

ENVIRONMENTAL ASSESSMENT for HUD-funded Proposals

Recommended format per 24 CFR 58.36, revised March 2005

[Previously recommended EA formats are obsolete].



Project Identification:

PR-LIHTC-00039
JARDINES DE LOIZA APARTMENTS
MEDIANIA ALTA WARD
STATE ROAD NO. 188
LOIZA, PR

Preparer:

ARCH. JORGE L. SALA MORALES
ARCON

Responsible Entity:

PUERTO RICO DEPARTMENT OF HOUSING
(PRDOH)

Month/Year:

May 17, 2023

ENVIRONMENTAL ASSESSMENT

Responsible Entity: PUERTO RICO DEPARTMENT OF HOUSING
[24 CFR 58.2(a)(7)] (PRDOH)

Certifying Officers: JUAN CARLOS PEREZ-BOFILL
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OFFICERS
CDBG-DR PROGRAM

Project Name: JARDINES DE LOIZA APARTMENTS

Project Location: MEDIANIA ALTA WARD
STATE ROAD NO. 188 KM. 5.5
LOIZA, PR

Estimated Total Project Cost: **\$24,319,115.00**

Grant Recipient: Puerto Rico Housing Finance Authority
[24 CFR 58.2(a)(5)]

Recipient Address: Calle Aldebaran 638, Urb. Altamira
San Juan, PR 00901

Project Representative: Carlos M. Colón Jr.

Telephone Number: (787) 759-8585

Email: cmcolon@mutualdsc.com

CONDITIONS FOR APPROVAL:

(List all mitigation measures adopted by the responsible entity to eliminate or minimize adverse environmental impacts. These conditions must be included in project contracts and other relevant documents as requirements). [24 CFR 58.40(d), 40 CFR 1505.2(c)]

The following conditions and mitigation measures must be adopted throughout the construction:

1. Any deviation from the scope of work calls for the re-evaluation of the application for funding under the National Environmental Policy Act.
2. Permits – Procure and maintain all required Federal, Puerto Rico and local permits and comply with all permit conditions prior to construction. These must be specific to the latest SOW and approved construction drawings and must be valid throughout the construction.
3. Endorsements - Procure and maintain all required endorsements. These must be specific to the latest SOW and approved construction drawings and must be valid throughout the construction.
4. Comply with all conditions stipulated in the permits and endorsements. These include, but are not limited to:
 - a. Compliance with DRNA conditions and proposed mitigation measures presented in the document titled “Recomendaciones” expedited on 28/Oct/2021 as published by OGPe (See Exhibit 15 – DRNA Recommendations).
 - b. Compliance with conditions presented in the Categorical Exclusion (aka Certificación de Cumplimiento Ambiental por Exclusion Categórica) (See Exhibit 16).
 - c. Contractor must detain all construction work if archaeological deposits and/or elements of historical value are encountered during any phase of the construction. Contractor must inform the ICPR, SHPO and Contracting Officer within 24 hours of the finding. No work may resume until consultation is complete and authorization has been granted to continue.
 - d. Contractor must implement and maintain the CES plan for the control of erosion and sedimentation.
 - e. Outfit all equipment with mufflers.
 - f. Comply with noise ordinance as established in the “Reglamento para el Control de la Contaminación por Ruido de la Junta de Calidad Ambiental”.
 - g. Comply with noise ordinance as established in the “Reglamento para el Control de la Contaminación por Ruido de la Junta de Calidad Ambiental”.
 - h. Contractor must detain any an all-construction work if any above ground and/or below ground water sources are encountered during the construction effort and shall notify the DRNA immediately upon such findings.
 - i. Contractor must take preventive measure to ensure that storm water does not carry organic and/or inorganic materials (oil, fuel spills, etc.) into neighboring bodies of water.
 - j. Contractor must take preventive measures to prevent construction dust from becoming a nuisance to neighboring populations.
 - k. Developer to evaluate if a National Pollutant Discharge Elimination System (NPDES) permit is required.
 - l. Interior auditory environment shall not exceed a day-night average sound level of 45 decibels. Attenuation measures to meet these interior goals shall be employed where feasible.
 - m. Must comply with the Solid Waste Authority regulations which include but are not limited to, the following:

- i. Law Num. 70-1992
 - ii. Regulation No. 6825 of June 15, 2004
 - iii. Law No. 136 of July 25, 2000
 - iv. Law No. 191 of July 30, 1999
 - v. Reglamento Conjunto
 - vi. Regulation 7940 of November 2, 2010
 - vii. General Disposition of Chapter 46 of Solid Waste Rule
 - viii. Law Num. 61 -2002
 - ix. Reuse, Reduce and Recycling Plan of Solid Waste Authority.
 - x. Prepare and emergency plan for diesel and oil spills in accordance with the Regulation of Water Quality Standard of the Department and Natural Resources
5. Developer must maintain the collection and proper disposal of solid waste services for unit tenants after construction is completed.
 6. All activities must comply with federal, Puerto Rico, and local laws and regulations regarding the management of lead-based paint and asbestos contaminated materials. Developer must procure the assessment of existing construction materials to determine if any abatement is required prior to commencement of construction. If abatement of lead-based paint and/or asbestos containing materials is required, the abatement and disposal of material must be executed in strict compliance with Puerto Rico's Environmental Quality Board and DRNA regulations, and EPA.
 7. Development is conditioned to a Certification of Consistency with the Puerto Rico Coastal Management Program from the DRNA. The project will be subject to consultation and to any permits from the Planning Board if required in the consistency determination.

BREAKDOWN OF FUND SOURCES

Tax Credit Capital	Permanent Loan	Other Sources	CDBG-DR	Total Cost
5,685,745	4,381,116	283,685	13,968,569	24,319,115

ACRONYMS AND ABBREVIATIONS

Acronym	Meaning
AAA	Puerto Rico Water and Sewage Authority (Autoridad de Acueductos y Alcantarillados)
ABFE	Advisory Base Flood Elevation
ACM	Asbestos Containing Materials
ACT	Department of Transportation (Autoridad de Carreteras)
ADS	Solid Waste Authority (Autoridad de Desperdicios Sólidos)
AEE	Puerto Rico Electric Power Authority (Autoridad de Energía Eléctrica)
CBRS	Coastal Barrier Resource System
CDBG-DR	Community Development Block Grant – Disaster Recovery
CES Plan	Erosion Control and Sediment Containment Plan (Plan para el Control de la Erosión y Prevención de la Sedimentación)
DRNA	Department of Natural Resources (Departamento de Recursos Naturales)
EA	Environmental Assessment
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
ICPR	Institute of Puerto Rican Culture (Instituto de Cultura Puertorriqueña)
LBP	Lead Based Paints
LIHTC	Low Income House Tax Credit
LOMA	FEMA Letter of Map Amendment
NCRS	Natural Resources Conservation Service
NPDES	National Pollutant Discharge Elimination System
PRASA	Puerto Rico Water and Sewage Authority (Autoridad de Acueductos y Alcantarillados)
PRDOH	Puerto Rico Department of Housing (Departamento de La Vivienda)
RECs	Recognized Environmental Conditions
SFHA	Special Flood Hazard Area
SHPO	State Historic Preservations Office
SOW	Scope of Work
SSA	Sole Source Aquifers
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service

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1. PROJECT DESCRIPTION

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

Puerto Rico is short of suitable affordable housing for numerous low-income populations including, but not limited to, the working population, single parent families and young adults. Throughout the past decade PR has been wrought by an economic recession that has been further tainted by hikes in construction costs, the implementation of new taxes, the degradation of the islands credit rating and new fiscal controls over government spending.

In 2017 Hurricane Maria caused a strong devastation in the municipality of Loiza affecting many low-income housing projects. Loiza population and nearby municipalities need affordable housing that may satisfy the demand of safe, sanitary and secure housing. The project Loiza Apartment is a two formerly independent projects that was affected by the Hurricane Maria. The proposal is to consolidate the existing projects, and rehabilitate the structures, infrastructure, and site in accordance with the prevailing Building Codes, Fair Housing and ADA regulations. Project enhancement will enable to provide to the existing nearby population an opportunity to live in a suitable housing unit for low-income families.

The purpose of this endeavor is to assist in providing suitable, resilient affordable housing to low-income families of Loiza.

B. Description of the Proposal: Include all contemplated actions that are either geographically or functionally a composite part of the project, regardless of the source of funding. [24 CFR 58.32, 40 CFR 1508.25]

The following has been extracted from the developer's project narrative (see supporting documents I-1):

Jardines of Loiza is the consolidation of two projects built over twenty years ago. First Phase, Jardines de Loiza I, was built in 1995, with a total of eighty units and the second, Jardines de Loiza II was built in 2001 with a total of 27 units. The units are distributed in four building of three stories (walkup), three buildings with 27 units and one single building of 26 units. A total of fifty nine units consist of two bedrooms, 48 units have three bedrooms. The project has an Administration Building, basket ball court, play grounds and parking areas. Also a new community building will be constructed to provide facilities in case of emergencies. (Hurricane)

Jardines de Loiza is a substantial rehabilitation and reconstruction of Phase I and II following the regulations of Community Development Block Grant Disaster Recovery Program, Low-Income Housing Tax Credit and will continue with the mortgage loan from USDA Rural Development under new terms.

In general terms the site's immediate neighborhood is a mixture of residential, and commercial land uses. The property is at Jardines de Loiza, state road PR 188 Km 5.5 Mediania Alta Ward in the municipality of Loiza. The project is near amenities and public facilities, public schools, grocery store, pharmacy, Federal Post Office, Bus Terminal, Municipal Hospital, Sport Complex and Police Station.

The Project's units, the facilities and common areas will be designed in strict compliance with federal, state and local laws, rules, regulations, requirements and ordinances, including, but not limited to, the standards of the American with Disabilities Act (ADA), the Uniform Federal Accessibility Standards (UFAS), as well as the Federal Housing Act (FHA), as amended. A total of nine out of the 36 units ground floor will be for handicapped, five accessible units, three sensory accessible units and one will double as mobility and sensory accessible units.

Project will include the rehabilitation of apartments, which consist of the following:

- Repairing of walls and ceilings
- Electrical Upgrade
- New Smoke Detectors installation
- Replacement of tiles
- Remodeling of kitchens, including new refrigerators and stove energy star
- New Bathroom vanities, faucets water sense fixture,
- LED lighting replacement
- UFAS and ADA Compliance

Project will include the rehabilitation of site infrastructure as follows:

- Exterior lamps and poles replacement
- Asphalt repair
- New Stop wheels
- Playground enhancement
- Surveillance Cameras
- A new Emergency Generator 50 KVA
- Water Pump House

- Improved Trash and recycle station
- Rearrange the site drainage system (Rain Water Harvesting)
- Construction of concrete fences
- Installation of Solar Panels with batteries for the Administration Building

C. Existing Conditions and Trends: Describe the existing conditions of the project area and its surroundings, and trends likely to continue in the absence of the project. [24 CFR 58.40(a)]

The proposed project consists in the rehabilitation and reconstruction of four existing multifamily buildings that were constructed over twenty years ago. It is in inside Loiza's urban center near commercial, medical facilities, schools, churches, the town square, pharmacies, and governmental offices. It is readily accessible, supported by adequate utilities infrastructure. The project enhancement will provide to low-income families the opportunity to continue living in a more resilient project with fixtures that will be helpful in emergency situations.

Puerto Rico's debt crisis accompanied by current economic trends and development efforts suggest that in the absence of this project the site would remain 'as-is' until funding is secured.

2. FINDING: [58.40(g)]

Finding of No Significant Impact
(The project will not result in a significant impact on the quality of the human environment)

Finding of Significant Impact
(The project may significantly affect the quality of the human environment)

Preparer Signature: _____

Date: May 17, 2023

Name/Title/Agency: ARCH. JORGE L. SALA
ARCON, LLC

Certifying Officer Signature: _____


Date: _____ June 8, 2023 _____

Name/Title/Agency: _____
Sally Z. Acevedo Cosme
Permits and Environmental Compliance Specialist
PR Department of Housing

3. STATUTORY CHECKLIST: [24CFR §58.5]

Record the determinations made regarding each listed statute, executive order or regulation. Provide appropriate source documentation. Note reviews or consultations completed as well as any applicable permits or approvals obtained or required. Note dates of contact or page references. Provide compliance or consistency documentation. Attach additional material as appropriate. Note conditions, attenuation or mitigation measures required.

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
<p>Historic Preservation [36 CFR 800]</p>	<p>Yes No <input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>On September 26,2020, Archaeologist Sharon Melendez, submitted on behalf of the applicant Mutual Development Service Corp a technical assistance 106 consultation for the project undertaking. As according to the information there is no adverse effect on historic property since the project consist of a reconstruction and will not affect site LO26 previously mitigated during the project construction of Jardines de Loiza.</p> <p>A letter from Carlos A. Rubio Cancela, State Historic Preservation Officer, dated December 11, 2020 and directed towards Lauren Bair Poche confirms a finding of no historic properties affected for the proposed undertaking.</p> <p>No further action is required since an official determination has been addressed in accordance 36 CFR Part 800. Therefore, this factor is in compliance with regulations.</p> <p>See Exhibit 1 - State Historic Preservation Officer Letter See Exhibit A – Archaeological Study See Exhibit H – SHPO Letters & Communications</p>
<p>Floodplain Management [24 CFR 55, Executive Order 11988]</p>	<p>Yes No <input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>The project consists in the rehabilitation of existing residential buildings, its surroundings and infrastructure. The structures and infrastructure were built over 20 years ago. New construction is limited to that of an accessory/multi-use building.</p> <p>The site per se is divided into two parcels identified as Parcel R-1 and Parcel R-2A. As presented in the National Flood Hazard Layer FIRMette (72000C0395J eff. 11/18/2009), the</p>

		<p>north of the site is in Zone X 0.2% Chance of Flood Hazards while the lower portion is in Zone AE Special Flood Hazard Area.</p> <p>However, portions of the property have been removed from the SFHA as certified in a Letter of Map Revision Based on Fill for Parcel R-1 and a Letter of Map Amendment for Parcel R-2A. Hence, the Federal mandatory flood insurance requirement does not apply.</p> <p>Floodplain management does not apply including the need to provide an 8-step Decision Making Process document.</p> <p>See Exhibit 2 – Floodplains Management See Exhibit D – Elevation Certificate See Exhibit E – Community Acknowledgment Form See Exhibit F – LOMR & LOMA</p>
<p>Wetlands Protection [Executive Order 11990]</p>	<p>Yes No <input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>The project consists in the rehabilitation of series of existing residential and accessory buildings, site amenities and infrastructure within a residential complex located in a developed, mixed-use urban landscape in the municipality of Loiza. New construction is limited to a multi-use building, approximately 60' x 32', flanking the existing administrative building and which will be built in an already impacted area.</p> <p>A permit won't be required as per Section 404 of the Clean Water Act for the project will not require the discharge of dredger or fill material into wetlands. This has been confirmed through consultation with the Corps of Engineers, Department of the Army, as is stipulated in their letter directed to Eng. Erika Alcantara dated October 28, 2020.</p> <p>Furthermore, the area for the new construction is not considered a wetland given that it was impacted in the 1995 construction endeavor and serves as a parking area.</p> <p>The DRNA has vetted the project and found no critical habitat, critical elements, or conservation priority area in the proposed activity and presented that it has no objection to the development.</p>

		<p>No adverse effects are anticipated.</p> <p>See Exhibit 3 - Wetland Protection / Map See Exhibit 3.1 – Department of the Army – Corps of Engineers See Exhibit I – Designer’s Letter on Wetlands See Exhibit J – Department of the Army and DRNA</p>
<p>Coastal Zone Management Act [Sections 307(c), (d)]</p>	<p>Yes No <input checked="" type="checkbox"/> <input type="checkbox"/></p>	<p>The project consists in the rehabilitation of series of existing residential and accessory buildings, site amenities and infrastructure within a residential complex located in a developed, mixed-use urban landscape in the municipality of Loiza. New construction is limited to a multi-use building, approximately 60’ x 32’, flanking the existing administrative building and which will be built in an already impacted area.</p> <p>The project is located approximately 700 meters from the coast within the Coastal Zone Management Area. The existing buildings and infrastructure between the project and the coast serve as a buffer of protection to the project and coast alike.</p> <p>The DRNA has vetted the project and found no critical habitat, critical elements, or conservation priority area in the proposed activity and presented that it has no objection to the development.</p> <p>Nevertheless, the developer has been asked to apply for Certification of Consistency with the Puerto Rico Coastal Management Program from the DRNA. The project will be subject to consultation and to any permits from the Planning Board if required by the consistency determination.</p> <p>See Exhibit 4 - Coastal Zone Management See Exhibit 4.1 – Coastal Zone Management See Exhibit J – Department of the Army and DRNA</p>
<p>Sole Source Aquifers [40 CFR 149]</p>	<p>Yes No <input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>Puerto Rico is included in Region II of the USA EPA designated sole-source aquifer regions.</p> <p>The project is not served by designated sole-source aquifers nor is it located within a sole</p>

		<p>source aquifer watershed.</p> <p>No adverse effects are anticipated.</p> <p>See Exhibit 5 - Sole Source Aquifers (SSA)</p>
<p>Endangered Species Act [50 CFR 402]</p>	<p>Yes No <input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>The project consists in the rehabilitation of series of existing residential and accessory buildings, site amenities and infrastructure within a residential complex located in a developed, mixed-use urban landscape in the municipality of Loiza. New construction is limited to a multi-use building, approximately 60' x 32', flanking the existing administrative building and which will be built in an already impacted area.</p> <p>The National Fish and Wildlife Service does not identify this area as a Wildlife Refuge. As stated in the letter of June 11,2019, the project proposed qualifies for the blanket clearance letter.</p> <p>No adverse effects are anticipated.</p> <p>See Exhibit 6 - Endangered Species & Ecology</p>
<p>Wild and Scenic Rivers Act [Sections 7(b), (c)]</p>	<p>Yes No <input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>The project is located over 9.5 miles from the three rivers designated as wild & scenic.</p> <p>No adverse effects are anticipated.</p> <p>See Exhibit 7 - Wild and Scenic Rivers See Exhibit 7.1 – Wild and Scenic Rivers – Enlarged Plan</p>
<p>Air Quality [Clean Air Act, Sections 176(c) and (d), and 40 CFR 6, 51, 93]</p>	<p>Yes No <input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>The project is in the Municipality of Loiza. This municipality is not currently listed as a nonattainment area in the United States Environmental Protection Agency Green Book.</p> <p>See Exhibit 8 – Air Quality</p>
<p>Farmland Protection Policy Act [7 CFR 658]</p>	<p>Yes No <input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>The project consists in the rehabilitation of series of existing residential and accessory buildings, site amenities and infrastructure within a residential complex located in a developed, mixed-use urban landscape in the municipality of Loiza. New construction is limited to a multi-use building, approximately 60' x 32', flanking the existing administrative building and which will be built in an already impacted area.</p>

		<p>The activity is not new construction or relocation on a previously undisturbed lot. No adverse effects on farmland is anticipated.</p> <p>See Exhibit 9 – Prime Farmlands See Exhibit G – Custom Soils Report</p>
<p>Environmental Justice [Executive Order 12898]</p>	<p>Yes No <input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>The rehabilitation of the existing buildings is meant to provide safe, sound, and secure dwellings to low-income families in Loiza.</p> <p>There are no environmental findings that would adversely affect target populations for Environmental Justice.</p>

HUD Environmental Standards

Determination and Compliance Documentation

<p>Noise Abatement and Control [24 CFR 51 B]</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>A specific-scope noise survey for day and night periods was carried out to measure noise levels at the project site. The study measured a weighted LDN average (24 hours) of 58.5 dB. This is less than the normally unacceptable levels of 65 decibels and therefore in compliance.</p> <p>See Exhibit B – Noise Assessment</p>
<p>Toxic/Hazardous/Radioactive Materials, Contamination, Chemicals or Gases [24 CFR 58.5(i)(2)]</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>A Phase I Environmental Site Assessment dated October 1, 2020 and in conformance with the scope and limitations of ASTM 1527-13. Study performed concludes that there are no recognized environmental conditions associated with the property usage or on the project site. The report also determined that there are no sites within the radii of concern that could adversely impact the site. Therefore, this factor is in compliance with the regulations.</p> <p>See Exhibit C - Phase 1 Environmental Assessment</p>
<p>Siting of HUD-Assisted Projects near Hazardous Operations [24 CFR 51 C]</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>The project consists in the rehabilitation of series of existing residential and accessory buildings, site amenities and infrastructure within a residential complex located in a developed, mixed-use urban landscape in the municipality of Loiza. New construction is limited to a multi-use building, approximately 60' x 32', flanking the existing administrative building and which will be built in an already impacted area.</p> <p>A Phase I Environmental Site Assessment dated October 1, 2020 and in conformance with the scope and limitations of ASTM 1527-13. Study performed concludes that there are no state registered aboveground storage tanks (ASTs) within a specified .25 mile radii of the site. Therefore, this factor is in compliance with the regulations.</p> <p>See Exhibit C - Phase 1 Environmental Assessment</p>
<p>Airport Clear Zones and Accident Potential Zones [24 CFR 51 D]</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>The nearest airport Civil and Military is the Luis Munoz Marin airport approximately 6.75 miles east of the site. The project site is not within 15,000 feet of a military airport or 2,500 feet of a civilian airport.</p>

		See Exhibit 11 - Airport Hazards / Airports in Puerto Rico Map
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Other Factors

Source or Documentation

<p>Flood Disaster Protection Act [Flood Insurance] [§58.6(a)]</p>	<p>Yes No <input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>The selected site is in a special flood area. It stands within the Zone A defined as an area determined in 100-year flood plain by FEMA and Puerto Rico Planning Board.</p> <p>The site per se is divided into two parcels identified as Parcel R-1 and Parcel R-2A. As presented in the National Flood Hazard Layer FIRMette (72000C0395J eff. 11/18/2009), the north of the site is in Zone X 0.2% Chance of Flood Hazards while the lower portion is in Zone AE Special Flood Hazard Area.</p> <p>However, portions of the property have been removed from the SFHA as certified in Letters of Map Revision (LOMA) Based on Fill for both the Parcel R-1 and Parcel R-2A. Hence, the Federal mandatory flood insurance requirement does not apply.</p> <p>See Exhibit 2 – Floodplains Management</p>
<p>Coastal Barrier Resources Act/ Coastal Barrier Improvement Act [§58.6(c)]</p>	<p>Yes No <input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>The project site is located approximately .94 miles east from the nearest system unit PR-87. The infrastructure, river, and vegetation between PR-87 and the project will serve as a buffer of protection between the two areas.</p> <p>No adverse effects are anticipated.</p> <p>See Exhibit 12 - Coastal Barrier Resources Act (CBRS) See Exhibit 12.1 - Coastal Barrier Resources Act (CBRS) - Enlarged</p>
<p>Airport Runway Clear Zone or Clear Zone Disclosure [§58.6(d)]</p>	<p>Yes No <input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>The nearest airport Civil and Military is the Luis Munoz Marin airport approximately 6.75 miles east of the site. The project site is not within 15,000 feet of a military airport or 2,500 feet of a civilian airport.</p> <p>See Exhibit 11 - Airport Hazards / Airports in Puerto Rico Map</p>
<p>Other Factors</p>		<p>Climate Change: The project consists in the rehabilitation of series of existing residential and accessory buildings, site amenities and infrastructure within a residential complex located in a developed, mixed-use urban landscape in the municipality of Loiza. New construction is limited to a multi-use building, approximately</p>

		<p>60' x 32', flanking the existing administrative building and which will be built in an already impacted area.</p> <p>Coastal inundation due to sea level rises are long term. Currently, there are no specific requirements related to new construction due to climate change in the coastal zone. The Sea Level Rise Predication for the Northern Puerto Rico coast is about 0.91 feet (Intermediate) for 2050. The inundation of this amount will not threaten the site by that time.</p> <p>Based upon the project scope, there should be no adverse impact relating to Climate Change.</p>
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4. ENVIRONMENTAL ASSESSMENT CHECKLIST

[Environmental Review Guide HUD CPD 782, 24 CFR 58.40; Ref. 40 CFR 1508.8 &1508.27]

Evaluate the significance of the effects of the proposal on the character, features and resources of the project area. Enter relevant base data and verifiable source documentation to support the finding. Then enter the appropriate impact code from the following list to make a determination of impact. **Impact Codes:** (1) - No impact anticipated; (2) - Potentially beneficial; (3) - Potentially adverse; (4) - Requires mitigation; (5) - Requires project modification. Note names, dates of contact, telephone numbers and page references. Attach additional material as appropriate. Note conditions or mitigation measures required.

Land Development	Code	Source or Documentation
Conformance with Comprehensive Plans and Zoning	1	The project consists in the rehabilitation of existing buildings located in a developed, mixed-use urban landscape in the municipality of Loiza. The zoning is consistent with the project intent.
Compatibility and Urban Impact	1	The project lies within a populated area of mixed occupancies. Single and multi-family homes, commercial, healthcare, governmental, recreational, and institutional facilities are found throughout the immediate vicinity.
Slope	1	The project consists in the rehabilitation of series of existing residential and accessory buildings, site amenities and infrastructure within a residential complex located in a developed, mixed-use urban landscape in the municipality of Loiza. New construction is limited to a multi-use building, approximately 60' x 32', flanking the existing administrative building and which will be built in an already impacted area. The terrain is relatively flat. No major ground disturbance activities are anticipated.
Erosion	1	A potential for some construction related erosion exists. The contractor must adhere to the CES plan as a measure of erosion control. There is no anticipated adverse effect on erosion expected from the development of the project.
Soil Suitability	1	The project consists in the rehabilitation of series of existing residential and accessory buildings, site amenities and infrastructure within a residential complex located in a developed, mixed-use urban landscape in the municipality of Loiza. New construction is limited to a multi-use building, approximately 60' x 32', flanking the existing administrative building and which will be built in an already impacted area. The project's designer, a civil engineer, has prepared the design based on the Geotechnical Report prepared for the original development and has certified that there is no need for additional Soil Studies. See Exhibit 17 – Soil Studies Letter
Hazards and Nuisances including Site Safety	1	The project site does not present any specific construction logistic difficulties to the contractor. Hence, the contractor should not be facing any safety, hazard, or nuisances other than those typical to construction projects. Nevertheless, the contractor must endeavor to provide a safe

		environment, on and off-site, throughout the construction. This includes compliance with all safety and environmental measures established by, but not limited to, OSHA.
Energy Consumption	1	<p>The project consists in the rehabilitation of series of existing residential and accessory buildings, site amenities and infrastructure within a residential complex located in a developed, mixed-use urban landscape in the municipality of Loiza. New construction is limited to a multi-use building, approximately 60' x 32', flanking the existing administrative building and which will be built in an already impacted area.</p> <p>The design strives to meet ICC-700 National Green Building Standards and specifies the use of LED lighting, energy star rated appliances, renewable energy through a solar panel/photovoltaic system to serve specific areas.</p> <p>The demand for electricity generated by the project won't require a major expansion of power facilities nor would it have any anticipated adverse effects.</p> <p>See Exhibit 13 – AEE/LUMA Endorsement</p>

Noise - Contribution to Community Noise Levels	1	<p>The area will not have addition noise source besides the project rehabilitation noise. There is no change in the project use. Noise survey was conducted on October 6, 2020 during morning and night periods as defined in the regulatory requirements of Natural Resources Department of Puerto Rico and HUD. The noise was detected by the use of two calibrated ground level meters in compliance with the American National Standards LDN 65.9. The weighed LDN average is 58.5 db, not exceeding the acceptable criteria of 65 db required by HUD 24 CFR Part 51.</p> <p>With respects to construction noise, it must be mitigated by standard procedures and measures as requested by the Department of Natural Resources of Puerto Rico required in their 'Reglamento para el Control de la Contaminación por Ruido'.</p> <p>See Exhibit B - Noise Assessment</p>
Air Quality Effects of Ambient Air Quality on Project and Contribution to Community Pollution Levels	1	<p>The project construction activities consist of minor source of air pollution. During the rehabilitation of the project, the contractor must endeavor to minimize construction dust from becoming a nuisance to the neighborhood and environment through mitigation measures that include but are not limited to, have obtained from OGPe a Consolidated Permit (PUI) to to address any concern related to effects of the project rehabilitation to quality of air. The project will include the construction of a multiuse building at the project site. Must</p>

		avoid impact to the air quality during construction.
Environmental Design Visual Quality - Coherence, Diversity, Compatible Use and Scale	2	<p>The project consists in the rehabilitation of series of existing residential and accessory buildings, site amenities and infrastructure within a residential complex located in a developed, mixed-use urban landscape in the municipality of Loiza. New construction is limited to a multi-use building, approximately 60' x 32', flanking the existing administrative building and which will be built in an already impacted area.</p> <p>The rehabilitation will improve the building aesthetics therefore upgrading the urban fabric of the area.</p>

Socioeconomic	Code	Source or Documentation
Demographic Character Changes	1	<p>The project consists in the rehabilitation of series of existing residential and accessory buildings, site amenities and infrastructure within a residential complex located in a developed, mixed-use urban landscape in the municipality of Loiza. New construction is limited to a multi-use building, approximately 60' x 32', flanking the existing administrative building and which will be built in an already impacted area.</p> <p>No change is anticipated in the demographic composition. The project will continue to address the need for affordable housing in Loiza.</p>
Displacement	1	<p>The project consists in the rehabilitation of series of existing residential and accessory buildings, site amenities and infrastructure within a residential complex located in a developed, mixed-use urban landscape in the municipality of Loiza. New construction is limited to a multi-use building, approximately 60' x 32', flanking the existing administrative building and which will be built in an already impacted area.</p> <p>There will be neither displacement nor adverse socioeconomic effects.</p>
Employment and Income Patterns	1	<p>The construction endeavor will provide job opportunities for construction laborers.</p> <p>There is no anticipated effect on employment and income patterns other than the aforementioned.</p>

Community Facilities and Services

	Code	Source or Documentation
Educational Facilities	2	<p>It should be noted that schools in Puerto Rico are currently struggling to keep a healthy student body.</p> <p>The Belen Blanco de Zequeira School and Carlos Escobar Lopez School are both within a 800 meter radius from the project. The rehabilitation of Jardines de Loiza will help retain a tenant base that will contribute to the student body of these schools.</p>
Commercial Facilities	2	<p>There are numerous commercial facilities (including restaurants and pharmacies) within walking distance of the site. The tenants at Jardines de Loiza will serve as clients to these commercial facilities and therefore, will positively contribute to the local economy.</p>
Health Care	2	<p>Consilio de Salud Integral del Municipio de Loiza is located within 800 meters (10-minute walk as per Google Maps) and (2 minute drive), respectively, from the project site. The nearby hospital provides 24 Medical Emergency services, x-ray facilities, cardiovascular services, ambulance services and a pharmacy.</p> <p>Numerous medical offices and pharmacies are found throughout and around the project. In particular, Pharmacy Jardines de Loiza is 270 meters from the site.</p> <p>These facilities will help secure the health of the project's tenants.</p>
Social Services	2	<p>The project intends to provide safe, sound, and secure affordable housing to low-income families.</p> <p>The site is also located within walking distance from social service offices run by the Municipality.</p>
Solid Waste	1	<p>The project will retain the solid waste management services that currently serve the project.</p> <p>Recycling should be implemented during construction and enforced as per standards set by the Department of Natural and Environmental Resources (Departamento de Recursos Naturales y Ambientales- DRNA).</p> <p>There a no anticipated adverse effects on waste removal services.</p>
Wastewater	1	<p>The project will continue to be served by the existing aqueduct infrastructure provided by the local water and sewer service company known as 'La Autoridad de Acueductos y Alcantarillados' (aka AAA).</p> <p>There a no anticipated adverse effects on wastewater management.</p>

		See Exhibit 14 - AAA Endorsement
Storm Water	1	<p>The site stands within the Zone A defined as an area determined to be in the 100-year flood by FEMA as per Advisory Maps of FEMA. However, the parcels that constitute the site have a LOMA that removes them from the 100-year floodplain. The area surrounding the location is within the 100-year floodplain.</p> <p>Existing infrastructure includes a series of concrete gutters and channels, box culverts, inlets/catch basins, underground pipes, and a storm sewer easement to manage storm water.</p> <p>The project description states that a tank for rainwater harvesting for the administrative building will be added.</p> <p>There are no adverse effects anticipated due to the proposed rehabilitation.</p>
Water Supply	1	<p>The project will continue to be served by the existing aqueduct infrastructure provided by the local water and sewer service company known as 'La Autoridad de Acueductos y Alcantarillados' (aka AAA).</p> <p>There are no anticipated adverse effects on water supply resources.</p> <p>See Exhibit 14 - AAA Endorsement</p>
Public Safety - Police	1	The project is for upgrade of existing facilities and will put no undue additional burden on the Police. Police Station distance is at 450 meters walking distance from the project.
Fire Department	1	The project is for upgrade of existing facilities and will put no undue additional burden on the Fire Department. The local fire department is located at 86 meters (8-minute walking distance) from the project site.
- Emergency Medical	1	The project is for upgrade of existing facilities and will put no undue additional burden on the emergency medical facilities. Consilio de Salud Integral del Municipio de Loiza is located are located a 800 meters (10 minute walk as per Google Maps) and (2 minute drive), respectively, from the project site. The nearby hospital provides 24 Medical Emergency services, x-ray facilities, cardiovascular services, ambulance services and a pharmacy.
Open Space and Recreation - Open Space	2	<p>Parque Histórico Cueva Maria De La Cruz is at 1.1 Km from the project site.</p> <p>The area serves as a historic park for the municipality of Loiza. Tours available to visit the cave as well as participate in the three different workshops: bomba dance class, beekeeping, and turban-making demonstration.</p>

		<p>Cueva María de la Cruz houses one of the largest bee sanctuaries in the Caribbean, harboring thousands of bees.</p> <p>Paseo Julia de Burgos, a relatively new recreational park that flanks Rio Grande, is within 570 meters of the site.</p> <p>The open spaces lend themselves to social gatherings and/or serve as a healthy retreat for the tenants of Jardines de Loiza. Furthermore, the presence of the tenant base will contribute to a healthy environment at these places.</p>
- Recreation	2	<p>The complex has a basketball court and playground facilities that will be upgraded as part of the rehabilitation. A baseball field and a basketball court are within walking distance of the project.</p> <p>The complexes provide for exercise and entertainment to the tenants of Jardines de Loiza. Furthermore, the presence of the tenant base will contribute to a healthy environment at these places.</p>
- Cultural Facilities	2	<p>Cultural facilities within a 800m radius from the site include the city town square, churches, and a library.</p> <p>Parque Histórico Cueva Maria De La Cruz is at 1.1 Km from the project site.</p> <p>These spaces lend themselves to social gatherings and/or serve as a healthy retreat for the tenants of Jardines de Loiza. The presence of the tenant base will also contribute to a healthy environment at these places.</p>
Transportation	2	<p>The project is for upgrade of existing facilities and will put no undue additional burden on transportation services. Nearest Bus Stop is at 9 minutes walking from the project (800 meters).</p>

Natural Features**Source or Documentation**

Water Resources	1	<p>The project will continue to be served by the existing aqueduct infrastructure provided by the local water and sewer service company known as 'La Autoridad de Acueductos y Alcantarillados' (aka AAA).</p> <p>There a no anticipated adverse effects on water supply resources.</p> <p>Rio Grande de Loiza is 570 meters from the site. Due to the distance and dense infrastructure between both locations, there should be no impact on the river.</p> <p>See Exhibit 14 - AAA Endorsement</p>
Surface Water	1	<p>Existing infrastructure includes a series of concrete gutters and channels, box culverts, inlets/catch basins, underground pipes, and a storm sewer easement to manage storm water.</p> <p>The project description states that a tank for rainwater harvesting for the administrative building will be added.</p> <p>Rio Grande de Loiza is 570 meters from the site. Due to the distance and dense infrastructure between them, there should be no impact on the river.</p>
Unique Natural Features and Agricultural Lands	1	<p>The selected site is located within a densely populated urban landscape that has already been impacted/developed. The project consists in the rehabilitation of the existing complex.</p> <p>No unique natural features and agricultural lands will be impacted by the project rehabilitation. The area will remain the same dimensions and lies in a developed area.</p>
Vegetation and Wildlife	1	<p>The selected site is located within a densely populated urban landscape that has already been impacted/developed. The project consists in the rehabilitation of the existing complex.</p> <p>There will be no significant impact on Vegetation and Wildlife.</p>

5. LIST OF SOURCES, AGENCIES, AND PERSONS CONTACTED

1. FEMA Flood Map Service Center
 - a. <https://msc.fema.gov/portal/home>
2. The National Flood Insurance Program Community Status Book
 - a. <https://www.fema.gov/cis/PR.html>
3. Junta de Planificación de Puerto Rico
4. National Wetlands Inventory
 - a. <https://www.fws.gov/wetlands/data/mapper.html>
5. Puerto Rico Coastal Zone Management Program
6. Office for Coastal Zone Management
 - a. <https://coast.noaa.gov/czm/mystate/#puertorico>
7. Coastal Vulnerability Viewer
8. United States Environmental Protection Agency
 - a. <https://www.epa.gov/dwssa>
 - b. <https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe31356b>
 - c. USEPA Green Book
 - i. <https://www3.epa.gov/airquality/greenbook/ancl.html>
 - ii. <https://www3.epa.gov/airquality/greenbook/tnca.html>
 - iii. https://www3.epa.gov/airquality/greenbook/anayo_pr.html
 - d. <https://geopub.epa.gov/myem/efmap/index.html?ve=13,18.466328,-66.104730&pText=San%20Juan+>
 - e. <https://nepassistool.epa.gov/nepassist/nepamap.aspx>
 - f. EnviroMapper
 - i. <https://geopub.epa.gov/myem/efmap/index.html?ve=7,18.215569,-66.468953&pText=Puerto%20Rico>
9. National Wildlife Refuge System
 - a. <https://www.fws.gov/refuges/>
 - b. <https://www.fws.gov/refuges/refugeLocatorMaps/PuertoRico.html>
 - c. https://www.fws.gov/refuges/maps/NWRS_National_Map.pdf
10. USA National Wild and Scenic Rivers
 - a. www.rivers.gov
11. Federal Aviation Administration
 - a. https://www.faa.gov/airports/planning_capacity/npias/reports/media/NPIAS-Report-2019-2023-Appendix-B.pdf
12. Google Earth
 - a. <https://earth.google.com>
13. Google Maps
 - a. <https://maps.google.com>
14. USFWS Coastal Barrier Resources System
 - a. <https://www.fws.gov/cbra>
15. United States Department of Agriculture
 - a. <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>
16. Studies, Reports and Endorsements provided by the developer
 - a. Project Narrative
 - b. Archaeological Study
 - c. Environmental Site Assessment – Phase 1
 - d. Noise Study
 - e. OGPe

- f. Construction Drawings
- g. AAA
- h. AEE
- i. DRNA
- j. State Historic Preservations Office (SHPO)
- k. Fish and Wildlife Services
- l. Department of the Army – US Corps of Engineers

6. SUMMARY OF FINDINGS AND CONCLUSIONS

a. Alternatives and Project Modifications Considered [24 CFR 58.40(e), Ref. 40 CFR1508.9]

(Identify other reasonable courses of action that were considered and not selected, such as other sites, design modifications, or other uses of the subject site. Describe the benefits and adverse impacts to the human environment of each alternative and the reasons for rejecting it.)

The proposed project calls for the rehabilitation of series of existing residential and accessory buildings, site amenities and infrastructure within a residential complex located in a developed, mixed-use urban landscape in the municipality of Loiza. New construction is limited to a multi-use building, approximately 60' x 32', flanking the existing administrative building and which will be built in an already impacted area.

Alternatives to this development would be:

1. Demolition and reconstruction of the existing buildings and infrastructure.
2. Developing a new residential complex on a vacant site elsewhere in the Municipality of Loiza.
3. Rehabilitation of an existing, unused structure within Loiza.

Neither of the alternatives are as feasible as the rehabilitation of the existing complex.

Alt. 1: Demolishing the existing buildings and infrastructure for reconstruction is not necessary given that the existing structures are structurally sound. Demolition works will produce unnecessary waste and any reconstruction will make for an inefficient use of funds and material resources.

Alt. 2: Developing a new residential complex elsewhere in Loiza will cost more than the proposed rehab. It will consume a greater portion of the available funds at the expense of other projects. It will also require invading vacant land that will be further away from the existing town center, its commerce, amenities, and infrastructure. It would also require the implementation of mitigation measures that are not necessary for project rehabilitation.

Alt. 3: The project's intent is to update its existing facilities to better serve the current and future tenants at Jardines de Loiza. The rehabilitation of another complex and/or buildings will require consumption of more funds due the need to execute a purchase of a property and the high possibility of the need for adaptive works to that are not necessary under the current proposal.

b. No Action Alternative [24 CFR 58.40(e)]

(Discuss the benefits and adverse impacts to the human environment of not implementing the preferred alternative).

The 'No Action Alternative' means that the existing complex will not be upgraded until funding is secured. It would continue to slowly deteriorate at the expense of its tenant base.

7. MITIGATION MEASURES RECOMMENDED

[24 CFR 58.40(d), 40 CFR 1508.20] (Recommend feasible ways in which the proposal or its external factors should be modified in order to minimize adverse environmental impacts and restore or enhance environmental quality.)

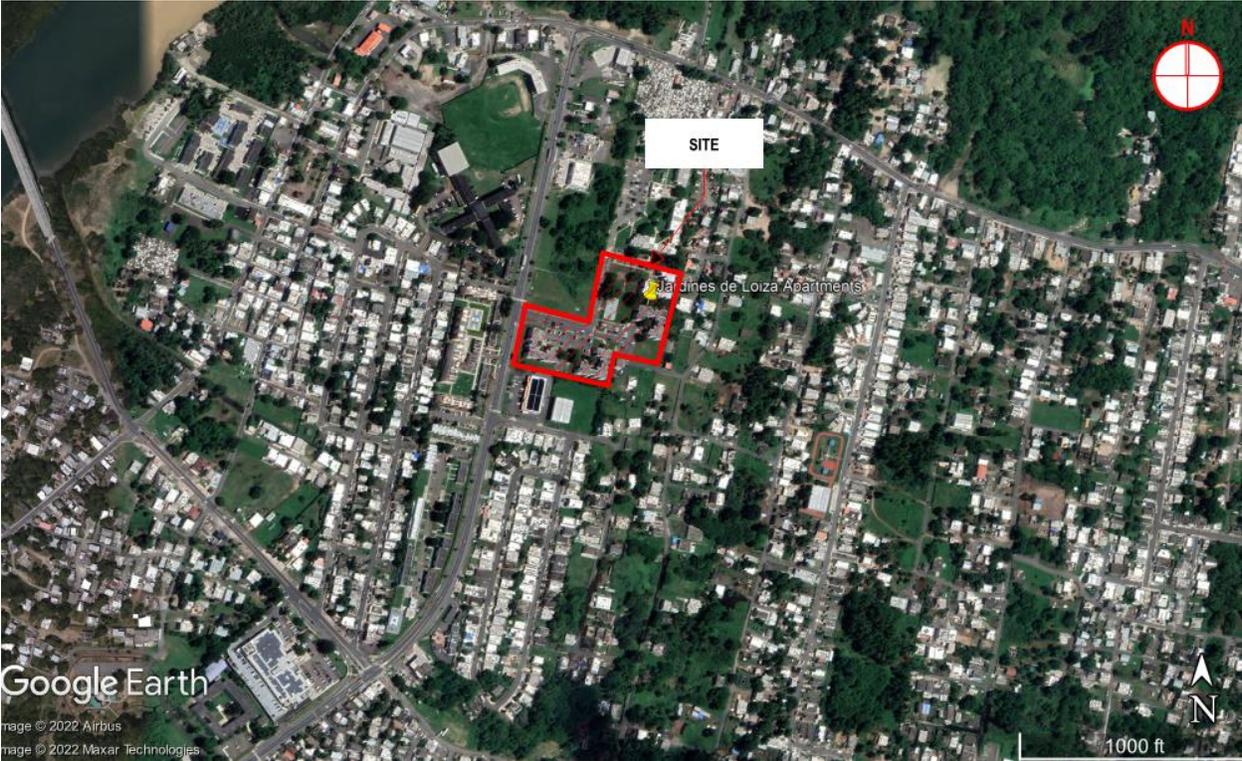
1. Comply with all conditions stipulated in the permits and endorsements. These include, but are not limited to:
 - a. Compliance with DRNA conditions and proposed mitigation measures presented in the document titled "Recomendaciones" expedited on 28/Oct/2021 as published by OGPe (See Exhibit 15 – DRNA Recommendations).
 - b. Compliance with conditions presented in the Categorical Exclusion (aka Certificación de Cumplimiento Ambiental por Exclusion Categórica) (See Exhibit 16).
 - c. Contractor must detain all construction work if archaeological deposits and/or elements of historical value are encountered during any phase of the construction. Contractor must inform the ICPR, SHPO and Contracting Officer within 24 hours of the finding. No work may resume until consultation is complete and authorization has been granted to continue.
 - d. Contractor must implement and maintain the CES plan for the control of erosion and sedimentation.
 - e. Outfit all equipment with mufflers.
 - f. Comply with noise ordinance as established in the "Reglamento para el Control de la Contaminación por Ruido de la Junta de Calidad Ambiental".
 - g. Contractor must detain any an all-construction work if any above ground and/or below ground water sources are encountered during the construction effort and shall notify the DRNA immediately upon such findings.
 - h. Contractor must take preventive measure to ensure that storm water does not carry organic and/or inorganic materials (oil, fuel spills, etc.) into neighboring bodies of water.
 - i. Contractor must take preventive measures to prevent construction dust from becoming a nuisance to neighboring populations.
 - j. Developer to evaluate if a National Pollutant Discharge Elimination System (NPDES) permit is required.
 - k. Interior auditory environment shall not exceed a day-night average sound level of 45 decibels. Attenuation measures to meet these interior goals shall be employed where feasible.
 - l. Must comply with the Solid Waste Authority regulations which include but are not limited to, the following:
 - xi. Law Num. 70-1992
 - xii. Regulation No. 6825 of June 15, 2004
 - xiii. Law No. 136 of July 25,2000
 - xiv. Law No. 191 of July 30, 1999
 - xv. Reglamento Conjunto
 - xvi. Regulation 7940 of November 2, 2010
 - xvii. General Disposition of Chapter 46 of Solid Waste Rule
 - xviii. Law Num. 61 -2002
 - xix. Reuse, Reduce and Recycling Plan of Solid Waste Authority.
 - xx. Prepare and emergency plan for diesel and oil spills in accordance with the Regulation of Water Quality Standard of the Department and Natural Resources
2. Developer must maintain the collection and proper disposal of solid waste services for unit tenants after construction is completed.

3. All activities must comply with federal, Puerto Rico, and local laws and regulations regarding the management of lead-based paint and asbestos contaminated materials. Developer must procure the assessment of existing construction materials to determine if any abatement is required prior to commencement of construction. If abatement of lead-based paint and/or asbestos containing materials is required, the abatement and disposal of material must be executed in strict compliance with Puerto Rico's Environmental Quality Board and DRNA regulations and EPA.
4. Any mitigation measures required by the DRNA as presented in their Consistency Determination for the CZMP and/or measures stipulated in by the Planning Board Permit, if required.

8. APPENDIX A – Exhibits

Exhibit No. 0	Site Surroundings – Aerial Image of Loiza and Site Photos Existing Conditions
Exhibit No. 1	State Historic Preservation Officer Letter
Exhibit No. 2	Floodplains Management – ABFE Map
Exhibit No. 2.1	Floodplains Management – FEMA FIRMette
Exhibit No. 3	Wetland Protection / Map
Exhibit No. 3.1	Department of the Army – Corps of Engineers
Exhibit No. 4	Coastal Zone Management – Vulnerability viewer
Exhibit No.: 4.1	Coastal Zone Management – Program Map
Exhibit No. 5	Sole Source Aquifers (SSA)
Exhibit No. 6	Endangered Species and Ecology
Exhibit No. 7	Wild and Scenic Rivers
Exhibit No. 7.1	Wild and Scenic Rivers – Enlarged Plan
Exhibit No. 8	Air Quality Map
Exhibit No. 9	Prime Farmlands
Exhibit No. 10	Intentionally Left Blank
Exhibit No. 11	Airport Hazards / Airports in Puerto Rico Map
Exhibit No. 12	Coastal Barrier Resources Act (CBRS)
Exhibit No. 12.1	Coastal Barrier Resources Act (CBRS) – Enlarged Plan
Exhibit No. 13	AEE/LUMA Endorsement
Exhibit No. 14	AAA Endorsement
Exhibit No. 15	DRNA Recommendations
Exhibit No. 16	Soil Studies Letter

Exhibit No. 0
Site Surroundings – Aerial Image of Loiza



Aerial Image
Source: Google Earth



Site Photos – Existing Conditions



Site Photos – Existing Conditions

Exhibit No. 1
State Historic Preservations Office Letter



GOBIERNO DE PUERTO RICO

Oficina Estatal de Conservación Histórica

Friday, December 11, 2020

Lauren Bair Poche

Architectural Historian, Historic Preservation Manager
HORNE Federal, LLC

SHPO: 06-05-19-01 PUERTO RICO DISASTER RECOVERY, CDBG-DR GAP TO LOW INCOME HOUSING TAX CREDITS (LIHTC) PROGRAM: JARDINES DE LOIZA PROJECT, LOIZA, PUERTO RICO

Dear Ms. Poche,

The SHPO has received and reviewed the above referenced project in accordance with 54 USC 306108 (commonly known as Section 106 of the National Historic Preservation Act, as amended) and 36 CFR Part 800: *Protection of Historic Properties*. The State Historic Preservation Officer (SHPO) is to advise and assist federal agencies and other responsible entities when identifying historic properties, assessing effects upon them, and considering alternatives to avoid or reduce the project's effects.

Our records support your finding **no historic properties affected** for the proposed undertaking.

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

Sincerely,

Carlos A. Rubio-Cancela
State Historic Preservation Officer

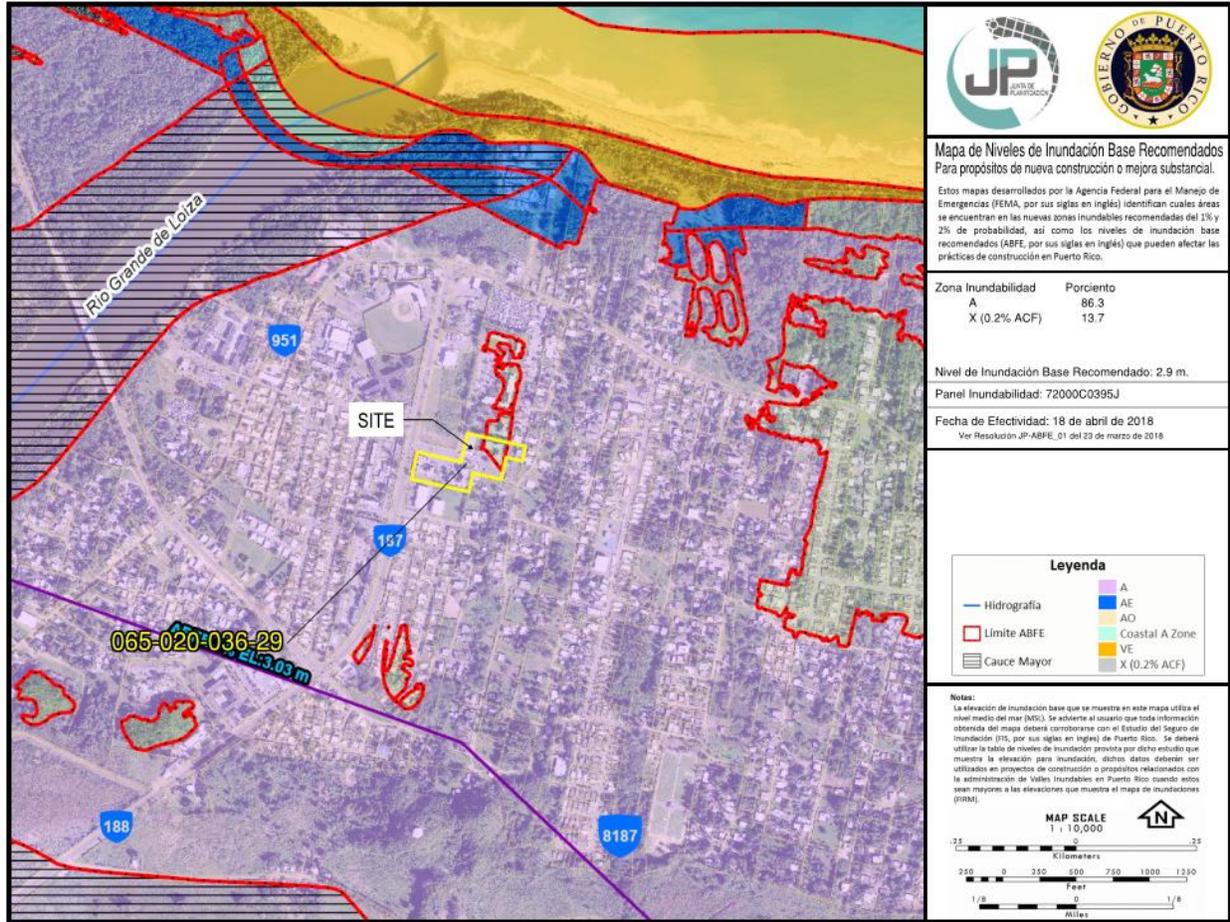
CARC/GMO/MB/SG



Cuartel de Ballajá, San Juan, PR • PO Box 9023935, San Juan, PR 00902-3935 • www.oech.pr.gov • 787-721-3737

State Historic Preservations Office Letter
SOURCE: State Historic Preservations Office (SHPO)

Exhibit No. 2
Floodplains Management – ABFE map

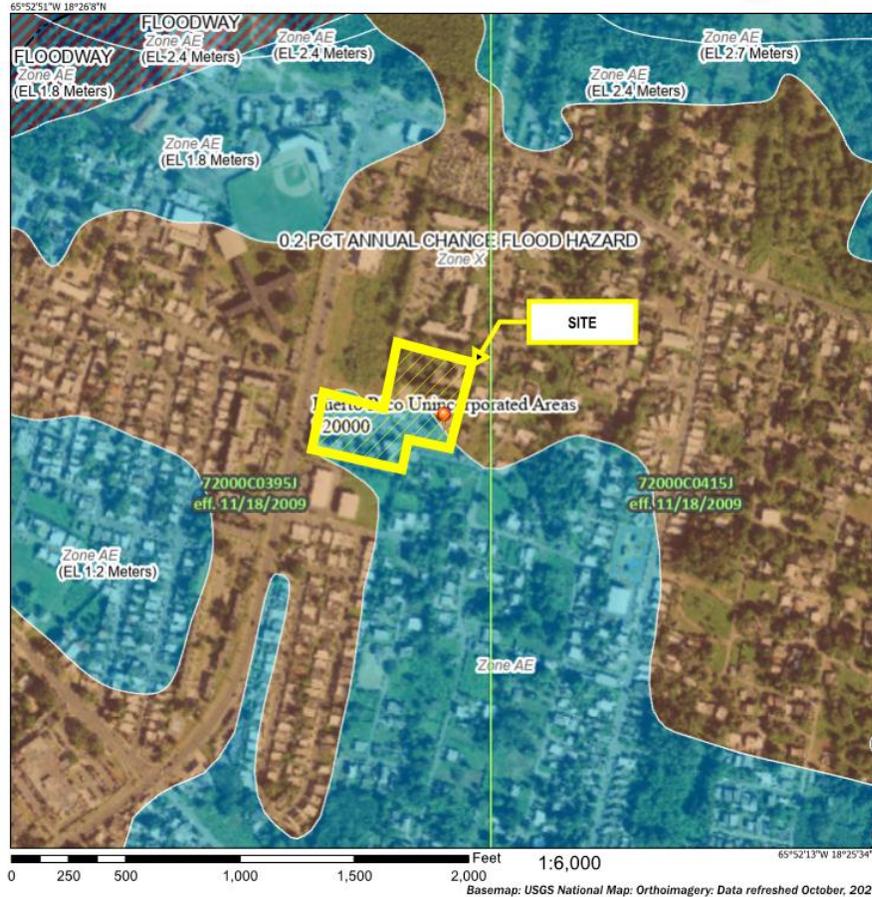


ABFE Map

SOURCE: Junta de Planificación / https://gis.jp.pr.gov/II/bn_DetermStandard.html

Exhibit No. 2.1
Floodplains Management - FIRMette

National Flood Hazard Layer FIRMette



Legend

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

SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE) Zone A, V, AP9
- With BFE or Depth Zone AE, AO, AH, VE, AR
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD

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

OTHER AREAS

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

GENERAL STRUCTURES

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

OTHER FEATURES

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

MAP PANELS

- Digital Data Available
- No Digital Data Available
- Unmapped

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

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/16/2023 at 7:19 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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

FEMA FIRMette
 SOURCE: FEMA

Exhibit No. 3
Wetland Protection / Wetlands Map



JARDINES DE LOIZA APARTMENTS



October 14, 2020

Wetlands

- | | | |
|--------------------------------|-----------------------------------|----------|
| Estuarine and Marine Deepwater | Freshwater Emergent Wetland | Lake |
| Estuarine and Marine Wetland | Freshwater Forested/Shrub Wetland | Other |
| | Freshwater Pond | 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

Wetlands Map

SOURCE: www.fws.gov/wetlands/data/mapper.html

Exhibit No. 3.1

Department of the Army – Corps of Engineers



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
ANTILLES OFFICE
FUND. ANGEL RAMOS ANNEX BLDG., SUITE 202
383 F. D. ROOSEVELT AVE.
SAN JUAN, PUERTO RICO 00918

October 28, 2020

Regulatory Division
South Permits Branch
Antilles Permits Section
SAJ-1992-50015(NPR-CGR)

Eng. Erika Alcántara Martínez
400 Calle Calaf PMB 408
San Juan, Puerto Rico 00918-1314

Dear Eng. Alcántara:

Reference is made to your electronic message dated on October 14, 2020 for the rehabilitation of an existing housing project (Jardines de Loíza) built between years 1990 and 2001. The proposed activity is located at the existing housing project located at the east side of state road PR-187, Municipality of Loíza.

Based on available information, the U.S. Army Corps of Engineers issued a no permit required letter on January 9, 1992 for the referenced parcel of land where the existing housing project was built in the past. The proposed rehabilitation at the existing housing project will not require a Department of the Army permit, as the activity is not regulated.

This NPR does not address nor include any consideration for geographic jurisdiction on aquatic resources and shall not be interpreted as such.

This letter does not obviate the requirement to obtain any other Federal, State, or local permits that may be necessary for your project. Should you have any questions, please contact me at carmen.g.roman@usace.army.mil.

Thank you for your cooperation with our permit program.

Sincerely,

ROMAN.CARME
N.G.1246904878
2020.009.20065

Carmen G. Román
Project Manager

Enclosures

Letter from the Corps of Engineers
Source: Corps of Engineers

Exhibit No. 4

Coastal Zone Management – Vulnerability Viewer

12/12/22, 1:54 PM

ArcGIS - Puerto Rico Coastal Vulnerability Viewer

Puerto Rico Coastal Vulnerability Viewer



Puerto Rico Coastal Vulnerability Viewer This tool is intended to provide a preliminary assessment of coastal resources and infrastructure at risk due to climate change and sea le ...

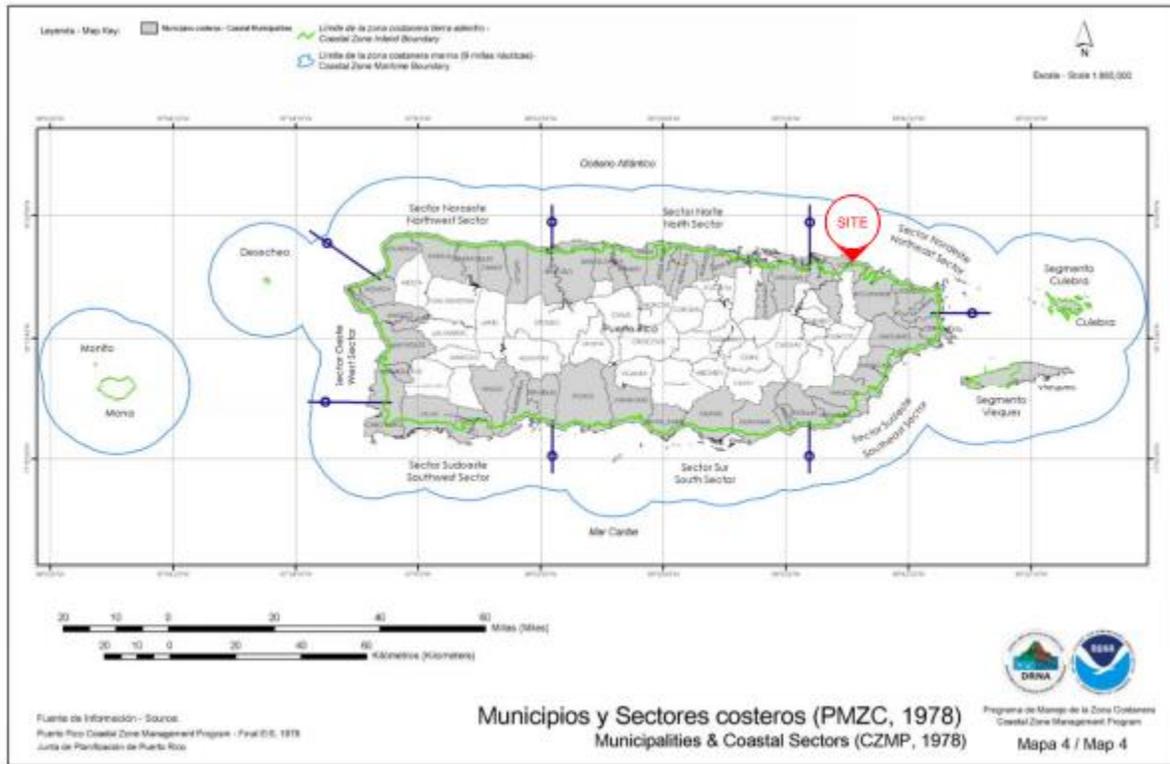
Maxar | Esri, HERE, Garmin, GeoTechnologies, Inc.

<https://www.arcgis.com/home/webmap/print.html>

1/1

Coastal Vulnerability Viewer
SOURCE: www.arcgis.com

Exhibit No. 4.1
Coastal Zone Management - Program



Coastal Zone Management Program
 SOURCE: Puerto Rico Coastal Zone Management Program (PRCZMP) Plan, September 2009

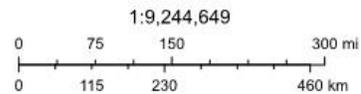
Exhibit No. 5
Sole Source Aquifers (SSA)

ArcGIS Web AppBuilder



11/3/2022, 5:21:39 PM

 Sole_Source_Aquifers



Esri, HERE, Garmin, NGA, USGS

U.S. Environmental Protection Agency

Sole Source Aquifers Map
SOURCE: <https://www.epa.gov/dwssa>

Project: PR-LIHTC-00039 - JARDINES DE LOIZA APARTMENTS
Preparer's Name: Jorge L. Sala

Exhibit No. 6
Endangered Species and Ecology – USFWS

Explanatory Memorial

Mutual Residential Development Corp., proposes the reconstruction of the facilities of the residential complex *Jardines de Loiza Apartment*. This development is located in the Municipality of Loiza, see Figure 1. As part of the reconstruction, the construction of a building for the use of the community is proposed, consisting of an activity room, kitchen, and bathrooms. This building is proposed with a surface area of 1,820.00 square feet and will have a system of photovoltaic panels and rainwater harvesting system. This building will be located next to the administrative office building of the housing complex. This building will have a floor level of 3.30 m, msl and construction on a surface of land with a minimum elevation of 3.24 m, msl. The construction is proposed in a segment of the parking area next to the administration building. Photos 1, 2, 3, and 4 show the place where the construction is proposed.

The housing complex is located in the floodplain of the Rio Grande de Loiza. Figures 2 and 3 show the flood maps; Flood Insurance Rate Map and Advisory Map. Both maps developed and published by the Federal Emergency Management Agency (FEMA). In both figures, the location of the project is indicated. Below is a summary of the information on both maps:

- FIRM MAP: Panel 72000C0395J
Zone AE - Base Flood Elevation: N/A
- Advisory Map (FEMA): Panel 72000C0395J
Zone A - ABFE: 2.90 m
Location: 18.430877, -65.875942

The information on the base elevation level of the Advisory Map was obtained from the following web page prepared by FEMA: <https://feedback.region2coastal.com/pr-wmbfe/>. A copy of the page where the base flood level data was obtained is included.

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 the Endangered Species Act.

Reviewer:  Date: 6/11/2019

 Date: 6/12/2019

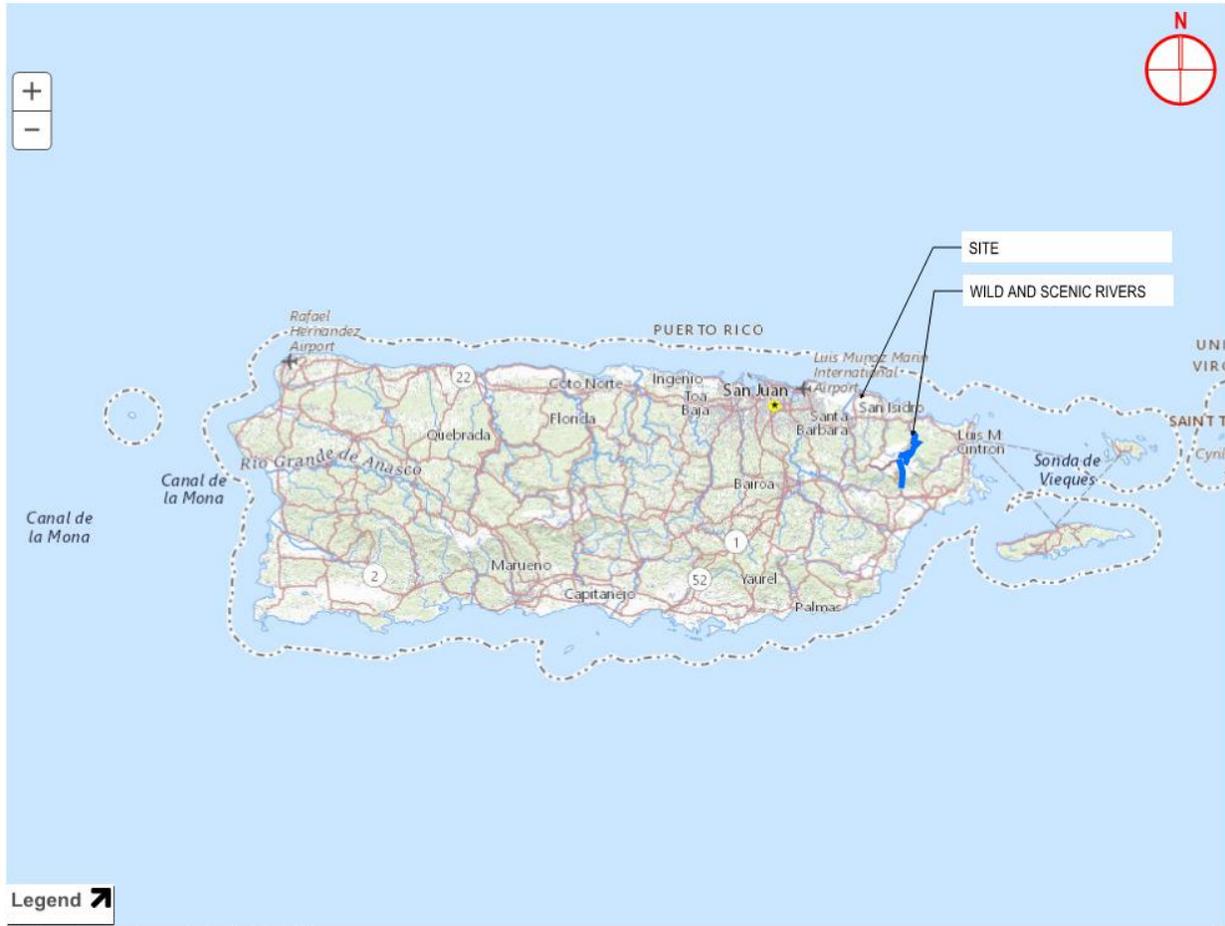
Caribbean ES Field Supervisor

Blanket Clearance Letter
SOURCE: US Fish and Wildlife Service

Exhibit No. 7 Wild and Scenic Rivers

8/30/22, 10:39 AM

<https://www.rivers.gov/river-app/index.html?state=PR>



<https://www.rivers.gov/river-app/index.html?state=PR>

1/1

Puerto Rico Scenic Rivers
SOURCE: www.rivers.gov

Exhibit No. 7.1
Wild and Scenic Rivers – Enlarged Plan

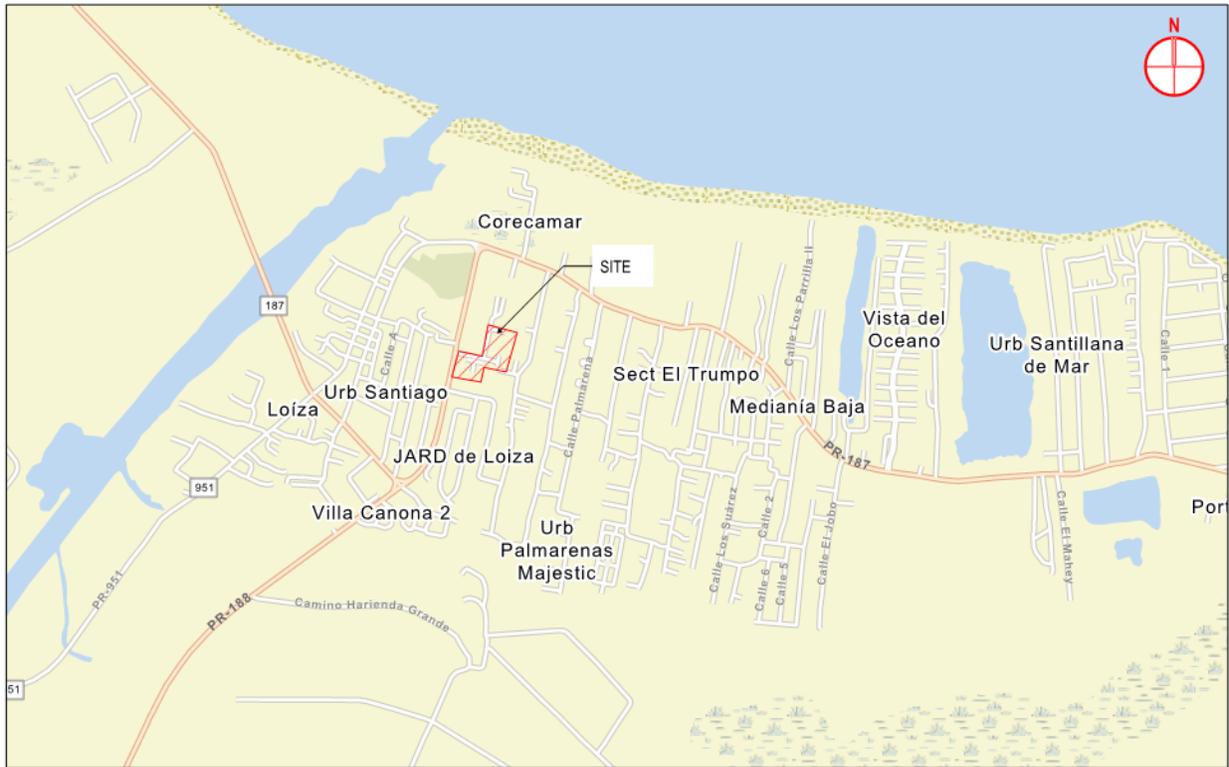
Jardines de Loiza



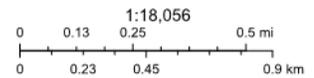
Puerto Rico Scenic Rivers – Enlarged Plan
SOURCE: <https://nepassisttool.epa.gov/nepassist/nepamap.aspx>

Exhibit No. 8
Air Quality Map

Jardines de Loiza



December 19, 2022



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

EPA Air Quality – Attainment Area Map

Source: <https://nepassisttool.epa.gov/nepassist/nepamap.aspx>

Exhibit No. 9
Prime Farmlands



Prime Farmlands

SOURCE: <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>

Prime and other Important Farmlands—Humacao Area, Puerto Rico Eastern Part		
Map Symbol	Map Unit Name	Farmland Classification
Cf	Catano loamy sand, 0 to 2 percent slopes	Not prime farmland
Uo	Urban land-Catano complex, 0 to 2 percent slopes	Not prime farmland

Data Source Information

Soil Survey Area: Humacao Area, Puerto Rico Eastern Part
 Survey Area Data: Version 14, Sep 13, 2022

Prime Farmlands – Classifications

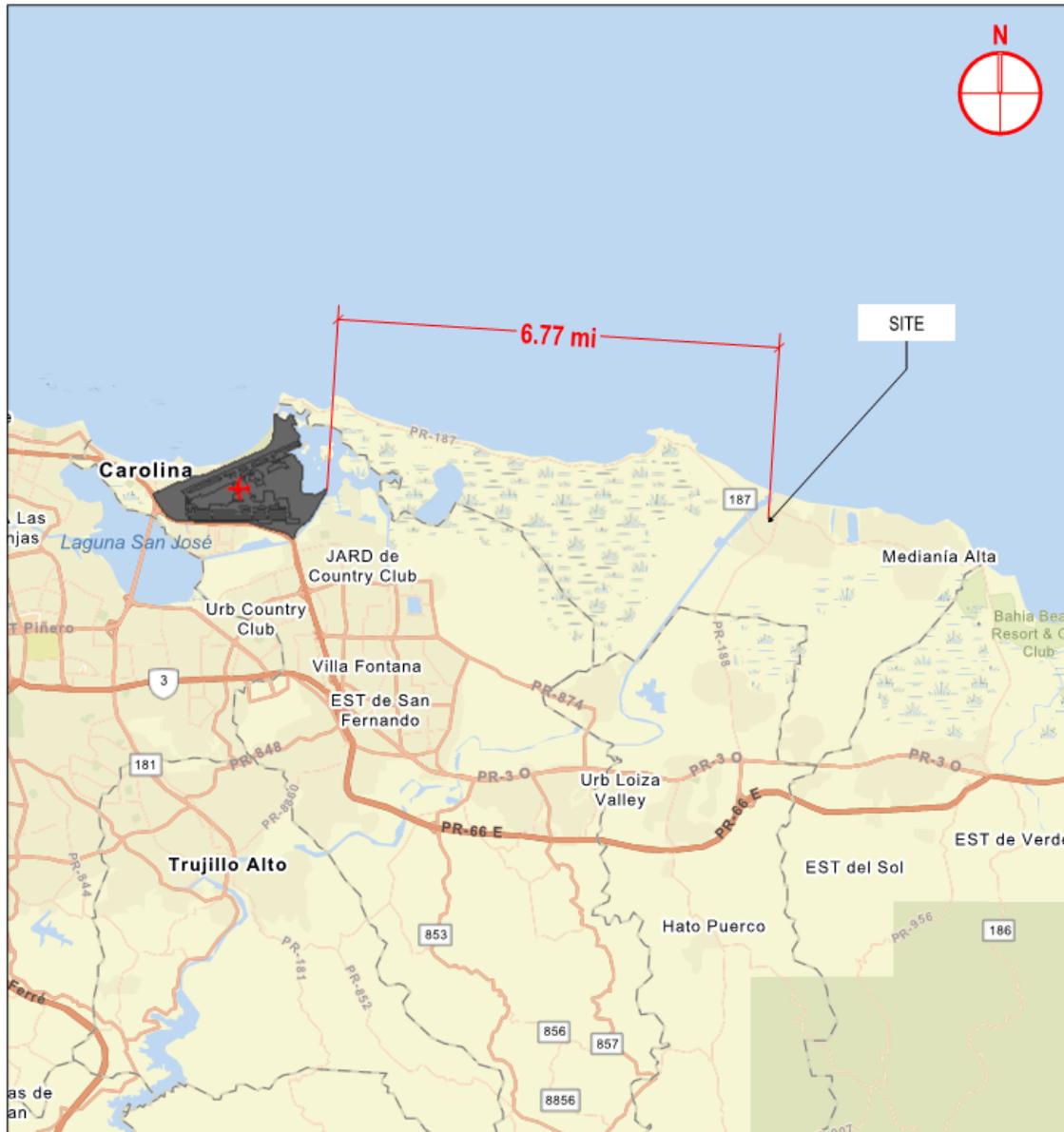
SOURCE: <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>

Exhibit No. 10

INTENTIONALLY LEFT
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Exhibit No. 11
Airport Hazards / Airports in Puerto Rico Map

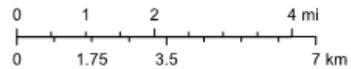
Jardines de Loiza Apartments



December 12, 2022

1:144,448

-  Airport Points
-  Airport Polygons
-  Railroads



Esri, HERE, Garmin, Foursquare, SafeGraph, GeoTechnologies, Inc, METI/
NASA, USGS, NPS, EPA OEI

Airport Distance

SOURCE: <https://nepassisttool.epa.gov/nepassist/nepamap.aspx>

Exhibit No. 12
Coastal Barrier Resources Act (CBRS)



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

JARDINES DE LOIZA



December 12, 2022

- CBRS Buffer Zone
- System Unit

CBRS Units

- Otherwise Protected Area

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

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

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

CBRS Map - Distance

SOURCE: <https://fwsprimary.wim.usgs.gov/CBRSMapper-v2/>

Exhibit No. 12.1
Coastal Barrier Resources Act (CBRS) - Enlarged



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

JARDINES DE LOIZA*



December 12, 2022

CBRS Buffer Zone System Unit

CBRS Units

Otherwise Protected Area

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

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

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

CBRS Map – Enlarged Plan

SOURCE: <https://fwspriamry.wim.usgs.gov/CBRSMapper-v2/>

Exhibit No. 13
AEE/LUMA Endorsement

Rev. 06/21



UTILITY TRANSFORMATION - DISTRIBUTION ENGINEERING REPORT

8 de septiembre de 2021

Sra. Iliana Garay Oh
Gerente Interina de Edificabilidad
Y Códigos e Infraestructura
PO Box 41118
Santurce, PR 00940

Estimada señora Garay:

OGPe :2019-259748-SRI-046865
LUMA :19-6-0095
Carga :75 KVA
Asunto :Jardines de Loiza

Carr 188 Km 10.4 Bo. Mediania Baja, Loiza

El proyecto de referencia según nuestros archivos, tiene un plano endosado vigente para la fecha del 23 de octubre del 2020. Según el comunicado de la AEE 15-05, el plano endosado de la construcción eléctrica tiene una vigencia de dos años.

Atentamente,

Gustavo Rodríguez Lasanta
Ingeniero Supervisor
Región de San Juan

Digitally signed by GUSTAVO
O. RODRIGUEZ LASANTA
Date: 2021.09.08 10:05:14
-04'00'

"Somos un patrono con igualdad de oportunidades en el empleo y no discriminamos por razón de raza, color, sexo, edad, origen social o nacional, condición social, afiliación política, ideas políticas o religiosas; por ser víctima o ser percibida(o) como víctima de violencia doméstica, agresión sexual o acoso, sin importar estado civil, orientación sexual, identidad de género o estatus migratorio; por impedimento físico, mental o ambos por condición de veterano(a) o por información genética."

LUMAPR.COM

LUMA Endorsement Letter
SOURCE: LUMA

Project: PR-LIHTC-00039 - JARDINES DE LOIZA APARTMENTS
Preparer's Name: Jorge L. Sala

Exhibit No. 14 AAA Endorsement



GOBIERNO DE PUERTO RICO

AUTORIDAD DE ACUEDUCTOS Y ALCANTARILLADOS | INFRAESTRUCTURA | PROYECTOS PÚBLICOS Y PRIVADOS METRO

18 de octubre de 2021

Ing. Gabriel Hernández Rodríguez
Secretario Auxiliar Oficina de Gerencia de Permisos (OGPe)
PO BOX 41179
San Juan, Puerto Rico 00940-1179

Ingeniero Hernández Rodríguez:

**AAA-RM-19-45-0001 LOÍZA – JARDINES DE LOÍZA APARTMENTS
PROPIEDAD DE MUTUAL DEVELOPMENT SERVICE CORP.
(107 UNIDADES EQUIVALENTES)
CARRETERA ESTATAL PR-188 KM 10.4, BO. MEDIANIA BAJA
OGPE: 2019-265120-SRI-043480; 2019-265120-SRI-046828; 2019-265120-SRI-032213;
2019-265120-SRI-030352; 2019-265120-SRI-025656; 2019-265120-SRI-024392
(APROBACIÓN DE PLANO REVISADO)**

Se ha presentado a la consideración de esta Autoridad los planos revisados para la construcción de los sistemas de agua potable y alcantarillado sanitario que servirán al proyecto de epígrafe. El proyecto contempla de la instalación de una cisterna para uso doméstico con capacidad de 21,420 galones para servir 107 apartamentos tipo "walk-up" y áreas comunes. Además se propone instalación de cisterna de agua de lluvia para servir la estructura de la administración.

La revisión consiste de lo siguiente:

1. Modificación de un tramo en la alineación de una línea sanitaria existente al lado del nuevo edificio multifuso.
2. Relocalización de contador de agua de 2" de diámetro.
3. Se incluye detalle del filtro de agua de lluvia.

Deseamos informarle que los planos para los sistemas de agua y alcantarillado sanitario del proyecto sometidos por el Ing. Ricardo Solas Rodríguez, licencia número 4219 y el Ing. Jorge A. Torres Scandali, licencia número 10906, han sido aprobados por esta Autoridad. Esta aprobación estará sujeta a todas las condiciones aplicables estipuladas en la carta de Aprobación de Planos del 22 de septiembre de 2020 dirigida a OGPe.

Condiciones respecto a la Aprobación de este Plano:

Sistema de Alcantarillado Sanitario

1. Los registros de inspección ("manhole") a instalarse en el sistema de alcantarillado sanitario deberán ser cubiertos con un anticorrosivo (epoxy), igual o similar al denominado "Concresive 305" o "Celigard 663".
2. El dueño o contratista deberá estar preparado con personal y equipo adecuado para realizar las pruebas de nivelación al sistema sanitario propuesto. La misma deberá cumplir en terreno con las pendientes profundidades de los registros adecuadas según Capítulo IV incisos 4.06 y 4.15.01 estipulado en el Manual de Normas de Diseño de esta autoridad.
3. Las instalaciones sanitarias a construirse deberán ser validadas mediante pruebas de infiltración, continuidad (luz) y niveles. Los registros de limpieza serán validados mediante prueba de pase de cinta. Resaltamos el hecho de que la Autoridad podría requerir la evaluación de la nueva instalación mediante el uso de cámara de circuito cerrado (CCTV).

Avenida Barbosa 604, Hato Rey I P.O. BOX 7066 San Juan, PR 00916-7066

☎ 787.620.2277 Exts. 1206/1145 | 📞 787.999.1772 🌐 www.acueductospr.com

4. La infiltración y ex filtración de agua en las tuberías no podrá ser mayor de 50 galones por pulgada de diámetro por milla de longitud de tubería por 24 horas. El Urbanizador proveerá los medios necesarios, según lo requiera el ingeniero de esta Agencia, para llevar a cabo las pruebas para determinar la infiltración y ex filtración de agua en las secciones de cloaca que indique dicho ingeniero.
5. Toda tubería que no llene los requisitos de las pruebas, será reparada por el contratista y sometida a prueba hasta que sea aprobada definitivamente por el inspector de la Oficina de Proyectos Públicos y Privados.
6. Las tapas de los registros de inspección del alcantarillado sanitario tienen que tener un solo agujero para ventilación, para reducir a un mínimo la entrada de aguas pluviales en dicho alcantarillado.
7. Todas las uniones de la tubería para el alcantarillado sanitario, incluyendo las acometidas para servicio, serán con junta de goma con el fin de reducir a un mínimo la cantidad de infiltraciones de agua en las cañerías.
8. Todas las distancias están expresadas en metros, a menos que se especifique otra unidad.
9. Todas las cloacas se construirán con tuberías y piezas especiales de conexión polivinil (PVC) y deberán satisfacer los requisitos estipulados en las especificaciones de la Autoridad de Acueductos y Alcantarillados de Puerto Rico, para la clase de obra y materiales. Las juntas de las tuberías deberán ser del tipo de campana y espiga El Urbanizador proveerá los certificados correspondientes acreditados que la tubería a usarse en el de polivinilo (PVC) cumplen con los requisitos de las especificaciones normales de la American Society Testing Materials (ASTM-D-3034) actualmente en vigor aplicables para tubería de esa clase.
10. El relleno para la nivelación adecuada del terreno donde se construyan estructuras y registros de inspección, deberá hacerse en capas con material apropiado y de acuerdo con los requisitos establecidos por la Junta de Planificación, o sea, que se obtenga una densidad no menor de 95% de la densidad máxima determinada, según el método "standard" de prueba de la AASHO para la relación de humedad-densidad de suelos. Dicho relleno deberá hacerse totalmente hasta la elevación requerida indicada en los planos aprobados, de manera que luego se abra la zanja o excavación necesaria para la instalación de cloacas, así como para la construcción de registros de inspección u otras estructuras.
11. Será responsabilidad del dueño el proveer protección de hormigón en cruces de tuberías donde la distancia entre las caras externas de los tubos estén a 0.46 m (1.5 ft) o menos. Este requerimiento también aplica para los cruces con las tuberías pluviales para minimizar cualquier eventualidad por contacto de ambas aguas.

Todas las demás condiciones establecidas en nuestras cartas anteriores permanecen vigentes.

Cordialmente,


Ing. Luis Almeida Marín, PE
Gerente Técnico – Región Metro
Proyectos Públicos y Privados

LAM/evs

c: Expediente, Archivo de Lectura

AAA Endorsement Letter
SOURCE: AAA

Exhibit No. 15 DRNA Recommendations



GOBIERNO DE PUERTO RICO
Departamento de Desarrollo Económico y Comercio
Oficina de Gerencia de Permisos

Número de Caso:
2019-265120-SRM-046868

Recomendaciones

Jardines de Loíza Apartments

Datos de Localización

De acuerdo a la información suministrada se propone una actividad: Privada en:

Dirección Física

KM HM 10.4 CARR. 188
BO. MEDIANÍA BAJA
, PUERTO RICO

Loíza Puerto Rico, 00722

Número(s) de Catastro

065-020-036-29

Calificación

Distrito(s) de Calificación: R-I (99%), DT-G (1%)

Distrito en el Mapa de Inundabilidad: AE (65.9%), 0.2 PCT
(34.1%)

Tipo de Suelo: Cf (73.2%), SNS (26.8%)

Dueño

Mutual Development Service Corp.

