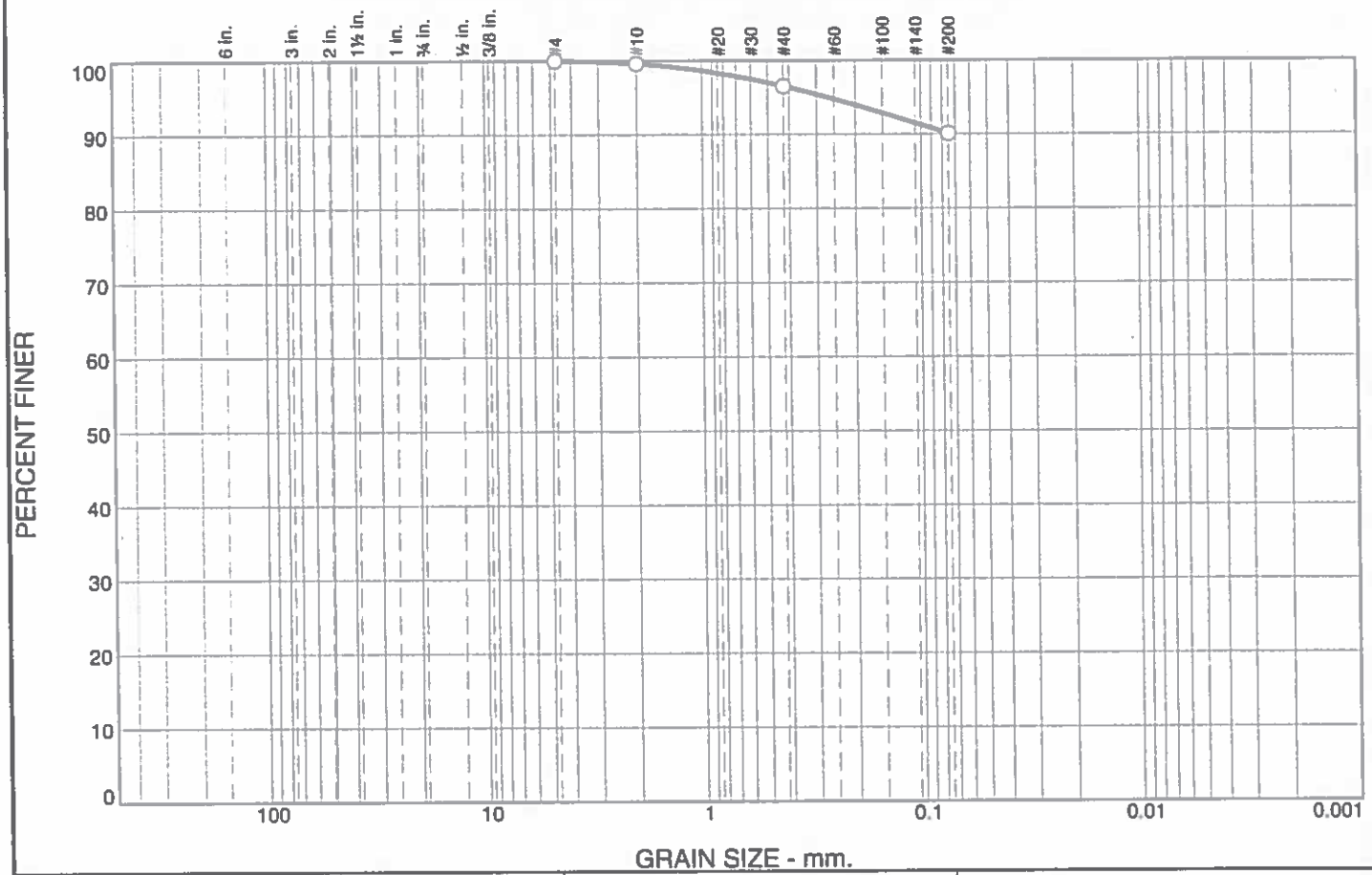
Source of Sample: BORING NO. 106 **Depth:** 14'@24'
Sample Number: 106-32

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.4	3.1	6.4	90.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.6		
#40	96.5		
#200	90.1		

VICTOR E. RIVERA ROLON
INGENIERO
LICENCIADO
Lic. 5008
PUERTO RICO

* (no specification provided)

Material Description

clay, trace to some fine sand, medium to high plasticity

Atterberg Limits

PL= 24 LL= 44 PI= 20

Coefficients

D_{90}= D_{85}= D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-7-6(20)

Remarks

Source of Sample: BORING NO. 106 **Depth:** 34'@41'
Sample Number: 106-33

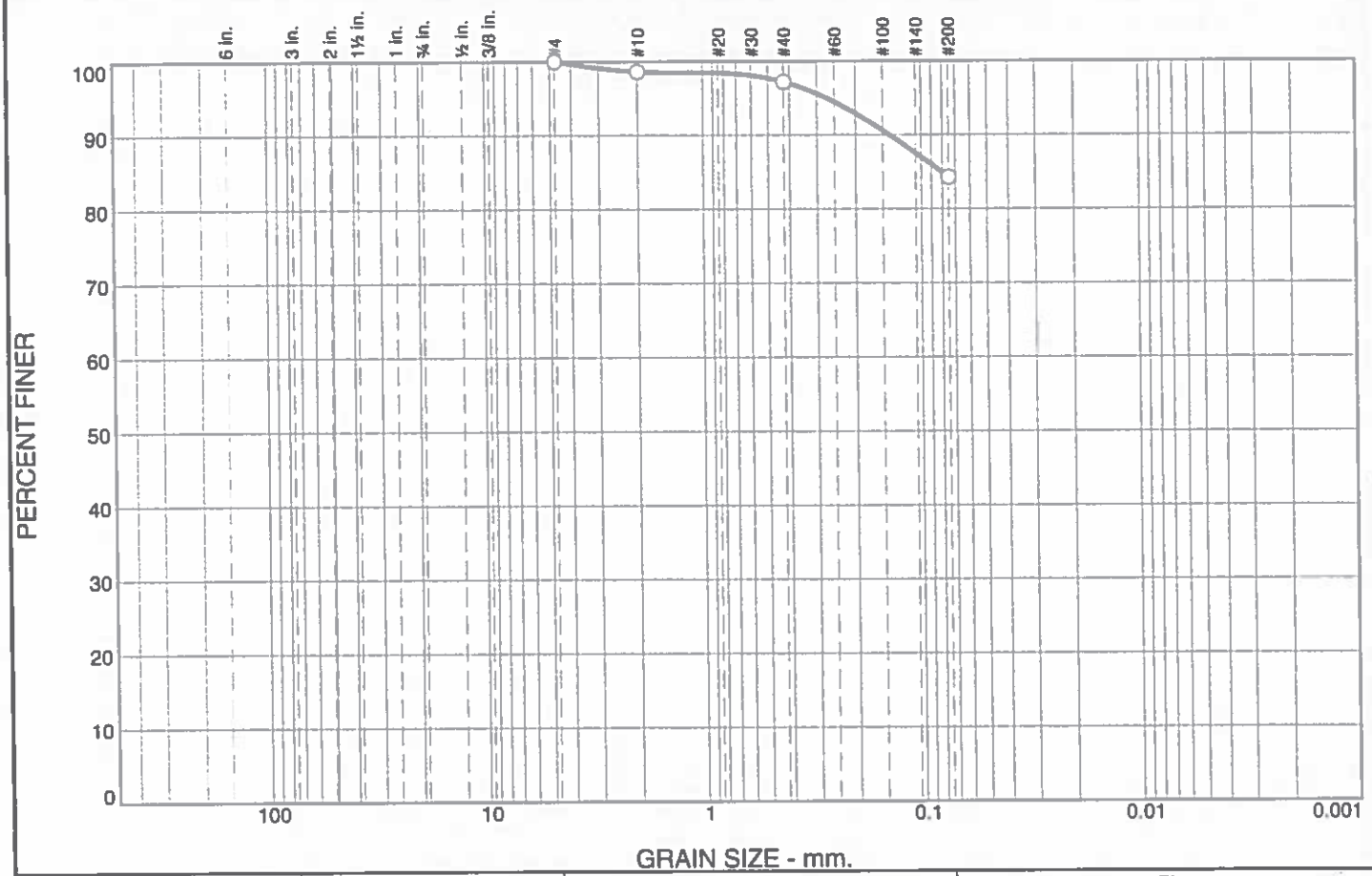
AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	1.4	1.4	12.9	84.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	98.6		
#40	97.2		
#200	84.3		

* (no specification provided)

Material Description

silt, some fine sand, low to medium compressibility

Atterberg Limits

PL= 24 LL= 32 PI= 8

Coefficients

D_{90}= 0.1401 D_{85}= 0.0808 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= ML AASHTO= A-4(6)

Remarks

VICTOR E. RIVERA ROLON — INGENIERO LICENCIADO — Lic.5008 — PUERTO RICO

Source of Sample: BORING NO. 106 **Depth:** 44'@46'
Sample Number: 106-34

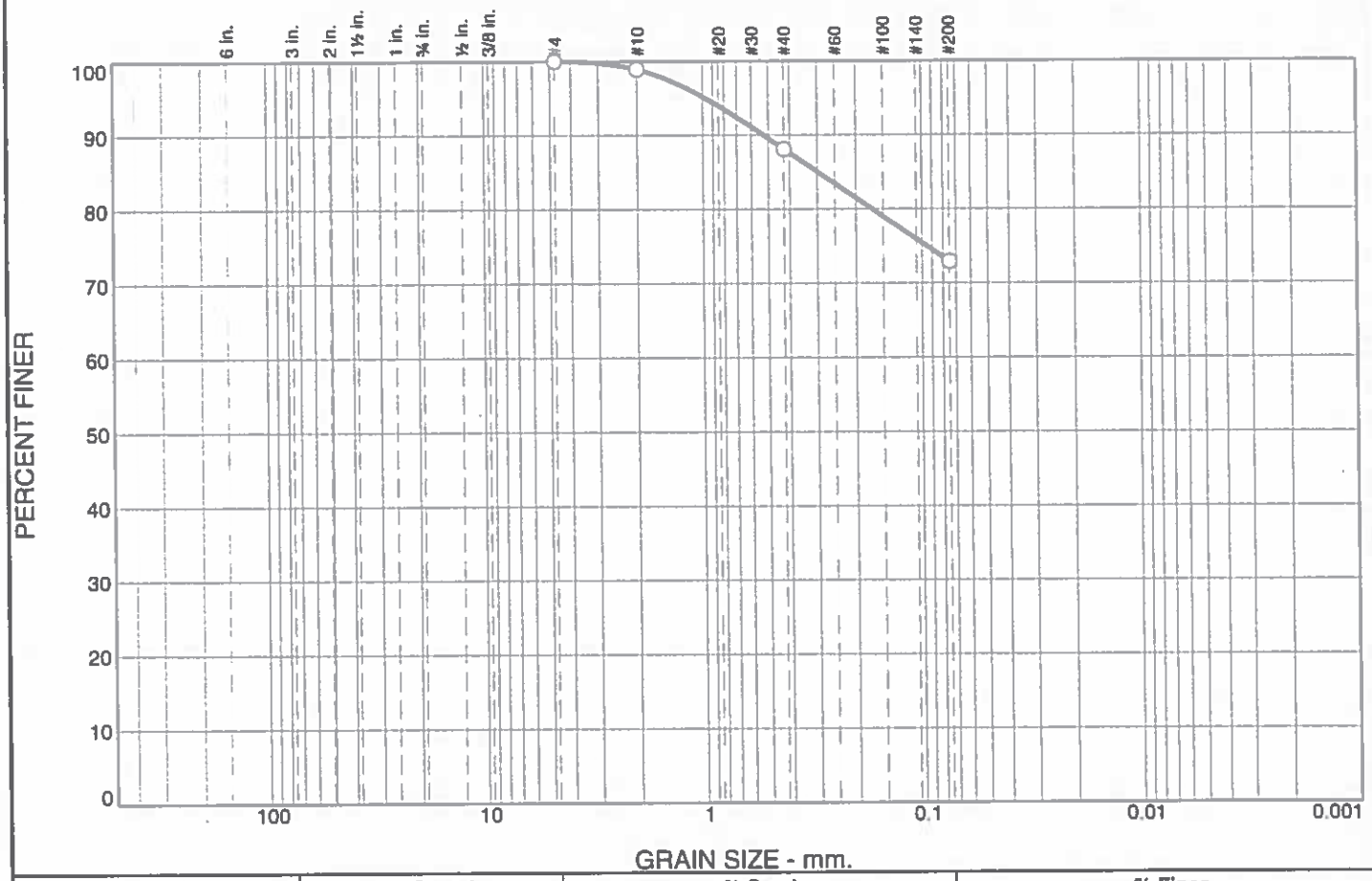
AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	1.1	10.8	15.2	72.9	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	98.9		
#40	88.1		
#200	72.9		

* (no specification provided)

Material Description

sandy clay, medium plasticity

Atterberg Limits

PL= 22 LL= 38 PI= 16

Coefficients

D_{90}= 0.5280 D_{85}= 0.2986 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-6(11)

Remarks

VICTOR E. RIVERA RUIZ INGENIERO LICENCIADO Lic.5008 PUERTO RICO

Source of Sample: BORING NO. 106 **Depth:** 49'@56'
Sample Number: 106-35

AAP AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

PO Box 32198
Ponce, PR 00732-2198

VICTOR E. RIVERA ASSOCIATES, LLC

Geotechnical Engineers

Tels.: (787) 259-1410
E-mail: verivera@prtc.net

PROJECT: Proposed Ponce Health Science University — Improvements to Ponce Campus | BORING NO.: 107 | SHEET NO.: 1/4

LOCATION: By-Pass (PR-2), Ponce, Puerto Rico | CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán | DRILLER: A. Maldonado | WORK STARTED: 5-07-19 | WORK FINISHED: 5-08-19

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON | HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" | DRILLING FLUID: NONE | CORE DATA-TYPE BARREL: ----- | TYPE & SIZE BIT: -----

GROUND WATER: DATE AND DEPTH: ▼ 15.0'; E=1.01m [05-08-19] | DRILL MANUFACTURER TYPE & NO.: CME-55

"X" COORDINATE: ----- | "Y" COORDINATE: ----- | ELEVATION: 5.58m | JOB NO.: 19-4467

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
1		10 – 8		22	8.8	---				
2		14 – 13								
3		12 – 16		33	8.5	---				
4		17 – 10								
5		12 – 10	Clayey sand and limestone gravel, cohesionless,	21	12.3	---				
6		11 – 15	medium – yellow ("caliche") (a)							
7		12 – 11		19	9.0	---				
8		8								
9	2.84		-9.0'							
10		2 – 3		5	31.5	1.09				
11		2 – 2								
12										
13										
14			Clay, medium plasticity, stiff – brown / olive mottled (b)							
15	▼	2 – 1	γ = 106.9pcf	2	37.7	---	34	12	96.0	
16		1 – 1					A-6(2) / CL			
17										A
18										
19	-0.21		-19.0'							
20		1 – 3		8	32.1	1.81				
21		5 – 5								
22										
23										
24										
25		1 – 3		5	30.6	1.43	50	25	90.6	
26		2 – 3	Clay, fine sand, high plasticity, stiff – dark brown /				A-7-6(25) / CH			
27			olive (b)							
28			γ = 108.8pcf							
29										
30		1 – 3		6	34.3	1.18				
31		3 – 4								
32										
33										
34										
35		1 – 3 – 3 – 3		6	39.1	1.26				

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 75
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 75

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

PO Box 32198
Ponce, PR 00732-2198

VICTOR E. RIVERA ASSOCIATES, LLC
Geotechnical Engineers

Tels.: (787) 259-1410
E-mail: verivera@prtc.net

PROJECT: Proposed Ponce Health Science University — Improvements to Ponce Campus — BORING NO.: 107 — SHEET NO.: 2/4

LOCATION: By-Pass (PR-2), Ponce, Puerto Rico — CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán — DRILLER: A. Maldonado — WORK STARTED: 5-07-19 — WORK FINISHED: 5-08-19

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON — HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" — DRILLING FLUID: NONE — CORE DATA-TYPE BARREL: ----- — TYPE & SIZE BIT: -----

GROUND WATER: DATE AND DEPTH: ▼ 15.0'; E=1.01m [05-08-19] — DRILL MANUFACTURER TYPE & NO.: CME-55

"X" COORDINATE: ----- — "Y" COORDINATE: ----- — ELEVATION: 5.58m — JOB NO.: 19-4467

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
36			Clay, fine sand, high plasticity, stiff – dark brown /							
37	-5.70		olive (b) -37.0'							
38										
39										
40		WH		WH	33.6	0.48				
41										
42										
43										
44										
45		WH		WH	31.9	---				
46										
47			Clay, trace to some fine sand, medium plasticity,							
48			medium soft – dark olive gray (b)							
49			γ = 110.4							
50		WH		WH	38.7	---	34	12	89.9	
51							A-6(11) / CL			
52										A
53										
54										
55		WH		WH	37.3	---				
56										
57										
58										
59										
60	-12.71	WH	-60.0'	WH	39.0	0.42				
61										
62							38	16	88.7	
63							A-6(15) / CL			
64										
65		WH	Clay, trace to some fine sand, medium plasticity,	WH	35.2	0.76				
66			medium - dark olive brown (c)							
67			γ = 120.3pcf							
68										
69										
70		WH/18" - 3		WH	37.3	0.97				

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 75
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 75

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

PO Box 32198
Ponce, PR 00732-2198

VICTOR E. RIVERA ASSOCIATES, LLC

Geotechnical Engineers

Tels.: (787) 259-1410
E-mail: verivera@prtc.net

PROJECT: Proposed Ponce Health Science University — Improvements to Ponce Campus | BORING NO.: 107 | SHEET NO.: 3/4

LOCATION: By-Pass (PR-2), Ponce, Puerto Rico | CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán | DRILLER: A. Maldonado | WORK STARTED: 5-07-19 | WORK FINISHED: 5-08-19

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON | HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" | DRILLING FLUID: NONE | CORE DATA-TYPE BARREL: ----- | TYPE & SIZE BIT: -----

GROUND WATER: DATE AND DEPTH: ▼ 15.0'; E=1.01m [05-08-19] | DRILL MANUFACTURER TYPE & NO.: CME-55

"X" COORDINATE: ----- | "Y" COORDINATE: ----- | ELEVATION: 5.58m | JOB NO.: 19-4467

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
71							36	14	92.7	
72							A-6(14) / CL			
73										
74			Clay, trace to some fine sand, medium plasticity,							
75		WH/18"	medium - dark olive brown (c)	WH	36.8	0.92				
76		4	γ = 120.3pcf							
77										
78										
79	-18.51		-79.0'							
80		1 – 2		5	37.2	1.09				
81		3 - 5								
82										
83										
84			Clay, stiff – orange brown / olive mottled (d)							
85		4 – 4	γ = 122.4pcf	9	23.4	1.30				
86		5								
87										A
88	-21.25		-88.0'							
89										
90		1/18"		1/18"	31.8	---				
91			Silty clay, soft – orange brown (d)							
92										
93	-22.77		-93.0'							
94										
95		10 – 8		18	9.2	---				
96		10								
97										
98			Coarse sand and fine gravel / some silt, medium –							
99			orange brown (d)							
100		7 – 7		18	24.6	---				
101		9 – 10								
102										
103										
104	-26.13		-104.0'							
105		7 – 7 – 9 – 10	Silty clay, stiff to very stiff – orange brown (d)	16	24.2	2.27				

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 75
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 75

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

PO Box 32198
Ponce, PR 00732-2198

VICTOR E. RIVERA ASSOCIATES, LLC

Geotechnical Engineers

Tels.: (787) 259-1410
E-mail: verivera@prtc.net

PROJECT: Proposed Ponce Health Science University
Improvements to Ponce Campus
BORING NO.: 107 SHEET NO.: 4/4

LOCATION: By-Pass (PR-2), Ponce, Puerto Rico CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán DRILLER: A. Maldonado WORK STARTED: 5-07-19 WORK FINISHED: 5-08-19

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES 1 3/8" I.D. SPLIT SPOON HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" DRILLING FLUID: NONE CORE DATA-TYPE BARREL: ----- TYPE & SIZE BIT: -----

GROUND WATER: DATE AND DEPTH: ▽ 15.0'; E=1.01m [05-08-19] DRILL MANUFACTURER TYPE & NO. CME-55

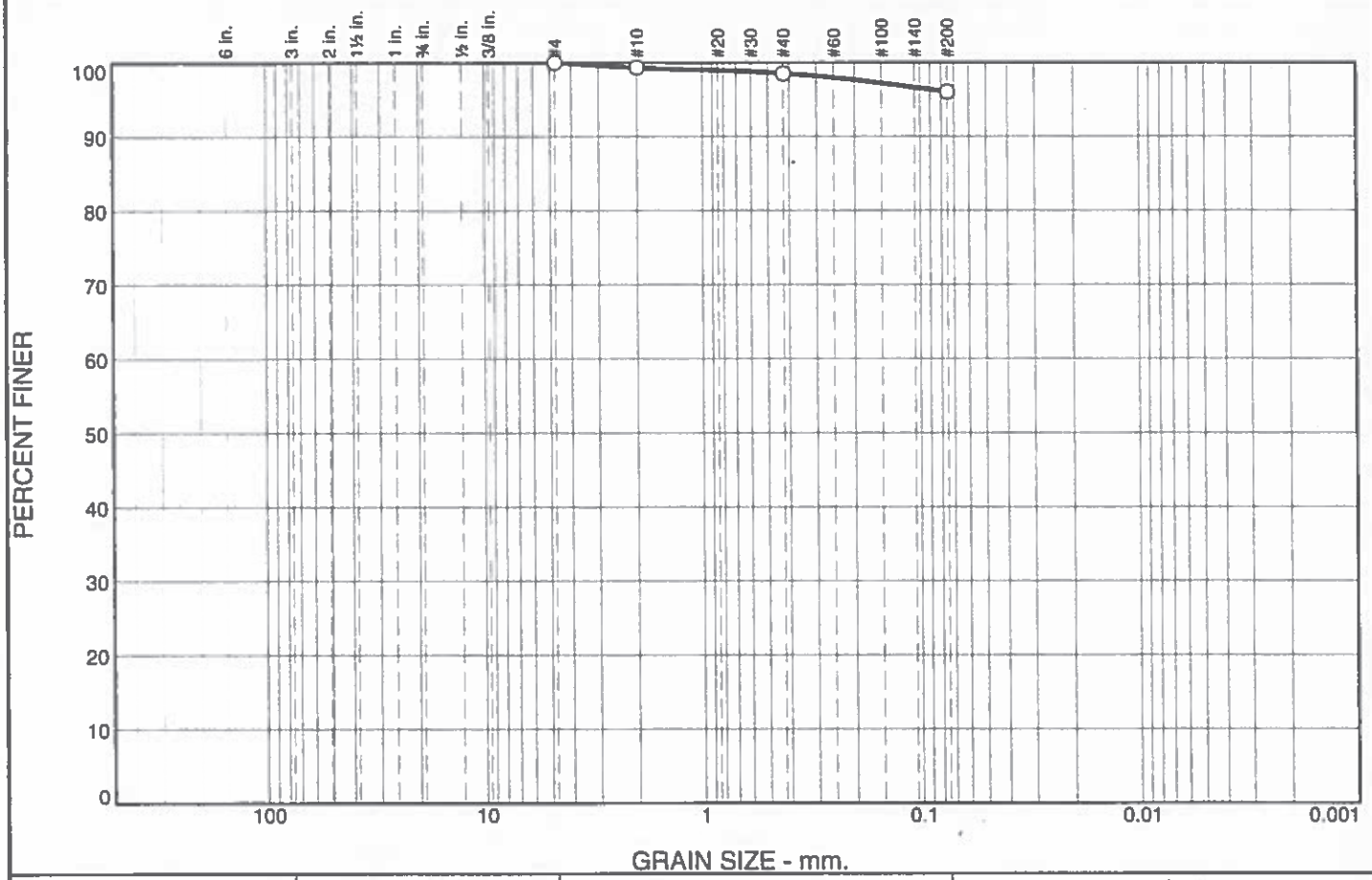
"X" COORDINATE: ----- "Y" COORDINATE: ----- ELEVATION: 5.58m JOB NO.: 19-4467

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
106										
107			Silty clay, stiff to very stiff – orange brown (d)							A
108	-27.35		-108.0'							
109										
110		19 – 60/5"		79/11"	15.4	---				
111			Medium to coarse sand and weathered fine gravel /							
112			some silt, very dense – orange brown (d)							B
113										
114										
115	-29.63	68 – 37 – 34	-115.5'	71	15.00	---				
116			END OF BORING							
117										
118										
119										
120										
121										
122			(a) - man-made fill							
123			(b) - alluvial of recent deposition							
124			(c) - lacustrine							
125			(d) - alluvial of older deposition							
126										
127										
128										
129										
130										
131										
132										
133										
134										
135			END OF BORING							
136										
137										
138										
139										
140										

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 75
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 75

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.7	0.8	2.5	96.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.3		
#40	98.5		
#200	96.0		

* (no specification provided)

VICTOR E. RIVERA ROLDAN INGENIERO LICENCIADO Lic.5008 PUERTO RICO

Material Description

clay, medium plasticity

Atterberg Limits

PL= 22 LL= 34 PI= 12

Coefficients

D_{90}= D_{85}= D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-6(12)

Remarks

Source of Sample: BORING NO. 107 **Depth:** 14'@15'
Sample Number: 107-36

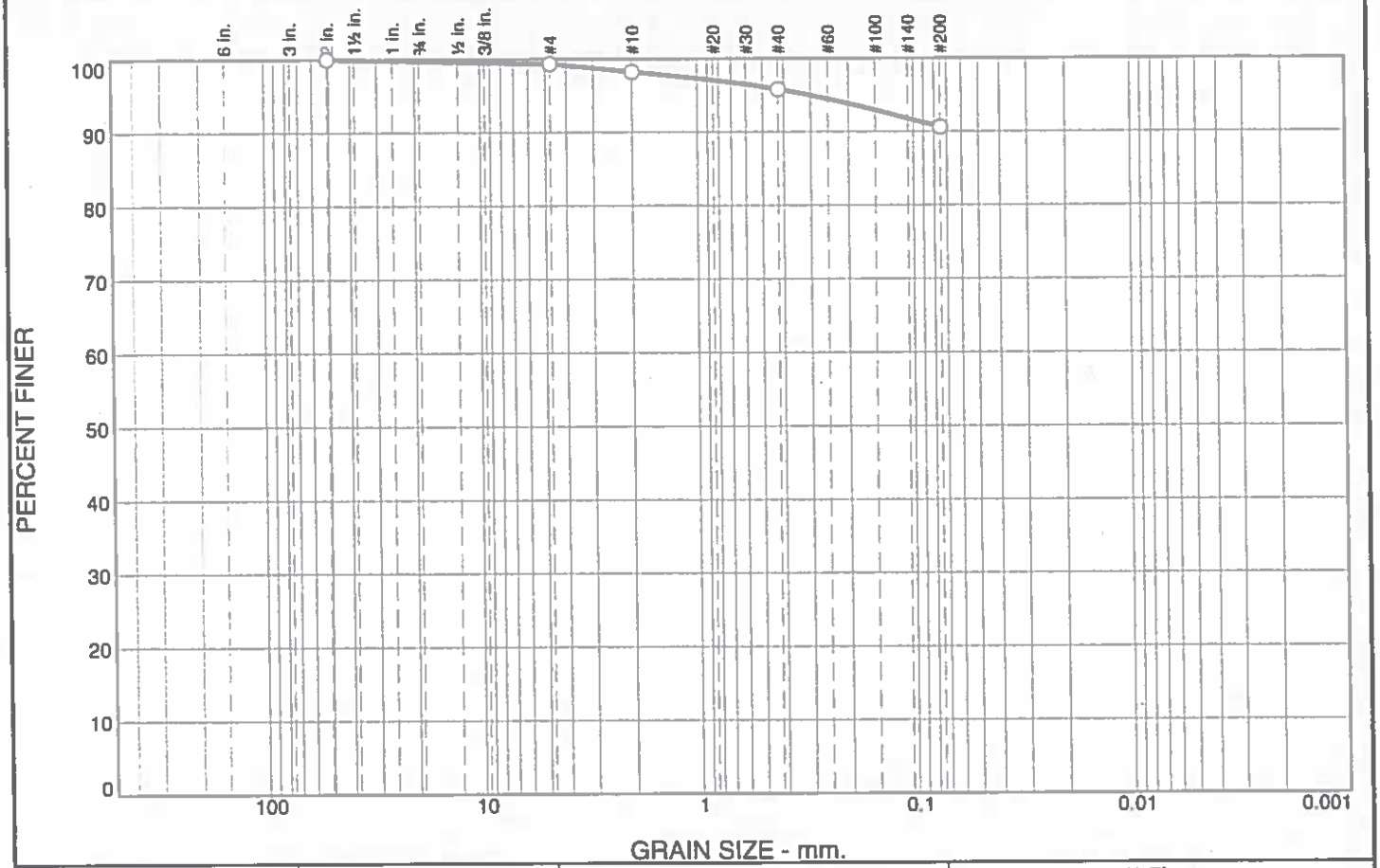
AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.3	0.4	1.1	2.4	5.2	90.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
#4	99.3		
#10	98.2		
#40	95.8		
#200	90.6		

* (no specification provided)

Material Description

clay, fine sand, high plasticity

Atterberg Limits

PL= 25 LL= 50 PI= 25

Coefficients

D_{90}= D_{85}= D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CH AASHTO= A-7-6(25)

Remarks

VICTOR E. RIVERA ROLON INGENIERO LICENCIADO Lic.5008 PUERTO RICO

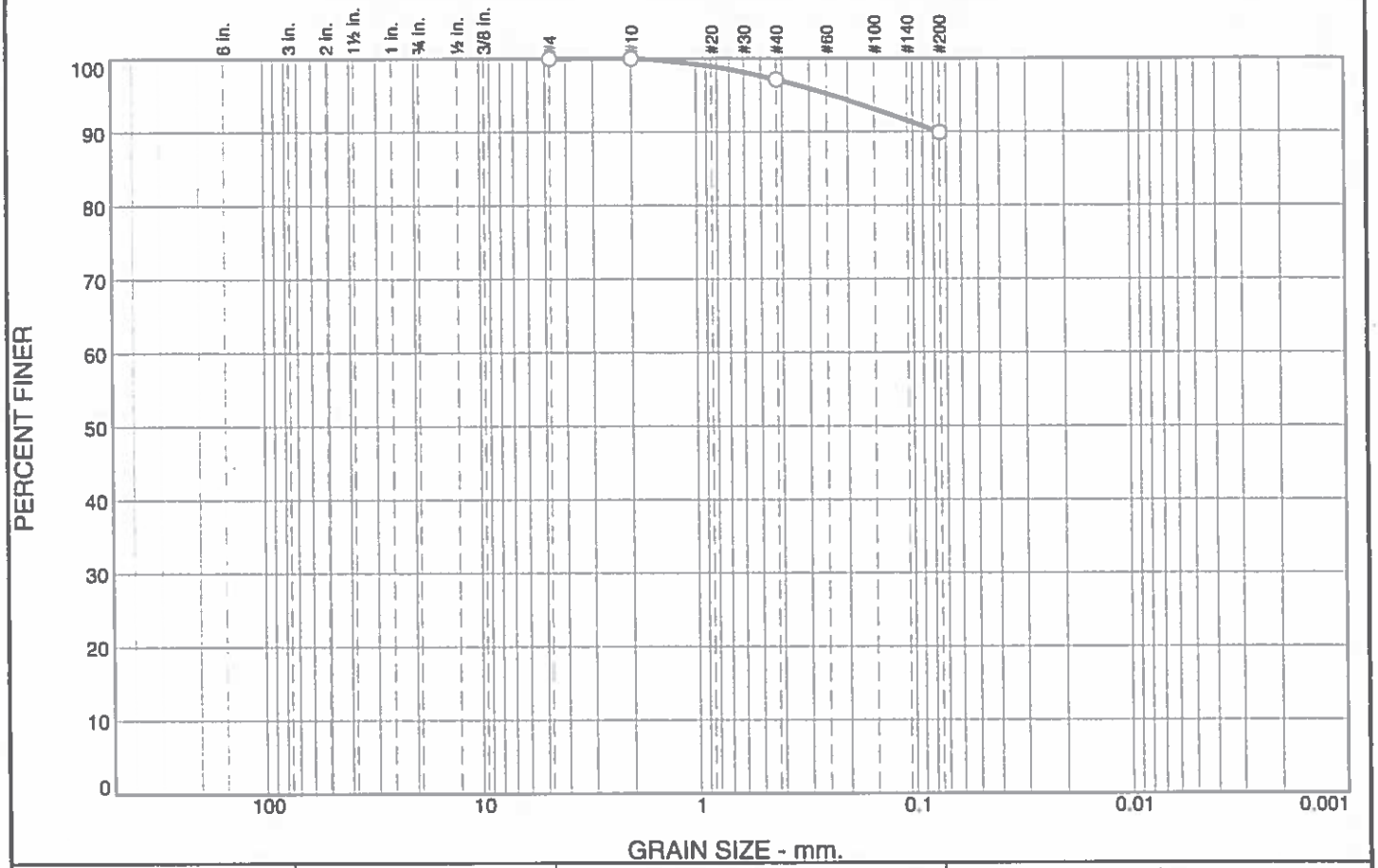
Source of Sample: BORING NO. 107 **Depth:** 19'@29'
Sample Number: 107-37

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	2.9	7.2	89.9	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	100.0		
#40	97.1		
#200	89.9		

VICTOR E. RIVERA POLANCO INGENIERO LICENCIADO Lic.5008 PUERTO RICO

(no specification provided)

Material Description

clay, trace to some fine sand, medium plasticity

Atterberg Limits

PL= 22 LL= 34 PI= 12

Coefficients

D_{90}= 0.0766 D_{85}= D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-6(11)

Remarks

Source of Sample: BORING NO. 107 **Depth:** 44'@56'
Sample Number: 107-38

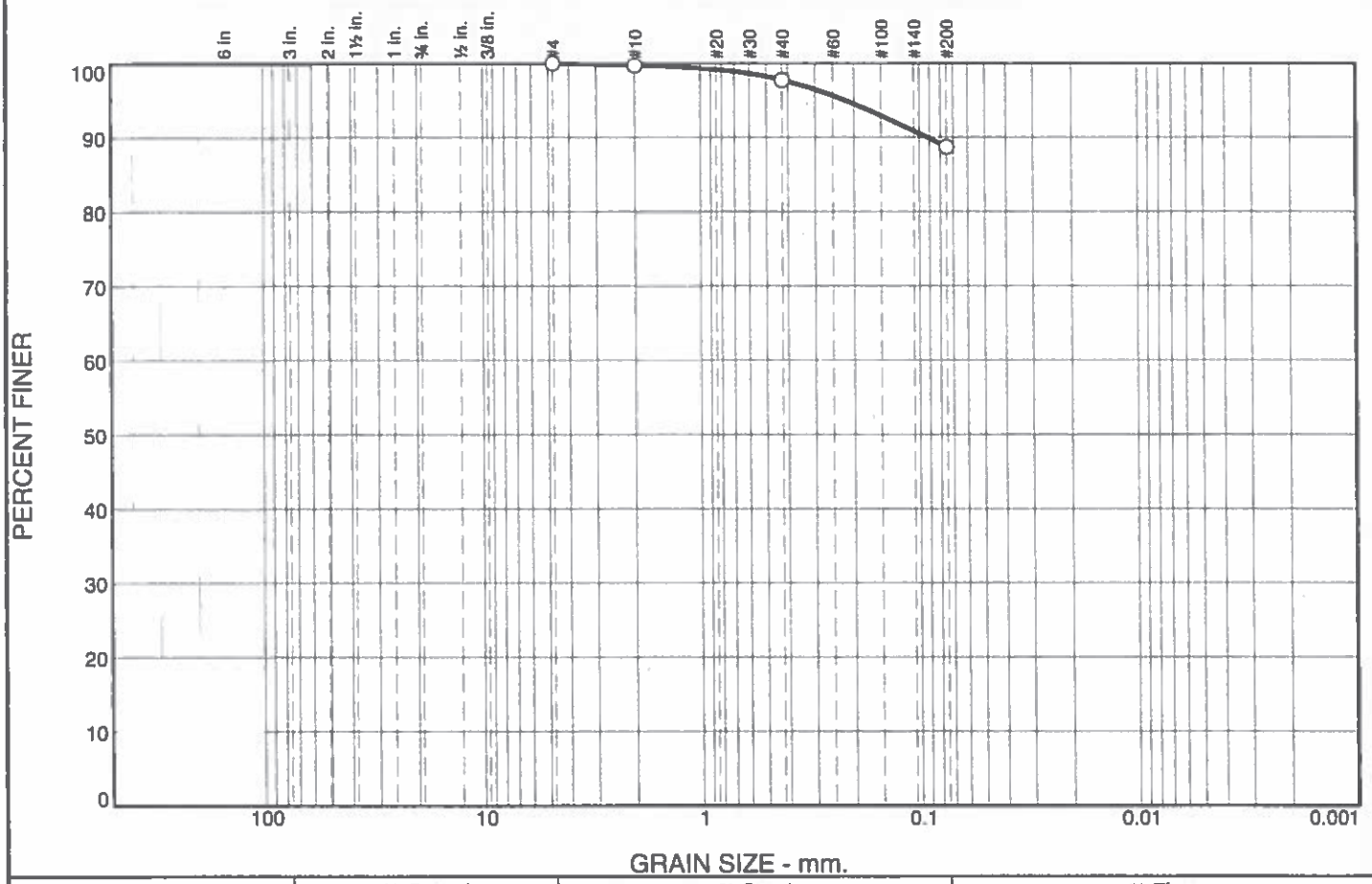
AAP AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.3	2.0	9.0	88.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.7		
#40	97.7		
#200	88.7		

VICTOR E. RIVERA ROLON
INGENIERO LICENCIADO
Lic.5008
PUERTO RICO

* (no specification provided)

Material Description

clay, trace to some fine sand, medium plastsicity

Atterberg Limits

PL= 22 LL= 38 PI= 16

Coefficients

D_{90}= 0.0925 D_{85}= D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-6(15)

Remarks

Source of Sample: BORING NO. 107 **Depth:** 59'@66'
Sample Number: 107-39

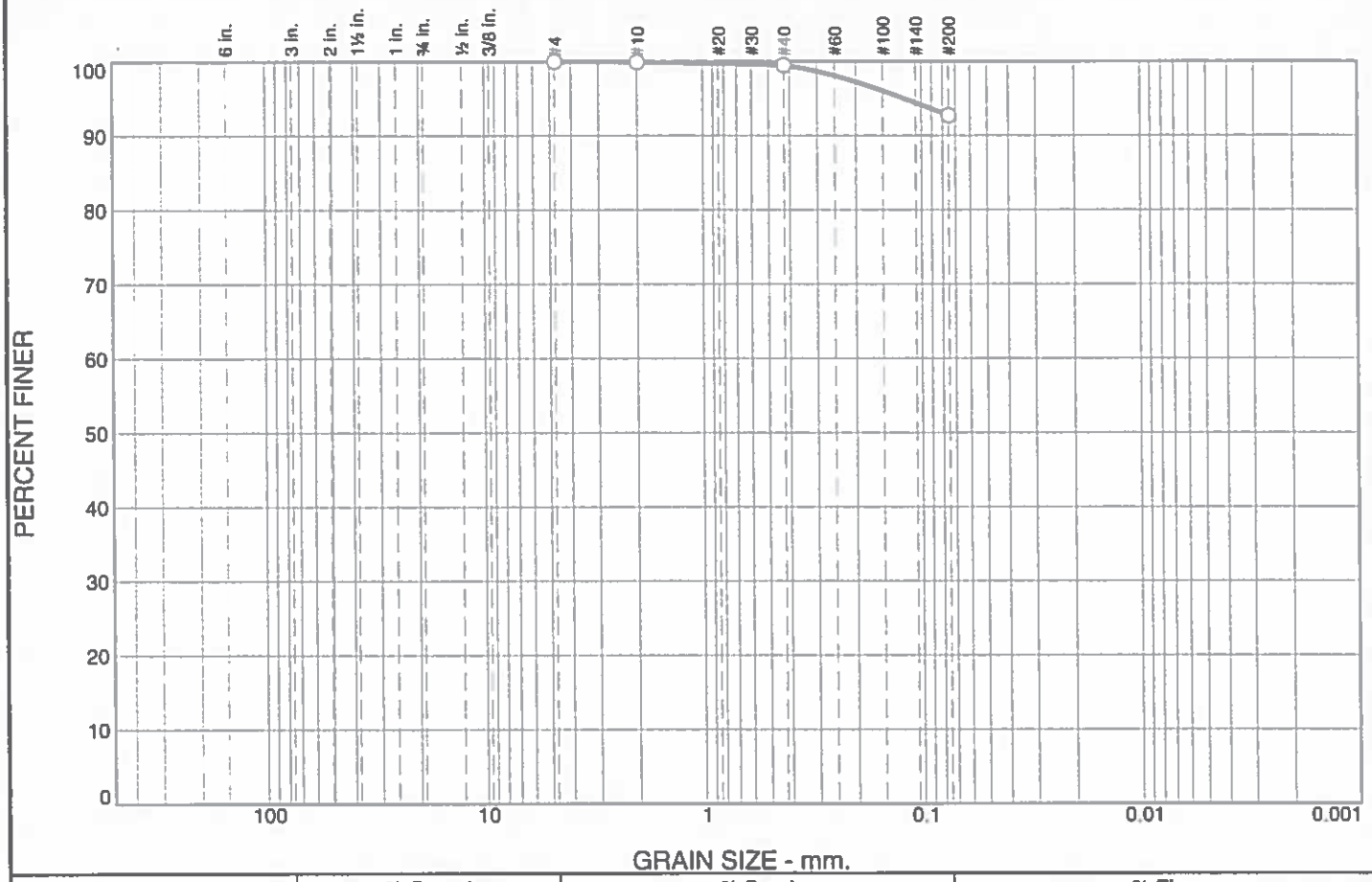
AAP AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.1	0.4	6.8	92.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.9		
#40	99.5		
#200	92.7		

* (no specification provided)

VICTOR E. RIVERA ROLON
INGENIERO
LICENCIADO
Lic.5008
PUERTO RICO

Material Description

clay, trace fine sand, medium plasticity

Atterberg Limits

PL= 22 LL= 36 PI= 14

Coefficients

D_{90}= D_{85}= D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-6(14)

Remarks

Source of Sample: BORING NO. 107 **Depth:** 69'@76'
Sample Number: 107-40

AAP AASHTO R18 ACCREDITED **Date:** 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

PO Box 32198
Ponce, PR 00732-2198

VICTOR E. RIVERA ASSOCIATES, LLC

Geotechnical Engineers

Tels.: (787) 259-1410
E-mail: verivera@prtc.net

PROJECT: Proposed Ponce Health Science University — Improvements to Ponce Campus | BORING NO.: 108 | SHEET NO.: 1/3

LOCATION: By-Pass (PR-2), Ponce, Puerto Rico | CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán | DRILLER: A. Maldonado | WORK STARTED: 4-30-19 | WORK FINISHED: 5-01-19

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON | HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" | DRILLING FLUID: NONE | CORE DATA-TYPE BARREL: ----- | TYPE & SIZE BIT: -----

GROUND WATER: DATE AND DEPTH: ▼ 14.0'; E=0.13m[05-01-19] | DRILL MANUFACTURER TYPE & NO.: CME-55

"X" COORDINATE: ---- | "Y" COORDINATE: ---- | ELEVATION: 4.40m | JOB NO.: 19-4467

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
1		10 – 6	Silty sandy clay, very stiff – dark brown (a)	11	17.4	---				
2	3.79	5 – 5	-2.0'							
3		9 – 8	Silt, sand and limestone gravel, cohesionless,	16	15.9	---				
4	3.18	8 – 6	medium – yellow ("caliche") (a) -4.0'							
5		3 – 4		12	24.7	4.36				
6		8 – 8								
7		9 – 9		18	27.3	2.86				
8		10								
9										
10		2 – 4	Gravelly clay, trace to some sand, high plasticity,	9	26.3	2.44	52	30	68.6	
11		5 – 5	stiff – brown (b)				A-7-6(20) / CH			
12			γ = 105.6pcf							
13										
14	▼									
15		1 – 2		4	35.1	1.22				
16		2 – 3								
17										A
18										
19	-1.39		-19.0'							
20		1 – 2		5	40.8	0.92				
21		3 – 3								
22										
23										
24										
25		1/12"	Clay, trace to some fine sand, medium to high	4	36.1	1.22	51	28	93.6	
26		3 – 4	plasticity, stiff - brown / bluish mottled (b)				A-7-6(29) / CH			
27			γ = 109.6pcf							
28										
29										
30		3 – 4		8	33.6	1.76				
31		4 – 5								
32										
33										
34							42	18	87.4	
35		3 – 3 – 4 - 3		7	42.7	1.06	A-7-6(17) /CL			

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 75
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 75

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

PO Box 32198
Ponce, PR 00732-2198

VICTOR E. RIVERA ASSOCIATES, LLC

Geotechnical Engineers

Tels.: (787) 259-1410
E-mail: verivera@prtc.net

PROJECT: Proposed Ponce Health Science University — Improvements to Ponce Campus | BORING NO.: 108 | SHEET NO.: 2/3

LOCATION: By-Pass (PR-2), Ponce, Puerto Rico | CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán | DRILLER: A. Maldonado | WORK STARTED: 4-30-19 | WORK FINISHED: 5-01-19

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON | HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" | DRILLING FLUID: NONE | CORE DATA-TYPE BARREL: ----- | TYPE & SIZE BIT: -----

GROUND WATER: DATE AND DEPTH: ▼ 14.0'; E=0.13m [05-01-19] | DRILL MANUFACTURER TYPE & NO.: CME-55

"X" COORDINATE: ----- | "Y" COORDINATE: ----- | ELEVATION: 4.40m | JOB NO.: 19-4467

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
36			Clay, trace to some fine sand, medium to high plasticity, stiff - brown / bluish mottled (b)							
37										
38	-7.16		γ = 109.6pcf -38.0'							
39										
40		WH/12" – 1	Sandy silt, cohesionless, loose – blueish gray (c)	5	31.8	---	NV	NP	66.1	
41		4						A-4(0) / ML		
42	-8.40		-42.0'							
43										
44										
45		WH		WH	47.6	0.76				
46										
47										
48			Clay, some sand, occasionally few small peat							
49			Intrusions, medium plasticity, medium - dark gray (c)							
50		WH	γ = 111.9pcf	3	49.4	---	43	18	83.5	
51		2 - 3						A-7-6(16) / CL		
52										A
53										
54										
55		WH		WH	49.3	0.92				
56										
57	-12.98		-57.0'							
58										
59										
60		WH		WH	44.4	---				
61										
62										
63										
64			Silty sandy clay, medium plasticity, medium stiff – dark							
65		1 – 2	bluish gray (c)	4	37.1	0.82	37	15	77.1	
66		2 – 1	γ = 120.0pcf					A-6(10) / CL		
67										
68										
69										
70		WH		WH	35.4	0.72				

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 75
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 75

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

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Ponce, PR 00732-2198

VICTOR E. RIVERA ASSOCIATES, LLC

Geotechnical Engineers

Tels.: (787) 259-1410
E-mail: verivera@prtc.net

PROJECT: Proposed Ponce Health Science University — Improvements to Ponce Campus — BORING NO.: 108 — SHEET NO.: 3/3

LOCATION: By-Pass (PR-2), Ponce, Puerto Rico — CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán — DRILLER: A. Maldonado — WORK STARTED: 4-30-19 — WORK FINISHED: 5-01-19

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON — HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" — DRILLING FLUID: NONE — CORE DATA-TYPE BARREL: ----- — TYPE & SIZE BIT: -----

GROUND WATER: DATE AND DEPTH: ▼ 14.0' E=0.13m [05-01-19] — DRILL MANUFACTURER TYPE & NO.: CME-55

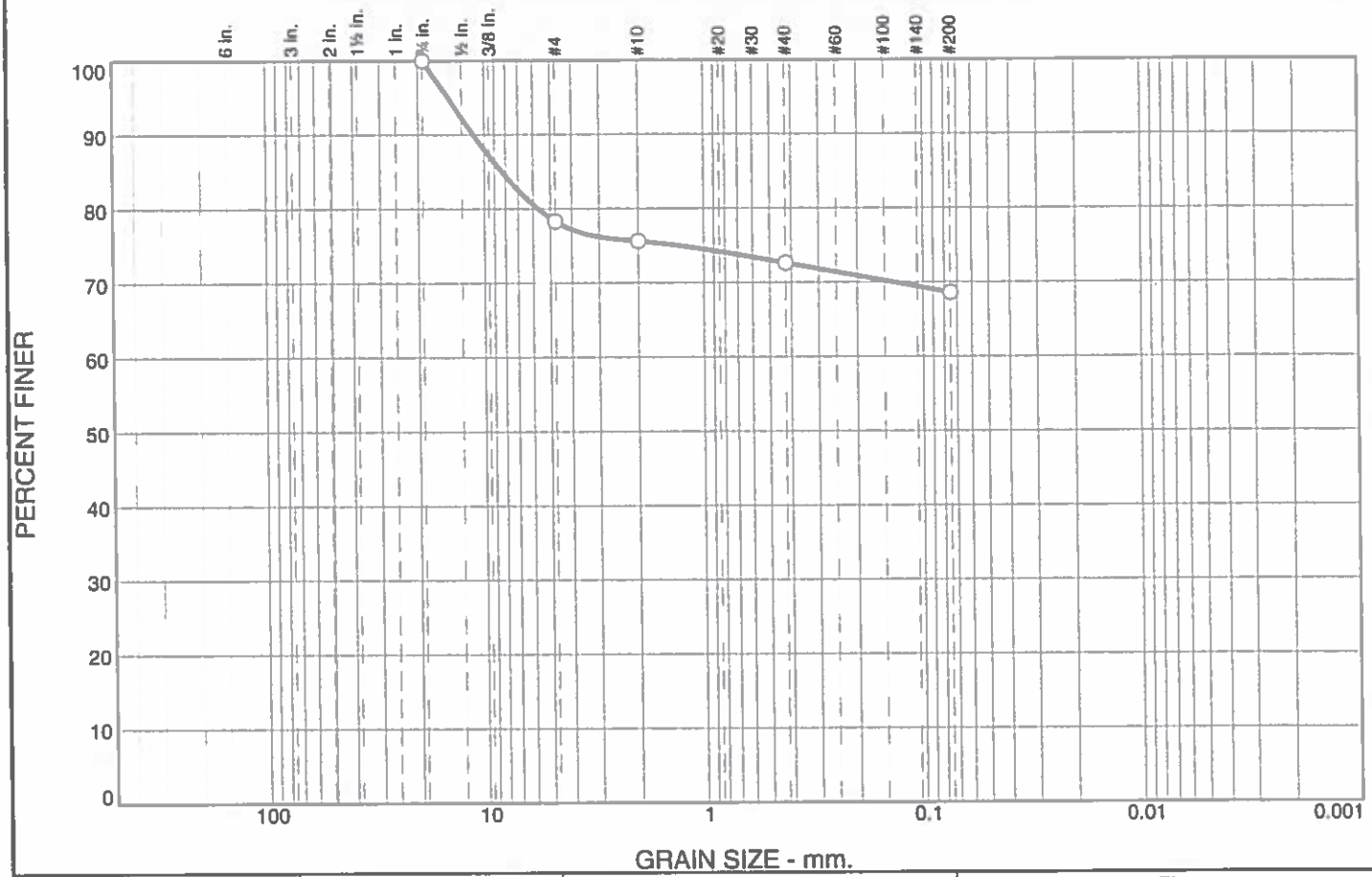
"X" COORDINATE: ----- — "Y" COORDINATE: ----- — ELEVATION: 4.40m — JOB NO.: 19-4467

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
71			Silty sandy clay, medium plasticity, medium stiff – dark bluish gray (c) -72.0'							
72										
73										
74										
75		1 – 2	Clayey sand, medium – dark blueish gray (c)	6	29.8	0.76				
76		4 – 7	γ = 128.1pcf							
77										
78	-19.38		-78.0'							
79										
80		1/12"		5	36.7	1.60				
81		4 - 6	Silty clay, trace fine sand, stiff – brownish gray (d)							
82										
83										
84	-21.21		-84.0'							
85		2 – 4		9	27.1	---				
86		5 – 3	Clayey fine sand, medium loose – brown (d)							
87										A
88	-22.43		-88.0'							
89										
90		6 – 13		30	22.7	---				
91		17								
92										
93										
94			Clay, some fine sand, stiff to very stiff (hard lowermost							
95		15 – 18	feet) – grayish / orange brown (d)	32	11.3	---				
96		14								
97										
98										
99										
100	-26.39	13–13–16-18	-101.0'	29	9.6	3.80				
101			**END OF BORING**							
102			(a) - man-made fill							
103			(b) - alluvial of recent deposition							
104			(c) - lacustrine							
105			(d) - alluvial of older deposition							

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 75
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 75

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	21.7	2.7	3.0	4.0	68.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4"	100.0		
#4	78.3		
#10	75.6		
#40	72.6		
#200	68.6		

* (no specification provided)

Material Description

gravelly clay, trace to some sand, high plasticity

Atterberg Limits

PL= 22 LL= 52 PI= 30

Coefficients

D_{90}= 11.2485 D_{85}= 8.3395 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CH AASHTO= A-7-6(20)

Remarks

VICTOR E. RIVERA RIOLLANO INGENIERO LICENCIADO Lic. 5008 PUERTO RICO

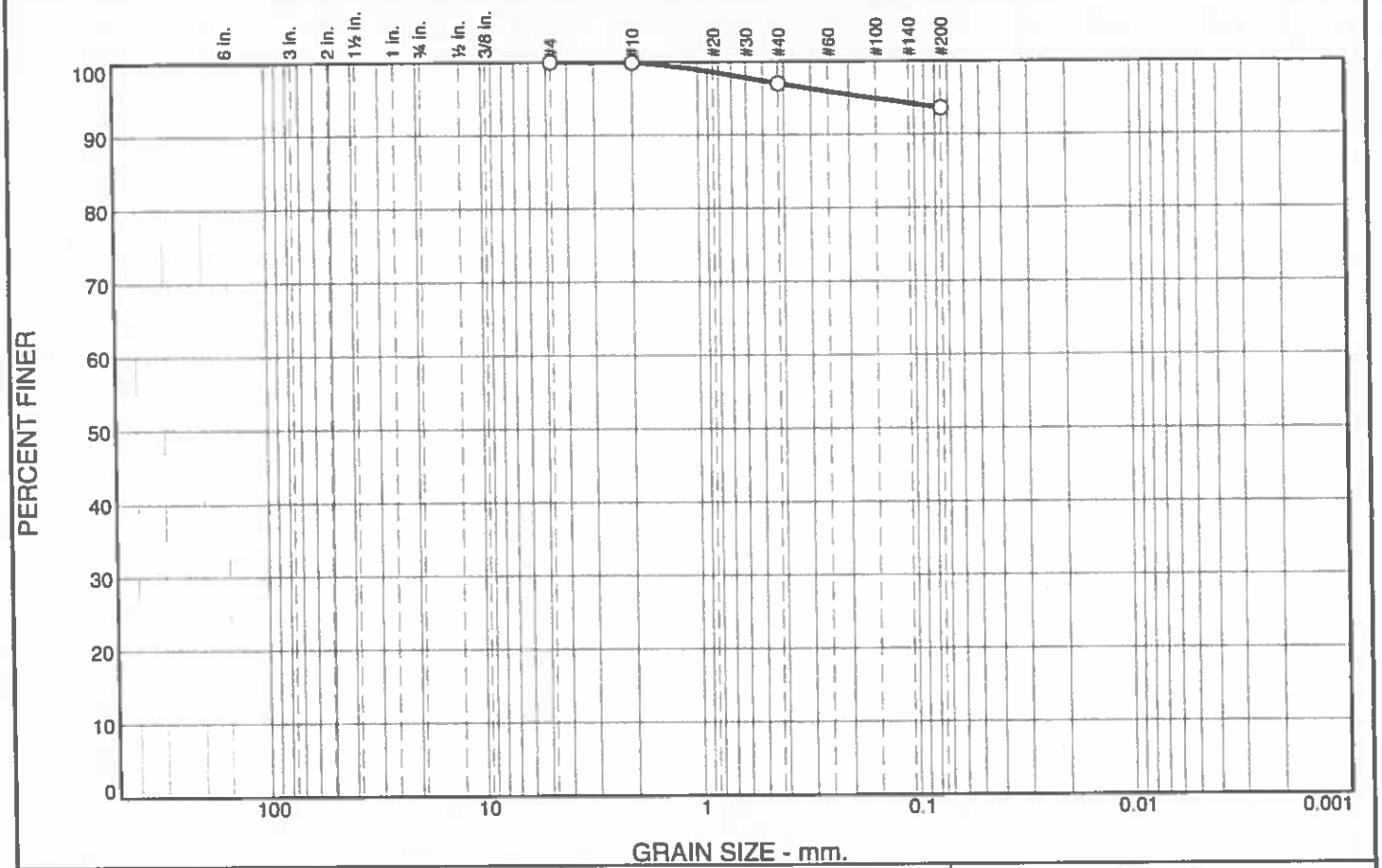
Source of Sample: BORING NO. 108 **Depth:** 6'@16'
Sample Number: 108-41

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.1	2.9	3.4	93.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.9		
#40	97.0		
#200	93.6		

* (no specification provided)

Material Description

clay, trace fine sand, high plasticity

Atterberg Limits

PL= 23 LL= 51 PI= 28

Coefficients

D_{90}= D_{85}= D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CH AASHTO= A-7-6(29)

Remarks

VICTOR E. RIVERA ROLON
INGENIERO LICENCIADO
lic.5008
PUERTO RICO

Source of Sample: BORING NO. 108 **Depth:** 19'@30'
Sample Number: 108-42

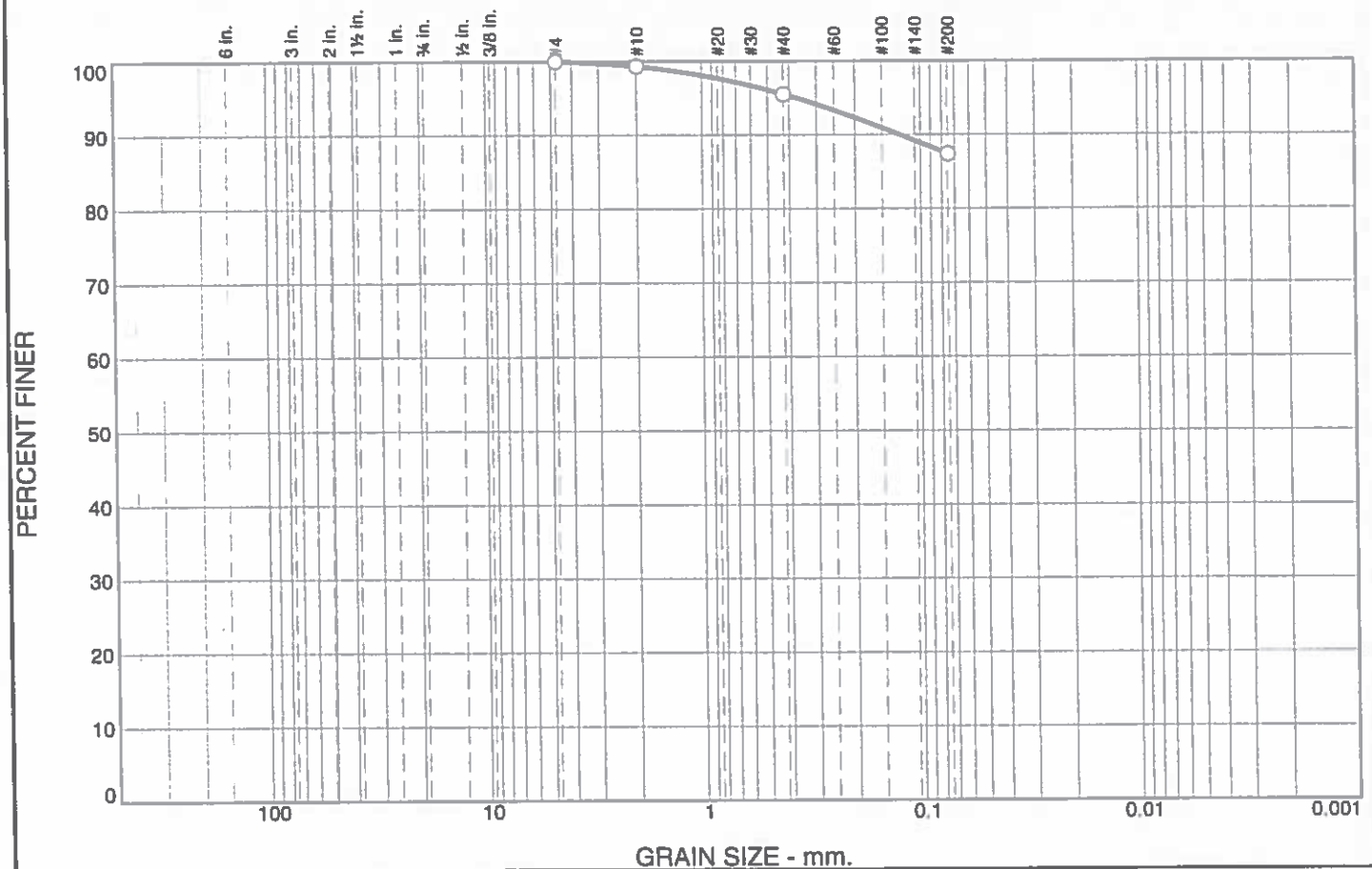
AAP AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.7	3.8	8.1	87.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.3		
#40	95.5		
#200	87.4		

* (no specification provided)

Material Description

clay, some fine sand, medium plasticity

Atterberg Limits

PL= 24 LL= 42 PI= 18

Coefficients

D_{90}= 0.1247 D_{85}= D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-7-6(17)

Remarks

VICTOR E. RIVERA ROLDAN INGENIERO LICENCIADO Lic.5008 PUERTO RICO

Source of Sample: BORING NO. 108 **Depth:** 32'@38'
Sample Number: 108-43

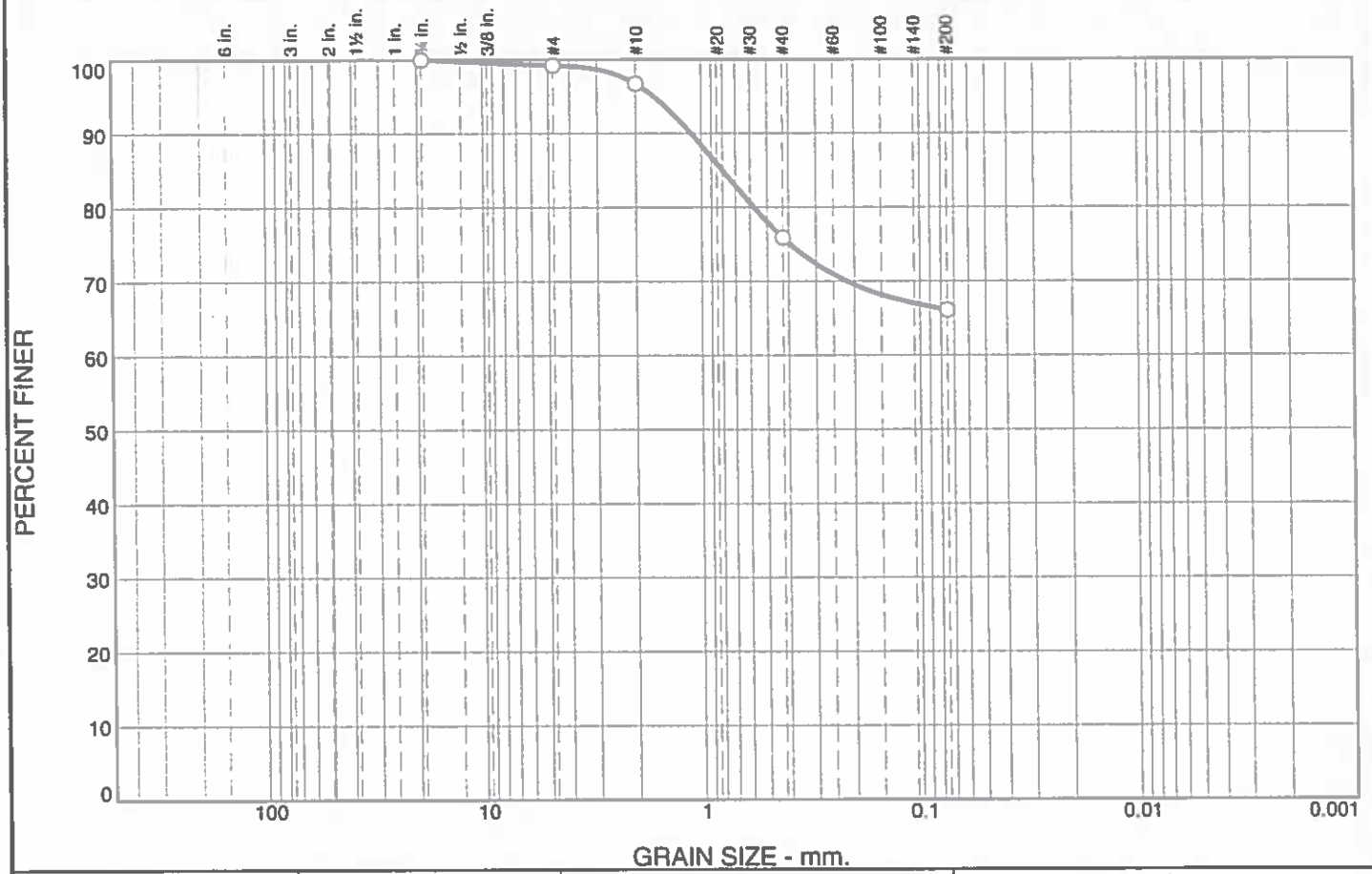
AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.8	2.5	20.8	9.8	66.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4"	100.0		
#4	99.2		
#10	96.7		
#40	75.9		
#200	66.1		

