

Environmental Assessment

Determinations and Compliance Findings for HUD-assisted Projects

24 CFR Part 58

Project Information

Project Name: Remodel of Parque Gándara (PR-CRP-000927)

Responsible Entity: Puerto Rico Department of Housing (PRDOH)

Grant Recipient (if different than Responsible Entity): Municipality of San Juan

State/Local Identifier: Puerto Rico

Preparer: Zugeiza González & Lizbeth Ortiz, PPL, Slocum Ventures

Certifying Officer Name and Title:

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Consultant (if applicable):

Direct Comments to: PRDOH at environmentcdbg@vivienda.pr.gov

Project Location:

Lat. 18.422262, Long. -66.059345

Cadaster number: 063-041-136-21

Parque Gándara is located in Roosevelt Ave.124, Hato Rey North, San Juan. At the north end the park connects with the Tren Urbano Station and the sidewalks of Avenida Roosevelt, while connecting with the municipal sidewalks of Fernando Primero Street on the western side, to the municipal sidewalk of Juan B. Huyke street on the southern edges; the east side is bordered by the aerial Tren Urbano tracks and an abandoned parcel belonging to the Puerto Rico Highway and Transportation Authority. (Refer to Figure 1 and Appendix 5.2)

Description of the Proposed Project [24 CFR 50.12 & 58.32; 40 CFR 1508.25]:

The design for the remodel of Parque Gándara follows a dual strategy: (1) to take advantage of the natural characteristics of the site; and (2) to enhance and develop the current uses of the park. The main architectural component is a 420' diameter circular walkway that is centrally contained within the square perimeter of the park. The path of exactly ¼ mile in length serves as the foundational architectural element that orders for the rest of the project, as it provides a continuous internal connection throughout the facility. A secondary series of diagonal pathways also intersect with the main radial walkway, thus creating various interior regions within the park. As a whole, the bisected circular sidewalk system provides a continuous pedestrian connection throughout the public greenspace while offering multiple leisure intersections for recreation, and in parallel facilitating access to the peripheral urban sidewalks outside of the park. The existing gazebo is going to be demolished and a new gazebo is going to be built in the central area.

At the north end the park connects with the Tren Urbano Station and the sidewalks of Avenida Roosevelt, while connecting with the municipal sidewalks on the western and southern edges; the east side is bordered by the aerial Tren Urbano tracks and an abandoned parcel belonging to the Puerto Rico Highway and Transportation Authority.

In addition to the actual required earthworks, the park will be mostly composed of greenspaces [vegetation and landscape], concrete pavement [paths and sidewalks], benches, a new central gazebo [concrete and steel], flexible floorings for the kid's areas [rubber and/or sand], and various other light structures and features [lighting, beach tennis court, metallic pergolas, signage, etc.].

The main areas of the new park will include the following:

- Circular and radial pedestrian paths
- Sidewalks [new and/or repaired]
- Interior plazas
- Seating areas [benches]
- Path and site lighting
- Infantile playground areas
- Restoration of existing landscape
- Reforestation, new landscape. and green improvements
- Repairs to basketball and volleyball court
- Central gazebo
- Fitness yard
- Urban agriculture yard
- Signage

The proposed remodel for the Gándara Park is a fundamentally sustainable project with a minimal carbon footprint as it is mainly a rehabilitation of an existing urban park, geared towards maximizing its public use. Although limited, the project calls for selective demolition of damaged sidewalks, walkways, the gazebo and other existing concrete structures . Said demolition will be specified and coordinated so that the removed concrete can be recycled on-site as crushed stone for site fill and underlayment. The design also features a retention pond at the northwest end, adjacent to the existing pump station, at the lowest elevation point on the site, to improve

seasonal flooding. Depending on the tree inventory and plant assessment, our plan is to preserve as much of the vegetative material in the park, and to add more trees. When necessary, all removed plant elements will be duly mitigated, replanted and/or replaced. Other proposed green features are the addition of drought-resistant plants, permeable surfaces, and recycling bins. Although limited, the project calls for selective demolition of damaged sidewalks, walkways, and other existing concrete structures. The project will observe or exceed current environmental parameters and comply with the ADA (American Disabilities Act), the PR Building Code, the IBC, and other applicable design parameters and regulations (Refer to Appendix 5.2).

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

The purpose of the project is to provide recreational and natural space to low and moderate-income communities around, that were impacted by Hurricanes Irma and Maria in 2017. The park will provide green infrastructure to the urbanized areas around with public gardens and other amenities.

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

The site is currently a park with deteriorated areas since the hurricanes Irma and María. The community is using some areas of the park due to the existing conditions. Some areas are not safe. If the project is not completed as presented in this document, the deterioration will continue, and it can set the stage for illegal activity.

Funding Information

Grant Number	HUD Program	Funding Amount
B-17-DM-72-0001; B-18-DP-72-0001; B-19-DP-78-0002; B-18-DE-72-0001	Community Development Block Grant – Disaster Recovery (CDBG- DR)	\$11,938,162,230

Estimated Total HUD Funded Amount: \$4,354,565.32

Estimated Total Project Cost (HUD and non-HUD funds) [24 CFR 58.32(d)]: \$4,354,565.32

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

Record below the compliance or conformance determinations for each statute, executive order, or regulation. Provide credible, traceable, and supportive source documentation for each authority. Where applicable, complete the necessary reviews or consultations and obtain or note applicable permits of approvals. Clearly note citations, dates/names/titles of contacts, and page references. Attach additional documentation as appropriate.

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 <input type="checkbox"/> <input checked="" type="checkbox"/>	<p>The project is not within 15,000 feet of a military airport or 2,500 feet of a civilian airport. The project is 15,000 ft from a civil airport Fernando Ribas Dominicci airport and 16,000 from military/civil Luis Munoz Marin airport. Therefore, the project is not located within a Runway Potential Zone /Clear Zone (RPZ/CZ or Accident Potential Zone (APZ), complies with HUD's Airport Hazard Regulations.</p> <p>Refer to Figure 2: Airport Hazards</p>
Coastal Barrier Resources Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]	Yes No <input type="checkbox"/> <input checked="" type="checkbox"/>	<p>The project is located outside the coastal zone limits and is not expected to affect Coastal Barrier Resources. The closest CBR is approximately 6.18 miles. Therefore, the project complies with this regulation and no mitigation steps are required.</p> <p>Refer to Figure 3a & 3b: Coastal Barrier Resources</p>
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 <input type="checkbox"/> <input checked="" type="checkbox"/>	<p>The project is located in Zone 0.2% annual chance (or 500-year) flood as shown in the FEMA Flood Insurance Rate Map (FIRM) Panel 72000C0370J from 11/18/2009. The project location is out of the regulatory flooding zone (A/100-year zone) and will not require flood insurance.</p> <p>Refer to Figure 4: Flood Insurance Rate Map</p>

STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 & 58.5

<p>Clean Air</p> <p>Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93</p>	<p>Yes No</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>The project location is in a nonattainment designated area for 1 NAAQS pollutant, Sulfur Dioxide (2010). It is included the Puerto Rico Non-Attainment State Implementation Plan Sulfur Dioxide (SO₂) National Ambient Air Quality Standard that explain the steps to bring into compliance with the 2010 1-Hour Sulfur Dioxide in Puerto Rico and the mitigation.</p> <p>The proposed project will not contribute to the emission of SO₂. Sulfur dioxide primary derived from fossil fuel combustion at power plants and other industrial facilities, both which are not part of the proposed project. The project estimated emissions levels are below the minimum. The project must obtain construction permits and comply with the required conditions regarding the fugitive dust control during the construction.</p> <p>There is no anticipated adverse effect due to the project's development.</p> <p>Refer to Figure 5 and Appendix 5.4: Non-attainment Areas (Air Quality)</p>
<p>Coastal Zone Management</p> <p>Coastal Zone Management Act, sections 307(c) & (d)</p>	<p>Yes No</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>The project is located outside the area identified as Coastal Zone therefore it complies with this regulation and no compliance steps or mitigation is required. The closest coastal zone is 1,300 feet away.</p> <p>Refer to Figure 6a & 6b: Coastal Zone Land Boundary</p>

<p>Contamination and Toxic Substances</p> <p>24 CFR Part 50.3(i) & 58.5(i)(2)</p>	<p>Yes No</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>The site was evaluated for potential contamination by conducting a field inspection on July 14, 2023, to identify any onsite hazards including, but not limited to, soil staining, above ground storage tanks, signs of underground storage tank, hazardous debris, or waste, etc. The site inspection did not identify any onsite hazards.</p> <p>In addition, a desktop review and evaluation of EPA databases, including NEPAassist and the Enforcement and Compliance History Online (ECHO) among other resources was conducted to determine if the project site was located near hazardous waste sites, industrial sites, dump sites, landfills, etc. The research included USEPA National Priorities List Sites (Superfund sites), CERCLA or state-equivalent sites, RCRA Corrective Action sites with releases requiring clean-up action and/or further investigation. The desktop review found three (3) properties within 500 ft which are closed, and forty-nine (49) properties within 3,000 ft, which will not affect the site due to the distance and topography of the area.</p> <p>Cartographic and photographic evidence combines suggest the urban park was built between 1960 and 1962, before that time three or two houses scattered along the parcel are present in 1941 and 1947 USGS topographic maps (see maps in Section 106 documents).</p> <p>The project site is not located within 3000 feet of a toxic/solid waste landfill site. The site is free of hazardous materials, contamination, toxic chemicals and gases and radioactive substances that could affect the health and safety of occupants or conflict with the intended use of property.</p> <p>Asbestos-Containing Material (ACM) and Lead-Based Paint (LBP) limited survey were conducted with negative results. SACM was not identified at the reference structure, in addition, no suspect material was observed. LBP or lead-glaze was not identified above the regulatory level of 1.0mg/cm² at the subject structure. In addition, lead containing ceramic components were not identified to contain lead above the regulatory level. Although limited, the project calls for selective demolition of damaged sidewalks, walkways, the gazebo and other existing concrete structures with an estimate of 7,985 square feet of demolition.</p> <p>Refer to Figure 7a,b,c & Appendix 5.5: Contamination and Toxic Data, and Attachment 5.10 Studies</p>
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<p>Endangered Species</p> <p>Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402</p>	<p>Yes No</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>The proposed project is located in a densely populated, urban area. The site is not identified as a critical habitat by the U.S. Fish and Wildlife Services (USFWS). No formal compliance steps or mitigation are required. However, the Endangered Species List Report indicated that one species, the Puerto Rican Boa, will be considered in the analysis and design of the project. If a Puerto Rican Boa is found in the project action site, work shall cease until the Boa moves off on its own. If the Boa does not move off, the CM shall contact the Puerto Rico Department of Natural and Environmental Resources and ask for them to relocate the Boa.</p> <p>The project conforms the project criteria for the Self-Certification under blanket clearance letter for federally sponsored projects (HUD). The proposed project complies with the following project criteria: 2) Construction of gutters and sidewalks along existing roads; and 8) Improvement to existing recreational facilities, including the installation of roofs to existing basketball courts, provided that the lightning associate to the facilities are not visible directly or indirectly from the beach.</p> <p>Refer to Appendix 5.6: Self-Certification Clearance Letter and Critical Habitat Map</p>
<p>Explosive and Flammable Hazards</p> <p>24 CFR Part 51 Subpart C</p>	<p>Yes No</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>Not applicable. The project does not include a hazardous facility or the development, construction, rehabilitation that will increase residential densities, or conversion.</p> <p>The site does not have any UST or AST onsite, the desktop evaluation concluded that there are four (4) UST in less than 3,000 ft. (see document attached for the list).</p> <p>This project will not result in an increased number of people being exposed to hazardous operations involving above ground storage tanks (ASTs).</p> <p>Refer to Appendix 5.7: List of Underground and Aboveground Storage Tanks (UST & AST) in Project Location</p>
<p>Farmlands Protection</p> <p>Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658</p>	<p>Yes No</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>This project does not include any activities that could potentially convert agricultural land to non-agricultural use. Furthermore, the soil in the area is not identified as Farmland of Statewide Importance.</p> <p>The project is in compliance with the regulations and there is no need for mitigation.</p> <p>Refer to Figure 8: Farmland Protection</p>

<p>Floodplain Management</p> <p>Executive Order 11988, particularly section 2(a); 24 CFR Part 55</p>	<p>Yes No</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>Per the effective ABFE map, the project is within the boundary of the 0.2% Annual Chance Flood, also known as 500-year floodplain. Since the project is a non-critical action, it is allowed to proceed without processing under 24 CFR Part 55 (HUD’s regulation for floodplain management). Therefore, the project complies with Executive Order 11988 and 24 CFR Part 55. No formal compliance steps or mitigation are required.</p> <p>Refer to Figure 9 a & b: Advisory Base Flood Elevations Map</p>
<p>Historic Preservation</p> <p>National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800</p>	<p>Yes No</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>The archaeological potential of the proposed project is low. The park was built between 1960 and 1962. Within the 0.25-miles area of the project, it was identified one (1) NRHP Eligible Historic Property, the Iglesia Presbiteriana en Hato Rey; and seven (7) cultural resources studies conducted within the quarter-mile radius project area.</p> <p>Based on the results of the historic property identification efforts, the Program has determined that project actions will not affect the historic properties that compose the Area of Potential Effect (APE). The undertaking proposes the remodeling of Dr. José Narciso Gándara Cartagena Park, located in Hato Rey Norte Ward, approximately 4.53 miles southeast of the San Juan Historic Zone, 3.06 miles southeast of the Puerta de Tierra Historic District, 1.43 miles northwest of the Río Piedras Traditional Urban Center, and 1.28 miles northwest of the University of Puerto Rico Tower and Quadrangle. The only historic property reported within a quarter-mile radius of the direct APE is the Hato Rey Presbyterian Church built in 1958, located 0.08 miles southeast, on the junction of Eleanor Roosevelt (State Road PR-41) and Fernando Primero Streets. Due to sustained urban development since the early 20th century, intensifying in the mid- to late 20th century, the potential for intact cultural deposits within the direct APE is considered low. Therefore, no impact to cultural properties is anticipated for this revitalization project. No additional studies are recommended.</p> <p>On September 19th, 2023, the Section 106 NHPA Effect Determination was submitted to SHPO for the project. On October 4th, 2023, SHPO concurred with the Program determination of no historic properties affected within the project’s area of potential effect.</p> <p>Refer to Appendix 5.3: Historic Preservation (Section 106)</p>

<p>Noise Abatement and Control</p> <p>Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B</p>	<p>Yes No</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>Noise conditions experienced by people utilizing the park are not anticipated to differ from previous conditions, nor are they anticipated to significantly impact activities proposed for the site. As the project does not involve new construction, purchase, resale, or modernization of housing a noise calculation is not required.</p> <p>According to the Noise (EA level review), the potential noise generators:</p> <ul style="list-style-type: none"> • Up to 300 ft from a major road – in this case the site is closed to Ave. Muñoz Rivera (HWY 1) to the east site. • In the north side of the park is Roosevelt Avenue which is considered a major road. • Around 50 ft. from a railroad- in this case the train station Ave. Roosevelt is located around 100 ft from the project site. <p>The project will not generate excess noises in the area other that during construction and this will be temporary and is not anticipated to impact the surrounding neighborhood.</p> <p>Therefore, the proposed project is in compliance with Noise Abatement and Control regulations.</p> <p>Refer to Figure 10: Noise Abatement and Control</p>
<p>Sole Source Aquifers</p> <p>Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149</p>	<p>Yes No</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>According to the Environmental Protection Agency (EPA) GIS Mapping System for Sole Source Aquifer, no such features occur in Puerto Rico.</p> <p>Refer to Figure 11a & 11b: Sole Source Aquifers</p>
<p>Wetlands Protection</p> <p>Executive Order 11990, particularly sections 2 and 5</p>	<p>Yes No</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>The project is not located on any riparian nor wetlands. The closest wetland (freshwater emergent wetland) is approximately 380 feet. Furthermore, a permit will not be required as per Section 404 of the Clean Water Act for the project will not require the discharge of dredger or fill material into wetlands.</p> <p>The proposed project is in compliance with the regulation.</p> <p>Refer to Figure 12: Wetland Protection</p>
<p>Wild and Scenic Rivers</p> <p>Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)</p>	<p>Yes No</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>The projects are not within proximity of a National Wild and Scenic River. The project is located approximately 19 miles from the three wild and scenic rivers located in Puerto Rico. The project is not going to impact wild and scenic rivers. Therefore, the proposed project is in compliance with the Wild and Scenic Rivers Act.</p> <p>Refer to Figure 13: Wild and Scenic Rivers</p>

ENVIRONMENTAL JUSTICE

Environmental Justice

Executive Order 12898

Yes No

Based on the scope of this project, there will be a positive impact on low- and moderate-income residents. The main purpose of this project is providing a safe place to the community. The project complies with Executive Order 12898, Environmental Justice because it doesn't propose disproportionately high & adverse human health or environmental effects on low-income and minority populations.

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	1	The project is compatible with the land use and zoning of the area, that's classified as urban land on the Soil Classification Map. In the land use plan is classified as endowment use (dotacional) which include parks in the allowable uses. The project represents an improvement to the urban design of the areas, incorporating green infrastructure and recreational elements to the community.
Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	1	The proposed project action is the rehabilitation and reconstruction of the park in the urban area, which is classified as urban land on the Soil Classification Map. Inadequate soils are not expected to affect the proposed project. The project will keep their green areas and will not affect the storm runoff waters. Surface water caused by a rain event will be re-directed to storm canals though the park to discharged into the existing storm sewer system. The contractor must comply with the CES plan (Sediment and Erosion Control Plan) during construction and after use.
Hazards and Nuisances including Site Safety and Noise	3	Construction activities may result in temporary elevation of ambient noise levels in immediate areas around active construction areas. The project estimated emissions levels are below the minimum, and a fugitive dust control will be implemented during the construction. The park is located next to a high traffic avenue and the Tren Urbano station. The sidewalks surrounding the park will be replaced; in order to minimize pedestrian disruption during construction foot traffic will be redirected through the parallel sidewalk on the other side Rey Fernando Street. The sidewalk facing Roosevelt Avenue will be demolished and reconstructed in two phases to always provide a safe pedestrian access on that side. The work will be completed during normal business hours

Environmental Assessment Factor	Impact Code	Impact Evaluation
		to avoid impacting nearby residential properties during nighttime hours. The project will not be affected by natural or man-made hazards. There are no air pollution generators in the vicinity of the project and the project will not be affected by nuisances such as gas, smoke, or odors. The park is not a noise-generating facility and is not in a noise-sensitive area.

Environmental Assessment Factor	Impact Code	Impact Evaluation
SOCIOECONOMIC		
Employment and Income Patterns	2	This project will not have any impacts to the employment and/or income patterns, other than the workers contracted to the construction of the park.
Demographic Character Changes, Displacement	2	This project will not change the demographic characteristics nor will promote residents' displacement. This project would allow for a better quality of life for the residents in the area.
Environmental Justice	1	The PR-CRP Program is directed to improve the communities where low-moderate income individuals were impacted by hurricanes Irma and María, and as such, the improvements made under this program will not disproportionately negatively affect underserved communities.

Environmental Assessment Factor	Impact Code	Impact Evaluation
COMMUNITY FACILITIES AND SERVICES		
Educational and Cultural Facilities	1	This project will provide a space which can be used for education and cultural facilities.
Commercial Facilities	2	The project will not affect commercial facilities. The project will only affect pedestrian traffic on the surrounding sidewalk of the park during construction. Traffic flux is not likely to be affected by the Gándara remodel project. Most of the demolition and construction processes will take part internally, and most of the construction-related traffic will be headed to the tangential cul-de- sac so as to avoid impacting Roosevelt Avenue, and Rey Fernando Street. However, there will be access to the Train Station and the commercial facilities in the area will not be affected.
Health Care and Social Services	2	The project will not have any anticipated impact on health care and social services. The activities that will promote the park, will help the community's health and it can be used to offer social services to the community.
Solid Waste Disposal / Recycling	2	As the project involved keeping the use of the park, there should not be a significant increase in solid waste in the area. Is expected during the construction to generate approximately 93 cubic yards of construction debris. The remaining construction solid waste materials would be collected for appropriate disposal in compliance with the solid waste disposal and recycling regulations.

Waste Water / Sanitary Sewers	2	There are no anticipated impacts to the wastewater and sanitary sewer system. During construction is very likely that they use portable toilets in compliance with OSHA, and it will comply with local and federal regulations. "OSHA regulations state that there must be at least one portable toilet per 10 people using it at any given time during construction activities onsite; however, there can be more than one toilet per 10 people if necessary." Nevertheless, to be decided by GC.
Water Supply	2	There is no anticipated increase or impact to the local water supply for the proposed project.
Public Safety - Police, Fire and Emergency Medical	2	The proposed project is not anticipated to put an additional demand or impact local public safety component. The proposed project will increase the visitors in the area, this can cause an increase in the population eligible to receive medical services in the area, however this impact is not anticipated to overload current emergency medical services available.
Parks, Open Space and Recreation	1	As the proposed project is improving an existing park, the project is considered to be beneficial as it will provide an open space and recreational areas for all the community.
Transportation and Accessibility	1	The project will provide recreational / green space to the Tren Urbano users. The access to the sidewalks will be improved and that will provide accessibility between Ave. Roosevelt Tren Urbano Station and the residential area.

Environmental Assessment Factor	Impact Code	Impact Evaluation
NATURAL FEATURES		
Unique Natural Features, Natural Water Resources	2	The proposed project is not expected to cause any water quality issues at or around the construction site. Construction activities must implement the best management practices and will not imply discharges or sewage effluents to surface water bodies. The project will maintain the existing green infrastructure. Therefore, there are no anticipated impacts to unique natural features and water resources.
Vegetation, Wildlife	2	The proposed project will not create adverse impacts to area sensitive vegetation or wildlife, as the rehabilitation of the areas will occur within the previous park boundaries. However, the Endangered Species List Report indicated that one specie, the Puerto Rican Boa, will be considered in the analysis and design of the project. If a Puerto Rican Boa is found in the project action site, work shall cease until the Boa moves off on its own. If the Boa does not move off, the CM shall contact the Puerto Rico Department of Natural and Environmental Resources and ask for them to relocate the Boa
Other Factors	2	No other factors were identified to have impacts created by the proposed project.

Environmental Assessment Factor	Impact Code	Impact Evaluation
CLIMATE AND ENERGY		
Climate Change Impacts	1	This is a small project with no measurable impact on climate change factors.
Energy Efficiency	1	The project site is connected to the local electricity provider. There would be no substantial change in energy demand in the area. The project will follow best practices for energy efficiency and the Efficient Lighting Regulation for Exteriors (path and site lightning).

Additional Studies Performed:

- Tree Evaluation
- Report for the Subsurface Exploratory
- Asbestos and Lead Study

Field Inspection (Date and completed by):

The result from the field inspection, completed on 7/14/2023, is in Appendix 5.8.

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

1. FEMA Flood Map Service Center
 - <https://msc.fema.gov/portal/home>
2. The National Flood Insurance Program
 - <https://www.fema.gov/cis/PR.html>
3. National Park Services
 - <https://www.nps.gov/subjects/nlandmarks/index.htm>
4. National Wetland Inventory
 - <https://www.fws.gov/wetlands/data/mapper.html>
5. Puerto Rico Coastal Zone Management Program
 - <https://www.drna.pr.gov/pmzc/>
6. Office for Coastal Zone Management
 - <https://coast.noaa.gov/czm/mystate/#puertorico>
7. United State Environmental Protection Agency
 - <https://www.epa.gov/dwssa>
 - <https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe31356b>
 - <https://www3.epa.gov/airquality/greenbook/tnc.html>
 - https://www3.epa.gov/airquality/greenbook/anayo_pr.html
8. National Wildlife Refuge System
 - <https://www.fws.gov/refuges/>
 - <https://www.fws.gov/refuges/refugeLocatorMaps/PuertoRico.html>
 - https://www.fws.gov/refuges/maps/NWRS_National_Map.pdf
9. USA National Wild and Scenic Rivers
 - <http://www.rivers.gov/>
10. Federal Aviation Administration
 - https://www.faa.gov/airports/planning_capacity/npas/reports/media/NPI

[AS- Report2019-2023-Appendix-B.pdf](#)

11. USDWS Coastal Barriers Resources Systems

- <https://www.fws.gov/cbra>

12. Google Earth

- <https://earth.google.com/web/>

13. Planning interactive Map

- <https://gis.jp.pr.gov/mipr/>

List of Permits Obtained:

- Certificación de Cumplimiento Ambiental por Exclusión
Categoría: #: 2023-475506-DEC-126305
- AEE – approved | permit/endorsement ID: 2023-475506-SRI-065969
- AAA – approved | permit/endorsement ID: 2023-475506-SRI-065970
- NET – approved | permit/endorsement ID: 2023-475506-SRI-066016
- ACT – approved | permit/endorsement ID: 2023-475506-SRI-067169
- ICP – approved | permit/endorsement ID: 2023-475506-SRA-066093

Public Outreach [24 CFR 50.23 & 58.43]:

In accordance with 24 CFR 58.43, the public will be made aware of the proposed action and given the opportunity to comment via required noticing process (Finding of No Significant Impact noticing process). On August 22nd, 2023 the Municipality hosted a meeting at the park to present the design to members of the community with positive feedback.

Cumulative Impact Analysis [24 CFR 58.32]:

There are no cumulative impacts associated with the proposed project. Overall impacts to the community were evaluated to the local community for this project. As noted within the impact code above, almost all criteria reviewed related to the local community were determined to be 1 – minor beneficial impact or 2 – no impact, except for one related to the noise impact during the construction that was determined to be 3 – minor adverse impact, which will be mitigated during the construction time. Ultimately, the proposed project will have beneficial impact to the community and the environment of the area since it will keep the park use and will add more recreational spaces and garden for the community.

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

Alternatives considered for the project included evaluating the replacement of the existing features and keep the previous design. This alternative was not selected because the area required ADA accessibility and the area needed to integrate urban design that incorporates the train station and green infrastructure as a space for the community to use.

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

The no action alternative would not provide with a usable greenspace. Currently the municipality, as owner of the property provides maintenance for the site without obtaining a benefit for its residents. The site serves as one of the main accesses to the Tren Urbano station for the residents in the area. The no action alternative will keep a deteriorated space as a dangerous place that can be used for illegal activities which will affect the community. Thus, a no action alternative is not in the municipality's interest.

Summary of Findings and Conclusions:

This project will allow the community and the visitors, including those with low to moderate income, to have open recreational and cultural space. It will also help to attract visitors from other areas which will likely increase the use of the Tren Urbano and the activities in the area. Because the site was previously impacted, there will be no significant environmental impact as a result of this action. Furthermore, the site will maintain the park characteristics, and the project includes the enhancement of the landscaping features and community garden which will have a positive impact to the environment and the community. Therefore, this project will have social and environmental benefits improving the quality of life of the residents and visitors of the area.

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
Clean Air Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93	The project must obtain construction permits and comply with the required conditions regarding the fugitive dust control during the construction.
Noise Control	The work will be completed during normal business hours to avoid impacting nearby residential properties during nighttime hours.
Soil Suitability / Slope / Erosion / Drainage / Storm Water Runoff	Standard construction BMPs would be used to control erosion and runoff during construction.
Historic Preservation	If unexpected cultural resources are encountered at any time within the project area, work should cease in the immediate vicinity of such discoveries and SHPO would be notified. After such notification, project activities should not resume without and/or written letter from SHPO.
Threatened and Endangered Species	If a Puerto Rican Boa is found in the project action site, work shall cease until the Boa moves off on its own. If the Boa does not move off, the CM shall contact the Puerto Rico Department of Natural and Environmental Resources and ask for them to relocate the Boa.
Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	The contractor must comply with the CES plan (Sediment and Erosion Control Plan) during construction and after use.

Determination:

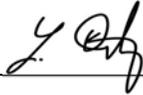
Finding of No Significant Impact [24 CFR 58.40(g)(1); 40 CFR 1508.27]

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: 2/7/2024

Name/Title/Organization: _____

Lizbeth Ortiz, PPL Environmental Specialist, Slocum Ventures, LLC

Certifying Officer Signature: _____



Date: February 16, 2024

Name/Title: _____

I. Lorenzo, Permits 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).

List of Attachments

5.1 Figures

- Figure 1: Project Description
- Figure 2: Airport Hazard
- Figure 3: Coastal Barrier Resources
- Figure 4: Flood Insurance
- Figure 5: Non – Attainment Areas (Clean Air)
- Figure 6: Coastal Zone Management
- Figure 7: Contamination and Toxic Substance
- Figure 8: Farmland Protection
- Figure 9: Floodplain Management
- Figure 10: Noise Abatement and Control
- Figure 11: Sole Source Aquifer
- Figure 12: Wetland Protection
- Figure 13: Wild and Scenic Rivers

5.2 Construction Drawings

5.3 Historic Preservation

5.4 Non – Attainment Areas (Air Quality)

5.5 Contamination and Toxic Data

5.6 Consultation Self-Certification Clearance Letter Submitted to FWS (Endangered Species)

5.7 List of Underground and Aboveground Storage Tanks (UST & AST) in Project Location (Explosive and Flammable Hazard)

5.8 Field Visit Checklist and Site Evaluation

5.9 Field Inspection Photos

5.10 Studies

5.1 Figures

Figure 1: Project location

Project Name: Parque Gándara
PR-CRP-000927

Location: AveRoosevelt, Calle Fernando Primero & Calle Juan B.Huyke

Coordinates: Lat. 18.42217, Long. -66.05933

Cadastral Number: 063-041-136-22



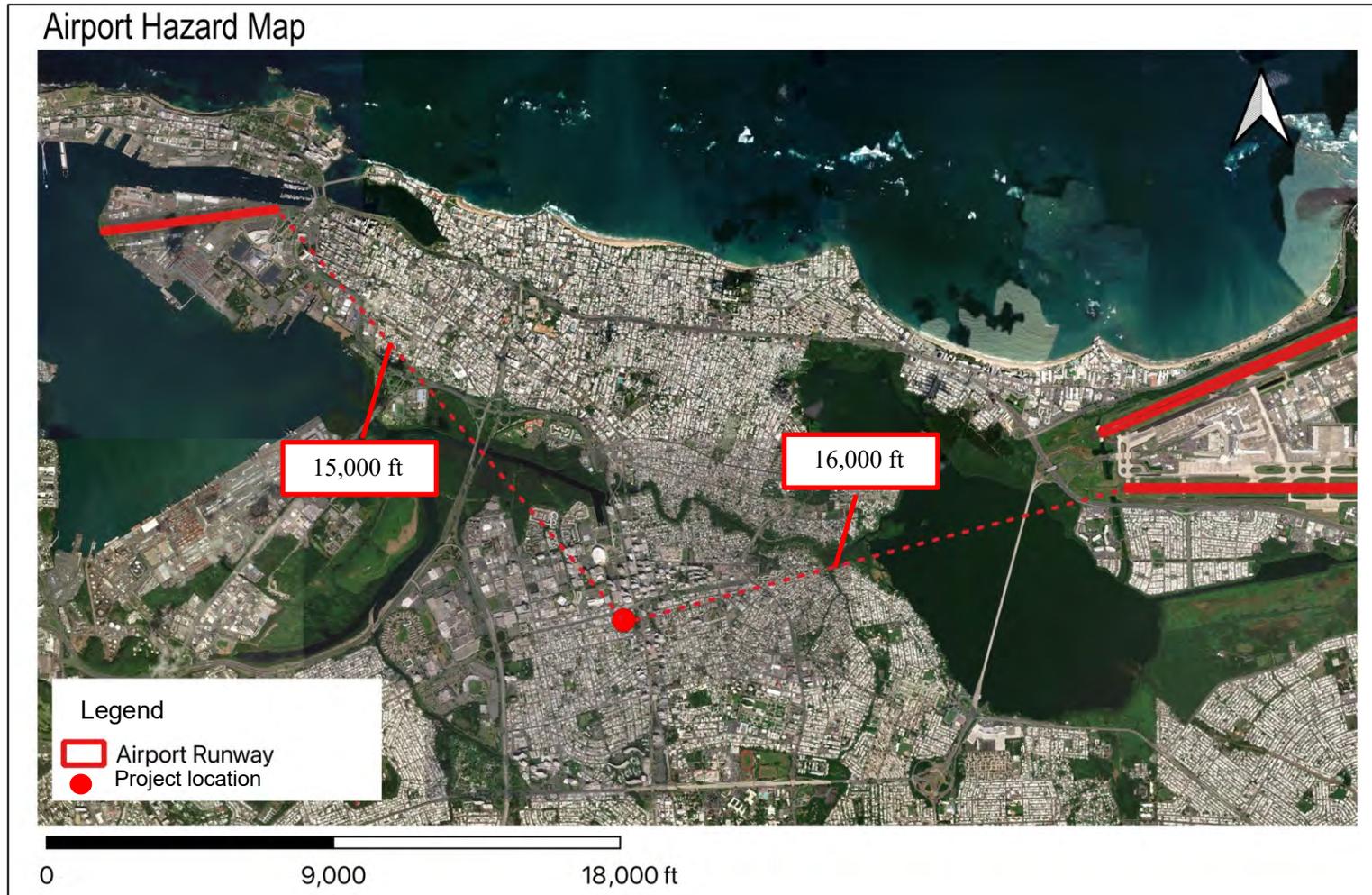
Figure 2: Airport Hazard

Figure 2: Airport Hazard Map

Project Name: PR-CRP-000927 Remodel of Parque Gándara

Location: Roosevelt Ave. 124, Calle Fernando Primero & Calle Juan B. Huyke, Hato Rey North, San Juan

Coordinates: Lat. 18.422262, Long. -66.059345



Source: USGS National Transportation Dataset: <https://www.sciencebase.gov/catalog/item/5a61c93ae4b06e28e9c3bdaf>

Company: Slocum Ventures

Date: 6/15/2023

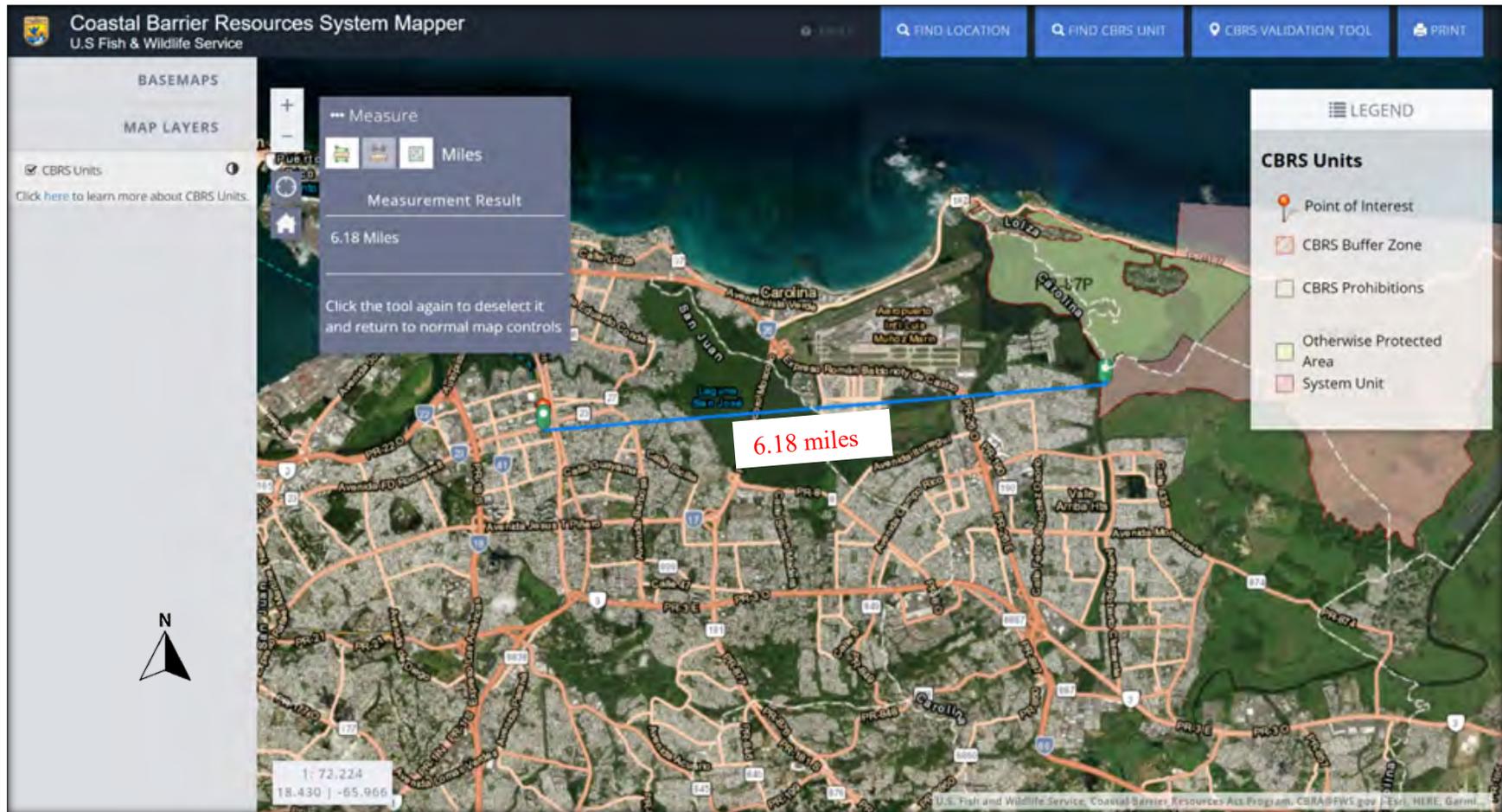
Figure 3: Coastal Barrier Resources

Figure 3a: Coastal Barrier Resources

Project Name: PR-CRP-000927 Remodel of Parque Gándara

Location: Roosevelt Ave. 124, Calle Fernando Primero & Calle Juan B. Huyke, Hato Rey North, San Juan

Coordinates: Lat. 18.422262, Long. -66.059345



Source: Coastal Barrier Resources System Mapper: <https://fwsprimary.wim.usgs.gov/CBRSMapper-v2/>

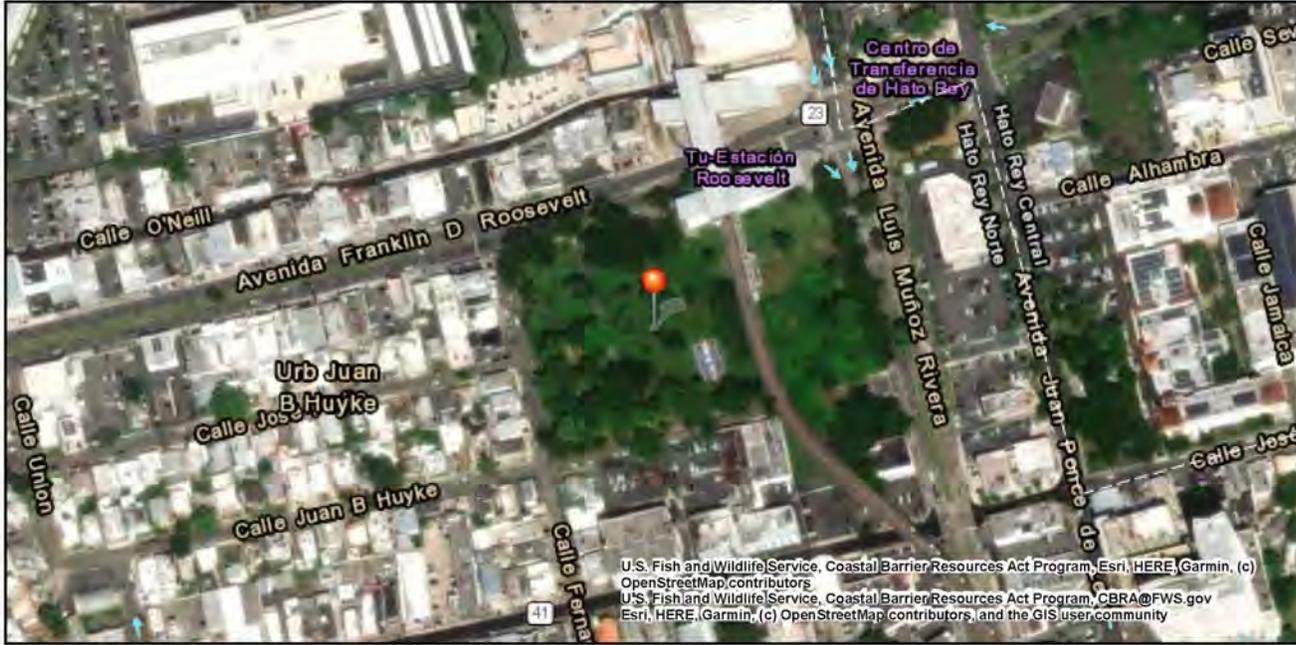
Company: Slocum Ventures

Date: 6/15/2023

Figure 3b: Coastal Barrier Resources

U.S. Fish and Wildlife Service

Coastal Barrier Resources System Mapper Documentation



CBRS Units

Otherwise Protected Area	CBRS Buffer Zone
System Unit	-66.059287, 18.422288

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: Parque Gandara
User Supplied Address/Location Description: Ave. Roosevelt 124
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. 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 6/21/2023 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.

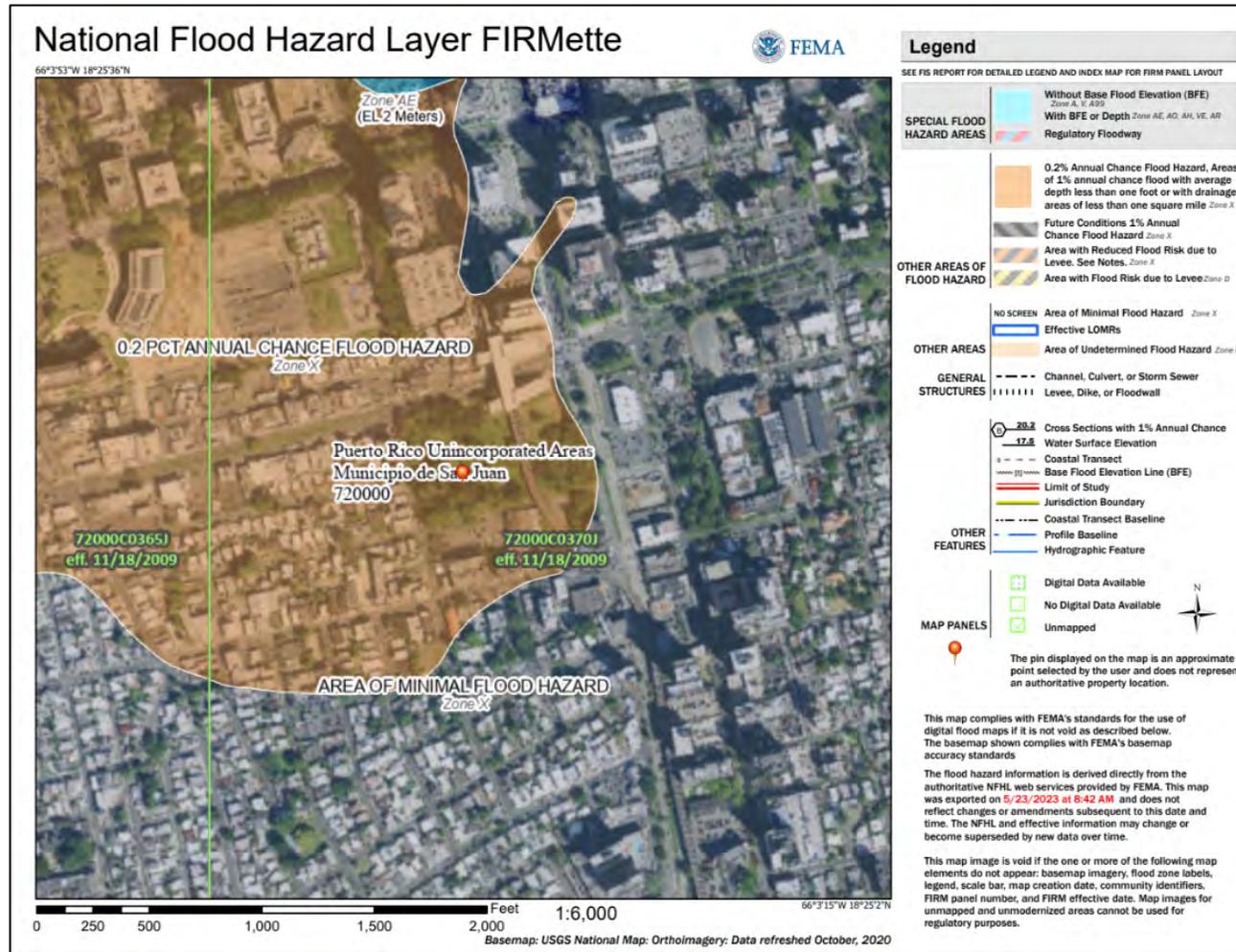
This map image may be void if one or more of the following map elements do not appear: basemap imagery, CBRS unit labels, prohibition date labels, legend, scale bar, map creation date. For additional information about flood insurance and the CBRS, visit: <https://www.fws.gov/node/263838>.



Figure 4: Flood Insurance

Figure 4: Flood Insurance Rate Map (FIRM)

Project Name: PR-CRP-000927 Remodel of Parque Gándara
 Location: Roosevelt Ave. 124, Calle Fernando Primero & Calle Juan B. Huyke, Hato Rey North, San Juan
 Coordinates: Lat. 18.422262, Long. -66.059345



Source: Federal Emergency Management Agency <https://msc.fema.gov/portal/search?AddressQuery=San%20Juan%20#searchresultsanchor>
 Company: Slocum Ventures
 Date: 5/23/2023

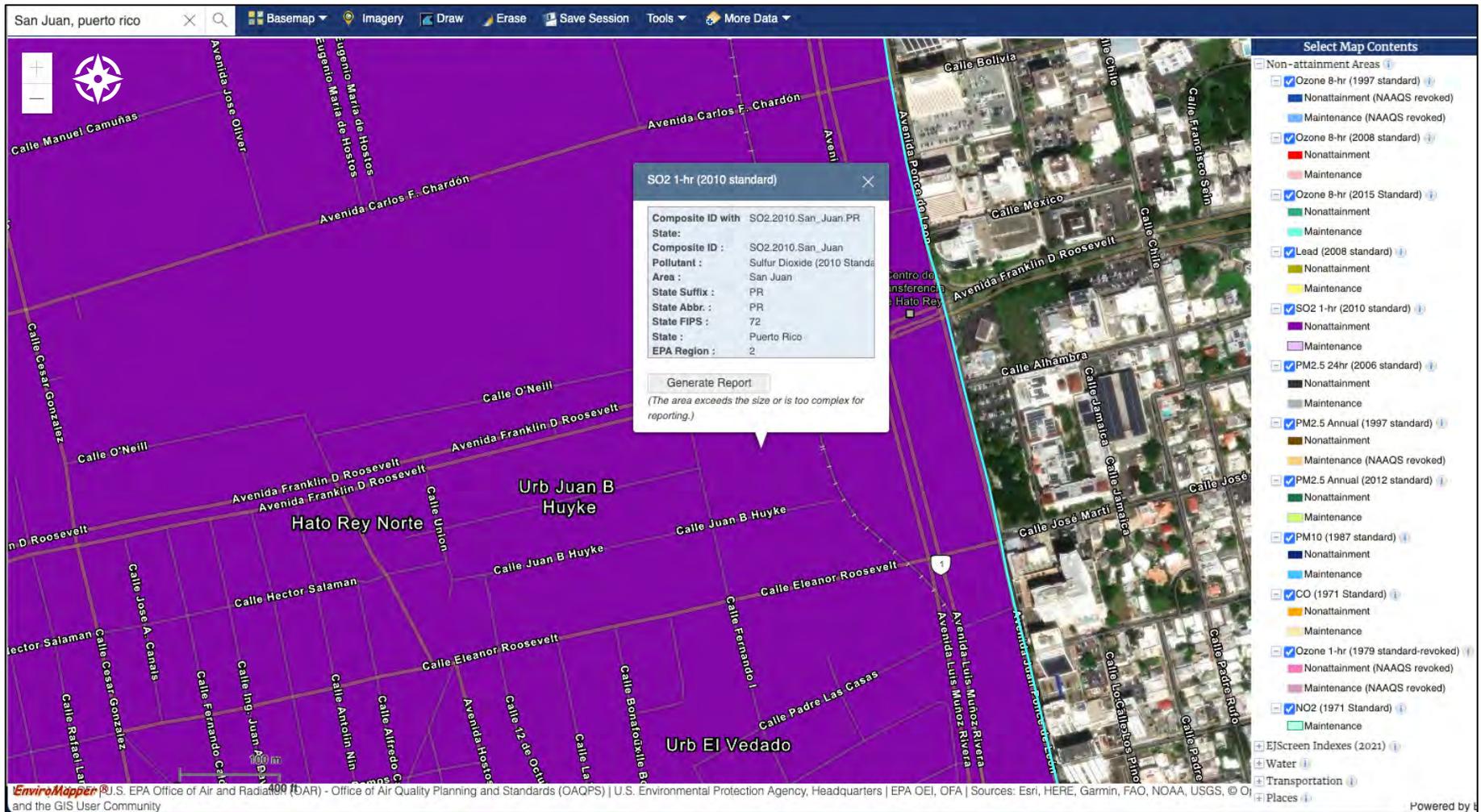
Figure 5: Non-attainment Areas (Clean Air)

Figure 5: Non-attainment Areas (Clean Air)

Project Name: PR-CRP-000927 Remodel of Parque Gándara

Location: Roosevelt Ave. 124, Calle Fernando Primero & Calle Juan B. Huyke, Hato Rey North, San Juan

Coordinates: Lat. 18.422262, Long. -66.059345



Source: Environmental Protection Agency (EPA) <https://nepassistool.epa.gov/nepassist/nepamap.aspx>

Company: Slocum Ventures

Date: 5/24/2023

Figure 6: Coastal Zone Management

Figure 6a: Coastal Zone Boundary

Project Name: PR-CRP-000927 Remodel of Parque Gándara

Location: Roosevelt Ave. 124, Calle Fernando Primero & Calle Juan B. Huyke, Hato Rey North, San Juan

Coordinates: Lat. 18.422262, Long. -66.059345



Source: Department of Natural and Environmental Resources: <https://drnapmzc.maps.arcgis.com/apps/MapTools/index.html?appid=e9e1788520a74242852b03494e739ea4>

Company: Slocum Ventures

Date: 6/29/2023

Figure 6b: Coastal Zone Boundary



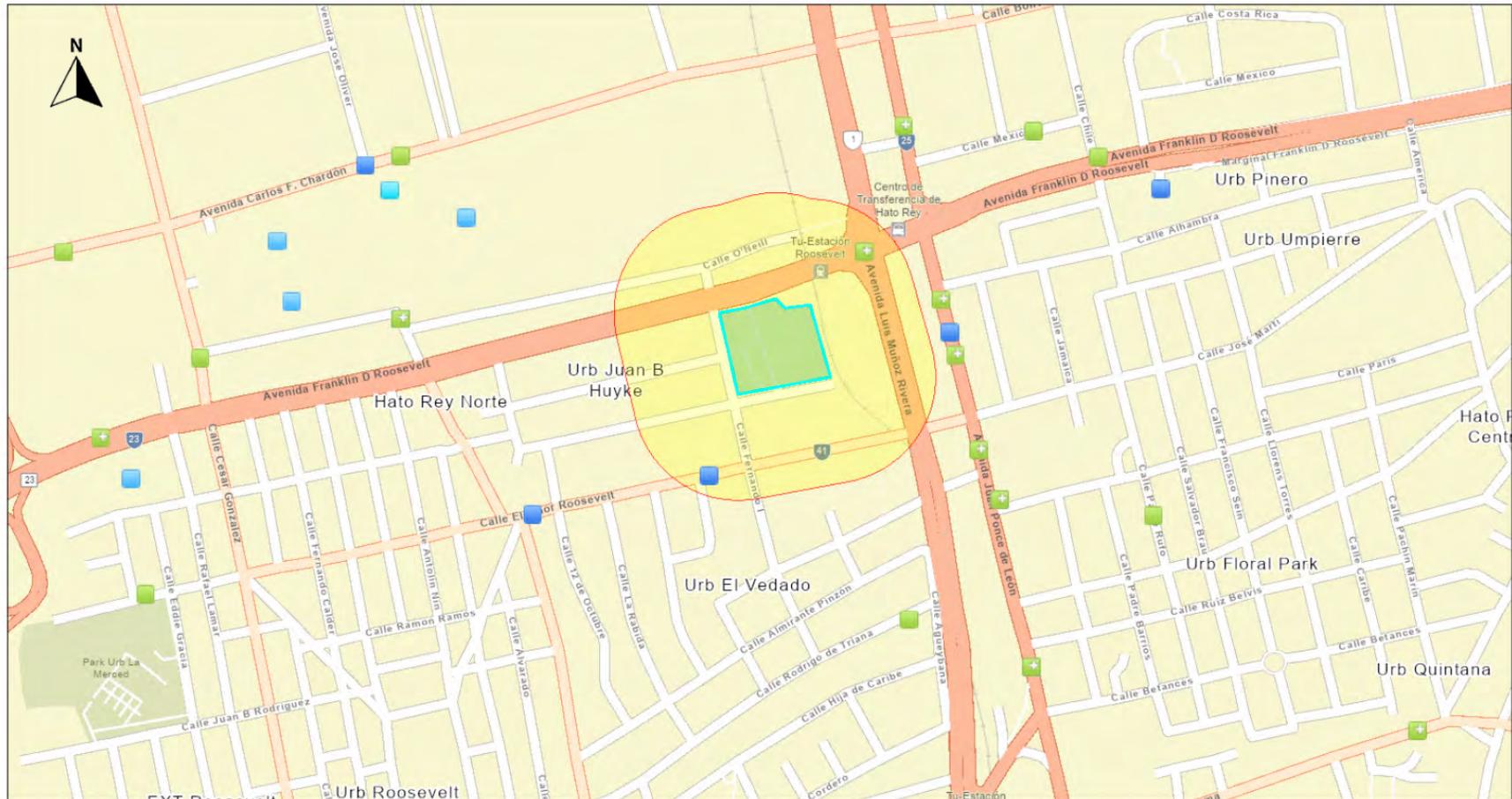
Figure 7: Contamination and Toxic Substance

Figure 7a: Toxics and Hazardous Facilities 500 ft. Radius

Project Name: PR-CRP-000927 Remodel of Parque Gándara

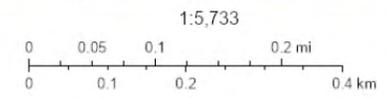
Location: Roosevelt Ave. 124, Calle Fernando Primero & Calle Juan B. Huyke, Hato Rey North, San Juan

Coordinates: Lat. 18.422262, Long. -66.059345



July 17, 2023

- + Hazardous Waste (RCRAInfo)
- Water Dischargers (NPDES)
- Parque Gandara
- Hazardous Waste (RCRAInfo)
- Air Pollution (ICIS-AIR)
- Toxic Releases (TRI)
- Project Buffer



Esri Community Maps Contributors, Esri, HERE, Garmin, Foursquare, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, NPS, US Census Bureau

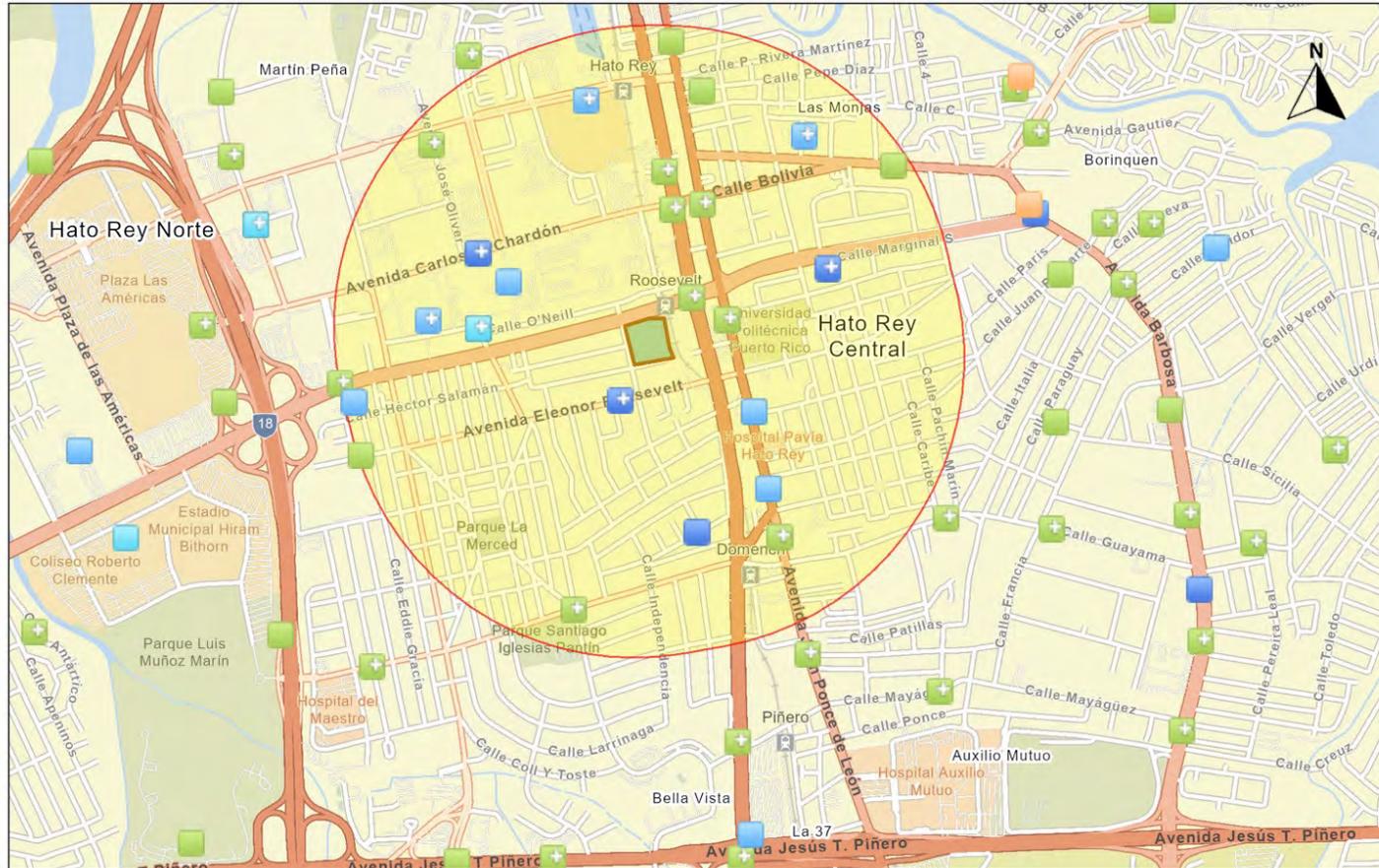
Source: Environmental Protection Agency: <https://nepassistool.epa.gov/nepassist/nepamap.aspx>

Figure 7b: Toxics and Hazardous Facilities 3,000 ft. Radius

Project Name: PR-CRP-000927 Remodel of Parque Gándara

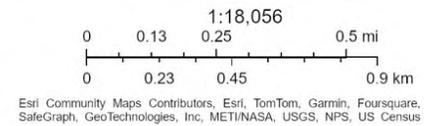
Location: Roosevelt Ave. 124, Calle Fernando Primero & Calle Juan B. Huyke, Hato Rey North, San Juan

Coordinates: Lat. 18.422262, Long. -66.059345



January 12, 2024

- | | | | |
|----------------------|---------------------------|----------------------------|----------------|
| Brownfields (ACRES) | Water Dischargers (NPDES) | Air Pollution (ICIS-AIR) | Project Buffer |
| Toxic Releases (TRI) | Water Dischargers (NPDES) | Hazardous Waste (RCRAInfo) | Parque Gándara |
| Toxic Releases (TRI) | Air Pollution (ICIS-AIR) | Hazardous Waste (RCRAInfo) | |



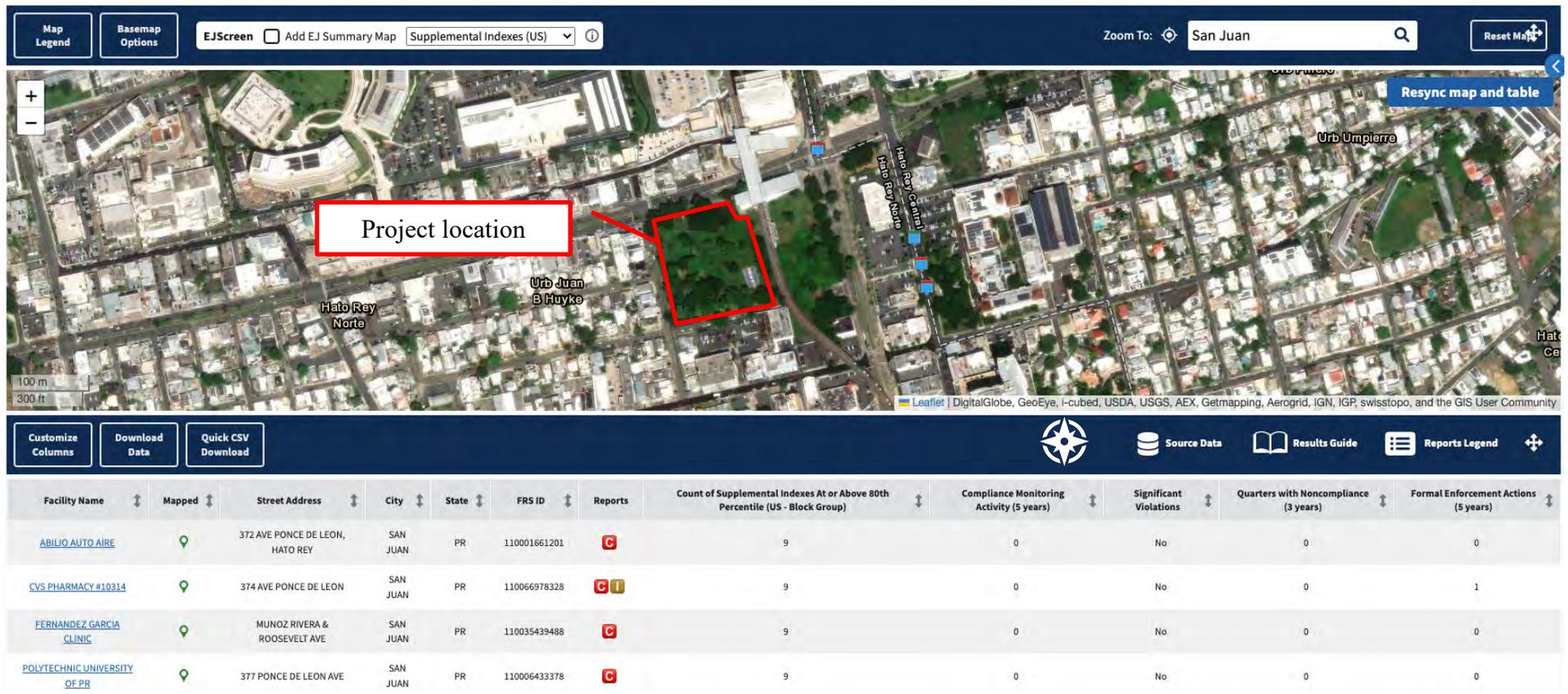
Source: Environmental Protection Agency: <https://nepassistool.epa.gov/nepassist/nepamap.aspx>

Figure 7c: Enforcement and Compliance History Online (ECHO)

Project Name: PR-CRP-000927 Remodel of Parque Gándara

Location: Roosevelt Ave. 124, Calle Fernando Primero & Calle Juan B. Huyke, Hato Rey North, San Juan

Coordinates: Lat. 18.422262, Long. -66.059345



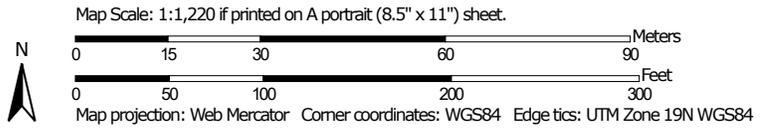
Source: Environmental Protection Agency: <https://echo.epa.gov/facility-search/results>

Figure 8: Farmland Protection

Soil Map—San Juan Area, Puerto Rico
(Parque Gandara)



Soil Map may not be valid at this scale.