Cabida

Cabida según escritura: 14647.35 metros cuadrados

Medioambiente

El Departamento de Recursos Naturales y Ambientales (DRNA) a través de su Oficial de Permiso asignado a la OGPe realizó una búsqueda en el Sistema de Información Geográfica (GIS) de la Junta de Planificación y no encontró en el área de la actividad propuesta hábitat crítico, elementos críticos ni área de Prioridad de Conservación. La División de Medioambiente no tiene objeción al proyecto propuesto. No obstante, deberá cumplir con los siguientes requerimientos: Parte del proyecto ubica en Zona AE, por tanto, deberá cumplir con el Reglamento sobre Áreas Especiales de Riesgo de Inundación (Reglamento de Planificación Núm. 13 - Reglamento sobre Áreas Especiales de Riesgo a Inundación) y la Resolución Núm. JP-HH-2016 (Guías para la Elaboración de Estudios Hidrológicos-Hidráulicos). 1. Previo a cualquier extracción de la corteza terrestre deberá cumplir con la Regla 3.4.1 y Sección 3.4.1.3 – (Permiso Único Incidental Operacional - Permiso de Actividad Incidental a una obra autorizada) del Reglamento Conjunto para la evaluación y expedición de permisos relacionados al desarrollo, uso de terrenos y operación de negocios. Se le apercibe que la Ley Núm. 132 de 25 de junio de 1968, según enmendada y su Reglamento, prohíben la extracción, excavación, remoción y dragado de material de la corteza terrestre sin el permiso correspondiente. 2. De ser necesario el corte de árboles, deberá cumplir con la Regla 3.4.1 y 3.4.2 – (Permiso Único Incidental Operacional - Autorización de Corte, Poda, Trasplante y Siembra de Árboles) del Reglamento Conjunto para la evaluación y expedición de permisos relacionados al desarrollo, uso de terrenos y operación de negocios. Se le apercibe que la Ley Núm. 133 de 1 de julio de 1975, según enmendada prohíbe el corte y poda de árboles sin el permiso correspondiente. 3. Deberá establecer un programa de reforestación utilizando especies nativas que además de ayudar a minimizar la erosión beneficien la vida silvestre. Esta medida es cónsona con la Ley para Fomentar la Siembra de Árboles Cuyas Frutas y/o Semillas Provean Alimento a Especies de Aves Silvestres de Puerto Rico (Ley Núm. 97 de 24 de junio de 1998), la cual establece lo siguiente: "En todo proyecto de reforestación en que se utilicen fondos públicos La o privados, o en una combinación de estos, un 15% en las áreas rurales y un 10% en las áreas urbanas del total de árboles a ser sembrados, serán de





Recomendaciones

Jardines de Loíza Apartments

especies cuyas frutas y/o semillas sirvan de alimento a las aves silvestres que residan temporal o permanentemente en ésta". 4. Deberá Presentar Certificación de Hábitat, según el Capítulo 9.13 del Reglamento Conjunto para la evaluación y expedición de permisos relacionados al desarrollo, uso de terrenos y operación de negocios. Dicha Certificación deberá ser tramitada en el DRNA, en conformidad con la Ley Núm. 241 de 15 de agosto de 1999, La Nueva Ley de Vida Silvestre de Puerto Rico, el Reglamento 6765 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 la Orden Administrativa Núm. 2010-09, Para Establecer los Procedimientos y Requisitos Para La Evaluación, Categorización y Mitigación de Hábitats. 5. Deberá cumplir con las disposiciones del Reglamento Conjunto para la evaluación y expedición de permisos relacionados al desarrollo Sección 5.1.2.2 Análisis de riesgos a deslizamientos y otras condiciones del subsuelo, que indica: para todo proyecto de urbanización, incluyendo urbanizaciones vía excepción, se tomará en consideración el riesgo a deslizamientos y otras condiciones del subsuelo mediante la presentación de un estudio geotécnico certificado por un ingeniero licenciado que evalúe la geología e hidrología del terreno, presencia de fallas geológicas, historial de deslizamientos en la zona, susceptibilidad del terreno a los mismos, topografía, presencia del materiales de depósitos de deslizamientos (QI) según descritos en los cuadrángulos geológicos de Puerto Rico por el USGS y las propiedades ingenieriles del subsuelo, entre otros. 6. De tener alguna descarga de escorrentía a cualquier cuerpo de agua durante la operación, deberá consultar a la Agencia Federal de Protección Ambiental para determinar si dichas descargas requieren un permiso "NPDES" de acuerdo al Código Federal de Reglamentación Número 40, Sección 122.26 (b) (14) (x). 7. Será responsabilidad del Peticionario previo las labores de remoción de extracción de los materiales de la corteza terrestre el obtener y mantener en vigor durante el Permiso General Para Otras Obras y/o un Permiso General Consolidado por la Oficina de Gerencias de Permisos (OGPe) para el área de operaciones objeto del permiso". 8. De descubrirse en el predio objeto de desarrollo algún cuerpo de agua superficial o subterráneo, sea perenne o intermitente, deberá informarlo inmediatamente al DRNA y demás agencias concernidas. 9. Se apercibe que cualquier obra de construcción que se realice en el cauce legal de ríos o de quebradas deberá cumplir con Estudio Hidrológico Hidráulico (EHH) y su endoso correspondiente del DRNA. Esta recomendación es solamente aplicable a la situación de hechos y los datos según presentados y evaluados en el caso y el Secretario Auxiliar 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 el endoso original se emitió bajo premisas falsas o fraudulentas.

Condiciones Especiales

NINGUNA

Condiciones Generales

Esta recomendación es solamente aplicable a la situación de hechos y los datos según presentados y evaluados en el caso. La OGP 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





Recomendaciones

Jardines de Loíza Apartments

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.

Firma / Sellos

Fecha de Expedición:

28/OCT/2021



Ing. Gabriel Hernández Rodríguez
Secretario Auxiliar



Recommendations by DRNA

SOURCE: *Departamento de Desarrollo Económico y Comercio*

Exhibit No. 16
Soil Studies Letter

RS Design Group, P.S.C.

Vick Center Building
867 Ave. Muñoz Rivera, Ste. 402D
San Juan, PR 00925-2128

rsdesigngrouppsc@yahoo.com
rsdesigngroup.pr@gmail.com
Telephone: 787-754-7745

October 1st, 2020

Puerto Rico Finance Authority
P.O. Box 7136
San Juan, PR 00936-8461

Re: Low Income Housing Tax Credit Program
Project Owner: Mutual Development Service Corporation
Project Name: Reconstruction of Jardines de Loiza Apartments

SOIL SURVEY

Dear Sirs:

The undersigned a civil engineer, duly licenses and register in Puerto Rico, hereby certify that:

A Soil Survey is not needed for the Reconstruction of Jardines de Loiza Apartments.

Subsoil exploration was performed for the original construction.

The soil was consolidated in accordance with the recommendation and under the inspection of a Geotechnical Services Company. The Residential Buildings, the Community Building and all Site Work were design and built under the geotechnical report criteria. The expansion of the community building has been designed with the same criteria of the existing building.

Ricardo Solá
Engineer PR License 4219



Soils Conditions
SOURCE: RS Design Group, PSC

9. APPENDIX B – Studies and Reports

Exhibit A	Archaeological Study
Exhibit B	Noise Assessment
Exhibit C	Phase 1 Environmental Assessment
Exhibit D	Elevation Certificate
Exhibit E	Community Acknowledgment Form
Exhibit F	LOMR & LOMA
Exhibit G	Custom Soils Report
Exhibit H	SHPO Letters & Communications
Exhibit I	Designer's Letter on Wetlands
Exhibit J	Department of the Army and DRNA

2020 LOW-INCOME HOUSING TAX CREDITS & CDGB-DR GAP TO LIHTC
APPLICATION 2020-026 - Jardines de Loíza Apartments
Project: Jardines de Loíza Apartments
Owner: Jardines de Loíza, LLC

Application: 2020-026- II. 023
Archaeological Study

As Concluded by Archeologist Sharon Melendez Ortiz during the recent SHIPO submission:

As part of the building permitting process to develop Jardines de Loíza, three archaeological studies were carried out in 1991, 1996 and 2003 by Juan Gonzalez, as per . The archaeological site LO-26 site was identified, evaluated, and mitigated. The data recovery of the site, located in the northeast part of the property, was implemented as a way to mitigate the adverse effect of the Jardines de Loíza project on it, and as a way of preserving the site by record. After the implementation of the data recovery and acceptance of the report, the SHPO agreed with a determination of “No adverse effect” as stated in a letter dated from May 9, 2003.

The improvement actions that are being proposed are limited to previously evaluated areas, so the potential to find previously unknown resources within the APE is minimal. These activities are limited to areas that have already been impacted by the construction of the residential complex. It is therefore understood that the undertaking does not have the potential to have an indirect or direct adverse effect on what may remain of LO-26 site. As such, and No adverse effect determination is appropriate for this undertaking.

- Please see latest SHIPO letter dated June 10, 2019 finding no historic property effected.
- Also see Section 106 Determination documentation prepared by Sharon Melendez Ortiz.
- Sharon Melendez Resume



GOBIERNO DE PUERTO RICO

Oficina Estatal de Conservación Histórica
State Historic Preservation Office

June 10, 2019

Eng. Ricardo Solá

Solá Engineering Consultants, PSC
867 Ave. Muñoz Rivera
Oficina 402-D
Edificio Vick Center
San Juan, Puerto Rico 00925-2128

SHPO: 06-05-19-01 JARDINES DE LOIZA APARTMENTS (WALK UPS),
LOCALIZADO EN LA CARR. 188 DEL BO. MEDIANIA BAJA, LOÍZA, PUERTO
RICO

Our Office has received and reviewed the above referenced project in accordance with 54 USC 306108 (commonly known as Section 106 of the *National Historic Preservation Act, as amended*) and 36 CFR Part 800: *Protection of Historic Properties* from the Advisory Council on Historic Preservation. The State Historic Preservation Officer (SHPO) is to advise and assist federal agencies and other responsible entities when identifying historic properties, assessing effects upon them, and considering alternatives to avoid or reduce the project's effects.

While we believe that an Agency's finding of no historic properties affected is appropriate for this undertaking, the Federal Agency will need to submit an official determination for our review in order to complete the Section 106 process.

If you have any questions concerning our comments, do not hesitate to contact our Office.

Sincerely,

Carlos A. Rubio-Cancela
State Historic Preservation Officer

CARC/GMO/SGA/srf

Cuartel de Ballajá (Tercer Piso),
Calle Norzagaray, Esquina Beneficencia, Viejo San Juan, P.R. 00901

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OFICINA ESTATAL DE
CONSERVACIÓN HISTÓRICA
OFICINA DEL GOBERNADOR

STATE HISTORIC
PRESERVATION OFFICE
OFFICE OF THE GOVERNOR

 <p>GOVERNMENT OF PUERTO RICO Department of Housing</p>	<p>PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM: LOW INCOME HOUSING TAX CREDIT (LIHTC) PROGRAM Section 106 NHPA Effect Determination, Archaeology</p>
<p>Case ID: SHPO 12-14-89-01</p>	<p>Project Location (Street Address): Jardines de Loíza, PR-188, km 10.4, Medianía Alta</p>
<p>City: Loíza</p>	<p>Project Coordinates: 18.430547°, -65.876780°</p>

<p>Applicant Name: Mutual Development Service Corp.</p>	
<p>TPID (Número de Catastro): 065-000-005-76 & 065-020-036-29</p>	
<p>Type of Undertaking: <input type="checkbox"/> New Construction <input checked="" type="checkbox"/> Substantial Repair</p>	
<p>Vacant Lot: No</p>	<p>Construction Date (if applicable): 1995 & 2001</p>
<p>Property Size (acres): 4.71 acres</p>	<p>FEMA / Local Funded Demolition Removal: NO</p>

<p>SOI Qualified-Archaeologist: Sharon Meléndez Ortiz</p>
<p>Date Reviewed: September 26, 2020</p>

SCOPE OF WORK
<p>The applicant is seeking Community Development Block Grant disaster recovery funds financed by the federal Department of Housing and Urban Development due to damage received by the 2017 Hurricanes Irma and Maria. It is a Section 106 undertaking due to the use of federal dollars. Activities related to this project will be done in a manner that does not meet Stipulations II.A.1 and/or II.B.9 of the Addendum to the Programmatic Agreement.</p>
<p>DEFINE THE AREA OF POTENTIAL EFFECTS <i>(Describe the location and extent [size and depth] of all potential ground disturbing activities):</i></p>
<p>The proposed action is the improvement of Jardines de Loíza, a multistory housing complex in compliance with Section 106 NHPA Effect Determination. The proposed project area site is located at Jardines de Loíza, PR-188, km 10.4, Medianía Alta ward, in the municipality of Loíza.</p>
<p>The Jardines de Loíza residential project was built with the purpose of being rented under the Section 8 Program, administered by the United States Department of Housing and Urban Development (HUD), to provide housing for people with limited resources. Jardines de Loiza consists of 107 walk-up units, of which 59 units have two (2) bedrooms and 48 units have three (3) bedrooms. In addition to the units, the development has an administration building, basketball court and a playground for children. The project was built in two phases. The construction of the first phase (80 units, recreational facilities and the community center) was completed in 1995 and its occupation was authorized under the use permit 94-21-D468-00C-U. Phase two of the project (27 units) was completed in 2001 and its occupation was authorized under the use permit 01PU2-CET00-04581.</p>
<p>The proposed action consists in carrying out minor repairs to the buildings, and to provide electric and potable water protection systems as preparation for emergencies and / or atmospheric phenomena. The proposed action includes: interior renovation of the units</p>

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for the disabled (6); repair of balcony floors; interior and exterior painting; replacement of luminaires with energy saver luminaires; reorganization of the parking lot behind the communal building and provision of additional parking spaces; repair and improvement of the landscaping; installation of an emergency power plant; installation of a reserve potable water cistern with pump; installation of bicycle racks; installation of surface for 'Walking Trail'; reorganization of the two play-ground areas and replacement of recreational equipment; relocation and improvement of garbage station; repair of access control; expansion of the Community Center; installation of solar panels in the upper part of the Community Center; and installation of tanks to collect rainwater.

The project's area of potential effects corresponds to the 4.71 acres parcel's limit. It is limited to the north by access roads, to the east and south by the parcels' boundaries, and to the west by PR-188 and an access road. The APE includes the staging area.

<u>Presence of Known Archaeological Concerns:</u>	YES	NO
Known Archeological Resources Located within 1-km radius of the proposed project area.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Proposed project area is located within an NRHP-Listed or Eligible Historic District.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proposed project area is located within an NRHP-Listed or Eligible Archaeology District.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proposed project area is located within a Traditional Urban Center.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

District OR Traditional Urban Center Name (if applicable):

<u>Archaeological Site Potential Factors:</u>	YES	NO
Activities Substantially Conform to the Original Footprint of the Building or Structure.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Proposed project area is located on Significantly Disturbed Soils (Describe nature and extent of disturbance below.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Proposed project area is located on Well-draining Soil Series	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Slope within the proposed project area is in excess of 30 degrees (57.7%)	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Description of Soil Disturbance (if applicable): The APE has been previously disturbed by development activities including, but not necessarily limited to, site preparation for construction, deposit of fill to avoid flood levels, excavations for foundations, landscaping and underground utilities.

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NATURAL SETTING *(Discuss the natural setting of the proposed project including location, landform, slope, distance to water, soils, and vegetation.):*

The municipality of Loíza is located on the northern coastal plain of Puerto Rico. The project area is located on an alluvial plain, 0.73 km east of the mighty Río Grande de Loíza, and 0.84 km south of the Atlantic Ocean. The topography of the site is completely flat. It sits at 3 m above sea level.

The soil in the area has been classified as Cataño loamy sand, 0 to 2 percent slopes (Cf). The Cataño series consists of very deep, excessively drained, rapidly permeable soils found in beach areas along the coast. They formed in regolith of beach sand deposits that consists of sand-size shell fragments, quartz grains, and miscellaneous volcanic subrounded fragments

The vegetation is typical of a residential complex, consisting mainly of ornamental grass and shade trees.

CULTURAL SETTING AND PREVIOUS INVESTIGATIONS *(Discuss the cultural setting for the proposed project including previously identified archaeological sites, NRHP listed/eligible historic properties, and cultural resource studies conducted within one mile of the project area.):*

The area that now occupies the municipality of Loíza has been populated since long before the European colonization. Within its territory, there are reported more than 50 pre-Columbian sites, six (6) of them within a 1-km radius of the project area. These are: type site Hacienda Grande (LZ0100002), located 0.70 km south; cave Cueva Mela (LZ0100031), 0.79 km south; cave Cueva Dolores (LZ0100032), 0.67 km SW; Cueva María de la Cruz (LZ0100001), 0.82 km SW; rock shelter Cantera (LZ0100021); and the Elenan hamlet site Las Yucas (LZ0100026 or LO-26).

The latter site -LO-26- is especially relevant to this determination as it is located within the APE. This site was first reported in 1977, and it was mentioned by Juan González Colón in the Phase IA-IB study that he conducted for the project Jardines de Loíza back in 1991. He excavated 67 test pits, two of which resulted positive to four fragments of Elenan Ostionoid pottery. He concluded that the small site covered an area of 46 by 33 m, and that it was impacted by sand extraction, burial of garbage and planting activities. A Phase II Evaluation was carried out by González Colón in 1995, with the objective of assessing LO-26's horizontal and vertical limits, integrity and eligibility to the NRHP. He excavated 60 test pits, 23 with positive results; five 1x1m stratigraphic units, of which three were positive; and a scrape of an area of 3 x 7 m. He concluded that LO-26 is a small ellipsoidal site characterized by the absence of food remains, especially those of marine

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origin. González Colón recommended a mitigation or phase III data recovery as the site is eligible to the NRHP under Criterion D: research potential, and it was going to be adversely affected by the project Jardines de Loíza. The data recovery of LO-26 was carried out by González Colón in 2001. For this phase, 27 2 x 2 m stratigraphic units were excavated. The archaeological materials recovered were predominantly Elenan ceramic fragments and some lithics. The absence of shell and bone materials was notable. A post mold and six possible open burning furnaces (teepees) were also identified. The study concluded that LO-26 was a ceramic production satellite hamlet. What may have remained of this site after the data recovery was covered by more than a meter of fill.

Loíza was officially founded in 1719, but the region was inhabited by Spaniards since the beginning of the colonization of the Island, first in the quest for gold, and after that to produce sugar cane. This industry, which propitiated the construction of several sugar mills in the late 16th century, continued until the second half of the 20th century. The traditional urban center of Loíza is 0.22 km east of the project area. The NRHP-listed Parroquia Espíritu Santo lies 0.41 km NW of the project area.

Ten (10) additional cultural resources surveys have been carried out within a 0.76 km radius, three (3) of them with positive results (see Table). In the Phases IA conducted by Maurás Casillas in 2003 and Pantel in 2002, the investigators concluded that the area is sensitive and thus recommended additional studies. Pantel reported pre-Columbian pottery in the phase IA-IB conducted in 2010 for the project *Desvío Sur Urbanización de Loíza desde la intersección de la PR-187 con la PR-188*, located 0.50 km south of the project area; and in the Phase IB carried out in 2002 for the project *Mejoras a la Carr. PR-187*, 0.06 km east. For the latter, he concluded that the artifacts belonged to nearby site Hacienda Grande (LZX0100002). Marlene Ramos also reported pre-Columbian pottery in the phase IA-IB for the project *Loíza Region Connection to the Carolina S.T.P., First stage*, conducted in 1984 in an area 0.31 km SW of the project area.

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<p>DETERMINATION OF POTENTIAL EFFECTS</p>
<p>Discuss the archaeological potential for the proposed project location:</p> <p>Evidently, the archaeological potential of the proposed project location is high. As part of the building permitting process to develop Jardines de Loíza, three archaeological studies were carried out. The archaeological site LO-26 site was identified, evaluated, and mitigated. The data recovery of the site, located in the northeast part of the property (see figure), was implemented as a way to mitigate the adverse effect of the Jardines de Loíza project on it, and as a way of preserving the site by record. After the implementation of the data recovery and acceptance of the report, the SHPO agreed with a determination of "No adverse effect" as stated in a letter dated from May 9, 2003.</p> <p>The improvement actions that are being proposed are limited to previously evaluated areas, so the potential to find previously unknown resources within the APE is minimal. These activities are limited to areas that have already been impacted by the construction of the residential complex. It is therefore understood that the undertaking does not have the potential to have an indirect or direct adverse effect on what may remain of LO-26 site. As such, I understand that a No adverse effect determination is appropriate for this undertaking.</p>

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

No Historic Properties Affected
 No Adverse Effect
 Adverse Effect

(No Adverse Effect Conditions or Proposed Adverse Effect Resolution here, if needed)

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:

 GOVERNMENT OF PUERTO RICO Department of Housing	PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM: LOW INCOME HOUSING TAX CREDIT (LIHTC) PROGRAM Section 106 NHPA Effect Determination, Archaeology	
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Table of archaeological sites, historic properties and historic districts located within the project area or within a 0.50-km radius

Name	SHPO id #	IPRC id #	Distance/Direction	Description	NRHP
Hacienda Grande	LZ0100002	LO-2	0.70 km (S)	Pre-Columbian settlement. Type site of Hacienda Grande style pottery.	Eligible
Cueva Mela	LZ0100031	-	0.79 km (S)	Rocky shelter with archaic and Saladoid artifacts.	No data
Cueva Dolores	LZ0100032	-	0.67 km (SW)	Rocky shelter with Saladoid artifacts.	No data
Parroquia Espíritu Santo			0.41 km (NW)	Catholic church	Listed
Las Yucas	LZ0100026	LO-26	Within the APE	Elenan Ostionoid ceramic production satellite hamlet	Eligible
Cueva María de la Cruz	LZ0100001	LO-1	0.82 km (SW)	Rock shelter with pre-columbian artifacts and human burials. Pre-ceramic, Saladoid and Elenoid.	No data
Cantera	LZ0100021	LO-21	0.92 km (SE)	Rock shelter with pre-Columbian artifacts Saladoid style.	No data

Table of cultural resources surveys conducted within the project area or within a 0.50-km radius

Author	Phase/Title	Year	SHPO / IPRC code	Results	Distance/Direction
Antonio Daubón	IA-IB/ Proyecto Centro de Salud Familiar	1994	04-08-93-03	Negative	0.76 km SW
Juan González	IA-IB/ Proyecto Construcción de Gimnasio	2000	09-05-01-02	Negative	0.17 km SW
Agamemnon Gus Pantel Tekakis	IA-IB/ Desvío Sur Urbanización de Loíza desde la intersección de la PR-187 con la PR-188	2010	04-06-10-01	Positive to Pre-Columbian pottery.	0.50 km S
Marlene Ramos	IA-IB/ Loíza Region Connection to the Carolina S.T.P., First stage	1984	10-28-83-30	Positive to Pre-Columbian pottery.	0.31 km SW
Adalberto Maurás	IA-IB/ Urb. Palmarenas	2002	ICP/CAT-LO-02-09-03	Negative	0.32 km (NE-SE)

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Author	Phase/Title	Year	SHPO / IPRC code	Results	Distance/ Direction
Juan González Colón	III/ Jardines De Loiza Apartment Complex Sitio De Las Yucas (LO-26) Informe Final	2003	ICP/CAT-LO-03-10-04	Positive. Site Las Yucas (LO-26), located 0.34 mi NE of the proposed project area.	Within the APE
Juan González Colón	II/ Jardines De Loiza Apartment Complex Informe Final	1996		Positive. Site LO-26 is eligible to the NRHP.	Within the APE
Juan González Colón	IA-IB/ Jardines De Loíza Apartment Complex	1991	ICP/CAT-LO-91-04-04	Positive. Two of the 67 test pits resulted positive to 4 fragments of precolonial ceramics.	Within the APE
Adalberto Maurás Casillas	IA/ Escuela Superior Vocacional	2003	ICP/CAT-LO-03-09-07	Sensitive area.	0.61 km (SW)
Antonio Daubón Vidal	IA-IB/ Centro de Salud Familiar	1994	ICP/CAT-LO-94-05-04	Negative.	0.27 km (SW)
Miguel Rodríguez López	IB/ Loíza Region Connection to Carolina Regional Systems Second Stage (From Sta. 51+18.32 to Sta. 64+51.31)	1985	10-28-83-17/ ICP/CAT-LO-85-01-03	Negative.	0.24 km (SW)
Agamemnon Gus Pantel Tekakis	IA/ Carr. PR-187 (AC-018760) (Etapa 1 - Desvío) (Etapa 2 - Ensanche) (Etapa 3 - Mejoras Geométricas)	2002	ICP/CAT-LO-02-10-01	Sensitive area.	0.29 km (SE)
Agamemnon Gus Pantel Tekakis	IB/ Carr. PR-187 (AC-018760) (Etapa 1 - Desvío) (Etapa 2 - Ensanche) (Etapa 3 - Mejoras Geométricas)	2002	ICP/CAT-LO-02-10-02	Positive. A concentration of artifacts was observed between test pits 1 and 10. It can be associated to site Hacienda Grande.	0.06 km (NE-SE)
Antonio Daubón Vidal	IA-IB/ Boulevard PR-187	1994	ICP/CAT-LO-94-05-03	Negative.	0.29 (SW)



GOVERNMENT OF PUERTO RICO
Department of Housing

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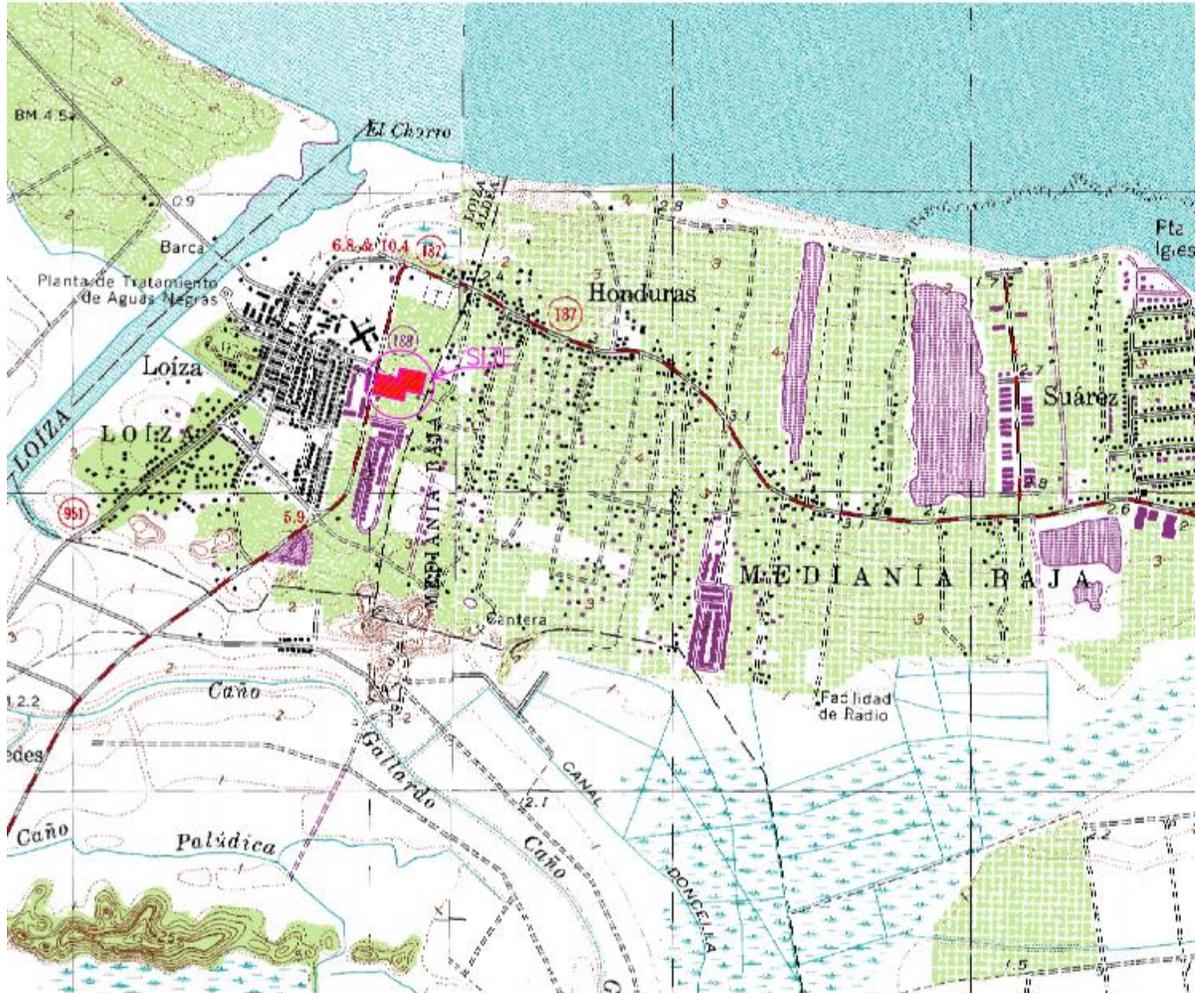
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Project (Parcel) Location - USGS Topographic Map



COORDINATES
X = 14,762.2425
Y = 20,110.9325

JARDINES DE LOIZA APARTMENTS
LOCATION PLAN
SCALE : 20,000

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Project (Parcel) Location - Aerial Map



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Soils Map



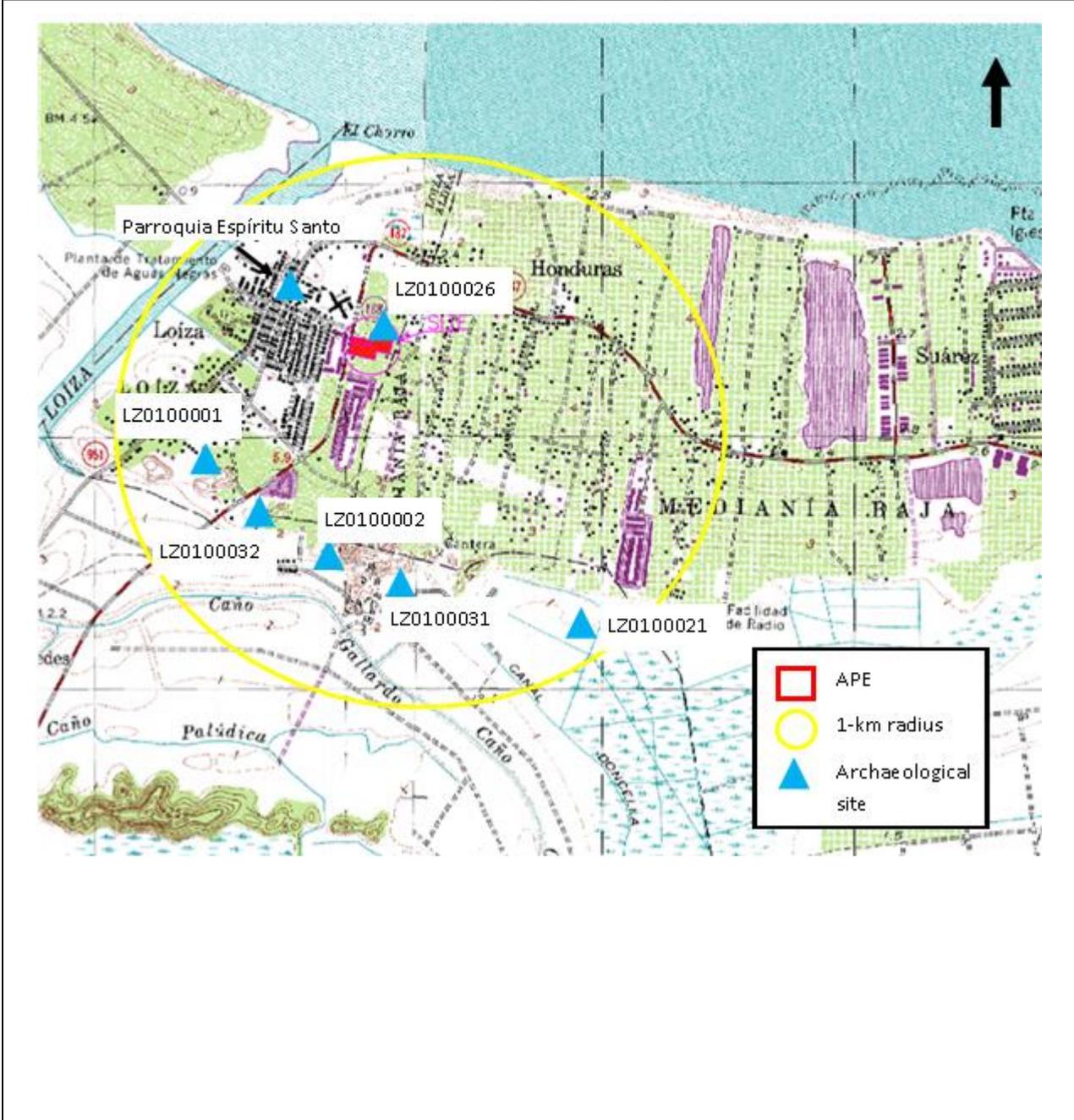
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Project (Parcel) Location with Previously Recorded Cultural Resources - Aerial Map



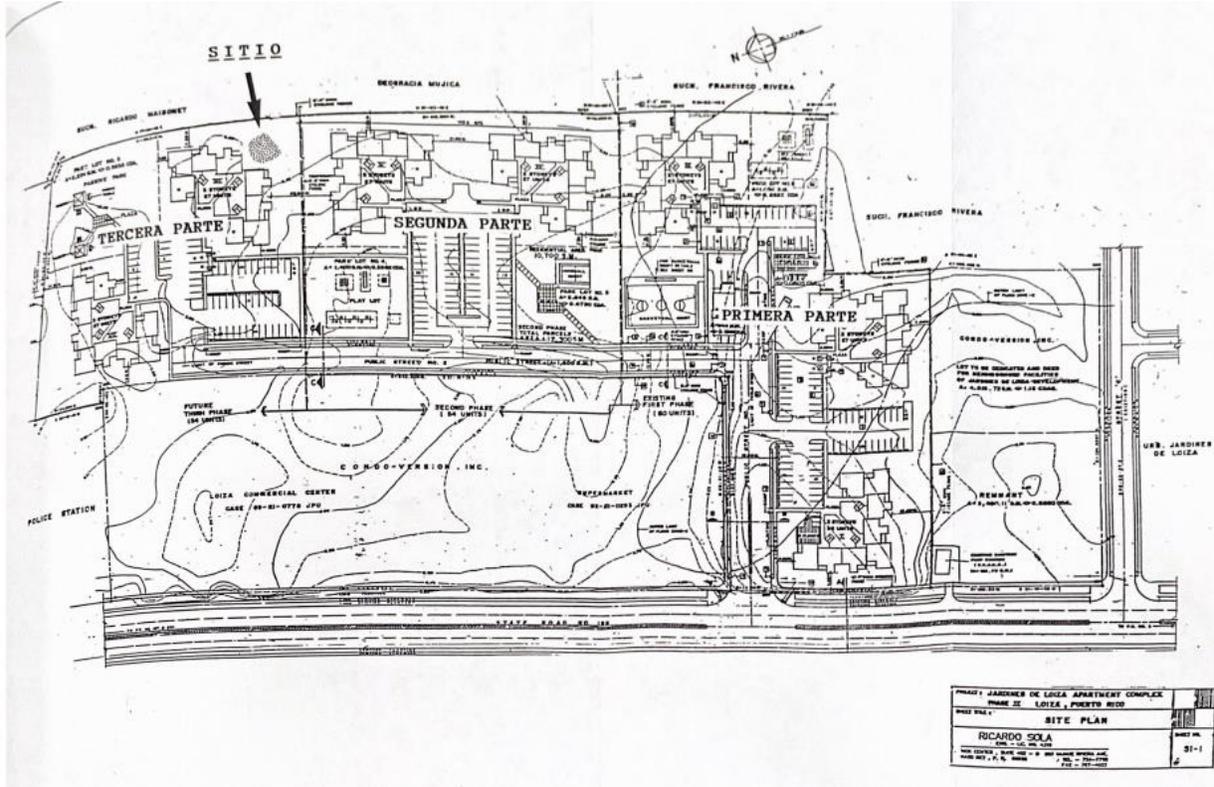
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**Project (Parcel) Location with Previously Recorded Cultural Resources
USGS Topographic Map**



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Site Plan with the location of LO-26



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<p>Photo #: 1</p>	<p>Description (include direction): Aerial view of Jardines de Loíza, looking east.</p>
<p>Date: no data</p>	



<p>Photo #: 2</p>	<p>Description (include direction): View of the entrance to Jardines de Loíza, looking west.</p>
<p>Date: 09/25/20</p>	

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<p>Photo #: 3</p>	<p>Description (include direction): General view of the southwestern building and its parking area, looking southwest.</p>
<p>Date: 09/25/20</p>	



<p>Photo #: 4</p>	<p>Description (include direction): General view of the southeastern building and its parking area, looking south.</p>
<p>Date: 09/25/20</p>	

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<p>Photo #: 5</p>	<p>Description (include direction): General view of center-eastern building and its parking area, looking north.</p>
<p>Date: 09/25/20</p>	



<p>Photo #: 6</p>	<p>Description (include direction): General view of the passive recreation area south of the center-eastern building, looking east.</p>
<p>Date: 09/25/20</p>	

 <p>GOVERNMENT OF PUERTO RICO Department of Housing</p>	<p>PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM: LOW INCOME HOUSING TAX CREDIT (LIHTC) PROGRAM Section 106 NHPA Effect Determination, Archaeology</p>
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<p>City: Loíza</p>	<p>Project Coordinates: 18.430547°, -65.876780°</p>



<p>Photo #: 7</p>	<p>Description (include direction): View of the administrative office building, located south of the basketball court, looking east.</p>
<p>Date: 09/25/20</p>	



<p>Photo #: 8</p>	<p>Description (include direction): General view of the center-eastern and northeastern building and recreative area, looking southeast.</p>
<p>Date: 09/25/20</p>	

 <p>GOVERNMENT OF PUERTO RICO Department of Housing</p>	<p>PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM: LOW INCOME HOUSING TAX CREDIT (LIHTC) PROGRAM Section 106 NHPA Effect Determination, Archaeology</p>
<p>Case ID: SHPO 12-14-89-01</p>	<p>Project Location (Street Address): Jardines de Loíza, PR-188, km 10.4, Medianía Alta</p>
<p>City: Loíza</p>	<p>Project Coordinates: 18.430547°, -65.876780°</p>



<p>Photo #: 9</p>	<p>Description (include direction): General view of northeastern building, where site LO-26 was/is located.</p>
<p>Date: 09/25/20</p>	



<p>Photo #: 10</p>	<p>Description (include direction): Back view of the northeast building, looking south. The difference in level with the adjoining plot due to the deposited fill can be appreciated.</p>
<p>Date: 09/25/20</p>	

SHARON MELÉNDEZ ORTIZ

Sharon Meléndez-Ortiz has over 27 years of professional experience in Archaeology. She was staff Archaeologist at the Puerto Rico State Historic Preservation Office, where she reviewed projects pursuant section 106 of the National Historic Preservation Act compliance. She has taken several specialized trainings in Cultural Resources Management in Puerto Rico and the United States. She has conducted and directed research in Puerto Rico and México. She is the author or co-author of more than 100 cultural resource management reports; national register nominations; historic ceramics catalogues; guides of archaeology for history teachers; editor of two (2) professional publications; editor of one (1) academic publication; offered workshops for secondary school teachers and university professors; and dictated lectures for colleagues, as well as elementary and secondary school students. She has experience in historical archaeology, ethnoarchaeology, urban archaeology, precolonial archaeology, preservation planning and public outreach. She has directed several regional surveys in southern Puerto Rico.

Sharon Meléndez Ortiz meets the Secretary of Interior's Qualification Standards. She is listed in the Council for the Protection of the Terrestrial Heritage of Puerto Rico's list for conducting phases I, II and III studies.

AREAS OF EXPERTISE

- Research design for the identification, evaluation and documentation of precolonial and colonial archaeological sites.
- Cultural Resources Management; orientation and compliance with local and federal laws for the management and treatment of cultural resources and historic properties; site interpretation and public outreach.
- Programmatic Agreement certifications and Sectio 106 NHPA Effect Determination Forms
- Caribbean archaeology.
- Latin-American and Caribbean history.
- Development of workshops in the areas of history, archaeology and preservation for school students, teachers and university professors.

EDUCATION

2008 - 2010	UNIVERSITY OF PUERTO RICO, RÍO PIEDRAS CAMPUS PhD Program in History, with concentration in Puerto Rico and the Caribbean
2000 – 2002	UNIVERSITY OF LEICESTER, ENGLAND. MA in Archaeology and Heritage. Awarded with Distinction.
1997 – 2003	CENTRO DE ESTUDIOS AVANZADOS DE PUERTO RICO Y EL CARIBE. Graduate courses in History and Puerto Rican Studies (15 credits)
1994 - 1996	ESCUELA NACIONAL DE ANTROPOLOGÍA E HISTORIA, MÉXICO. M.A. candidate, Ethnoarchaeology and Historical Archaeology

1988 – 1991 UNIVERSITY OF PUERTO RICO, RÍO PIEDRAS CAMPUS.
BA in Anthropology, Magna Cum Laude.

PROFESSIONAL EXPERIENCE IN ARCHAEOLOGY

- 2013- 2020 Advisor on Cultural Affairs, Highways and Transportation Authority. Compliance with laws and regulations; preparation and review of proposals; preparation and evaluation of archaeological studies; preparation of protection plans for historic properties; preparation and revision of agreements.
- 2015-2020 Archaeologist and cultural resources management consultant. Virellas and Associates. Cultural Resources Management; archival and field research; preparation of environmental documents, phase IA-IB, II and III surveys.
- 2014-2020 Archaeologist and cultural resources management consultant. TRCE. Cultural Resources Management; archival and field research; preparation of environmental documents, phase IA-IB, II and III surveys, archeological impact statements.
- 2019-2020 Archaeologist. Tetra Tech. Puerto Department of Housing R3Program Consultation.
- 2016 Principal Investigator. *Sistema de riego de las tres haciendas, Santa Isabel, Puerto Rico. District nomination to the National Register of Historic Places.* Preparation of district nomination to the National Register of Historic Places. Conducted with a National Historic Preservation Grant.
- 2016 Co-Principal Investigator. *Historic Development of the Bastion of San Agustín and the Old San Juan Fortifications.* Prepared for Richard Grubb and Associates.
- 2014-2015 Principal Investigator. *Reconocimiento general de sitios arqueológicos en el municipio de Santa Isabel* – General survey of archaeological sites in the municipality of Santa Isabel, including evaluation of sites and records. Conducted with a National Historic Preservation Grant.
- 2013-2014 Consultant Archaeologist. Forest Plan Assessment, *El Yunque* National Forest. Assessment of the condition of cultural and historic resources within the boundaries of the *El Yunque* National Forest.
- 2012-2013 Principal Investigator. *Reconocimiento general de sitios arqueológicos en el municipio de Salinas* – General survey of archeological sites in the municipality of Salinas, including evaluation of sites and records. Conducted with a National Historic Preservation Grant.
- 2010-2013 Senior Archeologist. CSA Group. Cultural Resources Management; archival and field research; preparation of environmental documents, phase IA-IB, II and III surveys, archeological impact statements and Cultural Resources Management Plans.
- 2011 Archeologist. Soltec International Inc. Assisting with the acquisition of archaeological background information through literature and desk reviews, and site assessments for various existing telecommunications tower sites located in Puerto Rico.
- 2011 Principal Investigator. *Reconocimiento general de sitios arqueológicos en los municipios de Arroyo y Patillas*- General survey of archaeological sites in the municipalities of

- Arroyo and Patillas, including evaluation of sites and records. Conducted with a National Historic Preservation Grant.
- 2010 Principal Investigator. *Sitios Brujos: Reconocimiento general de sitios arqueológicos en el municipio de Guayama* - General survey of archaeological sites in the municipality of Guayama, including evaluation of sites and records. Conducted with a National Historic Preservation Grant.
- 2009 Archaeologist, community education. *Reconocimiento general de sitios arqueológicos prehistóricos en el Municipio de Orocovis*. (General survey of prehistoric archaeological sites in the Municipality of Orocovis.) Prepared for the State Historic Preservation Office with the Historic Preservation Fund.
- 2008 Archaeologist, *Proyecto Ciudadela*, Santurce: Preparation of catalog data sheets of archaeological materials and museographic script for exhibition of archaeological documentation.
- 2005 Co-principal Investigator. *Identificación de indicadores arqueológicos para los establecimientos comerciales y públicos en los centros urbanos del siglo XIX en Puerto Rico: caso de Aibonito*. Research funded in part with Federal funds from the National Park Service through the State Historic Preservation Office.
- 2005 Archaeologist. *Inventario de recursos culturales de Toa Baja*. Federally funded research for the National Park Service through the State Historic Preservation Office. Hired by Jacqueline López Meléndez.
- 1999 – 2003 Historic Property Specialist. Puerto Rico State Historic Preservation Office. Staff archeologist, Section 106 compliance; public outreach; National Register nominations evaluation, research and redaction.
- 1998 Fiel Archaeologist. *Investigaciones arqueológicas en la Ermita de San Antonio de Padua de la Tuna, Isabela*. Research conducted for the Master's degree thesis of archaeologist Jaqueline López.
- 1998 Assistant Researcher Archaeologist. *Proyecto de inventario y evaluación de yacimientos arqueológicos en Loíza, Puerto Rico*. Hired by Marisol J. Meléndez Maíz, Principal Investigator.
- 1997 – 1998 Principal Investigator. *Cerámica de importación y cerámica criolla, siglos XVI al XVIII, Bastión de San Justo, Viejo San Juan*. Research funded in part with federal funds from the National Park Service through the State Historic Preservation Office.
- 1997 Assistant Archaeologist. *Punta Ostiones, Cabo Rojo: Análisis de las excavaciones realizadas por Herbert Spinden en 1916*. Hired by Marisol J. Meléndez Maíz, Principal Investigator.
- 1996 Assistant Archaeologist. *Inventario de recursos culturales del municipio de Las Piedras*. Hired by Marisol J. Meléndez Maíz, Principal Investigator.
- 1994 Director and Coordinator. *Práctica de campo de etnoarqueología de estudiantes de licenciatura, Valle del Mezquital, Estado de México, Escuela Nacional de Antropología e Historia, México*. Hired by Dr. Patricia Fournier, Project Director.

- 1993 - 1994 Archaeologist. *Etnoarqueología de la comunidad Otomí El Pino Suárez*. Otomi Ceramics Formative Ethnoarchaeology Research Project, México.
- 1993 Archaeology Technician. *Excavación en La Cueva de las Varillas, Teotihuacan, Estado de México, México*. Work performed for Dr. Linda Manzanilla.
- 1993 Archaeology Technician. *Prospección arqueológica en la zona arqueológica de Xochicalco, Morelos, México*. Work performed for Engr. Luis Barba and Dr. Linda Manzanilla.
- 1993 Archaeology Technician. *Levantamiento topográfico de la Pirámide Circular Cuicuilco, México D.F. y la Cueva de la Basura, Teotihuacan, Estado de México, México*. Work performed for the National School of Anthropology and History, Mexico with Dra. Linda Manzanilla.

EXPERIENCE IN CONTRACT ARCHAEOLOGY

DATA RECOVERIES (PHASES III) AND ARCHAEOLOGICAL MONITORING

- 2019 Principal Investigator. Corrección de deslizamiento PR-676, km 7.2, Vega Baja. Informe de supervisión arqueológica.
- 2019 Principal Investigator. Reparación de emergencia del Puente no. 217 sobre la Quebrada Gandel en Mayaguez. Prepared for the Highways and Transportation Authority.
- 2017-2018 Principal Investigator. *Monitoría arqueológica de los trabajos del proyecto Emergency Works PR-3, KM 69.3 to 70.6, Naguabo*. Prepared for the Highways and Transportation Authority.
- 2017-2018 Principal Investigator. *Monitoría arqueológica de los trabajos del proyecto Reemplazo de atarjea colapsada en la PR-3 km 57.1, Ceiba*. Prepared for the Highways and Transportation Authority.
- 2017-2018 Principal Investigator. *Supervisión arqueológica Atarjeas Históricas en la PR-546, Proyecto Paseo de Ciclistas y Peatones de Coamo*. Prepared for the Highways and Transportation Authority.
- 2014-2017 Principal Investigator. *Supervisión arqueológica proyecto Deslizamiento Avenida Luis Muñoz Rivera (PR-25R), KM 1.1, San Juan*. Contracted by the Highways and Transportation Authority through Del Valle Group.
- 2015-2016 Principal Investigator. *Supervisión arqueológica Decanter Hotel, calle San José, esquina Luna, Viejo San Juan*. Prepared for Hotel Decanter.
- 2014-2016 Principal Investigator. *Supervisión arqueológica Fases I y II Paseo Lineal de Puerta de Tierra*. Contracted by SCF.
- 2015 Consultant and Local Liaison. *Phase III Caguitas, Bo. Cañabón, Caguas*. Archaeological survey of prehistoric site performed by Panamerican Consultants.

- 2014-2015 Co-principal Investigator. *Documentación arqueológica Fase III para el proyecto Conector PR-158, desde la PR-743 hasta la PR-1, Cayey*. Hired by archeologist Jaqueline López Meléndez.
- 2014 Principal Investigator. *Documentación arqueológica de la atarjea ubicada en la PR-308, KM 3.5, Cabo Rojo*. Prepared for the Highways and Transportation Authority.
- 2013-2014 Principal Investigator. *Documentación arqueológica fase III, Plaza Apartments Coamo*. Data recovery of a colonial site in the urban core of Coamo.
- 2013 Principal Investigator. *Guamaní River Bridge, Bridge No. 138. Highway PR-3, KM 141, Spanning the Guamaní River, Machete Ward, Guayama*. Prepared for the Highways and Transportation Authority.
- 2012 Principal Investigator. *Laboratorio arqueológico de la mitigación arqueológica fase III del Proyecto Plaza Universitaria, Río Piedras*. Prepared for Desarrollos Universitarios Inc., Ceramic analysis of a pottery production site in Río Piedras, Puerto Rico.
- 2009 Historical Investigator. *Investigación arqueológica fase III: estructuras históricas de la hacienda La Florentina, PR-2, km 163.57, Hormigueros, Puerto Rico*. Research performed for archaeologist Marisol J. Meléndez Maíz.
- 2008 Field Archaeologist. *Documentación de estructura de ladrillos, Proyecto desvío de Isabela, Puerto Rico*. Hired by archaeologist Jaqueline López Meléndez.
- 2006 - 2008 Co-principal Investigator and Field Archaeologist. *Documentación arqueológica proyecto Mejoras a las calles Fortaleza, San Justo y Tanca, Viejo San Juan*. Hired by archeologist Marisol J. Meléndez Maíz.
- 2005-2006 Co-principal Investigator. *Investigación arqueológica, proyecto Ciudadela, Santurce*. Hired by archeologist Marisol J. Meléndez Maíz.
- 2003 – 2004 Co-principal investigator. *Archaeological laboratory and final report preparation for the archaeological mitigation carried out for the Rio Piedras - UPR alignment of Tren Urbano along Ponce de Leon Avenue*. Hired by archeologist Marisol J. Meléndez Maíz.
- 2003 – 2004 Research Archaeologist. *Monitoría arqueológica del soterrado de utilidades en el centro histórico de Aibonito, Primera fase*. Hired by archeologist Marisol J. Meléndez Maíz.
- 1999 Auxiliary Research Archaeologist and Field Supervisor. *Archaeological Monitoring and Data Recovery, U.S.C.G. Base, La Puntilla, San Juan*. Hired by archeologist Marisol J. Meléndez Maíz.
- 1997 – 1999 Auxiliary Research Archaeologist and Field Supervisor. *Archaeological Monitoring and Data Recovery Program, Tren Urbano Project, Río Piedras Section*. Hired by archeologist Marisol J. Meléndez Maíz.
- 1998 – 1999 Auxiliary Research Archaeologist and Field Supervisor. *Evaluación arqueológica fase III, Áreas de Disposición V y B-1, Barrios Celada y Hato Nuevo, Gurabo, Proyecto del Dragado del Lago Carraízo*. Hired by archeologist Marisol J. Meléndez Maíz.
- 1997 Archaeologist. *Monitoría de las líneas de gas de San Juan Gas, Viejo San Juan*. Hired by archeologist Marisol J. Meléndez Maíz.

1997 Assistant Archaeologist. *Evaluación arqueológica fase III, La Urnaga, San Sebastián.* Hired by Marlene Ramos Vélez, Project Archaeologist.

ARCHAEOLOGICAL EVALUATIONS / DETERMINATION OF ELIGIBILITY TO THE NATIONAL REGISTER OF HISTORIC PLACES (PHASES II)

- 2017 Principal Investigator. *Historical-Architectural Study for the Project Demolition and New Construction of Facilities in Commercial Parcel A, Luis Llorens Torres, San Juan, Puerto Rico.* Prepared for Iglesias Vázquez and Associates.
- 2015-2016 Co-principal investigator and Report Author. *Archeological Survey and National Register of Historic Places Eligibility Determination at the Aibonito Flowers Inventory Property, Asomante, Aibonito, Puerto Rico.* Prepared for New South Associates, Inc.
- 2013 Principal Investigator. *Investigación arqueológica fase II Dow AgroSciences/Mycogen Seeds, PR, Guayama Salinas.* Prepared for Dow AgroSciences.
- 2009 Field Archaeologist and Historian. *Archaeological evaluation Phase II for PR-158 Connector from PR-743 until PR-1 Project, Cayey, Puerto Rico.* Documentation of a multicomponent site. Prepared for the Department of Transportation and Public Works.
- 2005 Co-principal investigator. *Evaluación arqueológica proyecto Ciudadela, Santurce.* Hired by archeologist Marisol J. Meléndez Maíz.
- 2004 Co-principal investigator. *Evaluación arqueológica de la Plaza de Recreo de Toa Baja.* Hired by archeologist Marisol J. Meléndez Maíz.
- 2003 Research Archaeologist. *Evaluación arqueológica fase II, Proyecto Mercado de Flores en la Antigua Tabacalera de Aibonito.* Hired by Marisol J. Meléndez Maíz, Principal Investigator.
- 1997 – 1998 Auxiliary Research Archaeologist. *Evaluación arqueológica fase II, Áreas de Disposición V, Barrio Hato Nuevo, Gurabo, Proyecto del Dragado del Lago Carraízo.* Hired by Marisol J. Meléndez Maíz, Principal Investigator.
- 1997 Auxiliary Archaeologist. *Evaluación arqueológica fase II, Mejoras al sistema sanitario, Comunidad Esperanza, Vieques.* Hired by Marlene Ramos, Principal Investigator.
- 1996 – 1997 Research Archaeologist and Ceramics Analyst. *Stage II Archaeological Evaluation, Bajadero Site, Eleuterio García Street, Bajadero Community, Arenalejos Ward, Arecibo.* Hired by Marisol J. Meléndez Maíz, Principal Investigator.
- 1996 Auxiliary Laboratory Archaeologist. *Evaluación arqueológica fase II, Proyecto Plaza Gelpi anexo al Museo de Historia de Ponce, calle Salud esquina Isabel, Ponce.* Hired by Marisol J. Meléndez Maíz, Principal Investigator.
- 1996 Auxiliary Archaeologist and Laboratory Analyst. *Evaluación arqueológica fase II para tres proyectos localizados en el Barrio Palmas Altas, Barceloneta.* Hired by Marisol J. Meléndez Maíz, Principal Investigator.
- 1996 Auxiliary Archaeologist. *Evaluación arqueológica fase II, Comunidad Punta Pozuelo, Guayama.* Hired by archaeologist Andrés Príncipe.

1996 Archaeology Technician. *Stage II Evaluation, Arecibo Flood Control Project for the US Army Corps of Engineers.* Contracted by Panamerican Consultants, Inc.

RECONAISSANCE SURVEYS AND DOCUMENTAL RESEARCH (PHASES IA AND IB)

2020 Principal Investigator. Phase IA-IB PR-158 Bypass in Cayey. Prepared for TRCE.

2020 Principal Investigator. Phase IA-IB. Demolición del antiguo Cesco, Calle Gautier Benítez, Caguas. Prepared for the Municipality of Caguas.

2020 Principal Investigator. Phase IA Replacement of La Riviera Bridge, Corozal. Prepared by J.O. Virellas and Associates.

2020 Principal Investigator. Phase IA Landslide and road repairs PR-10, km 44.7 to 45.2, Utuado. Prepared for Virella and Associates.

2020 Principal Investigator. Phase IA. Replacement of Victor Rojas Bridge in Arecibo. Prepared for Batlle.

2020 Principal Investigator. Phase IA Replacement of Bridge 652 in Sabana Grande. Prepared for the PRHTA.

2020 Principal Investigator. Fase IA. Instalación de puente temporero sobre el Puente 176 en Aibonito. Prepared for PRHTA.

2020 Principal Investigator. Phase IA-IB Barahona Cell Site. Prepared for Innovatel.

2020 Principal Investigator. Phase IA-IB Cañaboncito Cell Site. Prepared for Innovatel.

2020 Principal Investigator. Phase IA. Replacement of Bridge 670 in Arecibo. Prepared for Batlle.

2019 Principal Investigator. Phase I Cultural Resources Assessment. Replacement of Bridge no. 116 over Quebrada Ceiba, Ceiba. Prepared for J.O. Virellas & Associates.

2019 Principal Investigator. Phase IA Cultural Resources Assessment. Implementation of Preventive Maintenance Program Protocol, Rehabilitation and Scour Mitigation for Bridge 2315 at PR-53 km 66.5, Patillas. Prepared for TRCE.

2018-2019 Principal Investigator. Landslide and Road Damage Evaluation and Repair. Identification of Historic Properties and Assessment of Effects/Section 106 Review Process. Prepared for the PRHTA.

2017-2018 Principal Investigator. Revisión de proyectos de emergencia tras el paso de los huracanes Irma y María: Adjuntas, Ceiba y Naguabo. Prepared for the Highways and Transportation Authority.

2017 Principal Investigator. *Phase IA Cultural Resources Assessment for the project Improvement to Intersections PR-2, 2R and San Juan St (RUM Entrance, La Vita), PR-2 km 153.90, Mayaguez.* Prepared for Alpha Engineering.

- 2015-2016 Principal Investigator. Cultural Resources Assessment and Evaluation. *Replacement of Bridge no. 443 over Zequeira Channel, PR-951, KM 4.9, Loíza, Puerto Rico*. Prepared for Iglesias-Vazquez and Associates.
- 2015 Principal Investigator. *Evaluación arqueológica Fase IB, Rehabilitación Bloque 40, Centro Urbano, Carolina*. Prepared for the Municipality of Carolina.
- 2015 Principal Investigator. *Phase IA-IB View Point @ The Park, Bayamón*. Prepared for Edgardo Péres, Architect and Associates.
- 2015 Principal Investigator. *Phase IB, Revitalización de Guajataca*. Prepared for Recurso Ciudad.
- 2015 Principal Investigator. *Phase IA-IB, Revitalización del malecón de Salinas*. Prepared for Toro Architects.
- 2015 Principal Investigator. *Phase I Cultural Resources Assessment, Improvement to Bridge no. 1096, over Guanajibo River, San Germán*. Prepared for TRCE.
- 2015 Principal Investigator. *Phase IA-IB, Replacement of Bridge 144 over the Blanco River, Naguabo*. Prepared for the Highways and Transportation Authority.
- 2015 Principal Investigator. *Phase IA-IB, Replacement of Bridge 194 over the Blanco River, Naguabo*. Prepared for the Highways and Transportation Authority.
- 2015 Principal Investigator. *Phase IB, Reconstrucción y Reparación a la PR-10, desde el km 59 al 62, Utuado*. Prepared for JoVirellas and Associates.
- 2015 Principal Investigator. *Phase IA-IB Cultural Resources Assessment Replacement of Bridge No. 217 over Gandel Creek, PR-106, Mayaguez*. Prepared for JoVirellas and Associates.
- 2014-2015 Principal Investigator. *Phase I cultural Resources Assessment, New Marine Facility for U.S. Customs Border Protection, Mayaguez Marine Unit at Cabo Rojo*. Presented to the U.S. Customs and Border Protection through Salo Engineering.
- 2014 Principal Investigator. *Phase IA-IB Cultural Resources Assessment, Replacement of Bridge No. 122 Over Santiago River, Naguabo, PR*. Prepared for TRCE.
- 2014 Principal Investigator. *Phase IA-IB Cultural Resources Assessment, Barranquitas South Bypass, Barranquitas*. Prepared for TRCE.
- 2014 Principal Investigator. *Estudio arqueológico fase IA-IB para el proyecto Cataño Housing for the Elderly, PR-5, KM 20.2, barrio Palmas, Cataño*. Prepared for MD Engineering Group.
- 2014 Principal Investigator. *Estudio arqueológico fase IB. Proyecto Revitalización de Guajataca, Isabela*. Prepared for Recurso: Ciudad.
- 2014 Principal Investigator. *Evaluación de recursos culturales fase I, Mejoras al puente no. 261, Maricao*. Prepared for TRCE.
- 2014 Principal Investigator. *Estudio arqueológico fase IB Proyecto Paseo Puerta de Tierra Fases III y IV*. Prepared for SCF Architects.

- 2014 Principal Investigator. *Fase IA, Ensanche de la PR-140 y PR-642, Bo. Florida Adentro, Florida*. Prepared for the Highways and Transportation Authority.
- 2014 Principal Investigator. *Phase IA Cultural Resources Assessment, Parcel 46 at Naval Activity Puerto Rico, Ceiba*. Presented to U.S. Customs and Border Protection through Salo Engineering.
- 2013 Principal Investigator. *Evaluación arqueológica fase IA, Proyecto Paseo Lineal de Puerta de Tierra, San Juan*. Prepared for SCF Architects.
- 2013 Principal Investigator. *Evaluación arqueológica Fase IA, Rehabilitación Bloque 40, Centro Urbano, Carolina*. Prepared for the Municipality of Carolina.
- 2012 Principal Investigator. *Fase IA-IB, Reemplazo del puente 1828, Barceloneta*. Prepared for Engr. David Moreno and the Highways and Transportation Authority.
- 2012 Principal Investigator. *Fase IA-IB, Mejoras al cementerio II, Bo. Celada, Gurabo*. Prepared for the Municipality of Gurabo.
- 2012 Principal Investigator. *Fase IA-IB, Nuevo cementerio municipal, Bo. Quebrada, Camuy*. Prepared for the Municipality of Camuy.
- 2012 Principal Investigator. *Fase IA-IB, Parque de patineta, Bo. Quebrada, Camuy*. Prepared for the Municipality of Camuy.
- 2012 Principal Investigator. *Fase IA, Mejoras a la plaza de recreo de Camuy*. Prepared for the Municipality of Camuy.
- 2012 Principal Investigator. *Fase IA, Biblioteca municipal de Gurabo*. Prepared for the Municipality of Gurabo.
- 2012 Principal Investigator. *Fase IA-IB, Facilidades de área de patinetas y gimnasio, Bo. Quebrada, Camuy*. Prepared for the Municipality of Camuy.
- 2012 Principal Investigator. *Fase IA-IB, Gurabo Elderly Housing*. Prepared for the Municipality of Gurabo.
- 2012 Principal Investigator. *Fase IA-IB, Complejo Deportivo Barrio Celada, Gurabo*. Prepared for the Municipality of Gurabo.
- 2010 Co-investigator. *Evaluación arqueológica fase IB Obras de control de inundaciones del Río Jacaguas, Juana Díaz*. Hired by archeologist Jaqueline López Meléndez.
- 2010 Co-investigator. *Fase IA-IB, Instalación de sistema pluvial y sanitario, Las Croabas, Fajardo*. Hired by the archeologist Jaqueline López Meléndez.
- 2009 Field Archaeologist and Historian. *Fase IA-IB, Paseo de los presidentes, Puerta de Tierra*. Hired by archeologist Jaqueline López Meléndez.
- 2009 Field Archaeologist. *Fase IA-IB, Conector PR-158, desde la PR-743 hasta la PR-1, Cayey*. Hired by archeologist Jaqueline López Meléndez.

- 2008 Co-Investigator. *Flood control project for communities in southern part of Juana Diaz, Puerto Rico.* Hired by archaeologist Jaqueline López Meléndez.
- 2008 Field Archaeologist. *Evaluación arqueológica fase I, Proyecto de control de inundaciones del Río de la Plata.* Hired by archeologist Marisol J. Meléndez Maíz.
- 2008 Principal Investigator. *Evaluación arqueológica fase IA: Proyecto Mejoras a las calles Tetuán, Recinto Sur y Terrazas de la Recinto Sur, Viejo San Juan.* Hired by archeologist Marisol J. Meléndez Maíz.
- 2006 Field Archaeologist. *Proyecto Centro Vacacional UTIER, Arecibo.* Hired by archeologist Marisol J. Meléndez Maíz.
- 2005 Principal Investigator. *Proyecto Enmienda al Desvío de Lares, PR-111, Municipio de Lares, Puerto Rico.* Performed for URS-Caribe.
- 2005 Principal Investigator. *Proyecto Conector PR-128, Lares, Puerto Rico.* Performed for URS-Caribe.
- 2004 Principal Investigator. *Proyecto rediseño de la Intersección de la PR-3 con la PR-185 y el Ensanche y Mejoras al Puente No. 706 de la PR-185 sobre la Avenida 65 de Infantería en el Municipio de Canóvanas, Puerto Rico.* Performed for URS-Caribe.
- 2003 – 2004 Principal investigator: *Evaluación arqueológica fase IA de once centros urbanos: Naranjito, Juana Dlaz, Guayanilla, Vieques, Rincón, San Lorenzo, Barceloneta, Santa Isabel, Peñuelas, Salinas y Vega Baja* - Survey of eleven urban centers, producing a comprehensive report that included specific recommendations for urban areas.
- 1999 Principal Investigator. *Evaluación de recursos culturales fase I, Proyecto, Fajardo Community Private School, Baqrrio Quebrada Fajardo, Fajardo.* Contracted by Engr. M. López.
- 1999 Assistant Fiel Archaeologist and Laboratory Director. *Evaluación arqueológica fases IA-IB, Proyecto corte Ave. Muñoz Rivera, drenaje pluvial, área de estacionamiento, Guardia Nacional de Puerto Rico, Viejo San Juan.* Hired by Jaqueline López, Principal Investigator.
- 1999 Field Archaeologist. *Evaluación arqueológica fase IA-IB, Planta de Energía Total, Guayama.* Hired by Archaeologist Marlene Ramos.
- 1998 Field Archaeologist. *Evaluación arqueológica fase IB, Mejoras al Sistema Sanitario Comunidad Olimpo, Guayama.* Hired by Archaeologist Andrés Príncipe Jácome.
- 1998 Field Archaeologist. *Evaluación arqueológica fase IA-IB, Mejoras al Sistema de Acueductos, Barrios Quebrada Grande, Quebradillas y Honduras, Barranquitas.* Hired by Jaqueline López, Principal Investigator.

SPECIALIZED COURSES

- 2001 *Section 106: An Introduction.* Washington D.C., USA. Seminar offered by the National Institute of Preservation.

- 2001 *Taller de Conservación de Materiales Muebles*. San Juan, Puerto Rico. Workshop offered by Fine Arts International and the National Park Service.
- 2000 *Applications of the GIS Software*. San Juan, Puerto Rico. Workshop offered by Aurelio Castro, GIS Consultant.
- 2000 *Integrating Cultural Resources Management in NEPA Compliance*. Washington D.C., USA. Seminar offered by the National Institute of Preservation.
- 1999 *Section 106 of the National Historic Preservation Act: Working with the Revised Regulations*. San Juan, Puerto Rico. Seminar offered by the Advisory Council on Historic Preservation.

LECTURES AND PUBLICATIONS

- 2017 *National Register Nomination for the District Sistema de riego de las tres haciendas, Santa Isabel, Puerto Rico*. Department of the Interior of the United States, National Park Service.
- 2017 *Bajo las calles de San Juan: una mirada arqueológica a las entrañas de la ciudad murada*. Lecture presented at the Museo Felisa Rincón de Gautier, Viejo San Juan.
- 2017 *Las murallas en la arqueología de San Juan*. Co-author with Marisol Meléndez Maíz. Lecture presented in the Symposium of the History Association of the Old San Juan, San Cristóbal Castle.
- 2017 *Ojalá que llueva café en el campo*. Lecture presented at the State Historic Preservation Office.
- 2015 *Fantasmas a plena vista: Sitios arqueológicos industriales en el llano costero del sur*. In *Revista Patrimonio*, published by the State Historic Preservation Office.
- 2015 *Del escrito al hecho*. Talk delivered at the State Historic Preservation Office.
- 2014 *Arqueología detectivesca: Reconocimiento de sitios en Salinas, mirando al sur desde el acervo documental*. Talk delivered at the State Historic Preservation Office.
- 2013 *Fantasmas a plena vista: Sitios arqueológicos industriales en el llano costero del sur*. Presentation at the Symposium on Industrial Archaeology, State Historic Preservation Office.
- 2009 *Del Machete al hechizo. Formas de resistencia entre los esclavos y esclavas de origen africano y afro-caribeño durante el periodo colonial*. *Journal of Historical Research*, Number 6. University of Puerto Rico.
- 2003 *National Register Nomination for Punta Ostiones Site, Cabo Rojo*. Department of the Interior of the United States, National Park Service.
- 2002 *Punta Ostiones: The Research Potential of a Prehistoric Caribbean Site*. Thesis submitted as partial requirement for the degree of Master in Archaeology and Heritage, School of Archaeological Studies, University of Leicester, England.

- 2002 *Más Allá de Indiana Jones: Una breve introducción a la arqueología puertorriqueña.* Archeology workshop for teachers. Co-authored with: Miguel A. Bonini, Reniel Rodríguez and Aida B. Rivera. Special publication of the State Historic Preservation Office.
- 2001 *Arqueología de contrato, realidades y perspectivas.* Co-author: Lourdes S. Domínguez, PhD. Presentation in the forum *Aportaciones de la arqueología de contrato al conocimiento arqueológico en Puerto Rico*, held on November 8, 2001 in San Juan, Puerto Rico. (Pending publication)
- 2000 *Foreword.* In: *OEPH Semana de la Arqueología.* Publication of the State Historic Preservation Office.

LENGUAGE SKILLS

- Fluent in Spanish and English (speaking, reading and writing)
- Basic in Portuguese, Italian and French (reading)
- Basic in Turkish (speaking)

COMPUTER SKILLS

- Microsoft Office (Word, Excel, PowerPoint, Access and Publisher)
- Typing

2020 LOW-INCOME HOUSING TAX CREDITS & CDGB-DR GAP TO LIHTC
APPLICATION 2020-026 - Jardines de Loíza Apartments
Project: Jardines de Loíza Apartments
Owner: Jardines de Loíza, LLC

Application: 2020-026- II. 021

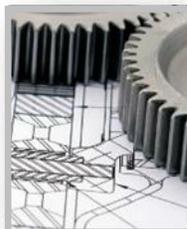
Noise Study

Conclusion:

The HUD noise acceptability criterion of 65 dB for exterior of the Jardines de Loíza Apartments was met and in our opinion no further restrictions or controls are applicable to this project.

NOISE SURVEY REPORT

At
Jardines de Loíza
Loíza, Puerto Rico



Physical Address:

Villa Blanca Industrial Park
Plaza Bairoa Suite 215
Caguas, P.R. 00725
www.sharetechgroup.com

October 14, 2020

Carlos Colón McFarland
Mutual Development Service Corp.
PO Box 192037
San Juan, P. R. 00919-2037
Email: cmcolon@mutualdsc.com
Phone: 787-691-8585

RE: Environmental Noise Survey for Jardines de Loiza at Loíza, Puerto Rico

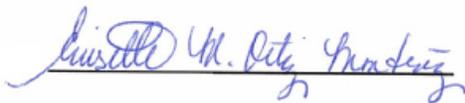
Dear Mr. Colón,

Enclosed please find professional consulting services report for subject environmental noise survey conducted at the location of Jardines de Loiza in Loiza, P.R., on October 6, 2020.

We appreciate the opportunity to service you and look forward to continuing supporting Mutual Development Service Corp. in the near future.

If you have any questions, do not hesitate to contact us.

Sincerely,



Enisette Ortiz
EHS Coordinator
ShareTech Group

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EXECUTIVE SUMMARY

This report summarizes the results obtained from environmental noise survey conducted at Jardines de Loiza on Loiza, P.R. (See figure #1 for location) during October 6, 2020.



Figure #1- Survey Location for Jardines de Loiza (Satellite Photo)

The results from this survey are summarized on Table # 4 and 5. The interpretation of the results is presented on page 16, and the conclusions and recommendations on page 17.

The LDN represents the 24 hours average sound level. For daytime period the Time – Weighted Average LDN is 54.0 dB. For nighttime period the Time – Weighted Average LDN is 65.9 dB.

Based on the data collected during the noise survey at daytime and nighttime, the Calculated Time – Weighted LDN Average ^{24 hours} is 58.5 dB reveal a LDN level acceptable using the acceptability criterion of 65 dB for exterior.

INTRODUCTION

ShareTech Group was contracted by Mutual Development Service Corp. on September 18, 2020 to perform a limited and specific-scope noise survey during day and night periods at their project located at PR-187 in the municipality of Loiza. The study was carried out to measure the noise levels at selected locations at the perimeter of the Project to confirm compliance with the established HUD Noise criteria (24 CFR 51).

HUD defines the day period with hours in a range between 7:00 am and 10:00 pm and the night period in a range between 10:01 pm until 6:59 am. Refer to Table I on next page for the HUD noise criteria.

This study was carried out considering the Environmental Quality Board (EQB) regulatory requirements. Results were compared with the EQB established noise limits during night and day periods based on the residential nature of the buildings in the area. Day and night periods for environmental noise control limits are defined in the Puerto Rico's Environmental Quality Board (EQB) Noise Control Regulation, refer to Table III on Appendix 6 referenced from said regulation.

The area under study is classified as intermediate residential (R-I), as established by the Puerto Rico Planning Board, known in Spanish as "Junta de Planificación". Table I on the next page shows the HUD Site Acceptability Standards for Day – Night Average Sound Level in decibels. An exterior noise level of 65 dB or lower is considered acceptable by HUD.

The HUD exterior noise standards refer to the degree of acceptability of the noise environment at the site. Noise environment is determined by the additional sound levels of those generated by buildings or other facilities containing noise sensitive uses.

The standards shall usually apply at a location 2 meters (6.5 feet) from the building housing noise sensitive activities in the direction of the predominant noise source. Where the building location is undetermined, the standards shall apply 2 meters (6.5 feet) from the building setback line nearest to the predominant noise source. The standards shall also apply at other locations where it is determined that quite outdoor space is required in an area ancillary to the principal use on the site.

The noise environment inside a building is considered acceptable if: (i) The noise environment external to the building complies with these standards, and (ii) the building is constructed in a manner common to the area or, if of uncommon construction, has at least the equivalent noise attenuation characteristics.

Under HUD, the Site Acceptability Standards for Day – Night sound level (in decibels) is presented below:

Table #1 – HUD Site Acceptability Standards

Acceptable or Unacceptable	Day-night average sound level (in decibels)	Special approvals and requirements
Acceptable	Not exceeding 65 dB (1)	None.
Normally Unacceptable	Above 65 dB but not exceeding 75 dB	Special Approvals (2)
		Environmental Review (3).
		Attenuation (4).
Unacceptable	Above 75 dB	Special Approvals (2).
		Environmental Review (3).
		Attenuation (5).

Notes:

- (1) Acceptable threshold may be shifted to 70 dB in special circumstances pursuant to §51.105(a).
- (2) See §51.104(b) for requirements.
- (3) See §51.104(b) for requirements.
- (4) 5 dB additional attenuation required for sites above 65 dB but not exceeding 70 dB and 10 dB additional attenuation required for sites above 70 dB but not exceeding 75 dB. (See §51.104(a).)
- (5) Attenuation measures to be submitted for approval on a case-by-case basis.

This report includes the results of the noise levels during the daytime period as well as during the nighttime period.

METHODOLOGY & EQUIPMENT

The noise survey was conducted in accordance with the requirements under HUD 24 CFR 51 and by EQB's Noise Pollution Control Regulation entitled "Reglamento para el Control de la Contaminación de Ruido" Appendix 1. The following tasks were performed as part of this survey:

Task 1) As stated earlier, the noise survey was also conducted in accordance to the requirements of EQB's Noise Pollution Control Regulation entitled "*Reglamento para el Control de la Contaminación de Ruido*" and with *HUD Noise criteria (Appendix 1)* as stated under 24 CFR 51 using one (1) calibrated sound level meter under the required American National Standards Institute (ANSI) Specifications. Two 3M Sound Pro Series DL Sound Level Meters was used to carry out this study.

The noise survey was conducted during the early morning periods at hours considered within both, the HUD and EQB daytime and nighttime regulatory definition on Tuesday, October 6, 2020. Four (4) noise measurement locations were surveyed during the daytime and nighttime periods on that day. No rain events occurred during the noise survey.

The noise survey was carried out using two (2) calibrated sound level meters which meets the "American National Standards Institute" (ANSI) specification for Type 1, sound level meters on its latest revision (See Figure #2). Sound Pro Series DL Sound Level Meters manufactured by 3M (Quest Technologies) were used. Refer to Appendix 3 for data on calibration of the sound level meter instruments. The instruments are equipped with software and data logger and generate the data used to prepare this report. The raw data is included under Appendix 4.



Figure #2- Sound Level Meter Photo

The sequence followed for conducting the noise survey is described below:

- The noise level measurements for the nighttime period were started at around 05:44 a.m. and finished approximately 06:51 a.m. The EQB nighttime noise period is encompassed between 10:01 p.m. and 06:59 a.m. Refer to table #II for details.
- The measurements for the daytime period were started at around 07:01 a.m. and finished approximately 08:05 a.m. The EQB daytime noise period is encompassed between 07:00 a.m. and 10:00 p.m. Refer to table #III for details.
- The sound level meters were calibrated pre and post the measurement using calibrator model AC-300. Refer to Appendix 2 for equipment calibration data.

The readings were collected using two (2) calibrated Sound Level Meters Model Sound-Pro DL:

- Meter 1 – Serial Number: BLL100004 (Calibrator serial number: AC300001324)
- Meter 2 – Serial Number: BLP080003 (Calibrator serial number: AC300005899)

The monitoring stations (MS) or locations of this noise survey at Jardines de Loíza Apartments perimeter are described in the table shown above. Refer to Figure #3 for these locations.

Table #2- Noise Survey Data Collected on Nighttime Period

Meter	Monitoring Station (MS)	Time	Run Time	Description – Refer to figure #3 for locations
1	1	05:45:45 am	00:30:07	Located at north side.
2	2	05:44:51 am	00:30:20	Located at west side.
1	3	06:19:55 am	00:30:07	Located at east side.
2	4	06:18:52 am	00:32:34	Located at south side.

Table #3- Noise Survey Data Collected on Daytime Period

Meter	Monitoring Station (MS)	Time	Run Time	Description- Refer to figure #3 for locations
1	1	07:02:21 am	00:30:39	Located at north side.
2	2	07:01:46 am	00:30:11	Located at west side.
1	3	07:35:27 am	00:30:12	Located at east side.
2	4	07:33:16 am	00:32:00	Located at south side.

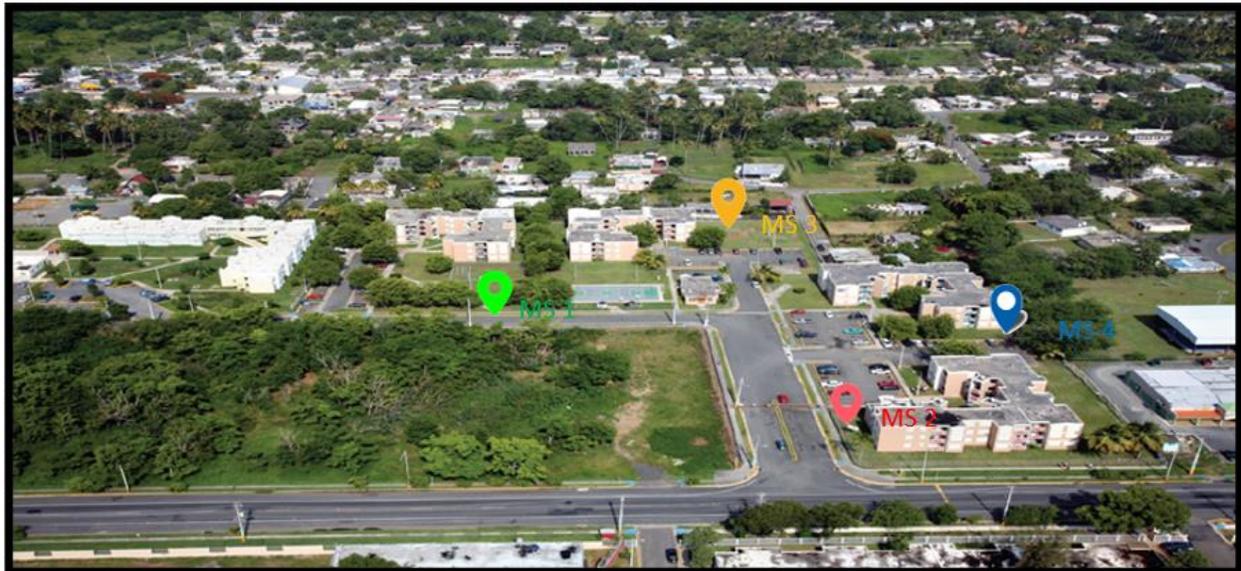


Figure #3- Monitoring Station Locations on Jardines de Loíza Apartments Aerial Photo

The monitoring stations (MS) for daytime and nighttime period are described as:

- **Monitoring Station #1:** Located at north side. Refer to Figure #3, the green pin.
- **Monitoring Station #2:** Located at west side. Refer to Figure #3, the red pin.
- **Monitoring Station #3:** Located at east side. Refer to Figure #3, the yellow pin.
- **Monitoring Station #4:** Located at south side. Refer to Figure #3, the blue pin.

***Note:** No rain events occurred during the noise survey. See Appendix 4 for Field Notes.



Figure #5- Monitoring Stations #1 location (North Side).



Figure #6- Monitoring Stations #2 location (West side).



Figure #7- Monitoring Stations #3 location (East Side).



Figure #8- Monitoring Stations #4 location (South Side).

Task 2) Preparation of Report - This report summarizes the results of the noise survey and was prepared for client use and discussions as they consider pertinent. Report includes findings, explanation of existing particular conditions during this noise survey, and interpretations of results, conclusions and recommendations, as applicable. **Appendix 3** includes the noise level measurements data and associated graphs as collected by the sound level meters, data logged and retrieved at the end of the study.

REPORT OF RESULTS

On October 6, 2020, a noise survey was performed during the day and night periods establish by EQB. No rain events occurred during the noise survey. The levels of this survey will be compared to the levels established on the regulation.

The detailed results of this survey are illustrated in Appendix 3. A summary was prepared using LDN values for each monitoring station. The LDN represents the day / night sound level, this measurement is a 24 – hour average sound level where 10 dB is added to all the readings that occur between 10 pm and 7 am. The results of this survey are presented in tables #IV & V, and in figure #9.

Table #4- Readings Recorded by the Sound Level Meters (Nighttime Period)

Monitoring Stations (MS)	LDN
Monitoring Station 1	66.0 dB
Monitoring Station 2	68.8 dB
Monitoring Station 3	64.0 dB
Monitoring Station 4	64.7 dB
Average Nighttime LDN	65.9 dB

Table #5- Readings Recorded by the Sound Level Meters (Daytime Period)

Monitoring Stations (MS)	LDN
Monitoring Station 1	51.7 dB
Monitoring Station 2	56.4 dB
Monitoring Station 3	53.4 dB
Monitoring Station 4	53.1 dB
Average Daytime LDN	54.0 dB

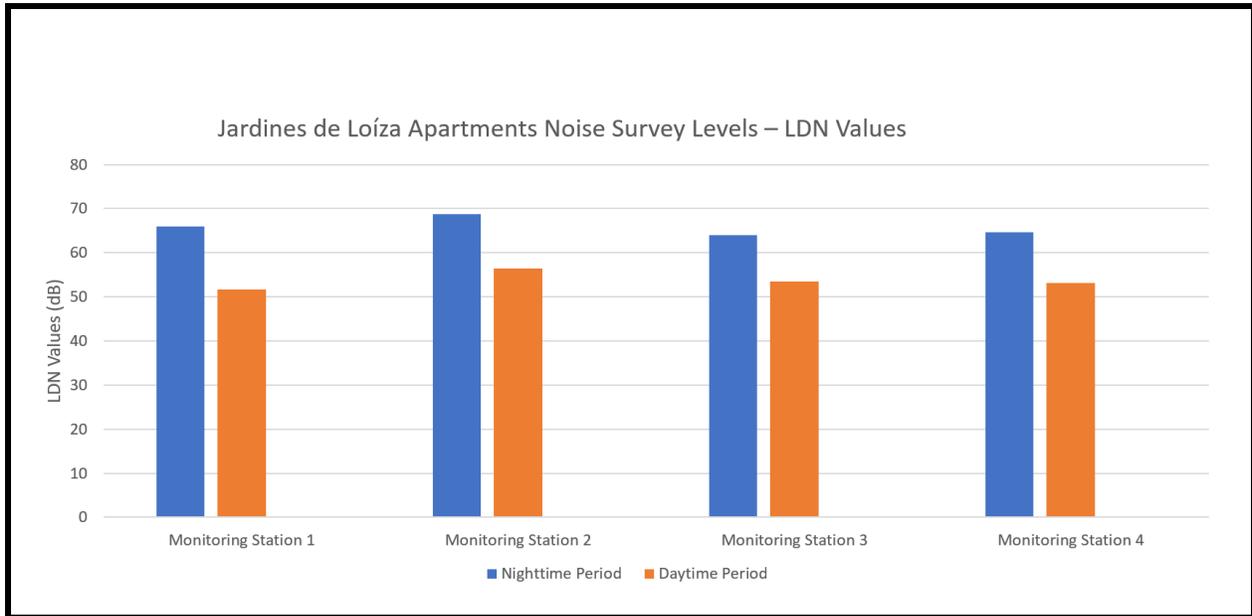


Figure #9- Monitoring Stations LDN Values.

A Calculated Time-Weighted Average for 24 hours is presented below:

$$\begin{aligned}
 \text{Weighted Average 24 hours} &= ((15/24) * \text{Daytime Period LDN}) + ((9/24) * \text{Nighttime Period LDN}) \\
 &= ((15/24) * 54.0 \text{ dB}) + ((9/24) * 65.9 \text{ dB}) \\
 &= 33.75 \text{ dB} + 24.71 \text{ dB}
 \end{aligned}$$

Calculated Time-Weighted LDN Average 24 hours = 58.5 dB

INTERPRETATION OF RESULTS

The EQB’s Noise Pollution Control Regulation entitled “*Reglamento para el Control de la Contaminación de Ruido*” and HUD Noise criteria (Appendix 1) under 24 CFR 51 established the guidelines for an exterior noise level of 65 dB or lower is considered acceptable by HUD.

The LDN represents the 24 hours average sound level. For daytime period the Time – Weighted Average LDN is 54.0 dB. For nighttime period the Time – Weighted Average LDN is 65.9 dB.

Based on the data collected during the noise survey at daytime and nighttime, the Calculated Time – Weighted LDN Average _{24 hours} is 58.5 dB reveal a LDN level acceptable using the acceptability criterion of 65 dB for exterior.

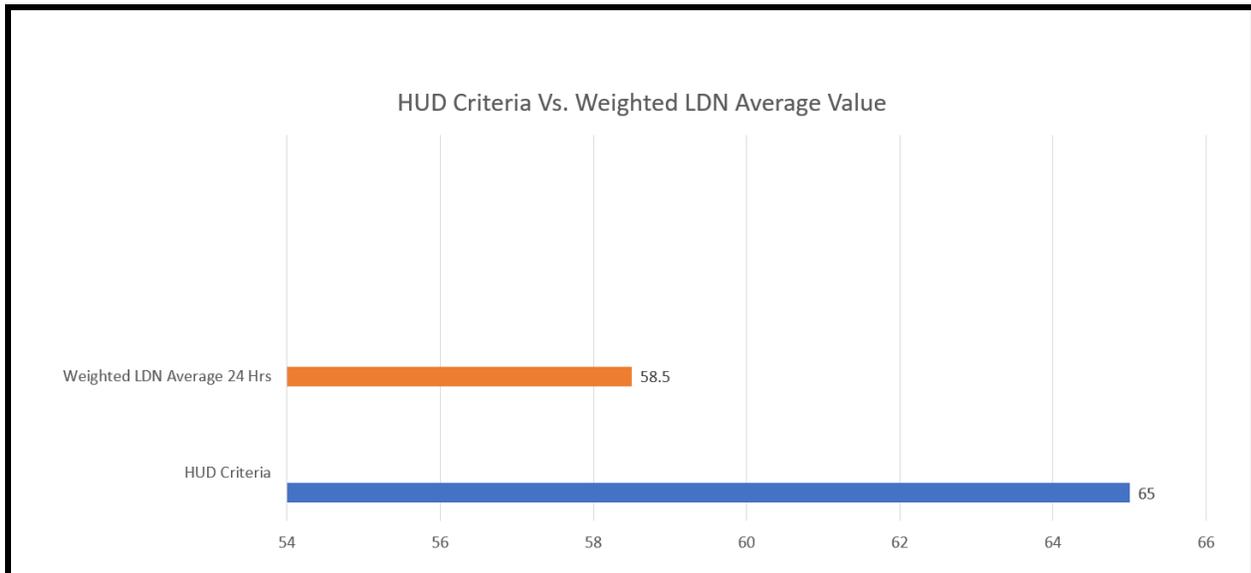


Figure #10- HUD Criteria -vs- Weighted LDN Average Value.

CONCLUSIONS AND RECOMMENDATIONS

The HUD noise acceptability criterion of 65 dB for exterior of the Jardines de Loíza Apartments was met and in our opinion no further restrictions or controls are applicable to this project.

ACRONYMS

SPL - Sound Pressure Level will be displayed, with the selected weighting and response characteristics. The value displayed is the maximum SPL during the previous second. (SPL is also always shown in the display bar indicator.)

LEQ - The average integrated sound level accumulated while in the RUN mode is shown in the numeric display. LEQ indicates that a 3dB exchange rate was used for the measurements.

LAVG - The same type of measurement as LEQ, except that a 4, 5 or 6dB exchange rate was used. The display will be correct for the exchange rate selected.

TWA - Time Weighted Average. The average level accumulated during a study, but calculated with an eight-hour integration time.

LMAX - The Maximum SPL obtained while in the RUN mode is shown in the numeric display. With PEAK response selected, this functions as a Peak Hold.

LMIN - The Minimum Sound Pressure Level obtained while in the RUN mode is shown in the numeric display.

LN - The SPL exceeded for N of the time during a study. Four user selectable values are calculated. The default values are L5, L10, L50 and L90. The values may be changed in the PARA Setup Menu.

LDN - Day/Night Sound Level. The average sound pressure over a 24 hour study, with additional factors for time of day. Sound pressures between the hours of 10 pm and 7 am are increased by 10dB prior to being averaged. A 3dB exchange rate should be used and is generally assumed.

CNEL - Community Noise Exposure Level. The average sound pressure over a 24 hour study, with additional factors for time of day. Sound pressures between the hours of 7 pm and 10 pm are increased by 5dB prior to being averaged. Sound pressures between the hours of 10 pm and 7 am are increased by 10dB prior to being averaged. A 3dB exchange rate should be used and is generally assumed. If an exchange rate other than 3dB is selected via the Setup Menu, CNEL will not be calculated and the display will show.

% OL - Percentage of time during the study that an overload (OL) condition occurred. Overload indicates that the signal has exceeded the measuring range.

SEL - Sound Exposure in Pascal-squared seconds or Pascal-squared hours, switching from Pa2S to Pa2H at 3600 Pa2S. The display will show if the exchange rate is not 3dB.

