

Environmental Assessment

Determinations and Compliance Findings for HUD-assisted Projects

24 CFR Part 58

Project Information

Project Name: Construction of New Public Parking (PR-CRP-000988)

Responsible Entity: Puerto Rico Department of Housing (PRDOH)

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

State/Local Identifier: Puerto Rico/Barranquitas

Preparer: Eng. Carlos Gonzalez Morales, Environmental Consultant

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Consultant (if applicable): Ing. Carlos Gonzalez Morales - Consultor Ambiental

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Project Location:

Address: State Road PR-156 Km 16.3, Pueblo Ward, Barranquitas, PR 00794
Cadastral No.: 247-092-020-12 / 247-092-020-11 / 247-092-020-10-901
Coordinates: 18.185505, -66.305029

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

The Municipality of Barranquitas proposes the construction of a public parking facility facing PR-156 at kilometer 16.3. To increase parking capacity, a two-level parking structure will be built on the existing parking lot within the project area (Figure 1). Site photos are included in the *Field Inspection* section of this EA. The new structure will be constructed of reinforced concrete and will include solar panels to provide energy. It will feature an access ramp connecting to PR-156 for vehicle access. Stairs will be built to access the second level for visitors, and parking spaces will be designated for people with disabilities. Interior and exterior landscaping will be included, and the water distribution, electricity, and sanitary sewage system infrastructure will be connected to the existing infrastructure on PR-156. The proposed project will provide parking for users of the adjacent businesses.

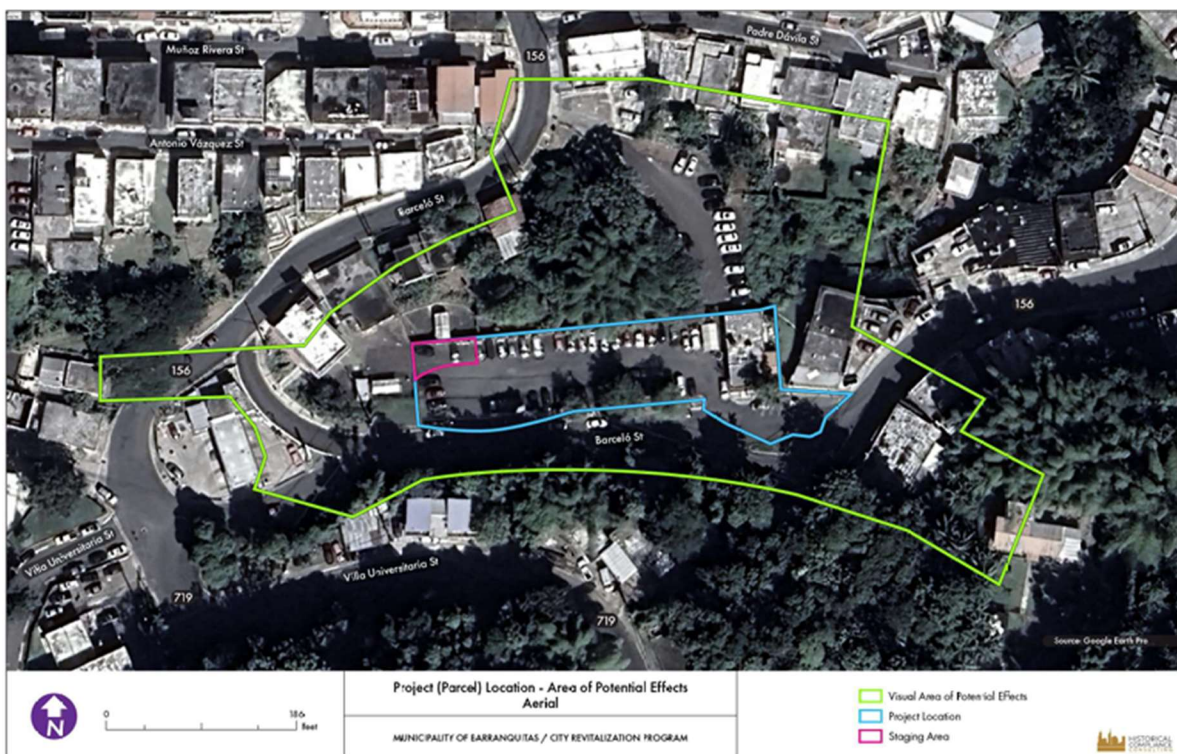


Figure 1. PR-CRP-000988 Barranquitas Project Area

Source: Attachment 10. 106 NHPA Effect Determination

Construction of the new public parking facility will require ground disturbance for structural foundations and utility installation. Excavation activities will include the building foundations, footings, underground electrical distribution system, stormwater drainage system, and potable water system connections. All excavation and grading work will occur within the project footprint, which is approximately 0.41 acres. The construction staging area will be located within the project site (Figure 1). Table 1 summarizes the estimated excavation areas, depths, and volumes by component.

Table 1. Excavation Area, Depth, and Volume by Component

Component	Excavation Area	Depth	Volume
Foundations	72.7 m ² (782.25 ft ²)	9.14 m (30 ft)	664.48 m ³ (23,467.5 ft ³)
Footings	435.83 m ² (1,429.91 ft ²)	0.99 m (3.25 ft)	131.63 m ³ (4,647.21 ft ³)
Underground electrical system	8.36 m ² (90 ft ²)	1.22 m (4 ft)	10.19 m ³ (360 ft ³)
Stormwater drainage system	32.81 m ² (353 ft ²)	0.60 m (2 ft)	20.0 m ³ (706 ft ³)
Drinking water system	0.736 m ² (7.92 ft ²)	0.30 m (1 ft)	0.22 m ³ (7.92 ft ³)

Source: Attachment 10. 106 NHPA Effect Determination

Statement of Purpose and Need for the Proposal:

In September 2017, Hurricanes Irma and María made landfall in Puerto Rico, causing catastrophic damage across all 78 municipalities. To address these impacts, the U.S. Department of Housing and Urban Development (HUD) allocated Community Development Block Grant–Disaster Recovery (CDBG-DR) funding to support long-term recovery, including programs designed to increase resilience and reduce future vulnerability. The purpose of the proposed project is to expand and improve public parking capacity in the urban center of Barranquitas to support community revitalization and enhance accessibility for residents and visitors. The need for the project arises from inadequate parking in the downtown area, which forces residents and visitors to rely on street parking along narrow roads, contributing to traffic congestion and reduced pedestrian safety. The shortage of safe and accessible parking limits access to the Town Plaza, museums, and businesses. The project will provide a modern, resilient parking facility that addresses these deficiencies, improves circulation and accessibility, and supports the long-term recovery and vitality of Barranquitas.

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

The project site and its surroundings have been substantially altered by urban development, including the construction of commercial and office buildings and the paving of surfaces with asphalt, resulting in soil impermeabilization. Vegetation is limited to ornamental trees planted in strips for landscaping and shade. Local fauna consists primarily of common urban-tolerant species, such as birds and reptiles (e.g., lizards and iguanas).

The site is within the urban center of the Municipality of Barranquitas, an area that has experienced substantial development and land use transformation over time. Natural disasters have further affected the built environment, contributing to the deterioration of some structures. In response, the Municipality has pursued ongoing efforts to preserve and revitalize the cultural heritage of its historic center.

If the proposed project does not proceed, the existing surface parking lot would remain in its current condition and continue to provide limited parking capacity. No new infrastructure would be installed, and no additional parking demand would be met. The site would remain vulnerable to further surface wear, inefficient stormwater management associated with the existing impervious cover, and progressive deterioration. The broader trend of urbanization and incremental redevelopment in the area would likely continue, but without the added parking capacity and site improvements that the project is intended to provide.

Funding Information

Grant Number	HUD Program	Funding Amount
B-17-DM-72-0001	Community Development Block Grant – Disaster Recovery (CDBG-DR)	\$1,507,179,000
B-18-DP-72-0001		\$8,220,783,000
B-19-DP-78-0002		\$277,853,230

Estimated Total HUD Funded Amount: \$1,703,289.56

Estimated Total Project Cost (HUD and non-HUD funds) [24 CFR 58.32(d)]: \$1,703,289.56

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 ☐ ☒	The project is not located within a Federal Aviation Administration (FAA)-designated civilian airport Runway Protection Zone (RPZ), or Accident Potential Zone (APZ). The project is not within 15,000 feet of a military airport nor 2,500 feet of a civilian airport. The nearest civil airport is Merceditas Regional Airport (PSE) approximately 20.64 mi (108,979.20 ft) measured from the project boundary to the runway. The nearest military airport is Luis Muñoz Marín (SJU) Joint Military Airfield Muñiz Air National Guard, approximately 25.54 mi (134,851.20 ft) measured from the project boundary to the runway. Therefore, the project is in compliance with 24 C.F.R. Part 51, Subpart D. Refer to Attachment 1: Airports Hazards Map
Coastal Barrier Resources Coastal Barrier Resources Act, as amended by the Coastal Barrier	Yes No ☐ ☒	The proposed project is not located within a Coastal Barrier Resources Unit (CBRS). The CBRS Unit closest to the project is PR-47 located to the south of the project site at an approximate distance of 14.28 miles

Improvement Act of 1990 [16 USC 3501]		(75,379 feet). Therefore, the Project is in compliance with the Coastal Barrier Resources Act (CBRA). Refer to Attachment 2: Coastal Barrier Resources Map
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 ☐ ☒	The FEMA Flood Insurance Rate Map (FIRM) for the project area, Panel Number 72000C1170H (effective April 19, 2005) shows that the project is not located within a FEMA Special Flood Hazard Area (SFHA)/100-year floodplain and is designated as Zone X, outside the SFHA. Therefore, the project does not require flood insurance in accordance with the Flood Disaster Protection Act of 1973 and the National Flood Insurance Reform Act of 1994. Documentation demonstrating the location outside the SFHA has been included. Therefore, the project is in compliance with 42 U.S.C. §§ 4001-4128 and 42 U.S.C. § 5154a. Refer to Attachment 3: Flood Insurance Map
STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 & 58.5		
Clean Air Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93	Yes No ☐ ☒	According to the US Environmental Protection Agency (EPA) List of Current Nonattainment Counties for all Criteria Pollutants, Barranquitas is in attainment for all pollutants. No new emission sources will be added. The proposed action complies with the Clean Air Act and 40 C.F.R. Parts 6, 51 and 93. No formal compliance steps or mitigation are required. Refer to Attachment 4a. Nonattainment Map and Attachment 4b. PR Green Book EPA List of Current Nonattainment Counties for all Criteria Pollutants
Coastal Zone Management Coastal Zone Management Act, sections 307(c) & (d)	Yes No ☐ ☒	The project is not located within the coastal zone of Puerto Rico, as defined by the State's Coastal Zone Management Program (CZMP). The nearest coastal zone is 13.83 mi (73,031.50 ft) from the project boundary. Therefore, the project is in compliance with the Coastal Zone Management Act, sections 307(c) and (d). Refer to Attachment 5. Coastal Zone Boundary Map
Contamination and Toxic Substances 24 CFR Part 50.3(i) & 58.5(i)(2)	Yes No ☒ ☐	<u>Historical Use of the Property</u> The project parcel has been extensively disturbed by past development and has long been part of the municipality's urban core. Aerial photographs and mapping show that by at least the mid-20th century the property was subdivided and built upon; five

		buildings were constructed and later demolished, and the site transitioned to its current use as an open-air municipal parking area. The land is classified as Urban Soil with an Intermediate Commercial (C-I) zoning designation. No evidence was found of heavy industrial operations and fuel storage. Previous ground disturbance from building construction, demolition, and parking lot paving have likely removed or altered shallow soils. <u>EPA Facilities</u> The NEPAssist database was reviewed to identify EPA facilities within 3,000 feet of the project site. Fourteen facilities were identified, some of which are co-located: • Eleven (11) Hazardous Waste (RCRAInfo) facilities • Three (3) Air Pollution (ICIS-AIR) facilities The closest facility is located approximately 0.05 miles from the project site; however, most are located more than 0.1 miles away. All identified facilities appear to be in regulatory compliance with no documented violations, enforcement actions, or unresolved compliance issues noted in available EPA records. Based on available environmental compliance data, no contamination concerns associated with these nearby facilities are anticipated to impact the proposed project. No adverse effects on the project site are expected due to the presence or proximity of these regulated facilities. <u>Underground Storage Tanks (UST)</u> Four UST sites were identified within one mile of the project site from the EPA's UST finder database (see Attachment 6d): TALLER MECANICA AEE (PR_21211-23931), ESSO LA VEGA (PR_21247-23913), TAVIN SS (PR_21250-23937), SHELL SS (PR_21350-23896) These locations were verified in the PR Planning Board's (PRPB) database (see Attachment 6e) and with the PR Department of Natural and Environmental (DNER)Resources Leaking Underground Storage List (LUST) and the information is found in Attachment 6f. The evaluation for these 4 sites is as follows: • Two of these sites, including the closest UST to the project site –located just 0.02 miles away–
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		and another – located 0.67 miles from the site – are not included in any of the LUST database. • Another site appears on the Active LUST 2024 list and is situated 0.64 miles from the project. Given this distance, any potential leaks are unlikely to impact the proposed project or its intended use. • Additionally, a third site is located 0.88 miles from the project and is included in the Inactive Sites LUST 2020 list. Its distance and inactive status further suggest it poses no risk to the proposed project or its intended use. Therefore, it is unlikely that these UST sites represent a significant concern for the proposed project’s development or affect the intended use of the site. <u>Field Inspection Findings</u> A site visit conducted on July 9, 2023, confirmed that the project parcel is currently used as an open municipal parking lot and is free of debris or dumping. No evidence of USTs, aboveground storage tanks (ASTs), leaking electrical equipment, or hazardous operations was observed. No wastewater discharges, landfills, or disturbed soils indicating contamination were present. The field inspection concluded that no environmental conditions exist on or adjacent to the site that would pose limitations or constraints to the proposed project’s development. <u>Asbestos and Lead-Based Paint</u> The site has not been subject to Lead-based Paint (LBP) or Asbestos Containing Material (ACM) studies. These will be conducted to any construction or demolition work. If necessary, any remediation must be completed prior to construction start. <u>Radon</u> Per HUD Notice CPD-23-103, dated January 11, 2024, the Responsible Entity (RE) must evaluate radon as part of the site contamination analysis for any project involving structures that are occupied or intended to be occupied for at least four (4) hours per day. Since this project involves the construction of a two-level open-air parking facility, which does not meet the occupancy criteria, it is exempt from radon contamination analysis and mitigation requirements. Therefore, the Project is in compliance with 24 C.F.R. Part 50.3(i) and 58.5(i)(2).
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		Refer to Attachment 6a. Contamination and Toxic Substances Map, Attachment 6b. Contamination and Toxic Substances Table, Attachment 6c. Facility Reports, Attachment 6d. Underground Storage Tank (UST) Map-EPA UST Finder, Attachment 6e. Underground Storage Tank (UST) Map-PRPB, Attachment 6f. UST sites Table, Attachment 6g. Active and Inactive Sites LUST Lists (selected pages), Attachment 6h. Field Inspection Checklist, Attachment 6i. Notice CPD-23-103: Departmental Policy for Addressing Radon in the Environmental Review Process, Attachment 10: 106 NHPA Effect Determination
Endangered Species Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	Yes No ☐ ☒	PRDOH, as the Responsible Entity, is conducting due diligence to assess Federally Listed Threatened and Endangered Species, in accordance with the Endangered Species Act Section 7. This involves consulting the U.S. Fish and Wildlife Service (USFWS). The project site's IPaC species list included the Puerto Rican boa (<i>Chilabothrus inornatus</i>), which has an endangered status, and Palo de Rosa (<i>Ottoschulzia rhodoxylon</i>), which has a threatened status. However, no Palo de Rosa were identified within the project site (see list of Flora in Attachment 7d). The nearest designated critical habitat is located approximately 10.92 mi (57,647.26 ft) from the project boundary, and the NOAA Environmental Sensitivity ESI Map indicates no environmentally sensitive habitats within the project footprint. The proposed project site is located in a highly disturbed, urbanized setting currently used as a municipal parking lot, with no vegetation capable of supporting habitat for listed species. The field inspection confirmed that the property is fully impacted by prior development and lacks vegetation or features that could support sensitive wildlife. A Self-Certification under the Blanket Clearance Letter (BCL), dated June 12, 2024, was submitted to the U.S. Fish and Wildlife Service (USFWS) for review. In

		response, USFWS issued a determination on July 11, 2024, confirming that the project complies with applicable requirements and is not likely to adversely affect any federally listed species. The project will implement best management practices, including erosion and sediment control and minimization of vegetation disturbance, to avoid any incidental impacts off-site. If a Puerto Rican Boa is found on the project site, work shall cease until the Boa moves off on its own. If the Boa does not move off, the Construction Manager shall contact the Puerto Rico Department of Natural and Environmental Resources and ask them to relocate the Boa. Therefore, the project is in compliance with the Endangered Species Act of 1973, particularly Section 7; 50 C.F.R. Part 402. Refer to Attachment 7a: Environmental Sensitivity (ESI) Map Attachment 7b: Critical Habitat Map, Attachment 7c: USFWS Package with IPaC, and Attachment 7d: Habitat Categorization Study and DRNA Certification
Explosive and Flammable Hazards 24 CFR Part 51 Subpart C	Yes No ☐ ☒	On-site assessment is not required because the activity will not increase residential, institutional, recreational, commercial or industrial densities or conversion. The project does not entail adding an AST. The project will expose neither people nor buildings to any above-ground explosive or flammable fuels or chemicals containers according to 24 C.F.R. §§ 51.201-51.205. Therefore, the project is in compliance with 24 C.F.R. Part 51, Subpart C.
Farmlands Protection Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658	Yes No ☐ ☒	The project sites do not include prime or unique farmland or other farmland of statewide or local importance as identified by the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS). The project does not include the conversion of agricultural land to other uses. Therefore, the project is in compliance with the Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 C.F.R. Part 658. Refer to Attachment 8: Farmlands Map
Floodplain Management	Yes No	The project is not located within the floodplain. According to the October 2024 Advisory Base Flood

Executive Order 11988, particularly section 2(a); 24 CFR Part 55	☐ ☒	Elevation (ABFE), the project is located in Zone X. According to the FIRM Panel number 72000C1170H (effective 4/19/2005), the project is in Zone X Area of Minimal Flood. The Preliminary FIRM Map is not available for the project sites. The project will not undergo activities within a floodplain. Therefore, the Project is in compliance with Executive Order 11988. Refer to Attachment 3: Flood Insurance Map and Attachment 9. ABFE Map
Historic Preservation National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800	Yes No ☐ ☒	Through consultation with the Puerto Rico State Historic Preservation Office (PRSHPO), a finding of No Historic Properties Affected per 36 C.F.R. § 800.4(d)(1) has been received. The Section 106 Effect Determination (EDF) prepared for the project confirmed that the Area of Potential Effect (APE) is highly disturbed, with prior demolition of five buildings documented in 1956 aerial photography and continued use of the lot as paved parking. The project site is located within the Traditional Urban Center (TUC) of Barranquitas, an area with long-standing urban development and cultural resources. No archaeological sites, historic structures, or properties listed in or eligible for listing in the National Register of Historic Places (NRHP) are present within the direct or visual APE. In a letter dated June 5, 2025, State Historic Preservation Officer Carlos A. Rubio Cancela, indicates the following: <i>Our records support your findings of no historic properties affected for this undertaking.</i> Additionally, a No Objection letter was received from the Instituto de Cultura Puertorriqueña (ICP) on June 12, 2024. Therefore, the project is in compliance with the National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 C.F.R. Part 800. Refer to Attachment 10: 106 NHPA Effect Determination Attachment 11. TUC Map, and Attachment 19: Permits and Approvals
Noise Abatement and Control Noise Control Act of 1972, as amended by the Quiet	Yes No ☐ ☒	The project involves the construction of a new two-level public parking facility. The proposed action is not a noise-sensitive use, as parking facilities are not considered residential, institutional, or other noise-sensitive land uses. Because the project does not

Communities Act of 1978; 24 CFR Part 51 Subpart B		involve a noise-sensitive use, a formal noise assessment is not required, and no attenuation measures are necessary. Temporary noise during construction will occur due to the use of heavy equipment and machinery, cranes, compressors, tools, and trucks hauling construction materials. To minimize noise impact, work will occur during the day. Regular equipment maintenance will occur to ensure optimal operating conditions and prevent unnecessary noise. Therefore, the project is in compliance with the Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 C.F.R. Part 51, Subpart B.
Sole Source Aquifers Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149	Yes No ☐ ☒	There are no sole source aquifers in Puerto Rico. Therefore, the proposed project site is not located within a sole source aquifer, nor will it directly or indirectly impact one. Therefore, the project is in compliance with the Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 C.F.R. Part 149. Refer to Attachment 12: Sole Source Aquifers Map
Wetlands Protection Executive Order 11990, particularly sections 2 and 5	Yes No ☐ ☒	According to the USFWS's National Wetlands Inventory (NWI), the project is not located within a wetland, and no wetlands are present within the project footprint. The nearest mapped wetland is located approximately 337.1 feet northeast of the project. A field inspection conducted on July 9, 2023 confirmed that the project site is a developed municipal parking lot with no evidence of wetlands within the project footprint. Because the project is located entirely outside of mapped wetlands and no wetland characteristics were observed during screening, no wetland avoidance, minimization, or mitigation measures are required. Therefore, the project complies with the requirements of Executive Order 11990, particularly sections 2 and 5. Refer to Attachment 6g. Field Inspection Checklist, and Attachment 13. Wetlands Map
Wild and Scenic Rivers Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)	Yes No ☐ ☒	The wild and scenic rivers in Puerto Rico are in the El Yunque National Forest, approximately 34 mi (179,580 ft) east of the project. These rivers include La Mina

		River, Icacos River, and Mameyes River, with the La Mina River being the closest to the Project. Therefore, the project is in compliance with Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c). Refer to Attachment 14. Wild and Scenic Rivers Map
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Environmental Assessment Factors [24 CFR 58.40] 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	<u>Conformance with Plans</u> The proposed project is located within the TUC of Barranquitas and is consistent with the municipality's comprehensive planning objectives to revitalize its urban center, improve mobility, and support cultural and economic activity. By providing modern parking infrastructure adjacent to the Town Plaza, the project reduces traffic congestion, enhances accessibility for residents and visitors, and complements ongoing revitalization efforts. The project does not conflict with existing land use policies or future planning initiatives and is fully compatible with the community's vision for an accessible town center. <u>Compatible Land Use and Zoning</u> The project site is zoned C-I (Intermediate Commercial), a designation that allows for municipal infrastructure such as parking facilities. The parcel is currently used as an informal open-air parking lot, and the

		proposed project complies with existing zoning regulations. Surrounding land uses include commercial, institutional, and residential development consistent with the downtown setting. The project represents infill development within an established urban center and will not contribute to urban sprawl or increase environmental risk relative to the community as a whole. The site is not located within Puerto Rico's karst region. <u>Scale and Urban Design</u> The project will not significantly alter the landform, as the site is already a paved municipal parking lot with no natural vegetation or structures to clear. Construction of a two-level reinforced-concrete parking facility will represent infill development that is compatible in scale and mass with the surrounding commercial and institutional buildings in the TUC. The facility will not introduce elements out of character with the urban setting and will not inappropriately alter density or height relative to nearby structures. Instead, it will improve circulation, reduce congestion, and enhance access to downtown amenities, supporting street-level activity and community interaction. Landscaping will further integrate the project with its surroundings and mitigate heat island effects. Overall, the project conforms to the established urban context and municipal revitalization objectives. Refer to Attachment 11. TUC Map and Attachment 15. Land Use Plan (PUT) Map
Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	2	<u>Soil Suitability</u> There is no evidence of ground subsidence, seismic activity, a high-water table, erosion, or other unusual conditions on the project site, nor any visible evidence of foundation cracking, heaving, settling, or basement flooding in the surrounding neighborhood. A Geotechnical Report was prepared for the site, which included borings that showed the top layers of the site are made up of mixed fill materials, including gravel, sand, clay, and pieces of wood and old construction debris. These materials vary across the site and extend as deep as 20–25 feet in some areas. Below the fill, stronger natural soils and dense decomposed rock were found. No groundwater or unusual soil problems such as subsidence, cracking, or flooding were observed. The land is flat and in an area with low susceptibility to landslides. The study found that if the building were placed directly on the existing fill, some uneven settlement could occur (about 2–3 inches). To avoid this, engineers recommend using rammed aggregate piers beneath certain areas of the structure. Because the property is already paved, relatively small in size, and connected to the municipal stormwater system, the project will not create erosion or runoff problems. The site is not farmland, forest, or a unique natural area, so the project will not displace soils better suited for natural resource uses. Overall, the soil

		conditions can safely support the proposed project once the recommended engineering measures are applied. <u>Slope</u> The project site is mostly flat and is currently paved as a municipal parking lot. There is no evidence of slope instability, past slides, or slumps in the project area; the field inspection documented no indicators such as cracked retaining walls, tilted trees, or displaced ground. A Geotechnical Report confirmed stable subsoil conditions beneath the fill layer and noted that at the west side of the lot, the access ramp to the second floor will be constructed with upgrading fills in the order of 2.5 to 3.0 meters high. Therefore, a retaining wall will be required. The project does not involve development on or near a steep slope and will therefore not create erosion, slope stability, or runoff problems. Because the site is already developed, slope modification activities will not remove microclimatic conditions that could support unique natural habitats, nor will they affect social or cultural resources. <u>Erosion</u> The project site is fully paved and flat, with no evidence of existing erosion or sedimentation issues. The field inspection confirmed that the parcel has been used as a municipal parking lot and does not contain vegetation or soil exposures that could contribute to erosion. The site is not located on or near erosion-sensitive areas such as steep slopes, sandy soils, or surface waters. The proposed project will involve localized excavation for foundations and utilities, temporarily exposing soils during construction. However, the total disturbance area is small (approximately 0.4 acres), and the site will be repaved and re-covered upon completion. The project will not involve steepening of slopes and is not expected to significantly affect, or be affected by, erosion or sedimentation conditions. <u>Drainage and Storm Water Runoff</u> The project site is fully paved and relatively flat, with no indication of cross-lot runoff, swales, rills, or gullies. The field inspection confirmed that the parcel has been used as a municipal parking lot, with filled ground but no evidence of erosion or drainage issues. Existing stormwater runoff from the site is captured by the municipal stormwater system, which will continue to serve the site after redevelopment. The project will not generate an increase in impervious area, as the site is already asphalt-covered, and therefore no significant change in stormwater volume is anticipated. The municipal drainage infrastructure is expected to adequately service the proposed development. No safety hazards from nearby stormwater features such as open culverts or unprotected large drainage pipes were observed. The project will not substantially contribute to off-site pollution by stormwater runoff, leaching of chemicals, or other pollutants. Given its
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		location in a fully urbanized setting and reliance on municipal drainage, changes in rainfall intensity are not expected to result in adverse impacts. Refer to Attachment 6g. Field Inspection Checklist, Attachment 16. Geotechnical Report, and Attachment 20. Project Plans
Hazards and Nuisances including Site Safety and Noise	2	The field inspection confirmed that the parcel is free of dumping, abandoned vehicles, or evidence of vermin infestation, and no natural or man-made hazards such as USTs/ASTs, leaking equipment, or waste discharges were observed. The site is not located near heavy pollution generators, and there are no known hazards from adjacent land uses that could impact the project. The surrounding area consists of commercial, institutional, and residential development typical of a small urban center. No nuisances such as strong odors, gas, smoke, glare, or vibration were noted in the vicinity. Temporary impacts may occur during construction from the use of heavy machinery, cranes, compressors, trucks, and other equipment, which can generate combustion gases and fugitive dust during demolition and site preparation. Standard maintenance will be implemented to keep equipment in optimal operating condition and reduce emissions. Standard dust control measures will be implemented during construction such as watering exposed areas as needed and the use of tarps on hauling trucks to prevent dust from escaping loads per Department of Natural and Environmental Resources (DRNA) requirements. The proposed project is not a noise-sensitive use and will not create ongoing noise impacts. Construction will generate temporary noise from equipment and vehicles, but these activities will be short-term and managed through standard construction practices. Once operational, the parking facility will not significantly increase noise levels beyond existing downtown conditions. Refer to Attachment 6a. Contamination and Toxic Substances Map, Attachment 6b. Contamination and Toxic Substances Table, Attachment 6c. Facility Reports, Attachment 6d. Underground Storage Tank (UST) Map-EPA UST Finder Attachment 6e. Underground Storage Tank (UST) Map-PRPB, Attachment 6f. UST Table, Attachment 6g. Active and Inactive Sites LUST Lists (selected pages), Attachment 6h. Field Inspection Checklist, and Attachment 19. Permits and Approvals

Environmental Assessment Factor	Impact Code	Impact Evaluation
SOCIOECONOMIC		
Employment and Income Patterns	1	The project will generate approximately 40 temporary construction jobs, including equipment operators, laborers, and truck drivers. These positions are expected to be filled primarily by contractors and subcontractors active in Puerto Rico's construction industry, with opportunities for local workers. In addition, the project will create five permanent jobs associated with the operation and maintenance of the parking facility. These jobs span a mix of skill sets, from general labor to facility management and maintenance, and align with the skills available within the community. While relatively small in scale, the project is expected to support local employment opportunities and provide a steady source of income for a small number of residents. Indirectly, the project will also benefit local businesses, cultural institutions, and municipal services by improving parking availability, reducing congestion, and increasing visitor access to the downtown area. These improvements are expected to create favorable conditions for commerce and tourism without displacing existing employment or income structures.
Demographic Character Changes, Displacement	2	<u>Demographic Character Changes</u> The project is located in the TUC of Barranquitas, characterized by a mix of residential, commercial, institutional, and cultural uses, with a majority low- to moderate-income (LMI) population. The proposed project will not alter the racial, ethnic, or income composition of the area's housing and does not contribute to segregation or concentration of disadvantaged groups. Instead, the project supports equitable access by providing improved parking capacity and accessibility features that enhance connections to the Town Plaza, municipal services, museums, and local businesses. The facility will not create physical barriers or limit mobility; rather, it will reduce congestion and improve circulation within the downtown area. The project does not violate HUD site and neighborhood standards, nor does it create a concentration of LMI households. Environmental impacts are temporary, limited to construction-phase emissions and noise, and will not disproportionately affect LMI or minority residents. Overall, the project will improve access to services, facilities, and cultural resources in downtown Barranquitas. <u>Displacement</u> The proposed project will not directly displace any individuals or families, as the site is already developed and used as a municipal parking lot with no housing units. The project will also not destroy or

		relocate existing businesses, community facilities, or job centers. Instead, it will expand parking capacity to support the surrounding commercial and cultural uses. No identifiable groups including older persons, women, single-parent households, racial or ethnic groups, or LMI households will be adversely affected by the project.
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Environmental Assessment Factor	Impact Code	Impact Evaluation
COMMUNITY FACILITIES AND SERVICES		
Educational and Cultural Facilities	2	The proposed two-level public parking facility will not generate housing or increase school enrollment and therefore will not affect the capacity of educational facilities. By organizing parking and reducing congestion, the project will improve access to nearby cultural resources without creating safety concerns or requiring new access routes.
Commercial Facilities	2	The project will enhance convenient access to retail and service establishments in the Barranquitas TUC. Essential shopping for food, medicine, banks, and other services is already located within a short walking distance from the proposed parking facility, including for older residents. Local retail services are affordable and provide an adequate range of goods and conveniences for area users. Ride share and taxi options are available in the town center, but because retail services are within easy walking distance, no additional transit or paratransit options are needed. The project will not displace or negatively affect existing commercial services; rather, by adding organized parking and reducing congestion, it will improve access to and support the viability of nearby businesses
Health Care and Social Services	2	The proposed parking facility will not result in a population increase or new residents requiring health or social services, so no additional demand on hospitals, clinics, or skilled medical staff is anticipated. Non-emergency health care providers, including primary care, dental, and mental health services, are located within a short drive of the project site, and emergency services such as police, fire, and ambulances are available within approximately three to five minutes. The project will not require specialized medical services, such as geriatric care, nor will it place demands on social service programs. Social services are available in the downtown area and accessible by foot or local transit, and the project will not overtax these resources or create a concentration of disadvantaged populations in violation of HUD site and neighborhood standards. Refer to Attachment 17. Emergency Facilities Location Map
Solid Waste Disposal / Recycling	2	During construction, the project will generate non-hazardous solid waste typical of demolition and building activities, including wood, concrete, metals, masonry blocks, cardboard, plastics, and domestic waste from construction workers. It is estimated that approximately 10

		cubic yards of waste per week will be produced. The contractor will be responsible for estimating the quantities of waste at each construction stage, maintaining designated storage areas, and arranging for collection by an authorized carrier. Construction debris will be transported to the Barranquitas Municipal Landfill, located about 5,250 feet from the site. To promote recycling, the contractor will establish a clearly labeled “Separation and Recycling Area” where recyclable materials (e.g., metals, cardboard, plastics) will be collected and managed under the guidance of the Municipality of Barranquitas Recycling Office. A Recycling Plan will be submitted to the DRNA for review and approval, as required. Construction waste will be separated at the source to facilitate proper storage, transport, and disposal, ensuring that recyclable materials are diverted whenever possible. No hazardous waste is anticipated during construction; if small amounts of fuels, lubricants, or similar materials are used, they will be stored and disposed of by licensed providers following manufacturer specifications. During operation, the parking facility will generate only minor amounts of non-hazardous domestic waste, which will be managed through the Barranquitas Municipal Solid Waste Collection Program, while recyclable materials will be handled through the Municipality’s Recycling Program. These provisions ensure that both construction and operational wastes are properly stored, transported, recycled, and disposed of, and that the project will not exceed the capacity of existing municipal solid waste or recycling systems. Refer to Attachment 18. Municipal Landfill Location Map and Attachment 19. Permits and Approvals
Waste Water / Sanitary Sewers	2	The proposed parking facility will be served by the Puerto Rico Aqueduct and Sewer Authority (PRASA) sanitary sewer system, which has sufficient capacity to handle the small volume of wastewater expected from the project. Wastewater generation has been estimated at approximately 1,000 gallons per day, an amount not considered significant relative to the capacity of the municipal infrastructure. Service can be provided by connecting to an existing 8-inch sanitary pipeline along PR-156, and the necessary connection permit can be arranged through PRASA’s customer service process. No on-site septic or alternative disposal systems are required. The project area is not prone to flooding or combined sewer overflows, and changes in rainfall are not expected to affect the performance of the municipal sewer connection. Refer to Attachment 21. Project Plans
Water Supply	2	Potable water for the construction and operation of the proposed facility will be provided by PRASA. The system has sufficient capacity to

		supply the small quantity of water required for construction activities (primarily for dust control and worker needs) and the minimal operational demand is expected once the facility is complete. No on-site wells, purification systems, or alternative supplies are necessary. Water quality from the PRASA system is treated and monitored to meet U.S. EPA Safe Drinking Water Act standards. The project will not affect sole sources or other aquifers, as no groundwater extraction is planned. Consumption associated with the project will be negligible compared to the community's overall supply and will not degrade water quality or quantity. Refer to Attachment 19. Permits and Approvals and Attachment 21. Project Plans
Public Safety - Police, Fire and Emergency Medical	2	Police, fire, and emergency medical services are all located within 1335.3 ft (0.25 mi) of the site. These services are expected to provide response times of only a few minutes, which is adequate for an urban setting. The firefighting service is well positioned and equipped to meet the minimal needs of the project, which involves no hazardous materials storage and presents a low fire risk. The site is not in an area of wildfire intensification, so the project will not place additional strain on fire protection resources. Emergency health care services are also nearby, ensuring rapid access to first aid or ambulance transport if needed during construction or operation. Because the parking facility is a low-intensity use and will not substantially increase population or activity levels, it will not significantly burden local police, fire, or emergency medical providers in terms of staffing or equipment. Refer to Attachment 17. Emergency Facilities Location Map
Parks, Open Space and Recreation	2	Several recreational and cultural facilities are located within walking distance of the project site, including Casa Museo Luis Muñoz Rivera 804 ft (0.15 mi), Mausoleo Familia Muñoz Rivera 929 ft (0.18 mi), Centro Cultural Luis Muñoz Marín 735 ft (0.14 mi), and Escuela Pablo Berdecia 951 ft (0.18 mi). These resources are already served by the TUC's pedestrian network and local streets, providing convenient access for residents and visitors. The proposed parking facility will not overload or diminish the capacity of these open space and cultural assets. Instead, it will support their use by improving organized parking, reducing congestion, and enhancing access for visitors, including older adults and people with disabilities through designated accessible spaces.
Transportation and Accessibility	1	The project will improve access and circulation in the downtown area. Because the project is designed to organize existing parking demand rather than add significant new traffic, a formal traffic study is not required. The project will not reduce the level of service on surrounding

		roadways, and no special actions to mitigate transportation impacts are necessary. The facility will be directly accessible from PR-156, the primary corridor through Barranquitas. The design includes adequate vehicular circulation and parking, including accessible spaces and ramps for people with disabilities, as well as sufficient space for service vehicles or small moving trucks. Pedestrian safety and circulation will be maintained through existing sidewalks, pavement markings, and nearby crosswalks that connect to civic and cultural facilities. Although there are no dedicated bicycle lanes on PR-156, the project will not impede bicycle use, and bicycles can be accommodated within the parking structure if needed. Emergency vehicles will have unobstructed access to the site from PR-156 and surrounding streets. The parking facility will not expose LMI or minority populations to harmful air pollutants from highway traffic, as it is located in a small urban core with no adjacent high-volume roadways. Overall, existing and foreseeable transportation facilities and services are adequate to meet the project's needs, and the design improves accessibility for visitors, residents, older adults, and people with disabilities. Temporary traffic management measures shown in project plans will guide vehicles and protect pedestrians during construction, while final signage, pavement markings, and other permanent traffic controls for the parking facility will be addressed in a Traffic Control Plan to be established in conjunction with the Municipal Police. Refer to Attachment 21. Project Plans
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Environmental Assessment Factor	Impact Code	Impact Evaluation
NATURAL FEATURES		
Unique Natural Features, Water Resources	2	<u>Unique Natural Features</u> The project is located within an urbanized area and there are no known unique natural features on or adjacent to the project sites. The proposed construction will occur on previously developed or disturbed urban lots. The project will not degrade or obstruct access to any natural or scenic features, nor will it impact viewsheds or visual corridors to notable natural landmarks. No introduction of non-indigenous or invasive species is anticipated as part of project landscaping or construction. Runoff from the project will be managed in accordance with best practices for stormwater and erosion control, and no degradation of off-site natural resources is expected. As a result, the project will not

		adversely affect any unique natural features or ecosystem services in the surrounding area. <u>Water Resources</u> A site visit and review of desktop data from the U.S. Geological Survey data, NOAA, and the Planning Board confirm that the proposed project will not impact surface waters or other sensitive resources. No unique riparian or aquatic habitats occur on or near the parcel. The site is not subject to rapid water withdrawal or aquifer drawdown concerns. Geotechnical borings did not detect groundwater within the depth explored. There is no evidence of a shallow or problematic groundwater level, and there are no large-capacity wells pumping significant volumes nearby. The closest drinking water well, Pozo Tres Caminos, is located approximately 5,709 ft (1.08 mi) from the site and is owned by PRASA/AAA. The project will not affect this or other water supply sources. The project will not involve septic systems or other on-site wastewater disposal and will not introduce pollutants to surface or groundwater. Because the parcel is already paved, construction will not increase impervious cover, and runoff will continue to be handled by the municipal stormwater system with standard erosion and sediment controls. No special measures are required to protect groundwater recharge or downstream water users, as the project's small scale and urban setting are not expected to significantly impact water resource conditions. Refer to Attachment 6g. Field Inspection Checklist, Attachment 7a. Environmental Sensitivity Map (ESI), Attachment 20. Water Well Extraction Map, and Attachment 21. Project Plans
Vegetation, Wildlife	2	<u>Vegetation</u> Vegetation on the project site is limited to a few ornamental trees planted in narrow strips along sidewalks and streets. No remnant or endemic plant communities, agricultural lands, or habitats containing rare, threatened, or protected species occur on or adjacent to the site. The USFWS' IPaC species list identified that the endangered Palo de Rosa (<i>Ottoschulzia rhodoxylon</i>) may be present at the site. However, the species inventory did not identify it at the project site (see Attachment 7d). The proposed parking facility will not introduce non-native or invasive vegetation, nor will it require landscape maintenance practices that could threaten nearby habitats or agricultural activities. The limited removal of any existing ornamental trees or shrubs will be offset by planned landscaping and green areas described in the project scope, which include interior and perimeter gardens to improve aesthetics and provide shade.

		<u>Wildlife</u> Wildlife use is minimal and limited to common urban-adapted species. No riparian corridors, wetlands, or natural habitats occur on or adjacent to the site, and no fish spawning grounds, or game species habitat will be affected. Consultation with the USFWS identified no designated critical habitat within the project footprint or nearby areas. The project site's IPaC species list included only the Puerto Rican boa (<i>Chilabothrus inornatus</i>), which has an endangered status. The RE has adopted the following strategy to address encounters with the Puerto Rican boa: If a Puerto Rican Boa is found on the project site, work shall cease until the Boa moves off on its own. If the Boa does not move off, the Construction Manager shall contact the Puerto Rico Department of Natural and Environmental Resources and ask them to relocate the Boa. The project will not alter groundwater levels; damage tree covers essential for wildlife or create barriers to wildlife movement. Landscaping will include ornamental plantings compatible with the urban setting, which may provide limited cover or perching habitat but will not encourage pest species. No excessive grading, noise, pesticide use, or runoff is expected to harm wildlife or sensitive habitats. A habitat categorization ("Categorización de Hábitat") was prepared for the project to comply with the DRNA requirements. In the report, the site is described as a property that "has been previously impacted by the construction of structures and soil impermeabilization. The dominant vegetation consists of trees planted as part of a landscaping design, arranged in planting strips that provide shade. The local fauna is limited to several species of birds and reptiles, such as lizards and iguanas, typically found in urban areas." Per project drawings, some trees in the site will be removed. The habitat categorization indicates that to improve aesthetics and existing conditions, native trees, shrubs, and palms will be planted. For this, a planting plan will be developed and authorized under the Tree Cutting, Planting, and Reforestation Permit. The resulting vegetation to be included in the project is expected to provide equal or improved habitat for wildlife compared to current conditions, through the use of species that offer food sources. The tree species to be planted will be selected from the list provided under Act No. 97 of June 24, 1998 – <i>Law to Promote the Planting of Trees Whose Fruits or Seeds Provide Food for Wild Bird Species of Puerto Rico</i>. After evaluation, DRNA issued the following determination: "We have categorized the site as Natural Habitat with Low Potential to Become Critical Habitat, High Ecological Value Habitat, or Ecological Value Habitat." Overall, the project will have no adverse effect on native vegetation, wildlife, protected species, or broader ecosystem functions.
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		Refer to Attachment 6g. Field Inspection Checklist, Attachment 7a. Environmental Sensitivity Map (ESI), Attachment 7c. USFWS Package with IPaC, Attachment 7d. Habitat Categorization Study and DRNA Certification, and Attachment 21. Project Plans
Other Factors	2	N/A

Environmental Assessment Factor	Impact Code	Impact Evaluation
ENERGY		
Energy Efficiency	2	The proposed public parking facility is located in the TUC of Barranquitas within walking distance of shops, cultural centers, schools, and municipal services. Its location supports compact land use, reducing vehicle circulation and idling compared to informal on-street parking. The design includes interior and perimeter landscaping that will provide shade for parked cars and reduce pavement heat gain. No south-facing façade optimization is needed because the structure is primarily open-air and does not include enclosed conditioned spaces. The project is not a residential or conditioned commercial building, so Energy Star appliances and green building certifications do not directly apply. Lighting for the parking decks will use efficient fixtures, and solar panels are planned to supply part of the facility's electrical demand. The facility's estimated energy load is 25 kVA, as approved in LUMA's Endoso Final, a negligible increase in demand relative to the capacity of the local grid. No significant greenhouse gas emissions are expected beyond temporary construction equipment use and minimal operational lighting demand. Solar energy integration will further offset indirect emissions from grid electricity. Water use will be minimal and limited to construction and landscape irrigation and maintenance during operations. Because of its small size and non-residential nature, the project is not expected to pursue LEED-ND or other green-building certifications. However, the inclusion of photovoltaic panels may qualify for Puerto Rico or federal renewable energy incentives, which can be evaluated during final design and procurement. Refer to Attachment 19. Permits and Approvals and Attachment 21. Project Plans

Additional Studies Performed:

- Attachment 7d. Habitat Categorization Study and DRNA Certification
- Attachment 16. Geotechnical Report

Field Inspection (Date and completed by):

The field inspection was conducted by Eng. Carlos González Morales, Environmental Specialist on July 9, 2023 and included as Attachment 6g.

Site Photo 1:

Applicant ID #	(PR-CRP-000988)
Property Address:	Road PR-156 Km 16.3 (Barcelo Street) Barranquitas, PR 00794
	
Description:	East project area on road PR-156 (facing South)

Site Photo 2:

Applicant ID #	(PR-CRP-000988)
Property Address:	Road PR-156 Km 16.3 (Barcelo Street) Barranquitas, PR 00794
	
Description:	West project area on road PR-156 (facing South)

List of Sources, Agencies and Persons Consulted:

Data Sources:

- Esri Imagery Basemap service
- Flood zone data obtained from Federal Emergency Management Agency (FEMA) web viewer
- Coastal Zone Management Act files obtained from the National Oceanic and Atmospheric Administration (NOAA)
- Wetlands, Coastal Barrier Resource Zone and Critical Habitat data (USFWS)
- Wild and Scenic River data from US Forest Service (USFS)
- Hazardous site, UST, Sole Source Aquifer, and air quality data from Environmental Protection Agency (EPA)
- Puerto Rico Planning Board website.
- Land use data obtained from the Puerto Rico Planning Board (PRPB)
- TUC map obtained from Puerto Rico SHPO (PRSHPO)
- USDA-NRCS (Natural Resources Conservation Service) – Farmland Classification Map
- Google Earth – Various Distance and Location Maps
- State Historic Preservation Office (SHPO)
- Puerto Rico Culture Institute (ICP)
- Permits Management Office (OGPe)
- Federal Communications Commission (FCC)
- Department of Natural and Environmental Resources (DRNA)
- LUMA Energy

- Puerto Rico Aqueduct and Sewer Authority (AAA)
- Department of Transportation (DOT)
- Highway and Transportation Authority (ACT)
- Telecommunications Bureau of Puerto Rico (NET)

Agencies Consulted:

- United States Fish & Wildlife Service (USFWS)
- State Historic Preservation Office (SHPO)
- Department of Natural and Environmental Resources (DRNA)

List of Permits Obtained (Attachment 19):

- DRNA (Certification of compliance with PR Environmental Public Policy, Law 416)
- ICP
- LUMA Energy
- A Construction Permit must be submitted to the Puerto Rico Permit Management Office (OGPe) for approval.
 - As part of the permit application, a sign will be installed at the project site to inform the public about the project and provide contact information if any comment arises.

Public Outreach [24 CFR 50.23 & 58.43]:

The Finding of No Significant Impact (FONSI) will be published in Spanish and English languages after the approval of this Environmental Review Record. This approval signifies that, after careful analysis, the project will not cause significant adverse environmental effects. The FONSI determination will be publicly available and published in a newspaper, providing the community with full transparency regarding the project's environmental impact.

Cumulative Impact Analysis [24 CFR 58.32]:

The proposed project will provide organized parking to support nearby businesses, cultural institutions, and public services. Socially, the project is expected to have a positive impact by improving access to community resources such as museums, cultural centers, and municipal offices, while reducing traffic congestion and improving pedestrian safety in the downtown area. These benefits complement broader municipal revitalization initiatives supported by CDBG-DR funds, which aim to restore economic activity and enhance the quality of life in town centers.

From an environmental perspective, the project's incremental impact is minimal because the site is already developed and paved. Construction will generate only short-term emissions, noise, and solid waste, which will be mitigated through good housekeeping practices, dust suppression, and proper debris management as required by DRNA. There are no wetlands, rivers, or other sensitive habitats in or near the project area, and no federally listed species or cultural resources will be affected. Landscaping will include small gardens and shade trees, improving visual quality and urban heat conditions without introducing invasive plants.

Infrastructure impacts will also be limited. The project will make use of existing water, sewer, drainage, and power systems, all of which have adequate capacity to serve the minor needs of the facility. It will not require expansion of roadways or major utilities. Other ongoing or foreseeable actions in the

vicinity such as streetscape improvements, cultural building maintenance, and small-scale commercial upgrades are consistent with the municipality's revitalization strategy and are not expected to collectively create significant adverse environmental effects.

Alternatives [24 CFR 58.40(e)]:

During project planning, relocating the proposed parking facility to another parcel was considered. However, no other site offered the same strategic advantages as the selected parcel in the TUC. Alternative locations would have been farther from existing businesses, cultural facilities, and municipal services, reducing their effectiveness in easing congestion and supporting downtown commerce. They also would have required additional infrastructure (e.g., roadway connections, drainage) and potentially increased environmental impacts by disturbing undeveloped land or encouraging sprawl beyond the historic center. For these reasons, alternative sites were dismissed.

Different design approaches such as expanding surface parking would require more impervious area, leaving less room for green space and potentially increasing stormwater runoff. The chosen two-level design efficiently uses the existing footprint, adds landscaped buffers and shade trees, and minimizes new impervious cover while meeting accessibility and safety requirements.

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

Under the no action alternative, the project would not proceed, and the site would remain in its current condition, with inadequate capacity. Traffic issues would persist, limiting access to nearby businesses, museums, and cultural venues. Economic recovery goals for the downtown area, supported by CDBG-DR funding, would not be fully realized.

Summary of Findings and Conclusions:

The proposed project is not expected to result in significant adverse environmental impacts. Onsite assessments confirmed the absence of contamination and hazardous materials. Endangered species concerns have been cleared under the USFWS BCL. The project site consists of a previously developed urban lot with no critical habitats or unique ecological features present.

No historic or cultural resources are located within the APE, and SHPO concurrence has been received. In accordance with SHPO coordination, standard protocols will be followed to halt work and notify authorities if resources are discovered during construction. Stormwater runoff and erosion will be managed through best practices, and the project avoids floodplains and wetlands.

The project aligns with local land use plans, is compatible with surrounding residential development, and is fully supported by existing infrastructure. Waste, water, and energy needs will be managed through public utilities and in accordance with regulatory requirements. With these findings and mitigation measures in place, the project is compliant with applicable environmental laws and is anticipated to have a minimal environmental footprint. Overall, the project will not significantly impact the environment, and all permitting recommendations will be followed.

Mitigation Measures and Conditions

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
Contamination and Toxic Substances	Lead-based paint (LBP) and asbestos-containing materials (ACM) assessments will be conducted prior to the initiation of any demolition or construction activities associated with the proposed project. In the event that LBP or ACM are identified, appropriate remediation procedures will be implemented in accordance with applicable environmental and safety regulations to ensure compliance before construction begins.
Endangered Species	If a Puerto Rican Boa is found in the project sites, 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.
Hazards and Nuisances including Site Safety and Noise	Follow erosion and sediment control measures as specified by DRNA (Attachment 19).
Solid Waste Disposal / Recycling	A Recycling Plan will be submitted to the DRNA for review and approval (Attachment 19).
Historic Preservation	Follow historic resource protection standards including <i>Reglamento Conjunto</i> conservation provisions as specified in the ICP No Objection Determination (Attachment 19).
Vegetation, Wildlife	Per project drawings, some trees in the site will be removed. The “Habitat Categorization” (Attachment 7d) document indicates that: • A planting plan will be developed and authorized under the Tree Cutting, Planting, and Reforestation Permit. • The vegetation to be included in the project plan is expected to provide equal or improved habitat for wildlife compared to current conditions, through the use of species that offer food sources. The tree species to be planted will be selected from the list provided under Act No. 97 of June 24, 1998 – Law to Promote the Planting of Trees Whose Fruits or Seeds Provide Food for Wild Bird Species of Puerto Rico.
Energy Efficiency	Construct electrical systems in accordance with approved plans and applicable technical standards as specified in the LUMA Electrical Endorsement (Attachment 19).

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: 10/03/2025

Name/Title/Organization: Carlos González Morales/CGM Environmental Consultants

Digitally signed by
Santa D. Ramírez
Lebrón



Certifying Officer Signature: _____

Date: 2025.10.09
11:35:14 -04'00'

Date: October 9, 2025

Name/Title: Santa D. Ramírez Lebrón / 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

1	Airport Hazards Map
2	Coastal Barrier Resources Map
3	Flood Insurance Map
4a	Nonattainment Map
4b	PR Green Book
5	Coastal Zone Boundary Map
6a	Contamination and Toxic Substances Map
6b	Contamination and Toxic Substances Table
6c	Facility Reports
6d	Underground Storage Tank (UST) Map – EPA UST Finder
6e	Underground Storage Tank (UST) Map – PRPB
6f	UST sites Table
6g	Active and Inactive Sites LUST Lists (selected pages)
6h	Field Inspection Checklist
6i	Notice CPD-23-103: Departmental Policy for Addressing Radon in the Environmental Review Process
7a	Environmental Sensitivity Map (ESI)
7b	Critical Habitat Map
7c	USFWS Package with IPaC
7d	Habitat Categorization Study and DRNA Certification
8	Farmland Classification Map and Legend
9	ABFE Map
10	106 NHPA Effect Determination
11	TUC Map
12	Sole Source Aquifers Map
13	Wetlands Map
14	Wild and Scenic Rivers Map
15	Land Use Plan (PUT) Map
16	Geotechnical Report
17	Emergency Facilities Location Map
18	Municipality Landfill Location Map
19	Permits and Approvals
20	Water Well Extraction Map
21	Project Plans

Attachment 1. Airport Hazards Map

PR-CRP-000988 Barranquitas - Construction of New Public Parking

Coord: 18.185505, -66.305029

Address: State Road PR-156 Km 16.3, Pueblo Ward, Barranquitas, PR 00794



Source: Google Earth (Spatial Reference: WGS84) at URL <https://earth.google.com/>

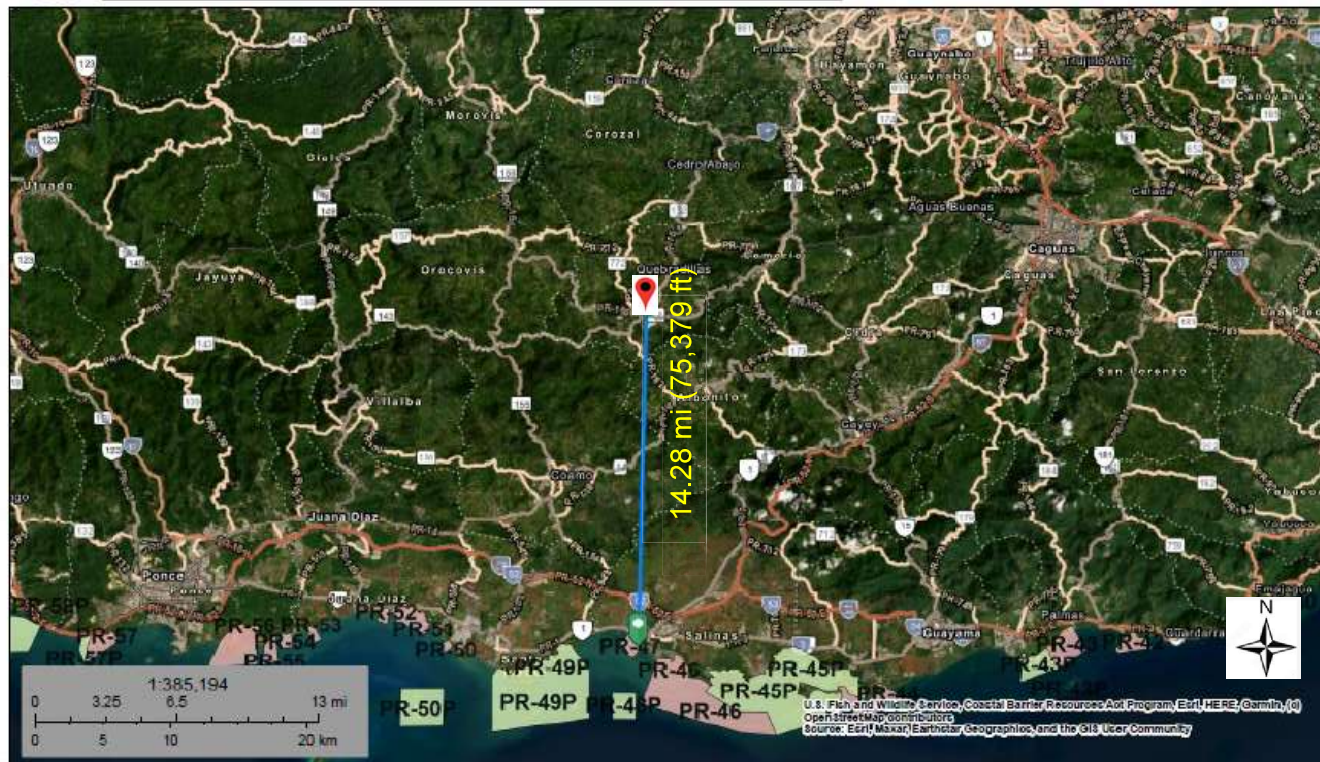
Prepared by ICF

Coordinates: 18.185505, -66.305029



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

CBR (Estacionamiento)



August 26, 2025

CBRS Units

-  Otherwise Protected Area
 System Unit
 PR-CRP-000988

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

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

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

Attachment 3. Flood Insurance Map

Address: State Road PR-156 Km 16.3, Pueblo Ward, Barranquitas,
PR 00794

Coordinates: 18.185505, -66.305029



FEMA FLOOD MAP



 Project Location

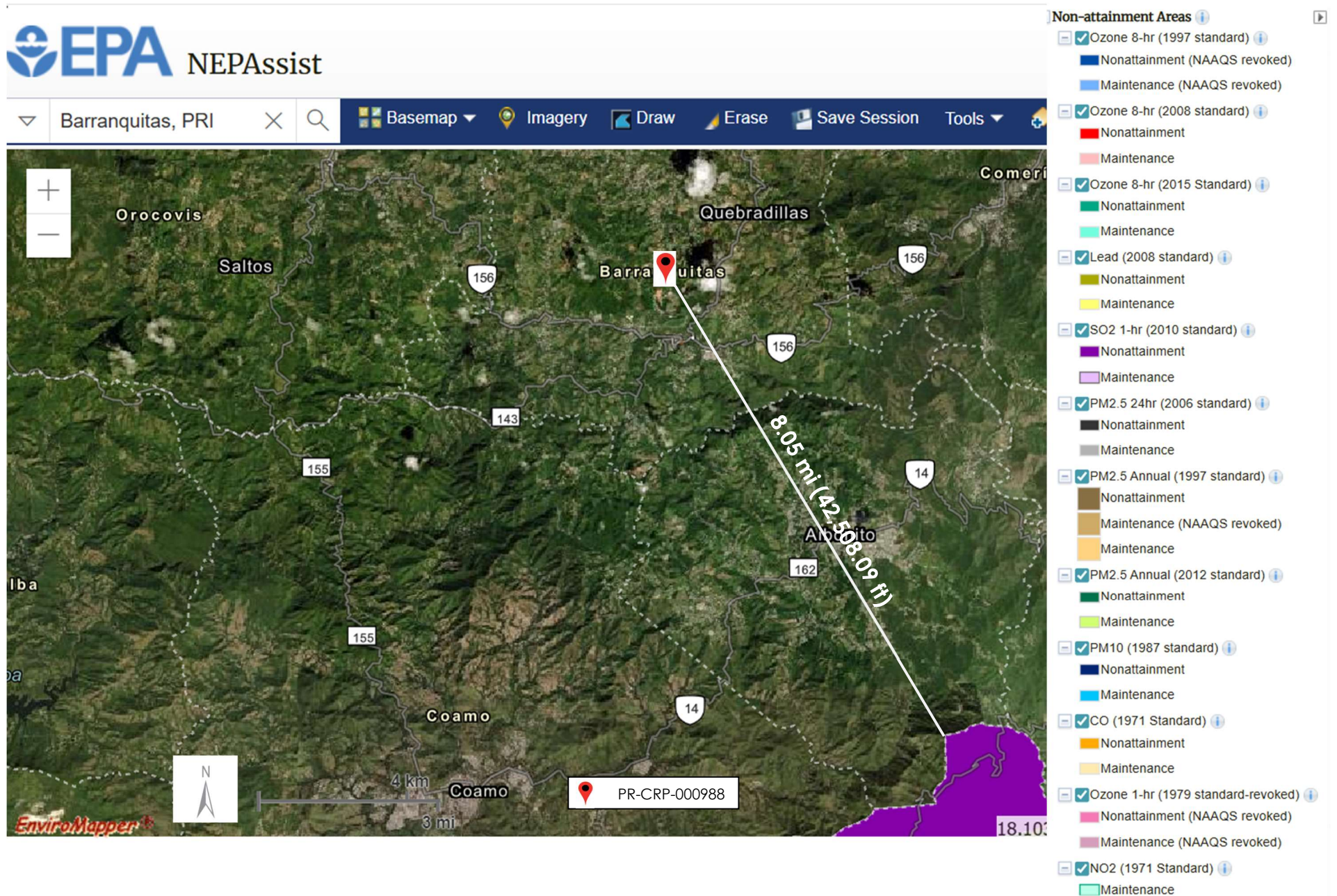
Source: FEMA FIRMette (Spatial Reference: NAVD88) at URL <https://msc.fema.gov/portal/search>

Attachment 4a. Nonattainment Map

PR-CRP-000988 Barranquitas - Construction of New Public Parking

Coord: 18.185505, -66.305029

Address: State Road PR-156 Km 16.3, Pueblo Ward, Barranquitas, PR 00794



Source: U.S. Environmental Protection Agency (EPA) NEPAassist (Spatial Reference: GRS80) at URL <https://nepassisttool.epa.gov/nepassist/nepamap.aspx>

Prepared by ICF

Attachment 4b

PR Green Book



Data is current as of August 31, 2025

* 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)

PUERTO RICO 

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

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																			111213141516171819202122232425	//		Part	32,185	72/013
Bayamon Municipio	Sulfur Dioxide (2010)	San Juan, PR																			1819202122232425	//		Part	22,921	72/021
Catano Municipio	Sulfur Dioxide (2010)	San Juan, PR																			1819202122232425	//		Whole	28,140	72/033
Guaynabo Municipio	PM-10 (1987)	Mun. of Guaynabo, PR	929394959697989900010203040506070809																			02/11/2010	Moderate	Part	90,470	72/061
Guaynabo Municipio	Sulfur Dioxide (2010)	San Juan, PR																			1819202122232425	//		Part	23,802	72/061
Salinas Municipio	Sulfur Dioxide (2010)	Guayama-Salinas, PR																			1819202122232425	//		Part	23,401	72/123
San Juan Municipio	Sulfur Dioxide (2010)	San Juan, PR																			1819202122232425	//		Part	147,963	72/127
Toa Baja Municipio	Sulfur Dioxide (2010)	San Juan, PR																			1819202122232425	//		Part	52,441	72/137

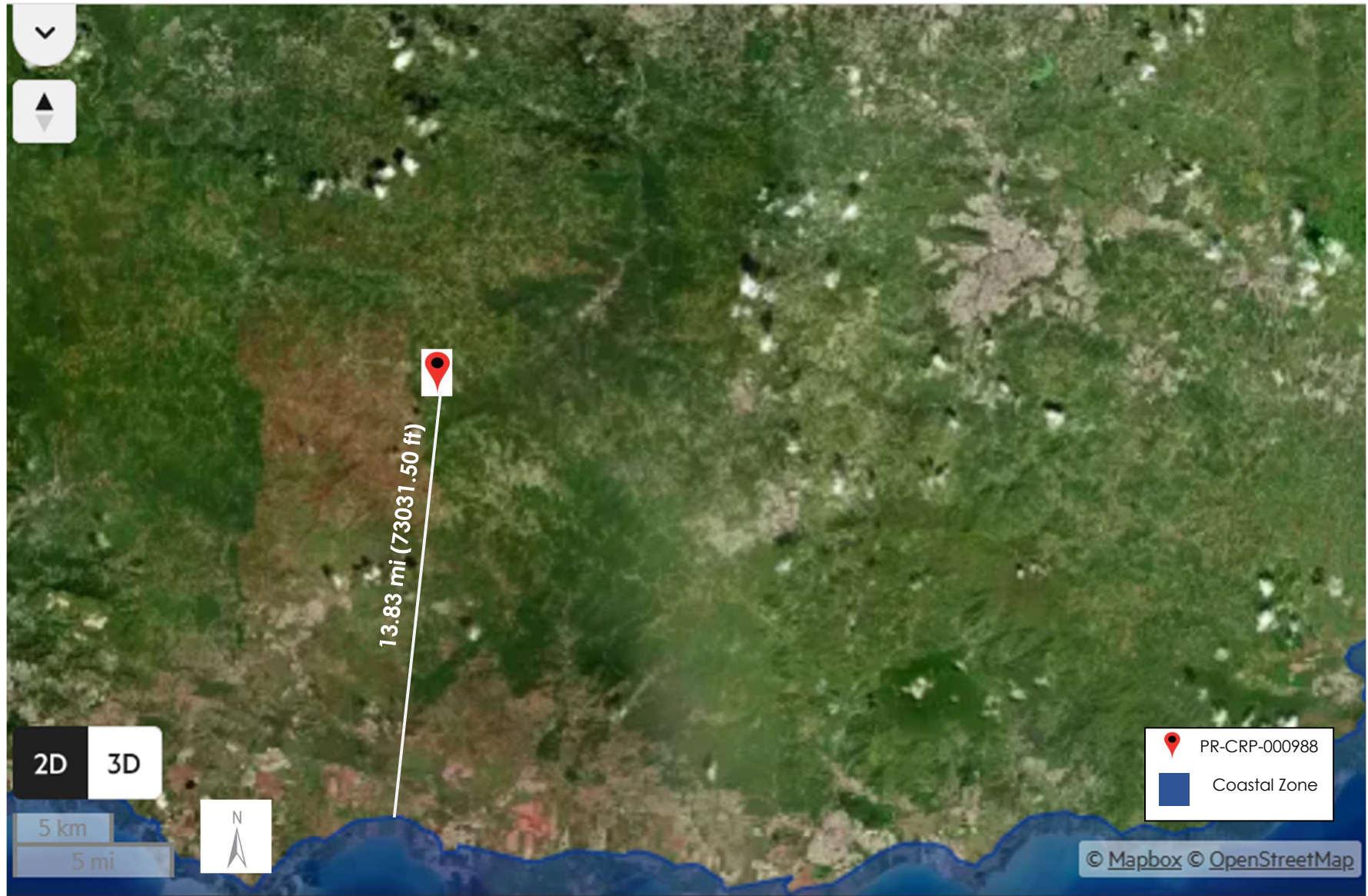
Follow.

Attachment 5. Coastal Zone Boundary Map

PR-CRP-000988 Barranquitas - Construction of New Public Parking

Coord: 18.185505, -66.305029

Address: State Road PR-156 Km 16.3, Pueblo Ward, Barranquitas, PR 00794



Source: US National Oceanic and Atmospheric Administration (NOAA), US Coastal Zone Management Act boundary (Spatial Reference: WGS84) at
URL <https://koordinates.com/layer/20522-us-coastal-zone-management-act-boundary/>

Prepared by  ICF

Attachment 6a. Contamination and Toxic Substances Map

PR-CRP-000988 Barranquitas - Construction of New Public Parking

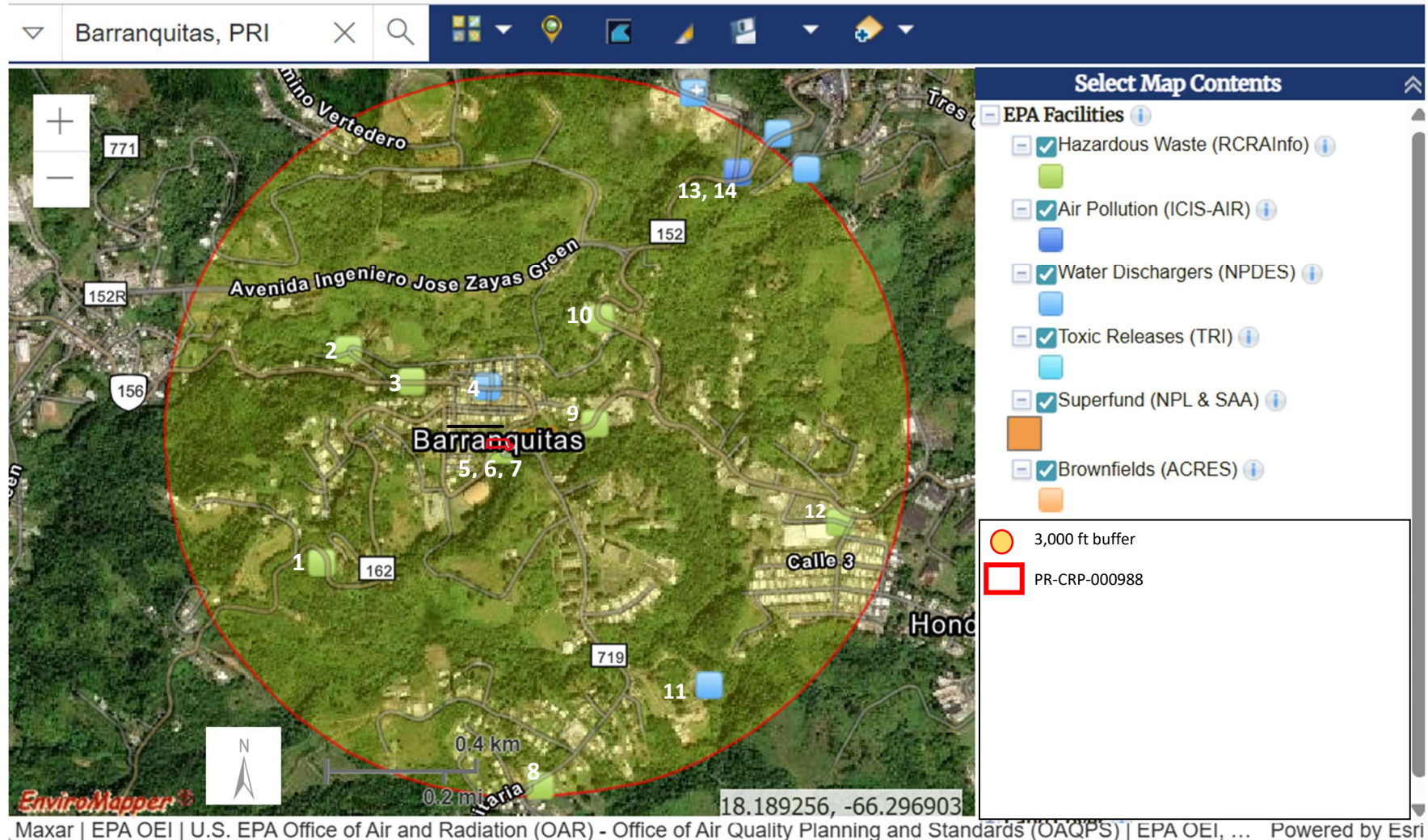
Coord: 18.185505, -66.305029

Address: State Road PR-156 Km 16.3, Pueblo Ward, Barranquitas, PR 00794



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Source: EPA NEPAAssist (Spatial Reference: GRS80), accessed at URL <https://nepassisttool.epa.gov/nepassist/nepamap.aspx>

Prepared by ICF

Attachment 6b. Contamination and Toxic Substances Table

PR-CRP-000988 Barranquitas

<i>ID</i>	EPA Facility	Distance from Project Site	Direction from Project Site	Description
1	Hazardous Waste (RCRAInfo)	0.40 mi	SW	ESSO LA PELOTA - FORMER SS PR-162 KM 9.2 BO HELECHAL, BARRANQUITAS, PR 00794 FRS ID110007822311 EPA Region02 Latitude18.182564 Longitude-66.310307 Locational Data SourceRCRAINFO Industries-- Indian CountryN
2	Hazardous Waste (RCRAInfo)	0.32 mi	NW	DEPT OF ED - JOSE BERRIOS BERDECIA Handler ID: PR0000011205 CALLE MELITON PERELES - PUEBLO BARRANQUITAS, PR 00618 County Name: BARRANQUITAS Latitude: 18.18747 Longitude: -66.30964 Hazardous Waste Generator: Owner Name: DEPT OF EDUCATION
3	Hazardous Waste (RCRAInfo)	0.20 mi	NW	DEPT OF ED - PABLO COLON BERDECIA Handler ID: PR0000012666 AVE ANTONIO BARCELO 156 BARRANQUITAS, PR 00618 County Name: BARRANQUITAS Latitude: 18.186749 Longitude: -66.308099 Hazardous Waste Generator: Owner Name: DEPT OF EDUCATION
4	Air Pollution (ICIS- AIR)	0.07	NW	FACILITY NAME MUNICIPALITY OF BARRANQUITAS NPDES PRR040056 STREET 1 23 LUIS MUÑOZ RIVERA ST CITY BARRANQUITAS COUNTY NAME BARRANQUITAS STATE PR ACTIVITY STATUS Expired ZIP CODE 00794 REGION Region 2 TYPE OF PERMIT ISSUED General Permit LATITUDE +18.186611 LONGITUDE +66.306278 PERMIT EXPIRED DATE 30-JUN-2021
5	Hazardous Waste (RCRAInfo)	0.05 mi	S	BARRANQUITAS SS 0558 Handler ID: PRR000004085 CALLE BARCELO 48 BARRANQUITAS, PR 00794-1734 County Name: BARRANQUITAS Latitude: 18.18534

			Longitude: -66.305257 Hazardous Waste Generator: Owner Name: RODOLFO TORRES
6	Hazardous Waste (RCRAInfo)	0.05 mi	S MIKE FOTO Handler ID: PRR000011577 63 CALLE BARCELO BARRANQUITAS, PR 00794-1748 County Name: BARRANQUITAS Latitude: 18.18538 Longitude: -66.30445 Hazardous Waste Generator: Owner Name: MIKE FOTO
7	Hazardous Waste (RCRAInfo)	0.05 mi	S PR PUBLIC HOUSING ADM RES VILLA UNIVERSI Handler ID: PRR000010017 CARR 719 KM 0.3 EDIF ADMIN BARRANQUITAS, PR 00794 County Name: BARRANQUITAS Latitude: 18.185142 Longitude: -66.305956 Hazardous Waste Generator: Owner Name: PR PUBLIC HOUSING ADMIN
8	Hazardous Waste (RCRAInfo)	0.59	S ABC METAL MFG Handler ID: PRN008013401 RD 719 KM 1.5 BARRANQUITAS, PR 99999 County Name: BARRANQUITAS Latitude: 18.177387 Longitude: -66.304983 Hazardous Waste Generator: Owner Name:
9	Hazardous Waste (RCRAInfo)	0.07 mi	E CENTRO DE SALUD INTEGRAL DE LA MONTANA Handler ID: PRN008021651 53 BARCELO ST BARRANQUITAS, PR 00794-1735 County Name: BARRANQUITAS Latitude: 18.18579 Longitude: -66.30365 Hazardous Waste Generator: Owner Name:
10	Hazardous Waste (RCRAInfo)	0.20	NE BARRANQUITAS STP Handler ID: PRD000689307 STATE RD 152 KM 0.2 BARRANQUITAS, PR 00618 County Name: BARRANQUITAS Latitude: 18.18822 Longitude: -66.303512 Hazardous Waste Generator: Owner Name: OWNERNAME
11	Air Pollution (ICIS-AIR)	0.50	SE FACILITY NAME PRASA - BARRANQUITAS WWTP NPDES PRL025861 STREET 1 ROAD 719 KM. 0.2 CITY BARRANQUITAS

			STATE PR ACTIVITY STATUS Effective ZIP CODE 00737-0666 REGION Region 2 TYPE OF PERMIT ISSUED Associated Permit Record LATITUDE 18.179707 LONGITUDE -66.300838 PERMIT ISSUED DATE 01-JAN-2021 EXPIRED DATE 31-DEC-2025
12	Hazardous Waste (RCRAInfo)	0.51	E SHELL CO PR LTD SS 0558 BARRANQUITAS Handler ID: PRR000005215 BARCELO ST BARRANQUITAS, PR 00794 County Name: BARRANQUITAS Latitude: 18.18347 Longitude: -66.2977 Hazardous Waste Generator: Owner Name: THE SHELL CO PR LTD
13	Air Pollution (ICIS-AIR)	0.54 mi	NE PR ASPHALT BARRANQUITAS PR 152 KM 1.0 BO. QDA. GRANDE BARRANQUITAS, PR 00794 Operating Status OPR Operating Status Desc. Operating Facility ID PR0000007201900018 State Registration Number PFE-0892-1100 Facility Type Code POF Facility Type Desc. Privately Owned Facility
14	Hazardous Waste (RCRAInfo)	0.54 mi	NE BETTERROADS ASPHALT CORP Handler ID: PRD987381241 PR 152 KM 1.0 BARRANQUITAS, PR 00618 County Name: BARRANQUITAS Latitude: 18.191606 Longitude: -66.300173 Hazardous Waste Generator: Owner Name: ARTURO DIAZ

Attachment 6c

Facility Reports



Detailed Facility Report

Facility Summary

ESSO LA PELOTA - FORMER SS

PR-162 KM 9.2 BO HELECHAL, BARRANQUITAS, PR 00794

FRS (Facility Registry Service) ID: 110007822311

EPA Region: 02

Latitude: 18.182564

Longitude: -66.310307

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	05/25/2001
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): Inactive Other, (PRR000011478)

Safe Drinking Water Act (SDWA): No Information

Go To Enforcement/Compliance Details

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

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information

Greenhouse Gas Emissions (eGGRT): No Information

Toxic Releases (TRI): No Information

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

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110007822311					N	18.182564	-66.310307

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
RCRAInfo	RCRA	PRR000011478	Other	Inactive ()			N	18.182564	-66.310307

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110007822311	ESSO LA PELOTA - FORMER SS	PR-162 KM 9.2 BO HELECHAL, BARRANQUITAS, PR 00794	Barranquitas Municipio
RCRAInfo	RCRA	PRR000011478	ESSO LA PELOTA - FORMER SS	RD 162 KM 9.2 HELECHAL WARD, BARRANQUITAS, PR 00794	Barranquitas Municipio

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
--------	------------	----------	-----------------

No data records returned

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
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No data records returned

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
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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 included in ECHO's Compliance Monitoring Activity counts because they are not compliance monitoring strategy <<https://www.epa.gov/compliance/compliance-monitoring-programs>> activities or because they are not counted as inspections within EPA's Annual Results <<https://www.epa.gov/enforcement/enforcement-data-and-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	PRR000011478	No	09/06/2025	0	09/05/2025

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: PRR000011478)		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	01/01-03/31/24	04/01-06/30/24	07/01-09/30/24	10/01-12/31/24	01/01-03/31/25	04/01-06/30/25	07/01-09/30/25
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation	Agency											

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date
---------	--------	-----------	----------------	-------------	------

No data records returned

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

Formal Enforcement Actions

Last 5 Years

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

No data records returned

Environmental Conditions

Watersheds

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

No data records returned

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	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)
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No data records returned

Pollutants

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

TRI Facility ID	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

Community

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 2022 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. Census boundaries and demographic data for U.S. Territories are based on the "2020 Island Areas Demographic Profiles" from the U.S. Census Bureau. EPA's spatial processing methodology considers the overlap between the selected radii and ACS census block groups 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 (ACS (American Community Survey))

Total Persons	5,020
Population Density	1,609/sq.mi.
Housing Units in Area	2,133
Percent People of Color	100%
Households in Area	1,567
Households on Public Assistance	99
Persons With Low Income	4,071
Percent With Low Income	82%

Geography

Radius of Selected Area	1 mi.
Center Latitude	18.182564
Center Longitude	-66.310307
Total Area	3.121 sq.mi.
Land Area	100%
Water Area	0%

Income Breakdown (ACS (American Community Survey)) - Households (%)

Less than \$15,000	778 (49.68%)
\$15,000 - \$25,000	306 (19.54%)
\$25,000 - \$50,000	294 (18.77%)
\$50,000 - \$75,000	110 (7.02%)
Greater than \$75,000	78 (4.98%)

Age Breakdown (ACS (American Community Survey)) - Persons (%)

Children 5 years and younger	283 (6%)
Minors 17 years and younger	1,102 (22%)
Adults 18 years and older	3,918 (78%)
Seniors 65 years and older	879 (18%)

Race Breakdown (ACS (American Community Survey)) - Persons (%)

White	2,786 (55%)
African-American	382 (8%)
Hispanic-Origin	5,012 (100%)
Asian	0 (0%)
Hawaiian/Pacific Islander	0 (0%)
American Indian	5 (0%)
Other/Multiracial	416 (8%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)

Less than 9th Grade	491 (14.25%)
9th through 12th Grade	325 (9.43%)
High School Diploma	1,024 (29.72%)
Some College/2-year	554 (16.08%)
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	668 (19.39%)



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Facility Information

DEPT OF ED - JOSE BERRIOS BERDECIA

Handler ID: PR0000011205

CALLE MELITON PERELES - PUEBLO

BARRANQUITAS, PR 00618

County Name: BARRANQUITAS

Latitude: 18.18747

Longitude: -66.30964

Hazardous Waste Generator:

Owner Name: DEPT OF EDUCATION

BIENNIAL REPORT SUMMARY

No Biennial Report data is available for the facility listed above.