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: San Juan Area, Puerto Rico

Survey Area Data: Version 16, Sep 12, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

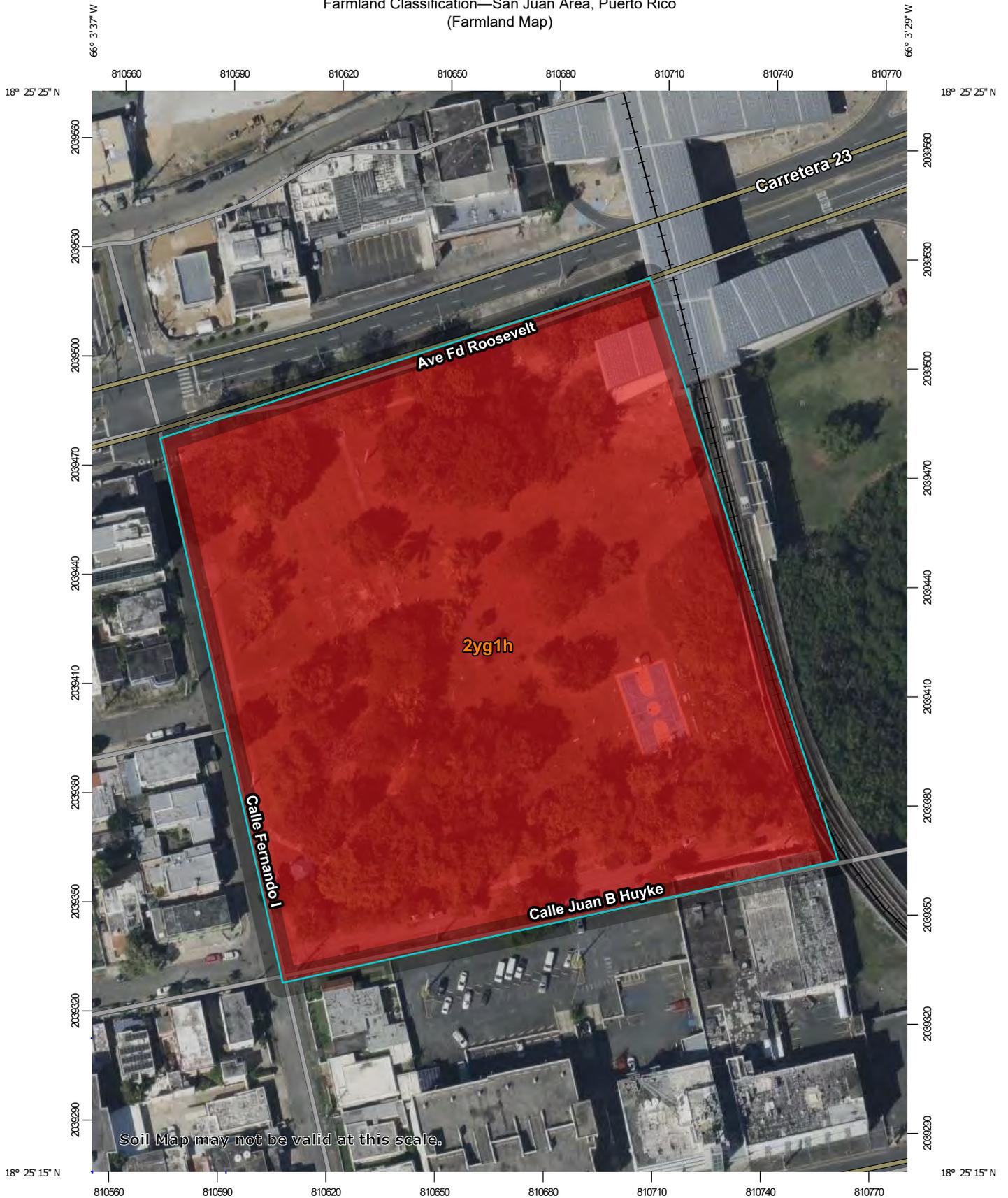
Date(s) aerial images were photographed: Jan 23, 2022—Mar 1, 2022

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.

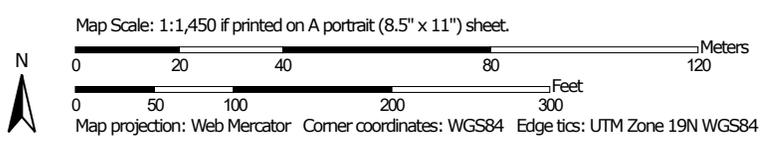
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
UI	Urban land	4.3	100.0%
Totals for Area of Interest		4.3	100.0%

Farmland Classification—San Juan Area, Puerto Rico
(Farmland Map)



Soil Map may not be valid at this scale.



Farmland Classification—San Juan Area, Puerto Rico
(Farmland Map)

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

Farmland Classification—San Juan Area, Puerto Rico
(Farmland Map)

	Prime farmland if subsoiled, completely removing the root inhibiting soil layer		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 reclaimed of excess salts and sodium		Farmland of unique importance		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		Farmland of statewide importance, if irrigated and drained		Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season		Not prime farmland		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, if irrigated and 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		Prime farmland if drained		Prime farmland if irrigated and reclaimed of excess salts and sodium
	Farmland of statewide importance		Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer		Farmland of statewide importance, if thawed		Prime farmland if protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance
	Farmland of statewide importance, if drained		Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60		Farmland of local importance		Prime farmland if irrigated		Farmland of statewide importance, if drained
	Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season				Farmland of local importance, if irrigated		Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
	Farmland of statewide importance, if irrigated						Prime farmland if irrigated and drained		Farmland of statewide importance, if irrigated
							Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season		

Farmland Classification—San Juan Area, Puerto Rico
(Farmland Map)

<p> Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season</p> <p> Farmland of statewide importance, if irrigated and drained</p> <p> Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season</p> <p> Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer</p> <p> Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60</p>	<p> Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium</p> <p> Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season</p> <p> Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season</p> <p> Farmland of statewide importance, if warm enough</p> <p> Farmland of statewide importance, if thawed</p> <p> Farmland of local importance</p> <p> Farmland of local importance, if irrigated</p>	<p> Farmland of unique importance</p> <p> Not rated or not available</p> <p>Water Features</p> <p> Streams and Canals</p> <p>Transportation</p> <p> Rails</p> <p> Interstate Highways</p> <p> US Routes</p> <p> Major Roads</p> <p> Local Roads</p> <p>Background</p> <p> Aerial Photography</p>	<p>The soil surveys that comprise your AOI were mapped at 1:20,000.</p> <div style="border: 1px solid black; padding: 5px;"> <p>Warning: Soil Map may not be valid at this scale.</p> <p>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.</p> </div> <p>Please rely on the bar scale on each map sheet for map measurements.</p> <p>Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)</p> <p>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.</p> <p>This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.</p> <p>Soil Survey Area: San Juan Area, Puerto Rico Survey Area Data: Version 17, Sep 13, 2023</p> <p>Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.</p> <p>Date(s) aerial images were photographed: Jan 23, 2022—Mar 1, 2022</p> <p>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.</p>
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Farmland Classification

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
2yg1h	Urban land	Not prime farmland	5.9	100.0%
Totals for Area of Interest			5.9	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.

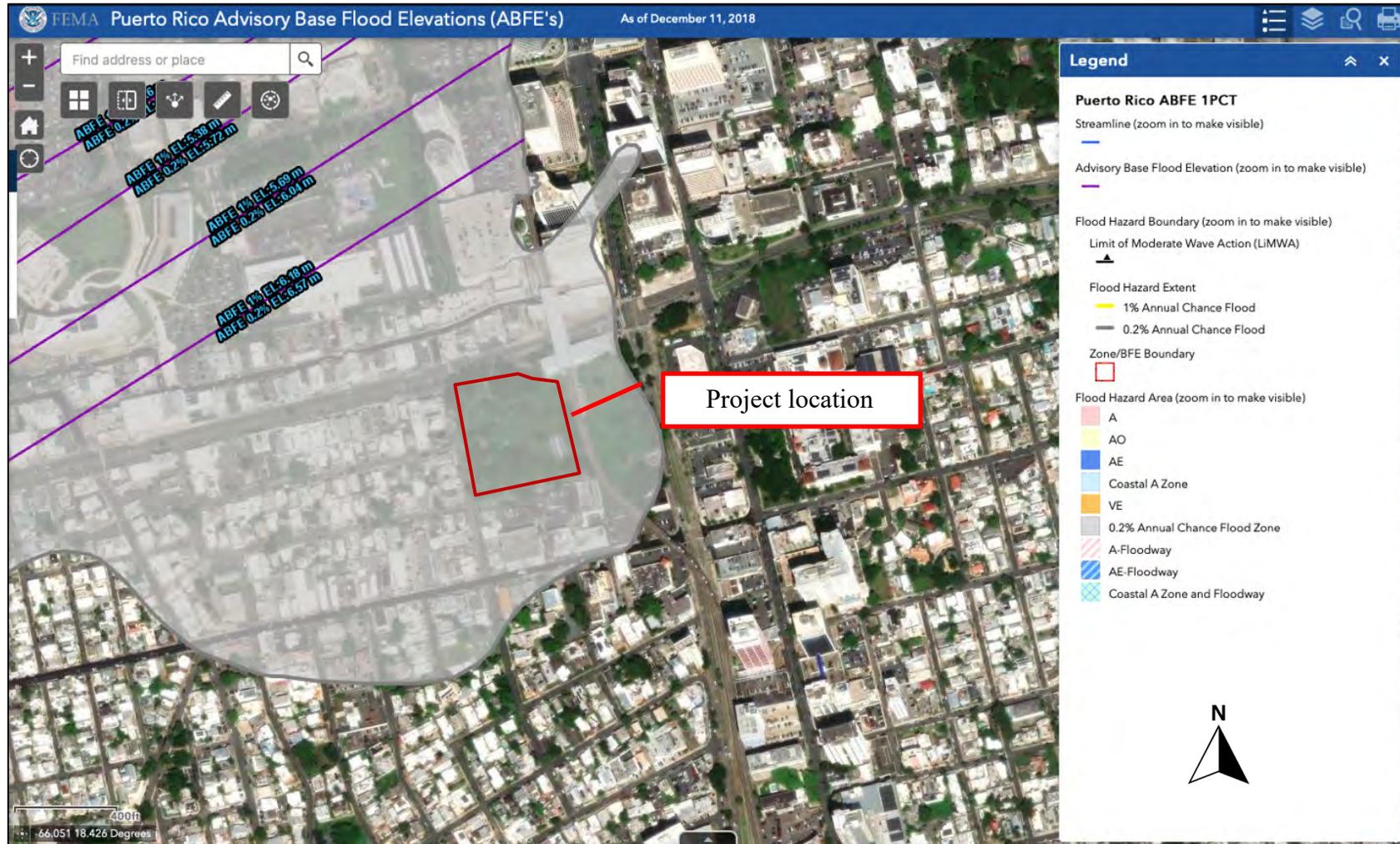
Figure 9: Floodplain Management

Figure 9a: Advisory Base Flood Elevations Map (Advisory Map)

Project Name: PR-CRP-000927 Remodel of Parque Gándara

Location: Roosevelt Ave. 124, Calle Fernando Primero & Calle Juan B. Huyke, Hato Rey North, San Juan

Coordinates: Lat. 18.422262, Long. -66.059345



Source: Federal Emergency Management Agency <https://gis-r2-fema.hub.arcgis.com/apps/31dfa15671944086b54b55bfc03344d7/explore>

Company: Slocum Ventures

Date: 6/15/2023

Figure 9b: Advisory Base Flood Elevations Map (Advisory Map)



Figure 10: Noise Abatement and Control

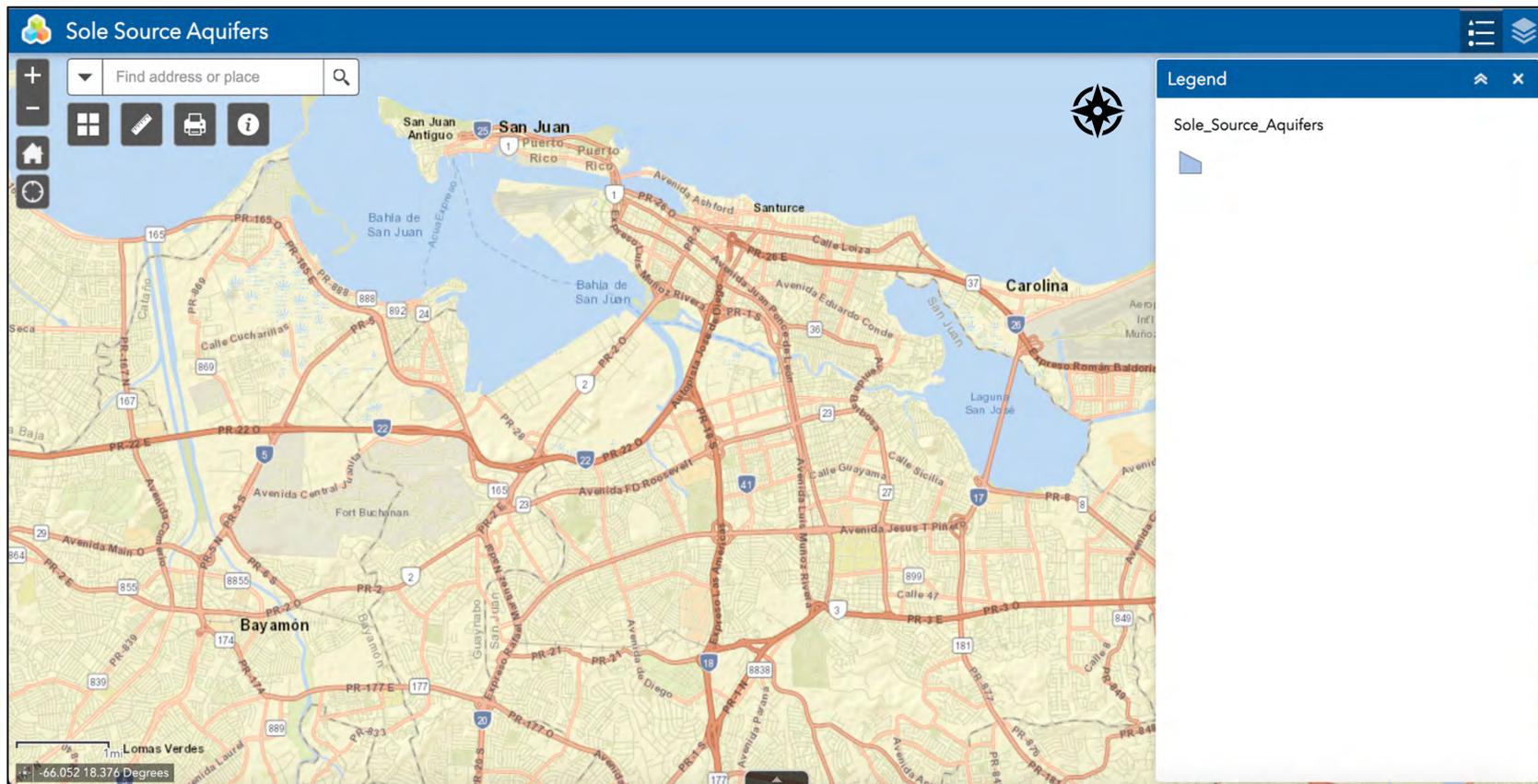
Figure 11: Sole Source Aquifer

Figure 11a: Sole Sorce Aquifer Map

Project Name: PR-CRP-000927 Remodel of Parque Gándara

Location: Roosevelt Ave. 124, Calle Fernando Primero & Calle Juan B. Huyke, Hato Rey North, San Juan

Coordinates: Lat. 18.422262, Long. -66.059345



Source: Sole Source Aquifers Mapper: <https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe31356b>

Company: Slocum Ventures

Date: 6/15/2023

Figure 11b: Sole Source Aquifer, Parque Gándara

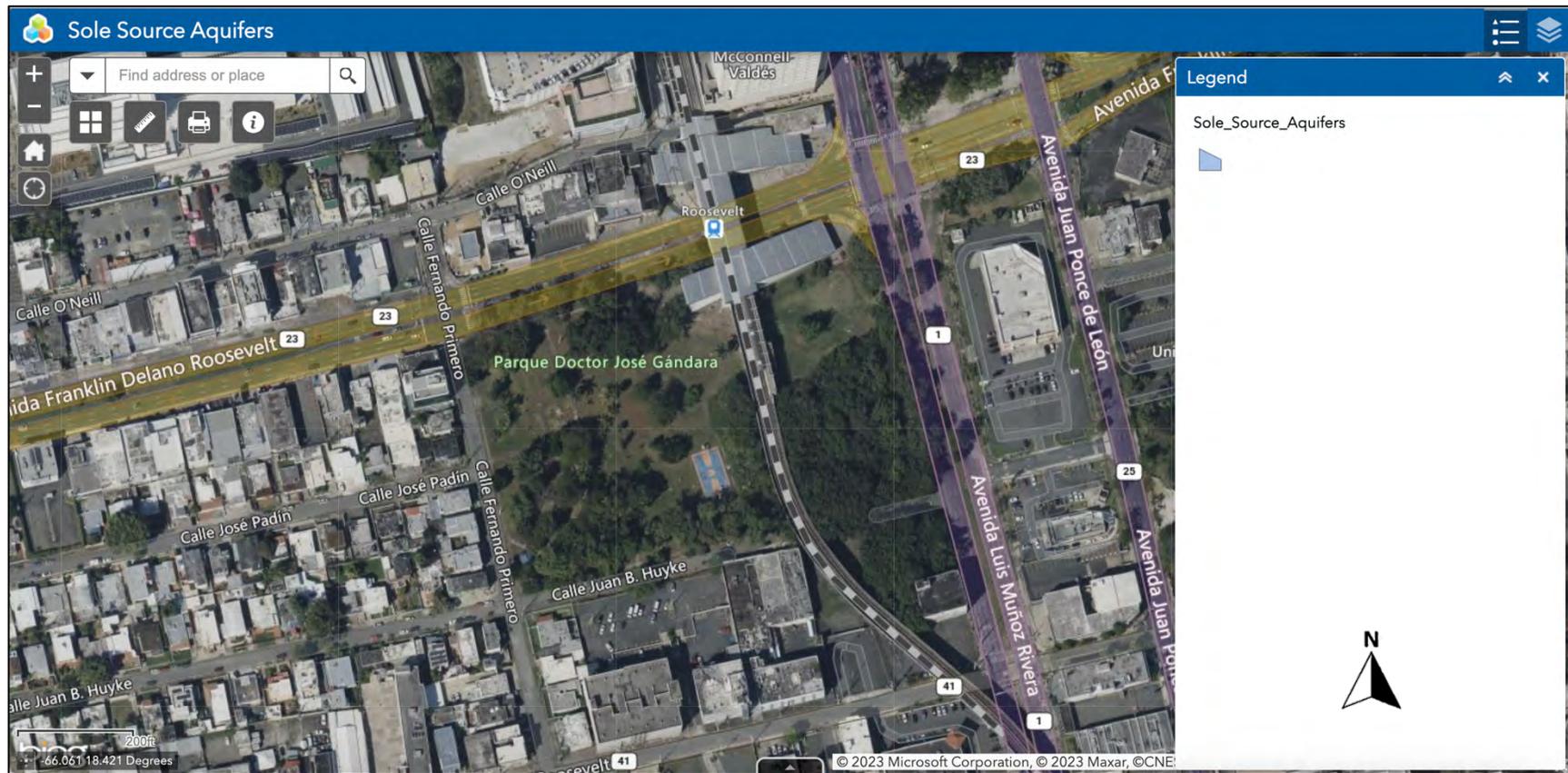


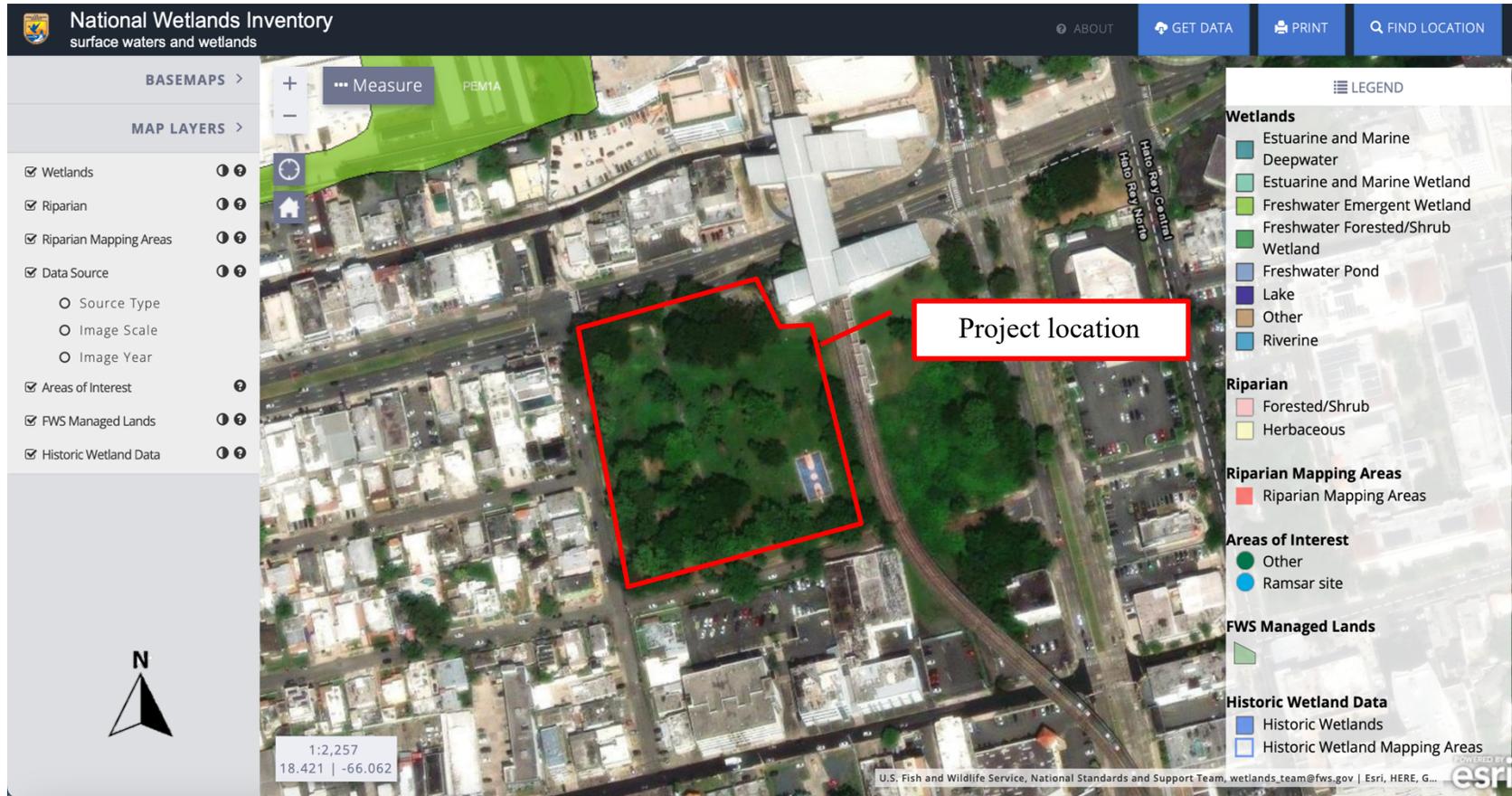
Figure 12: Wetland Protection

Figure 12: Wetland Protection Map

Project Name: PR-CRP-000927 Remodel of Parque Gándara

Location: Roosevelt Ave. 124, Calle Fernando Primero & Calle Juan B. Huyke, Hato Rey North, San Juan

Coordinates: Lat. 18.422262, Long. -66.059345



Source: National Wetlands Inventory Mapper: <https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/>

Company: Slocum Ventures

Date: 6/22/2023

Figure 13: Wild and Scenic Rivers

Figure 13: Wild and Scenic Rivers

Project Name: PR-CRP-000927 Remodel of Parque Gándara

Location: Roosevelt Ave. 124, Calle Fernando Primero & Calle Juan B. Huyke, Hato Rey North, San Juan

Coordinates: Lat. 18.422262, Long. -66.059345



Source: National Wetlands Inventory Mapper: <https://www.rivers.gov/river-app/index.html?state=PR> <https://www.rivers.gov/river-app/index.html?state=PR>

Company: Slocum Ventures

Date: 6/22/2023



PUERTO RICO

Puerto Rico has approximately 5,385 miles of river, of which 8.9 miles of three rivers are designated as wild & scenic—less than 2/10ths of 1% of the commonwealth's river miles.



Choose A State

Choose A River

Dark and foreboding one minute, sun-drenched and exploding with color the next, tropical rivers span every mood.

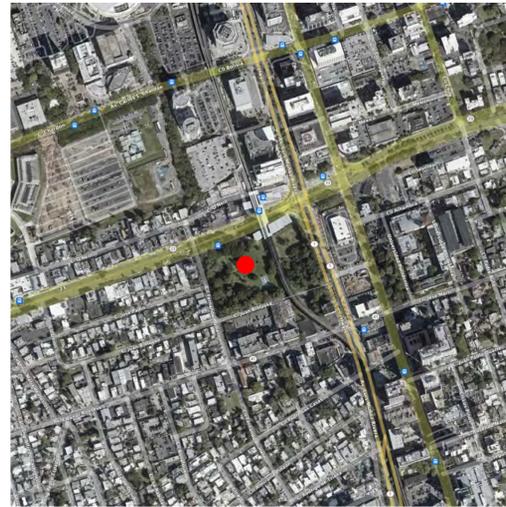
[+ View larger map](#)

- Rio de la Mina
- Rio Icacos
- Rio Mameyes

5.2 Construction Drawings

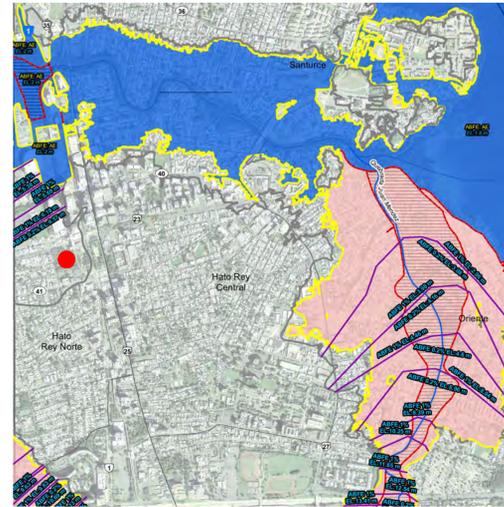
location map

not to scale



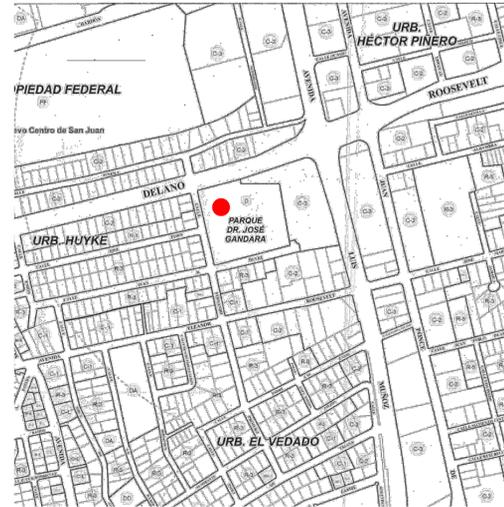
flooding map

not to scale



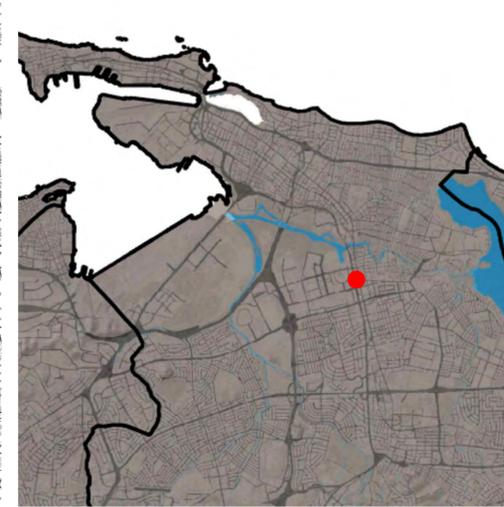
zoning map

not to scale



p.u.t. map

not to scale



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general notes

Abbreviations

The following terms are used on the general notes, documents, drawings and illustrations for this project:

GC -	General Contractor
Contractor -	The GC (in most cases)
MC -	Mechanical Contractor
EC -	Electrical Contractor
A.W.I. -	Architectural Woodworking Institute
AFF -	Above Finished Floor
FFL -	Finished Floor Line
TBSA -	To Be Specified by Architect
DET -	Detail
NIC -	Not In Contract
VOS -	Verify On Site
OC -	On Center
CL -	Center Line
TYP -	Typical

General Requirements

The GC will coordinate the following with the owner:

- Access hours to the site
 - Parking space
 - Loading / unloading area
 - Garbage & debris removal
 - Construction material storage
 - Storage for material and equipment to be reused
- The GC is responsible for damages caused by him or his subcontractors to the sidewalks, walls, ceilings, overhangs and / or any surface, construction or property damaged by the construction.

Demolition Notes

- Previous to the beginning of construction, the contractor will verify the dimensions shown in this document, he will corroborate with the site and/or building's existing condition, and he will notify the architect of any discrepancy that could cause problems in the execution of the proposed work.
- The contractor will dispose of all construction debris and garbage as per owner instructions, furthermore, the contractor will meet with codes & regulations for the disposal of such material.
- The contractor is responsible for any property damage to the owner and others, consequently he will pay and repair said damages.
- Any demolition / removal will be performed in an organized manner by taking the necessary measures to prevent dust dispersal, in addition, excessive noise will be kept to a minimum. Likewise, demolition work will be carried out exclusively as per owner's instructions.
- The removal of existing equipment / material will be done carefully so as to reuse them if possible. The equipment / material will be removed and stored as per owner's instructions.
- After demolition work, the area is to be cleaned and prepared for construction, as designed.
- The contractor will coordinate with the owner and other affected parties (neighbors) so as to minimize the obstruction to their wellbeing during demolition work and construction.
- The contractor will close the water supply temporarily until the begining of construction; Likewise, the contractor will look after all electrical infrastructure damaged during demolition work.
- The GC will submit all shop drawings, specifications and equipment to be installed during the demolition work and the construction phase.
- The GC will provide the architect with a schedule of the demolition phase in relation with the construction phase.
- Having spoken with the architect, the contractor will coordinate with the owner any additional labor to be provided or sub-contracted by the owner.
- All demolition work will be done according to the guidelines established in the construction documents.
- The contractor will be responsible for the security of his staff and equipment during demolition work.
- The GC will protect the drainage system and water supply which may become vulnerable during the demolition phase. Likewise, the contractor will not use any existing drainage to clean materials and tools or to dispose of any debris.

Alternatives

- The GC can substitute construction materials and/or equipment to be installed exclusively by written request to the architect. Said request will be accompanied with a document citing cost changes, the petition will be considered in accord with the owner's needs, aesthetic value and overall quality reflected in the final product.
- The architect will notify the GC about the request in writing, after a reasonable period of time, which depending on the scope, could take anywhere between one week and ten days. Substitution of materials, equipment or elements with a considerable lead time must be proposed in a timely fashion to prevent delays. Otherwise, the GC is responsible for the delay and its financial outcome.

Coordination

- The GC will provide a work schedule to the architect (based on the contract's parameters) during the first week after the order to proceed. The schedule will identify dates, areas and responsibilities along with an agenda for proposed site meetings.
- The GC will notify the architect (in writing) of any stoppage or expected disruption of the work calendar. This notification must take place as soon as possible.
- Any questions concerning drawings or specifications must be directed to the architect as soon as possible.
- The GC will verify dimensions and overall conditions established on the construction documents with the on-site reality. Any discrepancy must be notified to the architect as soon as possible.
- The GC will notify the architect of any discrepancy between the architectural drawings and the engineering drawings. Otherwise, the GC assumes the responsibility for the corresponding rectifications from said discrepancy.
- In the event that a proposed alignment between wall(s) and column(s), or new structural elements and existing ones, proved to be impossible to produce due to unforeseen conditions discovered in the site, the GC will notify the architect for directions on how to proceed.
- The GC is responsible for all coordination on site and the supervision of the sub-contractors unless otherwise established between architect, owner and GC.

Submittals

- Shop drawings and samples are required for the following:
- exposed concrete bench
 - wall ceramic covering
 - court paint
 - steel bridge
- This drawings will be included in the construction costs, with the exception of what was already established with the architect.
- Shop drawings and samples will be submitted as follows:
- Drawings: three (3) sets of copies
 - Documents: three (3) sets of copies
 - Samples: as required by GC (the architect will keep a sample of each submittal)
- Any dimension reliant on field conditions is the responsibility of the GC, regardless of approval of the shop drawings by the architect.

Quality control

- Having marked the preliminary locations on site with chalk, the GC (with 24 hours notice) will notify the architect for any approval / inspection of the following:
 - Exact location of electrical, telephone and IT outputs,
 - Exact location of roofing systems
 - Exact location of all lighting systems
- The GC will be responsible for the storage and protection of all construction material and equipment to be installed. The architect reserves the right to solicit additional protection and change the storage conditions of any construction material or equipment to be installed. Despite this, the GC will meet the standards and storage recommendations established by the manufacturers and suppliers, including but not limited to temperature and humidity parameters.

- The GC will install all materials and equipment according to the standards and recommendations established by the manufacturers and suppliers, including but not limited to temperature and humidity parameters.
- The GC will assure that site conditions are appropriate for the installation and construction. The beginning of the installation of finishing materials will signify that the current conditions of the project permits it. The GC will notify the architect in writing of any situation which would not allow the satisfactory completion of the project.
- The GC will be responsible for the disposal of all debris and garbage and in doing so meeting the parameters established by law.
- The GC will be responsible for maintenance and cleaning.

End of Contract

- Having completed all work, the GC will give assurance of clean surfaces free of defects and no debris or garbage on site. Hence the GC will use broom and vacuum cleaners for the final cleaning.
- The GC will submit all warranties and instructions of the material and equipment installed to the owner. This will be submitted to the architect in writing for backup purposes, however the responsibility lies solely on the GC.
- By signing the construction contract, the GC, agrees to provide a warranty for at least (1) year against all types of defects in the construction, installation, materials and equipment. Said warranty will be provided to the owner. The warranty will be exclusive from any other warranty established by manufacturers, suppliers and sub-contractors..

Additional Notes

- All finishes for walls and trims (interior/exterior) will be smooth plastered, unless otherwise specified.

legend

	EXISTING WALL
	TO BE DEMOLISHED
	NEW CONCRETE WALL
	NEW MASONRY WALL
	ELEVATION
	SECTION
	WALL DETAIL
	DETAIL
	FINISHED FLOOR ELEVATION
	PROPERTY LINE

OGPE: INFRAESTRUCTURE PRE-CONSULTATION

AGENCY	APPLICATION NUMBER	ACTUAL STATE	EXPEDITION DATE
LUMA	2023-475506-SRI-065969	Approved	12-Apr-23
NETPR	2023-475506-SRI-066016	Approved	11-Apr-23
AAA	2023-475506-SRI-065970	Agency Review	Pending
ACT	2023-475506-SRI-067169	Approved	21-Apr-23
Programa de Arqueología y Etnohistoria (ICP - PAE)	2023-475506-SRA-066093	Approved	5-Apr-23
Programa de Patrimonio Histórico Edificado (ICP - PPHE)	2023-475506-SRA-066097	Approved	10-Apr-23

LIST OF THE APPLICABLE CODES AND REGULATIONS

2018 PUERTO RICO BUILDING CODE

2017 ICC A117.1 ACCESSIBLE AND USABLE BUILDING FACILITIES

NEC NATIONAL ELECTRICAL CODE

ASTM INTERNATIONAL STANDARDS

2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

ZONING CODE REVIEW

D-G DOTACIONAL GENERAL (RCPR 2020)



LEGEND:

XX	PROPERTY POINT	—	SIGN
XX 14	CONTROL POINT	●	WOOD POLE
XX 14 STA-8	SPOT ELEVATIONS	◆	WOOD LIGHTING POLE
—	PROPERTY LINE	◆	STEEL POWER POLE
—	CENTER LINE	◆	STEEL LIGHTING POLE
—	CHAIN LINK FENCE	◆	GALVANIZED LIGHTING PIPE
—	BARBED WIRE FENCE	◆	ORNAMENTAL LIGHTING POLE
—	GALVANIZED STEEL FENCE	◆	ORNAMENTAL LIGHTING POLE (DOUBLE)
—	GUARDRAIL	◆	ALUMINUM LIGHTING POLE
—	ELECTRICAL LINE	◆	ALUMINUM POWER POLE
—	BANK OF RIVER OR CREEK	◆	ALUMINUM LIGHTING POLE (DOUBLE)
—	AEE AERIAL SERVITUDE LIMIT	◆	CONCRETE POWER POLE
—	STORM SEWER LINE	◆	CONCRETE LIGHTING POLE
—	SANITARY SEWER LINE	◆	CONCRETE LIGHTING POLE (DOUBLE)
—	SANITARY FORCE LINE	◆	SIGNAL LIGHT POLE
—	CONTOUR LINE 5.00 MTS.	◆	EXPRESSWAY OVERHEAD SIGN
—	CONTOUR LINE 1.00 MTS.	◆	GUY CABLE
—	CONTOUR LINE 0.50 MTS.	◆	TRANSFORMER
—	CURB	◆	ELECTRICAL PEDESTAL
—	CURB AND GUTTER	◆	CATV PEDESTAL
—	ACCESS CURB	◆	ELECTRICAL PULL BOX
—	CONCRETE SWALE	◆	ELECTRICAL SWITCH UNIT
—	EXISTING STRUCTURE	◆	ELECTRICAL PAD MOUNTED TRANSFORMER
—	STORM SEWER MANHOLE	◆	EXISTING PALM TREE
—	COMMUNICATIONS MANHOLE	◆	EXISTING TREE
—	ELECTRIC MANHOLE	◆	E.O.P.
—	SANITARY MANHOLE	◆	E.S.U.
—	VALVE MANHOLE	◆	E.P.B.
—	MANHOLE	◆	M.H.
—	CATCH BASINS	◆	W.M.
—	HEAD WALL	◆	C.B.
—	CURB INLET	◆	CPP.
—	CLEAN OUT	◆	RCM.
—	WATER VALVE	◆	REINFORCED CONCRETE PIPE
—	WATER METER	◆	KM ID
—	FIRE HYDRANT	◆	T.C.P.B.
			TELECOMMUNICATIONS PULL BOX

- NOTES:**
- ALL DISTANCES & ELEVATIONS ARE EXPRESSED IN THE METRIC UNITS SYSTEM, EXCEPT FOR PIPE DIAMETERS THAT ARE EXPRESSED IN INCHES.
 - HORIZONTAL CONTROLS ARE TIED TO THE STATE PLANE COORDINATE SYSTEM NAD 83 NA 2011 EPOCH 2010, USING A GNSS ANTENNA TRIMBLE R-8 CONNECTED TO A VIRTUAL REFERENCE STATION OPERATED BY HLCM GROUP, INC.
 - VERTICAL CONTROLS ARE PROVIDED HORTOMETRIC HEIGHT GEOID 8 (PUERTO RICO) USING A GNSS ANTENNA TRIMBLE R-8 CONNECTED TO A VIRTUAL REFERENCE STATION OPERATED BY HLCM GROUP, INC.
 - FIELD WORKS WERE PERFORMED USING A TOTAL STATION INSTRUMENT NIKON NIVO IN SEVERAL SUNNY DAYS DURING THE MONTH OF MAY 2022.
 - CLOGGED CATCH BASINS & MANHOLES INVERT ELEVATIONS MAY DIFFER ONCE THE UTILITY IS CLEANED. LAND SURVEYOR JORGE D. GONZALEZ FUENTES DOES NOT GUARANTEE THE ELEVATIONS OF CLOGGED OR SEALED UTILITIES.
 - SPOT ELEVATIONS REFER TO SPECIFIC COORDINATES, HOWEVER, CONTOUR LINES ONLY INDICATE THE GENERAL BEHAVIOR OF THE TERRAIN AND ARE GENERATED BY INTERPOLATION OF THE DATA COLLECTED ON THE FIELD.
 - SPOT ELEVATIONS ARE TAKEN RANDOMLY AND DO NOT NECESSARILY REPRESENT THE BEHAVIOR OF STORM WATER RUNOFF.
 - THE UTILITY SERVICE CONNECTIONS OF THE HOUSES REPRESENTS THE LOCATION AND DIAMETER, LAND SURVEYOR JORGE D. GONZALEZ FUENTES DOES NOT CERTIFICATE THE STATE OR FUNCTIONALITY.
 - AS STATED IN THE MANUAL FOR THE PROFESSIONAL PRACTICE AND GUIDELINES FOR THE COMPENSATION OF PROFESSIONAL SERVICES, PUBLISHED BY THE C.I.A.P.R., IN THE SECTIONS 2.2.2, 7.2.1, 7.2.2, 7.2.4, IT IS THE CLIENT, OWNER, OR AUTHORIZED REPRESENTATIVE RESPONSIBILITY TO CORROBORATE THE NAMES OF THE AFFECTED PROPERTY OWNERS BY PERFORMING A TITLE SEARCH.
 - THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULT OF THE SURVEY MADE ON THE DATE INDICATED AND CAN ONLY BE CONSIDERED AS AN INDICATION OF THE GENERAL CONDITIONS EXISTING AT THAT TIME.
 - CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND MEASUREMENTS AND ADVISE ARCHITECT OR OWNER OF ANY DIFFERENCES.
 - UNDERGROUND UTILITY WERE LOCATED BASED ON ABOVE GROUND EVIDENCE. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO ANY WORK.
 - TREE SURVEY - LAND SURVEYOR JORGE D. GONZALEZ FUENTES DID NOT PERFORM A TREE SURVEY OF THE PROPERTY.
 - THE LOCATION MAP WAS EXTRACTED FROM THE DIGITAL TOPOGRAPHIC QUADRANGLE OF "SAN JUAN", PUBLISHED BY THE U.S. GEOLOGICAL SURVEY.

SURVEY PLAN
 OF DR. JOSE N. GANDARA PARK LOCATED
 AT FRANKLIN D. ROOSEVELT AVE. AND
 FERNANDO PRIMERO STREET HATO REY
 NORTE WARD, SAN JUAN PUERTO RICO

SCALE	1:400
PLAN AS BUILT PLAN	
PROJECT	2771-003
DRAWN BY	J.L.G.F.
VERIFIED BY	J.L.G.F.
DATE	JUNE 2022
INSCRIPTION DATA	
FOLIO	N/A
TOMO	N/A
FINCA	N/A
CANTONAL NO.	083-041-186-11

CERTIFY CORRECT:
 JORGE D. GONZALEZ FUENTES
 PROFESSIONAL SURVEYOR LIC. 7199

REVISIONS:

NO.	DATE	DESCRIPTION

GEOMATIC
 SOLUTIONS AND SURVEYING
 URB. BALDORCH, HORREAS STREET 45, SUITE 201 HATO REY PR
 00914 P.R. | P.O. BOX 474
 TEL. 787-665-6665 | 787-630-1075
 WWW.GEOMATICPR.COM | INFO@GEOMATICPR.COM

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Yo, Arq. José F. Vázquez Pérez, con número de licencia 17226, 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, conocida como la "Ley para la Inversión por la Industria Panamericana" y con la Ley Núm. 319 de 15 de mayo de 1938, según enmendada, Ley Núm. 95 de 6 de julio de 1978, según enmendada, según aplica. Reconozco que cualquier declaración falsa o falsificación 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 OGP.

DESIGN DEVELOPMENT DRAWINGS
 DATE: MAY 5, 2023

REVISIONS:

PARQUE GÁNDARA
 Calle Juan B. Huyke
 San Juan, Puerto Rico, 00918

TOPOGRAPHIC SURVEY & NOTES

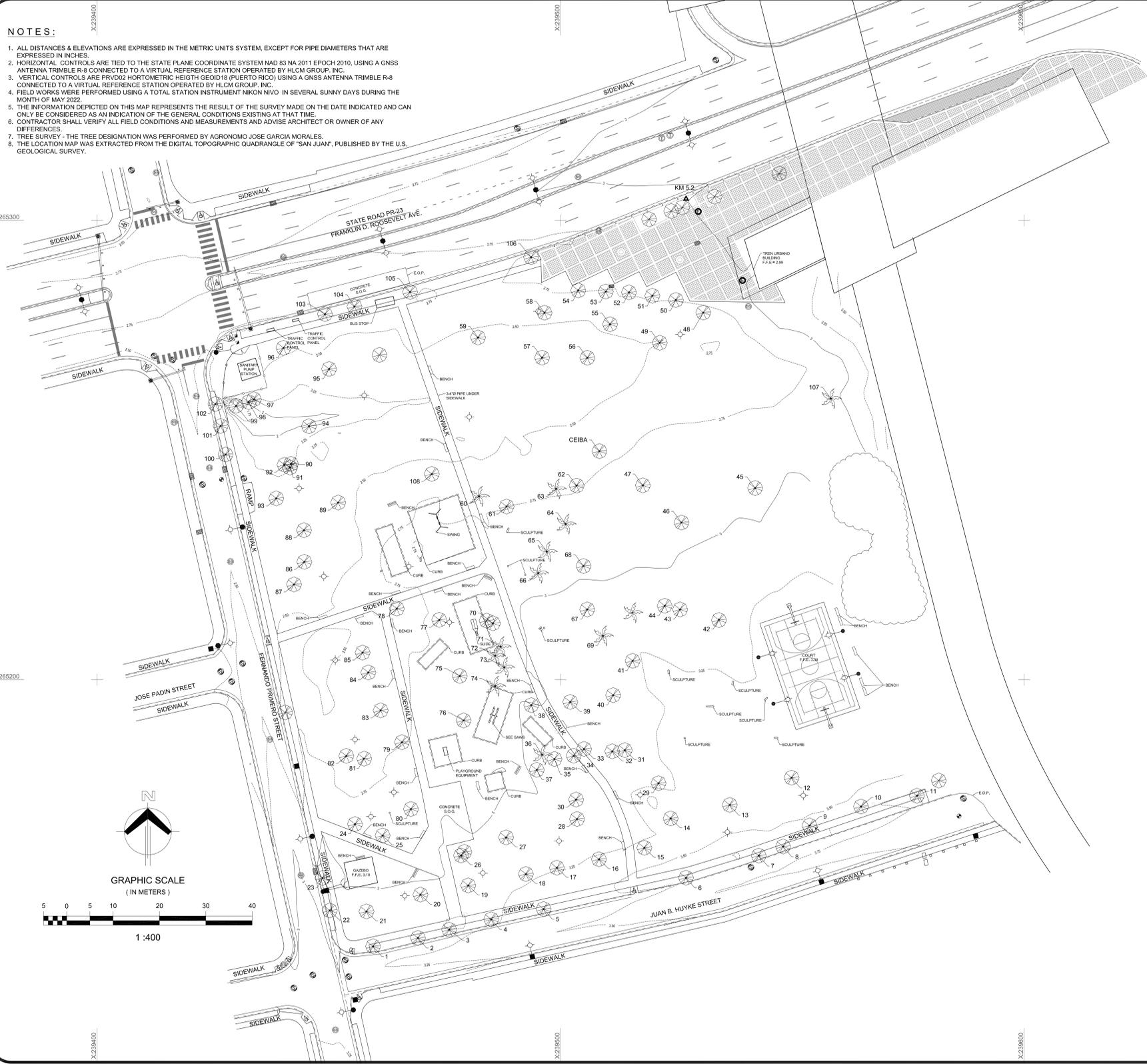
**SCHEMATIC
DRAWINGS**

DATE:

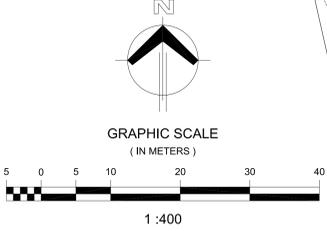
REVISIONS:
MARCH 21, 2023

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- CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND MEASUREMENTS AND ADVISE ARCHITECT OR OWNER OF ANY DIFFERENCES.
- TREE SURVEY - THE TREE DESIGNATION WAS PERFORMED BY AGRÓNOMO JOSÉ GARCÍA MORALES.
- THE LOCATION MAP WAS EXTRACTED FROM THE DIGITAL TOPOGRAPHIC QUADRANGLE OF "SAN JUAN", PUBLISHED BY THE U.S. GEOLOGICAL SURVEY.



ID	NOMBRE COMUN	NOMBRE CIENTIFICO	DAP	Altura	Condición
1	Guamá americano	<i>Pithecellobium dulce</i>	58	25	Deficiente
2	Guamá americano	<i>Pithecellobium dulce</i>	34	25	Deficiente
3	Guamá americano	<i>Pithecellobium dulce</i>	35	30	Deficiente
4	Guamá americano	<i>Pithecellobium dulce</i>	56	35	Deficiente
5	Guamá americano	<i>Pithecellobium dulce</i>	31.25	30	Deficiente
6	Guamá americano	<i>Pithecellobium dulce</i>	49	25	Deficiente
7	Reina de las flores	<i>Lagerstroemia speciosa</i>	16	25	Regular
8	Reina de las flores	<i>Lagerstroemia speciosa</i>	42	35	Regular
9	Reina de las flores	<i>Lagerstroemia speciosa</i>	26.5	35	Regular
10	Guamá americano	<i>Pithecellobium dulce</i>	63	50	Regular
11	Ucar	<i>Bucida buceras</i>	14.5	40	Buena
12	Ucar	<i>Bucida buceras</i>	25.5	50	Regular
13	Mangó	<i>Mangifera indica</i>	33	40	Buena
14	Ucar	<i>Bucida buceras</i>	14	40	Buena
15	Ucar	<i>Bucida buceras</i>	18	40	Regula
16	Ucar	<i>Bucida buceras</i>	23	45	Buena
17	Ucar	<i>Bucida buceras</i>	24	50	Regular
18	Ucar	<i>Bucida buceras</i>	18	40	Regular
19	Ucar	<i>Bucida buceras</i>	24	45	Regular
20	Caoba	<i>Sweetenia spp.</i>	12	15	Regular
21	Maria	<i>Calophyllum calaba</i>	20	20	Regular
22	Maria	<i>Calophyllum calaba</i>	20	14	Deficiente
23	Reina de las flores	<i>Lagerstroemia speciosa</i>	25	20	Regular
24	Reina de las flores	<i>Lagerstroemia speciosa</i>	18	20	Regular
25	Pterocarpus	<i>Pterocarpus indicus</i>	42.5	35	Buena
26	Ucar	<i>Bucida buceras</i>	10	40	Buena
27	Almendra	<i>Terminalia catappa</i>	29	40	Regular
28	Ficus	<i>Ficus lyrata</i>	5	10	Buena
29	Mangó	<i>Mangifera indica</i>	26	25	Regular
30	Caoba	<i>Sweetenia spp.</i>	25	40	Regular
31	Algaroba	<i>Hymenaea courbaril</i>	24	40	Regular
32	Algaroba	<i>Hymenaea courbaril</i>	20	40	Buena
33	Algaroba	<i>Hymenaea courbaril</i>	18	35	Regular
34	Algaroba	<i>Hymenaea courbaril</i>	38	45	Regular
35	Palma de coco	<i>Cocos nucifera</i>	15	50	Deficiente
36	Almendra	<i>Terminalia catappa</i>	34	40	Regular
37	Almendra	<i>Terminalia catappa</i>	12.5	15	Buena
38	Caoba	<i>Sweetenia spp.</i>	10	17	Buena
39	Cupéy	<i>Clusia rosea</i>	7	10	Buena
40	Almendra	<i>Terminalia catappa</i>	12	12	Deficiente
41	Maria	<i>Calophyllum calaba</i>	28	25	Buena
42	Roble blanco	<i>Tabebuia heterophylla</i>	7.5	16	Regular
43	Roble blanco	<i>Tabebuia heterophylla</i>	7	20	Buena
44	Ceiba	<i>Ceiba pentandra</i>	14	14	Buena
45	Almendra	<i>Terminalia catappa</i>	34	40	Regular
46	Almendra	<i>Terminalia catappa</i>	29	30	Regular
47	Guamá americano	<i>Pithecellobium dulce</i>	87	50	Regular
48	Maria	<i>Calophyllum calaba</i>	27	30	Regular
49	Cepillo de botella	<i>Callistemon citrinus</i>	13.5	18	Buena
50	Cepillo de botella	<i>Callistemon citrinus</i>	8	14	Buena
51	Cepillo de botella	<i>Callistemon citrinus</i>	11	14	Regular
52	Cepillo de botella	<i>Callistemon citrinus</i>	13	15	Regular
53	Cepillo de botella	<i>Callistemon citrinus</i>	9	17	Buena
54	Casia de siam	<i>Senna siamea</i>	36	40	Regular
55	Caoba	<i>Sweetenia spp.</i>	52	60	Regular
56	Caoba	<i>Sweetenia spp.</i>	38	60	Regular
57	Caoba	<i>Sweetenia spp.</i>	45	50	Regular
58	Caoba	<i>Sweetenia spp.</i>	61	55	Regular
59	Palma real	<i>Roystonia borinquena</i>	19	25	Buena
60	Ceiba	<i>Ceiba pentandra</i>	6	10	Buena
61	Melaleuca	<i>Melaleuca quinquenervia</i>	26	30	Deficiente
62	Palma de coco	<i>Cocos nucifera</i>	12	8	Buena
63	Palma de coco	<i>Cocos nucifera</i>	10	7	Deficiente
64	Palma de coco	<i>Cocos nucifera</i>	9	7	Deficiente
65	Palma de coco	<i>Cocos nucifera</i>	12	4	Deficiente
66	Melaleuca	<i>Melaleuca quinquenervia</i>	15	20	Regular
67	Schefflera	<i>Schefflera actinophylla</i>	7.5	12	Buena
68	Palma real	<i>Roystonia borinquena</i>	4	4	Buena
69	Almendra	<i>Terminalia catappa</i>	13	20	Buena
70	Palma de coco	<i>Cocos nucifera</i>	10	8	Deficiente
71	Palma de coco	<i>Cocos nucifera</i>	10	18	Buena
72	Palma de coco	<i>Cocos nucifera</i>	9	6	Buena
73	Palma de coco	<i>Cocos nucifera</i>	10	10	Buena
74	Laurel benjamina	<i>Ficus benjamina</i>	36	35	Regular
75	Almendra	<i>Terminalia catappa</i>	18	35	Regular
76	Maria	<i>Calophyllum calaba</i>	40	15	Deficiente
77	Caoba	<i>Sweetenia spp.</i>	29	35	Regular
78	Pterocarpus	<i>Pterocarpus indicus</i>	15	35	Buena
79	Ucar	<i>Bucida buceras</i>	12	6	Deficiente
80	Cepillo de botella	<i>Callistemon citrinus</i>	22	35	Regular
81	Ucar	<i>Bucida buceras</i>	21	35	Buena
82	Ucar	<i>Bucida buceras</i>	12	20	Regular
83	Ucar	<i>Bucida buceras</i>	26	40	Regular
84	Almendra	<i>Terminalia catappa</i>	23	22	Deficiente
85	Ucar	<i>Bucida buceras</i>	20	20	Deficiente
86	Melaleuca	<i>Melaleuca quinquenervia</i>	21	20	Deficiente
87	Jagüey blanco	<i>Ficus laevigata</i>	5	10	Buena
88	Jagüey blanco	<i>Ficus laevigata</i>	22	18	Deficiente
89	Maria	<i>Calophyllum calaba</i>	3	12	Buena
90	Moca	<i>Andira inermis</i>	8	25	Buena
91	Roble blanco	<i>Tabebuia heterophylla</i>	18	25	Regular
92	Ucar	<i>Bucida buceras</i>	22	40	Buena
93	Caoba	<i>Sweetenia spp.</i>	34	40	Regular
94	Falso flamboyán	<i>Peltophorum pterocarpum</i>	63	40	Regular
95	Falso flamboyán	<i>Peltophorum pterocarpum</i>	32	22	Regular
96	Caoba	<i>Sweetenia spp.</i>	11	20	Regular
97	Falso flamboyán	<i>Peltophorum pterocarpum</i>	20	20	Regular
98	Maria	<i>Calophyllum calaba</i>	20	25	Regular
99	Maria	<i>Calophyllum calaba</i>	28	25	Regular
100	Maria	<i>Calophyllum calaba</i>	15	20	Deficiente
101	Pterocarpus	<i>Pterocarpus indicus</i>	31	35	Buena
102	Pterocarpus	<i>Pterocarpus indicus</i>	34	40	Regular
103	Pterocarpus	<i>Pterocarpus indicus</i>	53	40	Buena
104	Pterocarpus	<i>Pterocarpus indicus</i>	38	36	Deficiente
105	Palma Real	<i>Roystonia borinquena</i>	15	35	Buena



**TREE INVENTORY
OF DR. JOSE N. GANDARA PARK LOCATED
AT FRANKLIN D. ROOSEVELT AVE. AND
FERNANDO PRIMERO STREET HATO REY
NORTE WARD, SAN JUAN PUERTO RICO**

SCALE	1:500
PLAN	AS BUILT PLAN
PROJECT	2271-003
DRAWN BY	J.A.G.R.
VERIFIED BY	J.D.G.F.
DATE	JUNE 2022
INSCRIPTION DATA	
FIELD	N/A
TOMO	N/A
FOLIO	N/A
CONSTRUCION NO.	0505046138221

CERTIFY CORRECT:
[Signature]
JORGE D. GONZALEZ FUENTES
PROFESSIONAL SURVEYOR LIC. 7199



GEOMATIC
SOLUTIONS AND SURVEYING
URB. BALDORICH HOSTOS STREET #16 SUITE 201 HATO REY PR
694-4127W, 694-647N
TEL. 694-4127W, 694-647N
WWW.GEOMATICPR.COM, INFO@GEOMATICPR.COM

SHEET: 1 OF 1

TREE INVENTORY SURVEY PLAN
not to scale



Top View
Parque Gándara



View from Ave. Roosevelt
Parque Gándara

5.3 Historic Preservation



GOVERNMENT OF PUERTO RICO
STATE HISTORIC PRESERVATION OFFICE

Executive Director | Carlos A. Rubio-Cancela | carubio@prshpo.pr.gov

Wednesday, October 4, 2023

Lauren Bair Poche, M.A.