SEL - The Sound Exposure Level is the constant Sound level which, if lasting for one Second, would deliver the same amount of acoustical energy as that accumulated over the entire Study

RTMS or **RTHM** - The total RUN time will be displayed. Time may be displayed in MIN:SEC and HRS:MIN. The MIN:SEC display for a Study that lasts over one hour will wrap around to 00:00. The HRS:MIN display will count to 99:59 and then wrap around to 00:00 but the actual time will be stored in memory.

LPK - The Peak Level. The output of a second peak detector may be viewed as LPK or logged. The frequency weighting is independent of the main RMS detector and may be set in the PAPA setup menu as 2PK. The selection of whether or not to log peaks is made in the LOG Setup Menu. The weighting selection (A, C or LIN) is made in the PAPA Setup Menu. While viewing LPK the weighting of the second peak detector is displayed, and the Weighting and Response keys are disabled.

LLOG - The LEQ (or LAVG) last logged during a study. Data is logged at a user defined interval. This feature may be used to display a timed LEQ for the previous logging interval. This display updates at the end of each logging interval. The display will show LLOG " if LEQ is not being logged.

TAKM - The time integration of individual Taktmaximal values. Taktmaximal is the maximum level (LMAX) encountered over either a 3 or 5 second interval. 3 or 5 second Taktmaximal is selected in the PAPA Setup Menu. Individual Taktmaximal (LMAX) values may be logged by setting the logging interval to 3 or 5 seconds in the LOG Setup Menu. Taktmaximal measurements are required by some countries' noise regulations. A Taktmaximal measurement calculates a higher average level for highly impulsive sounds than does a LEQ measurement. TAKM is affected by the Exchange Rate and should be run with an Exchange Rate of 3dB.

BATT - Displays the voltage of the weaker of the two 9 volt batteries to give an indication of remaining life. The low battery indication (DAT) on the display occurs at approximately 6.8 volts.

LC-A - An optional second RMS detector may be used to provide a simultaneous C-A weighted LEQ or LAVG of the measured sound. Refer to section 3.6 C-A Option".

DEFINITIONS

DbA- Sound level in decibels read on the A scale of sound-level meter. The A scale of a sound discriminates against very low frequencies (as does the human ear) and is therefore better for measuring general sound levels.

dBC- Sound level in decibels read on the C scale of sound-level meter. The C scale discriminates very little against very low frequencies.

Decibel (dB)- A unit used to express sound-power level (L and sound-pressure level (Lv). Sound power is the total acoustic output of a sound source in watts (W). By definition, sound-power level, in decibels, is: $L_w = 10 \log W/W_o$, where W is the sound power of the source and W_o is the reference sound power of 10^{-12} . Because the decibel is also used to describe other physical quantities, such as electrical current and electrical voltage, the correct reference quantity must be specified.

Far field- In noise measurements, this refers to the distance from the noise source where the sound-pressure level decreases 6 dBA for each doubling of distance (inverse square law).

Filter- A device for separating components of a signal on the basis of its frequency. It allows components in one or more frequency bands to pass relatively unattenuated, and it greatly attenuates components in other frequency bands.

Free sound field (free field)- A field in a homogeneous, isotropic medium free from boundaries. In practice it is a field in which the effects of the boundaries are negligible over the region of interest.

Frequency (in Hz)- Rate at which pressure oscillations are produced One hertz is equivalent to one cycle per second A subjective characteristic of sound related to frequency is pitch.

Hearing conservation- The prevention or minimizing of noise-induced deafness through the use of hearing protection devices, the control of noise through engineering methods, annual audiometric tests, and employee training.

Hearing level- The deviation in decibels of an individual's threshold from the zero reference of the audiometer.

Near Field- In noise measurements, refers to a field in the immediate vicinity of the noise source where the sound-pressure level does not follow the inverse square law.

Noise- Any unwanted sound.

Pink noise- Noise that has been weighted, especially at the low end of the spectrum, so that the energy per band (usually octave band) is approximately constant over the spectrum.

Sound absorption coefficient- The ratio of the sound energy absorbed by the surface of a medium (or material) exposed to a sound field (or to sound radiation) to the sound energy incident on that surface.

Sound analyzer- A device for measuring the band-pressure level or pressure-spectrum level of a sound as a function of frequency.

Sound level- A weighted sound-pressure level obtained by the use of metering characteristics and the weighting A, B, or C specified in ANSI S1.4.

Sound-level meter and octave-band analyzer- Instruments for measuring sound-pressure levels in decibels referenced to 0.0002 microbars. Readings can also be made in specific octave bands, usually beginning at 75 Hz and continuing through 10,000 Hz.

Sound-pressure level, SPL- The level, in decibels, of a sound is 20 times the logarithm to the base 10 of the ratio of the pressure of this sound to the reference pressure, which must be explicitly stated.

Sound transmission- The word sound usually means sound waves traveling in air. However, sound waves also travel in solids and liquids. These sound waves may be transmitted to air to make sound we can hear.

APPENDIX 1: “REGLAMENTO PARA EL CONTROL DE LA CONTAMINACIÓN DE RUIDO”



DEPARTAMENTO DE ESTADO

Número: 8019

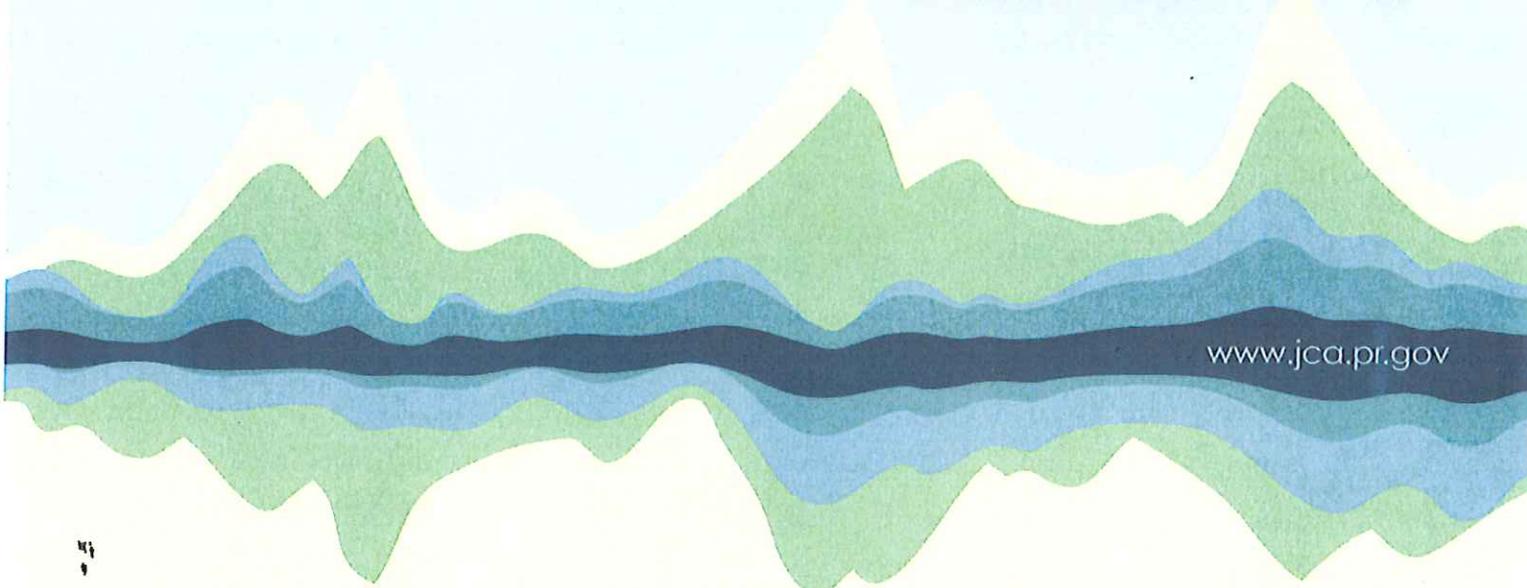
Fecha: 9 de mayo de 2011

Aprobado: Hon. Kenneth D. McClintock
Secretario de Estado



Por: Eduardo Arosemena Muñoz
Secretario Auxiliar de Servicios

Reglamento para el control de la CONTAMINACIÓN por RUIDOS



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DEPARTAMENTO DE ESTADO
CERTIFICACIONES Y
REGULACIONES
MAY - 9 PM 3:51

Título del Reglamento: Reglamento para el Control de Contaminación por Ruidos

Fecha de aprobación 5 de mayo de 2011 (Resolución R-11-7-1)

Aprobación: Junta de Gobierno en pleno compuesta por:

Sr. Reynaldo Matos
Miembro Asociado

Lcda. Blanche Gonzalez Hodge
Miembro Asociado

Lcdo. Pedro J. Nieves Miranda
Presidente

Fecha de publicación del Aviso Público: 1 de mayo de 2010, periódico El Vocero
1 de mayo de 2010, periódico Primera Hora
11 de septiembre de 2010, periódico Primera Hora
11 de septiembre de 2010, periódico El Vocero

Agencia que lo aprobó: Junta de Calidad Ambiental
Edificio Agencias Ambientales Cruz A. Matos
Urb. San José Industrial Park
1375 Avenida Ponce de León
San Juan, Puerto Rico 00926-2604

Referencia sobre autoridad estatutaria para promulgar el reglamento: Ley sobre Política Pública Ambiental, Ley Núm. 416 de 22 de septiembre de 2004, según enmendada

Reglamento Número: _____

Fecha de Radicación en el
Departamento de Estado: _____

Fecha de Vigencia: _____

Reglamento a enmendarse: Reglamento para el Control de la
Contaminación por Ruidos,
Reglamento Núm. 3418 de 25 de
febrero de 1987.

CERTIFICACIÓN

Certifico que el procedimiento de reglamentación seguido en este caso se llevó a tenor con las disposiciones de la Ley de Procedimiento Administrativo Uniforme, Ley Núm. 170 de 12 de agosto de 1988, según enmendada, y que el reglamento a que hace referencia este Volante Supletorio fue debidamente revisado y no contiene errores sustantivos, tipográficos o clericales. Además, Certifico que con el Volante Supletorio se acompaña copia de los avisos de prensa publicados.



Lcda. Edmée Zeidan Cuebas
Secretaria de la Junta de Gobierno de
la Junta de Calidad Ambiental

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PARTE I: DISPOSICIONES GENERALES

REGLA 1 – TÍTULO

Estas Reglas se conocerán como Reglamento para el Control de la Contaminación por Ruidos.

REGLA 2 – BASE LEGAL

Este Reglamento es promulgado bajo la autoridad conferida a la Junta de Calidad Ambiental de Puerto Rico, en adelante la JCA, mediante la Ley sobre Política Pública Ambiental, Ley Núm. 416 del 22 de septiembre de 2004, según enmendada, y de conformidad con las disposiciones de la Ley de Procedimiento Administrativo Uniforme, Ley Núm. 170 del 22 de agosto de 1988, según enmendada.

REGLA 3 – ENMIENDA AL REGLAMENTO PARA EL CONTROL DE LA CONTAMINACIÓN POR RUIDO

Este Reglamento enmienda el Reglamento para el Control de la Contaminación por Ruidos, Reglamento Núm. 3418 de 25 de febrero de 1987.

REGLA 4 – PROPÓSITO

Los propósitos de este Reglamento son:

- A. Establecer las normas y requisitos para el control, disminución o eliminación de ruidos que puedan resultar nocivos a la salud y perturbar el bienestar público.
- B. Establecer los requisitos para los niveles de emisiones de ruido entre zonas y para la administración y procedimientos relacionados con la valoración de los niveles sonoros.

REGLA 5 – VIGENCIA DEL REGLAMENTO

- A. Este Reglamento comenzará a regir a los treinta (30) días de su radicación en el Departamento de Estado.

- B. Todos los asuntos que hayan sido presentados con antelación a la vigencia de este Reglamento y que se encuentren pendientes ante la JCA o un tribunal con jurisdicción y competencia, continuarán su curso de acuerdo a lo establecido en el Reglamento Núm. 3418 de 24 de febrero de 1987.

REGLA 6 – CLÁUSULA DE SEPARABILIDAD

Si cualquier disposición del presente Reglamento fuese declarada ilegal o inconstitucional por un tribunal con jurisdicción y competencia, tal decisión no afectará las demás disposiciones del mismo, las cuales se mantendrán en pleno efecto y vigor, considerándose cada una por separado.

REGLA 7 – DISPOSICIONES CONFLICTIVAS O CONTRADICTORIAS

Cuando dos o más disposiciones de este Reglamento sean aplicables a la misma situación de hechos y éstas resultaran ser contradictorias o conflictivas entre sí, se aplicará la disposición que sea más restrictiva.

REGLA 8-9 –RESERVADAS

PARTE II: DEFINICIONES

REGLA 10 – DEFINICIONES

Para propósitos de este Reglamento, los siguientes términos tendrán los significados que se expresan a continuación y deberá entenderse que el singular incluye el plural y el masculino incluye el femenino:

- A. Aerogenerador** – es un aparato que convierte la energía eólica en energía eléctrica mediante un generador accionado por el viento, conocido también como turbina eólica. Sus componentes estructurales y mecánicos incluyen una torre, góndola (en inglés, "nacelle"), generador, sistema de control y cimientos, entre otros.
- B. Amortiguador de sonido ("muffler")** – es cualquier dispositivo o artefacto utilizado para reducir el sonido producido por la emisión de gases provenientes de un motor de combustión interna.
- C. Bocina de aire** – es cualquier artefacto que se utilice para producir una señal de sonido y para lo cual se utilice gas comprimido.

- D. Construcción** – es cualquier actividad relacionada a la instalación de un equipo generador de sonido, movimiento de terreno, demolición, remoción o disposición, excavación y operaciones de terminaciones en edificios, predios, derechos de vías, estructuras públicas o privadas o propiedad similar.
- E. Contaminación por ruido** – es cualquier emisión de sonido que exceda los niveles de ruido permitidos en este Reglamento.
- F. Decibello o Decibel (dB)** – es una unidad para medir la intensidad del sonido, la cual es igual a veinte (20) veces el logaritmo de base 10 de la razón entre la presión del sonido y la presión de referencia, la que es 20 micro pascuales (μPa).
- G. dB(A)** – es la unidad de medida utilizada para comparar magnitudes del total de la presión de sonido cuando se usa la escala de medición "A" del sonómetro y usando una presión de referencia de 20 micro pascuales (μPa).
- H. Demolición** – es la destrucción, remoción o desmantelamiento intencional de estructuras de forma total o parcial, tales como, pero sin limitarse a, edificios públicos o privados, superficies de vía u otros similares.
- I. Día de la semana** – es cualquier día natural de la semana.
- J. Emergencia** – es cualquier determinación hecha por el Director Ejecutivo de la JCA o la Junta de Gobierno de la JCA, mediante Resolución al respecto, ante un evento particular, sobre cualquier situación o serie de situaciones que ponen en peligro real o inminente a cualquier persona, propiedad o recurso, y para el cual se requiere atención inmediata. Se entenderá también como emergencia, cualquier anomalía causada por un evento natural o tecnológico, tales como huracán, tornado, tormenta, inundación, terremoto, maremoto, derrumbe de tierra, sequía, incendio, explosión, accidente o materiales peligrosos, entre otros; cualquier grave perturbación del orden público o un ataque por fuerza enemiga a través de sabotaje o mediante el uso de bombas, artillería o explosivo de cualquier género o por medio atómico, radiológico, químico o bacteriológico, así como también por cualquier otro medio que utilice el enemigo en cualquier parte de Puerto Rico y que amerite que se movilicen y se utilicen recursos humanos y económicos extraordinarios a nivel estatal y municipal para remediar los daños causados o evitar los que puedan surgir en ese estado o para prevenir o disminuir la amenaza de que la emergencia pueda convertirse en un desastre.
- K. Emisión de Sonido** – es la emanación de sonido a la atmósfera por una

fuente emisora.

- L. Espectro sonoro** – es la descripción de un sonido en términos de sus componentes de frecuencia. Se utiliza el análisis en bandas de 1/1 octava, 1/3 octava y el análisis de Fourier (FFT).
- M. Fuente emisora** – es cualquier objeto o artefacto originador de ondas sonoras, sea de tipo estacionario, móvil o portátil.
- N. Góndola ("nacelle")** – es la estructura en la cima de la torre de un aerogenerador que contiene todos los componentes generatrices del aerogenerador, incluyendo el multiplicador y el generador eléctrico, entre otros.
- O. Junta de Calidad Ambiental (JCA)** – es la agencia del Gobierno de Puerto Rico creada por la Ley Núm. 416 de 22 de septiembre de 2004, según enmendada, conocida como la Ley sobre Política Pública Ambiental.
- P. Junta de Gobierno de la JCA** – es el organismo rector de la Junta de Calidad Ambiental, el cual se compone de tres miembros nombrados por el Gobernador con el consejo y consentimiento del Senado y se compone de un Presidente, un Vice-Presidente y un Miembro Asociado. Un Miembro Alterno, que también es nombrado por el Gobernador, podrá sustituir a cualquiera de los miembros asociados cuando uno de estos no se encuentre presente.
- Q. K_I** – es la penalización por ruidos impulsivos ($L_{im} - L_{eq}$).
- R. K_t** – es la penalización por tonos prominentes.
- S. L_{10}** – es el nivel de sonido en la escala A, dB (A), que es excedido en un diez por ciento (10%) del tiempo para un determinado periodo bajo consideración.
- T. L_{90}** – representa el nivel que ha superado el 90% del tiempo de medida. Es indicativo de los valores bajos de ruido.
- U. L_{im}** – es el nivel máximo de presión observado con detección de "impulsos".
- V. $L_{equivalente} (L_{eq})$** – es el nivel sonoro continuo equivalente; es decir, el nivel constante, dB(A), que puede producir la misma energía sonora (medida en escala A) que un sonido variante especificado en un tiempo establecido.
- W. $L_{equivalente\ tiempo} (L_{eq\ T})$** – es el nivel sonoro continuo equivalente. Éste se

define como el valor del nivel de presión en dB en ponderación A de un sonido estable que en un intervalo de tiempo (T) posee la misma presión sonora cuadrática media (P_{rms} : valor eficaz) que el sonido que se mide y cuyo nivel varía con el tiempo.

X. LICA – el nivel máximo permitido a la fuente por este Reglamento, excluyendo la influencia del ruido de fondo.

Y. Límite de propiedad – es límite de la colindancia del predio donde ubica la fuente originadora de sonido.

Z. Medición de Sonido – es la recopilación de datos sonoros de acuerdo a los procedimientos establecidos por la Junta de Calidad Ambiental.

AA. Nivel de presión acústica ("Sound Pressure Level" o SPL) – es la cantidad en decibeles que se obtiene como resultado del cálculo matemático que consiste del producto de 20 por el logaritmo de base 10 de la razón entre la presión acústica registrada (P) y el valor de la presión acústica de referencia (P_{ref}) que equivale a 2×10^{-5} Newtons/m²; esto es, " $20 \cdot \log_{10} (P/P_{ref})$ ".

BB. Nivel de sonido o nivel sonoro – es el nivel de presión de sonido medido mediante las características de medición y escalas A, B o C, tal como lo especifica la última revisión de "*Specification for Sound Level Meters*" de la "*American National Standards Institute*" (ANSI).

CC. Ondas de sonido – son las variaciones periódicas ondulatorias de sonido en la densidad y en la presión del medio.

DD. Onda sonora – es la variación en la presión de un medio (típicamente, el aire) y que se propaga a una velocidad característica.

EE. Parte responsable – es toda persona natural o jurídica que sea dueño u operador de la fuente emisora del ruido causando un incumplimiento con este Reglamento.

FF. Periodo diurno – es el periodo comprendido entre las 7:00 a.m. y las 10:00 p.m. de cualquier día de la semana.

GG. Periodo nocturno – es el periodo comprendido entre las 10:01 p.m. de un día y las 6:59 a.m. del día siguiente.

HH. Persona – es toda persona, natural o jurídica, o grupo de personas privadas o públicas, incluyendo agencias e instrumentalidades del gobierno, municipios u otras similares.

II. Predio originador de sonido – es el sitio, local o lugar de origen de ondas sonoras o cualquier área geográfica, incluyendo todos los terrenos y cuerpos de agua contiguos. Éste comprende todas las fuentes individuales de sonido que estén localizadas dentro de los límites de dicha propiedad, ya sean de tipo estacionario, móvil o portátil.

JJ. Predio originador de sonido existente – es cualquier predio originador de sonido existente a la fecha de vigencia de este Reglamento.

KK. Predio originador de sonido nuevo o modificado – es cualquier predio originador de sonido que sea establecido en una fecha posterior a la vigencia de este Reglamento, o que existiendo sea modificado de alguna manera.

LL. Presión acústica – son las variaciones en la fuerza por unidad de área, medida en Newtons/metro², que se observa en un medio durante la propagación de una onda acústica. Para el caso del medio "aire", se registran variaciones por encima y por debajo de la presión atmosférica local.

MM. Presión de onda sonora– se representa como "Lp" y se expresa en decibeles. Esta cantidad se obtiene como resultado de un cálculo matemático que consiste del producto de 20 por el logaritmo de base 10 de la razón entre la presión de sonido (P) y una presión de referencia (P_{ref}) de 20 micro pascales (μPa); esto es, $L_p = 20 \cdot \log_{10} (P/P_{ref})$.

NN. Rotor – está compuesto por varias palas y es el que transforma la energía cinética del viento en un momento torsor en el eje del equipo.

OO. Ruido – es un sonido que excede las limitaciones (valores) establecidos en este Reglamento. El sonido podría o no resultar indeseable y afectar psicológicamente y/o fisiológicamente al ser humano.

PP. Ruido continuo – es aquel ruido que se manifiesta ininterrumpidamente durante más de tres minutos. Dentro de esta categoría se diferencian las siguientes tres situaciones:

1. Ruido continuo fluctuante – es aquel ruido cuyo nivel de presión acústica, (SPL), varía entre unos límites que difieren en más de 6 dB(A) cuando se utiliza la respuesta rápida ("fast") del sonómetro.

2. Ruido continuo uniforme – es aquel ruido cuyo nivel de presión acústica, (SPL), varía entre unos límites que difieren en menos de 3 dB(A) cuando se utiliza la respuesta rápida ("fast") del sonómetro.

- 3. Ruido continuo variable** – es aquel ruido cuyo nivel de presión acústica, (SPL), varía entre unos límites que van desde 3 a 6 dB(A) cuando se utiliza la respuesta rápida (“fast”) del sonómetro.
- QQ. Ruido de fondo ambiental** – es el ruido existente en un ambiente dado y que se compone, usualmente, de sonidos de diversas fuentes, cercanas y lejanas. Se excluye la fuente de ruido que da lugar a la querrela.
- RR. Ruido de fondo despreciable** – es un ruido de fondo cuyo nivel está sobre los 10 dB de diferencia al de la fuente sonora que se desea medir.
- SS. Ruido de fondo elevado** – es un ruido de fondo cuya diferencia es menor de 3 dB cuando se compara con el ruido de la fuente sonora.
- TT. Ruido esporádico** – es aquel ruido que se manifiesta interrumpidamente durante un periodo de tiempo igual o menor de tres (3) minutos.
- UU. Ruido esporádico aleatorio** – es aquel ruido esporádico que se produce de forma totalmente impredecible.
- VV. Ruido esporádico intermitente** – es aquel ruido esporádico que se repite en periodos de tiempo que son posibles de determinar.
- WW. Ruido estridente** – es un ruido agudo, desapacible y chirriante.
- XX. Ruido impulsivo** – es un ruido procedente de un sonido impulsivo.
- YY. Ruido perturbador** – es un ruido que atenta contra la paz y/o tranquilidad de una persona y que viola las disposiciones de este Reglamento.
- ZZ. Sistema de generación de energía eólica** – es un sistema compuesto de uno o más aerogeneradores y sus obras accesorias. Para propósito de este Reglamento, este sistema podrá clasificarse en uno de tres grupos básicos conforme a las siguientes definiciones:
- 1. Sistema de generación de energía eólica de escala pequeña** – es aquel que en total tiene una capacidad nominal para generar hasta veinte (20) kilowatts (kW) de electricidad.
 - 2. Sistemas de generación de energía eólica de escala mediana o distribuida** – es aquel que se compone de uno (1) a cinco (5) aerogeneradores y que en total tiene una capacidad nominal para generar más de veinte (20) kilowatts (kW) de electricidad, pero en el que

ninguno de los aerogeneradores tiene la capacidad para generar individualmente más de un (1) megawatt (MW) de electricidad.

3. Sistemas de generación de energía eólica de gran escala o escala industrial – es aquel que se compone de más de cinco (5) aerogeneradores o que, de estar compuesto por menos de cinco (5) aerogeneradores, incluye al menos un (1) aerogenerador que tiene la capacidad individual para generar un (1) megawatt (MW) de electricidad o más.

AAA. Sonido – es un fenómeno físico en el cual la materia se pone en vibración y genera una onda acústica en un medio particular que es captada por un receptor. Éste se puede describir usando diversas características, tales como: longitud de onda, velocidad de propagación, nivel sonoro, contenido espectral y duración.

BBB. Sonido impulsivo – es un sonido de muy corta duración, generalmente de una fracción de segundo y con una abrupta subida y rápida disminución de presión acústica. Ejemplos típicos de este tipo de sonido son las explosiones, impactos de martillo, descargas de armas de fuego, entre otros.

CCC. Sonido indeseable – es aquel sonido que excede los niveles permitidos en este Reglamento.

DDD. Sonómetro – es un instrumento que se usa para medir los niveles de sonido, de acuerdo con el "Specification for Sound Level Meters" Type 1 y 2, o la última revisión aprobada de la "American National Standards Institute" (ANSI). Incluye el sonómetro de precisión calibrada y el sonómetro integrado de precisión.

EEE. Tono – es un sonido caracterizado por una sola frecuencia e incluye cualquier sonido que pueda ser percibido como un tono único o una sucesión de tonos.

FFF. Torre – es una estructura que soporta la góndola y el rotor en un aerogenerador.

GGG. Vehículo de motor – es cualquier vehículo impulsado o movido sobre el terreno por un motor. Incluye vehículos tales como, pero sin limitarse a, vehículos de pasajeros, camiones, camiones de arrastre, arrastres de acampar, vehículos de carreras, vehículos de recreación y motocicletas.

HHH. Vía pública – es cualquier vía, calle, carretera, autopista, avenida, callejón, acera o espacio similar destinado al uso público.

III. Vibración – es un movimiento oscilatorio de cuerpos materiales y que es descrito por las variables de velocidad, aceleración y amplitud.

JJJ. Zona – cualquiera de las áreas en la que el ser humano lleva a cabo diversas actividades y que han sido clasificadas en este Reglamento como: zona de tranquilidad, zona residencial, zona comercial o zona industrial.

KKK. Zona Comercial – área donde se agrupan locales comerciales no habitados por humanos y en los que se vende toda clase de mercancía o se brindan servicios misceláneos. En esta zona se permiten niveles superiores a los permitidos en las zonas residenciales, pero inferiores a los niveles de ruido en las zonas industriales. Esta definición incluye, pero no se limita, a áreas tales como las siguientes: establecimientos comerciales de alimentos, estaciones de servicios de vehículos, recreación y entretenimiento, servicios comunales.

LLL. Zona de Tranquilidad – área previamente designada por el gobierno estatal, municipal o federal, en la que haya necesidad de una tranquilidad excepcional.

MMM. Zona Industrial – área de terreno subdividida y desarrollada, de acuerdo con un plan general, para el uso de una cantidad de empresas industriales en la cual los seres humanos van a permanecer por largos periodos de tiempo. Las actividades económicas que envuelve esta zona, son de tal naturaleza que se anticipan niveles mayores de ruido que en las otras zonas.

NNN. Zona Residencial – área en la cual los seres humanos habitan y donde los niveles de ruido pueden interferir con el disfrute de la propiedad. Ésta incluye todas las residencias, terrenos y estructuras. Dicha zona aplica también a cualquier sitio dentro de los límites de la propiedad, según sea aplicable.

PARTE III: DISPOSICIONES ADMINISTRATIVAS

REGLA 11 – DERECHO DE UN FUNCIONARIO A ACCEDER, INSPECCIONAR, EXAMINAR O LLEVAR A CABO CUALQUIER ACCIÓN PERTINENTE

A. La JCA, representada por sus miembros, agentes o empleados, podrá acceder, inspeccionar, examinar y llevar a cabo cualquier otra acción autorizada por este Reglamento, por la Ley sobre Política Pública Ambiental, *supra*, por la Ley de Procedimiento Administrativo Uniforme, *supra*, o por un Tribunal con jurisdicción y competencia. Estas acciones podrán llevarse a

cabo en cualquier local, equipo, instalación y/o documentos de cualquier persona, entidad, firma, agencia o instrumentalidad gubernamental sujeta a su jurisdicción. Estas gestiones serán realizadas con el fin de investigar, inspeccionar o tomar aquellas medidas que se estimen necesarias para asegurar las mejores condiciones ambientales, verificar el cumplimiento con las disposiciones de este Reglamento y tomar las medidas de sonido que la JCA estime necesarias.

- B. En caso de que a un funcionario de la JCA que esté identificado como tal, se le niegue el acceso o se le impida realizar una inspección o cualquier acción autorizada en ley, la JCA podrá expedir una orden administrativa u obtener una orden judicial, según los procedimientos dispuestos por la Ley sobre Política Pública Ambiental, *supra*, la Ley de Procedimiento Administrativo Uniforme, *supra*, o cualquier otra ley especial.
- C. Cualquier solicitud de documentos que se encuentre dentro del ámbito jurisdiccional de la JCA que sea hecha por un funcionario de esta agencia y que esté debidamente identificado y autorizado para llevar a cabo una inspección o cualquier asunto comprendido en la Ley de Política Pública Ambiental, *supra*, o en este Reglamento, tendrá que ser provista dentro de un término no mayor de cuarenta y ocho (48) horas o aquel período de tiempo que disponga la JCA.

REGLA 12 – INFORMACIÓN DISPONIBLE AL PÚBLICO

- A. Toda información recibida por la JCA estará disponible para ser inspeccionada y copiada por el público, según dispuesto en la Ley sobre Política Pública Ambiental, *supra*, en este Reglamento o en cualquier mecanismo que para ello se apruebe por la JCA.
- B. Cualquier persona que someta información y documentos a la JCA, podrá reclamar confidencialidad para toda o parte de la información o documento sometido. Dicha solicitud deberá realizarse por escrito y expondrá todas las razones por las cuales se solicita la confidencialidad.
- C. Cualquier información o documento presentado a la JCA sin haberse presentado la correspondiente solicitud de confidencialidad conforme a lo aquí dispuesto, estará disponible al público sin restricción alguna. La JCA adjudicará los reclamos de confidencialidad de conformidad con la Ley sobre Política Pública Ambiental, *supra*, o cualquier mecanismo que a tales efectos apruebe la Junta de Gobierno de la JCA.

REGLA 13 – NOTIFICACIÓN DE VIOLACIÓN Y ÓRDENES ADMINISTRATIVAS

- A. Siempre que la JCA encuentre que una o más disposiciones de este Reglamento han sido violadas o haya motivos fundados para pensar que han sido violadas, la JCA podrá, a su discreción, expedir por escrito una notificación de violación en contra del alegado infractor. Toda notificación especificará en qué consistió la violación y/o los aspectos que están fuera de cumplimiento con esta reglamentación.
- B. La notificación de la que habla el inciso anterior especificará los requisitos y las condiciones que la JCA determine necesarios y podrá incluir términos de tiempo para lograr cumplimiento. No obstante lo antes mencionado e independientemente de que se haya expedido una notificación de violación, la JCA podrá expedir una Orden Administrativa de Hacer, Mostrar Causa y/o, Cese y Desista, así como cualquier otra acción o provisión disponible en la Ley sobre Política Pública Ambiental, *supra*.

REGLA 14 – PENALIDADES

- A. Cualquier violación a este Reglamento estará sujeta a las penalidades según establecidas en la Ley sobre Política Pública Ambiental, *supra*.
- B. La imposición de penalidades se realizará luego de finalizado un proceso de vista administrativa, el que se conducirá según las disposiciones de la Ley de Procedimiento Administrativo Uniforme, *supra*, la Ley sobre Política Pública Ambiental, *supra*, y el reglamento aprobado por la JCA para la celebración de procedimientos y/o vistas administrativas.

REGLA 15 – ESTORBO PÚBLICO

Ninguna parte de este Reglamento deberá entenderse como que autoriza o legaliza la creación o mantenimiento de un estorbo público, según ha sido definido por las leyes estatales y federales.

REGLA 16 – ACCIONES LEGALES DE CIUDADANOS

Ninguna parte de este Reglamento deberá entenderse como un límite a las acciones legales civiles que pudiesen llevar los ciudadanos, según se establece en el Artículo 19 de la Ley sobre Política Pública Ambiental, *supra*.

REGLA 17 – RESPONSABILIDAD DE CUMPLIMIENTO

Este Reglamento no limita el derecho de persona alguna para exigir o lograr el cumplimiento con sus requisitos o para proveer los servicios requeridos al

contratar con terceros. Sin embargo, tales contratos no relevarán a ninguna persona de la obligación de cumplir con este Reglamento.

REGLA 18-19- RESERVADAS

PARTE IV: PROHIBICIONES Y REQUISITOS GENERALES

REGLA 20- PROHIBICIONES GENERALES

A. Acciones prohibidas

Queda prohibida cualquier acción u omisión en violación a los requisitos establecidos en este Reglamento. Por tanto, ninguna persona causará o permitirá que se produzca la contaminación por ruido debido a la emisión de cualquier sonido en violación a este Reglamento.

B. Información Falsa o Errónea.

Ninguna persona podrá someter por sí o por una tercera persona, información falsa o errónea a la JCA. Tampoco podrá incluir o permitir que se incluya información falsa en algún documento sometido a la JCA en virtud de este Reglamento.

C. Interferencia

Ninguna persona causará o permitirá:

1. La interferencia, alteración, remoción o destrucción de cualquier equipo de control de ruido, excepto que no sea para propósitos de reparación o reposición.
2. La interferencia intencional o alteración de cualquier instrumento, artefacto o área de localización debidamente rotulada, que haya sido localizado por o para la JCA con el propósito de llevar a cabo cualquier tipo de medición de sonido.
3. El uso de un producto al cual le haya sido removido o dejado inoperante el sistema de control de ruido, cualquier elemento de diseño de éste o su rótulo de nivel de sonido.

D. Registros o Récorde

La JCA podrá requerir del dueño o persona responsable de cualquier predio originador de sonido o fuente emisora de sonido, que establezca y mantenga un registro sobre la emisión de los mismos, así como preparar aquellos informes que, a juicio de la JCA, sean necesarios.

E. Mediciones

Todas las mediciones y los análisis de datos se harán de acuerdo con los métodos y procedimientos adoptados o aceptados por la JCA conforme a este Reglamento.

F. Equipo

Todo equipo para el control de la contaminación por ruidos deberá instalarse, conservarse y operarse en forma satisfactoria y razonable de acuerdo con las especificaciones del fabricante, de la "American National Standards Institute" (ANSI), *Specification for Sound Level Meter, S1.4-1971*, o su última revisión, así como con aquellos requisitos establecidos por la JCA.

REGLA 21 – RUIDOS PROHIBIDOS

A. Las siguientes acciones, entre otras, se declaran como ruidos contaminantes, excesivos, perturbadores y estridentes y están prohibidos por este Reglamento:

1. Bocinas y sirenas

Ninguna persona ocasionará o permitirá, innecesariamente, el sonar de bocinas y sirenas de cualquier vehículo de motor en una vía pública o predio originador de sonido, excepto como una señal de peligro o en casos de emergencia, según definido en este Reglamento.

2. Radios, instrumentos musicales, velloneras, amplificadores y artefactos similares

Ninguna persona operará o permitirá la operación de cualquier radio, instrumento musical, vellonera, amplificador o cualquier artefacto similar para la producción o reproducción de sonido, de tal forma que ocasione contaminación por ruido a través del límite de propiedad, en violación de los límites fijados en este Reglamento.

3. Altoparlantes exteriores, megáfonos y artefactos similares

Ninguna persona usará u operará o permitirá el uso u operación de cualquier altoparlante, megáfono o artefacto similar en una posición fija o movable en el exterior de cualquier estructura o vehículo de motor, en exceso de los niveles máximos permitidos bajo este Reglamento. No podrán usarse dichos artefactos durante el periodo nocturno.

4. Construcción

Ninguna persona usará u operará o permitirá el uso u operación de cualquier equipo para la construcción, reparación o trabajos de demolición, de forma que se produzca contaminación por ruido, según se define en este Reglamento. Además, se prohíbe el uso u operación de dicho equipo durante el periodo nocturno, excepto para realizar obras en casos de emergencia, según definido en este Reglamento.

Esta Sección no aplicará al uso de herramientas domésticas, sujeto a este Reglamento.

5. Vehículos de motor

- a. Ninguna persona operará o permitirá la operación de un vehículo de motor en una vía pública en cualquier momento de forma tal que los niveles de presión de sonido emitidos por el vehículo excedan los niveles máximos permisibles establecidos en este Reglamento. Tampoco se permitirá la operación de un vehículo de motor que no esté equipado por un sistema, aparato o artefacto amortiguador de sonido que opere eficientemente.
- b. Ninguna persona dejará operando o permitirá la operación de cualquier vehículo de motor o cualquier equipo auxiliar de arrastre estacionado en una vía pública o predio de estacionamiento público o privado, a una distancia menor de 150 pies de la zona designada como residencial o tranquilidad durante el periodo nocturno. Esta prohibición abarca todo equipo que forme parte del vehículo de motor, tales como, pero no limitados a, equipo de refrigeración o equipo similar.

6. Eventos de vehículos de motor de carreras

Ninguna persona realizará o permitirá la realización de pruebas o carreras de vehículos de motor, en violación de las normas establecidas

en este Reglamento. Dicha prohibición está exceptuada para aquellas pistas autorizadas en forma prescrita por la JCA.

7. Vehículos de recolección de desperdicios sólidos

- a. Ninguna persona operará o permitirá la operación del mecanismo de compactar desperdicios sólidos en cualquier vehículo de motor, de tal forma que durante el ciclo de compactación se exceda el nivel de presión de sonido de 76 dB(A) medido a una distancia de 23 pies o su equivalente, desde cualquier punto del vehículo.
- b. Ninguna persona recolectará o permitirá la recolección de desperdicios sólidos en las zonas residenciales y de tranquilidad entre las 10:00 p.m. de un día a las 6:00 a.m. del siguiente día.

8. Alarmas

Ninguna persona sonará o permitirá el sonar de cualquier alarma exterior en cualquier edificio o vehículo a menos que tal alarma cese su operación dentro de diez (10) minutos luego de ser activada y cuya finalidad tenga el propósito de alertar una emergencia u acto criminal.

9. Maquinaria, equipo, abanicos y acondicionador de aire

Ninguna persona operará o permitirá la operación de maquinaria, equipo, abanicos y acondicionadores de aire de tal forma que excedan los límites máximos de niveles de presión de sonido establecidos en este Reglamento.

10. Reparación y prueba de vehículos de motor

La reparación, remodelación, reconstrucción, fabricación o prueba de cualquier vehículo de motor o motocicletas estará sujeta a los niveles máximos permisibles de sonidos fijados en este Reglamento.

11. Equipo de motor doméstico (*Domestic Power Tools*)

Ninguna persona operará o permitirá la operación de equipos de motor tales como: sierras, lijadoras, taladros, máquinas de cortar grama y equipo de jardín o herramientas de cualquier naturaleza, usados primordialmente para propósitos domésticos en el exterior e interior de residencias, durante las horas que comprende el periodo nocturno. Tampoco se podrá operar o permitir la operación de tal equipo de motor

en cualquier momento, de tal forma que viole las disposiciones de este Reglamento.

12. Venta por pregono

Ninguna persona venderá o permitirá la venta de cualquier producto pregonando en cualquier área, mediante el uso de sistemas de amplificación, de forma que la emisión de sonidos exceda los niveles máximos permisibles especificados en este Reglamento. Además, queda prohibida la venta por pregono durante el periodo nocturno.

13. Vibración

Ninguna persona operará o permitirá la operación de cualquier artefacto que genere vibraciones causadas por ondas sonoras o presión de sonido que puedan percibirse sin instrumentos, o que esté sobre los límites de percepción de una persona, en o más allá de los límites de cualquier propiedad contigua a la fuente originadora.

- B. Zona de Tranquilidad – Ninguna persona emitirá o permitirá la emisión de cualquier ruido innecesario, inesperado o inusitado, en violación a este Reglamento, en zonas donde sea necesaria tranquilidad mientras la misma está en uso. El área designada como zona de tranquilidad deberá estar provista de señales y rótulos conspicuos que hayan sido desplegados en calles adyacentes o contiguas, indicando que la misma es una zona de tranquilidad.

REGLA 22-23 – RESERVADAS

PARTE V: CLASIFICACIÓN DE ZONAS Y LOS NIVELES DE EMISIÓN DE SONIDOS ENTRE ZONAS

REGLA 24 – APLICABILIDAD

Esta Parte aplica a la fuente emisora o predio originador de cualquier sonido que pueda cruzar los límites de propiedad y exceder los niveles establecidos en la Tabla I, según medido en la zona receptora apropiada.

REGLA 25 – CLASIFICACIÓN DE ZONAS

A. Zona I: Residencial – Incluye, pero no se limita, a áreas tales como las siguientes:

1. Residencias

- a. permanentes
- b. rurales o campestres
- c. de verano

2. Viviendas comerciales

- a. hoteles y moteles
- b. apartamentos alquilados
- c. parques de casas móviles
- d. campamentos
- e. cabañas
- f. casa de huéspedes
- g. dormitorios estudiantiles

3. Servicios a la comunidad

- a. orfanatos
- b. instituciones correccionales
- c. instituciones de caridad

B. Zona II: Comercial – Incluye, pero no se limita, a áreas tales como:

1. Establecimientos comerciales de alimentos

- a. restaurantes
- b. comedores
- c. cafeterías
- d. heladerías
- e. clubes nocturnos
- f. cafetería al aire libre o rodante
- g. carnicerías
- h. supermercados

2. Estaciones de servicios de vehículos

- a. gasolineras
- b. venta y renta de vehículos de motor

- c. estacionamientos de vehículos públicos y privados
- d. centro de lavado de vehículos de motor
- e. servicios de reparación (hojalatería, pintura y mecánica, electrónica)
- f. servicio de accesorios para vehículos de motor

3. Comerciales

- a. funeraria
- b. clínicas veterinarias
- c. barberías
- d. salones de Belleza
- e. lavanderías
- f. oficinas
- g. farmacias
- h. centros comerciales

4. Recreación y entretenimiento

- a. teatros
- b. estadios
- c. hipódromos
- d. campos de golf
- e. lugares de diversiones y recreación
- f. playas, Ríos, Lagos y Lagunas
- g. plazas públicas
- h. gimnasios
- i. salones de bailes y discotecas

5. Servicios comunales

- a. iglesias
- b. centros culturales
- c. cotos de caza y pesca
- d. bosques estatales o nacionales

C. Zona III: Industrial – Incluye, pero no se limita, a áreas tales como:

1. Establecimientos de carga y descarga

- a. ferreterías
- b. almacenes, madereras, tiendas de ventas al por mayor
- c. terminal de camiones
- d. muelles
- e. depósito de materiales de construcción

f. instalación de desperdicios sólidos no peligrosos o peligrosos

2. Área industrial: propiedades utilizadas en la fabricación de bienes de consumo

- a. minería
- b. industrias livianas y pesadas
- c. petroquímicas
- d. refinerías
- e. extracción y procesamiento de materiales de la corteza terrestre
- f. siderúrgicas
- g. canteras
- h. central termoeléctrica
- i. farmacéuticas
- j. procesamiento agroquímicos
- k. almacenamiento de tanques de gas

3. Agricultura: área utilizada en la producción de cultivos de cosechas y/o crianza de animales

- a. granjas avícolas, conejos, porcinos y apicultura (abejas)
- b. vaquerías
- c. invernaderos
- d. graneros
- e. siembra, cultivo
- f. caballerizas

D. Zona IV: Tranquilidad – Incluye, pero no se limita, a áreas tales como:

- 1. Hospitales
- 2. Clínicas
- 3. Hospitales de salud mental
- 4. Tribunales de justicia
- 5. Asilos de ancianos
- 6. Escuelas
- 7. Guardería o cuidados infantiles

REGLA 26 – LÍMITE DE NIVELES DE SONIDO

Ninguna persona emitirá o permitirá la emisión de cualquier sonido, el cual al cruzar el límite de propiedad del predio originador de sonido, pueda exceder los niveles establecidos en la Tabla I de este Reglamento, según medido en la zona receptora apropiada de acuerdo con las definiciones de este Reglamento.

REGLA 27 – LÍMITES DE NIVELES DE SONIDO PARA AEROGENERADORES O SISTEMAS DE GENERACIÓN DE ENERGÍA EÓLICA

A fin de establecer los límites de sonido para los casos en que la fuente emisora de sonido es un aerogenerador o sistema de generación de energía eólica, según definido en este Reglamento, se aplicará la Tabla I con los siguientes ajustes:

- A. Cuando la fuente emisora es un aerogenerador o sistema de generación de energía eólica y la zona receptora es una Zona I (residencial), para el periodo nocturno con un nivel de sonido establecido de 50 dB(A), se realizará el ajuste de añadir 5 dB(A), a fin de que el nivel de sonido en estos casos sea de 55 dB(A).
- B. Cuando la fuente emisora es un aerogenerador o sistema de generación de energía eólica y la zona receptora es una Zona IV (tranquilidad) para el periodo nocturno con un nivel de sonido establecido de 50 dB(A), se realizará el ajuste de añadir 5 dB(A), a fin de que el nivel de sonido en estos casos sea de 55 dB(A).

TABLA I
LIMITE DE NIVELES DE SONIDO
dB(A)

Nivel de Sonido Excedido en 10 % del Periodo de Medición (L₁₀)

FUENTE EMISORA	ZONAS RECEPTORAS							
	Zona I (Residencial)		Zona II (Comercial)		Zona III (Industrial)		Zona IV (Tranquilidad)	
	D	N	D	N	D	N	D	N
Zona I (Residencial)	60	50	65	55	70	60	55	50
Zona II (Comercial)	65	50	70	60	75	65	55	50
Zona III (Industrial)	65	50	70	65	75	75	55	50
Zona IV (Tranquilidad)	65	50	70	65	75	75	55	50

Nota: "D" implica el periodo diurno y "N" implica el periodo nocturno.

REGLA 28 – MONITOREO

- A. A los únicos fines de orientar sobre la reglamentación de la JCA a una potencial fuente de ruidos que se presume podría emitir ruidos en violación a este Reglamento, personal de la JCA podrá requerir el encendido de la fuente, siempre y cuando la misma esté instalada o construida. Dicho encendido se solicitará con el fin de evaluar los niveles de sonido que genera la fuente. De no estar en cumplimiento con este Reglamento, la JCA podrá emitir una Notificación de Cortesía apercibiéndole de las violaciones a las que se expone de encontrarse operando la fuente.
- B. La JCA podrá requerir de cualquier predio originador de sonido o fuente emisora de ruido, que instale, opere y mantenga un equipo de monitoreo, así como la preparación y radicación de informes sobre la misma.

REGLA 29 – EXCEPCIONES A LAS PROHIBICIONES

A. Durante el periodo diurno

Las prohibiciones establecidas en esta Regla aplicarán a las fuentes emisoras o predio originador de cualquier sonido que pueda cruzar los límites de la propiedad. Las siguientes acciones, cuando se lleven a cabo durante el periodo diurno (7:00 a.m. a 10:00 p.m.), estarán exentas de los requisitos establecidos en este Reglamento:

1. los sonidos emitidos por los proyectos temporeros para la reparación y mantenimiento de hogares y sus dependencias,
2. los sonidos emitidos durante la instalación y reparación de servicios públicos esenciales, y
3. los sonidos emitidos por un disparo de armas livianas de fuego en polígonos de tiro autorizados.

B. Emergencias

No se considerará contaminación por ruido aquel sonido que, generado en exceso de los niveles autorizados en este Reglamento, sea realizado al efectuarse un trabajo de emergencia, según definido en este Reglamento, para proteger la salud, seguridad o bienestar inmediato de la comunidad o individuos, o restauración de la propiedad como medida de seguridad luego de un desastre. Nada de lo contenido en este inciso se entenderá como que permite al personal de emergencia, policías, bomberos o conductores de

ambulancias y otros similares a producir ruidos durante el cumplimiento de sus deberes cuando tales ruidos sean claramente innecesarios.

C. Excepciones generales

Las siguientes situaciones se considerarán como excepciones adicionales a la prohibición de ruidos, según definido en este Reglamento:

1. los sonidos emitidos por artefactos para la prevención de accidentes;
2. los sonidos emitidos por asambleas, actos públicos y paradas no rutinarias;
3. los sonidos emitidos por el disparo de armas livianas de fuego durante la temporada de caza siempre que se produzcan en áreas designadas para esos fines;
4. los sonidos emitidos por las calderas de refinерías de petróleo y las plantas generatrices de electricidad durante el encendido de esas calderas;
5. los sonidos emitidos por campanas, campanarios y/o carillones que se extienden hasta quince (15) minutos;
6. el sonido emitido por la voz humana no amplificada;
7. el sonido emitido por los animales;
8. el sonido emitido por el encendido de plantas de emergencia como parte del proceso de calentamiento, siempre que no exceda los diez (10) minutos; y
9. el sonido emitido por los aeroplanos, ya que el mismo está regulado por la Ley Federal de la Administración Federal de Aviación (Federal Aviation Administration) y las normas de ruido establecidas por la Agencia Federal de Protección Ambiental (*Environmental Protection Agency*) para la manufactura de nuevos productos.

D. La mejor tecnología de control

Nada de lo contenido en esta sección se entenderá como que impedirá a la JCA requerir la instalación de la mejor tecnología de control de ruido disponible en el mercado para aquellas actividades que se declaren exentas de las disposiciones de este Reglamento.

REGLA 30 – CONSEJO ASESOR PARA ASUNTOS RELIGIOSOS

El Director Ejecutivo de la JCA constituirá un Consejo Asesor sobre Asuntos Religiosos para asesorar a la JCA en el establecimiento de la política pública ambiental que de alguna manera incida en el derecho constitucional de libre culto que les asiste a las instituciones religiosas en Puerto Rico. Este Consejo Asesor estará compuesto, entre otros, por líderes de organizaciones religiosas debidamente establecidas en Puerto Rico. Dicho Consejo Asesor establecerá su organización interna.

REGLA 31 – CRITERIOS PARA LA TOMA DE MEDICIONES

Los siguientes criterios serán utilizados para identificar condiciones que requieren la mitigación de ruidos relacionados al tránsito en las vías públicas, siempre que éstos sean la fuente emisora más prominente. Esta evaluación requiere la determinación del nivel equivalente, L_{eq} 1hr (1HL), correspondiente a la hora del día o de la noche en que se registra el mayor impacto de ruido, según se describe en la Tabla II.

**TABLA II
CRITERIOS PARA LA TOMA DE MEDICIONES**

CATEGORÍA	1HL	DESCRIPCIÓN DE USOS Y ACTIVIDADES
A	57 dBA (exterior)	Lugares que requieren tranquilidad excepcional y preservación del ambiente
B	67 dBA (exterior)	Viviendas, hoteles, parques, iglesias, escuelas, bibliotecas, hospitales
C	72 dBA (exterior)	Desarrollos no incluidos en A y B, y comercios e industrias
D	(No hay límites establecidos)	Tierras no desarrolladas
E	52 dBA (interior)	Viviendas, hoteles, edificios públicos, iglesias, escuelas, bibliotecas, hospitales, auditorios, edificios comerciales

Estos criterios son cónsonos con las recomendaciones de la Administración Federal de Carreteras (*Federal Highway Administration*). Como los límites indicados no representan condiciones normales aceptables, se recomienda en cada caso la implantación de mitigación de ruidos que provean atenuación mínima del orden de 10 dB(A).

REGLA 32-33- RESERVADAS

PARTE VI: VALORACIÓN DE LOS NIVELES SONOROS

REGLA 34 – APLICABILIDAD

Esta Parte aplicará a todo procedimiento en el que se valorará el nivel sonoro, incluyendo el equipo utilizado.

REGLA 35 – CONSIDERACIONES GENERALES SOBRE EQUIPO SONOMÉTRICO

- A. El sonómetro deberá cumplir con las normas de la *American National Standards Institute* para instrumentos Tipo I o Tipo II, las cuales están disponibles en la Biblioteca de la JCA.
- B. El sonómetro tiene que estar en total funcionamiento y deberá tener baterías con la carga suficiente para evitar que el aparato indique necesidad de reemplazo de baterías durante una medición.
- C. El sonómetro tiene que ser verificado en su calibración antes y después de cada medición sonométrica.

REGLA 36 – PROTOCOLO PARA MEDICIONES SONOMÉTRICAS

- A. Se utilizará un sonómetro para determinar el nivel de sonido L_{10} . Se determinará el valor de L_{10} registrado en un intervalo no menor de treinta (30) minutos de duración. Deberá considerarse si la fuente emisora opera el mínimo de tres (3) minutos, que es el nivel de sonido correspondiente al L_{10} del periodo de medición. Se podrán tomar muestras adicionales para asegurarse que dichas medidas son representativas de las emisiones de la fuente, según medidas en la zona receptora correspondiente.
- B. Se empleará la escala de ponderación de frecuencias A ("*A-weighting*") en todas las mediciones. Los niveles de sonido se indicarán en dB(A).

- C. La respuesta del detector del sonómetro ("response") se colocará en la posición de integración rápida ("fast") y si las oscilaciones de la lectura fueran superiores a 4 ó 5 dB(A), se cambiará a respuesta lenta ("slow").

REGLA 37 – RUIDO DE FONDO

A. Consideraciones

1. El ruido de fondo no debe "ahogar" la señal que es de interés.
2. El nivel de la señal (fuente emisora) debe ser por lo menos de 3 dB superior al ruido de fondo.
3. Si el nivel de ruido de fondo es 3 dB menos que la fuente generante, no se realizará una medición de precisión del efecto de la fuente sonora.
4. La medición de ruido de fondo se realizará en términos de la estadística L_{spi} , según medido durante un intervalo continuo no menor de tres (3) minutos de duración.
5. Se podrán tomar muestras adicionales del nivel de ruido de fondo para asegurar que las medidas obtenidas son representativas del ambiente acústico existente en el lugar.
6. Si el operador de la fuente causante del ruido no acata la solicitud del funcionario de la JCA para detener el equipo o las actividades ruidosas durante el tiempo requerido para realizar las mediciones de ruido de fondo o el operador de la fuente no se encuentra en la facilidad, o por situaciones de emergencia y/o seguridad no sea posible detener el equipo o las actividades ruidosas, no se incluirá ajuste alguno por ruido de fondo. Bajo estas circunstancias se asumirá que los niveles de ruido observados son causados enteramente por la fuente emisora. Dicho hecho se hará constar como parte del informe realizado.

B. Procedimiento a seguir en condiciones de un nivel de ruido de fondo elevado:

1. Se tomará la medida del nivel de sonido con la fuente de ruido funcionando (L_{sn}).
2. Se tomará la medida del nivel de ruido de fondo con la fuente detenida (L_n).
3. Se calculará la diferencia entre ambas lecturas: ($L_{sn} - L_n$).

C. Procedimiento para medir el nivel sonoro de una fuente emisora bajo condiciones de un ruido de fondo.

1. Medir el nivel de sonido total (L_{s+n}) con la fuente de ruido funcionando, medido según indicado en este Reglamento.
2. Medir L_{10} del nivel de ruido de fondo (L_n) con la fuente apagada, medido según indicado en este Reglamento.
3. Determinar la diferencia entre ambas lecturas ($L_{s+n} - L_n$).
4. Determinar la diferencia entre los niveles de la fuente y el ruido de fondo (L_s).
5. Realizar la corrección correspondiente, según se describe en el siguiente inciso, y comparar dicho nivel corregido con los límites regulatorios correspondientes, según especificados en este Reglamento, a fin de evaluar el cumplimiento con el mismo.

D. Condiciones para calcular la corrección correspondiente a fin de ajustar el nivel de ruido medido en la presencia de ruido de fondo.

1. Si el L_s es menor de 3 dB, el nivel de ruido de fondo es muy alto para una medición precisa del efecto de la fuente sonora.
2. Si el L_s está entre 3 y 10 dB, será necesaria una corrección al nivel de sonido de la fuente.
3. Si el L_s es mayor de 10 dB, no se requiere una corrección al nivel medido de la fuente de ruido.
4. Si el ruido de fondo es despreciable, se puede registrar directamente el nivel de ruido de dicha fuente (L_s) y determinar si cumple o no con el nivel reglamentario.

E. Corrección cuando el ruido de fondo es inferior al límite establecido en este Reglamento.

Cuando el ruido de fondo es inferior al límite establecido en la Tabla I de este Reglamento, es importante realizar la siguiente corrección, de manera que se incluya el efecto del ruido de fondo:

TABLA III
CORRECCIÓN AL NIVEL DE RUIDO DE FONDO

Nivel de ruido de fondo L_n relativo a L_{JCA}	Nivel total permitido
De 0 hasta 3 dB	$L_{JCA} + 3$ dB
Mayor de 3 hasta 6 dB	$L_{JCA} + 2$ dB
Mayor de 6 hasta 10 dB	$L_{JCA} + 1$ dB
Mayor de 10 dB	$L_{JCA} + 0$ dB

REGLA 38 – CONSIDERACIONES GENERALES SOBRE EL LUGAR DE MEDICIÓN

- A. La medición de nivel sonoro se llevará a cabo en un lugar en que su valor sea más alto y, si fuera preciso, en el momento y situación en que las molestias sean más intensas para los afectados o querellantes.
- B. Las mediciones se tomarán en diferentes puntos en el área exterior del predio receptor, típicamente en las colindancias. En caso de edificios o apartamentos, los balcones y ventanas pueden ser utilizados para estos propósitos. Se utilizarán los valores del nivel sonoro registrados en espacios interiores (habitaciones, pasillos, entre otros), cuando no haya otro espacio adecuado para la realización de la medición.
- C. Los dueños de las fuentes emisoras, ubicadas tanto al aire libre como en establecimientos y locales interiores, facilitarán a los técnicos de la JCA el acceso a sus instalaciones o fuente de emisión de ruidos y pondrán en funcionamiento dichas fuentes emisoras a las distintas velocidades, cargas y marchas que les indique el personal técnico de la JCA. El dueño u operador podrá presenciar el proceso operativo en todos sus detalles.

REGLA 39 – PRECAUCIONES EN LA METODOLOGÍA

A fin de reducir los posibles errores de medición, se adoptarán las siguientes precauciones:

- A. Contra el efecto de pantalla: el técnico se situará en el plano normal (perpendicular) al eje del micrófono y lo más separado del mismo que sea posible, en forma compatible con la lectura del indicador de medida del sonómetro.

- B. Contra el efecto de las reflexiones sonoras: para evitar la influencia de ondas estacionarias o reflejadas, se situará el sonómetro, de ser posible, a más de 1.2 metros (4 pies) de cualquier pared o superficie reflectante. Es importante ilustrar, mediante un dibujo o plano, la colocación del sonómetro con relación a dichas superficies.
- C. Contra el efecto del viento: el técnico, cuando estime que la velocidad del viento es superior a 1.5 metros/segundo (3 mph), empleará una pantalla ("windscreen") contra el viento. Para velocidades superiores a 3 metros/segundos (7 mph), se desistirá de la medición.

REGLA 40 – PROCEDIMIENTO PARA LA REALIZACIÓN DE ESTUDIOS SONOROS

- A. Se realizarán estudios detallados en circunstancias especiales donde se requiera una caracterización exhaustiva de una fuente de ruido con características especiales. Cada estudio será diseñado por personal técnico de la JCA tomando en consideración todos los aspectos reglamentarios.
- B. Cuando existan tonos prominentes o ruidos impulsivos, el nivel máximo permitido quedará medido según

$$L_{JCA} = L_{eq} + K_i + K_t,$$

donde

L_{JCA} es el nivel máximo permitido a la fuente por este Reglamento, excluyendo la influencia del ruido de fondo,

L_{eq} es el nivel equivalente de sonido observado,

K_i es la penalización por ruidos impulsivos ($L_{im} - L_{eq}$) y en el que L_{im} es el nivel máximo de presión observado con detección de "impulsos", y

K_t es la penalización por tonos prominentes.

- C. Para la evaluación de ruidos de impulso, se efectuarán mediciones breves de cinco (5) segundos de duración con el sonómetro en el modo de detección de impulsos "I". De este modo, se determinará la diferencia entre el nivel de los impulsos L_{im} y el valor de L_{eq} correspondiente a dicho intervalo. No se tendrán en cuenta valores de K_i iguales o inferiores a 2dB y la penalización máxima será de 5 dB.

REGLA 41 – MÉTODOS ALTERNOS DE MEDICIÓN

Cualquier persona que solicite autorización para utilizar un método analítico o una prueba alterna a lo establecido en este Reglamento, solicitará y demostrará a satisfacción de la JCA, que el método propuesto es igual o superior al establecido en este Reglamento en términos de precisión, exactitud

y sensibilidad de los procedimientos y equipos utilizados. De igual forma, debe demostrar que el equipo a utilizarse ha sido calibrado y que tal calibración se encuentra vigente.

REGLA 42-43- RESERVADAS

PARTE VII: PLANES DE CUMPLIMIENTO, DISPENSAS Y AUTORIZACIONES DE EMERGENCIA

REGLA 44 – PLANES DE CUMPLIMIENTO

A. Aplicabilidad

Los Planes de Cumplimiento son aplicables a fuentes emisoras o predios originadores de sonido que estén en violación de cualquiera de los requisitos de este Reglamento. La aprobación de los mismos no limita la facultad de la JCA para requerir acciones específicas con relación a tales violaciones. Estos planes no son aplicables a la Parte IV de este Reglamento.

B. Prohibición de operar

Ninguna persona podrá construir, operar o permitir la construcción u operación de una fuente emisora de sonido en violación a cualquier requisito de este Reglamento, a menos que el dueño u operador de la fuente de emisión opere conforme a un Plan de Cumplimiento o Dispensa aprobada por la JCA.

C. Requisitos del Plan de Cumplimiento

El Plan de Cumplimiento será presentado ante la Junta de Gobierno de la JCA y cumplirá con los siguientes requisitos:

1. Deberán ser firmados por el dueño u operador de una fuente emisora de sonido o ruido cuando se haya comenzado una acción para la cual se requiera cumplimiento con los requisitos de este Reglamento.
2. Establecerá acciones de progreso para alcanzar las metas específicas y para la instalación de los controles necesarios mediante la construcción y modificación de su fuente emisora, así como la fecha límite en las que serán alcanzadas estas acciones de progreso.

3. Establecerá fechas límites para alcanzar cumplimiento con cada requisito que esté violando. El tiempo final de cumplimiento para el control de la contaminación por ruido que se requiera para llevar a cabo los objetivos del Plan, será el más corto que pueda lograrse, pero en ningún caso, mayor de noventa (90) días laborables.
4. Notificará, mediante informes periódicos a la JCA, su cumplimiento con las acciones de progreso y las metas específicas.

D. Normas para la aprobación de los Planes de Cumplimiento

1. El solicitante demostrará, a satisfacción de la JCA, que el Plan de Cumplimiento:
 - a. no causará incumplimiento con los requisitos de la Ley sobre Política Pública Ambiental, *supra*;
 - b. establecerá pautas para el cumplimiento final de las metas propuestas tan rápidamente como sea factible;
 - c. establecerá pautas para medir las acciones de progreso y el logro de metas temporales que brindan la protección máxima para la salud humana y el ambiente.
2. La JCA actuará sobre el Plan de Cumplimiento propuesto dentro de un término razonable que no deberá exceder de noventa (90) días laborables.

E. Modificación o revocación de la aprobación de un Plan de Cumplimiento

1. La JCA podrá modificar o revocar un Plan de Cumplimiento previamente aprobado cuando se den las siguientes situaciones:
 - a. cuando sea necesario para la protección de la salud humana y el ambiente;
 - b. cuando exista una condición de emergencia;
 - c. cuando se identifique alguna información que altere el razonamiento seguido en la concesión del Plan de Cumplimiento;
 - d. cuando se proponga un cambio significativo en el el Plan de Cumplimiento aprobado; y

- e. cuando la JCA así lo determine necesario.
2. Si la JCA decide denegar la solicitud de modificación o revocación, enviará por escrito al peticionario una denegatoria exponiendo las razones de su decisión de acuerdo a lo establecido en la Ley de Procedimiento Administrativo Uniforme, *supra*, y la Ley sobre Política Pública Ambiental, *supra*.

REGLA 45- DISPENSAS

A. Autorización para Dispensas

La Junta de Gobierno de la JCA podrá dispensar del estricto cumplimiento de los requisitos establecidos en este Reglamento únicamente mediante el trámite establecido en esta Regla.

B. Solicitud de Dispensa

Toda solicitud de dispensa presentada ante la Junta de Gobierno de la JCA incluirá lo siguiente:

1. una descripción de la Regla para la cual se solicita dispensa, exponiendo claramente la naturaleza y alcance de lo que se propone;
2. una exposición por escrito de las razones para la petición de aprobación de la dispensa, e incluirá una explicación de por qué no será factible el cumplimiento;
3. un estudio acústico de los niveles de ruido en los límites de la propiedad;
4. una expresión del término por el cual estará solicitando la dispensa;
5. evidencia de la implementación de la mejor tecnología disponible en el mercado para el cumplimiento con los límites establecidos en este Reglamento; y
6. cualquier otra información que la JCA determine necesaria para evaluar dicha solicitud.

C. Normas para conceder dispensas

La solicitud de dispensa será aprobada solamente si el solicitante demuestra a satisfacción de la Junta de Gobierno de la JCA que ha cumplido con los siguientes requisitos:

1. que la implementación de la mejor tecnología disponible no es suficiente para cumplir con las disposiciones de este Reglamento;
2. que la dispensa no causará impacto adverso significativo sobre la salud humana o el ambiente; y
3. que existen circunstancias especiales que justifiquen la concesión de la dispensa.

D. Acción sobre la solicitud de Dispensa

1. La Junta de Gobierno de la JCA, *motu proprio* o a solicitud de parte debidamente fundamentada, podrá, discrecionalmente, celebrar una vista administrativa previo al otorgamiento de una dispensa, según los requisitos que para ello se disponen en este Reglamento.
2. La Junta de Gobierno de la JCA notificará por escrito al solicitante de la dispensa o la solicitud de vista, si la misma fue concedida o denegada.
3. En la notificación sobre la dispensa de la que habla el inciso anterior, la Junta de Gobierno de la JCA expondrá las razones que tuvo para la acción tomada.

E. Condiciones para la Concesión de Dispensas

Al conceder una dispensa, la Junta de Gobierno de la JCA podrá imponer las condiciones que considere necesarias para la protección de la salud, seguridad y bienestar público.

F. Período de Vigencia

1. Una dispensa se mantendrá en vigor por el periodo de tiempo que determine la Junta de Gobierno de la JCA, el cual no podrá exceder de cuatro (4) años. Para gestionar la renovación o extensión de la misma, el dueño u operador del predio originador de sonido deberá radicar una solicitud a tales efectos con por lo menos noventa (90) días de anticipación a la fecha en que la dispensa original expire.
2. Cualquier solicitud de renovación o extensión deberá ser presentada durante el término concedido. Posterior a esa fecha, el solicitante tendrá que presentar una nueva solicitud de dispensa de conformidad con este Reglamento. Dicha renovación, extensión o nueva dispensa no podrá exceder de doce (12) meses de vigencia.

3. A partir de la fecha en que se radique la solicitud de dispensa, renovación o extensión de una dispensa, la Junta de Gobierno de la JCA deberá actuar sobre la misma, de acuerdo a las reglas y reglamentos vigentes.

REGLA 46 – AVISOS PÚBLICOS Y VISTAS PÚBLICAS PARA EL TRÁMITE DE LAS DISPENSAS

A. Avisos Públicos

1. Todo aviso público relacionado con un asunto pendiente ante la JCA bajo este Reglamento, especificará la fecha, hora y lugar donde los documentos estarán disponibles para inspección pública. Estos documentos incluirán cualquier determinación preliminar de la JCA.
2. Todo aviso público indicará el periodo de tiempo durante el que las personas interesadas podrán someter comentarios escritos o solicitar, de forma fundamentada, vistas públicas. El aviso especificará la fecha, hora y el lugar de cada vista pública, así como horario de duración de la vista y término de espera para declararla desierta de no comparecer público.
3. Todo aviso público será publicado por lo menos treinta (30) días antes de que la JCA tome cualquier determinación final con respecto a cualquier asunto pendiente ante su consideración, a menos que por una situación de emergencia la JCA determine que, en el mejor interés público, sea necesario que se haga una determinación final en un periodo de tiempo más corto.
4. El aviso público podrá publicarse en un (1) periódico de circulación general en Puerto Rico o por cualquier otro método que disponga la Junta de Gobierno de la JCA. En los casos en que los avisos públicos sean para considerar una solicitud de dispensa y/o autorización ante la JCA, el solicitante de la misma sufragará cualquier costo relacionado a su publicación, previo a que sea publicado.
5. La JCA podrá publicar avisos adicionales o avisos de cualquier otra índole en la forma que considere apropiada.

B. Vistas Públicas

1. La JCA podrá celebrar, a su discreción, una vista pública sobre el otorgamiento de una dispensa o cualquier otro asunto pendiente ante ella, mediante solicitud debidamente fundamentada por cualquier persona interesada o cuando la JCA determine que la celebración de

una vista pública ayudará a evaluar la situación ante su consideración. La JCA no celebrará vistas públicas sin publicar un aviso notificando la celebración de la misma. Para determinar si se concede la celebración de vistas públicas, la Junta de Gobierno de la JCA tomará en consideración los siguientes factores:

- a. la magnitud y naturaleza de la solicitud y la cuantía de la inversión necesaria;
 - b. el grado de interés de parte del público en la acción a llevarse a cabo; y
 - c. el grado de interés de parte de la JCA y de otras agencias gubernamentales en la acción a llevarse a cabo, entre otros factores relevantes.
2. La Junta de Gobierno de la JCA podrá presidir la vista pública por sí o a través de un panel examinador.
 3. La vista pública deberá iniciarse a la hora indicada en el aviso público y de no haber presente ninguna persona interesada en deponer en la misma, ésta podrá darse por culminada luego de una (1) hora de la hora indicada en el aviso público. El horario de duración de la vista estará incluido en el aviso público.
 4. El registro de deponentes de la vista pública estará disponible para inspección del público en general.

C. Los comentarios recibidos

Todos los comentarios recibidos durante el periodo de participación pública serán evaluados por la JCA al momento de tomar una determinación final sobre el asunto en cuestión, según la Ley sobre Política Pública Ambiental, *supra*, y Ley de Procedimiento Administrativo Uniforme, *supra*.

D. Decisión final

Luego de celebrada una vista pública, la Junta de Gobierno de la JCA preparará una resolución que detalle su decisión final. Esta resolución deberá cumplir con los requisitos de notificación, según dispuestos en la Ley sobre Política Pública Ambiental, *supra*, y Ley de Procedimiento Administrativo Uniforme, *supra*, así como en cualquier otra legislación aplicable.

REGLA 47 – REVOCACIÓN DE PLAN DE CUMPLIMIENTO, DISPENSAS O AUTORIZACIONES

La JCA podrá decretar el cese de operaciones o revocar un Plan de Cumplimiento o dispensa que haya sido encontrado en violación de este Reglamento o de las condiciones del mismo, de acuerdo a la Ley sobre Política Pública Ambiental, *supra*, la Ley de Procedimiento Administrativo Uniforme, *supra*, y el Reglamento de Procedimiento de Vistas Administrativas, *supra*. La Orden de Cese será efectiva hasta tanto la fuente emisora se encuentre en cumplimiento con este Reglamento y así lo disponga la JCA mediante Resolución al respecto en la que ordene el dejar sin efecto dicha Orden o así lo ordene un tribunal con jurisdicción y competencia.

REGLA 48 – AUTORIZACIÓN DE EMERGENCIA

A. Autorización en caso de emergencia

1. Si la Junta de Gobierno de la JCA encuentra que existe un peligro significativo e inminente para la salud humana o el ambiente, podrá expedir una autorización de emergencia para personas o fuentes emisoras no autorizadas.
2. Estas autorizaciones podrán incluir dispensas a reglas específicas de este Reglamento, según se establece en la Regla sobre dispensas.

B. Disposiciones para autorizaciones de emergencias

Las autorizaciones para casos de emergencias cumplirán con los siguientes requisitos:

1. Según las circunstancias, éstas podrán ser verbales o escritas. Si la autorización es verbal, inmediatamente deberá producirse una autorización escrita, la cual se expedirá dentro de un término de cinco (5) días después de concedida la autorización verbal.
2. No tendrán una duración mayor de noventa (90) días.
3. Especificarán claramente la fuente emisora.
4. Incorporarán, hasta el máximo factible que no sea inconsistente con la situación de emergencia, todos los requisitos de este Reglamento.
5. Podrán ser revocadas por la Junta de Gobierno de la JCA en cualquier momento, si se determina que dicha revocación es necesaria para

proteger la salud humana o el ambiente.

GOBIERNO DE PUERTO RICO
OFICINA DEL GOBERNADOR
JUNTA DE CALIDAD AMBIENTAL

A tenor y de acuerdo con la Ley sobre Política Pública Ambiental, Ley Núm. 416 de 22 de septiembre de 2004, según enmendada, ha sido enmendado por la **Resolución R-11-7-1** de la Junta de Gobierno de la Junta de Calidad Ambiental el

REGLAMENTO PARA EL CONTROL DE LA CONTAMINACIÓN POR RUIDOS

Estas enmiendas al Reglamento establecen las normas y requisitos para el control, disminución o eliminación de ruidos que puedan resultar nocivos a la salud y perturbar el bienestar público. Establece, además, los requisitos para los niveles de emisiones de ruido entre zonas, así como la administración y procedimientos relacionados con la valoración de los niveles sonoros.

Aprobado: 5 de mayo de 2011

En virtud de la Sección 2.8 de la Ley Núm. 170 de 12 de agosto de 1988, según enmendada, conocida como Ley de Procedimiento Administrativo Uniforme, (3 L.P.R.A sección 2128), este Reglamento entra en vigencia a los treinta (30) días a partir de su radicación en el Departamento de Estado,


Sr. Reynaldo Matos Jiménez
Miembro Asociado


Lda. Blanche Gonzalez Hodge
Miembro Asociado


Lcdo. Pedro J. Nieves Miranda
Presidente

ELECTRONIC CODE OF FEDERAL REGULATIONS

e-CFR Data is current as of February 10, 2014

Title 24: Housing and Urban Development

PART 51—ENVIRONMENTAL CRITERIA AND STANDARDS

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-

AUTHORITY: 42 U.S.C. 3535(d), unless otherwise noted.

SOURCE: 44 FR 40861, July 12, 1979, unless otherwise noted.

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Subpart A—General Provisions

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§51.1 Purpose.

The Department of Housing and Urban Development is providing program Assistant Secretaries and administrators and field offices with environmental standards, criteria and guidelines for determining project acceptability and necessary mitigating measures to insure that activities assisted by the Department achieve the goal of a suitable living environment.

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§51.2 Authority.

This part implements the Department's responsibilities under: The National Housing Act (12 U.S.C. 1701 *et seq.*); sec. 2 of the Housing Act of 1949 (42 U.S.C. 1441); secs. 2 and 7(d) of the Department of Housing and Urban Development Act (42 U.S.C. 3531 and 3535(d)); the National Environmental Policy Act of 1969 (42 U.S.C. 4321); and the other statutes that are referred to in this part.

[61 FR 13333, Mar. 26, 1996]

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§51.3 Responsibilities.

The Assistant Secretary for Community Planning and Development is responsible for administering HUD's environmental criteria and standards as set forth in this part. The Assistant Secretary for Community Planning and Development may be assisted by HUD officials in implementing the responsibilities established by this part. HUD will identify these HUD officials and their specific responsibilities through FEDERAL REGISTER notice.

[61 FR 13333, Mar. 26, 1996]

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§51.4 Program coverage.

Environmental standards shall apply to all HUD actions except where special provisions and exemptions are contained in each subpart.

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Subpart B—Noise Abatement and Control

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§51.100 Purpose and authority.

- (a) It is the purpose of this subpart B to:
 - (1) Call attention to the threat of noise pollution;

(2) Encourage the control of noise at its source in cooperation with other Federal departments and agencies;

(3) Encourage land use patterns for housing and other noise sensitive urban needs that will provide a suitable separation between them and major noise sources;

(4) Generally prohibit HUD support for new construction of noise sensitive uses on sites having unacceptable noise exposure;

(5) Provide policy on the use of structural and other noise attenuation measures where needed; and

(6) Provide policy to guide implementation of various HUD programs.

(b) *Authority.* Specific authorities for noise abatement and control are contained in the Noise Control Act of 1972, as amended (42 U.S.C. 4901 *et seq.*); and the General Services Administration, Federal Management Circular 75-2; *Compatible Land Uses at Federal Airfields.*

[44 FR 40861, July 12, 1979, as amended at 61 FR 13333, Mar. 26, 1996]

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§51.101 General policy.

(a) It is HUD's general policy to provide minimum national standards applicable to HUD programs to protect citizens against excessive noise in their communities and places of residence.

(1) *Planning assistance.* HUD requires that grantees give adequate consideration to noise exposures and sources of noise as an integral part of the urban environment when HUD assistance is provided for planning purposes, as follows:

(i) Particular emphasis shall be placed on the importance of compatible land use planning in relation to airports, highways and other sources of high noise.

(ii) Applicants shall take into consideration HUD environmental standards impacting the use of land.

(2) *Activities subject to 24 CFR part 58.* (i) Responsible entities under 24 CFR part 58 must take into consideration the noise criteria and standards in the environmental review process and consider ameliorative actions when noise sensitive land development is proposed in noise exposed areas. Responsible entities shall address deviations from the standards in their environmental reviews as required in 24 CFR part 58.

(ii) Where activities are planned in a noisy area, and HUD assistance is contemplated later for housing and/or other noise sensitive activities, the responsible entity risks denial of the HUD assistance unless the HUD standards are met.

(3) *HUD support for new construction.* HUD assistance for the construction of new noise sensitive uses is prohibited generally for projects with unacceptable noise exposures and is discouraged for projects with normally unacceptable noise exposure. (Standards of acceptability are contained in §51.103(c).) This policy applies to all HUD programs providing assistance, subsidy or insurance for housing, manufactured home parks, nursing homes, hospitals, and all programs providing assistance or insurance for land development, redevelopment or any other provision of facilities and services which are directed to making land available for housing or noise sensitive development. The policy does not apply to research demonstration projects which do not result in new construction or reconstruction, flood insurance, interstate land sales registration, or any action or emergency assistance under disaster assistance provisions or appropriations which are provided to save lives, protect property, protect public health and safety, remove debris and wreckage, or assistance that has the effect of restoring facilities substantially as they existed prior to the disaster.

(4) *HUD support for existing construction.* Noise exposure by itself will not result in the denial of HUD support for the resale and purchase of otherwise acceptable existing buildings. However, environmental noise is a marketability factor which HUD will consider in determining the amount of insurance or other assistance that may be given.

(5) *HUD support of modernization and rehabilitation.* For modernization projects located in all noise exposed areas, HUD shall encourage noise attenuation features in alterations. For major or substantial rehabilitation projects in the Normally Unacceptable and Unacceptable noise zones, HUD actively shall seek to have project sponsors incorporate noise attenuation features, given the extent and nature of the rehabilitation being undertaken and the level or exterior noise exposure. In Unacceptable noise zones, HUD shall strongly encourage conversion of noise-exposed sites to land uses compatible with the high noise levels.

(6) *Research, guidance and publications.* HUD shall maintain a continuing program designed to provide new knowledge of noise abatement and control to public and private bodies, to develop improved methods for anticipating noise encroachment, to develop noise abatement measures through land use and building construction practices, and to foster better understanding of the consequences of noise. It shall be HUD's policy to issue guidance documents periodically to assist HUD personnel in assigning an acceptability category to projects in accordance with noise exposure standards, in evaluating noise attenuation measures, and in advising local agencies about noise abatement strategies. The guidance documents shall be updated periodically in accordance with advances in the state-of-the-art.

(7) *Construction equipment, building equipment and appliances.* HUD shall encourage the use of quieter construction equipment and methods in population centers, the use of quieter equipment and appliances in buildings, and the use of appropriate noise abatement techniques in the design of residential structures with potential noise problems.

(8) *Exterior noise goals.* It is a HUD goal that exterior noise levels do not exceed a day-night average sound level of 55 decibels. This level is recommended by the Environmental Protection Agency as a goal for outdoors in residential areas. The levels recommended by EPA are not standards and do not take into account cost or feasibility. For the purposes of this regulation and to meet other program objectives, sites with a day-night average sound level of 65 and below are acceptable and are allowable (see Standards in §51.103(c)).

(9) *Interior noise goals.* It is a HUD goal that the interior auditory environment shall not exceed a day-night average sound level of 45 decibels. Attenuation measures to meet these interior goals shall be employed where feasible. Emphasis shall be given to noise sensitive interior spaces such as bedrooms. Minimum attenuation requirements are prescribed in §51.104(a).

(10) *Acoustical privacy in multifamily buildings.* HUD shall require the use of building design and acoustical treatment to afford acoustical privacy in multifamily buildings pursuant to requirements of the Minimum Property Standards.

[44 FR 40861, July 12, 1979, as amended at 50 FR 9268, Mar. 7, 1985; 61 FR 13333, Mar. 26, 1996]

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§51.102 Responsibilities.

(a) *Surveillance of noise problem areas.* Appropriate field staff shall maintain surveillance of potential noise problem areas and advise local officials, developers, and planning groups of the unacceptability of sites because of noise exposure at the earliest possible time in the decision process. Every attempt shall be made to insure that applicants' site choices are consistent with the policy and standards contained herein.

(b) *Notice to applicants.* At the earliest possible stage, HUD program staff shall:

(1) Determine the suitability of the acoustical environment of proposed projects;

(2) Notify applicants of any adverse or questionable situations; and

(3) Assure that prospective applicants are apprised of the standards contained herein so that future site choices will be consistent with these standards.

(c) *Interdepartmental coordination.* HUD shall foster appropriate coordination between field offices and other departments and agencies, particularly the Environmental Protection Agency, the Department of Transportation, Department of Defense representatives, and the Department of Veterans Affairs. HUD staff shall utilize the acceptability standards in commenting on the prospective impacts of transportation facilities and other noise generators in the Environmental Impact Statement review process.

[44 FR 40861, July 12, 1979, as amended at 54 FR 39525, Sept. 27, 1989; 61 FR 13333, Mar. 26, 1996]

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§51.103 Criteria and standards.

These standards apply to all programs as indicated in §51.101.

(a) *Measure of external noise environments.* The magnitude of the external noise environment at a site is determined by the value of the day-night average sound level produced as the result of the accumulation of noise from all sources contributing to the external noise environment at the site. Day-night average sound level, abbreviated as DNL and symbolized as L_{dn} , is the 24-hour average sound level, in decibels, obtained after addition of 10 decibels to sound levels in the night from 10 p.m. to 7 a.m. Mathematical expressions for average sound level and day-night average sound level are stated in the Appendix I to this subpart.

(b) *Loud impulsive sounds.* On an interim basis, when loud impulsive sounds, such as explosions or sonic booms, are experienced at a site, the day-night average sound level produced by the loud impulsive sounds alone shall have 8 decibels added to it in assessing the acceptability of the site (see appendix I to this subpart). Alternatively, the C-weighted day-night average sound level (L_{Cdn}) may be used without the 8 decibel addition, as indicated in §51.106(a)(3). Methods for assessing the contribution of loud impulsive sounds to day-night average sound level at a site and mathematical expressions for determining whether a sound is classed as “loud impulsive” are provided in the appendix I to this subpart.

(c) *Exterior standards.* (1) The degree of acceptability of the noise environment at a site is determined by the sound levels external to buildings or other facilities containing noise sensitive uses. The standards shall usually apply at a location 2 meters (6.5 feet) from the building housing noise sensitive activities in the direction of the predominant noise source. Where the building location is undetermined, the standards shall apply 2 meters (6.5 feet) from the building setback line nearest to the predominant noise source. The standards shall also apply at other locations where it is determined that quiet outdoor space is required in an area ancillary to the principal use on the site.

(2) The noise environment inside a building is considered acceptable if: (i) The noise environment external to the building complies with these standards, and (ii) the building is constructed in a manner common to the area or, if of uncommon construction, has at least the equivalent noise attenuation characteristics.

SITE ACCEPTABILITY STANDARDS

	Day-night average sound level (in decibels)	Special approvals and requirements
Acceptable	Not exceeding 65 dB(1)	None.
Normally Unacceptable	Above 65 dB but not exceeding 75 dB	Special Approvals (2)
		Environmental Review (3).

		Attenuation (4).
Unacceptable	Above 75 dB	Special Approvals (2).
		Environmental Review (3).
		Attenuation (5).

Notes: (1) Acceptable threshold may be shifted to 70 dB in special circumstances pursuant to §51.105(a).

(2) See §51.104(b) for requirements.

(3) See §51.104(b) for requirements.

(4) 5 dB additional attenuation required for sites above 65 dB but not exceeding 70 dB and 10 dB additional attenuation required for sites above 70 dB but not exceeding 75 dB. (See §51.104(a).)

(5) Attenuation measures to be submitted to the Assistant Secretary for CPD for approval on a case-by-case basis.

[44 FR 40861, July 12, 1979, as amended at 49 FR 12214, Mar. 29, 1984]

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§51.104 Special requirements.

(a)(1) *Noise attenuation.* Noise attenuation measures are those required in addition to attenuation provided by buildings as commonly constructed in the area, and requiring open windows for ventilation. Measures that reduce external noise at a site shall be used wherever practicable in preference to the incorporation of additional noise attenuation in buildings. Building designs and construction techniques that provide more noise attenuation than typical construction may be employed also to meet the noise attenuation requirements.

(2) *Normally unacceptable noise zones and unacceptable noise zones.* Approvals in Normally Unacceptable Noise Zones require a minimum of 5 decibels additional sound attenuation for buildings having noise-sensitive uses if the day-night average sound level is greater than 65 decibels but does not exceed 70 decibels, or a minimum of 10 decibels of additional sound attenuation if the day-night average sound level is greater than 70 decibels but does not exceed 75 decibels. Noise attenuation measures in Unacceptable Noise Zones require the approval of the Assistant Secretary for Community Planning and Development, or the Certifying Officer for activities subject to 24 CFR part 58. (See §51.104(b)(2).)

(b) *Environmental review requirements.* Environmental reviews shall be conducted pursuant to the requirements of 24 CFR parts 50 and 58, as applicable, or other environmental regulations issued by the Department. These requirements are hereby modified for all projects proposed in the Normally Unacceptable and Unacceptable noise exposure zones as follows:

(1) *Normally unacceptable noise zone.* (i) All projects located in the Normally Unacceptable Noise Zone require a Special Environmental Clearance except an EIS is required for a proposed project located in a largely undeveloped area, or where the HUD action is likely to encourage the establishment of incompatible land use in this noise zone.

(ii) When an EIS is required, the concurrence of the Program Assistant Secretary is also required before a project can be approved. For the purposes of this paragraph, an area will be considered as largely undeveloped unless the area within a 2-mile radius of the project boundary is more than 50 percent developed for urban uses and infrastructure (particularly water and sewers) is available and has capacity to serve the project.

(iii) All other projects in the Normally Unacceptable zone require a Special Environmental Clearance, except where an EIS is required for other reasons pursuant to HUD environmental policies.

(2) *Unacceptable noise zone.* An EIS is required prior to the approval of projects with unacceptable noise exposure. Projects in or partially in an Unacceptable Noise Zone shall be submitted to the Assistant Secretary for Community Planning and Development, or the Certifying Officer for activities subject to 24 CFR part 58, for approval. The Assistant Secretary or the Certifying Officer may waive the EIS requirement in cases where noise is the only environmental issue and no outdoor noise sensitive activity will take place on the site. In such cases, an environmental review shall be made pursuant to the requirements of 24 CFR parts 50 or 58, as appropriate.

[44 FR 40861, July 12, 1979, as amended at 61 FR 13333, Mar. 26, 1996]

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§51.105 Exceptions.

(a) *Flexibility for non-acoustic benefits.* Where it is determined that program objectives cannot be achieved on sites meeting the acceptability standard of 65 decibels, the Acceptable Zone may be shifted to L_{dn} 70 on a case-by-case basis if all the following conditions are satisfied:

(1) The project does not require an Environmental Impact Statement under provisions of §51.104 (b)(1) and noise is the only environmental issue.

(2) The project has received a Special Environmental Clearance and has received the concurrence of the Environmental Clearance Officer.

(3) The project meets other program goals to provide housing in proximity to employment, public facilities and transportation.

(4) The project is in conformance with local goals and maintains the character of the neighborhood.

(5) The project sponsor has set forth reasons, acceptable to HUD, as to why the noise attenuation measures that would normally be required for new construction in the L_{dn} 65 to L_{dn} 70 zone cannot be met.

(6) Other sites which are not exposed to noise above L_{dn} 65 and which meet program objectives are generally not available.

The above factors shall be documented and made part of the project file.

