



Repairs of Mayagüez Readiness
Center, Vega Baja Readiness Center,
Ponce Readiness Center, Arecibo
Readiness Center, Aibonito Readiness
Center, and Utuado Readiness Center

Different Facilities, Puerto Rico

TABLE OF CONTENTS

PART 1: GENERAL INFORMATION

- 1.1 ACRONYMOUS
- 1.2 DEFINITIONS
- 1.3 DESCRIPTION
- 1.4 BACKGROUND
- 1.5 PERFORMANCE PERIOD
- 1.6 FUNDS

PART 2: COST PROPOSAL CONSIDERATION

- 2.1 SCOPE OF WORKS
- 2.2 CONDITIONS
 - 2.2.1 GENERAL CONDITIONS
 - 2.2.2 UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS
CONTRACTS OF PUERTO RICO
 - 2.2.3 CONTRACT CLAUSES REQUIRED IN PURCHASES AND CONTRACTS
WITH FEDERAL FUNDS
 - 2.2.4 HUD GENERAL PROVISIONS
 - 2.2.5 HUD 4010
 - 2.2.6 IMPERATIVE INCLUSION CLAUSES
 - 2.2.7 SECURITY AND PROTECTION REQUIREMENTS
 - 2.2.7.1 Anti-Terrorism/Force Protection
 - 2.2.7.2 iWATCH
 - 2.2.7.3 TARP

ATTACHMENT LIST

ATTACHMENT 1: Scope of Works

ATTACHMENT 2: Uniform General Conditions for Public Works Contracts in Puerto Rico

ATTACHMENT 3: Contract Clauses Required in Purchases and Contracts with Federal Funds

ATTACHMENT 4: HUD General Provisions

ATTACHMENT 5: HUD 4010

ATTACHMENT 6: Imperative Inclusion Clauses

PART 1

GENERAL INFORMATION

1.1 ACRONYMOUS

1.2 DEFINITIONS

1.3 OVERVIEW

1.4 DESCRIPTION

1.5 PERFORMANCE PERIOD

1.6 FUNDS

PART 1: GENERAL INFORMATION

1.1 ACRONYMOUNS

ASG Administración de Servicios Generales

AT/OPSEC Antiterrorism/Operational Security Background Investigation

CAC Common Access Card

CD Compact Disc

CFMO Construction and Facilities Management Office

CFR Code Federal Regulation

CPM Critical Path Method

CTRA Colegio de Técnicos de Refrigeración de Aire Acondicionado

DD Department of Defense

DDD Damage, Description, and Dimensions

DoD Department of Defense

DFARS Defense Federal Acquisition Regulation Supplement

DoD Department of Defense

FAR Federal Acquisition Regulation

FEMA Federal Emergency Management Agency

FPCON Force Protection Condition

NGB National Guard Bureau

OSHA Occupational Safety and Health Agency

POC Point of Contact

PRARNG Puerto Rico Army National Guard

RC Readiness Center

RFI Request for Information

RUL Registro Unico de Licitadores

SAM System for Award Management

SF Square Feet

US United States

1.2 DEFINITIONS

Change Order - A written order issued by the PRARNG, or its duly authorized representative, to the Contractor, signed by both parties, covering, additions, deletions, and/or revisions in the Work and/or an adjustment in the Contract Price and/or the Contract Time, if any, issued on or after the Effective Date of the Contract. In Unit Price Contracts, a Change Order can also reflect a change in the number of items, as well as an increase or decrease, contained in the proposal. In Lump Sum Contracts, it reflects an order for additional or less work.

Contract - a written agreement, especially concerning with detailed services herein in this document.

Contractor - is an individual or entity that conducts business and is duly organized under the laws of the Government of Puerto Rico or foreign commercial organizations authorized to do business in Puerto Rico, registered in "Registro Unico de Licitadores" under the Puerto Rico General Services Administration (ASG), with: Unique Entity Identifier, CAGE Number and be active in SAM Registry. It will be who be awarded to perform the services and works described in this request.

Days - this term will be considered as calendar days.

Government - means Government of Puerto Rico, it is inclusive but not limited to other branches, municipalities and instrumentalities that administer Puerto Rico.

OWNER – means Puerto Rico Army National Guard.

PRARNG – means Puerto Rico Army National Guard.

Project Manager - The professional licensed and collegiate Engineer or Architect, designated in accordance with the Contract as the Contractor's authorized representative who is made by Contractor responsible for and placed in charge of the Work.

Project Schedule - A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Work

within the Contract Time.

Subcontractor - A Subcontractor is an individual or entity that has a direct contract with the Contractor to perform any of the Work at the Site. The term Subcontractor as referred throughout the Purchase Order Documents means the Subcontractor or his authorized representative.

1.3 OVERVIEW

This document defines the work that the Proposer shall perform for the “Restoration and Repairs of Mayagüez RC, Vega Baja RC, Ponce RC, Arecibo RC, Aibonito RC and Utuado RC”. The Proposer shall provide all work in connection with the repair and installation of items listed in the Damage, Description, Dimensions (DDD) Report validated by Federal Emergency Management Agency (FEMA). The Contractor is to provide the Puerto Rico Army National Guard (PRARNG) with all costs associated with the restoration of the facility to its pre-disaster design and function.

1.4 DESCRIPTION

The services in this scope of work are intended for the rehabilitation of all damages received during Hurricane María in the sites included and as described in the Damage, Description and Dimensions (DDD) Report generated by FEMA.

Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up and completion of the work.

1.5 PERFORMANCE PERIOD

Contractor will develop the activities indicated in the scope of work in a term of 180 days.

1.6 FUNDS

Appropriation funds for the project are insurances, FEMA and CDBG-DR.

PART 2

COST PROPOSAL CONSIDERATION

2.1 SCOPE OF WORKS

2.2 CONDITIONS

2.2.1 GENERAL CONDITIONS

2.2.2 UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACT OF PUERTO RICO

2.2.3 CONTRACT CLAUSES REQUIRED IN PURCHASES AND CONTRACTS WITH FEDERAL FUNDS

2.2.4 HUD GENERAL PROVISIONS

2.2.5 HUD 4010

2.2.6 IMPERATIVE INCLUSION CLAUSES

2.2.7 SECURITY AND PROTECTION REQUIREMENTS

2.2.7.1 Anti-Terrorism/Force Protection

2.2.7.2 iWATCH

2.2.7.3 TARP

2.1 SCOPE OF WORKS

Refer to Attachment 1

2.2 CONDITIONS

2.2.1 General Conditions

1. The proposal must include the payment of all applicable state and municipal taxes and patents as require by Law. The Contractor shall be paid taxes prior to start the works and will be required to present evidence of these payments.
2. Along the duration of contract, Contractor must comply with Federal Non-Discrimination policy and Drug-Free Workplace Policy.
3. Any waste generated as part of the contract must be disposed outside of PRARNG facilities and in accordance with applicable laws and regulations.
4. The Contractor is responsible for provide to PRARNG copy permits hauling vehicle that transport material generated as part of the proposed activities.
5. If applicable the Fuel Oil and Gas (F.O.G.) shall be no more than 25% of the equipment charges.
6. If applicable the Fringe Benefits shall be no more than 30% of the payroll.
7. Working hours at the facility are from 7:30a.m. to 4:00p.m. Any activities to be developed off working hours must be coordinated with PRARNG and the execution will be pending approval from PRARNG and without additional charges.
8. Any person who as part of the activities of the contract will access the facilities on behalf of the Contractor should have at all times a photo ID. Accepted identifications are passport driver s license or ID card issued by the Department of Transportation and Public Works (DTOP).

9. All the provide information as part of this acquisition process, including but not limited to plans, statement of works, and photography, is for the exclusive use of this acquisition process. Any reproduction and distribution of the material for other use is prohibit.
10. Portable Toilet Facilities: Contractor shall be responsible for providing sanitary services for its employees throughout the duration of the activities of the contract. Toilets shall be regularly cleaned and emptied as required by Health regulations.
11. Award of Subcontracts for Portions of the Work,
 - Unless otherwise specified in the Contract Documents the Contractor, as soon as practicable after the signing of the Contract, shall furnish to the PRARNG's Representative in writing for his acceptance a fist of the names of the main Suppliers and Subcontractors proposed for the principal portions of the Work.
 - The Contractor must be submit the Certification of Subcontractors and Suppliers provide by PRARNG. As part of this Certification of Subcontractors and Suppliers is required that the Contractor provide a copy of the Payment and Performance Bonds.
 - All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of PRARNG's Representative, PRARNG and Architect/Engineer, including required contract provisions applicable to Federal Agency funded projects.
12. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility and utilities services in site.
13. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site that was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work.

14. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and PRARNG's Representative has issued a notice to PRARNG and Contractor of Final Acceptance of the Work (except as otherwise expressly provided in connection with Substantial Completion).
15. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs. The safety representative at the Site may have other duties assigned to him.
16. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available at the site in accordance with laws or regulations.
17. Any other fees or charges related to permitting to be paid by the Contractor will be indicated in the special conditions.
18. The Contractor is responsible to obtain all permits and certifications of approval required in connection with this statement of works.
19. The Contractor is responsible to develop and submit a Work Plans for cleaning, removal and disposing of the contaminated material.
20. Hold Harmless is required.
21. Terrorism coverage is required.
22. Contractor shall assume full responsibility for any damage to any such land or area, or to the PRARNG or occupant thereof, or of any adjacent land or areas, resulting from the performance of the Work.
23. The Contractor is responsible for the removal of debris during performance of the Work.
24. During the progress of the Work, Contractor shall keep the Site and other areas free from excessive accumulations of waste materials,

rubbish, and other debris caused by his operations on the Site.

25. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

26. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Purchase Order Documents.

27. If the Contractor fails to clean up as indicated above, the PRARNG may do so and the cost thereof shall be charged to the Contractor.

28. All materials and equipment acquired by the Contractor as part of the Purchase Order and/or contract must meet with the Build American, Buy American (BABA) Act.

29. The Contractor is responsible of the quality of all materials and workmanship furnished in the services and is included in the bid price and no additional payment will be made by PRARNG.

30. The Contractor will be allowed to stored materials and equipment used in the project within the facility. It is the Contractor's responsibility to provide the storage, security materials, and equipment.

31. The Contractor will be responsible for submitting a "Site Safety and Health Plan" for approval by the staff of the PRARNG, according to the date scheduled. Mobilization to the site cannot be made until the plan is approved.

32. Project limit fence shall be 4' silt fence and 3.5' HDPE Orange plastic mesh safety fence barrier, reinforced with 2" x 4" wood stakes.

33. Davis Bacon and Related Act (DBRA) apply for this project.

2.2.2 Uniform General Conditions for Public Works Contract of Puerto Rico

All costs associated and related with the Uniform General Conditions for public Works Contract of Puerto Rico will be part of the cost proposal. See *Attachment 2*

2.2.3 Contract Clauses Required in Purchases and Contracts with Federal Funds

All costs associated and related with the Contract Clauses Required in Purchases and Contracts with Federal Funds will be part of the cost proposal. *See Attachment 3*

2.2.4 HUD General Provisions

All costs associated and related with the HUD General Provisions will be part of the cost proposal. *See Attachment 4*

2.2.5 HUD 4010

All costs associated and related with the HUD General Provisions will be part of the cost proposal. *See Attachment 5*

2.2.6 Imperative Inclusion Clauses

All costs associated and related with the Imperative Inclusion Clauses will be part of the cost proposal. *See Attachment 6*

2.2.7 Security and Protection Requirements

The Bidder, Team and all associated Subcontractor personnel must provide all information required for background checks to comply with the requirements for access to the facilities to be performed by the Provost Marshal Office, Director of Emergency Services or the Office of Security. The Proposing workforce must comply with all personal identity verification requirements (clause FAR 52.204- 9, Verification of personal identification of Contractor personnel) as directed by the Department of Defense, HQDA and / or local policy. In addition to the changes authorized by the change clauses of this Purchase Order, if the Force Protection Condition (FPCON) in any individual installation or insulation change, the Government may require changes in the Contractor's security issues or processes.

The photographs will be limited to the authorized work area with the prior approval of the PRARNG and only for information purposes for the development of the services described in this document. The Contractor must request permission from the PRARNG before taking the photographs and will be governed by the instructions offered for taking them. The use of drone to take is prohibited.

2.2.7.1 Anti-Terrorism/Force Protection

AT Level I training, all awarded Contractor's personnel, to include subcontractor personnel, requiring access PRARNG installations, facilities and controlled access areas shall complete AT Level I awareness training within fourteen (14) calendar days after Purchase Order start date or effective date of incorporation of this requirements into the Purchase Order, whichever is applicable. The awarded Bidder shall submit certificates of completion for each affected Contractor's personnel and subcontractor's personnel to the Contracting Officer Representative (COR) within seven (7) calendar days after completion of training by all personnel. AT Level I awareness training is available at the following website: <http://jko.jten.mil> The PRARNG can provide the instructions (2 hours) with previous coordination.

- Access and general protection/security policy and procedures. Awarded Bidder and all associated subcontractor's personnel shall provide all information required for background checks to meet installation access requirements to be accomplished by installation Provost Marshal Office, Director of Emergency Services or Security Office. Awarded Bidder workforce must comply with all personal identity verification requirements (FAR clause 52.204-9, Personal Identify Verification of Contractor Personnel) as directed by DoD, HQDA and/or local policy. In addition to the changes otherwise authorized by the changes clause of this Purchase Order, should the Force Protection Condition (FPCON) at any individual facilities or installation change, the Government may require changes in contractor security matters or processes.
- Awarded Bidder and all associated sub-contractor's personnel shall comply with all standards and policies for all PRARNG installations and facilities to include access and local security policies and procedures (provided by government representative). This applies for contractors that do not require CAC but require access to a DoD facilities or installations.

2.2.7.2 iWATCH

iWATCH training, Contractor's personnel, to include subcontractor personnel, requiring access PRARNG installations, facilities and controlled access areas shall complete iWATCH awareness training within fourteen (14) calendar days after Purchase Order start date or effective date of incorporation of this requirement into the Purchase Order, whichever is

applicable. The Contractor shall submit certificates of completion for each affected Contractor's personnel and subcontractor's personnel to the Contracting Officer Representative (COR) within ten (10) calendar days after completion of training by all personnel. The PRARNG can provide training in face-to-face to personnel of Contractor and Subcontractor (1 hour) with previous coordination.

2.2.7.3 TARP

Threat Awareness and Reporting Program (TARP) training, Contractor's personnel, to include subcontractor personnel, requiring access PRARNG installations, facilities and controlled access areas shall complete TARP awareness training within fourteen (14) calendar days after Purchase Order start date or effective date of incorporation of this requirement into the Purchase Order, whichever is applicable. The Contractor shall submit certificates of completion for each affected Contractor's personnel and subcontractor's personnel to the Contracting Officer Representative (COR) within ten (10) calendar days after completion of training by all personnel. The PRARNG can provide training in face-to-face to personnel of Contractor and Subcontractor (2 hours) with previous coordination.

Attachment 1

Scope of Works

SCOPE OF WORK (SOW)
Construction Services

“Repairs of Mayagüez Readiness Center, Vega Baja Readiness Center,
Ponce Readiness Center, Arecibo Readiness Center, Aibonito Readiness Center
and Utuado Readiness Center-
FEMA Project #109484, #109492, #109488, #109483, #109481, #109490”
Puerto Rico Army National Guard (PRARNG)

1. INTRODUCTION

This document defines the work that the Proposer shall perform for the “Restoration and Repairs of Mayagüez RC, Vega Baja RC, Ponce RC, Arecibo RC, Aibonito RC and Utuado RC”. The Proposer shall provide all work in connection with the repair and installation of items listed in the Damage, Description, Dimensions (DDD) Report validated by Federal Emergency Management Agency (FEMA). The Contractor is to provide the Puerto Rico Army National Guard (PRARNG) with all costs associated with the restoration of the facility to its pre-disaster design and function.

The contractor will be directly responsible for ensuring the accuracy, timeliness, and completion of all tasks assigned under this contract. The scope of work presented is based upon circumstances existing at the time of solicitation. The PRARNG reserves the right to modify or delete the tasks listed and, if appropriate, add additional tasks prior to and during the term of the contract.

The following information is provided for Proposers to consider and estimate the necessary resources and activities to develop the Project. Proposers shall consider that all activities shall be performed in compliance with FEMA guidelines.

1.1 Location:

- 1.1.1 Site #1: Mayagüez Readiness Center, Mayagüez, Puerto Rico
- 1.1.2 Site #2: Vega Baja Readiness Center, Vega Baja, Puerto Rico
- 1.1.3 Site #3: Ponce Readiness Center, Ponce, Puerto Rico
- 1.1.4 Site #4: Arecibo Readiness Center, Arecibo, Puerto Rico
- 1.1.5 Site #5: Aibonito Readiness Center, Aibonito, Puerto Rico
- 1.1.6 Site #6: Utuado Readiness Center, Utuado, Puerto Rico

1.1.7 See EXHIBIT A –Site plans

1.1.8 Physical Address:

- 1.1.8.1 Site #1: PR 2 Las Américas Corner #100, Bo. Sábalos, Mayagüez, PR 00681
- 1.1.8.2 Site #2: PR 687 Km 2.1, Tortuguero Camp, Vega Baja, PR 00693
- 1.1.8.3 Site #3: PR 2 Ponce by Pass, Ponce, PR 00733
- 1.1.8.4 Site #4: PR 129 Km 2.5, Arecibo, PR 00612
- 1.1.8.5 Site #5: PR 162 Km 6.0, Aibonito, PR 00705
- 1.1.8.6 Site #6: Int. PR 123 & 111 Km 0.0, Utuado, PR 00641

1.1.9 Coordinates:

- 1.1.9.1 Site #1: Latitude: 18.175639, Longitude: -67.152213
- 1.1.9.2 Site #2: Latitude: 18.450557, Longitude: -66.420747
- 1.1.9.3 Site #3: Latitude: 17.994752, Longitude: -66.620314
- 1.1.9.4 Site #4: Latitude: 18.456185, Longitude: -66.744741
- 1.1.9.5 Site #5: Latitude: 18.134435, Longitude: -66.263385
- 1.1.9.6 Site #6: Latitude: 18.268851, Longitude: -66.712345

1.2 Background:

- 1.2.1 **Site #1:** CPT Ruben Acosta Readiness Center, commonly known as **Mayagüez Readiness Center** is located in a residential/light commercial area on the west-central coast of Puerto Rico. The installation consists of approximately 10 acres and has five structures, classified as permanent. Mayagüez Readiness Center is located in the city downtown area. The Readiness Center is located in the central section with a rectangular shape. The units assigned to this installation are the B Co 296th IN Reg and D Co 296th IN Reg. The mission of this installation is to provide adequate facilities supporting the training, storage, and administrative requirements of assigned units. The Mayagüez Readiness Center with a facility number 00001 built in 1964, have 32,321 square feet (SF). The two-story U-shaped facility has its long axis running north-south. The facility has significant deterioration due to damages caused by hurricane Maria. Mayagüez Readiness Center have two vehicle entrances that are located along street Las Américas. The western entrance provides direct access to the installation paved Organizational Vehicle Parking (GOV) (4,130 SY) parking area, and the eastern provides direct access to the paved Nonorganizational Vehicle Parking (POV) (2,916.67 SY) parking area.
- 1.2.2 **Site #2:** The **Vega Baja Readiness Center** is located in the Algarrobo neighborhood of the municipality of Vega Baja with an approximately 15 acres and has ten structures, classified as permanent. The Readiness Center is located in the central section with a square shape. The units assigned to this installation are HHC 130th EN BN, FSC 130TH EN BN, 1010th EN CO, 215th EN DET, 1450 JAG DET. The Readiness Center also house the Vehicle Maintenance Shop (FMS 7). The mission of this installation is to provide adequate facilities supporting the training, storage, maintenance, and administrative requirements of assigned units. The Vega Baja Readiness Center with a facility number 01107 built in 1976, have 46,767 square feet (SF). The facility has significant deterioration due to damages caused by hurricane Maria. Vega Baja Readiness Center have one-vehicle entrance located along the PR 687. The entrance provides direct access to the paved Nonorganizational Vehicle Parking (POV) (9,428 SY) parking area. The installation also has two paved Organizational Vehicle Parking (GOV) (7,294 SY) and one unpaved (GOV) (1,539 SY) parking area. In addition, in the FMS 7 area exists one paved (GOV) (8,762 SY) parking area.
- 1.2.3 **Site #3:** Ramon De Castro Readiness Center, commonly known as **Ponce Readiness Center** is located in the urban zone of the municipality of Ponce with an approximately 6 acres and has five structures, classified as permanent. The Readiness Center is a one-story building located in the north part of the installation. The units assigned to this installation is the HHD 125th MP BN. The mission of this installation is to provide adequate facilities supporting the training, storage, and administrative requirements of assigned unit. The Ponce Readiness Center with a facility number 00001 built in 1961, have 17,419 square feet (SF). The facility has significant deterioration due to damages caused by hurricane Maria. Ponce Readiness Center have two-vehicle entrance located along the PR 2. The entrances provide direct access to the paved Nonorganizational Vehicle Parking (POV) (2,216 SY) parking area. The

installation also has one paved Organizational Vehicle Parking (GOV) (1,047 SY) and one paved Rotary wing landing pad (385 SY).

- 1.2.4 **Site #4:** COL Amaury M. Gandia Readiness Center, commonly known as **Arecibo Readiness Center** is located in the in the Hato Abajo neighborhood of the municipality of Arecibo with an approximately 6.460 acres and has three structures, classified as permanent. The unit assigned to this installation is 755th MP CO. The mission of this installation is to provide adequate facilities supporting the training, storage, and administrative requirements of assigned unit. The Arecibo Readiness Center with a facility number 00001 built in 1981, have 25,210 square feet (SF). The facility has significant deterioration due to damages caused by hurricane Maria. Arecibo Readiness Center has one-vehicle entrance located along the PR 129. The entrance provides direct access to the two paved Nonorganizational Vehicle Parking (POV) (3,682 SY) parking area. The installation also has one paved Organizational Vehicle Parking (GOV) (3,164 SY) parking area.

- 1.2.5 **Site #5:** The **Aibonito Readiness Center** is on 4 acres of open area located in the southwest edge of the municipality of Aibonito. The installation has one structure and two paved areas. The property is characterized as a sloping hillside from west to east with grass vegetation in areas that are not paved. The Aibonito Readiness Center facility number 00001 was constructed in 1964 as a single company armory with a measure of 14,357 SF. It is a two story, concrete masonry, tropical style building with open air porch hallways and heavy wood rooms doors. It contains administrative, classroom, dining, storage, locker room, showers/latrines, supply room, and arms vault areas. Only administrative areas are air conditioned. There are two paved areas adjacent to the Readiness Center. A portion of one area is designated as the Assembly Area with the rest designated as government owned vehicle (GOV) parking with 1120 SY. The other lot is used for privately owned vehicle (POV) parking of 1543 SY.

- 1.2.6 **Site #6:** The **Utuado Readiness Center** is on 0.72 acre lease property of PRIDCO located in the municipality of Utuado. This property has been leased since April 1, 1976. The installation has one structure and one paved area. The Utuado Readiness Center facility number 00001 has measure of 12,250 SF. There is one paved area adjacent to the Readiness Center. This area is a designated as government owned vehicle (GOV) parking with 444 SY.

2. SERVICES

2.1. DESCRIBE IN GENERAL SERVICE TO BE PERFORMED

The services in this scope of work are intended for the rehabilitation of damages received during Hurricane María in the sites included and as described in the Damage, Description and Dimensions (DDD) Report generated by FEMA.

Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up and completion of the work.

2.2. ATTACHMENTS

- 2.2.1. Refer to **EXHIBIT A** Site Plans
- 2.2.2. Refer to **EXHIBIT B** Floor Plans
- 2.2.3. Refer to **EXHIBIT C** Tasks Description
- 2.2.4. Refer to **EXHIBIT D** Photos
- 2.2.5. Refer to **EXHIBIT E** Lead Based Paint Report
- 2.2.6. Refer to **EXHIBIT F** Asbestos Containing Materials Report

- 2.2.7. Refer to **EXHIBIT G** PRARNG Environmental Policy
- 2.2.8. Refer to **EXHIBIT H** Technical Specifications
- 2.2.9. Refer to **EXHIBIT I** Submittal Log

3. **STAFF REQUIREMENTS**

Contractor shall supervise and direct the work completely and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the work in accordance with the contract documents. Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures of construction.

The Contractor shall employ a competent licensed and collegiate architect or engineer, as the Project Manager, and necessary assistants to direct the work. These assistants shall be in attendance at the project site at all times during the prosecution of the work. The Project Manager shall be satisfactory to the PRARNG or his representatives and shall not change except with the consent of the PRARNG, unless the Project Manager proves to be unsatisfactory to the Contractor (and Contractor gives PRARNG written notice of the specific reason for removal as Project Manager) or ceases to be in Contractor's employ.

The Project Manager will be the Contractor's representative at the Site and shall have authority to act on behalf of the Contractor. The Contractor, prior to the start of the project, will inform the PRNG the name, authority and responsibilities of the Project Manager and/or Superintendent. All communications given or received from the Project Manager shall be binding on Contractor.

The Contractor is responsible for the quality of all material and workmanship furnished in the construction of the Project.

4. **TASKS DESCRIPTION:** See **EXHIBIT C** for details of the task description for each site.

4.1 Additional Notes (applies to all sites as needed)

- a. All removed A/C equipment should be packed and delivered to Parada 3-1/2, Puerta de Tierra, San Juan. The removed components (air handling units, condensing units, refrigerant pipes, etc.) should be identified, placed in a wood pallet and wrap with heavy duty (90 gauge) stretch packaging film. The Contractor is responsible of providing a certification (Form CTRA-2005-2 from "Colegio de Técnicos de Refrigeración y Aire Acondicionado de Puerto Rico") for each unit removed and a certification for each new unit installed.
- b. For exterior paint work the following procedure should be implemented: first clean the surface thoroughly using pressure-wash, remove any loose paint, apply primer, apply first coat of paint to match existing color and then apply second coat of paint to match existing color.
- c. For interior paint work the following procedure should be implemented: first, clean the surface thoroughly, remove any loose paint, apply primer, apply first coat of paint to match existing color and then apply second coat of paint to match existing color.
- d. For small cracks (less than ¼ inch wide) repairs in a concrete wall the following procedure should be implemented: first, scrub the crack clean of any loose concrete, paint or old filler using a wire brush. Remove all dust and debris with a vacuum. Apply the concrete caulk or liquid filler over the crack as directed by the manufacturer. Add texture to the patched area before it dries to match existing wall texture. Paint over the patched area with primer and two coats of paint to match existing color.
For larger cracks (more than ¼ inch wide) repairs in a concrete wall the following procedure should be implemented: first, widen the crack using a chisel and hammer to a minimum of ¼

inch and break away any deteriorating concrete (undercut the sides of the crack to give it an inverted "V" shape). Scrub the crack clean of any loose concrete, paint or old filler using a wire brush. Remove all dust and debris with a vacuum. Apply the joint compound over the crack as directed by the manufacturer. Add texture to the patched area before it dries to match existing wall texture. Paint over the patched area with primer and two coats of paint to match existing color.

- e. For the installation of doors and windows the following procedure should be implemented: remove and discard the existing door or window. Install the new door or window as per manufacturer's instructions. Repair window and door sill as needed. Apply sealant around the frame joint on both exterior and interior sides. If necessary, paint impacted areas to match existing color. All doors and windows have to include new hardware.
- f. For the installation of wood doors, the Contractor must use treated wood and apply a sealer coat. Color must match the existing door. All doors have to include new hardware.
- g. For the installation of acoustic tiles, the following procedure should be implemented: remove and discard existing acoustic tiles. Install new acoustic tile as directed by manufacturer's instructions.
- h. For the installation of aluminum roof flashing, the following procedure should be implemented: remove and discard the existing aluminum roof flashing. Install the new aluminum roof flashing. Material has to be same gauge as the existing one.
- i. For the installation of aluminum downspout, the following procedure should be implemented: remove and discard the existing aluminum downspout. Install the new aluminum downspout. Material has to be same gauge as the existing one.
- j. For the installation of aluminum rain gutters, the following procedure should be implemented: remove and discard the existing aluminum rain gutters. Install the new aluminum rain gutters. Material has to be same gauge as the existing one.
- k. For the installation of electrical concrete poles, the following procedure should be implemented: remove and discard existing concrete poles. Install the new concrete pole including rewiring and bulbs.
- l. For the installation of electrical fixtures, the following procedure should be implemented: remove and discard existing electrical fixture. Install the new electrical fixture with the necessary connections needed for it to be functional.
- m. For the installation of PVC pipes, the following procedure should be implemented: remove and discard existing PVC pipes. Install the new PVC pipe with the necessary connections needed for it to be functional.
- n. For concrete rehabilitation Contractor must submit the repair procedures for executing the work as well as the test data and documentation on materials used for repair. Submittal must include component materials, mixture proportions and supplier's quality control program.
- o. For plaster wall and ceiling repair, the following procedure should be implemented: break away any loose pieces of plaster and wipe the area clean. Clean any exposed steel rod and install anticorrosive treatment if necessary. If rebars are corroded, apply repair procedure approved by GNPR representative (Contractor must submit the repair procedure for approval). Fill the affected area with patching plaster. Smooth the plaster until it's seamless against the rest of the wall or ceiling. Work the area until the texture matches the existing one. Paint over the patched area with primer and two coats of paint to match existing color.
- p. For the installation of solar heater, the following procedure should be implemented: remove and discard the existing solar heater. Install the new solar heater with the necessary connections needed for it to be functional.
- q. For the installation of corrugated galvanized steel roof panels, the following procedure should be implemented: remove and discard the existing roof panels. Install the new corrugated galvanized steel roof panels. The structure has to be able to support 20 pounds per square

feet with the necessary anchoring system. A shop drawing must be submitted for the approval of the PRARNG.

- r. For Asbestos Abatement the following procedure should be implemented:
 - 1. Construction and Facilities Management Office (CFMO) will coordinate a site visit prior to submitting the proposal. Contractor shall visit the project site to verify the nature and extent of the existing conditions and any special difficulties to be encountered. Contractor shall be responsible of paying all fees, give all notice, file all necessary drawings and obtain all permits and certifications of approval required. Comply with all current local, state and federal laws and regulations.
 - 2. Ensure full compliance with title 29 Code Federal Regulation (CFR) Subpart Z, 1926.1101 and any other OSHA, Environmental Protection Agency (EPA) and Puerto Rico Environmental Quality Board (EQB) regulations as applicable. A written certification of having complied with the training and medical requirements specified above will be submitted to the PRARNG including copy of the medical clearance for respirator users. Medical records of the Contractor's employees will not be submitted.
 - 3. Prepare and submit EQB General Permit and Asbestos Removal Plan. Approval from Construction and Facilities Management Office (CFMO) Environmental Section is required before submitting to EQB.
 - 4. After obtaining EQB permit:
 - i. Prepare project area. Delimitate, mark and protect the boundaries of the area. Install signage in accordance with regulations.
 - ii. Contractor shall identify all of the ACM to be removed. Refer to **Exhibit F**. Provide all material, equipment and labor necessary for asbestos and mastic removal.
 - iii. Sample and provide copy of the laboratory results taken before the abatement, during and for the final clearance.
 - iv. Provide material transportation and disposal. The Contractor will dispose the debris in accordance with all applicable current local, state, federal laws and regulations, methods and must provide copy of manifest.
 - v. Contractor is responsible to request and obtain Final Closure Certification of the removal and disposition of ACM of the EQB.
 - vi. Contractor shall provide permit closeout documents, including evidence of final report submitted to EQB, prior to final invoice.
 - 5. After mitigation, if the results are found above required minimum standards, Contractor must repeat the cleaning process until the standard is achieved. All the removal and disposition of ACM shall be coordinated through CFMO Environmental Branch.
 - 6. All work shall be performed by personnel skilled and certified in their respective trades and in accordance with the best practices of trade. Contractor personnel shall provide proof of valid certifications.
- s. For Lead Abatement the following procedure should be implemented:
 - 1. Construction and Facilities Management Office (CFMO) will coordinate a site visit prior to submitting the proposal. Contractor shall visit the project site to verify the nature and extent of the existing conditions and any special difficulties to be encountered. Contractor shall be responsible of paying all fees, give all notice, file all necessary drawings and obtain all permits and certifications of approval required. Comply with all current local, state and federal laws and regulations.
 - 2. Prepare and submit Puerto Rico Department Natural and Environmental Resources (PRDNER) General Permit and work plan for Construction and Facilities Management Office (CFMO) Environmental Section approval.
 - 3. After obtaining PRDNER approval:

- i. Prepare project area. Delimitate, mark and protect the boundaries of the area. Install signage in accordance with regulations.
 - ii. Contractor shall identify all of the LBP to be cleared or removed. Refer to **Exhibit E**.
 - iii. Sample and provide copy of the laboratory results taken before the abatement, during and for the final clearance.
 - iv. Provide material transportation and disposal.
 - v. Contractor shall provide permit closeout documents, including evidence of final report submitted to PRDNER, prior to final invoice.
4. All work shall be performed by personnel skilled and certified in their respective trades in accordance with the best practice of trade. Contractor personnel shall provide proof of valid certifications.
5. Submit for CFMO Environmental Branch approval copy of Work Plan for cleaning, removal and disposing of lead contaminated material. Work Plan shall also include the method to contain the resulting water as part of the cleaning and removal process.
6. Ensure full compliance with title 29 Code Federal Regulation (CFR) Part 1910.1025, 29 CFR Subpart I-Personal Protective Equipment (29 CFR 1910.132/133/134), 29 CFR 1910.1200, and any other OSHA and Environmental Protection Agency (EPA) regulation and PRDNER as applicable.
7. Contractor is responsible for verifying and measuring all areas to be included in the proposal.
8. Contractor shall coordinate with CFMO Environmental Branch personnel to be present during Contractor testing.
9. Ensure that final clearance sample results are below 10µg/SF.
10. Dispose all waste and excess material, as applicable, and in compliance with all current Local, State and Federal regulations.
11. The space shall be isolated from the rest of the building by closing all doors except one that is designated as the work entrance/emergency exit door. That entrance will be kept close during all clean-up operations and will provide easy access to the outside in case of an emergency.
12. Wet cleaning by a high-pressure system is prohibited. Dry sweeping will not be used.
13. The Contractor will dispose of all lead contaminated excess material in accordance with the Resource Conservation and Recovery Act (RCRA), the regulations of the PRDNER, regulations of the U.S. Department of Transportation and any other applicable Commonwealth and Federal regulation.
14. A toxic characteristic leaching procedure (TCLP) test for lead will determine if the material is classified as "hazardous" or as "non-hazardous" waste. The Contractor will be responsible for providing this test.
15. If the excess material is determined to be hazardous, it will be removed from the facility and shall be accompanied by a Uniform Hazardous Waste Manifest, which will be supplied by the Contractor. The Contractor will pack the hazardous waste in accordance with 49 CFR 173 and 178.
16. If the excess material is determined to be "non-hazardous", the Contractor will remove and dispose the excess material as solid waste off the owner properties. The Contractor will be required to present a disposition certificate indicating that all the solid waste was disposed in compliance with all federal, commonwealth and local laws and regulations.
17. Do not place any lead contaminated material into the sewer. Do not mix any lead contaminated material with any other non-contaminated material.
18. The Contractor shall identify and submit the literature of any equipment or material to be used to perform cleaning procedure in the work plan.

19. Contractor shall pay all fees, give all notice, file all necessary drawings and obtain all permits and certifications of approval required in connection with this work.
 20. A written certification of having complied with the necessary training and medical requirements will be submitted to the PRARNG including copy of the medical clearance for respirator users. Medical records of the Contractor's employees will not be solicited.
 21. The Contractor shall obtain and maintain in full force and effect required licenses, permits and authorizations necessary to perform the work. The Contractor shall supply the PRARNG with evidence of such licenses, permits and authorizations. This evidence shall be submitted subsequent to the contract award and prior to commencing the work.
 22. Manifests previous the waste disposition need to coordinate with the Environmental authorized person for signature previous disposal. Then shall be submitted to the Puerto Rico Department of Natural and Environmental Resources and a copy submitted to the PRARNG.
 23. Contractor shall submit report containing quantity of waste disposed by landfill or recycling and the disposal manifests copies of all non-hazardous waste generation.
 24. Contractor shall provide permit closeout documents, including evidence of final reports for Lead removal submitted to PRDENR, prior to final invoice.
- t. All dimensions shall be field verify by the contractor during the site visit, before submitting the cost proposal.
 - u. The contracted company, if necessary, should provide dumpsters for the disposition of removed materials and garbage that generates as part of the work performed. It is not authorized to use the dumpsters from the PRARNG or inside PRNG facilities. The maintenance services for the dumpster have to be provided by the contractor during the operational hours stipulated at the contract.
 - v. All materials and equipment incorporated into the work shall be as specified or, if not specified, shall be of good quality and new. Contractor has to comply with the Buy American Act and provide evidence of compliance.

4.2 Meetings: The Contractor will attend regular scheduled weekly meetings or as needed to inform of the construction progress. Key personnel, such as the project manager and PRARNG representatives, will be in attendance to discuss and resolve progress and issues. Meeting minutes will be documented, published, and distributed within 7 business days after the meeting by the Owner or designated party and will serve as the progress reports for the project.

5.0 **DELIVERABLES** - The key deliverables to be provided include, but are not limited to, the following:

5.1 Preconstruction

- Project Schedule: Progress schedule shall present a practical plan to complete the work within the contract time, and shall convey the Contractor's intent as to the manner of prosecuting the progress of the work. The project schedule shall be computer produced using the Critical Path Method ("CPM") format. The schedule shall be computer generated utilizing an Owner approved project scheduling software such as Primavera, Microsoft Project or Sure Track (Refer to Uniform General Conditions Section 6.4.3 for details). The progress schedule has to be submitted during preconstruction for the evaluation and approval of a representative of PRARNG. Two (2) hard copies and one (1) digital pdf format (CD) copy should be submitted.

- Safety Plan: The selected contractor should provide a safety plan considering all risks that could be present at the different work activities and the measurements to be taken for mitigation or elimination of these risks. The contracted company should submit their safety plan for the evaluation process and final approval by the PRARNG before its implementation and monitoring. The safety plan must include protocols for prevention and mitigation of COVID-19 at the work place. Two (2) hard copies and one (1) digital pdf format (CD) copy should be submitted.
- List of personnel and vehicles: A list of all the personnel included in the developing of the services will be provided, and a list with the information of the official vehicles that will enter PRARNG installations. Also, PRARNG will performed a police record check to all of the company's personnel before performing any work inside the military installation.
- Security/Anti-Terrorism/Force Protection:
All personnel working on site must comply with the DD Form 369 and the AT Level 1 training before performing any work inside the military installation.
 - AT Level I training, all awarded Contractor's personnel, to include subcontractor personnel, requiring access PRARNG installations, facilities and controlled access areas shall complete AT Level I awareness training within fourteen (14) calendar days after contract start date or effective date of incorporation of these requirements into the contract, whichever is applicable. The awarded Bidder shall submit certificates of completion for each affected Contractor's personnel and subcontractor's personnel to the Contracting Officer Representative (COR) within seven (7) calendar days after completion of training by all personnel. AT Level I awareness training is available at the following website: <https://jko.jten.mil/courses/at1/launge.html>.
 - Access and general protection/security policy and procedures. Awarded Bidder and all associated subcontractor's personnel shall provide all information required for background checks to meet installation access requirements to be accomplished by installation Provost Marshal Office, Director of Emergency Services or Security Office. Awarded Bidder workforce must comply with all personal identity verification requirements (FAR clause 52.204-9, Personal Identify Verification of Contractor Personnel) as directed by DoD, HQDA and/or local policy. In addition to the changes otherwise authorized by the changes clause of this contract, should the Force Protection Condition (FPCON) at any individual facilities or installation change, the Government may require changes in contractor security matters or processes.
 - Awarded Bidder and all associated sub-contractor's personnel shall comply with all standards and policies for all PRNG installations and facilities to include access and local security policies and procedures (provided by government representative). This applies for contractors that do not require CAC but require access to a DoD facilities or installations.
- Schedule of Values: The Contractor should submit a copy of the schedule of values for the evaluation and approval of a representative of PRARNG. Schedule of Values shall be presented for each site individually. Two (2) hard copies and one (1) digital pdf format (CD) copy should be submitted.
- Photograph Set: A complete set of photographs in color shall be provided for the existing conditions of all areas that will be impacted before any work is performed. These photos should be identified in a floor plan. Two (2) hard copies and one (1) digital pdf format (CD) copy should be submitted. The use of drones is prohibited as

well as the distribution of all photos of the PRNG facilities. Photos will be used only to show the work performed and progress.

5.2 Construction

- Schedule of Values: The Contractor should submit monthly a copy of the schedule of values for each site individually for the evaluation and approval of a representative of PRARNG. Three (3) hard copies and two (2) digital pdf format (CD) copies should be submitted. The schedule of values should enclose photos as evidence of the work performed during the given period.
- Project Schedule Updates: The project schedule shall be updated monthly and submitted for evaluation and approval of a representative of PRARNG. Two (2) hard copies and one (1) digital pdf format (CD) copy should be submitted.
- Submittals for Material and Equipment: The Contractor shall submit all submittals for approval of materials, shop drawings and samples to the Owner's representative (Refer to Uniform General Conditions Section 6.5 for details). Two (2) hard copies and one (1) digital pdf format (CD) copy should be submitted. Submittals should be approved before the installation of any given material or equipment. If any material or equipment is installed without having an approved submittal, the owner will not pay the given work.
- Closeout Plan for Asbestos and Lead Abatement: Manifests previous the waste disposition need to coordinate with the Environmental authorized person for signature previous disposal. Then shall be submitted to the Puerto Rico Department of Natural and Environmental Resources and a copy submitted to the PRARNG Directorate of Engineering, Environmental Section. Contractor shall submit report containing quantity of waste disposed by landfill or recycling and the disposal manifests copies of all non-hazardous construction and demolition waste generation. Contractor shall provide permit closeout documents, including evidence of final reports for Asbestos and Lead removal submitted to PRDENR, prior to invoice.
- Waste Disposal: During the progress of the work, Contractor shall keep the site and other areas free from excessive accumulations of waste materials, rubbish and other debris caused by his operations on the site. Removal and disposal of such waste materials, rubbish and other debris shall conform to applicable Laws and Regulations. Waste disposal manifests shall be submitted to the PRARNG.

5.3 Closeout

- Prior to Substantial Completion of the work, Contractor shall clean the site and make it ready for utilization by Owner.
- For the project closeout, the Contractor shall submit a binder with two (2) hard copies and two (2) CD/DVD digital pdf format copies that includes the following documents: all approved submittals, RFI, meeting minutes and schedule of values generated during the project. This information will be part of the required documents for the last payment. Contractor shall maintain project document records for five (5) years beyond date of completion. Contractor has to comply with the Uniform General Conditions for Public Works.

6.0 **SCHEDULE:** The following schedule shall be adhered to after award of the Contract. The development/performance times specified below establish the document delivery date(s). This schedule is for the works regarding all six (6) facilities within this period.

Proposed Schedule

Contract kick off meeting	NTP+7 days
Administrative documentation (due)	NTP + 60
Preconstruction Submittals (due)	NTP + 30
Construction Submittals (due)	NTP + 45
Period of Performance	NTP + 180
Closeout	NTP+210

7.0 CRITERIA

- FEMA Public Assistance Program and Policy Guide. Verify with program Managers, latest applicable version. Refer to the https://www.fema.gov/sites/default/files/2020-06/fema_public-assistance-program-and-policy-guide_v4_6-1-2020.pdf
- International Building Code (IBC) 2018 or latest version
- Puerto Rico Building Code (PRBC) 2019

8.0 CONTRACT TERM

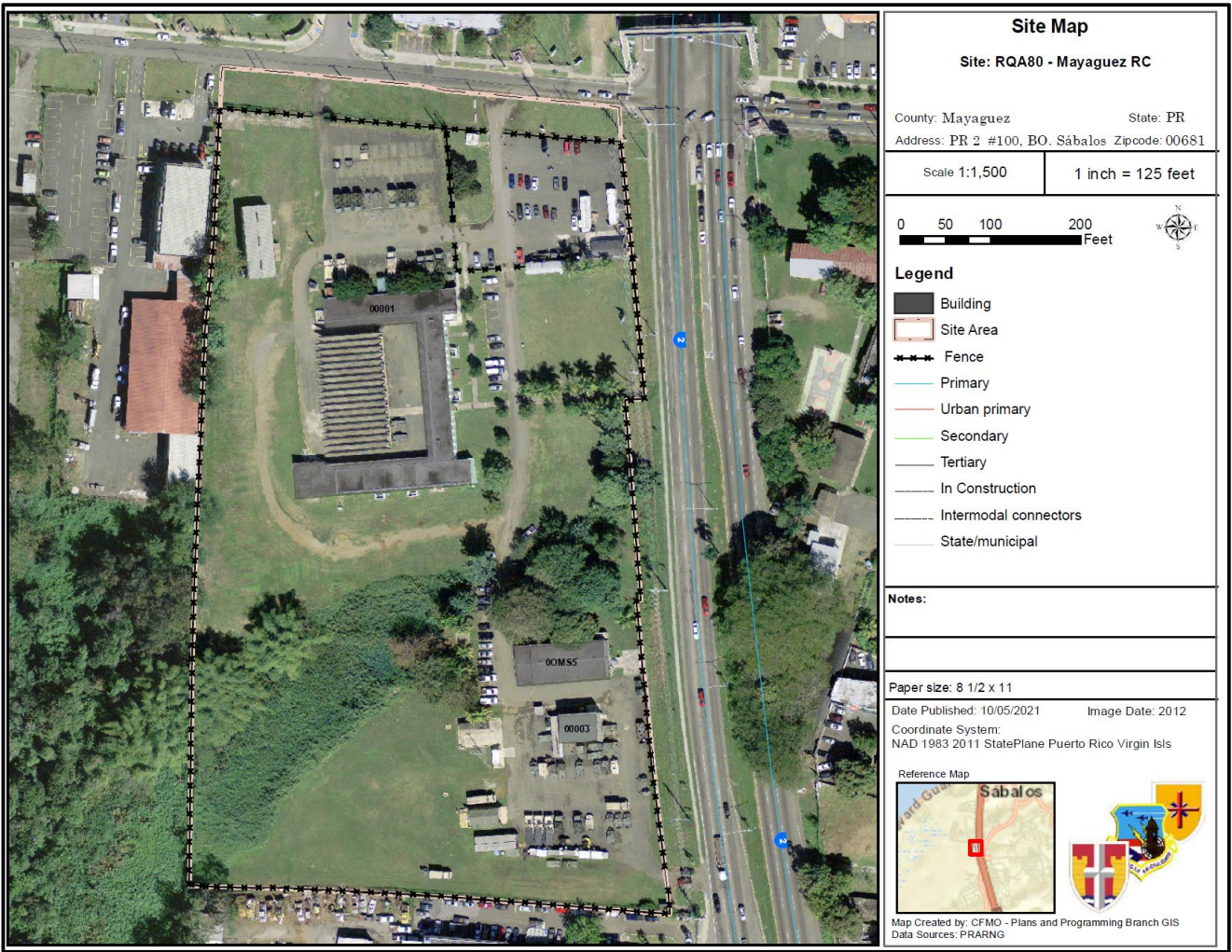
8.1 The Contractor shall have 180 days to complete the construction activities.

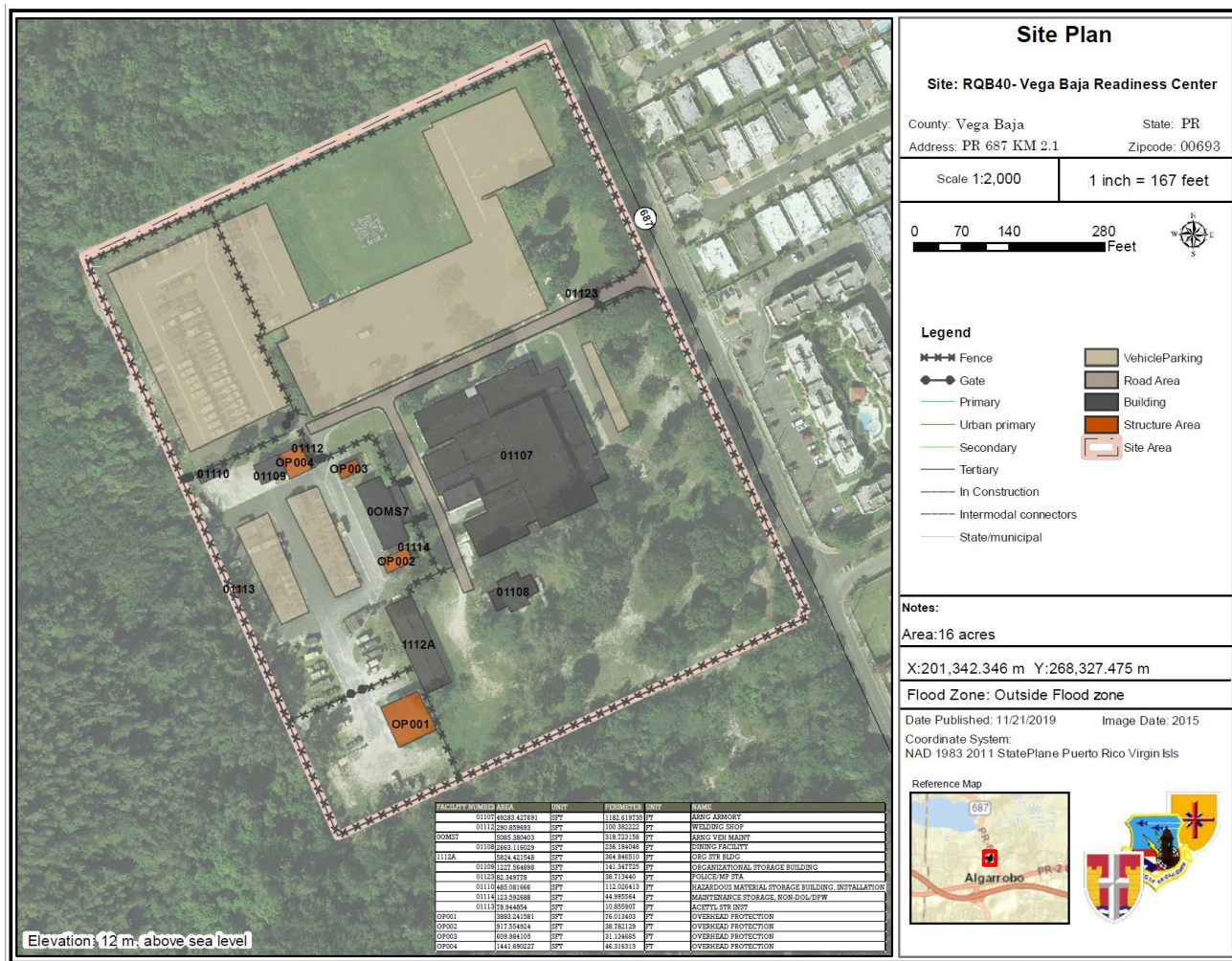
8.2 The Proposer shall be responsible for completing the activities outlined in this Scope of Work during this period.

Attachment 1 - End

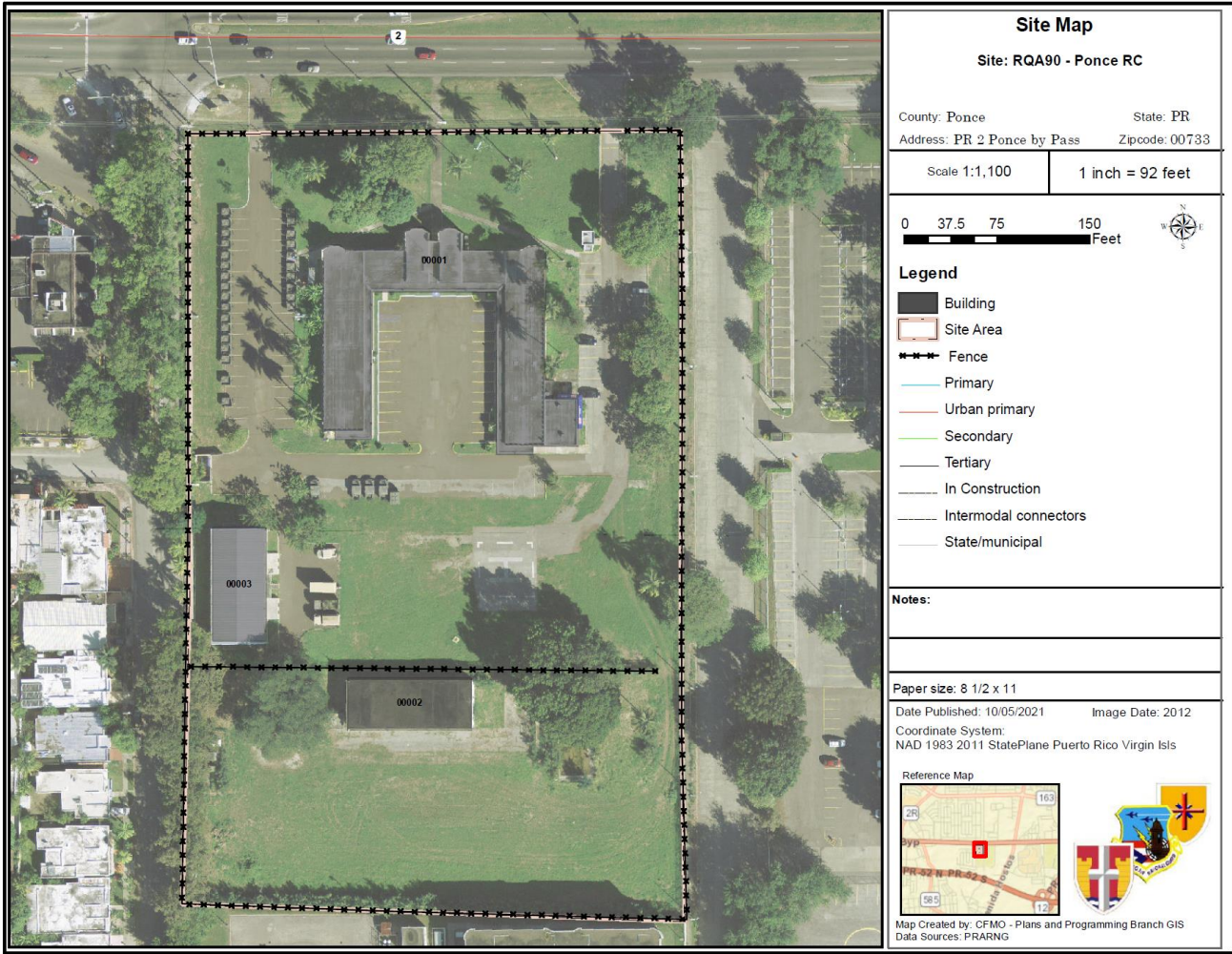
EXHIBIT A: Site location

Site #1: Mayagüez Readiness Center

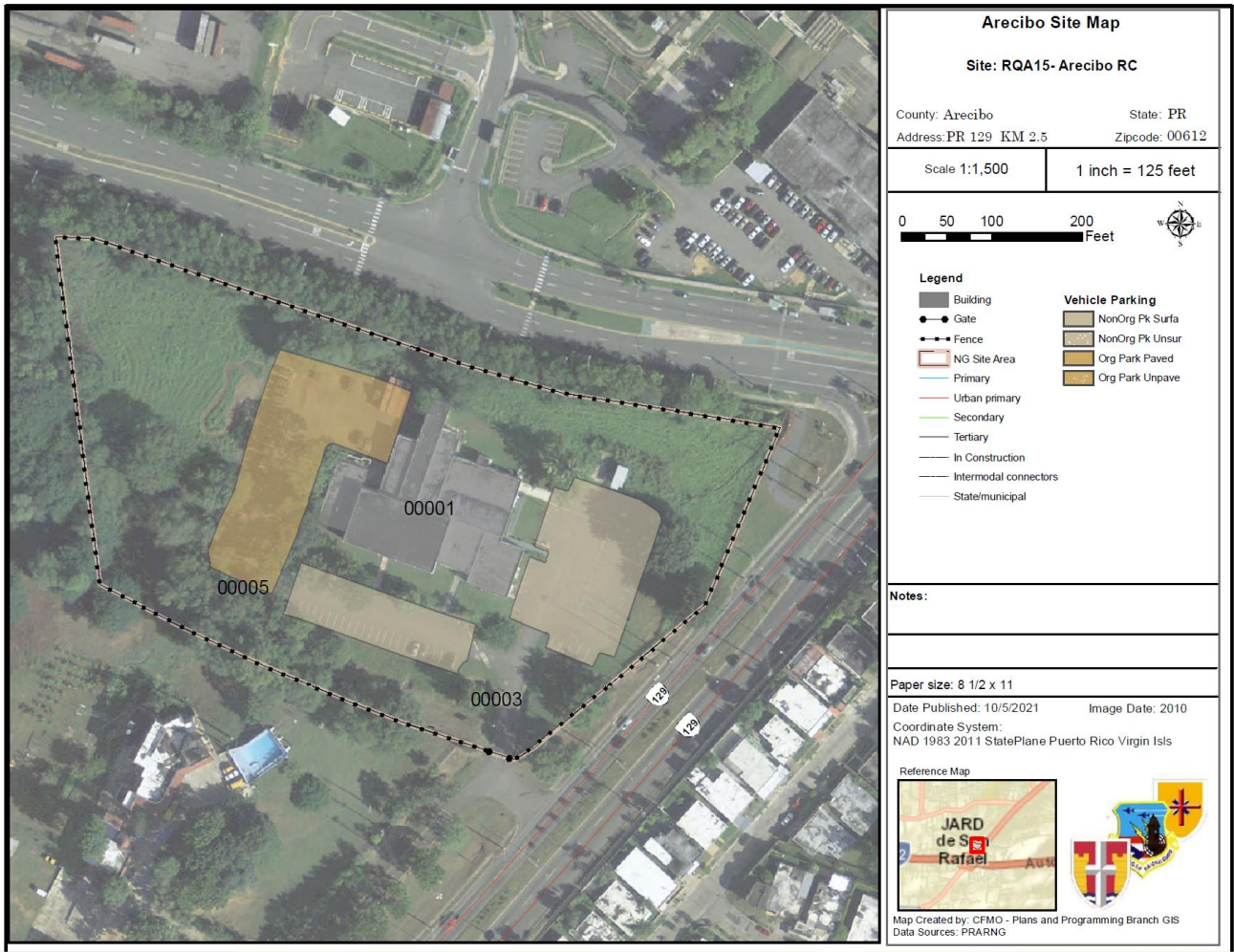




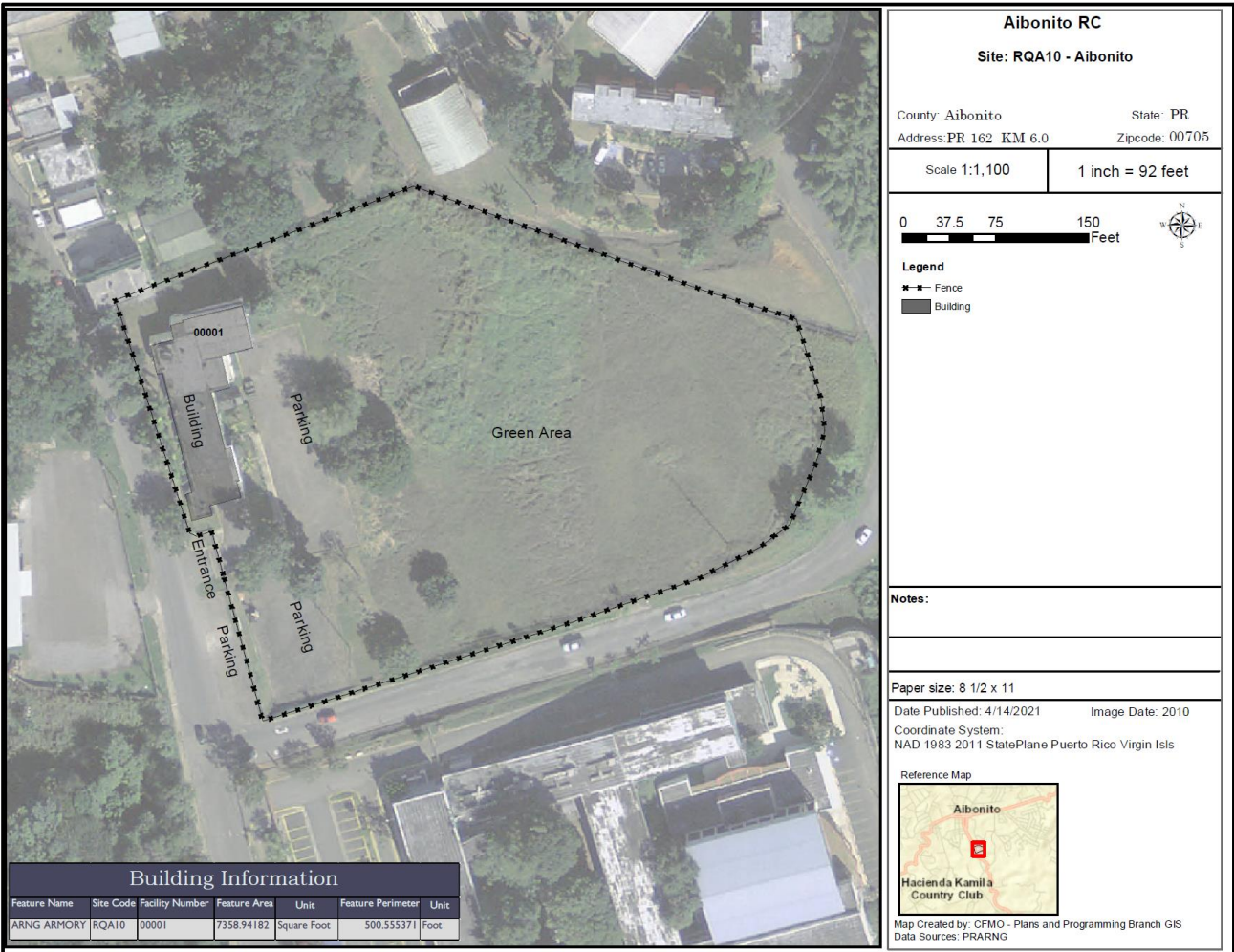
Site #3: Ponce Readiness Center



Site #4: Arecibo Readiness Center



Site #5: Aibonito Readiness Center



Site #6: Utuado Readiness Center

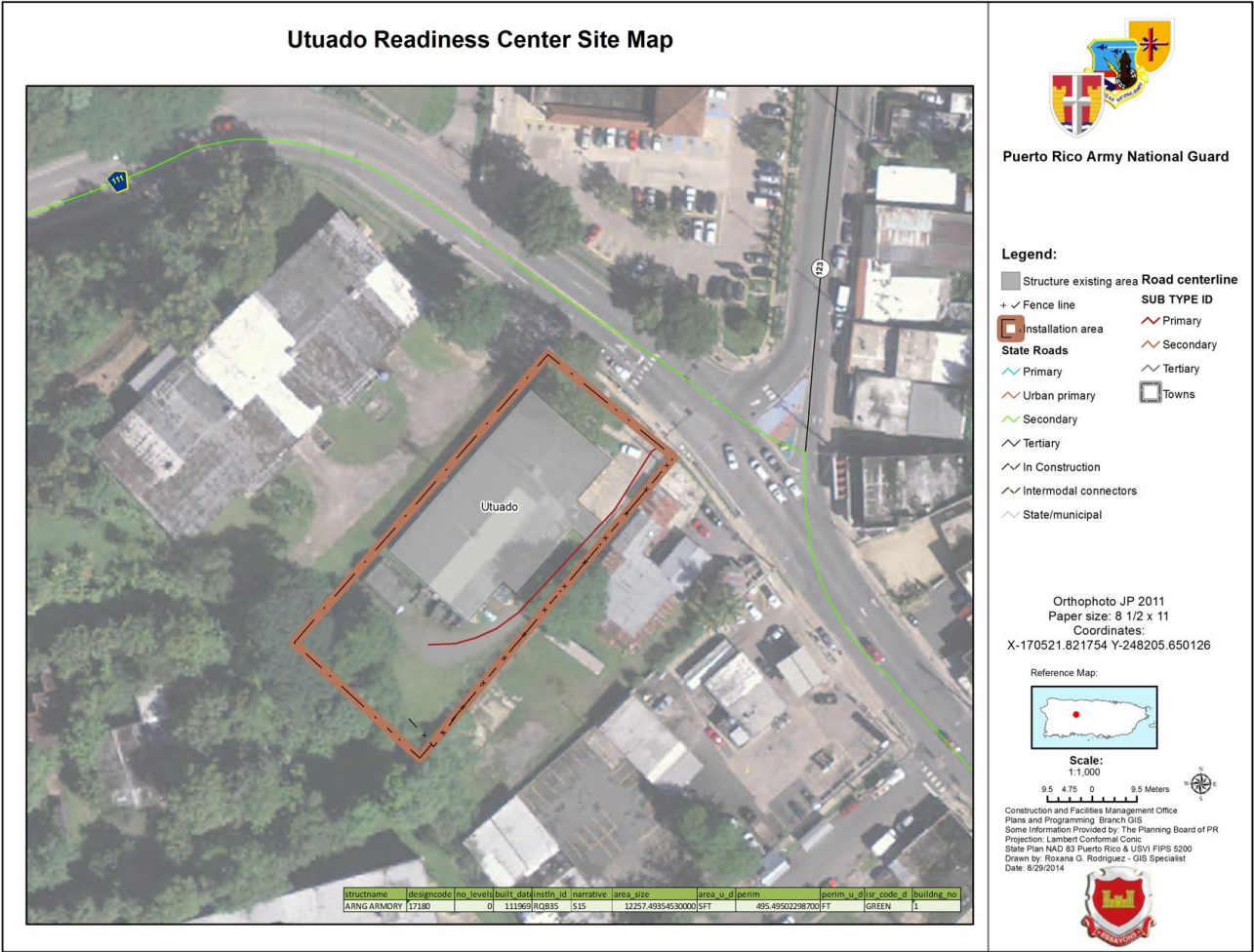
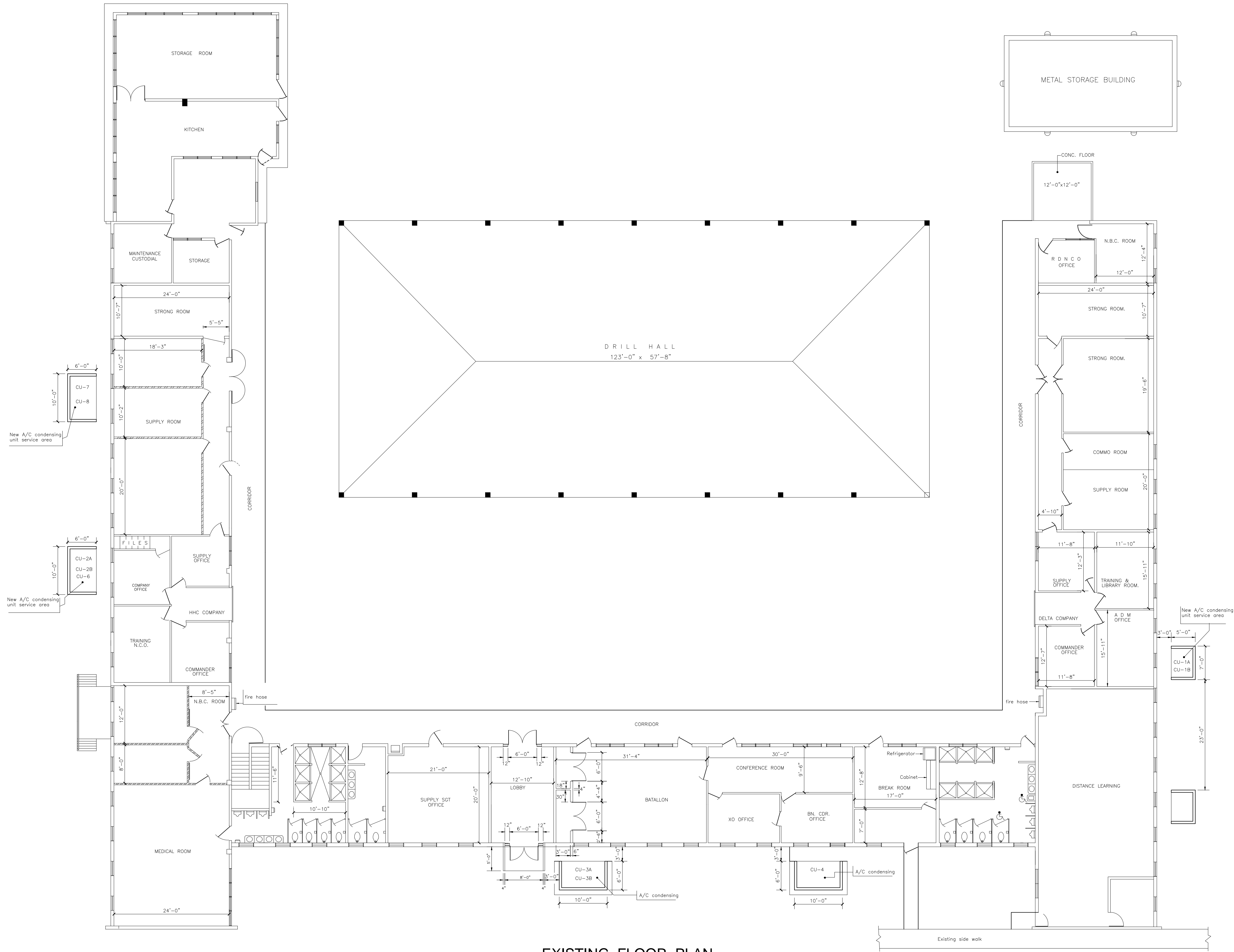


EXHIBIT B: Floor Plan



EXISTING FLOOR PLAN
SCALE: 1/18"=1'-0"

I, ENG. ALEJANDRO FONSECA, P.E., LC:19965, CERTIFY THAT I AM THE PROFESSIONAL WHO DESIGNED THESE PLANS, AND THE DESIGNER OF RECORD FOR THE PROJECT. I HAVE REVIEWED THE PLANS AND SPECIFICATIONS AND I AM SURE THAT THEY COMPLY WITH THE APPLICABLE PROVISIONS OF THE REGULATIONS AND CODES OF AGENCIES, REGULATORY BOARD OR PUBLIC WORKS, AND I HAVE NOT BEEN INFORMED OF ANY FALSE STATEMENT OR RECKLESSLY BY EITHER MYSELF, MY AGENTS OR EMPLOYEES, OR OTHERWISE MY KNOWLEDGE. THEY MAKE ME AWARE OF THE FACTS OF THE PROJECT, INCLUDING BUT NOT LIMITED TO THE PARTICIPATION IN THE PROFESSIONAL CERTIFICATION PROCEDURE OF THE OIGP.

CERTIFIED:



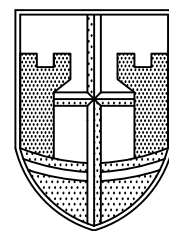
PUERTO RICO ARMY NATIONAL GUARD

CALLE GENERALES STEVES #100, SAN JUAN, PUERTO RICO 00901 - 2104

PROJECT: READINESS CENTER MAYAGUEZ
MAYAGUEZ, PUERTO RICO

SHEET TITLE: EXISTING FLOOR PLAN

NO.	DESCRIPTION	DATE	NO.	DESCRIPTION	DATE



DESIGN:

DRAWN:

DANIEL RUIZ

SUPERVISOR:

MAJ. FONSECA, P.E.

DATE:

FY19

SCALE:

AS NOTED

SHEET:

TOTAL SHEETS:

1

OF

1

SHEET NAME:

A-1

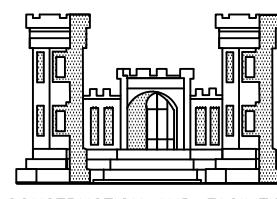


A^{-1}



7. ENG. ALEJANDRO FONSECA, P.E., C.19.09.95, CERTIFY THAT I AM AN ALEJANDRO FONSECA, P.E., C.19.09.95, AND THE SUPPLEMENTARY SPECIFICATIONS, ALSO CERTIFY THAT I UNDERSTAND THAT THESE PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE PROVISIONS OF THE REGULATIONS AND COOPERATION REGULATORY BOARD OF PUBLIC ENGINEERS OF THE STATE OF CALIFORNIA. I HAVE NO ANY FALSE STATEMENT OR FALSIFICATION OF THE FACTS IS NOT MADE KNOWINGLY OR RECKLESSLY BY MYSELF, MY AGENTS OR EMPLOYEES, OR OTHERWISE MY KNOWLEDGE, THEY MAKE ME RESPONSIBLE. IN ADDITION, MY REPLACING ANY SIGNATURE, WITHOUT MY WRITTEN CONSENT, WITH ANY OTHER SIGNATURE, WILL LIMIT THE PARTICIPATION IN THE PROFESSIONAL CERTIFICATION PROCEDURE OF THE OGPB*.

CERTIFIED



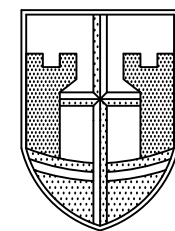
CONSTRUCTION AND FACILITIES
MANAGEMENT OFFICE

PUERTO RICO ARMY NATIONAL GUARD

CALLE GENERAL ESTEVES #100, SAN JUAN PUERTO RICO 00901 - 2104

READINESS CENTER ARECIBO
ARECIBO, PUERTO RICO

EXISTING FLOOR PLAN

[illegible]

DESIGN

DRAWN

DANIEL RUIZ

SUPERVISOR

MAJ. FONSECA, P.E.

DATE: _____

SCALE:
AS NOTE

SHEET

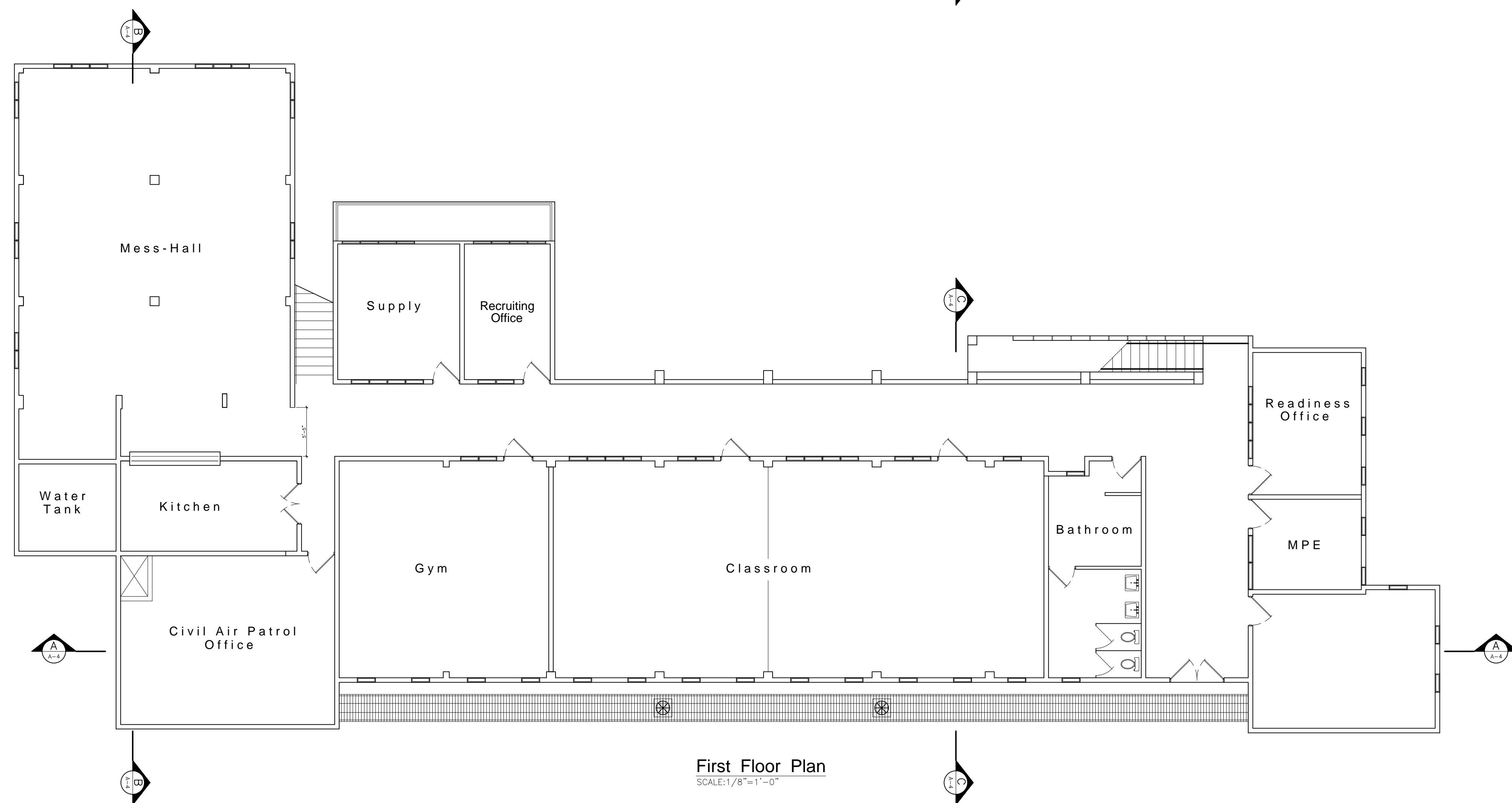
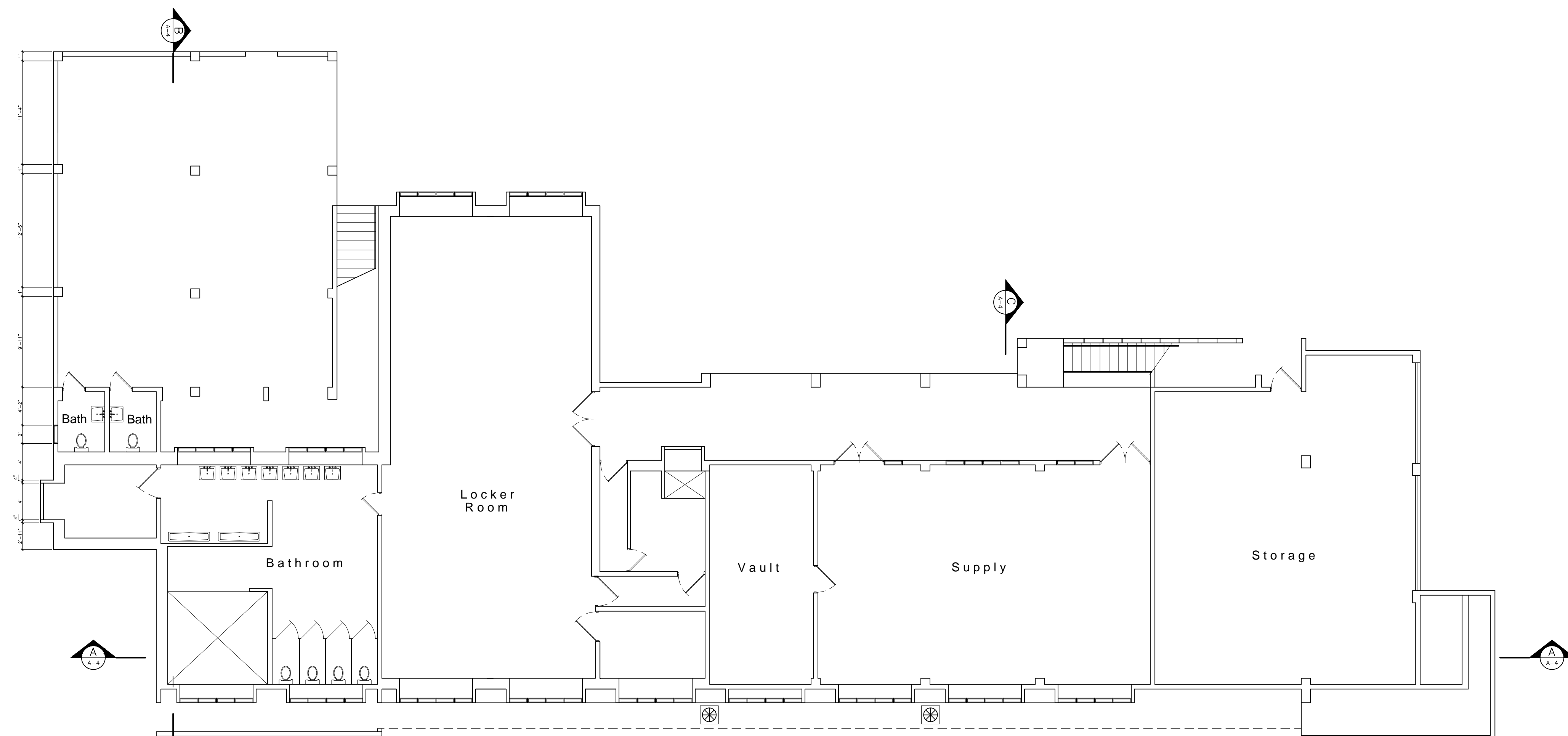
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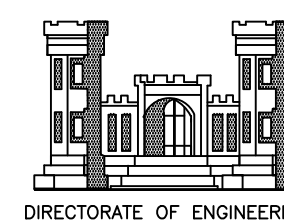
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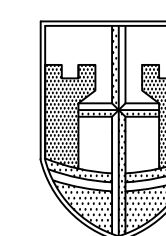
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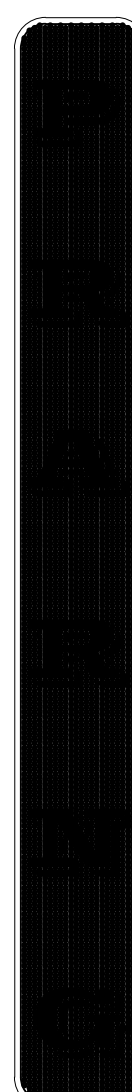


DESIGN BY:	?
DRAWN BY:	DANIEL RUIZ
VERIFIED BY:	
SCALE:	AS NOTED
DATE:	9-APRIL-2012

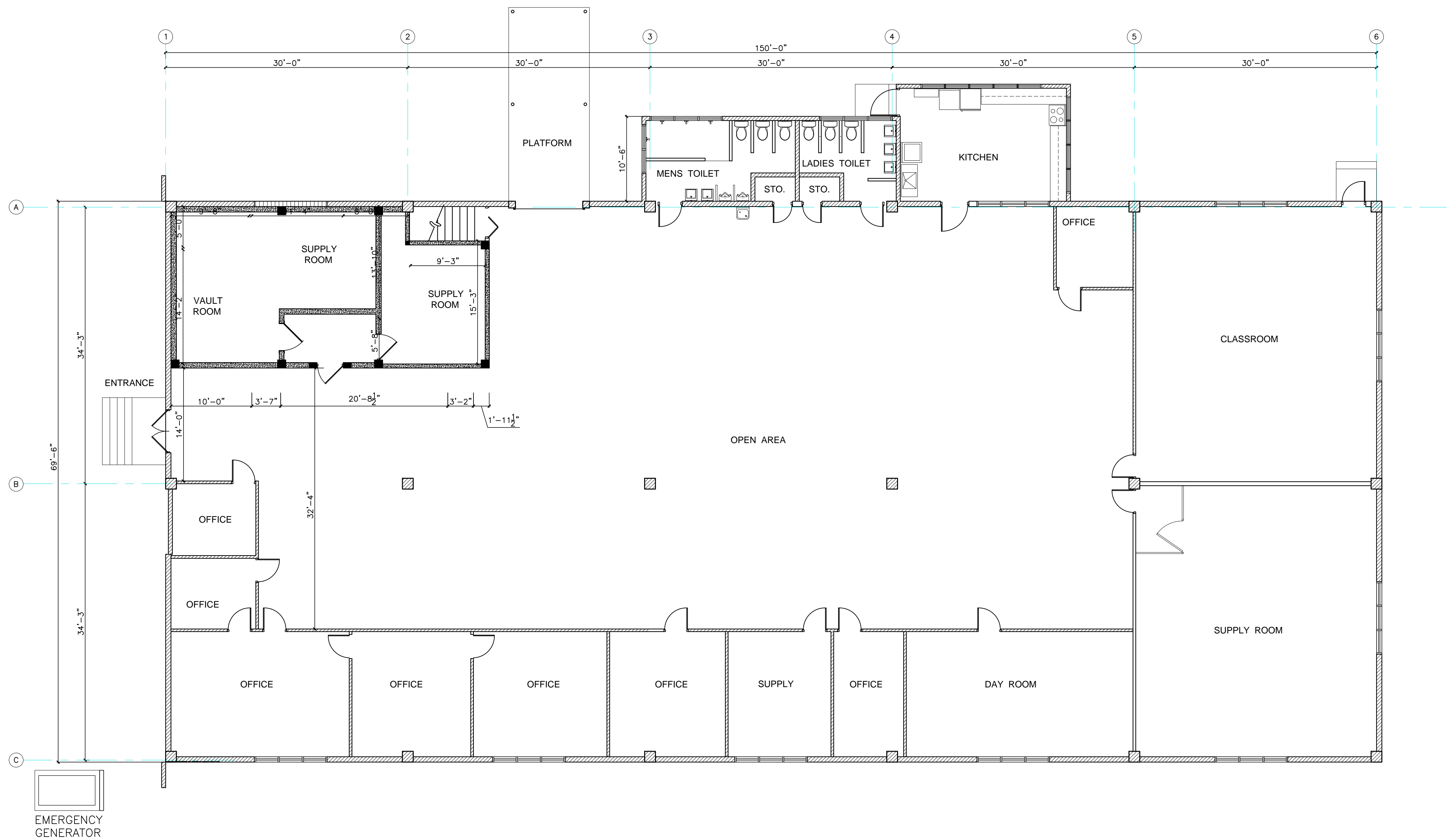


PUERTO RICO ARMY NATIONAL GUARD
DIRECTORATE OF ENGINEERING
P.O. BOX 3786 SAN JUAN PUERTO RICO 00904 - 3786
PROJECT: READINESS CENTER AIBONITO
PUERTO RICO
SHEET TITLE: FLOOR PLAN



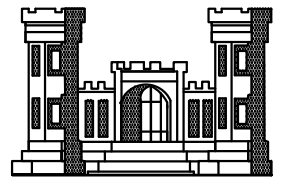
			
N o.	DESCRIPTION	DATE	
REVISIONS			

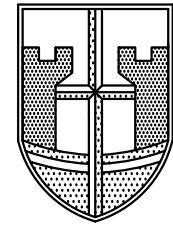
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EXISTING FLOOR PLAN
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DESIGN BY:	.
STRUCTURAL DESIGN:	.
DRAFTSMAN:	A. PEDRAZA
REVISED BY:	CPT. FONSECA
SCALE:	AS NOTED
DATE:	OCT. , 2014

 CONSTRUCTION AND FACILITIES MANAGEMENT OFFICE		
PUERTO RICO ARMY NATIONAL GUARD CONSTRUCTION AND FACILITIES MANAGEMENT OFFICE UTUADO ARMORY UTUADO , PUERTO RICO EXISTING FLOOR PLAN		
PROJECT:	UTUADO ARMORY UTUADO , PUERTO RICO	
SHEET TITLE:	EXISTING FLOOR PLAN	

		
P R A R N G	DATE	
	DESCRIPTION	
	REVISIONS	
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SHEET NUMBER:	1 OF 2
TOTAL SHEET	2
SHEET NAME	A-1

EXHIBIT C: Tasks Description

Site #1: Mayagüez Readiness Center

The Proposer will be responsible for performing the following tasks:

Main Building

Break Room:

1. Prepare and paint in-kind 3 SF of exterior concrete wall. (Photo #1)

Conference Room Bravo:

2. Remove and replace in-kind 1 each of aluminum jalousie window (36 IN wide x 72 IN high). (Photo #2)

Delta 1 Room:

3. Remove and replace in-kind 1 each of aluminum jalousie window (36 IN long x 66 IN wide). (Photo #3)
4. Remove and replace in-kind 1 each of aluminum jalousie window (36 IN long x 72 IN wide). (Photo #4)

Distance Learning Center (Basement):

5. Prepare and paint in-kind 5.81 SF of interior wall (19 IN long x 44 IN wide). (Photo #5)

Family Program Office:

6. Remove and replace in-kind 10 each of ceiling acoustic tiles (2 FT long x 2 FT wide). (Photos #6, 7)

General Supply Storage Room:

7. Prepare and paint in-kind 4 SF of interior wall. (Photo #8)

Guard House:

8. Prepare and paint in-kind 352 SF of exterior wall. (Photo #9)

Laundry Room:

9. Prepare and paint in-kind 24 SF of interior ceiling. (Photo #10)
10. Prepare and paint in-kind 48 SF of interior wall. (Photo #11)

Men's Bathroom South:

11. Prepare and paint in-kind 376 SF of interior ceiling. (Photos #12, 13)
12. Prepare and paint in-kind 150 SF of interior wall. (Photo #14)

Supply Storage Room:

13. Prepare and paint in-kind 480 SF of interior ceiling. (Photos #15, 16)

Training NCO:

14. Prepare and paint in-kind 36 SF of interior wall. (Photo #17)

Women's Bathroom South:

15. Prepare and paint in-kind 18 SF of interior wall. (Photos #18, 19)

Gym (Basement)

16. Remove and replace similar or equal 1 each of Trane MCW518K10RAB HVAC_12K Btu Unit
 - *Hazard Mitigation Proposal (HMP): Anchoring system for Trane MCW518K10RAB HVAC_12K Btu Unit*
 - **See additional notes for details on handling existing and new equipment.**

Roof

17. Remove and replace in-kind 1 each of PVC Condulet 1"

Flammable Material Storehouse Building

Exterior

18. Build and install treated wood frame (2" x 4"), painted, with treated wood panel painted insert for a future sign (8 FT wide x 4 FT high). (Photo #20)

Field Maintenance Shop

Exterior

19. Remove and replace in-kind 1 each of aluminum roof flashing (63 FT long x 12 IN wide). (Photos #21, 22)
20. Remove and replace in-kind 1 each of aluminum downspout (3 IN wide x 15 FT high). (Photos #21, 22)

21. Remove and replace in-kind 1 each of aluminum rain gutters (63 FT long x 8 IN wide). (Photos #21, 22)
22. Prepare and paint in-kind 281 SF exterior metal siding wall. (Photo #21)
23. Remove and replace similar or equal 3 each of Trane HVAC Unit (Model 2TTB3018A1000AA, 18K BTU HVAC Units)
 - *HMP: Anchoring system for 3 each Trane HVAC Unit (Model 2TTB3018A1000AA, 18K BTU HVAC Units)*
 - **See additional notes for details on handling existing and new equipment.**

NOTE: The Certification of No Presence of Asbestos is included as part of **Exhibit F**. The Lead Inspection Report is included as part of **Exhibit E**. Although there are components containing lead, the works to be performed don't impact the contaminated components. Therefore, this project will not include lead abatement.