* (no specification provided)

Material Description

sandy silt, cohessionless

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 1.1177 D_{85}= 0.8019 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= ML AASHTO= A-4(0)

Remarks

VICTOR E. RIVERA R. INGENIERO LICENCIADO Lic.5008 PUERTO RICO

Source of Sample: BORING NO. 108 **Depth:** 39'@42'
Sample Number: 108-44

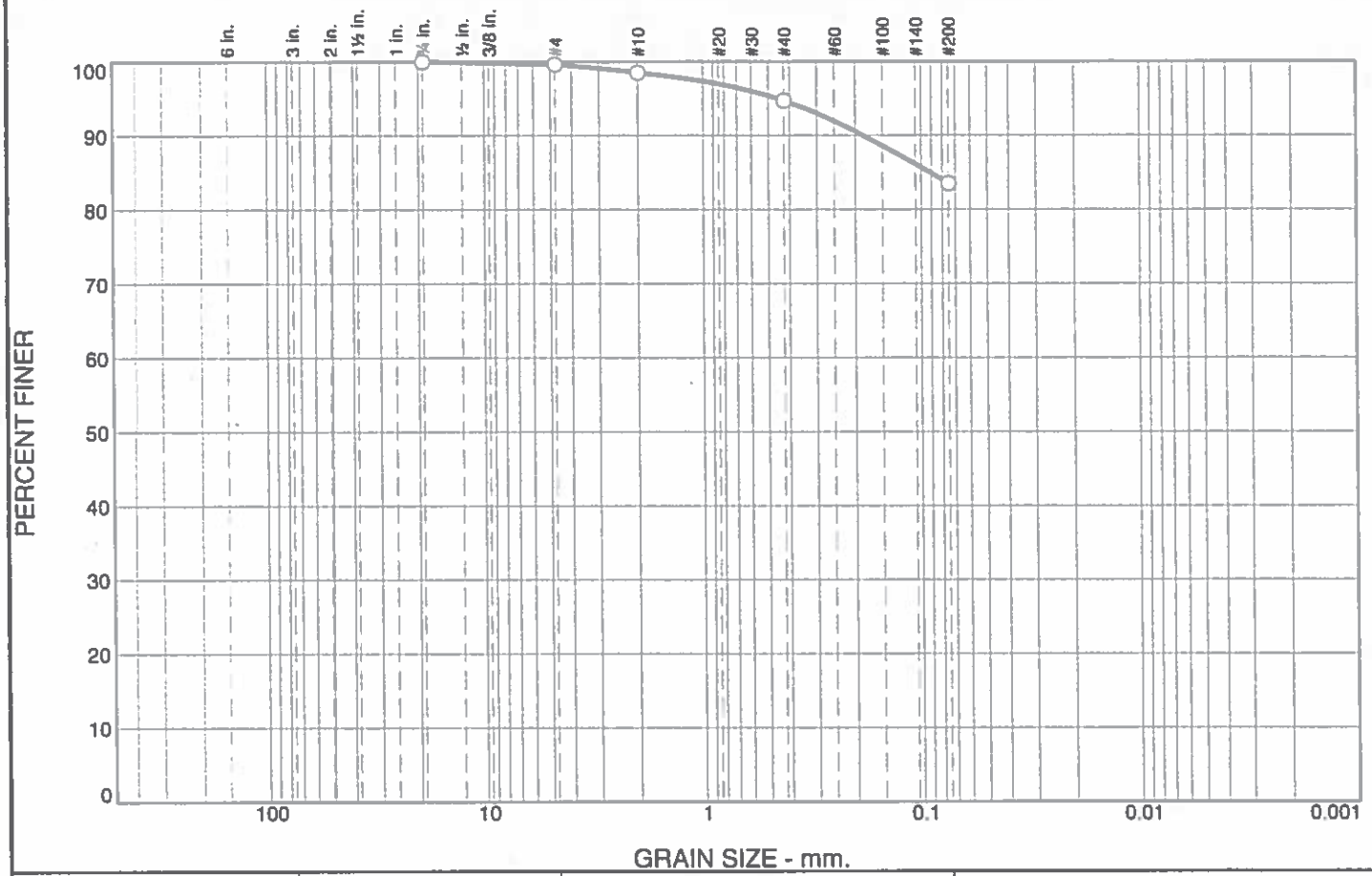
AAP AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.4	1.1	3.8	11.2	83.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4"	100.0		
#4	99.6		
#10	98.5		
#40	94.7		
#200	83.5		

* (no specification provided)

Material Description

clay, some sand, medium plasticity

Atterberg Limits

PL= 25 LL= 43 PI= 18

Coefficients

D_{90}= 0.1844 D_{85}= 0.0916 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-7-6(16)

Remarks

VICTOR E. RIVERA RODRIGUEZ INGENIERO LICENCIADO Lic. 5008 PUERTO RICO

Source of Sample: BORING NO. 108 **Depth:** 45'@55'
Sample Number: 108-45

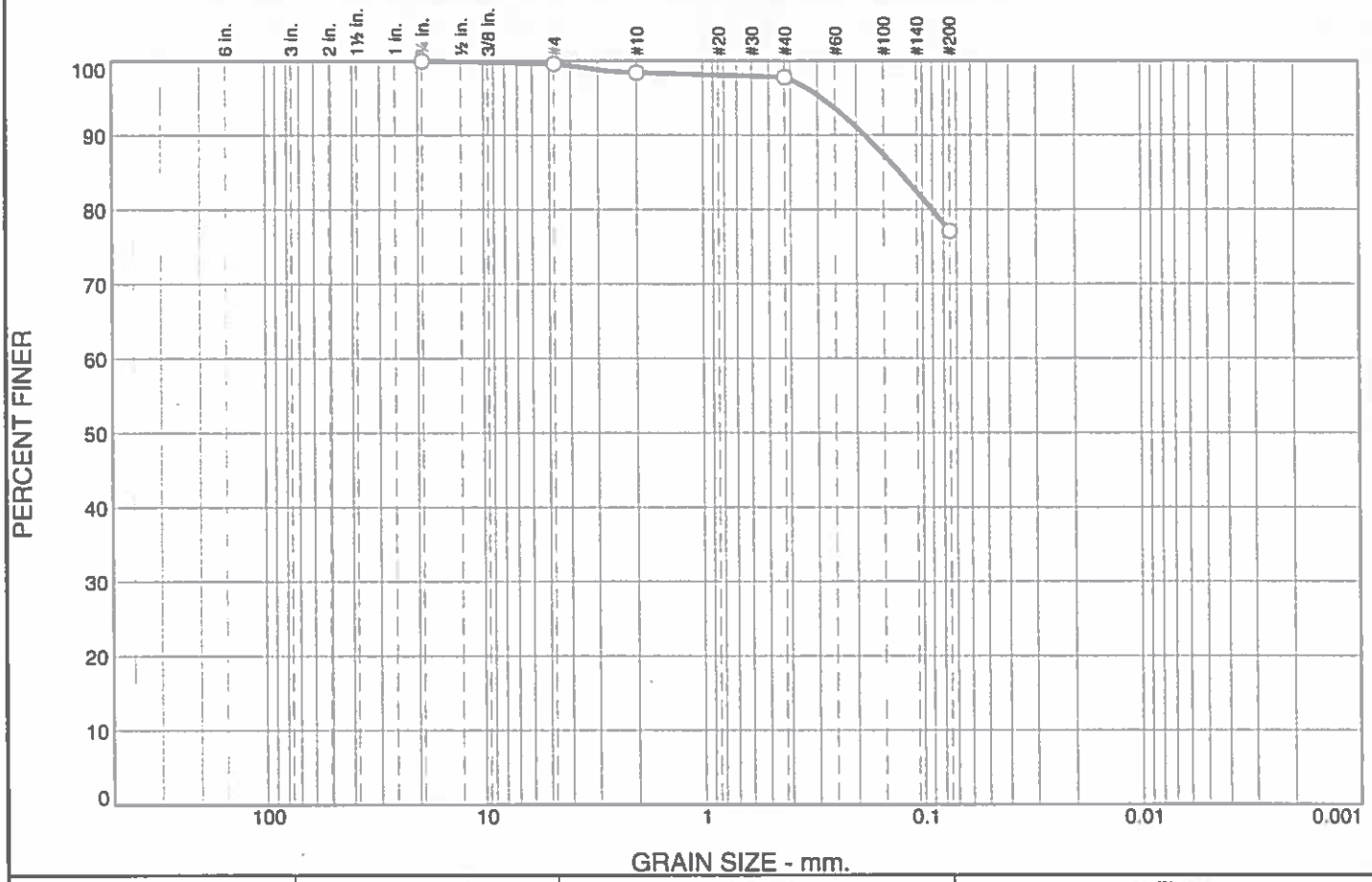
AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.4	1.2	0.6	20.7	77.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4"	100.0		
#4	99.6		
#10	98.4		
#40	97.8		
#200	77.1		

* (no specification provided)

Material Description

silty sandy clay, medium plasticity

Atterberg Limits

PL= 24 LL= 37 PI= 15

Coefficients

D_{90}= 0.1831 D_{85}= 0.1268 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-6(10)

Remarks

VICTOR E. RIVERA ROLDAN INGENIERO LICENCIADO Lic. 5008 PUERTO RICO

Source of Sample: BORING NO. 108 **Depth:** 59'@70'
Sample Number: 108-46

AAP AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

PO Box 32198
Ponce, PR 00732-2198

VICTOR E. RIVERA ASSOCIATES, LLC

Geotechnical Engineers

Tels.: (787) 259-1410
E-mail: verivera@prtc.net

PROJECT: Proposed Ponce Health Science University Improvements to Ponce Campus — BORING NO.: 109 — SHEET NO.: 1/3

LOCATION: By-Pass (PR-2), Ponce, Puerto Rico — CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán — DRILLER: A. Maldonado — WORK STARTED: 5-01-19 — WORK FINISHED: 5-03-19

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON — HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" — DRILLING FLUID: NONE — CORE DATA-TYPE BARREL: ----- — TYPE & SIZE BIT: -----

GROUND WATER: DATE AND DEPTH: ▼ 15.0'; E=1.16m[05-03-19] — DRILL MANUFACTURER TYPE & NO.: CME-55

"X" COORDINATE: ----- — "Y" COORDINATE: ----- — ELEVATION: 5.73m — JOB NO.: 19-4467

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
1		4 – 5		21	6.5	---				
2		16 – 14								
3		14 – 16		28	9.9	---				
4		12 – 6					26	9	28	
5		6 – 6	Clayey sandy limestone gravel, low plasticity, medium	12	12.3	---	A-2-4(0) / GC			
6		6 – 6	– yellow ("caliche") (a)							
7		6 – 8		15	10.2	---				
8		7								
9	2.99		-9.0'							
10		3 – 2		7	29.0	2.35				
11		4 – 4								
12			Silty clay, stiff – brown (b)							
13										
14	1.46		-14.0'							
15	▼	2 – 2	Sandy silt, trace fine gravel, medium compressibility,	4	33.7	---	37	11	62.4	
16		2 – 2	loose, -olive / brown (b)				A-6(5) / ML			
17	0.55		-17.0'							A
18										
19										
20		3 – 3		8	32.0	1.64				
21		5 – 5								
22										
23										
24			Clay, some fine sand, high plasticity, stiff – olive brown							
25		1 – 3	(b)	7	29.9	1.72	52	26	80.5	
26		4 – 5	γ = 108.6pcf				A-7-6(22) / CH			
27										
28										
29										
30		2 – 2		5	31.5	1.51				
31		3 – 5								
32	-4.03		-32.0'							
33			Clay, occasionally small peat pockets, medium to high							
34			plasticity, medium stiff to stiff – dark olive gray (c)							
35		1 – 2 – 3 – 4	γ = 107.2pcf	5	38.9	1.43				

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 75
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 75

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

PO Box 32198
Ponce, PR 00732-2198

VICTOR E. RIVERA ASSOCIATES, LLC

Geotechnical Engineers

Tels.: (787) 259-1410
E-mail: verivera@prtc.net

PROJECT: Proposed Ponce Health Science University
Improvements to Ponce Campus
BORING NO.: 109 SHEET NO.: 2/3
LOCATION: By-Pass (PR-2), Ponce, Puerto Rico CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán DRILLER: A. Maldonado WORK STARTED: 5-01-19 WORK FINISHED: 5-03-19

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES 1 3/8" I.D. SPLIT SPOON HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" DRILLING FLUID: NONE CORE DATA-TYPE BARREL: ------ TYPE & SIZE BIT: ------

GROUND WATER: DATE AND DEPTH: ▼ 15.0'; E=1.16m [05-03-19] DRILL MANUFACTURER TYPE & NO. CME-55

"X" COORDINATE: ----- "Y" COORDINATE: ----- ELEVATION: 5.73m JOB NO.: 19-4467

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
36										
37							49	25	96.5	
38			Clay, occasionally small peat pockets, medium to high plasticity, medium stiff to stiff – dark olive gray (c)				A-7-6(27) / CL			
39										
40		WH	γ = 107.2pcf	WH	37.4	0.67				
41										
42	-7.07		-42.0'							
43										
44										
45		WH		WH	38.1	---				
46										
47			Silty clay, some fine sand, medium plasticity, medium – dark olive gray (c)				36	13	86.7	
48							A-6(110 / CL			
49			γ = 112.5pcf							
50		WH		WH	34.9	---				
51										
52										A
53										
54	-10.73		-54.0'							
55		1 – 1		2	31.8	1.26				
56		1 – 1								
57										
58										
59										
60		WH/12"		2	43.8	0.92	36	18	70.6	
61		1 – 1	Sandy clay, very few small peat intrusions, medium plasticity, medium stiff – dark olive gray (c)				A-6(8) / CL			
62										
63			γ = 119.1pcf							
64										
65		WH/12"		5	32.4	1.68				
66		4								
67										
68	-15.00		-68.0'							
69			Very fine sand, some silt, loose – dark gray (c)							
70		2 – 2 – 3 – 4	γ = 113.0pcf	5	29.2	---				

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 75
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 75

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

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VICTOR E. RIVERA ASSOCIATES, LLC

Geotechnical Engineers

Tels.: (787) 259-1410
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PROJECT: Proposed Ponce Health Science University Improvements to Ponce Campus — BORING NO.: 1089 — SHEET NO.: 3/3

LOCATION: By-Pass (PR-2), Ponce, Puerto Rico — CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán — DRILLER: A. Maldonado — WORK STARTED: 5-01-19 — WORK FINISHED: 5-03-19

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON — HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" — DRILLING FLUID: NONE — CORE DATA-TYPE BARREL: ------ — TYPE & SIZE BIT: ----

GROUND WATER: DATE AND DEPTH: ▼ 15.0' E=1.16m [05-03-19] — DRILL MANUFACTURER TYPE & NO.: CME-55

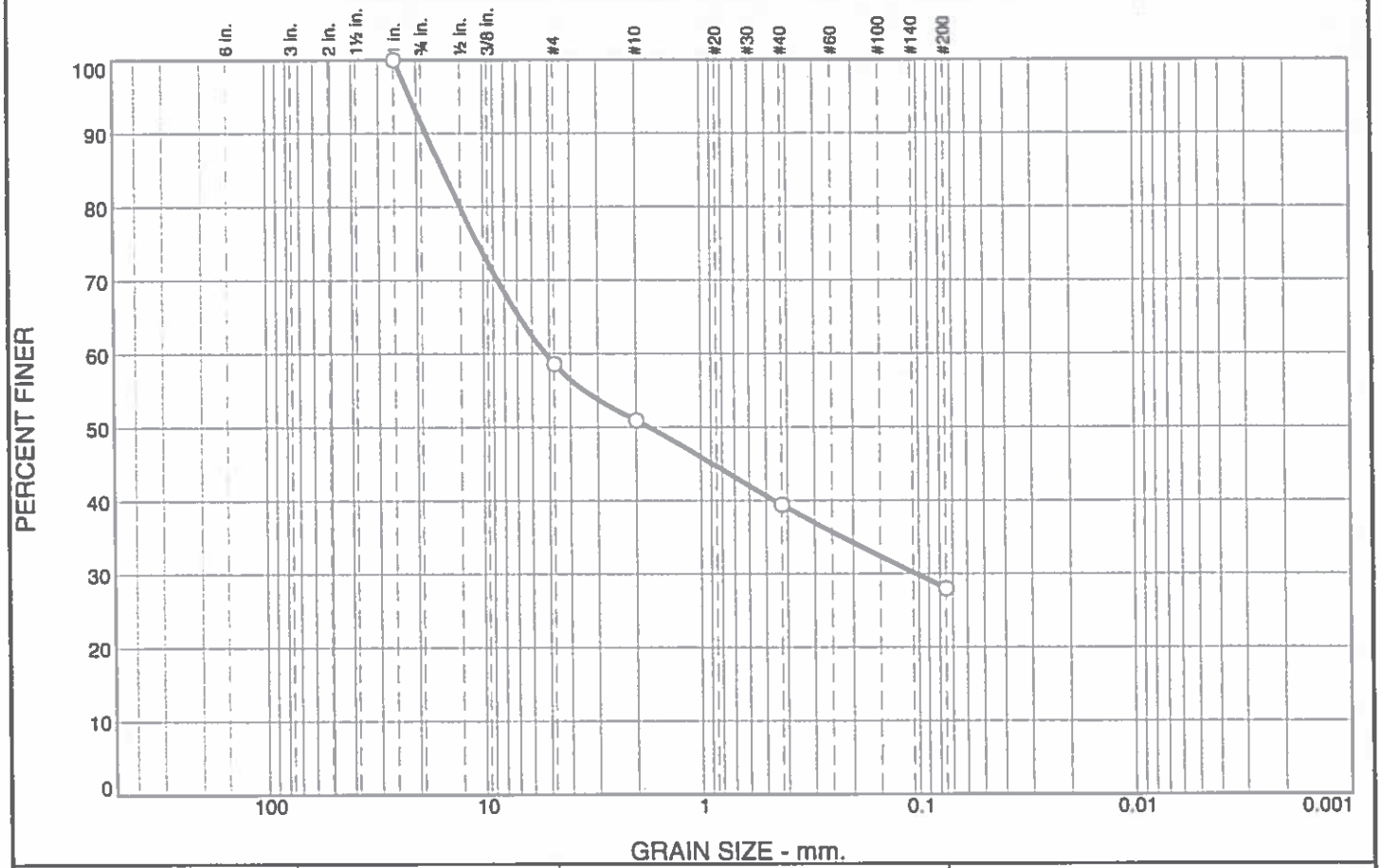
"X" COORDINATE: ----- — "Y" COORDINATE: ----- — ELEVATION: 5.73m — JOB NO.: 19-4467

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
71			Very fine sand, some silt, loose – dark gray (c)							
72	-16.22		γ = 113.0pcf -72.0'							
73										
74										
75		WH		WH	34.7	0.93				
76			Silty clay, very fine small peat intrusions, medium to							
77			medium stiff – dark olive gray (c)							
78										
79										
80	-18.66	WH/18"	-80.0'	WH	36.1	0.76				
81		3			35.5	1.34				
82										
83										
84										
85		4 – 6		17	26.6	2.61				
86		11	Silty clay, occasionally trace to some fine sand, stiff -							
87			orange brown (d)							A
88										
89										
90		4 – 3		7	29.6	1.89				
91		4 – 4								
92										
93	-22.62		-93.0'							
94										
95		53/6"		53/6"	13.1	---				
96			Medium to coarse sand and fine gravel, trace to some							
97			silt, dense to very dense – orange brown							
98										
99										
100	-24.91	18 – 22 – 13	-100.5'	35	10.6	---				
101			END OF BORING							
102			(a) - man-made fill							
103			(b) - alluvial of recent deposition							
104			(c) - lacustrine							
105			(d) - alluvial of older deposition							

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 75
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 75

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	8.6	32.8	7.7	11.5	11.4	28.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100.0		
#4	58.6		
#10	50.9		
#40	39.4		
#200	28.0		

* (no specification provided)

Material Description

clayey sandy limestone gravel, low plasticity ("caliche" fill)

Atterberg Limits

PL= 17 LL= 26 PI= 9

Coefficients

D_{90}= 18.1555 D_{85}= 15.2777 D_{60}= 5.2160
D_{50}= 1.7539 D_{30}= 0.1034 D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= GC AASHTO= A-2-4(0)

Remarks

VICTOR E. RIVERA ROLDAN INGENIERO LICENCIADO Lic. 5008 PUERTO RICO

Source of Sample: BORING NO. 109 **Depth:** 1'@8'
Sample Number: 109-47

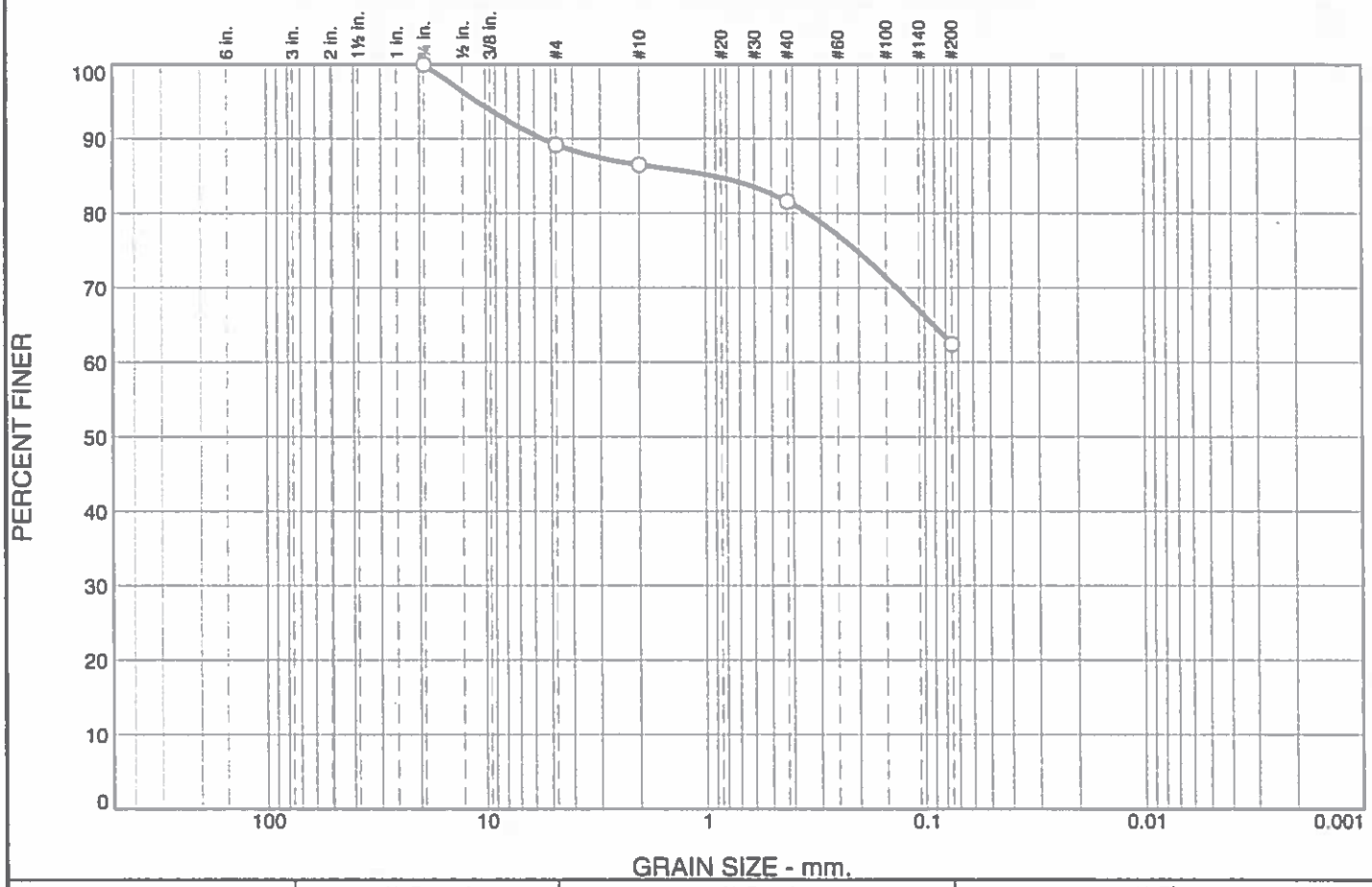
AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	10.8	2.7	4.9	19.2	62.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4"	100.0		
#4	89.2		
#10	86.5		
#40	81.6		
#200	62.4		

* (no specification provided)

Material Description

sandy silt, trace fine gravel, medium compressibility

Atterberg Limits

PL= 26 LL= 37 PI= 11

Coefficients

D_{90}= 5.5019 D_{85}= 0.9276 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= ML AASHTO= A-6(5)

Remarks

VICTOR E. RIVERA RULLAN INGENIERO LICENCIADO Lic.5008 PUERTO RICO

Source of Sample: BORING NO. 109 **Depth:** 14'@16'
Sample Number: 109-48

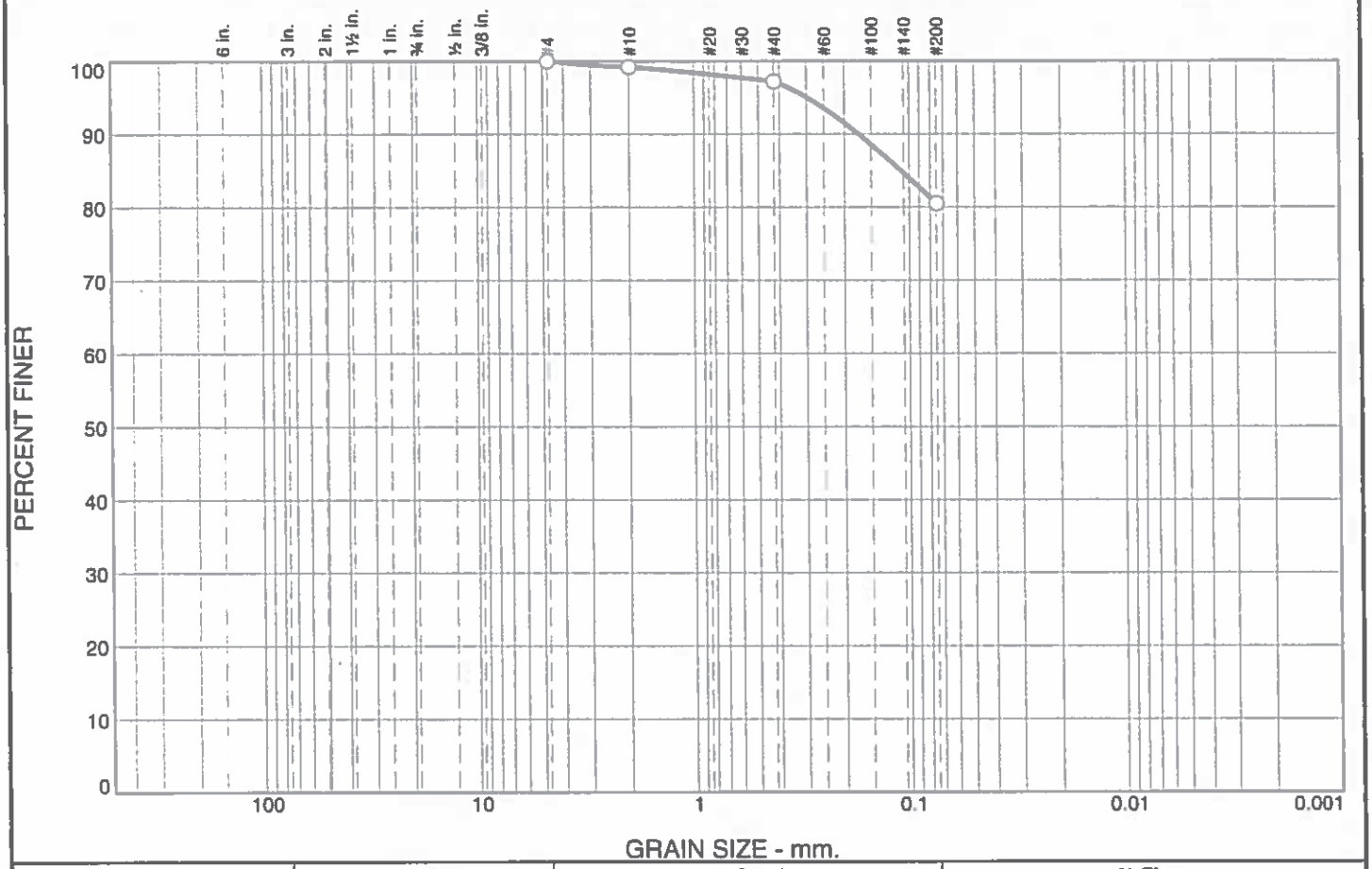
AAP AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.8	2.0	16.7	80.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.2		
#40	97.2		
#200	80.5		

* (no specification provided)

Material Description

clay, some fine sand, high plasticity

Atterberg Limits

PL= 26 LL= 52 PI= 26

Coefficients

D_{90}= 0.1721 D_{85}= 0.1096 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CH AASHTO= A-7-6(22)

Remarks

VICTOR E. RIVERA ROLÓN INGENIERO LICENCIADO Lic. 5008 PUERTO RICO

Source of Sample: BORING NO. 109 **Depth:** 19'@31'
Sample Number: 109-49

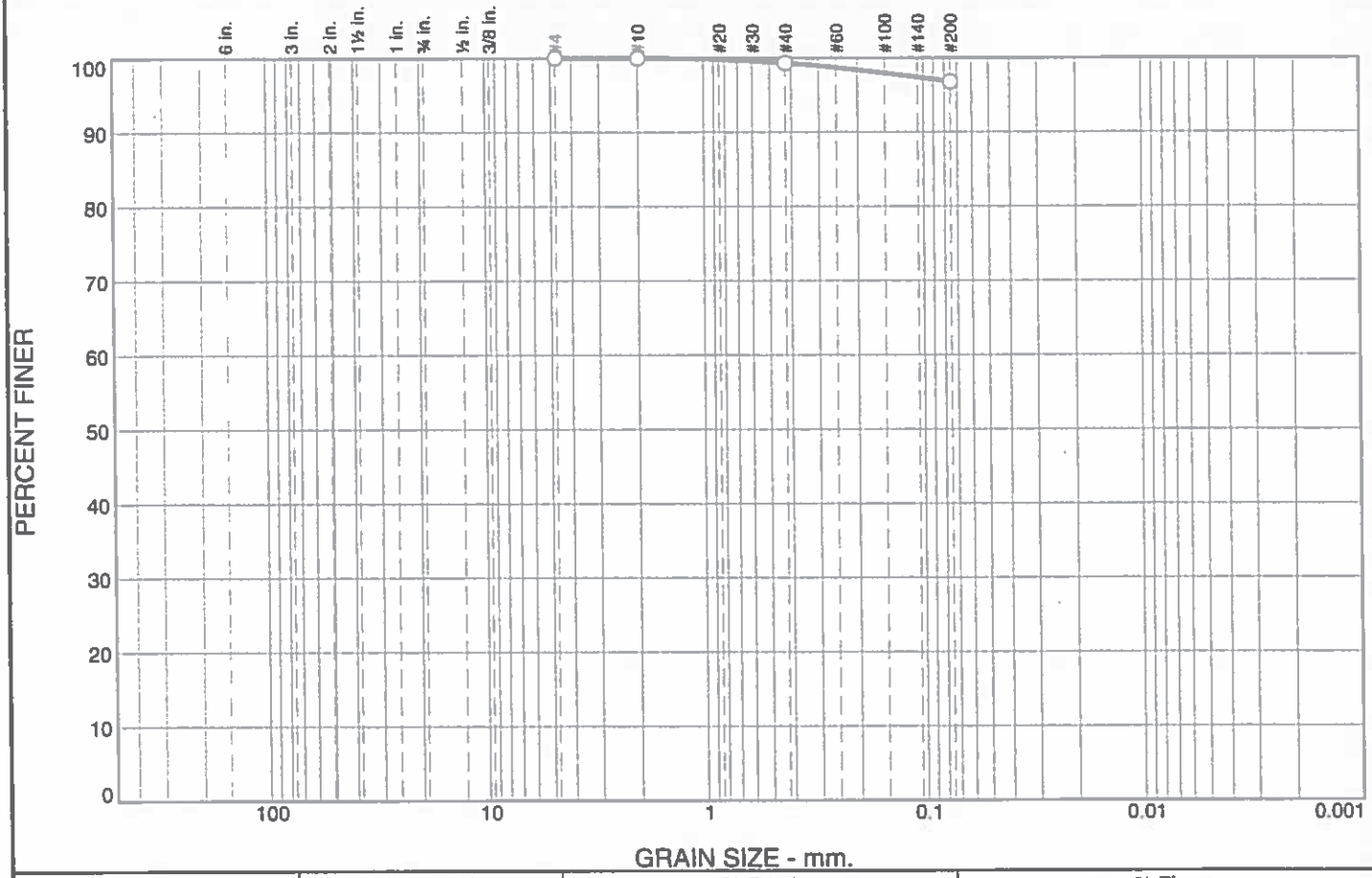
AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.7	2.5	96.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	100.0		
#40	99.3		
#200	96.8		

* (no specification provided)

Material Description

clay, medium to high plasticity

Atterberg Limits

PL= 24 LL= 49 PI= 25

Coefficients

D_{90}= D_{85}= D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-7-6(27)

Remarks

VICTOR E. RIVERA ROLDAN INGENIERO LICENCIADO Lic.5008 PUERTO RICO

Source of Sample: BORING NO. 109 **Depth:** 34'@41'
Sample Number: 109-50

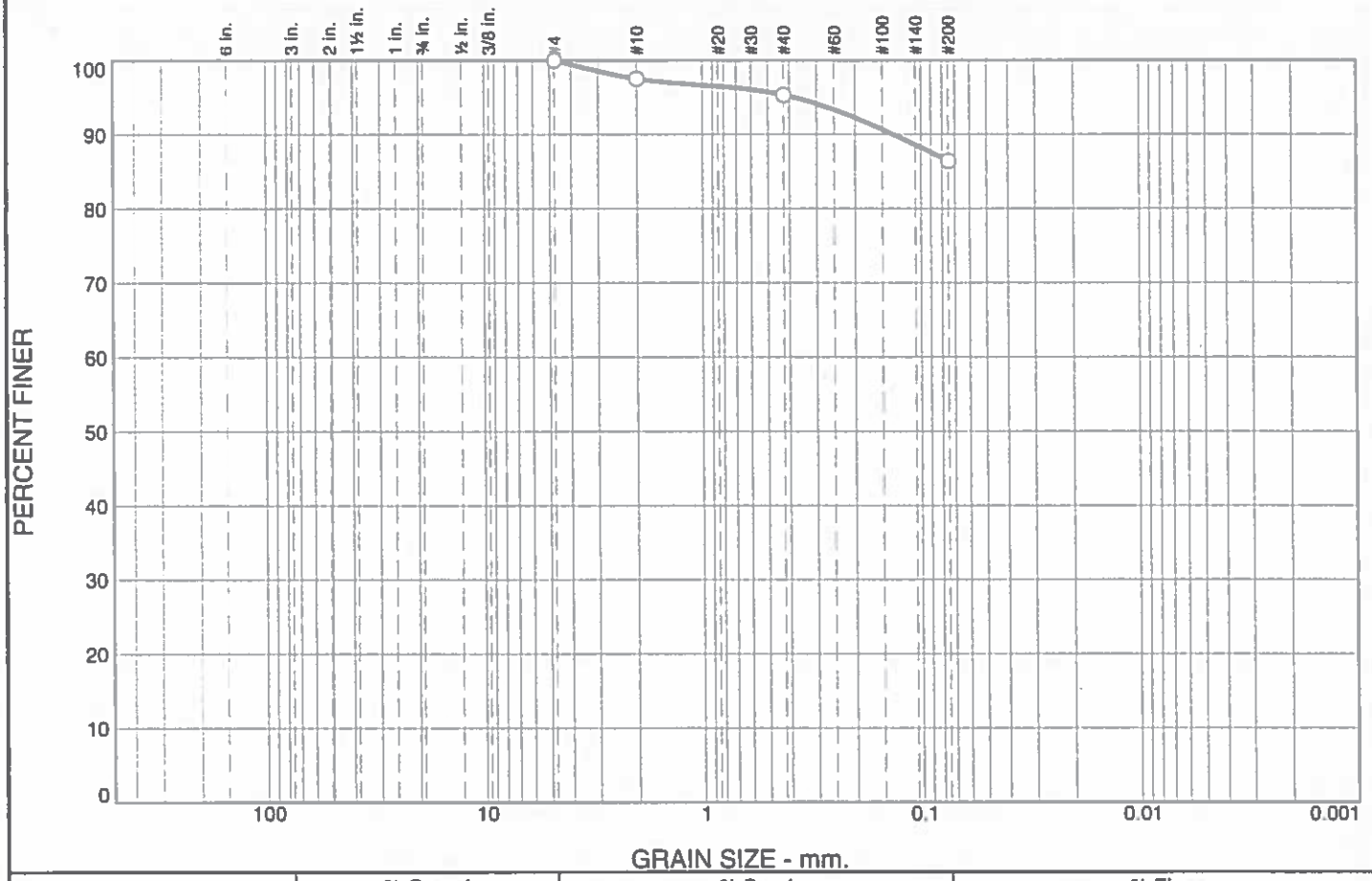
AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	2.5	2.2	8.9	86.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	97.5		
#40	95.3		
#200	86.4		

* (no specification provided)

Material Description

silty clay, trace to some fine sand, medium compressibility

Atterberg Limits

PL= 23 LL= 36 PI= 13

Coefficients

D_{90}= 0.1341 D_{85}= D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-6(11)

Remarks

VICTOR E. RIVERA ROSARIO INGENIERO LICENCIADO Lic.5008 PUERTO RICO

Source of Sample: BORING NO. 109 **Depth:** 44'@51'
Sample Number: 109-51

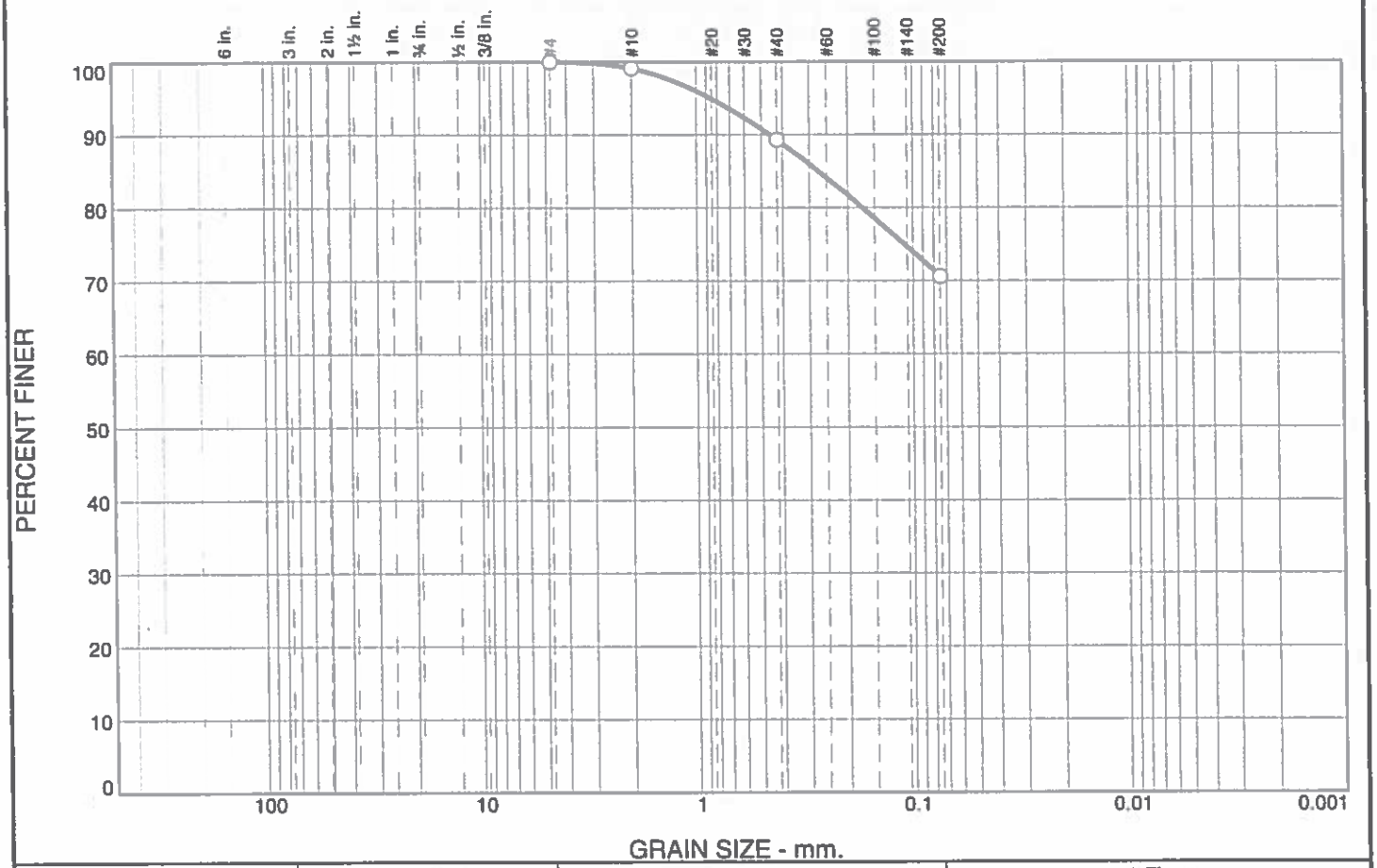
AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.9	9.8	18.7	70.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.1		
#40	89.3		
#200	70.6		

* (no specification provided)

Material Description

sandy clay, medium plasticity

Atterberg Limits

PL= 23 LL= 36 PI= 18

Coefficients

D_{90}= 0.4590 D_{85}= 0.2735 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-6(8)

Remarks

VICTOR E. RIVERA POLANCO INGENIERO LICENCIADO Lic.5008 PUERTO RICO

Source of Sample: BORING NO. 109 **Depth:** 54'@66'
Sample Number: 109-52

AAP AASHTO R18 ACCREDITED

Date: 06/03/19

VICTOR E. RIVERA ASSOCIATES
Ponce, Puerto Rico

Client: LOA Management, PSC
Project: Proposed Ponce Health Science University
Improvements to Ponce Campus, By-Pass (PR-2), Ponce, Puerto
Project No: 19-4467 **APPROVED BY:** V.E.R.R.

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Ponce, PR 00732-2198

VICTOR E. RIVERA & ASSOCIATES
Geotechnical Engineers

Tels.: (787) 259-1410
Fax: (787) 259-1604

PROJECT: Proposed Academic Campus Ponce Health Sciences University | BORING NO.: 7 | SHEET NO.: 1/3

LOCATION: By Pass, Ponce, Puerto Rico | CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán | DRILLER: A. Maldonado | WORK STARTED: 10/24/18 | WORK FINISHED: 10/24/18

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON | HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" | DRILLING FLUID: NONE | CORE DATA-TYPE BARREL: ----- | TYPE & SIZE BIT: -----

GROUND WATER: DATE AND DEPTH: 19.0' [10/24/18] ▽ 17.0' [10/24/18] | DRILL MANUFACTURER TYPE & NO.: CME-55

"X" COORDINATE: ----- | "Y" COORDINATE: ----- | ELEVATION: 5.39m | JOB NO.: 18-4391

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
1		4 - 9	Sandy gravelly clay, medium stiff to stiff, medium plasticity - yellow (a)	20	8.7	--				
2		11 - 11								
3		6 - 4		9	10.3	--				
4		5 - 6					38	18	35.1	
5		5 - 2		4	21.3	--	[A-2-6 / GC]			
6		2 - 3								
7		3 - 5		11	25.3	--				
8	2.95	6	-8.0'							
9										
10		3 - 2		5	39.8	1.01				
11		3 - 3								
12							37	13	90.0	
13							[A-6(13) / CL]			
14										
15		2 - 2		4	32.8	0.92				
16		2 - 2								
17	▽ 0.20		Clay, trace to some fine sand, stiff, medium to high plasticity - brown, grayish (b)							A
18										
19	▽ -0.40									
20		1 - 1		5	34.2	1.68				
21		4 - 4								
22										
23										
24										
25		1 - 2		5	33.8	1.34				
26		3 - 4								
27							49	25	83.8	
28							[A-7-6(22) / CL]			
29										
30		2 - 3		6	35.3	1.34				
31		3 - 4								
32										
33										
34										
35		1 - 2		4	36.4	1.64				

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 50
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 50

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

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VICTOR E. RIVERA & ASSOCIATES
Geotechnical Engineers

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PROJECT: Proposed Academic Campus Ponce Health Sciences University | BORING NO.: 7 | SHEET NO.: 2/3

LOCATION: By Pass, Ponce, Puerto Rico | CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán | DRILLER: A. Maldonado | WORK STARTED: 10/24/18 | WORK FINISHED: 10/24/18

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON | HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" | DRILLING FLUID: NONE | CORE DATA-TYPE BARREL: ----- | TYPE & SIZE BIT: -----

GROUND WATER: DATE AND DEPTH: 19.0' [10/24/18] ▼ 17.0' [10/24/18] | DRILL MANUFACTURER TYPE & NO.: CME-55

"X" COORDINATE: ----- | "Y" COORDINATE: ----- | ELEVATION: 5.39m | JOB NO.: 18-4391

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
36		2 - 3								
37	-5.89		-37.0'							
38										
39										
40		PUSH/12"		2	35.9	0.96				
41		2 - 2								
42										
43										
44										
45		1 - 1		2	36.6	0.84	40	16	82.5	
46		1 - 2	Clay, trace to some fine sand, occasionally small peat intrusions, medium to stiff, medium plasticity - dark olive gray, occasionally blackish (c)				[A-6(14) / CL]			
47										
48										
49										
50		1 -2		3	37.6	0.69				
51		1 - 1								
52										A
53										
54										
55		PUSH/18"		WH	38.0	--				
56										
57							41	18	83.7	
58							[A-7-6 (16) / CL]			
59										
60		1 - 1		3	36.6	1.43				
61		2 - 3								
62										
63	-13.82		-63.0'							
64										
65		PUSH/6" - 2		5	32.0	--				
66		3 - 5	Sandy silty clay, occasionally peat intrusions, stiff, medium plasticity, dark olive gray (c)							
67							37	12	73.1	
68							[A-6 (8) / CL]			
69										
70		PUSH/18"		WH	46.0	1.43				

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 50
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 50

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

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Geotechnical Engineers

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Fax: (787) 259-1604

PROJECT: Proposed Academic Campus Ponce Health Sciences University | BORING NO.: 7 | SHEET NO.: 3/3

LOCATION: By Pass, Ponce, Puerto Rico | CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán | DRILLER: A. Maldonado | WORK STARTED: 10/24/18 | WORK FINISHED: 10/24/18

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON | HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" | DRILLING FLUID: NONE | CORE DATA-TYPE BARREL: ---- | TYPE & SIZE BIT: ----

GROUND WATER: DATE AND DEPTH: 19.0' [10/24/18] ▽ 17.0' [10/24/18] | DRILL MANUFACTURER TYPE & NO.: CME-55

"X" COORDINATE: ---- | "Y" COORDINATE: ---- | ELEVATION: 5.39m | JOB NO.: 18-4391

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
71										
72										
73										
74										
75		1 - 4	Sandy silty clay, occasionally peat intrusions, stiff, medium plasticity, dark olive gray (c)	8	32.0	1.51				
76		4 - 4								
77										
78										
79										
80		2 - 2		6	35.1	1.72				
81		4 - 5								A
82	-19.61		-82.0'							
83			Fine to medium sand, very dense, brown, gray (d)							
84										
85		36 - 47		83	23.2	--				
86										
87										
88	-21.44		-88.0'							
89			Clay, very stiff to hard - orange brown (d)							
90	-22.05	7 - 9 - 12	-90.0'	21	22.0	3.45				
91			**END OF BORING**							
92										
93										
94										
95										
96										
97										
98										
99			(a) - man-made fill ("caliche" – gravel always refer to limestone fragments)							
100			(b) - alluvial of recent deposition							
101			(c) - lacustrine							
102			(d) - alluvial of older deposition							
103			ground water recorded at drilling, later raised inferring an artesian condition							
104										
105										

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 50
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 50

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

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PROJECT: Proposed Academic Campus
Ponce Health Sciences University — BORING NO.: 8 — SHEET NO.: 1/3

LOCATION: By Pass, Ponce, Puerto Rico — CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán — DRILLER: A. Maldonado — WORK STARTED: 10/09/18 — WORK FINISHED: 10/09/18

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON — HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" — DRILLING FLUID: NONE — CORE DATA-TYPE BARREL: ----- — TYPE & SIZE BIT: -----

GROUND WATER: DATE AND DEPTH: 15.0' [10/09/18] ▽ 12.0' [10/09/18] — DRILL MANUFACTURER TYPE & NO.: CME-55

"X" COORDINATE: ----- — "Y" COORDINATE: ----- — ELEVATION: 4.79m — JOB NO.: 18-4391

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
1		10 - 6	Clayey sand and gravel, medium - yellow (a)	14	14.9	--				
2		8 - 7								
3		5 - 10		19	20.9	--				
4	3.58	9 - 6	-4.0'							
5		7 9	Clay, some fine sand and traces of fine gravel, stiff, high plasticity - brown (b)	17	25.6	3.13				
6		8 - 8								
7		5 - 9		16	33.3	1.76				
8		7 - 7					52	27	72.5	
9							[A-7-6(19) / CH]			
10		2 - 2		5	27.2	1.51				
11		3 - 2								
12	▽ 1.13									
13	▲ 0.83		-13.0'							
14			Sandy clay, stiff, medium plasticity – brown, gray and olive mottled (b)							
15	▽ 0.22	2 - 2		6	30.7	1.76				
16		4 - 6								
17							38	16	74.9	A
18							[A-6(11) / CL]			
19										
20		2 - 4		8	29.8	1.18				
21		4 - 7								
22	-1.92		-22.0'							
23			Clay, some fine sand, stiff, high plasticity – grayish brown (b)							
24										
25		3 - 4		9	33.0	2.69				
26		5 - 5								
27							56	31	85.7	
28							[A-7-6(29) / CH]			
29										
30		1 - 2		6	30.8	1.89				
31		4 - 4								
32										
33	-5.35		-33.0'							
34			Clay, occ. seams of fine sand, medium stiff to stiff – dark brown, olive (c)							
35		2 - 2		5	39.8	1.01				

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 50
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 50

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

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PROJECT: Proposed Academic Campus Ponce Health Sciences University | BORING NO.: 8 | SHEET NO.: 2/3

LOCATION: By Pass, Ponce, Puerto Rico | CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán | DRILLER: A. Maldonado | WORK STARTED: 10/09/18 | WORK FINISHED: 10/09/18

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON | HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" | DRILLING FLUID: NONE | CORE DATA-TYPE BARREL: ----- | TYPE & SIZE BIT: -----

GROUND WATER: DATE AND DEPTH: 15.0' [10/09/18] ▼ 12.0' [10/09/18] | DRILL MANUFACTURER TYPE & NO.: CME-55

"X" COORDINATE: ----- | "Y" COORDINATE: ----- | ELEVATION: 4.79m | JOB NO.: 18-4391

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
36		3 - 3	Clay, occ. seams of fine sand, medium stiff to stiff – dark brown, olive (c)							
37	-6.49		-37.0'							
38			Clayey fine sand, loose, low plasticity – dark gray (c)							
39										
40		PUSH/6" - 2		4	25.7	--	30	11	41.3	
41		2 - 2					[A-6(1) / SC]			
42										
43	-8.32		-43.0'							
44										
45		1 - 2		4	40.8	0.92				
46		2 - 2								
47										
48			Clay, some fine sand, medium – dark olive gray (c)							
49										
50		PUSH 12"								
51		3 - 5		3	37.3	--				
52										
53										
54										
55		1 - 1		3	41.8	1.01				
56	-12.28	2 - 3	-56.0'							
57			Fine sand and clay, some small peaty pockets, loose (medium stiff?) – dark olive gray (c)							
58										
59										
60		PUSH 12"		2	29.6	0.61				
61		2 - 2								
62	-14.11		-62.0'							
63			Medium to coarse sand, medium – dark olive gray (c)							
64										
65	-15.11	2 - 4	-65.0'	11	20.2	1.16				
66		7 - 8	Silty clay, trace to some fine sand, medium stiff – dark olive gray (c)							
67										
68										
69										
70		PUSH 24"		WH	23.6	0.18				

Td: A

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
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W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
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Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 50
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N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
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PROJECT: Proposed Academic Campus
Ponce Health Sciences University — BORING NO.: 8 — SHEET NO.: 3/3

LOCATION: By Pass, Ponce, Puerto Rico — CLIENT: LOA Management, PSC

INSPECTOR: V. Rivera Roldán — DRILLER: A. Maldonado — WORK STARTED: 10/09/18 — WORK FINISHED: 10/09/18

POWER DRIVEN HOLLOW STEM AUGER; SAMPLE-TYPES & SIZES: 1 3/8" I.D. SPLIT SPOON — HAMMER WGT: 140 POUNDS

HAMMER DROP: 30" — DRILLING FLUID: NONE — CORE DATA-TYPE BARREL: ----- — TYPE & SIZE BIT: -----

GROUND WATER: DATE AND DEPTH: 15.0' [10/09/18] ▽ 12.0' [10/09/18] — DRILL MANUFACTURER TYPE & NO.: CME-55

"X" COORDINATE: ----- — "Y" COORDINATE: ----- — ELEVATION: 4.79m — JOB NO.: 18-4391

DEPTH (FT.)	ELEV. (M)	S.P.T. "N" VALUES	DESCRIPTION OF MATERIALS	N	W_N	Qu	LL	PI	%	Td
71										
72	-17.16		-72.0'							
73			Sandy clay, trace to some fine gravel, stiff – dark brown (d)							
74										
75		2 - 2		5	24.6	--				
76	-18.38	3 - 4	-76.0'							
77			Clay, stiff – orange brown, olive mottled (d)							
78										
79										
80		3 - 4		9	35.6	1.34				
81		5 - 7								A
82	-20.21		-82.0'							
83			Fine to medium sand, medium, brown (d)							
84										
85		4 - 8		13	22.1					
86	-21.43	5 - 9	-86.0'							
87			END OF BORING							
88										
89										
90										
91										
92										
93										
94										
95										
96										
97										
98										
99			(a) - man-made fill ("caliche" – gravel always refer to limestone fragments)							
100			(b) - alluvial of recent deposition							
101			(c) - lacustrine							
102			(d) - alluvial of older deposition							
103			ground water recorded at drilling, later raised inferring an artesian condition							
104										
105										

* = INDICATED AS NEEDED
(1) NO. OF BLOWS REQUIRED TO DRIVE SAMPLER 0"-6", 6"-12", 12"-18", 18"-24"
(2) FORCE TO CAUSE THIN WALLED SAMPLER TO PENETRATE AT RATE ½ FT/SEC.
W_N = NATURAL MOISTURE CONTENT IN % OF DRY WEIGHT
Qu = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
Td = TYPE OF DRILLING
(A) = STANDARD BORING IN SOILS SHOWING "N" VALUES BELOW 50
(B) = ROTARY DRILLING USING ALLOY DRAG BIT AND/OR IN SOILS SHOWING "N" VALUES ABOVE 50

N = SUM OF SAMPLER PENETRATION FROM 6" TO 18"
LL = LIQUID LIMIT
PI = PLASTICITY INDEX
% = PERCENT FINER THAN NO. 200 SIEVE

EXHIBIT "B"

ROUTINE FIELD AND LABORATORY TESTING PROCEDURES

FOR THE LATEST REVISION OF THE

PROPOSED PONCE HEALTH SCIENCES UNIVERSITY

BY PASS (STATE ROAD NO. 2)

PONCE, PUERTO RICO

(VERA Job No. 19-4467)

By:

VICTOR E. RIVERA ROLDAN, PE, MBA

VICTOR E. RIVERA ASSOCIATES

GEOTECHNICAL ENGINEERS

VICTOR E. RIVERA ROLDAN
INGENIERO LICENCIADO
Lic.5008
PUERTO RICO

RECEIVED
19 JUN 2019
LOA Management

JUNE 14, 2019

AAR AASHTO R18 ACCREDITED

EXHIBIT "B"

ROUTINE FIELD AND LABORATORY TESTING PROCEDURES

I. FIELD DRILLING (ADVANCEMENT) OF TEST BORING(S)

Test borings were advanced by either means, i.e., using hollow stem continuous flight power augers, or by means of standard wash boring method. Each is described below

A. Powered Augers Method

The Auger Drilling Method consist of powered turning a continuous flight hollow stem auger 6" O.D. and 2 ½" I.D. into the soil to the desired depth or level. The auger is used to advance and case the test hole simultaneously. It is used with a center rod and plug assembly at it lower end. The plug assembly is held in-place by the cap inside drill rod and is coupled to the auger and its assembly to the rotating spindle on the drill rig, thus preventing dirt from entering the mouth of the auger.

Once the desire depth of level for sampling is reached, the plug is retracted by withdrawing the center rod to permit lowering of the sampler or core barrel, as the case may be, through the auger. After the sampler is retracted, the plug is reinserted and held in-place by the center rod, another auger section is connected to the first, together with one additional center rod to secure the plug to the cap, and the hole is advanced.

This procedure is repeated until the desire hole depth is reached. The auger can always be stopped at any depth level to allow normal sampling practice.

B. Standard Wash Boring Method

In this method a temporary casing is driven into the ground. The soil inside the casing is taken out by means of chopping and washing down to the desired sampling depth. Water is forced down thru a drill rods string and emerges with a high velocity through a small opening in the chopping bit. This action loosens the soil inside the temporary casing and the soil water slurry comes up through the annular space between the rods string and casing. A T-connection provided at the top facilitates the collection of wash water in a sump made nearby. The wash water collected is again pumped through a hose into the rods string. As the borehole advances additional casing pipe and drill rods are added. The connection between water hose and wash pipe is provided with a swivel head so that the rod

string and chopping bit can be twisted and pressed down whereby the borehole is advanced further into the soil. While driving the casing the swivel head is removed. By repeating the process, the borehole is advanced to the required sampling depth. The method is suitable for all soil types except gravels and boulders. The slurry flowing out of the hole gives the indication of the soil type. The change of the color in the wash water indicates the change in the soil strata.

This procedure is repeated until the desire hole depth is reached.

Regardless of the method followed in advancing the test boring(s), soil samples are secured from the bottom of the hole by means of a 1 3/8" I.D. Split Spoon Sampler. While securing the soil samples, the standard penetration test is performed, and the "N" values obtained. This is the number of blows required to drive the sampling spoon at a distance of one (1) foot into the ground with 140 pounds hammer falling 30 inches. The "N" values give an indication of the consistency of cohesive soils and the state of packing of granular soils as follows:

Cohesive Soils

"N" Value (Blow/Ft.)	**Consistency**	**Unconfined Compressive Strength (TSF)**
Less than 2	Very Soft	0.25
2-4	Soft	0.25 - 0.50
4-8	Medium	0.50 - 1.00
8-10	Stiff	1.00 - 2.00
15-30	Very Stiff	2.00 - 4.00
More than 30	Hard	4.00

Granular Soils

"N" Values (Blows/Ft.)	**Relative Density**
0-5	Very Loose
5-10	Loose
10-30	Medium
30-50	Dense
Over 50	Very Dense

C. Other Drilling Method

C.1. Semi-Consolidated or Gravel Materials (B-Type of Drilling) Where Applicable:

Advancement of the hole into semi-consolidated or gravelly deposit generally showing "N" values below 50 by means of the conventional method previously described results on a very low and costly operation, thus, requiring a different system for deepening the hole. On this case, a combined drilling and sampling method is used.

Sampling is made on the standard way already discussed, however, advancement of the hole is achieved by means of rotary drilling using alloy drag bit placed at the lower end of the powered turning rod. This method also combines from the standard wash boring the jet of water to clean-out the soil debris produced by the drilling action.

C.2. Rock Coring (C-Type of Drilling) Where Applicable:

This method is applied for drilling into hard or consolidated rock and some coarse gravel and boulder deposits, and basically consist of drilling with diamond bits secured to the lower end of a rock sampler (core barrel). This barrel is double tubed to insure a high percentage of core recovery for most adequate evaluation of the rock sample.

From the rock sample secured, the rock quality designation (RQD) is determined by measuring the core recovery percentage of core sticks that are greater than 10cm (4.0 inches) in length. Core that is not hard or sound should not be counted, even if they are 10cm (4.0 inches) in length. It is a leading indicator for low-quality rock zones. Today RQD is used as a standard parameter in drill core logging and forms a basic element value of the major mass classification systems:

- Rock Mass Rating system (RMR) and Quality-system.
- RQD is defined as the quotient: "RQD = (Sumof10)/Itot x 100%"

where: (Sumof10) = Sum of length of core sticks longer than 10cm (4.0 inches)

Itot = Total length of core run

Relation of RQD and Rock Quality

RQD (%)	Rock Quality Description
0 – 25	Very Poor
25 – 50	Poor
50 – 75	Fair
75 – 90	Good
90 – 100	Excellent

II. LABORATORY WORK

A. Identification of Soils

Soil samples are classified according to their constituents, and the following terminology is used to denote the percentage by weight of each component:

Description Term	Range of Proportion (%)
Trace	1-10
Some	10-20
Adjective (sandy, silty, clayey)	20-35
And	35-50

Granular soils are non-cohesive soils consisting of boulders, gravel, sand, silt, either separately or in combination, that is, soil showing no-plasticity.

Boulders are the constituents with an average diameter larger than 3-inches. Gravel ranges from fine (No. 10 Sieve) to coarse (3 inches sieve). Sand particles are those passing No. 10 Sieve and retained on No. 200 mesh. The silt particle ranges from 0.66 to 0.002 mm.

Cohesive soils are those which possess characteristics of cohesiveness and plasticity. They may be granular soils as described above with the addition of clay or organic silt which causes cohesion and plasticity or may be clay or organic silt with no coarse components.

The clay fraction is composed of clay minerals and in general has an average particle diameter of less than 0.002 mm.

The organic fraction is that portion with average particle diameter less than 0.06 mm. The clay and organic silt may occur separately or in conjunction.

Both materials will exhibit plastic qualities within a certain range of water content, but the range will be greater in the case of clay. The organic silt has a more granular appearance than the clay.

Besides the constituents and colors, each sample is carefully examined for stratifications, presence of secondary structures, shells, fibrous or disseminated peat, plasticity, or any foreign matter that might undermine it shearing resistance, that is, it load carrying capacity.

B. Natural Moisture Content

The natural moisture content is determined by finding the quality of water present in the voids of the soil specimen in the natural condition and dividing it by the dry weight of the sample. The result thus attained is expressed as a percentage (dry weight basis).

The weight of the water is determined by subtracting the weight of a soil specimen in its natural condition from the weight of the specimen after been dried in an oven at 105 C twenty-four (24) hours.

C. Unconfined Compression Tests

The cohesive soil specimens obtained from split spoon samples, cannot be considered as undisturbed samples, nevertheless, their unconfined compressive strength can be easily determined to obtain some information as to the shearing strength. Unconfined compressive strength tests were performed by subjecting cylinders of soil some 2.75" high by 1.375" in diameter to axial deflection at a constant load and measuring the resisting stress developed in the soil.

The load applied on the samples is measured by a scale and the deflection recorded on a strain dial calibrated in thousands of an inch.