[44 FR 40861, July 12, 1979, as amended at 61 FR 13334, Mar. 26, 1996]

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§51.106 Implementation.

(a) *Use of available data.* HUD field staff shall make maximum use of noise data prepared by others when such data are determined to be current and adequately projected into the future and are in terms of the following:

(1) *Sites in the vicinity of airports.* The noise environment around airports is described sometimes in terms of Noise Exposure Forecasts, abbreviated as NEF or, in the State of California, as Community Noise Equivalent Level, abbreviated as CNEL. The noise environment for sites in the vicinity of airports for which day-night average sound level data are not available may be evaluated from NEF or CNEL analyses using the following conversions to DNL:

DNL≈NEF+35

DNL≈CNEL

(2) *Sites in the vicinity of highways.* Highway projects receiving Federal aid are subject to noise analyses under the procedures of the Federal Highway Administration. Where such analyses are available they may be used to assess sites subject to the requirements of this standard. The Federal Highway Administration employs two alternate sound level descriptors: (i) The A-weighted sound level not exceeded more than 10 percent of the time for the highway design hour traffic flow, symbolized as L_{10} ; or (ii) the equivalent sound level for the design hour, symbolized as L_{eq} . The day-night average sound level may be estimated from the design hour L_{10} or L_{eq} values by the following relationships, provided heavy trucks do not exceed 10 percent of the total traffic flow in vehicles per 24 hours and the traffic flow between 10 p.m. and 7 a.m. does not exceed 15 percent of the average daily traffic flow in vehicles per 24 hours:

$DNL \approx L_{10}(\text{design hour}) - 3$ decibels

$DNL \approx L_{eq}(\text{design hour})$ decibels

Where the auto/truck mix and time of day relationships as stated in this section do not exist, the HUD Noise Assessment Guidelines or other noise analysis shall be used.

(3) *Sites in the vicinity of installations producing loud impulsive sounds.* Certain Department of Defense installations produce loud impulsive sounds from artillery firing and bombing practice ranges. Noise analyses for these facilities sometimes encompass sites that may be subject to the requirements of this standard. Where such analyses are available they may be used on an interim basis to establish the acceptability of sites under this standard. The Department of Defense uses day-night average sound level based on C-weighted sound level, symbolized L_{Cdn} , for the analysis of loud impulsive sounds. Where such analyses are provided, the 8 decibel addition specified in §51.103(b), is not required, and the same numerical values of day-night average sound level used on an interim basis to determine site suitability for non-impulsive sounds apply to the L_{Cdn} .

(4) *Use of areawide acoustical data.* HUD encourages the preparation and use of areawide acoustical information, such as noise contours for airports. Where such new or revised contours become available for airports (civil or military) and military installations they shall first be referred to the HUD State Office (Environmental Officer) for review, evaluation and decision on appropriateness for use by HUD. The HUD State Office shall submit revised contours to the Assistant Secretary for Community Planning and Development for review, evaluation and decision whenever the area affected is changed by 20 percent or more, or whenever it is determined that the new contours will have a significant effect on HUD programs, or whenever the contours are not provided in a methodology acceptable under §51.106(a)(1) or in other cases where the HUD State Office determines that Headquarters review is warranted. For other areawide acoustical data, review is required only where existing areawide data are being utilized and where such data have been changed to reflect changes in the measurement methodology or underlying noise source assumptions. Requests for determination on usage of new or revised areawide data shall include the following:

(i) Maps showing old, if applicable, and new noise contours, along with brief description of data source and methodology.

(ii) Impact on existing and prospective urbanized areas and on development activity.

(iii) Impact on HUD-assisted projects currently in processing.

(iv) Impact on future HUD program activity. Where a field office has determined that immediate approval of new areawide data is necessary and warranted in limited geographic areas, the request for approval should state the circumstances warranting such approval. Actions on proposed projects shall not be undertaken while new areawide noise data are being considered for HUD use except where the proposed location is affected in the same manner under both the old and new noise data.

(b) *Site assessments.* Compliance with the standards contained in §51.103(c) shall, where necessary, be determined using noise assessment guidelines, handbooks, technical documents and procedures issued by the Department.

(c) *Variations in site noise levels.* In many instances the noise environment will vary across a site, with portions of the site being in an Acceptable noise environment and other portions in a Normally Unacceptable noise environment. The standards in §51.103(c) shall apply to the portions of a building or buildings used for residential purposes and for ancillary noise sensitive open spaces.

(d) *Noise measurements.* Where noise assessments result in a finding that the site is borderline or questionable, or is controversial, noise measurements may be performed. Where it is determined that noise measurements are required, such measurements will be conducted in accordance with methods and measurement criteria established by the Department. Locations for noise measurements will depend on the location of noise sensitive uses that are nearest to the predominant noise source (see §51.103(c)).

(e) *Projections of noise exposure.* In addition to assessing existing exposure, future conditions should be projected. To the extent possible, noise exposure shall be projected to be representative of conditions that are expected to exist at a time at least 10 years beyond the date of the project or action under review.

(f) *Reduction of site noise by use of berms and/or barriers.* If it is determined by adequate analysis that a berm and/or barrier will reduce noise at a housing site, and if the barrier is existing or there are assurances that it will be in place prior to occupancy, the environmental noise analysis for the site may reflect the benefits afforded by the berm and/or barrier. In the environmental review process under §51.104(b), the location height and design of the berm and/or barrier shall be evaluated to determine its effectiveness, and impact on design and aesthetic quality, circulation and other environmental factors.

[44 FR 40861, July 12, 1979, as amended at 61 FR 13334, Mar. 26, 1996]

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Appendix I to Subpart B of Part 51—Definition of Acoustical Quantities

1. *Sound Level.* The quantity in decibels measured with an instrument satisfying requirements of American National Standard Specification for Type 1 Sound Level Meters S1.4-1971. Fast time-averaging and A-frequency weighting are to be used, unless others are specified. The sound level meter with the A-weighting is progressively less sensitive to sounds of frequency below 1,000 hertz (cycles per second), somewhat as is the ear. With fast time averaging the sound level meter responds particularly to recent sounds almost as quickly as does the ear in judging the loudness of a sound.

2. *Average Sound Level.* Average sound level, in decibels, is the level of the mean-square A-weighted sound pressure during the stated time period, with reference to the square of the standard reference sound pressure of 20 micropascals.

Day-night average sound level, abbreviated as DNL, and symbolized mathematically as L_{dn} is defined as:

$$L_{dn} = 10 \log_{10} \left[\frac{1}{86400} \left(\int_{0000}^{2359} 10^{L_A(t)/10} dt + \int_{0000}^{2359} 10^{L_A(t)/10} dt + \int_{2359}^{2400} 10^{[L_A(t)+10]/10} dt \right) \right]$$

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Time t is in seconds, so the limits shown in hours and minutes are actually interpreted in seconds. $L_A(t)$ is the time varying value of A-weighted sound level, the quantity in decibels measured by an instrument satisfying requirements of American National Standard Specification for Type 1 Sound Level Meters S1.4-1971.

3. *Loud Impulsive Sounds.* When loud impulsive sounds such as sonic booms or explosions are anticipated contributors to the noise environment at a site, the contribution to day-night average sound level produced by the loud impulsive sounds shall have 8 decibels added to it in assessing the acceptability of a site.

A loud impulsive sound is defined for the purpose of this regulation as one for which:

(i) The sound is definable as a discrete event wherein the sound level increases to a maximum and then decreases in a total time interval of approximately one second or less to the ambient background level that exists without the sound; and

(ii) The maximum sound level (obtained with slow averaging time and A-weighting of a Type 1 sound level meter whose characteristics comply with ANSI S1.4-1971) exceeds the sound level prior to the onset of the event by at least 6 decibels; and

(iii) The maximum sound level obtained with fast averaging time of a sound level meter exceeds the maximum value obtained with slow averaging time by at least 4 decibels.

[44 FR 40861, July 12, 1979; 49 FR 10253, Mar. 20, 1984; 49 FR 12214, Mar. 29, 1984]

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Subpart C—Siting of HUD-Assisted Projects Near Hazardous Operations Handling Conventional Fuels or Chemicals of an Explosive or Flammable Nature

AUTHORITY: 42 U.S.C. 3535(d).

SOURCE: 49 FR 5103, Feb. 10, 1984, unless otherwise noted.

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§51.200 Purpose.

The purpose of this subpart C is to:

(a) Establish safety standards which can be used as a basis for calculating acceptable separation distances (ASD) for HUD-assisted projects from specific, stationary, hazardous operations which store, handle, or process hazardous substances;

(b) Alert those responsible for the siting of HUD-assisted projects to the inherent potential dangers when such projects are located in the vicinity of such hazardous operations;

(c) Provide guidance for identifying those hazardous operations which are most prevalent;

(d) Provide the technical guidance required to evaluate the degree of danger anticipated from explosion and thermal radiation (fire); and

(e) Provide technical guidance required to determine acceptable separation distances from such hazards.

[49 FR 5103, Feb. 10, 1984, as amended at 61 FR 13334, Mar. 26, 1996]

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§51.201 Definitions.

The terms *Department* and *Secretary* are defined in 24 CFR part 5.

Acceptable separation distance (ASD)—means the distance beyond which the explosion or combustion of a hazard is not likely to cause structures or individuals to be subjected to blast overpressure or thermal radiation flux levels in excess of the safety standards in §51.203. The ASD is determined by applying the safety standards established by this subpart C to the guidance set forth in HUD Guidebook, “Siting of HUD-Assisted Projects Near Hazardous Facilities.”

Blast overpressure—means the pressure, in pounds per square inch, in excess of normal atmospheric pressure on the surrounding medium caused by an explosion.

Danger zone—means the land area circumscribed by the radius which delineates the ASD of a given hazard.

Hazard—means any stationary container which stores, handles or processes hazardous substances of an explosive or fire prone nature. The term “hazard” does not include pipelines for the transmission of hazardous substances, if such pipelines are located underground or comply with applicable Federal, State and local safety standards. Also excepted are: (1) Containers with a capacity of 100 gallons or less when they contain common liquid industrial fuels, such as gasoline, fuel oil, kerosene and crude oil since they generally would pose no danger in terms of thermal radiation of blast overpressure to a project; and (2) facilities which are shielded from a proposed HUD-assisted project by the topography, because these topographic features effectively provide a mitigating measure already in place.

Hazardous substances—means petroleum products (petrochemicals) and chemicals that can produce blast overpressure or thermal radiation levels in excess of the standards set forth in §51.203. A specific list of hazardous substance is found in appendix I to this subpart.

HUD-assisted project—the development, construction, rehabilitation, modernization or conversion with HUD subsidy, grant assistance, loan, loan guarantee, or mortgage insurance, of any project which is intended for residential, institutional, recreational, commercial or industrial use. For purposes of this subpart the terms “rehabilitation” and “modernization” refer only to such repairs and renovation of a building or buildings as will result in an increased number of people being exposed to hazardous operations by increasing residential densities, converting the type of use of a building to habitation, or making a vacant building habitable.

Thermal radiation level—means the emission and propagation of heat energy through space or a material medium, expressed in BTU per square foot per hour (BTU/ft.² hr.).

[49 FR 5103, Feb. 10, 1984, as amended at 61 FR 5204, Feb. 9, 1996; 61 FR 13334, Mar. 26, 1996]

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§51.202 Approval of HUD-assisted projects.

(a) The Department will not approve an application for assistance for a proposed project located at less than the acceptable separation distance from a hazard, as defined in §51.201, unless appropriate mitigating measures, as defined in §51.205, are implemented, or unless mitigating measures are already in place.

(b) In the case of all applications for proposed HUD-assisted projects, the Department shall evaluate projected development plans in the vicinity of these projects to determine whether there are plans to install a hazardous operation in close proximity to the proposed project. If the evaluation shows that such a plan exists, the Department shall not approve assistance for the project unless the Department obtains satisfactory assurances that adequate mitigating measures will be taken when the hazardous operation is installed.

[49 FR 5103, Feb. 10, 1984, as amended at 61 FR 13334, Mar. 26, 1996]

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§51.203 Safety standards.

The following standards shall be used in determining the acceptable separation distance of a proposed HUD-assisted project from a hazard:

(a) *Thermal Radiation Safety Standard.* Projects shall be located so that:

(1) The allowable thermal radiation flux level at the building shall not exceed 10,000 BTU/sq. ft. per hr.;

(2) The allowable thermal radiation flux level for outdoor, unprotected facilities or areas of congregation shall not exceed 450 BTU/sq. ft. per hour.

(b) *Blast Overpressure Safety Standard.* Projects shall be located so that the maximum allowable blast overpressure at both buildings and outdoor, unprotected facilities or areas shall not exceed 0.5 psi.

(c) If a hazardous substance constitutes both a thermal radiation and blast overpressure hazard, the ASD for each hazard shall be calculated, and the larger of the two ASDs shall be used to determine compliance with this subpart.

(d) Background information on the standards and the logarithmic thermal radiation and blast overpressure charts that provide assistance in determining acceptable separation distances are contained in appendix II to this subpart C.

[49 FR 5103, Feb. 10, 1984, as amended at 61 FR 13334, Mar. 26, 1996]

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§51.204 HUD-assisted hazardous facilities.

In reviewing applications for proposed HUD-assisted projects involving the installation of hazardous facilities, the Department shall ensure that such hazardous facilities are located at an acceptable separation distance from residences and from any other facility or area where people may congregate or be present. The mitigating measures listed in §51.205 may be taken into account in determining compliance with this section.

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§51.205 Mitigating measures.

Application of the standards for determining an Acceptable Separation Distance (ASD) for a HUD-assisted project from a potential hazard of an explosion or fire prone nature is predicated on level topography with no intervening object(s) between the hazard and the project. Application of the standards can be eliminated or modified if:

(a) The nature of the topography shields the proposed project from the hazard.

(b) An existing permanent fire resistant structure of adequate size and strength will shield the proposed project from the hazard.

(c) A barrier is constructed surrounding the hazard, at the site of the project, or in between the potential hazard and the proposed project.

(d) The structure and outdoor areas used by people are designed to withstand blast overpressure and thermal radiation anticipated from the potential hazard (e.g., the project is of masonry and steel or reinforced concrete and steel construction).

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§51.206 Implementation.

This subpart C shall be implemented for each proposed HUD-assisted project by the HUD approving official or responsible entity responsible for review of the project. The implementation procedure will be part of the environmental review process in accordance with the procedures set forth in 24 CFR parts 50 and 58.

[61 FR 13334, Mar. 26, 1996]

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§51.207 Special circumstances.

The Secretary or the Secretary's designee may, on a case-by-case basis, when circumstances warrant, require the application of this subpart C with respect to a substance not listed in appendix I to this subpart C that would create thermal or overpressure effect in excess of that listed in §51.203.

[61 FR 13334, Mar. 26, 1996]

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§51.208 Reservation of administrative and legal rights.

Publication of these standards does not constitute a waiver of any right: (a) Of HUD to disapprove a project proposal if the siting is too close to a potential hazard not covered by this subpart, and (b) of HUD or any person or other entity to seek to abate or to collect damages occasioned by a nuisance, whether or not covered by the subpart.

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Appendix I to Subpart C of Part 51—Specific Hazardous Substances

The following is a list of specific petroleum products and chemicals defined to be hazardous substances under §51.201.

HAZARDOUS LIQUIDS

Acetic Acid	Ethyl Benzene
Acetic Anhydride	Ethyl Dichloride
Acetone	Ethyl Ether
Acrylonitrile	Gasoline
Amyl Acetate	Heptane
Amyl Alcohol	Hexane
Benzene	Isobutyl Acetate
Butyl Acetate	Isobutyl Alcohol
Butyl Acrylate	Isopropyl Acetate
Butyl Alcohol	Isopropyl Alcohol
Carbon Bisulfide	Jet Fuel and Kerosene
Carbon Disulfide	Methyl Alcohol
Cellosolve	Methyl Amyl Alcohol
Cresols	Methyl Cellosolve
Crude Oil (Petroleum)	Methyl Ethyl Ketone
Cumene	Naptha
Cyclohexane	Pentane
No. 2 Diesel Fuel	Propylene Oxide
Ethyl Acetate	Toluene
Ethyl Acrylate	Vinyl Acetate
Ethyl Alcohol	Xylene

HAZARDOUS GASES

Acetaldehyde	Hydrogen
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Butadiene	Liquefied Natural Gas (LNG)
Butane	Liquefied Petroleum Gas (LPG)
Ethene	Propane
Ethylene	Propylene
Ethylene Oxide	Vinyl Chloride

(Primary Source: "Urban Development Siting with respect to Hazardous Commercial/Industrial Facilities," by Rolf Jensen and Associates, Inc., April 1982)

[49 FR 5105, Feb. 10, 1984; 49 FR 12214, Mar. 29, 1984]

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Appendix II to Subpart C of Part 51—Development of Standards; Calculation Methods

I. Background Information Concerning the Standards

(a) Thermal Radiation:

(1) *Introduction.* Flammable products stored in above ground containers represent a definite, potential threat to human life and structures in the event of fire. The resulting fireball emits thermal radiation which is absorbed by the surroundings. Combustible structures, such as wooden houses, may be ignited by the thermal radiation being emitted. The radiation can cause severe burn, injuries and even death to exposed persons some distance away from the site of the fire.

(2) *Criteria for Acceptable Separation Distance (ASD).* Wooden buildings, window drapes and trees generally ignite spontaneously when exposed for a relatively long period of time to thermal radiation levels of approximately 10,000 Btu/hr. sq. ft. It will take 15 to 20 minutes for a building to ignite at that degree of thermal intensity. Since the reasonable response time for fire fighting units in urbanized areas is approximately five to ten minutes, a standard of 10,000 BTU/hr. sq. ft. is considered an acceptable level of thermal radiation for buildings.

People in outdoor areas exposed to a thermal radiation flux level of approximately 1,500 Btu/ft² hr will suffer intolerable pain after 15 seconds. Longer exposure causes blistering, permanent skin damage, and even death. Since it is assumed that children and the elderly could not take refuge behind walls or run away from the thermal effect of the fire within the 15 seconds before skin blistering occurs, unprotected (outdoor) areas, such as playgrounds, parks, yards, school grounds, etc., must be placed at such a distance from potential fire locations so that the radiation flux level is well below 1500 Btu/ft² hr. An acceptable flux level, particularly for elderly people and children, is 450 Btu/ft² hr. The skin can be exposed to this degree of thermal radiation for 3 minutes or longer with no serious detrimental effect. The result would be the same as a bad sunburn. Therefore, the standard for areas in which there will be exposed people, e.g. outdoor recreation areas such as playgrounds and parks, is set at 450 Btu/hr. sq. ft. Areas covered also include open space ancillary to residential structures, such as yard areas and vehicle parking areas.

(3) *Acceptable Separation Distance From a Potential Fire Hazard.* This is the actual setback required for the safety of occupied buildings and their inhabitants, and people in open spaces (exposed areas) from a potential fire hazard. The specific distance required for safety from such a hazard depends upon the nature and the volume of the substance. The Technical Guidebook entitled "Urban Development Siting With Respect to Hazardous/Commercial Industrial Facilities," which supplements this regulation, contains the technical guidance required to compute Acceptable Separation Distances (ASD) for those flammable substances most often encountered.

(b) *Blast Overpressure:* The Acceptable Separation Distance (ASD) for people and structures from materials prone to explosion is dependent upon the resultant blast measured in pounds per square inch (psi) overpressure. It has been determined by the military and corroborated by two independent studies conducted for the Department of Housing and Urban Development that 0.5 psi is the acceptable level of blast overpressure for both buildings and occupants, because a frame structure can normally withstand that level of external exertion with no serious structural damage, and it is

unlikely that human beings inside the building would normally suffer any serious injury. Using this as the safety standard for blast overpressure, nomographs have been developed from which an ASD can be determined for a given quantity of hazardous substance. These nomographs are contained in the handbook with detailed instructions on their use.

(c) *Hazard evaluation:* The Acceptable Separation Distances for buildings, which are determined for thermal radiation and blast overpressure, delineate separate identifiable danger zones for each potential accident source. For some materials the fire danger zone will have the greatest radius and cover the largest area, while for others the explosion danger zone will be the greatest. For example, conventional petroleum fuel products stored in unpressurized tanks do not emit blast overpressure of dangerous levels when ignited. In most cases, hazardous substances will be stored in pressurized containers. The resulting blast overpressure will be experienced at a greater distance than the resulting thermal radiation for the standards set in Section 51.203. In any event the hazard requiring the greatest separation distance will prevail in determining the location of HUD-assisted projects.

The standards developed for the protection of people and property are given in the following table.

	Thermal radiation	Blast overpressure
Amount of acceptable exposure allowed for building structures	10,000 BTU/ft ² hr	0.5 psi.
Amount of acceptable exposure allowed for people in open areas	450 BTU/ft ² hr	0.5 psi.

Problem Example

The following example is given as a guide to assist in understanding how the procedures are used to determine an acceptable separation distance. The technical data are found in the HUD Guidebook. Liquid propane is used in the example since it is both an explosion and a fire hazard.

In this hypothetical case a proposed housing project is to be located 850 feet from a 30,000 gallon liquid propane (LPG) tank. The objective is to determine the acceptable separation distance from the LPG tank. Since propane is both explosive and fire prone it will be necessary to determine the ASD for both explosion and for fire. The greatest of the two will govern. There is no dike around the tank in this example.

Nomographs from the technical Guidebook have been reproduced to facilitate the solving of the problem.

ASD For Explosion

Use Figure 1 to determine the acceptable separation distance for explosion.

The graph depicted on Figure 1 is predicated on a blast overpressure of 0.5 psi.

The ASD in feet can be determined by applying the quantity of the hazard (in gallons) to the graph.

In this case locate the 30,000 gallon point on the horizontal axis and draw a vertical line from that point to the intersection with the straight line curve. Then draw a horizontal line from the point where the lines cross to the left vertical axis where the ACCEPTABLE SEPARATION DISTANCE of 660 feet is found.

Therefore the ASD for explosion is 660 feet

Since the proposed project site is located 850 feet from the tank it is located at a safe distance with regards to blast overpressure.

ACCEPTABLE SEPARATION DISTANCE
BLAST OVERPRESSURE
NO BLAST HAZARD
HAZARDOUS GAS CLOUDS

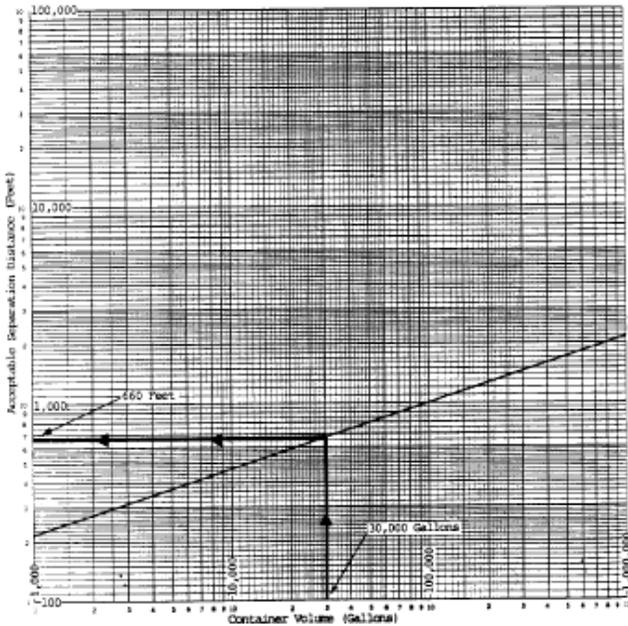


Figure 3

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ASD For Fire

To determine the ASD for fire it will be necessary to first find the fire width (diameter of the fireball) on Figure 2. Then apply this to Figure 3 to determine the ASD.

Since there are two safety standards for fire: (a) 10,000 BTU/ft²hr. for buildings; and (b) 450 BTU/ft²hr. for people in exposed areas, it will be necessary to determine an ASD for each.

To determine the fire width locate the 30,000 gallon point on the horizontal axis on *Figure 2* and draw a vertical line to the straight line curve. Then draw a horizontal line from the point where the lines cross to the left vertical axis where the FIRE WIDTH is found to be *350 feet*.

Now locate the 350 ft. point on the horizontal axis of *Figure 3* and draw a vertical line from that point to curves 1 and 2. Then draw horizontal lines from the points where the lines cross to the left vertical axis where the ACCEPTABLE SEPARATION DISTANCES of *240 feet* for buildings and *1,150 feet* for exposure to people is found.

Based on this the proposed project site is located at a safe distance from a potential fireball. However, exposed playgrounds or other exposed areas of congregation must be at least 1,150 feet from the tank, or be appropriately shielded from a potential fireball.

(Source: HUD Handbook, "Urban Development Siting With Respect to Hazardous Commercial/Industrial Facilities.")

FIRE WIDTH - UNCONTAINED SPILL
HAZARDOUS GAS CONTAINERS
NET WEIGHT

32

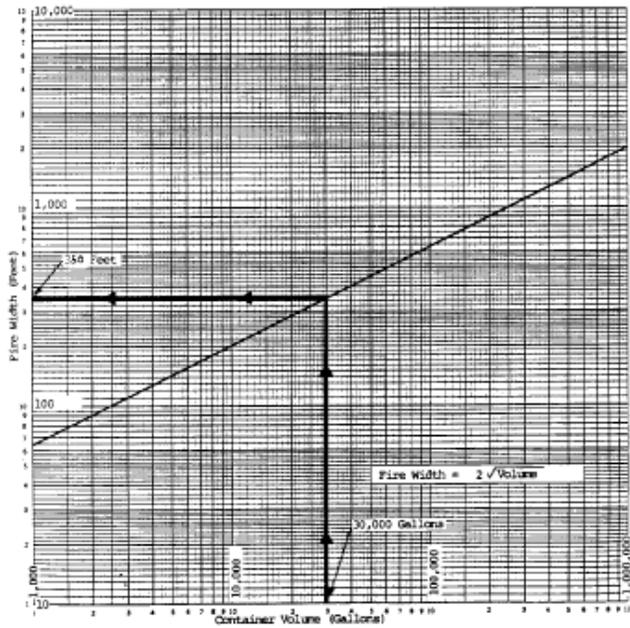


Figure 2

[View or download PDF](#)

ACCEPTABLE SEPARATION DISTANCE
HAZARDOUS GAS CONTAINERS
UNCONTAINED

33

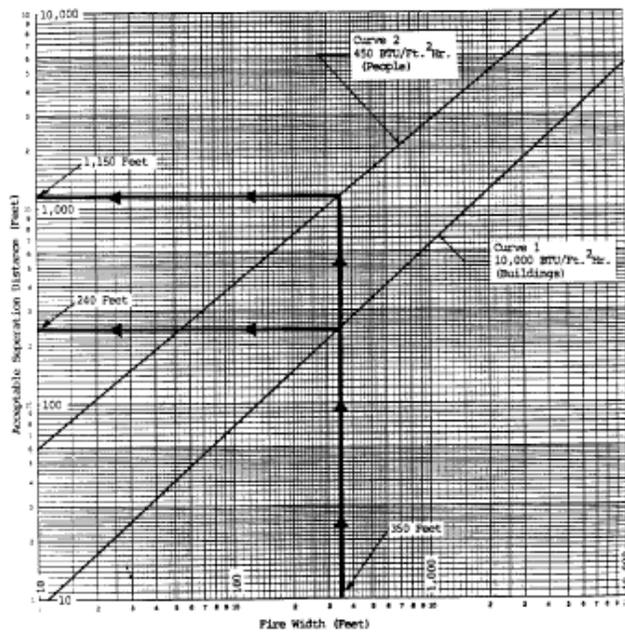


Figure 3

[View or download PDF](#)

[49 FR 5105, Feb. 10, 1984; 49 FR 12214, Mar. 29, 1984]

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Subpart D—Siting of HUD Assisted Projects in Runway Clear Zones at Civil Airports and Clear Zones and Accident Potential Zones at Military Airfields

AUTHORITY: Sec. 2, Housing Act of 1949, as amended, 42 U.S.C. 1441, affirmed by sec. 2, HUD Act of 1969, Pub. L. 90-448; sec. 7(d), HUD Act of 1965, 42 U.S.C. 3535(d); OMB, Fed'l Mgmt. Cir. 75-2: Compatible Land Uses At Federal Airfields.

SOURCE: 49 FR 880, Jan. 6, 1984, unless otherwise noted.

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§51.300 Purpose.

It is the purpose of this subpart to promote compatible land uses around civil airports and military airfields by identifying suitable land uses for Runway Clear Zones at civil airports and Clear Zones and Accident Potential Zones at military airfields and by establishing them as standards for providing HUD assistance, subsidy or insurance.

[49 FR 880, Jan. 6, 1984, as amended at 61 FR 13334, Mar. 26, 1996]

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§51.301 Definitions.

For the purposes of this regulation, the following definitions apply:

(a) *Accident Potential Zone*. An area at military airfields which is beyond the Clear Zone. The standards for the Accident Potential Zones are set out in Department of Defense Instruction 4165.57, "Air Installations Compatible Use Zones," November 8, 1977, 32 CFR part 256. There are no Accident Potential Zones at civil airports.

(b) *Airport Operator*. The civilian or military agency, group or individual which exercises control over the operations of the civil airport or military airfield.

(c) *Civil Airport*. An existing commercial service airport as designated in the National Plan of Integrated Airport Systems prepared by the Federal Aviation Administration in accordance with section 504 of the Airport and Airway Improvement Act of 1982.

(d) *Runway Clear Zones and Clear Zones*. Areas immediately beyond the ends of a runway. The standards for Runway Clear Zones for civil airports are established by FAA regulation 14 CFR part 152. The standards for Clear Zones for military airfields are established by DOD Instruction 4165.57, 32 CFR part 256.

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§51.302 Coverage.

(a) These policies apply to HUD programs which provide assistance, subsidy or insurance for construction, land development, community development or redevelopment or any other provision of facilities and services which are designed to make land available for construction. When the HUD assistance, subsidy or insurance is used to make land available for construction rather than for the actual construction, the provision of the HUD assistance, subsidy or insurance shall be dependent upon whether the facility to be built is itself acceptable in accordance with the standards in §51.303.

(b) These policies apply not only to new construction but also to substantial or major modernization and rehabilitation and to any other program which significantly prolongs the physical or economic life of existing facilities or which, in the case of Accident Potential Zones:

(1) Changes the use of the facility so that it becomes one which is no longer acceptable in accordance with the standards contained in §51.303(b);

(2) Significantly increases the density or number of people at the site; or

(3) Introduces explosive, flammable or toxic materials to the area.

(c) Except as noted in §51.303(a)(3), these policies do not apply to HUD programs where the action only involves the purchase, sale or rental of an existing property without significantly prolonging the physical or economic life of the property.

(d) The policies do not apply to research or demonstration projects which do not result in new construction or reconstruction, to interstate land sales registration, or to any action or emergency assistance which is provided to save lives, protect property, protect public health and safety, or remove debris and wreckage.

[49 FR 880, Jan. 6, 1984, as amended at 61 FR 13334, Mar. 26, 1996]

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§51.303 General policy.

It is HUD's general policy to apply standards to prevent incompatible development around civil airports and military airfields.

(a) HUD policy for actions in Runway Clear Zones and Clear Zones.

(1) HUD policy is not to provide any assistance, subsidy or insurance for projects and actions covered by this part except as stated in §51.303(a)(2) below.

(2) If a project proposed for HUD assistance, subsidy or insurance is one which will not be frequently used or occupied by people, HUD policy is to provide assistance, subsidy or insurance only when written assurances are provided to HUD by the airport operator to the effect that there are no plans to purchase the land involved with such facilities as part of a Runway Clear Zone or Clear Zone acquisition program.

(3) Special notification requirements for Runway Clear Zones and Clear Zones. In all cases involving HUD assistance, subsidy, or insurance for the purchase or sale of an existing property in a Runway Clear Zone or Clear Zone, HUD (or the responsible entity or recipient under 24 CFR part 58) shall advise the buyer that the property is in a Runway Clear Zone or Clear Zone, what the implications of such a location are, and that there is a possibility that the property may, at a later date, be acquired by the airport operator. The buyer must sign a statement acknowledging receipt of this information.

(b) HUD policy for actions in Accident Potential Zones at Military Airfields. HUD policy is to discourage the provision of any assistance, subsidy or insurance for projects and actions in the Accident Potential Zones. To be approved, projects must be generally consistent with the recommendations in the *Land Use Compatibility Guidelines For Accident Potential Zones* chart contained in DOD Instruction 4165.57, 32 CFR part 256.

[49 FR 880, Jan. 6, 1984, as amended at 61 FR 13334, Mar. 26, 1996]

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§51.304 Responsibilities.

(a) The following persons have the authority to approve actions in Accident Potential Zones:

(1) For programs subject to environmental review under 24 CFR part 58: the Certifying Officer of the responsible entity as defined in 24 CFR part 58.

(2) For all other HUD programs: the HUD approving official having approval authority for the project.

(b) The following persons have the authority to approve actions in Runway Clear Zones and Clear Zones:

(1) For programs subject to environmental review under 24 CFR part 58: The Certifying Officer of the responsible entity as defined in 24 CFR part 58.

(2) For all other HUD programs: the Program Assistant Secretary.

[61 FR 13335, Mar. 26, 1996]

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§51.305 Implementation.

(a) Projects already approved for assistance. This regulation does not apply to any project approved for assistance prior to the effective date of the regulation whether the project was actually under construction at that date or not.

(b) Acceptable data on Runway Clear Zones, Clear Zones and Accident Potential Zones. The only Runway Clear Zones, Clear Zones and Accident Potential Zones which will be recognized in applying this part are those provided by the airport operators and which for civil airports are defined in accordance with FAA regulations 14 CFR part 152 or for military airfields, DOD Instruction 4165.57, 32 CFR part 256. All data, including changes, related to the dimensions of Runway Clear Zones for civil airports shall be verified with the nearest FAA Airports District Office before use by HUD.

(c) Changes in Runway Clear Zones, Clear Zones, and Accident Potential Zones. If changes in the Runway Clear Zones, Clear Zones or Accident Potential Zones are made, the field offices shall immediately adopt these revised zones for use in reviewing proposed projects.

(d) The decision to approve projects in the Runway Clear Zones, Clear Zones and Accident Potential Zones must be documented as part of the environmental assessment or, when no assessment is required, as part of the project file.

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APPENDIX 2: EQUIPMENT DATA CALIBRATION

Meter #1

CALIBRATED CERTIFICATE OF CALIBRATION

BY **TRANSCAT**

Customer: RAECO RENTS LLC
135 BERNICE DRIVE
BENSENVILLE, IL 60106



PO Number: 4081-1

Certificate/SO Number: 17-C6T3Y-20-1 Revision 0

Manufacturer: 3M Company
Model Number: Soundpro SE/DL
Description: Sound Level Meter
Serial Number: BLL100004
ID: NONE

As-Found: In Tolerance
As-Left: In Tolerance

Issue Date: Feb 07, 2020
Calibration Date: Feb 07, 2020
Due Date: Feb 07, 2021

Calibrated To: Manufacturer Specification
Calibration Procedure: 1-AC28066-1

Transcat Calibration Laboratories have been audited and found in compliance with ISO/IEC 17025:2017. Accredited calibrations performed within the Lab's Scope of Accreditation are indicated by the presence of the Accrediting Body's Logo and Certificate Number. Any measurements on an accredited calibration not covered by that Lab's Scope of Accreditation are listed in the notes section of the certificate. SCC, NRC, CLAS or ANAB do not guarantee the accuracy of an individual calibration by accredited laboratories.

Transcat calibrations, as applicable, are performed in compliance with the requirements of the Transcat Quality Manual QAC-P01-000, the customer's Purchase Order and/or Quality Agreement requirements, ISO 9001:2015, ANSI/NCSL Z540.1-1994 (R2002) or NQA-1, as applicable. Complete records of work performed are maintained by Transcat and are available for inspection. Laboratory standards used in the performance of this calibration are listed on this certificate.

Transcat documents the traceability of measurements to the SI units through the National Institute of Standards and Technology (NIST), or the National Research Council of Canada (NRC), or other national measurement institutes (NMI) that are signatories to the CIPM Mutual Recognition Arrangement, or accepted fundamental and/or natural physical constants, or by the use of specified methods, consensus standards or ratio type measurements. Documentation supporting traceability information is available for review upon written request at a Transcat facility. The measured quantity and the measurement uncertainty are required for further dissemination of traceability.

A binary decision rule, utilizing simple acceptance, and simple rejection criteria is used for the determination of compliance. When compliance statements are present, they are reported without factoring in the effects of uncertainty and comply with the guidelines established by ASME B89.7.3.1-2001 (R2011) as follows:

- The acceptance zone is defined as: less than or equal to the high limit, and/or greater than or equal to the low limit. The rejection zones are defined as greater than the high limit and/or less than the low limit.
- Single measurement results in the acceptance zone are identified as in-tolerance. Single measurement results in the rejection zone are identified as out-of-tolerance (OOT).
- When all measurement results are in the acceptance zone for repeated measurements, for the same characteristic, the test is identified as in-tolerance. For repeated characteristic measurements, a single measurement result in the rejection zone, will cause the test to be identified as out-of-tolerance (OOT).

Uncertainties are reported with a coverage factor k=2, providing a level of confidence of approximately 95%. All calibrations have been performed using processes having a TUR of 4:1 or better (3:1 for mass calibrations), unless otherwise noted. The Test Uncertainty Ratio (TUR) is calculated in accordance with NCSL International RP-18. For mass calibrations: Conventional mass referenced to 8.0 g/cm³.

The results in this report relate only to the item calibrated or tested. Recorded calibration data is valid at the time of calibration within the stated uncertainties at the environmental conditions noted. The determination of compliance to the specification is specific to the model/serial no./ID no. referenced above based on the tolerances shown; these tolerances are either the original equipment manufacturers (OEM's) warranted specifications or the client's requested specifications. This certificate may not be reproduced except in full, without the written approval of Transcat. Additional information, if applicable may be included on separate report(s).

As Found/As Left Data

Description	Setpoints	Accuracy	Low Limit	High Limit	As Found / As Left	O O T	TUR
Source Level (A Weight)							
A Weight	114dB	±(1 dB)	96.9	98.9	98.1 dB		3.1 : 1
125Hz	114dB	±(1 dB)	104.4	106.4	105.6 dB		2.9 : 1
250Hz	114dB	±(1 dB)	109.8	111.8	110.8 dB		2.8 : 1

Date Received: February 05, 2020
Service Level: R5

Certificate - Page 1 of 3

Customer Number: 1-593031-000
OPS-F20-013R5 08/26/2019 FP001R5 9/23/2019



CALIBRATED CERTIFICATE OF CALIBRATION

BY **TRANSCAT**

Customer: RAECO RENTS LLC
135 BERNICE DRIVE
BENSENVILLE, IL 60106



PO Number: 4057-1

Certificate/SO Number: 17-C6M0R-260-1 Revision 0

Manufacturer: 3M Company
Model Number: AC-300
Description: Sound Level Calibrator
Serial Number: AC-300001324
ID: NONE

As-Found: In Tolerance
As-Left: In Tolerance

Issue Date: Jan 20, 2020
Calibration Date: Jan 20, 2020
Due Date: Jan 20, 2021

Calibrated To: Manufacturer Specification
Calibration Procedure: 1-AC62139-1

Transcat Calibration Laboratories have been audited and found in compliance with ISO/IEC 17025:2017. Accredited calibrations performed within the Lab's Scope of Accreditation are indicated by the presence of the Accrediting Body's Logo and Certificate Number. Any measurements on an accredited calibration not covered by that Lab's Scope of Accreditation are listed in the notes section of the certificate. SCC, NRC, CLAS or ANAB do not guarantee the accuracy of an individual calibration by accredited laboratories.

Transcat calibrations, as applicable, are performed in compliance with the requirements of the Transcat Quality Manual QAC-P01-000, the customer's Purchase Order and/or Quality Agreement requirements, ISO 9001:2015, ANSI/NCSL Z540.1-1994 (R2002) or NQA-1, as applicable. Complete records of work performed are maintained by Transcat and are available for inspection. Laboratory standards used in the performance of this calibration are listed on this certificate.

Transcat documents the traceability of measurements to the SI units through the National Institute of Standards and Technology (NIST), or the National Research Council of Canada (NRC), or other national measurement institutes (NMI) that are signatories to the CIPM Mutual Recognition Arrangement, or accepted fundamental and/or natural physical constants, or by the use of specified methods, consensus standards or ratio type measurements. Documentation supporting traceability information is available for review upon written request of a Transcat facility. The measured quantity and the measurement uncertainty are required for further dissemination of traceability.

A binary decision rule, utilizing simple acceptance, and simple rejection criteria is used for the determination of compliance. When compliance statements are present, they are reported without factoring in the effects of uncertainty and comply with the guidelines established by ASME B89.7.3.1-2001 (R2011) as follows:
-The acceptance zone is defined as: less than or equal to the high limit, and/or greater than or equal to the low limit. The rejection zones are defined as greater than the high limit and/or less than the low limit.
-Single measurement results in the acceptance zone are identified as in-tolerance. Single measurement results in the rejection zone are identified as out-of-tolerance (OOT).
-When all measurement results are in the acceptance zone for repeated measurements, for the same characteristic, the test is identified as in-tolerance. For repeated characteristic measurements, a single measurement result in the rejection zone, will cause the test to be identified as out-of-tolerance (OOT).

Uncertainties are reported with a coverage factor k=2, providing a level of confidence of approximately 95%. All calibrations have been performed using processes having a TUR of 4:1 or better (3:1 for mass calibrations), unless otherwise noted. The Test Uncertainty Ratio (TUR) is calculated in accordance with NCSL International RP-18. For mass calibrations: Conventional mass referenced to 8.0 g/cm³.

The results in this report relate only to the item calibrated or tested. Recorded calibration data is valid at the time of calibration within the stated uncertainties at the environmental conditions noted. The determination of compliance to the specification is specific to the model/serial no./ID no. referenced above based on the tolerances shown; these tolerances are either the original equipment manufacturers (OEM's) warranted specifications or the client's requested specifications. This certificate may not be reproduced except in full, without the written approval of Transcat. Additional information, if applicable may be included on separate report(s).

As Found/As Left Data

Description	Setpoints	Accuracy	Low Limit	High Limit	As Found / As Left	O O T	TUR
Source Level							
	114.0dB	±(0.4 dB)	113.6	114.4	114.0 dB		1.1 : 1
1000Hz							
	114.0dB	±(0.4 dB)	113.6	114.4	114.0 dB		1.1 : 1
250Hz							

Field not applicable.

Date Received: January 17, 2020
Service Level : R3

Certificate - Page 1 of 3

Customer Number: 1-593031-000
OFS-F20-013R5 08/26/2019 FP001R6 9/23/2019



CALIBRATED CERTIFICATE OF CALIBRATION

BY **TRANSAT**

Customer: RAECO RENTS LLC
135 BERNICE DRIVE
BENSENVILLE, IL 60106



PO Number: 4057-1

Certificate/SO Number: 17-C6M0R-260-1 Revision 0

Traceable Standards

Asset	Manufacturer	Model Number	Description	Cal Date	Due Date	Traceability Number	Use
13414	General Radio	1986	Sound Level Calibrator	24-Sep-19	31-Mar-20	CAS-405612-X0D4F C-901	AF/AL
18985	Simpson Electric Company	886-2	Sound Level Meter	1-Mar-19	31-Mar-20	17-818985-721-1	AF/AL
21848	Agilent/HP	53131A	Frequency Counter, 2 Channel	11-Apr-19	30-Apr-20	17-821848-23-1	AF/AL
O10277	Extech Instrument Corporation	407732	Sound Level Meter, Type-2	27-Sep-19	30-Sep-20	17-8O10277-13-1	AF/AL

The use of the standard is defined as: AF - used for as-found readings, AL - used for as-left readings.

Environmental Data

Temperature	Relative Humidity	Temp/ RH Asset
67.95°F /19.97°C	44.40%	O10253-1

Legend

Topic	Description
Accuracy	UUT specification that establishes expected tolerances and a time limit(calibration interval) over which the instrument is expected to hold these tolerances
As Found	Initial measurement results
As Left	Measurement results after adjustment and/or repair
Blank Data Field	Test is not applicable for the UUT
Cal Process Uncertainty (CPU)	The uncertainty of calibration process for the reported measurement result
Cover Factor (k)	A measure of uncertainty that defines an interval about the measurement result
Low / High Limits	Establishes UUT acceptable performance limits for the test measurement
Measurement Uncertainty	The dispersion of the values attributed to a measured quantity
OOT	Out of Tolerance
Setpoints	Measurement target values
Traceability	Unbroken chain of comparisons relating an instrument's measurements to a known standard(s)
Traceability Number	Unique identifier(s) used to document traceability of calibration standards
TUR	Test Uncertainty Ratio, ratio of the tolerance or specification of the test measurement in relation to the uncertainty in measurement results
UUT	Unit Under test

Date Received: January 17, 2020
Service Level: R3

Certificate - Page 2 of 3

Customer Number: 1-593031-000
OPS-F20-013R5 08/28/2019 FP001R6 9/23/2019



CALIBRATED CERTIFICATE OF CALIBRATION

BY TRANSOTT

Customer: RAECO RENTS LLC
135 BERNICE DRIVE
BENSENVILLE, IL 60106



PO Number: 4081-1

Certificate/SO Number: 17-C6T3Y-20-1 Revision 0

Traceable Standards

Asset	Manufacturer	Model Number	Description	Cal Date	Due Date	Traceability Number	Use
13414	General Radio	1986	Sound Level Calibrator	24-Sep-19	31-Mar-20	CAS-405612-X0D4F 0-901	AF/AL

The use of the standard is defined as: AF - used for as-found readings, AL - used for as-left readings.

Environmental Data

Temperature	Relative Humidity	Temp / RH Asset
68.20°F /20.11°C	51.10%	O10253-1

Legend

Topic	Description
Accuracy	UUT specification that establishes expected tolerances and a time limit(calibration interval) over which the instrument is expected to hold these tolerances
As Found	Initial measurement results
As Left	Measurement results after adjustment and/or repair
Blank Data Field	Test is not applicable for the UUT
Cal Process Uncertainty (CPU)	The uncertainty of calibration process for the reported measurement result
Cover Factor (K)	A measure of uncertainty that defines an interval about the measurement result
Low / High Limits	Establishes UUT acceptable performance limits for the test measurement
Measurement Uncertainty	The dispersion of the values attributed to a measured quantity
OOT	Out of Tolerance
Setpoints	Measurement target values
Traceability	Unbroken chain of comparisons relating an instrument's measurements to a known standard(s)
Traceability Number	Unique Identifier(s) used to document traceability of calibration standards
TUR	Test Uncertainty Ratio, ratio of the tolerance or specification of the test measurement in relation to the uncertainty in measurement results
UUT	Unit Under test

Calibrated At:
8334B Arrow Ridge Blvd.
Charlotte, NC 28273

Facility Responsible:
8334B Arrow Ridge Blvd.
Charlotte, NC 28273
800-828-1470

Calibrated By:
Electronically Signed By:
Tracy Dye

Tracy Dye Feb 07, 2020
Calibration Technician 11:23:57 -05:00

Reviewed By:
Electronically Signed By:
Adam McCrea

Adam McCrea Feb 07, 2020
Lab Manager 11:30:39 -05:00

Unit Barcode: 
0900B335889

Date Received: February 05, 2020
Service Level: R6

Certificate - Page 3 of 3

Customer Number: 1-593031-000
OPS-F20-013R6 08/26/2019 FP001R6 9/23/2019



CALIBRATED BY TRANSCAT CERTIFICATE OF CALIBRATION

Customer: RAECO RENTS LLC
135 BERNICE DRIVE
BENSENVILLE, IL 60106



PO Number: 4081-1

Certificate/SO Number: 17-C6T3Y-20-1 Revision 0

As Found/As Left Data

Description	Setpoints	Accuracy	Low Limit	High Limit	As Found / As Left	O O T	TUR
Source Level (A Weight)							
500Hz	114dB	±(1 dB)	113.0	115.0	113.9 dB		2.7 : 1
1000Hz	114dB	±(1 dB)	114.2	116.2	115.3 dB		2.7 : 1
2000Hz	114dB	±(1 dB)	114.0	116.0	114.4 dB		1.6 : 1
4000Hz							
Sound Level (C Weight)							
C Weight	114dB	±(1 dB)	113.0	115.0	113.9 dB		2.7 : 1
125Hz	114dB	±(1 dB)	113.0	115.0	114.1 dB		2.7 : 1
250Hz	114dB	±(1 dB)	113.0	115.0	114.0 dB		2.7 : 1
500Hz	114dB	±(1 dB)	113.0	115.0	113.8 dB		2.7 : 1
1000Hz	114dB	±(1 dB)	113.0	115.0	113.9 dB		2.7 : 1
2000Hz	114dB	±(1 dB)	113.0	115.0	113.6 dB		1.6 : 1
4000Hz							
Sound Level Test							
Level Test	74dB	±(1 dB)	73.0	75.0	74.5 dB		2.2 : 1
1kHz	84dB	±(1 dB)	83.0	85.0	83.9 dB		2.2 : 1
1kHz	94dB	±(1 dB)	93.0	95.0	94.1 dB		2.2 : 1
1kHz	104dB	±(1 dB)	103.0	105.0	103.8 dB		2.2 : 1
1kHz	114dB	±(1 dB)	113.0	115.0	113.7 dB		2.7 : 1
1kHz							

Field not applicable.

Date Received: February 05, 2020
Service Level : R5

Certificate - Page 2 of 3

Customer Number: 1-593031-000
OPS-F20-013R5 08/25/2019 FP001R6 0/23/2019



CALIBRATED CERTIFICATE OF CALIBRATION

BY **TRANSOIL**

Customer: RAECO RENTS LLC
135 BERNICE DRIVE
BENSENVILLE, IL 60106



PO Number: 4057-1

Certificate/SO Number: 17-C6M0R-260-1 Revision 0

Calibrated At:
8334B Arrow Ridge Blvd.
Charlotte, NC 28273

Facility Responsible:
8334B Arrow Ridge Blvd.
Charlotte, NC 28273
800-828-1470

Calibrated By:
Electronically Signed By:
Tracy Dye

Tracy Dye Jan 20, 2020
Calibration Technician 07:37:21 -05:00

Reviewed By:
Electronically Signed By:
Eric Hubrich for

Adam McCrea Jan 20, 2020
Lab Manager 08:27:48 -05:00

Unit Barcode: 
0900B333287

Date Received: January 17, 2020
Service Level: R3

Certificate - Page 3 of 3

Customer Number: 1-593031-000
OPS-F20-013R5 08/26/2019 FP001R6 9/23/2019



Meter #2

CALIBRATED CERTIFICATE OF CALIBRATION

BY **TRANSCAT**

Customer: RAECO RENTS LLC
135 BERNICE DRIVE
BENSENVILLE, IL 60106



PO Number: 3887-1

Certificate/SO Number: 17-C515K-260-1 Revision 0

Manufacturer: 3M Company
Model Number: SoundPro DL-1-1/3
Description: Sound Level Meter, Type-1
Serial Number: BLP080003
ID: NONE

As-Found: In Tolerance
As-Left: In Tolerance

Issue Date: Oct 30, 2019
Calibration Date: Oct 30, 2019
Due Date: Oct 30, 2020

Calibrated To: Manufacturer Specification
Calibration Procedure: 1-AC28066-1

Transcat Calibration Laboratories have been audited and found in compliance with ISO/IEC 17025:2017. Accredited calibrations performed within the Lab's Scope of Accreditation are indicated by the presence of the Accrediting Body's Logo and Certificate Number. Any measurements on an accredited calibration not covered by that Lab's Scope of Accreditation are listed in the notes section of the certificate. SCC, NRC, CLAS or ANAB do not guarantee the accuracy of an individual calibration by accredited laboratories.

Transcat calibrations, as applicable, are performed in compliance with the requirements of the Transcat Quality Manual QAC-P01-000, the customer's Purchase Order and/or Quality Agreement requirements, ISO 9001:2015, ANSI/NCSL 2540.1-1994 (R2002) or NQA-1, as applicable. Complete records of work performed are maintained by Transcat and are available for inspection. Laboratory standards used in the performance of this calibration are listed on this certificate.

Transcat documents the traceability of measurements to the SI units through the National Institute of Standards and Technology (NIST), or the National Research Council of Canada (NRC), or other national measurement institutes (NMI) that are signatories to the CIPM Mutual Recognition Arrangement, or accepted fundamental and/or natural physical constants, or by the use of specified methods, consensus standards or ratio type measurements. Documentation supporting traceability information is available for review upon written request at a Transcat facility. The measured quantity and the measurement uncertainty are required for further dissemination of traceability.

A binary decision rule, utilizing simple acceptance, and simple rejection criteria is used for the determination of compliance. When compliance statements are present, they are reported without factoring in the effects of uncertainty and comply with the guidelines established by ASME B89.7.3.1-2001 (R2011) as follows:

- The acceptance zone is defined as: less than or equal to the high limit, and/or greater than or equal to the low limit. The rejection zones are defined as: greater than the high limit and/or less than the low limit.
- Single measurement results in the acceptance zone are identified as in-tolerance. Single measurement results in the rejection zone are identified as out-of-tolerance (OOT).
- When all measurement results are in the acceptance zone for repeated measurements, for the same characteristic, the test is identified as in-tolerance. For repeated characteristic measurements, a single measurement result in the rejection zone, will cause the test to be identified as out-of-tolerance (OOT).

Uncertainties are reported with a coverage factor k=2, providing a level of confidence of approximately 95%. All calibrations have been performed using processes having a TUR of 4:1 or better (3:1 for mass calibrations), unless otherwise noted. The Test Uncertainty Ratio (TUR) is calculated in accordance with NCSL International RP-18. For mass calibrations: Conventional mass referenced to 8.0 µg/cm³.

The results in this report relate only to the item calibrated or tested. Recorded calibration data is valid at the time of calibration within the stated uncertainties at the environmental conditions noted. The determination of compliance to the specification is specific to the model/serial no./ID no. referenced above based on the tolerances shown; these tolerances are either the original equipment manufacturers (OEM's) warranted specifications or the client's requested specifications. This certificate may not be reproduced except in full, without the written approval of Transcat. Additional information, if applicable may be included on separate report(s).

As Found/As Left Data

Description	Setpoints	Accuracy	Low Limit	High Limit	As Found / As Left	$\frac{O}{T}$	TUR
Source Level (A Weight)							
A Weight	114dB	±(1 dB)	95.9	98.9	97.4 dB		3.1 : 1
125Hz	114dB	±(1 dB)	104.4	106.4	104.9 dB		2.9 : 1
250Hz	114dB	±(1 dB)	109.8	111.8	110.2 dB		2.8 : 1

Date Received: October 23, 2019
Service Level : R6

Certificate - Page 1 of 3

Customer Number: 1-593031-000
OPS-F20-013R5 08/26/2019 FP001R6 9/23/2019



CALIBRATED CERTIFICATE OF CALIBRATION

BY **TRANSCIT**

Customer: RAECO RENTS LLC
 135 BERNICE DRIVE
 BENSENVILLE, IL 60106



PO Number: 3887-1

Certificate/SO Number: 17-C515K-260-1 Revision 0

As Found/As Left Data

Description	Setpoints	Accuracy	Low Limit	High Limit	As Found / As Left	O T TUR
Source Level (A Weight)						
500Hz	114dB	±(1 dB)	113.0	115.0	113.4 dB	2.7 : 1
1000Hz	114dB	±(1 dB)	114.2	116.2	114.5 dB	2.7 : 1
2000Hz	114dB	±(1 dB)	114.0	116.0	114.3 dB	1.6 : 1
4000Hz						
Sound Level (C Weight)						
C Weight	114dB	±(1 dB)	113.0	115.0	113.3 dB	2.7 : 1
125Hz	114dB	±(1 dB)	113.0	115.0	113.3 dB	2.7 : 1
250Hz	114dB	±(1 dB)	113.0	115.0	113.3 dB	2.7 : 1
500Hz	114dB	±(1 dB)	113.0	115.0	113.5 dB	2.7 : 1
1000Hz	114dB	±(1 dB)	113.0	115.0	113.4 dB	2.7 : 1
2000Hz	114dB	±(1 dB)	113.0	115.0	113.3 dB	1.6 : 1
4000Hz						
Sound Level Test						
Level Test	74dB	±(1 dB)	73.0	75.0	73.4 dB	2.2 : 1
1kHz	84dB	±(1 dB)	83.0	85.0	83.3 dB	2.2 : 1
1kHz	94dB	±(1 dB)	93.0	95.0	93.3 dB	2.2 : 1
1kHz	104dB	±(1 dB)	103.0	105.0	103.3 dB	2.2 : 1
1kHz	114dB	±(1 dB)	113.0	115.0	113.4 dB	2.7 : 1
1kHz						

Field not applicable.

Date Received: October 23, 2019
 Service Level : RG

Certificate - Page 2 of 3

Customer Number: 1-593031-000
 OPS-F20-013R5 08/26/2019 FP001R6 9/23/2019



CALIBRATED CERTIFICATE OF CALIBRATION

BY **TRANSCAT**

Customer: RAECO RENTS LLC
135 BERNICE DRIVE
BENSENVILLE, IL 60106



PO Number: 3887-1

Certificate/SO Number: 17-C515K-260-1 Revision 0

Traceable Standards

Asset	Manufacturer	Model Number	Description	Cal Date	Due Date	Traceability Number	Use
13414	General Radio	1986	Sound Level Calibrator	24-Sep-19	31-Mar-20	CAS-405612-X0D4F-0-901	AF/AL

The use of the standard is defined as: AF - used for as-found readings, AL - used for as-left readings.

Environmental Data

Temperature	Relative Humidity	Temp / RH Asset
67.14°F /19.52°C	62.60%	O10253-1

Legend

Topic	Description
Accuracy	UUT specification that establishes expected tolerances and a time limit (calibration interval) over which the instrument is expected to hold these tolerances
As Found	Initial measurement results
As Left	Measurement results after adjustment and/or repair
Blank Data Field	Test is not applicable for the UUT
Cal Process Uncertainty (CPU)	The uncertainty of calibration process for the reported measurement result
Cover Factor (k)	A measure of uncertainty that defines an interval about the measurement result
Low / High Limits	Establishes UUT acceptable performance limits for the test measurement
Measurement Uncertainty	The dispersion of the values attributed to a measured quantity
OOT	Out of Tolerance
Setpoints	Measurement target values
Traceability	Unbroken chain of comparisons relating an instrument's measurements to a known standard(s)
Traceability Number	Unique identifier(s) used to document traceability of calibration standards
TUR	Test Uncertainty Ratio, ratio of the tolerance or specification of the test measurement in relation to the uncertainty in measurement results
UUT	Unit Under test

Calibrated At:
8334B Arrow Ridge Blvd.
Charlotte, NC 28273

Facility Responsible:
8334B Arrow Ridge Blvd.
Charlotte, NC 28273
800-828-1470

Calibrated By:
Electronically Signed By:
Tracy Dye

Tracy Dye
Calibration Technician
Oct 30, 2019
09:47:04 -04:00

Reviewed By:
Electronically Signed By:
Adam McCrea

Adam McCrea
Lab Manager
Oct 30, 2019
09:54:46 -04:00

Unit Barcode: 
900B0202121

Date Received: October 23, 2019
Service Level: R6

Certificate - Page 3 of 3

Customer Number: 1-593031-000
OPS-F20-013R5 08/26/2019 FP001R6 9/23/2019



CALIBRATED CERTIFICATE OF CALIBRATION

BY **TRANSCAT**

Customer: RAECO RENTS LLC
135 BERNICE DRIVE
BENSENVILLE, IL 60106



PO Number: 3887-1

Certificate/SO Number: 17-C5I5K-240-1 Revision 0

Manufacturer: 3M Company
Model Number: AC-300
Description: Sound Level Calibrator
Serial Number: AC300005899
ID: NONE

As-Found: In Tolerance
As-Left: In Tolerance

Issue Date: Oct 30, 2019
Calibration Date: Oct 30, 2019
Due Date: Oct 30, 2020

Calibrated To: Manufacturer Specification
Calibration Procedure: 1-AC62139-1

Transcat Calibration Laboratories have been audited and found in compliance with ISO/IEC 17025:2017. Accredited calibrations performed within the Lab's Scope of Accreditation are indicated by the presence of the Accrediting Body's Logo and Certificate Number. Any measurements on an accredited calibration not covered by that Lab's Scope of Accreditation are listed in the notes section of the certificate. SCC, NRC, CLAS or ANAB do not guarantee the accuracy of an individual calibration by accredited laboratories.

Transcat calibrations, as applicable, are performed in compliance with the requirements of the Transcat Quality Manual QAC-P01-000, the customer's Purchase Order and/or Quality Agreement requirements, ISO 9001:2015, ANSI/NCSL Z540.1-1994 (R2002) or NOA-1, as applicable. Complete records of work performed are maintained by Transcat and are available for inspection. Laboratory standards used in the performance of this calibration are listed on this certificate.

Transcat documents the traceability of measurements to the SI units through the National Institute of Standards and Technology (NIST), or the National Research Council of Canada (NRC), or other national measurement institutes (NMI) that are signatories to the CIPM Mutual Recognition Arrangement, or accepted fundamental and/or natural physical constants, or by the use of specified methods, consensus standards or ratio type measurements. Documentation supporting traceability information is available for review upon written request at a Transcat facility. The measured quantity and the measurement uncertainty are required for further dissemination of traceability.

A binary decision rule, utilizing simple acceptance, and simple rejection criteria is used for the determination of compliance. When compliance statements are present, they are reported without factoring in the effects of uncertainty and comply with the guidelines established by ASME B89.7.3.1-2001 (R2011) as follows:

- The acceptance zone is defined as: less than or equal to the high limit, and/or greater than or equal to the low limit. The rejection zones are defined as greater than the high limit and/or less than the low limit.
- Single measurement results in the acceptance zone are identified as in-tolerance. Single measurement results in the rejection zone are identified as out-of-tolerance (OOT).
- When all measurement results are in the acceptance zone for repeated measurements, for the same characteristic, the test is identified as in-tolerance. For repeated characteristic measurements, a single measurement result in the rejection zone, will cause the test to be identified as out-of-tolerance (OOT).

Uncertainties are reported with a coverage factor $k=2$, providing a level of confidence of approximately 95%. All calibrations have been performed using processes having a TUR of 4:1 or better (3:1 for mass calibrations), unless otherwise noted. The Test Uncertainty Ratio (TUR) is calculated in accordance with NCSL International RP-18. For mass calibrations: Conventional mass referenced to 9.8 g/cm³.

The results in this report relate only to the item calibrated or tested. Recorded calibration data is valid at the time of calibration within the stated uncertainties at the environmental conditions noted. The determination of compliance to the specification is specific to the model/serial no./ID no. referenced above based on the tolerances shown; these tolerances are either the original equipment manufacturers (OEM's) warranted specifications or the client's requested specifications. This certificate may not be reproduced except in full, without the written approval of Transcat. Additional information, if applicable may be included on separate report(s).

As Found/As Left Data

Description	Setpoints	Accuracy	Low Limit	High Limit	As Found / As Left	O O T	TUR
Source Level							
1000Hz	114.0dB	±(0.4 dB)	113.6	114.4	114.1 dB		1.1 : 1
250Hz	114.0dB	±(0.4 dB)	113.6	114.4	114.1 dB		1.1 : 1

Date Received: October 23, 2019
Service Level: RB

Certificate - Page 1 of 3

Customer Number: 1-593031-000
OPS-F20-013R5 08/26/2019 FP001R6 8/23/2019



CALIBRATED CERTIFICATE OF CALIBRATION

BY **TRANSICAT**

Customer: RAECO RENTS LLC
 135 BERNICE DRIVE
 BENSENVILLE, IL 60106



PO Number: 3887-1

Certificate/SO Number: 17-C5I5K-240-1 Revision 0

As Found/As Left Data

Description	Setpoints	Accuracy	Low Limit	High Limit	As Found / As Left	O O Y TUR
Frequency (Hz) Measure						
Frequency	1000Hz	±(0.5% Rdg)	995	1005	1000 Hz	
	250.0Hz	±(0.5% Rdg)	248.7	251.3	250.4 Hz	

Field not applicable.

Traceable Standards

Asset	Manufacturer	Model Number	Description	Cal Date	Due Date	Traceability Number	Use
13414	General Radio	1986	Sound Level Calibrator	24-Sep-19	31-Mar-20	CAS-405612-X0D4F 0-901	AF/AL
18985	Simpson Electric Company	886-2	Sound Level Meter	1-Mar-19	31-Mar-20	17-&18985-721-1	AF/AL
O10051	HP	53132A opt 010	Frequency Counter, 2 Channel	27-Dec-18	31-Dec-19	17-&O10051-24-2	AF/AL
O10277	Extech Instrument Corporation	407732	Sound Level Meter, Type-2	27-Sep-19	30-Sep-20	17-&O10277-13-1	AF/AL

The use of the standard is defined as: AF - used for as-found readings, AL - used for as-left readings.

Environmental Data

Temperature	Relative Humidity	Temp/ RH Asset
66.67°F /19.26°C	61.40%	O10253-1

Date Received: October 23, 2019
Service Level: R6

Certificate - Page 2 of 3

Customer Number: 1-593031-000
 OPS-F20-013R5 08/26/2019 FP001R6 9/23/2019



CALIBRATED BY TRANSICIT CERTIFICATE OF CALIBRATION

Customer: RAECO RENTS LLC
135 BERNICE DRIVE
BENSENVILLE, IL 60106

PO Number: 3887-1



Certificate/SO Number: 17-C515K-240-1 Revision 0

Legend

Topic	Description
Accuracy	UUT specification that establishes expected tolerances and a time limit (calibration interval) over which the instrument is expected to hold these tolerances
As Found	Initial measurement results
As Left	Measurement results after adjustment and/or repair
Blank Data Field	Test is not applicable for the UUT
Cal Process Uncertainty (CPU)	The uncertainty of calibration process for the reported measurement result
Cover Factor (k)	A measure of uncertainty that defines an interval about the measurement result
Low / High Limits	Establishes UUT acceptable performance limits for the test measurement
Measurement Uncertainty	The dispersion of the values attributed to a measured quantity
OOT	Out of Tolerance
Setpoints	Measurement target values
Traceability	Unbroken chain of comparisons relating an instrument's measurements to a known standard(s)
Traceability Number	Unique identifier(s) used to document traceability of calibration standards
TUR	Test Uncertainty Ratio, ratio of the tolerance or specification of the test measurement in relation to the uncertainty in measurement results
UUT	Unit Under test

Calibrated At:
8334B Arrow Ridge Blvd.
Charlotte, NC 28273

Facility Responsible:
8334B Arrow Ridge Blvd.
Charlotte, NC 28273
800-828-1470

Calibrated By:
 Electronically Signed By:
Tracy Dye

Tracy Dye Oct 30, 2019
Calibration Technician 09:24:30 -04:00

Reviewed By:
 Electronically Signed By:
Adam McCree

Adam McCree Oct 30, 2019
Lab Manager 09:32:15 -04:00

Unit Barcode: 90080202122

Date Received: October 23, 2019
Service Level: R5

Certificate - Page 3 of 3

Customer Number: 1-593031-000
OPS-F20-013R5 08/26/2019 FF001R6 9/23/2019



APPENDIX 3: NOISE LEVEL MEASUREMENT AND GRAPHS



Session Report

10/6/2020

Information Panel

Name Monitoring Station #1 - Daytime Period
Start Time 10/6/2020 7:02:21 AM
Stop Time 10/6/2020 7:33:00 AM
Device Name BLL100004
Model Type SoundPro DL
Device Firmware Rev R.13H
Comments 

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
CNEL	1	51.7 dB	L10	1	53.3 dB
Takt	1	55.9 dB	LDN	1	51.7 dB
L90	1	46.2 dB	Rtime	1	00:30:39
Exchange Rate	1	3 dB	Response	1	FAST
Weighting	1	A	Criterion Level	1	90 dB

Statistics Table

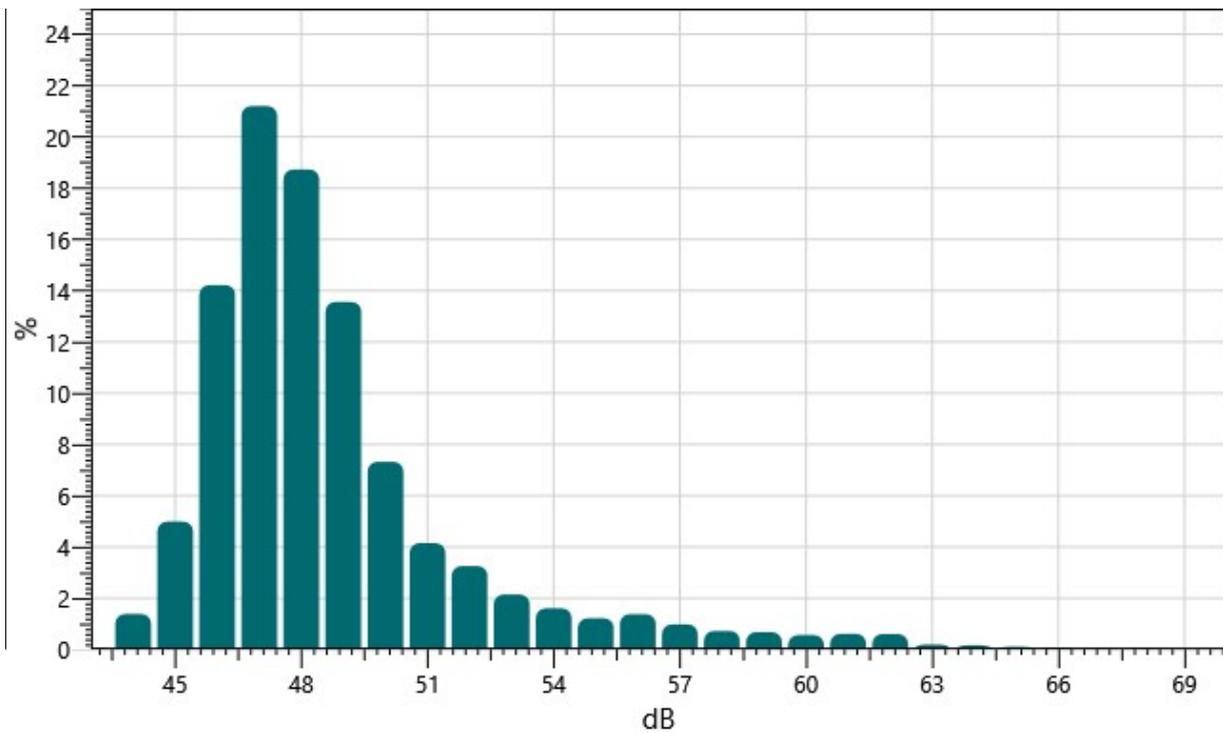
dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
43:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.03	0.06
44:	0.06	0.08	0.07	0.10	0.12	0.14	0.15	0.17	0.24	0.27	1.39
45:	0.32	0.31	0.33	0.36	0.40	0.50	0.61	0.65	0.71	0.81	4.99
46:	0.91	1.04	1.07	1.27	1.38	1.48	1.55	1.67	1.77	2.06	14.22
47:	2.37	2.48	1.51	2.22	2.15	2.17	2.09	2.16	2.02	2.03	21.20
48:	1.98	1.97	2.05	2.00	1.92	1.79	1.81	1.72	1.76	1.73	18.73
49:	1.68	1.56	1.50	1.42	1.31	1.30	1.25	1.16	1.21	1.17	13.56
50:	1.16	1.01	0.58	0.79	0.71	0.67	0.66	0.58	0.60	0.55	7.32
51:	0.52	0.50	0.41	0.44	0.43	0.42	0.37	0.35	0.38	0.32	4.15
52:	0.31	0.35	0.38	0.33	0.30	0.35	0.32	0.30	0.30	0.30	3.25
53:	0.31	0.28	0.18	0.21	0.24	0.20	0.20	0.20	0.17	0.17	2.15
54:	0.18	0.15	0.19	0.16	0.18	0.15	0.15	0.15	0.16	0.13	1.61
55:	0.12	0.15	0.12	0.13	0.10	0.11	0.09	0.11	0.13	0.15	1.22
56:	0.16	0.17	0.10	0.17	0.15	0.14	0.13	0.13	0.12	0.11	1.38



57:	0.12	0.10	0.08	0.09	0.10	0.10	0.11	0.10	0.08	0.09	0.98
58:	0.07	0.08	0.06	0.07	0.07	0.05	0.07	0.07	0.09	0.09	0.72
59:	0.07	0.08	0.04	0.06	0.06	0.07	0.09	0.08	0.07	0.06	0.68
60:	0.06	0.06	0.07	0.06	0.06	0.06	0.07	0.04	0.05	0.04	0.56
61:	0.05	0.04	0.05	0.05	0.07	0.06	0.06	0.08	0.07	0.09	0.61
62:	0.08	0.08	0.06	0.06	0.08	0.06	0.04	0.05	0.04	0.05	0.60
63:	0.03	0.04	0.03	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.19
64:	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.17
65:	0.02	0.02	0.01	0.02	0.01	0.00	0.01	0.00	0.01	0.00	0.11
66:	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.01	0.00	0.08
67:	0.00	0.01	0.01	0.00	0.01	0.00	0.01	0.01	0.00	0.00	0.04
68:	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.05
69:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Statistics Chart

Monitoring Station #1 - Daytime Period: Statistics Chart



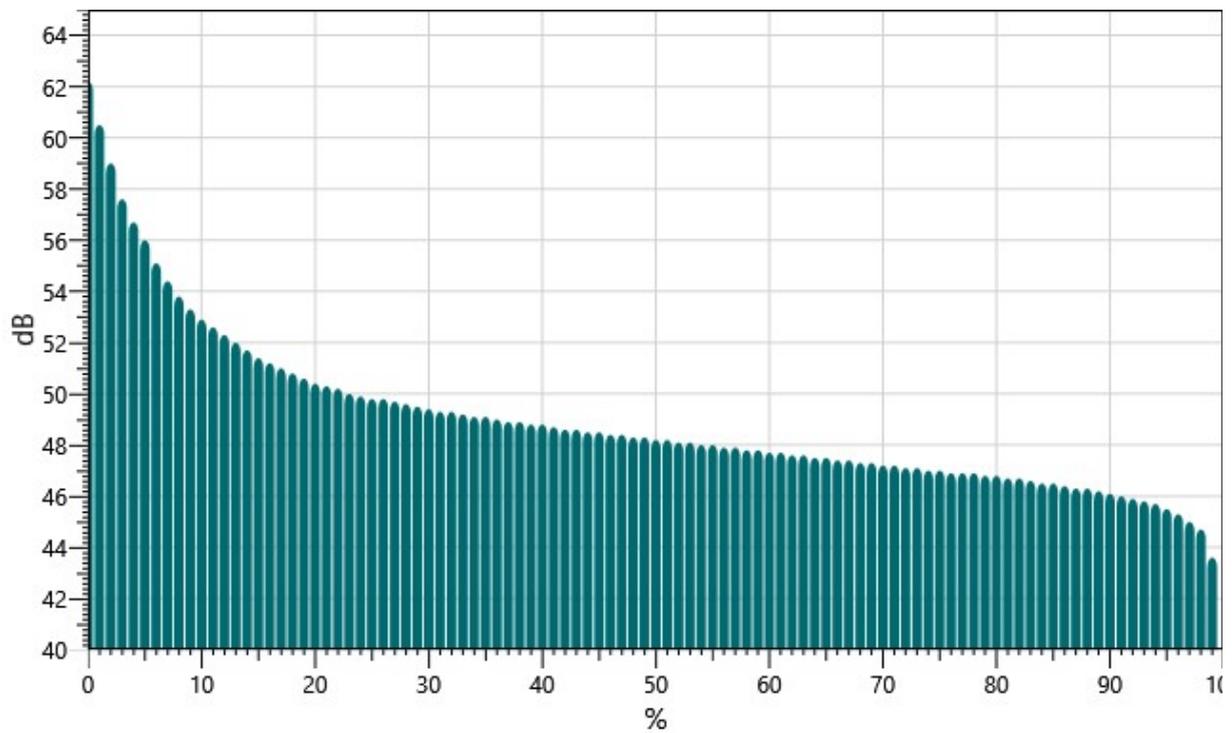
Exceedance Table

	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%
0%:		62.2	60.5	59.0	57.6	56.7	56.0	55.1	54.4	53.8
10%:	53.3	52.9	52.6	52.3	52.0	51.7	51.4	51.2	51.0	50.8

20%:	50.6	50.4	50.3	50.2	50.0	49.9	49.8	49.8	49.7	49.6
30%:	49.5	49.4	49.3	49.3	49.2	49.1	49.1	49.0	48.9	48.9
40%:	48.8	48.8	48.7	48.6	48.6	48.5	48.5	48.4	48.4	48.3
50%:	48.3	48.2	48.2	48.1	48.1	48.0	48.0	47.9	47.9	47.8
60%:	47.8	47.7	47.7	47.6	47.6	47.5	47.5	47.4	47.4	47.3
70%:	47.3	47.2	47.2	47.1	47.1	47.0	47.0	46.9	46.9	46.9
80%:	46.8	46.8	46.7	46.7	46.6	46.5	46.5	46.4	46.3	46.3
90%:	46.2	46.1	46.0	45.9	45.8	45.7	45.5	45.3	45.0	44.7
100%:	43.6									

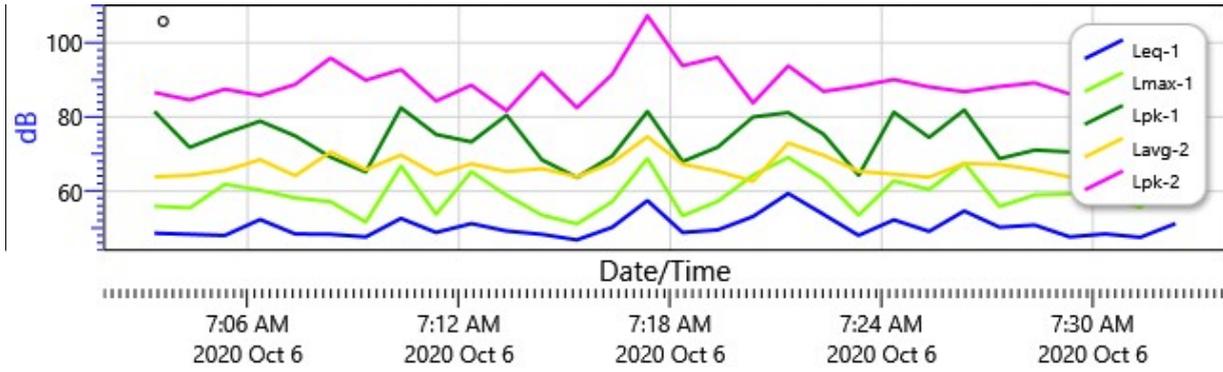
Exceedance Chart

Monitoring Station #1 - Daytime Period: Exceedance Chart



Logged Data Chart

Monitoring Station #1 - Daytime Period: Logged Data Chart



Session Report

10/6/2020

Information Panel

Name Monitoring Station #1 - Nighttime Period
 Start Time 10/6/2020 5:45:45 AM
 Stop Time 10/6/2020 6:15:52 AM
 Device Name BLL100004
 Model Type SoundPro DL
 Device Firmware Rev R.13H
 Run Time 00:30:07
 Description Located at North Side of Jardines de Loíza

Summary Data Panel

<u>Description</u>	<u>Meter</u>	<u>Value</u>	<u>Description</u>	<u>Meter</u>	<u>Value</u>
CNEL	1	66 dB	L10	1	58.4 dB
L90	1	52 dB	LDN	1	66 dB
Rtime	1	00:30:07	Takt	1	62.1 dB
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	FAST	Criterion Level	1	90 dB

Statistics Table

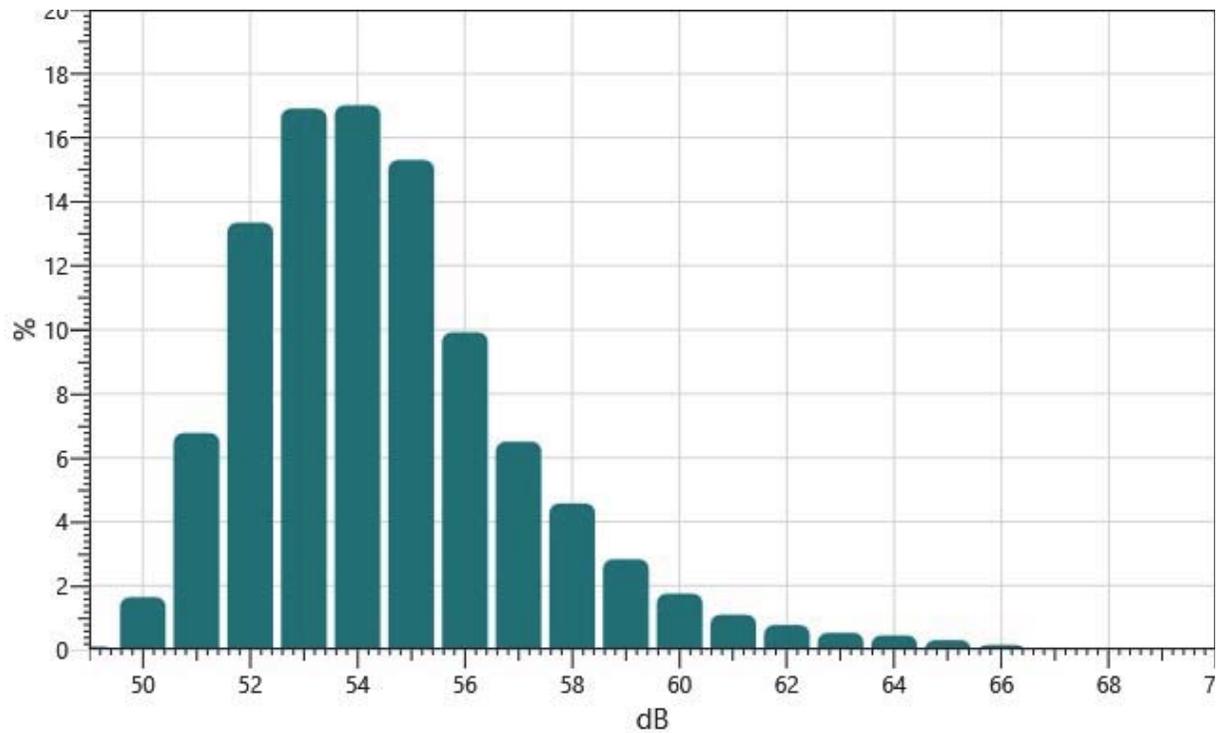
dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
49:	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.02	0.03	0.10
50:	0.05	0.06	0.06	0.12	0.13	0.15	0.18	0.27	0.26	0.36	1.64
51:	0.37	0.45	0.50	0.56	0.61	0.75	0.82	0.85	0.87	0.99	6.77
52:	1.09	1.13	1.16	1.23	1.36	1.38	1.45	1.40	1.50	1.65	13.35
53:	1.77	1.91	1.17	1.67	1.73	1.73	1.70	1.76	1.72	1.74	16.91
54:	1.79	1.79	1.72	1.74	1.70	1.69	1.62	1.70	1.66	1.61	17.01
55:	1.63	1.56	1.58	1.54	1.60	1.49	1.49	1.52	1.45	1.45	15.30
56:	1.44	1.32	0.80	1.07	1.01	0.92	0.89	0.85	0.82	0.80	9.92
57:	0.77	0.75	0.72	0.70	0.61	0.64	0.64	0.57	0.59	0.51	6.50
58:	0.51	0.51	0.44	0.49	0.45	0.46	0.42	0.44	0.42	0.41	4.57
59:	0.35	0.44	0.23	0.30	0.27	0.28	0.26	0.25	0.23	0.22	2.83
60:	0.23	0.22	0.20	0.19	0.16	0.18	0.16	0.15	0.13	0.12	1.75
61:	0.14	0.10	0.12	0.10	0.12	0.11	0.11	0.10	0.10	0.09	1.09



62:	0.09	0.11	0.08	0.09	0.07	0.08	0.07	0.08	0.06	0.05	0.77
63:	0.06	0.05	0.06	0.06	0.05	0.06	0.06	0.04	0.05	0.04	0.53
64:	0.05	0.05	0.04	0.05	0.04	0.04	0.04	0.03	0.05	0.05	0.44
65:	0.06	0.04	0.02	0.03	0.03	0.04	0.02	0.03	0.02	0.02	0.30
66:	0.02	0.01	0.01	0.02	0.01	0.02	0.01	0.02	0.01	0.01	0.15
67:	0.01	0.00	0.01	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.05
68:	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
69:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Statistics Chart

Monitoring Station #1 - Nighttime Period: Statistics Chart



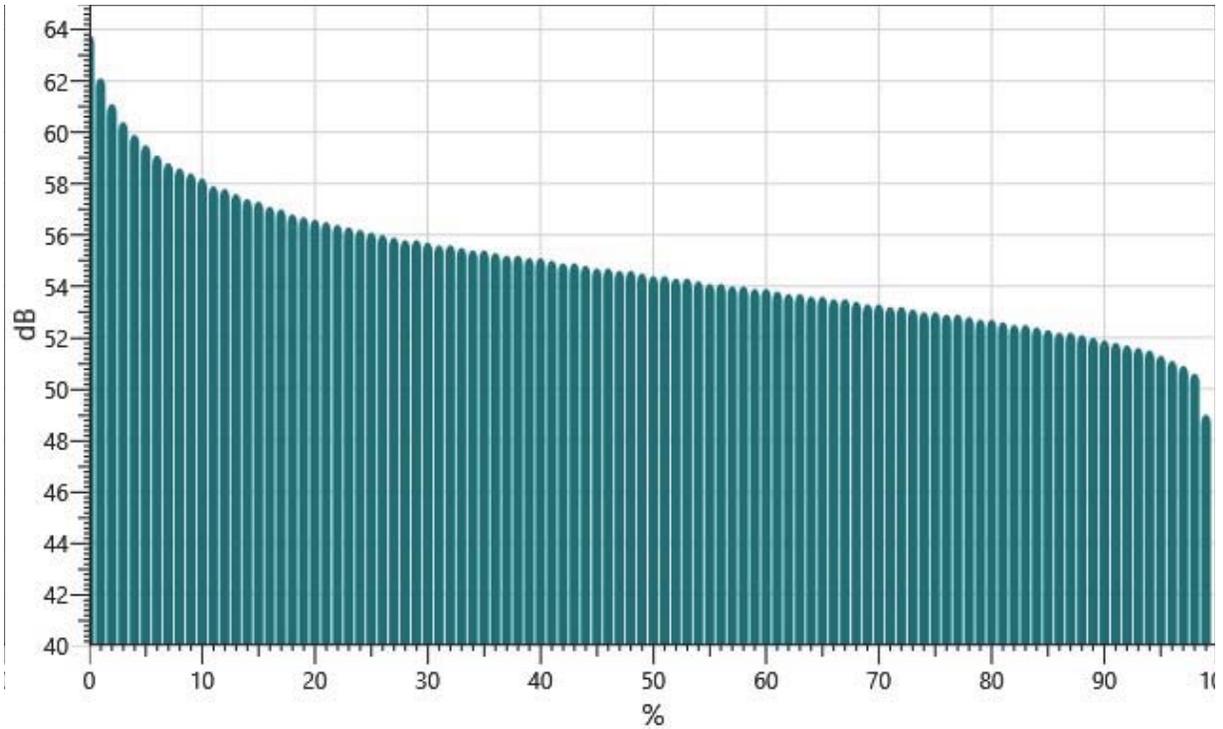
Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		63.8	62.1	61.1	60.4	59.9	59.5	59.1	58.8	58.6
10%:	58.4	58.2	57.9	57.8	57.6	57.4	57.3	57.1	57.0	56.8
20%:	56.7	56.6	56.5	56.4	56.3	56.2	56.1	56.0	55.9	55.8
30%:	55.8	55.7	55.6	55.6	55.5	55.4	55.4	55.3	55.2	55.2
40%:	55.1	55.1	55.0	54.9	54.9	54.8	54.7	54.7	54.6	54.6
50%:	54.5	54.4	54.4	54.3	54.3	54.2	54.1	54.1	54.0	54.0

60%:	53.9	53.9	53.8	53.7	53.7	53.6	53.6	53.5	53.5	53.4
70%:	53.3	53.3	53.2	53.2	53.1	53.0	53.0	52.9	52.9	52.8
80%:	52.7	52.7	52.6	52.5	52.5	52.4	52.3	52.2	52.2	52.1
90%:	52.0	51.9	51.8	51.7	51.6	51.5	51.3	51.1	50.9	50.6
100%:	49.0									