Site #2: Vega Baja Readiness Center

The Proposer will be responsible for performing the following tasks:

Main Building

Site:

1. Remove and replace in-kind 1 each electrical concrete pole (includes rewiring and bulb); Type H3 (35 FT high). (Photo #23)
2. Remove and replace in-kind 8 each helicopter landing pad perimeter lights FL-860. (Photo #24, 25)
3. Remove and replace in-kind 2 each bulb at electrical concrete pole (includes rewiring); Type H3 (35 FT high). (Photo #23)

Exterior:

4. (Roof): Remove and replace in-kind 1 IN diameter PVC electrical conduit, 100 LF long. (Photos #26, 27)
5. (Engineer Company Office): Remove and replace in-kind 1 each aluminum and glass fixed window (30 IN wide x 24 IN high). (Photo #28)
 - *HMP: Install vinyl shatterproof safety & security window film. A total of 720 SF including other glass windows located in the building.*
6. Repair 1 each steel roof access ladder with safety cage and security door, 18 FT high. (Photo #29)
7. (Conference Room): Remove and replace similar or equal 1 each A/C Split Unit with a Trane Evaporator Unit MCX048E10RCA and a XE-1000 Condenser Unit TTR048D100A2, 48,000 Btu
 - a. *HMP: Anchoring system for A/C unit*
 - b. **See additional notes for details on handling existing and new equipment.**
8. (Gym): Remove and replace similar or equal 1 each A/C Split Unit Trane MWW536K10RAA, 36,000 Btu
 - a. *HMP: Anchoring system for A/C unit*
 - **See additional notes for details on handling existing and new equipment.**

Interior:

9. (Basketball Court): Remove and replace in-kind 3 each aluminum and glass sliding windows (4 FT wide x 10 FT high). (Photos #30, 31)
 - *HMP: Install vinyl shatterproof safety & security window film.*
10. (Supply Room #41): Remove and replace in-kind 4 IN diameter PVC pipes, 9 LF long. (Photo #32)
11. (Basketball Court): Prepare and paint in-kind 6,300 SF of interior wall. (Photos #33, 34, 35)
12. (Retention Office): Remove and replace in-kind 2 each fluorescent recessed light (4 FT long x 2 FT wide). (Photo #36)
13. (Hallway towards the gym): Remove and replace in-kind 2 each aluminum jalousie window (3 FT long x 3 FT wide). (Photo #37)
14. (Basketball Court): Repair in-kind interior cement plaster 2.5 SF (30 IN long x 12 IN wide). (Photo #38)

Dining Facility (Building 01108)

Exterior:

15. Remove and replace 1 each solar heater, 35 gallons. (Photos #39, 40)
 - *HMP: Add an anchoring system that will resist expected wind pressure during a similar event to prevent it from being overturned and damaged.*

Interior:

16. Repair in-kind 300 SF concrete ceiling (includes corroded rebars, cement plaster and cracks repairment). (Photo #41)

Overhead Protection (Building OP 002)

Exterior:

17. Remove and replace in-kind 400 SF of corrugated galvanized steel roof panels. (Photo #42)
 - *HMP: Add an anchoring system that will resist expected wind pressure during a similar event to prevent it from being overturned and damaged.*

Additional Works

18. Lead and Asbestos Abatement (For inspection reports refer to **Exhibit E** and **F**)

Site #3: Ponce Readiness Center

The Proposer will be responsible for performing the following tasks:

Main Building

Walls:

1. Repair in-kind 21 SF of exterior wall plaster. (Photos #43, 44, 45, 46)
2. Remove and replace in-kind 1 each aluminum jalousie window (30 IN long x 30 IN wide). (Photo #47)
3. Prepare and paint in-kind 7,098 SF of exterior paint wall. (Photos #48, 49, 50, 51, 52)
4. Remove and replace in-kind 2 each of exterior PVC, LR electrical conduit 1 IN. (Photo #53)

Wingway:

5. Prepare and paint in-kind 2,926 SF of ceiling paint. (Photos #54, 55, 56, 57, 58, 59)

Storage GP

Exterior:

6. Remove and replace in-kind 1 each of solid wood entrance double door (44 IN wide x 80 IN high). (Photo #60)
7. Remove and replace in-kind 1 each of solid wood entrance door frame (6 IN wide x 80 IN high). (Photo #60)

Additional Works

8. Lead and Asbestos Abatement (For inspection reports refer to **Exhibit E** and **F**)

Site #4: Arecibo Readiness Center

The Proposer will be responsible for performing the following tasks:

Site:

1. (House Guard): Remove and replace in-kind 4 each security cameras at house guard, access control (similar or equal to Owl brand, CAM-CM01-245, 45 ft range, night vision). (Photos #81, 82)
2. Remove and replace similar or equal 1 each Lift Master barrier gate, Chamberlain BG770 with 8 FT wood arm. (Photo #89)

Exterior:

3. (Figna Office-Family Support): Remove and replace in-kind 1 each Aluminum and glass door (4 FT wide x 7 FT high). (Photo #90)
 - *HMP: Add a rolling aluminum shutter to protect entrance door*

Interior:

4. (Main Building): Remove and replace in-kind 1 each glass window, 3 FT long x 1 FT wide. (Photo #83)
5. (Hallways and Basketball Court): Prepare and paint in-kind 1,900 SF of interior paint. (Photos #84, 85, 86)
6. (Basketball Court): Remove and replace in-kind 8 each of aluminum jalousie windows, 2.5 FT wide x 6 FT high. (Photos #87, 88)
 - *HMP: Replace windows with storm rated windows with weather stripping for water intrusion.*
7. (Basketball Court): Remove and replace silicon sealer of windows frames, 136 LF.
8. (Room #3): Remove and replace in-kind 1 each of aluminum A/C vent grid, 20 IN x 24 IN.
9. (Hallways, Kitchen and Office #3): Remove and replace in-kind 250 SF of Acoustic ceiling tiles (4 FT long x 2 FT wide). (Photo #91)
10. (Offices-Building South Side): Remove and replace similar or equal 3 each of Trane A/C split unit 2TTR2018A1000AA, 18,000 Btu.
 - **See additional notes for details on handling existing and new equipment.**
11. (Figna Office): Remove and replace similar or equal 1 each of Trane A/C split unit 2TTR2060B1000AA, 60,000 Btu / 5 Tons.
 - **See additional notes for details on handling existing and new equipment.**
12. (Mess Storage Hallway): Remove and replace in-kind 2 each of Fluorescent recessed light fixture (4 FT long x 2 FT wide). (Photo #92)

Additional Works

13. Asbestos Abatement (For inspection report refer to **Exhibit F**)

NOTE: The Lead Inspection Report is included as part of **Exhibit E**. Although there are components containing lead, the works to be performed don't impact the contaminated components. Therefore, this project will not include lead abatement.

Site #5: Aibonito Readiness Center

The Proposer will be responsible for performing the following tasks:

Building Interior:

1. Remove and replace similar or equal 1 each McCall commercial refrigerator and/or freezer - Mod. 1020.
 - *HMP: Install a 120V / single phase surge protector.*
2. Remove and replace similar or equal 1 each Victory commercial refrigerator and/or freezer - VF-1NSF.
 - *HMP: Install a 120V / single phase surge protector.*
3. Remove and replace similar or equal 1 each Ice-o-Matic Ice maker machine - NSE/ICE0500FA 3.
 - *HMP: Install a 120V / single phase surge protector.*
4. Supply and install a 240V split phase surge protector to an A/C split unit of 12,000 BTU.

Site #6: Utuado Readiness Center

The Proposer will be responsible for performing the following tasks:

Building Interior (Classroom 19, Offices 8, 12, 13 & 14)

1. Supply in-kind 1,000 SF of Acoustic ceiling tiles (4 FT long x 2 FT wide). This item will not be installed. Material will be delivered at Parada 3-1/2, Puerta de Tierra, San Juan.

Building Interior (Room 12)

2. Remove and replace in-kind 1 each Laminated wood conglomerate desk (6 FT long x 2.5 FT wide x 3 FT high).

EXHIBIT D: Photos

Site #1: Mayagüez RC



Photo #1: Mayagüez – Wall Paint



Photo #2: Mayagüez – Window 3 FT x 4 FT



Photo #3: Mayagüez – Window 36 IN x 66 IN



Photo #4: Mayagüez – Window 36 IN x 72 IN



Photo #5: Mayagüez – Wall Paint



Photo #6: Mayagüez – Acoustic Ceiling



Photo #7: Mayagüez – Acoustic Ceiling



Photo #8: Mayagüez – Wall Paint



Photo #9: Mayagüez – Wall Paint



Photo #10: Mayagüez – Ceiling Paint

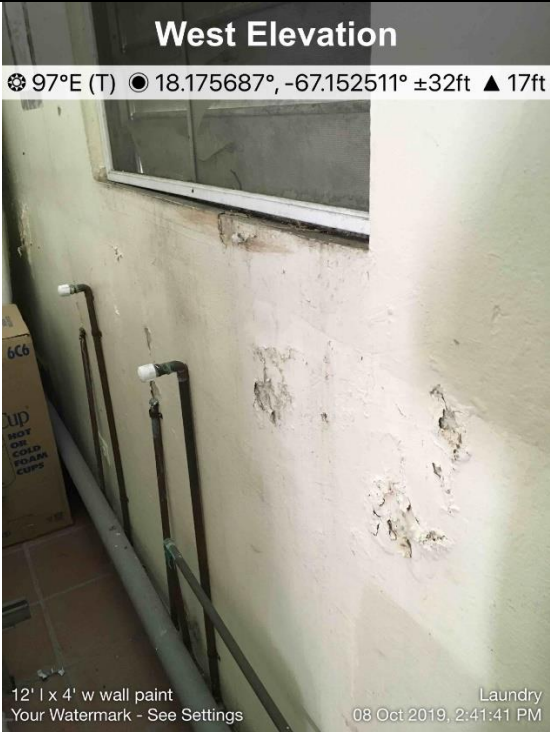


Photo #11: Mayagüez – Wall Paint



Photo #12: Mayagüez – Ceiling Paint



Photo #13: Mayagüez – Ceiling Paint

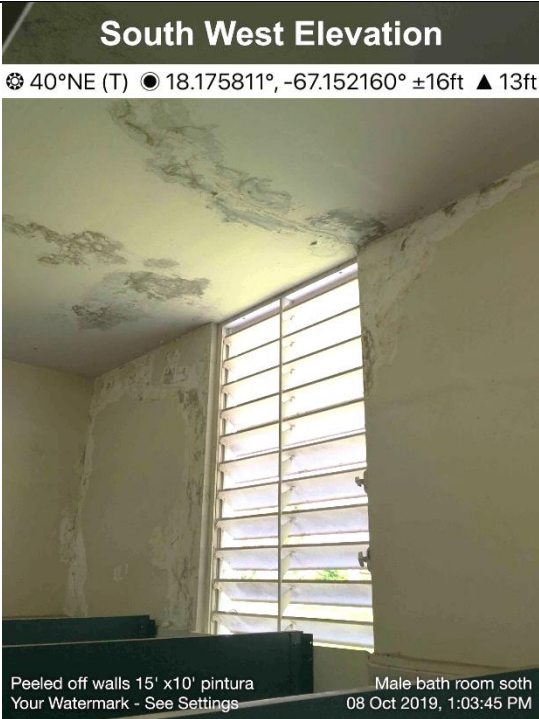


Photo #14: Mayagüez – Wall Paint



Photo #15: Mayagüez – Ceiling Paint



Photo #16: Mayagüez – Ceiling Paint



Photo #17: Mayagüez – Wall Paint



Photo #18: Mayagüez – Wall Paint



Photo #19: Mayagüez – Wall Paint

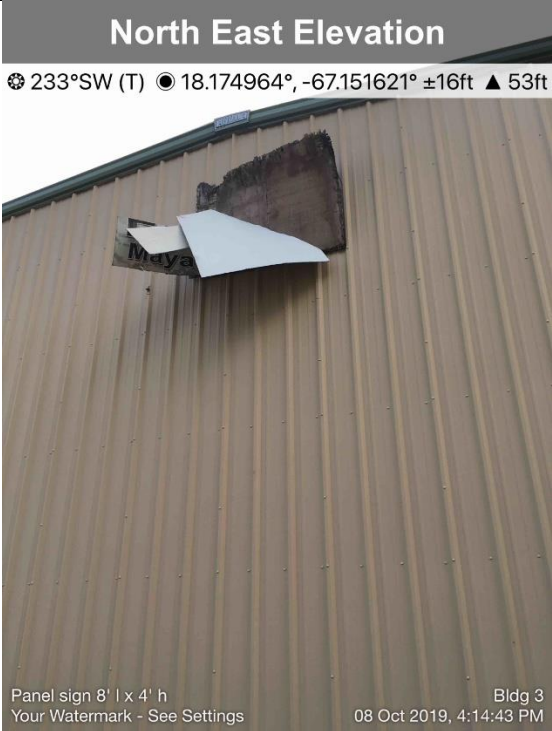


Photo #20: Mayagüez – Wood Signage

 A photograph of a light-colored metal building with a dark roof. A white downspout is visible on the left side of the building. The sky is blue with white clouds. A small tree is in the foreground.	 A close-up photograph of the roofline of a light-colored metal building. A white downspout is visible on the left side of the building. The sky is blue with white clouds.
<p>Photo #21: Mayagüez – Flashing, Gutters & Downspout</p>	<p>Photo #22: Mayagüez – Flashing, Gutters & Downspout</p>

Site #2: Vega Baja RC

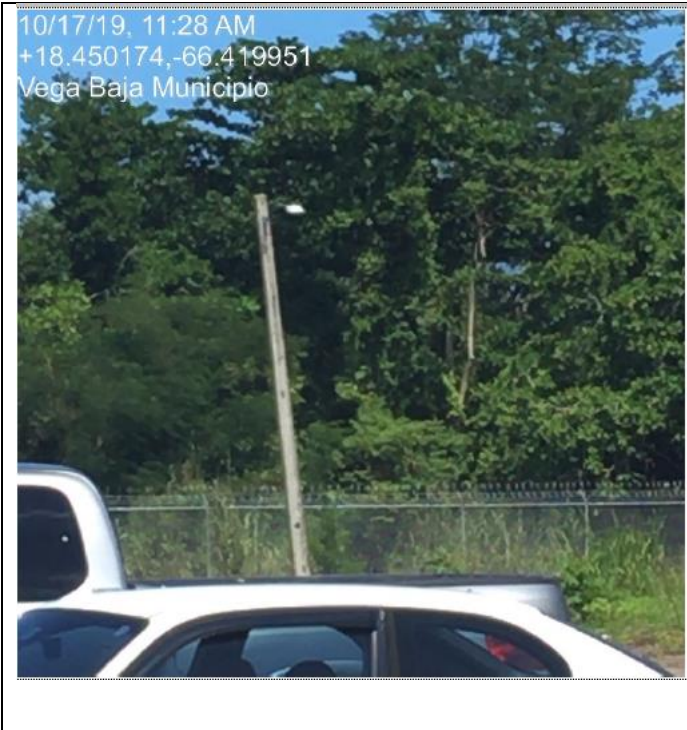


Photo #23: Vega Baja – Concrete Pole

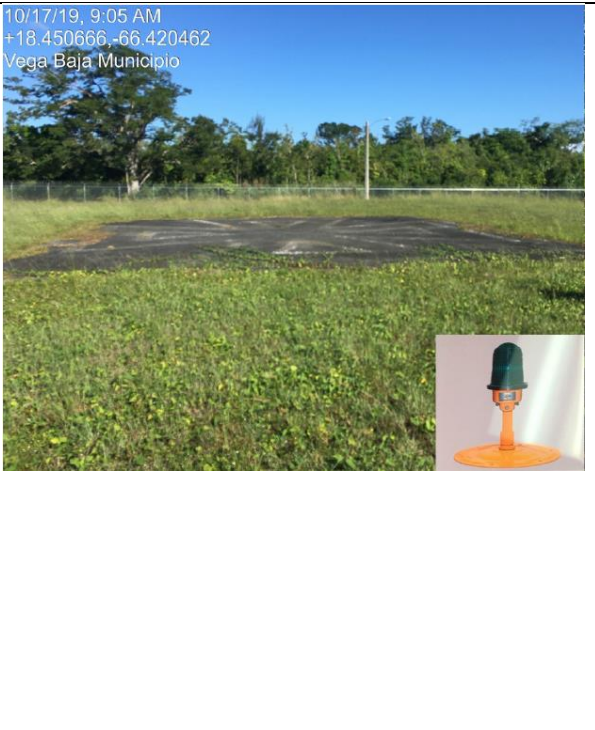


Photo #24: Vega Baja – Helicopter Landing Pad Perimeter Lights

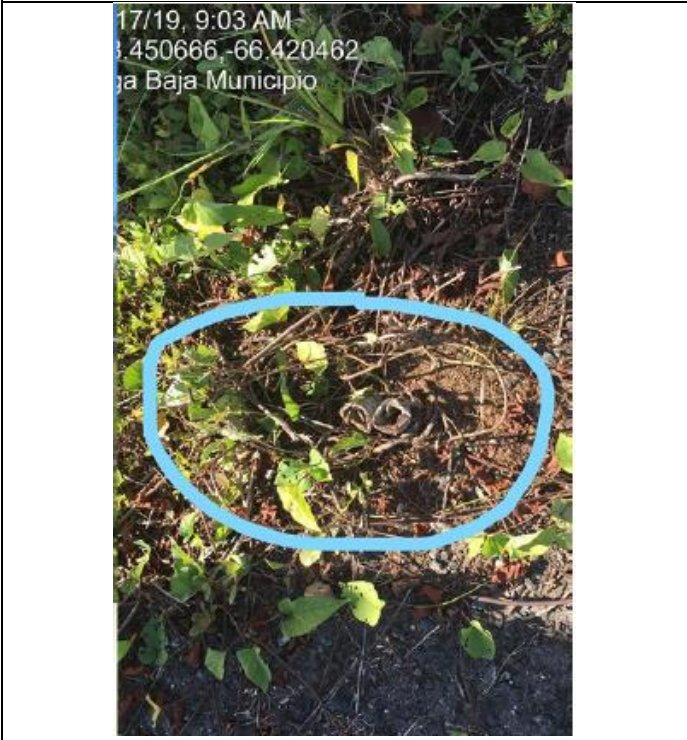


Photo #25: Vega Baja – Helicopter Landing Pad Perimeter Lights



Photo #26: Vega Baja – 1 IN PVC Electrical Conduit

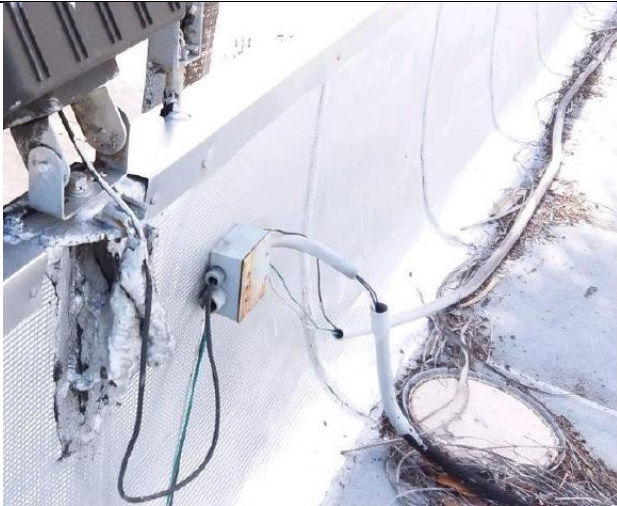


Photo #27: Vega Baja – 1 IN PVC Electrical Conduit



Photo #28: Vega Baja – Glass Window

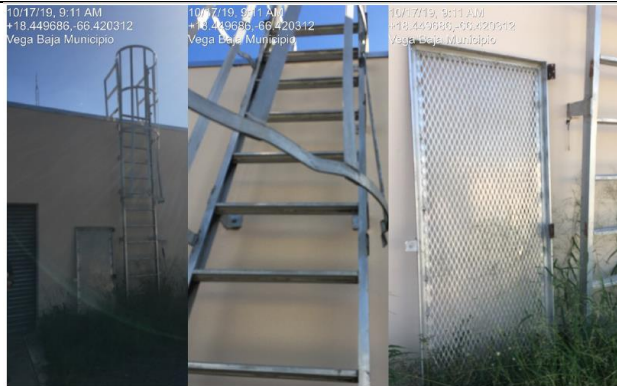


Photo #29: Vega Baja – Steel Roof Access Ladder



Photo #30: Vega Baja – Glass Sliding Windows



Photo #31: Vega Baja – Glass Sliding Windows



Photo #32: Vega Baja – 4 IN PVC Pipes



Photo #33: Vega Baja – Wall Paint



Photo #34: Vega Baja – Wall Paint



Photo #35: Vega Baja – Wall Paint



Photo #36: Vega Baja – Fluorescent Lights



Photo #37: Vega Baja – Aluminum Jalousie Windows



Photo #38: Vega Baja – Interior Plaster



Photo #39: Vega Baja – Solar Heater



Photo #40: Vega Baja – Solar Heater



Photo #41: Vega Baja – Concrete Ceiling



Photo #42: Vega Baja – Steel Roof Panels

Site #3: Ponce RC



Photo #43: Ponce – Wall Plaster



Photo #44: Ponce – Wall Plaster



Photo #45: Ponce – Wall Plaster



Photo #46: Ponce – Wall Plaster



Photo #47: Ponce – Aluminum Jalousie Window



Photo #48: Ponce – Wall Paint



Photo #49: Ponce – Wall Paint



Photo #50: Ponce – Wall Paint



Photo #51: Ponce – Wall Paint



Photo #52: Ponce – Wall Paint



Photo #53: Ponce – PVC Electrical Condulet



Photo #54: Ponce – Ceiling Paint



Photo #55: Ponce – Ceiling Paint



Photo #56: Ponce – Ceiling Paint



Photo #57: Ponce – Ceiling Paint



Photo #58: Ponce – Ceiling Paint







Photo #59: Ponce – Ceiling Paint



Photo #60: Ponce – Solid Wood Door

Site #4: Arecibo RC

<p>10/3/19, 10:29 AM +18.455623,-66.744416 Arecibo Municipio</p> 	<p>10/3/19, 10:32 AM +18.455530,-66.744438 Arecibo Municipio</p> 
<p>Photo #81: Arecibo – Security Cameras</p>	<p>Photo #82: Arecibo – Security Cameras</p>
<p>10/3/19, 9:08 AM +18.456340,-66.744785 Arecibo Municipio</p> 	<p>10/3/19, 9:41 AM +18.455981,-66.744350 Arecibo Municipio</p> 
<p>Photo #83: Arecibo – Glass Window</p>	<p>Photo #84: Arecibo – Interior Wall Paint</p>

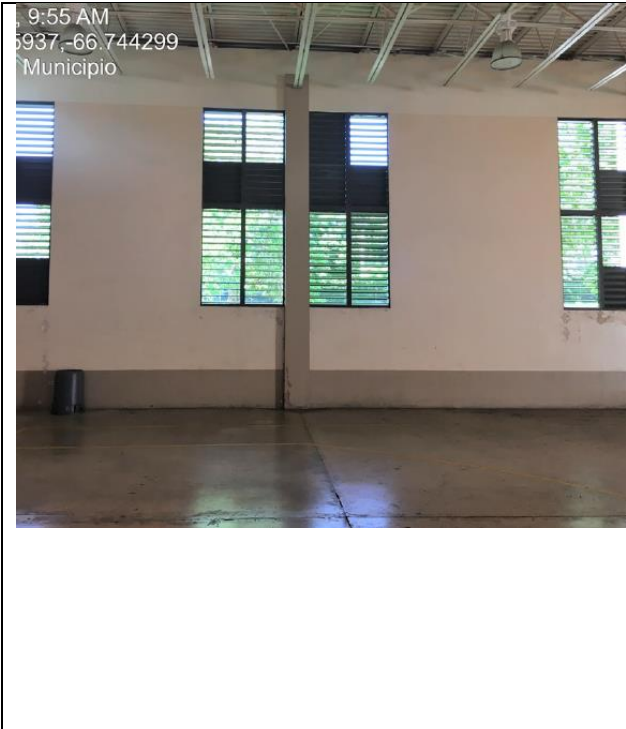


Photo #85: Arecibo – Interior Wall Paint



Photo #86: Arecibo – Interior Wall Paint



Photo #87: Arecibo – Aluminum Jalousie Windows



Photo #88: Arecibo – Aluminum Jalousie Windows



Photo #89: Arecibo – Wood Barrier Gate



Photo #90: Arecibo – Aluminum & Glass Door



Photo #91: Arecibo – Acoustic Ceiling



Photo #92: Arecibo – Fluorescent Light Fixture

EXHIBIT E: Lead Based Paint Inspection Report

LEAD BASED PAINT INSPECTION REPORT

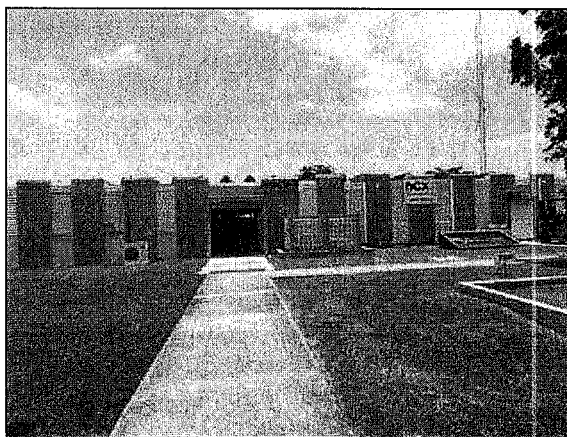
FOR

PUERTO RICO NATIONAL GUARD

SAMPLING CONDUCTED AT
PRNG MAYAGÜEZ READINESS CENTER,
MAYAGÜEZ, PR

ZEM-19076

JULY, 2019



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TABLE OF CONTENT

SECTION 1: EXECUTIVE SUMMARY	1
1.1 Introduction.....	1
1.2 Summary of Property Evaluation	1
1.3 Property Locations of Building Components with Lead Based Paint	1
Table 1-1 Summary of Building Components with Lead Based Paint.....	1
 SECTION 2: LEAD-BASED PAINT INSPECTION REPORT	 2
2.1 Overview of the Evaluation.....	2
2.2 Sampling Procedure and Results Presentation	2
2.3 Lead Regulatory Levels.....	3
2.4 Conditions and Limitations	3
2.5 Abatement Conditions	3
2.6 Recommendations	4
2.7 Environmental Assessment Report Certification	4
 SECTION 3: APPENDICES	 5
Appendix A: XRF Sampling Data	6
Appendix B: Project Photographs.....	16
Appendix C: Certifications, Licenses, and Accreditations.....	21
Appendix D: XRF's Performance Characteristics Sheet	23
Appendix E: Location of Positive Materials.....	27

SECTION 1: EXECUTIVE SUMMARY

1.1 INTRODUCTION

A Lead-Based Paint inspection was conducted on July 24, 2019 at Puerto Rico National Guard Mayagüez Readiness Center, project located at Mayagüez, Puerto Rico. The lead-based paint inspection was performed to identify paint that contains lead above allowable levels and to assist with the compliance of local, state and federal regulations.

1.2 SUMMARY OF PROPERTY EVALUATION

The project consisted of the evaluation of the interior and exterior areas of the aforementioned project. The evaluation found that lead based paint was present in selective components and surfaces through the buildings on the date of the inspection. Table 1-1 identifies the components positive for lead. Table 2-1 identifies lead-based paint as defined by the U.S. Environmental Protection Agency (EPA) and the Environmental Quality Board (EQB). For specific locations and additional detail on the location of lead- reference Sections 2 and 3.

1.3 PROPERTY LOCATIONS OF BUILDING COMPONENTS WITH LEAD-BASED PAINT

Table 1-1 summarizes the site components and surfaces coated with lead-based paint. Details that identify positive lead-based paint findings within specific areas and on surfaces were provided in the lead-based paint inspection report. The "substrate" is the building component material directly beneath the painted surface. Photographic documentation is for reference purposes and doesn't necessarily include all the surfaces with lead based paint and/or components containing lead.

Table 1-1: Summary of Components Containing Lead				
Area	Component	Color	Substrate	Approximate Amount
1-1	Gate	Cream	Metal	50 Ft ²
	Shelve	Cream	Metal	90 Ft ²
1-1 & 1-2	Floor Lines	Yellow	Concrete	140 Ln. Ft.
1-33	Curbs	Yellow	Concrete	360 Ln. Ft.
Exterior	Curbs	Yellow	Concrete	750 Ln. Ft.
	Floor	Yellow	Concrete	6 Ft ²

Note:

- The quantification of positives materials presented in this table is only an estimate. If an abatement of the materials will be conducted, the Contractors shall estimate the amount of materials to be abated.

SECTION 2: LEAD-BASED PAINT INSPECTION REPORT

2.1 OVERVIEW OF THE EVALUATION

This lead-based paint inspection is an investigation to identify all lead-based paint on a surface-by-surface basis. A lead-based paint inspection conforming to HUD guidelines was performed at the aforementioned property.

Averages of 523 samples were taken at identified surfaces of the evaluated areas using X-ray fluorescence (XRF) analyzer. The evaluation found that lead-based paint was present in selective components and surfaces through the site on the date of the assessment (See Table 1-1).

Some of the remaining XRF test locations exhibited lead-in-paint levels below the level that EPA identifies as lead-based paint, namely 1.0 mg/cm^2 . Such surfaces could create dust-lead or soil-lead hazards if the paint is turned into dust by abrasion, scraping, or sanding. Should these or any lead containing components or surfaces be disturbed in any manner that generates dust, care should be taken to limit its spread.

Testing was performed by Harry Peña, state-certified risk assessor 1364-06-19-RA-001, using the Niton XLp-300A XRF, SN-101222. The credentials are provided in Section 3, Appendix C: Certifications, Licenses, and Accreditations. The XRF analyzer is designed to measure the lead content of surface coatings on a variety of building surfaces, substrates, and components. The measurement is rapid and nondestructive and, according to the manufacturer, is capable of detecting lead concentrations that occur within numerous layers of various surface coatings.

Please refer to the XRF Testing Results Section 3, Appendix A: XRF Sampling Data for the detailed analytical testing results for each distinct area inspected. The reports provide a complete testing data.

2.2 SAMPLING PROCEDURE AND RESULTS PRESENTATION

The Lead Based Paint Sampling Procedure was design to evaluate and document all the data obtained form the inspection in a sequential method that provided confidence at the moment of the results presentation.

The survey was performed following the methodology established in the HUD Guidelines for the Evaluation and Control of Lead Based Paint in Housing (2012 revision) and the PREQB Lead Based Paint Abatement Control Regulation. The surfaces evaluation was performed as follows:

- If the lead concentration measured by the XRF Spectrum Analyzer is less than 1.0 mg/cm^2 it is considered negative.
- If the lead concentration measured by the XRF Spectrum Analyzer is equal or greater than 1.0 mg/cm^2 it is considered positive.

To each functional space of the property a name was assigned according to the use of that space. If no name could be assigned then a code letter or number was assigned. The room numbers will be assigned clockwise as you enter the structure and go towards the left always.

Each wall surface was named with letters beginning with wall A the wall facing the main entrance direction. The wall at your left will be wall B, the wall at front wall C and the wall at you right will be wall D.

2.3 LEAD REGULATORY LEVELS

The lead regulatory levels provided below are those used when preparing this lead-based paint evaluation or when evaluating data collected. The EPA regulatory levels are the same as the state regulatory levels provided in the following table.

TABLE 2-1: LEAD REGULATORY LEVELS	
	EPA/EQB Levels
Lead-Based Paint	1.0 mg/cm ² or 0.5% by weight (or 5,000 ppm)

2.4 CONDITIONS AND LIMITATIONS—DISCLAIMER

Zimmetry Environmental Management Corp. has performed this lead-based paint inspection in a thorough and professional manner consistent with commonly accepted industry standards. The Preparer cannot guarantee and does not warrant that this evaluation has identified all adverse environmental factors and/or conditions affecting this project on the date of the evaluation.

The results reported and conclusions reached by the Preparer are solely for the benefit of the Owner. The results and opinions in this report, based solely on the conditions found at the project on the date of the evaluation, are valid only on that date. The Preparer assumes no obligation to advise the client of any changes in any real or potential lead-based paint hazards at this residence beyond the date of the project evaluation.

The lead inspection was performed to ready accessible components and surfaces. If suspected components that could contain lead are encountered underneath current installed tiles or other construction material, they shall be managed as containing lead until the appropriate test is performed.

2.5 ABATEMENT CONDITIONS

Abatement, as defined by HUD and the Puerto Rico Environmental Quality Board (EQB), means any set of measures designed to eliminate lead-based paint and/or lead-based paint hazards permanently. The people providing these services must to be trained in accordance with the EQB licensing/certification requirements. The product manufacturer and/or

contractor must warrant abatement methods to last a minimum of 20 years, or these methods must have a design life of at least 20 years.

Abatement activities may include, but are not necessarily limited to:

- onsite or offsite removal of lead-based paint from substrates and components
- replacement of components or fixtures painted with lead-based paint
- permanent enclosure of lead-based paint with construction materials mechanically-fastened to the substrate
- encapsulation of lead-based paint with specially designed encapsulant products
- removal or permanent covering (concrete or asphalt) of soil-lead-based paint hazards

If enclosure or encapsulation is conducted as an abatement method, the lead-based paint remains on the property, so ongoing lead-based paint maintenance is required.

2.6 RECOMMENDATIONS

According to the EQB lead regulations, prior to the demolishing of a structure containing lead based paint, the contaminated surfaces or substrates must be abated or removed. The waste generated has to be characterized to determine if the waste generated is hazardous or non hazardous waste. The firm providing the abatement services must be certified as an abatement firm by the EQB. Workers conducting abatement must be trained and certified as abatement workers by a training provider accredited by the EQB.

2.7 ENVIRONMENTAL ASSESSMENT REPORT CERTIFICATION

Zimmetry Environmental Management Corp. has performed this lead-based paint inspection in a thorough and professional manner consistent with commonly accepted industry standards. The inspection was conducted on July 24, 2019 by Harry Peña, state-certified risk assessor 1364-06-19-RA-001, qualified by experience, education and training in the recognition of lead based paint and approved sampling techniques using the Niton XLp-300A XRF, SN-101222.



Harry Peña, MSEM
Environmental Risk Assessor

SECTION 3: APPENDICES

Appendix A: XRF Sampling Data

Appendix B: Project Photographs

Appendix C: Certifications, Licenses, and Accreditations

Appendix D: XRF's Performance Characteristics Sheet

Appendix E: Location of Positive Materials

APPENDIX A: XRF SAMPLING DATA

PROJECT:	PRNG Mayagüez Readiness Center, Mayagüez, PR			CLIENT: Puerto Rico National Guard			
DATE:	7/24/2019			LBP Inspector: Harry Peña			
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
1	Calibration				1.00		
2	Calibration				1.00		
3	Calibration				1.00		
4	Area 1-1	Gate	Grey	Metal	0.00	Negative	
5	Area 1-1	Door	Grey	Metal	0.00	Negative	
6	Area 1-1	Door Casing	Grey	Metal	0.00	Negative	
7	Area 1-1	Wall A	Cream	Concrete	0.00	Negative	
8	Area 1-1	Wall B	Cream	Concrete	0.00	Negative	
9	Area 1-1	Wall C	Cream	Concrete	0.00	Negative	
10	Area 1-1	Wall D	Cream	Concrete	0.00	Negative	
11	Area 1-1	Floor Line	Yellow	Concrete	0.80	Negative	
12	Area 1-1	Floor Line	Yellow	Concrete	0.50	Negative	
13	Area 1-1	Floor Line	Yellow	Concrete	0.12	Negative	
14	Area 1-1	Gate	Cream	Metal	4.30	Positive	
15	Area 1-1	Door	Cream	Metal	0.00	Negative	
16	Area 1-1	Door Casing	Cream	Metal	0.00	Negative	
17	Area 1-1	Baseboard	Cream	Concrete	0.00	Negative	
18	Area 1-1	Shelve	Cream	Metal	4.20	Positive	
19	Area 1-2	Door	Grey	Metal	0.00	Negative	
20	Area 1-2	Door Casing	Grey	Metal	0.00	Negative	
21	Area 1-2	Gate	Grey	Metal	0.00	Negative	
22	Area 1-2	Floor	Yellow	Concrete	1.90	Positive	
23	Area 1-2	Wall D	Cream	Concrete	0.00	Negative	
24	Area 1-2	Column	Cream	Concrete	0.00	Negative	
25	Area 1-2	Floor Line	Yellow	Concrete	1.40	Positive	
26	Area 1-2	Beam	Cream	Concrete	0.00	Negative	
27	Area 1-2	Door	Grey	Metal	0.00	Negative	
28	Area 1-2	Door Casing	Grey	Metal	0.00	Negative	
29	Area 1-2	Cage	Black	Metal	0.00	Negative	
30	Area 1-2	Wall A	Cream	Concrete	0.01	Negative	
31	Area 1-2	Grille	Black	Metal	0.00	Negative	
32	Area 1-2	Baseboard	Cream	Concrete	0.00	Negative	
33	Area 1-2	Wall C	Cream	Concrete	0.00	Negative	
34	Area 1-2	Wall B	Cream	Concrete	0.00	Negative	
35	Area 1-2	Ceiling	Cream	Concrete	0.01	Negative	
36	Area 1-2	Beam	Cream	Concrete	0.00	Negative	
37	Area 1-2	Window Shutter	White	Metal	0.00	Negative	
38	Area 1-3	Door	Grey	Metal	0.00	Negative	
39	Area 1-3	Door Casing	Grey	Metal	0.00	Negative	
40	Area 1-3	Wall A	Cream	Concrete	0.00	Negative	
41	Area 1-3	Wall B	Cream	Concrete	0.00	Negative	
42	Area 1-3	Wall C	Cream	Concrete	0.00	Negative	
43	Area 1-3	Wall D	Cream	Concrete	0.00	Negative	
44	Area 1-3	Window Shutter	White	Metal	0.00	Negative	
45	Area 1-3	Floor Tile	Terracotta	Ceramic	0.03	Negative	
46	Area 1-3	Ceiling	White	Concrete	0.00	Negative	
47	Area 1-3	Beam	Cream	Concrete	0.00	Negative	
48	Area 1-3	Door	Grey	Metal	0.00	Negative	
49	Area 1-3	Door Casing	Grey	Metal	0.00	Negative	
50	Area 1-3	Door	White	Metal	0.00	Negative	
51	Area 1-3	Door Casing	White	Metal	0.01	Negative	
52	Area 1-4	Wall A	Cream	Concrete	0.00	Negative	
53	Area 1-4	Pipeline	Yellow	Metal	0.00	Negative	
54	Area 1-4	Wall B	Cream	Concrete	0.02	Negative	
55	Area 1-4	Window Shutter	White	Metal	0.01	Negative	
56	Area 1-4	Sink	White	Metal	0.02	Negative	
57	Area 1-4	Beam	Cream	Concrete	0.00	Negative	
58	Area 1-4	Ceiling	White	Concrete	0.00	Negative	
59	Area 1-4	Wall C	Cream	Concrete	0.03	Negative	
60	Area 1-4	Wall D	Cream	Concrete	0.00	Negative	

PROJECT:	PRNG Mayagüez Readiness Center, Mayagüez, PR			CLIENT: Puerto Rico National Guard			
DATE:	7/24/2019			LBP Inspector: Harry Peña			
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
61	Area 1-4	Window Shutter	White	Metal	0.00	Negative	
62	Area 1-4	Door	Grey	Metal	0.00	Negative	
63	Area 1-4	Door Casing	Grey	Metal	0.00	Negative	
64	Area 1-4	Wall A	Cream	Concrete	0.01	Negative	
65	Area 1-4	Gate	Black	Metal	0.01	Negative	
66	Area 1-4	Door	Grey	Wood	0.00	Negative	
67	Area 1-4	Door Casing	Grey	Wood	0.00	Negative	
68	Area 1-5	Door	Grey	Wood	0.00	Negative	
69	Area 1-5	Door Casing	Grey	Wood	0.03	Negative	
70	Area 1-5	Wall A	Cream	Concrete	0.02	Negative	
71	Area 1-5	Wall B	Cream	Concrete	0.02	Negative	
72	Area 1-5	Wall C	Cream	Concrete	0.00	Negative	
73	Area 1-5	Wall D	Cream	Concrete	0.00	Negative	
74	Area 1-5	Grille	Black	Metal	0.00	Negative	
75	Area 1-5	Ceiling	White	Concrete	0.01	Negative	
76	Area 1-5	Floor Tile	Terracotta	Ceramic	0.00	Negative	
77	Area 1-5	Window Shutter	White	Metal	0.00	Negative	
78	Area 1-5	Pipeline	Yellow	Metal	0.00	Negative	
79	Area 1-5	Gate	Black	Metal	0.00	Negative	
80	Area 1-6	Wall A	Cream	Concrete	0.01	Negative	
81	Area 1-6	Wall B	Cream	Concrete	0.00	Negative	
82	Area 1-6	Wall C	Cream	Concrete	0.00	Negative	
83	Area 1-6	Wall D	Cream	Concrete	0.02	Negative	
84	Area 1-6	Window Shutter	White	Metal	0.00	Negative	
85	Area 1-6	Ceiling	White	Concrete	0.00	Negative	
86	Area 1-7	Gate	Black	Metal	0.00	Negative	
87	Area 1-7	Rolling Door	Green	Metal	0.00	Negative	
88	Area 1-7	Rolling Door Frame	Green	Metal	0.01	Negative	
89	Area 1-7	Wall A	Cream	Concrete	0.00	Negative	
90	Area 1-7	Wall B	Cream	Concrete	0.00	Negative	
91	Area 1-7	Wall C	Cream	Concrete	0.00	Negative	
92	Area 1-7	Wall D	Cream	Concrete	0.00	Negative	
93	Area 1-7	Ceiling	White	Concrete	0.00	Negative	
94	Area 1-7	Pipeline	Cream	Metal	0.00	Negative	
95	Area 1-7	Window Shutter	White	Metal	0.03	Negative	
96	Area 1-8	Gate	Green	Metal	0.00	Negative	
97	Area 1-8	Wall A	Cream	Concrete	0.00	Negative	
98	Area 1-8	Wall B	Cream	Concrete	0.00	Negative	
99	Area 1-8	Wall C	Cream	Concrete	0.02	Negative	
100	Area 1-8	Floor Tile	Gray	Ceramic	0.00	Negative	
101	Area 1-9	Door	Gray	Metal	0.00	Negative	
102	Area 1-9	Door Casing	Gray	Metal	0.00	Negative	
103	Area 1-9	Wall A	Cream	Concrete	0.00	Negative	
104	Area 1-9	Wall B	Cream	Concrete	0.00	Negative	
105	Area 1-9	Wall C	Cream	Concrete	0.00	Negative	
106	Area 1-9	Wall D	Cream	Concrete	0.03	Negative	
107	Area 1-9	Window Shutter	White	Metal	0.02	Negative	
108	Area 1-9	Door	Grey	Metal	0.01	Negative	
109	Area 1-9	Door Casing	Grey	Metal	0.01	Negative	
110	Area 1-10	Door	Grey	Metal	0.00	Negative	
111	Area 1-10	Door Casing	Grey	Metal	0.00	Negative	
112	Area 1-10	Wall A	Cream	Concrete	0.00	Negative	
113	Area 1-10	Wall B	Cream	Concrete	0.00	Negative	
114	Area 1-10	Wall C	Cream	Concrete	0.00	Negative	
115	Area 1-10	Wall D	Cream	Concrete	0.01	Negative	
116	Area 1-10	Window Shutter	White	Metal	0.00	Negative	
117	Area 1-10	Ceiling	White	Concrete	0.01	Negative	
118	Area 1-11	Door	Grey	Metal	0.00	Negative	
119	Area 1-11	Door Casing	Grey	Metal	0.00	Negative	
120	Area 1-11	Wall A	Cream	Concrete	0.00	Negative	

PROJECT:	PRNG Mayagüez Readiness Center, Mayagüez, PR			CLIENT: Puerto Rico National Guard			
DATE:	7/24/2019			LBP Inspector: Harry Peña			
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
121	Area 1-11	Wall B	Cream	Concrete	0.00	Negative	
122	Area 1-11	Wall C	Cream	Concrete	0.00	Negative	
123	Area 1-11	Wall D	Cream	Concrete	0.00	Negative	
124	Area 1-11	Window Shutter	White	Metal	0.01	Negative	
125	Area 1-11	Ceiling	White	Concrete	0.00	Negative	
126	Area 1-12	Door	Grey	Metal	0.00	Negative	
127	Area 1-12	Door Casing	Grey	Metal	0.00	Negative	
128	Area 1-12	Wall A	Cream	Concrete	0.00	Negative	
129	Area 1-12	Wall B	Cream	Concrete	0.00	Negative	
130	Area 1-12	Wall C	Cream	Concrete	0.00	Negative	
131	Area 1-12	Wall D	Cream	Concrete	0.00	Negative	
132	Area 1-12	Window Shutter	White	Metal	0.03	Negative	
133	Area 1-13	Door	Grey	Metal	0.02	Negative	
134	Area 1-13	Door Casing	Grey	Metal	0.03	Negative	
135	Area 1-13	Cage	Grey	Metal	0.00	Negative	
136	Area 1-13	Window Shutter	White	Metal	0.00	Negative	
137	Area 1-13	Grille	Black	Metal	0.01	Negative	
138	Area 1-13	Wall A	Cream	Concrete	0.00	Negative	
139	Area 1-13	Wall B	Cream	Concrete	0.00	Negative	
140	Area 1-13	Wall C	Cream	Concrete	0.00	Negative	
141	Area 1-13	Wall D	Cream	Concrete	0.01	Negative	
142	Area 1-13	Ceiling	White	Concrete	0.00	Negative	
143	Area 1-13	Beam	Cream	Concrete	0.00	Negative	
144	Area 1-13	Column	Cream	Concrete	0.00	Negative	
145	Area 1-14	Door	Grey	Metal	0.00	Negative	
146	Area 1-14	Door Casing	Grey	Metal	0.01	Negative	
147	Area 1-14	Wall Tile	Cream	Ceramic	0.04	Negative	
148	Area 1-14	Floor Tile	Cream	Ceramic	0.07	Negative	
149	Area 1-14	Wall A	Cream	Concrete	0.00	Negative	
150	Area 1-14	Wall B	Cream	Concrete	0.00	Negative	
151	Area 1-14	Wall C	Cream	Concrete	0.00	Negative	
152	Area 1-14	Wall D	Cream	Concrete	0.01	Negative	
153	Area 1-14	Ceiling	White	Concrete	0.00	Negative	
154	Area 1-14	Beam	Cream	Concrete	0.00	Negative	
155	Area 1-14	Column	Cream	Concrete	0.00	Negative	
156	Area 1-14	Partition	Green	Plastic	0.00	Negative	
157	Area 1-14	Door	Cream	Metal	0.00	Negative	
158	Area 1-14	Door Casing	Cream	Metal	0.00	Negative	
159	Area 1-14	Lavatory	White	Ceramic	0.05	Negative	
160	Area 1-14	Urinal	White	Ceramic	0.01	Negative	
161	Area 1-14	Toilet	White	Ceramic	0.00	Negative	
162	Area 1-14	Window Shutter	White	Metal	0.00	Negative	
163	Area 1-15	Door	Grey	Metal	0.00	Negative	
164	Area 1-15	Door Casing	Grey	Metal	0.00	Negative	
165	Area 1-15	Wall Tile	Cream	Ceramic	0.02	Negative	
166	Area 1-15	Floor Tile	Cream	Ceramic	0.00	Negative	
167	Area 1-15	Lavatory	White	Ceramic	0.00	Negative	
168	Area 1-15	Toilet	White	Ceramic	0.00	Negative	
169	Area 1-15	Wall A	Cream	Concrete	0.00	Negative	
170	Area 1-15	Wall B	Cream	Concrete	0.00	Negative	
171	Area 1-15	Wall C	Cream	Concrete	0.00	Negative	
172	Area 1-15	Wall D	Cream	Concrete	0.00	Negative	
173	Area 1-15	Window Shutter	White	Metal	0.00	Negative	
174	Area 1-16	Wall A	Cream	Concrete	0.00	Negative	
175	Area 1-16	Wall B	Cream	Concrete	0.00	Negative	
176	Area 1-16	Wall C	Cream	Concrete	0.01	Negative	
177	Area 1-16	Wall D	Cream	Concrete	0.02	Negative	
178	Area 1-16	Window Shutter	White	Metal	0.00	Negative	
179	Area 1-16	Ceiling	White	Concrete	0.00	Negative	
180	Area 1-16	Fascia	Cream	Drywall	0.00	Negative	

PROJECT:	PRNG Mayagüez Readiness Center, Mayagüez, PR			CLIENT: Puerto Rico National Guard			
DATE:	7/24/2019			LBP Inspector: Harry Peña			
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
181	Area 1-16	Floor Tile	Grey	Ceramic	0.01	Negative	
182	Area 1-17	Wall A	Cream	Concrete	0.00	Negative	
183	Area 1-17	Wall B	Cream	Concrete	0.00	Negative	
184	Area 1-17	Wall C	Cream	Concrete	0.00	Negative	
185	Area 1-17	Wall D	Cream	Concrete	0.01	Negative	
186	Area 1-17	Floor	Yellow	Concrete	0.01	Negative	
187	Area 1-17	Floor Tile	Grey	Ceramic	0.00	Negative	
188	Area 1-18	Wall A	White	Concrete	0.00	Negative	
189	Area 1-18	Wall B	White	Concrete	0.00	Negative	
190	Area 1-18	Wall C	White	Concrete	0.00	Negative	
191	Area 1-18	Wall D	White	Concrete	0.00	Negative	
192	Area 1-18	Ceiling	White	Concrete	0.03	Negative	
193	Area 1-18	Beam	White	Concrete	0.02	Negative	
194	Area 1-18	Column	White	Concrete	0.00	Negative	
195	Area 1-18	Rolling Door	Grey	Metal	0.00	Negative	
196	Area 1-18	Wall D	White	Drywall	0.00	Negative	
197	Area 1-18	Floor Line	Red	Concrete	0.01	Negative	
198	Area 1-18	Door	Black	Metal	0.00	Negative	
199	Area 1-18	Door Casing	Black	Metal	0.01	Negative	
200	Area 1-19	Door	Grey	Metal	0.00	Negative	
201	Area 1-19	Door Casing	Grey	Metal	0.00	Negative	
202	Area 1-19	Wall A	Cream	Concrete	0.00	Negative	
203	Area 1-19	Wall B	Cream	Concrete	0.00	Negative	
204	Area 1-19	Wall C	Cream	Concrete	0.01	Negative	
205	Area 1-19	Wall D	Cream	Concrete	0.00	Negative	
206	Area 1-19	Floor Tile	Grey	Ceramic	0.01	Negative	
207	Area 1-19	Window Shutter	White	Metal	0.01	Negative	
208	Area 1-20	Door	Grey	Metal	0.00	Negative	
209	Area 1-20	Door Casing	Grey	Metal	0.00	Negative	
210	Area 1-20	Wall A	Cream	Concrete	0.00	Negative	
211	Area 1-20	Wall B	Cream	Concrete	0.00	Negative	
212	Area 1-20	Wall C	Cream	Concrete	0.01	Negative	
213	Area 1-20	Wall D	Cream	Concrete	0.03	Negative	
214	Area 1-20	Ceiling	White	Concrete	0.01	Negative	
215	Area 1-20	Wall Tile	Cream	Ceramic	0.00	Negative	
216	Area 1-20	Floor Tile	Cream	Ceramic	0.00	Negative	
217	Area 1-20	Lavatory	White	Ceramic	0.03	Negative	
218	Area 1-20	Toilet	White	Ceramic	0.00	Negative	
219	Area 1-20	Urinal	White	Ceramic	0.00	Negative	
220	Area 1-20	Window Shutter	White	Metal	0.02	Negative	
221	Area 1-21	Wall A	Cream	Concrete	0.00	Negative	
222	Area 1-21	Wall B	Cream	Concrete	0.00	Negative	
223	Area 1-21	Wall D	Cream	Concrete	0.00	Negative	
224	Area 1-21	Wall C	Cream	Drywall	0.00	Negative	
225	Area 1-21	Floor Tile	Grey	Ceramic	0.01	Negative	
226	Area 1-22	Wall A	Cream	Drywall	0.00	Negative	
227	Area 1-22	Wall B	Cream	Drywall	0.00	Negative	
228	Area 1-22	Wall C	Cream	Drywall	0.00	Negative	
229	Area 1-22	Wall D	Cream	Drywall	0.00	Negative	
230	Area 1-22	Floor Tile	Cream	Ceramic	0.22	Negative	
231	Area 1-23	Door	Cream	Metal	0.00	Negative	
232	Area 1-23	Door Casing	Cream	Metal	0.00	Negative	
233	Area 1-23	Wall A	Cream	Drywall	0.01	Negative	
234	Area 1-23	Wall B	Cream	Drywall	0.00	Negative	
235	Area 1-23	Wall C	Cream	Drywall	0.00	Negative	
236	Area 1-23	Wall D	Cream	Drywall	0.00	Negative	
237	Area 1-23	Ceiling	White	Concrete	0.01	Negative	
238	Area 1-24	Wall A	Cream	Drywall	0.00	Negative	
239	Area 1-24	Wall B	Cream	Drywall	0.00	Negative	
240	Area 1-24	Wall C	Cream	Drywall	0.00	Negative	

PROJECT:	PRNG Mayagüez Readiness Center, Mayagüez, PR			CLIENT: Puerto Rico National Guard			
DATE:	7/24/2019			LBP Inspector: Harry Peña			
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
241	Area 1-24	Wall D	Cream	Drywall	0.01	Negative	
242	Area 1-24	Gate	Black	Metal	0.00	Negative	
243	Area 1-24	Floor Tile	Cream	Ceramic	0.00	Negative	
244	Area 1-25	Door	Varnish	Wood	0.01	Negative	
245	Area 1-25	Door Casing	Varnish	Wood	0.02	Negative	
246	Area 1-25	Wall A	Cream	Concrete	0.01	Negative	
247	Area 1-25	Wall D	Cream	Concrete	0.00	Negative	
248	Area 1-25	Wall B	Cream	Concrete	0.00	Negative	
249	Area 1-25	Wall C	Cream	Concrete	0.00	Negative	
250	Area 1-25	Ceiling	White	Concrete	0.03	Negative	
251	Area 1-25	Window Shutter	White	Metal	0.01	Negative	
252	Area 1-25	Switch Box	Grey	Metal	0.01	Negative	
253	Area 1-26	Door	Grey	Metal	0.01	Negative	
254	Area 1-26	Door Casing	Grey	Metal	0.01	Negative	
255	Area 1-26	Wall A	White	Concrete	0.00	Negative	
256	Area 1-26	Wall B	White	Concrete	0.00	Negative	
257	Area 1-26	Wall D	White	Concrete	0.01	Negative	
258	Area 1-26	Wall C	White	Drywall	0.00	Negative	
259	Area 1-26	Floor Tile	Grey	Ceramic	0.30	Negative	
260	Area 1-26	Lavatory	White	Ceramic	0.00	Negative	
261	Area 1-26	Toilet	White	Ceramic	0.00	Negative	
262	Area 1-26	Wall Tile	White	Ceramic	0.01	Negative	
263	Area 1-27	Door	Grey	Metal	0.00	Negative	
264	Area 1-27	Door Casing	Grey	Metal	0.00	Negative	
265	Area 1-27	Wall A	White	Drywall	0.00	Negative	
266	Area 1-27	Wall B	White	Concrete	0.01	Negative	
267	Area 1-27	Wall C	White	Concrete	0.01	Negative	
268	Area 1-27	Wall D	White	Concrete	0.00	Negative	
269	Area 1-27	Lavatory	White	Ceramic	0.00	Negative	
270	Area 1-27	Toilet	White	Ceramic	0.00	Negative	
271	Area 1-27	Window Shutter	White	Metal	0.00	Negative	
272	Area 1-28	Gate	Grey	Metal	0.00	Negative	
273	Area 1-28	Wall A	Cream	Concrete	0.01	Negative	
274	Area 1-28	Wall C	Cream	Concrete	0.01	Negative	
275	Area 1-28	Wall D	Cream	Concrete	0.00	Negative	
276	Area 1-28	Floor Tile	Grey	Ceramic	0.00	Negative	
277	Area 1-28	Switch Box	Cream	Metal	0.01	Negative	
278	Area 1-28	Ceiling	White	Concrete	0.02	Negative	
279	Area 1-29	Door	Grey	Metal	0.00	Negative	
280	Area 1-29	Door Casing	Grey	Metal	0.01	Negative	
281	Area 1-29	Wall A	Cream	Concrete	0.01	Negative	
282	Area 1-29	Wall B	Cream	Concrete	0.02	Negative	
283	Area 1-29	Wall C	Cream	Concrete	0.01	Negative	
284	Area 1-29	Wall D	Cream	Concrete	0.01	Negative	
285	Area 1-29	Window Shutter	White	Metal	0.00	Negative	
286	Area 1-30	Door	Grey	Metal	0.00	Negative	
287	Area 1-30	Door Casing	Grey	Metal	0.00	Negative	
288	Area 1-30	Wall A	Blue	Concrete	0.00	Negative	
289	Area 1-30	Wall C	Blue	Concrete	0.00	Negative	
290	Area 1-30	Wall B	Cream	Concrete	0.01	Negative	
291	Area 1-30	Wall D	Cream	Concrete	0.01	Negative	
292	Area 1-30	Ceiling	Cream	Concrete	0.00	Negative	
293	Area 1-30	Window Shutter	White	Metal	0.02	Negative	
294	Area 1-30	Floor Tile	grey	Ceramic	0.02	Negative	
295	Area 1-31	Door	Grey	Metal	0.00	Negative	
296	Area 1-31	Door Casing	Grey	Metal	0.00	Negative	
297	Area 1-31	Wall A	Cream	Concrete	0.01	Negative	
298	Area 1-31	Wall B	Cream	Concrete	0.00	Negative	
299	Area 1-31	Wall C	Cream	Concrete	0.00	Negative	
300	Area 1-31	Wall D	Cream	Concrete	0.00	Negative	

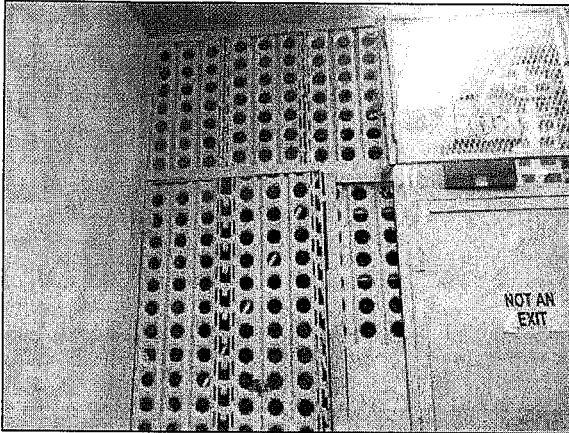
PROJECT:	PRNG Mayagüez Readiness Center, Mayagüez, PR			CLIENT: Puerto Rico National Guard			
DATE:	7/24/2019			LBP Inspector: Harry Peña			
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
301	Area 1-31	Ceiling	Cream	Concrete	0.00	Negative	
302	Calibration				1.00		
303	Calibration				1.00		
304	Calibration				1.00		
305	Area 1-32	Door	Grey	Metal	0.00	Negative	
306	Area 1-32	Door Casing	Grey	Metal	0.00	Negative	
307	Area 1-32	Wall A	Cream	Concrete	0.01	Negative	
308	Area 1-32	Wall B	Cream	Concrete	0.03	Negative	
309	Area 1-32	Wall C	Cream	Concrete	0.00	Negative	
310	Area 1-32	Wall D	Cream	Concrete	0.03	Negative	
311	Area 1-32	Window Shutter	White	Metal	0.00	Negative	
312	Area 1-33	Column	Cream	Concrete	0.00	Negative	
313	Area 1-33	Column	Yellow	Concrete	0.23	Negative	
314	Area 1-33	Column	Cream	Concrete	0.00	Negative	
315	Area 1-33	Column	Cream	Concrete	0.00	Negative	
316	Area 1-33	Column	Cream	Concrete	0.00	Negative	
317	Area 1-33	Baseboard	Cream	Concrete	0.70	Negative	
318	Area 1-33	Baseboard	Yellow	Concrete	0.00	Negative	
319	Area 1-33	Column	Cream	Concrete	0.00	Negative	
320	Area 1-33	Beam	Green	Concrete	0.00	Negative	
321	Area 1-33	Beam	Green	Concrete	0.01	Negative	
322	Area 1-33	Ceiling	Cream	Concrete	0.00	Negative	
323	Area 1-33	Ceiling	Cream	Concrete	0.00	Negative	
324	Area 1-33	Curb	Yellow	Concrete	2.60	Positive	
325	Area 1-33	Curb	Yellow	Concrete	3.10	Positive	
326	Area 1-33	Curb	Yellow	Concrete	4.20	Positive	
327	Exterior Area	Wall C-1	Cream	Concrete	0.01	Negative	
328	Exterior Area	Overhang	Cream	Concrete	0.00	Negative	
329	Exterior Area	Wall D-1	Cream	Concrete	0.02	Negative	
330	Exterior Area	Baseboard	Green	Concrete	0.01	Negative	
331	Exterior Area	D-1	Cream	Concrete	0.00	Negative	
332	Exterior Area	Curb	Yellow	Concrete	0.70	Negative	
333	Exterior Area	Ramp	Yellow	Concrete	0.40	Negative	
334	Exterior Area	Ramp	Yellow	Concrete	0.00	Negative	
335	Exterior Area	Curb	Yellow	Concrete	4.20	Positive	
336	Exterior Area	Wall C-2	Cream	Concrete	0.00	Negative	
337	Exterior Area	Wall C-3	Cream	Concrete	0.00	Negative	
338	Exterior Area	Wall C-4	Cream	Concrete	0.00	Negative	
339	Exterior Area	Baseboard	Green	Concrete	0.00	Negative	
340	Exterior Area	Curb	Yellow	Concrete	6.10	Positive	
341	Exterior Area	Curb	Yellow	Concrete	2.10	Positive	
342	Exterior Area	Wall B-1	Cream	Concrete	0.00	Negative	
343	Exterior Area	Wall B-2	Cream	Concrete	0.00	Negative	
344	Exterior Area	Floor	Yellow	Concrete	3.20	Positive	
345	Exterior Area	Baseboard	Green	Concrete	0.02	Negative	
346	Exterior Area	Grille	Grey	Metal	0.00	Negative	
347	Exterior Area	Wall B-1	Cream	Concrete	0.00	Negative	
348	Exterior Area	Baseboard	Green	Concrete	0.01	Negative	
349	Exterior Area	Gate	Grey	Metal	0.01	Negative	
350	Exterior Area	Wall C-3	Cream	Concrete	0.00	Negative	
351	Exterior Area	Column	Cream	Metal	0.02	Negative	
352	Exterior Area	Vertical Ladder	Black	Metal	0.00	Negative	
353	Area 1-34	Wall A	Cream	Concrete	0.00	Negative	
354	Area 1-34	Wall B	Cream	Concrete	0.00	Negative	
355	Area 1-34	Wall C	Cream	Concrete	0.00	Negative	
356	Area 1-34	Wall D	Cream	Concrete	0.00	Negative	
357	Area 1-34	Baseboard	Green	Concrete	0.01	Negative	
358	Exterior Area	Wall D-2	Cream	Concrete	0.01	Negative	
359	Exterior Area	Wall D-2	Green	Concrete	0.00	Negative	
360	Exterior Area	Curb	Yellow	Concrete	0.00	Negative	

PROJECT:	PRNG Mayagüez Readiness Center, Mayagüez, PR			CLIENT: Puerto Rico National Guard			
DATE:	7/24/2019			LBP Inspector: Harry Peña			
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
361	Exterior Area	Wall D-2	Cream	Concrete	0.02	Negative	
362	Exterior Area	Wall D-2	Green	Concrete	0.02	Negative	
363	Exterior Area	Grille	Black	Metal	0.00	Negative	
364	Exterior Area	Bollard	Yellow	Metal	0.00	Negative	
365	Exterior Area	Wall D-2	Cream	Concrete	0.01	Negative	
366	Exterior Area	Wall D-2	Green	Concrete	0.00	Negative	
367	Exterior Area	Grille	Black	Metal	0.00	Negative	
368	Parking	Floor Line	Yellow	Concrete	0.00	Negative	
369	Parking	Floor Line	Yellow	Concrete	0.01	Negative	
370	Parking	Floor Line	Yellow	Concrete	0.00	Negative	
371	Parking	Floor Line	Yellow	Concrete	0.00	Negative	
372	Parking	Floor Line	Yellow	Concrete	0.02	Negative	
373	Parking	Floor Line	Yellow	Concrete	0.02	Negative	
374	Parking	Floor Line	Yellow	Concrete	0.00	Negative	
375	Parking	Floor Line	Yellow	Concrete	0.00	Negative	
376	Parking	Floor Line	Yellow	Concrete	0.00	Negative	
377	Parking	Floor Line	Yellow	Concrete	0.01	Negative	
378	Parking	Curb	Yellow	Concrete	0.00	Negative	
379	Parking	Curb	Yellow	Concrete	0.00	Negative	
380	Parking	Curb	Yellow	Concrete	0.00	Negative	
381	Parking	Curb	Yellow	Concrete	0.00	Negative	
382	Parking	Curb	Yellow	Concrete	0.03	Negative	
383	Parking	Curb	Yellow	Concrete	0.00	Negative	
384	Parking	Curb	Yellow	Concrete	0.00	Negative	
385	Parking	Curb	Yellow	Concrete	0.00	Negative	
386	Parking	Curb	Yellow	Concrete	0.01	Negative	
387	Parking	Curb	Yellow	Concrete	0.01	Negative	
388	Parking	Wall A	Cream	Concrete	0.00	Negative	
389	Parking	Wall A	Cream	Concrete	0.00	Negative	
390	Parking	Wall A	Cream	Concrete	0.03	Negative	
391	Parking	Wall A	Cream	Concrete	0.00	Negative	
392	Parking	Wall A	Cream	Concrete	0.00	Negative	
393	Parking	Wall A	Cream	Concrete	0.00	Negative	
394	Parking	Wall A	Green	Concrete	0.02	Negative	
395	Parking	Wall A	Green	Concrete	0.01	Negative	
396	Parking	Wall A	Green	Concrete	0.00	Negative	
397	Parking	Wall A	Green	Concrete	0.00	Negative	
398	Parking	Wall A	Green	Concrete	0.01	Negative	
399	Parking	Wall A	Green	Concrete	0.01	Negative	
400	Parking	Grille	Black	Metal	0.00	Negative	
401	Parking	Handrail	Green	Metal	0.00	Negative	
402	Parking	Curb	Yellow	Concrete	0.01	Negative	
403	Parking	Floor Line	Yellow	Concrete	0.00	Negative	
404	Parking	Base	Green	Concrete	0.00	Negative	
405	Parking	Base	Brown	Concrete	0.00	Negative	
406	Parking	Wall A	Green	Concrete	0.02	Negative	
407	Parking	Grille	White	Metal	0.02	Negative	
408	Area I-35	Wall A	Cream	Concrete	0.00	Negative	
409	Area I-35	Wall B	Cream	Concrete	0.00	Negative	
410	Area I-35	Wall C	Cream	Concrete	0.01	Negative	
411	Area I-35	Wall D	Cream	Concrete	0.01	Negative	
412	Area I-35	Column	Brown	Metal	0.00	Negative	
413	Area I-35	Floor Line	Yellow	Concrete	0.00	Negative	
414	Area I-35	Floor Line	Black	Concrete	0.02	Negative	
415	Area I-35	Floor Line	Yellow	Concrete	0.02	Negative	
416	Area I-36	Door	Grey	Metal	0.01	Negative	
417	Area I-36	Door Casing	Grey	Metal	0.00	Negative	
418	Area I-36	Wall A	Cream	Concrete	0.00	Negative	
419	Area I-36	Wall B	Cream	Concrete	0.01	Negative	
420	Area I-36	Wall C	Cream	Concrete	0.00	Negative	

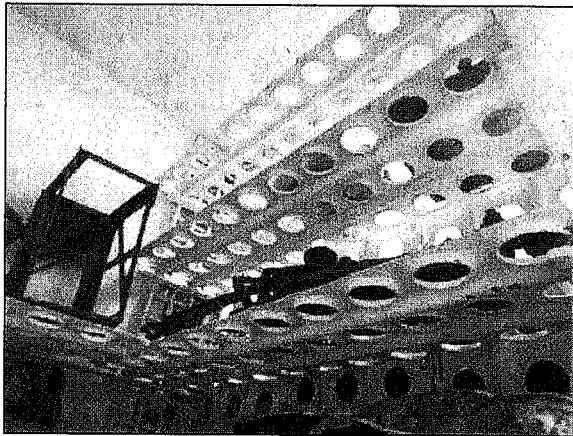
PROJECT:	PRNG Mayagüez Readiness Center, Mayagüez, PR			CLIENT: Puerto Rico National Guard			
DATE:	7/24/2019				LBP Inspector: Harry Peña		
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
421	Area I-36	Wall D	Cream	Concrete	0.00	Negative	
422	Area I-36	Ceiling	White	Concrete	0.01	Negative	
423	Area I-36	Half Wall	Cream	Concrete	0.01	Negative	
424	Area I-36	Handrail	Cream	Metal	0.00	Negative	
425	Area I-36	Floor Tile	Grey	Ceramic	0.00	Negative	
426	Area B-1	Door	Cream	Metal	0.00	Negative	
427	Area B-1	Door Casing	Cream	Metal	0.02	Negative	
428	Area B-1	Wall A	Cream	Concrete	0.00	Negative	
429	Area B-1	Wall B	Cream	Concrete	0.00	Negative	
430	Area B-1	Wall C	Cream	Concrete	0.00	Negative	
431	Area B-1	Wall D	Cream	Concrete	0.03	Negative	
432	Area B-1	Wall Tile	Cream	Ceramic	0.02	Negative	
433	Area B-1	Floor Tile	Cream	Ceramic	0.00	Negative	
434	Area B-1	Ceiling	White	Concrete	0.00	Negative	
435	Area B-2	Door	Cream	Metal	0.01	Negative	
436	Area B-2	Door Casing	Cream	Metal	0.01	Negative	
437	Area B-2	Wall A	Cream	Concrete	0.00	Negative	
438	Area B-2	Wall B	Cream	Concrete	0.00	Negative	
439	Area B-2	Wall C	Cream	Concrete	0.00	Negative	
440	Area B-2	Wall D	Cream	Concrete	0.03	Negative	
441	Area B-2	Lavatory	White	Ceramic	0.03	Negative	
442	Area B-2	Toilet	White	Ceramic	0.00	Negative	
443	Area B-2	Urinal	White	Ceramic	0.00	Negative	
444	Area B-2	Wall Tile	Cream	Ceramic	0.00	Negative	
445	Area B-2	Floor Tile	Cream	Ceramic	0.01	Negative	
446	Area B-2	Ceiling	White	Concrete	0.01	Negative	
447	Area B-3	Wall A	Cream	Concrete	0.00	Negative	
448	Area B-3	Wall B	Cream	Concrete	0.00	Negative	
449	Area B-3	Wall C	Cream	Concrete	0.00	Negative	
450	Area B-3	Wall D	Cream	Concrete	0.00	Negative	
451	Area B-3	Ceiling	White	Concrete	0.01	Negative	
452	Area B-3	Handrail	Cream	Metal	0.00	Negative	
453	Area B-3	Step	Cream	Concrete	0.01	Negative	
454	Area B-3	Door	Grey	Metal	0.02	Negative	
455	Area B-3	Door Casing	Grey	Metal	0.01	Negative	
456	Area B-3	Shelve	Cream	Concrete	0.00	Negative	
457	Area B-3	Door	Cream	Metal	0.00	Negative	
458	Area B-4	Door	Cream	Metal	0.00	Negative	
459	Area B-4	Door Casing	Cream	Metal	0.02	Negative	
460	Area B-4	Wall A	Grey	Concrete	0.00	Negative	
461	Area B-4	Wall B	Grey	Concrete	0.00	Negative	
462	Area B-4	Wall C	Grey	Concrete	0.00	Negative	
463	Area B-4	Wall D	Grey	Concrete	0.00	Negative	
464	Area B-4	Floor Tile	Grey	Ceramic	0.01	Negative	
465	Area B-6	Wall A	Cream	Concrete	0.00	Negative	
466	Area B-6	Wall B	Cream	Concrete	0.00	Negative	
467	Area B-6	Wall C	Cream	Concrete	0.00	Negative	
468	Area B-6	Wall D	Cream	Concrete	0.01	Negative	
469	Area B-6	Ceiling	White	Concrete	0.01	Negative	
470	Area B-6	Beam	White	Metal	0.70	Negative	
471	Area B-7	Door	Cream	Metal	0.00	Negative	
472	Area B-7	Door Casing	Cream	Metal	0.01	Negative	
473	Area B-7	Wall A	Cream	Concrete	0.01	Negative	
474	Area B-7	Wall B	Cream	Concrete	0.00	Negative	
475	Area B-7	Wall C	Cream	Concrete	0.00	Negative	
476	Area B-7	Wall D	Cream	Concrete	0.03	Negative	
477	Area B-7	Ceiling	White	Concrete	0.00	Negative	
478	Area B-7	Shelve	Cream	Wood	0.00	Negative	
479	Area B-8	Door	Cream	Metal	0.00	Negative	
480	Area B-8	Door Casing	Cream	Metal	0.00	Negative	

[illegible]

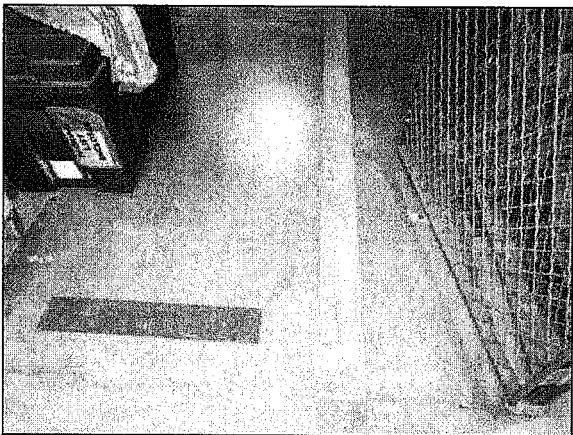
APPENDIX B: PROJECT PHOTOGRAPHS



Area 1-1
Lead based paint metal gate.



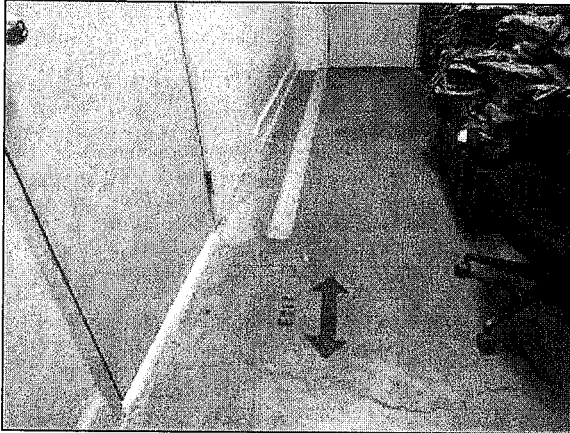
Area 1-1
Lead based paint metal shelf.



Area 1-2
Lead based paint concrete floor line.

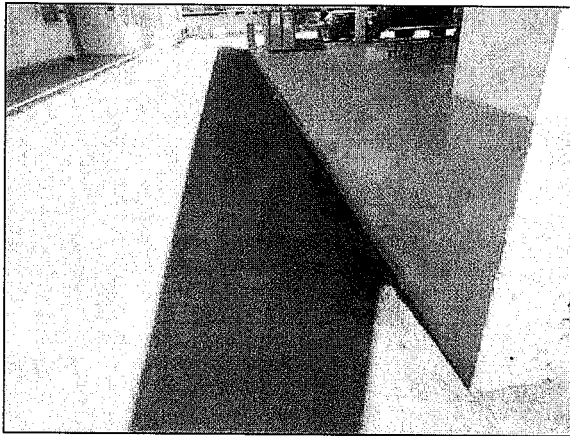
Photographic documentation is for reference purposes and doesn't necessarily include all the surfaces with lead based paint and/or components containing lead

APPENDIX B: PROJECT PHOTOGRAPHS



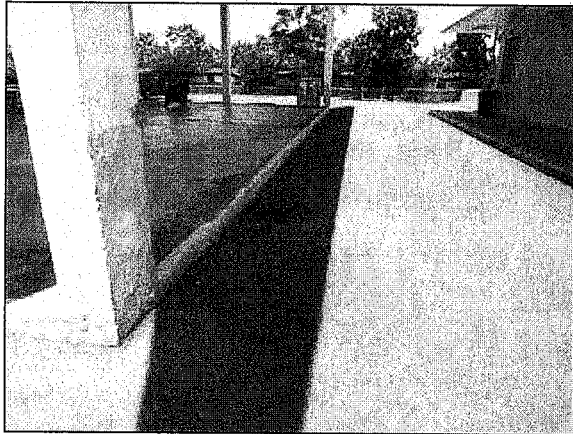
Area 1-2

Lead based paint concrete floor line.



Area 1-33

Lead based paint concrete curb.



Area 1-33

Lead based paint concrete curb.

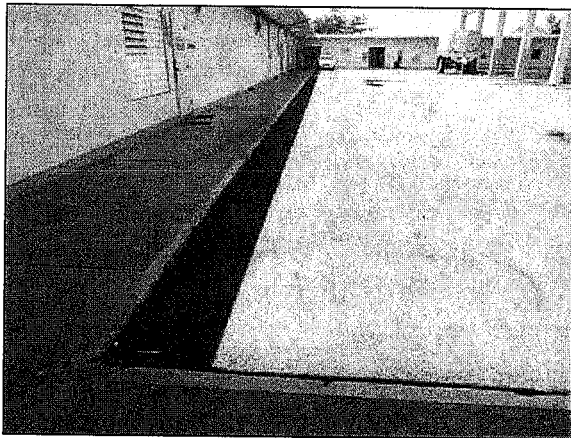
Photographic documentation is for reference purposes and doesn't necessarily include all the surfaces with lead based paint and/or components containing lead

APPENDIX B: PROJECT PHOTOGRAPHS



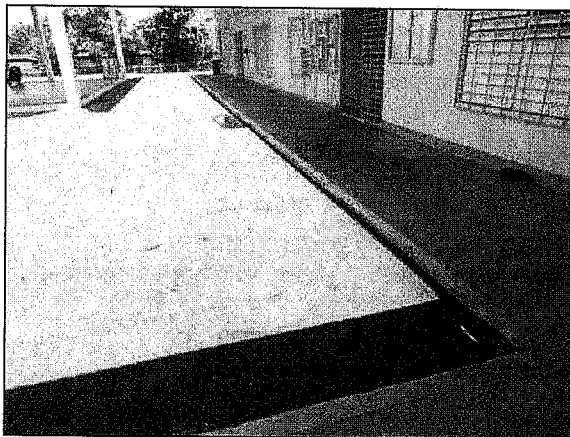
Area 1-33

Lead based paint concrete curb.



Exterior

Lead based paint concrete curb.

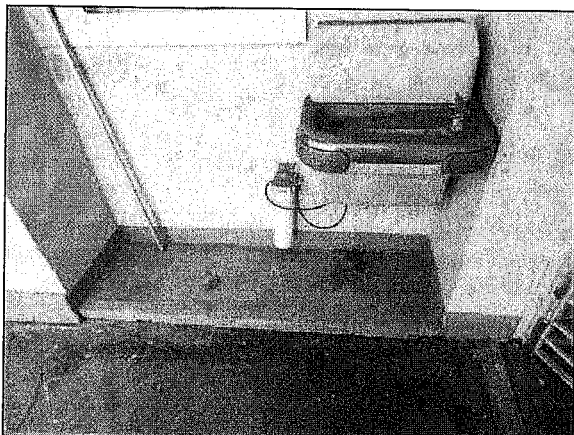


Exterior

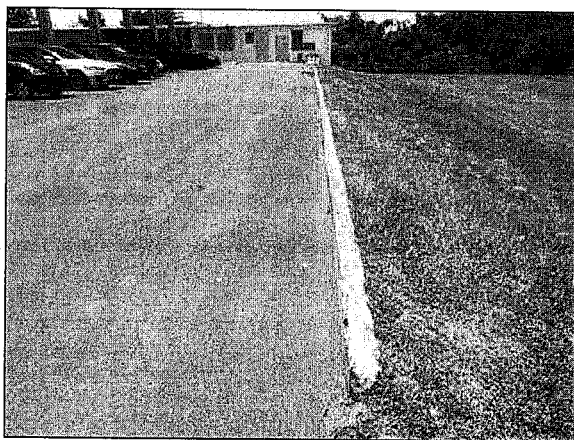
Lead based paint concrete curb.

Photographic documentation is for reference purposes and doesn't necessarily include all the surfaces with lead based paint and/or components containing lead

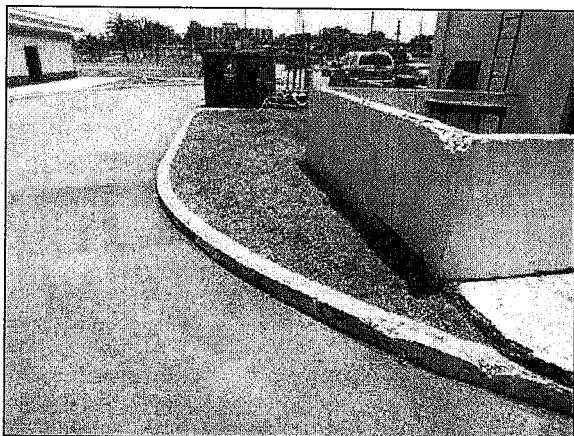
APPENDIX B: PROJECT PHOTOGRAPHS



Exterior
Lead based paint concrete floor.



Exterior
Lead based paint concrete curb.



Exterior
Lead based paint concrete curb.

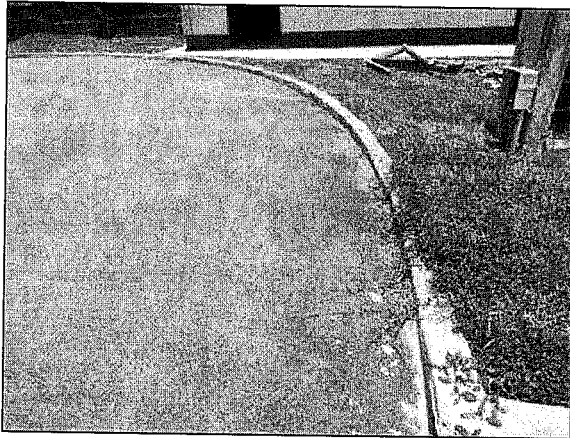
Photographic documentation is for reference purposes and doesn't necessarily include all the surfaces with lead based paint and/or components containing lead

APPENDIX B: PROJECT PHOTOGRAPHS



Exterior

Lead based paint concrete curb.



Exterior

Lead based paint concrete curb.




Exterior

Lead based paint concrete curb.

Photographic documentation is for reference purposes and doesn't necessarily include all the surfaces with lead based paint and/or components containing lead

APPENDIX C: CERTIFICATIONS, LICENSES, AND ACCREDITATIONS

 **GOBIERNO DE PUERTO RICO**
JUNTA DE CALIDAD AMBIENTAL

Este certificado es otorgado a:

Zimmetry Environmental Management, Corp.
(# s.socios: 66-0606404)

Por haber cumplido con los requisitos establecidos en el Capítulo V, Regla 1841, sección b(2) del Reglamento para el Control de Actividades de Mitigación de Pintura con Base de Plomo. Se le otorga una certificación en la disciplina de:


Empresa

Para llevar a cabo actividades de mitigación de pintura con base de plomo en la jurisdicción de Puerto Rico.

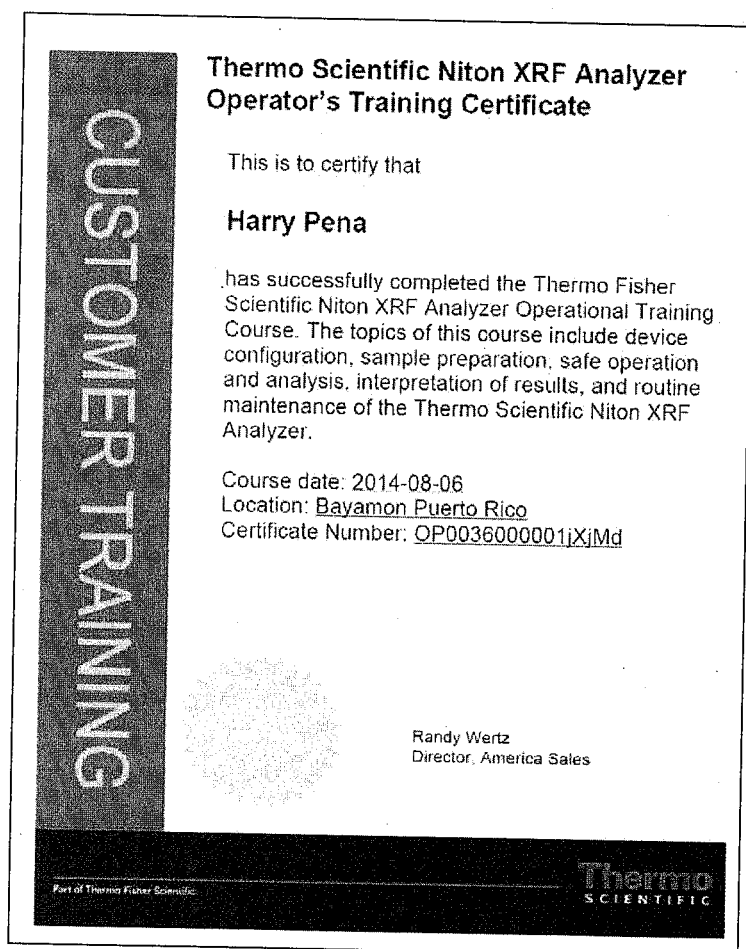
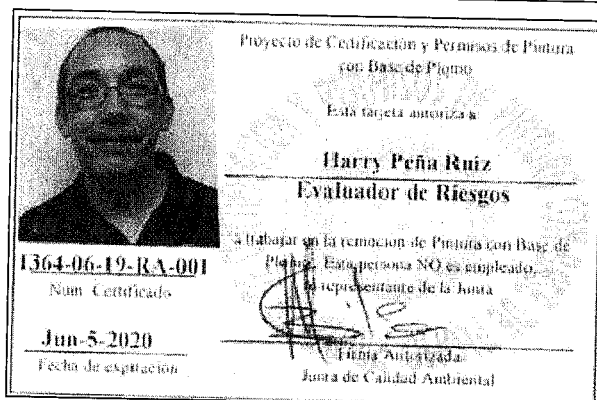
Número de Certificado
5536-0219-LF-001

Este certificado será sujeto a ser revocado, suspendido, modificado o enmendado debido a causas que incluyan evidencia de no cumplimiento, información falsa provista en la solicitud o por cualquier alteración que afecte la habilidad de llevar a cabo las tareas efectivamente.

Fecha de emisión: 03 de marzo de 2019
Fecha de expiración: 03 de marzo de 2020


Tania Vázquez Rivera
Directora Ejecutiva

APPENDIX C: CERTIFICATIONS, LICENSES, AND ACCREDITATIONS



APPENDIX D: XRF's PERFORMANCE CHARACTERISTICS SHEET

Performance Characteristic Sheet

EFFECTIVE DATE: September 24, 2004

EDITION NO.: 1

MANUFACTURER AND MODEL:

Make: Niton LLC

Tested Model: XLp 300

Source: ^{109}Cd

Note: This PCS is also applicable to the equivalent model variations indicated below, for the Lead-in-Paint K+L variable reading time mode, in the XLi and XLp series:

XLi 300A, XLi 301A, XLi 302A and XLi 303A.

XLp 300A, XLp 301A, XLp 302A and XLp 303A.

XLi 700A, XLi 701A, XLi 702A and XLi 703A.

XLp 700A, XLp 701A, XLp 702A, and XLp 703A.

Note: The XLi and XLp versions refer to the shape of the handle part of the instrument. The differences in the model numbers reflect other modes available, in addition to Lead-in-Paint modes. The manufacturer states that specifications for these instruments are identical for the source, detector, and detector electronics relative to the Lead-in-Paint mode.

FIELD OPERATION GUIDANCE

OPERATING PARAMETERS:

Lead-in-Paint K+L variable reading time mode.

XRF CALIBRATION CHECK LIMITS:

0.8 to 1.2 mg/cm² (inclusive)

The calibration of the XRF instrument should be checked using the paint film nearest 1.0 mg/cm² in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm² film).

If readings are outside the acceptable calibration check range, follow the manufacturer's instructions to bring the instruments into control before XRF testing proceeds.

SUBSTRATE CORRECTION:

For XRF results using Lead-in-Paint K+L variable reading time mode, substrate correction is not needed for:

Brick, Concrete, Drywall, Metal, Plaster, and Wood

INCONCLUSIVE RANGE OR THRESHOLD:

K+L MODE READING DESCRIPTION	SUBSTRATE	THRESHOLD (mg/cm ²)
Results not corrected for substrate bias on any substrate	Brick	1.0
	Concrete	1.0
	Drywall	1.0
	Metal	1.0
	Plaster	1.0
	Wood	1.0

BACKGROUND INFORMATION

EVALUATION DATA SOURCE AND DATE:

This sheet is supplemental information to be used in conjunction with Chapter 7 of the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* ("HUD Guidelines"). Performance parameters shown on this sheet are calculated from the EPA/HUD evaluation using archived building components. Testing was conducted in August 2004 on 133 testing combinations. The instruments that were used to perform the testing had new sources; one instrument's was installed in November 2003 with 40 mCi initial strength, and the other's was installed June 2004 with 40 mCi initial strength.

OPERATING PARAMETERS:

Performance parameters shown in this sheet are applicable only when properly operating the instrument using the manufacturer's instructions and procedures described in Chapter 7 of the HUD Guidelines.

SUBSTRATE CORRECTION VALUE COMPUTATION:

Substrate correction is not needed for brick, concrete, drywall, metal, plaster or wood when using Lead-in-Paint K+L variable reading time mode, the normal operating mode for these instruments. If substrate correction is desired, refer to Chapter 7 of the HUD Guidelines for guidance on correcting XRF results for substrate bias.

EVALUATING THE QUALITY OF XRF TESTING:

Randomly select ten testing combinations for retesting from each house or from two randomly selected units in multifamily housing. Use the K+L variable time mode readings.