Respectfully Submitted,

VICTOR E. RIVERA ASSOCIATES

GEOTECHNICAL ENGINEERS

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EXHIBIT "C"

PILE LOADING SCHEDULE

FOR THE LATEST REVISION OF THE

PROPOSED PONCE HEALTH SCIENCES UNIVERSITY

BY PASS (STATE ROAD NO. 2)

PONCE, PUERTO RICO

(VERA Job No. 19-4467)

By:

VICTOR E. RIVERA ROLDAN, PE, MBA

VICTOR E. RIVERA ASSOCIATES

GEOTECHNICAL ENGINEERS

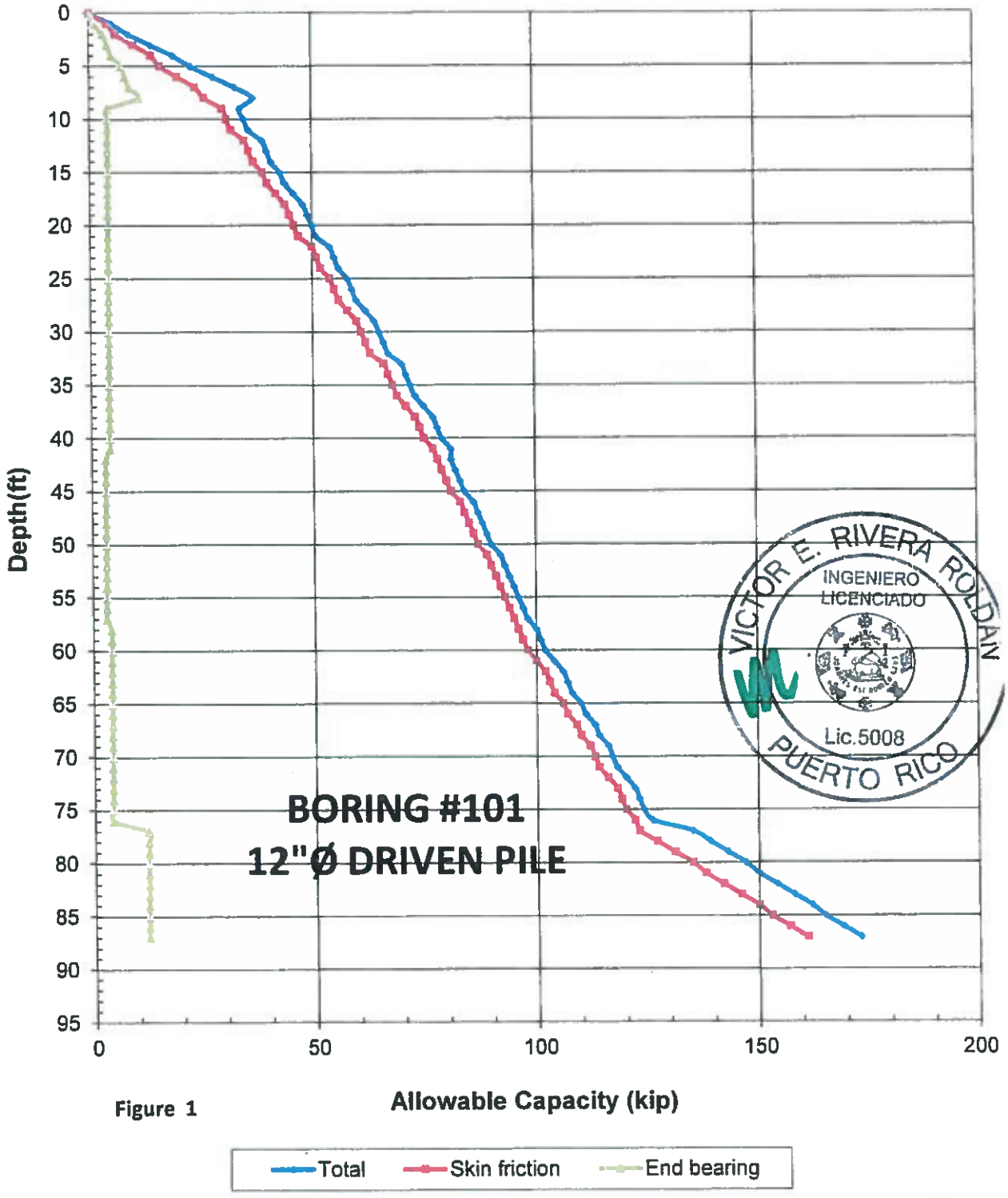
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PUERTO RICO

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19 JUN 2019
LOA Management

JUNE 14, 2019

AAP AASHTO R18 ACCREDITED

Proposed Academic Campus, Ponce Health Sciences University
Allowable Capacity vs. Depth
(Skin friction, end bearing, total for 12" DRIVEN PILE
(Safety Factor = 2)



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PUERTO RICO

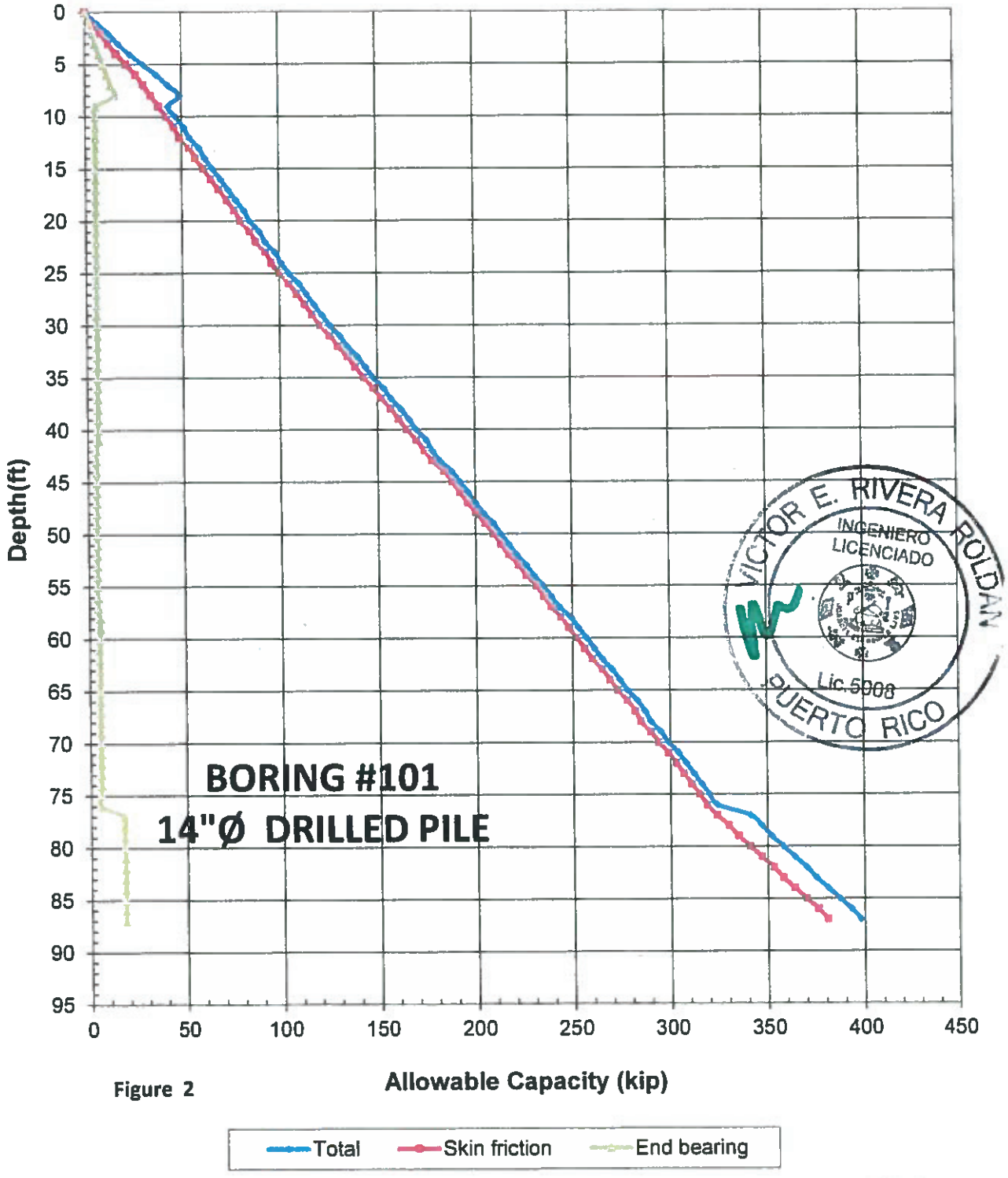
Figure 1

VICTOR E. RIVERA ASSOCIATES, LLC
GEOTECHNICAL ENGINEERS
& CONCRETE TESTING LABORATORIES

AASHTO R18
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Proposed Academic Campus, Ponce Health Sciences University
Allowable Capacity vs. Depth
(Skin friction, end bearing, total for 14" DRILLED PILE
(Safety Factor = 2)



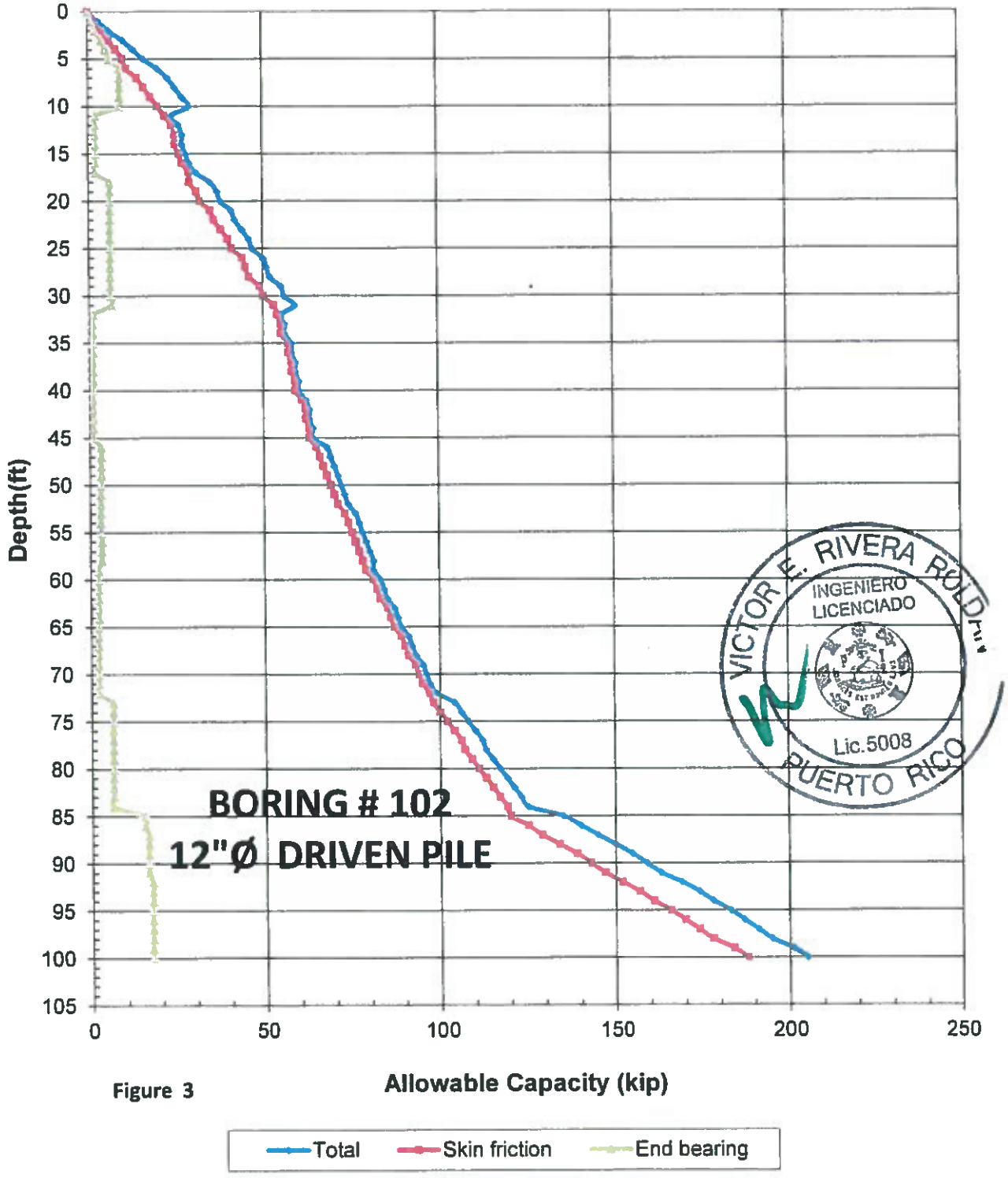
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Figure 2

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Proposed Academic Campus, Ponce Health Sciences University
Allowable Capacity vs. Depth
(Skin friction, end bearing, total for 12" DRIVEN PILE
(Safety Factor = 2)



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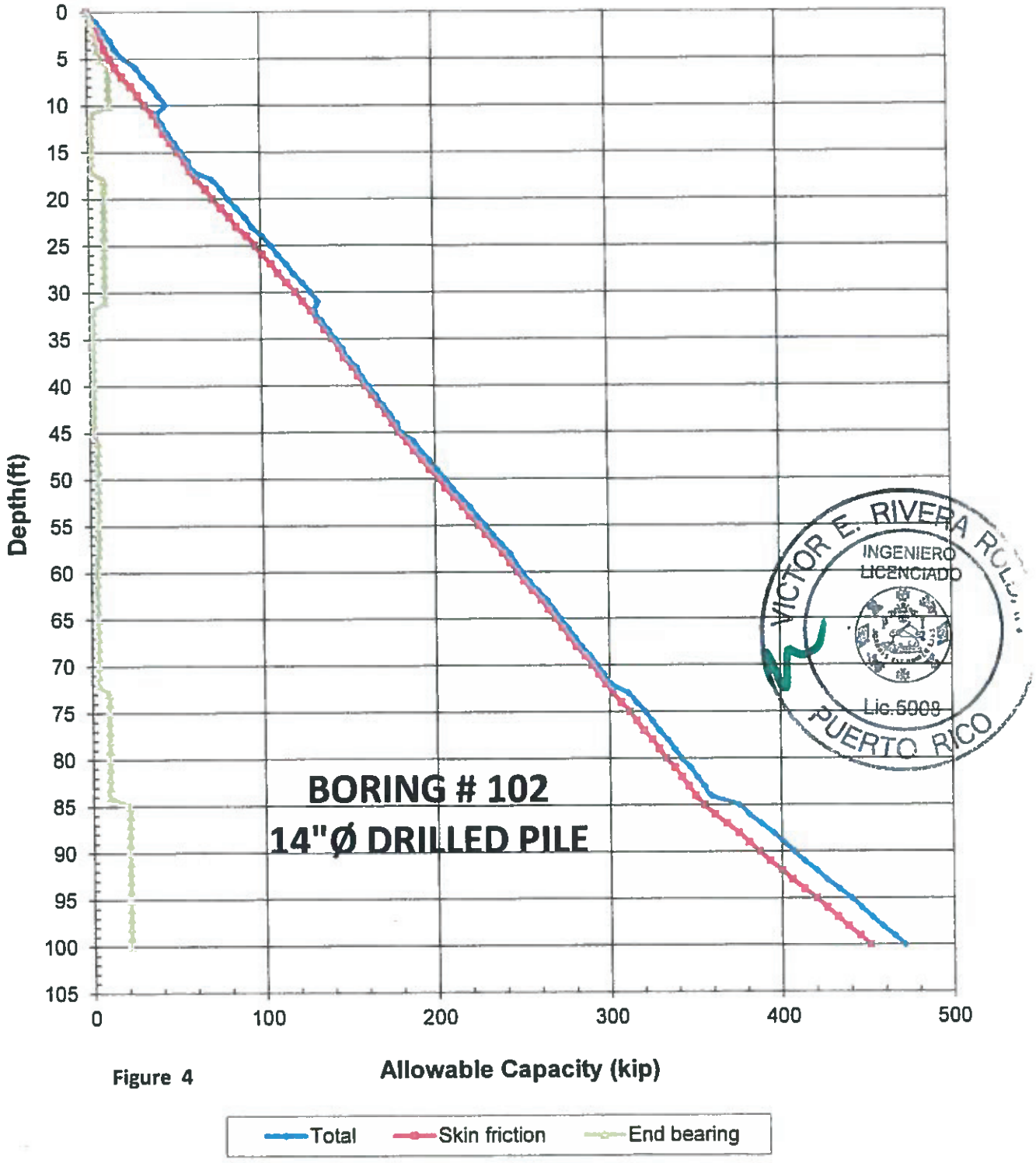
Figure 3

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Allowable Capacity vs. Depth
(Skin friction, end bearing, total for 14" DRILLED PILE
(Safety Factor = 2)



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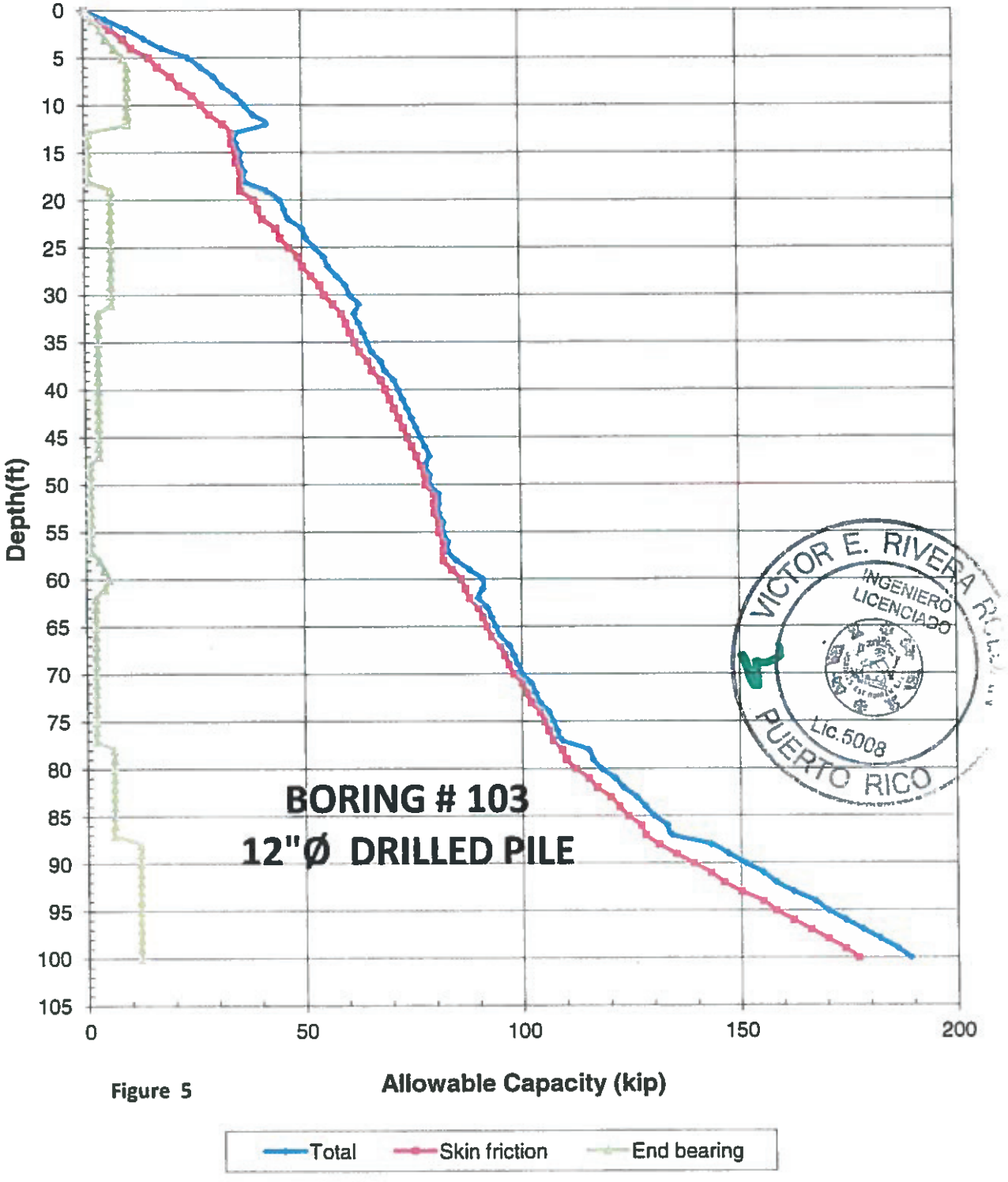
Figure 4

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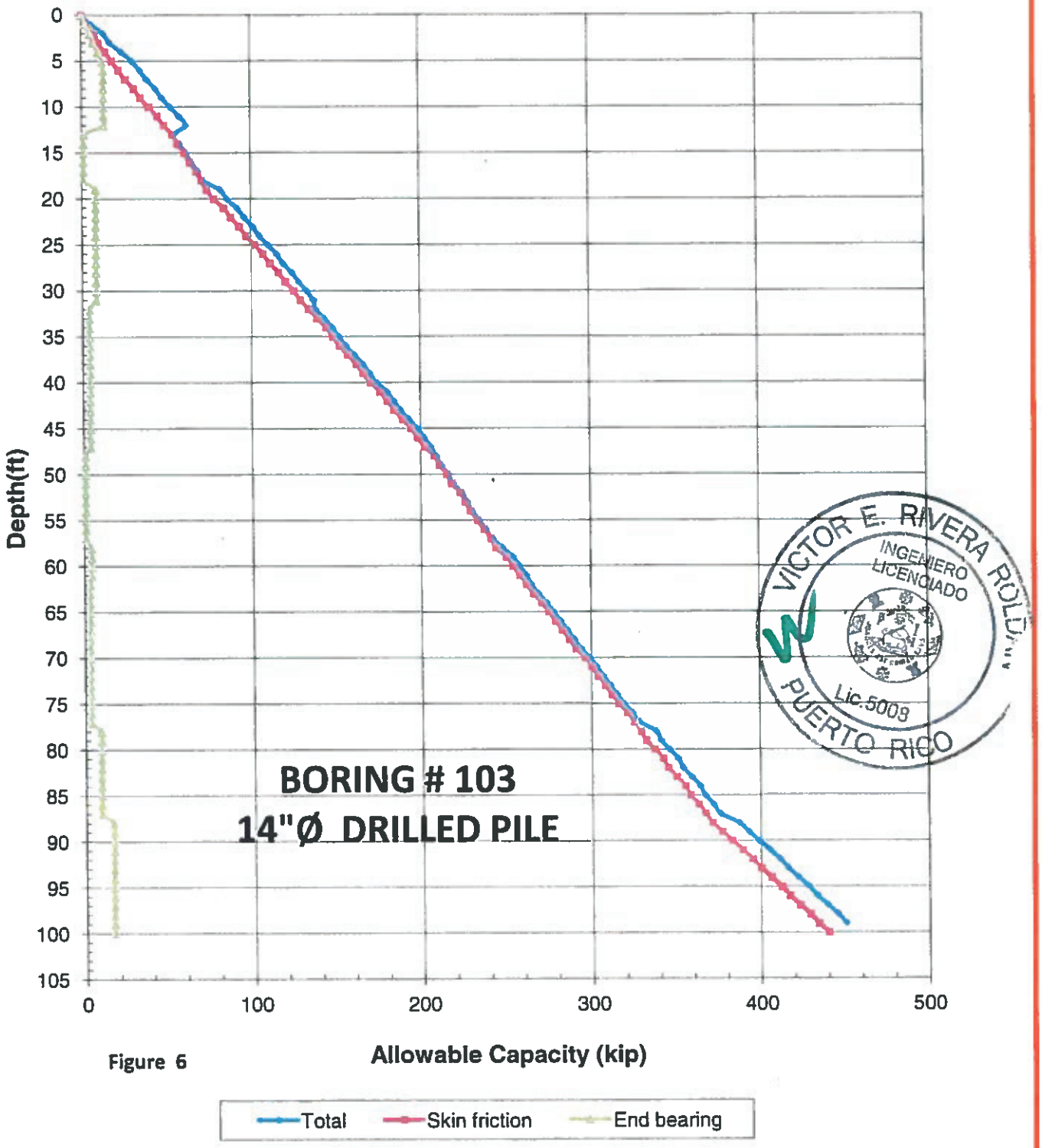
Proposed Academic Campus, Ponce Health Sciences University
Allowable Capacity vs. Depth
(Skin friction, end bearing, total for 12" DRILLED PILE
(Safety Factor = 2)



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Figure 5

Proposed Academic Campus, Ponce Health Sciences University
Allowable Capacity vs. Depth
(Skin friction, end bearing, total for 14" DRILLED PILE
(Safety Factor = 2)



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Figure 6

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Proposed Academic Campus, Ponce Health Sciences University
Allowable Capacity vs. Depth
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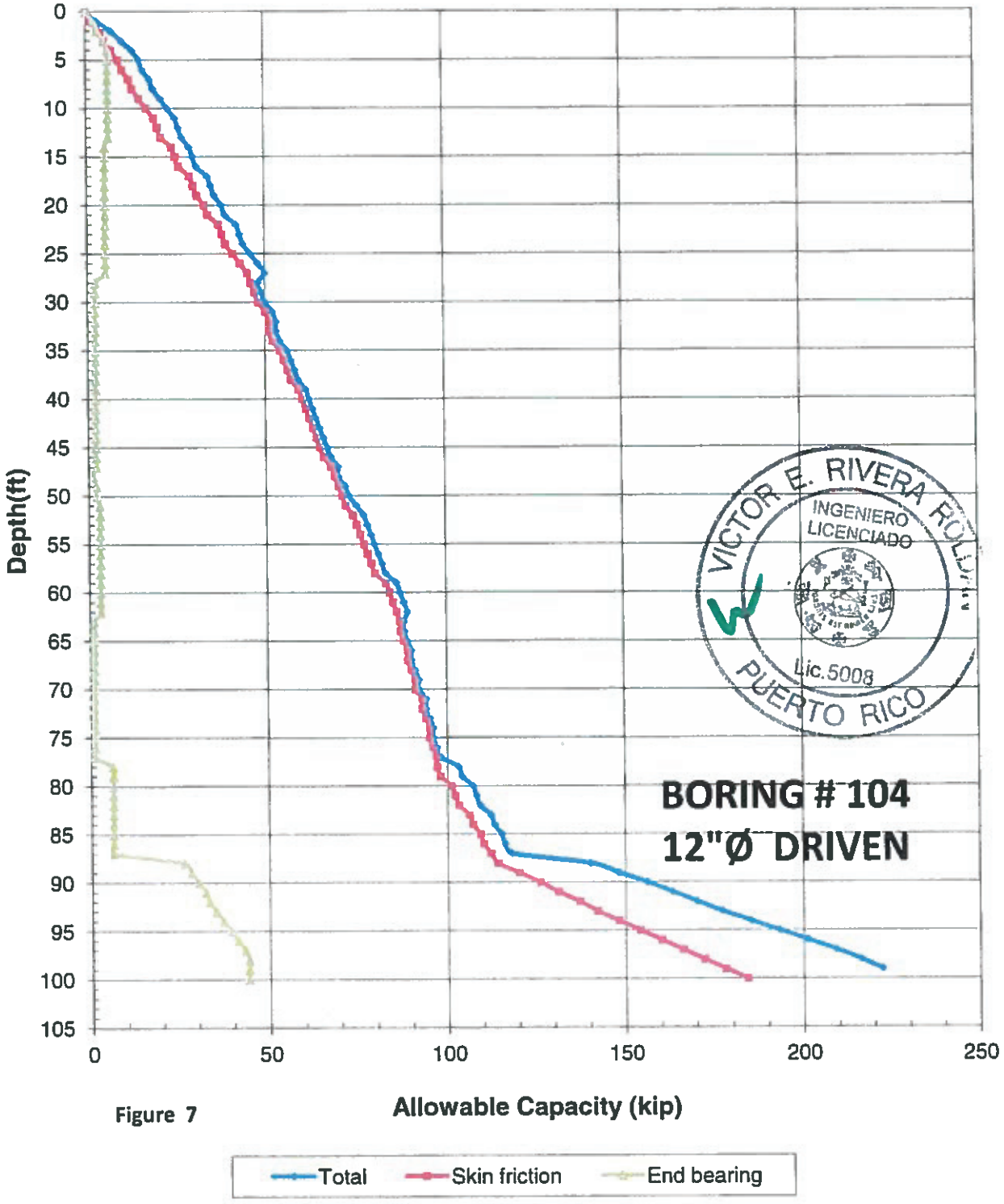
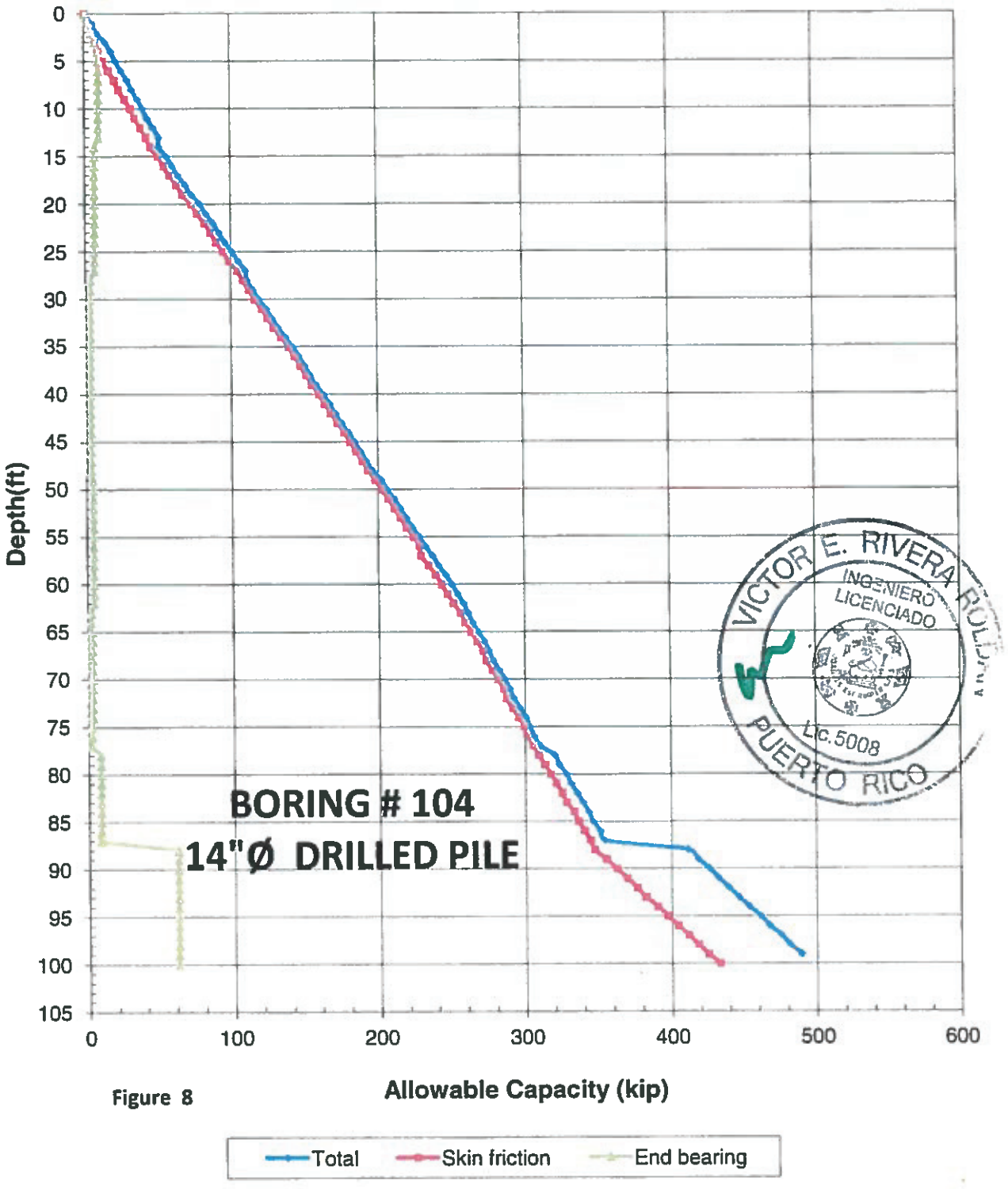


Figure 7

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(Skin friction, end bearing, total for 14" DRILLED PILE
(Safety Factor = 2)



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Figure 8

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Allowable Capacity vs. Depth
(Skin friction, end bearing, total for 12" DRIVEN PILE
(Safety Factor = 2)

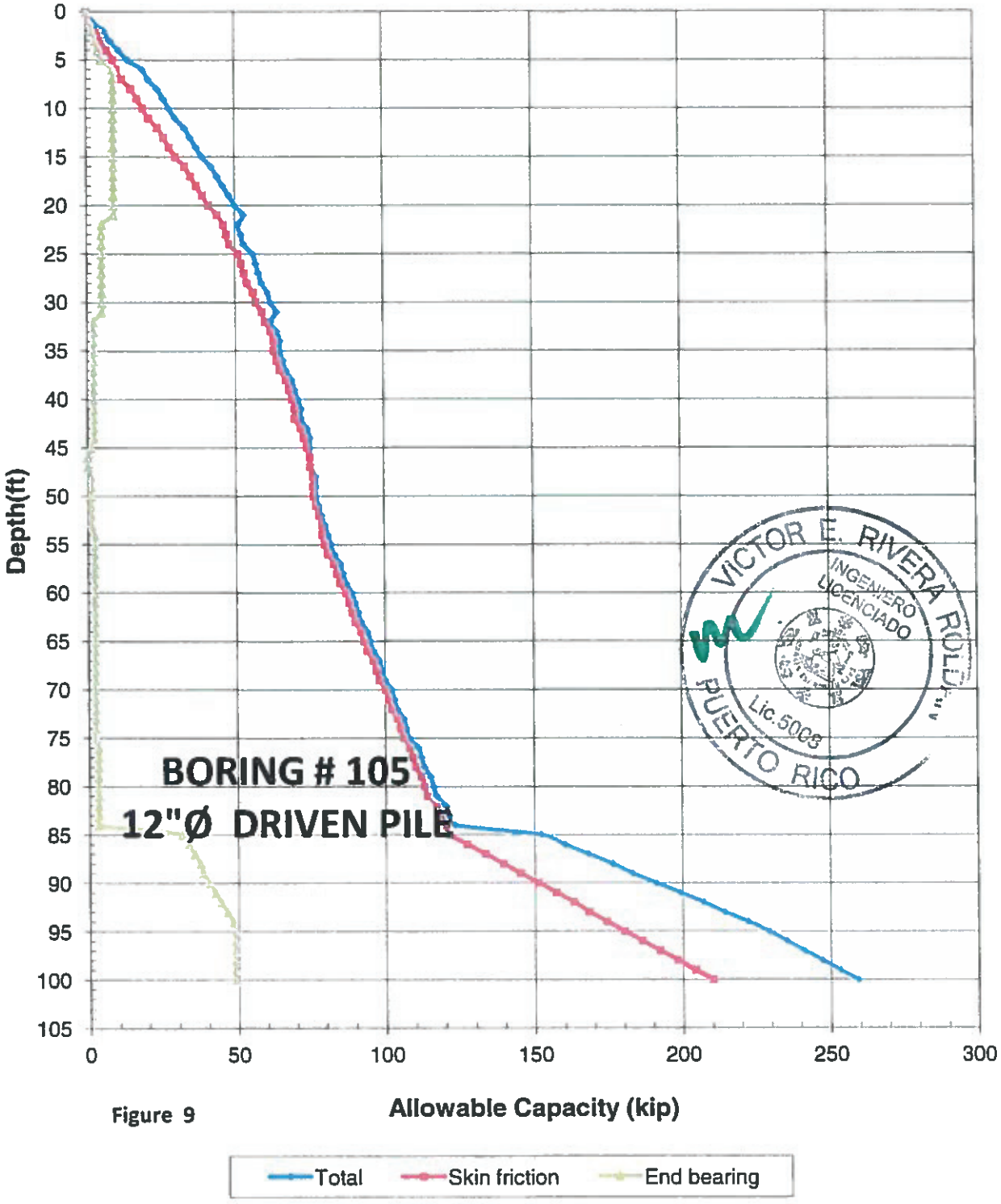


Figure 9

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Allowable Capacity vs. Depth
(Skin friction, end bearing, total for 14" DRILLED PILE
(Safety Factor = 2)

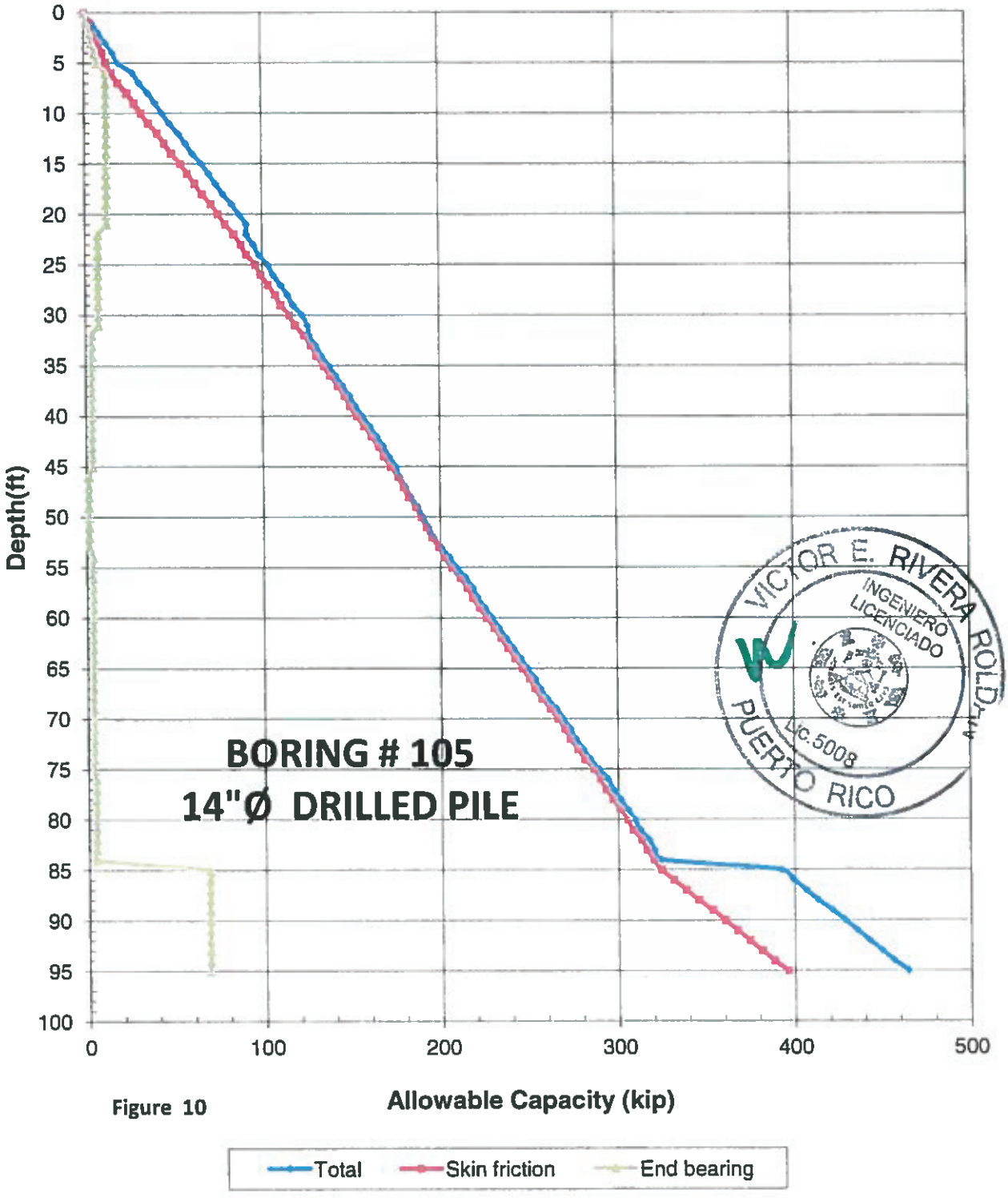
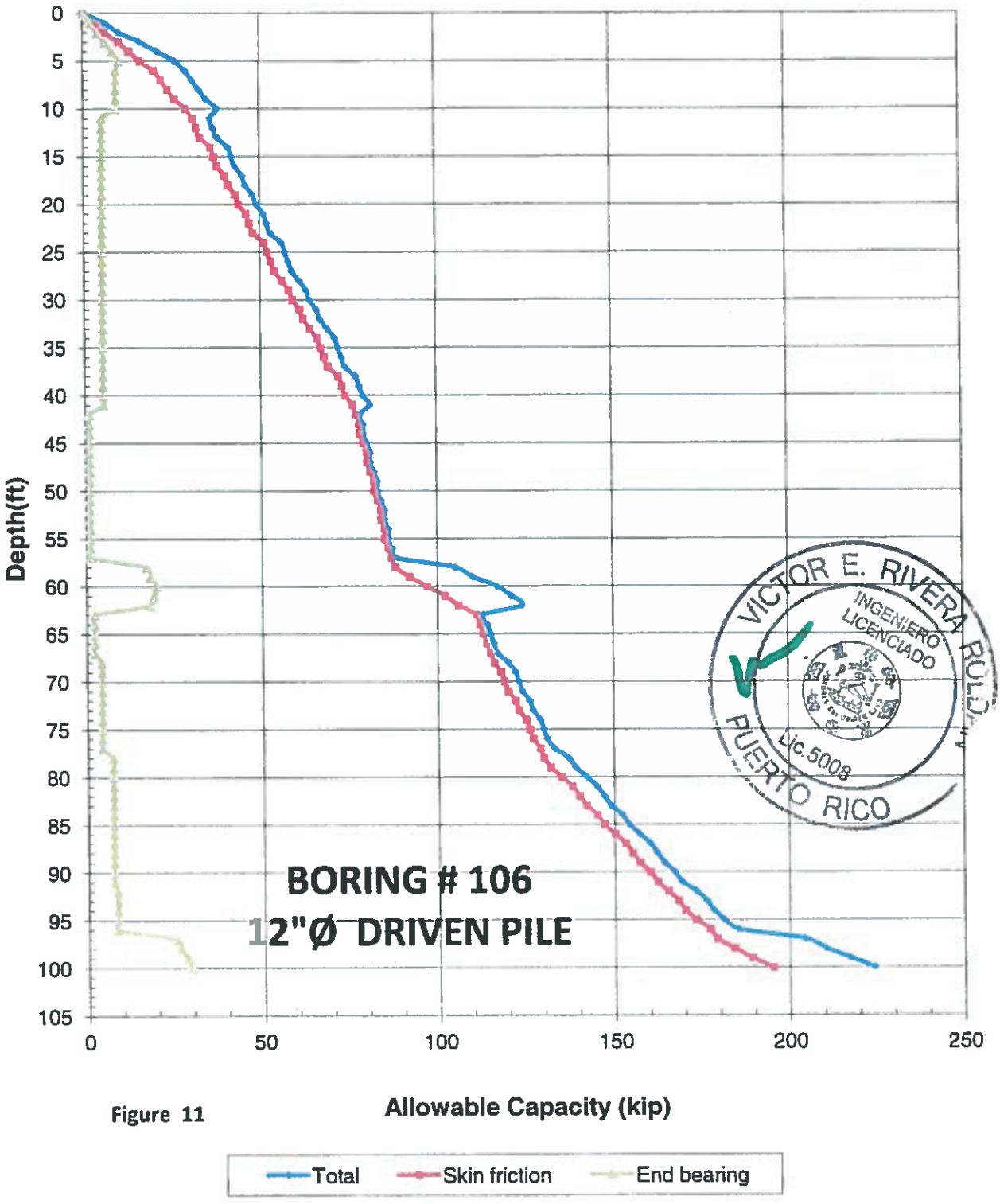


Figure 10

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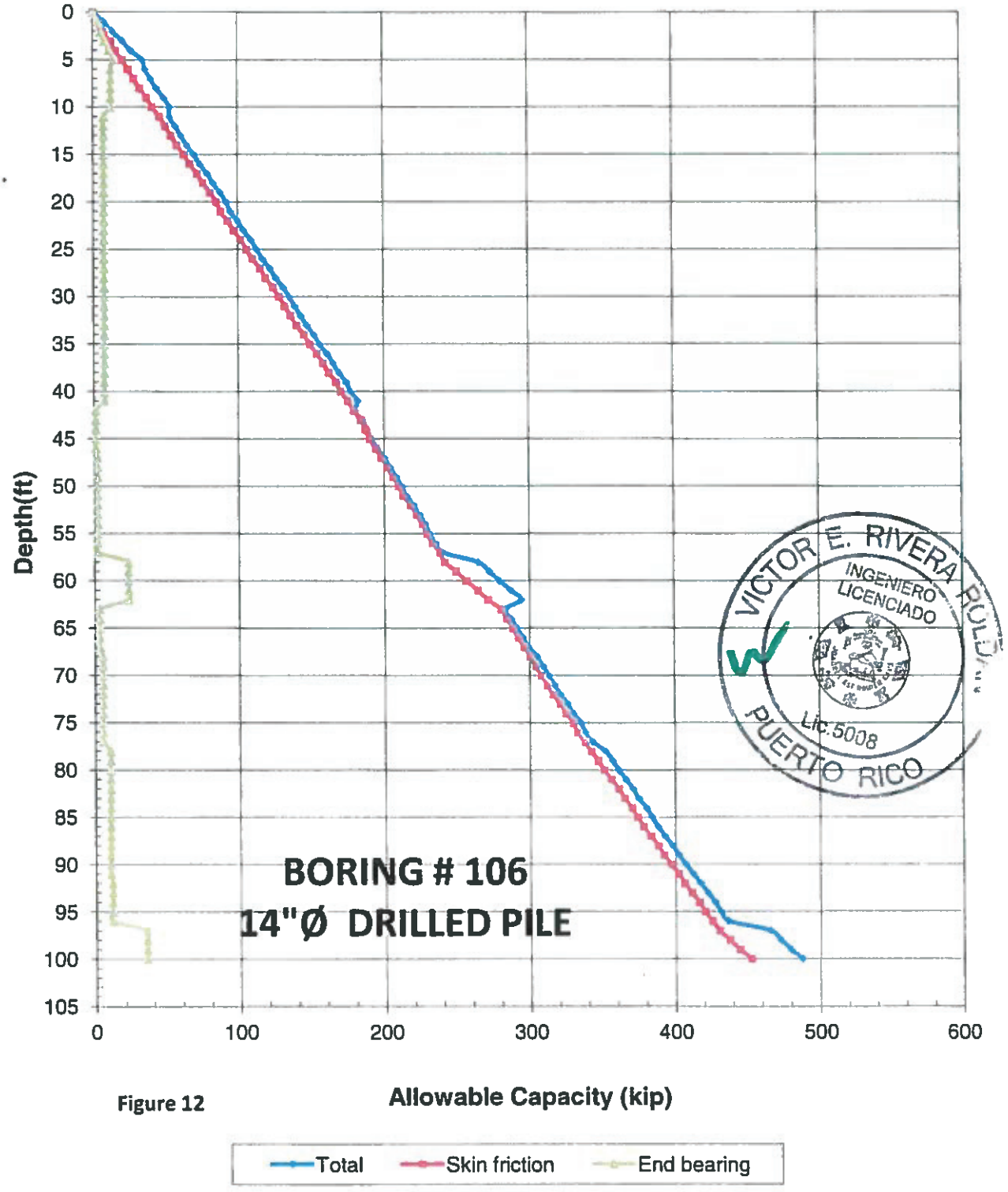
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Allowable Capacity vs. Depth
(Skin friction, end bearing, total for 12" DRIVEN PILE
(Safety Factor = 2)



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Figure 11

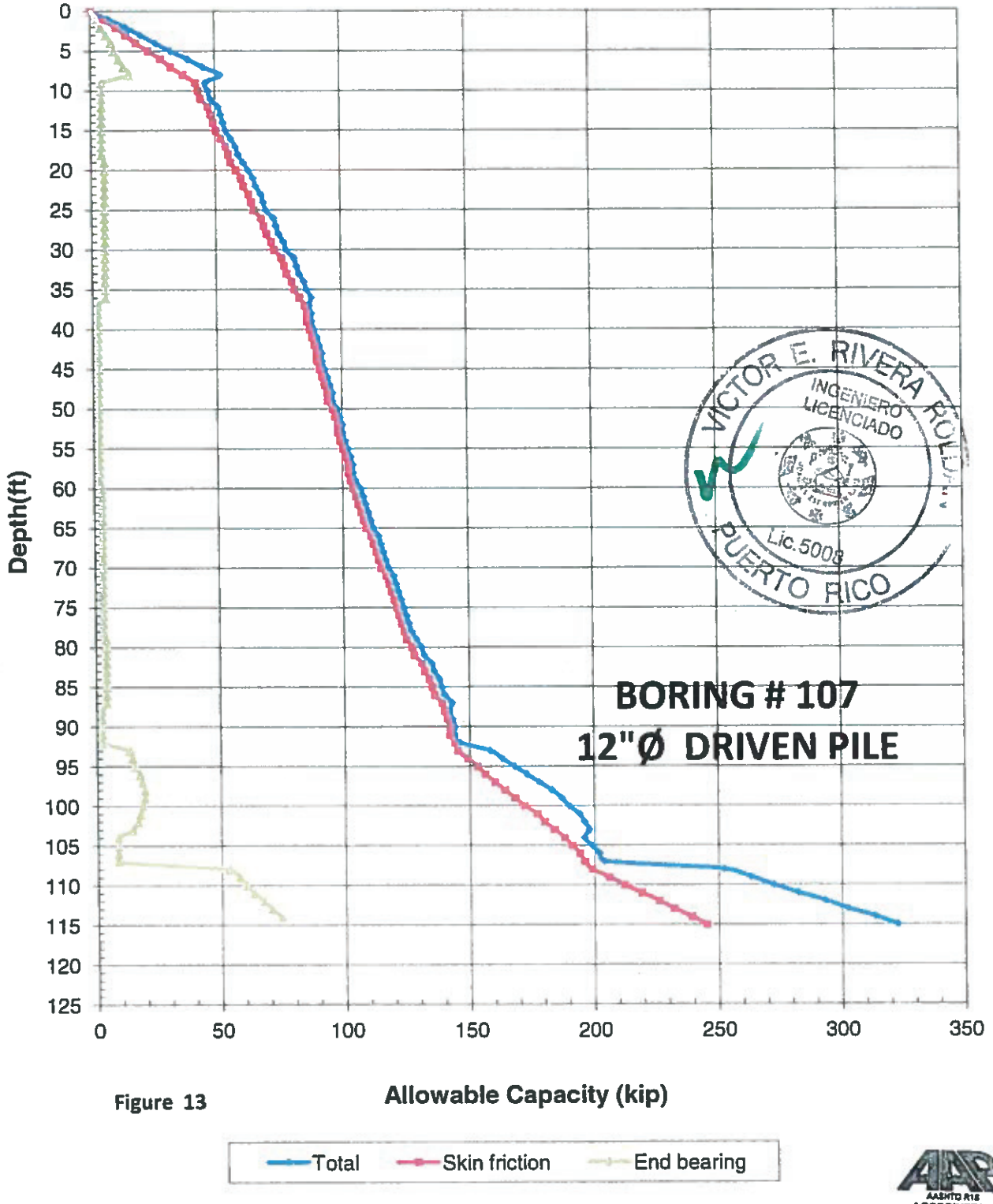
Proposed Academic Campus, Ponce Health Sciences University
Allowable Capacity vs. Depth
(Skin friction, end bearing, total for 14" DRILLED PILE
(Safety Factor = 2)



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Figure 12

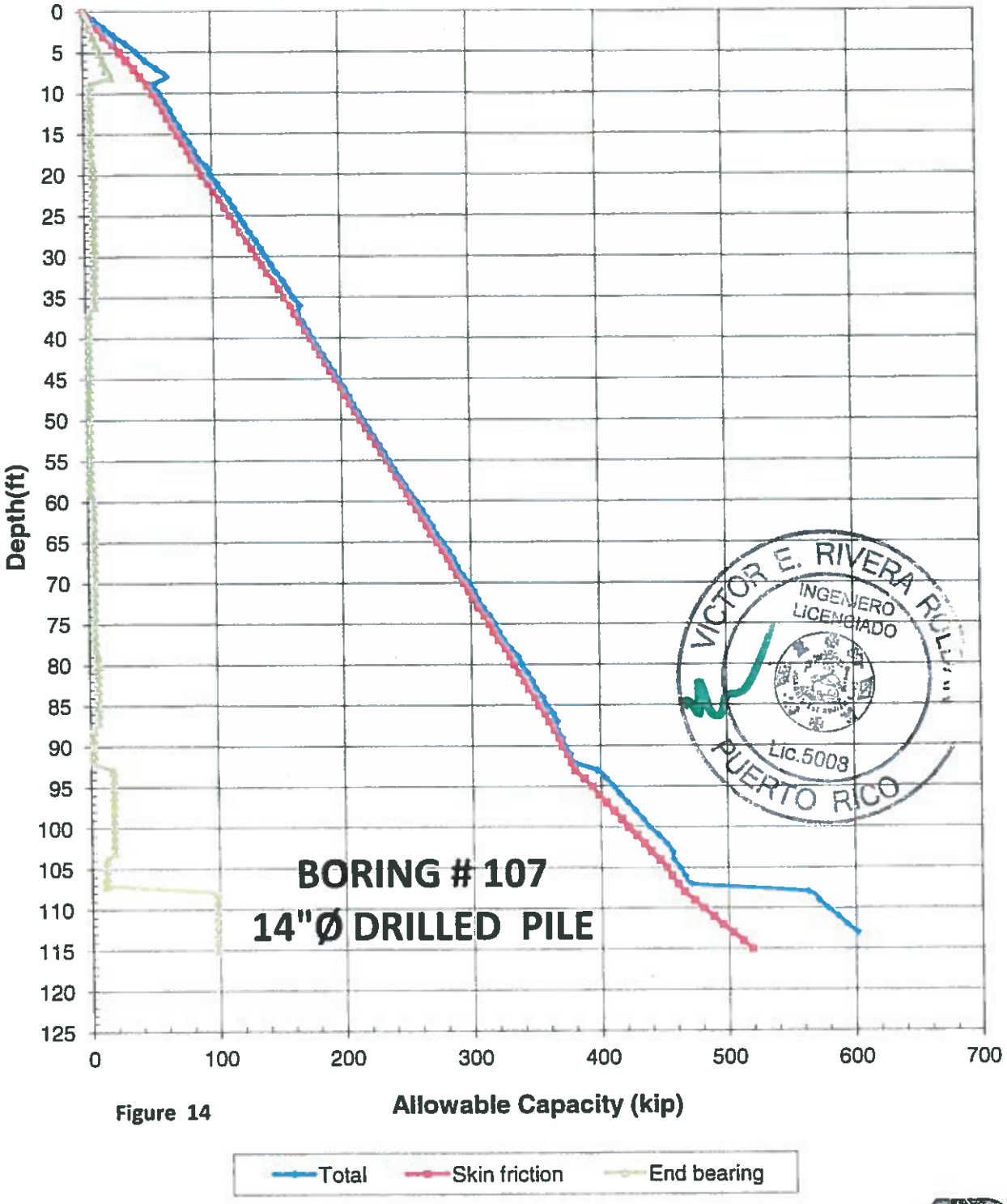
Proposed Academic Campus, Ponce Health Sciences University
Allowable Capacity vs. Depth
(Skin friction, end bearing, total for 12" DRIVEN PILE
(Safety Factor = 2)



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Figure 13

Proposed Academic Campus, Ponce Health Sciences University
Allowable Capacity vs. Depth
(Skin friction, end bearing, total for 14" DRILLED PILE
(Safety Factor = 2)



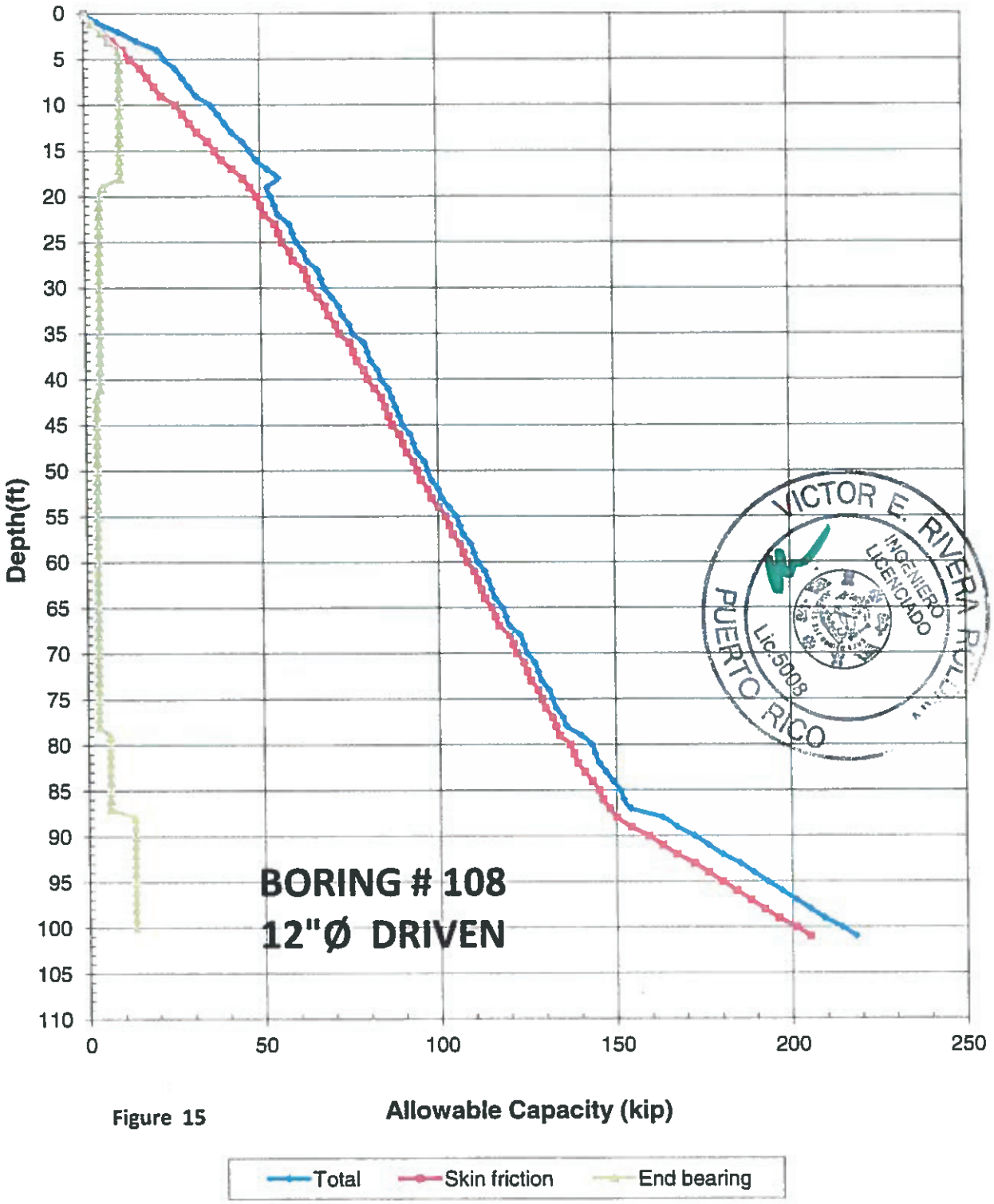
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Figure 14

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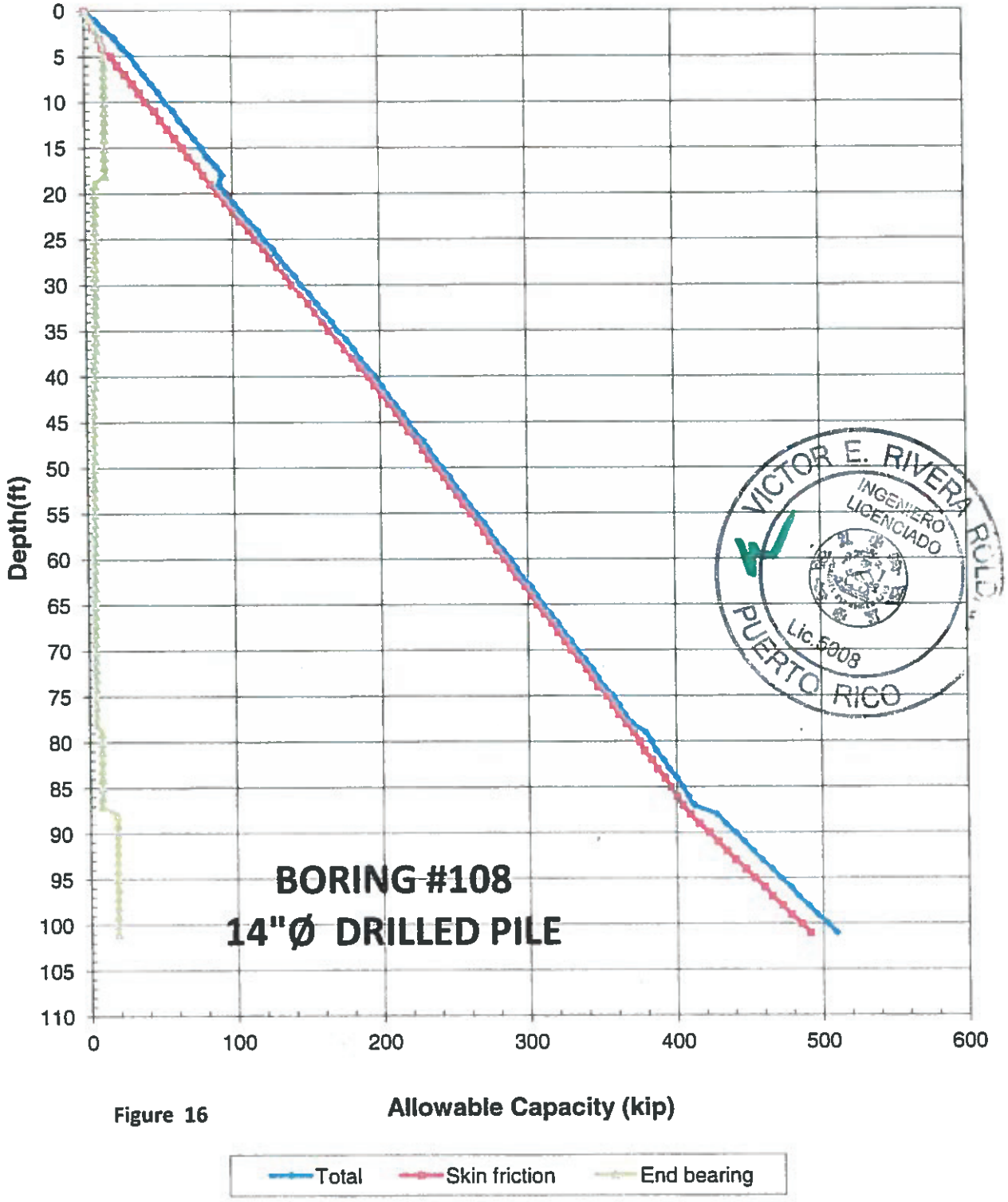
Proposed Academic Campus, Ponce Health Sciences University
Allowable Capacity vs. Depth
(Skin friction, end bearing, total for 12" DRIVEN PILE
(Safety Factor = 2)



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Figure 15

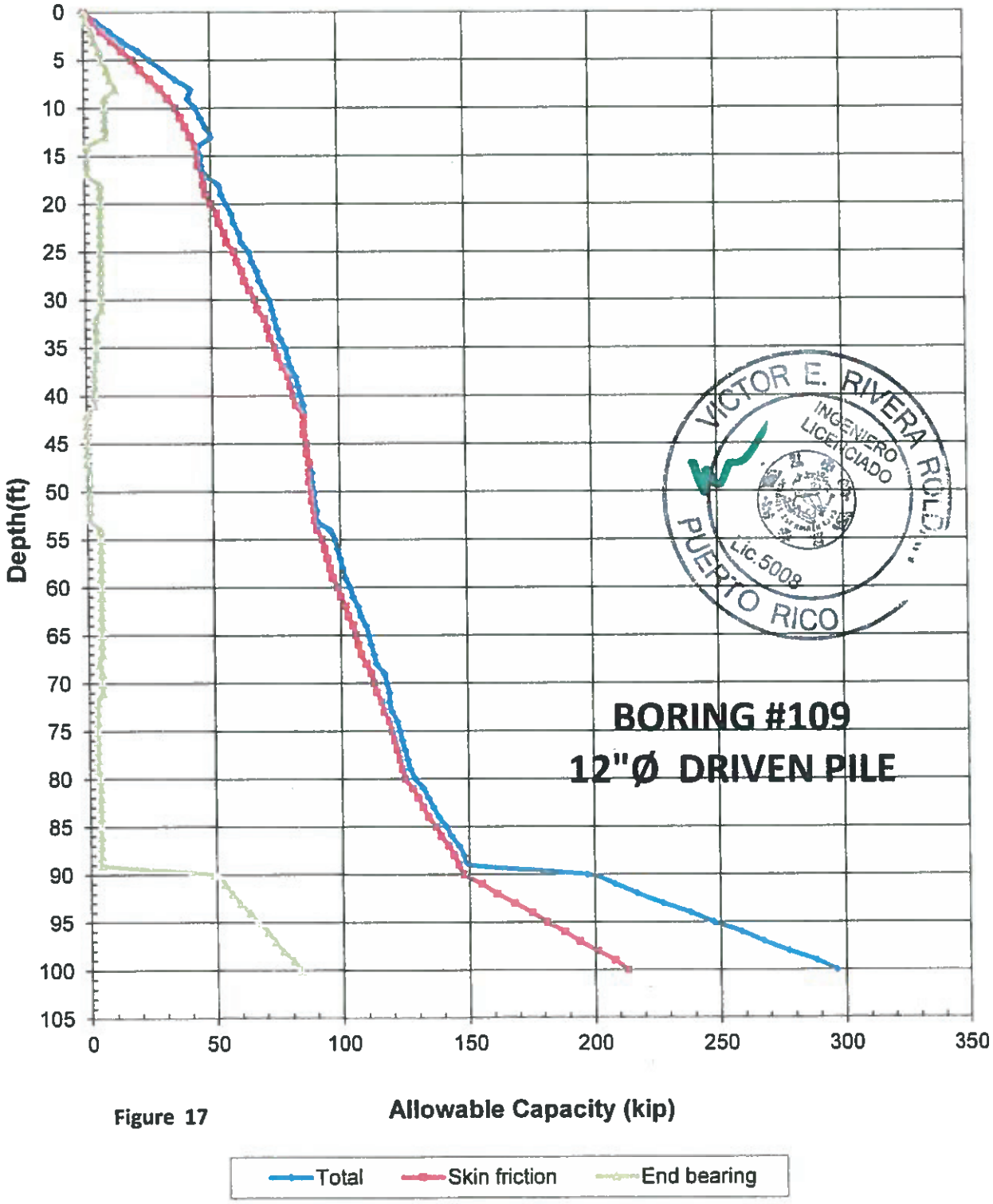
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Allowable Capacity vs. Depth
(Skin friction, end bearing, total for 14" DRILLED PILE
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Figure 16

Proposed Academic Campus, Ponce Health Sciences University
Allowable Capacity vs. Depth
(Skin friction, end bearing, total for 12" DRIVEN PILE
(Safety Factor = 2)

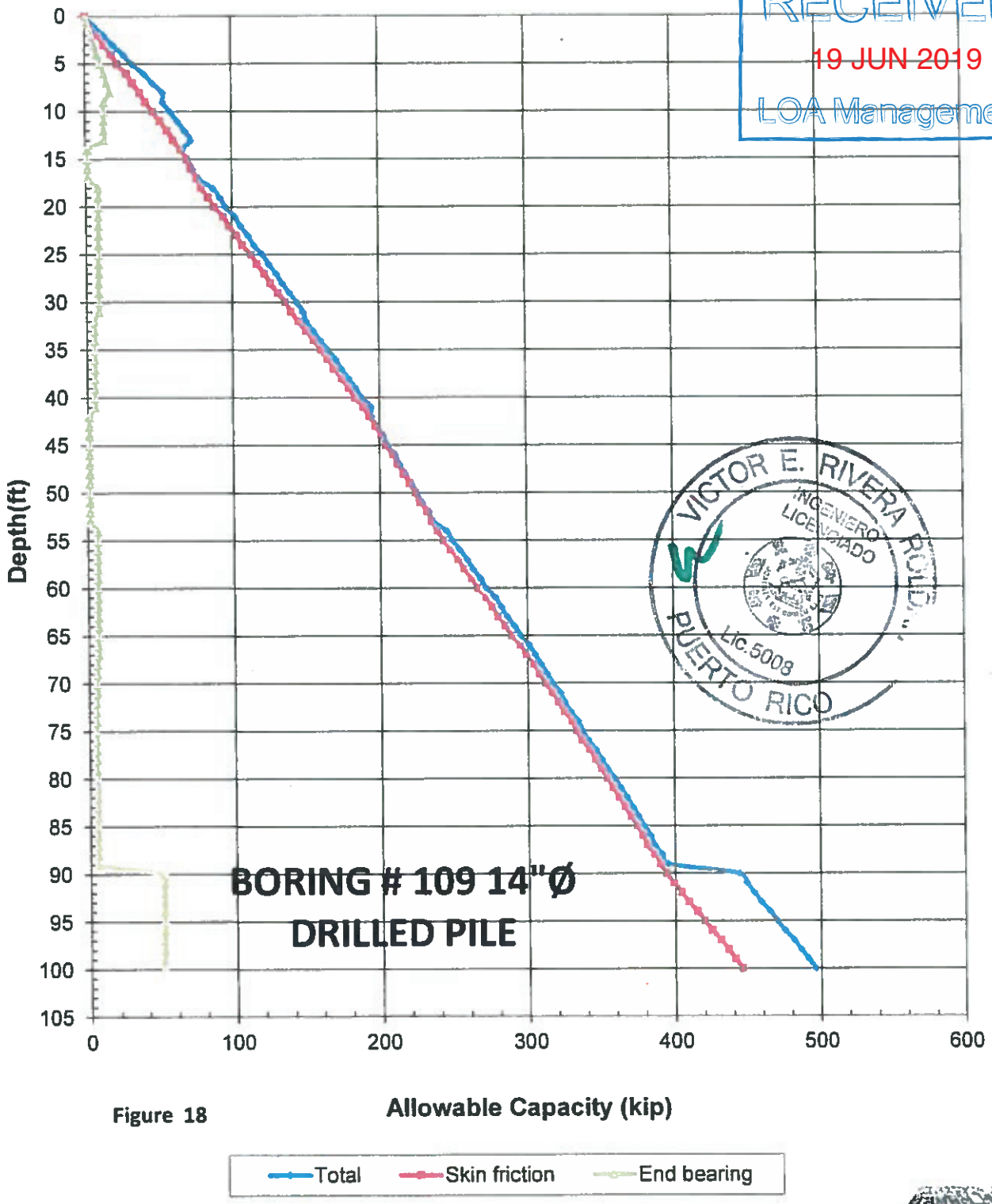


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Figure 17

Proposed Academic Campus, Ponce Health Sciences University
Allowable Capacity vs. Depth
(Skin friction, end bearing, total for 14" DRILLED PILE
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Figure 18

T.- Geotechnical analysis addendum 1

ADDENDUM NO. 1

ADDITIONAL GEOTECHNICAL EVALUATION

FOR THE LATEST REVISION OF THE

PROPOSED PONCE HEALTH SCIENCES UNIVERSITY

BY PASS (STATE ROAD NO. 2)

PONCE, PUERTO RICO

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ADDENDUM NO. 1
ADDITIONAL GEOTECHNICAL EVALUATION
FOR THE LATEST REVISION OF THE
PROPOSED PONCE HEALTH SCIENCES UNIVERSITY
BY PASS (STATE ROAD NO. 2)
PONCE, PUERTO RICO
(VERA Job No. 19-4467.B)

Submitted To:

LOA MANAGEMENT, PSC
PO BOX 270122
SAN JUAN PR 00928-2922

Attention
MR. LADISLAO ORTIZ, JR., P.E.
PRINCIPAL
email: lortiz@loamanagement.com
and/or
MR. JOSE ARRESEIGOR
VICE-PRESIDENT
M PROPERTY SERVICES P.R., LLC
email: jarresseigor@pr-mps.com

By:

VICTOR E. RIVERA ROLDAN, PE, MBA
VICTOR E. RIVERA ASSOCIATES, LLC
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October 14, 2018

Addendum No. 1 To: Additional Geotechnical Evaluation
for the Latest Revision of the
Proposed Ponce Health Sciences University
By Pass (State Road No. 2)
Ponce, Puerto Rico
(VERA Job No. 19-4467.B)

Submitted To: LOA Management, PSC
PO Box 270122
San Juan PR 00928-2922

Attention: Mr. Ladislao Ortiz, Jr., P.E.
Principal
email: lortiz@loamanagement.com
and/or:
Mr. Jose Arreseigor
Vice-president
M Property Services PR, LLC
email: jarreseigor@pr-mps.com

Report:

Pursuant our written proposal of July 22, 2019, addressed to yourgoodselves, herein submitted are the outcomes of the additional engineering and other related tasks rendered.