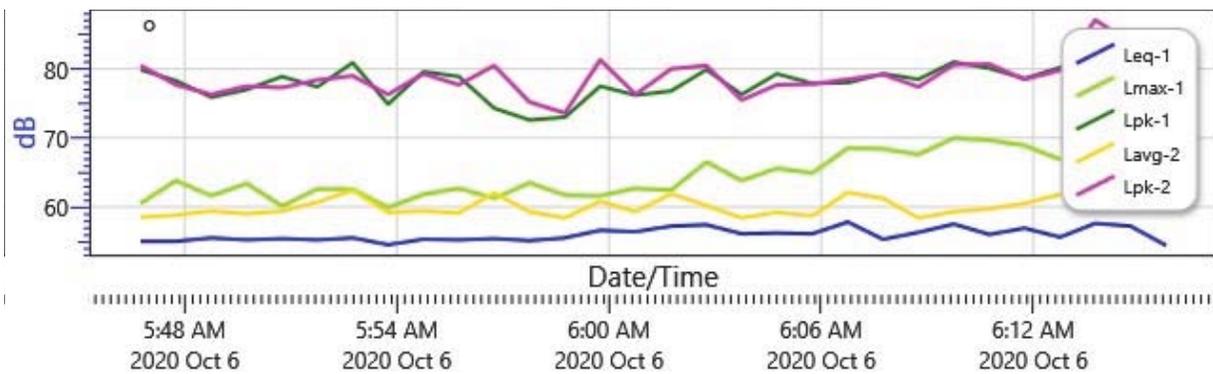
Exceedance Chart

Monitoring Station #1 - Nighttime Period: Exceedance Chart



Logged Data Chart

Monitoring Station #1 - Nighttime Period: Logged Data Chart



Session Report

10/6/2020

Information Panel

Name Monitoring Station #2 - Daytime Period
Start Time 10/6/2020 7:01:46 AM
Stop Time 10/6/2020 7:31:57 AM
Device Name BLP080003
Model Type SoundPro DL
Device Firmware Rev R.13H
Comments Located at West Side of Jardines de Loiza

Summary Data Panel

<u>Description</u>	<u>Meter</u>	<u>Value</u>	<u>Description</u>	<u>Meter</u>	<u>Value</u>
Rtime	1	00:30:11	LDN	1	56.4 dB
CNEL	1	56.4 dB	Takt	1	60.3 dB
L10	1	58.6 dB	L90	1	51 dB

Statistics Table

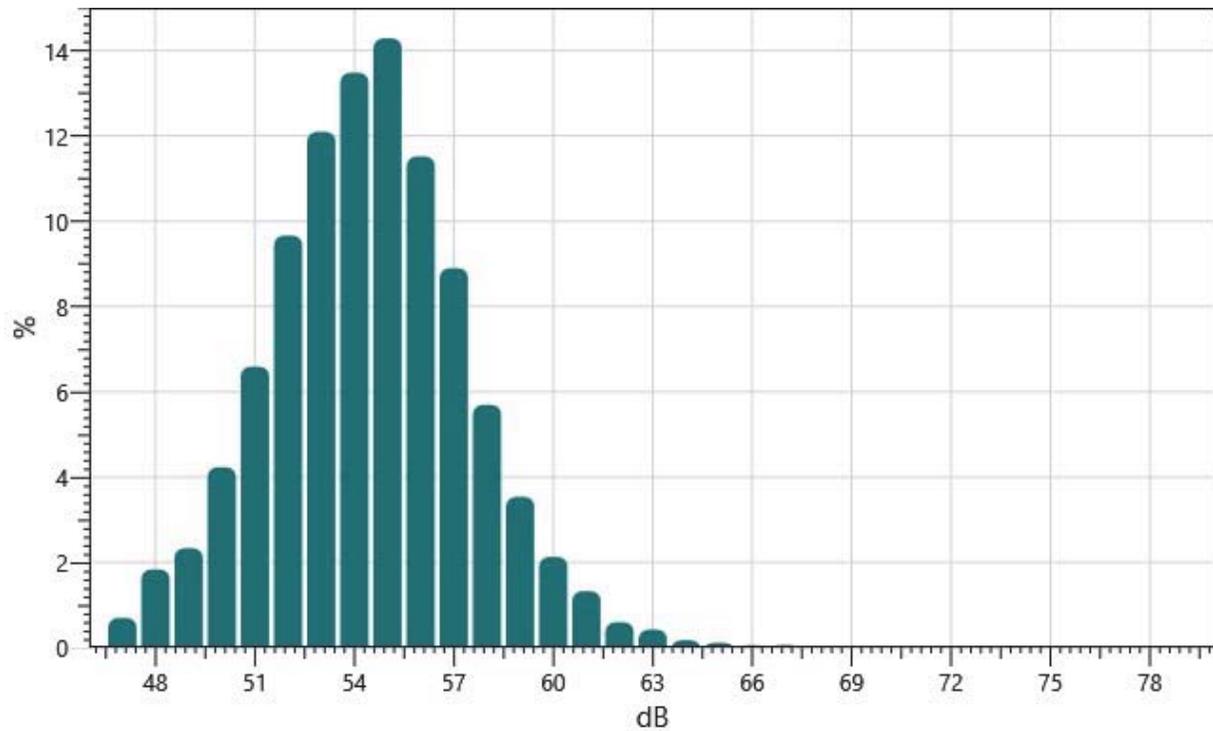
dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
46:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.04
47:	0.03	0.03	0.03	0.04	0.06	0.07	0.07	0.10	0.12	0.15	0.70
48:	0.14	0.19	0.17	0.21	0.19	0.20	0.18	0.18	0.16	0.21	1.84
49:	0.21	0.27	0.14	0.22	0.19	0.22	0.25	0.26	0.26	0.32	2.33
50:	0.32	0.35	0.38	0.44	0.44	0.43	0.43	0.44	0.49	0.51	4.23
51:	0.48	0.62	0.61	0.63	0.66	0.63	0.66	0.72	0.73	0.85	6.59
52:	0.93	1.13	0.73	0.95	0.92	0.94	1.06	0.94	1.01	1.05	9.66
53:	1.06	1.13	1.11	1.13	1.26	1.21	1.30	1.26	1.33	1.30	12.09
54:	1.34	1.34	1.31	1.29	1.29	1.39	1.38	1.38	1.40	1.38	13.48
55:	1.48	1.52	1.12	1.46	1.38	1.53	1.48	1.48	1.42	1.40	14.29
56:	1.33	1.27	1.21	1.18	1.17	1.17	1.07	1.05	1.02	1.04	11.52
57:	1.02	1.02	0.95	0.92	0.90	0.84	0.83	0.87	0.77	0.79	8.90
58:	0.79	0.80	0.60	0.60	0.54	0.50	0.46	0.48	0.46	0.45	5.69
59:	0.46	0.46	0.45	0.42	0.40	0.33	0.28	0.24	0.25	0.25	3.54
60:	0.26	0.26	0.23	0.21	0.21	0.20	0.19	0.19	0.17	0.21	2.13
61:	0.17	0.16	0.14	0.09	0.17	0.13	0.12	0.11	0.12	0.11	1.33



62:	0.10	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.06	0.04	0.60
63:	0.05	0.05	0.05	0.04	0.04	0.05	0.05	0.04	0.03	0.03	0.43
64:	0.03	0.02	0.02	0.00	0.02	0.01	0.02	0.03	0.02	0.02	0.18
65:	0.02	0.02	0.02	0.01	0.01	0.01	0.02	0.01	0.00	0.00	0.12
66:	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.06
67:	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.06
68:	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.04
69:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
70:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
71:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
72:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
73:	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.03
74:	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.04
75:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
76:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
77:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Statistics Chart

Monitoring Station #2 - Daytime Period: Statistics Chart

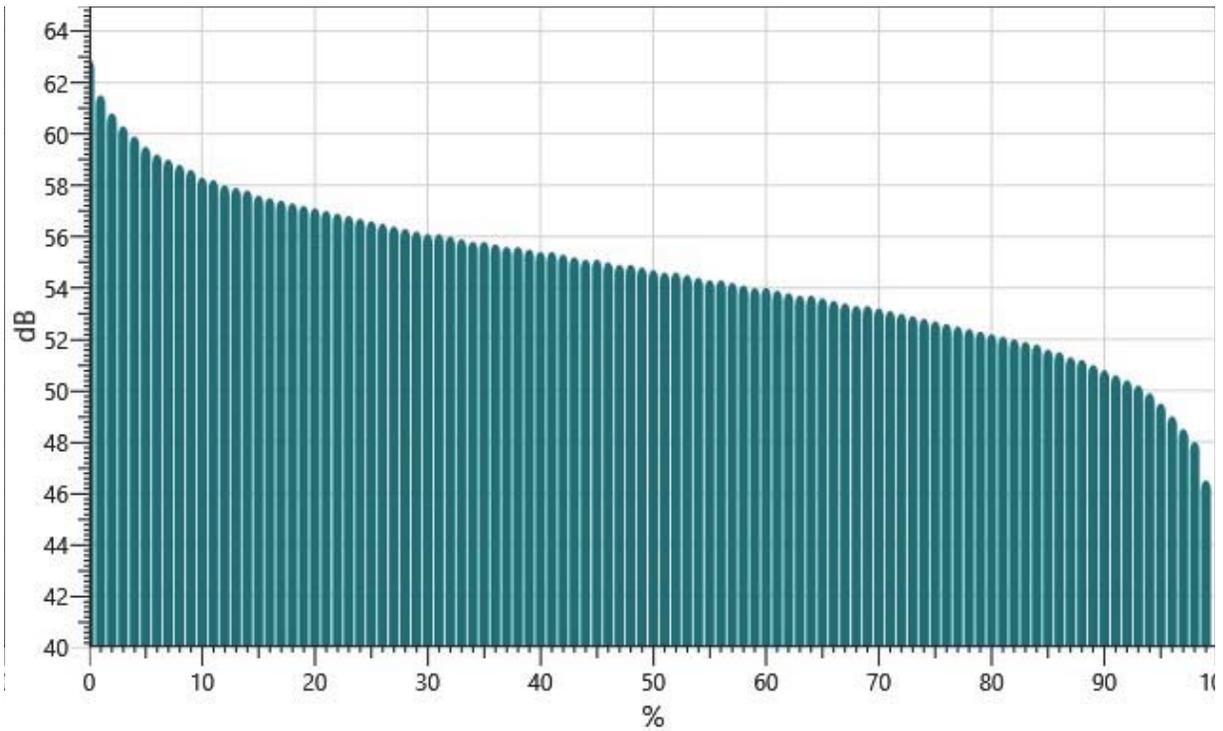


Exceedance Table

	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		62.9	61.5	60.8	60.3	59.9	59.5	59.2	59.0	58.8
10%:	58.6	58.3	58.2	58.0	57.9	57.8	57.6	57.5	57.4	57.3
20%:	57.2	57.1	57.0	56.9	56.8	56.7	56.6	56.5	56.4	56.3
30%:	56.2	56.1	56.1	56.0	55.9	55.8	55.8	55.7	55.6	55.6
40%:	55.5	55.4	55.4	55.3	55.2	55.1	55.1	55.0	54.9	54.9
50%:	54.8	54.7	54.6	54.6	54.5	54.4	54.3	54.3	54.2	54.1
60%:	54.0	54.0	53.9	53.8	53.7	53.7	53.6	53.5	53.4	53.3
70%:	53.3	53.2	53.1	53.0	52.9	52.8	52.7	52.6	52.5	52.4
80%:	52.3	52.2	52.1	52.0	51.9	51.8	51.6	51.5	51.3	51.2
90%:	51.0	50.8	50.6	50.4	50.2	49.9	49.5	49.0	48.5	48.0
100%:	46.5									

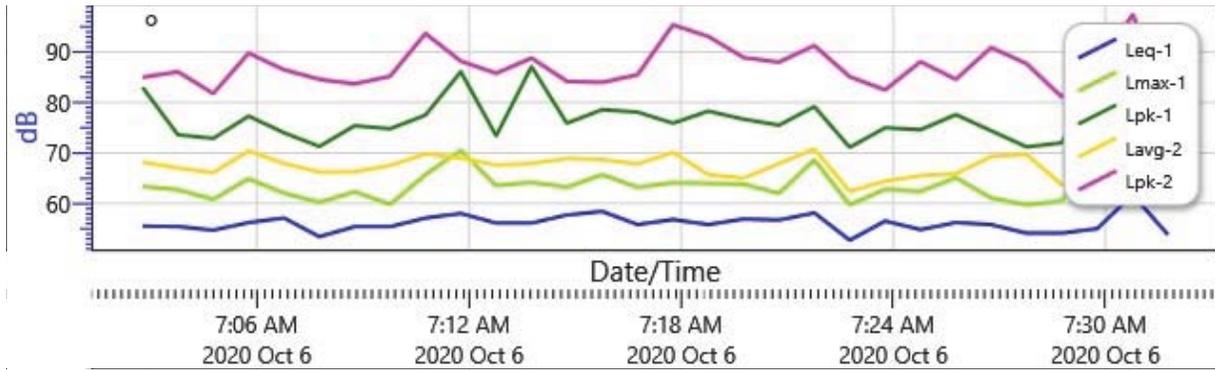
Exceedance Chart

Monitoring Station #2 - Daytime Period: Exceedance Chart



Logged Data Chart

Monitoring Station #2 - Daytime Period: Logged Data Chart



Session Report

10/6/2020

Information Panel

Name Monitoring Station #2 - Nighttime Period
Start Time 10/6/2020 5:44:51 AM
Stop Time 10/6/2020 6:15:11 AM
Device Name BLP080003
Model Type SoundPro DL
Device Firmware Rev R.13H
Comments Located at West Side of Jardines de Loíza

Summary Data Panel

<u>Description</u>	<u>Meter</u>	<u>Value</u>	<u>Description</u>	<u>Meter</u>	<u>Value</u>
Rtime	1	00:30:20	LDN	1	68.8 dB
CNEL	1	68.8 dB	Takt	1	69.3 dB
L10	1	59.5 dB	L90	1	50.2 dB
Exchange Rate	1	3 dB	Criterion Level	1	90 dB
Weighting	1	A	Response	1	FAST

Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
46:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
47:	0.01	0.01	0.01	0.02	0.04	0.04	0.04	0.06	0.07	0.10	0.38
48:	0.09	0.12	0.14	0.17	0.18	0.19	0.23	0.25	0.36	0.39	2.12
49:	0.40	0.44	0.27	0.39	0.43	0.49	0.48	0.58	0.62	0.62	4.71
50:	0.67	0.74	0.80	0.80	0.81	0.82	0.87	0.84	0.91	0.96	8.23
51:	0.96	0.91	0.94	1.03	1.11	1.09	1.14	1.25	1.25	1.15	10.83
52:	1.09	1.14	0.83	1.03	1.07	1.10	1.00	0.92	0.95	0.97	10.11
53:	0.96	0.96	0.91	0.88	0.92	0.95	0.92	0.95	0.96	0.98	9.40
54:	1.04	1.01	0.98	0.93	0.98	0.92	0.90	0.85	0.82	0.84	9.25
55:	0.83	0.95	0.66	0.86	0.89	0.87	0.86	0.85	0.85	0.87	8.49
56:	0.90	0.94	0.86	0.79	0.79	0.81	0.81	0.84	0.82	0.85	8.41
57:	0.92	0.88	0.82	0.81	0.77	0.76	0.79	0.76	0.74	0.72	7.97
58:	0.75	0.78	0.60	0.61	0.64	0.67	0.66	0.62	0.61	0.54	6.47
59:	0.60	0.62	0.56	0.57	0.52	0.49	0.47	0.46	0.48	0.45	5.20

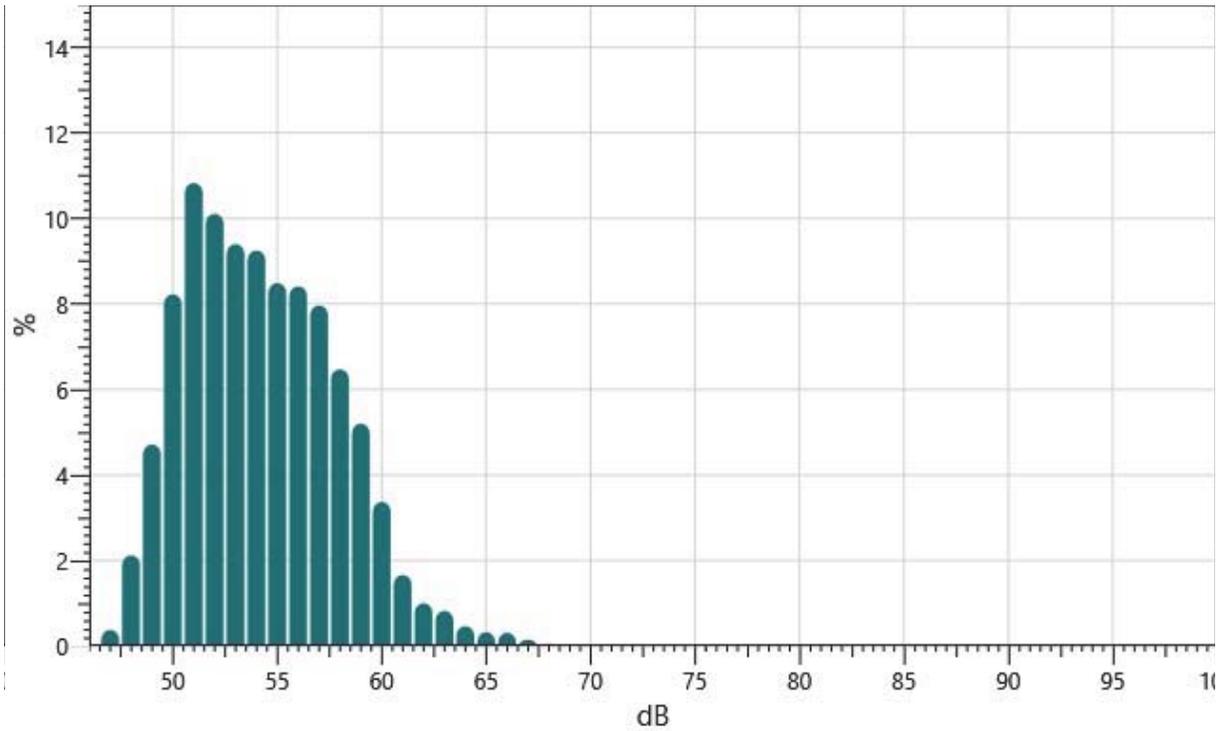


60:	0.44	0.46	0.38	0.37	0.32	0.31	0.30	0.27	0.28	0.24	3.37
61:	0.24	0.20	0.18	0.09	0.20	0.13	0.16	0.16	0.16	0.14	1.67
62:	0.13	0.11	0.11	0.10	0.09	0.08	0.09	0.10	0.08	0.10	1.00
63:	0.11	0.10	0.10	0.08	0.08	0.07	0.07	0.07	0.08	0.07	0.83
64:	0.07	0.06	0.05	0.04	0.05	0.05	0.04	0.04	0.04	0.04	0.47
65:	0.03	0.03	0.02	0.04	0.03	0.04	0.03	0.03	0.04	0.03	0.33
66:	0.04	0.04	0.03	0.04	0.04	0.02	0.02	0.03	0.02	0.02	0.31
67:	0.03	0.02	0.01	0.01	0.01	0.02	0.01	0.01	0.02	0.02	0.15
68:	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.06
69:	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
70:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
71:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
72:	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.03
73:	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
74:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
75:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
76:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
77:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
78:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
79:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
80:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
81:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
82:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
83:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
84:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
88:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
91:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
93:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
94:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



Statistics Chart

Monitoring Station #2 - Nighttime Period: Statistics Chart

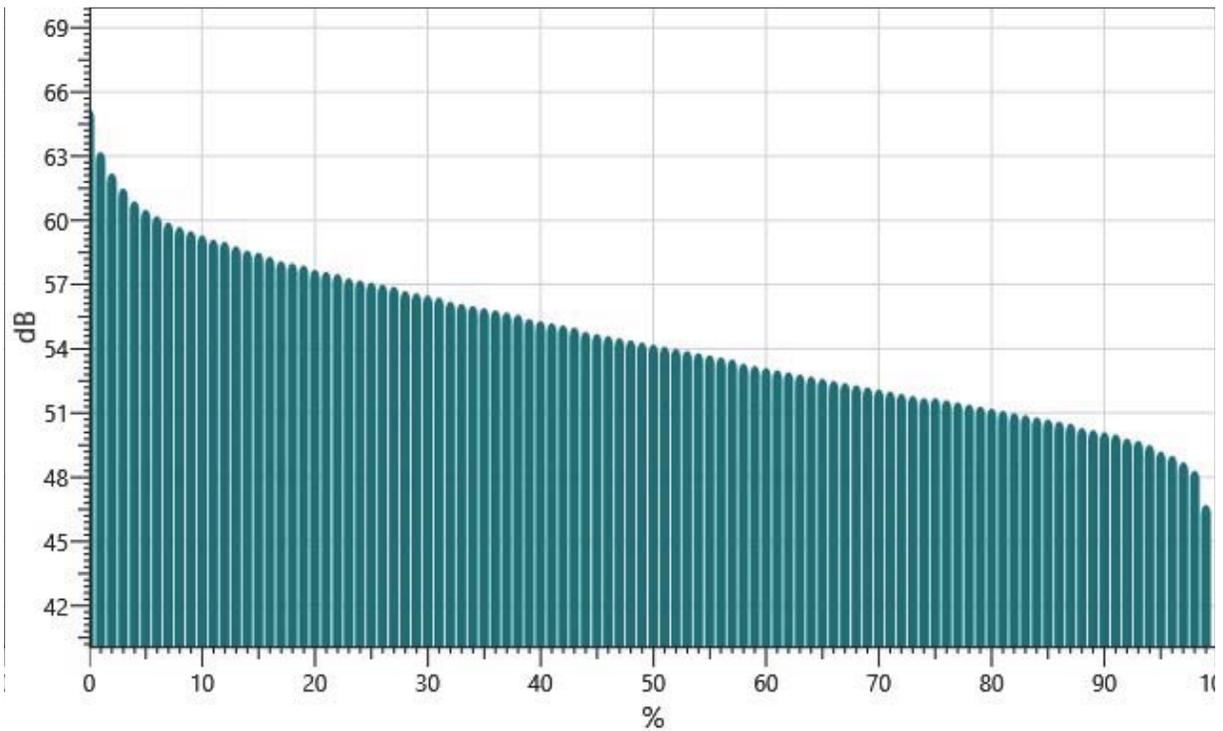


Exceedance Table

	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%
0%:		65.2	63.2	62.2	61.5	60.9	60.5	60.2	59.9	59.7
10%:	59.5	59.3	59.1	59.0	58.8	58.6	58.5	58.3	58.1	58.0
20%:	57.9	57.7	57.6	57.5	57.3	57.2	57.1	57.0	56.9	56.7
30%:	56.6	56.5	56.4	56.2	56.1	56.0	55.9	55.8	55.7	55.6
40%:	55.4	55.3	55.2	55.1	55.0	54.8	54.7	54.6	54.5	54.4
50%:	54.3	54.2	54.1	54.0	53.9	53.8	53.7	53.6	53.5	53.3
60%:	53.2	53.1	53.0	52.9	52.8	52.7	52.6	52.5	52.4	52.3
70%:	52.2	52.1	52.0	51.9	51.8	51.7	51.7	51.6	51.5	51.4
80%:	51.3	51.2	51.1	51.0	50.9	50.8	50.7	50.6	50.5	50.3
90%:	50.2	50.1	50.0	49.8	49.7	49.5	49.2	49.0	48.7	48.3
100%:	46.7									

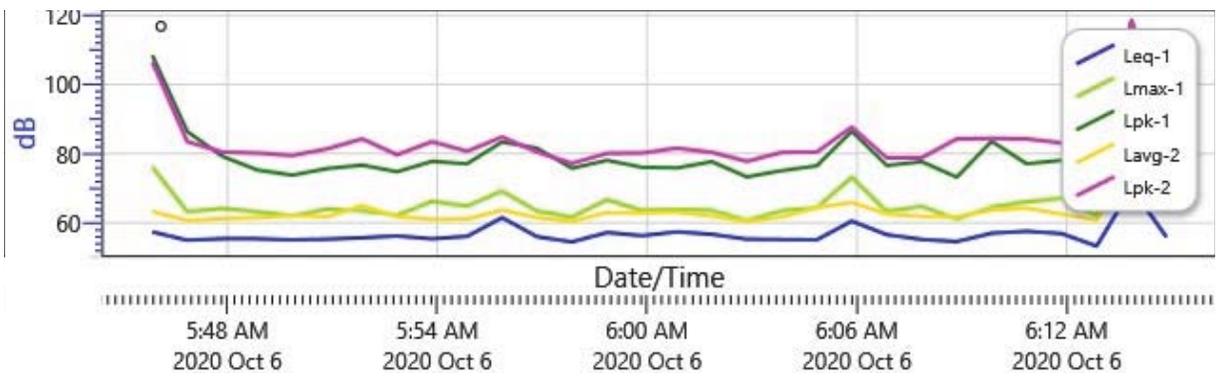
Exceedance Chart

Monitoring Station #2 - Nighttime Period: Exceedance Chart



Logged Data Chart

Monitoring Station #2 - Nighttime Period: Logged Data Chart



Session Report

10/6/2020

Information Panel

Name Monitoring Station #3 - Daytime Period
Start Time 10/6/2020 7:35:27 AM
Stop Time 10/6/2020 8:05:39 AM
Device Name BLL100004
Model Type SoundPro DL
Device Firmware Rev R.13H
Comments Located at East Side of Jardines de loíza

Summary Data Panel

<u>Description</u>	<u>Meter</u>	<u>Value</u>	<u>Description</u>	<u>Meter</u>	<u>Value</u>
CNEL	1	53.4 dB	L10	1	54.1 dB
Takt	1	56.2 dB	LDN	1	53.4 dB
L90	1	52.5 dB	Rtime	1	00:30:12
Exchange Rate	1	3 dB	Response	1	FAST
Weighting	1	A	Criterion Level	1	90 dB

Statistics Table

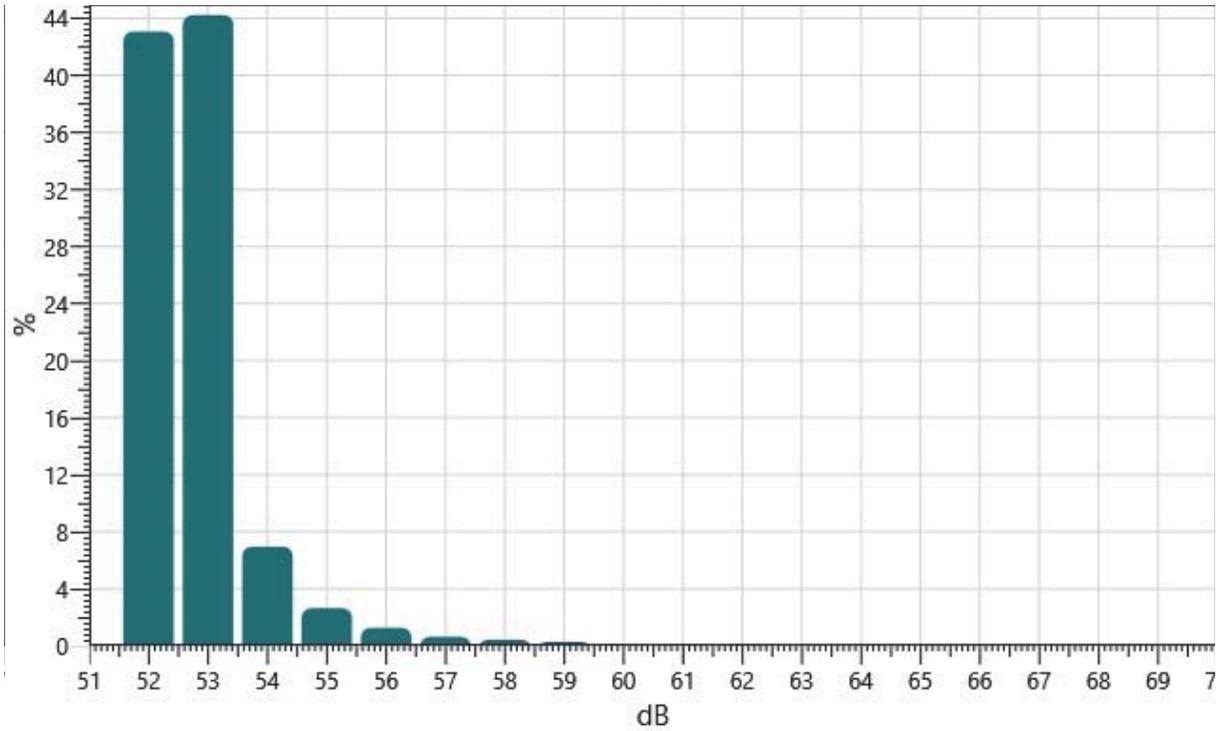
dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
51:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.05
52:	0.14	0.37	0.79	1.57	2.73	4.28	6.01	7.90	9.31	9.99	43.08
53:	9.97	9.08	4.79	5.43	4.10	3.31	2.56	2.09	1.60	1.31	44.23
54:	1.20	1.01	0.83	0.68	0.72	0.61	0.59	0.49	0.41	0.41	6.96
55:	0.35	0.33	0.29	0.29	0.26	0.23	0.25	0.23	0.20	0.19	2.64
56:	0.19	0.16	0.11	0.12	0.13	0.13	0.13	0.11	0.10	0.09	1.27
57:	0.09	0.07	0.08	0.07	0.07	0.05	0.06	0.05	0.04	0.05	0.62
58:	0.04	0.05	0.05	0.05	0.04	0.05	0.04	0.04	0.03	0.03	0.43
59:	0.03	0.04	0.03	0.03	0.03	0.03	0.03	0.02	0.03	0.02	0.29
60:	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.15
61:	0.00	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.11
62:	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.11
63:	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
64:	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03



65:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
66:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
68:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Statistics Chart

Monitoring Station #3 - Daytime Period: Statistics Chart



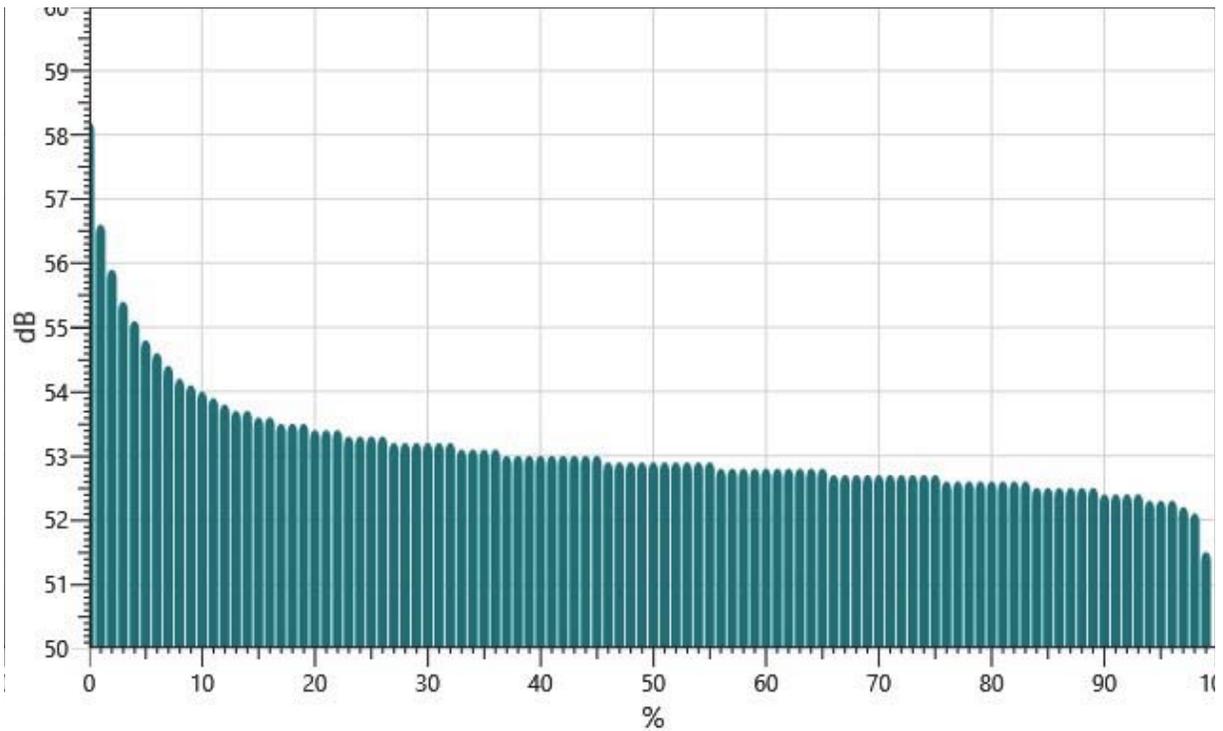
Exceedance Table

	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%
0%:		58.2	56.6	55.9	55.4	55.1	54.8	54.6	54.4	54.2
10%:	54.1	54.0	53.9	53.8	53.7	53.7	53.6	53.6	53.5	53.5
20%:	53.5	53.4	53.4	53.4	53.3	53.3	53.3	53.3	53.2	53.2
30%:	53.2	53.2	53.2	53.2	53.1	53.1	53.1	53.1	53.0	53.0
40%:	53.0	53.0	53.0	53.0	53.0	53.0	53.0	52.9	52.9	52.9
50%:	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.8	52.8	52.8
60%:	52.8	52.8	52.8	52.8	52.8	52.8	52.8	52.7	52.7	52.7
70%:	52.7	52.7	52.7	52.7	52.7	52.7	52.7	52.6	52.6	52.6
80%:	52.6	52.6	52.6	52.6	52.6	52.5	52.5	52.5	52.5	52.5
90%:	52.5	52.4	52.4	52.4	52.4	52.3	52.3	52.3	52.2	52.1
100%:	51.5									



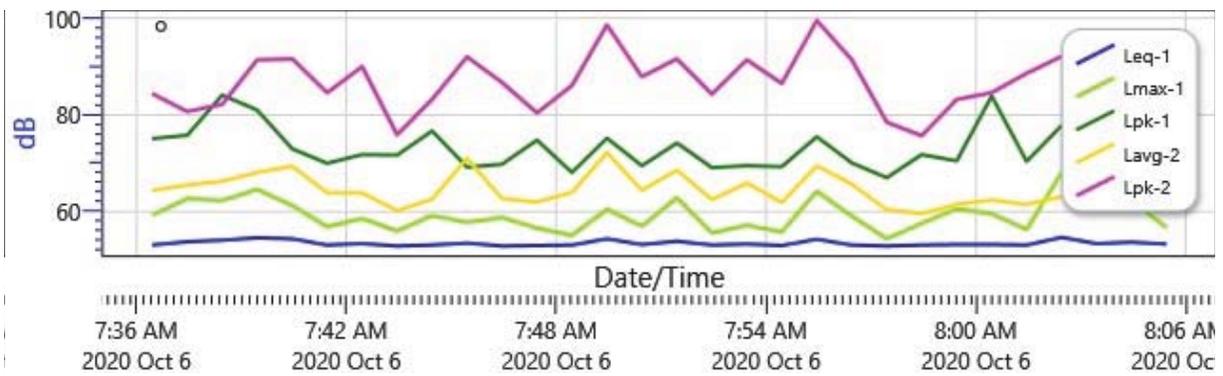
Exceedance Chart

Monitoring Station #3 - Daytime Period: Exceedance Chart



Logged Data Chart

Monitoring Station #3 - Daytime Period: Logged Data Chart



Session Report

10/6/2020

Information Panel

Name Monitoring Station #3 - Nighttime Period
 Start Time 10/6/2020 6:19:55 AM
 Stop Time 10/6/2020 6:50:02 AM
 Device Name BLL100004
 Model Type SoundPro DL
 Device Firmware Rev R.13H
 Run Time 00:30:07
 Description Located at East Side of Jardines de Loiza

Summary Data Panel

<u>Description</u>	<u>Meter</u>	<u>Value</u>	<u>Description</u>	<u>Meter</u>	<u>Value</u>
CNEL	1	64 dB	L10	1	54.9 dB
Takt	1	57 dB	LDN	1	64 dB
L90	1	52.5 dB	Rtime	1	00:30:07
Exchange Rate	1	3 dB	Response	1	FAST
Weighting	1	A	Criterion Level	1	90 dB

Statistics Table

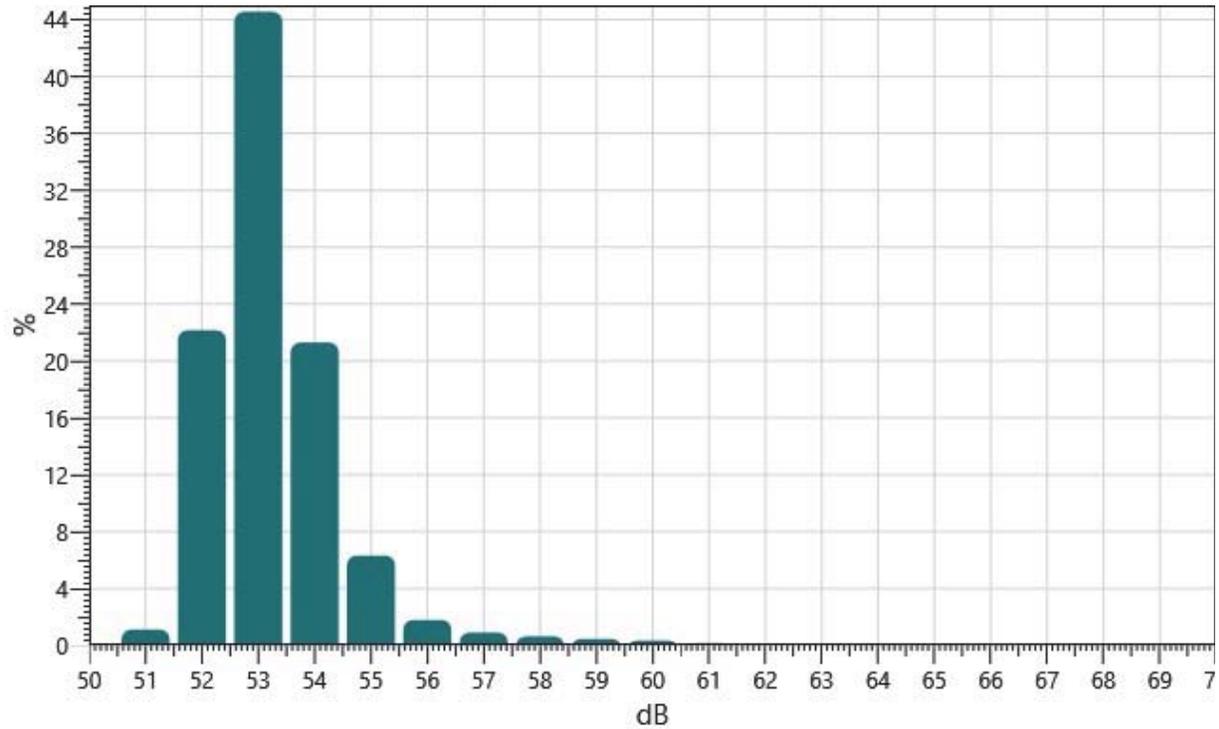
dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
50:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.03
51:	0.02	0.02	0.04	0.05	0.09	0.11	0.14	0.16	0.20	0.28	1.11
52:	0.37	0.60	0.77	1.20	1.64	2.13	2.87	3.53	4.19	4.86	22.16
53:	5.39	5.68	3.57	4.88	4.70	4.45	4.29	4.10	3.85	3.64	44.55
54:	3.20	2.98	2.79	2.40	2.21	1.93	1.75	1.55	1.30	1.19	21.29
55:	1.00	0.82	0.79	0.70	0.68	0.58	0.48	0.50	0.40	0.35	6.31
56:	0.29	0.27	0.14	0.21	0.19	0.18	0.15	0.13	0.12	0.11	1.79
57:	0.11	0.11	0.09	0.10	0.10	0.09	0.08	0.08	0.07	0.07	0.90
58:	0.08	0.07	0.07	0.05	0.06	0.07	0.06	0.07	0.05	0.06	0.63
59:	0.05	0.06	0.04	0.06	0.04	0.04	0.05	0.03	0.04	0.04	0.45
60:	0.03	0.04	0.04	0.04	0.03	0.03	0.03	0.04	0.03	0.03	0.33
61:	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.02	0.01	0.01	0.16
62:	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.11



63:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.09
64:	0.00	0.01	0.01	0.01	0.01	0.00	0.01	0.00	0.01	0.00	0.06
65:	0.01	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.04

Statistics Chart

Monitoring Station #3 - Nighttime Period: Statistics Chart

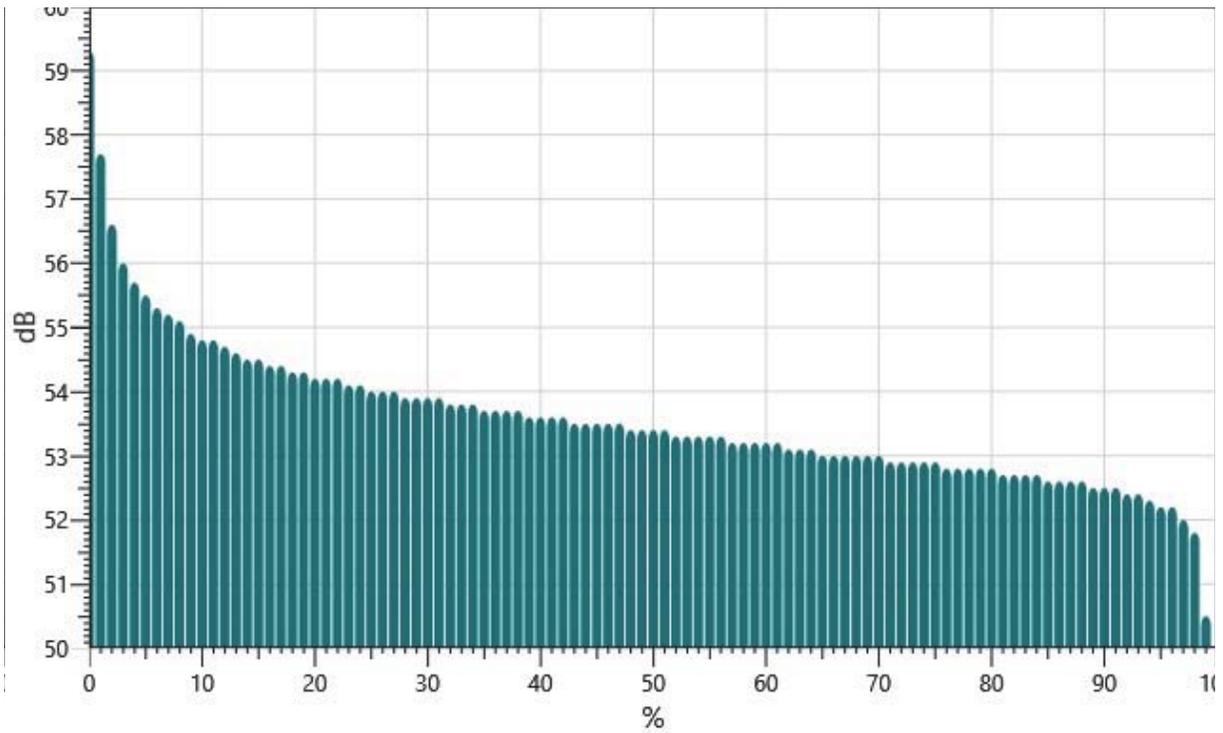


Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		59.3	57.7	56.6	56.0	55.7	55.5	55.3	55.2	55.1
10%:	54.9	54.8	54.8	54.7	54.6	54.5	54.5	54.4	54.4	54.3
20%:	54.3	54.2	54.2	54.2	54.1	54.1	54.0	54.0	54.0	53.9
30%:	53.9	53.9	53.9	53.8	53.8	53.8	53.7	53.7	53.7	53.7
40%:	53.6	53.6	53.6	53.6	53.5	53.5	53.5	53.5	53.5	53.4
50%:	53.4	53.4	53.4	53.3	53.3	53.3	53.3	53.3	53.2	53.2
60%:	53.2	53.2	53.2	53.1	53.1	53.1	53.0	53.0	53.0	53.0
70%:	53.0	53.0	52.9	52.9	52.9	52.9	52.9	52.8	52.8	52.8
80%:	52.8	52.8	52.7	52.7	52.7	52.7	52.6	52.6	52.6	52.6
90%:	52.5	52.5	52.5	52.4	52.4	52.3	52.2	52.2	52.0	51.8
100%:	50.5									

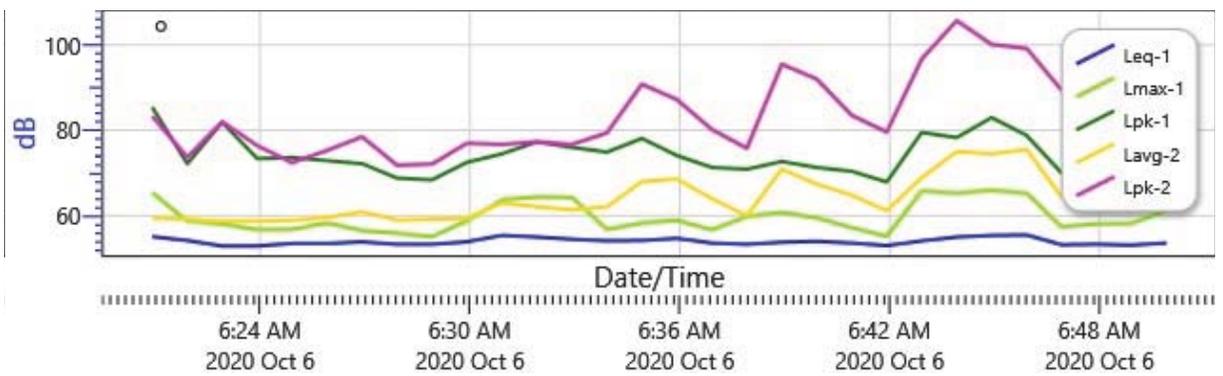
Exceedance Chart

Monitoring Station #3 - Nighttime Period: Exceedance Chart



Logged Data Chart

Monitoring Station #3 - Nighttime Period: Logged Data Chart



Session Report

10/6/2020

Information Panel

Name Monitoring Station #4 - Daytime Period
Start Time 10/6/2020 7:33:16 AM
Stop Time 10/6/2020 8:05:16 AM
Device Name BLP080003
Model Type SoundPro DL
Device Firmware Rev R.13H
Comments Located at South Side of Jardines de Loíza

Summary Data Panel

<u>Description</u>	<u>Meter</u>	<u>Value</u>	<u>Description</u>	<u>Meter</u>	<u>Value</u>
CNEL	1	53.1 dB	L10	1	53.8 dB
Takt	1	54.9 dB	LDN	1	53.1 dB
L90	1	52 dB	Rtime	1	00:32:00
Exchange Rate	1	3 dB	Response	1	FAST
Weighting	1	A	Criterion Level	1	90 dB

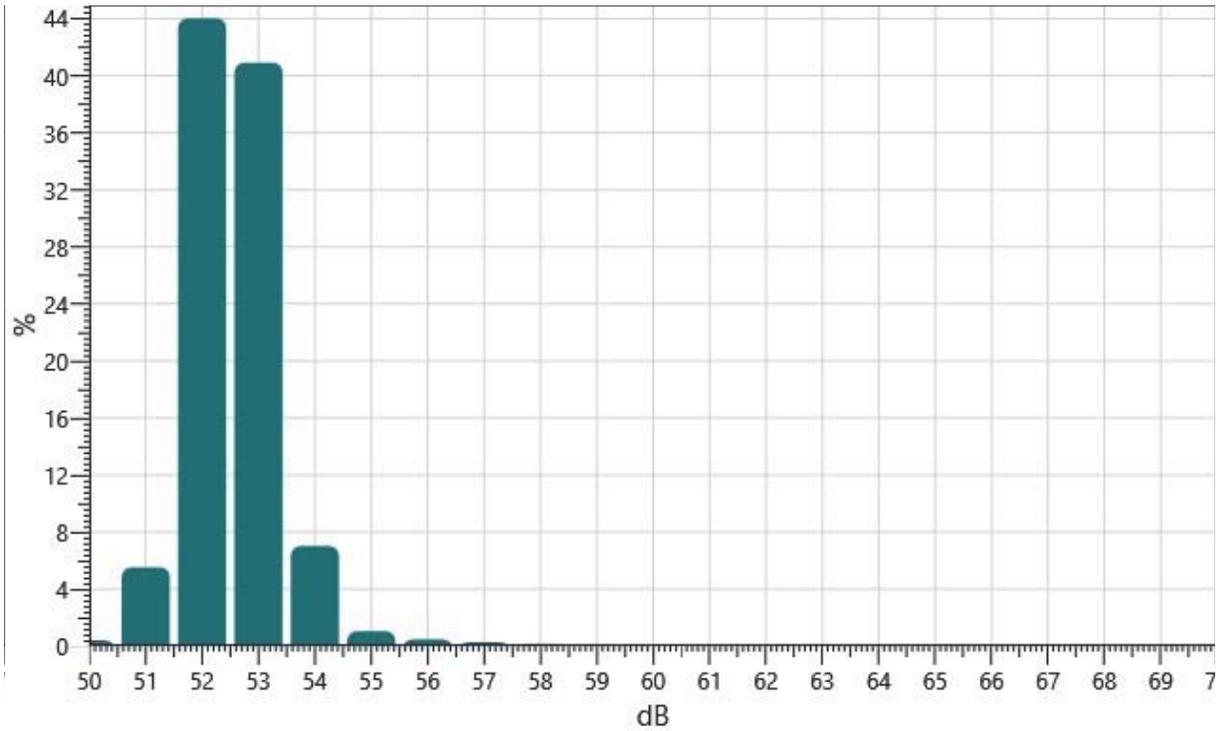
Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
50:	0.00	0.00	0.00	0.00	0.01	0.02	0.05	0.08	0.11	0.15	0.41
51:	0.16	0.19	0.19	0.19	0.26	0.34	0.49	0.82	1.24	1.65	5.53
52:	2.23	3.03	2.43	3.61	4.21	4.78	5.40	5.76	6.20	6.37	44.02
53:	6.24	5.96	5.61	5.25	4.53	3.89	3.05	2.50	2.10	1.78	40.91
54:	1.47	1.23	1.03	0.82	0.66	0.51	0.41	0.33	0.30	0.25	7.01
55:	0.21	0.19	0.10	0.12	0.09	0.09	0.07	0.06	0.06	0.06	1.05
56:	0.07	0.05	0.06	0.05	0.04	0.03	0.06	0.04	0.03	0.04	0.48
57:	0.03	0.05	0.03	0.04	0.03	0.02	0.02	0.02	0.03	0.02	0.28
58:	0.02	0.02	0.01	0.02	0.02	0.02	0.01	0.02	0.02	0.01	0.17
59:	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.09
60:	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
61:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
62:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01



Statistics Chart

Monitoring Station #4 - Daytime Period: Statistics Chart



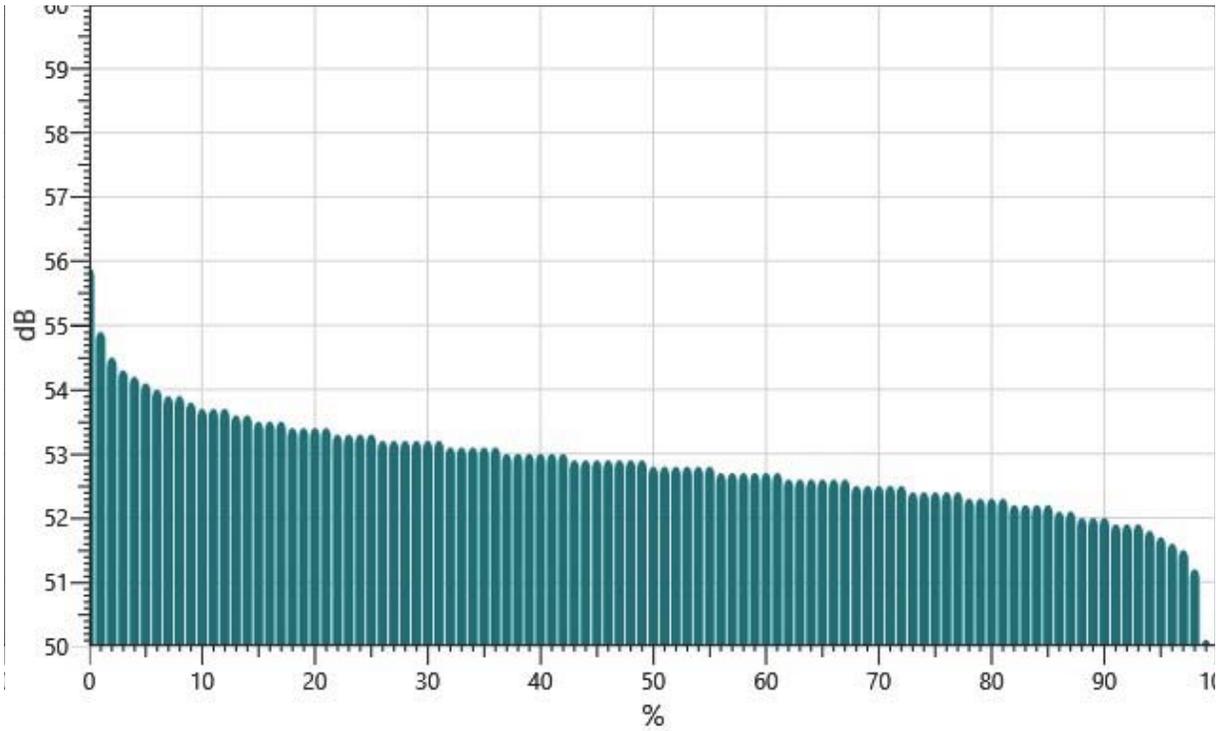
Exceedance Table

	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%
0%:		55.9	54.9	54.5	54.3	54.2	54.1	54.0	53.9	53.9
10%:	53.8	53.7	53.7	53.7	53.6	53.6	53.5	53.5	53.5	53.4
20%:	53.4	53.4	53.4	53.3	53.3	53.3	53.3	53.2	53.2	53.2
30%:	53.2	53.2	53.2	53.1	53.1	53.1	53.1	53.1	53.0	53.0
40%:	53.0	53.0	53.0	53.0	52.9	52.9	52.9	52.9	52.9	52.9
50%:	52.9	52.8	52.8	52.8	52.8	52.8	52.8	52.7	52.7	52.7
60%:	52.7	52.7	52.7	52.6	52.6	52.6	52.6	52.6	52.6	52.5
70%:	52.5	52.5	52.5	52.5	52.4	52.4	52.4	52.4	52.4	52.3
80%:	52.3	52.3	52.3	52.2	52.2	52.2	52.2	52.1	52.1	52.0
90%:	52.0	52.0	51.9	51.9	51.9	51.8	51.7	51.6	51.5	51.2
100%:	50.1									



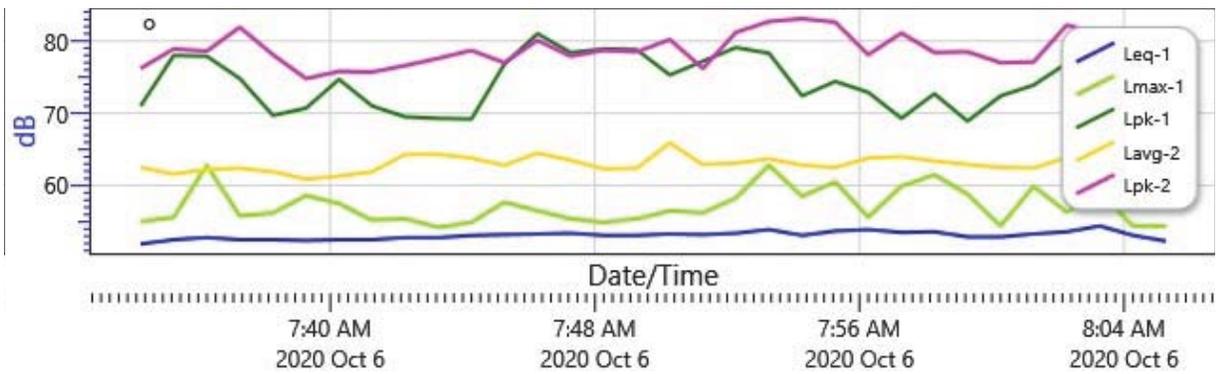
Exceedance Chart

Monitoring Station #4 - Daytime Period: Exceedance Chart



Logged Data Chart

Monitoring Station #4 - Daytime Period: Logged Data Chart



Session Report

10/6/2020

Information Panel

Name Monitoring Station #4- Nighttime Period
Start Time 10/6/2020 6:18:52 AM
Stop Time 10/6/2020 6:51:26 AM
Device Name BLP080003
Model Type SoundPro DL
Device Firmware Rev R.13H
Comments Located at South side of Jardines de Loíza

Summary Data Panel

<u>Description</u>	<u>Meter</u>	<u>Value</u>	<u>Description</u>	<u>Meter</u>	<u>Value</u>
CNEL	1	64.7 dB	L10	1	55.4 dB
Takt	1	58.2 dB	LDN	1	64.7 dB
L90	1	53.2 dB	Rtime	1	00:32:34
Exchange Rate	2	5 dB	Response	2	SLOW
Weighting	2	C	Criterion Level	2	90 dB

Statistics Table

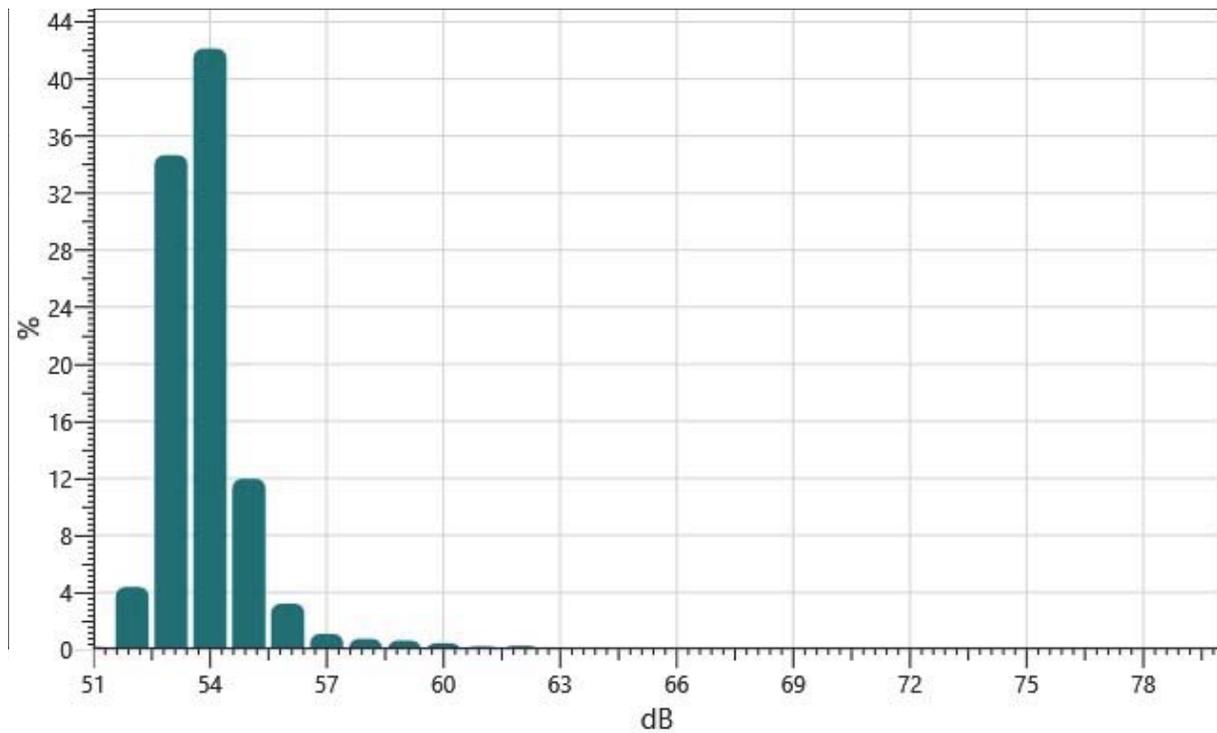
dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
51:	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.03	0.03	0.07	0.18
52:	0.10	0.17	0.14	0.25	0.28	0.37	0.50	0.67	0.87	1.03	4.37
53:	1.21	1.47	1.93	2.53	3.18	3.80	4.52	5.05	5.45	5.53	34.66
54:	5.55	5.38	5.23	4.92	4.59	4.20	3.76	3.19	2.81	2.51	42.13
55:	2.08	1.90	1.17	1.36	1.15	1.09	1.00	0.85	0.75	0.62	11.97
56:	0.57	0.46	0.44	0.37	0.34	0.26	0.24	0.19	0.18	0.16	3.21
57:	0.14	0.14	0.11	0.13	0.10	0.12	0.09	0.08	0.09	0.08	1.09
58:	0.09	0.08	0.05	0.07	0.08	0.06	0.06	0.08	0.10	0.08	0.73
59:	0.06	0.06	0.05	0.07	0.06	0.08	0.08	0.05	0.05	0.04	0.61
60:	0.05	0.06	0.04	0.05	0.04	0.04	0.03	0.04	0.04	0.03	0.43
61:	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.02	0.21
62:	0.02	0.01	0.01	0.02	0.03	0.03	0.02	0.03	0.03	0.04	0.26
63:	0.02	0.01	0.01	0.01	0.00	0.01	0.00	0.01	0.00	0.00	0.08
64:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01



65:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
66:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
67:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
68:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
69:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
70:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
71:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
72:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
74:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
76:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
77:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Statistics Chart

Monitoring Station #4- Nighttime Period: Statistics Chart



Exceedance Table

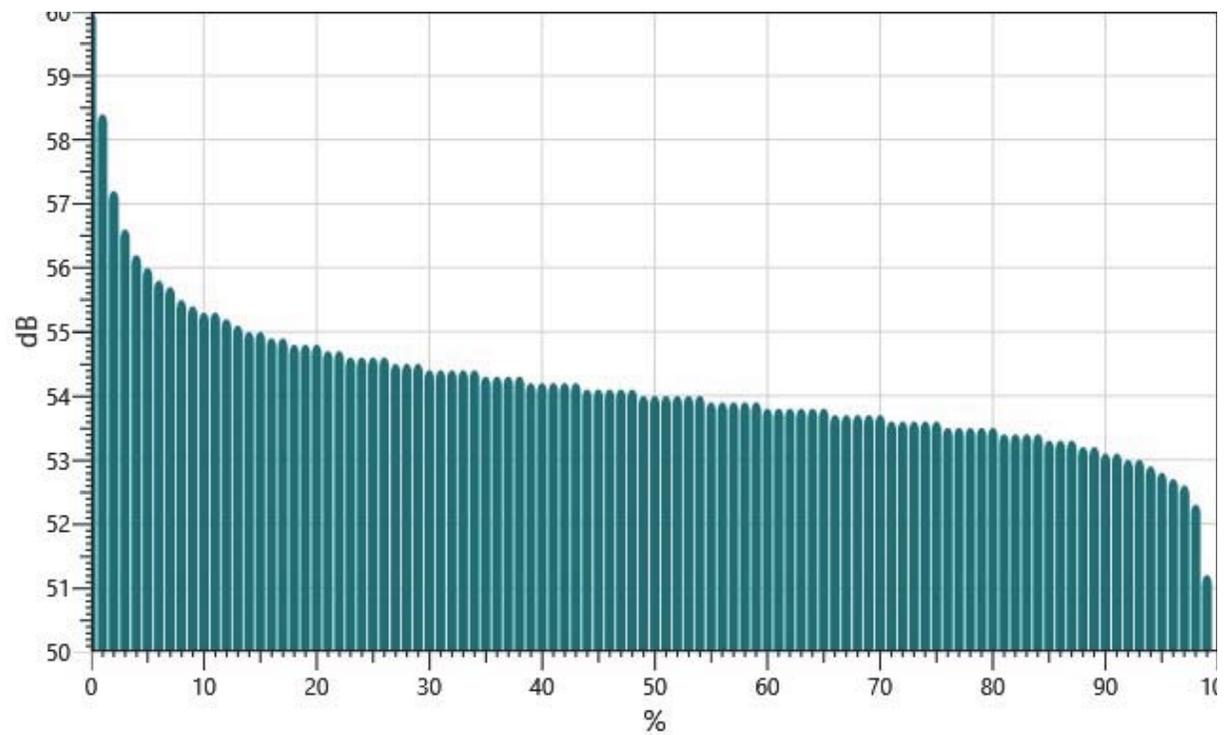
	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%
0%:		60.0	58.4	57.2	56.6	56.2	56.0	55.8	55.7	55.5
10%:	55.4	55.3	55.3	55.2	55.1	55.0	55.0	54.9	54.9	54.8



20%:	54.8	54.8	54.7	54.7	54.6	54.6	54.6	54.6	54.5	54.5
30%:	54.5	54.4	54.4	54.4	54.4	54.4	54.4	54.3	54.3	54.3
40%:	54.2	54.2	54.2	54.2	54.2	54.1	54.1	54.1	54.1	54.1
50%:	54.0	54.0	54.0	54.0	54.0	54.0	53.9	53.9	53.9	53.9
60%:	53.9	53.8	53.8	53.8	53.8	53.8	53.8	53.7	53.7	53.7
70%:	53.7	53.7	53.6	53.6	53.6	53.6	53.6	53.5	53.5	53.5
80%:	53.5	53.5	53.4	53.4	53.4	53.4	53.3	53.3	53.3	53.2
90%:	53.2	53.1	53.1	53.0	53.0	52.9	52.8	52.7	52.6	52.3
100%:	51.2									

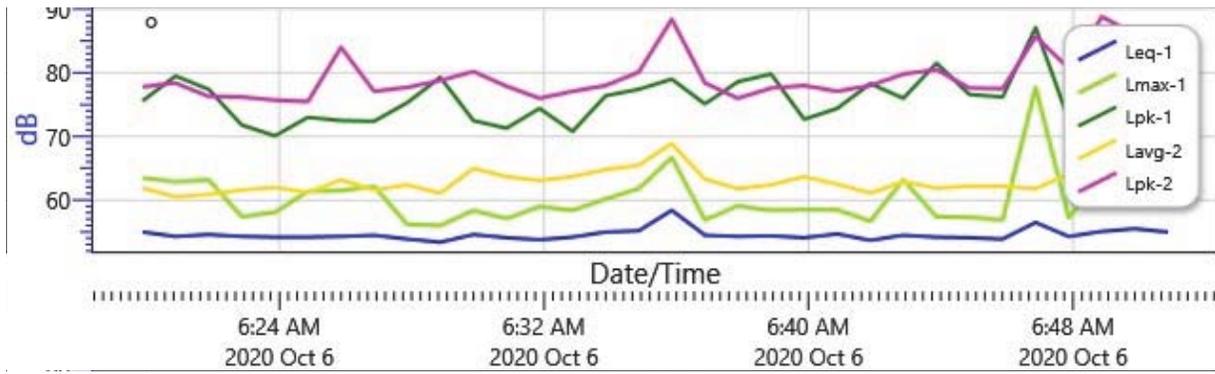
Exceedance Chart

Monitoring Station #4- Nighttime Period: Exceedance Chart



Logged Data Chart

Monitoring Station #4- Nighttime Period: Logged Data Chart



APPENDIX 4: FIELD NOTES



Noise Survey Field Notes Form

Project Name: Jardines de Loiza Apartments
Project Location: PR-187
Calibrator Serial Number: AC-300001324
Calibration Value: 114 dB
Equipment Serial Number: BLL100004 - Meter 1

Daytime Measures

Monitoring Station (MS)	Location	Comments
MS1	North Side - near north neighbor limit	7:02 AM starting time
MS3	East side - near east neighbor limit	7:35 AM starting time

Nighttime Measures

Monitoring Station (MS)	Location	Comments
MS1	north side - near north neighbor limit	5:45 AM starting time
MS3	East side - near east neighbor limit	6:19 AM starting time

Notes:

*Take photos by monitoring station

Weather: cloudy morning. No rain, insects occurred.

Traffic: low traffic flow.

Adjacent roads or street: PR-187

Other surroundings noise: vehicles, people talking, and birds.

Others: Shredtech personnel: Luisillo Ortiz, and Thon Perino.



Noise Survey Field Notes Form

Project Name: Jardines de Loiza Apartments
Project Location: PR-187
Calibrator Serial Number: AC-300005899
Calibration Value: 114 dB
Equipment Serial Number: BLP080003 Meter 2

Daytime Measures (7:00 am - 10:00 pm)

Monitoring Station (MS)	Location	Comments
MS2	West Side - near Gate and PR-187	7:01 Am starting time
MS4	South Side - near south neighbor limit	7:33 starting time

Nighttime Measures (10:01 pm - 6:59 am)

Monitoring Station (MS)	Location	Comments
MS2	West Side - near Gate and PR-187	5:44 Am starting time
MS4	South Side - near south neighbor limit	6:18 Am starting time

Notes:

*Take photos by monitoring station

Weather: Cloudy morning. No rain events occurred.

Traffic: low traffic flow.

Adjacent roads or street: PR-187

Other surroundings noise: vehicles, people talking and birds.

Others: ShareTech personnel: Eusebio Ortiz & Bruce Berrios.

2020 LOW-INCOME HOUSING TAX CREDITS & CDGB-DR GAP TO LIHTC
APPLICATION 2020-026 - Jardines de Loíza Apartments
Project: Jardines de Loíza Apartments
Owner: Jardines de Loíza, LLC

Application: 2020-026- II. 025

Phase I environmental site assessment report

PREPARED FOR:

JARDINES DE LOIZA, LLC.
SAN JUAN, PR.

PREPARED BY:

CTS GROUP, INC.
SAN JUAN, PR.

DATABASES SEARCH
PROVIDED BY:



ESA PHASE I
ASTM E1527-13

SITE: JARDINES DE LOIZA APARTMENTS
ROAD PR-188, KM 5.5, MEDIANIA BAJA WARD
LOIZA, PUERTO RICO.

PROJECT ID: JLA-10-020
SUPPORT: INFO@CTSGROUPPR.COM

OCTOBER 10, 2020

Background and Disclaimer: The purpose of an environmental site assessment is to identify actual or potential “recognized environmental conditions” that may result in liability or land use restrictions. The ASTM 1527-13 Environmental Site Assessment is the minimum standard for environmental due diligence in the commercial real estate industry and currently meet the standard for All Appropriate Inquiry under the Small Business Liability Relief and Brownfield’s redevelopment Act of 2002. A diligent effort in accordance with generally accepted good commercial and customary standards and practice was undertaken to identify the “recognize environmental conditions” that might affect the redevelopment project. However, the identification of old hazardous waste sites is an evolving process; therefore, CTS Group, Inc. cannot state with absolute certainty that no other potentially hazardous waste site is located in the area.

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1.0 EXECUTIVE SUMMARY

Mr. Carlos M. Colon acting as an authorized representative of Jardines de Loíza, LLC. engaged CTS Group Inc. to conduct a Phase I Environmental Site Assessments (ESA) at a commercial property physically located at Road PR-188, Km 5.5, Mediania Baja Ward, Loiza, Puerto Rico. This property will be subsequently referred to in this report as “the subject property”. This assessment was prepared in accordance with the American Society of Testing Materials (ASTM) Standard Practice for Phase I Environmental Site Assessments Process (ASTM Designation E1527-13).

The purpose of the Phase I was to evaluate environmental concerns or issues with respect to the range of contaminants within the scope of the Comprehensive Environmental Response and Liability Act (CERCLA) and petroleum products that may be associated with the Subject Property, based upon readily available information and site observations. In defining a standard of good commercial and customary practice for conducting an environmental site assessment of a property, the goal of the processes established by this practice is to identify “*Recognized Environmental Conditions (REC)*”. A REC means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. The term is not intended to include *de minimis* conditions that generally do not present a threat to the human health or the environment and that generally would not be subject of an enforcement action if brought to the attention of appropriate governmental agencies.

The use of land in Puerto Rico is regulated by the Master Zoning Plan of the Puerto Rico Planning Board. According to the zoning maps for the Loiza Municipality, the subject property falls within a Residential (R-1) zoning area. The environmental professional, however, is not qualified to determine zoning compliance for the identified use of the subject property. The subject site is assumed to be free of zoning compliance violations that might affect its intended use, and no liability or responsibility is assumed in this respect. A complete zoning compliance assessment is beyond the scope of this Environmental Site Assessment. As per FEMA Emergency Flood Map No. 72000C0415H (effective date November 18, 2009), 65.9% of the subject property lies within a Zone AE and 34.1% of the subject site lies within a 0.2 PCT Zone. The environmental professional, however, is not qualified to determine the flooding conditions of the subject site. The subject property is assumed to be free of adverse floodable conditions that might affect its intended development, and no liability

or responsibility is assumed in this respect. Further analysis of the flood insurance or flood certification is beyond the scope of this Environmental Assessment.

Due to the disruption in the services provided by the different government agencies as a result of the Covid-19 emergency, we made several unsuccessful efforts to contact the Municipality of Loiza in order to obtain information in connection with the current and historical operation of the subject property. The PR EQB was contacted in order to obtain information regarding any environmentally related incident or violation in connection with the commercial operations of the subject property and the rest of the business in the subject's immediate vicinity. Due to the delay caused by the Covid-19 emergency, as of the completion of this report, CTS Group, Inc. has not yet received a response to our inquiry from the PR EQB requesting information. Responses from agencies not yet received will be forwarded to the client upon receipt with any applicable recommendations. After reviewing the available documentation with the PR Environmental Quality Board's Underground Storage Tank Program in connection with the subject property, no information was found that would affect the professional opinion issued in this report.

CTS Group, Inc. contracted Environmental Data Resources, Inc. to perform an EDR Radius Map with GeoCheck, Historical Topo Maps and Aerial Photo Search in order to comply with the Federal approximate minimum search distance as detailed in ASTM Document E-1527-13. The database search includes regulatory agency lists of known or potentially hazardous waste facilities, landfills, hazardous waste generators, and disposal facilities in addition to properties under investigation. Updated on a monthly or quarterly basis this Report by itself may not meet the 90 days updating requirements of the ASTM standard. For this reason, CTS Group, Inc. individually reviewed each of the required Standard Environmental Record Resources found in the Standard to verify the available records including EPA and EQB internet sites and physical files. None of the listed facilities represent a risk of human exposure to contamination and/or migration of contaminated groundwater from or to the property.

The inspection of the subject property surrounding yield the following results:

- There is no evidence of oily films on standing water.
- There is no evidence of discolored and oil stained floors.
- There is no evidence of discarded chemical containers.
- There is no evidence of waste pipes, buried waste.
- There is no evidence of distressed vegetation.
- There is no presence of unusual odors.
- There is no evidence of a LUST Facility at the subject property

- There is no evidence of a LUST Facility at any of the adjoining properties.

The results of this assessment have revealed no Recognized Environmental Conditions associated with the Subject Property.

The results of this assessment have revealed no Controlled Recognized Environmental Conditions associated with the Subject Property.

The results of this assessment have revealed no Historical Recognized Environmental Conditions associated with the Subject Property.

The results of this assessment have revealed no *de-minimis* conditions associated with the property.

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-13 of a residential apartment complex known as Jardines de Loiza and physically located at Road PR-188, Km 5.5, Mediania Baja Ward, Loiza, Puerto Rico. Any exceptions to, or deletions from, this practice are described in Section 2.4 of this report. Any exception to, or deletions from, this practice are described in Section 13.0 of this report. The Findings, Opinions, and Conclusion sections of this report are based on sections 12.5, 12.6, and 12.8 of ASTM E 1527-13, respectively.

It is our professional opinion that due to the fact that no Recognized Environmental Conditions were identified during this assessment, there is no need to conduct any further study or testing in the subject property, unless there is a change of the current operations as describes herein. Several data gaps were identified while conducting the research for this assessment that could have a significant impact in the findings described herein since neither the present nor the past owners of the subject property were available to be interviewed, the environmental professional did not gained access to the subject property's interior and was not able interview any state or municipal government official while conducting the research for this Environmental Site Assessment. Except for the limitations and exceptions discussed in Section 2.3, this Phase I ESA complies with the ASTM Standard 1527-13.

2.0 INTRODUCTION

CTS Group, Inc. conducted a Phase I Environmental Site Assessment of an undeveloped lot of land intended to be used for residential purposes. The subject property is located at Road PR-188, Km 5.5, Mediania Baja Ward, Loiza, Puerto Rico. The subject property refers to a level rectangular parcel containing a total area of 16,312.9798 square meters. The land parcel is at street grade and has adequate drainage. All city utilities are available, including water, sewer, electric and telephone services. Land improvements included asphalt paving, concrete sidewalks, curbing and minimal landscaping. The site is improved with a 120 apartments residential complex known as Jardines de Loiza. This assessment was prepared in accordance with the American Society of Testing Materials (ASTM) Standard Practice for Phase I Environmental Site Assessments Process (ASTM Designation E1527-13).

2.1 Purpose

The purpose of this practice is to define good commercial and customary practice in the United States of America for conducting an *environmental site assessment* of a parcel of *commercial real estate* with respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. §9601) and *petroleum products*. As such, this practice is intended to permit a *user* to satisfy one of the requirements to qualify for the *innocent landowner, contiguous property owner, or bona fide prospective purchaser* limitations on CERCLA liability (hereinafter, the “*landowner liability protections*,” or “*LLPs*”): that is, the practice that constitutes *all appropriate inquiries* into the previous ownership and uses of the *property* consistent with good commercial and customary practice as defined at 42 U.S.C. §9601(35)(B). Controlled substances are not included within the scope of this standard.

2.2 Detailed scope of Services

CTS Group, Inc. was engaged by Mr. Carlos M. Colon acting as an authorized representative of Jardines de Loiza, LLC. to conduct an ESA Phase I to conform to ASTM 1527-13. Jardines de Loiza and its representatives understand that it is the professional obligation of CTS Group, Inc. to report the findings from the assessment being conducted. The scope of services for this project included a visual reconnaissance of the site and neighboring properties; review of readily available Federal, state, and local regulatory records; examination when available of historic information and evaluation of current and past operations and activities on-site. Matrix reviewed/utilized historic aerial photographs, Sanborn Fire Insurance Maps, historic topographic maps and city directories as part of the Phase I ESA. Additionally, a

regulatory database search was conducted by CTS Group, Inc. for information available in governmental databases. The Phase I ESA also included an initial Vapor Encroachment Screening (VES) to determine if a Vapor Encroachment Condition (VEC) is identified for the Target Property TP (that is, the presence or likely presence of Chemicals of Concern (COC) vapors in the subsurface of the TP caused by the release of vapors from contaminated soil and/or groundwater either on or near the TP as identified by the Tier 1 procedure of ASTM E2600-15. As required by the ASTM 1527-13 standard, a Phase I ESA consists of four components which are being described below:

Records Review

Review of property deeds, titles, and any other pertinent legal record. Review of available records, including permitting, topographic maps, geological maps, aerial pictures and historical records. The database of the U.S. Environmental Protection Agency and the Puerto Rico Environmental Quality Board were reviewed to determine if any regulated facilities were located at the subject property or in its vicinity.

Site Reconnaissance

A site reconnaissance of the subject property and adjoining properties will be conducted to identify if there is the presence of any Recognized Environmental Condition.

Interviews

CTS Group, Inc. will perform a series of interviews with present and past owners of the subject property, neighbors and owners of adjoining property, and local and state government officials.

Preparation of final Report

This Final Report will reveal the Environmental Professional evaluation of findings after conducting an ASTM 1527-13 Phase I ESA at the subject property.

2.3 Significant Assumptions

CTS Group, Inc. assumes that the reports, documents and general and specific information provided by the client, government agencies and the people interviewed while conducting this study are complete and reliable. No other significant assumptions have been made while performing this Phase I ESA.

2.4 *Limitations and Exceptions*

The purpose of an environmental site assessment is to identify actual or potential “recognized environmental conditions” that may result in liability or land use restrictions. The ASTM 1527-13 Environmental Site Assessment is the minimum standard for environmental due diligence in the commercial real estate industry and currently meet the standard for All Appropriate Inquiry under the Small Business Liability Relief and Brownfield’s redevelopment Act of 2002. A diligent effort in accordance with generally accepted good commercial and customary standards and practice was undertaken to identify the “recognized environmental conditions” that might affect the redevelopment project. However, the identification of old hazardous waste sites is an evolving process; therefore, CTS Group, Inc. cannot state with absolute certainty that no other potentially hazardous waste sites are located in the area. This assessment reflects the normal degree of care and skill that is ordinarily exercised by environmental professionals conducting business in this or similar localities. In no event, shall CTS Group, Inc., or its employees be liable for any damages, injury, loss, cost, or expenses whatsoever arising in connection with the use or reliance on the information contained in this report, except as otherwise provided by law. As part of this assessment, CTS Group, Inc. submitted requests for information via the Freedom of Information Act (FOIA) and Office of Public Records Act (OPRA) to various governmental agencies. As of the preparation of this report, these requests may not have been fulfilled. The conclusions of this report are subject to change upon receipt of a response from these FOIA and OPRA requests. Where access to portions of the subject property or to structures on the site was unavailable or limited, CTS Group, Inc. renders no opinion as to the presence of direct or indirect evidence relating to petroleum substances, hazardous substances or both in that portion of the site or structure. In addition, CTS Group, Inc. renders no opinion as to the presence of indirect evidence related to hazardous material or oil where direct observation of the ground surface, interior walls, floors, ceilings, or a structure is obstructed by objects or materials, including snow, covering on or over these surfaces.

The information in this report is based on the review of available historical documents, governmental databases, deed records, aerial photographs, governmental environmental files, conducted interviews with past/present owners and neighbors, and a site reconnaissance of the area by the environmental professional. The result of this assessment, as written in this report, is valid as of the date of report. The assessment does not include sampling of soil, rock, groundwater, surface water, or air. Mold, indoor air quality, asbestos, and lead-based paint surveys are excluded from the scope of this report.

2.5 *Special Terms and Conditions*

The Phase I ESA was conducted in conformance with the scope and limitations of ASTM designation E 1527-13 standard practice. There are no special terms or conditions to the content of the report that are in addition to the scope outlined in Section 2.2.

Authorization to perform this assessment was given by Mr. Carlon M. Colon acting as an authorized representative of the subject property owner. Instructions as to the location of the subject property, access, and an explanation of the subject property and facilities to be assessed were provided by Mrs. Victoria Colon.

The following is a list of terminology that is used throughout this report and therefore should be defined:

Actual Knowledge: The knowledge actually possessed by an individual who is a real person, rather than an entity.

Adjoining Properties: Any real property or properties the border of which is contiguous or partially contiguous with that of the subject property, or that would be contiguous or partially contiguous with that of the subject property but for a street, road, or another public thoroughfare separating them.

All Appropriate Inquiry: That inquiry constituting "all appropriate inquiry into previous ownership and uses of the subject property consistent with good commercial or customary practice", as defined in CERCLA, 42 U.S.C 9607 (b)(3), 9607 (q); and 9607 (r), assuming compliance with other elements of the defense.

Activity and Use Limitation (AUL): Legal or physical restrictions or limitations on the use of, or access to, a site or facility: (1) to reduce or eliminate potential exposure to hazardous substances or petroleum products in the soil, soil vapor, groundwater, and/or surface water on the property, or (2) to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment.

Area of Concern (AOC) (defined by the Approximate Minimum Search Distance): Records to be reviewed pertain to the *TP* and to properties within the *AOC* (that is, within the *approximate minimum search distance*). The *AOC* is one third of a mile around the *TP*.

Business Environmental Risk: A risk which can have a material environmental or environmentally driven impact on the business associated with the current or planned

use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in the E 1527-13 practice. Considerations of business environmental risk may involve addressing one or more non-scope considerations.

Chemical(s) of Concern (COC): Chemical that is present in the subsurface environment and can potentially migrate as a vapor into the sub-surface of the TP.

Controlled Recognized Environmental Condition: A REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (e.g., as evidenced by the issuance of a NFA letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (e.g., property use restrictions, AULs, institutional controls, or engineering controls).

Data Failure: A failure to achieve the historical research objectives of ASTM 1527-13 even after reviewing the standard historical sources that are reasonably ascertainable and likely to be useful. Data failure is one type of data gap.

Data Gap: A lack of or inability to obtain information required by ASTM 1527-13 despite good faith efforts by the environmental professional to gather such information. Data gaps may result from incompleteness in any of the activities required by the ASTM 1527-13, including, but not limited to, site reconnaissance (for example, an inability to conduct the subject property visit) and interviews (for example, an inability to interview the key subject property manager, regulatory officials, etc.).

De minimis condition: A condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de-minimis conditions are neither, recognized environmental conditions nor controlled recognized environmental conditions.

Due Diligence: The process of inquiring into the environmental characteristics of a parcel of commercial real estate or other conditions, usually in connection with a property transaction.

Environmental Professional: A person meeting the education, training and experience requirements, as set forth in the ASTM E 1527-13 practice.

Hazardous Substance: A substance defined as a hazardous substance pursuant to CERCLA 42 USC 9601(14), as interpreted by USEPA regulations and the courts.

Historical Recognized Environmental Condition: A past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted residential use criteria established by a regulatory authority, without subjecting the property to any required controls (e.g., property use restrictions, AULs, institutional controls, or engineering controls). Before calling the past release and HREC, the EP must determine whether the past release is a REC at the time the Phase I ESA is conducted (e.g., if there has been a change in the regulatory criteria). If the EP considers this past release to be a REC at the time the Phase I ESA is conducted, the condition shall be included in the conclusions section of the report as a REC.

Migrate/ Migration: Refers to the movement of hazardous substances or petroleum products in any form, including, for example, solid and liquid at the surface or subsurface, and vapor in the subsurface.

Obvious: That which is plain or evident; a condition or fact that could not be ignored or overlooked by a reasonable observer while visually or physically observing the subject property.

Occupants: Those tenants, subtenants, or other persons or entities using the subject property or a portion of the subject property.

Owner: Generally, the fee owner of record of the subject property.

Practically Reviewable: Information that is practically reviewable means that the information is provided by the source in a manner and in a form that, upon examination, yields information relevant to the subject property without the need for extraordinary analysis of irrelevant data.

Reasonable Ascertainable: Information that is (1) publicly available, (2) obtainable from its source within reasonable time and cost constraints, and (3) practically reviewable.

Recognized Environmental Conditions: The presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment.

Subject Property: The real estate property that is the subject of this ESA.

Target Property (TP): Property involved in the real estate transaction that is the subject of the VES defined by this guide.

User: The party seeking to use Practice E 1527-13 to perform an environmental site assessment of the subject property.

Vapor Encroachment Condition (VEC): Presence or likely presence of COC vapors in the subsurface of the TP caused by the release of vapors from contaminated soil or groundwater or both either on or near the TP as identified by the VES.

2.6 User Reliance

While conducting a Phase I – Environmental Site Assessments, as recommended by ASTM E-1527-13, an environmental professional is not required to verify independently the information provided but may rely on information provided unless he or she has actual knowledge that certain information is incorrect or unless it is obvious that certain information is incorrect based on other information obtained in the Phase I Environmental Site Assessment or otherwise actually known to the environmental professional.

This Phase I ESA was conducted solely for the purpose of providing information to the client. The findings, opinions, conclusions and other information provided in this report may be released to third parties. However, third parties shall have no right to rely on any information contained in this report, and CTS Group, Inc. shall have no liability to third parties in any manner whatsoever.

3.0 USER PROVIDED INFORMATION

3.1 Location and Legal Description

The subject property is located at Road PR-188, Km 5.5, Mediania Baja Ward, Loiza, Puerto Rico. The general site location is in the northeastern area of the island. The subject property's legal description reads as follow from its original Spanish translation:

PARCELA NUMERO UNO: RUSTICA: Predio de terreno de forma irregular y topografía llana radicado en el Barrio Medianía Baja del Municipio de Loiza Aldea, Puerto Rico, en lindes por el NORTE, con las parcelas número uno y dos; por el SUR, con terrenos de la Sucesión de Francisco Rivera y parcelas números tres y cuatro de la finca de la cual se segrega; por el ESTE, con terrenos de la Sucesión de Francisco Rivera y por el OESTE, con la Carretera Estatal Número ciento ochenta y ocho (188) y la parcela número seis de la finca de la cual se segrega. Contiene un área de TRECE MIL SEISCIENTOS OCHENTA Y DOS METROS CUADRADOS CON TRESCIENTOS DIEZMILESIMAS DE OTRO (13,682.0310 m.c.) equivalentes a tres punto cuatro mil ochocientos diez cuerdas (3.4810 cdas.).

En esta parcela enclavan tres (3) edificios de tres niveles cada uno, construidos en hormigón, para un total de ochenta (80) apartamentos, contiene además un edificio de un piso para oficinas de administración y otras facilidades para áreas comunes y residenciales.

Finca número 9114 inscrita al folio 21vto del tomo 186 de Loiza del Sistema Karibe.

Afecto a servidumbre de líneas de agua y alcantarillado sanitario a favor de la Autoridad de Acueductos y Alcantarillados de Puerto Rico; servidumbre eléctrica a favor de la Autoridad de Energía Eléctrica de Puerto Rico; servidumbre de teléfonos a favor de la Puerto Rico Telephone Company y servidumbre de alcantarillado pluvial a favor del Municipio de Loiza.

Catastro Número: 065-020-036-29-000.

PARCELA R-2-A: RUSTICA: Predio de terreno de forma rectangular y topografía llana radicado en el Barrio Medianía Baja del Municipio de Loiza Aldea, Puerto Rico, en lindes por el NORTE, con terrenos de la finca de la cual se segrega ahora denominada Parcela R-Dos D; por el SUR, con la parcela del complejo de apartamentos Jardines de Loiza (Fase I; por el ESTE, con terrenos propiedad de la Sucesión de Deogracias Mujica y por el OESTE, con la Parcela R-Dos B a dedicarse a uso público para la extensión de calle pública existente. Contiene un área de CINCO MIL TRESCIENTOS SETENTA Y TRES METROS CUADRADOS CON DOS MIL CUARENTA Y SEIS DIEZMILESIMAS DE OTRO (5,373.2046 m.c.) equivalentes a uno punto tres mil seiscientos setenta y una cuerdas (1.3671 cdas.).