Historic Preservation Senior Manager
HORNE Puerto Rico
10000 Perkins Rowe, Suite 610 Bldg G
Baton Rouge, LA 70810

SHPO: 09-19-23-01 PR-CRP-000927 IMPROVEMENTS TO PARQUE GÁNDARA, HATO REY NORTE WARD, ROOSEVELT AVENUE (STATE ROAD PR-23), FERNANDO PRIMERO STREET & JUAN B. HUYKE STREET, SAN JUAN, PUERTO RICO

Dear Ms. Poche,

The SHPO 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*. 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.

Our records support your finding of **no historic properties affected** within the project's area of potential effects.

If you have any questions or comments regarding this matter or require our further assistance, do not hesitate to contact our Office.

Sincerely,


Carlos A. Rubio-Cancela
State Historic Preservation Officer

CARC/GMO/SG





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,

A handwritten signature in blue ink, appearing to read 'JB', is placed over the typed name of the signatory.

Juan C. Pérez Bofill, P.E. M.Eng
Director of Disaster Recovery
CDBG DR-MIT

September 19, 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 City Revitalization (City-Rev) Program

Section 106 NHPA Effect Determination Submittal for PR-CRP-000927: Parque Gandara Project, San Juan, 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 Puerto Rico Housing (PRDOH) for CDBG-DR.

On behalf of PRDOH and the subrecipient, the Municipality of San Juan, HORNE is submitting documentation for the proposed Parque Gandara Project which is within the Hato Rey Norte Ward. The project area is not within an eligible or listed historic district. The proposed project aims to improve and enhance the current park through circular and radial pedestrian paths, both new and repaired sidewalks, interior plazas, seating areas with benches, path and site lighting, infantile playground areas, restoration of existing landscapes, reforestation, new landscapes, repairs to the basketball and volleyball courts, central gazebo, fitness yard, urban agriculture yard, and signage. The full scope of the project is described in detail within the submitted documentation, which includes mapping, photographs, and 60% design plans.

Based on the provided documentation, the Program requests a concurrence with a determination that no historic properties affected is appropriate for this undertaking.

Please contact me with any questions or concerns by email at lauren.poche@horne.com or phone at 225-405-7676.

Kindest regards,



Lauren Bair Poche. M.A.

Architectural Historian, Historic Preservation Senior Manager
Attachments

PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM CITY REVITALIZATION PROGRAM (CITY-REV) Section 106 NHPA Effect Determination		
Subrecipient: Municipality of San Juan		
Project Name: Improvements to Parque Gándara		Project ID: PR-CRP-000927

Project Location: Hato Rey Norte Ward, Roosevelt Avenue (State Road PR-23), Fernando Primero Street & Juan B. Huyke Street, San Juan PR 00918	
Project Coordinates: 18.422170, -66.059330	
TPID (Número de Catastro): 063-041-136-21	
Type of Undertaking: <input checked="" type="checkbox"/> Substantial Repair/Improvements <input type="checkbox"/> New Construction	
Construction Date (AH est.): c1960	Property Size (acres): 4.34

SOI-Qualified Architect/Architectural Historian: Eduardo A. Regis Martínez, M.A.
Date Reviewed: July 26, 2023
SOI-Qualified Archaeologist: Jesus E. Vega, Ph.D.
Date Reviewed: September 5, 2023

In compliance with Section 106 of the National Historic Preservation Act (NHPA), the Program is responsible for identifying historic properties listed in the 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)

The Municipality of San Juan proposes the remodeling of Dr. José Narciso Gándara Cartagena Park, an urban park located in Hato Rey Norte Ward. The proposed design takes advantage of the natural characteristics of the site in order to enhance and develop the current uses of the park. The main architectural component is a circular walkway with a 420 feet diameter centrally contained within the square perimeter of the park.

A path a quarter-mile in length will serve as the foundational architectural element that orders the rest of the project, providing a continuous internal connection throughout the facility. A secondary series of diagonal pathways will intersect with the main radial walkway, creating various interior regions within the park. As a whole, the bisected circular sidewalk system will provide a continuous pedestrian connection throughout the public greenspace, offering multiple leisure intersections for recreation access to the peripheral urban sidewalks outside of the park.

At the north end, the park connects with the Tren Urbano Roosevelt Station and the sidewalk of Roosevelt Avenue (State Road PR-23). It also connects with the municipal sidewalks on the west and south borders. The east side is bordered by the aerial train tracks and an abandoned parcel belonging to the Puerto Rico Highway Transportation Authority.

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Subrecipient: Municipality of San Juan	
Project Name: Improvements to Parque Gándara	Project ID: PR-CRP-000927

Beside the required earthworks, the park will be mostly composed of landscaped greenspaces, concrete pavement for paths and sidewalks, benches, a concrete and steel gazebo, flexible floorings for the kid’s areas made of rubber and sand, and various other light structures and features, such as public lighting, beach tennis court, metallic pergolas, signage, among others.

Overall, the main areas of the new park will include circular and radial pedestrian paths, both new and repaired sidewalks, interior plazas, seating areas with benches, path and site lighting, infantile playground areas, restoration of existing landscapes, reforestation, new landscapes, repairs to the basketball and volleyball courts, central gazebo, fitness yard, urban agriculture yard, and signage.

This is a fundamentally sustainable project with a minimal carbon footprint as it is mainly a rehabilitation of an existing urban park geared towards maximizing its public use. Although limited, our project calls for selective demolition of damaged sidewalks, walkways, and other existing concrete structures, which will require ground disturbance. Said demolition will be specified and coordinated so that the removed concrete can be recycled on-site as crushed stone for site fill and underlayment. The design also features a retention pond at the northwest end of the park, the lowest elevation point on the site, to improve seasonal flooding. It will be adjacent to the existing pump station.

Depending on the tree inventory and plant assessment, the goal is to preserve as much of the vegetative material in the park, and to add more trees. When necessary, all removed plant elements will be duly mitigated, replanted, or replaced. Other proposed green features are the addition of drought-resistant plants, permeable surfaces, and recycling bins. The project will observe or exceed current environmental parameters and comply with the ADA (American Disabilities Act), the PR Building Code, the IBC, and other applicable design parameters and regulations. Maximum depth of construction disturbance, including foundations and utilities, is three feet.

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 the west parcel of Gándara Park (TPID: 063-041-136-21), limited by Roosevelt Avenue (State Road PR-23) to the north, Fernando Primero Street to the west, Juan B. Huyke Street to the south, and the Tren Urbano Roosevelt Station aerial train tracks

PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM CITY REVITALIZATION PROGRAM (CITY-REV) Section 106 NHPA Effect Determination		 GOVERNMENT OF PUERTO RICO DEPARTMENT OF HOUSING
Subrecipient: Municipality of San Juan		
Project Name: Improvements to Parque Gándara		Project ID: PR-CRP-000927

to the east. The east parcel of Gándara Park (TPID: 063-041-136-22), on the other side of the train tracks, is not part of the project. Overall, the direct APE is 0.08 miles (443.3 feet) long from north to south and 0.09 miles (464.4 feet) wide from east to west, encompassing 4.34 acres. The visual APE is the viewshed of the proposed project, which is the urban landscape of Hato Rey Norte Ward: the multi-story buildings of the financial district along Luis Muñoz Rivera Avenue and Ponce de León Avenue (State Road PR-1) to the northeast; the commercial establishments along Roosevelt Avenue (State Road PR-23) to the north and northwest; the residential streets of Juan B. Huyke Urbanization of to the west and southwest; and a parking lot for local office buildings to the south.

Identification of Historic Properties - Archaeology

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 within a quarter-mile radius of one recorded archaeological site and/or NRHP listed/eligible historic property pertaining to the Hato Rey Norte/Hato Rey Central Wards of the Municipality of San Juan, described below, and highlighted in the aerial and topographic maps included. "No data" denotes no corresponding Institute of Puerto Rican Culture (IPRC), State Historic Preservation Office (SHPO), or National Register of Historic Places (NRHP) identification was found.

Table 1. Archaeological Sites and/or NRHP Listed/Eligible Historic Properties Within Quarter-Mile Radius of Project Area

#	Name	SHPO ID	IPRC ID	Location	Description	NRHP
1	Iglesia Presbiterian en Hato Rey	No data	No data	0.08 mi SE	Historic, Presbyterian church inaugurated in June 1958; originally named Río Piedras Presbyterian Church, it began in a medical store on Quisqueya Street, Santurce, in June 1950, before relocating to October 12 Street in Urb. Roosevelt; on January 1951, the Presbytery of	No data

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					Puerto Rico officialized the congregation with 30 members; located on the junction of Eleanor Roosevelt (State Road PR-41) and Fernando Primero Streets.	
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Table 2. Cultural Resource Studies Conducted Within Quarter-Mile Radius of Project Area

ID	Author	Title	Year	SHPO/IPRC ID	Results	Location
A	Marlene Ramos	Phase 1A, Historic Background of the Urban Development of Río Piedras & Caño Martín Peña Sector, Tren Urbano	1995	08-17-92-01/ CAT-SJ-C-95-05-06	Positive	0.01 mi NE
B	Eduardo Questell & Carlos Figueroa	Phase 1A, Urban Train for San Juan Metropolitan Area (Tren Urbano)	1992	08-17-92-01/ CAT-BA-92-04-05	Negative	0.07 mi NE
C	Sharon Meléndez Ortiz & Hernán Bustelo	Phase 1A, View Point at Roosevelt	2016	07-15-16-04/ No data	Negative	0.17 mi NE
D	Sharon Meléndez Ortiz	Phase 1B, View Point at Roosevelt	2016	07-15-16-04/ No data	Negative	0.17 mi NE
E	Antonio Daubón Vidal	Phase 1A, Loft at Ponce de León #419	2006	03-05-12-04/ CAT-SJ-C-06-12-06	Negative	0.17 mi SE
F	Antonio Daubón Vidal	Phase 1B, Loft at Ponce de León #419	2006	03-05-12-04/ CAT-SJ-C-06-13-02	Negative	0.18 mi SE
G	Agamemnon Gus Pantel Tekakis	Phase 1B, Coliseo Olímpico de Puerto Rico - Nuevo Centro de San Juan	1997	02-17-98-01/ CAT-SJ-C-96-06-03	Negative	0.24 mi NW

Cultural Setting

Hato Rey is a flat land of alluvial deposits in the Municipality of San Juan. To the north, between Hato Rey and the Atlantic Ocean, is the islet of Cangrejos, now called Santurce. South of Hato Rey is Río Piedras. Unlike Cangrejos and Río Piedras, Hato Rey never became

PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM CITY REVITALIZATION PROGRAM (CITY-REV) Section 106 NHPA Effect Determination	 GOVERNMENT OF PUERTO RICO DEPARTMENT OF HOUSING
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Project Name: Improvements to Parque Gándara	Project ID: PR-CRP-000927

an independent municipality, with its urban development in the 19th century restricted to Ponce de León Avenue, also known as the Military Road or *Carretera Central* from Río Piedras to San Juan.

The early history of Hato Rey is largely about cattle ranching. In 1505, Vicente Yáñez Pinzón introduced pigs and goats on the south coast of Puerto Rico, for a future settlement that never materialized. In 1510, Juan Ponce de León, as the first Spanish governor of Puerto Rico, introduced cattle and horses from Santo Domingo, with additional cattle brought by Luis Fernando de Alfaro in 1511.

By 1521, there were two bridges connecting San Juan Islet to the rest of Puerto Rico, at *Caño San Antonio* between San Juan and Cangrejos, and at *Caño Martín Peña* between Cangrejos and Hato Rey, meaning *el hato del rey*, the king’s ranch where cattle roamed freely, providing meat for Spanish troops in San Juan. By the 19th century, various sectors of Hato Rey were privately fenced off for sugar cane cultivation, as the prize of sugar was rising and cattle ranching deteriorated. Oranges and pineapples were also cultivated.

In the early 20th century, new cattle began to be imported from the United States, including Holstein, Jersey, Guernsey, Shorthorn, and Ayrshire breeds. By the 1920s, the cattle had adapted to the tropical climate, and thus began the modern milk industry on the island. By the mid-20th century, one of the largest milk producers was *JFonalledas*, also known as *Vaquería Tres Monjitas*, the same people that built the large mall of *Plaza Las Américas*, leading to the collapse of small, traditional stores in Río Piedras.

In the early 20th century, Hato Rey attracted various affluent families as an area of florid beauty and tranquility, leading to the construction of mansions along Ponce de León Avenue, or close to it. The end of the Second World War brought an era of prosperity to the banking industry in Puerto Rico, giving rise to *La Milla de Oro* at the center of Hato Rey, with tall buildings rising on both sides of Ponce de León Avenue, filled with banking, law and government offices. While the very rich gravitated towards Guaynabo, the mansions along Ponce de León Avenue were converted into office spaces, or demolished for commercial ventures. New middle class, upper middle class and working class neighborhoods were built along much of Hato Rey, including Urbanización Juan B. Huyke south of Franklin D. Roosevelt Avenue.

Potential for Intact Cultural Deposits

The archaeological site files at the State Historic Preservation Office (SHPO) and at the Consejo Arqueológico Terrestre (CAT), affiliated with the Institute of Puerto Rican Culture

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(IPRC) do not report any prehistoric archaeological sites within the project area. Between 1930 and 2015, a hundred archaeological sites have been reported in the Municipality of San Juan, of which nine are associated with pre-Columbian cultures. Some of these archaeological sites are the underwater Vega-Vicente (SJ0100026), located off the coast of Punta Piedrita in Condado and associated with pre-ceramic groups from the Archaic Period (ca. 4,000 BC to 200 AD), Los Dominicos/SJ-1 (SJ0100001), located in Old San Juan and associated with the Agro-pottery Period I or Saladoid Culture (ca. 250 BC to 600 AD), and La Ceiba/St. Mary's/Antiguo Casino/SJ-4 (SJ0100004), also located in Condado and associated with the Agro-pottery Period II or Ostionoid Culture (ca. 600 AD to 1,200 AD), among others. The closest known aboriginal site is at Isla Guachinango (No data), located in the San José Lagoon, Santurce Ward, approximately 1.58 miles northeast. The closest fresh-water body, the canalized **Caño Martín Peña**, flows 0.57 miles northwest of the project area. There are no prehistoric sites reported in Hato Rey Norte, Hato Rey Sur, or Hato Rey Central Wards.

Two railroad lines pertaining to the *Ferrocarril de Circunvalación de Puerto Rico*, established during the late 19th century and significantly expanded during the early 20th century due to the growing sugar cane industry, converged approximately 0.25 miles northeast of the project area: Line A from San Juan to Arecibo, which began construction on 1888 and ran north of Roosevelt Avenue (State Road PR-23) and O'Neill Street, and Line B from Martín Peña to Río Piedras, which began construction in 1889 and ran along Luis Muñoz Rivera and Ponce de León Avenues (State Road PR-1), east of Gándara Park. The Martín Peña Train Station was located 0.33 miles northeast, what is today the Popular Center. None of these historic properties crossed into the current project area, which surroundings have been impacted by sustained urban development since the early 20th century. Moreover, virtually every nearby construction in Hato Rey, whether commercial or residential, dates to mid- to late 20th and 21st centuries; most of the early 20th century constructions have been demolished and built over. For instance, three to four houses scattered along the parcel were present throughout the 1940s and appear to have been demolished by the beginning of the 1950s. Therefore, the potential for intact deposits of prehistoric or historic materials is considered low.

History of Use

Before Gándara Park was built, the 4.34-acre parcel south of the **Caño Martín Peña** was likely land used for cattle ranching during the late 19th century to early 20th century. Hato Rey began to rapidly urbanize at the turn of the century, with residential and commercial

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developments sprouting along Ponce de León Avenue (State Road PR-1), known then as the Military Road or **Carretera Central** from Río Piedras to San Juan. The parcel was located on Insular Road #45, perpendicular to the Military Road and west of a railroad line built by the American Railroad Company of Porto Rico, as shown on a 1932 map of a segment of Hato Rey (Figure 1) between today’s Hato Rey Norte and Hato Rey Central Wards. The Eleanor Roosevelt Development had begun construction south of the parcel, on the other side of the insular road.

Three to four houses scattered along the parcel are present in 1941 and 1947 USGS topographic maps (Figures 2 and 3), and a new railroad line appears to have been built to the north of the parcel. A small stream emanating from the **Caño Martín Peña** likely supplied water to the houses. These houses are no longer present in a 1952 edition of a 1949 USGS topographic map (Figure 4), which only shows a single, larger L-shaped structure to the south of the parcel. The new Roosevelt Avenue (State Road PR-23), bordering the north limit of the parcel, is also present. By this point, all the land west of the parcel, between the new avenue and the Eleanor Roosevelt Development, had been urbanized. Fernando Primero Street to the west and Juan B. Huyke Street to the south first appear on a 1959 edition of a 1957 USGS topographic map (Figure 5), part of the continued advancement of urbanization of Hato Rey in the latter half of the 20th century. Both railroad lines are no longer present, marking a clear shift toward vehicular transportation and the economic downturn of the local sugarcane industry.

The label of Dr. José N. Gándara Park, accompanied by a postal office toward the east end of Juan B. Huyke Street, first appear in a 1965 edition of a 1963 USGS topographic map (Figure 6) and in subsequent publications, such as the 1972 and 1982 editions of a 1969 USGS topographic map (Figures 7 and 8). Aerial photographs of Gándara Park from 1962 and 1967 (Figures 9 and 10) shows its composition of pedestrian walkways to the west and a dirt patch to the southeast, where the current basketball court resides. It appears that the west side of the urban park was sparsely covered by trees and shrubs, while the east side was mainly a grass field. The cartographic and photographic evidence combined suggests the urban park was built between 1960 and 1962.

The last major change to Gándara Park and its surroundings occurred between 1995 and 2005, with the construction of the **Tren Urbano**, a fully-automated rapid transit system traversing the metropolitan Municipalities of San Juan, Guaynabo, and Bayamón. The Roosevelt Station was inaugurated in 2004 on the junction of Roosevelt Avenue (State Road PR-23) and Luis Muñoz Rivera Avenue (State Road PR-1), as seen on satellite images from 1994 and 1995 to 2004 and 2005 (Figures 11, 12, 13, and 14). It is one of several stations of the **Tren Urbano** in the financial district of Hato Rey, colloquially known as **La Milla de Oro**.

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One of the entrances to the train station, currently in disuse, was built on the northeast limit of the urban park, with aerial train tracks built across the park on a north-south axis.

The overall configuration of Gándara Park has remained the same since, with minor changes such as a slightly denser vegetation cover on the southwest corner of the park and a design change on the basketball court, as seen on satellite images from 2014 and 2015 (Figures 15 and 16). The vegetation appears overgrown in a satellite image from August 2017 (Figure 17), one month prior to the passing of hurricanes Irma and María, which devastation is evidenced in a subsequent satellite image taken approximately two months later (Figure 18). Gándara Park was completely abandoned in the following years.

According to a news article in *El Adoquín*, in 2021 the urban park was adopted and rehabilitated by a group of community members led by José Luis Díaz. Inspired, local artist Alberto Soto contributed several of his sculptures to the park, including *Dedos de la Paz*. A community garden was also established near the aerial train tracks, facing west. *Cooperativa de la Península de Cantera* currently maintains the landscaping of the park. They also painted the basketball court, replaced wooden boards, and installed pedestrian lights throughout the walkways.



Figure 1. 1932 map of east segment of Hato Rey, San Juan, by Petro Otero. Project APE is highlighted in yellow. (Source: Library of Congress, <https://www.loc.gov/maps/collections>).

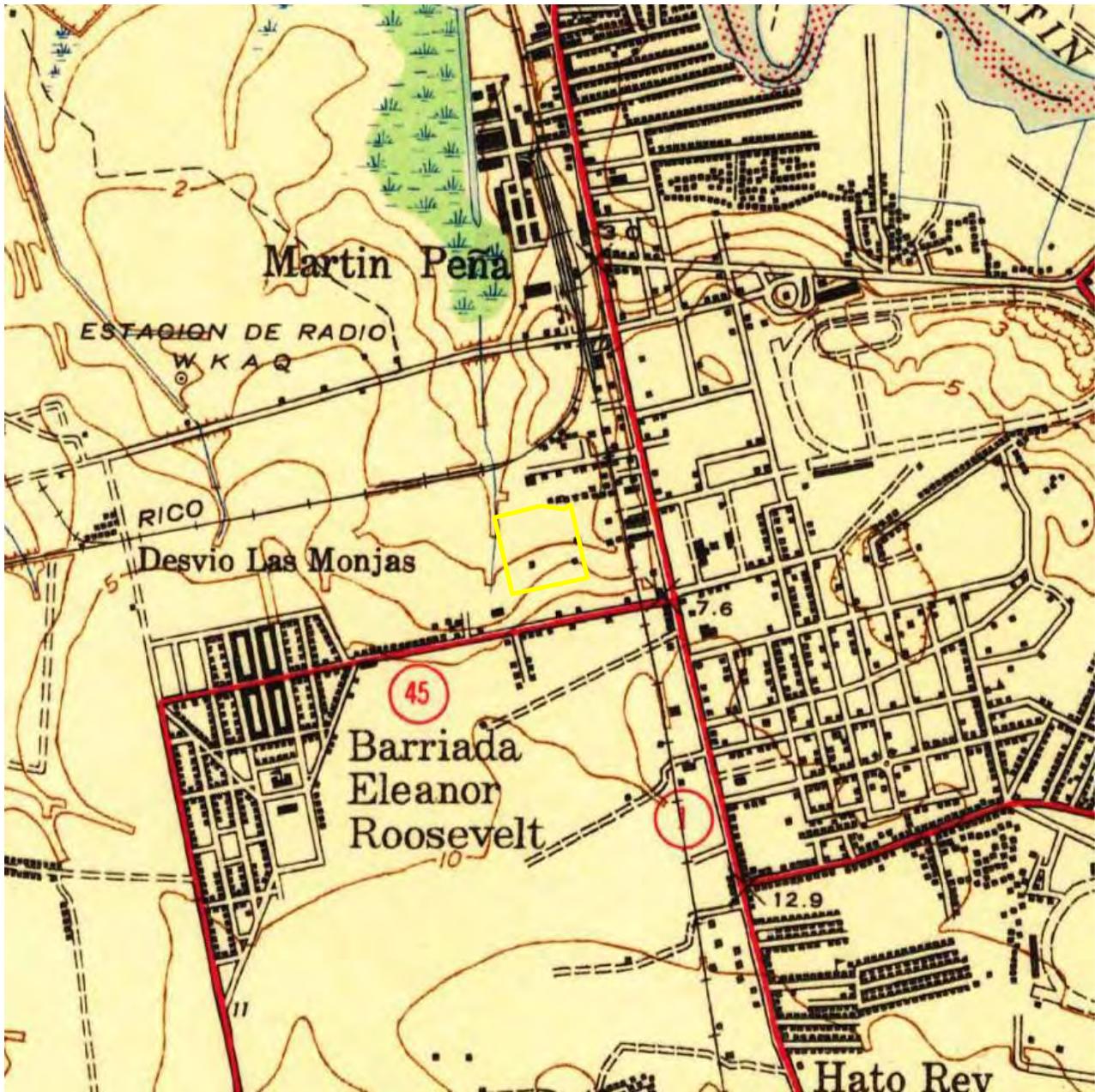


Figure 2. USGS 1941 topographic map (1:30,000 scale) of Hato Rey, San Juan. Project APE is highlighted in yellow. (Source: topoView, <https://ngmdb.usgs.gov/topoview>).

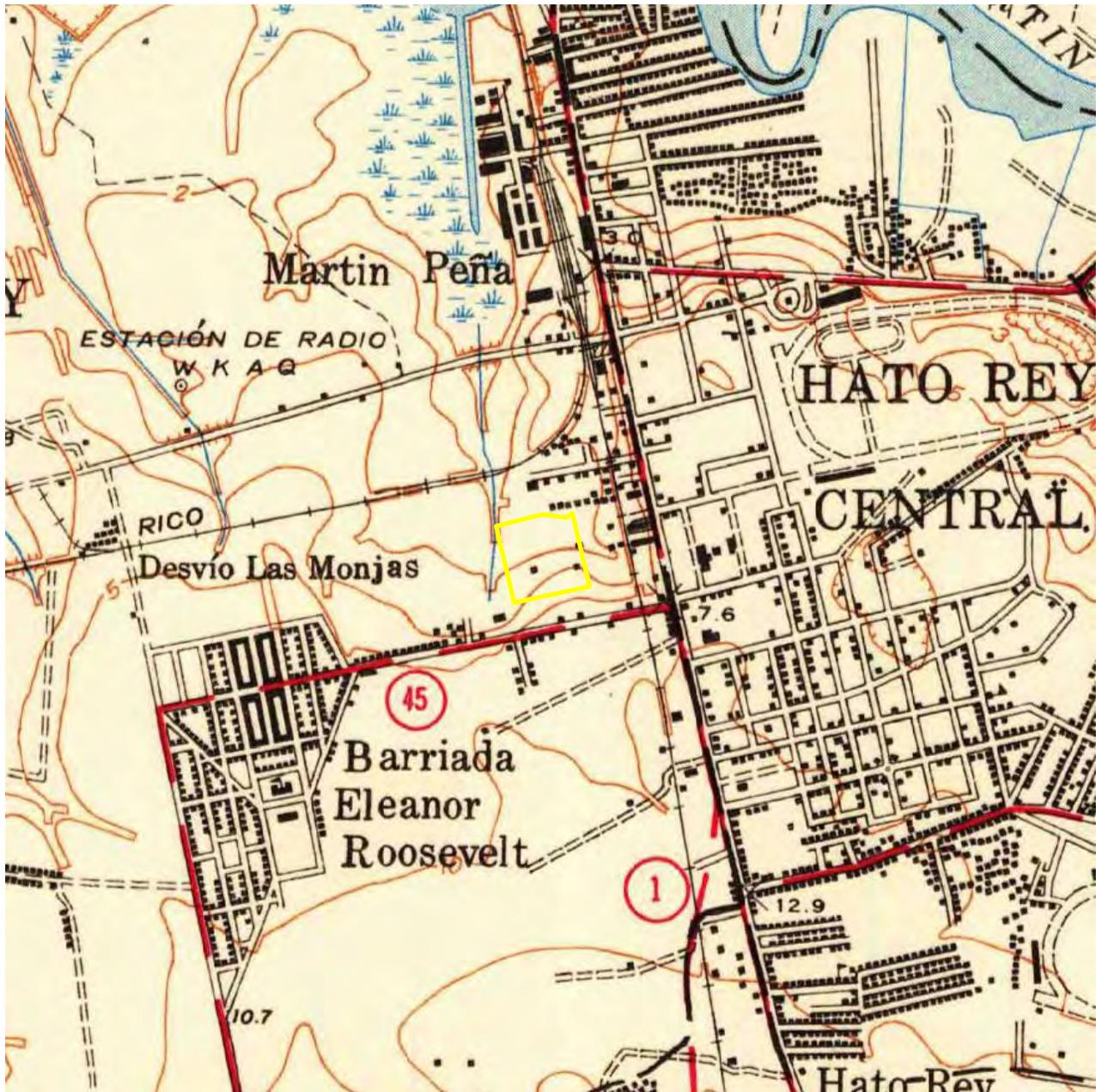


Figure 3. USGS 1947 topographic map (1:30,000 scale) of Hato Rey, San Juan. Project APE is highlighted in yellow. (Source: topoView, <https://ngmdb.usgs.gov/topoview>).

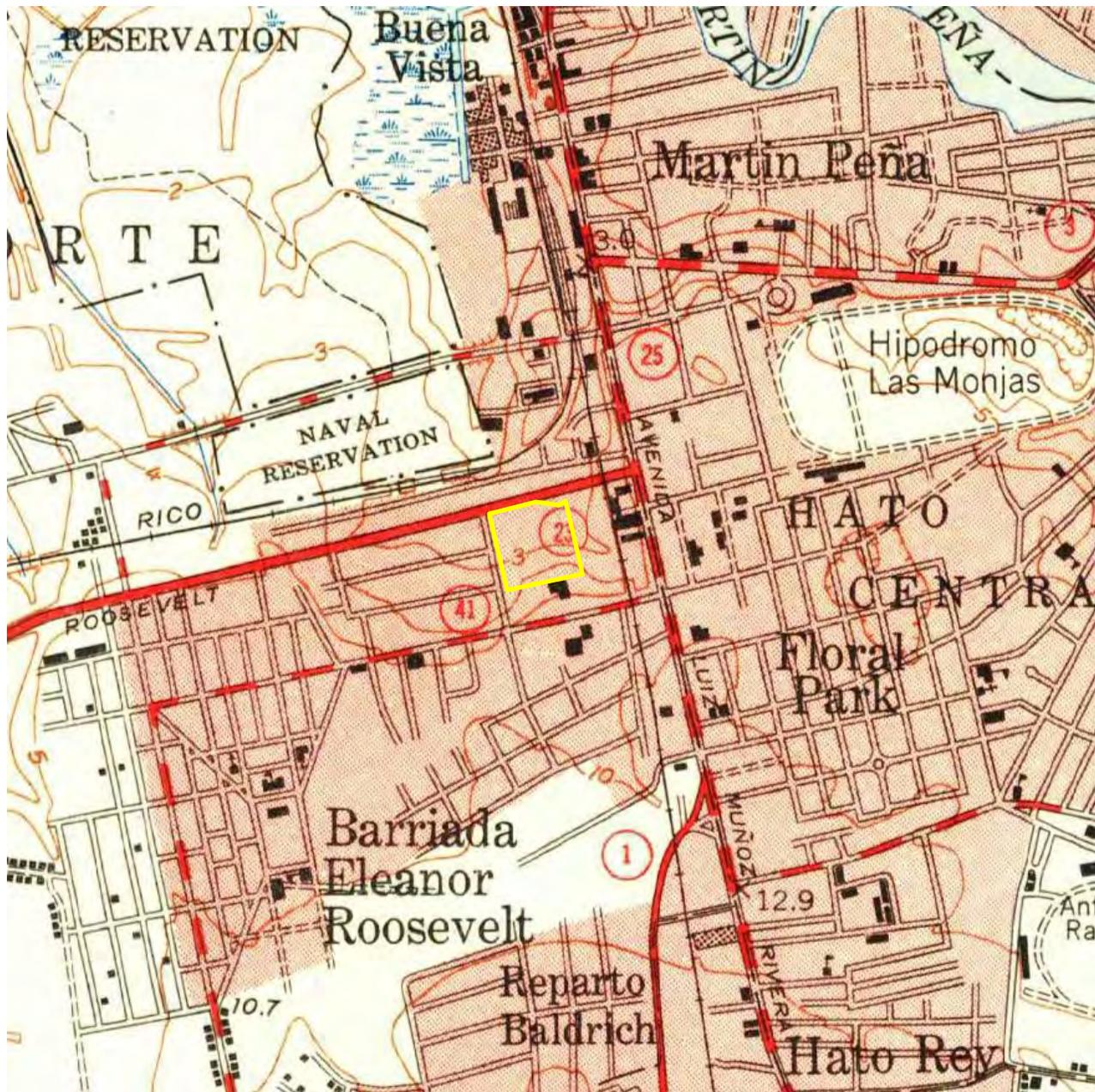


Figure 4. USGS 1952 ed. of 1949 topographic map (1:30,000 scale) of Hato Rey, San Juan. Project APE is highlighted in yellow. (Source: topoView, <https://ngmdb.usgs.gov/topoview>).

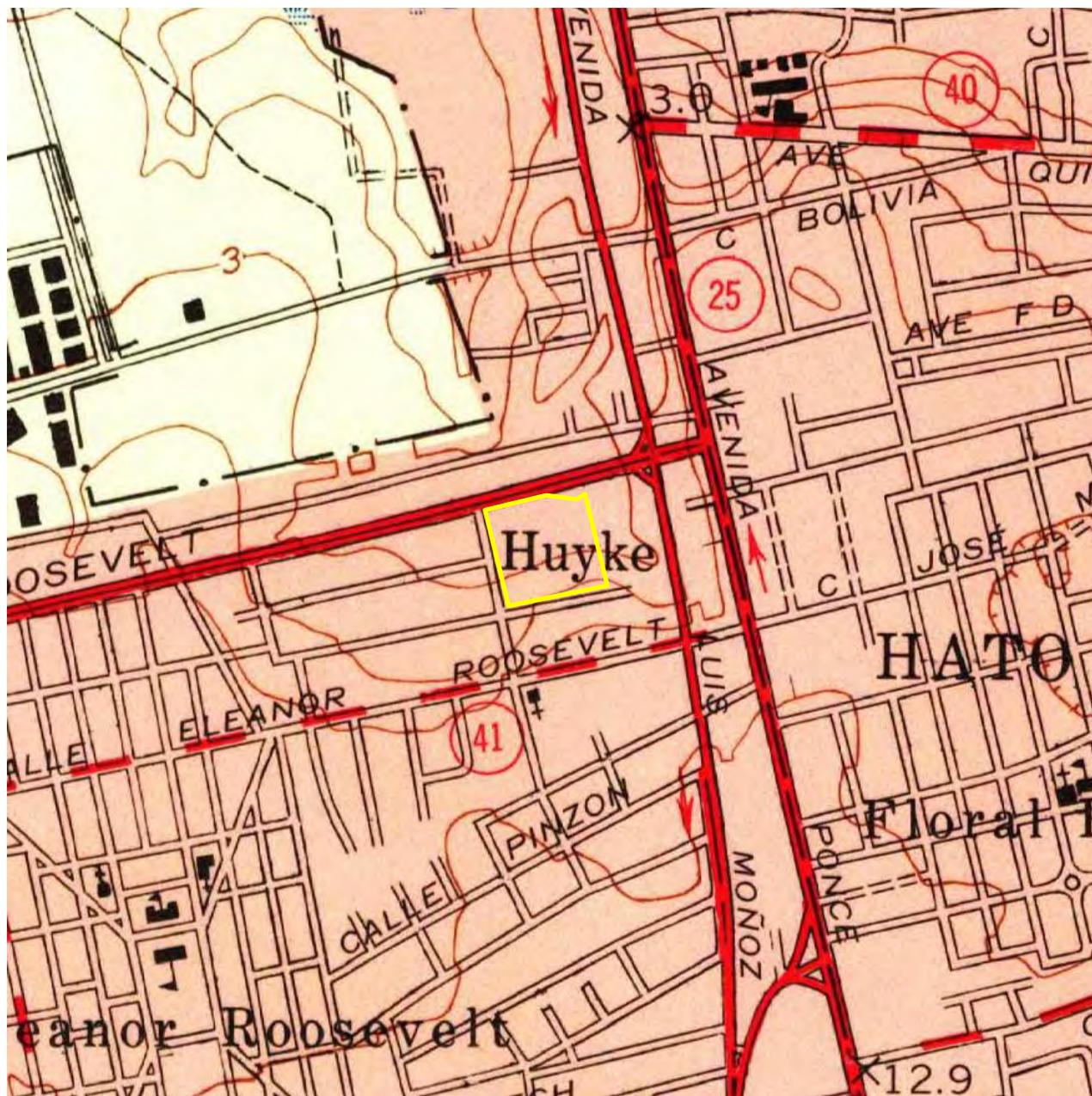


Figure 5. USGS 1959 ed. of 1957 topographic map (1:20,000 scale) of Hato Rey, San Juan. Project APE is highlighted in yellow. (Source: topoView, <https://ngmdb.usgs.gov/topoview>).

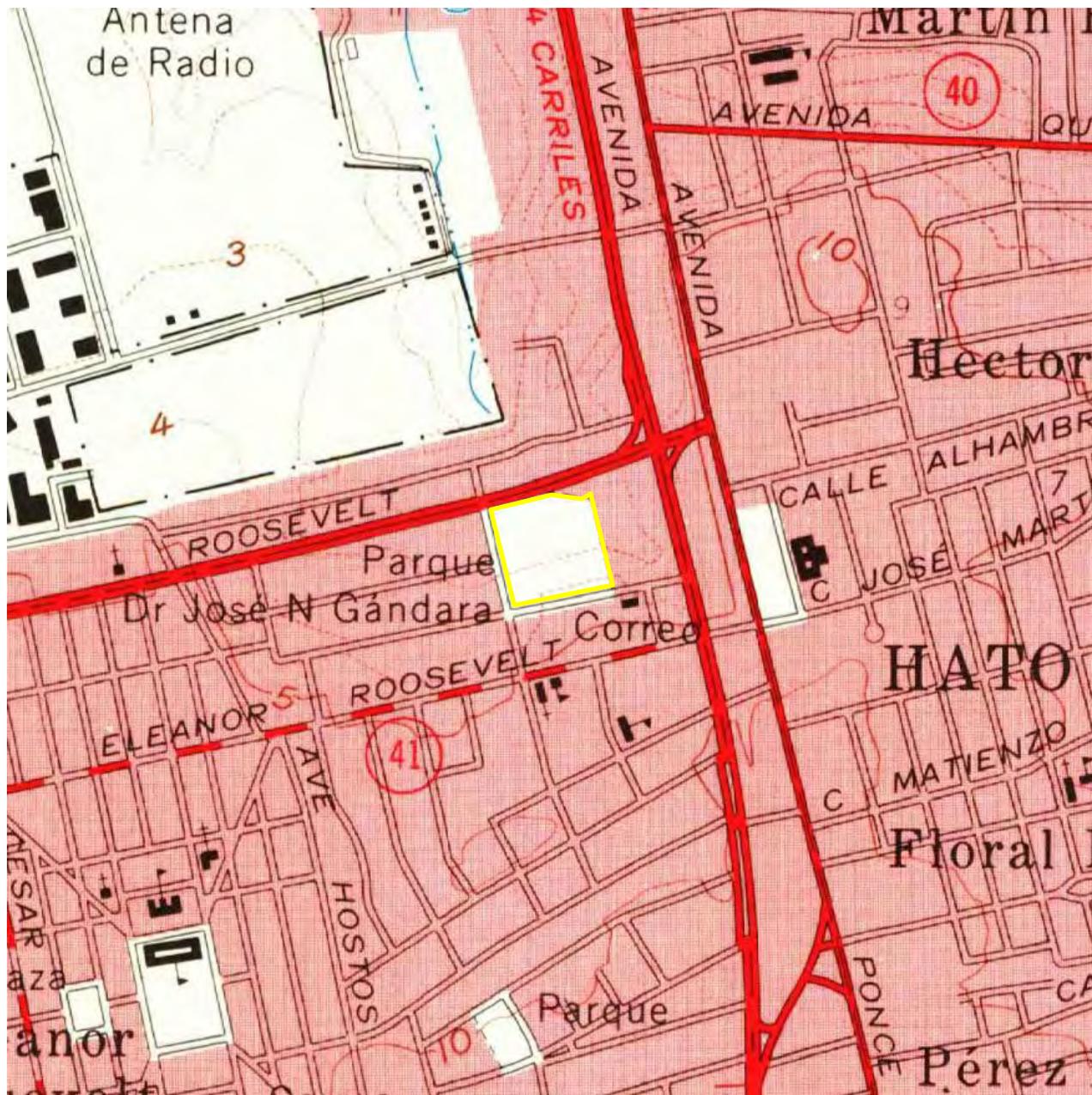


Figure 6. USGS 1965 ed. of 1963 topographic map (1:20,000 scale) of Hato Rey, San Juan. Project APE is highlighted in yellow. (Source: topoView, <https://ngmdb.usgs.gov/topoview>).

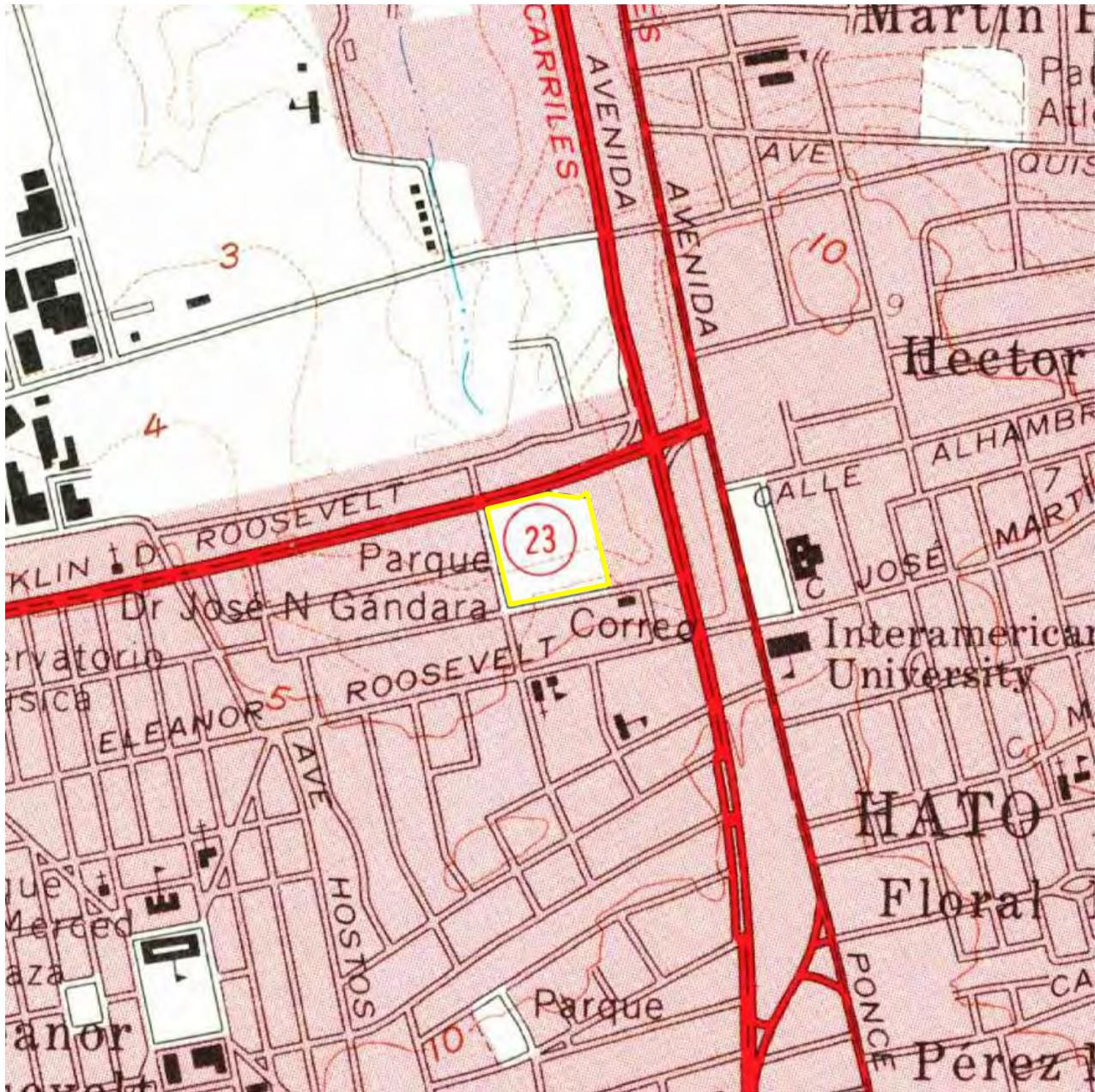


Figure 7. USGS 1972 ed. of 1969 topographic map (1:20,000 scale) of Hato Rey, San Juan. Project APE is highlighted in yellow. (Source: topoView, <https://ngmdb.usgs.gov/topoview>).

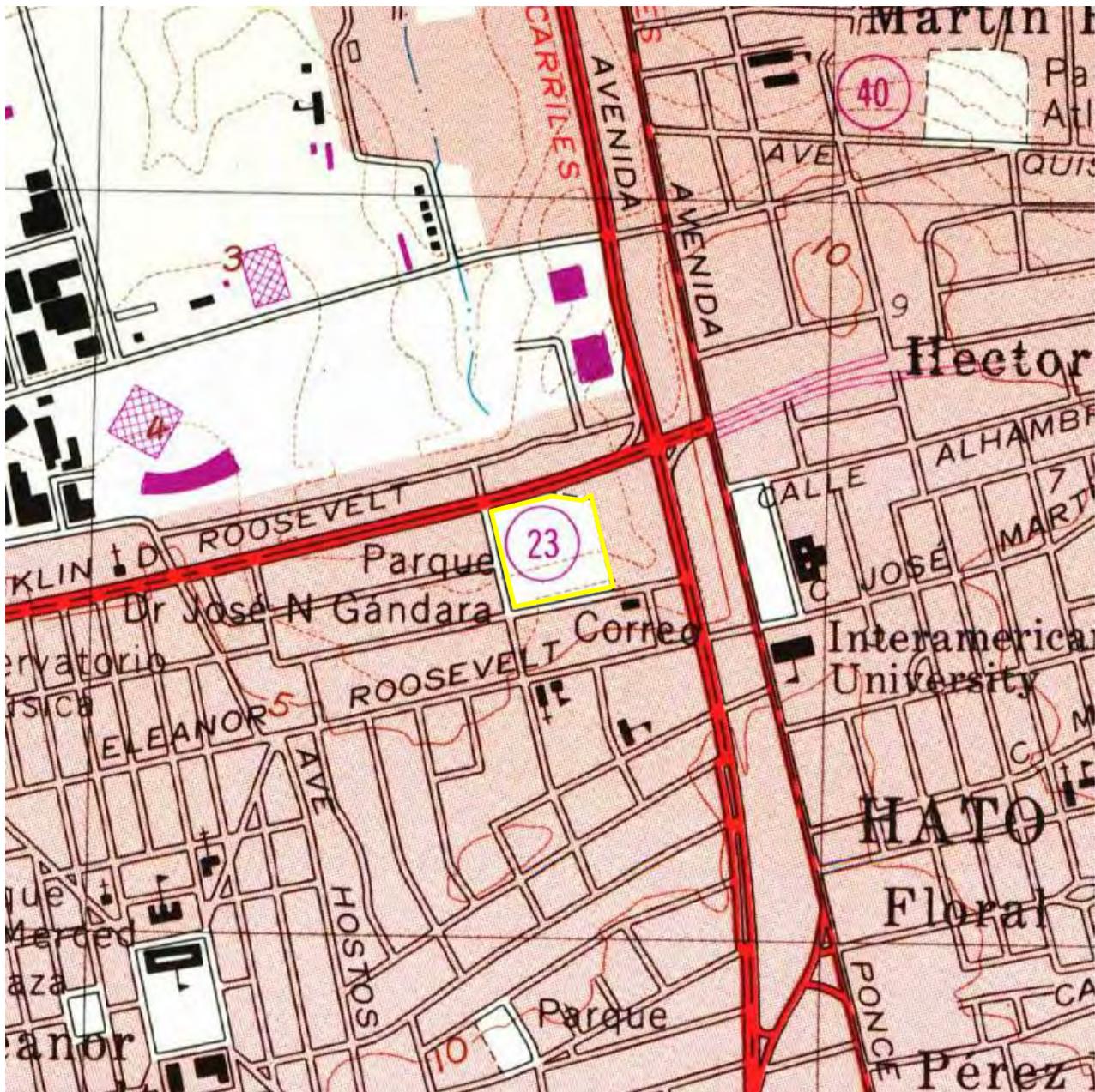


Figure 8. USGS 1982 ed. of 1969 topographic map (1:20,000 scale) of Hato Rey, San Juan. Project APE is highlighted in yellow. (Source: topoView, <https://ngmdb.usgs.gov/topoview>).



Figure 9. 1962 aerial photograph of Parque Gándara in Hato Rey, San Juan. Project APE is highlighted in yellow. (Source: Historic Aerials, <https://www.historicaerials.com>).



Figure 10. 1967 aerial photograph of Parque Gándara in Hato Rey, San Juan. Project APE is highlighted in yellow. (Source: Historic Aerials, <https://www.historicaerials.com>).



Figure 11. November 1994 satellite image of Parque Gándara in Hato Rey, San Juan. Project APE is highlighted in yellow. (Source: Google Earth Pro, <https://www.google.com/intl/es-419/earth/versions/#earth-pro>).



Figure 12. November 1995 satellite image of Parque Gándara in Hato Rey, San Juan. Project APE is highlighted in yellow. (Source: Google Earth Pro, <https://www.google.com/intl/es-419/earth/versions/#earth-pro>).



Figure 13. January 2004 satellite image of Parque Gándara in Hato Rey, San Juan. Project APE is highlighted in yellow. (Source: Google Earth Pro, <https://www.google.com/intl/es-419/earth/versions/#earth-pro>).



Figure 14. September 2005 satellite image of Parque Gándara in Hato Rey, San Juan. Project APE is highlighted in yellow. (Source: Google Earth Pro, <https://www.google.com/intl/es-419/earth/versions/#earth-pro>).



Figure 15. April 2014 satellite image of Parque Gándara in Hato Rey, San Juan. Project APE is highlighted in yellow. (Source: Google Earth Pro, <https://www.google.com/intl/es-419/earth/versions/#earth-pro>).



Figure 16. August 2015 satellite image of Parque Gándara in Hato Rey, San Juan. Project APE is highlighted in yellow. (Source: Google Earth Pro, <https://www.google.com/intl/es-419/earth/versions/#earth-pro>).



Figure 17. August 2017 satellite image of Parque Gándara in Hato Rey, San Juan. Project APE is highlighted in yellow. (Source: Google Earth Pro, <https://www.google.com/intl/es-419/earth/versions/#earth-pro>).



Figure 18. November 2017 satellite image of Parque Gándara in Hato Rey, San Juan. Project APE is highlighted in yellow. (Source: Google Earth Pro, <https://www.google.com/intl/es-419/earth/versions/#earth-pro>).

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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 located within the boundaries of the National Register of Historic Places (NRHP)-eligible San Juan Traditional Urban Center or any demarcated historic districts such as Isleta de San Juan, Condado, Península de Cantera, Santurce Sector Central, Santurce Sector II and III, and Río Piedras. No properties within a 400-meter radius of the undertaking are designated as historic resources by any state or federal entity. Surrounding structures are low-rise, reinforced concrete constructions used as residential, commercial, and office spaces built in the mid- to late 20th and 21st centuries.

The viewshed of the project consists of:

- Along its boundary to the east; a vacant lot and the easement of the Tren Urbano elevated tracks and the Roosevelt Avenue Train Station.
- Along Juan B Huyke street to the south; a 21st century two-level office building, an open parking lot and a mid-20th century one-level Spanish revival influenced modernist styled residence, date and architect unknown, in the corner with Fernando Primero Street.
- Along Fernando Primero street to the west: four mid-20th century one and two-level reinforced concrete modernist styled residences, until the junction of Fernando Primero and José Padín Streets; from said junction, a mid-20th century one-level tropical Art Deco influenced modernist styled residence, date and architect unknown, mid- to late 20th century two-level reinforced concrete modernist styled residence, a late 20th century four-level office building and a mid-20th century two level reinforced concrete commercial building, extensively altered, in the corner of Roosevelt Avenue.
- Along Roosevelt Avenue to the north: a one-level 21st century one-level commercial structure (Baskin Robbins franchise), a late 20th century two-level office building, a late 20th century one-level commercial structure that has been extensively altered, a mid-20th century two-level commercial structure also extensively altered, a vacant lot, and the north side of the Roosevelt Avenue Train Station.

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Determination

The following historic properties have been identified within the APE:

- Direct Effect: No Traditional Urban Centers, Historic Zones, archaeological sites, or NHRP-listed or -eligible historic properties are reported within the direct Area of Potential Effects (APE).
- Indirect Effect: No Traditional Urban Centers, Historic Zones, archaeological sites, or NHRP-listed or -eligible historic properties are reported within the direct Area of Potential Effects (APE).

Based on the results of our historic property identification efforts, the Program has determined that project actions will not affect the historic properties that compose the Area of Potential Effect (APE). The undertaking proposes the remodeling of Dr. José Narciso Gándara Cartagena Park, located in Hato Rey Norte Ward, approximately 4.53 miles southeast of the San Juan Historic Zone, 3.06 miles southeast of the Puerta de Tierra Historic District, 1.43 miles northwest of the Río Piedras Traditional Urban Center, and 1.28 miles northwest of the University of Puerto Rico Tower and Quadrangle. The only historic property reported within a quarter-mile radius of the direct APE is the Hato Rey Presbyterian Church built in 1958, located 0.08 miles southeast, on the junction of Eleanor Roosevelt (State Road PR-41) and Fernando Primero Streets. Due to sustained urban development since the early 20th century, intensifying in the mid- to late 20th century, the potential for intact cultural deposits within the direct APE is considered low. Therefore, no impact to cultural properties is anticipated for this revitalization project. No additional studies are recommended.