LIST OF FACILITY CONTACTS



NAME	STREET	CITY	STATE	ZIP CODE	PI
CARLOS MARRERO LUNA	CALLE MELITON PERELES -	BARRANQUITAS	PR	00618	78

HANDLER / FACILITY CLASSIFICATION

Unspecified Universe for the facility listed above.

HANDLER TYPE
Not in a universe

LIST OF PROCESS UNIT INFORMATION FOR GROUP

<https://epa.gov/envirofacts/metadata/table/rcra/rcr_pm_unit>

No Process Information is available for the facility listed above.

LIST OF NAICS CODES AND DESCRIPTIONS

No NAICS Codes are available for the facility listed above.

LIST OF WASTE CODES AND DESCRIPTIONS

No Waste Codes are available for the facility listed above.

Contact Us <<https://www.epa.gov/enviro/forms/contact-us-about-envirofacts>> to ask a question, provide feedback, or report a problem.

Last updated on August 13, 2025



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Facility Information

DEPT OF ED - PABLO COLON BERDECIA

Handler ID: PR0000012666

AVE ANTONIO BARCELO 156

BARRANQUITAS, PR 00618

County Name: BARRANQUITAS

Latitude: 18.186749

Longitude: -66.308099

Hazardous Waste Generator:

Owner Name: DEPT OF EDUCATION

BIENNIAL REPORT SUMMARY

No Biennial Report data is available for the facility listed above.

LIST OF FACILITY CONTACTS

NAME	STREET	CITY	STATE	ZIP CODE	PH
CARLOS MARRERO	AVE ANTONIO BARCELO 156	BARRANQUITA	PR	00618	78

NAME	STREET	CITY	STATE	ZIP CODE	PL

HANDLER / FACILITY CLASSIFICATION

Unspecified Universe for the facility listed above.

HANDLER TYPE
Not in a universe

LIST OF PROCESS UNIT INFORMATION FOR GROUP

<https://epa.gov/envirofacts/metadata/table/rcra/rcr_pm_unit>

No Process Information is available for the facility listed above.

LIST OF NAICS CODES AND DESCRIPTIONS

No NAICS Codes are available for the facility listed above.

LIST OF WASTE CODES AND DESCRIPTIONS

No Waste Codes are available for the facility listed above.



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Facility

FACILITY NAME (1) <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/facility_name>	MUNICIPALITY OF BARRANQUITAS	NPDES <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/external_permit_
STREET 1 <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/location_address>	23 LUIS MUÑOZ RIVERA ST	SIC CODE <https://epa.gov/envirofacts/metadata/column/icis/xref_facility_interest_sic/s
CITY <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/city>	BARRANQUITAS	MAJOR / MINOR <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/major_minor_status_flag>
COUNTY NAME <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/county_code>	BARRANQUITAS	TYPE OF OWNERSHIP <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/facility_type_code
STATE <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/state_code>	PR	ACTIVITY STATUS <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/perr
ZIP CODE <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/zip>	00794	INACTIVE DATE <https://epa.gov/envirofacts/metadata/column/icis/icis_perm_comp_status/status_end_da
REGION <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/epa_region_code>	Region 2	TYPE OF PERMIT ISSUED <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/permit_type_code>

LATITUDE <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/geocode_latitude>	+18.186611	ORIGINAL PERMIT ISSUE DATE <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/original_issue_date>
LONGITUDE <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/geocode_longitude>	+66.306278	PERMIT ISSUED DATE <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/issued_date>
LAT/LON CODE OF ACCURACY <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/horizontal_accuracy_measure>		PERMIT EXPIRED DATE <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/expiration_date>
LAT/LON METHOD <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/horizontal_collect_method_code>		
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LAT/LON DATUM <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/horizontal_ref_datum_code>		FLOW <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/total_design_flow_mgd>
RECEIVING WATERS <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/state_water_body_name>		FEDERAL GRANT IND <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/federal_grant_flag>
PRETREATMENT CODE <https://epa.gov/envirofacts/metadata/column/icis/icis_perm_pretreatment/pretreatment_indicator_code>		SLUDGE CLASS FAC IND <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/facility_type_indicator>
MAILING NAME <https://epa.gov/envirofacts/metadata/column/frs/frs_program_facility/primary_name>	MUNICIPALITY OF BARRANQUITAS	SLUDGE RELATED PERMIT NUM <https://epa.gov/envirofacts/metadata/column/icis/icis_perm_association/related_external_permit_number>
MAILING STREET (1) <https://epa.gov/envirofacts/metadata/column/frs/frs_program_facility/location_address>	23 LUIS MU OZ RIVERA ST	ANNUAL DRY SLUDGE PROD <https://epa.gov/envirofacts/metadata/column/icis/icis_perm_biosolid/total_volume_amt>
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MAILING STATE <https://epa.gov/envirofacts/metadata/column/frs/frs_program_facility/state_name>	PUERTO RICO	
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COGNIZANT OFFICIAL <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/dmr_cognizant_official>	Mayor Francisco López	COGNIZANT OFFICIAL TEL <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/dmr_cognizant_offcl_telephone_number>

Activity

FACILITY NAME (1) <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/facility_name>	MUNICIPALITY OF BARRANQUITAS	NPDES <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/external_pe
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Activity Name <https://epa.gov/envirofacts/metadata/column/icis/icis_activity_report/activity_name>	Activity Type Description <https://epa.gov/envirofacts/metadata/column/icis/ref_activity_type/activity_type_desc>	Activity Status Description <https://epa.gov/envirofacts/metadata/colum
MS4- Municipality of Barranquitas - Desk Review	Offsite Record Review	Active
	Permit	Active
MUNICIPALITY OF BARRANQUITAS (DEPARTMENT OF PUBLIC WORKS)-CWA-HECTOR ORTIZ	Inspection/Evaluation	Active
MUNICIPALITY OF BARRANQUITAS (SB)	Inspection/Evaluation	Active
	Permit	Active



Contacts

FACILITY NAME (1) <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/facility_name>	MUNICIPALITY OF BARRANQUITAS	NPDES <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/external_pe
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No Contacts Found.**Permit Tracking**

FACILITY NAME (1) <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/facility_name>	MUNICIPALITY OF BARRANQUITAS	NPDES <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/external_peri
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PERMIT ISSUED DATE <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/issue_date>	07-JUN-2010	PERMIT EXPIRED DATE <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/expiration_date>
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FACILITY NAME (1) <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/facility_name>	MUNICIPALITY OF BARRANQUITAS	NPDES <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/external_peri>
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PERMIT ISSUED DATE <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/issue_date>	12-JUL-2016	PERMIT EXPIRED DATE <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/expiration_date>
EFFECTIVE DATE <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/effective_date>	17-APR-2018	RETIREMENT DATE <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/retirement_date>

Permit Tracking Events

Event Description <https://epa.gov/envirofacts/metadata/column/icis/icis_perm_track_event/perm_track_event_code>	Event Date <https://epa.gov/envirofacts/metadata/column/icis/icis_perm_track
Permit Expiration	30-JUN-2021
Permit Effective	17-APR-2018
Permit Retired	16-APR-2018
Permit Issued	12-JUL-2016
Permit Reissued	12-JUL-2016
Permit Expiration	05-NOV-2011
Permit Effective	07-JUN-2010
Permit Issued	07-JUN-2010

Inspections

FACILITY NAME (1) <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/facility_name>	MUNICIPALITY OF BARRANQUITAS	NPDES <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/external_pe
Inspection Type <https://epa.gov/envirofacts/metadata/column/icis/icis_activity_report/activity_name>	Date of Inspection <https://epa.gov/envirofacts/metadata/column/icis/icis_activity_repor	
MUNICIPALITY OF BARRANQUITAS (DEPARTMENT OF PUBLIC WORKS)-CWA-HECTOR ORTIZ	06-SEP-2012	
MUNICIPALITY OF BARRANQUITAS (SB)	24-SEP-2010	

Outfalls/Pipe Schedules

FACILITY NAME (1) <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/facility_name>	MUNICIPALITY OF BARRANQUITAS	NPDES <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/external_permit_n
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ACTIVITY STATUS <https://epa.gov/envirofacts/metadata/column/icis/icis_limit_set/status/status_flag>		REPORT DESIGNATOR <https://epa.gov/envirofacts/metadata/column/icis/icis_limit_set/limit_set_designator>
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INIT REPORTING DATE <https://epa.gov/envirofacts/metadata/column/icis/icis_limit_set_schedule/initial_monitoring_date>		REPORTING UNITS <https://epa.gov/envirofacts/metadata/column/icis/icis_limit_set/report_frequency_code>
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Limits Report (Pipes)

FACILITY NAME (1) <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/facility_name>	MUNICIPALITY OF BARRANQUITAS	NPDES <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/external_p
PIPE NUMBER <https://epa.gov/envirofacts/metadata/column/icis/icis_perm_feature/perm_feature_nmbr>		

PIPE DESCRIPTION <https://epa.gov/envirofacts/metadata/column/icis/icis_perm_feature/perm_feature_text>		REPORT DESIGNATOR <https://epa.gov/envirofacts/metadata/column/icis/icis_limit_set/limit_set_designa
DMR COMMENT <https://epa.gov/envirofacts/metadata/column/icis/icis_limit_set/dmr_comment_text>		LIMIT SET TYPE <https://epa.gov/envirofacts/metadata/column/icis/icis_limit_set/limit_set_type_co

No ICIS Limits Report Found.

Limits Report (Dockets)

No ICIS Limits Information Found.

Measurements and Violations

No ICIS Measurements Information Found.

Compliance Schedules and Violations

FACILITY NAME (1) <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/facility_name>	MUNICIPALITY OF BARRANQUITAS	NPDES <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/external_pe
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No Compliance Schedules Found.

No Compliance Violations Found.

Pretreatment Inspections/Audits

FACILITY NAME (1) <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/facility_name>	MUNICIPALITY OF BARRANQUITAS	NPDES <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/external_pe
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No ICIS Pretreatment Inspections Found.

Pretreatment Performance Summary

FACILITY NAME (1) <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/facility_name>	MUNICIPALITY OF BARRANQUITAS	NPDES <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/external_pe
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No ICIS Pretreatment Performance Summary Information Found.

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Last updated on August 13, 2025



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Facility Information

BARRANQUITAS SS 0558
Handler ID: PRR000004085
CALLE BARCELO 48
BARRANQUITAS, PR 00794-1734
County Name: BARRANQUITAS
Latitude: 18.18534
Longitude: -66.305257
Hazardous Waste Generator:
Owner Name: RODOLFO TORRES

BIENNIAL REPORT SUMMARY

No Biennial Report data is available for the facility listed above.

LIST OF FACILITY CONTACTS

NAME	STREET	CITY	STATE	ZIP CODE	PH
	PO BOX 366697	SAN JUAN	PR	00936-6697	

HANDLER / FACILITY CLASSIFICATION					
Unspecified Universe for the facility listed above.					

HANDLER TYPE
Not in a universe

LIST OF PROCESS UNIT INFORMATION FOR GROUP

<https://epa.gov/envirofacts/metadata/table/rcra/rcr_pm_unit>

No Process Information is available for the facility listed above.

LIST OF NAICS CODES AND DESCRIPTIONS

No NAICS Codes are available for the facility listed above.

LIST OF WASTE CODES AND DESCRIPTIONS

No Waste Codes are available for the facility listed above.

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Facility Information

MIKE FOTO
Handler ID: PRR000011577
63 CALLE BARCELO
BARRANQUITAS, PR 00794-1748
County Name: BARRANQUITAS
Latitude: 18.18538
Longitude: -66.30445
Hazardous Waste Generator:
Owner Name: MIKE FOTO

BIENNIAL REPORT SUMMARY

No Biennial Report data is available for the facility listed above.

LIST OF FACILITY CONTACTS

NAME	STREET	CITY	STATE	ZIP CODE	PH
OLGA GONZALEZ	CALLE BARCELO	BARRANQUITAS	PR	00794-1748	78

HANDLER / FACILITY CLASSIFICATION

Unspecified Universe for the facility listed above.

HANDLER TYPE
Not in a universe

LIST OF PROCESS UNIT INFORMATION FOR GROUP

<https://epa.gov/envirofacts/metadata/table/rcra/rcr_pm_unit>

No Process Information is available for the facility listed above.

LIST OF NAICS CODES AND DESCRIPTIONS

No NAICS Codes are available for the facility listed above.

LIST OF WASTE CODES AND DESCRIPTIONS

No Waste Codes are available for the facility listed above.

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Facility Information

PR PUBLIC HOUSING ADM RES VILLA UNIVERSI

Handler ID: PRR000010017

CARR 719 KM 0.3 EDIF ADMIN

BARRANQUITAS, PR 00794

County Name: BARRANQUITAS

Latitude: 18.185142

Longitude: -66.305956

Hazardous Waste Generator:

Owner Name: PR PUBLIC HOUSING ADMIN

BIENNIAL REPORT SUMMARY

No Biennial Report data is available for the facility listed above.

LIST OF FACILITY CONTACTS

NAME	STREET	CITY	STATE	ZIP CODE	Ph
PATRICK WANGEN	PO BOX 363188	SAN JUAN	PR	00936-3188	78

HANDLER / FACILITY CLASSIFICATION					
Unspecified Universe for the facility listed above.					

HANDLER TYPE
Not in a universe

LIST OF PROCESS UNIT INFORMATION FOR GROUP

<https://epa.gov/envirofacts/metadata/table/rcra/rcr_pm_unit>

No Process Information is available for the facility listed above.

LIST OF NAICS CODES AND DESCRIPTIONS

No NAICS Codes are available for the facility listed above.

LIST OF WASTE CODES AND DESCRIPTIONS

No Waste Codes are available for the facility listed above.

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Facility Information

ABC METAL MFG
Handler ID: PRN008013401
RD 719 KM 1.5
BARRANQUITAS, PR 99999
County Name: BARRANQUITAS
Latitude: 18.177387
Longitude: -66.304983
Hazardous Waste Generator:
Owner Name:

BIENNIAL REPORT SUMMARY

No Biennial Report data is available for the facility listed above.

LIST OF FACILITY CONTACTS

NAME	STREET	CITY	STATE	ZIP CODE	PH
FELIPE COLON	RD 719 KM 1.5	BARRANQUITAS	PR	99999	78

HANDLER / FACILITY CLASSIFICATION					
Unspecified Universe for the facility listed above.					
HANDLER TYPE					
Not in a universe					

LIST OF PROCESS UNIT INFORMATION FOR GROUP

<https://epa.gov/envirofacts/metadata/table/rcra/rcr_pm_unit>

No Process Information is available for the facility listed above.

LIST OF NAICS CODES AND DESCRIPTIONS

No NAICS Codes are available for the facility listed above.

LIST OF WASTE CODES AND DESCRIPTIONS

No Waste Codes are available for the facility listed above.

Contact Us <<https://www.epa.gov/enviro/forms/contact-us-about-envirofacts>> to ask a question, provide feedback, or report a problem.



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Facility Information

CENTRO DE SALUD INTEGRAL DE LA MONTANA

Handler ID: PRN008021651

53 BARCELO ST

BARRANQUITAS, PR 00794-1735

County Name: BARRANQUITAS

Latitude: 18.18579

Longitude: -66.30365

Hazardous Waste Generator:

Owner Name:

BIENNIAL REPORT SUMMARY

No Biennial Report data is available for the facility listed above.

LIST OF FACILITY CONTACTS

NAME	STREET	CITY	STATE	ZIP CODE	PH
LOURDES COLON	BARCELO ST	BARRANQUITAS	PR	00794-1735	78

HANDLER / FACILITY CLASSIFICATION

Unspecified Universe for the facility listed above.

HANDLER TYPE
Not in a universe

LIST OF PROCESS UNIT INFORMATION FOR GROUP

<https://epa.gov/envirofacts/metadata/table/rcra/rcr_pm_unit>

No Process Information is available for the facility listed above.

LIST OF NAICS CODES AND DESCRIPTIONS

No NAICS Codes are available for the facility listed above.

LIST OF WASTE CODES AND DESCRIPTIONS

No Waste Codes are available for the facility listed above.

Contact Us <<https://www.epa.gov/enviro/forms/contact-us-about-envirofacts>> to ask a question, provide feedback, or report a problem.



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Facility Information

BARRANQUITAS STP
Handler ID: PRD000689307
STATE RD 152 KM 0.2
BARRANQUITAS, PR 00618
County Name: BARRANQUITAS
Latitude: 18.18822
Longitude: -66.303512
Hazardous Waste Generator:
Owner Name: OWNERNAME

BIENNIAL REPORT SUMMARY

No Biennial Report data is available for the facility listed above.

LIST OF FACILITY CONTACTS

NAME	STREET	CITY	STATE	ZIP CODE	PH
JULIO PUJOLS	PO BOX 7066 BO OBRERO STATION	SANTURCE	PR	00916	78

NAME	STREET	CITY	STATE	ZIP CODE	PL

HANDLER / FACILITY CLASSIFICATION

Unspecified Universe for the facility listed above.

HANDLER TYPE
Not in a universe

LIST OF PROCESS UNIT INFORMATION FOR GROUP

<https://epa.gov/envirofacts/metadata/table/rcra/rcr_pm_unit>

No Process Information is available for the facility listed above.

LIST OF NAICS CODES AND DESCRIPTIONS

NAICS CODE	NAICS DESCRIPTION
22131	WATER SUPPLY AND IRRIGATION SYSTEMS
22132	SEWAGE TREATMENT FACILITIES

LIST OF WASTE CODES AND DESCRIPTIONS

No Waste Codes are available for the facility listed above.

Contact Us <<https://www.epa.gov/enviro/forms/contact-us-about-envirofacts>> to ask a question, provide feedback, or report a problem.

Last updated on August 13, 2025



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ICIS Detailed Report

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Facility

FACILITY NAME (1) <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/facility_name>	PRASA - BARRANQUITAS WWTP	NPDES <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/external_permit_number>
STREET 1 <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/location_address>	ROAD 719 KM. 0.2	SIC CODE <https://epa.gov/envirofacts/metadata/column/icis/xref_facility_interest_sic_code>
CITY <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/city>	BARRANQUITAS	MAJOR / MINOR <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/major_minor_status_flag>
COUNTY NAME <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/county_code>		TYPE OF OWNERSHIP <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/facility_type_code>
STATE <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/state_code>	PR	ACTIVITY STATUS <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/permit_status_code>
ZIP CODE <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/zip>	00737-0666	INACTIVE DATE <https://epa.gov/envirofacts/metadata/column/icis/icis_perm_comp_status/status_end_date>
REGION <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/epa_region_code>	Region 2	TYPE OF PERMIT ISSUED <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/permit_type_code>

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LAT/LON SCALE <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/source_map_scale_nmbr>		USGS HYDRO BASIN CODE <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/huc_code>
LAT/LON DATUM <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/horizontal_ref_datum_code>		FLOW <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/total_design_flow.
RECEIVING WATERS <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/state_water_body_name>		FEDERAL GRANT IND <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/federal_grant_flag>
PRETREATMENT CODE <https://epa.gov/envirofacts/metadata/column/icis/icis_perm_pretreatment/pretreatment_indicator_code>		SLUDGE CLASS FAC IND <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/facility_type_indicator>
MAILING NAME <https://epa.gov/envirofacts/metadata/column/frs/frs_program_facility/primary_name>	PRASA BARRANQUITAS WWTP	SLUDGE RELATED PERMIT NUM <https://epa.gov/envirofacts/metadata/column/icis/icis_perm_association/related_externa
MAILING STREET (1) <https://epa.gov/envirofacts/metadata/column/frs/frs_program_facility/location_address>	ROAD 719 KM 0 2	ANNUAL DRY SLUDGE PROD <https://epa.gov/envirofacts/metadata/column/icis/icis_perm_biosolid/total_volume_amt
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MAILING STATE <https://epa.gov/envirofacts/metadata/column/frs/frs_program_facility/state_name>	PUERTO RICO	
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Activity

FACILITY NAME (1) <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/facility_name>	PRASA - BARRANQUITAS WWTP	NPDES <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/external_permit_id>
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Activity Name <https://epa.gov/envirofacts/metadata/column/icis/icis_activity_report/activity_name>	Activity Type Description <https://epa.gov/envirofacts/metadata/column/icis/ref_activity_type/activity_type_desc>	Activity Status Description <https://epa.gov/envirofacts/metadata/column/icis/icis_activity_report/activity_status_desc>
BCOE Level 2 Review - 2024 - PRL025861	Offsite Record Review	Active
	Permit	Active
	Permit	Active

**Contacts**

FACILITY NAME (1) <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/facility_name>	PRASA - BARRANQUITAS WWTP	NPDES <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/external_permit_id>
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No Contacts Found.**Permit Tracking**

FACILITY NAME (1) <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/facility_name>	PRASA - BARRANQUITAS WWTP	NPDES <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/external_permit_id>
PERMIT ISSUED BY <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/issuing_agency>		ORIGINAL DATE OF ISSUE <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/original_issue_date>

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EFFECTIVE DATE <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/effective_date>	01-JAN-2016	RETIREMENT DATE <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/retirement_date>
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Permit Tracking Events

Event Description <https://epa.gov/envirofacts/metadata/column/icis/icis_perm_track_event/perm_track_event_code>	Event Date <https://epa.gov/envirofacts/metadata/column/icis/icis_perm_track>
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Permit Effective	01-JAN-2021
Permit Issued	01-JAN-2021
Permit Reissued	01-JAN-2021
Permit Expiration	31-DEC-2020
Permit Retired	31-DEC-2020
Permit Effective	01-JAN-2016
Permit Issued	01-JAN-2016

Inspections

FACILITY NAME (1) <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/facility_name>	PRASA - BARRANQUITAS WWTP	NPDES <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/external_pei
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No Inspections Found.

Outfalls/Pipe Schedules

FACILITY NAME (1) <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/facility_name>	PRASA - BARRANQUITAS WWTP	NPDES <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/external_permit_n
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INIT REPORTING DATE <https://epa.gov/envirofacts/metadata/column/icis/icis_limit_set_schedule/initial_monitoring_date>		REPORTING UNITS <https://epa.gov/envirofacts/metadata/column/icis/icis_limit_set/report_frequency_code>
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FACILITY NAME (1) <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/facility_name>	PRASA - BARRANQUITAS WWTP	NPDES <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/external_permit_n
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LATITUDE <https://epa.gov/envirofacts/metadata/column/icis/icis_perm_feature_coord/latitude_measure>		LONGITUDE <https://epa.gov/envirofacts/metadata/column/icis/icis_perm_feature_coord/longitude_me
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INIT DMR DUE DATE <https://epa.gov/envirofacts/metadata/column/icis/icis_limit_set_schedule/initial_dmr_due_date>		SUBMISSION UNITS <https://epa.gov/envirofacts/metadata/column/icis/icis_limit_set/report_frequency_code>
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Limits Report (Pipes)

FACILITY NAME (1) <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/facility_name>	PRASA - BARRANQUITAS WWTP	NPDES <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/external_pe
PIPE NUMBER <https://epa.gov/envirofacts/metadata/column/icis/icis_perm_feature/perm_feature_nmbr>		
PIPE DESCRIPTION <https://epa.gov/envirofacts/metadata/column/icis/icis_perm_feature/perm_feature_text>		REPORT DESIGNATOR <https://epa.gov/envirofacts/metadata/column/icis/icis_limit_set/limit_set_designat
DMR COMMENT <https://epa.gov/envirofacts/metadata/column/icis/icis_limit_set/dmr_comment_text>		LIMIT SET TYPE <https://epa.gov/envirofacts/metadata/column/icis/icis_limit_set/limit_set_type_coc

No ICIS Limits Report Found.**Limits Report (Dockets)****No ICIS Limits Information Found.****Measurements and Violations****No ICIS Measurements Information Found.****Compliance Schedules and Violations**

FACILITY NAME (1) <https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/facility_name>	PRASA - BARRANQUITAS WWTP	NPDES <https://epa.gov/envirofacts/metadata/column/icis/icis_permit/external_pe
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No Compliance Schedules Found.**No Compliance Violations Found.**

Pretreatment Inspections/Audits

FACILITY NAME (1) < https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/facility_name >	PRASA - BARRANQUITAS WWTP	NPDES < https://epa.gov/envirofacts/metadata/column/icis/icis_permit/external_pei >
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No ICIS Pretreatment Inspections Found.

Pretreatment Performance Summary

FACILITY NAME (1) < https://epa.gov/envirofacts/metadata/column/icis/icis_facility_interest/facility_name >	PRASA - BARRANQUITAS WWTP	NPDES < https://epa.gov/envirofacts/metadata/column/icis/icis_permit/external_pei >
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No ICIS Pretreatment Performance Summary Information Found.

Contact Us <<https://www.epa.gov/enviro/forms/contact-us-about-envirofacts>> to ask a question, provide feedback, or report a problem.

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RCRAInfo Facility

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Facility Information

SHELL CO PR LTD SS 0558 BARRANQUITAS

Handler ID: PRR000005215

BARCELO ST

BARRANQUITAS, PR 00794

County Name: BARRANQUITAS

Latitude: 18.18347

Longitude: -66.2977

Hazardous Waste Generator:

Owner Name: THE SHELL CO PR LTD

BIENNIAL REPORT SUMMARY

No Biennial Report data is available for the facility listed above.

LIST OF FACILITY CONTACTS

NAME	STREET	CITY	STATE	ZIP CODE	PH
	PO BOX 366697	SAN JUAN	PR	00936-6697	

HANDLER / FACILITY CLASSIFICATION					
Unspecified Universe for the facility listed above.					

HANDLER TYPE
Not in a universe

LIST OF PROCESS UNIT INFORMATION FOR GROUP

<https://epa.gov/envirofacts/metadata/table/rcra/rcr_pm_unit>

No Process Information is available for the facility listed above.

LIST OF NAICS CODES AND DESCRIPTIONS

No NAICS Codes are available for the facility listed above.

LIST OF WASTE CODES AND DESCRIPTIONS

No Waste Codes are available for the facility listed above.

Contact Us <<https://www.epa.gov/enviro/forms/contact-us-about-envirofacts>> to ask a question, provide feedback, or report a problem.

Last updated on August 13, 2025



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ICIS–Air Detailed Plant View

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Plant Information

PR ASPHALT BARRANQUITAS PR 152 KM 1.0 BO. QDA. GRANDE BARRANQUITAS, PR 00794	
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Operating Status	OPR	Operating Status Desc.	Operating
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Facility ID	PR0000007201900018	State Registration Number	PFE-0892-1100
Facility Type Code	POF	Facility Type Desc.	Privately Owned Facility
Government Facility Code		Government Facility Description	

NAICS Information

NAICS Code	NAICS Description
324121	Asphalt Paving Mixture and Block Manufacturing

SIC Information

SIC Code	SIC Description
2951	Asphalt Paving Mixtures And Blocks

Air Program Information



Program Code	Program Description	Operating Status	Subpart Code	Subpart Description
CAAGACTM	40 CFR Part 63 Area Sources	Operating	CAAGACTMZZZZ	40 CFR Part 63 Area Sources - Subpart ZZZZ - STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES (RICE)
CAANSPS	New Source Performance Standards	Operating	CAANSPSI	NSPS Part 60 - Subpart I - HOT MIX ASPHALT FACILITIES
CAASIP	State Implementation Plan for National Primary and Secondary Ambient Air Quality	Operating		

Air Pollutant Information

Pollutant Code	Pollutant Description	Chemical Abstract Service (CAS) Number	SRS ID	AIR Pollutant Class Code	AIR Compliance Code
10193	Carbon monoxide	630080	65052	MIN	Minor
10461	Sulfur dioxide	7446095	150367	MIN	Minor
300000005	NITROGEN OXIDES NO2	10102440	167924	MIN	Minor
300000236	VISIBLE EMISSIONS		1647650	MIN	Minor
300000243	VOLATILE ORGANIC COMPOUNDS (VOCs)		761346	MIN	Minor
300000319	PARTICULATE MATTER < 10 UM		1647619	MIN	Minor
	TOTAL				

Air Compliance Monitoring Information

State/EPA Flag	Activity Type	Activity Type Description	Compliance Monitor Type	Compliance Monitor Type Description
E	INS	Inspection/Evaluation	FOO	FCE On-Site
E	INS	Inspection/Evaluation	PCE	PCE On-Site

Informal Enforcement Information

State/EPA Flag	Activity Type	Activity Type Description	Enforcement Identifier	Enforcement Type Code
S	AIF	Administrative - Informal	PR000A0000720190001800006	NOV
S	AIF	Administrative - Informal	PR000A0000720190001800002	NOV
S	AIF	Administrative - Informal	PR000A200174656	NOV

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Facility Information

BETTERROADS ASPHALT CORP

Handler ID: PRD987381241

PR 152 KM 1.0

BARRANQUITAS, PR 00618

County Name: BARRANQUITAS

Latitude: 18.191606

Longitude: -66.300173

Hazardous Waste Generator:

Owner Name: ARTURO DIAZ

BIENNIAL REPORT SUMMARY

No Biennial Report data is available for the facility listed above.

LIST OF FACILITY CONTACTS

NAME	STREET	CITY	STATE	ZIP CODE	Ph
	PO BOX 21420	RIO PIEDRAS	PR	00928	

HANDLER / FACILITY CLASSIFICATION

Unspecified Universe for the facility listed above.

HANDLER TYPE
Not in a universe

LIST OF PROCESS UNIT INFORMATION FOR GROUP

<https://epa.gov/envirofacts/metadata/table/rcra/rcr_pm_unit>

No Process Information is available for the facility listed above.

LIST OF NAICS CODES AND DESCRIPTIONS

No NAICS Codes are available for the facility listed above.

LIST OF WASTE CODES AND DESCRIPTIONS

No Waste Codes are available for the facility listed above.

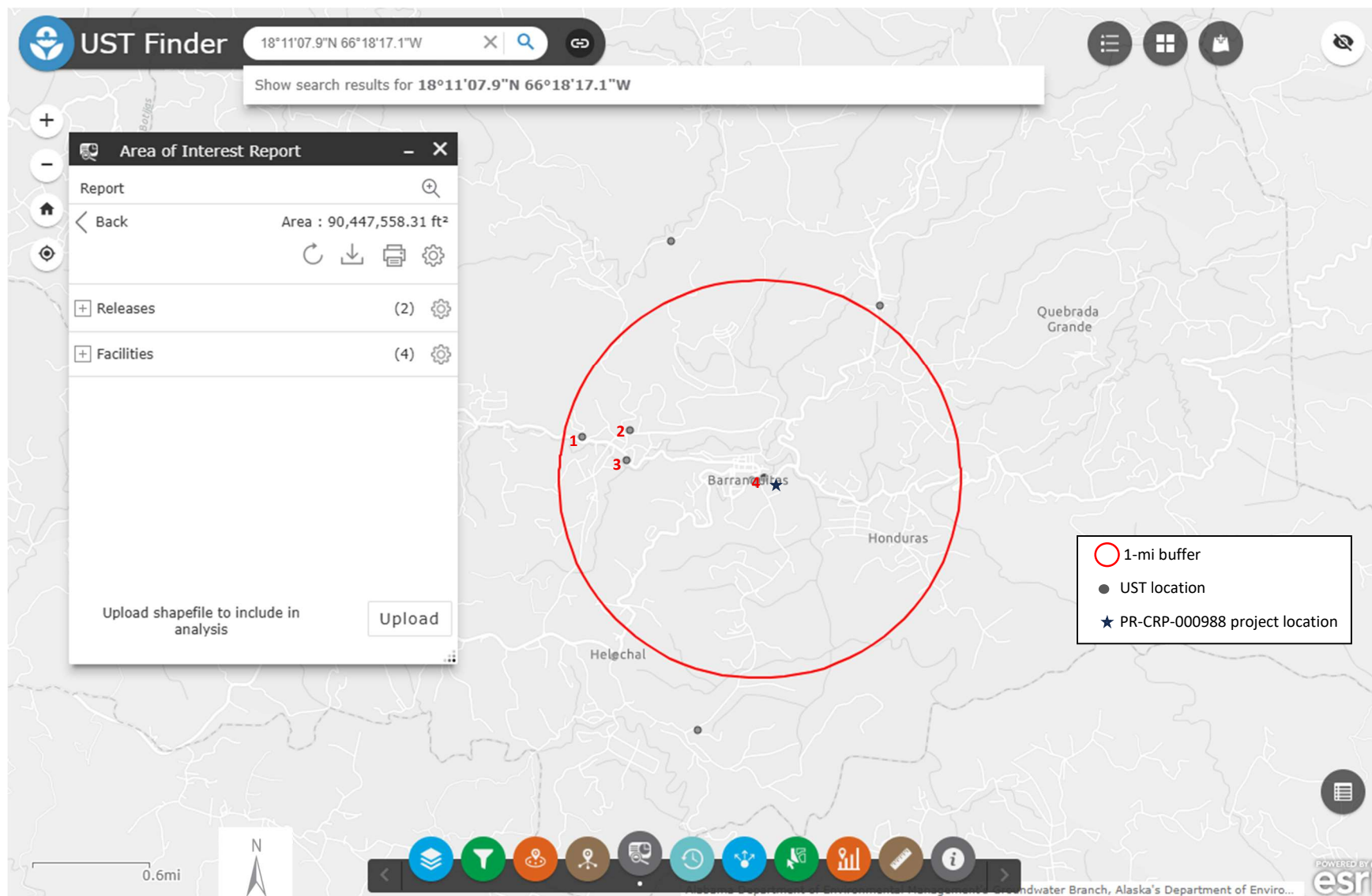
Contact Us <<https://www.epa.gov/enviro/forms/contact-us-about-envirofacts>> to ask a question, provide feedback, or report a problem.

Attachment 6d. Underground Storage Tank (UST) Map – EPA UST Finder

PR-CRP-000988 Barranquitas - Construction of New Public Parking

Coord: 18.185505, -66.305029

Address: State Road PR-156 Km 16.3, Pueblo Ward, Barranquitas, PR 00794



Source: EPA UST Finder (Spatial Reference: GRS80), URL <https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=b03763d3f2754461adf86f121345d7bc>

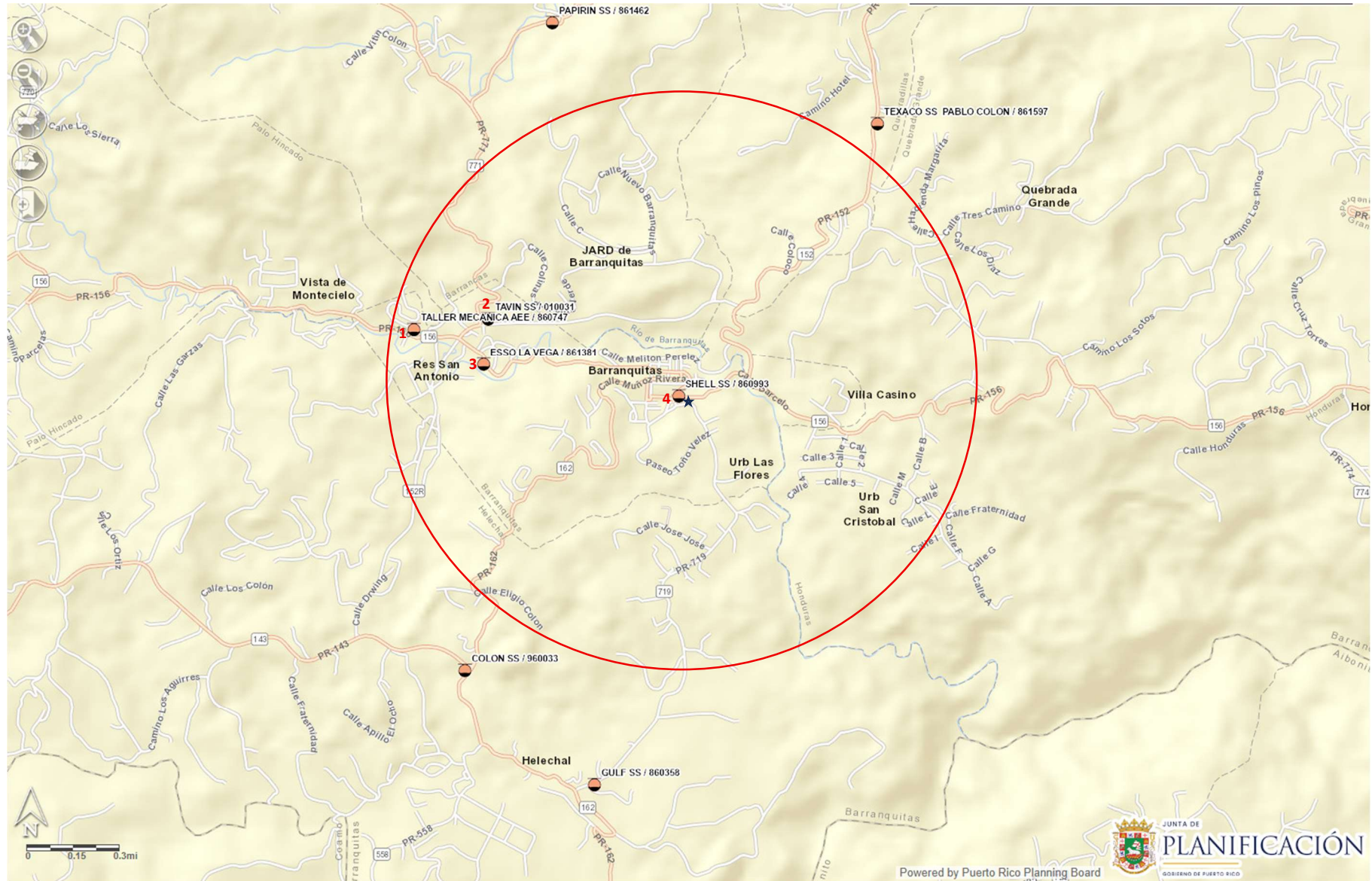
Prepared by ICF

Attachment 6e. Underground Storage Tank (UST) Map - PRPB

PR-CRP-000988 Barranquitas - Construction of New Public Parking

Coord: 18.185505, -66.305029

Address: State Road PR-156 Km 16.3, Pueblo Ward, Barranquitas, PR 00794



Source: MIPR, Junta de Planificación, URL <https://gis.jp.pr.gov/mipr/>

Prepared by ICF

Attachment 6f. UST sites Table

PR-CRP-000988 Barranquitas

<i>ID</i>	Facility ID	Distance from Project Site (miles)	Direction from Project Site	Description from EPA UST Finder	ID from PRPB map	DRNA LUST LIST
1	PR_21211-23931	0.88	E	TALLER MECANICA AEE Name: TALLER MECANICA AEE Address: CARR 156 KM 14 City: BARRANQUITAS State: Puerto Rico Latitude: 18.1886 Longitude: -66.3188 Coordinate Source: State	TALLER MECANICA AEE / 860747	Inactive Sites LUST List 2020
2	PR_21247-23913	0.67	E	ESSO LA VEGA Name: ESSO LA VEGA City: BARRANQUITAS State: Puerto Rico Latitude: 18.1869 Longitude: -66.3154 Coordinate Source: State Facility Status: Unknown EPA Region: 2	TAVIN SS / 010031	None
3	PR_21250-23937	0.64	E	TAVIN SS Name: TAVIN SS Address: CARR 152 INT. CARR 771 KM 0.2 City: BARRANQUITAS State: Puerto Rico Latitude: 18.1891 Longitude: -66.3152 Coordinate Source: State Facility Status: Unknown	ESSO LA VEGA / 861381	Active Sites LUST List 2024
4	PR_21350-23896	0.02	W	SHELL SS Name: SHELL SS Address: CALLE BARCELO City: BARRANQUITAS State: Puerto Rico Latitude: 18.1854 Longitude: -66.3057 Coordinate Source: State Facility Status: Unknown	SHELL SS / 860993	None

Attachment 6g

Active and Inactive Sites LUST Lists (selected pages)

INACTIVE SITES LUST LIST

2020

UST ID	NAME	CITY	ADDRESS	OWNER	DTKNOWN	HOWKNOWN	DT-RELEASED
86-0650	Shell #4509	Toa Baja	Carr. 2 Km. 16.8, Bo. Candelaria	Shell Company (P.R.) Limited	Unknown	UST Removal	10-Sep-97
86-0652	Shell #4444	Bayamón	Ave Lomas Verdes	Shell Company (P.R.) Limited	10-Nov-93	Unknown	8-Jun-05
86-0653	Shell 804363	Manatí	Carr.2 Km. 50.2	Shell Company (P.R.) Limited	31-May-97	Unknown	30-Sep-04
86-0660	Shell 804746	San Juan	Muñoz Rivera #761	Shell Company (P.R.) Limited	25-Mar-92	Unknown	8-May-95
86-0661	Shell # 804894	Caguas	Carr #1 km 27.5	Shell Company (P.R.) Limited	12-Jan-00	UST Removal	22-Jan-02
86-0665	Shell 804215	Cabo Rojo	Salvador Brau (65	Shell Company (P.R.) Limited	3-Aug-01	UST Removal	28-Sep-04
86-0667	Ex Shell (Liuberas)	Yauco	Carr 376 Km 0.19	Shell Company (P.R.) Limited	20-Sep-99	UST Removal	19-Oct-04
86-0685	Shell 4231	Cabo Rojo	Calle Carbonell 86	Shell Company (P.R.) Limited	23-May-97	Product in MW	28-Dec-01
86-0686	Shell 804037	Salinas	Carr PR-1 Km 92.0 Bo. Jueyes	Shell Company (P.R.) Limited	8-Aug-95	UST Removal	20-Mar-03
86-0689	Ex Shell 4339	Moca	Carr 420 km 1.1	Shell Company (P.R.) Limited	17-Aug-99	UST Removal	23-Apr-03
86-0697	Hertz Rent a Car	Carolina	Luis Muñoz Marín Airport	Shell Company (P.R.) Limited	12-Dec-97	UST Removal	15-May-95
86-0700	Marine Management	San Juan	Zona Portuaria	Shell Company (P.R.) Limited	29-Dec-99	UST Removal	22-Nov-04
86-0707	Shell 3987	Juncos	Carr 31 km 24.4	Shell Company (P.R.) Limited	10-Jun-96	UST Removal	10-Mar-00
86-0711	Shell 804720	Carolina	Ave. Campo Rico	Shell Company (P.R.) Limited	26-Jul-01	Unknown	1-Apr-04
86-0718	Seven Up	Bayamón	Carr. 177 Km. 8.3 Minillas	Seven-up	1-Nov-02	Unknown	19-May-95
86-0723	Pedro Rodríguez	San Juan	Calle Quisqueya # 55	Quisqueya 155 S/S	6-Dec-99	UST Removal	13-Dec-01
86-0724	Gasolina Coqui	San Juan	Carr 176 km 7.2 Cupey	Jose Sánchez	Unknown	UST Removal	21-May-95
86-0747	PREPA	Barranquitas	Bo. La Vega Salida Orocovis	Autoridad Energía Eléctrica	29-Jun-98	Unknown	22-Jan-01
86-0749	Taller de Mecánica	Mayaguez	Carr 2 km 149 Bo. El Maní	Autoridad Energía Eléctrica	23-May-97	Free Product	23-May-95
86-0752	Taller de Mecánica	Ponce	Ave Hostos 37	Autoridad Energía Eléctrica	24-Feb-98	Tightness Test	15-Jan-03
86-0753	Taller de Mecánica	Aguadilla	Calle Victoria	Autoridad Energía Eléctrica	15-Aug-94	Unknown	25-May-95
86-0754	Taller de Mecánica	San Germán	Carr. 362 KM. 0.0	Autoridad Energía Eléctrica	15-Oct-90	UST Removal	8-Nov-93
86-0755	Taller de Mecánica	San Sebastián	Carr. 119 Salida Camuy	Autoridad Energía Eléctrica	15-Feb-00	Product in MW	25-Jan-01
86-0757	Taller de Mecánica	Arecibo	Ave San Rosado	Autoridad Energía Eléctrica	1-Sep-97	Unknown	28-May-95
86-0758	Taller de Mecánica	Manatí	Carr. 2 Calle Patriota	Autoridad Energía Eléctrica	8-Jan-02	UST Removal	29-May-95
86-0759	Taller de Mecánica	Utua	Carr 111 km 1.4	Autoridad Energía Eléctrica	17-Dec-99	Product in MW	30-May-95
86-0763	Taller de Mecánica	Vega Baja	Carr. 2 Km. 38.6	Autoridad Energía Eléctrica	Unknown	Product in MW	31-May-95
86-0764	Luis Muñoz Marín Airport	Carolina	Aeropuerto Luis Muñoz Marín	Operaciones Aéreas	23-Apr-93	UST Removal	17-Mar-98
86-0767	Sistema de Riego	Lajas	Carr. 101 Km. 21.7	Autoridad Energía Eléctrica	Unknown	Product in MW	2-Jun-95
86-0769	Taller de Mecánica	Yauco	Calle Matienzo	Autoridad Energía Eléctrica	6-Nov-97	Product in MW	28-Feb-01
86-0777	Ready Mix (Planta 8)	Bayamón	Carr 861 km 3	Shell Company (P.R.) Limited	16-Sep-96	Product in MW	4-Jun-95
86-0784	Hipodromo Antiguo	San Juan	Ave. 65 de Infantería	Shell Company (P.R.) Limited	Unknown	UST Removal	5-Jun-95
86-0796	Municipio de Fajardo	Fajardo	Obras Públicas Municipal	Shell Company (P.R.) Limited	12-Jul-99	Suspect Release	29-Sep-04
86-0797	Municipio de Juncos	Juncos	Carr 185	Shell Company (P.R.) Limited	23-Oct-98	UST Removal	7-Jun-95
86-0801	Verpas Products	Carolina	Carr. 887 Km. 9.0 Bo. Martín González	Shell Company (P.R.) Limited	4-May-00	Vapors on MW	8-Jun-95

INACTIVE SITES LUST LIST

2020

UST ID	NAME	CITY	ADDRESS	OWNER	DTKNOWN	HOWKNOWN	DT-RELEASED
93-0017	Kodak Caribbean Ltd.	Carolina	Ave Campo Rico 246	Kodak Caribbean Ltd.	5-Oct-99	UST Removal	26-Mar-96
93-0019	Almacenes Owens	Las Piedras	Carr. 183 Km. 21.6 Bo. Tejas	Compañía de Fomento Industrial	1-Jun-00	UST Removal	4-Dec-01
93-0022	GPR #2145	Carolina	Calle Ignacio Arzuaga #151	Gasolinas de Puerto Rico	4-Jun-97	Product in MW	13-Oct-04
93-0033	COE	San Juan	Ave. Fernández Juncos #400	U.S. Army C.O.E.	21-Nov-95	Unknown	23-Aug-03
93-0059	Hospital Sub-Regional	Humacao	Expreso Cruz Ortiz Estela, Ave. Tejas	Hospital Sub-Regional de Humacao	23-May-00	UST Removal	30-Mar-96
93-0060	GPR #2135	Camuy	PR-119 Calle Muñoz Rivera #137	Gasolinas de Puerto Rico	Unknown	Product in MW	18-Dec-03
93-0061	Sucesion Marti Torres	San Juan	Ave Ponce de Leon 461	Sucesión Marti Torres	8-Jun-95	UST Removal	1-Apr-96
93-0078	Camuy S/S	Camuy	Carr. 4491Km. 2.1, Bo. Puente	Félix Ruiz Soto	24-Jun-97	UST Removal	1-May-98
93-0079	Hotel Marriot	San Juan	Condado	Dupont Plaza / Marriot Hotel	25-Apr-94	UST Removal	4/3/1996/14 may 99
93-0087	Esso 2P-142	Manati	Carr. # 2 km 46.2	Esso Standard Oil Co.	30-Jan-02	Spill Suspect	1-Mar-02
94-0001	Fundacion Sierra Boerman	San Juan	Ave Ponce de Leon 701	Fundación Sierra Boerman	27-Sep-99	UST Removal	5-Apr-96
94-0009	P.R. National Guard	Peñuelas	Carr 385	P.R. National Guard	5-Aug-03	UST Removal	6-Apr-96
94-0011	Campamento Tortuguero	Vega Baja	Carr. 687	P.R. National Guard	Unknown	UST Removal	27-Mar-02
94-0016	WAPA Broadcasting	Guaynabo	Carr 21	WAPA Broadcasting Sta.	Unknown	Spill on creek	8-Apr-96
94-0021	Unknown	Gurabo	Unknown	Finca La Hormiga	16-Sep-96	UST Removal	7-Jun-95
94-0035	Carolina Associates (Apartamentos de Diego)	San Juan	Ave. De Diego #575	De Diego Apartments (Carlos M. Vega)	Unknown	UST Removal	Unknown
94-0037	Escuela Villa Capri	San Juan	Ave Arterial Esq. Olivero	Interstate General Properties	Unknown	Unknown	25-Oct-00
94-0055	Valle Escondido S/S (Gulf)	Guaynabo	Carr 834 km 2.2 Bo. Hato Nuevo	Gualberto Garcia	8-Mar-99	UST Removal	29-Sep-00
94-0063	Pueblo International	Guaynabo	Centro Comercial Santa Maria	Pueblo International	1-Sep-99	High TPH Values	15-Nov-99
94-0079	Principado Dry Cleaners Inc.	San Juan	Ave. Barbosa #604	Principado Cleaners, Inc. (Roberto E. Homar)	31-Aug-99	UST Removal	12-Feb-02
94-0120	Olympic Mills Inc.	Guaynabo	Carr. 20 Km. 3.8, Bo. Los Frailes	Olympic Mills Inc.	2-Aug-00	High TPH Values in Soil	6-Oct-00
94-0126	Antigua Planta La Famosa	Bayamón	Carr. #2, Bo. Hato Tejas	Auction & Salvage, Inc.	21-Nov-00	UST Removal	23-May-03
94-0128	Antigua Penitenciaría Estatal (Oso Blanco)	San Juan	Carr. #21, Villa Nevarez, Bo. Monacillos	PRSTRT	27-Feb-13	UST Removal	18-Jun-15
94-0159	Shelfoam	Cidra	Carr. #171, Calle A, Parque Industrial, Zona Urbana	Shelfoam Products	9-Feb-16	UST Removal	17-Apr-96
94-0164	Unknown	Carolina	Ave 65 Inf. 7.3	Seedmans	21-Jan-97	Unknown	18-Apr-96
94-0172	Hotel Barranquitas	Barranquitas	Carr. 152 Km. 0.6, Bo. Quebradillas	Compañía de Fomento Industrial	20-Jun-00	UST Removal	3-Dec-04
94-0176	Atlantic Thermo Form	Juncos	Carr. 187 Km. 2.4 Parque Ind. Lote 10	Compañía de Fomento Industrial	23-Jun-00	UST Removal	24-May-02
94-0177	Estudio Panamericano	Carolina	Carr. 26 Km. 12.0, Parque Industrial Sabana Abajo Lo	Compañía de Fomento Industrial	Unknown	UST Removal	8-Apr-02
94-0189	Empresas Vasallo	Carolina	Carr 190 / La Cerámica	Empresas Vasallo	1-Aug-95	Product in MW	23-Feb-96
94-0201	Planta Filtros El Yunque	Rio Grande	Carr. 3 Km. 25.4 Int. 955 Km. 0.3/Juan González	Autoridad de Acueductos y Alcantarillados	Unknown	Unknown	Unknown
94-0229	Escuela Alcides Figueroa	Añasco	Unknown	Departamento de Educación	17-Oct-94	Unknown	24-Apr-96
94-0239	Escuela Nemesio Canales	San Juan	Res. Nemesio Canales	Departamento de Educación	16-Sep-96	Unknown	25-Apr-96
94-0241	Escuela Antonio Sarriera	San Juan	Río Piedras	Departamento de Educación	13-Dec-00	UST Removal	26-Apr-96
94-0243	Esc. Villa Capri	San Juan	Calle Verona Esq. Niza, Villa Capri	Departamento de Educación	9-Aug-99	Unknown	27-Apr-96
94-0245	Esc. Carmen Sanabria	San Juan	Calle Arkansas San Gerardo	Departamento de Educación	21-Nov-95	Unknown	21-Jun-96

ACTIVE SITES LUST LIST

2024

	UST ID	NAME	CITY	ADDRESS	OWNER	HOWKNOWN	DTKNOWN
93	86-0318	Gulf #119	San Juan	Ave. Central 1039 Puerto Nuevo	Caribbean Petroleum Corp.	High Concentrations	11-Apr-98
94	86-0319	Gulf #120	Arecibo	Carr #10 km 85.9	Caribbean Petroleum Corp	UST Removal	31-Jan-05
95	86-0321	Gulf #122	Dorado	Carr # 699 & Carr 854	Caribbean Petroleum Corp	Product in Well	12-Mar-99
96	86-0323	Gulf #126	Juana Díaz	Carr. 14 Km. 11.3 Bo. Jacaguas	Caribbean Petroleum	UST Removal	25-May-00
97	86-0326	Gulf 129	Arecibo	Carr 129 km 39.4	Caribbean Petroleum Corp.	UST Removal	27-Oct-04
98	86-0327	Gulf #131	Yauco	Carr. 371 Km. 2.3 Bo. Almacigo	Caribbean Petroleum Corp.	UST Removal	16-Mar-99
99	86-0328	Gulf #132	Fajardo	Carr. 987 Km. 0.2	Caribbean Petroleum	Spill Notification	18-Nov-99
100	86-0331	Gulf #135	Guaynabo	Carr 838 Calle Main	Caribbean Petroleum Corp.	Product in Well	3-Apr-00
101	86-0332	Gulf #136	Mayaguez	Bo. Maní	Caribbean Petroleum Corp	Product in Well	6-Jun-02
102	86-0334	Gulf #139	Bayamón	Carr 2 km 8.3	Caribbean Petroleum Corp.	Product in well	15-Jan-01
103	86-0336	Gulf # 304	San Juan	Carr 2 Km 5.0 Bo. Pueblo Viejo	Arturo R.Umpierre Norat	Investigation Plan	15-Nov-24
104	86-0346	Gulf #328	Gurabo	Carr. 181 Km. 23.1	Caribbean Petroluem Corp.	UST Removal	16-Sep-96
105	86-0350	Gulf 345	Guayanilla	Carr. 132 Km. 3.7	Caribbean Petroleum Corp	High Concentration	24-Mar-97
106	86-0352	Santana S/S	Humacao	Carr. 3 Km. 83.5	Caribbean Petroleum Corp	UST Removal	16-Mar-99
107	86-0353	Doraville S/S	Dorado	Carr. 695 km. 1.5 Bo. Higuillar	American Petroleum Corp.	UST Removal	14-Jul-00
108	86-0355	Gulf S/S #353	Adjuntas	Carr. 135 km. 81.0	Caribbean Petroleum Corp.	UST Removal	24-Aug-99
109	86-0356	Gulf #356	Cayey	Carr. 184 Km. 27.6	Gulf-Chevron	High Concentration	16-Dec-93
110	86-0358	Gulf #362	Barranquitas	Carr. 719 Km. 2.6 Bo. Helechal	Caribbean Petroleum Corp.	High Concentration	22-May-92
111	86-0359	Shell #3840	Cayey	Carr 1 km 52.4 Beatriz	Shell Company (P.R.) Limited	UST Removal	6-Nov-96
112	86-0363	Gulf #371	Hatillo	Carr. 493 & Carr. 853 Bo. Corcobado	Caribbean Petroleum Corp.	Monitoring Results	29-Mar-99
113	86-0371	Torrado Gas Service Station	Hatillo	Carr 130 km 6.0	Hector Torrado	UST Removal	4/1/2005
114	86-0372	Gulf 386	Trujillo Alto	Round Hills Commercial Center	Caribbean Petroleum Corp	UST Removal	1-Oct-97
115	86-0373	Servicentro Rodríguez	Cayey	Calle 1 Esq 7 Ur Aponte	Jorge Rodríguez	Spill	18-Jan-99

ACTIVE SITES LUST LIST

2024

	UST ID	NAME	CITY	ADDRESS	OWNER	HOWKNOWN	DTKNOWN
277	86-1359	Ex Esso (Garaje Muñoz)	Yauco	Calle 25 de julio # 19	Esso	UST Removal	19-Jan-99
278	86-1367	Esso CO-266	Yabucoa	Calle Cristobal Colón 65	Esso Standard Oil Co.	UST Removal	27-May-91
279	86-1369	Ex Esso 3P-259	Humacao	Carr 33 km 83.4 Bo Cataño	Esso	Soil Contamination	15-Jul-05
280	86-1373	Anibal Dávila S/S	Maunabo	Calle Muñoz Rivera Esq. Barceló	Esso Standard Oil Co.	UST Removal	23-Apr-98
281	86-1376	Esso	Cidra	Cidra	Esso Standard Oil Co.	Spill	6-Nov-98
282	86-1380	Ex ESSO 3P-436	Aibonito	Carr 14 km 80.0	Esso Standard Oil Co.	UST Removal	Unknown
283	86-1381	Carlos Rodríguez	Barranquitas	Carr 156 km 14.7 Bo. La Vega	Esso Standard Oil Co.	Spill	10-May-99
284	86-1395	Hormigonera Mayaguezana	Mayaguez	PR-114 Km. 147.7 Bo. Guanajibo Castillo	Esso Standard Oil Co.	Film in MW	17-Jun-03
285	86-1427	Hospital del Maestro	San Juan	Ave. Domenech	Esso Standard Oil Co.	Unknown	21-Apr-99
286	86-1437	Caribe Hilton	San Juan	San Geronimo, Grond 6	Esso Standard Oil Co.	High Concentration	21-Nov-00
287	86-1455	Asociacion Pescadores	Culebra	Playa Sardinas 2	Aso. De Pescadores	Closure (High Values)	8-Aug-95
288	86-1456	Cayo Isleta Marina	Fajardo	Puerto Real	Inversiones Isleta Marina	UST Removal	19-Nov-01
289	86-1462	Papirin S/S	Barranquitas	Carr 771 km 2.5 Bo. Barrancas	Sr. Octavio Santini	UST Removal	24-Sep-01
290	86-1465	Pfizer	Barceloneta	Carr 2 km 58.2	Pfizer Pharmaceuticals	UST Removal	19-Mar-02
291	86-1469	Garaje La Hamaca	Lares	Carr #124 km 5.3	Lumen Cruz	UST Removal	18-Apr-01
292	86-1509	Gulf #013	Toa Baja	Carr #167 Ave. Comerio Norte #600 Km 10.7	Oil Investment Consolidated, Inc.	Characterization Rep	Unknown
293	86-1510	Urbano Torres s/s	Rio Piedras	Carr 1 km 18.8 Bo. Tortugo	U.S Marshall Service	UST Removal	Unknown
294	86-1515	U.S Naval Comp. & Telec. Sta	Isabela	Carr 2 km 116.2	U.S Navy	UST Removal	2-Mar-01
295	86-1520	U.S. Naval Security Group Activity	Toa Baja	Barrio Sabana Seca	U.S Navy	Closure (High Values)	13-May-99
296	86-1533	Aeropuerto Internacional Luis Muñoz Mar	Carolina	Ave Los Gobernadores	Porths Authority	UST Removal	20-Sep-96
297	86-1555	Zulu Gas Station	San Juan	Ave. Fernández Juncos	Zulu Gas Station	Soil Contamination	15-Apr-08
298	86-1565	Rolón s/s	Morovis	Carr 155 km 48.8	Morovis S/S	Spill	6-Nov-97
299	86-1567	Pueblo s/s 554	Lares	Carr 111 km 33.4	Texaco	UST Removal	16-Dec-97

Attachment 6h

Field Inspection Checklist

Field Visit Checklist and Site Evaluation

Project Name:	Construction of New Public Parking (PR-CRP-000988)	Coordinates:	18.185505, -66.305029
Project address:	State Road PR-156 Km 16.3, Pueblo Ward, Barranquitas, PR 00794	Municipality:	Barranquitas
State:	Puerto Rico	ZIP:	00794
Inspector Name:	Eng. Carlos González Morales, Environmental Specialist		
Date of Visit:	July 9, 2023		
Existing Environmental Conditions on and Around Site			
	Site Specific	Adjacent Areas	
General observations:	The lot proposed for the construction of the project is an open space currently used as a parking lot and linking key residential, commercial, and institutional areas.	The proposed project is intended to be developed near the urban center of Barranquitas, as the surrounding area has undergone significant development and transformation over the years.	
Evidence of wetlands?	No, there are no wetlands in the project area because they are developed areas. See included Photos.	The project site is near to riverine Wetlands, identified by the USFWS National Wetland Inventory as the Rio Barranquitas, which is 95 linear meters north of the property to be developed.	
Evidence of Threatened or Endangered species?	No, the proposed project is located in a densely populated, urban landscape	The area proposed to be developed is one previously impacted by the construction of streets, residential and commercial structures and is fully impacted due to its use as a municipal parking lot. As can be seen in the photo, there is no vegetation within the property to be developed that could harbor significant wildlife.	
Evidence of landfills, dumping, or disturbed soils?	No	The land is currently used as a parking lot and is free of debris and trash.	
Evidence of wastewater discharges?	No	No	
Toxic Chemicals and Radioactive Materials			
Evidence of USTs?	No	No	
If yes, are they in use?	N/A	N/A	
Any out of service underground fuel tanks?	No	None identified	
Evidence of above ground storage tanks (including 55-gallon drums)?	No	None identified	
Evidence of leaking ASTs?	N/A	N/A	
Evidence of leaking electrical equipment?	No	No	
Hazardous Operations			
Evidence of manufacturing operations utilizing or producing hazardous substances?	No	No	

Evidence of past operations that may have used hazardous substances or radiological materials that may have been released?	No	No
General Notes/Observations		
The project site is located within a developed urban area of the Municipality of Barranquitas. No environmental conditions were identified during the assessment that would pose limitations or constraints to the proposed project's development.		

Site Photo 1:

Applicant ID #	(PR-CRP-000988)
Property Address:	Road PR-156 Km 16.3 (Barcelo Street) Barranquitas, PR 00794
	
Description:	East project area on road PR-156 (facing South)

Site Photo 2:

Applicant ID #	(PR-CRP-000988)
Property Address:	Road PR-156 Km 16.3 (Barcelo Street) Barranquitas, PR 00794
	
Description:	West project area on road PR-156 (facing South)

Site Photo 3:

Applicant ID #	PR-CRP-000988
Property Address:	Road PR-156 Km 16.3 (Barcelo Street) Barranquitas, PR 00794
	
Description:	Aerial Foto

Attachment 6i

Notice CPD-23-103: Departmental Policy for
Addressing Radon in the Environmental Review
Process



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

WASHINGTON, DC 20410-7000

OFFICE OF COMMUNITY PLANNING
AND DEVELOPMENT

Special attention of:
Regional Directors
Field Office Directors
CPD Directors and field office staff
OEE Directors and field office staff
PIH Directors and field office staff
Office of Housing Directors and division
staff
ONAP Administrators and field office staff
OLHCHH Directors and Healthy Homes
Representatives
Program Environmental Clearance Officers
Responsible Entities
Public Housing Authorities
Tribes
Tribally Designated Housing Entities

Notice: CPD-23-103

Issued: January 11, 2024

This notice will be effective 90 days after the date issued. For Tribes, Tribally Designated Housing Entities, and Department of Hawaiian Homelands Recipients, however, it will be effective two years after the date issued.

Expires: This Notice is effective until amended, superseded, or rescinded

SUBJECT: Departmental Policy for Addressing Radon in the Environmental Review Process

I. Purpose

The purpose of this Notice is to clarify that radon must be considered in the contamination analysis for 24 CFR Parts 50 or 58, as applicable; to provide guidance on recommended best practices for considering radon; and to identify the U.S. Department of Housing and Urban Development (HUD) programs that have established specific radon guidance. This Notice does not impose radon testing requirements; however, it does include guidance on strategies for considering radon in the site contamination analysis.

This notice applies *only* to projects that are subject to HUD's contamination regulations at 24 CFR 50.3(i) or 24 CFR 58.5(i). It does not apply to the purchase of single family homes with an FHA-backed mortgage nor Section 184 and Section 184A loan guarantees. This notice also does *not* preempt any existing, federal state, or local requirements regarding radon. It also does not preempt the radon requirements found in HUD's Office of Housing programs following the Multifamily Accelerated Processing (MAP) Guide, Healthcare Mortgage Insurance Program Handbook, Rental Assistance Demonstration Program Notice and supplemental guidance, or other current or future radon guidance that is more prescriptive. See section IV of this notice for links to Housing radon guidance documents.

Compliance with this notice is required 90 days after the date issued for all HUD programs subject to 24 CFR Parts 50 and 58, with the exception of Tribe, Tribally Designated Housing Entity (TDHE), and Department of Hawaiian Homeland (DHHL) recipients. In

recognition of the need to provide additional support for radon programs, compliance with this notice is required starting January 11, 2026 for Tribe, TDHE, and DHHL recipients.

II. Radon and its health effects

Radon is a radioactive gas that forms when radium and certain other radioactive metals break down in rocks, soil, and water.¹ It is found in nearly all soils and moves through the soil to the air and into structures through cracks and other areas of permeability. Building materials and groundwater may also be a source of indoor radon. Once inside, radon concentrations can build to high levels, regardless of the age, condition, or design of the building.

The most common pathway for human exposure to radon is inhalation indoors. Radon is the number one cause of lung cancer in non-smokers and the second leading cause of lung cancer overall.² The risk of adverse health effects from radon in indoor air depends largely on two main variables: the level of radon exposure and the length of time exposed. Many radon-induced lung cancers can be prevented by testing and reducing radon levels in existing buildings and by using radon resistant construction techniques for all new construction.³

The goal for mitigating radon in buildings is to reduce radon concentrations in indoor air as low as reasonably achievable and practicable considering the efficacy of current industry-standard radon reduction systems and environmental conditions (e.g., geology and climate). The most effective strategy to protect the health and safety of occupants is to prevent radon from entering the building by using radon resistant construction techniques; another effective strategy is to reduce the level of radon inside existing buildings by installing and operating a radon reduction system. An effective radon reduction system achieves two main goals: it reduces the concentration of radon gas in the home by venting it safely outside the structure and removes the radon gas from under the foundation before it can come into the home.

III. Considering radon in the environmental review

HUD's environmental regulations at 24 CFR 58.5(i)(2)(i) and (ii)⁴ state that,

[i]t is HUD's policy that all properties that are being proposed for use in HUD programs **be free of hazardous materials, contamination, toxic chemicals and gases, and radioactive substances**, where a hazard could affect the health and safety of occupants or conflict with the intended utilization of the property.

The environmental review of multifamily housing . . . , **must include the evaluation of** . . . other evidence of contamination on or near the site, to ensure that occupants of proposed sites are not

¹ National Institute of Health, Periodic Table, Element Summary, "Radon", <https://pubchem.ncbi.nlm.nih.gov/element/Radon>.

² U.S. Environmental Protection Agency, "Health Risk of Radon", <https://www.epa.gov/radon/health-risk-radon>.

³ <https://www.epa.gov/radon/health-risk-radon>.

⁴ HUD's contamination policy at 24 CFR 50.3(i)(1) and (2) implements the same substantive policy with slightly different text, <https://www.ecfr.gov/current/title-24/subtitle-A/part-50/subpart-A/section-50.3>.

adversely affected by any of the hazards listed in paragraph (i)(2)(i) of this section.

As radon is a radioactive substance, HUD or the responsible entity (RE) must consider it as part of the site contamination analysis for projects that:

- Require an environmental review at the level of *Categorically Excluded Subject to 50.4 or 58.5* (“CEST”), *Environmental Assessment*, or *Environmental Impact Statement*; and
- Involve structures that are occupied or are intended to be occupied at least four (4) hours a day.

Note: HUD’s contamination policy does not apply to projects that are Exempt or Categorically Excluded Not Subject to 50.4 or 58.5 (“CENST”).

HUD encourages environmental review preparers to follow the most recent U.S. Environmental Protection Agency (EPA) recommendations about assessing the health risk from radon exposure and when to reduce radon levels in indoor air. Because more people are exposed to moderate levels of radon, most radon-induced lung cancer results from long-term exposure to low or moderate radon levels in the home, as opposed to short term exposure to very high levels of radon.⁵ The EPA recommends homes be fixed if the radon level is 4 pCi/L or more. Because there is no known safe level of exposure to radon, EPA also recommends that Americans consider fixing their home for radon levels between 2 pCi/L and 4 pCi/L⁶. Indoor air radon levels vary across the U.S. and from parcel to parcel due to differences in geology, climate, seasonal variation, building construction, and other conditions. Additionally, because radon cannot be seen, tasted, or smelled, the only method for determining the precise radon level in a specific building is to test the indoor air.

Exemptions from having to consider radon in the contamination analysis⁷:

- Buildings with no enclosed areas having ground contact.
 - Buildings containing crawlspaces, utility tunnels, or parking garages would *not* be exempt, however buildings built on piers would be exempt, provided that there is open air between the lowest floor of the building and the ground.
- Buildings that are not residential and will not be occupied for more than 4 hours per day.
- Buildings with existing radon mitigation systems - document radon levels are below 4 pCi/L⁸ with test results dated within two years of submitting the application for HUD assistance and document the system includes an ongoing maintenance plan that includes periodic testing to ensure the system continues to meet the current EPA recommended levels. If the project does not require an application, document test results dated within

⁵ World Health Organization, *Handbook on Indoor Radon; A Public Health Perspective* (January 1, 2009). p. x, 2, <https://www.who.int/publications/i/item/9789241547673>.

⁶ <https://www.epa.gov/radon/what-epas-action-level-radon-and-what-does-it-mean>

⁷ These exemptions are specific to this notice and do not all comport with the requirements in the MAP Guide, Healthcare Mortgage Insurance Program Handbook, RAD Program Notice and supplemental guidance or other program guidance.

⁸ Or the EPA’s current recommended level for reducing radon levels in indoor air, <https://www.epa.gov/radon/health-risk-radon>.

two years of the date the environmental review is certified. Refer to program office guidance to ensure compliance with program requirements.

- Buildings tested within five years⁹ of the submission of application for HUD assistance: test results document indoor radon levels are below current the EPA's recommended action levels of 4.0 pCi/L. For buildings with test data older than five years, any new environmental review must include a consideration of radon using one of the methods in Section A below.

A. How to consider radon in the HUD Environmental Review

This section details how environmental review preparers may consider radon in the HUD environmental review in order to satisfy 24 CFR 50.3(i) or 24 CFR 58.5(i)¹⁰. This section provides a recommended "best practice" method; however, preparers may utilize one of the alternate options if they choose not to implement the best practice.

i. Recommended Best Practice

When considering radon in the contamination analysis, HUD strongly recommends using the American National Standards Institute/American Association of Radon Scientists and Technologists (ANSI/AARST) radon testing standards for single- and multi- family buildings, schools, and large buildings, including those constructed using radon-resistant construction techniques.¹¹ The ANSI/AARST standard describes how to conduct testing, interpret test results, and draft a Radon Test Report to document the process for the building owner (and to use as documentation for the ERR).

The ANSI/AARST standards can be viewed online for free and are intended to be implemented by licensed radon professionals. To find a licensed radon professional in your area contact the State/Tribe's radon program office,¹² National Radon Proficiency Program (NRPP),¹³ or the National Radon Safety Board (NRSB).¹⁴

There may also be state and/or local radon requirements, depending on the jurisdiction. Contact the relevant State/Tribal radon control program to ensure the project complies with State/Tribal requirements.¹⁵

Note: Although testing is not required under this notice, *testing is the only way to determine the radon level within a building.*

⁹ Note that the allowance for the use of test results within the previous five years is specific to this notice and does not comport with the ANSI/AARST standards.

¹⁰ This section does not apply to projects that are subject to the MAP Guide, Healthcare Mortgage Insurance Program Handbook or RAD Program Notice and supplemental guidance or other current or future HUD radon guidance that is more prescriptive.

¹¹ ANSI/AARST Standards (In lieu of developing a federal radon testing standard, the EPA references the ANSI/AARST Standards), <https://standards.aarst.org/> (<https://www.epa.gov/radon/radon-standards-practice>).

¹² The National Radon Program Services, "State Radon Programs Information", <https://sosradon.org/state>.

¹³ NRPP, <https://nrpp.info>.

¹⁴ NRSB, <https://www.nrsb.org>.

¹⁵ <https://sosradon.org/state>.

ii. Alternative Options

Using the ANSI/AARST radon testing standards is not the only option available for considering the risk that occupants may be exposed to high radon levels.¹⁶ If the environmental review preparer chooses not to conduct radon testing per the ANSI/AARST standards, one of the following alternative strategies¹⁷ must be used to consider radon in the contamination analysis. Review the HUD program office guidance in Section IV to ensure the strategy used to consider radon in the contamination analysis complies with specific program office requirements for the project.¹⁸

1. Do-it-yourself (DIY) radon test kits may be used to measure radon levels in single-family dwelling units. In HUD single-family buildings¹⁹ with multiple units, one DIY test kit must be used for each dwelling unit. DIY radon test kits may be available for low or no cost through State/Tribal radon program offices and are available to purchase through the National Radon Program Services website and some state radon control program websites.²⁰

When using a DIY test kit, there can be quality control issues that affect the quality of the test results. To ensure the DIY test results are as accurate as possible, it is important to read the entire test kit instructions before activating the test device and to follow them fully. The EPA's *Citizen's Guide to Radon*²¹ and the ANSI/AARST standard for testing single-family housing are excellent resources for detailed instructions about conducting the radon test, including where to place the test device(s), how to prepare the home (whether to close the windows, turn off fans, the length of time to test), how to document the test process, and interpret the results. HUD encourages that test devices be approved by either the NRPP or NRSB. Contact the National Radon Program Services helpline, the State/Tribal radon program office, or the local health department for assistance.²²

2. In remote or other areas where there are no licensed/certified radon professionals and/or DIY test kits cannot be shipped to a lab in sufficient time, the local government, such as a local health department or environmental department, may decide to purchase radon monitoring equipment and train staff to use it. Monitoring equipment, such as continuous radon monitors, should be used in accordance with the manufacturer's instructions and intended use and staff should ensure proper quality control and quality assurance practices are adhered to.

¹⁶ High levels of radon are those that are at or above 4 pCi/L.

¹⁷ Alternative to measuring radon levels in indoor air using the ANSI/AARST standards.

¹⁸ Note: REs and HUD must also ensure that the strategy used complies with any state or local laws and regulations regarding radon.

¹⁹ HUD defines "single family building" as a residential building with one to four dwelling units.

²⁰ National Radon Program Services, <https://sosradon.org/purchase-kits>.

²¹ EPA, *A Citizen's Guide to Radon: The Guide to Protecting Yourself and Your Family from Radon* (EPA 402/K-12/002, December 2016), <https://www.epa.gov/radon/publications-about-radon>.

²² The National Radon Program Services, which has phone, email, and mail connections, is operated by Kansas State University for the US EPA, <https://sosradon.org/Contact>. (The phone numbers may also be reached by persons with hearing or speech difficulties by dialing 711 via teletype (TTY) or telecommunications device for the deaf (TDD)).

3. Scientific data review. Available science-based information may be used to determine whether the project site is located in an area that has average documented radon levels at or above 4 pCi/L. Contact the State/Tribal radon program office (or health department), as needed, for assistance with obtaining and interpreting available science-based information about radon levels in the area. Science-based information includes, but is not limited to:

- State/Tribe-generated radon information, such as surveys of radon levels from collecting radon measurement data or geological studies that identify high risk areas.
- Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), National Environmental Public Health Tracking, Radon Testing map.²³ This map provides radon test data from national radon testing laboratories and states that can be viewed by state or county. Radon test data ranges from 1988 to the present.

Environmental review preparers may *not* use the EPA Map of Radon Zones nor EPA State Maps of Radon Zones for considering radon levels at a project site for compliance with 24 CFR 50.3(i) or 24 CFR 58.5(i) because it is not appropriate for a site-specific analysis of radon risk, which is required for a HUD environmental review.

Note: Although science-based, a document review *does not* determine the radon level in a specific building; where feasible, HUD recommends using one of the radon testing strategies.

When conducting a scientific data review in lieu of testing, there must be a minimum of 10 (ten) documented test results over the previous 10 years for which data is available in a given county for the scientific data review approach to be utilized. If there are less than 10 documented results over this period, then there is a lack of scientific data for the purposes of this notice and no further consideration of radon is needed if testing is infeasible or impracticable.

Additionally, testing data utilized should cover the smallest geographic area for which the minimum amount of documented test results exist, up in size to the county in which the project is located. The best available data must be used. Best available data refers to the most current data that best indicates the level of radon concentration at a project site. Whenever possible, utilize the average of the previous 10 years of data.

There may be certain scenarios in which use of the Recommended Best Practice or Alternative Options identified above may not be feasible or practicable due to limited access to testing (e.g., lack of licensed radon professionals in the project area) and lack of scientific data (e.g., there are less than 10 documented test results over the previous 10 years). Refer to section **C. Documenting the environmental review record** below for documentation requirements in these scenarios.

²³ CDC, “National Environmental Public Health Tracking, Radon Testing”, <https://www.cdc.gov/ncet/ncet/tracking/topics/RadonTesting.htm>.

B. Mitigating Radon

When radon testing determines indoor air radon levels are at or above 4 pCi/L or the scientific data review determines the project site is located in an area that has documented radon levels at or above 4 pCi/L, the Environmental Review Record (ERR) must include a mitigation plan. When the determination is based on a scientific data review, if feasible, HUD recommends conducting radon testing (using one of the testing strategies described in the previous sections) to confirm radon levels in the building(s) proposed for HUD funding. If testing then demonstrates that radon levels within the building are below 4 pCi/L, mitigation would *not* be required; environmental review preparers can simply document the test results in the ERR.

The mitigation plan²⁴ must identify the radon level; consider the risk to occupants' health; describe the radon reduction system that will be installed; whenever possible, establish an ongoing maintenance plan to ensure the system is operating as intended; establish a reasonable timeframe for implementation (i.e., integrate radon mitigation activities into an annual plan or a 5-year plan that is already completed for HUD funded activities); and require post-installation testing. Where feasible, post-installation testing should be conducted by a licensed radon professional. In an area where there are no licensed radon professionals, there may be other personnel, such as trained staff, other professionals (i.e., engineers, geologist, scientists, public health staff) who have experience conducting radon testing or have the relevant skills and knowledge to follow the device instructions or ANSI/AARST test protocols and mitigation standards. For assistance Contact the EPA's local radon program office, state/Tribe radon program office, the National Radon Program Services,²⁵ or refer to the applicable ANSI/AARST standard for guidance.

If using the ANSI/AARST mitigation standard to install the radon reduction system, follow the guidance in the standard to draft the mitigation and the operation, maintenance, and monitoring plans.

C. Documenting the environmental review record

Under HUD's regulations, 24 CFR 58.38(a)(3) or 50.11, HUD, or the RE, is required to document the radon evaluation as part of the contamination analysis in the ERR. For ERRs documented using the HUD Environmental Review Online System (HEROS), document the radon evaluation in the Contamination and Toxic Substances factor Compliance Determination screen and upload supporting documentation. For Office of Housing projects, document the radon evaluation in the HEROS Housing Requirements Screen.

If testing is not conducted and not otherwise required by program guidance, the documentation will need to provide evidence of average documented radon test results covering the project site or its county, other science-based information suggesting radon levels at the project site, or evidence of a lack thereof.

²⁴ Example of an areawide radon testing plan: Home Forward, Multnomah County, Oregon at: <http://homeforward.org/content/radon-information>.

²⁵ EPA Regional, State, and Tribal Radon contacts, <https://www.epa.gov/radon/epa-map-radon-zones-and-supplemental-information#datainfo>; National Radon Program Services, <https://sosradon.org/main> or 800 644-6999.

In instances where radon testing will be conducted but cannot be conducted until after the environmental review record is certified -such as with new construction or certain rehabilitation projects- then the initial documentation would not include a radon evaluation but must include a condition for post-construction radon testing followed by mitigation if needed. The environmental preparer must update the environmental review record with the radon evaluation and proof of any required mitigation when complete.

Acceptable methods to document radon consideration in the ERR include:

- ANSI/AARST standard: Include a copy of the test report and mitigation plan (if applicable) as described in the standard in the ERR. For Office of Housing programs, follow program guidance requirements on timing and documentation.
- DIY and other radon test strategies: Document the test device, time period of test, test conditions (HVAC system off windows closed, outside temperature), test results, and other conditions relevant to test conditions. Refer to the applicable ANSI/AARST standard as guidance.
- Review of CDC radon testing data, geologic studies/maps, other scientific data: Describe and cite the maps and data used to determine the area wide radon levels and include copies of all supporting documentation (maps/studies) in the ERR.
- In instances where HUD grantees, applicants, and recipients are unable to obtain science-based data, environmental review preparers must consider the feasibility of radon testing if they have not already. If the grantee, applicant, or recipient determines that testing is infeasible or impracticable, the environmental review must document the basis for this determination.²⁶ Acceptable documentation in these scenarios where testing is infeasible and science-based data is not available includes but is not limited to: correspondence with state and local radon control agencies indicating a lack of scientific data evidencing radon levels at the project site, a copy of CDC Environmental Health Tracking Network information showing the project site is located in a county with a lack of scientific data, and a basis for the conclusion that testing would be infeasible or impracticable. The RE, grantee, applicant, or recipient is not required to submit additional documentation substantiating their decision that testing is infeasible or impracticable.
- When all this is documented in the ERR, *no* further consideration of radon is needed and no further action with respect to radon is needed for the environmental review. .