A. 0.10 MG underground Water Tanks: to be located at the building north-easternmost corner attached (wall to wall) to the main building structure. Bottom slab invert elevation is to reach 1.63 m, i.e., a depth ±15.5 ft. below building finished ground floor elevation (FFE = 6.36 m). Nearest borings (no. 101 and 103 as per report) average ground surface elevation is 5.63 m, i.e., top slab of the tanks or cisterns is to be located ±0.72 m higher than actual ground surface, thus bottom of proposed excavation is to reach ±12.5 ft. below actual ground. Ground water level was established at depth of 13.0 ft. below ground surface at both borings no. 101 and 103 (average elevation of 1.68 m).

Though a weight compensation (floating foundation) could be considered deleting the piling for the support of the cisterns, the fact the cisterns top slab is a continuation of the main building plus the cistern is to be attached to the main structure in turn to be pile supported, make the potential different vertical behavior among the two structures, one over piles (static), the other over a mat foundation of main

concern. Small steps and cracks along the joints of the two, though not to structurally weaken or damage the integrity of the structures, are of main concern for the serviceability and aesthetically unwanted. Therefore, the cisterns are to be also pile supported. Piling is to follow the related recommendations for the building additionally to the design data given further ahead.

In addition, and because the presence of the ground water, the cistern excavation is to call for dewatering, most probably.

Excavation down to the contemplated depth can be easily executed using a mid-size hydraulic excavator commonly called "backhoe". Because of the medium soft to medium clayey silt (boring no. 101), and the loose sandy silt (boring no. 103) to be exposed throughout the lowermost feet of the excavation walls and at bottom, besides the room limitation to provide for sloped unprotected inclined excavation sides or walls, excavation protection by adequate means must be provided. Needless to say, all excavations shall be performed in accordance with Occupational Safety and Health Administration (OSHA) excavation standard, 29CFR Part 1926, sub-part P, published by the US Department of Labor, and/or any other applicable standard.

For any case, the potential contractor is to thoroughly evaluate the content of the earlier report as well as the observations before said, in proposing any dewatering method as well as for the protection of the excavation.

Structurally, both cisterns bottom slab and walls must be provided to resist an unbalanced head of water of not less than 5.0 ft. with cisterns empty.

Cistern walls are to be designed for at rest earth pressure (Po) if any kind of filling or stress due lateral loading is incorporated after top slab and any other interior structural elements are cast and have gained it strength capacity in full. On the other hand, if the walls are to be laterally loaded before casting of the top slab and any other structural element, these are to be designed for active earth pressure (Pa). For the at rest construction, adopt a coefficient of earth pressure at rest (Ko) equal to 0.23, while a coefficient of active earth pressure (K_A) of 0.61 for the active condition.

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B. Non-Rigid Soil-Structure Interaction Analysis (p-y Method)

This is a "*thorough lateral load analysis method that consider the flexural rigidity of the foundation, the soils response to lateral loads, and soil-structure interaction effect. One of the approaches in conducting this analysis is known as "p-y method". This method models the foundation using two-dimensional finite difference analysis. It divides the foundation into "n" intervals with node at the end of each interval, and the soil as a series of non-linear "springs" located at each node. The flexural stiffness of each interval is defined by the appropriate EI, and the load deformation properties of each spring is defined as "p-y curve". "P-y curves is defined as the lateral load-deflection relationship between the foundation and soil. These are expressed in the form of "p-y curves", where "p" is the lateral soil resistance per unit length of the foundation, and "y" is the lateral deflection*. (Coduto, "Foundation Design", 2nd edition, Prentice Hall, 2001).

All modeling was processed using a PC program entitled "AllPile, Version 7", 2017 by CivilTech Software.

To facilitate the interpretation and adaptation of the results attained, the building footprint was divided in two (2) halves, i.e., east and west according to borings results that were grouped as per the stratification and layered lowest strength properties (representing the most critical scenario). Presentation and corresponding p-y curves is based on boring no. 107 for east half, and the west by boring no. 104.

For each half, curves for fixed and free ends are given for the different types and diameters piles recommended. A lateral load of 10 k was used to generate the p-y curves. Please notice, the 18" uniform diameter drilled pile is added as an alternative since was not considered on the earlier report.

Results attained and building halves, are given as per attached exhibit A, "p-y curves".

C. Seismic Design Parameters

According to ASTM D7400-17, "*Standard Test Method for Downhole Seismic Testing*", these test methods are limited to the determination of the interval velocities from arrival times and relative arrival times of compression (P) waves and vertically (SV), horizontally (SH) oriented shear (S) seismic waves which are generated near surface and travel down to an array of vertically installed seismic sensors.

"The P-wave and S-wave velocities are directly related to the important geotechnical elastic constants of Poisson's ratio, shear modulus, bulk modulus and young modulus . . .". "These parameters are used in both analysis of soil behavior under both static and dynamic loads where elastic constants are input variables into models defining the different states of deformations such as elastic, elastic plastic, and failure . . .". the test was conducted close to boring no. 104 included on our referred earlier report of June 14, 2019.

Execution of the test was a combined effort among this office and Jaca & Sierra Testing Laboratories (JS) from Trujillo Alto, Puerto Rico. JS was hired under contract with our office. Our office was in charge of the drilling work and instrument installation, while JS provided all other instrumentation and executed the field testing.

Copy of JS report is included as Appendix B of this report, "*Factual Report-Downhole Seismic Tests, Ponce Health Sciences University – Ponce, P.R.,*" (September 30, 2019).

D. 18"ϕ Drilled Pile Alternative

Please, find the 18"ϕ drilled piles allowable load carrying capacities as per attached figure 1. Corresponding p-y curve is included in item B exhibit A.

E. Pavements Design and Construction Preliminary Guidelines

Provided the guidelines outlined on item H, "Ground Level Parking Pavement, Construction Guidelines, and Design Parameters", p 25 of the earlier additional evaluation report of June 14, 2019, adopt a CBR equal to 10% in proportioning a flexible pavement, and a modulus of subgrade reaction (Ks) equal to 100 pounds per cubic inch (PCI) in proportioning a rigid one.

701758

Respectfully Submitted,

Victor E. Rivera Roldan, PE, MBA
President

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EXHIBIT "A"

P-Y CURVES

ADDENDUM NO. 1

FOR THE LATEST REVISION OF THE

PROPOSED PONCE HEALTH SCIENCES UNIVERSITY

BY PASS (STATE ROAD NO. 2)

PONCE, PUERTO RICO

(VERA Job No. 19-4467.B)

By:

VICTOR E. RIVERA ROLDAN, PE, MBA

VICTOR E. RIVERA ASSOCIATES, LLC

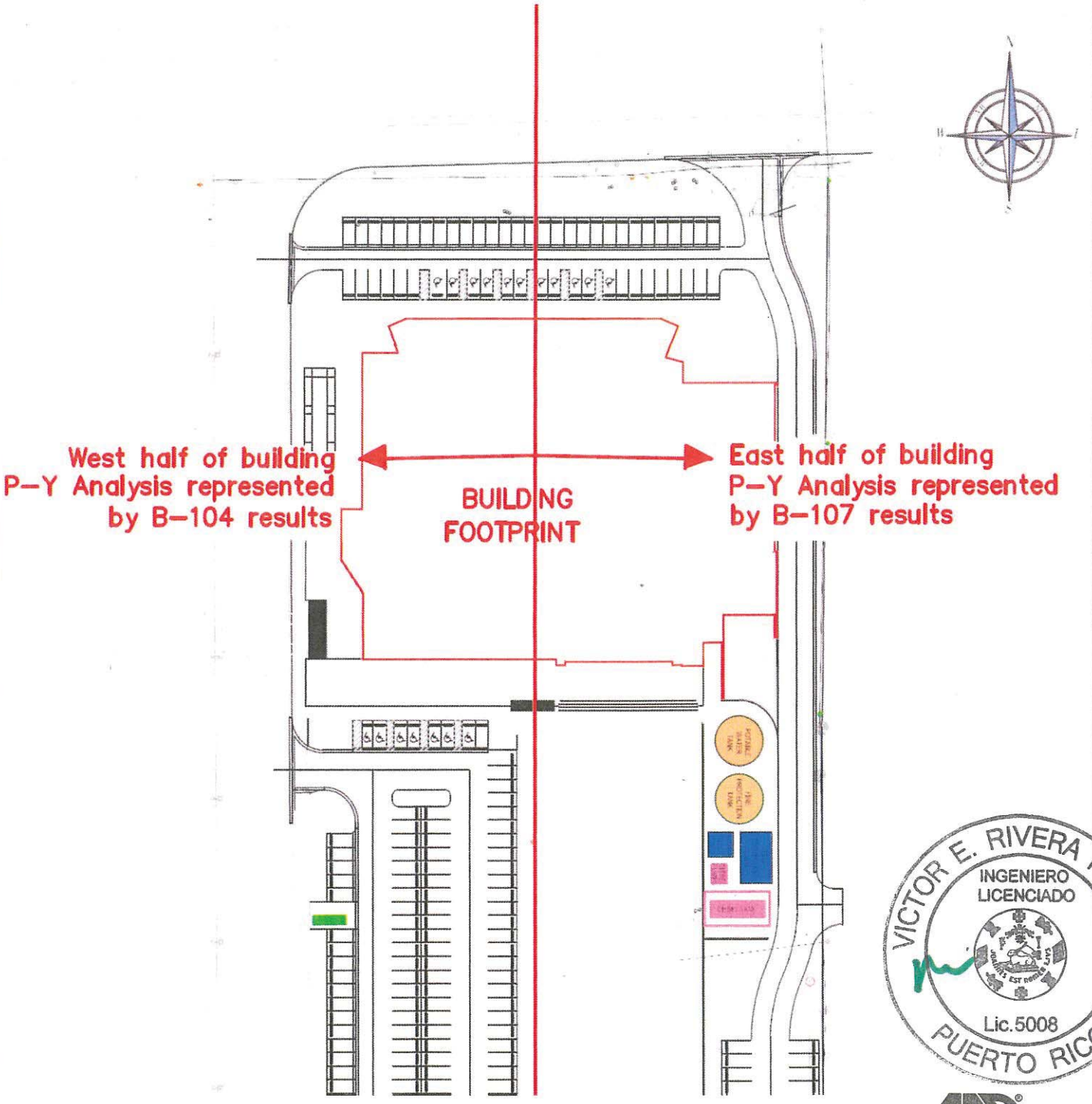
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AMOUNT: 1	VERIFIED BY: V. MENDEZ	DATE: 9-06-19	

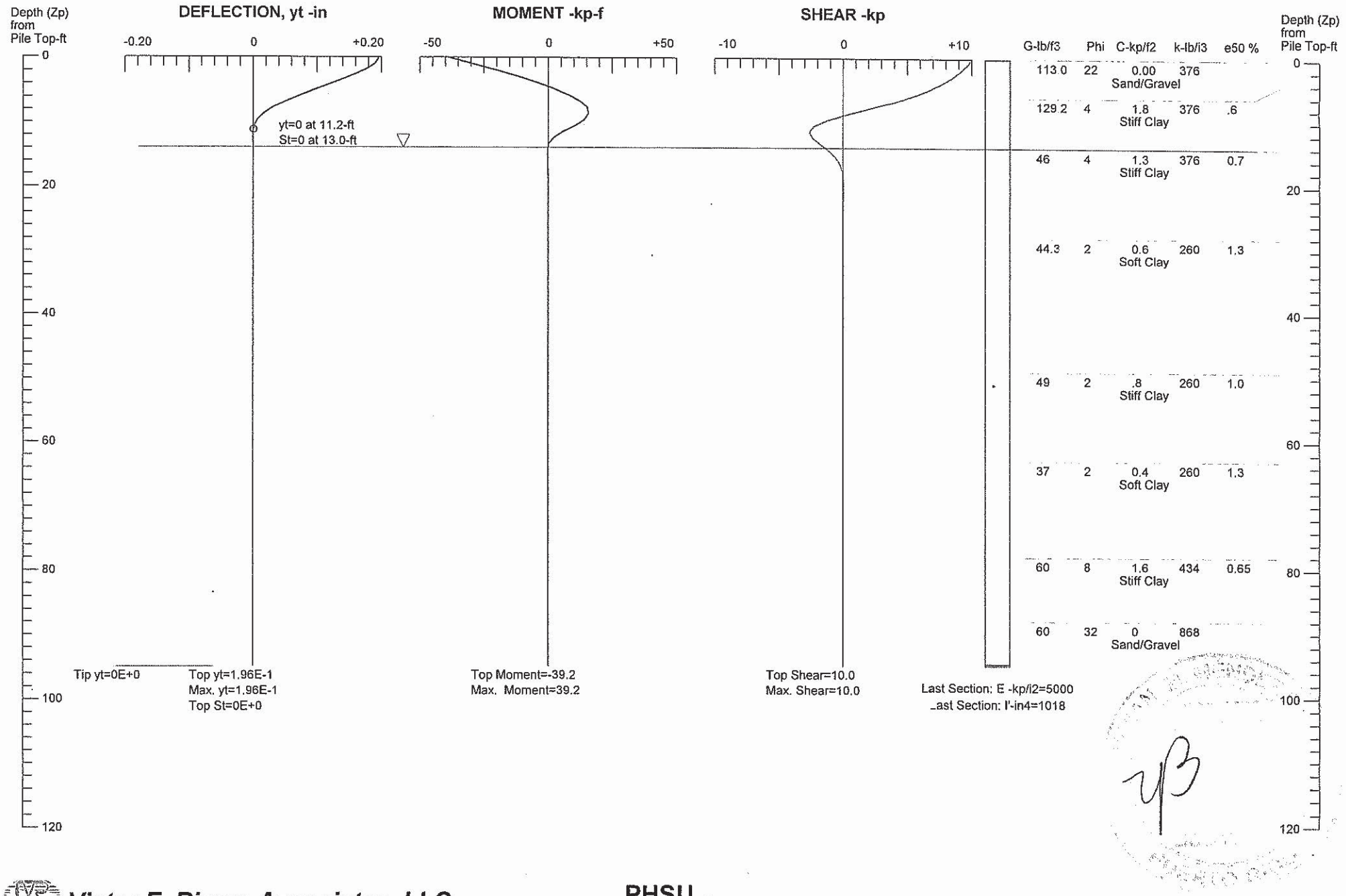
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PONCE HEALTH SCIENCES UNIVERSITY
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FAX NO.: (787) 259-1604
e-mail: verivera@prtc.net

PILE DEFLECTION & FORCE vs DEPTH

Single Pile, Khead=5, Kbc=2



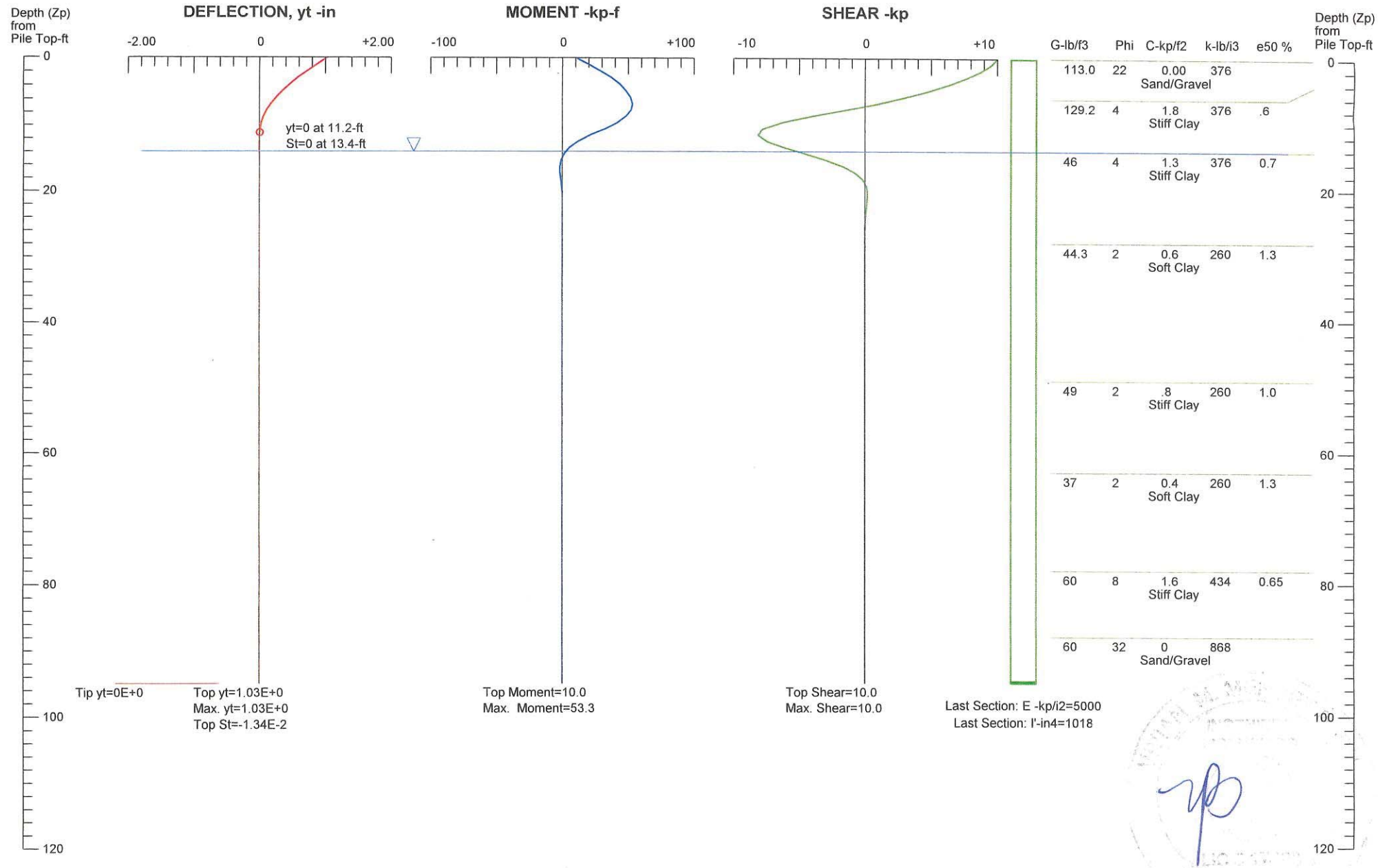
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Boring 104 - 12"diam. Driven Pile - Fixed Head

PILE DEFLECTION & FORCE vs DEPTH

Single Pile, Khead=1, Kbc=1



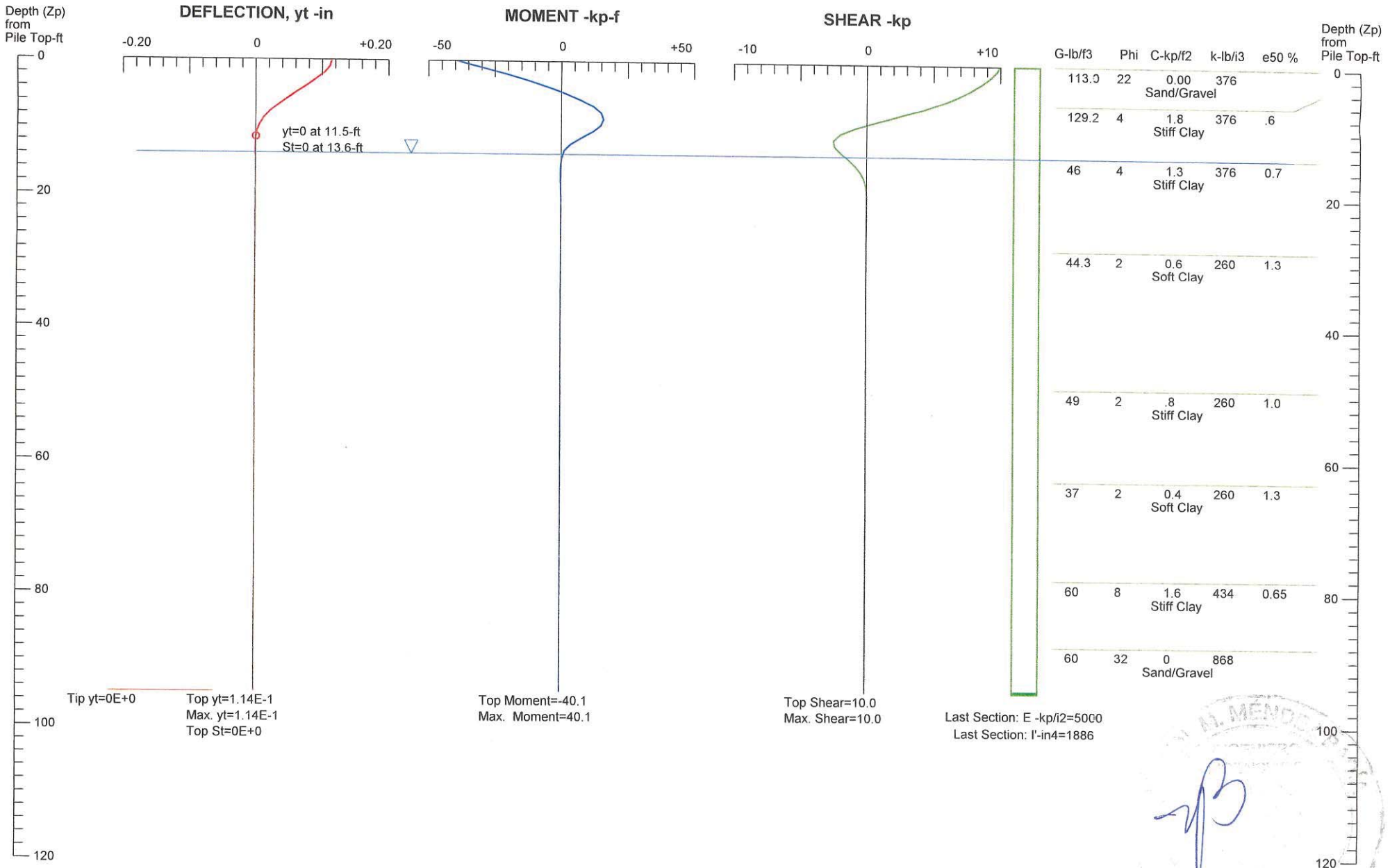
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Boring 104 - 12"diam. Driven Pile - Free Head

PILE DEFLECTION & FORCE vs DEPTH

Single Pile, Khead=5, Kbc=2



G-lb/f3	Phi	C-kp/f2	k-lb/i3	e50 %	
113.0	22	0.00	376		Sand/Gravel
129.2	4	1.8	376	.6	Stiff Clay
46	4	1.3	376	0.7	Stiff Clay
44.3	2	0.6	260	1.3	Soft Clay
49	2	.8	260	1.0	Stiff Clay
37	2	0.4	260	1.3	Soft Clay
60	8	1.6	434	0.65	Stiff Clay
60	32	0	868		Sand/Gravel

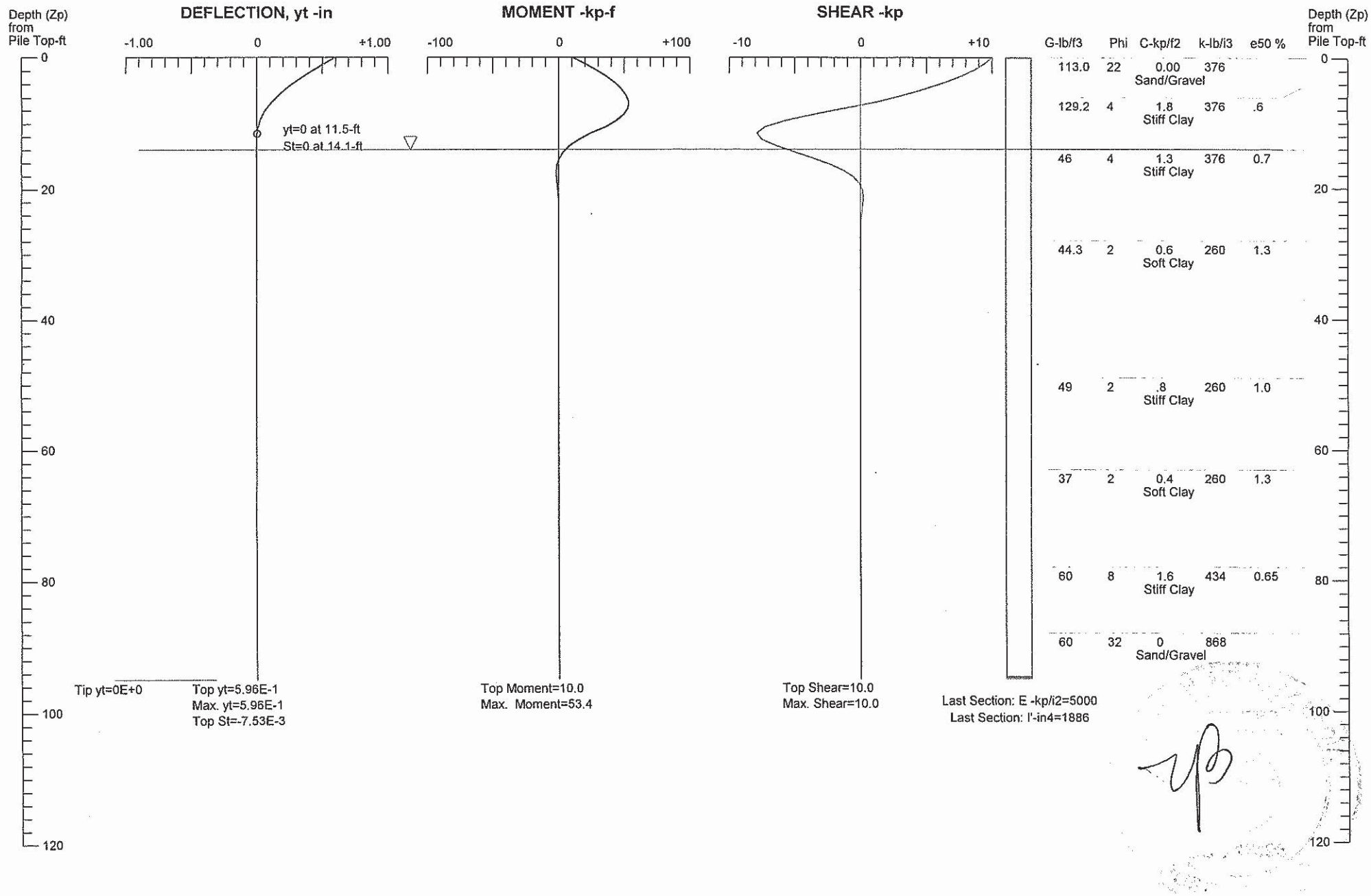
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Boring 104 - 14"diam. Drilled Pile - Fixed Head

PILE DEFLECTION & FORCE vs DEPTH

Single Pile, Khead=1, Kbc=1



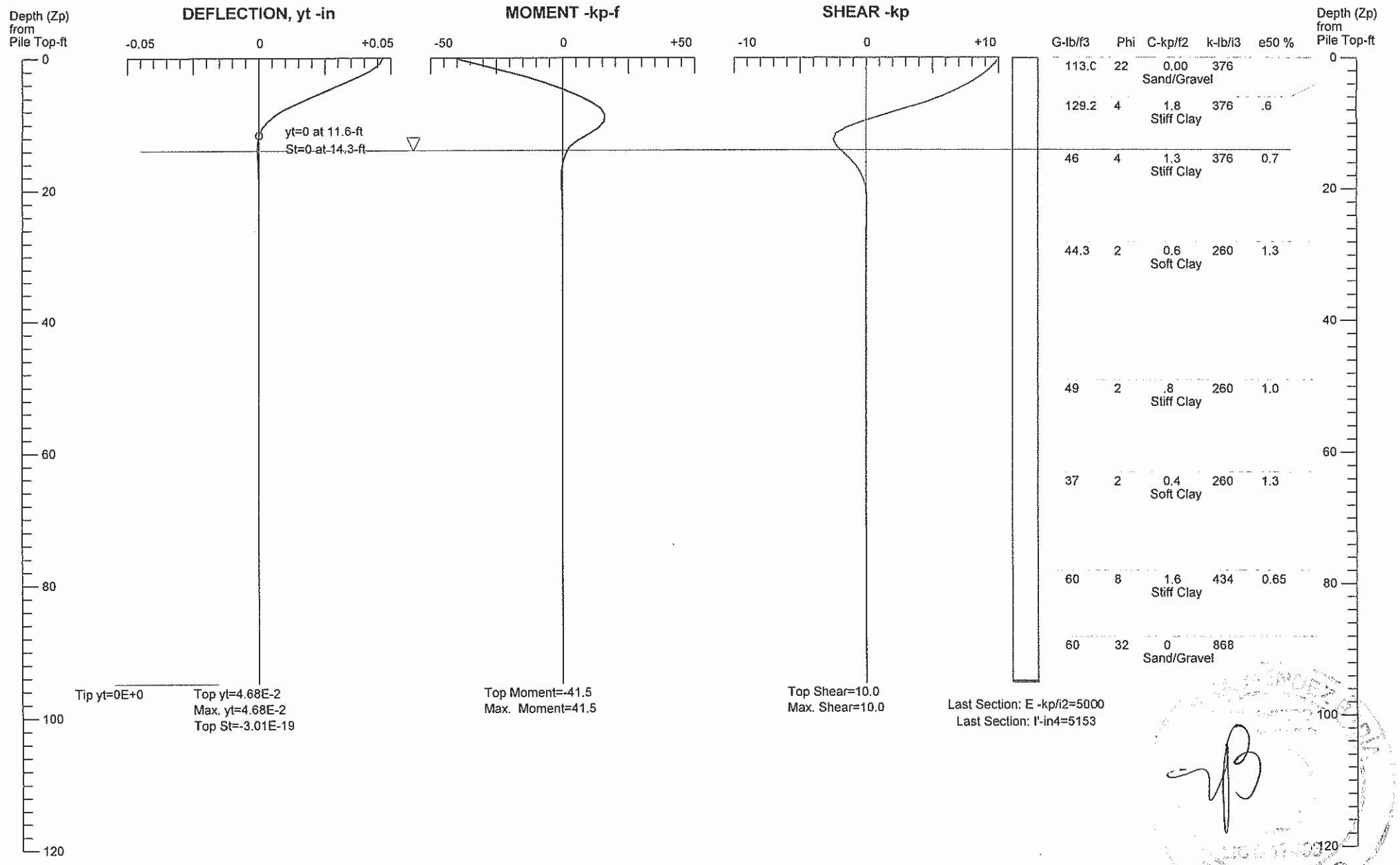
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Boring 104 - 14"diam. Drilled Pile - Free Head

PILE DEFLECTION & FORCE vs DEPTH

Single Pile, Khead=5, Kbc=2



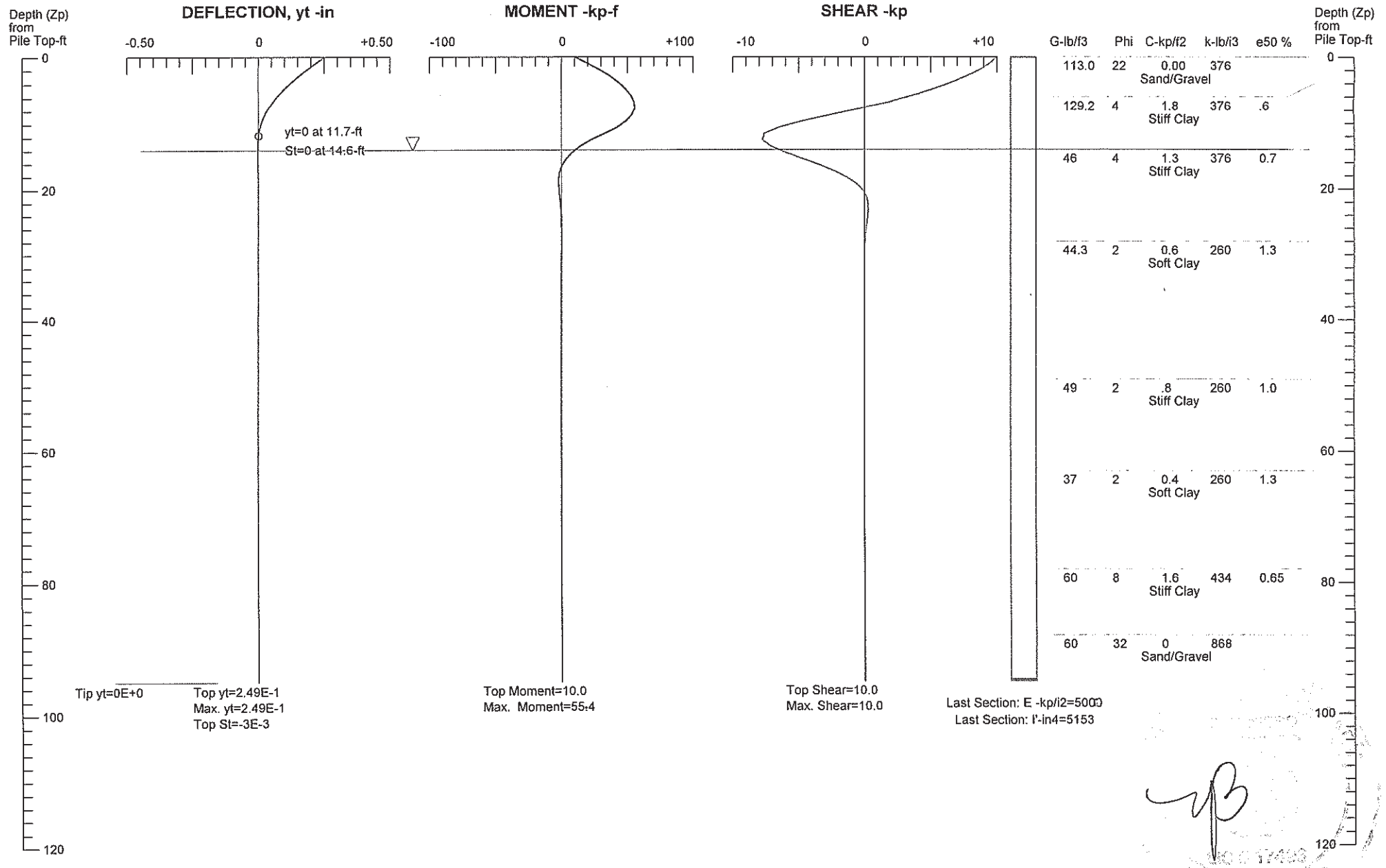
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Boring 104 - 18"diam. Drilled Pile - Fixed Head

PILE DEFLECTION & FORCE vs DEPTH

Single Pile, Khead=1, Kbc=1



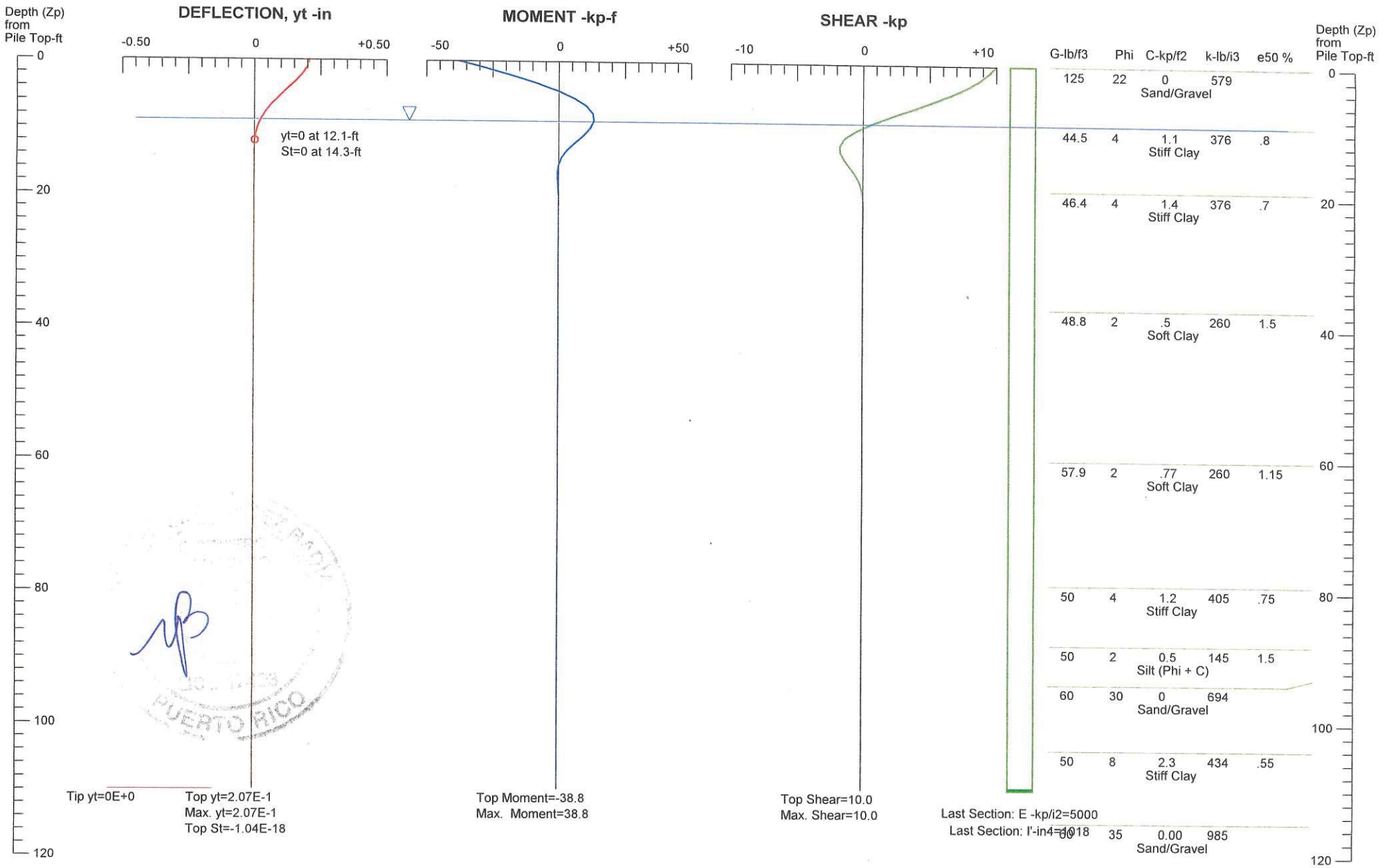
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Boring 104 - 18"diam. Drilled Pile - Free Head

PILE DEFLECTION & FORCE vs DEPTH

Single Pile, Khead=5, Kbc=2



PUERTO RICO

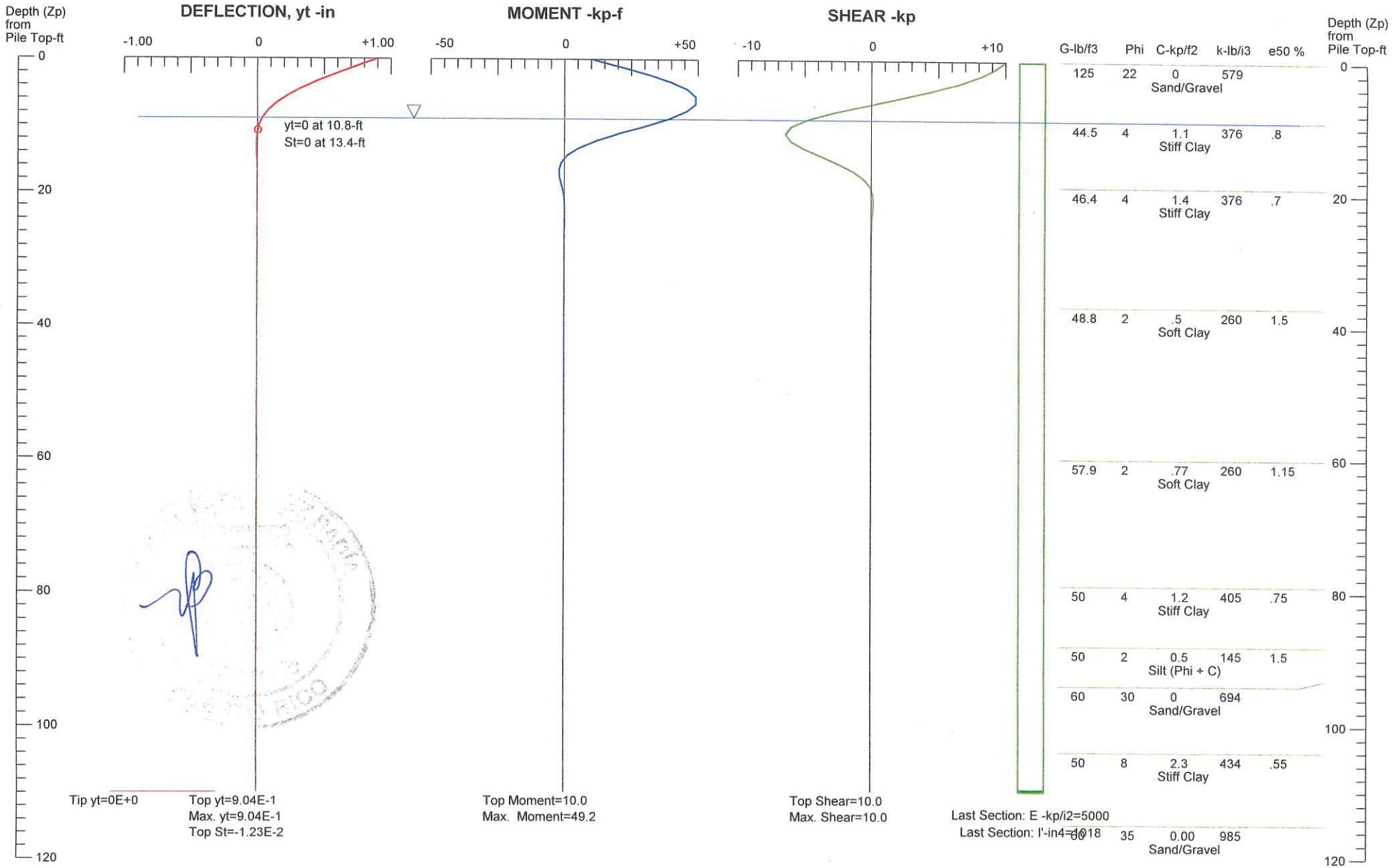
Victor E. Rivera Associates, LLC

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Boring 107 - 12"diam. Driven Pile - Fixed Head

PILE DEFLECTION & FORCE vs DEPTH

Single Pile, Khead=1, Kbc=1



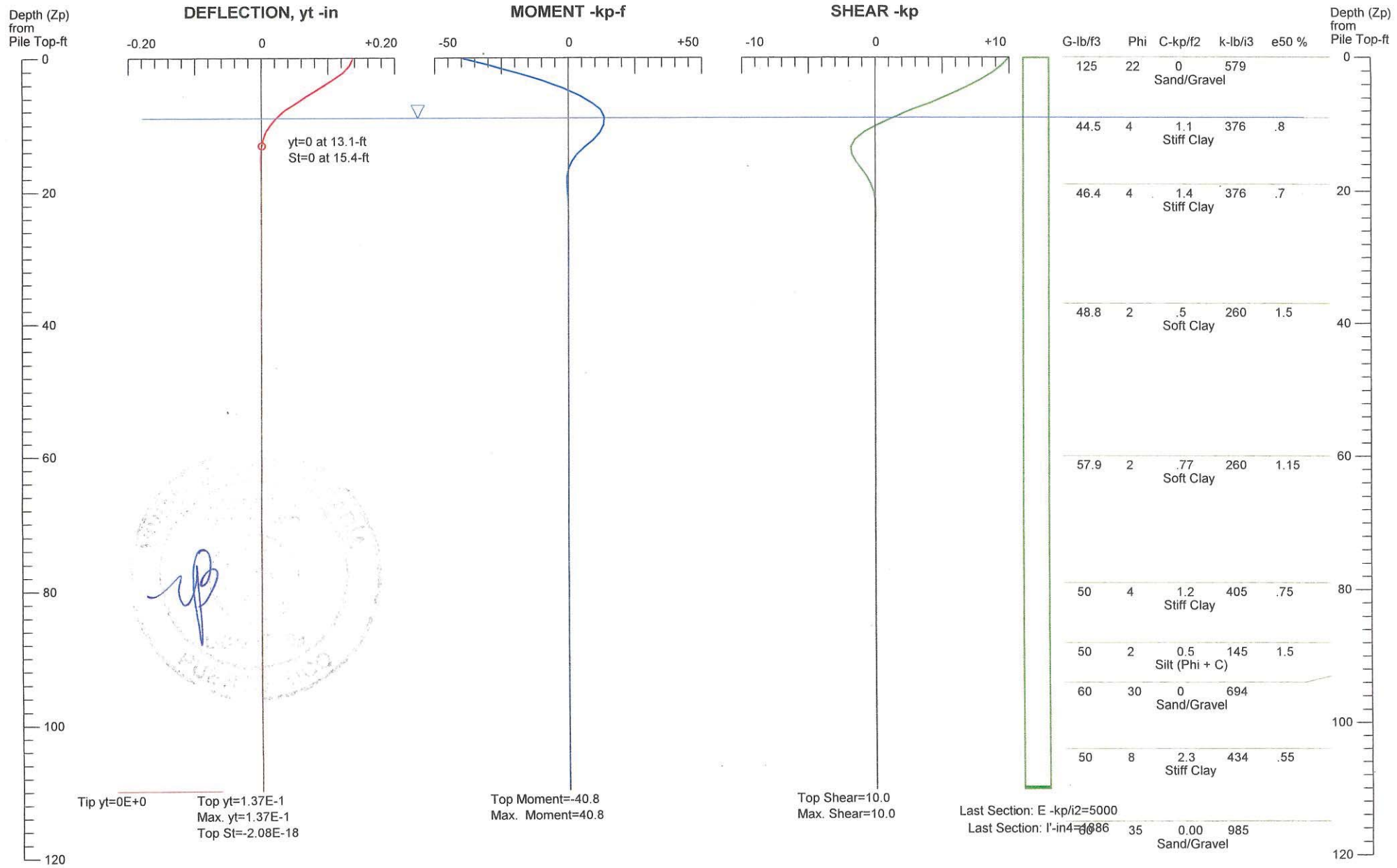
Victor E. Rivera Associates, LLC

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Boring 107 - 12"diam. Driven Pile - Free Head

PILE DEFLECTION & FORCE vs DEPTH

Single Pile, Khead=5, Kbc=2



G-lb/f3	Phi	C-kp/f2	k-lb/i3	e50 %	
125	22	0	579		Sand/Gravel
44.5	4	1.1	376	.8	Stiff Clay
46.4	4	1.4	376	.7	Stiff Clay
48.8	2	.5	260	1.5	Soft Clay
57.9	2	.77	260	1.15	Soft Clay
50	4	1.2	405	.75	Stiff Clay
50	2	0.5	145	1.5	Silt (Phi + C)
60	30	0	694		Sand/Gravel
50	8	2.3	434	.55	Stiff Clay
60	35	0.00	985		Sand/Gravel

Depth (Zp) from Pile Top-ft

0
20
40
60
80
100
120

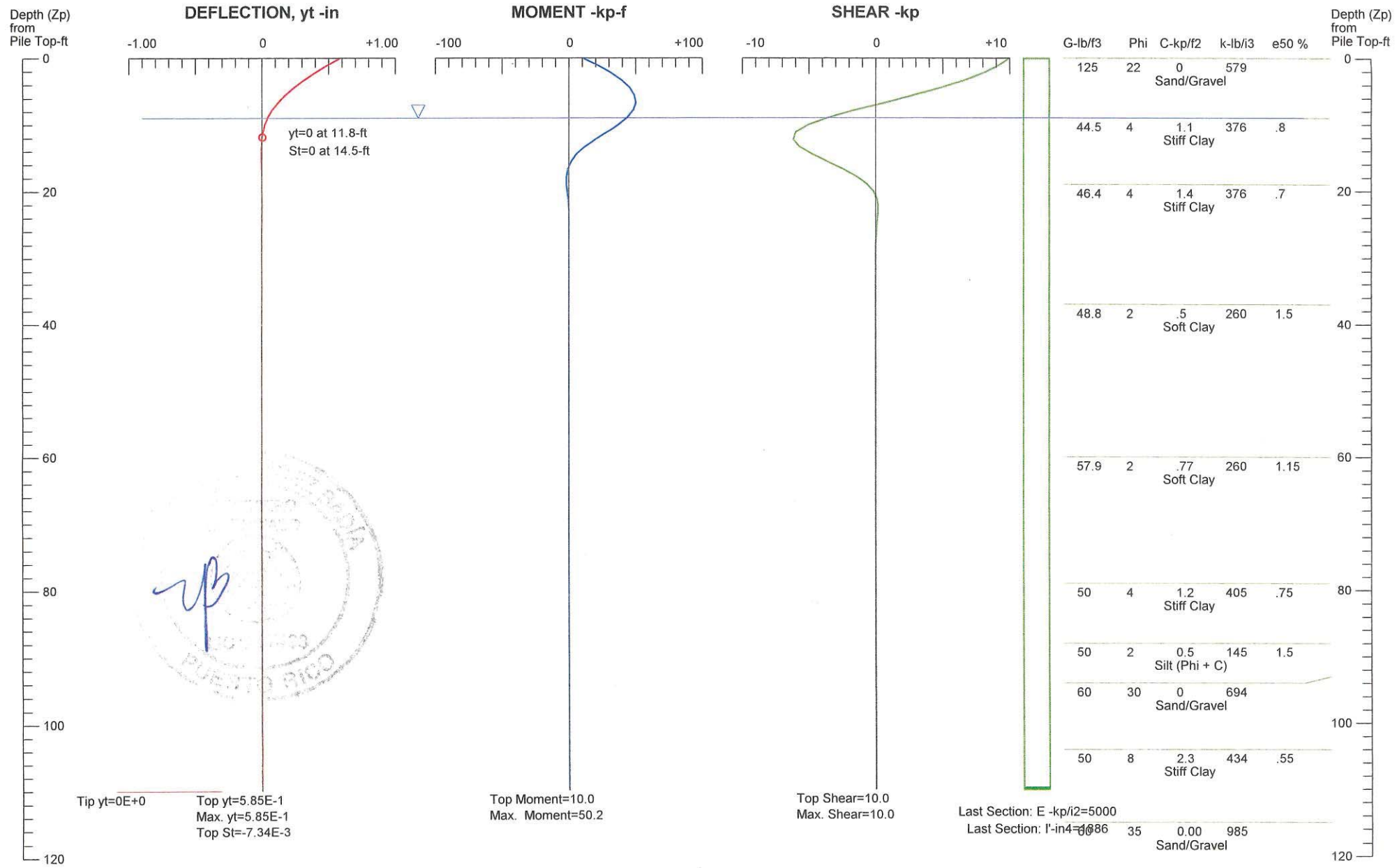
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Boring 107 - 14"diam. Drilled Pile - Fixed Head

PILE DEFLECTION & FORCE vs DEPTH

Single Pile, Khead=1, Kbc=1



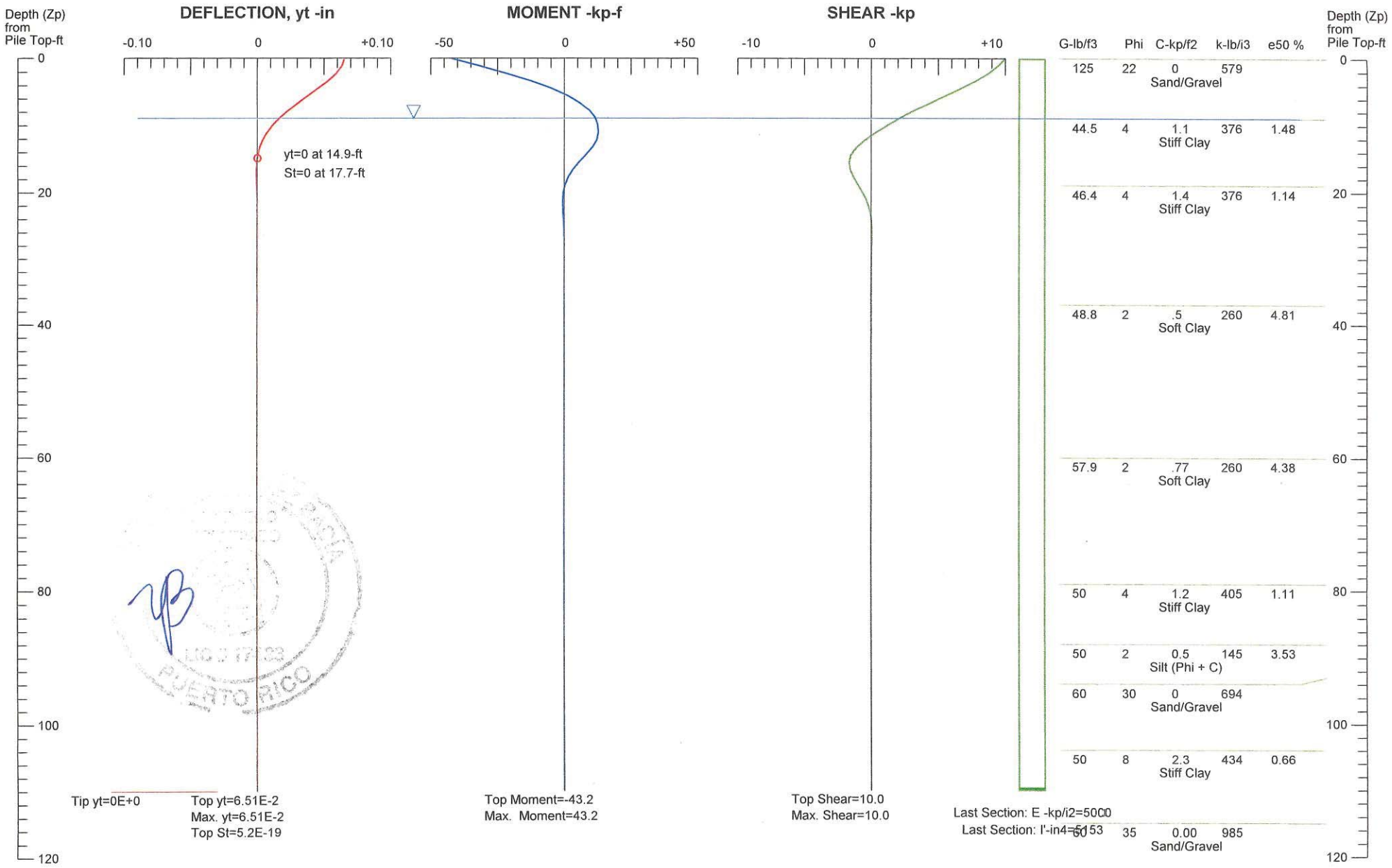
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Boring 107 - 14"diam. Drilled Pile - Free Head