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Recommendation *(Please keep on same page as SHPO Staff Section)*

The Puerto Rico Department of Housing requests that the Puerto Rico SHPO concur that the following determination is appropriate for the undertaking (Choose One):

No Historic Properties Affected

No Adverse Effect

Condition (if applicable):

Adverse Effect

Proposed Resolution (if applicable):

This Section is to be Completed by SHPO Staff Only

The Puerto Rico State Historic Preservation Office has reviewed the above information and: <input type="checkbox"/> Concurs with the information provided. <input type="checkbox"/> Does not concur with the information provided.	
Comments:	
Carlos Rubio-Cancela State Historic Preservation Officer	Date:

Subrecipient: Municipality of San Juan

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Project (Parcel) Location – Area of Potential Effect Map (Aerial)



Source: 2022 Aerial Photograph, Google Earth Pro

Subrecipient: Municipality of San Juan

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Project (Parcel) Location - Aerial Map



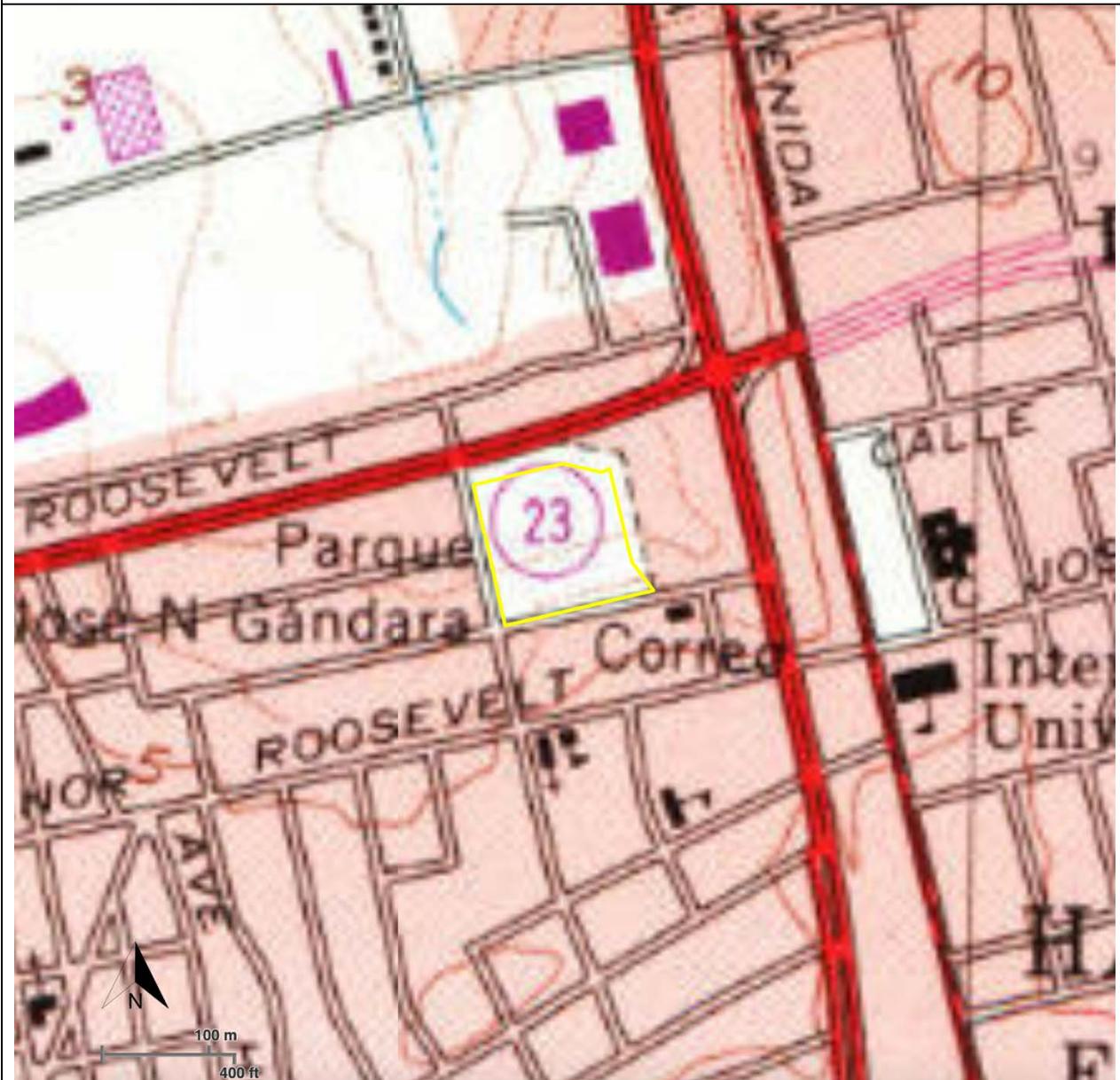
Source: Interactive Map of United States Environmental Protection Agency, NEPAassist
(<https://nepassisttool.epa.gov/nepassist/nepamap.aspx>)

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Project (Parcel) Location - USGS Topographic Map



Source: Interactive Map of United States Environmental Protection Agency, NEPAassist
(<https://nepassisttool.epa.gov/nepassist/nepamap.aspx>)

Subrecipient: Municipality of San Juan

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Project (Parcel) Location - Soils Map



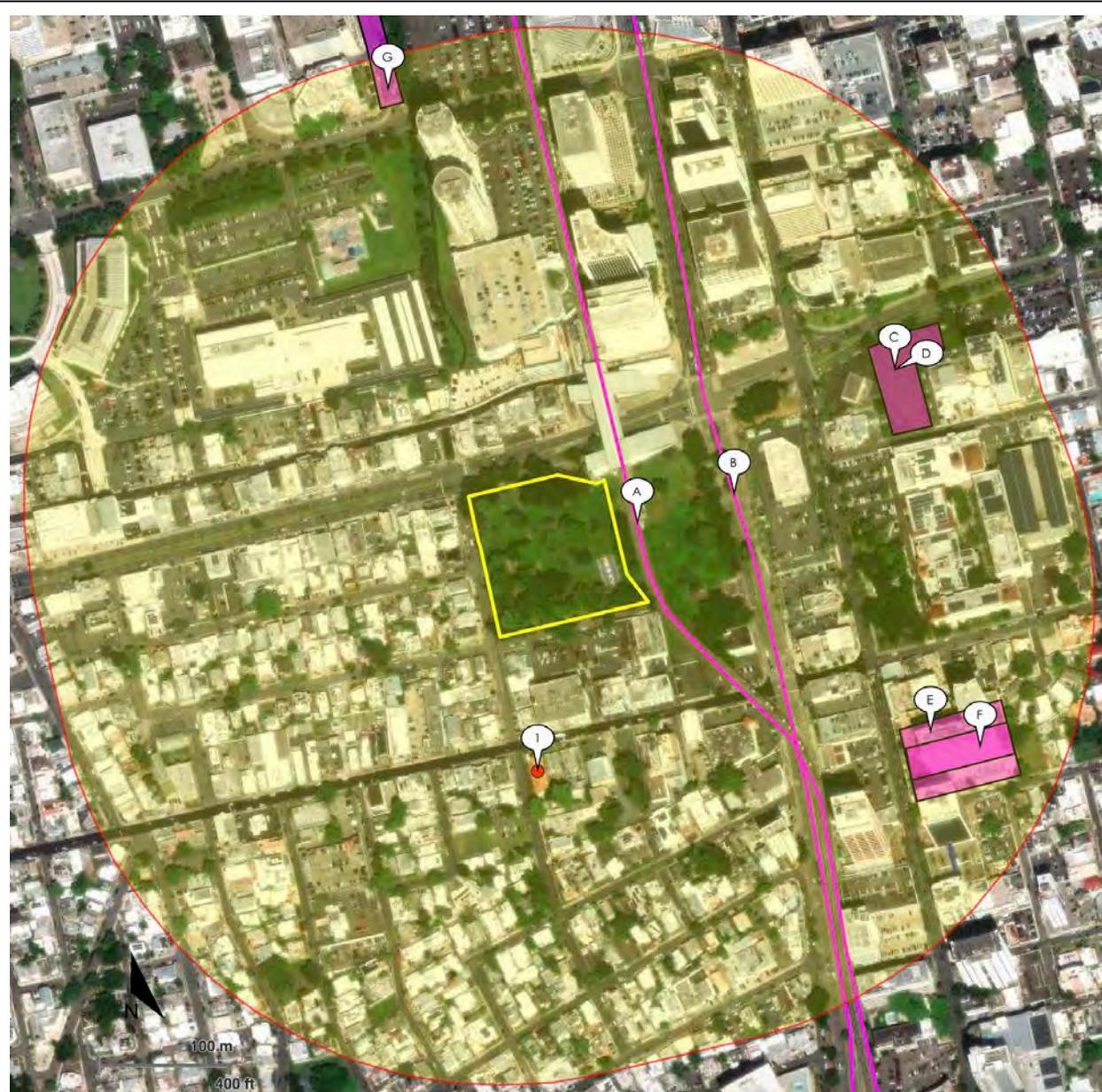
Source: Interactive Map of Planning Board, MIPR (<http://gis.jp.pr.gov/mipr/>)

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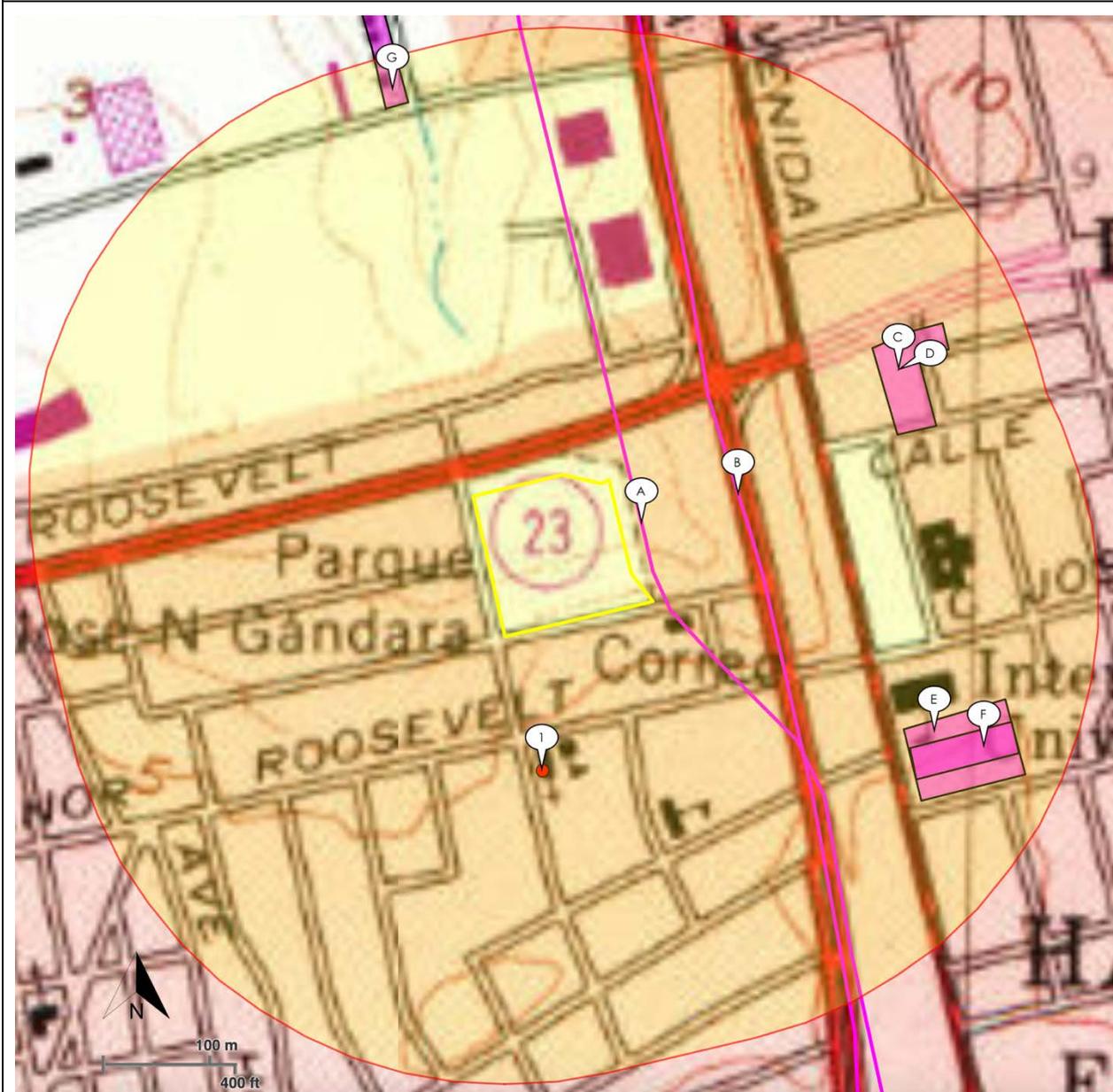
Project ID: PR-CRP-000927

Project (Parcel) Location with Previous Investigations and Recorded Historic Properties
Within a Quarter-Mile Radius - Aerial Map



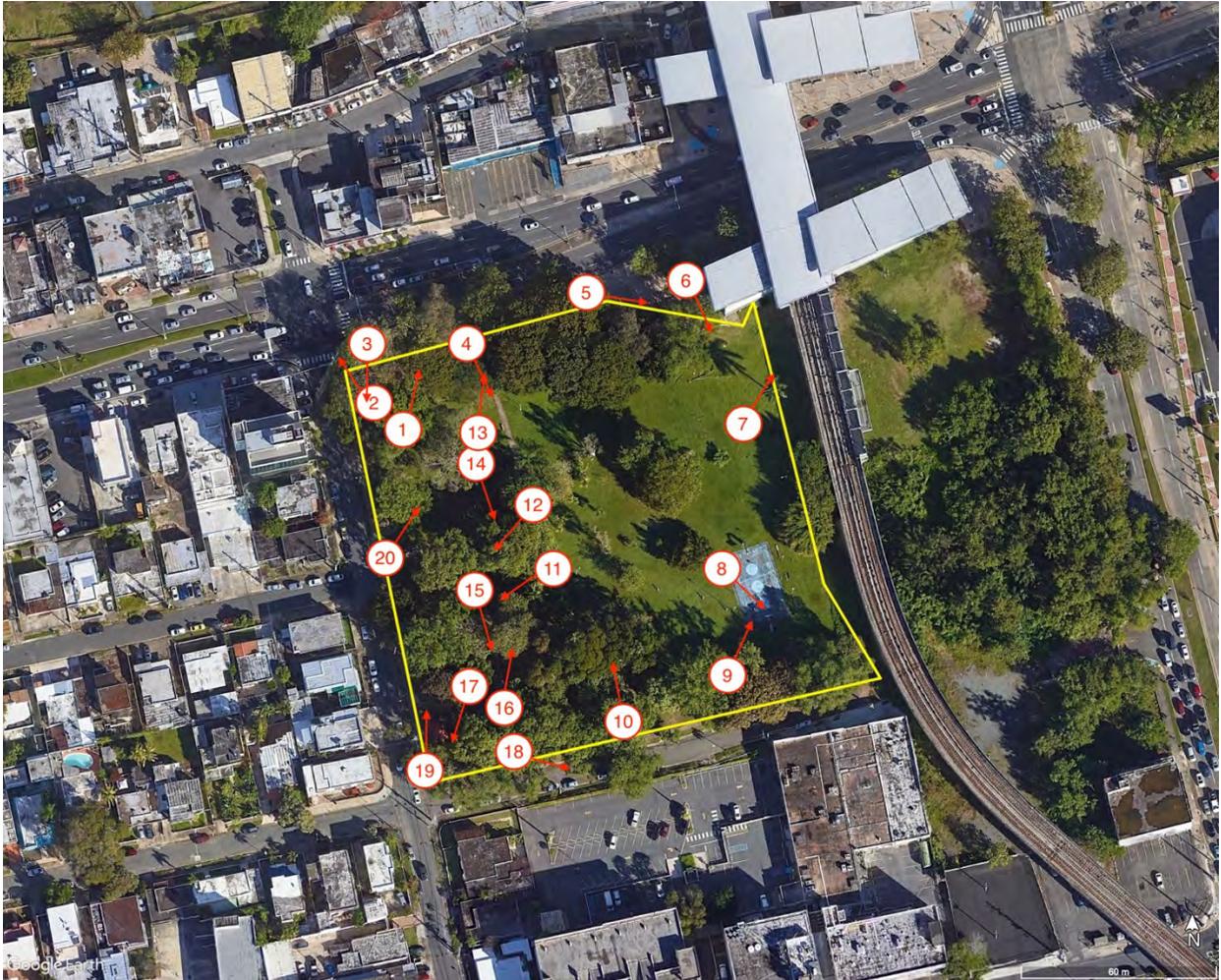
Source: Interactive Map of United States Environmental Protection Agency, NEPAassist
(<https://nepassisttool.epa.gov/nepassist/nepamap.aspx>)

Project (Parcel) Location with Previous Investigations and Recorded Historic Properties
Within a Quarter-Mile Radius - USGS Topographic Map



Source: Interactive Map of United States Environmental Protection Agency, NEPAassist
(<https://nepassisttool.epa.gov/nepassist/nepamap.aspx>)

Photograph Key - Archaeology



Source: 2022 Aerial Photograph, Google Earth Pro

Subrecipient: Municipality of San Juan

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Photo #: 1

Description: Rear of pump station, northwest limit of the park.

Date: 8/31/23

Direction: NE



Photo #: 2

Description: Drainage system beside sidewalk, northwest limit.

Date: 8/31/23

Direction: NW

Subrecipient: Municipality of San Juan

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Photo #: 3

Description: Pump station, northwest limit of the park.

Date: 8/31/23

Direction: SE



Photo #: 4

Description: Pedestrian path on north side, toward the center.

Date: 8/31/23

Direction: SE

Subrecipient: Municipality of San Juan

Project Name: Improvements to Parque Gándara

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Photo #: 5

Description: Northeast limit of the park, facing Roosevelt Avenue.

Date: 8/31/23

Direction: SE



Photo #: 6

Description: Unused entrance to Roosevelt Station, outside the park.

Date: 8/31/23

Direction: SE

Subrecipient: Municipality of San Juan

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Photo #: 7

Description: Aerial train tracks, northeast limit of the park.

Date: 8/31/23

Direction: NE



Photo #: 8

Description: Basketball court, southeast side of the park.

Date: 8/31/23

Direction: SE

Subrecipient: Municipality of San Juan

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Photo #: 9

Description: Pedestrian path toward basketball court, southeast side.

Date: 8/31/23

Direction: NE



Photo #: 10

Description: Pedestrian path on south side, toward the center.

Date: 8/31/23

Direction: NW

Subrecipient: Municipality of San Juan

Project Name: Improvements to Parque Gándara

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Photo #: 11

Description: Southwest side of the park, from pedestrian path.

Date: 8/31/23

Direction: SW

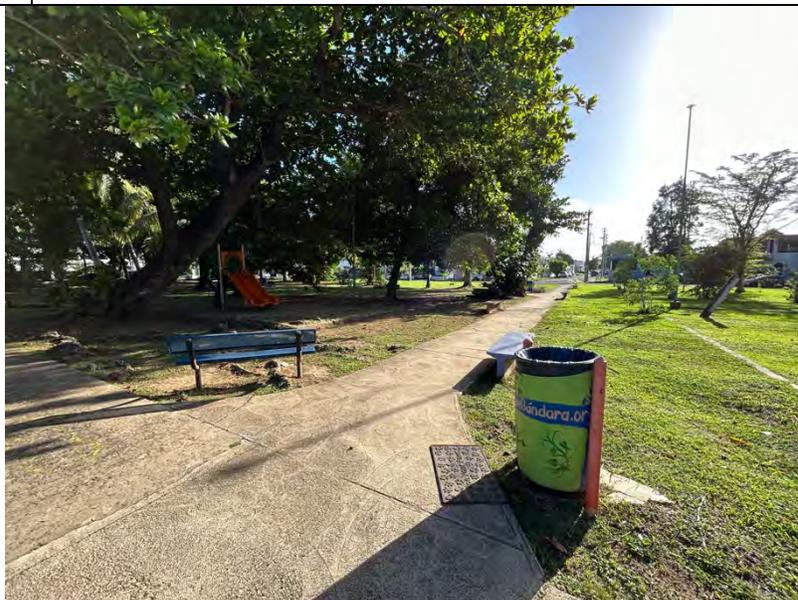


Photo #: 12

Description: Pedestrian path triple intersection at center of the park.

Date: 8/31/23

Direction: SW

Subrecipient: Municipality of San Juan

Project Name: Improvements to Parque Gándara

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Photo #: 13

Description: North side of the park, bordering Roosevelt Avenue.

Date: 8/31/23

Direction: NE



Photo #: 14

Description: Swing set near pedestrian intersection, northwest side.

Date: 8/31/23

Direction: SE

Subrecipient: Municipality of San Juan

Project Name: Improvements to Parque Gándara

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Photo #: 15

Description: Pedestrian path toward Juan B. Huyke Street.

Date: 8/31/23

Direction: SE



Photo #: 16

Description: Pedestrian space, southwest side of the park.

Date: 8/31/23

Direction: NE

Subrecipient: Municipality of San Juan

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Photo #: 17

Description: Gazebo on southwest limit, bordering Fernando I Street.

Date: 8/31/23

Direction: SW



Photo #: 18

Description: Southwest limit of the park, facing Juan B. Huyke Street.

Date: 8/31/23

Direction: SE

Subrecipient: Municipality of San Juan

Project Name: Improvements to Parque Gándara

Project ID: PR-CRP-000927



Photo #: 19

Description: Southwest limit of the park, facing Fernando I Street.

Date: 8/31/23

Direction: N



Photo #: 20

Description: Pedestrian path on west side, toward the center.

Date: 8/31/23

Direction: NE

Subrecipient: Municipality of San Juan

Project Name: Improvements to Parque Gándara

Project ID: PR-CRP-000927

Photograph Key - Architecture



Source: 2022 Aerial Photograph, Google Earth Pro

Subrecipient: Municipality of San Juan

Project Name: Improvements to Parque Gándara

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Photo #: 1

Description: Mid-20th century concrete one-level residential structure. Corner of Juan B Huyke & Fernando Primero Streets (063-041-136-14). Looking at S, from undertaking. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23



Photo #: 2

Description: Vacant lot, used as parking. Juan B Huyke Street (06-041-136-15). Looking at S, from undertaking. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23

Subrecipient: Municipality of San Juan

Project Name: Improvements to Parque Gándara

Project ID: PR-CRP-000927



Photo #: 3

Description: Vacant lot, used as parking. Juan B Huyke Street (06-041-136-16). Looking at S, from undertaking. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23



Photo #: 4

Description: Vacant lot, use as parking. Juan B Huyke Street (06-041-136-17). Looking at S, from undertaking. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23

Subrecipient: Municipality of San Juan

Project Name: Improvements to Parque Gándara

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Photo #: 5

Description: Vacant lot, used as parking. Juan B Huyke Street (06-041-136-18). Looking at S, from undertaking. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23



Photo #: 6

Description: Vacant lot, used as parking. Juan B Huyke Street (06-041-136-19). Looking at S, from undertaking. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23

Subrecipient: Municipality of San Juan

Project Name: Improvements to Parque Gándara

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Photo #: 7

Description: Office/commercial 21st century concrete one-level structure. Juan B Huyke Street (06-041-136-20). Looking at S, from undertaking. Hato Rey Centro Ward, San Juan, PR 00918.

Date: 7/26/23



Photo #: 8

Description: Late 20th century concrete *Tren Urbano* mass transit system, raised track & easement. Looking E, from undertaking. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23

Subrecipient: Municipality of San Juan

Project Name: Improvements to Parque Gándara

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Photo #: 9

Description: Late 20th century concrete Tren Urbano Roosevelt Avenue Station, South Section (063-041-136-22). Looking NE, from undertaking. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23



Photo #: 10

Description: Late 20th century concrete Tren Urbano Roosevelt Avenue Station, North & South Sections (06-041-103-08 & 063-041-136-22). Looking ENE, from undertaking. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23

Subrecipient: Municipality of San Juan

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Photo #: 11

Description: Vacant lot, State Road PR-23, Franklin Delano Roosevelt Avenue (06-041-103-05). Looking N, from undertaking. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23



Photo #: 12

Description: Commercial late 20th century concrete one-level structure, State Road PR-23, Franklin Delano Roosevelt Avenue (06-041-103-04). Looking N, from undertaking. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23

Subrecipient: Municipality of San Juan

Project Name: Improvements to Parque Gándara

Project ID: PR-CRP-000927



Photo #: 13

Description: Commercial late 20th century concrete one-level structure, State Road PR-23, Franklin Delano Roosevelt Avenue (06-041-103-03). Looking N, from undertaking. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23



Photo #: 14

Description: Commercial 21st century concrete two-level structure, State Road PR-23, Franklin Delano Roosevelt Avenue (06-041-103-02). Looking N, from undertaking. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23

Subrecipient: Municipality of San Juan

Project Name: Improvements to Parque Gándara

Project ID: PR-CRP-000927



Photo #: 15

Description: Commercial 21st century concrete one-level structure, State Road PR-23, Franklin Delano Roosevelt Avenue (06-041-103-01). Looking N, from undertaking. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23



Photo #: 16

Description: State Road PR-23, Franklin Delano Roosevelt Avenue. Looking E, from undertaking northwest corner. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23

Subrecipient: Municipality of San Juan

Project Name: Improvements to Parque Gándara

Project ID: PR-CRP-000927



Photo #: 17

Description: Corner of State Road PR-23 (Franklin Delano Roosevelt Avenue) and Fernando Primero Street. Looking N, from undertaking northwest corner. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23



Photo #: 18

Description: Corner of State Road PR-23 (Franklin Delano Roosevelt Avenue) and Fernando Primero Street. Looking W, from undertaking northwest corner. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23

Subrecipient: Municipality of San Juan

Project Name: Improvements to Parque Gándara

Project ID: PR-CRP-000927



Photo #: 19

Description: Commercial 20th century concrete two-level structure, State Road PR-23, Franklin Delano Roosevelt Avenue (06-041-118-42), corner of Fernando Primero Street. Looking N, from undertaking. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23



Photo #: 20

Description: Commercial late 20th century concrete five-level structure, Fernando Primero Street (06-041-118-42). Looking W, from undertaking. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23

Subrecipient: Municipality of San Juan

Project Name: Improvements to Parque Gándara

Project ID: PR-CRP-000927



Photo #: 21

Description: Residential mid-20th century concrete two-level structure, Fernando Primero Street (06-041-118-43). Looking W, from undertaking. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23



Photo #: 22

Description: Residential early 20th century concrete one-level structure, Fernando Primero corner of José Padín Street (06-041-118-44). Looking W, from undertaking. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23

Subrecipient: Municipality of San Juan

Project Name: Improvements to Parque Gándara

Project ID: PR-CRP-000927



Photo #: 23

Description: José Padín Street. Looking W, from undertaking & Fernando Primero Street. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23



Photo #: 24

Description: Residential mid-20th century concrete two-level structure, Fernando Primero, corner of José Padín Streets (06-041-125-20). Looking W, from undertaking. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23

Subrecipient: Municipality of San Juan

Project Name: Improvements to Parque Gándara

Project ID: PR-CRP-000927



Photo #: 25

Description: Residential mid-20th century concrete two-level structure, Fernando Primero Street (06-041-125-44). Looking W, from undertaking. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23



Photo #: 26

Description: Residential mid-20th century concrete two-level structure, Fernando Primero Street (06-041-125-23). Looking W, from undertaking. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23

Subrecipient: Municipality of San Juan

Project Name: Improvements to Parque Gándara

Project ID: PR-CRP-000927



Photo #: 27

Description: Residential mid-20th century concrete two-level structure, Fernando Primero corner of Juan B. Huyke Street (06-041-125-24). Looking W, from undertaking. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23



Photo #: 28

Description: Juan B. Huyke Street. Looking W, from undertaking & Fernando Primero Street. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23

Subrecipient: Municipality of San Juan

Project Name: Improvements to Parque Gándara

Project ID: PR-CRP-000927



Photo #: 29

Description: Residential mid-20th century concrete two-level structure, Fernando Primero corner of Juan B. Huyke Street (06-041-135-17). Looking SW, from undertaking & Fernando Primero Street. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23



Photo #: 30

Description: Corner of Fernando Primero and Juan B. Huyke Streets. Looking S. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23

Subrecipient: Municipality of San Juan

Project Name: Improvements to Parque Gándara

Project ID: PR-CRP-000927



Photo #: 31

Description: Panoramic view of undertaking, from southwest corner. Looking SW, Juan B. Huyke corner of Fernando Primero Street. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23



Photo #: 32

Description: Panoramic view of undertaking, from southeast corner. Looking NW. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23

Subrecipient: Municipality of San Juan

Project Name: Improvements to Parque Gándara

Project ID: PR-CRP-000927



Photo #: 33

Description: Panoramic view of undertaking, from northeast corner. Looking SW. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23



Photo #: 34

Description: Panoramic view of undertaking, from northwest corner. Looking SE. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23

Subrecipient: Municipality of San Juan

Project Name: Improvements to Parque Gándara

Project ID: PR-CRP-000927



Photo #: 35

Description: Mid-20th century concrete one-level sewer pump station. Located at the undertaking's northwest corner. Looking E, from undertaking & Fernando Primero Street. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23



Photo #: 36

Description: Mid-20th century concrete one-level sewer pump station. Located at the undertaking's northwest corner. Looking N, from State Road PR-12 (Franklin Delano Roosevelt Avenue) & Fernando Primero Street. Hato Rey Centro Ward, San Juan, PR 00918

Date: 7/26/23

5.4 Non-attainment Areas (Air Quality)

Parque Gándara
Map



Geographic coordinates:

POLYGON
 (18.422670,-66.060133,18.422813,-66.059586,18.422894,-66.059361,18.422884,-66.059329,18.422874,-66.059232,18.422905,-66.058975,18.422742,-66.058921,18.422426,-66.058889,18.422060,-66.058792,18.421805,-66.058642,18.421571,-66.059897,18.422670,-66.060133)
 with buffer 0 miles

Note: The information in the following reports is based on publicly available databases and web services. The National Report uses nationally available datasets and the State Reports use datasets available through the EPA Regions. Click on the hyperlinked question to view the data source and associated metadata.

National Report

Project Area

0.01 sq mi

Within an Ozone 8-hr (1997 standard) Non-Attainment/Maintenance Area?	no
Within an Ozone 8-hr (2008 standard) Non-Attainment/Maintenance Area?	no
Within a Lead (2008 standard) Non-Attainment/Maintenance Area?	no
Within a SO2 1-hr (2010 standard) Non-Attainment/Maintenance Area?	yes
Within a PM2.5 24hr (2006 standard) Non-Attainment/Maintenance Area?	no
Within a PM2.5 Annual (1997 standard) Non-Attainment/Maintenance Area?	no
Within a PM2.5 Annual (2012 standard) Non-Attainment/Maintenance Area?	no

Within a PM10 (1987 standard) Non-Attainment/Maintenance Area?	no
Within a Federal Land?	no
Within an impaired stream?	no
Within an impaired waterbody?	yes
Within a waterbody?	no
Within a stream?	no
Within an NWI wetland?	click here May take several minutes
Within a Brownfields site?	no
Within a Superfund site?	no
Within a Toxic Release Inventory (TRI) site?	no
Within a water discharger (NPDES)?	no
Within a hazardous waste (RCRA) facility?	no
Within an air emission facility?	no
Within a school?	no
Within an airport?	no
Within a hospital?	no
Within a designated sole source aquifer?	no
Within a historic property on the National Register of Historic Places?	no
Within a Toxic Substances Control Act (TSCA) site?	no
Within a Land Cession Boundary?	no
Within a tribal area (lower 48 states)?	no
Within the service area of a mitigation or conservation bank?	no
Within the service area of an In-Lieu-Fee Program?	no
Within a Public Property Boundary of the Formerly Used Defense Sites?	no
Within a Munitions Response Site?	no
Within an Essential Fish Habitat (EFH)?	no
Within a Habitat Area of Particular Concern (HAPC)?	no
Within an EFH Area Protected from Fishing (EFHA)?	yes
Within a Bureau of Land Management Area of Critical Environmental Concern?	no
Within an ESA-designated Critical Habitat Area per U.S. Fish & Wildlife Service?	no
Within an ESA-designated Critical Habitat river, stream or water feature per U.S. Fish & Wildlife Service?	no

Puerto Rico Report 
Demographic Reports 
USFWS IPaC Report 

Green Book

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You are here: [EPA Home](#) > [Green Book](#) > > [National Area and County-Level Multi-Pollutant Information](#) > Puerto Rico Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants

Puerto Rico Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants

Data is current as of July 31, 2023

Listed by County, NAAQS, Area. 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.

* The 1997 Primary Annual PM-2.5 NAAQS (level of 15 µg/m³) is revoked in attainment and maintenance areas for that NAAQS. For additional information see the PM-2.5 NAAQS SIP Requirements Final Rule, effective October 24, 2016. ([81 FR 58009](#))

Change the State:

PUERTO RICO

Download National Dataset: [dbf](#) | [xls](#) | [Data dictionary \(PDF\)](#)

[Important Notes](#)

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or Part County	Population (2010)	State/County FIPS Codes
PUERTO RICO								
Arecibo Municipio	Lead (2008)	Arecibo, PR	11 12 13 14 15 16 17 18 19 20 21 22 23	//		Part	32,185	72/013
Bayamon Municipio	Sulfur Dioxide (2010)	San Juan, PR	18 19 20 21 22 23	//		Part	22,921	72/021
Catano Municipio	Sulfur Dioxide (2010)	San Juan, PR	18 19 20 21 22 23	//		Whole	28,140	72/033
Guaynabo Municipio	PM-10 (1987)	Mun. of Guaynabo, PR	92 93 94 95 96 97 98 99 00 01 02 03 04 05 06 07 08 09	02/11/2010	Moderate	Part	90,470	72/061
Guaynabo Municipio	Sulfur Dioxide (2010)	San Juan, PR	18 19 20 21 22 23	//		Part	23,802	72/061
Salinas Municipio	Sulfur Dioxide (2010)	Guayama-Salinas, PR	18 19 20 21 22 23	//		Part	23,401	72/123
San Juan Municipio	Sulfur Dioxide (2010)	San Juan, PR	18 19 20 21 22 23	//		Part	147,963	72/127
Toa Baja Municipio	Sulfur Dioxide (2010)	San Juan, PR	18 19 20 21 22 23	//		Part	52,441	72/137



GOVERNMENT OF PUERTO RICO
DEPARTMENT OF NATURAL AND ENVIRONMENTAL RESOURCES

**Puerto Rico Non-Attainment State Implementation Plan
Sulfur Dioxide (SO₂) National Ambient Air Quality Standard**

Prepared by: Department of Natural and Environmental Resources
Air Quality Area

Objective: To bring into compliance with the 2010 1-Hour Sulfur Dioxide (SO₂) primary NAAQS the designated SO₂ non-attainment areas in Puerto Rico

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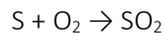
Acronyms

AQCRs:	Air Quality Control Regions
AQS:	Air Quality System
CAA:	Clean Air Act
DNER:	Department of Natural and Environmental Resources'
EPA:	Environmental Protection Agency
FIP:	Federal Implementation Plan
FR:	Federal Register
IRP:	Integrated Resource Plan
NAAQS:	National Ambient Air Quality Standards
NAA-SIP:	Non-Attainment Area-State Implementation Plan
NANSR:	Non-Attainment New Source Review
ppb:	parts per billion
PRDNER:	Puerto Rico Department of Natural and Environmental Resources
PREB	Puerto Rico Energy Board
PREPA:	Puerto Rico Electric Power Authority
PREPPA:	Puerto Rico Environmental Public Policy Act
PREQB:	Puerto Rico Environmental Quality Board
PTE:	Potential to Emit
RCAP:	Regulation for the Control of Atmospheric Pollution
SIP:	State Implementation Plan
SO ₂ :	Sulfur Dioxide
SO _x	other Sulfur Dioxide
tpy:	tons per year
ULSD:	Ultra Low Sulfur Diesel
ug/m ³ :	micrograms per cubic meter
USEPA:	Unites States Environmental Protection Agency

1.0 Overview

1.1 INTRODUCTION

Sulfur dioxide (SO₂) is a colorless, reactive air pollutant with a strong odor. The effects of this gas can be a threat to human health, animal health, and plant life. Short-term exposures to SO₂ can harm the human respiratory system and make breathing more difficult. Clinical Studies had demonstrated that people with asthma, particularly children, are more sensitive to the SO₂. The sulfur containing compounds in the material is oxidized in the presence of oxygen to form sulfur dioxide via the following chemical reaction:



High concentrations of SO₂ in the air generally lead to the formation of other sulfur oxides (SO_x) which can react with other compounds in the atmosphere to form small particles, increasing particulate matter concentration and ambient pollution. SO_x can also react with water to form acids.

The general population may be exposed to sulfur dioxide mainly by breathing air that contains it. In addition, one may also be exposed to sulfur dioxide by skin contact with it. Some health effects associated with exposure to SO₂ emissions are: (1) difficult breathing, (2) changes in ability to breathe, and (3) burning nose and throat (ATSDR, 1998). Sulfur dioxide irritates the skin and mucous membranes of the eyes, nose, throat, and lungs. High concentrations of SO₂ can cause inflammation and irritation of the respiratory system, especially during heavy physical activity. The resulting symptoms associated with SO₂ exposure can include: (1) pain when taking a deep breath, (2) coughing, (3) throat irritation, and (4) breathing difficulties. High concentrations of SO₂ can affect lung function, worsen asthma attacks, and worsen existing heart disease in sensitive groups. The gases containing SO₂ can also react with other chemicals in the air and change to a small particle that can get into the lungs and cause similar health effects (NPS, 2018).

Sulfur dioxide (SO₂) is one of six "criteria" pollutants scientists have identified as being particularly harmful to human health and the environment. For this reason, the Clean Air Act (CAA) requires the United States Environmental Protection Agency (USEPA or EPA) to set primary air quality standards at a level judged to be requisite to protect the public health with an adequate margin of safety. The CAA also required EPA to establish secondary standards to protect public welfare from any known or anticipated effects associated with the pollutant in the ambient air, including effects on crops, vegetation, wildlife, buildings and national monuments, and visibility. Sulfur dioxide is primarily derived from fossil fuel combustion at power plants and other industrial facilities. Other sources of SO₂ include industrial processes like extracting metal from ore and the burning of high sulfur fuels by locomotives, large ships, and non-road equipment.

1.2 NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS)

On June 22, 2010 (75 FR 35520) the Environmental Protection Agency strengthened the primary National Ambient Air Quality Standard (NAAQS) for sulfur dioxide (SO₂). Specifically, EPA replaced the annual and 24-hour primary standards with a new 1-hour SO₂ standard set at 75 parts per billion (ppb) or 196 ug/m³ as determined in accordance with Appendix T of Title 40 of Code of Federal Regulations (40 CFR), part 50. EPA significantly strengthened the primary standard based on health studies showing that people with asthma experience negative respiratory effects following very short exposure to SO₂ while breathing at elevated rates.

On August 21, 2015, the EPA issued the Data Requirements Rule for the 2010 1-Hour SO₂ Primary NAAQS (80 FR 51052). Under this rule, each air regulatory agency was required to submit a list to the EPA by January 15, 2016, that identified all sources within its jurisdiction that have SO₂ emissions that exceeded the 2,000 tons per year (tpy) annual threshold. The rule requires air quality characterization of the area associated with each listed source and provides two options to undertake this characterization: (1) the use of monitoring or (2) modeling the impacted Air Basin using approved EPA dispersion models.

On December 21, 2015, the Department of Natural and Environmental Resources (DNER), submitted to the EPA the list of sources with SO₂ emissions above the 2,000 ton per year statutory threshold. Table # 1 below presents the sources included in the notification provided by the DNER, as well as their SO₂ emissions, as reported.

Table # 1: Source with emission on or above 2,000 ton per year of SO₂. As reported to EPA on December 21, 2015.

Source	Municipality	SO ₂ Emission Rate (ton/year)	
		Allowable	Actual
PREPA Aguirre Power Plant	Salinas	30,038.09	9,264.11
PREPA South Coast Steam Power Plant ¹	Guayanilla	11,505.53	8,336.43
PREPA San Juan Power Plant	San Juan	7,787.05	4,903.39
PREPA Palo Seco Power Plant	Toa Baja	17,344.16	3,125.37

The EPA explained in the Data Requirements Rule (80 FR 51057) that the current ambient SO₂ monitoring network, overall, is not appropriately positioned / located, or of adequate size, for purposes of demonstrating compliance with the new standard, to characterize and measure the ambient air quality around many of the Island of Puerto Rico larger emitting SO₂ sources in operation today. The EPA stated that, because ambient SO₂ concentrations are not the result of complex chemical reactions (unlike ozone or PM_{2.5}), they can be modeled accurately using well understood air quality modeling tools, especially in areas where one or only a few sources exist. Air quality modeling and ambient monitoring are appropriate tools for characterizing ambient air quality for purposes of informing future decisions to implement the SO₂

¹ While PREPA South Coast was identified in Table 1 as a source with equal or greater than 2,000 tons per year of SO₂, the modeling analysis determined this source did not contribute to nonattainment, resulting in the area near and surrounding PREPA South Coast to be designated attainment.

NAAQS. Therefore, both options are available to the state to characterize the areas geared to demonstrate compliance with the new SO₂ 1-hour NAAQS promulgated.

If the air monitoring option was selected, the EPA required that the monitors being used to satisfy this rulemaking must be operational by January 1, 2017. It recognizes that the logistical and financial burdens of installing an ambient air monitoring station can vary in difficulty and the resources required. The EPA believes that any further delay in air quality characterization around sources identified as a result of this rulemaking will delay implementation of the standard and public health protection in areas where there may be a violation of the standard. The DNER made several attempts to relocate the SO₂ air monitoring network, but lack of infrastructure or adequate site characteristics limited the capability of the agency to relocate the existing monitors and its stations. In order to comply with regulatory requirements, on June 20, 2016, DNER notified EPA that the modeling option was going to be used to characterize peak 1-hour SO₂ concentrations. The document also enclosed the Dispersion Modeling Protocol required under 40 CFR 51.1203(d).

In March of 2017, the DNER submitted to EPA a 1-hour SO₂ modeling assessment and boundary recommendations for the designation of Puerto Rico area. DNER provided updated modeling between October and November 2017, in response to EPA comments on the March 2017 submission, which allowed EPA to finalize the SO₂ designation for Puerto Rico.

1.3 GEOGRAPHICAL DESCRIPTION

On January 9, 2018, EPA notified in the Federal Register (83 FR 1098) the designation of two (2) areas, comprised of several wards in different municipalities of Puerto Rico, as non-attainment for the new SO₂ NAAQS. This designation was based on EPA mathematical dispersion modeling, as provided by the regulation. According to the dispersion model’s results, the Puerto Rico Electric Power Authority (PREPA) Plants located in the designated non-attainment areas were the only contributors of the NAAQS exceedances.

DNER’s modeling assessment indicates the main SO₂ emitters in the non-attainment areas are: PREPA San Juan Power Plant and PREPA Palo Seco Power Plant in the San Juan Metro Area, and PREPA Aguirre Power Plant in Guayama-Salinas Area. Table # 2 presents the designated non-attainment areas for sulfur dioxide as defined in the Federal Register. Note that the areas are defined by municipalities and wards.

*Table #2: Designated **non-attainment areas** as defined in the Federal Register*

San Juan Metro Area	Guayama - Salinas Area
<ul style="list-style-type: none"> ● Cataño Municipality (All) ● Toa Baja Municipality (Partial) <ul style="list-style-type: none"> ○ Palo Seco Ward ○ Sabana Seca Ward ● San Juan Municipality (Partial) ● Guaynabo Municipality (Partial) ● Bayamón Municipality (Partial) 	<ul style="list-style-type: none"> ● Salinas Municipality (Partial) <ul style="list-style-type: none"> ○ Aguirre Ward ○ Lapa Ward



Figure 1: The striped area includes the non-attainment municipalities and wards. The map also presents the site location for PREPA San Juan and PREPA Palo Seco Power Plants



Figure 2: The striped area includes the non-attainment municipality and wards. The map also presents the site location for PREPA Aguirre Power Plant

2.0 CLEAN AIR ACT REQUIREMENTS

As required by the CAA, states, including the Government of Puerto Rico to must develop a Non-Attainment Area State Implementation Plan (NAA-SIP) that meets the requirements of Section 172(c) of the CAA. According to this Section the required components of the NAA-SIP are: (1) Attainment Demonstration, (2) Contingency Measures, (3) Emission Inventory, (4) Reasonable Further Progress, (5) Non-attainment New Sources Review, (6) Reasonably Available Control Measure and (7) Reasonable Available Control

Technology. As stated in Section 191(a) of the CAA the state should submit an NAA-SIP with a demonstration to reach attainment within 5 years of the designation.

3.0 EMISSIONS INVENTORY

Emissions inventory and source emission rate data serve as the foundation for modeling and other required analyses. Sulfur dioxide emissions come from anthropogenic sources such as fossil fuel combustion and biogenic sources such as volcanic activity. Anthropogenic emissions of SO₂ in Puerto Rico are mainly due to combustion of fossil fuels by external combustion boilers (~90 %), internal combustion engines (~1.6%) and transportation-related sources (~8.4%) based on 2014 EPA National Emission Inventory (USEPA, 2014), shown in Figure #3.

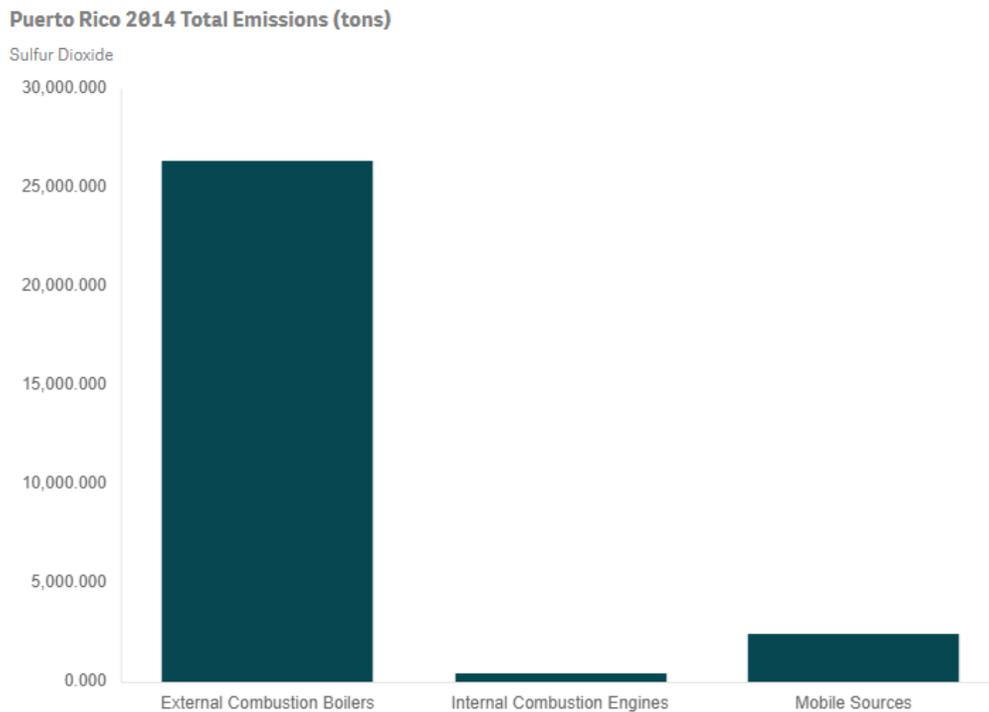


Figure #3: NEI 2014 SO₂ Emission based on process

The 2014 National Emission Inventory for SO₂ Non Attainment Areas for San Juan Area and Guayama-Salinas Area are shown as follows:

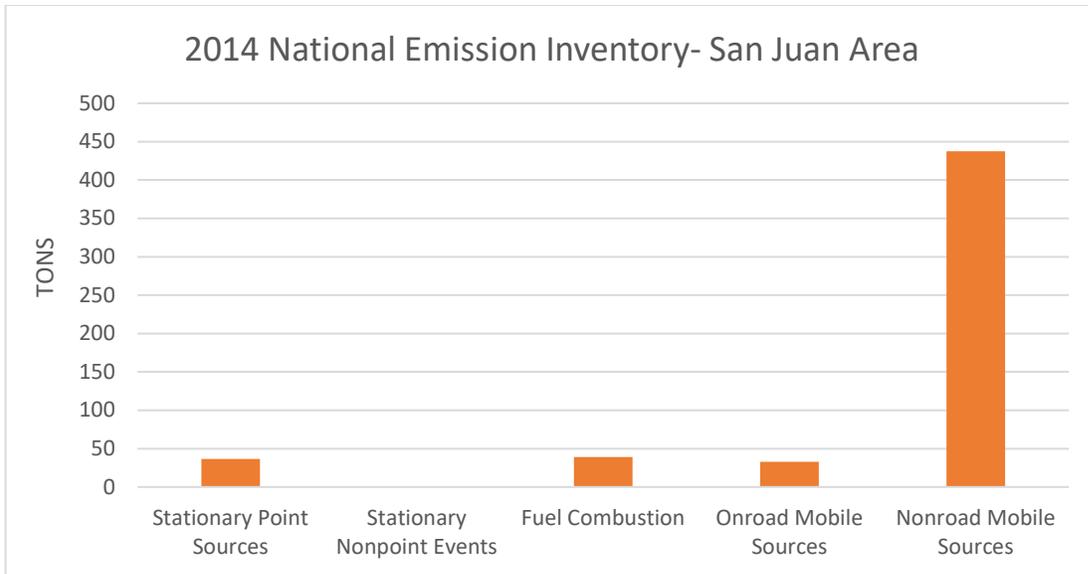


Figure #4: SO₂ Non Attainment Areas- San Juan

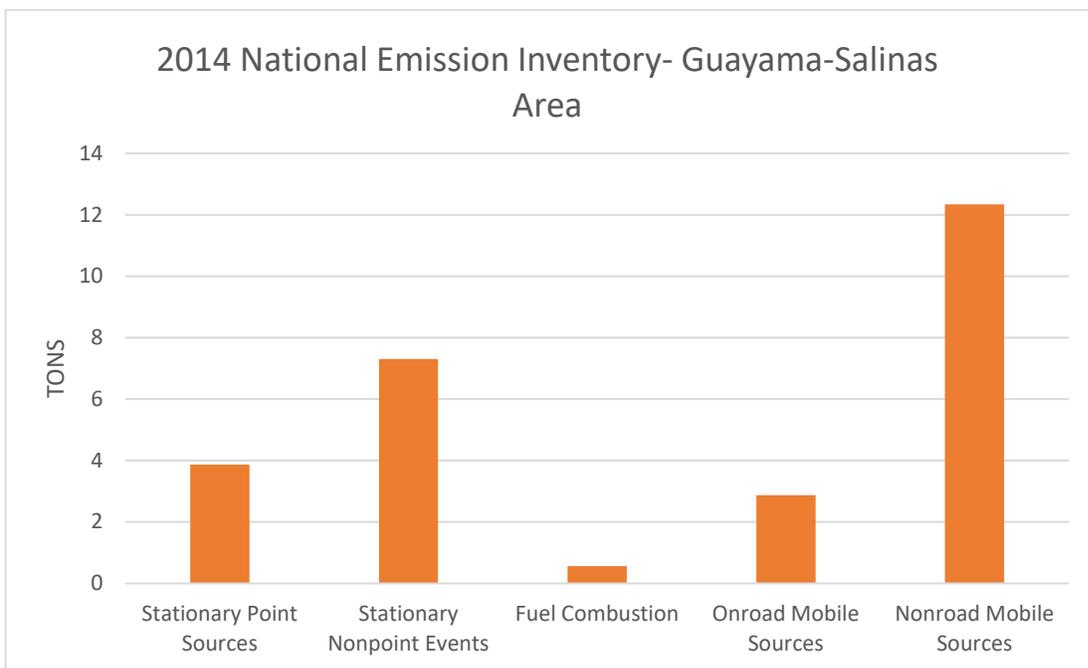


Figure #5: SO₂ Non Attainment Areas-Guayama

As required under Section 172(c)(3) of the CAA, the air regulatory agency should develop a comprehensive, accurate and current inventory of actual emission from all relevant sources of SO₂. Inventory should be consistent with data requirements codified in 40 CFR, part 51, Subpart A.

DNER prepared the projected emission inventory 2019-2030, for the 1- hour SO₂ non-attainment SIP, in the areas of San Juan Metro and Guayama-Salinas. The principal SO₂ emitters in each area are: PREPA San Juan and Palo Seco in San Juan, and PREPA Aguirre, in Guayama-Salinas. All of them are comprised primarily of external combustion boilers, combined cycle and internal combustion generation units.

The projected emission inventory includes five years of SO₂ allowable emissions, from 2019-2023. This inventory shows the required reductions in SO₂ potential emissions, that PREPA facilities should reach, to comply with the 1-hour SO₂ NAAQS. To satisfy the projected emission inventory requirement, the DNER prepared a document titled: *Puerto Rico 1-Hour SO₂ Non-Attainment Area State Implementation Plan: 2019-2023 Projected Emission Inventory*.

4.0 ATTAINMENT DEMONSTRATION

The two (2) nonattainment areas in Puerto Rico for the 1-hour SO₂ NAAQS are San Juan Metro and Guayama-Salinas. The San Juan Metro nonattainment area, includes the following municipalities and wards; within Cataño, (Palmas and Barrio Pueblo Wards), in Toa Baja (Palo Seco and Sabana Seca Wards), within Guaynabo (Pueblo Viejo Ward), in Bayamón (Juan Sánchez Ward) and in San Juan (San Juan Antiguo, Santurce, Hato Rey Norte and Gobernador Piñero Wards). The rest of the wards in each municipality were classified as attainment/unclassified.

The largest SO₂ sources in San Juan Metro area are, PREPA San Juan in San Juan municipality and PREPA Palo Seco in Toa Baja. Both sites are located within urban areas. In Guayama -Salinas area, the major SO₂ emissions comes from PREPA Aguirre, and this facility is located in Salinas municipality. The Guayama-Salinas area is classified as rural. See modeling protocol for additional information of the area characterization.

The other SO₂ sources in San Juan Metro area are: Bacardi, Edelcar and other minor sources, and Applied Energy System (AES) and other minor sources in Guayama-Salinas area. Previously modeling analysis showed that the SO₂ emissions contributions for these industries were insignificant. However, these minor sources emissions contributions will be addressed with the 1- hour SO₂ background concentration.

The attainment demonstration will be conducted by emission projections and dispersion modeling analysis. In addition to dispersion modeling, ambient air monitoring in the designated nonattainment areas will be used to measure current air quality and to compare the results of the SO₂ ground level concentration values predicted through the dispersion modeling analysis. This NAA-SIP developed by the DNER was prepared to establish the Government of Puerto Rico's strategy to reach compliance of the 2010 Sulfur Dioxide (SO₂) primary NAAQS.

In particular, the NAA-SIP that has been developed will use the modeling tools available through the EPA-approved modeling program and will be complemented with a new ambient monitoring network geared to compare actual ground-level concentrations of SO₂ within the two (2) designated Non-Attainment Areas. The locations where these new monitoring stations will be located (Six (6) units per Non-Attainment Area) are to be the same as the points of high SO₂ concentration calculated through the modeling exercise. DNER's goal is to compare the Model concentration predictions with the data secured from these new monitoring stations. All data to be secured will be fully validated through the EPA's Quality Assurance / Quality Control guidelines implemented at the DNER.

Modeling Methodology

The dispersion model used for the analysis is the AERMOD modeling system. This model is the USEPA recommendation in the Guideline on Air Quality Models² (GAQM), for the modeling of the 1-hour SO₂ NAAQS. The AERMOD model version used by PRDNER, is the latest available or the 21112. The AERMOD default modeling options are used in the analysis.

PRDNER attainment modeling scenario in each nonattainment area is based on the potential emissions or PTE rate, the PREPA new operating scenario using natural gas, and the proposed emission unit retirements, through the integration of renewable projects to the power grid. The modeling scenarios have the Natural Gas PTE certified emissions, that PREPA provided PRDNER. PREPA calculated the new emission rates for Natural Gas in all the emission units that will stay operating in their facilities. See modeling protocol for SO₂ emissions data.

The model for San Juan area, includes in the same modeling run, the allowable emissions of PREPA San Juan and PREPA Palo Seco, due to the proximity of each plant. The model for Guayama-Salinas area, only considers the allowable emissions for PREPA Aguirre. The contribution to the 1- hour SO₂ emissions from nearby sources in both nonattainment areas, is represented by the 1- hour SO₂ background concentration.

The AERMOD parameters used in the analysis were the default options, including building downwash for all PREPA plants. The emission units stack parameters data including the updated coordinates, was submitted and revised by PREPA. PREPA submitted PRDNER the height, width and length of the buildings in each facility, along with maps identifying the structures. PREPA also submitted the BPIP Prime output model data to be used in the 1- hour SO₂ attainment model in San Juan and Guayama-Salinas areas. PRDNER used this BPIP data for PREPA San Juan, Palo Seco and Aguirre.

PRDNER use a coarse and refined receptor grid for the modeling analysis. An additional receptor grid was used to determine fence line concentrations. The coarse grid is used to determine the maximum 1-hour SO₂ concentrations and the extension of the area of significant impact, or the area where the model predicts violations of the 1-hour SO₂ NAAQS. The refined grid is denser and covers the area where the previous model predicts the 1-hour SO₂ maximum concentration. See modeling protocol for additional information about the receptor grids.

The onsite meteorological data for the 1-hour SO₂ SIP model, was provided by PREPA and reprocessed by PRDNER. PREPA submitted PRDNER, meteorological data from PREPA San Juan, PREPA Palo Seco and PREPA Aguirre stations. The data from PREPA San Juan is from 2013 and in the case of PREPA Aguirre, the data is from years 2014-2016.

The SO₂ background concentration is a Tier 1 approach or based on a monitored design value. The design value is from the SO₂ monitor at Guayama, AQS-72-057-009. The concentration is 47 ug/m³ or 18 ppb, and this value will be added to the AERMOD model result, or the highest four highest (H4H).

Model Results

The model results for the LNG scenario demonstrate attainment with the 1- hour SO₂ NAAQS in both nonattainment areas. According to the model results the H4H concentration was below the NAAQS. The Table 1 shows the model results in each nonattainment areas.

²40CFR Part 51. Guideline on Air Quality Models. Environmental Protection Agency. January 2017.

Table1: 1-Hour Modeling Results for the SO₂ SIP

Facility	X (m)	Y (m)	H4H (µg/m ³)	Background (µg/m ³)	Design Concentration (µg/m ³)	NAAQS SO ₂ (µg/m ³)
PREPA San Juan	805500	2038922	11.97	47	58.97	196
PREPA Palo Seco	800950	2043422	13.44	47	60.44	196
PREPA San Juan/Palo Seco	800950	2043422	13.45	47	60.45	196
PREPA Aguirre	791000	1998000	21.77	47	68.77	196

The H4H in San Juan Metro area was 60.45 µg/m³ and was registered to the northwest of PREPA Palo Seco. PREPA Palo Seco had the major contribution to this concentration. Refer to Figure 1. The Palo Seco boilers were the emission units with more contribution to the H4H design concentration.

In the Guayama-Salinas area the H4H was 68.77 µg/m³ and was registered north of PREPA Aguirre. Refer to Figure 2. The major contribution to this concentration was from the boilers and the combined cycles HRSG.

Figure 1: San Juan Metro Area LNG Modeling Results

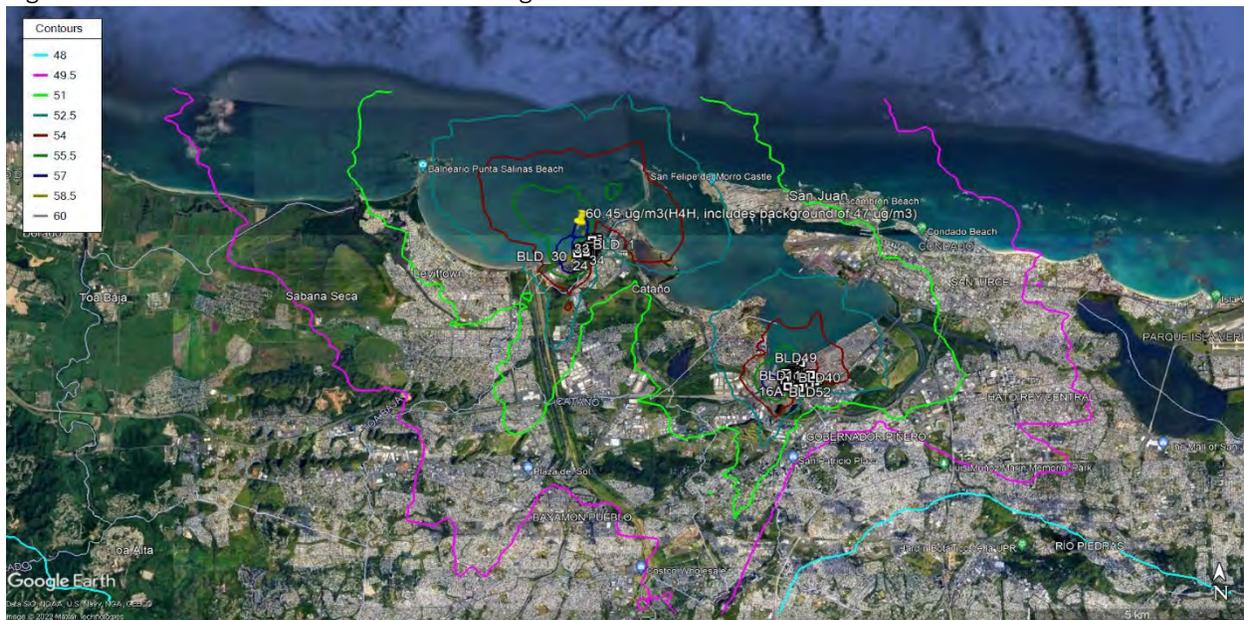


Figure 6: San Juan Metro Area LNG Modeling Results

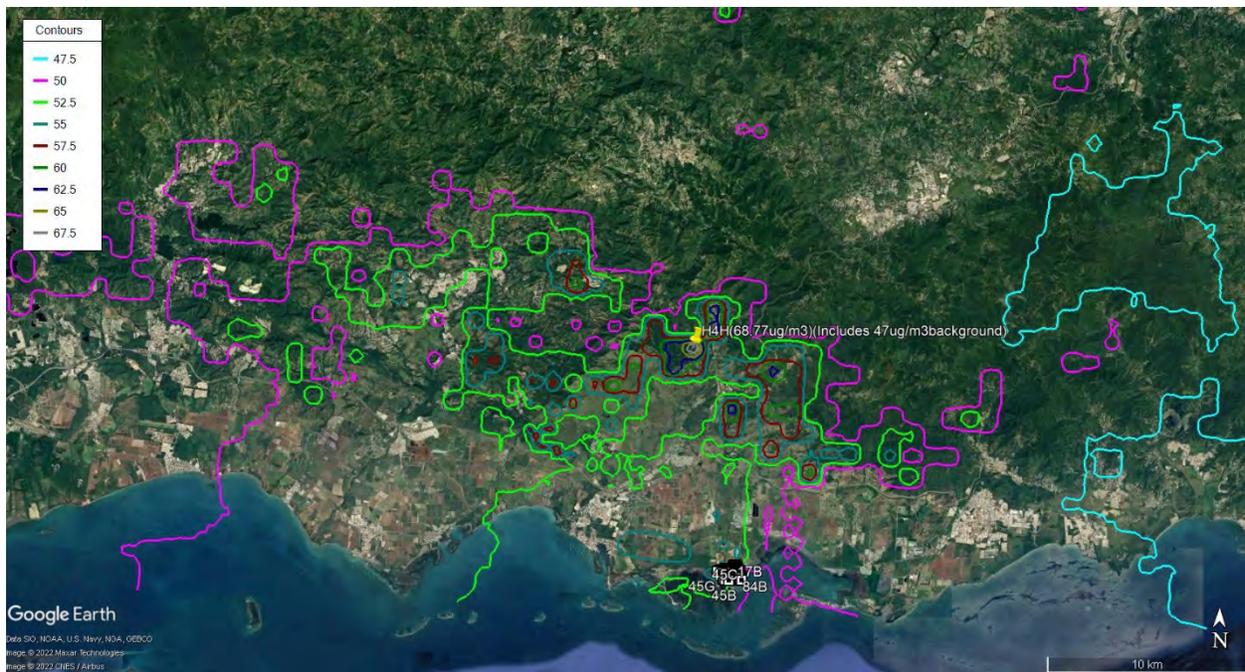


Figure 7: Guayama-Salinas Area LNG Modeling Results

5.0. NON-ATTAINMENT NEW SOURCE REVIEW 172 (c)(5)

Permits for new and modified major stationary sources.