Conduct XRF retesting at the ten testing combinations selected for retesting.

Determine if the XRF testing in the units or house passed or failed the test by applying the steps below.

Compute the Retest Tolerance Limit by the following steps:

Determine XRF results for the original and retest XRF readings. Do not correct the original or retest results for substrate bias. In single-family housing a result is defined as the average of three readings. In multifamily housing, a result is a single reading. Therefore, there will be ten original and ten retest XRF results for each house or for the two selected units.

Calculate the average of the original XRF result and retest XRF result for each testing combination.

Square the average for each testing combination.

Add the ten squared averages together. Call this quantity C.

Multiply the number C by 0.0072. Call this quantity D.

Add the number 0.032 to D. Call this quantity E.

Take the square root of E. Call this quantity F.

Multiply F by 1.645. The result is the Retest Tolerance Limit.

Compute the average of all ten original XRF results.

Compute the average of all ten re-test XRF results.

Find the absolute difference of the two averages.

If the difference is less than the Retest Tolerance Limit, the inspection has passed the retest. If the difference of the overall averages equals or exceeds the Retest Tolerance Limit, this procedure should be repeated with ten new testing combinations. If the difference of the overall averages is equal to or greater than the Retest Tolerance Limit a second time, then the inspection should be considered deficient.

Use of this procedure is estimated to produce a spurious result approximately 1% of the time. That is, results of this procedure will call for further examination when no examination is warranted in approximately 1 out of 100 dwelling units tested.

TESTING TIMES:

For the Lead-in-Paint K+L variable reading time mode, the instrument continues to read until it is moved away from the testing surface, terminated by the user, or the instrument software indicates the reading is complete. The following table provides testing time information for this testing mode. The times have been adjusted for source decay, normalized to the initial source strengths as noted above. Source strength and type of substrate will affect actual testing times. At the time of testing, the instruments had source strengths of 26.6 and 36.6 mCi.

Testing Times Using K+L Reading Mode (Seconds)						
Substrate	All Data			Median for laboratory-measured lead levels (mg/cm ²)		
	25 th Percentile	Median	75 th Percentile	Pb < 0.25	0.25 ≤ Pb < 1.0	1.0 ≤ Pb
Wood Drywall	4	11	19	11	15	11
Metal	4	12	18	9	12	14
Brick Concrete Plaster	8	16	22	15	18	16

CLASSIFICATION RESULTS:

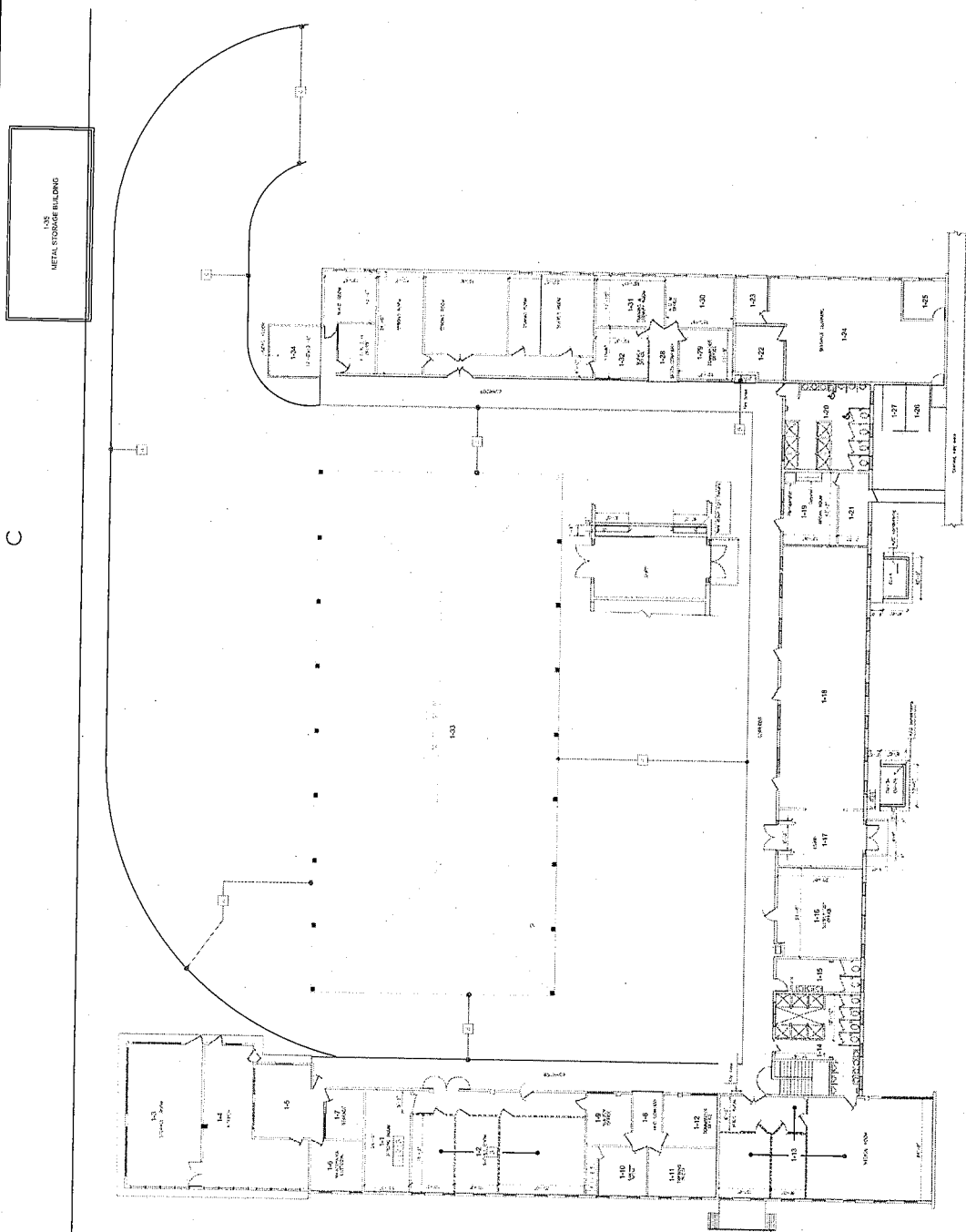
XRF results are classified as positive if they are greater than or equal to the threshold, and negative if they are less than the threshold.

DOCUMENTATION:

A document titled *Methodology for XRF Performance Characteristic Sheets* provides an explanation of the statistical methodology used to construct the data in the sheets, and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. For a copy of this document call the National Lead Information Center Clearinghouse at 1-800-424-LEAD.

This XRF Performance Characteristic Sheet was developed by the Midwest Research Institute (MRI) and QuanTech, Inc., under a contract between MRI and the XRF manufacturer. HUD has determined that the information provided here is acceptable when used as guidance in conjunction with Chapter 7, Lead-Based Paint Inspection, of HUD's *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*.

APPENDIX E: LOCATION OF POSITIVE MATERIALS



Lead Legend:

- 1 Metal Gate
- 2 Metal Shelves
- 3 Floor Lines
- 4 LBP Concrete Curb
- 5 LBP Concrete Floor

Graphic Legend:

Concrete surface

Note:

The type of materials shown in this figure is for illustrative purposes only. The actual quantity and quality of materials refer to the Lead Based Paint survey report dated July 2019.

BUILDING FLOOR PLAN:
NTS

Zimmerly Environmental
Environmental Building Inspectors
Indoor Environmental Quality / Mold Assessments, Asbestos, Lead Based
Paint Consulting - Phone (781) 376-9010 - Fax (781) 993-0005

Project: PRNG Mayaguez, PR

Date: August 2019

Drawing:

Project No: ZEM-19076

LEAD BASED PAINT INSPECTION REPORT

FOR

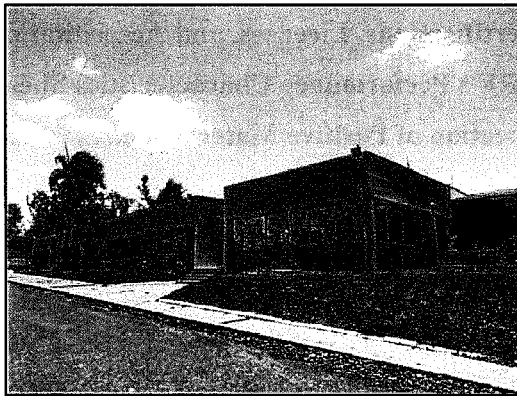
PUERTO RICO NATIONAL GUARD

SAMPLING CONDUCTED AT

PRNG VEGA BAJA READINESS
CENTER, VEGA BAJA, PR

ZEM-19077

MAY, 2019



PREPARED BY:

ZIMMETRY ENVIRONMENTAL MANAGEMENT CORP.

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PHONE: 787.995.0005

WEB PAGE: WWW.ZIMMETRY.COM

EMAIL: INFO@ZIMMETRY.COM

TABLE OF CONTENT

SECTION 1: EXECUTIVE SUMMARY	1
1.1 Introduction.....	1
1.2 Summary of Property Evaluation	1
1.3 Property Locations of Building Components with Lead Based Paint	1
Table 1-1 Summary of Building Components with Lead Based Paint.....	1
 SECTION 2: LEAD-BASED PAINT INSPECTION REPORT	 2
2.1 Overview of the Evaluation.....	2
2.2 Sampling Procedure and Results Presentation	2
2.3 Lead Regulatory Levels.....	3
2.4 Conditions and Limitations	3
2.5 Abatement Conditions	3
2.6 Recommendations	4
2.7 Environmental Assessment Report Certification	4
 SECTION 3: APPENDICES	 5
Appendix A: XRF Sampling Data.....	6
Appendix B: Project Photographs.....	20
Appendix C: Certifications, Licenses, and Accreditations.....	21
Appendix D: XRF's Performance Characteristics Sheet.....	23
Appendix E: Location of Positive Materials.....	27

SECTION 1: EXECUTIVE SUMMARY

1.1 INTRODUCTION

A Lead-Based Paint inspection was conducted on May 14, 2019 at Puerto Rico National Guard Vega Baja Readiness Center, project located at Vega Baja, Puerto Rico. The lead-based paint inspection was performed to identify paint that contains lead above allowable levels and to assist with the compliance of local, state and federal regulations.

1.2 SUMMARY OF PROPERTY EVALUATION

The project consisted of the evaluation of the interior and exterior areas of the aforementioned project. The evaluation found that lead based paint was present in selective components and surfaces through the buildings on the date of the inspection. Table 1-1 identifies the components positive for lead. Table 2-1 identifies lead-based paint as defined by the U.S. Environmental Protection Agency (EPA) and the Environmental Quality Board (EQB). For specific locations and additional detail on the location of lead- reference Sections 2 and 3.

1.3 PROPERTY LOCATIONS OF BUILDING COMPONENTS WITH LEAD-BASED PAINT

Table 1-1 summarizes the site components and surfaces coated with lead-based paint. Details that identify positive lead-based paint findings within specific areas and on surfaces were provided in the lead-based paint inspection report. The “substrate” is the building component material directly beneath the painted surface. Photographic documentation is for reference purposes and doesn't necessarily include all the surfaces with lead based paint and/or components containing lead.

Table 1-1: Summary of Components containing Lead				
Area	Component	Color	Substrate	Approximate Amount
Exterior, Site A & B	Curb	Yellow	Concrete	435 Ln. Ft.
Exterior	Guardrail	White	Metal	125 Ln. Ft.

Note:

- The quantification of positives materials presented in this table is only an estimate. If an abatement of the materials will be conducted, the Contractors shall estimate the amount of materials to be abated.

SECTION 2: LEAD-BASED PAINT INSPECTION REPORT

2.1 OVERVIEW OF THE EVALUATION

This lead-based paint inspection is an investigation to identify all lead-based paint on a surface-by-surface basis. A lead-based paint inspection conforming to HUD guidelines was performed at the aforementioned project.

Averages of 733 samples were taken at identified surfaces of the evaluated areas using X-ray fluorescence (XRF) analyzer. The evaluation found that lead-based paint was present in selective components and surfaces through the site on the date of the assessment (See Table 1-1).

Some of the remaining XRF test locations exhibited lead-in-paint levels below the level that EPA identifies as lead-based paint, namely 1.0 mg/cm^2 . Such surfaces could create dust-lead or soil-lead hazards if the paint is turned into dust by abrasion, scraping, or sanding. Should these or any lead containing components or surfaces be disturbed in any manner that generates dust, care should be taken to limit its spread.

Testing was performed by Harry Peña, state-certified lead inspector 2290-1018-LI-002, using the Niton XLP-300A XRF, SN-101222. The credentials are provided in Section 3, Appendix C: Certifications, Licenses, and Accreditations. The XRF analyzer is designed to measure the lead content of surface coatings on a variety of building surfaces, substrates, and components. The measurement is rapid and nondestructive and, according to the manufacturer, is capable of detecting lead concentrations that occur within numerous layers of various surface coatings.

Please refer to the XRF Testing Results Section 3, Appendix D: XRF Sampling Data for the detailed analytical testing results for each distinct area inspected. The reports provide a complete testing data.

2.2 SAMPLING PROCEDURE AND RESULTS PRESENTATION

The Lead Based Paint Sampling Procedure was design to evaluate and document all the data obtained form the inspection in a sequential method that provided confidence at the moment of the results presentation.

The survey was performed following the methodology established in the HUD Guidelines for the Evaluation and Control of Lead Based Paint in Housing (2012 revision) and the PREQB Lead Based Paint Abatement Control Regulation. The surfaces evaluation was performed as follows:

- If the lead concentration measured by the XRF Spectrum Analyzer is less than 1.0 mg/cm^2 it is considered negative.
- If the lead concentration measured by the XRF Spectrum Analyzer is equal or greater than 1.0 mg/cm^2 it is considered positive.

To each functional space of the property a name was assigned according to the use of that space. If no name could be assigned then a code letter or number was assigned. The room numbers will be assigned clockwise as you enter the structure and go towards the left always.

Each wall surface was named with letters beginning with wall A the wall facing the main entrance direction. The wall at your left will be wall B, the wall at front wall C and the wall at you right will be wall D.

2.3 LEAD REGULATORY LEVELS

The lead regulatory levels provided below are those used when preparing this lead-based paint evaluation or when evaluating data collected. The EPA regulatory levels are the same as the state regulatory levels provided in the following table.

TABLE 2-1: LEAD REGULATORY LEVELS	
	EPA/EQB Levels
Lead-Based Paint	1.0 mg/cm ² or 0.5% by weight (or 5,000 ppm)

2.4 CONDITIONS AND LIMITATIONS—DISCLAIMER

Zimmetry Environmental Management Corp. has performed this lead-based paint inspection in a thorough and professional manner consistent with commonly accepted industry standards. The Preparer cannot guarantee and does not warrant that this evaluation has identified all adverse environmental factors and/or conditions affecting this project on the date of the evaluation.

The results reported and conclusions reached by the Preparer are solely for the benefit of the Owner. The results and opinions in this report, based solely on the conditions found at the project on the date of the evaluation, are valid only on that date. The Preparer assumes no obligation to advise the client of any changes in any real or potential lead-based paint hazards at this residence beyond the date of the project evaluation.

The lead inspection was performed to ready accessible components and surfaces. If suspected components that could contain lead are encountered underneath current installed tiles or other construction material, they shall be managed as containing lead until the appropriate test is performed.

2.5 ABATEMENT CONDITIONS

Abatement, as defined by HUD and the Puerto Rico Environmental Quality Board (EQB), means any set of measures designed to eliminate lead-based paint and/or lead-based paint hazards permanently. The people providing these services must to be trained in accordance with the EQB licensing/certification requirements. The product manufacturer and/or

contractor must warrant abatement methods to last a minimum of 20 years, or these methods must have a design life of at least 20 years.

Abatement activities may include, but are not necessarily limited to:

- onsite or offsite removal of lead-based paint from substrates and components
- replacement of components or fixtures painted with lead-based paint
- permanent enclosure of lead-based paint with construction materials mechanically-fastened to the substrate
- encapsulation of lead-based paint with specially designed encapsulant products
- removal or permanent covering (concrete or asphalt) of soil-lead-based paint hazards


If enclosure or encapsulation is conducted as an abatement method, the lead-based paint remains on the property, so ongoing lead-based paint maintenance is required.

2.6 RECOMMENDATIONS

According to the EQB lead regulations, prior to the demolishing of a structure containing lead based paint, the contaminated surfaces or substrates must be abated or removed. The waste generated has to be characterized to determine if the waste generated is hazardous or non hazardous waste. The firm providing the abatement services must be certified as an abatement firm by the EQB. Workers conducting abatement must be trained and certified as abatement workers by a training provider accredited by the EQB.

2.7 ENVIRONMENTAL ASSESSMENT REPORT CERTIFICATION

Zimmetry Environmental Management Corp. has performed this lead-based paint inspection in a thorough and professional manner consistent with commonly accepted industry standards. The inspection was conducted on May 14, 2019 by Harry Peña, state-certified lead inspector 2290-1018-LI-002, qualified by experience, education and training in the recognition of lead based paint and approved sampling techniques using the Niton XLp-300A XRF, SN-101222.



Harry Peña, MSEM
Environmental Risk Assessor

SECTION 3: APPENDICES

Appendix A: XRF Sampling Data

Appendix B: Project Photographs

Appendix C: Certifications, Licenses, and Accreditations

Appendix D: XRF's Performance Characteristics Sheet

Appendix E: Location of Positive Materials

APPENDIX A: XRF SAMPLING DATA

PROJECT: PRNG Vega Baja Readiness Center, Vega Baja, PR				CLIENT: Puerto Rico National Guard			
DATE: 05/14/2019				LBP Inspector: Harry Peña		Page 1 of 13	
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
1	Calibration				1.00		
2	Calibration				1.00		
3	Calibration				1.00		
4	Area 1-1	Gate	Black	Metal	0.00	Negative	
5	Area 1-1	Door	Green	Metal	0.28	Negative	
6	Area 1-1	Door Casing	Green	Metal	0.19	Negative	
7	Area 1-1	Wall A	White	Concrete	0.00	Negative	
8	Area 1-1	Wall B	White	Concrete	0.00	Negative	
9	Area 1-1	Wall C	White	Concrete	0.00	Negative	
10	Area 1-1	Wall D	White	Concrete	0.00	Negative	
11	Area 1-1	Wall C	White	Concrete	0.00	Negative	
12	Area 1-1	Floor	Gray	Concrete	0.00	Negative	
13	Area 1-2	Door	Green	Metal	0.00	Negative	
14	Area 1-2	Door Casing	Green	Metal	0.00	Negative	
15	Area 1-2	Wall A	Cream	Concrete	0.00	Negative	
16	Area 1-2	Wall B	Cream	Concrete	0.00	Negative	
17	Area 1-2	Wall C	Cream	Concrete	0.00	Negative	
18	Area 1-2	Wall D	Cream	Concrete	0.00	Negative	
19	Area 1-3	Rolling Door	Gray	Metal	0.00	Negative	
20	Area 1-3	Rolling Door Frame	Yellow	Metal	0.00	Negative	
21	Area 1-3	Wall A	White	Concrete	0.01	Negative	
22	Area 1-3	Wall B	White	Concrete	0.00	Negative	
23	Area 1-3	Wall C	White	Concrete	0.00	Negative	
24	Area 1-3	Wall D	White	Concrete	0.00	Negative	
25	Area 1-3	Door	Gray	Metal	0.00	Negative	
26	Area 1-3	Door Casing	Gray	Metal	0.00	Negative	
27	Area 1-3	Floor	White	Concrete	0.00	Negative	
28	Area 1-3	Ceiling	White	Concrete	0.00	Negative	
29	Area 1-3	Grille	Black	Metal	0.00	Negative	
30	Area 1-4	Door	Green	Metal	0.00	Negative	
31	Area 1-4	Door Casing	Green	Metal	0.00	Negative	
32	Area 1-4	Wall A	Cream	Concrete	0.01	Negative	
33	Area 1-4	Wall B	Cream	Concrete	0.00	Negative	
34	Area 1-4	Wall C	Cream	Concrete	0.00	Negative	
35	Area 1-4	Wall D	Cream	Concrete	0.00	Negative	
36	Area 1-4	Ceiling	White	Concrete	0.00	Negative	
37	Area 1-5	Gate	Black	Metal	0.00	Negative	
38	Area 1-5	Door	Gray	Metal	0.10	Negative	
39	Area 1-5	Door Casing	Gray	Metal	0.10	Negative	
40	Area 1-5	Floor	Red	Concrete	0.00	Negative	
41	Area 1-5	Floor	Yellow	Concrete	0.00	Negative	
42	Area 1-5	Floor	Gray	Concrete	0.00	Negative	
43	Area 1-5	Wall A	Cream	Concrete	0.00	Negative	
44	Area 1-5	Wall B	Cream	Concrete	0.00	Negative	
45	Area 1-5	Wall C	Cream	Concrete	0.00	Negative	
46	Area 1-5	Wall D	Cream	Concrete	0.00	Negative	
47	Area 1-5	Ceiling	Cream	Concrete	0.00	Negative	
48	Area 1-6	Door	Gray	Metal	0.00	Negative	
49	Area 1-6	Door Casing	Gray	Metal	0.00	Negative	
50	Area 1-6	Wall A	Cream	Concrete	0.00	Negative	
51	Area 1-6	Wall B	Cream	Concrete	0.00	Negative	
52	Area 1-6	Wall C	Cream	Concrete	0.00	Negative	
53	Area 1-6	Wall D	Cream	Concrete	0.00	Negative	
54	Area 1-7	Door	Green	Metal	0.00	Negative	
55	Area 1-7	Door Casing	Green	Metal	0.00	Negative	
56	Area 1-7	Wall A	Cream	Concrete	0.00	Negative	
57	Area 1-7	Wall B	Cream	Concrete	0.03	Negative	
58	Area 1-7	Wall C	Cream	Concrete	0.02	Negative	
59	Area 1-7	Wall D	Cream	Concrete	0.00	Negative	
60	Area 1-7	Wall Tile	Cream	Ceramic	0.00	Negative	

PROJECT: PRNG Vega Baja Readiness Center, Vega Baja, PR				CLIENT: Puerto Rico National Guard			
DATE: 05/14/2019				LBP Inspector: Harry Peña		Page 2 of 13	
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
61	Area 1-7	Wall Tile	Yellow	Ceramic	0.00	Negative	
62	Area 1-7	Floor Tile	Cream	Ceramic	0.00	Negative	
63	Area 1-7	Lavatory	White	Ceramic	0.00	Negative	
64	Area 1-7	Toilet	White	Ceramic	0.02	Negative	
65	Area 1-7	Partition	Cream	Wood	0.00	Negative	
66	Area 1-7	Ceiling	White	Metal	0.00	Negative	
67	Area 1-7	Window Shutter	White	Metal	0.00	Negative	
68	Area 1-8	Wall A	Cream	Concrete	0.00	Negative	
69	Area 1-8	Wall B	Cream	Concrete	0.00	Negative	
70	Area 1-8	Wall C	Cream	Concrete	0.03	Negative	
71	Area 1-8	Wall D	Cream	Concrete	0.03	Negative	
72	Area 1-9	Door	Cream	Metal	0.00	Negative	
73	Area 1-9	Door Casing	Cream	Metal	0.00	Negative	
74	Area 1-9	Wall A	Cream	Concrete	0.00	Negative	
75	Area 1-9	Wall B	Cream	Concrete	0.00	Negative	
76	Area 1-9	Wall C	Cream	Concrete	0.00	Negative	
77	Area 1-9	Wall D	Cream	Concrete	0.00	Negative	
78	Area 1-10	Door	Green	Metal	0.00	Negative	
79	Area 1-10	Door Casing	Green	Metal	0.00	Negative	
80	Area 1-10	Wall A	Cream	Concrete	0.00	Negative	
81	Area 1-10	Wall B	Cream	Concrete	0.00	Negative	
82	Area 1-10	Wall C	Cream	Concrete	0.00	Negative	
83	Area 1-10	Wall D	Cream	Concrete	0.00	Negative	
84	Area 1-10	Ceiling	White	Metal	0.00	Negative	
85	Area 1-10	Grille	Black	Metal	0.00	Negative	
86	Area 1-11	Wall Tile	Cream	Ceramic	0.02	Negative	
87	Area 1-11	Wall Tile	Green	Ceramic	0.02	Negative	
88	Area 1-11	Floor Tile	Cream	Ceramic	0.00	Negative	
89	Area 1-11	Urinal	White	Ceramic	0.00	Negative	
90	Area 1-11	Lavatory	White	Ceramic	0.00	Negative	
91	Area 1-11	Wall A	Cream	Concrete	0.00	Negative	
92	Area 1-11	Wall B	Cream	Concrete	0.00	Negative	
93	Area 1-11	Wall C	Cream	Concrete	0.00	Negative	
94	Area 1-11	Wall D	Cream	Concrete	0.00	Negative	
95	Area 1-12	Wall A	Cream	Concrete	0.00	Negative	
96	Area 1-12	Wall B	Cream	Concrete	0.01	Negative	
97	Area 1-12	Wall C	Cream	Concrete	0.00	Negative	
98	Area 1-12	Wall D	Cream	Concrete	0.00	Negative	
99	Area 1-12	Toilet	White	Ceramic	0.00	Negative	
100	Area 1-12	Floor Tile	Cream	Ceramic	0.00	Negative	
101	Area 1-12	Ceiling	White	Metal	0.00	Negative	
102	Area 1-12	Beam	Orange	Metal	0.00	Negative	
103	Area 1-13	Rolling Door	Gray	Metal	0.00	Negative	
104	Area 1-13	Rolling Door Frame	Red	Metal	0.00	Negative	
105	Area 1-13	Wall B	Cream	Concrete	0.00	Negative	
106	Area 1-13	Wall D	Cream	Concrete	0.00	Negative	
107	Area 1-13	Wall C	White	Concrete	0.00	Negative	
108	Area 1-13	Lower Wall	Yellow	Concrete	0.00	Negative	
109	Area 1-14	Door	Gray	Metal	0.00	Negative	
110	Area 1-14	Door Casing	Gray	Metal	0.00	Negative	
111	Area 1-14	Wall A	Cream	Concrete	0.00	Negative	
112	Area 1-14	Wall B	Cream	Concrete	0.00	Negative	
113	Area 1-14	Wall C	Cream	Concrete	0.00	Negative	
114	Area 1-14	Wall D	Cream	Concrete	0.00	Negative	
115	Area 1-14	Floor	Gray	Metal	0.00	Negative	
116	Area 1-15	Door	Gray	Metal	0.00	Negative	
117	Area 1-15	Door Casing	Gray	Metal	0.00	Negative	
118	Area 1-15	Wall A	Cream	Concrete	0.00	Negative	
119	Area 1-15	Wall B	Cream	Concrete	0.01	Negative	
120	Area 1-15	Wall C	Cream	Concrete	0.00	Negative	

PROJECT: PRNG Vega Baja Readiness Center, Vega Baja, PR				CLIENT: Puerto Rico National Guard			
DATE: 05/14/2019				LBP Inspector: Harry Peña		Page 3 of 13	
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
121	Area 1-15	Wall D	Cream	Concrete	0.00	Negative	
122	Area 1-15	Partition	Cream	Drywall	0.00	Negative	
123	Area 1-15	Ceiling	White	Concrete	0.00	Negative	
124	Area 1-16	Door	Cream	Metal	0.01	Negative	
125	Area 1-16	Door Casing	Cream	Metal	0.00	Negative	
126	Area 1-16	Floor Tile	Pink	Ceramic	0.00	Negative	
127	Area 1-16	Wall A	Cream	Concrete	0.00	Negative	
128	Area 1-16	Wall B	Cream	Concrete	0.00	Negative	
129	Area 1-16	Wall C	Cream	Concrete	0.00	Negative	
130	Area 1-16	Wall D	Cream	Drywall	0.00	Negative	
131	Area 1-17	Door	Gray	Metal	0.00	Negative	
132	Area 1-17	Door Casing	Gray	Metal	0.00	Negative	
133	Area 1-17	Wall A	Cream	Concrete	0.02	Negative	
134	Area 1-17	Wall B	Cream	Concrete	0.00	Negative	
135	Area 1-17	Wall C	Cream	Concrete	0.00	Negative	
136	Area 1-17	Wall D	Cream	Concrete	0.00	Negative	
137	Area 1-17	Wall D	Cream	Drywall	0.00	Negative	
138	Area 1-17	Door	White	Metal	0.00	Negative	
139	Area 1-17	Door Casing	White	Metal	0.00	Negative	
140	Area 1-17	Window Casing	White	Metal	0.00	Negative	
141	Area 1-18	Door	White	Metal	0.00	Negative	
142	Area 1-18	Door Casing	White	Metal	0.00	Negative	
143	Area 1-18	Wall A	Cream	Concrete	0.00	Negative	
144	Area 1-18	Wall B	Cream	Concrete	0.00	Negative	
145	Area 1-18	Wall C	Cream	Concrete	0.00	Negative	
146	Area 1-18	Wall D	Cream	Concrete	0.00	Negative	
147	Area 1-18	Gate	Black	Metal	0.00	Negative	
148	Area 1-18	Floor Tile	Pink	Ceramic	0.00	Negative	
149	Area 1-18	Baseboard	Red	Concrete	0.00	Negative	
150	Area 1-19	Wall A	Cream	Concrete	0.00	Negative	
151	Area 1-19	Wall B	Cream	Concrete	0.00	Negative	
152	Area 1-19	Wall C	Cream	Concrete	0.00	Negative	
153	Area 1-19	Wall D	Cream	Concrete	0.03	Negative	
154	Area 1-19	Door	Gray	Metal	0.00	Negative	
155	Area 1-19	Door Casing	Gray	Metal	0.00	Negative	
156	Area 1-20	Door	White	Metal	0.00	Negative	
157	Area 1-20	Door Casing	White	Metal	0.00	Negative	
158	Area 1-21	Door	Gray	Metal	0.00	Negative	
159	Area 1-21	Door Casing	Gray	Metal	0.00	Negative	
160	Area 1-21	Wall A	Cream	Concrete	0.00	Negative	
161	Area 1-21	Wall B	Cream	Concrete	0.00	Negative	
162	Area 1-21	Wall C	Cream	Concrete	0.00	Negative	
163	Area 1-21	Wall D	Cream	Concrete	0.00	Negative	
164	Area 1-21	Floor Tile	Cream	Ceramic	0.01	Negative	
165	Area 1-21	Floor Tile	Pink	Ceramic	0.00	Negative	
166	Area 1-22	Wall A	Cream	Concrete	0.00	Negative	
167	Area 1-22	Wall C	Cream	Concrete	0.00	Negative	
168	Area 1-23	Wall A	Cream	Concrete	0.00	Negative	
169	Area 1-23	Wall B	Cream	Concrete	0.00	Negative	
170	Area 1-23	Wall C	Cream	Concrete	0.02	Negative	
171	Area 1-23	Wall D	Cream	Concrete	0.00	Negative	
172	Area 1-23	Floor Tile	Pink	Ceramic	0.00	Negative	
173	Area 1-23	Door	Gray	Metal	0.00	Negative	
174	Area 1-23	Door Casing	Gray	Metal	0.00	Negative	
175	Area 1-24	Wall A	Cream	Concrete	0.00	Negative	
176	Area 1-24	Wall B	Cream	Concrete	0.00	Negative	
177	Area 1-24	Wall D	Cream	Concrete	0.00	Negative	
178	Area 1-24	Floor Tile	Cream	Ceramic	0.00	Negative	
179	Area 1-24	Door	Gray	Metal	0.00	Negative	
180	Area 1-24	Door Casing	Gray	Metal	0.00	Negative	

PROJECT: PRNG Vega Baja Readiness Center, Vega Baja, PR				CLIENT: Puerto Rico National Guard			
DATE: 05/14/2019				LBP Inspector: Harry Peña			Page 4 of 13
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
181	Area 1-24	Wall A	Brown	Concrete	0.01	Negative	
182	Area 1-24	Wall A	Blue	Concrete	0.00	Negative	
183	Area 1-24	Wall A	Yellow	Concrete	0.00	Negative	
184	Area 1-25	Wall A	Cream	Concrete	0.00	Negative	
185	Area 1-25	Wall B	Cream	Concrete	0.00	Negative	
186	Area 1-25	Wall C	Cream	Concrete	0.01	Negative	
187	Area 1-25	Wall D	Cream	Concrete	0.00	Negative	
188	Area 1-25	Floor Tile	Cream	Ceramic	0.03	Negative	
189	Area 1-26	Door	Gray	Metal	0.00	Negative	
190	Area 1-26	Door Casing	Gray	Metal	0.00	Negative	
191	Area 1-26	Floor	Gray	Concrete	0.00	Negative	
192	Area 1-26	Gate	Black	Metal	0.00	Negative	
193	Area 1-26	Wall A	Cream	Concrete	0.00	Negative	
194	Area 1-26	Wall B	Cream	Concrete	0.00	Negative	
195	Area 1-26	Wall C	Cream	Concrete	0.00	Negative	
196	Area 1-26	Wall D	Cream	Concrete	0.00	Negative	
197	Area 1-26	Beam	Brown	Metal	0.00	Negative	
198	Area 1-26	Grille	Black	Metal	0.00	Negative	
199	Area 1-26	Window	Gray	Metal	0.02	Negative	
200	Area 1-26	Window Casing	Gray	Metal	0.00	Negative	
201	Area 1-26	Floor	Black	Metal	0.00	Negative	
202	Area 1-26	Baret	Yellow	Wood	0.80	Negative	
203	Area 1-27	Door	Gray	Metal	0.00	Negative	
204	Area 1-27	Door Casing	Gray	Metal	0.00	Negative	
205	Area 1-27	Wall A	Cream	Concrete	0.02	Negative	
206	Area 1-27	Wall B	Cream	Concrete	0.00	Negative	
207	Area 1-27	Wall C	Cream	Concrete	0.00	Negative	
208	Area 1-27	Wall D	Cream	Concrete	0.00	Negative	
209	Area 1-27	Floor Tile	Pink	Ceramic	0.01	Negative	
210	Area 1-28	Door	Gray	Metal	0.00	Negative	
211	Area 1-28	Door Casing	Gray	Metal	0.00	Negative	
212	Area 1-28	Wall A	Cream	Concrete	0.00	Negative	
213	Area 1-28	Wall B	Cream	Concrete	0.00	Negative	
214	Area 1-28	Wall C	Cream	Concrete	0.00	Negative	
215	Area 1-28	Wall D	Cream	Concrete	0.00	Negative	
216	Area 1-29	Door	Gray	Metal	0.00	Negative	
217	Area 1-29	Door Casing	Gray	Metal	0.00	Negative	
218	Area 1-29	Wall A	Cream	Concrete	0.00	Negative	
219	Area 1-29	Wall B	Cream	Concrete	0.00	Negative	
220	Area 1-29	Wall C	Cream	Concrete	0.00	Negative	
221	Area 1-29	Wall D	Cream	Concrete	0.00	Negative	
222	Area 1-30	Door	Gray	Metal	0.00	Negative	
223	Area 1-30	Door Casing	Gray	Metal	0.00	Negative	
224	Area 1-30	Wall A	Cream	Drywall	0.00	Negative	
225	Area 1-30	Wall D	Cream	Drywall	0.02	Negative	
226	Area 1-30	Wall B	Cream	Concrete	0.00	Negative	
227	Area 1-30	Wall C	Cream	Concrete	0.00	Negative	
228	Area 1-30	Floor Tile	Cream	Ceramic	0.00	Negative	
229	Area 1-30	Window Casing	Black	Metal	0.00	Negative	
230	Area 1-31	Door	Gray	Metal	0.00	Negative	
231	Area 1-31	Door Casing	Gray	Metal	0.00	Negative	
232	Area 1-31	Wall A	Cream	Concrete	0.00	Negative	
233	Area 1-31	Wall D	Cream	Concrete	0.00	Negative	
234	Area 1-31	Wall B	Cream	Drywall	0.00	Negative	
235	Area 1-31	Wall C	Cream	Drywall	0.00	Negative	
236	Area 1-32	Door	Gray	Metal	0.00	Negative	
237	Area 1-32	Door Casing	Gray	Metal	0.00	Negative	
238	Area 1-32	Wall A	Cream	Concrete	0.03	Negative	
239	Area 1-32	Wall D	Cream	Concrete	0.00	Negative	
240	Area 1-32	Wall C	Cream	Drywall	0.00	Negative	

PROJECT: PRNG Vega Baja Readiness Center, Vega Baja, PR				CLIENT: Puerto Rico National Guard			
DATE: 05/14/2019				LBP Inspector: Harry Peña		Page 5 of 13	
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
241	Area 1-33	Door	Gray	Metal	0.00	Negative	
242	Area 1-33	Door Casing	Gray	Metal	0.00	Negative	
243	Area 1-33	Wall A	Cream	Drywall	0.00	Negative	
244	Area 1-33	Wall D	Cream	Drywall	0.00	Negative	
245	Area 1-33	Wall B	Cream	Concrete	0.02	Negative	
246	Area 1-33	Wall C	Cream	Concrete	0.02	Negative	
247	Area 1-34	Door	Gray	Metal	0.00	Negative	
248	Area 1-34	Door Casing	Gray	Metal	0.00	Negative	
249	Area 1-34	Wall A	Cream	Concrete	0.00	Negative	
250	Area 1-34	Wall B	Cream	Concrete	0.00	Negative	
251	Area 1-34	Wall C	Cream	Concrete	0.00	Negative	
252	Area 1-34	Wall D	Cream	Concrete	0.00	Negative	
253	Area 1-34	Floor Tile	Pink	Ceramic	0.00	Negative	
254	Area 1-35	Wall A	Cream	Concrete	0.00	Negative	
255	Area 1-35	Wall B	Cream	Concrete	0.00	Negative	
256	Area 1-35	Wall C	Cream	Concrete	0.00	Negative	
257	Area 1-35	Wall D	Cream	Concrete	0.00	Negative	
258	Area 1-35	Floor Tile	Pink	Ceramic	0.00	Negative	
259	Area 1-36	Wall A	Cream	Drywall	0.00	Negative	
260	Area 1-36	Wall C	Cream	Concrete	0.00	Negative	
261	Area 1-36	Fire Cabinet	White	Metal	0.00	Negative	
262	Area 1-37	Door	Cream	Metal	0.00	Negative	
263	Area 1-37	Door Casing	Cream	Metal	0.00	Negative	
264	Area 1-37	Wall A	Cream	Concrete	0.00	Negative	
265	Area 1-37	Wall B	Cream	Concrete	0.00	Negative	
266	Area 1-37	Wall C	Cream	Concrete	0.00	Negative	
267	Area 1-37	Wall D	Cream	Concrete	0.01	Negative	
268	Area 1-38	Door	Gray	Metal	0.00	Negative	
269	Area 1-38	Door Casing	Gray	Metal	0.00	Negative	
270	Area 1-38	Wall A	Cream	Concrete	0.00	Negative	
271	Area 1-38	Wall B	Cream	Concrete	0.00	Negative	
272	Area 1-38	Wall C	Cream	Concrete	0.00	Negative	
273	Area 1-38	Wall D	Cream	Concrete	0.00	Negative	
274	Area 1-38	Ceiling	White	Drywall	0.00	Negative	
275	Area 1-39	Door	Gray	Metal	0.00	Negative	
276	Area 1-39	Door Casing	Gray	Metal	0.00	Negative	
277	Area 1-39	Wall A	Cream	Concrete	0.00	Negative	
278	Area 1-39	Wall B	Cream	Concrete	0.03	Negative	
279	Area 1-39	Wall C	Cream	Concrete	0.00	Negative	
280	Area 1-39	Wall D	Cream	Concrete	0.00	Negative	
281	Area 1-39	Beam	Brown	Metal	0.00	Negative	
282	Area 1-40	Door	Gray	Metal	0.00	Negative	
283	Area 1-40	Door Casing	Gray	Metal	0.00	Negative	
284	Area 1-40	Wall A	Cream	Concrete	0.00	Negative	
285	Area 1-40	Wall B	Cream	Concrete	0.00	Negative	
286	Area 1-40	Wall C	Cream	Concrete	0.00	Negative	
287	Area 1-40	Wall D	Cream	Concrete	0.00	Negative	
288	Area 1-40	Floor	Gray	Concrete	0.00	Negative	
289	Area 1-41	Door	Cream	Metal	0.00	Negative	
290	Area 1-41	Door Casing	Cream	Metal	0.00	Negative	
291	Area 1-41	Wall Tile	Cream	Ceramic	0.00	Negative	
292	Area 1-41	Wall Tile	Yellow	Ceramic	0.00	Negative	
293	Area 1-41	Lavatory	White	Ceramic	0.00	Negative	
294	Area 1-41	Toilet	White	Ceramic	0.00	Negative	
295	Area 1-41	Floor Tile	Cream	Ceramic	0.02	Negative	
296	Area 1-41	Wall A	Cream	Concrete	0.00	Negative	
297	Area 1-41	Wall B	Cream	Concrete	0.00	Negative	
298	Area 1-41	Wall C	Cream	Concrete	0.00	Negative	
299	Area 1-41	Wall D	Cream	Concrete	0.00	Negative	
300	Calibration				1.00		

PROJECT: PRNG Vega Baja Readiness Center, Vega Baja, PR				CLIENT: Puerto Rico National Guard			
DATE: 05/14/2019				LBP Inspector: Harry Peña		Page 6 of 13	
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
301	Calibration				1.00		
302	Calibration				1.00		
303	Area 1-42	Door	Gray	Metal	0.00	Negative	
304	Area 1-42	Door Casing	Gray	Metal	0.00	Negative	
305	Area 1-42	Wall A	Cream	Concrete	0.03	Negative	
306	Area 1-42	Wall B	Cream	Concrete	0.00	Negative	
307	Area 1-42	Wall C	Cream	Concrete	0.00	Negative	
308	Area 1-42	Wall D	Cream	Concrete	0.00	Negative	
309	Area 1-42	Wall Tile	Cream	Ceramic	0.00	Negative	
310	Area 1-42	Wall Tile	Green	Ceramic	0.00	Negative	
311	Area 1-42	Floor Tile	Cream	Ceramic	0.03	Negative	
312	Area 1-42	Lavatory	White	Ceramic	0.00	Negative	
313	Area 1-42	Toilet	White	Ceramic	0.00	Negative	
314	Area 1-42	Urinal	White	Ceramic	0.01	Negative	
315	Area 1-43	Wall A	Cream	Concrete	0.00	Negative	
316	Area 1-43	Wall B	Cream	Concrete	0.00	Negative	
317	Area 1-43	Wall C	Cream	Concrete	0.00	Negative	
318	Area 1-43	Wall D	Cream	Concrete	0.00	Negative	
319	Area 1-43	Floor Tile	Cream	Ceramic	0.02	Negative	
320	Area 1-43	Door	Gray	Metal	0.00	Negative	
321	Area 1-43	Door Casing	Gray	Metal	0.00	Negative	
322	Area 1-44	Wall A	Cream	Concrete	0.00	Negative	
323	Area 1-44	Wall B	Cream	Concrete	0.00	Negative	
324	Area 1-44	Wall C	Cream	Concrete	0.00	Negative	
325	Area 1-44	Wall D	Cream	Concrete	0.00	Negative	
326	Area 1-45	Door	Gray	Metal	0.00	Negative	
327	Area 1-45	Door Casing	Gray	Metal	0.00	Negative	
328	Area 1-45	Wall A	Cream	Concrete	0.00	Negative	
329	Area 1-45	Wall B	Cream	Concrete	0.03	Negative	
330	Area 1-45	Wall C	Cream	Concrete	0.00	Negative	
331	Area 1-45	Wall D	Cream	Concrete	0.00	Negative	
332	Area 1-46	Door	Gray	Metal	0.00	Negative	
333	Area 1-46	Door Casing	Gray	Metal	0.00	Negative	
334	Area 1-46	Wall A	Cream	Concrete	0.00	Negative	
335	Area 1-46	Wall B	Cream	Concrete	0.00	Negative	
336	Area 1-46	Wall C	Cream	Concrete	0.00	Negative	
337	Area 1-46	Wall D	Cream	Concrete	0.00	Negative	
338	Area 1-47	Door	Gray	Metal	0.00	Negative	
339	Area 1-47	Door Casing	Gray	Metal	0.00	Negative	
340	Area 1-47	Wall A	Cream	Concrete	0.00	Negative	
341	Area 1-47	Wall B	Cream	Concrete	0.00	Negative	
342	Area 1-47	Wall C	Cream	Concrete	0.02	Negative	
343	Area 1-47	Wall D	Cream	Concrete	0.01	Negative	
344	Area 1-48	Wall A	Cream	Concrete	0.00	Negative	
345	Area 1-48	Wall B	Cream	Concrete	0.00	Negative	
346	Area 1-48	Wall C	Cream	Concrete	0.00	Negative	
347	Area 1-48	Wall D	Cream	Concrete	0.00	Negative	
348	Area 1-48	Floor Tile	Cream	Ceramic	0.02	Negative	
349	Area 1-49	Door	Cream	Metal	0.00	Negative	
350	Area 1-49	Door Casing	Cream	Metal	0.00	Negative	
351	Area 1-49	Wall A	Cream	Drywall	0.00	Negative	
352	Area 1-49	Wall B	Cream	Drywall	0.00	Negative	
353	Area 1-49	Wall C	Cream	Drywall	0.00	Negative	
354	Area 1-49	Wall D	Cream	Drywall	0.00	Negative	
355	Area 1-50	Door	Gray	Metal	0.00	Negative	
356	Area 1-50	Door Casing	Gray	Metal	0.00	Negative	
357	Area 1-50	Wall A	Gray	Concrete	0.00	Negative	
358	Area 1-50	Wall D	Gray	Concrete	0.00	Negative	
359	Area 1-50	Wall B	Yellow	Drywall	0.00	Negative	
360	Area 1-50	Wall C	Gray	Concrete	0.00	Negative	

PROJECT: PRNG Vega Baja Readiness Center, Vega Baja, PR				CLIENT: Puerto Rico National Guard			
DATE: 05/14/2019				LBP Inspector: Harry Peña		Page 7 of 13	
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
361	Area 1-51	Door	Gray	Metal	0.00	Negative	
362	Area 1-51	Door Casing	Gray	Metal	0.00	Negative	
363	Area 1-51	Wall A	Gray	Concrete	0.01	Negative	
364	Area 1-51	Wall B	Gray	Drywall	0.00	Negative	
365	Area 1-51	Wall C	Gray	Drywall	0.00	Negative	
366	Area 1-51	Wall D	Gray	Drywall	0.00	Negative	
367	Area 1-51	Floor Tile	Cream	Ceramic	0.02	Negative	
368	Area 1-52	Door	Gray	Metal	0.00	Negative	
369	Area 1-52	Door Casing	Gray	Metal	0.00	Negative	
370	Area 1-52	Wall A	Cream	Drywall	0.00	Negative	
371	Area 1-52	Wall B	Cream	Drywall	0.00	Negative	
372	Area 1-52	Wall C	Cream	Drywall	0.00	Negative	
373	Area 1-52	Wall D	Cream	Drywall	0.00	Negative	
374	Area 1-52	Column	Cream	Concrete	0.01	Negative	
375	Area 1-53	Door	Gray	Metal	0.00	Negative	
376	Area 1-53	Door Casing	Gray	Metal	0.00	Negative	
377	Area 1-53	Wall A	Cream	Drywall	0.00	Negative	
378	Area 1-53	Wall C	Cream	Drywall	0.00	Negative	
379	Area 1-53	Wall D	Cream	Drywall	0.00	Negative	
380	Area 1-53	Wall B	Gray	Drywall	0.00	Negative	
381	Area 1-54	Door	White	Metal	0.00	Negative	
382	Area 1-54	Door Casing	White	Metal	0.00	Negative	
383	Area 1-54	Wall A	Cream	Drywall	0.00	Negative	
384	Area 1-54	Wall D	Cream	Drywall	0.00	Negative	
385	Area 1-54	Wall B	Cream	Concrete	0.02	Negative	
386	Area 1-54	Wall C	Cream	Concrete	0.00	Negative	
387	Area 1-54	Floor Tile	Pink	Ceramic	0.00	Negative	
388	Area 1-55	Door	Gray	Metal	0.00	Negative	
389	Area 1-55	Door Casing	Gray	Metal	0.00	Negative	
390	Area 1-55	Wall A	Cream	Drywall	0.00	Negative	
391	Area 1-55	Wall B	Cream	Drywall	0.00	Negative	
392	Area 1-55	Wall C	Cream	Drywall	0.00	Negative	
393	Area 1-55	Wall D	Cream	Drywall	0.00	Negative	
394	Area 1-56	Door	Cream	Metal	0.00	Negative	
395	Area 1-56	Door Casing	Cream	Metal	0.00	Negative	
396	Area 1-56	Wall A	Cream	Concrete	0.00	Negative	
397	Area 1-56	Wall B	Cream	Drywall	0.00	Negative	
398	Area 1-56	Wall C	Cream	Drywall	0.00	Negative	
399	Area 1-56	Wall D	Cream	Drywall	0.02	Negative	
400	Area 1-56	Window Casing	Cream	Metal	0.00	Negative	
401	Area 1-57	Door	Cream	Metal	0.00	Negative	
402	Area 1-57	Door Casing	Cream	Metal	0.00	Negative	
403	Area 1-57	Wall A	Cream	Concrete	0.00	Negative	
404	Area 1-57	Wall B	Cream	Drywall	0.00	Negative	
405	Area 1-57	Wall C	Cream	Drywall	0.00	Negative	
406	Area 1-57	Wall D	Cream	Drywall	0.00	Negative	
407	Area 1-58	Wall A	Cream	Concrete	0.00	Negative	
408	Area 1-58	Wall C	Cream	Concrete	0.00	Negative	
409	Area 1-58	Wall B	Cream	Drywall	0.00	Negative	
410	Area 1-58	Wall D	Cream	Drywall	0.00	Negative	
411	Area 1-58	Floor Tile	Cream	Ceramic	0.00	Negative	
412	Area 1-59	Door	Gray	Metal	0.00	Negative	
413	Area 1-59	Door Casing	Gray	Metal	0.00	Negative	
414	Area 1-59	Column	Cream	Concrete	0.00	Negative	
415	Area 1-59	Wall A	Cream	Drywall	0.00	Negative	
416	Area 1-59	Wall C	Cream	Drywall	0.00	Negative	
417	Area 1-59	Wall D	Cream	Drywall	0.03	Negative	
418	Area 1-59	Wall B	Brown	Concrete	0.00	Negative	
419	Area 1-60	Door	Gray	Metal	0.00	Negative	
420	Area 1-60	Door Casing	Gray	Metal	0.00	Negative	

PROJECT: PRNG Vega Baja Readiness Center, Vega Baja, PR				CLIENT: Puerto Rico National Guard			
DATE: 05/14/2019				LBP Inspector: Harry Peña		Page 8 of 13	
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
421	Area 1-60	Wall A	Cream	Concrete	0.00	Negative	
422	Area 1-60	Wall B	Cream	Concrete	0.00	Negative	
423	Area 1-60	Wall C	Cream	Concrete	0.00	Negative	
424	Area 1-60	Wall D	Cream	Concrete	0.00	Negative	
425	Area 1-61	Door	Gray	Metal	0.00	Negative	
426	Area 1-61	Door Casing	Gray	Metal	0.00	Negative	
427	Area 1-61	Wall A	Cream	Concrete	0.01	Negative	
428	Area 1-61	Wall B	Cream	Drywall	0.00	Negative	
429	Area 1-61	Wall C	Cream	Drywall	0.00	Negative	
430	Area 1-61	Wall D	Cream	Drywall	0.00	Negative	
431	Area 1-62	Door	Gray	Metal	0.00	Negative	
432	Area 1-62	Door Casing	Gray	Metal	0.00	Negative	
433	Area 1-62	Wall A	Cream	Drywall	0.00	Negative	
434	Area 1-62	Wall C	Cream	Drywall	0.02	Negative	
435	Area 1-63	Wall A	Cream	Drywall	0.00	Negative	
436	Area 1-63	Wall C	Cream	Drywall	0.00	Negative	
437	Area 1-63	Wall D	Cream	Drywall	0.00	Negative	
438	Area 1-63	Wall B	Cream	Concrete	0.00	Negative	
439	Area 1-63	Floor Tile	Pink	Ceramic	0.00	Negative	
440	Area 1-64	Door	Gray	Metal	0.00	Negative	
441	Area 1-64	Door Casing	Gray	Metal	0.00	Negative	
442	Area 1-64	Wall A	Cream	Concrete	0.00	Negative	
443	Area 1-64	Wall B	Cream	Concrete	0.02	Negative	
444	Area 1-64	Wall C	Cream	Drywall	0.03	Negative	
445	Area 1-64	Wall D	Cream	Drywall	0.00	Negative	
446	Area 1-65	Door	Gray	Metal	0.00	Negative	
447	Area 1-65	Door Casing	Gray	Metal	0.00	Negative	
448	Area 1-65	Wall A	Cream	Concrete	0.00	Negative	
449	Area 1-65	Wall D	Cream	Concrete	0.00	Negative	
450	Area 1-65	Wall C	Cream	Drywall	0.00	Negative	
451	Area 1-65	Wall B	Cream	Drywall	0.00	Negative	
452	Area 1-66	Door	Gray	Metal	0.00	Negative	
453	Area 1-66	Door Casing	Gray	Metal	0.00	Negative	
454	Area 1-66	Wall A	Cream	Drywall	0.00	Negative	
455	Area 1-66	Wall B	Cream	Drywall	0.00	Negative	
456	Area 1-66	Wall C	Cream	Drywall	0.00	Negative	
457	Area 1-66	Wall D	Cream	Concrete	0.00	Negative	
458	Area 1-66	Window Casing	White	Metal	0.01	Negative	
459	Area 1-67	Door	Gray	Metal	0.00	Negative	
460	Area 1-67	Door Casing	Gray	Metal	0.00	Negative	
461	Area 1-67	Wall A	Cream	Drywall	0.00	Negative	
462	Area 1-67	Wall B	Cream	Drywall	0.00	Negative	
463	Area 1-67	Wall C	Cream	Drywall	0.00	Negative	
464	Area 1-67	Wall D	Cream	Concrete	0.03	Negative	
465	Area 1-68	Wall C	Cream	Concrete	0.02	Negative	
466	Area 1-68	Wall D	Cream	Concrete	0.00	Negative	
467	Area 1-68	Wall A	Cream	Drywall	0.00	Negative	
468	Area 1-68	Wall B	Cream	Drywall	0.00	Negative	
469	Area 1-68	Door	Gray	Metal	0.00	Negative	
470	Area 1-68	Door Casing	Gray	Metal	0.00	Negative	
471	Area 1-69	Wall B	Cream	Drywall	0.00	Negative	
472	Area 1-69	Wall D	Cream	Drywall	0.00	Negative	
473	Area 1-70	Wall A	Cream	Concrete	0.03	Negative	
474	Area 1-70	Wall C	Cream	Concrete	0.00	Negative	
475	Area 1-70	Wall B	Cream	Drywall	0.00	Negative	
476	Area 1-70	Wall D	Cream	Drywall	0.00	Negative	
477	Area 1-71	Door	Gray	Metal	0.00	Negative	
478	Area 1-71	Door Casing	Gray	Metal	0.00	Negative	
479	Area 1-71	Wall A	Cream	Concrete	0.01	Negative	
480	Area 1-71	Wall B	Cream	Concrete	0.00	Negative	

PROJECT: PRNG Vega Baja Readiness Center, Vega Baja, PR				CLIENT: Puerto Rico National Guard			
DATE: 05/14/2019				LBP Inspector: Harry Peña		Page 9 of 13	
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
481	Area 1-71	Wall C	Cream	Concrete	0.00	Negative	
482	Area 1-71	Wall D	Cream	Concrete	0.00	Negative	
483	Area 1-71	Ceiling	White	Concrete	0.00	Negative	
484	Area 1-71	Floor	Gray	Metal	0.01	Negative	
485	Area 1-73	Door	Gray	Metal	0.00	Negative	
486	Area 1-73	Door Casing	Gray	Metal	0.00	Negative	
487	Area 1-73	Wall B	Cream	Concrete	0.00	Negative	
488	Area 1-73	Wall C	Cream	Concrete	0.00	Negative	
489	Area 1-73	Wall D	Cream	Concrete	0.00	Negative	
490	Area 1-73	Partition	Cream	Drywall	0.00	Negative	
491	Area 1-73	Wall A	Cream	Drywall	0.00	Negative	
492	Area 1-74	Door	Gray	Metal	0.00	Negative	
493	Area 1-74	Door Casing	Gray	Metal	0.00	Negative	
494	Area 1-74	Wall A	Cream	Concrete	0.00	Negative	
495	Area 1-74	Wall B	Cream	Concrete	0.00	Negative	
496	Area 1-74	Wall C	Cream	Concrete	0.00	Negative	
497	Area 1-74	Wall D	Cream	Concrete	0.02	Negative	
498	Area 1-74	Window Shutter	White	Metal	0.00	Negative	
499	Area 1-75	Wall A	Cream	Concrete	0.00	Negative	
500	Area 1-75	Wall B	Cream	Concrete	0.00	Negative	
501	Area 1-75	Wall C	Cream	Concrete	0.01	Negative	
502	Area 1-75	Wall D	Cream	Concrete	0.00	Negative	
503	Area 1-75	Floor	Gray	Concrete	0.00	Negative	
504	Area 1-76	Wall Tile	Cream	Ceramic	0.00	Negative	
505	Area 1-76	Wall Tile	Green	Ceramic	0.00	Negative	
506	Area 1-76	Wall A	Cream	Concrete	0.00	Negative	
507	Area 1-76	Wall B	Cream	Concrete	0.00	Negative	
508	Area 1-76	Wall C	Cream	Concrete	0.00	Negative	
509	Area 1-76	Wall D	Cream	Concrete	0.00	Negative	
510	Area 1-76	Floor Tile	Cream	Ceramic	0.01	Negative	
511	Area 1-76	Toilet	White	Ceramic	0.00	Negative	
512	Area 1-77	Wall A	Cream	Concrete	0.00	Negative	
513	Area 1-77	Wall B	Cream	Concrete	0.00	Negative	
514	Area 1-77	Wall C	Cream	Concrete	0.00	Negative	
515	Area 1-77	Wall D	Cream	Concrete	0.00	Negative	
516	Area 1-77	Wall Tile	Cream	Ceramic	0.00	Negative	
517	Area 1-77	Wall Tile	Green	Ceramic	0.00	Negative	
518	Area 1-77	Floor Tile	Cream	Ceramic	0.00	Negative	
519	Area 1-77	Lavatory	White	Ceramic	0.03	Negative	
520	Area 1-77	Urinal	White	Ceramic	0.00	Negative	
521	Area 1-77	Beam	Orange	Metal	0.20	Negative	
522	Area 1-78	Wall A	Cream	Concrete	0.00	Negative	
523	Area 1-78	Wall B	Cream	Concrete	0.00	Negative	
524	Area 1-78	Wall C	Cream	Concrete	0.00	Negative	
525	Area 1-78	Wall D	Cream	Concrete	0.00	Negative	
526	Area 1-78	Floor	Gray	Concrete	0.00	Negative	
527	Area 1-78	Door	Gray	Metal	0.00	Negative	
528	Area 1-78	Door Casing	Gray	Metal	0.00	Negative	
529	Area 1-79	Wall B	Cream	Concrete	0.00	Negative	
530	Area 1-79	Wall C	Cream	Concrete	0.00	Negative	
531	Area 1-79	Wall D	Cream	Concrete	0.00	Negative	
532	Area 1-79	Ceiling	White	Concrete	0.01	Negative	
533	Area 1-80	Floor Tile	Yellow	Ceramic	0.00	Negative	
534	Area 1-80	Floor	Red	Concrete	0.00	Negative	
535	Area 1-80	Wall A	Cream	Concrete	0.00	Negative	
536	Area 1-80	Wall B	Cream	Concrete	0.00	Negative	
537	Area 1-80	Wall C	Cream	Concrete	0.00	Negative	
538	Area 1-80	Wall D	Cream	Concrete	0.00	Negative	
539	Area 1-80	Beam	Cream	Metal	0.30	Negative	
540	Area 1-80	Floor Tile	White	Ceramic	0.00	Negative	

PROJECT: PRNG Vega Baja Readiness Center, Vega Baja, PR				CLIENT: Puerto Rico National Guard			
DATE: 05/14/2019				LBP Inspector: Harry Peña		Page 10 of 13	
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
541	Area 1-80	Louver	Gray	Metal	0.00	Negative	
542	Area 1-80	Floor	Red	Concrete	0.03	Negative	
543	Area 1-80	Floor	White	Concrete	0.00	Negative	
544	Area 1-81	Wall A	Gray	Concrete	0.00	Negative	
545	Area 1-81	Wall B	Gray	Concrete	0.00	Negative	
546	Area 1-81	Wall C	Yellow	Concrete	0.01	Negative	
547	Area 1-81	Wall D	Yellow	Concrete	0.60	Negative	
548	Area 1-81	Floor Tile	Cream	Ceramic	0.00	Negative	
549	Area 1-81	Door	Gray	Metal	0.00	Negative	
550	Area 1-81	Door Casing	Gray	Metal	0.00	Negative	
551	Area 1-82	Wall A	White	Concrete	0.00	Negative	
552	Area 1-82	Wall B	White	Drywall	0.00	Negative	
553	Area 1-82	Wall C	White	Drywall	0.00	Negative	
554	Area 1-82	Floor	Gray	Concrete	0.02	Negative	
555	Area 1-83	Wall A	White	Concrete	0.00	Negative	
556	Area 1-83	Wall B	White	Concrete	0.00	Negative	
557	Area 1-83	Wall C	White	Concrete	0.00	Negative	
558	Area 1-83	Wall D	White	Concrete	0.00	Negative	
559	Area 1-83	Floor	Gray	Concrete	0.00	Negative	
560	Area 1-83	Floor Tile	Yellow	Ceramic	0.00	Negative	
561	Area 1-83	Door	Gray	Metal	0.00	Negative	
562	Area 1-83	Door Casing	Gray	Metal	0.00	Negative	
563	Area 1-84	Wall A	White	Concrete	0.00	Negative	
564	Area 1-84	Wall B	White	Concrete	0.00	Negative	
565	Area 1-84	Wall C	White	Concrete	0.00	Negative	
566	Area 1-84	Wall D	White	Concrete	0.00	Negative	
567	Area 1-84	Wall A	White	Drywall	0.00	Negative	
568	Area 1-85	Door	Gray	Metal	0.00	Negative	
569	Area 1-85	Door Casing	Gray	Metal	0.00	Negative	
570	Area 1-85	Wall A	Cream	Concrete	0.00	Negative	
571	Area 1-85	Wall B	Cream	Concrete	0.01	Negative	
572	Area 1-85	Wall C	Cream	Concrete	0.00	Negative	
573	Area 1-85	Wall D	Cream	Concrete	0.00	Negative	
574	Area 1-86	Door	Gray	Metal	0.00	Negative	
575	Area 1-86	Door Casing	Gray	Metal	0.00	Negative	
576	Area 1-86	Wall A	White	Concrete	0.00	Negative	
577	Area 1-86	Wall B	White	Concrete	0.00	Negative	
578	Area 1-86	Wall C	White	Concrete	0.02	Negative	
579	Area 1-86	Wall D	White	Concrete	0.00	Negative	
580	Area 1-87	Floor Tile	Gray	Ceramic	0.03	Negative	
581	Area 1-87	Door	Black	Metal	0.00	Negative	
582	Area 1-87	Door Casing	Black	Metal	0.00	Negative	
583	Area 1-87	Wall A	White	Concrete	0.00	Negative	
584	Area 1-87	Wall B	White	Concrete	0.00	Negative	
585	Area 1-87	Wall C	White	Concrete	0.00	Negative	
586	Area 1-87	Wall D	White	Concrete	0.00	Negative	
587	Area 1-87	Ceiling	White	Drywall	0.00	Negative	
588	Area 1-88	Wall B	White	Concrete	0.00	Negative	
589	Area 1-88	Wall C	White	Concrete	0.00	Negative	
590	Area 1-88	Wall D	White	Concrete	0.00	Negative	
591	Area 1-89	Door	Gray	Metal	0.00	Negative	
592	Area 1-89	Door Casing	Gray	Metal	0.00	Negative	
593	Area 1-89	Wall A	Cream	Concrete	0.00	Negative	
594	Area 1-89	Wall B	Cream	Concrete	0.02	Negative	
595	Area 1-89	Wall C	Cream	Concrete	0.00	Negative	
596	Area 1-89	Wall D	Cream	Concrete	0.00	Negative	
597	Area 1-89	Floor Tile	Cream	Ceramic	0.00	Negative	
598	Area 1-90	Door	Green	Metal	0.00	Negative	
599	Area 1-90	Door Casing	Green	Metal	0.00	Negative	
600	Area 1-90	Wall A	Cream	Concrete	0.00	Negative	

PROJECT: PRNG Vega Baja Readiness Center, Vega Baja, PR				CLIENT: Puerto Rico National Guard			
DATE: 05/14/2019				LBP Inspector: Harry Peña		Page 11 of 13	
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
601	Area 1-90	Wall B	Cream	Concrete	0.00	Negative	
602	Area 1-90	Wall C	Cream	Concrete	0.00	Negative	
603	Area 1-90	Wall D	Cream	Concrete	0.00	Negative	
604	Area 1-90	Wall Tile	Cream	Ceramic	0.00	Negative	
605	Area 1-90	Wall Tile	Yellow	Ceramic	0.00	Negative	
606	Area 1-90	Floor Tile	Cream	Ceramic	0.00	Negative	
607	Area 1-90	Lavatory	White	Ceramic	0.00	Negative	
608	Area 1-90	Toilet	White	Ceramic	0.00	Negative	
609	Calibration				1.00		
610	Calibration				1.00		
611	Calibration				1.00		
612	Area 1-91	Door	Gray	Metal	0.00	Negative	
613	Area 1-91	Door Casing	Gray	Metal	0.00	Negative	
614	Area 1-91	Wall A	Cream	Concrete	0.00	Negative	
615	Area 1-91	Wall B	Cream	Concrete	0.00	Negative	
616	Area 1-91	Wall C	Cream	Concrete	0.00	Negative	
617	Area 1-91	Wall D	Cream	Concrete	0.00	Negative	
618	Area 1-91	Wall Tile	Cream	Ceramic	0.00	Negative	
619	Area 1-91	Wall Tile	Green	Ceramic	0.00	Negative	
620	Area 1-91	Lavatory	White	Ceramic	0.02	Negative	
621	Area 1-91	Toilet	White	Ceramic	0.00	Negative	
622	Area 1-92	Wall A	White	Concrete	0.00	Negative	
623	Area 1-92	Wall B	White	Concrete	0.00	Negative	
624	Area 1-92	Wall C	White	Concrete	0.00	Negative	
625	Area 1-92	Wall D	White	Concrete	0.00	Negative	
626	Area 1-93	Wall A	Cream	Drywall	0.00	Negative	
627	Area 1-93	Wall B	Cream	Concrete	0.00	Negative	
628	Area 1-93	Wall C	Cream	Concrete	0.02	Negative	
629	Area 1-93	Wall D	Cream	Concrete	0.00	Negative	
630	Area 1-93	Door	Gray	Metal	0.00	Negative	
631	Area 1-93	Door Casing	Gray	Metal	0.00	Negative	
632	Area 1-94	Wall A	Cream	Concrete	0.00	Negative	
633	Area 1-94	Wall B	Cream	Concrete	0.00	Negative	
634	Area 1-94	Wall D	Cream	Concrete	0.01	Negative	
635	Area 1-94	Partition	Cream	Drywall	0.00	Negative	
636	Area 1-94	Door	Gray	Metal	0.00	Negative	
637	Area 1-94	Door Casing	Gray	Metal	0.00	Negative	
638	Area 1-94	Door	Gray	Metal	0.00	Negative	
639	Area 1-94	Door Casing	Gray	Metal	0.00	Negative	
640	Area 1-95	Wall A	Cream	Drywall	0.00	Negative	
641	Area 1-95	Wall B	Cream	Drywall	0.00	Negative	
642	Area 1-95	Wall C	Cream	Concrete	0.00	Negative	
643	Area 1-95	Wall D	Cream	Concrete	0.00	Negative	
644	Area 1-95	Door	Gray	Metal	0.00	Negative	
645	Area 1-95	Door Casing	Gray	Metal	0.00	Negative	
646	Area 1-95	Window Shutter	White	Metal	0.00	Negative	
647	Area 1-96	Wall A	Cream	Concrete	0.00	Negative	
648	Area 1-96	Wall D	Cream	Concrete	0.01	Negative	
649	Area 1-96	Wall B	Cream	Drywall	0.00	Negative	
650	Area 1-96	Wall C	Cream	Drywall	0.00	Negative	
651	Area 1-96	Door	Gray	Metal	0.00	Negative	
652	Area 1-96	Door Casing	Gray	Metal	0.00	Negative	
653	Area 1-97	Door	Gray	Metal	0.00	Negative	
654	Area 1-97	Door Casing	Gray	Metal	0.00	Negative	
655	Area 1-97	Wall A	Cream	Concrete	0.00	Negative	
656	Area 1-97	Wall B	Cream	Drywall	0.00	Negative	
657	Area 1-97	Wall C	Cream	Drywall	0.00	Negative	
658	Area 1-97	Wall D	Cream	Drywall	0.00	Negative	
659	Area 1-98	Door	Gray	Metal	0.00	Negative	
660	Area 1-98	Door Casing	Gray	Metal	0.00	Negative	

PROJECT: PRNG Vega Baja Readiness Center, Vega Baja, PR

CLIENT: Puerto Rico National Guard

DATE: 05/14/2019

LBP Inspector: Harry Peña

Page 12 of 13

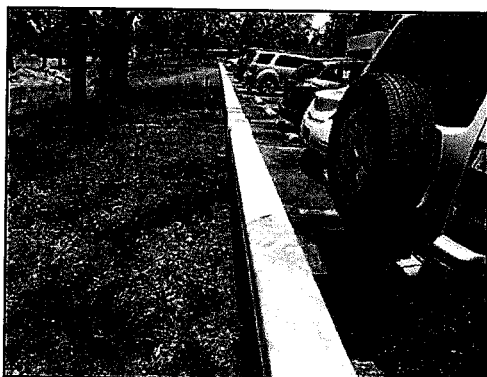
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
661	Area 1-98	Wall A	Cream	Concrete	0.00	Negative	
662	Area 1-98	Wall B	Cream	Concrete	0.02	Negative	
663	Area 1-98	Wall C	Cream	Drywall	0.00	Negative	
664	Area 1-98	Wall D	Cream	Drywall	0.00	Negative	
665	Area 2-1	Door	White	Metal	0.00	Negative	
666	Area 2-1	Door Casing	White	Metal	0.00	Negative	
667	Area 2-1	Wall A	Cream	Concrete	0.00	Negative	
668	Area 2-1	Wall B	Cream	Concrete	0.00	Negative	
669	Area 2-1	Wall C	Cream	Concrete	0.00	Negative	
670	Area 2-1	Wall D	Cream	Concrete	0.00	Negative	
671	Area 2-1	Window Casing	White	Metal	0.00	Negative	
672	Exterior Area	Wall C	Cream	Concrete	0.00	Negative	
673	Exterior Area	Wall C	Green	Concrete	0.00	Negative	
674	Exterior Area	Handrail	Gray	Metal	0.00	Negative	
675	Exterior Area	Vertical Ladder	Gray	Metal	0.00	Negative	
676	Exterior Area	Floor	Green	Concrete	0.00	Negative	
677	Exterior Area	Wall C	Cream	Concrete	0.00	Negative	
678	Exterior Area	Wall C	Cream	Concrete	0.00	Negative	
679	Exterior Area	Wall C	Gray	Concrete	0.00	Negative	
680	Exterior Area	Grille	Gray	Metal	0.00	Negative	
681	Exterior Area	Floor Tile	Yellow	Ceramic	0.00	Negative	
682	Exterior Area	Wall D	Cream	Concrete	0.00	Negative	
683	Exterior Area	Wall D	Green	Concrete	0.00	Negative	
684	Exterior Area	Grille	Gray	Ceramic	0.00	Negative	
685	Exterior Area	Curb	Yellow	Concrete	0.18	Negative	
686	Exterior Area	Pavement Marking	Yellow	Ceramic	0.00	Negative	
687	Exterior Area	Curb	Yellow	Concrete	0.00	Negative	
688	Exterior Area	Railing	Gray	Metal	0.12	Negative	
689	Exterior Area	Ramp	Green	Concrete	0.00	Negative	
690	Exterior Area	Wall D	Cream	Concrete	0.00	Negative	
691	Exterior Area	Wall D	Green	Concrete	0.00	Negative	
692	Exterior Area	Curb	Yellow	Concrete	3.10	Positive	
693	Exterior Area	Islet	Yellow	Concrete	0.70	Negative	
694	Exterior Area	Wall A	Cream	Concrete	0.00	Negative	
695	Exterior Area	Wall A	Green	Concrete	0.00	Negative	
696	Exterior Area	Curb	Yellow	Concrete	1.20	Positive	
697	Exterior Area	Base	Yellow	Concrete	0.00	Negative	
698	Exterior Area	Step	Yellow	Concrete	0.00	Negative	
699	Exterior Area	Riser	Gray	Concrete	0.00	Negative	
700	Exterior Area	Floor	Gray	Concrete	0.00	Negative	
701	Exterior Area	Beam	White	Metal	2.90	Positive	
702	Exterior Area	Curb	White	Concrete	1.20	Positive	
703	Exterior Area	Wall A	Cream	Concrete	0.00	Negative	
704	Exterior Area	Wall A	Green	Concrete	0.00	Negative	
705	Exterior Area	Wall B	Cream	Concrete	0.00	Negative	
706	Exterior Area	Wall B	Green	Concrete	0.00	Negative	
707	Exterior Area	Grille	Black	Metal	0.00	Negative	
708	Exterior Area	Grille	Gray	Metal	0.00	Negative	
709	Exterior Area	Wall B	Cream	Concrete	0.00	Negative	
710	Guard House	Floor Tile	White	Ceramic	0.14	Negative	
711	Guard House	Wall A	Cream	Concrete	0.00	Negative	
712	Guard House	Wall B	Cream	Concrete	0.00	Negative	
713	Guard House	Wall C	Cream	Concrete	0.00	Negative	
714	Guard House	Wall D	Cream	Concrete	0.00	Negative	
715	Guard House	Ceiling	Cream	Concrete	0.00	Negative	
716	Guard House	Door	Gray	Metal	0.00	Negative	
717	Guard House	Door Casing	Gray	Metal	0.00	Negative	
718	Guard House Bathroom	Wall A	Cream	Concrete	0.00	Negative	
719	Guard House Bathroom	Wall B	Cream	Concrete	0.00	Negative	
720	Guard House Bathroom	Wall C	Cream	Concrete	0.00	Negative	

[illegible]

APPENDIX B: PROJECT PHOTOGRAPHS



Exterior Area
Lead based paint concrete curb.



Exterior Area
Lead based paint metal guardrail.



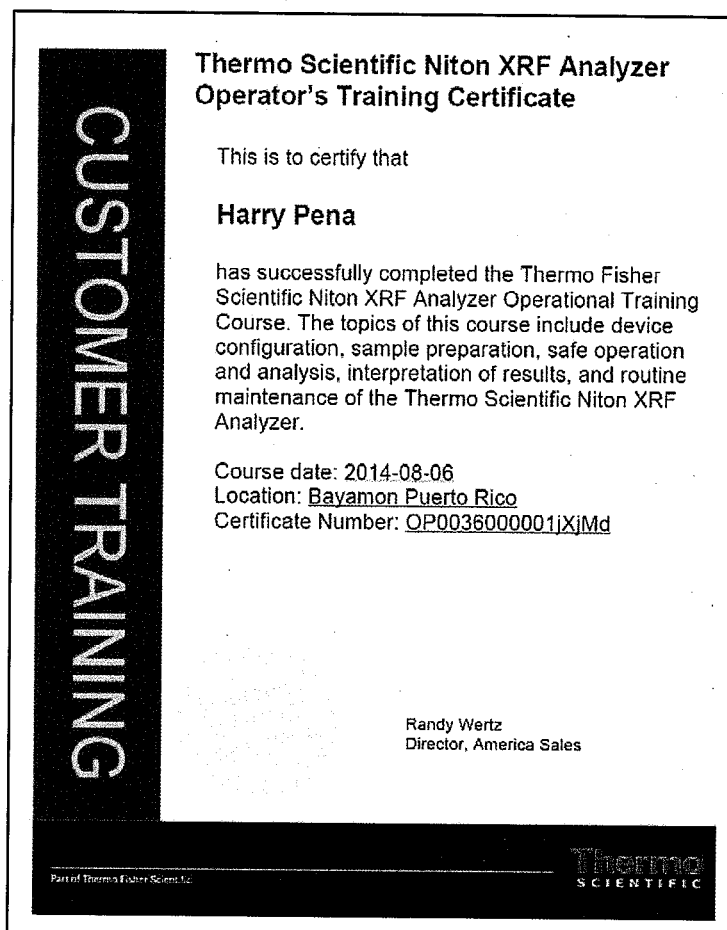
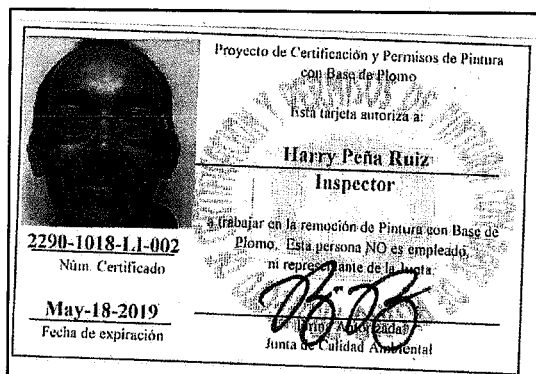
Exterior Area
Lead based paint metal guardrail.

Photographic documentation is for reference purposes and doesn't necessarily include all the surfaces with lead based paint and/or components containing lead

APPENDIX C: CERTIFICATIONS, LICENSES, AND ACCREDITATIONS

	<p>GOBIERNO DE PUERTO RICO JUNTA DE CALIDAD AMBIENTAL</p>	
<p>Este certificado es otorgado a:</p>		
<p>Zimmetry Environmental Management, Corp. (# s.social: 66-0606404)</p>		
<p>Por haber cumplido con los requisitos establecidos en el Capítulo VI, Regla 1541, sección B(2) del Reglamento para el Control de Actividades de Mitigación de Pintura con Base de Plomo. Se le otorga una certificación en la disciplina de:</p>		
<p>Empresa</p>		
<p>Para llevar a cabo actividades de mitigación de pintura con base de plomo en la jurisdicción de Puerto Rico</p>		
<p>Número de Certificado 5536-0219-LF-001</p>		
<p>Este certificado está sujeto a ser revocado, suspendido, modificado o convalidado debido a causas que incluyan evidencia de no cumplimiento, información falsa provista en la solicitud o por cualquier alteración que afecta la habilidad de llevar a cabo las tareas efectivamente.</p>		
<p>Fecha de emisión: 03 de marzo de 2019 Fecha de expiración: 02 de marzo de 2020</p>	<p> Tania Vázquez Rivera Directora Ejecutiva</p>	

APPENDIX C: CERTIFICATIONS, LICENSES, AND ACCREDITATIONS



APPENDIX D: XRF's PERFORMANCE CHARACTERISTICS SHEET

Performance Characteristic Sheet

EFFECTIVE DATE: September 24, 2004

EDITION NO.: 1

MANUFACTURER AND MODEL:

Make: Niton LLC

Tested Model: XLp 300

Source: ^{109}Cd

Note: This PCS is also applicable to the equivalent model variations indicated below, for the Lead-in-Paint K+L variable reading time mode, in the XLi and XLp series:

XLi 300A, XLi 301A, XLi 302A and XLi 303A.

XLp 300A, XLp 301A, XLp 302A and XLp 303A.

XLi 700A, XLi 701A, XLi 702A and XLi 703A.

XLp 700A, XLp 701A, XLp 702A, and XLp 703A.

Note: The XLi and XLp versions refer to the shape of the handle part of the instrument. The differences in the model numbers reflect other modes available, in addition to Lead-in-Paint modes. The manufacturer states that specifications for these instruments are identical for the source, detector, and detector electronics relative to the Lead-in-Paint mode.

FIELD OPERATION GUIDANCE

OPERATING PARAMETERS:

Lead-in-Paint K+L variable reading time mode.

XRF CALIBRATION CHECK LIMITS:

0.8 to 1.2 mg/cm² (inclusive)

The calibration of the XRF instrument should be checked using the paint film nearest 1.0 mg/cm² in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm² film).

If readings are outside the acceptable calibration check range, follow the manufacturer's instructions to bring the instruments into control before XRF testing proceeds.

SUBSTRATE CORRECTION:

For XRF results using Lead-in-Paint K+L variable reading time mode, substrate correction is not needed for:

Brick, Concrete, Drywall, Metal, Plaster, and Wood

INCONCLUSIVE RANGE OR THRESHOLD:

K+L MODE READING DESCRIPTION	SUBSTRATE	THRESHOLD (mg/cm ²)
Results not corrected for substrate bias on any substrate	Brick	1.0
	Concrete	1.0
	Drywall	1.0
	Metal	1.0
	Plaster	1.0
	Wood	1.0

BACKGROUND INFORMATION

EVALUATION DATA SOURCE AND DATE:

This sheet is supplemental information to be used in conjunction with Chapter 7 of the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* ("HUD Guidelines"). Performance parameters shown on this sheet are calculated from the EPA/HUD evaluation using archived building components. Testing was conducted in August 2004 on 133 testing combinations. The instruments that were used to perform the testing had new sources; one instrument's was installed in November 2003 with 40 mCi initial strength, and the other's was installed June 2004 with 40 mCi initial strength.

OPERATING PARAMETERS:

Performance parameters shown in this sheet are applicable only when properly operating the instrument using the manufacturer's instructions and procedures described in Chapter 7 of the HUD Guidelines.

SUBSTRATE CORRECTION VALUE COMPUTATION:

Substrate correction is not needed for brick, concrete, drywall, metal, plaster or wood when using Lead-in-Paint K+L variable reading time mode, the normal operating mode for these instruments. If substrate correction is desired, refer to Chapter 7 of the HUD Guidelines for guidance on correcting XRF results for substrate bias.

EVALUATING THE QUALITY OF XRF TESTING:

Randomly select ten testing combinations for retesting from each house or from two randomly selected units in multifamily housing. Use the K+L variable time mode readings.

Conduct XRF-retesting at the ten testing combinations selected for retesting.

Determine if the XRF testing in the units or house passed or failed the test by applying the steps below.

Compute the Retest Tolerance Limit by the following steps:

Determine XRF results for the original and retest XRF readings. Do not correct the original or retest results for substrate bias. In single-family housing a result is defined as the average of three readings. In multifamily housing, a result is a single reading. Therefore, there will be ten original and ten retest XRF results for each house or for the two selected units.

Calculate the average of the original XRF result and retest XRF result for each testing combination.

Square the average for each testing combination.

Add the ten squared averages together. Call this quantity C.

Multiply the number C by 0.0072. Call this quantity D.

Add the number 0.032 to D. Call this quantity E.

Take the square root of E. Call this quantity F.

Multiply F by 1.645. The result is the Retest Tolerance Limit.

Compute the average of all ten original XRF results.

Compute the average of all ten re-test XRF results.

Find the absolute difference of the two averages.

If the difference is less than the Retest Tolerance Limit, the inspection has passed the retest. If the difference of the overall averages equals or exceeds the Retest Tolerance Limit, this procedure should be repeated with ten new testing combinations. If the difference of the overall averages is equal to or greater than the Retest Tolerance Limit a second time, then the inspection should be considered deficient.

Use of this procedure is estimated to produce a spurious result approximately 1% of the time. That is, results of this procedure will call for further examination when no examination is warranted in approximately 1 out of 100 dwelling units tested.

TESTING TIMES:

For the Lead-in-Paint K+L variable reading time mode, the instrument continues to read until it is moved away from the testing surface, terminated by the user, or the instrument software indicates the reading is complete. The following table provides testing time information for this testing mode. The times have been adjusted for source decay, normalized to the initial source strengths as noted above. Source strength and type of substrate will affect actual testing times. At the time of testing, the instruments had source strengths of 26.6 and 36.6 mCi.

Testing Times Using K+L Reading Mode (Seconds)						
	All Data			Median for laboratory-measured lead levels (mg/cm ²)		
Substrate	25 th Percentile	Median	75 th Percentile	Pb < 0.25	0.25 ≤ Pb < 1.0	1.0 ≤ Pb
Wood Drywall	4	11	19	11	15	11
Metal	4	12	18	9	12	14
Brick Concrete Plaster	8	16	22	15	18	16

CLASSIFICATION RESULTS:

XRF results are classified as positive if they are greater than or equal to the threshold, and negative if they are less than the threshold.

DOCUMENTATION:

A document titled *Methodology for XRF Performance Characteristic Sheets* provides an explanation of the statistical methodology used to construct the data in the sheets, and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. For a copy of this document call the National Lead Information Center Clearinghouse at 1-800-424-LEAD.

This XRF Performance Characteristic Sheet was developed by the Midwest Research Institute (MRI) and QuanTech, Inc., under a contract between MRI and the XRF manufacturer. HUD has determined that the information provided here is acceptable when used as guidance in conjunction with Chapter 7, Lead-Based Paint Inspection, of HUD's *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*.

APPENDIX E: LOCATION OF POSITIVE MATERIALS



SITE PLAN

NTS

Lead Legend:

- 1 CONC. CURB
- 2 GUARD RAIL

Zimmetry Environmental Environmental Building Inspectors

Indoor Environmental Quality / Mold Assessments, Asbestos, Lead Based
Paint Consulting - Phone (787) 376-9010 - Fax (787) 995-0005

Project: PRNG VEGA BAJA READINESS CENTER SITE MAP

Date: June 2019

ZEM-19077

Drawing:

LEAD BASED PAINT INSPECTION REPORT

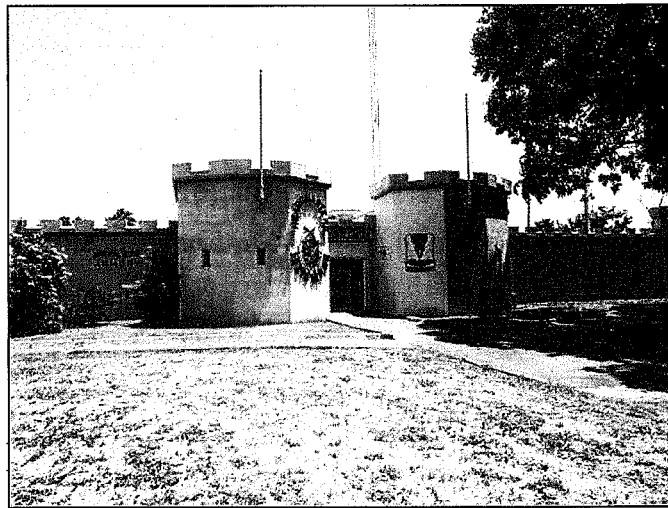
FOR

PUERTO RICO NATIONAL GUARD

SAMPLING CONDUCTED AT
PRNG PONCE READINESS
CENTER, PONCE, PR

ZEM-19080

JULY, 2019



ZIMMETRY ENVIRONMENTAL MANAGEMENT CORP.
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PHONE: 787.995.0005
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EMAIL: INFO@ZIMMETRY.COM

TABLE OF CONTENT

SECTION 1: EXECUTIVE SUMMARY.....	1
1.1 Introduction	1
1.2 Summary of Property Evaluation	1
1.3 Property Locations of Building Components with Lead Based Paint.....	1
Table 1-1 Summary of Building Components with Lead Based Paint.....	2
 SECTION 2: LEAD-BASED PAINT INSPECTION REPORT	 3
2.1 Overview of the Evaluation	3
2.2 Sampling Procedure and Results Presentation	3
2.3 Lead Regulatory Levels	4
2.4 Conditions and Limitations	4
2.5 Abatement Conditions	5
2.6 Recommendations	5
2.7 Environmental Assessment Report Certification	5
 SECTION 3: APPENDICES	 6
Appendix A: XRF Sampling Data.....	7
Appendix B: Project Photographs	17
Appendix C: Certifications, Licenses, and Accreditations.....	23
Appendix D: XRF's Performance Characteristics Sheet	25
Appendix E: Location of Positive Materials	29

SECTION 1: EXECUTIVE SUMMARY

1.1 INTRODUCTION

A Lead-Based Paint inspection was conducted on July 24, 2019 at Puerto Rico National Guard Ponce Readiness Center located at Ponce, Puerto Rico. The lead-based paint inspection was performed to identify paint that contains lead above allowable levels and to assist with the compliance of local, state and federal regulations.

1.2 SUMMARY OF PROPERTY EVALUATION

The project consisted of the evaluation of the interior and exterior areas of the aforementioned project. The evaluation found that lead based paint was present in selective components and surfaces through the project on the date of the inspection. Table 1-1 identifies the components positive for lead. Table 2-1 identifies lead-based paint as defined by the U.S. Environmental Protection Agency (EPA) and the Environmental Quality Board (EQB). For specific locations and additional detail on the location of lead- reference Sections 2 and 3.

1.3 PROPERTY LOCATIONS OF BUILDING COMPONENTS WITH LEAD-BASED PAINT

Table 1-1 summarizes the site components and surfaces coated with lead-based paint. Details that identify positive lead-based paint findings within specific areas and on surfaces were provided in the lead-based paint inspection report. The “substrate” is the building component material directly beneath the painted surface. Photographic documentation is for reference purposes and doesn't necessarily include all the surfaces with lead based paint and/or components containing lead.

Table 1-1: Summary of Components Containing Lead				
Area	Component	Color	Substrate	Approximate Amount
Lobby	Baseboard	Cream	Concrete	42 Ln Ft
Staircase	Step	Cream	Concrete	52 Ft ²
	Riser	Cream	Concrete	
	Hand Rail	Green	Metal	All System
	Railing	Cream	Metal	
Staircase (to roof) 1-1,1-2, 1-6, 1-11, 1-21, 1-23, 1-24, 1-25, 1-27, 1-30, 1-31, & 1-32	Doors	Cream	Wood	17 Units
1-2, 1-6, 1-7, 1-10, 1-11, 1-12, 1-13, 1-21, 1-23, 1-24, 1-25, 1-26, 1-27, 1-29, & 1-30	Entrance Floor Markings	Yellow	Concrete	60 Ln Ft
1-7	Wall B	Cream	Concrete	10 Ft ²
1-13	Wall C	Gray & Blue	Concrete	184 Ft ²
	C-Side Baseboard	Gray	Concrete	
	C-Side Column	Gray	Concrete	
	C-Side Beam	Gray	Concrete	
1-22	Wall B	Gray	Concrete	264 Ft ²
	Wall D	Gray	Concrete	243 Ft ²
Hallway A	Wall A & Baseboard	Cream	Concrete	664 Ft ²
Hallway B	Wall B & Baseboard	Cream	Concrete	691 Ft ²
Hallway D	Wall D & Baseboard	Cream	Concrete	687 Ft ²
Hallway C1	Baseboard	Cream	Concrete	30 Ln Ft
Hallway C2	Baseboard	Cream	Concrete	30 Ln Ft
Exterior Area A	Wall Sections	Yellow	Concrete	1,080 Ft ²

Note:

- The quantification of positives materials presented in this table is only an estimate. If an abatement of the materials will be conducted, the Contractors shall estimate the amount of materials to be abated.