En esta parcela enclava un edificio residencial de tres niveles construido en hormigón para un total de veintisiete (27) apartamentos. Contiene además facilidades comunales y recreativas.

Finca número 9827 inscrita al Tomo de Hoja Movil 209 de Loiza del Sistema Karibe.

Afecto a servidumbre de líneas de agua y alcantarillado sanitario a favor de la Autoridad de Acueductos y Alcantarillados de Puerto Rico; servidumbre eléctrica a favor de la Autoridad de Energía Eléctrica de Puerto Rico; servidumbre de teléfonos a favor de la Puerto Rico Telephone Company y servidumbre de alcantarillado pluvial a favor del Municipio de Loiza.

Catastro Número: 065-000-005-76-000.

3.2 *Owner Information*

Based on the provided information the subject property's owner of record is Jardines de Loiza, LLC., represented by Mr. Carlos M. Colon.

3.3 *Title and Judicial Records*

No title of or judicial records were reviewed by the Environmental Professional as part of this Environmental Site Assessment.

3.4 Environmental Liens or Activity and Use Limitations.

The subject property owner does not have any reliable information regarding any if specific chemicals were at some point stored at the subject site or if any environmentally related incident took place in the subject property immediate vicinity that could affect the opinion provided in this assessment.

3.5 Specialized Knowledge or Experience of the User

The subject property owner does not have any reliable information regarding any if specific chemicals were at some point stored at the subject site or if any environmentally related incident took place in the subject property immediate vicinity that could affect the opinion provided in this assessment.

3.6 Actual Knowledge of the User

The subject property owner does not have any reliable information regarding any if specific chemicals were at some point stored at the subject site or if any environmentally related incident took place in the subject property immediate vicinity that could affect the opinion provided in this assessment.

3.7 Reasons for Significantly Lower Purchase Price.

This assessment has yielded no significant environmental issues or contamination concerns that may significantly reduce the fair market value of the property was reported. None are suspected by CTS Group Inc.

3.8 Commonly Known or Reasonably Ascertainable Information.

The client does not know of any specific chemicals that are present or once were present at the subject property.

The client does not know of any spills or other chemicals releases that have taken place at the subject property.

The client does not know of any environmental cleanups that have taken place at the subject property.

In general, the client is not aware of any commonly known or reasonable ascertainable information that can be used to identify a recognized environmental condition in connection with the subject property.

3.9 Reason for performing Phase I

The objective of performing this Phase I Environmental Site Assessment at the subject property is to identify any recognized environmental condition in connection with the present and past operations of the subject property and the neighboring business. The scope of this practice includes research and reporting requirements that support the user's ability to qualify for the LLPs. As such, sufficient documentation of all sources, records, and resources utilized in conducting the inquiry required by this practice is provided in this report.

4.0 RECORDS REVIEWS

4.1 Standard Environmental Records Sources

CTS Group, Inc. contracted Environmental Data Resources, Inc. to perform an EDR Radius Map with Geo-Check, Historical Topo Maps and Aerial Photo Search in order to comply with the Federal approximate minimum search distance as detailed in ASTM Document E-1527-13. The database search includes regulatory agency lists of known or potentially hazardous waste facilities, landfills, hazardous waste generators, and disposal facilities in addition to properties under investigation.

The information provided in this report was obtained from publicly available sources. The locations of the properties listed in this report are plotted with a geographic information system (GIS) utilizing geocoding of property addresses. Updated on a monthly or quarterly basis this Report by itself may not meet the 90 days updating requirements of the ASTM standard. For this reason, CTS Group, Inc. individually reviewed each of the required Standard Environmental Record Resources found in the Standard to verify the available records including EPA and EQB internet sites and physical files.

The following Federal ASTM and Non-ASTM Records were requested and verified for this purpose. (Please see EDR Report Details in the Appendix 2). All records were reviewed and verified, however, CTS Group, Inc. must emphasize that the underlined records are the requirements of the ASTM Standard to be reviewed for the approximately minimum search distance.

Federal Database	Specified Search Radii	No. of Sites Identified
National Priority List (NPL)	1.0 mile	0
Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)	0.5 mile	0
CERCLIS No Further Remedial Action Planned (NFRAP)	0.25 mile	0
Corrective Action Report (CORRACTS)	1.0 mile	0
Resource Conservation & Recovery Act (RCRA) treatment, storage, and disposal facilities (TSD) list	0.5 mile	0
RCRA Generators list	0.25 mile	0
RCRA Non-Generators list	0.25 mile	0

Table – 1

The state databases searched, and the specified search radii, are as follows:

State Database	Specified Search Radii	No. of Sites Identified
State Hazardous Waste Sites (SHWS)	1.0 mile	0
State Solid Waste Landfill Sites	0.5 mile	0
State Registered Underground Storage Tanks/ Aboveground Storage Tanks (UST's/AST's) list	0.25 mile	0
State Registered Leaking Underground Storage Tanks (LUST) list	0.5 mile	0
State Voluntary Cleanup Programs (VCP)	0.5 mile	0
Brownfields	0.5 mile	0
Local Landfill/Solid Waste Disposal Sites (SWRCY)	0.5 mile	0
Historical Service Stations	0.25 mile	0
Historical Dry Cleaners	0.25 mile	0

Table – 2

MAPPED SITES SUMMARY						
Target Property Address: ROAD PR-188, KM 6.2, MEDIANIA BAJA WARD LOIZA, PR 00772						
Click on Map ID to see full detail.						
MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION	
NO MAPPED SITES FOUND						

Table – 4

None of the listed facilities represent a risk of human exposure to contamination and/or the migration of contaminated ground water from or to the Subject Property. Neither the subject property nor any of the adjoining properties are listed in any of the on this list. Refer to Appendix I.

Subject Property Search Result

The target property was not identified in any of the databases reviewed as part of this Environmental Site Assessment.

TARGET PROPERTY SEARCH RESULTS
The target property was not listed in any of the databases searched by EDR.
DATABASES WITH NO MAPPED SITES
No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

Orphan or Unmapped Sites

Based on EDR report, the following sites were not mapped due to poor or inadequate address information:

Due to poor or inadequate address information, the following sites were not mapped. Count: 1 records.	
Site Name	Database(s)
JARDINES DE CAROLINA P.S. - CAROLI	ICIS, FINDS, ECHO

Table – 5

After reviewing the available information provided by the PR Environmental Quality Board's Underground Storage Tank Program in connection with the subject property, no information was found that would affect the professional opinion issued in this report. None of the Orphan Facilities represent a risk of human exposure to contamination and migration of contaminated ground water from or to the property. Neither the subject property nor any of the adjoining properties are on this list. Based on EDR Radius Map with Geo-Check and Historical Topo Map and Aerial Photo Search, no facility of interest was identified that could result in the presence of a REC in connection with the subject property.

4.2 Regulatory Agency File and Records Review

Neither the subject property nor any of the adjoining properties were identified with a past or current violation on one or more of the standard environmental record sources. Therefore, regulatory files and/or records associated with the above-mentioned listing do not need to be reviewed.

4.3 Additional Environmental Records Sources

Department of Natural Resources and Environment (DRNA) & US Geological Survey (USGS)

According to the DRNA and the USGS, there are no public supply wells or agricultural wells within the subject property or any of the adjoining properties. Based on the information obtained from the USGS Groundwater Monitoring Network there are no active monitoring wells in the Municipality of Loiza. Refer to Appendix III.

Puerto Rico Environmental Quality Board (EQB) Monitoring Wells, UST, and LUST

Information was obtained by using Environmental Quality Board data information system. According to the EQB (JCA in Spanish) Groundwater Monitoring Network there are no active monitoring wells in the subject property vicinity. No UST was identified at the subject property at the time this assessment was being conducted. A list with all the Registered UST and LUST listed in the Municipality of Carolina is provided in Appendix IV. No facility of interest was identified in this list. None of the listed facilities is believed to represent a threat to the property and/or the human health. Neither the subject property nor any of the adjoining properties are on this list.

4.4 Physical Setting Source

Physical Setting Sources were obtained from the USGS, US Department of Agriculture, and visits to the subject property and its vicinity.

General Geography

The subject property is located in the Municipality of Loiza which is part of the Bayamón-Loíza region. The Bayamón-Loíza region covers about 280 mi² in the eastern North Coast area. It is bounded to the north by the Atlantic Ocean, to the west and south by the drainage basin divide of the Río de Bayamón, and to the east and south by the drainage basin divide of the lower Río Grande de Loíza (below Lago Loíza). Included in the Bayamón-Loíza region are the Río Bayamón, Río Piedras, and lower Río Grande de Loíza drainage basins (fig. 2.1.4.A-1). The San Juan metropolitan area is not only the principal population center of the Bayamón-Loíza region, but also of all Puerto Rico. The northern section of the Bayamón-Loíza region consists of a coastal plain composed of deposits of sand, silt, clay, and sand muck overlying limestone formations, which form the principal aquifer. The elevation of the land surface in the coastal plain ranges from mean sea level to about 100 feet above mean sea level. An almost continuous strip of swamps and lagoons lies near the coast. The principal coastal lagoons are Laguna San José, Laguna La Torrecilla, and Laguna de Piñones. The southern part of the region is comprised mostly of the foothills of the inner uplands, which range in elevation from about 100 to 1,300 feet above mean sea level.

General Site Geographic Information

The Bayamón-Loíza region covers about 280 sq mi in the eastern North Coast area. It is bounded to the north by the Atlantic Ocean, to the west and south by the drainage basin divide of the Río de Bayamón, and to the east and south by the drainage basin divide of the lower Río Grande de Loíza (below Lago Loíza). Included in the Bayamón-Loíza region are the Río Bayamón, Río Piedras, and lower Río Grande de Loíza drainage basins. The San Juan metropolitan area is not only the principal population center of the Bayamón-Loíza region, but also of all Puerto Rico. The northern section of the Bayamón-Loíza region consists of a coastal plain composed of deposits of sand, silt, clay, and sand muck overlying limestone formations, which form the principal aquifer. The elevation of the land surface in the coastal plain ranges from mean sea level to about 100 feet above mean sea level. An almost continuous strip of swamps and lagoons lies near the coast. The principal coastal lagoons are Laguna San José, Laguna La Torrecilla, and Laguna de Piñones. The southern part of the region is comprised mostly of the foothills of the inner uplands, which range in elevation from about 100 to 1,300 feet above mean sea level. The principal streams flowing through the region are the Río Bayamón and Río Piedras which flow north, and the Río Grande de Loíza which flows northeast. The Río Bayamón has its headwaters in the mountainous interior of the island and flows across a wide alluvial valley surrounded by swamp deposits near the coast. The Río Piedras, a relatively short river that has its

headwaters in the foothills, flows across a wide alluvial plain and discharges into Bahía de San Juan. The Río Grande de Loíza, with headwaters in the interior of the island (section 2.5), is the primary source of water filling Lago Loíza (the principal water-supply reservoir for the San Juan metropolitan area), on its course to the Atlantic Ocean.

General Site and Vicinity Hydrogeology

Two principal water-bearing units are present in the Bayamón-Loíza region: an upper water-table aquifer comprised of sedimentary rocks of Tertiary age and surficial deposits of Quaternary age; and a lower confined aquifer comprised mainly of sedimentary rocks of Tertiary age. The two units are separated by the upper member of the Cibao Formation, which acts as a confining unit. The upper aquifer occurs in the uppermost rocks overlying the upper member of the Cibao Formation, the Aguada and Aymamón Limestones, and alluvial deposits. The Aguada and Aymamón Limestones are eroded and covered with alluvial deposits, and the upper part of the Cibao Formation becomes thinner near San Juan. As a consequence, the available freshwater in the upper aquifer around San Juan largely resides in surficial deposits. For the most part, according to Rodríguez-Martínez (1991, p. 12), the upper aquifer is absent in the San Juan metropolitan area, and where present, is thin and contains brackish water. The thickness of the upper aquifer is limited by the location of the saline-freshwater interface and the top of the Cibao Formation. The transmissivity of the upper aquifer ranges from less than 500 to more than 3,000 ft²/d (Ingrid Padilla, U.S. Geological Survey, written communication, 1991).

Higher transmissivity values are measured west of the Canal del Río de Bayamón in the Toa Baja-Vega Baja region. The lower aquifer occurs in the Mucarabones Sand and minor limestone lenses within the Cibao Formation (Rodríguez-Martínez, 1991, p.15). The lower aquifer is confined from Bayamón to San Juan, but east of Río Piedras, the formations that comprise this hydrologic unit pinch out. The transmissivity of the lower aquifer ranges from less than 150 to 2,000 ft²/d (Anderson, 1976, p. 18). The quality of water in the lower aquifer ranges between fresh to brackish in the San Juan metropolitan area (Rodríguez-Martínez, 1991, p.15). Some wells south of Trujillo Alto and Carolina yield water from the volcanic rocks in small quantities. The water that may be available in the volcanic bedrock flows through cracks and fissures in the weathered zones.

Ground-Water Levels & Movements

Regional ground-water flow in the upper and lower aquifers within the Bayamón-Loíza region is northward from surficial exposures of the formations of Tertiary age, where the recharge occurs, to eventually discharge into swamps and lagoons along the coast.

Ground water also moves locally towards the main stream systems of the Río Bayamón, Río Piedras, and Río Grande de Loíza. Higher ground-water levels are observed during the rainy season, which occurs from August through November and from April to May, than during the dry season. The difference between the highest and the lowest water-level altitude during 1987 in one observation well near Cataño and another near San Juan was about 4 and 9 feet, respectively. Recharge to the water-bearing formations in the area is primarily from rainfall, but also from infiltration of streamflow. In the highly urbanized San Juan metropolitan area another possible source of recharge to the aquifer is leakage from water and sewer lines (Anderson, 1976, p.15). According to Anderson (1976, p. 27), the Río Bayamón recharges the alluvium and the Tertiary age aquifers when ground-water levels are low, generally from January to April. During the rest of the year the aquifer either is in balance with the stream or contributes water to it.

4.5 Historical Use of the Property

The subject property was developed and improved with the current residential project back in 1995. The subject site was vacant and with no commercial use on record prior its development. No prior commercial use was identified at the subject property; neither is suspected by CTS Group, Inc.

4.6 Use of Properties in Surrounding Area

The subject property's neighborhood is a mixture of residential and commercial land uses and is almost completely developed. The property is located on a major traffic arterial with good access to surroundings developments. There are no indications of any major changes to the area in the near future. In conclusion, the subject property has an excellent location for residential purpose due to the active traffic pattern of state road PR-188 and the proximity to new developments of residential buildings, and Loin City Core. The subject site's configuration and access characteristic are excellent, since the subject property has a good frontage to the main street and it is close to state Road PR-188 and road PR-951.

4.7 Standard Historical Sources

Aerial Photographs

Aerial photographs were obtained using the EDR Radius Map with Lightbox and Historical Topo Maps and Aerial Photo Search. The images taken from an aerial platform had sufficient resolution to allow identification of development and activities of areas encompassing the subject property. The reviewed material included images from the past 30 years. Based on the available aerial photographs, the commercial

activities in the subject property vicinity has not experienced significant changes over the past two decades.

Fire Insurance Maps

No fire insurance maps were reviewed as part of this investigation.

Property Tax Files

No property tax information was made available to the environmental professional.

Recorded Land Title Records

No title records were reviewed as part of this environmental site assessment.

USGS Topographic Maps

The USGS Topographic Map of the subject property vicinity dating back to 1940 were obtained using the EDR Radius Map with GeoCheck, Historical Topo Maps and Aerial Photo Search. Other than the use listed under sections 4.5 and 4.6, no additional commercial used was identified in connection with the subject property or any of the adjoining properties.

Local Street Directories

Local street directories were reviewed as part of this assessment in order to identify any prior commercial use of the subject property and the adjoining properties. The Shell Petroleum refinery was identified as the main industrial operation in the subject property immediate vicinity.

Building Department Records

No building department records were reviewed as part of this assessment.

Zoning/Land Use Records

The use of land in Puerto Rico is regulated by the Master Zoning Plan of the Puerto Rico Planning Board. According to the zoning maps for the Loiza Municipality, the subject property falls within a Residential (R-1) zoning area. The environmental professional, however, is not qualified to determine zoning compliance for the identified use of the subject property. The subject site is assumed to be free of zoning compliance violations that might affect its intended use, and no liability or responsibility is assumed in this respect. A complete zoning compliance assessment is beyond the scope of this Environmental Site Assessment.

Other Historical Sources

No other historical sources were reviewed as part of this assessment.

5.0 SITE RECONNAISSANCE

5.1 Methodology and Limiting Conditions

The subject property was inspected on September 24th, 2020 by EP Ihosvany Negret. The methodology used for the site reconnaissance of the subject property consisted of visually inspecting the subject property interior and surrounding areas. The purpose of this visit was to identify any potential recognized environmental conditions and/or any potential source of environmental impairment.

5.2 General Site Setting

All areas of the subject property were accessible at the time of the inspection. There were no visual or physical obstructions of the subject property. During the inspection, an interior and exterior walk-through of the subject property was performed. The exteriors of adjoining properties were visually evaluated to identify any Recognized Environmental Condition.

General Description of Land & Structures

The subject property refers to a level rectangular parcel containing a total area of 16,312.9798 square meters. The land parcel is at street grade and has adequate drainage. All city utilities are available, including water, sewer, electric and telephone services. Land improvements included asphalt paving, concrete sidewalks, curbing and minimal landscaping. The site is improved with a 120 apartments residential complex known as Jardines de Loiza.

Roads

State road PR-188, two lanes, two-way road provides easy access to surrounding developments while connecting with other municipalities and with the state road PR-951. The surrounding neighborhood comprises a mixture of land uses. To the north of the site is Loiza city core; to the south is state road #188; to the east is Jardines de Loiza Apartments Complex; to the west is state road #951 and municipal cemetery.

Utilities

The Puerto Rico Electrical Power Authority (PREPA) provides electrical power to the subject's immediate neighborhood. The Puerto Rico Aqueducts and Sewers Authority (PRASA) provide potable water, to the area, and the Puerto Rico Telephone Company

provides telephone services. There are no other utilities available at the subject property. The subject property vicinity has the typical and necessary government services available, including fire and police protection provided by the Commonwealth government, street cleaning provided by the municipal government, and postal service provided by the federal government.

Floods

As per FEMA Emergency Flood Map No. 72000C0415H (effective date November 18, 2009), 65.9% of the subject property lies within a Zone AE and 34.1% of the subject site lies within a 0.2 PCT Zone. The environmental professional, however, is not qualified to determine the flooding conditions of the subject site. The subject property is assumed to be free of adverse floodable conditions that might affect its intended development, and no liability or responsibility is assumed in this respect. Further analysis of the flood insurance or flood certification is beyond the scope of this Environmental Assessment.

Landfill, Dumping, Disturbed Soil

There are not landfills, Dumping, or disturbed soil at the subject property or adjoining properties. The soil is not disturbed but it does show water accumulation in several areas in the presence of precipitation. There is not a Municipal Solid Waste Facility in the Municipality of Loiza.

5.3 Current Use(s) of the Property

The subject property is currently occupied by a residential apartment complex known as Jardines de Loiza.

5.4 Past Use(s) of the Property

The subject property was developed and improved with the current residential project back in 1995. The subject site was vacant and with no commercial use on record prior its development. No prior commercial use was identified at the subject property; neither is suspected by CTS Group, Inc.

5.5 Current Uses of Adjoining Properties

On the North, the subject property is adjoined by a vacant lot of land and a residential apartments project known as Loiza Home for the Elderly.

On the South, the property shares boundary with the following properties:

- A commercial property occupied by a community drugstore operating under the commercial name of Farmacia Jardines de Loiza and Mega Fresh Supermarket.
- Several Residential properties with no commercial use on record.

On the East, the subject property is adjoined by Pseveral residential properties with no commercial use on record.

On the West, the subject property is adjoined a public residential project known as Yuquiyu I.

5.6 Past Uses of Adjoining Properties

No additional historical use information was identified in connection with any of the adjoining properties. From reviewing the historical aerial photography and the available information, we do not suspect any industrial or other environmentally sensitive commercial activities in the subject property immediate vicinity.

5.7 Historical Uses in the Surrounding Area

The subject property's neighborhood is a mixture of residential and commercial land uses and is almost completely developed. The property is located on a major traffic arterial with good access to surroundings developments. There are no indications of any major changes to the area in the near future. In conclusion, the subject property has an excellent location for residential purpose due to the active traffic pattern of state road PR-188 and the proximity to new developments of residential buildings, and Loin City Core. The subject site's configuration and access characteristic are excellent, since the subject property has a good frontage to the main street and it is close to state Road PR-188 and road PR-951.

5.8 Interior and Exterior Observations

Hazardous Substances and Petroleum Products in Connection with Identified Uses.

No hazardous substances and petroleum products were identified in connection with identified use of the subject property.

Power Generators

No power generator was reported or observed during the site reconnaissance.

Petroleum Storage Tanks

No petroleum storage tank was identified during the site reconnaissance.

Odors

No strong, pungent, or noxious odors were identified at the subject property and its surroundings during the site inspection.

Pools of Liquid

No standing surface water, pools or sumps containing liquids likely to be hazardous substances or petroleum products were observed during the site reconnaissance.

Drums

No drums suspected to have residual hydrocarbon products or any other chemical were observed at the subject property.

Hazardous Substance and Petroleum Products Containers (Not Necessarily in Connection with Identified Uses)

None observed or reported

Unidentified Substance Containers

No unidentified Substance Containers were observed at the subject property.

PCBs

During the site inspection, we did not identify any visual indications of equipment likely to contain PCB.

Interior Observations:Heating/Cooling

No HVAC facilities were observed or reported during the site inspection.

Stains or Corrosion

No corroded or stained metal containers were observed within the subject property.

Drains and Sumps

No sumps or malfunctioning drain system were observed at the subject property.

Exterior Observations:Pits, Ponds, or Lagoons

No pits, ponds, or lagoons were observed in the subject property.

Stained Soil or Pavement

No stained soil or pavement was observed at the subject property.

Stressed Vegetation

No stressed vegetation other than from insufficient water was observed at the subject property.

Solid Waste

No trash construction debris, demolition debris, or other solid waste disposal, or mounds or depressions suggesting trash or other solid waste disposal were observed at the subject property.

Wastewater

No wastewater or any discharge into a drain, ditch, underground injection system, or stream on or adjacent to the property was observed. The subject property is fully connected to the Municipal Sewer System.

Wells

No dry wells, irrigation wells, injection wells, abandoned wells, or other wells were observed at the subject property.

Septic Systems

No on-site septic systems or cesspools were observed.

5.9 Vapor Encroachment Screen (VES)

The initial Vapor Encroachment Screening (VES) is intended to determine if a Vapor Encroachment Condition (VEC) is identified for the Target Property TP (that is, the presence or likely presence of Chemicals of Concern (COC) vapors in the subsurface of the TP caused by the release of vapors from contaminated soil and/or groundwater either on or near the TP as identified by the Tier 1 procedure of ASTM E2600-15. No sources of Petroleum Hydrocarbon COCs were identified within the specified Area of Concern of 528 ft. from the subject property. No source of volatile/semi volatile hazardous COCs were identified in the proposed Area of Concern.

5.10 *Out of Scope Considerations*

Following are several non-scope considerations that the user may want to assess in connection with *commercial real estate*. No implication is intended as to the relative importance of inquiry into such non-scope considerations, and this list of non-scope considerations is not intended to be all-inclusive:

Wetlands/Flood Plain

The subject property is located on a 17.82-acre Freshwater Emergent Wetland habitat classified as a PEM1A.

Classification code: PEM1A

System Palustrine (P): The Palustrine System includes all nontidal wetlands dominated by trees, shrubs, persistent emergent, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 ppt. It also includes wetlands lacking such vegetation, but with all of the following four characteristics: (1) area less than 8 ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 2.5 m (8.2 ft) at low water; and (4) salinity due to ocean-derived salts less than 0.5 ppt.

Class Emergent (EM): Characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants.

Subclass Persistent (1): Dominated by species that normally remain standing at least until the beginning of the next growing season. This subclass is found only in the Estuarine and Palustrine systems.

Water Regime Temporary Flooded (A): Surface water is present for brief periods (from a few days to a few weeks) during the growing season, but the water table usually lies well below the ground surface for the most of the season.

The current operations at the subject property are believed to cause no adverse impact to the wetlands identified in the map. A copy of the National Wetland Inventory for the subject property vicinity issued by the U.S. Fish and Wildlife Service is included in Appendix A of this report. As per FEMA Emergency Flood Map No. 72000C0415H (effective date November 18, 2009), 65.9% of the subject property lies within an Zone AE and 34.1% of the subject site lies within a 0.2 PCT Zone. The environmental professional, however, is not qualified to determine the flooding conditions of the subject site. The subject property is assumed to be free of adverse floodable conditions that might affect its intended development, and no liability or responsibility is assumed

in this respect. Further analysis of the flood insurance or flood certification is beyond the scope of this Environmental Assessment.

Endangered Species

Under the Endangered Species Act (ESA), the government protects endangered and threatened plants and animals (listed species) and their habitats. The presence of listed species can restrict use of property to ensure that the proposed or current activities do not adversely affect endangered or threatened species as well as their critical habitats. Based on limited reviewed information could not identify any record of threatened or endangered species in the subject property immediate vicinity that may be affected by the current operations at the site.

Lead-Based Paint

Based on the age of the structure it is possible that some of the paint and/or ceramic tiles in the bathroom and kitchen may contain Lead. The PR EQB requires that a Lead Based Paint inspection and removal (If needed) to be performed prior to any major renovations or demolition of a building suspected to have LBP. CTS Group, did not perform an LBP inspection at the premises, therefore, a professional opinion cannot be offered on that regard.

Asbestos Containing Building Materials (ACBM's)

National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations require sampling potential ACBM prior to demolition or extensive renovation, regardless of the date of construction; therefore, if such activities are planned, it may be required to conduct a survey of the entire facility, or that portion slated for renovation or demolition, before initiating such destructive activities. CTS Group, did not perform an ACM inspection at the premises, therefore, a professional opinion cannot be offered on that regard.

Microbial Contamination (Mold)

A comprehensive mold survey was beyond the scope of this assessment; however, during the assessment, no visual evidence of active water or mold damage was observed in the areas inspected by CTS Group, Inc.

Radon

Radon gas is a product of the decay series that begins with uranium. Radon is produced directly from radium, which can be commonly found in bedrock that contains black shale and/or granite. Radon gas can migrate through the ground and enter buildings

through porous concrete or fractures. Radon tends to accumulate in poorly ventilated basements. Long-term exposure to radon has been associated with lung cancer. The EPA Map of Radon Zones does not provide a map for Puerto Rico. No Radon testing was performed by CTS Group, Inc.

Lead in Drinking Water

CTS Group, Inc. researched information pertaining to the source and the regulatory compliance of the drinking water supplied to the subject property. The subject property receives its drinking water from the Puerto Rico Aqueduct and Sewer Authority (PRASA). According to the PRASA's website, 100 % of its water is tested before it enters the distribution system. The water supplied to the Subject Property vicinity is believed to meet federal and state drinking water standards.

Indoor Air Quality

Indoor pollution sources that release gases or particles into the air are the primary cause of indoor air quality problems in homes. Inadequate ventilation can increase indoor pollutant levels by not bringing in enough outdoor air to dilute emissions from indoor sources and by not carrying indoor air pollutants out of the home. High temperature and humidity levels can also increase concentrations of some pollutants. Due to the fact that the subject property is a vacant parcel of land with no structures Indoor Air Quality guidelines does not apply in this case. Ambient air quality related to releases of hazardous substances or petroleum products was analyzed as part of a Vapor Encroachment Screen included in section 5.9.

Noise Pollution

A Noise Survey was not performed as part of this Environmental Site Assessment. No information was provided to the Environmental Professional on whether or not a Noise Survey has been performed at the premises.

6.0 INTERVIEWS AND QUESTIONNAIRES

6.1 *User/client questionnaire*

Refer to Appendix X for a copy of the client/user questionnaire.

6.2 *Past owners and/or past occupants Questionnaire*

The subject property past owners were not available to be interviewed. Based on the information collected by interviewing local government officials, present owner and

neighboring business owners there is no reason to be believed that the subject property was used to store any regulated chemicals.

6.3 *Present owner and/or site manager interview*

Refer to Appendix X for a copy of the client/user questionnaire.

6.4 *Government Official(s) Interview (s)*

Due to the disruption in the services provided by the different government agencies as a result of the Covid-19 emergency, we made several unsuccessful efforts to contact the Municipality of Loiza order to obtain information in connection with the current and historical operation of the subject property. The PR EQB was contacted in order to obtain information regarding any environmentally related incident or violation in connection with the commercial operations of the subject property and the rest of the business in the subject's immediate vicinity. Due to the delay caused by the Covid-19 emergency, as of the completion of this report, CTS Group, Inc. has not yet received a response to our inquiry from the PR EQB requesting information. Responses from agencies not yet received will be forwarded to the client upon receipt with any applicable recommendations. After reviewing the available documentation with the PR Environmental Quality Board's Underground Storage Tank Program in connection with the subject property, no information was found that would affect the professional opinion issued in this report.

7.0 FINDINGS

The inspection of the subject property surrounding yield the following results:

- There is no evidence of oily films on standing water.
- There is no evidence of discolored and oil stained floors.
- There is no evidence of discarded chemical containers.
- There is no evidence of waste pipes, buried waste.
- There is no evidence of distressed vegetation.
- There is no presence of unusual odors.
- There is no evidence of a LUST Facility at the subject property
- There is no evidence of a LUST Facility at any of the adjoining properties.

The results of this assessment have revealed no Recognized Environmental Conditions associated with the Subject Property.

The results of this assessment have revealed no Controlled Recognized Environmental Conditions associated with the Subject Property.

The results of this assessment have revealed no Historical Recognized Environmental Conditions associated with the Subject Property.

The results of this assessment have revealed no *de-minimis* conditions associated with the property.

8.0 PROFESSIONAL OPINION

It is our professional opinion that due to the fact that no Recognized Environmental Conditions were identified during this assessment, there is no need to conduct any further study or testing in the subject property, unless there is a change of the current operations as describes herein. Except for the limitations and exceptions discussed in Section 2.3, this Phase I ESA complies with the ASTM Standard 1527-13.

9.0 ADDITIONAL INVESTIGATIONS

Based on the results of this ESA Phase I there is no need to conduct further investigation at the subject property.

10.0 DATA GAPS

Several data gaps were identified while conducting the research for this assessment that could have a significant impact in the findings described herein since neither the present nor the past owners of the subject property were available to be interviewed, the environmental professional did not gained access to the subject property's interior and was not able interview any state or municipal government official while conducting the research for this Environmental Site Assessment.

11.0 CONCLUSIONS

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-13 of a residential apartment complex known as Jardines de Loiza and physically located at Road PR-188, Km 5.5, Mediania Baja Ward, Loiza, Puerto Rico. Any exceptions to, or deletions from, this practice are described in Section 2.4 of this report. Any exception to, or deletions from, this practice are described in Section 13.0 of this report. The Findings, Opinions, and Conclusion sections of this report are based on sections 12.5, 12.6, and 12.8 of ASTM E 1527-13, respectively.

12.0 RECOMMENDATIONS

No further testing is required at the subject property.

13.0 LIMITING CONDITIONS & DEVIATIONS

Any exception to, or deletions from, this practice are described in Section 13.0 of this report. The Findings, Opinions, and Conclusion sections of this report are based on sections 12.5, 12.6, and 12.8 of ASTM E 1527-13, respectively.

14.0 REFERENCES

ASTM Standards:

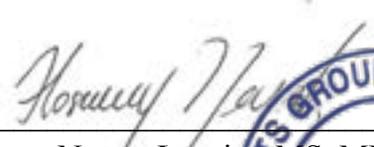
1. *ASTM1527-13 Standard practice for Environmental Site Assessments Phase I*
2. *E2091 Guide for Use of Activity and Use Limitations, Including Institutional and Engineering Controls*
3. *E2600 Guide for Vapor Encroachment Screening on Property*
4. *Involved in Real Estate Transactions*

Federal Statutes:

1. *Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (“CERCLA” or “Superfund”), as amended by Superfund Amendments and Reauthorization Act of 1986 (“SARA”) and Small Business Liability Relief and Brownfields Revitalization Act of 2002 (“Brownfields Amendments”), 42 U.S.C. §§9601 et seq.*
2. *Emergency Planning and Community Right-To-Know Act of 1986 (“EPCRA”), 42 U.S.C. §§11001 et seq.*
3. *Freedom of Information Act, 5 U.S.C. §552, as amended by Public Law No. 104-231, 110 Stat. 3048*

15.0 ENVIRONMENTAL PROFESSIONAL STATEMENT & SIGNATURE

I declare that, to the best of my professional knowledge and belief, I meet the definition of *Environmental Professional* as defined in §312.10 of 40 CFR § 312” and 12.13.2. I, have the specific qualifications based on education, training, and experience to assess a *property* of the nature, history, and setting of the subject *property*. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.



Ihosvany Negret Lapeira, MS. ME
Lead Environmental Consultant
CTS Group Inc



Site Photographs & Aerial Views





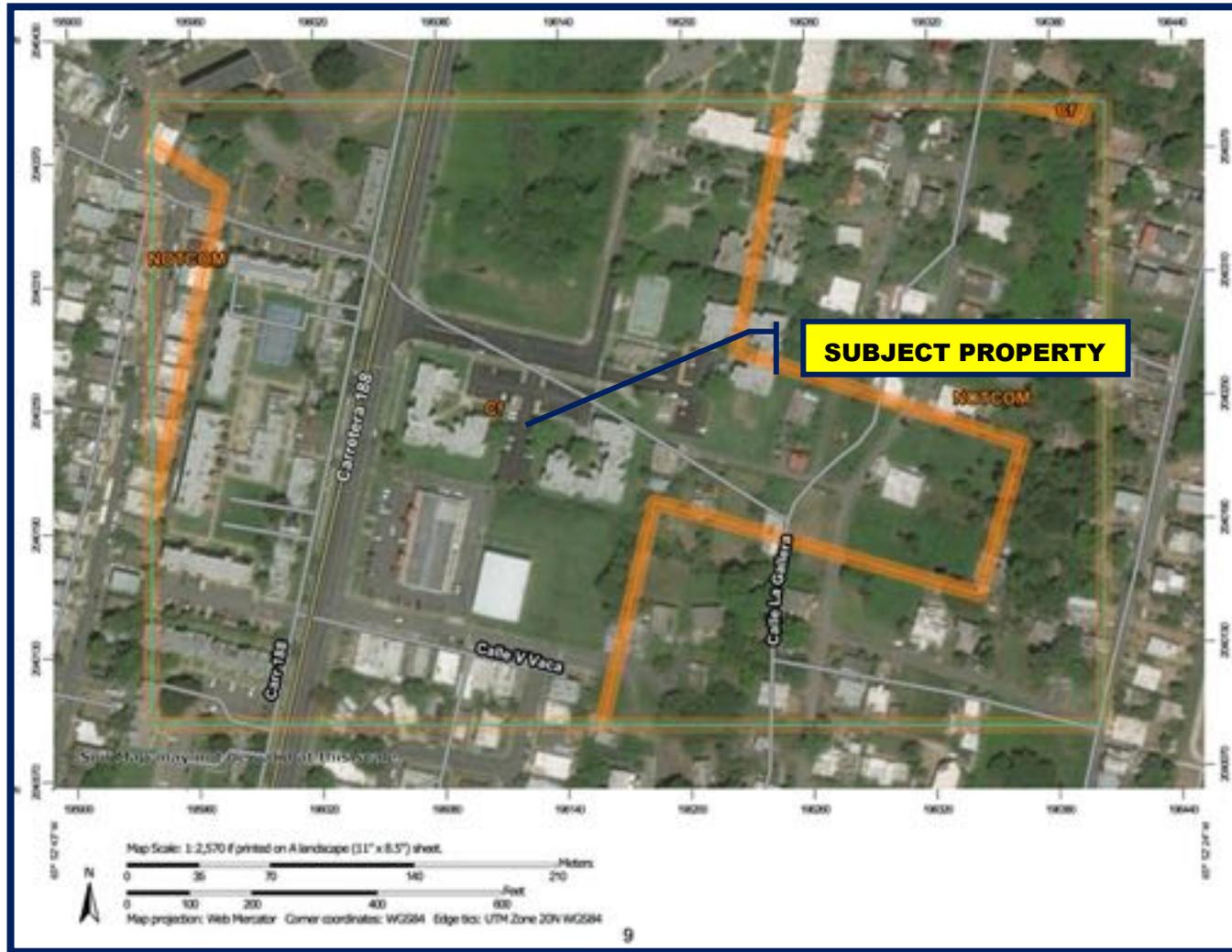
Adjoining Properties



Appendix A

Aerial Views and Maps

USDA Soil Map



**SUBJECT PROPERTY VICINITY
SOIL MAP
SOURCE: USDA**

**JARDINES DE LOIZA, LLC.
ROAD PR-188, KM 5.5, MEDIANIA BAJA WARD
LOIZA, PUERTO RICO**

Property Tax ID Information

Ubicación	
Catastro	065-020-006-29
Coordenadas NAD83	x: 258865 7787, y: 266212-3186 (Lat: 18.43074586, Lon: -65.87612808) Ver: Google Google Earth OpenStreet Tiempos.USGS Waze
Area Aprox. (m.c.)	14647.3517
Municipio	Loíza
Barrio	Barrio Pueblo (85.9%), Mediana Baja (14.1%)
Características Ambientales	
Zona Inundabilidad	A1 (85.9%) , S2 POT (14.1%)
Zona Inund. Advisory	A (84.2%) , X 0.2% ACP (13.8%)
Panel Inundabilidad	7200000115() , 7200000286()
Floodway	
Suelo (NFCS)	U7 (73.2%) , SWS (26.8%)
Calificación y Clasificación de Suelo	
Calificación	R-1 (89%) , U7-D (7%)
Clasificación PT	No clasificado
Clasificación PUT	SU (89%) , U7A (7%)
Mapas de Calificación	Loíza, Mapa PUT
Distribo Sobrepuesto	APE-ZC (Área de Planificación Especial Zona Clásica)
Zona Histórica	
Sitio Histórico	
Reglamento Aplicable	<ul style="list-style-type: none"> Plan de Uso de Terrenos Reglamento Consulta de Permisos para Obras de Construcción y Usos de Terrenos
Vigencia de Clasificación PUT	30-nov-2015
Vigencia de GeoDato de Calificación	7-MAY-2012
Status POT	
Usos Permitidos Por Reglamento	R-1 <ul style="list-style-type: none"> Vivienda unifamiliar (< 275 m² = 1 unidad de vivienda básica) Casa de Salud de hasta 2 inquilinos Casas en hilera (una unidad en cada solar) Casas peño (1 o 2 familias en cada solar) Casas de aptos (núm. de unidades según el tamaño del solar en m² y densidad en m²) Estacionamientos en solares para esos propósitos Hospedajes especializados

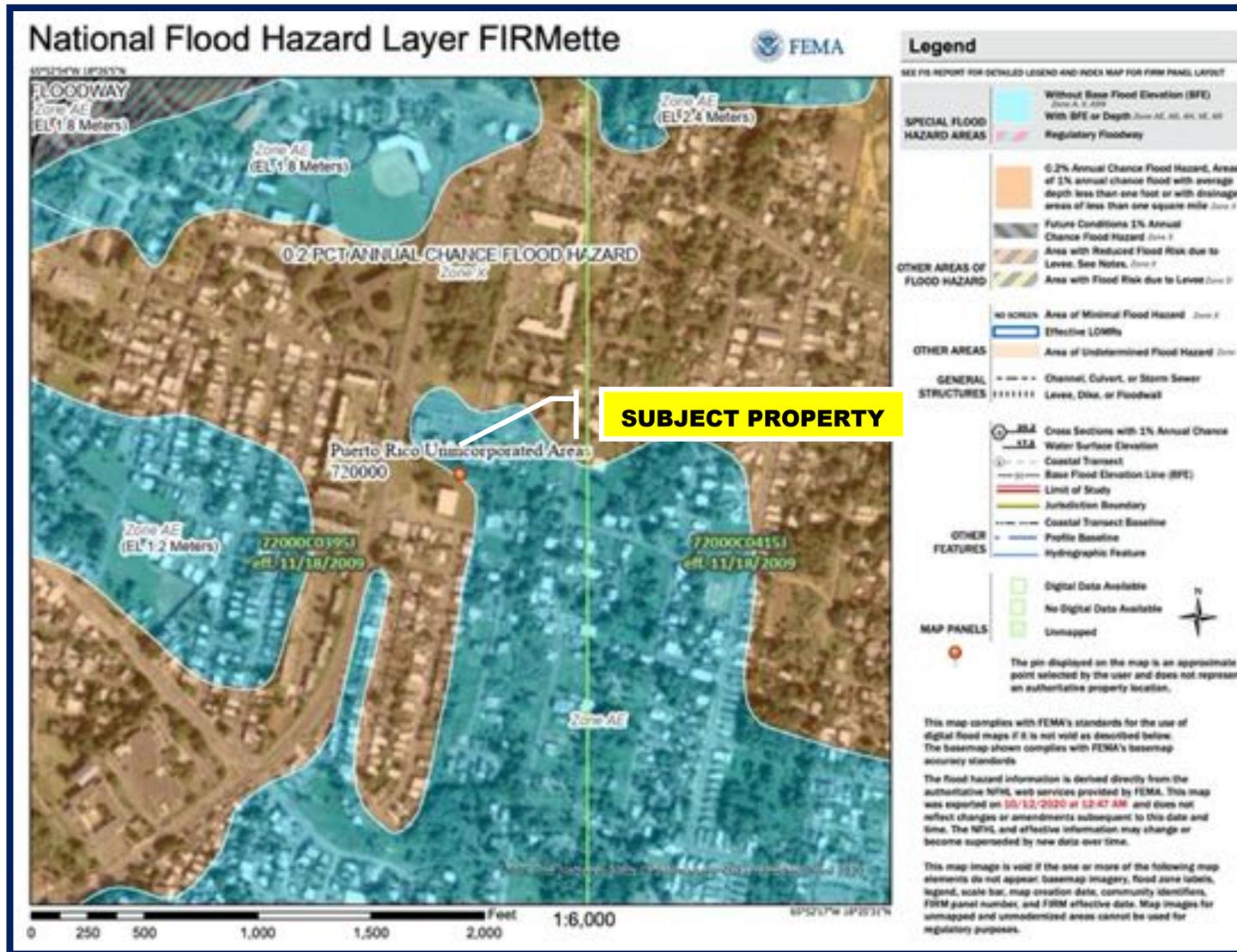


PROPERTY TAX ID INFORMATION
SOURCE: PR PLANNING BOARD

JARDINES DE LOIZA, LLC.
ROAD PR-188, KM 5.5, MEDIANIA BAJA WARD
LOIZA, PUERTO RICO

Zoning Map

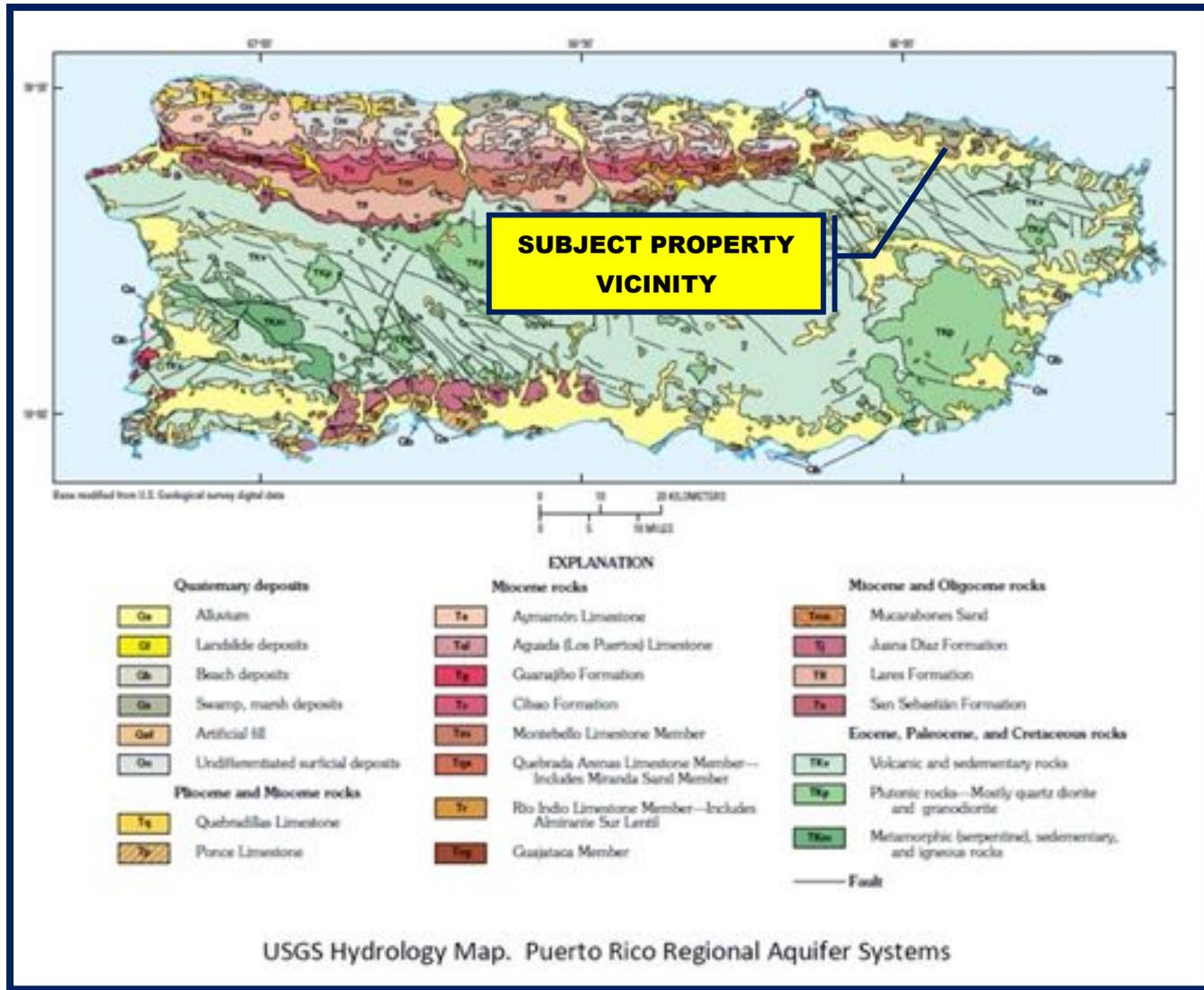
U.S. FEMA Flood Map



MAP#: 72000C0710H
SOURCE: US FEMA

JARDINES DE LOIZA, LLC.
ROAD PR-188, KM 5.5, MEDANIA BAJA WARD
LOIZA, PUERTO RICO

USGS Geologic Map



Appendix I
EDR Radius Map with GeoCheck Report

Jardines DE Loiza

Road PR-188, Km 6.2, Mediania Baja Ward
Loiza, PR 00772

Inquiry Number: 6211524.2s
October 01, 2020

The EDR Radius Map™ Report with GeoCheck®



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

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EXECUTIVE SUMMARY

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

TARGET PROPERTY INFORMATION

ADDRESS

ROAD PR-188, KM 6.2, MEDIANIA BAJA WARD
LOIZA, PR 00772

COORDINATES

Latitude (North):	18.4309720 - 18° 25' 51.49"
Longitude (West):	65.8760670 - 65° 52' 33.84"
Universal Tranverse Mercator:	Zone 20
UTM X (Meters):	196173.0
UTM Y (Meters):	2040157.5
Elevation:	10 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5964486 CAROLINA, PR
Version Date:	2013
East Map:	5964506 RIO GRANDE, PR
Version Date:	2013

MAPPED SITES SUMMARY

Target Property Address:
ROAD PR-188, KM 6.2, MEDIANIA BAJA WARD
LOIZA, PR 00772

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
--------	-----------	---------	-------------------	--------------------	----------------------------

NO MAPPED SITES FOUND

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

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

DATABASES WITH NO MAPPED SITES

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

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

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

Federal Delisted NPL site list

Delisted NPL..... National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY..... Federal Facility Site Information listing
 SEMS..... Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

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

Federal RCRA CORRACTS facilities list

CORRACTS..... Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

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

Federal RCRA generators list

RCRA-LQG..... RCRA - Large Quantity Generators
 RCRA-SQG..... RCRA - Small Quantity Generators
 RCRA-VSQG..... RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS..... Land Use Control Information System

EXECUTIVE SUMMARY

US ENG CONTROLS..... Engineering Controls Sites List
 US INST CONTROLS..... Institutional Controls Sites List

Federal ERNS list

ERNS..... Emergency Response Notification System

State- and tribal - equivalent CERCLIS

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

State and tribal leaking storage tank lists

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

State and tribal registered storage tank lists

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

State and tribal voluntary cleanup sites

INDIAN VCP..... Voluntary Cleanup Priority Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

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

Local Lists of Hazardous waste / Contaminated Sites

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

Local Land Records

LIENS 2..... CERCLA Lien Information

Records of Emergency Release Reports

HMIRS..... Hazardous Materials Information Reporting System

Other Ascertainable Records

RCRA NonGen / NLR..... RCRA - Non Generators / No Longer Regulated

EXECUTIVE SUMMARY

FUDS.....	Formerly Used Defense Sites
DOD.....	Department of Defense Sites
SCRD DRYCLEANERS.....	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR.....	Financial Assurance Information
EPA WATCH LIST.....	EPA WATCH LIST
2020 COR ACTION.....	2020 Corrective Action Program List
TSCA.....	Toxic Substances Control Act
TRIS.....	Toxic Chemical Release Inventory System
SSTS.....	Section 7 Tracking Systems
ROD.....	Records Of Decision
RMP.....	Risk Management Plans
RAATS.....	RCRA Administrative Action Tracking System
PRP.....	Potentially Responsible Parties
PADS.....	PCB Activity Database System
ICIS.....	Integrated Compliance Information System
FTTS.....	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS.....	Material Licensing Tracking System
COAL ASH DOE.....	Steam-Electric Plant Operation Data
COAL ASH EPA.....	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER.....	PCB Transformer Registration Database
RADINFO.....	Radiation Information Database
HIST FTTS.....	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS.....	Incident and Accident Data
CONSENT.....	Superfund (CERCLA) Consent Decrees
INDIAN RESERV.....	Indian Reservations
FUSRAP.....	Formerly Utilized Sites Remedial Action Program
UMTRA.....	Uranium Mill Tailings Sites
LEAD SMELTERS.....	Lead Smelter Sites
US AIRS.....	Aerometric Information Retrieval System Facility Subsystem
US MINES.....	Mines Master Index File
ABANDONED MINES.....	Abandoned Mines
FINDS.....	Facility Index System/Facility Registry System
UXO.....	Unexploded Ordnance Sites
ECHO.....	Enforcement & Compliance History Information
DOCKET HWC.....	Hazardous Waste Compliance Docket Listing
FUELS PROGRAM.....	EPA Fuels Program Registered Listing
MINES MRDS.....	Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

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

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LUST.....	Recovered Government Archive Leaking Underground Storage Tank
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SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were not identified.

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

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 1 records.

Site Name

JARDINES DE CAROLINA P.S. - CAROLI

Database(s)

ICIS, FINDS, ECHO

OVERVIEW MAP - 6211524.2S

CTS Group, Inc.

JDL-10-020



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ⚡ Manufactured Gas Plants
- 🚧 National Priority List Sites
- 🏢 Dept. Defense Sites

- 0 1/4 1/2 1 Miles
- Indian Reservations BIA
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory

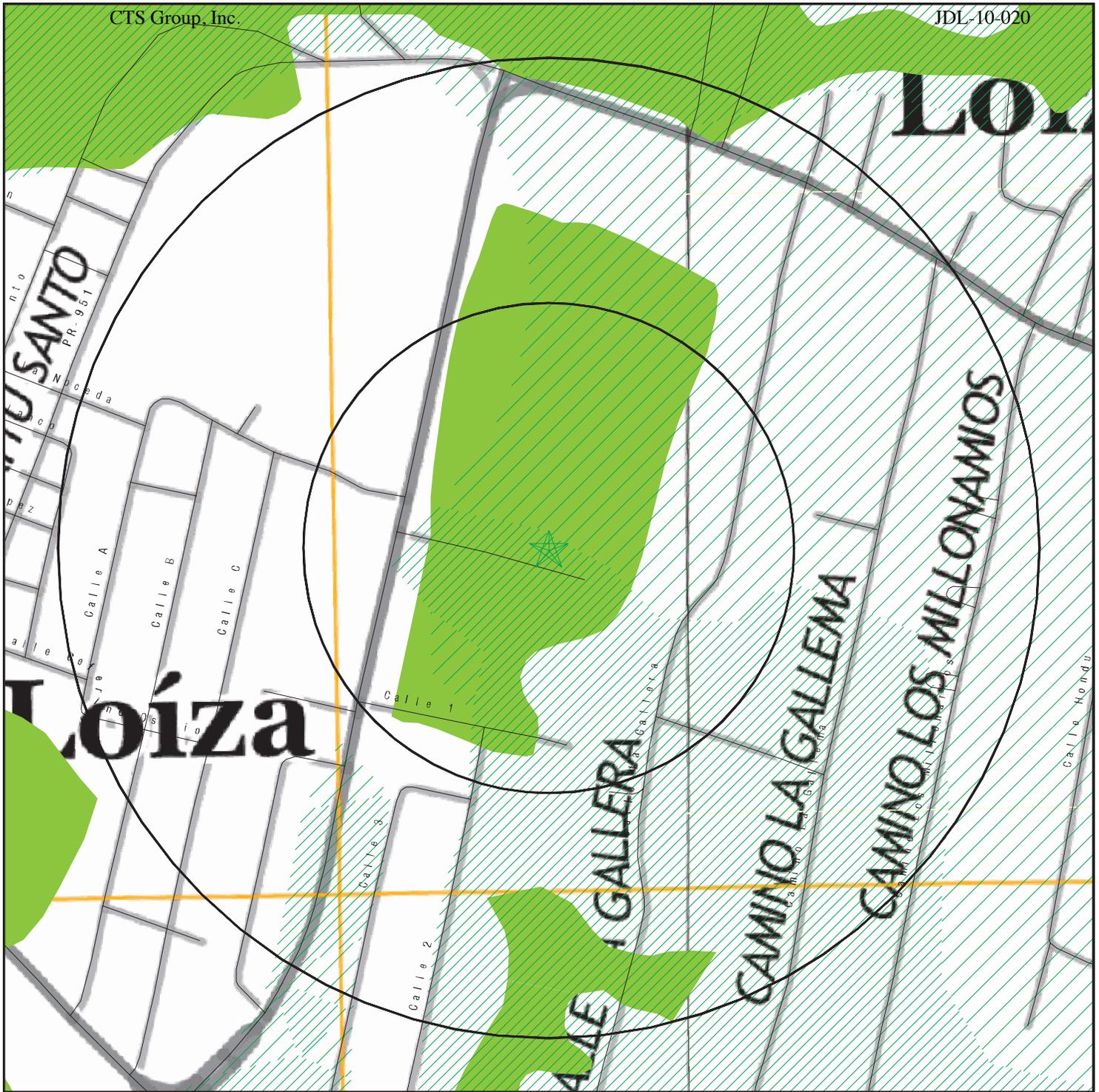
This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

<p>SITE NAME: Jardines DE Loiza ADDRESS: Esplanada 188 Km 6.21 Media Barajada Loiza, LLC. Loiza PR 00772 LAT/LONG: 18.430972 / 65.876067</p>	<p>CLIENT: CTS Group, Inc. CONTACT: Evelyn Negrete M. Long INQUIRY #: 6211524.2S DATE: October 01, 2020 10:16 am</p>
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DETAIL MAP - 6211524.2S

CTS Group, Inc.

JDL-10-020



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites

- Indian Reservations BIA
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory



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

SITE NAME: Jardines DE Loiza
 ADDRESS: Esplanada 189, Km 6.21, Media Barro, Loiza, PR 00772
 LAT/LONG: 18.430972 / 65.876067

CLIENT: CTS Group, Inc.
 CONTACT: Evelyn Negret MS Mena, PR.
 INQUIRY #: 6211524.2S
 DATE: October 01, 2020 10:17 am

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
<i>Federal NPL site list</i>								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
<i>Federal Delisted NPL site list</i>								
Delisted NPL	1.000		0	0	0	0	NR	0
<i>Federal CERCLIS list</i>								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
<i>Federal CERCLIS NFRAP site list</i>								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
<i>Federal RCRA CORRACTS facilities list</i>								
CORRACTS	1.000		0	0	0	0	NR	0
<i>Federal RCRA non-CORRACTS TSD facilities list</i>								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
<i>Federal RCRA generators list</i>								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
<i>Federal institutional controls / engineering controls registries</i>								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
<i>Federal ERNS list</i>								
ERNS	TP		NR	NR	NR	NR	NR	0
<i>State- and tribal - equivalent CERCLIS</i>								
SHWS	N/A		N/A	N/A	N/A	N/A	N/A	N/A
<i>State and tribal leaking storage tank lists</i>								
LUST	0.500		0	0	0	NR	NR	0
INDIAN LUST	0.500		0	0	0	NR	NR	0
<i>State and tribal registered storage tank lists</i>								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
<i>State and tribal voluntary cleanup sites</i>								
INDIAN VCP	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

NO SITES FOUND

Count: 1
CPS Group, Inc.

ORPHAN SUMMARY

JDL-10-020

<u>City</u>	<u>EDR ID</u>	<u>Site Name</u>	<u>Site Address</u>	<u>Zip</u>	<u>Database(s)</u>
CAROLINA	1006263060	JARDINES DE CAROLINA P.S. - CAROLI	ROAD 887 KM .9	00772	ICIS, FINDS, ECHO

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 07/29/2020	Source: EPA
Date Data Arrived at EDR: 08/03/2020	Telephone: N/A
Date Made Active in Reports: 08/25/2020	Last EDR Contact: 09/03/2020
Number of Days to Update: 22	Next Scheduled EDR Contact: 10/12/2020
	Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 07/29/2020	Source: EPA
Date Data Arrived at EDR: 08/03/2020	Telephone: N/A
Date Made Active in Reports: 08/25/2020	Last EDR Contact: 09/03/2020
Number of Days to Update: 22	Next Scheduled EDR Contact: 10/12/2020
	Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 08/25/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 09/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 04/03/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

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

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 08/25/2020
Number of Days to Update: 22

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/03/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 07/29/2020	Source: EPA
Date Data Arrived at EDR: 08/03/2020	Telephone: 800-424-9346
Date Made Active in Reports: 08/25/2020	Last EDR Contact: 09/03/2020
Number of Days to Update: 22	Next Scheduled EDR Contact: 10/26/2020
	Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report
 CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 06/15/2020	Source: EPA
Date Data Arrived at EDR: 06/22/2020	Telephone: 800-424-9346
Date Made Active in Reports: 09/17/2020	Last EDR Contact: 09/22/2020
Number of Days to Update: 87	Next Scheduled EDR Contact: 01/04/2021
	Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal
 RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 06/15/2020	Source: Environmental Protection Agency
Date Data Arrived at EDR: 06/22/2020	Telephone: (212) 637-3660
Date Made Active in Reports: 09/18/2020	Last EDR Contact: 09/22/2020
Number of Days to Update: 88	Next Scheduled EDR Contact: 01/04/2021
	Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators
 RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/15/2020	Source: Environmental Protection Agency
Date Data Arrived at EDR: 06/22/2020	Telephone: (212) 637-3660
Date Made Active in Reports: 09/18/2020	Last EDR Contact: 09/22/2020
Number of Days to Update: 88	Next Scheduled EDR Contact: 01/04/2021
	Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 06/15/2020	Source: Environmental Protection Agency
Date Data Arrived at EDR: 06/22/2020	Telephone: (212) 637-3660
Date Made Active in Reports: 09/18/2020	Last EDR Contact: 09/22/2020
Number of Days to Update: 88	Next Scheduled EDR Contact: 01/04/2021
	Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

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

Date of Government Version: 06/15/2020	Source: Environmental Protection Agency
Date Data Arrived at EDR: 06/22/2020	Telephone: (212) 637-3660
Date Made Active in Reports: 09/18/2020	Last EDR Contact: 09/22/2020
Number of Days to Update: 88	Next Scheduled EDR Contact: 01/04/2021
	Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/15/2020	Source: Department of the Navy
Date Data Arrived at EDR: 05/19/2020	Telephone: 843-820-7326
Date Made Active in Reports: 06/18/2020	Last EDR Contact: 08/04/2020
Number of Days to Update: 30	Next Scheduled EDR Contact: 11/23/2020
	Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/13/2020	Source: Environmental Protection Agency
Date Data Arrived at EDR: 02/20/2020	Telephone: 703-603-0695
Date Made Active in Reports: 05/15/2020	Last EDR Contact: 08/24/2020
Number of Days to Update: 85	Next Scheduled EDR Contact: 12/07/2020
	Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/13/2020	Source: Environmental Protection Agency
Date Data Arrived at EDR: 02/20/2020	Telephone: 703-603-0695
Date Made Active in Reports: 05/15/2020	Last EDR Contact: 08/24/2020
Number of Days to Update: 85	Next Scheduled EDR Contact: 12/07/2020
	Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 06/15/2020	Source: National Response Center, United States Coast Guard
Date Data Arrived at EDR: 06/22/2020	Telephone: 202-267-2180
Date Made Active in Reports: 09/17/2020	Last EDR Contact: 09/22/2020
Number of Days to Update: 87	Next Scheduled EDR Contact: 01/04/2021
	Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

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

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: N/A	Source: Environmental Quality Board
Date Data Arrived at EDR: N/A	Telephone: 787-767-8181
Date Made Active in Reports: N/A	Last EDR Contact: 08/22/2005
Number of Days to Update: N/A	Next Scheduled EDR Contact: 11/21/2005
	Data Release Frequency: N/A

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tanks

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 07/27/2018	Source: Environmental Quality Board
Date Data Arrived at EDR: 11/08/2018	Telephone: 787-767-8056
Date Made Active in Reports: 01/03/2019	Last EDR Contact: 09/01/2020
Number of Days to Update: 56	Next Scheduled EDR Contact: 11/02/2020
	Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/14/2020	Source: EPA Region 10
Date Data Arrived at EDR: 05/20/2020	Telephone: 206-553-2857
Date Made Active in Reports: 08/12/2020	Last EDR Contact: 07/24/2020
Number of Days to Update: 84	Next Scheduled EDR Contact: 11/02/2020
	Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/29/2020	Source: EPA Region 1
Date Data Arrived at EDR: 05/20/2020	Telephone: 617-918-1313
Date Made Active in Reports: 08/12/2020	Last EDR Contact: 07/24/2020
Number of Days to Update: 84	Next Scheduled EDR Contact: 11/02/2020
	Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/26/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 78

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/15/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 02/01/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST: Underground Storage Tank Facilities
Underground storage tank site locations.

Date of Government Version: 01/01/2008
Date Data Arrived at EDR: 03/26/2008
Date Made Active in Reports: 04/23/2008
Number of Days to Update: 28

Source: Environmental Quality Board
Telephone: 787-767-8056
Last EDR Contact: 09/01/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Semi-Annually

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/23/2020
Next Scheduled EDR Contact: 11/01/2020
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/26/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 78

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/29/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/08/2020	Source: EPA Region 6
Date Data Arrived at EDR: 05/20/2020	Telephone: 214-665-7591
Date Made Active in Reports: 08/12/2020	Last EDR Contact: 07/24/2020
Number of Days to Update: 84	Next Scheduled EDR Contact: 11/02/2020
	Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/03/2020	Source: EPA Region 7
Date Data Arrived at EDR: 05/20/2020	Telephone: 913-551-7003
Date Made Active in Reports: 08/12/2020	Last EDR Contact: 07/24/2020
Number of Days to Update: 84	Next Scheduled EDR Contact: 11/02/2020
	Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 04/14/2020	Source: EPA Region 8
Date Data Arrived at EDR: 05/20/2020	Telephone: 303-312-6137
Date Made Active in Reports: 08/13/2020	Last EDR Contact: 07/24/2020
Number of Days to Update: 85	Next Scheduled EDR Contact: 11/02/2020
	Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008	Source: EPA, Region 7
Date Data Arrived at EDR: 04/22/2008	Telephone: 913-551-7365
Date Made Active in Reports: 05/19/2008	Last EDR Contact: 04/20/2009
Number of Days to Update: 27	Next Scheduled EDR Contact: 07/20/2009
	Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015	Source: EPA, Region 1
Date Data Arrived at EDR: 09/29/2015	Telephone: 617-918-1102
Date Made Active in Reports: 02/18/2016	Last EDR Contact: 09/16/2020
Number of Days to Update: 142	Next Scheduled EDR Contact: 01/04/2021
	Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 06/01/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/15/2020
Next Scheduled EDR Contact: 12/28/2020
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Services, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 03/18/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/19/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 03/18/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/19/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Quarterly

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 08/25/2020
Number of Days to Update: 22

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 09/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/22/2020
Date Data Arrived at EDR: 06/23/2020
Date Made Active in Reports: 09/17/2020
Number of Days to Update: 86

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 09/22/2020
Next Scheduled EDR Contact: 01/04/2021
Data Release Frequency: Quarterly

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 06/15/2020
Date Data Arrived at EDR: 06/22/2020
Date Made Active in Reports: 09/18/2020
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 09/22/2020
Next Scheduled EDR Contact: 01/04/2021
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/18/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 86

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 08/13/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 08/05/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 06/15/2020
Date Data Arrived at EDR: 06/22/2020
Date Made Active in Reports: 09/10/2020
Number of Days to Update: 80

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 09/22/2020
Next Scheduled EDR Contact: 01/04/2021
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 08/06/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/17/2020
Date Made Active in Reports: 09/10/2020
Number of Days to Update: 85

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/18/2020
Next Scheduled EDR Contact: 12/28/2020
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 79

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/14/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 03/01/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/15/2020
Number of Days to Update: 85

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 08/25/2020
Number of Days to Update: 22

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 09/03/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Annually

RMP: Risk Management Plans

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 01/31/2020	Source: Environmental Protection Agency
Date Data Arrived at EDR: 05/13/2020	Telephone: 202-564-8600
Date Made Active in Reports: 08/03/2020	Last EDR Contact: 07/15/2020
Number of Days to Update: 82	Next Scheduled EDR Contact: 11/02/2020
	Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995	Source: EPA
Date Data Arrived at EDR: 07/03/1995	Telephone: 202-564-4104
Date Made Active in Reports: 08/07/1995	Last EDR Contact: 06/02/2008
Number of Days to Update: 35	Next Scheduled EDR Contact: 09/01/2008
	Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 04/27/2020	Source: EPA
Date Data Arrived at EDR: 05/06/2020	Telephone: 202-564-6023
Date Made Active in Reports: 06/09/2020	Last EDR Contact: 09/03/2020
Number of Days to Update: 34	Next Scheduled EDR Contact: 11/16/2020
	Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 10/09/2019	Source: EPA
Date Data Arrived at EDR: 10/11/2019	Telephone: 202-566-0500
Date Made Active in Reports: 12/20/2019	Last EDR Contact: 07/13/2020
Number of Days to Update: 70	Next Scheduled EDR Contact: 10/19/2020
	Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/23/2016	Telephone: 202-564-2501
Date Made Active in Reports: 02/10/2017	Last EDR Contact: 06/30/2020
Number of Days to Update: 79	Next Scheduled EDR Contact: 10/19/2020
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009	Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 08/18/2017
Number of Days to Update: 25	Next Scheduled EDR Contact: 12/04/2017
	Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009	Source: EPA
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 08/18/2017
Number of Days to Update: 25	Next Scheduled EDR Contact: 12/04/2017
	Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/25/2019	Source: Nuclear Regulatory Commission
Date Data Arrived at EDR: 10/25/2019	Telephone: 301-415-7169
Date Made Active in Reports: 01/15/2020	Last EDR Contact: 07/20/2020
Number of Days to Update: 82	Next Scheduled EDR Contact: 11/02/2020
	Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2018	Source: Department of Energy
Date Data Arrived at EDR: 12/04/2019	Telephone: 202-586-8719
Date Made Active in Reports: 01/15/2020	Last EDR Contact: 09/04/2020
Number of Days to Update: 42	Next Scheduled EDR Contact: 12/14/2020
	Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/05/2019	Telephone: N/A
Date Made Active in Reports: 11/11/2019	Last EDR Contact: 08/31/2020
Number of Days to Update: 251	Next Scheduled EDR Contact: 12/14/2020
	Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/06/2019	Telephone: 202-566-0517
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 08/06/2020
Number of Days to Update: 96	Next Scheduled EDR Contact: 11/16/2020
	Data Release Frequency: Varies

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 09/24/2020
Next Scheduled EDR Contact: 01/11/2021
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transportation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transportation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2020
Date Data Arrived at EDR: 07/15/2020
Date Made Active in Reports: 07/21/2020
Number of Days to Update: 6

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 09/22/2020
Next Scheduled EDR Contact: 01/04/2021
Data Release Frequency: Biennially

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014	Source: USGS
Date Data Arrived at EDR: 07/14/2015	Telephone: 202-208-3710
Date Made Active in Reports: 01/10/2017	Last EDR Contact: 07/07/2020
Number of Days to Update: 546	Next Scheduled EDR Contact: 10/19/2020
	Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017	Source: Department of Energy
Date Data Arrived at EDR: 09/11/2018	Telephone: 202-586-3559
Date Made Active in Reports: 09/14/2018	Last EDR Contact: 07/28/2020
Number of Days to Update: 3	Next Scheduled EDR Contact: 11/16/2020
	Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019	Source: Department of Energy
Date Data Arrived at EDR: 11/15/2019	Telephone: 505-845-0011
Date Made Active in Reports: 01/28/2020	Last EDR Contact: 08/21/2020
Number of Days to Update: 74	Next Scheduled EDR Contact: 11/30/2020
	Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 07/29/2020	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/03/2020	Telephone: 703-603-8787
Date Made Active in Reports: 08/25/2020	Last EDR Contact: 09/03/2020
Number of Days to Update: 22	Next Scheduled EDR Contact: 10/12/2020
	Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931 and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001	Source: American Journal of Public Health
Date Data Arrived at EDR: 10/27/2010	Telephone: 703-305-6451
Date Made Active in Reports: 12/02/2010	Last EDR Contact: 12/02/2009
Number of Days to Update: 36	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 05/01/2020
Date Data Arrived at EDR: 05/21/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 84

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 08/25/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 05/28/2020
Date Data Arrived at EDR: 05/28/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 77

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 09/10/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Quarterly

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/27/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 78

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 08/28/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 08/28/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 06/22/2020
Date Data Arrived at EDR: 06/22/2020
Date Made Active in Reports: 09/10/2020
Number of Days to Update: 80

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 09/16/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/03/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 86

Source: EPA
Telephone: (212) 637-3000
Last EDR Contact: 09/15/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 07/02/2020
Date Made Active in Reports: 09/17/2020
Number of Days to Update: 77

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 07/26/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 71

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 08/19/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 06/27/2020
Date Data Arrived at EDR: 07/02/2020
Date Made Active in Reports: 09/28/2020
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 08/03/2020
Number of Days to Update: 76

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 08/17/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Quarterly

PCS ENF: Enforcement data

No description is available for this data

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 07/01/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 09/11/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Semi-Annually

PCS INACTIVE: Listing of Inactive PCS Permits

An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 05/06/2015
Number of Days to Update: 120

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

MINES MRDS: Mineral Resources Data System

Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 08/28/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Environmental Quality Board in Puerto Rico.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/04/2014
Number of Days to Update: 187

Source: Environmental Quality Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 10/02/2019
Date Made Active in Reports: 12/10/2019
Number of Days to Update: 69

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Annually

Oil/Gas Pipelines

Source: Endeavor Business Media

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data

Source: Endeavor Business Media

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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.

Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services

Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

Current USGS 7.5 Minute Topographic Map

Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK[®] - PHYSICAL SETTING SOURCE ADDENDUM**TARGET PROPERTY ADDRESS**

JARDINES DE LOIZA
ROAD PR-188, KM 6.2, MEDIANIA BAJA WARD
LOIZA, PR 00772

TARGET PROPERTY COORDINATES

Latitude (North): 18.430972 - 18° 25' 51.50"
Longitude (West): 65.876067 - 65° 52' 33.84"
Universal Tranverse Mercator: Zone 20
UTM X (Meters): 196173.0
UTM Y (Meters): 2040157.5
Elevation: 10 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map: 5964486 CAROLINA, PR
Version Date: 2013

East Map: 5964506 RIO GRANDE, PR
Version Date: 2013

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

<u>Flood Plain Panel at Target Property</u>	<u>FEMA Source Type</u>
7200000059C	FEMA Q3 Flood data
<u>Additional Panels in search area:</u>	<u>FEMA Source Type</u>
7200000057C	FEMA Q3 Flood data
7200000065E	FEMA Q3 Flood data

NATIONAL WETLAND INVENTORY

<u>NWI Quad at Target Property</u>	<u>NWI Electronic Data Coverage</u>
NOT AVAILABLE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

GEOLOGIC AGE IDENTIFICATION

Era:	-	Category:	-
System:	-		
Series:	-		
Code:	N/A	<i>(decoded above as Era, System & Series)</i>	

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture’s (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	CATANO
Soil Surface Texture:	loamy sand
Hydrologic Group:	Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.
Soil Drainage Class:	Excessively. Soils have very high and high hydraulic conductivity and low water holding capacity. Depth to water table is more than 6 feet.
Hydric Status:	Soil does not meet the requirements for a hydric soil.
Corrosion Potential - Uncoated Steel:	LOW
Depth to Bedrock Min:	> 60 inches
Depth to Bedrock Max:	> 60 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Permeability Rate (in/hr)	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	4 inches	loamy sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 20.00 Min: 6.00	Max: 8.40 Min: 7.90
2	4 inches	60 inches	sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 20.00 Min: 6.00	Max: 8.40 Min: 7.90

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinator soil types may appear within the general area of target property.

Soil Surface Textures: sand
sandy loam

Surficial Soil Types: sand
sandy loam

Shallow Soil Types: No Other Soil Types

Deeper Soil Types: coarse sand

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
1	USGS40001046174	1/4 - 1/2 Mile West
2	USGS40001046022	1/2 - 1 Mile SSW
3	USGS40001046058	1/2 - 1 Mile ESE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No PWS System Found		

Note: PWS System location is not always the same as well location.

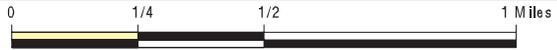
PHYSICAL SETTING SOURCE MAP - 6211524.2s

CTS Group, Inc.

JDL-10-020



- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons



- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location



SITE NAME: Jardines DE Loiza
 ADDRESS: Esplanada 18A, Km 6.21, Media Bahía Water Loiza, LLC, Loiza PR 00772
 LAT/LONG: 18.430972 / 65.876067

CLIENT: CTS Group, Inc.
 CONTACT: Roberto Negron MS M. Eng.
 INQUIRY #: 6211524.2s
 DATE: October 01, 2020 10:18 am

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Database EDR ID Number

1
West **FED USGS** **USGS40001046174**
1/4 - 1/2 Mile
Lower

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	SOEGARD WELL, LOIZA, PR	Type:	Well
Description:	Not Reported	HUC:	21010005
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1960
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

2
SSW **FED USGS** **USGS40001046022**
1/2 - 1 Mile
Higher

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	ALV 2 WELL, LOIZA, PR	Type:	Well
Description:	Not Reported	HUC:	21010005
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1965
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1987-06-01
Feet below surface:	7.29	Feet to sea level:	Not Reported
Note:	Not Reported		

3
ESE **FED USGS** **USGS40001046058**
1/2 - 1 Mile
Higher

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	ALL WELL, LOIZA, PR	Type:	Well
Description:	Not Reported	HUC:	21010005
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	30	Well Hole Depth Units:	ft

**GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON**

AREA RADON INFORMATION

Not Reported

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map

Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATIONAQUIFLOW^R Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

LOCAL / REGIONAL WATER AGENCY RECORDS**FEDERAL WATER WELLS****PWS: Public Water Systems**

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

OTHER STATE DATABASE INFORMATION**RADON****Area Radon Information**

Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER**Airport Landing Facilities: Private and public use landing facilities**

Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater

Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

STREET AND ADDRESS INFORMATION

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Appendix II

EDR Historical Topo Map and Aerial Photo Report

Jardines DE Loiza
Road PR-188, Km 6.2, Mediania Baja Ward
Loiza, PR 00772

Inquiry Number: 6211524.5

October 01, 2020

EDR Historical Topo Map Report

with QuadMatch™



EDR Historical Topo Map Report

CTS Group, Inc.

10/01/20
JDL-10-020

Site Name:

Jardines DE Loiza
Road PR-188, Km 6.2, Median
Loiza, PR 00772
EDR Inquiry # 6211524.5

Client Name:

CTS Group, Inc.
400 Juan Calaf, Ste. 235
San Juan, PR 00912
Contact: Ihosvany Negret M.S M.eng.



EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by CTS Group, Inc. were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDR's Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:**Coordinates:**

P.O.#	NA	Latitude:	18.430972 18° 25' 51" North
Project:	Jardines de Loiza	Longitude:	-65.876067 -65° 52' 34" West
		UTM Zone:	Zone 20 North
		UTM X Meters:	196177.41
		UTM Y Meters:	2040280.00
		Elevation:	9.84' above sea level

Maps Provided:

2013
1982
1969
1963
1956, 1957
1949, 1950
1947
1940, 1941

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ESA Phase I - ASTM E1527-13 - Jardines de Loiza, LLC. Site: Jardines de Loiza Apartments - Loiza, PR. 105

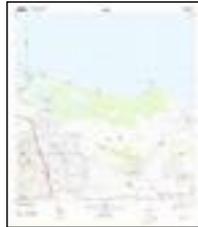
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2013 Source Sheets



Rio Grande
2013
7.5-minute, 20000



Carolina
2013
7.5-minute, 20000

1982 Source Sheets



Rio Grande
1982
7.5-minute, 20000
Aerial Photo Revised 1977



Carolina
1982
7.5-minute, 20000
Aerial Photo Revised 1977

1969 Source Sheets



Carolina
1969
7.5-minute, 20000
Aerial Photo Revised 1967

1963 Source Sheets



Rio Grande
1963
7.5-minute, 20000
Aerial Photo Revised 1962



Carolina
1963
7.5-minute, 20000
Aerial Photo Revised 1962

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1956, 1957 Source Sheets

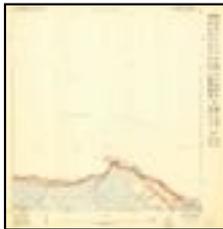


Rio Grande
1956
7.5-minute, 20000



Carolina
1957
7.5-minute, 20000

1949, 1950 Source Sheets



Carolina NE
1949
7.5-minute, 10000



Carolina SE
1950
7.5-minute, 10000

1947 Source Sheets



Carolina
1947
7.5-minute, 30000



Rio Grande
1947
7.5-minute, 30000

1940, 1941 Source Sheets



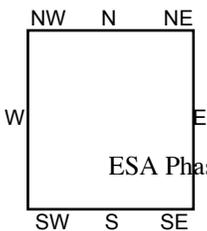
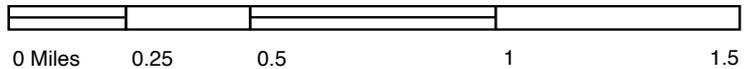
Carolina
1940
7.5-minute, 30000



Rio Grande
1941
7.5-minute, 30000



This report includes information from the following map sheet(s).



TP, Carolina, 2013, 7.5-minute
E, Rio Grande, 2013, 7.5-minute

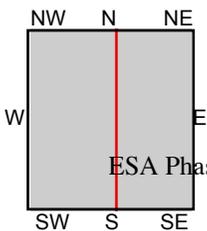
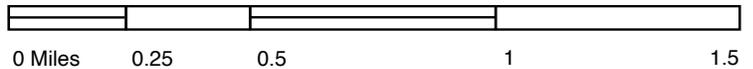
SITE NAME: Jardines DE Loiza
ADDRESS: Road PR-188, Km 6.2, Mediania Baja Wa
Loiza, PR 00772
CLIENT: CTS Group, Inc.

ESA Phase I - ASTM E1527-13 - Jardines de Loiza, LLC. Site: Jardines de Loiza Apartments - Loiza, PR. 108





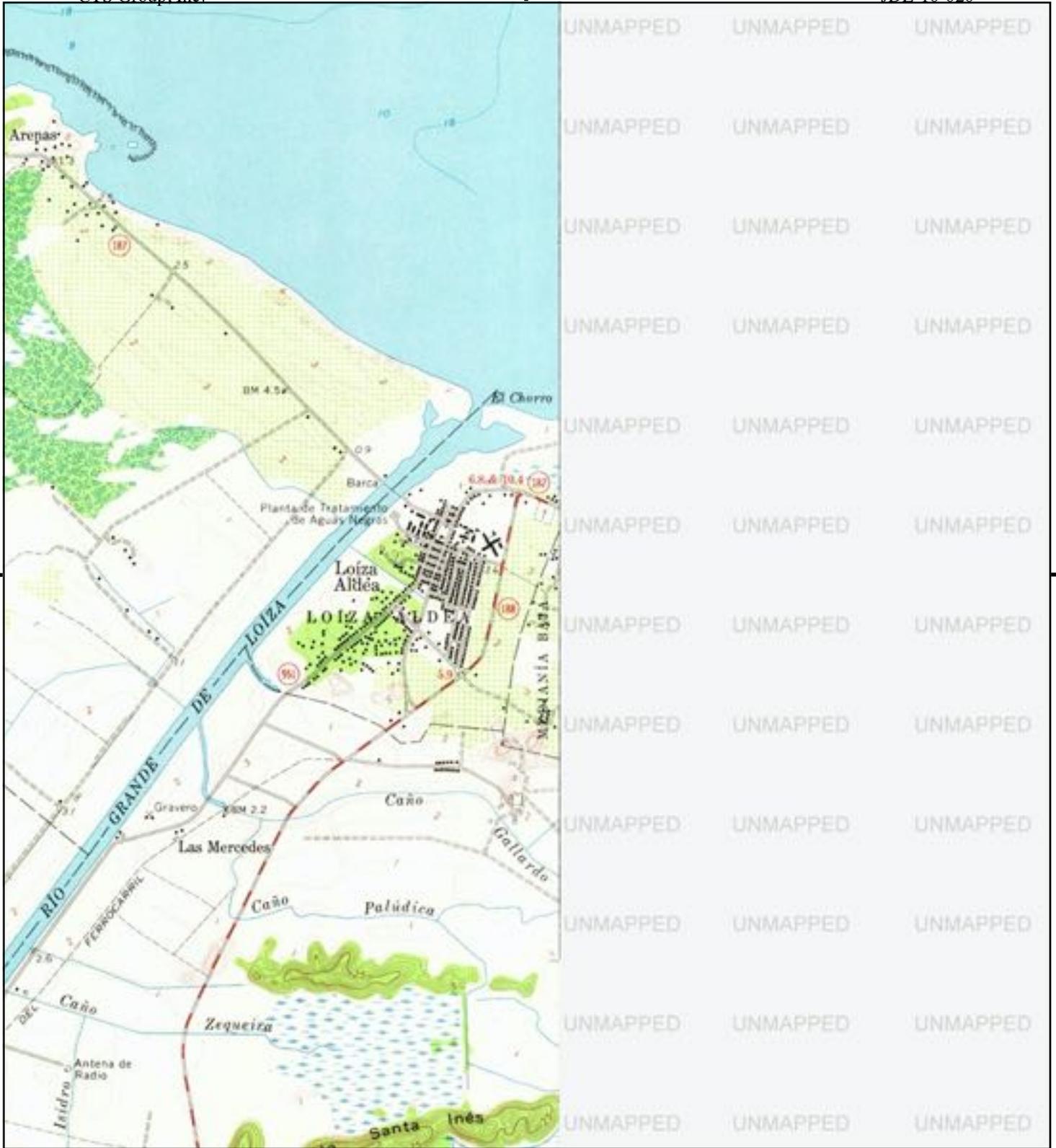
This report includes information from the following map sheet(s).



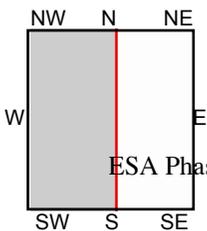
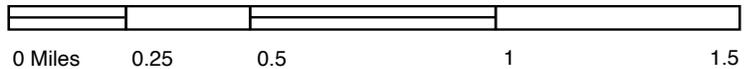
TP, Carolina, 1982, 7.5-minute
E, Rio Grande, 1982, 7.5-minute

SITE NAME: Jardines DE Loiza
ADDRESS: Road PR-188, Km 6.2, Mediania Baja Wa
Loiza, PR 00772
CLIENT: CTS Group, Inc.

ESA Phase I - ASTM E1527-13 - Jardines de Loiza, LLC. Site: Jardines de Loiza Apartments - Loiza, PR. 109



This report includes information from the following map sheet(s).



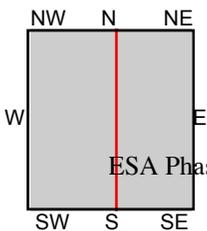
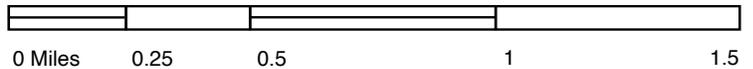
TP, Carolina, 1969, 7.5-minute

SITE NAME: Jardines DE Loiza
 ADDRESS: Road PR-188, Km 6.2, Mediana Baja We
 Loiza, PR 00772
 CLIENT: CTS Group, Inc.

ESA Phase I - ASTM E1527-13 - Jardines de Loiza, LLC. Site: Jardines de Loiza Apartments - Loiza, PR.



This report includes information from the following map sheet(s).



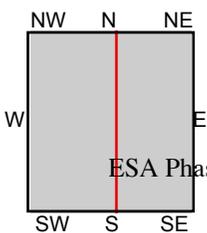
TP, Carolina, 1963, 7.5-minute
E, Rio Grande, 1963, 7.5-minute

SITE NAME: Jardines DE Loiza
 ADDRESS: Road PR-188, Km 6.2, Mediania Baja W of Loiza, PR 00772
 CLIENT: CTS Group, Inc.

ESA Phase I - ASTM E1527-13 - Jardines de Loiza, LLC. Site: Jardines de Loiza Apartments - Loiza, PR.



This report includes information from the following map sheet(s).

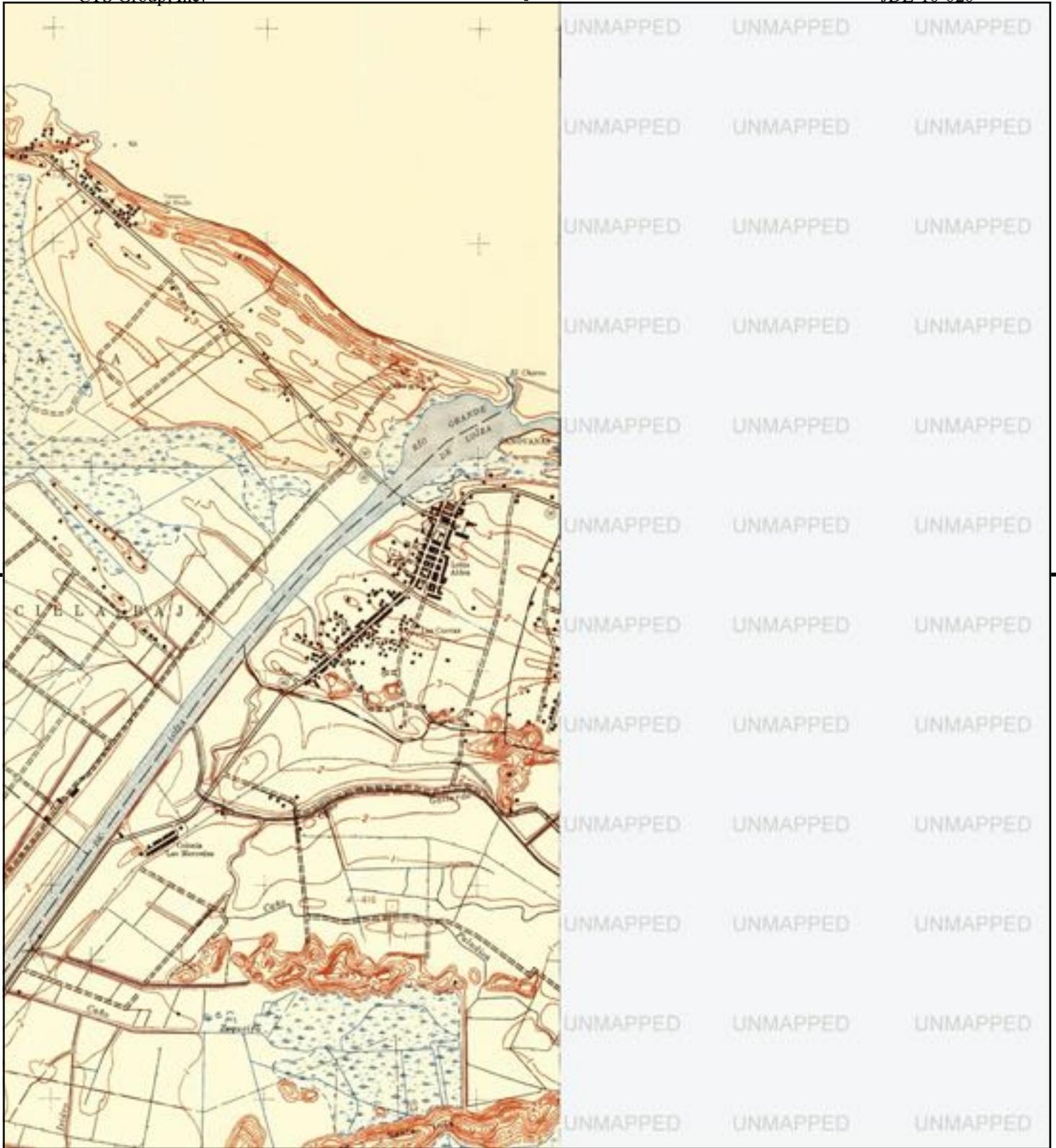


TP, Carolina, 1957, 7.5-minute
E, Rio Grande, 1956, 7.5-minute

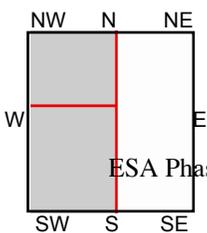
SITE NAME: Jardines DE Loiza
 ADDRESS: Road PR-188, Km 6.2, Mediania Baja Wa
 Loiza, PR 00772
 CLIENT: CTS Group, Inc.