The location or construction of any new major stationary source, or major modification, or significant source shall obtain a location approval from the DNER, prior to its construction in accordance with Rule 201 of Regulation for the Control of Atmospheric Pollution (RCAP). The DNER shall notify the public of the location approval application. An application for location approval shall include information about alternative sites, proposed facility size, production, processes, and environmental control techniques that demonstrate that the benefits of the proposed source significantly outweigh the environmental and social costs imposed as a result of its location, construction, or modification.

The requirements for location approval are included in Rule 201. Rule 201 requires that emission sources to be located within a designated non-attainment area will be regulated and limited by means of the replacement of existing fuels with new renewable energy projects and using natural gas in the Puerto Rico Electric Power Authority (PREPA) generation fleet. For emissions sources located in attainment areas, air pollutants emitted from the new major source, major modification, or significant source must be limited by means of the best available control technology (BACT).

Non Attainments provisions are included in Rule 210 for stationary sources locating in designated clean or unclassifiable areas which would cause or contribute to a violation of a national ambient air quality standard.

The provisions for Non-attainment SO₂ areas for San Juan and Guayama-Salinas are included in Rule 425. This rule contemplates control measures to reach attainment or improve air quality using different alternatives, such as, renewable energy sources, switching fuel to ultra low sulfur diesel and natural gas conversion.

6.0 REASONABLE FURTHER PROGRESS 172 (c)(2) CAA

This NAA-SIP had been developed under the basis of the integration of renewable energy sources, an aggressive fuel-switching program under which the PREPA power generation fleet located within the designated Non-Attainment Areas will be switching diesel fuel to Ultra Low Sulfur Diesel (ULSD) fuel (once all existing inventory of diesel fuel are exhausted) and from Bunker C fuel oil to natural gas, for achieving attainment at the PREPA Palo Seco, San Juan and Aguirre Power Plants.

On August 24, 2020, the Energy Bureau issued the IRP Final Order, with respect to the Integrated Resource Plan (“IRP”) of the PREPA.³ The Approved IRP includes a Modified Preferred Resource Plan (Action Plan) considering specific power generation capacity additions⁴ and retirements.⁵ In the Approved IRP, the Energy Bureau established a schedule for minimum quantities of renewable resources and battery energy storage resources and directed PREPA to submit a renewable resource and battery energy storage procurement plan. The Approved IRP included a program for six (6) tranches of procurement for renewable energy and battery storage resources from third parties,⁶ in support of, among other things, meeting Act 17-2019⁷ targets for renewable energy installations.⁸

The schedule of minimum quantities of renewables and battery storage additions is expected to be as follows:

Procurement Tranche	RFP Target Release Date	Solar PV or equivalent other energy, MW	4-hr. Battery Storage equivalent, MW
1	Dec-20	1000	500
2	April 2022	500	250

³ Final Resolution and Order on the Puerto Rico Electric Power Authority’s Integrated Resource Plan, *In re. Review of the Puerto Rico Electric Power Authority Integrated Resource Plan*, Case No. CEPR-AP-2018-0001, August 24, 2020 (“Approved IRP”).

⁴ *Id.*, ¶¶847-867, pp. 263-269.

⁵ *Id.*, ¶¶869-873, pp. 270-271.

⁶ *Id.*, ¶ 860, pp. 266-268.

⁷ Known as *Puerto Rico Energy Public Policy Act* (“Act 17-2019”).

⁸ Approved IRP, p. 266.

Procurement Tranche	RFP Target Release Date	Solar PV or equivalent other energy, MW	4-hr. Battery Storage equivalent, MW
3-4	September 2022	1000	500
5	March 2023	500	125
6	September 2023	750	125

As part of the SIP, DNER proposes an Interim Plan, to strengthen the existing SIP to improve air quality. The Interim Plan proposes fuel switching from diesel to ultra-low sulfur diesel ("ULSD") in certain units, starting in 2022, once existing inventory of diesel fuel is exhausted., as described below:

Interim Plan (Fuel Switching)

PREPA Facility	Generation Unit	Fuel Switching Date
Palo Seco	Power Block 1-1, 1-2	Upon exhaustion of existing diesel inventory
Palo Seco	Power Block 2-1	Upon exhaustion of existing diesel inventory
Palo Seco	Power Block 2-2	Upon exhaustion of existing diesel inventory
Palo Seco	Power Block 3-1	Upon exhaustion of existing diesel inventory
Palo Seco	Power Block 3-2	Upon exhaustion of existing diesel inventory
Palo Seco	FT8 Mobile Pack 1	Upon exhaustion of existing diesel inventory
Palo Seco	FT8 Mobile Pack 2	Upon exhaustion of existing diesel inventory
Palo Seco	FT8 Mobile Pack 3	Upon exhaustion of existing diesel inventory
San Juan	HRSG 5&6	Upon exhaustion of existing diesel inventory
Aguirre	Gas Turbine CC1-1HRSG	Upon exhaustion of existing diesel inventory
Aguirre	Gas Turbine CC1-2HRSG	Upon exhaustion of existing diesel inventory
Aguirre	Gas Turbine CC1-3HRSG	Upon exhaustion of existing diesel inventory
Aguirre	Gas Turbine CC1-4HRSG	Upon exhaustion of existing diesel inventory
Aguirre	Gas Turbine CC2-1HRSG	Upon exhaustion of existing diesel inventory
Aguirre	Gas Turbine CC2-2HRSG	Upon exhaustion of existing diesel inventory
Aguirre	Gas Turbine CC2-3HRSG	Upon exhaustion of existing diesel inventory
Aguirre	Gas Turbine CC2-4HRSG	Upon exhaustion of existing diesel inventory
Aguirre	Gas Turbine AGGT2-1, 2-2	Upon exhaustion of existing diesel inventory

Also, the Interim Plan considers the retirement of certain units as described below:

Interim Plan (Retirements)

PREPA Facility	Generation Unit	Unit Retirement Date
Palo Seco	Boiler 2	June 2023
Palo Seco	Power Block 2-2	June 2023
Palo Seco	Power Block 3-2	June 2023

This is contingent to renewable the effective integration of new renewable energy projects forecasted by the Energy Bureau. This action is required to maintain the power grid stability for Puerto Rico and in compliance with the best management practices.

The DNER proposes a Final Plan to attain compliance with the SO₂ NAAQS. The Final Plan consists of the conversion of several units to be able to use natural gas as the primary fuel, as described below:

Final Plan (Gas Conversions)

PREPA Facility	Generation Unit	Conversion Date
Palo Seco	Boiler 1	July 1, 2030
Palo Seco	Boiler 3	July 1, 2029
Palo Seco	Boiler 4	July 1, 2028
Palo Seco	Power Block 1-1, 1-2	To be determined
Palo Seco	Power Block 2-1	To be determined
Palo Seco	Power Block 2-2	To be determined
Palo Seco	Power Block 3-1	To be determined
Palo Seco	Power Block 3-2	To be determined
Palo Seco	FT8 Mobile Pack 1	To be determined
Palo Seco	FT8 Mobile Pack 2	To be determined
Palo Seco	FT8 Mobile Pack 3	To be determined
San Juan	HRSB 5&6	July 1, 2022
San Juan	Boiler 7	January 31, 2024
San Juan	Boiler 8	January 31, 2026
San Juan	Boiler 9	January 31, 2028
San Juan	Boiler 10	January 31, 2030
Aguirre	AG1	July 1, 2028
Aguirre	AG2	July 1, 2030
Aguirre	Gas Turbine CC1-1HRSB	To be determined
Aguirre	Gas Turbine CC1-2HRSB	To be determined
Aguirre	Gas Turbine CC1-3HRSB	To be determined
Aguirre	Gas Turbine CC1-4HRSB	To be determined
Aguirre	Gas Turbine CC2-1HRSB	To be determined
Aguirre	Gas Turbine CC2-2HRSB	To be determined
Aguirre	Gas Turbine CC2-3HRSB	To be determined
Aguirre	Gas Turbine CC2-4HRSB	To be determined
Aguirre	Gas Turbine AGGT2-1, 2-2	To be determined

If required to meet its generation power commitments, PREPA would request a waiver to utilize an alternate fuel whenever there is a natural disaster or emergency or other extraordinary event under which the natural gas primary fuel is not available for an extended period. This will be done through the request of an Emergency Waiver before the DNER.

- a. The emergency waiver must be approved by PRDNER and EPA. PRDNER will submit the waiver request to USEPA OECA. The waiver must provide (1) evidence and justification for the emergency, (2) how long the waiver is needed, (3) projection for when the natural gas supply will be restored, (4) interim measures to reduce excess emissions. If EPA determines the waiver request is warranted, EPA will approve the temporary emergency waiver. If EPA

does not approve the waiver, EPA and PRDNER may use their discretion to determine noncompliance and/or issue a finding of failure to implement the SIP.

7.0 REASONABLY AVAILABLE CONTROL MEASURE/ REASONABLY AVAILABLE CONTROL TECHNOLOGY 172 (c) (1) and (6) measures to be reasonably available and contribute to attainment as expeditiously as practicable

Enforceable emission limitations and control measures

The DNER RCAP has rules to implement and enforce the NAAQS and other air quality standards. These rules include formal systematic procedures for construction and operation permits that will meet the federal requirements. As part of this SIP, the RCAP will be amended to include more specific rules (Rule 210 and 425) for non-attainment areas.

- (1) If attainment of SO₂ air quality standards in the Non-Attainment Areas are not achieved, DNER will undertake aggressive follow-up for compliance and enforcement at any source within the boundaries of San Juan Metro and Guayama-Salinas Non-Attainment Areas. This includes expedited procedures for establishing enforceable consent agreements pending the adoption of revised SIPs. Any source that is found in violation of any compliance plan approved by the Board or any requirement within such plan will be subject to sanctions specified in Rule 115.
- (2) In the event adoption of any additional control measures is necessary, it will be subject to DNER's administrative and legal process.
- (3) If a new measure/control is already promulgated and scheduled to be implemented at the federal or state level, and that measure/control is determined to be sufficient to address a violation of the SO₂ NAAQS, additional local measures may be unnecessary. Furthermore, DNER will submit to EPA an analysis to demonstrate the proposed measures are adequate to bring the area to attainment.
- (4) The DNER may require any owner or operator responsible for any source of sulfur dioxide emissions which may be contributing to air pollution to install, operate, and maintain monitoring devices; to maintain records; and file periodic reports.
 - a. Within three (3) months of the receipt of any order under Rule 425 of the RCAP, or within another time period that such order may specify, the owner or operator shall submit a plan to the DNER. Such plan shall include an air quality and meteorological measurement network consistent with the objective of obtaining an accurate assessment of the sulfur dioxide air quality and meteorology within the zone impacted by sulfur dioxide emissions from the source. The plan shall follow criteria guidelines furnished by the DNER for number of instruments; site location; monitoring methods; equipment performance specifications; equipment operation and maintenance; analytical and data reduction quality assurance; and data reporting. The DNER may issue additional orders to require that a previously submitted plan be clarified, updated, corrected, supplemented, or otherwise amended.

8.0 CONTINGENCY MEASURE

Identify sources of violation of the SO₂ NAAQS: DNER may declare an air pollution alert, warning or emergency, and will determine that such condition requires immediate action for the protection of the health of human beings. The DNER will order persons causing or contributing to the atmospheric pollution to reduce their emissions to eliminate such condition, or to immediately discontinue the emission of pollutants. In addition, the DNER also maintains air quality information in a form readily available to the public on the DNER Website (www.drna.pr.gov).

Compliance and enforcement: Article 9(a)(7) of Puerto Rico Environmental Public Policy Act (PREPPA) 416 of September 22, 2004, provides the Secretary of the DNER the authority to order persons causing or contributing to a condition which harms the environment and natural resources, or which poses an imminent danger for the public health and safety, to immediately diminish or discontinue their actions. Also, Article 9(a)(8) of PREPPA provides the authority to issue orders to do or forbear or to cease and desist so as to take the preventive or control measures that, in its judgment, are necessary to achieve the purposes of this Act and the regulations promulgated thereunder.

Upon notification by DNER that a nearby air monitor for the area has registered four validated ambient SO₂ concentrations in excess of the standard, or that a monitored SO₂ violation based on the design value occurred during calendar years 2022 and beyond, PREPA will, without any further action by DNER or EPA, undertake a full system audit of all emissions units subject to control under this plan. PREPA will submit a written system audit report to DNER within 30 days of the notification. The system audit report must detail the operating parameters of all emissions units for four 10-day periods up to and including the date upon which the reference monitor registered each exceedance, together with recommended provisional SO₂ emission control strategies for each affected unit and evidence that these control strategies have been deployed, as appropriate. Upon receipt of the system audit report, DNER will immediately begin a 30-day evaluation period to diagnose the cause of the monitored exceedance. This evaluation will be followed by a 30-day consultation period with PREPA to develop and implement operational changes necessary to prevent future monitored violations of the standard. These changes may include fuel switching to reduce or eliminate the use of sulfur containing fuels, physical or operational reduction of production capacity, or other changes as appropriate. If any new emission limits are necessary, they would be submitted to EPA as a SIP revision.

Establishment of a New Attainment Ambient Monitoring Networks (NAAMN): The 2010 SO₂ NAAQS attainment strategy in this SIP considers the development of a NAAMN in the Guayama-Salinas and the San Juan Metro non-attainment areas. The data gathered from the existing monitoring network allows the DNER to propose the development of a NAAMN to be installed at the designated non-attainment areas in Puerto Rico, geared to compare NAAQS compliance. It is recommended to install twelve (12) monitoring stations under the NAAMN, placing six (6) in each of the two non-attainment areas. The analysis developed to select the monitoring station locations will be based upon the areas predicted to have the maximum concentrations, predicted through the use of EPA-approved AERMOD⁹ Modeling Program. This is directed

⁹ AERMOD is a “steady-state plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain.” [Air Quality Dispersion Modeling - Preferred and Recommended Models | US EPA](#)

to address EPA's concerns, as well as to fully validate the Government of Puerto Rico's compliance with the Clean Air Act NAAQS requirements.

9.0 CONCLUSION

On January 9, 2018, the EPA's decision to designate areas of Puerto Rico as non-attainment areas for the 2010 SO₂ NAAQS was published in the Federal Register (83 FR. 1098). The non-attainment designations that took effect on April 9, 2018, correspond to the Air Quality Control Regions (AQCRs) covering: 1. Areas within the Municipalities of San Juan, Guaynabo, Toa Baja, and Bayamón, together with the entire Cataño Municipality on the north of the main island (San Juan Metro Area); 2. Sectors of the Guayama and Salinas Municipalities on the south of the main island. For areas designated as nonattainment, states must develop a State Implementation Plan that meets the requirements of Section 172(c) Clean Air Act (CAA). Paragraphs 172(c) and 172(a)(2) establish the requirements for the implementation of reasonably available control measures to achieve compliance as soon as practicable but no later than five years after the nonattainment designation. In response to the promulgation of the 2010 1-Hour SO₂ Primary National Ambient Air Quality Standard, this SIP is submitted, according to the requirements established in Sections 172(b) and (c) of the (CAA). With this plan, the DNER will meet all requirements to demonstrate attainment with the 2010 1-hour SO₂ NAAQS ambient air monitoring in the designated non-attainment San Juan Metro and Guayama-Salinas areas. This plan demonstrates that the implementation of the control measures at existing sources limit SO₂ emissions below the 2010 NAAQS for sulfur dioxide.

10.0 APPENDIX

- A. Puerto Rico 1-Hour So₂ Nonattainment Area State Implementation Plan-Modeling Protocol (Draft Final)
- B. Puerto Rico 1-Hour So₂ Nonattainment Area State Implementation Plan-2019-2023 Projected Emission Inventory (Draft)

5.5 Contamination and Toxics Data

5.5 a: Contamination and Toxics records within 500 feet

Project Name: PR-CRP-000927 Remodel of Parque Gándara

Location: Roosevelt Ave. 124, Calle Fernando Primero & Calle Juan B. Huyke, Hato Rey North, San Juan

Coordinates: Lat. 18.422262, Long. -66.059345



Facility Name	Mapped	Street Address	City	State	FRS ID	Reports	Count of Supplemental Indexes At or Above 80th Percentile (US - Block Group)	Compliance Monitoring Activity (5 years)	Significant Violations	Quarters with Noncompliance (3 years)	Formal Enforcement Actions (5 years)
ABILIO AUTO AIRE		372 AVE PONCE DE LEON, HATO REY	SAN JUAN	PR	110001661201		9	0	No	0	0
CVS PHARMACY #10314		374 AVE PONCE DE LEON	SAN JUAN	PR	110066978328		9	0	No	0	1
FERNANDEZ GARCIA CLINIC		MUNOZ RIVERA & ROOSEVELT AVE	SAN JUAN	PR	110035439488		9	0	No	0	0
POLYTECHNIC UNIVERSITY OF PR		377 PONCE DE LEON AVE	SAN JUAN	PR	110006433378		9	0	No	0	0



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[Data Services <https://epa.gov/>](https://epa.gov/)

[Help <https://epa.gov/>](https://epa.gov/)

Detailed Facility Report



Detailed Facility Report

Facility Summary

ABILIO AUTO AIRE

372 AVE PONCE DE LEON, HATO REY, SAN JUAN, PR 00919 ⓘ

FRS (Facility Registry Service) ID: 110001661201

EPA Region: 02

Latitude: 18.422399

Longitude: -66.056989

Locational Data Source: FRS

Industries: --

Indian Country: N

Enforcement and Compliance Summary

Statute	CAA
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): Temporarily Closed Minor (PR0000007212700700)

Clean Water Act (CWA): No Information

Resource Conservation and Recovery Act (RCRA): No Information

Safe Drinking Water Act (SDWA): No Information

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

Go To Enforcement/Compliance Details

Known Data Problems <https://epa.gov/resources/echo-data/known-data-problems>

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110001661201					N	18.422399	-66.056989
ICIS-Air	CAA	PR0000007212700700	Minor Emissions	Temporarily Closed	CAACFC		N	18.464919	-66.095697

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110001661201	ABILIO AUTO AIRE	372 AVE PONCE DE LEON, HATO REY, SAN JUAN, PR 00919	San Juan Municipio
ICIS-Air	CAA	PR0000007212700700	ABILIO AUTO AIRE	372 PONCE DE LEON AVENUE, PUERTO RICO, PR 00919	

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
ICIS-Air	PR0000007212700700	7539	Automotive Repair Shops

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
ICIS-Air	PR0000007212700700	999999	

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 compliance monitoring strategy activities. For programs without compliance monitoring strategies, entries in italics are not counted as on-site activities within EPA's Annual Results.

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
CAA	PR0000007212700700	No	11/18/2023	0	11/17/2023

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+
CAA	(Source ID: PR0000007212700700)	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	07/01-09/30/23	10/01-12/31/23
Facility-Level Status		No Violation Identified											
HPV History													
Violation Type	Agency	Programs	Pollutants										

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](#) |
 [Ecological Use](#) |
 [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)
Ozone	No	--	No	--
Lead	No	--	No	--
Particulate Matter	No	--	No	--
Carbon Monoxide	No	--	No	--
Sulfur Dioxide	Yes	Sulfur Dioxide (2010)	No	--

Pollutants

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

[TRI Facility](#) |
 [Year](#) |
 [Air Emission](#) |
 [Surface Water Discharge](#) |
 [Off-Site Transfers to POTWs \(Publicly Owned Treatment Works\)](#) |
 [Underground Injection](#) |
 [Disposal to Land](#) |
 [Total On-Site Release](#) |
 [Total Off-Site Transfer](#)

No data records returned

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

Chemical Name

No data records returned

DMR and TRI Multi-Year Loading Report

CWA (Clean Water Act) Discharge Monitoring Report (DMR) Pollutant Loadings

NPDES ID



Description

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

Related Reports

Compare to

US State

Index Type

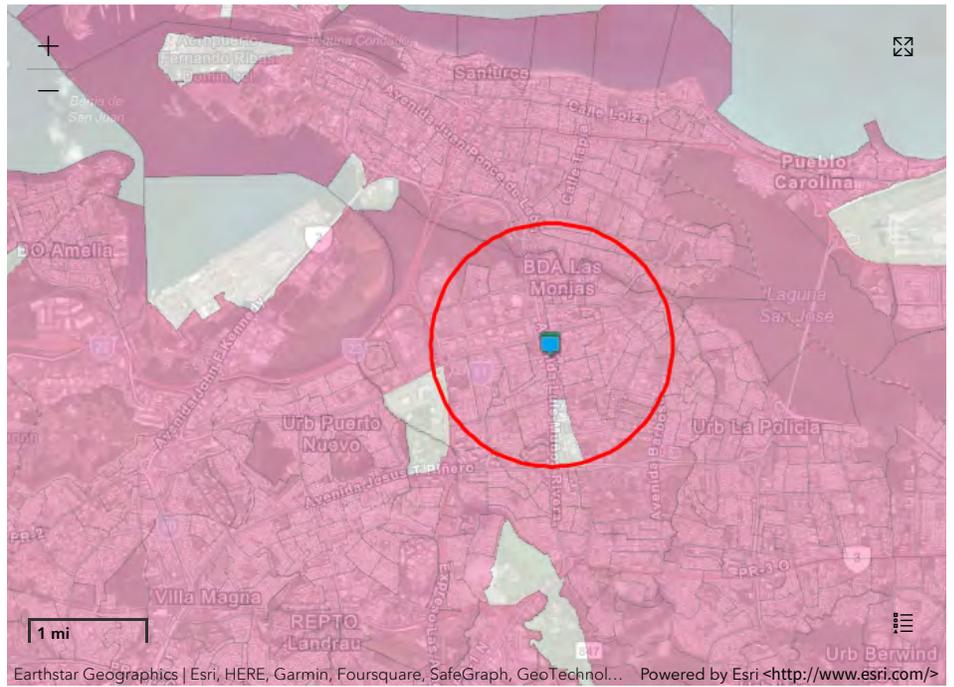
Environmental Justice Supplemental

EJScreen Community Report

Download Data

Facility 1-mile Radius Facility Census Block Group

Census Block Group ID: 721270065001	US (Percentile)	
Supplemental Indexes	Facility Census Block Group	1-mile Max
Count of Indexes At or Above 80th Percentile	9	9
Particulate Matter 2.5	--	--
Ozone	--	--
Diesel Particulate Matter	88	99
Air Toxics Cancer Risk	52	58
Air Toxics Respiratory Hazard Index	33	44
Toxic Releases to Air	94	99
Traffic Proximity	99	99
Lead Paint	99	99
Risk Management Plan (RMP) Facility Proximity	99	99
Hazardous Waste Proximity	99	99
Superfund Proximity	93	99
Underground Storage Tanks (UST)	99	99
Wastewater Discharge	99	99



Demographic Profile of Surrounding Area (1-Mile Radius)

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 2017 - 2021 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 <<https://epa.gov/help/reports/dfr-data-dictionary#demographic>>.

General Statistics (U.S. Census)	
Total Persons	38,237
Population Density	12,473/sq.mi.
Housing Units in Area	22,934

General Statistics (ACS (American Community Survey))	
Total Persons	32,313
Percent People of Color	100%
Households in Area	14,540
Households on Public Assistance	381
Persons With Low Income	21,778
Percent With Low Income	68%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	18.422399
Center Longitude	-66.056989
Land Area	98%
Water Area	2%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than \$15,000	5,586 (38.4%)
\$15,000 - \$25,000	2,536 (17.44%)
\$25,000 - \$50,000	2,936 (20.19%)
\$50,000 - \$75,000	1,576 (10.84%)
Greater than \$75,000	1,911 (13.14%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	1,689 (4%)
Minors 17 years and younger	6,527 (17%)
Adults 18 years and older	31,710 (83%)
Seniors 65 years and older	7,398 (19%)

Race Breakdown (U.S. Census) - Persons (%)	
White	25,471 (67%)
African-American	7,068 (18%)
Hispanic-Origin	37,673 (99%)
Asian/Pacific Islander	245 (1%)
American Indian	354 (1%)
Other/Multiracial	5,099 (13%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	3,728 (15%)
9th through 12th Grade	1,526 (6.14%)
High School Diploma	5,685 (22.88%)
Some College/2-year	1,806 (7.27%)
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	9,384 (37.76%)



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Detailed Facility Report



Detailed Facility Report

Facility Summary

CVS PHARMACY #10314

374 AVE PONCE DE LEON, SAN JUAN, PR 00918 ⓘ

FRS (Facility Registry Service) ID: 110066978328

EPA Region: 02

Latitude: 18.42184

Longitude: -66.05684

Locational Data Source: FRS

Industries: Health and Personal Care Stores

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)	1
Penalties from EPA Cases (5 years)	\$60,000

Regulatory Information

Clean Air Act (CAA): No Information

Clean Water Act (CWA): No Information

Resource Conservation and Recovery Act (RCRA): Active VSQG, (PRR000025577)

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information

Greenhouse Gas Emissions (eGGRT): No Information

Toxic Releases (TRI): No Information

Go To Enforcement/Compliance Details

Known Data Problems <<https://epa.gov/resources/echo-data/known-data-problems>>

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110066978328					N	18.42184	-66.05684
RCRAInfo	RCRA	PRR000025577	VSQG	Active (H)			N	18.4225	-66.057017

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110066978328	CVS PHARMACY #10314	374 AVE PONCE DE LEON, SAN JUAN, PR 00918	San Juan Municipio
RCRAInfo	RCRA	PRR000025577	CVS PHARMACY #10314	374 AVE PONCE DE LEON, SAN JUAN, PR 00918	San Juan Municipio

Facility SIC (Standard Industrial Classification) Codes

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	SIC Code	SIC Description
		No data records returned	

System	Identifier	NAICS Code	NAICS Description
RCRAInfo	PRR000025577	44611	Pharmacies and Drug Stores

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	PRR000025577	No	10/14/2023	0	10/13/2023

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: PRR000025577)	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	07/01-09/30/23	10/01-12/31/23
Facility-Level Status		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
RCRA	ICIS	3002	RCRAINFO/PRR000025577	Judicial	02-2014-0024	EPA	Puerto Rico CVS Pharmacy, LLC	11/19/2019	1	01/09/2020	\$60,000	\$0	--	\$0	\$3,500

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 Ecological Use 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)
Ozone	No	--	No	--
Lead	No	--	No	--
Particulate Matter	No	--	No	--
Carbon Monoxide	No	--	No	--
Sulfur Dioxide	Yes	Sulfur Dioxide (2010)	No	--

Pollutants

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

TRI Facility 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 Releases

No data records returned

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

Chemical Name

No data records returned

CWA (Clean Water Act) Discharge Monitoring Report (DMR) Pollutant Loadings

DMR and TRI Multi-Year Loading Report

NPDES ID



Description



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

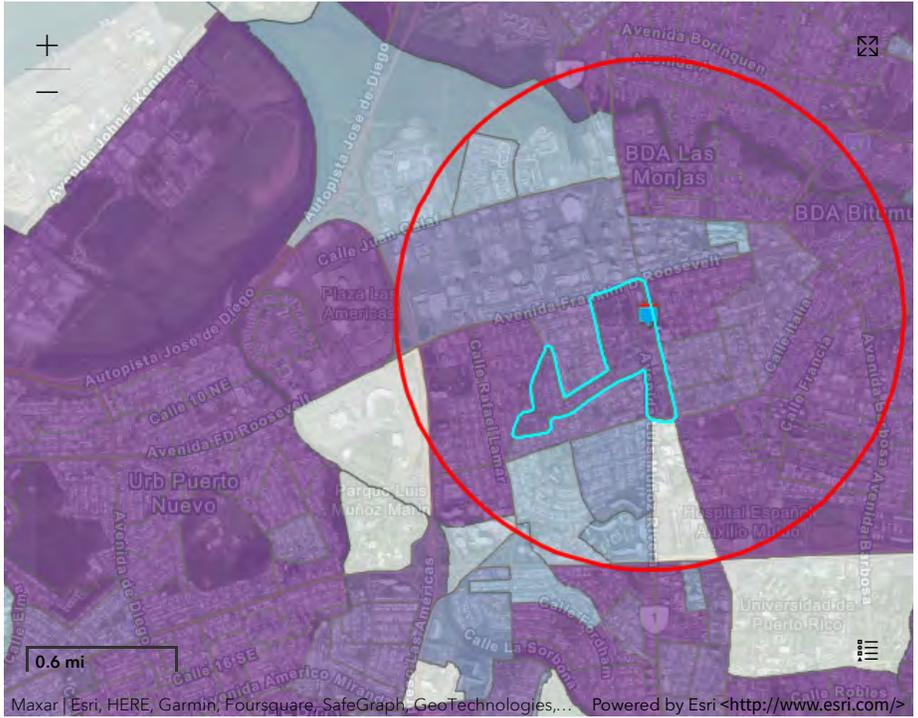
Index Type ⓘ

Environmental Justice Supplemental

Related Reports

EJScreen Community Report

Census Block Group ID: 721270065001	US (Percentile)	
Supplemental Indexes	Facility Census Block Group	1-mile Max
Count of Indexes At or Above 80th Percentile	9	9
Particulate Matter 2.5	--	--
Ozone	--	--
Diesel Particulate Matter	88	99
Air Toxics Cancer Risk	52	58
Air Toxics Respiratory Hazard Index	33	44
Toxic Releases to Air	94	99
Traffic Proximity	99	99
Lead Paint	99	99
Risk Management Plan (RMP) Facility Proximity	99	99
Hazardous Waste Proximity	99	99
Superfund Proximity	93	99
Underground Storage Tanks (UST)	99	99
Wastewater Discharge	99	99



Demographic Profile of Surrounding Area (1-Mile Radius)

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 2017 - 2021 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 <<https://epa.gov/help/reports/dfr-data-dictionary#demographic>>.

General Statistics (U.S. Census)	
Total Persons	37,669
Population Density	12,331/sq.mi.
Housing Units in Area	22,664

General Statistics (ACS (American Community Survey))	
Total Persons	32,187
Percent People of Color	100%
Households in Area	14,628
Households on Public Assistance	393
Persons With Low Income	21,606
Percent With Low Income	67%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	18.42184
Center Longitude	-66.05684
Land Area	98%
Water Area	2%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than \$15,000	5,669 (38.75%)
\$15,000 - \$25,000	2,507 (17.14%)
\$25,000 - \$50,000	2,943 (20.12%)
\$50,000 - \$75,000	1,586 (10.84%)
Greater than \$75,000	1,923 (13.15%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	1,647 (4%)
Minors 17 years and younger	6,389 (17%)
Adults 18 years and older	31,281 (83%)
Seniors 65 years and older	7,383 (20%)

Race Breakdown (U.S. Census) - Persons (%)	
White	25,328 (67%)
African-American	6,783 (18%)
Hispanic-Origin	37,116 (99%)
Asian/Pacific Islander	237 (1%)
American Indian	346 (1%)
Other/Multiracial	4,975 (13%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	3,642 (14.64%)
9th through 12th Grade	1,445 (5.81%)
High School Diploma	5,628 (22.62%)
Some College/2-year	1,783 (7.17%)
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	9,589 (38.54%)



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Detailed Facility Report



Detailed Facility Report

Facility Summary

FERNANDEZ GARCIA CLINIC

MUNOZ RIVERA & ROOSEVELT AVE, SAN JUAN, PR 00936 ⓘ

FRS (Facility Registry Service) ID: 110035439488

EPA Region: 02

Latitude: 18.423414

Longitude: -66.058151

Locational Data Source: RCRAINFO

Industries: --

Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	08/28/2013
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, (PRR000021501)

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information

Greenhouse Gas Emissions (eGGRT): No Information

Toxic Releases (TRI): No Information

Go To Enforcement/Compliance Details

Known Data Problems <https://epa.gov/resources/echo-data/known-data-problems>

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110035439488					N	18.423414	-66.058151
RCRAInfo	RCRA	PRR000021501	SQG	Active (H)			N	18.423414	-66.058151

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110035439488	FERNANDEZ GARCIA CLINIC	MUNOZ RIVERA & ROOSEVELT AVE, SAN JUAN, PR 00936	San Juan Municipio
RCRAInfo	RCRA	PRR000021501	FERNANDEZ GARCIA CLINIC	MUNOZ RIVERA & ROOSEVELT AVE, SAN JUAN, PR 00936	San Juan Municipio

Facility SIC (Standard Industrial Classification) Codes

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	SIC Code	SIC Description
No data records returned			

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)
No data records returned							

Entries in italics are not counted as compliance monitoring strategy activities. For programs without compliance monitoring strategies, entries in italics are not counted as on-site activities within EPA's Annual Results.

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	PRR000021501	No	11/18/2023	0	11/17/2023

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: PRR000021501)	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	07/01-09/30/23	10/01-12/31/23
Facility-Level Status		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	SEB 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 Ecological Use 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)
Ozone	No	--	No	--
Lead	No	--	No	--
Particulate Matter	No	--	No	--
Carbon Monoxide	No	--	No	--
Sulfur Dioxide	Yes	Sulfur Dioxide (2010)	No	--

Pollutants

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

TRI Facility Year Air Emissions Surface Water Discharges Off-Site Transfers to POTWs (Publicly Owned Treatment Works) Underground Injections Disposal 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

CWA (Clean Water Act) Discharge Monitoring Report (DMR) Pollutant Loadings

DMR and TRI Multi-Year Loading Report

NPDES ID

↓

Description

↓

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.

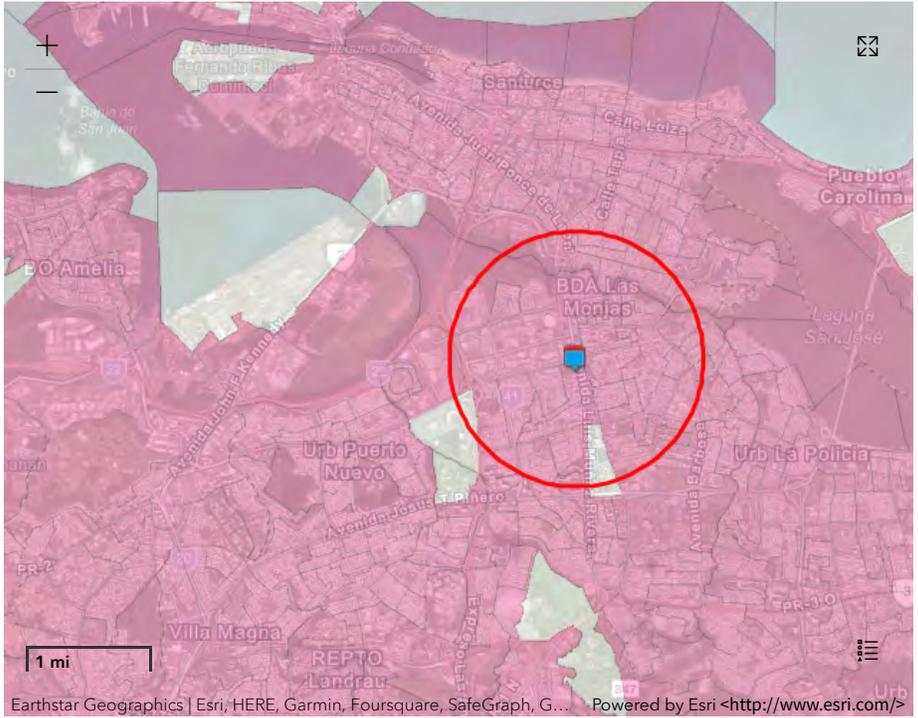
EJScreen Indexes Shown

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 US State
Index Type ⓘ
 Environmental Justice Supplemental

Related Reports

EJScreen Community Report

Supplemental Indexes	US (Percentile)	
	Facility Census Block Group	1-mile Max
Count of Indexes At or Above 80th Percentile	9	9
Particulate Matter 2.5	--	--
Ozone	--	--
Diesel Particulate Matter	88	99
Air Toxics Cancer Risk	52	58
Air Toxics Respiratory Hazard Index	33	44
Toxic Releases to Air	94	99
Traffic Proximity	99	99
Lead Paint	99	99
Risk Management Plan (RMP) Facility Proximity	99	99
Hazardous Waste Proximity	99	99
Superfund Proximity	93	99
Underground Storage Tanks (UST)	99	99
Wastewater Discharge	99	99



Demographic Profile of Surrounding Area (1-Mile Radius)

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 2017 - 2021 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 <<https://epa.gov/help/reports/dfr-data-dictionary#demographic>>.

General Statistics (U.S. Census)	
Total Persons	36,024
Population Density	11,723/sq.mi.
Housing Units in Area	21,709

General Statistics (ACS (American Community Survey))	
Total Persons	31,052
Percent People of Color	100%
Households in Area	13,829
Households on Public Assistance	337
Persons With Low Income	20,590
Percent With Low Income	67%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	18.423414
Center Longitude	-66.058151
Land Area	98%
Water Area	2%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than \$15,000	5,152 (37.26%)
\$15,000 - \$25,000	2,479 (17.93%)
\$25,000 - \$50,000	2,747 (19.86%)
\$50,000 - \$75,000	1,555 (11.24%)
Greater than \$75,000	1,896 (13.71%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	1,575 (4%)
Minors 17 years and younger	6,091 (17%)
Adults 18 years and older	29,933 (83%)
Seniors 65 years and older	6,902 (19%)

Race Breakdown (U.S. Census) - Persons (%)	
White	23,780 (66%)
African-American	6,767 (19%)
Hispanic-Origin	35,471 (98%)
Asian/Pacific Islander	239 (1%)
American Indian	344 (1%)
Other/Multiracial	4,895 (14%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	3,661 (15.42%)
9th through 12th Grade	1,519 (6.4%)
High School Diploma	5,309 (22.36%)
Some College/2-year	1,783 (7.51%)
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	8,988 (37.85%)



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Detailed Facility Report



Detailed Facility Report

Facility Summary

POLYTECHNIC UNIVERSITY OF PR

377 PONCE DE LEON AVE, SAN JUAN, PR 00918

FRS (Facility Registry Service) ID: 110006433378

EPA Region: 02

Latitude: 18.422108

Longitude: -66.05691

Locational Data Source: FRS

Industries: Educational Services

Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	12/15/2005
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 VSQG, (PR0000333484)

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information

Greenhouse Gas Emissions (eGGRT): No Information

Toxic Releases (TRI): No Information

Go To Enforcement/Compliance Details

Known Data Problems <https://epa.gov/resources/echo-data/known-data-problems>

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110006433378					N	18.422108	-66.05691
RCRAInfo	RCRA	PR0000333484	VSQG	Active (H)			N	18.421909	-66.056795

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110006433378	POLYTECHNIC UNIVERSITY OF PR	377 PONCE DE LEON AVE, SAN JUAN, PR 00918	San Juan Municipio
RCRAInfo	RCRA	PR0000333484	POLYTECHNIC UNIVERSITY OF PR	377 PONCE DE LEON AVE, HATO REY, PR 00918	San Juan Municipio

Facility SIC (Standard Industrial Classification) Codes

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	SIC Code	SIC Description
			No data records returned

System	Identifier	NAICS Code	NAICS Description
RCRAInfo	PR0000333484	61131	Colleges, Universities, and Professional Schools

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 compliance monitoring strategy activities. For programs without compliance monitoring strategies, entries in italics are not counted as on-site activities within EPA's Annual Results.

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	PR0000333484	No	11/18/2023	0	11/17/2023

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: PR0000333484)	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	07/01-09/30/23	10/01-12/31/23
Facility-Level Status		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	SEB 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 Ecological Use 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)
Ozone	No	--	No	--
Lead	No	--	No	--
Particulate Matter	No	--	No	--
Carbon Monoxide	No	--	No	--
Sulfur Dioxide	Yes	Sulfur Dioxide (2010)	No	--

Pollutants

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

TRI Facility Year Air Emissions Surface Water Discharges Off-Site Transfers to POTWs (Publicly Owned Treatment Works) Underground Injections Disposal 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

CWA (Clean Water Act) Discharge Monitoring Report (DMR) Pollutant Loadings

DMR and TRI Multi-Year Loading Report

NPDES ID



Description

No data records returned

e-Manifest Hazardous Waste History (Public)

Hazardous Waste Shipped in Kilograms by Year (Through 8/19/2023)

Source ID	Waste Description	2020	2021	2022	2023
PR0000333484	Hazardous Waste	21	83	24	38
PR0000333484	Acute Hazardous Waste	0	0 - 3	0	0
PR0000333484	Pharmaceutical Hazardous Waste	0	0	0	0

Pharmaceutical Hazardous Waste is excluded from the Hazardous and Acute Hazardous Waste quantities shown above because Pharmaceutical Waste is managed under 40 CFR part 266 subpart P <<https://www.epa.gov/hwgenerators/final-rule-management-standards-hazardous-waste-pharmaceuticals-and-amendment-p075>> and is excluded from Computed Generator Status calculations.

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

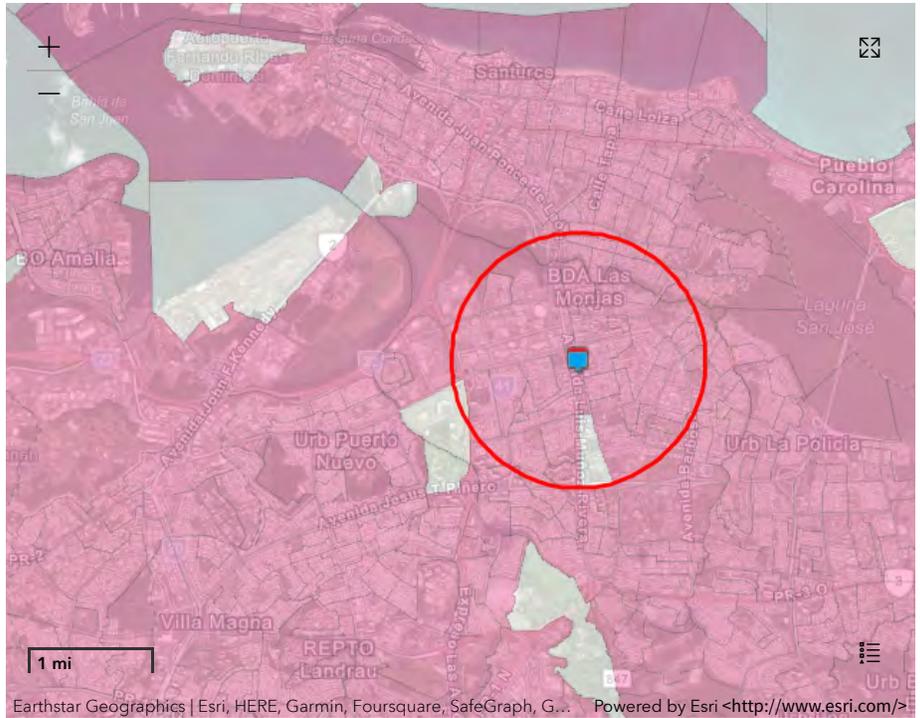
Related Reports

EJScreen Community Report

Download Data

Facility 1-mile Radius Facility Census Block Group

Census Block Group ID: 721270065001	US (Percentile)	
Supplemental Indexes	Facility Census Block Group	1-mile Max
Count of Indexes At or Above 80th Percentile	9	9
Particulate Matter 2.5	--	--
Ozone	--	--
Diesel Particulate Matter	ⓘ 88	ⓘ 99
Air Toxics Cancer Risk	52	58
Air Toxics Respiratory Hazard Index	33	44
Toxic Releases to Air	ⓘ 94	ⓘ 99
Traffic Proximity	ⓘ 99	ⓘ 99
Lead Paint	ⓘ 99	ⓘ 99
Risk Management Plan (RMP) Facility Proximity	ⓘ 99	ⓘ 99
Hazardous Waste Proximity	ⓘ 99	ⓘ 99
Superfund Proximity	ⓘ 93	ⓘ 99
Underground Storage Tanks (UST)	ⓘ 99	ⓘ 99
Wastewater Discharge	ⓘ 99	ⓘ 99



Demographic Profile of Surrounding Area (1-Mile Radius)

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 2017 - 2021 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 <<https://epa.gov/help/reports/dfr-data-dictionary#demographic>>.

General Statistics (U.S. Census)	
Total Persons	37,890
Population Density	12,424/sq.mi.
Housing Units in Area	22,763

General Statistics (ACS (American Community Survey))	
Total Persons	32,219
Percent People of Color	100%
Households in Area	14,576
Households on Public Assistance	385
Persons With Low Income	21,678
Percent With Low Income	68%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	18.422108
Center Longitude	-66.05691
Land Area	98%
Water Area	2%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than \$15,000	5,619 (38.56%)
\$15,000 - \$25,000	2,518 (17.28%)
\$25,000 - \$50,000	2,935 (20.14%)
\$50,000 - \$75,000	1,581 (10.85%)
Greater than \$75,000	1,918 (13.16%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	1,663 (4%)
Minors 17 years and younger	6,440 (17%)
Adults 18 years and older	31,450 (83%)
Seniors 65 years and older	7,387 (20%)

Race Breakdown (U.S. Census) - Persons (%)	
White	25,362 (67%)
African-American	6,912 (18%)
Hispanic-Origin	37,333 (99%)
Asian/Pacific Islander	240 (1%)
American Indian	350 (1%)
Other/Multiracial	5,026 (13%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	3,682 (14.82%)
9th through 12th Grade	1,485 (5.98%)
High School Diploma	5,655 (22.75%)
Some College/2-year	1,791 (7.21%)
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	9,484 (38.16%)

5.5 b: Contamination and Toxics records within 3,000 feet

Project Name: PR-CRP-000927 Remodel of Parque Gándara

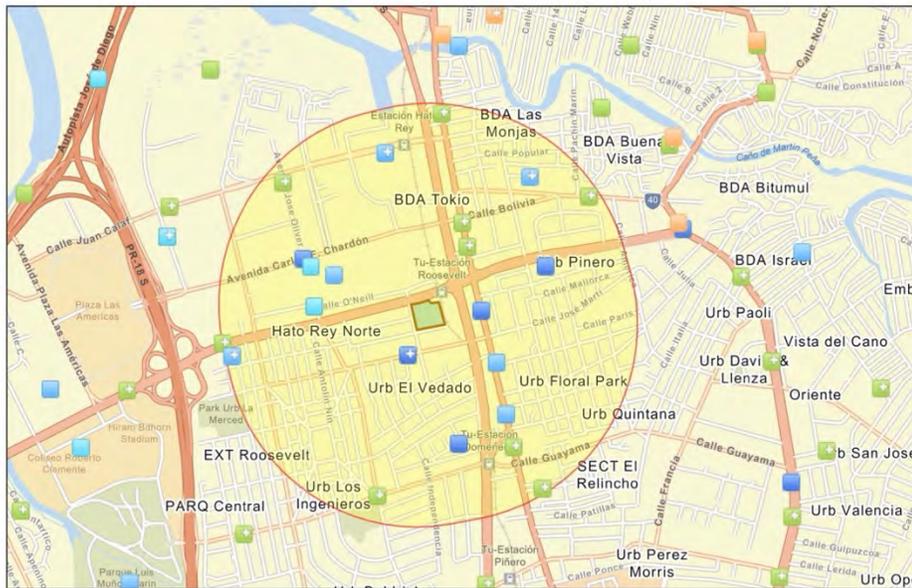
Location: Roosevelt Ave. 124, Calle Fernando Primero & Calle Juan B. Huyke, Hato Rey North, San Juan

Coordinates: Lat. 18.422262, Long. -66.059345

Air emission:

- Dry Clean USA
- Different Cleaners
- Celia's Laundry
- Industria Lechera PR
- Educlean, Inc.
- Supreme Quality Cleaners
- Abilio Auto Aire

Parque Gandara



July 17, 2023



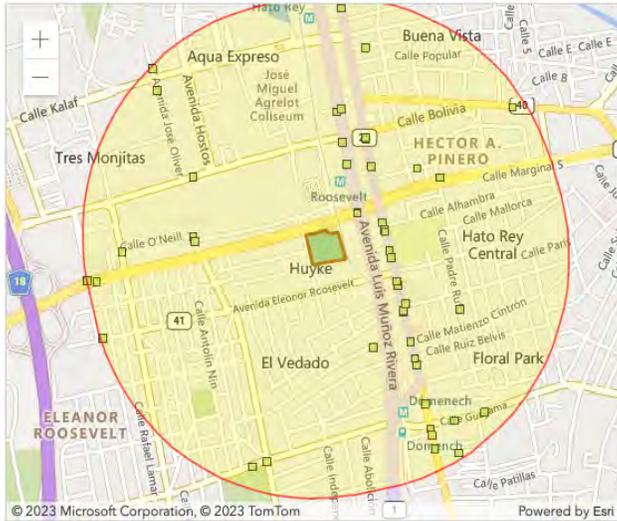
Report question: Within 3000 of a Air emissions site? yes

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

3000 feet Submit

Name	Distance
± DRY CLEAN USA (PUERTO RICO,PR)	1818.30 feet
± DIFFERENT CLEANERS (SAN JUAN,PR)	1750.35 feet
± CELIA'S LAUNDRY (PUERTO RICO,PR)	1127.55 feet
± INDUSTRIA LECHERA PR (SAN JUAN,PR)	1512.23 feet
± EDUCLEAN, INC. (PUERTO RICO,PR)	1820.83 feet
± SUPREME QUALITY CLEANERS (SAN JUAN,PR)	407.89 feet
± ABILIO AUTO AIRE (PUERTO RICO,PR)	600.95 feet

RCRA Hazardous Waste generators within 3,000 feet



Report question: Within 3000 of a Hazardous waste site? yes

Modify question by entering a new buffer distance and unit for the selected study area:
 3000 feet Submit

Name	Distance
AUTORIDAD PARA EL FINANCIAMIENTO DE LA INFRAESTRUCTURA WORLD PLAZA BUILDING (SAN JUAN,PR)	876.41 feet
ASOCIACION MAESTROS DE PUERTO RICO (HATO REY,PR)	1382.03 feet
ALLIED MANAGEMENT (HATO REY,PR)	1261.21 feet
POLYTECHNIC UNIVERSITY OF PR (HATO REY,PR)	601.54 feet
TROPICOLOR LBA (HATO REY,PR)	952.81 feet
DOMENECH PATHOLOGY & TOXICOLOGY LABORATORY (SAN JUAN,PR)	2712.77 feet
INDUSTRIA LECHERA DE PUERTO RICO (HATO REY,PR)	1512.23 feet
B P P R POPULAR CENTER (HATO REY,PR)	1519.63 feet
TEXACO PR INC - PONCE DE LEON SS (HATO REY,PR)	2148.70 feet
UNION ASSET MANAGEMENT (HATO REY,PR)	1041.04 feet
OLIVER EXTERMINATING SERVICES CORP (SAN JUAN,PR)	2922.06 feet
TROPICOLOR PUERTA DE TIERRA (SAN JUAN,PR)	783.34 feet
BANCO POPULAR OF PR (HATO REY,PR)	1559.49 feet
PUERTO RICO ELECTRIC POWER AUTH (HATO REY,PR)	1519.63 feet
CHASE MANHATTAN BANK NA THE (HATO REY,PR)	1146.01 feet
DELTA MAINTENANCE SERVICES INC (HATO REY,PR)	1242.45 feet
ORGANIZATIONAL MAINT SHOP #6 (HATO REY,PR)	359.07 feet
HOSPITAL PAVIA (SAN JUAN,PR)	1019.10 feet
SHELL CO PR LTD SS 0787 REGIS SVC CTR (HATO REY,PR)	2599.86 feet
COMISION ESTATAL DE ELECCIONES (HATO REY,PR)	2995.62 feet
POLICIA DE PUERTO RICO (HATO REY,PR)	1535.73 feet
TISCHER & CO INC (SAN JUAN,PR)	604.50 feet
COLEGIO TECNOLOGICO DE SAN JUAN (SAN JUAN,PR)	2963.98 feet
CHICO SHELL SERVICE STATION (SAN JUAN,PR)	604.11 feet
NORTHWEST PIPELINE MOAB COMPRESSOR ST. (SAN JUAN,UT)	2870.38 feet
PRASA MCCRAKEN WAREHOUSE (SAN JUAN,PR)	2716.16 feet
FERNANDEZ GARCIA CLINIC (SAN JUAN,PR)	352.09 feet
STYLING GARAGE (HATO REY,PR)	2540.72 feet
BORINQUEN BODY (HATO REY,PR)	2394.00 feet
SHELL CO PR LTD SHELL SS 0124 GARAJE BER (SAN JUAN,PR)	605.87 feet
FIREYE - ROCKWELL INTL (HATO REY,PR)	2473.33 feet
SHELL CO PR LTD SS 804975 MARTIN PENA (HATO REY,PR)	1665.02 feet
GSA FEDERICO DEGETAU FEDERAL BLDG (HATO REY,PR)	1684.44 feet
UNIVERSITY OF PUERTO RICO RIO PIEDRAS (RIO PIEDRAS,PR)	989.91 feet
SAN JUAN JUDICIAL CENTER (HATO REY,PR)	2724.47 feet
BORINQUEN PETROLEUM (HATO REY,PR)	1685.37 feet
CHICO SHELL SERVICE STATION (SAN JUAN,PR)	604.11 feet
FUTURE ATLANTIS CONDOMINIUM (SAN JUAN,PR)	751.26 feet
FEDERICO DEGETAU FEDERAL OFFICE BUILDING - INDOOR FIRING RANGE (SAN JUAN,PR)	1684.44 feet
QUISQUEYA SERVICE STATION (HATO REY,PR)	2835.29 feet
EDP UNIVERSITY (HATO REY,PR)	2723.39 feet
AEELA MAIN BLDG HATO REY (SAN JUAN,PR)	1584.45 feet
BANCO POPULAR - POPULAR CENTER (HATO REY,PR)	1559.49 feet
NATION WIDE INSURANCE CO (HATO REY,PR)	1338.99 feet
BISMARCK TRADING INC (HATO REY,PR)	1491.67 feet
UNIVERSIDAD DEL SAGRADO CORAZON (SAN JUAN,PR)	1261.21 feet
NEXT DAY SIGNS INC (HATO REY,PR)	2463.91 feet
CVS PHARMACY #10314 (SAN JUAN,PR)	616.68 feet
COLISEO ROBERTO CLEMENTE (HATO REY,PR)	2966.63 feet
LABORATORIO DE PATOLOGIA DR NOY (HATO REY,PR)	1201.11 feet
COMPANIA PETROLERA CARIBE INC (SAN JUAN,PR)	2549.27 feet
TELEMUNDO OF PR (SAN JUAN,PR)	2995.62 feet
TEXACO PR INC HATO REY SS (HATO REY,PR)	2848.09 feet

RCRA Hazardous Waste list

Name of site (Hazardous Waste site)	Distance
AUTORIDAD PARA EL FINANCIAMIENTO DE LA INFRAESTRUCTURA WORLD PLAZA BUILDING (SAN JUAN)	1072.67 ft.
ASOCIACIÓN DE MAESTROS DE PUERTO RICO (HATO REY, PR)	1696.57 ft.
ALLIED MANAGEMENT (HATO REY, PR)	1473.95 ft.
POLYTECHNIC UNIVERSITY OF PR (HATO REY, PR)	870.66 ft.
TROPICOLOR LBA (HATO REY, PR)	1182.71 ft.
INDUSTRIA LECHERA DE PUERTO RICO (HATO REY, PR)	1767.65 ft.
B P P R POPULAR CENTER (HATO REY, PR)	1712.29 ft.
TEXACO PR INC. – PONCE DE LEÓN SS (HATO REY, PR)	2444.42 ft.
UNION ASSET MANAGEMENT (HATO REY, PR)	1365.72 ft.
TROPICOLOR PUERTA DE TIERRA (SAN JUAN, PR)	1109.23 ft.
BANCO POPULAR OF PR (HATO REY, PR)	1751.92 ft.
PUERTO RICO ELECTRIC POWER AUTHORITY (HATO REY, PR)	1712.29 ft.
DELTA MAINTENANCE SERVICES INC. (HATO REY, PR)	1456.35 ft.
CHASE MANHATTAN BANK NA (HATO REY, PR)	1337.52 ft.
ORGANIZATIONAL MAINT SHOP #6 (HATO REY, PR)	600.51 ft.
HOSPITAL PAVIA (SAN JUAN, PR)	1344.30 ft.
SHELL CO. PR LTD SS 0787 REGIS SVC CTR (HATO REY, PR)	2891.79 ft.
POLICÍA DE PUERTO RICO (HATO REY, PR)	1769.87 ft.
TISCHER & CO. INC. (SAN JUAN, PR)	821.66 ft.
CHICO SHELL SERVICE STATION (SAN JUAN, PR)	822.42 ft.
FERNÁNDEZ GARCÍA CLINIC (SAN JUAN, PR)	593.60 ft.
STYLING GARAGE (HATO REY, PR)	2846.81 ft.
BORINQUEN BODY (HATO REY, PR)	2586.36 ft.
SHELL CO. PR LTD SS 804975 MARTIN PENA (HATO REY, PR)	1972.06 ft.
FIREYE – ROCKWELL INTL. (HATO REY, PR)	2718.57 ft.
SHELL CO PR LTD SS 0124 GARAJE BER (SAN JUAN, PR)	824.33 ft.
GSA FEDERICO DEGETAU FEDERAL BLDG (HATO REY, PR)	1966.95 ft.
UNIVERSIDAD DE PUERTO RICO (RIO PIEDRAS, PR)	1317.14 ft.
SAN JUAN JUDICIAL CENTER (HATO REY, PR)	2996.48 ft.
BORINQUEN PETROLEUM (HATO REY, PR)	1988.97 ft.
CHICO SHELL SERVICE STATION (SAN JUAN, PR)	822.42 ft.
FUTURE ATLANTIS CONDOMINIUM (SAN JUAN, PR)	1075.35 ft.
FEDERICO DEGETAU FEDERAL OFFICE BUILDING – INDOOR FIRING RANGE (SAN JUAN, PR)	1966.95 ft.
AEELA MAIN BLDG HATO REY (SAN JUAN, PR)	1893.70 ft.
BANCO POPULAR – POPULAR CENTER (HATO REY, PR)	1751.92 ft.
NATION WIDE INSURANCE CO (HATO REY, PR)	1579.83 ft.
BISMARCK TRADING INC. (HATO REY, PR)	1743.02 ft.
UNIVERSIDAD SAGRADO CORAZON (SAN JUAN, PR)	1473.95 ft.
NEXT DAY SIGNS INC. (HATO REY, PR)	2753.67 ft.
CVS PHARMACY #10314 (SAN JUAN, PR)	907.97 ft.
COMPANIA PETROLERA CARIBE INC. (SAN JUAN, PR)	2837.45 ft.
LABORATORIO DE PATOLOGIA DR NOY (HATO REY, PR)	1469.79 ft.