Examples of acceptable documentation of radon consideration in the ERR:

- A project site is located in a county in which the CDC Radon Testing data shows that more than 10 tests have been conducted over the last 10 years. The average of the 200 tests completed in the county over the last 10 years is 4.5 pCi/L. Since scientific data

²⁶ Common instances where this determination may occur include a lack of funding for testing or the cost of testing is prohibitively high when compared with the cost of a particular low-dollar project.

indicates that average radon levels in the county in which the project is located are greater than 4.0 pCi/L, the grantee must either test for radon or formulate a mitigation plan they will implement.

- Radon testing data from the CDC Environmental Public Health Tracking Network map shows data for the county in which the project site is located, which is the smallest area for which data is available. The data shows the annual mean pre-mitigation radon measurement in tested buildings for the most recent 10-year period as 1.8 pCi/L. There is no other available evidence of radon levels in the area. The local government chooses to establish a radon testing plan to confirm radon levels in specific buildings are below 4 pCi/L. The test plan timeframe aligns with the RE's housing rehabilitation plan.
- A project site is located in a county in which the CDC Radon data shows that more than 10 tests have been conducted over the last 10 years. The average of the 220 tests completed in the county over the last 10 years is 3.2 pCi/L. The responsible entity or HUD reviewer documents the results in the environmental review records and therefore satisfies this notice's requirement that radon be considered as part of the environmental review process.
- A project site is located in a county in which the CDC data shows that fewer than 10 tests have been conducted over the last 10 years. The RE or HUD reviewer documents the lack of scientific data in the environmental review records. The RE has reviewed the cost of radon testing for the project and determined that testing is infeasible because the cost to test for this project would cut too much into the project's small budget. They note this determination in the environmental review record.

The local EPA radon contact person and the National Radon Program Services may be able to assist with developing a testing plan. The EPA's *A Citizen's Guide to Radon* (for single family homes) and the ANSI/AARST standards (single family and multifamily buildings) are a good source for guidance on the information that is included in a test plan.

Note: HUD or a Responsible Entity must reject projects in areas that have sufficient documented radon levels at or above 4 pCi/L if no mitigation has been proposed or performed.

IV. HUD program office documents addressing radon

Current HUD program office guidance regarding radon testing and mitigation is listed below. Each HUD program office is responsible for issuing program-specific radon guidance. Program guidance may be updated as Departmental policies develop; be sure to use the most current guidance. Additionally, this notice does not preempt or modify existing HUD program-specific radon requirements, such as those found in the Multifamily Accelerated Processing (MAP) Guide, the Healthcare Mortgage Insurance Program Handbook 4232.1 Rev-1, the RAD Program Notice and Supplemental Notice 4B, or other current or future radon guidance that is more prescriptive. For questions concerning program office guidance, contact your program office representative.

- Office of Housing, *Multifamily Housing, Multifamily Accelerated Processing Guide* (4430.G), Section 9.6.3, https://www.hud.gov/program_offices/administration/hudclips/guidebooks/hsg-gb4430
- Office of Housing, Office of Residential Care Facilities, *Healthcare Mortgage Insurance Program Handbook* (4232.1), Section 7.8, Rev-1), or most recent edition, <https://www.hud.gov/sites/documents/42321S2C7HSGH.PDF>
- Office of Housing, Office of Recapitalization, Rental Assistance Demonstration (RAD) Program (Notice H-2019-09 PIH-2019-23 (HA)) and Supplemental Notice 4B (Notice H-2023-08 PIH-2023-19 (HA)), <https://www.hud.gov/RAD/library/notices>
 - Quick Reference Guide, Environmental Review Requirements for RAD Conversions (2020), <https://www.hudexchange.info/resource/4216/environmental-review-requirements-for-rad-transactions/>. Check RAD Resource Desk for future guidance, <https://www.radresource.net/index.cfm>
- Office of Public and Indian Housing (PIH), Radon Information for PIH Programs (Notice 2013-06 (HA)), <https://www.hud.gov/sites/documents/PIH2013-06.PDF> and <https://www.hudexchange.info/programs/radon/>

V. Resources

A. HUD resources for implementation of this notice

Costs for radon testing and mitigation are considered eligible program costs for many HUD grant programs. As such, costs for radon testing and mitigation could be included in the total project costs funded or insured by HUD. **Note:** Costs for ongoing operation and/or maintenance of installed mitigation systems may not be eligible under certain HUD programs. For questions about the eligibility of the ongoing maintenance of radon mitigation systems, as well as other funding-specific questions, contact your HUD program office contact.

Table A on the following page, notes the major HUD programs for which radon testing and/or mitigation under 24 CFR 50.3(i) or 24 CFR 58.5(i) is an eligible program expense. This list is non-exhaustive; for other HUD programs please contact the appropriate program office contact.

Table A: HUD programs and radon testing and mitigation as an eligible expense

Program or grant name	Is radon testing an eligible expense?	Is radon mitigation an eligible expense?²⁷
Community Development Block Grant (CDBG)	Yes	Yes
Community Development Block Grant CARES Act (CDBG-CV)	Yes	Yes
Community Development Block Grant Disaster Recovery (CDBG-DR)	Yes	Yes
Community Development Block Grant Mitigation (CDBG-MIT)	Yes	Yes
Community Project Funding (CPF) Grants	Yes	Yes
Continuum of Care Program (CoC)	Yes	Yes
Emergency Solutions Grants Program	Yes	Yes
FHA-Insured Healthcare Loans	Yes	Yes
FHA-Insured Multifamily Loans	Yes	Yes
Green and Resilient Retrofit Program (GRRP)	Yes	Yes
HOME Investment Partnerships American Rescue Plan Program (HOME-ARP)	Yes	Yes
HOME Investment Partnerships Program (HOME)	Yes	Yes
Housing Opportunities for Persons With AIDS (HOPWA)	Yes	Yes
Housing Trust Fund (HTF)	Yes	Yes
HUD Section 8 renewals with capital repairs	Yes	Yes
HUD Section 8(bb) Transfer of Budget Authority.	Yes	Yes
Indian Community Development Block Grant (ICDBG)	Yes	Yes
Indian Housing Block Grant Program (IHBG)	Yes	Yes
Public Housing Capital and Operating Funds	Yes	Yes
Rental Assistance Demonstration (RAD)	Yes	Yes
Section 108 Loan Guarantee Program	Yes	Yes
Section 202 Supportive Housing for the Elderly Program	Yes	Yes
Section 811 Supportive Housing for Persons with Disabilities Program	Yes	Yes
Self-Help Homeownership Opportunity Program (SHOP)	Yes	Yes
Transfers of Rental Assistance with HUD Held or Insured Debt and/or Use Restrictions ("Section 209 Transfers.")	Yes	Yes

²⁷ Note: The term “radon mitigation” refers only to initial installation of a radon mitigation system and does *not* encompass ongoing maintenance.

B. Other radon resources

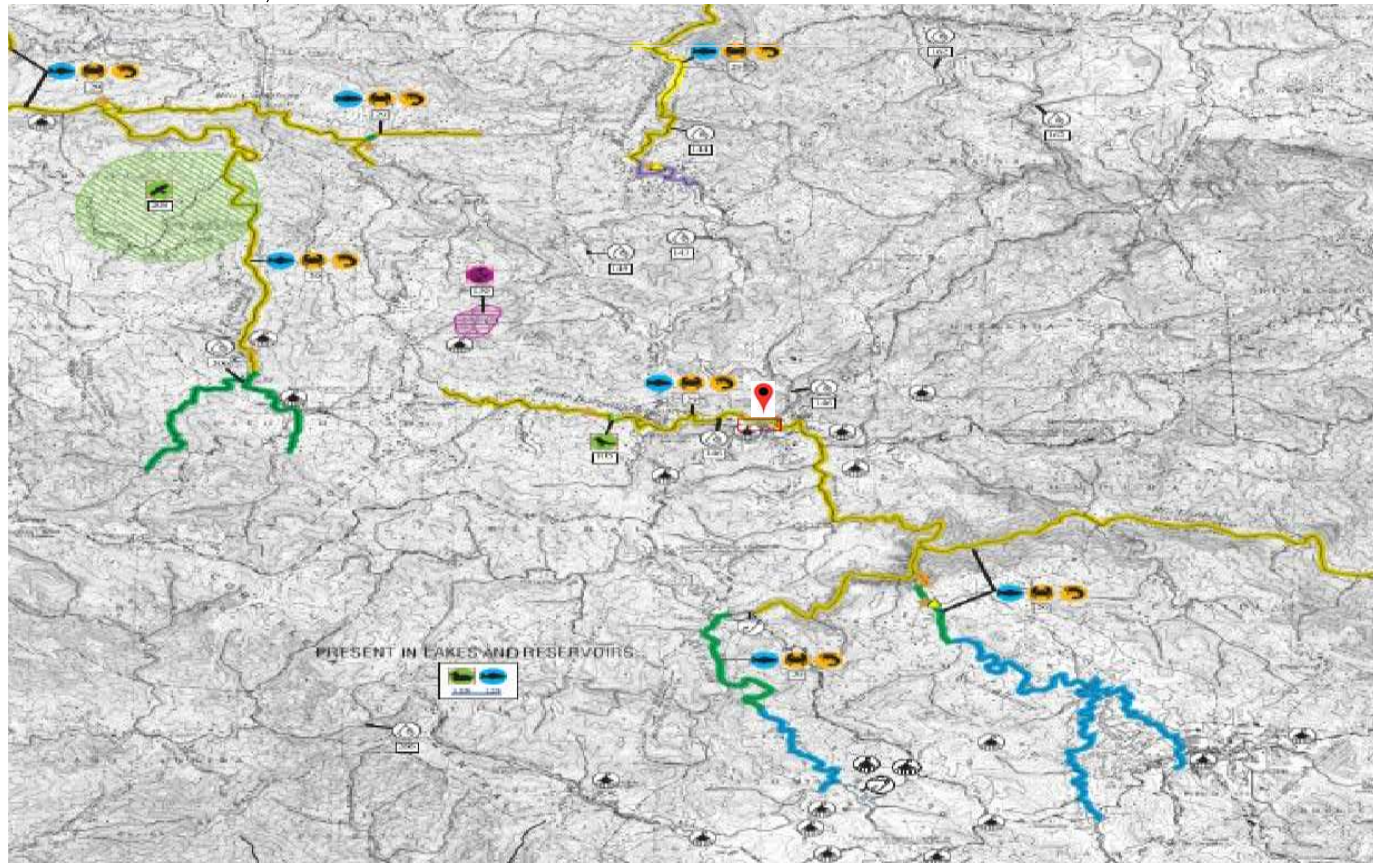
- EPA radon website, <https://www.epa.gov/radon> National Radon Program Services, <https://sosradon.org/>
 - Helpline: 1-800-557-2366
 - Comprehensive radon information, links to state radon programs and radon testing and mitigation information, and access to radon helplines
- CDC, National Center for Environmental Health, “Radon”, <https://www.cdc.gov/radon/>
 - National Environmental Public Health Tracking Network testing data map: <https://www.cdc.gov/ncet/ncet/tracking/topics/RadonTesting.htm>
- ANSI/AARST radon testing protocols and mitigation standards, <https://standards.aarst.org/>
- HUD 3-part radon webinar series sponsored by the Office of Lead Hazard Control and Healthy Homes and Public and Indian Housing, <https://www.hudexchange.info/programs/radon/>
- Office of Lead Hazard Control and Healthy Homes, *About Radon*, https://www.hud.gov/program_offices/healthy_homes/healthyhomes/radon
- OEE, *Radon Fact Sheet*, <https://www.hudexchange.info/resource/4955/oee-radon-fact-sheet/>
- OEE Radon and HUD-Assisted Projects Webinar Series, <https://www.hudexchange.info/news/radon-and-hud-assisted-projects-webinar-series/>

For questions concerning this Notice, contact your local OEE field environmental office staff, <https://www.hudexchange.info/programs/environmental-review/hud-environmental-staff-contacts/>

Attachment 7a. Enviromental Sensitivity Index Map

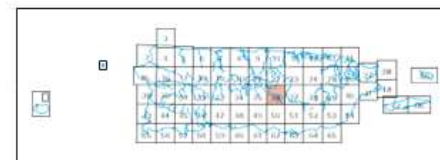
Address: State Road PR-156 Km 16.3, Pueblo Ward,
Barranquitas, PR 00794

Coordinates: 18.185505, -66.305029



- SHORELINE HABITATS (ESI)**
- 1A EXPOSED ROCKY CLIFFS
 - 1B EXPOSED SOLIDMAN-MADE STRUCTURES
 - 2A EXPOSED WAVE-CUT PLATFORMS & BEDROCK
 - 2B SCALP AND STEEP SLOPES ON MUD/SEDIMENT
 - 3A FINE-TO-MEDIUM GRAINED SAND BEACHES
 - 4 COARSE-GRAINED SAND BEACHES
 - 5 MIXED SAND AND GRAVEL BEACHES
 - 6A GRAVEL BEACHES
 - 6B RIPRAP
 - 7 EXPOSED TIDAL FLATS
 - 8A SHELTERED ROCKY SHORES
 - 8B SHELTERED, SOLIDMAN-MADE STRUCTURES
 - 9A SHELTERED TIDAL FLATS
 - 9B SHELTERED VEGETATED LOW BANKS
 - 10 MANGROVES
 - SALT- AND BRACKISH WATER MARSHES
 - FRESHWATER MARSHES
 - FRESHWATER SWAMPS
 - FRESHWATER SCIRUS SHRUB

- STREAM REACHES (RSI)**
- 1 QUIET POOL, LOW-SENSITIVE BANKS
 - 2 STRAIGHT CHANNEL WITH CLAY/ORGANIC LOW-SENSITIVE BANKS (MUD DOMINANT)
 - 3 MEANDERING CHANNEL, SAND POINT BARS
 - 4 MEANDERING CHANNEL, VEGETATED POINT BARS
 - 5 RAPIDS OVER BEDROCK
 - 6 MEANDERING CHANNEL, SAND AND GRAVEL POINT BARS
 - 7 SPLIT CHANNEL WITH COARSE GRAVEL, SCOUR RAPIDS
 - 8 SMALL FALLS, BOULDERS IN CHANNEL
 - 9 LARGE FALLS, BOULDERS IN CHANNEL
 - 10 CHANNELS WITH ASSOCIATED VULNERABLE WETLANDS
 - KARST



Not For Navigation
Published: May 2000
Published at Seattle, Washington
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Response and Restoration
Hazardous Materials Response Division

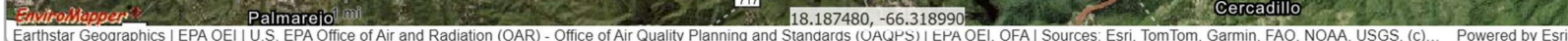
SCALE 1:55000



BARRANQUITAS, P.R. (1982) PR-36

PR-CRP-000988 Barranquitas - Construction of New Public Parking

Address: State Road PR-156 Km 16.3, Pueblo Ward, Barranquitas, PR 00794

Prepared by  ICF

Attachment 7c

USFWS Package with IPaC



Transmittal Letter

June 28, 2024

Caribbean Ecological Services Field Office
U.S. Fish and Wildlife Service
P.O. Box 491
Boquerón, Puerto Rico 00622
Email: caribbean@es@fws.gov



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: 2024.07.11 10:59:02 -04'00'

SILMARIE PADRON Digitally signed by SILMARIE PADRON
Date: 2024.07.11 12:36:07 -04'00'
Acting Caribbean ES Field Supervisor

RE: USFWS Endangered Species Act Certifications CRP Program – June 2024

We are submitting the following Self-Certifications for projects under the CDBG-DR City Revitalization Program. Attached are included the Self-Certifications that certify that the projects are in compliance and are not likely to adversely affect federally-listed species.

The following table includes the projects that are in compliance with the Blanket Clearance Letter for the Endangered Species act of 1973, as amended, and the Fish and Wildlife Coordination Act.

Project Number	Project Name
PR-CRP-000048	Nuevo Estacionamiento Público en la Calle Libertad
PR-CRP-000053	Sidewalk Revitalization Jayuya Urban Center
PR-CRP-000209	Iniciativa para la Rehabilitación de Integral de la Comunidad Especial "El Cerro"
PR-CRP-000342	Alumbrado y Reconstrucción de Aceras Ave. Emérito Estrada Rivera
PR-CRP-000446	Rehabilitación Plaza de Recreo Cristobal Colón
PR-CRP-000655	Plaza Urbanización Roosevelt
PR-CRP-000775	Revitalization of Architecture and Historical Facades in the Urban Center
PR-CRP-000988	Construcción de Ampliación de Estacionamiento Público
PR-CRP-001026	Conversion Of Del Valle Avenue into a Complete Street
PR-CRP-001192	Public Facilities Plaza Rafael Hernández Marín Río Piedras



Self-Certification

<http://www.fws.gov/caribbean/ES/Index.html>

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 Puerto Rico Department of Housing (PRDOH) certifies that the following project **Construcción de Ampliación de Estacionamiento Público (PR-CRP-000988)**, consisting of the construction of an extension to the existing municipal public parking lot, including a 2-level building consisting of 33 regular and 6 disabled parking spaces on the street-level floor, 44 parking spaces on the second floor, an elevator, emergency exit stairs, and a solar energy system, located at PR-156 Road Km 16.3 (Barceló Street), Barranquitas, PR 00794 (18.18561, -66.30506), complies with:

Check	Project Criteria
☐	1. Street resurfacing.
☐	2. Construction of gutters and sidewalks along existing roads.
☐	3. Reconstruction or emergency repairs of existing buildings, facilities and homes.
☐	4. Rehabilitation of existing occupied single-family homes, and buildings; provided that equipment storage or staging areas are not located on vacant property harboring a wetland and/or forested vegetation and that the lighting associated to the new facilities is not visible directly or indirectly from a beach.
☐	5. Demolition of dilapidated single-family homes or buildings; provided that the demolition debris is disposed in certified receiving facilities; equipment storage or staging areas are not located on vacant property harboring a wetland and/or forested vegetation.

☐	6. Rebuilding of demolished single-family homes or buildings, provided that the new construction is within the existing footprint of the previous structure and/or within pre-existing grassed or paved areas, and that the lighting associated to the new facilities are not visible directly or indirectly from a beach.
☐	7. Activities within existing Right of Ways (ROWs) of roads, bridges and highways, when limited to actions that do not involve cutting native vegetation or mayor earth moving; and are not located within, or adjacent to, drainages, wetlands, or aquatic systems. These activities include the installation of potable water and sanitary pipelines.
☐	8. Improvements to existing recreational facilities, including the installation of roofs to existing basketball courts, provided that the lighting associated to the facilities are not visible directly or indirectly from the beach.
☐	9. Construction of electric underground systems in existing towns and communities, provided that the property is not a wetland area and the lighting associated to the facilities are not visible directly or indirectly from the beach.
☒	10. Construction of facilities on vacant properties covered with grasses in urban areas, provided that the lighting associated to the facilities are not visible directly or indirectly from the beach.
☐	11. Construction of houses, buildings or acquiring lands in urban areas covered by grass for relocation of low-income families and/or facilities that have been affected by weather conditions.



Ángel G. López-Guzmán
Deputy Director

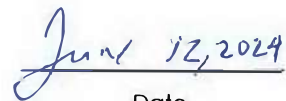
Permits and Environmental Compliance Division

Office of Disaster Recovery

Address: P.O. Box 21365 San Juan, PR 00928

Telephone and Ext: 787-274-2527 ext. 4320

Email: environmentcdba@vivienda.pr.gov



Date

PR-CRP-000988
PROJECT PHOTOS AND MAPS















































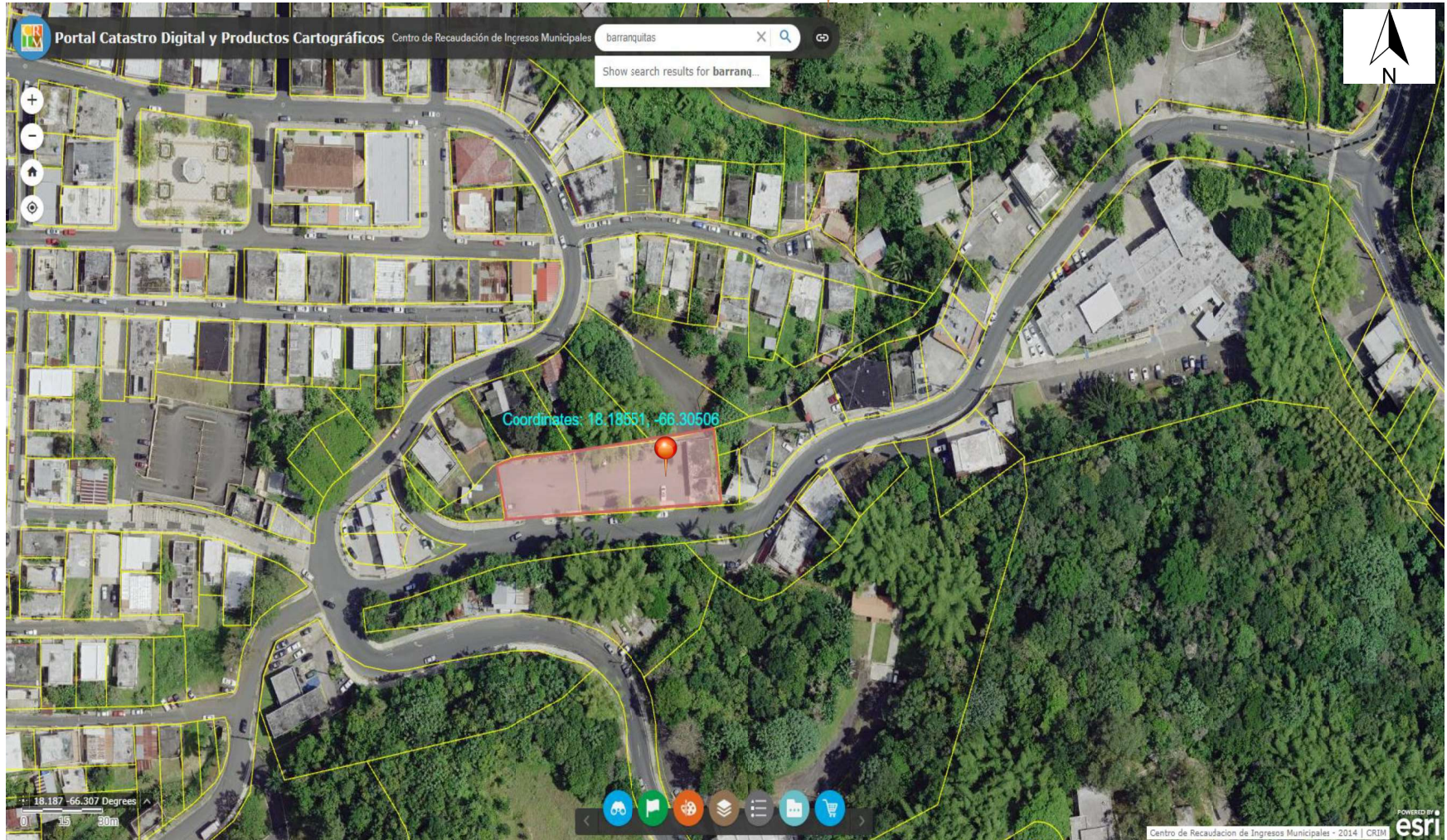




PR-CRP-000988 Project Location Map

Address: PR-156 Km 16.3 (Barceló Street), Barranquitas, PR 00794

Coordinates: 18.18561, -66.30506



PR-CRP-000988 Wetland Map

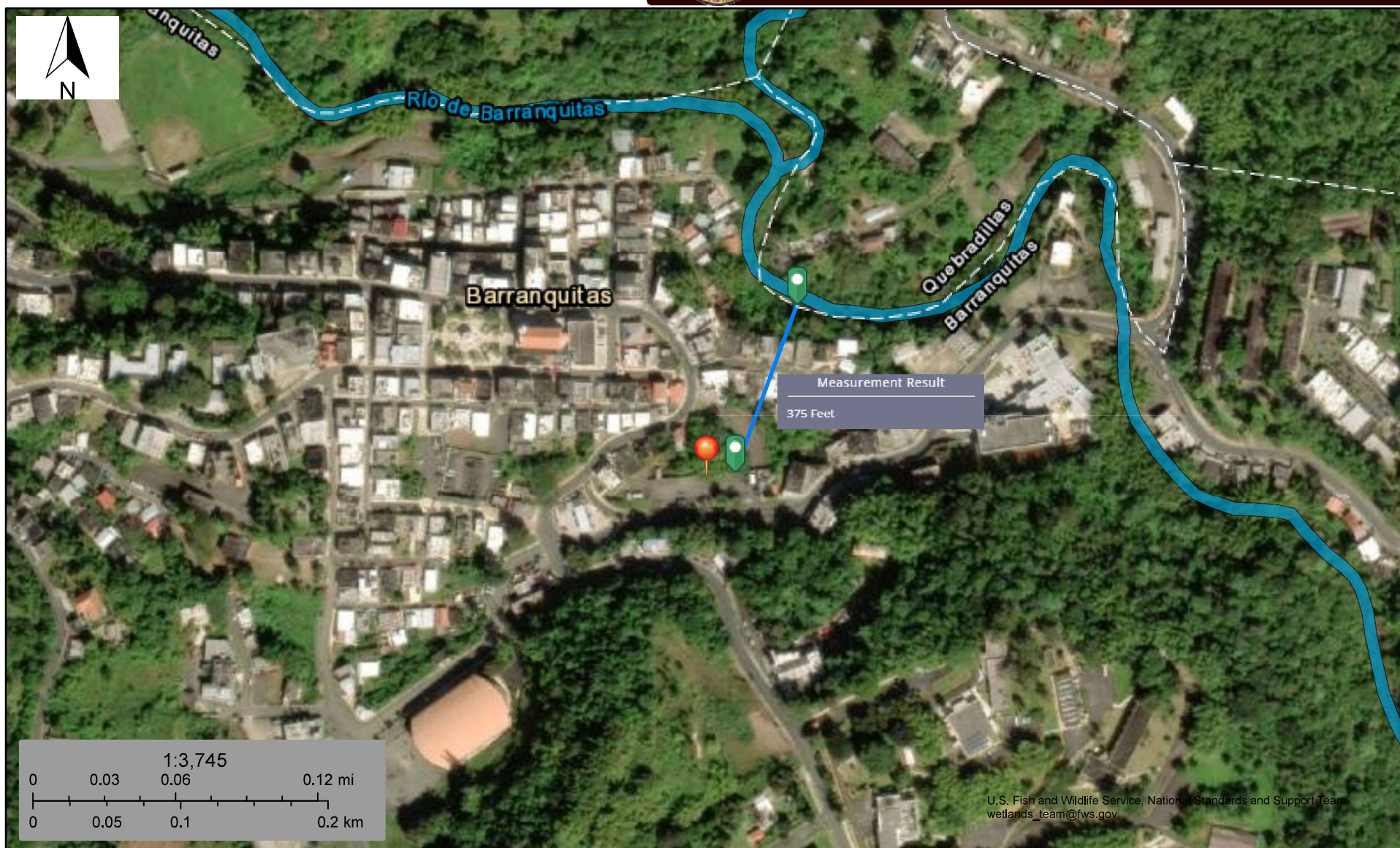
Address: PR-156 Km 16.3 (Barceló Street), Barranquitas, PR 00794

Coordinates: 18.18561, -66.30506



U.S. Fish and Wildlife Service

National Wetlands Inventory



June 10, 2024

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

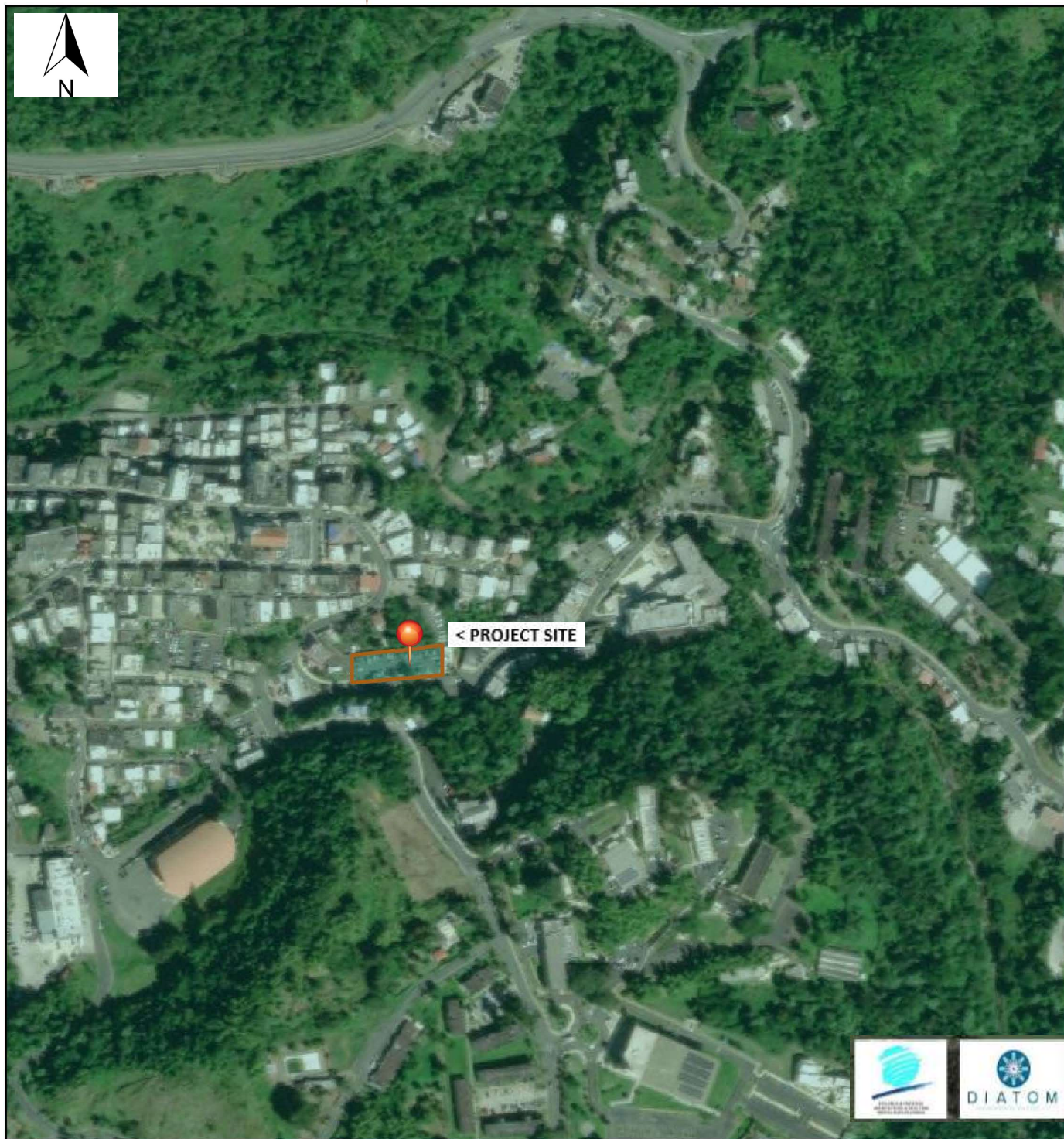
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

PR-CRP-000988 Critical Habitat Map

Address: PR-156 Km 16.3 (Barceló Street), Barranquitas, PR 00794

Coordinates: 18.18561, -66.30506



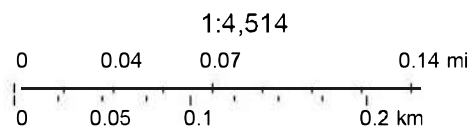
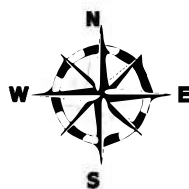
September 10, 2023



Project 1



Search Result (polygon)



Maxar

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

Barranquitas County, Puerto Rico



Local office

Caribbean Ecological Services Field Office

☎ (939) 320-3135

📅 (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

NOT FOR CONSULTATION

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
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	Endangered

Flowering Plants

NAME	STATUS
Palo De Rosa <i>Ottoschulzia rhodoxylon</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5741	Threatened

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.

Bald & Golden Eagles

There are no documented cases of eagles being present at this location. However, if you believe eagles may be using your site, please reach out to the local Fish and Wildlife Service office.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- 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>
- Supplemental Information for Migratory Birds and Eagles in IPaC
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence 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). To see 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 of bald and golden eagles 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 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. Please contact your local Fish and Wildlife Service Field Office if you have questions.

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:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

The [data](#) in this location indicates there are no migratory [birds of conservation concern](#) expected to occur in this area.

There may be migratory birds in your project area, but we don't have any survey data available to provide further direction. For additional information, please refer to the links above for recommendations to minimize impacts to migratory birds or contact your local FWS office.

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 to 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.

NOT FOR CONSULTATION

Attachment 7d

Habitat Categorization Study and DRNA Certification

Categorización de Hábitat

Construcción de Ampliación Estacionamiento Público, Barranquitas

Preparado Para:

Central Group Engineering Services, PSC

787-857-8021

Preparado por :



Green Projects Environmental Consultants, LLC

p/c : Agro. Elvelisse Figueroa Hernandez

787-528-3322

greenprojectpr@gmail.com



i. Descripción y localización de la finca del proyecto bajo evaluación

DESCRIPCIÓN DEL PROYECTO

El Municipio Autónomo de Barranquitas posee un área de estacionamiento sobre tierra ubicado en la Carretera PR-156, Km. 16.3 (Calle Barceló) en el Municipio de Barranquitas. Este estacionamiento tiene una cabida de 1,606.1199 metros cuadrados, equivalente a 0.4086 cuerdas. Con el propósito de aumentar la capacidad de espacios para estacionamientos y mejorar el entorno de la entrada al pueblo, se pretende construir un segundo nivel sobre el estacionamiento existente a conocerse como Ampliación Estacionamiento Público (en adelante el "Proyecto" o "Acción Propuesta").

El nuevo nivel de estacionamientos se construirá en hormigón armado y contará con placas solares que energizarán el mismo, tendrá una rampa de acceso al segundo nivel la cual conectará con la carretera 156, se relocará uno de los accesos existentes al estacionamiento. El predio de terreno está ubicado en Suelo Urbano y tiene una calificación C-I (Comercial Intermedio), además está ubicado en área no inundable Zona X de acuerdo con el mapa # 72000C1170H.

Localización del Proyecto:



Dirección: Carretera PR-156, Km. 16.3 (Calle Barceló) en el Municipio de Barranquitas - **Coordenadas:** X: 213573.2612 Y: 238979.4592

DESCRIPCIÓN DEL PREDIO:

La propiedad ha sido impactada previamente con la construcción de estructuras e impermeabilización de los suelos. La vegetación dominante son árboles que fueron sembrados como parte de diseño paisajista sembrados en franjas de siembra, que sirven para brindar sombra. La fauna del lugar se limita a varias especies de aves y reptiles como lagartijos y siguanas típicamente encontrados en zonas urbanas.

- ii. **Inventario reciente de la flora y fauna del lugar de la obra, resaltando la presencia, si alguna, de especies raras, vulnerables o en peligro de extinción o que constituyan elementos críticos de vida silvestre según las listas del DRNA o del gobierno federal**

Lista de Flora

Familia	Nombre Común	Nombre Científico	Clasificación
Arecaceae	Palma adonidea	<i>Veitchia merrillii</i>	P
Bignoniaceae	Roble Plateado	<i>Tabebuia argentea</i>	A
Bromeliaceae	Bromelia	<i>Bromelia Spp</i>	H
Combretaceae	Ucar	<i>Bucida buceras</i>	A
Compositae	Guaco	<i>Mikania cordifolia</i>	B
Compositae	Margarita	<i>Bidens pilosa</i>	H
Compositae	Clavelillo rojo	<i>Emilia fosbergii</i>	H
Compositae	Santa María	<i>Vernonia albicaulis</i>	H
Compositae	Yerba socialista	<i>Vernonia cinerea</i>	H
Connaraceae	Juan Caliente	<i>Rourea surinamensis</i>	B
Convolvulacea	Batatilla blanca	<i>Merremia quinquefolia</i>	B
Convulvulaceae	Bejuco de puerco	<i>Ipomoea setifera</i>	B
Lauraceae	Aguacate	<i>Persea mericana</i>	A
Piperaceae	Higuillo	<i>Piper aduncum</i>	Ar
Poaceae	Bambuas	<i>Bambusa vulgaris</i>	H
Poaceae	Pendejuelo	<i>Digitaria sanguinalis</i>	H
Poaceae	<i>Zoysa spp</i>	<i>Zoysa</i>	H

Lista de Fauna:

Aves		
Nombre Comun	Nombre Científico	Clasificación
<i>Ardea alba</i>	Garza Real	R
<i>Columbina passerima</i>	Rolita	R
<i>Coereba flaveola</i>	Reinita Común	R
<i>Quiscalus niger</i>	Mozambique	I
<i>Tyrannus dominicensis</i>	Pitirre	R
<i>Vireo latimeri</i>	Bienteveo	E
<i>Margarops fuscatus</i>	Zorzal Pardo	R
<i>Mimus polyglottos</i>	Ruiseñor	R
Reptiles		
Nombre Comun	Nombre Científico	Clasificación
<i>Anolis cristatellus</i>	Lagartijo Común	E
<i>Ameiva exul</i>	Siguana	E
Anfibios		
Nombre Comun	Nombre Científico	Clasificación
<i>Eleutherodactylus coqui</i>	Coquí común	E
<i>Bufo marinus</i>	Sapo marino	I

I- Introducido R- Residente E- Endémico

iii. Descripción de la metodología utilizada para realizar el inventario

La fase de inventario sobre la flora fue realizada en el lugar donde se propone la construcción del Proyecto. Durante las inspecciones de campo, se recorrió el área que ocupa la huella de impacto de las obras propuestas en su totalidad; para documentar las especies de flora.

En cuanto a la fauna, se realizó el estudio comenzando a tempranas horas (6:45 am-10:00 am) y en horarios de la tarde (4:00 pm-10:00 pm). Para lograr la identificación de las aves y fauna en general se establecieron lugares de muestreo donde era posible observar todo el lugar. La identificación de aves fue visual y por la identificación del sonido peculiar de cada una de las especies.

Para los reptiles se determinó su presencia al momento en que salían a termoregular. Para identificarlos se utilizaron mecanismos indirectos para determinar la presencia de diferentes especies de animales como por ejemplo: restos de nidos, plumas, heces fecales entre otros.

Como recursos adicionales para determinar la presencia o ausencias de especies consideradas como críticas, raras o en peligro de extinción se consultó

con la División de Patrimonio Natural del Departamento de Recursos Naturales y Ambientales (DRNA).

- iv. **Presencia en la finca de cuerpos de agua, pozos de agua potable, humedales, bosques, cuevas, mogotes, sumideros, descargas de aguas usadas o pluviales, playas, dunas de arena, guajones, ect.**

Sistemas Naturales y Áreas Ecológicamente Sensitivas					
Sistema	Dentro	Fuera	Distancia (m)	No existe	Nombre
Área Costanera				X	
Bahías				X	
Bosques o Reservas				X	
Zona del Carso				X	
Dunas				X	
Embalses				X	
Reserva agrícola				X	
Humedal				X	
Acantilado				X	
Hábitat				X	
Manantiales				X	
Refugio de Aves				X	
Ríos			95 NE		Rio Barranquitas
Quebradas				X	
Canal				X	
Sumideros				X	
Laguna				X	
Reptiles				X	
Mamíferos				X	

- v. **Descripción de los hábitats naturales de alto valor ecológico presentes en la finca del proyecto propuesto. Descripción de los impactos reales o potenciales del proyecto propuesto sobre estos sistemas o cualquier otro de valor natural presente.**

Hidrología:

Dentro o cercano al área del proyecto no existen cuerpos de agua que puedan verse afectados por las obras propuestas. El cuerpo de agua más cercano es la Río Barranquitas que discurre al Noroeste de la Propiedad a una distancia aproximada de 95 metros.

Humedales

El *National Wetlands Inventory Mapper* del FWS no establece la presencia de humedales dentro del predio de la Acción. Reconocimientos de campo efectuados con motivo de la preparación de esta EA no arrojaron información distinta.

Índice de Sensibilidad Ambiental:

Dentro de la Propiedad no existen cuerpos de agua, u otros sistemas naturales, tales como cuevas, reservas naturales, sumideros, bosques y áreas ecológicamente sensitivas, tampoco dentro de una distancia de 400 m lineales con excepción del Río Barranquitas.

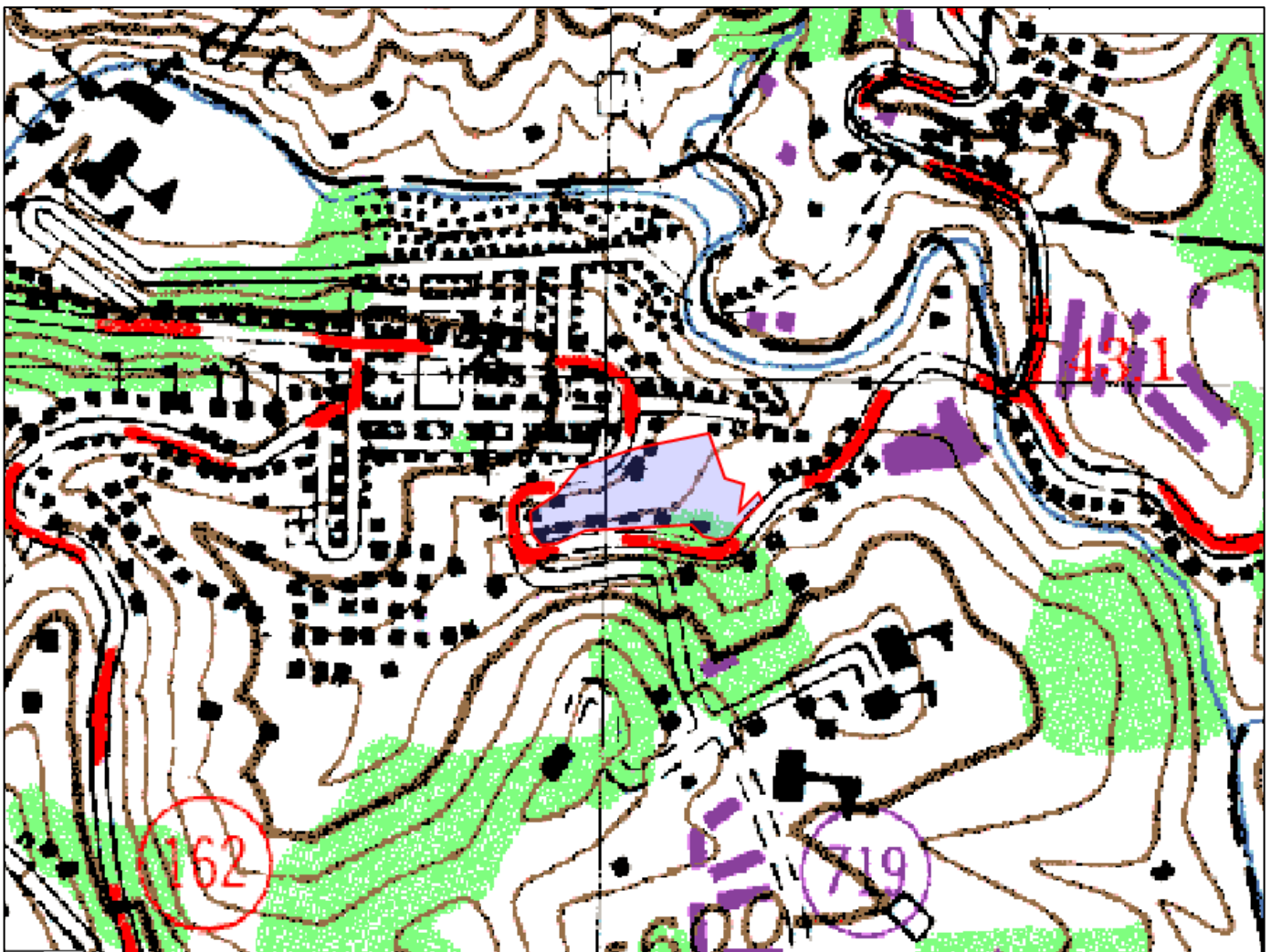
El Mapa ESI, con excepción del Río Barranquitas tampoco identifica la presencia de recursos biológicos de importancia dentro de la Propiedad, o dentro de un radio de 400 m alrededor de ésta. El MIPR operado por la Junta de Planificación tampoco identifica la presencia de tales recursos dentro de la Propiedad o dentro del radio descrito. Tampoco han sido identificados dentro de la Propiedad con motivo de recorridos efectuados como parte de la preparación de esta EA.



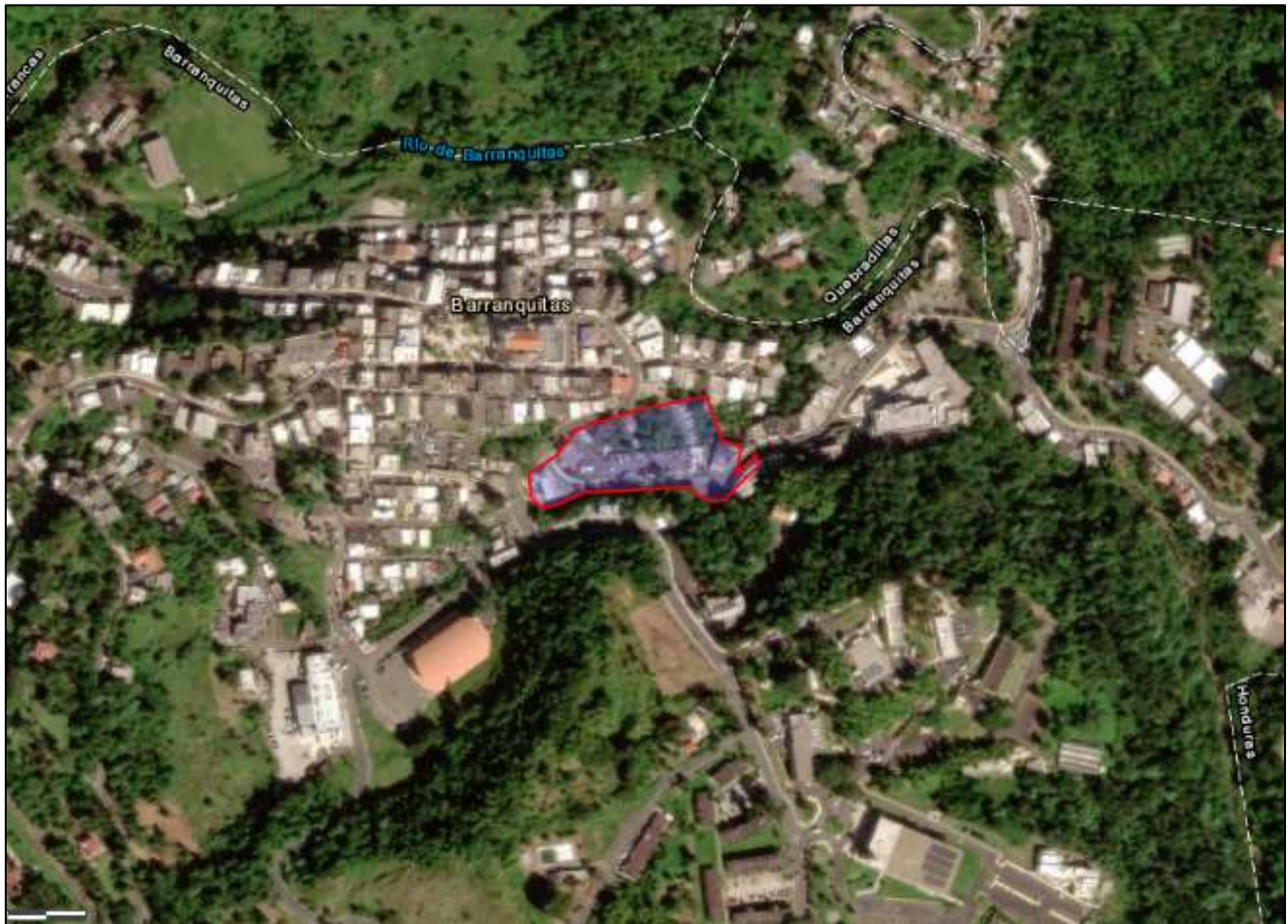
vi. Descripción resumida de las actividades humanas pasadas realizadas en el predio del proyecto propuesto, particularmente aquellas que hayan causados impactos permanentes.

- Construcción de Estructuras
- Impermeabilización de Suelos
- Desarrollo Urbano el Sector

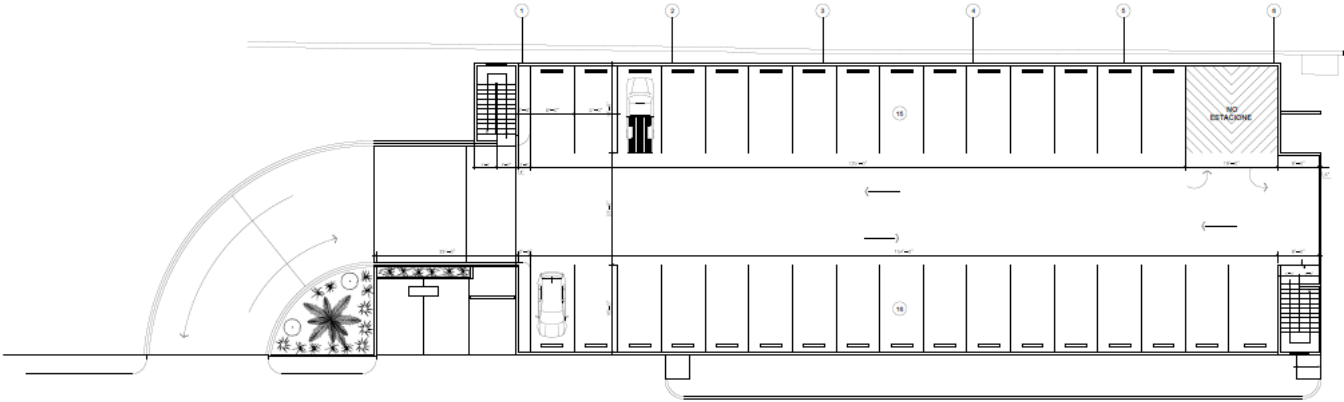
vii. Copia legible de mapa topográfico 1:20,000 donde se señale claramente la localización de la finca del proyecto propuesto.



- viii. Foto aérea donde se señale claramente la localización de la finca del proyecto propuesto

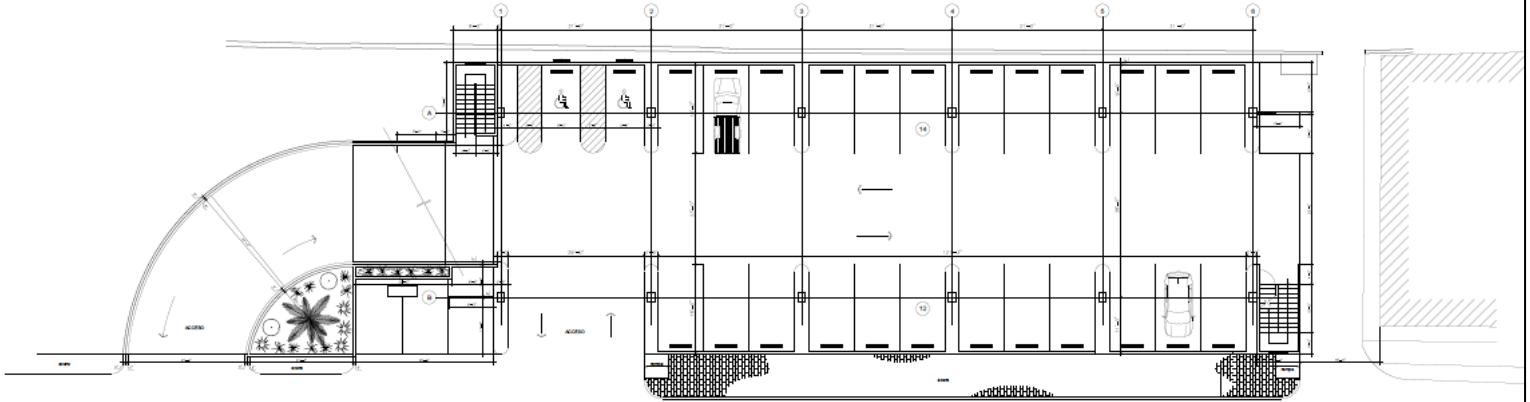


ix. Plano de la finca del proyecto donde se señale detalladamente la huella de impacto de la obra propuesta.



PLANTA ARQUITECTONICA - NIVEL SUPERIOR (32 ESTACIONAMIENTOS)

Escala: 1/32' = 1" = 0'



PLANTA ARQUITECTONICA - NIVEL BASE (26 ESTACIONAMIENTOS)

Escala: 1/32' = 1" = 0'

← CALLE BARCELO (PR #156) →

x. **Determinación de la Categoría de Hábitat Natural que se recomienda para la finca del proyecto propuesto a tenor con la información sometida y las disposiciones de la Ley 241 y sus reglamentos.**

El Reglamento Núm. 6765 de 11 de febrero de 2004, conocido como el Reglamento para Regir la Conservación y el Manejo de la Vida Silvestre, las Especies Exóticas y la Caza en el Estado Libre Asociado de Puerto Rico (Reglamento 6765), establece, para fines de determinar el tipo de mitigación aplicable a un predio, seis (6) categorías de hábitat, a saber: **Categoría 1:** Hábitat Irremplazable; **Categoría 2:** Hábitat esencial; **Categoría 3:** Hábitat de Alto valor Ecológico; **Categoría 4:** Hábitat de Valor Ecológico; **Categoría 5:** Hábitat Natural con bajo potencial de convertirse en hábitat esencial, de alto valor ecológico o de valor ecológico; y, **Categoría 6:** Hábitat natural con bajo potencial de convertirse en hábitat esencial, de alto valor ecológico o de valor ecológico.

Las obras de la Acción Propuesta se realizarán únicamente en los terrenos que, por carecer de valores ecológicos particulares, ha sido clasificado como SU, calificado como C-I y R-I, en reconocimiento de su idoneidad para desarrollo según contempla la Acción Propuesta. En la Propiedad no se ha identificado la presencia de especies amenazadas o en peligro que limiten o impidan el desarrollo de la misma.

Visto lo anterior, donde se propone la Acción Propuesta corresponde a una Categoría 6: Hábitat natural con bajo potencial de convertirse en hábitat esencial, de alto valor ecológico o de valor ecológico. De conformidad con los requisitos del Reglamento 6765 aplicables a hábitat Categoría 6, la Acción Propuesta se realizará implantando medidas que minimicen la pérdida directa de hábitat.

La determinación de categoría de hábitat se hizo tomando en cuenta la localización de la Acción Propuesta, la ausencia de vegetación, el impacto previo a la Propiedad y el desarrollo urbano del sector. El predio de la Acción Propuesta no contiene una composición única de especies, tampoco se identificaron especies de vida silvestre, poblaciones o comunidades de especies de distribución específica y limitada de baja capacidad de dispersión que puedan ser afectadas por la Acción Propuesta.

Sin embargo, para mejorar la estética y las condiciones existentes se sembrarán árboles, arbustos y palmas nativas. Una vez se complete el plan de siembra que se autorice en la Autorización de Corte, Siembra y Forestación se espera que la vegetación que forme parte de las áreas verdes, constituya un área igual o mejor para la vida silvestre que la existente, con el uso de especies que provean alimento a la misma. Las especies a utilizarse en la siembra de árboles serán

seleccionadas de la lista que provee la Ley Núm. 97 del 24 de junio de 1998 – Ley para Fomentar la Siembra de Árboles cuyas Frutas o Semillas Provean Alimento a Especies de Aves Silvestres de Puerto Rico.

xi. Descripción del área propuesta para mitigación, según la Categoría de Hábitat natural recomendada y las disposiciones de la Ley 241 y sus reglamentos.

Según la discusión que antecede, las acciones propuestas no requieren mitigación. No obstante, mediante la implementación de medidas de mejoramiento paisajista en el proyecto en las áreas verdes, se implementan colateralmente medidas de mitigación. La vegetación a sembrarse será tomando especial consideración a las guías de siembra de especies nativas que sirvan de fuentes de alimento y hábitaculo para las especies que se puedan beneficiar de estos.

Fotos:





GOBIERNO DE PUERTO RICO
DEPARTAMENTO DE RECURSOS NATURALES Y AMBIENTALES

NOV 02 2023

AGRO ELVELISSE FIGUEROA HERNANDEZ
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G-1 CALLE 1
TOA ALTA, PR 00953
greenprojectpr@gmail.com

Estimada agrónoma Figueroa Hernández:

**Certificación para Categorización de
Hábitats Naturales para la Vida Silvestre
Ampliación Estacionamiento Público Barranquitas
Carr. PR-156, km 16.3
Bo. Pueblo, Barranquitas
O-SE-CCH01-SJ-02672-07092023**

El Departamento de Recursos Naturales y Ambientales (DRNA) evaluó una Solicitud de Certificación para Categorización de Hábitats Naturales para la Vida Silvestre para el proyecto de epígrafe. La misma fue evaluada de acuerdo con las disposiciones aplicables relacionadas con la fauna, la flora y sus hábitats de la Ley 416 del 2004, según enmendada (*Ley Sobre Política Pública Ambiental*), la Ley 23 del 1972, según enmendada (*Ley Orgánica del Departamento de Recursos Naturales y Ambientales de Puerto Rico*), la Ley 150 de 1988, según enmendada (*Ley del Programa de Patrimonio Natural de Puerto Rico*), la Ley 314 de 1998 (*Ley para Declarar la Política Pública sobre Humedales y Designación de Caño Tiburones como Reserva Natural*), la Ley 292 del 1999 (*Ley para la Protección de la Fisiografía Cársica de Puerto Rico*) y su Reglamento 8486 de 2014 (*Plan y Reglamento del Área de Planificación Especial del Carso*) y la Ley 241 del 1999, según enmendada (*Nueva Ley de vida silvestre de Puerto Rico*) y sus Reglamentos 6765 de 2004 (*Reglamento para regir la conservación y el manejo de la vida silvestre, las especies exóticas y la caza en el Estado Libre Asociado de Puerto Rico*) y 6766 del 2004 (*Reglamento para regir las especies vulnerables y en peligro de extinción en el Estado Libre Asociado de Puerto Rico*), así como de la Orden Administrativa del DRNA 2010-09 y el *Puerto Rico State Wildlife Action Plan* del DRNA, adoptado en Septiembre, 2015. En cuanto al Inventario de flora y fauna incluido en la solicitud, encontramos que cumplió satisfactoriamente con las disposiciones aplicables del Reglamento 6765, *supra*, documentando de forma representativa la flora y la fauna del lugar.

El predio del proyecto tiene una cabida de 1,606.1 metros cuadrados. Es un predio comercial urbano desarrollado, ocupado por un estacionamiento terrero pavimentado. Se propone la demolición del estacionamiento existente y la construcción de un edificio de estacionamiento de dos niveles. No hay reportes de especies de flora o fauna Vulnerables o En Peligro de Extinción.

Como resultado de dicha evaluación, hemos categorizado el predio como **Hábitat Natural con Bajo Potencial de Convertirse en Hábitat Esencial, Hábitat de Alto Valor Ecológico o Hábitat de Valor Ecológico (Categoría 6)**. El Artículo 2.03 del Reglamento 6765, supra, establece lo siguiente para esta categoría:

“La meta de la mitigación es minimizar el impacto al hábitat. El Departamento deberá actuar para alcanzar las metas de la mitigación de hábitat recomendando o exigiendo acciones que minimicen la pérdida directa de hábitat y que evite impacto a otro hábitat fuera del área a impactarse.”

Este documento es una calificación de los hábitats naturales sitios en el predio de epígrafe, requerida por los estatutos legales vigentes. **No constituye un permiso para la construcción u operación del proyecto propuesto.**

Esta certificación es solamente aplicable a la situación de hechos según presentados y evaluados en el caso y la Secretaria se reserva el derecho de evaluar, variar o modificar el mismo en cualquier momento anterior a la emisión del permiso o la acción administrativa correspondiente por parte de la agencia solicitante o proponente, de surgir nueva información oficial especifica estableciendo que el derecho aplicable o las condiciones ambientales en el predio han cambiado sustancialmente o cuando la certificación original se emitió bajo premisas falsas o fraudulentas.

Si tiene alguna pregunta o necesita orientación sobre este asunto, puede escribirnos a la dirección indicada o comunicarse al teléfono 787-999-2200 extension 2846.

Cordialmente,



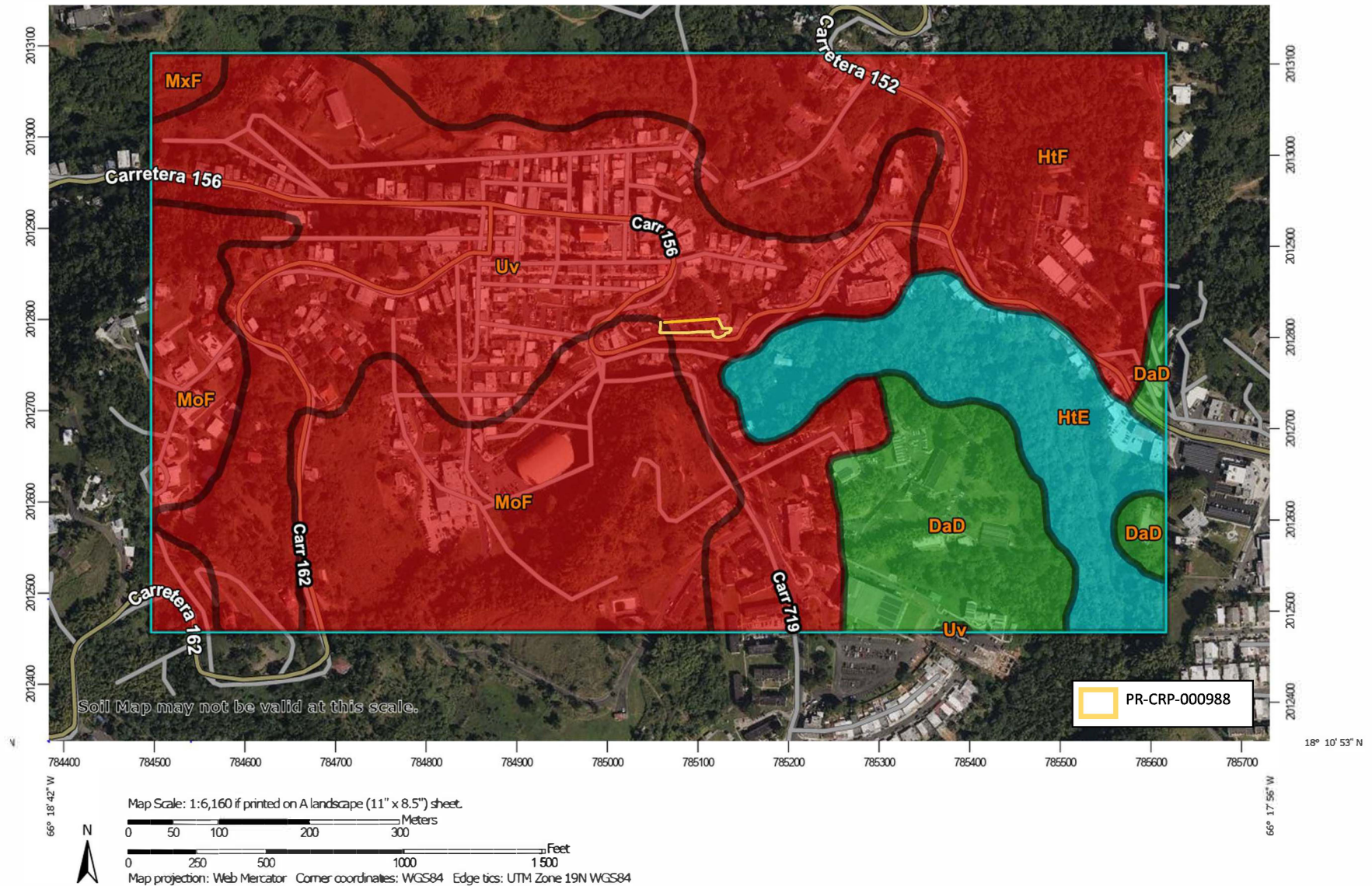
Ivelisse Espinosa Lugo
Secretaria Auxiliar Interina
Secretaría Auxiliar de Permisos, Endosos y Servicios Especializados

Attachment 8. Farmland Classification Map

PR-CRP-000988 Barranquitas - Construction of New Public Parking

Coord: 18.185505, -66.305029

Address: State Road PR-156 Km 16.3, Pueblo Ward, Barranquitas, PR 00794



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

9/10/2025
Page 1 of 5

Source: U.S. Department of Agriculture (USDA) Web Soil Survey (Spatial Reference: WGS84), URL <https://websoilsurvey.nrcs.usda.gov/>

Prepared by ICF

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

	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	Soil Rating Points			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		Not prime farmland		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 drained		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 protected from flooding or not frequently flooded during the growing season		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 irrigated		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 drained and either protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if irrigated
							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



Attachment 9. ABFE Map

PR-CRP-000988 Barranquitas - Construction of New Public Parking

Coord: 18.185505, -66.305029

Address: State Road PR-156 Km 16.3, Pueblo Ward, Barranquitas, PR 00794



FEMA | Esri Community Maps Contributors, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc., METI/NASA, USGS, NPS, US Census Bureau, USFWS

Powered by Esri

Source: Puerto Rico Advisory Base Flood Elevations (ABFEs) (Spatial Reference: NAVD88) at URL <https://experience.arcgis.com/experience/2be181b530e74669b33e3edaafef2ebf>

Prepared by ICF

Attachment 10

106 NHPA Effect Determination



OFICINA ESTATAL DE

CONSERVACIÓN HISTÓRICA

GOBIERNO DE PUERTO RICO

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

Thursday, June 5, 2025

Lauren B Poche

269 Avenida Ponce de León, San Juan, PR, 00917

SHPO-CF-05-14-25-08 PR-CRP-000988 (Barranquitas), Construcción de Nuevo Estacionamiento Público

Dear Ms. Poche,

Our Office has received and reviewed the above referenced project in accordance with 54 U.S.C. 306108 (commonly known as Section 106 of the National Historic Preservation Act) and 36 CFR Part 800: Protection of Historic Properties.

Our records support your finding of no historic properties affected for this undertaking.

Please note that should you discover other historic properties at any point during project implementation, you should notify the SHPO immediately. If you have any questions regarding our comments, please do not hesitate to contact our Office.

Sincerely,

Carlos A. Rubio Cancela

State Historic Preservation Officer
CARC/GMO/ MB





GOVERNMENT OF PUERTO RICO
DEPARTMENT OF HOUSING

April 30, 2024

Arch. Carlos A. Rubio Cancela

Executive Director

Puerto Rico State Historic Preservation Office

Cuartel de Ballajá, Third Floor

San Juan, Puerto Rico 00901

Re: Authorization to Submit Documents for Consultation

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 review services, among others, that will support the objectives of the agenda for both CDBG-DR and CDBG -MIT Programs.

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,

Aldo A. Rivera Vázquez, PE

Director

Division of Environmental Permitting and Compliance

Office of Disaster Recovery

5/14/2025

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-000988,
CONSTRUCCIÓN DE NUEVO ESTACIONAMIENTO PÚBLICO, BARRANQUITAS,
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, PRDOH contracted Horne Federal, LLC (HORNE) to provide environmental records review services that will support their objectives for the CDBG-DR funds.

On behalf of PRDOH, HORNE is submitting documentation for the proposed Construcción de Nuevo Estacionamiento Público, which is adjacent to the Barranquitas Traditional Urban Center. The Municipality of Barranquitas proposes to develop a two-level parking structure on the site of an existing parking lot. The full scope of the project is described in the submitted documentation, which includes mapping, photographs, and the 90% design development plans.

Based on the documentation provided, the Program requests a concurrence with a determination that **no historic properties affected** is appropriate for this undertaking. If you have any questions or concerns, please contact me by email at lauren.poche@horne.com or phone at 225-405-7676.

Kindest regards,



Lauren Bair Poche. M.A.

Architectural Historian, EHP Senior Manager
LBP/KPS

Attachments

PR-CRP-000988

CONSTRUCCIÓN DE NUEVO
ESTACIONAMIENTO PÚBLICO PROJECT
BARRANQUITAS, PUERTO RICO

SECTION 106 EFFECT DETERMINATION FORM

PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM CITY REVITALIZATION PROGRAM (CITY-REV) Section 106 NHPA Effect Determination		
Subrecipient: Municipio de Barranquitas		
Project Name: Construcción de Nuevo Estacionamiento Público		Project ID: PR-CRP-000988

Project Location: PR-156 KM 16.3 (aka Barceló Street), Barrio Pueblo, Barranquitas, Puerto Rico	
Project Coordinates: Latitude 18.185487, Longitude -66.305238	
TPID (Número de Catastro): 247-092-020-12 -000/ 247-092-020-11-000 / 247-092-020-10-901	
Type of Undertaking: ☐ Substantial Repair ☒ New Construction	
Construction Date (AH est.): N/A	Property Size (acres): 0.4086

SOI-Qualified Architect/Architectural Historian:	Ms Berenice Sueiro-Vázquez Dr Arleen Pabón-Charneco
Date Reviewed: February-April 2025	
SOI-Qualified Archaeologist:	Mr David Sherman
Date Reviewed: February - April 2025	
SOI-Qualified Reviewer(s):	Dr Karen Anderson-Córdova Architect Carmen-Marla López
Date Reviewed: April 2025	

In compliance with Section 106 of the National Historic Preservation Act (NHPA), the Program is responsible for identifying historic properties listed in the National Register of Historic Places (NRHP) and any properties not listed that would be considered eligible for listing that are located within the geographic area of potential effects (APE) of the proposed project and assessing the potential effects of its undertakings on these historic properties. It has been determined by the SOI-qualified professionals that the project undertaking does not conform to Stipulation II.A (Project Review – Programmatic Allowances) of the Section 106 Programmatic Agreement (PA) among FEMA, SHPO and COR3, as amended (May 3, 2023).¹

Project Description (Undertaking)²

The Barranquitas Municipality, assisted by the Puerto Rico Department of Housing (Departamento de la Vivienda de Puerto Rico) (PRDOH) and the Puerto Rico 2017 Disaster Recovery, CDBG-DR Program – City Revitalization Program (Programa de Revitalización del Gobierno Federal) (City Rev) proposes the construction of a public parking facing PR-156, kilometer 16.3 (also known as Barceló Street). (See “Project Architectural Plans (90%), Barranquitas, Puerto Rico dated 22 February 2024.”) (See Figures 1 and 2.) At present, there is a parking area on a section of the site which occupies 16,061,199 square meters (172,881,307.2 square feet), equivalent to approximately 0.4086 acres. To increase the parking capacity (the present car park is in an informal lot open to the air), a two-level parking structure will be built. The new structure will be constructed of reinforced concrete and will feature solar panels to provide energy. It will have an access ramp connecting to the above-mentioned highway for cars to access the structure. The land upon which the building will be built is classified as Urban Soil and has a C-I (Intermediate Commercial) designation.

¹ Previous Section 106 NHPA Effect Determination Forms (EDFs), prepared by Dr Heidi J Dilan and Dr Maritza Torres Martínez, were reviewed by the Program on 19 January 2024, 18 September 2024, 5 October 2024, and 20 November 2024. On 7 January 2025, the General Manager (GM) revised the last version of the group of the Section 106 EDFs submitted and returned it to the Subrecipient, finding it: “incomplete” and “non-compliant with Program and Section 106 requirements.” (City Revitalization Program ICF, “Barranquitas 000988 – Enmienda al EDF – al de Sept 18 hoy Nov 18, 2024 – Estacionamiento Barranquitas” (MS: San Juan, Puerto Rico, e-mail from Ms Carmen-Marla López to Ms Liliana Silva and Ms Glorían Vélez, 7 January 2025). The present EDF, prepared by Historical Compliance Consulting (HCC) and ICF, is a new document based on new methodology, as well as research and interpretative activities.

² The project's description was provided by the designers to the SOI-Qualified Team.

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: Municipio de Barranquitas		
Project Name: Construcción de Nuevo Estacionamiento Público		Project ID: PR-CRP-000988

Excavation work will be needed for the following components: (i) “geopilotes”, (ii) footings, (iii) underground electrical system, (iv) draining pluvial system, and (v) drinking water system. (See Table 1.)

TABLE 1
COMPONENT, EXCAVATION AREA, DEPTH, AND VOLUME

COMPONENT	EXCAVATION AREA	DEPTH	VOLUME
“Geopilotes”	782.25 square feet (72.7 square meters)	30 feet (9.14 meters)	23,467.5 cubic feet (664.478 cubic meters)
Footings	1,429.91 square feet (435.83 square meters)	3.25 feet (0.99 meters)	4,647.21 cubic feet (431.47 cubic meters)
Underground electrical system	90 square feet (8.36 square meters)	4 feet (1.219 meters)	360 cubic feet (10.19 cubic meters)
Draining pluvial system	353 square feet (32.81 square meters)	2 feet 60 meters	706 cubic feet (19.99 cubic meters)
Drinking water system	7.92 square feet 0.736 square meters	1 foot 0.30 meters	7.92 cubic feet (.224 cubic meters)

The project construction staging area will be located within the project site.

Area of Potential Effects

As defined in 36 CFR §800.16(d), the 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 Estacionamiento Público de Barranquitas with an approximate area of 0.4086 acres). As mentioned, the construction staging area will be within the project area. The proposed undertaking will have no effect on the Barranquitas Traditional Urban Center (TUC). (See Figures 3 and 4.)

The Visual APE extends along the lots on each street surrounding the Estacionamiento Público de Barranquitas. On the north and the west residences and businesses are found; on the east there are commercial establishments; and on the south one finds mainly businesses. Most properties along the north side have visual contact with the project exclusively from their backyards. All these properties are located at a higher level. (See Table 2.) (See Photographs 1 to 21.)

TABLE 2
APROXIMATE DISTANCE FROM PROJECT AREA TO THE BORDER OF THE VISUAL APE

DIRECTION	APPROXIMATE DISTANCE
North	180 feet
East	120 feet
South	35 feet
West	225 feet

The proposed undertaking will have **no** effect on the properties forming the Visual APE. (See Figures 1 and 2.)

Historic Context

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: Municipio de Barranquitas		
Project Name: Construcción de Nuevo Estacionamiento Público		Project ID: PR-CRP-000988

PRE-CONTACT PERIOD

The earliest and most extensive archaeological investigation within the Barranquitas Municipality was undertaken by Dr Irving Rouse in 1938 when he recorded seven sites with ballcourts.³ Thirteen prehistoric archaeological sites (including the seven recorded by Dr Rouse) are recorded in the Institute of Puerto Rican Culture (IPRC) files for the Municipality. The Puerto Rico State Historic Preservation Office (PRSHPO) files list a total of eight prehistoric archaeological sites in the Municipality, which include six recorded by IPRC, one recorded both by IPRC and Dr Rouse, and one additional site recorded only by the PRSHPO. In sum, fourteen prehistoric sites have been recorded in the Municipality.

These sites represent three complex ceremonial/residential centers with large ball courts (Quebrada Grande/IPRC BR 7; Palo Hincado/SHPO 0100001/IPRC BR 1; and La Toje/IPRC BR 2), one ball court with an associated residential component and midden (Quebradillas I/SHPO BS0100002/IPRC BR 11), three prehistoric artifacts scatters that may have been small habitation sites (SHPO BS0100003/IPRC BR 12; SHPO BS0100004/IPRC BR 13; and SHPO BS0100007/IPRC BR 15), one cave with prehistoric petroglyphs (SHPO BR0100005/ IPRC BR 14), two multi component historic/prehistoric sites (SHPO BS0100006/IPRC BR 9 and BS0100008), and four ballcourts recorded by Dr Rouse (IPRC BR 3, IPRC BR 4, IPRC BR 5, IPRC BR 6).

The locations for the sites recorded in the PRSHPO files are georeferenced while the locations for the sites recorded by the IPRC are less certain. The locations for two of the sites recorded by Dr Rouse (La Toje and Quebrada Grande) are uncertain. However, Dr Rouse did record descriptions of the landforms where they were found.⁴ No locational information is available for IPRC sites BR 3 – BR 6. Of the 10 sites for which landform could be determined, eight were on level areas on ridges, while only one was on a terrace and one was in cave on a foot slope.

Temporally sensitive ceramic artifacts were recorded at nine of the sites recorded in the municipality and include Ostionoid, Chicoid, Elenoid, Santa Elena, Capá, and contact period ceramics. These findings suggest that prehistorically, Barranquitas was most intensively occupied during the period around AD 1000 to 1500. Prehistoric populations in Barranquitas appear to have favored broad level ridges, especially for the larger ceremonial/residential complexes.

HISTORIC PERIOD

In the traditional manner of most towns throughout the Puerto Rican Archipelago, the Municipality of Barranquitas owes its existence to a group of neighbors who banded together and presented a petition to the Spanish Government to secede from an established municipality, in this case Coamo. There was a standard reason given in most of these petitions: the residents could not attend religious services since there was no parish close to their place of residence. The excuse was a good one and worked dozens of times. First, the Spanish Government was responsible for assuring its citizens had access to religious services with relative ease. Second, no town independence could be obtained unless a region had achieved the standing of a parish. By asking for religious services, a parish could be established and then secession. Seldom mentioned were the real reasons, which included the desire to be free from the taxes of a particular municipality, as well as personal vendettas, among others.

Barranquitas was organized in a very mountainous region of Puerto Rico's Cordillera Central close to the Pidona River. A map probably dating to the 1880s evidences it had four "entrances/exits" aligned in the following directions: (i) Aibonito and Coamo; (ii) Barros; (iii) Sabana del Palmar (present day Comerío); and (iv) Cayey. At

³ Antonio Daubón Vidal, "Stages 1A-1B, Cultural Resources Survey for the Interamerican University (New Building Facilities) Barranquitas Honruras Ward, Barranquitas, Puerto Rico" (MS: San Juan, Puerto Rico, 1989), IPRC CAT/BR 89-01-04.

⁴ Marisol J Meléndez Maíz and Isabel Rivera Collazo, "Verification of the Location and Current Conditions of the Excavated Archaeological Sites by Irving Rouse 1936-1938," Volumes 1 and 2 (MS: San Juan, Puerto Rico, 2002).

present, the urban core and the rest of the Municipality are located south of Corozal and Naranjito, north of Coamo and Aibonito, west of Comerío and Cidra, and east of Orocovis. (See Image 1.)



Image 1
Barranquitas, Puerto Rico, c. 1880s. Sabana del Palmar was Comerío's original name.
NPS 9_88_3_SC_Ar_D_T_4_C_2_4

As was characteristic, at the time of the foundation, the plaza (present day Plaza Bicentenario Monseñor Miguel A. Mendoza) and the church (Iglesia San Antonio de Padua) shared the same lot. Although there was space surrounding the block, the streets are not yet formally built in historic maps. Forming a super block in the center of town, its shape was rectangular with the longest axis aligned east-west. (See Images 1 and 2.) The east-west arrangement is the result of the mandate that established the most important part of the church (the apse) needed to face the east and the rising sun. This arrangement guaranteed the church façade with the entrance (westwork) faced the plaza. It is known that the town square also served as an atrium on special occasions. The now traditional organization of four streets surrounding the plaza and the church is the result of transformations suffered during the 19th century. The same applies to the street separating the church from the plaza (present day Calle Padre Martínez).

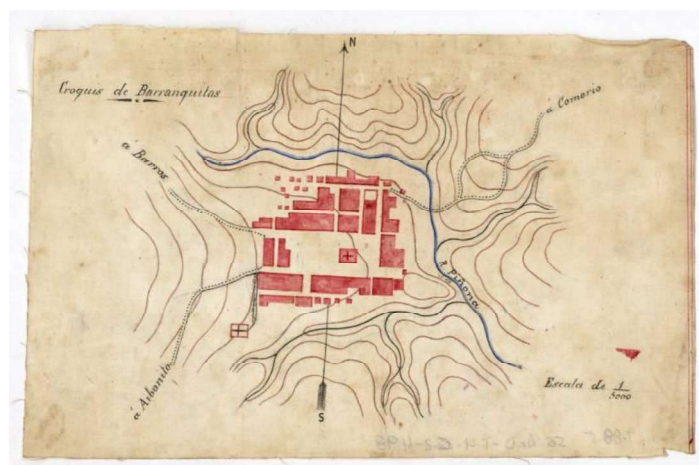


Image 2
Plan of Barranquitas, Puerto Rico, 1880s
NPS 9_88_5_SC_Ar_D_T_4_C_2_4

While blocks are distributed in an orthogonal grid, there is no regularity in terms of their morphology. Some blocks are square while others are rectangular. Still others have other shapes. At this time (1880s), the northern sector of

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: Municipio de Barranquitas		
Project Name: Construcción de Nuevo Estacionamiento Público		Project ID: PR-CRP-000988

the plaza included two streets running from east to west (present day Antonio R Barceló Street and Florida Street⁵) while the south only had one (present day PR- 162). (See Image 2.)

The name Barranquitas is a diminutive associated with the Spanish word *barranco* (ravine), a character-defining element of the region, which is in the Sierra de Cayey, part of the Cordillera Central. (See Images 1 and 2.) The name resonates in the area and the Municipality has a sector that is known as Barrio Barrancas. Barranquitas is sited south of Corozal and Naranjito, north of Coamo and Aibonito, west of Comerío and Cidra, and east of Orocovis. (See Image 3.) The setting forms a unique physical context that adds beauty to the town.