PILE DEFLECTION & FORCE vs DEPTH

Single Pile, Khead=5, Kbc=2



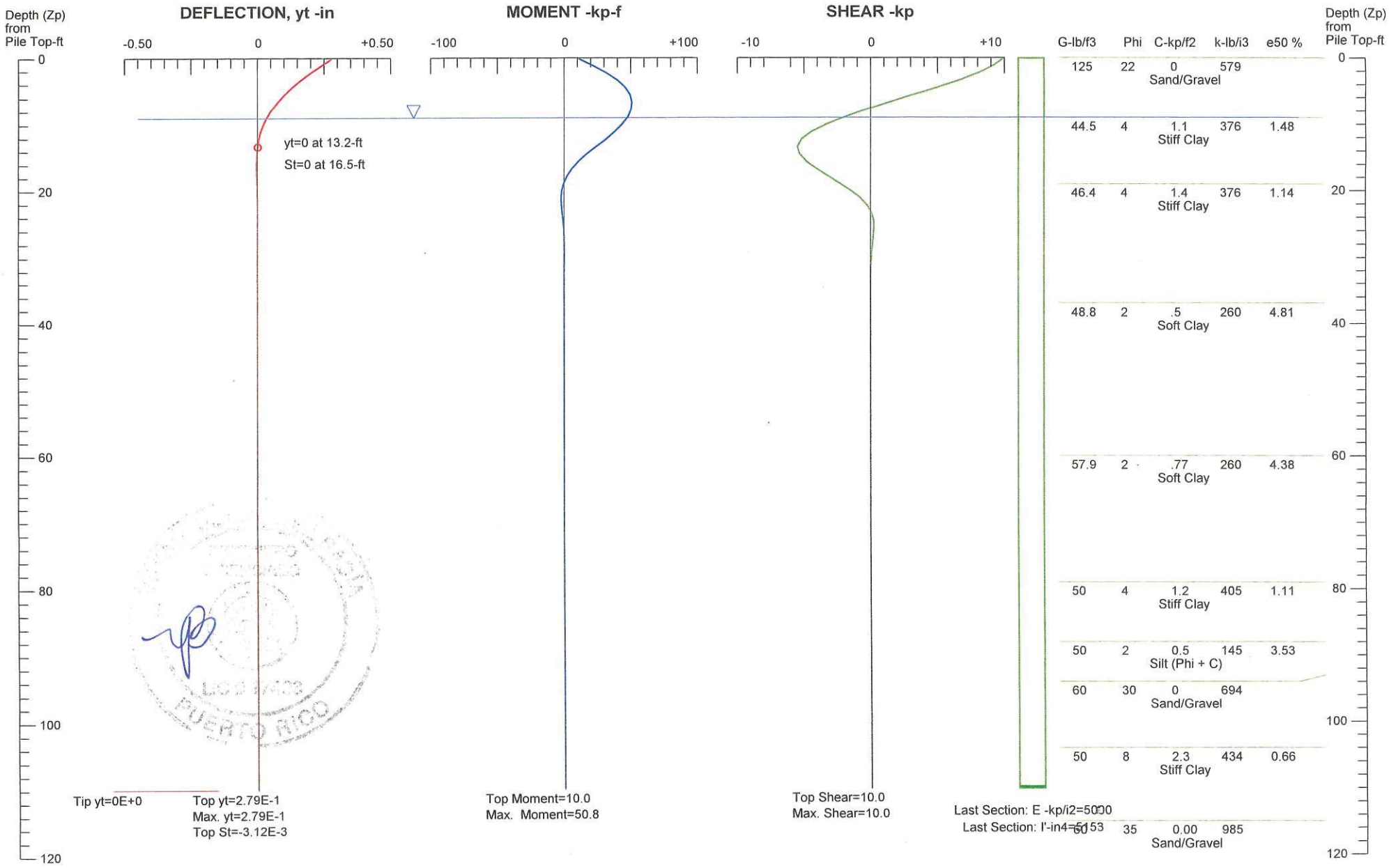
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Boring 107 - 18"diam. Drilled Pile -Fixed Head

PILE DEFLECTION & FORCE vs DEPTH

Single Pile, Khead=1, Kbc=1



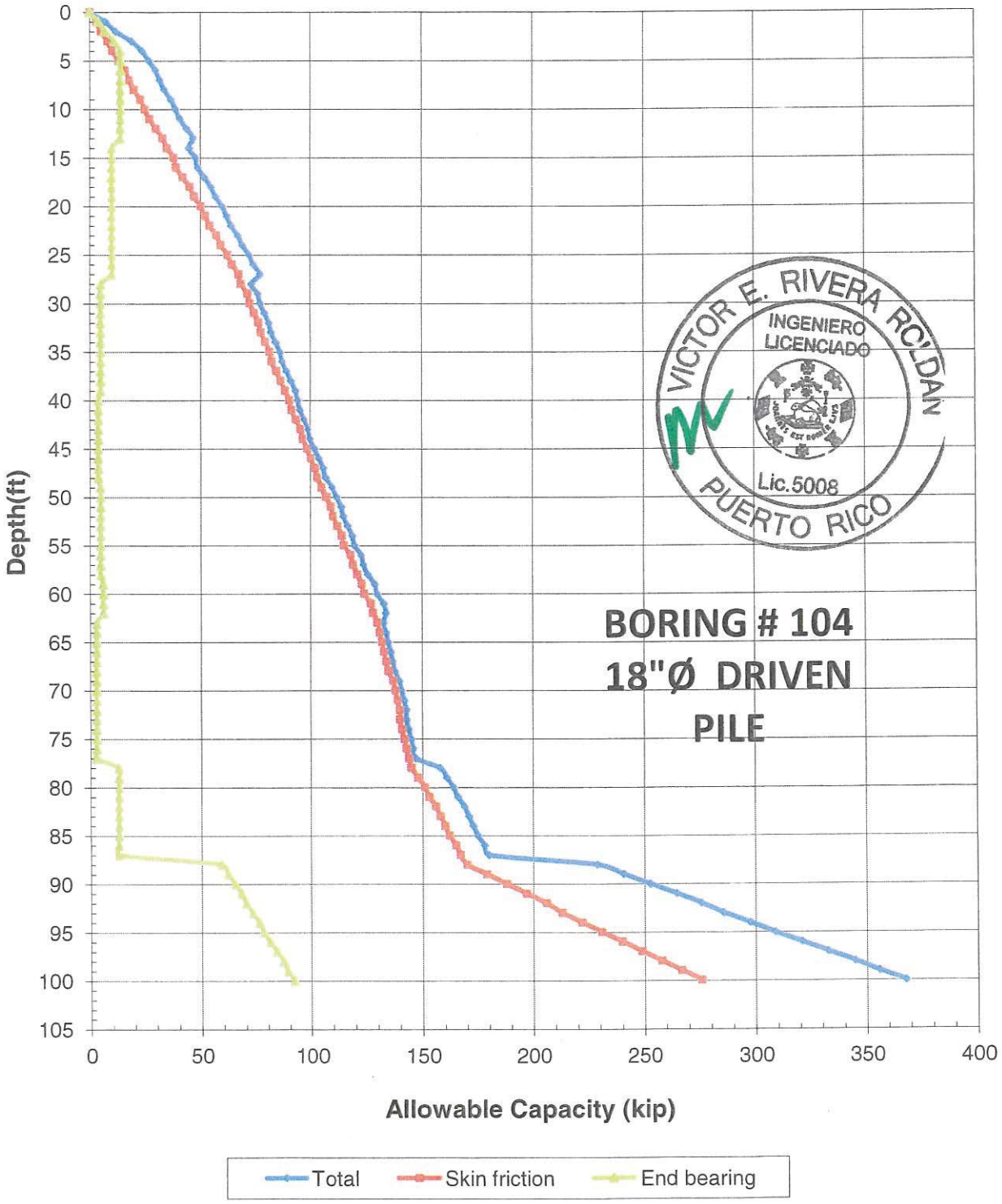
G-lb/f3	Phi	C-kp/f2	k-lb/i3	e50 %	
125	22	0	579		Sand/Gravel
44.5	4	1.1	376	1.48	Stiff Clay
46.4	4	1.4	376	1.14	Stiff Clay
48.8	2	.5	260	4.81	Soft Clay
57.9	2	.77	260	4.38	Soft Clay
50	4	1.2	405	1.11	Stiff Clay
50	2	0.5	145	3.53	Silt (Phi + C)
60	30	0	694		Sand/Gravel
50	8	2.3	434	0.66	Stiff Clay
60	35	0.00	985		Sand/Gravel

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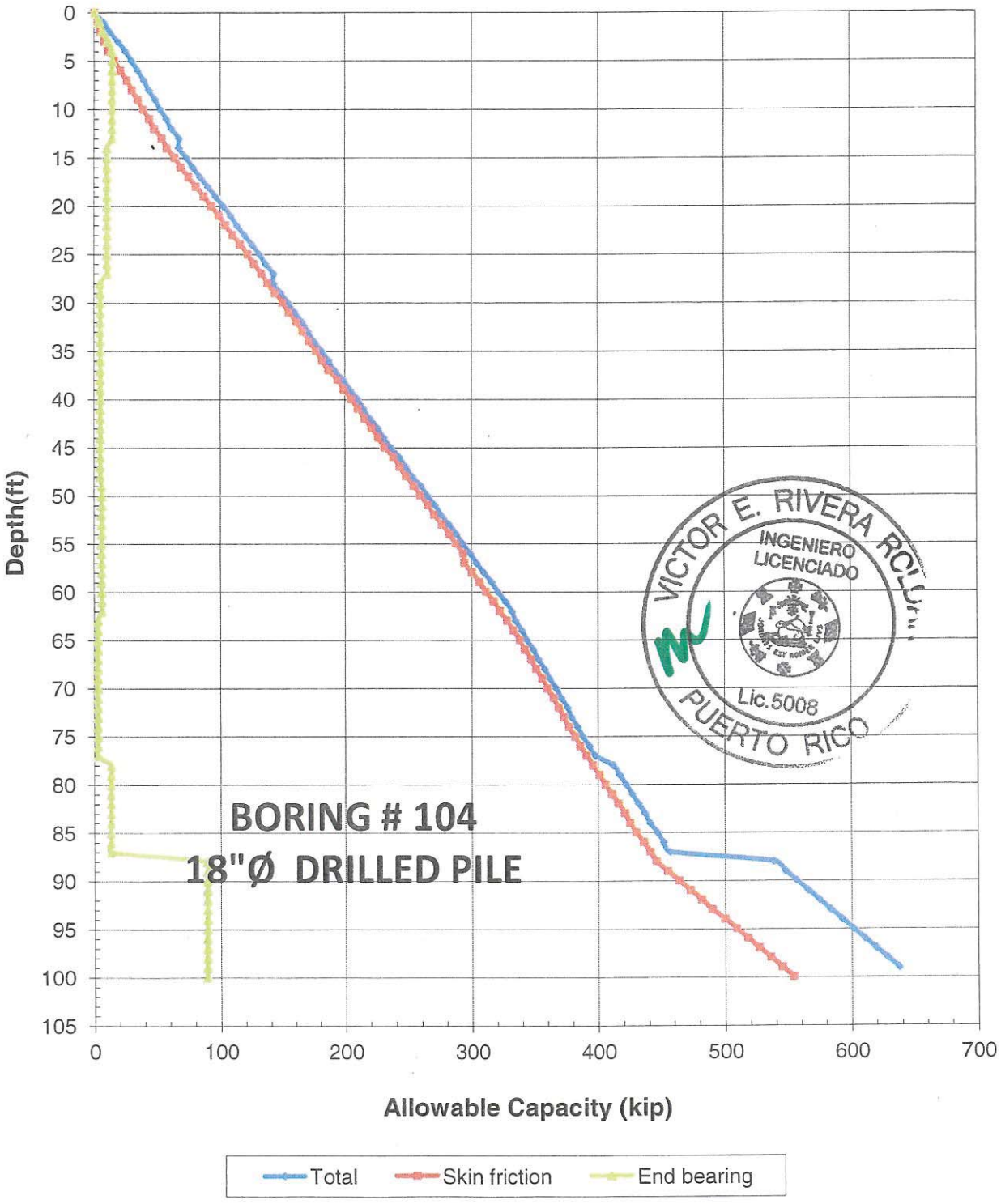
Boring 107 - 18"diam. Drilled Pile -Free Head

Proposed Academic Campus, Ponce Health Sciences University
Allowable Capacity vs. Depth
(Skin friction, end bearing, total for 18" DRIVEN PILE
(Safety Factor = 2)



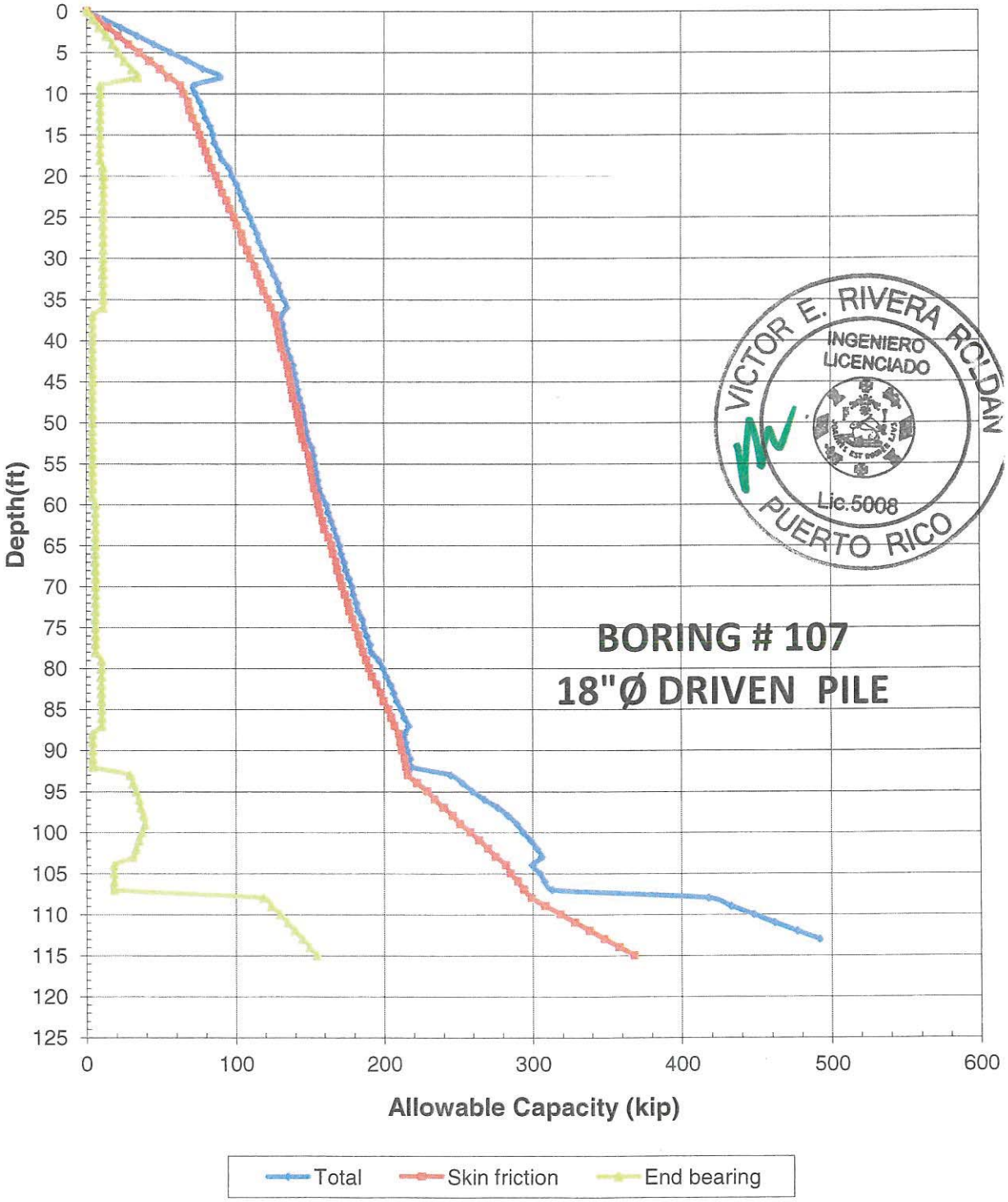
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Proposed Academic Campus, Ponce Health Sciences University
Allowable Capacity vs. Depth
(Skin friction, end bearing, total for 18" DRILLED PILE
(Safety Factor = 2)



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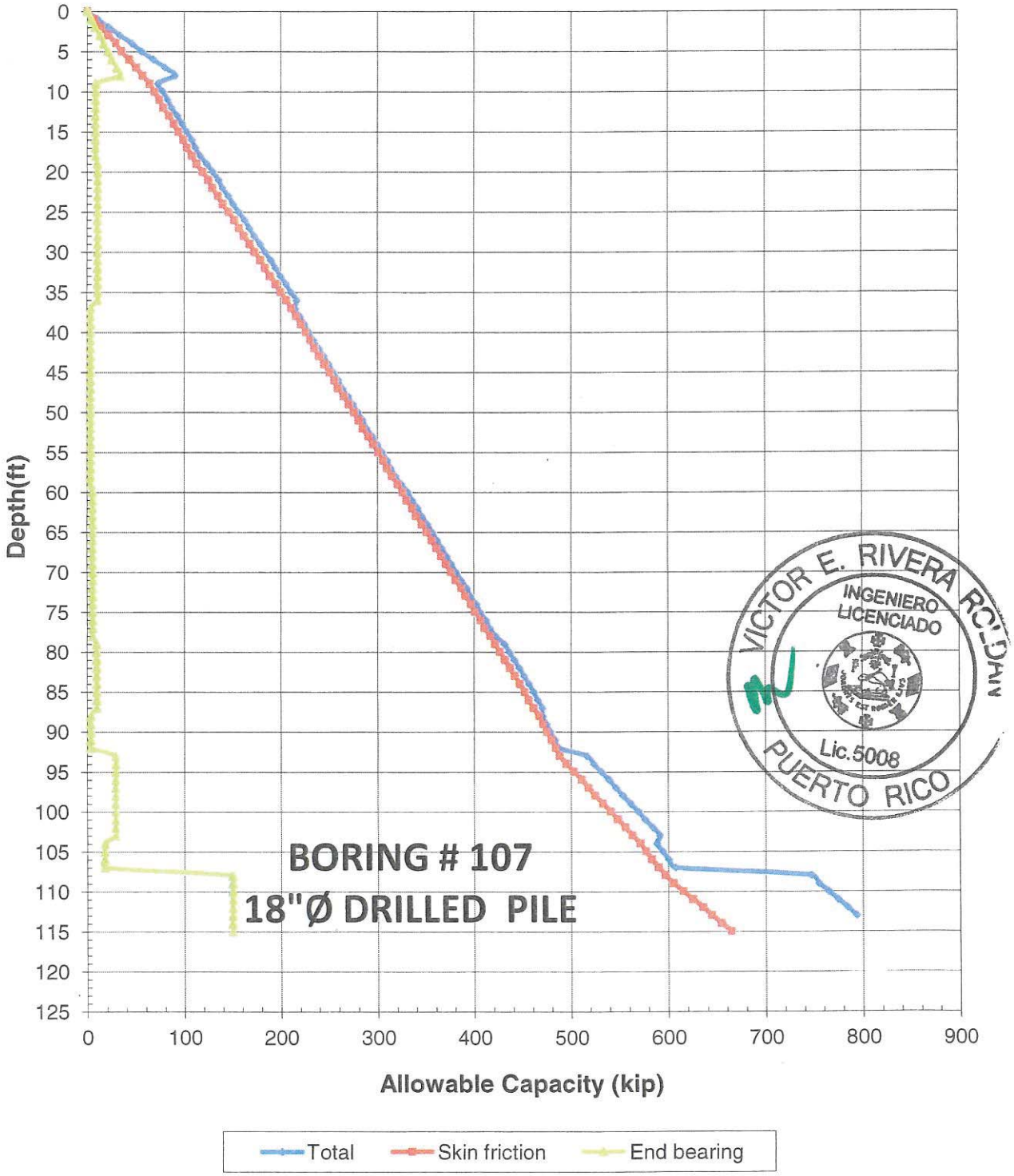
Proposed Academic Campus, Ponce Health Sciences University
Allowable Capacity vs. Depth
(Skin friction, end bearing, total for 18" DRIVEN PILE
(Safety Factor = 2)



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Proposed Academic Campus, Ponce Health Sciences University
Allowable Capacity vs. Depth
(Skin friction, end bearing, total for 18" DRILLED PILE
(Safety Factor = 2)



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LICENCIADO
Lic. 5008
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APPENDIX B

FACTUAL REPORT-DOWNHOLE SEISMIC TESTS

PONCE HEALTH SCIENCES UNIVERSITY

BY PASS (STATE ROAD NO. 2)

PONCE, PUERTO RICO

(SEPTEMBER 30, 2019)

By:

JACA & SIERRA TESTING LABORATORIES

TRUJILLO ALTO, PUERTO RICO

VICTOR E. RIVERA ROLDAN
INGENIERO LICENCIADO
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PUERTO RICO

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FACTUAL REPORT

DOWNHOLE SEISMIC TESTS AT PONCE HEALTH SCIENCES UNIVERSITY PONCE, PR

Submitted to:

Víctor Rivera & Assoc.
Att: Eng. Víctor Rivera

Prepared by:

Manuel E. Porrata Arbona, EIT
Manuel E. Candelario Cosme, MSCE, PE

Date:

September 30, 2019

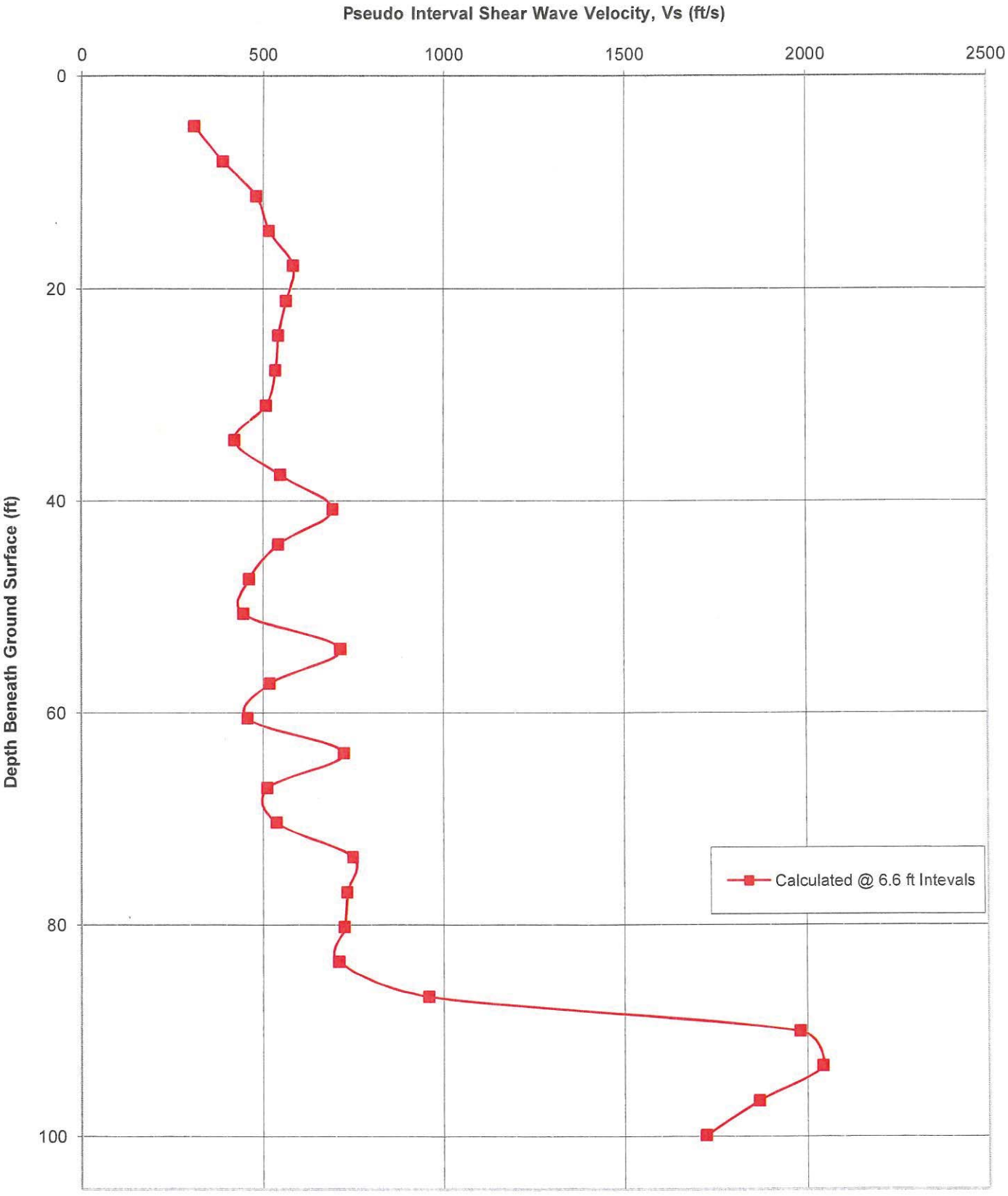
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Job No. 8034

This report contains 4 pages including cover

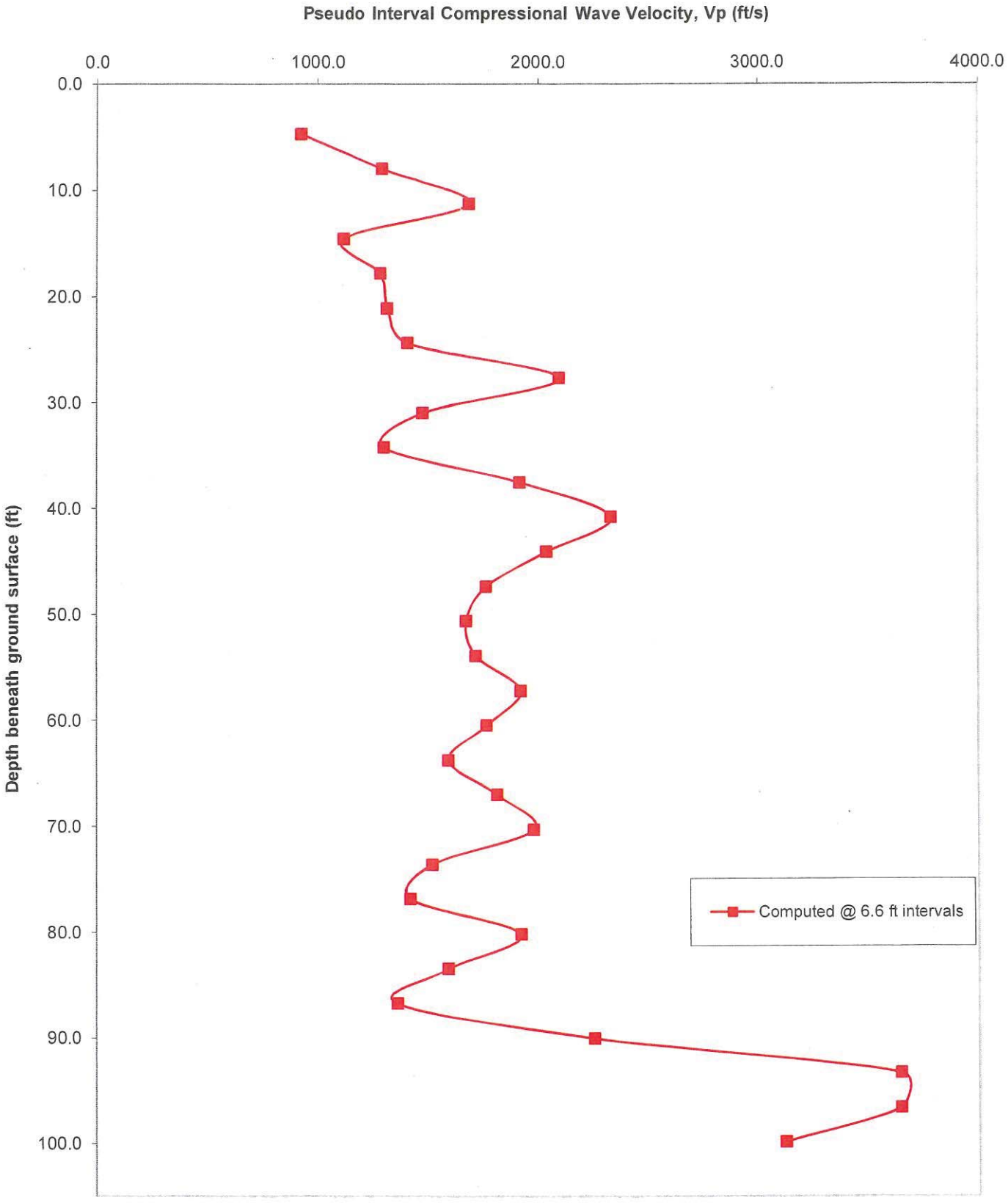
JACA & SIERRA
Testing Laboratories
Geotechnical Engineers

Downhole Seismic Test - B-104 - Ponce Health Sciences University



JACA & SIERRA
Testing Laboratories
Geotechnical Engineers

Downhole Seismic Test - B-104 - Ponce Health Sciences University



JACA & SIERRA

TABLE 1. SHEAR WAVE VELOCITY MEASUREMENT ASTM D7400
DOWNHOLE SEISMIC TEST - BORING 104

Operator:	M. Porrata
Test Date / Weather:	Septeber 18, 2019
Source:	12 lb Sledge Hammer
Downhole Receiver:	BHG 2 Triaxial Geophone
Recording Equipment	ES 3000-Seismograph
Borehole Information:	Grouted Cased Borehole
Method of Installation:	4 inch ID Hollow Stem Augers
Casing Diameter:	2 inch Sch.40 PVC
Clamp Method:	Mechanical Spring
Ground Surface Elevation @ Source, Eg:	- m
Shear Wave Source Horizontal Offset, Xs:	7.56 ft
Compression (P) Wave Source Offset, Xp	3.42 ft
Pipe Stickup.	1.8125 ft
Receiver Offset from Reference Point:	0 ft
Ground Surface Elevation @ Borehole, Eg:	0 m

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Recorded Geophone Depth (ft)	Corrected Geophone Depth (ft)	Corrected Geophone Depth (m)	Receiver Depth, D_s(ft)	Receiver Elevation (m)	Source Slant Distance, L_s (ft)	Reference Shear Wave Arrival Time (millisec)	Interval Arrival Time Difference ΔT_s (millisec)	Interval Shear Wave Velocity, Vs (ft/sec)	Interval Shear Wave Velocity, Vs (m/sec)
3.3	1.5	0.5	1.5	-0.45	7.70	3.2			
							2.9	425	130
6.6	4.8	1.5	4.8	-1.45	8.94	6.1			
							7.8	270	82
9.9	8.0	2.5	8.0	-2.45	11.04	13.9			
							4.2	614	187
13.1	11.3	3.5	11.3	-3.45	13.62	18.1			
							7	404	123
16.4	14.6	4.5	14.6	-4.45	16.45	25.1			
							4.2	708	216
19.7	17.9	5.5	17.9	-5.45	19.42	29.3			
							6.1	501	153
23.0	21.2	6.5	21.2	-6.46	22.48	35.4			
							4.8	649	198
26.3	24.5	7.5	24.5	-7.46	25.60	40.2			
							6.7	470	143
29.5	27.7	8.5	27.7	-8.46	28.75	46.9			
							5.1	623	190
32.8	31.0	9.5	31.0	-9.46	31.92	52			
							7.4	432	132
36.1	34.3	10.5	34.3	-10.46	35.12	59.4			
							7.8	412	125
39.4	37.6	11.5	37.6	-11.46	38.33	67.2			
							3.9	826	252
42.7	40.9	12.5	40.9	-12.46	41.55	71.1			
							5.4	598	182
46.0	44.1	13.5	44.1	-13.46	44.78	76.5			
							6.5	498	152
49.2	47.4	14.5	47.4	-14.46	48.02	83			
							7.5	432	132
52.5	50.7	15.5	50.7	-15.46	51.26	90.5			
							7	464	141
55.8	54.0	16.5	54.0	-16.46	54.51	97.5			
							2.1	1,548	472
59.1	57.3	17.5	57.3	-17.46	57.76	99.6			
							10.4	313	95
62.4	60.5	18.5	60.5	-18.46	61.01	110			
							3.8	857	261
65.6	63.8	19.5	63.8	-19.46	64.27	113.8			
							5.2	627	191
68.9	67.1	20.5	67.1	-20.46	67.53	119			
							7.5	435	133
72.2	70.4	21.5	70.4	-21.46	70.79	126.5			
							4.6	709	216
75.5	73.7	22.5	73.7	-22.46	74.05	131.1			
							4.1	796	243
78.8	76.9	23.5	76.9	-23.46	77.32	135.2			
							4.8	680	207
82.0	80.2	24.5	80.2	-24.46	80.58	140			
							4.2	778	237
85.3	83.5	25.5	83.5	-25.46	83.85	144.2			
							5	654	199
88.6	86.8	26.5	86.8	-26.46	87.12	149.2			
							1.8	1,816	554
91.9	90.1	27.5	90.1	-27.46	90.39	151			
							1.5	2,180	664
95.2	93.4	28.5	93.4	-28.46	93.66	152.5			
							1.7	1,924	586
98.4	96.6	29.5	96.6	-29.46	96.93	154.2			
							1.8	1,817	554
101.7	99.9	30.5	99.9	-30.46	100.20	156			

U.- Geotechnical analisys_Addendum_2_20191121

November 20, 2019

Addendum No. 2 To: Proposed Ponce Health Sciences University
By Pass (State Road No. 2)
Ponce, Puerto Rico
(VERA Job No. 19-4467.B)

Submitted To: LOA Management, PSC
PO Box 270122
San Juan PR 00928-2922

Attention: Mr. Ladislao Ortiz, Jr., P.E.
Principal
email: lortiz@loamanagement.com
and/or:
Mr. Jose Arreseigor
Vice-president
M Property Services PR, LLC
email: jarreseigor@pr-mps.com

Subject: Comments from "OGPE" on October 08, 2019;
Clarification on Efficiency of Pile Groups; and
Ground Acceleration Factor

Report:

Pursuant your kindly request, submitted herein are our responses for the clarification and further recommendations asked for the above captioned subject matters.

A. **Commentaries** for "Oficina de Gerencia de Permisos (OGPE) pertaining to "Análisis de Riesgos a Deslizamientos y Otros Condiciones del Subsuelo", Section 5.1.2.2 from "Reglamento Conjunto".

On reports entitled "Preliminary Geotechnical Evaluation Proposed Ponce Health Sciences University – By Pass (State Road No. 2) – Ponce, Puerto Rico (VERA Job No. 19-4467, June 14, 2019) corresponding items "Site Location and Project Description" and "Geologic Setting", thorough descriptions of the project site geomorphology and elevations are given, and furthermore, potential grading is also reviewed. No deep fill deposits are foreseen much less any

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cut slope that could suggest a lateral instability problem; therefore, this kind of problem is of no concern for the project.

Site geology is also discussed detailing the prevailing one. The site falls over the deep flood plain most of the Ponce city southern valley falls over. The alluvial/lacustrine sediments conforming this deposit could reach well in excess of 100 m in thickness. There is no such thing as a fault nor contact zone identifiable around on any of the US Geologic Survey (USGS) publications that could mean any risk for the project during a strong earthquake, thus this condition must be left out of the "project concerns".

All pertinent geotechnical engineering considerations that must be invoked on the planning, design, and construction of the project are very well discussed and addressed in both earlier reports as well in "Addendum no. 1 – Additional Geotechnical Evaluation for the Latest Revision of the Proposed Ponce Health Sciences University – By Pass (State Road No. 2) – Ponce, Puerto Rico (VERA Job No. 19-4467.B, October 07, 2019). We strongly recommend a thorough reading of the three written reports. All questions arised as per today are readily adequately answered.

B. Efficiency of Pile Group is defined as the interaction "between piles in a group and the adjacent soil, and the ultimate load of a single pile multiplied by the number of piles in the group (Coducto, 2001).

This efficiency depends among other factor, 1) the number of piles, length, diameter, arrangement, and spacing of the piles, 2) load transfer made (friction or end bearing), and 3) load assigned to each pile. Coducto suggest an analysis procedure to figure-out the efficiency of groups (chapter 14, article 14.6).

Notice the three (3) given factors directly depends on the structural design of the project foundations. The structural engineer must address this issue, and make corresponding cross-references.

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C. Pile Block Failure is defined as the failure of a pile group due to shear and/or settlements when approached as a single footing. This phenomenon mostly occurs when pile spacing is so narrow that mobilization of stresses around one pile overlap those induced by a next one. This mode of failure is overcome providing a pile spacing (cc) not less than three (3) times the pile(s) diameter. Hence, adopting this spacing grid, there is no concern related to a block failure.

Seismic Design Parameters

Design the pile foundation for the following parameters:

1. Earthquake magnitude: 7 on the Richter scale.
2. Ground acceleration: 0.3 g (g = gravitary acceleration).
3. Average Shear Wave Velocity = 500 ft./sec.
4. Average Compressional Wave Velocity = 1800 ft/sec.
5. Short-Period Amplification Factor Site Coefficient (Fa) = 1.3
6. Long Period Amplification Factor Site Coefficient (Fv) = 2.8
7. Confirmed Soil type = E.

Respectfully Submitted,

Victor E. Rivera Roldan, PE, MBA
President

VICTOR E. RIVERA ROLDAN
INGENIERO LICENCIADO
Lic.5008
PUERTO RICO

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V.- Traffic Study

kleinengineering psc

TRAFFIC IMPACT ANALYSIS REPORT

Ponce Health Sciences University

State Road PR-2, Km. 227.2
Municipality of Ponce, Puerto Rico



Prepared for:

LOA Management, PSC
P.O. Box 270122
San Juan, Puerto Rico 00927-0122

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LIST OF ACRONYMS

AADT: Annual Average Daily Traffic
ATC: Automatic Traffic Data Recorder
CBD: Central Business District
DDHV: Directional Design Hourly Volume
DTPW: Department of Transportation and Public Works of Puerto Rico
EB: Eastbound
HCM: Highway Capacity Manual
ITE: Institute of Transportation Engineers
KEPSC: Klein Engineering, PSC
LOA: LOA Management, PSC
LOS: Level of Service
MOE: Measures of Effectiveness
NB: Northbound
PHF: Peak Hour Factor
PRHTA: Puerto Rico Highway and Transportation Authority
PRPB: Puerto Rico Planning Board
ROW: Right-of-Way
SB: Southbound
TMC: Turning Movement Counts
TRB: Transportation Research Board
TTI: Texas Transportation Institute
VPH: Vehicles per Hour
WB: Westbound

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INTRODUCTION

Land use is a matter of public interest which must be controlled by state and municipal governments. There is a strong relationship between land use and transportation. For example, the construction of a new highway will have an effect in the economic development of a specific area, while a new development generates trips that will have an impact on the capacity of available highway facilities. Therefore, the impact of new developments in existing transportation networks is a key element that needs to be strictly analyzed to determine a project's feasibility.

Traffic congestion in our highway system is continuously escalating. According to the Texas Transportation Institute (TTI) [9]: "The national congestion recession is over. Urban areas of all sizes are experiencing the challenges seen in the early 2000s – population, jobs and therefore congestion are increasing. The U.S. economy has regained nearly all of the 9 million jobs lost during the recession and the total congestion problem is larger than the pre-recession levels.

"The data from 1982 to 2014 show that, short of major economic problems, congestion will continue to increase if projects, programs and policies are not expanded.

- The problem is very large. In 2014, congestion caused urban Americans to travel an extra 6.9 billion hours and purchase an extra 3.1 billion gallons of fuel for a congestion cost of $160 billion. Trucks account for $28 billion (17 percent) of that cost, much more than their 7 percent of traffic.
- From 2013 to 2014, 95 of America's 100 largest metro areas saw increased traffic congestion, from 2012 to 2013 only 61 cities experienced increases.
- In order to reliably arrive on time for important freeway trips, travelers had to allow 48 minutes to make a trip that takes 20 minutes in light traffic.
- Employment was up by more than 500,000 jobs from 2013 to 2014; if transportation investment continues to lag, congestion will get worse."

Therefore, it is important to monitor land use near existing roadways and provide mitigation alternatives in case of significant impacts on highway traffic caused by new developments to avoid the deterioration of the levels of service on existing roads, and further degradation of the transportation system.

The purpose of this study is to evaluate the traffic impacts caused by a future land development that will access an existing highway system. The project named Ponce Health Sciences University has the purpose of providing academic and clinical services. The institution is expected to receive students and medical practitioners from Puerto Rico, as well as other states and countries.

Figure 1 shows the study area, including the locations where traffic data were collected for the operational analysis.

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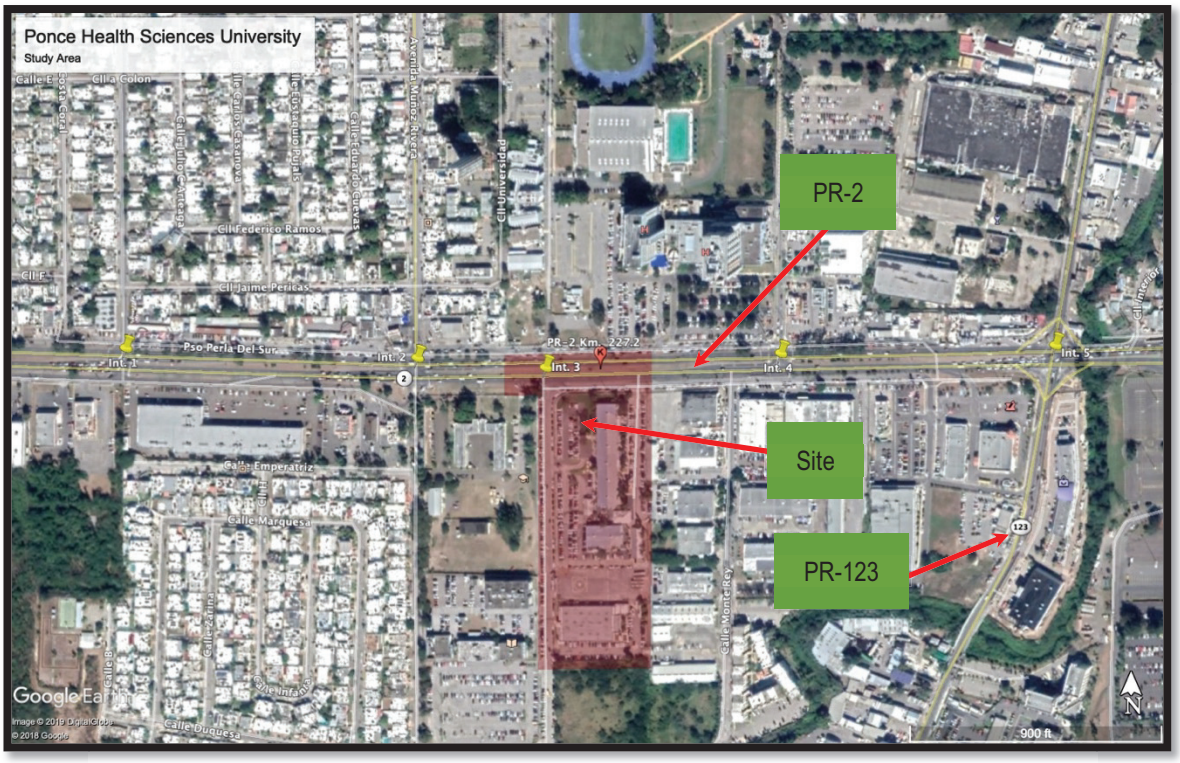


Figure 1. Proposed project's location and study area (Source: Google).

This study was requested and prepared for LOA Management, PSC (LOA), project managers for the proposed development, in conformity with the requirements set forth by the Puerto Rico Highway and Transportation Authority (PRHTA) of the Department of Transportation and Public Works of Puerto Rico (DTPW).

DESCRIPTION OF THE PROPOSED DEVELOPMENT

The proposed development consists of an institutional health sciences academic facility. According to the project's master plan, the new facilities will include the following areas:

- Auditorium;
- Classrooms;
- Medical clinic;
- Academic laboratories;
- Cafeteria;
- Retail area;
- Student dormitories;
- Athletic facilities; and
- Parking.

The areas described above will be distributed in the four levels of the new building, which will have an approximate total gross area of 259,225 square feet. The site will also have approximately 127,107 square feet of parking area in a three-story garage building. The latter is incorporated to the university's building in its central area, starting on the second

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level. Figure 2 shows images of the proposed four-level building included in the project's master plan.

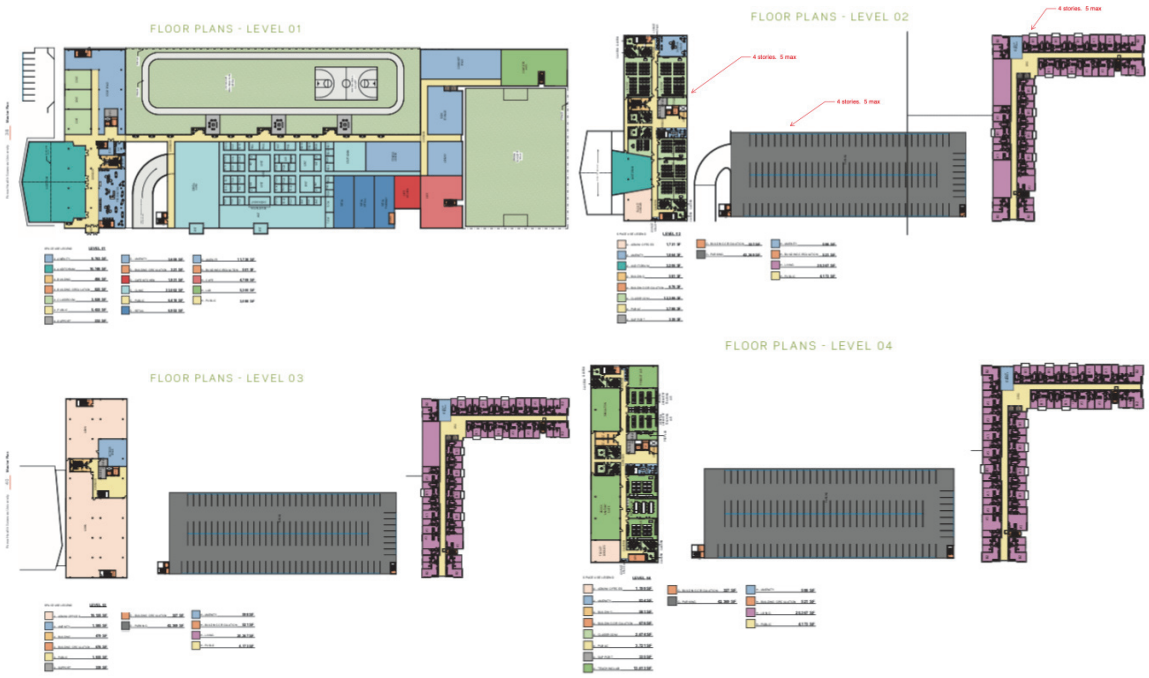


Figure 2. Proposed project's architectural master plan (Source: LOA).

Figure 3 shows the location of the proposed project and existing infrastructure in the area. The site is located to the south of the Ponce Central Business District (CBD), with direct access to the roadway network that serves the Municipality.

SITE ACCESS

The parcel of land to be developed is located on State Road PR-2, Km. 227.2, in Canas Urbano Ward of the Municipality of Ponce. The existing access to the site is through the south frontage road of State Road PR-2, where the frontage road has its west terminus. The latter provides direct access to the eastbound (EB) lanes of PR-2 for vehicles making a right turn maneuver from the frontage road. Likewise, vehicles traveling EB on PR-2 can turn right onto the frontage road and have access to the site. Figure 4 shows an image of the existing access from PR-2.

The above-mentioned south frontage road also intersects with B Street, which provides access to the parking lot located on the southern end of the facilities, as well as other buildings that abut the road, including Damas Hospital facilities, Multimed Services, and the Ponce Health Sciences University.

Figure 5 shows the proposed site plan for the project and Figure 6 shows the proposed modifications to the intersection of PR-2 and the south frontage road. The latter consists of the addition of a left-turn lane for PR-2 westbound (WB) traffic that will enter the site.

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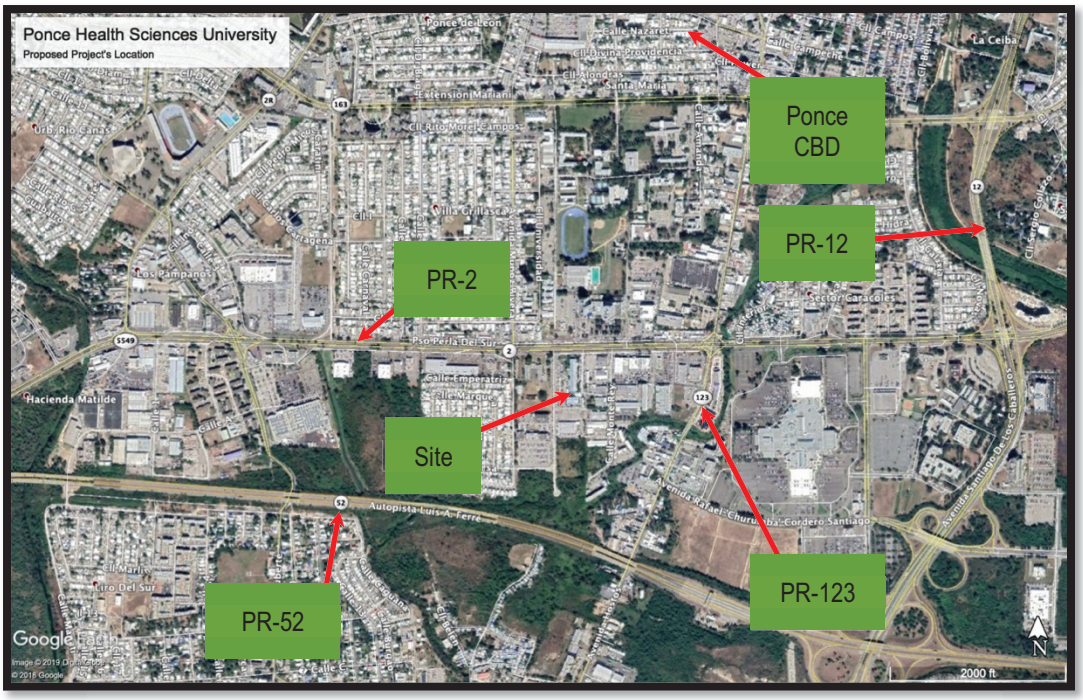


Figure 3. Proposed project's location and surroundings (Source: Google).



Figure 4. Existing access to site from PR-2 (Source: Google).

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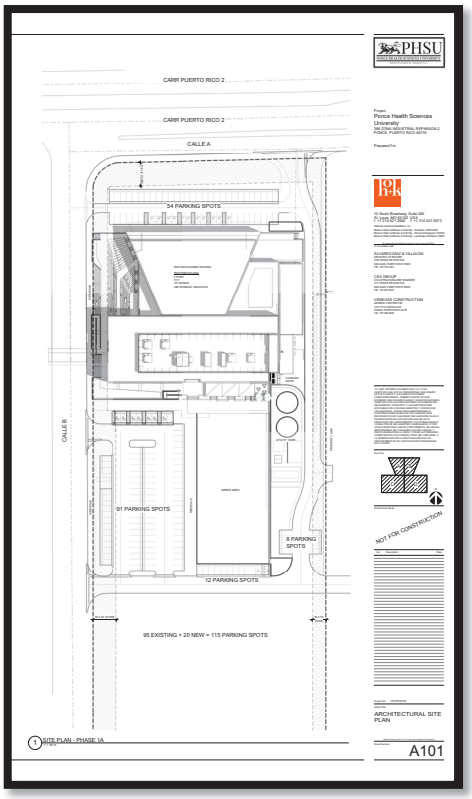


Figure 5. Proposed site plan (Not to Scale; Source: LOA).

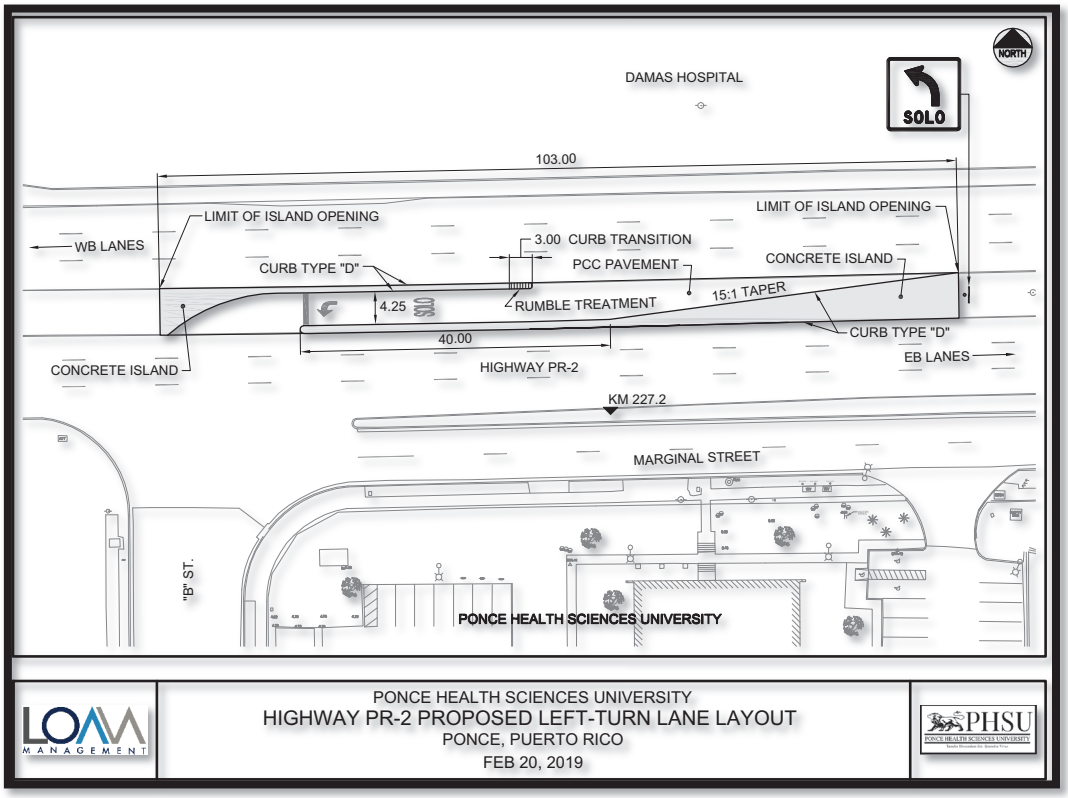


Figure 6. Proposed access to site from PR-2 (Not to Scale; Source: LOA).

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FUNDAMENTALS OF TRAFFIC FLOW AND OPERATIONAL ANALYSIS

To better understand the conditions of traffic flow, engineers use three basic measures to represent the state of a traffic stream: flow, density, and space mean speed. These parameters are related by the following equation:

$$q = k * s$$

Flow (q) can be defined as the rate at which vehicles pass through a specific point in the highway on an hourly basis, whereas density (k) relates to the volume of vehicles in a specific stretch of roadway. Time mean speed is the average of the individual speeds of a vehicle, while space mean speed (s) is obtained by averaging the individual times of different vehicles observed along an established distance of roadway. Typical units for flow, speed, and density are veh/h, mi/h, and veh/mi, respectively.

Two (2) other important concepts in traffic engineering are volume (v) and demand (d). Volume can be defined as how many vehicles are counted through a predetermined point in the highway system in a specific time period. Traffic volume studies used for operational analysis typically set this time period as one (1) hour.

In congested highway environments, there are an amount of vehicles that would like to use the facility but are prevented of doing so because of congestion. Demand is defined as the amount of vehicles that want to use the highway, plus the volume obtained.

Traffic conditions in the highway network vary due to time of day, weather conditions, and season of the year, among other factors. The average annual daily traffic (AADT) is the total volume of traffic for a year in a highway section, divided by the number of days in the year. The highest traffic volume in one hour during a typical day is called the peak hour, which is a very important value for design and operational analysis. AADT can be converted to directional peak volumes with the following equation:

$$DDHV = AADT * K * D$$

Where DDHV is the directional design hour volume, K is the proportion of traffic in the peak hour, and D is the proportion traffic traveling in the peak direction of flow.

Transportation facilities have a limited ability to handle excessive traffic demand. A system's capacity is defined by the Transportation Research Board's (TRB) Highway Capacity Manual, 6th Edition (HCM) [10] as "the maximum hourly rate at which persons or vehicles reasonably can be expected to traverse a point or a uniform section of a lane or roadway during a given time period under prevailing roadway, traffic, and control conditions". Different methods for capacity analysis are applied to unsignalized and signalized intersections.

Unsignalized intersections are controlled by stop and yield signs, and their capacity is based on a gap acceptance model. Signalized intersections use traffic signals as their

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primary controls, and the capacity for this type of intersection is related to specific parameters, like the saturation flow rate.

Saturation flow rate is defined in the HCM [10] as “the equivalent hourly rate at which previously queued vehicles can traverse an intersection approach under prevailing conditions, assuming that the green signal is available at all times and no lost times are experienced”. The saturation flow rate (s) can be calculated using the following equation:

$$s = 3{,}600 / h$$

Where h is the saturation headway in seconds/vehicle, which is an average headway obtained for the intersection.

Traffic engineers need performance measures to quantify operational conditions for proposed and existing highways. This introduces the concept of Level of Service (LOS), which is defined in the HCM [10] as: “a quantitative stratification of a performance measure or measures that represent quality of service, measured on an A - F scale, with LOS A representing the best operating conditions from the traveler’s perspective and LOS F the worst.”

For interrupted flow facilities, including both unsignalized and signalized intersections, the base scale for level of service is divided into six levels as presented in Table 1.

Table 1. Level of Service criteria for intersections (Adapted from HCM).

Level of Service	Control Delay per Vehicle (s/veh)	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10	0-10
B	> 10-20	> 10-15
C	> 20-35	> 15-25
D	> 35-55	> 25-35
E	> 55-80	> 35-50
F	> 80	> 50

The Level of Service criteria is based on the delay experienced by drivers. Control delay is the delay caused by an intersection control device, and is divided in two (2) components: the sum of the time that the vehicle spends in queue, plus the delay caused by acceleration and deceleration. LOS criteria for the two (2) basic types of intersection control are different because drivers expect higher delays at signalized intersections.

A measure that results from the LOS and capacity analysis that is also very useful to traffic engineers is the v/c ratio. This ratio compares the traffic demand at the evaluated facility versus the capacity of the system. A ratio of v/c > 1 shows that the capacity of the system is not enough to handle the expected traffic demand.

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The basic parameters and evaluation criteria that were presented in this section are essential in the operational analysis process for existing facilities, as well as for future facilities being planned.

ANALYSIS PARAMETERS

STUDY AREA

The extension of the study area for this traffic impact study was chosen after an evaluation of the proposed project plans, existing highway facilities, and land uses near the proposed development. Figure 7 shows an aerial photograph with the location of the site where the proposed project will be built and the intersections included in the analysis, which are listed below:

- Intersection 1: State Road PR-2 and Virgilio Biaggi St.;
- Intersection 2: State Road PR-2 and Muñoz Rivera Ave.;
- Intersection 3: State Road PR-2 and Site;
- Intersection 4: State Road PR-2 and Damas Hospital access road; and
- Intersection 5: State Road PR-2 and State Road PR-123.

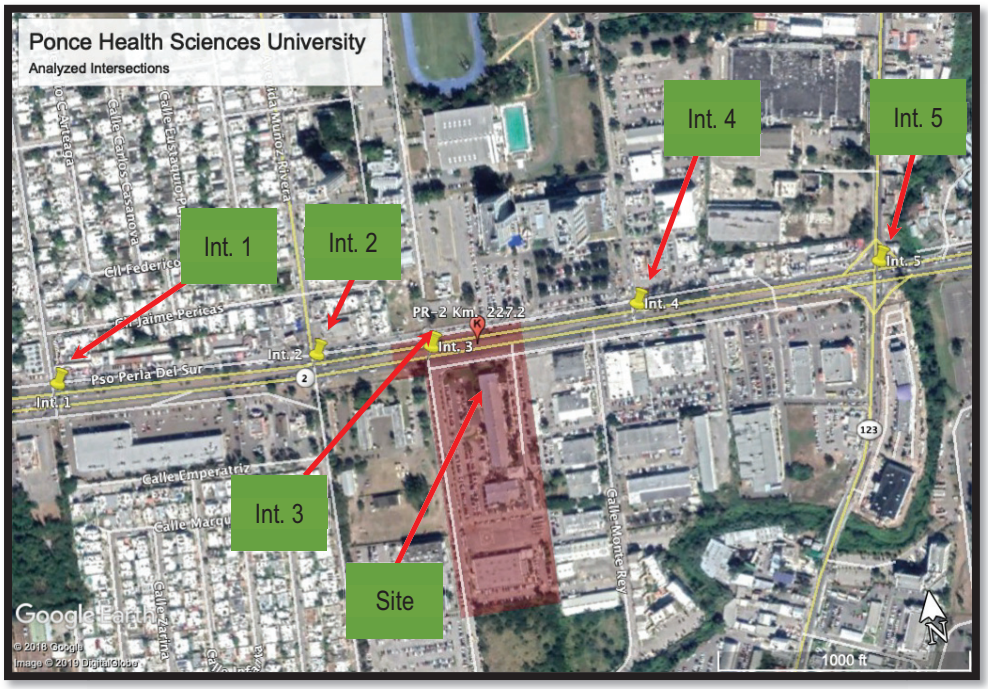


Figure 7. Analyzed intersections (Image Source: Google).

The above-mentioned image shows the surroundings of the parcel to be developed, which can be currently accessed from PR-2 and its south frontage road. Land uses in the area include residential, commercial, and institutional uses. Figure 8 presents sheet

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078 of the *Plan de Ordenación Territorial del Municipio Autónomo de Ponce*, which was obtained online from the Puerto Rico Planning Board (PRPB) [6].

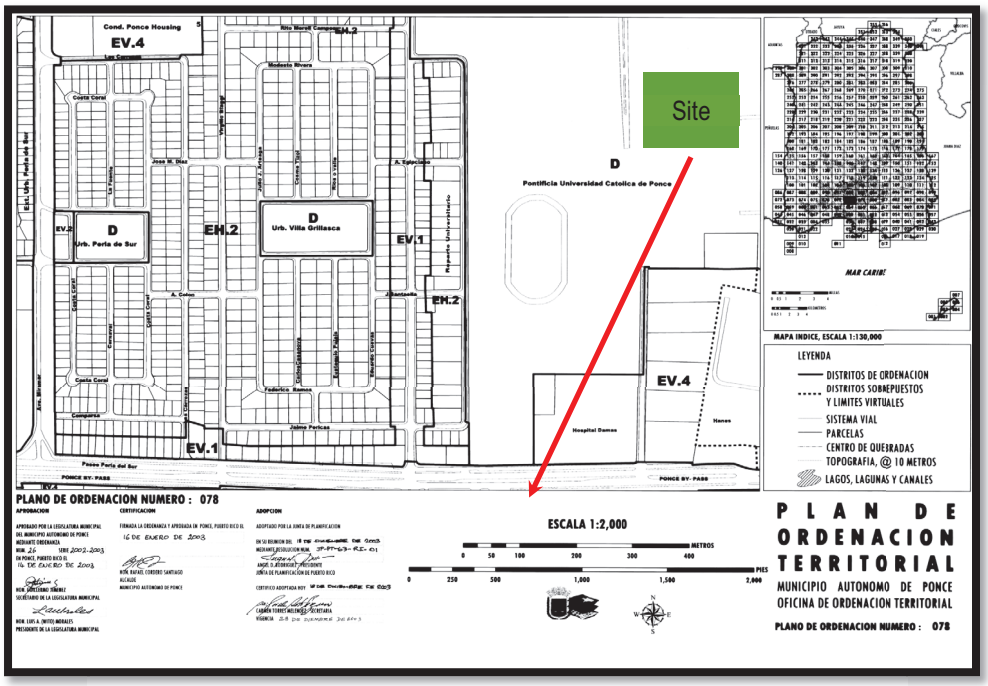


Figure 8. Land uses near de project (Source: PRPB).

A brief description and basic information of the existing highways near the proposed development is presented next. Virgilio Biaggi Street and Muñoz Rivera Avenue can be considered collector roads that connect local roads to arterials in the area. B Street and the Damas Hospital access road are local roads that provide access to PR-2 to facilities that abut them. Official descriptions or AADT values for the two above-mentioned roads are not available from PRHTA.

State Road PR-2

State Road PR-2 is part of the Primary and Secondary System of Puerto Rico's roadway network. PR-2 begins at the intersection of Roberto H. Todd Avenue with PR-26 in Santurce, travels southwesterly to PR-20 in Guaynabo, and then traverses through Bayamón, Vega Alta, Vega Baja, Manatí, Arecibo, Añasco, Mayagüez, Hormigueros, San Germán, Sábana Grande, Yauco, and Guayanilla to the intersection of PR-1 and PR-133, in Ponce. The total length of the route is 230.7 Kms and, in 2008, had an AADT of 28,894 vehicles between PR-2R and PR-123, according to PRHTA.

State Road PR-123

State Road PR-123 is part of the Primary, Secondary, and Tertiary System of Puerto Rico's roadway network. PR-123 begins in Ponce at PR-12, following Old Route 10, northwesterly to Adjuntas , continuing northwesterly to Utuado crossing PR-111, then northerly near Dos Bocas Dam to the PR-10 intersection with PR-6609 at Km 78.2,

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south of Arecibo. The total length of the route is 63.4 Kms and, in 2006, had an AADT of 11,580 vehicles between PR-2 and Las Américas Avenue, according to PRHTA.

TYPICAL STUDY DAYS

Manual turning movement counts (TMC) for the intersections analyzed in this study at State Road PR-2 were done on Tuesday, March 5, 2019 and Wednesday, March 6, 2019.

Appendix A shows traffic counts data used in this analysis.

PEAK HOURS

After processing traffic data collected from the field, individual 1-hour peak periods were determined for each intersection evaluated, for the morning (AM) and afternoon (PM) conditions. These were the peak periods used for the operational analysis.

The decision not to use a system peak was based on the traffic data that were obtained from field counts, which led to the conclusion that the 1-hr peak periods for each intersection did not vary significantly. Thus, the use of the peak periods calculated for each intersection provides the most conservative scenario for the operational analysis. The peak hours obtained for the existing condition are presented in Table 2.

Table 2. Peak hours for each intersection.