ESA Phase I - ASTM E1527-13 - Jardines de Loiza, LLC. Site: Jardines de Loiza Apartments - Loiza, PR. 112





This report includes information from the following map sheet(s).

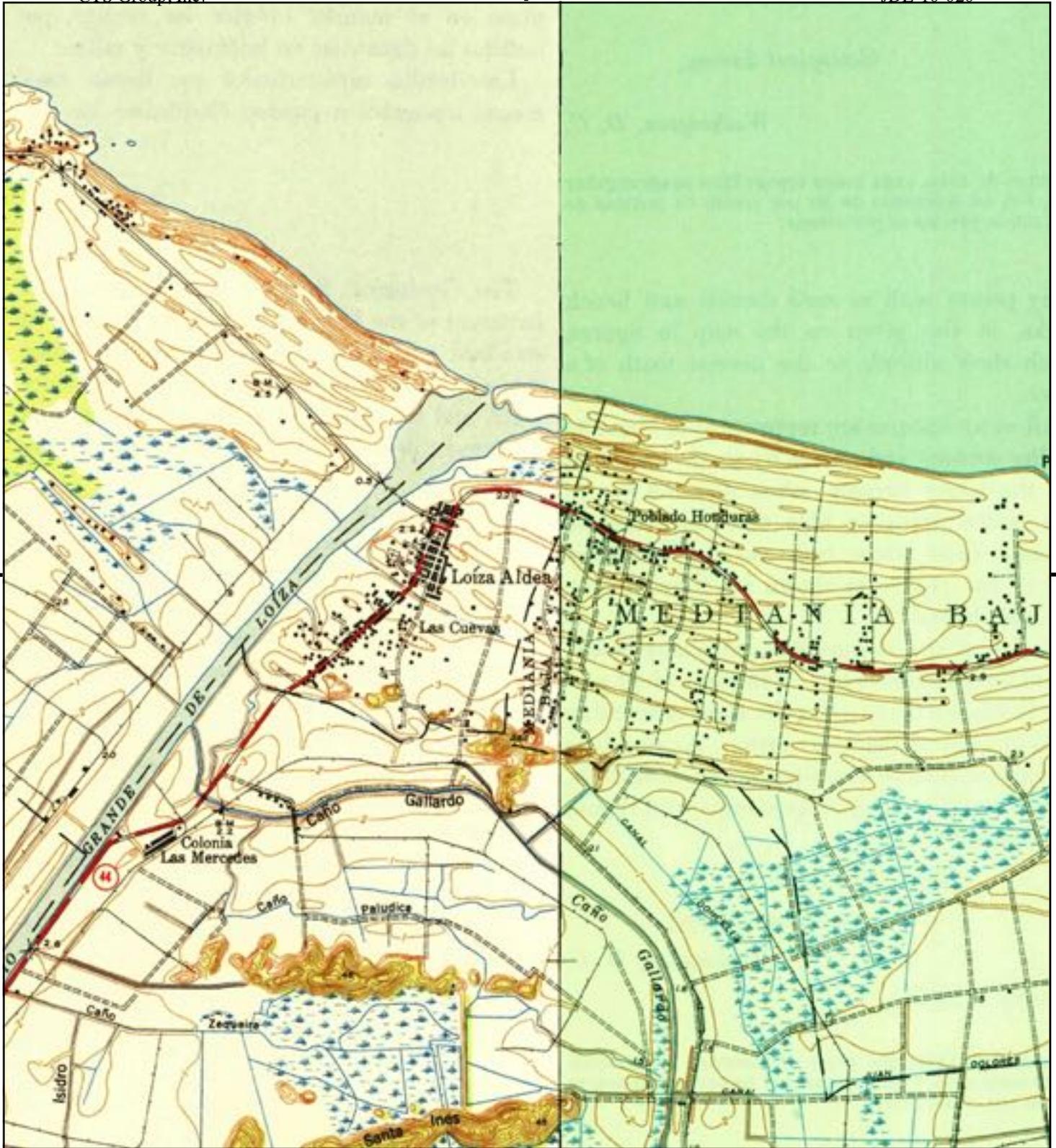


TP, Carolina SE, 1950, 7.5-minute
NW, Carolina NE, 1949, 7.5-minute

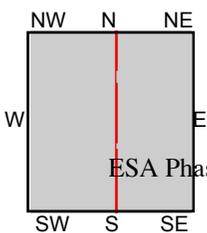
SITE NAME: Jardines DE Loiza
ADDRESS: Road PR-188, Km 6.2, Mediana Baja Wa Loiza, PR 00772
CLIENT: CTS Group, Inc.

ESA Phase I - ASTM E1527-13 - Jardines de Loiza, LLC. Site: Jardines de Loiza Apartments - Loiza, PR. 113





This report includes information from the following map sheet(s).

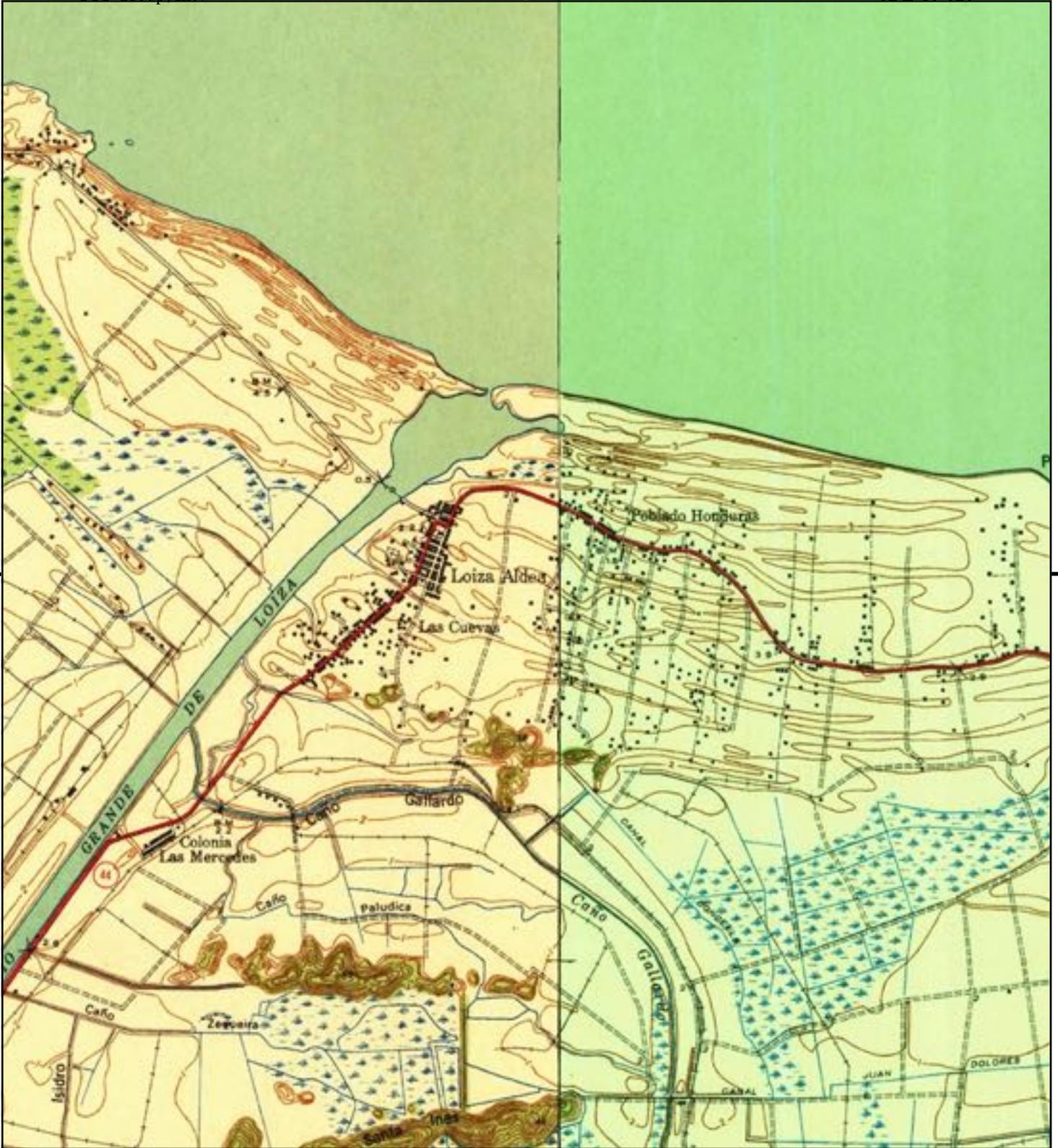


TP, Carolina, 1947, 7.5-minute
E, Rio Grande, 1947, 7.5-minute

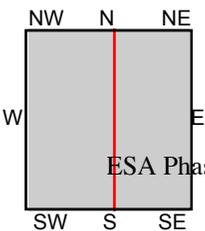
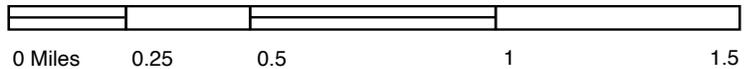
SITE NAME: Jardines DE Loiza
ADDRESS: Road PR-188, Km 6.2, Mediana Baja We
Loiza, PR 00772
CLIENT: CTS Group, Inc.

ESA Phase I - ASTM E1527-13 - Jardines de Loiza, LLC. Site: Jardines de Loiza Apartments - Loiza, PR.

114



This report includes information from the following map sheet(s).



TP, Carolina, 1940, 7.5-minute
E, Rio Grande, 1941, 7.5-minute

SITE NAME: Jardines DE Loiza
 ADDRESS: Road PR-188, Km 6.2, Mediania Baja Wa
 Loiza, PR 00772
 CLIENT: CTS Group, Inc.

ESA Phase I - ASTM E1527-13 - Jardines de Loiza, LLC. Site: Jardines de Loiza Apartments - Loiza, PR. 115



Jardines DE Loiza

Road PR-188, Km 6.2, Mediania Baja Ward

Loiza, PR 00772

Inquiry Number: 6211524.6

October 01, 2020

The EDR Aerial Photo Decade Package



EDR Aerial Photo Decade Package

CTS Group, Inc.

10/01/20
JDL-10-020

Site Name:

Jardines DE Loiza
Road PR-188, Km 6.2, Median
Loiza, PR 00772
EDR Inquiry # 6211524.6

Client Name:

CTS Group, Inc.
400 Juan Calaf, Ste. 235
San Juan, PR 00912
Contact: Ihosvany Negret M.S M.eng.



Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

<u>Year</u>	<u>Scale</u>	<u>Details</u>	<u>Source</u>
2003	1"=500'	Flight Date: December 19, 2003	USGS
1983	1"=500'	Flight Date: February 08, 1983	USGS
1977	1"=1000'	Flight Date: March 14, 1977	USGS

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ESA Phase I - ASTM E1527-13 - Jardines de Loiza, LLC. Site: Jardines de Loiza Apartments - Loiza, PR.

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INQUIRY #: 6211524.6

YEAR: 2003

ESA Phase I - ASTM E1527-13 - Jardines de Loiza, LLC. Site: Jardines de Loiza Apartments - Loiza, PR.

— = 500'





INQUIRY #: 6211524.6

YEAR: 1983

ESA Phase I - ASTM E1527-13 - Jardines de Loiza, LLC. Site: Jardines de Loiza Apartments - Loiza, PR.

— = 500'





INQUIRY #: 6211524.6

YEAR: 1977



ESA Phase I - ASTM E1527-13 - Jardines de Loiza, LLC. Site: Jardines de Loiza Apartments - Loiza, PR.

— = 1000'

Appendix III

USGS and Puerto Rico EQB Water Monitoring Wells



USGS Home
Contact USGS
Search USGS

Groundwater Watch

Latest News...

Puerto Rico and U.S. Virgin Islands Active Water Level Network

Click site symbol to open information pop-up. Click Station ID in pop-up for county information and site selection.
Map loading slowly? Try a different browser. Web browser performance varies significantly.



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, CAN, Es...

Map generated 10/9/2020 2:10:54 PM

[Groundwater Watch Help Page](#)

[Download Google Earth Version](#)

[Download Puerto Rico and U.S. Virgin Islands water-level data](#) **NEW**

Puerto Rico And U.s. Virgin Islands Municipalities depicted on the state location map with active wells

Municipalities	Well Count	Real-Time	Continuous	Periodic
Aguada Municipio	1	-	-	1
Aguadilla Municipio	1	-	-	1
Arecibo Municipio	5	1	1	3
Barceloneta Municipio	4	-	-	4

CTS Group, Inc.

JDL-10-020

Bayamón Municipio	2	-	-	2
Cabo Rojo Municipio	1	-	1	-
Caguas Municipio	2	1	-	1
Camuy Municipio	1	-	-	1
Carolina Municipio	1	1	-	-
Dorado Municipio	3	-	1	2
Fajardo Municipio	3	-	-	3
Florida Municipio	1	1	-	-
Guánica Municipio	1	1	-	-
Guayama Municipio	3	1	-	2
Guayanilla Municipio	1	1	-	-
Guaynabo Municipio	1	-	1	-
Hatillo Municipio	1	1	-	-
Juana Díaz Municipio	5	1	1	3
Lajas Municipio	2	-	1	1
Luquillo Municipio	2	1	-	1
Manatí Municipio	2	1	-	1
Mayagüez Municipio	1	1	-	-
Naguabo Municipio	1	1	-	-
Peñuelas Municipio	1	-	1	-
Ponce Municipio	4	1	-	3
Rincón Municipio	1	-	1	-
Sabana Grande Municipio	1	-	1	-
Salinas Municipio	7	2	2	3
San Germán Municipio	1	-	-	1
San Juan Municipio	4	-	-	4
San Sebastián Municipio	1	-	-	1
Santa Isabel Municipio	6	1	2	3
Toa Baja Municipio	1	-	1	-
Vega Alta Municipio	2	1	1	-
Vega Baja Municipio	2	-	1	1
Vieques Municipio	2	1	1	-
Yabucoa Municipio	1	-	-	1
Yauco Municipio	1	-	-	1
<hr/>				
Number of active PR wells:	80	19	17	44

U.S. Virgin Islands network wells

Note: Color shading in the table below indicates multiple wells that plot as a single point on the state location map above.
 Note: BLS = Water Level in Feet Below Land Surface, RVD = Water Level referenced to a vertical datum

Map Index	Site ID	Site Name	Most Recent Measurement	Date	Well Depth	Local Aquifer
1	174303064484400	ADVENTURE 28 WELL, ST. CROIX, USVI	20.27 BLS	4/30/2020		
2	182038064550300	GRADE SCHOOL 3 WELL, ST. THOMAS, USVI	11.24 BLS	7/29/2020		
3	182044064454900	SUSANNABERG DPW 3 WELL, ST. JOHN, USVI	16.59 BLS	6/23/2020	105.0	

[Return to National Page](#)

*References to non-Department of the Interior (DOI) products do not constitute an endorsement by the DOI.
 By viewing the Google Maps API on this web site the user agrees to these [TERMS](#).

*References to non-Department of the Interior (DOI) products do not constitute an endorsement by the DOI.

Appendix IV
Leaking Underground Storage Tanks
(LUST) and Registered Underground
Storage Tanks (UST)

Owner Name	AltFacilityID	Notification Description	Facility Name	Street Address	City	Facility Description
Autoridad de Acueductos y Pedro Acosta Crousset	2-920068	Closure	PLANTA DE FILTROS	RD. 124 KM. 2.2	Las Marias	Utilities
ESSO STANDARD OIL CO PR	2-990027	Amended	Quemado #5	CALLE 120 KM. 1.0	Las Marias	Gas Station
COMPANIA DE FOMENTO	2-861336	Amended	ESSO S/S 2P- 321	COMERCIO ST.	Las Marias	Gas Station
LAS PIEDRAS CONTAINER INC	2-930019	Closure	PROYECTO S-0916-067 Y EXT.	CARR. 183, KM 21.6	Las Piedras	Other
MOLINOS DE P.R., INC.	2-860720	Closure	JOHNSON AND JOHNSON	Address Unknown	Las Piedras	Not Listed
PAMCOR INC.	2-860035	Closure	MOLINOS DE P.R., INC.	STATE ROAD #183 KM 20.2	Las Piedras	Farm
ROSARIO SANTIAGO	2-860061	Closure	PAMCOR, INC.	RD.183 KM.17.0	Las Piedras	Industrial
TEXACO PUERTO RICO INC	2-900048	Amended	LA FINQUITA S/S - ISMAEL CRESPO	ROAD 198 KM 21.9	Las Piedras	Gas Station
EDDIE MORALES	2-861736	Amended	RAFAEL RODRIGUEZ S/S # 385	ROAD 198 KM 24.3	Las Piedras	Gas Station
Caribbean Petroleum Corporation	2-861016	Amended	Pueblito del Rio S/S	RD. #31 km 17.2	Las Piedras	Gas Station
LIFE SAVERS, INC.	2-860390	Amended	GULF-S/S #413	RD. 183, KM. 20.6	Las Piedras	Gas Station
LAS PIEDRAS CONSTRUCTION	2-860449	Closure	LIFE SAVERS, INC.	RD. 30, KM 21.4	Las Piedras	Not Listed
CERAMCO CO	2-900098	New	LAS PIEDRAS CONSTRUCTION	CARR 937 KM 1.0	Las Piedras	Contractor
PUERTO RICO TELEPHONE CO	2-861940	New	CERAMCO CO	HC01 BOX 8122	Las Piedras	Not Listed
Municipio de Las Piedras	2-920037	Amended	OFICINA CENTRAL LAS PIEDRAS	CALLE JOSE C. BARBOSA #54	Las Piedras	Utilities
William Rodriguez Algarin	2-970007	Closure	Municipio Las Piedras /Casa Alcaldia	Road 198 Km. 21.9	Las Piedras	Not Listed
Becton Dickison Caribe LTD	2-900012	Amended	GARAGE OASIS	JOSE CELSO BARBOSA 80	Las Piedras	Gas Station
CHESEBROUGH PONDS MFG. CO.	2-870007	Amended	Becton Dickison Caribe LTD.	ROAD 183, KM. 20.3	Las Piedras	Industrial
TEXACO PUERTO RICO INC	2-860587	Closure	CHEESEBROUGH PONDS MFG. CO.	RD. 183, KM 21.2	Las Piedras	Industrial
RUBEN CORREA SOTOMAYOR	2-861732	Amended	LAS PIEDRAS S/S #355	RD 183 KM 21.9	Las Piedras	Gas Station
INTEL PUERTO RICO INC	2-910241	Amended	LAS PIEDRAS S/S	RD 198 KM 22.2	Las Piedras	Gas Station
Manuel Rodriguez Velazquez	2-910333	Amended	ADAN CARABALLO #322	CARR. 198 KM 5.1	Las Piedras	Gas Station
Caribbean Petroleum Corporation	2-880064	Closure	INTEL PUERTO RICO INC	SOUTH INDUSTRIAL PARK	Las Piedras	Not Listed
ADM.SERV.DESARROLLO	2-861249	Amended	Manuel Service Station	BARBOSA AVE. #107	Las Piedras	Gas Station
Southwest health corporation	2-860339	Amended	GULF S/S #0316	RD,#31 KM 14.8	Las Piedras	Gas Station
Angel L. Santana	2-960009	Closure	ASDA LAS PIEDRAS	CARR. 189 KM.20.4	Las Piedras	State Government
TEXACO PUERTO RICO INC	2-980159	New	Centro Diagnostico-Tratamiento-Las	Calle Jose C. Barbosa	Las Piedras	Other
Celestino Rosado Alejandro	2-020031	New	Exel S/S	Carr.30 Int. 9937 Bo. Ceiba Sur	Las Piedras	Gas Station
RICARDO CINTRON ESTADES	2-861696	Amended	JOSE R. RODRIGUEZ #266	ROAD 187 KM 6.0	Loiza	Gas Station
Margarita Angel Pedemonte	2-862021	Amended	San Patricio S/S (Ex GULF #383)	CARR #187 KM 10.6	Loiza	Gas Station
Autoridad de Acueductos y	2-860691	Amended	MI GASOLINERA	CARR. 187 KM 9.1 Mediania Baja	Loiza	Gas Station
ESSO STANDARD OIL CO PR	2-980027	Amended	Margarita Service Station	Carr. 187 Km. 7.8	Loiza	Gas Station
PUERTO RICO TELEPHONE CO	2-990034	Closure	Antigua Planta Aguas Servidas Loiza	PR 951 KM 6.4	Loiza	State Government
FLEETWOOD NOVELTY INC.	2-861112	Amended	ESSO S/S CO-214	Carr. 187 km. 5.1 Bo. Las Cuevas	Loiza	Gas Station
DEPARTAMENTO DE EDUCACION	2-890094	Amended	Remoto Loiza	CARR.187 KM 9.0 Mediani BAja	Loiza	Utilities
Carl Leyva Ramos	2-930062	Closure	FLEETWOOD NOVELTY INC.	CARR 187 KM 7.7	Loiza	Industrial
SOL PUERTO LIMITED	2-950036	Closure	ESCUELA CARLOS ESCOBAR LOPEZ	CALLE A URB. SANTIAGO	Loiza	State Government
Anibal Frago	2-860370	Amended	Caribel Service Station	CARR 188 KM 5.9	Loiza	Gas Station
TEXACO PUERTO RICO INC	2-860972	Amended	SHELL S/S #002437	CARR. 187, KM. 10.4 Loiza Aldea	Loiza	Gas Station
U.S. Naval Station	2-861254	Amended	Casa Blanca Service Station	RD. 983, KM. 1.2	Luquillo	Gas Station
SYLTRON INC(LIGHTING	2-861711	Amended	LUQUILLO S/S #966	1 FERNANDEZ GARCIA ST.	Luquillo	Gas Station
	2-861934	Closure	ATLANTIC FLEET WEAPONS TR FAC	PICO DEL ESTE RADAR FACILITY	Luquillo	Federal Military
	2-020008	Amended	Shell 204309	Carr. 3 Km. 38.0 Bo Pitahaya	Luquillo	Gas Station
	2-860070	Closure	SYLTRON INC(LIGHTING PRODUCTS)	ROAD 992 KM .5	Luquillo	Industrial

Appendix V Additional Provided Documentation

ENVIRONMENTAL QUESTIONNAIRE

CLIENT: Jardines de Loiza, LLC.

SITE: Jardines de Loiza Apartments

Road PR-188, Km 5.5, Mediania Baja Ward
 STREET ADDRESS OF SUBJECT PROPERTY

<u>Loiza</u>	<u>Puerto Rico</u>	<u>00772</u>
CITY	STATE	ZIP CODE

<u>Ihosvany Negret MS. M. Eng. – Environmental Consultant</u>			
NAME & TITLE OF PARTY COMPLETING QUESTIONNAIRE			
<u>400 Calle Juan Calaf, Suite 235</u>	<u>San Juan</u>	<u>PR</u>	<u>00918</u>
STREET ADDRESS	CITY	STATE	ZIP
<u>CTS Group, Inc.</u>	<u>787.247.0640</u>	<u>info@ctsgrouppr.com</u>	
NAME OF FIRM	PHONE NUMBER	E-MAIL	

NAME AND POSITION OF INTERVIEWED PERSONS:

Mr. Carlos M. Colon - Owner Representative

Mr. Victoria Colon – Site Management

Ihosvany Negret – CTS Group, Inc. – Env. Professional



ENVIRONMENTAL QUESTIONNAIRE

Persons to be Questioned – The following questions should be asked of

- The current owner of the property
- Any commercial occupant of the property (residential occupants do not need to be asked the questions)
- For vacant properties, the site manager can use the occupant's column to answer the questionnaire.

The preparer should ask each person to answer all questions to the best of the respondent's actual knowledge and in good faith. When completing the site visit portion of the questionnaire the preparer should be sure to observe the property and the buildings and other structures on the property. All questions should be answered as indicated in the form.

QUESTION	LENDER/SERVICER OR OBSERVED DURING SITE VISIT	OWNER	OCCUPANTS
1. Is the <i>property</i> or any <i>adjoining property</i> used for an industrial use?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
2. To the best of your knowledge, has the <i>property</i> or any <i>adjoining property</i> been used for an industrial use in the past?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
3. Is the <i>property</i> or any <i>adjoining property</i> used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
4. To the best of your knowledge has the <i>property</i> or any <i>adjoining property</i> been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown

CTS Group Inc. Engineers and Environmental Consultants
400 Calaf, Ste. 235
San Juan, PR 00918
Tel. 787.247-0640 - info@ctsgrouppr.com



QUESTION	LENDER/SERVICER OR OBSERVED DURING SITE VISIT	OWNER	OCCUPANTS
5. Are there currently, or to the best of your knowledge have there been previously, any damaged or discarded automobile or industrial batteries, or pesticides, paints, or other chemicals in individual containers of greater than 5 gal (19 L) in volume or 50 gal (190 L) in the aggregate, stored on or used at the <i>property</i> or at the facility?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
6. Are there currently, or to the best of your knowledge have there been previously, any industrial <i>drums</i> (typically 55 gal [208 L]) or sacks of chemicals located on the <i>property</i> or at the facility?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
7. Has <i>fill dirt</i> been brought onto the <i>property</i> that originated from a contaminated site or that is of an unknown origin?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
8. Are there currently, or to the best of your knowledge have there been previously, any <i>pits, ponds, or lagoons</i> located on the <i>property</i> in connection with waste treatment or waste disposal?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
9. Is there currently, or to the best of your knowledge have there been previously, any stained soil on the <i>property</i> ?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
10. Are there currently, or to the best of your knowledge have there been previously, any registered or unregistered storage tanks (above or underground) located on the <i>property</i> ?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown

CTS Group Inc. Engineers and Environmental Consultants
 400 Calaf, Ste. 235
 San Juan, PR 00918
 Tel. 787.247-0640 - info@ctsgrouppr.com



QUESTION	LENDER/SERVICER OR OBSERVED DURING SITE VISIT	OWNER	OCCUPANTS
11. Are there currently, or to the best of your knowledge have there been previously, any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the <i>property</i> adjacent to any structure located on the <i>property</i> ?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
12. Are there currently, or to the best of your knowledge have there been previously, any flooring, drains, or walls located within the facility that are stained by substances other than water or are emitting foul odors?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
13. If the <i>property</i> is served by a private well or non-public water system, have contaminants been identified in the well or system that exceed guidelines applicable to the water system or has the well been designated contaminated by any government environmental/health agency?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
14. Does the <i>owner</i> or <i>occupant</i> of the <i>property</i> have any knowledge of <i>environmental liens</i> or governmental notification relating to the past or recurrent violations of environmental laws with respect to the <i>property</i> or any facility located on the <i>property</i> ?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
15. Has the <i>owner</i> or <i>occupant</i> of the <i>property</i> been informed of the past or current existence of <i>hazardous substances</i> or <i>petroleum products</i> or environmental violations with respect to the <i>property</i> or any facility located on the <i>property</i> ?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown

CTS Group Inc. Engineers and Environmental Consultants
 400 Calaf, Ste. 235
 San Juan, PR 00918
 Tel. 787.247-0640 - info@ctsgrouppr.com



QUESTION	LENDER/SERVICER OR OBSERVED DURING SITE VISIT	OWNER	OCCUPANTS
16. Does the <i>owner</i> or <i>occupant</i> of the property have any knowledge of any environmental site assessment of the <i>property</i> or facility that indicated the presence of <i>hazardous substances</i> or <i>petroleum products</i> on, or contamination of, the <i>property</i> or recommended further assessment of the <i>property</i> ?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
17. Does the <i>owner</i> or <i>occupant</i> of the property know of any past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any <i>hazardous substance</i> or <i>petroleum products</i> involving the <i>property</i> by any <i>owner</i> or <i>occupant</i> of the <i>property</i> ?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
18. Does the <i>property</i> discharge wastewater on or adjacent to the <i>property</i> other than storm water into a sanitary sewer system?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
19. To the best of your knowledge, have any <i>hazardous substances</i> or <i>petroleum products</i> , unidentified waste materials, tires, automotive or industrial batteries or any other waste materials been dumped above grade, buried and/or burned on the <i>property</i> ?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
20. Is there a transformer, capacitor, or any hydraulic equipment for which there are any records indicating the presence of PCB's on the <i>property</i> ?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown

Please provide details relating to any question answered "yes" in the space provided. Attach additional sheets or informative documents if necessary.

CTS Group Inc. Engineers and Environmental Consultants
400 Calaf, Ste. 235
San Juan, PR 00918
Tel. 787.247-0640 - info@ctsgrouppr.com



FORM 0109
ENVIRONMENTAL
QUESTIONNAIRE

The Environmental Professional must complete the following required information.

This questionnaire was completed by:

Name:	<i>Ihosvany Negret MS. M. Eng.</i>
Title:	<i>Lead Environmental Consultant</i>
Firm:	<i>CTS Group, Inc.</i>
Address:	<i>400 Calaf St. Ste. 235 San Juan, PR 00918</i>
Phone Number:	<i>787-247-0640</i>
Date:	<i>September 30, 2020</i>

If the preparer is different than the user, complete the following:

Name of Users:	<i>Mutual Development Services, Corp.</i>
Address of Users:	<i>Mutual Development Services, Corp. San Juan, PR.</i>
Phone Number of User:	
Relationship of Preparer to Site:	<i>None</i>
Relationship of Preparer to User:	<i>Consultant</i>

The undersigned represents that to the best of his/her knowledge the above statements and facts are true and correct and to the best of his/her knowledge no material facts have been suppressed or misstated.

Date: *SEP/30/2020* Signature: 
 Title: *President MDSC*
Ihosvany Negret EP.

CTS Group Inc. Engineers and Environmental Consultants
 400 Calaf, Ste. 235
 San Juan, PR 00918
 Tel. 787.247-0640 - info@ctsgrouppr.com

Appendix VI
Reliance Letter
Evidence of Insurance



October 10, 2020

To: Jardines de Loiza, LLC.
San Juan, PR.

RE: Jadrines de Loiza Apartments (the "Project")
Road PR-188, Km 5.5, Mediania Baja Ward
Loiza, Puerto Rico

Ladies and Gentlemen:

CTS Group, Inc. ("Consultant") agrees and acknowledges that Jardines de Loiza, LLC and each of their respective successors and assigns (the "Relying Entities") are authorized by Consultant to rely without limitation on the information, recommendations, and other contents of the following environmental reports, which was prepared by Consultant in connection with the Project:

- ASTM E 1527-13 Environmental Site Assessment Phase I dated October 10, 2020.

The Phase I Environmental Site Assessment Reports were prepared in accordance with ASTM E 1527-13 as authorized by EPA's All Appropriate Inquiries Final Rule. Consultant also agrees and acknowledges that the entities set forth above are authorized to rely on all other environmental reports, studies, letters, data, information, or recommendations prepared by Consultant in connection with the Project.

Consultant acknowledges that it maintains a Pollution Incident Liability and Professional Liability insurance with limits of at least \$1,000,000 per occurrence. Consultant agrees and acknowledges that it shall not limit its liability in an amount less than said insurance coverage to the Relying Entities, notwithstanding any limitations on liability set forth in the Phase I Reports or any other environmental reports, studies, letters, data, information, or recommendations, or any terms and conditions agreed to as part of preparation of the referenced documents.

Very truly yours,

Ihosvany Negret Lapera

CTS Group, Inc.
 By: Ihosvany Negret Lapera, MS, M. Eng.
 Its: Environmental Professional

 A circular blue ink seal is stamped over the signature and name. The seal contains the text "CTS GROUP, INC." at the top, "#182650" in the center, "2006" below the number, and "Puerto Rico" at the bottom. The outer ring of the seal contains the text "Engineers & Environmental Consultants".

PRODUCER CTS EASTERN AMERICA INSURANCE AGENCY
P.O. BOX 193900
SAN JUAN, PR 00919-3900

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURERS AFFORDING COVERAGE

INSURED CTS GROUP, INC.
400 CALLE CALAF, SUITE 235
SAN JUAN, PR 00918

INSURER A: CONTINENTAL CASUALTY COMPANY
INSURER B:
INSURER C:
INSURER D:
INSURER E:

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
	GENERAL LIABILITY <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> OCCUR _____ GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PROJECT <input type="checkbox"/> LOC				EACH OCCURRENCE	\$
					FIRE DAMAGE (Any one fire)	\$
					MED EXP (Any one person)	\$
					PERSONAL & ADV INJURY	\$
					GENERAL AGGREGATE	\$
					PRODUCTS - COMP/OP AGG	\$
						\$
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS				COMBINED SINGLE LIMIT (Each accident)	\$
					BODILY INJURY (Per person)	\$
					BODILY INJURY (Per accident)	\$
					PROPERTY DAMAGE (Per accident)	\$
	GARAGE LIABILITY <input type="checkbox"/> ANY AUTO				AUTO ONLY - EA ACCIDENT	\$
					OTHER THAN EA ACC AUTO ONLY:	\$
					AGG	\$
	EXCESS LIABILITY <input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> DEDUCTIBLE <input type="checkbox"/> RETENTION \$				EACH OCCURRENCE	\$
					AGGREGATE	\$
						\$
						\$
						\$
	WORKERS COMPENSATION AND EMPLOYERS LIABILITY				W C STATU- TORY LIMITS	OTHER \$
					E.L. EACH ACCIDENT	\$
					E.L. DISEASE-EA EMPLOYEE	\$
					E.L. DISEASE-POLICY LIMIT	\$
A	OTHER ARCHITECTS ENGINEERS & CONSULTANTS	EEH591922807	09/07/2020	09/07/2021	LIMITS OF LIABILITY	\$1,000,000 PER CLAIM
						\$1,000,000 AGGREGATE
						\$1,000 DEDUCTIBLE

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/EXCLUSIONS ADDED BY ENDORSEMENT/SPECIAL PROVISIONS LIMITED TO PROFESSIONAL SERVICES RENDERED

CERTIFICATE HOLDER | **ADDITIONAL INSURED; INSURER LETTER:**

JARDINES DE LOIZA, LLC.
PO BOX 192037
SAN JUAN, PR 00919-2037

FILE # H89079 CERT # 7 PROD # 1463 IQO

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE
EASTERN AMERICA INSURANCE AGENCY, INC.

IMPORTANT
If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s). If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).
Phase I - ASTM E1527-13 - Jardines de Loiza, LLC Site: Jardines de Loiza Apartments - Loiza, PR. 135

This Certificate of Insurance does not constitute a contract between the issuing insurer(s), authorized representative or producer, and the certificate holder, nor does it affirmatively or negatively amend, extend or alter the coverage afforded by the policies listed thereon.

Explanatory Memorial

Mutual Residential Development Corp., proposes the reconstruction of the facilities of the residential complex *Jardines de Loiza Apartment*. This development is located in the Municipality of Loiza, see Figure 1. As part of the reconstruction, the construction of a building for the use of the community is proposed, consisting of an activity room, kitchen, and bathrooms. This building is proposed with a surface area of 1,820.00 square feet and will have a system of photovoltaic panels and rainwater harvesting system. This building will be located next to the administrative office building of the housing complex. This building will have a floor level of 3.30 m, msl and construction on a surface of land with a minimum elevation of 3.24 m, msl. The construction is proposed in a segment of the parking area next to the administration building. Photos 1, 2, 3, and 4 show the place where the construction is proposed.

The housing complex is located in the floodplain of the Rio Grande de Loiza. Figures 2 and 3 show the flood maps; Flood Insurance Rate Map and Advisory Map. Both maps developed and published by the Federal Emergency Management Agency (FEMA). In both figures, the location of the project is indicated. Below is a summary of the information on both maps:

- FIRM MAP: Panel 72000C0395J
Zone AE - Base Flood Elevation: N/A
- Advisory Map (FEMA): Panel 72000C0395J
Zone A - ABFE: 2.90 m
Location: 18.430877, -65.875942

The information on the base elevation level of the Advisory Map was obtained from the following web page prepared by FEMA: <https://feedback.region2coastal.com/pr-wmbfe/>. A copy of the page where the base flood level data was obtained is included.



FEMA

NATIONAL FLOOD INSURANCE PROGRAM

ELEVATION CERTIFICATE

AND

INSTRUCTIONS

2015 EDITION

U.S. DEPARTMENT OF HOMELAND SECURITY
Federal Emergency Management Agency
National Flood Insurance Program

ELEVATION CERTIFICATE AND INSTRUCTIONS

Paperwork Reduction Act Notice

Public reporting burden for this data collection is estimated to average 3.75 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and submitting this form. You are not required to respond to this collection of information unless a valid OMB control number is displayed on this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing the burden to: Information Collections Management, Department of Homeland Security, Federal Emergency Management Agency, 500 C Street SW, Washington, DC 20742, Paperwork Reduction Project (1660-0008). **NOTE: Do not send your completed form to this address.**

Privacy Act Statement

Authority: Title 44 CFR § 61.7 and 61.8.

Principal Purpose(s): This information is being collected for the primary purpose of estimating the risk premium rates necessary to provide flood insurance for new or substantially improved structures in designated Special Flood Hazard Areas.

Routine Use(s): The information on this form may be disclosed as generally permitted under 5 U.S.C. § 552a(b) of the Privacy Act of 1974, as amended. This includes using this information as necessary and authorized by the routine uses published in DHS/FEMA-003 – National Flood Insurance Program Files System or Records Notice 73 Fed. Reg. 77747 (December 19, 2008); DHS/FEMA/NFIP/LOMA-1 – National Flood Insurance Program (NFIP) Letter of Map Amendment (LOMA) System of Records Notice 71 Fed. Reg. 7990 (February 15, 2006); and upon written request, written consent, by agreement, or as required by law.

Disclosure: The disclosure of information on this form is voluntary; however, failure to provide the information requested may result in the inability to obtain flood insurance through the National Flood Insurance Program or the applicant may be subject to higher premium rates for flood insurance. Information will only be released as permitted by law.

Purpose of the Elevation Certificate

The Elevation Certificate is an important administrative tool of the National Flood Insurance Program (NFIP). It is to be used to provide elevation information necessary to ensure compliance with community floodplain management ordinances, to determine the proper insurance premium rate, and to support a request for a Letter of Map Amendment (LOMA) or Letter of Map Revision based on fill (LOMR-F).

The Elevation Certificate is required in order to properly rate Post-FIRM buildings, which are buildings constructed after publication of the Flood Insurance Rate Map (FIRM), located in flood insurance Zones A1–A30, AE, AH, A (with BFE), VE, V1–V30, V (with BFE), AR, AR/A, AR/AE, AR/A1–A30, AR/AH, and AR/AO. The Elevation Certificate is not required for Pre-FIRM buildings unless the building is being rated under the optional Post-FIRM flood insurance rules.

As part of the agreement for making flood insurance available in a community, the NFIP requires the community to adopt floodplain management regulations that specify minimum requirements for reducing flood losses. One such requirement is for the community to obtain the elevation of the lowest floor (including basement) of all new and substantially improved buildings, and maintain a record of such information. The Elevation Certificate provides a way for a community to document compliance with the community's floodplain management ordinance.

Use of this certificate does not provide a waiver of the flood insurance purchase requirement. Only a LOMA or LOMR-F from the Federal Emergency Management Agency (FEMA) can amend the FIRM and remove the Federal mandate for a lending institution to require the purchase of flood insurance. However, the lending institution has the option of requiring flood insurance even if a LOMA/LOMR-F has been issued by FEMA. The Elevation Certificate may be used to support a LOMA or LOMR-F request. Lowest floor and lowest adjacent grade elevations certified by a surveyor or engineer will be required if the certificate is used to support a LOMA or LOMR-F request. A LOMA or LOMR-F request must be submitted with either a completed FEMA MT-EZ or MT-1 package, whichever is appropriate.

This certificate is used only to certify building elevations. A separate certificate is required for floodproofing. Under the NFIP, non-residential buildings can be floodproofed up to or above the Base Flood Elevation (BFE). A floodproofed building is a building that has been designed and constructed to be watertight (substantially impermeable to floodwaters) below the BFE. Floodproofing of residential buildings is not permitted under the NFIP unless FEMA has granted the community an exception for residential floodproofed basements. The community must adopt standards for design and construction of floodproofed basements before FEMA will grant a basement exception. For both floodproofed non-residential buildings and residential floodproofed basements in communities that have been granted an exception by FEMA, a floodproofing certificate is required.

Additional guidance can be found in FEMA Publication 467-1, Floodplain Management Bulletin: Elevation Certificate, available on FEMA's website at <https://www.fema.gov/media-library/assets/documents/3539?id=1727>.

ELEVATION CERTIFICATE

Important: Follow the instructions on pages 1-9.

Copy all pages of this Elevation Certificate and all attachments for (1) community official, (2) insurance agent/company, and (3) building owner.

SECTION A – PROPERTY INFORMATION					FOR INSURANCE COMPANY USE	
A1. Building Owner's Name Mutual Residential Development Corp.					Policy Number:	
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. State Road PR-188, Km. 18.8, Barrio Pueblo					Company NAIC Number:	
City Loiza		State Puerto Rico		ZIP Code 00772		
A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) Lot No. 6						
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) _____						
A5. Latitude/Longitude: Lat. <u>18.430877</u> Long. <u>-65.875942</u> Horizontal Datum: <input type="checkbox"/> NAD 1927 <input type="checkbox"/> NAD 1983						
A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.						
A7. Building Diagram Number _____						
A8. For a building with a crawlspace or enclosure(s):						
a) Square footage of crawlspace or enclosure(s) <u>1,820.00</u> sq ft						
b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade _____						
c) Total net area of flood openings in A8.b _____ sq in						
d) Engineered flood openings? <input type="checkbox"/> Yes <input type="checkbox"/> No						
A9. For a building with an attached garage:						
a) Square footage of attached garage _____ sq ft						
b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade _____						
c) Total net area of flood openings in A9.b _____ sq in						
d) Engineered flood openings? <input type="checkbox"/> Yes <input type="checkbox"/> No						
SECTION B – FLOOD INSURANCE RATE MAP (FIRM) INFORMATION						
B1. NFIP Community Name & Community Number Puerto Rico - 720000				B2. County Name		B3. State Puerto Rico <input checked="" type="checkbox"/>
B4. Map/Panel Number 0395	B5. Suffix J	B6. FIRM Index Date	B7. FIRM Panel Effective/ Revised Date 11-08-2009	B8. Flood Zone(s) AE	B9. Base Flood Elevation(s) (Zone AO, use Base Flood Depth) N/A	
B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9: <input type="checkbox"/> FIS Profile <input checked="" type="checkbox"/> FIRM <input type="checkbox"/> Community Determined <input type="checkbox"/> Other/Source: _____						
B11. Indicate elevation datum used for BFE in Item B9: <input type="checkbox"/> NGVD 1929 <input type="checkbox"/> NAVD 1988 <input checked="" type="checkbox"/> Other/Source: _____						
B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? <input type="checkbox"/> Yes <input type="checkbox"/> No Designation Date: _____ <input type="checkbox"/> CBRS <input type="checkbox"/> OPA						

ELEVATION CERTIFICATE

OMB No. 1660-0008
Expiration Date: November 30, 2018

IMPORTANT: In these spaces, copy the corresponding information from Section A.			FOR INSURANCE COMPANY USE
Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.			Policy Number:
City	State	ZIP Code	Company NAIC Number

SECTION C – BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

C1. Building elevations are based on: Construction Drawings* Building Under Construction* Finished Construction

*A new Elevation Certificate will be required when construction of the building is complete.

C2. Elevations – Zones A1–A30, AE, AH, A (with BFE), VE, V1–V30, V (with BFE), AR, AR/A, AR/AE, AR/A1–A30, AR/AH, AR/AO. Complete Items C2.a–h below according to the building diagram specified in Item A7. In Puerto Rico only, enter meters.

Benchmark Utilized: _____ Vertical Datum: _____

Indicate elevation datum used for the elevations in items a) through h) below.

NGVD 1929 NAVD 1988 Other/Source: _____

Datum used for building elevations must be the same as that used for the BFE.

Check the measurement used.

- | | | | |
|---|------|-------------------------------|--|
| a) Top of bottom floor (including basement, crawlspace, or enclosure floor) | 3.30 | <input type="checkbox"/> feet | <input checked="" type="checkbox"/> meters |
| b) Top of the next higher floor | | <input type="checkbox"/> feet | <input type="checkbox"/> meters |
| c) Bottom of the lowest horizontal structural member (V Zones only) | | <input type="checkbox"/> feet | <input type="checkbox"/> meters |
| d) Attached garage (top of slab) | | <input type="checkbox"/> feet | <input type="checkbox"/> meters |
| e) Lowest elevation of machinery or equipment servicing the building
(Describe type of equipment and location in Comments) | | <input type="checkbox"/> feet | <input type="checkbox"/> meters |
| f) Lowest adjacent (finished) grade next to building (LAG) | 3.24 | <input type="checkbox"/> feet | <input checked="" type="checkbox"/> meters |
| g) Highest adjacent (finished) grade next to building (HAG) | 3.27 | <input type="checkbox"/> feet | <input checked="" type="checkbox"/> meters |
| h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support | | <input type="checkbox"/> feet | <input type="checkbox"/> meters |

SECTION D – SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to certify elevation information. I certify that the information on this Certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.

Were latitude and longitude in Section A provided by a licensed land surveyor? Yes No Check here if attachments.

Certifier's Name Ricardo Sola	License Number 4019	Place Seal Here
Title License Engineer Authorized to Practice Surveying in Puerto Rico		
Company Name Mutual Residential Development Corp.		
Address State Road PR-188, Km. 18.8, Barrio Pueblo		
City Loiza	State Puerto Rico	
Signature	Date January 22, 2019	Telephone (787) 754-7745
		Ext.

Copy all pages of this Elevation Certificate and all attachments for (1) community official, (2) insurance agent/company, and (3) building owner.

Comments (including type of equipment and location, per C2(e), if applicable)

C2. Elevation datum used - mean sea level (msl)

ELEVATION CERTIFICATE

OMB No. 1660-0008
Expiration Date: November 30, 2018

IMPORTANT: In these spaces, copy the corresponding information from Section A.			FOR INSURANCE COMPANY USE	
Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.			Policy Number:	
City	State	ZIP Code	Company NAIC Number	

SECTION E – BUILDING ELEVATION INFORMATION (SURVEY NOT REQUIRED) FOR ZONE AO AND ZONE A (WITHOUT BFE)

For Zones AO and A (without BFE), complete Items E1–E5. If the Certificate is intended to support a LOMA or LOMR-F request, complete Sections A, B, and C. For Items E1–E4, use natural grade, if available. Check the measurement used. In Puerto Rico only, enter meters.

- E1. Provide elevation information for the following and check the appropriate boxes to show whether the elevation is above or below the highest adjacent grade (HAG) and the lowest adjacent grade (LAG).
- a) Top of bottom floor (including basement, crawlspace, or enclosure) is _____ feet meters above or below the HAG.
- b) Top of bottom floor (including basement, crawlspace, or enclosure) is _____ feet meters above or below the LAG.
- E2. For Building Diagrams 6–9 with permanent flood openings provided in Section A Items 8 and/or 9 (see pages 1–2 of Instructions), the next higher floor (elevation C2.b in the diagrams) of the building is _____ feet meters above or below the HAG.
- E3. Attached garage (top of slab) is _____ feet meters above or below the HAG.
- E4. Top of platform of machinery and/or equipment servicing the building is _____ feet meters above or below the HAG.
- E5. Zone AO only: If no flood depth number is available, is the top of the bottom floor elevated in accordance with the community's floodplain management ordinance? Yes No Unknown. The local official must certify this information in Section G.

SECTION F – PROPERTY OWNER (OR OWNER'S REPRESENTATIVE) CERTIFICATION

The property owner or owner's authorized representative who completes Sections A, B, and E for Zone A (without a FEMA-issued or community-issued BFE) or Zone AO must sign here. The statements in Sections A, B, and E are correct to the best of my knowledge.

Property Owner or Owner's Authorized Representative's Name

Carlos M. Colón

Address	City	State	ZIP Code
P.O. Box 192037	San Juan	PR	<input checked="" type="checkbox"/> 00919

Signature	Date	Telephone
	January 22, 2019	(787) 759-8585

Comments

FIRM MAP
PANEL: 72000C0395J
ZONE AE - Base Flood Elevation: N/A

Advisory Map (FEMA):
PANEL: 72000C0395J
ZONE A - ABFE: 2.90 m

Location: 18.430877, -65.875942

Reference Information: <https://feedback.region2coastal.com/pr-wmbfe/>.

See: Explanatory Memorial

Check here if attachments.

BUILDING PHOTOGRAPHS

ELEVATION CERTIFICATE

See Instructions for Item A6.

OMB No. 1660-0008

Expiration Date: November 30, 2018

IMPORTANT: In these spaces, copy the corresponding information from Section A.			FOR INSURANCE COMPANY USE
Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.			Policy Number:
City	State	ZIP Code	Company NAIC Number

If using the Elevation Certificate to obtain NFIP flood insurance, affix at least 2 building photographs below according to the instructions for Item A6. Identify all photographs with date taken; "Front View" and "Rear View"; and, if required, "Right Side View" and "Left Side View." When applicable, photographs must show the foundation with representative examples of the flood openings or vents, as indicated in Section A8. If submitting more photographs than will fit on this page, use the Continuation Page.

Photo One

Photo One

Photo One Caption

Clear Photo One

Photo Two

Photo Two

Photo Two Caption

Clear Photo Two

BUILDING PHOTOGRAPHS

ELEVATION CERTIFICATE

Continuation Page

OMB No. 1660-0008
Expiration Date: November 30, 2018

IMPORTANT: In these spaces, copy the corresponding information from Section A.	FOR INSURANCE COMPANY USE
Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.	Policy Number:
City State ZIP Code <input type="text"/>	Company NAIC Number

If submitting more photographs than will fit on the preceding page, affix the additional photographs below. Identify all photographs with: date taken; "Front View" and "Rear View"; and, if required, "Right Side View" and "Left Side View." When applicable, photographs must show the foundation with representative examples of the flood openings or vents, as indicated in Section A8.

Photo Three

Photo Three

Photo Three Caption

Clear Photo Three

Photo Four

Photo Four

Photo Four Caption

Clear Photo Four



Photo 1. Right side view of the lot area proposed for development.



Photo 2. Front view of the lot area proposed for development.



Photo 3. Left side view of the lot area proposed for development.



Photo 4. Rear view of the lot area proposed for development.

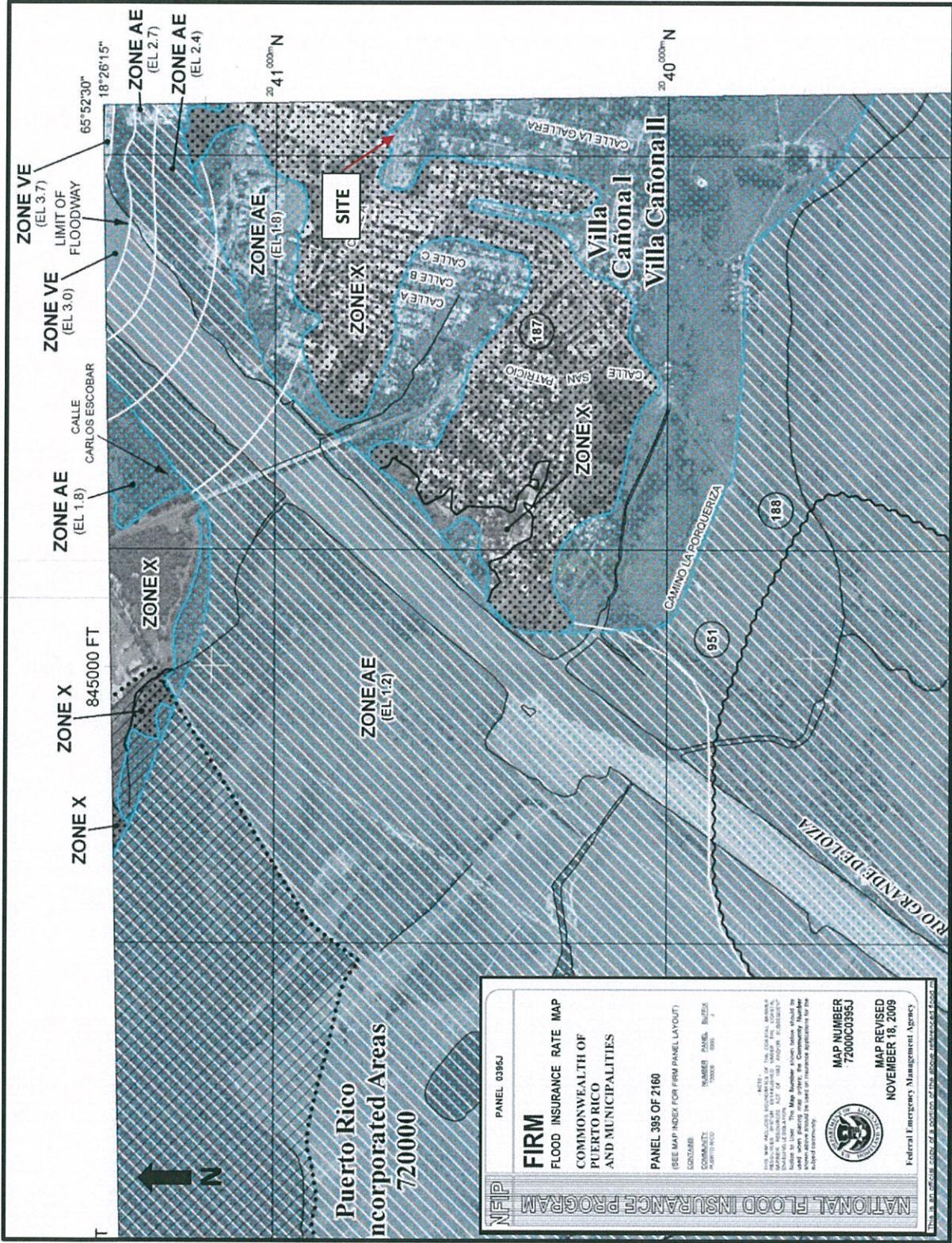


FIGURE 2: Partial copy of Flood Map (Panel: 72000C0395J) – Flood Insurance Rate Map - 1%) where shows the location of the project site, Not to Scale.

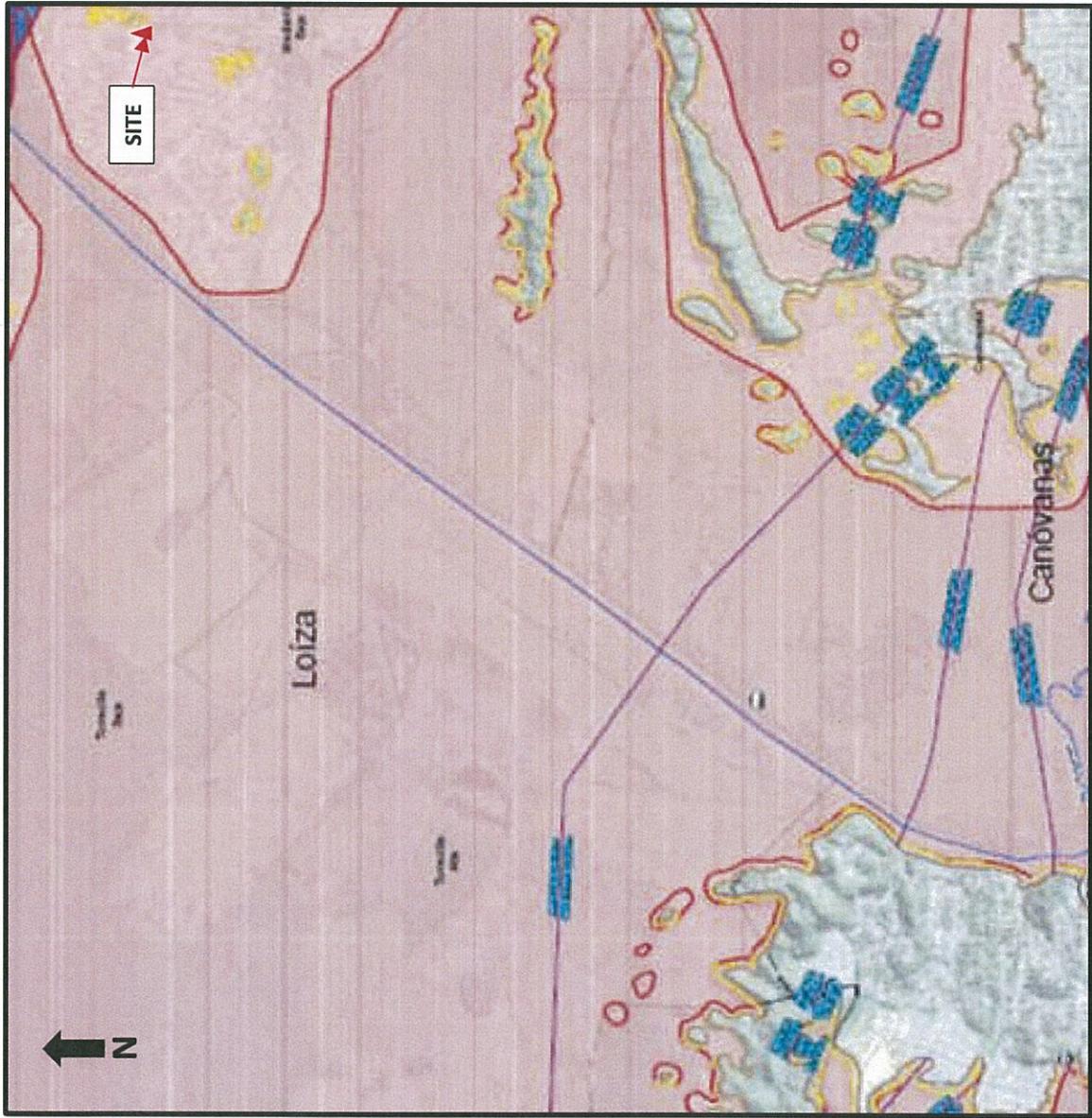


FIGURE 3: Partial copy of Flood Map (Panel: 72000C0395J - Advisory Base Flood Elevation - 1%) where shows the location of the project site, Not to Scale.

Search by Latitude,Longitude
 Address Search (May not be accurate)

Enter an address, latitude/longitude coordinates (in decimal degree format, for example "17.758338, -64.658925"), or estate name, and click the "Get Details" button.

****Note** that address searches are not always accurate in Puerto Rico. It may be necessary to drop the red pin on the exact structure location by clicking on the map.

18.430877, -65.875942

Get Details

Clear Details

Approximate Address Identified: , **Loíza, Puerto Rico**



Advisory FEMA Flood Hazard Data

FEMA advisory flood hazard data currently available for Puerto Rico is provided below to help you understand the current flood risk to your property and to guide post Maria recovery and rebuilding efforts. This tool provides the most recent FEMA flood hazard information including updated floodplains and Advisory Base Flood Elevations (ABFEs) for riverine and coastal areas, as well as coastal erosion hazard areas.

Attribute Name	Attribute Value
What is the most recent FEMA flood hazard data source available for this location?	ADVISORY
What is my property's Flood Zone?  (For N/A results, please contact your local floodplain administrator for more information.)	A Zone SubType: N/A
What is my property's Advisory Flood Elevation?  (For AO Zones, the floor depth will be shown instead of an elevation; For N/A results, please contact your local floodplain administrator for more information.)	2.9 m

Attribute Name	Attribute Value
What is my property's Depth? 	0.0 m
Was there erosion for my property based on Hurricane Maria? 	No Erosion Identified
Is there potential for erosion on my property based on the 1% Annual Chance Flood Hazard? 	No Erosion Identified
Is my property within a 30-year erosion risk area? 	No Erosion Identified
Is my property within a 60-year erosion risk area? 	No Erosion Identified
View your property on our Interactive Web Tool	Link to Web Tool
Where can I get the GIS data for my property area?	Link to Advisory GIS Data

Effective Flood Insurance Data

This information is from the effective Flood Insurance Rate Map for your community. It is used to determine who must buy flood insurance and how much it costs. It may also be used by your community to regulate development in flood prone areas.

Attribute Name	Attribute Value
What is my property's current effective Base Flood Elevation? 	N/A
What is my property's current effective Flood Zone? 	AE
View your property on our Interactive Web Tool	Link to Web Tool for Effective Data

**DEPARTMENT OF HOMELAND SECURITY - FEDERAL EMERGENCY MANAGEMENT AGENCY
COMMUNITY ACKNOWLEDGMENT FORM**

*O.M.B. NO. 1660-0015
Expires February 28, 2014*

PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this data collection is estimated to average 1.38 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and submitting the form. This collection is required to obtain or retain benefits. You are not required to respond to this collection of information unless a valid OMB control number is displayed on this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Department of Homeland Security, Federal Emergency Management Agency, 1800 South Bell Street, Arlington, VA 20598-3005, Paperwork Reduction Project (1660-0015). NOTE: Do not send your completed form to this address.

This form must be completed for requests involving the existing or proposed placement of fill (complete Section A) **OR** to provide acknowledgment of this request to remove a property from the SFHA which was previously located within the regulatory floodway (complete Section B).

This form must be completed and signed by the official responsible for floodplain management in the community. **The six digit NFIP community number and the subject property address must appear in the spaces provided below. Incomplete submissions will result in processing delays.** Please refer to the MT-1 instructions for additional information about this form.

Community Number: 720000 Property Name or Address: PARCEL R-1 AND R-2A JARDINES DE LOIZA APT AND MULTIPURPOSE STRUCTURE, LOIZA PR 00772

A. REQUESTS INVOLVING THE PLACEMENT OF FILL

As the community official responsible for floodplain management, I hereby acknowledge that we have received and reviewed this Letter of Map Revision Based on Fill (LOMR-F) or Conditional LOMR-F request. Based upon the community's review, we find the completed or proposed project meets or is designed to meet all of the community floodplain management requirements, including the requirement that no fill be placed in the regulatory floodway, and that all necessary Federal, State, and local permits have been, or in the case of a Conditional LOMR-F, will be obtained. For Conditional LOMR-F requests, the applicant has or will document Endangered Species Act (ESA) compliance to FEMA prior to issuance of the Conditional LOMR-F determination. For LOMR-F requests, I acknowledge that compliance with Sections 9 and 10 of the ESA has been achieved independently of FEMA's process. Section 9 of the ESA prohibits anyone from "taking" or harming an endangered species. If an action might harm an endangered species, a permit is required from U.S. Fish and Wildlife Service or National Marine Fisheries Service under Section 10 of the ESA. For actions authorized, funded, or being carried out by Federal or State agencies, documentation from the agency showing its compliance with Section 7(a)(2) of the ESA will be submitted. In addition, we have determined that the land and any existing or proposed structures to be removed from the SFHA are or will be reasonably safe from flooding as defined in 44CFR 65.2(c), and that we have available upon request by DHS-FEMA, all analyses and documentation used to make this determination. For LOMR-F requests, we understand that this request is being forwarded to DHS-FEMA for a possible map revision.

Community Comments:

Community Official's Name and Title: *(Please Print or Type)*
Maria del C. Gordillo Pérez, Chairwoman

Telephone No.:
(787) 200-7574

Community Name:
COMMONWEALTH OF PUERTORICO AND MUNICIPALITIES

Community Official's Signature: (required)



Date:
9/30/2020

B. PROPERTY LOCATED WITHIN THE REGULATORY FLOODWAY

As the community official responsible for floodplain management, I hereby acknowledge that we have received and reviewed this request for a LOMA. We understand that this request is being forwarded to DHS-FEMA to determine if this property has been inadvertently included in the regulatory floodway. We acknowledge that no fill on this property has been or will be placed within the designated regulatory floodway. We find that the completed or proposed project meets or is designed to meet all of the community floodplain management requirements.

Community Comments:

Community Official's Name and Title: *(Please Print or Type)*

Telephone No.:

Community Name:

Community Official's Signature (required):

Date:

2020 LOW-INCOME HOUSING TAX CREDITS & CDGB-DR GAP TO LIHTC

APPLICATION 2020-026 - Jardines de Loíza Apartments

Project: Jardines de Loíza Apartments

Owner: Jardines de Loíza, LLC

Application: 2020-026-II. 017

NFIP FEMA Map

Jardines de Loíza (“the Project”) is a consolidation of two projects on neighboring lots, built over twenty (20) years ago; called **Comarso** (Parcel R-1) and **Covemarso** (Parcel R-2A).

TABLE OF CONTENTS

- NFIP Map (FEMA Map)
 - FEMA Website Screenshot with amendments for both parcels.
 - **Comarso** amendment No. 20-02-1335A-720000 11/12/2020
 - **Covemarso** amendment No. 21-02-0182A-720000 11/12/2020
 - NFIP FEMA Map
- Approval Letter of Map Revision regarding **Comarso**, which concludes (page 5):
*“Using the information submitted and the effective National Flood Insurance Program (NFIP) map, we have determined that the described portion(s) of the property(ies) is/are not located in the SFHA, an area inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood). **This document revises the effective NFIP map to remove the subject property from the SFHA located on the effective NFIP map; therefore, the Federal mandatory flood insurance requirement does not apply.**”*
- Approval Letter of Map Revision regarding **Covemarso**, which concludes (page 12):
*“Using the information submitted and the effective National Flood Insurance Program (NFIP) map, we have determined that the described portion(s) of the property(ies) is/are not located in the SFHA, an area inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood). **The subject property is correctly shown outside the SFHA located on the effective NFIP map; therefore, the Federal mandatory flood insurance requirement does not apply.**”*

*Please note that FEMA has advised that they are experiencing delays in updating NFIP Map, regarding maps revisions and amendments.

The flood map for the selected area is number **72000C0395J**, effective on **11/18/2009** [?](#)

DYNAMIC MAP



PRINT MAP/
FIRMette

MAP IMAGE



DOWNLOAD
FIRM PANEL

Changes to this FIRM [?](#)

- Revisions (2)
- Amendments (2)
 - 20-02-1335A-720000 11/12/2020
 - 21-02-0182A-720000 11/12/2020
- Revalidations (1)

You can choose a new flood map or move the location pin by selecting a different location on the locator map below or by entering a new location in the search field above. It may take a minute or more during peak hours to generate a dynamic FIRMette. If you are a person with a disability, are blind, or have low vision, and need assistance, please contact a [map specialist](#).

[Go To NFHL Viewer »](#)


<p>PIN</p> <ul style="list-style-type: none"> Approximate location based on user input and does not represent an authoritative property location 	<p>SPECIAL FLOOD HAZARD AREAS</p> <ul style="list-style-type: none"> Without Base Flood Elevation (BFE) Zone A, V, A99 With BFE or Depth Regulatory Floodway Zone AE, AO, AH, VE, AR 	<p>Cross Sections</p> <ul style="list-style-type: none"> 20.2 Cross Sections with 1% Annual Chance Water Surface Elevation 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation Coastal Transect Base Flood Elevation Line (BFE) Limit of Study Jurisdiction Boundary Coastal Transect Baseline Profile Baseline Hydrographic Feature
<p>MAP PANELS</p> <ul style="list-style-type: none"> Selected FloodMap Boundary Digital Data Available No Digital Data Available Unmapped 	<p>OTHER AREAS OF FLOOD HAZARD</p> <ul style="list-style-type: none"> 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X Future Conditions 1% Annual Chance Flood Hazard Zone X Area with Reduced Flood Risk due to Levee. See Notes. Zone X Area with Flood Risk due to Levee Zone D 	<p>OTHER FEATURES</p> <ul style="list-style-type: none"> Channel, Culvert, or Storm Sewer Levee, Dike, or Floodwall
<p>OTHER AREAS</p> <ul style="list-style-type: none"> NO SCREEN Area of Minimal Flood Hazard Zone X Effective LOMRs Area of Undetermined Flood Hazard Zone D Otherwise Protected Area Coastal Barrier Resource System Area 		

National Flood Hazard Layer FIRMette



65°52'52"W 18°26'10"N



65°52'14"W 18°25'36"N

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

Legend

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

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance
		17.5 Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped
		The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.



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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/10/2021 at 2:35 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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



Ricardo Sola <rsolaengineering@gmail.com>

Final MT-1 Determination Document

1 message

FEMA MT-1 Support <MT1_Support_Do_Not_Reply@northwindgrp.com>

Fri, Nov 13, 2020 at 11:41 AM

To: "rsolaengineering@gmail.com" <rsolaengineering@gmail.com>

Hello,

The LOMC Clearinghouse may be experiencing delays in sending and receiving correspondence via mail for MT-1 cases at this time; therefore, the relevant correspondence for your application is attached.

If you would like to respond to the correspondence with any questions please contact the FEMA Mapping and Insurance eXchange (FMIX) at the contact information below.

Thank you,

 **20-02-1335A-720000.pdf**
458K



Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION BASED ON FILL DETERMINATION DOCUMENT (REMOVAL)

COMMUNITY AND MAP PANEL INFORMATION		LEGAL PROPERTY DESCRIPTION
COMMUNITY	COMMONWEALTH OF PUERTO RICO, PUERTO RICO TERRITORY-WIDE COUNTY, PUERTO RICO	A portion of Parcel 1, as described in the Deed recorded as Certificate No. 2020-000518-CERT, Finca No. 9114, in the Office of the Registrar, Commonwealth of Puerto Rico (Catastro No. 065-020-036-29-000) The portion of property is more particularly described by the following metes and bounds:
	COMMUNITY NO.: 720000	
AFFECTED MAP PANEL	NUMBER: 72000C0395J	APPROXIMATE LATITUDE & LONGITUDE OF PROPERTY: 18.430906, -65.875801 SOURCE OF LAT & LONG: LOMA LOGIC DATUM: NAD 83
	DATE: 11/18/2009	
FLOODING SOURCE: ATLANTIC OCEAN; RIO GRANDE DE LOIZA REACH 1		

DETERMINATION

LOT	BLOCK/ SECTION	SUBDIVISION	STREET	OUTCOME WHAT IS REMOVED FROM THE SFHA	FLOOD ZONE	1% ANNUAL CHANCE FLOOD ELEVATION (MSL)	LOWEST ADJACENT GRADE ELEVATION (MSL)	LOWEST LOT ELEVATION (MSL)
Parcel R-1	--	--	--	Portion of Property	X (shaded)	--	--	3.0 meters

Special Flood Hazard Area (SFHA) - The SFHA is an area that would be inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood).

ADDITIONAL CONSIDERATIONS (Please refer to the appropriate section on Attachment 1 for the additional considerations listed below.)

LEGAL PROPERTY DESCRIPTION
PORTIONS REMAIN IN THE SFHA
STATE LOCAL CONSIDERATIONS

This document provides the Federal Emergency Management Agency's determination regarding a request for a Letter of Map Revision based on Fill for the property described above. Using the information submitted and the effective National Flood Insurance Program (NFIP) map, we have determined that the described portion(s) of the property(ies) is/are not located in the SFHA, an area inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood). This document revises the effective NFIP map to remove the subject property from the SFHA located on the effective NFIP map; therefore, the Federal mandatory flood insurance requirement does not apply. However, the lender has the option to continue the flood insurance requirement to protect its financial risk on the loan. A Preferred Risk Policy (PRP) is available for buildings located outside the SFHA. Information about the PRP and how one can apply is enclosed.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Information eXchange (FMIX) toll free at (877) 336-2627 (877-FEMA MAP), or by letter addressed to the Federal Emergency Management Agency, Engineering Library, 3601 Eisenhower Ave Ste 500, Alexandria, VA 22304-6426.


Luis V. Rodriguez, P.E., Director
Engineering and Modeling Division
Federal Insurance and Mitigation Administration



Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION BASED ON FILL DETERMINATION DOCUMENT (REMOVAL)

ATTACHMENT 1 (ADDITIONAL CONSIDERATIONS)

LEGAL PROPERTY DESCRIPTION (CONTINUED)

Parcel (R-1) :

Commencing in point 156, located at southwest corner of parcel, thence with a bearing N 21°18'17.984" E a distance 54.5207 meters to point 164, thence with an arc, with a radius of 3.5000 meters from point 163, located N 21°18'18.000" E at 3.5000 meters, to point 162, thence with S 68°41'42.000" E, a distance of 91.1538 meters to point 166, thence S 21°18'18.000" E, 60.9513 meters to point 165, thence S 68°41'42.000" E, 59.2075 meters to point 243, thence S 21°21'56.593" W, 73.3537 meters to point 170, thence S 19°43'47.357" W, 6.7450 meters to point 242, thence N 67°47'20.179" W, 61.5740 meters to point 240, thence S 21°04'23.334" W, 39.9030 meters to point 152, thence N 68°41'44.000" W, 122.4113 meters to point of beginning, number 156.

PORTIONS OF THE PROPERTY REMAIN IN THE SFHA (This Additional Consideration applies to the preceding 1 Property.)

Portions of this property, but not the subject of the Determination/Comment document, may remain in the Special Flood Hazard Area. Therefore, any future construction or substantial improvement on the property remains subject to Federal, State/Commonwealth, and local regulations for floodplain management.

STATE AND LOCAL CONSIDERATIONS (This Additional Consideration applies to all properties in the LOMR-F DETERMINATION DOCUMENT (REMOVAL))

Please note that this document does not override or supersede any State or local procedural or substantive provisions which may apply to floodplain management requirements associated with amendments to State or local floodplain zoning ordinances, maps, or State or local procedures adopted under the National Flood Insurance Program.

This attachment provides additional information regarding this request. If you have any questions about this attachment, please contact the FEMA Map Information eXchange (FMIX) toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency Engineering Library, 3601 Eisenhower Ave Ste 500, Alexandria, VA 22304-6426.

Luis V. Rodriguez, P.E., Director
Engineering and Modeling Division
Federal Insurance and Mitigation Administration



Federal Emergency Management Agency

Washington, D.C. 20472

ADDITIONAL INFORMATION REGARDING LETTERS OF MAP REVISION BASED ON FILL

When making determinations on requests for Letters of Map Revision based on the placement of fill (LOMR-Fs), the Department of Homeland Security's Federal Emergency Management Agency (FEMA) bases its determination on the flood hazard information available at the time of the determination. Requesters should be aware that flood conditions may change or new information may be generated that would supersede FEMA's determination. In such cases, the community will be informed by letter.

Requesters also should be aware that removal of a property (parcel of land or structure) from the Special Flood Hazard Area (SFHA) means FEMA has determined the property is not subject to inundation by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood). This does not mean the property is not subject to other flood hazards. The property could be inundated by a flood with a magnitude greater than the base flood or by localized flooding not shown on the effective National Flood Insurance Program (NFIP) map.

The effect of a LOMR-F is it removes the Federal requirement for the lender to require flood insurance coverage for the property described. The LOMR-F *is not* a waiver of the condition that the property owner maintain flood insurance coverage for the property. *Only* the lender can waive the flood insurance purchase requirement because the lender imposed the requirement. *The property owner must request and receive a written waiver from the lender before canceling the policy.* The lender may determine, on its own as a business decision, that it wishes to continue the flood insurance requirement to protect its financial risk on the loan.

The LOMR-F provides FEMA's comment on the mandatory flood insurance requirements of the NFIP as they apply to a particular property. A LOMR-F is not a building permit, nor should it be construed as such. Any development, new construction, or substantial improvement of a property impacted by a LOMR-F must comply with all applicable State and local criteria and other Federal criteria.

If a lender releases a property owner from the flood insurance requirement, and the property owner decides to cancel the policy and seek a refund, the NFIP will refund the premium paid for the current policy year, provided that no claim is pending or has been paid on the policy during the current policy year. The property owner must provide a written waiver of the insurance requirement from the lender to the property insurance agent or company servicing his or her policy. The agent or company will then process the refund request.

Even though structures are not located in an SFHA, as mentioned above, they could be flooded by a flooding event with a greater magnitude than the base flood. In fact, more than 25 percent of all claims paid by the NFIP are for policies for structures located outside the SFHA in Zones B, C, X (shaded), or X (unshaded). More than one-fourth of all policies purchased under the NFIP protect structures located in these zones. The risk to structures located outside SFHAs is just not as great as the risk to structures located in SFHAs. Finally, approximately 90 percent of all federally declared disasters are caused by flooding, and homeowners insurance does not provide financial protection from this flooding. Therefore, FEMA encourages the widest possible coverage under the NFIP.

The NFIP offers two types of flood insurance policies to property owners: the low-cost Preferred Risk Policy (PRP) and the Standard Flood Insurance Policy (SFIP). The PRP is available for 1- to 4-family residential structures located outside the SFHA with little or no loss history. The PRP is available for townhouse/rowhouse-type structures, but is not available for other types of condominium units. The SFIP is available for all other structures.

Additional information on the PRP and how a property owner can qualify for this type of policy may be obtained by contacting the Flood Insurance Information Hotline, toll free, at 1-800-427-4661. Before making a final decision about flood insurance coverage, FEMA strongly encourages property owners to discuss their individual flood risk situations and insurance needs with an insurance agent or company.

The revisions made effective by a LOMR-F are made pursuant to Section 206 of the Flood Disaster Protection Act of 1973 (P.L. 93-234) and are in accordance with the National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and Urban Development Act of 1968, P.L. 90-448) 42 U.S.C. 4001-4128, and 44 CFR Part 65.

In accordance with regulations adopted by the community when it made application to join the NFIP, letters issued to revise an NFIP map must be attached to the community's official record copy of the map. That map is available for public inspection at the community's official map repository. Therefore, FEMA sends copies of all such letters to the affected community's official map repository.

To ensure continued eligibility to participate in the NFIP, the community must enforce its floodplain management regulations using, at a minimum, the flood elevations and zone designations shown on the NFIP map, including the revisions made effective by LOMR-Fs. LOMR-Fs are based on minimum criteria established by the NFIP. State, county, and community officials, based on knowledge of local conditions and in the interest of safety, may set higher standards for construction in the SFHA. If the State, county, or community has adopted more restrictive and comprehensive floodplain management criteria, these criteria take precedence over the minimum Federal criteria.

FEMA does not print and distribute LOMR-Fs to primary map users, such as local insurance agents and mortgage lenders; therefore, the community serves as the repository for LOMR-Fs. FEMA encourages communities to disseminate LOMR-Fs so that interested persons, such as property owners, insurance agents, and mortgage lenders, may benefit from the information. FEMA also encourages communities to prepare articles for publication in the local newspaper that describe the changes made and the assistance community officials will provide in serving as a clearinghouse for LOMR-Fs and interpreting NFIP maps.

When a restudy is undertaken, or when a sufficient number of revisions occur on particular map panels, FEMA initiates the printing and distribution process for the panels and incorporates the changes made effective by LOMR-Fs. FEMA notifies community officials in writing when affected map panels are being physically revised and distributed. If the results of particular LOMR-Fs cannot be reflected on the new map panels because of scale limitations, FEMA notifies the community in writing and revalidates the LOMR-Fs in that letter. LOMR-Fs revalidated in this way usually will become effective 1 day after the effective date of the revised map.

Your property has been reclassified as moderate-to-low flood risk. Your flood risk has been reduced but not removed.

You may now qualify for a Preferred Risk Flood Insurance Policy with annual rates starting as low as \$325. Keep your home—and everything inside of it—covered for less money. Contact your insurance agent to secure a lower-cost policy today.

Protect the life you've built.

Call **800-427-4661** or visit www.FloodSmart.gov



FEMA



Flooding 101: Did you know?

- Flooding is the most common and costly disaster in the United States. Just 1 inch of flood water can cause \$25,000 of damage to your home.
- People outside of high-risk flood areas file more than 20% of NFIP claims and receive one-third of disaster assistance for flooding.
- Most homeowners and renters insurance doesn't cover flood damage. Only flood insurance provides financial protection from costly flooding.

Stay covered. Save money. Talk to an agent today.

For more information visit FloodSmart.gov.



Ricardo Sola <rsolaengineering@gmail.com>

Final MT-1 Determination Document

FEMA MT-1 Support <MT1_Support_Do_Not_Reply@northwindgrp.com>
To: "rsolaengineering@gmail.com" <rsolaengineering@gmail.com>

Fri, Nov 13, 2020 at 12:01 PM

Hello,

The LOMC Clearinghouse may be experiencing delays in sending and receiving correspondence via mail for MT-1 cases at this time; therefore, the relevant correspondence for your application is attached.

If you would like to respond to the correspondence with any questions please contact the FEMA Mapping and Insurance eXchange (FMIX) at the contact information below.

Thank you,

 **21-02-0182A-720000.pdf**
93K



Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP AMENDMENT DETERMINATION DOCUMENT (OUT AS SHOWN)

COMMUNITY AND MAP PANEL INFORMATION		LEGAL PROPERTY DESCRIPTION
COMMUNITY	COMMONWEALTH OF PUERTO RICO, PUERTO RICO TERRITORY-WIDE COUNTY, PUERTO RICO	A portion of Parcel R-2A, as shown on the Deed recorded as Certificate No. 2020-000520-CERT and Finca No. 9827, in the Office of the Registrar, Commonwealth of Puerto Rico (Catastro No. 065-000-005-76-000) The portion of property is more particularly described by the following metes and bounds:
	COMMUNITY NO.: 720000	
AFFECTED MAP PANEL	NUMBER: 72000C0395J DATE: 11/18/2009	
FLOODING SOURCE: ATLANTIC OCEAN; RIO GRANDE DE LOIZA REACH 1		APPROXIMATE LATITUDE & LONGITUDE OF PROPERTY: 18.431503, -65.875699 SOURCE OF LAT & LONG: LOMA LOGIC DATUM: NAD 83

DETERMINATION

LOT	BLOCK/ SECTION	SUBDIVISION	STREET	OUTCOME WHAT IS OUTSIDE OF THE SFHA	FLOOD ZONE	1% ANNUAL CHANCE FLOOD ELEVATION (MSL)	LOWEST ADJACENT GRADE ELEVATION (MSL)	LOWEST LOT ELEVATION (MSL)
Parcel R-2A	--	--	--	Portion of Property	X (shaded)	--	--	--

Special Flood Hazard Area (SFHA) - The SFHA is an area that would be inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood).

ADDITIONAL CONSIDERATIONS (Please refer to the appropriate section on Attachment 1 for the additional considerations listed below.)

LEGAL PROPERTY DESCRIPTION
PORTIONS REMAIN IN THE SFHA

This document provides the Federal Emergency Management Agency's determination regarding a request for a Letter of Map Amendment for the property described above. Using the information submitted and the effective National Flood Insurance Program (NFIP) map, we have determined that the described portion(s) of the property(ies) is/are not located in the SFHA, an area inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood). The subject property is correctly shown outside the SFHA located on the effective NFIP map; therefore, the Federal mandatory flood insurance requirement does not apply. If the policy has been written using an incorrect zone, it can be endorsed to correct the zone for the current policy year and one prior policy term. Please contact the insurance agent or company involved to request endorsement of the policy. However, the lender has the option to continue the flood insurance requirement to protect its financial risk on the loan. A Preferred Risk Policy (PRP) is available for buildings located outside the SFHA. Information about the PRP and how one can apply is enclosed.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Information eXchange (FMIX) toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, Engineering Library, 3601 Eisenhower Ave Ste 500, Alexandria, VA 22304-6426.


Luis V. Rodriguez, P.E., Director
Engineering and Modeling Division
Federal Insurance and Mitigation Administration



Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP AMENDMENT DETERMINATION DOCUMENT (OUT AS SHOWN) ATTACHMENT 1 (ADDITIONAL CONSIDERATIONS)

LEGAL PROPERTY DESCRIPTION (CONTINUED)

Parcel (R-2A):

Commencing in point 165, located at southwest corner of parcel, thence with a bearing N 21°18'38" E, a distance 61.0000 meters to point 151B, thence S 68°42'01" E, 86.7562 meters to point 244A, thence S 18°45'30" W, 47.3462 meters to point 171, thence S 19°53'31" W, 13.7045 meters to point 243, thence N 68°42'01" W, 89.2040 meters to point of beginning, number 165.

PORTIONS OF THE PROPERTY REMAIN IN THE SFHA (This Additional Consideration applies to the preceding 1 Property.)

Portions of this property, but not the subject of the Determination/Comment document, may remain in the Special Flood Hazard Area. Therefore, any future construction or substantial improvement on the property remains subject to Federal, State/Commonwealth, and local regulations for floodplain management.

This attachment provides additional information regarding this request. If you have any questions about this attachment, please contact the FEMA/Map Information eXchange (FMIX) toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, Engineering Library, 3601 Eisenhower Ave Ste 500, Alexandria, VA 22304-6426.

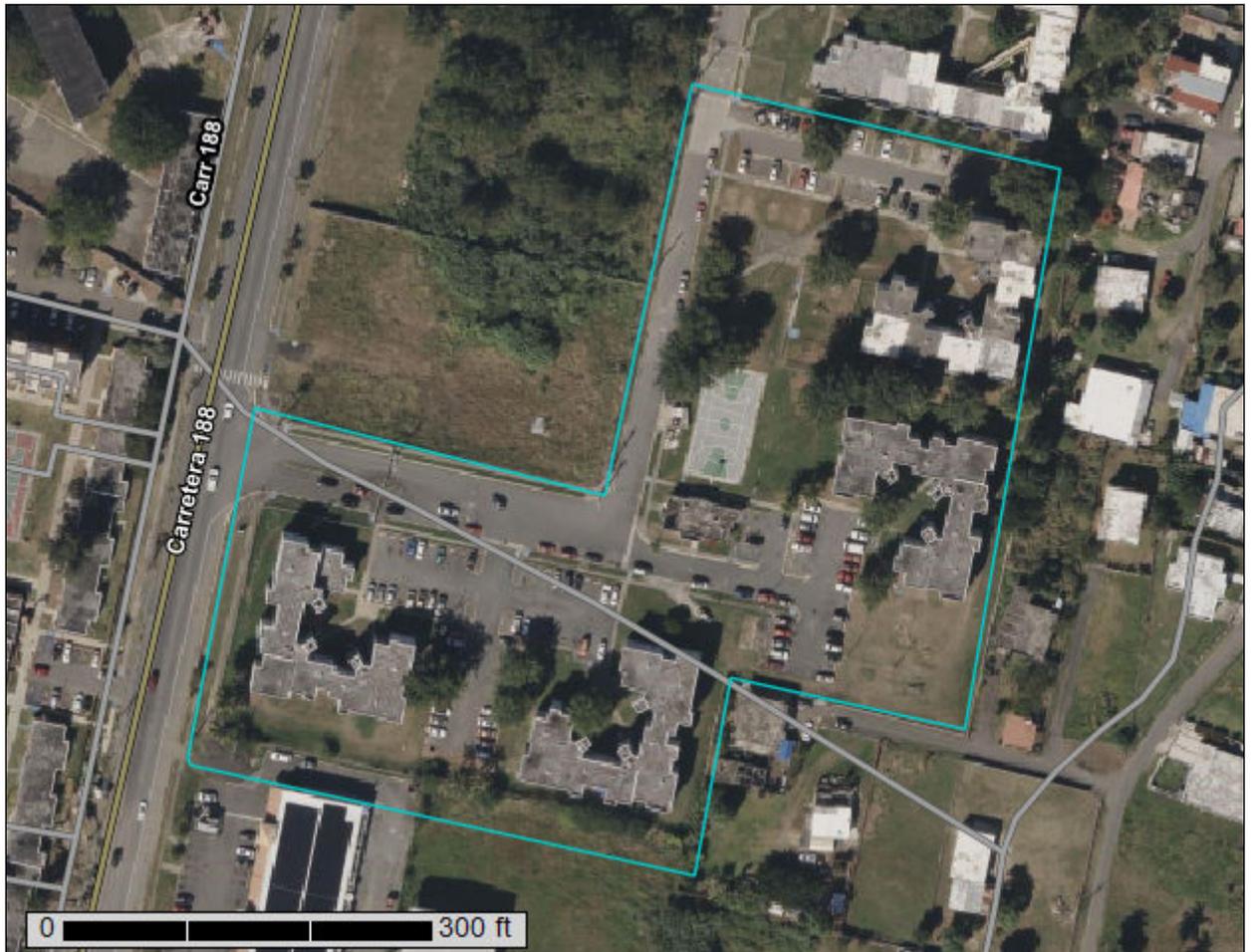
A handwritten signature in black ink, appearing to read "Luis V. Rodriguez".