Image 3
Barranquitas, Puerto Rico, 1942
<https://www.loc.gov/item/2017798871/>

In 1800, there were around seventy neighbors residing in the region and approximately thirty lived in “*las lomas de Barranquitas*.”⁶ These residents entrusted Antonio Aponte Ramos to present the secession petition to the authorities on 3 April 1803. Formally submitted on 28 May 1804, Bishop Juan Alejo de Arizmendi (1760-1814) agreed to create the Barranquitas parish. Since during the same year Barranquitas got its first mayor, Antonio Berrios, this year can be considered the founding date of the Municipality. The town was established in four *cuerdas*⁷ donated by Sabina Colón, an area which had previously belonged to the Coamo Municipality. The formal declaration of Barranquitas as a municipality was enacted during the governorship of Governor General Ramón de Castro y Gutiérrez (1752-1812).

⁵ In the 1880s, Florida Street is depicted longer than it is at present.

⁶ Sonia Padilla Rodríguez, *Barranquitas: Notas para su Historia* (San Juan, Puerto Rico: Oficina Estatal de Preservación Histórica, 1984), 28. Translation: “in the Barranquitas hills.”

⁷ A *cuerda* is a unit of land measurement used in Puerto Rico. It equals approximately 3,930 square meters, 4,700 square yards or 0.971 acres.

Subrecipient: Municipio de Barranquitas

Project Name: Construcción de Nuevo Estacionamiento Público

Project ID: PR-CRP-000988



Image 4

Barranquitas town plaza (looking north), one of the principal streets, and church, 1910.
William H Armstrong, *Progressive Military Map of Puerto Rico*⁸

As traditional, the Plaza and the Catholic Church, dedicated to St Anthony of Padua, were designed to be the heart of the urban core. The first temple (1804-1809), made of wood and shingles, was destroyed by Hurricane Santa Ana in 1825. Its substitute, a brick building, was damaged on 13 September 1876 by Hurricane San Felipe. The third iteration had a zinc roof and is credited to Pepe Vázquez and his son Froilán Vázquez. It was destroyed by Hurricane San Felipe II in 1929. (See Image 4.) Although some mention the present building was inaugurated that same year, it can be dated to the first half of the 20th century, probably to the 1920s-1930s decades. Its style reflects the eclectic approach favored at the time by the American Catholic churches throughout the Puerto Rican Archipelago, a mixture of Medievalisms with a touch of the Mediterranean Revival aesthetics.⁹ (See Image 5.) During this period, ecclesiastical architecture played a colonizing role. Larger and sumptuous buildings quite different from the traditional Spanish temples throughout the Archipelago, were constructed to import American religious standards.



Image 5

Iglesia San Antonio de Padua, Barranquitas, Puerto Rico, 1941.
<https://www.loc.gov/item/2017797057/>

Nestled in the mountains, Barranquitas was a world of its own until modern times. In 1859 there were plans for a *seis metros y siete décimetros* wide road to be built to connect Aibonito and Barranquitas which would allow the

⁸ Lanny Thompson and María Dolores Luque (editors), *The Cartographic Journey of Lieutenant William H Armstrong Volume 2* (San Juan, Puerto Rico: Centro de Investigaciones Históricas, 2020), 739.

⁹ Arleen Pabón Charneco, *La arquitectura patrimonial puertorriqueña y sus estilos* (San Juan, Puerto Rico: Oficina Estatal de Conservación Histórica, 2010), 355-390.

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second town to connect to the Aibonito-Coamo road.¹⁰ It took decades to achieve this goal, a fact that limited the development of the Municipality.

In 1853, there were 55 wooden houses and 18 *bohíos*¹¹ throughout the Municipality. Residents were served by three shoe shops (*zapaterías*) and the same number of carpentry shops (*carpinterías*), one silversmith (*platería*), and one tailor (*sastrería*). By 1878, Manuel Úbeda y Delgado described that the town was formed of the plaza, five streets, and six alleys (*callejones*). He also noted the principal thoroughfares were Comercio and Real Streets. As per his recount, the following official buildings existed: (i) the church with a metal roof, although the building was constructed of wood; (ii) a cemetery encircled by a masonry wall; (iii) a two stories high town hall (*casa del ayuntamiento*) built in 1843; and (iv) the wood and shingle parochial house that belonged to the government. Additionally, there was a butcher shop made of wood and barracks for the Guardia Civil.¹² By the first decade of the 20th century, the town was still a relatively humble conglomerate of houses aligned along an orthogonal grid. (See Image 4 and Table 3.)

TABLE 3
BARRANQUITAS RESIDENTS' ETHNICITIES IN 1897

ETHNICITIES	NUMBER LIVING IN BARRANQUITAS
Puerto Ricans	7,761
Spanish Subjects (<i>Peninsulares</i>)	25
Canary Islanders	4
Total	7,790

According to these numbers provided by Cayetano Coll y Toste,¹³ the total population of the Municipality was 7,790. (See Table 3.) It is interesting to note Spaniards are divided into two groups: those coming from the Peninsula and the ones from the Canary Islands. The Puerto Rican group could be interpreted as a third category within the Spaniards.

At this time, architectural artifacts throughout the Municipality included: 176 houses, 5 warehouses, 2 sugar establishments, 4 coffee establishments, and 115 *bohíos*.¹⁴ There was one masonry building, one masonry and wood building, 193 wood buildings, and 136 straw and *yagüas* ones.

The list of businesses was quite extensive and included multiple commercial activities. (See Table 4.)

¹⁰ Spanish Government, Ministerio de Cultura, Portal de Archivos Españoles (PARES), "Se aprueba construcción carretera en jurisdicción de Aibonito," 1863-1865, ES.28079, AHN/16/ULTRAMAR, 357, Expediente 5, Access, <https://pares.mcu.es/ParesBusquedas20/catalogo/description/1319168?nm>

¹¹ Sonia Padilla Rodríguez, *Barranquitas: Notas para su Historia*, 32. The word *bohío* was used to describe the houses of the less affluent. They were usually similar to the Natives residences.

¹² Manuel Úbeda y Delgado, *Isla de Puerto Rico Estudio Histórico, Geográfico y Estadístico de la Misma* (San Juan, Puerto Rico: Establecimiento tip del Boletín, 1878), 228.

¹³ Cayetano Coll y Toste, *Reseña del estado social, económico e industrial de la isla de Puerto Rico al tomar posesión de ella los Estados Unidos* (San Juan, Puerto Rico: Imprenta de la "Correspondencia," 1899), 72-77, Access, <https://babel.hathitrust.org/cgi/pt?id=umn.31951p00132229c&seq=374>.

¹⁴ *Idem*. *Yagüa* buildings use the royal palm's (a palm tree species) thick, woody sheathing leaf as construction material.

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TABLE 4
BARRANQUITAS PROFESSIONS IN 1897

TYPE OF VENUE	NUMBER
Meat Stores	2
Pharmacies	1
Bakeries	4
Grocery Stores	4
Mixed Merchandise Stores	4
Inn/Taverns	11

Surprisingly, in the list detailing the educational level of the residents it is mentioned that there were four public schools. It is relevant to underscore the fact that the lack of a formal educational system made possible for private parties to establish "schools" of their own. That could be an explanation for the number of schools mentioned by Coll y Toste, although he clearly points out they were "public." (See Table 5.)

TABLE 5
EDUCATIONAL LEVEL OF BARRANQUITAS RESIDENTS IN 1899¹⁵

EDUCATIONAL LEVEL	PERCENT OF THE POPULATION
Percent of residents who could read and write	8.39%
Percent of residents who could read	1.12%
Percent of residents who could not read or write	90.49%
Total Population	100%

Despite its relative physical isolation, Barranquitas was home to distinguished writer and politician Don Luis Muñoz Rivera (1859-1910). (See Image 6.) His most relevant contribution to Puerto Rico was probably his son – also a writer and politician – Don Luis Muñoz Marín (1898-1990). Don Luis *filis* was the first elected governor of the Island, a position he held for four terms. He was founding member of the Partido Popular Democrático, one of the political forces throughout the Archipelago until a short time ago. Buried in Barranquitas next to his father and mother, his name is intimately connected to the Municipality. Clara Lair (Merced Negrón Muñoz) (1890-1973) was a poet and essayist who is considered a great influence on Postmodern and Feminist Movements within the Archipelago. She was also a native of Barranquitas.



¹⁵ *Idem.*

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Image 6
Luis Muñoz Rivera House (listed in the NRHP), Barranquitas, Puerto Rico¹⁶

Barranquitas is surrounded by mountains and hills that create an extremely picturesque setting. (See Image 7.) On one of the hills outside the PRSHPO'S TUC, although surrounded on three sides by it, is the site where the car parking structure is planned. The site is on the outskirts of the town.

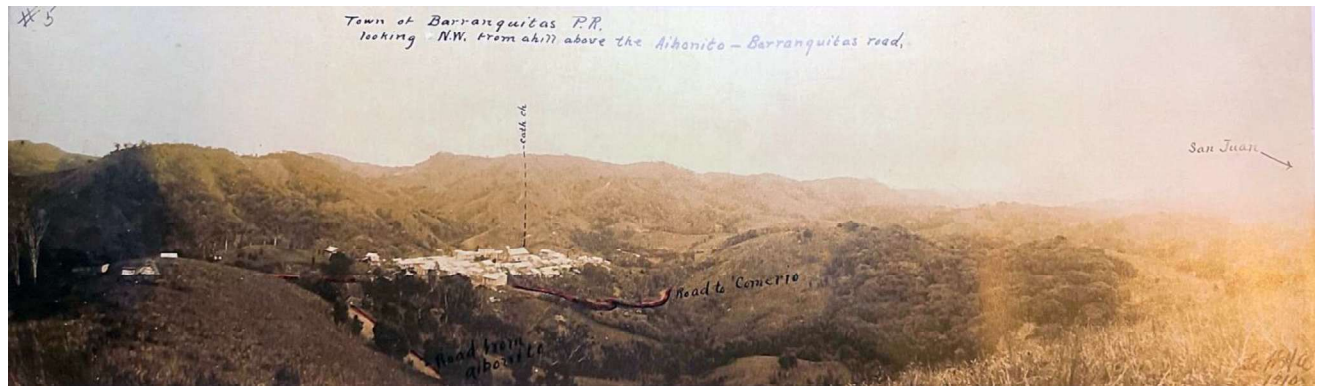


Image 7
General View of Barranquitas setting (looking towards the northwest), 1910.
William H Armstrong, *Progressive Military Map of Puerto Rico*¹⁷

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 there are no historic properties previously identified in the project area. The archaeological cultural resources survey reports and site survey forms, as well as the administrative project files, of both the PRSHPO and the IPRC were consulted. The PRSHPO and the IPRC files do not document any archaeological cultural resources within a quarter mile of the proposed project. Therefore, no map of the archaeological resources of the project area is included with this EDF form. The closest documented archaeological site is BS0100008, located approximately 0.38 miles southeast of the APE. This site is known as Honduras I and represents a multi-component prehistoric/historic occupation. The prehistoric component was represented by Chicoid and Capá style ceramics while the historic component was represented by materials from the 20th century.

A total of nine cultural resources survey reports (Phase 1A, 1B and Phase II) are documented in the PRSHPO and IPRC files within the 0.25 miles research radius around the APE. (See Figures 5 and 6.) (See Table 6.) These include eight Phase 1A/1B investigations (ICP/CAT BR 86-01-01; ICP/CAT BR 89-01-04; SHPO 06-12-90-05/ICP/CAT BR 91-01-07; ICP/CAT BR 91-01-08; SHPO 12-04-95-01/ ICP/CAT BR 95-02-02; SHPO 03-24-98-01/ ICP/CAT BR 98-02-07; SHPO 03-09-11-03; and ICP/CAT BR 06-04-01 and one Phase 1A investigation (SHPO: 06-20-19-03). Of these investigations,

¹⁶ The banner hanging on the house balustrade reads: "Luis Muñoz Rivera was born here." Access, https://www.google.com/search?sca_esv=e86fb0d398013f57&rlz=1C1JZEV_enUS929US929&q=casa+luis+munoiz+rivera,+barranquitas,+puerto+rico&udm=2&fbs=ABzOT_CWdhQLP1FcmU5B0fn3xuWpA-dk4wpBWOgsoR7DG5zJBki0xbyJIUgVJnlXKXyPv8i55c5HrZwki5zR2rxm-wqpSxxOn_3b-mCAH89Hc7vvpn2jrw6_ZTMnaSP5jrvyMBVPfaLXd7IXHUdpX6xWxy9cJXCwiX3W-a089fCDLz4q7RFHtDfDQinUQbRChqs9MSOo0ka72RHW65vJuB5-j00NeX_aNg&sa=X&ved=2ahUKewjHjFOC8YKMAxV5LtAFHfhKM_wQtKgLegQlFRAB&biw=1280&bih=551&dpr=1.5#vhid=8WAhh1ZNQljHIM&vssid=mosaic.

¹⁷ Lanny Thompson and María Dolores Luque (editors), *The Cartographic Journey of Lieutenant William H Armstrong* Volume 2, 739.

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only one (SHPO 03-24-98-01/ ICP/CAT BR 98-02-07) yielded positive results, represented by pre-Hispanic ceramics identified at site SHPO BS0100004/IPRC BR 13, located approximately 3.2 miles northeast of the APE.

Four of these investigations (ICP/CAT BR 86-01-01; ICP/CAT BR 91-01-08; SHPO 12-04-95-01/ICP/CAT BR 95-02-02; and SHPO 03-24-98-01/ICP/CAT BR 98-02-07) were undertaken pursuant to improvements to the Barranquitas Municipality potable water/wastewater system and represent the most extensive archaeological investigations conducted within the research radius. The remaining five investigations within the research radius represent smaller projects undertaken pursuant to building construction (ICP/CAT BR 89-01-04; SHPO 06-12-90-05/ICP/CAT BR 91-01-07; SHPO 03-09-11-03; ICP/CAT BR 06-04-01) and evaluation of landslide and road damage (SHPO 06-20-19-03).

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TABLE 6
PRSHPO AND IPRC CULTURAL RESOURCES SURVEYS INCLUDING PROPERTIES
WITHIN A QUARTER MILE OF THE VISUAL APE

SHPO/IPRC NUMBER	SURVEY DATE	SURVEY NAME	AUTHOR	AREA ¹⁸	RESULTS	DIRECTION AND DISTANCE FROM APE TO SURVEY AREA
IPRC: ICP/CAT BR 86-01-01	October 1986	"Archaeological Study, Stages 1A-1B, Barranquitas Sewer Treatment Plant, Barranquitas, Puerto Rico"	Miguel Rodríguez	4 acres	Negative	0.15-miles/northwest
IPRC: ICP/CAT BR 89-01-04	November 1989	"Stages 1A-1B Cultural Resources Survey for The Interamerican University (New Building Facilities) Barranquitas Regional College, Honduras Ward, Barranquitas, Puerto Rico"	Antonio Daubón Vidal	1.23 acres	Negative	0.05-miles/southeast
SHPO: 06-12-90-05 IPRC: ICP/CAT BR 91-01-07	July 1991	"Cultural Resources Survey Stages 1A-1B Project: Casa Barranquitas (Elderly Housing 1003, Inc.), Barranquitas, Puerto Rico"	Iván E Méndez Bonilla	1.34 acres	Negative	0.16-miles/east
IPRC: ICP/CAT BR 91-01-08	April 1991	"Estudio Recursos Culturales Fases 1A-1B Proyecto Planta de Tratamientos de Barranquitas/ Entrada de Acceso y Línea de Presión de 10 Pulgadas, Barranquitas, Puerto Rico (Versión en Español)"	Antonio Daubón Vidal	2.3 acres	Negative	0.10-miles/east
SHPO: 12-04-95-01 IPRC: ICP/CAT BR 95-02-02	December 1995	"Investigación Arqueológica Fase 1a-1b Proyecto De Eliminación Estación de Bombas, La Vega y El Parque, Barranquitas, Puerto Rico"	Marisol Rodríguez Miranda	2.5 km long	Negative	0.05-miles/north
SHPO: 03-24-98-01 IPRC: ICP/CAT BR 98-02-07	March 1998	"Evaluación Arqueológica Fase 1A-1B Proyecto Mejoras al Sistema de Acueductos para los Barrios Quebrada Grande, Quebradillas y Honduras, Barranquitas, Puerto Rico"	Jaqueline López Meléndez	No data	Positive (archaeological deposit identified 2.9-miles/north west of APE)	0.09-miles/northeast

¹⁸

Measurements have been converted to the Imperial System by the SOI qualified professionals.

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SHPO: 03-09-11-03	July 2012	"Instalación de Techo en Acero Estructural y Reparaciones Menores a Facilidades Existentes en Cancha de Baloncesto, Calle Melitón Pereles, Barrio Pueblo, Barranquitas, Puerto Rico, Estudio de Identificación de Recursos Culturales Fase I"	Fernando Alvarado Muñoz	0.25-acres (approx. from sketch in report)	Negative	0.23-miles/northwest
IPRC: ICP/CAT BR 06-04-01	April 2006	"Evaluación Arqueológica Fase IA-IB especial Melitón Pereles del Municipio de Barranquitas, Puerto Rico"	Osvaldo Torres	1.82-acres	Negative	0.19-miles/west, northwest
SHPO: 06-20-19-03	November 2019	"Cultural Resources Evaluation Landslide and Road Damage Evaluation and Repair Recommendation/ Project ID RPE1399544, ER-9999(322) Sites ER-HWY 408 and ER-HWY 409 Barranquitas, Puerto Rico (Group C) AC-813544)"	Rosa A Martínez Montero	2.4-acres	Negative	0.23-miles/southeast

PHYSIOGRAPHIC REGION AND SOILS

Barranquitas is in the Puerto Rico central mountains region and is defined by deeply incised uplands with steep side slopes drained by the Barranquitas, Caliente, Grande de Manatí, and Canabón rivers and their many tributaries.

The direct APE occupies a foot slope above the Barranquitas River located approximately .04 miles to the north. The elevation within the APE ranges from approximately 580 meters (m) above mean sea level (amsl) in the southeast corner of the direct APE to approximately 589 m amsl (1932.41 feet) at its northwestern corner.

The surface geology within the APE is defined by the Cenomanian-lower Albian-aged Robles Formation, which is composed largely of volcanoclastic sandstone and siltstone with lava and some limestone, conglomerate, and breccia. Two soil map units have been identified¹⁹ within the APE and include: Maricao clay, 20 to 60 percent slopes (MoF) and Urban land-Vega Alta complex, 2 to 12 percent slopes (Uv). Areas mapped as MoF are 80 percent Maricao, 10 percent Cuchillas, and 10 percent Agueybaná. These soil series are well drained, clay dominated, and form on ridges, the shoulders and summits of ridges, the shoulders and summits of mountains, and backslopes. (See Figure 7.)

Almost the entirety of the direct APE is mapped as Uv. Areas mapped as Uv are 60 percent Urban land, 30 percent Vega Alta, 5 percent Almirante, and 5 percent Humatas series soils. No data is available for Urban land. The Vega Alta series is clay dominated and forms on uplands and terraces. The Almirante series forms in valleys in clayey sediments of mixed origin. The Humatas series forms on side slopes and ridges of strongly dissected uplands.

The absence of mapped alluvial soils within the APE, along with its slope suggests it did not aggrade significantly since human populations first began to occupy Puerto Rico. For these reasons, the APE is unlikely to harbor deeply buried archaeological deposits with research potential.

¹⁹ Soil Survey Geographical Database, Natural Resources Conservation Service, United States Department of Agriculture. "Geographic Database for Barranquitas, Puerto Rico" (MS: San Juan, Puerto Rico), Accessed April 2025.

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DETERMINATION ELIGIBILITY OF ARCHAEOLOGICAL PROPERTIES WITHIN THE PROJECT'S APE

The archaeological potential of the APE is thought to be negligible for buried prehistoric and historic deposits that possess research potential. No cultural resources were identified within the 0.25-miles research radius around the APE by any of the nine previous archaeological investigations conducted within the research radius. Only one of these (SHPO 03-24-98-01/ ICP/CAT BR 98-02-07) was culturally positive. This investigation identified an archaeological site well beyond the limits of the research radius.

The direct effects APE has been impacted by previous construction that included the construction and demolition of five buildings discernible on aerial imagery from 1956 as well as the construction of the now extant parking lot. (See Figure 8.) These processes presumably impacted any potential shallowly buried cultural deposits within the APE.

As noted above, the APE is underlain by an ancient geologic unit deposited long before the arrival of human populations to Puerto Rico. Furthermore, the soils present on site did not form in alluvial deposits and are unlikely to have aggraded significantly since that arrival. The slope within the APE, which is approximately 20% north to south, further suggests it is on a non-aggrading landform.

Although the paucity of previous archaeological investigation within the municipality limits settlement pattern analysis to general statements, some patterns appear robust. The overwhelming majority of the prehistoric sites identified in Barranquitas were recorded on ridges above deeply incised waterways. This pattern holds for all of the sites thought to represent ceremonial and/or residential occupations. The APE occupies a foot slope, a landform type that does not appear to have been favored by the prehistoric populations in the municipality.

For the above reasons, it is our conclusion that there are no archaeological properties eligible for inclusion in the NRHP within the project's APE.

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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 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 adjacent to the Barranquitas TUC / Historic District, eligible for inclusion in the NRHP as a historic district. (See Figures 3 and 4.)

NATIONAL REGISTER OF HISTORIC PLACES LISTED BARRANQUITAS PROPERTIES

The Barranquitas Municipality has three properties included in the NRHP. Two of these are buildings and the third one is an archaeological site. (See Table 7.)

TABLE 7
BARRANQUITAS PROPERTIES LISTED IN THE NATIONAL REGISTER OF HISTORIC PLACES

NAME AND ADDRESS	INCLUSION DATE	NRHP ID NUMBER	CATEGORY	CRITERION
Casa Natal de Luis Muñoz Rivera Muñoz Rivera and Manuel Torres Streets	4 September 1984	84003139	Building (House)	N/A ²⁰
Batey Palo Hincado Neighboring Barranquitas Town	2 September 1999	99001021	Site (Archaeological)	D
<i>El Cortijo</i> PR-162 Km 18.5	11 September 2018	100002934	Building (House)	C

The only property within the quarter-mile area and the TUC is the Casa Natal de Luis Muñoz Rivera. According to professional sources and the PRSHPO catalog information, the Palo Hincado Batey has been adversely and irreversibly impacted. *El Cortijo*, in turn, is outside the TUC and the quarter-mile area.

None of the NRHP listed Barranquitas properties, even if sited within the TUC as is the case of the Casa Natal Luis Muñoz Rivera, will be affected by the proposed project. (See Figure 9.)

PUERTO RICO PLANNING BOARD

The Puerto Rico Planning Board (PRPB) has a list of properties considered and declared "historic" by means of the organism's resolutions. In most cases, the list is comparable to the NRHP one.²¹ (See Table 8.)

²⁰ This nomination, dated to 1984, includes no categorization regarding significance criteria.

²¹ Junta de Planificación, Gobierno de Puerto Rico, San Juan, Puerto Rico, "Registro Oficial de Sitios y Zonas Históricas designados por la Junta de Planificación de Puerto Rico Revisado 7 de diciembre de 2022" (MS: San Juan, Puerto Rico, 2022), Access: <https://jp.pr.gov/wp-content/uploads/2022/12/REGISTRO-OFICIAL-DE-SITIOS-Y-ZONAS-HISTORICAS-DESIGNADAS-Rev.-DIC-2022.pdf>.

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TABLE 8
BARRANQUITAS HISTORIC PROPERTIES
(AS PER THE PUERTO RICO PLANNING BOARD)

NAME	CONSTRUCTION DATE	RESOLUTION NUMBER	DATE OF DESIGNATION	DATE OF NOTIFICATION
Casa Natal Luis Muñoz Rivera	2 nd half 19 th century	2000-(RC)-22-JP-SH	15 March 2001	3 April 2001
<i>El Cortijo</i>	1 st 20 th century	2003-41-01-JP-SH	21 October 2003	2 December 2003

The PRPB list does not include any archaeological sites. As mentioned, the *El Cortijo* is outside the TUC and the quarter-mile area.

None of the properties listed by the PRPB will be affected. The Casa Natal Luis Muñoz Rivera will **not** be affected by the project.

NATIONAL REGISTER OF HISTORIC PLACES ELIGIBLE PROPERTIES

To interpret the architectural properties eligible for inclusion in the NRHP, archival research activities were undertaken. Additionally, visits to Barranquitas were carried out to study the site where the car park structure will be constructed. The visit included photographic documentation of all the properties forming the Visual APE. The following studies were also interpreted and reviewed.

1. Puerto Rico State Historic Preservation Office, San Juan, Puerto Rico, "Proyecto de reconocimiento de inventario de centros urbanos de los 78 municipios de Puerto Rico" (MS: San Juan, Puerto Rico, 2020-In Progress).

In this inventory, eight Barranquitas architectural properties appear as eligible for inclusion in the NRHP. (See Table 9.)

TABLE 9
BARRANQUITAS NRHP ELIGIBLE PROPERTIES
(AS PER THE PRSHPO 2020 IN-PROGRESS INVENTORY)

NAME	APPROXIMATE DATE	CATEGORY	NRHP CRITERIA
Alcaldía	1 st half 20 th century	Building (Town Hall)	A and C
Panteón Familia Berríos Berdecía*	1 st half 20 th century	Building (Pantheon)	C
Mausoleo de Muñoz Rivera	1 st half 20 th century	Building (Pantheon)	B and C
Cementerio Municipal La Vega*	1 st half 19 th century	Site (Cemetery)	C
Escuela Cástulo Rodríguez Torres ²²	1 st half 20 th century	Building (School)	C
Escuela Eduardo Georgetti	1 st half 20 th century	Building (School)	C
Parroquia [sic] San Antonio de Padua ²³	c 1933	Building (Church)	A and C
Plaza (Luis Muñoz Rivera)	c 1880	Site (Plaza)	A and C
Museo Joaquín de Rojas	c 1925-1930	Building (House)	C
Residencial Villa Universitaria	c 1963	District	C

All properties inventoried as significant by the PRSHPO, except the Cementerio Municipal La Vega and the Mausoleo de Muñoz Rivera, are within the quarter mile area. The Residencial Villa Universitaria is part of

²² At present, the name of the school is Escuela Petroamérica Pagán.

²³ The Church of San Antonio de Padua in Barranquitas was designed by architect Eduardo Porrata Doria (1890-1971).

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Barranquitas TUC even if physically separated from the older section of the urban core. Properties marked with an asterisk (*) in Table 9 are outside the quarter mile area of the project.

None of the properties listed in Table 9 will be impacted by the proposed project.

INSTITUTE OF PUERTO RICAN CULTURE

1. Institute of Puerto Rican Culture, Patrimonio Edificado, San Juan, Puerto Rico, "Inventario de Monumentos de Puerto Rico" (MS: San Juan, Puerto Rico, 1960s).²⁴

The inventory includes two properties: the Town Plaza and the Luis Muñoz Rivera House.²⁵ As mentioned, **neither** of these two properties will be impacted by the proposed project.

2. Institute of Puerto Rican Culture, Patrimonio Edificado, San Juan, Puerto Rico, "Inventario General de Sitios y Objetos de Interés Arqueológico, Histórico y Artístico" (MS: San Juan, Puerto Rico, 1977).

Listing properties and objects of archaeological, historic and artistic "interest," the inventory includes the following three Barranquitas Pre-contact properties:

- (i) Cave in the Maná Sector, Barrio Barrancas, Barranquitas;
- (ii) Palo Hincado on PR-156, Barranquitas where a Native settlement which included a *batey* once existed;
- (iii) Hoyo Hondo, Barrio Helecho, Barranquitas where a *cemí* and other artifacts were found.

None of the above-mentioned properties will be impacted by the proposed project.

HISTORIC AMERICAN BUILDING SURVEY (HAER) INVENTORY

1. HAER, "Puentes de Barranquitas" (MS: Río Piedras, Puerto Rico, 1977), Pablo López and William Rodríguez. Three bridges are included in this inventory.

- (i) Puente Usabón (Bridge Number 358), PR-162 Kilometer 5.6, a steel truss bridge constructed in 1908;
- (ii) Puente Barranquitas (Number 338), PR-156 Kilometer 16.6, I-beam bridge dating to 1908;
- (iii) Puente Capitán Whellar, Capitán Whellar Street, a brick structure built by American occupation forces in 1898. The inventory form establishes it is: "[T]he only US Army built bridge built by occupation forces still standing."

None of the bridges listed in the HAER inventory will be impacted by the proposed project.

DETERMINATION OF ELIGIBILITY OF THE ESTACIONAMIENTO PÚBLICO DE BARRANQUITAS AND ITS VISUAL APE

According to the National Park Service (NPS), eligibility to the NRHP is determined by several characteristics: "The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association . . ." To be eligible, a property must also be associated to an important historic context by meeting at least one of four criteria:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. That are associated with the lives of persons significant in our past; or

²⁴ This is an approximate date since the inventory sheets do not include the date when they were prepared. Since the IPRC was founded during the mid-1950s, this is probably one of the first inventories made by the institution. The cars in the photos seem to belong to this period. Since it has not been updated, the information in it is almost eighty years old.

²⁵ Evidence of its historic (more than half a century old) and now abandoned inventory methodology is the description of the second property's architectural style as: *criollo residencial pueblerino* (Creole residential provincial [sic]).

- C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That have yielded, or may be likely to yield, information important in prehistory or history.²⁶

Additionally, although there may be exceptions to this rule, a property must be at least 50 years old to merit inclusion in the NRHP.

The Estacionamiento Público de Barranquitas

A careful analysis of the Estacionamiento Público de Barranquitas evidences neither the sector nor the open parking at present is a NRHP eligible property. While the low hill has existed for eons and was one of the exits / entrances to the town there are numerous constructions, some of them date to approximately the 1920s. At present, the site is part of the urban setting, albeit outside the present day Barranquitas TUC.

Historical aerial photos and visual documentation suggest the site now used as an open-air car parking has maintained a defined spatial presence despite the open nature of the area – formed of several lots owned by the Municipality – since it frames one of the exits / entrances of the town. However, the development of the area and the large number of constructed buildings confirm the fact it is not eligible for inclusion in the NRHP. Neither is the open area (or site) used for parking at the present time. (See Figures 8 and 10.)

The Visual APE

The Visual APE includes twenty properties surrounding the Estacionamiento Público de Barranquitas. Image 7 depicts the site and the surrounding streets, the Visual APE properties (lots in gray and numbered with red circles), and the Visual APE line of demarcation (green). Five properties are located within the Barranquitas TUC. Twelve out of twenty properties surrounding the Estacionamiento Público de Barranquitas date to the second half of the 20th century. None are individually eligible for inclusion in the NRHP. However, there are four residential properties that are individually eligible for inclusion in the NRHP. (See Photographs 1–20 in Table 11.)



Image 7
Project Area and Direct APE (blue) and Visual APE Properties (red dots with white numbers).
(The green line represents the limit of the Visual APE.
The staging area is within the Direct APE.)

²⁶ National Park Service, "National Register Bulletin How to Apply the National Register Criteria for Evaluation," pp 2; 12-24, Access: https://www.nps.gov/subjects/nationalregister/upload/NRB-15_web508.pdf.

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A summarized interpretation of the twenty properties which form the Visual APE of the project is presented in Table 10.

TABLE 10
SUMMARY OF THE PROPERTIES WITHIN THE APE

TYPE	NUMBER
Eligible Properties	4
Not Eligible Properties	15
N/A	1
Contributing Properties	3 ²⁷
Not Contributing Properties	3

As shown in Table 10, 19 out of 20 properties form the Visual APE of the project. Of these, only 5% are eligible for inclusion in the NRHP. Thirteen of 15 properties outside the Barranquitas TUC are considered not eligible for inclusion in the NRHP.

Table 11 includes all properties forming the Visual APE. The significance, category and NRHP eligibility criteria of each one are interpreted as per this organism's guidelines. The Centro de Recaudación de Ingresos Municipales (CRIM Cadaster)²⁸ identification numbers and addresses are also included, as well as construction dates.

²⁷ Fifteen properties are outside the TUC. The Program recommends the property located at 54 Barceló Street (247-092-39-17 PN), (building: house) be included as contributing to the TUC.

²⁸ The Centro de Recaudación de Ingresos Municipales' (CRIM) numbering and data are infamous for its errors and inconsistencies. Numbers of blocks and, at times, *parcelas* (lots) are not in any special order and different lots within a block may share the same cadaster number. HCC scrutinized inconsistencies in varied ways, including contrasting what was found in the field with aerial photographs. Despite its many shortcomings, CRIM numbers are used to identify properties because they are the Government of Puerto Rico's official identification for the island's real estate property.

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 TABLE 11
 VISUAL APE

ID NUMBER	1	
CADASTER NUMBER	247-092-020-10-901 ²⁹	
DATE	2 nd half 20 th century	
ADDRESS	Barceló Street (PR-156)	
NRHP STATUS		
Listed		
Eligible		
Not Eligible	X	
Contributing		
Not Contributing		
CATEGORY	Building (Cafeteria)	
CRITERIA	N/A	
ID NUMBER	2	
CADASTER NUMBER	247-092-020-08 PN / 247-092-020-09 PN ³⁰	
DATE	2 nd half 20 th century	
ADDRESS	Barceló Street (PR-156)	
NRHP STATUS		
Listed		
Eligible		
Not Eligible	X	
Contributing		
Not Contributing		
CATEGORY	Building (Store)	
CRITERIA	N/A	
ID NUMBER	3	
CADASTER NUMBER	273-002-043-05-000	
DATE	2 nd half 20 th century	
ADDRESS	Barceló Street (PR-156)	
NRHP STATUS		
Listed		
Eligible		
Not Eligible	X	
Contributing		
Not Contributing		
CATEGORY	Building (Business)	
CRITERIA	N/A	

²⁹ A section of the lot is being used as parking at present shares this cadaster number.

³⁰ The letters "PN" after a cadaster number refers to the Plot Number (Número de parcela) provided by the Centro de Recaudación de Ingresos Municipales (CRIM).

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ID NUMBER	4	
CADASTER NUMBER	273-002-056-03-000	
DATE	2nd half 20th century	
ADDRESS	Villa Universitaria Street (PR-719)	
NRHP STATUS		
Listed		
Eligible		
Not Eligible	X	
Contributing		
Not Contributing		
CATEGORY	Building (House)	
CRITERIA	N/A	
ID NUMBER	5	
CADASTER NUMBER	273-002-043-04-000	
DATE	2nd half 20th century	
ADDRESS	Barceló Street (PR-156)	
NRHP STATUS		
Listed		
Eligible		
Not Eligible	X	
Contributing		
Not Contributing		
CATEGORY	Building (Business)	
CRITERIA	N/A	
ID NUMBER	6 ³¹	
CADASTER NUMBER	273-002-056-04 PN	
DATE	N/A	
ADDRESS	Barceló Street (PR-156)	
NRHP STATUS	N/A	
Listed		
Eligible		
Not Eligible		
Contributing		
Not Contributing		
CATEGORY		
CRITERIA	N/A	

³¹ This is the back side of a property, the only section included in the Visual APE. Entrance to the property is along PR-719.

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ID NUMBER	7
CADASTER NUMBER	273-002-039-14 PN / 273-001-039-13 PN / 273-001-039-14 PN / 247-092-039-15 PN
DATE	2 nd half 20 th century
ADDRESS	Barceló Street (PR-156)
NRHP STATUS	
Listed	
Eligible	
Not Eligible	X
Contributing	
Not Contributing	
CATEGORY	Building (Gas Station)
CRITERIA	N/A



ID NUMBER	8
CADASTER NUMBER	247-091-042-20-000
DATE	1 st half 20 th century
ADDRESS	Barceló Street (PR-156)
NRHP STATUS	
Listed	
Eligible	X
Not Eligible	
Contributing	
Not Contributing	
CATEGORY	Building (House)
CRITERIA	C



ID NUMBER	9
CADASTER NUMBER	273-002-039-14 PN
DATE	1 st half 21 st century
ADDRESS	Barceló Street (PR-156)
NRHP STATUS	
Listed	
Eligible	
Not Eligible	X
Contributing	
Not Contributing	
CATEGORY	Structure (Shed)
CRITERIA	N/A



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ID NUMBER	10	
CADASTER NUMBER	247-092-039-30-000	
DATE	2 nd half 20 th century	
ADDRESS	Barceló Street (PR-156)	
NRHP STATUS		
Listed		
Eligible		
Not Eligible	X	
Contributing		
Not Contributing		
CATEGORY	Building (Business)	
CRITERIA	N/A	
ID NUMBER	11	
CADASTER NUMBER	247-092-039-16-001	
DATE	2 nd half 20 th century	
ADDRESS	Barceló Street (PR-156)	
NRHP STATUS		
Listed		
Eligible		
Not Eligible	X	
Contributing		
Not Contributing		
CATEGORY	Building (Business)	
CRITERIA	N/A	
ID NUMBER	12	
CADASTER NUMBER	247-092-039-28-000 ³²	
DATE	2 nd half 20 th century	
ADDRESS	Barceló Street (PR-156)	
NRHP STATUS		
Listed		
Eligible		
Not Eligible	X	
Contributing		
Not Contributing		
CATEGORY	Building (House)	
CRITERIA	N/A	

³²

Only the backyard of this property is part of the Visual APE.

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ID NUMBER	13	
CADASTER NUMBER	247-092-039-17 PN ³³	
DATE	1 st half 20 th century	
ADDRESS	54 Barceló Street (PR-156)	
NRHP STATUS		
Listed		
Eligible	X	
Not Eligible		
Contributing	X ³⁴	
Not Contributing		
CATEGORY	Building (House)	
CRITERIA	C	
ID NUMBER	14	
CADASTER NUMBER	247-092-039-18-001	
DATE	N/A	
ADDRESS	Barceló Street (PR-156)	
NRHP STATUS		
Listed		
Eligible		
Not Eligible	X	
Contributing		
Not Contributing		
CATEGORY	Site (Parking)	
CRITERIA	N/A	
ID NUMBER	15	
CADASTER NUMBER	247-092-039-19-001	
DATE	2 nd half 20 th century	
ADDRESS	Barceló Street (PR-156)	
NRHP STATUS		
Listed		
Eligible		
Not Eligible	X	
Contributing		
Not Contributing	X	
CATEGORY	Building (Business)	
CRITERIA	N/A	

³³ Only the backyard of this property is part of the Visual APE.

³⁴ Even though this property is outside the PRSHPO TUC, the Program respectfully suggests it be included as contributing.

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ID NUMBER	16	
CADASTER NUMBER	247-092-039-24-001 ³⁵	
DATE	Mid 20 th century	
ADDRESS	Padre Dávila Street	
NRHP STATUS		
Listed		
Eligible		
Not Eligible	X	
Contributing		
Not Contributing	X	
CATEGORY	Building (House)	
CRITERIA	N/A	
ID NUMBER	17	
CADASTER NUMBER	247-092-039-29-001 ³⁶	
DATE	1 st half 20 th century	
ADDRESS	Padre Dávila Street	
NRHP STATUS		
Listed		
Eligible	X	
Not Eligible		
Contributing	X	
Not Contributing		
CATEGORY	Building (House)	
CRITERIA	C	
ID NUMBER	18	
CADASTER NUMBER	247-092-039-27-001 ³⁷	
DATE	1 st half 20 th century	
ADDRESS	6 Padre Dávila Street	
NRHP STATUS		
Listed		
Eligible	X	
Not Eligible		
Contributing	X	
Not Contributing		
CATEGORY	Building (House)	
CRITERIA	C	

³⁵ Only the backyard of this property is part of the Visual APE.

³⁶ Only the backyard of this property is part of the Visual APE.

³⁷ Only the backyard of this property is part of the Visual APE.

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ID NUMBER	19	
CADASTER NUMBER	247-092-039-20-001 ³⁸	
DATE	2 nd half 20 th century	
ADDRESS	Padre Dávila Street	
NRHP STATUS		
Listed		
Eligible		
Not Eligible	X	
Contributing		
Not Contributing	X	
CATEGORY	Building (House)	
CRITERIA	N/A	
ID NUMBER	20	
CADASTER NUMBER	247-092-039-21-001 ³⁹	
DATE	2 nd half 20 th century	
ADDRESS	Padre Dávila Street	
NRHP STATUS		
Listed		
Eligible		
Not Eligible	X	
Contributing		
Not Contributing	X	
CATEGORY	Building (House)	
CRITERIA	N/A	

³⁸ Only the backyard of this property is part of the Visual APE.

³⁹ Only the backyard of this property is part of the Visual APE.

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Determination

The following historic properties have been identified within the APE:

- Direct Effect

Archaeology

The APE is thought to possess negligible archaeological potential. The APE is on a non-aggrading landform and unlikely to harbor deeply buried archaeological deposits. The APE has been impacted by previous construction and demolition and is therefore unlikely to harbor any surface or shallowly buried archaeological deposits. Additionally, the APE occupies a low slope element, a landform type that does not appear to have been favored by prehistoric populations. For these reasons, it is the Program's conclusion that the project as proposed will have no effect on historic archaeological properties.

Architecture

A small, picturesque mountain town like Barranquitas presents a unique challenge regarding the preservation of its character-defining features which need to include its landscape. Three issues intersected regarding this project. In the first place, while the project is outside the Barranquitas TUC, it is adjacent and surrounded by it on three sides. The second consideration has to do with the project's typology and morphology, which are at odds with any historic center. Thirdly, the project is to be constructed on the lowest part of a hill which frames one of the entrances/exits of the town. At present, there is an informal open parking area on the part of the hill where the parking structure will be constructed but it still retains some verdant sectors.

The Program has carefully studied the adjacency of the proposed parking to Barranquitas' TUC borders, analyzing the site as per the "Principles and Objectives" section of the ICOMOS "Charter for the Conservation of Historic Towns and Urban Areas" (also known as the Washington Charter, 1987), given the fact the USA is a signatory member. In the above-mentioned section, the following historic towns and urban areas character-defining components to be preserved are listed:

- Urban patterns as defined by lots and streets;
- Relationships between buildings and green and open spaces;
- The formal appearance, interior and exterior, of buildings as defined by scale, size, style, construction, materials, color and decoration;
- The relationship between the town or urban area and its surrounding setting, both natural and man-made; and
- The various functions that the town or urban area has acquired over time.⁴⁰

The Charter clearly establishes that "[a]ny threat to these qualities would compromise the authenticity of the historic town or urban area."

While it would be an adverse effect to construct a parking structure within the TUC of any Puerto Rican town, the project is proposed for a lot that is outside although adjacent. It is a given urban cores in general need to adapt to modern transformations by – at times – including new architectural typologies. These insertions, however, need to be compatible with the character of, in this case, the urban area founded during the 19th century. A parking structure will never be compatible to the character of Puerto Rican traditional urban cores.

While the proposed project will create a "super block"⁴¹ structure next to a traditional layout of one family residential lots, at present, part of the lot is used for the same function. Complicating the issue is the fact that a parking structure – by definition – is a long one characterized by a dramatic scale (when compared to the nearby

⁴⁰ ICOMOS, "Charter for the Conservation of Historic Towns and Urban Areas" (MS: Washington DC, 1987).

⁴¹ Use of the term "superblock" here refers to Modernism's approach of creating larger than traditional urban blocks, needed for some of the new architectural typologies (i.e. skyscraper) invented at the time.

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buildings). However, the buildings facing Barceló Street adjacent to where the structure will be constructed have lots, covered with greenery, which may help camouflage the parking. The project would **not** be visible from the historic core section of the Barranquitas TUC.

The dilemma presented by this project would have been solved if a clearer mandate and/or regulations existed regarding the administration of TUCs. For example, in most historic cores around the world, TUCs are surrounded by a transitional area that may not allow for structures such as a parking. However, since there is no transitional area and the parking is clearly outside the TUC the Program considers no historic properties will be affected.

Based on the results of our historic property identification efforts, the Program has determined that at present project actions will not affect the historic properties that compose the Direct APE.

- Indirect Effect

As previously stated, there are four properties eligible for inclusion in the NRHP within the Visual APE. All are residences that date to the first half of the 20th century. Their addresses are:

- Barceló Street (247-091-042-20-000),
- 54 Barceló Street (247-092-39-17 PN),
- Padre Dávila Street (247-092-039-29-001, and
- 6 Padre Dávila Street (247-092-039-027-001).

The project will not cause any changes to the boundaries, setting, location, materials, workmanship, feeling, design, or association of the four eligible historic properties. Additionally, the viewshed will not be altered in any way. Furthermore, the project will not introduce any audible or atmospheric elements to these historic properties. (See Figures 1 and 2; and Photographs 1 to 21.)

The Program has determined that the proposed project actions will not affect the historic properties within the Visual Area of Potential Effects (APE). However, due to the proximity of the house located at 54 Barceló Street (247-092-39-17 PN), which sits on a lot immediately adjacent to the north side of the undertaking, it is recommended that the property be thoroughly documented through photographs prior to the start of construction. Additionally, to safeguard the property during construction activities, the installation of fencing or clear signage is advised to deter trespassing and vandalism. It is also recommended that the project incorporate an area with mature trees to serve as a natural buffer or visual screen between the proposed parking area and neighboring properties, helping to minimize visual impacts and enhance compatibility with the surrounding context.

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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

Recommendations: While the municipality does not own the adjacent properties, to the extent feasible, we recommend the following: The property at 54 Barceló Street (247-092-39-17 PN) should be thoroughly photographed before construction begins. To prevent trespassing or vandalism, fencing or clear signage is recommended. Additionally, preserving an area with mature trees as a natural buffer between the proposed parking area and neighboring properties is advised to reduce visual impact and improve compatibility with the surrounding environment.

☐ No Adverse Effect
Condition (if applicable)

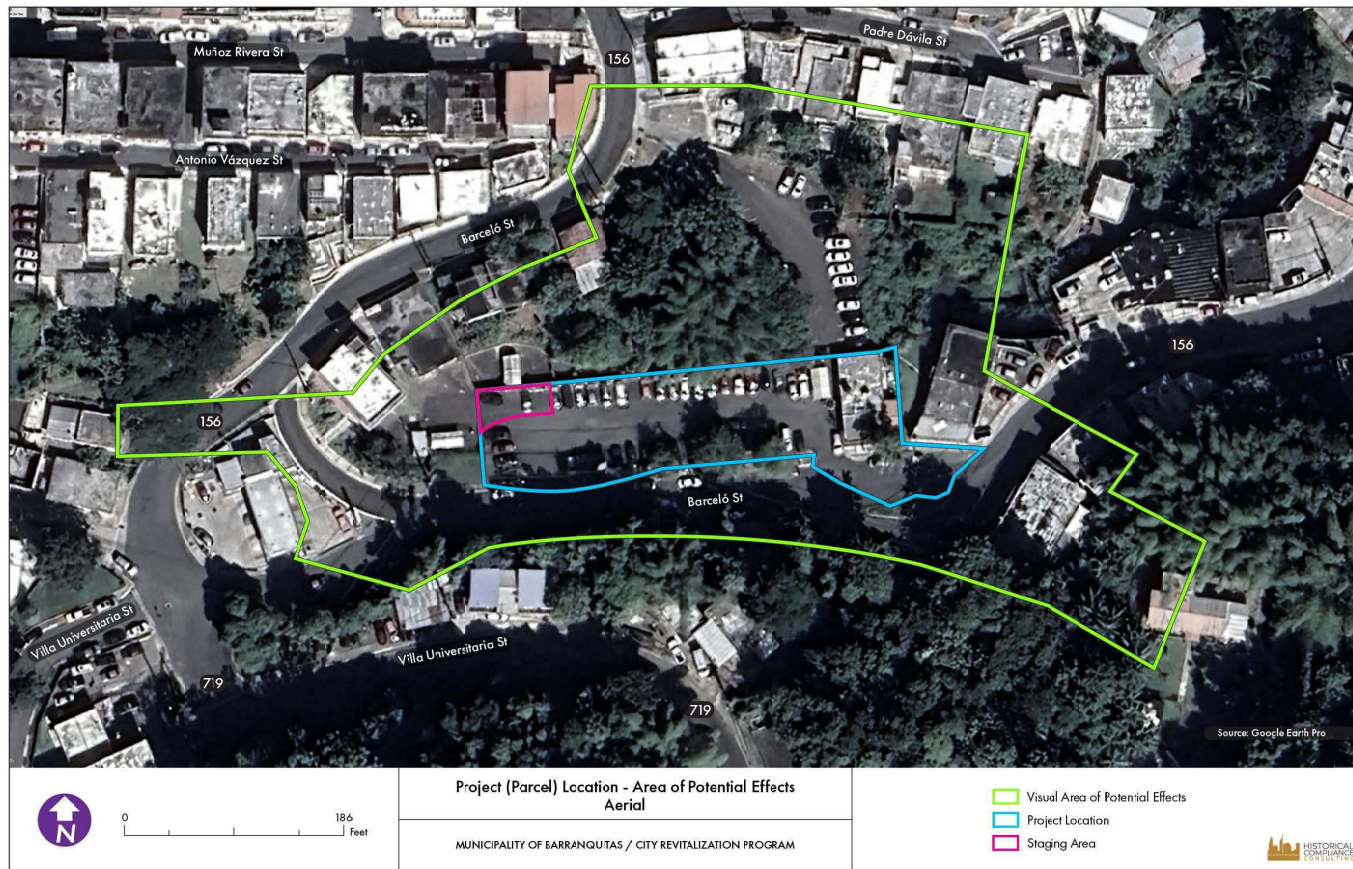
☐ Adverse Effect
Proposed Resolution (if applicable)

This Section is to be Completed by SHPO Staff Only

The Puerto Rico State Historic Preservation Office has reviewed the above information and: ☐ Concurs with the information provided. ☐ Does not concur with the information provided.	
Comments: 	
Carlos Rubio-Cancela State Historic Preservation Officer	Date:

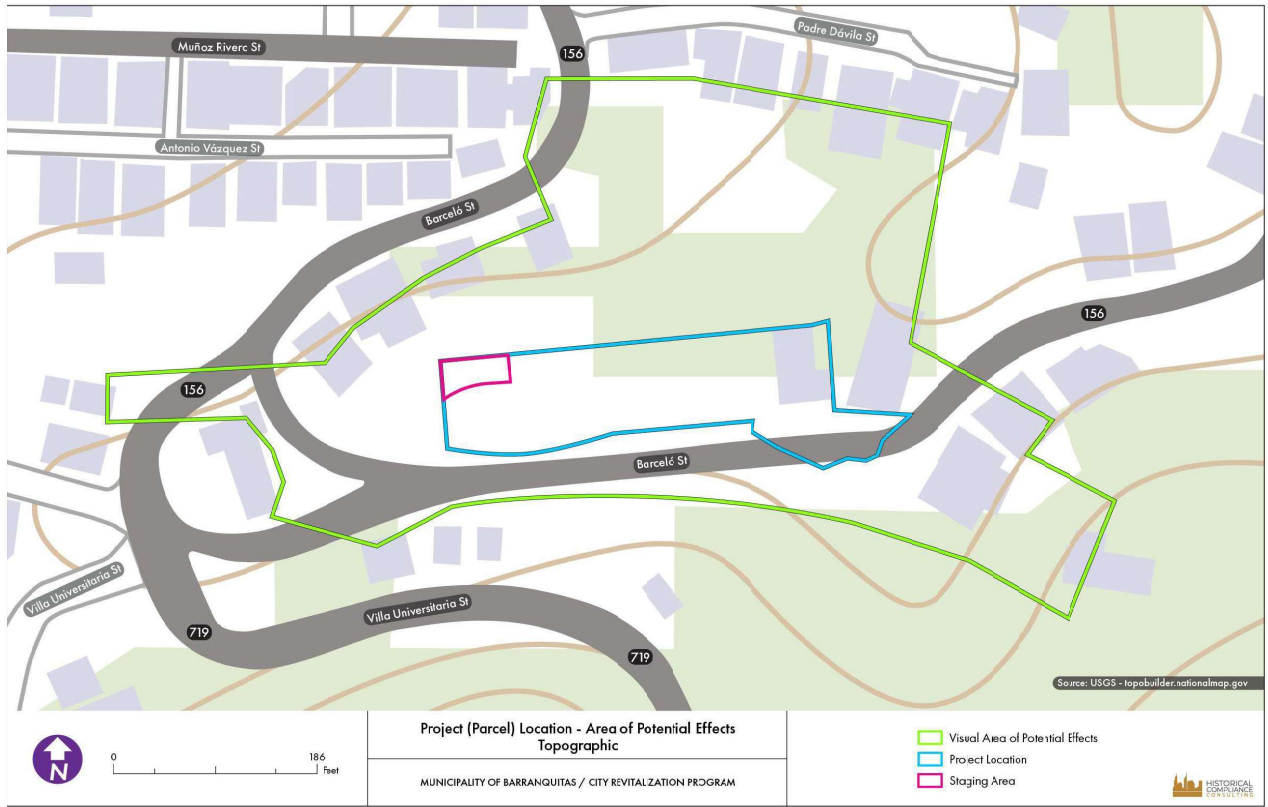
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Figure 1- Project (Parcel) Location – Area of Potential Effect Map (Aerial)



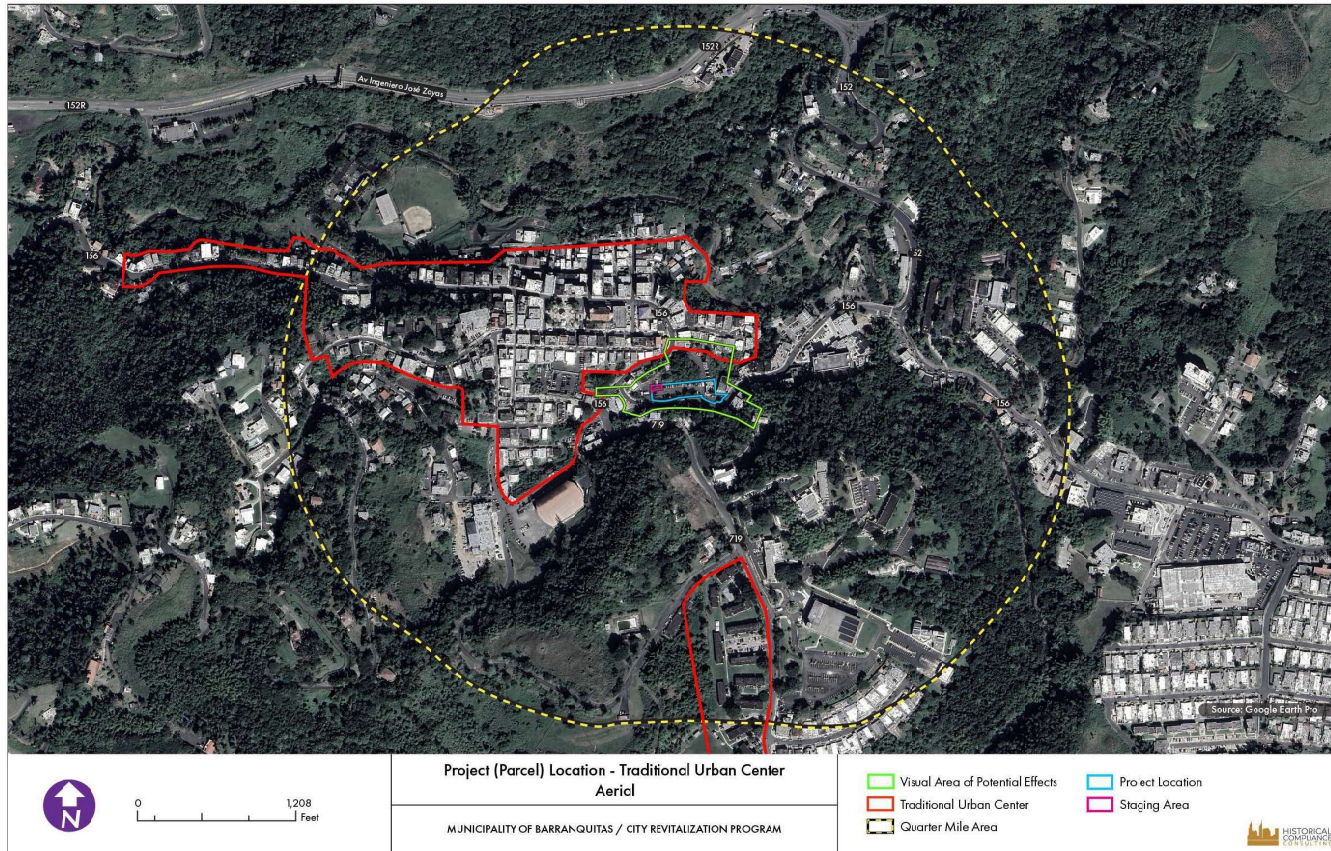
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Project Name: Construcción de Nuevo Estacionamiento Público	Project ID: PR-CRP-000988	

Figure 2 - Project (Parcel) Location – Area of Potential Effect Map (USGS Topographic)



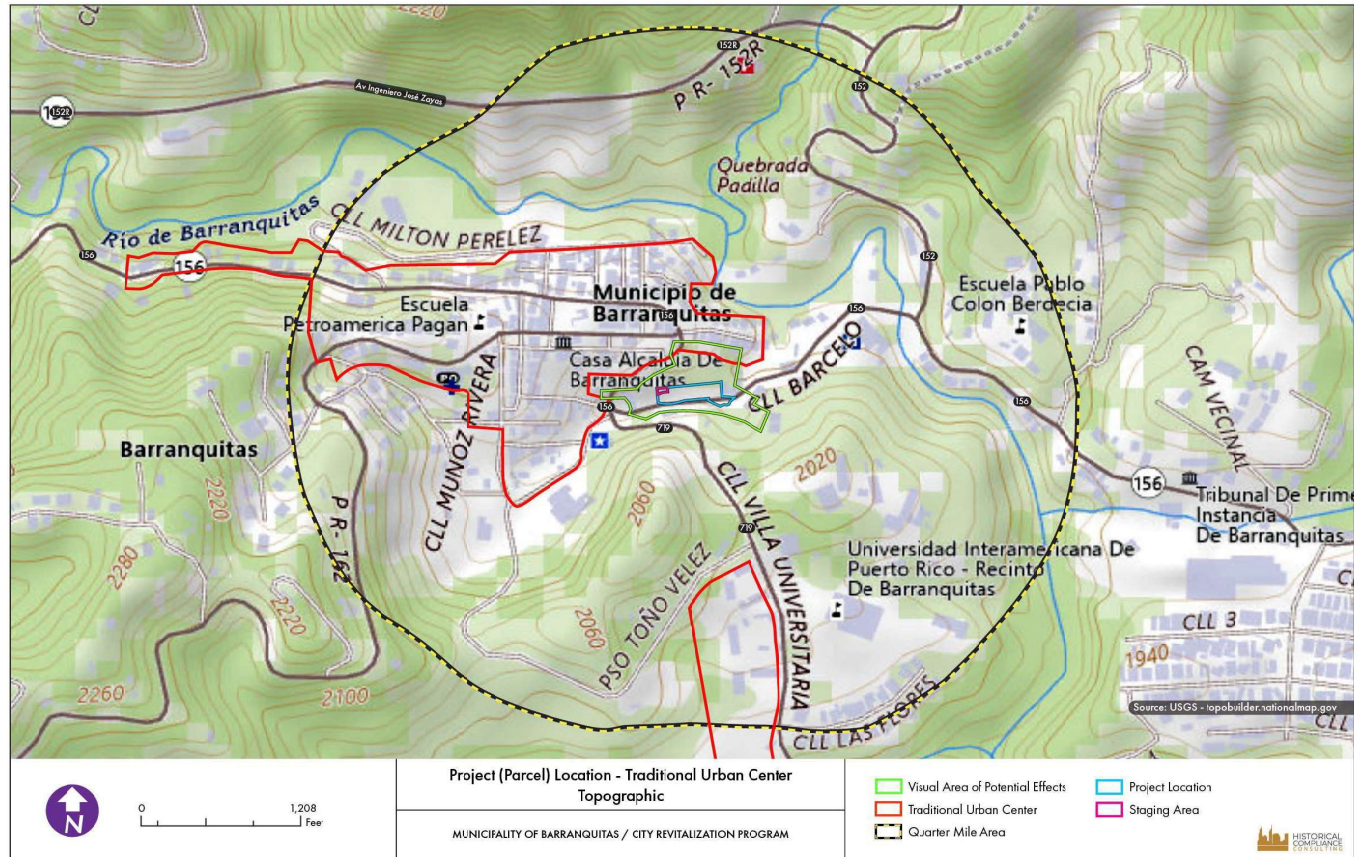
PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM CITY REVITALIZATION PROGRAM (CITY-REV) Section 106 NHPA Effect Determination		
Subrecipient: Municipio de Barranquitas		
Project Name: Construcción de Nuevo Estacionamiento Público	Project ID: PR-CRP-000988	

Figure 3- Project (Parcel) Location – Traditional Urban Center (Aerial)



PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM CITY REVITALIZATION PROGRAM (CITY-REV) Section 106 NHPA Effect Determination		 GOVERNMENT OF PUERTO RICO DEPARTMENT OF PLANNING
Subrecipient: Municipio de Barranquitas		
Project Name: Construcción de Nuevo Estacionamiento Público	Project ID: PR-CRP-000988	

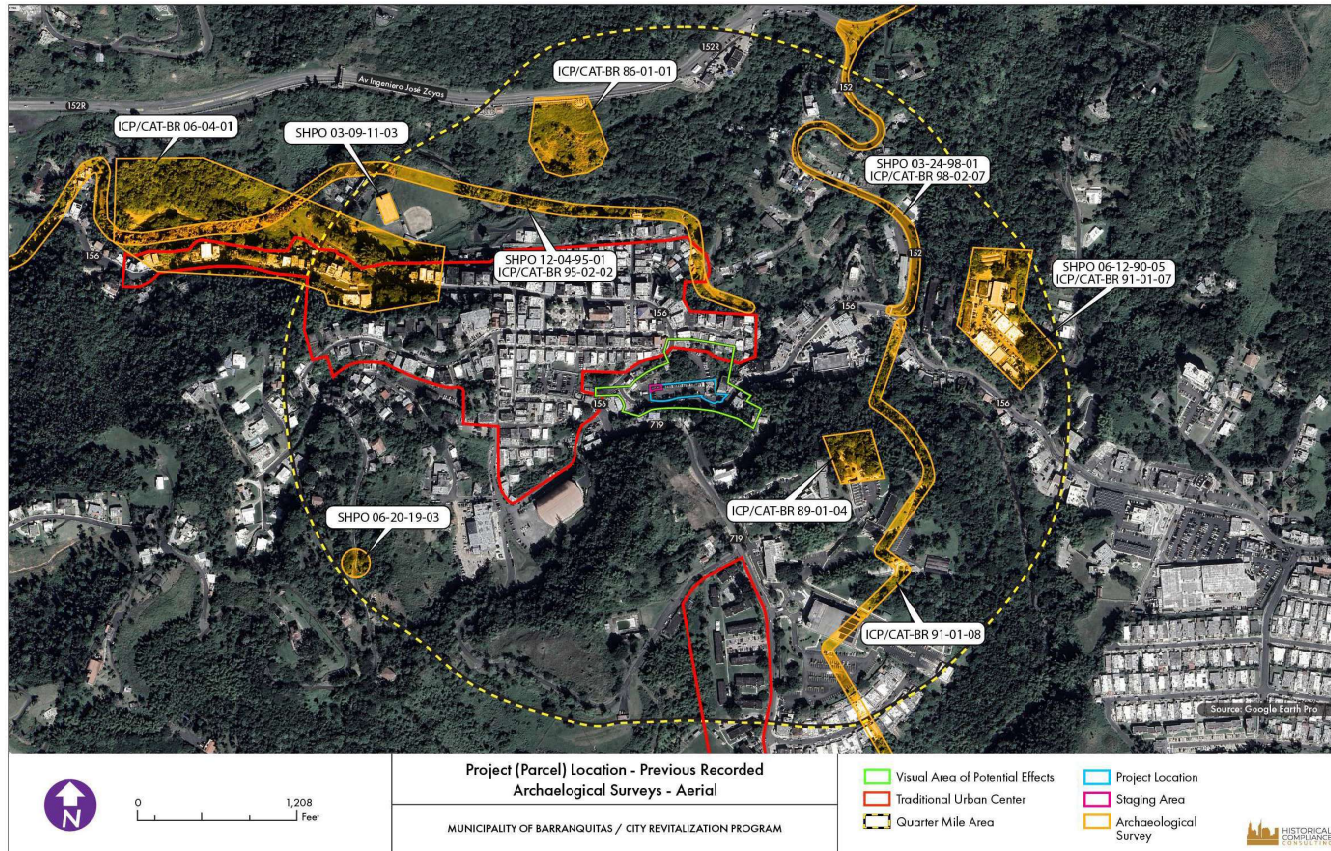
Figure 4 - Project (Parcel) Location – Traditional Urban Center (USGS Topographic)



PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM CITY REVITALIZATION PROGRAM (CITY-REV) Section 106 NHPA Effect Determination	
Subrecipient: Municipio de Barranquitas	
Project Name: Construcción de Nuevo Estacionamiento Público	Project ID: PR-CRP-000988

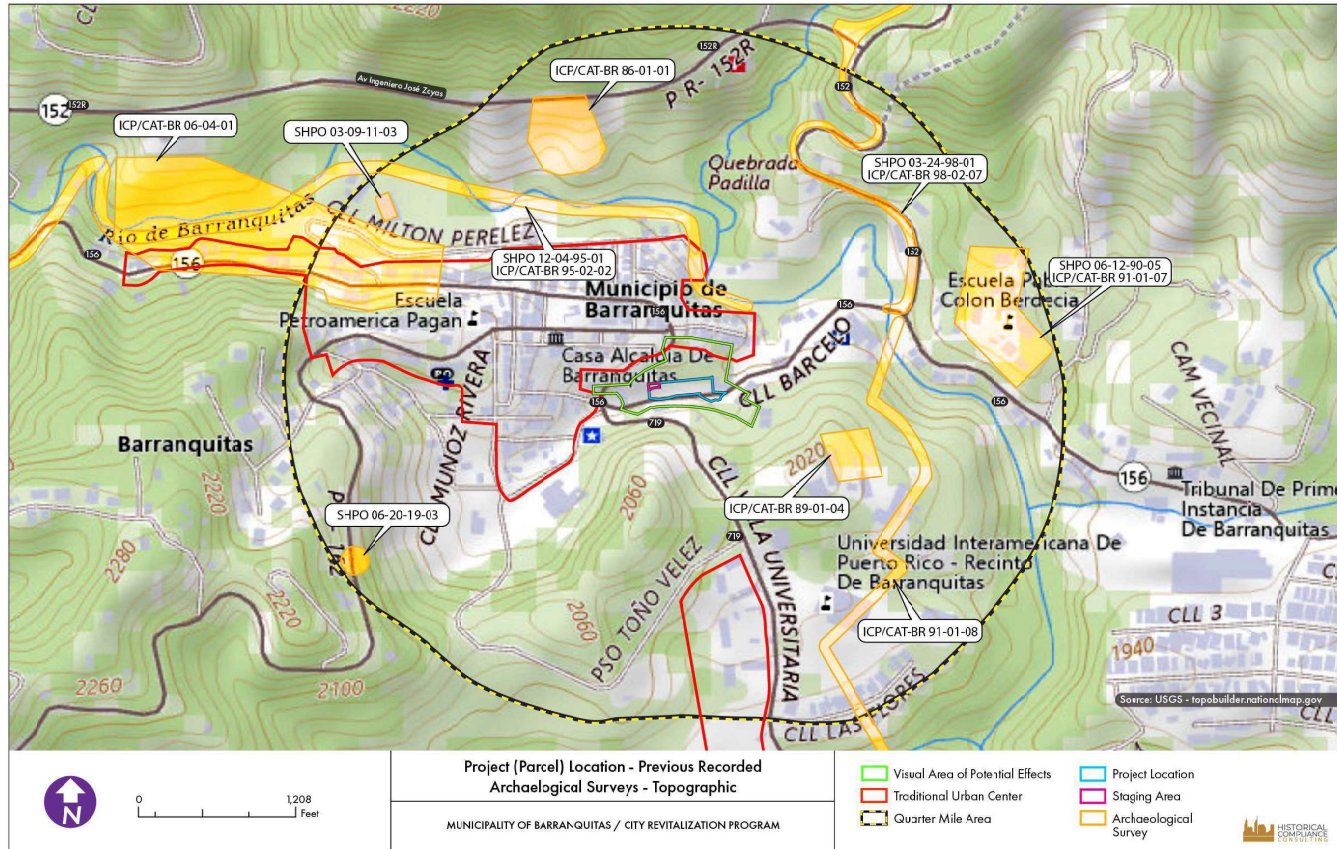


Figure 5 - Project (Parcel) Location with Previous Archaeological Surveys Map (Aerial)



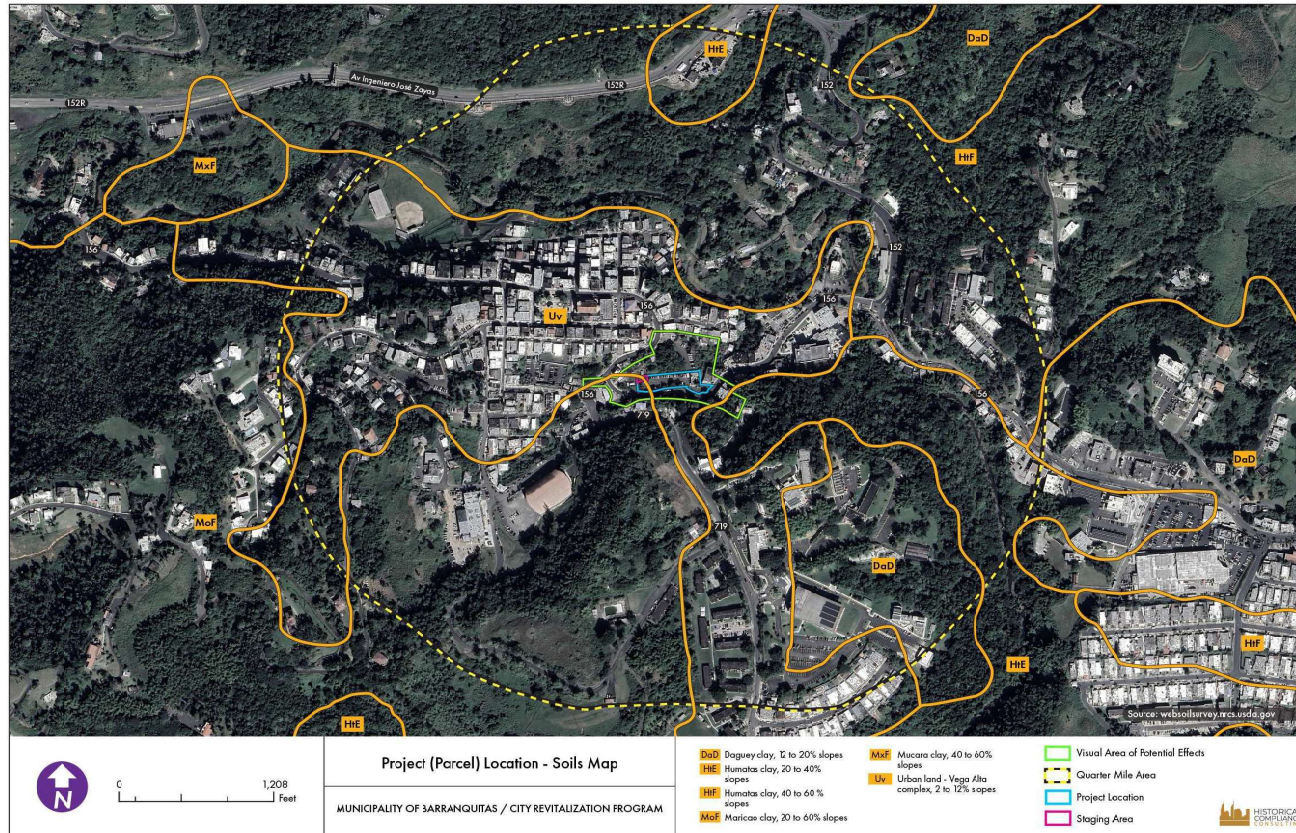
PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM CITY REVITALIZATION PROGRAM (CITY-REV) Section 106 NHPA Effect Determination		
Subrecipient: Municipio de Barranquitas		
Project Name: Construcción de Nuevo Estacionamiento Público	Project ID: PR-CRP-000988	

Figure 6 - Project (Parcel) Location with Previous Archaeological Surveys Map (USGS Topographic)



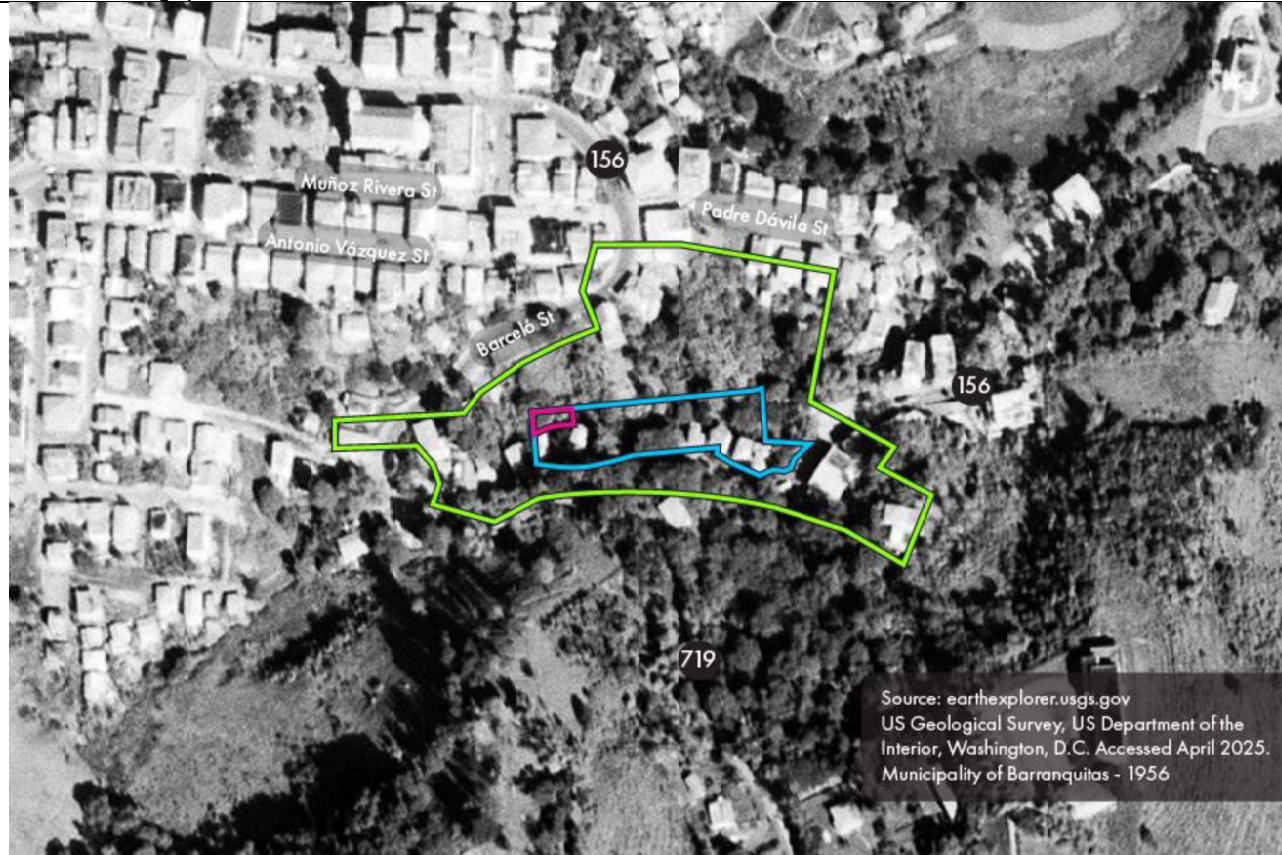
PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM CITY REVITALIZATION PROGRAM (CITY-REV) Section 106 NHPA Effect Determination		 GOVERNMENT OF PUERTO RICO DEPARTMENT OF HOUSING
Subrecipient: Municipio de Barranquitas		
Project Name: Construcción de Nuevo Estacionamiento Público		Project ID: PR-CRP-000988

Figure 6- Project (Parcel) Location – Soils Map (Aerial)



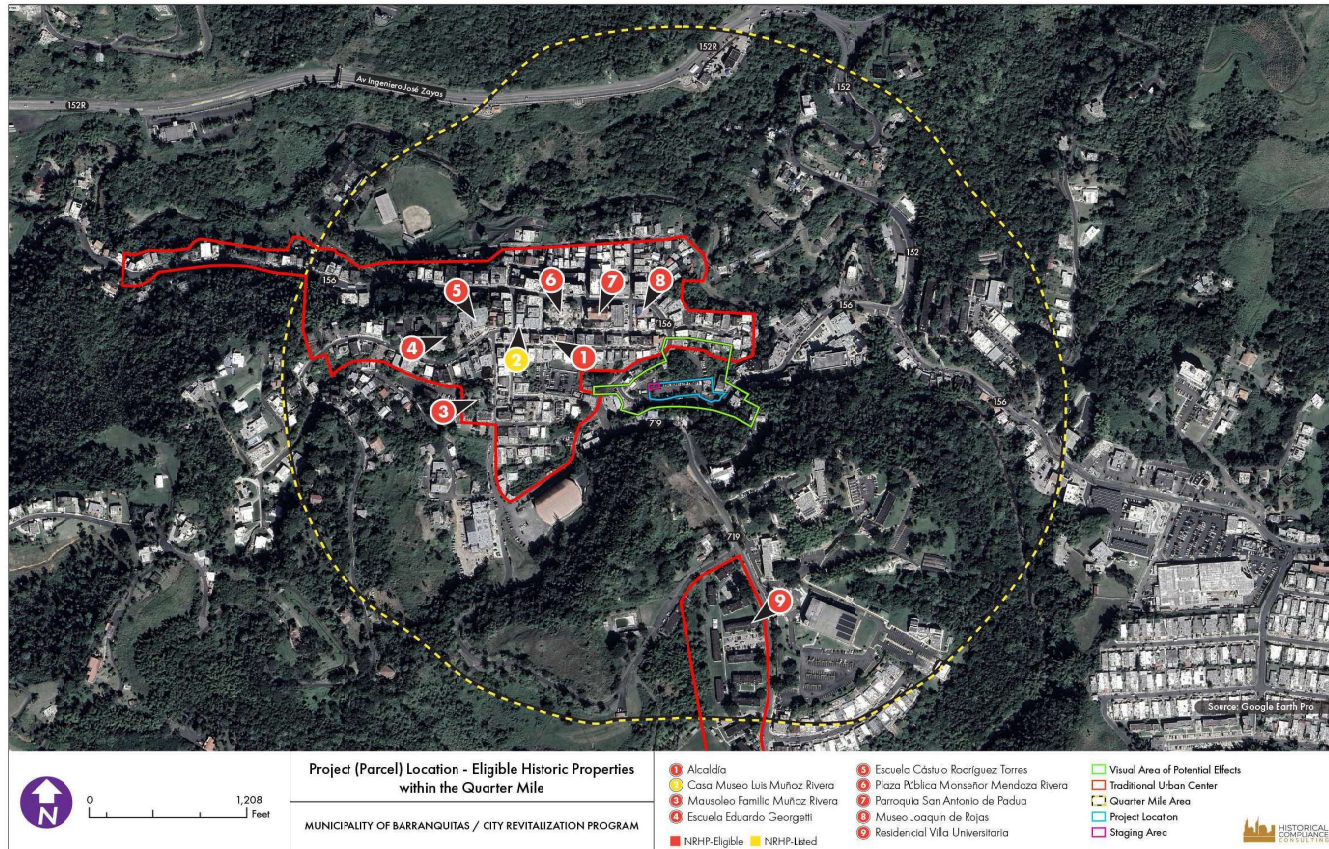
PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM CITY REVITALIZATION PROGRAM (CITY-REV) Section 106 NHPA Effect Determination	 GOVERNMENT OF PUERTO RICO DEPARTMENT OF HOUSING
Subrecipient: Municipio de Barranquitas	
Project Name: Construcción de Nuevo Estacionamiento Público	Project ID: PR-CRP-000988

Figure 8 -Project (Parcel) Location – Historic Aerial Photograph – 1956



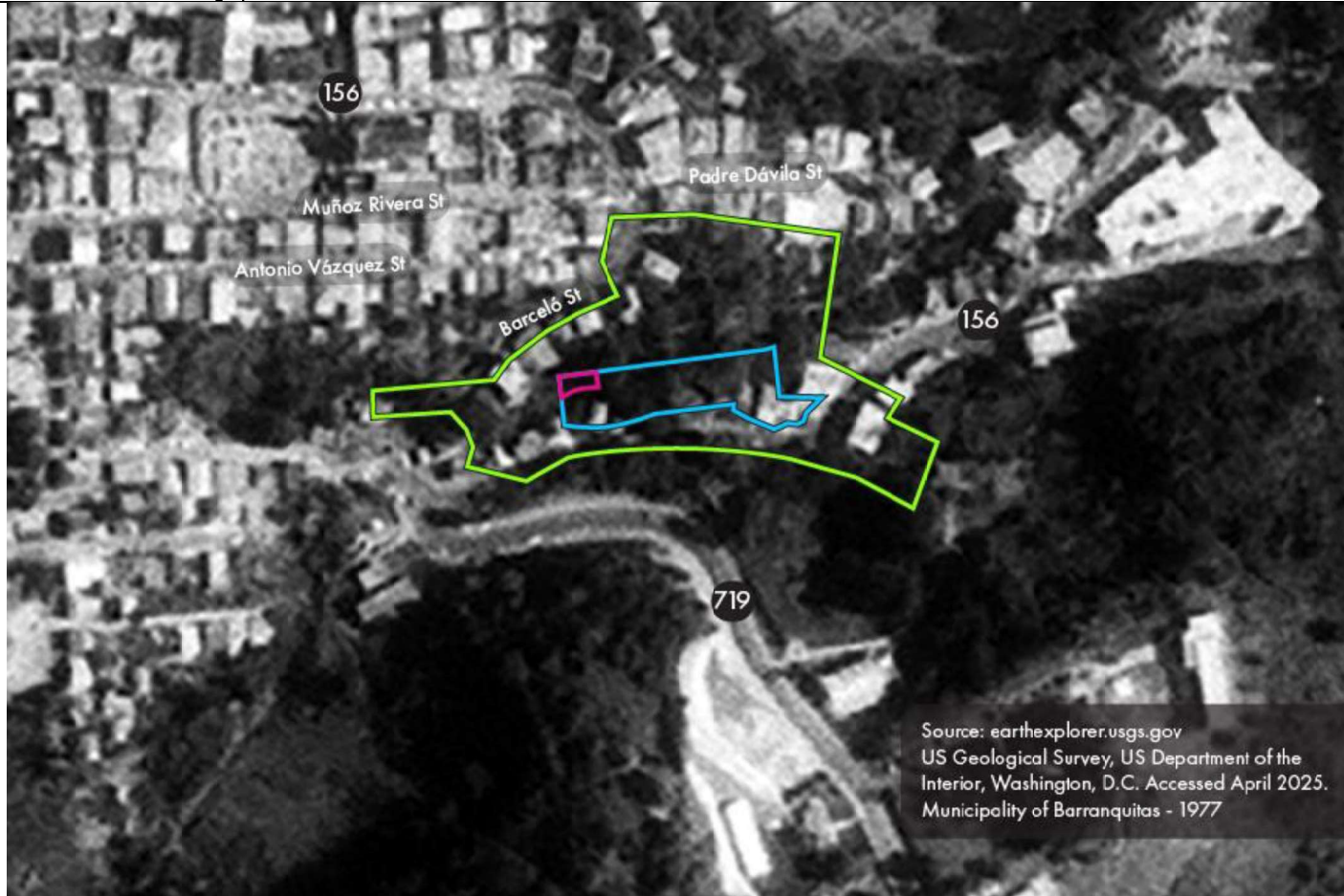
PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM CITY REVITALIZATION PROGRAM (CITY-REV) Section 106 NHPA Effect Determination		
Subrecipient: Municipio de Barranquitas		
Project Name: Construcción de Nuevo Estacionamiento Público	Project ID: PR-CRP-000988	

Figure 9- Project (Parcel) Location with Previously Identified Historic Properties Map (Aerial)



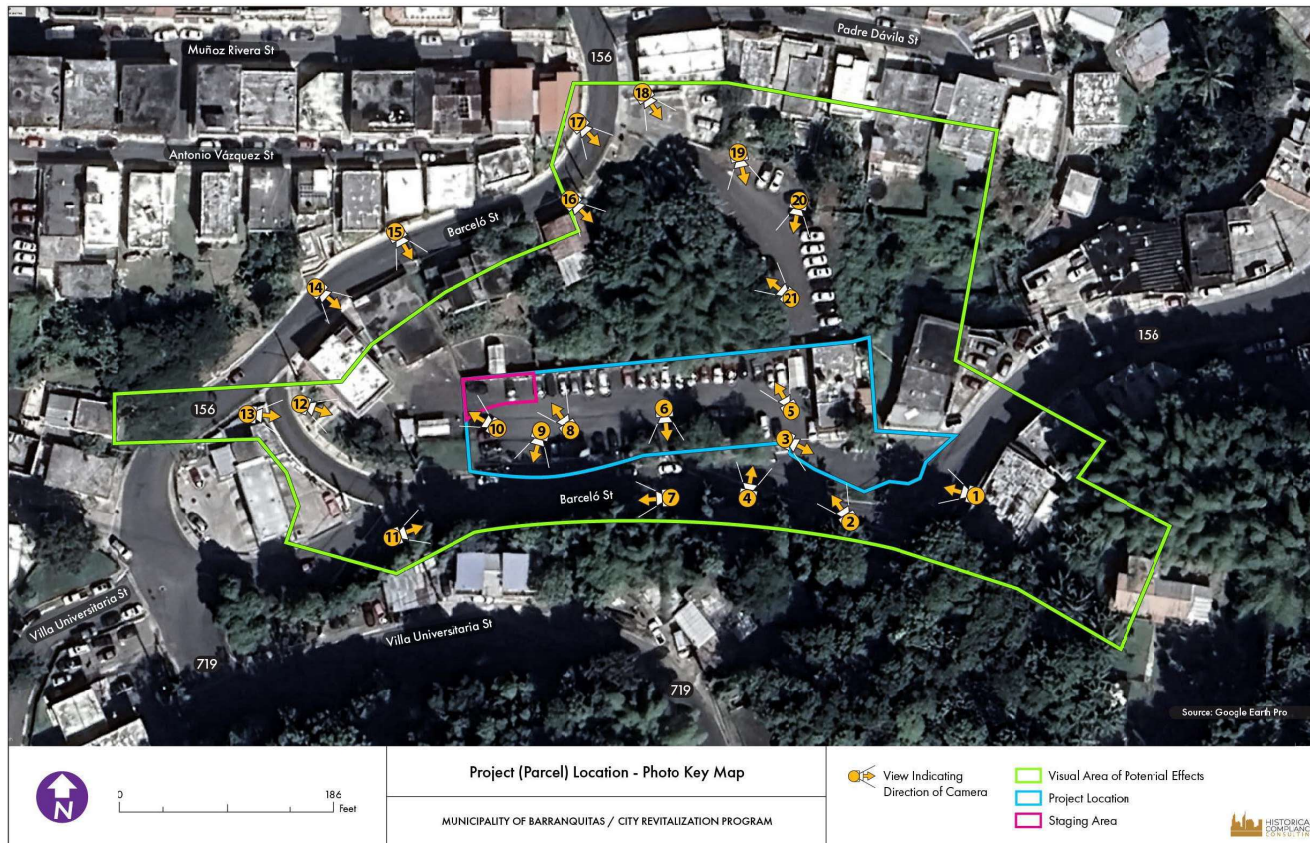
PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM CITY REVITALIZATION PROGRAM (CITY-REV) Section 106 NHPA Effect Determination		
Subrecipient: Municipio de Barranquitas		
Project Name: Construcción de Nuevo Estacionamiento Público	Project ID: PR-CRP-000988	

Figure 10-Project (Parcel) Location – Historic Aerial Photograph – 1977



PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM CITY REVITALIZATION PROGRAM (CITY-REV) Section 106 NHPA Effect Determination		
Subrecipient: Municipio de Barranquitas		
Project Name: Construcción de Nuevo Estacionamiento Público	Project ID: PR-CRP-000988	

Figure 11 - Project (Parcel) Location – Photo Key Map



Subrecipient: Municipio de Barranquitas

Project Name: Construcción de Nuevo Estacionamiento Público

Project ID: PR-CRP-000988



Photo #:1

Description: View of project site from the southeast on Barceló Street (PR-156), looking towards the northwest.