SECTION 2: LEAD-BASED PAINT INSPECTION REPORT

2.1 OVERVIEW OF THE EVALUATION

This lead-based paint inspection is an investigation to identify all lead-based paint on a surface-by-surface basis. A lead-based paint inspection conforming to HUD guidelines was performed at the aforementioned facilities.

Averages of 530 samples were taken at identified surfaces of the evaluated areas using X-ray fluorescence (XRF) analyzer. The evaluation found that lead-based paint was present in selective components and surfaces through the site on the date of the assessment (See Table 1-1). Some of the remaining XRF test locations exhibited lead-in-paint levels below the level that EPA identifies as lead-based paint, namely 1.0 mg/cm². Such surfaces could create dust-lead or soil-lead hazards if the paint is turned into dust by abrasion, scraping, or sanding. Should these or any lead containing components or surfaces be disturbed in any manner that generates dust, care should be taken to limit its spread.

Testing was performed by Onell González, state-certified lead inspector 2290-1018-LI-001, using the Niton XLp-300A XRF, SN-101222. The credentials are provided in Section 3, Appendix C: Certifications, Licenses, and Accreditations. The XRF analyzer is designed to measure the lead content of surface coatings on a variety of building surfaces, substrates, and components. The measurement is rapid and nondestructive and, according to the manufacturer, is capable of detecting lead concentrations that occur within numerous layers of various surface coatings.

Please refer to the XRF Testing Results Section 3, Appendix D: XRF Sampling Data for the detailed analytical testing results for each distinct area inspected. The reports provide a complete testing data.

2.2 SAMPLING PROCEDURE AND RESULTS PRESENTATION

The Lead Based Paint Sampling Procedure was design to evaluate and document all the data obtained form the inspection in a sequential method that provided confidence at the moment of the results presentation.

The survey was performed following the methodology established in the HUD Guidelines for the Evaluation and Control of Lead Based Paint in Housing (2012 revision) and the PREQB Lead Based Paint Abatement Control Regulation. The surfaces evaluation was performed as follows:

- If the lead concentration measured by the XRF Spectrum Analyzer is less than 1.0 mg/cm² it is considered negative.
- If the lead concentration measured by the XRF Spectrum Analyzer is equal or greater than 1.0 mg/cm² it is considered positive.

To each functional space of the property a name was assigned according to the use of that space. If no name could be assigned then a code letter or number was assigned. Each wall surface of each area was named with letters beginning with wall A the wall facing the main entrance direction. The wall at your left will be wall B, the wall at front wall C and the wall at you right will be wall D.

2.3 LEAD REGULATORY LEVELS

The lead regulatory levels provided below are those used when preparing this lead-based paint evaluation or when evaluating data collected. The EPA regulatory levels are the same as the state regulatory levels provided in the following table.

TABLE 2-1: LEAD REGULATORY LEVELS	
	EPA/EQB Levels
Lead-Based Paint	1.0 mg/cm ² or 0.5% by weight (or 5,000 ppm)

2.4 CONDITIONS AND LIMITATIONS—DISCLAIMER

Zimmetry Environmental Management Corp. has performed this lead-based paint inspection in a thorough and professional manner consistent with commonly accepted industry standards. The Preparer cannot guarantee and does not warrant that this evaluation has identified all adverse environmental factors and/or conditions affecting this project on the date of the evaluation.

The results reported and conclusions reached by the Preparer are solely for the benefit of the Owner. The results and opinions in this report, based solely on the conditions found at the project on the date of the evaluation, are valid only on that date. The Preparer assumes no obligation to advise the client of any changes in any real or potential lead-based paint hazards at this residence beyond the date of the project evaluation.

The lead inspection was performed to ready accessible components and surfaces. If suspected components that could contain lead are encountered underneath current installed tiles or other construction material, they shall be managed as containing lead until the appropriate test is performed.

2.5 ABATEMENT CONDITIONS

Abatement, as defined by HUD and the Puerto Rico Environmental Quality Board (EQB), means any set of measures designed to eliminate lead-based paint and/or lead-based paint hazards permanently. The people providing these services must be trained in accordance with the EQB licensing/certification requirements. The product manufacturer and/or contractor must warrant abatement methods to last a minimum of 20 years, or these methods must have a design life of at least 20 years.

Abatement activities may include, but are not necessarily limited to:

- onsite or offsite removal of lead-based paint from substrates and components
- replacement of components or fixtures painted with lead-based paint
- permanent enclosure of lead-based paint with construction materials mechanically-fastened to the substrate
- encapsulation of lead-based paint with specially designed encapsulant products
- removal or permanent covering (concrete or asphalt) of soil-lead-based paint hazards

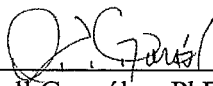
If enclosure or encapsulation is conducted as an abatement method, the lead-based paint remains on the property, so ongoing lead-based paint maintenance is required.

2.6 RECOMMENDATIONS

According to the EQB lead regulations, prior to the demolishing of a structure containing lead based paint, the contaminated surfaces or substrates must be abated or removed. The waste generated has to be characterized to determine if the waste generated is hazardous or non hazardous waste. The firm providing the abatement services must be certified as an abatement firm by the EQB. Workers conducting abatement must be trained and certified as abatement workers by a training provider accredited by the EQB.

2.7 ENVIRONMENTAL ASSESSMENT REPORT CERTIFICATION

Zimmetry Environmental Management Corp. has performed this lead-based paint inspection in a thorough and professional manner consistent with commonly accepted industry standards. The inspection was conducted on July 24, 2019 by Onell González, state-certified lead inspector 2290-1018-LI-001, qualified by experience, education and training in the recognition of lead based paint and approved sampling techniques using the Niton XLp-300A XRF, SN-101222.


Onell González, PhD(c), CIEC, LEED AP O+M
Professional Industrial Hygienist |
Green Building Advisor & International Trainer

SECTION 3: APPENDICES

Appendix A: XRF Sampling Data

Appendix B: Project Photographs

Appendix C: Certifications, Licenses, and Accreditations

Appendix D: XRF's Performance Characteristics Sheet

Appendix E: Location of Positive Materials

APPENDIX A: XRF SAMPLING DATA

PROJECT:	PRNG Ponce Readiness Center, Ponce PR			CLIENT: Puerto Rico National Guard			
DATE:	7/24/2019				LBP Inspector: Onell González		
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
1	Calibration				1.00		
2	Calibration				1.00		
3	Calibration				1.00		
4	Lobby	Door	Cream	Wood	0.00	Negative	
5	Lobby	Door Casing	Cream	Wood	0.01	Negative	
6	Lobby	Wall A	Cream	Concrete	0.00	Negative	
7	Lobby	Wall B	Cream	Concrete	0.00	Negative	
8	Lobby	Wall D	Cream	Concrete	0.00	Negative	
9	Lobby	Baseboard	Cream	Concrete	2.30	Positive	
10	Lobby	Baseboard	Cream	Concrete	1.30	Positive	
11	Staircase	Grille	Gray	Metal	0.00	Negative	
12	Staircase	Step	Cream	Concrete	1.20	Positive	
13	Staircase	Riser	Cream	Concrete	1.30	Positive	
14	Staircase	Hand Rail	Green	Metal	1.50	Positive	
15	Staircase	Wall A	Cream	Concrete	0.00	Negative	
16	Staircase	Wall B	Cream	Concrete	0.00	Negative	
17	Staircase	Wall C	Cream	Concrete	0.00	Negative	
18	Staircase	Wall D	Cream	Concrete	0.00	Negative	
19	Staircase	Railing	Cream	Metal	1.20	Positive	
20	Staircase	Floor	Gray	Concrete	0.28	Negative	
21	Staircase	Step	Gray	Concrete	0.60	Negative	
22	Staircase	Step	Gray	Concrete	0.40	Negative	
23	Staircase	Ceiling	White	Concrete	0.00	Negative	
24	Staircase	Door	Cream	Wood	1.30	Positive	
25	Roof Area	Wall A	Yellow	Concrete	0.00	Negative	
26	Roof Area	Wall B	Yellow	Concrete	0.00	Negative	
27	Roof Area	Wall D	Yellow	Concrete	0.00	Negative	
28	Roof Area	Soffit	White	Concrete	0.00	Negative	
29	Recruitment	Door	Cream	Wood	0.00	Negative	
30	Recruitment	Door Casing	Cream	Wood	0.00	Negative	
31	Recruitment	Wall A	Gray	Concrete	0.00	Negative	
32	Recruitment	Column	Gray	Concrete	0.00	Negative	
33	Recruitment	Wall B	Gray	Concrete	0.00	Negative	
34	Recruitment	Column	Gray	Concrete	0.00	Negative	
35	Recruitment	Wall C	Gray	Concrete	0.00	Negative	
36	Recruitment	Column	Gray	Concrete	0.00	Negative	
37	Recruitment	Wall D	Blue	Concrete	0.00	Negative	
38	Recruitment	Window Shutter	White	Metal	0.00	Negative	
39	Recruitment	Ceiling	White	Concrete	0.00	Negative	
40	Recruitment	Beam	Gray	Concrete	0.00	Negative	
41	Area 1-1	Double Door	Cream	Wood	2.50	Positive	
42	Area 1-1	Door Casing	Cream	Wood	0.00	Negative	
43	Area 1-1	Wall A	Yellow	Concrete	0.50	Negative	
44	Area 1-1	Wall A	Yellow	Concrete	0.30	Negative	
45	Area 1-1	Wall B	Blue	Concrete	0.60	Negative	
46	Area 1-1	Wall C	Blue	Concrete	0.70	Negative	
47	Area 1-1	Single Door	Cream	Wood	1.40	Positive	
48	Area 1-1	Door Casing	Cream	Wood	0.00	Negative	
49	Area 1-1	Beam	White	Concrete	0.00	Negative	
50	Area 1-1	Wall C	White	Concrete	0.00	Negative	
51	Area 1-2	Door	Cream	Wood	3.60	Positive	
52	Area 1-2	Door Casing	Green	Wood	0.00	Negative	
53	Area 1-2	Floor Marking	Yellow	Concrete	2.10	Positive	
54	Area 1-2	Wall A	Yellow	Concrete	0.00	Negative	
55	Area 1-2	Wall B	Cream	Drywall	0.00	Negative	
56	Area 1-2	Wall C	Cream	Drywall	0.00	Negative	
57	Area 1-2	Wall D	Cream	Concrete	0.00	Negative	
58	Area 1-2	Column	Cream	Concrete	0.00	Negative	
59	Area 1-2	Floor Tile	Gray	Ceramic	0.30	Negative	
60	Area 1-2	Baseboard	Gray	Ceramic	0.30	Negative	

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Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
61	Area 1-3	Wall A	Yellow	Concrete	0.00	Negative	
62	Area 1-3	Wall B	Gray	Concrete	0.00	Negative	
63	Area 1-3	Wall C	Gray	Drywall	0.00	Negative	
64	Area 1-3	Wall D	Yellow	Drywall	0.00	Negative	
65	Area 1-3	Door	Varnish	Wood	0.00	Negative	
66	Area 1-3	Door Casing	Varnish	Wood	0.00	Negative	
67	Area 1-4	Wall A	Cream	Drywall	0.00	Negative	
68	Area 1-4	Wall B	Cream	Concrete	0.00	Negative	
69	Area 1-4	Column	Gray	Concrete	0.00	Negative	
70	Area 1-4	Wall C	Gray	Concrete	0.00	Negative	
71	Area 1-4	Wall D	Gray	Drywall	0.00	Negative	
72	Area 1-5	Door	Varnish	Wood	0.00	Negative	
73	Area 1-5	Door Casing	Varnish	Wood	0.00	Negative	
74	Area 1-5	Wall A	Gray	Drywall	0.00	Negative	
75	Area 1-5	Wall B	Gray	Drywall	0.00	Negative	
76	Area 1-5	Wall C	Gray	Concrete	0.00	Negative	
77	Area 1-5	Column	Gray	Concrete	0.00	Negative	
78	Area 1-5	Wall D	Gray	Concrete	0.00	Negative	
79	Area 1-6	Door	Cream	Wood	1.20	Positive	
80	Area 1-6	Door Casing	Gray	Wood	0.00	Negative	
81	Area 1-6	Floor Marking	Yellow	Concrete	2.70	Positive	
82	Area 1-6	Door	Cream	Wood	1.60	Positive	
83	Area 1-6	Door Casing	Cream	Wood	0.00	Negative	
84	Area 1-6	Floor Marking	Yellow	Concrete	2.00	Positive	
85	Area 1-6	Wall A	Cream	Concrete	0.00	Negative	
86	Area 1-6	Baseboard	Cream	Concrete	0.00	Negative	
87	Area 1-6	Wall B	Cream	Concrete	0.00	Negative	
88	Area 1-6	Column	Cream	Concrete	0.00	Negative	
89	Area 1-6	Window Shutter	White	Metal	0.00	Negative	
90	Area 1-6	Beam	Cream	Concrete	0.00	Negative	
91	Area 1-6	Folding Partition	Varnish	Wood	0.00	Negative	
92	Area 1-6	Wall B	Cream	Concrete	0.00	Negative	
93	Area 1-6	Wall C	Cream	Concrete	0.00	Negative	
94	Area 1-6	Wall C	Cream	Concrete	0.00	Negative	
95	Area 1-6	Wall D	Cream	Concrete	0.10	Negative	
96	Area 1-6	Base	Cream	Concrete	0.10	Negative	
97	Area 1-6	Column	Cream	Concrete	0.00	Negative	
98	Area 1-6	Beam	Cream	Concrete	0.00	Negative	
99	Area 1-7	Floor Marking	Yellow	Concrete	2.30	Positive	
100	Area 1-7	Floor Tile	Gray	Ceramic	0.00	Negative	
101	Area 1-7	Wall A	Cream	Drywall	0.00	Negative	
102	Area 1-7	Wall B	Cream	Concrete	1.90	Positive	
103	Area 1-7	Wall C	Cream	Concrete	0.50	Negative	
104	Area 1-7	Wall C	Cream	Concrete	0.00	Negative	
105	Area 1-8	Door	Cream	Wood	0.40	Negative	
106	Area 1-8	Door Casing	Cream	Wood	0.00	Negative	
107	Area 1-8	Wall D	White	Concrete	0.12	Negative	
108	Area 1-8	Wall D	White	Concrete	0.25	Negative	
109	Area 1-8	Floor Tile	Gray	Ceramic	0.00	Negative	
110	Area 1-8	Baseboard	Gray	Ceramic	0.00	Negative	
111	Area 1-8	Wall Tile	Cream	Ceramic	0.00	Negative	
112	Area 1-8	Wall A	White	Concrete	0.21	Negative	
113	Area 1-8	Column	White	Concrete	0.40	Negative	
114	Area 1-8	Wall B	White	Concrete	-0.17	Negative	
115	Area 1-8	Wall C	White	Concrete	0.00	Negative	
116	Area 1-9	Door	Cream	Wood	0.00	Negative	
117	Area 1-9	Door Casing	Cream	Wood	0.00	Negative	
118	Area 1-9	Floor Tile	Gray	Ceramic	0.00	Negative	
119	Area 1-9	Baseboard	Gray	Ceramic	0.00	Negative	
120	Area 1-9	Wall A	Cream	Concrete	0.11	Negative	

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Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
121	Area 1-9	Wall B	Yellow	Concrete	0.00	Negative	
122	Area 1-9	Wall C	Cream	Drywall	0.00	Negative	
123	Area 1-9	Column	Cream	Concrete	0.30	Negative	
124	Area 1-9	Wall D	Cream	Concrete	0.60	Negative	
125	Area 1-10	Door	Cream	Wood	0.18	Negative	
126	Area 1-10	Door Casing	Cream	Wood	0.00	Negative	
127	Area 1-10	Floor Marking	Yellow	Concrete	2.00	Positive	
128	Area 1-10	Floor Tile	Green	Ceramic	0.00	Negative	
129	Area 1-10	Wall A	Blue	Concrete	0.22	Negative	
130	Area 1-10	Wall A	Blue	Concrete	0.00	Negative	
131	Area 1-10	Wall C	Blue	Concrete	0.10	Negative	
132	Area 1-10	Wall Tile	Cream	Ceramic	0.00	Negative	
133	Area 1-10	Wall Tile	Green	Ceramic	0.00	Negative	
134	Area 1-10	Wall A	Blue	Concrete	0.00	Negative	
135	Area 1-10	Wall B	Yellow	Concrete	0.00	Negative	
136	Area 1-10	Partition	Blue	Concrete	0.00	Negative	
137	Area 1-10	Lavatory	White	Ceramic	0.00	Negative	
138	Area 1-10	Lavatory	White	Ceramic	0.00	Negative	
139	Area 1-10	Partition	Blue	Plastic	0.00	Negative	
140	Area 1-10	Toilet	White	Ceramic	0.00	Negative	
141	Area 1-10	Wall C	Blue	Concrete	0.00	Negative	
142	Area 1-10	Toilet	White	Ceramic	0.10	Negative	
143	Area 1-10	Urinal	White	Ceramic	0.00	Negative	
144	Area 1-11	Door	Cream	Wood	0.10	Negative	
145	Area 1-11	Door	Cream	Wood	2.70	Positive	
146	Area 1-11	Door Casing	Cream	Wood	0.00	Negative	
147	Area 1-11	Floor Marking	Yellow	Concrete	2.30	Positive	
148	Area 1-11	Wall C	Cream	Wood	0.00	Negative	
149	Area 1-11	Floor Tile	Gray	Ceramic	0.00	Negative	
150	Area 1-11	Wall A	Yellow	Concrete	0.00	Negative	
151	Area 1-11	Wall B	Yellow	Concrete	0.00	Negative	
152	Area 1-11	Wall C	Yellow	Concrete	0.00	Negative	
153	Area 1-11	Wall D	Yellow	Concrete	0.00	Negative	
154	Area 1-12	Sliding Door	Cream	Metal	0.00	Negative	
155	Area 1-12	Floor Marking	Yellow	Concrete	2.00	Positive	
156	Area 1-12	Wall D	Gray	Concrete	0.00	Negative	
157	Area 1-12	Column	Gray	Concrete	0.00	Negative	
158	Area 1-12	Wall C	Yellow	Concrete	0.00	Negative	
159	Area 1-12	Wall C	Yellow	Concrete	0.00	Negative	
160	Area 1-12	Baseboard	Yellow	Concrete	0.08	Negative	
161	Area 1-12	Wall A	Cream	Concrete	0.00	Negative	
162	Area 1-12	Wall B	Yellow	Concrete	0.00	Negative	
163	Area 1-13	Wall A	Gray	Drywall	0.00	Negative	
164	Area 1-13	Wall A	Yellow	Concrete	0.80	Negative	
165	Area 1-13	Wall B	Orange	Concrete	0.80	Negative	
166	Area 1-13	Baseboard	Gray	Concrete	0.60	Negative	
167	Area 1-13	Column	Gray	Concrete	0.80	Negative	
168	Area 1-13	Wall B	Gray	Concrete	0.50	Negative	
169	Area 1-13	Wall C	Gray	Concrete	1.20	Positive	
170	Area 1-13	Window Grille	Green	Metal	0.30	Negative	
171	Area 1-13	Wall C	Blue	Concrete	1.30	Positive	
172	Area 1-13	Baseboard	Gray	Concrete	1.30	Positive	
173	Area 1-13	Wall C	Gray	Concrete	1.20	Positive	
174	Area 1-13	Column	Gray	Concrete	1.30	Positive	
175	Area 1-13	Beam	Gray	Concrete	1.30	Positive	
176	Area 1-13	Window Shutter	White	Metal	0.00	Negative	
177	Area 1-13	Wall D	Cream	Concrete	0.00	Negative	
178	Area 1-13	Floor	Gray	Concrete	0.00	Negative	
179	Area 1-13	Floor Line	Red	Concrete	0.00	Negative	
180	Area 1-13	Floor Marking	Yellow	Concrete	2.30	Positive	

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Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
181	Area 1-14	Door	Green	Metal	0.10	Negative	
182	Area 1-14	Door Casing	Green	Metal	0.00	Negative	
183	Area 1-14	Wall A	Blue	Concrete	0.60	Negative	
184	Area 1-14	Wall B	Blue	Concrete	0.40	Negative	
185	Area 1-14	Baseboard	Blue	Concrete	0.40	Negative	
186	Area 1-14	Floor	Gray	Concrete	0.06	Negative	
187	Area 1-14	Floor Line	Yellow	Concrete	0.09	Negative	
188	Area 1-14	Wall B	Blue	Concrete	0.60	Negative	
189	Area 1-14	Wall C	Blue	Concrete	0.60	Negative	
190	Area 1-14	Wall D	Blue	Concrete	0.60	Negative	
191	Area 1-15	Door	Cream	Wood	0.90	Negative	
192	Area 1-15	Door	Cream	Wood	0.60	Negative	
193	Area 1-15	Door Casing	Cream	Wood	0.00	Negative	
194	Area 1-15	Floor Tile	Gray	Ceramic	0.00	Negative	
195	Area 1-15	Baseboard	Gray	Ceramic	0.00	Negative	
196	Area 1-15	Wall A	Cream	Concrete	0.00	Negative	
197	Area 1-15	Wall A	Cream	Concrete	0.10	Negative	
198	Area 1-15	Wall B	Cream	Concrete	0.00	Negative	
199	Area 1-15	Wall C	Cream	Concrete	0.10	Negative	
200	Area 1-15	Wall D	Cream	Concrete	0.00	Negative	
201	Area 1-15	Floor Marking	Cream	Metal	0.20	Negative	
202	Area 1-16	Door	Cream	Wood	0.00	Negative	
203	Area 1-16	Door	Cream	Wood	0.70	Negative	
204	Area 1-16	Door Casing	Cream	Wood	0.00	Negative	
205	Area 1-16	Wall A	Yellow	Concrete	0.20	Negative	
206	Area 1-16	Wall A	Yellow	Concrete	0.00	Negative	
207	Area 1-16	Wall B	Cream	Concrete	0.00	Negative	
208	Area 1-16	Wall C	Yellow	Concrete	0.00	Negative	
209	Area 1-16	Wall D	Cream	Concrete	0.00	Negative	
210	Area 1-17	Wall D	Cream	Concrete	0.00	Negative	
211	Area 1-17	Door	Cream	Wood	0.00	Negative	
212	Area 1-17	Door Casing	Cream	Wood	0.00	Negative	
213	Area 1-17	Wall A	Cream	Concrete	0.00	Negative	
214	Area 1-17	Wall A	Cream	Concrete	0.00	Negative	
215	Area 1-17	Wall A	Cream	Concrete	0.00	Negative	
216	Area 1-17	Wall B	Cream	Concrete	0.00	Negative	
217	Area 1-17	Wall C	Cream	Concrete	0.00	Negative	
218	Area 1-18	Door	Cream	Wood	0.00	Negative	
219	Area 1-18	Door	Cream	Wood	0.00	Negative	
220	Area 1-18	Door Casing	Cream	Wood	0.00	Negative	
221	Area 1-18	Wall A	Yellow	Concrete	0.00	Negative	
222	Area 1-18	Wall B	Yellow	Concrete	0.00	Negative	
223	Area 1-18	Wall C	Yellow	Concrete	0.00	Negative	
224	Area 1-18	Wall D	Yellow	Concrete	0.00	Negative	
225	Area 1-18	Floor Tile	Gray	Ceramic	0.00	Negative	
226	Area 1-18	Baseboard	Gray	Ceramic	0.00	Negative	
227	Area 1-19	Door	Cream	Metal	0.12	Negative	
228	Area 1-19	Door Casing	Cream	Metal	0.09	Negative	
229	Area 1-19	Wall A	Cream	Concrete	0.00	Negative	
230	Area 1-19	Wall B	Cream	Concrete	0.00	Negative	
231	Area 1-19	Wall C	Cream	Concrete	0.00	Negative	
232	Area 1-19	Wall D	Cream	Concrete	0.00	Negative	
233	Area 1-20	Door	Cream	Wood	0.80	Negative	
234	Area 1-20	Door	Cream	Wood	0.12	Negative	
235	Area 1-20	Door Casing	Cream	Wood	0.00	Negative	
236	Area 1-20	Wall A	Yellow	Concrete	0.00	Negative	
237	Area 1-20	Wall A	Yellow	Concrete	0.00	Negative	
238	Area 1-20	Window Shutter	Cream	Metal	0.80	Negative	
239	Area 1-20	Wall B	Cream	Concrete	0.00	Negative	
240	Area 1-20	Wall C	Cream	Concrete	0.00	Negative	

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241	Area 1-20	Wall C	Cream	Concrete	0.00	Negative	
242	Area 1-20	Wall D	Cream	Concrete	0.00	Negative	
243	Area 1-20	Floor	Gray	Ceramic	0.00	Negative	
244	Area 1-20	Baseboard	Gray	Ceramic	0.00	Negative	
245	Area 1-21	Door	Cream	Wood	1.20	Positive	
246	Area 1-21	Door Casing	Cream	Wood	0.00	Negative	
247	Area 1-21	Floor Marking	Yellow	Concrete	2.40	Positive	
248	Area 1-21	Wall A	Pink	Concrete	0.40	Negative	
249	Area 1-21	Wall A	Cream	Concrete	0.00	Negative	
250	Area 1-21	Wall B	Brown	Concrete	0.40	Negative	
251	Area 1-21	Wall B	Cream	Concrete	0.00	Negative	
252	Area 1-21	Wall C	White	Concrete	0.50	Negative	
253	Area 1-21	Wall C	Pink	Concrete	0.00	Negative	
254	Area 1-21	Wall D	Brown	Concrete	0.50	Negative	
255	Area 1-21	Wall D	Cream	Concrete	0.00	Negative	
256	Area 1-21	Partition	Green	Concrete	0.40	Negative	
257	Area 1-23	Double Door	Cream	Wood	0.30	Negative	
258	Area 1-23	Double Door	Cream	Wood	0.30	Negative	
259	Area 1-23	Double Door	Cream	Wood	1.80	Positive	
260	Area 1-23	Floor Marking	Yellow	Concrete	2.10	Positive	
261	Area 1-23	Gate	Cream	Metal	0.10	Negative	
262	Area 1-22	Door	Orange	Metal	0.01	Negative	
263	Area 1-22	Floor	Gray	Concrete	0.00	Negative	
264	Area 1-22	Floor	Gray	Concrete	0.00	Negative	
265	Area 1-22	Wall A	Gray	Concrete	0.80	Negative	
266	Area 1-22	Wall A	Gray	Concrete	0.80	Negative	
267	Area 1-22	Wall B	Gray	Concrete	1.10	Positive	
268	Area 1-22	Wall C	Gray	Concrete	0.00	Negative	
269	Area 1-22	Wall C	Cream	Concrete	0.70	Negative	
270	Area 1-22	Wall D	Gray	Concrete	1.20	Positive	
271	Area 1-22	Floor Line	Yellow	Concrete	0.00	Negative	
272	Area 1-23	Wall A	Yellow	Concrete	0.00	Negative	
273	Area 1-23	Wall A	Cream	Concrete	0.00	Negative	
274	Area 1-23	Wall B	Yellow	Concrete	0.00	Negative	
275	Area 1-23	Wall C	Cream	Concrete	0.00	Negative	
276	Area 1-23	Wall C	Cream	Concrete	0.07	Negative	
277	Area 1-23	Window Grille	Cream	Metal	0.27	Negative	
278	Area 1-23	Wall C	Blue	Concrete	0.00	Negative	
279	Area 1-23	Baseboard	Blue	Concrete	0.00	Negative	
280	Area 1-23	Sliding Door	Green	Metal	0.20	Negative	
281	Area 1-23	Wall D	Yellow	Concrete	0.40	Negative	
282	Area 1-23	Wall D	Yellow	Concrete	0.70	Negative	
283	Area 1-23	Column	Yellow	Concrete	0.20	Negative	
284	Area 1-23	Wall A	Yellow	Concrete	0.05	Negative	
285	Area 1-23	Window Molding	Pink	Concrete	0.10	Negative	
286	Area 1-23	Wall A	Pink	Concrete	0.30	Negative	
287	Area 1-23	Floor	Gray	Concrete	0.50	Negative	
288	Area 1-24	Door	Cream	Wood	1.50	Positive	
289	Area 1-24	Door Casing	Cream	Concrete	0.00	Negative	
290	Area 1-24	Floor Marking	Yellow	Concrete	2.20	Positive	
291	Area 1-24	Wall A	Cream	Concrete	0.00	Negative	
292	Area 1-24	Sliding Door	Green	Metal	0.00	Negative	
293	Area 1-24	Sliding Door	Green	Metal	0.00	Negative	
294	Area 1-24	Baseboard	Cream	Concrete	0.00	Negative	
295	Area 1-24	Wall B	Cream	Concrete	0.00	Negative	
296	Area 1-24	Window Shutter	White	Metal	0.00	Negative	
297	Area 1-24	Column	Cream	Concrete	0.00	Negative	
298	Area 1-24	Wall C	Cream	Concrete	0.00	Negative	
299	Area 1-24	Beam	White	Concrete	0.00	Negative	
300	Area 1-24	Ceiling	White	Concrete	0.00	Negative	

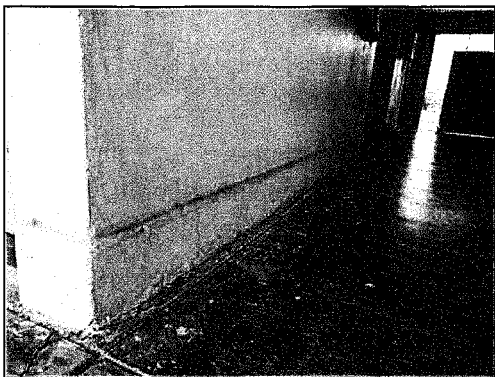
PROJECT:	PRNG Ponce Readiness Center, Ponce PR			CLIENT: Puerto Rico National Guard			
DATE:	7/24/2019				LBP Inspector: Onell González		
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
301	Area 1-24	Floor Line	Yellow	Concrete	0.00	Negative	
302	Area 1-24	Floor	Gray	Concrete	0.00	Negative	
303	Area 1-24	Floor Marking	Yellow	Concrete	2.40	Positive	
304	Area 1-24	Door	Cream	Wood	1.70	Positive	
305	Area 1-24	Door Casing	Cream	Wood	0.00	Negative	
306	Area 1-24	Wall B	Cream	Concrete	0.00	Negative	
307	Area 1-24	Baseboard	Cream	Concrete	0.00	Negative	
308	Area 1-24	Column	Cream	Concrete	0.02	Negative	
309	Area 1-24	Wall C	Cream	Concrete	0.00	Negative	
310	Area 1-24	Wall C	Cream	Concrete	0.01	Negative	
311	Area 1-24	Wall D	Cream	Concrete	0.00	Negative	
312	Area 1-24	Column	Cream	Concrete	0.00	Negative	
313	Area 1-25	Floor Marking	Yellow	Concrete	2.10	Positive	
314	Area 1-25	Door	Cream	Wood	1.30	Positive	
315	Area 1-25	Door Casing	Cream	Wood	0.00	Negative	
316	Area 1-25	Floor Tile	Gray	Ceramic	0.00	Negative	
317	Area 1-25	Baseboard	Gray	Ceramic	0.00	Negative	
318	Area 1-25	Wall A	Blue	Concrete	0.00	Negative	
319	Area 1-25	Wall B	Blue	Concrete	0.00	Negative	
320	Area 1-25	Column	Blue	Concrete	0.00	Negative	
321	Area 1-25	Wall C	Blue	Concrete	0.00	Negative	
322	Area 1-25	Wall D	Yellow	Concrete	0.00	Negative	
323	Area 1-26	Floor Marking	Yellow	Concrete	2.40	Positive	
324	Area 1-26	Door	Cream	Wood	0.50	Negative	
325	Area 1-26	Door Casing	Cream	Wood	0.00	Negative	
326	Area 1-26	Floor Tile	Green	Ceramic	0.00	Negative	
327	Area 1-26	Wall A	Blue	Concrete	0.20	Negative	
328	Area 1-26	Wall A	Blue	Concrete	0.00	Negative	
329	Area 1-26	Wall B	Blue	Concrete	0.00	Negative	
330	Area 1-26	Wall C	Blue	Concrete	0.11	Negative	
331	Area 1-26	Baseboard	Green	Ceramic	0.00	Negative	
332	Area 1-26	Wall Tile	White	Ceramic	0.00	Negative	
333	Area 1-26	Wall Tile	Green	Ceramic	0.00	Negative	
334	Area 1-26	Wall C	Blue	Concrete	0.00	Negative	
335	Area 1-26	Wall D	Yellow	Concrete	0.00	Negative	
336	Area 1-26	Partition	Green	Plastic	0.00	Negative	
337	Area 1-26	Toilet	White	Ceramic	0.00	Negative	
338	Area 1-26	Toilet	White	Ceramic	0.00	Negative	
339	Area 1-26	Lavatory	White	Ceramic	0.00	Negative	
340	Area 1-26	Lavatory	White	Ceramic	0.00	Negative	
341	Area 1-26	Floor Tile	Gray	Ceramic	0.00	Negative	
342	Area 1-26	Partition	Blue	Concrete	0.00	Negative	
343	Area 1-26	Wall A	Blue	Concrete	0.00	Negative	
344	Area 1-26	Wall B	Blue	Concrete	0.00	Negative	
345	Area 1-27	Floor Marking	Yellow	Concrete	2.50	Positive	
346	Area 1-27	Door	Cream	Wood	1.20	Positive	
347	Area 1-27	Door Casing	Cream	Wood	0.00	Negative	
348	Area 1-27	Floor Tile	Gray	Ceramic	0.00	Negative	
349	Area 1-27	Baseboard	Gray	Ceramic	0.00	Negative	
350	Area 1-27	Wall A	Pink	Concrete	0.00	Negative	
351	Area 1-27	Wall A	Pink	Concrete	0.00	Negative	
352	Area 1-27	Column	Pink	Concrete	0.00	Negative	
353	Area 1-27	Wall B	Pink	Concrete	0.00	Negative	
354	Area 1-27	Wall C	Pink	Concrete	0.00	Negative	
355	Area 1-27	Wall D	Pink	Concrete	0.00	Negative	
356	Area 1-28	Door	Varnish	Wood	0.00	Negative	
357	Area 1-28	Door Casing	Green	Metal	0.00	Negative	
358	Area 1-28	Wall A	White	Concrete	0.00	Negative	
359	Area 1-28	Wall B	White	Concrete	0.00	Negative	
360	Area 1-28	Wall C	Pink	Concrete	0.00	Negative	

PROJECT:	PRNG Ponce Readiness Center, Ponce PR			CLIENT: Puerto Rico National Guard			
DATE:	7/24/2019			LBP Inspector: Onell González			
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
361	Area 1-28	Wall D	Pink	Concrete	0.00	Negative	
362	Area 1-28	Column	Pink	Concrete	0.00	Negative	
363	Area 1-28	Floor Tile	Gray	Ceramic	0.00	Negative	
364	Area 1-28	Baseboard	Gray	Ceramic	0.00	Negative	
365	Area 1-29	Floor Marking	Yellow	Concrete	2.30	Positive	
366	Area 1-29	Door	Cream	Wood	0.50	Negative	
367	Area 1-29	Door	Cream	Wood	0.02	Negative	
368	Area 1-29	Door Casing	Cream	Wood	0.00	Negative	
369	Area 1-29	Wall A	Cream	Concrete	0.60	Negative	
370	Area 1-29	Wall B	Cream	Concrete	0.00	Negative	
371	Area 1-29	Column	Cream	Concrete	0.00	Negative	
372	Area 1-29	Wall C	Cream	Concrete	-0.03	Negative	
373	Area 1-29	Wall C	Cream	Concrete	0.20	Negative	
374	Area 1-29	Wall D	Cream	Concrete	0.00	Negative	
375	Area 1-29	Column	Cream	Concrete	0.60	Negative	
376	Area 1-29	Wall A	Cream	Concrete	0.22	Negative	
377	Area 1-30	Floor Marking	Yellow	Concrete	2.00	Positive	
378	Area 1-30	Floor Marking	Yellow	Concrete	2.00	Positive	
379	Area 1-30	Door 1	Cream	Wood	1.80	Positive	
380	Area 1-30	Door Casing	Cream	Wood	0.00	Negative	
381	Area 1-30	Door 2	Cream	Wood	1.90	Positive	
382	Area 1-30	Door Casing	Cream	Wood	0.00	Negative	
383	Area 1-30	Wall A	Green	Concrete	0.00	Negative	
384	Area 1-30	Wall B	Green	Concrete	0.00	Negative	
385	Area 1-30	Column	Green	Concrete	0.00	Negative	
386	Area 1-30	Wall B	Green	Concrete	0.00	Negative	
387	Area 1-30	Baseboard	Cream	Concrete	0.00	Negative	
388	Area 1-30	Wall C	Green	Concrete	0.00	Negative	
389	Area 1-30	Wall C	Green	Concrete	0.00	Negative	
390	Area 1-30	Column	Green	Concrete	0.00	Negative	
391	Area 1-30	Wall D	Green	Concrete	0.00	Negative	
392	Area 1-30	Wall D	Green	Concrete	0.00	Negative	
393	Area 1-30	Window Shutter	White	Metal	0.00	Negative	
394	Area 1-30	Beam	Green	Concrete	0.00	Negative	
395	Area 1-31	Double Door	Cream	Wood	1.20	Positive	
396	Area 1-31	Door Casing	Cream	Wood	0.00	Negative	
397	Area 1-31	Wall A	Blue	Concrete	0.02	Negative	
398	Area 1-31	Wall A	Blue	Concrete	0.05	Negative	
399	Area 1-31	Wall A	Gray	Concrete	0.00	Negative	
400	Area 1-31	Wall B	Blue	Concrete	0.00	Negative	
401	Area 1-31	Wall B	Gray	Concrete	0.00	Negative	
402	Area 1-31	Wall C	Blue	Concrete	0.06	Negative	
403	Area 1-31	Wall C	Gray	Concrete	0.00	Negative	
404	Area 1-31	Wall D	Blue	Concrete	0.24	Negative	
405	Area 1-31	Wall D	Gray	Concrete	0.00	Negative	
406	Area 1-32	Door	Cream	Wood	1.20	Positive	
407	Area 1-32	Door Casing	Cream	Wood	0.00	Negative	
408	Area 1-32	Wall A	Yellow	Concrete	0.05	Negative	
409	Area 1-32	Wall A	Yellow	Concrete	0.03	Negative	
410	Area 1-32	Wall B	Cream	Concrete	0.03	Negative	
411	Area 1-32	Wall C	Cream	Concrete	0.01	Negative	
412	Area 1-32	Wall D	Cream	Concrete	0.00	Negative	
413	Area 1-32	Window Shutter	White	Metal	0.00	Negative	
414	Area 1-32	Base	White	Concrete	0.11	Negative	
415	Area 1-33	Door	Orange	Metal	0.10	Negative	
416	Area 1-33	Wall A	White	Concrete	0.00	Negative	
417	Area 1-33	Wall C	White	Concrete	0.00	Negative	
418	Area 1-33	Under Stair	White	Concrete	0.02	Negative	
419	Area 1-33	Wall D	White	Concrete	0.00	Negative	
420	Hallway A	Wall A	Cream	Concrete	0.40	Negative	

PROJECT:	PRNG Ponce Readiness Center, Ponce PR			CLIENT: Puerto Rico National Guard			
DATE:	7/24/2019				LBP Inspector: Onell González		
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
421	Hallway A	Window Sill	Cream	Concrete	0.40	Negative	
422	Hallway A	Window Shutter	White	Metal	0.00	Negative	
423	Hallway A	Column	Green	Metal	0.02	Negative	
424	Hallway A	Wall A	Cream	Concrete	0.80	Negative	
425	Hallway A	Wall A	Cream	Concrete	1.80	Positive	
426	Hallway A	Baseboard	Cream	Concrete	1.20	Positive	
427	Hallway A	Column	Green	Metal	0.00	Negative	
428	Hallway A	Column	Green	Metal	0.00	Negative	
429	Hallway B	Wall B	Cream	Concrete	0.80	Negative	
430	Hallway B	Wall B	Cream	Concrete	1.70	Positive	
431	Hallway B	Baseboard	Cream	Concrete	1.20	Positive	
432	Hallway B	Wall B	Cream	Concrete	1.20	Positive	
433	Hallway B	Column	Green	Metal	0.00	Negative	
434	Hallway B	Column	Green	Metal	0.00	Negative	
435	Hallway B	Column	Green	Metal	0.00	Negative	
436	Hallway D	Wall D	Cream	Concrete	0.70	Negative	
437	Hallway D	Wall D	Cream	Concrete	1.80	Positive	
438	Hallway D	Window Sill	Cream	Concrete	0.40	Negative	
439	Hallway D	Column	Green	Metal	0.20	Negative	
440	Hallway D	Baseboard	Cream	Concrete	1.40	Positive	
441	Hallway D	Wall D	Cream	Concrete	0.60	Negative	
442	Hallway D	Column	Green	Concrete	0.00	Negative	
443	Parking Lot	Curb	White	Concrete	0.00	Negative	
444	Parking Lot	Curb	Yellow	Concrete	0.00	Negative	
445	Parking Lot	Floor Line	Yellow	Concrete	0.00	Negative	
446	Parking Lot	Floor Line	Yellow	Concrete	0.00	Negative	
447	Parking Lot	Handicap Line	Blue	Concrete	0.00	Negative	
448	Parking Lot	Curb	White	Concrete	0.00	Negative	
449	Parking Lot	Curb	Yellow	Concrete	0.00	Negative	
450	Parking Lot	Floor Line	Yellow	Concrete	0.00	Negative	
451	Parking Lot	Floor Line	Yellow	Concrete	0.50	Negative	
452	Parking Lot	Floor Line	Yellow	Concrete	0.60	Negative	
453	Parking Lot	Ramp	Blue	Concrete	0.00	Negative	
454	Hallway C1	Wall C	Cream	Concrete	0.00	Negative	
455	Hallway C1	Column	Green	Metal	0.00	Negative	
456	Hallway C1	Baseboard	Cream	Concrete	1.40	Positive	
457	Hallway C2	Wall C	Cream	Concrete	0.00	Negative	
458	Hallway C2	Wall C	Cream	Concrete	0.22	Negative	
459	Hallway C2	Baseboard	Cream	Concrete	1.20	Positive	
460	Hallway C2	Column	Green	Metal	0.00	Negative	
461	Exterior Area Side C	Wall	Cream	Concrete	0.00	Negative	
462	Exterior Area Side C	Wall	Cream	Concrete	0.00	Negative	
463	Exterior Area Side C	Wall	Cream	Concrete	0.00	Negative	
464	Exterior Area Side C	Fascia	Green	Concrete	0.00	Negative	
465	Exterior Area Side B	Wall	Yellow	Concrete	0.00	Negative	
466	Exterior Area Side B	Wall	Yellow	Concrete	0.00	Negative	
467	Exterior Area Side B	Wall	Yellow	Concrete	0.00	Negative	
468	Exterior Area Side B	Wall	Yellow	Concrete	0.00	Negative	
469	Exterior Area Side B	Fascia	Green	Concrete	0.00	Negative	
470	Exterior Area Side B	Window Shutter	Black	Metal	0.00	Negative	
471	Exterior Area Side B	Window Grille	Black	Metal	0.00	Negative	
472	Exterior Area Side A	Wall	Yellow	Concrete	1.40	Positive	
473	Exterior Area Side A	Wall	Yellow	Concrete	1.20	Positive	
474	Exterior Area Side A	Fascia	Green	Concrete	0.00	Negative	
475	Exterior Area Side A	Block	Yellow	Concrete	0.00	Negative	
476	Exterior Area Side A	Block	Yellow	Concrete	0.00	Negative	
477	Exterior Area Side A	Window Shutter	Black	Metal	0.00	Negative	
478	Exterior Area Side A	Window Grille	Black	Metal	0.18	Negative	
479	Exterior Area Side A	Wall	Yellow	Concrete	1.40	Positive	
480	Exterior Area Side A	Wall	Yellow	Concrete	1.30	Positive	

[illegible]

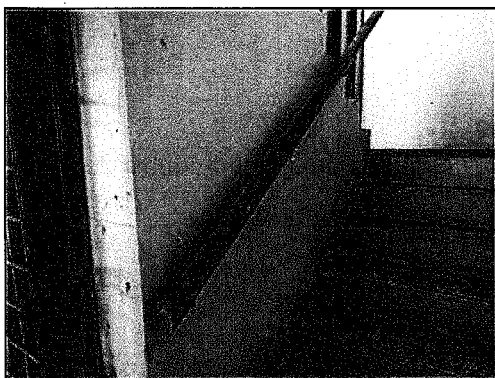
APPENDIX B: PROJECT PHOTOGRAPHS



Lobby
Lead based painted concrete baseboard



Staircase
Lead based painted concrete steps & risers



Staircase
Lead based painted metal handrail



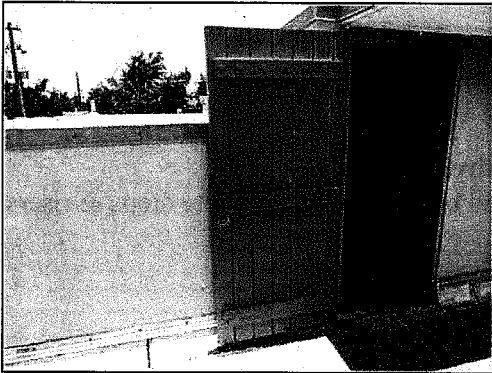
Staircase
Lead based painted concrete risers

Photographic documentation is for reference purposes and doesn't necessarily include all the surfaces with lead based paint and/or components containing lead

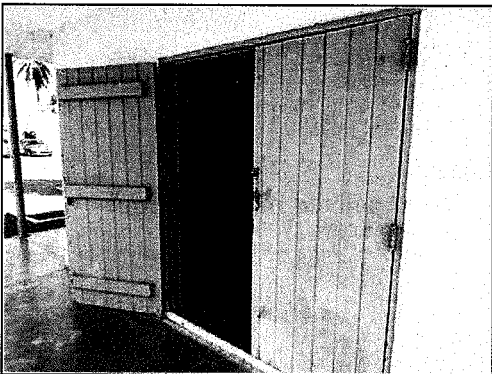
APPENDIX B: PROJECT PHOTOGRAPHS



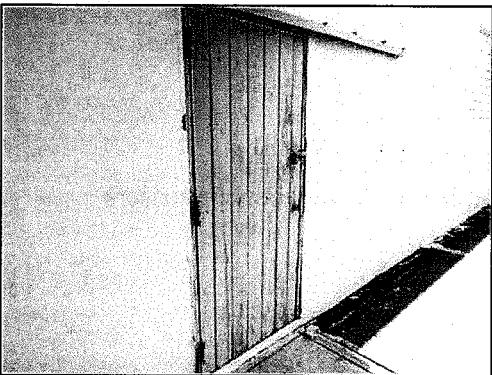
Staircase
Lead based painted metal railing



Staircase (to roof)
Lead based painted wood door



Area 1-1
Lead based painted wood double door



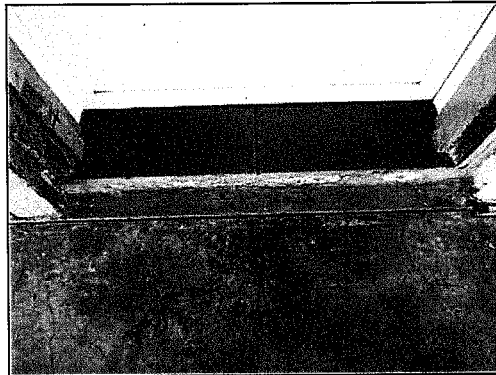
Area 1-1
Lead based painted wood single door

Photographic documentation is for reference purposes and doesn't necessarily include all the surfaces with lead based paint and/or components containing lead

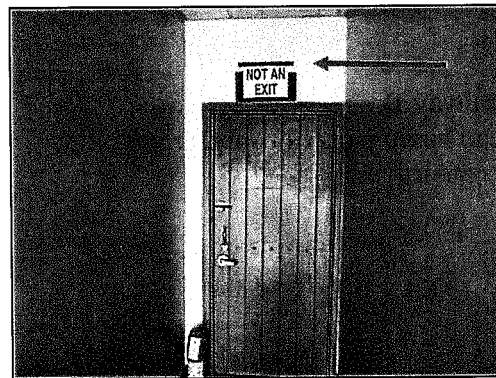
APPENDIX B: PROJECT PHOTOGRAPHS



Area 1-2
Lead based painted wood door



Area 1-2
Lead based painted concrete floor marking



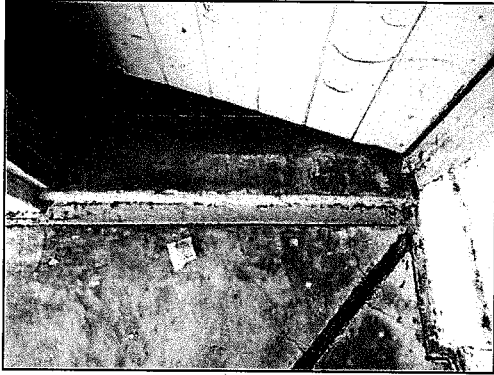
Area 1-7
Lead based painted concrete wall B



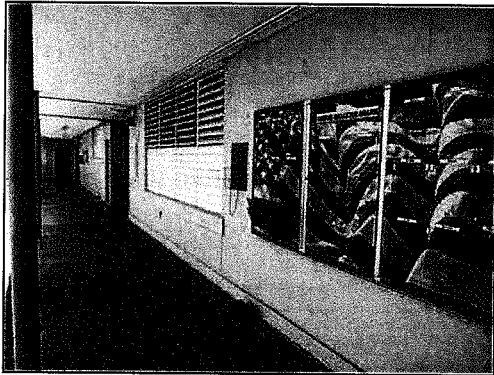
Area 1-24
Lead based painted wood door

Photographic documentation is for reference purposes and doesn't necessarily include all the surfaces with lead based paint and/or components containing lead

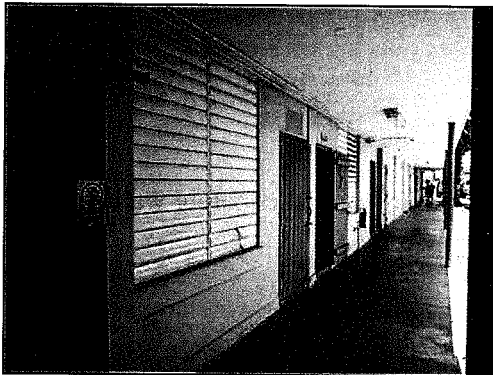
APPENDIX B: PROJECT PHOTOGRAPHS



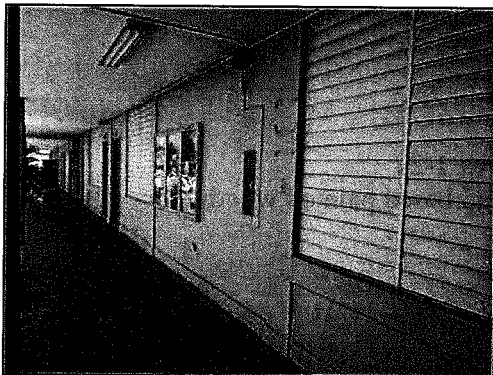
Area 1-24
Lead based painted concrete floor marking



Hallway A
Lead based painted concrete wall A &
baseboard



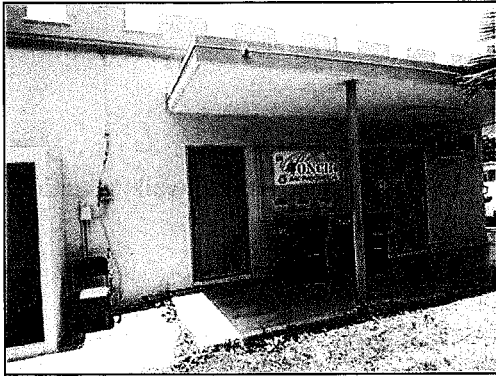
Hallway B
Lead based painted concrete wall B &
baseboard



Hallway D
Lead based painted concrete wall D &
baseboard

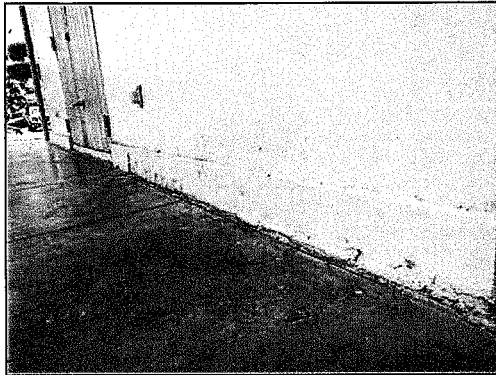
Photographic documentation is for reference purposes and doesn't necessarily include all the surfaces with lead based paint and/or components containing lead

APPENDIX B: PROJECT PHOTOGRAPHS



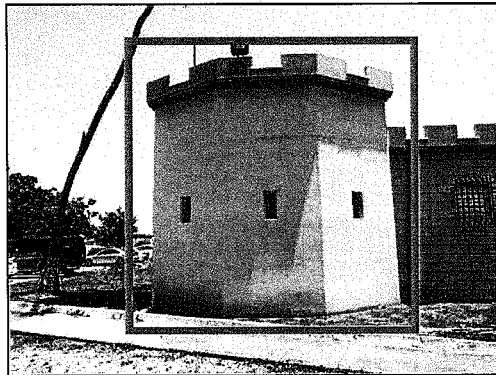
Hallway C1

Lead based painted concrete baseboard



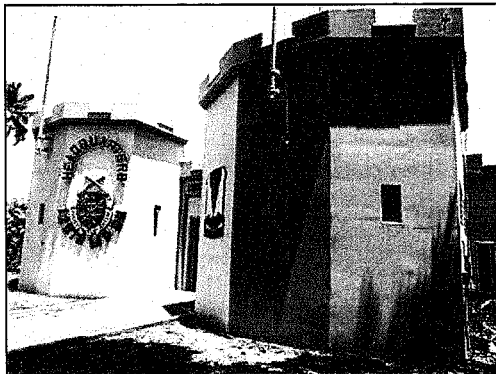
Hallway C2

Lead based painted concrete baseboard



Exterior Side A

Lead based painted concrete wall A section

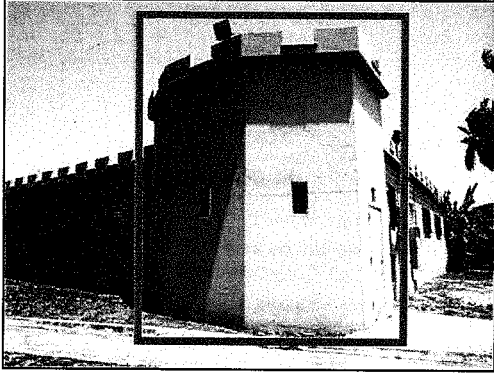


Exterior Side A

Lead based paint concrete wall A sections

Photographic documentation is for reference purposes and doesn't necessarily include all the surfaces with lead based paint and/or components containing lead

APPENDIX B: PROJECT PHOTOGRAPHS



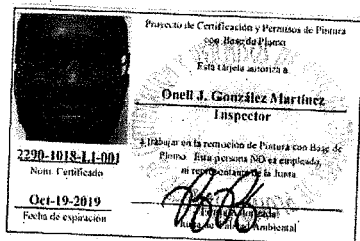
Exterior Side A
Lead based paint concrete wall A section

Photographic documentation is for reference purposes and doesn't necessarily include all the surfaces with lead based paint and/or components containing lead

APPENDIX C: CERTIFICATIONS, LICENSES, AND ACCREDITATIONS

	<p>GOBIERNO DE PUERTO RICO JUNTA DE CALIDAD AMBIENTAL</p>	
<p>Este certificado es otorgado a:</p>		
<p>Zimmetry Environmental Management, Corp. (# s.social: 66-0605404)</p>		
<p>Por haber cumplido con los requisitos establecidos en el Capítulo V, Regla 1541, sección 9(2) del Reglamento para el Control de Actividades de Mitigación de Pintura con Base de Plomo. Se le otorga una certificación en la disciplina de:</p>		
<p>Empresa</p>		
<p>Para llevar a cabo actividades de mitigación de pintura con base de plomo en la jurisdicción de Puerto Rico</p>		
<p>Número de Certificado 5536-0219-LF-001</p>		
<p>Este certificado está sujeto a ser revocado, suspendido, modificado o comentado debido a causas que incluyan evidencia de no cumplimiento, información falsa provista en la solicitud o por cualquier alteración que afecte la habilidad de llevar a cabo las tareas afectuamente</p>		
<p>Fecha de emisión: 03 de marzo de 2019 Fecha de expiración: 02 de marzo de 2020</p>	<p> Tania Vázquez Rivera Directora Ejecutiva</p>	

APPENDIX C: CERTIFICATIONS, LICENSES, AND ACCREDITATIONS



APPENDIX D: XRF's PERFORMANCE CHARACTERISTICS SHEET

Performance Characteristic Sheet

EFFECTIVE DATE: September 24, 2004

EDITION NO.: 1

MANUFACTURER AND MODEL:

Make: Niton LLC

Tested Model: XLp 300

Source: ^{109}Cd

Note: This PCS is also applicable to the equivalent model variations indicated below, for the Lead-in-Paint K+L variable reading time mode, in the XLi and XLp series:

XLi 300A, XLi 301A, XLi 302A and XLi 303A.

XLp 300A, XLp 301A, XLp 302A and XLp 303A.

XLi 700A, XLi 701A, XLi 702A and XLi 703A.

XLp 700A, XLp 701A, XLp 702A, and XLp 703A.

Note: The XLi and XLp versions refer to the shape of the handle part of the instrument. The differences in the model numbers reflect other modes available, in addition to Lead-in-Paint modes. The manufacturer states that specifications for these instruments are identical for the source, detector, and detector electronics relative to the Lead-in-Paint mode.

FIELD OPERATION GUIDANCE

OPERATING PARAMETERS:

Lead-in-Paint K+L variable reading time mode.

XRF CALIBRATION CHECK LIMITS:

0.8 to 1.2 mg/cm² (inclusive)

The calibration of the XRF instrument should be checked using the paint film nearest 1.0 mg/cm² in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm² film).

If readings are outside the acceptable calibration check range, follow the manufacturer's instructions to bring the instruments into control before XRF testing proceeds.

SUBSTRATE CORRECTION:

For XRF results using Lead-in-Paint K+L variable reading time mode, substrate correction is not needed for:

Brick, Concrete, Drywall, Metal, Plaster, and Wood

INCONCLUSIVE RANGE OR THRESHOLD:

K+L MODE READING DESCRIPTION	SUBSTRATE	THRESHOLD (mg/cm ²)
Results not corrected for substrate bias on any substrate	Brick	1.0
	Concrete	1.0
	Drywall	1.0
	Metal	1.0
	Plaster	1.0
	Wood	1.0

BACKGROUND INFORMATION

EVALUATION DATA SOURCE AND DATE:

This sheet is supplemental information to be used in conjunction with Chapter 7 of the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* ("HUD Guidelines"). Performance parameters shown on this sheet are calculated from the EPA/HUD evaluation using archived building components. Testing was conducted in August 2004 on 133 testing combinations. The instruments that were used to perform the testing had new sources; one instrument's was installed in November 2003 with 40 mCi initial strength, and the other's was installed June 2004 with 40 mCi initial strength.

OPERATING PARAMETERS:

Performance parameters shown in this sheet are applicable only when properly operating the instrument using the manufacturer's instructions and procedures described in Chapter 7 of the HUD Guidelines.

SUBSTRATE CORRECTION VALUE COMPUTATION:

Substrate correction is not needed for brick, concrete, drywall, metal, plaster or wood when using Lead-in-Paint K+L variable reading time mode, the normal operating mode for these instruments. If substrate correction is desired, refer to Chapter 7 of the HUD Guidelines for guidance on correcting XRF results for substrate bias.

EVALUATING THE QUALITY OF XRF TESTING:

Randomly select ten testing combinations for retesting from each house or from two randomly selected units in multifamily housing. Use the K+L variable time mode readings.

Conduct XRF retesting at the ten testing combinations selected for retesting.

Determine if the XRF testing in the units or house passed or failed the test by applying the steps below.

Compute the Retest Tolerance Limit by the following steps:

Determine XRF results for the original and retest XRF readings. Do not correct the original or retest results for substrate bias. In single-family housing a result is defined as the average of three readings. In multifamily housing, a result is a single reading. Therefore, there will be ten original and ten retest XRF results for each house or for the two selected units.

Calculate the average of the original XRF result and retest XRF result for each testing combination.

Square the average for each testing combination.

Add the ten squared averages together. Call this quantity C.

Multiply the number C by 0.0072. Call this quantity D.

Add the number 0.032 to D. Call this quantity E.

Take the square root of E. Call this quantity F.

Multiply F by 1.645. The result is the Retest Tolerance Limit.

Compute the average of all ten original XRF results.

Compute the average of all ten re-test XRF results.

Find the absolute difference of the two averages.

If the difference is less than the Retest Tolerance Limit, the inspection has passed the retest. If the difference of the overall averages equals or exceeds the Retest Tolerance Limit, this procedure should be repeated with ten new testing combinations. If the difference of the overall averages is equal to or greater than the Retest Tolerance Limit a second time, then the inspection should be considered deficient.

Use of this procedure is estimated to produce a spurious result approximately 1% of the time. That is, results of this procedure will call for further examination when no examination is warranted in approximately 1 out of 100 dwelling units tested.

TESTING TIMES:

For the Lead-in-Paint K+L variable reading time mode, the instrument continues to read until it is moved away from the testing surface, terminated by the user, or the instrument software indicates the reading is complete. The following table provides testing time information for this testing mode. The times have been adjusted for source decay, normalized to the initial source strengths as noted above. Source strength and type of substrate will affect actual testing times. At the time of testing, the instruments had source strengths of 26.6 and 36.6 mCi.

Testing Times Using K+L Reading Mode (Seconds)						
Substrate	All Data			Median for laboratory-measured lead levels (mg/cm ²)		
	25 th Percentile	Median	75 th Percentile	Pb < 0.25	0.25 ≤ Pb < 1.0	1.0 ≤ Pb
Wood Drywall	4	11	19	11	15	11
Metal	4	12	18	9	12	14
Brick Concrete Plaster	8	16	22	15	18	16

CLASSIFICATION RESULTS:

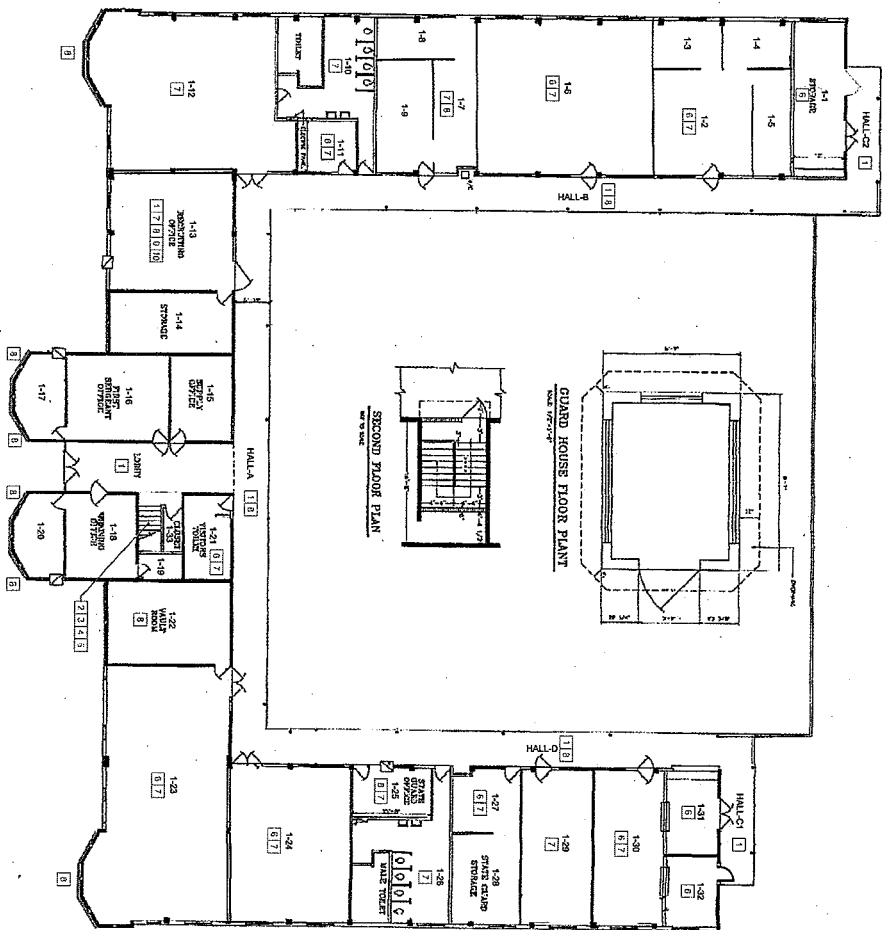
XRF results are classified as positive if they are greater than or equal to the threshold, and negative if they are less than the threshold.

DOCUMENTATION:

A document titled *Methodology for XRF Performance Characteristic Sheets* provides an explanation of the statistical methodology used to construct the data in the sheets, and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. For a copy of this document call the National Lead Information Center Clearinghouse at 1-800-424-LEAD.

This XRF Performance Characteristic Sheet was developed by the Midwest Research Institute (MRI) and QuanTech, Inc., under a contract between MRI and the XRF manufacturer. HUD has determined that the information provided here is acceptable when used as guidance in conjunction with Chapter 7, Lead-Based Paint Inspection, of HUD's *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*.

APPENDIX E: LOCATION OF POSITIVE MATERIALS



BUILDING FLOOR PLAN:

NOTE:
The layout of materials shown in this figure is for illustrative purposes only. For actual location and quantity of materials refer to the Lead Based Paint survey report dated August 2019.

Lead Legend:

- 1 Baseboard
- 2 Step
- 3 Riers
- 4 Hand Rolling
- 5 Rolling
- 6 Door
- 7 Floor Markings
- 8 Wall Surface
- 9 Column
- 10 Beam

Zimmetry Environmental
Environmental Building Inspectors
Indoor Environmental Quality / Mold Assessment, Asbestos, Lead Based
Paint Consulting - Phone (781) 376-2010 - Fax (781) 795-0005
Project: PANG Pongcar, PR
Date: August 2019
Project No: ZEM-19060

LEAD BASED PAINT INSPECTION REPORT

FOR

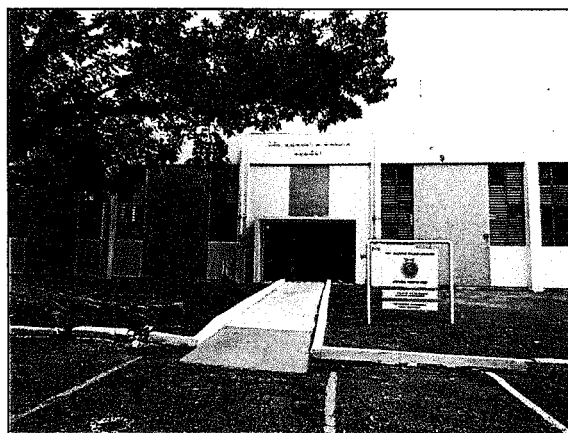
PUERTO RICO NATIONAL GUARD

SAMPLING CONDUCTED AT

PRNG ARECIBO READINESS
CENTER, ARECIBO, PR

ZEM-19079

FEBRUARY, 2020



PREPARED BY:

ZIMMETRY ENVIRONMENTAL MANAGEMENT CORP.

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TABLE OF CONTENT

SECTION 1: EXECUTIVE SUMMARY	1
1.1 Introduction	1
1.2 Summary of Property Evaluation	1
1.3 Property Locations of Building Components with Lead Based Paint	1
Table 1-1 Summary of Building Components with Lead Based Paint	1
 SECTION 2: LEAD-BASED PAINT INSPECTION REPORT	 2
2.1 Overview of the Evaluation	2
2.2 Sampling Procedure and Results Presentation	2
2.3 Lead Regulatory Levels	3
2.4 Conditions and Limitations	3
2.5 Abatement Conditions	3
2.6 Recommendations	4
2.7 Environmental Assessment Report Certification	4
 SECTION 3: APPENDICES	 5
Appendix A: XRF Sampling Data	6
Appendix B: Project Photographs	17
Appendix C: Certifications, Licenses, and Accreditations	18
Appendix D: XRF's Performance Characteristics Sheet	20
Appendix E: Location of Positive Materials	24

SECTION 1: EXECUTIVE SUMMARY

1.1 INTRODUCTION

A Lead-Based Paint inspection was conducted on February 26, 2020 at Puerto Rico National Guard Arecibo Readiness Center, project located at Arecibo, Puerto Rico. The lead-based paint inspection was performed to identify paint that contains lead above allowable levels and to assist with the compliance of local, state and federal regulations.

1.2 SUMMARY OF PROPERTY EVALUATION

The project consisted of the evaluation of the interior and exterior areas of the aforementioned project. The evaluation found that lead based paint was present in selective components and surfaces through the buildings on the date of the inspection. Table 1-1 identifies the components positive for lead. Table 2-1 identifies lead-based paint as defined by the U.S. Environmental Protection Agency (EPA) and the Environmental Quality Board (EQB). For specific locations and additional detail on the location of lead- reference Sections 2 and 3.

1.3 PROPERTY LOCATIONS OF BUILDING COMPONENTS WITH LEAD-BASED PAINT

Table 1-1 summarizes the site components and surfaces coated with lead-based paint. Details that identify positive lead-based paint findings within specific areas and on surfaces were provided in the lead-based paint inspection report. The "substrate" is the building component material directly beneath the painted surface. Photographic documentation is for reference purposes and doesn't necessarily include all the surfaces with lead based paint and/or components containing lead.

Table 1-1: Summary of Components Containing Lead				
Area	Component	Color	Substrate	Approximate Amount
1-1	Floor Lines	Yellow	Concrete	812 Ln. Ft.
1-12	Gate Frame	Yellow	Metal	1 Unit

Note:

- The quantification of positives materials presented in this table is only an estimate. If an abatement of the materials will be conducted, the Contractors shall estimate the amount of materials to be abated.

SECTION 2: LEAD-BASED PAINT INSPECTION REPORT

2.1 OVERVIEW OF THE EVALUATION

This lead-based paint inspection is an investigation to identify all lead-based paint on a surface-by-surface basis. A lead-based paint inspection conforming to HUD guidelines was performed at the aforementioned project.

Averages of 593 samples were taken at identified surfaces of the evaluated areas using X-ray fluorescence (XRF) analyzer. The evaluation found that lead-based paint was present in selective components and surfaces through the site on the date of the assessment (See Table 1-1).

Some of the remaining XRF test locations exhibited lead-in-paint levels below the level that EPA identifies as lead-based paint, namely 1.0 mg/cm^2 . Such surfaces could create dust-lead or soil-lead hazards if the paint is turned into dust by abrasion, scraping, or sanding. Should these or any lead containing components or surfaces be disturbed in any manner that generates dust, care should be taken to limit its spread.

Testing was performed by Joanne Negrón, state-certified lead inspector LBPI-02320-011, using the Niton XLp-300A XRF, SN-101222. The credentials are provided in Section 3, Appendix C: Certifications, Licenses, and Accreditations. The XRF analyzer is designed to measure the lead content of surface coatings on a variety of building surfaces, substrates, and components. The measurement is rapid and nondestructive and, according to the manufacturer, is capable of detecting lead concentrations that occur within numerous layers of various surface coatings.

Please refer to the XRF Testing Results Section 3, Appendix D: XRF Sampling Data for the detailed analytical testing results for each distinct area inspected. The reports provide a complete testing data.

2.2 SAMPLING PROCEDURE AND RESULTS PRESENTATION

The Lead Based Paint Sampling Procedure was design to evaluate and document all the data obtained form the inspection in a sequential method that provided confidence at the moment of the results presentation.

The survey was performed following the methodology established in the HUD Guidelines for the Evaluation and Control of Lead Based Paint in Housing (2012 revision) and the PREQB Lead Based Paint Abatement Control Regulation. The surfaces evaluation was performed as follows:

- If the lead concentration measured by the XRF Spectrum Analyzer is less than 1.0 mg/cm^2 it is considered negative.
- If the lead concentration measured by the XRF Spectrum Analyzer is equal or greater than 1.0 mg/cm^2 it is considered positive.

To each functional space of the property a name was assigned according to the use of that space. If no name could be assigned then a code letter or number was assigned. The room numbers will be assigned clockwise as you enter the structure and go towards the left always.

Each wall surface was named with letters beginning with wall A the wall facing the main entrance direction. The wall at your left will be wall B, the wall at front wall C and the wall at you right will be wall D.

2.3 LEAD REGULATORY LEVELS

The lead regulatory levels provided below are those used when preparing this lead-based paint evaluation or when evaluating data collected. The EPA regulatory levels are the same as the state regulatory levels provided in the following table.

TABLE 2-1: LEAD REGULATORY LEVELS	
	EPA/EQB Levels
Lead-Based Paint	1.0 mg/cm ² or 0.5% by weight (or 5,000 ppm)

2.4 CONDITIONS AND LIMITATIONS—DISCLAIMER

Zimmetry Environmental Management Corp. has performed this lead-based paint inspection in a thorough and professional manner consistent with commonly accepted industry standards. The Preparer cannot guarantee and does not warrant that this evaluation has identified all adverse environmental factors and/or conditions affecting this project on the date of the evaluation.

The results reported and conclusions reached by the Preparer are solely for the benefit of the Owner. The results and opinions in this report, based solely on the conditions found at the project on the date of the evaluation, are valid only on that date. The Preparer assumes no obligation to advise the client of any changes in any real or potential lead-based paint hazards at this residence beyond the date of the project evaluation.

The lead inspection was performed to ready accessible components and surfaces. If suspected components that could contain lead are encountered underneath current installed tiles or other construction material, they shall be managed as containing lead until the appropriate test is performed.

2.5 ABATEMENT CONDITIONS

Abatement, as defined by HUD and the Puerto Rico Environmental Quality Board (EQB), means any set of measures designed to eliminate lead-based paint and/or lead-based paint hazards permanently. The people providing these services must to be trained in accordance with the EQB licensing/certification requirements. The product manufacturer and/or

contractor must warrant abatement methods to last a minimum of 20 years, or these methods must have a design life of at least 20 years.

Abatement activities may include, but are not necessarily limited to:

- onsite or offsite removal of lead-based paint from substrates and components
- replacement of components or fixtures painted with lead-based paint
- permanent enclosure of lead-based paint with construction materials mechanically-fastened to the substrate
- encapsulation of lead-based paint with specially designed encapsulant products
- removal or permanent covering (concrete or asphalt) of soil-lead-based paint hazards

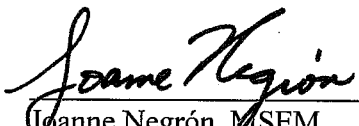
If enclosure or encapsulation is conducted as an abatement method, the lead-based paint remains on the property, so ongoing lead-based paint maintenance is required.

2.6 RECOMMENDATIONS

According to the EQB lead regulations, prior to the demolishing of a structure containing lead based paint, the contaminated surfaces or substrates must be abated or removed. The waste generated has to be characterized to determine if the waste generated is hazardous or non hazardous waste. The firm providing the abatement services must be certified as an abatement firm by the EQB. Workers conducting abatement must be trained and certified as abatement workers by a training provider accredited by the EQB.

2.7 ENVIRONMENTAL ASSESSMENT REPORT CERTIFICATION

Zimmetry Environmental Management Corp. has performed this lead-based paint inspection in a thorough and professional manner consistent with commonly accepted industry standards. The inspection was conducted on February 26, 2020 by Joanne Negrón, state-certified lead inspector LBPI-02320-011, qualified by experience, education and training in the recognition of lead based paint and approved sampling techniques using the Niton XLP-300A XRF, SN-101222.


Joanne Negrón, MSEM
Environmental Lead Inspector

SECTION 3: APPENDICES

Appendix A: XRF Sampling Data

Appendix B: Project Photographs

Appendix C: Certifications, Licenses, and Accreditations

Appendix D: XRF's Performance Characteristics Sheet

Appendix E: Location of Positive Materials

APPENDIX A: XRF SAMPLING DATA

PROJECT: PRNG Arecibo Readiness Center, Arecibo, PR				CLIENT: Puerto Rico National Guard			
DATE: 02/26/2020				LBP Inspector: Joanne Negrón			
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
1	Calibration				1.00		
2	Calibration				1.00		
3	Calibration				1.00		
4	Area 1-1	Door	Black	Metal	0.00	Negative	
5	Area 1-1	Door Casing	Black	Metal	0.00	Negative	
6	Area 1-1	Entrance	Cream	Concrete	0.00	Negative	
7	Area 1-1	Lower Wall A	Brown	Concrete	0.00	Negative	
8	Area 1-1	Middle Wall A	Cream	Concrete	0.01	Negative	
9	Area 1-1	Upper Wall A	Cream	Concrete	0.00	Negative	
10	Area 1-1	Window Shutter	Black	Metal	0.00	Negative	
11	Area 1-1	Floor Line	Yellow	Concrete	1.80	Positive	
12	Area 1-1	Wall Symbol	Yellow	Concrete	0.00	Negative	
13	Area 1-1	Wall Symbol	Green	Concrete	0.00	Negative	
14	Area 1-1	Wall Symbol	Brown	Concrete	0.00	Negative	
15	Area 1-1	Column	Brown	Concrete	0.00	Negative	
16	Area 1-1	Column	Brown	Concrete	0.00	Negative	
17	Area 1-1	Lower Wall B	Brown	Concrete	0.00	Negative	
18	Area 1-1	Middle Wall B	Cream	Concrete	0.02	Negative	
19	Area 1-1	Upper Wall B	Cream	Concrete	0.00	Negative	
20	Area 1-1	Column	Brown	Concrete	0.00	Negative	
21	Area 1-1	Bulletin Board	Yellow	Wood	0.00	Negative	
22	Area 1-1	Letter	Black	Metal	0.00	Negative	
23	Area 1-1	Floor Line	Yellow	Concrete	2.40	Positive	
24	Area 1-1	Window Shutter	Black	Metal	0.00	Negative	
25	Area 1-1	Logo	Yellow	Concrete	0.00	Negative	
26	Area 1-1	Logo	Black	Concrete	0.01	Negative	
27	Area 1-1	Logo	Green	Concrete	0.00	Negative	
28	Area 1-1	Rolling Door	Black	Metal	0.00	Negative	
29	Area 1-1	Rolling Door Casing	Black	Metal	0.00	Negative	
30	Area 1-1	Column	Brown	Concrete	0.01	Negative	
31	Area 1-1	Lower Wall C	Brown	Concrete	0.00	Negative	
32	Area 1-1	Middle Wall C	Cream	Concrete	0.00	Negative	
33	Area 1-1	Logo	Blue	Concrete	0.03	Negative	
34	Area 1-1	Logo	Red	Concrete	0.00	Negative	
35	Area 1-1	Logo	Green	Concrete	0.00	Negative	
36	Area 1-1	Logo	Yellow	Concrete	0.00	Negative	
37	Area 1-1	Column	Brown	Concrete	0.00	Negative	
38	Area 1-1	Rolling Door	Black	Metal	0.00	Negative	
39	Area 1-1	Rolling Door Casing	Black	Metal	0.00	Negative	
40	Area 1-1	Lower Wall C	Brown	Concrete	0.00	Negative	
41	Area 1-1	Middle Wall C	Cream	Concrete	0.00	Negative	
42	Area 1-1	Upper Wall C	Cream	Concrete	0.00	Negative	
43	Area 1-1	Window Shutter	Black	Metal	0.00	Negative	
44	Area 1-1	Column	Brown	Metal	0.00	Negative	
45	Area 1-1	Lower Wall D	Brown	Concrete	0.00	Negative	
46	Area 1-1	Middle Wall D	Cream	Concrete	0.00	Negative	
47	Area 1-1	Pipeline	Cream	Metal	0.00	Negative	
48	Area 1-1	Column	Brown	Concrete	0.00	Negative	
49	Area 1-1	Letter	Black	Concrete	0.00	Negative	
50	Area 1-1	Column	Brown	Concrete	0.00	Negative	
51	Area 1-1	Grille	Black	Metal	0.00	Negative	
52	Area 1-1	Floor	Blue	Concrete	0.00	Negative	
53	Area 1-1	Ceiling	Cream	Metal	0.01	Negative	
54	Area 1-1	Beam	Cream	Concrete	0.00	Negative	
55	Area 1-2	Column	Brown	Concrete	0.00	Negative	
56	Area 1-2	Column	Cream	Concrete	0.00	Negative	
57	Area 1-2	Wall A	Green	Concrete	0.00	Negative	
58	Area 1-2	Wall A	White	Concrete	0.00	Negative	
59	Area 1-2	Wall B	White	Concrete	0.00	Negative	
60	Area 1-2	Wall B	White	Concrete	0.02	Negative	

PROJECT: PRNG Arecibo Readiness Center, Arecibo, PR				CLIENT: Puerto Rico National Guard			
DATE: 02/26/2020				LBP Inspector: Joanne Negrón			
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
61	Area 1-2	Wall B	White	Concrete	0.02	Negative	
62	Area 1-2	Column	White	Concrete	0.00	Negative	
63	Area 1-2	Wall C	White	Concrete	0.00	Negative	
64	Area 1-2	Wall D	White	Concrete	0.00	Negative	
65	Area 1-2	Beam	Red	Metal	0.00	Negative	
66	Area 1-3	Door	Gray	Metal	0.03	Negative	
67	Area 1-3	Door Casing	Gray	Metal	0.00	Negative	
68	Area 1-3	Floor Line	Yellow	Concrete	0.00	Negative	
69	Area 1-3	Floor Line	Yellow	Concrete	0.01	Negative	
70	Area 1-3	Floor Line	Yellow	Concrete	0.01	Negative	
71	Area 1-3	Floor	Gray	Concrete	0.00	Negative	
72	Area 1-3	Floor	Gray	Concrete	0.00	Negative	
73	Area 1-3	Floor	Gray	Concrete	0.00	Negative	
74	Area 1-3	Wall B	Cream	Concrete	0.00	Negative	
75	Area 1-3	Wall A	Cream	Concrete	0.03	Negative	
76	Area 1-3	Column	Cream	Concrete	0.00	Negative	
77	Area 1-3	Wall D	Cream	Concrete	0.01	Negative	
78	Area 1-3	Wall C	Cream	Concrete	0.00	Negative	
79	Area 1-3	Ceiling	Cream	Concrete	0.02	Negative	
80	Area 1-3	Cage Gate	Gray	Metal	0.00	Negative	
81	Area 1-3	Cage	Gray	Metal	0.00	Negative	
82	Area 1-3	Grille	Gray	Metal	0.00	Negative	
83	Area 1-4	Door	Cream	Metal	0.23	Negative	
84	Area 1-4	Door Casing	Cream	Metal	0.20	Negative	
85	Area 1-4	Wall A	Cream	Concrete	0.00	Negative	
86	Area 1-4	Cage	Cream	Metal	0.00	Negative	
87	Area 1-4	Floor Line	Red	Concrete	0.00	Negative	
88	Area 1-4	Wall C	Cream	Concrete	0.00	Negative	
89	Area 1-4	Wall B	Cream	Concrete	0.01	Negative	
90	Area 1-4	Window Grille	Black	Metal	0.00	Negative	
91	Area 1-4	Wall D	Cream	Concrete	0.00	Negative	
92	Area 1-4	Ceiling	White	Metal	0.00	Negative	
93	Area 1-4	Beam	White	Metal	0.00	Negative	
94	Area 1-5	Wall B	Cream	Concrete	0.00	Negative	
95	Area 1-5	Wall B	Cream	Concrete	0.00	Negative	
96	Area 1-5	Wall B	Cream	Concrete	0.00	Negative	
97	Area 1-5	Wall C	Cream	Concrete	0.01	Negative	
98	Area 1-5	Door	Cream	Concrete	0.01	Negative	
99	Area 1-5	Door Casing	Cream	Concrete	0.00	Negative	
100	Area 1-5	Upper Wall D	Cream	Concrete	0.00	Negative	
101	Area 1-5	Lower Wall D	Cream	Concrete	0.01	Negative	
102	Area 1-5	Column	Cream	Concrete	0.00	Negative	
103	Area 1-5	Wall A	Cream	Concrete	0.00	Negative	
104	Area 1-5	Ceiling	White	Metal	0.00	Negative	
105	Area 1-5	Beam	White	Metal	0.00	Negative	
106	Area 1-6	Door	Cream	Metal	0.00	Negative	
107	Area 1-6	Door Casing	Cream	Metal	0.00	Negative	
108	Area 1-6	Gate	Cream	Metal	0.01	Negative	
109	Area 1-6	Wall A	Cream	Concrete	0.00	Negative	
110	Area 1-6	Wall B	Cream	Concrete	0.00	Negative	
111	Area 1-6	Wall C	Cream	Concrete	0.00	Negative	
112	Area 1-6	Wall D	Cream	Concrete	0.00	Negative	
113	Area 1-6	Window Grille	Black	Metal	0.00	Negative	
114	Area 1-6	Ceiling	White	Metal	0.00	Negative	
115	Area 1-6	Beam	White	Metal	0.00	Negative	
116	Area 1-8	Door	Cream	Metal	0.00	Negative	
117	Area 1-8	Door Casing	Cream	Metal	0.00	Negative	
118	Area 1-8	Wall Tile	Yellow	Ceramic	0.03	Negative	
119	Area 1-8	Floor Tile	Yellow	Ceramic	0.02	Negative	
120	Area 1-8	Lavatory	White	Ceramic	0.02	Negative	

PROJECT: PRNG Arecibo Readiness Center, Arecibo, PR				CLIENT: Puerto Rico National Guard			
DATE: 02/26/2020				LBP Inspector: Joanne Negrón			
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
121	Area 1-8	Toilet	White	Ceramic	0.01	Negative	
122	Area 1-8	Partition	Cream	Wood	0.00	Negative	
123	Area 1-8	Beam	Red	Metal	0.00	Negative	
124	Area 1-9	Wall C	Cream	Concrete	0.01	Negative	
125	Area 1-9	Wall D	Cream	Concrete	0.00	Negative	
126	Area 1-9	Door	Cream	Metal	0.00	Negative	
127	Area 1-9	Door Casing	Cream	Metal	0.03	Negative	
128	Area 1-9	Wall A	Cream	Concrete	0.00	Negative	
129	Area 1-9	Wall B	Cream	Concrete	0.00	Negative	
130	Area 1-9	Wall C	Cream	Concrete	0.00	Negative	
131	Area 1-11	Door	Cream	Metal	0.00	Negative	
132	Area 1-11	Door Casing	Cream	Metal	0.00	Negative	
133	Area 1-11	Wall A	Cream	Concrete	0.02	Negative	
134	Area 1-11	Wall B	Cream	Concrete	0.00	Negative	
135	Area 1-11	Wall C	Cream	Wood	0.00	Negative	
136	Area 1-11	Wall D	Black	Metal	0.00	Negative	
137	Area 1-11	Ceiling	White	Metal	0.00	Negative	
138	Area 1-11	Beam	Cream	Metal	0.01	Negative	
139	Area 1-11	Partition	Cream	Concrete	0.00	Negative	
140	Area 1-10	Wall Tile	Cream	Ceramic	0.00	Negative	
141	Area 1-10	Sink	White	Metal	0.23	Negative	
142	Area 1-10	Lavatory	White	Ceramic	0.00	Negative	
143	Area 1-10	Urinal	White	Ceramic	0.00	Negative	
144	Area 1-10	Floor Tile	Cream	Ceramic	0.00	Negative	
145	Area 1-10	Wall A	Cream	Concrete	0.00	Negative	
146	Area 1-10	Wall B	Cream	Concrete	0.00	Negative	
147	Area 1-10	Wall C	Cream	Concrete	0.03	Negative	
148	Area 1-10	Partition	Green	Wood	0.00	Negative	
149	Area 1-10	Toilet	White	Ceramic	0.00	Negative	
150	Area 1-10	Wall A	Cream	Concrete	0.00	Negative	
151	Area 1-10	Wall B	Cream	Concrete	0.00	Negative	
152	Area 1-10	Wall C	Cream	Concrete	0.00	Negative	
153	Area 1-10	Shower Tile	Gray	Ceramic	0.03	Negative	
154	Area 1-10	Beam	Red	Metal	0.00	Negative	
155	Area 1-10	Wall Tile	Cream	Ceramic	0.00	Negative	
156	Area 1-10	Wall A	Cream	Concrete	0.00	Negative	
157	Area 1-10	Wall B	Cream	Concrete	0.00	Negative	
158	Area 1-10	Wall C	Cream	Concrete	0.00	Negative	
159	Area 1-10	Wall D	Cream	Concrete	0.02	Negative	
160	Area 1-7	Door	Cream	Metal	0.00	Negative	
161	Area 1-7	Door Casing	Cream	Metal	0.00	Negative	
162	Area 1-7	Floor Tile	Yellow	Ceramic	0.00	Negative	
163	Area 1-7	Floor Tile	Gray	Ceramic	0.00	Negative	
164	Area 1-7	Wall A	Cream	Concrete	0.01	Negative	
165	Area 1-7	Wall B	Cream	Concrete	0.00	Negative	
166	Area 1-7	Wall C	Cream	Concrete	0.00	Negative	
167	Area 1-7	Wall D	Cream	Concrete	0.00	Negative	
168	Area 1-7	Wall Tile	Yellow	Ceramic	0.00	Negative	
169	Area 1-7	Wall Tile	Yellow	Ceramic	0.00	Negative	
170	Area 1-7	Lavatory	White	Ceramic	0.02	Negative	
171	Area 1-7	Bench	Yellow	Wood	0.00	Negative	
172	Area 1-7	Toilet	White	Ceramic	0.00	Negative	
173	Area 1-7	Wall A	White	Concrete	0.00	Negative	
174	Area 1-7	Wall B	White	Concrete	0.00	Negative	
175	Area 1-7	Wall C	White	Concrete	0.00	Negative	
176	Area 1-7	Wall D	White	Concrete	0.00	Negative	
177	Area 1-12	Wall A	Cream	Concrete	0.00	Negative	
178	Area 1-12	Wall B	Cream	Concrete	0.00	Negative	
179	Area 1-12	Wall C	Cream	Concrete	0.00	Negative	
180	Area 1-12	Wall D	Cream	Concrete	0.00	Negative	