Int. No.	Description	AM Weekday	PM Weekday
1	PR-2 & Virgilio Biaggi Street	11:00 – 12:00	3:30 – 4:30
2	PR-2 & Muñoz Rivera Avenue	11:00 – 12:00	3:00 – 4:00
3	PR-2 & South Frontage Road	8:00 – 9:00	12:00 – 1:00
4	PR-2 & Damas Hospital Access Road	11:00 – 12:00	3:00 – 4:00
5	PR-2 & PR-123	11:00 – 12:00	4:00 – 5:00

DATA FILES MATRIX

Table 3 shows the file names for the scenarios evaluated in the traffic model.

Table 3. File names for existing and future conditions.

Existing Condition		Opening Day (2022) Condition		Future (2027) Condition	
AM Peak Period	PM Peak Period	AM Peak Period	PM Peak Period	AM Peak Period	PM Peak Period
Existing AM Peak VB.syn	Existing PM Peak VB.syn	Opening AM Peak.syn	Opening PM Peak.syn	Future AM Peak.syn	Future PM Peak.syn

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ANALYSIS OF EXISTING CONDITIONS

TABULATED VOLUMES

Vehicle turning movement counts were manually collected every 15 minutes for each approach at the five (5) intersections, during a consecutive 12-hr counting period. Turning movement counts at the intersections of the corresponding north and / or south frontage roads at intersections 1, 2, and 4 were also collected. The addition of N and S, respectively, show data for the intersections of north and south frontage road at the corresponding intersections.

Traffic data were processed using a spreadsheet format with which hourly flows were generated. Calculated traffic flows (vph) for the morning and afternoon peak periods are presented in Table 4 through Table 12.

Table 4. Calculated peak hour flows for Intersection 1, AM / PM.

Approach	Movement	A.M. Volume (vph)	P.M. Volume (vph)
North / Virgilio Biaggi Street	Left	136	116
	Through	68	60
	Right	44	100
East / PR-2 WB	Left	172	180
	Through	1212	1732
	Right	36	20
South / PR-2 South Frontage Road	Left	52	64
	Through	12	8
West / PR-2 EB	Left	96	108
	Through	1012	984
	Right	12	0

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Table 5. Calculated peak hour flows for Intersection 1N, AM / PM.

Approach	Movement	A.M. Volume (vph)	P.M. Volume (vph)
North / Virgilio Biaggi Street	Left	20	0
	Through	120	364
	Right	16	4
East / PR-2 North Frontage Road	Left	20	20
	Through	24	68
	Right	12	32
South / PR-2	Left	20	24
	Through	120	72
	Right	16	12
West / PR-2 North Frontage Road	Left	0	0
	Through	8	8
	Right	68	40

Table 6. Calculated peak hour flows for Intersection 1S, AM / PM.

Approach	Movement	A.M. Volume (vph)	P.M. Volume (vph)
North / PR-2	Left	28	56
	Right	196	148
East / PR-2 South Frontage Road	Through	24	76
	Right	64	84
West / PR-2 South Frontage Road	Left	0	0
	Through	212	300

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Table 7. Calculated peak hour flows for Intersection 2, AM / PM.

Approach	Movement	A.M. Volume (vph)	P.M. Volume (vph)
North / Muñoz Rivera Avenue	Left	360	348
	Through	36	76
	Right	80	196
East / PR-2 WB	Left	88	176
	Through	768	1488
	Right	56	88
South / Marquesa Street	Left	28	36
	Through	172	12
	Right	48	40
West / PR-2 EB	Left	192	132
	Through	1032	1268
	Right	44	16

Table 8. Calculated peak hour flows for Intersection 2N, AM / PM.

Approach	Movement	A.M. Volume (vph)	P.M. Volume (vph)
North / Muñoz Rivera Avenue	Left	0	0
	Through	352	424
	Right	4	12
East / PR-2 North Frontage Road	Left	92	144
	Through	12	12
	Right	188	128
South / PR-2	Left	28	28
	Through	384	256
	Right	12	0
West / PR-2 North Frontage Road	Left	20	4
	Right	20	20

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Table 9. Calculated peak hour flows for Intersection 3, AM / PM.

Approach	Movement	A.M. Volume (vph)	P.M. Volume (vph)
East / PR-2 South Frontage Road	Left	112	144
	Right	16	116
South / PR-2 South Frontage Road	Right 1 – to PR-2	44	124
	Right 2 – to Frontage Rd.	32	8
West / PR-2	Through	1612	1546
	Right	348	320

Table 10. Calculated peak hour flows for Intersection 4, AM / PM.

Approach	Movement	A.M. Volume (vph)	P.M. Volume (vph)
North / Damas Hospital Access Road	Left	208	256
	Right	80	144
East / PR-2 WB	Through	1364	1292
	Right	36	28
West / PR-2 EB	Left	288	288
	Through	1256	1356

Table 11. Calculated peak hour flows for Intersection 4N, AM / PM.

Approach	Movement	A.M. Volume (vph)	P.M. Volume (vph)
North / Damas Hospital Access Road	Through	264	264
	Right	12	12
East / PR-2 North Frontage Road	Left	48	48
	Through	68	68
	Right	172	172
South / PR-2	Left	36	36
	Through	196	196

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Table 12. Calculated peak hour flows for Intersection 5, AM / PM.

Approach	Movement	A.M. Volume (vph)	P.M. Volume (vph)
North / PR-123 SB	Left	172	168
	Through	156	156
	Right	232	240
East / PR-2 WB	Left	148	144
	Through	1404	1512
	Right	320	248
South / PR-123 NB	Left	208	180
	Through	172	160
	Right	108	104
West / PR-2 EB	U	12	12
	Left	200	188
	Through	1136	1360
	Right	164	244

Maneuvers with calculated flows resulting in 0 vph were modeled as 4 vph in the operational analysis. Calculated flows at the main intersections and corresponding frontage roads were balanced in the macroscopic simulation model.

GEOMETRIC DESIGN OF EXISTING INTERSECTIONS

The geometric design of the intersections included in the operational analysis, and pictures of the field work area are included in this section. Figure 9 through Figure 19 show aerial and at-grade views of the existing intersections included in the operational analysis. The images show each intersection's existing geometric configuration and traffic control.

The printouts included in Appendix C correspond to the layout prepared using Synchro 10, macroscopic simulation software that was used to analyze performance parameters of existing and proposed conditions.

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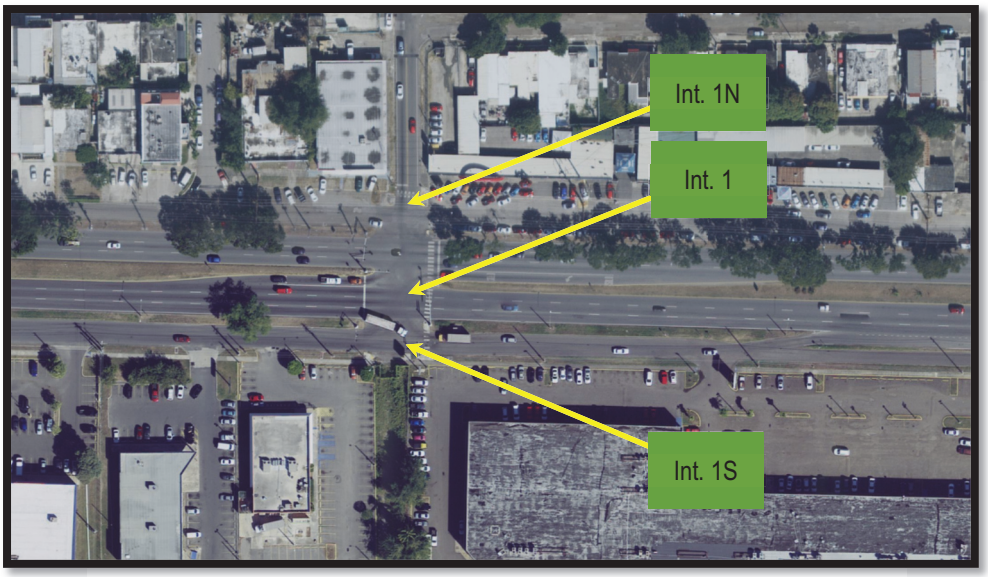


Figure 9. Aerial view of Intersection 1 (Source: Apple).



Figure 10. Intersection of PR-2 and Virgilio Biaggi Street (Source: Google).

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Figure 11. North and south frontage roads at Int. 1 (Source: Google)

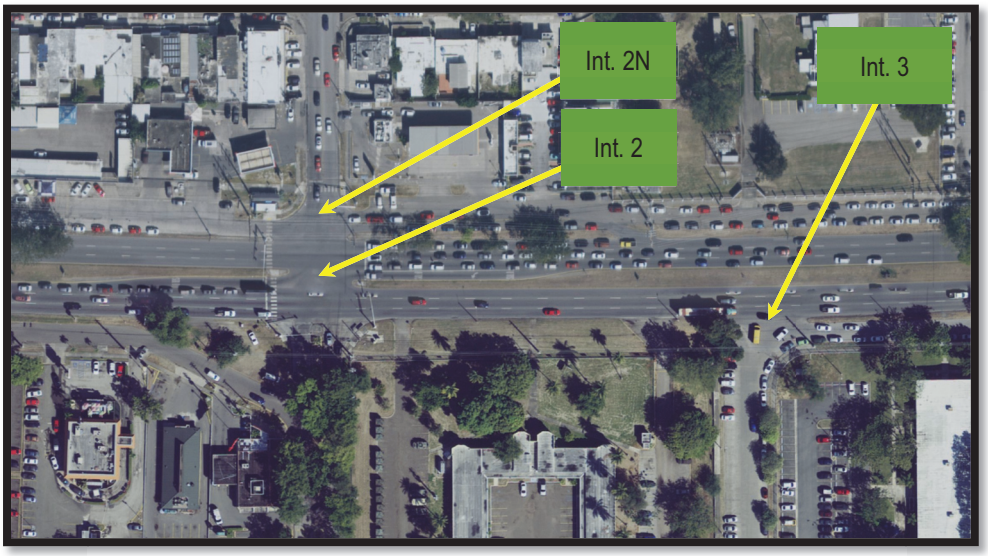


Figure 12. Aerial view of intersections 2 and 3 (Source: Apple).

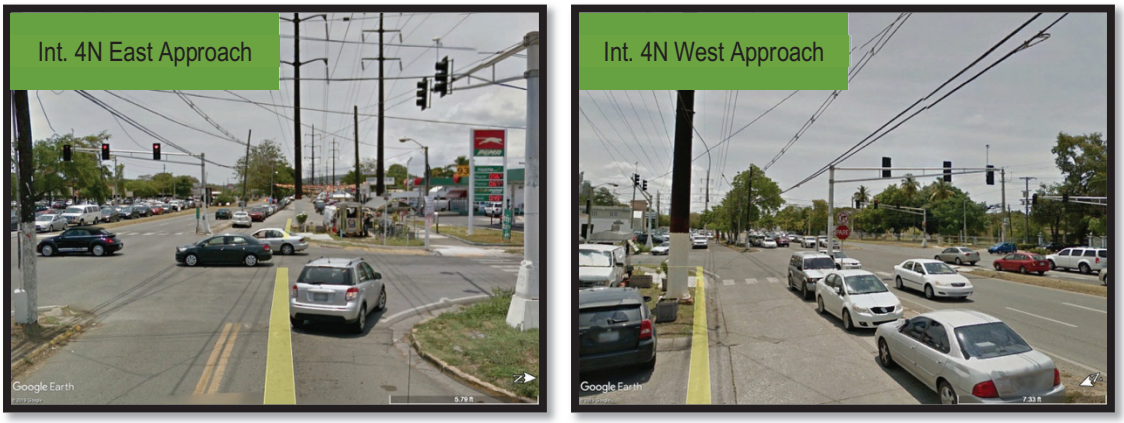


Figure 13. North Frontage Rd. int. Muñoz Rivera Ave. (Source: Google).

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Figure 14. Intersection of PR-2 and Muñoz Rivera Ave. (Source: Google).



Figure 15. Intersection of PR-2 and site access (Source: Google).

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Figure 16. Aerial view of Intersection 3 (Source: Apple).



Figure 17. Intersection of PR-2 and Damas Hospital Street (Source: Google).

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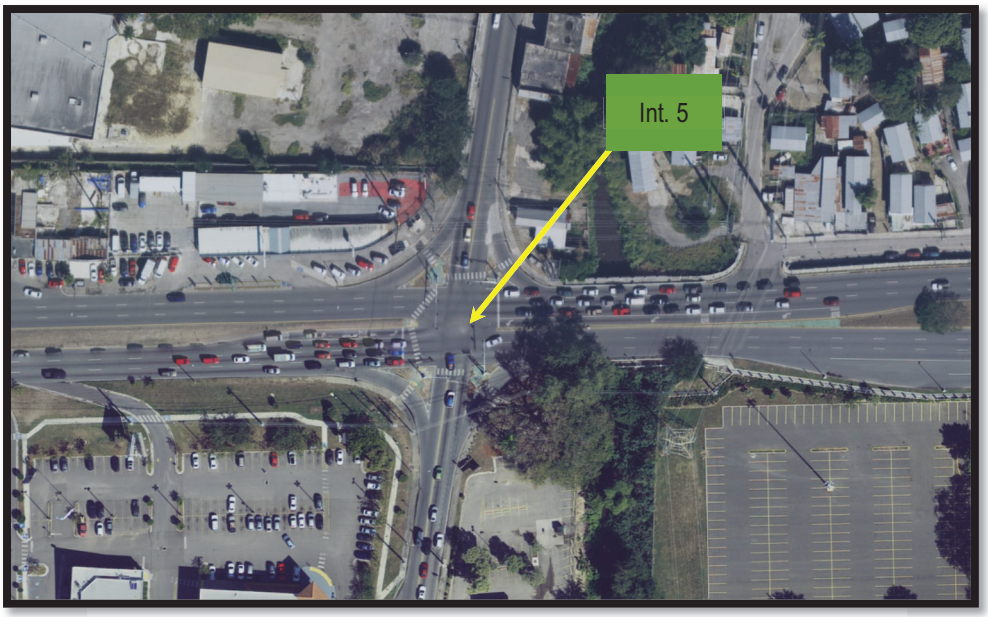


Figure 18. Aerial view of Intersection 5 (Source: Apple).



Figure 19. Intersection of PR-2 and PR-123 (Source: Google).

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DESCRIPTION OF INTERSECTION CONTROLS

Intersection 1, formed by State Road PR-2 and Virgilio Biaggi Street has four (4) approaches and a traffic signal. The north frontage road has a stop control, while the south frontage road has a traffic signal. The signal currently operates with the following phases: protected left-turn movements for EB and WB traffic on PR-2; through traffic for EB and WB traffic on PR-2; protected SB movements from Virgilio Biaggi Street; protected WB traffic on the south frontage road. EB traffic on the south frontage road has an overlapping green phase concurrent with EB through traffic on PR-2.

Intersection 2, which is formed by PR-2 and Muñoz Rivera Ave., is also signalized. The signal currently operates with the following phases: protected left-turn movements for EB and WB traffic on PR-2; through traffic for EB and WB traffic on PR-2; protected SB movements from Muñoz Rivera Avenue; and protected NB movements from Marquesa Street. The north frontage road has a stop control for EB and WB traffic.

Intersection 3, formed by PR-2 and the access to the south frontage road has a stop control for the minor NB approach.

Intersection 4, formed by State Road PR-2 and Damas Hospital Street has three (3) approaches and a traffic signal. The north frontage road is a one-way street and has a stop control for WB traffic. The signal currently operates with the following phases: protected left-turn movements for EB traffic on PR-2; through traffic for EB and WB traffic on PR-2; protected SB movements from Damas Hospital Street.

Intersection 5, formed by State Road PR-2 and PR-123 has four (4) approaches and a traffic signal. The signal currently operates with the following phases: protected left-turn movements for EB and WB traffic on PR-2; through traffic for EB and WB traffic on PR-2; protected SB movements from PR-123; protected NB traffic from PR-123.

CAPACITY ANALYSIS

Synchro 10 was the primary traffic analysis tool used for this capacity evaluation. Synchro is a macroscopic analysis and traffic signal optimization program developed by Trafficware. Synchro's capacity analysis for the unsignalized intersections in this project is based on the methodology presented in the HCM [10].

Existing information like calculated traffic flows, intersection geometry, and control type, among others, were input to the program for capacity and operational analysis. A calibration process was later applied to the model, in order to represent local driving conditions. Two (2) important parameters related to unsignalized intersection capacity analysis were used for model calibration: the critical gap (tC), and the follow-up time (tF).

The critical gap is the minimum gap in the traffic from the main road that drivers from the secondary road will accept in order to perform their proposed maneuver. The follow-

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up time is a parameter similar to saturation flow rate for signalized intersections. Both parameters are calibrated in the HCM [10] for traffic conditions in the continental United States.

In the study named “Gap Acceptance Studies and Critical Gap Times for Two-Way Stop Controlled Intersections in the Mayagüez Area” [7], the author found a difference of up to 39.2% between the values from the HCM [10] and field values obtained for left-turn maneuvers from minor road. This shows that Puerto Rican drivers have a tendency to be more assertive than drivers in the mainland.

A Peak-Hour Factor (PHF) of 1 was used in the model, as recommended in the HCM [10]. Calculated peak hour flows used in the macroscopic model are presented in Table 4 through Table 12.

Since Intersection 1S has through traffic, although the signal phases overlap with the ones on the main line of PR-2, the signals were modeled as separate intersections. Furthermore, the intersections were modeled considering turning movements observed on the field, albeit some violate regulatory prohibitions posted on traffic signs.

Measures of effectiveness (MOE) like Level of Service (LOS), control delay, and 95th percentile queue length were obtained from the calibrated model for existing conditions. Tabulated values for these parameters for each intersection included in the study are presented in Table 13 through Table 21.

Table 13. Measures of effectiveness for Intersection 1N, AM / PM.

Approach	Lane or Lane Group	Level of Service (LOS)		Control Delay (sec)		Queue Length 95th (ft)	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
North	L – T – R	A	A	0.7	0.0	1	0
East	L – T – R	A	A	8.6	8.6	4	9
South	L – T – R	A	A	1.1	1.9	1	2
West	L – T – R	A	A	8.2	8.0	5	3
Intersection (Unsignalized)		A	A	2.5	2.5		

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Table 14. Measures of effectiveness for Intersection 1, AM / PM.

Approach	Lane or Lane Group	Level of Service (LOS)		Control Delay (sec)		Queue Length 95th (ft)	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
North	L – T – R	E	F	77.8	97.7	#485	#546
East	L	F	F	214.3	167.5	#358	#315
	T – R	C	D	34.0	44.3	424	#589
South	L – T – R	E	F	79.4	175.7	#121	#179
West	L	E	E	68.4	73.9	#139	#315
	T – R	C	C	27.6	27.2	258	#589
Intersection (Signalized)		D	E	50.4	56.3		

Table 15. Measures of effectiveness for Intersection 1S, AM / PM.

Approach	Lane or Lane Group	Level of Service (LOS)		Control Delay (sec)		Queue Length 95th (ft)	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
North	L – R	A	B	9.2	11.2	m20	m9
East	T – R	C	F	26.5	76.3	70	#220
West	L – T	F	C	89.1	27.3	171	241
Intersection (Signalized)		D	D	39.2	36.5		

Table 16. Measures of effectiveness for Intersection 2N, AM / PM.

Approach	Lane or Lane Group	Level of Service (LOS)		Control Delay (sec)		Queue Length 95th (ft)	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
North	L – T – R	A	A	0.0	0.0	0	0
East	L – T – R	A	A	8.7	9.0	22	23
South	L – T – R	A	A	0.6	0.8	2	2
West	L – T – R	A	A	8.8	7.9	3	1
Intersection (Unsignalized)		A	A	2.7	2.9		

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Table 17. Measures of effectiveness for Intersection 2, AM / PM.

Approach	Lane or Lane Group	Level of Service (LOS)		Control Delay (sec)		Queue Length 95th (ft)	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
North	L – T – R	F	F	155.1	166.4	#466	#628
East	L	F	F	116.0	143.4	#334	#386
	T – R	D	D	42.6	47.6	604	679
South	L – T – R	E	C	63.9	34.2	162	50
West	L	F	F	127.1	80.8	#354	#212
	T – R	C	C	31.6	34.1	320	402
Intersection (Signalized)		E	E	62.3	66.6		

Table 18. Measures of effectiveness for Intersection 3, AM / PM.

Approach	Lane or Lane Group	Level of Service (LOS)		Control Delay (sec)		Queue Length 95th (ft)	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
East	T	A	A	0.0	0.0	0	0
South	R	A	A	7.5	7.8	2	7
West	T – R	A	A	0.0	0.0	0	0
Intersection (Unsignalized)		A	A	0.1	0.2		

Table 19. Measures of effectiveness for Intersection 4N, AM / PM.

Approach	Lane or Lane Group	Level of Service (LOS)		Control Delay (sec)		Queue Length 95th (ft)	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
North	T – R	A	A	0.0	0.0	0	0
East	L – T – R	A	A	9.4	9.2	26	25
South	L – T	A	A	1.6	1.6	3	3
Intersection (Unsignalized)		A	A	3.5	3.5		

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Table 20. Measures of effectiveness for Intersection 4, AM / PM.

Approach	Lane or Lane Group	Level of Service (LOS)		Control Delay (sec)		Queue Length 95th (ft)	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
North	L – R	E	F	60.7	88.3	#381	#577
East	T – R	D	D	43.7	48.2	654	#716
West	L	F	F	90.9	82.8	#473	#438
	T	B	B	10.5	10.6	217	224
Intersection (Signalized)		D	D	37.2	41.8		

Table 21. Measures of effectiveness for Intersection 5, AM / PM.

Approach	Lane or Lane Group	Level of Service (LOS)		Control Delay (sec)		Queue Length 95th (ft)	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
North	L	F	F	Error	Error	#458	#447
	T	E	E	61.1	61.1	224	224
	R	D	D	43.4	44.2	238	247
East	L	E	E	74.5	73.6	229	222
	T	D	D	49.3	53.1	547	606
	R	C	C	34.6	30.1	314	229
South	L	F	E	88.5	79.3	#348	273
	T	E	E	74.8	72.6	260	241
	R	C	C	31.9	30.7	108	103
West	L	F	F	100.8	89.9	#389	#339
	T	D	D	44.3	48.1	435	524
	R	C	C	23.5	29.8	143	224
Intersection (Signalized)		F	F	107.7	102.7		

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ANALYSIS OF PROPOSED CONDITIONS

The 10th Edition of the Institute of Transportation Engineers' (ITE) Trip Generation Manual was the primary tool used to estimate the additional traffic that will be generated by the proposed development. Trafficware's Synchro 10 Suite includes TripGen, which incorporates the information from the above-mentioned reference, facilitating the Analyst's calculation of trips generated by a proposed development. TripGen was used to calculate traffic volumes that are expected to be generated by the proposed project.

Available information from the project, like land use, square footage, and number of students, were the basis for the traffic forecast procedure.

The following ITE Trip Generation Codes were chosen:

- 550: University / College,
- 630: Clinic,
- 880: Pharmacy / Drug Store without Drive-Through, and
- 936: Coffee / Donut Shop without Drive-Through.

Furthermore, information regarding directional distribution, which is the percent of vehicles entering and exiting, and average vehicle trip ends were obtained for the AM and PM peak periods of the generator. Table 22 shows the volumes that the proposed development is expected to generate, based on the assumptions mentioned above.

Appendix B includes a printout from TripGen.

Table 22. Calculated trip generation for the proposed project.

Generator	AM Peak Period		PM Peak Period	
	Entering Vehicles	Exiting Vehicles	Entering Vehicles	Exiting Vehicles
Arecibo Travel Plaza	597	435	293	401

Traffic generated by the proposed development was then distributed through the highway system assuming that vehicles exiting from the proposed site during the morning peak and afternoon peak periods would do so through the proposed access on the south frontage road of PR-2.

Subsequently, traffic was assigned to the intersections in the traffic impact study using turning movement percentages calculated from traffic counts of existing conditions and balancing volumes. Synchro's TIA tool was used for the latter. Non-site generated future traffic was calculated using a 20-year linear growth factor of 1.25 in the area, which was obtained from PRHTA, and corresponds to the Islandwide average for urban principal arterials.

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Construction permits awarded in the area were obtained from the internet portal of the Puerto Rico Planning Board (PRPB), as seen in Figure 20. Construction permits awarded through SuperSIP, SIP, and ARPE are, respectively, represented by purple dots, yellow squares, and yellow circles. Based on the available information, future traffic volumes generated by projects that have been approved for construction in the area are included in the linear growth factor presented by PRHTA.

Following PRHTA guidelines for traffic impact studies, the forecast years for future traffic are the expected opening year of the facility and a five (5) year horizon, respectively, 2022 and 2027.



Figure 20. Construction permits awarded near the project (Source: PRPB).

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TABULATED VOLUMES

Opening Day

A three-year horizon was used to forecast opening day conditions in the area, since the project is expected to be completely built and operational by mid-2022. Future calculated traffic flows for the intersections in the operational analysis, including the proposed access, are presented in Table 23 through Table 31.

Table 23. Calculated peak hour flows for Intersection 1N, AM / PM, 2022.

Approach	Movement	A.M. Volume (vph)	P.M. Volume (vph)
North / Virgilio Biaggi Street	Left	25	0
	Through	353	405
	Right	8	4
East / PR-2 North Frontage Road	Left	21	21
	Through	25	71
	Right	12	33
South / PR-2	Left	23	34
	Through	137	104
	Right	17	16
West / PR-2 North Frontage Road	Left	4	0
	Through	8	8
	Right	81	45

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Table 24. Calculated peak hour flows for Intersection 1, AM / PM, 2022.

Approach	Movement	A.M. Volume (vph)	P.M. Volume (vph)
North / Virgilio Biaggi Street	Left	275	214
	Through	109	96
	Right	71	160
East / PR-2 WB	Left	243	209
	Through	1661	1996
	Right	60	32
South / PR-2 South Frontage Road	Left	54	78
	Through	12	9
	Right	5	0
West / PR-2 EB	Left	100	112
	Through	1207	1094
	Right	12	0

Table 25. Calculated peak hour flows for Intersection 1S, AM / PM, 2022.

Approach	Movement	A.M. Volume (vph)	P.M. Volume (vph)
North / PR-2	Left	42	79
	Right	323	226
East / PR-2 South Frontage Road	Through	25	79
	Right	67	87
West / PR-2 South Frontage Road	Left	5	0
	Through	220	312

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Table 26. Calculated peak hour flows for Intersection 2N, AM / PM, 2022.

Approach	Movement	A.M. Volume (vph)	P.M. Volume (vph)
North / Muñoz Rivera Avenue	Left	0	0
	Through	420	471
	Right	4	12
East / PR-2 North Frontage Road	Left	96	150
	Through	12	12
	Right	196	133
South / PR-2	Left	36	31
	Through	497	289
	Right	14	0
West / PR-2 North Frontage Road	Left	21	4
	Through	0	0
	Right	24	22

Table 27. Calculated peak hour flows for Intersection 2, AM / PM, 2022.

Approach	Movement	A.M. Volume (vph)	P.M. Volume (vph)
North / Muñoz Rivera Avenue	Left	432	393
	Through	37	79
	Right	83	204
East / PR-2 WB	Left	209	233
	Through	1852	1996
	Right	168	131
South / Marquesa Street	Left	29	37
	Through	179	12
	Right	57	45
West / PR-2 EB	Left	200	137
	Through	1284	1419
	Right	46	17

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Table 28. Calculated peak hour flows for Intersection 3, AM / PM, 2022.

Approach	Movement	A.M. Volume (vph)	P.M. Volume (vph)
East / PR-2	Left	330	160
	Through	1971	2129
South / PR-2 South Frontage Road	Left	259	231
	Right	236	314
West / PR-2	Through	1676	1610
	Right	638	467

Table 29. Calculated peak hour flows for Intersection 4N, AM / PM, 2022.

Approach	Movement	A.M. Volume (vph)	P.M. Volume (vph)
North / Damas Hospital Access Road	Through	315	293
	Right	12	12
East / PR-2 North Frontage Road	Left	57	53
	Through	71	71
	Right	179	179
South / PR-2	Left	57	54
	Through	345	318

Table 30. Calculated peak hour flows for Intersection 4, AM / PM, 2022.

Approach	Movement	A.M. Volume (vph)	P.M. Volume (vph)
North / Damas Hospital Access Road	Left	234	266
	Right	138	172
East / PR-2 WB	Through	2162	2117
	Right	50	43
West / PR-2 EB	Left	353	330
	Through	1560	1594

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Table 31. Calculated peak hour flows for Intersection 5, AM / PM, 2022.

Approach	Movement	A.M. Volume (vph)	P.M. Volume (vph)
North / PR-123 SB	Left	179	175
	Through	162	162
	Right	277	267
East / PR-2 WB	Left	154	150
	Through	1674	1681
	Right	333	258
South / PR-123 NB	Left	249	200
	Through	179	166
	Right	112	108
West / PR-2 EB	U	12	12
	Left	237	212
	Through	1349	1536
	Right	196	276

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5-Year Horizon

Following the requirements set forth in PRHTA's guidelines for traffic impact studies, a five-year horizon (2027) from the project's opening day has been analyzed. Future calculated traffic flows for the intersections in the operational analysis, including the proposed access, are presented in Table 32 through Table 40.

Table 32. Calculated peak hour flows for Intersection 1N, AM / PM, 2027.

Approach	Movement	A.M. Volume (vph)	P.M. Volume (vph)
North / Virgilio Biaggi Street	Left	26	0
	Through	373	428
	Right	9	4
East / PR-2 North Frontage Road	Left	22	22
	Through	26	75
	Right	13	35
South / PR-2	Left	24	36
	Through	145	110
	Right	18	17
West / PR-2 North Frontage Road	Left	4	0
	Through	9	9
	Right	86	47

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Table 33. Calculated peak hour flows for Intersection 1, AM / PM, 2027.

Approach	Movement	A.M. Volume (vph)	P.M. Volume (vph)
North / Virgilio Biaggi Street	Left	290	227
	Through	116	101
	Right	75	169
East / PR-2 WB	Left	257	221
	Through	1757	21111
	Right	64	34
South / PR-2 South Frontage Road	Left	57	83
	Through	13	10
	Right	6	0
West / PR-2 EB	Left	106	119
	Through	1277	1157
	Right	13	0

Table 34. Calculated peak hour flows for Intersection 1S, AM / PM, 2027.

Approach	Movement	A.M. Volume (vph)	P.M. Volume (vph)
North / PR-2	Left	44	84
	Right	342	239
East / PR-2 South Frontage Road	Through	26	84
	Right	70	92
West / PR-2 South Frontage Road	Left	6	0
	Through	233	330

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Table 35. Calculated peak hour flows for Intersection 2N, AM / PM, 2027.

Approach	Movement	A.M. Volume (vph)	P.M. Volume (vph)
North / Muñoz Rivera Avenue	Left	0	0
	Through	444	498
	Right	4	13
East / PR-2 North Frontage Road	Left	101	158
	Through	13	13
	Right	207	141
South / PR-2	Left	39	33
	Through	526	306
	Right	14	0
West / PR-2 North Frontage Road	Left	22	4
	Through	0	0
	Right	25	23

Table 36. Calculated peak hour flows for Intersection 2, AM / PM, 2027.

Approach	Movement	A.M. Volume (vph)	P.M. Volume (vph)
North / Muñoz Rivera Avenue	Left	457	416
	Through	40	84
	Right	88	216
East / PR-2 WB	Left	221	246
	Through	1959	2111
	Right	178	139
South / Marquesa Street	Left	31	40
	Through	189	13
	Right	61	47
West / PR-2 EB	Left	211	145
	Through	1359	1500
	Right	48	18

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Table 37. Calculated peak hour flows for Intersection 3, AM / PM, 2027.

Approach	Movement	A.M. Volume (vph)	P.M. Volume (vph)
East / PR-2	Left	349	169
	Through	2085	2252
South / PR-2 South Frontage Road	Left	274	244
	Right	250	332
West / PR-2	Through	1773	1703
	Right	674	494

Table 38. Calculated peak hour flows for Intersection 4N, AM / PM, 2027.

Approach	Movement	A.M. Volume (vph)	P.M. Volume (vph)
North / Damas Hospital Access Road	Through	333	310
	Right	13	13
East / PR-2 North Frontage Road	Left	61	56
	Through	75	75
	Right	189	189
South / PR-2	Left	61	57
	Through	365	337

Table 39. Calculated peak hour flows for Intersection 4, AM / PM, 2027.

Approach	Movement	A.M. Volume (vph)	P.M. Volume (vph)
North / Damas Hospital Access Road	Left	248	282
	Right	146	182
East / PR-2 WB	Through	2287	2240
	Right	53	45
West / PR-2 EB	Left	373	349
	Through	1650	1686

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Table 40. Calculated peak hour flows for Intersection 5, AM / PM, 2027.

Approach	Movement	A.M. Volume (vph)	P.M. Volume (vph)
North / PR-123 SB	Left	189	185
	Through	172	172
	Right	293	283
East / PR-2 WB	Left	163	158
	Through	1771	1778
	Right	352	273
South / PR-123 NB	Left	263	211
	Through	189	176
	Right	119	114
West / PR-2 EB	U	13	13
	Left	251	224
	Through	1427	1625
	Right	207	292

GEOMETRIC DESIGN OF PROPOSED CONDITION

This chapter analyzes the geometric condition of the proposed project's access. The operational analysis is based on the calculated future traffic conditions, once the project becomes fully operational in 2022, and in the 5-year horizon, which will occur in 2027. The study scenario considered for this academic project is in conformity with the "Moderate Office Building" within the Metro Area study criteria, as described in PRHTA Guidelines [4], which requires the analysis of the year when the project becomes fully operational and the 5-year period following its opening.

The preliminary operational analysis done for the proposed conditions shown on Figure 6 resulted in significant degradation to the levels of service at the intersection of PR-2 and Damas Hospital Street. The latter occurred because vehicles exiting from the project that were headed westbound had to do a U-turn at the above-mentioned intersection, causing excessive delays.

Therefore, a signalized intersection providing access to left-turning vehicles from the east approach and left-turning vehicles exiting the site from the south approach was modeled, as shown in Figure 21. The remaining intersections included in the study area were modeled with their existing geometric configuration.

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Figure 21. Proposed site access (Image source: Bing).

DESCRIPTION OF INTERSECTION CONTROLS

The same intersection controls discussed in the existing conditions section apply to this section of the Report. A traffic signal has been modeled for the proposed reconfiguration of the intersection of PR-2 and the south frontage road, where the project will be accessed from. The new geometric configuration of the intersection will have a left-turn lane for vehicles approaching from the east on PR-2, and will provide access to PR-2 westbound lanes to vehicles turning left from the south approach. Figure 22 shows the proposed intersection's movements and traffic control.

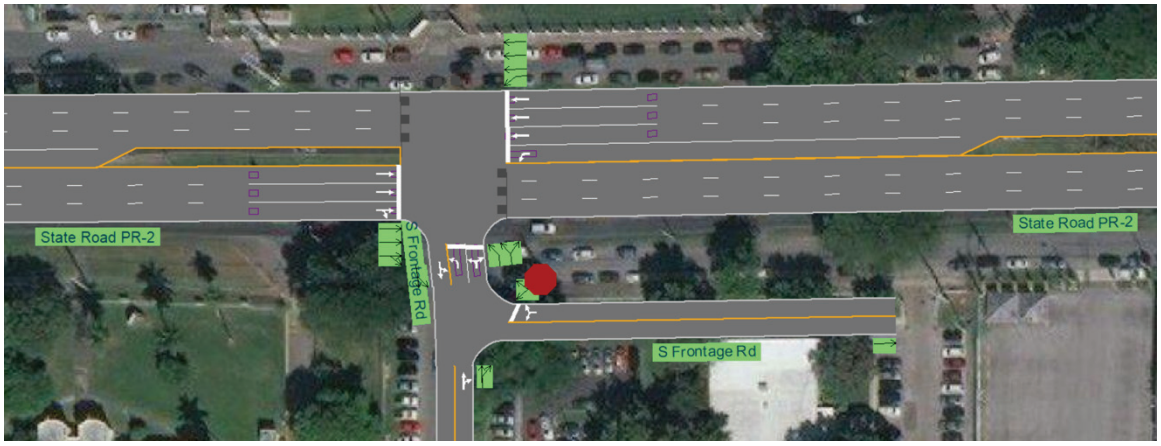


Figure 22. Geometric configuration for PR-2 and the proposed access.

CAPACITY ANALYSIS

Please refer to the existing conditions section for the detailed description of the measures of effectiveness (MOE) used to analyze the intersections included in this study. Table 41 through Table 49 present the results of the operational analysis for the opening year, 2022, with the construction of the proposed development. Table 50 through Table 58 present the results for the 5-year future year, 2027.

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Opening Day

Table 41. Measures of effectiveness for Intersection 1N, AM / PM, 2022.

Approach	Lane or Lane Group	Level of Service (LOS)		Control Delay (sec)		Queue Length 95th (ft)	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
North	L – T – R	A	A	0.6	0.0	1	0
East	L – T – R	A	A	8.9	8.8	5	10
South	L – T – R	A	A	1.2	2.0	1	2
West	L – T – R	A	A	8.4	8.1	7	3
Intersection (Unsignalized)		A	A	2.5	2.5		

Table 42. Measures of effectiveness for Intersection 1, AM / PM, 2022.

Approach	Lane or Lane Group	Level of Service (LOS)		Control Delay (sec)		Queue Length 95th (ft)	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
North	L – T – R	F	F	89.3	123.9	#610	#723
East	L	F	F	88.0	145.8	#359	#325
	T – R	D	E	51.1	59.4	#621	#841
South	L – T – R	E	F	60.0	101.4	106	m#134
West	L	F	F	155.8	261.4	#208	#273
	T – R	E	D	57.6	47.0	#456	400
Intersection (Signalized)		E	E	63.0	74.7		

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Table 43. Measures of effectiveness for Intersection 1S, AM / PM, 2022.

Approach	Lane or Lane Group	Level of Service (LOS)		Control Delay (sec)		Queue Length 95th (ft)	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
North	L – R	A	D	5.4	39.6	82	m270
East	T – R	B	F	19.9	176.5	66	#250
West	L – T	D	D	36.0	45.9	214	358
Intersection (Signalized)		B	E	17.5	71.0		

Table 44. Measures of effectiveness for Intersection 2N, AM / PM, 2022.

Approach	Lane or Lane Group	Level of Service (LOS)		Control Delay (sec)		Queue Length 95th (ft)	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
North	L – T – R	A	A	0.0	0.0	0	0
East	L – T – R	A	A	9.2	9.3	26	26
South	L – T – R	A	A	0.7	0.9	2	2
West	L – T – R	A	A	9.1	8.0	4	2
Intersection (Unsignalized)		A	A	2.7	2.9		

Table 45. Measures of effectiveness for Intersection 2, AM / PM, 2022.

Approach	Lane or Lane Group	Level of Service (LOS)		Control Delay (sec)		Queue Length 95th (ft)	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
North	L – T – R	F	D	80.5	53.9	#446	#447
East	L	D	D	50.3	43.2	m281	m#265
	T – R	C	C	27.2	31.4	#755	m#634
South	L – T – R	C	B	32.2	15.1	123	32
West	L	F	F	118.2	114.1	#347	#220
	T – R	D	D	41.9	35.5	446	393
Intersection (Signalized)		D	D	43.2	38.6		

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Table 46. Measures of effectiveness for Intersection 3, AM / PM, 2022.

Approach	Lane or Lane Group	Level of Service (LOS)		Control Delay (sec)		Queue Length 95th (ft)	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
East	L	E	F	59.7	357.7	m0	m#160
	T	A	A	1.9	1.1	m30	m7
South	L - R	E	F	66.2	88.7	#275	#302
West	T – R	C	A	21.4	2.6	m#328	m46
Intersection (Unsignalized)		C	C	20.7	23.1		

Table 47. Measures of effectiveness for Intersection 4N, AM / PM, 2022.

Approach	Lane or Lane Group	Level of Service (LOS)		Control Delay (sec)		Queue Length 95th (ft)	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
North	T – R	A	A	0.0	0.0	0	0
East	L – T – R	A	A	9.9	9.6	31	29
South	L – T	A	A	1.5	1.5	4	3
Intersection (Unsignalized)		A	A	3.5	3.6		

Table 48. Measures of effectiveness for Intersection 4, AM / PM, 2022.

Approach	Lane or Lane Group	Level of Service (LOS)		Control Delay (sec)		Queue Length 95th (ft)	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
North	L – R	F	F	103.5	104.2	#552	#531
East	T – R	D	D	52.4	50.2	#866	m#577
West	L	E	F	60.7	101.8	m#364	m#406
	T	A	A	0.6	4.1	m10	m124
Intersection (Signalized)		D	D	39.3	42.9		

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Table 49. Measures of effectiveness for Intersection 5, AM / PM, 2022.

Approach	Lane or Lane Group	Level of Service (LOS)		Control Delay (sec)		Queue Length 95th (ft)	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
North	L	D	B	39.8	19.7	#159	94
	T	C	B	23.9	15.2	107	77
	R	A	A	7.8	4.9	65	45
East	L	C	F	24.1	89.8	103	#144
	T	C	E	22.5	62.4	287	#315
	R	B	B	10.0	10.2	113	81
South	L	E	C	65.0	21.5	#234	108
	T	C	B	24.6	15.3	117	78
	R	A	A	4.0	1.5	24	9
West	L	F	F	773.6	430.0	m#543	m#328
	T	D	C	48.8	30.2	m#373	m#253
	R	B	A	13.0	4.8	m75	m43
Intersection (Signalized)		E	D	66.5	53.7		

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5-Year Horizon

Table 50. Measures of effectiveness for Intersection 1N, AM / PM, 2027.

Approach	Lane or Lane Group	Level of Service (LOS)		Control Delay (sec)		Queue Length 95th (ft)	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
North	L – T – R	A	A	0.7	0.0	1	0
East	L – T – R	A	A	9.0	9.0	5	11
South	L – T – R	A	A	1.2	2.1	2	2
West	L – T – R	A	A	7	8.2	7	4
Intersection (Unsignalized)		A	A	2.5	2.5		

Table 51. Measures of effectiveness for Intersection 1, AM / PM, 2027.

Approach	Lane or Lane Group	Level of Service (LOS)		Control Delay (sec)		Queue Length 95th (ft)	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
North	L – T – R	F	F	97.7	177.5	#721	#843
East	L	F	F	99.6	106.3	#424	#375
	T – R	E	E	65.2	56.0	#771	#895
South	L – T – R	E	F	74.2	81.3	127	m#117
West	L	F	F	130.4	285.1	#226	#296
	T – R	E	D	64.9	42.9	#546	410
Intersection (Signalized)		E	E	73.0	76.3		

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Table 52. Measures of effectiveness for Intersection 1S, AM / PM, 2027.

Approach	Lane or Lane Group	Level of Service (LOS)		Control Delay (sec)		Queue Length 95th (ft)	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
North	L – R	A	A	6.3	5.2	96	m0
East	T – R	C	F	20.7	92.2	72	#280
West	L – T	C	D	34.3	45.6	227	365
Intersection (Signalized)		B	D	17.5	39.8		

Table 53. Measures of effectiveness for Intersection 2N, AM / PM, 2027.

Approach	Lane or Lane Group	Level of Service (LOS)		Control Delay (sec)		Queue Length 95th (ft)	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
North	L – T – R	A	A	0.0	0.0	0	0
East	L – T – R	A	A	9.5	9.5	30	29
South	L – T – R	A	A	0.7	1.0	3	2
West	L – T – R	A	A	9.4	8.0	4	2
Intersection (Unsignalized)		A	A	2.8	3.0		

Table 54. Measures of effectiveness for Intersection 2, AM / PM, 2027.

Approach	Lane or Lane Group	Level of Service (LOS)		Control Delay (sec)		Queue Length 95th (ft)	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
North	L – T – R	F	E	96.8	64.7	#484	#514
East	L	E	D	66.0	42.7	m#319	m#288
	T – R	D	D	50.1	49.3	m#835	m#734
South	L – T – R	C	B	32.7	16.3	131	35
West	L	F	F	130.5	127.6	#372	#250
	T – R	D	D	38.2	41.5	452	463
Intersection (Signalized)		E	D	55.5	50.4		

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Table 55. Measures of effectiveness for Intersection 3, AM / PM, 2027.

Approach	Lane or Lane Group	Level of Service (LOS)		Control Delay (sec)		Queue Length 95th (ft)	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
East	L	E	F	63.2	141.5	m309	#371
	T	A	A	2.3	498.8	m27	m#188
South	L – R	E	F	78.8	2.0	#306	m14
West	T – R	C	A	31.6	5.0	m#891	m100
Intersection (Unsignalized)		C	C	26.9	34.6		

Table 56. Measures of effectiveness for Intersection 4N, AM / PM, 2027.

Approach	Lane or Lane Group	Level of Service (LOS)		Control Delay (sec)		Queue Length 95th (ft)	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
North	T – R	A	A	0.0	0.0	0	0
East	L – T – R	A	A	10.3	9.9	36	33
South	L – T	A	A	1.6	1.6	4	4
Intersection (Unsignalized)		A	A	3.7	3.7		

Table 57. Measures of effectiveness for Intersection 4, AM / PM, 2027.

Approach	Lane or Lane Group	Level of Service (LOS)		Control Delay (sec)		Queue Length 95th (ft)	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
North	L – R	F	F	118.6	129.7	#596	#617
East	T – R	E	E	76.6	65.8	m#956	m#384
West	L	E	F	66.7	121.7	m#375	m#457
	T	A	A	0.5	2.3	m10	m71
Intersection (Signalized)		D	D	52.9	53.7		

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Table 58. Measures of effectiveness for Intersection 5, AM / PM, 2027.

Approach	Lane or Lane Group	Level of Service (LOS)		Control Delay (sec)		Queue Length 95th (ft)	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
North	L	D	C	45.3	25.6	#174	114
	T	C	B	24.3	18.3	113	92
	R	A	A	8.9	5.0	77	46
East	L	C	F	24.4	131.3	109	#166
	T	C	F	25.4	92.5	#327	#371
	R	B	B	10.8	12.3	124	101
South	L	F	C	83.8	29.2	#254	#149
	T	C	B	25.0	18.4	123	94
	R	A	A	4.6	2.3	28	16
West	L	F	F	842.2	555.8	m#572	m#433
	T	E	C	63.3	22.7	m#441	m272
	R	B	A	13.7	7.0	m79	m75
Intersection (Signalized)		E	E	76.0	68.7		

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ANALYSIS OF RESULTS

The analysis of the measures of effectiveness for the existing and proposed conditions reveal that the surrounding roadway network has the capacity to absorb traffic generated by the new medical university and clinic in the long term.

The values obtained for the HCM's average control delays for the morning and afternoon peak periods of the opening year (2022) and five-year horizon (2027) are within acceptable parameters presented by PRHTA. The four (4) existing signalized intersections included in the analysis show acceptable LOS and additional delays during the future condition. Unsignalized intersections included in the analysis also continue to perform with acceptable levels of service in the future condition.

The modified intersection between PR-2 and the south frontage road that provides access to the site will operate with an acceptable LOS C for both peak periods. Furthermore, the proposed modification to this intersection will prevent vehicles with a westbound destination that exit the site from having to do a U-turn maneuver at the intersection of PR-2 and Damas Hospital Street, which would cause significant delays and LOS degradation to that intersection.

The expected traffic growth included in the model represents a conservative scenario, considering the decrease in population that the Municipality of Ponce has been experiencing since the 2010 Census [11]. Also, the trip generation used for the project does not consider potential reduction in vehicle trips due to students that will reside on campus, as well as alternate modes of transportation, like walking and biking.

At the approach level, the most significant delays are expected to occur on the minor approaches, prioritizing corridor progression along PR-2. For the particular intersection that will provide access to the project, the most significant delays are expected for the left-turn movement from PR-2 westbound and the northbound movement from the south frontage road. Nonetheless, this modification to the intersection will provide safer and more efficient traffic operations at the intersection and corridor level. Furthermore, a signalized intersection will also provide for safer pedestrian crossing, considering the academic nature of the project and the existing campus of the Pontifical Catholic University of Ponce on the north edge of PR-2.

Intersection LOS and calculated delays for the existing conditions, as well as for 2022 and 2027 proposed conditions are presented in Table 59.

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Table 59. Comparison of results 2019, 2022, and 2027.

Intersection Number	Level of Service (LOS)						Control Delay (sec)					
	A.M.			P.M.			A.M.			P.M.		
	Existing	2022	2027	Existing	2022	2027	Existing	2022	2027	Existing	2022	2027
1	D	E	E	E	E	E	50.4	63.0	73.0	56.3	74.7	76.3
2	E	D	E	E	D	D	62.3	43.2	55.5	66.6	38.6	50.4
3	A	C	C	A	C	C	0.1	20.7	26.9	0.2	23.1	34.6
4	D	D	D	D	D	D	37.2	39.3	52.9	41.8	42.9	53.7
5	F	E	E	F	D	E	107.7	66.5	76.0	102.7	53.7	68.7

CONCLUSIONS AND RECOMMENDATIONS

The results of the operational analysis for the proposed Ponce Health Sciences University show that an acceptable LOS will be obtained during the morning and afternoon peak periods after the proposed project is constructed and operational, as well as in a five-year horizon after operations begin. The surrounding roadway network has the capacity to accommodate traffic generated by the new development and the expected growth of current traffic.

Therefore, the following list of improvements to vehicular traffic conditions in the area are recommended:

1. Construct a new signalized intersection at the existing unsignalized intersection of PR-2 and the south frontage road that provides access to the site. The new signal will operate with the following phases: protected left turn and through movements for WB traffic on PR-2; through EB and WB movements on PR-2; protected phase for NB traffic from the south frontage road.
2. Build a 300-ft long left-turn lane for the WB approach on PR-2.
3. The NB approach from the south frontage road will accommodate one (1) left-turn lane and one (1) right-turn lane with permissive left turning maneuvers. The upstream intersection of the south access with the frontage road will have a stop control for the approach from the latter.
4. Optimize the signalized intersections of PR-2 with Virgilio Biaggi Street, Muñoz Rivera Avenue, Damas Hospital Street, and State Road PR-123.

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CERTIFICATION

I hereby certify that the results of this study were obtained using the best recommended and accepted traffic engineering practices to date.

I also certify that the information included in this report is true and all analyses presented are correct, to the best of my knowledge, and in compliance with the requirements set forth in PRHTA's *Guías Para la Preparación de Estudios de Accesos y de Tránsito*, of December, 2004.

In San Juan, Puerto Rico, August 13, 2019.

Francisco R. Klein, PE, PTOE, RSP

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SELLO PROFESIONAL

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Renglón:	Servicio Profesional
Descripción del Trabajo:	Informes Periciales
Fecha de Emisión:	2019-08-13
Monto Emitido:	$23
Número de Serie:	9547-0245-7502-0962
Número de Caso:	KP2019.005.LOA
Proyecto / Unidad:	PHSU TIS
Rol del Profesional:	Analista

Certificación:

El profesional certifica con la emisión de la estampilla digital especial del Colegio de Ingenieros y Agrimensores de Puerto Rico el haber cumplido con las disposiciones de la Sección 11 de la Ley 319 del 15 de mayo de 1938, según enmendada.

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REFERENCES

1. Institute of Transportation Engineers. “Manual of Transportation Engineering Studies.” ITE. 2010.
2. Institute of Transportation Engineers. “Trip Generation Manual, 9th Edition.” ITE. 2012.
3. Institute of Transportation Engineers. “Transportation Impact Analyses for Site Development.” ITE. 2010.
4. Puerto Rico Highway and Transportation Authority. “Guías para la Preparación de Estudios Operacionales de Acceso y de Tránsito para Puerto Rico.” PRHTA. 2004.
5. Puerto Rico Highway and Transportation Authority. “Flujo Vehicular Carreteras Estatales”. www.dtop.gov.pr. 2003-2013.
6. Puerto Rico Planning Board. jp.pr.gov. Visited April 2019.
7. Rivera, Jorge. “Gap Acceptance Studies and Critical Gap Times for Two-Way Stop Controlled Intersections in the Mayagüez Area”. University of Puerto Rico at Mayagüez. 2006.
8. Roess, Roger P.; Prassas, Elena S.; McShane, William R. “Traffic Engineering, Fourth Edition.” Pearson Prentice Hall. 2010.
9. Schrank, D.; Eisele, B.; Lomax, T.; and Bak, J. “2015 Urban Mobility Scorecard”. Texas A&M Transportation Institute - The Texas A&M University System. August, 2015.
10. Transportation Research Board. “Highway Capacity Manual, 6th Edition - Part 3”. TRB. 2016.
11. United States Census Bureau. American Fact Finder. Factfinder.census.gov. Visited August, 2019.

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APPENDICES

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APPENDIX A: TRAFFIC COUNTS

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Data Date:	6-Mar-19														
Int. No.	1N														
Int. Desc.	PR-2 North Frontage Rd. int. Virgilio Biaggi St.														
		Virgilio Biaggi Street						State Road PR-2 North Frontage Road							
		NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	15-Min Vol.	Hourly Vol.
Start	End														
6:00:00	6:15:00	1	6	1	0	8	1	0	1	3	1	0	0	22	
6:15:00	6:30:00	1	3	2	3	6	0	1	0	2	2	0	0	20	
6:30:00	6:45:00	1	7	2	3	26	0	0	0	3	2	0	0	44	86
6:45:00	7:00:00	3	13	3	0	25	0	0	1	2	0	3	1	51	137
7:00:00	7:15:00	4	36	9	0	19	1	0	1	5	1	6	3	85	200
7:15:00	7:30:00	4	26	4	1	47	0	0	1	3	1	5	2	94	274
7:30:00	7:45:00	3	36	9	2	53	0	0	3	5	2	5	9	127	357
7:45:00	8:00:00	3	38	2	3	60	1	1	3	7	1	4	6	129	435
8:00:00	8:15:00	5	30	4	6	74	2	0	2	17	5	6	3	154	504
8:15:00	8:30:00	5	24	5	1	50	1	1	2	7	3	4	5	108	518
8:30:00	8:45:00	7	23	6	0	40	0	3	2	4	2	4	8	99	490
8:45:00	9:00:00	10	26	5	3	46	1	1	4	4	2	9	2	113	474
9:00:00	9:15:00													0	320
9:15:00	9:30:00													0	212
9:30:00	9:45:00													0	113
9:45:00	10:00:00													0	0
10:00:00	10:15:00													0	0
10:15:00	10:30:00													0	0
10:30:00	10:45:00													0	0
10:45:00	11:00:00													0	0
11:00:00	11:15:00	5	21	0	3	35	1	0	1	8	2	8	3	87	87
11:15:00	11:30:00	6	25	2	1	34	3	0	2	16	6	9	8	112	199
11:30:00	11:45:00	12	17	2	1	51	2	0	6	6	4	7	1	109	308
11:45:00	12:00:00	7	29	4	3	43	0	2	6	5	6	9	1	115	423
12:00:00	12:15:00	8	33	4	1	64	2	2	2	12	3	8	10	149	485
12:15:00	12:30:00	12	24	3	1	40	2	0	1	7	3	3	7	103	476
12:30:00	12:45:00	9	18	3	3	45	2	1	1	8	2	10	4	106	473
12:45:00	13:00:00	6	22	4	2	48	1	1	4	11	6	5	6	116	474
13:00:00	13:15:00													0	325
13:15:00	13:30:00													0	222
13:30:00	13:45:00													0	116
13:45:00	14:00:00													0	0
14:00:00	14:15:00													0	0
14:15:00	14:30:00													0	0
14:30:00	14:45:00													0	0
14:45:00	15:00:00													0	0
15:00:00	15:15:00	6	18	3	0	91	1	0	2	10	5	17	8	161	161
15:15:00	15:30:00	8	27	1	1	63	4	1	2	13	2	10	10	142	303
15:30:00	15:45:00	9	26	2	1	45	0	0	1	17	6	10	6	123	426
15:45:00	16:00:00	5	28	4	4	33	4	4	1	9	2	8	7	109	535
16:00:00	16:15:00	6	23	0	1	58	2	1	0	10	1	12	15	129	503
16:15:00	16:30:00	10	35	2	0	46	2	1	4	5	4	7	9	125	486
16:30:00	16:45:00	5	18	2	3	56	2	1	1	3	5	14	9	119	482
16:45:00	17:00:00	8	27	0	0	40	1	2	5	7	3	11	5	109	482
17:00:00	17:15:00	10	28	1	2	55	1	1	4	11	5	8	4	130	483
17:15:00	17:30:00	8	24	1	2	48	0	0	1	9	7	9	4	113	471
17:30:00	17:45:00	7	24	0	0	49	2	3	2	10	3	7	10	117	469
17:45:00	18:00:00	5	22	1	1	25	0	2	2	8	2	5	6	79	439
		199	757	91	52	1423	39	29	68	247	99	223	172	3399	

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Date: 2019.08.13 15:48:42

Data Date:	6-Mar-19														
Int. No.	1														
Int. Desc.	PR-2 int. Virgilio Biaggi St.														
		Virgilio Biaggi Street						State Road PR-2							
		NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	15-Min Vol.	Hourly Vol.
Start	End														
6:00:00	6:15:00	0	0	0	6	0	5	7	129	2	1	49	1	200	
6:15:00	6:30:00	2	0	2	2	2	2	6	171	2	5	64	1	259	
6:30:00	6:45:00	1	0	0	13	6	7	11	207	1	8	106	0	360	819
6:45:00	7:00:00	0	0	0	19	4	4	19	290	0	4	118	0	458	1277
7:00:00	7:15:00	0	1	0	23	2	3	44	276	1	10	148	5	513	1590
7:15:00	7:30:00	0	0	0	43	1	8	31	329	0	5	146	2	565	1896
7:30:00	7:45:00	2	1	0	36	8	17	45	294	1	16	157	5	582	2118
7:45:00	8:00:00	5	1	0	46	13	10	39	327	1	24	195	4	665	2325
8:00:00	8:15:00	0	0	0	50	23	22	38	308	3	19	179	4	646	2458
8:15:00	8:30:00	3	1	0	39	11	9	30	266	2	28	143	3	535	2428
8:30:00	8:45:00	3	0	0	31	6	10	36	247	4	24	168	8	537	2383
8:45:00	9:00:00	1	0	0	38	11	3	36	290	2	26	175	5	587	2305
9:00:00	9:15:00													0	1659
9:15:00	9:30:00													0	1124
9:30:00	9:45:00													0	587
9:45:00	10:00:00													0	0
10:00:00	10:15:00													0	0
10:15:00	10:30:00													0	0
10:30:00	10:45:00													0	0
10:45:00	11:00:00													0	0
11:00:00	11:15:00	4	1	0	25	14	7	22	242	1	33	257	6	612	612
11:15:00	11:30:00	6	2	0	30	11	14	28	215	2	36	234	5	583	1195
11:30:00	11:45:00	13	3	0	34	17	11	24	253	3	43	303	9	713	1908
11:45:00	12:00:00	4	2	0	25	14	14	29	277	0	35	265	9	674	2582
12:00:00	12:15:00	12	2	1	39	20	21	27	237	3	43	272	13	690	2660
12:15:00	12:30:00	9	4	0	27	14	8	32	200	3	46	296	8	647	2724
12:30:00	12:45:00	8	0	0	30	16	10	22	315	3	28	303	6	741	2752
12:45:00	13:00:00	20	1	0	36	14	13	26	303	2	36	285	13	749	2827
13:00:00	13:15:00													0	2137
13:15:00	13:30:00													0	1490
13:30:00	13:45:00													0	749
13:45:00	14:00:00													0	0
14:00:00	14:15:00													0	0
14:15:00	14:30:00													0	0
14:30:00	14:45:00													0	0
14:45:00	15:00:00													0	0
15:00:00	15:15:00	8	4	1	53	26	33	24	226	2	27	425	6	835	835
15:15:00	15:30:00	9	2	0	38	22	17	27	203	0	42	396	10	766	1601
15:30:00	15:45:00	16	3	0	36	17	15	24	213	1	35	444	11	815	2416
15:45:00	16:00:00	13	3	1	24	11	13	29	188	0	41	383	12	718	3134
16:00:00	16:15:00	16	2	0	29	15	25	27	246	0	45	433	5	843	3142
16:15:00	16:30:00	6	3	0	31	12	11	28	209	2	36	456	16	810	3186
16:30:00	16:45:00	12	3	0	40	10	14	21	206	1	37	417	7	768	3139
16:45:00	17:00:00	9	2	1	17	24	9	30	232	0	36	394	7	761	3182
17:00:00	17:15:00	8	3	1	31	19	22	22	229	3	20	417	16	791	3130
17:15:00	17:30:00	3	1	1	32	22	13	14	213	2	37	409	14	761	3081
17:30:00	17:45:00	9	3	0	34	13	19	23	202	0	37	384	9	733	3046
17:45:00	18:00:00	12	0	0	19	7	9	16	211	1	38	361	10	684	2969
		214	48	8	976	405	398	837	7754	48	901	8782	230	20601	

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Date: 2019.08.13 15:48:42

Data Date:	6-Mar-19														
Int. No.	1S														
Int. Desc.	PR-2 int. South Frontage Road														
		State Road PR-2						State Road PR-2 South Frontage Road							
		NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	15-min	1-hr.
Start	End													Vol.	Vol.
6:00:00	6:15:00				2	0	2	0	2			1	0	7	
6:15:00	6:30:00				3	0	5	0	4			1	4	17	
6:30:00	6:45:00				4	0	10	0	13			1	1	29	53
6:45:00	7:00:00				2	0	7	0	12			2	0	23	76
7:00:00	7:15:00				3	0	10	0	26			2	1	42	111
7:15:00	7:30:00				1	0	7	0	24			1	0	33	127
7:30:00	7:45:00				5	0	15	0	33			3	1	57	155
7:45:00	8:00:00				7	0	26	0	26			5	6	70	202
8:00:00	8:15:00				12	0	31	0	33			4	0	80	240
8:15:00	8:30:00				5	0	30	0	35			10	7	87	294
8:30:00	8:45:00				7	0	26	0	31			2	3	69	306
8:45:00	9:00:00				8	0	31	0	37			1	1	78	314
9:00:00	9:15:00													0	234
9:15:00	9:30:00													0	147
9:30:00	9:45:00													0	78
9:45:00	10:00:00													0	0
10:00:00	10:15:00													0	0
10:15:00	10:30:00													0	0
10:30:00	10:45:00													0	0
10:45:00	11:00:00													0	0
11:00:00	11:15:00				10	0	38	0	54			9	5	116	116
11:15:00	11:30:00				10	0	38	1	61			8	7	125	241
11:30:00	11:45:00				7	0	49	0	53			6	16	131	372
11:45:00	12:00:00				6	0	44	0	65			8	5	128	500
12:00:00	12:15:00				19	0	44	1	71			12	9	156	540
12:15:00	12:30:00				15	0	44	0	68			14	14	155	570
12:30:00	12:45:00				9	0	39	0	69			15	11	143	582
12:45:00	13:00:00				14	0	37	0	75			19	21	166	620
13:00:00	13:15:00													0	464
13:15:00	13:30:00													0	309
13:30:00	13:45:00													0	166
13:45:00	14:00:00													0	0
14:00:00	14:15:00													0	0
14:15:00	14:30:00													0	0
14:30:00	14:45:00													0	0
14:45:00	15:00:00													0	0
15:00:00	15:15:00				15	0	40	1	56			12	9	133	133
15:15:00	15:30:00				15	0	46	1	66			11	12	151	284
15:30:00	15:45:00				8	0	42	2	57			17	17	143	427
15:45:00	16:00:00				8	0	48	1	65			23	17	162	589
16:00:00	16:15:00				5	0	50	1	57			16	17	146	602
16:15:00	16:30:00				8	0	42	0	68			10	10	138	589
16:30:00	16:45:00				6	0	42	0	56			10	16	130	576
16:45:00	17:00:00				18	0	46	0	51			19	9	143	143
17:00:00	17:15:00				11	0	31	0	76			10	11	139	282
17:15:00	17:30:00				9	0	49	0	70			7	7	142	424
17:30:00	17:45:00				5	0	40	0	61			12	12	130	554
17:45:00	18:00:00				2	0	38	2	52			11	11	116	527
		0	0	0	259	0	1047	10	1527	0	0	282	260	3385	