Date: 03/24/25

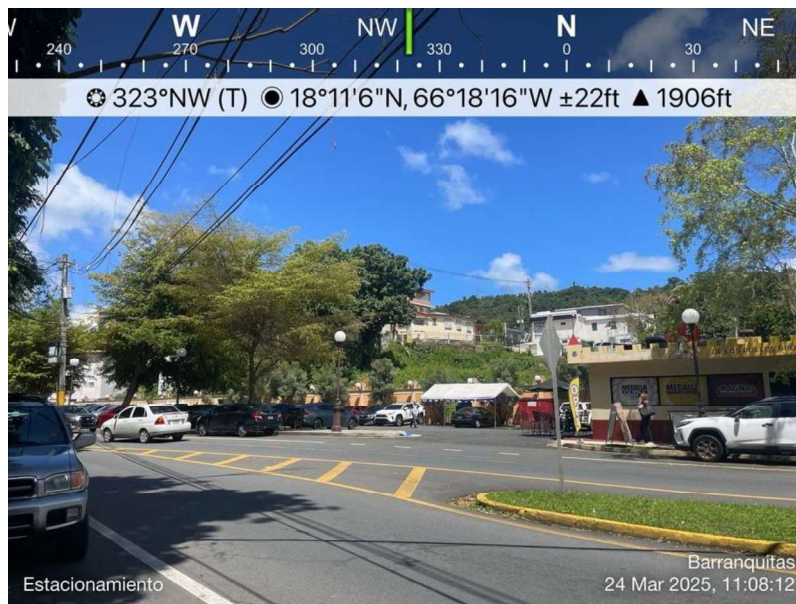


Photo #:2

Description: Closer view of project site from the southeast on Barceló Street (PR-156), looking towards the northwest.

Date: 03/24/25

Subrecipient: Municipio de Barranquitas

Project Name: Construcción de Nuevo Estacionamiento Público

Project ID: PR-CRP-000988

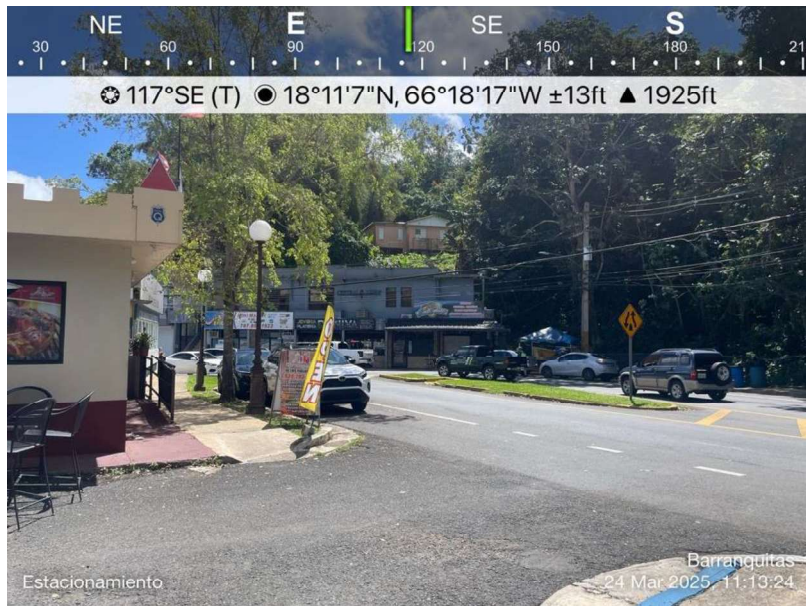


Photo #:3

Description: View of the APE's limit from the project site, looking towards the southeast.

Date: 03/24/25

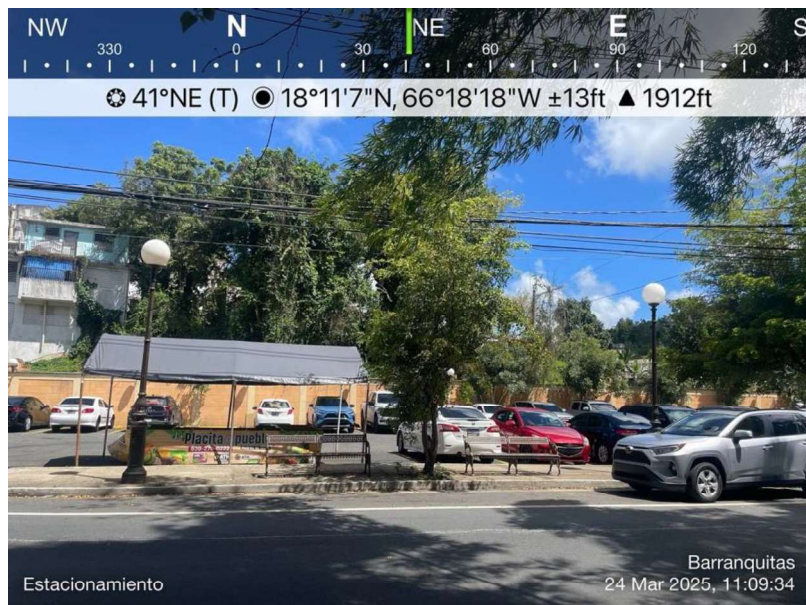


Photo #:4

Description: View of project site from the south on Barceló Street (PR-156), looking towards the northeast.

Date: 03/24/25

Subrecipient: Municipio de Barranquitas

Project Name: Construcción de Nuevo Estacionamiento Público

Project ID: PR-CRP-000988

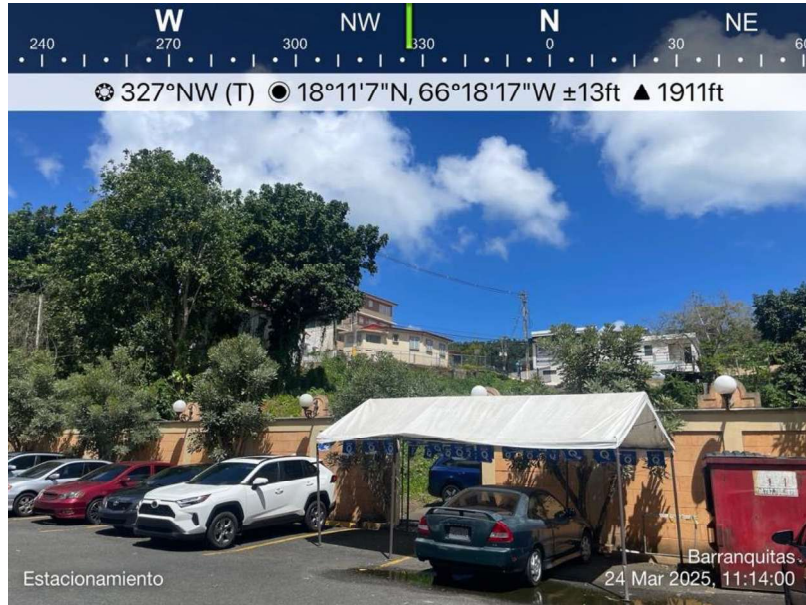


Photo #:5

Description: View from project site, looking towards the northwest.

Date: 03/24/25

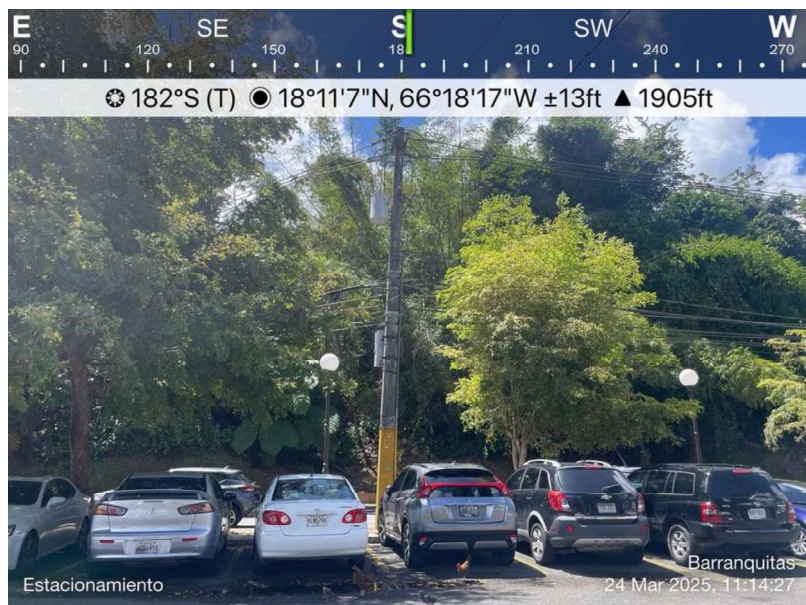


Photo #:6

Description: View from the project site, looking towards the south of the Visual APE.

Date: 03/24/25

Subrecipient: Municipio de Barranquitas

Project Name: Construcción de Nuevo Estacionamiento Público

Project ID: PR-CRP-000988



Photo #:7

Description: View from Barceló Street looking towards the west.

Date: 03/24/25



Photo #:8

Description: View from project site, looking towards the northwest.

Date: 03/24/25

Subrecipient: Municipio de Barranquitas

Project Name: Construcción de Nuevo Estacionamiento Público

Project ID: PR-CRP-000988

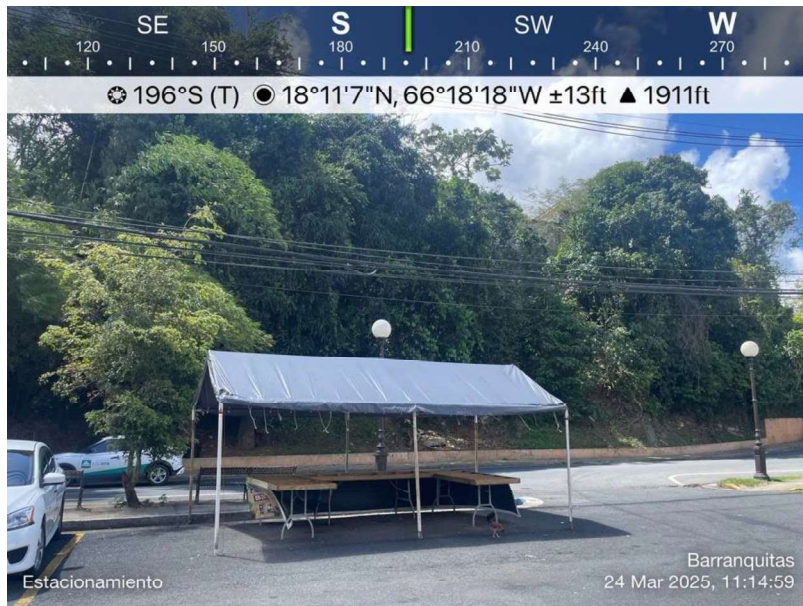


Photo #:9

Description: View from the project site, looking towards the south.

Date: 03/24/25



Photo #:10

Description: View from the project site, looking towards the west.

Date: 03/24/25

Subrecipient: Municipio de Barranquitas

Project Name: Construcción de Nuevo Estacionamiento Público

Project ID: PR-CRP-000988

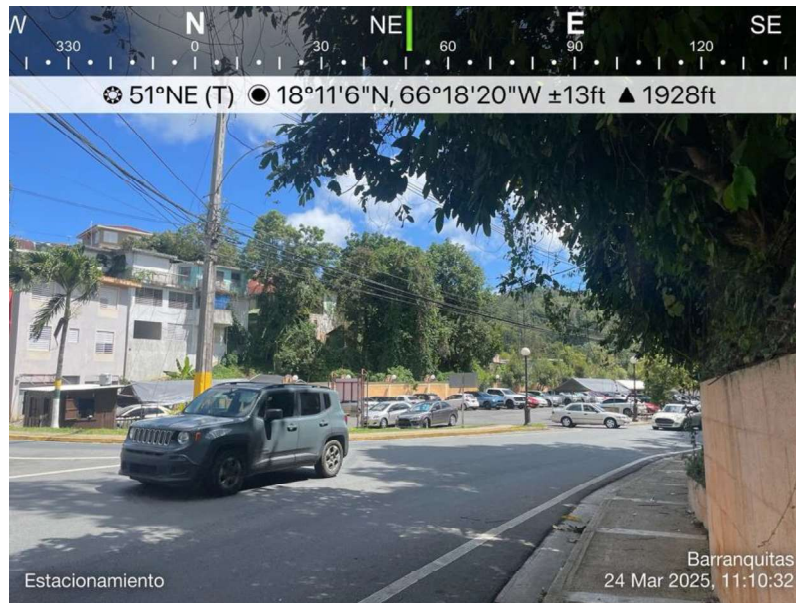


Photo #:11

Description: View of project site from the southwest on Barceló Street (PR-156), looking towards the northeast.

Date: 03/24/25



Photo #:12

Description: View of project site from the west on Barceló Street (PR-156), looking towards the east.

Date: 03/24/25

Subrecipient: Municipio de Barranquitas

Project Name: Construcción de Nuevo Estacionamiento Público

Project ID: PR-CRP-000988



Photo #:13

Description: View of project site from the west on Barceló Street (PR-156), looking towards the east.

Date: 03/24/25



Photo #:14

Description: View of main facades of adjacent buildings north of the project site, looking towards the southeast.

Date: 03/24/25

Subrecipient: Municipio de Barranquitas

Project Name: Construcción de Nuevo Estacionamiento Público

Project ID: PR-CRP-000988



Photo #:15

Description: View of main facades of adjacent buildings north of the project site, looking towards the southeast.

Date: 03/24/25

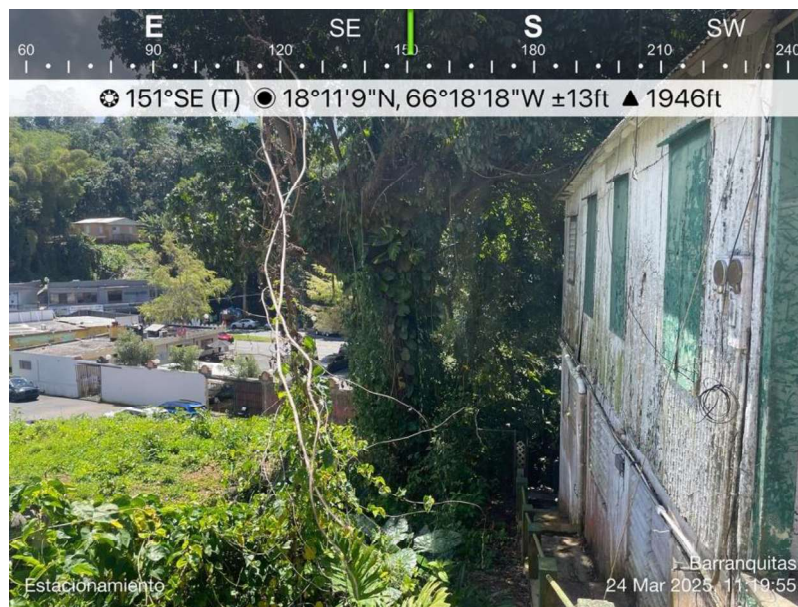


Photo #:16

Description: View of project site from 54 Barceló Street (247-092-39-17 PN), looking towards the southeast.

Date: 03/24/25

Subrecipient: Municipio de Barranquitas

Project Name: Construcción de Nuevo Estacionamiento Público

Project ID: PR-CRP-000988



Photo #:17

Description: View from north Barceló Street, looking towards the southeast.

Date: 03/24/25

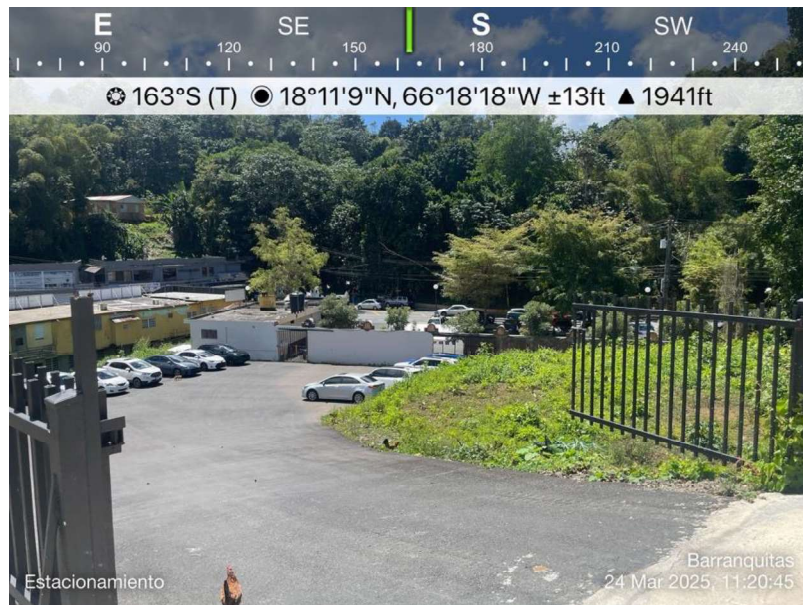


Photo #:18

Description: View from adjacent private parking north of the project site, looking towards the southeast.

Date: 03/24/25

Subrecipient: Municipio de Barranquitas

Project Name: Construcción de Nuevo Estacionamiento Público

Project ID: PR-CRP-000988

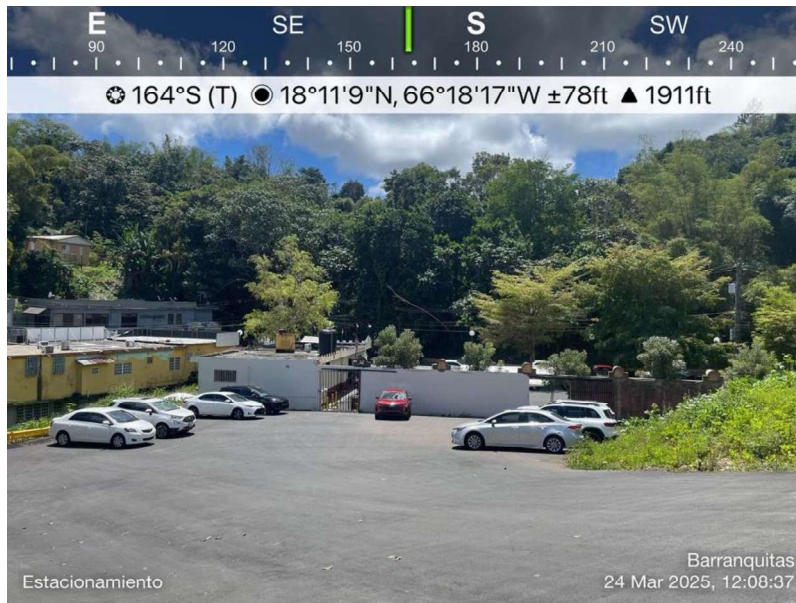


Photo #:19

Description: View from adjacent private parking north of the project site, looking towards the south.

Date: 03/24/25

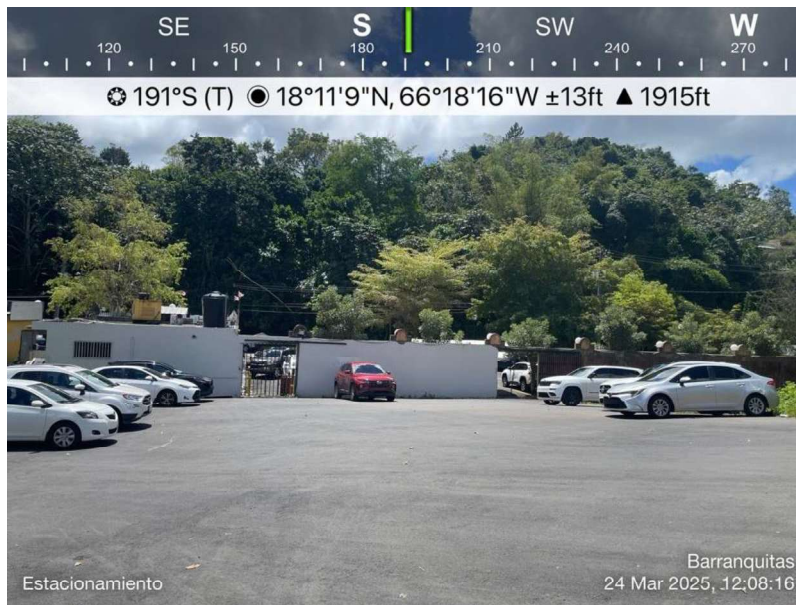
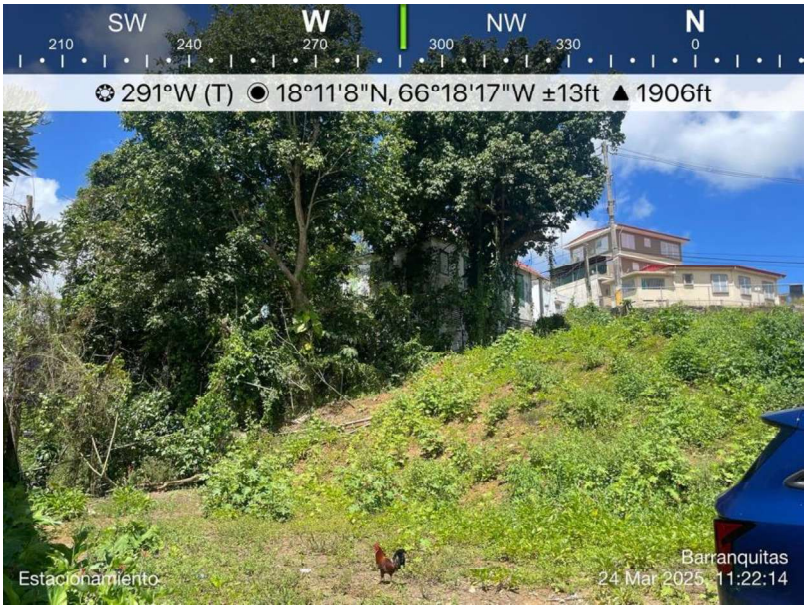


Photo #:20

Description: Closer view from adjacent private parking north of the project site, looking towards the south.

Date: 03/24/25

PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM CITY REVITALIZATION PROGRAM (CITY-REV) Section 106 NHPA Effect Determination		
Subrecipient: Municipio de Barranquitas		
Project Name: Construcción de Nuevo Estacionamiento Público		Project ID: PR-CRP-000988

	
Photo #: 21	Description: View of 54 Barceló Street (247-092-39-17 PN) from adjacent private parking, looking towards the west.
Date: 03/24/25	

PR-CRP-000988

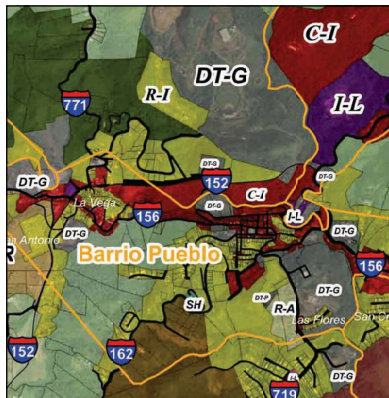
CONSTRUCCIÓN DE NUEVO
ESTACIONAMIENTO PÚBLICO PROJECT
BARRANQUITAS, PUERTO RICO

90% DESIGN DRAWINGS

AMPLIACION DE ESTACIONAMIENTOS PUBLICO

CARRETERA 156 KM 16.3, BO. PUEBLO DEL MUNICIPIO DE
BARRANQUITAS, PUERTO RICO.

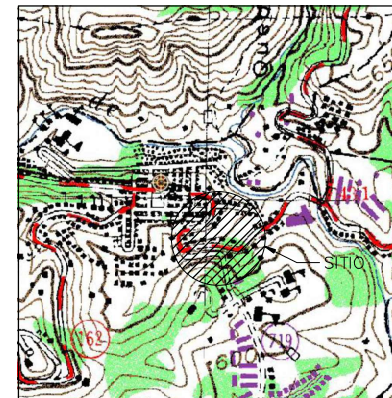
HON. ELLIOT COLON BLANCO
ALCALDE



MAPA DE CALIFICACION



FOTO AEREA



LOCALIZACION

YO, RAFAEL A. ZAYAS ROLON, INGENIERO, 13248, CERTIFICO QUE SOY EL PROFESIONAL QUE DISEÑO ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIEN CERTIFICO QUE ENTiendo QUE DICHO PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APPLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APPLICABLES DE LOS REGLAMENTOS Y CODIGOS DE CONSTRUCCION VIGENTES DE LAS AGENCIAS, JUNTAS REGLAMENTADORAS O CORPORACIONES PUBLICAS CON JURISDICCION. CERTIFICO, ADENAS, QUE LA PREPARACION DE ESTOS PLANOS Y ESPECIFICACIONES SE HA CUMPLIDAMENTE CON LO DISPUESTO EN LA LEY NUM. 14 DE 8 DE ENERO DE 2004, SEGUN ENMIENDADA, CONOCIDA COMO LEY PARA LA INVERSION POR LA INDUSTRIA PUERTORRIQUENA, Y CON LA LEY NUM. 319 DE 15 DE MAYO DE 1938, SEGUN ENMIENDADA, LEY NUM. 8 DE JULIO DE 1976, SEGUN ENMIENDADA, SEGUN APUQUE RECONOZCO QUE CUALQUIER DECLARACION FALSA O FALSIFICACION DE LOS HECHOS QUE SE HAYA PRODUCIDO POR DESCONEJIMIENTO O POR NEGLIGENCIA YA SEA POR MI, MIS AGENTES O EMPLEADOS O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCION JUDICIAL Y DISCIPLINARIA POR LA OGE.

ING. RAFAEL A. ZAYAS ROLON
LIC. #3248

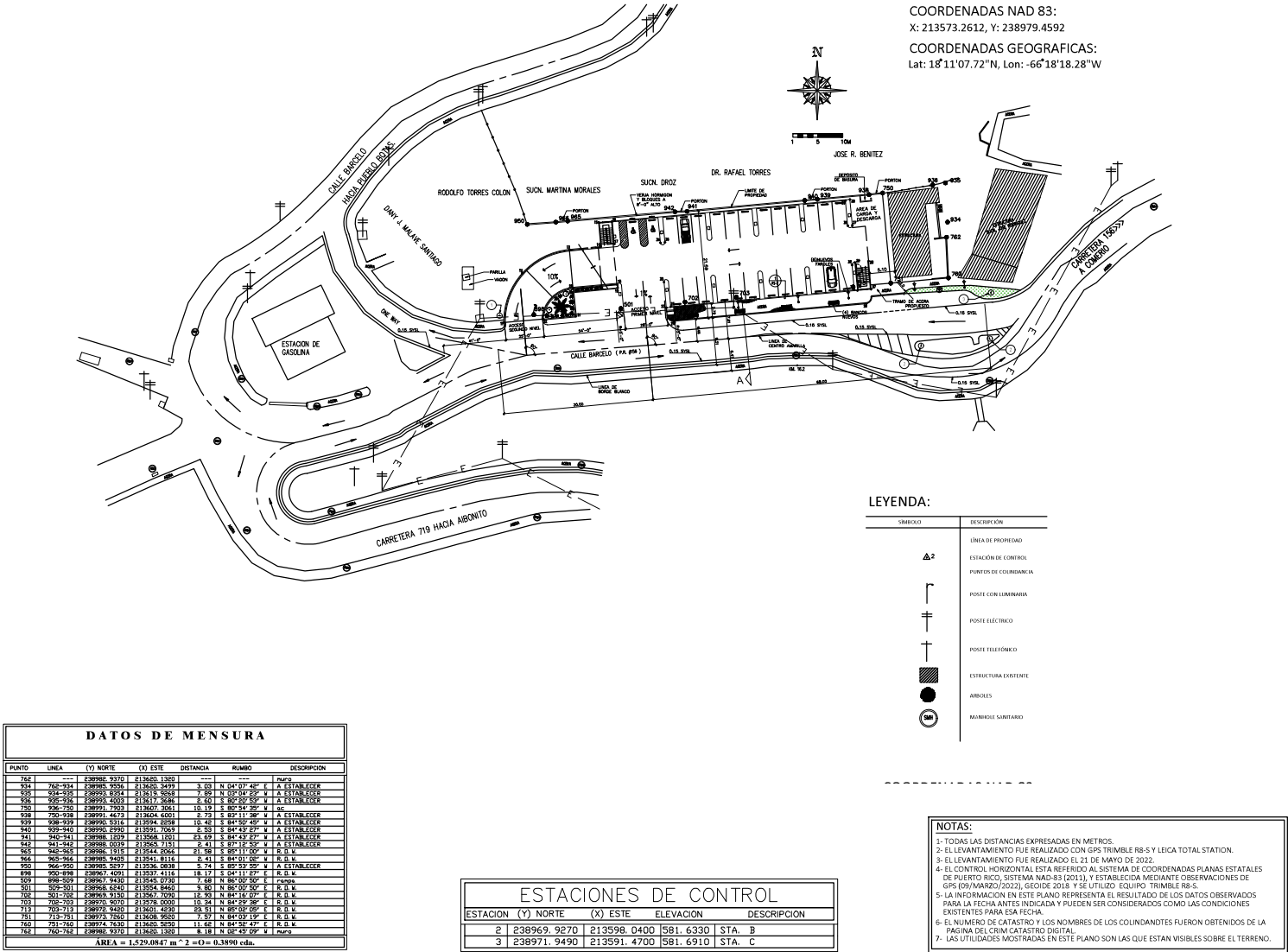


63 CALLE BARCELO STE 201, BARRANQUITAS, P.R. 00794 - TEL. (787)857.8021
E-MAIL: CENTRALGROUP.PR@GMAIL.COM

INDICE

1	T-1	HOJA TITULO E INDICE
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3	PS-2	PLANO DE SITIO - PROPUUESTO
4	PS-3	PLANO DE SITIO - CONTROL
5	PS-4	MANTENIMIENTO DE TRANSITO
6	PS-5	PERSPECTIVAS
7	A1	PLANTAS ARQUITECTONICAS - PROPUUESTAS
8	A2	ELEVACIONES
9	A3	PLANTAS DE DRENAJES Y SECCIONES
10	A4	DETALLES ARQUITECTONICOS
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17	PS-1	PLANTAS DE DRENAJES
18	ES-1	ELECTRICAL SITE PLAN
19	ES-2	EXISTING ELECTRICAL SITE PLAN
20	ES-3	ELECTRICAL NOTES
21	ES-4	ELECTRICAL NOTES

DISEÑADO POR:
VICTOR N. MORA JONES
LIC. # 2946



DATOS DE MENSURA						
PUNTO	LÍNEA	(Y) NORTE	(X) ESTE	DISTANCIA	ÁNGULO	DESCRIPCION
762	---	238986.9370	213620.1380	---	---	---
934	762-934	238986.9596	213620.3499	3.03	N 04° 01' 46"	E A ESTABLECER
938	934-938	238991.8824	213619.7686	7.89	N 09° 54' 25"	E A ESTABLECER
936	938-936	238993.4503	213617.3646	5.60	S 80° 50' 53"	V A ESTABLECER
730	936-730	238991.7903	213607.0581	10.19	S 80° 31' 25"	E A ESTABLECER
938	730-938	238991.4673	213604.4001	2.73	S 89° 11' 38"	V A ESTABLECER
939	938-939	238990.5314	213594.9258	10.48	S 84° 52' 45"	V A ESTABLECER
940	939-940	238990.9390	213591.7063	6.53	S 84° 49' 27"	V A ESTABLECER
941	940-941	238988.1279	213588.1101	83.69	S 84° 42' 45"	V A ESTABLECER
942	941-942	238988.0039	213585.7151	6.41	S 87° 12' 53"	V A ESTABLECER
943	942-943	238986.1115	213584.0564	21.98	S 89° 11' 02"	E A ESTABLECER
944	943-944	238985.9429	213581.8116	2.41	S 84° 01' 02"	E A ESTABLECER
945	944-945	238985.2577	213578.9818	5.74	S 89° 12' 25"	E A ESTABLECER
946	945-946	238985.4201	213577.4116	18.17	S 84° 11' 27"	E A ESTABLECER
947	946-947	238984.4201	213574.1770	7.48	N 89° 02' 02"	E A ESTABLECER
948	947-948	238984.6240	213574.8440	5.80	N 89° 02' 02"	E A ESTABLECER
949	948-949	238984.9130	213575.7270	16.90	N 84° 15' 36"	E A ESTABLECER
950	949-950	238975.9070	213578.0000	10.34	N 84° 15' 36"	E A ESTABLECER
951	950-951	238975.9440	213601.4020	68.51	N 89° 02' 02"	E A ESTABLECER
952	951-952	238974.7850	213608.8250	7.57	N 89° 02' 02"	E A ESTABLECER
953	952-953	238974.7630	213620.3620	11.68	N 84° 56' 47"	E A ESTABLECER
954	953-954	238990.9370	213620.1380	8.18	N 05° 45' 09"	E A ESTABLECER

AREA A = 1,529.0047 m² ± 0 = 0.3890 cda.

CENTRAL GROUP, PSC.

PUNCAJUNING - ARCHITECTURAL PLANNING

10 CALLE BARELTO DE 100' LA ANCHURA - TEL. 786-757-8010

REVISIONES	
FECHA	REVISIONES

EL MANEJO DE LAS ZONAS URBANAS, MEDIANTE UNA COMISIÓN DE SUFICIENTE PROFESIONALES, DEBE SER UNO DE LOS OBJETOS DE LA INVESTIGACIÓN Y DEL DISEÑO DE LAS OBRAS DE INFRAESTRUCTURA. EL MANEJO DE LAS ZONAS URBANAS, MEDIANTE UNA COMISIÓN DE SUFICIENTE PROFESIONALES, DEBE SER UNO DE LOS OBJETOS DE LA INVESTIGACIÓN Y DEL DISEÑO DE LAS OBRAS DE INFRAESTRUCTURA. EL MANEJO DE LAS ZONAS URBANAS, MEDIANTE UNA COMISIÓN DE SUFICIENTE PROFESIONALES, DEBE SER UNO DE LOS OBJETOS DE LA INVESTIGACIÓN Y DEL DISEÑO DE LAS OBRAS DE INFRAESTRUCTURA.

FECHA: FEBRERO 2023

REVISOR POR: RAFAEL

DISEÑADOR POR: WILSON H. RIVERA

ESCALA: 1:400

PROYECTO: PLANO DE MENSURA DE UN PREDIO DE TERRENO EN EL BO. PUEBLO DE BARRANQUITAS

DESCRIPCION

PLANO DE MENSURA

M-1

1 1

TEL. RAFAEL ALZAVAR RIVERA 786-757-8010

SYSL = LINEA SOLIDA AMARILLA
SWSL = LINEA SOLIDA BLANCA
DWL = LINEA BLANCA ENTRECORTADA

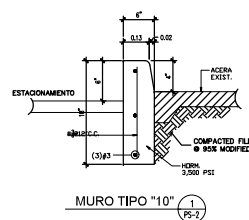
NOTAS:

- LETREROS Y ROTULACION SERAN CONSTRUIDOS DE ACUERDO AL MANUAL DE SEÑALES DE TRANSITO PARA LAS VIAS PUBLICAS DE P.R.

- LA PINTURA DE TRANSITO BLANCA Y AMARILLA CUMPLIRA CON LOS REQUISITOS MINIMOS DE LAS ESPECIFICACIONES 618 DE LA AUTORIDAD DE CARRETERAS Y TRANSPORTACION DE P.R.

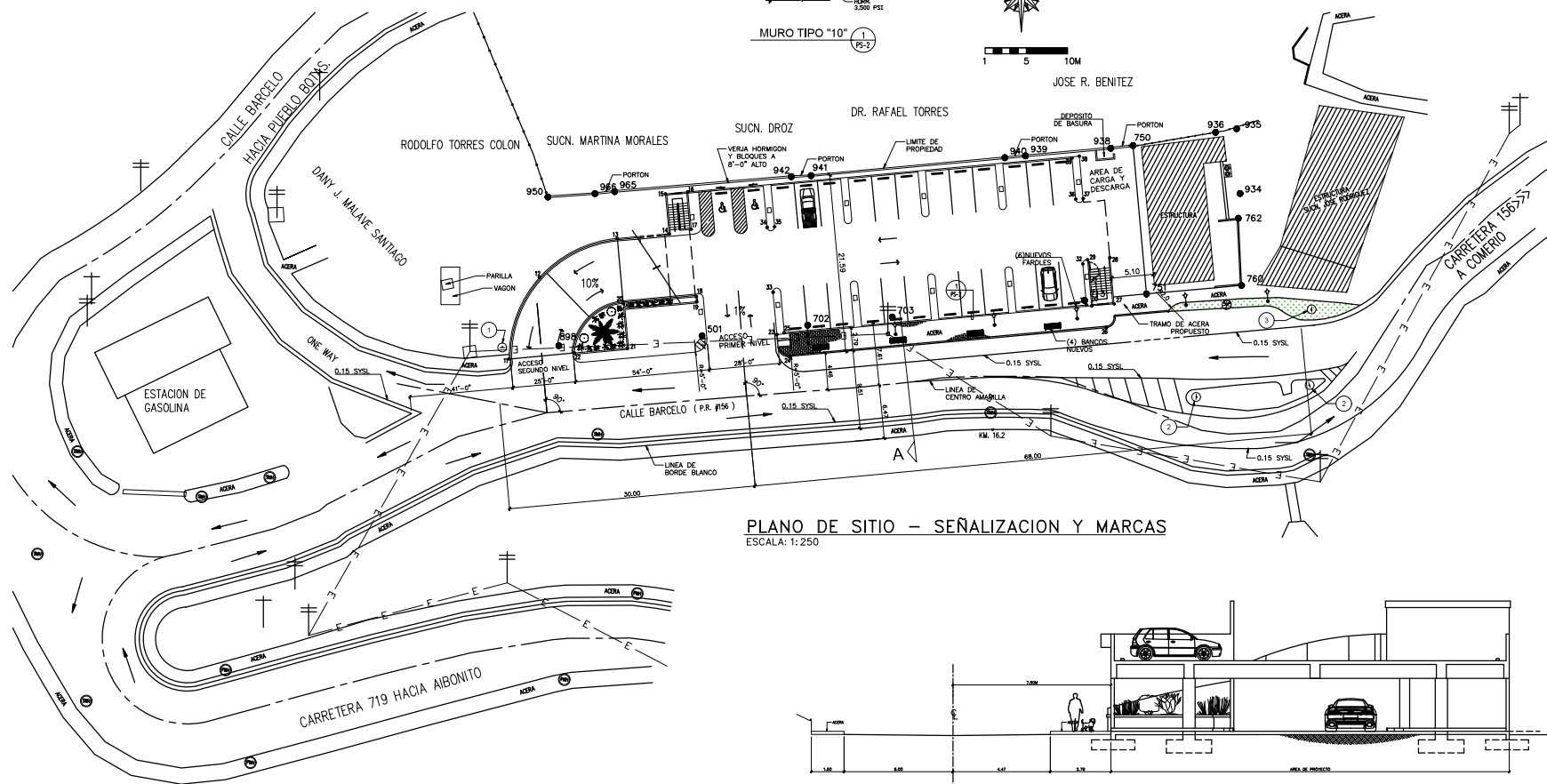
NUM. DE CODIGO	CODIFICACION	CODIGO DE ROTULO	ROTULO	TAMAFIO DE LOS ROTULOS	ESTRUC. ARMAZON AREA	MANUAL DE REFERENCIA	TOTAL
(1)	1	R1d		24" X 24"	N/A	MANUAL DE ROTULACION PARA LAS VIAS PUBLICAS DE PUERTO RICO DTOP VERSION 2020 (MUTCZ 2009)	1
(2)	2	R4d		18" X 24"	N/A	MANUAL DE ROTULACION PARA LAS VIAS PUBLICAS DE PUERTO RICO DTOP VERSION 2020 (MUTCZ 2009)	1
(3)	3	D1e		24" X 30"	N/A	MANUAL DE ROTULACION PARA LAS VIAS PUBLICAS DE PUERTO RICO DTOP	1

- 1- TODAS LAS DISTANCIAS EXPRESADAS EN METROS.
- 2- EL LEVANTAMIENTO FUE REALIZADO CON GPS TRIMBLE R8-S Y LEICA TOTAL STATION.
- 3- EL LEVANTAMIENTO FUE REALIZADO EL 21 DE MAYO DE 2022.
- 4- EL CONTROL HORIZONTAL ESTÁ REFERIDO AL SISTEMA DE COORDENADAS PLANAS ESTATALES DE PUERTO RICO, SISTEMA NAD-83 (2011), Y ESTABLECIDA MEDIANTE OBSERVACIONES DE GPS (RINEX 2021), GEOID 2011 Y SET POINT (GPS TRIMBLE R8-S).
- 5- LA INFORMACION EN ESTE PLANO REPRESENTA EL RESULTADO DE LOS DATOS OBSERVADOS PARA LA FECHA ANTES INDICADA Y PUEDEN SER CONSIDERADOS COMO LAS CONDICIONES EXISTENTES PARA ESA FECHA.
- 6- EL NÚMERO DE CATASTRO Y LOS NOMBRES DE LOS COLINDANTES FUERON OBTENIDOS DE LA PAGINA DEL CNA CATASTRAL DIGITAL.
- 7- LAS UTILIDADES MOSTRADAS EN ESTE PLANO SON LAS QUE ESTAN VISIBLES SOBRE EL TERRENO.



JOSE R. BENITEZ

SÍMBOLO	DESCRIPCIÓN
	LÍNEA DE PROPIEDAD
	ESTACION DE CONTROL
	PUNTOS DE COLOCACION
	POSTE CON ALUMBRADO
	POSTE ELÉCTRICO
	POSTE TELEFÓNICO
	ESTRUCTURA EXISTENTE
	ÁRBOLES
	MARQUEO SANITARIO



CENTRA GROUP, PSC.

ENGINEERING - ARCHITECTURAL - PLANNING
3 CALLE MACULO STE 201 MANAGUATE, P.R. 00704 - TEL. & FAX (787) 467-4021

REVISIONES

[illegible][illegible]

FECHA:	
REVISADO POR:	
ELABORADO POR:	U.C. #
VICTOR M. RIVERA	2946
ESCALA:	
1:250	
PROYECTO:	

PLANO CONSTRUCCION
ESTACIONAMIENTO PASE
MUN. BARRANQUITAS
BARRANQUITAS, P.R.

DESCRIPCION
PLANO DE SITIO
PROPUESTO

PS-2 3 of 15

ING. RAFAEL A. ZAYAS ROLÓN
EDMUNDO 13048



LEYENDA:

SÍMBOLO	DESCRIPCIÓN
	LÍNEA DE PROPIEDAD
	ESTACIÓN DE CONTROL
	PUNTOS DE COINCIDENCIA
	POSTE CON LUAMPARABA
	POSTE ELÉCTRICO
	POSTE TELEFÓNICO
	ESTRUCTURA EXISTENTE
	ARBORES
	MANHOLE SANITARIO

REVISIONES		
REVISOR DEL	FECHA	DISTRIBUCION

FECHA:	
REVISADO POR:	
ELABORADO POR:	LIC. #
VICTOR M. RIVERA	2946
ESCALA:	
1:250	
PROYECTO:	
PLANO CONSTRUCCION	
ESTACIONAMIENTO PASEO	
MUN. BARRANQUITAS	
BARRANQUITAS, P.R.	

DESCRIPCIÓN
PLANO DE CONTROL

ING. RAFAEL A. ZAYAS ROLON
UJENCA 15248



4. THERE SHALL BE TWO 4" ORANGE AND 4" WHITE REFLECTIVE SHEETING STRIPS ON EACH SIDE SUBJECTED TO THE FOLLOWING ORANGE AND WHITE ORANGE

NOTES TO CONSTRUCTION INSPECTOR & CONTRACTOR:

4. IN NO EVENT SHALL THE CONSTRUCTION INTERFERE WITH THE FREE TRANSIT OF VEHICLES

6-THE CONTRACTOR SHALL AT ALL TIMES TAKE ALL REASONABLE PRECAUTIONS FOR THE

SHALL PROVIDE AND UTILIZE EQUIPMENT FOR PERSONAL PROTECTION, MATERIALS, TOOLS & CR. EQUIPMENT AND ACCESSORIES, AND SERVICES, AND SHALL MAINTAIN THE

3-ALL SLIDS SHALL MEET SIZE, MATERIAL, MOUNTING FRAME, REFLECTION AND ALL OTHER REQUIREMENTS

THE CONTRACTOR SHALL HAVE THE AFFECTED GAMES REWOUND, IF, AS THE SAME CONDITION OR BETTER THAN BEFORE CONSTRUCTION.

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[illegible]

<u>VANGUARD 13M</u>	<u>CONTRACT 24</u>	<u>WEIGHT 8.65</u>
0	STERE	25

B, C AND D WARNING SIGNS



[illegible][illegible]

FECHA: **ABRIL 2023**

REVISADO POR:

DESIGNED FOR:	LOC. #
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ESOM 44

THE CONCLUSION

ESTACIONAMIENTO PUBLICO
MUN. BARRANQUITAS
BARRANQUITAS, P.R.

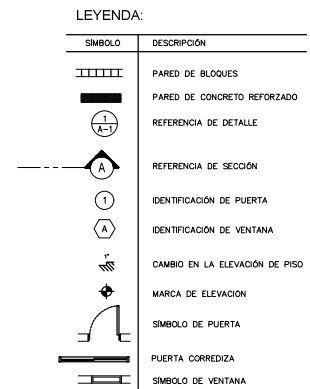
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PERSPECTIVAS

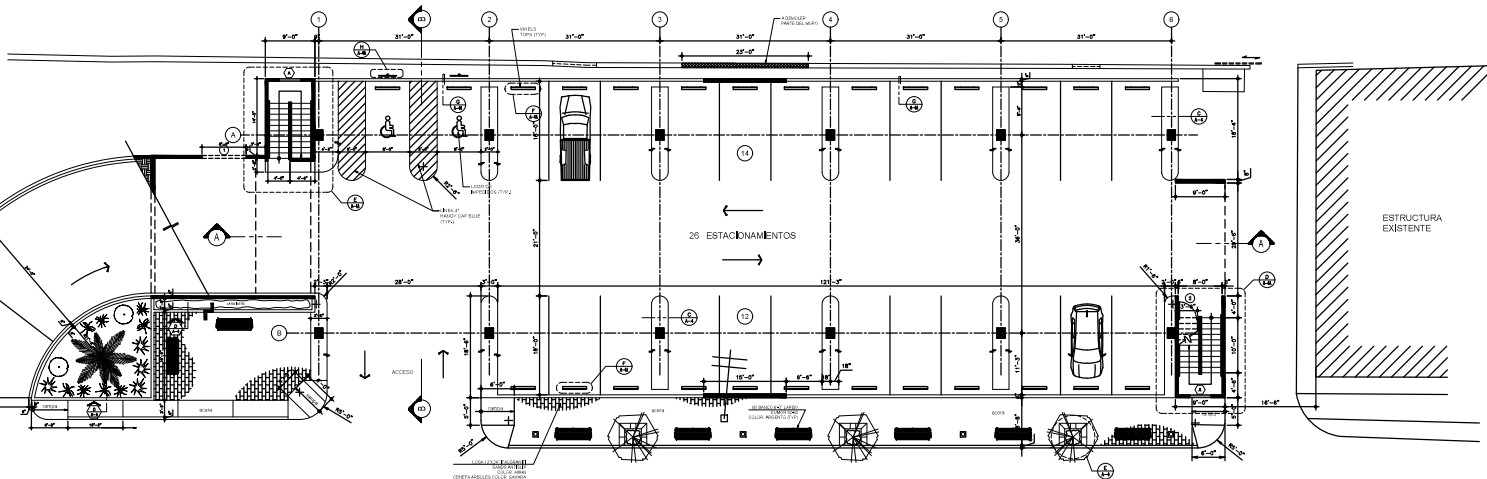
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ING. RAFAEL A. ZAYAS ROLON
LICENCIA 13248



PLANTA ARQUITECTONICA - NIVEL SUPERIOR (32 ESTACIONAMIENTOS)
ESCALA: 3/32"=1'-0"



PLANTA ARQUITECTONICA - NIVEL BASE (26 ESTACIONAMIENTOS)
ESCALA: 3/32"=1'-0"

← CALLE BARCELO (PR #156) →

[illegible][illegible]

FECHA:

RENTADO POR:

DEBIDO POR:	LC. \$
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PROYECTO:

PLANO CONSTRUCCION
ESTACIONAMIENTO PUBLICO

MUN. BARRANQUITAS

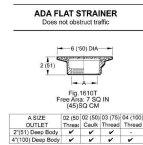
BARRANQUITAS, P.R.

DESCRIZIONE
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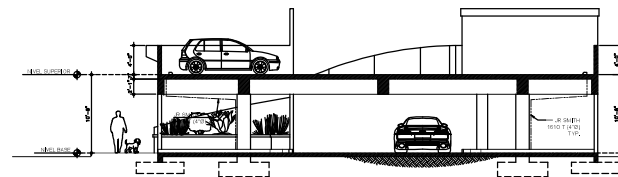
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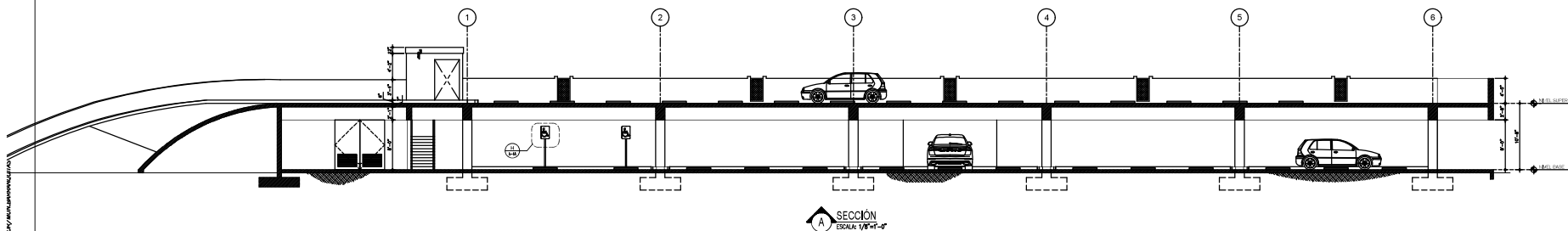
ING. RAFAEL A. ZAYAS ROLÓN



PLANTA DRENAJE - SEGUNDO NIVEL
ESCALA: 3/32"=1'-0"



PLANTA DRENAJE - PRIMER NIVEL
ESCALA: 3/32"=1'-0"



SECCIÓN
ESCALA: 1/8"=1'-0"

CENTRAL GROUP, PSC.

 ENGINEERING - ARCHITECTURAL - PLANNING
 43 CALDWELL STREET, NEWTON, MA 02459 - TEL. & FAX (781) 551-4201

[illegible][illegible]FECHA: _____
REVISADO POR: _____

DEBILADO POR:	LEC. B
VICTOR E. RIVERA	2946
ESCALA:	
VARIA	

PLANO CONSTRUCCION
ESTACIONAMIENTO PUBL
MUN. BARRANQUITAS
BARRANQUITAS, P.R.

DESCRIPCION:
PLANTAS DE DRENAJE
Y SECCIONES

A-3 9-19

ING. RAFAEL A. ZAYAS ROLON
LICENCIA 13248

S-0.1	STRUCTURAL DRAWING INDEX & GENERAL NOTES
S-0.2	REINFORCED CONCRETE DETAILS & NOTES
S-1.0	FOUNDATION PLAN
S-1.1	ROOF STRUCTURAL PLAN
S-2.0	STRUCTURAL FRAME ELEVATION

AD	Additional Dead Load	LLH	Long Leg Horizontal
AB	Anchor Bolt	LOC	Location
A/C	Air Conditioner	LONGIT	Longitudinal
AD2L	Additional	LI	Lightweight
AF	Above Finish Floor	LL	Live Load
AL	Aluminum	MAX	Maximum
ACH	Architectural	MECH	Mechanical
ARCH	Architect, Architectural	MEZZ	Mezzanine
BCB	Bottom Chord Bearing	MFG	Manufacturer
BD	Base	MD	Middle
BLDG	Building	MET	Metals
BLUG	Blockage	MISC	Mixed
BM (s)	Beams (s)	MTL	Material, Metal
BO	By Others, Blockout, Bottom of opening	N	North
B	Bottom	NIC	Not in Contract
BP	Base Photo	NF	Not Face
BRO	Bridging	N#	Number
B	Bearing	Nominal	Nominal
BCM	Bottom of Beam	NTS	Not to Scale
BN	Beam Number	NS	Not Side
CNT	Centile	OC	On Center
CG	Center of Gravity	OD	Outside Diameter
CP	Cast-in-place Concrete	OPG	Opening
COS	Center of Strands (steel)	OPP	Opposite
		OSP	Opposite Half
		O.O.	Out to Out
CL	Cent rail or Construction Joint	PL	Plate
CL	Ceiling	PLT	Plastic
CLG	Caulking	PCF	Pounds per Cubic Foot
CLR	Clear, Clearance	PERM	Perimeter
CLC	Clearance Heavy Unit	PERP	Perpendicular
COL	Column	PLF	Pounds per Linear Foot
CONC	Concrete	PROJ	Projection
CONN	Connection	PSF	Pounds per Square Foot
CONST	Construction	PSI	Pounds per Square Inch
CONT	Continuous	RECT	Rectangle
CORR	Corrupted	RE	Refer (enough)
CTR	Center	REINF	Reinforcement/Reinforce
DBA	Deformed Bar Anchor	REV	Revision
DBL	Double	REQD	Required
DN	Dimension	S	South
DNG	Decking	SC	Scale
DK	Ditto	SCHD	Schedule
DTL	Detail	SECT	Section
DWG (s)	Drawing (s)	SER	Structural Engineer
DWL	Dead Load	SH	Sheet
E	Each	SMT	Similar
EA	Each	SL	Slab
EMB	Embedment	SLV	Slieve
EE	Each End	SPOS	Spaces
EF	Each Face	SPCS	Spacing
EG	Exiting Grade	SPL	Splice
EX	Expansion Joint	SPEC	Specification
ELEV	Elevation, Elevator	STF	Stiffener
ENGR	Structural Engineer	SS	Slab on Grade
EQ	Equal	S.O.F	Step of Footing
EXIST	Existing	STRNR	Strut
EXP	Expansion Bolt	STL	Steel
EXT	Exterior	STR	Structure
EXL	Each Way	TEMP	Temperature
EW	Each Way	THK	Thickness
ETC	Etc	THRD	Threaded
F	Footing Number	TOPC	Topping
FB	Foot Beam	TP	Typical
FE	For Face, Finished Face	T.O.B	Top of Beam
FFE	Finish Floor Elevation	T.O.C	Top of Concrete
FG	Final Grade	T.O.D.	Top of Deck
FN	Finish	T.O.J	Top of Joist
FLG	Flange	T.O.P.	Top of Opening
FND	Foundation	T.O.S	Top of Slab or Steel
FRG	Framing	T.O.W	Top of Wall
FT	Foot, Feet	T & B	Top and Bottom
FS	Far Side	U	Units
FSG	Finish Gauge	UNL	Unless Noted Otherwise
GALV	Galvanized	VB	Vertical
GC	General Contractor	VERT	Vertical
GR	Grade	VMS	Vories
H	Horizontal	W	West, Wire, Size
HORIZ	Horizontal	W/C	Water Cement Ratio
HH	Horizontal Hole	WOOD	Wood
HDAS	Headed Anchor Stud	WP	Work Point
HSS	High Strength Bolt	WT	Weight
H	Height	W/W	Welded Wire Fabric
ID	Inside Diameter	W/	With
INFO	Information	W/W	Welded
INT	Interior	W/W	Waterproof
JST	Joist	WM	Welded Wire Mesh
J	Joint	WMA	And
K	Kips		
KLF	Kips per linear foot		
KSF	Kips per square foot		
KSI	Kips per square inch		
L	Left, Length		
LAM	Laminated		
LBS	Pounds		
LEV	Level		
LLV	Long Leg Vertical		

THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE SPECIFICATIONS AND THE ARCHITECTURAL, ELECTRICAL, MECHANICAL AND ANY OTHER TRACE DRAWINGS. IF THERE IS A DISCREPANCY BETWEEN DRAWINGS, THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ARCHITECT AND THE ENGINEER PRIOR TO PERFORMING ANY WORK.

3- CONTRACTOR SHALL BE RESPONSIBLE FOR DISCREPANCIES ON STRUCTURAL DRAWINGS WITH THE ARCHITECTURAL DRAWING BEFORE LAYING OUT ANY WORK. IF ANY DISCREPANCY ARISES THE ARCHITECT AND ENGINEER MUST BE NOTIFIED.

3-1- DETAILS, NOTES AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE WITH THE APPROVAL OF THE ENGINEER.

4- THE FOLLOWING CODES, STANDARDS AND SPECIFICATION APPLY TO ALL THE CONSTRUCTION WORKS:

- 1- 2018 P.R. BUILDING CODE
- 2- INTERNATIONAL BUILDING CODE (IBC 2018)
- 3- AISC STANDARD 17-16
- 4- AMERICAN CONCRETE INSTITUTE 318-14 LATEST EDITION
- 5- AMERICAN INSTITUTE OF STEEL CONSTRUCTION, 9 EDITION
- 6- AMERICAN WELDING SOCIETY 2014 LATEST EDITION
- 7- CONCRETE REINFORCING STEEL INSTITUTE LATEST EDITION
- 8- AMERICAN SOCIETY FOR TESTING AND MATERIAL
- 9- STEEL DECK INSTITUTE LATEST EDITION
- 10- ACI, MANUAL OF CONCRETE PRACTICE, LATEST EDITION

5- DESIGN LOADS:

- A)-LIVE LOADS:
 - 1) PARKING SPACE ----- 40 PSF
 - 2) OFFICE AREA ----- 50 PSF
 - 3) STAIRS AND EXIT WAYS -----100 PSF
 - 4) MECHANICAL ROOM ----- 100 PSF
 - 5) ROOF ----- 40 PFS

B)-WIND LOADS:

WIND LOAD SHALL BE COMPUTE AS PER ASCE-7-16

- 1)-BASIC WIND SPEED ----- 160 MPH
- 2)-IMPORTANCE FACTOR ----- 1.0
- 3)-EXPOSURE CATEGORY ----- 3
- 4)-TOPOGRAPHIC FACTOR ----- 1.0
- 5)-INTERNAL PRESSURE COEFFICIENT C_{pi} ----- ± 0.0

C)-SEISMIC LOADS:

SEISMIC LOAD SHALL BE COMPUTE AS PER ASCE-7-16

- 1)-SEISMIC IMPORTANCE FACTOR ----- $I_p = 1.0$
- 2)-SPECTRAL RESPONSE ACCEL ----- $S_a = 0.97g$ ----- $S_w = 0.37g$
- 3)-SPECTRAL RESPONSE COEFFICIENTS ----- $C_s = 0.668g$ ----- $C_w = 0.34g$
- 4)-SEISMIC DESIGN CATEGORY ----- D
- 5)-BASIC SEISMIC-CRACK RESISTING SYSTEM
 - W-E DIRECTION ----- WALLS
 - E-W DIRECTION ----- WALLS
- 6)-STRUCTURAL MODIFICATION FACTOR ----- 8.5
- 7)-STRUCTURAL ANALYSIS USED ----- STATIC

1- ANY CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN WIND-OR SEISMIC-FORCE-RESISTING SYSTEM, DESIGNATED SEISMIC SYSTEM OR A WIND-OR SEISMIC-RESISTING COMPONENT LISTED IN THE STRUCTURAL SPECIAL INSPECTION REPORT SHALL STATEMENT TO THE DESIGNATED INSPECTOR OR DESIGN PROFESSIONAL IN CHARGE, OR THE OWNER, PRIOR TO THE COMMENCEMENT OF WORK ON THE STRUCTURAL SPECIAL INSPECTION, THAT THE CONTRACTOR HAS EMPLOYED A QUALIFIED INSPECTOR LISTED SPECIAL INSPECTION, WHICH WILL BE PERFORMED BY THE REGISTERED DESIGN PROFESSIONAL AS REQUIRED BY THE CONTRACT DOCUMENTS.

2- THE OWNER WILL PROVIDE THE SERVICES OF A SPECIAL INSPECTOR WITHIN THE SPECIFICATIONS DESCRIBE HEREIN, AND THE CONTRACTOR SHALL PROVIDE THE SPECIAL INSPECTOR WITH THE FOLLOWING:

A. CAST-IN-PLACE CONCRETE - PROVIDE CONTINUOUS AND PERIODIC SPECIAL INSPECTION AND STRUCTURAL TESTS AS SHOWN IN SPECIFICATION SECTION 033000 FOR THE FOLLOWING COMPONENTS OF THE WORK:

- 1. PERIODIC INSPECTION OF REINFORCING STEEL
- 2. PERIODIC INSPECTION OF REINFORCING STEEL AND BOLTS INSTALLED PRIOR TO CONCRETE PLACEMENT
- 3. PERIODIC INSPECTION TO VERIFY USE OF REQUIRED DESIGN MIX
- 4. CONTINUOUS INSPECTION AT THE TIME FRESH CONCRETE IS SAMPLED FOR STRENGTH TEST TO DETERMINE COMPRESSIVE STRENGTH
- 5. PERIODIC INSPECTION OF CONCRETE FOR PROPER CURE
- 6. CONTINUOUS INSPECTION OF CONCRETE FOR PROPER APPLICATION AND PLACEMENT TECHNIQUES
- 7. PERIODIC INSPECTION OF CONCRETE FOR PROPER CURING
- 8. PERIODIC INSPECTION OF IN-SITU CONCRETE STRENGTH PRIOR TO THE REMOVAL OF SHORES AND FORMS
- 9. PERIODIC INSPECTION OF CONCRETE FORMWORK, SHORING, AND RESHORING

B. STRUCTURAL STEEL - PROVIDE CONTINUOUS AND PERIODIC SPECIAL INSPECTION AND STRUCTURAL TESTS AS SHOWN IN SPECIFICATION SECTION 051000 FOR THE FOLLOWING COMPONENTS OF THE WORK:

- 1. PERIODIC INSPECTION VERIFYING MATERIALS FOR HIGH-STRENGTH BOLTS, NUTS, AND WASHERS
- 2. PERIODIC INSPECTION OF STEEL CONNECTIONS FOR PROPER WELDING
- 3. CONTINUOUS INSPECTION OF SPLIT-CURTICLE TYPE CONNECTION USING HIGH-STRENGTH BOLTS
- 4. PERIODIC INSPECTION OF STEEL CONNECTIONS FOR PROPER WELDING
- 5. PERIODIC INSPECTION OF STEEL CONNECTIONS FOR PROPER WELDING
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- 100. PERIODIC INSPECTION OF STEEL CONNECTIONS FOR PROPER WELDING

C. POSITIONING AND BRACING - PROVIDE CONTINUOUS AND PERIODIC SPECIAL INSPECTION AND STRUCTURAL TESTS AS SHOWN IN SPECIFICATION SECTION 053100 FOR THE FOLLOWING COMPONENTS OF THE WORK:

- 1. PERIODIC INSPECTION OF PRESTRESSING TENDONS
- 2. CONTINUOUS INSPECTION OF APPLICATION OF PRESTRESSING STRESSING
- 3. PERIODIC INSPECTION OF PRESTRESSING TENDONS
- 4. CONTINUOUS INSPECTION OF APPLICATION OF PRESTRESSING STRESSING
- 5. PERIODIC INSPECTION OF PRESTRESSING TENDONS
- 6. CONTINUOUS INSPECTION OF APPLICATION OF PRESTRESSING STRESSING
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- 40. CONTINUOUS INSPECTION OF APPLICATION OF PRESTRESSING STRESSING
- 41. PERIODIC INSPECTION OF PRESTRESSING TENDONS
- 42. CONTINUOUS INSPECTION OF APPLICATION OF PRESTRESSING STRESSING
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- 1- BACKFILLING AGAINST FOUNDATION WALLS SHALL BE DONE WITH SMALL COMPACTING EQUIPMENT IN LAYERS NOT EXCEEDING 6" DEPTH PER PASS. MATERIAL SHALL BE GRANULAR ASBESTIC CLASSIFICATION A-2 OR BETTER REFER TO GEOTECHNICAL REPORT.
- 2- NO BACKFILLING SHALL BE REDISTRIBUTED AGAINST BASEMENT WALLS UNTIL UPPER SLAB ARE IN PLACE AND ALL REINFORCING BARS HAVE BEEN SET.
- 3- ALL INTERIOR SLAB ON GROUND SHALL BE CAST OVER A POROUS MATERIAL WITH A 6 M.L. MIN.
- 4- FOUNDATION HAS BEEN DESIGN USING THE FOLLOWING PARAMETERS:
A - SOIL BEARING PRESSURE IS 3,000 PSF AT DEPTH SHOWN ON DRAWING.
B - WIND SPEED CATEGORY II, EXPOSURE B, AS PER UBC CODE, INC. DATE 11/03/2013, COS 458
CONTRACTOR IS RESPONSIBLE FOR OBTAINING COPY OF SUCH REPORT AND MEMORANDUMS, AND FOR PROVIDING INFORMATION TO ARCHITECT FOR RECORD.
- 5- CONTRACTOR SHALL VERIFY ALL EXISTING FIELD CONDITIONS THAT MAY AFFECT THE INSTALLATION OF THE FOUNDATION SYSTEM AS SHOWN PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL REVIEW ALL EXISTING RECORDS AND FIELD DATA, AND SHALL BE RESPONSIBLE FOR NOTIFYING ARCHITECT OF ANY DISCREPANCIES AND SUBMIT FOR REVIEW BY THE OWNER'S GEOLOGICAL ENGINEER.
- 7- SEE SPECIFICATIONS AND REFERENCES GEOTECHNICAL REPORT FOR REQUIREMENTS FOR EXCAVATIONS AND EROSION CONTROL MEASURES TO BE USED DURING CONSTRUCTION OF FOUNDATION. PROPOSED MEASURES CONTAINED IN THE GEOTECHNICAL REPORT ARE PART OF THIS WORK.
- 8- CONTRACTOR SHALL TAKE NECESSARY PREVENTATIVE MEASURES TO PROTECT ADJACENT FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATENT MOVEMENT, UNDERMINING, WASHOUT, AND OTHER HAZARDS CREATED BY EXCAVATION AND FOUNDATION CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING THE DESIGN, INSTALLATION, MONITORING, AND FINAL REMOVAL OF ANY REQUIRED NEEDLING, UNDERPINNING, SHORING, OR OTHER CONSTRUCTION OF WHICH NO RECORDS ARE AVAILABLE, MAY BE ENCOUNTERED. THE CONTRACTOR SHALL FORMULATE HIS OWN CONCLUSIONS AS TO THE EXTENT OF SUCH CONSTRUCTION AND SHALL REMOVE ALL SUCH CONSTRUCTION AFTER COMPLETION OF THE FOUNDATION WORK. CONTRACTOR SHALL OBTAIN THE STRUCTURAL ENGINEER'S WRITTEN APPROVAL.
- 9- CONTRACTOR SHALL MAINTAIN SUFFICIENT STAKE WATERMARKS AT ALL CRITICAL VERTICAL AND HORIZONTAL JOINTS IN ALL BELOW GRADE CONCRETE INCLUDING ELEVATOR PITTS AND FIT WALLS.
- 12- ALL SHORING, SHEETING, AND DETRAINING SHALL BE THE TOTAL RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL MAINTAIN ALL SHORING AND SHEETING THROUGHOUT THE ENTIRE PROJECT.
- 13- ANY BACKFILL SHOULD BE PLACED AND COMPACTED IN EQUAL LAYERS TO EQUAL DEPTHS ON BOTH SIDES OF STRUCTURAL ELEMENTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE GEOTECHNICAL REPORT.
- 14- CONTRACTOR SHALL MAINTAIN ACCESS TO ALL UTILITIES AND ADJACENT AREAS AND SHALL REPAIR AND REBAR SUBURGES AND BACKFILL WITH ACCEPTABLE GRANULAR AND/OR COMPACTED FILL IN CONFORMANCE WITH THE

- DENOTES TOP BARS REINFORCEMENT
- DENOTES BOTTOM BARS REINFORCEMENT
- T=0 DENOTES SLAB THICKNESS
- DENOTES R/C WALLS OR COLUMNS ABOVE & BELOW SLAB
- DENOTES R/C WALLS OR COLUMNS ABOVE SLAB
- DENOTES EXISTING WALLS & COLUMNS
- F=0.00 DENOTES TENDON FORCE IN K/T
- (0.00) DENOTES C. G. OF TENDONS IN
- DENOTES TEMP. REINFORCEMENT AS SHOWN ON DRAWINGS
- DENOTES P.T. CABLES
- (0.0) DISTANCE TO C.G. FROM BOTTOM OF SLAB OR BEAM
- VERTICAL STEP
- (A) COLUMNS OR WALL LINE
- MATCH LINES
- WELDED WIRE FABRIC
- (S-C) INDICATES DETAIL NUMBER
- (S-C) INDICATES NUMBER WHERE DRAWN
- (S-C) INDICATES SECTION NUMBER
- (S-C) INDICATES NUMBER WHERE DRAWN
- F=0.00 INDICATES FOOTING TYPE
- (0.00) INDICATES TOP OR BOTTOM OF FOOTING ELEVATION
- INDICATES CONCRETE PILE/PIERS WHERE SHOWN ON PLAN

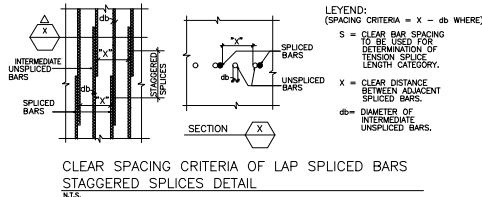
[illegible]

BARS SIZE NO.	CONCRETE STRENGTH P.S.I. (40th) in.		
	3,000	4,000	5,000
#3	7	6	6
#4	9	8	7
#5	11	10	9
#6	13	11	10
#7	15	13	12
#8	17	15	14
#9	20	17	15
#10	22	19	17
#11	24	21	19



BARS SIZE		#3	#4	#5	#6	#7	#8	#9	#10	#11
TENSION LAP		SPICES TOP BARS								
CONCRETE STRENGTH	3,000 P.S.I.	21	28	35	46	63	82	104	132	162
	4,000 P.S.I.	18	24	30	40	54	71	90	114	140
	5,000 P.S.I.	16	22	27	36	48	64	81	102	126
TENSION LAP		SPICES								
CONCRETE STRENGTH	3,000 P.S.I.	16	22	27	35	48	63	80	102	125
	4,000 P.S.I.	16	19	23	31	42	55	69	88	108
	5,000 P.S.I.	16	17	21	27	37	49	62	79	97
COMPRESSION LAP		SPICES								
CONCRETE STRENGTH	3,000 P.S.I. UP TO 4,000 P.S.I.	12	15	19	23	26	30	34	38	42

*NOTE: FOR CLASS B TENSION SPLICE ONLY. (CATEGORY 3 AS PER CRSI)
TOP BARS IS HORIZONTAL REINF. WITH MORE THAN 12"
CONCRETE BELOW BAR



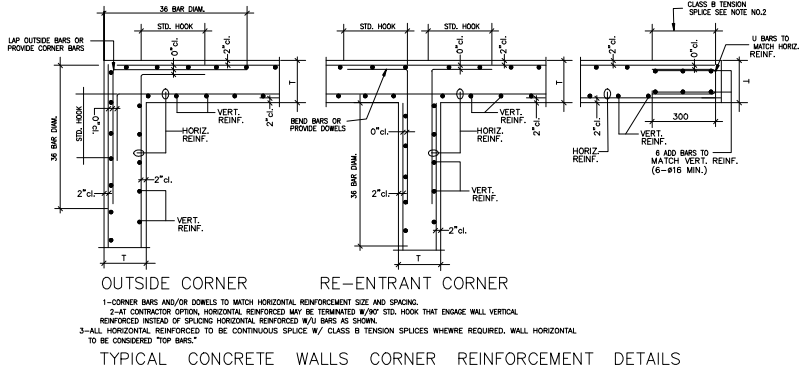
2- ALL CONCRETE SHALL DEVELOPED A MINIMUM 28-DAYS CYLINDER COMPRESSIVE STRENGTH AND SHALL CONTAIN A MAXIMUM WATER CEMENT RATIO AS SHOWN BELOW:

LOCATION	STRENGTH PSI	W/C
A- SLAB ON GROUND	5,500	.65
B- MAT FOUNDATION & FOOTINGS	4,000	.60
C- FOUNDATION WALLS	4,000	.50
D- STRUCTURAL SLABS & BEAMS	5,000	.50
E- COLUMNS NOT IN SCHEDULE	4,000	.60
F- PRECAST	5,000	.50
G- MISCELLANEOUS	4,000	.60

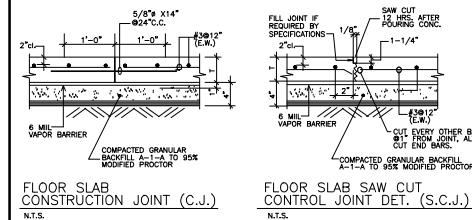
3- ALL CONCRETE SHALL BE TESTED AS PER ACI 318-14 FOLLOWING THE PROCEDURES IN THE ASTM C-172 AND C-39, LATEST EDITION. IF APPROVED CURING METHOD ARE NOT FOLLOWED, FIELD CURE CYLINDER ARE REQUIRED, FOLLOWING ASTM STANDARDS. ALL TESTING SHALL BE PERFORMED UNDER THE SUPERVISION OF A CERTIFIED TESTING LABORATORY TO BE APPROVED BY THE ENGINEER.

4- CONCRETE DESIGN MIX SHALL NOT HAVE SLUMPS OVER 4 INCHES UNLESS A HRWR ADMIXTURE (SUPER PLASTICIZER) IS USED.

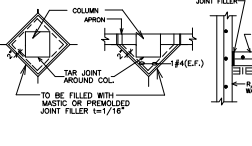
5- ALL CONCRETE SHALL BE CURED AS SPECIFY IN THE STANDARD PRACTICE FOR CURING CONC. ACI 308-92.