PROJECT: PRNG Arecibo Readiness Center, Arecibo, PR

CLIENT: Puerto Rico National Guard

DATE: 02/26/2020

LBP Inspector: Joanne Negrón

Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
181	Area 1-12	Window Grille	Black	Metal	0.00	Negative	
182	Area 1-12	Wall A	Cream	Wood	0.00	Negative	
183	Area 1-12	Gate Frame	Yellow	Metal	1.80	Positive	
184	Area 1-12	Ceiling	White	Metal	0.00	Negative	
185	Area 1-12	Beam	White	Metal	0.00	Negative	
186	Area 1-13	Door	Cream	Metal	0.00	Negative	
187	Area 1-13	Door Casing	Cream	Metal	0.00	Negative	
188	Area 1-13	Floor Tile	Gray	Ceramic	0.02	Negative	
189	Area 1-13	Baseboard	Gray	Ceramic	0.00	Negative	
190	Area 1-13	Wall A	Cream	Concrete	0.00	Negative	
191	Area 1-13	Wall B	Cream	Concrete	0.00	Negative	
192	Area 1-13	Wall C	Cream	Concrete	0.01	Negative	
193	Area 1-13	Wall D	Cream	Concrete	0.01	Negative	
194	Area 1-13	Window Shutter	Brown	Metal	0.00	Negative	
195	Area 1-14	Door	Brown	Wood	0.00	Negative	
196	Area 1-14	Door Casing	Brown	Wood	0.00	Negative	
197	Area 1-14	Wall A	Cream	Concrete	0.00	Negative	
198	Area 1-14	Wall B	Cream	Concrete	0.02	Negative	
199	Area 1-14	Wall C	Cream	Concrete	0.00	Negative	
200	Area 1-14	Wall D	Cream	Concrete	0.00	Negative	
201	Area 1-14	Floor Tile	Gray	Ceramic	0.00	Negative	
202	Area 1-14	Baseboard	Gray	Ceramic	0.03	Negative	
203	Area 1-14	Door	Cream	Metal	0.00	Negative	
204	Area 1-14	Door Casing	Cream	Metal	0.00	Negative	
205	Area 1-14	Entrance	Cream	Ceramic	0.05	Negative	
206	Area 1-14	Door	Cream	Metal	0.00	Negative	
207	Area 1-14	Door Casing	Cream	Metal	0.00	Negative	
208	Area 1-15	Wall B	Cream	Concrete	0.00	Negative	
209	Area 1-15	Wall B	Cream	Concrete	0.00	Negative	
210	Area 1-15	Wall D	Cream	Concrete	0.00	Negative	
211	Area 1-15	Wall A	Cream	Concrete	0.00	Negative	
212	Area 1-15	Door	Black	Metal	0.00	Negative	
213	Area 1-15	Door Casing	Black	Metal	0.00	Negative	
214	Area 1-16	Door	Cream	Metal	0.00	Negative	
215	Area 1-16	Door Casing	Cream	Metal	0.00	Negative	
216	Area 1-16	Floor Tile	Gray	Metal	0.01	Negative	
217	Area 1-16	Baseboard	Gray	Metal	0.00	Negative	
218	Area 1-16	Door	Cream	Metal	0.00	Negative	
219	Area 1-16	Door Casing	Cream	Metal	0.00	Negative	
220	Area 1-16	Wall A	Yellow	Concrete	0.00	Negative	
221	Area 1-16	Wall B	Yellow	Concrete	0.00	Negative	
222	Area 1-16	Window Shutter	Brown	Metal	0.00	Negative	
223	Area 1-16	Wall C	Yellow	Concrete	0.00	Negative	
224	Area 1-16	Wall D	Yellow	Concrete	0.00	Negative	
225	Area 1-16	Window Casing	Black	Metal	0.00	Negative	
226	Area 1-16	Ceiling	White	Metal	0.00	Negative	
227	Area 1-16	Beam	White	Metal	0.00	Negative	
228	Area 1-17	Door	Cream	Metal	0.00	Negative	
229	Area 1-17	Door Casing	Cream	Metal	0.00	Negative	
230	Area 1-17	Door	Cream	Metal	0.00	Negative	
231	Area 1-17	Door Casing	Cream	Metal	0.00	Negative	
232	Area 1-17	Wall A	White	Drywall	0.00	Negative	
233	Area 1-17	Wall B	White	Drywall	0.00	Negative	
234	Area 1-17	Wall C	Yellow	Drywall	0.00	Negative	
235	Area 1-17	Wall D	Cream	Drywall	0.00	Negative	
236	Area 1-17	Floor Tile	Cream	Ceramic	0.23	Negative	
237	Area 1-17	Baseboard	Cream	Ceramic	0.20	Negative	
238	Area 1-18	Door	Cream	Metal	0.00	Negative	
239	Area 1-18	Door Casing	Cream	Metal	0.00	Negative	
240	Area 1-18	Wall A	White	Drywall	0.00	Negative	

PROJECT: PRNG Arecibo Readiness Center, Arecibo, PR				CLIENT: Puerto Rico National Guard			
DATE: 02/26/2020				LBP Inspector: Joanne Negrón			
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
241	Area 1-18	Wall B	Yellow	Drywall	0.01	Negative	
242	Area 1-18	Wall C	Yellow	Drywall	0.00	Negative	
243	Area 1-18	Wall D	White	Drywall	0.00	Negative	
244	Area 1-18	Floor Tile	Cream	Ceramic	0.25	Negative	
245	Area 1-18	Baseboard	Cream	Ceramic	0.20	Negative	
246	Area 1-19	Door	Cream	Metal	0.00	Negative	
247	Area 1-19	Door Casing	Cream	Metal	0.00	Negative	
248	Area 1-19	Wall A	Cream	Concrete	0.00	Negative	
249	Area 1-19	Wall B	Cream	Concrete	0.01	Negative	
250	Area 1-19	Wall C	Cream	Concrete	0.00	Negative	
251	Area 1-19	Wall D	Cream	Concrete	0.00	Negative	
252	Area 1-19	Window Casing	Black	Metal	0.00	Negative	
253	Area 1-20	Door	Gray	Metal	0.00	Negative	
254	Area 1-20	Door Casing	Gray	Metal	0.00	Negative	
255	Area 1-20	Wall A	Yellow	Drywall	0.02	Negative	
256	Area 1-20	Wall B	Cream	Drywall	0.00	Negative	
257	Area 1-20	Wall C	Cream	Drywall	0.00	Negative	
258	Area 1-20	Wall D	Cream	Drywall	0.00	Negative	
259	Area 1-20	Window Casing	Black	Metal	0.00	Negative	
260	Area 1-21	Door	Cream	Metal	0.00	Negative	
261	Area 1-21	Door Casing	Cream	Metal	0.00	Negative	
262	Area 1-21	Floor Tile	Gray	Ceramic	0.02	Negative	
263	Area 1-21	Baseboard	Gray	Ceramic	0.00	Negative	
264	Area 1-21	Wall A	Cream	Concrete	0.00	Negative	
265	Area 1-21	Window Casing	Black	Metal	0.00	Negative	
266	Area 1-21	Wall B	Cream	Drywall	0.00	Negative	
267	Area 1-21	Wall C	Cream	Drywall	0.00	Negative	
268	Area 1-21	Wall D	Cream	Concrete	0.00	Negative	
269	Area 1-22	Door	Cream	Metal	0.00	Negative	
270	Area 1-22	Door Casing	Cream	Metal	0.00	Negative	
271	Area 1-22	Wall A	Cream	Concrete	0.00	Negative	
272	Area 1-22	Wall B	Cream	Concrete	0.01	Negative	
273	Area 1-22	Wall C	Cream	Concrete	0.00	Negative	
274	Area 1-22	Wall D	Cream	Concrete	0.00	Negative	
275	Area 1-23	Door	Cream	Metal	0.00	Negative	
276	Area 1-23	Door Casing	Cream	Metal	0.00	Negative	
277	Area 1-23	Wall A	Cream	Concrete	0.02	Negative	
278	Area 1-23	Wall B	Cream	Concrete	0.00	Negative	
279	Area 1-23	Wall C	Cream	Concrete	0.00	Negative	
280	Area 1-23	Wall D	Cream	Concrete	0.00	Negative	
281	Area 1-24	Door	Cream	Metal	0.00	Negative	
282	Area 1-24	Door Casing	Cream	Metal	0.01	Negative	
283	Area 1-24	Wall A	Cream	Drywall	0.00	Negative	
284	Area 1-24	Wall B	Cream	Concrete	0.00	Negative	
285	Area 1-24	Wall C	Cream	Concrete	0.00	Negative	
286	Area 1-24	Wall D	Black	Drywall	0.00	Negative	
287	Area 1-24	Wall D	Green	Drywall	0.00	Negative	
288	Area 1-24	Window Shutter	Black	Metal	0.00	Negative	
289	Area 1-25	Gate	Black	Metal	0.00	Negative	
290	Area 1-25	Door	Black	Metal	0.00	Negative	
291	Area 1-25	Door Casing	Black	Metal	0.00	Negative	
292	Area 1-25	Floor Tile	Gray	Ceramic	0.02	Negative	
293	Area 1-25	Baseboard	Gray	Ceramic	0.00	Negative	
294	Area 1-25	Wall A	Cream	Concrete	0.01	Negative	
295	Area 1-25	Wall B	Cream	Concrete	0.00	Negative	
296	Area 1-25	Window Shutter	Brown	Metal	0.00	Negative	
297	Area 1-25	Wall C	Cream	Drywall	0.00	Negative	
298	Area 1-25	Wall D	Cream	Drywall	0.00	Negative	
299	Area 1-25	Window Grille	Black	Metal	0.00	Negative	
300	Calibration				1.00		

PROJECT: PRNG Arecibo Readiness Center, Arecibo, PR				CLIENT: Puerto Rico National Guard			
DATE: 02/26/2020				LBP Inspector: Joanne Negrón			
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
301	Calibration				1.00		
302	Calibration				1.00		
303	Area 1-26	Door	Cream	Metal	0.00	Negative	
304	Area 1-26	Door Casing	Cream	Metal	0.00	Negative	
305	Area 1-26	Wall D	Cream	Concrete	0.00	Negative	
306	Area 1-26	Floor Tile	Gray	Ceramic	0.00	Negative	
307	Area 1-26	Baseboard	Gray	Ceramic	0.02	Negative	
308	Area 1-26	Wall A	Green	Concrete	0.00	Negative	
309	Area 1-26	Window Casing	Black	Metal	0.00	Negative	
310	Area 1-26	Lower Wall A	Green	Concrete	0.00	Negative	
311	Area 1-26	Wall B	Cream	Concrete	0.00	Negative	
312	Area 1-26	Wall C	Cream	Concrete	0.01	Negative	
313	Area 1-27	Door	Cream	Metal	0.00	Negative	
314	Area 1-27	Door Casing	Cream	Metal	0.00	Negative	
315	Area 1-27	Wall A	Cream	Concrete	0.00	Negative	
316	Area 1-27	Wall B	Cream	Concrete	0.00	Negative	
317	Area 1-27	Wall C	Cream	Concrete	0.00	Negative	
318	Area 1-27	Wall D	Cream	Concrete	0.01	Negative	
319	Area 1-27	Window Casing	Black	Metal	0.00	Negative	
320	Area 1-27	Floor Tile	Gray	Ceramic	0.00	Negative	
321	Area 1-27	Baseboard	Gray	Ceramic	0.00	Negative	
322	Area 1-28	Door	Cream	Metal	0.00	Negative	
323	Area 1-28	Door Casing	Cream	Metal	0.00	Negative	
324	Area 1-28	Wall A	Cream	Concrete	0.00	Negative	
325	Area 1-28	Wall B	Cream	Concrete	0.00	Negative	
326	Area 1-28	Wall C	Cream	Concrete	0.00	Negative	
327	Area 1-28	Wall D	Cream	Concrete	0.04	Negative	
328	Area 1-28	Window Casing	Brown	Metal	0.00	Negative	
329	Area 1-29	Door	Cream	Metal	0.00	Negative	
330	Area 1-29	Door Casing	Cream	Metal	0.00	Negative	
331	Area 1-29	Wall Tile	Yellow	Ceramic	0.04	Negative	
332	Area 1-29	Floor Tile	Yellow	Ceramic	0.01	Negative	
333	Area 1-29	Toilet	White	Ceramic	0.02	Negative	
334	Area 1-29	Lavatory	White	Ceramic	0.01	Negative	
335	Area 1-29	Wall A	Cream	Concrete	0.00	Negative	
336	Area 1-29	Wall B	Cream	Concrete	0.00	Negative	
337	Area 1-29	Wall C	Cream	Concrete	0.00	Negative	
338	Area 1-29	Wall D	Cream	Concrete	0.00	Negative	
339	Area 1-32	Wall A	Cream	Concrete	0.01	Negative	
340	Area 1-32	Wall B	Cream	Concrete	0.00	Negative	
341	Area 1-32	Wall C	Cream	Concrete	0.00	Negative	
342	Area 1-32	Door	Cream	Metal	0.00	Negative	
343	Area 1-32	Door Casing	Cream	Metal	0.00	Negative	
344	Area 1-30	Door	Cream	Metal	0.00	Negative	
345	Area 1-30	Door Casing	Cream	Metal	0.00	Negative	
346	Area 1-30	Wall A	Cream	Concrete	0.00	Negative	
347	Area 1-30	Wall B	Cream	Concrete	0.00	Negative	
348	Area 1-30	Wall C	Cream	Concrete	0.00	Negative	
349	Area 1-30	Wall D	Cream	Concrete	0.04	Negative	
350	Area 1-30	Ceiling	Cream	Metal	0.00	Negative	
351	Area 1-31	Door	Cream	Metal	0.00	Negative	
352	Area 1-31	Door Casing	Cream	Metal	0.00	Negative	
353	Area 1-31	Wall A	Cream	Concrete	0.00	Negative	
354	Area 1-31	Wall B	Cream	Concrete	0.00	Negative	
355	Area 1-31	Wall C	Cream	Concrete	0.00	Negative	
356	Area 1-31	Wall D	Cream	Concrete	0.00	Negative	
357	Area 1-31	Ceiling	Cream	Metal	0.05	Negative	
358	Area 1-31	Beam	Cream	Metal	0.00	Negative	
359	Area 1-31	Window Shutter	Black	Metal	0.00	Negative	
360	Area 1-33	Door	Cream	Metal	0.05	Negative	

PROJECT: PRNG Arecibo Readiness Center, Arecibo, PR				CLIENT: Puerto Rico National Guard			
DATE: 02/26/2020				LBP Inspector: Joanne Negrón			
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
361	Area 1-33	Door Casing	Cream	Metal	0.00	Negative	
362	Area 1-33	Floor Tile	Gray	Ceramic	0.00	Negative	
363	Area 1-33	Floor Tile	White	Ceramic	0.01	Negative	
364	Area 1-33	Wall Tile	Cream	Ceramic	0.03	Negative	
365	Area 1-34	Door	Cream	Metal	0.00	Negative	
366	Area 1-34	Door Casing	Cream	Metal	0.00	Negative	
367	Area 1-34	Door	Cream	Metal	0.00	Negative	
368	Area 1-34	Door Casing	Cream	Metal	0.00	Negative	
369	Area 1-34	Floor Tile	Gray	Ceramic	0.05	Negative	
370	Area 1-34	Floor Tile	White	Ceramic	0.05	Negative	
371	Area 1-34	Lavatory	White	Ceramic	0.00	Negative	
372	Area 1-34	Wall Tile	White	Ceramic	0.02	Negative	
373	Area 1-35	Wall Tile	White	Ceramic	0.00	Negative	
374	Area 1-35	Floor Tile	Gray	Ceramic	0.01	Negative	
375	Area 1-35	Floor Tile	White	Ceramic	0.00	Negative	
376	Area 1-35	Door	Cream	Metal	0.00	Negative	
377	Area 1-35	Door Casing	Cream	Metal	0.00	Negative	
378	Area 1-36	Wall A	Cream	Concrete	0.00	Negative	
379	Area 1-36	Wall B	Cream	Concrete	0.00	Negative	
380	Area 1-36	Wall C	Cream	Concrete	0.00	Negative	
381	Area 1-36	Wall D	Cream	Concrete	0.00	Negative	
382	Area 1-36	Window Casing	Black	Metal	0.04	Negative	
383	Area 1-37	Door	Cream	Metal	0.00	Negative	
384	Area 1-37	Door Casing	Cream	Metal	0.00	Negative	
385	Area 1-37	Floor Tile	Gray	Ceramic	0.00	Negative	
386	Area 1-37	Baseboard	Gray	Ceramic	0.01	Negative	
387	Area 1-37	Wall A	Cream	Concrete	0.00	Negative	
388	Area 1-37	Wall B	Cream	Concrete	0.00	Negative	
389	Area 1-37	Wall C	Cream	Concrete	0.00	Negative	
390	Area 1-37	Wall D	Cream	Concrete	0.00	Negative	
391	Area 1-37	Window Casing	Black	Metal	0.00	Negative	
392	Area 1-37	Wall D	Cream	Concrete	0.00	Negative	
393	Area 1-38	Door	Cream	Metal	0.00	Negative	
394	Area 1-38	Door Casing	Cream	Metal	0.00	Negative	
395	Area 1-38	Wall A	Cream	Concrete	0.02	Negative	
396	Area 1-38	Wall B	Cream	Concrete	0.00	Negative	
397	Area 1-38	Wall C	Cream	Concrete	0.00	Negative	
398	Area 1-38	Wall D	Cream	Concrete	0.00	Negative	
399	Area 1-38	Column	Cream	Concrete	0.02	Negative	
400	Area 1-38	Beam	White	Metal	0.00	Negative	
401	Area 1-38	Ceiling	White	Metal	0.00	Negative	
402	Exterior Main Building	Wall A	Cream	Concrete	0.00	Negative	
403	Exterior Main Building	Wall A	Green	Concrete	0.00	Negative	
404	Exterior Main Building	Column	Cream	Concrete	0.00	Negative	
405	Exterior Main Building	Entrance	Cream	Concrete	0.00	Negative	
406	Exterior Main Building	Curb	White	Concrete	0.00	Negative	
407	Exterior Main Building	Wall A	Cream	Concrete	0.00	Negative	
408	Exterior Main Building	Wall A	Green	Concrete	0.01	Negative	
409	Exterior Main Building	Column	Cream	Concrete	0.00	Negative	
410	Exterior Main Building	Wall B	Cream	Concrete	0.00	Negative	
411	Exterior Main Building	Column	Cream	Concrete	0.00	Negative	
412	Exterior Main Building	Wall B	Green	Concrete	0.00	Negative	
413	Exterior Main Building	Wall A	Cream	Concrete	0.00	Negative	
414	Exterior Main Building	Wall A	Green	Concrete	0.00	Negative	
415	Exterior Main Building	Wall A	Cream	Concrete	0.03	Negative	
416	Exterior Main Building	Wall A	Green	Concrete	0.00	Negative	
417	Exterior Main Building	Wall A	Green	Concrete	0.00	Negative	
418	Exterior Main Building	Wall A	Green	Concrete	0.01	Negative	
419	Exterior Main Building	Wall A	Green	Concrete	0.00	Negative	
420	Exterior Main Building	Wall B	Cream	Concrete	0.00	Negative	

PROJECT: PRNG Arecibo Readiness Center, Arecibo, PR				CLIENT: Puerto Rico National Guard			
DATE: 02/26/2020				LBP Inspector: Joanne Negrón			
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
421	Exterior Main Building	Wall B	Cream	Concrete	0.00	Negative	
422	Exterior Main Building	Wall B	Cream	Concrete	0.00	Negative	
423	Exterior Main Building	Wall B	Green	Concrete	0.00	Negative	
424	Exterior Main Building	Wall B	Green	Concrete	0.01	Negative	
425	Exterior Main Building	Wall B	Green	Concrete	0.00	Negative	
426	Exterior Main Building	Floor	Yellow	Concrete	0.01	Negative	
427	Exterior Main Building	Lid	Yellow	Metal	0.00	Negative	
428	Exterior Main Building	Curb	Yellow	Concrete	0.00	Negative	
429	Exterior Main Building	Entrance	Cream	Concrete	0.00	Negative	
430	Exterior Main Building	Lower Wall B	Green	Concrete	0.00	Negative	
431	Exterior Main Building	Lower Wall B	Cream	Concrete	0.00	Negative	
432	Exterior Main Building	Mop Sink	Cream	Concrete	0.02	Negative	
433	Exterior Main Building	Wall C	Cream	Concrete	0.00	Negative	
434	Exterior Main Building	Wall C	Green	Concrete	0.00	Negative	
435	Exterior Main Building	Lower Wall C	Cream	Concrete	0.00	Negative	
436	Exterior Main Building	Lower Wall C	Cream	Concrete	0.00	Negative	
437	Site 1	Floor Line	Yellow	Concrete	0.01	Negative	
438	Site 1	Floor Line	Yellow	Concrete	0.00	Negative	
439	Site 1	Floor Line	Yellow	Concrete	0.00	Negative	
440	Site 1	Floor Line	Blue	Concrete	0.00	Negative	
441	Site 1	Floor Line	Blue	Concrete	0.00	Negative	
442	Exterior Main Building	Wall B	Cream	Concrete	0.00	Negative	
443	Exterior Main Building	Wall B	Green	Concrete	0.00	Negative	
444	Exterior Main Building	Wall B	Cream	Concrete	0.00	Negative	
445	Exterior Main Building	Wall B	Green	Concrete	0.01	Negative	
446	Exterior Main Building	Wall B	Cream	Concrete	0.00	Negative	
447	Exterior Main Building	Wall B	Green	Concrete	0.00	Negative	
448	Exterior Main Building	Wall B	Cream	Concrete	0.00	Negative	
449	Exterior Main Building	Wall B	Green	Concrete	0.00	Negative	
450	Exterior Main Building	Wall C	Cream	Concrete	0.00	Negative	
451	Exterior Main Building	Wall C	Green	Concrete	0.02	Negative	
452	Exterior Main Building	Wall C	Cream	Concrete	0.00	Negative	
453	Exterior Main Building	Wall C	Green	Concrete	0.00	Negative	
454	Exterior Main Building	Wall C	Cream	Concrete	0.01	Negative	
455	Exterior Main Building	Wall C	Green	Concrete	0.00	Negative	
456	Exterior Main Building	Wall B	Cream	Concrete	0.00	Negative	
457	Exterior Main Building	Wall B	Green	Concrete	0.00	Negative	
458	Exterior Main Building	Wall B	Cream	Concrete	0.00	Negative	
459	Exterior Main Building	Wall B	Green	Concrete	0.02	Negative	
460	Exterior Main Building	Vertical Ladder	Black	Metal	0.00	Negative	
461	Exterior Main Building	Wall C	Cream	Concrete	0.00	Negative	
462	Exterior Main Building	Wall D	Cream	Concrete	0.00	Negative	
463	Exterior Main Building	Wall D	Green	Concrete	0.01	Negative	
464	Exterior Main Building	Wall D	Cream	Concrete	0.00	Negative	
465	Exterior Main Building	Vertical Ladder	Black	Metal	0.00	Negative	
466	Exterior Main Building	Wall C	Cream	Concrete	0.00	Negative	
467	Exterior Main Building	Wall C	Cream	Concrete	0.00	Negative	
468	Exterior Main Building	Wall C	Cream	Concrete	0.02	Negative	
469	Exterior Main Building	Wall C	Green	Concrete	0.03	Negative	
470	Exterior Main Building	Wall C	Green	Concrete	0.01	Negative	
471	Exterior Main Building	Wall C	Green	Concrete	0.02	Negative	
472	Exterior Main Building	Entrance	Cream	Concrete	0.00	Negative	
473	Exterior Main Building	Ramp	Yellow	Concrete	0.00	Negative	
474	Exterior Main Building	Handrail	Green	Metal	0.16	Negative	
475	Exterior Main Building	Floor	Gray	Concrete	0.00	Negative	
476	Exterior Main Building	Wall B	Cream	Concrete	0.00	Negative	
477	Exterior Main Building	Wall B	Green	Concrete	0.03	Negative	
478	Exterior Main Building	Rolling Door	Gray	Metal	0.00	Negative	
479	Exterior Main Building	Wall C	Cream	Concrete	0.00	Negative	
480	Exterior Main Building	Wall C	Green	Concrete	0.00	Negative	

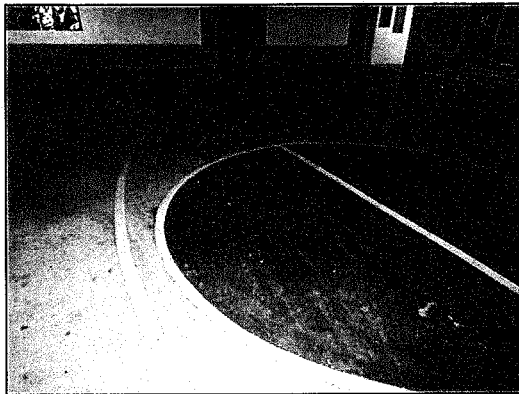
PROJECT: PRNG Arecibo Readiness Center, Arecibo, PR				CLIENT: Puerto Rico National Guard			
DATE: 02/26/2020				LBP Inspector: Joanne Negrón			
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading	Pos/Neg	Comments
481	Exterior Main Building	Entrance	Cream	Concrete	0.00	Negative	
482	Exterior Main Building	Wall A	Cream	Concrete	0.00	Negative	
483	Exterior Main Building	Wall A	Green	Concrete	0.03	Negative	
484	Exterior Main Building	Wall A	Cream	Concrete	0.01	Negative	
485	Exterior Main Building	Wall A	Green	Concrete	0.02	Negative	
486	Exterior Main Building	Wall A	Cream	Concrete	0.01	Negative	
487	Exterior Main Building	Wall A	Green	Concrete	0.00	Negative	
488	Exterior Main Building	Handrail	Green	Metal	0.15	Negative	
489	Exterior Main Building	Vertical Ladder	Black	Metal	0.09	Negative	
490	Exterior Main Building	Wall D	Green	Concrete	0.00	Negative	
491	Exterior Main Building	Wall D	Cream	Concrete	0.00	Negative	
492	Area 1-39	Wall A	White	Concrete	0.00	Negative	
493	Area 1-39	Center Column	White	Concrete	0.00	Negative	
494	Area 1-39	Center Column	White	Concrete	0.00	Negative	
495	Area 1-39	Center Column	White	Concrete	0.00	Negative	
496	Area 1-39	Wall A	White	Concrete	0.04	Negative	
497	Area 1-39	Wall B	White	Concrete	0.00	Negative	
498	Area 1-39	Beam	White	Concrete	0.00	Negative	
499	Area 1-39	Beam	White	Metal	0.00	Negative	
500	Area 1-39	Ceiling	White	Metal	0.00	Negative	
501	Area 1-39	Partition	Gray	Drywall	0.00	Negative	
502	Area 1-39	Wall C	White	Concrete	0.00	Negative	
503	Area 1-39	Door	Red	Wood	0.00	Negative	
504	Area 1-39	Door Casing	Red	Wood	0.00	Negative	
505	Area 1-39	Window Shutter	Black	Metal	0.00	Negative	
506	Area 1-39	Floor	Yellow	Concrete	0.00	Negative	
507	Area 1-40	Door	Cream	Metal	0.00	Negative	
508	Area 1-40	Door Casing	Cream	Metal	0.00	Negative	
509	Area 1-40	Floor Tile	Brown	Ceramic	0.03	Negative	
510	Area 1-40	Wall Tile	Cream	Ceramic	0.02	Negative	
511	Area 1-40	Lavatory	White	Ceramic	0.02	Negative	
512	Area 1-40	Toilet	White	Ceramic	0.02	Negative	
513	Area 1-40	Urinal	White	Ceramic	0.02	Negative	
514	Area 1-40	Window Grille	Black	Metal	0.00	Negative	
515	Area 1-40	Wall A	White	Concrete	0.00	Negative	
516	Area 1-40	Wall B	White	Concrete	0.02	Negative	
517	Area 1-40	Wall C	White	Concrete	0.00	Negative	
518	Area 1-40	Wall D	White	Concrete	0.00	Negative	
519	Area 1-40	Ceiling	White	Concrete	0.00	Negative	
520	Area 1-41	Door	Cream	Metal	0.00	Negative	
521	Area 1-41	Door Casing	Cream	Metal	0.00	Negative	
522	Area 1-41	Floor Tile	Gray	Ceramic	0.01	Negative	
523	Area 1-41	Wall Tile	Cream	Ceramic	0.03	Negative	
524	Area 1-41	Lavatory	White	Ceramic	0.00	Negative	
525	Area 1-41	Toilet	White	Ceramic	0.00	Negative	
526	Area 1-41	Window Grille	Black	Metal	0.00	Negative	
527	Area 1-41	Wall A	White	Concrete	0.00	Negative	
528	Area 1-41	Wall B	White	Concrete	0.00	Negative	
529	Area 1-41	Wall C	White	Concrete	0.01	Negative	
530	Area 1-41	Wall D	White	Concrete	0.00	Negative	
531	Area 1-41	Ceiling	White	Concrete	0.00	Negative	
532	Site 2	Floor Line	Yellow	Concrete	0.00	Negative	
533	Site 2	Floor Line	Yellow	Concrete	0.01	Negative	
534	Site 2	Floor Line	Yellow	Concrete	0.02	Negative	
535	Site 2	Floor Line	Blue	Concrete	0.05	Negative	
536	Site 2	Floor Line	Blue	Concrete	0.00	Negative	
537	Site 2	Floor Line	Blue	Concrete	0.00	Negative	
538	Site 2	Bollard	Yellow	Metal	0.00	Negative	
539	Structure 1 Exterior Area	Wall A	Cream	Concrete	0.00	Negative	
540	Structure 1 Exterior Area	Wall B	Cream	Concrete	0.02	Negative	

[illegible]

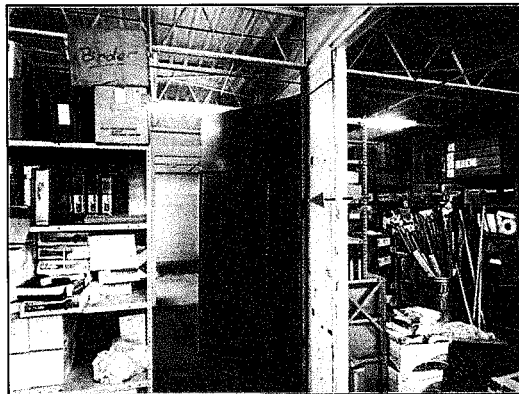
APPENDIX B: PROJECT PHOTOGRAPHS



Area 1-1
Lead based painted concrete floor
line.



Area 1-1
Lead based painted concrete floor
line.



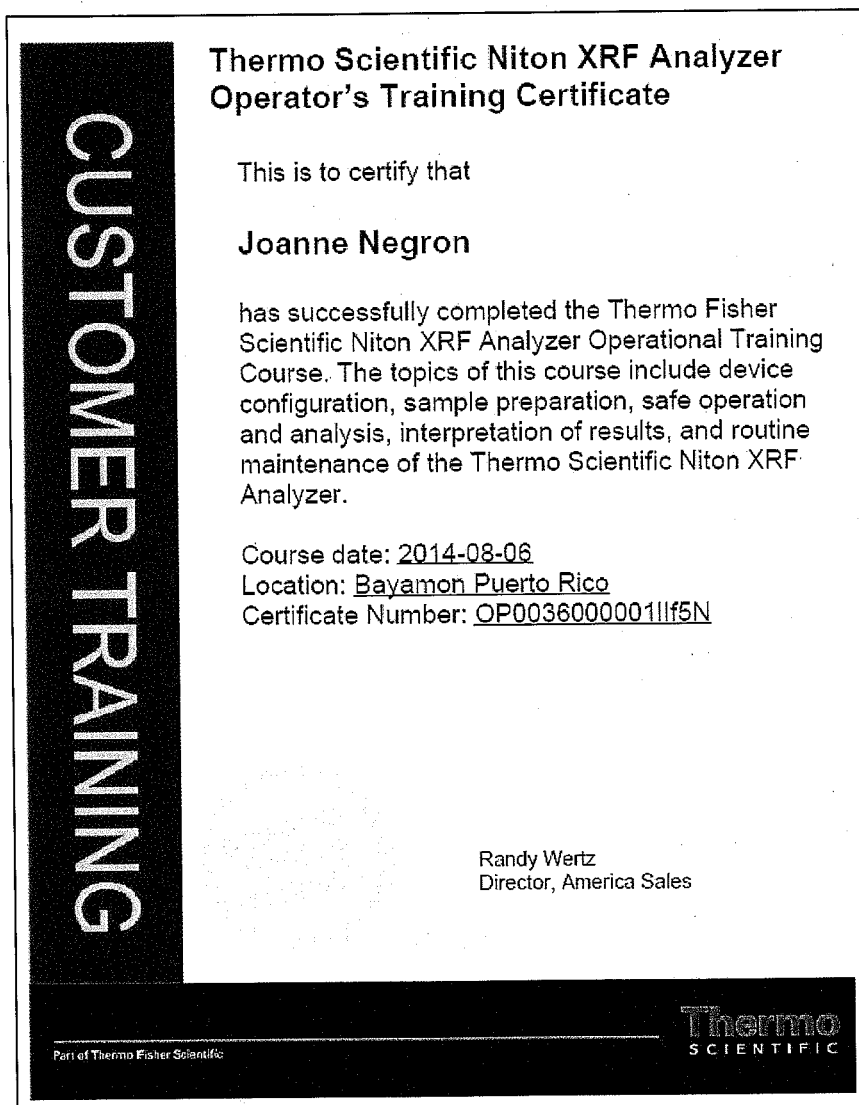
Area 1-12
Lead based painted metal gate frame.

Photographic documentation is for reference purposes and doesn't necessarily include all the surfaces with lead based paint and/or components containing lead

APPENDIX C: CERTIFICATIONS, LICENSES, AND ACCREDITATIONS

		GOBIERNO DE PUERTO RICO Departamento de Recursos Naturales y Ambientales	
Este certificado es otorgado a:			
Zimmetry Environmetal Management			
Por haber cumplido con los requisitos establecidos en el Capítulo VI, Regla 127 del Reglamento para el Manejo Adecuado de Actividades de Pintura con Base de Plomo. Se le otorga esta certificación como Empresa para llevar a cabo actividades de Mitigación de Pintura con base de plomo en la jurisdicción de Puerto Rico.			
Número de Certificado LBPf-03620-009			
Fecha de emisión: Marzo 03, 2020		 Cynthia I. Rivera Morales Secretaria Interina	
Fecha de Expiración: Marzo 02, 2021		<u>14 de febrero de 2020</u> Fecha	

APPENDIX C: CERTIFICATIONS, LICENSES, AND ACCREDITATIONS



APPENDIX D: XRF's PERFORMANCE CHARACTERISTICS SHEET

Performance Characteristic Sheet

EFFECTIVE DATE: September 24, 2004

EDITION NO.: 1

MANUFACTURER AND MODEL:

Make: Niton LLC

Tested Model: XLp 300

Source: ^{109}Cd

Note: This PCS is also applicable to the equivalent model variations indicated below, for the Lead-in-Paint K+L variable reading time mode, in the XLi and XLp series:

XLi 300A, XLi 301A, XLi 302A and XLi 303A.

XLp 300A, XLp 301A, XLp 302A and XLp 303A.

XLi 700A, XLi 701A, XLi 702A and XLi 703A.

XLp 700A, XLp 701A, XLp 702A, and XLp 703A.

Note: The XLi and XLp versions refer to the shape of the handle part of the instrument. The differences in the model numbers reflect other modes available, in addition to Lead-in-Paint modes. The manufacturer states that specifications for these instruments are identical for the source, detector, and detector electronics relative to the Lead-in-Paint mode.

FIELD OPERATION GUIDANCE

OPERATING PARAMETERS:

Lead-in-Paint K+L variable reading time mode.

XRF CALIBRATION CHECK LIMITS:

0.8 to 1.2 mg/cm² (inclusive)

The calibration of the XRF instrument should be checked using the paint film nearest 1.0 mg/cm² in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm² film).

If readings are outside the acceptable calibration check range, follow the manufacturer's instructions to bring the instruments into control before XRF testing proceeds.

SUBSTRATE CORRECTION:

For XRF results using Lead-in-Paint K+L variable reading time mode, substrate correction is not needed for:

Brick, Concrete, Drywall, Metal, Plaster, and Wood

INCONCLUSIVE RANGE OR THRESHOLD:

K+L MODE READING DESCRIPTION	SUBSTRATE	THRESHOLD (mg/cm ²)
Results not corrected for substrate bias on any substrate	Brick	1.0
	Concrete	1.0
	Drywall	1.0
	Metal	1.0
	Plaster	1.0
	Wood	1.0

BACKGROUND INFORMATION

EVALUATION DATA SOURCE AND DATE:

This sheet is supplemental information to be used in conjunction with Chapter 7 of the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* ("HUD Guidelines"). Performance parameters shown on this sheet are calculated from the EPA/HUD evaluation using archived building components. Testing was conducted in August 2004 on 133 testing combinations. The instruments that were used to perform the testing had new sources; one instrument's was installed in November 2003 with 40 mCi initial strength, and the other's was installed June 2004 with 40 mCi initial strength.

OPERATING PARAMETERS:

Performance parameters shown in this sheet are applicable only when properly operating the instrument using the manufacturer's instructions and procedures described in Chapter 7 of the HUD Guidelines.

SUBSTRATE CORRECTION VALUE COMPUTATION:

Substrate correction is not needed for brick, concrete, drywall, metal, plaster or wood when using Lead-in-Paint K+L variable reading time mode, the normal operating mode for these instruments. If substrate correction is desired, refer to Chapter 7 of the HUD Guidelines for guidance on correcting XRF results for substrate bias.

EVALUATING THE QUALITY OF XRF TESTING:

Randomly select ten testing combinations for retesting from each house or from two randomly selected units in multifamily housing. Use the K+L variable time mode readings.

Conduct XRF retesting at the ten testing combinations selected for retesting.

Determine if the XRF testing in the units or house passed or failed the test by applying the steps below.

Compute the Retest Tolerance Limit by the following steps:

Determine XRF results for the original and retest XRF readings. Do not correct the original or retest results for substrate bias. In single-family housing a result is defined as the average of three readings. In multifamily housing, a result is a single reading. Therefore, there will be ten original and ten retest XRF results for each house or for the two selected units.

Calculate the average of the original XRF result and retest XRF result for each testing combination.

Square the average for each testing combination.

Add the ten squared averages together. Call this quantity C.

Multiply the number C by 0.0072. Call this quantity D.

Add the number 0.032 to D. Call this quantity E.

Take the square root of E. Call this quantity F.

Multiply F by 1.645. The result is the Retest Tolerance Limit.

Compute the average of all ten original XRF results.

Compute the average of all ten re-test XRF results.

Find the absolute difference of the two averages.

If the difference is less than the Retest Tolerance Limit, the inspection has passed the retest. If the difference of the overall averages equals or exceeds the Retest Tolerance Limit, this procedure should be repeated with ten new testing combinations. If the difference of the overall averages is equal to or greater than the Retest Tolerance Limit a second time, then the inspection should be considered deficient.

Use of this procedure is estimated to produce a spurious result approximately 1% of the time. That is, results of this procedure will call for further examination when no examination is warranted in approximately 1 out of 100 dwelling units tested.

TESTING TIMES:

For the Lead-in-Paint K+L variable reading time mode, the instrument continues to read until it is moved away from the testing surface, terminated by the user, or the instrument software indicates the reading is complete. The following table provides testing time information for this testing mode. The times have been adjusted for source decay, normalized to the initial source strengths as noted above. Source strength and type of substrate will affect actual testing times. At the time of testing, the instruments had source strengths of 26.6 and 36.6 mCi.

Testing Times Using K+L Reading Mode (Seconds)						
	All Data			Median for laboratory-measured lead levels (mg/cm ²)		
Substrate	25 th Percentile	Median	75 th Percentile	Pb < 0.25	0.25 ≤ Pb < 1.0	1.0 ≤ Pb
Wood Drywall	4	11	19	11	15	11
Metal	4	12	18	9	12	14
Brick Concrete Plaster	8	16	22	15	18	16

CLASSIFICATION RESULTS:

XRF results are classified as positive if they are greater than or equal to the threshold, and negative if they are less than the threshold.

DOCUMENTATION:

A document titled *Methodology for XRF Performance Characteristic Sheets* provides an explanation of the statistical methodology used to construct the data in the sheets, and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. For a copy of this document call the National Lead Information Center Clearinghouse at 1-800-424-LEAD.

This XRF Performance Characteristic Sheet was developed by the Midwest Research Institute (MRI) and QuanTech, Inc., under a contract between MRI and the XRF manufacturer. HUD has determined that the information provided here is acceptable when used as guidance in conjunction with Chapter 7, Lead-Based Paint Inspection, of HUD's *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*.

APPENDIX E: LOCATION OF POSITIVE MATERIALS

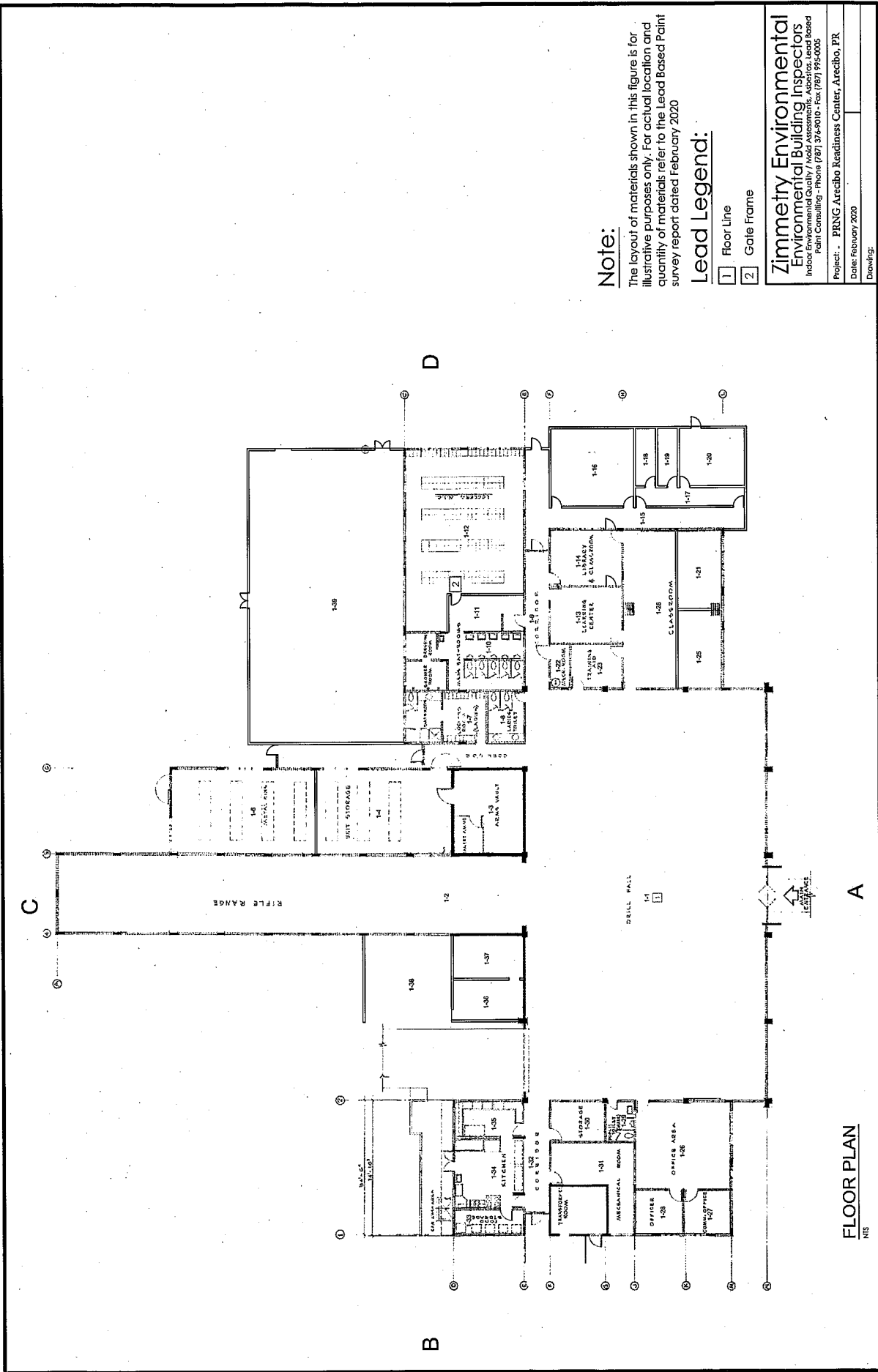


EXHIBIT F: Asbestos Containing Material Report



CERTIFICACION DE NO PRESENCIA DE ASBESTO EN ESTRUCTURAS A DEMOLERSE

(Deberá completarse en letra de molde o impresa)

PGC-
PARA USO OFICIAL

Yo, Elme Rivera, mayor de edad, Casado, y vecino de Vega Baja
(Nombre) (Estado Civil) (Municipio)

Dirección Postal Vega Baja Lakes Calle 11 L31 Vega Baja 00693
(Pueblo) (Zip Code)


Teléfonos: Residencial (939) 969 - 1311 Oficina (787) 722 - 0220 Ext.
Fax (787) 724 - 5788

Certifico que:

*Mayagüez Readiness Center, Mayagüez, Puerto Rico

1. La estructura localizada en Puerto Rico National Guard Facility, la cual será objeto de una demolición se encuentra libre de asbesto.
2. La información antes indicada es cierta y correcta.
3. Afirmo y reconozco las consecuencias de incluir y someter información falsa en este documento.
4. Para que así conste, firmo la presente certificación en San Juan de Puerto Rico,
(Municipio)
hoy día 22 de agosto de 2019

* Esta certificación es exclusivamente para las áreas muestreadas.


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

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



**ENVIRONMENTAL SURVEY
FOR
ASBESTOS CONTAINING MATERIALS (ACM)
AT
VEGA BAJA READINESS CENTER
VEGA BAJA, PUERTO RICO**

Prepared For:
PR National Guard

August 2019

Prepared By:

Analytical Environmental
Services International, Inc.
611 Monserrate Street
2nd Floor, Santurce, P.R. 00907
(787) 722-0220 / Fax (787) 724-5788

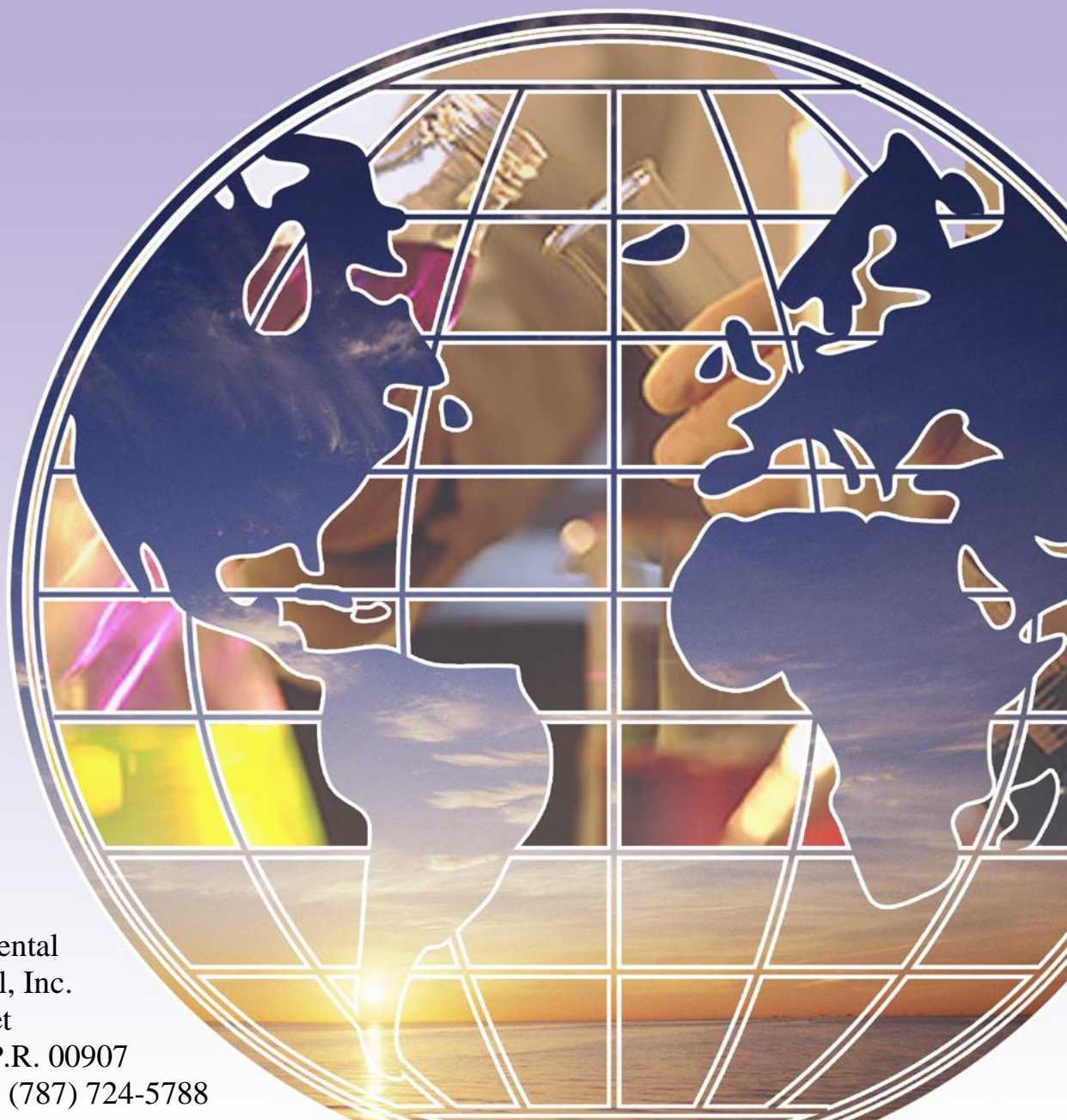


TABLE OF CONTENTS

I. SUMMARY

1.0 INTRODUCTION

2.0 GENERAL BACKGROUND

3.0 PROJECT IDENTIFICATION/DESCRIPTION

4.0 SAMPLING METHODS

5.0 SAMPLING RESULTS

6.0 CONCLUSIONS

APPENDIX I - Certifications and Accreditations

APPENDIX II - Physical Assessment Inspection Form

APPENDIX III - Analytical Results

APPENDIX IV - Selective Photos

APPENDIX V- Floor Plans with Location of Sampling
Points and Distribution of ACM

I. SUMMARY

Analytical Environmental Services International, Inc (AES International) was contracted to perform an Asbestos Containing Materials (ACM) survey for the Vega Baja Readiness Center located in Vega Baja, Puerto Rico.

The ACM inspection was conducted on 8/23/19 by Anthony Rivera, an EQB certified asbestos inspector.

The scope of the survey included sampling of suspected ACM present and analysis of the samples collected. During the survey, thirty-three (33) samples were collected from suspected materials. Samples collected were analyzed by Polarized Light Microscopy (PLM) for asbestos fibers. ACM identified include:

- Mastic on floor. Material is classified as miscellaneous, category I, non-friable, ACM. Approximately 12 sq.ft. of this material are present in one of the storage areas (see floor plan for location).
- Red mastic on the metal A/C Ducts. Material is classified as miscellaneous, category I, non-friable, ACM. Exact quantity cannot be estimated as material could be present under the A/C duct insulation in different areas around the structure.

No access was feasible to a storage room (see floor plan for location) which has been closed for a long time, as well as to the two arms vaults (security reasons). Consequently, all materials present in these 2 rooms shall be assumed as ACM.

Roofing treatment was not sampled due to warranty. Therefore all construction materials present on the roof are to be assumed as ACM.

If demolition/remodeling activities will be conducted in the nearest future it is recommended to remove all ACM known, or suspected, present within the structure, as to comply with NESHAP/EQB requirements.

1.0 INTRODUCTION

Analytical Environmental Services International, Inc (AES International) was contracted to perform an Asbestos Containing Materials (ACM) survey for the Vega Baja Readiness Center located in Vega Baja, Puerto Rico.

The ACM inspection was conducted on 8/23/19, by Anthony Rivera, an EQB/AHERA certified asbestos inspector (see Appendix I for credentials). The scope of the survey included sampling of suspected ACM and analysis of samples collected.

Samples collected were sent to AES International Inc., a NVLAP accredited laboratory located in Santurce, Puerto Rico. Samples were analyzed by Polarized Light Microscopy method (PLM), in accordance to EPA recommended procedures. The samples are defined as asbestos containing materials (ACM) if they contain more than 1% asbestos.

2.0 GENERAL BACKGROUND

Asbestos was used in the construction industry from 1900 to 1989. It is still being used today in various products. The health effects of asbestos have been studied since the 1930's. More health studies have been conducted in asbestos than any other natural substance. The mere presence of asbestos containing materials does not necessary constitute a health hazard. However, when these materials become disturbed from building renovation, maintenance, or other everyday activities that allow fibers to be released into the environment, a potential hazard does exist.

The relationship between exposure level and health risk is very complex. Although this relationship is not completely understood, asbestos exposure has been associated with various types of lung diseases including a debilitating lung disease called ASBESTOSIS; a rare cancer of chest called MESOTHELIOMA; and cancers of the esophagus, stomach, colon and other organs. Asbestosis is not fatal; it is however incurable. One who has it cannot breathe easily and physical activity becomes limited. MESOTHELIOMA is 100% fatal, as there is no cure. These diseases can be directly linked to asbestos because of the mineral particles that can be find in the lining of the lungs and stomach, since the body cannot absorb these minerals. Tests have determined that asbestos can cause cancer, but scientists disagree on the amount of asbestos fibers that must be inhaled to cause cancer. The nose filters out all visible particles. Therefore, only the microscopic fibers are the one who cause the problems.

Studies indicate different health effect resulting from exposure to chrysotile asbestos versus exposure to the amphibole form of asbestos. The latter, which include tremolite, amosite, actinolite, anthophyllite and crocidolite have more significant health impact than chrysotile.

Some scientists cite studies concluding that is the size of the fibers deposited in the lungs that result in cancer. Long, thin fibers, greater than 8 microns in length and less than 0.25 microns in diameter show the highest potential of cancer development.

2.1 National Emission Standards for Hazardous Air Pollutants (NESHAP)

The EPA's rules concerning the application, removal, and disposal of ACM, as well as manufacturing, spraying and fabricating of ACM were issued under the asbestos NESHAP regulation (U.S. EPA National Emission Standards for Hazardous Air Pollutants, 40 CFR 61 Subpart M, October 30, 1987). The asbestos NESHAP regulation governs asbestos demolition and renovation projects in all facilities. The NESHAP rule usually requires owners or operators to have all friable ACM removed before the building is demolished and may require its removal before renovation. If friable ACM shall be disturbed, the NESHAP rule may require appropriate work practices, or procedures for emission control. The rule states that any ACM, which may become friable, poses a potential hazard that should be addressed.

A revised NESHAP ruling was released on November 20, 1990, effective February 20, 1991 which includes as the responsibility of the owner, or operator, to "prior to the commencement of the demolition or renovation, thoroughly inspect the affected facility or part of the facility where demolition or renovation operation will occur for the presence of asbestos, including Category I and Category II non-friable ACM." (40 CFR, Part 61, National Emission Standards for hazardous Air Pollutants, Asbestos NESHAP Revision, Final Rule, November 20, 1990).

3.0 PROJECT IDENTIFICATION/DESCRIPTION

The area investigated consists of the main building of the Vega Baja Readiness facility. It includes various storage rooms, classrooms, medical rooms, arms vault, assembly area, mechanical closet and gym.

4.0 SAMPLING METHODS

Thirty-three (33) samples were collected from suspected ACM. Samples were collected from joint compounds, ceiling tile, baseboards, epoxy, vinyl floor tiles, A/C insulation, glue on metal A/C Ducts and gypsum boards. Roofing treatment was not sampled as it was under warranty.

5.0 SAMPLING RESULTS

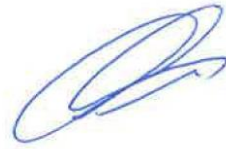
Location of materials and results are shown in the physical assessment form in Appendix II. Analytical results of samples collected are shown in Appendix III. The results are presented according to functional areas tested. The suspected samples collected were analyzed by Polarized Light Microscopy (PLM) for asbestos fibers.

Asbestos fibers above 1% area (ACM) were identified in four (4) samples collected from mastic on floor (1) and red glue on meal A/C ducts (see summary Table 1).

6.0 CONCLUSIONS

ACM were detected during a survey conducted for the Vega Baja Readiness Center in Vega Baja, Puerto Rico. Results are presented in the summary. Access was not feasible to a storage room, vault areas. Roofing treatment was not sampled due to warranty. Therefore all construction materials present are to be assumed as ACM.

The ACM sampling relates to surfaces accessible and not covered by rigid barriers. Should any material hidden under surfaces, or architectural components be present, it must be assumed as ACM.



Anthony Rivera, EQB Asbestos Inspector
Lic#: ASB-0918-0661-SI

**Table 1. Summary of Asbestos Containing Materials (ACM) for Vega Baja Readiness Center,
Vega Baja, Puerto Rico.**

Structure	Sample ID	Description	Result (Percentage of Asbestos)
Main Building	AR-4	Mastic on Floor from Storage	2% Chrysotile
	AR-12	Red Glue from AC Ducts, Assembly Area	4% Chrysotile
	AR-13	Red Glue from AC Ducts, Assembly Area	3% Chrysotile
	AR-33	Red Glue from AC Ducts, Assembly Area	3% Chrysotile

Appendix I



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

AES International

611 Monserrate

Santurce, PR 00907

Mr. Ady Padan

Phone: 787-722-0220 Fax: 787-724-5788

Email: yotal@bellsouth.net

<http://www.aesipr.org>

ASBESTOS FIBER ANALYSIS

NVLAP LAB CODE 200051-0

Bulk Asbestos Analysis

Code

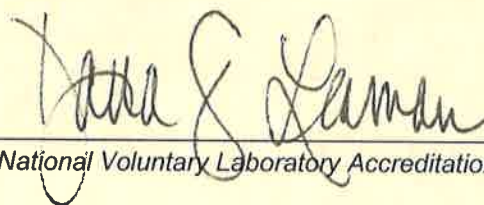
Description

18/A01

EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples

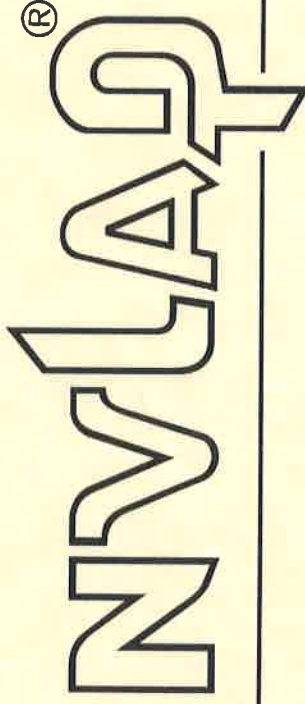
18/A03

EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials



For the National Voluntary Laboratory Accreditation Program

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 200051-0

AES International

Santurce, PR

*is accredited by the National Voluntary Laboratory Accreditation Program for specific services,
listed on the Scope of Accreditation, for:*

Asbestos Fiber Analysis

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).*

2019-01-01 through 2019-12-31

Effective Dates

A handwritten signature in dark ink, appearing to read "Peter J. Lamm".

For the National Voluntary Laboratory Accreditation Program

ACM Inspector Credentials

	<p>TARJETA DE REGISTRO PARA LA REMOCION DE ASBESTO</p> <p>Esta tarjeta autoriza a:</p> <p><i>Anthony Rivera Eaves</i></p> <p>Inspector</p> <p>A trabajar en la remoción de asbesto en P.R. Esta persona NO es un empleado, ni un representante de la Junta.</p> <p></p> <p>Firma Autorizada Junta de Calidad Ambiental</p>
<p>ASB-0918-0661-SI</p> <p>Número de Registro</p> <p>9-sept-2019</p> <p>Fecha de vencimiento</p>	

Appendix II



ASBESTOS SAMPLE INSPECTION FORM FOR PHYSICAL & HAZARD ASSESSMENTClient Name **Puerto Rico Army National Guard**Building : Readiness CenterProject Name: Vega Baja Readiness CenterMain StructureInspection Date: 8/23/19Page: 1 of 6

Homogeneous Material Description		Material Category	Asbestos Content	Friability	Location of Materials	Asbestos Contents	Total Square Feet of ACM	AHERA Assessment Category (1-7,X, None)	Hazard Ranking (1-7)
I.D. Number	Material Description								
AR-1	Joint Compound from Office 2 (Recruiting)	Surf.	No	F		ND		X	
AR-2	Ceiling Tile 2'x 4' from Office 4 (Recruiting)	Misc.	No	F		ND		X	
AR-3	Black Vinyl Baseboard 3" from Supply Office	Misc.	No	F		ND		X	
AR-4	Mastic on Floor from Storage	Misc.	Yes	F		2% CHR		X	
AR-5	Gray Epoxy Floor from Storage 2	Misc.	No	NF		ND		X	
AR-6	Gray Vinyl Floor Tile 12"x 12" from Storage 1	Misc.	No	NF		ND		X	

Inspected by: Anthony RiveraDate: 8/23/19

Friability: F = friable, NF = nonfriable, X = not applicable (material is non-ACBM)

AHERA Assessment Category: 1 = Damaged or significantly damaged TSI ACBM; 2 = Damaged friable surfacing ACBM; 3 = Significantly damaged friable surfacing ACBM;

4 = Damaged or significantly damaged friable miscellaneous ACBM; 5 = ACBM with potential for damage; 6 = ACBM with potential for significant damage;

7 = Any remaining friable ACBM or friable suspected ACBM; X = Not applicable (material is non-ACBM or non-friable surfacing or miscellaneous materials);

None = No assessment category provided in original inspection.

Hazard Ranking Category: 1 = Significantly damaged; 2 = Damaged and potential of significant damage; 3 = Damaged and potential for damage; 4 = Damaged;

5 = Potential for significant damage; 6 = Potential for damage; 7 = All remaining ACBM

* - See Floor Plans for Location of Functional Spaces; ** - Unless Specified, the Asbestos Type is Chrysotile; ND - None Detected

ASBESTOS SAMPLE INSPECTION FORM FOR PHYSICAL & HAZARD ASSESSMENTClient Name **Puerto Rico Army National Guard**Building : Readiness CenterProject Name: Vega Baja Readiness CenterMain StructureInspection Date: 8/23/19Page: 2 of 6

Homogeneous Material Description		Material Category	Asbestos Content	Friability	Location of Materials	Asbestos Contents	Total Square Feet of ACM	AHERA Assessment Category (1-7,X, None)	Hazard Ranking (1-7)
I.D. Number	Material Description								
AR-7	Gray Vinyl Baseboard 3" from Storage 1	Misc.	No	NF		ND		X	
AR-8	Joint Compound from Wall, Storage Room	Surf.	No	F		ND		X	
AR-9	Gray Glue from Sink Area, Break Room	Misc.	No	NF		ND		X	
AR-10	White Acoustical Ceiling Tile 2'x 4' from Break Room	Misc.	No	F		ND		X	
AR-11	A/C Insulation Sample from Medical Room	Misc.	No	F		ND		X	
AR-12	Pink Glue from AC Ducts, Assembly Area	Misc.	Yes	NF		4% CHR		X	

Inspected by: Anthony RiveraDate: 8/23/19

Friability: F = friable, NF = nonfriable, X = not applicable (material is non-ACBM)

AHERA Assessment Category: 1 = Damaged or significantly damaged TSI ACBM; 2 = Damaged friable surfacing ACBM; 3 = Significantly damaged friable surfacing ACBM;

4 = Damaged or significantly damaged friable miscellaneous ACBM; 5 = ACBM with potential for damage; 6 = ACBM with potential for significant damage;

7 = Any remaining friable ACBM or friable suspected ACBM; X = Not applicable (material is non-ACBM or non-friable surfacing or miscellaneous materials);

None = No assessment category provided in original inspection.

Hazard Ranking Category: 1 = Significantly damaged; 2 = Damaged and potential of significant damage; 3 = Damaged and potential for damage; 4 = Damaged;

5 = Potential for significant damage; 6 = Potential for damage; 7 = All remaining ACBM

* - See Floor Plans for Location of Functional Spaces; ** - Unless Specified, the Asbestos Type is Chrysotile; ND - None Detected

ASBESTOS SAMPLE INSPECTION FORM FOR PHYSICAL & HAZARD ASSESSMENT

Client Name **Puerto Rico Army National Guard**
 Project Name: Vega Baja Readiness Center
 Inspection Date: 8/23/19

Building : Readiness Center
Main Structure
 Page: 3 of 6

Homogeneous Material Description		Material Category	Asbestos Content	Friability	Location of Materials	Asbestos Contents	Total Square Feet of ACM	AHERA Assessment Category (1-7,X, None)	Hazard Ranking (1-7)
I.D. Number	Material Description								
AR-13	Pink Glue from AC Ducts, Assembly Area	Misc.	Yes	NF		3% CHR		X	
AR-14	White Gypsum Board from Communication Room	Misc.	No	NF		ND		X	
AR-15	Gray Epoxy Floor from Communication Room	Misc.	No	NF		ND		X	
AR-16	Cream VFT 12"x 12" from Gym Area	Misc.	No	NF		ND		X	
AR-17	Cream VFT 12"x 12" from Gym Area	Misc.	No	NF		ND		X	
AR-18	Cream VFT 12"x 12" from Gym Area	Misc.	No	NF		ND		X	

Inspected by: Anthony Rivera

Date: 8/23/19

Friability: F = friable, NF = nonfriable, X = not applicable (material is non-ACBM)

AHERA Assessment Category: 1 = Damaged or significantly damaged TSI ACBM; 2 = Damaged friable surfacing ACBM; 3 = Significantly damaged friable surfacing ACBM;

4 = Damaged or significantly damaged friable miscellaneous ACBM; 5 = ACBM with potential for damage; 6 = ACBM with potential for significant damage;

7 = Any remaining friable ACBM or friable suspected ACBM; X = Not applicable (material is non-ACBM or non-friable surfacing or miscellaneous materials);

None = No assessment category provided in original inspection.

Hazard Ranking Category: 1 = Significantly damaged; 2 = Damaged and potential of significant damage; 3 = Damaged and potential for damage; 4 = Damaged;

5 = Potential for significant damage; 6 = Potential for damage; 7 = All remaining ACBM

* - See Floor Plans for Location of Functional Spaces; ** - Unless Specified, the Asbestos Type is Chrysotile; ND - None Detected

ASBESTOS SAMPLE INSPECTION FORM FOR PHYSICAL & HAZARD ASSESSMENTClient Name **Puerto Rico Army National Guard**Building : Readiness CenterProject Name: Vega Baja Readiness CenterMain StructureInspection Date: 8/23/19Page: 4 of 6

Homogeneous Material Description		Material Category	Asbestos Content	Friability	Location of Materials	Asbestos Contents	Total Square Feet of ACM	AHERA Assessment Category (1-7,X, None)	Hazard Ranking (1-7)
I.D. Number	Material Description								
AR-19	Black Vinyl Baseboard 3" from Gym Area	Misc.	No	NF		ND		X	
AR-20	Cream VFT 12"x 12" from Fire Station	Misc.	No	NF		ND		X	
AR-21	Gypsum Board Wall from Fire Station, Office 3	Misc.	No	F		ND		X	
AR-22	White Joint Compound from Fire Station, Office 2	Surf.	No	F		ND		X	
AR-23	Gray VFT 12"x 12" from State Guard Area, Office 2	Misc.	No	NF		ND		X	
AR-24	Gray VFT 12"x 12" from State Guard Area, Office 3	Misc.	No	NF		ND		X	

Inspected by: Anthony RiveraDate: 8/23/19

Friability: F = friable, NF = nonfriable, X = not applicable (material is non-ACBM)

AHERA Assessment Category: 1 = Damaged or significantly damaged TSI ACBM; 2 = Damaged friable surfacing ACBM; 3 = Significantly damaged friable surfacing ACBM;

4 = Damaged or significantly damaged friable miscellaneous ACBM; 5 = ACBM with potential for damage; 6 = ACBM with potential for significant damage;

7 = Any remaining friable ACBM or friable suspected ACBM; X = Not applicable (material is non-ACBM or non-friable surfacing or miscellaneous materials);

None = No assessment category provided in original inspection.

Hazard Ranking Category: 1 = Significantly damaged; 2 = Damaged and potential of significant damage; 3 = Damaged and potential for damage; 4 = Damaged;

5 = Potential for significant damage; 6 = Potential for damage; 7 = All remaining ACBM

* - See Floor Plans for Location of Functional Spaces; ** - Unless Specified, the Asbestos Type is Chrysotile; ND - None Detected

ASBESTOS SAMPLE INSPECTION FORM FOR PHYSICAL & HAZARD ASSESSMENTClient Name **Puerto Rico Army National Guard**Building : Readiness CenterProject Name: Vega Baja Readiness CenterMain StructureInspection Date: 8/23/19Page: 5 of 6

Homogeneous Material Description		Material Category	Asbestos Content	Friability	Location of Materials	Asbestos Contents	Total Square Feet of ACM	AHERA Assessment Category (1-7,X, None)	Hazard Ranking (1-7)
I.D. Number	Material Description								
AR-25	Gray VFT 12"x 12" from FCS Office 1	Misc.	No	NF		ND		X	
AR-26	Acoustical Ceiling Tile 2'x 4' from FCS Area	Misc.	No	F		ND		X	
AR-27	White Gypsum Board from FCS Area, Office 3	Misc.	No	F		ND		X	
AR-28	White Joint Compound from FCS Area	Surf.	No	F		ND		X	
AR-29	A/C Duct Insulation from NBC Area	Misc.	No	F		ND		X	
AR-30	A/C Duct Insulation from NBC Area	Misc.	No	F		ND		X	

Inspected by: Anthony RiveraDate: 8/23/19

Friability: F = friable, NF = nonfriable, X = not applicable (material is non-ACBM)

AHERA Assessment Category: 1 = Damaged or significantly damaged TSI ACBM; 2 = Damaged friable surfacing ACBM; 3 = Significantly damaged friable surfacing ACBM;

4 = Damaged or significantly damaged friable miscellaneous ACBM; 5 = ACBM with potential for damage; 6 = ACBM with potential for significant damage;

7 = Any remaining friable ACBM or friable suspected ACBM; X = Not applicable (material is non-ACBM or non-friable surfacing or miscellaneous materials);

None = No assessment category provided in original inspection.

Hazard Ranking Category: 1 = Significantly damaged; 2 = Damaged and potential of significant damage; 3 = Damaged and potential for damage; 4 = Damaged;

5 = Potential for significant damage; 6 = Potential for damage; 7 = All remaining ACBM

* - See Floor Plans for Location of Functional Spaces; ** - Unless Specified, the Asbestos Type is Chrysotile; ND - None Detected

ASBESTOS SAMPLE INSPECTION FORM FOR PHYSICAL & HAZARD ASSESSMENTClient Name **Puerto Rico Army National Guard**Building : Readiness CenterProject Name: Vega Baja Readiness CenterMain StructureInspection Date: 8/23/19Page: 6 of 6

Homogeneous Material Description		Material Category	Asbestos Content	Friability	Location of Materials	Asbestos Contents	Total Square Feet of ACM	AHERA Assessment Category (1-7,X, None)	Hazard Ranking (1-7)
I.D. Number	Material Description								
AR-31	Gray Vinyl Baseboard 3" from Storage 1	Misc.	No	NF		ND		X	
AR-32	Gray Vinyl Baseboard 3" from Storage 1	Misc.	No	NF		ND		X	
AR-33	Pink Glue from A/C Ducts in Assemble Area	Misc.	Yes	NF		3% CHR		X	

Inspected by: Anthony RiveraDate: 8/23/19

Friability: F = friable, NF = nonfriable, X = not applicable (material is non-ACBM)

AHERA Assessment Category: 1 = Damaged or significantly damaged TSI ACBM; 2 = Damaged friable surfacing ACBM; 3 = Significantly damaged friable surfacing ACBM;

4 = Damaged or significantly damaged friable miscellaneous ACBM; 5 = ACBM with potential for damage; 6 = ACBM with potential for significant damage;

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None = No assessment category provided in original inspection.

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* - See Floor Plans for Location of Functional Spaces; ** - Unless Specified, the Asbestos Type is Chrysotile; ND - None Detected

Appendix III





ANALYTICAL ENVIRONMENTAL SERVICES INTERNATIONAL, INC.

611 Monserrate Street, 2nd. Floor, Santurce, P.R. 00907

PH. (787) 722-0220 Fax (787) 724-5788

Job ID: B19080025



REPORT NUMBER



RP19082708

POLARIZED LIGHT MICROSCOPY (PLM) BULK SAMPLE ANALYSIS REPORT

Client Name:	National Guard (PRARNG)	Date Collected:	08/23/2019
Project Name:	Vega Baja Readiness Center, Vega Baja	Date Received:	08/27/2019
Project ID:			

RESULT OF ANALYSIS (BY % AREA VISUAL ESTIMATE)

Lab Sample ID	Sample Description	Asbestos Detected	Asbestos Fibers	Other Fibers	Non - Fibrous Material
B19080025.01 B19080025.01.A AR-1 Layer % of Total :100% Date Analyzed: 08/27/2019 Sample Location: Joint Compound from Office 2 (Recruiting) Comments: Paint Included As Binders	Soft, Silty With Paint And Fibers Cream	No		Cellulose 4	Binders/Paint 96

B19080025.02 B19080025.02.A AR-2 Layer % of Total :100% Date Analyzed: 08/27/2019 Sample Location: Ceiling Tile 2'x 4' from Office 4 (Recruiting) Comments:	Semi Hard, Fibrous with Perlite Gray	No		Cellulose 18 Synthetic 20 Mineral Wool 22	Perlite 12 Binders/Paint 28
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B19080025.03 B19080025.03.A AR-3 Layer % of Total :100% Date Analyzed: 08/27/2019 Sample Location: Black Vinyl Baseboard 3" from Supply Office Comments:	Hard, Rubber with Glue and Fibers Black	No		Cellulose 3	Rubber 91 Glue 6
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B19080025.04 B19080025.04.A AR-4 Layer % of Total :100% Date Analyzed: 08/27/2019 Sample Location: Mastic on Floor, Storage Comments:	Hard, Compact with Black Mastic and Fibers Black	Yes	Chrysotile 2	Cellulose 3	Bitumen 40 Sand/Aggregates 55
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MICROANALYST:

[Karen Acosta]

QUALITY CONTROL:

[Elme Rivera]

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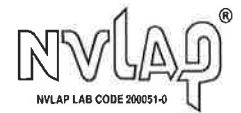


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Job ID: B19080025



REPORT NUMBER



RP19082708

POLARIZED LIGHT MICROSCOPY (PLM) BULK SAMPLE ANALYSIS REPORT

Client Name:	National Guard (PRARNG)	Date Collected:	08/23/2019
Project Name:	Vega Baja Readiness Center, Vega Baja	Date Received:	08/27/2019
Project ID:			

RESULT OF ANALYSIS (BY % AREA VISUAL ESTIMATE)

Lab Sample ID	Sample Description	Asbestos Detected	Asbestos Fibers	Other Fibers	Non - Fibrous Material
B19080025.05 B19080025.05.A AR-5	Semi Hard, Compact with Paint and Fibers Gray	No		Cellulose 3	Sand/Aggregates 72 Binders/Paint 25

Layer % of Total :100%

Date Analyzed: 08/27/2019

Sample Location: Gray Epoxy Floor from Storage 2

Comments:

Paint Included As Binders

B19080025.06 B19080025.06.A AR-6	Hard, Compact, Partly Granular with Glue Other - and Fibers Gray	No		Cellulose 2	Binders/Paint 65 Sand/Aggregates 25 Glue 8
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Layer % of Total :100%

Date Analyzed: 08/27/2019

Sample Location: Gray Vinyl Floor Tile 12"x 12" from Storage 1

Comments:

B19080025.07 B19080025.07.A AR-7	Hard, Rubbber with Glue and Fibers Gray	No		Cellulose 3	Rubber 91 Glue 6
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Layer % of Total :100%

Date Analyzed: 08/27/2019

Sample Location: Gray Vinyl Baseboard 3" from Storage 1

Comments:

B19080025.08 B19080025.08.A AR-8	Soft, Silty With Paint And Fibers Cream	No		Cellulose 5	Binders/Paint 95
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Layer % of Total :100%

Date Analyzed: 08/27/2019

Sample Location: Joint Compound from Wall, Storage Room

Comments:

MICROANALYST:

[Karen Acosta]

QUALITY CONTROL:

[Elme Rivera]

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REPORT NUMBER



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POLARIZED LIGHT MICROSCOPY (PLM) BULK SAMPLE ANALYSIS REPORT

Client Name:	National Guard (PRARNG)	Date Collected:	08/23/2019
Project Name:	Vega Baja Readiness Center, Vega Baja	Date Received:	08/27/2019
Project ID:			

RESULT OF ANALYSIS (BY % AREA VISUAL ESTIMATE)

Lab Sample ID	Sample Description	Asbestos Detected	Asbestos Fibers	Other Fibers	Non - Fibrous Material
Client Sample ID					

Paint Included As Binders

B19080025.09	Semi Hard, Glue and Fibers	No		Cellulose 5	Glue 95
B19080025.09.A	Gray				

AR-9

Layer % of Total :100%

Date Analyzed: 08/27/2019

Sample Location: Gray Glue from Sink Area, Break Room

Comments:

B19080025.10	Semi Hard, Fibrous with Perlite	No		Cellulose 18	Perlite 12
B19080025.10.A	and Paint			Synthetic 20	Binders/Paint 30
AR-10	Gray			Glass Fibers 20	

Layer % of Total :100%

Date Analyzed: 08/27/2019

Sample Location: White Acoustical Ceiling Tile 2'x 4' from Break Room

Comments:

Paint Included As Binders

B19080025.11	Soft, Fibrous with Aluminum	No		Cellulose 8	Aluminum 10
B19080025.11.A	Cream			Glass Fibers 82	

AR-11

Layer % of Total :100%

Date Analyzed: 08/27/2019

Sample Location: A/C Insulation Sample from Medical Room

Comments:

B19080025.12	Soft, Glue and Fibers	Yes	Chrysotile 4	Cellulose 8	Glue 88
B19080025.12.A	Brown				

AR-12

Layer % of Total :100%

Date Analyzed: 08/27/2019

Sample Location: Pink Glue from AC Ducts, Assembly Area

MICROANALYST:

[Karen Acosta]

QUALITY CONTROL:

[Elme Rivera]

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REPORT NUMBER



RP19082708

POLARIZED LIGHT MICROSCOPY (PLM) BULK SAMPLE ANALYSIS REPORT

Client Name:	National Guard (PRARNG)	Date Collected:	08/23/2019
Project Name:	Vega Baja Readiness Center, Vega Baja	Date Received:	08/27/2019
Project ID:			

RESULT OF ANALYSIS (BY % AREA VISUAL ESTIMATE)

Lab Sample ID	Sample Description	Asbestos Detected	Asbestos Fibers	Other Fibers	Non - Fibrous Material
Client Sample ID					

Comments:

B19080025.13 Soft, Glue and Fibers Yes Chrysotile 3 Cellulose 8 Glue 89

B19080025.13.A

AR-13

Layer % of Total :100%

Date Analyzed: 08/27/2019

Sample Location: Pink Glue from AC Ducts, Assembly Area

Comments:

B19080025.14 Semi Hard with Fibers and Paint No Cellulose 10 Binders/Paint 80

B19080025.14.A

AR-14

Layer % of Total :100%

Date Analyzed: 08/27/2019

Sample Location: White Gypsum Board from Communication Room

Comments:

Paint Included As Binders

B19080025.15 Hard, Compact, Parly Granular No Cellulose 2 Binders/Paint 68

B19080025.15.A

AR-15

Layer % of Total :100%

Date Analyzed: 08/27/2019

Sample Location: Gray Epoxy Floor from Communication Room

Comments:

B19080025.16 Hard, Compact, Parly Granular No Cellulose 2 Binders/Paint 68

B19080025.16.A

AR-16

Layer % of Total :100%

Date Analyzed: 08/27/2019

Sample Location: Cream VFT 12"x 12" from Gym Area

MICROANALYST:

[Karen Acosta]

QUALITY CONTROL:

[Elme Rivera]

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POLARIZED LIGHT MICROSCOPY (PLM) BULK SAMPLE ANALYSIS REPORT

Client Name:	National Guard (PRARNG)	Date Collected:	08/23/2019
Project Name:	Vega Baja Readiness Center, Vega Baja	Date Received:	08/27/2019
Project ID:			

RESULT OF ANALYSIS (BY % AREA VISUAL ESTIMATE)

Lab Sample ID	Sample Description	Asbestos Detected	Asbestos Fibers	Other Fibers	Non - Fibrous Material
Client Sample ID					

Comments:

B19080025.17 Hard, Compact, Partly Granular No Cellulose 2 Binders/Paint 65
B19080025.17.A with Glue Sand/Aggregates 25
AR-17 Other - and Fibers Glue 8
Layer % of Total :100%
Date Analyzed: 08/27/2019
Sample Location: Cream VFT 12"x 12" from Gym Area

Comments:

B19080025.18 Hard, Rubbber with Glue and No Cellulose 2 Binders/Paint 66
B19080025.18.A Fibers Sand/Aggregates 24
AR-18 Cream Glue 8
Layer % of Total :100%
Date Analyzed: 08/27/2019
Sample Location: Cream VFT 12"x 12" from Gym Area

Comments:

B19080025.19 Hard, Rubbber with Glue and No Cellulose 2 Rubber 86
B19080025.19.A Fibers Black Glue 12
AR-19
Layer % of Total :100%
Date Analyzed: 08/27/2019
Sample Location: Black Vinyl Baseboard 3" from Gym Area

Comments:

B19080025.20 Hard, Compact, Partly Granular No Cellulose 2 Binders/Paint 69
B19080025.20.A with Glue Sand/Aggregates 24
AR-20 Other - and Fibers Glue 5
Layer % of Total :100%
Date Analyzed: 08/27/2019
Sample Location: Cream VFT 12"x 12" from Fire Station

Comments:

MICROANALYST:

[Karen Acosta]

QUALITY CONTROL:

[Elme Rivera]

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REPORT NUMBER



RP19082708

POLARIZED LIGHT MICROSCOPY (PLM) BULK SAMPLE ANALYSIS REPORT

Client Name:	National Guard (PRARNG)	Date Collected:	08/23/2019
Project Name:	Vega Baja Readiness Center, Vega Baja	Date Received:	08/27/2019
Project ID:			

RESULT OF ANALYSIS (BY % AREA VISUAL ESTIMATE)

Lab Sample ID Client Sample ID	Sample Description	Asbestos Detected	Asbestos Fibers	Other Fibers	Non - Fibrous Material
B19080025.21 B19080025.21.A AR-21 Layer % of Total :100% Date Analyzed: 08/27/2019 Sample Location: Gypsum Board Wall from Fire Station, Office 3 Comments: Paint Included As Binders	Semi Hard with Paint and Fibers Cream	No		Cellulose 15	Binders/Paint 85

B19080025.22 B19080025.22.A AR-22 Layer % of Total :100% Date Analyzed: 08/27/2019 Sample Location: White Joint Compound from Fire Station, Office 2 Comments: Paint Included As Binders	Soft, Silty With Paint And Fibers Other - and Fibers White	No		Cellulose 10	Binders/Paint 90
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B19080025.23 B19080025.23.A AR-23 Layer % of Total :100% Date Analyzed: 08/27/2019 Sample Location: Gray VFT 12"x 12" from State Guard Area, Office 2 Comments:	Hard, Compact, Partly Granular with Glue Other - and Fibers Gray	No		Cellulose 2	Binders/Paint 69 Sand/Aggregates 24 Glue 5
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B19080025.24 B19080025.24.A AR-24 Layer % of Total :100% Date Analyzed: 08/27/2019 Sample Location: Gray VFT 12"x 12" from State Guard Area, Office 3	Hard, Compact, Partly Granular with Glue Other - and Fibers Cream	No		Cellulose 2	Binders/Paint 71 Sand/Aggregates 22 Glue 5
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MICROANALYST:

[Karen Acosta]

QUALITY CONTROL:

[Elme Rivera]

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REPORT NUMBER



RP19082708

POLARIZED LIGHT MICROSCOPY (PLM) BULK SAMPLE ANALYSIS REPORT

Client Name:	National Guard (PRARNG)	Date Collected:	08/23/2019
Project Name:	Vega Baja Readiness Center, Vega Baja	Date Received:	08/27/2019
Project ID:			

RESULT OF ANALYSIS (BY % AREA VISUAL ESTIMATE)

Lab Sample ID	Sample Description	Asbestos Detected	Asbestos Fibers	Other Fibers	Non - Fibrous Material
Client Sample ID					

Comments:

B19080025.25 Hard, Compact, Partly Granular with Glue
B19080025.25.A Other - and Fibers
AR-25 Cream
Layer % of Total :100%

Date Analyzed: 08/27/2019

Sample Location: Gray VFT 12"x 12" from FCS Office 1

Comments:

B19080025.26 Semi Hard, Fibrous with Perlite
B19080025.26.A and Paint
AR-26 Gray
Layer % of Total :100%

Date Analyzed: 08/27/2019

Sample Location: Acoustical Ceiling Tile 2'x 4' from FCS Area

Comments:

Paint Included As Binders

B19080025.27 Semi Hard with Paint and Fibers
B19080025.27.A Cream
AR-27
Layer % of Total :100%

Date Analyzed: 08/27/2019

Sample Location: White Gypsum Board from FCS Area, Office 3

Comments:

Paint Included As Binders

B19080025.28 Semi Hard with Paint and Fibers
B19080025.28.A Cream
AR-28
Layer % of Total :100%

Date Analyzed: 08/27/2019

MICROANALYST:

[Karen Acosta]

QUALITY CONTROL:

[Elme Rivera]

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF OF THE US GOVERNMENT. ANALYSIS OF FLOOR TILE IS NOT COVERED BY THE CURRENT NEW YORK ELAP CERTIFICATION. EPA METHOD 600/M4-82-020: INTERIM METHOD FOR THE DETERMINATION OF ASBESTOS IN BULK INSULATION SAMPLES.



ANALYTICAL ENVIRONMENTAL SERVICES INTERNATIONAL, INC.

611 Monserrate Street, 2nd. Floor, Santurce, P.R. 00907

PH. (787) 722-0220 Fax (787) 724-5788

Job ID: B19080025



REPORT NUMBER



RP19082708

POLARIZED LIGHT MICROSCOPY (PLM) BULK SAMPLE ANALYSIS REPORT

Client Name:	National Guard (PRARNG)	Date Collected:	08/23/2019
Project Name:	Vega Baja Readiness Center, Vega Baja	Date Received:	08/27/2019
Project ID:			

RESULT OF ANALYSIS (BY % AREA VISUAL ESTIMATE)

Lab Sample ID	Sample Description	Asbestos Detected	Asbestos Fibers	Other Fibers	Non - Fibrous Material
Client Sample ID					

Sample Location: White Joint Compound from FCS Area

Comments:

Paint Included As Binders

B19080025.29	Soft, Fibrous with Aluminum Cream	No		Glass Fibers 90	Aluminum 10
---------------------	-----------------------------------	----	--	-----------------	-------------

B19080025.29.A

AR-29

Layer % of Total :100%

Date Analyzed: 08/27/2019

Sample Location: A/C Duct Insulation from NBC Area

Comments:

B19080025.30	Soft, Fibrous with Aluminum Cream	No		Glass Fibers 85	Aluminum 15
---------------------	-----------------------------------	----	--	-----------------	-------------

B19080025.30.A

AR-30

Layer % of Total :100%

Date Analyzed: 08/27/2019

Sample Location: A/C Duct Insulation from NBC Area

Comments:

B19080025.31	Hard, Rubbber with Glue and Fibers Gray	No		Cellulose 3	Rubber 87 Glue 10
---------------------	---	----	--	-------------	----------------------

B19080025.31.A

AR-31

Layer % of Total :100%

Date Analyzed: 08/27/2019

Sample Location: Gray Vinyl Baseboard 3" from Storage 1

Comments:

B19080025.32	Hard, Rubbber with Glue and Fibers Gray	No		Cellulose 4	Rubber 90 Glue 6
---------------------	---	----	--	-------------	---------------------

B19080025.32.A

AR-32

Layer % of Total :100%

Date Analyzed: 08/27/2019

MICROANALYST:

[Karen Acosta]

QUALITY CONTROL:

[Elme Rivera]

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF THE US GOVERNMENT. ANALYSIS OF FLOOR TILE IS NOT COVERED BY THE CURRENT NEW YORK ELAP CERTIFICATION. EPA METHOD 600/M4-82-020: INTERIM METHOD FOR THE DETERMINATION OF ASBESTOS IN BULK INSULATION SAMPLES.



ANALYTICAL ENVIRONMENTAL SERVICES INTERNATIONAL, INC.

611 Monserrate Street, 2nd. Floor, Santurce, P.R. 00907

PH. (787) 722-0220 Fax (787) 724-5788

Job ID: B19080025



REPORT NUMBER



RP19082708

POLARIZED LIGHT MICROSCOPY (PLM) BULK SAMPLE ANALYSIS REPORT

Client Name:	National Guard (PRARNG)	Date Collected:	08/23/2019
Project Name:	Vega Baja Readiness Center, Vega Baja	Date Received:	08/27/2019
Project ID:			

RESULT OF ANALYSIS (BY % AREA VISUAL ESTIMATE)

Lab Sample ID	Sample Description	Asbestos Detected	Asbestos Fibers	Other Fibers	Non - Fibrous Material
Client Sample ID					

Sample Location: Gray Vinyl Baseboard 3" from Storage 1

Comments:

B19080025.33	Soft, Glue and Fibers	Yes	Chrysotile 3	Cellulose 6	Glue 91
B19080025.33.A	Brown				

AR-33

Layer % of Total :100%

Date Analyzed: 08/27/2019

Sample Location: Pink Glue from A/C Ducts in Assemble Area

Comments:

Comments:

FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH COMPONENT IS ANALYZED AND REPORTED SEPARATELY.

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH US EPA METHOD: 600/M4-82-020 of Dec. 1982 and 600/R-93/116 OF JULY 93.

MICROANALYST:

[Karen Acosta]

QUALITY CONTROL:

[Elme Rivera]

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF OF THE US GOVERNMENT. ANALYSIS OF FLOOR TILE IS NOT COVERED BY THE CURRENT NEW YORK ELAP CERTIFICATION. EPA METHOD 600/M4-82-020: INTERIM METHOD FOR THE DETERMINATION OF ASBESTOS IN BULK INSULATION SAMPLES.