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Date: 2019.08.13 15:48:42

Date:	6-Mar-19														
Int. No.	2N														
Int. Desc.	PR-2 North Frontage Rd. int. Muñoz Rivera Ave.														
		Muñoz Rivera Avenue						State Road PR-2 North Frontage Road							
		NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	15-min	1-hr.
Start	End													Vol.	Vol.
6:00:00	6:15:00	1	12	0	0	17	0	2	0	0	8	2	12	54	
6:15:00	6:30:00	1	16	1	0	20	0	0	1	0	11	0	19	69	
6:30:00	6:45:00	2	38	3	0	25	2	2	1	0	8	0	12	93	
6:45:00	7:00:00	3	53	1	1	51	0	3	0	0	14	2	28	156	372
7:00:00	7:15:00	5	65	3	0	67	2	7	0	5	36	2	20	212	530
7:15:00	7:30:00	2	91	1	0	65	3	2	0	1	28	1	45	239	700
7:30:00	7:45:00	7	96	3	0	88	1	5	0	5	23	3	47	278	885
7:45:00	8:00:00	8	74	5	1	99	1	4	0	3	22	5	56	278	1007
8:00:00	8:15:00	4	66	4	0	85	3	3	0	4	24	6	30	229	1024
8:15:00	8:30:00	6	63	1	0	69	2	3	0	2	22	5	16	189	974
8:30:00	8:45:00	6	52	1	1	71	1	5	0	5	19	2	27	190	886
8:45:00	9:00:00	3	54	2	0	90	2	5	1	3	24	5	16	205	813
9:00:00	9:15:00													0	584
9:15:00	9:30:00													0	395
9:30:00	9:45:00													0	205
9:45:00	10:00:00													0	0
10:00:00	10:15:00													0	0
10:15:00	10:30:00													0	0
10:30:00	10:45:00													0	0
10:45:00	11:00:00													0	0
11:00:00	11:15:00	8	56	2	0	72	0	0	0	0	42	3	17	200	200
11:15:00	11:30:00	7	52	0	0	89	4	2	0	2	35	8	31	230	430
11:30:00	11:45:00	4	52	0	0	69	3	3	0	5	26	4	20	186	616
11:45:00	12:00:00	6	69	0	0	105	4	6	0	6	28	4	22	250	866
12:00:00	12:15:00	3	59	1	0	105	3	2	0	3	35	4	10	225	891
12:15:00	12:30:00	7	52	0	6	112	2	2	0	2	43	2	12	240	901
12:30:00	12:45:00	4	60	3	0	95	1	2	0	1	38	3	20	227	942
12:45:00	13:00:00	7	64	0	0	106	3	1	0	5	36	3	32	257	949
13:00:00	13:15:00													0	724
13:15:00	13:30:00													0	484
13:30:00	13:45:00													0	257
13:45:00	14:00:00													0	0
14:00:00	14:15:00													0	0
14:15:00	14:30:00													0	0
14:30:00	14:45:00													0	0
14:45:00	15:00:00													0	0
15:00:00	15:15:00	7	59	2	0	116	3	2	0	1	33	7	28	258	258
15:15:00	15:30:00	9	51	1	1	122	2	0	0	3	29	7	17	242	500
15:30:00	15:45:00	9	45	0	0	98	3	2	0	0	37	5	27	226	726
15:45:00	16:00:00	8	55	0	0	98	1	3	0	0	32	6	16	219	945
16:00:00	16:15:00	14	49	1	0	89	2	0	0	0	35	5	28	223	910
16:15:00	16:30:00	8	66	0	0	107	1	2	0	3	35	7	37	266	934
16:30:00	16:45:00	7	53	2	0	99	7	1	0	0	31	2	32	234	942
16:45:00	17:00:00	5	55	2	0	85	3	3	0	2	19	6	38	218	941
17:00:00	17:15:00	7	51	2	1	96	2	0	0	8	25	6	33	231	949
17:15:00	17:30:00	3	55	2	0	103	1	3	0	4	33	6	21	231	914
17:30:00	17:45:00	4	38	2	0	79	0	3	0	5	21	10	28	190	870
17:45:00	18:00:00	4	46	0	0	77	2	1	0	3	24	3	22	182	834
		179	1767	45	11	2669	64	79	3	81	876	134	819	6727	

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Date: 2019.08.13 15:48:42

Date:	6-Mar-19														
Int. No.	2														
Int. Desc.	PR-2 int. Muñoz Rivera Ave.														
		Muñoz Rivera Avenue						State Road PR-2							
		NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	15-min	1-hr.
Start	End													Vol.	Vol.
6:00:00	6:15:00	5	2	6	16	1	7	11	129	0	5	41	3	226	
6:15:00	6:30:00	1	1	9	17	1	12	15	158	0	9	53	3	279	
6:30:00	6:45:00	4	7	7	24	2	7	21	231	1	13	100	10	427	932
6:45:00	7:00:00	0	13	7	44	3	16	38	256	5	11	99	8	500	1432
7:00:00	7:15:00	0	16	21	63	8	33	53	243	1	10	128	8	584	1790
7:15:00	7:30:00	2	41	8	57	6	33	59	285	5	11	121	14	642	2153
7:30:00	7:45:00	2	65	5	84	8	23	59	268	8	15	152	17	706	2432
7:45:00	8:00:00	7	43	12	90	9	20	48	258	11	22	192	14	726	2658
8:00:00	8:15:00	4	28	15	74	6	30	46	224	5	19	163	11	625	2699
8:15:00	8:30:00	3	9	6	64	8	20	40	283	4	20	137	15	609	2666
8:30:00	8:45:00	7	19	3	63	4	25	34	179	3	33	159	8	537	2497
8:45:00	9:00:00	2	15	11	72	11	30	33	265	3	38	169	9	658	2429
9:00:00	9:15:00													0	1804
9:15:00	9:30:00													0	1195
9:30:00	9:45:00													0	658
9:45:00	10:00:00													0	0
10:00:00	10:15:00													0	0
10:15:00	10:30:00													0	0
10:30:00	10:45:00													0	0
10:45:00	11:00:00													0	0
11:00:00	11:15:00	7	7	18	67	9	35	35	254	4	36	247	20	739	739
11:15:00	11:30:00	17	3	11	65	7	27	28	255	3	34	236	18	704	1443
11:30:00	11:45:00	11	13	13	73	14	31	39	268	8	44	318	17	849	2292
11:45:00	12:00:00	5	21	7	75	16	41	67	241	4	40	234	14	765	3057
12:00:00	12:15:00	8	6	16	87	9	39	54	291	5	48	280	14	857	3175
12:15:00	12:30:00	10	13	10	93	17	48	32	245	4	53	300	19	844	3315
12:30:00	12:45:00	10	13	5	83	15	37	39	312	5	39	278	18	854	3320
12:45:00	13:00:00	6	12	10	83	18	38	53	383	12	44	286	17	962	3517
13:00:00	13:15:00													0	2660
13:15:00	13:30:00													0	1816
13:30:00	13:45:00													0	962
13:45:00	14:00:00													0	0
14:00:00	14:15:00													0	0
14:15:00	14:30:00													0	0
14:30:00	14:45:00													0	0
14:45:00	15:00:00													0	0
15:00:00	15:15:00	7	2	11	88	7	56	45	256	6	32	392	28	930	930
15:15:00	15:30:00	9	3	10	87	19	49	33	317	4	44	372	22	969	1899
15:30:00	15:45:00	6	8	5	75	12	53	26	256	7	49	432	13	942	2841
15:45:00	16:00:00	9	4	1	61	13	47	37	267	6	35	406	26	912	3753
16:00:00	16:15:00	8	7	6	66	9	47	39	276	6	31	398	18	911	3734
16:15:00	16:30:00	8	2	3	82	13	48	68	145	3	36	429	23	860	3625
16:30:00	16:45:00	2	7	1	67	15	53	38	214	4	35	416	18	870	3553
16:45:00	17:00:00	9	26	14	63	12	31	35	223	3	38	383	15	852	852
17:00:00	17:15:00	8	22	10	67	11	46	56	218	5	38	387	9	877	1729
17:15:00	17:30:00	13	10	13	78	9	45	38	230	7	28	409	12	892	2621
17:30:00	17:45:00	6	8	9	41	10	41	45	259	1	29	380	11	840	3461
17:45:00	18:00:00	5	2	2	46	8	44	55	201	5	30	322	6	726	3335
		201	448	285	2115	310	1112	1319	7890	148	969	8419	458	23674	

Digitally signed by: Francisco Roberto Klein Moya
Date: 2019.08.13 15:48:42

Date:	5-Mar-19														
Int. No.	3														
Int. Desc.	PR-2 int. South Frontage Road														
		PR-2 South Frontage Road						State Road PR-2 (EB) and South Frontage Road (WB)							
		NB-L	NB-R-F	NB-R-2	SB-L	SB-T	SB-R	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	15-min	1-hr.
Start	End													Vol.	Vol.
6:00:33	6:15:00		3	2					128	24	9		2	168	
6:15:00	6:30:00		1	7					167	37	22		3	237	
6:30:00	6:45:00		2	5					239	53	23		7	329	
6:45:00	7:00:00		0	6					277	69	25		3	380	1114
7:00:00	7:15:00		2	2					276	53	24		9	366	1312
7:15:00	7:30:00		2	6					352	60	15		5	440	1515
7:30:00	7:45:00		4	8					365	77	29		4	487	1673
7:45:00	8:00:00		0	13					336	91	55		8	503	1796
8:00:00	8:15:00		2	17					359	83	29		7	497	1927
8:15:00	8:30:00		5	7					333	59	36		3	443	1930
8:30:00	8:45:00		2	11					345	90	26		8	482	1925
8:45:00	9:00:00		8	11					403	87	28		4	541	1963
9:00:00	9:15:00													0	1466
9:15:00	9:30:00													0	1023
9:30:00	9:45:00													0	541
9:45:00	10:00:00													0	0
10:00:00	10:15:00													0	0
10:15:00	10:30:00													0	0
10:30:00	10:45:00													0	0
10:45:00	11:00:00													0	0
11:00:00	11:15:00		2	29					346	53	12		19	461	461
11:15:00	11:30:00		4	24					339	40	10		19	436	897
11:30:00	11:45:00		5	36					333	46	5		25	450	1347
11:45:00	12:00:00		5	30					328	48	23		39	473	1820
12:00:00	12:15:00		8	60					363	49	14		24	518	1877
12:15:00	12:30:00		13	16					371	55	20		24	499	1940
12:30:00	12:45:00		6	25					354	67	21		30	503	1993
12:45:00	13:00:00		2	31					387	80	36		29	565	2085
13:00:00	13:15:00													0	1567
13:15:00	13:30:00													0	1068
13:30:00	13:45:00													0	565
13:45:00	14:00:00													0	0
14:00:00	14:15:00													0	0
14:15:00	14:30:00													0	0
14:30:00	14:45:00													0	0
14:45:00	15:00:00													0	0
15:00:00	15:15:00		7	48					384	49	16		24	528	528
15:15:00	15:30:00		10	66					379	46	14		18	533	1061
15:30:00	15:45:00		9	68					358	40	13		25	513	1574
15:45:00	16:00:00		12	49					321	27	14		21	444	2018
16:00:00	16:15:00		14	66					296	26	10		42	454	1944
16:15:00	16:30:00		20	76					305	48	7		23	479	1890
16:30:00	16:45:00		7	75					343	37	5		28	495	1872
16:45:00	17:00:00		20	44					289	22	15		24	414	1842
17:00:00	17:15:00		17	76					336	37	7		46	519	1907
17:15:00	17:30:00		10	62					314	31	4		29	450	1878
17:30:00	17:45:00		4	36					304	22	7		18	391	1774
17:45:00	18:00:00		6	33					270	21	10		8	348	1708
		0	212	1045	0	0	0	0	10300	1627	584	0	578	14346	

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Date: 2019.08.13 15:48:42

Date:	6-Mar-19														
Int. No.	4N														
Int. Desc.	PR-2 North Frontage Rd. int. Damas Hospital														
		Damas Hospital Access Road						PR-2 North Frontage Road							
		NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	15-min	1-hr.
Start	End													Vol.	Vol.
6:00:00	6:15:00	6	17			6	0				0	5	17	51	
6:15:00	6:30:00	11	27			2	1				0	6	26	73	
6:30:00	6:45:00	8	28			2	1				2	6	32	79	
6:45:00	7:00:00	20	42			17	1				3	8	47	138	341
7:00:00	7:15:00	13	58			13	2				0	10	45	141	431
7:15:00	7:30:00	17	59			17	0				1	15	52	161	519
7:30:00	7:45:00	17	47			21	2				3	11	43	144	584
7:45:00	8:00:00	20	60			15	0				5	13	59	172	618
8:00:00	8:15:00	24	64			10	0				0	12	42	152	629
8:15:00	8:30:00	18	55			16	1				2	7	38	137	605
8:30:00	8:45:00	22	53			21	1				3	13	45	158	619
8:45:00	9:00:00	8	55			25	3				2	15	38	146	593
9:00:00	9:15:00													0	441
9:15:00	9:30:00													0	304
9:30:00	9:45:00													0	146
9:45:00	10:00:00													0	0
10:00:00	10:15:00													0	0
10:15:00	10:30:00													0	0
10:30:00	10:45:00													0	0
10:45:00	11:00:00													0	0
11:00:00	11:15:00	9	42			41	7				8	14	22	143	143
11:15:00	11:30:00	12	35			37	0				7	11	34	136	279
11:30:00	11:45:00	9	49			66	3				12	17	43	199	478
11:45:00	12:00:00	13	41			64	4				10	11	49	192	670
12:00:00	12:15:00	11	40			75	6				11	16	34	193	720
12:15:00	12:30:00	13	48			66	6				9	12	37	191	775
12:30:00	12:45:00	9	57			42	1				7	9	34	159	735
12:45:00	13:00:00	19	62			57	1				11	17	45	212	755
13:00:00	13:15:00													0	562
13:15:00	13:30:00													0	371
13:30:00	13:45:00													0	212
13:45:00	14:00:00													0	0
14:00:00	14:15:00													0	0
14:15:00	14:30:00													0	0
14:30:00	14:45:00													0	0
14:45:00	15:00:00													0	0
15:00:00	15:15:00	7	21			66	2				10	12	30	148	148
15:15:00	15:30:00	8	29			75	0				6	6	21	145	293
15:30:00	15:45:00	5	26			78	5				1	14	20	149	442
15:45:00	16:00:00	11	18			47	3				5	1	28	113	555
16:00:00	16:15:00	11	14			87	0				12	7	22	153	560
16:15:00	16:30:00	7	26			86	2				4	13	18	156	571
16:30:00	16:45:00	4	14			62	3				3	5	9	100	522
16:45:00	17:00:00	8	23			52	1				4	13	12	113	522
17:00:00	17:15:00	7	21			62	6				5	5	13	119	488
17:15:00	17:30:00	6	22			25	5				4	16	14	92	424
17:30:00	17:45:00	8	23			39	5				3	5	11	94	418
17:45:00	18:00:00	9	18			35	11				1	1	10	85	390
		370	1194	0	0	1327	83	0	0	0	154	326	990	4444	

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Date:	5-Mar-19														
Int. No.	4														
Int. Desc.	State Road PR-2 int. Damas Hospital														
		Damas Hospital Access Road						State Road PR-2							
		NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	15-min	1-hr.
Start	End													Vol.	Vol.
6:00:09	6:15:00				8	0	3	37	93			59	9	209	
6:15:00	6:30:00				3	0	3	47	125			85	15	278	
6:30:00	6:45:00				5	0	5	42	198			100	15	365	
6:45:00	7:00:00				14	0	5	55	216			153	9	452	1304
7:00:00	7:15:00				7	0	6	65	193			189	21	481	1576
7:15:00	7:30:00				9	0	7	60	218			198	14	506	1804
7:30:00	7:45:00				7	0	7	65	288			293	6	666	2105
7:45:00	8:00:00				7	0	7	71	262			280	17	644	2297
8:00:00	8:15:00				12	0	8	79	247			262	17	625	2441
8:15:00	8:30:00				18	0	13	68	260			249	17	625	2560
8:30:00	8:45:00				17	0	10	70	252			278	13	640	2534
8:45:00	9:00:00				25	0	7	63	297			237	18	647	2537
9:00:00	9:15:00													0	1912
9:15:00	9:30:00													0	1287
9:30:00	9:45:00													0	647
9:45:00	10:00:00													0	0
10:00:00	10:15:00													0	0
10:15:00	10:30:00													0	0
10:30:00	10:45:00													0	0
10:45:00	11:00:00													0	0
11:00:00	11:15:00				37	0	22	43	315			310	13	740	740
11:15:00	11:30:00				34	0	27	61	282			323	6	733	1473
11:30:00	11:45:00				41	0	34	66	288			299	10	738	2211
11:45:00	12:00:00				52	0	20	72	314			341	9	808	3019
12:00:00	12:15:00				61	0	28	72	291			321	6	779	3058
12:15:00	12:30:00				43	0	28	70	309			310	8	768	3093
12:30:00	12:45:00				34	0	23	78	267			298	13	713	3068
12:45:00	13:00:00				28	0	26	77	383			323	12	849	3109
13:00:00	13:15:00													0	2330
13:15:00	13:30:00													0	1562
13:30:00	13:45:00													0	849
13:45:00	14:00:00													0	0
14:00:00	14:15:00													0	0
14:15:00	14:30:00													0	0
14:30:00	14:45:00													0	0
14:45:00	15:00:00													0	0
15:00:00	15:15:00				64	0	36	72	339			323	7	841	841
15:15:00	15:30:00				47	0	27	64	318			348	5	809	1650
15:30:00	15:45:00				45	0	31	64	302			367	3	812	2462
15:45:00	16:00:00				36	0	33	77	297			318	4	765	3227
16:00:00	16:15:00				55	0	37	78	279			363	3	815	3201
16:15:00	16:30:00				46	0	38	71	263			360	4	782	3174
16:30:00	16:45:00				58	0	36	74	281			385	7	841	3203
16:45:00	17:00:00				44	0	32	60	279			345	0	760	3198
17:00:00	17:15:00				49	0	26	83	267			319	6	750	3133
17:15:00	17:30:00				24	0	20	75	304			332	2	757	3108
17:30:00	17:45:00				27	0	17	36	259			277	6	622	2889
17:45:00	18:00:00				25	0	12	42	259			267	2	607	2736
		0	0	0	982	0	634	2057	8545	0	0	8912	297	21427	

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Date:	6-Mar-19																	
Int. No.	5																	
Int. Desc.	State Road PR-2 int. State Road PR-123																	
		State Road PR-123						State Road PR-2										
		NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	EB-U	EB-L	EB-T	EB-R	WB-U	WB-L	WB-T	WB-R	15-min	1-hr.
Start	End															Vol.	Vol.
6:01:21	6:15:00	3	11	17	3	8	15	0	20	73	13	0	8	50	9	230	
6:15:00	6:30:00	8	4	12	7	16	16	0	27	94	27	0	15	116	13	355	
6:30:00	6:45:00	13	26	14	6	17	15	0	37	96	23	1	24	147	20	439	
6:45:00	7:00:00	12	16	17	7	24	16	0	34	143	35	0	25	198	34	561	1585
7:00:00	7:15:00	25	29	13	8	29	28	0	60	146	31	0	39	187	33	628	1983
7:15:00	7:30:00	24	34	12	14	32	29	0	59	181	30	0	29	250	72	766	2394
7:30:00	7:45:00	34	34	20	19	37	27	1	62	186	29	0	57	271	57	834	2789
7:45:00	8:00:00	31	50	17	13	42	46	3	52	172	54	0	57	298	78	913	3141
8:00:00	8:15:00	28	40	32	26	45	39	3	68	183	26	0	48	217	55	810	3323
8:15:00	8:30:00	23	38	23	52	47	49	3	51	190	40	0	30	192	41	779	3336
8:30:00	8:45:00	34	32	19	23	29	33	2	46	212	37	0	38	252	47	804	3306
8:45:00	9:00:00	39	33	29	40	48	45	1	27	216	37	1	41	217	44	818	3211
9:00:00	9:15:00	35	31	26	40	28	44	0	46	212	37	1	46	239	39	824	3225
9:15:00	9:30:00	44	36	27	41	59	55	2	52	200	39	0	35	213	48	851	3297
9:30:00	9:45:00	42	37	28	29	33	45	4	47	230	34	0	42	265	41	877	3370
9:45:00	10:00:00	38	58	32	27	55	55	4	28	196	39	0	37	190	53	812	3364
10:00:00	10:15:00	31	35	28	34	32	41	2	69	242	36	1	42	296	70	959	3499
10:15:00	10:30:00	45	51	35	40	35	45	4	42	195	46	0	31	256	66	891	3539
10:30:00	10:45:00	41	38	35	43	32	61	2	53	260	32	0	34	328	71	1030	3692
10:45:00	11:00:00	40	50	28	58	40	68	0	45	220	35	0	31	253	46	914	3794
11:00:00	11:15:00	57	30	31	40	27	40	3	52	269	44	0	38	274	61	966	3801
11:15:00	11:30:00	57	31	30	46	54	61	6	39	223	39	0	42	247	53	928	3838
11:30:00	11:45:00	52	43	27	43	39	58	3	50	284	41	0	37	351	80	1108	3916
11:45:00	12:00:00	62	39	51	43	55	51	8	55	222	47	0	37	325	59	1054	4056
12:00:00	12:15:00	47	36	39	56	54	56	4	57	324	42	1	33	328	81	1158	4248
12:15:00	12:30:00	63	34	43	61	62	63	2	53	258	58	0	38	216	48	999	4319
12:30:00	12:45:00	42	32	30	38	56	54	4	53	304	47	0	53	321	76	1110	4321
12:45:00	13:00:00	57	38	32	50	51	62	3	65	223	55	0	55	277	65	1033	4300
13:00:00	13:15:00	54	36	20	41	63	58	2	54	307	48	0	38	326	70	1117	4259
13:15:00	13:30:00	69	43	41	60	52	56	3	62	368	43	0	44	250	60	1151	4411
13:30:00	13:45:00	45	28	34	47	54	50	5	48	312	58	0	37	278	59	1055	4356
13:45:00	14:00:00	57	48	28	28	48	52	4	41	240	44	0	47	295	55	987	4310
14:00:00	14:15:00	45	29	32	61	54	49	3	44	254	55	0	35	258	70	989	4182
14:15:00	14:30:00	52	44	43	43	39	72	4	59	262	58	0	31	305	67	1079	4110
14:30:00	14:45:00	45	42	30	46	48	63	0	53	285	49	2	44	336	64	1107	4162
14:45:00	15:00:00	58	39	20	58	39	59	2	59	274	57	2	47	344	57	1115	4290
15:00:00	15:15:00	60	33	27	53	47	76	5	38	283	48	0	30	309	46	1055	4356
15:15:00	15:30:00	65	23	19	43	39	48	4	57	314	46	1	41	353	54	1107	4384
15:30:00	15:45:00	66	27	29	43	38	67	2	35	260	51	0	33	360	40	1051	4328
15:45:00	16:00:00	50	25	20	48	32	45	1	48	299	57	0	29	371	61	1086	4299
16:00:00	16:15:00	59	36	23	58	58	64	4	42	294	34	0	33	346	60	1111	4355
16:15:00	16:30:00	45	40	26	42	39	60	3	47	340	61	0	36	378	62	1179	4427
16:30:00	16:45:00	66	34	34	50	45	77	2	30	283	49	0	32	306	76	1084	4460
16:45:00	17:00:00	54	30	15	43	41	51	1	46	300	40	0	38	364	73	1096	4470
17:00:00	17:15:00	73	40	31	41	58	40	1	32	263	50	0	30	302	53	1014	4373
17:15:00	17:30:00	54	20	32	32	34	44	2	43	355	40	0	34	398	56	1144	4338
17:30:00	17:45:00	65	42	20	36	40	45	0	36	218	35	0	35	285	39	896	4150
17:45:00	18:00:00	55	39	25	33	32	36	0	25	232	39	0	22	300	52	890	3944
		2164	1664	1296	1813	1986	2329	112	2248	11497	2015	10	1758	13238	2634	44764	

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Date: 2019.08.13 15:48:42

APPENDIX B: TRIP GENERATION

Digitally signed by: Francisco
Roberto Klein Moya
Date: 2019.08.13 15:48:42

Trip Generation Summary

Alternative: Alternative 1
Phase:
Project: KP2019.005.LOA

Open Date: 8/13/2019
Analysis Date: 8/13/2019

ITE	Land Use		Weekday Average Daily Trips			Weekday AM Peak Hour of Generator			Weekday PM Peak Hour of Generator		
		*	Enter	Exit	Total	* Enter	Exit	Total	* Enter	Exit	Total
550	Ponce Health Sciences University and Dorms		1482	1482	2964	185	62	247	85	181	266
	1900 Students										
630	Ponce Health Sciences University Medical		630	629	1259	100	72	172	70	83	153
	33 1000 Sq. Ft. GFA										
880	Ponce Health Sciences University Retail Shops		316	315	631	27	27	54	39	38	77
	7 1000 Sq. Ft. GFA										
936	Ponce Health Sciences University Cafe				0	285	274	559	99	99	198
	7 1000 Sq. Ft. GFA										
Unadjusted Volume			2428	2426	4854	597	435	1032	293	401	694
Internal Capture Trips			0	0	0	0	0	0	0	0	0
Pass-By Trips			0	0	0	0	0	0	0	0	0
Volume Added to Adjacent Streets			2428	2426	4854	597	435	1032	293	401	694

Total Weekday Average Daily Trips Internal Capture = 0 Percent
Total Weekday AM Peak Hour of Generator Internal Capture = 0 Percent
Total Weekday PM Peak Hour of Generator Internal Capture = 0 Percent

* - Custom rate used for selected time period.

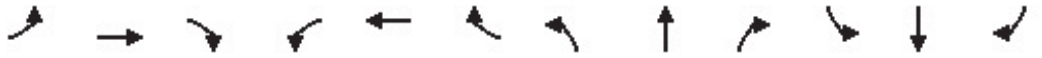
Source: Institute of Transportation Engineers, Trip Generation Manual 10th Edition
TRIP GENERATION 10, TRAFFICWARE, LLC

P. 1

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Date: 2019.08.13 15:48:42

APPENDIX C: SYNCHRO OUTPUT

Digitally signed by: Francisco
Roberto Klein Moya
Date: 2019.08.13 15:48:42



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	96	1012	12	206	1454	44	52	12	4	211	105	68
Future Volume (vph)	96	1012	12	206	1454	44	52	12	4	211	105	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.97	
Satd. Flow (prot)	1593	4569		1593	4557			1602			1593	
Flt Permitted	0.95	1.00		0.95	1.00			0.62			0.97	
Satd. Flow (perm)	1593	4569		1593	4557			1030			1593	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	96	1012	12	206	1454	44	52	12	4	211	105	68
RTOR Reduction (vph)	0	1	0	0	2	0	0	2	0	0	7	0
Lane Group Flow (vph)	96	1023	0	206	1496	0	0	66	0	0	377	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Split	NA	
Protected Phases	5	2		1	6			4		8	8	
Permitted Phases							4					
Actuated Green, G (s)	12.0	50.0		12.0	50.0			12.0			30.0	
Effective Green, g (s)	12.0	50.0		12.0	50.0			12.0			30.0	
Actuated g/C Ratio	0.10	0.42		0.10	0.42			0.10			0.25	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	159	1903		159	1898			103			398	
v/s Ratio Prot	0.06	0.22		c0.13	c0.33						c0.24	
v/s Ratio Perm								c0.06				
v/c Ratio	0.60	0.54		1.30	0.79			0.64			0.95	
Uniform Delay, d1	51.7	26.3		54.0	30.4			51.9			44.2	
Progression Factor	1.00	1.00		1.00	1.00			0.64			1.00	
Incremental Delay, d2	15.8	1.1		171.5	3.4			25.2			33.7	
Delay (s)	67.6	27.4		225.5	33.8			58.4			78.0	
Level of Service	E	C		F	C			E			E	
Approach Delay (s)		30.8			57.0			58.4			78.0	
Approach LOS		C			E			E			E	

Intersection Summary			
HCM 2000 Control Delay	50.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	192	1032	44	183	1596	116	28	172	48	360	36	80
Future Volume (vph)	192	1032	44	183	1596	116	28	172	48	360	36	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			0.95		0.95	0.95	
Frt	1.00	0.99		1.00	0.99			0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	0.97	
Satd. Flow (prot)	1593	4549		1593	4530			3075		1513	1476	
Flt Permitted	0.95	1.00		0.95	1.00			0.99		0.60	0.70	
Satd. Flow (perm)	1593	4549		1593	4530			3075		952	1062	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	192	1032	44	183	1596	116	28	172	48	360	36	80
RTOR Reduction (vph)	0	3	0	0	6	0	0	14	0	0	12	0
Lane Group Flow (vph)	192	1073	0	183	1706	0	0	234	0	230	234	0
Turn Type	Prot	NA		Prot	NA		Split	NA		Perm	NA	
Protected Phases	5	2		1	6		4	4			8	
Permitted Phases										8		
Actuated Green, G (s)	18.0	65.0		18.0	65.0			19.0		30.0	30.0	
Effective Green, g (s)	18.0	65.0		18.0	65.0			19.0		30.0	30.0	
Actuated g/C Ratio	0.12	0.44		0.12	0.44			0.13		0.20	0.20	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	
Lane Grp Cap (vph)	193	1997		193	1989			394		192	215	
v/s Ratio Prot	c0.12	0.24		0.11	c0.38			c0.08				
v/s Ratio Perm										c0.24	0.22	
v/c Ratio	0.99	0.54		0.95	0.86			0.59		1.20	1.09	
Uniform Delay, d1	65.0	30.5		64.5	37.3			60.9		59.0	59.0	
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2	63.5	1.0		52.5	5.1			6.5		128.4	87.0	
Delay (s)	128.4	31.5		117.0	42.4			67.3		187.4	146.0	
Level of Service	F	C		F	D			E		F	F	
Approach Delay (s)		46.2			49.6			67.3			166.0	
Approach LOS		D			D			E			F	

Intersection Summary			
HCM 2000 Control Delay	63.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	148.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	4	212	24	64	40	283
Future Volume (vph)	4	212	24	64	40	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	
Frt		1.00	0.90		0.88	
Flt Protected		1.00	1.00		0.99	
Satd. Flow (prot)		1675	1512		1469	
Flt Permitted		1.00	1.00		0.99	
Satd. Flow (perm)		1675	1512		1469	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	4	212	24	64	40	283
RTOR Reduction (vph)	0	0	58	0	175	0
Lane Group Flow (vph)	0	216	30	0	148	0
Turn Type	Split	NA	NA		Prot	
Protected Phases	2	2	6		8	
Permitted Phases						
Actuated Green, G (s)		50.0	12.0		46.0	
Effective Green, g (s)		50.0	12.0		46.0	
Actuated g/C Ratio		0.42	0.10		0.38	
Clearance Time (s)		4.0	4.0		4.0	
Lane Grp Cap (vph)		697	151		563	
v/s Ratio Prot		c0.13	c0.02		c0.10	
v/s Ratio Perm						
v/c Ratio		0.31	0.20		0.26	
Uniform Delay, d1		23.4	49.6		25.4	
Progression Factor		1.00	1.00		1.92	
Incremental Delay, d2		1.2	3.0		0.1	
Delay (s)		24.6	52.6		48.9	
Level of Service		C	D		D	
Approach Delay (s)		24.6	52.6		48.9	
Approach LOS		C	D		D	

Intersection Summary			
HCM 2000 Control Delay	41.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	309	1347	1808	48	225	87
Future Volume (vph)	309	1347	1808	48	225	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.91	0.91		1.00	
Frt	1.00	1.00	1.00		0.96	
Flt Protected	0.95	1.00	1.00		0.97	
Satd. Flow (prot)	1593	4577	4559		1557	
Flt Permitted	0.95	1.00	1.00		0.97	
Satd. Flow (perm)	1593	4577	4559		1557	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	309	1347	1808	48	225	87
RTOR Reduction (vph)	0	0	2	0	10	0
Lane Group Flow (vph)	309	1347	1854	0	302	0
Turn Type	Prot	NA	NA		Prot	
Protected Phases	5	2	6		8	
Permitted Phases						
Actuated Green, G (s)	30.0	99.0	65.0		37.0	
Effective Green, g (s)	30.0	99.0	65.0		37.0	
Actuated g/C Ratio	0.21	0.69	0.45		0.26	
Clearance Time (s)	4.0	4.0	4.0		4.0	
Lane Grp Cap (vph)	331	3146	2057		400	
v/s Ratio Prot	c0.19	0.29	c0.41		c0.19	
v/s Ratio Perm						
v/c Ratio	0.93	0.43	0.90		0.76	
Uniform Delay, d1	56.0	10.0	36.5		49.3	
Progression Factor	1.00	1.00	1.00		1.00	
Incremental Delay, d2	35.1	0.4	6.9		12.5	
Delay (s)	91.1	10.4	43.5		61.8	
Level of Service	F	B	D		E	
Approach Delay (s)		25.5	43.5		61.8	
Approach LOS		C	D		E	

Intersection Summary			
HCM 2000 Control Delay	37.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	144.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	12	208	1181	171	148	1404	320	208	172	108	172	156
Future Volume (vph)	12	208	1181	171	148	1404	320	208	172	108	172	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1593	4577	1425	1593	4577	1425	1593	1676	1425	1593	1676
Flt Permitted		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.12	1.00
Satd. Flow (perm)		1593	4577	1425	1593	4577	1425	1593	1676	1425	203	1676
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	12	208	1181	171	148	1404	320	208	172	108	172	156
RTOR Reduction (vph)	0	0	0	38	0	0	42	0	0	51	0	0
Lane Group Flow (vph)	0	220	1181	133	148	1404	278	208	172	57	172	156
Turn Type	Prot	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Perm	NA
Protected Phases	5	5	2		1	6		8	8			4
Permitted Phases				2			6			8	4	
Actuated Green, G (s)		25.0	61.0	61.0	25.0	61.0	61.0	26.0	26.0	26.0	33.0	33.0
Effective Green, g (s)		25.0	61.0	61.0	25.0	61.0	61.0	26.0	26.0	26.0	33.0	33.0
Actuated g/C Ratio		0.16	0.38	0.38	0.16	0.38	0.38	0.16	0.16	0.16	0.20	0.20
Clearance Time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)		247	1734	539	247	1734	539	257	270	230	41	343
v/s Ratio Prot		c0.14	0.26		0.09	c0.31		c0.13	0.10			0.09
v/s Ratio Perm				0.09			0.20			0.04	c0.85	
v/c Ratio		0.89	0.68	0.25	0.60	0.81	0.52	0.81	0.64	0.25	4.20	0.45
Uniform Delay, d1		66.7	41.9	34.3	63.3	44.8	38.6	65.1	63.1	59.0	64.0	56.1
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		34.8	2.2	1.1	10.3	4.2	3.5	23.4	11.0	2.6	1493.3	4.3
Delay (s)		101.4	44.0	35.4	73.6	49.0	42.1	88.5	74.1	61.5	1557.3	60.4
Level of Service		F	D	D	E	D	D	F	E	E	F	E
Approach Delay (s)			51.1			49.8			77.4			521.8
Approach LOS			D			D			E			F

Intersection Summary			
HCM 2000 Control Delay	112.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.58		
Actuated Cycle Length (s)	161.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	85.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBR
Lane Configurations	
Traffic Volume (vph)	232
Future Volume (vph)	232
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1425
Flt Permitted	1.00
Satd. Flow (perm)	1425
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	232
RTOR Reduction (vph)	73
Lane Group Flow (vph)	159
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Actuated Green, G (s)	33.0
Effective Green, g (s)	33.0
Actuated g/C Ratio	0.20
Clearance Time (s)	4.0
Lane Grp Cap (vph)	292
v/s Ratio Prot	
v/s Ratio Perm	0.11
v/c Ratio	0.54
Uniform Delay, d1	57.3
Progression Factor	1.00
Incremental Delay, d2	7.1
Delay (s)	64.4
Level of Service	E
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1612	348	0	1895	0	44
Future Volume (Veh/h)	1612	348	0	1895	0	44
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1612	348	0	1895	0	44
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	482			806		
pX, platoon unblocked			0.84		0.71	0.84
vC, conflicting volume			1960		2418	711
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1472		61	0
tC, single (s)			4.1		6.8	*4.1
tC, 2 stage (s)						
tF (s)			2.2		3.5	*2.0
p0 queue free %			100		100	97
cM capacity (veh/h)			381		670	1510

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1
Volume Total	645	645	670	632	632	632	44
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	348	0	0	0	44
cSH	1700	1700	1700	1700	1700	1700	1510
Volume to Capacity	0.38	0.38	0.39	0.37	0.37	0.37	0.03
Queue Length 95th (ft)	0	0	0	0	0	0	2
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	7.5
Lane LOS							A
Approach Delay (s)	0.0			0.0			7.5
Approach LOS							A

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		

* User Entered Value



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	8	68	20	24	12	20	120	16	24	296	8
Future Volume (Veh/h)	4	8	68	20	24	12	20	120	16	24	296	8
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	4	8	68	20	24	12	20	120	16	24	296	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								108				
pX, platoon unblocked												
vC, conflicting volume	540	524	300	588	520	128	304			136		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	540	524	300	588	520	128	304			136		
tC, single (s)	7.1	*4.5	*4.1	*4.1	*4.5	*4.1	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	*2.1	*2.0	*2.2	*2.0	*2.1	2.2			2.2		
p0 queue free %	99	99	95	98	98	99	98			98		
cM capacity (veh/h)	430	1000	1389	919	1047	1538	1257			1448		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	80	56	156	328
Volume Left	4	20	20	24
Volume Right	68	12	16	8
cSH	1207	1067	1257	1448
Volume to Capacity	0.07	0.05	0.02	0.02
Queue Length 95th (ft)	5	4	1	1
Control Delay (s)	8.2	8.6	1.1	0.7
Lane LOS	A	A	A	A
Approach Delay (s)	8.2	8.6	1.1	0.7
Approach LOS	A	A		

Intersection Summary				
Average Delay	2.5			
Intersection Capacity Utilization	39.5%	ICU Level of Service	A	
Analysis Period (min)	15			

* User Entered Value



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	0	20	92	12	188	32	435	13	0	352	4
Future Volume (Veh/h)	20	0	20	92	12	188	32	435	13	0	352	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	20	0	20	92	12	188	32	435	13	0	352	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								90				
pX, platoon unblocked	0.94	0.94		0.94	0.94	0.94				0.94		
vC, conflicting volume	830	866	178	702	862	224	356			448		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	692	731	178	556	726	49	356			287		
tC, single (s)	*4.1	6.5	*4.5	*4.1	*4.5	*4.1	4.1			4.1		
tC, 2 stage (s)												
tF (s)	*2.2	4.0	*2.0	*2.2	*2.1	*2.0	2.2			2.2		
p0 queue free %	97	100	99	90	98	88	97			100		
cM capacity (veh/h)	734	318	1513	931	777	1624	1199			1197		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	40	292	250	230	176	180
Volume Left	20	92	32	0	0	0
Volume Right	20	188	0	13	0	4
cSH	989	1269	1199	1700	1197	1700
Volume to Capacity	0.04	0.23	0.03	0.14	0.00	0.11
Queue Length 95th (ft)	3	22	2	0	0	0
Control Delay (s)	8.8	8.7	1.3	0.0	0.0	0.0
Lane LOS	A	A	A			
Approach Delay (s)	8.8	8.7	0.7		0.0	
Approach LOS	A	A				

Intersection Summary				
Average Delay	2.7			
Intersection Capacity Utilization	57.0%	ICU Level of Service	B	
Analysis Period (min)	15			

* User Entered Value



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	48	68	172	55	302	0	0	264	12
Future Volume (Veh/h)	0	0	0	48	68	172	55	302	0	0	264	12
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	0	48	68	172	55	302	0	0	264	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								82				
pX, platoon unblocked												
vC, conflicting volume	888	682	270	682	688	302	276			302		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	888	682	270	682	688	302	276			302		
tC, single (s)	7.1	6.5	6.2	*4.1	*4.5	*4.1	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	*2.2	*2.1	*2.0	2.2			2.2		
p0 queue free %	100	100	100	95	92	88	96			100		
cM capacity (veh/h)	210	356	769	890	843	1386	1287			1259		

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	288	357	276
Volume Left	48	55	0
Volume Right	172	0	12
cSH	1113	1287	1700
Volume to Capacity	0.26	0.04	0.16
Queue Length 95th (ft)	26	3	0
Control Delay (s)	9.4	1.6	0.0
Lane LOS	A	A	
Approach Delay (s)	9.4	1.6	0.0
Approach LOS	A		

Intersection Summary				
Average Delay	3.5			
Intersection Capacity Utilization	65.9%	ICU Level of Service	C	
Analysis Period (min)	15			

* User Entered Value



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	112	16	28	32	305	43
Future Volume (Veh/h)	112	16	28	32	305	43
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	112	16	28	32	305	43
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	697	44			60	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	697	44			60	
tC, single (s)	*4.1	*4.1			4.1	
tC, 2 stage (s)						
tF (s)	*2.2	*2.0			2.2	
p0 queue free %	85	99			80	
cM capacity (veh/h)	729	1733			1544	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	128	60	348
Volume Left	112	0	305
Volume Right	16	32	0
cSH	786	1700	1544
Volume to Capacity	0.16	0.04	0.20
Queue Length 95th (ft)	14	0	18
Control Delay (s)	10.5	0.0	7.1
Lane LOS	B		A
Approach Delay (s)	10.5	0.0	7.1
Approach LOS	B		

Intersection Summary			
Average Delay	7.1		
Intersection Capacity Utilization	42.6%	ICU Level of Service	A
Analysis Period (min)	15		

* User Entered Value



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	984	0	184	1767	20	75	9	0	178	92	154
Future Volume (vph)	108	984	0	184	1767	20	75	9	0	178	92	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			1.00			0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.98	
Satd. Flow (prot)	1593	4577		1593	4569			1605			1561	
Flt Permitted	0.95	1.00		0.95	1.00			0.46			0.98	
Satd. Flow (perm)	1593	4577		1593	4569			779			1561	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	108	984	0	184	1767	20	75	9	0	178	92	154
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	0	0	17	0
Lane Group Flow (vph)	108	984	0	184	1786	0	0	84	0	0	407	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Split	NA	
Protected Phases	5	2		1	6			4		8	8	
Permitted Phases							4					
Actuated Green, G (s)	12.0	50.0		12.0	50.0			12.0			30.0	
Effective Green, g (s)	12.0	50.0		12.0	50.0			12.0			30.0	
Actuated g/C Ratio	0.10	0.42		0.10	0.42			0.10			0.25	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	159	1907		159	1903			77			390	
v/s Ratio Prot	0.07	0.21		c0.12	c0.39						c0.26	
v/s Ratio Perm								c0.11				
v/c Ratio	0.68	0.52		1.16	0.94			1.09			1.04	
Uniform Delay, d1	52.1	26.0		54.0	33.5			54.0			45.0	
Progression Factor	1.00	1.00		1.00	1.00			0.40			1.00	
Incremental Delay, d2	20.9	1.0		119.9	10.5			99.1			57.2	
Delay (s)	73.1	27.0		173.9	44.0			120.7			102.2	
Level of Service	E	C		F	D			F			F	
Approach Delay (s)		31.6			56.1			120.7			102.2	
Approach LOS		C			E			F			F	

Intersection Summary			
HCM 2000 Control Delay	55.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	132	1268	16	206	1739	102	36	12	40	348	76	196
Future Volume (vph)	132	1268	16	206	1739	102	36	12	40	348	76	196
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			0.95		0.95	0.95	
Frt	1.00	1.00		1.00	0.99			0.93		1.00	0.90	
Flt Protected	0.95	1.00		0.95	1.00			0.98		0.95	0.99	
Satd. Flow (prot)	1593	4568		1593	4539			2909		1513	1432	
Flt Permitted	0.95	1.00		0.95	1.00			0.98		0.70	0.96	
Satd. Flow (perm)	1593	4568		1593	4539			2909		1110	1376	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	132	1268	16	206	1739	102	36	12	40	348	76	196
RTOR Reduction (vph)	0	1	0	0	4	0	0	35	0	0	43	0
Lane Group Flow (vph)	132	1283	0	206	1837	0	0	53	0	313	264	0
Turn Type	Prot	NA		Prot	NA		Split	NA		Perm	NA	
Protected Phases	5	2		1	6		4	4			8	
Permitted Phases										8		
Actuated Green, G (s)	18.0	65.0		18.0	65.0			19.0		30.0	30.0	
Effective Green, g (s)	18.0	65.0		18.0	65.0			19.0		30.0	30.0	
Actuated g/C Ratio	0.12	0.44		0.12	0.44			0.13		0.20	0.20	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	
Lane Grp Cap (vph)	193	2006		193	1993			373		225	278	
v/s Ratio Prot	0.08	0.28		c0.13	c0.40			c0.02				
v/s Ratio Perm										c0.28	0.19	
v/c Ratio	0.68	0.64		1.07	0.92			0.14		1.39	0.95	
Uniform Delay, d1	62.3	32.4		65.0	39.1			57.3		59.0	58.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2	17.9	1.6		83.8	8.5			0.8		200.9	42.4	
Delay (s)	80.2	33.9		148.8	47.6			58.1		259.9	100.7	
Level of Service	F	C		F	D			E		F	F	
Approach Delay (s)		38.3			57.8			58.1			181.1	
Approach LOS		D			E			E			F	

Intersection Summary			
HCM 2000 Control Delay	69.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	148.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	85.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	300	76	84	76	200
Future Volume (vph)	0	300	76	84	76	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	
Frt		1.00	0.93		0.90	
Flt Protected		1.00	1.00		0.99	
Satd. Flow (prot)		1676	1558		1492	
Flt Permitted		1.00	1.00		0.99	
Satd. Flow (perm)		1676	1558		1492	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	300	76	84	76	200
RTOR Reduction (vph)	0	0	33	0	79	0
Lane Group Flow (vph)	0	300	127	0	197	0
Turn Type		NA	NA		Prot	
Protected Phases		2	6		8	
Permitted Phases						
Actuated Green, G (s)		50.0	12.0		46.0	
Effective Green, g (s)		50.0	12.0		46.0	
Actuated g/C Ratio		0.42	0.10		0.38	
Clearance Time (s)		4.0	4.0		4.0	
Lane Grp Cap (vph)		698	155		571	
v/s Ratio Prot		c0.18	c0.08		c0.13	
v/s Ratio Perm						
v/c Ratio		0.43	0.82		0.35	
Uniform Delay, d1		24.9	52.9		26.3	
Progression Factor		1.00	1.00		0.77	
Incremental Delay, d2		1.9	36.1		0.1	
Delay (s)		26.8	89.0		20.4	
Level of Service		C	F		C	
Approach Delay (s)		26.8	89.0		20.4	
Approach LOS		C	F		C	

Intersection Summary			
HCM 2000 Control Delay	37.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	42.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	293	1379	1903	41	256	144
Future Volume (vph)	293	1379	1903	41	256	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.91	0.91		1.00	
Frt	1.00	1.00	1.00		0.95	
Flt Protected	0.95	1.00	1.00		0.97	
Satd. Flow (prot)	1593	4577	4562		1546	
Flt Permitted	0.95	1.00	1.00		0.97	
Satd. Flow (perm)	1593	4577	4562		1546	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	293	1379	1903	41	256	144
RTOR Reduction (vph)	0	0	2	0	14	0
Lane Group Flow (vph)	293	1379	1942	0	386	0
Turn Type	Prot	NA	NA		Prot	
Protected Phases	5	2	6		8	
Permitted Phases						
Actuated Green, G (s)	30.0	99.0	65.0		37.0	
Effective Green, g (s)	30.0	99.0	65.0		37.0	
Actuated g/C Ratio	0.21	0.69	0.45		0.26	
Clearance Time (s)	4.0	4.0	4.0		4.0	
Lane Grp Cap (vph)	331	3146	2059		397	
v/s Ratio Prot	c0.18	0.30	c0.43		c0.25	
v/s Ratio Perm						
v/c Ratio	0.89	0.44	0.94		0.97	
Uniform Delay, d1	55.3	10.1	37.7		53.0	
Progression Factor	1.00	1.00	1.00		1.00	
Incremental Delay, d2	27.4	0.4	10.4		38.7	
Delay (s)	82.7	10.5	48.1		91.7	
Level of Service	F	B	D		F	
Approach Delay (s)		23.2	48.1		91.7	
Approach LOS		C	D		F	

Intersection Summary			
HCM 2000 Control Delay	42.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	144.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	12	188	1360	244	144	1512	248	180	160	104	168	156
Future Volume (vph)	12	188	1360	244	144	1512	248	180	160	104	168	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1593	4577	1425	1593	4577	1425	1593	1676	1425	1593	1676
Flt Permitted		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.12	1.00
Satd. Flow (perm)		1593	4577	1425	1593	4577	1425	1593	1676	1425	203	1676
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	12	188	1360	244	144	1512	248	180	160	104	168	156
RTOR Reduction (vph)	0	0	0	38	0	0	38	0	0	51	0	0
Lane Group Flow (vph)	0	200	1360	206	144	1512	210	180	160	53	168	156
Turn Type	Prot	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Perm	NA
Protected Phases	5	5	2		1	6		8	8			4
Permitted Phases				2			6			8	4	
Actuated Green, G (s)		25.0	61.0	61.0	25.0	61.0	61.0	26.0	26.0	26.0	33.0	33.0
Effective Green, g (s)		25.0	61.0	61.0	25.0	61.0	61.0	26.0	26.0	26.0	33.0	33.0
Actuated g/C Ratio		0.16	0.38	0.38	0.16	0.38	0.38	0.16	0.16	0.16	0.20	0.20
Clearance Time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)		247	1734	539	247	1734	539	257	270	230	41	343
v/s Ratio Prot		c0.13	0.30		0.09	c0.33		c0.11	0.10			0.09
v/s Ratio Perm				0.14			0.15			0.04	c0.83	
v/c Ratio		0.81	0.78	0.38	0.58	0.87	0.39	0.70	0.59	0.23	4.10	0.45
Uniform Delay, d1		65.7	44.2	36.3	63.2	46.4	36.4	63.8	62.6	58.8	64.0	56.1
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		24.2	3.6	2.1	9.7	6.4	2.1	14.8	9.2	2.3	1449.7	4.3
Delay (s)		89.9	47.8	38.4	72.8	52.7	38.6	78.6	71.8	61.1	1513.7	60.4
Level of Service		F	D	D	E	D	D	E	E	E	F	E
Approach Delay (s)			51.2			52.4			72.0			495.3
Approach LOS			D			D			E			F

Intersection Summary			
HCM 2000 Control Delay	106.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.55		
Actuated Cycle Length (s)	161.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	85.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBR
Lane Configurations	
Traffic Volume (vph)	240
Future Volume (vph)	240
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1425
Flt Permitted	1.00
Satd. Flow (perm)	1425
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	240
RTOR Reduction (vph)	76
Lane Group Flow (vph)	164
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Actuated Green, G (s)	33.0
Effective Green, g (s)	33.0
Actuated g/C Ratio	0.20
Clearance Time (s)	4.0
Lane Grp Cap (vph)	292
v/s Ratio Prot	
v/s Ratio Perm	0.12
v/c Ratio	0.56
Uniform Delay, d1	57.5
Progression Factor	1.00
Incremental Delay, d2	7.7
Delay (s)	65.2
Level of Service	E
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1548	320	0	2047	0	124
Future Volume (Veh/h)	1548	320	0	2047	0	124
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1548	320	0	2047	0	124
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	482			808		
pX, platoon unblocked			0.79		0.71	0.79
vC, conflicting volume			1868		2390	676
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1168		0	0
tC, single (s)			4.1		6.8	*4.1
tC, 2 stage (s)						
tF (s)			2.2		3.5	*2.0
p0 queue free %			100		100	91
cM capacity (veh/h)			469		722	1422

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1
Volume Total	619	619	630	682	682	682	124
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	320	0	0	0	124
cSH	1700	1700	1700	1700	1700	1700	1422
Volume to Capacity	0.36	0.36	0.37	0.40	0.40	0.40	0.09
Queue Length 95th (ft)	0	0	0	0	0	0	7
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	7.8
Lane LOS							A
Approach Delay (s)	0.0			0.0			7.8
Approach LOS							A

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	56.4%	ICU Level of Service	B
Analysis Period (min)	15		

* User Entered Value



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	8	40	20	68	32	30	92	15	0	364	4
Future Volume (Veh/h)	0	8	40	20	68	32	30	92	15	0	364	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	8	40	20	68	32	30	92	15	0	364	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								108				
pX, platoon unblocked												
vC, conflicting volume	592	533	366	570	528	100	368			107		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	592	533	366	570	528	100	368			107		
tC, single (s)	7.1	*4.5	*4.1	*4.1	*4.5	*4.1	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	*2.1	*2.0	*2.2	*2.0	*2.1	2.2			2.2		
p0 queue free %	100	99	97	98	94	98	97			100		
cM capacity (veh/h)	382	999	1311	957	1047	1575	1191			1484		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	48	120	137	368
Volume Left	0	20	30	0
Volume Right	40	32	15	4
cSH	1246	1130	1191	1484
Volume to Capacity	0.04	0.11	0.03	0.00
Queue Length 95th (ft)	3	9	2	0
Control Delay (s)	8.0	8.6	1.9	0.0
Lane LOS	A	A	A	
Approach Delay (s)	8.0	8.6	1.9	0.0
Approach LOS	A	A		

Intersection Summary				
Average Delay	2.5			
Intersection Capacity Utilization	53.8%	ICU Level of Service	A	
Analysis Period (min)	15			

* User Entered Value



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	0	20	144	12	128	28	256	0	0	424	12
Future Volume (Veh/h)	4	0	20	144	12	128	28	256	0	0	424	12
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	4	0	20	144	12	128	28	256	0	0	424	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								90				
pX, platoon unblocked												
vC, conflicting volume	748	742	218	544	748	128	436			256		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	748	742	218	544	748	128	436			256		
tC, single (s)	*4.1	6.5	*4.5	*4.1	*4.5	*4.1	4.1			4.1		
tC, 2 stage (s)												
tF (s)	*2.2	4.0	*2.0	*2.2	*2.1	*2.0	2.2			2.2		
p0 queue free %	99	100	99	86	99	92	98			100		
cM capacity (veh/h)	777	334	1455	1001	810	1612	1120			1306		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	24	284	156	128	212	224
Volume Left	4	144	28	0	0	0
Volume Right	20	128	0	0	0	12
cSH	1270	1193	1120	1700	1306	1700
Volume to Capacity	0.02	0.24	0.02	0.08	0.00	0.13
Queue Length 95th (ft)	1	23	2	0	0	0
Control Delay (s)	7.9	9.0	1.7	0.0	0.0	0.0
Lane LOS	A	A	A			
Approach Delay (s)	7.9	9.0	0.9		0.0	
Approach LOS	A	A				

Intersection Summary				
Average Delay	2.9			
Intersection Capacity Utilization	57.2%	ICU Level of Service		B
Analysis Period (min)	15			

* User Entered Value



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	48	68	172	52	282	0	0	264	12
Future Volume (Veh/h)	0	0	0	48	68	172	52	282	0	0	264	12
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	0	48	68	172	52	282	0	0	264	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								84				
pX, platoon unblocked												
vC, conflicting volume	862	656	270	656	662	282	276			282		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	862	656	270	656	662	282	276			282		
tC, single (s)	7.1	6.5	6.2	*4.1	*4.5	*4.1	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	*2.2	*2.1	*2.0	2.2			2.2		
p0 queue free %	100	100	100	95	92	88	96			100		
cM capacity (veh/h)	220	370	769	912	867	1410	1287			1280		

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	288	334	276
Volume Left	48	52	0
Volume Right	172	0	12
cSH	1138	1287	1700
Volume to Capacity	0.25	0.04	0.16
Queue Length 95th (ft)	25	3	0
Control Delay (s)	9.2	1.6	0.0
Lane LOS	A	A	
Approach Delay (s)	9.2	1.6	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		

* User Entered Value



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	144	16	108	8	32	288
Future Volume (Veh/h)	144	16	108	8	32	288
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	144	16	108	8	32	288
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	464	112			116	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	464	112			116	
tC, single (s)	*4.1	*4.1			4.1	
tC, 2 stage (s)						
tF (s)	*2.2	*2.0			2.2	
p0 queue free %	87	99			98	
cM capacity (veh/h)	1084	1634			1473	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	160	116	320
Volume Left	144	0	32
Volume Right	16	8	0
cSH	1122	1700	1473
Volume to Capacity	0.14	0.07	0.02
Queue Length 95th (ft)	12	0	2
Control Delay (s)	8.7	0.0	0.9
Lane LOS	A		A
Approach Delay (s)	8.7	0.0	0.9
Approach LOS	A		

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	42.1%	ICU Level of Service	A
Analysis Period (min)	15		

* User Entered Value

Development: Ponce Health Sciences University

Driveway: 1 PHSU

Origin #	Route	To		From	
		Distribution %	Trips	Distribution %	Trips
1	Origin 1 (Node 4) to PHSU	24.88	149	32.89	143
2	Origin 2 (Node 7) to PHSU	0.10	1	6.40	28
3	Origin 3 (Node 5) to PHSU	7.28	43	2.71	12
4	Origin 4 (Node 13) to PHSU	1.67	10	0.45	2
5	Origin 5 (Node 11) to PHSU	8.65	52	9.84	43
6	Origin 6 (Node 15) to PHSU	0.49	3	0.72	3
7	Origin 7 (Node 27) to PHSU	1.18	7	4.14	18
8	Origin 8 (Node 28) to PHSU	2.75	16	0.72	3
9	Origin 9 (Node 19) to PHSU	6.49	39	6.83	30
10	PHSU to Origin 10 (Node 21)	1.18	7	0.00	---
11	Origin 11 (Node 23) to PHSU	5.70	34	4.70	20
12	Origin 12 (Node 22) to PHSU	34.51	206	26.71	116
13	Origin 13 (Node 24) to PHSU	5.11	31	3.87	17

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Date: 2019.08.13 15:48:42



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	96	1012	12	206	1454	44	52	12	4	211	105	68
Future Volume (vph)	96	1161	12	234	1597	58	52	12	5	264	105	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.97	
Satd. Flow (prot)	1593	4570		1593	4553			1600			1593	
Flt Permitted	0.95	1.00		0.95	1.00			0.68			0.97	
Satd. Flow (perm)	1593	4570		1593	4553			1135			1593	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor (vph)	104%	104%	104%	104%	104%	104%	104%	104%	104%	104%	104%	104%
Adj. Flow (vph)	100	1207	12	243	1661	60	54	12	5	275	109	71
RTOR Reduction (vph)	0	1	0	0	3	0	0	2	0	0	5	0
Lane Group Flow (vph)	100	1218	0	243	1718	0	0	69	0	0	450	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Split	NA	
Protected Phases	5	2		1	6			4		8	8	
Permitted Phases							4					
Actuated Green, G (s)	8.0	37.4		22.0	51.4			18.0			36.6	
Effective Green, g (s)	8.0	37.4		22.0	51.4			18.0			36.6	
Actuated g/C Ratio	0.06	0.29		0.17	0.40			0.14			0.28	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	98	1314		269	1800			157			448	
v/s Ratio Prot	0.06	0.27		c0.15	c0.38						c0.28	
v/s Ratio Perm								c0.06				
v/c Ratio	1.02	0.93		0.90	0.95			0.44			1.00	
Uniform Delay, d1	61.0	45.0		53.0	38.2			51.4			46.7	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	96.5	12.6		34.8	12.9			8.7			43.6	
Delay (s)	157.5	57.6		87.7	51.0			60.1			90.3	
Level of Service	F	E		F	D			E			F	
Approach Delay (s)		65.2			55.6			60.1			90.3	
Approach LOS		E			E			E			F	

Intersection Summary			
HCM 2000 Control Delay	63.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	192	1032	44	183	1596	116	28	172	48	360	36	80
Future Volume (vph)	192	1235	44	201	1781	162	28	172	55	415	36	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			0.95		0.95	0.95	
Frt	1.00	0.99		1.00	0.99			0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	0.97	
Satd. Flow (prot)	1593	4553		1593	4520			3066		1513	1480	
Flt Permitted	0.95	1.00		0.95	1.00			0.88		0.54	0.62	
Satd. Flow (perm)	1593	4553		1593	4520			2714		858	938	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor (vph)	104%	104%	104%	104%	104%	104%	104%	104%	104%	104%	104%	104%
Adj. Flow (vph)	200	1284	46	209	1852	168	29	179	57	432	37	83
RTOR Reduction (vph)	0	2	0	0	8	0	0	18	0	0	11	0
Lane Group Flow (vph)	200	1328	0	209	2012	0	0	247	0	268	273	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases							4			8		
Actuated Green, G (s)	18.0	53.0		29.0	64.0			46.0		46.0	46.0	
Effective Green, g (s)	18.0	53.0		29.0	64.0			46.0		46.0	46.0	
Actuated g/C Ratio	0.13	0.38		0.21	0.46			0.33		0.33	0.33	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	
Lane Grp Cap (vph)	204	1723		329	2066			891		281	308	
v/s Ratio Prot	c0.13	0.29		0.13	c0.45							
v/s Ratio Perm								0.09		c0.31	0.29	
v/c Ratio	0.98	0.77		0.64	0.97			0.28		0.95	0.89	
Uniform Delay, d1	60.8	38.2		50.7	37.2			34.7		46.0	44.5	
Progression Factor	1.00	1.00		0.83	0.22			1.00		1.00	1.00	
Incremental Delay, d2	58.1	3.4		7.5	12.8			0.8		43.0	29.2	
Delay (s)	119.0	41.6		49.6	20.8			35.5		89.0	73.7	
Level of Service	F	D		D	C			D		F	E	
Approach Delay (s)		51.7			23.5			35.5			81.1	
Approach LOS		D			C			D			F	

Intersection Summary			
HCM 2000 Control Delay	40.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1612	348	0	1895	0	44
Future Volume (vph)	1612	613	317	1895	249	227
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	0.97	
Frt	0.96		1.00	1.00	0.93	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	4387		1593	4577	2943	
Flt Permitted	1.00		0.95	1.00	0.97	
Satd. Flow (perm)	4387		1593	4577	2943	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor (vph)	104%	104%	104%	104%	104%	104%
Adj. Flow (vph)	1676	638	330	1971	259	236
RTOR Reduction (vph)	49	0	0	0	119	0
Lane Group Flow (vph)	2265	0	330	1971	376	0
Turn Type	NA		Prot	NA	Prot	
Protected Phases	2		1	6	4	
Permitted Phases						
Actuated Green, G (s)	75.0		33.0	112.0	20.0	
Effective Green, g (s)	75.0		33.0	112.0	20.0	
Actuated g/C Ratio	0.54		0.24	0.80	0.14	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	2350		375	3661	420	
v/s Ratio Prot	c0.52		c0.21	0.43	c0.13	
v/s Ratio Perm						
v/c Ratio	0.96		0.88	0.54	0.89	
Uniform Delay, d1	31.2		51.6	4.9	59.0	
Progression Factor	0.35		1.10	0.17	1.00	
Incremental Delay, d2	10.1		3.0	0.1	24.2	
Delay (s)	21.1		59.6	0.9	83.1	
Level of Service	C		E	A	F	
Approach Delay (s)	21.1			9.3	83.1	
Approach LOS	C			A	F	

Intersection Summary			
HCM 2000 Control Delay	21.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	4	212	24	64	40	283
Future Volume (vph)	5	212	24	64	40	311
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	
Frt		1.00	0.90		0.88	
Flt Protected		1.00	1.00		0.99	
Satd. Flow (prot)		1675	1512		1468	
Flt Permitted		1.00	1.00		0.99	
Satd. Flow (perm)		1675	1512		1468	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor (vph)	104%	104%	104%	104%	104%	104%
Adj. Flow (vph)	5	220	25	67	42	323
RTOR Reduction (vph)	0	0	57	0	181	0
Lane Group Flow (vph)	0	225	35	0	184	0
Turn Type	Split	NA	NA		Prot	
Protected Phases	2	2	6		8	
Permitted Phases						
Actuated Green, G (s)		37.4	18.0		52.6	
Effective Green, g (s)		37.4	18.0		52.6	
Actuated g/C Ratio		0.31	0.15		0.44	
Clearance Time (s)		4.0	4.0		4.0	
Lane Grp Cap (vph)		522	226		643	
v/s Ratio Prot		c0.13	c0.02		c0.13	
v/s Ratio Perm						
v/c Ratio		0.43	0.16		0.29	
Uniform Delay, d1		32.8	44.4		21.6	
Progression Factor		1.00	1.00		1.00	
Incremental Delay, d2		2.6	1.5		1.1	
Delay (s)		35.4	45.8		22.8	
Level of Service		D	D		C	
Approach Delay (s)		35.4	45.8		22.8	
Approach LOS		D	D		C	