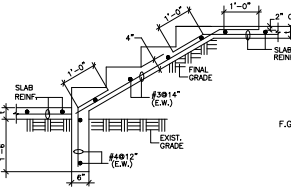
N.T.S.



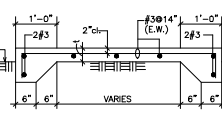
N.T.S.



NOT TO SCALE:



N.T.S.



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E-MAIL: centralgroupinfo@aol.com

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FECHA: MAYO.2023

REVISADO POR:

DISEÑADO POR: U.C. #

WCTOR R. RIVERA 2046

ESCALA: $3/32"=1'-0"$

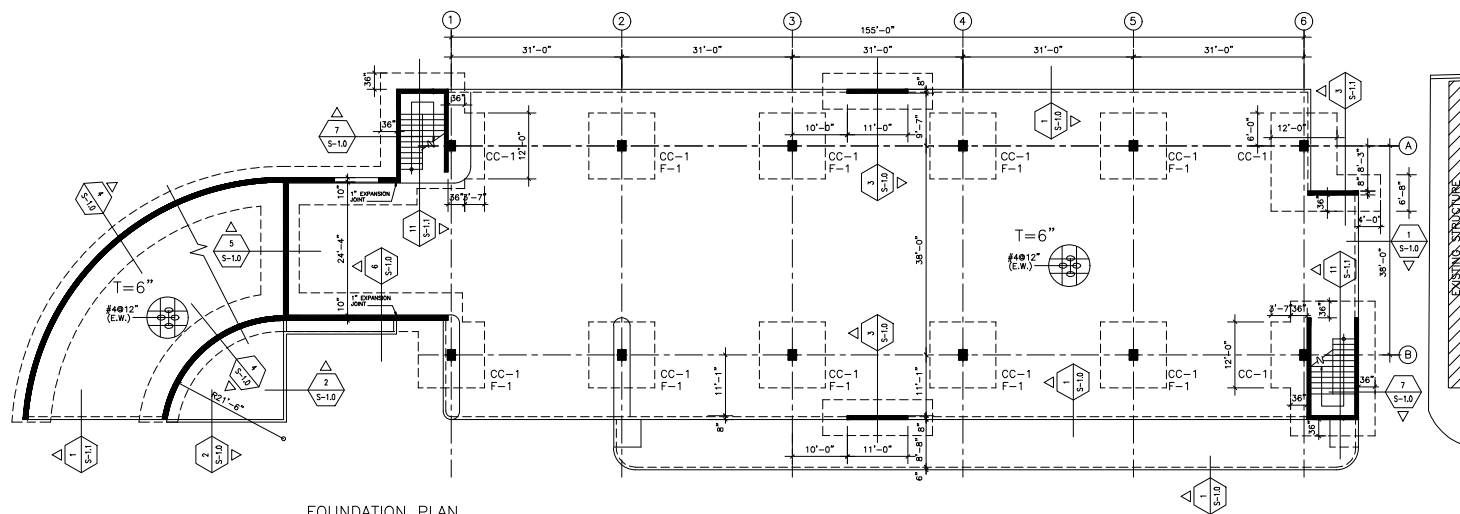
PROYECTO:

PLANO RECONSTRUCCION
ESTACIONAMIENTO PASEO
MUN. BARRANQUITAS
BARRANQUITAS, P.R.

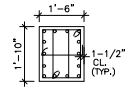
REINF. CONCRETE
DETAILS & NOTES

DEGREE NAME: HOUR NAME:



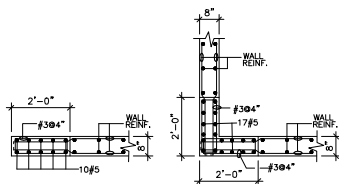


FOUNDATION PLAN
SC: 3/32"=1'-0"

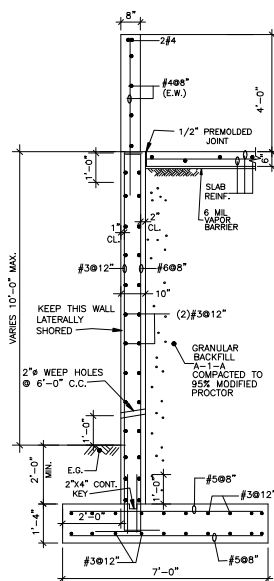


VERT. REINF. 14#7
TIES SEE FRAME ELEVATION

TYP. COLUMN DETAIL
MKD. CC-1

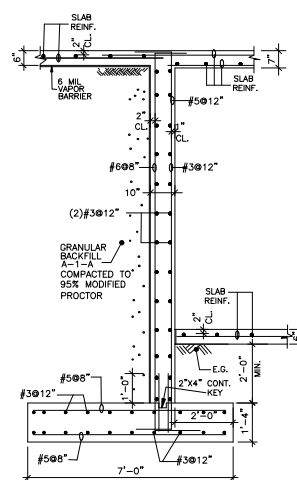


TYP. WALL BOUNDARY DETAIL
FOR EDGE AND CORNER

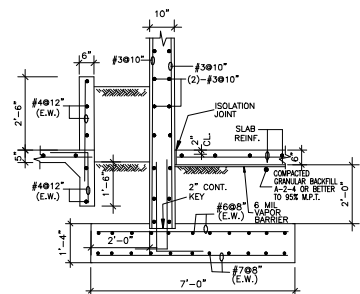


SECTION 

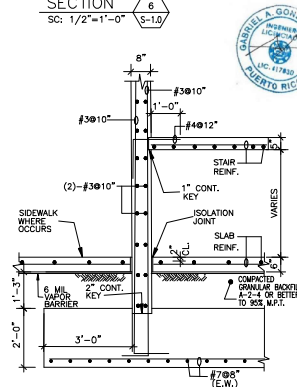
SC: 1/2"=1'-0"



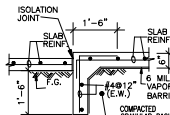
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SC: 1/2"=1'-0" S-1.0



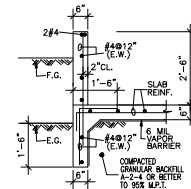
SECTION  6
SC: 1/2"=1'-0"  S-1.0



SECTION 
SC: 1/2"=1'-0"



SECTION 1
SCALE: 1/2"=1'-0"



SECTION 2
SCALE: 1/2"=1'-0" S-1



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E-MAIL: centralgroup@psd.com

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FECHA:
ABRIL 2023

REVISADO POR:

DEJADO POR: LIC. #
VICTOR M. BARRERA 2948

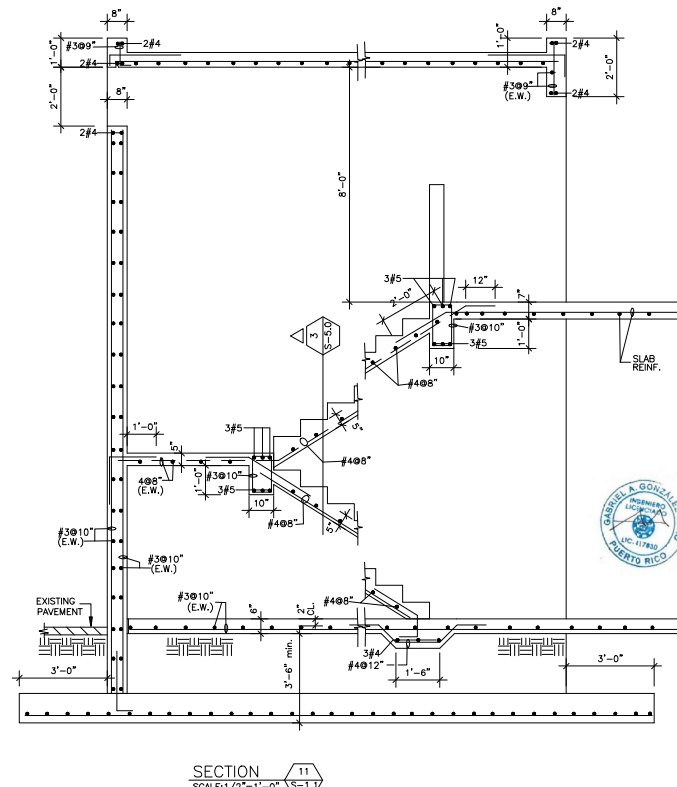
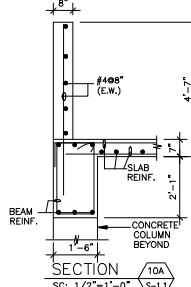
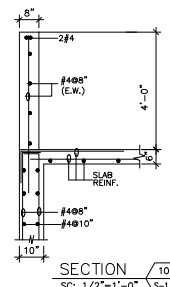
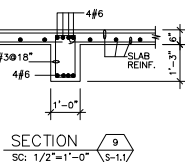
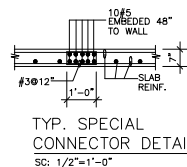
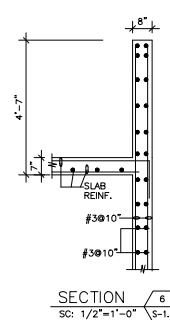
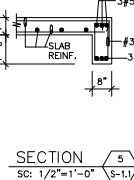
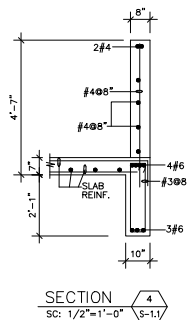
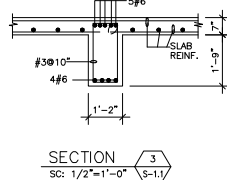
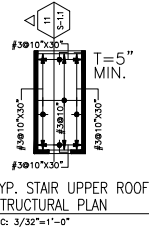
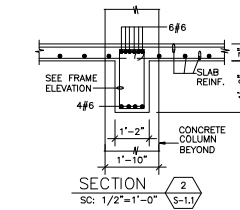
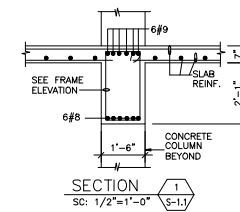
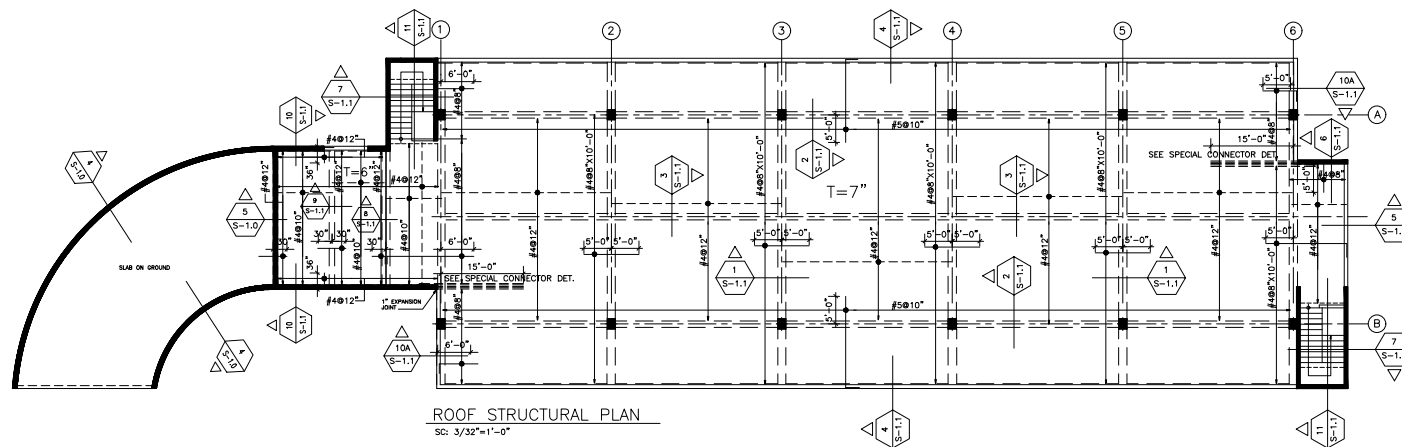
ESCALA:
3/32"=1'-0"

PROYECTO:

PLANO RECONSTRUCCION
ESTACIONAMIENTO PASEO
MUN. BARRANQUITAS
BARRANQUITAS, P.R.

FOUNDATION PLAN

DIBUJO NUM.	FOLIO NUM.
S-1.0	DE



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63 GALT WHEELER TRL 200 MARLBOROUGH, MA 02546 • TEL. & FAX (508) 467-4831
E-MAIL: centralgroup@earthlink.net

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FECHA: ABRIL 2023

REVISADO POR:

DEMANDA POR: LIC. §

VICTOR N. RIVERA 2948

ESCALA: $3/32"=1'-0"$

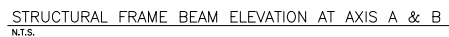
PROYECTOR:

PLANO RECONSTRUCCION
ESTACIONAMIENTO PASEO
MUN. BARRANQUITAS
BARRANQUITAS, P.R.

DESCRIPTION:

ROOF STRUCTURAL PL

DIBUJO NUM	FOLIA NUM
S-1.1	DE



FILE NAME : TR-VCTOR/MUN.BARRANQUITAS

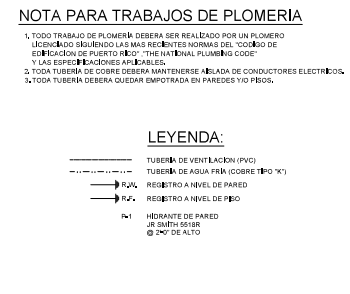
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PLANO RECONSTRUCCION
ESTACIONAMIENTO PASE
MUN. BARRANQUITAS
BARRANQUITAS, P.R.

DESCRIPTION:

STRUCTURAL FRAME
ELEVATION

DIBUJO NUM: **S-2.0**
 HOJA NUM: **DE**



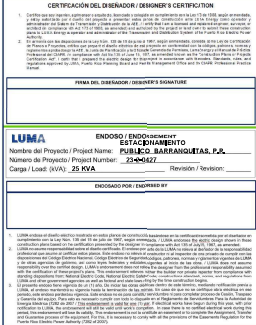
1. El dueño del proyecto es responsable de realizar las pruebas de los cables primarios y secundarios con sus terminaciones. Los resultados de estas pruebas tienen que estar de acuerdo con los parámetros establecidos por la AEE para los mltamos. Estas pruebas tienen que realizarse en coordinación con un representante de la Oficina de Inspecciones del Departamento de Ingeniería de Distribución correspondiente.
2. Durante la instalación del cable, éste debe estar protegido de la humedad y abrasiones. El contratista es responsable de instalar el cable mediante las prácticas recomendadas de halado para no exceder la tensión especificada para el cable.
3. Las tapas de registros (manholes) a ser instalados en el área de siembra tienen que estar protegidos mediante una loza de hormigón reforzado, según especificado en el patrón URB-52.
4. En aquellos casos donde el proyecto está localizado a menos de una milla de un cuerpo de agua, los conductos ascendentes tienen que ser de PVC Schedule 80 o de fiberglass, según aprobado por la AEE.
5. Las bandejas del sistema enterrado serán inspeccionadas por la AEE antes de ser cubiertos y compactadas.
6. Todo banco expuesto a tráfico vehicular tendrá que ser protegido con hormigón. Aquellas que se encuentren cerca de instalaciones de otras utilities tendrán un despeje mínimo de 13 pulgadas de éstas.
7. La cantidad de fusibles de reemplazo que proveerá el contratista será la misma cantidad de los instalados en cada subestación.
8. Los conectores que se utilizarán para la conexión a tierra de antenas y subestaciones serán de soldadura extérmica (thermo-weld) o de compresión.
9. El contratista proveerá cable de halado (fishwire) en cada conducto de resguardo.
10. Todo sistema de distribución tendrá una resistencia máxima a tierra de 10 ohms. Se instalará una varilla para conectar a tierra el neutral en cada cuatro postes o cada 1,000 pies y en todos los transformadores.
11. Cada base de hormigón para poste tiene que incluir dos conductos de resguardo para uso futuro, según requerido por la AEE.
12. Los bases para postes tienen que ser inspeccionados por la AEE en su etapa de construcción.

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 212 del 15 de mayo de 1938, según enmendada.

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



Yo **INJALRE** Ley **10424**, número de Leyes N° 6242, que establece que soy **profesional** que (confecciona, diseño o preparo) estos **planos** y las especificaciones complementarias. También, declaro que entiendo que dichos planos y especificaciones cumplen con los requisitos establecidos en el Reglamento de Ejecución de los planos aplicables de los Reglamentos y Códigos de Constitución Vigentes de las Agencias, Juntas Reguladoras o Corporaciones Públicas con jurisdicción, Códigos, además, de las disposiciones de la Ley 14004, según enmendada, que cumple con lo establecido en la Ley 14004, según enmendada, conocida como la Ley para la Dispersión por la Industria Puertorriqueña y que en Ley Núm. 39 de 15 de mayo de 1953, según enmendada. Ley Núm. 36 de 6 de mayo de 1978, que establece que los planos que se haya producido por desconocimiento o por negligencia ya sea por mí, mis agentes o empleados, o por otras personas con mi consentimiento, me hacen responsable de cualquier acción judicial disciplinaria por la OGPPE.



OGPe: 2024-606941-SRI-310632
LUMA: 23-2-0427
Carga: 25 KVA
Proecto: Estacionamiento Publico-
Municipio De Barranquitas
Municipio: Barranquitas

[illegible]

ELECTRICAL NOTES

DISCUO NUM: ESI-4

ING. PAPAEL A. ZATAS ROLON
LICENCIADA 13249

Attachment 11. TUC Map

PR-CRP-000988 Barranquitas - Construction of New Public Parking

Coord: 18.185505, -66.305029

Address: State Road PR-156 Km 16.3, Pueblo Ward, Barranquitas, PR 00794



Fuente: Junta de Planificación, Departamento de la Vivienda.

SPCS PR & VI NAD83 W/KID:32161



Centro Urbano
Municipio de Barranquitas



Source: Puerto Rico State Historic Preservation Office (SHPO) at URL https://prahadigital.org/s/flmm_en/page/state-historic-preservation-office

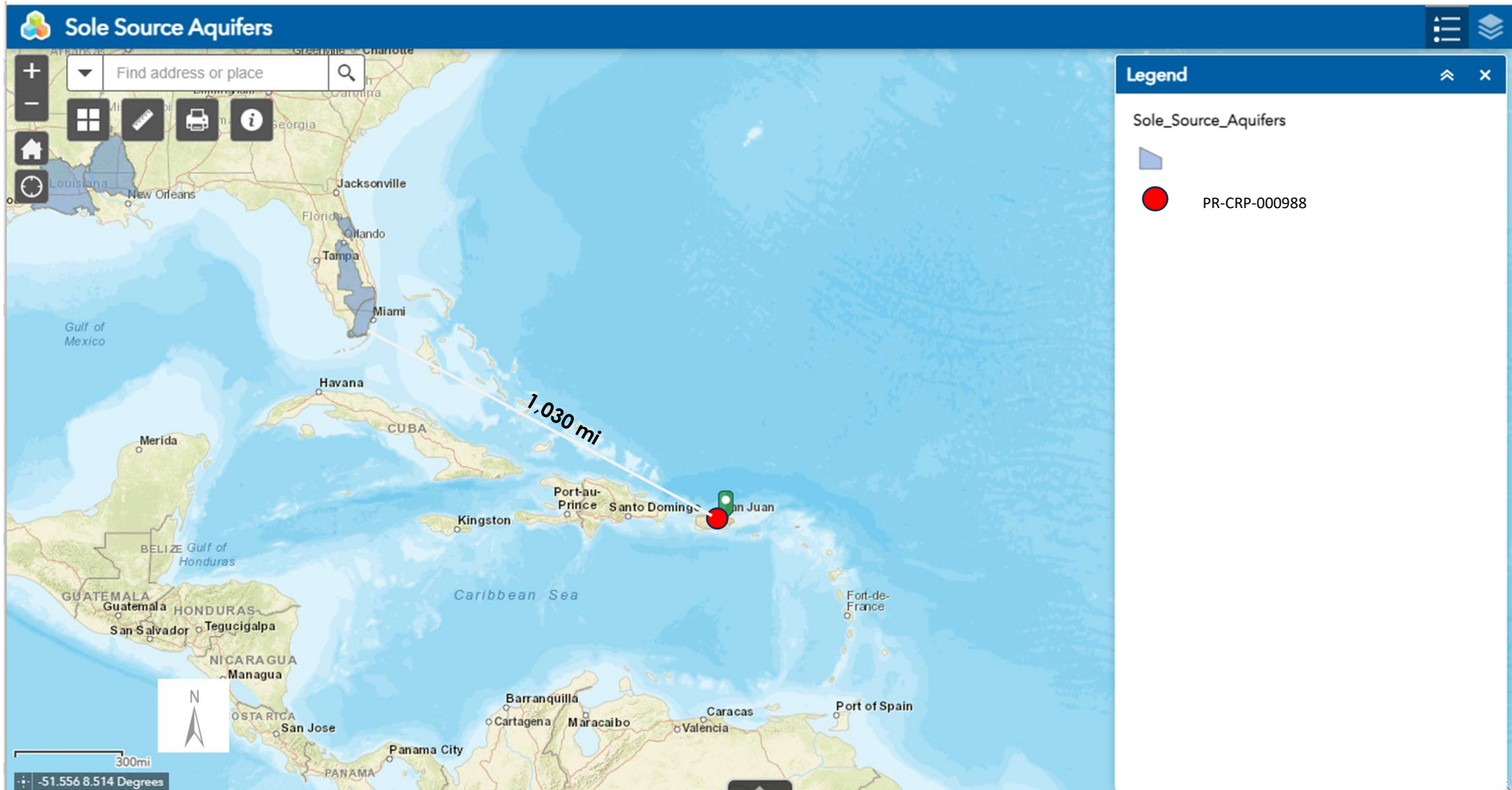
Prepared by ICF

Attachment 12. Sole Source Aquifers Map

PR-CRP-000988 Barranquitas - Construction of New Public Parking

Coord: 18.185505, -66.305029

Address: State Road PR-156 Km 16.3, Pueblo Ward, Barranquitas, PR 00794



Source: U.S. EPA Map of Sole Source Aquifer Locations (Spatial Reference: WGS84), accessed at URL <https://www.epa.gov/dwssa/map-sole-source-aquifer-locations>

Prepared by 

Attachment 13. Wetlands Map

Address: State Road PR-156 Km 16.3, Pueblo Ward,
Barranquitas, PR 00794

Coordinates: Lat: 18.18552356, Lon: -66.30475436



May 30, 2023

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

Attachment 14. Wild and Scenic Rivers Map

Address: State Road PR-156 Km 16.3, Pueblo Ward,
Barranquitas, PR 00794

Coordinates: 18.185505, -66.305029



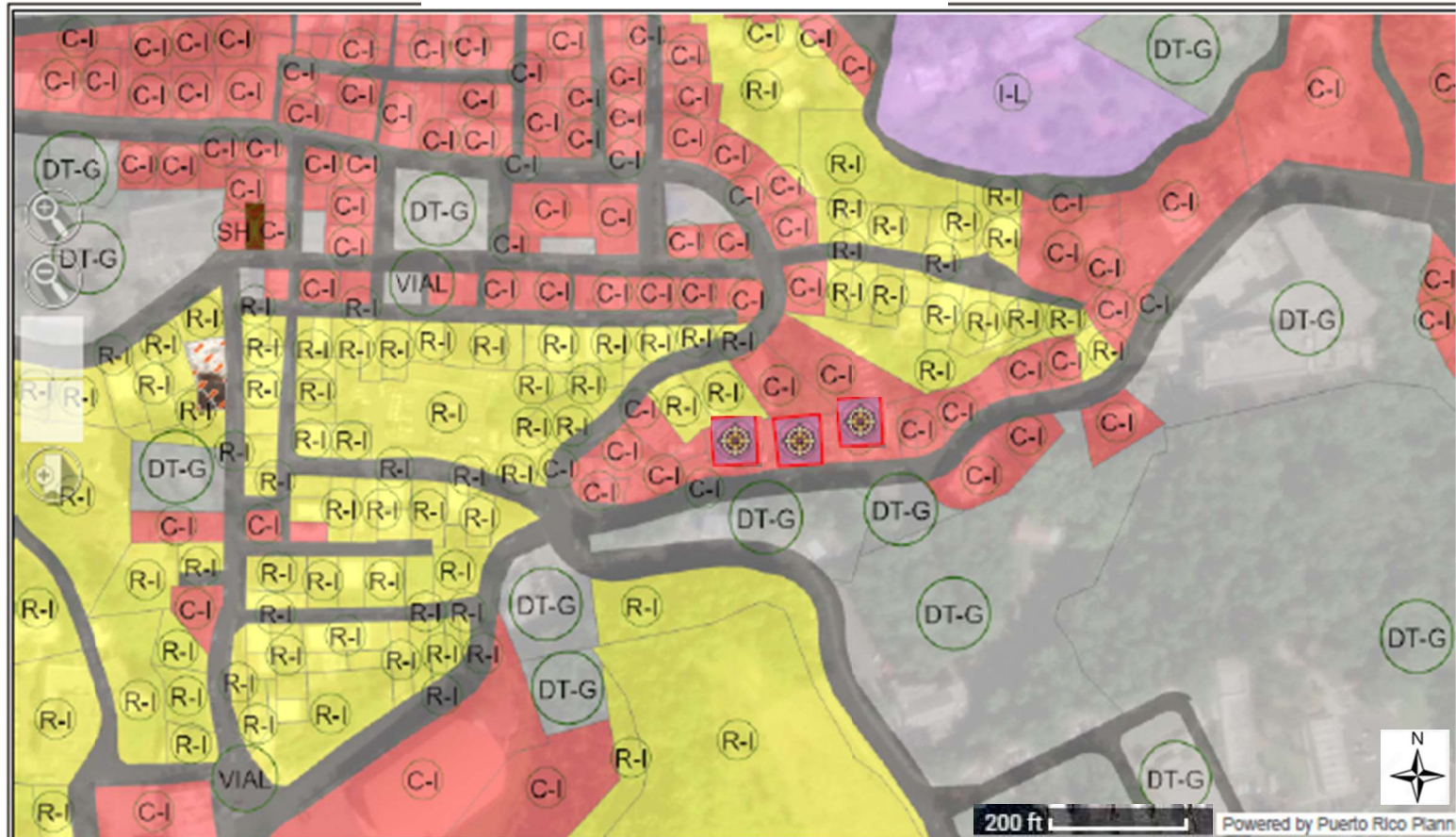
Project Location

Source: US Forest Service (USFS) (Spatial Reference: WGS84),
URL <https://www.arcgis.com/home/webmap/viewer.html?panel=gallery&layers=a37eb56966cc4b11b69909e288414e53>

Attachment 15. Land Use Plan (PUT) Map Address:

State Road PR-156 Km 16.3, Pueblo Ward,
Barranquitas, PR 00794

Coordinates: 18.185505, -66.305029



C-1: Comercial Local	RT-1: Residencial Turístico Intermedio
C-2: Comercial Central Intermed	RU-1: Residencial Baja Densidad min 450
C-3: Comercial Central	RU-2: Residencial Baja Densidad min 300
C-C: Centro Comercial	RU-3: Residencial General min 250 mc
C-I: Comercial Intermedio	
C-L: Comercial Liviano	
C-L: Comercio Liviano	

 Project Location

Source: Puerto Rico Planning Board (Spatial Reference: NAD 83) URL https://gis.jp.pr.gov/mipr/?_ga=2.179884384.573855578.1749479750-1975718757.1701700188&_gl=1*19zkayv*_ga*MTk3NTcxO
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Attachment 16

Geotechnical Report



Geotechnical Engineering Services, PSC

***SUBSOIL EXPLORATION AND
GEOTECHNICAL ENGINEERING REPORT FOR
TWO STORY PARKING BUILDING
BARRANQUITAS, PUERTO RICO***





Geotechnical Engineering Services, PSC

***SUBSOIL EXPLORATION AND
GEOTECHNICAL ENGINEERING REPORT FOR
TWO STORY PARKING BUILDING
BARRANQUITAS, PUERTO RICO***

Central Group Engineering Services, PSC
CLIENT/DESIGNER

Geotechnical Engineering Services, PSC
GEOTECHNICAL CONSULTANTS

Submitted on July 19, 2023
Job No. 234119





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Geotechnical Engineering Services, PSC

SUBSOIL EXPLORATION AND GEOTECHNICAL ENGINEERING REPORT FOR TWO STORY PARKING BUILDING BARRANQUITAS, PUERTO RICO

1.0 INTRODUCTION

The existing municipal on ground parking lot will be redeveloped as a two-story parking building, located at Barceló Street, in the town of Barranquitas, Puerto Rico. As per the request of the office of Central Group Engineering Services, PSC, designers of the project, GEOTECHNICAL ENGINEERING SERVICES, PSC, performed a subsoil exploration at the site of the reference project.

The purpose of the exploration was to establish the physical properties of the underlying subsurface soils' formation in order to evaluate and recommend the soil parameters required for the design of the foundation system of the proposed structure. This report presents the results of the subsurface exploration performed at the site, following the terms and conditions contained in our proposal.

2.0 SITE LOCATION AND PROJECT DESCRIPTION

The parking lot is located at PR-156, in the vicinity of Kilometer 16.2, in the municipality of Barranquitas, Puerto Rico. **Figure 1**, shows a Google Earth aerial photo, with the site location depicted on it. The proposed project consists in the construction of a two-story concrete building supported over twelve columns. At the west side of the lot, the access ramp to the second floor will be constructed with upgrading fills in the order of 2.5 to 3.0 meters high, hence a retaining wall will be required. The site, which is cover with an asphalt pavement is relatively leveled, but the area was heavily upgraded in the past. At the northwest side of the lot, apparently, a 5-foot pipe cross the site.



3.0 WORK PERFORMED

Four (4) borings were drilled to cover the proposed building footprint to depths of 20 and 25 feet. **Figure 2**, shows a site plan with the borings approximately depicted on it.

Routine laboratory tests were conducted on most of the soil samples secured, according the applicable ASTM Designations. The data was then evaluated in order to prepare the foundations recommendations for the proposed structure.

4.0 SUBSOIL CONDITIONS

Borings revealed an upper fill layer consisting of silty angular gravel with some sand, trace to little clay, and sometimes with trace wood pieces. Colors of samples varied from yellowish brown to dark yellowish brown, dark olive gray, reddish brown, and dark greenish gray. Standard Penetration Test N-values ranged from 9 to 33 blows per foot, which represent a loose to dense state of relative density. This fill layer extends erratically thru the site from 1 to 23 feet.

Underlying this upper crust of fill at Boring 1, another fill layer consisting of silty clay with some sand and with little angular gravel, was found. A concrete obstruction was found at a depth of approximately 18 feet. Colors of samples varied from yellowish brown to reddish brown, and black. Consistency, based only on Standard Penetration Test N-values, varied from stiff to hard. The natural moisture content of samples secured ranged from 24 to 27 percent. This fill layer extends to the full depth drilled at Boring 1. This clayey fill layer was also found interbedded in the silty angular gravel fill crust at Boring 2, from approximately 13 to 18 feet, with similar properties.

Underlying the silty angular fill layer at Boring 2, another fill stratum consisting of silty sand with trace to little gravel, trace clay and with trace wood pieces, was found. Colors of sample varied from weak red to dark yellowish brown, reddish brown, and dark greenish gray. Standard Penetration Test N-value was 26 blows per foot, which represents a medium dense state of relative density. This fill stratum extends to the full depth drilled.



Table 1, shows the extension of the entire fill mass at each boring.

TABLE # 1

<i>Boring #</i>	<i>Depth of fill (feet)</i>
1	>18 (concrete obstruction at 18 feet)
2	>25
3	1
4	4.5

Underlying the silty angular gravel fill layer at Borings 3 and 4, an in-situ layer consisting of silty clay with trace to some sand, and with trace to little gravel, was encountered. Colors of samples varied from reddish brown to yellowish brown, sometimes with black oxidation stains. Consistency, based on Standard Penetration Test N-values and unconfined compressive strength data, varied from medium to hard. The natural moisture content of samples secured ranged from 35 to 44 percent, while the unconfined compressive strength data varied from 2.00 to more than 4.50 tons per square foot. This layer extends to a depth of approximately 18 feet at Boring 3, and to a depth of 14 feet at Boring 4.

Underlying this silty clay layer, a stratum consisting of sandy silt with trace angular gravel and sometimes with trace to little clay, was encountered. Colors of samples varied from yellowish brown to olive, reddish brown, dark brown, and strong brown, with black oxidation veins. Standard Penetration Test N-values ranged from 13 to 29 blows per foot. The natural moisture content of samples secured varied from 24 to 37 percent. This stratum extends to the full depth drilled at Boring 3 and to a depth of approximately 18 feet at Boring 4.

Underlying this stratum at Boring 4, an in-situ horizon consisting of highly weathered to decomposed rock, sampled as; Silty angular gravel with some sand and sometimes with clayey silt pockets, was encountered. Colors of samples varied from olive to dark olive gray, dark yellowish brown, dark greenish gray, and black. Standard Penetration Test N-values ranged from 17 to 60 blows per foot, which represents a medium to very dense state of relative density. This horizon extends to the full depth drilled.



5.0 GROUNDWATER

Groundwater level was not detected within the range of depth drilled. However, it is not possible to properly determine the groundwater level within the normal scope of the test hole exploration. Therefore, the fact of observing the water table during the drilling operations, may not indicate the true position of the existing groundwater table.

6.0 GENERAL

The above information is a general description of the subsoil conditions at the site. For detailed information on the soil characteristics at and along the boreholes, at the time and under the conditions these were drilled, refer to the boring logs which are included on an Appendix to this report. The depths mentioned in this report, unless otherwise specified, are referred to the existing ground surface elevations prevailing during the drilling phase of this project.

7.0 DISCUSSION

Borings drilled revealed a thick erratic fill crust at the north side of the parking and mostly in-situ soils at the south side. Moreover, apparently a 5-foot concrete pipe cross the site at a depth of some 23 feet deep, since a concrete obstruction was found at a depth of 18 feet. The exact pipeline alignment is unknown, however, it seems that the fill embankment to create the access ramp and various footings will be placed over the pipe. This scenario will bring differential settlements between the north and south axes of columns which will cause aesthetic, architectonic, and structural damages to the proposed parking building. Also, the upgrading fill required to create the access ramp to the second level, will provoke total settlements that might endanger the structural integrity of the pipe (if any). Hence, in order to built the proposed parking building, the north alignment of columns as well as the area of the access ramp (including the retaining wall), a subsurface treatment will need to be performed, in order to reduce the expected total and differential settlements. The improvement will consist of using intermediate foundations. This intermediate foundation system consists of inserting rammed gravel columns, in order to improve the poor bearing and settlement susceptible layers found at the site, where the created columns will carry most of the proposed structure loads. This intermediate foundation system is called Geopiers®.



As shown in **Figure 3**, a Geopier element is a dense, aggregate pier constructed in a pre-excavated hole with equipment that imposes significantly lateral prestress into the undisturbed soils surrounding the element. These holes typically range from 18" to 36" in diameter and are excavated by conventional drilling techniques, using either truck-mounted augering equipment or "dangle drill" equipment mounted on an excavator or crane. The Geopier foundation system should be used at the north axis of columns and at the ramp area.

For the soil conditions found in this particular site, the aggregate used for pier construction should be high quality crushed rock, such as used for highway base course construction. Geopiers depth should be in the order of 6 to 8 feet.

The south side of columns can be placed over conventional isolated footings cast over in-situ soils found at a depth of 5 feet.

General recommendations for excavations and earthwork operations to be followed by the contractor during construction are provided in the next section.

8.0 ENGINEERING RECOMMENDATIONS

8.1 *Foundation*

Settlement analyses performed for a typical spread footing some 6' by 6' bearing 2,500 psf show about 2.5 to 3 inches of settlement for the soil conditions disclosed by borings. Higher settlements were obtained for higher net contact pressures. Taking into account these results, it is concluded that the north axis of columns and the access ramp (including the retaining wall) should be built over treated soils to reduce the potential for settlements and improve their bearing capacity.

Since the old fills go down to a depth of approximately 25 feet and a pipeline run somewhere within the project site, the alternative of soil removal and substitution is not considered practical (as it will require deep excavations and bracing). As a feasible alternative, and as previously mentioned, the referenced structures can consider the use of



rammed aggregate piers (*Geopiers*) to support structural loads. The Geopier system is a foundation support on soft and/or loose soil sites and provides an alternative to deep piles/caissons and over-excavation and replacement filling.

By constructing Geopier elements some 24 to 30 inches in diameter, spaced at some 48 inches center-to-center, the Geopier-reinforced soil mass experiences significant permanent pre-stressing, which will allows spread and strip footings to be designed based on an allowable soil bearing pressure of 4,000 psf.

The coverage ratio of geopiers below spread or strip footings should be at least 40 percent for a maximum expected settlement of 1 inch. For example, a spread footing measuring 36 ft² (6' by 6') needs to be placed over 5 Geopiers 24" in diameter, as illustrated in the following **Figure 4**.

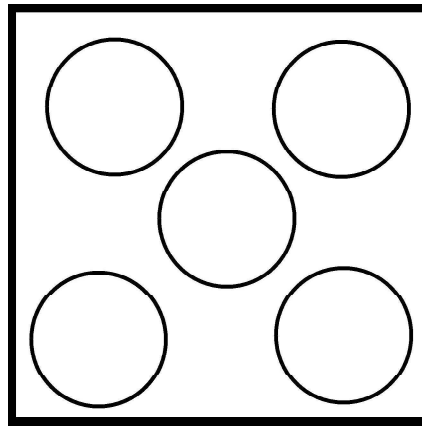


Figure 4; Five geopiers within 6'x6' spread footing ($Q_{all}=4$ ksf)

For the case of strip or wall footings, one line of 24" to 30" diameter Geopiers spaced at some 48 inches c-c can be considered below a strip footing up to 3 feet wide for an allowable bearing pressure of 2,500 psf, as shown in **Figure 5**. Settlements in exceed of 1 inch should not be expected.

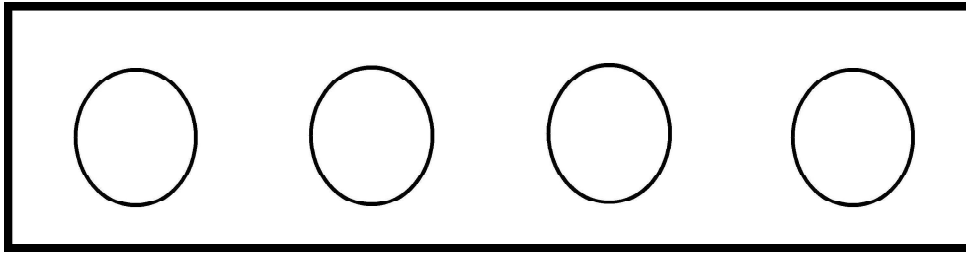


Figure 5; Geopiers aligned at 48" c-c within 3 feet wide strip footing

It is important to point out that, that the Geopiers® system is a trademark product, with in-house software and design procedures. Hence, the preliminary recommendations presented in this report need to be evaluated by the Geopiers® design team, and amended accordingly. For example, length of embedment and spacing, shall be determined by them, based on actual structures loads and the subsoil conditions presented in our report.

Geopier company should be considered as part of the design team, and not a subcontractor of the project. Geopier company provides design recommendations and specifications to the designers, as part of their services.

The footings at the north axis may be dimensioned on the basis of an allowable soil bearing pressure of 4,000 psf. Depth of foundation (D_f) shall not be shallower than 5 feet below existing grade. For loads of short duration, such as seismic or wind loads, the recommended soil bearing pressures can be increased by 33 percent.

All foundation excavation bases shall be inspected and released by a Geotechnical technician prior to the actual cast of the concrete. It is important, that the foundation bottom not be disturbed or softened due to poor excavation procedures, because this could lead to an unanticipated source of significant settlement.

A differential settlement in the order of 0.75 of an inch between nearby footings, should be considered in the design.

The excavated soils shall not be used as backfill.



8.2 *Excavation Recommendations*

An excavation of about 5 feet is expected at each column's location. Our calculations indicate that a slope ratio of 1:1 (H:V) to a maximum depth of five (5) feet should be used to reach an adequate factor of safety (FS) for the temporary slopes (a week or less). A buffer zone of at least five (5) feet shall be left between the crest of the temporary slopes and any nearby structure.

If the minimum buffer zone cannot be guaranteed, there is need to use a braced excavation. The design of the bracing system shall be performed by experts in this field. Also, open sloped excavations will bring large amounts of excavations and difficulty to access through the site.

It is a well-known fact that excavations cause a change in the state of stress in the soil beside and beneath the excavated space. Such changes in stress are associated with movements of the adjacent soils and usually they have the character of settlement. If these settlements become excessive, damage to adjacent structures can be provoked.

Therefore, the design and construction of the retaining structure shall be properly performed in order to reduce settlements to a tolerable value.

Several reference points shall be established at the existing structures adjacent to the braced cuts, to indicate the trend of any movement which might affect the stability of such structures.

Lateral pressures on braced cuts cannot be calculated by the classical theories because of differences in behavior of the structure during construction. Therefore, proper techniques must be used in the design of the temporary retaining structures, considering how construction is carried out.

Once again, it is important that the shoring system be properly designed as a temporary retaining structure. This shall be responsibility of the General Contractor.

Pressures resulting from uniform surcharge loads such as stockpiled earth, concentrated surface loads as cranes,



trucks or other construction vehicles, and hydrostatic pressures shall be considered in the design.

Before the excavation or undercut starts, the contractor shall to submit the designer (in writing) a logical order of construction procedures and sequences to be employed, verified by his Geotechnical consultant.

Once the bottom of such excavation has been reached (5 feet deep), the soil inspector, shall perform an inspection of the bearing surface and recommends any additional remotion if there is presence of soft and/or loose deposits.

A meeting shall be held with the selected contractor prior to construction to discuss (Owner, Geotechnical Consultant, Inspection and Contractor) the construction techniques, the selected braced alternative design of system presented by contractor, the loss prevention documentation, the monitoring program, and any doubts there may be on this project. This meeting in itself is a loss prevention tool where not appropriate design or construction techniques can be singled out and eradicated prior to the construction of the temporary retention system.

Establishing reference points on adjacent structures prior to starting any excavation operation will permit measuring of any settlement that may start to occur, thus allowing to take the necessary measures to prevent such problems.

After footings are cast, backfilling of the excavations shall be performed on a controlled way.

After a rain event, water inside any open excavation shall be pumped out immediately.



8.3 *General Earthwork Recommendations*

Earthwork conducted at the site should follow the general guidelines provided below.

8.3.1 Site Preparation

1. *Clearing and Grubbing*

The site should be cleared of all surface and subsurface deleterious materials, including trees, brush, stumps, logs and tree roots, garbage, construction debris, buried utility lines, structures, old slabs, old footings, pavements, etc.

2. *Stripping/Excavation*

After clearing the site, should be stripped to sufficient depth to remove topsoil, old fills, and poor bearing soils (approx. 24 inches at the access ramp area). Excavations of five feet are expected at each column.

However, actual depth of removal should be determined directly at the field during earthwork operations. Any rubbish, organic, or other deleterious material encountered during excavation operations will be removed to its full depth, disposed and excavation backfilled under controlled conditions as specified further in this section.

3. *Fill Areas/Proof Rolling*

Prior to placing any needed fill in the area, an inspection of the area is to be made by a Geotechnical inspector. Proof rolling with at least a 15 tons smooth wheel roller (at the area of the access ramp), under the presence of a Geotechnical Engineer or his representative, shall be used to detected the presence of soft spots. Any soft spot detected shall be completely removed, and replaced with selected fill properly compacted.

4. *Compaction*

The fill should be compacted that the dry unit weight of the compacted material is equal to or greater than ninety-five (95) percent of the maximum unit dry weight of material compacted in the laboratory under Modified Proctor Compaction Test. It should be the responsibility of the Resident Engineer to instruct the Soils Engineer retained by the owner on a consultative basis to determine the optimum moisture and corresponding dry density of every type



of fill material to be used by the contractor in order to properly evaluate the percentage of compaction of the fill material.

5. *Equipment Procedure*

The contractor should employ suitable equipment, to obtain the required percentage of compaction. The number of passes of the equipment over each section of the work surface shall be determined in the field. However, the Soils Engineer shall determine the density of the fill material after the compaction of each eight (8) inch layer, and the contractor shall not place any additional fill until the preceding compacted layer has been found to fulfill the aforementioned requirements. Each successive pass should overlap the preceding adjacent pass by ten (10) percent. Roller passes made on material in unsuitable condition will not be considered in judging compliance with our recommendations. In case the Contractor fails to obtain the required compaction energy, he must get the appropriate type of equipment to comply with this compaction criterion.

6. *Moisture Content*

The moisture content of the fill material, prior to compaction, should be within the limits of 4% less than or 4% greater than the optimum, as determined by the Modified Proctor Test.

The acceptability of the compaction will be established by tests (state weathered at Contractor's or Owner's expense). The unit weight of compacted material will be established by in-place density tests conducted by the Soils Consultant (at the Resident Engineer's request) by nuclear testing procedures, according to ASTM requirements.

Additional tests to establish or confirm maximum Proctor Density, optimum moisture content and percentage stone content will be performed as required by working conditions.



8.3.2 Fill Material

Samples of all potential sources of fill must be submitted to the soil laboratory to establish their adequacy. Borrow materials for fill should consist of essentially granular material (GM, SW, SP, SM, or SC, Unified Soil Classification System; or A-2-6, A-2-4, A-1-b, A-1-a, AASHTO Classification System), as approved by the Geotechnical Engineer. These should be free from vegetable matter and should not contain rocks having a dimension greater than six (6) inches.

9.0 ADDITIONAL COMMENTS

The services of a P.R. licensed Soils Engineer should be retained during the excavation and foundation phases of the work. This is to observed compliance with the specifications or recommendations and to allow design changes in the event that sub-surface conditions differ from that anticipated prior to starting the construction program. The Soils Engineer selected for this purpose, should receive copy of all plans and report, evaluate them and recommend variations or additional studies, as the deems necessary for thus assuming technical responsibilities of the solutions herein recommended. Copies of this report are furnished only to provide the factual data which were gathered and which were summarized in the report.

The analysis and recommendations submitted in this report are based in part upon the data obtained from the soil borings made. The nature and extent of variations between the borings may not become evident until construction. If variations then appear evident, it will be necessary to re-evaluate the recommendations of this report.

In the event that any changes in the nature, design or location of the facilities planned, the conclusions and recommendations contained in this report shall not be considered valid, unless the changes are reviewed and conclusions of this report modified or confirmed in writing.

The soil and foundation engineering report has been prepared for this project by Geotechnical Engineering Services, PSC. This report was for design purposes only and may not be sufficient to prepare an accurate bid. Contractors wishing copies of the report may secure them from owner with the understanding that its scope is limited to design



consideration. It is recommended that the soil foundation engineer be provided the opportunity for a general review of final design and specifications in order to verify that the earthwork and foundation recommendations were properly interpreted and implemented in the design and specifications. If the soil and foundation engineer is not allowed the opportunity of making this recommended review, he can assume no responsibility for misinterpretation of his recommendations. The standard procedure followed during the drilling of the test borings are discussed in detail in the appendix to this soil report.

This report has been prepared taking into consideration the design factors presently known to us. The project designers should be alert of any item that might have been overlooked, that could require clarification or that may need additional recommendations to those discussed herein.

Respectfully submitted,



ANIEL GRILLASCA RODRÍGUEZ, M.E.C.E., P.E.
GEOTECHNICAL ENGINEER



AGR\Reference No. 234119
July 19, 2023



APPENDIXES



APPENDIX NO. 1
GENERAL

Comprised in this report is a description of the project as made known to **GES**, Geotechnical Engineering Services, PSC and details of the project with pertinent recommendations for the design of foundations and other earth related structures. It should be considered that the design recommendations are relative to the project aspects discussed and subject to the limitations imposed by all practical considerations in the determination of subsoil conditions.

The field and laboratory data shown in boring logs represent subsoil conditions encountered at the borehole proper. The analysis and conclusions herein presented and discussed are based on such results and on a reasonable interpolation of subsoil characteristics. Whenever cross-sections with a schematic representation of the interpreted subsoil stratification between borings are included, the same should not be taken to represent true intermediate conditions but are rather given for general comparison purposes only.

Copy of this report should be made available to the Project Designers for their information and guidance, as well as to the Contractor and Resident Engineer, in order to secure maximum protection in the case of possible unexpected variations. Any such variations as well as any changes or modifications to the scope of project described after submittance of this report shall be notified by writing to these Consultants in order to evaluate same and decide upon the need to alter or modify the recommendations given.



APPENDIX NO. 2
FIELD AND LABORATORY WORK

The field work consisted of a visual observation of the area and existing structures at the site, if any, and of performance of test borings as indicated.

Test borings were made in accordance to the "Standard Penetration Test and Split-Spoon Sampling of Soils Method" as proposed by the Standards of the American Society for testing and Materials Designation ASTM D-1586, Latest Revision.

The testing hole is bored either by manual and mechanical augers or by driving a 2.5 inch inside diameter casing into the ground which is washed clean internally each time a soil sample is to be secured below its reach. While sampling, the Standard Penetration Test is performed and the "N" values recorded. This is the number of blows required to drive the split-spoon sampler 12 inches into the ground using a 140 lbs. hammer with a free fall of 30 inches.

The value gives an indication of the consistency of cohesive soils and the relative density of granular soils as shown in the following table:



COHESIVE SOILS

"N" VALUES	CONSISTENCY	UNCONFINED COMP. STRENGTH (TSF)
less than 2	Very soft	less than 0.25
2 - 4	soft	0.25 - 0.50
4 - 8	medium	0.50 - 1.00
8 - 15	stiff	1.00 - 2.00
15 - 30	very stiff	2.00 - 4.00
over 30	hard	over 4.00

GRANULAR SOILS

"N" VALUES	RELATIVE DENSITY
0 - 5	very loose
5 - 10	loose
10 - 30	medium
30 - 50	dense
over 50	very dense

Depth of water surface shown on logs indicate the phreatic level found either prior to use of any casing and water or taken 24 hours after the test borings was completed and the casing, if any, is pulled out. The information given, unless otherwise indicated, is not adequate for study of deep excavations and is only to be used as an approximate level in the study of a normal foundation of the project. Phreatic or underground water levels may vary with seasonal rainshower variations thus water may appear where none is shown and the reader of this report should be aware of this fact. For excavations where ground water levels are of utmost importance special studies consisting of long range observations on installed wellpoint-type devices should be performed. Where deep excavations are contemplated, as in pumping stations, study of artesian or sub-artesian aquifers should be made by means of deep test borings and pumping tests.



DIAMOND CORE DRILLING

Whenever drilling through rock is necessary the same is made following the "Diamond Core Drilling for Site Investigation" method as proposed by the standards of the American Society for Testing and Materials Designation ASTM D-2113-L.R. In general a double tube core barrel with diamond bit is rotated under pressure into the rock. The drilled rock enters into the barrel using circulating water as cooling agent. At intervals of 2 to 5 feet the barrel is lifted and the core is removed. The length of each core run as well as the length of the core recovered is noted.

LABORATORY WORK

Water Contents

The natural moisture content was determined for all samples, except for those with high percentage of gravel or coarse sand.

The tests follow standards of the American Society for Testing and Materials ASTM Designation D-2216, Latest Revision. The water or moisture content of a given soil mass is by definition the ratio of the weight of water to the oven dry weight of the soil, expressed as a percentage.

Unconfined Compression Tests

All suitable samples of cohesive soil recovered from the split-spoon sampler were tested in unconfined compression. The ratio of the maximum load required for failure to the corrected cross sectional area of the sample expressed in tons per square foot is defined as the unconfined compressive strength.

Examination and Description

Soil samples are classified according to their constituents, the following terminology used to denote the approximate percentage by weight of each component.



DESCRIPTION TERM	PERCENT BY WEIGHT
Trace	1 - 10
Little to some	10 - 20
Sandy, silty clayey	20 - 35
And	35 - 50

The examined samples are related into one of the following main groups; boulders, gravel, sand, clay, and silt. On peat, the presence of the decomposed and partly decomposed vegetable matter, is used for identification. The differentiation between a clay and a silt is based on the presence or lack of plasticity, dilatancy and dry strength rather than on grain size. The description of the soil includes: color, odor, minerals, presence of foreign matter, geological history, etc. These descriptions as well as the results of the laboratory testing are used in grouping similar samples into a stratigraphic unit as shown on the final boring logs. Therefore, the data on subsurface exploration logs represent subsoil conditions at the precise locations of the boreholes only.



FIGURES





FIGURE 1 - SITE LOCATION ON GOOGLE EARTH PHOTO
TWO STORY PARKING BUILDING
BARRANQUITAS, PUERTO RICO

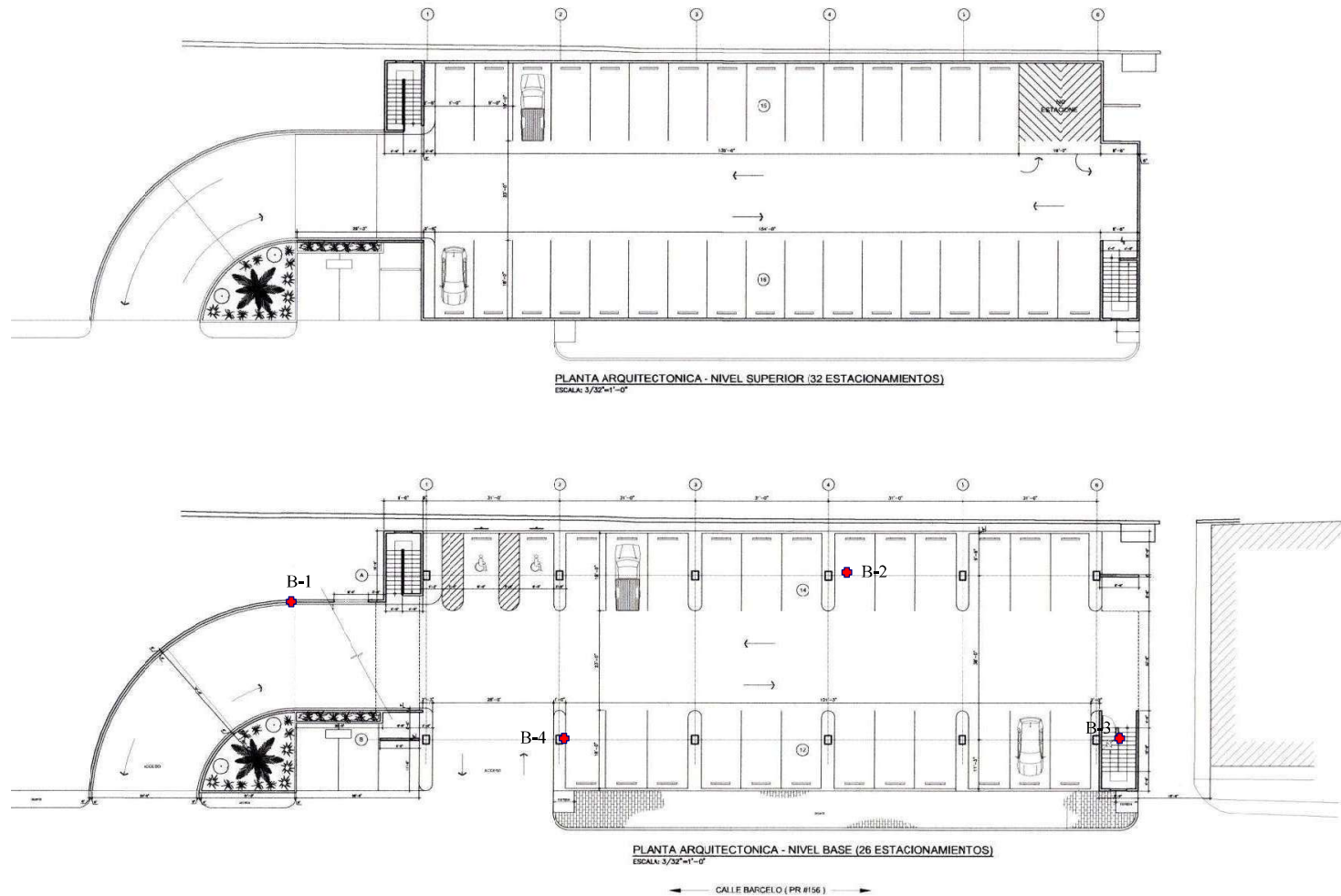
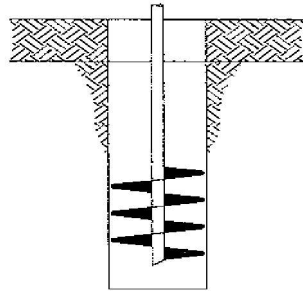
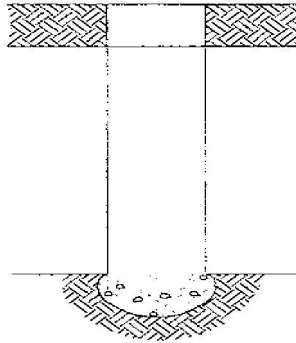


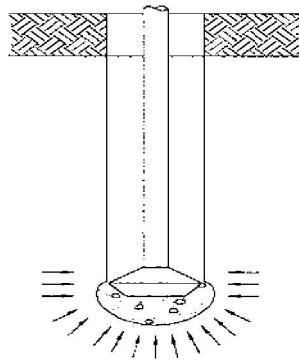
FIGURE 2 - BORINGS LOCATION PLAN
TWO STORY PARKING BUILDING
BARRANQUITAS, PUERTO RICO



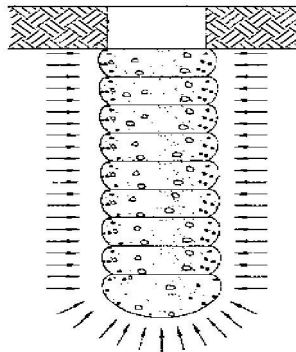
1. DRILL A CAVITY



2. PLACE CLEAN STONE AT
BOTTOM OF CAVITY



3. MAKE A
BOTTOM BULB



4. BUILD GEOPIER SHAFT WITH
0.3 m THICK LAYERS OF
HIGHWAY BASE AGGREGATE

FIGURE 3 - GEOPIER ELEMENT
TWO STORY PARKING BUILDING
BARRANQUITAS, PUERTO RICO



Geotechnical Engineering Services, PSC



Geotechnical Engineering Services, PSC

BORING LOGS





Geotechnical Engineering Services, PSC

BORING LOGS

The description of subsurface profile and results of field and laboratory tests, as enclosed, pertain to conditions actually encountered at the borings location proper and at the depths indicated. Profile tracings between borings, when given, represent a reasonable interpolation of subsoil characteristics and should not be taken to indicate true intermediate conditions.

Notes:

- N - Number of blows required to drive
the sampling spoon a distance of
12" with a 140 lbs hammer falling
30"*
- NW - No water*
- WH - Weight of hammer*
- WR - Weight of Rods*
- W - Natural moisture content in % of dry weight*
- qu - Unconfined compressive strength in tons/sq ft*
- * - penetrometer value*
-





Geotechnical Engineering Services, PSC

Geotechnical Engineering Services, PSC

Geotechnical Engineering Services, PSC												Date: 6/26/2023		Elevation:		
Project Name: Two-Story Municipal Parking Building Barranquitas, Puerto Rico												Boring No.: 1		Code No.:		
Location: PR-156 Km 16.2												Water Table: N.D.		Our Job No.: 234119		
Drill Machine: CME-55																
Depth (ft.)	Sampler Type	Sample No.	Sample Length (in.)	Sample Recovery (in.)	Blows/6"	SPT N-Value	RQD %	W _n %	W _p %	W _l %	I _p %	USCS Class.	Soil Pattern	Description	Qu (tsf)	
5	*	1	24		11-8-7-10	15		17						Fill: Silty angular gravel, some sand, trace clay, yellowish brown, dark olive gray. Same as above, yellowish brown.		
	*	2	24		9-9-9-7	18		8				Same as above.				
	*	3	24		10-8-25-22	33		7				Same as above.				
	*	4	24		10-8-8-8	16		14				Same as above, trace to little clay.				
	*	5	24		6-4-5-4	9		20								
15																
	*	6	24		7-6-7-7	13		27						Fill: Silty clay, some sand, little angular gravel, yellowish brown, reddish brown, black.		
20																
	*	7	24		50/2"	50/2"		24						Same as above, little gravel, concrete obstruction.		
25															End of boring at 20 feet.	
30																
35																
40																
45																

Comments: * Split Spoon Sampler
N.D. - Not Detected

Hammer Weight: 140 lb Page 1 of 1 Sampler Size: 2" x 2" O.D. Foreman: J.L. Rodriguez



Geotechnical Engineering Services, PSC

Geotechnical Engineering Services, PSC

Geotechnical Engineering Services, PSC											Date: 6/26/2023		Elevation:				
Project Name: Two-Story Municipal Parking Building Barranquitas, Puerto Rico											Boring No.: 2		Code No.:				
											Location: PR-156 Km 16.2		Water Table: N.D.				
											Drill Machine: CME-55		Our Job No.: 234119				
Depth (ft.)	Sampler Type	Sample No.	Sample Length (in.)	Sample Recovery (in.)	Blows/6"	SPT N-Value	RQD %	W _n %	W _p %	W _l %	I _p %	USCS Class.	Soil Pattern	Description	Qu (tsf)		
5	*	1	24		12-12-7-6	19		10						Fill: Silty angular gravel, some sand, trace to little clay, yellowish brown, dark yellowish brown. Same as above, trace clay.			
	*	2	24		8-9-12-10	21		11						Same as above.			
	*	3	24		12-8-8-6	16		8						Same as above, trace to little clay, yellowish brown, reddish brown. Same as above.			
	*	4	24		8-13-6-7	19		6									
10	*	5	24		6-4-5-4	9		13									
15	*	6	24		6-5-10-16	15		27								Fill: Silty clay, some sand, little angular gravel, yellowish brown, reddish brown, weak red, olive, black.	
20	*	7	24		9-16-13-17	29		20								Fill: Silty angular gravel, some sand, little clay, trace wood pieces, dark yellowish brown, yellowish brown, weak red, dark olive, dark greenish gray, reddish brown.	
25	*	8	24		12-12-14-16	26		32								Fill: Silty sand, trace to little gravel, trace clay, trace wood pieces, weak red, dark yellowish brown, reddish brown, dark greenish gray. End of boring at 25 feet.	
30																	
35																	
40																	
45																	

Comments: * Split Spoon Sampler
N.D. - Not Detected

Hammer Weight: 140 lb	Page 1 of 1	Sampler Size: 2' x 2" O.D.	Foreman: J.L. Rodriguez
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Geotechnical Engineering Services, PSC

Geotechnical Engineering Services, PSC

Geotechnical Engineering Services, PSC											Date: 6/26/2023	Elevation:				
Project Name: Two-Story Municipal Parking Building Barranquitas, Puerto Rico											Boring No.: 3	Code No.:				
											Location: PR-156 Km 16.2	Water Table: N.D.				
											Drill Machine: CME-55	Our Job No.: 234119				
Depth (ft.)	Sampler Type	Sample No.	Sample Length (in.)	Sample Recovery (in.)	Blows/5"	SPT N-Value	RQD %	W _n %	W _p %	W _L %	I _p %	USCS Class.	Soil Pattern	Description	Qu (tsf)	
5	*	1	24		14-7-5-8	12		30						Fill: Silty angular gravel, some sand, yellowish brown.	4.00	
	*	2	24		7-8-10-10	18		35						Silty clay, trace sand and fine gravel, reddish brown.	4.50+	
	*	3	24		4-6-8-8	14		36						Same as above.	3.25	
	*	4	24		7-8-8-7	16		44						Same as above.	3.25	
10	*	5	24		4-4-6-10	10		38							Same as above, reddish brown, yellowish brown, olive.	2.00
15	*	6	24		6-11-11-10	22		38							Same as above, some sand, trace to little gravel.	3.50
20	*	7	24		7-12-17-18	29		37					Sandy silt, trace gravel, yellowish brown, reddish brown, dark brown, black oxidation veins.			
25	*	8	24		10-13-16-22	29		24					Same as above, trace to little clay, strong brown, olive, black oxidation veins.			
30														End of boring at 25 feet.		
35																
40																
45																

Comments: * Split Spoon Sampler
N.D. - Not Detected

Hammer Weight: 140 lb	Page 1 of 1	Sampler Size: 2' x 2" O.D.	Foreman: J.L. Rodriguez
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Geotechnical Engineering Services, PSC

Geotechnical Engineering Services, PSC

Geotechnical Engineering Services, PSC											Date: 6/26/2023		Elevation:		
Project Name: Two-Story Municipal Parking Building Barranquitas, Puerto Rico											Boring No.: 4		Code No.:		
											Location: PR-156 Km 16.2		Water Table: N.D.		
											Drill Machine: CME-55		Our Job No.: 234119		
Depth (ft.)	Sampler Type	Sample No.	Sample Length (in.)	Sample Recovery (in.)	Blows/6"	SPT N-Value	RQD %	W _n %	W _p %	W _l %	I _p %	USCS Class.	Soil Pattern	Description	Qu (tsf)
5	*	1	24		7-5-6-5	11		15						Fill: Silty angular gravel, some sand, trace to little clay, dark yellowish brown, dark greenish gray.	
	*	2	24		8-8-9-10	17		9						Same as above, trace clay, dark yellowish brown.	
10	*	3	24		6-2-3-6	5		36						Same as above.	3.00
	*	4	24		8-7-9-9	16		41						Silty clay, trace sand and fine gravel, reddish brown.	
15	*	5	24		6-6-8-10	14		42						Same as above, reddish brown, black oxidation stains.	3.00
														Same as above.	
20	*	6	24		4-5-8-10	13		36						Same as above.	
														Sandy silt, trace angular gravel, olive, yellowish brown, black.	
25	*	7	24		9-8-9-9	17		14						Highly weathered to decomposed rock sampled as: Silty angular gravel, some sand, olive, dark olive gray, black.	
	*	8	24		7-33-27-30	60		28						Same as above, trace clayey silt pockets, dark yellowish brown, dark greenish gray.	
30														End of boring at 25 feet.	
35															
40															
45															

Comments: * Split Spoon Sampler
N.D. - Not Detected

Hammer Weight: 140 lb	Page 1 of 1	Sampler Size: 2" x 2" O.D.	Foreman: J.L. Rodriguez
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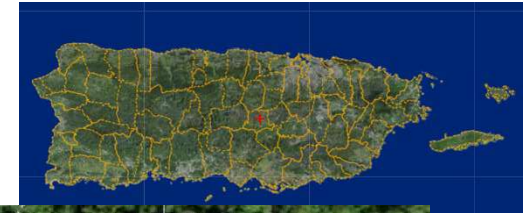
Crown Hills, 138 W. Churchill Ave., PMB 343, San Juan, PR 00926-6023

PHONE NO. (787) 648-2224

Attachment 17. Emergency Facilities Location Map

Address: State Road PR-156 Km 16.3, Pueblo Ward,
Barranquitas, PR 00794

Coordinates: 18.185505, -66.305029



- | | |
|-----------------------------|------------------|
| Fire Station | Project Location |
| Police Station | Hospital |
| Emergency Management Office | |

Source: Google Earth (Spatial Reference:
WGS84) at URL <https://earth.google.com/>

Attachment 18. Municipal Landfill Location Map

Address: State Road PR-156 Km 16.3, Pueblo Ward,
Barranquitas, PR 00794

Coordinates: 18.185505, -66.305029



- Project Location
- Municipal Landfill

Source: Google Earth (Spatial Reference: WGS84) at URL <https://earth.google.com/>

Attachment 19

Permits and Approvals

ICP

No Objection Letter



GOBIERNO DE PUERTO RICO
INSTITUTO DE CULTURA PUERTORRIQUEÑA
Programa Patrimonio Histórico Edificado

12 DE JUNIO DE 2024

Lic. Félix E. Rivera Torres
Secretario Auxiliar
DEPARTAMENTO DE DESARROLLO ECONÓMICO Y COMERCIO
Oficina de Gerencia de Permisos
PO Box 41179
San Juan, Puerto Rico 00940-1179

NO OBJECCIÓN

CASO OGPE:	2023-491367-SRA-300310
DESCRIPCIÓN:	ESTACIONAMIENTO PÚBLICO MUNICIPIO DE BARRANQUITAS
MUNICIPIO:	BARRANQUITAS
UBICACIÓN:	PR 156 KM 16.3 CALLE BARCELÓ
CATASTRO:	247-092-020-11
CALIFICACIÓN:	C-I
PROPIETARIO:	MUNICIPIO DE BARRANQUITAS
PROPONENTE:	MUNICIPIO DE BARRANQUITAS

El Instituto de Cultura Puertorriqueña (ICP), por medio de su Programa de Patrimonio Histórico Edificado (ICP-PPHE), ha examinado el proyecto de referencia para determinar si afecta Propiedades de Valor Histórico y Arquitectónico que estén protegidas, o sean elegibles a serlo, bajo las leyes y reglamentos que nuestra agencia tiene responsabilidad de administrar, como agencia primaria, endosante o recomendante. Estas leyes y reglamentos incluyen, entre otros:

1. La Ley 89 del 21 de junio de 1955 S.E., Ley Orgánica del Instituto de Cultura Puertorriqueña, en especial el inciso 4(a)(7), “Determinar que edificios o estructuras son de valor histórico o artístico en Puerto Rico. (...)” y el inciso 4(a)(8), “Asesorar a la Junta de Planificación en la reglamentación de construcción en aquellas zonas que determine como zonas de valor histórico. (...)”.
2. La Ley 89 del 21 de junio de 1955 S.E., Ley Orgánica del Instituto de Cultura Puertorriqueña, en su inciso 4(b)(3) según enmendado por la ley 119 del 26 de septiembre de 2005, que permite “adoptar, enmendar o derogar, por conducto de su Junta de Directores, las reglas que gobiernen [el] funcionamiento y el descargo de los poderes” concedidos e impuestos al ICP por ley, y la imposición de multas administrativas y/u otras sanciones por su incumplimiento o violación.
 - a. Reglamento de Procedimientos Administrativos del Programa de Patrimonio Histórico Edificado del Instituto de Cultura Puertorriqueña registrado en el Departamento de Estado como Reglamento Núm. 7746 con vigencia del 3 de abril de 2009.

Calle Beneficencia, Viejo San Juan | P.O. BOX 9024184, San Juan, Puerto Rico 00902-4184



CASO OGPE: 2023-491367-SRA-300310
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3. Ley Núm. 161 de 1 de diciembre de 2009, S.E., Ley para la Reforma del Proceso de Permisos de Puerto Rico, Artículo 1.5, inciso 31, el Instituto de Cultura Puertorriqueña es identificado como una de las agencias gubernamentales concernidas y con injerencia sobre el proceso de evaluación de solicitudes para el desarrollo y uso de terrenos, consultas, permisos, licencias, certificaciones, autorizaciones o cualquier trámite para la operación de negocios en Puerto Rico. Esta Ley establece claramente el requerimiento de autorización escrita previa del ICP para toda intervención y operación en las propiedades incluidas en el Registro de Sitios y Zonas Históricas de Puerto Rico, plazas de recreo y centros fundacionales (ver Reglamento Conjunto).
 - A. Reglamento Conjunto para la Evaluación y Expedición de Permisos Relacionados al Desarrollo, Uso de Terrenos y Operaciones de Negocios (RC-2020); registrado en el Departamento de Estado de Puerto Rico bajo el Número 9233 con vigencia de 2 de enero de 2021. Tomo X: Conservación de Recursos Históricos
 - B. Reglamento Conjunto para la Evaluación y Expedición de Permisos Relacionados al Desarrollo, Uso de Terrenos y Operaciones de Negocios (RC-2020); registrado en el Departamento de Estado de Puerto Rico bajo el Número 9233 con vigencia de 2 de enero de 2021. Tomos II, III, IV, VI, VII, IX (ver anejo 1 con identificación de Reglas correspondientes).
4. La Ley Núm. 183 de 21 de agosto de 2000, S.E., Ley Orgánica de la Oficina Estatal de Conservación Histórica, Artículo 7(b) y Artículo 8 (b), establece implícitamente el requerimiento de la recomendación favorable previa del ICP en permisos para proyectos que cuenten con fondos, permisos o asistencia de alguna agencia federal para realizar intervenciones que puedan impactar propiedades localizadas en el territorio de Puerto Rico que hayan sido incluidas en el Registro Nacional de Lugares Históricos en Washington o sean elegibles al mismo.¹
5. Ley Núm. 60 de 1 de julio de 2019, S.E., Código de Incentivos de Puerto Rico, Capítulo 7 Infraestructura y Energía Verde, Sección 2071.01, Inciso 1: Se provee para que un negocio establecido, o que será establecido, en Puerto Rico por una Persona, organizado o no bajo un nombre común, pueda solicitarle al Secretario del DDEC la Concesión de Incentivos cuando la Entidad se establece en Puerto Rico para dedicarse a una de las siguientes actividades elegibles: Realizar obras de mejoras, restauración o reconstrucción de edificios existentes, u obras de reestructuración o nueva construcción en solares baldíos en las Zonas Históricas de Puerto Rico, y los alquileres de tales edificios localizados en tales zonas una vez hayan sido mejorados, restaurados, reconstruidos, reestructurados o construidos, según sea el caso. Se requiere la Recomendación del ICP.
6. La exigencia de endoso o comentario del ICP aplicable a propiedades designadas de valor histórico y arquitectónico por otros medios, tales como:
 - a. Resolución de la Asamblea Legislativa.
 - b. Monumentos Históricos designados por la Junta de Directores del ICP.
 - c. Propiedades designadas por un plan de ordenamiento territorial de un Municipio Autónomo y que esté en vigor, o por el Plan de Uso de Terrenos de Puerto Rico.
 - d. Ser declaradas históricas en un plan especial de zonificación.
 - e. Otras propiedades referidas por cualquier componente del Sistema Unificado de Información/Single Business Portal (SUI/SBP), la Oficina de Permisos de un Municipio

¹ La OECH asiste a las agencias federales en el proceso de cumplimiento con el 54 USC 306108 (Sección 106 de la Ley de Preservación Histórica Nacional) y el 36 CFR Parte 800: Protección de Propiedades Históricas, pero esta consulta no sustituye los permisos ni las recomendaciones requeridos en Puerto Rico para intervenciones en propiedades históricas en virtud de la Ley 161-2009, según enmendada, Ley para la Reforma del Proceso de Permisos de Puerto Rico y la Ley 89-1955, según enmendada, Ley Orgánica del Instituto de Cultura Puertorriqueña.



CASO OGPE: 2023-491367-SRA-300310
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MUNICIPIO: BARRANQUITAS
UBICACIÓN: PR 156 KM 16.3 CALLE BARCELÓ
CATASTRO: 247-092-020-11
CALIFICACIÓN: C-I
PROPIETARIO: MUNICIPIO DE BARRANQUITAS
PROPONENTE: MUNICIPIO DE BARRANQUITAS
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Autónomo con poder de otorgar permisos, la Junta de Planificación, el Programa de Arqueología y Etnohistoria del ICP, u otra agencia o entidad de gobierno con poder reglamentario.

7. Petición a solicitud voluntaria de un propietario o derechohabiente de una propiedad.

De acuerdo a nuestros expedientes y la información provista:

1. La propiedad a impactar **Sí se localiza dentro de los límites de un centro urbano** según este concepto está definido por el Tomo XII Glosario de la Junta de Planificación, parte III, defición C-71 del Reglamento Conjunto 2023.
2. Se propone la construcción de un segundo nivel en hormigón sobre un estacionamiento existente.
3. **Importante:** Los nuevos muros/paredes/superficies del nuevo estacionamiento **no se utilizará para promociones, murales adicionales a la bandera de Puerto Rico propuesta, o billboards digitales u otro material.**
4. El proyecto propuesto no implica impacto adverso a recursos culturales pertenecientes al patrimonio histórico construido.

Por lo tanto, se emite una determinación de **NO OBJECIÓN AL PROYECTO PROPUESTO.**

Esta evaluación no incluye los elementos a evaluarse conforme a la Ley 112-1988, Ley para la Protección del Patrimonio Arqueológico Terrestre, lo cual debe hacerse mediante solicitud separada al Programa de Arqueología y Etnohistoria del ICP. Las evaluaciones de ambos programas son necesarias para concluir el proceso con esta agencia.

Este documento tiene vigencia de un (1) año a partir de su emisión.

Sin otro particular, quedo.

Mildred Gonzalez Valentin, BDA. MARq.
Subdirectora
Programa Patrimonio Histórico Edificado

MGV/ejc

ANEJO 1

1. Reglamento Conjunto para la Evaluación y Expedición de Permisos Relacionados al Desarrollo, Uso de Terrenos y Operaciones de Negocios (RC-2020); registrado en el Departamento de Estado de Puerto Rico bajo el Número 9233 con vigencia de 2 de enero de 2021.
Tomo X: Conservación de Recursos Históricos
 - a. Capítulo 10.2 Conservación de Sitios Históricos, Zonas Históricas y Centros Fundacionales,
 1. Regla 10.2.2 Requerimiento Expedición de Permisos y Recomendaciones en Sitios y Zonas Históricas, Sección 10.2.2.3, Sección 10.2.2.4, Sección 10.2.2.3 y Sección 10.2.2.4
 2. Regla 10.2.5 Normas Generales de Intervención
 3. Regla 10.2.7 Intervención en Espacios Públicos y Estacionamientos donde ubican Sitios y Zonas Históricas
 4. Regla 10.2.8 Obras en las Plazas, Plazuelas, Plazas de Recreo y en las Propiedades Circundantes a éstas, en Zonas Históricas Designadas o en Proceso de Designación
 5. Regla 10.2.9 Estacionamiento en Sitios y Zonas Históricas
 6. Regla 10.2.10 Rótulos, Cortinas y Toldos en Sitios y Zonas Históricas
 7. Regla 10.2.11 Conservación del Patrimonio Inmueble, Sección 10.2.11.5 Requerimiento de Recomendaciones o Certificaciones



CASO OGPE: 2023-491367-SRA-300310
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2. Reglamento Conjunto para la Evaluación y Expedición de Permisos Relacionados al Desarrollo, Uso de Terrenos y Operaciones de Negocios (RC-2020); registrado en el Departamento de Estado de Puerto Rico bajo el Número 9233 con vigencia de 2 de enero de 2021. Tomos II, III, IV, VI, VII, IX
- a. Regla 2.1.8, Sección 2.1.8.7, Inciso “b”: Todo proyecto público o privado que conlleve movimiento de terreno, excavación, extracción de corteza terrestre o construcción, reconstrucciones o canalizaciones deberá solicitar a la División o Unidad de Evaluación Ambiental (DECA) la recomendación del ICP sobre Arqueología y Conservación Histórica, ya sea a través de la OGPe, los Municipios Autónomos con Jerarquía I a la III o el Profesional Autorizado.
 - b. Regla 2.2.8, Inciso c-10: Consultas de Ubicación a proyectos de mejoras públicas municipales en propiedades y estructuras que ubiquen en los centros fundacionales, dentro de Zonas Históricas o designadas como sitio histórico deberán contar con la recomendación del ICP, previo comienzo de la obra.
 - c. Regla 2.3.1: El PA requerirá una Recomendación del ICP en todo aquel permiso único a otorgarse en las estructuras oficialmente designadas e incluidas en el Registro de Sitios y Zonas Históricas de la JP y en los centros fundacionales de los Municipios. Los permisos y determinaciones finales a un permiso de construcción y para la demolición, reparación, restauración o remodelación de una estructura con valor histórico requerirán de la recomendación del ICP.
 - d. Regla 3.2.1 Permisos de Construcción, Sección 3.2.1.2, inciso “f”: El proyecto que se encuentre en una zona histórica, centros urbanos tradicionales y yacimientos arqueológicos, la OGPe, Los Municipios Autónomos con jerarquías de la I a la III o los PA, requerirán la recomendación escrita del ICP antes de autorizar cualquier permiso de construcción, conforme a la Regla 10.2.11 de Conservación del Patrimonio Inmueble, en el Tomo X de este Reglamento Conjunto.
 - e. Regla 3.2.2, inciso “b-6”: Si el proyecto se encuentre en una zona histórica, centros urbanos tradicionales y yacimientos arqueológicos, la OGPe, los Municipios Autónomos con Jerarquía I a la III, o los PA, requerirán la recomendación escrita del ICP antes de autorizar la actividad de demolición. En caso de ser una propiedad histórica, estará conforme a lo establecido en este Reglamento Conjunto sobre Conservación de Sitios y Zonas Históricas, entiéndase Tomo X, o cualquier documento formal emitido por las Entidades Gubernamentales Concernidas cuando existe una situación de emergencia previamente decretada por el Gobierno de Puerto Rico o el Gobierno Federal.
 - f. Regla 3.2.4 Obras Exentas de Permisos de Construcción
 - 1. Sección 3.2.4.1 Actividades que no se consideren obras de Construcción, inciso “c”: Cuando la actividad se vaya a realizar en Sitios y Zonas Históricas así declaradas por la JP, el ICP o la Asamblea Legislativa, o en otras áreas especiales donde así se establezca mediante Reglamento o resolución, deberá obtener la autorización correspondiente del ICP, mediante una solicitud de recomendación de arqueología y conservación histórica (“SRA”).
 - 2. Sección 3.2.4.2 Obras de Carácter Menor Exentas, inciso “b”: Cuando la obra exenta se vaya a realizar en Sitios y Zonas Históricas así declaradas por la JP, el ICP o la Asamblea Legislativa, o en otras áreas especiales donde así se establezca mediante Reglamento o resolución, deberá obtener la autorización correspondiente del ICP, mediante una solicitud de recomendación de arqueología y conservación histórica (“SRA”).
 - g. Regla 3.5.9 Permiso Formal para la Extracción, Excavación, Remoción y Dragado de los Componentes de la Corteza Terrestre, Sección 3.5.9.4, inciso “u”: Recomendación del ICP para el área donde se propone la extracción, cuando la misma haya sido predeterminada por ICP o la Asamblea Legislativa como zona de valor histórico o arqueológico.
 - h. Regla 3.7.1 Permiso Único, Sección 3.7.1.7, inciso “g”: Se requerirá la recomendación del ICP en Sitios y Zonas históricas antes de expedir este tipo de permiso para actividades cuya duración exceda de treinta (30) días.
 - i. Regla 4.4.1.2 Licencias Traficantes al Detalle de Bebidas Alcohólicas, Sección 4.4.1.2, inciso “c”: Recomendación del ICP en los casos en que la propiedad ubique en una zona histórica
 - j. Regla 6.1.27 Distrito S-H: Sitio Histórico, Sección 6.6.27.2 (ver Tabla 6.85 – Usos permitidos en Distrito S-H) y Sección 6.1.27.4 (ver Tabla 6.86 – Parámetros de Diseño Distrito S-H).
 - k. Regla 6.1.28 Distrito C-H: Conservación Histórica, Sección 6.1.28.2 (ver Tabla 6.87 – Usos permitidos en Distrito C-H) y Sección 6.1.28.4 (ver Tabla 6.88- Parámetros de Diseño Distrito C-H).
 - l. Regla 7.3.6 Centro Urbano (CU), Sección 7.3.6.1, Inciso “d”: Toda intervención en los centros urbanos delimitados se hará en conformidad con el Plan de Ordenación Territorial, Plan de área del Centro Urbano Tradicional o Plan de Rehabilitación del Centro Urbano, cumpliendo con las disposiciones de la Regla 10.2.11 en el Tomo X de este Reglamento Conjunto.
 - m. Capítulo 9.1 Obras Eléctricas, Sección 9.1.2.2 inciso “k”: Los permisos y autorizaciones en Sitios y Zonas Históricas, Plazas de recreo y bloques circundantes, entiéndase centros fundacionales de los pueblos requerirán de la recomendación del ICP.
 - n. Capítulo 9.6 Obras de Acueductos y Alcantarillados, Sección 9.6.2.2, Inciso “f”: Los permisos y Autorizaciones en Sitios y Zonas Históricas, plazas de recreo y bloques circundantes, entiéndase centros fundacionales de los pueblos requerirán de la recomendación del ICP.
 - o. Capítulo 9.8 Sistemas Individuales de Disposición de Desperdicios Domésticos (SIDDD), Sección 9.8.3.1, inciso “d”.
 - p. Capítulo 9.11 Proyectos de Construcción, Instalación y Ubicación de Torres e Instalaciones de Telecomunicaciones, Sección 9.11.6.3, inciso “e” Zonas Históricas y Centros Fundacionales.