ANALYTICAL ENVIRONMENTAL SERVICES INTERNATIONAL, INC

611 Monserrate, 2nd. Floor, Santurce, P.R. 00907

Ph: (787) 722-0220 Fax: (787) 724-5788



TESTING

Transmittal Sheet for Bulk Sample Analysis

Client Name: Puerto Rico Army National Guard

Address:

Contact: Ilena Mejía

Phone/Fax: (787) 396-2125

Project Name: Vega Baja Readiness Center

Site Location: Vega Baja

Samplers Name: Anthony Rivera

Company: AESI

Chain of Custody Record

Sample I. D.	Sample Description (i.e. Location, Name, etc.)	Collected		Analysis Required		Comments	Laboratory I.D.
		Date	Time	PLM	Other		
AR-1	See Hazard Assessment	8-23-19		x			190800 75.01
AIR-2				x			12
AR-3				x			13
AR-4				x			14
AIR-5				x			15
AIR-6				x			16
AIR-7				x			17
AIR-8				x			18
AR-9				x			19
AR-10				x			10
AIR-11				x			11
AIR-12				x			12
AR-13				x			13

Turnaround Time:

Normal:



Rush:



Relinquished By:

Date/ Time:

Received By:

Date/ Time:

Relinquished By:

Date/ Time:

Received By:

Date/ Time:

Delivered Directly to Lal

Method of Shipment:

Lab. Recipient:

Date:

Job ID: B19080025



National Guard (PRARNG)

COC-BULK-011/RI

ANALYTICAL ENVIRONMENTAL SERVICES INTERNATIONAL, INC

611 Monserrate, 2nd. Floor, Santurce, P.R. 00907

Ph: (787) 722-0220 Fax: (787) 724-5788



TESTING

Transmittal Sheet for Bulk Sample Analysis

Client Name: Puerto Rico Army National Guard

Address:

Contact: Ilena Mejía

Phone/Fax: (787) 396-2125

Project Name: Vega Baja Readiness Center

Site Location: Vega Baja

Samplers Name: Anthony Rivera

Company: AESI

Chain of Custody Record

Sample I. D.	Sample Description (i.e. Location, Name, etc.)	Collected		Analysis Required		Comments	Laboratory I.D.
		Date	Time	PLM	Other		
AIR-14	See Hazard Assessment	8-23-15		✓			14
AIR-15				✓			15
AIR-16				✓			16
AIR-17				✓			17
AIR-18				✓			18
AIR-19				✓			19
AIR-20				✓			20
AIR-21				✓			21
AIR-22				✓			22
AIR-23				✓			23
AIR-24				✓			24
AIR-25				✓			25
AIR-26				✓			26

Turnaround Time:

Normal:

Rush:

Relinquished By:		Delivered Directly to Lab:	Job ID: B19080025 National Guard (PRARNG)
Date/ Time:	8-23-15	Method of Shipment:	
Received By:		Lab. Recipient:	
Date/ Time:		Date:	
Relinquished By:			
Date/ Time:			
Received By:			
Date/ Time:			

COC-BULK-011/RI

ANALYTICAL ENVIRONMENTAL SERVICES INTERNATIONAL, INC

611 Monserrate, 2nd. Floor, Santurce, P.R. 00907

Ph: (787) 722-0220 Fax: (787) 724-5788



TESTING

Transmittal Sheet for Bulk Sample Analysis

Client Name: Puerto Rico Army National Guard

Address:

Contact: Ilena Mejía

Phone/Fax: (787) 396-2125

Project Name: Vega Baja Readiness Center

Site Location: Vega Baja

Samplers Name: Anthony Rivera

Company: AESI

Chain of Custody Record

Sample I. D.	Sample Description (i.e. Location, Name, etc.)	Collected		Analysis Required		Comments	Laboratory I.D.
		Date	Time	PLM	Other		
AIR-27	Sec Hazard Assessment	8-23-15		x			27
AIR-28				x			28
AIR-29				x			29
AIR-30				x			30
AIR-31				x			31
AIR-32				x			32
AIR-33				x			33

Turnaround Time:

Normal: ☒Rush: ☐

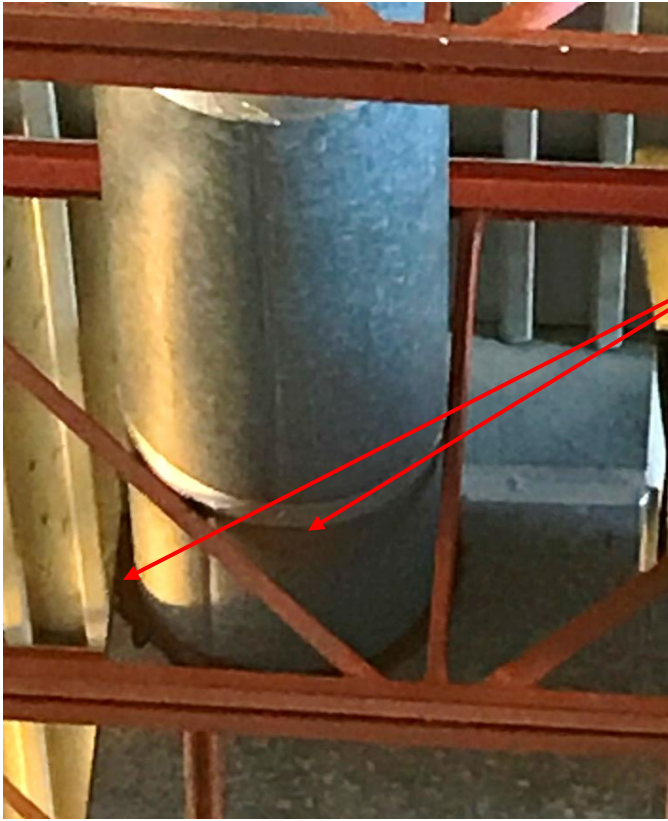
Relinquished By:	Delivered Directly to La	Job ID: B19080025
Date/ Time: 8-23-15	Method of Shipment:	
Received By:	Lab. Recipient:	 National Guard (PRARNG)
Date/ Time:	Date:	
Relinquished By:		
Date/ Time:		
Received By:		
Date/ Time:		

COC-BULK-011/RI

Appendix IV



Selective Photos

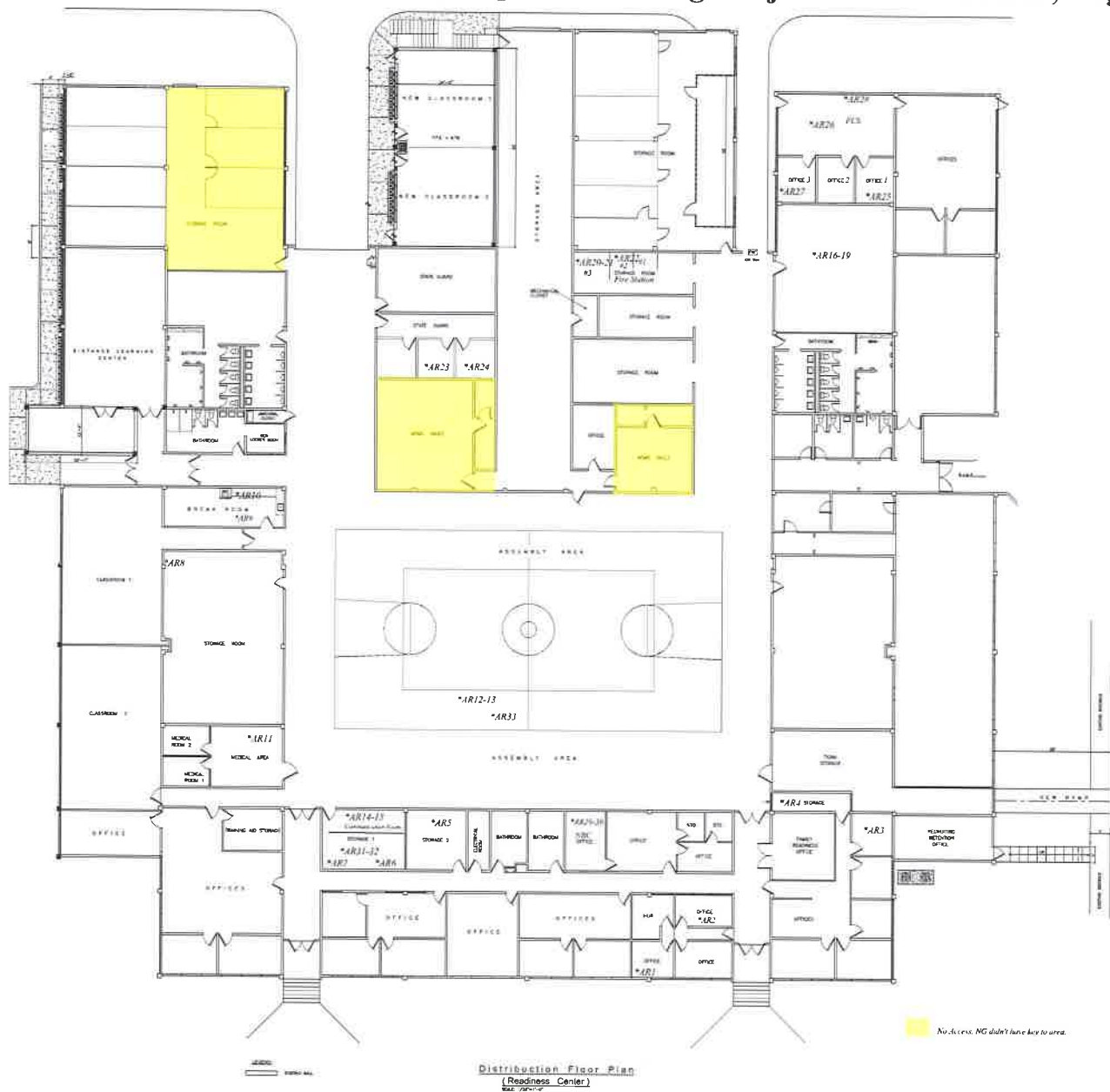


**Asbestos Containing Red Glue
on A/C Ducts
Assembly Area**

Appendix V

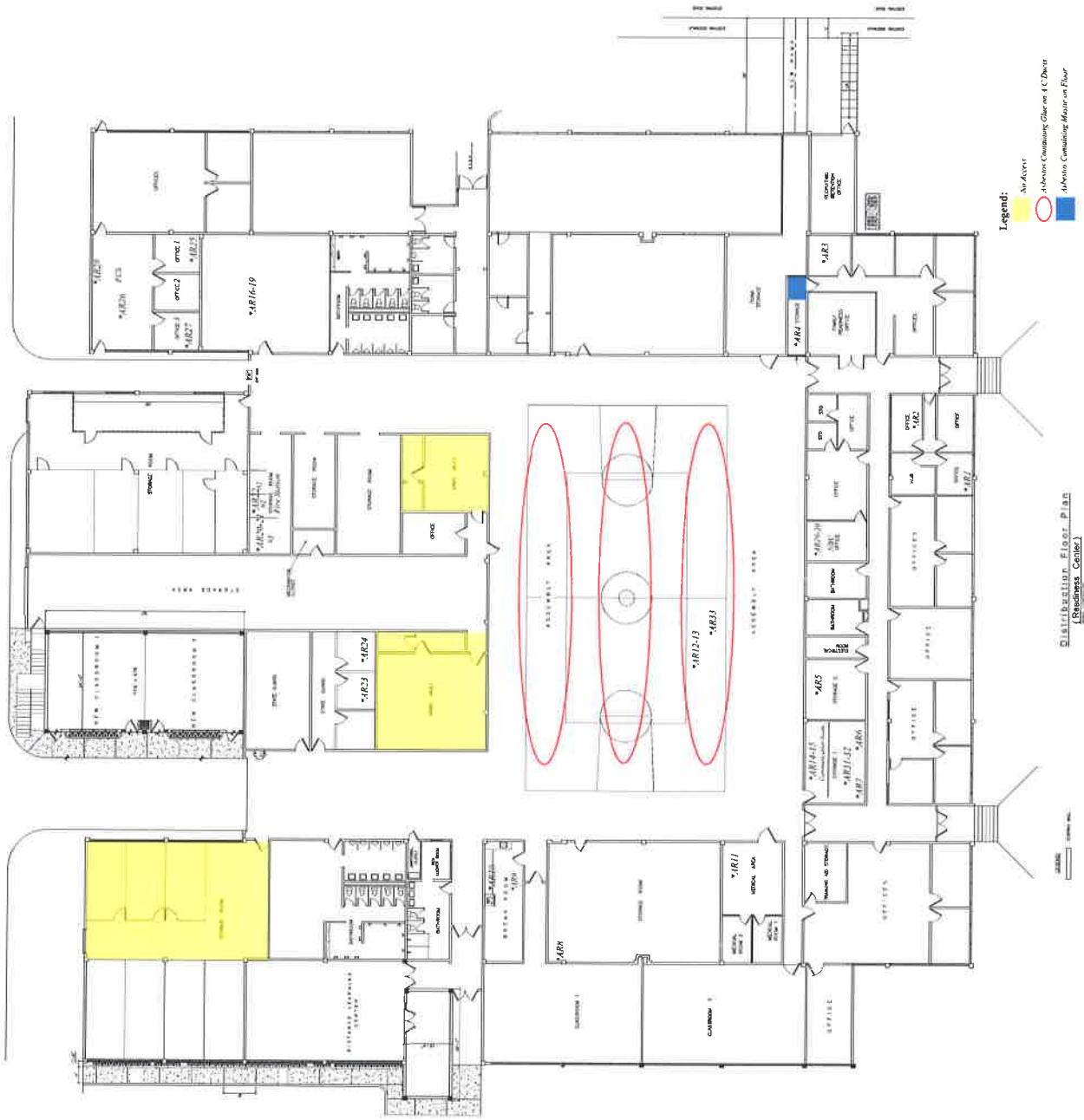


Schematic Location of Bulk Sampling Points at Vega Baja Readiness Center, Vega Baja, PR



DESIGN	A. FONSECA						
DRAWN	DANIEL RUIZ						
SCALE	1/8"=1'-0"						
DATE							
PUERTO RICO ARMY NATIONAL GUARD DIRECTORATE OF ENGINEERING P.O. BOX 3384 SAN JUAN, PUERTO RICO 00924-3384 VEGA BAJA READINESS CENTER TRANSFORMATION / REHABILITATION							
SHEET TITLE: Proposed Floor Plan (Readiness Center)							
<table border="1"> <thead> <tr> <th>NO.</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td></td> </tr> </tbody> </table>		NO.	DESCRIPTION	DATE	1		
NO.	DESCRIPTION	DATE					
1							
SHEET NUMBER: 1 OF 1							
SHEET NAME: A-102							

Schematic Location of ACM at Vega Baja Readiness Center, Vega Baja, PR



Legend:

- No Asbestos
- Asbestos Contaminating Material on Floor
- Asbestos Contaminating Material on Wall

Distribution Floor Plan
(Revised 2002)

Scale: 1/8" = 1'-0"



**ENVIRONMENTAL SURVEY
FOR
ASBESTOS CONTAINING MATERIALS (ACM)
AT PONCE READINESS CENTER
PONCE, PUERTO RICO**

Prepared For:
PR National Guard

September 2019

Prepared By:

Analytical Environmental
Services International, Inc.
611 Monserrate Street
2nd Floor, Santurce, P.R. 00907
(787) 722-0220 / Fax (787) 724-5788

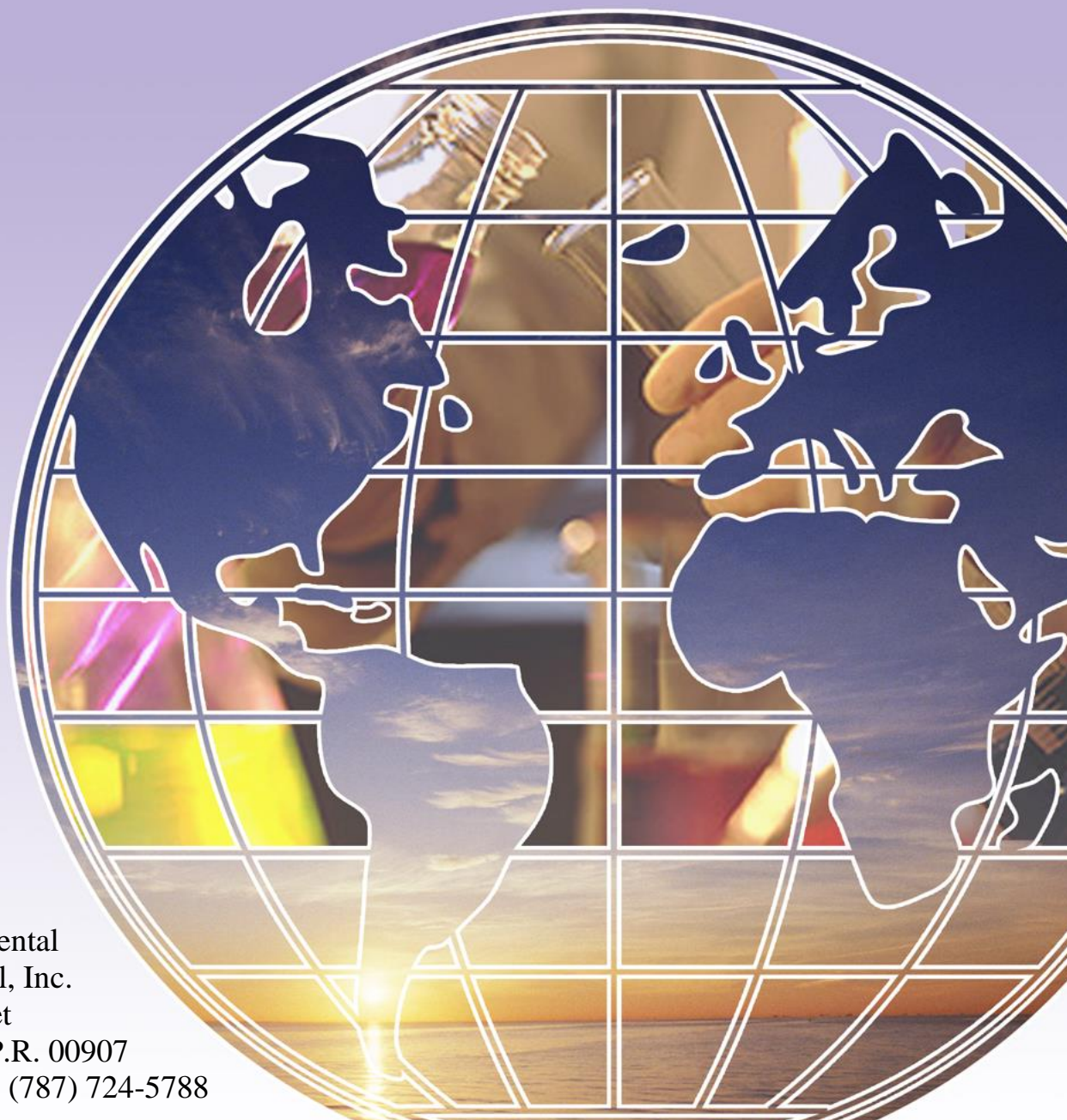


TABLE OF CONTENTS

I. SUMMARY

1.0 INTRODUCTION

2.0 GENERAL BACKGROUND

3.0 PROJECT IDENTIFICATION/DESCRIPTION

4.0 SAMPLING METHODS

5.0 SAMPLING RESULTS

6.0 CONCLUSIONS

APPENDIX I - Certifications and Accreditations

APPENDIX II - Physical Assessment Inspection Form

APPENDIX III - Analytical Results

APPENDIX IV - Selective Photos

APPENDIX V- Floor Plans with Location of Sampling
Points and Distribution of ACM

I. SUMMARY

Analytical Environmental Services International, Inc (AES International) was contracted to perform an Asbestos Containing Materials (ACM) survey for the Ponce Readiness Center located in Ponce, Puerto Rico. The ACM inspection was conducted on 9/3/19 by Elme Rivera, an EQB certified asbestos inspector.

The scope of the survey included sampling of suspected ACM present and analysis of the samples collected. During the survey, thirty-three (33) samples were collected from suspected materials. Samples collected were analyzed by Polarized Light Microscopy (PLM) for asbestos fibers. ACM identified include:

- Gray 12"x12" VFT on top of VFT with Black mastic. Material is classified as miscellaneous, category I, non-friable, ACM. Approximately 1,526 sq.ft. of this material are present. VFT are covered by ceramic tiles.
- Green 12"x12" VFT on top of VFT with Black Mastic. Material is classified as miscellaneous, category I, non-friable, ACM. Approximately 484 sq.ft. of this material are present. VFT are covered by ceramic tiles.
- Mastic behind chalkboard in Room 1-13 was not available for sampling therefore assumed as ACM.

If demolition/remodeling activities will be conducted in the nearest future it is recommended to remove all ACM known, or suspected, present within the structure, as to comply with NESHAP/EQB requirements.

1.0 INTRODUCTION

Analytical Environmental Services International, Inc (AES International) was contracted to perform an Asbestos Containing Materials (ACM) survey for the Ponce Readiness Center located in Ponce, Puerto Rico.

The ACM inspection was conducted on 9/3/19, by Elme Rivera, an EQB/AHERA certified asbestos inspector (see Appendix I for credentials). The scope of the survey included sampling of suspected ACM and analysis of samples collected.

Samples collected were sent to AES International Inc., a NVLAP accredited laboratory located in Santurce, Puerto Rico. Samples were analyzed by Polarized Light Microscopy method (PLM), in accordance to EPA recommended procedures. The samples are defined as asbestos containing materials (ACM) if they contain more than 1% asbestos.

2.0 GENERAL BACKGROUND

Asbestos was used in the construction industry from 1900 to 1989. It is still being used today in various products. The health effects of asbestos have been studied since the 1930's. More health studies have been conducted in asbestos than any other natural substance. The mere presence of asbestos containing materials does not necessary constitute a health hazard. However, when these materials become disturbed from building renovation, maintenance, or other every day activities that allow fibers to be released into the environment, a potential hazard does exist.

The relationship between exposure level and health risk is very complex. Although this relationship is not completely understood, asbestos exposure has been associated with various types of lung diseases including a debilitating lung disease called ASBESTOSIS; a rare cancer of chest called MESOTHELIOMA; and cancers of the esophagus, stomach, colon and other organs. Asbestosis is not fatal; it is however incurable. One who has it cannot breathe easily and physical activity becomes limited. MESOTHELIOMA is 100% fatal, as there is no cure. These diseases can be directly linked to asbestos because of the mineral particles that can be find in the lining of the lungs and stomach, since the body cannot absorb these minerals. Tests have determined that asbestos can cause cancer, but scientists disagree on the amount of asbestos fibers that must be inhaled to cause cancer. The nose filters out all visible particles. Therefore, only the microscopic fibers are the one who cause the problems.

Studies indicate different health effect resulting from exposure to chrysotile asbestos versus exposure to the amphibole form of asbestos. The latter, which include tremolite, amosite, actinolite, anthophyllite and crocidolite have more significant health impact than chrysotile.

Some scientists cite studies concluding that is the size of the fibers deposited in the lungs that result in cancer. Long, thin fibers, greater than 8 microns in length and less than 0.25 microns in diameter show the highest potential of cancer development.

2.1 National Emission Standards for Hazardous Air Pollutants (NESHAP)

The EPA's rules concerning the application, removal, and disposal of ACM, as well as manufacturing, spraying and fabricating of ACM were issued under the asbestos NESHAP regulation (U.S. EPA National Emission Standards for Hazardous Air Pollutants, 40 CFR 61 Subpart M, October 30, 1987). The asbestos NESHAP regulation governs asbestos demolition and renovation projects in all facilities. The NESHAP rule usually requires owners or operators to have all friable ACM removed before the building is demolished and may require its removal before renovation. If friable ACM shall be disturbed, the NESHAP rule may require appropriate work practices, or procedures for emission control. The rule states that any ACM, which may become friable, poses a potential hazard that should be addressed.

A revised NESHAP ruling was released on November 20, 1990, effective February 20, 1991 which includes as the responsibility of the owner, or operator, to "prior to the commencement of the demolition or renovation, thoroughly inspect the affected facility or part of the facility where demolition or renovation operation will occur for the presence of asbestos, including Category I and Category II non-friable ACM." (40 CFR, Part 61, National Emission Standards for hazardous Air Pollutants, Asbestos NESHAP Revision, Final Rule, November 20, 1990).

3.0 PROJECT IDENTIFICATION/DESCRIPTION

The area investigated consists of the Readiness main building and two small back structures in the back. The main building consists of various classrooms, 2 bathrooms and 1 visitor bathroom, office spaces, various storages, recruiting office, training office, supply room, vault room and parts room.

4.0 SAMPLING METHODS

Thirty-three (33) samples were collected from suspected ACM present in the main building. No suspect ACM were found in the two back structures. Samples were collected from VFT and mastic, plaster, caulking, gypsum board, joint compound, ceiling tiles, baseboards, under sink spray on, built-up and flashing material from the roof.

5.0 SAMPLING RESULTS

Location of materials and results are shown in the physical assessment form in Appendix II. Analytical results of samples collected are shown in Appendix III. The results are

presented according to functional areas tested. The suspected samples collected were analyzed by Polarized Light Microscopy (PLM) for asbestos fibers.

Asbestos fibers above 1% area (ACM) were identified in three (3) samples collected from VFT and mastic (see summary Table 1).

Mastic behind chalkboard in Room 1-13 was not available for sampling therefore assumed as ACM.

6.0 CONCLUSIONS

ACM were detected during a survey conducted for the Ponce Readiness Center in Ponce, Puerto Rico. Results are presented in the summary.

The ACM sampling relates to surfaces accessible and not covered by rigid barriers. Should any material hidden under surfaces, or architectural components be present, it must be assumed as ACM.



Elme Rivera, EQB Asbestos Inspector
Lic#: ASB-0319-0201-SI

**Table 1. Summary of Asbestos Containing Materials (ACM) for Ponce Readiness Center,
Ponce, Puerto Rico.**

Structure	Sample ID	Description	Result (Percentage of Asbestos)
Main Building	NG-P-ER1	Gray VFT 12"x 12" on Top of VFT with Mastic from Room 1-2 (area covered with Ceramic)	4% CHR, Asbestos found in both Bitumen and Floor Tile
	NG-P-ER23	Gray VFT 12"x 12" on Top of VFT with Mastic from Room 1-4 (area covered with Ceramic)	4% CHR, Asbestos found in both Bitumen and Floor Tile
	NG-P-ER32	Green VFT 12"x 12" on Top of VFT with Mastic from Room 1-19	3% CHR, Asbestos found in both Bitumen and Floor Tile

Appendix I



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

AES International

611 Monserrate

Santurce, PR 00907

Mr. Ady Padan

Phone: 787-722-0220 Fax: 787-724-5788

Email: yotal@bellsouth.net

<http://www.aesipr.org>

ASBESTOS FIBER ANALYSIS

NVLAP LAB CODE 200051-0

Bulk Asbestos Analysis

Code

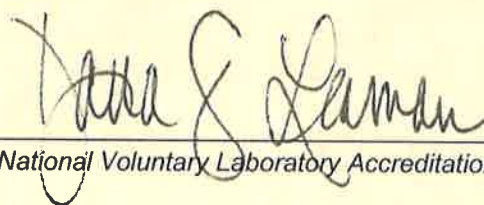
Description

18/A01

EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples

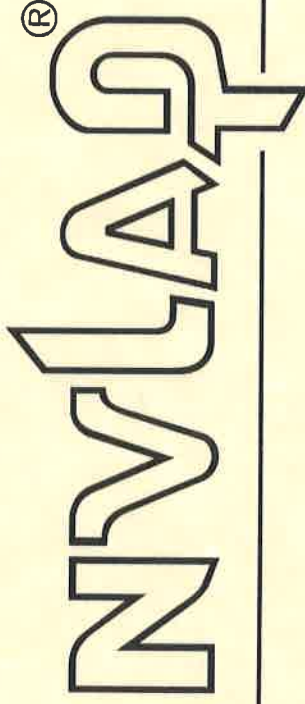
18/A03

EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials



For the National Voluntary Laboratory Accreditation Program

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 200051-0

AES International

Santurce, PR

*is accredited by the National Voluntary Laboratory Accreditation Program for specific services,
listed on the Scope of Accreditation, for:*

Asbestos Fiber Analysis

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).*

2019-01-01 through 2019-12-31

Effective Dates

A handwritten signature in dark ink, appearing to read "Peter J. Lamm".

For the National Voluntary Laboratory Accreditation Program

ACM Inspector Credentials



Appendix II



ASBESTOS SAMPLE INSPECTION FORM FOR PHYSICAL & HAZARD ASSESSMENTClient Name **Puerto Rico Army National Guard**Building : **Ponce Readiness Center**Project Name: **Ponce Readiness Center****Main Structure**Inspection Date: **9/3/19**Page: **1** of **6**

Homogeneous Material Description		Material Category	Asbestos Content	Friability	Location of Materials	Asbestos Contents	Total Square Feet of ACM	AHERA Assessment Category (1-7,X, None)	Hazard Ranking (1-7)
I.D. Number	Material Description								
NG-P-ER1	Gray VFT 12"x 12" on top of VFT with Mastic from Room 1-2 (area covered with Ceramic)	Misc.	Yes	NF	1-2, 1-3, 1-4 and Assumed 1-20,21,30,32	4% CHR Asbestos found in both Bitumen and Floor Tile		X	
NG-P-ER2	Gray VFT 12"x 12" with Glue from Room 1-17	Misc.	No	NF	1-17	ND		X	
NG-P-ER3	Plaster from Surface Wall A, Room 1-16	Surf.	No	NF	Patches on almost all Functional Spaces	ND		X	
NG-P-ER4	Door Frame Caulking from Room 1-16	Misc.	No	NF	Patches on almost all Functional Spaces	ND		X	
NG-P-ER5	Plaster from Surface Wall C, Room 1-15	Surf.	No	NF	Patches on almost all Functional Spaces	ND		X	
NG-P-ER6	Gypsum Board Panel from Wall B, Room 1-15	Misc.	No	NF	1-8, 1-14, 1-15	ND		X	

Inspected by: **Elme Rivera**Date: **9/3/19**

Friability: F = friable, NF = nonfriable, X = not applicable (material is non-ACBM)

AHERA Assessment Category: 1 = Damaged or significantly damaged TSI ACBM; 2 = Damaged friable surfacing ACBM; 3 = Significantly damaged friable surfacing ACBM;

4 = Damaged or significantly damaged friable miscellaneous ACBM; 5 = ACBM with potential for damage; 6 = ACBM with potential for significant damage;

7 = Any remaining friable ACBM or friable suspected ACBM; X = Not applicable (material is non-ACBM or non-friable surfacing or miscellaneous materials);

None = No assessment category provided in original inspection.

Hazard Ranking Category: 1 = Significantly damaged; 2 = Damaged and potential of significant damage; 3 = Damaged and potential for damage; 4 = Damaged;

5 = Potential for significant damage; 6 = Potential for damage; 7 = All remaining ACBM

* - See Floor Plans for Location of Functional Spaces; ** - Unless Specified, the Asbestos Type is Chrysotile; ND - None Detected

ASBESTOS SAMPLE INSPECTION FORM FOR PHYSICAL & HAZARD ASSESSMENTClient Name **Puerto Rico Army National Guard**Building : Ponce Readiness CenterProject Name: Ponce Readiness CenterMain StructureInspection Date: 9/3/19Page: 2 of 6

Homogeneous Material Description		Material Category	Asbestos Content	Friability	Location of Materials	Asbestos Contents	Total Square Feet of ACM	AHERA Assessment Category (1-7,X, None)	Hazard Ranking (1-7)
I.D. Number	Material Description								
NG-P-ER7	Joint Compound of Gypsum Panel from Wall B of Room 1-15	Misc.	No	NF	1-8, 1-14, 1-15	ND		X	
NG-P-ER8	Ceiling Tile 2'x 2' from Room 1-15	Misc.	No	NF	1-2, 1-12, 1-13, 1-14, 1-15	ND		X	
NG-P-ER9	Green VFT 12"x 12" from Room 1-14	Misc.	No	NF	Rooms 1-13, 1-14	ND		X	
NG-P-ER10	Green VFT 12"x 12" from Room 1-14	Misc.	No	NF	Rooms 1-13, 1-14	ND		X	
NG-P-ER11	Green VFT 12"x 12" from Room 1-13	Misc.	No	NF	Rooms 1-13, 1-14	ND		X	
NG-P-ER12	Green Baseboard with Glue from Room 1-14	Misc.	No	NF	Rooms 1-14, 1-19, 1-13	ND		X	

Inspected by: Elme RiveraDate: 9/3/19

Friability: F = friable, NF = nonfriable, X = not applicable (material is non-ACBM)

AHERA Assessment Category: 1 = Damaged or significantly damaged TSI ACBM; 2 = Damaged friable surfacing ACBM; 3 = Significantly damaged friable surfacing ACBM;

4 = Damaged or significantly damaged friable miscellaneous ACBM; 5 = ACBM with potential for damage; 6 = ACBM with potential for significant damage;

7 = Any remaining friable ACBM or friable suspected ACBM; X = Not applicable (material is non-ACBM or non-friable surfacing or miscellaneous materials);

None = No assessment category provided in original inspection.

Hazard Ranking Category: 1 = Significantly damaged; 2 = Damaged and potential of significant damage; 3 = Damaged and potential for damage; 4 = Damaged;

5 = Potential for significant damage; 6 = Potential for damage; 7 = All remaining ACBM

* - See Floor Plans for Location of Functional Spaces; ** - Unless Specified, the Asbestos Type is Chrysotile; ND - None Detected

ASBESTOS SAMPLE INSPECTION FORM FOR PHYSICAL & HAZARD ASSESSMENTClient Name **Puerto Rico Army National Guard**Building : Ponce Readiness CenterProject Name: Ponce Readiness CenterMain StructureInspection Date: 9/3/19Page: 3 of 6

Homogeneous Material Description		Material Category	Asbestos Content	Friability	Location of Materials	Asbestos Contents	Total Square Feet of ACM	AHERA Assessment Category (1-7,X, None)	Hazard Ranking (1-7)
I.D. Number	Material Description								
NG-P-ER13	Green Baseboard with Glue from Room 1-13	Misc.	No	NF	Rooms 1-14, 1-19, 1-13	ND		X	
NG-P-ER14	Green Baseboard with Glue from Room 1-14	Misc.	No	NF	Rooms 1-14, 1-19, 1-13	ND		X	
NG-P-ER15	Door Frame Caulking from Room 1-14	Misc.	No	NF	Almost all Functional Spaces	ND		X	
NG-P-ER16	Cream Under Sink Spray On from Room 1-12	Misc.	No	NF	Room 1-12	ND		X	
NG-P-ER17	Ceiling Tile 2'x 4' from Room 1-11	Misc.	No	NF	1-3, 1-4, 1-5, 1-11	ND		X	
NG-P-ER18	Ceiling Tile 2'x 4' from Room 1-7	Misc.	No	NF	1-3, 1-4, 1-5, 1-11	ND		X	

Inspected by: Elme RiveraDate: 9/3/19

Friability: F = friable, NF = nonfriable, X = not applicable (material is non-ACBM)

AHERA Assessment Category: 1 = Damaged or significantly damaged TSI ACBM; 2 = Damaged friable surfacing ACBM; 3 = Significantly damaged friable surfacing ACBM;

4 = Damaged or significantly damaged friable miscellaneous ACBM; 5 = ACBM with potential for damage; 6 = ACBM with potential for significant damage;

7 = Any remaining friable ACBM or friable suspected ACBM; X = Not applicable (material is non-ACBM or non-friable surfacing or miscellaneous materials);

None = No assessment category provided in original inspection.

Hazard Ranking Category: 1 = Significantly damaged; 2 = Damaged and potential of significant damage; 3 = Damaged and potential for damage; 4 = Damaged;

5 = Potential for significant damage; 6 = Potential for damage; 7 = All remaining ACBM

* - See Floor Plans for Location of Functional Spaces; ** - Unless Specified, the Asbestos Type is Chrysotile; ND - None Detected

ASBESTOS SAMPLE INSPECTION FORM FOR PHYSICAL & HAZARD ASSESSMENTClient Name **Puerto Rico Army National Guard**Building : Ponce Readiness CenterProject Name: Ponce Readiness CenterMain StructureInspection Date: 9/3/19Page: 4 of 6

Homogeneous Material Description		Material Category	Asbestos Content	Friability	Location of Materials	Asbestos Contents	Total Square Feet of ACM	AHERA Assessment Category (1-7,X, None)	Hazard Ranking (1-7)
I.D. Number	Material Description								
NG-P-ER19	Ceiling Tile 2'x 4' from Room 1-4	Misc.	No	NF	1-3, 1-4, 1-5, 1-11	ND		X	
NG-P-ER20	Gypsum Board Panel from Wall B, Room 1-8B	Misc.	No	NF	1-8, 1-14, 1-15	ND		X	
NG-P-ER21	Joint Compound Panel from Wall B, Room 1-8B	Misc.	No	NF	1-8, 1-14, 1-15	ND		X	
NG-P-ER22	Ceiling Tile 2'x 2' from Room 1-2	Misc.	No	NF	1-2, 1-12, 1-13, 1-14, 1-15, 1-30	ND		X	
NG-P-ER23	Gray VFT 12"x 12" on top of VFT with Mastic from Room 1-4 (area covered with Ceramic)	Misc.	Yes	NF	1-2, 1-3, 1-4 and Assumed 1-20,21,30,32	4% CHR Asbestos found in both Bitumen and Floor Tile		X	
NG-P-ER24	Ceiling Tile 2'x 2' from Room 1-30	Misc.	No	NF	1-2, 1-12, 1-13, 1-14, 1-15, 1-30	ND		X	

Inspected by: Elme RiveraDate: 9/3/19

Friability: F = friable, NF = nonfriable, X = not applicable (material is non-ACBM)

AHERA Assessment Category: 1 = Damaged or significantly damaged TSI ACBM; 2 = Damaged friable surfacing ACBM; 3 = Significantly damaged friable surfacing ACBM;

4 = Damaged or significantly damaged friable miscellaneous ACBM; 5 = ACBM with potential for damage; 6 = ACBM with potential for significant damage;

7 = Any remaining friable ACBM or friable suspected ACBM; X = Not applicable (material is non-ACBM or non-friable surfacing or miscellaneous materials);

None = No assessment category provided in original inspection.

Hazard Ranking Category: 1 = Significantly damaged; 2 = Damaged and potential of significant damage; 3 = Damaged and potential for damage; 4 = Damaged;

5 = Potential for significant damage; 6 = Potential for damage; 7 = All remaining ACBM

* - See Floor Plans for Location of Functional Spaces; ** - Unless Specified, the Asbestos Type is Chrysotile; ND - None Detected

ASBESTOS SAMPLE INSPECTION FORM FOR PHYSICAL & HAZARD ASSESSMENTClient Name **Puerto Rico Army National Guard**Building : **Ponce Readiness Center**Project Name: **Ponce Readiness Center****Main Structure**Inspection Date: **9/3/19**Page: **5** of **6**

Homogeneous Material Description		Material Category	Asbestos Content	Friability	Location of Materials	Asbestos Contents	Total Square Feet of ACM	AHERA Assessment Category (1-7,X, None)	Hazard Ranking (1-7)
I.D. Number	Material Description								
NG-P-ER25	Floor Material under Ceramic Tile, Room 1-30	Misc.	No	NF	Room 1-30	ND		X	
NG-P-ER26	Roof Built-Up from North Side	Misc.	No	NF	Roof	ND		X	
NG-P-ER27	Sealant around Roof Penetration, East Side	Misc.	No	NF	Roof	ND		X	
NG-P-ER28	Roof Flashing from Southeast Side	Misc.	No	NF	Roof	ND		X	
NG-P-ER29	Roof Built-Up from West Side	Misc.	No	NF	Roof	ND		X	
NG-P-ER30	Window Caulking from Bathroom 2	Misc.	No	NF	All Windows	ND		X	

Inspected by: **Elme Rivera**Date: **9/3/19**

Friability: F = friable, NF = nonfriable, X = not applicable (material is non-ACBM)

AHERA Assessment Category: 1 = Damaged or significantly damaged TSI ACBM; 2 = Damaged friable surfacing ACBM; 3 = Significantly damaged friable surfacing ACBM;

4 = Damaged or significantly damaged friable miscellaneous ACBM; 5 = ACBM with potential for damage; 6 = ACBM with potential for significant damage;

7 = Any remaining friable ACBM or friable suspected ACBM; X = Not applicable (material is non-ACBM or non-friable surfacing or miscellaneous materials);

None = No assessment category provided in original inspection.

Hazard Ranking Category: 1 = Significantly damaged; 2 = Damaged and potential of significant damage; 3 = Damaged and potential for damage; 4 = Damaged;

5 = Potential for significant damage; 6 = Potential for damage; 7 = All remaining ACBM

* - See Floor Plans for Location of Functional Spaces; ** - Unless Specified, the Asbestos Type is Chrysotile; ND - None Detected

ASBESTOS SAMPLE INSPECTION FORM FOR PHYSICAL & HAZARD ASSESSMENTClient Name **Puerto Rico Army National Guard**Building : **Ponce Readiness Center**Project Name: **Ponce Readiness Center****Main Structure**Inspection Date: **9/3/19**Page: **6** of **6**

Homogeneous Material Description		Material Category	Asbestos Content	Friability	Location of Materials	Asbestos Contents	Total Square Feet of ACM	AHERA Assessment Category (1-7,X, None)	Hazard Ranking (1-7)
I.D. Number	Material Description								
NG-P-ER31	Floor Joint of Hallway Corridor, Northwest	Misc.	No	NF	Exterior Corridor	ND		X	
NG-P-ER32	Green VFT 12"x 12" on top of VFT with Mastic from Room 1-19	Misc.	Yes	NF	Room 1-19	3% CHR Asbestos found in both Bitumen and Floor Tile		X	
NG-P-ER33	Floor Joint of Hallway Corridor, Northeast	Misc.	No	NF	Exterior Corridor	ND		X	

Inspected by: **Elme Rivera**Date: **9/3/19**

Friability: F = friable, NF = nonfriable, X = not applicable (material is non-ACBM)

AHERA Assessment Category: 1 = Damaged or significantly damaged TSI ACBM; 2 = Damaged friable surfacing ACBM; 3 = Significantly damaged friable surfacing ACBM;

4 = Damaged or significantly damaged friable miscellaneous ACBM; 5 = ACBM with potential for damage; 6 = ACBM with potential for significant damage;

7 = Any remaining friable ACBM or friable suspected ACBM; X = Not applicable (material is non-ACBM or non-friable surfacing or miscellaneous materials);

None = No assessment category provided in original inspection.

Hazard Ranking Category: 1 = Significantly damaged; 2 = Damaged and potential of significant damage; 3 = Damaged and potential for damage; 4 = Damaged;

5 = Potential for significant damage; 6 = Potential for damage; 7 = All remaining ACBM

* - See Floor Plans for Location of Functional Spaces; ** - Unless Specified, the Asbestos Type is Chrysotile; ND - None Detected

ASBESTOS SAMPLE INSPECTION FORM FOR PHYSICAL & HAZARD ASSESSMENTClient Name **Puerto Rico Army National Guard**Building : Ponce Readiness CenterProject Name: Ponce Readiness CenterSmall Back Structure 1 & 2Inspection Date: 9/3/19Page: 1 of 1

Homogeneous Material Description		Material Category	Asbestos Content	Friability	Location of Materials	Asbestos Contents	Total Square Feet of ACM	AHERA Assessment Category (1-7,X, None)	Hazard Ranking (1-7)
I.D. Number	Material Description								
	<i>No Suspected ACM</i>								

Inspected by: Elme RiveraDate: 9/3/19

Friability: F = friable, NF = nonfriable, X = not applicable (material is non-ACBM)

AHERA Assessment Category: 1 = Damaged or significantly damaged TSI ACBM; 2 = Damaged friable surfacing ACBM; 3 = Significantly damaged friable surfacing ACBM;

4 = Damaged or significantly damaged friable miscellaneous ACBM; 5 = ACBM with potential for damage; 6 = ACBM with potential for significant damage;

7 = Any remaining friable ACBM or friable suspected ACBM; X = Not applicable (material is non-ACBM or non-friable surfacing or miscellaneous materials);

None = No assessment category provided in original inspection.

Hazard Ranking Category: 1 = Significantly damaged; 2 = Damaged and potential of significant damage; 3 = Damaged and potential for damage; 4 = Damaged;

5 = Potential for significant damage; 6 = Potential for damage; 7 = All remaining ACBM

* - See Floor Plans for Location of Functional Spaces; ** - Unless Specified, the Asbestos Type is Chrysotile; ND - None Detected

Appendix III





ANALYTICAL ENVIRONMENTAL SERVICES INTERNATIONAL, INC.

611 Monserrate Street, 2nd. Floor, Santurce, P.R. 00907

PH. (787) 722-0220 Fax (787) 724-5788

Job ID: B19090007



REPORT NUMBER



RP19091204

POLARIZED LIGHT MICROSCOPY (PLM) BULK SAMPLE ANALYSIS REPORT

Client Name:	National Guard (PRARNG)	Date Collected:	09/03/2019
Project Name:	Ponce Readiness Center, Ponce	Date Received:	09/04/2019
Project ID:			

RESULT OF ANALYSIS (BY % AREA VISUAL ESTIMATE)

Lab Sample ID Client Sample ID	Sample Description	Asbestos Detected	Asbestos Fibers	Other Fibers	Non - Fibrous Material
B19090007.01 B19090007.01.A NG-P-ER1 Layer % of Total :100%	Hard, Compact, Partly Granular with Black Other - Glue and Fibers Green	Yes	Chrysotile 4	Cellulose 2	Binders/Paint 59 Sand/Aggregates 24 Bitumen 6 Glue 5

Date Analyzed: 09/06/2019

Sample Location: Gray VFT 12"x 12" on top of VFT with Mastic from Room 1-2 (area covered with Ceramic)

Comments:

Asbestos Found in Both Floor Tiles and Bitumen

B19090007.02 B19090007.02.A NG-P-ER2 Layer % of Total :100%	Hard, Compact, Partly Granular with Glue Other - and Fibers Gray	No		Cellulose 2	Binders/Paint 69 Sand/Aggregates 24 Glue 5
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Date Analyzed: 09/06/2019

Sample Location: Gray VFT 12"x 12" with Glue from Room 1-17

Comments:

B19090007.03 B19090007.03.A NG-P-ER3 Layer % of Total :100%	Semi Hard, Aggregates, Paint and Fibers Cream	No		Cellulose 5	Binders/Paint 50 Sand/Aggregates 45
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Date Analyzed: 09/06/2019

Sample Location: Plaster from Surface Wall A, Room 1-16

Comments:

Paint Included As Binders

B19090007.04 B19090007.04.A NG-P-ER4 Layer % of Total :100%	Semi Hard, Glue, Paint and Fibers White	No		Cellulose 5	Glue 70 Binders/Paint 25
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Date Analyzed: 09/06/2019

Sample Location: Door Frame Caulking from Room 1-16

MICROANALYST:

[Karen Acosta]

QUALITY CONTROL:

[Elme Rivera]

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF THE US GOVERNMENT. ANALYSIS OF FLOOR TILE IS NOT COVERED BY THE CURRENT NEW YORK ELAP CERTIFICATION. EPA METHOD 600/M4-82-020: INTERIM METHOD FOR THE DETERMINATION OF ASBESTOS IN BULK INSULATION SAMPLES.



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Job ID: B19090007



REPORT NUMBER



RP19091204

POLARIZED LIGHT MICROSCOPY (PLM) BULK SAMPLE ANALYSIS REPORT

Client Name:	National Guard (PRARNG)	Date Collected:	09/03/2019
Project Name:	Ponce Readiness Center, Ponce	Date Received:	09/04/2019
Project ID:			

RESULT OF ANALYSIS (BY % AREA VISUAL ESTIMATE)

Lab Sample ID	Sample Description	Asbestos Detected	Asbestos Fibers	Other Fibers	Non - Fibrous Material
Client Sample ID					

Comments:

Paint Included As Binders

B19090007.05	Hard, Glue with Aggregates and Fibers	No		Cellulose 5	Glue 75
B19090007.05.A	Cream				Binders/Paint 20
NG-P-ER5					
Layer % of Total :100%					

Date Analyzed: 09/09/2019

Sample Location: Plaster from Surface Wall C, Room 1-15

Comments:

Paint Included As Binders

B19090007.06	Semi Hard, Silty with Paint and Fibers	No		Cellulose 5	Binders/Paint 95
B19090007.06.A	Cream				
NG-P-ER6					
Layer % of Total :100%					

Date Analyzed: 09/09/2019

Sample Location: Gypsum Board Panel from Wall B, Room 1-15

Comments:

Paint Included As Binders

B19090007.07	Semi Hard, Silty with Fibers	No		Cellulose 15	Binders/Paint 85
B19090007.07.A	Gray				
NG-P-ER7					
Layer % of Total :100%					

Date Analyzed: 09/09/2019

Sample Location: Joint Compound of Gypsum Panel from Wall B of Room 1-15

Comments:

B19090007.08	Semi Hard, Fibrous with Perlite and Paint	No		Cellulose 18	Perlite 15
B19090007.08.A	Gray			Synthetic 15	Binders/Paint 30
NG-P-ER8				Mineral Wool 22	
Layer % of Total :100%					

MICROANALYST:

[Karen Acosta]

QUALITY CONTROL:

[Elme Rivera]

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REPORT NUMBER



RP19091204

POLARIZED LIGHT MICROSCOPY (PLM) BULK SAMPLE ANALYSIS REPORT

Client Name:	National Guard (PRARNG)	Date Collected:	09/03/2019
Project Name:	Ponce Readiness Center, Ponce	Date Received:	09/04/2019
Project ID:			

RESULT OF ANALYSIS (BY % AREA VISUAL ESTIMATE)

Lab Sample ID	Sample Description	Asbestos Detected	Asbestos Fibers	Other Fibers	Non - Fibrous Material
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Date Analyzed: 09/09/2019

Sample Location: Ceiling Tile 2'x 2' from Room 1-15

Comments:

Paint Included As Binders

B19090007.09	Hard, Compact, Partly Granular with Glue	No		Cellulose 2	Binders/Paint 68
B19090007.09.A	Other - and Fibers				Sand/Aggregates 25
NG-P-ER9	Blue				Glue 5
Layer % of Total :100%					

Date Analyzed: 09/09/2019

Sample Location: Green VFT 12"x 12" from Room 1-14

Comments:

B19090007.10	Hard, Compact, Partly Granular with Glue	No		Cellulose 2	Binders/Paint 69
B19090007.10.A	Other - and Fibers				Sand/Aggregates 25
NG-P-ER10	Blue				Glue 4
Layer % of Total :100%					

Date Analyzed: 09/09/2019

Sample Location: Green VFT 12"x 12" from Room 1-14

Comments:

B19090007.11	Hard, Compact, Partly Granular with Glue	No		Cellulose 3	Binders/Paint 65
B19090007.11.A	Other - and Fibers				Sand/Aggregates 24
NG-P-ER11	Blue				Glue 8
Layer % of Total :100%					

Date Analyzed: 09/09/2019

Sample Location: Green VFT 12"x 12" from Room 1-13

Comments:

B19090007.12	Hard, Rubbber with Glue and Fibers	No		Cellulose 3	Rubber 89
B19090007.12.A	Blue				Glue 8
NG-P-ER12					
Layer % of Total :100%					

MICROANALYST:

Karen Acosta

[Karen Acosta]

QUALITY CONTROL:

ER

[Elme Rivera]

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF THE US GOVERNMENT. ANALYSIS OF FLOOR TILE IS NOT COVERED BY THE CURRENT NEW YORK ELAP CERTIFICATION. EPA METHOD 600/M4-82-020: INTERIM METHOD FOR THE DETERMINATION OF ASBESTOS IN BULK INSULATION SAMPLES.



ANALYTICAL ENVIRONMENTAL SERVICES INTERNATIONAL, INC.

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PH. (787) 722-0220 Fax (787) 724-5788

Job ID: B19090007



REPORT NUMBER



RP19091204

POLARIZED LIGHT MICROSCOPY (PLM) BULK SAMPLE ANALYSIS REPORT

Client Name:	National Guard (PRARNG)	Date Collected:	09/03/2019
Project Name:	Ponce Readiness Center, Ponce	Date Received:	09/04/2019
Project ID:			

RESULT OF ANALYSIS (BY % AREA VISUAL ESTIMATE)

Lab Sample ID	Sample Description	Asbestos Detected	Asbestos Fibers	Other Fibers	Non - Fibrous Material
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Date Analyzed: 09/09/2019

Sample Location: Green Baseboard with Glue from Room 1-14

Comments:

B19090007.13	Hard, Rubbber with Glue and	No		Cellulose 4	Rubber 88
B19090007.13.A	Fibers				Glue 8
NG-P-ER13	Blue				

Layer % of Total :100%

Date Analyzed: 09/09/2019

Sample Location: Green Baseboard with Glue from Room 1-13

Comments:

B19090007.14	Hard, Rubbber with Glue and	No		Cellulose 3	Rubber 87
B19090007.14.A	Fibers				Glue 10
NG-P-ER14	Blue				

Layer % of Total :100%

Date Analyzed: 09/09/2019

Sample Location: Green Baseboard with Glue from Room 1-14

Comments:

B19090007.15	Semi hard with fibers	No		Cellulose 5	Binders/Paint 95
B19090007.15.A	Brown				
NG-P-ER15					

Layer % of Total :100%

Date Analyzed: 09/09/2019

Sample Location: Door Frame Caulking from Room 1-14

Comments:

B19090007.16	Semi Hard, Glue and Fibers	No		Cellulose 25	Glue 75
B19090007.16.A	White				
NG-P-ER16					

Layer % of Total :100%

Date Analyzed: 09/09/2019

MICROANALYST:

[Karen Acosta]

QUALITY CONTROL:

[Elme Rivera]

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Job ID: B19090007



REPORT NUMBER



RP19091204

POLARIZED LIGHT MICROSCOPY (PLM) BULK SAMPLE ANALYSIS REPORT

Client Name:	National Guard (PRARNG)	Date Collected:	09/03/2019
Project Name:	Ponce Readiness Center, Ponce	Date Received:	09/04/2019
Project ID:			

RESULT OF ANALYSIS (BY % AREA VISUAL ESTIMATE)

Lab Sample ID	Sample Description	Asbestos Detected	Asbestos Fibers	Other Fibers	Non - Fibrous Material
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Sample Location: Cream Under Sink Spray On from Room 1-12

Comments:

B19090007.17 B19090007.17.A NG-P-ER17 Layer % of Total :100%	Semi Hard, Fibrous with Perlite and Paint	No		Cellulose 15 Synthetic 15 Mineral Wool 20	Perlite 12 Binders/Paint 38
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Date Analyzed: 09/09/2019

Sample Location: Ceiling Tile 2'x 4' from Room 1-11

Comments:

Paint Included As Binders

B19090007.18 B19090007.18.A NG-P-ER18 Layer % of Total :100%	Semi Hard, Fibrous with Perlite and Paint Gray	No		Cellulose 18 Synthetic 15 Mineral Wool 20	Perlite 15 Binders/Paint 32
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Date Analyzed: 09/09/2019

Sample Location: Ceiling Tile 2'x 4' from Room 1-7

Comments:

Paint Included As Binders

B19090007.19 B19090007.19.A NG-P-ER19 Layer % of Total :100%	Semi Hard, Fibrous with Perlite and Paint Gray	No		Cellulose 15 Synthetic 20 Mineral Wool 22	Perlite 12 Binders/Paint 31
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Date Analyzed: 09/09/2019

Sample Location: Ceiling Tile 2'x 4' from Room 1-4

Comments:

Paint Included As Binders

MICROANALYST:

Karen Acosta

[Karen Acosta]

QUALITY CONTROL:

Elme Rivera

[Elme Rivera]

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Job ID: B19090007



REPORT NUMBER



RP19091204

POLARIZED LIGHT MICROSCOPY (PLM) BULK SAMPLE ANALYSIS REPORT

Client Name:	National Guard (PRARNG)	Date Collected:	09/03/2019
Project Name:	Ponce Readiness Center, Ponce	Date Received:	09/04/2019
Project ID:			

RESULT OF ANALYSIS (BY % AREA VISUAL ESTIMATE)

Lab Sample ID	Sample Description	Asbestos Detected	Asbestos Fibers	Other Fibers	Non - Fibrous Material
B19090007.20 B19090007.20.A NG-P-ER20 Layer % of Total :100% Date Analyzed: 09/09/2019 Sample Location: Gypsum Board Panel from Wall B, Room 1-8B Comments:	Semi Hard, Silty with Fibers Gray	No		Cellulose 10	Binders/Paint 90
B19090007.21 B19090007.21.A NG-P-ER21 Layer % of Total :100% Date Analyzed: 09/09/2019 Sample Location: Joint Compound Panel from Wall B, Room 1-8B Comments:	Semi Hard, Silty with Fibers White	No		Cellulose 8	Binders/Paint 92
B19090007.22 B19090007.22.A NG-P-ER22 Layer % of Total :100% Date Analyzed: 09/09/2019 Sample Location: Ceiling Tile 2'x 2' from Room 1-2 Comments:	Semi Hard, Fibrous with Perlite Gray	No		Cellulose 12 Synthetic 15 Mineral Wool 14	Perlite 12 Binders/Paint 47
B19090007.23 B19090007.23.A NG-P-ER23 Layer % of Total : Date Analyzed: 09/09/2019 Sample Location: Gray VFT 12"x 12" on top of VFT with Mastic from Room 1-4 (area covered with Ceramic) Comments:	Hard, Compact, Partly Granular with Glue Other - and Fibers Blue	No		Cellulose 2	Binders/Paint 68 Sand/Aggregates 22 Glue 8

MICROANALYST:

[Karen Acosta]

QUALITY CONTROL:

[Elme Rivera]

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF OF THE US GOVERNMENT. ANALYSIS OF FLOOR TILE IS NOT COVERED BY THE CURRENT NEW YORK ELAP CERTIFICATION. EPA METHOD 600/M4-82-020: INTERIM METHOD FOR THE DETERMINATION OF ASBESTOS IN BULK INSULATION SAMPLES.



ANALYTICAL ENVIRONMENTAL SERVICES INTERNATIONAL, INC.

611 Monserrate Street, 2nd. Floor, Santurce, P.R. 00907

PH. (787) 722-0220 Fax (787) 724-5788

Job ID: B19090007



REPORT NUMBER



RP19091204

POLARIZED LIGHT MICROSCOPY (PLM) BULK SAMPLE ANALYSIS REPORT

Client Name:	National Guard (PRARNG)	Date Collected:	09/03/2019
Project Name:	Ponce Readiness Center, Ponce	Date Received:	09/04/2019
Project ID:			

RESULT OF ANALYSIS (BY % AREA VISUAL ESTIMATE)

Lab Sample ID	Sample Description	Asbestos Detected	Asbestos Fibers	Other Fibers	Non - Fibrous Material
Client Sample ID					
B19090007.23	Hard, Compact, Partly Granular with Black Mastic	Yes	Chrysotile 4	Cellulose 3	Binders/Paint 58
B19090007.23.B	Other - and Fibers Cream				Sand/Aggregates 25
NG-P-ER23					Bitumen 10
Layer % of Total :					

Date Analyzed: 09/09/2019

Sample Location: Gray VFT 12"x 12" on top of VFT with Mastic from Room 1-4 (area covered with Ceramic)

Comments:

Asbestos Found In Both Bitumen and Floor Tiles

B19090007.24	Semi Hard, Fibrous with Perlite	No		Cellulose 20	Perlite 12
B19090007.24.A	and Paint			Synthetic 18	Binders/Paint 28
NG-P-ER24	Gray			Mineral Wool 22	
Layer % of Total :100%					

Date Analyzed: 09/09/2019

Sample Location: Ceiling Tile 2'x 2' from Room 1-30

Comments:

Paint Included As Binders

B19090007.25	Semi Hard, Bituminous with Aggregate and Fibers	No		Cellulose 5	Bitumen 55
B19090007.25.A	Black			Synthetic 15	Sand/Aggregates 25
NG-P-ER25					
Layer % of Total :100%					

Date Analyzed: 09/09/2019

Sample Location: Floor Material under Ceramic Tile, Room 1-30

Comments:

B19090007.26	Semi Hard, Bituminous with Aggregate and Fibers	No		Cellulose 5	Bitumen 59
B19090007.26.A	Black			Synthetic 14	Sand/Aggregates 22
NG-P-ER26					
Layer % of Total :100%					

Date Analyzed: 09/09/2019

Sample Location: Roof Built-Up from North Side

MICROANALYST:

[Karen Acosta]

QUALITY CONTROL:

[Elme Rivera]

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF THE US GOVERNMENT. ANALYSIS OF FLOOR TILE IS NOT COVERED BY THE CURRENT NEW YORK ELAP CERTIFICATION. EPA METHOD 600/M4-82-020: INTERIM METHOD FOR THE DETERMINATION OF ASBESTOS IN BULK INSULATION SAMPLES.



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611 Monserrate Street, 2nd. Floor, Santurce, P.R. 00907

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Job ID: B19090007



REPORT NUMBER



RP19091204

POLARIZED LIGHT MICROSCOPY (PLM) BULK SAMPLE ANALYSIS REPORT

Client Name:	National Guard (PRARNG)	Date Collected:	09/03/2019
Project Name:	Ponce Readiness Center, Ponce	Date Received:	09/04/2019
Project ID:			

RESULT OF ANALYSIS (BY % AREA VISUAL ESTIMATE)

Lab Sample ID	Sample Description	Asbestos Detected	Asbestos Fibers	Other Fibers	Non - Fibrous Material
Client Sample ID					

Comments:

B19090007.27

B19090007.27.A

NG-P-ER27

Layer % of Total :100%

Date Analyzed: 09/09/2019

Sample Location: Sealant around Roof Penetration, East Side

Comments:

Paint Included As Binders

B19090007.28

B19090007.28.A

NG-P-ER28

Layer % of Total :100%

Date Analyzed: 09/09/2019

Sample Location: Roof Flashing from Southeast Side

Comments:

Paint Included As Binders

B19090007.29

B19090007.29.A

NG-P-ER29

Layer % of Total :100%

Date Analyzed: 09/09/2019

Sample Location: Roof Built-Up from West Side

Comments:

B19090007.30

B19090007.30.A

NG-P-ER30

Layer % of Total :100%

Date Analyzed: 09/09/2019

MICROANALYST:

Karen Acosta

[Karen Acosta]

QUALITY CONTROL:

Elme Rivera

[Elme Rivera]

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Job ID: B19090007



REPORT NUMBER

RP19091204

POLARIZED LIGHT MICROSCOPY (PLM) BULK SAMPLE ANALYSIS REPORT

Client Name:	National Guard (PRARNG)	Date Collected:	09/03/2019
Project Name:	Ponce Readiness Center, Ponce	Date Received:	09/04/2019
Project ID:			

RESULT OF ANALYSIS (BY % AREA VISUAL ESTIMATE)

Lab Sample ID	Sample Description	Asbestos Detected	Asbestos Fibers	Other Fibers	Non - Fibrous Material
Client Sample ID					

Sample Location: Window Caulking from Bathroom 2

Comments:

Paint Included As Binders

B19090007.31	Semi Hard, Bituminous with	No		Cellulose 5	Bitumen 95
B19090007.31.A	Fibers				
NG-P-ER31	Black				

Layer % of Total :100%

Date Analyzed: 09/09/2019

Sample Location: Floor Joint of Hallway Corridor, Northwest

Comments:

B19090007.32	Hard, Compact, Partly Granular	No		Cellulose 2	Binders/Paint 68
B19090007.32.A	with Glue				Sand/Aggregates 25
NG-P-ER32	Other - and Fibers				Glue 5
	Blue				

Layer % of Total :

Date Analyzed: 09/09/2019

Sample Location: Green VFT 12"x 12" on top of VFT with Mastic from Room 1-19

Comments:

B19090007.32	Hard, Compact, Partly Granular	Yes	Chrysotile 3	Cellulose 2	Binders/Paint 66
B19090007.32.B	with Glue				Sand/Aggregates 22
NG-P-ER32	Other - Black Matsic and Fibers				Bitumen 3
	Cream				Glue 4

Layer % of Total :

Date Analyzed: 09/09/2019

Sample Location: Green VFT 12"x 12" on top of VFT with Mastic from Room 1-19

Comments:

Asbestos Found In Both Floor Tiles and Black Mastic

B19090007.33	Semi Hard, Bituminous with	No		Cellulose 3	Bitumen 97
B19090007.33.A	Fibers				
NG-P-ER33	Black				

Layer % of Total :100%

MICROANALYST:

Karen Acosta

[Karen Acosta]

QUALITY CONTROL:

Elme Rivera

[Elme Rivera]

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PH. (787) 722-0220 Fax (787) 724-5788

Job ID: B19090007



REPORT NUMBER



RP19091204

POLARIZED LIGHT MICROSCOPY (PLM) BULK SAMPLE ANALYSIS REPORT

Client Name:	National Guard (PRARNG)	Date Collected:	09/03/2019
Project Name:	Ponce Readiness Center, Ponce	Date Received:	09/04/2019
Project ID:			

RESULT OF ANALYSIS (BY % AREA VISUAL ESTIMATE)

Lab Sample ID	Sample Description	Asbestos Detected	Asbestos Fibers	Other Fibers	Non - Fibrous Material
Client Sample ID					

Date Analyzed: 09/09/2019

Sample Location: Floor Joint of Hallway Corridor, Northeast

Comments:

Comments:

FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH COMPONENT IS ANALYZED AND REPORTED SEPARATELY.

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH US EPA METHOD: 600/M4-82/020 of Dec. 1982 and 600/R-93/116 OF JULY 93.

MICROANALYST:

[Karen Acosta]

QUALITY CONTROL:

[Elme Rivera]

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF THE US GOVERNMENT. ANALYSIS OF FLOOR TILE IS NOT COVERED BY THE CURRENT NEW YORK ELAP CERTIFICATION. EPA METHOD 600/M4-82-020: INTERIM METHOD FOR THE DETERMINATION OF ASBESTOS IN BULK INSULATION SAMPLES.

ANALYTICAL ENVIRONMENTAL SERVICES INTERNATIONAL, INC.

611 Monserrate, 2nd. Floor, Santurce, P.R. 00907

Ph: (787) 722-0220 Fax: (787) 724-5788



Transmittal Sheet for Bulk Sample Analysis

Client Name: Puerto Rico Army National Guard

Address: _____

Contact: Ileana MejiasPhone/Fax: (787) 396-2125Project Name: Ponce Readiness CenterSite Location: Ponce, PRSamplers Name: Elme RiveraCompany: AESI

Chain of Custody Record

Sample I. D.	Sample Description (i.e. Location, Name, etc.)	Collected		Analysis Required		Comments	Laboratory I.D.
		Date	Time	PLM	Other		
NG-P-001	See Hazard Assessment	9/3/19		✓			
2				✓			
3				✓			
4				✓			
5				✓			
6				✓			
7				✓			
8				✓			
9				✓			
10				✓			
11				✓			
12				✓			
NG-P-013		9/3/19		✓			

Turnaround Time:

Normal: ☒Rush: ☐Relinquished By: [Signature]Date/ Time: 9/4/19 1:35:50Received By: Kare NDate/ Time: 9/4/19 14:00

Relinquished By: _____

Date/ Time: _____

Received By: _____

Date/ Time: _____

Delivered Directly to _____

Method of Shipment: _____

Lab. Recipient: _____

Date: _____

Job ID: B19090007



National Guard (PRARNG)

COC-BULK-011/RI

ANALYTICAL ENVIRONMENTAL SERVICES INTERNATIONAL, INC.

611 Monserrate, 2nd. Floor, Santurce, P.R. 00907

Ph: (787) 722-0220 Fax: (787) 724-5788



Transmittal Sheet for Bulk Sample Analysis

Client Name: Puerto Rico Army National Guard

Address: _____

Contact: Ileana MejiasPhone/Fax: (787) 396-2125Project Name: Ponce Readiness CenterSite Location: Ponce, PRSamplers Name: Elme RiveraCompany: AESI

Chain of Custody Record

Sample I. D.	Sample Description (i.e. Location, Name, etc.)	Collected		Analysis Required		Comments	Laboratory I.D.
		Date	Time	PLM	Other		
NG-P-ER14	See Hazard Assessment	9/3/19		✓			
15				✓			
16				✓			
17				✓			
18				✓			
19				✓			
20				✓			
21				✓			
22				✓			
23				✓			
24				✓			
25				✓			
NG-P-ER26		9/3/19		✓			

Turnaround Time:

Normal: ☒Rush: ☐Relinquished By: [Signature]Date/ Time: 9/4/19 / 13:50Received By: [Signature]Date/ Time: 9/7/19 14:00

Relinquished By: _____

Date/ Time: _____

Received By: _____

Date/ Time: _____

Delivered Directly to _____

Method of Shipment: _____

Lab. Recipient: _____

Date: _____

Job ID: B19090007



National Guard (PRARNG)

COC-BULK-011/RI

ANALYTICAL ENVIRONMENTAL SERVICES INTERNATIONAL, INC.

611 Monserrate, 2nd. Floor, Santurce, P.R. 00907

Ph: (787) 722-0220 Fax: (787) 724-5788



Transmittal Sheet for Bulk Sample Analysis

Client Name: Puerto Rico Army National GuardProject Name: Ponce Readiness Center

Address: _____

Site Location: Ponce, PRContact: Ileana MejiasSamplers Name: Elme RiveraPhone/Fax: (787) 396-2125Company: AESI

Chain of Custody Record

Sample I. D.	Sample Description (i.e. Location, Name, etc.)	Collected		Analysis Required		Comments	Laboratory I.D.
		Date	Time	PLM	Other		
NO-P-27	See Hazard Assessment	9/3/19		✓			
28				✓			
29				✓			
30				✓			
31				✓			
32				✓			
NO-P-33		9/3/19		✓			

Turnaround Time:

Normal: ☒Rush: ☐Relinquished By: [Signature]

Delivered Directly to Lab

Date/ Time: 9/4/19 11:30

Method of Shipment:

Received By: [Signature]Date/ Time: 9/4/19 14:00

Lab. Recipient:

Relinquished By:

Date/ Time:

Date:

Received By:

Date/ Time:

Job ID: B19090007



National Guard (PRARNG)

COC-BULK-011/R1

Appendix IV



Selective Photos- Caguas Readiness Center



**General View of Ponce Readiness Center
located in Ponce, Puerto Rico**



**Asbestos Containing Gray VFT 12"x 12"
on top of VFT with Mastic,
all covered by Ceramic Tiles, Room 1-2**



**Asbestos Containing Gray VFT 12"x 12"
with layer under with Mastic
all under Ceramic Tile, Room 1-4**

Selective Photos- Caguas Readiness Center



**Asbestos Containing Green VFT 12"x 12"
on top of VFT layer with Mastic
Room 1-19**



**Asbestos Containing Mastic assumed
behind Chalkboard
Room 1-13**



**General View of Back Structure 1
Ponce Readiness Center**

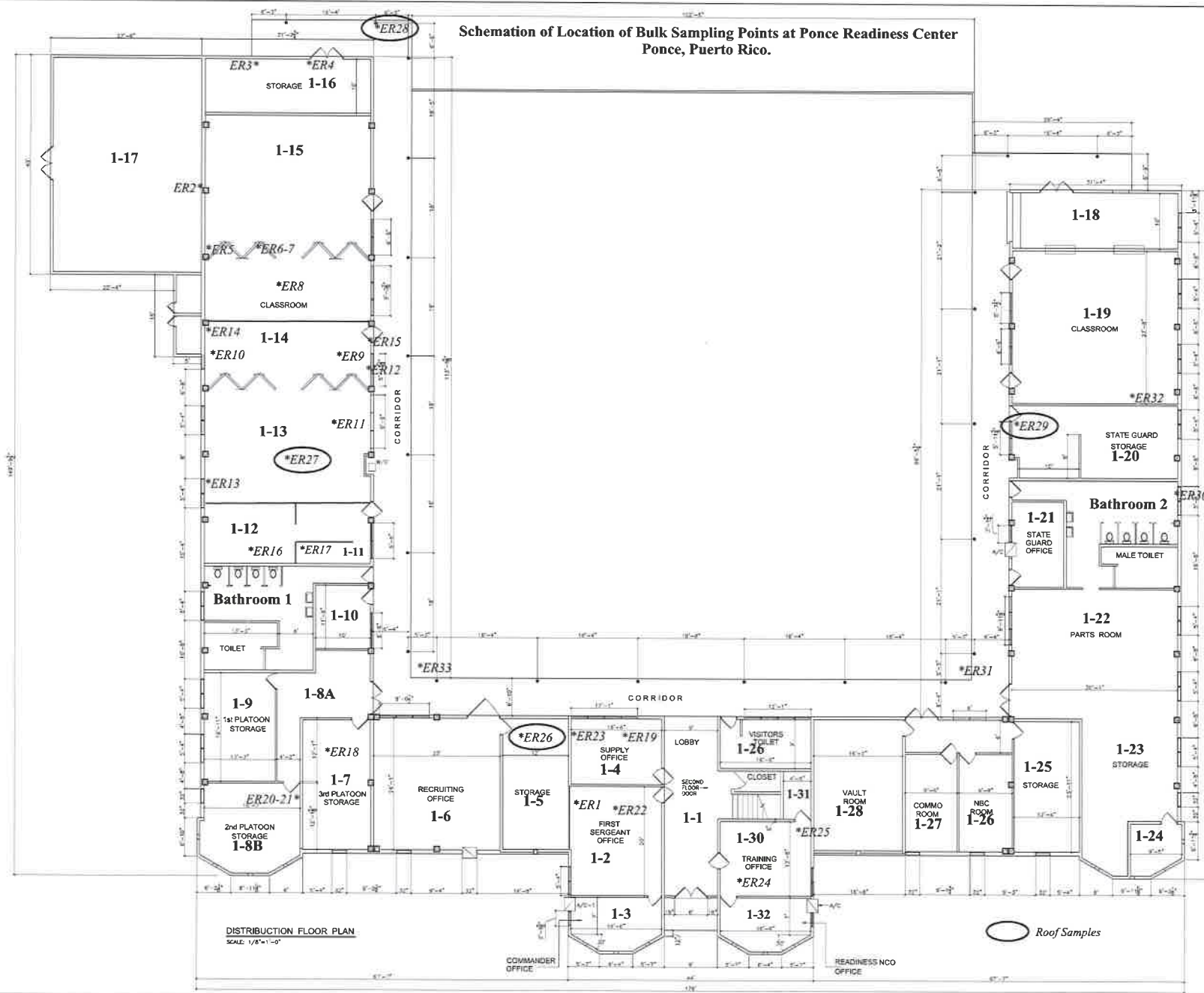
Selective Photos- Caguas Readiness Center



**General View of Back Structure 2
Ponce Readiness Center**

Appendix V





PROJECT NO. SHEET NO. SCALE DATE 5-JUN-2015	
PUERTO RICO ARMY NATIONAL GUARD DIRECTORATE OF ENGINEERING 1601 3101 SAN JUAN PUEBLO RICO 00911-2700	
READINESS CENTER PONCE, PUERTO RICO	
REVISIONS	
NO. 1 OF 1	DATE 5-JUN-2015
A-2	

**Schematic Distribution of ACM at Ponce Readiness Center
Ponce, Puerto Rico.**

This floor plan illustrates the distribution of Asbestos Containing Material (ACM) at the Ponce Readiness Center. The plan includes various rooms such as classrooms, storage areas, bathrooms, offices, and training spaces. Rooms are color-coded based on the presence of ACM:

- Yellow:** Asbestos Containing VFT with Mastic under Ceramic Tile
- Green:** Asbestos Containing VFT with layer under with Mastic
- Red Line:** Assume Black Mastic behind Chalkboard

The legend also indicates the location of the Commander's Office and the Readiness NCO's Office. The plan includes dimensions for each room and corridor, and a scale of 1/8" = 1'-0".

DISTRIBUTION FLOOR PLAN
SCALE: 1/8"=1'-0"

Legend:

- Asbestos Containing VFT with Mastic under Ceramic Tile
- Asbestos Containing VFT with layer under with Mastic
- Assume Black Mastic behind Chalkboard

Rooms and Areas:

- 1-17, 1-16, 1-15, 1-14, 1-13, 1-12, 1-11, 1-10, 1-9, 1-8A, 1-8B, 1-7, 1-6, 1-5, 1-4, 1-3, 1-2, 1-1, 1-30, 1-32, 1-28, 1-27, 1-26, 1-25, 1-24, 1-23, 1-22, 1-21, 1-20, 1-19, 1-18
- CLASSROOM
- CORRIDOR
- Bathroom 1
- Bathroom 2
- TOILET
- MALE TOILET
- PARTS ROOM
- STORAGE
- RECRUITING OFFICE
- SUPPLY OFFICE
- FIRST SERGEANT OFFICE
- TRAINING OFFICE
- VISITORS TOILET
- CLOSET
- VAULT ROOM
- COMMO ROOM
- NBC ROOM
- COMMANDER OFFICE
- READINESS NCO OFFICE

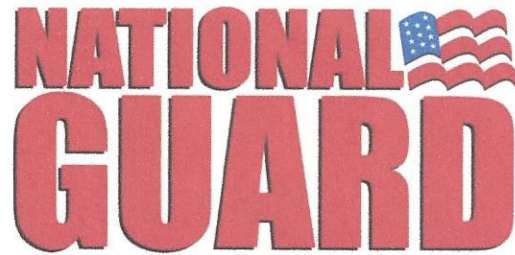
DISTRIBUTION FLOOR PLAN
SCALE: 1/8"=1'-0"

Legend:

- Legend:
- Asbestos Containing VFT with Mastic under Ceramic Tile
 - Asbestos Containing VFT with layer under with Mastic
 - Assume Black Mastic behind Chalkboard

ASBESTOS INSPECTION REPORT

FOR



AT THE

National Guard Arecibo, P.R.



Environmental Health & Safety Services

PMB 142, 400 Calle Calaf San Juan P. R. 00918 / Carr. #2 Km. 39.7 Bo Algarrobo Vega Baja P. R. 00693

Tel: 787-855-1901 Fax: 787-858-2646

TABLE OF CONTENTS

	PAGE
Table of Contents	
ACM INSPECTION.....	5
INTRODUCTION	5
ASBESTOS SURVEY	6
FINDINGS: Homogeneous areas and results	9
TABLE: Homogeneous areas per building to determine all materials that were sampled.....	9
TABLE: ACM present in the building.....	10
FINDINGS: Chain of Custody and results	11
FINDINGS: POSITIVE FINDINGS LOCATIONS PHOTOS & DRAWINGS	18
INSPECTOR'S ACCREDITATIONS.....	22

ASBESTOS INSPECTION REPORT

Confidential

Page 3 of 23

October 6, 2015

This inspection report is for the use only of National Guard. Any full or partial copy of this document must be authorized by National Guard.



Environmental Health & Safety Services

October 6, 2015

Ileana M. Mejía
Environmental Management and Evaluation Specialist
Engineering Directorate
Guardia Nacional de Puerto Rico
ileana.m.mejiamaymi.nfg@mail.mil

**RE: ASBESTOS INSPECTION REPORT
NATIONAL GUARD, ARECIBO
ARECIBO, PUERTO RICO**

Dear Mrs. Mejía:

Environmental Health & Safety Services, Inc. (EHSS) submits to your consideration the asbestos study report for the National Guard Arecibo Site Facilities, located at Arecibo, Puerto Rico.

The Asbestos Inspection was conducted following all the requirements under the Environmental Quality Board and Environmental Protection Agency regulations.

All materials that contain a concentration of more than 1% of asbestos are defined as Asbestos Containing Material (ACM). During the inspection the Asbestos Inspector visually inspected all materials to find any suspected material which can contain asbestos, delineate homogeneous areas and develop a sampling plan. On September 16, 2015, Diomar Quintana, certified asbestos inspector, conducted the survey at the area.

According to Environmental Protection Agency (EPA), 40 CFR 61, prior to a demolition or renovation, if there is more than 260 linear feet or 160 square feet of asbestos containing materials, the agency shall be notify with at least 10 working days prior to the removal of such material. This inspection was conducted to determine if ACM's were present in the building. It is also mandatory to request a mitigation permit from Puerto Rico Environmental Quality Board.

The information about the inspectors and the laboratory, are included in the Inspector Accreditations Section. If necessary you can contact us at (787) 855-1901. Thank you.

Cordially,

Diomar Quintana
Environmental Health & Safety Services

ACM INSPECTION INTRODUCTION

This report presents the results of the Asbestos Inspection performed for the National Guard Arecibo Site Facilities, located at Arecibo, Puerto Rico. This inspection was performed on September 16, 2015 in accordance with the U.S. Environmental Protection Agency and 40CFR763 AHERA, 40CFR61, Sub Part M NESHAP and the Environmental Quality Board guidelines for the presence of asbestos containing materials (ACM). This document is prepared for the sole use of National Guard. No other party should rely on the information contained herein without prior written consent of National Guard. The scope of services, inspection methodology, and results are presented below.

SCOPE OF WORK

The purpose of this inspection is to identify and assess all the ACM within the National Guard Arecibo Site Facilities, located at Arecibo, Puerto Rico. National Guard had requested assistance from Environmental Health and Safety Services to determine the level of asbestos hazards controls needed (if any) at the facilities. The intent of this inspection is to ascertain the presence of ACM above specified regulatory action levels. If ACM are found, the inspection will identify the components and their respective asbestos concentrations in such a manner that this report could be used as a basis for subsequent abatement activity.

PROPERTY DESCRIPTION

The National Guard Arecibo Site Facilities is located at Arecibo, Puerto Rico. The site has a main structure in concrete. It is composed of around 30 rooms. Including: offices, bathrooms, storage areas, classroom, gym and basketball court.

ASBESTOS SURVEY

All areas were visually inspected by our staff on September 16, 2015.

Materials that were considered as non suspect ACM were not sampled based on the inspection protocol established by EPA under AHERA. Other areas such as the roof were sampled although are not covered under AHERA sampling protocol.

The analysis and chain of custody of all samples taken are included in the report.

The ACM can be grouped in three categories which are:

1. **Surfacing Material:** ACM sprayed or trowled on surface for acoustical, decorative, or fireproofing purposes. This includes plaster and fireproofing insulation.
2. **Thermal System Insulation:** insulation used to inhibit heat transfer or prevent condensation on pipes, boilers, tanks, ducts, and various other components of hot and cold water systems and heating, ventilation and air conditioning (HVAC) systems.
3. **Miscellaneous materials:** Other, largely nonfriable products and materials such as floor tiles, ceiling tiles, roofing felt, concrete pipe, outdoor siding and fabrics.

Once these materials were categorized, they were assessed according to their physical condition. The conditions were based on the percentage of damage that the ACM exhibit. These conditions are as follows:

- **Significantly Damaged:** more than 10% of distributed damage or 25% localized damaged.
- **Damaged:** less than 10% of distributed damage or less than 25% localized damaged.
- **Good Condition:** Material with no visible damage or deterioration, or showing only very limited damaged or deterioration.

ACM that can be considered as in good condition, must be evaluated to determine if there is a possibility of suffering damaged from certain common and natural conditions that could alter their good condition. These factors to be used in determining the potential for disturbance of suspected material are:

- **Potential for Contact with the material:** including service workers and accessible to the occupants.
- **Influence of Vibration:** motors, intrusive noises, occasional loud sounds.
- **Potential for air erosion:** High velocity air, noticeable movement of air.

Based on these specifications the ACM found on the buildings can be place into one of the seven condition/potential for disturbance categories.

The homogeneous areas per structure and ACM with their respectively physical condition, potential for exposure and final categorization are included in the following tables per building.

During the course of this inspection, many samples were collected in the surveyed areas. Suspect asbestos ACM were found. Laboratory analysis confirmed the presence of asbestos containing materials. Access to the arms room was denied and the keys to the electric transformer were not available, therefore, all suspected materials that can be found on this areas are to be considered as ACM unless they can be sampled in the future.

INSPECTION FINDINGS

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Page 8 of 23

October 6, 2015

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FINDINGS: Homogeneous areas and results

Table: Homogeneous areas on the building to determine all materials that were sampled

Manufacturing Building						
Suspected Homogeneous Area	Location	ACM	Friable	Condition	Potential for exposure	Quantity (approx)
1. Acoustic Ceiling Tiles (wormhole)	Orderly Room, Admin Office, 1sg Office	No	N/A	N/A	N/A	N/A
2. Acoustic Ceiling Tiles	Kitchen, Classroom, Latrines, Gym, Commander Office, Supply, R&R, FIGNA, PME Supervisor	No	N/A	N/A	N/A	N/A
3. Floor tile	State Guard	No	N/A	N/A	N/A	N/A
4. Floor Tile & Mastic	Storage (door 21), Storage R&R (door 22),	Yes mastic	No	Damaged	Low	650 square feet
5. Wall Division	Storage Room (door 21)	No	N/A	N/A	N/A	N/A
6. HVAC System Mastic	Admin Office, 1SG Office, Orderly Room, Commander Office, Storage (door 21), Storage R&R (door 22)	Yes	No	Good Condition	Low	1700 square feet
7. Asphalt Roofing Product	Roof Area	No	N/A	N/A	N/A	N/A

Table: ACM present in the building

ACM	Location	Condition
Mastic on floor tiles	Storage (door 21), Storage R&R (door 22),	Damaged
Mastic on HVAC System	Admin Office, ISG Office, Orderly Room, Commander Office, Storage (door 21), Storage R&R (door 22)	Good Condition

FINDINGS: Chain of Custody and results

OrderID: 041528742



Asbestos Chain of Custody
EMSL Order Number (Lab Use Only):

041528742

EMSL ANALYTICAL, INC.
107 HADDON AVENUE
WESTMONT, NJ 08108
PHONE: (856) 858-4800
FAX: (856) 858-4960

Company : Environmental Health & Safety		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: PMB 142 Calle Calaf 400		Third Party Billing requires written authorization from third party	
City: San Juan	State/Province: PR	Zip/Postal Code: 00918	Country:
Report To (Name): D. Quintana		Fax #:	
Telephone #: 787-855-1901		Email Address: ehsspr@prtc.net	
Project Name/Number: National Guard Arecibo			
Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email <input type="checkbox"/> Purchase Order:		U.S. State Samples Taken:	
Turnaround Time (TAT) Options* - Please Check			
<input type="checkbox"/> 3 Hour <input type="checkbox"/> 6 Hour <input type="checkbox"/> 24 Hour <input type="checkbox"/> 48 Hour <input type="checkbox"/> 72 Hour <input type="checkbox"/> 96 Hour <input checked="" type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week			
<small>*For TEM Air 3 hr through 6 hr, please call ahead to schedule. There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.</small>			
PCM - Air <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA		TEM - Air <input type="checkbox"/> 4-4.5hr TAT (AHERA only) <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <input type="checkbox"/> ISO 10312	
PLM - Bulk (reporting limit) <input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) Point Count w/Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) <input type="checkbox"/> NYS 198.1 (friable in NY) <input type="checkbox"/> NYS 198.6 NOB (non-friable-NY) <input type="checkbox"/> NIOSH 9002 (<1%)		TEM - Bulk <input type="checkbox"/> TEM EPA NOB <input type="checkbox"/> NYS NOB 198.4 (non-friable-NY) <input type="checkbox"/> Chatfield SOP <input type="checkbox"/> TEM Mass Analysis-EPA 600 sec. 2.5 TEM - Water: EPA 100.2 Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking	
TEM - Dust <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167) Soil/Rock/Vermiculite <input type="checkbox"/> PLM CARB 435 - A (<0.25% sensitivity) <input type="checkbox"/> PLM CARB 435 - B (<0.1% sensitivity) <input type="checkbox"/> TEM CARB 435 - B (<0.1% sensitivity) <input type="checkbox"/> TEM CARB 435 - C (<0.01% sensitivity) <input type="checkbox"/> EPA Protocol (Semi-Quantitative) <input type="checkbox"/> EPA Protocol (Quantitative) Other:			
<input checked="" type="checkbox"/> Check For Positive Stop - Clearly Identify Homogenous Group			
Samplers Name: D. Quintana		Samplers Signature:	
Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
RB150916CD01A	Mastic on HVAC System Duct on Orderly Room	1	9/16/15
RB150916CD01B	Mastic on HVAC System Duct on Ad. Office ISG Office	1	9/16/15
RB150916CD02A	Ceiling Tile (worm hole) Orderly Room	2	9/16/15
RB150916CD03A	Ceiling Tile (pin hole) on Kitchen	3	9/16/15
RB150916CD04A	Floor Tile on State Guard	4	9/16/15
RB150916CD04B	Floor Tile on State Guard	4	9/16/15
RB150916 CD05A	Floor Tile on Storage (Door 21)	5	9/16/15
RB150916CD05B	Floor Tile on Storage R&R (Door 22)	5	9/16/15
Client Sample # (s):		Total # of Samples: 17	
Relinquished (Client): D. Quintana	Date: 9/16/15	Time:	
Received (Lab):	Date: 9-23-15	Time: 9:20	
Comments/Special Instructions:			

Controlled Document - Asbestos COC - R2 - 1/12/2010

Page 1 of 2 pages

Page 1 Of 2

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Page 12 of 23

October 6, 2015

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OrderID: 041528742



Asbestos Chain of Custody
EMSL Order Number (Lab Use Only):

041528742

EMSL ANALYTICAL, INC.
107 HADDON AVENUE
WESTMONT, NJ 08108
PHONE: (856) 858-4800
FAX: (856) 858-4960

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
RB150916 CD06	Wall division on Storage Room (Door 21)	6	9/16/15
RB150916 CD07A	Roof Area over Commo NBC	7	9/16/15
RB150916CD07B	Roof Area over Storage Area	7	9/16/15
RB150916CD07C	Roof Area over Arms Room	7	9/16/15
RB150916CD08A	Roof Area over Basketball Court	8	9/16/15
RB150916CD09A	Roof Area Over PX	9	9/16/15
RB150916CD09B	Roof Area Over PX	9	9/16/15
RB150916CD10A	Roof Area Over FIGNA	10	9/16/15
RB150916CD10B	Roof Area Over Commander Office	10	9/16/15
*Comments/Special Instructions:			

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NATIONSON, NJ
SEP 28 AM 10:35

Page 2 of 2 pages

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Page 2 Of 2



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200 Route 130 North, Cinnaminson, NJ 08077
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<http://www.EMSL.com> cinnaslab@EMSL.com

EMSL Order: 041528742
CustomerID: EHAS30
CustomerPO: CC-101700
ProjectID:

Attn: **Diomar Quintana**
Environmental Health & Safety Services
400 Calaf, Suite 142
San Juan, 00918-1323

Phone: (787) 855-1901
Fax: (787) 858-2646
Received: 09/23/15 9:20 AM
Analysis Date: 9/29/2015
Collected: 9/16/2015

Project: National Guard Arecibo

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos	
			% Fibrous	% Non-Fibrous	% Type	
RBI50916CD01A 041528742-0001	Orderly room - Mastic on HVAC system duct	Black Non-Fibrous Homogeneous		94% Non-fibrous (other)	6% Chrysotile	
RBI50916CD01B 041528742-0002	Ad office 1SG office - Mastic on HVAC system duct					Stop Positive (Not Analyzed)
RBI50916CD02A 041528742-0003	Orderly room - Ceiling tile (wormhole)	White Fibrous Homogeneous	50% Cellulose 30% Min. Wool	20% Non-fibrous (other)		None Detected
RBI50916CD03A 041528742-0004	Kitchen - Ceiling tile (pinhole)	White Fibrous Homogeneous	50% Cellulose 30% Min. Wool	20% Non-fibrous (other)		None Detected
RBI50916CD04A- Floor Tile 041528742-0005	State Guard - Floor tile	White Non-Fibrous Homogeneous		100% Non-fibrous (other)		None Detected
RBI50916CD04A- Mastic 041528742-0005A	State Guard - Floor tile	White Non-Fibrous Homogeneous		100% Non-fibrous (other)		None Detected
RBI50916CD04B- Floor Tile 041528742-0006	State Guard - Floor tile	White Non-Fibrous Homogeneous		100% Non-fibrous (other)		None Detected
RBI50916CD04B- Mastic 041528742-0006A	State Guard - Floor tile	White Non-Fibrous Homogeneous		100% Non-fibrous (other)		None Detected

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036, PA ID# 68-00367

Initial report from 09/30/2015 01:14:16

Test Report PLM(S)-7.25.0 Printed: 9/30/2015 1:14:16 AM

1

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Page 14 of 23

October 6, 2015

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EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
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<http://www.EMSL.com> cinnasblab@EMSL.com

EMSL Order: 041528742
CustomerID: EHAS30
CustomerPO: CC-101700
ProjectID:

Attn: **Diomar Quintana**
Environmental Health & Safety Services
400 Calaf, Suite 142
San Juan, 00918-1323

Phone: (787) 855-1901
Fax: (787) 858-2646
Received: 09/23/15 9:20 AM
Analysis Date: 9/29/2015
Collected: 9/16/2015

Project: National Guard Arecibo

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
RBI50916CD05A-Floor Tile 041528742-0007	Storage (Door 21) - Floor tile	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
RBI50916CD05A-Mastic 041528742-0007A	Storage (Door 21) - Floor tile	Black Non-Fibrous Homogeneous		92% Non-fibrous (other)	8% Chrysotile
RBI50916CD05B-Floor Tile 041528742-0008	Storage R&R (Door 22) - Floor tile	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
RBI50916CD05B-Mastic 041528742-0008A	Storage R&R (Door 22) - Floor tile				Stop Positive (Not Analyzed)
RBI50916CD06 041528742-0009	Storage Room (Door 21) - Wall division	Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (other)	None Detected
RBI50916CD07A 041528742-0010	Area over Commo NBC - Roof	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
RBI50916CD07B 041528742-0011	Area over storage area - Roof	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
RBI50916CD07C 041528742-0012	Area over arms room - Roof	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
RBI50916CD08A 041528742-0013	Area over basketball court - Roof	Gray Fibrous Homogeneous	30% Synthetic	70% Non-fibrous (other)	None Detected

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036, PA ID# 68-00367

Initial report from 09/30/2015 01:14:16

Test Report PLM(S)-7.25.0 Printed: 9/30/2015 1:14:16 AM

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EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
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<http://www.EMSL.com> cinnaslab@EMSL.com

EMSL Order: 041528742
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400 Calaf, Suite 142
San Juan, 00918-1323

Phone: (787) 855-1901
Fax: (787) 858-2646
Received: 09/23/15 9:20 AM
Analysis Date: 9/29/2015
Collected: 9/16/2015

Project: National Guard Arecibo

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos	
			%	Fibrous	% Non-Fibrous	% Type
RBI50916CD09A 041528742-0014	Area over PX - Roof	Black Fibrous Homogeneous	10%	Glass	90% Non-fibrous (other)	None Detected
RBI50916CD09B 041528742-0015	Area over PX - Roof	Black Fibrous Homogeneous	10%	Glass	90% Non-fibrous (other)	None Detected
RBI50916CD10A 041528742-0016	Area over FIGNA - Roof	Black Fibrous Homogeneous	10%	Glass	90% Non-fibrous (other)	None Detected
RBI50916CD10B 041528742-0017	Area over commander office - Roof	Black Fibrous Homogeneous	10%	Glass	90% Non-fibrous (other)	None Detected

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-046AP Lab 100194, NYS ELAP 10872, NJ DEP 03036, PA ID# 68-00367

Initial report from 09/30/2015 01:14:16

Test Report PLM(S)-7.25.0 Printed: 9/30/2015 1:14:16 AM

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Page 16 of 23

October 6, 2015

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**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077
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Fax: (787) 858-2646
Received: 09/23/15 9:20 AM
Analysis Date: 9/29/2015
Collected: 9/16/2015

Project: National Guard Arecibo

The samples in this report were submitted to EMSL for analysis by Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy. The reference number for these samples is the EMSL Order ID above. Please use this reference number when calling about these samples.