<https://nepassisttool.epa.gov/nepassist/drill-facilities.aspx>

5.6 Consultation Self-Certification Clearance Letter submitted to FWS
(Endangered Species)



May 31, 2023

Mr. Edwin Muniz
Field Supervisor
Fish and Wildlife Service
Caribbean Ecological Services Field Office
PO Box 491
Boquerón, PR 00622



Based on the information provided, we determined the project proposed qualifies for the blanket clearance letter. Nevertheless, if the project is modified this office should be contacted concerning the need for the initiation of consultation under section 7 of Endangered Species Act of 1973.

Reviewer: DAMARIS ROMAN RUIZ Digitally signed by DAMARIS ROMAN RUIZ
Date: 2023.06.12 13:02:00 -0400

EDWIN MUNIZ Digitally signed by EDWIN MUNIZ
Date: 2023.06.12 14:29:02 -0400
Caribbean IS Field Supervisor

RE: Self-Certification under Blanket Clearance Letter for federally sponsored projects, Housing and Urban Development, for PR-CRP-000927 – “Remodelación del Parque Gándara de San Juan”

Dear Mr. Muniz:

We submit for your review the enclosed Self-Certification to fulfill requirements related to the Blanket Clearance Letter dated January 14, 2013. This information is submitted to comply with Section 7 of the Endangered Species Act (ESA). The project is a CDBG-DR funded project; allocated by HUD to PRDOH as the grantee of the funds and the Municipality of San Juan as the subrecipient of the funds.

The Municipality of San Juan proposed the remodel of Parque Gándara in Hato Rey area. The design for the remodel of Parque Gándara follows a dual strategy: (1) to take advantage of the natural characteristics of the site; and (2) to enhance and develop the current uses of the park. The main architectural component is a 420' diameter circular walkway that is centrally contained within the square perimeter of the park. The path of exactly ¼ mile in length serves as the foundational architectural element that orders for the rest of the project, as it provides a continuous internal connection throughout the facility. A secondary series of diagonal pathways also intersect with the main radial walkway, thus creating various interior regions within the park. As a whole, the bisected circular sidewalk system provides a continuous pedestrian connection throughout the public greenspace while offering multiple leisure intersections for recreation, and in parallel facilitating access to the peripheral urban sidewalks outside of the park.

At the north end the park connects with the Tren Urbano Station and the sidewalks of Ave. Roosevelt, while connecting with the municipal sidewalks on the western and southern edges; the west side is bordered by the aerial Tren Urbano tracks and an abandoned parcel belonging to the Departamento de Carreteras. In addition to the actual required earthworks, the park will be mostly composed of greenspaces [vegetation and landscape], concrete pavement [paths and sidewalks], benches, a gazebo, flexible floorings for the kid's areas [rubber and/or sand], and various other light structures and features.

Mr. Edwin Muniz
Field Supervisor
Fish and Wildlife Service
Page 2

The main areas of the new park will include the following: Circular and radial pedestrian paths, Sidewalks [new and/or repaired], Interior plazas, Seating areas [benches], Path and site lighting, Infantile playground areas, Restoration of existing landscape, Reforestation, new landscape and green improvements, Repairs to basketball and volleyball court, Central gazebo, Fitness yard, Urban agriculture yard and Signage.

The project conforms to Project Criteria No 2: Construction of gutters and sidewalks along existing roads and No. 8: Improvements to existing recreational facilities, including the installation of roof to existing basketball courts, provided that the lighting associated to the facility are not visible directly or indirectly from the beach of the Blanket Clearance Letter for Federally sponsored projects, Housing and Urban Development dated January 14, 2013. The project activity is limited to a previously developed urban area and thus, the proposed action has no effect on any natural habitats or federally protected species. Please refer to enclosed maps and project description for details.

Should you require any additional information, please contact Project Manager Luis Yordan at lyordan@sanjuan.pr or by phone number 787-464-7618.

Cordially,


Milagros Murphy
Executive Officer
CDBG-DR CRP-POC

Self-Certification

Endangered Species Act Certification

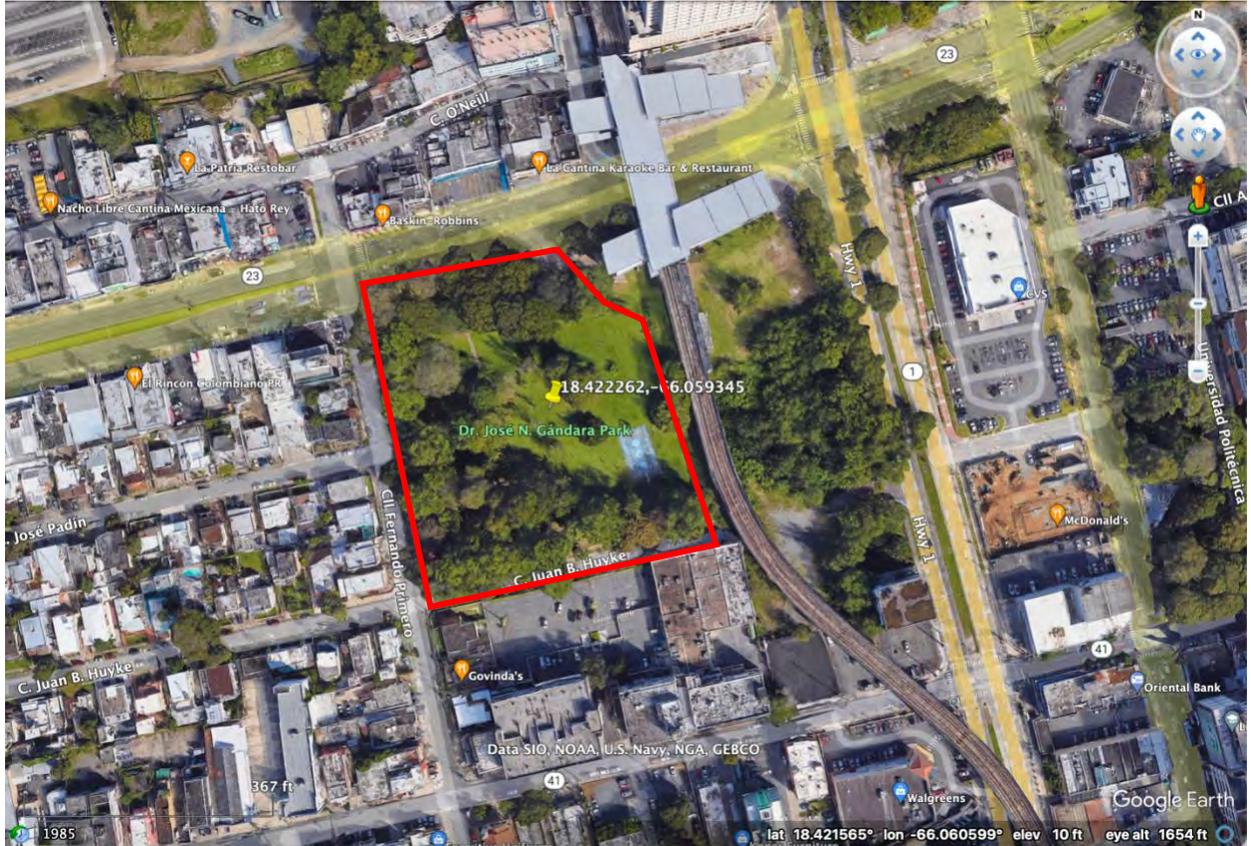
The U.S. Fish and Wildlife Service, Caribbean Ecological Services Field Office developed a Blanket Clearance Letter in compliance with Endangered Species Act of 1973, as amended, and the Fish and Wildlife Coordination Act for federally funded projects.

The Service determined that projects in compliance with the following criteria are not likely to adversely affect federally listed species.

The Municipality of San Juan, Puerto Rico, certifies that the following project ***PR-CRP-000927 - Remodelación del Parque Gándara de San Juan***, funded by HUD and located at 18.42217, - 66.05933. The Parque Gándara cadaster is 063-041-136-22, complies with:

Check	Project Criteria
	1. Street resurfacing.
X	2. Construction of gutters and sidewalks along exiting 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.
X	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.

Aerial Photo
Parque Gándara



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

San Juan County, Puerto Rico



Local office

Caribbean Ecological Services Field Office

☎ (787) 834-1600

📠 (787) 851-7440

✉ CARIBBEAN_ES@FWS.GOV

MAILING ADDRESS

Post Office Box 491

Boqueron, PR 00622-0491

PHYSICAL ADDRESS

Office Park I

State Road #2 Km 156.5, Suite 303}

Mayaguez, PR 00680

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 species¹ 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 Fisheries²).

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
<p>Puerto Rican Boa <i>Chilabothrus inornatus</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6628</p>	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.

You are still required to determine if your project(s) may have effects on all above listed species.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

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:

- 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-incident-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 list of migratory birds that potentially occur 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 [Rapid Avian Information Locator \(RAIL\) 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 or migrating in my 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 query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. 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?

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 (NWI)

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](#).

This location did not intersect any wetlands mapped by NWI.

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

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 tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

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.

National Critical Habitat Map

Project Name: PR-CRP-000927 Remodel of Parque Gándara

Location: Roosevelt Ave. 124, Calle Fernando Primero & Calle Juan B. Huyke, Hato Rey North, San Juan

Coordinates: Lat. 18.422262, Long. -66.059345



Source: National Critical Habitat Mapper: <https://noaa.maps.arcgis.com/apps/webappviewer/index.html?id=68d8df16b39c48fe9f60640692d0e318>

Company: Slocum Ventures

Date: 1/22/2024

5.7 List of Underground and Aboveground Storage Tanks
(UST & AST) in Project Location
(Explosive and Flammable Hazard)

5.7: Underground Storage Tank list

Facility ID	Name	Address	Latitude	Longitude	Approx. Distance from the site
PR)24005-26576	Texaco Gladiolas	Calle Bolivia Esq. Calle Quisqueya	18.4271	-66.0542	2,250 ft
PR_23899-26522	Texaco	Ave. Roosevelt & Hostos #249	18.4223	-66.0642	1,400 ft.
PR_23899-26529	US Federal Building	Ave. Chardón #150	18.4229	-66.0641	1,300 ft.
PR_23935-26573	Coliseo de PR	500 Calle Arterial B Hato Rey	18.4268	-66.0608	1,500 ft.

<https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=b03763d3f2754461adf86f121345d7bc>

5.8 Field Visit Checklist and Site Evaluation

Field Visit Checklist & Site Evaluation

Project Name:	Remodel of Parque Gándara	Latitude:	18.422262		
First Name:	Lizbeth	Last Name:	Ortiz	Longitude:	-66.059345
Street Address:	Roosevelt Ave. 124 , Hato Rey Norte		Apt/Suite:		
City:	San Juan	State:	PR	Zip:	
Date of Visit:	7/14/2023	Field Visit Conducted By:		Lizbeth Ortiz	
				Zugeiza González	

EXISTING ENVIRONMENTAL CONDITIONS ON & AROUND SITE

Levee/Flood Control Structures (Levees, T-walls, pumping stations, etc.)

	Site Specific	Area
Observations	In the Northwest corner in the park there is a AAA station. The project does not include an intervention inside the AAA property.	There is no other infrastructure in the surrounded areas.

Toxic Chemicals & Radioactive Materials

Petroleum or Chemical Storage

	Site Specific	Area
Is there any evidence or indication of an underground storage tank (UST) may be located on site?	No, the site does not present any evidence or indicator of an underground storage tank, located on site.	No, there is no indicators of an underground storage tank located in the surrounded area. There is a UST in 1,300 ft. in the US Federal Building to the
If yes, are they in use?	N/A	N/A
Are there any out-of-service underground fuel tanks?	No, there are not out of service underground fuel tanks on site.	No, there is not out of service underground fuel tanks in the surrounded area.
Is there any evidence that any AST on the property are leaking?	There is no AST leaking on the property.	There is no evidence of any AST leaking in the surrounded area.

Polychlorinated Biphenyls (PCB):

	Site Specific	Area
Is there any evidence or indication of leaking electrical equipment (transformer - ground or pole mounted, capacitor, or hydraulic equipment) present on site?	No, there is no evidence or indication of leaking electrical equipment (transformer-ground or pole mounted, capacitor, or hydraulic equipment) present on site.	There is no evidence of leaking electrical equipment in the surrounded area.

Hazardous Operations

	Site Specific	Area
Is there any evidence of manufacturing operations utilizing or producing hazardous substances at or in close proximity to the site?	No, there is no evidence of manufacturing operations utilizing or producing hazardous substances at or in close proximity to the site.	No, there is no evidence of manufacturing operations utilizing or producing hazardous substances in the surrounded area.
Is there any evidence or indication that past operations located on or in close proximity to the property used hazardous substances or radiological materials that may have been released into the environment?	There is no evidence or indication that past operations located on or in close proximity to the property used hazardous substances or radiological materials that may have been released into de environment.	There is no evidence or indication that past operations located in the surrounded area to the property used hazardous substances or radiological materials that may have been released into de environment.

Notes/Observations:

5.9 Field Inspection Photos

Photo 1:

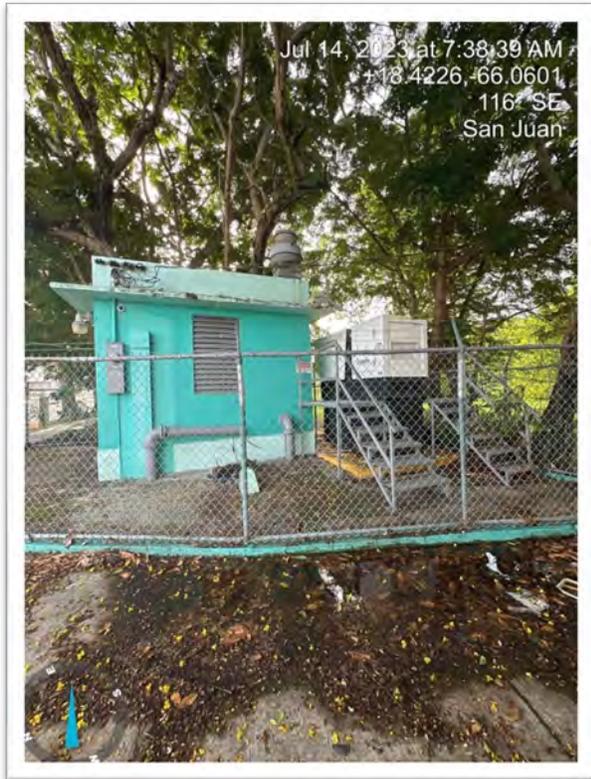


Photo description:
Northwest corner of the park, there is a AAA station with an generator. The project will not impact that area, only the fence to cover the structure.

Photo 2:

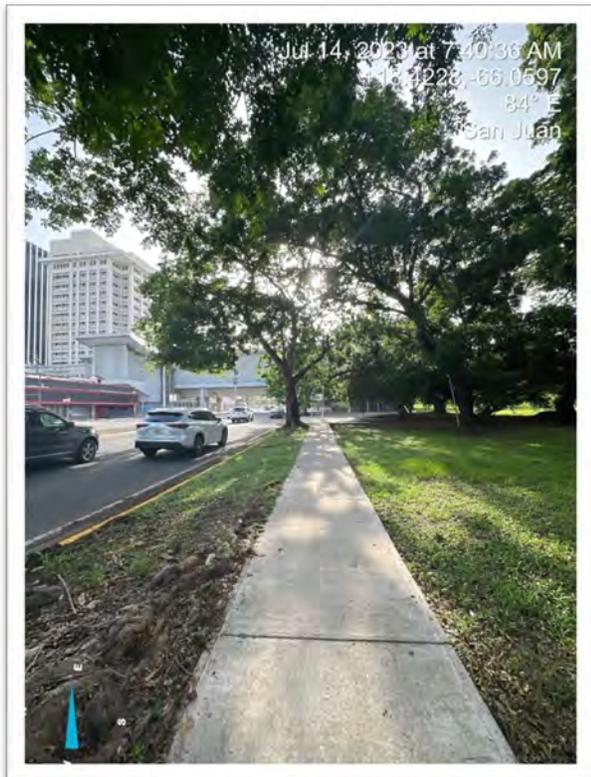


Photo description:
North sidewalk, direction to the Train Station.

Photo 3:

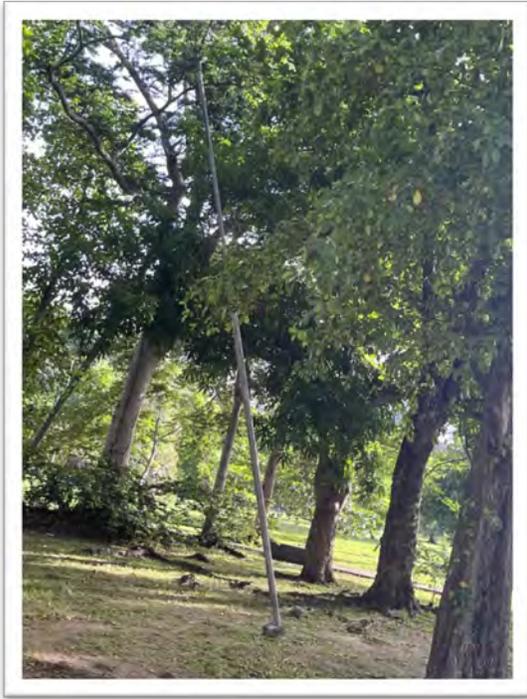


Photo description: Damaged light pole.

Photos 4 and 5:

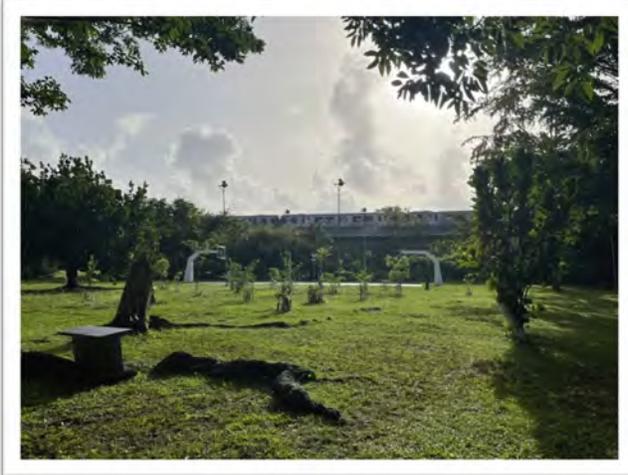
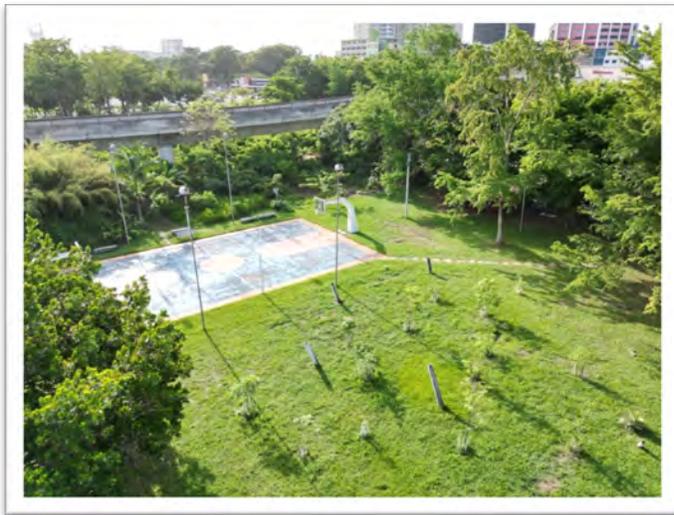


Photo description:
Southeast area, Basketball court.

Photo 6:



Photo description:
Southwest corner and the existing gazebo.

Photo 7:

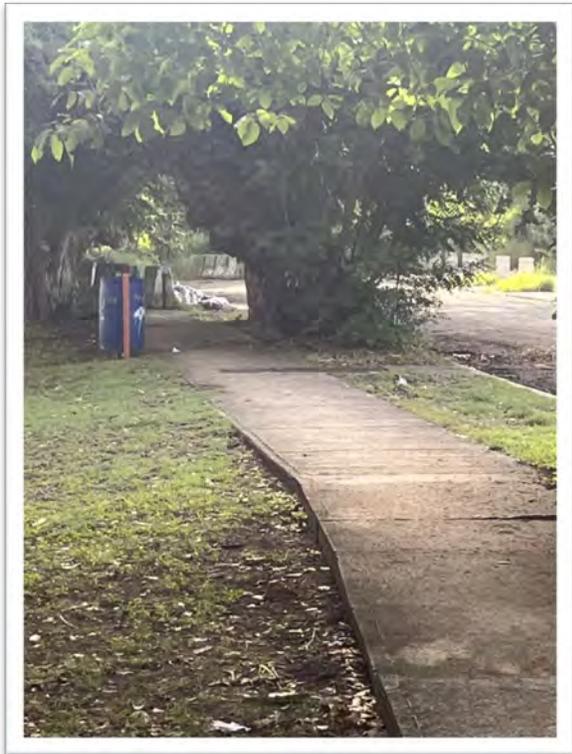


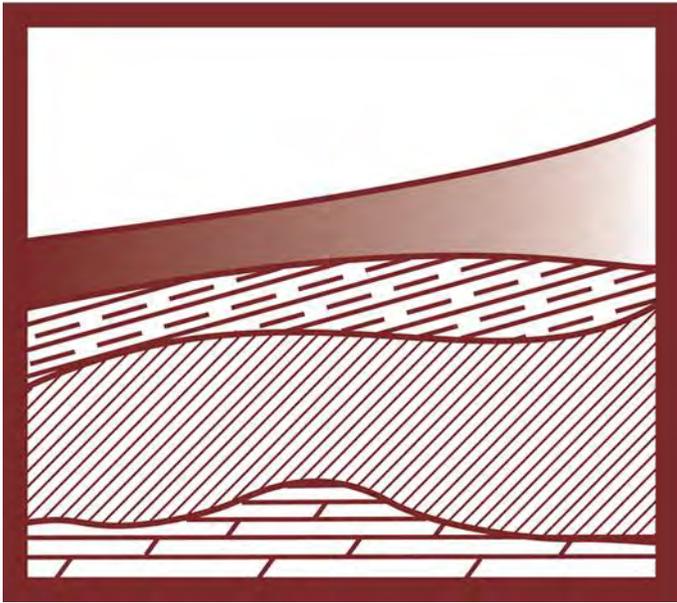
Photo description:
Southeast corner, dead end street.

Photo 8:



Photo description:
East entrance to the park.

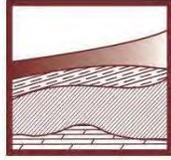
5.10 Studies



DESPIAU ASSOCIATES
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www.despiau.net



DESPIAU ASSOCIATES
CONSULTING GEOTECHNICAL ENGINEERS

Report for the Subsurface Exploratory
for the Proposed Improvements to Gándara Recreational Park
at Auxilio Mutuo Hospital Facilities, on Hato Rey Central Ward of
the Municipality of San Juan, Puerto Rico.

Reference No. DA/23Y4249

June 1, 2023

Prepared for:

Hacedor:Maker/Arquitectos
63 Condado St., Local #3
San Juan, P.R. 00907

Jose R. Despiau, P.E., License #17343
Geotechnical Engineer, Despiau Associates – Consulting Geotechnical Engineers.



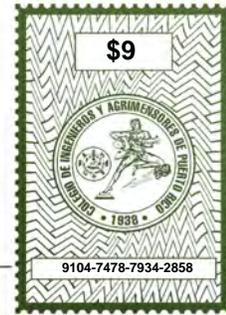


COLEGIO DE INGENIEROS Y AGRIMENSORES
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ESTAMPILLA DIGITAL ESPECIAL (EDE)

Ing. Jose R. Despiou Ramirez, PE

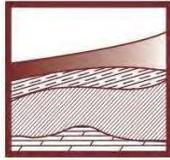


Práctica de: Ingeniería
Licencia: 17343
Renglón: Servicio Profesional
Descripción del Trabajo: Asesoramiento y Consultoría en Ingeniería
Fecha de Emisión: 06/01/2023
Monto Emitido: \$9
Número de Serie: 9104-7478-7934-2858
Número de Caso: DA/23Y4249
Proyecto / Unidad: Proposed Improvements to Gandara Recreational Park - San Juan
Rol del Profesional: Consultor

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.

La colocación del sello profesional constituye la cancelación de la estampilla digital especial



DESPIAU ASSOCIATES
CONSULTING GEOTECHNICAL ENGINEERS

June 1, 2023

Hacedor: Maker/Arquitectos

63 Condado St., Local #3
San Juan, P.R. 00907
Ph. 787-725-2521
Email: jfv@hacedormaker.com

Attn.: Arq. Jose Fernando Vázquez Perez, CAAPPR, AIA

Reference: Subsoil Exploration and Geotechnical Services for the Proposed Improvements to Gándara Recreational Park Facilities, in Hato Rey Central Ward of the Municipality of San Juan, Puerto Rico. Reference No. DA/23Y4249

Dear Mr. Vázquez'Perez:

As requested, we have completed the subsoil exploration for Proposed Improvements to Gándara Recreational Park Facilities, in Hato Rey Central Ward of the Municipality of San Juan, Puerto Rico.

The work was undertaken at your request of on behalf of the Municipality of San Juan. The work was made in accordance to proposal No. DA/04-10-23, dated April 28, 2023.

This report presents the results of the field exploratory drilling, laboratory tests performed on secured soil samples, engineering analyses, summary of findings and foundation assessment for the proposed structures and required improvements at the site for the proposed improvements being contemplated.

It has been a pleasure to have been of your assistance in this project.

Respectfully Submitted,

DESPIAU ASSOCIATES


Jose R. Despiau, PE.
Geotechnical Engineer

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I. INTRODUCTION

This report presents the results of the field exploratory drilling, laboratory tests performed on secured soil samples, engineering analyses, summary of findings, and geotechnical assessments for the site development and foundation design recommendations for the Proposed Improvements to Gándara Recreational Park Facilities presently contemplated. This report has been prepared for the exclusive use of the owners and the A/E Design Firm involved in the preparation of the site engineering design plans and specifications.

The present test boring program included the advancement of three (3) standard penetration tests, to establish the profile data at the specific explored locations for the present geotechnical engineering review. Also, one (1) Percolation test was performed in the northeasternmost sector of the park facilities. The results are further discussed in the following sections of this report. The Site location along with the Geological Survey Map and Boring Location Plan of the borings performed are included in Appendix A of this report.

Soil sampling was performed continuously in the upper 10.0 ft. and thereafter, at approximately five-foot intervals. All soil samples were taken with a 2"-O.D. split barrel sampler following the standard penetration test procedures in ASTM D-1586. Penetration resistance from the standard penetration tests are recorded in the "N" column of the boring logs. The record of the driving process of the string of rods and sampling were recorded in the boring logs which are included in Appendix 1 of this report.

The procedures used for the laboratory tests, as well as the routine and special laboratory procedures used, for the determination of the index soil properties are also contained in the Appendix (1) to this report.

II. SITE DESCRIPTION

2.1 Project Description

ITEM	DESCRIPTION
Site layout	Refer to the Site Location Map and Boring Location Plan (Figures 1 through 3 of Appendix A)

Structure(s)	<p>The present design scheme entails the construction of the following facilities, among others:</p> <ol style="list-style-type: none"> 1. Pavilion – Roofed open space concrete lightweight structure 2. Circuit Path – Quarter mile concrete path. 3. New Concrete Sidewalls 4. Two Beach Tennis Court 5. New Urban Garden
Building construction	<p>The buildings will consist of a reinforced concrete building, found over spread, continuous footings and/or mat foundation.</p>
Grading in building area	<p>At this stage, the site civil engineering plans and the final grading plans were not available for the present review. However, it is predicted the existing grade shall remain basically the same all throughout the site.</p> <p>Regardless, it is estimated that both cut and fill sections shall be required to replace the upper unsuitable fill section and to establish the foundation bottom elevations for the new foundation units and ground floor slabs.</p> <p><u>IN NO CASE</u> shall a cut/fill scenario within the footprint of any structure shall be allowed.</p>
Retaining walls	<p>No retaining wall are anticipated.</p>
Cut and fill slopes	<p>Although not predicted, any fill or cut slope slopes shall be constructed to a slope ratio not steeper than 2.0 horizontal to 1.0 vertical (2H:1V).</p>

2.2 Site Location and Description

ITEM	DESCRIPTION
Location	<p>The site for the proposed project is located between Franklin Delano Roosevelt Ave. (PR-23-north), Luis Muñoz Rivera Avenue to the east and Juan B. Huyke Street (south) in Hato Rey Central Ward of the Municipality of Juan, Puerto Rico.</p>

Existing topography	Although the existing topographic plan was not available for the present review, site observations revealed the project area is relatively leveled or flat.
Most prominent topographic features	As shown in the USGS (Topographic) map, the most prominent topographic feature near the site is a natural drainage stream which carries all surface runoff to the north until merging with the Caño Martin Peña Channel, which is found at about 925 meters north of the site.

III. FIELD SUBSURFACE AND SAMPLING PROGRAM

3.1 Geological Notes

Based on available US Geological Survey Map I-1010 of the San Juan Quadrangle prepared by Messrs. Maurice H., Pease, Jr. and Watson H. Monroe (1977), as shown in a portion Figure 2 of Appendix A, the units that lie at or adjacent to the site are the following:

1. **Older Alluvial Deposits (Pleistocene and Pliocene) (QTt)** - Described as clay, silty and sandy, mainly red or mottled red and light gray. Includes Mucarabones Sand and San Sebastián Formation in area east of the Río Piedras.
2. **Alluvium (Holocene) (Qa)** - Described as Sand, clay, and sandy clay.

Based on the USGS geological plan (San Juan Quadrangle), Fault alignments were not found near the study area.

3.2 Stratigraphic Units

In Table 1, a summary of the subsurface profile data is presented. Detailed profile data can be obtained in Appendix (1) to this report.

Table 1 – General Subsurface Profile

Description	Approximate Depth to Bottom of Stratum (ft.)	Material Encountered	Soil Density and Consistency
Stratum 1	0.0' to 2.0' – Boring 1 & 3 0.0' to 4.0' – Boring 2	Surface layer described as silty sand, sandy silt, and clay with variable amounts of gravel. Many roots at ground surface were found.	Stiff to V. Stiff
Stratum 2	2.0' to 4.0' – Boring 1 2.0' to 6.0' – Boring 3	Sandy lean clay	Soft to V. Stiff
Stratum 3	4.0' to 20.0' – Boring 1 & 2 6.0' to 20.0' – Boring 3	Sandy fat clay.	Stiff to Hard

Random sample from the borings of exploration disclosed A-7-6, and A-6 AASHTO Type (CH & CL – sandy fat and lean clay, as per USCS) with Free Swelling values varying between 20 to 35%. Based on cation exchange and activity ratio in the above tests, these clay materials classify as interstratified soils with a moderate to high Shrink/Swell Potential, (after Pearring and Holt). Refer to Appendix 3 to this report.

The graphical representation of the soil profiles is found in the boring logs included as Appendix (1) to this report.

3.3 Groundwater Levels

The ground water level was not found within the extent drilled. However, saturated conditions (w% > 30%) were found in all Borings of exploration within the upper surface layer. Therefore, some dewatering should be expected during the foundation excavations and earthwork within the upper clay material, where pond of water is normal.

These observations represent groundwater conditions at the time of the field exploration and may not be indicative of other times, or at other locations. Groundwater conditions can change with varying seasonal and weather conditions. All depths were measured from the existing ground surface prevailing during the period of the field work.

During construction, care should be taken to drain rainwater to proper out falls. All surface runoff water shall be collected and drained away from the structures and from slopes surfaces, if any. Internal structure drains are not recommended.

Groundwater level was measured after completion of the borings, during the period of the field work.

IV. PERCOLATION TEST RESULTS

4.1 JCA Method

One Percolation Tests in the north easternmost sector of the park facilities, where it is being proposed an urban garden. The test was performed in accordance to EPA/625/1-80/012, EPA/625/R-00/008 and the guidelines for percolation testing of Puerto Rico Environmental Quality Board (JCA) ["Manual de Reglamento de Control de Inyección Subterránea (RCIS)"]. (Refer to the Figure 2 of Appendix A for the approximate test location. The following table summarized the percolation test results.

TABLE 2 - Percolation Test Results

Percolation No.	Test No.	Test Depth	Percolation Rate (Minutes per inch)	Method Used
1	P-1	2.0 ft.	8.33 min. per inch ¹	JCA

NOTE:

- ¹. Considering the sandy lean clay and sandy fat clay were found deeper into the stratum lower permeability rates shall be expected within the clay material.

V. ENGINEERING RECOMMENDATIONS

The engineering data secured in the present exploration has been used to adequately assess the subsurface conditions at the site. Therefore, the recommendations contained herein shall be considered in the design and construction sequence of new foundations for the proposed structures. Based on our present evaluation the underlying soils at the tract of land are capable to sustain the loads of the proposed structure planned which can be founded over a spread, continuous footings, or mat type of foundation, casted over the in-situ soil or new engineered fill

section not exhibiting shrink-swell characteristics, depending on the final grading elevations of the project.

The subsurface exploratory boring performed disclosed the occurrence of a upper surface layer consisting of silty sand, sandy silt, and clay with variable amounts of gravel, followed by sandy lean and fat clays with moderate to high shrink/swell potential. Therefore, the complete removal and replacement of the upper 3.0 ft. shall be allowed, especially for concrete sidewalks and pathways, to cope with the swelling characteristics of the in-situ clays. Once the demucking operation is performed, the daylighted material shall be compacted to a minimum 95% of the in-situ soil maximum dry density, prior to the backfilling operation.

Therefore, as an initial contract phase, it shall be required the removal of the unsuitable fill section, as well as any underground utilities beneath the footprint of the proposed structures. Thus, the complete removal of the unsuitable surface soil to a minimum depth of 3.0 ft., shall be required. The horizontal extent of removal shall be determined at the field by the inspecting soils engineer. However, for cost estimating purposes a minimum horizontal distance equal to maximum depth of excavation shall be considered, unless this encroaches the adjacent building.

Following the removal of any unsuitable surface fill layer, the structures may be founded over the in-situ soil and the floor slabs over a newly deposited engineered fill section. To assure the differential settlements are maintained within tolerable limits, a uniform fill section is required, for which the expected fill section may increase even more.

The proposed structures can be supported by spread, continuous footings, or mat foundation. Recommendations for the foundations design of the proposed structures and related structural elements are presented in the following sections of this report.

5.1 Foundation Recommendations for Spread and Continuous Footings

5.1.1 Design Recommendations

Table 3 – Foundation Design Parameters

DESCRIPTION	VALUE
Foundation Type	Spread or Continuous Footings
Bearing Material	In-Situ soils or Compacted Engineered Fill ¹
Allowable Bearing Pressure	3,000 psf. for in-situ soil 2,000 psf. for compacted engineered fill
Minimum Depth of Foundation (Df)	3.5 feet
Modulus of Sub Grade Reaction	75 lbs./sq.-inch/inch
Total Estimated Settlement	1 inch
Estimated Differential Settlement	0.15 inch

¹ The complete replacement of any unsuitable fill section to a minimum depth of 3.0 ft. shall be allowed to replace any in-situ unsuitable fill section, debris and/or any underground structure (i.e., underground utilities). The replacement fill shall be non-swelling engineered fill (A-2-4 or better AASHTO type).

The allowable foundation bearing pressures apply to dead loads plus design live load conditions. The design bearing pressure may be increased by one-third when considering total loads that include wind or seismic conditions.

Also, a uniform fill section shall be required beneath any structure, for which the expected fill section may increase even more. This is to assure the differential settlements are maintained within tolerable limits of the structural building units. Therefore, ***IN NO CASE*** shall a cut/fill scenario within the footprint of any structure shall be allowed.

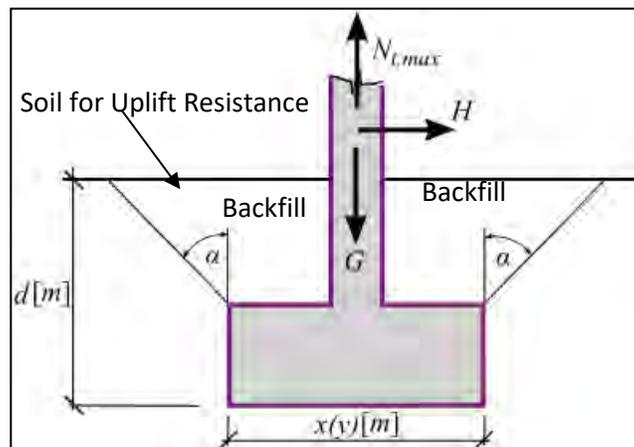
Foundation excavations, subgrade preparation and engineered fill placement should be observed by the geotechnical engineer or approved representative specially at non explored locations, where different soil condition may arise. If the soil conditions encountered differ significantly from those presented in this report, additional recommendations will be required by the undersigned.

5.1.2 Design Parameters - Uplift Loads

Uplift resistance of footings can be developed from the effective weight of the footing and the overlying soils. As illustrated on the subsequent figure, the effective weight of the soil prism defined by diagonal planes extending up from the top of the foundation perimeter to the ground surface at an angle, α , of 20 degrees from the vertical can be considered for uplift resistance. The maximum allowable uplift capacity should be taken as a sum of the effective weight of soil plus the dead weight of the foundation, divided by an appropriate factor of safety.

A maximum total unit weight of 125 pcf should be used for the backfill. This unit weight should be reduced to 60 pcf for portions of the backfill or natural soils below the groundwater elevation, should it be the case.

Also, the upper 1.5 ft. of soil, for the total calculation of additional resistance. A factor of safety for uplift equal to 2 (F.S. = 2) shall be considered. The actual depth of the of the foundation will depend on the required loading conditions acting on the foundations base.



5.1.3 Settlement Considerations

Footings should be proportioned to reduce differential foundation movement. Proportioning on the basis of equal total movement is recommended; however, proportioning to relative constant dead-load pressure will also reduce differential movement between adjacent footings. Additional foundation movements could occur if water from any source infiltrates the foundation soils; therefore, proper drainage must be provided in the final design and during construction.

Foundations should be reinforced as necessary to reduce the potential for distress caused by differential foundation movement. The use of joints at openings or other discontinuities in masonry walls shall be considered.

For the proposed structure, it shall be considered the differential settlement between central and extreme sectors of the structure. It shall be designed for a differential settlement of 0.15 of an inch. The expected differential settlements are predicted due elastic settlement upon construction of new structure foundations. These differential settlements can be experienced between structure units having different loading conditions.

One of the most important aspects for construction at the site, is related to the fill embankment section, if any, beneath any structure. The uniform fill section and the removal of any surface plastic clay and unsuitable surface material shall be allowed to reduce the expected settlements at the site.

5.2 Earthquake Design Considerations

Based on our experience with the geology of the area, it is our opinion that the subsurface characteristics reflect those of Site Class D as described in International Building Code 2018 and the Puerto Rico Building Code 2018. The “Site Class” is a designation used by the 2018 International Building Code (IBC) (ICC 2018) to quantify ground motion amplification.

The classification is based on the stiffness in the upper 100 feet of soil and bedrock materials of the site. Although we performed all SPT Borings up to 20 feet in depth, based on our exploratory borings and considering the herein proposed improvements, leads us to classify the site as Site Class D.

The IBC indicates that sites classified as Site Class D or E with S_1 greater than 0.2 a site-specific ground response analysis be completed to determine the response spectrum for design as per Section 11.4.8 of ASCE 7. We anticipate seismic design parameters may change if a site-specific ground response analysis is completed; therefore, the parameters provided in the following Table, presents the parameters obtained from the building code and the resulting values for S_{DS} and S_{D1} , respectively.

Table 4 - Seismic Design Parameters

Parameter	MCE _R
Site Class	D
Risk Category	II
Spectral Response Acceleration (Short Period), S _s	0.98 g
Spectral Response Acceleration (1-Second Period), S ₁	0.39 g
Site Coefficient, F _a	1.2
Site Coefficient, F _v	Null*
Modified Spectral Response Acceleration (Short Period), S _{MS}	1.176
Modified Spectral Response Acceleration (1-Second Period), S _{M1}	Null*
Spectral Response Acceleration (Short Period), S _{DS}	0.784
Spectral Response Acceleration (1-Second Period), S _{D1}	Null*

NOTE: * Requires a Site-Specific Ground Response Analysis - Refer to Section 11.4.8 of ASCE 7
 **Seismic site soil classification in general accordance with the 2018 International Building Code (IBC), which refers to ASCE 7-16.

5.3 Groundwater Considerations

In the present exploration, the groundwater level was not found within the extent of depth drilled. However, a perimeter drains (i.e., French Drain) shall be provided to divert any water flow away from the building perimeter.

No great dewatering problems should be expected during the excavation phase of construction, except during period of heavy rains. During such events, dewatering can be accomplished by pumping from adjacent sump pits near the excavations. The adequacy of the control of the dewatering process should be maintained during the excavation process. Casting of concrete shall be made in dry conditions.

5.4 Earthwork

The following recommendations shall be followed for site preparation, excavation, subgrade preparation and placement of engineered fills on the project. The recommendations presented for design and construction of earth supported elements including foundations and slabs are conditioned upon following the recommendations outlined in this section. All grading for the structures should incorporate the limits of the proposed structure plus a minimum pad blow-up of five feet beyond proposed perimeter of the proposed structures.

The earthwork phase of the project should be observed and evaluated by the undersigned or approved representative. The evaluation of earthwork should include observation and testing of engineered fill, subgrade preparation, foundation bearing soils, and other geotechnical conditions exposed during the construction of the project.

5.4.1 Site Preparation

Strip and remove existing vegetation, boulders (if encountered) and other deleterious materials from proposed structure footprint and pavement areas, if any. Exposed surfaces should be free of mounds and depressions which could prevent uniform compaction.

Stripped materials consisting of vegetation and organic materials should be wasted from the site or used to revegetate landscaped areas after completion of grading operations. If it is necessary to dispose of organic materials on-site, they should be placed in non-structural green areas, solely, and in fill sections not exceeding 5 feet in height.

In general, the site should be initially graded to create a relatively level surface to receive fill, if required by design to provide for a relatively uniform thickness of fill beneath the proposed structure(s) footprint. In any case, the difference in the total fill thickness, if any, beneath any structural unit, as established by the structural designer, shall not exceed 1.0 m.

Although evidence of underground facilities such as septic tanks, utilities and basements was not observed during the site reconnaissance, such features could be encountered during construction. If unexpected fills or underground facilities are encountered, such features should

be removed entirely, and the excavation should be thoroughly cleaned prior to backfill placement and/or construction.

5.4.2 Excavation

It is anticipated that some excavations for the proposed construction can be accomplished with conventional earthmoving equipment. Hard soils, boulders and cobbles may require heavy duty equipment or additional effort to advance deep excavations, such as underground utilities or finished grades substantially below existing grades.

On-site soils may pump or become unstable or unworkable at high water contents. Workability may be improved by scarifying and drying. Overexcavation of wet zones and replacement with granular materials (i.e. Crushed Stone $\frac{3}{4}$ " max. diameter) may be necessary. Lightweight excavation equipment may be required to reduce subgrade pumping.

5.4.3 Subgrade Preparation

Exposed areas which will receive fill or be constructed upon, once properly cleared and benched, where necessary, should be scarified to a minimum depth of 10 inches, and compacted to a minimum 95 % of its maximum dry density, as per its Modified Proctor Test.

Areas of loose/soft soils may be encountered at the foundation bearing depth after excavation is completed. When such conditions exist beneath proposed foundation areas, the subgrade soils should be surficially compacted prior to placement of any foundation system. If the required compaction effort cannot be achieved in-place, any loose/soft soils should be removed and replaced with compacted engineered fill.

If fill is to be placed in areas where slopes are steeper than 5:1 (horizontal:vertical), the area should be benched to reduce the potential for slippage between existing slopes and fills. Benches should be wide enough to accommodate compaction and earth moving equipment, and to allow placement of horizontal lifts of fill.

Subgrade soils beneath interior slabs, exterior slabs, and pavement should be scarified and compacted to a minimum depth of 10 inches. The moisture content and compaction of subgrade soils should be maintained until slab or pavement construction.

5.4.4 Fill Materials and Placement

Where required, the backfill material shall be inorganic and shall not exhibit swelling characteristics for general earthwork construction phase of the project. Thus, AASHTO Classification A-2-4 or better is required for all fill material. All fill material shall be compacted in layers not to exceeding six (6) inches when compacted (8" to 10-inches loose). A minimum compaction effort of 95% of its maximum laboratory Modified Proctor Density, is required. The enclosed fill specifications (Appendix 2) detail our recommended Fill Specifications.

Engineered fill should be placed and compacted in horizontal lifts, using equipment and procedures that will produce recommended moisture contents and densities throughout the fill lift. Fill lifts should **NOT** exceed ten inches loose thickness.

5.4.5 Compaction Requirements

Recommended compaction and moisture content criteria for engineered fill materials are as follows:

Table 5 - Compaction Requirements

Item	Descriptio
Fill Lift Thickness	8" to 10" inches or less in loose thickness
Minimum Compaction Requirements¹	95% of the materials maximum modified Proctor dry density (ASTM D 1557), unless otherwise stated in specific section of this report.
Moisture Content	Within 3% of optimum moisture content value as determined by the modified Proctor test at the time of placement and compaction.

NOTE: 1. It is recommended that any engineered fill be tested for moisture content and compaction during its placement. Should the results of the in-place density tests indicate the specified moisture or compaction limits have not been met, the area represented by the test should be reworked and retested as required until the specified moisture and compaction requirements are achieved.

5.4.6 Grading and Drainage

Positive drainage should be provided during construction and maintained throughout the lifespan of the project. Infiltration of water into utility trenches or foundation excavations should be prevented during construction. Planters and other surface features which could retain water in areas adjacent to the structures, should be sealed or eliminated. In areas where sidewalks or paving do not immediately adjoin the structures, we recommend that protective slopes be provided with a minimum grade of approximately five percent for at least 5 feet from perimeter walls. Backfill against footings, exterior walls, and in utility and sprinkler line trenches should be well compacted and free of all construction debris to reduce the possibility of moisture infiltration. Water should not be allowed to pond within 10 feet of the perimeter of the foundations.

Downspouts, roof drains or scuppers should discharge into splash blocks or extensions when the ground surface beneath such features is not protected by exterior slabs or paving. Landscaped irrigation adjacent to the foundation systems, if any, should be minimized or eliminated.

5.4.7 Slopes

For permanent unprotected slopes in compacted fill areas the recommended maximum configurations for on-site materials are as follows:

<u>Material</u>	<u>Maximum Slopes</u>	<u>Horizontal:Vertical</u>
• In-Situ Soil		5:1
• Engineered Fill		2:1

The face of all slopes should be compacted to the minimum specification for fill embankments. Alternately, fill slopes can be over-built and trimmed to compacted material. If any slope in cut or fill will exceed 10 to 15 feet in height, the grading design should include mid-height benches to intercept surface drainage and divert flow from the face of the embankment. Regardless, erosion protection shall be provided to any daylighted slope surface to remain.

5.4.8 Additional Earthwork Construction Considerations

Upon completion of filling and grading, care should be taken to maintain the subgrade moisture content prior to construction of foundations and floor slabs, especially on clayey soils. Construction traffic over the completed subgrade should be avoided to the extent practical. The site should also be graded to prevent ponding of surface water on the prepared subgrades and/or excavations. If the subgrade should become desiccated, saturated, or disturbed, the affected material should be removed and/or these materials should be scarified, and recompacted prior to the construction of any foundation and/or floor slabs.

Temporary excavations will most likely be required during grading operations. The grading contractor, by his contract, is usually responsible for designing and constructing stable, temporary excavations and should shore, slope or bench the sides of the excavations as required, to maintain stability of both the excavation sides and bottom. All excavations should comply with applicable local, state and federal safety regulations, including current OSHA Excavation and Trench Safety Standards.

The geotechnical engineer or approved representative should be retained during the construction phase of the project to observe earthwork and to perform necessary tests and observations during subgrade preparation; re-compaction; placement and compaction of controlled compacted fills; backfilling of excavations into the completed subgrade, and just prior to construction of foundations and floor slabs.

5.5 Nearby Structures

Due to the proximity of existing adjacent structures, the earthwork process and the construction of foundation units require special consideration regarding vibrations during the earthwork process. At this stage, it is difficult to predict the amount of vibrations to be produced by the equipment to be used during the construction sequence. Thus, this aspect of construction shall be evaluated with care.

As a minimum, a vibration survey using the excavation and compaction equipment actually used at the project shall be considered. In order to minimize vibrations during the earthwork process the construction of interception trenches to reduce the horizontal component of the peak particle velocity can be considered.

Regardless of the vibration restrain process provided, the use of photographs prior to the construction sequence is very valuable to establish preexisting conditions of nearby structures. These are very valuable in court. A monitoring process of vibrations shall be in place during the construction sequence, as considered necessary by the contractor.

Also, extreme care shall be taken during excavation procedures, adjacent to existing structures, to avoid any lateral yielding of existing foundations, alternate excavation sequence procedures can be put into effect as well as temporary retaining structures.

In addition, special consideration shall be allowed for any underground pipelines facilities (i.e., electrical, storm sewers, sprinkle system pipes, fire protection and others) found at the site. Special attention shall be taken in regard to existing utility pipelines, these shall be abandoned or redirected away from the proposed building footprint. Avoiding this, future problems can be experienced should these need to be serviced.

5.6 Additional Recommendations

We urge that our firm be retained to review those portions of the plans and specifications that pertain to earthwork and foundations to determine whether they are consistent with our recommendations. In the event the undersigned is not selected to review this item of the project contracts, the designers and construction firm involved in the design shall assume full responsibility of such important phase of the works.

The recommended geotechnical design concepts must be complemented with a structural design, which include and is not limited to the preparation of plans and specifications. Geotechnical reports by themselves are not considered a structural report and do not make any recommendations in relation to any structural problems observed nor any solutions that maybe required. It may be used as an adjunct to a Structural Report, prepared by a suitably qualified

registered structural engineer. For such purposes, we urge the structural designer to contact this office to clarify, review the designed process and to provide support in the preparation of the specifications for the required work, to meet the geotechnical requirements herein being presented.

VI. LIMITATIONS OF THIS REPORT

The above design parameters and recommendations are based in the information and interpretation of laboratory data of the test boring performed, and existing published correlations. Actual conditions, especially at intermediate locations, may differ from the information obtained in this exploration. The owner or contractor are urged to contact this office if different conditions than those herein described are encountered.

The recommendations contained in this report may have to be varied to accommodate recommendations to cope with undisclosed conditions. Furthermore, the monitoring and inspection of earthwork related construction procedures, as well as the supervision of the implementation of the herein given recommendations shall be made by the writer or his approved representative. Otherwise, the inspecting engineer shall study this report, perform additional tests as he deems necessary, to submit his own recommendations or assume full responsibility of the herein given recommendations in their entirety.

In the event that any changes in the nature, design, or location of the proposed development planned, the conclusions and recommendations contained in this report should not be considered valid unless the changes are reviewed and the recommendations contain herein are verified and/or modified in writing by the undersigned. The undersigned will not be responsible for any claims, damages, or liability associated with interpretation of subsurface data or reuse of the subsurface data or engineering analysis contained herein without his written consent.

The provision of services by Despiau Associates is specific to only providing documentation in relation to geotechnical recommendations and specifications for this project. All other engineering or non-engineering specifications are not included in the service herein provided. The scheduled fee does not cover any provision of any services beyond the issue of this geotechnical report. All further documentation or inspections will be charged at a separate quoted fee.

Also, if the geotechnical report is used for construction and/or to obtain a Construction Permit it will be considered an acceptance by the client of all geotechnical specifications and recommendations contained.

Respectfully Submitted,

DESPIAU ASSOCIATES


Jose R. Despiau, PE
Geotechnical Engineer

DA/23Y4249

Appendix (A) – Figures

1. US Geological Survey Service Topographical plan at a scale 1:20,000
- 1A. Geological Map
2. Boring Location Plan

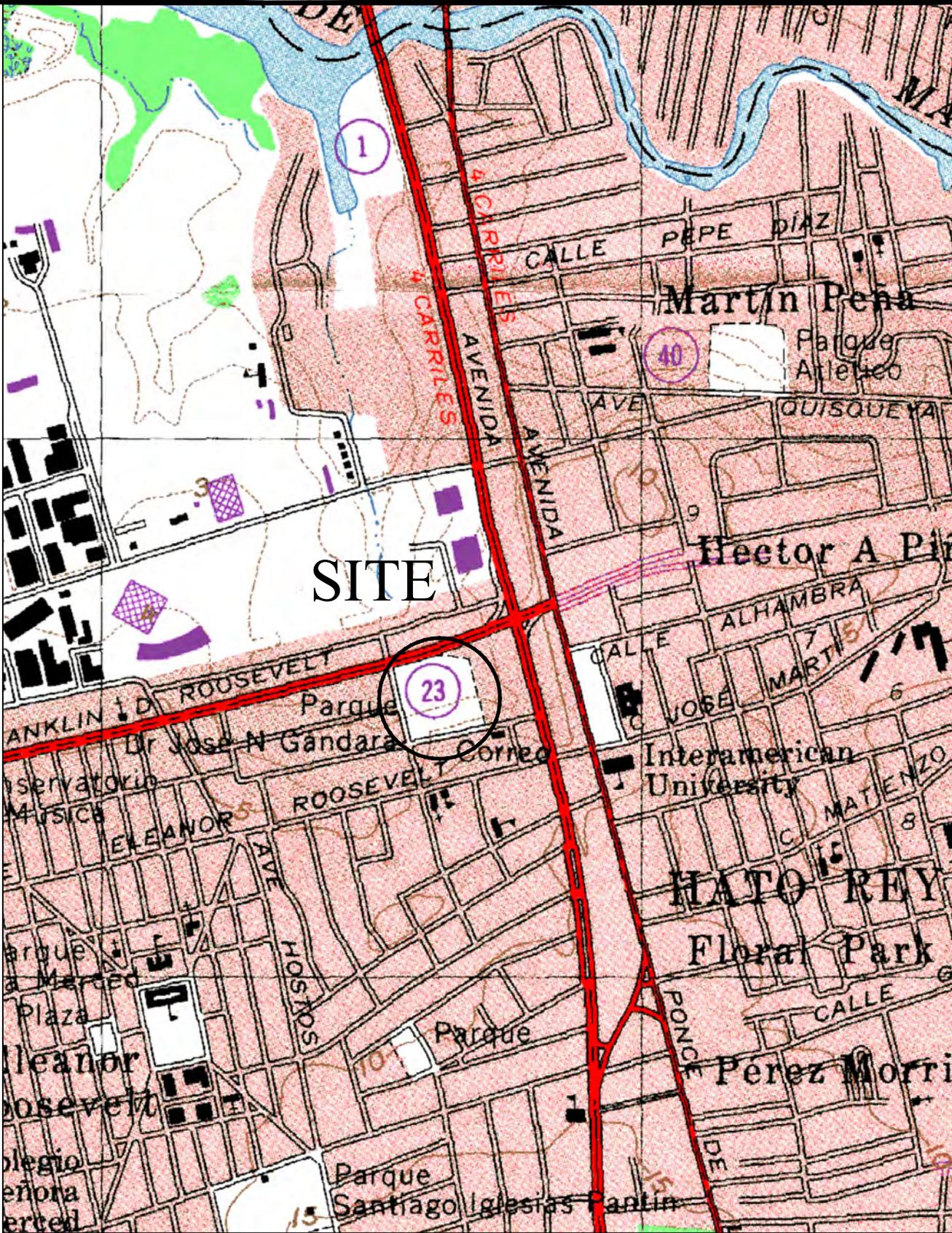
Appendix (1) - Boring Logs

Appendix (2) - Fill Specifications

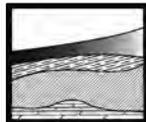
Appendix (3) - Special Laboratory Tests

APPENDIX (A)

Figures

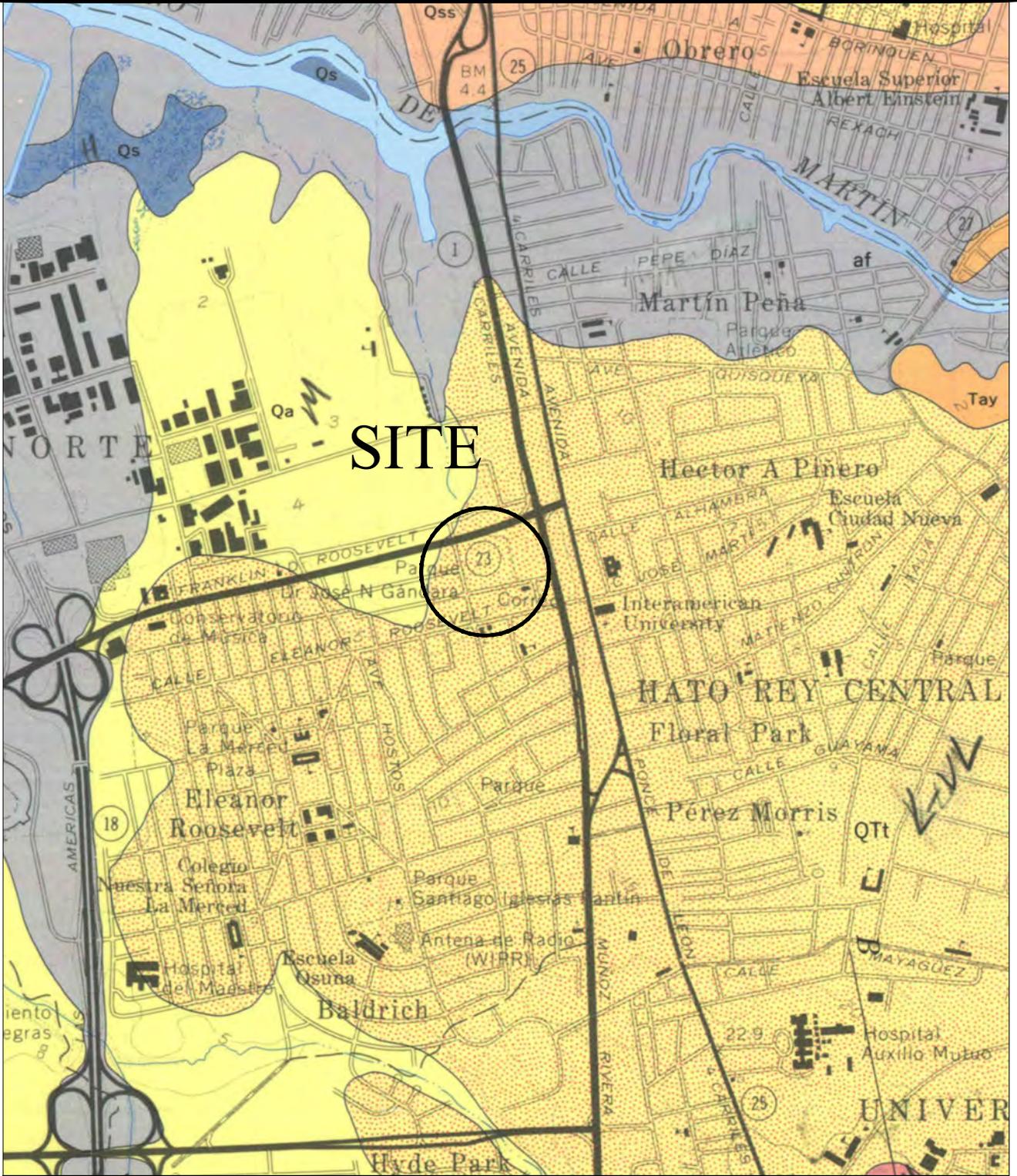


FROM US GEOLOGICAL SURVEY TOPOGRAPHIC MAP AT A SCALE 1:20,000



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 SOIL/GEOTECHNICAL ENGINEERING LABORATORIES
 P.O. BOX 260370, San Juan, Puerto Rico 00926-2622 / (787) 281-0686

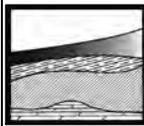
SITE PLAN
 GEOTECHNICAL SUBSURFACE EXPLORATORY SERVICES
 FOR THE PROPOSED IMPROVEMENTS TO GANDARA RECREATIONAL PARK
 AT JUAN B. HUYKE STREET, HATO REY CENTRAL WARD
 OF THE MUNICIPALITY OF SAN JUAN, PUERTO RICO.
 REFERENCE NO. DA23Y4249



NOTE: THE GEOLOGICAL UNITS IDENTIFIED AT OR IN THE VICINITY OF THE PROJECT ARE INDICATED IN THE US GEOLOGICAL SURVEY MAP (I-1010) OF THE SAN JUAN QUADRANGLE PREPARED BY WATSON .H. MONROE (1969) FOR THE US DEPARTMENT OF INTERIOR.