DRNA

Environmental Compliance Determination

**Determinación de Cumplimiento Ambiental para Evaluación Ambiental****ESTACIONAMIENTO PUBLICO MUNICIPIO DE BARRANQUITAS****Fecha de Expedición:**

28/JAN/2025

Datos de Determinación**Presentado por**

Municipio Autónomo de Barranquitas

Número de Caso

2023-491367-DEA-300355

Dirección FísicaCARRETERA 156 KM 16.3, BO. PUEBLO., Barranquitas,
Puerto Rico, 00794**Casos de Referencia**

2023-491367-REA-300000

Número(s) de Catastro

247-092-020-11

Acción Propuesta

La Acción Propuesta consiste en un proyecto: Público con Contratación Privada en el Distrito de Clasificación identificado a continuación. El mismo tiene los siguientes componentes:

Calificación**Distrito(s) de Calificación:**

C-I

Distrito en el Mapa de Inundabilidad:

X

Tipo de Suelo:

Uv

Cabida del proyecto (Área Total Según Escritura)

400.44 metros cuadrados

Servidumbres Existentes

Acueductos (AAA), Alcantarillado (AAA), Vía estatal de acceso (DTOP), Electricidad (AAE), Telecomunicaciones (PRTC)

Desperdicios Sólidos

Volumen en construcción: 10 yardas cúbicas

Tipo: NP

Volumen en operación: 15 yardas cúbicas

Tipo: NP

Movimiento de Tierra

Volumen: 50 metros cúbicos

Volumen de corte: 50 metros cúbicos

Volumen de relleno: 40 metros cúbicos

Demolición

Conlleva demolición: Sí

Conlleva explosivos: No

Instalación de Generadores de Electricidad

Conlleva generadores: No

Capacidad: N/A

Tanque: N/A

Descripción

El proyecto consiste en la construcción de ampliación de estacionamiento público en aumentar la capacidad de espacios para estacionamientos y mejorar el entorno de la entrada al pueblo, se pretende construir un segundo nivel sobre el estacionamiento existente. El nuevo nivel de estacionamientos se construirá en hormigón armado y en esta etapa se conectará al sistema eléctrico de LUMA, en una etapa futura se le instalarán placas solares en unos techos de acero





Determinación de Cumplimiento Ambiental para Evaluación Ambiental

sobre el estacionamiento que energizarán el mismo tendrá una rampa de acceso al segundo nivel la cual conectará con la carretera 156, se relocalizará uno de los accesos existentes al estacionamiento. Los predios de terreno propuesto para el desarrollo se componen de los siguientes números de catastros 247-092-020-11, 247-092-020-10 y 247-092-020-12.

El predio cuenta con la infraestructura necesaria para servirse de ella, o se puede proveer sin menoscabar el medio ambiente y la comunidad circundante. Durante la operación no hay necesidad de agua potable ya que no hay baños propuestos. Por lo que no se generará aguas usadas para este proyecto. Se estima que la cantidad de desperdicios a generarse como parte de la demolición es de aproximadamente 150 metros cúbicos, los cuales serán acarreados hasta el Sistema de relleno Sanitario de Barranquitas.

Se proyecta la necesidad de corte de terreno de aproximadamente 50 metros cúbicos, generados en las actividades de construcción de los cimientos del edificio que albergará el Estacionamiento, y la necesidad de traer unos 40 metros cúbicos de material de relleno para cubrir las excavaciones de los cimientos del edificio no cubierta por el concreto. El terreno excavado será utilizado como material de relleno para cubrir desperdicios sólidos en Sistema de Relleno Sanitario de Barranquitas.

Impactos al Ambiente y Medidas de Mitigación

La acción propuesta conllevará un impacto ambiental no significativo. Los potenciales impactos asociados a las actividades de demolición, extracción o remoción de corteza terrestre tales como sedimentación, erosión, ruidos, polvo fugitivo y generación de desperdicios sólidos no peligrosos, pueden ser eliminados o reducidos. El posible impacto en la calidad del aire durante las actividades construcción, estará principalmente asociado con la emisión de polvo fugitivo producto de las actividades de las actividades de movimiento de tierra en la construcción de los cimientos del estacionamiento multi-piso, el movimiento de camiones y tránsito vehicular y las emisiones de productos de combustión de los equipos y los camiones. Se tomarán medidas de control para la generación de polvo fugitivo, tales como irrigación de áreas expuestas y calles de acceso con agua como supresor de polvo mediante el uso de camiones cisterna y la compactación del terreno para disminuir la cantidad de material suelto que pudiera ser levantado por el viento. Se les exigirá a los transportistas, que deberán utilizar toldos en buenas condiciones en sus camiones para prevenir la generación de polvo fugitivo provenientes del movimiento de sus cargas. Se establecerá un sistema de mantenimiento preventivo a los equipos para asegurar condiciones de operación óptimas y prevenir la generación excesiva de gases producto de la combustión. Se mantendrán durante todo momento, los equipos de control de emisiones de los equipos y camiones, en funcionamiento de acuerdo con las especificaciones del manufacturero. Con el propósito de controlar el transporte de sedimentos fuera del área del proyecto, se colocarán pacas de heno y/o mallas de filtración en los puntos en que se estime necesario, especialmente en las áreas cercanas a las vías de acceso y a los sistemas pluviales construidos existentes. De ser necesario, se implementará un plan para el control de la erosión y sedimentación (Plan CES) en cumplimiento con los requisitos de las Agencia pertinentes.

La actividad propuesta generará desperdicios sólidos no peligrosos consistentes mayormente en escombros de construcción y desperdicios domésticos que se generarán durante las actividades de construcción. Será responsabilidad del contratista, estimar la cantidad de desperdicios sólidos no peligrosos a ser generados en cada una de las etapas de construcción según, la cantidad de empleados, visitantes del proyecto, etc. Se diseñarán las áreas de recogido de los residuos reciclables, los cuales serán manejados por la Oficina de Reciclaje del Municipio de Barranquitas. Se identificará un área de servicio para la separación y posterior recogido de los residuos reciclables, la cual se rotulará "Área de Separación y Reciclaje". Según exigido, se someterá al Departamento de Recursos Naturales y Ambientales (DRNA) el Plan de Reciclaje para su evaluación y aprobación. Dentro de las áreas que se considerarán para establecer los centros de acopio en el proyecto, están las áreas recreativas, áreas comunes de estacionamientos entre otras. En estas áreas se podrán colocar los recipientes rotulados para los materiales reciclables. Será también responsabilidad del contratista de la obra, separar en la fuente los desperdicios sólidos no peligrosos producto de la etapa de construcción. Los desperdicios de la construcción como madera, concreto, metales, papel, cartón, plásticos, etc., serán manejados por separado de los desperdicios sólidos domésticos generados por los empleados de la construcción para facilitar su almacenaje, transportación, reciclaje y disposición de estos. Una vez construida la facilidad, los desperdicios domésticos





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generados serán manejados por a través del sistema de recogido de desperdicios sólidos no peligrosos del Municipio de Barranquitas.

En la fase de construcción la maquinaria pesada a utilizarse en las actividades de demolición y excavación será la fuente principal de ruido. No obstante, a toda la maquinaria pesada se le proveerá mantenimiento preventivo para la operación óptima, controlando así los niveles de ruido. Como ejemplo podemos mencionar el engrase continuo de las partes neumáticas del equipo para prevenir ruidos innecesarios. Además, se mantendrán en funcionamiento óptimo, todos los componentes del sistema de silenciadores de todos los equipos y vehículos utilizados en el proyecto en todo momento durante el tiempo de duración del proyecto. Se cumplirá con los límites de ruido establecidos por el Reglamento para el Control de la Contaminación por Ruido de la JCA. Debido a la naturaleza del proyecto propuesto, durante la operación de este no se anticipan ruidos ni olores de carácter objetable. El predio no contiene una composición única de especies, tampoco se identificaron especies de vida silvestre, poblaciones o comunidades de especies de distribución específica y limitada de baja capacidad de dispersión que puedan ser afectadas por la Acción Propuesta. Según la discusión que antecede, la acción propuesta no requiere mitigación. No obstante, mediante la implementación de medidas de mejoramiento paisajista en el proyecto en las áreas verdes, se implementan colateralmente medidas de mitigación. La vegetación por sembrarse será tomando especial consideración a las guías de siembra de especies nativas que sirvan de fuentes de alimento y hábitaculo para las especies que se puedan beneficiar de estos.

El sistema pluvial actual del predio de terreno drena las aguas de escorrentías de forma natural en función de la topografía, descargando a través del sistema de alcantarillado pluvial municipal al Río Barranquitas.

El predio del proyecto cuenta con la Certificación de Categorización de Hábitat para Vida Silvestre del Departamento de Recursos Naturales y Ambientales, emitida el 2 de noviembre de 2023, donde se categoriza el predio como Hábitat Natural con Bajo Potencial de Convertirse en Hábitat Esencial, de Alto Valor Ecológico o de Valor Ecológico (Categoría 6).

Determinación

Luego de revisado y analizado el expediente administrativo y discutidos todos los méritos del documento ambiental, al amparo de los poderes y facultades que le confiere a esta Oficina de Gerencia de Permisos, (en adelante "OGPe") la Ley Núm. 161 - 2009, según enmendada y el Reglamento para el Proceso de Evaluación Ambiental de la Junta de Calidad Ambiental (en adelante "RPEA"), RESOLVEMOS:

- La Evaluación Ambiental (en adelante, "EA") sometida por la Agencia Proponente para la acción propuesta, cumple con todos los requisitos de la Ley sobre Política Pública Ambiental, Ley Número 416 - 2004, según enmendada, y con el RPEA. En dicho documento ambiental fueron adecuadamente considerados y analizados los impactos ambientales que conlleva la acción, por lo que se aprueba el mismo, dando así por terminado el proceso de evaluación ambiental.
- De conformidad con el RPEA, las medidas de mitigación contenidas en el documento ambiental serán obligatorias y constituirán las medidas mínimas a tomarse en consideración para proteger el ambiente. La Agencia Proponente requerirá a las agencias con jurisdicción que incluyan las medidas de mitigación como condición indispensable de sus permisos.
- La Agencia Proponente deberá procurar que al momento de llevarse a cabo el desarrollo del Proyecto, las recomendaciones emitidas por los Gerentes de Permisos de la OGPe sean adecuadamente observadas y consideradas. Asimismo, la Agencia Proponente será responsable de velar que la acción, de llevarse a cabo, se desarrolle acorde con la información suministrada en el documento ambiental presentado apercibiéndosele que, los permisos que administran las entidades gubernamentales en relación al cumplimiento de las mismas están supeditados a la información y datos contenidos en documento ambiental.





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- Si luego de haberse dado cumplimiento con el Artículo 4 de la Ley Núm. 416, supra, surgieran variaciones sustanciales en la acción propuesta, según definida en el RPEA, la Agencia Proponente será responsable de evaluar dichos impactos mediante el documento ambiental que entienda correspondiente.
- Se le apercibe que esta determinación de cumplimiento ambiental no será revisable hasta tanto se emita una determinación final, cuyo componente sea la presente determinación.

Recomendación y/o Comentarios del Director de la División de Cumplimiento Ambiental

3. Según información presentada expresan que el nuevo nivel de estacionamientos se construirá en hormigón armado y contará con placas solares que energizarán el mismo. Por tanto, deberán especificar de forma detallada la cantidad de módulos solares, tipo de instalación, cantidad de baterías, inversores, y todos los accesorios para el sistema. Además, deben ilustrar en el site plan su ubicación.
1. Solicitar a través de la Oficina de Gerencia de Permisos (OGPe) el Permiso Único Incidental Operacional, a tenor con la Regla 3.4.1 del Reglamento Núm. 9473, vigencia 16 de junio de 2023, conocido como el "Reglamento Conjunto para la Evaluación y Expedición de Permisos Relacionados al Desarrollo, Uso de Terrenos y Operación de Negocios".
2. Todo proceso de almacenaje, manejo y disposición de los desperdicios sólidos no peligrosos a ser generados durante las diferentes fases del proyecto propuesto, serán realizados en conformidad con lo estipulado bajo el Reglamento para el manejo de desperdicios no peligrosos, Reglamento Núm. 5717-1997.
3. Previo a las actividades de demolición propuestas, deberá verificar la existencia de material con contenido de asbesto o pintura con base de plomo. De confirmarse la existencia de dichos materiales y en cumplimiento con el reglamento Núm. 7308 del 1 marzo de 2007, conocido como el "Reglamento para el Trámite de Permisos Generales" deberán someter un Permiso General: (a) para actividades de mitigación de pintura con base de plomo y (b) para el manejo de materiales con contenido de asbesto.
4. La empresa o compañía que llevará a cabo la demolición deberá contar con los correspondientes permisos para realizar dichos trabajos y que los escombros generados sean manejados y dispuestos de forma adecuada para su disposición final y/o reciclaje.
5. Todos los materiales excedentes y escombros de construcción resultantes deberán haberse removido completamente del lugar, una vez completadas las obras. Se deberá disponer de estos de manera adecuada.
6. Tomar las medidas necesarias para controlar el área durante la construcción para evitar exponer a los vehículos a recoger lodo, polvo, sustancias pegajosas o material viscoso en las ruedas u otras partes del vehículo, los cuales a su vez puedan ser depositados en las calles u otro sitio público y así mantener las vías públicas y alrededores del proyecto libres de acumulación de desechos de construcción.
7. Mantener los camiones de carga que se utilicen para transportar escombros y/o materiales de construcción cubiertos con toldos mientras estén en movimiento, para evitar la generación de polvo fugitivo.
8. Tomar las medidas necesarias para evitar que residuos de sustancias orgánicas e inorgánicas como aceites, combustibles u otras sustancias químicas, puedan ser arrastradas por la escorrentía y ganen acceso a cualquier cuerpo de agua o sistema pluvial del área.
9. Tomar en consideración todo lo concerniente al manejo de aguas pluviales y control de escorrentías del predio. Tomar las medidas necesarias para el control de erosión y prevención de la sedimentación durante la realización de las obras.
10. Relación con el posible uso de equipos que puedan ser fuentes de emisión atmosféricas (generadores de electricidad, entre otros) deberán obtener del Área de Calidad de Aire del DRNA los permisos correspondientes conforme al Reglamento Número 5300 del 28 de agosto de 1995 conocido como el Reglamento para el Control de la Contaminación





Determinación de Cumplimiento Ambiental para Evaluación Ambiental

Atmosférica.

11.Relacionado al nivel de sonido máximo permitido, cumplir con el Reglamento Número 8019 del 9 de mayo de 2011, conocido como el Reglamento para el Control de la Contaminación por Ruido.

12.Relacionado a fuentes emisoras de iluminación exterior, cumplir con el Reglamento Núm. 8786 del 9 de agosto de 2016, conocido como el "Reglamento para el Control y la Prevención de la Contaminación Lumínica.

13.Deberá paralizar todo tipo de actividad de excavación, movimiento y remoción de corteza terrestre, y notificar en un plazo de veinticuatro (24) horas al Programa de Arqueología y Etnohistoria, en caso de que, durante el desarrollo del proyecto, se descubra o impacte algún depósito, elemento, estructura o vestigio de naturaleza arqueológica.

14.Cumplir con los requerimientos de las agencias concernientes y con las recomendaciones (2023-491367-REA-300000) emitidas para el proyecto.

15.Las recomendaciones y requisitos presentados en esta comunicación no eximen de cualquier otro requerimiento o permiso de esta Oficina u otras agencias concernidas, que sean aplicables a la acción propuesta.

Firma / Sellos

CERTIFICO: Que he notificado copia fiel y exacta de la presente determinación con sus anejos, bajo mi firma, a la Agencia Proponente.

Fecha de Expedición:

28/JAN/2025



LUMA

Final Endorsement



CERTIFICACIÓN DE PLANOS DE CONSTRUCCIÓN ELÉCTRICA / ELECTRICAL CONSTRUCTION DRAWINGS CERTIFICATION

Document No.: 4375.004

Version: 3

En armonía con las disposiciones de la Ley Núm. 7 del 19 de julio de 1985 y de la Ley Núm. 173 del 12 de agosto de 1988, según enmendadas, yo, / In accordance with the dispositions of the Law No. 7 from July 19 of 1985 and Law No.173 from August 12 of 1988, as amended, I, JOSE L. ORTIZ NIEVES certifico que / certify that:

Nombre y Apellidos / Name and last name

Soy mayor de edad, / I am an adult, CASADO, vecino de / neighbor of NARANJITO, Puerto Rico; que soy /

Estado civil / Civil state

municipality

Puerto Rico; that I am INGENIERO autorizado a ejercer la profesión en Puerto Rico con licencia número / authorized

Ingeniero o Arquitecto / Engineer or Architect

to practice the profession in Puerto Rico with license number 6242 y soy miembro activo del colegio de mi profesión / and that I am active member from my professional college.

En el ejercicio de mi profesión diseñé la fase eléctrica del proyecto de construcción descrita como: / In my profession exercise I designed the electric phase of the construction project describe as:

Nombre Proyecto / Project Number	ESTACIONAMIENTO PUBLICO MUNICIPIO DE BARRANQUITAS		
Núm. AEE/LUMA / PREPA/LUMA Number:	23-2-0427	Carga (kVA) / Load (kVA):	25 kVA
Dirección Física / Physical Address	CARR. 156 KM 16.3, BO. PUEBLO		
	BARRANQUITAS		

Estoy autorizado por el dueño del proyecto a radicar esta certificación ante LUMA como agente y operador de PREPA (PREPA/LUMA) / I am authorized by the owner project to submit this certification to LUMA as agent and operator of PREPA (PREPA/LUMA)

Dueño del Proyecto / Project Owner	CENTRAL GROUP, PSC
Dirección Postal / Mail Address	83 CALLE BARCELO, SUITE 201 BARRANQUITAS, PR 00794

Radico esta certificación ante AEE/LUMA para / I apply this certification to PREPA/LUMA for:

☒	Endoso de los planos de diseño eléctrico que tienen evaluación vigente desde el / I endorse this electrical design drawings which have updated evaluation from <u>06/01/2023</u> .
☐	Revisión número / Revision number _____ de los planos de diseño eléctrico previamente endosados por LUMA. Se incluye memorial explicativo / from the electrical drawings previously endorsed by LUMA. Explained memorandum is included.

La fase eléctrica del Proyecto preparada o diseñada por mí, según se incluye en los planos, documentos y especificaciones que acompañan esta certificación, está conforme con los reglamentos, códigos, normas, patrones y comunicados técnicos vigentes aplicables promulgados, aprobados o adoptados por LUMA, la Junta de Planificación y la Oficina de Gerencia de Permisos (OGPe), así como con las políticas públicas y leyes aplicables / The electrical project phase prepared or designed by me, as included in the drawings, documents and specifications that accompany this certification, is in accordance with the applicable regulations, codes, standards, procedures and current technical communications promulgated, approved or adopted by LUMA, the Planning Board and the Permits Management Office (OGPe), as well as public policies and applicable laws.

Acepto que el endoso de estos planos, documentos y especificaciones por parte LUMA no constituye un relevo de la responsabilidad profesional que conlleva esta certificación / I accept that these drawings endorsement, documents, and specifications by LUMA does not constitute a professional responsibility release that this certification carries.

Sustitución del Diseñador: Este Proyecto fue endosado con anterioridad a / **Designer Release:** This project was endorsed previously to _____, por lo que se incluye el relevo de responsabilidad expedido por éste / therefore, the responsibility release issued by him is included.

Ingeniero o Arquitecto / Engineer or Architect

CERTIFICACIÓN ELECTRÓNICA DEL DISEÑADOR / DESIGNER ELECTRONIC CERTIFICATION	ENDOSO ELECTRÓNICO DE LUMA / LUMA ELECTRONIC ENDORSEMENT
 Digitally signed by José L. Ortiz Nieves DN: cn=José L. Ortiz Nieves, o, ou, email=ortiz@dbllc.net, c=PR Date: 2025.03.05 10:54:35 -04'00' Fecha de Expiración: 2029-07-12	 Digitally signed by Frank N. Rivera Serrano DN: cn=Frank N. Rivera Serrano, o=LUMA Energy, ou=Engineering Distribution, email=frank.rivera@lumapr.com, c=US Reason: CERTIFICACION Date: 2025.03.28 14:45:28 -04'00' Fecha de Expiración: 2029-09-16

Recomendaciones

Estacionamiento Publico del Municipio de BarraNQUITAS

Datos de Localización

De acuerdo a la información suministrada se propone una actividad: Público en:

Dirección Física

carr. 156 Km. 16.3 Bo. Pueblo,
Barranquitas, Puerto Rico, 00794

Número(s) de Catastro

247-092-020-11

Calificación

Distrito(s) de Calificación: C-I

Distrito en el Mapa de Inundabilidad: X

Tipo de Suelo: Uv

Casos de Referencia

23-2-0427

Infraestructura

La Autoridad de Energía Eléctrica (Ahora LUMA) emite certificación de Planos de Construcción Eléctrica junto con planos endosados para el Proyecto propuesto.

Condiciones Especiales

La Autoridad de Energía Eléctrica (Ahora LUMA) emite certificación de Planos de Construcción Eléctrica junto con planos endosados para el Proyecto propuesto

Condiciones Generales

Esta recomendación es solamente aplicable a la situación de hechos y los datos según presentados y evaluados en el caso. La OGPe se reserva el derecho de reevaluar, variar o modificar el mismo en cualquier momento anterior a la emisión del permiso o la acción administrativa correspondiente por parte de la agencia solicitante o proponente cuando surja nueva información oficial específica estableciendo que el derecho aplicable o las condiciones ambientales en el predio han cambiado sustancialmente, o cuando la recomendación original se emitió bajo premisas falsas o fraudulentas.

Las vigencias de las diferentes agencias del proceso de recomendación serán las establecidas en los comunicados que estas emiten conforme a sus reglamentos.



Recomendaciones

Estacionamiento Publico del Municipio de BarraNQUITAS

Firma / Sellos

Fecha de Expedición:

28/MAR/2025

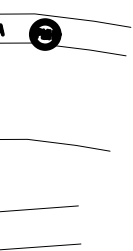


Norberto Almodóvar Vélez
Secretario Auxiliar de la OGPe



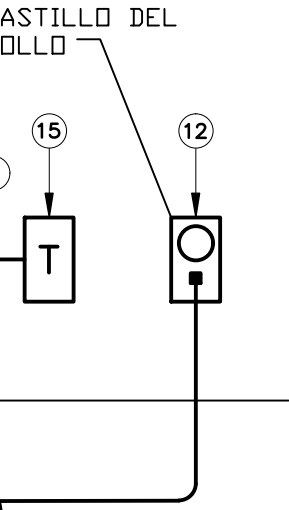
PLANO DE SITIO ELECTRICIDAD – PROPUESTO

ESCALA: 1: 400



LEYENDA:

SÍMBOLO	DESCRIPCIÓN
	EXISTING OVER HEAD PRIMARY LINE 8.32KV 3PH TO REMAIN
	EXISTING OVERHEAD TELEPHONE LINE TO REMIAN
	EXISTING CONCRETE PRIMARY POLE TO REMAIN
	EXISTING POLE MOUNTED DISTRIBUTION TRANSFORMER 37 1/2" KVA TO SERVE AS POINT OF CONNECTION PER LUMA LETTER DATED 1 JINE 22 #23-2-0427
	UNDERGROUND SECONDARY SERVICE FEEDER PER ELECTRICAL RISER DIAGRAM
	ELECTRICAL PANEL NEMA 3R PER SCHEDULE
	LIGHTING CONTROL PANEL SEE SPECIFICATIONS AND PROGRAMMING
	CEILING MOUNTED LIGHTING FISTURE PER SCHEDULE
	SAME AS ABOVE BUT MOUNTED ON WALL OR COLUMN - COORDINATE HEIGHT WITH ARCHITECTURE
	ARCHITECTURAL COLUMN MOUNTED LIGHT FIXTURE COORD. DETAILS WITH ARCHITECT
	EXISTING DOWN GUY TO REMAIN R MEANS TO BE REMOVED OR RELOCATED AS SHOWN
	NEW PRIMARY GUY LUMA STD. E-1-2-3, TO BE ANCHORED PER DETAIL.
	NEW SELF SUPPORTED 50 FT. SEE IMPORTANT NOTE
	METER SOCKET, SEE RISER DIAGRAM



misión a desarrollarse en estas zonas deberán
mento. Incluir nota al efecto en los planos de

oerá notificarle a la Oficina de Ingeniería de
comienzo de la obra posterior al endoso de los
tricos del proyecto para la requerida inspección,
ota al efecto en los planos de diseño.

responsable de lo siguiente. Incluir notas al efecto

o con aislamiento 600V, requerido desde el Punto
ficar el "Punto de Entrega" en los planos de diseño,
go Eléctrico Nacional y el Reglamento de Términos
e Energía Eléctrica. (Proyecto -Base de Contador)

el Gerente de Distrito Técnico correspondiente el
ompra de los transformadores.

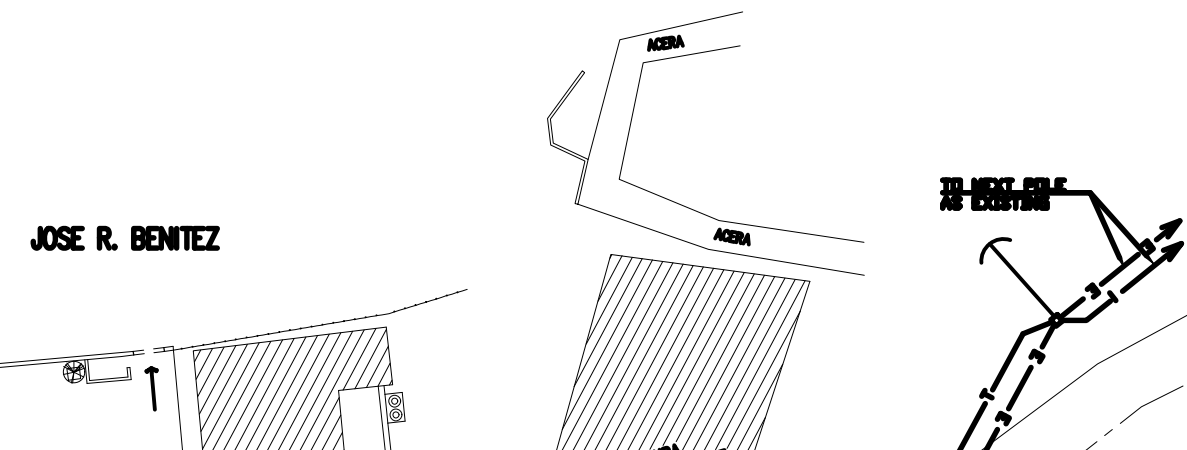
iii.

7.

No se permite ninguna construcción, movimiento de tierra, rodaje ninguna actividad incompatible con el derecho de servidumbre establecido en el terreno. Se refiere al desarrollador al Reglamento 7282 de 25 de enero de 2007, Para Servidumbres Para La Autoridad de Energía Eléctrica (Reglamento 7282) y la Ley 143 de 1979 (Ley 143), según enmendada. Cualquier asunto relacionado a las servidumbres se regirá por el Reglamento y ley antes citada. Todo permiso condicionado debe otorgarse ANTES de la solicitud para endoso de planos de diseño o antes de la solicitud de permiso de construcción a la OGPe.

El Proyecto debe cumplir con el Reglamento Complementario al Código Eléctrico Nacional, Sección IV. Artículo C y D en su totalidad, "Toma de Servicio Aérea" y "Toma de Servicio Soterrada". Se permitirá como punto de entrega una columna de hormigón conteniendo el contador (véase Manual de Normas de Distribución Urbana). La columna estará ubicada dentro del terreno del solicitante en la colindancia frontal y podrá formar parte de la verja si ésta cumple con las disposiciones del Manual de Normas de Distribución Urbana. El frente del contador deberá quedar en dirección a la calle a no más de 3 pies de la colindancia con la calle. La columna deberá cumplir con los despejos mínimos requeridos por el Código Eléctrico Nacional de Seguridad. Para tomas aéreas, la toma no excederá de un largo de cincuenta (50) pies desde el poste al soporte de la Columna.

JOSE R. BENITEZ



COLEGIO DE INGENIEROS Y AGRIMENSORES
DE PUERTO RICO

PO Box 100000 San Juan Puerto Rico 00901-0000
Tel: 787-759-2250 Ext: 1000 - puoricollege.org

ESTAMPILLA DIGITAL ESPECIAL (EDE)

Ing. Jose L. Ortiz Nieves, PE



Práctica de:	Ingeniería
Licencia:	6342
Renglón:	Plano
Descripción del Trabajo:	Diseño en Ingeniería
Fecha de Emisión:	03/05/2025
Monto Emitido:	\$5
Número de Serie:	5590-4344-5679-2557
Número de Caso:	23-2-0427
Proyecto / Unidad:	ESTACIONAMIENTO PUBLICO MUNICIPIO DE BARRANQUITAS
Rol del Profesional:	Diseñador

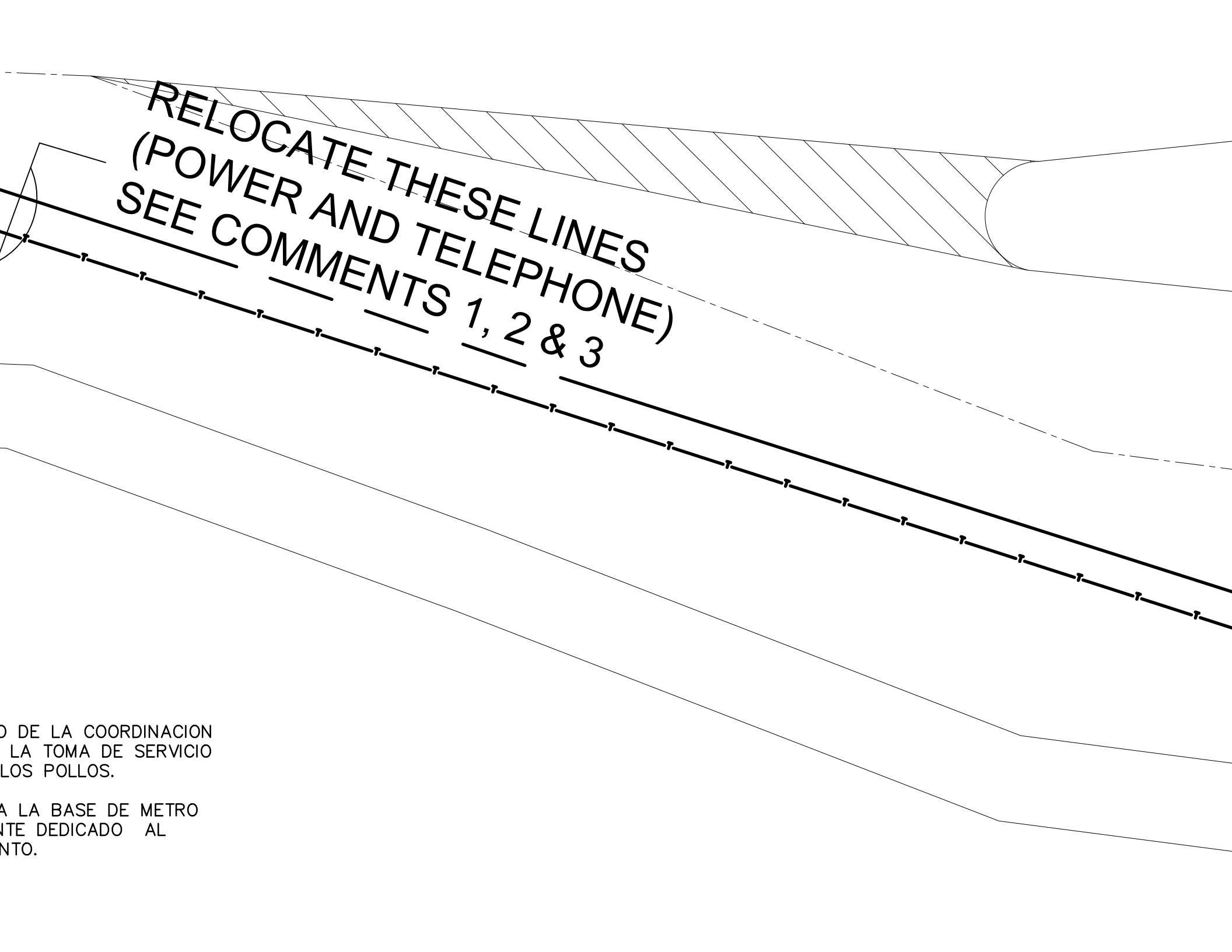


Certificación:

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 310 del 15 de mayo de 1938, según enmendada.

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

11'-0"
20'-0"
2'-0"



RELOCATE THESE LINES
(POWER AND TELEPHONE)
SEE COMMENTS 1, 2 & 3

The diagram shows a plan view of a road relocation. A solid line represents the new road alignment, with a dashed line indicating the original alignment. A series of short, parallel line segments with tick marks are shown along the new alignment, representing the relocation of power and telephone lines. A hatched area at the top right indicates a specific terrain or boundary. A circular feature is visible on the left side of the drawing.

DO DE LA COORDINACION
LA TOMA DE SERVICIO
LOS POLLOS.

A LA BASE DE METRO
NTE DEDICADO AL
NTO.

le, éste debe estar protegido de la
contratista es responsable de instalar el
recomendadas de halado
especificada para el cable.

oles) a ser instalados en el área de
tegidas mediante una loza de hormigón
en el patrón URD □52.

proyecto esté localizado a menos de una
ada, los conductos ascendentes tienen que
e fiberglass, según aprobado por la AEE.

errado serán inspeccionadas por la AEE
pactadas.

fico vehicular tendrá que ser protegida
se encuentren cerca de instalaciones de
espejo mínimo de 13 pulgadas de éstas.

emplazo que proveerá el contratista será la
ados en cada subestación.

rán para la conexión a tierra de antenas
ldadura exotérmica (thermo—weld) o de

de halado (fishwire) en cada conducto de

tendrá una resistencia máxima a tierra de
varilla para conectar a tierra el neutral
a 1,000 pies y en todos los

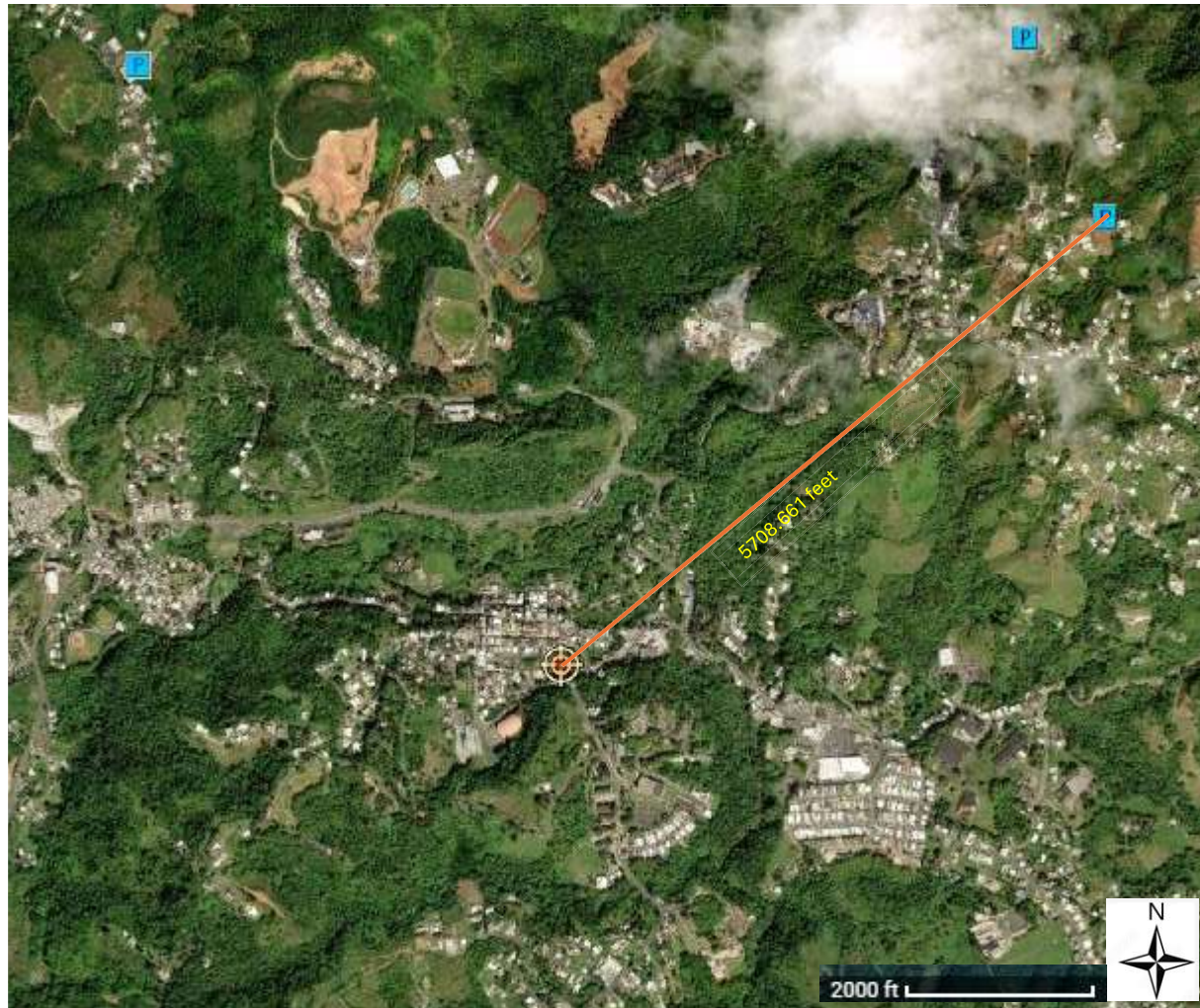
poste tiene que incluir dos conductos de
según requerido por la AEE.

que ser inspeccionadas por la AEE en su

Attachment 20. Water Well Extraction Map

Address: State Road PR-156 Km 16.3, Pueblo Ward,
Barranquitas, PR 00794

Coordinates: 18.185505, -66.305029



Project Location



Water well

Source: Puerto Rico Planning Board (Spatial Reference: NAD 83) URL https://gis.jp.pr.gov/mipr/?_ga=2.179884384.573855578.1749479750-1975718757.1701700188&_gl=1*19zkayv*_ga*MTk3NTcxODc1Ny4xNzAxNzAwMTg4*_ga_S4HGD1915F*czE3NDk1MDA0MjAkczEyOSRnMCR0MTc0OTUwMDQyMCRqNjAkBDaDA. *_ga_Z7MEG30P8C*czE3NDk1MDA0MjAkczEyOSRnMCR0MTc0OTUwMDQyMCRqNjAkBDaDA.

Attachment 21

Project Plans

PR-CRP-000988

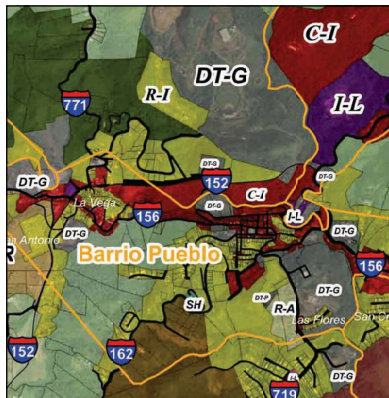
CONSTRUCCIÓN DE NUEVO
ESTACIONAMIENTO PÚBLICO PROJECT
BARRANQUITAS, PUERTO RICO

90% DESIGN DRAWINGS

AMPLIACION DE ESTACIONAMIENTOS PUBLICO

CARRETERA 156 KM 16.3, BO. PUEBLO DEL MUNICIPIO DE
BARRANQUITAS, PUERTO RICO.

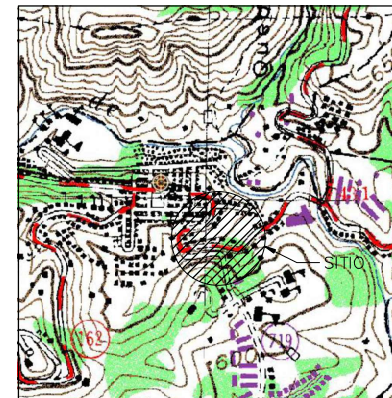
HON. ELLIOT COLON BLANCO
ALCALDE



MAPA DE CALIFICACION



FOTO AEREA



LOCALIZACION

YO, RAFAEL A. ZAYAS ROLON, INGENIERO, 13248, CERTIFICO QUE SOY EL PROFESIONAL QUE DISEÑO ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIEN CERTIFICO QUE ENTiendo QUE DICHO PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CODIGOS DE CONSTRUCCION VIGENTES DE LAS AGENCIAS, JUNTAS REGLAMENTADORAS O CORPORACIONES PUBLICAS CON JURISDICCION. CERTIFICO, ADENAS, QUE LA PREPARACION DE ESTOS PLANOS Y ESPECIFICACIONES SE HA CUMPLIDO CON LO DISPUESTO EN LA LEY NUM. 14 DE 8 DE ENERO DE 2004, SEGUN ENMIENDADA, CONOCIDA COMO LEY PARA LA INVERSION POR LA INDUSTRIA PUERTORRIQUENA Y CON LA LEY NUM. 319 DE 15 DE MAYO DE 1938, SEGUN ENMIENDADA, LEY NUM. 8 DE JULIO DE 1976, SEGUN ENMIENDADA, SEGUN APUQUE RECONOZCO QUE CUALQUIER DECLARACION FALSA O FALSIFICACION DE LOS HECHOS QUE SE HAYA PRODUCIDO POR DESCONEJIMIENTO O POR NEGLIGENCIA YA SEA POR MI, MIS AGENTES O EMPLEADOS O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCION JUDICIAL Y DISCIPLINARIA POR LA OGE.

ING. RAFAEL A. ZAYAS ROLON
LIC. #3248

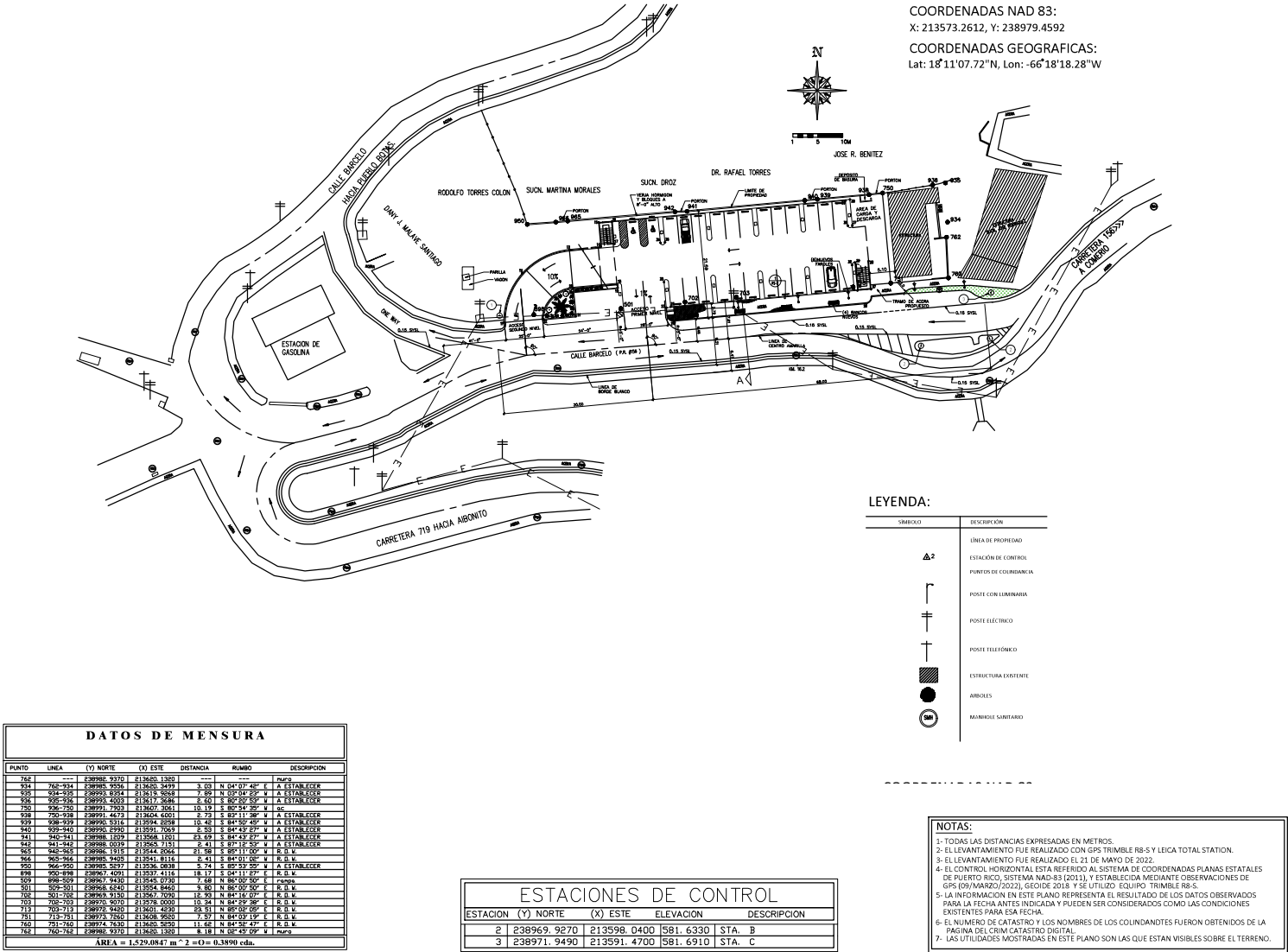


63 CALLE BARCELO STE 201, BARRANQUITAS, P.R. 00794 - TEL. (787)857.8021
E-MAIL: CENTRALGROUP.PR@GMAIL.COM

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3	PS-2	PLANO DE SITIO - PROPUERTO
4	PS-3	PLANO DE SITIO - CONTROL
5	PS-4	MANTENIMIENTO DE TRANSITO
6	PS-5	PERSPECTIVAS
7	A1	PLANTAS ARQUITECTONICAS - PROPUERTAS
8	A2	ELEVACIONES
9	A3	PLANTAS DE DRENAJES Y SECCIONES
10	A4	DETALLES ARQUITECTONICOS
11	A5	DETALLES ARQUITECTONICOS
12	S4-1	STRUCTURAL DRAWING
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17	PS-1	PLANTAS DE PROYECTO
18	ES-1	ELECTRICAL SITE PLAN
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20	ES-3	ELECTRICAL NOTES
21	ES-4	ELECTRICAL NOTES

DIBUJADO POR:
VICTOR N. RIVERA JAVIER
LIC. # 2946



DATOS DE MENSURA						
PUNTO	LÍNEA	(Y) NORTE	(X) ESTE	DISTANCIA	ÁNGULO	DESCRIPCIÓN
762	---	238986.9370	213620.1380	---	---	---
934	762-934	238986.9596	213620.3499	3.03	N 04°01'46"	E A ESTABLECER
938	934-938	238993.8824	213619.7686	7.89	N 09°54'25"	E A ESTABLECER
936	938-936	238993.4503	213617.3646	5.60	S 80°50'53"	V A ESTABLECER
730	936-730	238993.7903	213607.0581	10.19	S 80°31'25"	E A ESTABLECER
938	730-938	238993.4673	213604.4001	2.73	S 89°11'38"	V A ESTABLECER
939	938-939	238993.5314	213594.9258	10.48	S 84°52'45"	V A ESTABLECER
940	939-940	238993.9390	213591.7063	6.53	S 84°49'27"	V A ESTABLECER
941	940-941	238993.1229	213588.1101	63.69	S 84°42'45"	V A ESTABLECER
942	941-942	238993.0039	213585.7151	6.41	S 87°12'53"	V A ESTABLECER
943	942-943	238994.1315	213584.0564	21.98	S 89°11'02"	E A ESTABLECER
944	943-944	238993.9429	213581.8116	2.41	S 84°51'02"	E A ESTABLECER
945	944-945	238994.2507	213578.5818	3.74	S 89°12'25"	E A ESTABLECER
946	945-946	238993.9429	213578.5818	3.74	S 89°12'25"	E A ESTABLECER
947	946-947	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
948	947-948	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
949	948-949	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
950	949-950	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
951	950-951	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
952	951-952	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
953	952-953	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
954	953-954	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
955	954-955	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
956	955-956	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
957	956-957	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
958	957-958	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
959	958-959	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
960	959-960	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
961	960-961	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
962	961-962	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
963	962-963	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
964	963-964	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
965	964-965	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
966	965-966	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
967	966-967	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
968	967-968	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
969	968-969	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
970	969-970	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
971	970-971	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
972	971-972	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
973	972-973	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
974	973-974	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
975	974-975	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
976	975-976	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
977	976-977	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
978	977-978	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
979	978-979	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
980	979-980	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
981	980-981	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
982	981-982	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
983	982-983	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
984	983-984	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
985	984-985	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
986	985-986	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
987	986-987	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
988	987-988	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
989	988-989	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
990	989-990	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
991	990-991	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
992	991-992	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
993	992-993	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
994	993-994	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
995	994-995	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
996	995-996	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
997	996-997	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
998	997-998	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
999	998-999	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER
1000	999-1000	238994.4201	213577.4116	18.17	S 84°11'27"	E A ESTABLECER

ESTACIONES DE CONTROL				
ESTACION	(Y) NORTE	(X) ESTE	ELEVACION	DESCRIPCIÓN
2	238969.9270	213598.0400	581.6330	STA. B
3	238971.9490	213591.4700	581.6910	STA. C

CENTRAL GROUP, PSC.

PUNCAJUNG - ARCHITECTURAL PUNCAJUNG
10 CALLE BARRIO DE LOS RIOS, P.R. 00941 - TEL: 787-401-0001
E-MAIL: centralgroup@centralgroup.com

REVISIONES	
FECHA	DESCRIPCION

PROYECTO: PLAN DE MENSURA DE UN PREDIO DE TERRENO EN EL BO. PUEBLO DE BARRANQUITAS

FECHA: FEBRERO 2023

REVISOR POR: RAFAEL

REVISOR POR: WILSON H. RIVERA

US: B

PROYECTO: 2023

PROYECTO: 1400

PROYECTO: 1400

DESCRIPCION: PLANO DE MENSURA

PROYECTO: 1400

PROYECTO: 1400

TEL: 787-401-0001

\\server\Datos\Victor\Tr-VICTOR-2023\MUNBARRANQUITAS\ESTACIONAMIENTO - PASEO DERECHO DE VÍA SITE PLAN.dwg Saved By: USER Save Time: 4/8/2025 4:05 PM

CONFORME EN CUANTO AL DERECHO DE VÍA CON LA CARRETERA ESTATAL PR-156
SEGÚN DEFINIDO POR LOS PUNTOS R.O.W. 888, 501, 702, 703, 713, 751 Y 760.

SOMETIDO

AGUIA JOSUÉ VILLALOBOS COLÓN
AGRIENSOR-CONSULTOR
OFICINA DE DERECHO DE VÍA

FECHA

RECOMENDADO

JOSÉ A. TORRES APONTE
DIRECTOR INTERINO
ÁREA DE ADQUISICIÓN DE PROPIEDADES

FECHA

APROBADO:

DR. EDWIN E. GONZALEZ MONTALVO
SECRETARIO DE TRANSPORTACION Y OBRAS PÚBLICAS

FECHA

DATOS DE MENSURA						
PUNTO	LINEA	(Y) NORTE	(X) ESTE	DISTANCIA	RUMBO	DESCRIPCION
762	1	239988.9270	213620.1380			MUR
761	762-751	239988.9266	213620.1499	3.03	N 04° 07' 42"	A ESTABILICED
935	934-935	239993.8354	213615.1048	7.60	N 03° 04' 23"	V A ESTABILICED
936	935-936	239993.8303	213615.1048	8.60	N 03° 00' 53"	V A ESTABILICED
750	936-750	239991.7803	213620.1061	10.10	N 80° 54' 35"	V AL
751	750-751	239991.8473	213624.0001	8.23	N 82° 11' 38"	V A ESTABILICED
939	938-939	239990.3316	213594.2298	10.42	N 84° 30' 45"	V A ESTABILICED
940	939-940	239990.3960	213594.2298	8.23	N 82° 11' 38"	V A ESTABILICED
941	940-941	239988.1809	213594.1201	10.00	N 84° 43' 57"	V A ESTABILICED
942	941-942	239988.0092	213594.1201	8.41	N 84° 07' 52"	V A ESTABILICED
965	942-965	239984.1515	213544.0364	41.58	N 89° 11' 00"	V A D. V.
966	965-966	239984.1515	213544.0364	41.58	N 89° 11' 00"	V A D. V.
950	946-950	239985.1297	213536.0838	5.74	N 80° 53' 55"	V A ESTABILICED
956	950-956	239987.4291	213510.4116	18.17	N 04° 11' 07"	E. B. V.
300	898-300	239987.4430	213545.0130	7.68	N 86° 00' 50"	E. B. V.
301	500-301	239986.6240	213554.8460	5.80	N 86° 00' 50"	E. D. V.
703	501-703	239989.8150	213567.7590	10.51	N 84° 18' 07"	E. D. V.
702	703-702	239970.9070	213578.0000	10.34	N 84° 29' 38"	E. D. V.
713	702-713	239978.8480	213561.4200	10.51	N 89° 05' 05"	E. D. V.
751	713-751	239979.7560	213608.0500	7.57	N 84° 03' 19"	E. D. V.
760	751-760	239974.7630	213620.1000	11.62	N 84° 58' 47"	E. D. V.
762	760-762	239988.9270	213620.1380	8.18	N 05° 45' 09"	V MUR
AREA = 1,529.8847 m ² = 0.3690 cab.						

- NOTAS:
- 1.- TODAS LAS DISTANCIAS EXPRESADAS EN METROS.
 - 2.- EL LEVANTAMIENTO FUE REALIZADO CON GPS TRIMBLE R8-S Y LEICA TOTAL STATION.
 - 3.- EL LEVANTAMIENTO FUE REALIZADO EL 21 DE MAYO DE 2022.
 - 4.- EL CONTROL HORIZONTAL ESTA REFERIDO AL SISTEMA DE COORDENADAS PLANAS ESTATALES DE PUERTO RICO, SISTEMA NAD-83 (2011) Y SE ESTABLECIO MEDIANTE OBSERVACIONES DE GPS (09/MARZO/2022), GEOIDE 2018 Y SE UTILIZO EQUIPO TRIMBLE R8-S.
 - 5.- LA INFORMACION EN ESTE PLANO REPRESENTA EL RESULTADO DE LOS DATOS OBSERVADOS PARA LA FECHA ANTES INDICADA Y PUEDEN SER CONSIDERADOS COMO LAS CONDICIONES EXISTENTES PARA ESA FECHA.
 - 6.- EL NUMERO DE CATASTRO Y LOS NOMBRES DE LOS COLINDANTES FUERON OBTENIDOS DE LA PAGINA DEL CRIM CATASTRO DIGITAL.
 - 7.- LAS UTILIDADES MOSTRADAS EN ESTE PLANO SON LAS QUE ESTAN VISIBLES SOBRE EL TERRENO.



COLEGIO DE INGENIEROS Y AGRIMENSORES
DE PUERTO RICO
(El Colegio de Ingenieros y Agrimensores de Puerto Rico es una entidad sin fines de lucro, organizada de acuerdo a la Ley No. 100-1997, del 15 de mayo de 1997, y a la Ley No. 100-2001, del 15 de mayo de 2001.)

ESTAMPILLA DIGITAL ESPECIAL (EDE)
Ing. Rafael A. Zayas Rolón, PE


Práctica de:

12488

Uso de:

Plano

Descripción del Trabajo:

Conformaciones de Colindancias e Acciones de Destrucción

Fecha de Emisión:

02/20/2025

Nombre de Sitio:

9175-484-0649-7004

Nombre de Cliente:

CARLOS-25-179

Proyecto / Unidad:

Estacionamiento Público Municipal de Barranquitas

Rol de Profesional:

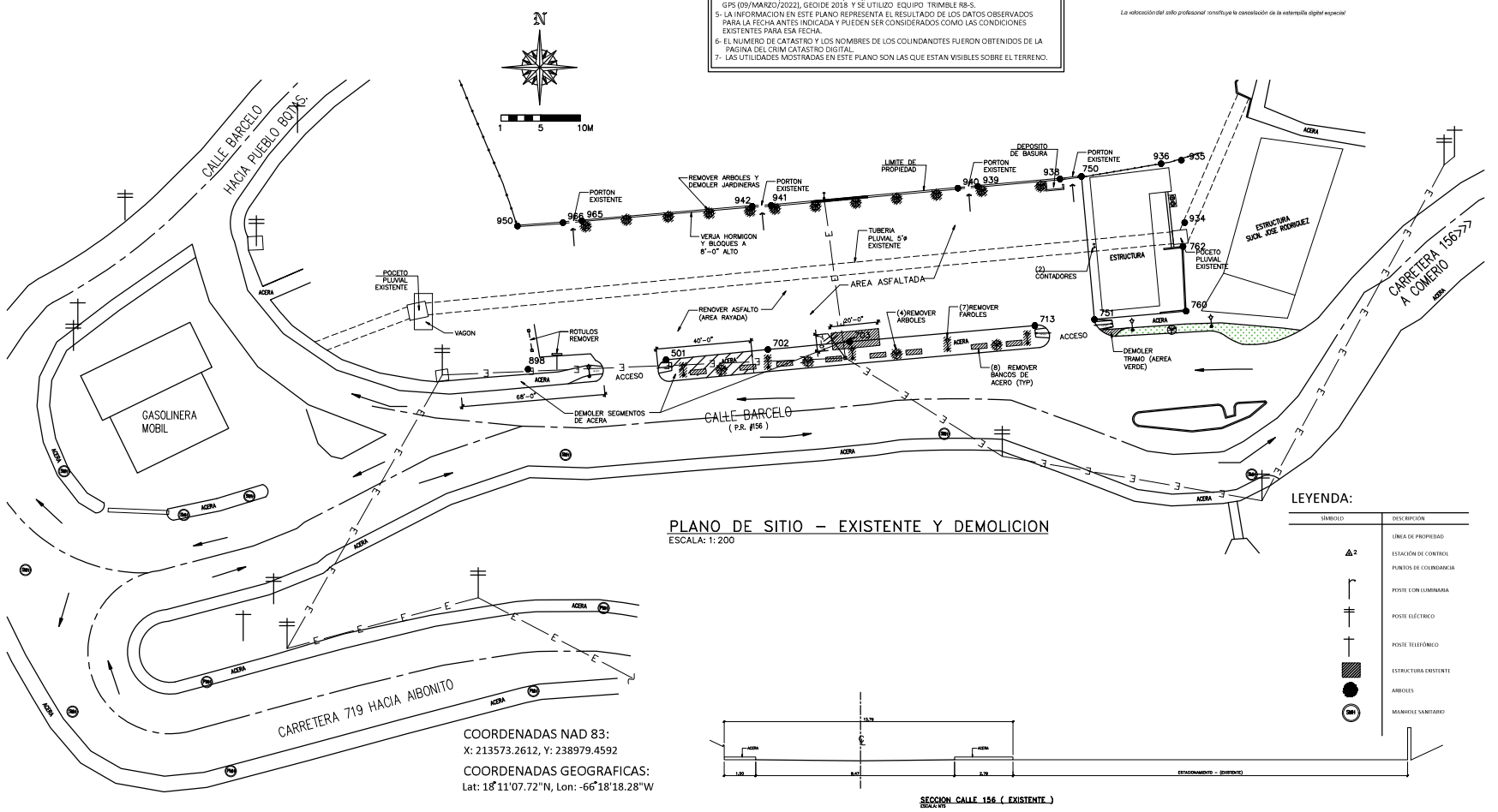
Supervisor de Agrimensura

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 obligaciones de la Ley No. 100-1997, del 15 de mayo de 1997, y la Ley No. 100-2001, del 15 de mayo de 2001, según enmendada.

La autenticidad del profesional garantiza la veracidad de la información digital emitida.

COMFORMITY OF SURVEY PLAN, TOPOGRAPHY & ASBUILT.





CENTRAL GROUP, PSC.
ENGINEERING-ARCHITECTURAL-PLANNING
10000 AV. BOULEVARD, SUITE 100 - SAN JUAN, P.R. 00925-4001
TEL: (787) 407-8001

REVISIONES

FECHA	REVISIONES

FECHA:

REVISADO POR:

ESCALA:

1:250

PROYECTO:

PLANO CONSTRUCCION ESTACIONAMIENTO PASEO MUN. BARRANQUITAS BARRANQUITAS, P.R.

DESCRIPCION:

PLANO DE SITIO EXISTENTE

DESENHO NOMBRE:

PS-1

DESENHO NUMERO:

2 de 19

FECHA:

18/04/2024

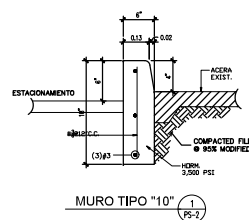
SYSL = LINEA SOLIDA AMARILLA
SWSL = LINEA SOLIDA BLANCA
DWL = LINEA BLANCA ENTRECORTADA

- LETREROS Y ROTULACION SERAN CONSTRUIDOS DE ACUERDO AL MANUAL DE SEÑALES DE TRANSITO PARA LAS VIAS PUBLICAS DE P.R.

- LA PINTURA DE TRANSITO BLANCA Y AMARILLA CUMPLIRA CON LOS REQUISITOS MINIMOS DE LAS ESPECIFICACIONES 618 DE LA AUTORIDAD DE CARRETERAS Y TRANSPORTACION DE P.R.

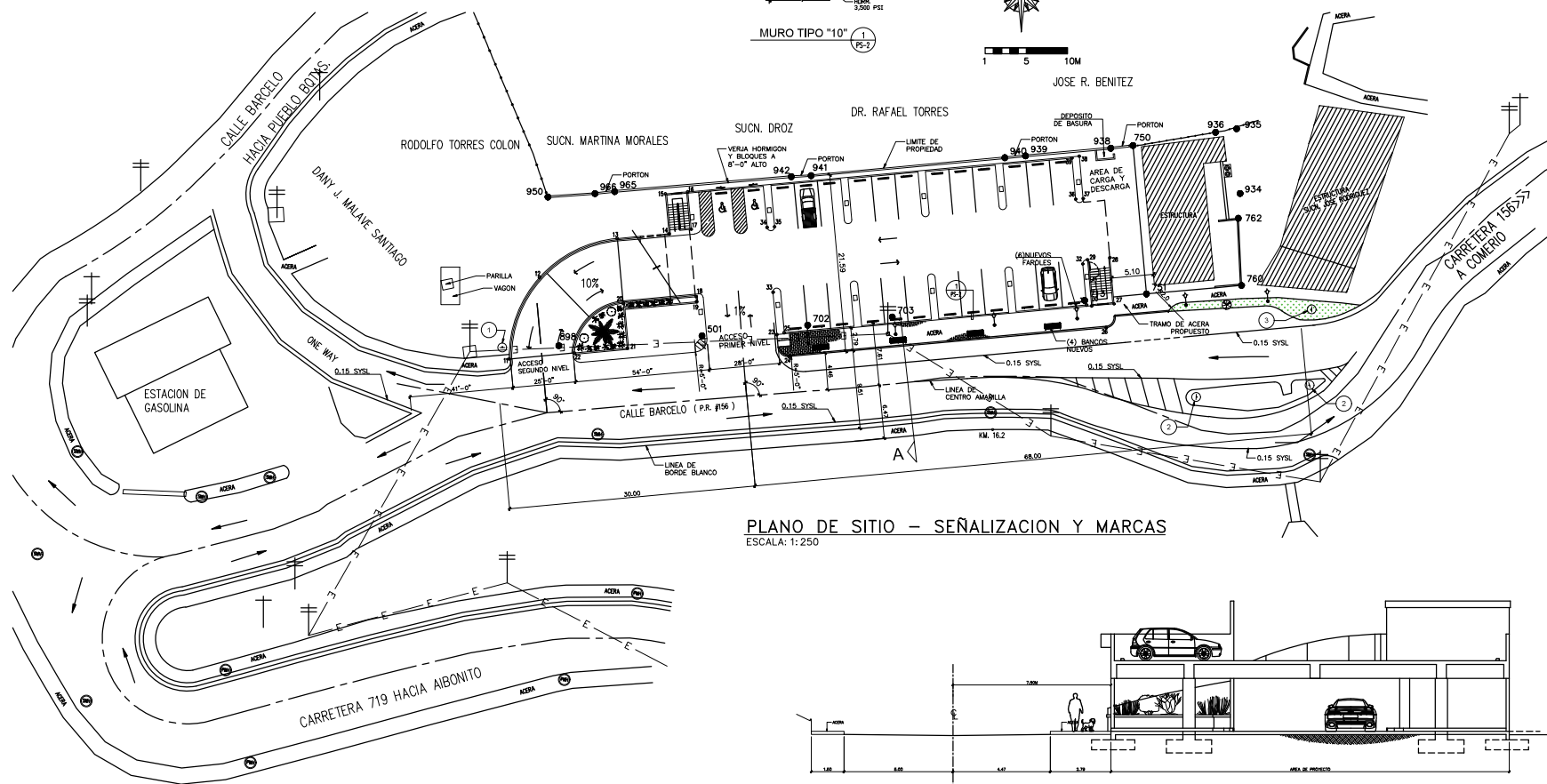
NÚM. DE CODIGO	CATEGORIA	CODIGO DE ROTULO	ROTULO	TAMANO DE LOS ROTULOS	ESTRUC. AMAZON AREA	MANUAL DE REFERENCIA	TOTAL
1	1	R-1d		24" X 24"	N/A	MANUAL DE ROTULACION PARA LAS VÍAS PÚBLICAS DE PUERTO RICO DTOP VERSION 2020 (MULTIC 2009)	1
2	2	R-47		18" X 24"	N/A	MANUAL DE ROTULACION PARA LAS VÍAS PÚBLICAS DE PUERTO RICO DTOP VERSION 2020 (MULTIC 2009)	1
3	3	D-1e		24" X 30"	N/A	MANUAL DE ROTULACION PARA LAS VÍAS PÚBLICAS DE PUERTO RICO DTOP	1

- 1- TODAS LAS DISTANCIAS EXPRESADAS EN METROS.
- 2- EL LEVANTAMIENTO FUE REALIZADO CON GPS TRIMBLE R8-S Y LEICA TOTAL STATION.
- 3- EL LEVANTAMIENTO FUE REALIZADO EL 21 DE MAYO DE 2022.
- 4- EL CONTROL HORIZONTAL ESTÁ REFERIDO AL SISTEMA DE COORDENADAS PLANAS ESTATALES DE PUERTO RICO, SISTEMA NAD-83 (2011), Y ESTABLECIDA MEDIANTE OBSERVACIONES DE GPS (RINEX 2021), GEOID 2011 Y SET POINT (GPS TRIMBLE R8-S).
- 5- LA INFORMACION EN ESTE PLANO REPRESENTA EL RESULTADO DE LOS DATOS OBSERVADOS PARA LA FECHA ANTES INDICADA Y PUEDEN SER CONSIDERADOS COMO LAS CONDICIONES EXISTENTES PARA ESA FECHA.
- 6- EL NÚMERO DE CATASTRO Y LOS NOMBRES DE LOS COLINDANTES FUERON OBTENIDOS DE LA PAGINA DEL CNA CATASTRAL DIGITAL.
- 7- LAS UTILIDADES MOSTRADAS EN ESTE PLANO SON LAS QUE ESTAN VISIBLES SOBRE EL TERRENO.



JOSE R. BENITEZ

SÍMBOLO	DESCRIPCIÓN
	LÍNEA DE PROPIEDAD
	ESTACION DE CONTROL
	PUNTOS DE COLOCACION
	POSTE CON ALUMBRADO
	POSTE ELÉCTRICO
	POSTE TELEFÓNICO
	ESTRUCTURA EXISTENTE
	ÁRBOLES
	MURDOL SANITARIO



CENTRAL GROUP, PSC.

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3 CALL MARCELO STE 201 BRANFORD, P.R. 00704 - TEL. & FAX (787)-467-4021

REVISIONES

[illegible][illegible]

FIGURE 1

REVISADO POR:

DISEÑADO POR: VICTOR M. RIVERA	LIC. #: 2948
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ESCALA:
1:250

PROYECTO:

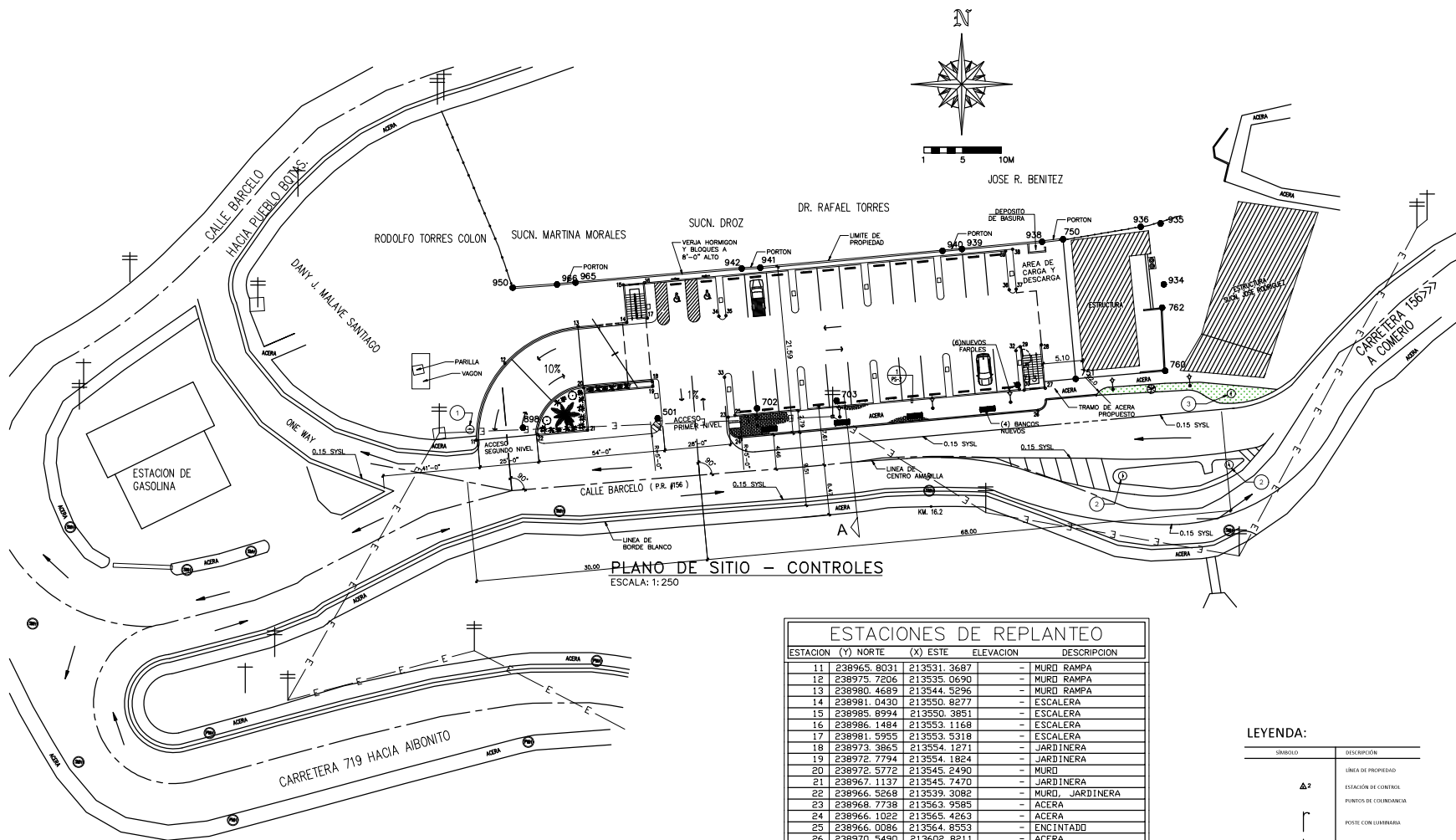
PLANO CONSTRUCCION
ESTACIONAMIENTO PASEO
MUN. BARRANQUITAS
BARRANQUITAS, P.R.

DESCRIPTION

PLANO DE SITIO
PROPUESTO

DEBILIT NUM	HEJA NUM
PS-2	3 = 19

ING, RAFAEL A. ZAYAS ROLÓN



ESTACIONES DE CONTROL				
ESTACION	(Y) NORTE	(X) ESTE	ELEVACION	DESCRIPCION
2	238969. 9270	213598. 0400	581. 6330	STA. B
3	238971. 9490	213591. 4700	581. 6910	STA. C

ESTACIONES DE REPLANTEO				
ESTACION	(Y) NORTE	(X) ESTE	ELEVACION	DESCRIPCION
11	238955.8031	213531.3687		MURD, RAMPA
12	238973.7336	213535.0669		MURD, RAMPA
13	238980.4689	213544.5236		MURD, RAMPA
14	238981.0430	213550.8277		ESCALERA
15	238985.8994	213550.3851		ESCALERA
16	238996.1484	213553.1168		ESCALERA
17	238981.5955	213553.5318		ESCALERA
18	238973.3881	213553.1274		JARDINERA
19	238972.7794	213554.1824		JARDINERA
20	238972.5772	213545.2409		MURD
21	238967.1137	213545.7470		JARDINERA
22	238966.5268	213539.3082		MURD, JARDINERA
23	238968.7738	213564.9585		ACERA
24	238966.1022	213564.8263		ACERA
25	238966.0056	213564.8553		ENCINTADO
26	238970.5490	213602.8211		ACERA
27	238972.5160	213605.0104		ESCALERA, RAMPA
28	238978.1312	213604.4986		ESCALERA
29	238977.8822	213601.7668		ESCALERA
30	238972.2670	213602.2787		ESCALERA, ACERA
31	238972.3634	213601.6578		ENCINTADO
32	238977.3716	213601.2013		ENCINTADO
33	238973.9338	213563.4882		ENCINTADO
34	238981.8254	213562.7668		ENCINTADO
35	238981.9085	213563.6794		ENCINTADO
36	238985.2494	213600.3301		ENCINTADO
37	238985.3234	213601.5824		ENCINTADO
38	238990.4923	213600.7704		ENCINTADO
39	238990.2576	213599.8736		ENCINTADO

LEYENDA:

SÍMBOLO	DESCRIPCIÓN
	LÍNEA DE PROPIEDAD
	ESTACIÓN DE CONTROL
	PUNTOS DE COLUMNARCA
	POSTE CON LUMINARIA
	POSTE ELÉCTRICO
	POSTE TELEFÓNICO
	ESTRUCTURA EXISTENTE
	ARBORES
	MANHOLE SANITARIO

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E-MAIL: info@centralgroup.com

[illegible][illegible]

FEC-10-

REVISADO POR:

DESIGNED FOR:

ESCALA:

PROYECTO :

FLANO CC

ESTACION
MUN. BAR.

BARRANQ

DESCRIPTION

FLANDERS

CELESTIO NA

PC-1

NAME: _____

LUDWIG K. F. 132



REFLECTORIZED PLASTIC DRUM

ING. RAFAEL A. ZAYAS ROLON
LICENCIADO 13248

[illegible][illegible]

FECHA: **ABRIL 2023**

REVISADO POR:

DESIGNED FOR:	LOC. #
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ESOM 44

REFERENCES

ESTACIONAMIENTO PUBLICO
MUN. BARRANQUITAS
BARRANQUITAS, P.R.

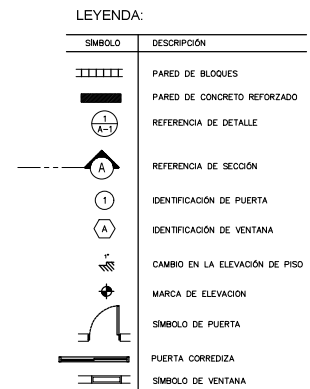
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PERSPECTIVAS

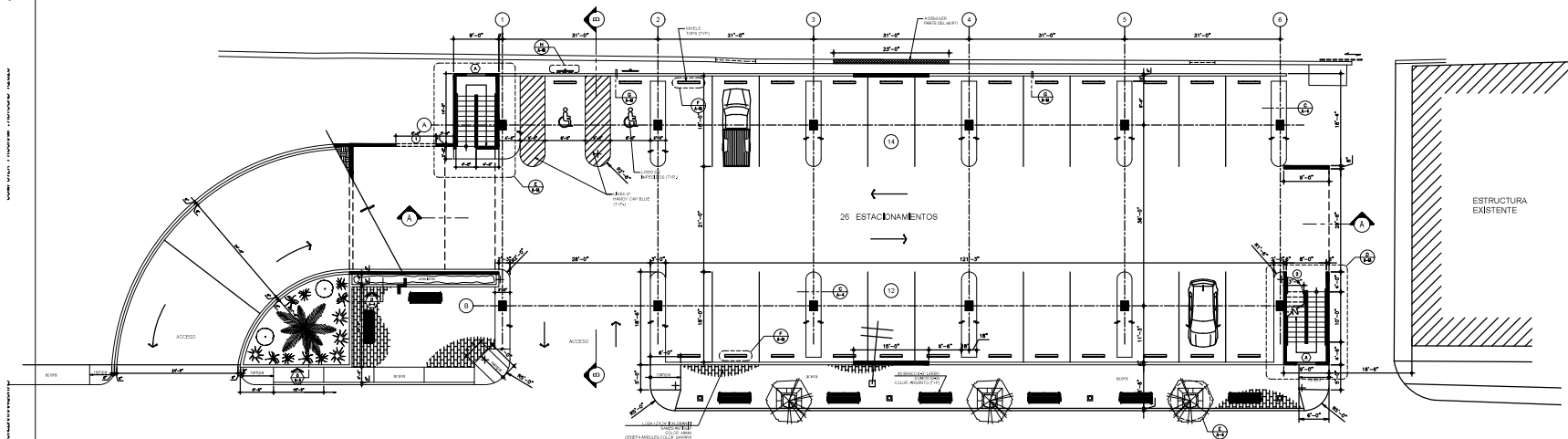
DISJO NUM:	FOUR NUM:
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DD 1 6-1

ING. RAFAEL A. ZAYAS ROLON
LICENCIA 13248



PLANTA ARQUITECTONICA - NIVEL SUPERIOR (32 ESTACIONAMIENTOS)
ESCALA: 3/32"=1'-0"



PLANTA ARQUITECTONICA - NIVEL BASE (26 ESTACIONAMIENTOS)
ESCALA: 3/32"=1'-0"

← CALLE BARCELO (PR #156) →

[illegible][illegible]

FECN

REVENUE FOR:

DISBURSO POR:	LC. #
MOTOR B. RIVERA	2846

ESCALA

PROYECTO:**PROYECTO:**

PLANO CONSTRUCCION
ESTACIONAMIENTO PUBLICO
MUN. BARRANQUITAS
BARRANQUITAS, P.R.