Report Comments:

Sample Receipt Date: 9/23/2015 Sample Receipt Time: 9:20 AM
Analysis Completed Date: 9/29/2015 Analysis Completed Time: 9:24 AM

Analyst(s):

Amy Johnson PLM (6)

Steven Quinn PLM (13)

Samples reviewed and approved by:

Benjamin Ellis, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101045-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036, PA ID# 66-00367

Initial report from 09/30/2015 01:14:16

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Page 17 of 23

October 6, 2015

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FINDINGS: POSITIVE FINDINGS LOCATIONS PHOTOS & DRAWINGS



HVAC mastic on offices



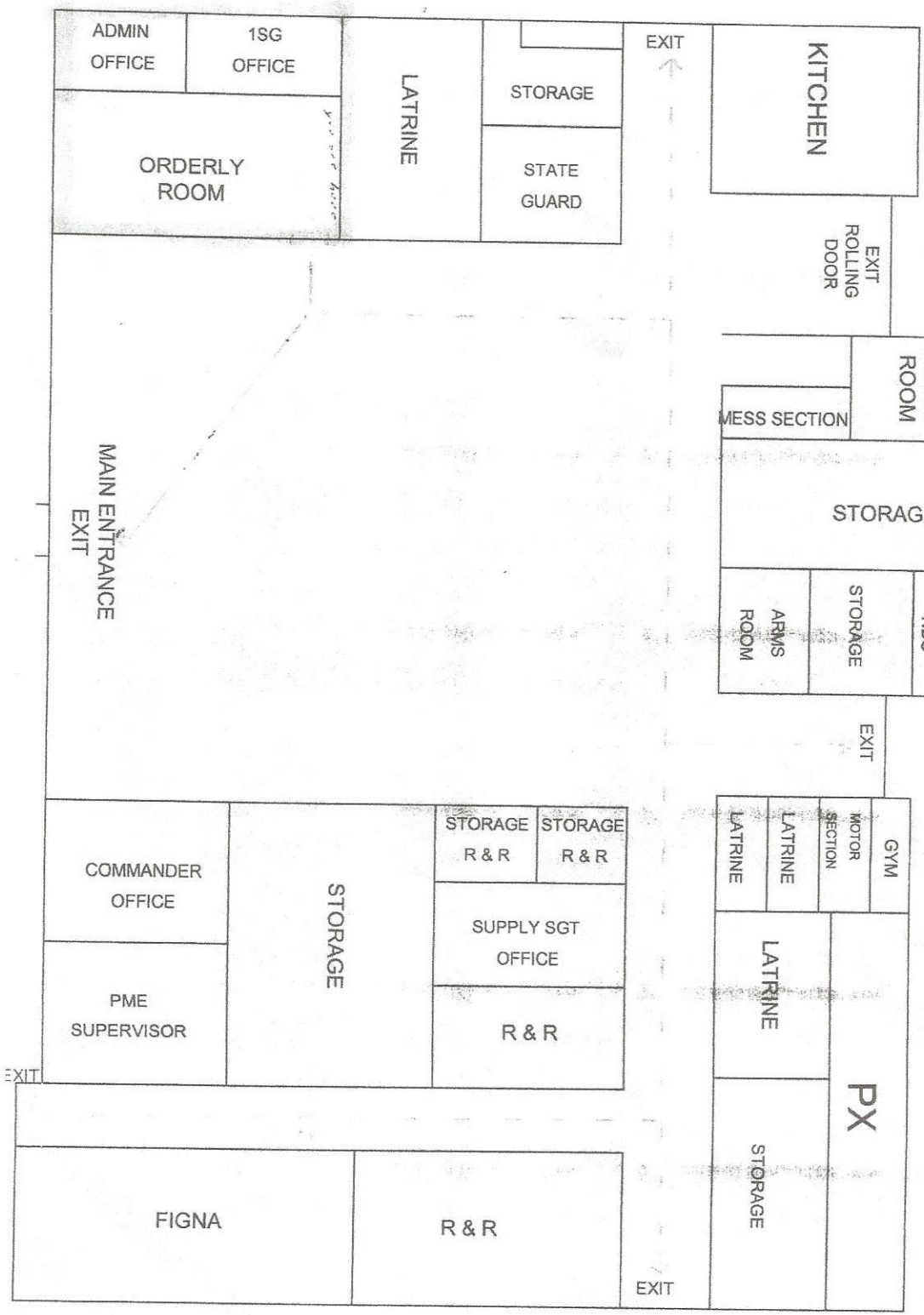
Mastic on floor tiles on Storage (door 21)

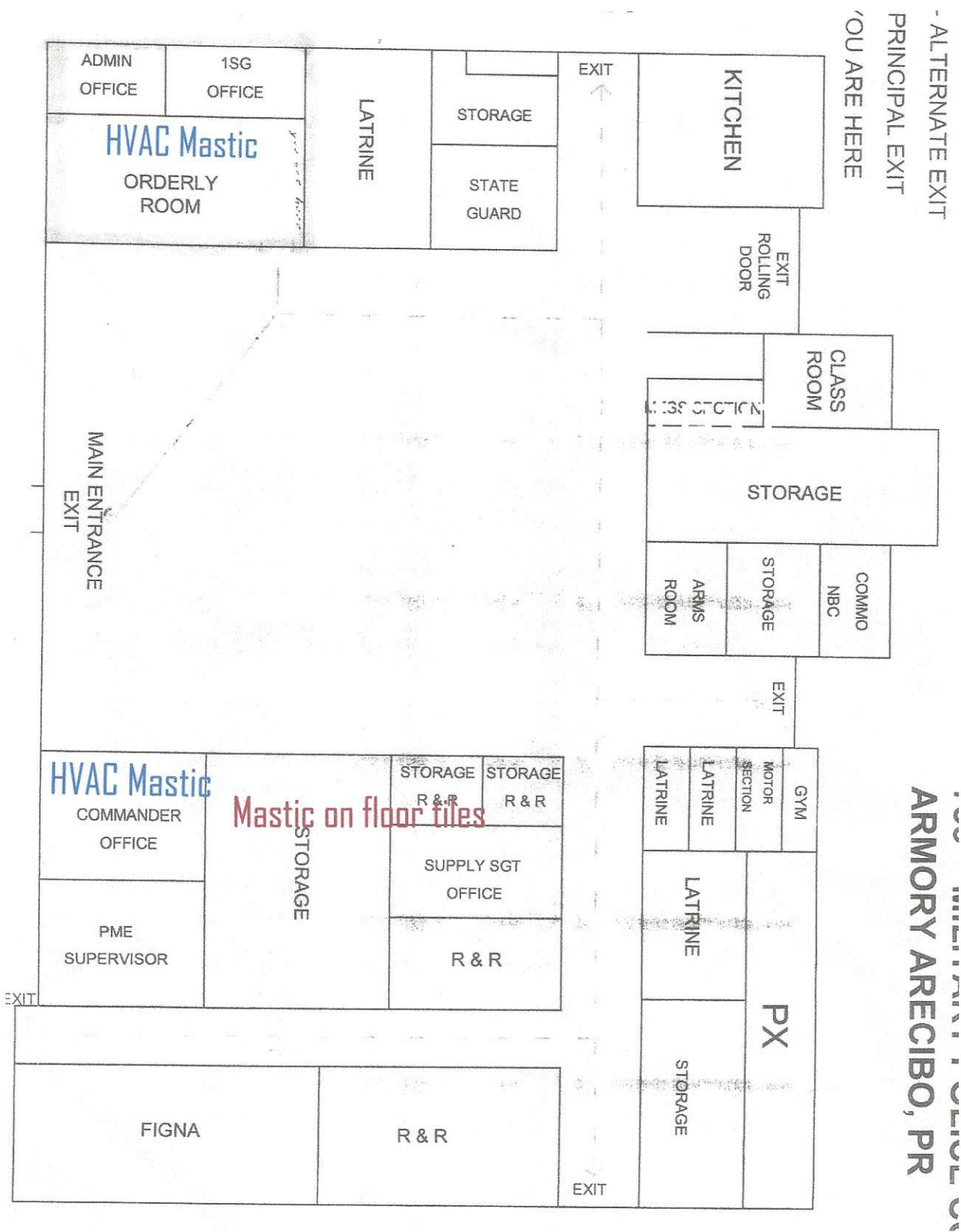


Mastic on floor tiles on Storage R&R (door 22)

ARMORY ARECIBO, PR

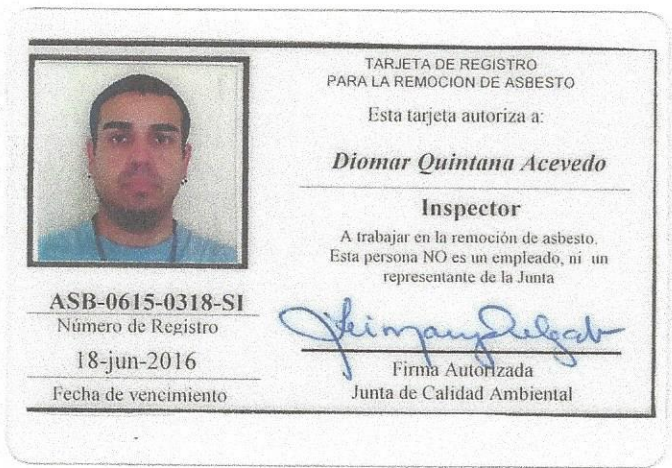
- ALTERNATE EXIT
PRINCIPAL EXIT
YOU ARE HERE





INSPECTOR'S ACCREDITATIONS

ENVIRONMENTAL QUALITY BOARD'S
ASBESTOS INSPECTOR'S CARDS



LABORATORY CERTIFICATIONS

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101048-0

EMSL Analytical, Inc.
Cinnaminson, NJ

is accredited by the National Voluntary Laboratory Accreditation Program for specific services,
listed on the Scope of Accreditation, for:

Asbestos Fiber Analysis

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2015-06-02 through 2016-06-30
Effective Dates




For the National Voluntary Laboratory Accreditation Program

EXHIBIT G: PRARNG Environmental Policy



PUERTO RICO NATIONAL GUARD
THE ADJUTANT GENERAL OFFICE
552 BORINQUEÑER STREET
FORT BUCHANAN, PR 00934

NGPR-Z

9 November 2020

MEMORANDUM FOR ALL PERSONNEL OF THE PUERTO RICO ARMY NATIONAL GUARD

SUBJECT: Environmental Policy Statement


1. The Puerto Rico Army National Guard is a versatile organization of educated, disciplined and well-trained Citizen Soldiers committed to accomplish those missions that are in the best interests of our Nation, State and community.
2. Personnel in this organization are subject to federal, state and local environmental laws and regulations. They must ensure they fully understand and conform to these laws and regulations.
3. The Puerto Rico Army National Guard is committed to protect and preserve our physical environment utilizing environmentally sound standards and practices.
4. Through the adoption of this Policy, the Puerto Rico Army National Guard will:
 - a. Support the military mission by identifying management actions required to protect and conserve natural and cultural resources and provide sustained use of the training lands.
 - b. Be an environmentally responsible neighbor in the communities where we operate, and act promptly and responsibly to correct incidents or conditions that endanger human health or the environment.
 - c. Comply with all applicable Federal, State and local environmental laws and regulations, and those other requirements to which we subscribe.
 - d. Consider environmental requirements and impacts early in our planning process as they relate to military training, equipment fielding and construction projects.
 - e. Clean-up any contaminated sites as quickly as resources permit.
 - f. Continually improve pollution reduction strategies through the application of innovative processes and technologies.

NGPR-Z
SUBJECT: ENVIRONMENTAL POLICY STATEMENT

5. Every employee, contractor and tenant of the Puerto Rico Army National Guard is expected to adhere to the provisions set forth in this policy. Managers at all levels are expected to oversee the implementation of this policy in their respective areas of responsibility.

6. Previous Policy Statement, 27 August 2019, is rescinded. A copy of this policy statement will be permanently posted on all bulletin boards.

7. Point of contact is 1LT David Santiago, PRARNG Environmental Manager, at (787) 421-8605, or email david.santiagohernandez.mil@mail.mil.



JOSE J. REYES
Major General (PR), PRNG
The Adjutant General

DISTRIBUTION:

A

EXHIBIT H: Technical Specifications

TABLE OF CONTENTS

<u>SECTION</u>	<u>DESCRIPTION</u>
DIVISION 01 01 32 16	GENERAL REQUIREMENTS Small Project Construction Progress Schedule
DIVISION 08 08 51 13	OPENINGS Aluminum Windows
DIVISION 09 09 90 00	FINISHES Paints and Coatings

SECTION 01 32 16.00 20

SMALL PROJECT CONSTRUCTION PROGRESS SCHEDULES

02/15

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Construction Schedule; G[, [_____]]

SD-07 Certificates

Monthly Updates

1.2 ACCEPTANCE

Prior to the start of work, prepare and submit to the Contracting Officer for acceptance a construction schedule in the form of a [Network Analysis Schedule (NAS)] [Bar Chart Schedule] in accordance with the terms in Contract Clause FAR 52.236-15 Schedules for Construction Contracts, except as modified in this contract.

The acceptance of a Baseline Construction Schedule is a condition precedent to:

- a. The Contractor starting work on the demolition or construction stage(s) of the contract.
- b. Processing Contractor's invoice(s) for construction activities/items of work.
- c. Review of any schedule updates.

Submittal of the Baseline Schedule, and subsequent schedule updates, is understood to be the Contractor's certification that the submitted schedule meets all of the requirements of the Contract Documents, represents the Contractor's plan on how the work will be accomplished, and accurately reflects the work that has been accomplished and how it was sequenced (as-built logic).

1.3 SCHEDULE FORMAT

1.3.1 Network Analysis Schedule (NAS)

Use the critical path method (CPM) to schedule and control project activities. Prepare and maintain project schedules using [Primavera P6][or][Microsoft Project 2010]. Importing data into the scheduling

program using data conversion techniques or third party software is cause for rejection of the submitted schedule. Build the schedule as follows:

- a. The Project Schedule must show submittals, Government review periods, material/equipment delivery, utility outages, all on-site construction, inspection, testing, and closeout activities. Government and Contractor on-site work activities must be driven by calendars that reflect Saturdays, Sundays and all Federal Holidays as non-work days.
- b. With the exception of the Contract Award and End Contract milestone activities, no activities shall be open-ended; each activity must have predecessor and successor ties. No activity must have open start or open finish (dangling) logic. Minimize redundant logic ties. Once an activity exists on the schedule it must not be deleted or renamed to change the scope of the activity and must not be removed from the schedule logic without approval from the Contracting Officer. While an activity cannot be deleted, where said activity is no longer applicable to the schedule but must remain within the logic stream for historical record, it can be changed to a milestone. Document any such change in the milestone's "Notebook", including a date and explanation for the change. The ID number for a deleted activity must not be re-used for another activity.
- c. Each activity must be assigned its appropriate Responsibility Code indicating responsibility to accomplish the work indicated by the activity, Phase Code and Work Location Code.
- d. Date/time constraint(s) and/or lags, other than those required by the contract, are not allowed unless accepted by the Contracting Officer. Include as the last activity in the contract schedule, a milestone activity named "Contract Completion Date".

1.3.1.1 Primavera P6 Settings and Parameters

Use the following Primavera P6 settings and parameters in preparing the Baseline Schedule. Deviation from these settings and parameters, without prior consent of the Contracting Officer, is cause for rejection of schedule submission.

- a. General: Define or establish Calendars and Activity Codes at the "Project" level, not the "Global" level.
- b. Admin Drop-Down Menu, Admin Preferences, Time Periods Tab:
 - (1) Set time periods for P6 to 8.0 Hours/Day, 40.0 Hours/Week, 172.0 Hours/Month and 2000.0 Hours/Year.
 - (2) Use assigned calendar to specify the number of work hours for each time period: Must be checked.
- c. Project Level, Dates Tab:
 - (1) Set "Must Finish By" date to "Contract Completion Date".
- d. Project Level, Defaults Tab:
 - (1) Duration Type: Set to "Fixed Duration & Units".

(2) Percent Complete Type: Set to "Physical".

(3) Activity Type: Set to "Task Dependent".

(4) Calendar: Set to "Standard 5 Day Workweek". Calendar must reflect Saturday, Sunday and all Federal holidays as non-work days. Alternative calendars may be used with Contracting Officer approval.

e. Project Level, Calculations Tab:

(1) Activity percent complete based on activity steps: Must be Checked.

(2) Reset Remaining Duration and Units to Original: Must be Checked.

(3) Subtract Actual from At Completion: Must be Checked.

(4) Recalculate Actual units and Cost when duration percent(%) complete changes: Must be Checked.

(5) Link Actual to Date and Actual This Period Units and Cost: Must be Checked.

f. Project Level, Settings Tab:

(1) Define Critical Activities: Check "Total Float is less than or equal to" and add "0d".

g. No on-site construction activity may have durations in excess of 20 working days.

1.3.1.2 Microsoft Project 2010 Settings and Parameters

The Network must have a minimum of 30 construction activities. No on-site construction activity may have durations in excess of 20 working days.

1.3.1.3 Cost Loading Microsoft Project 2010 Schedules

Assign material, labor and equipment costs to their respective Construction Activities. Material and equipment costs for which payment will be requested in advance of installation must be assigned to their respective procurement activity (i.e. the material/equipment on-site activity). Evenly disperse overhead and profit to each activity over the duration of the project. Cost loading must total to 100 percent of the value of the contract.

a. Submit an Earned Value Report with each schedule update showing activity budget, cost percent complete, earned amount and cost to complete as directed by the Contracting Officer.

b. With each schedule submission, provide a Schedule Variance control (SVC) diagram showing:

(1) Cash Flow S-Curves indicating planned project cost based on projected early and late activity finish dates.

(2) Earned Value to-date. Revise Cash Flow S-Curves when the contract

is modified, or as directed by the Contracting Officer.

1.3.2 Bar Chart Schedule

The Bar Chart must, as a minimum, show work activities, submittals, Government review periods, material/equipment delivery, utility outages, on-site construction, inspection, testing, and closeout activities. The Bar Chart must be time scaled and generated using an electronic spreadsheet program.

1.3.3 Schedule Submittals and Procedures

Submit [Network Analysis Schedules (NAS)][Bar Chart Schedules] and updates in hard copy and on electronic media that is acceptable to the Contracting Officer. Submit an electronic back-up of the project schedule in an import format compatible with the Government's scheduling program.

1.4 SCHEDULE MONTHLY UPDATES

Update the Construction Schedule at monthly intervals or when the schedule has been revised. The updated schedule must be kept current, reflecting actual activity progress and plan for completing the remaining work. Submit copies of purchase orders and confirmation of delivery dates as directed by the Contracting Officer.

a. Narrative Report: Provide with schedule updates. Identify and justify;

- (1) Progress made in each area of the project
- (2) Critical Path
- (3) Date/time constraint(s), other than those required by the contract
- (4) Changes in the following; added or deleted activities, original and remaining durations for activities that have not started, logic, milestones, planned sequence of operations, and critical path
- (5) Status of Contract Completion Date and interim milestones;
- (6) Current and anticipated delays (describe cause of delay and corrective actions(s) and mitigation measures to minimize);
- (7) Description of current and future schedule problem areas.

Each entry in the narrative report must cite the respective Activity ID and Activity Description, the date and reason for the change, and description of the change.

1.5 CONTRACT MODIFICATION

Submit a Time Impact Analysis (TIA) with each cost and time proposal for a proposed change. TIA must illustrate the influence of each change or delay on the Contract Completion Date or milestones. No time extensions will be granted nor delay damages paid unless a delay occurs which consumes all available Project Float, and extends the Projected Finish beyond the Contract Completion Date.

- a. Each TIA must be in both narrative and schedule form. The narrative must define the scope and conditions of the change; provide start and finish dates of impact, successor and predecessor activity to impact period, responsible party, describe how it originated, and how it impacts the schedule. The schedule submission must consist of three native files:
 - (1) Fragnet used to define the scope of the changed condition
 - (2) Most recent accepted schedule update as of the time of the proposal or claim submission that has been updated to show all activity progress as of the time of the impact start date.
 - (3) The impacted schedule that has the fragnet inserted in the updated schedule and the schedule "run" so that the new completion date is determined.
- b. For claimed as-built project delay, the inserted fragnet TIA method must be modified to account for as-built events known to occur after the data date of schedule update used.
- c. All TIAs must include any mitigation, and must determine the apportionment of the overall delay assignable to each individual delay. The associated narrative must clearly describe the findings in a chronological listing beginning with the earliest delay event.
 - (1) Identify types of delays as follows:
 - (a) Excusable Delay: Force-Majeure (e.g. weather) - Contractor may receive time extension, but time will not be compensable.
 - (b) Inexcusable Delay: Contractor Responsibility - Contractor will not receive time extension.
 - (c) Compensable Delay: Government Responsibility - Contractor may receive compensable time extension.
 - (2) If a combination of any of the delay types outlined above occurs, it is considered a Concurrent Delay, which will require an analysis of the facts to determine compensability and entitlement to any time extension under the applicable contract clauses.
- d. Submit Data disks containing the narrative and native schedule files.
- e. Unless the Contracting Officer requests otherwise, only add conformed contract modifications into the Project NAS.

1.6 3-WEEK LOOK AHEAD SCHEDULE

Prepare and issue a 3-Week Look Ahead schedule to provide a more detailed day-to-day plan of upcoming work identified on the Construction Schedule. Key the work plans to activity numbers when a NAS is required and update each week to show the planned work for the current and following two-week period. Additionally, include upcoming outages, closures, preparatory meetings, and initial meetings. Identify critical path activities on the Three-Week Look Ahead Schedule. The detail work plans are to be bar chart type schedules, maintained separately from the Construction Schedule on an

electronic spreadsheet program and printed on 8-1/2 by 11 inch sheets as directed by the Contracting Officer. Activities must not exceed 5 working days in duration and have sufficient level of detail to assign crews, tools and equipment required to complete the work. Deliver three hard copies and one electronic file of the 3-Week Look Ahead Schedule to the Contracting Officer no later than 8 a.m. each Monday, and review during the weekly CQC Coordination or Production Meeting.

1.7 CORRESPONDENCE AND TEST REPORTS:

All correspondence (e.g., letters, Requests for Information (RFIs), e-mails, meeting minute items, Production and QC Daily Reports, material delivery tickets, photographs) must reference Schedule Activities that are being addressed. All test reports (e.g., concrete, soil compaction, weld, pressure) must reference Schedule Activities that are being addressed.

1.8 ADDITIONAL SCHEDULING REQUIREMENTS

Any references to additional scheduling requirements, including systems to be inspected, tested and commissioned, that are located throughout the remainder of the Contract Documents, are subject to all requirements of

this section.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --

SECTION 08 51 13

ALUMINUM WINDOWS

05/11

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ALUMINUM ASSOCIATION (AA)

AA DAF45 (2003; Reaffirmed 2009) Designation System for Aluminum Finishes

AMERICAN ARCHITECTURAL MANUFACTURERS ASSOCIATION (AAMA)

AAMA 1302.4 (1973) Specifications for Forced-Entry Resistant Aluminum Prime Windows

AAMA 1503 (2009) Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections

AAMA 2603 (2017a) Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels

AAMA 2604 (2017a) Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels

AAMA 2605 (2017a) Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels

AAMA 611 (2014) Voluntary Specification for Anodized Architectural Aluminum

AAMA 701/702 (2011) Voluntary Specification for Pile Weatherstripping and Replaceable Fenestration Weatherseals

AAMA 902 (2016) Voluntary Specification for Sash Balances

AAMA WSG.1 (1995) Window Selection Guide

AAMA/WDMA/CSA 101/I.S.2/A440 (2011; Update 1 2014) North American Fenestration Standard/Specification for

Windows, Doors, and Skylights

ASTM INTERNATIONAL (ASTM)

ASTM A276/A276M	(2017) Standard Specification for Stainless Steel Bars and Shapes
ASTM E1300	(2016) Standard Practice for Determining Load Resistance of Glass in Buildings
ASTM F1642/F1642M	(2017) Standard Test Method for Glazing and Glazing Systems Subject to Airblast Loadings
ASTM F2248	(2012) Standard Practice for Specifying an Equivalent 3-Second Duration Design Loading for Blast Resistant Glazing Fabricated with Laminated Glass

INTERNATIONAL WINDOW CLEANING ASSOCIATION (IWCA)

IWCA I-14.1	(2001) Window Cleaning Safety Standard
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NATIONAL FENESTRATION RATING COUNCIL (NFRC)

NFRC 100	(2014) Procedure for Determining Fenestration Product U-Factors
NFRC 200	(2014) Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 101	(2018; TIA 18-1) Life Safety Code
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1.2 CERTIFICATION

Each prime window unit must bear the AAMA Label warranting that the product complies with [AAMA/WDMA/CSA 101/I.S.2/A440](#). Certified test reports attesting that the prime window units meet the requirements of [AAMA/WDMA/CSA 101/I.S.2/A440](#), including test size, will be acceptable in lieu of product labeling.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are [for Contractor Quality Control approval.][for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government.] Submittals with an "S" are for inclusion in the Sustainability eNotebook, in conformance to Section [01 33 29 SUSTAINABILITY REPORTING](#). Submit the following in accordance with Section [01 33 00 SUBMITTAL PROCEDURES](#):

[SD-02 Shop Drawings](#)

Windows; G[, [_____]]

Fabrication Drawings

SD-03 Product Data

Windows; G[, [_____]]

Hardware; G[, [_____]]

Fasteners; G[, [_____]]

Window Performance; G[, [_____]]

Screens; G[, [_____]]

Weatherstripping; G[, [_____]]

Accessories; G[, [_____]]

[G[, [_____]]

SD-04 Samples

Finish Sample

Window Sample

SD-05 Design Data

Structural Calculations for Deflection; G[, [_____]]

[Design Analysis; G[, [_____]]

Submit design analysis with calculations showing that the design of each different size and type of aluminum window unit and its anchorage to the structure meets the minimum antiterrorism standards required by paragraph "Minimum Antiterrorism Performance", unless conformance is demonstrated by Standard Airblast Test results. Calculations verifying the structural performance of each window proposed for use, under the given loads, must be prepared and signed by a registered Professional Engineer. The window components and anchorage devices to the structure, as determined by the design analysis, must be reflected in the shop drawings.]

SD-10 Operation and Maintenance Data

Windows, Data Package 1; G[, [_____]]

Submit in accordance with Section 01 78 23 OPERATION AND MAINTENANCE DATA.

Plastic Identification

When not labeled, identify types in Operation and Maintenance

1.4 QUALITY ASSURANCE

1.4.1 Shop Drawing Requirements

Provide drawings that indicate elevations of windows, full-size sections, thickness and gages of metal, fastenings, proposed method of anchoring, size and spacing of anchors, details of construction, method of glazing, details of operating hardware, [mullion details,] [method and materials for weatherstripping,] [method of attaching screens,] [material and method of attaching subframes,] [stools,] [casings,] [sills,] [trim,] [window cleaner anchors,] installation details, and other related items.

1.4.2 Sample Requirements

1.4.2.1 Finish Sample Requirements

Submit color chart of standard factory color coatings when factory-finish color coating is to be provided.

1.4.3 Design Data Requirements

Submit calculations to substantiate compliance with deflection requirements[and Minimum Antiterrorism Performance criteria]. A registered Professional Engineer must provide calculations.

Submit [design analysis](#) with calculations showing that the design of each different size and type of aluminum window unit and its anchorage to the structure meets the requirements of paragraph "Minimum Antiterrorism Performance Criteria". Calculations verifying the structural performance of each window proposed for use, under the given loads, must be prepared and signed by a registered professional engineer. Reflect the window components and anchorage devices to the structure, as determined by the design analysis, in the shop drawings.

1.4.4 Test Report Requirements

Submit test reports for each type of window attesting that identical windows have been tested and meet the requirements specified herein for conformance to [AAMA/WDMA/CSA 101/I.S.2/A440](#) including test size, [and [minimum condensation resistance factor](#) (CRF)[, and [resistance to forced entry](#)][, and, for Minimum Antiterrorism windows, in lieu of a Design Analysis, results of a Standard Airblast Test].

1.5 DELIVERY AND STORAGE

Deliver windows to project site in an undamaged condition. Use care in handling and hoisting windows during transportation and at the jobsite. Store windows and components out of contact with the ground, under a weathertight covering, so as to prevent bending, warping, or otherwise damaging the windows. Repair damaged windows to an "as new" condition as approved. If windows can not be repaired, provide a new unit.

1.6 PROTECTION

Protect finished surfaces during shipping and handling using the manufacturer's standard method. Do not apply coatings or lacquers to

surfaces to which caulking and glazing compounds must adhere.

1.7 PLASTIC IDENTIFICATION

Label plastic products provided to indicate their polymeric composition according to the following list. Where products are not labeled, provide product data indicating polymeric information in Operation and Maintenance Manual.

- a. Type 1: Polyethylene Terephthalate (PET, PETE).
- b. Type 2: High Density Polyethylene (HDPE).
- c. Type 3: Vinyl (Polyvinyl Chloride or PVC).
- d. Type 4: Low Density Polyethylene (LDPE).
- e. Type 5: Polypropylene (PP).
- f. Type 6: Polystyrene (PS).
- g. Type 7: Other. Use of this code indicates that the package in question is made with a resin other than the six listed above, or is made of more than one resin listed above, and used in a multi-layer combination.

1.8 FIELD MEASUREMENTS

Take field measurements prior to preparation of the drawings and fabrication.

1.9 PERFORMANCE REQUIREMENTS

1.9.1 Wind Loading Design Pressure

Design window components, including mullions, hardware, and anchors, to withstand a wind-loading design pressure of at least **pounds per square foot (psf)**.

1.9.2 [Tests

Test windows proposed for use in accordance with **AAMA/WDMA/CSA 101/I.S.2/A440** for the particular type and quality window specified.

Perform tests by a nationally recognized independent testing laboratory equipped and capable of performing the required tests. Submit the results of the tests as certified laboratory reports required herein.

Minimum design load for a uniform-load structural test must be **50 psf**.

[Test projected windows in accordance with the applicable portions of the **AAMA WSG.1** for air infiltration, water resistance, uniform-load deflection, and uniform-load structural test.]

[Test double-hung windows in accordance with the applicable portions of the **AAMA WSG.1** for air infiltration, water resistance, uniform-load deflection, and uniform-load structural test.]]

1.10 DRAWINGS

Submit the [Fabrication Drawings](#) for aluminum window units showing complete window assembly including hardware, weatherstripping, and subframe assembly details.

1.11 WINDOW PERFORMANCE

Aluminum windows must meet the following performance requirements. Perform testing requirements by an independent testing laboratory or agency.

1.11.1 Structural Performance

Structural test pressures on window units must be for positive load (inward) and negative load (outward). After testing, there will be no glass breakage, permanent damage to fasteners, hardware parts, support arms or actuating mechanisms or any other damage which could cause window to be inoperable. There must be no permanent deformation of any main frame, sash or ventilator member in excess of the requirements established by [AAMA/WDMA/CSA 101/I.S.2/A440](#) for the window types and classification specified in this section.

NOTE: Fixed windows and general window repairs shall match existing style and specifications.

1.11.2 Air Infiltration

Air infiltration must not exceed the amount established by [AAMA/WDMA/CSA 101/I.S.2/A440](#) for each window type.

1.11.3 Water Penetration

Water penetration must not exceed the amount established by [AAMA/WDMA/CSA 101/I.S.2/A440](#) for each window type.

1.11.4 [Life Safety Criteria

Provide windows that conform to [NFPA 101](#) Life Safety Code when rescue and/or second means of escape are indicated.

1.11.5 Sound Attenuation

The window unit must have a minimum STC of [\[\[41\] \[_____\]](#) with the window glazed with two pieces of [1/4 inch](#) thick laminated glass [\[\[34\] \[_____\]](#) with the window glazed with [1/2 inch](#) air space between two pieces of [1/4 inch](#) thick glass] when tested in accordance with [AAMA/WDMA/CSA 101/I.S.2/A440](#) acoustical performance (optional).

1.12 QUALIFICATION

Window manufacturer must specialize in designing and manufacturing the type of aluminum windows specified in this section, and have a minimum of [5](#) years of documented successful experience. Manufacturer must have the facilities capable of meeting contract requirements, single-source responsibility and warranty.

1.13 WARRANTY

Provide Manufacturer's standard performance guarantees or warranties that extend beyond a 1 year period.

PART 2 PRODUCTS

2.1 PRODUCT SUSTAINABILITY CRITERIA

For products in this section, where applicable and to extent allowed by performance criteria, provide and document the following:

2.1.1 Recycled content of Aluminum Windows

Provide aluminum window frames meeting the recycled content requirements as stated within this section and provide documentation in accordance with Section 01 33 29 SUSTAINABILITY REPORTING paragraph RECYCLED CONTENT.

2.1.2 Energy Efficient Equipment for Residential Windows

Provide Energy Star residential windows in accordance with Section 01 33 29 SUSTAINABILITY REPORTING paragraph ENERGY EFFICIENT EQUIPMENT.

2.2 WINDOWS

Provide prime windows that comply with AAMA/WDMA/CSA 101/I.S.2/A440 and the requirements specified herein. In addition to compliance with AAMA/WDMA/CSA 101/I.S.2/A440, window framing members for each individual light of glass must not deflect to the extent that deflection perpendicular to the glass light exceeds L/175 of the glass edge length when subjected to uniform loads at specified design pressures. Provide Structural calculations for deflection to substantiate compliance with deflection requirements. Provide windows of types, performance classes, performance grades, combinations, and sizes indicated or specified. [Provide aluminum window frames with a minimum recycled content of [20 percent.] Design windows to accommodate hardware, glass, weatherstripping, screens, and accessories to be furnished. Each window must be a complete factory assembled unit with or without glass installed. Dimensions shown are minimum. Provide windows with insulating glass and thermal break necessary to achieve a minimum Condensation Resistance Factor (CRF) of [_____] when tested in accordance with AAMA 1503.

2.2.1 Horizontal Sliding Windows (HS)

Type HS-[R15] [LC25] [CW30] [AW40] [[R] [LC] [CW] [AW]- [_____] (Optional Performance Grade)].

2.2.2 Fixed Windows (F)

Type F-[R15] [LC25] [CW30] [AW40] [[R] [LC] [CW] [AW]- [_____] (Optional Performance Grade)].

2.2.3 Forced Entry Resistant Windows

In addition to meeting the requirements of AAMA/WDMA/CSA 101/I.S.2/A440, windows designated for resistance to forced entry must conform to the requirements of AAMA 1302.4.

2.2.4 Glass and Glazing

Materials are specified in Section 08 81 00 GLAZING.

2.2.5 Caulking and Sealing

Are specified in Section 07 92 00 JOINT SEALANTS.

2.2.6 Weatherstripping

AAMA/WDMA/CSA 101/I.S.2/A440.

2.2.7 Sash Poles

Seamless aluminum tube, 0.0625 inch minimum wall thickness, one inch diameter, [_____] feet long, with cast aluminum hook and protective cover or tip on the lower end. Finish must match windows.

2.3 FABRICATION

Fabrication of window units must comply with AAMA/WDMA/CSA 101/I.S.2/A440.

2.3.1 Provisions for Glazing

Design windows and rabbets suitable for glass thickness shown [or specified]. [For minimum antiterrorism windows, attach glazing to its supporting frame using structural silicone sealant or adhesive glazing tape in accordance with ASTM F2248.]

2.3.2 Weatherstripping

Provide for ventilating sections of all windows to ensure a weather-tight seal meeting the infiltration requirements specified in AAMA/WDMA/CSA 101/I.S.2/A440. Provide easily replaceable factory-applied weatherstripping. Use molded vinyl, molded or molded-expanded neoprene or molded or expanded Ethylene Propylene Diene Terpolymer (EPDM) compression-type weatherstripping for compression contact surfaces. Use treated woven pile or wool, or polypropylene or nylon pile bonded to nylon fabric and metal or plastic backing strip weatherstripping for sliding surfaces. Do not use neoprene or polyvinylchloride weatherstripping where exposed to direct sunlight.

2.3.3 Fasteners

Use window manufacturer's standard for windows, trim, and accessories. Self-tapping sheet-metal screws are not acceptable for material more than 1/16 inch thick.

2.3.4 Adhesives

Provide joint sealants as specified in Section 07 92 00 JOINT SEALANTS. For interior application of joint sealants, comply with applicable regulations regarding reduced VOC's, and as specified in Section 07 92 00 JOINT SEALANTS.

2.3.5 Drips and Weep Holes

Provide continuous drips over heads of top ventilators. Where fixed windows adjoin ventilators, drips must be continuous across tops of fixed

windows. Provide drips and weep holes as required to return water to the outside.

2.3.6 Combination Windows

Windows used in combination must be factory assembled of the same class and grade. Where factory assembly of individual windows into larger units is limited by transportation considerations, prefabricate, match mark, transport, and field assemble.

2.3.7 Mullions and Transom Bars

[Provide mullions between multiple window units to resist two times (2X) glazing resistance in accordance with [ASTM F2248](#) and [ASTM E1300](#).]Provide mullions with a thermal break. Secure mullions and transom bars to adjoining construction and window units in such a manner as to permit expansion and contraction and to form a weathertight joint.[Where window cleaner anchors are required, reinforce mullions and anchor to adjoining construction so as to provide safe and adequate support.] Provide mullion covers on the interior and exterior to completely close exposed joints and recesses between window units and to present a neat appearance.[Provide special covers over structural support at mullions as indicated.]

2.3.8 Accessories

Provide windows complete with necessary hardware, fastenings, clips, fins, anchors, glazing beads, and other appurtenances necessary for complete installation and proper operation.

2.3.8.1 Hardware

[AAMA/WDMA/CSA 101/I.S.2/A440](#). The item, type, and functional characteristics must be the manufacturer's standard for the particular window type. Provide hardware of suitable design and of sufficient strength to perform the function for which it is used. Equip all operating ventilators with a lock or latching device which can be secured from the inside.

2.3.8.2 Fasteners

Provide concealed anchors of the type recommended by the window manufacturer for the specific type of construction. Anchors and fasteners must be compatible with the window and the adjoining construction. Provide a minimum of three anchors for each jamb located approximately [6 inches](#) from each end and at midpoint.

2.3.8.3 Window-Cleaner Anchors

Provide double head anchors for windows[indicated][specified]. Anchors must be stainless steel of size and design required for the window type and application, conforming to [ASTM A276/A276M](#). Provide two anchors for each single window[and each adjacent fixed glass window unit]. Fasten anchors [44 inches](#) above the window sill utilizing appropriate methods for the window type and application in accordance with industry safety standards.

2.3.8.4 Window Anchors

Anchoring devices for installing windows must be made of aluminum, cadmium-plated steel, stainless steel, or zinc-plated steel conforming to AAMA/WDMA/CSA 101/I.S.2/A440.

2.3.9 Finishes

Exposed aluminum surfaces must be factory finished with an[anodic coating][or][organic coating].[Color must be match existng and[as indicated in the plans].] All windows[for each building] must have the same finish.

2.3.9.1 Anodic Coating

Clean exposed aluminum surfaces and provide an anodized finish conforming to AA DAF45 and AAMA 611. Finish must be:

- [a. Architectural Class II (0.4 mil to 0.7 mil), designation AA-M10-C22-[A31, clear (natural)] [A32, integral color] [A34, electrolytically deposited color] anodized.]
- [b. Architectural Class I (0.7 mil or thicker), designation AA-M10-C22-[A41, clear (natural)] [A42, integral color] [A44, electrolytically deposited color] anodized.]

2.3.9.2 Organic Coating

Clean and prime exposed aluminum surfaces. Provide a[baked enamel finish in accordance with AAMA 2603 with total dry film thickness not less than 0.8 mil][high-performance finish in accordance with [AAMA 2604][AAMA 2605] with total dry film thickness of not less than 1.2 mils].

2.3.10 Screens

AAMA/WDMA/CSA 101/I.S.2/A440. Provide one insect screen for each operable exterior sash or ventilator. Design screens to be rewirable, easily removable from inside the building, and to permit easy access to operating hardware.

2.4 SPECIAL OPERATORS

For windows having operating hardware or locking or latching devices located more than 6 feet above the floor, provide suitably designed operators or locking or latching devices necessary for convenient and proper window operation.

2.4.1 Pole Operators

Poles must be of proper length to permit window operation from 5 feet above the floor. Provide one pole operator for each room, and one pole hanger for each pole. Locate hangers where directed.

2.4.2 Extension Crank Operators

Provide removable handles for crank-operated rotary-type operators located more than 6 feet above the floor. Provide one removable handle for each room.

2.4.3 Mechanical Operators

Provide [manual] operators for group operation of continuous rows of windows. Operators must be capable of opening and closing windows without appreciable deflection, vibration or rattle. Provide means of adjustment for transmission lines. Provide operators to control window units in groups as recommended by the window manufacturer or as indicated.

2.5 THERMAL-BARRIER WINDOWS

Provide thermal-barrier windows, complete with accessories and fittings, where indicated.

Specify material and construction except as follows:

- a. Aluminum alloy must be 6063-T6.
- b. Frame construction, including operable sash, must be factory-assembled and factory-sealed inner and outer aluminum completely separated from metal-to-metal contact. Join assembly by a continuous, concealed, low conductance divider housed in an interlocking extrusion of the inner frame. Metal fasteners, straps, or anchors must not bridge the connection between the inner and outer frame.
- c. Operating hardware for each sash must consist of spring-loaded nylon cushion blocks and pin locks designed to lock in predetermined locations.
- d. Sash must be completely separated from metal-to-metal contact by means of woven-pile weatherstripping, plastic, or elastomeric separation members.
- e. Operating and storm sash must be factory-glazed with the type of glass indicated and of the quality specified in Section 08 81 00 GLAZING.

2.6 MULLIONS

Provide mullions between multiple-window units where indicated.

Provide profiles for mullions and mullion covers, reinforced as required for the specified wind loading, and securely anchored to the adjoining construction. Mullion extrusion will include serrations or pockets to receive weatherstripping, sealant, or tape at the point of contact with each window flange.

Mullion assembly must include aluminum window clamps or brackets screwed or bolted to the mullion and the mullion cover.

Mullion cover must be screw-fastened to the mullion unless otherwise indicated.

Mullion reinforcing members must be fabricated of the materials specified in AAMA/WDMA/CSA 101/I.S.2/A440 and meet the specified design loading.

2.7 WINDOW CLEANERS' BOLTS

Provide window cleaners' bolts for all windows 7 feet or higher above

finished grade, except for windows that can be removed and cleaned from the ground or from a lower roof level without the use of an extension ladder. Provide two bolts for each single window unit and each fixed glass unit. Locate bolts 44 inches above the window sill.

Window cleaners' bolts must be double-head type, AISI Series 300 corrosion-resistant steel, size and design complying with IWCA I-14.1. Contact side of the bolts must be ground to fit flat against window jambs. Bolts must be factory- or field-attached before windows are set. Reinforce backs of frames to receive bolts with 1/4 by 6-inch corrosion-resistant steel or aluminum plates bolted or welded to the frames at the factory. Special wall anchors must be provided on frames at the point of bolt attachment.

PART 3 EXECUTION

3.2 INSTALLATION

3.2.1 Method of Installation

Install in accordance with the window manufacturer's printed instructions and details. Build in windows as the work progresses or install without forcing into prepared window openings. Set windows at proper elevation, location, and reveal; plumb, square, level, and in alignment; and brace, strut, and stay properly to prevent distortion and misalignment. Protect ventilators and operating parts against accumulation of dirt and building materials by keeping ventilators tightly closed and locked to frame. Bed screws or bolts in sill members, joints at mullions, contacts of windows with sills, built-in fins, and subframes in mastic sealant of a type recommended by the window manufacturer. Install and caulk windows in a manner that will prevent entrance of water and wind. Fasten insect screens securely in place.

Any materials that show visual evidence of biological growth due to the presence of moisture must not be installed on the building project.

3.2.2 Dissimilar Materials

Where aluminum surfaces are in contact with, or fastened to masonry, concrete, wood, or dissimilar metals, except stainless steel or zinc, protect the aluminum surface from dissimilar materials as recommended in the Appendix to AAMA/WDMA/CSA 101/I.S.2/A440. Do not coat surfaces in contact with sealants after installation with any type of protective material.

3.2.3 Anchors and Fastenings

Make provision for securing units to each other, to masonry, and to other adjoining construction. Windows installed in masonry walls must have head and jamb members designed to recess into masonry wall not less than 7/16 inch.

3.2.4 Adjustments After Installation

After installation of windows and completion of glazing and field painting, adjust all ventilators and hardware to operate smoothly and to provide weathertight sealing when ventilators are closed and locked. Lubricate

hardware and operating parts as necessary.[Adjust double hung windows to operate with maximum applied force of 25 pounds in either direction, not including breakaway friction force.] Verify that products are properly installed, connected, and adjusted.

3.3 CLEANING

Clean interior and exterior surfaces of window units of mortar, plaster, paint spattering spots, and other foreign matter to present a neat appearance, to prevent fouling of weathering surfaces and weather-stripping, and to prevent interference with the operation of hardware. Replace all stained, discolored, or abraded windows that cannot be restored to their original condition with new windows.

-- End of Section --

SECTION 09 90 00

PAINTS AND COATINGS
05/11

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (ACGIH)

ACGIH 0100 (2015; Suppl 2002-2016) Documentation of the Threshold Limit Values and Biological Exposure Indices

ASME INTERNATIONAL (ASME)

ASME A13.1 (2015) Scheme for the Identification of Piping Systems

ASTM INTERNATIONAL (ASTM)

ASTM C920 (2014a) Standard Specification for Elastomeric Joint Sealants

ASTM D235 (2002; R 2012) Mineral Spirits (Petroleum Spirits) (Hydrocarbon Dry Cleaning Solvent)

ASTM D2824/D2824M (2013) Aluminum-Pigmented Asphalt Roof Coatings, Non-Fibered, Asbestos Fibered, and Fibered without Asbestos

ASTM D4214 (2007; R 2015) Standard Test Method for Evaluating the Degree of Chalking of Exterior Paint Films

ASTM D4263 (1983; R 2012) Indicating Moisture in Concrete by the Plastic Sheet Method

ASTM D4444 (2013) Use and Calibration of Hand-Held Moisture Meters

ASTM D523 (2014) Standard Test Method for Specular Gloss

ASTM D6386 (2016) Standard Practice for Preparation of Zinc (Hot-Dip Galvanized) Coated Iron and Steel Product and Hardware Surfaces for Painting

ASTM E2129 (2010) Standard Practice for Data Collection for Sustainability Assessment

of Building Products

ASTM F1869 (2016) Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride

MASTER PAINTERS INSTITUTE (MPI)

MPI 1 (2012) Aluminum Paint

MPI 10 (2012) Latex, Exterior Flat (MPI Gloss Level 1)

MPI 101 (2012) Primer, Epoxy, Anti-Corrosive, for Metal

MPI 107 (2012) Primer, Rust-Inhibitive, Water Based

MPI 108 (2012) Epoxy, High Build, Low Gloss

MPI 11 (2012) Latex, Exterior Semi-Gloss, MPI Gloss Level 5

MPI 113 (2012) Elastomeric, Pigmented, Exterior, Water Based, Flat

MPI 116 (2012) Block Filler, Epoxy

MPI 119 (2012) Latex, Exterior, Gloss (MPI Gloss Level 6)

MPI 13 (2012) Stain, Exterior Solvent-Based, Semi-Transparent

MPI 134 (2012) Primer, Galvanized, Water Based

MPI 138 (2012) Latex, Interior, High Performance Architectural, (MPI Gloss Level 2)

MPI 139 (2012) Latex, Interior, High Performance Architectural, (MPI Gloss Level 3)

MPI 140 (2012) Latex, Interior, High Performance Architectural, (MPI Gloss Level 4)

MPI 141 (2012) Latex, Interior, High Performance Architectural, Semi-Gloss (MPI Gloss Level 5)

MPI 144 (2012) Latex, Interior, Institutional Low Odor/VOC, (MPI Gloss Level 2)

MPI 145 (2012) Latex, Interior, Institutional Low Odor/VOC, (MPI Gloss Level 3)

MPI 146 (2012) Latex, Interior, Institutional Low Odor/VOC, (MPI Gloss Level 4)

MPI 147	(May 2016) Latex, Interior, Institutional Low Odor/VOC, Semi-Gloss (MPI Gloss Level 5)
MPI 151	(2012) Light Industrial Coating, Interior, Water Based (MPI Gloss Level 3)
MPI 153	(2012) Light Industrial Coating, Interior, Water Based, Semi-Gloss (MPI Gloss Level 5)
MPI 154	(2012) Light Industrial Coating, Interior, Water Based, Gloss (MPI Gloss Level 6)
MPI 16	(2012) Stain, Exterior, Water Based, Solid Hide
MPI 161	(2012) Light Industrial Coating, Exterior, Water Based (MPI Gloss Level 3)
MPI 163	(2012) Light Industrial Coating, Exterior, Water Based, Semi-Gloss (MPI Gloss Level 5)
MPI 164	(2012) Light Industrial Coating, Exterior, Water Based, Gloss (MPI Gloss Level 6)
MPI 19	(2012) Primer, Zinc Rich, Inorganic
MPI 2	(2012) Aluminum Heat Resistant Enamel (up to 427 C and 800 F)
MPI 21	(2012) Heat Resistant Coating, (Up to 205°C/402°F), MPI Gloss Level 6
MPI 22	(2012) Aluminum Paint, High Heat (up to 590° C/1100° F)
MPI 23	(2012) Primer, Metal, Surface Tolerant
MPI 26	(2012) Primer, Galvanized Metal, Cementitious
MPI 27	(2012) Floor Enamel, Alkyd, Gloss (MPI Gloss Level 6)
MPI 31	(2012) Varnish, Polyurethane, Moisture Cured, Gloss (MPI Gloss Level 6)
MPI 39	(2012) Primer, Latex, for Interior Wood
MPI 4	(2012) Interior/Exterior Latex Block Filler
MPI 42	(2012) Textured Coating, Latex, Flat
MPI 44	(2012) Latex, Interior, (MPI Gloss Level 2)
MPI 45	(2012) Primer Sealer, Interior Alkyd

MPI 46	(2012) Undercoat, Enamel, Interior
MPI 47	(2012) Alkyd, Interior, Semi-Gloss (MPI Gloss Level 5)
MPI 48	(2012) Alkyd, Interior, Gloss (MPI Gloss Level 6-7)
MPI 49	(2012) Alkyd, Interior, Flat (MPI Gloss Level 1)
MPI 5	(2012) Primer, Exterior Alkyd Wood
MPI 50	(2012) Primer Sealer, Latex, Interior
MPI 51	(2012) Alkyd, Interior, (MPI Gloss Level 3)2
MPI 52	(2012) Latex, Interior, (MPI Gloss Level 3)
MPI 54	(2012) Latex, Interior, Semi-Gloss (MPI Gloss Level 5)
MPI 56	(2012) Varnish, Interior, Polyurethane, Oil Modified, Gloss
MPI 57	(2012) Varnish, Interior, Polyurethane, Oil Modified, Satin
MPI 59	(2012) Floor Paint, Alkyd, Low Gloss
MPI 6	(2012) Primer, Exterior Latex Wood
MPI 60	(2012) Floor Paint, Latex, Low Gloss
MPI 68	(2012) Floor Paint, Latex, Gloss
MPI 7	(Oct 2009) Exterior Oil Wood Primer
MPI 71	(2012) Varnish, Polyurethane, Moisture Cured, Flat (MPI Gloss Level 1)
MPI 72	(2012) Polyurethane, Two-Component, Pigmented, Gloss (MPI Gloss Level 6-7)
MPI 77	(2012) Epoxy, Gloss
MPI 79	(2012) Primer, Alkyd, Anti-Corrosive for Metal
MPI 8	(2012) Alkyd, Exterior Flat (MPI Gloss Level 1)
MPI 9	(2012) Alkyd, Exterior Gloss (MPI Gloss Level 6)

MPI 90	(2012) Stain, Semi-Transparent, for Interior Wood
MPI 94	(2012) Alkyd, Exterior, Semi-Gloss (MPI Gloss Level 5)
MPI 95	(2012) Primer, Quick Dry, for Aluminum

SCIENTIFIC CERTIFICATION SYSTEMS (SCS)

SCS	SCS Global Services (SCS) Indoor Advantage
SCS SP-01	(2000) Environmentally Preferable Product Specification for Architectural and Anti-Corrosive Paints

SOCIETY FOR PROTECTIVE COATINGS (SSPC)

SSPC 7/NACE No.4	(2007; E 2004) Brush-Off Blast Cleaning
SSPC Guide 6	(2015) Guide for Containing Surface Preparation Debris Generated During Paint Removal Operations
SSPC Guide 7	(2004; E 2004) Guide to the Disposal of Lead-Contaminated Surface Preparation Debris
SSPC PA 1	(2016) Shop, Field, and Maintenance Coating of Metals
SSPC PA Guide 3	(1982; E 1995) A Guide to Safety in Paint Application
SSPC Paint 18	(1982; E 2004) Chlorinated Rubber Intermediate Coat Paint
SSPC QP 1	(2012; E 2012) Standard Procedure for Evaluating Painting Contractors (Field Application to Complex Industrial Structures)
SSPC SP 1	(2015) Solvent Cleaning
SSPC SP 10/NACE No. 2	(2007) Near-White Blast Cleaning
SSPC SP 12/NACE No.5	(2002) Surface Preparation and Cleaning of Metals by Waterjetting Prior to Recoating
SSPC SP 2	(1982; E 2000; E 2004) Hand Tool Cleaning
SSPC SP 3	(1982; E 2004) Power Tool Cleaning
SSPC SP 6/NACE No.3	(2007) Commercial Blast Cleaning
SSPC VIS 1	(2002; E 2004) Guide and Reference Photographs for Steel Surfaces Prepared by

	Dry Abrasive Blast Cleaning
SSPC VIS 3	(2004) Guide and Reference Photographs for Steel Surfaces Prepared by Hand and Power Tool Cleaning
SSPC VIS 4/NACE VIS 7	(1998; E 2000; E 2004) Guide and Reference Photographs for Steel Surfaces Prepared by Waterjetting
U.S. ARMY CORPS OF ENGINEERS (USACE)	
EM 385-1-1	(2014) Safety and Health Requirements Manual
U.S. DEPARTMENT OF DEFENSE (DOD)	
MIL-PRF-680	(2010; Rev C; Notice 1 2015) Degreasing Solvent
MIL-STD-101	(2014; Rev C) Color Code for Pipelines and for Compressed Gas Cylinders
U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)	
EPA Method 24	(2000) Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings
U.S. FEDERAL AVIATION ADMINISTRATION (FAA)	
FAA AC 70/7460-1	(2015; Rev L) Obstruction Marking and Lighting
U.S. GENERAL SERVICES ADMINISTRATION (GSA)	
FED-STD-313	(2014; Rev E) Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities
FED-STD-595	(Rev C; Notice 1) Colors Used in Government Procurement
U.S. GREEN BUILDING COUNCIL (USGBC)	
LEED NC	(2009) Leadership in Energy and Environmental Design(tm) New Construction Rating System
U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)	
29 CFR 1910.1000	Air Contaminants
29 CFR 1910.1001	Asbestos

29 CFR 1910.1025

Lead

29 CFR 1926.62

Lead

UL ENVIRONMENT (ULE)

ULE Greenguard

UL Greenguard Certification Program

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are [for Contractor Quality Control approval.][for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government.] Submittals with an "S" are for inclusion in the Sustainability eNotebook, in conformance to Section 01 33 29 SUSTAINABILITY REPORTING. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

The current MPI, "Approved Product List" which lists paint by brand, label, product name and product code as of the date of contract award, will be used to determine compliance with the submittal requirements of this specification. The Contractor may choose to use a subsequent MPI "Approved Product List", however, only one list may be used for the entire contract and each coating system is to be from a single manufacturer. All coats on a particular substrate must be from a single manufacturer. No variation from the MPI Approved Products List is acceptable.

Samples of specified materials may be taken and tested for compliance with specification requirements.

SD-02 Shop Drawings

Piping identification

Submit color stencil codes

SD-03 Product Data

Certification

Coating;

Manufacturer's Technical Data Sheets

[Sealant]

SD-04 Samples

Color

SD-07 Certificates

Applicator's qualifications

Qualification Testing laboratory for coatings

SD-08 Manufacturer's Instructions

Application instructions

Mixing

Detailed mixing instructions, minimum and maximum application temperature and humidity, potlife, and curing and drying times between coats.

Manufacturer's Safety Data Sheets

Submit manufacturer's Safety Data Sheets for coatings, solvents, and other potentially hazardous materials, as defined in **FED-STD-313**.

SD-10 Operation and Maintenance Data

Coatings

Preprinted cleaning and maintenance instructions for all coating systems shall be provided.

1.3 APPLICATOR'S QUALIFICATIONS

1.3.1 Contractor Qualification

Submit the name, address, telephone number, and e-mail address of the contractor that will be performing all surface preparation and coating application. Submit evidence that key personnel have successfully performed surface preparation and application of coatings on a minimum of three similar projects within the past **five** years. List information by individual and include the following:

- a. Name of individual and proposed position for this work.
- b. Information about each previous assignment including:

Position or responsibility

Employer (if other than the Contractor)

Name of facility owner

Mailing address, telephone number, and telex number (if non-US) of facility owner

Name of individual in facility owner's organization who can be contacted as a reference

Location, size and description of structure

Dates work was carried out

Description of work carried out on structure

]

1.4 QUALITY ASSURANCE

1.4.1 Field Samples and Tests

The Contracting Officer may choose up to two coatings that have been delivered to the site to be tested at no cost to the Government. Take samples of each chosen product as specified in the paragraph "Sampling Procedures." Test each chosen product as specified in the paragraph "Testing Procedure." Products which do not conform, shall be removed from the job site and replaced with new products that conform to the referenced specification. Testing of replacement products that failed initial testing shall be at no cost to the Government.

1.4.1.1 Sampling Procedure

The Contracting Officer will select paint at random from the products that have been delivered to the job site for sample testing. The Contractor shall provide [one quart](#) samples of the selected paint materials. The samples shall be taken in the presence of the Contracting Officer, and labeled, identifying each sample. Provide labels in accordance with the paragraph "Packaging, Labeling, and Storage" of this specification.

1.4.1.2 Testing Procedure

Provide Batch Quality Conformance Testing for specified products, as defined by and performed by MPI. As an alternative to Batch Quality Conformance Testing, the Contractor may provide [Qualification Testing](#) for specified products above to the appropriate MPI product specification, using the third-party laboratory approved under the paragraph "Qualification Testing" laboratory for coatings. The qualification testing lab report shall include the backup data and summary of the test results. The summary shall list all of the reference specification requirements and the result of each test. The summary shall clearly indicate whether the tested paint meets each test requirement. Note that Qualification Testing may take 4 to 6 weeks to perform, due to the extent of testing required.

Submit name, address, telephone number, FAX number, and e-mail address of the independent third party laboratory selected to perform testing of coating samples for compliance with specification requirements. Submit documentation that laboratory is regularly engaged in testing of paint samples for conformance with specifications, and that employees performing testing are qualified. If the Contractor chooses MPI to perform the Batch Quality Conformance testing, the above submittal information is not required, only a letter is required from the Contractor stating that MPI will perform the testing.

1.4.2 [Sample Textured Wall Coating System Mock-Up](#)

After coating samples are approved, and prior to starting installation, a

minimum 8 foot by 8 foot mock-up shall be provided for each substrate and for each color and type of textured wall coating, using the actual substrate materials. Once approved the mock-up samples shall be used as a standard of workmanship for installation within the facility. At least 48 hours prior to mock-up installation, the Contractor shall submit written notification to the Contracting Officer's Representative.

1.5 REGULATORY REQUIREMENTS

1.5.1 Environmental Protection

In addition to requirements specified elsewhere for environmental protection, provide coating materials that conform to the restrictions of the local Air Pollution Control District and regional jurisdiction. Notify Contracting Officer of any paint specified herein which fails to conform.

1.5.2 Lead Content

Do not use coatings having a lead content over 0.06 percent by weight of nonvolatile content.

1.5.3 Chromate Content

Do not use coatings containing zinc-chromate or strontium-chromate.

1.5.4 Asbestos Content

Materials shall not contain asbestos.

1.5.5 Mercury Content

Materials shall not contain mercury or mercury compounds.

1.5.6 Silica

Abrasive blast media shall not contain free crystalline silica.

1.5.7 Human Carcinogens

Materials shall not contain ACGIH 0100 confirmed human carcinogens (A1) or suspected human carcinogens (A2).

1.6 PACKAGING, LABELING, AND STORAGE

Paints shall be in sealed containers that legibly show the contract specification number, designation name, formula or specification number, batch number, color, quantity, date of manufacture, manufacturer's formulation number, manufacturer's directions including any warnings and special precautions, and name and address of manufacturer. Pigmented paints shall be furnished in containers not larger than 5 gallons. Paints and thinners shall be stored in accordance with the manufacturer's written directions, and as a minimum, stored off the ground, under cover, with sufficient ventilation to prevent the buildup of flammable vapors, and at temperatures between 40 to 95 degrees F.

1.7 SAFETY AND HEALTH

Apply coating materials using safety methods and equipment in accordance with the following:

Work shall comply with applicable Federal, State, and local laws and regulations, and with the ACCIDENT PREVENTION PLAN, including the Activity Hazard Analysis as specified in Section 01 35 26 GOVERNMENT SAFETY REQUIREMENTS and in Appendix A of EM 385-1-1. The Activity Hazard Analysis shall include analyses of the potential impact of painting operations on painting personnel and on others involved in and adjacent to the work zone.

1.7.1 Safety Methods Used During Coating Application

Comply with the requirements of SSPC PA Guide 3.

1.7.2 Toxic Materials

To protect personnel from overexposure to toxic materials, conform to the most stringent guidance of:

- a. The applicable manufacturer's Safety Data Sheets (SDS) or local regulation.
- b. 29 CFR 1910.1000.
- c. ACGIH 0100, threshold limit values.
- [d. The appropriate OSHA standard in 29 CFR 1910.1025 and 29 CFR 1926.62 for surface preparation on painted surfaces containing lead. Removal and disposal of coatings which contain lead is specified in [Section 02 83 19.13 10 LEAD-BASED PAINT ABATEMENT][Section 02 83 13.00 20 LEAD IN CONSTRUCTION][Section 02 82 33.13 20 REMOVAL/CONTROL AND DISPOSAL OF PAINT WITH LEAD][____]."] Additional guidance is given in SSPC Guide 6 and SSPC Guide 7. Refer to drawings for list of hazardous materials located on this project. Contractor to coordinate paint preparation activities with this specification section.
-] e. The appropriate OSHA standards in 29 CFR 1910.1001 for surface preparation of painted surfaces containing asbestos. Removal and disposal of coatings which contain asbestos materials is specified in [Section 02 82 16.00 20 ENGINEERING CONTROL OF ASBESTOS CONTAINING MATERIALS][Section 02 82 13.00 10 ASBESTOS ABATEMENT]. Refer to drawings for list of hazardous materials located on this project. Contractor to coordinate paint preparation activities with this specification section.

1.8 ENVIRONMENTAL CONDITIONS

Comply, at minimum, with manufacturer recommendations for space ventilation during and after installation. [Isolate area of application from rest of building when applying high-emission paints or coatings.]

1.8.1 Coatings

Do not apply coating when air or substrate conditions are:

- a. Less than 5 degrees F above dew point;

- b. Below 50 degrees F or over 95 degrees F, unless specifically pre-approved by the Contracting Officer and the product manufacturer. Under no circumstances shall application conditions exceed manufacturer recommendations.

1.9 SUSTAINABLE DESIGN REQUIREMENTS

1.9.1 Local/Regional Materials

[Use materials or products extracted, harvested, or recovered, as well as manufactured, within a [200] mile radius from the project site, if available from a minimum of three sources. Paint and coating materials may be locally available.

1.10 COLOR SELECTION

[Color Coding For Shore-To-Ship Utility Connections: Paint hose connection fittings and shut-off valves the designated color. In addition to color coding provide 2 inch high stenciled letters using black stencil paint, clearly designating service for each connection.

Color Coding for Shore-to-Ship
Utility Connections

<u>Service</u>	<u>Color</u>	<u>FED-STD-595 No.</u>
Potable Water*	Blue	15044
Water Provided for Fire Protection**	Red	11105
Chilled Water	Striped Blue/White	15044/17886
Oily Waste Water	Striped Yellow/Black	13538/17038
Sewer	Gold	17043
Steam	White	17886
High Pressure Air	Gray	16081
Low Pressure Air	Tan	10324
Fuel	Yellow	13655

* This includes connections serving domestic functions.

** This includes non-potable salt water or, at some locations, fresh water connections provided for fire protection (may also include flushing and cooling requirements). Note: This does not include waterfront fire hydrants.

] Colors of finish coats shall be as indicated or specified. Where not indicated or specified, colors shall be selected by the Contracting Officer. Manufacturers' names and color identification are used for the purpose of color identification only. Named products are acceptable for use only if they conform to specified requirements. Products of other

manufacturers are acceptable if the colors approximate colors indicated and the product conforms to specified requirements.

1.11 LOCATION AND SURFACE TYPE TO BE PAINTED

1.11.1 Painting Included

Where a space or surface is indicated to be painted, include the following unless indicated otherwise.

- a. Surfaces behind portable objects and surface mounted articles readily detachable by removal of fasteners, such as screws and bolts.
- b. New factory finished surfaces that require identification or color coding and factory finished surfaces that are damaged during performance of the work.
- c. Existing coated surfaces that are damaged during performance of the work.

1.11.1.1 Exterior Painting

Includes new surfaces[, existing coated surfaces,] [and] [existing uncoated surfaces,] of the building[s] and appurtenances. Also included are existing coated surfaces made bare by cleaning operations.

1.11.1.2 Interior Painting

Includes new surfaces[, existing uncoated surfaces,] [and] [existing coated surfaces] of the building[s] and appurtenances as indicated and existing coated surfaces made bare by cleaning operations. Where a space or surface is indicated to be painted, include the following items, unless indicated otherwise.

- a. Exposed columns, girders, beams, joists, and metal deck; and
- b. Other contiguous surfaces.

1.11.2 Painting Excluded

Do not paint the following unless indicated otherwise.

- a. Surfaces concealed and made inaccessible by panelboards, fixed ductwork, machinery, and equipment fixed in place.
- b. Surfaces in concealed spaces. Concealed spaces are defined as enclosed spaces above suspended ceilings, furred spaces, attic spaces, crawl spaces, elevator shafts and chases.
- c. Steel to be embedded in concrete.
- d. Copper, stainless steel, aluminum, brass, and lead except existing coated surfaces.
- e. Hardware, fittings, and other factory finished items.

[
1.11.3 Definitions and Abbreviations

1.11.3.1 Qualification Testing

Qualification testing is the performance of all test requirements listed in the product specification. This testing is accomplished by MPI to qualify each product for the MPI Approved Product List, and may also be accomplished by Contractor's third party testing lab if an alternative to Batch Quality Conformance Testing by MPI is desired.

1.11.3.2 Batch Quality Conformance Testing

Batch quality conformance testing determines that the product provided is the same as the product qualified to the appropriate product specification. This testing shall only be accomplished by MPI testing lab.

1.11.3.3 Coating

A film or thin layer applied to a base material called a substrate. A coating may be a metal, alloy, paint, or solid/liquid suspensions on various substrates (metals, plastics, wood, paper, leather, cloth, etc.). They may be applied by electrolysis, vapor deposition, vacuum, or mechanical means such as brushing, spraying, calendaring, and roller coating. A coating may be applied for aesthetic or protective purposes or both. The term "coating" as used herein includes emulsions, enamels, stains, varnishes, sealers, epoxies, and other coatings, whether used as primer, intermediate, or finish coat. The terms paint and coating are used interchangeably.

1.11.3.4 DFT or dft

Dry film thickness, the film thickness of the fully cured, dry paint or coating.

1.11.3.5 DSD

Degree of Surface Degradation, the MPI system of defining degree of surface degradation. Five (5) levels are generically defined under the Assessment sections in the MPI Maintenance Repainting Manual.

1.11.3.6 EPP

Environmentally Preferred Products, a standard for determining environmental preferability in support of Executive Order 13101.

1.11.3.7 EXT

MPI short term designation for an exterior coating system.

1.11.3.8 INT

MPI short term designation for an interior coating system.

1.11.3.9 micron / microns

The metric measurement for 0.001 mm or one/one-thousandth of a millimeter.

1.11.3.10 mil / mils

The English measurement for 0.001 in or one/one-thousandth of an inch, equal to 25.4 microns or 0.0254 mm.

1.11.3.11 mm

The metric measurement for millimeter, 0.001 meter or one/one-thousandth of a meter.

1.11.3.12 MPI Gloss Levels

MPI system of defining gloss. Seven (7) gloss levels (G1 to G7) are generically defined under the Evaluation sections of the MPI Manuals. Traditionally, Flat refers to G1/G2, Eggshell refers to G3, Semigloss refers to G5, and Gloss refers to G6.

Gloss levels are defined by MPI as follows:

Gloss Level	Description	Units at 60 degrees	Units at 85 degrees
G1	Matte or Flat	0 to 5	10 max
G2	Velvet	0 to 10	10 to 35
G3	Eggshell	10 to 25	10 to 35
G4	Satin	20 to 35	35 min
G5	Semi-Gloss	35 to 70	
G6	Gloss	70 to 85	
G7	High Gloss		

Gloss is tested in accordance with [ASTM D523](#). Historically, the Government has used Flat (G1 / G2), Eggshell (G3), Semi-Gloss (G5), and Gloss (G6).

1.11.3.13 MPI System Number

The MPI coating system number in each Division found in either the MPI Architectural Painting Specification Manual or the Maintenance Repainting Manual and defined as an exterior (EXT/REX) or interior system (INT/RIN). The Division number follows the CSI Master Format.

1.11.3.14 Paint

See Coating definition.

1.11.3.15 REX

MPI short term designation for an exterior coating system used in repainting projects or over existing coating systems.

1.11.3.16 RIN

MPI short term designation for an interior coating system used in repainting projects or over existing coating systems.

PART 2 PRODUCTS

2.1 [MATERIALS](#)

Conform to the [coating](#) specifications and standards referenced in PART 3. Submit [manufacturer's technical data sheets](#) for specified [coatings](#) and solvents. [Minimum [20][50][_____] percent post-consumer recycled content for the following light-colored paints and primers: [_____]]. Minimum [50][90][99][_____] percent post-consumer recycled content for the following dark-colored paints and primers: [_____]]. [All][The following] consolidated latex paints shall contain a minimum of [100][_____] percent post-consumer recycled content[: [_____]].] Comply with applicable regulations regarding toxic and hazardous materials.

PART 3 EXECUTION

3.1 PROTECTION OF AREAS AND SPACES NOT TO BE PAINTED

Prior to surface preparation and coating applications, remove, mask, or otherwise protect, hardware, hardware accessories, machined surfaces, radiator covers, plates, lighting fixtures, public and private property, and other such items not to be coated that are in contact with surfaces to be coated. Following completion of painting, workmen skilled in the trades involved shall reinstall removed items. Restore surfaces contaminated by coating materials, to original condition and repair damaged items.

3.2 REPUTTYING AND REGLAZING

Remove cracked, loose, and defective putty or glazing compound on glazed sash and provide new putty or glazing compound. Where defective putty or glazing compound constitutes 30 percent or more of the putty at any one light, remove the glass and putty or glazing compound and reset the glass. Remove putty or glazing compound without damaging sash or glass. Clean rabbets to bare wood or metal and prime prior to reglazing. Putty for wood sash shall be a linseed oil putty. Patch surfaces to provide smooth transition between existing and new surfaces. Finish putty or glazing compound to a neat and true bead. Allow glazing compound time to cure, in accordance with manufacturer's recommendation, prior to coating application. Allow putty to set one week prior to coating application.

3.3 RESEALING OF EXISTING EXTERIOR JOINTS

3.3.1 Surface Condition

Surfaces shall be clean, dry to the touch, and free from frost and moisture; remove grease, oil, wax, lacquer, paint, defective backstop, or other foreign matter that would prevent or impair adhesion. Where adequate grooves have not been provided, clean out to a depth of [1/2 inch](#) and grind to a minimum width of [1/4 inch](#) without damage to adjoining work. Grinding shall not be required on metal surfaces.

3.3.2 Backstops

In joints more than [1/2 inch](#) deep, install glass fiber roving or neoprene, butyl, polyurethane, or polyethylene foams free of oil or other staining elements as recommended by sealant manufacturer. Backstop material shall be compatible with sealant. Do not use oakum and other types of absorptive materials as backstops.

3.3.3 Primer and Bond Breaker

Install the type recommended by the sealant manufacturer.

3.3.4 Ambient Temperature

Between 38 degrees F and 95 degrees F when applying sealant.

3.3.5 Exterior Sealant

For joints in vertical surfaces, provide ASTM C920, Type S or M, Grade NS, Class 25, Use NT. For joints in horizontal surfaces, provide ASTM C920, Type S or M, Grade P, Class 25, Use T. Color(s) shall be selected by the Contracting Officer. Apply the sealant in accordance with the manufacturer's printed instructions. Force sealant into joints with sufficient pressure to fill the joints solidly. Sealant shall be uniformly smooth and free of wrinkles.

3.3.6 Cleaning

Immediately remove fresh sealant from adjacent areas using a solvent recommended by the sealant manufacturer. Upon completion of sealant application, remove remaining smears and stains and leave the work in a clean condition. Allow sealant time to cure, in accordance with manufacturer's recommendations, prior to coating.

3.4 SURFACE PREPARATION

Remove dirt, splinters, loose particles, grease, oil, [disintegrated coatings,] and other foreign matter and substances deleterious to coating performance as specified for each substrate before application of paint or surface treatments. Oil and grease shall be removed prior to mechanical cleaning. Cleaning shall be programmed so that dust and other contaminants will not fall on wet, newly painted surfaces. Exposed ferrous metals such as nail heads on or in contact with surfaces to be painted with water-thinned paints, shall be spot-primed with a suitable corrosion-inhibitive primer capable of preventing flash rusting and compatible with the coating specified for the adjacent areas.

3.4.1 Additional Requirements for Preparation of Surfaces With Existing Coatings

Before application of coatings, perform the following on surfaces covered by soundly-adhered coatings, defined as those which cannot be removed with a putty knife:

- a. Test existing finishes for lead before sanding, scraping, or removing. If lead is present, refer to paragraph Toxic Materials.
- b. Wipe previously painted surfaces to receive solvent-based coatings, except stucco and similarly rough surfaces clean with a clean, dry cloth saturated with mineral spirits, ASTM D235. Allow surface to dry. Wiping shall immediately precede the application of the first coat of any coating, unless specified otherwise.
- c. Sand existing glossy surfaces to be painted to reduce gloss. Brush, and wipe clean with a damp cloth to remove dust.
- d. The requirements specified are minimum. Comply also with the

application instructions of the paint manufacturer.

- e. Previously painted surfaces [specified to be repainted] [damaged during construction] shall be thoroughly cleaned of all grease, dirt, dust or other foreign matter.
- f. Blistering, cracking, flaking and peeling or other deteriorated coatings shall be removed.
- g. Chalk shall be removed so that when tested in accordance with ASTM D4214, the chalk resistance rating is no less than 8.
- h. Slick surfaces shall be roughened. Damaged areas such as, but not limited to, nail holes, cracks, chips, and spalls shall be repaired with suitable material to match adjacent undamaged areas.
- i. Edges of chipped paint shall be feather edged and sanded smooth.
- j. Rusty metal surfaces shall be cleaned as per SSPC requirements. Solvent, mechanical, or chemical cleaning methods shall be used to provide surfaces suitable for painting.
- k. New, proposed coatings shall be compatible with existing coatings.

3.4.2 Existing Coated Surfaces with Minor Defects

[Sand, spackle, and treat minor defects to render them smooth. Minor defects are defined as scratches, nicks, cracks, gouges, spalls, alligatoring, chalking, and irregularities due to partial peeling of previous coatings.] [Remove chalking by sanding [or blasting] so that when tested in accordance with ASTM D4214, the chalk rating is not less than 8.]

3.4.3 Removal of Existing Coatings

Remove existing coatings from the following surfaces:

- a. Surfaces containing large areas of minor defects;
- b. Surfaces containing more than 20 percent peeling area; and
- c. Surfaces designated by the Contracting Officer, such as surfaces where rust shows through existing coatings.

3.4.4 Substrate Repair

- a. Repair substrate surface damaged during coating removal;
- b. Sand edges of adjacent soundly-adhered existing coatings so they are tapered as smooth as practical to areas involved with coating removal; and
- c. Clean and prime the substrate as specified.

3.5 PREPARATION OF METAL SURFACES

3.5.1 Existing and New Ferrous Surfaces

- a. Ferrous Surfaces including Shop-coated Surfaces and Small Areas That Contain Rust, Mill Scale and Other Foreign Substances: [Solvent clean] [or] [detergent wash] in accordance with SSPC SP 1 to remove oil and grease. Where shop coat is missing or damaged, clean according to [SSPC SP 2], [SSPC SP 3], [SSPC SP 6/NACE No.3], or [SSPC SP 10/NACE No. 2]. [Brush-off blast remaining surface in accordance with SSPC 7/NACE No.4]; [Water jetting to SSPC SP 12/NACE No.5 WJ-4 may be used to remove loose coating and other loose materials. Use inhibitor as recommended by coating manufacturer to prevent premature rusting.] Shop-coated ferrous surfaces shall be protected from corrosion by treating and touching up corroded areas immediately upon detection.
- b. Surfaces With More Than 20 Percent Rust, Mill Scale, and Other Foreign Substances: Clean entire surface in accordance with [SSPC SP 6/NACE No.3/SSPC SP 12/NACE No.5 WJ-3][SSPC SP 10/NACE No. 2/SSPC SP 12/NACE No.5 WJ-2].
- [c. Metal Floor Surfaces to Receive Nonslip Coating: Clean in accordance with [SSPC SP 10/NACE No. 2][SSPC SP 12/NACE No.5 WJ-2].

3.5.2 Final Ferrous Surface Condition:

For tool cleaned surfaces, the requirements are stated in SSPC SP 2 and SSPC SP 3. As a visual reference, cleaned surfaces shall be similar to photographs in SSPC VIS 3.

For abrasive blast cleaned surfaces, the requirements are stated in SSPC 7/NACE No.4, SSPC SP 6/NACE No.3, and SSPC SP 10/NACE No. 2. As a visual reference, cleaned surfaces shall be similar to photographs in SSPC VIS 1.

For waterjet cleaned surfaces, the requirements are stated in SSPC SP 12/NACE No.5. As a visual reference, cleaned surfaces shall be similar to photographs in SSPC VIS 4/NACE VIS 7.

3.5.3 Galvanized Surfaces

- a. New or Existing Galvanized Surfaces With Only Dirt and Zinc Oxidation Products: Clean with [solvent,][steam,][or][non-alkaline detergent solution]in accordance with SSPC SP 1. If the galvanized metal has been passivated or stabilized, the coating shall be completely removed by brush-off abrasive blast. New galvanized steel to be coated shall not be "passivated" or "stabilized" If the absence of hexavalent stain inhibitors is not documented, test as described in ASTM D6386, Appendix X2, and remove by one of the methods described therein.
- b. Galvanized with Slight Coating Deterioration or with Little or No Rusting: Water jetting to SSPC SP 12/NACE No.5 WJ3 to remove loose coating from surfaces with less than 20 percent coating deterioration and no blistering, peeling, or cracking. Use inhibitor as recommended by the coating manufacturer to prevent rusting.
- c. Galvanized With Severe Deteriorated Coating or Severe Rusting: [Water jet to SSPC SP 12/NACE No.5 WJ3 degree of cleanliness.] [Spot abrasive blast rusted areas as described for steel in SSPC SP 6/NACE No.3, and waterjet to SSPC SP 12/NACE No.5, WJ3 to remove existing coating.]

3.5.4 Non-Ferrous Metallic Surfaces

Aluminum and aluminum-alloy, lead, copper, and other nonferrous metal surfaces.

Surface Cleaning: Solvent clean in accordance with [SSPC SP 1](#) and wash with mild non-alkaline detergent to remove dirt and water soluble contaminants.

3.5.5 Terne-Coated Metal Surfaces

Solvent clean surfaces with mineral spirits, [ASTM D235](#). Wipe dry with clean, dry cloths.

3.5.6 Existing Surfaces with a Bituminous or Mastic-Type Coating

Remove chalk, mildew, and other loose material by washing with a solution of [1/2 cup](#) trisodium phosphate, [1/4 cup](#) household detergent, [one quart](#) 5 percent sodium hypochlorite solution and [3 quarts](#) of warm water.

3.6 PREPARATION OF CONCRETE AND CEMENTITIOUS SURFACE

3.6.1 Concrete and Masonry

a. Curing: Concrete, stucco and masonry surfaces shall be allowed to cure at least 30 days before painting, except concrete slab on grade, which shall be allowed to cure 90 days before painting.

b. Surface Cleaning: Remove the following deleterious substances.

(1) Dirt, [Chalking,] Grease, and Oil: Wash new [and existing uncoated] surfaces with a solution composed of [1/2 cup](#) trisodium phosphate, [1/4 cup](#) household detergent, and [4 quarts](#) of warm water. Then rinse thoroughly with fresh water. [Wash existing coated surfaces with a suitable detergent and rinse thoroughly.] For large areas, water blasting may be used.

(2) Fungus and Mold: Wash [new] [, existing coated,] [and existing uncoated] surfaces with a solution composed of [1/2 cup](#) trisodium phosphate, [1/4 cup](#) household detergent, [1 quart](#) 5 percent sodium hypochlorite solution and [3 quarts](#) of warm water. Rinse thoroughly with fresh water.

(3) Paint and Loose Particles: Remove by wire brushing.

(4) Efflorescence: Remove by scraping or wire brushing followed by washing with a 5 to 10 percent by weight aqueous solution of hydrochloric (muriatic) acid. Do not allow acid to remain on the surface for more than five minutes before rinsing with fresh water. Do not acid clean more than [4 square feet](#) of surface, per workman, at one time.

[(5) Removal of Existing Coatings: For surfaces to receive textured coating [MPI 42](#), remove existing coatings including soundly adhered coatings if recommended by textured coating manufacturer.

] c. Cosmetic Repair of Minor Defects: Repair or fill mortar joints and minor defects, including but not limited to spalls, in accordance with

manufacturer's recommendations and prior to coating application.

- d. Allowable Moisture Content: Latex coatings may be applied to damp surfaces, but not to surfaces with droplets of water. Do not apply epoxies to damp vertical surfaces as determined by [ASTM D4263](#) or horizontal surfaces that exceed 3 lbs of moisture per 1000 square feet in 24 hours as determined by [ASTM F1869](#). In all cases follow manufacturers recommendations. Allow surfaces to cure a minimum of 30 days before painting.

3.6.2 Gypsum Board, Plaster, and Stucco

- a. Surface Cleaning: Plaster and stucco shall be clean and free from loose matter; gypsum board shall be dry. Remove loose dirt and dust by brushing with a soft brush, rubbing with a dry cloth, or vacuum-cleaning prior to application of the first coat material. A damp cloth or sponge may be used if paint will be water-based.
- b. Repair of Minor Defects: Prior to painting, repair joints, cracks, holes, surface irregularities, and other minor defects with patching plaster or spackling compound and sand smooth.
- c. Allowable Moisture Content: Latex coatings may be applied to damp surfaces, but not surfaces with droplets of water. Do not apply epoxies to damp surfaces as determined by [ASTM D4263](#). New plaster to be coated shall have a maximum moisture content of 8 percent, when measured in accordance with [ASTM D4444](#), Method A, unless otherwise authorized. In addition to moisture content requirements, allow new plaster to age a minimum of 30 days before preparation for painting.

3.7 APPLICATION

3.7.1 Coating Application

Painting practices shall comply with applicable federal, state and local laws enacted to insure compliance with Federal Clean Air Standards. Apply coating materials in accordance with [SSPC PA 1](#). [SSPC PA 1](#) methods are applicable to all substrates, except as modified herein.

At the time of application, paint shall show no signs of deterioration. Uniform suspension of pigments shall be maintained during application.

Unless otherwise specified or recommended by the paint manufacturer, paint may be applied by brush, roller, or spray. Use trigger operated spray nozzles for water hoses. Rollers for applying paints and enamels shall be of a type designed for the coating to be applied and the surface to be coated. Wear protective clothing and respirators when applying oil-based paints or using spray equipment with any paints.

Paints, except water-thinned types, shall be applied only to surfaces that are completely free of moisture as determined by sight or touch.

Thoroughly work coating materials into joints, crevices, and open spaces. Special attention shall be given to insure that all edges, corners, crevices, welds, and rivets receive a film thickness equal to that of adjacent painted surfaces.

Each coat of paint shall be applied so dry film shall be of uniform thickness and free from runs, drops, ridges, waves, pinholes or other voids, laps, brush marks, and variations in color, texture, and finish. Hiding shall be complete.

Touch up damaged coatings before applying subsequent coats.[Interior areas shall be broom clean and dust free before and during the application of coating material.]