Luis V. Rodriguez, P.E., Director
Engineering and Modeling Division
Federal Insurance and Mitigation Administration



A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Humacao Area, Puerto Rico Eastern Part



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

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scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

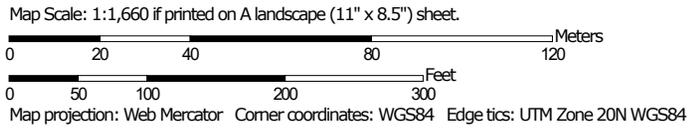
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Humacao Area, Puerto Rico Eastern Part
 Survey Area Data: Version 14, Sep 13, 2022

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

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

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Cf	Catano loamy sand, 0 to 2 percent slopes	5.3	90.8%
Uo	Urban land-Catano complex, 0 to 2 percent slopes	0.5	9.2%
Totals for Area of Interest		5.8	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

Custom Soil Resource Report

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Humacao Area, Puerto Rico Eastern Part

Cf—Catano loamy sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2wq35
Elevation: 0 to 60 feet
Mean annual precipitation: 70 to 90 inches
Mean annual air temperature: 75 to 79 degrees F
Frost-free period: 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Catano and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Catano

Setting

Landform: Coastal plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Beach sandy fluviomarine deposits derived from volcanic and sedimentary rock

Typical profile

A - 0 to 8 inches: loamy sand
AC - 8 to 18 inches: sand
C - 18 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(1.42 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 49 percent
Maximum salinity: Nonsaline to moderately saline (0.0 to 8.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Durados

Percent of map unit: 5 percent

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Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Aguadilla

Percent of map unit: 5 percent
Landform: Coastal plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Beaches

Percent of map unit: 5 percent
Landform: Coastal plains, beaches
Hydric soil rating: No

Uo—Urban land-Catano complex, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2yg2q
Elevation: 0 to 60 feet
Mean annual precipitation: 70 to 90 inches
Mean annual air temperature: 75 to 79 degrees F
Frost-free period: 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 60 percent
Catano and similar soils: 30 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Description of Catano

Setting

Landform: Beach plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Beach sandy fluviomarine deposits derived from volcanic and sedimentary rock

Custom Soil Resource Report

Typical profile

A - 0 to 8 inches: loamy sand
AC - 8 to 18 inches: sand
C - 18 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(1.42 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 49 percent
Maximum salinity: Nonsaline to moderately saline (0.0 to 8.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Typic psammaquents, very frequently flooded

Percent of map unit: 5 percent
Landform: Beaches
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Aguadilla

Percent of map unit: 5 percent
Landform: Beach plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

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Prime and other Important Farmlands

This table lists the map units in the survey area that are considered important farmlands. Important farmlands consist of prime farmland, unique farmland, and farmland of statewide or local importance. This list does not constitute a recommendation for a particular land use.

In an effort to identify the extent and location of important farmlands, the Natural Resources Conservation Service, in cooperation with other interested Federal, State, and local government organizations, has inventoried land that can be used for the production of the Nation's food supply.

Prime farmland is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil quality, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. The water supply is dependable and of adequate quality. Prime farmland is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

For some of the soils identified in the table as prime farmland, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures.

A recent trend in land use in some areas has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

Unique farmland is land other than prime farmland that is used for the production of specific high-value food and fiber crops, such as citrus, tree nuts, olives, cranberries, and other fruits and vegetables. It has the special combination of soil quality, growing season, moisture supply, temperature, humidity, air drainage, elevation, and aspect needed for the soil to economically produce sustainable high yields of these crops when properly managed. The water supply is dependable and of adequate quality. Nearness to markets is an additional consideration. Unique farmland is not based on national criteria. It commonly is in areas where there is a special microclimate, such as the wine country in California.

In some areas, land that does not meet the criteria for prime or unique farmland is considered to be *farmland of statewide importance* for the production of food, feed, fiber, forage, and oilseed crops. The criteria for defining and delineating farmland of statewide importance are determined by the appropriate State agencies. Generally, this land includes areas of soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some areas may produce as high a yield as prime farmland if conditions are favorable. Farmland of statewide importance may include tracts of land that have been designated for agriculture by State law.

In some areas that are not identified as having national or statewide importance, land is considered to be *farmland of local importance* for the production of food, feed, fiber, forage, and oilseed crops. This farmland is identified by the appropriate local agencies. Farmland of local importance may include tracts of land that have been designated for agriculture by local ordinance.

Report—Prime and other Important Farmlands

Prime and other Important Farmlands—Humacao Area, Puerto Rico Eastern Part		
Map Symbol	Map Unit Name	Farmland Classification
Cf	Catano loamy sand, 0 to 2 percent slopes	Not prime farmland
Uo	Urban land-Catano complex, 0 to 2 percent slopes	Not prime farmland

Data Source Information

Soil Survey Area: Humacao Area, Puerto Rico Eastern Part
 Survey Area Data: Version 14, Sep 13, 2022



GOBIERNO DE PUERTO RICO
Oficina Estatal de Conservación Histórica

Friday, December 11, 2020

Lauren Bair Poche

Architectural Historian, Historic Preservation Manager
HORNE Federal, LLC

SHPO: 06-05-19-01 PUERTO RICO DISASTER RECOVERY, CDBG-DR GAP TO LOW INCOME HOUSING TAX CREDITS (LIHTC) PROGRAM: JARDINES DE LOIZA PROJECT, LOIZA, PUERTO RICO

Dear Ms. Poche,

The SHPO has received and reviewed the above referenced project in accordance with 54 USC 306108 (commonly known as Section 106 of the National Historic Preservation Act, as amended) and 36 CFR Part 800: *Protection of Historic Properties*. The State Historic Preservation Officer (SHPO) is to advise and assist federal agencies and other responsible entities when identifying historic properties, assessing effects upon them, and considering alternatives to avoid or reduce the project's effects.

Our records support your finding **no historic properties affected** for the proposed undertaking.

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

Sincerely,

Carlos A. Rubio-Cancela
State Historic Preservation Officer

CARC/GMO/MB/SG



 <p>GOVERNMENT OF PUERTO RICO Department of Housing</p>	<p>PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM: LOW INCOME HOUSING TAX CREDIT (LIHTC) PROGRAM Section 106 NHPA Effect Determination, Archaeology</p>
<p>Case ID: SHPO 12-14-89-01</p>	<p>Project Location (Street Address): Jardines de Loíza, PR-188, km 10.4, Medianía Alta</p>
<p>City: Loíza</p>	<p>Project Coordinates: 18.430547°, -65.876780°</p>

<p>Applicant Name: Mutual Development Service Corp.</p>	
<p>TPID (Número de Catastro): 065-000-005-76 & 065-020-036-29</p>	
<p>Type of Undertaking: <input type="checkbox"/> New Construction <input checked="" type="checkbox"/> Substantial Repair</p>	
<p>Vacant Lot: No</p>	<p>Construction Date (if applicable): 1995 & 2001</p>
<p>Property Size (acres): 4.71 acres</p>	<p>FEMA / Local Funded Demolition Removal: NO</p>

<p>SOI Qualified-Archaeologist: Sharon Meléndez Ortiz</p>
<p>Date Reviewed: September 26, 2020</p>

SCOPE OF WORK
<p>The applicant is seeking Community Development Block Grant disaster recovery funds financed by the federal Department of Housing and Urban Development due to damage received by the 2017 Hurricanes Irma and Maria. It is a Section 106 undertaking due to the use of federal dollars. Activities related to this project will be done in a manner that does not meet Stipulations II.A.1 and/or II.B.9 of the Addendum to the Programmatic Agreement.</p>
<p>DEFINE THE AREA OF POTENTIAL EFFECTS <i>(Describe the location and extent [size and depth] of all potential ground disturbing activities):</i></p>
<p>The proposed action is the improvement of Jardines de Loíza, a multistory housing complex in compliance with Section 106 NHPA Effect Determination. The proposed project area site is located at Jardines de Loíza, PR-188, km 10.4, Medianía Alta ward, in the municipality of Loíza.</p>
<p>The Jardines de Loíza residential project was built with the purpose of being rented under the Section 8 Program, administered by the United States Department of Housing and Urban Development (HUD), to provide housing for people with limited resources. Jardines de Loiza consists of 107 walk-up units, of which 59 units have two (2) bedrooms and 48 units have three (3) bedrooms. In addition to the units, the development has an administration building, basketball court and a playground for children. The project was built in two phases. The construction of the first phase (80 units, recreational facilities and the community center) was completed in 1995 and its occupation was authorized under the use permit 94-21-D468-00C-U. Phase two of the project (27 units) was completed in 2001 and its occupation was authorized under the use permit 01PU2-CET00-04581.</p>
<p>The proposed action consists in carrying out minor repairs to the buildings, and to provide electric and potable water protection systems as preparation for emergencies and / or atmospheric phenomena. The proposed action includes: interior renovation of the units</p>

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for the disabled (6); repair of balcony floors; interior and exterior painting; replacement of luminaires with energy saver luminaires; reorganization of the parking lot behind the communal building and provision of additional parking spaces; repair and improvement of the landscaping; installation of an emergency power plant; installation of a reserve potable water cistern with pump; installation of bicycle racks; installation of surface for 'Walking Trail'; reorganization of the two play-ground areas and replacement of recreational equipment; relocation and improvement of garbage station; repair of access control; expansion of the Community Center; installation of solar panels in the upper part of the Community Center; and installation of tanks to collect rainwater.

The project's area of potential effects corresponds to the 4.71 acres parcel's limit. It is limited to the north by access roads, to the east and south by the parcels' boundaries, and to the west by PR-188 and an access road. The APE includes the staging area.

<u>Presence of Known Archaeological Concerns:</u>	YES	NO
Known Archeological Resources Located within 1-km radius of the proposed project area.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Proposed project area is located within an NRHP-Listed or Eligible Historic District.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proposed project area is located within an NRHP-Listed or Eligible Archaeology District.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proposed project area is located within a Traditional Urban Center.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

District OR Traditional Urban Center Name (if applicable):

<u>Archaeological Site Potential Factors:</u>	YES	NO
Activities Substantially Conform to the Original Footprint of the Building or Structure.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Proposed project area is located on Significantly Disturbed Soils (Describe nature and extent of disturbance below.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Proposed project area is located on Well-draining Soil Series	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Slope within the proposed project area is in excess of 30 degrees (57.7%)	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Description of Soil Disturbance (if applicable): The APE has been previously disturbed by development activities including, but not necessarily limited to, site preparation for construction, deposit of fill to avoid flood levels, excavations for foundations, landscaping and underground utilities.

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NATURAL SETTING *(Discuss the natural setting of the proposed project including location, landform, slope, distance to water, soils, and vegetation.):*

The municipality of Loíza is located on the northern coastal plain of Puerto Rico. The project area is located on an alluvial plain, 0.73 km east of the mighty Río Grande de Loíza, and 0.84 km south of the Atlantic Ocean. The topography of the site is completely flat. It sits at 3 m above sea level.

The soil in the area has been classified as Cataño loamy sand, 0 to 2 percent slopes (Cf). The Cataño series consists of very deep, excessively drained, rapidly permeable soils found in beach areas along the coast. They formed in regolith of beach sand deposits that consists of sand-size shell fragments, quartz grains, and miscellaneous volcanic subrounded fragments

The vegetation is typical of a residential complex, consisting mainly of ornamental grass and shade trees.

CULTURAL SETTING AND PREVIOUS INVESTIGATIONS *(Discuss the cultural setting for the proposed project including previously identified archaeological sites, NRHP listed/eligible historic properties, and cultural resource studies conducted within one mile of the project area.):*

The area that now occupies the municipality of Loíza has been populated since long before the European colonization. Within its territory, there are reported more than 50 pre-Columbian sites, six (6) of them within a 1-km radius of the project area. These are: type site Hacienda Grande (LZ0100002), located 0.70 km south; cave Cueva Mela (LZ0100031), 0.79 km south; cave Cueva Dolores (LZ0100032), 0.67 km SW; Cueva María de la Cruz (LZ0100001), 0.82 km SW; rock shelter Cantera (LZ0100021); and the Elenan hamlet site Las Yucas (LZ0100026 or LO-26).

The latter site -LO-26- is especially relevant to this determination as it is located within the APE. This site was first reported in 1977, and it was mentioned by Juan González Colón in the Phase IA-IB study that he conducted for the project Jardines de Loíza back in 1991. He excavated 67 test pits, two of which resulted positive to four fragments of Elenan Ostionoid pottery. He concluded that the small site covered an area of 46 by 33 m, and that it was impacted by sand extraction, burial of garbage and planting activities. A Phase II Evaluation was carried out by González Colón in 1995, with the objective of assessing LO-26's horizontal and vertical limits, integrity and eligibility to the NRHP. He excavated 60 test pits, 23 with positive results; five 1x1m stratigraphic units, of which three were positive; and a scrape of an area of 3 x 7 m. He concluded that LO-26 is a small ellipsoidal site characterized by the absence of food remains, especially those of marine

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origin. González Colón recommended a mitigation or phase III data recovery as the site is eligible to the NRHP under Criterion D: research potential, and it was going to be adversely affected by the project Jardines de Loíza. The data recovery of LO-26 was carried out by González Colón in 2001. For this phase, 27 2 x 2 m stratigraphic units were excavated. The archaeological materials recovered were predominantly Elenan ceramic fragments and some lithics. The absence of shell and bone materials was notable. A post mold and six possible open burning furnaces (teepees) were also identified. The study concluded that LO-26 was a ceramic production satellite hamlet. What may have remained of this site after the data recovery was covered by more than a meter of fill.

Loíza was officially founded in 1719, but the region was inhabited by Spaniards since the beginning of the colonization of the Island, first in the quest for gold, and after that to produce sugar cane. This industry, which propitiated the construction of several sugar mills in the late 16th century, continued until the second half of the 20th century. The traditional urban center of Loíza is 0.22 km east of the project area. The NRHP-listed Parroquia Espíritu Santo lies 0.41 km NW of the project area.

Ten (10) additional cultural resources surveys have been carried out within a 0.76 km radius, three (3) of them with positive results (see Table). In the Phases IA conducted by Maurás Casillas in 2003 and Pantel in 2002, the investigators concluded that the area is sensitive and thus recommended additional studies. Pantel reported pre-Columbian pottery in the phase IA-IB conducted in 2010 for the project *Desvío Sur Urbanización de Loíza desde la intersección de la PR-187 con la PR-188*, located 0.50 km south of the project area; and in the Phase IB carried out in 2002 for the project *Mejoras a la Carr. PR-187*, 0.06 km east. For the latter, he concluded that the artifacts belonged to nearby site Hacienda Grande (LZX0100002). Marlene Ramos also reported pre-Columbian pottery in the phase IA-IB for the project *Loíza Region Connection to the Carolina S.T.P., First stage*, conducted in 1984 in an area 0.31 km SW of the project area.

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DETERMINATION OF POTENTIAL EFFECTS
<p>Discuss the archaeological potential for the proposed project location:</p> <p>Evidently, the archaeological potential of the proposed project location is high. As part of the building permitting process to develop Jardines de Loíza, three archaeological studies were carried out. The archaeological site LO-26 site was identified, evaluated, and mitigated. The data recovery of the site, located in the northeast part of the property (see figure), was implemented as a way to mitigate the adverse effect of the Jardines de Loíza project on it, and as a way of preserving the site by record. After the implementation of the data recovery and acceptance of the report, the SHPO agreed with a determination of "No adverse effect" as stated in a letter dated from May 9, 2003.</p> <p>The improvement actions that are being proposed are limited to previously evaluated areas, so the potential to find previously unknown resources within the APE is minimal. These activities are limited to areas that have already been impacted by the construction of the residential complex. It is therefore understood that the undertaking does not have the potential to have an indirect or direct adverse effect on what may remain of LO-26 site. As such, I understand that a No adverse effect determination is appropriate for this undertaking.</p>

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

No Historic Properties Affected
 No Adverse Effect
 Adverse Effect

(No Adverse Effect Conditions or Proposed Adverse Effect Resolution here, if needed)

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:

 GOVERNMENT OF PUERTO RICO Department of Housing	PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM: LOW INCOME HOUSING TAX CREDIT (LIHTC) PROGRAM Section 106 NHPA Effect Determination, Archaeology	
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Table of archaeological sites, historic properties and historic districts located within the project area or within a 0.50-km radius

Name	SHPO id #	IPRC id #	Distance/Direction	Description	NRHP
Hacienda Grande	LZ0100002	LO-2	0.70 km (S)	Pre-Columbian settlement. Type site of Hacienda Grande style pottery.	Eligible
Cueva Mela	LZ0100031	-	0.79 km (S)	Rocky shelter with archaic and Saladoid artifacts.	No data
Cueva Dolores	LZ0100032	-	0.67 km (SW)	Rocky shelter with Saladoid artifacts.	No data
Parroquia Espíritu Santo			0.41 km (NW)	Catholic church	Listed
Las Yucas	LZ0100026	LO-26	Within the APE	Elenan Ostionoid ceramic production satellite hamlet	Eligible
Cueva María de la Cruz	LZ0100001	LO-1	0.82 km (SW)	Rock shelter with pre-columbian artifacts and human burials. Pre-ceramic, Saladoid and Elenoid.	No data
Cantera	LZ0100021	LO-21	0.92 km (SE)	Rock shelter with pre-Columbian artifacts Saladoid style.	No data

Table of cultural resources surveys conducted within the project area or within a 0.50-km radius

Author	Phase/Title	Year	SHPO / IPRC code	Results	Distance/Direction
Antonio Daubón	IA-IB/ Proyecto Centro de Salud Familiar	1994	04-08-93-03	Negative	0.76 km SW
Juan González	IA-IB/ Proyecto Construcción de Gimnasio	2000	09-05-01-02	Negative	0.17 km SW
Agamemnon Gus Pantel Tekakis	IA-IB/ Desvío Sur Urbanización de Loíza desde la intersección de la PR-187 con la PR-188	2010	04-06-10-01	Positive to Pre-Columbian pottery.	0.50 km S
Marlene Ramos	IA-IB/ Loíza Region Connection to the Carolina S.T.P., First stage	1984	10-28-83-30	Positive to Pre-Columbian pottery.	0.31 km SW
Adalberto Maurás	IA-IB/ Urb. Palmarenas	2002	ICP/CAT-LO-02-09-03	Negative	0.32 km (NE-SE)

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Author	Phase/Title	Year	SHPO / IPRC code	Results	Distance/ Direction
Juan González Colón	III/ Jardines De Loiza Apartment Complex Sitio De Las Yucas (LO-26) Informe Final	2003	ICP/CAT-LO-03-10-04	Positive. Site Las Yucas (LO-26), located 0.34 mi NE of the proposed project area.	Within the APE
Juan González Colón	II/ Jardines De Loiza Apartment Complex Informe Final	1996		Positive. Site LO-26 is eligible to the NRHP.	Within the APE
Juan González Colón	IA-IB/ Jardines De Loíza Apartment Complex	1991	ICP/CAT-LO-91-04-04	Positive. Two of the 67 test pits resulted positive to 4 fragments of precolonial ceramics.	Within the APE
Adalberto Maurás Casillas	IA/ Escuela Superior Vocacional	2003	ICP/CAT-LO-03-09-07	Sensitive area.	0.61 km (SW)
Antonio Daubón Vidal	IA-IB/ Centro de Salud Familiar	1994	ICP/CAT-LO-94-05-04	Negative.	0.27 km (SW)
Miguel Rodríguez López	IB/ Loíza Region Connection to Carolina Regional Systems Second Stage (From Sta. 51+18.32 to Sta. 64+51.31)	1985	10-28-83-17/ ICP/CAT-LO-85-01-03	Negative.	0.24 km (SW)
Agamemnon Gus Pantel Tekakis	IA/ Carr. PR-187 (AC-018760) (Etapa 1 - Desvío) (Etapa 2 - Ensanche) (Etapa 3 - Mejoras Geométricas)	2002	ICP/CAT-LO-02-10-01	Sensitive area.	0.29 km (SE)
Agamemnon Gus Pantel Tekakis	IB/ Carr. PR-187 (AC-018760) (Etapa 1 - Desvío) (Etapa 2 - Ensanche) (Etapa 3 - Mejoras Geométricas)	2002	ICP/CAT-LO-02-10-02	Positive. A concentration of artifacts was observed between test pits 1 and 10. It can be associated to site Hacienda Grande.	0.06 km (NE-SE)
Antonio Daubón Vidal	IA-IB/ Boulevard PR-187	1994	ICP/CAT-LO-94-05-03	Negative.	0.29 (SW)



GOVERNMENT OF PUERTO RICO
Department of Housing

PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM:
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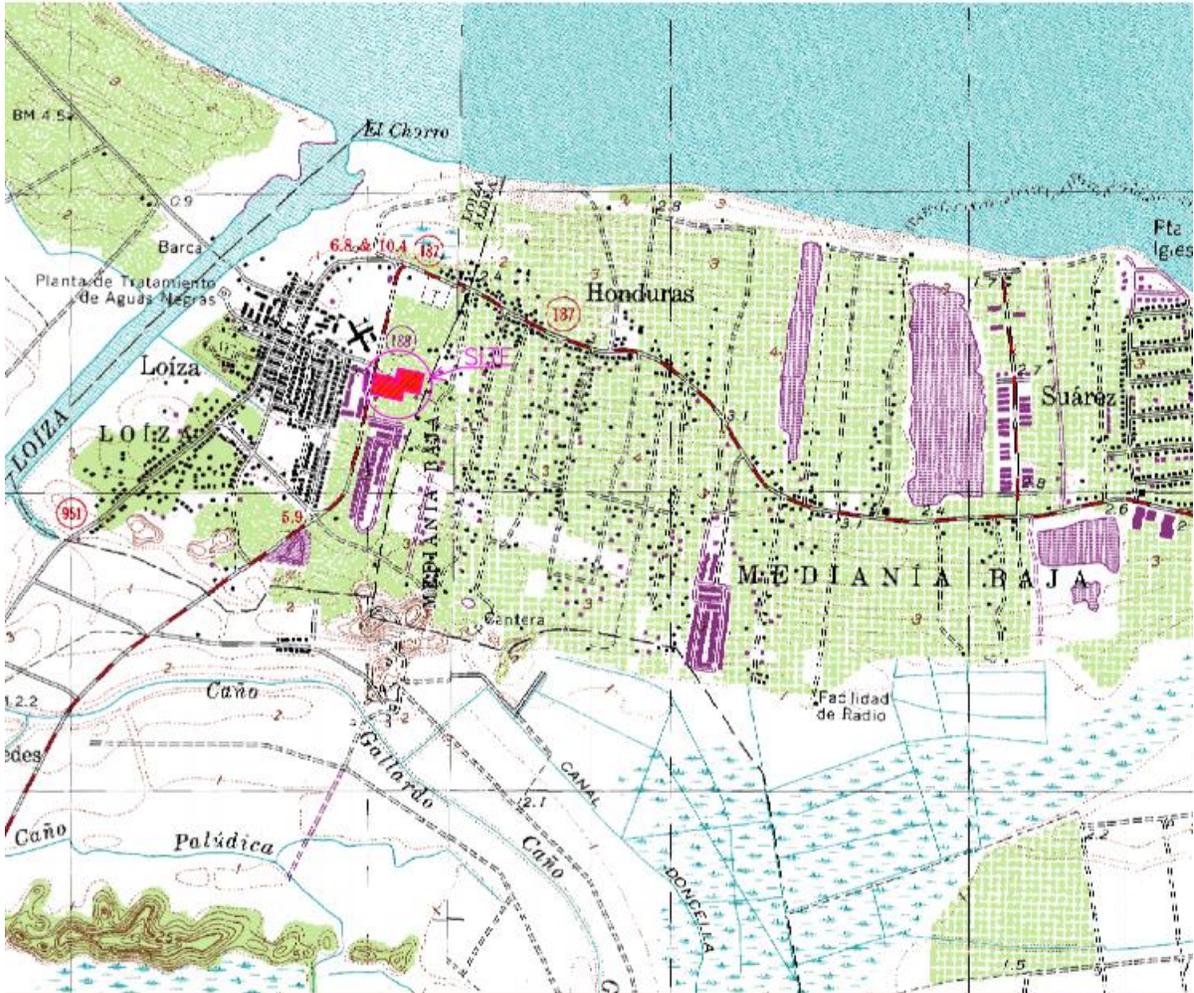
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Project (Parcel) Location - USGS Topographic Map



COORDINATES
X = 14,762.2425
Y = 20,110.9325

JARDINES DE LOIZA APARTMENTS
LOCATION PLAN
SCALE : 20,000

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Project (Parcel) Location - Aerial Map



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Soils Map



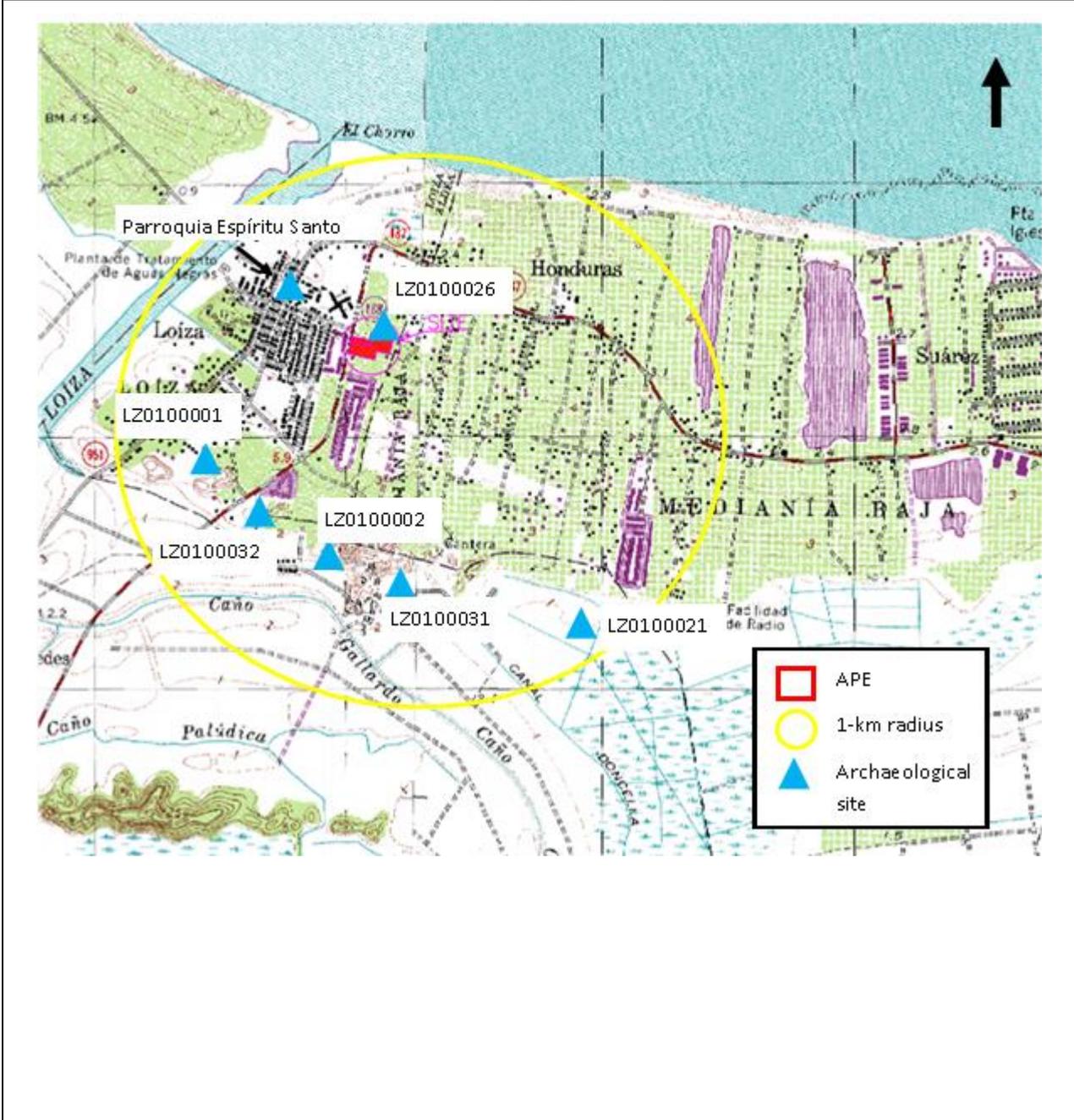
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Project (Parcel) Location with Previously Recorded Cultural Resources - Aerial Map



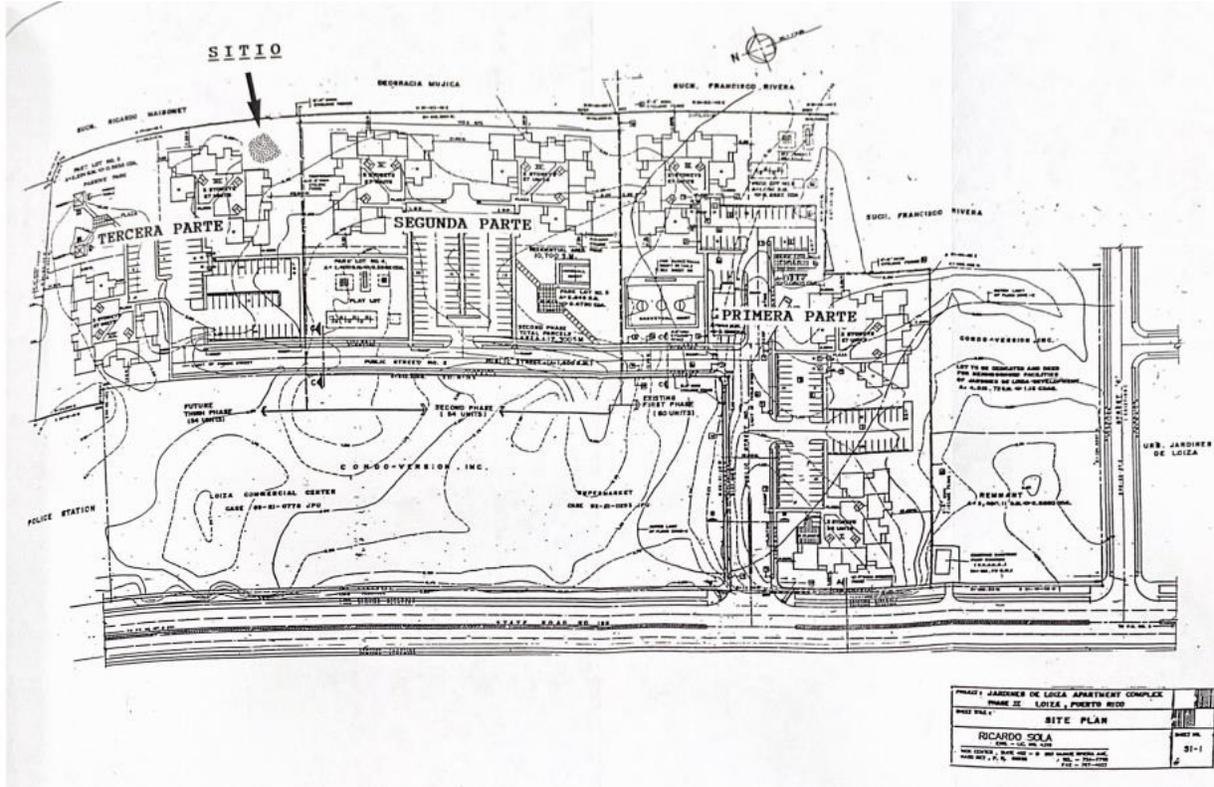
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**Project (Parcel) Location with Previously Recorded Cultural Resources
USGS Topographic Map**



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Site Plan with the location of LO-26



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<p>Photo #: 1</p>	<p>Description (include direction): Aerial view of Jardines de Loíza, looking east.</p>
<p>Date: no data</p>	



<p>Photo #: 2</p>	<p>Description (include direction): View of the entrance to Jardines de Loíza, looking west.</p>
<p>Date: 09/25/20</p>	

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<p>Photo #: 3</p>	<p>Description (include direction): General view of the southwestern building and its parking area, looking southwest.</p>
<p>Date: 09/25/20</p>	



<p>Photo #: 4</p>	<p>Description (include direction): General view of the southeastern building and its parking area, looking south.</p>
<p>Date: 09/25/20</p>	

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<p>Photo #: 5</p>	<p>Description (include direction): General view of center-eastern building and its parking area, looking north.</p>
<p>Date: 09/25/20</p>	



<p>Photo #: 6</p>	<p>Description (include direction): General view of the passive recreation area south of the center-eastern building, looking east.</p>
<p>Date: 09/25/20</p>	

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<p>Photo #: 7</p>	<p>Description (include direction): View of the administrative office building, located south of the basketball court, looking east.</p>
<p>Date: 09/25/20</p>	



<p>Photo #: 8</p>	<p>Description (include direction): General view of the center-eastern and northeastern building and recreative area, looking southeast.</p>
<p>Date: 09/25/20</p>	

 <p>GOVERNMENT OF PUERTO RICO Department of Housing</p>	<p>PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM: LOW INCOME HOUSING TAX CREDIT (LIHTC) PROGRAM Section 106 NHPA Effect Determination, Archaeology</p>
<p>Case ID: SHPO 12-14-89-01</p>	<p>Project Location (Street Address): Jardines de Loíza, PR-188, km 10.4, Medianía Alta</p>
<p>City: Loíza</p>	<p>Project Coordinates: 18.430547°, -65.876780°</p>



<p>Photo #: 9</p>	<p>Description (include direction): General view of northeastern building, where site LO-26 was/is located.</p>
<p>Date: 09/25/20</p>	



<p>Photo #: 10</p>	<p>Description (include direction): Back view of the northeast building, looking south. The difference in level with the adjoining plot due to the deposited fill can be appreciated.</p>
<p>Date: 09/25/20</p>	

SHARON MELÉNDEZ ORTIZ

Sharon Meléndez-Ortiz has over 27 years of professional experience in Archaeology. She was staff Archaeologist at the Puerto Rico State Historic Preservation Office, where she reviewed projects pursuant section 106 of the National Historic Preservation Act compliance. She has taken several specialized trainings in Cultural Resources Management in Puerto Rico and the United States. She has conducted and directed research in Puerto Rico and México. She is the author or co-author of more than 100 cultural resource management reports; national register nominations; historic ceramics catalogues; guides of archaeology for history teachers; editor of two (2) professional publications; editor of one (1) academic publication; offered workshops for secondary school teachers and university professors; and dictated lectures for colleagues, as well as elementary and secondary school students. She has experience in historical archaeology, ethnoarchaeology, urban archaeology, precolonial archaeology, preservation planning and public outreach. She has directed several regional surveys in southern Puerto Rico.

Sharon Meléndez Ortiz meets the Secretary of Interior's Qualification Standards. She is listed in the Council for the Protection of the Terrestrial Heritage of Puerto Rico's list for conducting phases I, II and III studies.

AREAS OF EXPERTISE

- Research design for the identification, evaluation and documentation of precolonial and colonial archaeological sites.
- Cultural Resources Management; orientation and compliance with local and federal laws for the management and treatment of cultural resources and historic properties; site interpretation and public outreach.
- Programmatic Agreement certifications and Sectio 106 NHPA Effect Determination Forms
- Caribbean archaeology.
- Latin-American and Caribbean history.
- Development of workshops in the areas of history, archaeology and preservation for school students, teachers and university professors.

EDUCATION

2008 - 2010	UNIVERSITY OF PUERTO RICO, RÍO PIEDRAS CAMPUS PhD Program in History, with concentration in Puerto Rico and the Caribbean
2000 – 2002	UNIVERSITY OF LEICESTER, ENGLAND. MA in Archaeology and Heritage. Awarded with Distinction.
1997 – 2003	CENTRO DE ESTUDIOS AVANZADOS DE PUERTO RICO Y EL CARIBE. Graduate courses in History and Puerto Rican Studies (15 credits)
1994 - 1996	ESCUELA NACIONAL DE ANTROPOLOGÍA E HISTORIA, MÉXICO. M.A. candidate, Ethnoarchaeology and Historical Archaeology

1988 – 1991 UNIVERSITY OF PUERTO RICO, RÍO PIEDRAS CAMPUS.
BA in Anthropology, Magna Cum Laude.

PROFESSIONAL EXPERIENCE IN ARCHAEOLOGY

- 2013- 2020 Advisor on Cultural Affairs, Highways and Transportation Authority. Compliance with laws and regulations; preparation and review of proposals; preparation and evaluation of archaeological studies; preparation of protection plans for historic properties; preparation and revision of agreements.
- 2015-2020 Archaeologist and cultural resources management consultant. Virellas and Associates. Cultural Resources Management; archival and field research; preparation of environmental documents, phase IA-IB, II and III surveys.
- 2014-2020 Archaeologist and cultural resources management consultant. TRCE. Cultural Resources Management; archival and field research; preparation of environmental documents, phase IA-IB, II and III surveys, archeological impact statements.
- 2019-2020 Archaeologist. Tetra Tech. Puerto Department of Housing R3Program Consultation.
- 2016 Principal Investigator. *Sistema de riego de las tres haciendas, Santa Isabel, Puerto Rico. District nomination to the National Register of Historic Places.* Preparation of district nomination to the National Register of Historic Places. Conducted with a National Historic Preservation Grant.
- 2016 Co-Principal Investigator. *Historic Development of the Bastion of San Agustín and the Old San Juan Fortifications.* Prepared for Richard Grubb and Associates.
- 2014-2015 Principal Investigator. *Reconocimiento general de sitios arqueológicos en el municipio de Santa Isabel* – General survey of archaeological sites in the municipality of Santa Isabel, including evaluation of sites and records. Conducted with a National Historic Preservation Grant.
- 2013-2014 Consultant Archaeologist. Forest Plan Assessment, *El Yunque* National Forest. Assessment of the condition of cultural and historic resources within the boundaries of the *El Yunque* National Forest.
- 2012-2013 Principal Investigator. *Reconocimiento general de sitios arqueológicos en el municipio de Salinas* – General survey of archeological sites in the municipality of Salinas, including evaluation of sites and records. Conducted with a National Historic Preservation Grant.
- 2010-2013 Senior Archeologist. CSA Group. Cultural Resources Management; archival and field research; preparation of environmental documents, phase IA-IB, II and III surveys, archeological impact statements and Cultural Resources Management Plans.
- 2011 Archeologist. Soltec International Inc. Assisting with the acquisition of archaeological background information through literature and desk reviews, and site assessments for various existing telecommunications tower sites located in Puerto Rico.
- 2011 Principal Investigator. *Reconocimiento general de sitios arqueológicos en los municipios de Arroyo y Patillas*- General survey of archaeological sites in the municipalities of

- Arroyo and Patillas, including evaluation of sites and records. Conducted with a National Historic Preservation Grant.
- 2010 Principal Investigator. *Sitios Brujos: Reconocimiento general de sitios arqueológicos en el municipio de Guayama* - General survey of archaeological sites in the municipality of Guayama, including evaluation of sites and records. Conducted with a National Historic Preservation Grant.
- 2009 Archaeologist, community education. *Reconocimiento general de sitios arqueológicos prehistóricos en el Municipio de Orocovis*. (General survey of prehistoric archaeological sites in the Municipality of Orocovis.) Prepared for the State Historic Preservation Office with the Historic Preservation Fund.
- 2008 Archaeologist, *Proyecto Ciudadela*, Santurce: Preparation of catalog data sheets of archaeological materials and museographic script for exhibition of archaeological documentation.
- 2005 Co-principal Investigator. *Identificación de indicadores arqueológicos para los establecimientos comerciales y públicos en los centros urbanos del siglo XIX en Puerto Rico: caso de Aibonito*. Research funded in part with Federal funds from the National Park Service through the State Historic Preservation Office.
- 2005 Archaeologist. *Inventario de recursos culturales de Toa Baja*. Federally funded research for the National Park Service through the State Historic Preservation Office. Hired by Jacqueline López Meléndez.
- 1999 – 2003 Historic Property Specialist. Puerto Rico State Historic Preservation Office. Staff archeologist, Section 106 compliance; public outreach; National Register nominations evaluation, research and redaction.
- 1998 Fiel Archaeologist. *Investigaciones arqueológicas en la Ermita de San Antonio de Padua de la Tuna, Isabela*. Research conducted for the Master's degree thesis of archaeologist Jaqueline López.
- 1998 Assistant Researcher Archaeologist. *Proyecto de inventario y evaluación de yacimientos arqueológicos en Loíza, Puerto Rico*. Hired by Marisol J. Meléndez Maíz, Principal Investigator.
- 1997 – 1998 Principal Investigator. *Cerámica de importación y cerámica criolla, siglos XVI al XVIII, Bastión de San Justo, Viejo San Juan*. Research funded in part with federal funds from the National Park Service through the State Historic Preservation Office.
- 1997 Assistant Archaeologist. *Punta Ostiones, Cabo Rojo: Análisis de las excavaciones realizadas por Herbert Spinden en 1916*. Hired by Marisol J. Meléndez Maíz, Principal Investigator.
- 1996 Assistant Archaeologist. *Inventario de recursos culturales del municipio de Las Piedras*. Hired by Marisol J. Meléndez Maíz, Principal Investigator.
- 1994 Director and Coordinator. *Práctica de campo de etnoarqueología de estudiantes de licenciatura, Valle del Mezquital, Estado de México, Escuela Nacional de Antropología e Historia, México*. Hired by Dr. Patricia Fournier, Project Director.

- 1993 - 1994 Archaeologist. *Etnoarqueología de la comunidad Otomí El Pino Suárez*. Otomi Ceramics Formative Ethnoarchaeology Research Project, México.
- 1993 Archaeology Technician. *Excavación en La Cueva de las Varillas, Teotihuacan, Estado de México, México*. Work performed for Dr. Linda Manzanilla.
- 1993 Archaeology Technician. *Prospección arqueológica en la zona arqueológica de Xochicalco, Morelos, México*. Work performed for Engr. Luis Barba and Dr. Linda Manzanilla.
- 1993 Archaeology Technician. *Levantamiento topográfico de la Pirámide Circular Cuicuilco, México D.F. y la Cueva de la Basura, Teotihuacan, Estado de México, México*. Work performed for the National School of Anthropology and History, Mexico with Dra. Linda Manzanilla.

EXPERIENCE IN CONTRACT ARCHAEOLOGY

DATA RECOVERIES (PHASES III) AND ARCHAEOLOGICAL MONITORING

- 2019 Principal Investigator. Corrección de deslizamiento PR-676, km 7.2, Vega Baja. Informe de supervisión arqueológica.
- 2019 Principal Investigator. Reparación de emergencia del Puente no. 217 sobre la Quebrada Gandel en Mayaguez. Prepared for the Highways and Transportation Authority.
- 2017-2018 Principal Investigator. *Monitoría arqueológica de los trabajos del proyecto Emergency Works PR-3, KM 69.3 to 70.6, Naguabo*. Prepared for the Highways and Transportation Authority.
- 2017-2018 Principal Investigator. *Monitoría arqueológica de los trabajos del proyecto Reemplazo de atarjea colapsada en la PR-3 km 57.1, Ceiba*. Prepared for the Highways and Transportation Authority.
- 2017-2018 Principal Investigator. *Supervisión arqueológica Atarjeas Históricas en la PR-546, Proyecto Paseo de Ciclistas y Peatones de Coamo*. Prepared for the Highways and Transportation Authority.
- 2014-2017 Principal Investigator. *Supervisión arqueológica proyecto Deslizamiento Avenida Luis Muñoz Rivera (PR-25R), KM 1.1, San Juan*. Contracted by the Highways and Transportation Authority through Del Valle Group.
- 2015-2016 Principal Investigator. *Supervisión arqueológica Decanter Hotel, calle San José, esquina Luna, Viejo San Juan*. Prepared for Hotel Decanter.
- 2014-2016 Principal Investigator. *Supervisión arqueológica Fases I y II Paseo Lineal de Puerta de Tierra*. Contracted by SCF.
- 2015 Consultant and Local Liaison. *Phase III Caguitas, Bo. Cañabón, Caguas*. Archaeological survey of prehistoric site performed by Panamerican Consultants.

- 2014-2015 Co-principal Investigator. *Documentación arqueológica Fase III para el proyecto Conector PR-158, desde la PR-743 hasta la PR-1, Cayey*. Hired by archeologist Jaqueline López Meléndez.
- 2014 Principal Investigator. *Documentación arqueológica de la atarjea ubicada en la PR-308, KM 3.5, Cabo Rojo*. Prepared for the Highways and Transportation Authority.
- 2013-2014 Principal Investigator. *Documentación arqueológica fase III, Plaza Apartments Coamo*. Data recovery of a colonial site in the urban core of Coamo.
- 2013 Principal Investigator. *Guamaní River Bridge, Bridge No. 138. Highway PR-3, KM 141, Spanning the Guamaní River, Machete Ward, Guayama*. Prepared for the Highways and Transportation Authority.
- 2012 Principal Investigator. *Laboratorio arqueológico de la mitigación arqueológica fase III del Proyecto Plaza Universitaria, Río Piedras*. Prepared for Desarrollos Universitarios Inc., Ceramic analysis of a pottery production site in Río Piedras, Puerto Rico.
- 2009 Historical Investigator. *Investigación arqueológica fase III: estructuras históricas de la hacienda La Florentina, PR-2, km 163.57, Hormigueros, Puerto Rico*. Research performed for archaeologist Marisol J. Meléndez Maíz.
- 2008 Field Archaeologist. *Documentación de estructura de ladrillos, Proyecto desvío de Isabela, Puerto Rico*. Hired by archaeologist Jaqueline López Meléndez.
- 2006 - 2008 Co-principal Investigator and Field Archaeologist. *Documentación arqueológica proyecto Mejoras a las calles Fortaleza, San Justo y Tanca, Viejo San Juan*. Hired by archeologist Marisol J. Meléndez Maíz.
- 2005-2006 Co-principal Investigator. *Investigación arqueológica, proyecto Ciudadela, Santurce*. Hired by archeologist Marisol J. Meléndez Maíz.
- 2003 – 2004 Co-principal investigator. *Archaeological laboratory and final report preparation for the archaeological mitigation carried out for the Rio Piedras - UPR alignment of Tren Urbano along Ponce de Leon Avenue*. Hired by archeologist Marisol J. Meléndez Maíz.
- 2003 – 2004 Research Archaeologist. *Monitoría arqueológica del soterrado de utilidades en el centro histórico de Aibonito, Primera fase*. Hired by archeologist Marisol J. Meléndez Maíz.
- 1999 Auxiliary Research Archaeologist and Field Supervisor. *Archaeological Monitoring and Data Recovery, U.S.C.G. Base, La Puntilla, San Juan*. Hired by archeologist Marisol J. Meléndez Maíz.
- 1997 – 1999 Auxiliary Research Archaeologist and Field Supervisor. *Archaeological Monitoring and Data Recovery Program, Tren Urbano Project, Río Piedras Section*. Hired by archeologist Marisol J. Meléndez Maíz.
- 1998 – 1999 Auxiliary Research Archaeologist and Field Supervisor. *Evaluación arqueológica fase III, Áreas de Disposición V y B-1, Barrios Celada y Hato Nuevo, Gurabo, Proyecto del Dragado del Lago Carraízo*. Hired by archeologist Marisol J. Meléndez Maíz.
- 1997 Archaeologist. *Monitoría de las líneas de gas de San Juan Gas, Viejo San Juan*. Hired by archeologist Marisol J. Meléndez Maíz.

1997 Assistant Archaeologist. *Evaluación arqueológica fase III, La Urnaga, San Sebastián.* Hired by Marlene Ramos Vélez, Project Archaeologist.

ARCHAEOLOGICAL EVALUATIONS / DETERMINATION OF ELIGIBILITY TO THE NATIONAL REGISTER OF HISTORIC PLACES (PHASES II)

- 2017 Principal Investigator. *Historical-Architectural Study for the Project Demolition and New Construction of Facilities in Commercial Parcel A, Luis Llorens Torres, San Juan, Puerto Rico.* Prepared for Iglesias Vázquez and Associates.
- 2015-2016 Co-principal investigator and Report Author. *Archeological Survey and National Register of Historic Places Eligibility Determination at the Aibonito Flowers Inventory Property, Asomante, Aibonito, Puerto Rico.* Prepared for New South Associates, Inc.
- 2013 Principal Investigator. *Investigación arqueológica fase II Dow AgroSciences/Mycogen Seeds, PR, Guayama Salinas.* Prepared for Dow AgroSciences.
- 2009 Field Archaeologist and Historian. *Archaeological evaluation Phase II for PR-158 Connector from PR-743 until PR-1 Project, Cayey, Puerto Rico.* Documentation of a multicomponent site. Prepared for the Department of Transportation and Public Works.
- 2005 Co-principal investigator. *Evaluación arqueológica proyecto Ciudadela, Santurce.* Hired by archeologist Marisol J. Meléndez Maíz.
- 2004 Co-principal investigator. *Evaluación arqueológica de la Plaza de Recreo de Toa Baja.* Hired by archeologist Marisol J. Meléndez Maíz.
- 2003 Research Archaeologist. *Evaluación arqueológica fase II, Proyecto Mercado de Flores en la Antigua Tabacalera de Aibonito.* Hired by Marisol J. Meléndez Maíz, Principal Investigator.
- 1997 – 1998 Auxiliary Research Archaeologist. *Evaluación arqueológica fase II, Áreas de Disposición V, Barrio Hato Nuevo, Gurabo, Proyecto del Dragado del Lago Carraízo.* Hired by Marisol J. Meléndez Maíz, Principal Investigator.
- 1997 Auxiliary Archaeologist. *Evaluación arqueológica fase II, Mejoras al sistema sanitario, Comunidad Esperanza, Vieques.* Hired by Marlene Ramos, Principal Investigator.
- 1996 – 1997 Research Archaeologist and Ceramics Analyst. *Stage II Archaeological Evaluation, Bajadero Site, Eleuterio García Street, Bajadero Community, Arenalejos Ward, Arecibo.* Hired by Marisol J. Meléndez Maíz, Principal Investigator.
- 1996 Auxiliary Laboratory Archaeologist. *Evaluación arqueológica fase II, Proyecto Plaza Gelpi anexo al Museo de Historia de Ponce, calle Salud esquina Isabel, Ponce.* Hired by Marisol J. Meléndez Maíz, Principal Investigator.
- 1996 Auxiliary Archaeologist and Laboratory Analyst. *Evaluación arqueológica fase II para tres proyectos localizados en el Barrio Palmas Altas, Barceloneta.* Hired by Marisol J. Meléndez Maíz, Principal Investigator.
- 1996 Auxiliary Archaeologist. *Evaluación arqueológica fase II, Comunidad Punta Pozuelo, Guayama.* Hired by archaeologist Andrés Príncipe.

1996 Archaeology Technician. *Stage II Evaluation, Arecibo Flood Control Project for the US Army Corps of Engineers.* Contracted by Panamerican Consultants, Inc.

RECONAISSANCE SURVEYS AND DOCUMENTAL RESEARCH (PHASES IA AND IB)

2020 Principal Investigator. Phase IA-IB PR-158 Bypass in Cayey. Prepared for TRCE.

2020 Principal Investigator. Phase IA-IB. Demolición del antiguo Cesco, Calle Gautier Benítez, Caguas. Prepared for the Municipality of Caguas.

2020 Principal Investigator. Phase IA Replacement of La Riviera Bridge, Corozal. Prepared by J.O. Virellas and Associates.

2020 Principal Investigator. Phase IA Landslide and road repairs PR-10, km 44.7 to 45.2, Utuado. Prepared for Virella and Associates.

2020 Principal Investigator. Phase IA. Replacement of Victor Rojas Bridge in Arecibo. Prepared for Batlle.

2020 Principal Investigator. Phase IA Replacement of Bridge 652 in Sabana Grande. Prepared for the PRHTA.

2020 Principal Investigator. Fase IA. Instalación de puente temporero sobre el Puente 176 en Aibonito. Prepared for PRHTA.

2020 Principal Investigator. Phase IA-IB Barahona Cell Site. Prepared for Innovatel.

2020 Principal Investigator. Phase IA-IB Cañaboncito Cell Site. Prepared for Innovatel.

2020 Principal Investigator. Phase IA. Replacement of Bridge 670 in Arecibo. Prepared for Batlle.

2019 Principal Investigator. Phase I Cultural Resources Assessment. Replacement of Bridge no. 116 over Quebrada Ceiba, Ceiba. Prepared for J.O. Virellas & Associates.

2019 Principal Investigator. Phase IA Cultural Resources Assessment. Implementation of Preventive Maintenance Program Protocol, Rehabilitation and Scour Mitigation for Bridge 2315 at PR-53 km 66.5, Patillas. Prepared for TRCE.

2018-2019 Principal Investigator. Landslide and Road Damage Evaluation and Repair. Identification of Historic Properties and Assessment of Effects/Section 106 Review Process. Prepared for the PRHTA.

2017-2018 Principal Investigator. Revisión de proyectos de emergencia tras el paso de los huracanes Irma y María: Adjuntas, Ceiba y Naguabo. Prepared for the Highways and Transportation Authority.

2017 Principal Investigator. *Phase IA Cultural Resources Assessment for the project Improvement to Intersections PR-2, 2R and San Juan St (RUM Entrance, La Vita), PR-2 km 153.90, Mayaguez.* Prepared for Alpha Engineering.

- 2015-2016 Principal Investigator. Cultural Resources Assessment and Evaluation. *Replacement of Bridge no. 443 over Zequeira Channel, PR-951, KM 4.9, Loíza, Puerto Rico*. Prepared for Iglesias-Vazquez and Associates.
- 2015 Principal Investigator. *Evaluación arqueológica Fase IB, Rehabilitación Bloque 40, Centro Urbano, Carolina*. Prepared for the Municipality of Carolina.
- 2015 Principal Investigator. *Phase IA-IB View Point @ The Park, Bayamón*. Prepared for Edgardo Péres, Architect and Associates.
- 2015 Principal Investigator. *Phase IB, Revitalización de Guajataca*. Prepared for Recurso Ciudad.
- 2015 Principal Investigator. *Phase IA-IB, Revitalización del malecón de Salinas*. Prepared for Toro Architects.
- 2015 Principal Investigator. *Phase I Cultural Resources Assessment, Improvement to Bridge no. 1096, over Guanajibo River, San Germán*. Prepared for TRCE.
- 2015 Principal Investigator. *Phase IA-IB, Replacement of Bridge 144 over the Blanco River, Naguabo*. Prepared for the Highways and Transportation Authority.
- 2015 Principal Investigator. *Phase IA-IB, Replacement of Bridge 194 over the Blanco River, Naguabo*. Prepared for the Highways and Transportation Authority.
- 2015 Principal Investigator. *Phase IB, Reconstrucción y Reparación a la PR-10, desde el km 59 al 62, Utuado*. Prepared for JoVirellas and Associates.
- 2015 Principal Investigator. *Phase IA-IB Cultural Resources Assessment Replacement of Bridge No. 217 over Gandel Creek, PR-106, Mayaguez*. Prepared for JoVirellas and Associates.
- 2014-2015 Principal Investigator. *Phase I cultural Resources Assessment, New Marine Facility for U.S. Customs Border Protection, Mayaguez Marine Unit at Cabo Rojo*. Presented to the U.S. Customs and Border Protection through Salo Engineering.
- 2014 Principal Investigator. *Phase IA-IB Cultural Resources Assessment, Replacement of Bridge No. 122 Over Santiago River, Naguabo, PR*. Prepared for TRCE.
- 2014 Principal Investigator. *Phase IA-IB Cultural Resources Assessment, Barranquitas South Bypass, Barranquitas*. Prepared for TRCE.
- 2014 Principal Investigator. *Estudio arqueológico fase IA-IB para el proyecto Cataño Housing for the Elderly, PR-5, KM 20.2, barrio Palmas, Cataño*. Prepared for MD Engineering Group.
- 2014 Principal Investigator. *Estudio arqueológico fase IB. Proyecto Revitalización de Guajataca, Isabela*. Prepared for Recurso: Ciudad.
- 2014 Principal Investigator. *Evaluación de recursos culturales fase I, Mejoras al puente no. 261, Maricao*. Prepared for TRCE.
- 2014 Principal Investigator. *Estudio arqueológico fase IB Proyecto Paseo Puerta de Tierra Fases III y IV*. Prepared for SCF Architects.

- 2014 Principal Investigator. *Fase IA, Ensanche de la PR-140 y PR-642, Bo. Florida Adentro, Florida*. Prepared for the Highways and Transportation Authority.
- 2014 Principal Investigator. *Phase IA Cultural Resources Assessment, Parcel 46 at Naval Activity Puerto Rico, Ceiba*. Presented to U.S. Customs and Border Protection through Salo Engineering.
- 2013 Principal Investigator. *Evaluación arqueológica fase IA, Proyecto Paseo Lineal de Puerta de Tierra, San Juan*. Prepared for SCF Architects.
- 2013 Principal Investigator. *Evaluación arqueológica Fase IA, Rehabilitación Bloque 40, Centro Urbano, Carolina*. Prepared for the Municipality of Carolina.
- 2012 Principal Investigator. *Fase IA-IB, Reemplazo del puente 1828, Barceloneta*. Prepared for Engr. David Moreno and the Highways and Transportation Authority.
- 2012 Principal Investigator. *Fase IA-IB, Mejoras al cementerio II, Bo. Celada, Gurabo*. Prepared for the Municipality of Gurabo.
- 2012 Principal Investigator. *Fase IA-IB, Nuevo cementerio municipal, Bo. Quebrada, Camuy*. Prepared for the Municipality of Camuy.
- 2012 Principal Investigator. *Fase IA-IB, Parque de patineta, Bo. Quebrada, Camuy*. Prepared for the Municipality of Camuy.
- 2012 Principal Investigator. *Fase IA, Mejoras a la plaza de recreo de Camuy*. Prepared for the Municipality of Camuy.
- 2012 Principal Investigator. *Fase IA, Biblioteca municipal de Gurabo*. Prepared for the Municipality of Gurabo.
- 2012 Principal Investigator. *Fase IA-IB, Facilidades de área de patinetas y gimnasio, Bo. Quebrada, Camuy*. Prepared for the Municipality of Camuy.
- 2012 Principal Investigator. *Fase IA-IB, Gurabo Elderly Housing*. Prepared for the Municipality of Gurabo.
- 2012 Principal Investigator. *Fase IA-IB, Complejo Deportivo Barrio Celada, Gurabo*. Prepared for the Municipality of Gurabo.
- 2010 Co-investigator. *Evaluación arqueológica fase IB Obras de control de inundaciones del Río Jacaguas, Juana Díaz*. Hired by archeologist Jaqueline López Meléndez.
- 2010 Co-investigator. *Fase IA-IB, Instalación de sistema pluvial y sanitario, Las Croabas, Fajardo*. Hired by the archeologist Jaqueline López Meléndez.
- 2009 Field Archaeologist and Historian. *Fase IA-IB, Paseo de los presidentes, Puerta de Tierra*. Hired by archeologist Jaqueline López Meléndez.
- 2009 Field Archaeologist. *Fase IA-IB, Conector PR-158, desde la PR-743 hasta la PR-1, Cayey*. Hired by archeologist Jaqueline López Meléndez.

- 2008 Co-Investigator. *Flood control project for communities in southern part of Juana Diaz, Puerto Rico.* Hired by archaeologist Jaqueline López Meléndez.
- 2008 Field Archaeologist. *Evaluación arqueológica fase I, Proyecto de control de inundaciones del Río de la Plata.* Hired by archeologist Marisol J. Meléndez Maíz.
- 2008 Principal Investigator. *Evaluación arqueológica fase IA: Proyecto Mejoras a las calles Tetuán, Recinto Sur y Terrazas de la Recinto Sur, Viejo San Juan.* Hired by archeologist Marisol J. Meléndez Maíz.
- 2006 Field Archaeologist. *Proyecto Centro Vacacional UTIER, Arecibo.* Hired by archeologist Marisol J. Meléndez Maíz.
- 2005 Principal Investigator. *Proyecto Enmienda al Desvío de Lares, PR-111, Municipio de Lares, Puerto Rico.* Performed for URS-Caribe.
- 2005 Principal Investigator. *Proyecto Conector PR-128, Lares, Puerto Rico.* Performed for URS-Caribe.
- 2004 Principal Investigator. *Proyecto rediseño de la Intersección de la PR-3 con la PR-185 y el Ensanche y Mejoras al Puente No. 706 de la PR-185 sobre la Avenida 65 de Infantería en el Municipio de Canóvanas, Puerto Rico.* Performed for URS-Caribe.
- 2003 – 2004 Principal investigator: *Evaluación arqueológica fase IA de once centros urbanos: Naranjito, Juana Dlaz, Guayanilla, Vieques, Rincón, San Lorenzo, Barceloneta, Santa Isabel, Peñuelas, Salinas y Vega Baja* - Survey of eleven urban centers, producing a comprehensive report that included specific recommendations for urban areas.
- 1999 Principal Investigator. *Evaluación de recursos culturales fase I, Proyecto, Fajardo Community Private School, Baqrrio Quebrada Fajardo, Fajardo.* Contracted by Engr. M. López.
- 1999 Assistant Fiel Archaeologist and Laboratory Director. *Evaluación arqueológica fases IA-IB, Proyecto corte Ave. Muñoz Rivera, drenaje pluvial, área de estacionamiento, Guardia Nacional de Puerto Rico, Viejo San Juan.* Hired by Jaqueline López, Principal Investigator.
- 1999 Field Archaeologist. *Evaluación arqueológica fase IA-IB, Planta de Energía Total, Guayama.* Hired by Archaeologist Marlene Ramos.
- 1998 Field Archaeologist. *Evaluación arqueológica fase IB, Mejoras al Sistema Sanitario Comunidad Olimpo, Guayama.* Hired by Archaeologist Andrés Príncipe Jácome.
- 1998 Field Archaeologist. *Evaluación arqueológica fase IA-IB, Mejoras al Sistema de Acueductos, Barrios Quebrada Grande, Quebradillas y Honduras, Barranquitas.* Hired by Jaqueline López, Principal Investigator.

SPECIALIZED COURSES

- 2001 *Section 106: An Introduction.* Washington D.C., USA. Seminar offered by the National Institute of Preservation.

- 2001 *Taller de Conservación de Materiales Muebles*. San Juan, Puerto Rico. Workshop offered by Fine Arts International and the National Park Service.
- 2000 *Applications of the GIS Software*. San Juan, Puerto Rico. Workshop offered by Aurelio Castro, GIS Consultant.
- 2000 *Integrating Cultural Resources Management in NEPA Compliance*. Washington D.C., USA. Seminar offered by the National Institute of Preservation.
- 1999 *Section 106 of the National Historic Preservation Act: Working with the Revised Regulations*. San Juan, Puerto Rico. Seminar offered by the Advisory Council on Historic Preservation.

LECTURES AND PUBLICATIONS

- 2017 *National Register Nomination for the District Sistema de riego de las tres haciendas, Santa Isabel, Puerto Rico*. Department of the Interior of the United States, National Park Service.
- 2017 *Bajo las calles de San Juan: una mirada arqueológica a las entrañas de la ciudad murada*. Lecture presented at the Museo Felisa Rincón de Gautier, Viejo San Juan.
- 2017 *Las murallas en la arqueología de San Juan*. Co-author with Marisol Meléndez Maíz. Lecture presented in the Symposium of the History Association of the Old San Juan, San Cristóbal Castle.
- 2017 *Ojalá que llueva café en el campo*. Lecture presented at the State Historic Preservation Office.
- 2015 *Fantasmas a plena vista: Sitios arqueológicos industriales en el llano costero del sur*. In *Revista Patrimonio*, published by the State Historic Preservation Office.
- 2015 *Del escrito al hecho*. Talk delivered at the State Historic Preservation Office.
- 2014 *Arqueología detectivesca: Reconocimiento de sitios en Salinas, mirando al sur desde el acervo documental*. Talk delivered at the State Historic Preservation Office.
- 2013 *Fantasmas a plena vista: Sitios arqueológicos industriales en el llano costero del sur*. Presentation at the Symposium on Industrial Archaeology, State Historic Preservation Office.
- 2009 *Del Machete al hechizo. Formas de resistencia entre los esclavos y esclavas de origen africano y afro-caribeño durante el periodo colonial*. *Journal of Historical Research*, Number 6. University of Puerto Rico.
- 2003 *National Register Nomination for Punta Ostiones Site, Cabo Rojo*. Department of the Interior of the United States, National Park Service.
- 2002 *Punta Ostiones: The Research Potential of a Prehistoric Caribbean Site*. Thesis submitted as partial requirement for the degree of Master in Archaeology and Heritage, School of Archaeological Studies, University of Leicester, England.

- 2002 *Más Allá de Indiana Jones: Una breve introducción a la arqueología puertorriqueña.* Archeology workshop for teachers. Co-authored with: Miguel A. Bonini, Reniel Rodríguez and Aida B. Rivera. Special publication of the State Historic Preservation Office.
- 2001 *Arqueología de contrato, realidades y perspectivas.* Co-author: Lourdes S. Domínguez, PhD. Presentation in the forum *Aportaciones de la arqueología de contrato al conocimiento arqueológico en Puerto Rico*, held on November 8, 2001 in San Juan, Puerto Rico. (Pending publication)
- 2000 *Foreword.* In: *OEPH Semana de la Arqueología.* Publication of the State Historic Preservation Office.

LENGUAGE SKILLS

- Fluent in Spanish and English (speaking, reading and writing)
- Basic in Portuguese, Italian and French (reading)
- Basic in Turkish (speaking)

COMPUTER SKILLS

- Microsoft Office (Word, Excel, PowerPoint, Access and Publisher)
- Typing

2020 LOW-INCOME HOUSING TAX CREDITS & CDGB-DR GAP TO LIHTC
APPLICATION 2020-026 - Jardines de Loíza Apartments
Project: Jardines de Loíza Apartments
Owner: Jardines de Loíza, LLC

SHPO submission letter

October 20, 2020

Carlos A. Rubio Cancela
Director Ejecutivo
Oficina Estatal de Conservación Histórica
Cuartel de Ballajá (Tercer Piso)

**Puerto Rico Disaster Recovery, CDBG-DR Gap to Low Income Housing Tax Credits (LIHTC) Program:
Jardines de Loíza Project (SHPO ID 06-05-19-01)**

Section 106 NHPA Effect Determination Submittals

Dear Mr. Rubio,

On February 9, 2018, an allocation of Community Development Block Grant - Disaster Recovery (CDBG-DR) funds was approved by the Department of Housing and Urban Development (HUD) the United States 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 (Housing) aims to lead a comprehensive and transparent recovery for the benefit of Puerto Rico residents.

To faithfully comply with HUD's environmental requirements, the Puerto Rico Department of Housing contracted Horne Federal, LLC (HORNE) to provide environmental records review services that will support the Department's objectives Puerto Rico Housing (PRDOH) for CDBG-DR.

On behalf of Puerto Rico Department of Housing, we are submitting documentation for the proposed Jardines de Loía Project in Loíza for your review. Please note this project was submitted for your review in 2019 (SHPO ID 06-05-19-01) and this correspondence and submission is a follow-up to that that correspondence.

The documentation includes:

1. **2020-026-SHPO.001**-Project Description with Estimated Budget;
2. **2020-026-SHPO.002**-USGS Topographic Quadrangle Map;
3. **2020-026-SHPO.003**-Site Plan (SI-3);
4. **2020-026-SHPO.004**- Ground Level Photographs;
5. **2020-026-SHPO.005**-As-Found/As-Built Plans;
6. **2020-026-SHPO.006**-Schematic/Preliminary Drawings;
7. **2020-026 SHPO Letter** - Correspondence dated June 10, 2019 - From the Puerto Rico State Historic Preservation Office Eng. Ricardo Sola;
8. **2020-026 PRDOH LIHTC Archaeology Form** - Archeological Form prepared by Arql. Sharon Melendez Ortiz;
9. **2020-026PRDOH LIHTC Non-Historic Architecture Form**- Architecture Form prepared by Arq. Jorge Lizardi Pollock, Ph.D.;

10. **2020-026 SOI-Qualified Staff Resumes** – ArqI. Sharon Melendez Ortiz and Arq. Jorge Lizardi Pollock, Ph.D.

Please contact me by email at lauren.poche@hornellp.com or phone at 225-405-7676, or Mr. Javier Nunez by email at javier.nunez@hornepr.com or by phone at 787-207-1270 with any questions or concerns.

Kindest regards,

A handwritten signature in cursive script that reads 'Lauren B. Poche'.

Lauren Bair Poche

Architectural Historian, Historic Preservation Manager

Enclosures

From: Lauren Poche Lauren.Poche@hornellp.com
Subject: RE: SHPO Jardines v2
Date: 19October, 2020 at 10:33 PM - Oct 19, 2020
To: Julio Colón jcolon@mutualdsc.com
Cc: Victoria Colon vcolon@mutualdsc.com, Carlos M. Colón McFarland cmcolon@mutualdsc.com, lihtc-cdbg@vivienda.pr.gov, Ebonar@vivienda.pr.gov, Giancarlo Martinez Chavez Giancarlo.Martinez@hornepr.com, Luis Mattei-Lozano Luis.Mattei@hornepr.com, Pdeleon@vivienda.pr.gov, Sacevedo@vivienda.pr.gov

Thank you Julio.

I have submitted this proposed project to SHPO for their review. I will notify you when I receive a response.

Thank you,
Lauren

Lauren B. Poche, M.A.

Historic Preservation Manager - Architectural Historian, Government Services | **HORNE**

O: 225.755.9798 D: 225.341.6171 M: 225.405.7676

10000 Perkins Rowe, Suite 610 Bldg G, Baton Rouge, LA 70810

hornellp.com [LinkedIn](#) [Twitter](#) [Blog](#)

From: Julio Colón <jcolon@mutualdsc.com>
Sent: Monday, October 19, 2020 3:44 PM
To: Lauren Poche <Lauren.Poche@hornellp.com>; lihtc-cdbg@vivienda.pr.gov; Ebonar@vivienda.pr.gov; Giancarlo Martinez Chavez <Giancarlo.Martinez@hornepr.com>; Luis Mattei-Lozano <Luis.Mattei@hornepr.com>; Pdeleon@vivienda.pr.gov; Sacevedo@vivienda.pr.gov
Cc: Victoria Colon <vcolon@mutualdsc.com>; "Carlos M. Colón McFarland" <cmcolon@mutualdsc.com>
Subject: Re: SHPO Jardines v2

Greetings,

First of all, many thank's for the comments.

We have fixed them all.

Attach will find the complete Jardines de Loíza SHPO documents on pdf format.

Thank's,

Julio M Colón
Mutual Development Service Corp.
787-439-2196

On 19Oct, 2020, at 3:37 PM - Oct 19, 2020, Carlos M. Colón McFarland <cmcolon@mutualdsc.com> wrote:

Thank you for your follow up email, this email fell through the cracks. We are addressing it ASAP. We should have it within the next hour.

Thank you,

Carlos M Colon

On Oct 19, 2020, at 3:13 PM, Lauren Poche <Lauren.Poche@hornellp.com> wrote:

Good afternoon,

I just wanted to follow up on this and see if you had any questions about the comments I had sent?

Lauren B. Poche, M.A.

Historic Preservation Manager - Architectural Historian, Government Services | **HORNE**

O: 225.755.9798 D: 225.341.6171 M: 225.405.7676

10000 Perkins Rowe, Suite 610 Bldg G, Baton Rouge, LA 70810

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From: Lauren Poche

Sent: Monday, October 5, 2020 1:57 PM

To: 'Carlos M. Colón McFarland' <cmcolon@mutualdsc.com>

Cc: LIHTC-CDBG <lihtc-cdbg@vivienda.pr.gov>; Eduardo Bonar Blanco <Ebonar@vivienda.pr.gov>; Giancarlo Martinez Chavez <Giancarlo.Martinez@hornepr.com>; Luis Mattei-Lozano <luis.mattei@hornepr.com>; Sally Z. Acevedo-Cosme <Sacevedo@vivienda.pr.gov>; Pedro A. De Leon-Rodriguez <Pdeleon@vivienda.pr.gov>

Subject: RE: SHPO Jardines v2

Importance: High

Good afternoon

GOOD AFTERNOON,

I have looked over the submitted documents and noticed some items that I would like to request be addressed.

All are small and should be easy to fix, but I am not able to address these myself. I have highlighted and added comments to the relevant pages: 1, 2, 42, 43 (global comment regarding SHPO ID), 63 (same SHPO ID comment), 67, and please include the resume for Architect Lizardi for consistency.

Once these are completed, I can submit to SHPO and initiate the consultation process for the proposed project. Let me know if you have any questions.

Thank you,
Lauren

Lauren B. Poche, M.A.

Historic Preservation Manager - Architectural Historian, Government Services | **HORNE**

O: 225.755.9798 D: 225.341.6171 M: 225.405.7676

10000 Perkins Rowe, Suite 610 Bldg G, Baton Rouge, LA 70810

hornellp.com [LinkedIn](#) [Twitter](#) [Blog](#)

From: Luis Mattei-Lozano <Luis.Mattei@hornepr.com>

Sent: Monday, October 5, 2020 11:18 AM

To: Sally Z. Acevedo-Cosme <Sacevedo@vivienda.pr.gov>; Lauren Poche <Lauren.Poche@hornellp.com>; Pedro A. De Leon-Rodriguez <Pdeleon@vivienda.pr.gov>

Cc: LIHTC-CDBG <lihtc-cdbg@vivienda.pr.gov>; Eduardo Bonar Blanco <Ebonar@vivienda.pr.gov>; Giancarlo Martinez Chavez <Giancarlo.Martinez@hornepr.com>

Subject: FW: SHPO Jardines v2

Sally / Lauren –

For the correspondence action, attached SHPO submission for the Jardines de Loiza project.

Thanks,

LUIS R. MATTEI-LOZANO, AIT, MPM, Assoc. AIA
Senior Associate, Housing | **HORNE Puerto Rico**
Main: 939-910-9300 | Dir: 787-777-1452

269 Ponce de Leon Ave, Hato Rey, PR, 00918

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From: LIHTC-CDBG <lihtc-cdbg@vivienda.pr.gov>
Sent: Monday, October 5, 2020 12:07 PM
To: Luis Mattei-Lozano <Luis.Mattei@hornepr.com>
Subject: FW: SHPO Jardines v2

Luis, caso para SHPO. Gracias.

CDBG-DR Program
Visit us: www.cdbg-dr.pr.gov
Write us: infocdbg@vivienda.pr.gov
<image001.png>

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From: "Carlos M. Colón McFarland" <cmcolon@mutualdsc.com>
Sent: Saturday, October 3, 2020 6:30 PM
To: LIHTC-CDBG <lihtc-cdbg@vivienda.pr.gov>
Cc: Maria Martinez <mmartinez@afv.pr.gov>; Javier E. Trologo Irizarry <Javier.E.Trogolo@afv.pr.gov>; Eduardo Bonar Blanco <Ebonar@vivienda.pr.gov>; "Elba (AFV) Castro Lebrón" <ecastrn@afv.nr.pnv>

~~-----~~
Subject: Fwd: SHPO Jardines v2

Re: Jardines De Loiza – 2020-026-SHPO
107 Multifamily Units in Loíza

Good afternoon,

Please acknowledge receipt of SHPO documentation and submission regarding Jardines De Loiza project# 2020-026 for NOFA 2020 LIHTC CDG-DR application process.

Project Name:
Jardines de Loíza Apartments
Located in: Loíza, PR.

Included Documentation:

1. 2020-026-SHPO.001-Project Description with estimated budget.
 2. 2020-026-SHPO.002-USGS Topographic Quadrangle Map.
 3. 2020-026-SHPO.003-Site Plan (SI-3).
 4. 2020-026-SHPO.004- Ground Level Photographs (included: NHPA Effect determination, archeological forms prepared by Licensed Archeologist Sharon Melendez).
 5. 2020-026-SHPO.005-As-Found/As-Built Plans existing condition plan (SI-1).
 6. 2020-026-SHPO.006-Schematic/Preliminary Drawings (A-1 to A-14).
 7. Initial SHPO - Letter dated 2019 - From SHPO Office to Ing. Ricardo Sola.
 8. NHPA Effect Determination - archeological forms prepared by Licensed Archeologist Sharon Melendez Ortiz.
 9. PRDOH LIHTC Non-Historic Architecture - prepared by Licensed Archeologist Sharon Melendez Ortiz.
 10. Licensed Archeologist Resume - Sharon Melendez Ortiz.
- Should you need any additional information please do not hesitate to contact me,

Carlos M Colon McFarland
Mutual Development Service Corp.
787-691-8585
cmcolon@mutualdsc.com



GOBIERNO DE PUERTO RICO

Oficina Estatal de Conservación Histórica
State Historic Preservation Office

June 10, 2019

Eng. Ricardo Solá

Solá Engineering Consultants, PSC
867 Ave. Muñoz Rivera
Oficina 402-D
Edificio Vick Center
San Juan, Puerto Rico 00925-2128

SHPO: 06-05-19-01 JARDINES DE LOIZA APARTMENTS (WALK UPS),
LOCALIZADO EN LA CARR. 188 DEL BO. MEDIANIA BAJA, LOÍZA, PUERTO
RICO

Our Office has received and reviewed the above referenced project in accordance with 54 USC 306108 (commonly known as Section 106 of the *National Historic Preservation Act, as amended*) and 36 CFR Part 800: *Protection of Historic Properties* from the Advisory Council on Historic Preservation. The State Historic Preservation Officer (SHPO) is to advise and assist federal agencies and other responsible entities when identifying historic properties, assessing effects upon them, and considering alternatives to avoid or reduce the project's effects.

While we believe that an Agency's finding of no historic properties affected is appropriate for this undertaking, the Federal Agency will need to submit an official determination for our review in order to complete the Section 106 process.

If you have any questions concerning our comments, do not hesitate to contact our Office.

Sincerely,

Carlos A. Rubio-Cancela
State Historic Preservation Officer

CARC/GMO/SGA/srf





March 27, 2023

Jorge L. Sala Morales
ARCON, LLC
P.O. Box 7821
Ponce, PR 00732-7821

**Re: Reconstruction Jardines de Loiza Apartments
State Road PR-188 Km. 10.4
Municipality of Loiza, PR**

Dear Mr. Sala:

We hereby certify that the proposed area of new construction within the Jardines de Loiza Apartments Complex will not encroach upon any wetland. The existing project comprises four three-story residential building with 107 apartments, providing rental subsidies for low-income families through U.S. Rural Administration.

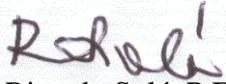
The first phase of 80 units, including a community building in the center of the site, was constructed between 1994 and 1995. The second phase, consisting of 27 apartments, was built north of the first phase in 2001. We are proposing a small expansion of 1,820 square feet to the community building's rear in an existing parking area, which was previously impacted during the parking construction in 1995.

There are no wetlands present on the project site, and there never have been any wetlands prior to the original construction. We have attached an annex letter from the Department of Army dated January 9, 1992, addressed to engineer Ricardo Solá, which confirms that the project as proposed does not require a Department of Army permit. Additionally, a letter dated October 28, 2020, from the Department of Army to engineer Erika Alcántara, confirms that the proposed rehabilitation of the existing housing project Jardines de Loiza will not require a Department of the Army permit.

Furthermore, we have included a letter of recommendation from the P.R. Department of Natural and Environmental Resources ("DRNA") October 28, 2021. The letter confirms that the DRNA's Environmental Division conducted a thorough search in the Geographic Information System ("GIS") of the Planning Board and found no critical habitat, critical elements, or conservation priority area in the proposed activity area. The DRNA has no objection to the proposed project.

Based on the previous analysis, we confidently conclude that no wetlands exist on the site of Jardines de Loiza Apartments.

Sincerely,

A handwritten signature in dark ink, appearing to read "R. Solá", is positioned above the typed name. The signature is written in a cursive style with a prominent initial "R".

Ricardo Solá, P.E.

President

Sola Engineering Consultants, PSC

Project Manager



DEPARTMENT OF THE ARMY
SAN JUAN AREA OFFICE, JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
400 FERNANDEZ JUNCOS AVENUE
SAN JUAN, PUERTO RICO 00901-3299

REPLY TO
ATTENTION OF

January 9, 1992

Regulatory Section

SUBJECT: Department of the Army Permit Application No. 199250015 (NP-JT)
Jardines de Loiza Apartments Complex (155 units) at Mediana
Baja Ward Loiza, Puerto Rico

Mr. Ricardo Sola
Cond. El Centro I
Suite 210
500 Munoz Rivera Ave.
Hato Rey, PR 00919

Dear Mr. Sola:

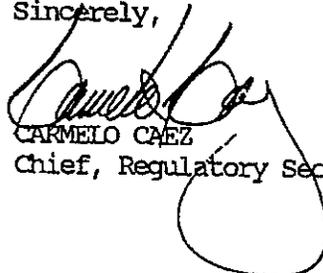
Your project as proposed will not require a Department of the Army permit in accordance with Section 10 of the Rivers and Harbors Act of 1899 as it is not located within the navigable waters of the United States. Furthermore, a permit will not be required in accordance with Section 404 of the Clean Water Act as it will not involve the discharge of dredged or fill material into waters of the United States.

Please be advised that this determination reflects current policy and regulations and is valid for a period no longer than 3 years from the date of this letter. If after the 3-year period, this determination has not been specifically revalidated by the Corps of Engineers, it shall automatically expire. This letter does not obviate the requirement to obtain any other Federal, Commonwealth, or local permits which may be necessary for your project.

This letter does not give absolute authority to perform the work as specified on your request. The proposed work may be subject to local building restrictions mandated by the National Flood Insurance Program. You should contact the PR Planning Board to determine if your site is located in a flood-prone or floodway area, and if you must comply with the local building requirements mandated by the National Flood Insurance Program. If the Planning Board cannot provide you the necessary information, you may provide our Jacksonville District a letter with a small scale map showing the location of the site, requesting a flood-hazard evaluation of the site. The request should be addressed to the Chief, Flood Control and Floodplain Management Branch, Jacksonville District, US Army Corps of Engineers, PO Box 4970, Jacksonville, Florida 32232-0019.

Thank you for your cooperation with our Regulatory Program.

Sincerely,


CARMELO CAIEZ
Chief, Regulatory Section



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
ANTILLES OFFICE
FUND. ANGEL RAMOS ANNEX BLDG., SUITE 202
383 F. D. ROOSEVELT AVE.
SAN JUAN, PUERTO RICO 00918

October 28, 2020

Regulatory Division
South Permits Branch
Antilles Permits Section
SAJ-1992-50015(NPR-CGR)

Eng. Erika Alcántara Martínez
400 Calle Calaf PMB 408
San Juan, Puerto Rico 00918-1314

Dear Eng. Alcántara:

Reference is made to your electronic message dated on October 14, 2020 for the rehabilitation of an existing housing project (Jardines de Loíza) built between years 1990 and 2001. The proposed activity is located at the existing housing project located at the east side of state road PR-187, Municipality of Loíza.

Based on available information, the U.S. Army Corps of Engineers issued a no permit required letter on January 9, 1992 for the referenced parcel of land where the existing housing project was built in the past. The proposed rehabilitation at the existing housing project will not require a Department of the Army permit, as the activity is not regulated.

This NPR does not address nor include any consideration for geographic jurisdiction on aquatic resources and shall not be interpreted as such.

This letter does not obviate the requirement to obtain any other Federal, State, or local permits that may be necessary for your project. Should you have any questions, please contact me at carmen.g.roman@usace.army.mil.

Thank you for your cooperation with our permit program.

Sincerely,

ROMAN.CARME
N.G.1246904878
2020.009.20065

Carmen G. Román
Project Manager

Enclosures



Recomendaciones

Jardines de Loíza Apartments

Datos de Localización

De acuerdo a la información suministrada se propone una actividad: Privada en:

Dirección Física

KM HM 10.4 CARR. 188
BO. MEDIANÍA BAJA
, PUERTO RICO

Loíza Puerto Rico, 00722

Número(s) de Catastro

065-020-036-29

Calificación

Distrito(s) de Calificación: R-I (99%), DT-G (1%)

Distrito en el Mapa de Inundabilidad: AE (65.9%), 0.2 PCT
(34.1%)

Tipo de Suelo: Cf (73.2%), SNS (26.8%)

Dueño

Mutual Development Service Corp.

Cabida

Cabida según escritura: 14647.35 metros cuadrados

Medioambiente

El Departamento de Recursos Naturales y Ambientales (DRNA) a través de su Oficial de Permiso asignado a la OGPe realizó una búsqueda en el Sistema de Información Geográfica (GIS) de la Junta de Planificación y no encontró en el área de la actividad propuesta hábitat crítico, elementos críticos ni área de Prioridad de Conservación. La División de Medioambiente no tiene objeción al proyecto propuesto. No obstante, deberá cumplir con los siguientes requerimientos: Parte del proyecto ubica en Zona AE, por tanto, deberá cumplir con el Reglamento sobre Áreas Especiales de Riesgo de Inundación (Reglamento de Planificación Núm. 13 - Reglamento sobre Áreas Especiales de Riesgo a Inundación) y la Resolución Núm. JP-HH-2016 (Guías para la Elaboración de Estudios Hidrológicos-Hidráulicos). 1. Previo a cualquier extracción de la corteza terrestre deberá cumplir con la Regla 3.4.1 y Sección 3.4.1.3 – (Permiso Único Incidental Operacional - Permiso de Actividad Incidental a una obra autorizada) del Reglamento Conjunto para la evaluación y expedición de permisos relacionados al desarrollo, uso de terrenos y operación de negocios. Se le apercibe que la Ley Núm. 132 de 25 de junio de 1968, según enmendada y su Reglamento, prohíben la extracción, excavación, remoción y dragado de material de la corteza terrestre sin el permiso correspondiente. 2. De ser necesario el corte de árboles, deberá cumplir con la Regla 3.4.1 y 3.4.2 – (Permiso Único Incidental Operacional - Autorización de Corte, Poda, Trasplante y Siembra de Árboles) del Reglamento Conjunto para la evaluación y expedición de permisos relacionados al desarrollo, uso de terrenos y operación de negocios. Se le apercibe que la Ley Núm. 133 de 1 de julio de 1975, según enmendada prohíbe el corte y poda de árboles sin el permiso correspondiente. 3. Deberá establecer un programa de reforestación utilizando especies nativas que además de ayudar a minimizar la erosión beneficien la vida silvestre. Esta medida es cónsona con la Ley para Fomentar la Siembra de Árboles Cuyas Frutas y/o Semillas Provean Alimento a Especies de Aves Silvestres de Puerto Rico (Ley Núm. 97 de 24 de junio de 1998), la cual establece lo siguiente: "En todo proyecto de reforestación en que se utilicen fondos públicos La o privados, o en una combinación de estos, un 15% en las áreas rurales y un 10% en las áreas urbanas del total de árboles a ser sembrados, serán de



Recomendaciones

Jardines de Loíza Apartments

especies cuyas frutas y/o semillas sirvan de alimento a las aves silvestres que residan temporal o permanentemente en ésta". 4. Deberá Presentar Certificación de Hábitat, según el Capítulo 9.13 del Reglamento Conjunto para la evaluación y expedición de permisos relacionados al desarrollo, uso de terrenos y operación de negocios. Dicha Certificación deberá ser tramitada en el DRNA, en conformidad con la Ley Núm. 241 de 15 de agosto de 1999, La Nueva Ley de Vida Silvestre de Puerto Rico, el Reglamento 6765 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 la Orden Administrativa Núm. 2010-09, Para Establecer los Procedimientos y Requisitos Para La Evaluación, Categorización y Mitigación de Hábitats. 5. Deberá cumplir con las disposiciones del Reglamento Conjunto para la evaluación y expedición de permisos relacionados al desarrollo Sección 5.1.2.2 Análisis de riesgos a deslizamientos y otras condiciones del subsuelo, que indica: para todo proyecto de urbanización, incluyendo urbanizaciones vía excepción, se tomará en consideración el riesgo a deslizamientos y otras condiciones del subsuelo mediante la presentación de un estudio geotécnico certificado por un ingeniero licenciado que evalúe la geología e hidrología del terreno, presencia de fallas geológicas, historial de deslizamientos en la zona, susceptibilidad del terreno a los mismos, topografía, presencia del materiales de depósitos de deslizamientos (QI) según descritos en los cuadrángulos geológicos de Puerto Rico por el USGS y las propiedades ingenieriles del subsuelo, entre otros. 6. De tener alguna descarga de escorrentía a cualquier cuerpo de agua durante la operación, deberá consultar a la Agencia Federal de Protección Ambiental para determinar si dichas descargas requieren un permiso "NPDES" de acuerdo al Código Federal de Reglamentación Número 40, Sección 122.26 (b) (14) (x). 7. Será responsabilidad del Peticionario previo las labores de remoción de extracción de los materiales de la corteza terrestre el obtener y mantener en vigor durante el Permiso General Para Otras Obras y/o un Permiso General Consolidado por la Oficina de Gerencias de Permisos (OGPe) para el área de operaciones objeto del permiso". 8. De descubrirse en el predio objeto de desarrollo algún cuerpo de agua superficial o subterráneo, sea perenne o intermitente, deberá informarlo inmediatamente al DRNA y demás agencias concernidas. 9. Se apercibe que cualquier obra de construcción que se realice en el cauce legal de ríos o de quebradas deberá cumplir con Estudio Hidrológico Hidráulico (EHH) y su endoso correspondiente del DRNA. Esta recomendación es solamente aplicable a la situación de hechos y los datos según presentados y evaluados en el caso y el Secretario Auxiliar 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 el endoso original se emitió bajo premisas falsas o fraudulentas.

Condiciones Especiales

NINGUNA

Condiciones Generales

Esta recomendación es solamente aplicable a la situación de hechos y los datos según presentados y evaluados en el caso. La OGP 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



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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.

Firma / Sellos

Fecha de Expedición:

28/OCT/2021



Ing. Gabriel Hernández Rodríguez
Secretario Auxiliar