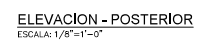
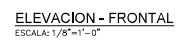
DESCRIPCIÓN

PLANTAS ARQUITECTONICAS

DELUO HUN

A-1 7-19

ING. RAFAEL A. ZAYAS ROLÓN
LICENCIA 13248



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E-MAIL: centraleng@prodnet.com

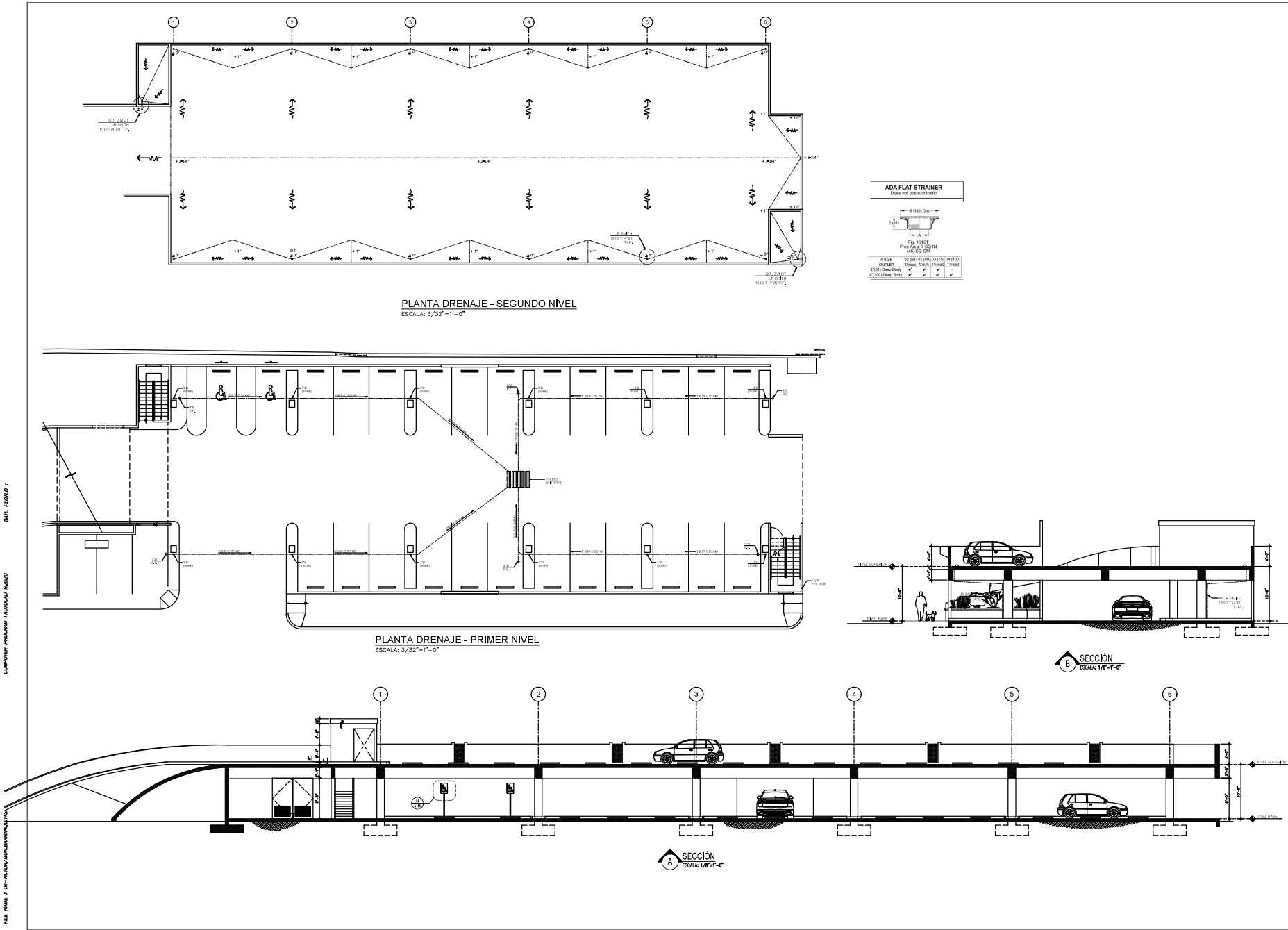
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1000

DATE PLOTTED : 11/11/2019

PROJECT NAME : PLANTAS DE DRENAJE

FILE NAME : PLANTAS DE DRENAJE



REVISIONES	
FECHA	REVISOR

NOTA: EL DISEÑO DE ESTE PROYECTO SE HA HECHO BASADO EN LA INFORMACIÓN PROPORCIONADA POR EL CLIENTE. EL INGENIERO NO SE RESPONSABILIZA POR LOS DAÑOS O PERJUICIOS QUE PUEDAN OCURRIR COMO CONSECUENCIA DEL USO DE ESTE DISEÑO. EL INGENIERO NO SE RESPONSABILIZA POR LOS DAÑOS O PERJUICIOS QUE PUEDAN OCURRIR COMO CONSECUENCIA DEL USO DE ESTE DISEÑO. EL INGENIERO NO SE RESPONSABILIZA POR LOS DAÑOS O PERJUICIOS QUE PUEDAN OCURRIR COMO CONSECUENCIA DEL USO DE ESTE DISEÑO.

STRUCTURAL DRAWING SHEET INDEX

S-0.1	STRUCTURAL DRAWING INDEX & GENERAL NOTES
S-0.2	REINFORCED CONCRETE DETAILS & NOTES
S-1.0	FOUNDATION PLAN
S-1.1	ROOF STRUCTURAL PLAN
S-2.0	STRUCTURAL FRAME ELEVATION

STANDARD DRAWING ABBREVIATIONS

ADL	Additional Detail Lead	LLH	Long Leg Horizontal
AB	Anchor Bolt	LOCT	Location
A/C	Air Conditioner	LONGT	Longitudinal
ADOL	Additional	LWGT	Lightweight
APF	Above Finish Floor	LL	Live Load
AL	Aluminum	LL	Live Load
AL	Alternate	MAX	Maximum
APP	Approximate	MEZ	Mechanical
ARCH	Architect, Architectural	MEZ	Mechanical
BCX	Bottom Chord Extension	MFG	Manufacturer
BF	Both Faces	MID	Middle
BLDG	Building	MN	Minimum
BLDG	Blockage	MISC	Miscellaneous
BM (x)	Beams (x)	MKD	Marked
BO	By Others, Blockout	MTL	Material, Metal
BO	Bottom of opening	N	North
B	Bottom	NIC	Not in Contract
BP	Base Plate	NF	Near Face
BRD	Bridging	NOM	Nominal
B/RG	Beading	NTS	Not to Scale
BOM	Bottom of Beam	NS	Near Side
C-1	Column Number	OC	On Center
CANT	Can't	OD	Outside Diameter
CG	Center of Gravity	OPNG	Opening
CG	Cast-in-Place Concrete	OPP	Opposite
CIS	Center of Gravity of Slab (steel)	OPP HAND	Opposite Hand
CJ	Cont rol or Construction Joint	O. O.	Out to Out
CL	Centerline	PL	Plate
CLD	Ceiling	P/C	Pre-Cast
CLKG	Clearance	PCF	Pounds per Cubic Foot
CLR	Clear, Clearance	PERM	Perimeter
CMU	Concrete Masonry Unit	PERP	Perpendicular
COL	Column	PLF	Pounds per Linear Foot
CONC	Concrete	PROJ	Projection
CONN	Connection	PSF	Pounds per Square Foot
CONSTR	Construction	RECT	Rectangular
CONT	Continuous	REF	Refer (enck)
CORR	Corrugated	REFR	Reinforcement/Reinforce
CTR	Center	REV	Revision
C.C.	Center to Center	REQ'D	Required
DBA	Deformed Bar Anchor	S	South
DBL	Double	SC	Scale
DM	Dimension	SCH	Schedule
DWG	Deskling	SECT	Section
DW	Down	SENG	Structural Engineer of Record
DTL	Detail	SHT	Sheet
DWD (x)	Drawing (x)	SH	Similar
DWL	Dowel	SL	Slab
DLD	Dead Load	SLV	Sieve
E	East	SPOS	Spaces
EA	Each	SPOS	Spacing
EMB	Embedment	SPL	Splice
EE	Each End	SPEC	Specification
EF	Each Face	SQ	Square
EG	Existing Grade	STD	Standard
EJ	Expansion Joint	STF	Stiffener
EL	Elevation	STG	Slab on Grade
ELEV	Elevation, Elevator	S.O.F.	Slab of Footing
ENGR	Structural Engineer of Record	STR	Structure
EQ	Equal	STR	Structure
EXIST	Existing	STR	Structure
EXP BOLT	Expansion Bolt	STR	Structure
EXT	Exterior	STR	Structure
EW	Each Way	STR	Structure
ETC	Etcetera	STR	Structure
F-1	Footing Number	STR	Structure
FB	Floor Beam	STR	Structure
F	Far Face, Finished Floor	STR	Structure
FFE	Finish Floor Elevation	STR	Structure
FG	Final Grade	STR	Structure
FN	Finish	STR	Structure
FL	Floor	STR	Structure
FLG	Flange	STR	Structure
FND	Foundation	STR	Structure
FRMG	Framing	STR	Structure
FT	Foot, Feet	STR	Structure
FTB	Footing	STR	Structure
FS	Far Side	STR	Structure
GA	Gage or Gauge	STR	Structure
GALV	Galvanized	STR	Structure
GC	General Contractor	STR	Structure
GR	Grade	STR	Structure
HBF	Horizontal Both Faces	STR	Structure
HORIZ	Horizontal	STR	Structure
HI	Horizontal Hook	STR	Structure
HMS	Headed Anchor Stud	STR	Structure
HSB	High Strength Bolt	STR	Structure
HT	Height	STR	Structure
ID	Inside Diameter	STR	Structure
INT	Information	STR	Structure
INT	Interior	STR	Structure
JST	Joint	STR	Structure
J	Joint	STR	Structure
K	Kips	STR	Structure
KLF	Kips per linear foot	STR	Structure
KSF	Kips per square foot	STR	Structure
KSI	Kips per square inch	STR	Structure
L	Left, Length	STR	Structure
LAM	Laminated	STR	Structure
LBS	Pounds	STR	Structure
LEV	Level	STR	Structure
LLV	Long Leg Vertical	STR	Structure

GENERAL NOTES

- 1- THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE SPECIFICATIONS AND THE ARCHITECTURAL, ELECTRICAL, MECHANICAL AND ANY OTHER TRADE DRAWINGS. IF THERE IS A DISCREPANCY BETWEEN DRAWINGS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ARCHITECT AND THE ENGINEER PRIOR TO PERFORMING ANY WORK.
- 2- CONTRACTOR SHALL VERIFY ALL DIMENSIONS ON STRUCTURAL DRAWINGS WITH THE ARCHITECTURAL DRAWINGS BEFORE LAYING OUT ANY WORK. IF ANY DISCREPANCY ARISES THE ARCHITECTS AND ENGINEER SHALL BE NOTIFIED.
- 3- DETAILS, NOTES AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE WITH THE APPROVAL OF THE ENGINEER.
- 4- THE FOLLOWING CODE, STANDARD AND SPECIFICATIONS APPLY TO ALL THE CONSTRUCTION WORKS:
 - 1- 2018 IBC BUILDING CODE
 - 2- INTERNATIONAL BUILDING CODE IBC 2018
 - 3- AMERICAN CONCRETE INSTITUTE 318-14 LATEST EDITION
 - 4- AMERICAN INSTITUTE OF STEEL CONSTRUCTION, 9 EDITION
 - 5- AMERICAN WELDING SOCIETY LATEST EDITION
 - 6- CONCRETE REINFORCING STEEL INSTITUTE LATEST EDITION
 - 7- AMERICAN SOCIETY FOR TESTING AND MATERIAL
 - 8- STEEL DECK INSTITUTE LATEST EDITION
 - 9- ACI MANUAL OF CONCRETE PRACTICE, LATEST EDITION
- 5- DESIGN LOADS:
 - 1) PARKING SPACE ----- 40 PSF
 - 2) OFFICE AREA ----- 50 PSF
 - 3) STAIRS AND EXIT WAYS ----- 100 PSF
 - 4) MECHANICAL ROOM ----- 100 PSF
 - 5) ROOF ----- 40 PSF
- 6- WIND LOADS:
 - 1) WIND LOAD SHALL BE COMPUTE AS PER ASCE-7-16
 - 2) BASIC WIND SPEED ----- 160 MPH
 - 3) IMPORTANCE FACTOR ----- 1.0
 - 4) EXPOSURE CATEGORY ----- B
 - 5) TOPOGRAPHIC FACTOR ----- 1.0
 - 6) INTERNAL PRESSURE COEFFICIENT Gagi ----- 0.5
- 7- SEISMIC LOADS:
 - 1) SEISMIC LOAD SHALL BE COMPUTE AS PER ASCE-7-16
 - 2) SEISMIC IMPORTANCE FACTOR ----- 1.0
 - 3) SEISMIC RESPONSE COEFFICIENT ----- 0.075
 - 4) SEISMIC DESIGN CATEGORY ----- D
 - 5) BASIC SEISMIC-RESISTING SYSTEM ----- SRS
 - 6) RESPONSE MODIFICATION FACTOR ----- 1.0
 - 7) STRUCTURAL ANALYSIS USED ----- STATIC
- 8- CONTRACTOR SHALL PROVIDE ADEQUATE SHORING TO THE STRUCTURE DURING CONSTRUCTION AND SHALL NOT CREATE ANY OVERLOAD SITUATION OVER IT DUE TO THE HORIZONTAL MOVEMENT OF ANY HEAVY EQUIPMENT OR THE STORAGE OF THE CONSTRUCTION MATERIALS.
- 9- IN CASE OF DOUBT IN THE INTERPRETATION OF ANY ASPECT OF THESE STRUCTURAL DRAWINGS AND/OR THE SPECIFICATIONS, THE DESIGNER SHALL BE CONSULTED, BEFORE COMMENCING ANY WORK.
- 10- IMPLEMENTING JOB SITE SAFETY AND CONSTRUCTION PROCEDURES (MEANS AND METHODS) TEMPORARY SHORING AND BRACING OF EXISTING CONSTRUCTION ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT ANY DAMAGE TO ADJACENT STRUCTURES AND UTILITIES.
- 11- ALL STRUCTURAL WORKS RELATED TO MEANS AND METHODS OF CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR, INCLUDING FORMWORK, SHORING, RESHORING, SUPPORT OF EXCAVATION, UNDERPINNING AND SUPPORT OF ALL CONSTRUCTION EQUIPMENT INCLUDING CRANES AND HOISTS.
- 12- SCALE ON THE DRAWINGS ARE FOR INFORMATION ONLY, NO DIMENSIONAL INFORMATION SHALL BE OBTAINED BY SCALING FROM THE DRAWINGS.
- 13- THE USE OF ELECTRONIC FILES OR REPRODUCTIONS OF THESE DOCUMENTS BY ANY PERSON, CONTRACTOR, SUBCONTRACTOR, DIRECTOR, FABRICATOR, OR MATERIAL SUPPLIER IN LEV OF PREPARATION OF SHOP DRAWINGS, SIGNIFY THEIR ACCEPTANCE OF ALL INFORMATION SHOWN HEREON AS CORRECT, AND OBLIGATE THEMSELVES TO ANY JOB EXPENSE, REAL OR IMPLIED, ARISING DUE TO ANY ERRORS THAT MAY OCCUR HEREON.
- 14- SUBMIT SHOP DRAWINGS AT LEAST 15 BUSINESS DAYS PRIOR TO THE DATE WHICH REVISED SUBMITTALS WILL BE REQUIRED. SHOP DRAWINGS SHALL BEAR THE CONTRACTOR'S STAMP OF APPROVAL WHICH SHALL CONSTITUTE CERTIFICATION THAT HE HAS VERIFIED ALL FIELD MEASUREMENTS, CONSTRUCTION CRITERIA, MATERIALS AND SIMILAR DATA, AND HAS CHECKED EACH DRAWING FOR COMPLETENESS, COORDINATION, AND COMPLIANCE WITH THE CONTRACT DOCUMENTS.
- 15- CONTRACTOR SHALL FURNISH DIMENSIONED COORDINATED SHOP DRAWINGS AT ALL LEVELS LOCATING SLAB EDGES AND ALL SLEEVES AND OPENINGS REQUIRED BY ALL TRADES FOR REVIEW BY THE ARCHITECT AND SDR.
- 16- THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD PRIOR TO COMMENCING WORK, AND SHALL REPORT ANY DISCREPANCIES BETWEEN CONTRACT DOCUMENTS AND FIELD CONDITIONS TO THE ARCHITECT.
- 17- NO CONSTRUCTION SHALL COMMENCE PRIOR TO THE APPROVAL OF SHOP DRAWINGS BY THE ARCHITECT. SEE SPECIFICATIONS FOR REQUIRED SUBMITTALS.
- 18- SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR DETAILED INFORMATION REGARDING FINISHES, PAINT, FIREPROOFING, FLOOR FINISHING, DRAIN LOCATIONS, WATERPROOFING AND DRAINPROOFING DETAILS.
- 19- SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF MASONRY AND ANY OTHER NON-LOAD BEARING PARTITIONS. PROVIDE SLP CONNECTIONS THAT ALLOW VERTICAL MOVEMENT AT THE HEADS OF ALL SUCH PARTITIONS. CONNECTIONS SHALL BE DESIGNED TO SUPPORT THE TOP WALLS LATERALLY FOR THE CODE-REQUIRED LATERAL LOAD, PROVIDE COMPRESSIVE PRESTRESS AT THE TOP OF WALLS AS REQUIRED BY THE ARCHITECTURAL DRAWINGS.
- 20- ALL COSTS OF INVESTIGATIONS AND/OR REDESIGN, DUE TO CONTRACTOR'S MISLOCATION OF STRUCTURAL ELEMENTS OR OTHER LACK OF CONFORMANCE WITH THE PROJECT DOCUMENTS, SHALL BE AT THE CONTRACTOR'S EXPENSES.

SPECIAL INSPECTION

- 1- ANY CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN WIND-OR SEISMIC-FORCE-RESISTING SYSTEM, DESIGNATED SEISMIC SYSTEM OR A WIND-OR SEISMIC-RESISTING COMPONENT LISTED IN THE STATEMENT OF SPECIAL INSPECTION SHALL SUBMIT A WRITTEN STATEMENT TO THE DESIGNATED INSPECTOR, OR DESIGN PROFESSIONAL, IN CHARGE, OR THE OWNER, PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR SPECIAL INSPECTION, THAT HE KNOWS, THAT THE SYSTEM WILL BE SUBJECT TO THE LISTED SPECIAL INSPECTION, WHICH WILL BE PERFORMED BY THE REGISTERED DESIGN PROFESSIONAL AS PER SECTIONS 1705, 1706, 1707, 1709, AND 1708.
- 2- THE OWNER WILL PROVIDE THE SERVICES OF A SPECIAL INSPECTOR WITH THE RESPONSIBILITIES DESCRIBE BELOW. SEE IBC 2009 CHAPTER 17 FOR ADDITIONAL INFORMATION.
- 3- SPECIAL INSPECTION - PROVIDE CONTINUOUS AND PERIODIC SPECIAL INSPECTION AND STRUCTURAL TESTS AS SHOWN IN SPECIFICATION SECTION 033000 FOR THE FOLLOWING COMPONENTS:
 - 1.1 PERIODIC INSPECTION OF REINFORCING STEEL
 - 1.2 PERIODIC INSPECTION OF EMBEDDERS, INSERTS, AND BOLTS INSTALLED PRIOR TO CONCRETE PLACEMENT
 - 1.3 PERIODIC INSPECTION TO VERIFY USE OF REQUIRED DESIGN MIX
 - 1.4 CONTINUOUS INSPECTION AT THE TIME FRESH CONCRETE IS SAMPLED FOR STRENGTH TEST
 - 1.5 PERIODIC INSPECTION OF BEARING-TYPE CONNECTIONS USING HIGH-STRENGTH BOLTS
 - 1.6 PERIODIC INSPECTION OF COMPLETE AND PARTIAL PENETRATION GROOVE WELDS, MULTIPASS FILLET WELDS, AND SINGLE PASS FILLET WELDS GREATER THAN 8MM
 - 1.7 PERIODIC INSPECTION OF SINGLE PASS FILLET WELDS LESS THAN OR EQUAL TO 8MM, FLOOR AND DECK WELDS INCLUDING WELDED STEEL AND BECK JOINT LAPS
 - 1.8 PERIODIC INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE WITH CONTRACT DOCUMENTS
- 4- SPECIAL INSPECTION - PROVIDE CONTINUOUS AND PERIODIC SPECIAL INSPECTION AND STRUCTURAL TESTS AS SHOWN IN SPECIFICATION SECTION 033116 FOR THE FOLLOWING COMPONENTS OF THE WORK:
 - 1.1 PERIODIC INSPECTION OF PRESTRESSING TENDONS
 - 1.2 CONTINUOUS INSPECTION OF APPLICATION OF PRESTRESSING FORCES
 - 1.3 PERIODIC INSPECTION OF IN-SITU CONCRETE STRENGTH PRIOR TO STRESSING OF TENDONS

FOUNDATIONS NOTES

- 1- BACKFILLING AGAINST FOUNDATION WALLS SHALL BE DONE WITH SMALL COMPACTING EQUIPMENT IN LAYERS NOT EXCEEDING 4" BACKFILL MATERIAL SHALL BE GRANULAR ASH/LO CLASSIFICATION A-2-4 OR BETTER, REFER TO GEOTECHNICAL REPORT.
- 2- NO BACKFILLING SHALL BE PERMITTED AGAINST BASEMENT WALLS UNTIL UPPER SLAB ARE IN PLACE AND CONCRETE HAS DEVELOPED ITS REQUIRED STRENGTH.
- 3- ALL INTERIOR SLAB ON GROUND SHALL BE CAST OVER A POROUS MATERIAL WITH A 6 MIL MN.
- 4- POLYETHYLENE VAPOUR BARRIER UNDER IT.
- 5- FOUNDATION HAS BEEN DESIGNED USING THE FOLLOWING PARAMETERS:
 - A- SOIL BEARING CAPACITY $F_b = 3,000$ PSF AT DEPTH SHOWN ON DRAWING.
 - B- SURVEY REPORT HAS BEEN PREPARED BY THE OFFICE OF SURVEYS INC DATE 11/03/2015, JOB 4558 CONTRACTOR IS RESPONSIBLE FOR OBTAINING COPY OF SUCH REPORT AND MEMORANDUMS, AND FOR FOLLOWING ITS RECOMMENDATION. SURVEY REPORT IS PART OF THE SPECIFICATION AND CONTRACT DOCUMENT OF PROJECT.
- 6- CONTRACTOR SHALL VERIFY ALL EXISTING FIELD CONDITIONS THAT MAY AFFECT THE INSTALLATION OF THE FOUNDATION SYSTEM AS SHOWN PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL REVIEW ALL EXISTING SITE CONDITIONS AND THE GEOTECHNICAL REPORT, AND ESTABLISH A SPECIFIC CONSTRUCTION PROGRAM, AND SUBMIT FOR REVIEW BY THE OWNER'S GEOTECHNICAL ENGINEER.
- 7- SEE SPECIFICATIONS AND REFERENCED GEOTECHNICAL REPORT FOR REQUIREMENTS FOR EXCAVATIONS AND PREPARATION OF THE FOUNDATION AND SLAB-ON-GRADE SUBGRADINGS, INCLUDING COMPACTION PROCEDURES, REQUIREMENTS CONTAINED IN THE GEOTECHNICAL REPORT ARE PART OF THIS WORK.
- 8- PROTECT ADJACENT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT, AND OTHER HAZARDS CREATED BY EXCAVATION OPERATIONS OR CONSTRUCTION PROCEDURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, INSTALLATION, MONITORING, AND FINAL REMOVAL OF ANY REQUIRED NEEDLING, UNDERPINNING, SHORING, OR BRACING OF EXISTING OR NEW CONSTRUCTION.
- 9- OTHER CONSTRUCTION OF WHICH NO RECORDS ARE AVAILABLE, MAY BE ENCOUNTERED. THE CONTRACTOR SHALL FORMULATE HIS OWN CONCLUSIONS AS TO THE EXTENT OF SUCH CONSTRUCTION AND SHALL REMOVE ALL 10- UTILITY LINES SHALL NOT BE PLACED THROUGH OR BELOW FOUNDATIONS WITHOUT THE STRUCTURAL ENGINEER'S WRITTEN APPROVAL.
- 11- PROVIDE CONTRACTOR BENTONITE STRIP WATERSTOPS AT ALL VERTICAL AND HORIZONTAL CONSTRUCTION JOINTS IN ALL BELOW GRADE CONCRETE INCLUDING ELEVATOR PITs AND PIT WALLS.
- 12- ALL SHORING, SHEETING, AND Dewatering SHALL BE THE TOTAL RESPONSIBILITY OF THE CONTRACTOR, SHEETING AND SHORING SHALL BE DESIGNED BY THE CONTRACTOR'S LICENSED PROFESSIONAL ENGINEER.
- 13- ANY BACKFILL SHOULD BE PLACED AND COMPACTED IN EQUAL LAYERS TO EQUAL DEPTH ON BOTH SIDES OF STRUCTURAL ELEMENTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE GEOTECHNICAL REPORT.
- 14- ALL ORGANIC AND/OR UNSTABLE MATERIALS SHALL BE REMOVED FROM FOOTING, SLAB, AND GRADE BEAM SUBGRADINGS AND BACKFILLED WITH ACCEPTABLE GRANULAR AND/OR COMPACTED FILL IN CONFORMANCE WITH THE SPECIFICATIONS.

LEGEND & SYMBOLS

- DENOTES TOP BARS REINFORCEMENT
- DENOTES BOTTOM BARS REINFORCEMENT
- T=0 DENOTES SLAB THICKNESS
- DENOTES R/C WALLS ON COLUMNS ABOVE & BELOW SLAB
- DENOTES R/C WALLS ON COLUMNS ABOVE SLAB
- DENOTES EXISTING WALLS & COLUMNS
- F=0.00 DENOTES TENDON FORCE IN K/FT
- (0.00) DENOTES C. G. OF TENDONS IN.
- As DENOTES TEMP REINFORCEMENT AS SHOWN ON DRAWINGS
- DENOTES P.T. CABLES
- (E.O.) DISTANCE TO C.G. FROM BOTTOM OF SLAB OR BEAM
- VERTICAL STEP
- COLUMNS OR WALL LINE
- MATCH LINES
- WELDED WIRE FABRIC
- INDICATES DETAIL NUMBER
- INDICATES NUMBER WHERE DRAWN
- INDICATES SECTION NUMBER
- INDICATES NUMBER WHERE DRAWN
- F=0 INDICATES FOOTING TYPE
- (0.00) INDICATES TOP OR BOTTOM OF FOOTING ELEVATION
- INDICATES CONCRETE PLASTER WHERE SHOWN ON PLAN

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REVISIONS

REVISION NO.	REVISION	DATE	BY
1	ISSUED FOR PERMIT	11/03/2015	XXX

FROM: MAYO, 2023
REVISION FOR: 11/03/2015

SCALE: 3/32"=1'-0"

PROJECT: PLANO RECONSTRUCCION ESTACIONAMIENTO PASO MUN. BARRANQUITAS BARRANQUITAS, P.R.

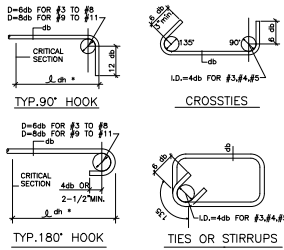
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S-0.1



EMBEDMENT LENGTH FOR STANDARD END HOOK

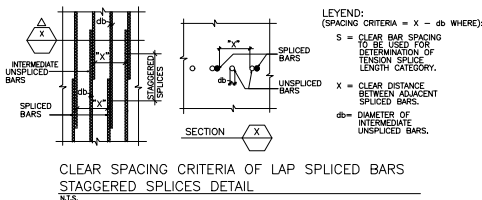
BAR SIZE	CONCRETE STRENGTH P.S.I. (E.M.)	IN.
#3	3,000	6
#4	4,000	8
#5	5,000	10
#6	6,000	12
#7	7,000	14
#8	8,000	16
#9	9,000	18
#10	10,000	20
#11	11,000	22



REINFORCEMENT SPLICE SCHEDULE

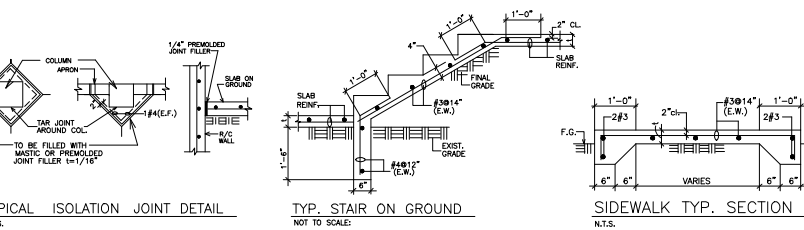
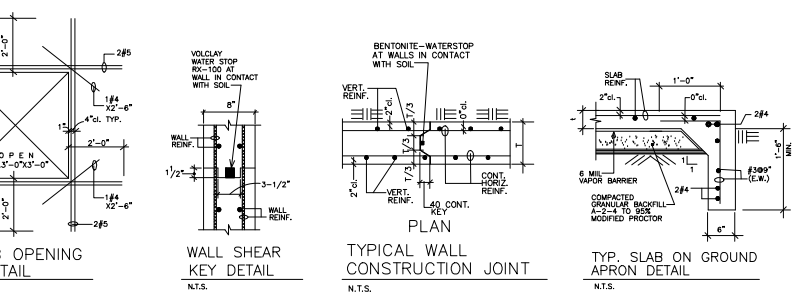
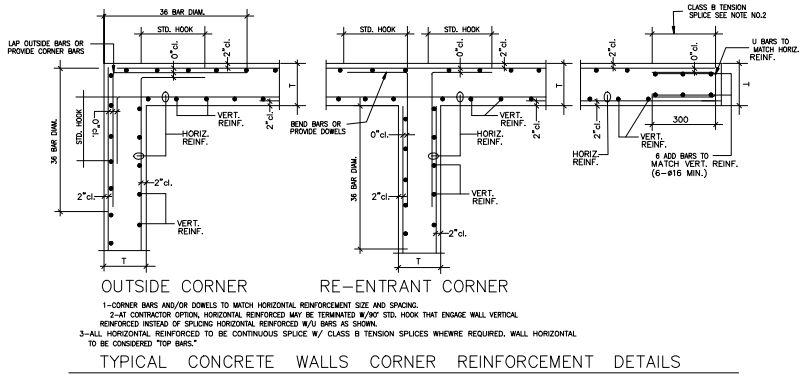
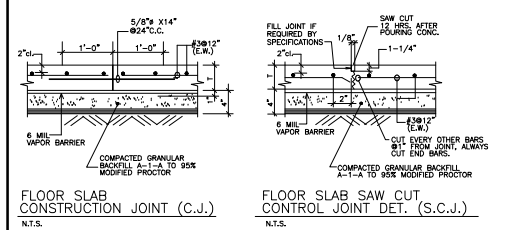
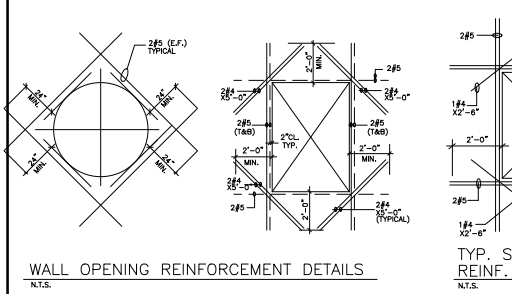
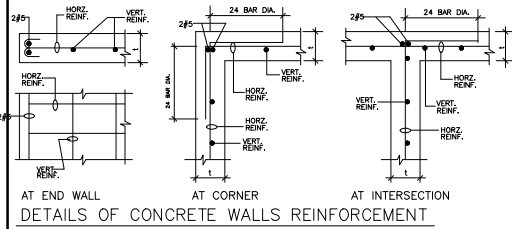
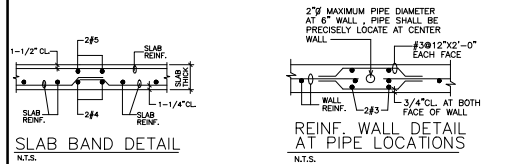
BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11
TENSION LAP SPLICES TOP BARS									
1,000 P.S.I.	21	28	35	46	63	82	104	132	162
2,000 P.S.I.	18	24	30	40	54	71	90	114	140
3,000 P.S.I.	16	22	27	36	48	64	81	102	126
TENSION LAP SPLICES BOTTOM BARS									
1,000 P.S.I.	16	22	27	35	48	63	80	102	125
2,000 P.S.I.	14	19	23	31	42	55	69	88	108
3,000 P.S.I.	16	17	21	27	37	49	62	79	97
COMPRESSION LAP SPLICES									
3,000 P.S.I. UP TO 1,000 P.S.I.	12	15	19	23	26	30	34	38	42

NOTE: FOR CLASS B TENSION SPLICE ONLY, (CATEGORY 3 AS PER CRS)
TOP BARS IS HORIZONTAL REINF. WITH MORE THAN 12" CONCRETE BELOW BAR



REINFORCED CONCRETE NOTES

- 1- ALL CONCRETE WORK SHALL CONFORM TO THE ACI BUILDING CODE FOR REINFORCED CONCRETE ACI-318-14 LATEST EDITION.
- 2- ALL CONCRETE SHALL BE DEVELOPED A MINIMUM 28-DAYS CYLINDER COMPRESSIVE STRENGTH AND SHALL CONTAIN A MAXIMUM WATER CEMENT RATIO AS SHOWN BELOW:
- 3- ALL CONCRETE SHALL BE TESTED AS PER ACI 318-14 FOLLOWING THE PROCEDURES IN THE ASTM C-172 AND C-39 LATEST EDITION. IF APPROVED CURING METHOD ARE NOT FOLLOWED, FIELD CURE CYLINDER ARE REQUIRED, FOLLOWING ASTM STANDARDS. ALL TESTING SHALL BE PERFORMED UNDER THE SUPERVISION OF A CERTIFIED TESTING LABORATORY TO BE APPROVED BY THE ENGINEER.
- 4- CONCRETE DESIGN MIX SHALL NOT HAVE SLUMPS OVER 4 INCHES UNLESS A HRRV ADMIXTURE (SUPER PLASTICIZER) IS USED.
- 5- ALL CONCRETE SHALL BE CURED AS SPECIFY IN THE STANDARD PRACTICE FOR CURING CONC. ACI 308-92.
- 6- CONCRETE SHALL NOT BE POURED UNTIL ALL STEEL REINFORCEMENT AND EMBEDDED ITEM HAS BEEN PROPERLY INSTALL AND INSPECTED BY THE INSPECTOR OFFICIAL. WHEN METAL CHAIRS ARE USED, THEY SHALL BE PLASTIC TIPPED.
- 7- ALL REINFORCING BARS FOR BEAMS, WALLS, BEAMS AND COLUMNS SHALL BE NEW BILLET STEEL CONFORMING TO THE STANDARDS OF ASTM A706, GRADE 60, OR ASTM A615, GRADE 60, AND THE SPECIAL QUALITY REQUIREMENTS DESCRIBED IN SECTION 21.1.5.2.2 AND 21.1.5.2.3 OF ACI-318-08. ALL REINFORCING BAR FOR ALL OTHER CONCRETE ELEMENTS SHALL BE NEW BILLET STEEL CONFORMING TO THE STANDARDS OF ASTM A615, GRADE 60.
- 8- WELDED WIRE FABRIC (WFF) SHALL CONFORM TO ASTM A-185 MIN FY=70,000 PSI.
- 9- CONCRETE COVER FOR STEEL REINFORCEMENT SHALL BE AS FOLLOW UNLESS OTHERWISE SHOWN ON DRAWINGS.
- 10- FOUNDATION CONCRETE CAST AGAINST EARTH - - - - - 3" INTERIOR - - - - - 3/4" CONCRETE EXPOSED TO EARTH OR WATER EXTERIOR - - - - - 1" AFTER REMOVAL OF FORMS - - - - - 2" C) BEAMS & COLUMNS - - - - - 1 1/2"
- 11- NO CONDUITS OR PIPE GREATER THAN 1 1/2" IN DIAMETER WILL BE ALLOWED TO BE CAST INTO THE WALL OR SLABS WITHOUT WRITTEN APPROVAL OF THE ENGINEER.
- 12- FOR CHAMFERS, SURFACE FINISH, DRIP, GROOVE AND CONCRETE FORMWORKS SEE ARCHITECTURAL DRAWING.
- 13- CONTRACTOR SHALL COORDINATE THE PLACEMENT OF THE ANCHORS, SLEEVES, OPENINGS, CONDUITS, ETC., OF VARIOUS TRADES THAT ARE EMBEDDED IN THE STRUCTURE. IN THE EVENT OF ANY INTERFERENCE BETWEEN ANY OF THESE ITEMS WITH THE STRUCTURAL ELEMENTS IT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE POURING ANY CONCRETE.
- 14- MAIN OPENING ARE SHOWN IN THE STRUCTURAL DRAWINGS, FOR SIZE AND EXACT LOCATION REFER TO THE VARIOUS TRADES DRAWINGS AND SPECIFICATIONS. NO OPENING, SLOT OR GROOVE NOT SHOWN ON DRAWINGS SHALL BE MADE IN ANY STRUCTURAL ELEMENT WITHOUT THE APPROVAL OF THE ENGINEER. OPENING NOT SHOWN ON DRAWINGS THAT INTERRUPT REINFORCEMENT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- 15- DIMENSIONS AND CONFIGURATION OF ALL STRUCTURAL ELEMENT SHALL BE COORDINATED WITH THE ARCHITECTURAL DRAWING BY THE CONTRACTOR AND IN THE EVENT OF ANY DISCREPANCIES IT SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH THE WORK.
- 16- THE CONSTRUCTION PROCEDURES, FORMWORKS REMOVAL AND THE LOCATIONS OF THE CONSTRUCTION JOINTS SHALL BE SUCH AS NOT TO IMPOSE ANY DETRIMENTAL EFFECT TO THE STRUCTURE OR TO REDUCE THE DESIGN STRENGTH.
- 17- ALL ONE WAY SLAB SHALL HAVE TEMPERATURE REINFORCEMENT AS FOLLOWS BUT NOT LESS THAN A STEEL AREA OF 0.02 X GROSS AREA OF CONCRETE.
- 18- 4"-1/2"SLAB--#3@12" B)-6"SLAB--#3@9" C)-7"SLAB--#4@14" D)-8"SLAB--#4@12"
- 19- DOWELS SHALL BE SAME SIZE AND NUMBER AS WALL OR COLUMN VERTICAL REINFORCEMENT. EMBEDDED MINIMUM 24 BAR DIAMETER INTO THE FOOTING. FOR #6 BAR OR GREATER, EXTENDED REINFORCEMENT TO REST ABOVE BOTTOM OF FOOTING REINFORCEMENT PROVIDING A STANDARD 90 DEGREE HOOK AT THE END, EXTEND REINFORCEMENT A SPICE LENGTH MIN. 30 BAR DIAMETER, INTO THE WALL OR COLUMN.
- 20- ALL BEAM REINFORCEMENT SHALL BE END IN STANDARD HOOKS AS PER ACI 318-14 UNLESS OTHERWISE SHOWN ON DRAWINGS.
- 21- ALL SLAB ON GROUND UNLESS SHOWN ON DRAWINGS SHALL BE 5" THICK REINFORCED WITH WIRE MESH, 6X6 - MAXIMUM 12" IN SHEETS ONLY. PROVIDE CONSTRUCTION JOINTS AT A MAXIMUM SPACING OF 20 FT. IN BOTH DIRECTION AND A CONTROL JOINTS BETWEEN THEM.
- 22- ALL OPENING IN CONCRETE WALLS SHALL BE REINFORCED IN THE PERIMETER WITH #25 BARS PLACED 2" FROM THE FACE OF THE WALL AND EXTENDING 2'-0" BEYOND CORNERS.
- 23- ALL LAPPING, BENDING AND PLACING OF REINFORCEMENT SHALL BE DONE IN ACCORDANCE WITH THE ACI 318-08 BUILDING CODE. DO NOT LAP SPLICES AT POINT OF MAXIMUM STRESS.
- 24- UNLESS SHOWN ON DRAWINGS ALL STEEL REINFORCEMENT ARE MID. CONTINUOUS AND SHALL BE SPLICED AT LAP POINTS. LAP POINT FOR TOP REINFORCEMENT OF BEAM SHOULD OCCUR IN THE MID-THIRD OF THE SPAN. LAP POINT FOR BOTTOM REINFORCEMENT SHOULD OCCUR AT A DISTANCE LESS THAN 1/4 OF THE SPAN BUT NOT GREATER THAN 1/6 OF THE SPAN FROM THE ADJACENT JOINTS. ALL REINFORCING STEEL SPLICES SHALL BE CLASS "B" FULL TENSION.
- 25- UNLESS OTHERWISE SHOWN ON DRAWINGS ALL 6" THICK CONCRETE WALL SHALL BE REINF. WITH #4@16 IN EACH DIRECTION, #25 SHALL BE PLACED AT 2" FROM THE END OF THE WALL. MINIMUM REINFORCEMENT FOR WALLS SHALL BE .0025 OF THE GROSS CROSS SECTIONAL AREA.
- 26- FORMWORK FOR FLEXURAL ELEMENTS SHALL INCLUDE THE CAMBER SHOWN ON DRAWINGS IN ADDITION TO THE REQUIRED BY THE FORMWORK DEFLECTION DUE TO THE STRUCTURE SELF WEIGHT. ALL FORMWORK SHORING AND RESHORING SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE DESIGN BY A LICENSED STRUCTURAL ENGINEER. IT IS SUBJECT TO THE APPROVAL IN WRITING OF THE STRUCTURAL ENGINEER OF RECORD.
- 27- CONTRACTOR SHALL SUBMIT A SHOP DRAWING SHOWING LOCATION AND DETAIL FOR CONSTRUCTION JOINTS IN SLAB AND BEAMS. SLAB AND BEAM CONSTRUCTION JOINTS SHALL BE LOCATED WITHIN THE MIDDLE THIRD OF ANY SPAN.
- 28- CONTRACTOR SHALL SUBMIT SHOP DRAWING SHOWING STEEL REINFORCEMENT AS REQUIRED IN THE TECHNICAL SPECIFICATIONS. PREPARED SHOP DRAWINGS IN ACCORDANCE WITH PART B, CHAPTER 3, ACI-315, LATEST EDITION.
- 29- NO DEFECTIVE CONCRETE SHALL BE CORRECTED USING MORTAR OR PLASTER, SUCH DEFECT SHALL BE INSPECTED BY THE STRUCTURAL ENGINEER FOR APPROPRIATE REPAIR PROCEDURES RECOMMENDATIONS.
- 30- WELDING OF REINFORCEMENT IS NOT PERMITTED. MECHANICAL SPLICES SHALL DEVELOP 120% OF THE YIELD STRENGTH OF THE BARS BEING SPLICED AND THEIR USE IS SUBJECT TO THE APPROVAL IN WRITING OF THE STRUCTURAL ENGINEER OF RECORD.
- 31- WHEN INSTALLING EXPANSION BOLTS OR ADHESIVE ANCHORS, THE CONTRACTOR SHALL TAKE MEASURES TO AVOID DRILLING OR CUTTING ANY OF THE EXISTING REINFORCEMENT.



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REVISIONS	REVISION
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FROM	DATE
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PLANO RECONSTRUCCION
ESTACIONAMIENTO PASEO
MUN. BARRANQUITAS
BARRANQUITAS, P.R.

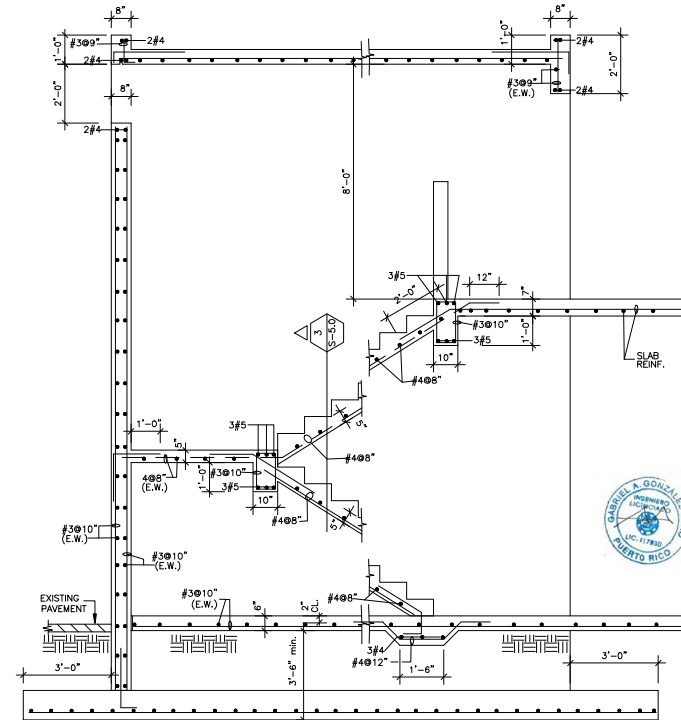
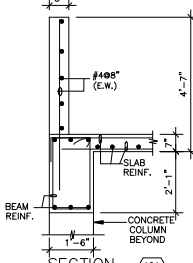
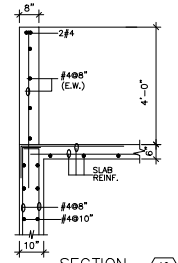
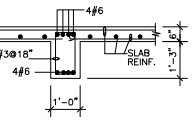
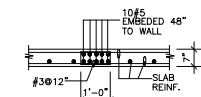
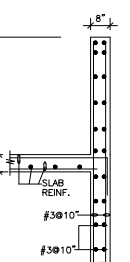
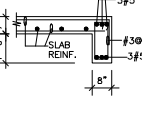
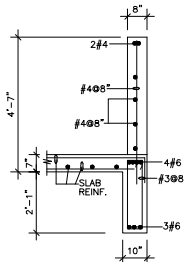
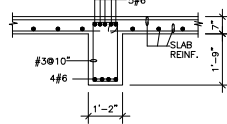
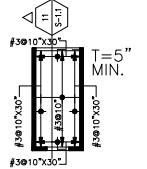
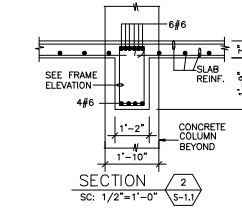
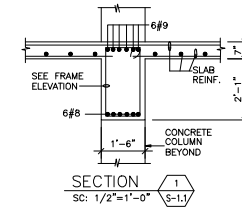
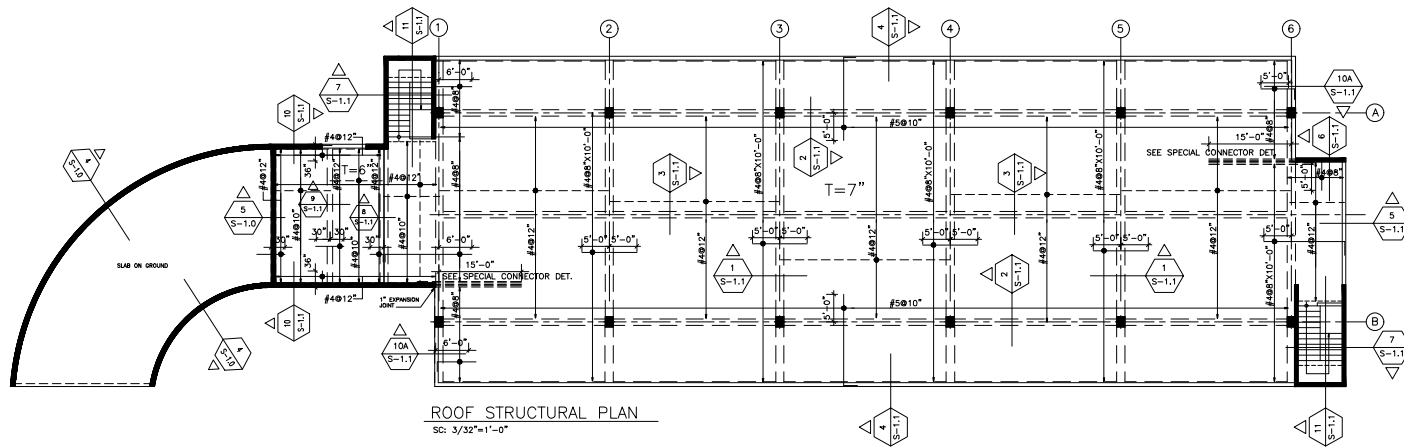
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REINF. CONCRETE
DETAILS & NOTES

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TEL: 410-391-8811
FAX: 410-391-8812

REVISION	DATE	BY	CHK
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CONSTRUCCION DE ESTACIONAMIENTO PARA EL MUNICIPIO DE BARRANQUITAS, P.R. (PROYECTO DE RECONSTRUCCION DE LA ESTACIONAMIENTO PARA EL MUNICIPIO DE BARRANQUITAS, P.R.)

PROYECTO DE RECONSTRUCCION DE LA ESTACIONAMIENTO PARA EL MUNICIPIO DE BARRANQUITAS, P.R. (PROYECTO DE RECONSTRUCCION DE LA ESTACIONAMIENTO PARA EL MUNICIPIO DE BARRANQUITAS, P.R.)

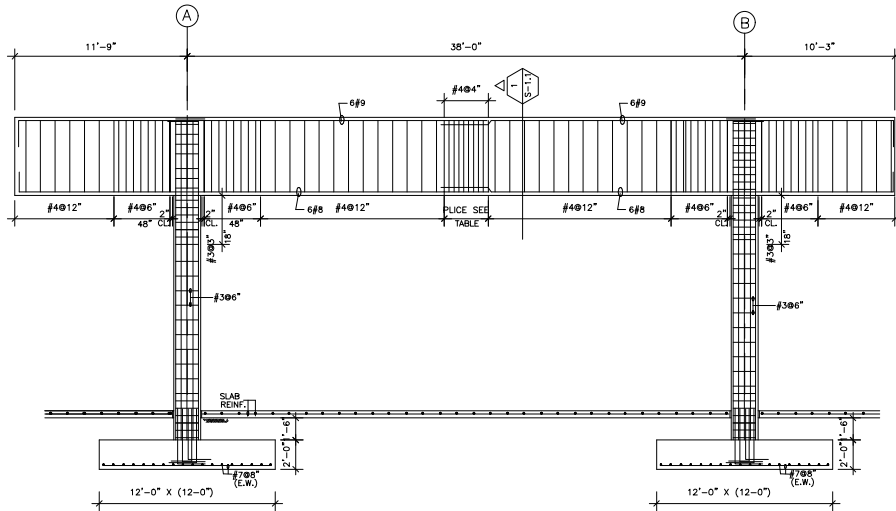
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FECHA: 11/01/2023
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PROYECTO: 3/32"=1'-0"

PLANO RECONSTRUCCION
ESTACIONAMIENTO PASEO
MUN. BARRANQUITAS
BARRANQUITAS, P.R.

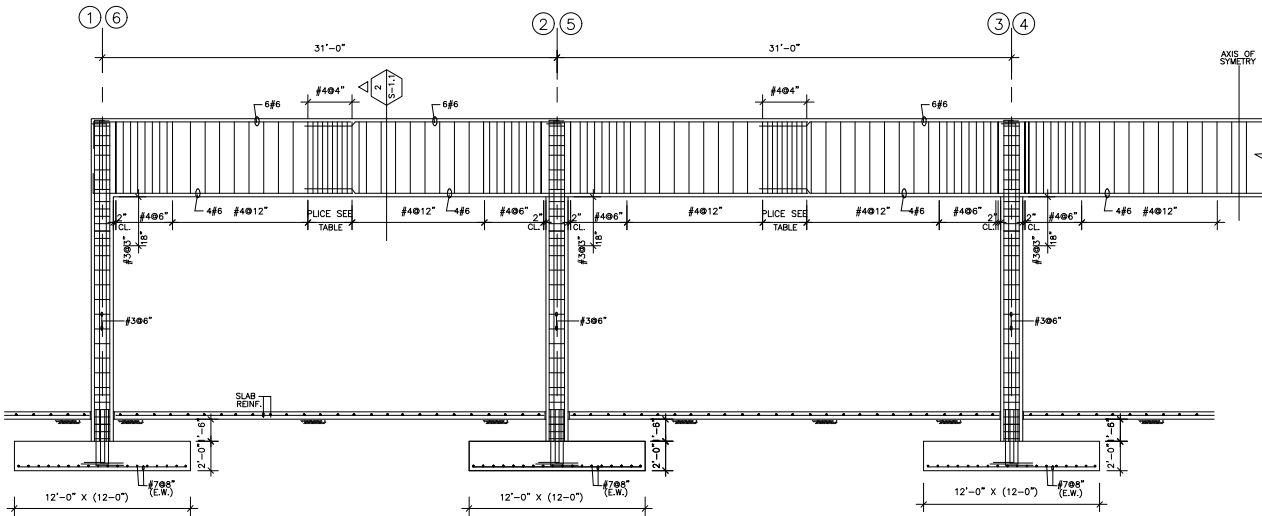
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STRUCTURAL FRAME BEAM ELEVATION AT AXIS 2,3,4 & 5

N.T.S.



STRUCTURAL FRAME BEAM ELEVATION AT AXIS A & B

N.T.S.

CENTRAL GROUP, PSC.

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10 DALL WHEEL DE 201 WARRINGTON, PA 19146 - TEL. 414 (215) 497-8811
E-mail: centralgroup@centralgroup.com

REVISION	FECHA	REVISOR

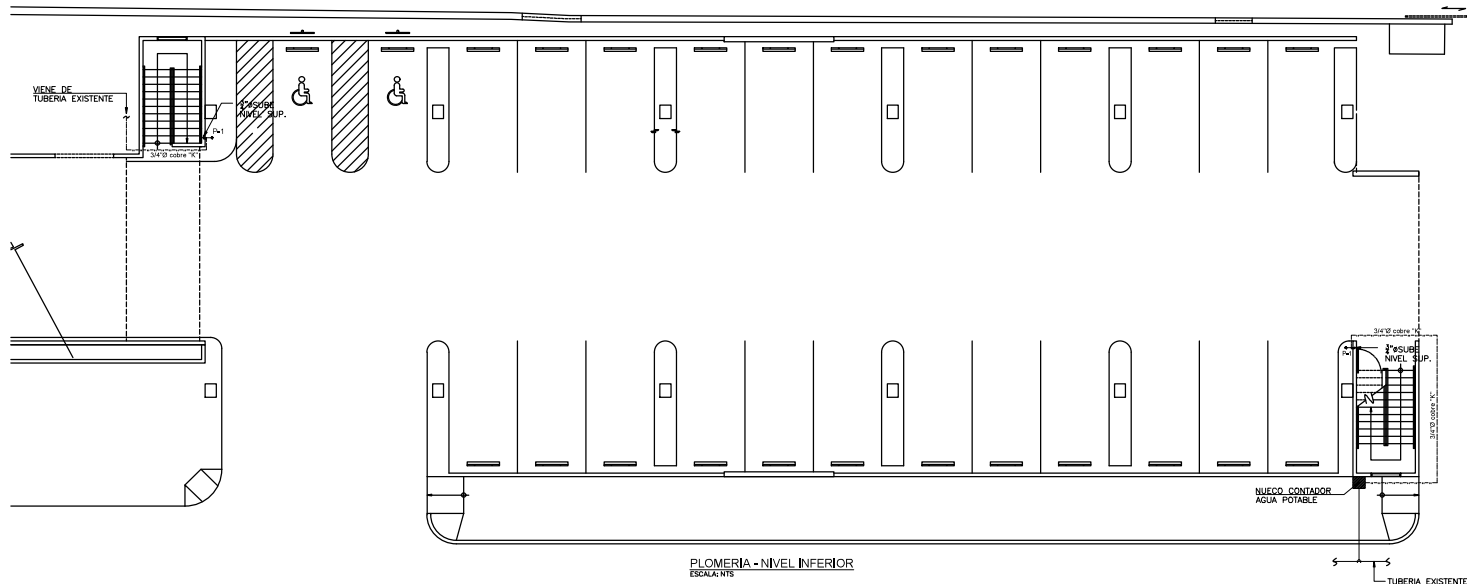
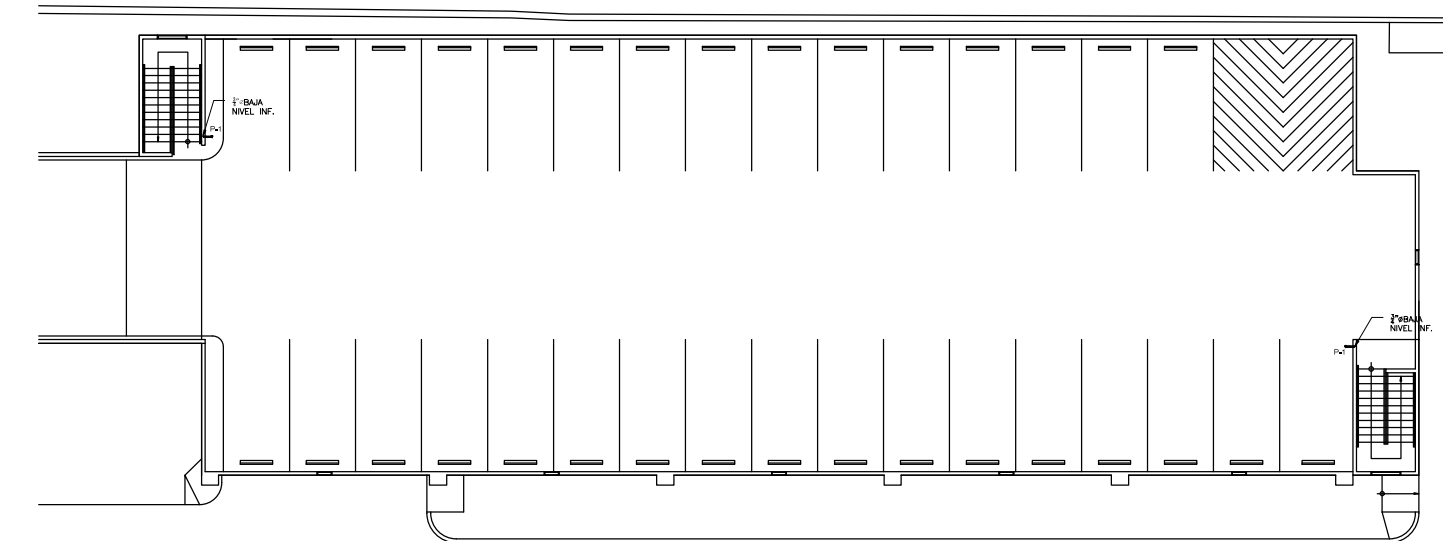
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PROYECTO	

PLANO RECONSTRUCCION
ESTACIONAMIENTO PASEO
MUN. BARRANQUITAS
BARRANQUITAS, P.R.

DESCRIPCION
STRUCTURAL FRAME
ELEVATION

DISEÑO	
VERIFICADO	



PLOMERIA - NIVEL SUPERIOR
ESCALA: 1/8\"/>

NOTA PARA TRABAJOS DE PLOMERIA

1. TODO TRABAJO DE PLOMERIA DEBERA SER REALIZADO POR UN PLOMERO LICENCIADO SEGUIENDO LAS NORMAS RECOMENDADAS DEL "COMITÉ DE EDUCACIÓN DE PUERTO RICO" - THE NATIONAL PLUMBING CODE.
2. TODA TUBERIA DE COBRE DEBERA MANTENERSE ABLADA DE CONDUCTORES ELECTRICOS.
3. TODA TUBERIA DEBERA QUEDAR EMPOTRADA EN PAREDES Y/O PISOS.

LEYENDA:

- TUBERIA DE VENTILACION (PVC)
- TUBERIA DE AGUA FRIA (COBRE 1/2\"/>
- RESISTRO A NIVEL DE PARED
- RESISTRO A NIVEL DE PISO
- HIDRANTE DE PARED
JR SMITH 5511BR
@ 2\"/>

REVISIONES

FECHA	REVISIONES

EL DISEÑO DE LA PLANTA DE PLOMERIA DEBE SER REALIZADO POR UN PLOMERO LICENCIADO SEGUIENDO LAS NORMAS RECOMENDADAS DEL "COMITÉ DE EDUCACIÓN DE PUERTO RICO" - THE NATIONAL PLUMBING CODE. Y LAS ESPECIFICACIONES APLICABLES. TODA TUBERIA DE COBRE DEBERA MANTENERSE ABLADA DE CONDUCTORES ELECTRICOS. TODA TUBERIA DEBERA QUEDAR EMPOTRADA EN PAREDES Y/O PISOS. EL DISEÑO DE LA PLANTA DE PLOMERIA DEBE SER REALIZADO POR UN PLOMERO LICENCIADO SEGUIENDO LAS NORMAS RECOMENDADAS DEL "COMITÉ DE EDUCACIÓN DE PUERTO RICO" - THE NATIONAL PLUMBING CODE. Y LAS ESPECIFICACIONES APLICABLES. TODA TUBERIA DE COBRE DEBERA MANTENERSE ABLADA DE CONDUCTORES ELECTRICOS. TODA TUBERIA DEBERA QUEDAR EMPOTRADA EN PAREDES Y/O PISOS.

PROYECTO:
MUNICIPIO DE BARRANQUITAS
ESTACIONAMIENTO PUBLICO
MUN. BARRANQUITAS
BARRANQUITAS, P.R.

DESCRIPCION:
PLANTAS DE PLOMERIA

PROYECTO:
MUNICIPIO DE BARRANQUITAS
ESTACIONAMIENTO PUBLICO
MUN. BARRANQUITAS
BARRANQUITAS, P.R.

PROYECTO:
MUNICIPIO DE BARRANQUITAS
ESTACIONAMIENTO PUBLICO
MUN. BARRANQUITAS
BARRANQUITAS, P.R.

PROYECTO:
MUNICIPIO DE BARRANQUITAS
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MUN. BARRANQUITAS
BARRANQUITAS, P.R.

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LUMA REQUIREMENT:

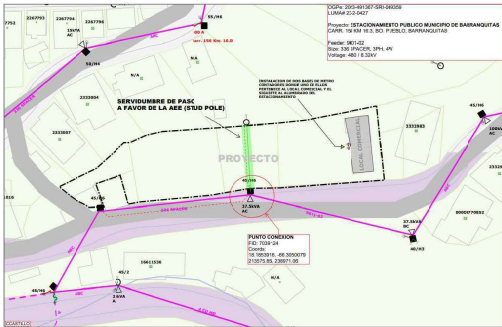
OP# : 2024-606941-SRI-069359
LUMA# : 23-2-0427
Carga : 25 KVA
Proyecto : ESTACIONAMIENTO PUBLICO MUNICIPIO DE BARRANQUITAS
Direccion: CARR. 156 KM 16.3, B.O. PUEBLO
Municipio: BARRANQUITAS

- El Proyecto está localizado en: Número de Catastro: 247-002-020-11
- El Punto de Conexión y control de proyecto está localizado en: Coordenadas geográficas en metros «Este «Norte (233976.41, 238970.83). Coordenadas Geográficas Latitud y Longitud (18.1854009, -86.3049935) LUMA/PREPA Reference FID 7039124.
- Durante la Inspección de campo se observó la instalación de dos bases de metros contadores anclada a estructura dentro de los predios del proyecto. Según en nuestro sistema, uno de los metros contadores este asignado al local comercial y el siguiente al alumbrado del estacionamiento público. Se recomienda relocalizar la base de metro contador del proyecto a una nueva columna en hormigón. Por tanto, el Proyecto se conectará al Punto de Conexión Indicado en el plano que se incluye.
- Parte de la estructura que se tiene contemplado construir dentro de los predios, se encuentra afectado por la servidumbre de paso existente debido a "Stud Pole". Por tanto, deberá presentarse Plano de Diseño para endos y la Certificación de Planos de Construcción Eléctrica para la relocalización de la distribución eléctrica correspondiente y la distribución eléctrica correspondiente hacia el Proyecto, acompañados por la Estampilla Digital Especial, y firmados digitalmente. Estos deberán ser radicados mediante el Portal Único de Negocios (UPN por sus siglas en inglés) de la Oficina de Gerencia de Permisos (OGPe). (Ver Comunicado Técnico 18-01 y 17-01); deberá cumplir con los siguientes reglamentos, directrices, comunicaciones e Información Técnica específica que se presenta a continuación.
- El diseñador deberá leer y entender este Informe en su totalidad. De haber dudas relacionadas al mismo, debe aclararlas con el Superintendente de Ingeniería de la Región de Caguan antes de radicar el plano para endoso. En adición, debe incluir y conformar parte del plano las notas pertinentes que se especifican como "Incluir nota al efecto en los planos de diseño".
- Asegurarse que el diseño propuesto cumple con el Reglamento conjunto para la evaluación y expedición de permisos relacionados al desarrollo, uso de terrenos y operación de negocios del 7 de junio de 2019, de la Oficina de Gerencia de Permisos de LUMA y los siguientes Comunicados Técnicos AEE.
- 07-02: Pruebas a cables soterrados nuevos y sus accesorios en proyectos privados del 29 de Julio de 2007.
- 12-01: Política Pública para la Construcción de Sistemas Eléctricos
- Los Criterios de Diseño para Sistemas Eléctricos Áreas de Transmisión y Distribución deben ser tomados en consideración una velocidad probable de viento de 160 mph.
- 13-03: Bases de Hormigón para Postes de Líneas Eléctricas.
- 14-03: Equipos con Alacalón en Goma de Silicón.
- 15-02: Postes para Sistemas de Distribución Eléctrica Primaria.
- 15-03: Revisión de Parámetros para Transformadores según Reglamentación del Departamento de Energía Federal (DOE).

- Los sistemas de alumbrado a construirse deberán cumplir con los siguientes Comunicados de la AEE:
- 07-01: Sistemas de Alumbrado.
- 16-03: Proyectos de Construcción con Sistemas de Alumbrado Público; esta consulta la podrá realizar a través del correo electrónico: energ@edec.gov.pr
- 16-04: Instalación de Luminarias Tipo Diodo Emisor de Luz (LED).
- En el sector existen líneas eléctricas aéreas, trifásico con 4 conductores calibre número 336 SPACED a un voltaje de 8.32 kV.
- El voltaje de alimentación para el Proyecto será de 8.32 kV. (Relocalización de Infraestructura)
- El voltaje de alimentación para el Proyecto será de 120/240V. (Proyecto «Base de Contador)
- Será responsable del diseñador del Proyecto indicar la localización exacta de este, ilustrar las líneas eléctricas existentes y de ser necesario, coordinar la reubicación de líneas eléctricas
- El diseño deberá ser un sistema soterrado. (Proyecto «Base de Contador)
- Será responsable del diseñador del Proyecto indicar la localización exacta de este, ilustrar las líneas eléctricas existentes y de ser necesario, coordinar la reubicación de líneas eléctricas
- Deberá incluir en los planos de diseño las coordenadas Lambert correspondientes a la ubicación del Proyecto, en versión del North American Datum (NAD 83) y la unidad de medidas en metros.(Referencia al Inciso 1 de este Informe); estas coordenadas deberán aparecer impresas en el plano de localización a ser radicados para revisión y eventual endoso, en una escala de 1:10,000 a 1:25,000. Incluir planos en formato .DWG o .DXF, el mismo deberá estar georeferenciado. Deberá presentar en los planos, cómputos de carga, tensión y flecha para los sistemas aéreos, y cómputos de caída de voltaje para diseños de sistema soterrados.
- Para todo servicio de uso exclusivo a instalaciones, el dueño del proyecto proveerá todos los materiales necesarios, incluyendo el transformador. Incluir nota al efecto en los planos de diseño. Esta evaluación del Punto de Conexión no constituye una revisión del plano de diseño. El diseñador es responsable de cumplir con los códigos, reglamentos, manuales, estándares y normas aplicables vigentes para los sistemas eléctricos en Puerto Rico. Además, deberá cumplir con los reglamentos de renovación de la infraestructura en el espacio público (Reglamento de Planificación Número 22), según exige la Oficina de Gerencia de Permisos (OGPe). Los sistemas de distribución y transmisión a desarrollarse en estas zonas deberán seguir los guías establecidas por este reglamento. Incluir nota al efecto en los planos de diseño.
- El dueño del proyecto o su representante deberá notificar a la Oficina de Ingeniería de Distribución de la Región correspondiente al comienzo de la obra posterior al endoso de los planos y previo al inicio de los trabajos eléctricos del proyecto para la requerida inspección, aprobación y coordinación necesaria. Incluir nota al efecto en los planos de diseño.
- Para servir el Proyecto, el proponente será responsable de la siguiente. Incluir notas al efecto en los planos de diseño:
 - Extender el alimentador secundario, soterrado con aislamiento 600V, requerido desde el Punto de Conexión hasta el proyecto. Deberá identificar el "Punto de Entrega en los planos de diseño, según el Reglamento Complementario al Código Eléctrico Nacional y el Reglamento de Términos y Condiciones Generales para el Suministro de Energía Eléctrica. (Proyecto «Base de Contador)
 - El Dueño del Proyecto deberá confirmar con el Gerente de Distrito Técnico correspondiente el voltaje primario a ser utilizado, previo a la compra de los transformadores.

- Obtener y gestionar todos los endosos de las agencias reguladoras pertinentes tales como:
 - Departamento de Recursos Naturales y Ambientales (DRNA) – Declaración de Impacto Ambiental (DIA).
 - Instituto de Cultura Puertorriqueña – Diseño de Permisos Arqueológicos.
 - Cuerpo de Ingenieros de Estados Unidos.
 - Departamento de Transportación y Obras Públicas Estatal o Municipal.
 - Junta de Planificación.
 - Oficina de Gerencia y Permisos (OGPe).
 - Otras agencias gubernamentales, federales y privadas requeridas para el desarrollo del proyecto.
- Este Proyecto está afectado por líneas eléctricas, por tanto
- El Proyecto está afectado por líneas de distribución primarias y/o secundarias, y tensores. Estas ocupan una franja de servidumbre de 10 pies de ancho o la largo de las líneas en el caso de líneas aéreas y 5 pies de ancho en caso de líneas soterradas.
 - El dueño del proyecto es responsable de cumplir con los requisitos establecidos en el Reglamento de Servidumbres para la Autoridad de Energía Eléctrica.
 - Toda nueva servidumbre para constituirse para líneas y equipos eléctricos debe cumplir con los requisitos establecidos en el Apéndice B del Reglamento. De igual forma, con los requisitos relacionados a los servidumbres asociadas a instalaciones eléctricas existentes en el área del proyecto.
 - Cualquier trabajo necesario de reubicación de líneas eléctricas energizadas, será realizado por LUMA con carga al Dueño y deberá coordinarse con el Gerente de Distrito correspondiente. Además, se prohíbe la realización de cualquier tipo de trabajo en las franjas de servidumbre de paso eléctrica sin la autorización escrita de LUMA. LUMA no aprobará la conexión de Proyectos con condiciones de instalación de servidumbres o que no cumplan con los desechos de seguridad requeridos.
 - No se permite ninguna construcción, movimiento de tierra, rodeo ni ninguna actividad incompatible con el derecho de servidumbre establecido en el terreno. Se refiere al desmantelamiento del Reglamento 7282 de 25 de enero de 2007. Para Servidumbres Para La Autoridad de Energía Eléctrica (Reglamento 7282) y la Ley 143 de 1979 (Ley 143), según enmendada. Cualquier asunto relacionado a las servidumbres se registró por el Reglamento y ley antes citada. Todo permiso condicionado debe otorgarse ANTES de la solicitud para endoso de planos de diseño o antes de la solicitud de permiso de construcción o la OGP.
 - El Proyecto debe cumplir con el Reglamento Complementario al Código Eléctrico Nacional, Sección IV, Artículo C y D en su totalidad, Toma de Servicio Aéreo y Toma de Servicio Soterrado. Se permitirá como punto de entrega una columna de hormigón conteniendo el contador (véase Manual de Normas de Distribución Urbana). La columna estará ubicada dentro del terreno del solicitante en la calandancia frontal y podrá formar parte de la verja si ésta cumple con las disposiciones del Manual de Normas de Distribución Urbana. El frente del contador deberá quedar en dirección a la calle o no más de 3 pies de la calandancia con la calle. La columna deberá cumplir con los desechos mínimos requeridos por el Código Eléctrico Nacional de Seguridad. Para torres aéreas, la torre no excederá de un largo de cincuenta (50) pies desde el poste al soporte de la columna.

- Incluímos como parte de esta evaluación, información gráfica sobre facilidades eléctricas.
- Cualquier duda sobre esta evaluación y su contenido, puede comunicarse a nuestra oficina por el 787-521-7918 o vía email a ingenieria.DistribucionCaguan@lumarpr.com
- Esta evaluación caduca al año (1 año) de la fecha de emisión, y cancela y sustituye cualquier otra realizada previamente.



LIFE SAFETY CODE CLEARANCE TABLE

NATURE OF WIRES CROSSED OVER	COMMUNICATION GUYS	SERVICES, 0- TO 750-V CABLE	OPEN-SUPPLY WIRES, VOLTAGE TO GROUND		
			0 to 750	750 to 8,700	8,700 to 50,000
COMMUNICATION CIRCUITS	2	2	4	4	6
AERIAL SUPPLY CABLES	4	2	2	2	4
OPEN SUPPLY WIRES, 0 to 750 V	4	2	2	2	4
OPEN SUPPLY WIRES, 750 to 8,700 V	4	4	2	2	4
OPEN SUPPLY WIRES, 8,700 to 50,000 V	6	6	4	4	4
TROLLEY CONDUCTORS	4	4	4	6	6
SERVICES, GUYS, LIGHTNING- PROTECTION WIRES	2	2	2	4	4

Yo, ING. JOSE L. ORTIZ, número de licencia # 6242, certifico que soy el profesional que (confecciono, diseño o preparo) 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, Justas 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 14-0004, según enmendada, conocida como la Ley para la Reintegración por la Industria Puertorriqueña y con la Ley Núm. 319 de 15 de mayo de 1938, según enmendada. Ley Núm. 96 de 8 de febrero de 1978, según enmendada, según aplicable, reconocida 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 consentimiento, me hacen responsable de cualquier acción judicial y disciplinaria por la OGP.

OGPe: 2024-606941-SRI-310632
LUMA: 23-2-0427
Carga: 25 KVA
Proyecto: Estacionamiento Publico- Municipio De Barranquitás
Municipio: Barranquitás

JOSE L. ORTIZ & ASSOC.
ELECTRICAL ENGINEERS-CONSULTANTS
P.O. BOX 2500
TIA BAJA, P.R. 00981
TEL. 795-2840
FAX. 795-2845

ING. JOSE L. ORTIZ
Lic. no. 6242 P.R.

CERTIFICACION DEL DISEÑADOR / DESIGNER'S CERTIFICATION

1. I, the undersigned, being a duly Licensed Professional Engineer, do hereby certify that I am the author of the design and specification of the project described herein, and that I am a duly Licensed Professional Engineer in the State of Puerto Rico, License No. 6242.

2. I hereby certify that the design and specification of the project described herein, and that I am a duly Licensed Professional Engineer in the State of Puerto Rico, License No. 6242.

3. I hereby certify that the design and specification of the project described herein, and that I am a duly Licensed Professional Engineer in the State of Puerto Rico, License No. 6242.

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10. I hereby certify that the design and specification of the project described herein, and that I am a duly Licensed Professional Engineer in the State of Puerto Rico, License No. 6242.

ENDOSO / ENDORSEMENT
Nombre del Proyecto / Project Name: ESTACIONAMIENTO PUBLICO, BARRANQUITAS, P.R.
Nombre del Proponente / Proponent Name: 23-0427
Carga / Load (KVA): 25 KVA. Proyecto / Project: Estacionamiento Publico

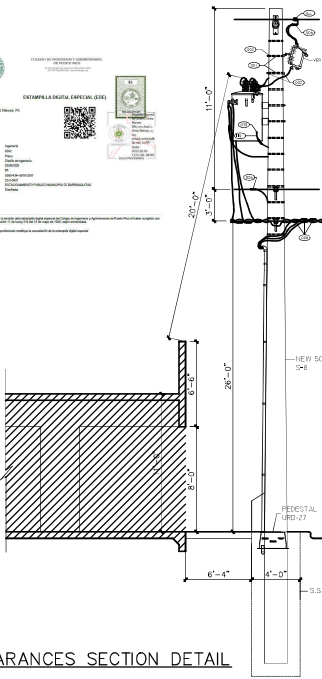
ENDOSO POR / PROVIDED BY

LUMA

PLANO DE SITIO ELECTRICIDAD- EXISTENTE
ESCALA 1:400

IMPORTANT NOTES
1. CONTRACTOR SHALL CONNECT EXISTING CABLE TO NEW POLES INCLUDING SERVICE TO BE CONNECTED TO NEW UNL27 METER. TO BE INSTALLED NEXT TO PRIMARY POLE. ADJUST LIFTING BEAM CONFORM TO A HORIZONTAL POSITION ON THE PRIMARY POLE AND REWIRE THE UNDERGROUND SERVICE UP TO METER BASE.

CLEARANCES SECTION DETAIL



CENTRAL GROUP, PSC.

ENGINEERING-ARCHITECTURAL - PLANNING
40 CALLE WILSON DE 201 BARRANQUITAS, P.R. - TEL. 8 (787) 660-4801
E-mail: centralgroup@centralgroup.com

REVISIONES		REVISIONES	
FECHA	REVISIONES	FECHA	REVISIONES

PROYECTO:

PLANO CONSTRUCCION
ESTACIONAMIENTO PUBLICO
MUN. BARRANQUITAS
BARRANQUITAS, P.R.

DESCRIPCION:

EXISTING ELECTRICAL
SITE PLAN

DRUID NUM: ESI-2

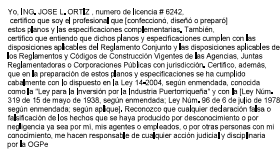
HOJA NUM: 19 of 21

INGENIERO A. TAVARES POLIN
INGENIERO A. TAVARES POLIN

1. El dueño del proyecto es responsable de realizar las pruebas de los cables primarios y secundarios con sus terminaciones. Los resultados de estas pruebas tienen que estar de acuerdo con los parámetros establecidos por la AEE para los mltamos. Estas pruebas tienen que realizarse en coordinación con un representante de la Oficina de Inspecciones del Departamento de Ingeniería de Distribución correspondiente.
2. Durante la instalación del cable, éste debe estar protegido de la humedad y abrasiones. El contratista es responsable de instalar el cable mediante las prácticas recomendadas de halado para no exceder la tensión especificada para el cable.
3. Las tapas de registros (manholes) a ser instalados en el área de siembra tienen que estar protegidos mediante una loza de hormigón reforzado, según especificado en el patrón URB-52.
4. En aquellos casos donde el proyecto está localizado a menos de una milla de un cuerpo de agua, los conductos ascendentes tienen que ser de PVC Schedule 80 o de fiberglass, según aprobado por la AEE.
5. Las bandejas del sistema enterrada serán inspeccionadas por la AEE antes de ser cubiertos y compactadas.
6. Todo banco expuesto a tráfico vehicular tendrá que ser protegido con hormigón. Aquellas que se encuentren cerca de instalaciones de otras utilities tendrán un despeje mínimo de 13 pulgadas de éstas.
7. La cantidad de fusibles de reemplazo que proveerá el contratista será la misma cantidad de los instalados en cada subestación.
8. Los conectores que se utilizarán para la conexión a tierra de antenas y subestaciones serán de soldadura extérmica (thermo-weld) o de compresión.
9. El contratista proveerá cable de halado (fishwire) en cada conducto de resguardo.
10. Todo sistema de distribución tendrá una resistencia máxima a tierra de 10 ohms. Se instalará una varilla para conectar a tierra el neutral en cada cuatro postes o cada 1,000 pies y en todos los transformadores.
11. Cada base de hormigón para poste tiene que incluir dos conductos de resguardo para uso futuro, según requerido por la AEE.
12. Los bases para postes tienen que ser inspeccionados por la AEE en su etapa de construcción.

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 219 del 15 de mayo de 1938, según enmendada.

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



1. *Journal of the American Medical Association*, 1997; 277: 1039-1043.

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FECHA:	
REVISADO POR:	
AUTOR:	
DEBIDO POR:	US: #
WALTER H. HERRA	2040
ESCALA:	
1:400	
PROYECTO:	
PLANO CONSTRUCCION ESTACIONAMIENTO PUBLICO MUN. BARRANQUITAS BARRANQUITAS, P.R.	
DESCRIPCION:	
ELECTRICAL NOTES	
DEBIDO A:	HOJA NO.
ESI-4	21 OF 21
I. J. PARRA, A. SAYAS ROLON ELECTRICAL ENGINEER	