Intersection Summary			
HCM 2000 Control Delay	30.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	309	1347	1808	48	225	87
Future Volume (vph)	339	1500	2079	48	225	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.91	0.91		1.00	
Frt	1.00	1.00	1.00		0.95	
Flt Protected	0.95	1.00	1.00		0.97	
Satd. Flow (prot)	1593	4577	4561		1544	
Flt Permitted	0.95	1.00	1.00		0.97	
Satd. Flow (perm)	1593	4577	4561		1544	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor (vph)	104%	104%	104%	104%	104%	104%
Adj. Flow (vph)	353	1560	2162	50	234	138
RTOR Reduction (vph)	0	0	2	0	16	0
Lane Group Flow (vph)	353	1560	2210	0	357	0
Turn Type	Prot	NA	NA		Prot	
Protected Phases	5	2	6		8	
Permitted Phases						
Actuated Green, G (s)	31.0	100.5	65.5		31.5	
Effective Green, g (s)	31.0	100.5	65.5		31.5	
Actuated g/C Ratio	0.22	0.72	0.47		0.22	
Clearance Time (s)	4.0	4.0	4.0		4.0	
Lane Grp Cap (vph)	352	3285	2133		347	
v/s Ratio Prot	c0.22	0.34	c0.48		c0.23	
v/s Ratio Perm						
v/c Ratio	1.00	0.47	1.04		1.03	
Uniform Delay, d1	54.5	8.5	37.2		54.2	
Progression Factor	0.57	0.05	0.72		1.00	
Incremental Delay, d2	27.3	0.2	25.3		55.5	
Delay (s)	58.6	0.6	52.2		109.8	
Level of Service	E	A	D		F	
Approach Delay (s)		11.3	52.2		109.8	
Approach LOS		B	D		F	

Intersection Summary			
HCM 2000 Control Delay	39.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	12	208	1181	171	148	1404	320	208	172	108	172	156
Future Volume (vph)	12	228	1297	188	148	1610	320	239	172	108	172	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1593	4577	1425	1593	4577	1425	1593	1676	1425	1593	1676
Flt Permitted		0.44	1.00	1.00	0.95	1.00	1.00	0.62	1.00	1.00	0.59	1.00
Satd. Flow (perm)		745	4577	1425	1593	4577	1425	1032	1676	1425	982	1676
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor (vph)	104%	104%	104%	104%	104%	104%	104%	104%	104%	104%	104%	104%
Adj. Flow (vph)	12	237	1349	196	154	1674	333	249	179	112	179	162
RTOR Reduction (vph)	0	0	0	61	0	0	84	0	0	82	0	0
Lane Group Flow (vph)	0	249	1349	135	154	1674	249	249	179	30	179	162
Turn Type	custom	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA
Protected Phases		5	2		1	6			8			4
Permitted Phases	5			2			6	8		8	4	
Actuated Green, G (s)		9.0	21.0	21.0	18.5	30.5	30.5	18.5	18.5	18.5	18.5	18.5
Effective Green, g (s)		9.0	21.0	21.0	18.5	30.5	30.5	18.5	18.5	18.5	18.5	18.5
Actuated g/C Ratio		0.13	0.30	0.30	0.26	0.44	0.44	0.26	0.26	0.26	0.26	0.26
Clearance Time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)		95	1373	427	421	1994	620	272	442	376	259	442
v/s Ratio Prot			c0.29		0.10	c0.37			0.11			0.10
v/s Ratio Perm		c0.33		0.09			0.17	c0.24		0.02	0.18	
v/c Ratio		2.62	0.98	0.32	0.37	0.84	0.40	0.92	0.40	0.08	0.69	0.37
Uniform Delay, d1		30.5	24.3	18.9	21.0	17.6	13.5	25.0	21.2	19.3	23.2	21.0
Progression Factor		1.10	1.21	1.02	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		754.5	18.6	1.6	2.4	4.4	1.9	36.5	2.7	0.4	14.1	2.3
Delay (s)		788.1	48.0	21.1	23.4	22.0	15.4	61.5	24.0	19.8	37.3	23.3
Level of Service		F	D	C	C	C	B	E	C	B	D	C
Approach Delay (s)			147.8			21.1			40.4			26.7
Approach LOS			F			C			D			C

Intersection Summary			
HCM 2000 Control Delay	68.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBR
Lane Configurations	
Traffic Volume (vph)	232
Future Volume (vph)	266
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1425
Flt Permitted	1.00
Satd. Flow (perm)	1425
Peak-hour factor, PHF	1.00
Growth Factor (vph)	104%
Adj. Flow (vph)	277
RTOR Reduction (vph)	183
Lane Group Flow (vph)	94
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Actuated Green, G (s)	18.5
Effective Green, g (s)	18.5
Actuated g/C Ratio	0.26
Clearance Time (s)	4.0
Lane Grp Cap (vph)	376
v/s Ratio Prot	
v/s Ratio Perm	0.07
v/c Ratio	0.25
Uniform Delay, d1	20.3
Progression Factor	1.00
Incremental Delay, d2	1.6
Delay (s)	21.9
Level of Service	C
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	8	68	20	24	12	20	120	16	24	296	8
Future Volume (Veh/h)	4	8	78	20	24	12	22	132	16	24	339	8
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	4	8	81	21	25	12	23	137	17	25	353	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								108				
pX, platoon unblocked												
vC, conflicting volume	623	607	357	684	602	146	361			154		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	623	607	357	684	602	146	361			154		
tC, single (s)	7.1	*4.5	*4.1	*4.1	*4.5	*4.1	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	*2.1	*2.0	*2.2	*2.0	*2.1	2.2			2.2		
p0 queue free %	99	99	94	97	97	99	98			98		
cM capacity (veh/h)	377	919	1321	833	961	1515	1198			1426		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	93	58	177	386
Volume Left	4	21	23	25
Volume Right	81	12	17	8
cSH	1154	981	1198	1426
Volume to Capacity	0.08	0.06	0.02	0.02
Queue Length 95th (ft)	7	5	1	1
Control Delay (s)	8.4	8.9	1.2	0.6
Lane LOS	A	A	A	A
Approach Delay (s)	8.4	8.9	1.2	0.6
Approach LOS	A	A		

Intersection Summary				
Average Delay	2.5			
Intersection Capacity Utilization	40.5%	ICU Level of Service	A	
Analysis Period (min)	15			

* User Entered Value



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	0	20	92	12	188	32	435	13	0	352	4
Future Volume (Veh/h)	20	0	23	92	12	188	35	478	13	0	404	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	21	0	24	96	12	196	36	497	14	0	420	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								90				
pX, platoon unblocked	0.96	0.96		0.96	0.96	0.96				0.96		
vC, conflicting volume	944	1005	212	810	1000	256	424			511		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	856	919	212	715	914	137	424			403		
tC, single (s)	*4.1	6.5	*4.5	*4.1	*4.5	*4.1	4.1			4.1		
tC, 2 stage (s)												
tF (s)	*2.2	4.0	*2.0	*2.2	*2.1	*2.0	2.2			2.2		
p0 queue free %	97	100	98	88	98	87	97			100		
cM capacity (veh/h)	638	250	1464	823	655	1533	1132			1104		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	45	304	284	262	210	214
Volume Left	21	96	36	0	0	0
Volume Right	24	196	0	14	0	4
cSH	912	1157	1132	1700	1104	1700
Volume to Capacity	0.05	0.26	0.03	0.15	0.00	0.13
Queue Length 95th (ft)	4	26	2	0	0	0
Control Delay (s)	9.1	9.2	1.3	0.0	0.0	0.0
Lane LOS	A	A	A			
Approach Delay (s)	9.1	9.2	0.7		0.0	
Approach LOS	A	A				

Intersection Summary				
Average Delay	2.7			
Intersection Capacity Utilization	58.9%	ICU Level of Service	B	
Analysis Period (min)	15			

* User Entered Value



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	48	68	172	55	302	0	0	264	12
Future Volume (Veh/h)	0	0	0	55	68	172	55	332	0	0	303	12
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	0	57	71	179	57	345	0	0	315	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								82				
pX, platoon unblocked												
vC, conflicting volume	994	780	321	780	786	345	327			345		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	994	780	321	780	786	345	327			345		
tC, single (s)	7.1	6.5	6.2	*4.1	*4.5	*4.1	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	*2.2	*2.1	*2.0	2.2			2.2		
p0 queue free %	100	100	100	93	91	87	95			100		
cM capacity (veh/h)	174	312	720	816	763	1335	1233			1214		

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	307	402	327
Volume Left	57	57	0
Volume Right	179	0	12
cSH	1034	1233	1700
Volume to Capacity	0.30	0.05	0.19
Queue Length 95th (ft)	31	4	0
Control Delay (s)	9.9	1.5	0.0
Lane LOS	A	A	
Approach Delay (s)	9.9	1.5	0.0
Approach LOS	A		

Intersection Summary				
Average Delay	3.5			
Intersection Capacity Utilization	68.2%	ICU Level of Service	C	
Analysis Period (min)	15			

* User Entered Value



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	112	16	29	32	305	43
Future Volume (Veh/h)	128	16	461	35	305	625
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	133	17	479	36	317	650
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						105
pX, platoon unblocked						
vC, conflicting volume	1781	497			515	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1781	497			515	
tC, single (s)	*4.1	*4.1			4.1	
tC, 2 stage (s)						
tF (s)	*2.2	*2.0			2.2	
p0 queue free %	46	99			70	
cM capacity (veh/h)	247	1170			1051	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	150	515	967
Volume Left	133	0	317
Volume Right	17	36	0
cSH	271	1700	1051
Volume to Capacity	0.55	0.30	0.30
Queue Length 95th (ft)	77	0	32
Control Delay (s)	33.6	0.0	6.5
Lane LOS	D		A
Approach Delay (s)	33.6	0.0	6.5
Approach LOS	D		

Intersection Summary			
Average Delay	6.9		
Intersection Capacity Utilization	43.8%	ICU Level of Service	A
Analysis Period (min)	15		

* User Entered Value

Development: Ponce Health Sciences University

Driveway: 1 PHSU

Origin #	Route	To		From	
		Distribution %	Trips	Distribution %	Trips
1	Origin 1 (Node 4) to PHSU	23.10	68	37.91	152
2	Origin 2 (Node 5) to PHSU	8.54	25	1.97	8
3	Origin 3 (Node 13) to PHSU	0.94	3	0.64	3
4	Origin 4 (Node 7) to PHSU	0.00	---	4.29	17
5	Origin 5 (Node 11) to PHSU	9.95	29	5.49	22
6	Origin 6 (Node 15) to PHSU	0.47	1	0.60	2
7	Origin 7 (Node 27) to PHSU	0.94	3	4.42	18
8	Origin 8 (Node 28) to PHSU	3.38	10	0.17	1
9	Origin 9 (Node 19) to PHSU	6.20	18	6.05	24
10	PHSU to Origin 10 (Node 21)	1.13	3	0.00	---
11	Origin 11 (Node 23) to PHSU	5.63	17	4.03	16
12	Origin 12 (Node 22) to PHSU	35.49	104	29.18	117
13	Origin 13 (Node 24) to PHSU	4.23	12	5.23	21

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Date: 2019.08.13 15:48:42



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	984	0	184	1767	20	75	9	0	178	92	154
Future Volume (vph)	108	1052	0	201	1919	31	75	9	0	206	92	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			1.00			0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.98	
Satd. Flow (prot)	1593	4577		1593	4566			1605			1564	
Flt Permitted	0.95	1.00		0.95	1.00			0.48			0.98	
Satd. Flow (perm)	1593	4577		1593	4566			812			1564	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor (vph)	104%	104%	104%	104%	104%	104%	104%	104%	104%	104%	104%	104%
Adj. Flow (vph)	112	1094	0	209	1996	32	78	9	0	214	96	160
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	0	0	12	0
Lane Group Flow (vph)	112	1094	0	209	2027	0	0	87	0	0	458	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Split	NA	
Protected Phases	5	2		1	6			4		8	8	
Permitted Phases							4					
Actuated Green, G (s)	8.0	50.0		25.0	67.0			18.0			41.0	
Effective Green, g (s)	8.0	50.0		25.0	67.0			18.0			41.0	
Actuated g/C Ratio	0.05	0.33		0.17	0.45			0.12			0.27	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	84	1525		265	2039			97			427	
v/s Ratio Prot	c0.07	0.24		0.13	c0.44						c0.29	
v/s Ratio Perm								c0.11				
v/c Ratio	1.33	0.72		0.79	0.99			0.90			1.07	
Uniform Delay, d1	71.0	43.8		60.0	41.3			65.1			54.5	
Progression Factor	1.00	1.00		1.00	1.00			0.80			1.00	
Incremental Delay, d2	210.9	2.9		20.8	18.6			48.5			64.0	
Delay (s)	281.9	46.7		80.8	59.9			100.4			118.5	
Level of Service	F	D		F	E			F			F	
Approach Delay (s)		68.6			61.8			100.4			118.5	
Approach LOS		E			E			F			F	

Intersection Summary			
HCM 2000 Control Delay	71.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	82.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	132	1268	16	206	1739	102	36	12	40	348	76	196
Future Volume (vph)	132	1364	16	224	1919	126	36	12	43	378	76	196
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			0.95		0.95	0.95	
Frt	1.00	1.00		1.00	0.99			0.93		1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.98		0.95	0.99	
Satd. Flow (prot)	1593	4569		1593	4534			2899		1513	1435	
Flt Permitted	0.95	1.00		0.95	1.00			0.75		0.69	0.95	
Satd. Flow (perm)	1593	4569		1593	4534			2220		1104	1367	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor (vph)	104%	104%	104%	104%	104%	104%	104%	104%	104%	104%	104%	104%
Adj. Flow (vph)	137	1419	17	233	1996	131	37	12	45	393	79	204
RTOR Reduction (vph)	0	1	0	0	7	0	0	30	0	0	53	0
Lane Group Flow (vph)	137	1435	0	233	2120	0	0	64	0	346	277	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases							4			8		
Actuated Green, G (s)	10.0	42.0		20.0	52.0			36.0		36.0	36.0	
Effective Green, g (s)	10.0	42.0		20.0	52.0			36.0		36.0	36.0	
Actuated g/C Ratio	0.09	0.38		0.18	0.47			0.33		0.33	0.33	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	
Lane Grp Cap (vph)	144	1744		289	2143			726		361	447	
v/s Ratio Prot	c0.09	0.31		0.15	c0.47							
v/s Ratio Perm								0.03		c0.31	0.20	
v/c Ratio	0.95	0.82		0.81	0.99			0.09		0.96	0.62	
Uniform Delay, d1	49.8	30.6		43.1	28.7			25.6		36.3	31.2	
Progression Factor	1.00	1.00		0.58	0.34			1.00		1.00	1.00	
Incremental Delay, d2	63.0	4.5		16.5	14.6			0.2		38.0	6.3	
Delay (s)	112.8	35.2		41.4	24.4			25.9		74.2	37.5	
Level of Service	F	D		D	C			C		E	D	
Approach Delay (s)		41.9			26.1			25.9			56.3	
Approach LOS		D			C			C			E	

Intersection Summary			
HCM 2000 Control Delay	35.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1548	320	0	2047	0	124
Future Volume (vph)	1548	449	154	2047	222	302
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	0.97	
Frt	0.97		1.00	1.00	0.91	
Flt Protected	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	4422		1593	4577	2910	
Flt Permitted	1.00		0.07	1.00	0.98	
Satd. Flow (perm)	4422		120	4577	2910	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor (vph)	104%	104%	104%	104%	104%	104%
Adj. Flow (vph)	1610	467	160	2129	231	314
RTOR Reduction (vph)	48	0	0	0	54	0
Lane Group Flow (vph)	2029	0	160	2129	491	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	4	
Permitted Phases			6			
Actuated Green, G (s)	84.0		84.0	84.0	18.0	
Effective Green, g (s)	84.0		84.0	84.0	18.0	
Actuated g/C Ratio	0.76		0.76	0.76	0.16	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	3376		91	3495	476	
v/s Ratio Prot	0.46			0.47	c0.17	
v/s Ratio Perm			c1.33			
v/c Ratio	0.60		1.76	0.61	1.08dr	
Uniform Delay, d1	5.7		13.0	5.7	46.0	
Progression Factor	0.37		1.43	0.16	1.00	
Incremental Delay, d2	0.5		345.3	0.1	49.4	
Delay (s)	2.6		363.8	1.0	95.4	
Level of Service	A		F	A	F	
Approach Delay (s)	2.6			26.3	95.4	
Approach LOS	A			C	F	

Intersection Summary			
HCM 2000 Control Delay	24.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.62		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	4	300	76	84	76	200
Future Volume (vph)	4	300	76	84	76	217
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	
Frt		1.00	0.93		0.90	
Flt Protected		1.00	1.00		0.99	
Satd. Flow (prot)		1675	1558		1489	
Flt Permitted		1.00	1.00		0.99	
Satd. Flow (perm)		1675	1558		1489	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor (vph)	104%	104%	104%	104%	104%	104%
Adj. Flow (vph)	4	312	79	87	79	226
RTOR Reduction (vph)	0	0	26	0	69	0
Lane Group Flow (vph)	0	316	140	0	236	0
Turn Type	Split	NA	NA		Prot	
Protected Phases	2	2	6		8	
Permitted Phases						
Actuated Green, G (s)		50.0	18.0		70.0	
Effective Green, g (s)		50.0	18.0		70.0	
Actuated g/C Ratio		0.33	0.12		0.47	
Clearance Time (s)		4.0	4.0		4.0	
Lane Grp Cap (vph)		558	186		694	
v/s Ratio Prot		c0.19	c0.09		c0.16	
v/s Ratio Perm						
v/c Ratio		0.57	0.75		0.34	
Uniform Delay, d1		41.1	63.8		25.4	
Progression Factor		1.00	1.00		2.66	
Incremental Delay, d2		4.1	24.0		0.6	
Delay (s)		45.2	87.8		68.2	
Level of Service		D	F		E	
Approach Delay (s)		45.2	87.8		68.2	
Approach LOS		D	F		E	

Intersection Summary			
HCM 2000 Control Delay	63.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	47.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	293	1379	1903	41	256	144
Future Volume (vph)	317	1533	2036	41	256	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.91	0.91		1.00	
Frt	1.00	1.00	1.00		0.95	
Flt Protected	0.95	1.00	1.00		0.97	
Satd. Flow (prot)	1593	4577	4563		1541	
Flt Permitted	0.95	1.00	1.00		0.97	
Satd. Flow (perm)	1593	4577	4563		1541	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor (vph)	104%	104%	104%	104%	104%	104%
Adj. Flow (vph)	330	1594	2117	43	266	172
RTOR Reduction (vph)	0	0	2	0	21	0
Lane Group Flow (vph)	330	1594	2158	0	417	0
Turn Type	Prot	NA	NA		Prot	
Protected Phases	5	2	6		8	
Permitted Phases						
Actuated Green, G (s)	21.0	74.4	49.4		27.6	
Effective Green, g (s)	21.0	74.4	49.4		27.6	
Actuated g/C Ratio	0.19	0.68	0.45		0.25	
Clearance Time (s)	4.0	4.0	4.0		4.0	
Lane Grp Cap (vph)	304	3095	2049		386	
v/s Ratio Prot	c0.21	0.35	c0.47		c0.27	
v/s Ratio Perm						
v/c Ratio	1.09	0.52	1.05		1.08	
Uniform Delay, d1	44.5	8.8	30.3		41.2	
Progression Factor	0.70	0.41	0.64		1.00	
Incremental Delay, d2	69.0	0.4	29.2		69.0	
Delay (s)	100.4	4.1	48.5		110.2	
Level of Service	F	A	D		F	
Approach Delay (s)		20.6	48.5		110.2	
Approach LOS		C	D		F	

Intersection Summary			
HCM 2000 Control Delay	42.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	12	188	1360	244	144	1512	248	180	160	104	168	156
Future Volume (vph)	12	204	1477	265	144	1616	248	192	160	104	168	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1593	4577	1425	1593	4577	1425	1593	1676	1425	1593	1676
Flt Permitted		0.73	1.00	1.00	0.95	1.00	1.00	0.65	1.00	1.00	0.65	1.00
Satd. Flow (perm)		1219	4577	1425	1593	4577	1425	1097	1676	1425	1093	1676
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor (vph)	104%	104%	104%	104%	104%	104%	104%	104%	104%	104%	104%	104%
Adj. Flow (vph)	12	212	1536	276	150	1681	258	200	166	108	175	162
RTOR Reduction (vph)	0	0	0	96	0	0	82	0	0	72	0	0
Lane Group Flow (vph)	0	224	1536	180	150	1681	176	200	166	36	175	162
Turn Type	custom	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA
Protected Phases		5	2		1	6			8			4
Permitted Phases	5			2			6	8		8	4	
Actuated Green, G (s)		5.5	19.0	19.0	5.5	19.0	19.0	18.5	18.5	18.5	18.5	18.5
Effective Green, g (s)		5.5	19.0	19.0	5.5	19.0	19.0	18.5	18.5	18.5	18.5	18.5
Actuated g/C Ratio		0.10	0.35	0.35	0.10	0.35	0.35	0.34	0.34	0.34	0.34	0.34
Clearance Time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)		121	1581	492	159	1581	492	368	563	479	367	563
v/s Ratio Prot			0.34		0.09	c0.37			0.10			0.10
v/s Ratio Perm		c0.18		0.13			0.12	c0.18		0.03	0.16	
v/c Ratio		1.85	0.97	0.37	0.94	1.06	0.36	0.54	0.29	0.08	0.48	0.29
Uniform Delay, d1		24.8	17.7	13.5	24.6	18.0	13.4	14.8	13.4	12.4	14.4	13.4
Progression Factor		0.86	0.76	0.39	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		408.8	15.1	1.8	57.7	41.6	2.0	5.7	1.3	0.3	4.4	1.3
Delay (s)		430.0	28.5	7.1	82.3	59.6	15.5	20.5	14.8	12.7	18.8	14.7
Level of Service		F	C	A	F	E	B	C	B	B	B	B
Approach Delay (s)			69.8			55.8			16.7			15.6
Approach LOS			E			E			B			B

Intersection Summary			
HCM 2000 Control Delay	53.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBR
Lane Configurations	
Traffic Volume (vph)	240
Future Volume (vph)	257
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1425
Flt Permitted	1.00
Satd. Flow (perm)	1425
Peak-hour factor, PHF	1.00
Growth Factor (vph)	104%
Adj. Flow (vph)	267
RTOR Reduction (vph)	167
Lane Group Flow (vph)	100
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Actuated Green, G (s)	18.5
Effective Green, g (s)	18.5
Actuated g/C Ratio	0.34
Clearance Time (s)	4.0
Lane Grp Cap (vph)	479
v/s Ratio Prot	
v/s Ratio Perm	0.07
v/c Ratio	0.21
Uniform Delay, d1	13.0
Progression Factor	1.00
Incremental Delay, d2	1.0
Delay (s)	14.0
Level of Service	B
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	8	40	20	68	32	30	92	15	0	364	4
Future Volume (Veh/h)	0	8	43	20	68	32	33	100	15	0	389	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	8	45	21	71	33	34	104	16	0	405	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								108				
pX, platoon unblocked												
vC, conflicting volume	656	595	407	636	589	112	409			120		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	656	595	407	636	589	112	409			120		
tC, single (s)	7.1	*4.5	*4.1	*4.1	*4.5	*4.1	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	*2.1	*2.0	*2.2	*2.0	*2.1	2.2			2.2		
p0 queue free %	100	99	96	98	93	98	97			100		
cM capacity (veh/h)	343	936	1265	896	981	1559	1150			1468		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	53	125	154	409
Volume Left	0	21	34	0
Volume Right	45	33	16	4
cSH	1201	1069	1150	1468
Volume to Capacity	0.04	0.12	0.03	0.00
Queue Length 95th (ft)	3	10	2	0
Control Delay (s)	8.1	8.8	2.0	0.0
Lane LOS	A	A	A	
Approach Delay (s)	8.1	8.8	2.0	0.0
Approach LOS	A	A		

Intersection Summary				
Average Delay	2.5			
Intersection Capacity Utilization	55.3%	ICU Level of Service	B	
Analysis Period (min)	15			

* User Entered Value



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	0	20	144	12	128	28	256	0	0	424	12
Future Volume (Veh/h)	4	0	21	144	12	128	30	278	0	0	453	12
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	4	0	22	150	12	133	31	289	0	0	471	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								90				
pX, platoon unblocked												
vC, conflicting volume	822	828	242	608	834	144	483			289		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	822	828	242	608	834	144	483			289		
tC, single (s)	*4.1	6.5	*4.5	*4.1	*4.5	*4.1	4.1			4.1		
tC, 2 stage (s)												
tF (s)	*2.2	4.0	*2.0	*2.2	*2.1	*2.0	2.2			2.2		
p0 queue free %	99	100	98	84	98	92	97			100		
cM capacity (veh/h)	722	296	1422	943	741	1589	1076			1270		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	26	295	176	144	236	248
Volume Left	4	150	31	0	0	0
Volume Right	22	133	0	0	0	12
cSH	1238	1140	1076	1700	1270	1700
Volume to Capacity	0.02	0.26	0.03	0.09	0.00	0.15
Queue Length 95th (ft)	2	26	2	0	0	0
Control Delay (s)	8.0	9.3	1.7	0.0	0.0	0.0
Lane LOS	A	A	A			
Approach Delay (s)	8.0	9.3	0.9		0.0	
Approach LOS	A	A				

Intersection Summary				
Average Delay	2.9			
Intersection Capacity Utilization	58.8%	ICU Level of Service		B
Analysis Period (min)	15			

* User Entered Value



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	48	68	172	52	282	0	0	264	12
Future Volume (Veh/h)	0	0	0	51	68	172	52	306	0	0	282	12
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	0	53	71	179	54	318	0	0	293	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								84				
pX, platoon unblocked												
vC, conflicting volume	940	725	299	725	731	318	305			318		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	940	725	299	725	731	318	305			318		
tC, single (s)	7.1	6.5	6.2	*4.1	*4.5	*4.1	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	*2.2	*2.1	*2.0	2.2			2.2		
p0 queue free %	100	100	100	94	91	87	96			100		
cM capacity (veh/h)	191	336	741	858	808	1367	1256			1242		

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	303	372	305
Volume Left	53	54	0
Volume Right	179	0	12
cSH	1080	1256	1700
Volume to Capacity	0.28	0.04	0.18
Queue Length 95th (ft)	29	3	0
Control Delay (s)	9.6	1.5	0.0
Lane LOS	A	A	
Approach Delay (s)	9.6	1.5	0.0
Approach LOS	A		

Intersection Summary				
Average Delay	3.6			
Intersection Capacity Utilization	66.8%	ICU Level of Service	C	
Analysis Period (min)	15			

* User Entered Value



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	144	16	108	8	32	288
Future Volume (Veh/h)	154	16	508	9	32	571
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	160	17	528	9	33	594
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						105
pX, platoon unblocked						
vC, conflicting volume	1192	532			537	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1192	532			537	
tC, single (s)	*4.1	*4.1			4.1	
tC, 2 stage (s)						
tF (s)	*2.2	*2.0			2.2	
p0 queue free %	72	99			97	
cM capacity (veh/h)	574	1134			1031	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	177	537	627
Volume Left	160	0	33
Volume Right	17	9	0
cSH	602	1700	1031
Volume to Capacity	0.29	0.32	0.03
Queue Length 95th (ft)	31	0	2
Control Delay (s)	13.4	0.0	0.9
Lane LOS	B		A
Approach Delay (s)	13.4	0.0	0.9
Approach LOS	B		

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		

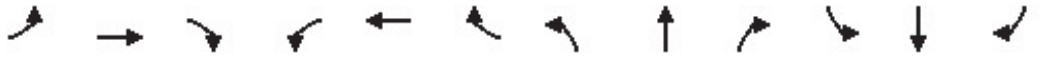
* User Entered Value

Development: Ponce Health Sciences University

Driveway: 1 PHSU

Origin #	Route	To		From	
		Distribution %	Trips	Distribution %	Trips
1	Origin 1 (Node 4) to PHSU	24.88	149	32.89	143
2	Origin 2 (Node 7) to PHSU	0.10	1	6.40	28
3	Origin 3 (Node 5) to PHSU	7.28	43	2.71	12
4	Origin 4 (Node 13) to PHSU	1.67	10	0.45	2
5	Origin 5 (Node 11) to PHSU	8.65	52	9.84	43
6	Origin 6 (Node 15) to PHSU	0.49	3	0.72	3
7	Origin 7 (Node 27) to PHSU	1.18	7	4.14	18
8	Origin 8 (Node 28) to PHSU	2.75	16	0.72	3
9	Origin 9 (Node 19) to PHSU	6.49	39	6.83	30
10	PHSU to Origin 10 (Node 21)	1.18	7	0.00	---
11	Origin 11 (Node 23) to PHSU	5.70	34	4.70	20
12	Origin 12 (Node 22) to PHSU	34.51	206	26.71	116
13	Origin 13 (Node 24) to PHSU	5.11	31	3.87	17

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Date: 2019.08.13 15:48:42



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	96	1012	12	206	1454	44	52	12	4	211	105	68
Future Volume (vph)	96	1161	12	234	1597	58	52	12	5	264	105	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.97	
Satd. Flow (prot)	1593	4570		1593	4553			1599			1593	
Flt Permitted	0.95	1.00		0.95	1.00			0.67			0.97	
Satd. Flow (perm)	1593	4570		1593	4553			1120			1593	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	106	1277	13	257	1757	64	57	13	6	290	116	75
RTOR Reduction (vph)	0	1	0	0	2	0	0	2	0	0	4	0
Lane Group Flow (vph)	106	1289	0	257	1819	0	0	74	0	0	477	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Split	NA	
Protected Phases	5	2		1	6			4		8	8	
Permitted Phases							4					
Actuated Green, G (s)	11.0	45.0		26.0	60.0			19.0			44.0	
Effective Green, g (s)	11.0	45.0		26.0	60.0			19.0			44.0	
Actuated g/C Ratio	0.07	0.30		0.17	0.40			0.13			0.29	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	116	1371		276	1821			141			467	
v/s Ratio Prot	0.07	0.28		c0.16	c0.40						c0.30	
v/s Ratio Perm								c0.07				
v/c Ratio	0.91	0.94		0.93	1.00			0.53			1.02	
Uniform Delay, d1	69.0	51.2		61.1	45.0			61.3			53.0	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	62.8	13.7		39.0	20.8			13.4			47.0	
Delay (s)	131.8	64.9		100.2	65.7			74.7			100.0	
Level of Service	F	E		F	E			E			F	
Approach Delay (s)		70.0			70.0			74.7			100.0	
Approach LOS		E			E			E			F	

Intersection Summary			
HCM 2000 Control Delay	73.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	78.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	192	1032	44	183	1596	116	28	172	48	360	36	80
Future Volume (vph)	192	1235	44	201	1781	162	28	172	55	415	36	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			0.95		0.95	0.95	
Frt	1.00	0.99		1.00	0.99			0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	0.97	
Satd. Flow (prot)	1593	4553		1593	4520			3065		1513	1480	
Flt Permitted	0.95	1.00		0.95	1.00			0.86		0.52	0.60	
Satd. Flow (perm)	1593	4553		1593	4520			2638		835	917	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	211	1358	48	221	1959	178	31	189	60	456	40	88
RTOR Reduction (vph)	0	3	0	0	8	0	0	18	0	0	11	0
Lane Group Flow (vph)	211	1404	0	221	2129	0	0	263	0	283	291	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases							4			8		
Actuated Green, G (s)	18.0	57.8		24.0	63.8			46.2		46.2	46.2	
Effective Green, g (s)	18.0	57.8		24.0	63.8			46.2		46.2	46.2	
Actuated g/C Ratio	0.13	0.41		0.17	0.46			0.33		0.33	0.33	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	
Lane Grp Cap (vph)	204	1879		273	2059			870		275	302	
v/s Ratio Prot	c0.13	0.31		0.14	c0.47							
v/s Ratio Perm								0.10		c0.34	0.32	
v/c Ratio	1.03	0.75		0.81	1.03			0.30		1.03	0.96	
Uniform Delay, d1	61.0	34.9		55.8	38.1			34.9		46.9	46.1	
Progression Factor	1.00	1.00		0.84	0.25			1.00		1.00	1.00	
Incremental Delay, d2	72.3	2.8		18.2	27.2			0.9		62.0	43.5	
Delay (s)	133.3	37.7		65.3	36.7			35.8		108.9	89.6	
Level of Service	F	D		E	D			D		F	F	
Approach Delay (s)		50.1			39.4			35.8			98.9	
Approach LOS		D			D			D			F	

Intersection Summary			
HCM 2000 Control Delay	50.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1612	348	0	1895	0	44
Future Volume (vph)	1612	613	317	1895	249	227
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	0.97	
Frt	0.96		1.00	1.00	0.93	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	4388		1593	4577	2943	
Flt Permitted	1.00		0.95	1.00	0.97	
Satd. Flow (perm)	4388		1593	4577	2943	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor (vph)	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	1773	674	349	2084	274	250
RTOR Reduction (vph)	49	0	0	0	119	0
Lane Group Flow (vph)	2398	0	349	2085	405	0
Turn Type	NA		Prot	NA	Prot	
Protected Phases	2		1	6	4	
Permitted Phases						
Actuated Green, G (s)	76.0		32.0	112.0	20.0	
Effective Green, g (s)	76.0		32.0	112.0	20.0	
Actuated g/C Ratio	0.54		0.23	0.80	0.14	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	2382		364	3661	420	
v/s Ratio Prot	c0.55		c0.22	0.46	c0.14	
v/s Ratio Perm						
v/c Ratio	1.01		0.96	0.57	0.96	
Uniform Delay, d1	32.0		53.3	5.1	59.6	
Progression Factor	0.40		1.05	0.21	1.00	
Incremental Delay, d2	18.1		7.4	0.1	35.8	
Delay (s)	30.9		63.7	1.1	95.4	
Level of Service	C		E	A	F	
Approach Delay (s)	30.9			10.1	95.4	
Approach LOS	C			B	F	

Intersection Summary			
HCM 2000 Control Delay	27.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	4	212	24	64	40	283
Future Volume (vph)	5	212	24	64	40	311
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	
Frt		1.00	0.90		0.88	
Flt Protected		1.00	1.00		0.99	
Satd. Flow (prot)		1674	1511		1468	
Flt Permitted		1.00	1.00		0.99	
Satd. Flow (perm)		1674	1511		1468	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor (vph)	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	6	233	26	70	44	342
RTOR Reduction (vph)	0	0	60	0	202	0
Lane Group Flow (vph)	0	239	36	0	184	0
Turn Type	Split	NA	NA		Prot	
Protected Phases	2	2	6		8	
Permitted Phases						
Actuated Green, G (s)		45.0	19.0		52.6	
Effective Green, g (s)		45.0	19.0		52.6	
Actuated g/C Ratio		0.35	0.15		0.41	
Clearance Time (s)		4.0	4.0		4.0	
Lane Grp Cap (vph)		585	223		600	
v/s Ratio Prot		c0.14	c0.02		c0.13	
v/s Ratio Perm						
v/c Ratio		0.41	0.16		0.31	
Uniform Delay, d1		31.7	47.9		25.7	
Progression Factor		1.00	1.00		1.00	
Incremental Delay, d2		2.1	1.6		1.3	
Delay (s)		33.8	49.4		27.0	
Level of Service		C	D		C	
Approach Delay (s)		33.8	49.4		27.0	
Approach LOS		C	D		C	

Intersection Summary			
HCM 2000 Control Delay	32.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	128.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	309	1347	1808	48	225	87
Future Volume (vph)	339	1500	2079	48	225	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.91	0.91		1.00	
Frt	1.00	1.00	1.00		0.95	
Flt Protected	0.95	1.00	1.00		0.97	
Satd. Flow (prot)	1593	4577	4561		1544	
Flt Permitted	0.95	1.00	1.00		0.97	
Satd. Flow (perm)	1593	4577	4561		1544	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor (vph)	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	373	1650	2287	53	248	146
RTOR Reduction (vph)	0	0	2	0	15	0
Lane Group Flow (vph)	373	1650	2338	0	379	0
Turn Type	Prot	NA	NA		Prot	
Protected Phases	5	2	6		8	
Permitted Phases						
Actuated Green, G (s)	31.0	100.3	65.3		31.7	
Effective Green, g (s)	31.0	100.3	65.3		31.7	
Actuated g/C Ratio	0.22	0.72	0.47		0.23	
Clearance Time (s)	4.0	4.0	4.0		4.0	
Lane Grp Cap (vph)	352	3279	2127		349	
v/s Ratio Prot	c0.23	0.36	c0.51		c0.25	
v/s Ratio Perm						
v/c Ratio	1.06	0.50	1.10		1.08	
Uniform Delay, d1	54.5	8.8	37.4		54.1	
Progression Factor	0.59	0.05	0.74		1.00	
Incremental Delay, d2	33.4	0.1	49.0		72.7	
Delay (s)	65.7	0.5	76.5		126.8	
Level of Service	E	A	E		F	
Approach Delay (s)		12.5	76.5		126.8	
Approach LOS		B	E		F	

Intersection Summary			
HCM 2000 Control Delay	53.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	12	208	1181	171	148	1404	320	208	172	108	172	156
Future Volume (vph)	12	228	1297	188	148	1610	320	239	172	108	172	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1593	4577	1425	1593	4577	1425	1593	1676	1425	1593	1676
Flt Permitted		0.44	1.00	1.00	0.95	1.00	1.00	0.60	1.00	1.00	0.57	1.00
Satd. Flow (perm)		745	4577	1425	1593	4577	1425	1003	1676	1425	952	1676
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	13	251	1427	207	163	1771	352	263	189	119	189	172
RTOR Reduction (vph)	0	0	0	61	0	0	84	0	0	88	0	0
Lane Group Flow (vph)	0	264	1427	146	163	1771	268	263	189	31	189	172
Turn Type	custom	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA
Protected Phases		5	2		1	6			8			4
Permitted Phases	5			2			6	8		8	4	
Actuated Green, G (s)		9.0	21.0	21.0	18.5	30.5	30.5	18.5	18.5	18.5	18.5	18.5
Effective Green, g (s)		9.0	21.0	21.0	18.5	30.5	30.5	18.5	18.5	18.5	18.5	18.5
Actuated g/C Ratio		0.13	0.30	0.30	0.26	0.44	0.44	0.26	0.26	0.26	0.26	0.26
Clearance Time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)		95	1373	427	421	1994	620	265	442	376	251	442
v/s Ratio Prot			c0.31		0.10	c0.39			0.11			0.10
v/s Ratio Perm		c0.35		0.10			0.19	c0.26		0.02	0.20	
v/c Ratio		2.78	1.04	0.34	0.39	0.89	0.43	0.99	0.43	0.08	0.75	0.39
Uniform Delay, d1		30.5	24.5	19.1	21.1	18.2	13.7	25.7	21.4	19.4	23.7	21.1
Progression Factor		1.09	1.21	1.02	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		824.1	33.0	1.8	2.7	6.4	2.2	53.4	3.0	0.4	18.7	2.6
Delay (s)		857.3	62.7	21.3	23.8	24.5	15.9	79.1	24.4	19.8	42.4	23.7
Level of Service		F	E	C	C	C	B	E	C	B	D	C
Approach Delay (s)			168.7			23.2			48.6			28.6
Approach LOS			F			C			D			C

Intersection Summary			
HCM 2000 Control Delay	77.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBR
Lane Configurations	
Traffic Volume (vph)	232
Future Volume (vph)	266
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1425
Flt Permitted	1.00
Satd. Flow (perm)	1425
Peak-hour factor, PHF	1.00
Growth Factor (vph)	110%
Adj. Flow (vph)	293
RTOR Reduction (vph)	181
Lane Group Flow (vph)	112
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Actuated Green, G (s)	18.5
Effective Green, g (s)	18.5
Actuated g/C Ratio	0.26
Clearance Time (s)	4.0
Lane Grp Cap (vph)	376
v/s Ratio Prot	
v/s Ratio Perm	0.08
v/c Ratio	0.30
Uniform Delay, d1	20.6
Progression Factor	1.00
Incremental Delay, d2	2.0
Delay (s)	22.6
Level of Service	C
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	8	68	20	24	12	20	120	16	24	296	8
Future Volume (Veh/h)	4	8	78	20	24	12	22	132	16	24	339	8
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	4	9	86	22	26	13	24	145	18	26	373	9
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								108				
pX, platoon unblocked												
vC, conflicting volume	658	640	378	722	636	154	382			163		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	658	640	378	722	636	154	382			163		
tC, single (s)	7.1	*4.5	*4.1	*4.1	*4.5	*4.1	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	*2.1	*2.0	*2.2	*2.0	*2.1	2.2			2.2		
p0 queue free %	99	99	93	97	97	99	98			98		
cM capacity (veh/h)	356	887	1298	800	928	1504	1176			1416		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	99	61	187	408
Volume Left	4	22	24	26
Volume Right	86	13	18	9
cSH	1130	951	1176	1416
Volume to Capacity	0.09	0.06	0.02	0.02
Queue Length 95th (ft)	7	5	2	1
Control Delay (s)	8.5	9.0	1.2	0.7
Lane LOS	A	A	A	A
Approach Delay (s)	8.5	9.0	1.2	0.7
Approach LOS	A	A		

Intersection Summary				
Average Delay	2.5			
Intersection Capacity Utilization	42.1%	ICU Level of Service	A	
Analysis Period (min)	15			

* User Entered Value



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	0	20	92	12	188	32	435	13	0	352	4
Future Volume (Veh/h)	20	0	23	92	12	188	35	478	13	0	404	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	22	0	25	101	13	207	39	526	14	0	444	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								90				
pX, platoon unblocked	0.96	0.96		0.96	0.96	0.96				0.96		
vC, conflicting volume	1000	1064	224	858	1059	270	448			540		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	907	974	224	758	969	143	448			425		
tC, single (s)	*4.1	6.5	*4.5	*4.1	*4.5	*4.1	4.1			4.1		
tC, 2 stage (s)												
tF (s)	*2.2	4.0	*2.0	*2.2	*2.1	*2.0	2.2			2.2		
p0 queue free %	96	100	98	87	98	86	96			100		
cM capacity (veh/h)	599	231	1447	788	616	1520	1109			1080		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	47	321	302	277	222	226
Volume Left	22	101	39	0	0	0
Volume Right	25	207	0	14	0	4
cSH	871	1125	1109	1700	1080	1700
Volume to Capacity	0.05	0.29	0.04	0.16	0.00	0.13
Queue Length 95th (ft)	4	30	3	0	0	0
Control Delay (s)	9.4	9.5	1.4	0.0	0.0	0.0
Lane LOS	A	A	A			
Approach Delay (s)	9.4	9.5	0.7		0.0	
Approach LOS	A	A				

Intersection Summary				
Average Delay	2.8			
Intersection Capacity Utilization	61.7%	ICU Level of Service	B	
Analysis Period (min)	15			

* User Entered Value



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	48	68	172	55	302	0	0	264	12
Future Volume (Veh/h)	0	0	0	55	68	172	55	332	0	0	303	12
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	0	61	75	189	61	365	0	0	333	13
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								82				
pX, platoon unblocked												
vC, conflicting volume	1053	826	340	826	833	365	346			365		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1053	826	340	826	833	365	346			365		
tC, single (s)	7.1	6.5	6.2	*4.1	*4.5	*4.1	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	*2.2	*2.1	*2.0	2.2			2.2		
p0 queue free %	100	100	100	92	90	86	95			100		
cM capacity (veh/h)	155	292	703	782	726	1312	1213			1194		

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	325	426	346
Volume Left	61	61	0
Volume Right	189	0	13
cSH	999	1213	1700
Volume to Capacity	0.33	0.05	0.20
Queue Length 95th (ft)	36	4	0
Control Delay (s)	10.3	1.6	0.0
Lane LOS	B	A	
Approach Delay (s)	10.3	1.6	0.0
Approach LOS	B		

Intersection Summary				
Average Delay	3.7			
Intersection Capacity Utilization	71.5%	ICU Level of Service	C	
Analysis Period (min)	15			

* User Entered Value



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	112	16	29	32	305	43
Future Volume (Veh/h)	128	16	461	35	305	625
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	141	18	507	39	336	688
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						105
pX, platoon unblocked						
vC, conflicting volume	1886	526			546	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1886	526			546	
tC, single (s)	*4.1	*4.1			4.1	
tC, 2 stage (s)						
tF (s)	*2.2	*2.0			2.2	
p0 queue free %	35	98			67	
cM capacity (veh/h)	216	1140			1023	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	159	546	1024
Volume Left	141	0	336
Volume Right	18	39	0
cSH	238	1700	1023
Volume to Capacity	0.67	0.32	0.33
Queue Length 95th (ft)	106	0	36
Control Delay (s)	46.1	0.0	7.1
Lane LOS	E		A
Approach Delay (s)	46.1	0.0	7.1
Approach LOS	E		

Intersection Summary			
Average Delay	8.5		
Intersection Capacity Utilization	45.5%	ICU Level of Service	A
Analysis Period (min)	15		

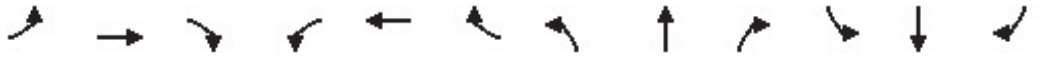
* User Entered Value

Development: Ponce Health Sciences University

Driveway: 1 PHSU

Origin #	Route	To		From	
		Distribution %	Trips	Distribution %	Trips
1	Origin 1 (Node 4) to PHSU	23.10	68	37.91	152
2	Origin 2 (Node 5) to PHSU	8.54	25	1.97	8
3	Origin 3 (Node 13) to PHSU	0.94	3	0.64	3
4	Origin 4 (Node 7) to PHSU	0.00	---	4.29	17
5	Origin 5 (Node 11) to PHSU	9.95	29	5.49	22
6	Origin 6 (Node 15) to PHSU	0.47	1	0.60	2
7	Origin 7 (Node 27) to PHSU	0.94	3	4.42	18
8	Origin 8 (Node 28) to PHSU	3.38	10	0.17	1
9	Origin 9 (Node 19) to PHSU	6.20	18	6.05	24
10	PHSU to Origin 10 (Node 21)	1.13	3	0.00	---
11	Origin 11 (Node 23) to PHSU	5.63	17	4.03	16
12	Origin 12 (Node 22) to PHSU	35.49	104	29.18	117
13	Origin 13 (Node 24) to PHSU	4.23	12	5.23	21

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Date: 2019.08.13 15:48:42



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	984	0	184	1767	20	75	9	0	178	92	154
Future Volume (vph)	108	1052	0	201	1919	31	75	9	0	206	92	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			1.00			0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.98	
Satd. Flow (prot)	1593	4577		1593	4566			1605			1564	
Flt Permitted	0.95	1.00		0.95	1.00			0.49			0.98	
Satd. Flow (perm)	1593	4577		1593	4566			816			1564	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	119	1157	0	221	2111	34	82	10	0	227	101	169
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	0	0	12	0
Lane Group Flow (vph)	119	1157	0	221	2144	0	0	93	0	0	485	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Split	NA	
Protected Phases	5	2		1	6			4		8	8	
Permitted Phases							4					
Actuated Green, G (s)	8.2	57.2		24.0	73.0			18.5			37.8	
Effective Green, g (s)	8.2	57.2		24.0	73.0			18.5			37.8	
Actuated g/C Ratio	0.05	0.37		0.16	0.48			0.12			0.25	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	85	1705		249	2171			98			385	
v/s Ratio Prot	c0.07	0.25		0.14	c0.47						c0.31	
v/s Ratio Perm								c0.11				
v/c Ratio	1.40	0.68		0.89	0.99			0.95			1.26	
Uniform Delay, d1	72.7	40.4		63.4	39.8			67.0			57.9	
Progression Factor	1.00	1.00		1.00	1.00			0.29			1.00	
Incremental Delay, d2	236.4	2.2		34.1	16.6			55.3			136.3	
Delay (s)	309.1	42.6		97.5	56.4			75.0			194.1	
Level of Service	F	D		F	E			E			F	
Approach Delay (s)		67.5			60.2			75.0			194.1	
Approach LOS		E			E			E			F	

Intersection Summary			
HCM 2000 Control Delay	78.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	153.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	87.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	132	1268	16	206	1739	102	36	12	40	348	76	196
Future Volume (vph)	132	1364	16	224	1919	126	36	12	43	378	76	196
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			0.95		0.95	0.95	
Frt	1.00	1.00		1.00	0.99			0.93		1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.98		0.95	0.99	
Satd. Flow (prot)	1593	4569		1593	4534			2903		1513	1435	
Flt Permitted	0.95	1.00		0.95	1.00			0.71		0.69	0.94	
Satd. Flow (perm)	1593	4569		1593	4534			2114		1097	1363	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	145	1500	18	246	2111	139	40	13	47	416	84	216
RTOR Reduction (vph)	0	1	0	0	6	0	0	32	0	0	48	0
Lane Group Flow (vph)	145	1517	0	246	2244	0	0	68	0	366	302	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases							4			8		
Actuated Green, G (s)	11.0	45.5		23.0	57.5			39.5		39.5	39.5	
Effective Green, g (s)	11.0	45.5		23.0	57.5			39.5		39.5	39.5	
Actuated g/C Ratio	0.09	0.38		0.19	0.48			0.33		0.33	0.33	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	
Lane Grp Cap (vph)	146	1732		305	2172			695		361	448	
v/s Ratio Prot	0.09	c0.33		0.15	c0.49							
v/s Ratio Perm								0.03		c0.33	0.22	
v/c Ratio	0.99	0.88		0.81	1.03			0.10		1.01	0.67	
Uniform Delay, d1	54.5	34.6		46.4	31.2			27.9		40.2	34.7	
Progression Factor	1.00	1.00		0.56	0.31			1.00		1.00	1.00	
Incremental Delay, d2	72.7	6.6		15.1	25.7			0.3		50.9	7.9	
Delay (s)	127.2	41.2		41.2	35.4			28.2		91.2	42.6	
Level of Service	F	D		D	D			C		F	D	
Approach Delay (s)		48.7			35.9			28.2			67.4	
Approach LOS		D			D			C			E	

Intersection Summary			
HCM 2000 Control Delay	44.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1548	320	0	2047	0	124
Future Volume (vph)	1548	449	154	2047	222	302
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	0.97	
Frt	0.97		1.00	1.00	0.91	
Flt Protected	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	4422		1593	4577	2910	
Flt Permitted	1.00		0.06	1.00	0.98	
Satd. Flow (perm)	4422		105	4577	2910	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor (vph)	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	1703	494	169	2252	244	332
RTOR Reduction (vph)	44	0	0	0	51	0
Lane Group Flow (vph)	2153	0	169	2252	525	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	4	
Permitted Phases			6			
Actuated Green, G (s)	94.0		94.0	94.0	18.0	
Effective Green, g (s)	94.0		94.0	94.0	18.0	
Actuated g/C Ratio	0.78		0.78	0.78	0.15	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	3463		82	3585	436	
v/s Ratio Prot	0.49			0.49	c0.18	
v/s Ratio Perm			c1.61			
v/c Ratio	0.62		2.06	0.63	1.24dr	
Uniform Delay, d1	5.5		13.0	5.5	51.0	
Progression Factor	0.72		1.52	0.25	1.00	
Incremental Delay, d2	0.5		481.2	0.1	111.9	
Delay (s)	4.5		501.1	1.5	162.9	
Level of Service	A		F	A	F	
Approach Delay (s)	4.5			36.4	162.9	
Approach LOS	A			D	F	

Intersection Summary			
HCM 2000 Control Delay	36.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.92		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	4	300	76	84	76	200
Future Volume (vph)	4	300	76	84	76	217
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	
Frt		1.00	0.93		0.90	
Flt Protected		1.00	1.00		0.99	
Satd. Flow (prot)		1675	1558		1490	
Flt Permitted		1.00	1.00		0.99	
Satd. Flow (perm)		1675	1558		1490	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor (vph)	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	4	330	84	92	84	239
RTOR Reduction (vph)	0	0	26	0	67	0
Lane Group Flow (vph)	0	334	150	0	256	0
Turn Type	Split	NA	NA		Prot	
Protected Phases	2	2	6		8	
Permitted Phases						
Actuated Green, G (s)		57.2	18.5		65.8	
Effective Green, g (s)		57.2	18.5		65.8	
Actuated g/C Ratio		0.37	0.12		0.43	
Clearance Time (s)		4.0	4.0		4.0	
Lane Grp Cap (vph)		624	187		638	
v/s Ratio Prot		c0.20	c0.10		c0.17	
v/s Ratio Perm						
v/c Ratio		0.54	0.80		0.40	
Uniform Delay, d1		37.7	65.7		30.3	
Progression Factor		1.00	1.00		0.24	
Incremental Delay, d2		3.3	29.7		0.4	
Delay (s)		41.0	95.4		7.7	
Level of Service		D	F		A	
Approach Delay (s)		41.0	95.4		7.7	
Approach LOS		D	F		A	

Intersection Summary			
HCM 2000 Control Delay	39.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	153.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	293	1379	1903	41	256	144
Future Volume (vph)	317	1533	2036	41	256	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.91	0.91		1.00	
Frt	1.00	1.00	1.00		0.95	
Flt Protected	0.95	1.00	1.00		0.97	
Satd. Flow (prot)	1593	4577	4563		1541	
Flt Permitted	0.95	1.00	1.00		0.97	
Satd. Flow (perm)	1593	4577	4563		1541	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor (vph)	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	349	1686	2240	45	282	182
RTOR Reduction (vph)	0	0	2	0	20	0
Lane Group Flow (vph)	349	1686	2283	0	445	0
Turn Type	Prot	NA	NA		Prot	
Protected Phases	5	2	6		8	
Permitted Phases						
Actuated Green, G (s)	23.0	82.0	55.0		30.0	
Effective Green, g (s)	23.0	82.0	55.0		30.0	
Actuated g/C Ratio	0.19	0.68	0.46		0.25	
Clearance Time (s)	4.0	4.0	4.0		4.0	
Lane Grp Cap (vph)	305	3127	2091		385	
v/s Ratio Prot	c0.22	0.37	c0.50		c0.29	
v/s Ratio Perm						
v/c Ratio	1.14	0.54	1.09		1.15	
Uniform Delay, d1	48.5	9.5	32.5		45.0	
Progression Factor	0.69	0.19	0.64		1.00	
Incremental Delay, d2	88.4	0.5	43.6		95.1	
Delay (s)	122.1	2.3	64.3		140.1	
Level of Service	F	A	E		F	
Approach Delay (s)		22.8	64.3		140.1	
Approach LOS		C	E		F	

Intersection Summary			
HCM 2000 Control Delay	54.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	104.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	12	188	1360	244	144	1512	248	180	160	104	168	156
Future Volume (vph)	12	204	1477	265	144	1616	248	192	160	104	168	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1593	4577	1425	1593	4577	1425	1593	1676	1425	1593	1676
Flt Permitted		0.44	1.00	1.00	0.95	1.00	1.00	0.64	1.00	1.00	0.63	1.00
Satd. Flow (perm)		745	4577	1425	1593	4577	1425	1065	1676	1425	1054	1676
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	13	224	1625	292	158	1778	273	211	176	114	185	172
RTOR Reduction (vph)	0	0	0	88	0	0	76	0	0	79	0	0
Lane Group Flow (vph)	0	237	1625	204	158	1778	197	211	176	35	185	172
Turn Type	custom	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA
Protected Phases		5	2		1	6			8			4
Permitted Phases	5			2			6	8		8	4	
Actuated Green, G (s)		9.0	24.0	24.0	5.5	20.5	20.5	18.5	18.5	18.5	18.5	18.5
Effective Green, g (s)		9.0	24.0	24.0	5.5	20.5	20.5	18.5	18.5	18.5	18.5	18.5
Actuated g/C Ratio		0.15	0.40	0.40	0.09	0.34	0.34	0.31	0.31	0.31	0.31	0.31
Clearance Time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)		111	1830	570	146	1563	486	328	516	439	324	516
v/s Ratio Prot			0.36		0.10	c0.39			0.10			0.10
v/s Ratio Perm		c0.32		0.14			0.14	c0.20		0.02	0.18	
v/c Ratio		2.14	0.89	0.36	1.08	1.14	0.41	0.64	0.34	0.08	0.57	0.33
Uniform Delay, d1		25.5	16.7	12.6	27.2	19.8	15.1	17.9	16.0	14.7	17.4	16.0
Progression Factor		1.07	0.98	0.82	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		534.9	5.8	1.4	98.2	70.3	2.5	9.4	1.8	0.4	7.1	1.7
Delay (s)		562.3	22.2	11.7	125.4	90.0	17.6	27.3	17.8	15.1	24.5	17.7
Level of Service		F	C	B	F	F	B	C	B	B	C	B
Approach Delay (s)			80.2			83.6			21.2			19.1
Approach LOS			F			F			C			B

Intersection Summary			
HCM 2000 Control Delay	69.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBR
Lane Configurations	
Traffic Volume (vph)	240
Future Volume (vph)	257
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1425
Flt Permitted	1.00
Satd. Flow (perm)	1425
Peak-hour factor, PHF	1.00
Growth Factor (vph)	110%
Adj. Flow (vph)	283
RTOR Reduction (vph)	196
Lane Group Flow (vph)	87
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Actuated Green, G (s)	18.5
Effective Green, g (s)	18.5
Actuated g/C Ratio	0.31
Clearance Time (s)	4.0
Lane Grp Cap (vph)	439
v/s Ratio Prot	
v/s Ratio Perm	0.06
v/c Ratio	0.20
Uniform Delay, d1	15.3
Progression Factor	1.00
Incremental Delay, d2	1.0
Delay (s)	16.3
Level of Service	B
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	8	40	20	68	32	30	92	15	0	364	4
Future Volume (Veh/h)	0	8	43	20	68	32	33	100	15	0	389	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	9	47	22	75	35	36	110	17	0	428	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								108				
pX, platoon unblocked												
vC, conflicting volume	693	629	430	672	622	118	432			127		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	693	629	430	672	622	118	432			127		
tC, single (s)	7.1	*4.5	*4.1	*4.1	*4.5	*4.1	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	*2.1	*2.0	*2.2	*2.0	*2.1	2.2			2.2		
p0 queue free %	100	99	96	97	92	98	97			100		
cM capacity (veh/h)	321	903	1240	865	947	1550	1128			1459		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	56	132	163	432
Volume Left	0	22	36	0
Volume Right	47	35	17	4
cSH	1170	1037	1128	1459
Volume to Capacity	0.05	0.13	0.03	0.00
Queue Length 95th (ft)	4	11	2	0
Control Delay (s)	8.2	9.0	2.1	0.0
Lane LOS	A	A	A	
Approach Delay (s)	8.2	9.0	2.1	0.0
Approach LOS	A	A		

Intersection Summary				
Average Delay	2.5			
Intersection Capacity Utilization	57.5%	ICU Level of Service	B	
Analysis Period (min)	15			

* User Entered Value



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	0	20	144	12	128	28	256	0	0	424	12
Future Volume (Veh/h)	4	0	21	144	12	128	30	278	0	0	453	12
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	4	0	23	158	13	141	33	306	0	0	498	13
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								90				
pX, platoon unblocked												
vC, conflicting volume	871	876	256	644	883	153	511			306		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	871	876	256	644	883	153	511			306		
tC, single (s)	*4.1	6.5	*4.5	*4.1	*4.5	*4.1	4.1			4.1		
tC, 2 stage (s)												
tF (s)	*2.2	4.0	*2.0	*2.2	*2.1	*2.0	2.2			2.2		
p0 queue free %	99	100	98	83	98	91	97			100		
cM capacity (veh/h)	686	277	1403	913	705	1577	1050			1252		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	27	312	186	153	249	262
Volume Left	4	158	33	0	0	0
Volume Right	23	141	0	0	0	13
cSH	1215	1110	1050	1700	1252	1700
Volume to Capacity	0.02	0.28	0.03	0.09	0.00	0.15
Queue Length 95th (ft)	2	29	2	0	0	0
Control Delay (s)	8.0	9.5	1.8	0.0	0.0	0.0
Lane LOS	A	A	A			
Approach Delay (s)	8.0	9.5	1.0		0.0	
Approach LOS	A	A				

Intersection Summary				
Average Delay	3.0			
Intersection Capacity Utilization	61.2%	ICU Level of Service		B
Analysis Period (min)	15			

* User Entered Value



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	48	68	172	52	282	0	0	264	12
Future Volume (Veh/h)	0	0	0	51	68	172	52	306	0	0	282	12
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	0	56	75	189	57	337	0	0	310	13
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								84				
pX, platoon unblocked												
vC, conflicting volume	994	768	316	768	774	337	323			337		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	994	768	316	768	774	337	323			337		
tC, single (s)	7.1	6.5	6.2	*4.1	*4.5	*4.1	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	*2.2	*2.1	*2.0	2.2			2.2		
p0 queue free %	100	100	100	93	90	86	95			100		
cM capacity (veh/h)	172	317	724	825	772	1345	1237			1222		

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	320	394	323
Volume Left	56	57	0
Volume Right	189	0	13
cSH	1047	1237	1700
Volume to Capacity	0.31	0.05	0.19
Queue Length 95th (ft)	33	4	0
Control Delay (s)	9.9	1.6	0.0
Lane LOS	A	A	
Approach Delay (s)	9.9	1.6	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	3.7		
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		

* User Entered Value



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	144	16	108	8	32	288
Future Volume (Veh/h)	154	16	508	9	32	571
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	169	18	559	10	35	628
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						105
pX, platoon unblocked						
vC, conflicting volume	1262	564			569	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1262	564			569	
tC, single (s)	*4.1	*4.1			4.1	
tC, 2 stage (s)						
tF (s)	*2.2	*2.0			2.2	
p0 queue free %	69	98			97	
cM capacity (veh/h)	538	1103			1003	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	187	569	663
Volume Left	169	0	35
Volume Right	18	10	0
cSH	566	1700	1003
Volume to Capacity	0.33	0.33	0.03
Queue Length 95th (ft)	36	0	3
Control Delay (s)	14.5	0.0	0.9
Lane LOS	B		A
Approach Delay (s)	14.5	0.0	0.9
Approach LOS	B		

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		

* User Entered Value

W.- Public Safety Fire and Emergency Medical



N
W E
S

Public Safety - Police, Fire and Emergency Medical

PONCE HEALTH SCIENCES UNVERSITY (PHSU), PONCE, PUERTO RICO

REVISIONS:

No.	Date:	Notes:	INITIALS:

SCALE: **1:8,000**
DATE: OCT/2022
DRAWN BY: Plan. Laredo González

GBA

HOJA: 1/1

Attachment XVII: SITE PICTURES.

GUIDE MAP:
PHSU, Ponce, Puerto Rico.
Google Earth, Sept/2022.
(graphic scale as shown)



FIELD PICTURES



PHASE 1 (“a” and “b”) Main Building Site, Diesel Fuel Tank (south-east) and Phase-2 Buildings to be demolished in the background)



PHASE 1 (“a” and “b”) Main Building Site, Diesel Fuel Tank (south-east) and Phase-2 Buildings to be demolished in the background)



PHASE 1 (“a” and “b”) Main Building Site, Detail of Diesel Fuel Tank plate.



PHASE 1 (“a” and “b”) Main Building Site, Diesel Fuel Tank (south-east) and Phase-2 Buildings to be demolished in the background)

PHASE 2 Buildings to be demolished (Southern view)





PHASE 2 Buildings to be demolished (Southern view)



PHASE 2 Buildings to be demolished (Southern view)



PHASE 2 Buildings to be demolished (Western view)



PHASE 2 Buildings to be demolished (Northern view)



PHASE 2 Buildings to be demolished (Northern view) Phase-1 southern boundary fence and Fuel Tank on the left.



Phase 1 southern boundary fence and Fuel (Diesel) tank to supply emergency electricity generator. In main building site (Phase 1a and 1b) View from Phase 2.



PHASE 2 Buildings to be demolished (space between the buildings North to South)



PHASE 2 Buildings to be demolished (space between the buildings North to South)



PHASE 2 Buildings to be demolished (East Side)



PHASE 2 Buildings to be demolished (East Side)



PHASE 2 Buildings to be demolished (Northern view) Phase-1 southern boundary fence and Fuel Tank on the right.

Fuel (Diesel) tank (right) to supply emergency electricity generator. Located in south-east main building site (Phase 1a and 1b)



Fuel (Diesel) tank to supply emergency electricity generator. In main building site (Phase 1a and 1b)



PHASE 2 Buildings to be demolished Electric facilities



PHASE 2 Buildings to be demolished : Electric facilities (Detail)



PHASE 2 Buildings to be demolished (Southern view) Electric facilities



PHASE 2 Buildings to be demolished (Southern view) Emergency Generator



PHASE 2 Buildings to be demolished (Southern view) Electric facilities



PHASE 2 Buildings to be demolished (Sout-East view)



PHASE 2 Buildings to be demolished (space between the buildings South to North)

PHASE 3



West Bounday fence, between Phase 1a-1b (west) and Phase 3 (East)



Existing Buildings to be remodel (west view).



Existing Buildings to be remodel and parking area (west view)



Existing Buildings to be remodel and parking area (north view)



Parking Area (North boundary fence and building to be remodel on the right)



Existing building to be remodel (on the right), East bounday fence and planting strip.



Parking area and north boundary fence (portion of the Phase-1a-b building on the left.