SCALE: NOT TO SCALE.

FROM US GEOLOGICAL SURVEY GEOLOGICAL MAP (I-1010)



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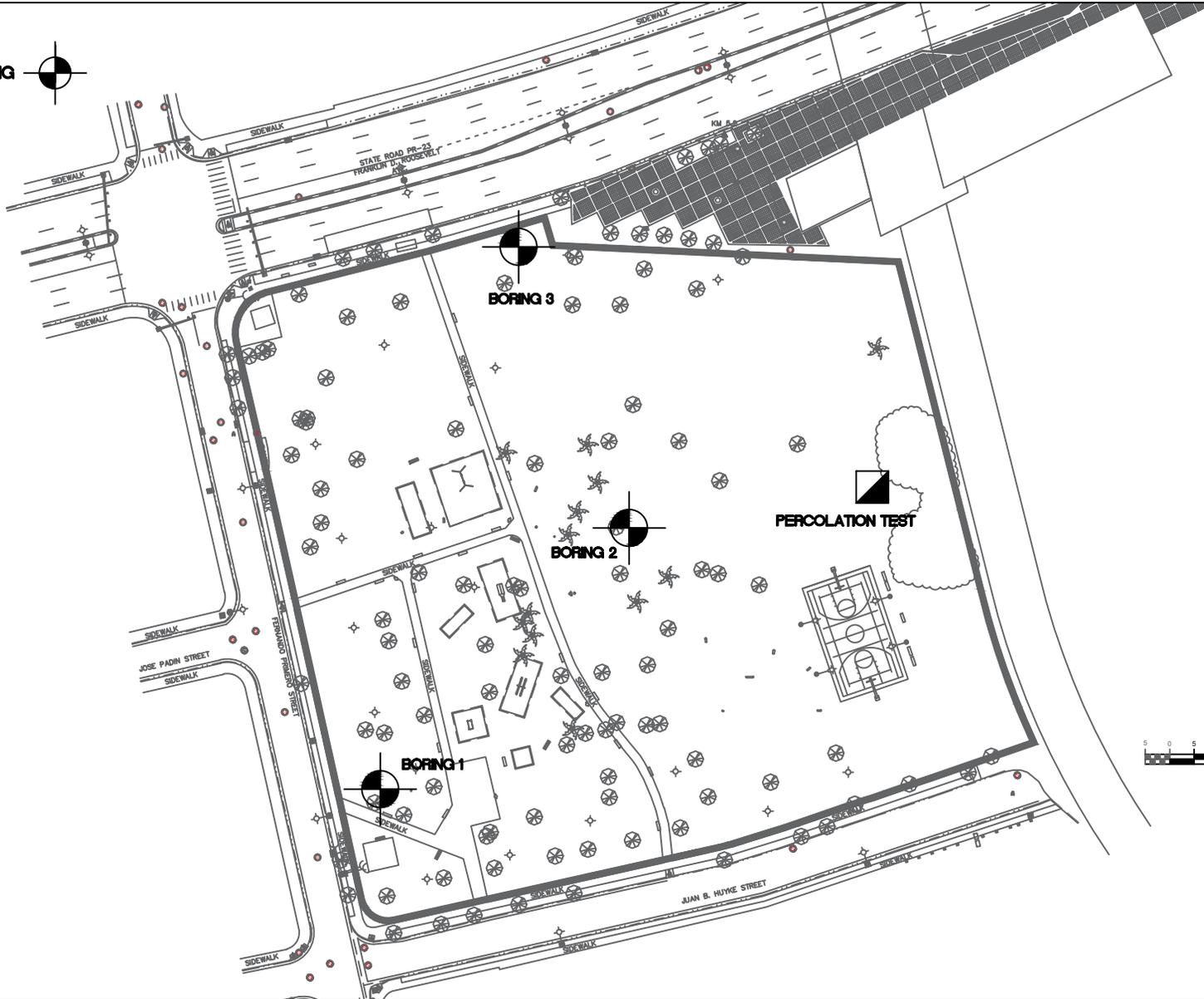
SITE PLAN

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1a

LEGEND:

BORING

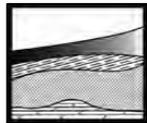


GRAPHIC SCALE
(IN METERS)



NOTE:
THIS DRAWING WAS PROVIDED BY THE CLIENT AND
WAS USED TO ILLUSTRATE THE APPROXIMATE
BORING LOCATION.

SCALE:
NOT TO SCALE - REDUCE FROM ORIGINAL



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APPENDIX (1)

Boring Logs

FIELD EXPLORATION DESCRIPTION

The boring locations were marked by a representative of Despiau Associates Corp. using a measuring wheel and referencing existing site features shown on the site plan provided to us. Boring elevation information was not provided. The locations of the borings should be considered accurate only to the degree implied by the means and methods used to define them.

The soil test borings were performed by a trailer-mounted CME 55 power drilling rig utilizing mud rotary drilling procedures to advance the boreholes. The drilling tools were removed from the borehole and representative soil samples were obtained continuously in the upper 10 ft. and thereafter, at approximately 5 ft. intervals using split-barrel sampling procedures. All soil samples were taken with a 2"-O.D. split barrel sampler following the standard penetration test procedures in ASTM D-1586. The split-barrel sampler was driven into the ground with a 140-pound hammer falling 30" inches. After seating the sampler six inches at the bottom of the borehole to penetrate any loose cuttings, the sampler is driven an additional 12 inches. The number of blows required to advance the sampling spoon the last 12 inches is recorded as the standard penetration resistance value (N-value). These N-values are indicated on the boring logs at the depths of occurrence.

The samples were tagged for identification, sealed to reduce moisture loss, and taken to our laboratory for further examination, testing, and classification. Information provided on the boring logs attached to this report includes soil descriptions, consistency evaluations, boring depths, sampling intervals, and groundwater conditions.

A field log of each boring was prepared by the drill crew. These logs included visual classifications of the materials encountered during drilling as well as the driller's interpretation of the subsurface conditions between samples. Final boring logs included with this report represent the engineer's interpretation of the field logs and include modifications based on laboratory observation and tests of the samples. Additional information provided on the boring logs attached to this report includes soil descriptions, consistency evaluations, boring depths, sampling intervals, and groundwater conditions.

ROUTINE LABORATORY TEST PROCEDURES

Routine laboratory testing was performed under the direction of a geotechnical engineer and included visual classification, moisture content, grain size analysis and Atterberg limits, as appropriate. The results of the special laboratory testing performed are shown on the borings logs and in Appendix C. Procedural standards noted above are for reference to methodology in general. In some cases, variations to methods are applied as a result of local practice or professional judgment. The following routine laboratories were performed on secured samples among others.

Classification

Visual-manual procedures, in accordance with ASTM D-2488 & D-2487, were employed to identify the subsoils at the site. Soils are described as one of the following: boulders, gravel, sand, silt, clay, organic soils and peat. Differentiation between the coarser soils is made by visual appreciation of predominant grain size. Fine grained soils (silt, clay, organic soils and peat) are partly identified using plasticity or dilatancy characteristics and the dry strength of the soil instead of the grain size.

Moisture Contents

The moisture content was determined for all samples obtained, and it is expressed in percentage of the given ratio of the weight of water and a given soil mass to the dry solid particles in it. The procedure used were in accordance to ASTM Designation D-2216.

Atterberg Limits

Designations: D-423 an D-424 establish respectively the standards for the determination of the liquid and plastic limits of the collected clayey samples. They are expressed as water contents and define the boundaries of three states in terms of "limits" as follows: (a) "liquid limit", the boundary between the liquid and the plastic states, and (b) "plastic limit", the boundary between the plastic and semi-solid states.

Volume Changes

Swelling characteristics are obtained in order to permit the expeditious identification of foundation soils which could be potentially troublesome due to excessive volume changes as shrinkage and swelling. The ratio of sample volume to its dry volume is recorded while immerse in distilled water for a period of 24 hours.

Unconfined Compressive Strengths (q-u)

A measure of shear strength was obtained for all cohesive soils sampled, where possible. The shear strength was determined either using a calibrated penetrometer, the unconfined compressive strength tester or the spring.

Free Swell Tests

The free swell tests are made in accordance to the procedures of the US Bureau of Reclamation, which provide percent total volume change from dry to saturated conditions.

DESCRIPTIVE TERMINOLOGY CONSISTENCY OF COHESIVE SOILS AND RELATIVE DENSITY OF GRANULAR SOILS

To approximate the consistency of fine grained soils (soft, medium, stiff, very stiff, hard), a simple test is performed with the hand: a hard fine grain soil is difficult to indent with the thumbnail, a very stiff soil can be indented by the thumbnail, stiff soils are readily indented with the thumb, medium soils can be penetrated by moderate thumb pressure, soft soils are easily penetrated with the thumb, and soft soils run between the fingers when squeezed.

The consistency of cohesive soils has also been correlated to the results of the Standard Penetration Test, as shown below. The correlation, however, is greatly affected by the clay structures and factors as sensitivity.

TABLE 1 - DESCRIPTION OF SOIL DENSITY AND CONSISTENCY

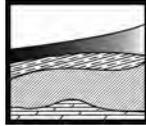
COARSE GRAINED SOILS

Range of Standard Penetration Resistance (BPF)	Relative Density
0 - 4	Very loose
4 - 10	Loose
10 - 30	Medium
30 - 50	Dense
over 50	Very Dense

FINE GRAINED SOIL

Range of Standard Penetration Resistance (BPF)	Unconfined Compressive Strength (TSF)	Consistency
0 - 2	0 – 0.25	very soft
2 - 4	0.25 - 0.50	soft
4 - 8	0.50 - 1.00	medium
8 - 15	1.00 - 2.00	stiff
15 - 30	2.00 - 4.00	very stiff
over 30	over 4.00	hard

These are very approximate correlations which vary with, among other factors, overburden pressure, depth to water and grain size. These correlations are meaningless in soils with a significant amount of gravel or cobbles.



DESPIAU ASSOCIATES CORP.
Soil / Geotechnical Engineering Laboratories

BORING NO.: 1
SHEET: 1 of 1
LOCATION: San Juan, P.R.
NORTHING: -
EASTING: -

PROJECT: Improvement to Gandara Recreational Park at Juan Huyke St. REFERENCE NO.: DA/23Y4249

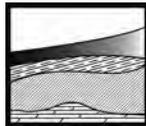
CASING: - SAMPLER: SS
Hammer Weight (lb.): - Drop (in.): - Hammer Weight (lb.): 140 Drop (in.): 30
Type : - Size : - Type: Split Spoon Sampler Size: 1-3/8" I.D.

DATE: 5/5/2023
GROUND ELEV.: -
DEPTH OF HOLE (ft.): 20
DRILL MACHINE: CME-55
DRILLER: A. Ferrer
DRILL METHOD: 5-5/8" Auger

Depth (ft)	Sampler	Sample No.	Blows/6 in	SPT N-Value	Symbol	Material Description	% Recovery	R.Q.D.	Water Content (%)	qu	Water Level	Liquid Limit	Plasticity Index	Soil Classification
0						Ground Surface								
	SS	1	3-8-9-7	17	[Symbol]	Silty Sand Dark brown silty sand, trace clay, some subangular gravel, many roots.	100		15		Ground water level was not found within the extended drilled.			
	SS	2	8-10-13-15	23		Sandy Lean Clay Brownish yellow, dark brown joints sandy lean clay.	58		38	4.5				
5	SS	3	7-9-11-12	20		Sandy Fat Clay	58		34	3.7				
	SS	4	12-12-18-18	30			100		25	5.0+				
	SS	5	7-15-20-26	35			83		30	5.0+				
10						Brownish yellow, light gray and red sandy fat clay.								
	SS	6	10-14-19	33			100		19	5.0+				
	SS	7	14-20-30	50		89		32	5.0+					
20														
25														
30														
35														
40														

qu (TSF) - UNCONFINED COMPRESSION STRENGTH
wh = WEIGHT OF HAMMER TO DRIVE SAMPLE
W_n = NATURAL WATER CONTENT IN PERCENT OF DRY WEIGHT

▼ DEPTH OF WATER BEFORE COMPLETION
▼ DEPTH OF WATER AFTER 24 HOURS



DESPIAU ASSOCIATES CORP.
Soil / Geotechnical Engineering Laboratories

BORING NO.: 2
SHEET: 1 of 1
LOCATION: San Juan, P.R.
NORTHING: -
EASTING: -

PROJECT: Improvement to Gandara Recreational Park at Juan Huyke St. REFERENCE NO.: DA/23Y4249

CASING: -

SAMPLER: SS

Hammer Weight (lb.): -

Drop (in.): -

Hammer Weight (lb.): 140

Drop (in.): 30

Type : -

Size : -

Type: Split Spoon Sampler

Size: 1-3/8" I.D.

DATE: 5/5/2023

GROUND ELEV.: -

DEPTH OF HOLE (ft.): 20

DRILL MACHINE: CME-55

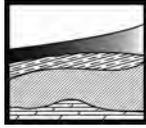
DRILLER: A. Ferrer

DRILL METHOD: 5-5/8" Auger

Depth (ft)	Sampler	Sample No.	Blows/6 in	SPT N-Value	Symbol	Material Description	% Recovery	R.Q.D.	Water Content (%)	qu	Water Level	Liquid Limit	Plasticity Index	Soil Classification	
0						Ground Surface									
	SS	1	1-3-7-7	10	[Symbol]	Sandy Silt and Clay Brown to dark brown, brownish yellow, reddish yellow sandy silt and clay, some subangular gravel, many roots.	100		28		Ground water level was not found within the extended drilled.				
	SS	2	5-6-8-9	14		58		20	1.0						
5	SS	3	6-7-10-9	17		Sandy Fat Clay	100		32	4.0		56	34	A-7-6(33)/CH	
	SS	4	10-14-13-14	27		58		38	4.5						
	SS	5	14-16-25-34	41		83		30	5.0+						
10						Light gray, red, brownish yellow, light olive brown sandy fat clay.									
	SS	6	13-22-26	48		100		28	5.0+						
15															
	SS	7	12-18-24	42	100		20	5.0+							
20															
25															
30															
35															
40															

qu (TSF) - UNCONFINED COMPRESSION STRENGTH
wh = WEIGHT OF HAMMER TO DRIVE SAMPLE
W_n = NATURAL WATER CONTENT IN PERCENT OF DRY WEIGHT

▼ DEPTH OF WATER BEFORE COMPLETION
▼ DEPTH OF WATER AFTER 24 HOURS



DESPIAU ASSOCIATES CORP.
Soil / Geotechnical Engineering Laboratories

BORING NO.: 3
SHEET: 1 of 1
LOCATION: San Juan, P.R.
NORTHING: -
EASTING: -

PROJECT: Improvement to Gandara Recreational Park at Juan Huyke St. REFERENCE NO.: DA/23Y4249

CASING: -

SAMPLER: SS

Hammer Weight (lb.): -

Drop (in.): -

Hammer Weight (lb.): 140

Drop (in.): 30

Type : -

Size : -

Type: Split Spoon Sampler

Size: 1-3/8" I.D.

DATE: 5/5/2023

GROUND ELEV.: -

DEPTH OF HOLE (ft.): 20

DRILL MACHINE: CME-55

DRILLER: A. Ferrer

DRILL METHOD: 5-5/8" Auger

Depth (ft)	Sampler	Sample No.	Blows/6 in	SPT N-Value	Symbol	Material Description	% Recovery	R.Q.D.	Water Content (%)	qu	Water Level	Liquid Limit	Plasticity Index	Soil Classification
0						Ground Surface								
	SS	1	6-7-10-12	17		Sandy Silt Dark brown, brownish yellow, light red and light gray sandy silt and clay, some subangular gravel, many roots.	58		21					
	SS	2	8-6-5-5	11			83		43	1.2		38	14	A-6(9)/CL
5	SS	3	1-1-2-3	3		Sandy Lean Clay Very dark brown, brownish yellow, light brownish gray, red, reddish brown, light gray sandy lean clay, some subangular gravel, few roots.	58		32	0.6				
	SS	4	9-10-12-12	22			100		32	2.5				
	SS	5	13-17-18-16	35		Sandy Fat Clay	100		29	4.5				
15	SS	6	11-15-19	34		Light gray, light olive brown and red sandy fat clay.	100		30	4.5				
20	SS	7	11-21-23	44			100		29	5.0+				
25														
30														
35														
40														

Ground water level was not found within the extended drilled.

qu (TSF) - UNCONFINED COMPRESSION STRENGTH
wh = WEIGHT OF HAMMER TO DRIVE SAMPLE
W_n = NATURAL WATER CONTENT IN PERCENT OF DRY WEIGHT

▼ DEPTH OF WATER BEFORE COMPLETION
▼ DEPTH OF WATER AFTER 24 HOURS

APPENDIX (2)
Earthwork Specifications

GENERAL EARTHWORK AND GRADING SPECIFICATIONS FOR PREPARATION EXCAVATION, FILLING AND GRADING

1.0 General

1.1 Intent

These General Earthwork and Grading Specifications are for the grading and earthwork shown on the approved grading plan(s) and/or indicated in the geotechnical report(s). These Specifications are a part of the recommendations contained in the geotechnical report(s). In case of conflict, the specific recommendations in the geotechnical report shall supersede these more general Specifications. Observations of the earthwork by the project Geotechnical Consultant during the course of grading may result in new or revised recommendations that could supersede these specifications or the recommendations in the geotechnical report(s).

1.2 The Geotechnical Consultant of Record

Prior to commencement of work, the owner shall employ the Geotechnical Consultant of Record (Geotechnical Consultant). The Geotechnical Consultants shall be responsible for reviewing the approved geotechnical report(s) and accepting the adequacy of the geotechnical findings, conclusions, and recommendations prior to the commencement of the grading.

Prior to commencement of grading, the Geotechnical Consultant shall review the "work plan" prepared by the Earthwork Contractor (Contractor) and schedule sufficient personnel to perform the appropriate level of observation, mapping, and compaction testing.

During the grading and earthwork operations, the Geotechnical Consultant shall observe, map, and document the subsurface exposures to verify the geotechnical design assumptions. If the observed conditions are found to be significantly different than the interpreted assumptions during the design phase, the Geotechnical Consultant shall inform the owner, recommend appropriate changes in design to accommodate the observed conditions, and notify the review agency where required. Subsurface areas to be geotechnically observed, mapped, elevations recorded, and/or tested

include natural ground after it has been cleared for receiving fill but before fill is placed, bottoms of all "remedial removal" areas, all key bottoms, and benches made on sloping ground to receive fill.

The Geotechnical Consultant shall observe the moisture-conditioning and processing of the subgrade and fill materials and perform relative compaction testing of fill to determine the attained level of compaction. The Geotechnical Consultant shall provide the test results to the owner and the Contractor on a routine and frequent basis.

1.3 The Earthwork Contractor

The Earthwork Contractor (Contractor) shall be qualified, experienced, and knowledgeable in earthwork logistics, preparation and processing of ground to receive fill, moisture-conditioning and processing of fill, and compacting fill. The Contractor shall review and accept the plans, geotechnical report(s), and these Specifications prior to commencement of grading. The Contractor shall be solely responsible for performing the grading in accordance with the plans and specifications.

The Contractor shall prepare and submit to the owner and the Geotechnical Consultant a work plan that indicates the sequence of earthwork grading, the number of "spreads" of work and the estimated quantities of daily earthwork contemplated for the site prior to commencement of grading. The Contractor shall inform the owner and the Geotechnical Consultant of changes in work schedules and updates to the work plan at least 24 hours in advance of such changes so that appropriate observations and tests can be planned and accomplished. The Contractor shall not assume that the Geotechnical Consultant is aware of all grading operations.

The Contractor shall have the sole responsibility to provide adequate equipment and methods to accomplish the earthwork in accordance with the applicable grading codes and agency ordinances, these Specifications, and the recommendations in the approved geotechnical report(s) and grading plan(s). If, in the opinion of the Geotechnical Consultant, unsatisfactory conditions, such as unsuitable soil, improper moisture condition, inadequate compaction, insufficient buttress key size, adverse weather, etc., are resulting in a quality of work less than required in these specifications,

the Geotechnical Consultant shall reject the work and may recommend to the owner that construction be stopped until the conditions are rectified.

2.0 Preparation of Areas to be Filled

2.1 Clearing and Grubbing

Vegetation, such as brush, grass, roots, and other deleterious material shall be sufficiently removed and properly disposed of in a method acceptable to the owner, governing agencies, and the Geotechnical Consultant.

The Geotechnical Consultant shall evaluate the extent of these removals depending on specific site conditions. Earth fill material shall not contain more than 1 percent of organic materials (by volume). No fill lift shall contain more than 5 percent of organic matter. Nesting of the organic materials shall not be allowed.

If potentially hazardous materials are encountered, the Contractor shall stop work in the affected area, and a hazardous material specialist shall be informed immediately for proper evaluation and handling of these materials prior to continuing to work in that area.

As presently defined by the State of California, most refined petroleum products (gasoline, diesel fuel, motor oil, grease, coolant, etc.) have chemical constituents that are considered to be hazardous waste. As such, the indiscriminate dumping or spillage of these fluids onto the ground may constitute a misdemeanor, punishable by fines and/or imprisonment, and shall not be allowed.

2.2 Processing

Existing ground that has been declared satisfactory for support of fill by the Geotechnical Consultant shall be scarified to a minimum depth of 6 inches. Existing ground that is not satisfactory shall be overexcavated as specified in the following section. Scarification shall continue until soils are broken down and free of large clay lumps or clods and the working surface is reasonably uniform, flat, and free of uneven features that would inhibit uniform compaction.

2.3 Overexcavation

In addition to removals and overexcavations recommended in the approved geotechnical report(s) and the grading plan, soft, loose, dry, saturated, spongy, organic-rich, highly fractured or otherwise unsuitable ground shall be overexcavated to competent ground as evaluated by the Geotechnical Consultant during grading.

2.4 Benching

Where fills are to be placed on ground with slopes steeper than 5:1 (horizontal to vertical units), the ground shall be stepped or benched. Please see the Standard Details for a graphic illustration. The lower bench or key shall be a minimum of 15 feet wide and at least 2 feet deep, into competent material as evaluated by the Geotechnical Consultant. Other benches shall be excavated a minimum height of 4 feet into competent material or as otherwise recommended by the Geotechnical Consultant. Fill placed on ground sloping flatter than 5:1 shall also be benched or otherwise overexcavated to provide a flat subgrade for the fill.

2.5 Evaluation/Acceptance of Fill Areas

All areas to receive fill, including removal and processed areas, key bottoms, and benches, shall be observed, mapped, elevations recorded, and/or tested prior to being accepted by the Geotechnical Consultant as suitable to receive fill. The Contractor shall obtain a written acceptance from the Geotechnical Consultant prior to fill placement. A licensed surveyor shall provide the survey control for determining elevations of processed areas, keys, and benches.

3.0 Fill Material

3.1 General

Material to be used as fill shall be essentially free of organic matter and other deleterious substances evaluated and accepted by the Geotechnical Consultant prior to placement. Soils of poor quality,

such as those with unacceptable gradation, high expansion potential, or low strength shall be placed in areas acceptable to the Geotechnical Consultant or mixed with other soils to achieve satisfactory fill material.

3.2 Oversize

Oversize material defined as rock, or other irreducible material with a maximum dimension greater than 8 inches, shall not be buried or placed in fill unless location, materials, and placement methods are specifically accepted by the Geotechnical Consultant. Placement operations shall be such that nesting of oversized material does not occur and such that oversize material is completely surrounded by compacted or densified fill. Oversize material shall not be placed within 10 vertical feet of finish grade or within 2 feet of future utilities or underground construction.

3.3 Import

If importing of fill material is required for grading, proposed import material shall meet the requirements of Section 3.1. The potential import source shall be given to the Geotechnical Consultant at least 48 hours (2 working days) before importing begins so that its suitability can be determined, and appropriate tests performed.

4.0 Fill Placement and Compaction

4.1 Fill Layers

Approved fill material shall be placed in areas prepared to receive fill (per Section 3.0) in near-horizontal layers not exceeding 8 inches in loose thickness. Each layer shall be spread evenly and mixed thoroughly to attain relative uniformity of material and moisture throughout.

4.2 Fill Moisture Conditioning

Fill soils shall be watered, dried back, blended, and/or mixed, as necessary to attain a relatively uniform moisture content at or slightly over optimum. Maximum density and optimum soil moisture

content tests shall be performed in accordance with the American Society of Testing and Materials (ASTM Test Method D1557). At the time of compaction, the material in each layer of fill shall have moisture content within 2% of optimum moisture content for compaction, as determined by ASTM D-1557 for determining the moisture-density relationship of the fill material

4.3 Compaction of Fill

After each layer has been moisture-conditioned, mixed, and evenly spread, it shall be uniformly compacted to not less than 95 % percent of maximum dry density (ASTM Test Method D1557).

For sectors within non-load-bearing areas shall be uniformly compacted to at least 90% of the modified Proctor Maximum Density for each lift, unless otherwise required in the geotechnical report. Any lift, or portion thereof, which is not compacted in accordance with the specifications, shall be compacted or removed and replaced to the satisfaction of the Geotechnical Engineer. The degree of compaction of each lift shall be checked by the Engineer and each successive lift shall not be placed or compacted until the previous lift is inspected, tested and approved by the Engineer.

Compaction equipment shall be adequately sized and be either specifically designed for soil compaction or of proven reliability to efficiently achieve the specified level of compaction with uniformity. It is the responsibility of the Contractor to select, furnish and properly maintain equipment which will compact the fill uniformly to the required density, however, the Contractor's selection of equipment is subject to approval by the Engineer. No fill shall be placed until approved compaction equipment is on the site and working condition.

4.4 Compaction of Fill Slopes

In addition to normal compaction procedures specified above, compaction of slopes shall be accomplished by back-rolling of slopes with sheepsfoot rollers at increments of 3 to 4 feet in fill elevation, or by other methods producing satisfactory results acceptable to the Geotechnical Consultant. Upon completion of grading, relative compaction of the fill, out to the slope face, shall be at least 95 % percent of maximum density per ASTM Test Method D1557.

Existing ground slope surfaces, to be covered by the fill shall be scarified into steps or benches and the fill progresses in order to provide a bond and avoid any shear failure along the fill/natural ground interface. Slopes shall not be steeper than 2.0 to 1.0 (Horizontal to Vertical units). Drainage other than storm water falling directly to slope shall not be permitted to cut across slope areas. Protection of slopes by planting of grass and shrubs shall be performed immediately upon their completion. Special sloping requirement may be established in the geotechnical report.

4.5 Erosion Protection

Embankment fills with slopes steeper than 1.5H: 1.0V (Horizontal: Vertical) shall be protected from runoff and erosion by an appropriate type of vegetation cover. This may be performed by hydro mulching in such a way as to cover the soil as fast as possible until evidence of "catch" or uniform stand to prevent erosion is achieved, at which time final acceptance will be given. The Contractor shall properly water, mow, and otherwise maintain all treated areas until final acceptance.

4.6 Benching

When embankment is to be placed and compacted on hillsides or when new embankment is to be compacted against an existing embankment, or when an embankment is built one-half (1/2) width at a time, the slopes that are steeper than four to one (4:1) when measured at right angles shall be continuously benched over these areas as the work is brought up in layers. Benching shall be of enough width to permit operation of placing and compacting equipment. Each horizontal cut shall begin at the intersection of the original ground and the vertical sides of the previous cuts.

4.7 Compaction Testing

Field-tests for moisture content and relative compaction of the fill soils shall be performed by the Geotechnical Consultant. Location and frequency of tests shall be at the Consultant's discretion based on field conditions encountered. Compaction test locations will not necessarily be selected on a random basis. Test locations shall be selected to verify adequacy of compaction levels in areas that are judged to be prone to inadequate compaction (such as close to slope faces and at the fill/bedrock benches).

4.8 Frequency of Compaction Testing

Tests shall be taken at intervals not exceeding 2 feet in vertical rise and/or 1,000 cubic yards of compacted fill soils embankment. In addition, as a guideline, at least one test shall be taken on slope faces for each 5,000 square feet of slope face and/or each 10 feet of vertical height of slope. The Contractor shall assure that fill construction is such that the testing schedule can be accomplished by the Geotechnical Consultant. The Contractor shall stop or slow down the earthwork construction if these minimum standards are not met.

4.9 Compaction Test Locations

The Geotechnical Consultant shall document the approximate elevation and horizontal coordinates of each test location. The Contractor shall coordinate with the project surveyor to assure that sufficient grade stakes are established so that the Geotechnical Consultant can determine the test locations with sufficient accuracy. At a minimum, two grade stakes within a horizontal distance of 100 feet and vertically less than 5 feet apart from potential test locations shall be provided.

5.0 Drain Installation

Subdrain systems shall be installed in accordance with the approved geotechnical report(s), the grading plan, and the Standard Details. The Geotechnical Consultant may recommend additional subdrains and/or changes in subdrain extent, location, grade, or material depending on conditions encountered during grading. All subdrains shall be surveyed by a land surveyor/civil engineer for line and grade after installation and prior to burial. Sufficient time should be allowed by the Contractor for these surveys.

At all times the Contractor shall maintain and operate proper and adequate surface and subsurface drainage methods to the satisfaction of the Engineer in order to keep the construction site dry.

6.0 Excavation

Excavations, as well as over-excavation for remedial purposes, shall be evaluated by the Geotechnical Consultant during grading. Remedial removal depths shown on geotechnical plans are estimates only. The actual extent of removal shall be determined by the Geotechnical Consultant based on the field evaluation of exposed conditions during grading. Where fill-over-cut slopes are to be graded, the cut portion of the slope shall be made, evaluated, and accepted by the Geotechnical Consultant prior to placement of materials for construction of the fill portion of the slope, unless otherwise recommended by the Geotechnical Consultant.

7.0 Trench Backfills

7.1 Safety

The Contractor shall follow all OSHA and Cal/OSHA requirements for safety of trench excavations.

7.2 Bedding and Backfill

All bedding and backfill of utility trenches shall be performed in accordance with the applicable provisions of Standard Specifications of Public Works Construction. The bedding shall be placed to 1 foot over the top of the conduit and densified. Backfill shall be placed and densified to a minimum of 90 percent of relative compaction from 1 foot above the top of the conduit to the surface.

The Geotechnical Consultant shall test the trench backfill for relative compaction. At least one test should be made for every 300 feet of trench and 2 feet of fill.

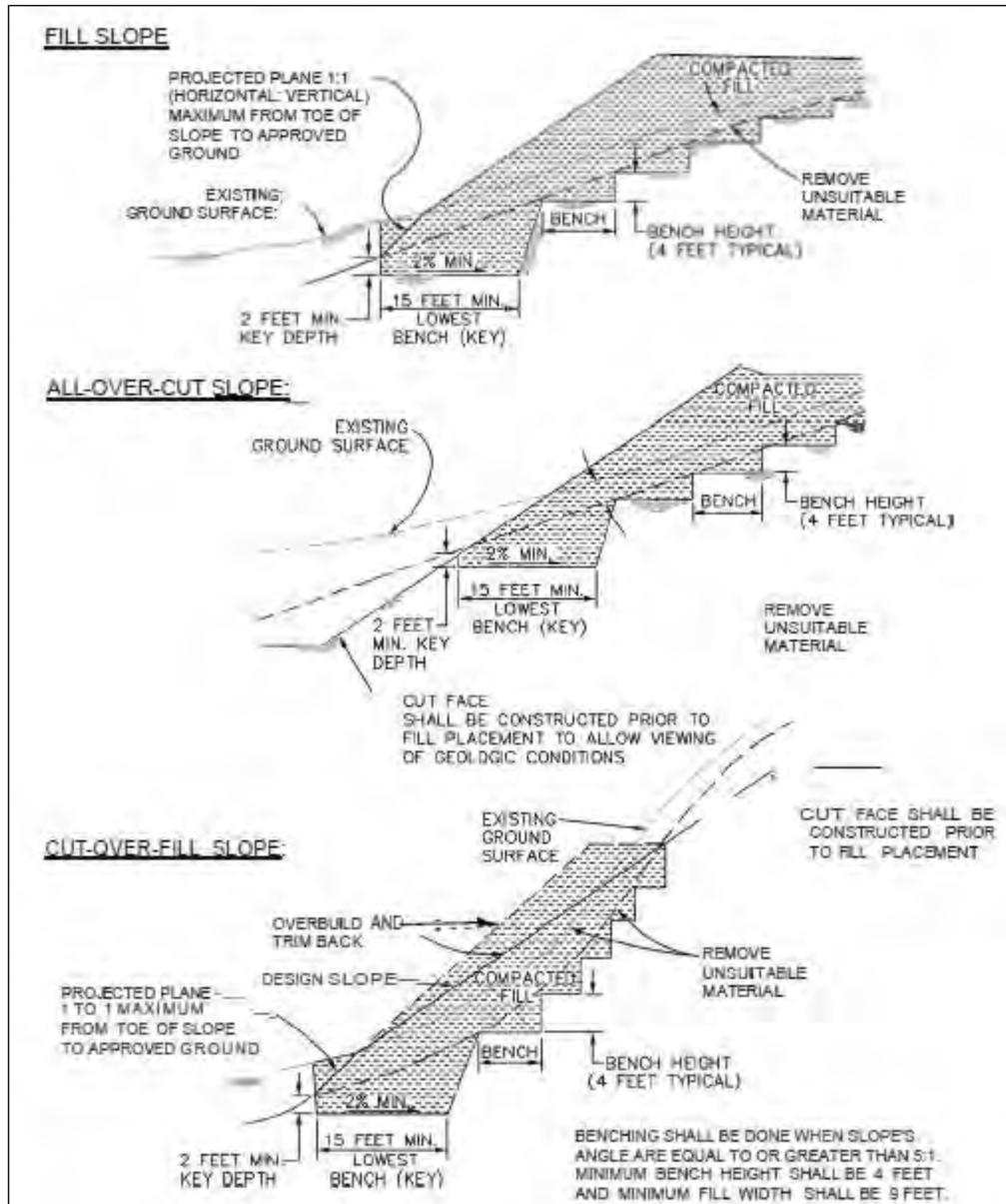
7.3 Lift Thickness

Lift thickness of trench backfill shall not exceed those allowed in the Standard Specifications of Public Works Construction unless the Contractor can demonstrate to the Geotechnical Consultant that the fill lift can be compacted to the minimum relative compaction by his alternative equipment and method.

7.4 Observation and Testing

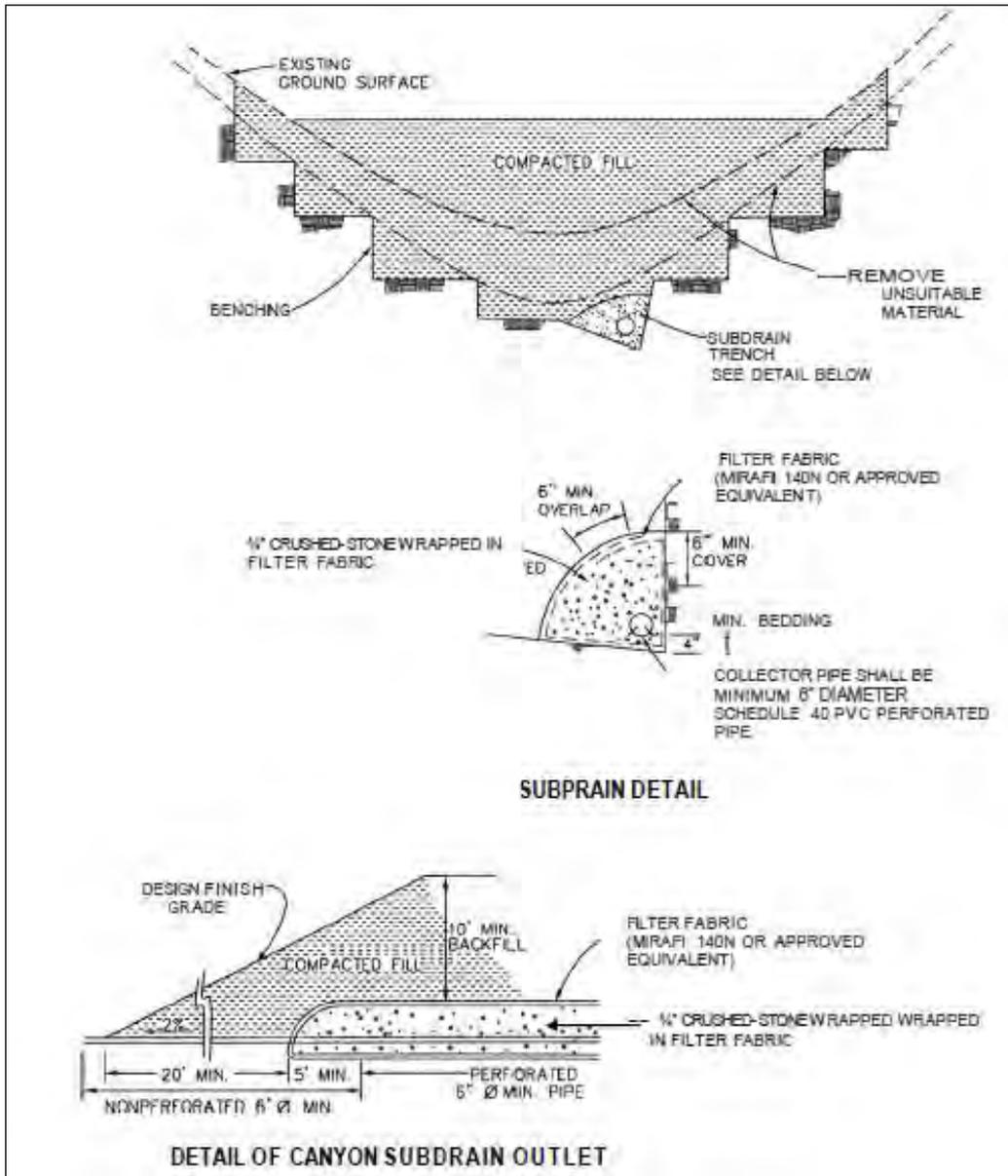
The densification of the bedding around the conduits shall be observed by the Geotechnical Consultant.

KEYING AND BENCHING



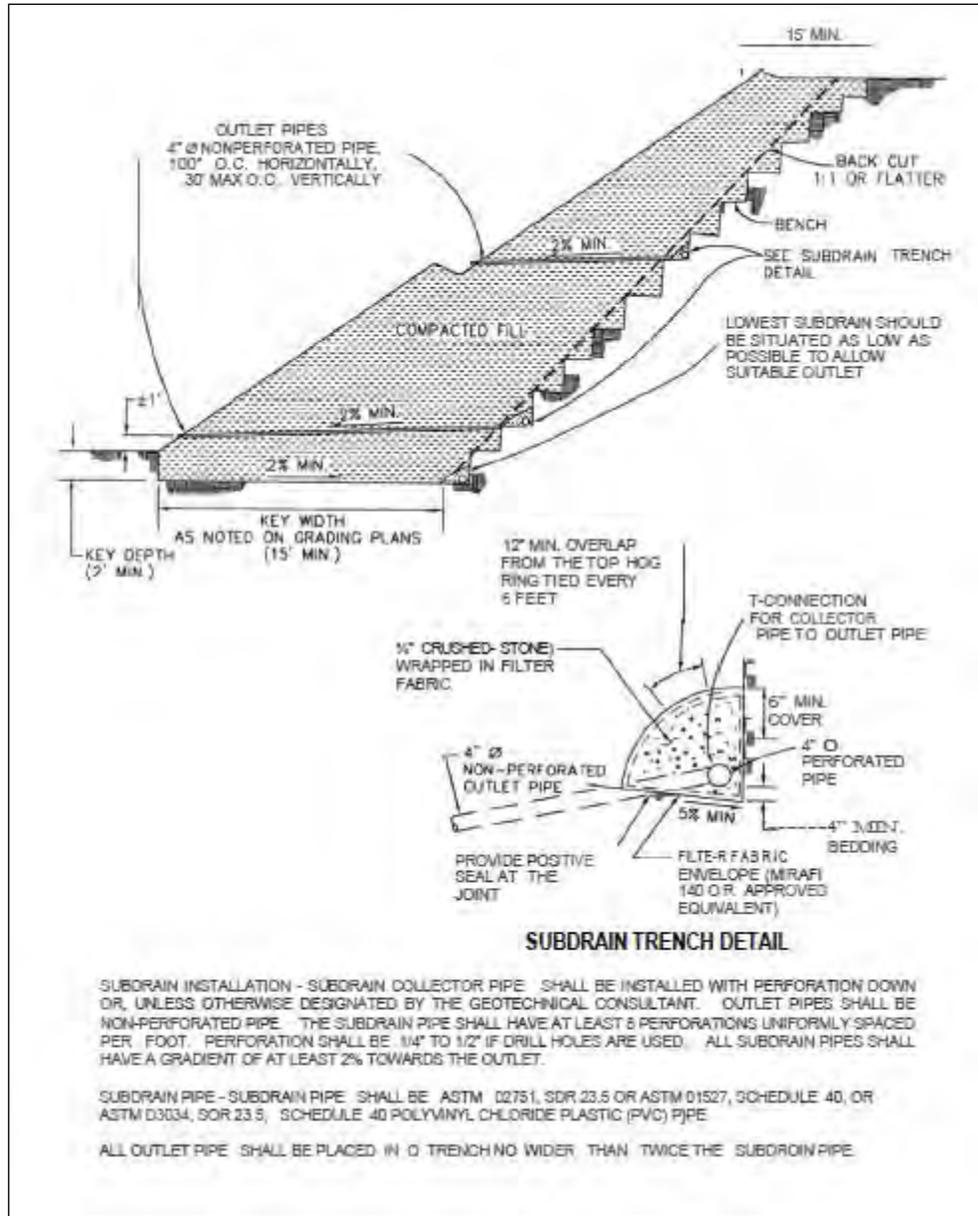
GENERAL EARTHWORK AND GRADING SPECIFICATIONS STANDARD DETAIL "A"

SUBDRAINS



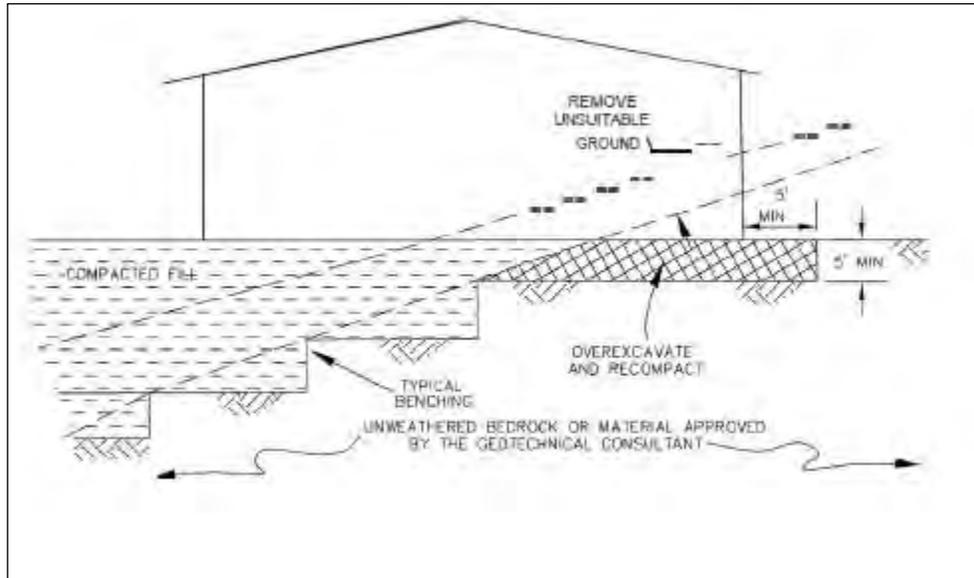
GENERAL EARTHWORK AND GRADING SPECIFICATIONS STANDARD DETAIL "B"

BUTTRESS OR REPLACEMENT FILL SUBDRAINS



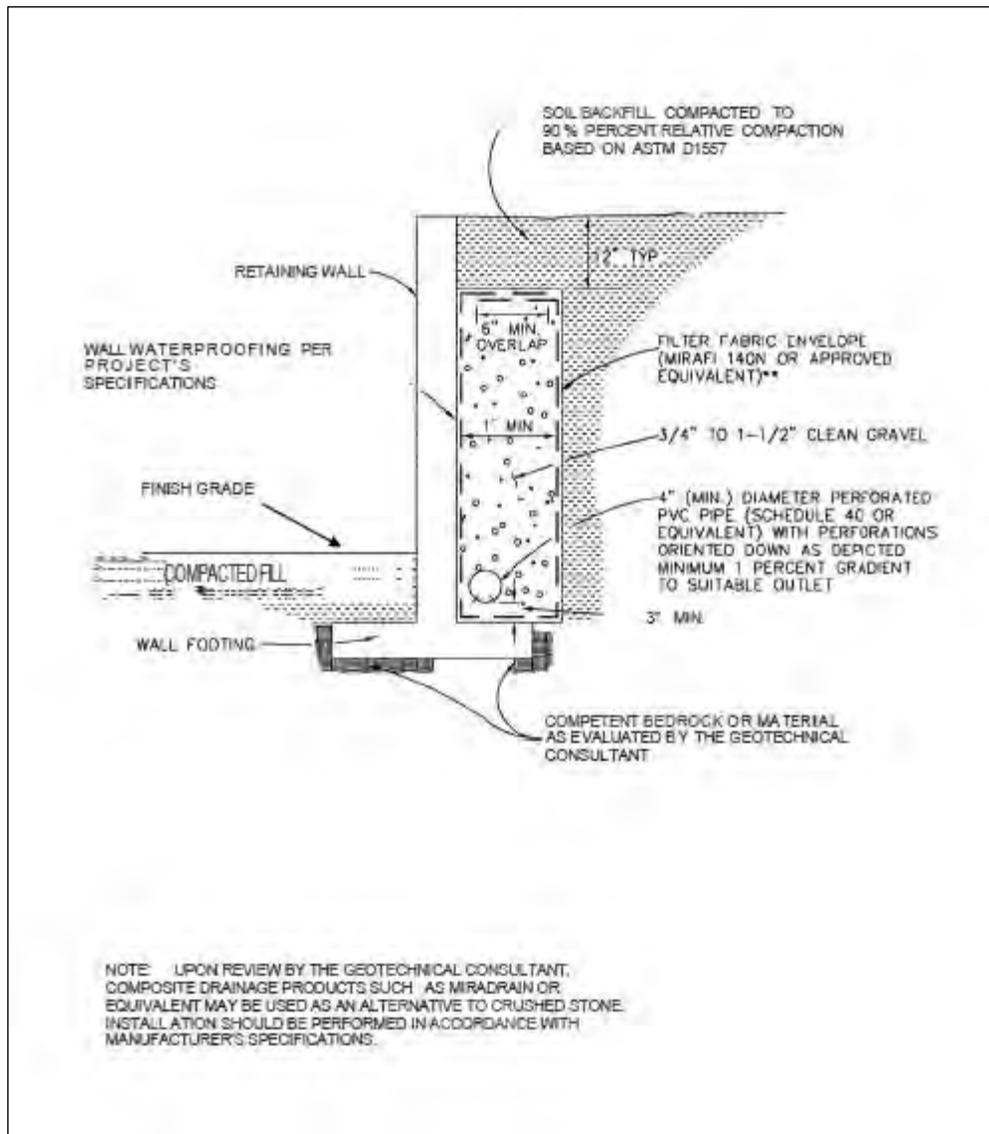
GENERAL EARTHWORK AND GRADING SPECIFICATIONS STANDARD DETAIL "C"

CUT-FILL TRANSITION FILL OVEREXCAVATION



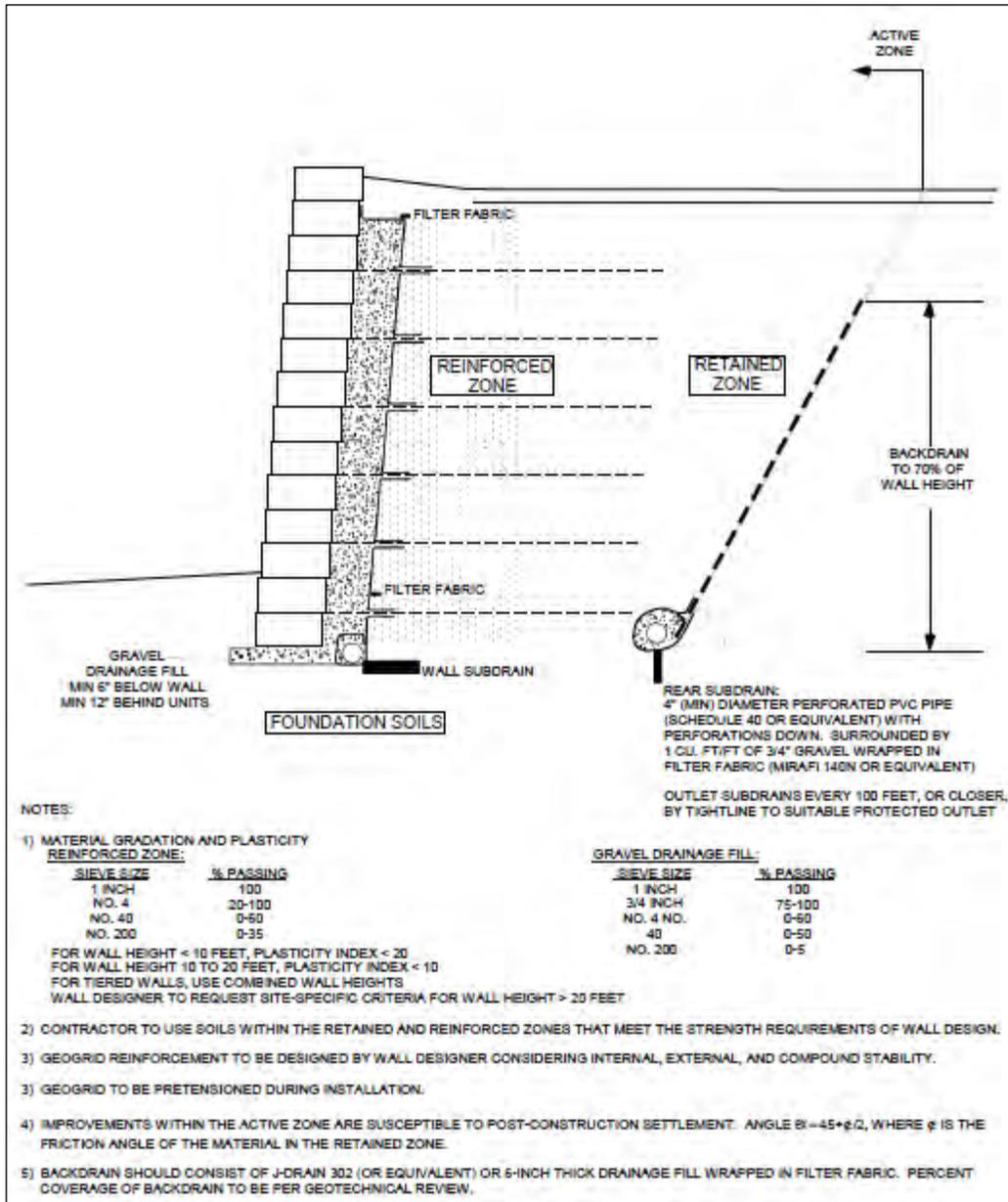
GENERAL EARTHWORK AND GRADING SPECIFICATIONS STANDARD DETAIL "D"

RETAINING WALL DRAINAGE



GENERAL EARTHWORK AND GRADING SPECIFICATIONS STANDARD DETAIL "E"

SEGMENTAL RETAINING WALL



GENERAL EARTHWORK AND GRADING SPECIFICATIONS STANDARD DETAIL " F "

APPENDIX (3)

Special Laboratory Tests

SPECIAL LABORATORY TESTS

As may be required for the geotechnical evaluations, a series of non-routine or special tests were performed to assist in the engineering analyses. The special tests performed are included in this Appendix. The special tests performed for the present project are included in the following list of laboratory tests, among other usually performed. A brief description of some of the special laboratory tests are:

Vane Shear Test

A pocket vane shear test device was used to perform various vane shear tests on samples (i.e. SPT and Undisturbed Shelby Tubes). The results of the vane shear tests are given in tons/ft.²

Mechanical Analysis of Soils

The process of separating the soil into particle-size groups, including both the sieve analysis of the coarser and fine grains was performed. Standard U.S. sieves were used to establish the Percent Finer by Weight of the samples. The percentage of fines was used to classify the samples in both the standard AASHTO and Unified Classification Systems.

Liquid & Plastic Limit Tests

The moisture content above which a soil readily becomes a liquid upon stirring is called the liquid limit. The standard Arthur Casagrande Device was used for such determination, following ASTM Specifications D423.

The plastic limit is defined as the minimum moisture content at which the soil mixture acts as a plastic solid. The standard ASTM specification D424 was followed in performing the tests.

From the above test results the plasticity index can be determined. It is defined as the numerical difference between the liquid limit and the plastic limit of the soil. In the data sheets

the tests results given in the corresponding column are the Liquid Limit (LL) and the Plasticity Index (P.I.).

Unit Weight Determination of Soils

The wet unit weight of the samples was obtained by mass per unit volume from the sample, as secured from the field. Dry unit weight determinations were obtained and are specifically mentioned in some of the tables and graphs of the geotechnical report.

Unconfined Compressive Strength Tests (Stress-Strain)

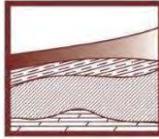
Basically, the unconfined compressive strength test is performed by axially loading a cylinder without lateral confinement. In wet fine-grained soils, the tests are performed quickly. Different from the routine Q_u tests, in the special unconfined compressive tests, which are performed in the triaxial compression chamber, the stress-strain at predetermined intervals are recorded. In the routine tests on SPT samples, the unconfined compression tests are performed by the spring tester. Sometimes, the pocket penetrometer device is used to determine the unconfined compressive strength. The test type is indicated in the corresponding column of test results.

Modified Proctor Compaction Tests

The laboratory compaction test consists for determining the maximum dry density and optimum moisture content of representative samples of in-situ or potential borrow fill sources. The Modified Proctor Density Tests are performed in accordance to the ASTM Designation D 1557, Standard Method for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures using a 10-lb. Rammer and 18-in. drop.

Free Swell Tests

The free swell tests are made in accordance to the procedures of the US Bureau of Reclamation, which provide percent total volume change from dry to a saturated condition.



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SOIL / GEOTECHNICAL ENGINEERING LABORATORIES

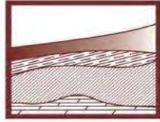
CLIENT:	Hacedor:Maker/Arquitectos
	63 Condado St. Local #3
	San Juan, P.R. 00907
	Ph: 787-725-2521
	E-mail: jfv@hacedormaker.com
PROJECT:	Improvements to Gándara Recreational Park at Juan B. Huyke Street of the Municipality of San Juan, P.R.
JOB NO.:	DA/23Y4249
DATE:	May 18, 2023

**SUMMARY OF SOIL CLASSIFICATION TESTS
AND FREE SWELL TESTS**

Boring No.	Sample Depth	Liquid Limit %	Plasticity Index %	% Passing US Sieve			Classification		% Free Swell	Clay Type Class.	
				10	40	200	AASHTO	USCS		AC*	CEAC**
2	4'-10'	56.3%	34.3%	100.0	98.4	89.5	A-7-6(33)	CH	35%	0.38	0.70
3	2'-4'	38.1%	14.2%	90.2	81.3	71.2	A-6(9)	CL	20%	0.20	0.31

* Activity Ratio

** Cation Exchange Activity



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SOIL / GEOTECHNICAL ENGINEERING LABORATORIES

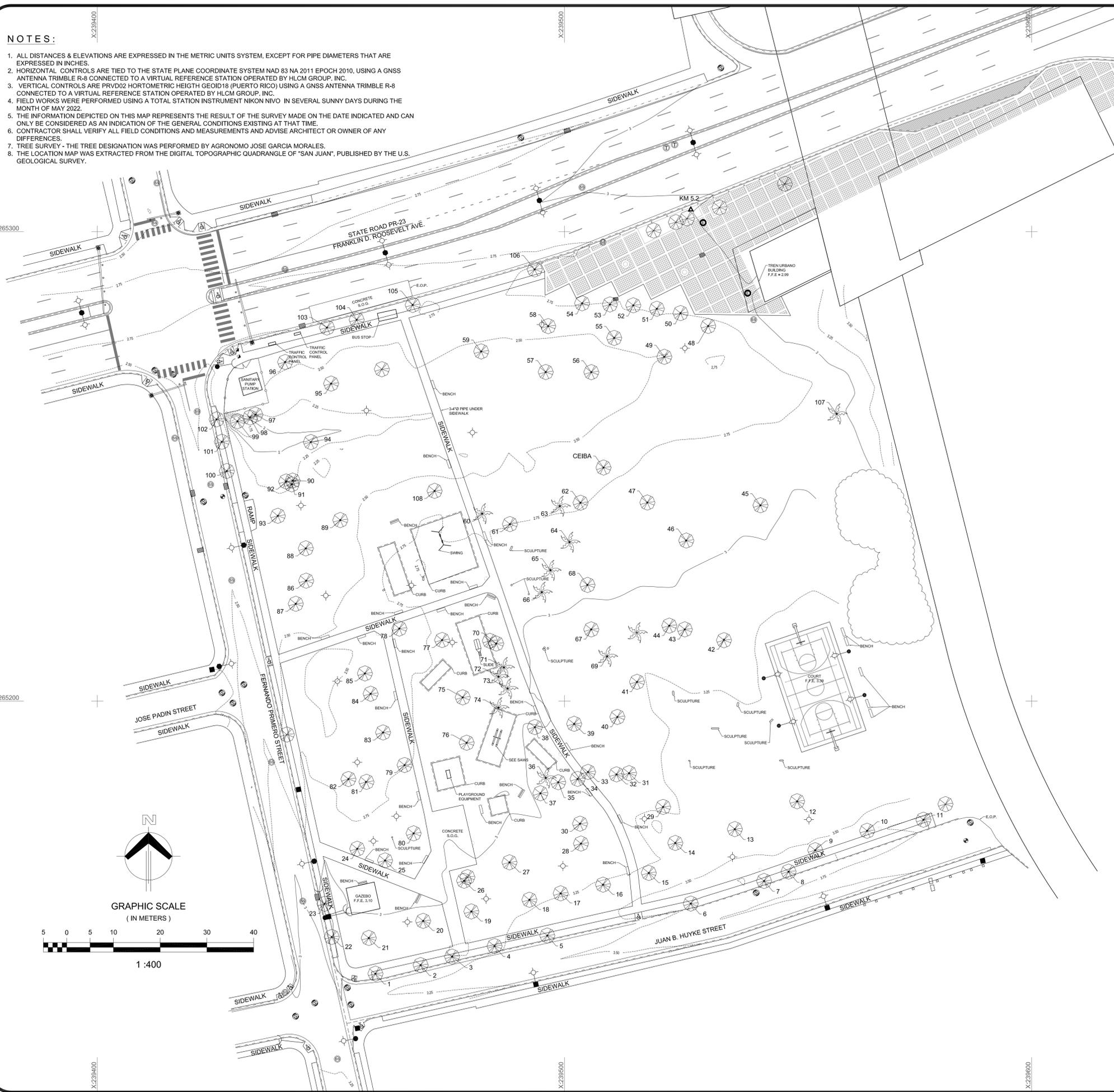
CLIENT:	Hacedor:Maker/Arquitectos
	63 Condado St. Local #3
	San Juan, P.R. 00907
	Ph: 787-725-2521
PROJECT:	Improvements to Gándara Recreational Park at Juan B. Huyke Street of the Municipality of San Juan, P.R.
JOB NO.:	DA/23Y4249
DATE:	May 18, 2023

ORGANIC CONTENT DETERMINATION

Boring No.	Sample Depth	Description	Organic Content %
2	2'-4'	Dark brown, brownish yellow sandy silt, some clay, some subangular gravel, few roots.	0.54
3	2'-4'	Very dark brown, brownish yellow, red and light gray silty clay, some subangular gravel, few roots.	0.34
3	4'-6'	Light brownish gray silty clay, trace sand, trace subangular gravel, few roots.	0.29

NOTES:

1. ALL DISTANCES & ELEVATIONS ARE EXPRESSED IN THE METRIC UNITS SYSTEM, EXCEPT FOR PIPE DIAMETERS THAT ARE EXPRESSED IN INCHES.
2. HORIZONTAL CONTROLS ARE TIED TO THE STATE PLANE COORDINATE SYSTEM NAD 83 NA 2011 EPOCH 2010, USING A GNSS ANTENNA TRIMBLE R-8 CONNECTED TO A VIRTUAL REFERENCE STATION OPERATED BY HLCM GROUP, INC.
3. VERTICAL CONTROLS ARE PROVIDED HORTOMETRIC HEIGHT GEOID18 (PUERTO RICO) USING A GNSS ANTENNA TRIMBLE R-8 CONNECTED TO A VIRTUAL REFERENCE STATION OPERATED BY HLCM GROUP, INC.
4. FIELD WORKS WERE PERFORMED USING A TOTAL STATION INSTRUMENT NIKON NIVO IN SEVERAL SUNNY DAYS DURING THE MONTH OF MAY 2022.
5. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULT OF THE SURVEY MADE ON THE DATE INDICATED AND CAN ONLY BE CONSIDERED AS AN INDICATION OF THE GENERAL CONDITIONS EXISTING AT THAT TIME.
6. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND MEASUREMENTS AND ADVISE ARCHITECT OR OWNER OF ANY DIFFERENCES.
7. TREE SURVEY - THE TREE DESIGNATION WAS PERFORMED BY AGRONOMO JOSE GARCIA MORALES.
8. THE LOCATION MAP WAS EXTRACTED FROM THE DIGITAL TOPOGRAPHIC QUADRANGLE OF "SAN JUAN", PUBLISHED BY THE U.S. GEOLOGICAL SURVEY.



ID	NOMBRE COMUN	NOMBRE CIENTIFICO	DAP	Altura	Condición
1	Guamá americano	<i>Pithecolobium dulce</i>	58	25	Deficiente
2	Guamá americano	<i>Pithecolobium dulce</i>	58	25	Deficiente
3	Guamá americano	<i>Pithecolobium dulce</i>	35	30	Deficiente
4	Guamá americano	<i>Pithecolobium dulce</i>	56	35	Deficiente
5	Guamá americano	<i>Pithecolobium dulce</i>	31.25	30	Deficiente
6	Guamá americano	<i>Pithecolobium dulce</i>	49	25	Deficiente
7	Guamá americano	<i>Pithecolobium dulce</i>	39	25	Deficiente
8	Reina de las flores	<i>Lagerstroemia speciosa</i>	16	25	Regular
9	Reina de las flores	<i>Lagerstroemia speciosa</i>	42	35	Regular
10	Reina de las flores	<i>Lagerstroemia speciosa</i>	26.5	35	Regular
11	Guamá americano	<i>Pithecolobium dulce</i>	63	50	Regular
12	Ucar	<i>Bucida buceras</i>	14.5	40	Buena
13	Ucar	<i>Bucida buceras</i>	25.5	50	Regular
14	Mangó	<i>Mangifera indica</i>	33	40	Buena
15	Ucar	<i>Bucida buceras</i>	14	40	Buena
16	Ucar	<i>Bucida buceras</i>	18	40	Regula
17	Ucar	<i>Bucida buceras</i>	23	45	Buena
18	Ucar	<i>Bucida buceras</i>	24	50	Regular
19	Ucar	<i>Bucida buceras</i>	18	40	Regular
20	Ucar	<i>Bucida buceras</i>	24	45	Regular
21	Caoba	<i>Swietenia spp.</i>	12	15	Regular
22	María	<i>Calophyllum calaba</i>	20	20	Regular
23	María	<i>Calophyllum calaba</i>	20	14	Deficiente
24	Reina de las flores	<i>Lagerstroemia speciosa</i>	25	20	Regular
25	Reina de las flores	<i>Lagerstroemia speciosa</i>	18	20	Regular
26	Pterocarpus	<i>Pterocarpus indicus</i>	42.5	35	Buena
27	Ucar	<i>Bucida buceras</i>	10	40	Buena
28	Almendra	<i>Terminalia catappa</i>	29	40	Regular
29	Ficus	<i>Ficus lyrata</i>	5	10	Buena
30	Mangó	<i>Mangifera indica</i>	26	25	Regular
31	Caoba	<i>Swietenia spp.</i>	25	40	Regular
32	Algarroba	<i>Hymenaea courbaril</i>	24	40	Regular
33	Algarroba	<i>Hymenaea courbaril</i>	20	40	Buena
34	Algarroba	<i>Hymenaea courbaril</i>	18	35	Regular
35	Algarroba	<i>Hymenaea courbaril</i>	38	45	Regular
36	Palma de coco	<i>Cocos nucifera</i>	15	50	Deficiente
37	Almendra	<i>Terminalia catappa</i>	34	40	Regular
38	Cupey	<i>Clusia rosea</i>	12.5	15	Buena
39	Caoba	<i>Swietenia spp.</i>	10	17	Buena
40	Cupey	<i>Clusia rosea</i>	7	10	Buena
41	Almendra	<i>Terminalia catappa</i>	12	12	Deficiente
42	María	<i>Calophyllum calaba</i>	28	25	Buena
43	Roble blanco	<i>Tabebuia heterophylla</i>	7.5	16	Regular
44	Roble blanco	<i>Tabebuia heterophylla</i>	7	20	Buena
45	Ceiba	<i>Ceiba pentandra</i>	14	14	Buena
46	Almendra	<i>Terminalia catappa</i>	34	40	Regular
47	Almendra	<i>Terminalia catappa</i>	29	30	Regular
48	Guamá americano	<i>Pithecolobium dulce</i>	87	50	Regular
49	María	<i>Calophyllum calaba</i>	27	30	Regular
50	Cepillo de botella	<i>Callistemon citrinus</i>	13.5	18	Buena
51	Cepillo de botella	<i>Callistemon citrinus</i>	8	14	Buena
52	Cepillo de botella	<i>Callistemon citrinus</i>	11	14	Regular
53	Cepillo de botella	<i>Callistemon citrinus</i>	13	15	Regular
54	Cepillo de botella	<i>Callistemon citrinus</i>	9	17	Buena
55	Casia de siam	<i>Senna siamea</i>	36	40	Regular
56	Caoba	<i>Swietenia spp.</i>	52	60	Regular
57	Caoba	<i>Swietenia spp.</i>	38	60	Regular
58	Caoba	<i>Swietenia spp.</i>	45	50	Regular
59	Caoba	<i>Swietenia spp.</i>	61	55	Regular
60	Palma real	<i>Roystonea borinquena</i>	19	25	Buena
61	Ceiba	<i>Ceiba pentandra</i>	6	10	Buena
62	Melaleuca	<i>Melaleuca quinquenervia</i>	26	30	Deficiente
63	Palma de coco	<i>Cocos nucifera</i>	12	8	Buena
64	Palma de coco	<i>Cocos nucifera</i>	10	7	Deficiente
65	Palma de coco	<i>Cocos nucifera</i>	9	7	Deficiente
66	Palma de coco	<i>Cocos nucifera</i>	12	4	Deficiente
67	Melaleuca	<i>Melaleuca quinquenervia</i>	15	20	Regular
68	Scheffera	<i>Scheffera actinophylla</i>	7.5	12	Buena
69	Palma real	<i>Roystonea borinquena</i>	4	4	Buena
70	Almendra	<i>Terminalia catappa</i>	33	40	Regular
71	Palma de coco	<i>Cocos nucifera</i>	13	20	Buena
72	Palma de coco	<i>Cocos nucifera</i>	10	8	Deficiente
73	Palma de coco	<i>Cocos nucifera</i>	10	18	Buena
74	Palma de coco	<i>Cocos nucifera</i>	9	6	Buena
75	Laurel benjamina	<i>Ficus benjamina</i>	10	10	Buena
76	Almendra	<i>Terminalia catappa</i>	36	35	Regular
77	María	<i>Calophyllum calaba</i>	18	35	Regular
78	Caoba	<i>Swietenia spp.</i>	40	15	Deficiente
79	Pterocarpus	<i>Pterocarpus indicus</i>	29	35	Regular
80	Ucar	<i>Bucida buceras</i>	15	35	Buena
81	Cepillo de botella	<i>Callistemon citrinus</i>	12	6	Deficiente
82	Ucar	<i>Bucida buceras</i>	22	35	Regular
83	Ucar	<i>Bucida buceras</i>	21	35	Buena
84	Almendra	<i>Terminalia catappa</i>	12	20	Regular
85	Ucar	<i>Bucida buceras</i>	26	40	Regular
86	Melaleuca	<i>Melaleuca quinquenervia</i>	23	22	Deficiente
87	Ucar	<i>Bucida buceras</i>	20	20	Deficiente
88	Melaleuca	<i>Melaleuca quinquenervia</i>	21	20	Deficiente
89	Jagüey blanco	<i>Ficus laevigata</i>	5	10	Buena
90	Jagüey blanco	<i>Ficus laevigata</i>	22	18	Deficiente
91	María	<i>Calophyllum calaba</i>	3	12	Buena
92	Moca	<i>Andra inermis</i>	8	25	Buena
93	Roble blanco	<i>Tabebuia heterophylla</i>	18	25	Regular
94	Ucar	<i>Bucida buceras</i>	22	40	Buena
95	Caoba	<i>Swietenia spp.</i>	34	40	Regular
96	Falso flamboyán	<i>Peltophorum pterocarpum</i>	63	40	Regular
97	Falso flamboyán	<i>Peltophorum pterocarpum</i>	32	22	Regular
98	Caoba	<i>Swietenia spp.</i>	11	20	Regular
99	Falso flamboyán	<i>Peltophorum pterocarpum</i>	20	20	Regular
100	María	<i>Calophyllum calaba</i>	20	25	Regular
101	María	<i>Calophyllum calaba</i>	28	25	Regular
102	María	<i>Calophyllum calaba</i>	15	20	Deficiente
103	Pterocarpus	<i>Pterocarpus indicus</i>	31	35	Buena
104	Pterocarpus	<i>Pterocarpus indicus</i>	34	40	Regular
105	Pterocarpus	<i>Pterocarpus indicus</i>	53	40	Buena
106	Pterocarpus	<i>Pterocarpus indicus</i>	36	36	Deficiente
107	Palma Real	<i>Roystonea borinquena</i>	15	35	Buena

TREE INVENTORY
OF DR. JOSE N. GANDARA PARK LOCATED AT FRANKLIN D. ROOSEVELT AVE. AND FERNANDO PRIMERO STREET HATO REY NORTE WARD, SAN JUAN PUERTO RICO

SCALE	1:400
PLAN	AS BUILT PLAN
PROJECT	227-6003
DRAWN BY	J.L.G.P.
VERIFIED BY	J.D.G.F.
DATE	JUNE 2022
INSCRIPTION DATA	
FOLD	N/A
TOMO	N/A
FRONTO	N/A
CONSTRUCION NO.	063.041.13521

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CERTIFY CORRECT:
[Signature]
JORGE D. GONZALEZ FUENTES
PROFESSIONAL SURVEYOR LIC. 7199



GEOMATIC SOLUTIONS AND SURVEYING
URB. BALDRICH - HOSTOS STREET 515 SUITE 201 HATO REY PR
TEL. 782-455-5595 782-430-1075
WWW.GEOMATICPR.COM INFO@GEOMATICPR.COM

Recomendación de acción:

Preparo listado de opinión sobre la posible acción a seguir de los árboles incluidos en la evaluación de árboles potencialmente peligrosos o de riesgo. Esta es una opinión de este servidor, pero, la determinación final debe de ser la de los diseñadores del proyecto.

#	Especie	Recomendación	Riesgo	Comentarios
1	Guamá americano	Remover	moderado	
2	Guamá americano	Remover	moderado	
3	Guamá americano	Remover	moderado	
4	Guamá americano	Remover	moderado	
5	Guamá americano	Remover	moderado	
6	Guamá americano	Remover lo mas pronto	alto	Gestionar permiso de corte con el DRNA
7	Guamá americano	Remover	moderado	
23	María	Remover	moderado	
36	Palma de coco	Remover	moderado	
41	Almendra	A discreción	bajo	
62	Melaleuca*	A discreción	bajo	
64	Palma de coco	Remover	bajo	Inevitablemente serán un riesgo mayor en un futuro a mediano plazo
65	Palma de coco	Remover	bajo	
66	Palma de coco	Remover	bajo	
78	Caoba	Remover urgente	alto	Gestionar permiso de corte con el DRNA
81	Cepillo de botella	Se puede conservar	bajo	
86	Melaleuca	Remover	moderado	
87	Ucar	Remover	bajo	Aunque sea de bajo riesgo, tiene mucho daño estructural
88	Melaleuca	A discreción	moderado	
90	Jagüey blanco	A discreción	bajo	

*Hay 4 palmas adicionales (#63, 71, 73 y 74) que pueden considerar remover ya que no es recomendable tenerlas en un parque pasivo.

En las **recomendaciones** están las alternativas:

- Remover: recomendación basada mayormente tomando en cuenta la seguridad y no necesariamente el diseño.
- A discreción: cliente decide si se remueven; sea por diseño o seguridad.
- Evaluaciones futuras: cliente decide si invierte en evaluación anual o un intervalo mayor.

Riesgo:

El resultado final de la evaluación establece cuatro clasificaciones de riesgo a saber: 1-bajo

2- moderado 3-Alto y 4- extremo.



ASBESTOS-CONTAINING MATERIALS LIMITED SURVEY

PARQUE GÁNDARA: REFURBISHMENT AND ENHANCEMENTS

Franklin D. Roosevelt Ave and Fernando Primero Street Hato Rey
Norte Ward San Juan, Puerto Rico 00918



Inspection Date: December 15, 2023
Prepared for: Municipio Autónomo de San Juan
Prepared by: Nortol Environmental & Occupational Safety, Inc.
Inspector:

Sixto Suárez
Asbestos Inspector
ASB-0523-0224-SI



NORTOL has performed this survey in a thorough and professional manner consistent with commonly accepted industry standards.

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Acronyms

A/C	=	Air Conditioning
ACM	=	Asbestos-containing Material
ACBM	=	Asbestos-containing Building Material
AHERA	=	Asbestos Hazard Emergency Response Act
ASHARA	=	Asbestos School Hazard Abatement and Reauthorization Act
CFR	=	Code of Federal Regulations
CPSC	=	Consumer Product Safety Commission
EPA	=	Environmental Protection Agency
Ft ²	=	square feet
HA	=	Homogeneous Area
HUD	=	Department of Housing and Urban Development
LF	=	Linear Feet
mg/cm ²	=	milligrams per square centimeter
NESHAP'S	=	National Emission Standards for Hazardous Air Pollutants
NIOSH	=	National Institute for Occupational Safety and Health
OSHA	=	Occupational Safety and Health Administration
PLM	=	Polarized Light Microscopy
PRDOH	=	Puerto Rico Department of Housing
PRDNER	=	Puerto Rico Department of Natural and Environmental Resources
SACM	=	Suspect ACM
SOW	=	Scope of Work
TSI	=	Thermal System Insulation
VFT	=	Vinyl floor tiles



I. INTRODUCTION

As part of the environmental due diligence, this limited survey is intended to assess the general presence, quantity, and location of suspected asbestos-containing materials (SACM) at *Parque Gándara: Refurbishment and Enhancements* property located at *Franklin D. Roosevelt Ave And Fernando Priomero Street Hato Rey Norte Wrd, San Juan PR 00918*.

The SACM limited survey was conducted on December 15, 2023, by Mr. Sixto Suárez (ACM inspector num. ASB-0523-0224-SI) from Nortol. Inspector's credential(s) is included in **Attachment 1**. Nortol's survey areas and report are limited to the details provided in Section II part D.

Nortol did not identify suspect materials at the reference structure, hence no bulk samples were collected nor sent to the laboratory for analysis. In addition, no suspect material was observed during the visual assessment that needed to be assumed as ACM.

There is concrete, and metal structural components. The floors are painted or bare concrete. The inspection was limited to areas described in the survey plan provided by the client.

II. ASBESTOS SURVEY REPORT

A. Survey Protocol:

This activity was conducted following 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 building to develop an inventory of suspect ACM homogeneous materials. During the sampling activities, suspected ACM was touched and observed by the inspector to determine its friability and physical condition. A friable material is defined as a material that when dry, can be crumbled, or reduced to powder by hand pressure. The friability of a material causally relates to the potential of the asbestos fibers to be released. The inspector assessed the suspect ACM according to their physical condition and potential damage.

B. Sampling Procedure:

The technique used for sampling the suspected accessible materials is designed to minimize possible fiber release and in turn possible contamination of surrounding areas. When apply, representative suspected material samples are collected in accordance with the EPA's AHERA/ASHARA guidelines and procedures presented in the *Guide for Controlling Asbestos Containing Materials in Building (EPA 560-6-85-024, June 1985)* and characterized following the



National Emission Standard for Hazardous Air Pollution (NESHAP), subpart M-Asbestos, 40 CFR Part 61-Standard for Demolition and Renovation. Samples of the homogeneous accessible materials are collected in quantities enough to determine asbestos content, and then placed in airtight bags. The bagged samples are properly collected, labeled, and identified. A Chain of Custody form is completed for collected bulk samples which are analyzed by an independent laboratory using the Polarized Light Microscopy (PLM) method. The laboratory utilizes dispersion staining techniques according to US EPA method 600/M4-82-020 incorporating visual estimates of identified material percentages.

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 (ACM), Category II – other Nonfriable ACM, and Regulated asbestos-containing material (RACM). ACMs are classified into three categories according to EPA-AHERA/ASHARA’s standards (40 CFR Part 763): Surfacing material, Thermal System Insulation (TSI) and Miscellaneous material.

Once the inspector has identified the ACM in a building, he or she must perform a physical assessment of TSI and friable material. Under § 763.88 of the AHERA Rule, the physical assessment of ACBM involve classifying the material into one of the following seven Categories: Damaged or significantly damaged TSI ACM; Damaged friable surfacing ACM; Significantly damaged friable surfacing ACM; Damaged or significantly damaged friable miscellaneous ACM; ACBM with potential for damage; ACBM with potential for significant damage; and Any remaining friable ACBM or friable suspected ACBM.

The PRDNER- former Environmental Quality Board (Regulation for the Control of Atmospheric Pollution-Rule 422) enacted in 1995, 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 PR State/Municipal Offices. To obtain demolition permits in Puerto Rico is necessary to include a certification (OGP-PGC-009 or equivalent) stating that there is no asbestos containing material in the project.

D. Survey Areas – Extent of Survey Coverage:

The survey included a detailed structure inspection providing a general sense of the overall location, type, quantity, and condition of potential ACMs present. The survey was thorough in the interior or exterior accessible functional spaces, and bulk samples (if applied) are taken from the observed suspect materials. The presence of asbestos in suspect materials (if applied) is



assumed or presumed in some cases without bulk samples being collected or analyzed (when applicable). This is necessary for locations where materials are inaccessible or areas that are unsafe to access (e.g., elevated heights, energized equipment, confined spaces, etc.). For those areas that were not safely accessible, suspect materials observed or presumed to be present (if applied) were documented and assumed as ACMs. The survey did not include destructive, intrusive and/or exploratory testing.

Areas Not Included in Survey and Service Constraints: All professional opinions presented in this report are based on information made available either by review of data provided by others or data gathered by Nortol personnel. Nortol affirms that data gathered and presented by Nortol in this report was collected in an appropriate manner in accordance with accepted methods and practices. Any energized utilities/services, including electricity, water and heat were assumed to be active. Materials associated with these items were determined to not be safely accessible and were not sampled. Suspect ACMs associated with these items should be assumed ACM until the systems can be de-energized and safely sampled. The survey did not include access or inspection of confined spaces or subsurface/underground areas including piping, conduits, building footings and soils (surficial or otherwise).

E. Findings

Nortol did not identify SACM at the reference structure, therefore no bulk samples were collected and/or sent to the laboratory for analysis. In addition, no suspect material was observed during the visual assessment that needed to be assumed as ACM.

Representative Pictures\Photograph Log of the structure are provided in **Attachment 2**. Certification for non-presence of asbestos is provided in **Attachment 3**.



III. CONCLUSION

ACM limited survey was conducted for the project identified with the header ID. Nortol did not identify SACM at the referenced structure, hence no bulk samples were collected and/or sent to the laboratory for analysis. In addition, no suspect material was observed during the visual assessment that needed to be assumed as ACM.

Any conditions or materials that could not be visually identified or were out-of-the SOW, were not inspected and may differ from those conditions or materials noted. It was not within the scope of the activity to remove surface materials to investigate portions of the structure or materials that may lay beneath the surface. Nortol's selection of sample locations and frequency of sampling was based on Nortol's observations and the assumption that similar materials in the same area are homogeneous in content.

The report is designed to aid the building owner, architect, construction manager, general contractors, and potential asbestos or lead abatement contractors in locating ACM. Under no circumstances is the report to be utilized solely as a bidding document or as a project specification document.



Attachment 1
Inspector's Credential



SIXTO SUAREZ
Puerto Rico
Asbestos Inspector



ASB-0523-0224-SI

Número de Registro

11-abr-2024

Fecha de vencimiento

TARJETA DE REGISTRO
PARA LA REMOCION DE ASBESTO

Esta tarjeta autoriza a:

Sixto Suárez

Inspector

A trabajar en la remoción de asbesto en
Puerto Rico. Esta persona **NO** es un
empleado del DRNA.

A handwritten signature in black ink, appearing to read "Amanda Romo".

Firma Autorizada - Departamento
Recursos Naturales y Ambientales



Attachment 2
Representative Pictures\Photograph Log





Sixto Suárez
NORTOL. Environmental & Occupational Safety, Inc.

PARQUE GÁNDARA: REFURBISHMENT AND ENHANCEMENTS - ACM SURVEY PHOTO LOG

Built circa: Not available at the moment of the inspection

Friday, December 15, 2023

Prepared For Municipio Autónomo de San Juan

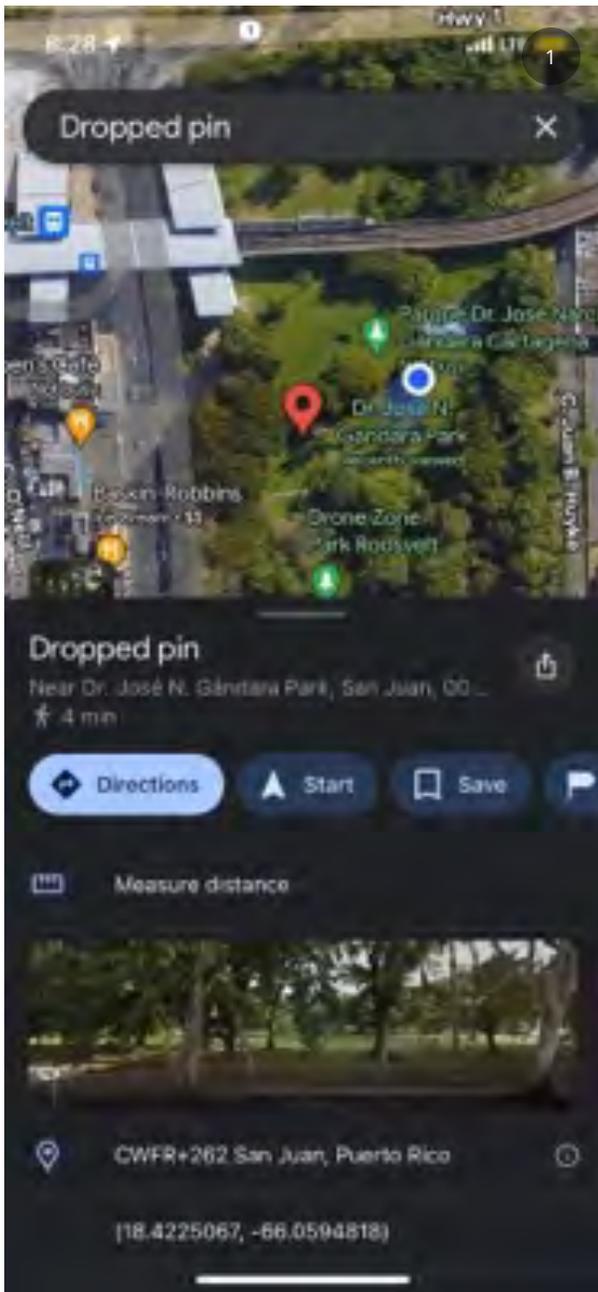
**Franklin D. Roosevelt Ave And Fernando Priomero Street Hato Rey Norte
Wrd, San Juan PR 00918**



FRONT VIEW:
(18.4225067, -66.0594818)

LOCATION:

(18.4225067, -66.0594818)



SCOPE OF WORK:

1

Inspección asbesto y plomo descrito en documentos de apoyo.



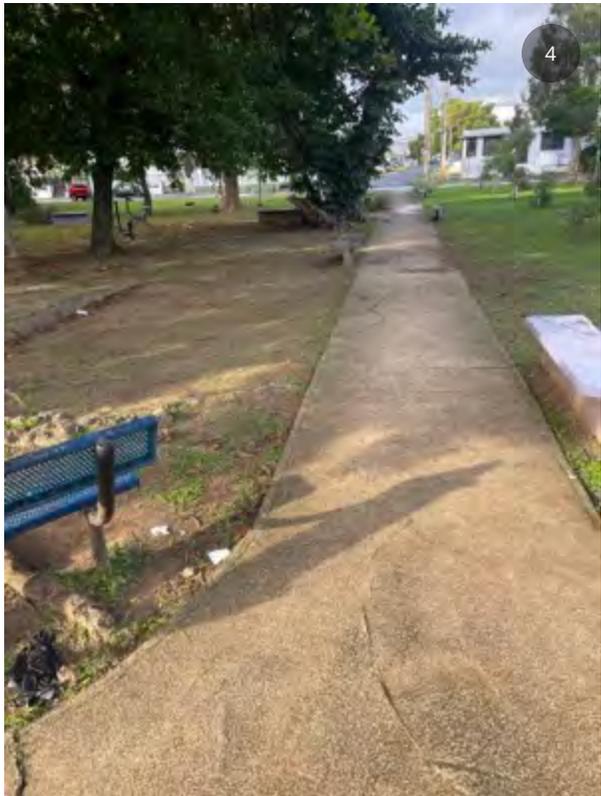
EXTERIOR GENERAL VIEWS: BASKETBALL COURT



EXTERIOR GENERAL VIEWS: PLAYGROUND



EXTERIOR GENERAL VIEWS: PARK





1

IS THERE ANY AREA WITHOUT ACCESS?

No.



1

IS THERE ANY VISIBLE INDICATION OF MOLD?

No, mold was not found visible at the moment of the inspection.



1

ARE THERE SIGNS OF POOR HOUSEKEEPING ON SITE? (MOUNDS OF RUBBLE, GARBAGE, STORM DEBRIS, SOLID WASTE, PETROLEUM PRODUCTS, PAINT, PESTICIDES, CLEANING FLUIDS, VEHICLE BATTERIES, ABANDONED VEHICLES, PITS, POOLS, PONDS OF HAZARDOUS SUBSTANCES, ETC.)

No.

1

ARE ANY ADDITIONAL SITE HAZARDS OBSERVED?

No.



SACM VISIBLE?

No SACM visible at the moment of the inspection.

Attachment 3
Certification for Non-Presence Asbestos (PGC-009)





CERTIFICACION DE NO PRESENCIA DE ASBESTO EN ESTRUCTURAS A DEMOLERSE

(Deberá completarse en letra de molde o impresa)

PGC- _____
PARA USO OFICIAL

Yo, Sixto Suárez, mayor de edad, casado, y vecino de Juana Díaz, Puerto Rico
(Nombre) (Estado Civil) (Municipio)

Dirección Postal P.O. Box 366457, San Juan P.R. 00936-8457
(Pueblo) (Zip Code)

Teléfonos: Residencial (787) 453-6127 Oficina (787) 420-0220
Fax (787) N/A

Certifico que:

1. La estructura Parque Gándara (CRP-00927 Refurbishment and Enhancements) localizada en avenida Franklin D. Roosevelt y calle Fernando Primero, Hato Rey Norte Wrd, San Juan, P.R., la cual será objeto de una demolición se encuentra libre de asbesto.
2. La información antes indicada es cierta y correcta.
3. Afirmo y reconozco las consecuencias de incluir y someter información falsa en este documento.
4. Para que así conste, firmo la presente certificación en San Juan de Puerto Rico,
(Municipio)
hoy día 15 de diciembre de 2023.

Firma y Sello del Profesional o
Firma del Inspector de Asbesto registrado por la JCA (Original)

Nota: Ingenieros o Arquitectos deberán someter evidencia de que se encuentra al día en el pago de sus cuotas de colegiación e Inspectores de Asbesto deberán someter evidencia de la tarjeta de registro provista por la JCA.

	<p>TARJETA DE REGISTRO PARA LA REMOCION DE ASBESTO</p> <p>Esta tarjeta autoriza a:</p> <p><i>Sixto Suárez</i></p> <hr/> <p>Inspector</p> <p>A trabajar en la remoción de asbesto en Puerto Rico. Esta persona NO es un empleado del DRNA.</p> <p><i>Sixto Suárez</i></p> <hr/> <p>Firma Autorizada - Departamento Recursos Naturales y Ambientales</p>
<p>ASB-0523-0224-SI</p> <hr/> <p>Número de Registro</p> <p>11-abr-2024</p> <hr/> <p>Fecha de vencimiento</p>	

PR Asbestos Inspector Accreditation



LEAD-BASED PAINT LIMITED SURVEY

PARQUE GÁNDARA: REFURBISHMENT AND ENHANCEMENTS

Franklin D. Roosevelt Ave and Fernando Primero Street Hato Rey
Norte Ward San Juan, Puerto Rico 00918



Inspection Date: December 15, 2023
Prepared for: Municipio Autónomo de San Juan
Prepared by: Nortol Environmental & Occupational Safety, Inc.
Inspector:

Roberto Rodríguez
Lead Inspector
LBP I.D. # LBPI-05422-074



NORTOL has performed this survey in a thorough and professional manner consistent with commonly accepted industry standards.

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Attachment 5 – Certification for Non-Presence LBP (PGC-010)

Attachment 6 – XRF Performance Characteristic Sheet



Acronyms

A/C	=	Air Conditioning
CFR	=	Code of Federal Regulations
CPSC	=	Consumer Product Safety Commission
EPA	=	Environmental Protection Agency
Ft ²	=	square feet
HA	=	Homogeneous Area
HUD	=	Department of Housing and Urban Development
LBP	=	Lead-based Paint
LF	=	Linear Feet
mg/cm ²	=	milligrams per square centimeter
NESHAP'S	=	National Emission Standards for Hazardous Air Pollutants
NIOSH	=	National Institute for Occupational Safety and Health
OSHA	=	Occupational Safety and Health Administration
PRDOH	=	Puerto Rico Department of Housing
PRDRNER	=	Puerto Rico Department of Natural and Environmental Resources
SOW	=	Scope of Work
XRF	=	X-Ray Fluorescent



I. INTRODUCTION

As part of the environmental due diligence, this limited survey is intended to assess the general presence, quantity, and location of LBP and lead-glazed ceramic components above allowable levels at *Parque Gándara: Refurbishment and Enhancements* property located at *Franklin D. Roosevelt Ave And Fernando Priomero Street Hato Rey Norte Wrd, San Juan PR 00918*.

The LBP limited survey, conforming to Housing Urban Development (HUD) Guidelines for the Evaluation and Control of Lead Based Paint in Housing, was conducted on December 15, 2023, by Mr. Roberto Rodríguez (Lead inspector number: LBPI-05422-074) from Nortol. Copy of Nortol's registration with the PRDNER as registered corporation is included in **Attachment 1**. Inspector's credential(s) is included in **Attachment 2**. Nortol's survey areas and report are limited to the details provided in Section II part D.

Based on the results of the survey, 60 XRF readings were performed using an XRF analyzer on identified and accessible surfaces in the interior and/or exterior of the subject structure. LBP was not identified above the regulatory level of 1.0 mg/cm² in SOW.

There is concrete, and metal structural components. The floors are painted or bare concrete. The inspection was limited to areas described in the survey plan provided by the client.

II. LEAD BASED PAINT SURVEY REPORT

A. Lead Based Paint Findings:

LBP was not found in the project accessed components. Data from XRF analyzer testing is included in **Attachment 3**. **Attachment 4** includes Representative Pictures\Photograph Log of the structure. Certification for non-presence of lead-based paints or lead-glazes is provided in **Attachment 5**.

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 assessing the 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 assessed.
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/cm². **Attachment 6** includes the XRF Performance Characteristic Sheet (PCS) of the analyzer.

The **letters A, B, C, and D** used in the survey refers to:

- A ⇒ Main entrance side orientation (to street)
- 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 LBP, urban soil, 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/cm² 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 regulations published in 1992, under Title X.

Although 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, 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 CFR 1926 by adding a new section 1926.62, containing employee protection requirements for construction workers exposed to lead.

On July 1998, the PRDNER - former PR Environmental Quality Board regulations regarding to LBP was created to issue activity permits, accredit institutions, and certificate persons involved in LBP activities in Puerto Rico. Local regulations require all lead to be managed as a special waste. On July 2019 this regulation was replaced by the new *Reglamento para el Manejo Adecuado de Actividades de Pintura con Base de Plomo*. To obtain a demolition permit in Puerto Rico is necessary to include a certification (OGP-PGC-010 or equivalent) stating that there is no LBP in the project.

D. Survey Areas – Extent of Survey Coverage:

The survey included a detailed structure inspection providing a general sense of the overall location, type, quantity, and condition of LBP and LBP ceramic components. The LBP survey was performed to ready accessible components and surfaces. If any suspect coated surface or ceramic components, that could contain lead, are encountered underneath current installed tiles or other construction material during demolition and/or renovation activities, which differ from materials tested during the LBP survey, these should be assumed to be Lead containing until testing/analysis confirmed otherwise. The survey was unobtrusive as samples were not taken where doing so would have resulted in objectionable damage to surfaces. Therefore, the survey did not include destructive, intrusive and/or exploratory testing.

Areas Not Included in Survey and Service Constraints: All professional opinions presented in this report are based on information made available either by review of data provided by others or data gathered by Nortol personnel. Nortol affirms that data gathered and presented by Nortol in this report was collected in an appropriate manner in accordance with accepted methods and



practices. Any energized utilities/services, including electricity, water and heat were assumed to be active. Materials associated with these items were determined to not be safely accessible and were not sampled. The survey did not include access or inspection of confined spaces or subsurface/underground areas including piping, conduits, building footings and soils (surficial or otherwise).

III. CONCLUSION

LBP limited survey was conducted for the project identified with the header ID. LBP or lead-glaze was not identified above the regulatory level of 1.0 mg/cm² at the subject structure. In addition, lead containing ceramic components were not identified to contain lead above the regulatory level.

Data from XRF analyzer testing results is included in **Attachment 3**. **Attachment 4** includes Representative Pictures\Photograph Log of the structure. Certification for non-presence of lead-based paints or lead-glazes is provided in **Attachment 5**.

Any conditions or materials that could not be visually identified or were out-of-the SOW, were not inspected and may differ from those conditions or materials noted. It was not within the scope of the activity to remove surface materials to investigate portions of the structure or materials that may lay beneath the surface. Nortol's selection of sample locations and frequency of sampling was based on Nortol's observations and the assumption that similar materials in the same area are homogeneous in content.

The report is designed to aid the building owner, architect, construction manager, general contractors, and potential asbestos or lead abatement contractors in locating LBP or lead-glaze. Under no circumstances is the report to be utilized solely as a bidding document or as a project specification document.



Attachment 1
Company Credentials





NAT-F121771-2

Attachment 2
Inspector's Credentials



ROBERTO RODRIGUEZ
Puerto Rico
Lead-based Paint Inspector



Attachment 3
LBP XRF Tabulated Readings



PARQUE GANDARA REFURBISHMENT AND ENHANCEMENTS XRF SHEET

Company		Heuresis Corp.															
Model	P800i																
Type	XRF Lead Paint Analyzer																
Serial Num.	2705																
App Version	pb200i-5.3.1																
Job Id	Reading #	Concentration	Units	Result	Level	Date	Time	Inspector	Job	Room	Structure	Component	Substrate	Wall	Color	Condition	Approx. Qty.
-	1	1.1	mg/cm2	Positive	1	12/15/2023	9:34:17	R.RODRIGUEZ	-	-	Calibration	-	-	-	-	-	-
-	2	1	mg/cm2	Positive	1	12/15/2023	9:34:41	R.RODRIGUEZ	-	-	Calibration	-	-	-	-	-	-
-	3	1	mg/cm2	Positive	1	12/15/2023	9:35:05	R.RODRIGUEZ	-	-	Calibration	-	-	-	-	-	-
PARQUE GANDARA	4	0.3	mg/cm2	Negative	1	12/15/2023	9:36:13	R.RODRIGUEZ	295	Exterior	Basketball Court	Floor	Concrete	-	Gray	Intact	-
PARQUE GANDARA	5	0.4	mg/cm2	Negative	1	12/15/2023	9:36:25	R.RODRIGUEZ	295	Exterior	Basketball Court	Floor	Concrete	-	Gray	Intact	-
PARQUE GANDARA	6	0.3	mg/cm2	Negative	1	12/15/2023	9:36:41	R.RODRIGUEZ	295	Exterior	Basketball Court	Floor	Concrete	-	Gray	Intact	-
PARQUE GANDARA	7	0	mg/cm2	Negative	1	12/15/2023	9:37:23	R.RODRIGUEZ	295	Exterior	Basketball Court	Floor Mark	Concrete	-	White	Intact	-
PARQUE GANDARA	8	0	mg/cm2	Negative	1	12/15/2023	9:37:36	R.RODRIGUEZ	295	Exterior	Basketball Court	Floor Mark	Concrete	-	White	Intact	-
PARQUE GANDARA	9	0	mg/cm2	Negative	1	12/15/2023	9:38:48	R.RODRIGUEZ	295	Exterior	Basketball Court	Post	Concrete	-	White	Intact	-
PARQUE GANDARA	10	0	mg/cm2	Negative	1	12/15/2023	9:38:59	R.RODRIGUEZ	295	Exterior	Basketball Court	Post	Concrete	-	White	Intact	-
PARQUE GANDARA	11	0	mg/cm2	Negative	1	12/15/2023	9:40:12	R.RODRIGUEZ	295	Exterior	Basketball Court	Bench	Concrete	-	Blue	Intact	-
PARQUE GANDARA	12	0	mg/cm2	Negative	1	12/15/2023	9:40:24	R.RODRIGUEZ	295	Exterior	Basketball Court	Bench	Concrete	-	Blue	Intact	-
PARQUE GANDARA	13	0	mg/cm2	Negative	1	12/15/2023	9:40:35	R.RODRIGUEZ	295	Exterior	Basketball Court	Bench	Concrete	-	Blue	Intact	-
PARQUE GANDARA	14	0.4	mg/cm2	Negative	1	12/15/2023	9:41:09	R.RODRIGUEZ	295	Exterior	Basketball Court	Post	Metal	-	Gray	Intact	-
PARQUE GANDARA	15	0.5	mg/cm2	Negative	1	12/15/2023	9:41:21	R.RODRIGUEZ	295	Exterior	Basketball Court	Post	Metal	-	Gray	Intact	-
PARQUE GANDARA	16	0.1	mg/cm2	Negative	1	12/15/2023	9:42:34	R.RODRIGUEZ	295	Exterior	Playground	Bench	Concrete	-	Purple	Intact	-
PARQUE GANDARA	17	0.2	mg/cm2	Negative	1	12/15/2023	9:42:54	R.RODRIGUEZ	295	Exterior	Playground	Bench	Concrete	-	Purple	Intact	-
PARQUE GANDARA	18	0.4	mg/cm2	Negative	1	12/15/2023	9:43:16	R.RODRIGUEZ	295	Exterior	Playground	Bench	Concrete	-	Purple	Intact	-
PARQUE GANDARA	19	0.1	mg/cm2	Negative	1	12/15/2023	9:43:54	R.RODRIGUEZ	295	Exterior	Playground	Bench	Concrete	-	Purple	Intact	-
PARQUE GANDARA	20	0	mg/cm2	Negative	1	12/15/2023	9:44:06	R.RODRIGUEZ	295	Exterior	Playground	Bench	Concrete	-	Purple	Intact	-
PARQUE GANDARA	21	0.1	mg/cm2	Negative	1	12/15/2023	9:44:41	R.RODRIGUEZ	295	Exterior	Playground	Bench	Metal	-	Green	Intact	-
PARQUE GANDARA	22	0.1	mg/cm2	Negative	1	12/15/2023	9:45:22	R.RODRIGUEZ	295	Exterior	Playground	Bench	Metal	-	Blue	Intact	-
PARQUE GANDARA	23	0	mg/cm2	Negative	1	12/15/2023	9:45:34	R.RODRIGUEZ	295	Exterior	Playground	Bench	Metal	-	Blue	Intact	-
PARQUE GANDARA	24	0.2	mg/cm2	Negative	1	12/15/2023	9:46:36	R.RODRIGUEZ	295	Exterior	Playground	Pole	Metal	-	Orange	Intact	-
PARQUE GANDARA	25	0.2	mg/cm2	Negative	1	12/15/2023	9:47:27	R.RODRIGUEZ	295	Exterior	Playground	Pole	Metal	-	Orange	Intact	-
PARQUE GANDARA	26	0.4	mg/cm2	Negative	1	12/15/2023	9:48:24	R.RODRIGUEZ	295	Exterior	Playground	Pole	Metal	-	Orange	Intact	-
PARQUE GANDARA	27	0.2	mg/cm2	Negative	1	12/15/2023	9:48:54	R.RODRIGUEZ	295	Exterior	Playground	Pole	Metal	-	Orange	Intact	-
PARQUE GANDARA	28	0.1	mg/cm2	Negative	1	12/15/2023	9:49:06	R.RODRIGUEZ	295	Exterior	Playground	Pole	Metal	-	Orange	Intact	-
PARQUE GANDARA	29	0.1	mg/cm2	Negative	1	12/15/2023	9:49:17	R.RODRIGUEZ	295	Exterior	Playground	Pole	Metal	-	Orange	Intact	-
PARQUE GANDARA	30	0	mg/cm2	Negative	1	12/15/2023	9:49:28	R.RODRIGUEZ	295	Exterior	Playground	Pole	Metal	-	Orange	Intact	-
PARQUE GANDARA	31	0.2	mg/cm2	Negative	1	12/15/2023	9:49:51	R.RODRIGUEZ	295	Exterior	Playground	Pole	Metal	-	Beige	Intact	-
PARQUE GANDARA	32	0.3	mg/cm2	Negative	1	12/15/2023	9:50:03	R.RODRIGUEZ	295	Exterior	Playground	Pole	Metal	-	Beige	Intact	-
PARQUE GANDARA	33	0.1	mg/cm2	Negative	1	12/15/2023	9:50:28	R.RODRIGUEZ	295	Exterior	Playground	Pole	Metal	-	Green	Intact	-
PARQUE GANDARA	34	0	mg/cm2	Negative	1	12/15/2023	9:50:51	R.RODRIGUEZ	295	Exterior	Playground	Pole	Metal	-	Black	Intact	-
PARQUE GANDARA	35	0.1	mg/cm2	Negative	1	12/15/2023	9:51:21	R.RODRIGUEZ	295	Exterior	Playground	Pole	Metal	-	Black	Intact	-
PARQUE GANDARA	36	0	mg/cm2	Negative	1	12/15/2023	9:51:39	R.RODRIGUEZ	295	Exterior	Playground	Pole	Metal	-	Black	Intact	-
PARQUE GANDARA	37	0	mg/cm2	Negative	1	12/15/2023	9:52:24	R.RODRIGUEZ	295	Exterior	Playground	Treads	Metal	-	Blue	Intact	-
PARQUE GANDARA	38	0	mg/cm2	Negative	1	12/15/2023	9:52:40	R.RODRIGUEZ	295	Exterior	Playground	Risers	Metal	-	Blue	Intact	-



PARQUE GANDARA REFURBISHMENT AND ENHANCEMENTS XRF SHEET

Company		Heuresis Corp.															
Model	PB00i																
Type	XRF Lead Paint Analyzer																
Serial Num.	2705																
App Version	pb200i-5.3.1																
Job Id	Reading #	Concentration	Units	Result	Level	Date	Time	Inspector	Job	Room	Structure	Component	Substrate	Wall	Color	Condition	Approx. Qty.
PARQUE GANDARA	39	0.1	mg/cm2	Negative	1	12/15/2023	9:53:54	R.RODRIGUEZ	295	Exterior	Gazebo	Column	Concrete	-	Gray	Intact	-
PARQUE GANDARA	40	0.2	mg/cm2	Negative	1	12/15/2023	9:54:05	R.RODRIGUEZ	295	Exterior	Gazebo	Column	Concrete	-	Gray	Intact	-
PARQUE GANDARA	41	0.1	mg/cm2	Negative	1	12/15/2023	9:54:16	R.RODRIGUEZ	295	Exterior	Gazebo	Column	Concrete	-	Gray	Intact	-
PARQUE GANDARA	42	0.1	mg/cm2	Negative	1	12/15/2023	9:54:32	R.RODRIGUEZ	295	Exterior	Gazebo	Column	Concrete	-	Gray	Intact	-
PARQUE GANDARA	43	0	mg/cm2	Negative	1	12/15/2023	9:54:44	R.RODRIGUEZ	295	Exterior	Gazebo	Column	Concrete	-	Gray	Intact	-
PARQUE GANDARA	44	0.1	mg/cm2	Negative	1	12/15/2023	9:55:34	R.RODRIGUEZ	295	Exterior	Gazebo	Bench	Metal	-	Green	Intact	-
PARQUE GANDARA	45	0	mg/cm2	Negative	1	12/15/2023	9:56:04	R.RODRIGUEZ	295	Exterior	Gazebo	Bench	Metal	-	Purple	Intact	-
PARQUE GANDARA	46	0.1	mg/cm2	Negative	1	12/15/2023	9:56:41	R.RODRIGUEZ	295	Exterior	Gazebo	Ceiling	Metal	-	Unpainted	Intact	-
PARQUE GANDARA	47	0.1	mg/cm2	Negative	1	12/15/2023	9:57:20	R.RODRIGUEZ	295	Exterior	Gazebo	Floor	Concrete	-	Unpainted	Intact	-
PARQUE GANDARA	48	0.1	mg/cm2	Negative	1	12/15/2023	9:58:10	R.RODRIGUEZ	295	Exterior	Playground	Risers	Metal	-	Blue	Intact	-
PARQUE GANDARA	49	0.1	mg/cm2	Negative	1	12/15/2023	9:58:21	R.RODRIGUEZ	295	Exterior	Gazebo	Column	Concrete	-	Gray	Intact	-
PARQUE GANDARA	50	0.1	mg/cm2	Negative	1	12/15/2023	9:58:34	R.RODRIGUEZ	295	Exterior	Gazebo	Column	Concrete	-	Gray	Intact	-
PARQUE GANDARA	51	0.1	mg/cm2	Negative	1	12/15/2023	9:58:45	R.RODRIGUEZ	295	Exterior	Gazebo	Column	Concrete	-	Gray	Intact	-
PARQUE GANDARA	52	0.1	mg/cm2	Negative	1	12/15/2023	9:58:56	R.RODRIGUEZ	295	Exterior	Gazebo	Column	Concrete	-	Gray	Intact	-
PARQUE GANDARA	53	0.1	mg/cm2	Negative	1	12/15/2023	9:59:07	R.RODRIGUEZ	295	Exterior	Gazebo	Column	Concrete	-	Gray	Intact	-
PARQUE GANDARA	54	0	mg/cm2	Negative	1	12/15/2023	9:59:19	R.RODRIGUEZ	295	Exterior	Gazebo	Bench	Metal	-	Green	Intact	-
PARQUE GANDARA	55	0.1	mg/cm2	Negative	1	12/15/2023	9:59:30	R.RODRIGUEZ	295	Exterior	Gazebo	Bench	Metal	-	Purple	Intact	-
PARQUE GANDARA	56	0	mg/cm2	Negative	1	12/15/2023	9:59:41	R.RODRIGUEZ	295	Exterior	Gazebo	Ceiling	Metal	-	Unpainted	Intact	-
PARQUE GANDARA	57	0.2	mg/cm2	Negative	1	12/15/2023	9:59:52	R.RODRIGUEZ	295	Exterior	Gazebo	Floor	Concrete	-	Unpainted	Intact	-
-	58	1	mg/cm2	Positive	1	12/15/2023	10:00:50	R.RODRIGUEZ	-	-	Calibration	-	-	-	-	-	-
-	59	1.1	mg/cm2	Positive	1	12/15/2023	10:01:14	R.RODRIGUEZ	-	-	Calibration	-	-	-	-	-	-
-	60	1.1	mg/cm2	Positive	1	12/15/2023	10:01:51	R.RODRIGUEZ	-	-	Calibration	-	-	-	-	-	-



DUPLICATED READINGS

Attachment 4
Representative Pictures\Photograph Log





Roberto Rodríguez
NORTOL. Environmental & Occupational Safety, Inc.

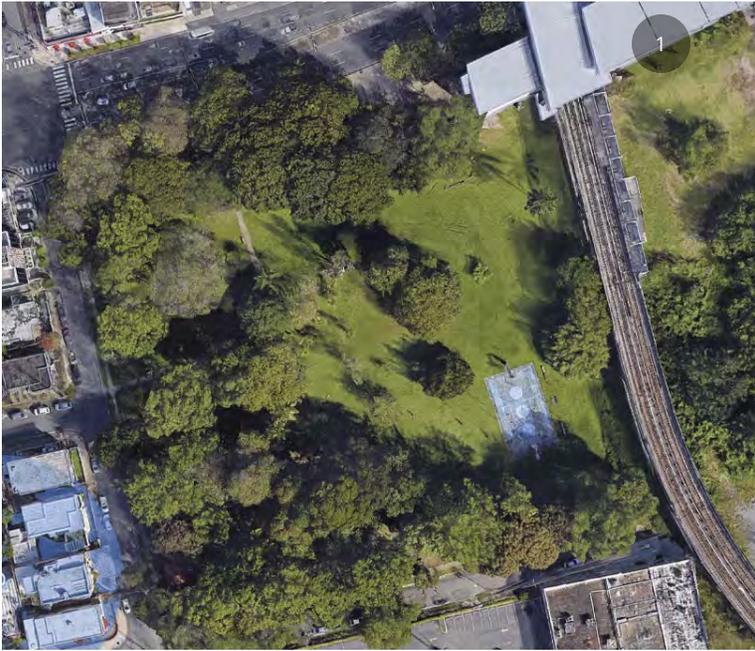
PARQUE GÁNDARA: REFURBISHMENT AND ENHANCEMENTS - LBP SURVEY PHOTO LOG

Built circa: Not available at the moment of the inspection

Friday, December 15, 2023

Prepared For Municipio Autónomo de San Juan

**Franklin D. Roosevelt Ave And Fernando Priomero Street Hato Rey Norte
Wrd, San Juan PR 00918**

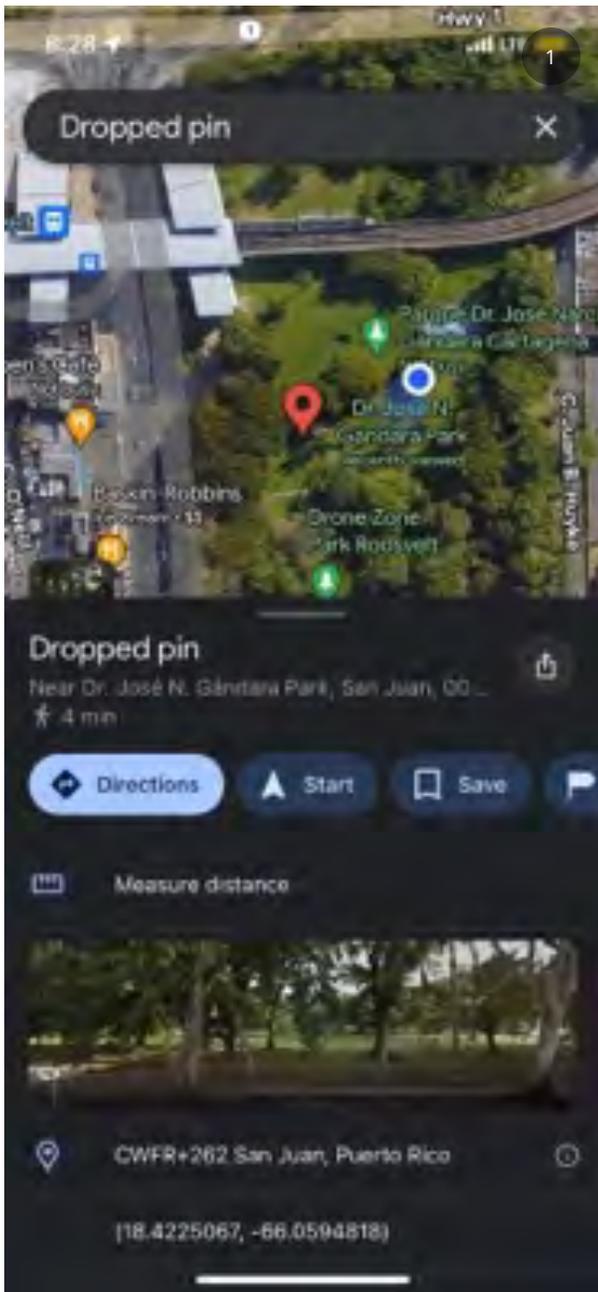


FRONT VIEW:

(18.4225067, -66.0594818)

LOCATION:

(18.4225067, -66.0594818)



SCOPE OF WORK:

1

Inspección asbesto y plomo descrito en documentos de apoyo.



EXTERIOR GENERAL VIEWS: BASKETBALL COURT



EXTERIOR GENERAL VIEWS: PLAYGROUND



EXTERIOR GENERAL VIEWS: PARK





1

IS THERE ANY AREA WITHOUT ACCESS?

No.



1

IS THERE ANY VISIBLE INDICATION OF MOLD?

No, mold was not found visible at the moment of the inspection.



1

ARE THERE SIGNS OF POOR HOUSEKEEPING ON SITE? (MOUNDS OF RUBBLE, GARBAGE, STORM DEBRIS, SOLID WASTE, PETROLEUM PRODUCTS, PAINT, PESTICIDES, CLEANING FLUIDS, VEHICLE BATTERIES, ABANDONED VEHICLES, PITS, POOLS, PONDS OF HAZARDOUS SUBSTANCES, ETC.)

No.

1

ARE ANY ADDITIONAL SITE HAZARDS OBSERVED?

No.



LBP DETECTED?

No LBP detected at the moment of the inspection.

Attachment 5
Certification for Non-Presence LBP





**CERTIFICACION DE NO PRESENCIA DE PINTURA CON BASE DE PLOMO
EN ESTRUCTURAS A DEMOLERSE**
(Deberá completarse en letra de molde o impresa)

NUM. PERMISO: _____

Yo, Roberto Rodríguez, mayor de edad, casado, y vecino de Juana Díaz P.R.
(Inspector o Evaluador de Riesgos) (Estado Civil) (Municipio)

Dirección Postal PO Box 366457 San Juan, P.R. 00936-6457
(Pueblo) (Zip Code)

Teléfonos Residencial: (939) 775-7287 Oficina: (787) 420-0220

Certifico que:

1. Estoy certificado por la Junta de Calidad Ambiental como (Inspector / Evaluador de Riesgos) con Número de Certificación LBPI-05422-074, la cual se encuentra vigente.
2. La estructura Parque Gándara (CRP-00927 Refurbishment and Enhancements) localizada en avenida Franklin D. Roosevelt y calle Fernando Primero, Hato Rey Norte Wrd, San Juan, P.R., la cual será objeto de una demolición se encuentra libre de pintura con base de plomo.
3. La información antes indicada es cierta y correcta.
4. Afirmo y reconozco las consecuencias de incluir y someter información falsa en este documento.
5. Para que así conste, firmo la presente certificación en San Juan de Puerto Rico,
(Municipio)
hoy día 15 de diciembre de 2023

Firma del Inspector o Evaluador de Riesgos (en original)

Nota : Deberá someter evidencia de la tarjeta o certificado provista por la JCA.



Roberto Rodríguez Rodríguez

Puerto Rico

Lead-based Paint Inspector Accreditations



NAT-F121771-2



GOBIERNO DE PUERTO RICO

Departamento de Recursos Naturales y Ambientales

Este certificado es otorgado a:

Nortol Environmental & Occupational Safety, Inc.

Por haber cumplido con los requisitos establecidos en el Capítulo VI, Regla 127 del Reglamento para el Manejo Adecuado de Actividades de Pintura con Base de Plomo. Se le otorga esta certificación como Firma para llevar a cabo actividades relacionadas a Mitigación de Pintura con base de plomo en la jurisdicción de Puerto Rico.

Número de Certificado

LBPf-04023-008

Fecha de emisión: Marzo 5, 2023

Fecha de Expiración: Marzo 4, 2024




José Roque Juliá
Jefe
División Desperdicios Tóxicos

Attachment 6
XRF Performance Characteristic Sheet



Performance Characteristic Sheet

EFFECTIVE DATE: September 1, 2022

MANUFACTURER AND MODEL:

Make: *Heuresis*
Models: *Model Pb200i, Pb200e*
Source: *⁵⁷Co, 5 mCi (nominal – new source)*

FIELD OPERATION GUIDANCE

OPERATING PARAMETERS:

Action Level 1.0 mg/cm²

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	1.0
	Concrete	1.0
	Drywall	1.0
	Metal	1.0
	Plaster	1.0
	Wood	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/cm² in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm² 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/cm² 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/cm² 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/cm². 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/cm² NIST SRM is shown in this example; use the actual lead loading of the NIST SRM used for substrate correction):

$$\text{Correction value} = (1\text{st} + 2\text{nd} + 3\text{rd} + 4\text{th} + 5\text{th} + 6\text{th Reading})/6 - 1.02 \text{ mg/cm}^2$$

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/cm². 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/cm²)	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/cm²), 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.



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