- [Apply paint to new fire extinguishing sprinkler systems including valves, piping, conduit, hangers, supports, miscellaneous metal work, and accessories. Shield sprinkler heads with protective coverings while painting is in progress. Remove sprinkler heads which have been painted and replace with new sprinkler heads. For piping in unfinished spaces, provide primed surfaces with one coat of red alkyd gloss enamel to a minimum dry film thickness of 1.0 mil. Unfinished spaces include attic spaces, spaces above suspended ceilings, crawl spaces, pipe chases, mechanical equipment room, and space where walls or ceiling are not painted or not constructed of a prefinished material. For piping in finished areas, provide prime surfaces with two coats of paint to match adjacent surfaces, except provide valves and operating accessories with one coat of red alkyd gloss enamel. Upon completion of painting, remove protective covering from sprinkler heads.
-] a. Drying Time: Allow time between coats, as recommended by the coating manufacturer, to permit thorough drying, but not to present topcoat adhesion problems. Provide each coat in specified condition to receive next coat.
- b. Primers, and Intermediate Coats: Do not allow primers or intermediate coats to dry more than 30 days, or longer than recommended by manufacturer, before applying subsequent coats. Follow manufacturer's recommendations for surface preparation if primers or intermediate coats are allowed to dry longer than recommended by manufacturers of subsequent coatings. Each coat shall cover surface of preceding coat or surface completely, and there shall be a visually perceptible difference in shades of successive coats.
- c. Finished Surfaces: Provide finished surfaces free from runs, drops, ridges, waves, laps, brush marks, and variations in colors.
- d. Thermosetting Paints: Topcoats over thermosetting paints (epoxies and urethanes) should be applied within the overcoating window recommended by the manufacturer.
- e. Floors: [For nonslip surfacing on level floors, as the intermediate coat is applied, cover wet surface completely with almandite garnet, Grit No. 36, with maximum passing U.S. Standard Sieve No. 40 less than 0.5 percent. When the coating is dry, use a soft bristle broom to sweep up excess grit, which may be reused, and vacuum up remaining residue before application of the topcoat.] [For nonslip surfacing on ramps, provide MPI 77 with non-skid additive, applied by roller in accordance with manufacturer's instructions.]

3.7.2 Mixing and Thinning of Paints

Reduce paints to proper consistency by adding fresh paint, except when thinning is mandatory to suit surface, temperature, weather conditions,

application methods, or for the type of paint being used. Obtain written permission from the Contracting Officer to use thinners. The written permission shall include quantities and types of thinners to use.

When thinning is allowed, paints shall be thinned immediately prior to application with not more than [0.125 L] [1 pint] of suitable thinner per [liter.] [gallon.] The use of thinner shall not relieve the Contractor from obtaining complete hiding, full film thickness, or required gloss. Thinning shall not cause the paint to exceed limits on volatile organic compounds. Paints of different manufacturers shall not be mixed.

3.7.3 Two-Component Systems

Two-component systems shall be mixed in accordance with manufacturer's instructions. Any thinning of the first coat to ensure proper penetration and sealing shall be as recommended by the manufacturer for each type of substrate.

3.7.4 Coating Systems

- a. Systems by Substrates: Apply coatings that conform to the respective specifications listed in the following Tables:

Table

Division 3.	Exterior Concrete Paint Table
Division 4.	Exterior Concrete Masonry Units Paint Table
Division 5.	Exterior Metal, Ferrous and Non-Ferrous Paint Table
Division 6.	Exterior Wood; Dressed Lumber, Paneling, Decking, Shingles Paint Table
Division 9.	Exterior Stucco Paint Table
Division 10.	Exterior Cloth Coverings and Bituminous Coated Surfaces Paint Table
Division 3.	Interior Concrete Paint Table
Division 4.	Interior Concrete Masonry Units Paint Table
Division 5.	Interior Metal, Ferrous and Non-Ferrous Paint Table
Division 6.	Interior Wood Paint Table
Division 9.	Interior Plaster, Gypsum Board, Textured Surfaces Paint Table

- b. Minimum Dry Film Thickness (DFT): Apply paints, primers, varnishes, enamels, undercoats, and other coatings to a minimum dry film thickness of 1.5 mil each coat unless specified otherwise in the Tables. Coating thickness where specified, refers to the minimum dry film thickness.
- c. Coatings for Surfaces Not Specified Otherwise: Coat surfaces which have not been specified, the same as surfaces having similar conditions of exposure.
- d. Existing Surfaces Damaged During Performance of the Work, Including New Patches In Existing Surfaces: Coat surfaces with the following:
 - (1) One coat of primer.
 - (2) One coat of undercoat or intermediate coat.

(3) One topcoat to match adjacent surfaces.

- e. Existing Coated Surfaces To Be Painted: Apply coatings conforming to the respective specifications listed in the Tables herein, except that pretreatments, sealers and fillers need not be provided on surfaces where existing coatings are soundly adhered and in good condition. Do not omit undercoats or primers.

3.8 COATING SYSTEMS FOR CONCRETE AND CEMENTITIOUS SUBSTRATES

Apply coatings of Tables in Division 3, 4 and 9 for Exterior and Interior.

3.9 INSPECTION AND ACCEPTANCE

In addition to meeting previously specified requirements, demonstrate mobility of moving components, including swinging and sliding doors, cabinets, and windows with operable sash, for inspection by the Contracting Officer. Perform this demonstration after appropriate curing and drying times of coatings have elapsed and prior to invoicing for final payment.

3.10 WASTE MANAGEMENT

As specified in the Waste Management Plan and as follows. Do not use kerosene or any such organic solvents to clean up water based paints. Properly dispose of paints or solvents in designated containers. Close and seal partially used containers of paint to maintain quality as necessary for reuse. Store in protected, well-ventilated, fire-safe area at moderate temperature. Place materials defined as hazardous or toxic waste in designated containers. [Coordinate with manufacturer for take-back program. Set aside scrap to be returned to manufacturer for recycling into new product. When such a service is not available, local recyclers shall be sought after to reclaim the materials.] [Set aside extra paint for future color matches or reuse by the Government.] [Where local options exist for leftover paint recycling, collect all waste paint by type and provide for delivery to recycling or collection facility for reuse by local organizations.]

-- End of Section --

EXHIBIT I: Submittal Log

Contractor

Inspector:

Construction Manager:

[illegible]

Attachment 2

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS OF PUERTO RICO

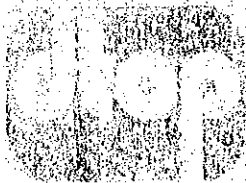


DEPARTAMENTO DE TRANSPORTACIÓN Y OBRAS PÚBLICAS
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
GOBIERNO DE PUERTO RICO

DEPARTAMENTO DE ESTADO

Número: **7998**
Fecha: **3 de marzo de 2011**
Aprobado: **Hon. Kenneth D. McClintock**
Secretario de Estado


Por: **Edgardo Arreola Matos**
Secretario Auxiliar de Servicios



UNIFORM GENERAL CONDITIONS

for

Public Works Contracts in Puerto Rico

UNIFORM GENERAL CONDITIONS

for

PUERTO RICO
VERDE



Public Works Contracts in Puerto Rico

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

INDEX

PART A. INTRODUCTION

Article 1 -	LEGAL BASIS; APPLICATION.....	1
1.1	Legal Basis	
1.2	Application	

PART B. UNIFORM GENERAL CONDITIONS

Article 1 -	DEFINITIONS AND TERMINOLOGY.....	1
1.1	Defined Terms	
1.2	Other Terms	
1.3	Terminology	

Article 2 -	CONTRACT DOCUMENTS.....	10
2.1	Intent and Interpretation of Contract Documents	
2.2	Order of Precedence of Contract Documents	
2.3	Written Interpretations	
2.4	Execution and Correlation	
2.5	Review of Contract Documents and Field Conditions by Contractor	
2.6	Amending and Supplementing Contract Documents	
2.7	Copies Furnished, Ownership and Reuse of Documents	

Article 3 -	BONDS AND INSURANCE.....	13
3.1	General for Owners with OCIP	
3.2	General for Owners without OCIP	
3.3	Performance, Payment, and Other Bonds	
3.4	Workmen's Compensation Insurance	
3.5	Contractor's Liability Insurance	
3.6	Business Auto Policy	
3.7	Contract Work - Builders Risk Insurance	
3.8	Installation Floater Policy	

3.9	Subcontractor's and Sub-Subcontractor's Liability Insurance	
3.10	Owner's Liability Insurance	
Article 4 –	SITE.....	20
4.1	Availability of Lands	
4.2	Subsurface and Physical Conditions	
4.3	Differing Subsurface or Physical Conditions	
4.4	Price and Time Adjustments	
4.5	Underground Facilities	
4.6	Reference Points	
4.7	Hazardous Environmental Condition at Site	
Article 5 –	OWNER.....	26
5.1	General	
5.2	Information and Services Required of the Owner	
5.3	Pay Promptly When Due	
5.4	Owner's Right to Stop the Work	
5.5	Owner's Right to Carry Out the Work Without Terminating the Employment of the Contractor	
5.6	Owner's Right to Clean Up	
5.7	Evidence of Financial Arrangements	
5.8	Limitations on Owner's Responsibilities	
Article 6 –	CONTRACTOR.....	28
6.1	Supervision and Superintendence	
6.2	Labor and Working Hours	
6.3	Services, Materials, and Equipment	
6.4	Progress and Other Schedules	
6.5	Submittals for Approvals, Substitutes and or "Equals"	
6.6	Review of Contract Documents	
6.7	Patent, Fees and Royalties	
6.8	Permits	
6.9	Laws and Regulations	
6.10	Taxes	
6.11	Use of Site and Other Areas	
6.12	Record Document	
6.13	Safety and Protection	
6.14	Safety Representative	
6.15	Hazard Communication Programs	
6.16	Plans and Working Drawings; As-Built Plans	
6.17	As Built Record Drawings	
6.18	Notice to Proceed	
6.19	Contractor's General Warranty and Guarantee	
6.20	Indemnification	
6.21	Subcontractors, Suppliers and Others	
Article 7 –	ARCHITECT/ENGINEER AND DESIGNATED INSPECTOR.....	55
7.1	Administration of the Contract	
7.2	Duties of Architect/Engineer and the Owner's Representative	
Article 8 –	OTHER WORK AND SEPARATE CONTRACTS.....	58

8.1	Owner's Right to Award Separate Contract, Perform Work with Owners Employees and Utility Workers. Related Work at Site	
8.2	Owner's Right to Award Separate Contract	
8.3	Mutual Responsibility of Contractors	
Article 9 –	TIME.....	62
9.1	Progress and Completion	
9.2	Change of Contract Time	
9.3	Delays and Extensions of Time	
9.4	Delay Damages	
9.5	Liquidated Damages	
9.6	Early Completion Incentive	
Article 10 –	CHANGE OF CONTRACT PRICE, COST OF THE WORK AND UNIT PRICE WORK.....	67
10.1	Change of Contract Price	
10.2	Cost of the Work	
10.3	Cash Allowances	
10.4	Unit Price Work	
10.5	Contractor's Fee	
Article 11 –	CHANGES IN THE WORK.....	72
11.1	Authorized Changes in the Work	
11.2	Unauthorized Changes in the Work	
11.3	Execution of Change Orders and Extra Work Orders	
11.4	Notification to Surety	
11.5	Claims and Disputes	
Article 12 –	TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK.....	74
12.1	Notice of Defects	
12.2	Access to Work	
12.3	Tests and Inspections	
12.4	Uncovering Work	
12.5	Correction or Removal of Deficient Work	
12.6	Correction Period	
12.7	Acceptance of Non-Compliant Work	
12.8	Owner's Right to Correct Deficient Work	
Article 13 –	PAYMENTS AND COMPLETION.....	79
13.1	Proposal Schedule and Schedule of Values	
13.2	Progress Payments	
13.3	Contractor's Warranty of Title	
13.4	Substantial Completion	
13.5	Partial Utilization	
13.6	Final Inspection	
13.7	Final Payment	
13.8	Final Completion Delayed	
13.9	Waiver of Claims	
13.10	Unilateral Liquidation	

Article 14 –	PROTECTION OF PERSONS AND PROPERTY.....	90
14.1	Public Convenience and Safety	
14.2	Laws to be Observed	
14.3	Sanitary, Health and Safety Provisions	
14.4	Labor Relations and Wages	
14.5	Environmental Protection	
14.6	Construction Over or Adjacent to Navigable Waters	
14.7	Traffic Protection Devices	
14.8	Use of Explosives	
14.9	Protection and Restoration of Property	
14.10	Forest Protection	
14.11	Responsibility for Damage Claims	
14.12	Contractor's Responsibility for Work	
14.13	Emergencies	
Article 15 –	SUSPENSION OF WORK AND TERMINATION.....	96
15.1	Suspension of Work	
15.2	Owner May Terminate for Cause	
15.3	Owner May Terminate the Contract For Convenience	
15.4	Contractor's Right to Terminate the Contract	
Article 16 –	DISPUTE RESOLUTION.....	101
16.1	Disputes	
16.2	Remedies	
16.3	Mediation	
16.4	Arbitration	
Article 17 –	MISCELLANEOUS.....	103
17.1	Governing Law	
17.2	Federal Funds	
17.3	Notice	
17.4	Computation of Time	
17.5	Ownership of Documents	
17.6	Personal Liability of Public Officials	
17.7	No Waiver of Legal Rights	
17.8	Cumulative Remedies	
17.9	Successors and Assigns	
17.10	Survival of Obligations	
17.11	Language	
17.12	Amendments	

PART C. ADDITIONAL PROVISIONS

ARTICLE 1:	SEPARABILITY CLAUSE; EFFECTIVENESS.....	106
1.1	Separability Clause.	
1.2	Effectiveness	

CERTIFICATION

GOVERNMENT OF PUERTO RICO
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

PART A. INTRODUCTION

ARTICLE 1 -LEGAL BASIS; APPLICATION

1.1 Legal Basis. The Secretary of Transportation and Public Works, in accordance with the powers conferred upon him by Law No. 198 of May 15, 1943, as amended by Law No. 131 of September 2, 2010 and Law No. 170 of August 12, 1988, as amended, hereby enacts the following regulations to establish the applicable legal framework for the contracting and management of all public works.

1.2. Application. The provisions of these Regulations shall be applicable to all contracts for public works executed by all government agencies, departments, public corporations and instrumentalities.

PART B. UNIFORM GENERAL CONDITIONS

ARTICLE 1 -DEFINITIONS AND TERMINOLOGY

1.1 Defined Terms

1.1.1 Wherever used in the Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof.

1.1.1.1. Agreement (or Contract) - The written instrument, which is evidence of the agreement between Owner and Contractor covering the Work.

1.1.1.2. Application for Payment - The form acceptable to Owner which is to be used by Contractor during the course of the Work in requesting progress or final payment and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

1.1.1.3. Architect/Engineer - The Architect or Engineer, referred herein as Architect/Engineer, is the collegiate professional licensed to practice architecture, engineering or surveying in the Commonwealth of Puerto Rico and is referred to throughout the Contract Documents. It is the Architect or Engineer authorized by the Owner for the preparation of all construction documents, plans and specifications and to submit such documents for the approval of the related public agency. The Architect/Engineer may designate an authorized representative. The Architect/Engineer is the individual or entity named as such in the Agreement.

1.1.1.4. Architect/Engineer's Consultant - An individual or entity having a contract with the Architect/Engineer to furnish services as Architect/Engineer's independent professional and collegiate consultant with respect to the Project and who is identified as such in the Supplementary Conditions.

1.1.1.5. Bonds - Performance and Payment bonds and other instruments of surety required in the Contract Documents.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

1.1.1.6. Certificate of Final Acceptance - Certificate issued by the Owner, or its duly authorized representative to Contractor indicating the date that the Work reached Final Acceptance.

1.1.1.7. Certificate of Substantial Completion - Certificate issued by the Owner, or its duly authorized representative, to the Contractor indicating the date that Substantial Completion was achieved for the Work.

1.1.1.8. Change in Law - Change in Law shall include: (i) the enactment or adoption by any legislative, regulatory, executive or administrative body of the Commonwealth of Puerto Rico or of the United States of America of any law, or any change or amendment to any law, in force as of the bid opening date, (ii) any change in the interpretation thereof which is final and not subject to administrative or judicial review, which cannot be complied with by a party without incurring in additional costs.

1.1.1.9. Change Order - A written order issued by the Owner, or its duly authorized representative, to the Contractor, signed by both parties, covering, additions, deletions, and/or revisions in the Work and/or an adjustment in the Contract Price and/or the Contract Time, if any, issued on or after the Effective Date of the Agreement. In Unit Price Contracts, a Change Order can also reflect a change in the number of items, as well as an increase or decrease, contained in the proposal. In Lump Sum Contracts, it reflects an order for additional or less work.

1.1.1.10. Claim - A claim is a demand or assertion by one of the parties seeking, as a matter of right, adjustment or interpretation of Contract terms, payment of money, extension of time or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. Claims must be made by written notice and in accordance with Article 11.5. The responsibility to substantiate Claims shall rest with the party making the Claim.

1.1.1.11. Commonwealth - The Commonwealth of Puerto Rico.

1.1.1.12. Construction Change Directive - A Construction Change Directive is a written order signed by the Owner, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Price or Contract Time, or both. The Owner may, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Price and Contract Time adjusted accordingly. A Construction Change Directive shall be used only in the absence of total agreement on the terms of the Change Order, Extra Work Order or Work Change Directive, and shall be paid with the monthly Progress Payment according to the method indicated in Article 10.1.2.3.

1.1.1.13. Contract (or Agreement) - The entire and integrated written Agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

1.1.1.14. Contract Documents - The Contract Documents establish the rights and obligations of the parties and include: (i) the Agreement, (ii) addenda (which pertain to the Contract Documents), (iii) Contractor's bid or proposal (including documentation accompanying the Bid and any post Bid documentation submitted prior to the Notice of Award), (iv) the Notice to Proceed, (v) the Bonds, (vi) these General Conditions, (vii) the Supplementary Conditions, (viii) the Special Provisions, (ix) the Specifications, (x) the Drawings as the same are more specifically identified in the Agreement, including Standard Drawings, if applicable and (xi) Instructions to Bidders. It shall also include: (i) all Written Amendments, (ii) Change Orders and Extra Work Orders, (iii) Work Change Directives, (iv) Field Orders and (v) Architect/Engineer's written interpretations and clarifications issued on or after the Effective Date of the Agreement. Approved Shop Drawings and the reports and drawings of subsurface and physical conditions are not Contract Documents. Only printed or hard copies of the items listed in this Article are Contract Documents. Files in electronic media format of text, data, graphics, and the like that may be furnished by Owner to Contractor are not Contract Documents, unless otherwise specified in the bid documents.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

1.1.1.15. Contract Item or Pay Item - A portion of Work specifically described and for which a price either unit or lump sum is provided. It includes the performance of all Work and the furnishing of labor, equipment and materials described in the Specifications.

1.1.1.16. Contract/Project Limits - The area, including Site and off-Site, within which the Work is to be performed.

1.1.1.17. Contract Price - See Contract Sum.

1.1.1.18. Contract Sum - It is the Contract Price as stated in the Agreement and is the total amount payable by the Owner to the Contractor for the performance of the Work under the Contract Documents subject to additions and deductions, stipulated in the Contract Documents.

1.1.1.19. Contract Time or Time - It is the period of time allotted in the Contract Documents for Substantial Completion of the Work.

1.1.1.20. Contract Unit - A major subdivision of the construction Project identified as such in the Contract Documents.

1.1.1.21. Contracting Officer - The Contracting Officer is the authorized representative of the Owner under the Contract Documents.

1.1.1.22. Contractor - The Contractor is the person or organization that contracts with the Owner for the performance of the Work described in the Contract Documents. The term Contractor, identified as such in the Agreement, means the Contractor or his authorized representative. In cases of Design-Build Contracts, the term Contractor shall also signify the Design-Builder Contractor.

1.1.1.23. Cost of the Work - See section 10.2 for definition.

1.1.1.24. Day - The word "day" shall constitute a calendar day of twenty-four (24) hours measured from midnight to the next midnight.

1.1.1.25. Design-Build Contracts - Shall be those contracts where the Contractor undertakes the duty to design the Work, in addition to performing the duties of Contractor.

1.1.1.26. Design-Builder Contractor - Shall be the Contractor in Design-Build Contracts, who in addition to having all duties of Contractor has the duty to design the Work, as specified in the Contract Documents.

1.1.1.27. Dispute - Any Claim, dispute or other disagreement involving the interpretation of the Contract Documents, a change in the Contract Sum, and or a change in the Contract Time, and other matters in question arising out of, or relating to the Contract or the breach thereof, except for Claims which have been waived by lack of proper notice and/or the making or acceptance of final payment as provided in Articles 13.7.2 and 13.9.1

1.1.1.28. Drawings or Plans - The approved drawings and supplementary drawings showing the location, character, dimensions, and details of the Work to be done which are part of the Contract Documents.

1.1.1.29. Effective Date of the Agreement - The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the parties to the Contract.

1.1.1.30. Engineer or Architect - See Architect/Engineer.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

1.1.1.31. Equal or Similar and Substitute - "Similar or Equal" or "Substitute", when used in relation to materials, parts, machinery, equipment, formulas of the Project and/or anything to them related, shall mean that they be of substantially the same quality, form, appearance, resistance, endurance, efficiency, capacity, safety, specifications and any other quality inherent, or related, to them as they are indicated in the drawings and/or specifications of the Contract.

1.1.1.32. Equipment - All machinery and implements, together with the necessary supplies for upkeep and maintenance, and all tools and apparatus necessary for the proper construction and acceptable completion of the Work.

1.1.1.33. Extra Work - An item of Work not provided for in the Contract as awarded but found by the Owner or its duly authorized representative necessary for the satisfactory completion of the Contract within its generally intended scope.

1.1.1.34. Extra Work Order - Is a written order issued by the Owner to Contractor and signed by both parties in a unit price contract concerning the performance of the Work or furnishing of materials involving Extra Work. It authorizes a change in the Work, adjustments in the Contract Price and/or Contract Time for services, or Work, for which there is no basis of payment, either direct or indirect, provided in the proposal, or Contract, or if the resulting overruns, or underruns, of any item, or items, exceed certain percentages. Extra Work Orders apply only to unit price contracts. Such Extra Work may be performed at agreed prices or as provided in Section 10.2 of these General Conditions.

1.1.1.35. Federal Agency - Any agency of the government of the United States of America or its succeeding agency.

1.1.1.36. Field Order - A written order issued by the Owner that requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Time.

1.1.1.37. Final Acceptance - Shall mean the acceptance of the Work by the Owner after the final inspection as evidenced by the Certificate of Final Acceptance sent to Contractor by Owner.

1.1.1.38. Force Account Work - Additional Work that is paid for based on the Cost of the Work as defined in Article 10.2.

1.1.1.39. Force Majeure - Means an act of God; earthquake; tidal wave; hurricane; act of the public enemy; war; blockade; public riot; lighting; fire; flood; explosion; a strike, excluding strikes and any other activity or demonstration by Owner's personnel that does not interfere directly with the Work; and any other cause, whether of the kind specifically enumerated herein or otherwise, which is not reasonably within the sole control of Contractor. A rain, windstorm flood or other natural phenomenon of normal intensity for the particular locality shall not be construed as Force Majeure.

1.1.1.40. Hazardous Environmental Condition - The presence at the Site of asbestos, PCBs, petroleum, hazardous waste, or radioactive material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

1.1.1.41. Hazardous Waste - The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 U.S.C. §6903) as amended.

1.1.1.42. Holidays - Saturdays, Sundays and the legal holidays listed below on which the Contractor will not be allowed to perform Work under the Contract except as otherwise ordered or authorized in writing by the Owner. All other Holidays not listed below will be considered working days. Also, if any of the listed holidays falls on a Sunday, the following Monday will be considered a holiday.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

New Year's Day	January 1
Three Kings Day	January 6
Good Friday	Variable
Independence Day	July 4
Constitution Day	July 25
Labor Day	First Monday of September
Election Day (when occurring)	Tuesday after 1 st Monday in November
Thanksgiving	Fourth Thursday in November
Christmas Day	December 25

1.1.1.43. Laboratory - The material testing laboratory of the Owner or any other testing laboratory which may be approved by the Owner or its duly authorized representative.

1.1.1.44. Laws and Regulations; Laws or Regulations - Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

1.1.1.45. Liens - Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

1.1.1.46. Major and Minor Contract Items - Any item having a Contract value equal to or greater than five per cent (5%) of the original Contract amount shall be considered as a major item. All the other Contract items shall be considered as minor items. A minor item may become a major item when the minor item is increased to the extent that the total cost of the item is equal to or greater than five per cent (5%) of the original Contract amount.

1.1.1.47. Materials - Any substances specified for use in the construction of the Project and its appurtenances.

1.1.1.48. Milestone - A principal event specified in the Contract Documents related to an intermediate completion date or time prior to the Substantial Completion of the whole Work.

1.1.1.49. Notice of Award - The written notice by the Owner to the apparent successful bidder stating that upon timely compliance by the apparent successful bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

1.1.1.50. Notice to Proceed - A written notice issued by the Owner to the Contractor fixing the date on which the Contract Time will commence to run and on which Contractor shall start to perform the Work under the Contract Documents. Such Notice to Proceed shall identify the persons included in article 5.2.2. Unless otherwise agreed by the parties, all permits and/or endorsements to be furnished by the Owner needed to start construction of the Project must be obtained prior to issuance of the Notice to Proceed.

1.1.1.51. OCIP - see Owner-Controlled Insurance Program.

1.1.1.52. Off-Site Work - Work to be performed outside of the of the Project's limits.

1.1.1.53. Owner - The Owner is the Department, Agency, Public Corporations, or any other instrumentality of the Commonwealth of Puerto Rico as identified in the Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Owner means the Owner or his authorized representative. It shall also mean any person, or entity, named as such in the Contract Documents.

1.1.1.54. Owner-Controlled Insurance Program - also known as "OCIP". An insurance program under which

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

Commercial General Liability, Excess General Liability, Builder's Risk, and Contractor's Pollution Liability coverage are procured or provided by the Owner for the Contractor, Subcontractors of any tier, who have been properly enrolled, while performing operations at the Project Site.

1.1.1.55. Owner's Representative - One or more persons or entity designated by the Owner, who will perform the functions of the Owner as described in these General Conditions. The Owner's Representative may employ Project Inspectors and/or other assistants to perform any function, duty or responsibility, as delegated by the Owner's Representative, including but not limited to the detailed inspections of performance of any or all portions of the Work.

1.1.1.56. Partial Utilization - Use by Owner of a substantially completed part of the Work for the purpose for which it is intended (or a related purpose) prior to Substantial Completion of all the Work.

1.1.1.57. Pay Item - See Contract Item.

1.1.1.58. Payment Bond - The security required to be furnished by the Contractor and his Surety and approved by the Owner to guarantee the payment of all persons or entities supplying labor, material and equipment in the prosecution of the Work or services required for completion of the Contract.

1.1.1.59. Performance Bond - The security required to be furnished by the Contractor and his Surety and approved by the Owner to guarantee the completion of all the requirements of the Contract.

1.1.1.60. Plans - See Drawings.

1.1.1.61. Project - The total construction of which the Work to be performed under the Contract Documents is the whole, or part.

1.1.1.62. Project Inspector - The professional, duly licensed and collegiate Engineer or Architect, or a legally qualified entity, contracted and/or designated by the Owner and/or the Owner's Representative to perform, as a Project Inspector, the continuous on Site inspection of any or all portions of the Work.

1.1.1.63. Project Manager - The professional licensed and collegiate Engineer or Architect, designated in accordance with the Contract as the Contractor's authorized representative who is made by Contractor responsible for and placed in charge of the Work.

1.1.1.64. Project Manual - The bound documentary information prepared for bidding and constructing the Work.

1.1.1.65. Project Schedule - A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Work within the Contract Times, as required by Article 6.4 of these General Conditions.

1.1.1.66. Reasonable Close Conformity - Compliance with reasonable and customary manufacturing and construction tolerances when working tolerances are not specified. When working tolerances are specified, reasonably close conformity means compliance with such working tolerances. Without detracting from the complete and absolute discretion of the Owner or its duly authorized representative to insist upon compliance with such tolerances, the Owner or its duly authorized representative may, at his sole option and reasonable discretion, accept variations beyond such tolerances when and where they will not materially affect the value or utility of the Work and the interests of the Owner.

1.1.1.67. Reference Specifications - Specifications issued by other official and/or professional organizations that are referred to and made part of the Owner's specifications and other Contract Documents. Unless otherwise specifically indicated in the Contract Documents, references cited shall be the edition of such specifications in effect at the time the Project is advertised for bids/proposals.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

1.1.1.68. Right of Way - A general term denoting land, property, easement or interest therein, usually in a strip, acquired for the Project or for the benefit of another project or public utility.

1.1.1.69. Samples - Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

1.1.1.70. Shop Drawings or Working Drawings - All drawings, diagrams, schedules, and other data or information, which are specifically prepared or assembled by or for the Contractor and submitted by Contractor to illustrate some portion of the Work.

1.1.1.71. Site - Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner that are designated for the use of Contractor. It shall also mean areas for the performance of off-site work, if same is required in the Contract Documents.

1.1.1.72. Special Conditions - Special requirements, regulations or direction, covering conditions peculiar to a particular project. Special Conditions shall prevail over particular provisions of these General Conditions only when such option is provided in any particular Article of these General Conditions by the use of words such as "unless otherwise indicated in the Contract Documents..." In all other instances these General Conditions shall prevail over any conflicting provision contained in the Special Conditions.

1.1.1.73. Specialty Item - A Contract Item, which is specifically identified in the Contract Documents as exempted from the computations to determine the total amount of the Work that the Contractor may be authorized to subcontract.

1.1.1.74. Specifications - That part of the Contract Documents consisting of written Technical Specifications, descriptions of materials, equipment, systems, standards, and workmanship as applied to the Work and certain administrative details applicable to the Work.

1.1.1.75. Standard Drawings - See Standard Plans.

1.1.1.76. Standard Plans (or Standard Drawings) - Drawings approved for repetitive use, showing details to be used where appropriate, included in the Plans or published as a separate document.

1.1.1.77. Standard Specifications - The set of specifications approved by the Owner for general application and repetitive use.

1.1.1.78. Subcontractor - A Subcontractor is an individual or entity that has a direct contract with the Contractor to perform any of the Work at the Site. The term Subcontractor as referred throughout the Contract Documents means the Subcontractor or his authorized representative.

1.1.1.79. Substantial Completion - The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of the Owner, or its authorized representative, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

1.1.1.80. Supplemental Agreement - A written agreement executed by the Contractor and Owner supplementing the Contract to cover Extra Work and/or changes and/or changed conditions incidental to and necessary for the acceptable completion of the Project.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

1.1.1.81. Supplemental Specifications - Approved additions and/or revisions to the Standard Specifications, including Technical Specifications.

1.1.1.82. Supplementary Conditions - That part of the Contract Documents that amends, or supplements, where allowed, these General Conditions.

1.1.1.83. Supplier - A manufacturer, fabricator, supplier, distributor, materialmen, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work.

1.1.1.84. Surety - The insurance or bonding corporation or other legal entity, other than the Contractor, authorized to do business in Puerto Rico, bound with and for the Contractor for the proposal guaranty and/or the Payment Bond and/or the Performance Bond, or other bonds and insurances required by the Contract Documents.

1.1.1.85. Technical Specifications - The directions, provisions and requirements setting forth, or relating to, the performance of the Work and to the kind and quality of materials and labor to be furnished under the Contract for the execution of the Project. Any entity making changes in the Technical Specifications and/or Plans and Drawings, must perform so complying with all laws, codes, rules and regulations applying to them.

1.1.1.86. Underground Facilities/Utilities - All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any easements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

1.1.1.87. Unit Price Work - Work to be paid for based on unit prices.

1.1.1.88. Utility - A public or privately owned agency or entity and the lines and facilities for producing, transmitting or distributing data or voice communications, power, electricity, gas, oil, gasoline, water, sewer and similar commodities for public or private use.

1.1.1.89. Work - The entire construction referred to in the Agreement and the performance of the services identified to be provided in the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce and make workable such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

1.1.1.90. Work Change Directive - A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by the Owner and recommended by the Architect/Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Time but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Time.

1.1.1.91. Work Order - A written order, signed by the Owner, or its duly authorized representative, which requires performance of a specific contractual issue by the Contractor without negotiation of any sort. If Contractor is not in agreement with the Work Order, he may present a Claim as established in Article 11.5.

1.1.1.92. Working Day - A calendar day, exclusive of Saturday and Sunday and designated legal holidays. All periods of time under the Contract Documents shall be measured in calendar days, unless Working Days are specified.

1.1.1.93. Working Drawings - See Shop Drawings.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

1.1.1.94. Written Amendment - See Supplemental Agreement.

1.2 Other Terms - The Owner's manuals and sets of regulations contain additional terms, not included above, which are used in the plans and other Contract Documents. Such terms shall be interpreted as defined in the Owner's manuals and sets of regulations.

1.3 Terminology

1.3.1 Intent of Certain Terms or Adjectives.

1.3.1.1. Unless otherwise indicated in the Contract Documents, whenever in the Contract Documents the terms "as allowed," "as approved," or terms of like effect or import are used, or the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Architect/Engineer as to the Work, it is intended that such action or determination will be solely to evaluate, in general, the completed Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be effective to assign to Architect/Engineer any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of these General Conditions and the Contract Documents.

1.3.2 Deficient.

1.3.2.1. The word "deficient," when modifying the word "Work," refers to Work, or part of it, that is unsatisfactory, faulty, or defective in that it does not conform to the Contract Document or does not meet the requirements of any inspection, reference standard, test, or approval referred to in the Contract Documents, or has been damaged prior to Owner's Representative's recommendation of final payment, unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with these General Conditions.

1.3.3 Furnish, Install, Perform, Provide.

1.3.3.1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use, assembling, or installation and in usable or operable condition.

1.3.3.2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position, said services, materials, or equipment complete and ready for intended use.

1.3.3.3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

1.3.3.4. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, "install," "perform" and/or, "provide" is implied.

1.3.4 Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

ARTICLE 2 - CONTRACT DOCUMENTS

2.1 Intent and Interpretation of Contract Documents

2.1.1 The Contract Documents constitutes the Contract. The Contract Documents represent the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral, including the bidding documents. The Contract Documents may be amended or modified as set forth in section 2.6.

2.1.2 The intent of the Contract Documents is to provide for the construction and completion of the Work described.

2.1.3 The Contractor shall furnish all labor, materials, equipment, tools, transportation and supplies required to complete the Work in accordance with the plans, specifications and terms of the Contract Documents.

2.1.4 The relationship which the parties intend to create under the Contract Documents is that of principal and independent Contractor and nothing herein is intended or shall be construed, so as to create a relationship of any kind, form or manner, such as but not limited to partnership, co-venturers, or employment between the Owner and Contractor, unless clearly otherwise expressed in the Contract Documents.

2.2 Order of Precedence of Contract Documents

2.2.1 The Contract Documents for each particular Project shall specify the order of precedence among the diverse documents that form the Contract Documents, except for the order of precedence of the General Conditions which may not be altered unless allowed to be altered by means of the Special Conditions as described in Article 1.1.1.72. If no such order of precedence is established in the Contract Documents for the Project, the following order shall be followed:

2.2.1.1. Agreement (which shall include the Bonds and required insurance policies).

2.2.1.2. Dated Contractor's Proposal

2.2.1.3. All addenda issued prior to Bid Date. Unless no conflict exist between addenda, the issuance of a subsequent addendum will supersede all previously issued addenda.

2.2.1.4. Instructions to Bidders

2.2.1.5. The General Conditions of the Contract, (except where in accordance with Article 1.1.1.72 they are allowed to be changed by the Special Conditions).

2.2.1.6. Special Conditions.

2.2.1.7. Plans or Drawings

2.2.1.8. The Standard Drawings.

2.2.1.9. Specifications.

2.2.1.10. Technical Specifications.

2.2.1.11. Supplemental Specifications.

2.2.1.12. Standard Specifications.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

2.3 Written Interpretations

2.3.1 Provided reasonable time is granted to Owner, written interpretations necessary for the proper execution or progress of the Work in the form of drawings, or otherwise, will be issued with reasonable promptness by the Owner, its designated representative, or Architect/Engineer so as not to adversely affect the critical path of the Project Schedule.

2.3.2 Contractor may make written request to the Owner, Owner's Representative, or the Architect/Engineer for such interpretations, when deemed necessary for the proper progress of the Work.

2.3.2.1. Such interpretations shall be consistent with and reasonably inferable from the Contract Documents and may be effected by Field Orders.

2.3.2.2. Interpretation drawings are not necessarily changes in the Work.

2.3.3 Except as may otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

2.3.3.1. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or

2.3.3.2. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

2.4 Execution and Correlation

2.4.1. The Agreement shall be signed by the Owner and Contractor or their authorized representatives. The other component parts of the Contract Documents, if not signed by the Owner or Contractor, shall be marked by their authorized representative.

2.4.2 By executing the Contract Documents, the Contractor represents that he has visited the Contract Limits within the Site, familiarized himself with the local conditions under which the Work is to be performed, correlated his observations with the requirements of Contract Documents, and accepts the same.

2.4.2.1 The Owner warrants that it has submitted all the necessary documents required of Owner to be submitted to the appropriate governmental agencies needed for the prosecution of the Work, as required by applicable laws and regulations.

2.4.3 The Owner and the Contractor acknowledge that no service or Work under the Contract Documents will be performed until both parties duly sign the Contract and the Notice to Proceed is issued.

2.4.3.1. No payment and/or disbursement will be made or paid for services rendered in violation of this clause.

2.4.4 The Contract Time.

2.4.4.1. The Contract Time must be specifically expressed on the Contract.

2.4.4.2. The Contract Time will be extended by the same number of days in which the term to execute the Work is extended by Change Orders or by any other mean allowed or permitted by the Contract or Contract Documents.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

2.4.4.3. Furthermore, the parties agree that no Work or service will be performed or received beyond Final Acceptance of the Contract.

2.4.4.4. No payment and/or disbursement will be made or paid for services rendered in violation of this clause.

2.4.5 The Contract Documents are complementary, and what is required by anyone shall be as obligatory as if required by all. The intention of the Contract Documents is to include all labor, materials, equipment and other items as provided on these General Conditions necessary for the proper execution and completion of the Work.

2.4.5.1. It is not intended that Work not covered under any heading, section, branch, class or trade of the Specifications shall be supplied unless it is required elsewhere in the Contract Documents.

2.4.5.2. The organization of the Specifications in divisions, sections, articles, and the arrangement of drawings shall not control the Contractor in dividing the Work among subcontractors or in establishing the extent of Work to be performed by any trade.

2.5 Review of Contract Documents and Field Conditions by Contractor.

2.5.1 Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents with each other and check and verify pertinent dimensions and quantities therein and all applicable field measurements.

2.5.2 Contractor shall promptly report in writing to Owner any conflict, error, ambiguity, inconsistency, discrepancy, or omission that Contractor may discover and shall obtain a written interpretation or clarification from Owner before proceeding with any Work affected by said conflict, error, ambiguity, inconsistency, discrepancy or omission.

2.5.2.1. However, Contractor shall not be liable to Owner for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents, unless Contractor failed to report it to the Owner with sufficient time for the Owner to provide a solution before the critical path of the Project is affected.

2.5.2.2. If the Contractor performs any construction activity in violation of this Article 2.5, the Contractor shall assume appropriate responsibility for such performance and shall bear an appropriate amount of the costs attributed to correction.

2.5.2.3. The Owner shall provide a solution to any reported conflict, error, ambiguity, discrepancy, or omission and if such solution adversely affects cost or the critical path of the Project, Owner will adjust Contract Price and Contract Time accordingly.

2.6 Amending and Supplementing Contract Documents

2.6.1 The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof in one (1) or more of the following ways:

2.6.1.1. a Written Amendment;

2.6.1.2. a Change Order;

2.6.1.3. an Extra Work Order; or

2.6.1.4. a Work Change Directive.

2.6.2 The requirements of the Contract Documents may be supplemented and minor variations and deviations in

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

the Work may be authorized, by one (1) or more of the followings ways:

2.6.2.1. a Field Order;

2.6.2.2. Owner's, or his authorized representative's, approval of a Shop Drawing or Sample; or

2.6.2.3. Owner's, his authorized representatives, or Architect/Engineer's written interpretation or clarification.

2.6.3 A modification may be made only after execution of the Contract.

2.7 Copies Furnished, Ownership and Reuse of Documents

2.7.1. The Contractor will be furnished, free of charge, four (4) complete copies of the Contract Documents. Additional copies will be furnished upon request at the cost of reproduction. If Contractor so requests it, Owner will also furnish, free of charge, if available, an electronic file in PLT format (plot to File) so that the Contractor may make the copies of plans and/or drawings that he needs to build the Project. If such electronic files are not available, the Owner shall allow the Contractor to prepare electronic files and to print, at Contractor's cost, but without additional payment to Owner or Architect/Engineer, those copies needed for use by Contractor.

2.7.2. All Drawings, Specifications and copies thereof furnished by the Owner, Architect/Engineer, or Owner's Representative are, and shall remain, property of the Owner.

2.7.2.1. The Contractor can make copies of all the Drawings, Specifications, and other Contract Documents without permission, and without the payment of any fees or royalties, to the Owner, Architect/Engineer, or Owner's Representative as long as they are necessary for use in the execution of the Work.

2.7.3. Contractor and any Subcontractor or Supplier or other individual or entity performing or furnishing any of the Work under a direct or indirect contract with Owner:

2.7.3.1. shall not have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Owner, Architect/Engineer or Engineer's Consultant, including electronic media editions; and

2.7.3.2. shall not reuse any of such Drawings, Specifications, other documents, or copies thereof on extension of the Project or any other project without written consent of Owner.

2.7.4 This prohibition will survive final payment, completion, and acceptance of the Work, or termination or completion of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 3- BONDS AND INSURANCE

3.1 General- For Owners with OCIP

3.1.1 The Contractor shall not commence work under the Contract until he has obtained the various insurances policies and bonds specified in the Owner's Controlled Insurance Program. Owner shall provide to Contractor an exact copy of the applicable Owner Controlled Insurance Program manual together with the Contract Documents.

3.2 General- For Owners without OCIP.

3.2.1 The Contractor shall not commence work under the Contract until he has obtained the various

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

insurances and bonds specified in this section and has submitted to the Owner certificates of insurance (and other evidence requested by Owner) evidencing his compliance with the various insurance requirements set forth in this Article.

3.2.1.1. Unless otherwise indicated in the Contract Documents, Contractor must, within ten (10) calendar days from the Notice of Award, provide to Owner, in form satisfactory to Owner as provided in detail in this Article, the following:

3.2.1.1.1. Performance Bond

3.2.1.1.2. Payment Bonds

3.2.1.1.3. Workmen's Compensation Insurance Policy issued by The Puerto Rico State Insurance Fund and all Social Insurances required by law.

3.2.1.1.4. General Liability Insurance

3.2.1.1.5. Business Auto Policy

3.2.1.1.6. Contract Works Policy (Builder's Risk)

3.2.1.1.7. Installation Floater Policy (when applicable)

4 3.2.2 Notwithstanding the requirements set forth in this Article, the Owner may opt out of part of the requirements included in this Article and require any and all other policies that it understands are needed for its particular construction projects, including other policies not required herein.

3.2.2.1. However, such decision to opt out of part of the requirements of this Article must be written and signed by the Owner stating particularly the reasoning behind it. Such written decision must be made part of Owner's Project file.

3.2.3. The insurance and bond policies required herein shall be obtained from insurance and surety companies complying with the requirements of Puerto Rico's Insurance Commissioner.

3.2.3.1. Prior to Bid announcement Date, Owner will publish a list of unacceptable insurance and bonding companies so that Contractor has knowledge of which companies are not authorized to provide insurances or bonds for the Work. Unless otherwise indicated in the Contract Documents, the Contractor must obtain an endorsement naming the Owner as an additional insured in each of the required insurance policies in this Article (as applicable).

3.2.4 The Contractor shall, throughout the performance of Work under the Contract and until the Final Acceptance of the Project, maintain current, and in effect all the required insurance, except the Contract Works Policy (Builder's Risk), which shall terminate on the date of Substantial Completion.

3.2.4.1. If on the termination date of any of the policies, the Project is still under construction and the Contractor has not renewed the policies, the Owner can renew them and deduct the amount paid for the premium, and applicable costs from the next payment, only if Contractor does not remedy and provide timely evidence of coverage.

3.2.5. Insurance coverage in the minimum limit amounts set forth herein shall not be construed to release the

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

Contractor from liability in excess of such coverage limit. Contractor must give thirty (30) calendar days written notice to Owner before any policy coverage is changed, canceled or not renewed and shall cause the insurance carrier to do the same.

3.2.6 Acceptance of Insurance; Option to Replace. If either Owner or Contractor has any objection to the coverage afforded by or to other provisions of the insurance required to be purchased and maintained by the other party in accordance with this Article on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within twenty (20) days after receipt of the certificates of insurance and bonds (or other such evidence) required by Article 3.1.1.

3.2.6.1. Owner and Contractor shall each provide to the other such additional information with respect to insurance provided as the other may reasonably request.

3.2.6.2. If either party fails to purchase or maintain all of the insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure prior to the start of the Work, or of such failure is to maintain, prior to any change in the required coverage.

3.2.6.3. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent insurance to protect such other party's interest at the expense of the party who was required to provide such coverage, and a Change Order (or Extra Work Order in a unit price Contract) shall be issued to adjust the Contract Price accordingly.

3.2.7. If Owner finds it necessary or convenient to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in section 14.5 no such use or occupancy shall commence before the insurers providing the property insurance pursuant to section 3.6 have acknowledged notice thereof and in writing effected any changes in coverage needed thereby.

3.2.7.1. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

3.2.7.2. If the Owner accepts, occupies, or uses a portion, or portions, of the Work for its intended use, or whatever use he deems necessary or convenient, it is the Owner's responsibility to insure the property comprising said portion, or portions of the Work.

3.2.7.3. If the Contractor obtained the Contract Works Policy (Builder's Risk) for the Work, the Owner may request that Contractor continues to carry said insurance and will pay the cost, as a Change Order, based on the proportion of the occupied area versus the total Project area.

3.2.7.4. If requested by Contractor, the Owner shall supply copy of its insurance policy, and/or certificate of insurance evidencing that said portion, or portions, of the Work now under the Owner's care, custody and control is properly insured.

3.3 Performance, Payment, and Other Bonds

3.3.1. Unless otherwise stated in the Contract Documents, the Contractor must, within ten (10) calendar days from the date of Notice of Award, furnish and file with the Owner, in form satisfactory to, and with Sureties approved by the Owner, the following:

3.3.1.1. Performance Bond to guarantee the faithful performance of the Contract, in an amount equal to at least fifty percent (50%), but not more than one hundred percent (100%) of the Contract Sum, as stated in the Supplementary General Conditions of the Contract. If none is stated, the amount shall be one hundred percent

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

(100%) of the Contract Sum.

3.3.1.2. Payment Bond, including Labor Bond in an amount equal to at least fifty percent (50%), but not more than one hundred percent (100%) of the Contract Sum, as stated in Supplementary General Conditions of the Contract. If none is stated, the amount shall be one hundred percent (100%) of the Contract Sum.

3.3.1.3. A separate and additional Payment Bond in an amount equal to the requirements of Law No. 111, approved June 22, 1961, as it may be amended in the future, payable to the Secretary of Labor of the Commonwealth of Puerto Rico to guarantee payment to laborers and employees of the Contractor.

3.3.1.4. Contractor shall also furnish such other Bonds as are required by the Contract Documents.

3.3.2. The Payment and Performance Bonds shall remain in effect as follows:

3.3.2.1. Under the Performance Bond: one (1) year after the date when the final payment becomes due for warranty work, as stipulated in the warranty clause, or as provided otherwise by Laws or Regulations or by the Contract Documents.

3.3.2.2. Under the Payment Bond: six (6) months after the retainage is paid in full to the Contractor, except as provided otherwise by Laws or Regulations or by the Contract Documents.

3.3.3 All Bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations. All Bonds must be signed by an attorney in fact duly authorized by the Commissioner of Insurance of Puerto Rico, and must be accompanied by a certified copy of such power of attorney.

3.3.4 If the Surety on any Bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of the Puerto Rico's Insurance Commissioner, Contractor shall within twenty (20) days thereafter substitute said Bond and Surety with acceptable substitutes.

3.4 Workmen's Compensation Insurance

3.4.1 The Contractor shall provide Worker's Compensation Insurance as required by the "Workers' Compensation Act of the Commonwealth of Puerto Rico". The Contractor shall furnish the Owner a certificate from the State Insurance Fund Corporation covered by the Workers' Compensation Act of the Commonwealth of Puerto Rico.

3.4.2 The Contractor shall also be responsible for compliance with said "Workers' Compensation Act" by all his subcontractors and agents.

3.5 Contractor's Liability Insurance

3.5.1 Contractor shall purchase and maintain the following liability insurance coverage, in an occurrence format, and other insurance as is appropriate for the Work being performed and will provide protection from claims set forth which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:

3.5.1.1. Limits. Unless otherwise stated in the Special Conditions of the Contract, the liability insurance limits shall not be less than:

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

3.5.1.1.1. General Aggregate Limit	\$1,000,000
3.5.1.1.2. Products/Completed Operations Aggregate Limit	\$1,000,000
3.5.1.1.3. Personal and Advertising Injury Limits	\$ 500,000
3.5.1.1.4. Each Occurrence Limit	\$ 500,000
3.5.1.1.5. Fire Damage Limit	\$ 50,000
3.5.1.1.6. Medical Expense Limit	\$ 5,000

3.5.1.2. Claims for damages because of bodily injury, occupational sickness or disease, or death of any person other than Contractor's employees;

3.5.1.3. Claims for damages insured by reasonably available personal injury liability coverage which are sustained: (i) by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or (ii) by any other person for any other reason;

3.5.1.4. Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting there from.

3.5.2 The insurance policies so required by this section 3.4 to be purchased and maintained, unless otherwise specified in the Contract Documents, shall:

3.5.2.1. include at least the specific coverage and be written for no less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater,

3.5.2.2. include complete operations/premises/products insurance;

3.5.2.3. include contractual liability insurance covering Contractor's indemnity obligations under these General Conditions. Unless otherwise specified in the Contract Documents, the indemnity clause shall read as follows:

3.5.2.3.1. The Contractor for itself, agents, employees, successors and assigns agrees to save harmless the Owner, its Officers, Agents, Employees and Architect/Engineer from and against any and all claims, demands and/or suits, except as stated below, whether judicial or extra judicial for any cost whatever arising out or related to the execution of the Contract, and its insurers shall defend the Owner, its officers, agents, Employees and Architect/Engineer from such claims, demands and/or suits and shall bear all the expenses for such defense contemplated within the coverage limits provided by the Contractor's general liability policy, except where such claims, demands and/or suits are due solely to the negligence of the Owner, its Officers, Agents, employees and negligence, errors and/or omissions of the work performed by the Architect/Engineer.

3.5.2.4. include personal & advertising liability.

3.5.2.5 include XCU hazards (Explosion, Collapse, and Underground), as applicable.

3.5.2.6. include Contractor's subcontracted work;

3.5.2.7. include fire damage and medical expenses;

3.5.2.8. remain in effect at least until Final Acceptance and at all times thereafter when Contractor may be correcting, removing or replacing Work; in accordance with section 13.7 and

3.5.2.9. Include Employer's Liability - Stop Gap coverage with a minimum limit of five hundred thousand

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

dollars (\$500,000.00) each personal occurrence and five hundred thousand dollars (\$500,000.00) each accident.

3.6 Business Auto Policy

3.6.1 Automobile Liability coverage shall be written to protect the Contractor against all claims for bodily injuries to members of the public and damage to property of others arising from the use of motor vehicles, and shall cover operations on or the site of all motor vehicles, whether they are owned, non-owned or hired.

3.6.2 Unless otherwise stated in the Contract Documents, the liability limits shall not be less than:

3.6.2.1. Bodily Injury: two hundred and fifty thousand dollars (\$250,000.00) each person and five hundred thousand dollars (\$500,000.00) each occurrence.

3.6.2.2. Property Damage: one hundred thousand dollars (\$100,000.00) each occurrence or two hundred and fifty thousand dollars (\$250,000.00) combined single limit for bodily injuries and property damage liability.

3.7 Contract Work-Builders Risk Insurance

3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide a Builder's Risk policy for the amount of coverage set in the Contract Documents. The Builders Risk policy will insure against property damage to the building or structure being constructed or erected during the course of construction.

3.7.1.1. The description of covered property should include all fixtures, materials and supplies to be used in or incidental to, the construction. It should also cover equipment, machinery, materials, etc., not yet installed but destined to become a permanent part of the structure, on the Site or at off Site temporary storage locations.

3.7.1.2. This insurance shall be written under an Inland Marine all risk form, including earthquake, windstorm and flood coverage and shall protect the Contractor, Subcontractors, and the Owner and shall contain a waiver of subrogation clause against the insured parties.

3.7.1.3. Coverage shall be for an amount equal to the Contract Sum, unless otherwise specified in the Contract Documents.

3.7.1.4. Coverage shall include expenses incurred in the repair or replacement of any insured property.

3.7.1.5. Coverage shall include materials and/or equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and/or equipment have been included in an Application for Payment recommended by Owner.

3.7.1.6. Coverage shall allow partial utilization of the Work by Owner, if Owner complies with Article 3.2.7, herein

3.7.1.7. Coverage shall include testing and startup.

3.7.1.8. Coverage shall be maintained in effect until Substantial Completion is achieved unless otherwise agreed to in writing by Owner and Contractor with thirty (30) days written notice to each other additional insured to whom a certificate of insurance has been issued.

3.7.1.9. Unless otherwise stated in the Contract Documents, flood coverage limits shall be for the Contract Sum or up to a maximum of \$250,000.00, whichever is lower.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

3.7.1.10. Deductibles under this Policy shall be no more than:

3.7.1.10.1. Flooding no more than \$5,000.00

3.7.1.10.2. For named windstorms, or hurricanes, no more than two percent (2%) of the Contract Sum.

3.7.1.10.3. For Earthquakes, no more than five percent (5%) of the total Contract Sum.

3.7.2. If the Contract Documents specify that Owner shall purchase the Builders Risk policy, said policy shall be under the same or better terms and conditions, than those indicated in section 3.6. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this section 3.6, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order or Written Amendment.

3.7.2.1. Unless otherwise provided in the contract Documents, Owner shall be responsible for the deductible under this policy.

3.7.2.2. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

3.7.3. The Contract Documents shall set forth, whenever applicable, which party shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will insure the interest of Owner, Contractor, and Subcontractors, each of whom is deemed to have an insurable interest and each shall be listed as an insured or additional insured. Unless otherwise set forth in the Contract Documents, said insurance, if needed, shall be purchased and paid for, by the Owner.

3.7.4. Receipt and Application of Insurance Proceeds

3.7.4.1. If Owner purchases said insurance, Owner is authorized and shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing to Owner's exercise of this power within fifteen (15) days after the occurrence of loss.

3.7.4.2. Owner shall settle with the insurers in accordance with what is agreed by the parties who own the insurable interest.

3.7.4.3. If no such agreement among the parties in interest is reached, Owner shall, on behalf of all parties, adjust and settle the loss with the insurers.

3.8 Installation Floater Policy

3.8.1. This policy shall be provided by the Contractor when Builders Risk policy does not apply and coverage is required for only a specific type of property during its installation.

3.8.2. The limit of insurance shall include the aggregate value of the Contractor's, Subcontractor's, or Owner's furnished equipment and materials to be erected or installed by the Contractor.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

3.8.3. This insurance shall be written under an Inland Marine all risk form, including earthquake, windstorm and flood coverage and shall protect the Contractor, Subcontractors, and the Owner and shall contain a waiver of subrogation clause against the insured parties.

3.9 Subcontractor's and Subcontractor's Liability Insurance.

3.9.1. Unless otherwise indicated in the Contract Documents, the Contractor shall, throughout the performance of Work under the Contract, procure and maintain in effect, and require all Subcontractors and others performing any such Work to procure and maintain in effect, insurance of the types applicable and with limits no less than the minimum amounts specified above, or insure the activity of his Subcontractors in his own policy.

3.10 Owner's Liability Insurance.

3.10.1 In addition to the insurance required to be provided by Contractor under Article 3.4, Owner, at Owner's option, may purchase and maintain Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

ARTICLE 4-SITE

4.1 Availability of Lands

4.1.1. Unless otherwise stated in the Contract Documents, Owner shall furnish the Site.

4.1.1.1. Owner shall notify Contractor of any known encumbrances or restrictions specifically related to use of the Site with which Contractor must comply in performing the Work.

4.1.1.2. Owner will obtain in a manner that does not adversely affect the critical path of the Work the easements for permanent structures or permanent changes to existing facilities.

4.1.1.3. If Contractor and Owner are unable to agree on the entitlement to or on the amount of any adjustment in the Contract Price or Contract Time, or both, as a result of any delay in Owner's complying with the responsibilities indicated above, Contractor may make a Claim therefore as provided in section 11.5.

4.1.2. Contractor shall secure and provide all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.2 Subsurface and Physical Conditions

4.2.1. Reports and Drawings. The Supplementary Conditions identify:

4.2.1.1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Architect/Engineer has used in preparing the Contract Documents; and

4.2.1.2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that Architect/Engineer has used in preparing the Contract Documents.

4.2.2. Limited Reliance by Contractor on Technical Data Provided. On lineal type projects, Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

not part of the Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data", Contractor may not rely upon or make any Claim against Owner, Architect/Engineer, or any of Architect/Engineer's Consultants with respect to:

4.2.2.1. the completeness of such reports and drawings for Contractor's construction purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

4.2.2.2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

4.2.2.3. any Contractor interpretation of, or conclusion drawn from, any "technical data" or any such other data, interpretations, opinions, or information.

4.2.3. Reliance by Contractor on Technical Data Provided. On building construction projects, Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, and such reports and drawings are part of the Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data", Contractor may not rely upon or make any Claim against Owner, Architect/Engineer, or any of Architect/Engineer's Consultants with respect to:

4.2.3.1. the completeness of such reports and drawings for Contractor's construction purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

4.2.3.2. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.3 Differing Subsurface or Physical Conditions

4.3.1. Notice: If Contractor believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

4.3.1.1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in section 4.2 is materially inaccurate; or

4.3.1.2. is of such a nature as to require a change in the Contract Documents; or

4.3.1.3. differs materially from that shown or indicated in the Contract Documents; or

4.3.1.4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents; then Contractor, shall promptly, in no event later than 3 working days, after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Article 6.16), notify Owner's Representative, Owner and Architect/Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

4.3.2. Architect/Engineer's and/or Owner's Representative Review. After receipt of written notice as required by the preceding Article, Architect/Engineer and/or Owner's Representative will promptly review the pertinent condition and determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing of Architect/Engineer's and/or Owner's Representative findings and conclusions.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

4.4. Price and Time Adjustments

4.4.1. The Contract Price, or the Contract Time, or both will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's costs of, or time required for, performance of the Work; subject, however, to the following:

4.4.1.1. such condition must meet any one or more of the categories described in Article 4.3.1; and

4.4.1.2. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of section 11.3.

4.4.2 Contractor shall not be entitled to any adjustment in the Contract Price or Contract Time if:

4.4.2.1. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner in respect of Contract Price and Contract Time by the submission of a Bid or by becoming bound under a negotiated contract; or

4.4.2.2. the existence of such condition could reasonably have been discovered or revealed as a result of any visual examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by Contractor prior to Contractor's making such final commitment; or

4.4.2.3. Contractor failed to give the written notice within the time and as required by Article 4.3.1.

4.4.3 If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price, or Contract Time, or both, a Claim may be made therefore as provided in section 11.5.

4.5 Underground Facilities

4.5.1. Shown or Indicated. The information and/or data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner's Representative, Owner or Architect/Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

4.5.1.1. Owner and Architect/Engineer shall be responsible for the reasonable accuracy or completeness of any such information or data; and

4.5.1.2. the costs of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:

4.5.1.2. 1. reviewing and checking all such information and data;

4.5.1.2.2. locating all Underground Facilities shown or indicated in the Contract Documents;

4.5.1.2.3. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and

4.5.1.2.4. the safety and protection of all such Underground Facilities and repairing any damage thereto

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

resulting from the Work.

4.5.2. Not Shown or Indicated.

4.5.2.1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Article 14.13), notify said findings in writing to the owner of such Underground Facility, Owner's Representative and Architect/Engineer.

4.5.2.2. Architect/Engineer, Owner's Representative and Owner will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility.

4.5.2.3. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

4.5.2.4. If Owner's Representative concludes that a change in the Contract Documents is required, a Work Change Directive, Change Order or Extra Work Order will be issued to reflect and document such consequences.

4.5.2.4.1. An equitable adjustment shall be made to the Contract Price or Contract Time, or both, if warranted under this Article 4.5.

4.5.2.4.2. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Time, Owner or Contractor may make a Claim therefore as provided in section 11.5.

4.6. Reference Points

4.6.1. In projects requiring construction of buildings, at the beginning of the project, the Owner will set construction stakes establishing sufficient property lines, baseline and a bench mark. These stakes and marks will constitute all the surveying work the Owner will provide for the use of the Contractor. From the above-mentioned stakes and marks, the Contractor shall develop and establish all necessary marks and controls to perform his work. The Contractor will be held responsible for the preservation of original stakes and marks provided by the Owner at the beginning of the project, and if any of these stakes or marks are carelessly or willfully destroyed or disturbed by the Contractor, the cost of replacing them will be at Contractor's expense. The Owner will be responsible for the accuracy of the original lines and marks furnished to the Contractor.

4.6.1.1. In lineal projects, Owner shall provide engineering surveys to establish reference points for construction which, in Architect/Engineer's judgment, are necessary to enable Contractor to proceed with the Work.

4.6.2. Contractor shall be responsible thereafter for establishing the reference points and property monuments in accordance with the survey provided by Owner and laying out the Work, shall protect and preserve the reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall be responsible for replacing the established reference points and property monuments, if affected during construction.

4.6.3. Contractor shall report to Owner's Representative and Architect/Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

4.7. Hazardous Environmental Condition at Site

4.7.1. Reports, Studies and Drawings. Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the Architect/Engineer in the Preparation of the Contract Documents.

4.7.2. Limited Reliance by Contractor on Technical Data Provided. On lineal type projects, Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not part of the Contract Documents. Such "technical data" is identified in the Technical Specifications. Except for such reliance on such "technical data", Contractor may not rely upon or make any Claim against Owner, Architect/Engineer, or any of Architect/Engineer's Consultants with respect to:

4.7.2.1. the completeness of such reports and drawings for Contractor's construction purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

4.7.2.2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

4.7.2.3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.7.3. Reliance by Contractor on Technical Specifications Provided. On building construction projects, unless otherwise indicated in the Contract Documents, Contractor may rely upon the general accuracy of the "technical data" contained in such Technical Specifications and/or Plans and Drawings. Except for such reliance on such "technical data", Contractor may not rely upon or make any Claim against Owner, Architect/Engineer, or any of Architect/Engineer's Consultants with respect to:

4.7.3.1. the completeness of such reports and drawings for Contractor's construction purposes, including any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

4.7.3.2. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.7.4. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site that was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work.

4.7.5. Contractor shall be responsible for Hazardous Environmental Conditions created due to any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

4.7.6. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately:

4.7.6.1. at Owner's cost, secure or otherwise isolate such condition, if it is not the Contractor's fault; or at Contractor's cost, if it is his fault, or anyone for whom Contractor is responsible;

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

4.7.6.2. stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by section 6.13 and 14.13); and

4.7.6.3. notify Owner's Representative, Owner and Architect/Engineer and promptly thereafter confirm such notice in writing, no later than 24 hours after the condition has been encountered. Failure to do so shall constitute a waiver of any claim in connection thereto.

4.7.6.3.1. Owner shall promptly consult with Architect/Engineer and/or Owner's Representative concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action.

4.7.7. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner's Representative has obtained any required permits related thereto and delivered to Contractor written notice:

4.7.7.1. specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or

4.7.7.2. specifying any special conditions under which such Work may be resumed safely.

4.7.7.3. If Owner, through Owner's Representative, and Contractor cannot agree as to entitlement to, or on the amount or extent, if any, of any adjustment in Contract Price or Contract Time, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefore as provided in Article 11.5.

4.7.8. If after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner's Representative may order the portion of the Work that is in the area affected by such condition to be deleted from the Work.

4.7.8.1. If Owner, through Owner's Representative, and Contractor cannot agree as to entitlement to, or on the amount or extent, if any, of an adjustment in Contract Price or Contract Time as a result of deleting such portion of the Work, then either party may make a Claim therefore as provided in Article 11.5.

4.7.8.2. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

4.7.9. To the fullest extent permitted by Laws or Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and the officers, directors, partners, employees, agents, other consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition:

4.7.9.1. was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and

4.7.9.2. were not created by Contractor or by anyone for whom Contractor is responsible.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

4.7.9.3. Nothing in this Article shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

4.7.10. To the fullest extent permitted by Laws or Regulations, Contractor shall indemnify and hold harmless Owner's Representative, Owner, Architect/Engineer, Architect/Engineer's Consultants, and the officers, directors, partners, employees, agents, other consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible.

4.7.10.1. Nothing in this Article shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

4.7.11. The provisions of sections 4.2, 4.3 and 4.4 are not intended to apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5-OWNER

5.1 General

5.1.1. Owner's responsibilities and obligations are expressed throughout these General Conditions and are not limited to the ones contained in this Article.

5.1.2. All functions of the Owner will be performed by the Contracting Officer, unless delegated to others in the Contract Documents.

5.1.3. The Contracting Officer may delegate his full authority to another person, and to that effect shall notify the Contractor by written communication.

5.1.4. Unless otherwise specified in the Contract Documents, the person signing this Contract shall be interpreted to mean the Contracting Officer.

5.2 Information and Services Required of the Owner

5.2.1. The Owner shall furnish all available information describing the Project including, but not limited to, physical characteristics, legal limits and utility locations for the Project.

5.2.1.1. Said information should have been made available with reasonable time, and, unless otherwise specified in Bid Documents, prior to bid opening.

5.2.2. Before commencement of the Work, as specified in the Notice to Proceed, the Owner shall inform the Contractor in writing the name of the Owner's Infrastructure Area Director, Architect/Engineer, Contracting Officer, Owner's Representative and Project Inspector, if applicable. Owner reserves the right to change, from time to time, the designated persons or entities and any other designated representative who will perform the functions of the Owner. The Notice to Proceed shall also indicate the day of the week on which Contractor and Owner's Representative shall hold their weekly meeting to discuss matters related to the Project. The Owner's Representative may, from time to time, change said date of the week.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

5.2.3 Furnishing of Right of Way - The Owner will be responsible for obtaining the necessary rights-of-way in advance of construction. Any exceptions will be indicated in the Contract Documents.

5.2.4 Information or services to be provided by Owner shall be furnished by the Owner with reasonable promptness so as to avoid any delay in the orderly programmed progress of the Work.

5.3 Pay Promptly When Due

5.3.1. Owner shall make payments to Contractor promptly when they are due.

5.4 Owner's Right to Stop the Work

5.4.1. The Owner's Representative and/or Owner may in accordance with Article 15.1.2 order the Contractor to stop the Work, or any portion thereof if the Contractor:

5.4.1.1. fails to start (and expeditiously continues) correcting defective work promptly after Contractor is notified in writing by the Owner;

5.4.1.2. persistently fails to supply materials or equipment in accordance with the Contract Documents; or

5.4.1.3. for any other significant reason deemed necessary to insure the proper execution of the Contract until the cause for such order has been eliminated.

5.5 Owner's Right to Carry Out the Work Without Terminating the Employment of the Contractor

5.5.1. If the Contractor persistently neglects to carry out the Work in accordance with the Contract Documents or persistently fails to comply with any provision of the Contract, the Owner, through the Owner's Representative, may, after ten (10) days written notice to the Contractor and Surety, if any, and without prejudice to any other remedy he may have, perform said Work and/or, remedy such deficiencies.

5.5.1.1. In such case, an appropriate deduction for the cost of performing said Work and/or correcting such deficiencies shall be made from the payments then, or thereafter, due the Contractor. If the payments then, or thereafter, due the Contractor are not sufficient to cover such amount, the Contractor and/or surety shall pay the difference to the Owner.

5.5.2. The cost to be charged to Contractor of such Work, repairs or replacement, will be the actual cost incurred by Owner.

5.6 Owner's Right to Clean Up

5.6.1. If a dispute arises between the separate contractors in the Project as to their responsibility for cleaning up as required by these General Conditions, the Owner may, after written notice to Contractor, clean up and charge the cost thereof to the several contractors in the proportion that the Architect/Engineer, or the Owner's Representative, determines equitable. If the Contractor is not in agreement with the cost distribution, he may make a claim as provided in Article 11.5.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

5.7 Evidence of Financial Arrangements

5.7.1. Upon Contractor's request, Owner will furnish Contractor reasonable evidence that financial arrangements have been made for the payment of Owners' obligations under the Contract, and that all documentation for said purpose has been filed pursuant to applicable Laws and Regulations.

5.7.1.1. If requested in writing by Contractor, Owner shall supply reasonable written evidence that Owner has complied with these requirements.

5.8 Limitations on Owner's Responsibilities

5.8.1. Unless otherwise provided in the Contract Documents the Owner, through Owner's Representative, shall have no authority over, nor responsibility for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or shall not be held responsible for any failure of Contractor to comply with Laws or Regulations applicable to the performance of the Work. Owner's Representative, or Owner, will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

ARTICLE 6 - CONTRACTOR

6.1 Supervision and Superintendence

6.1.1. Contractor shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.

6.1.1.1. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction, but Contractor shall not be responsible for the negligence of Owner or Architect/Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction, which is shown or indicated in and expressly required by the Contract Documents.

6.1.1.1.1. When the Contract Documents specify the use of a specific means, method, technique, sequence, or procedure of construction, which is shown or indicated in and expressly required by the Contract Document, such means, method, technique, sequence, or procedure of construction shall be used unless others are authorized by the Owner's Representative.

6.1.1.1.2. If the Contractor desires to use a means, method, technique, sequence, or procedure of construction other than specified in the Contract Documents, he shall request authority from the Owner's Representative to do so.

6.1.1.1.2.1. The request shall be in writing and shall include a description of the methods and equipment proposed and of the reasons for desiring to make the change.

6.1.1.1.2.2. If approval is given, it will be on the condition that the Contractor will be fully responsible for producing work in conformity with the Contract Documents.

6.1.1.1.2.3. If, after trial use of the substituted methods or equipment, the Owner's Representative determines that the Work produced does not meet Contract requirements, the Contractor shall discontinue the use of the substitute method or equipment and shall complete the remaining Work with the specified methods and

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

equipment.

6.1.1.1.2.4. The Contractor shall remove the deficient Work and replace it with Work of specified quality, or take such other corrective action as the Owner's Representative may direct.

6.1.1.1.2.5. No change will be made in the Contract amount for the construction items involved or in Contract Time as a result of authorizing a change in methods or equipment under these provisions.

6.1.1.1.3. Contractor shall be responsible to ascertain that the completed Work complies accurately with the Contract Documents.

6.1.2. Project Manager. Unless otherwise indicated in the Contract Documents, the Contractor shall employ a competent licensed and collegiate architect or engineer, as the Project Manager, and necessary assistants to direct the Work. These assistants shall be in attendance at the project site at all times during the prosecution of the Work. The Project Manager shall be satisfactory to the Owner or his representatives and shall not be changed except with the consent of the Owner, unless the Project Manager proves to be unsatisfactory to the Contractor (and Contractor gives Owner written notice of the specific reason for removal as Project Manager) or ceases to be in Contractor's employ.

6.1.2.1. The Project Manager will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. The Contractor, prior to the start of the Project, will inform the Owner's Representative, if already assigned, or the Owner, if not assigned, the name, authority and responsibilities of the Project Manager and/or Superintendent.

6.1.2.1.1. All communications given or received from the Project Manager shall be binding on Contractor. All communications related to the Contract directed to the Contractor and/or proceeding from the Owner, Architect/Engineer, Owner's Representative and other representatives of the Owner shall be made thru the Project Manager.

6.2 Labor and Working Hours

6.2.1. Contractor shall provide competent, suitably qualified personnel to survey, layout, and construct the Work as required by the Contract Documents.

6.2.1.1. The Contractor shall at all times enforce strict discipline and good order among his employees and shall not employ in relation to the Project or the Work any unfit person or anyone not skilled in the task assigned to him.

6.2.1.1.1. The Contractor shall be responsible to the Owner for the acts and omissions of all of his employees and all subcontractors, their agents and employees and all other persons performing any work under a contract with the Contractor.

6.2.1.2. The Contractor shall, at all times, employ sufficient labor and equipment for prosecuting the Work to full completion in the manner and within the time required in the Contract Documents.

6.2.1.2.1. Workers engaged in special work or skilled work shall have sufficient experience in the performance of such work and in the operation of the equipment and tools to perform it properly and satisfactorily.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

6.2.1.2.2. Any person employed by the Contractor or by a subcontractor who, as determined by the Owner's Representative, does not perform his work in a proper and skillful manner, or is disrespectful, intemperate, disorderly or otherwise objectionable shall, at the written request of the Owner's Representative, be removed forthwith by the Contractor or Subcontractor employing such employee, and such person shall not be employed again on any portion of the Work without the written consent of the Owner's Representative. Owner's Representative shall specify, in writing, the reason for the removal of such person from the jobsite.

6.2.1.2.2.1. Should the Contractor fail to remove such person or persons as required herein, the Owner may withhold payment of estimates which are or may become due, or may suspend the Work by written notice until such orders are complied with.

6.2.2. Except as otherwise required for the safety or protection of persons or the Work or property at the Site, or adjacent thereto, or for completion of daily Work as provided in Article 9.1.2.2.2. or as otherwise stated in the Contract Documents, all Work shall be performed during regular working hours and Contractor will not permit overtime work or the performance of Work on Saturday, Sunday, or any legal holiday without Owner's Representative's written consent (which will not be unreasonably withheld).

6.2.2.1. The Contractor shall comply with all the applicable Federal and Commonwealth laws, rules and regulations concerning fair labor practices including minimum wages, work hours, equal employment opportunities, non-discrimination, civil rights, employment of minors, and other labor relation matters.

6.2.2.2. The Contractor shall pay weekly, in lawful money of the United States of America, including payment by check or direct deposit, the entire amount of wages, less legally authorized or mandated deductions, earned by each of the laborers and employees engaged in the work.

6.2.2.2.1. The Contractor shall make available the Project payrolls to the Owner's Representative for inspection and shall submit copies of such payrolls to the Owner's Representative when required.

6.2.2.2.1.1. Any irregularities noted in the Project's payrolls will be brought to the attention of the Contractor by the Owner's Representative for appropriate corrective action and payment of any pending wages. Should the Contractor fail to take the necessary action, he will be subject to such civil and criminal proceedings as provided by law and regulations.

6.2.2.2.1.2. Payment of wages to laborers and employees of the Contractor for their work shall have preference over the payment of other debts of the Contractor, except as otherwise established by law.

6.3 Services, Materials, and Equipment

6.3.1. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

6.3.2. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents.

6.3.2.1. All warranties and guarantees required by the Contract Documents shall expressly benefit Owner.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

6.3.2.2. If required by Owner's Representative, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

6.3.2.3. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise provided in the Contract Documents.

6.4 Progress and Other Schedules

6.4.1. Measurement and payment.

6.4.1.1. Unless otherwise specified in the Contract Documents, all costs in connection with the preparation and maintenance of schedules, workplans, submittals and other work specified in this Article 6.4 are to be included and form part of the project's general administrative expenses. Contractor's Cost for said work required in Article 6.4 shall not be paid as a separate pay item in Unit Price contracts or as a Schedule of Values item, in Lump Sum contracts.

6.4.2. General.

6.4.2.1. Progress schedules shall represent a practical plan to complete the Work within the Contract Time, and shall convey the Contractor's intent as to the manner of prosecuting the progress of the Work.

6.4.2.2. The scheduling and execution of construction in accordance with the Contract Documents are the responsibility of the Contractor. The Contractor shall involve and coordinate all Subcontractors and Suppliers in the development and updating of progress schedules.

6.4.2.3. The submittal of progress schedules shall be understood to be the Contractor's representation that the progress schedule meets the requirements of the Contract Documents and that the Work is expected to be executed in the sequence and duration indicated in the progress schedule.

6.4.3. Scheduling format.

6.4.3.1. The Project Schedule shall be computer produced using the Critical Path Method ("CPM") format. The schedule shall be computer generated utilizing an Owner approved project scheduling software, as indicated in the Contract Documents, such as Primavera, Microsoft Project, or SureTrak. The project scheduling software selected shall be used consistently from commencement to Final Acceptance of the Project. If the Contractor desires to use a project scheduling software other than the one specified in the Contract Documents, he shall request authorization from the Owner's Representative to do so, prior to the issuance of the Notice to Proceed. If the Contract Documents do not indicate a specific scheduling program, the Contractor may use any of the three mentioned herein, at his sole option.

6.4.3.2. The Project Schedule shall be updated monthly and submitted as indicated in Article 6.4.4.

6.4.3.3. The schedule shall show Contract tasks, percent complete, progress bars, baseline schedules, milestones, start and finish dates, and other breakdowns as required by the Owner's Representative. The schedules shall show clearly the sequence of activities and shall list specifically the following activities:

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

6.4.3.3.1. interim milestones completion dates. Phasing and staging of the Work as specified shall be prominently identified;

6.4.3.3.2. submittals and the Owner's Representative review of submittals;

6.4.3.3.3. acquisition of permits;

6.4.3.3.4. any long lead time (over 60 days) orders for material and equipment;

6.4.3.3.5. work to be performed by other contractors and agencies;

6.4.3.3.6. delivery of Owner's furnished equipment and materials indicated for incorporation in the Work.

6.4.3.4. Descriptions of scheduled activities shall include sufficient detail to identify the work that is to be accomplished.

6.4.3.4.1. The schedule shall contain sufficient activities to clearly show the sequence and interdependencies of the Work. The Owner's Representative may request that additional activities and information be added and from time to time may also require reasonable amendments to the schedule format that result in more clarity as to how the information is presented.

6.4.3.4.2. Activity durations shall be expressed in whole days. Work that is to be performed by Subcontractor shall be clearly defined.

6.4.3.4.3. Critical path activities are those activities with a total float equal to or less than zero. Schedules with negative total float may be found to be impractical by the Owner's Representative.

6.4.3.4.4. A schedule showing that Work that is completed in less than the completion time specified, shall be considered to have float. The float shall be the time between the scheduled completion of the Work and the Contract completion date. Float time shall not be for the exclusive benefit of either the Owner or the Contractor. Float shall be a resource available to both parties.

6.4.3.4.4.1. If according to the critical path of the originally approved Project Schedule any party that generates a float in said critical path, then said float shall belong exclusively to the party generating said float.

6.4.3.4.5. A schedule found to be impractical for the preceding reasons or any other reasons shall be revised by the Contractor and resubmitted.

6.4.4. Submittals.

6.4.4.1. Within thirty (30) days after the effective date of the Notice to Proceed (unless otherwise specified in the Contract Documents), Contractor shall submit to Owner's Representative for its timely review:

6.4.4.1.1. a preliminary progress schedule indicating the times (numbers and days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

6.4.4.1.2. a preliminary schedule of Shop Drawings and Sample submittals which will list each required submittal and the times for submitting, reviewing, and processing such submittal; and

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

6.4.4.1.3. a preliminary schedule of values for all of the Work, as specified on Article 13, herein.

6.4.4.2. Submit one (1) electronic copy and the number of hard copies of the Submittals required in Article 6.4 which the Contractor requires to be returned, plus three (3) hard copies which will be retained by the Owner.

6.4.4.3. Schedule submittals will be reviewed by the Owner's Representative, and shall be updated and revised as indicated in section 6.4.6. Re-submittals shall conform to the same requirements as original submittals.

6.4.4.4. The Contractor shall prepare and submit all schedules and schedule analysis reports in electronic as well as hard copies.

6.4.4.5. All progress schedule submittals are subject to review and approval by the Owner's Representative.

6.4.4.5.1. Unless otherwise provided in the Contract Documents, at least ten (10) days before submission of the Application for Payment, a conference, to be attended by Contractor, Owner's Representative, Architect/Engineer, and others as appropriate, will be held to review for purposes of acceptability to Owner's Representative, as provided below, the progress schedules submitted in accordance to Article 6.4.4.1. If said meeting is not held, for reasons other than due to the fault of the Contractor, or if the Owner's Representative does not provide timely approval, or corrections, to the submitted submittals specified in Article 6.4.1., all the previously submitted submittals shall be considered approved, provided Contractor has given notice directly to Owner as required in Article 17.3.2.

6.4.4.5.1.1. Contractor shall have an additional ten (10) days to make corrections and adjustments and to complete and resubmit the schedules. Owner's Representative shall approve said corrections within a period of ten (10) days from the date of re-submittal otherwise they shall be considered approved, provided Contractor has given notice directly to Owner as required in Article 17.3.2.

6.4.4.5.1.1.1. The third progress payment shall not be paid to Contractor until acceptable schedules are submitted to Owner's Representative, or until schedules are considered approved as specified herein.

6.4.4.5.1.1.2. The Progress Schedule will be acceptable to Owner's Representative if in accordance with the Agreement it provides an orderly progression of the Work to completion within any specified Milestones and the Contract Time.

6.4.4.5.1.1.3. Contractor's schedule of Shop Drawings and Sample submittals will be acceptable to Owner's Representative if it provides, in Owner's sole discretion, a workable arrangement for reviewing and processing the required submittals.

6.4.4.6. The first schedule submitted by the Contractor will be reviewed for format, as well as content. The Owner's Representative may request format changes. Once the format has been approved, all subsequent schedules shall be submitted in the approved format.

6.4.5 Four-week work plan.

6.4.5.1. A schedule in calendar time-scaled bar chart format depicting the Contractor's intended work activities for the upcoming four (4) week period shall be submitted on a monthly basis and shall be due on the day of the project's weekly meeting. Each activity of one (1) day or more in duration shall be indicated.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

6.4.5.2. Any deviations, such as sequences of work, timing, and durations of activities from the approved Project Schedule, shall be noted and explained in writing.

6.4.5.3. The four (4) week work plan shall be submitted on sheets not less than 8 ½ inches by 11 inches, or as approved by the Owner's Representative.

6.4.6. Review, updates and revisions

6.4.6.1. The Owner's Representative will review and return to Contractor the schedule submittals, with written comments, within the following deadlines counted from the date of receipt.

6.4.6.1.1. Project CPM schedule: 14 calendar days.

6.4.6.1.2. Four (4) week work plan: 8 calendar days.

6.4.6.2. The Contractor shall make all corrections to the Project Schedule requested by the Owner's Representative and resubmit the schedule for approval. If the Contractor does not agree with the Owner's Representative's comments, the Contractor shall provide written notice of disagreement within five (5) days from the receipt of the Owner's Representative's comments. The Owner's Representative's comments on the four (4) week work plan for which the Contractor disagrees shall be resolved in a meeting held for that purpose, if necessary.

6.4.6.3. At least once each month, or often if indicated in the Contract Documents, the Contractor shall submit an updated schedule showing the progress of the Work to date and anticipated activities to be worked on. All updated schedules must comply with Article 6.4.

6.4.6.4. If, according to the approved Project Schedule, the Contractor is thirty (30) or more days behind as to the completion date of any milestone, or the schedule contains thirty (30) or more days of negative float, considering all approved time extensions, the Contractor shall submit a revised schedule, showing a practical plan to complete the Work within the Contract Time.

6.5 Submittals for Approval, Substitutes and/or "Equals"

6.5.1. Submittal for Approval of Materials, Shop Drawings and Samples; Plans and Working Drawings; As-Built Plans.

6.5.1.1. The Contractor shall submit all submittals for approvals of Materials, Shop Drawings and Samples to the Owner's Representative. The Owner's Representative will either perform the review and approval, or forward the Contractor's submittal to the Architect/Engineer's for his review and approval, in accordance with the accepted itinerary for Shop Drawings and Sample submittals.

6.5.1.2. All submittals will be identified as required by Owner's Representative and presented with the number of copies specified in the Contract Documents. If a number is not mentioned, seven (7) copies will be submitted. Of these seven (7) copies, four (4) shall be returned, duly evaluated, to the Contractor.

6.5.1.3. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Owner's Representative the services, materials, and equipment Contractor proposes to provide and to enable Owner's Representative to review the

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

information for the limited purposes of complying with the requirements of Article 6.17.

6.5.1.4. The Architect/Engineer or the Owner's Representative shall have the following deadlines within which to approve, request additional information or reject any Submittal for Approval of Materials, Shop Drawings and Samples:

6.5.1.4.1. For Materials, Shop Drawings or Samples which are the ones specified in the Contract Documents or are, in the opinion of the Owner's Representative, non-complex Shop Drawings or Materials, the Architect/Engineer or Owner's Representative shall have a period of ten (10) working days.

6.5.1.4.2. For Materials, Shop Drawings or Samples not complying with the requirements indicated in the previous Article, the period shall be twenty (20) working days.

6.5.1.4.3. If no comment by the Architect/Engineer or Owner's Representative is made within said period of time, the Contractor will have the right to Claim if said delay impacts the critical path.

6.5.1.4.4. The above mentioned deadlines can be extended if requested in writing by the Architect/Engineer and/or Owner's Representative as long as approval is made within a time period that does not alter the critical path. Such request for extension shall not be unreasonably denied.

6.5.1.5. Each Sample will be identified clearly as to material, supplier, pertinent data such as catalog numbers, and the use for which it is intended or otherwise as Owner's Representative may require, to enable the Architect/Engineer or the Owner's Representative to review the submittal for the limited purposes of complying with the requirements of Article 6.17.

6.5.1.5.1. The numbers of items each Sample to be submitted will be as specified in the Specifications. If no number of items is mentioned, three (3) samples will be submitted. Of these, three (3) samples, two (2) shall be returned, duly evaluated, to the Contractor.

6.5.2. Where an approval of Materials, Shop Drawing or Samples is required by the Contract Documents or the schedule of Shop Drawings and Sample submittals, any related Work performed, including materials purchases, prior to Owner's Representative or Architect/Engineer's review and approval of the pertinent submittal will be at the sole responsibility of Contractor.

6.5.3. Submittal Procedures.

6.5.3.1. Before delivering each submittal for approvals of Material, Shop Drawing or Sample, Contractor shall have:

6.5.3.1.1. verified that all shop drawing measurements, quantities, shop drawing dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar information are in accordance with the Contract Documents and if not in accordance, ascertained that all variations are indicated in the submittal;

6.5.3.1.2. verified all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

6.5.3.1.3. verified all Information relative to means, methods, techniques, sequences, and procedures of construction and safety precautions and programs incident thereto; and

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

6.5.3.1.4. Contractor shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings or Samples and with the requirements of the Work and the Contract Documents.

6.5.3.2. Each submittal shall bear a stamp or specific written indication that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal. If required in the Special Conditions, submittals for Materials and Samples must bear a notarized certificate of compliance.

6.5.3.3. At the time of each submittal, Contractor shall give Owner's Representative specific written notice of such variations, if any, that the submittal for approvals of material, Shop Drawing or Sample submitted may have from the requirements of the Contract Documents, such notice to be in a written communication included with the submittal.

6.5.4. The Architect/Engineer or Owner's Representative's Review.

6.5.4.1. Owner's Representative, either himself or through the Architect/Engineer, will perform a timely review, evaluation and comment of Shop Drawings and Samples in accordance with the schedule of Shop Drawings and Sample submittals acceptable to Owner's Representative. If no comment by the Owner's Representative is made within the time stated in this Article 6.5 the Contractor will have the right to claim pursuant the provisions of Article 11.5, if said delay impacts the critical path.

6.5.4.1.1. The Architect/Engineer or the Owner's Representative review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

6.5.4.1.2. The Architect/Engineer or the Owner's Representative's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto.

6.5.4.1.2.1. The review and approval of a separate item, as such, will not indicate approval of the assembly in which the item functions.

6.5.4.1.3. The Architect/Engineer or the Owner's Representative's review and approval of Shop Drawings or Samples shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has in writing called the Architect/Engineer or the Owner's Representative attention to each such variation at the time of each submittal as required by Article 6.17 and the Architect/Engineer or the Owner's Representative has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample approval; nor will any approval by the Architect/Engineer or the Owner's Representative relieve Contractor from responsibility for complying with the requirements of Article 6.17.

6.5.5. Re-submittal Procedures.

6.5.5.1. Contractor shall make corrections required by the Architect/Engineer or the Owner's Representative and shall return the required copies of materials submittals, the required number of corrected copies of Shop Drawings and submit as required new Samples for review and approval.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

6.5.6 Substitutes and "Or-equals".

6.5.6.1. Whenever an item or material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Owner's Representative for review under the circumstances described below. The Contractor will present his submittal for approval, indicating whether the item of material or equipment proposed is an Or Equal or a Substitute.

6.5.6.2. "Or-Equal" Items: If in Owner's Representative's sole discretion an item, or material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it will be considered by Owner's Representative as an "or-equal" item, in which case review and approval of the proposed item be accomplished without compliance with the special requirements for approval of the proposed substitute items and be acceptable or acceptable with comments. Owner's Representative's basis for rejection of the item of material or equipment as an "or equal" material shall be written and may be subject to appeal, as specified in Article 11.5 of these General Conditions, by Contractor. For the purposes of this Article, a proposed item of material or equipment will be considered functionally equal to an item so named if:

6.5.6.2.1. In the exercise of reasonable judgment, Owner's Representative determines that:

6.5.6.2.1.1. it is at least equal in quality, durability, appearance, strength, and design characteristics;

6.5.6.2.1.2. it will reliably perform at least equally well the function imposed by the design concept of the completed Project as a functioning whole, and;

6.5.6.2.2. Contractor certifies that:

6.5.6.2.2.1. there is no increase in cost to the Owner; and

6.5.6.2.2.2. it will conform substantially, even with deviations, to the detailed requirements of the item named in the Contract Documents.

6.5.6.2.2.3. Owner's Representative shall make the decision on the "or equal" material with sufficient time so as not to alter the Contractor's Programmed Schedule of the Work. If no comment by the Owner's Representative is made within said period of time, the Contractor will have the right to Claim pursuant the provisions of Article 11.5 if said delay impacts the critical path.

6.5.6.3. Substitute Items

6.5.6.3.1. If in Owner's Representative's sole discretion an item or material or equipment proposed by Contractor does not qualify as an "or-equal" item under Article 6.5.6, it will be considered a proposed substitute item.

6.5.6.3.2. Contractor shall submit sufficient information as provided below to allow Owner's Representative to determine that the item or material or equipment proposed is essentially equivalent to that specified and an acceptable substitute therefore.

6.5.6.3.2.1. Requests for review of proposed substitute items, material or equipment will not be accepted by

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

Owner's Representative from anyone other than Contractor.

6.5.6.3.3. The procedure for review by Owner's Representative will be as set forth in Article 6.5.6, as supplemented in these General Conditions and as Owner's Representative may decide is appropriate under the circumstances.

6.5.6.3.4. Contractor shall first make written application to Owner's Representative for review of a proposed substitute item, material or equipment that Contractor seeks to furnish or use.

6.5.6.3.4.1. The application shall certify that the proposed substitute item will perform adequately the functions and achieve the results called for by the general design, be similar in substance to that specified, and be suited to the same use as that specified.

6.5.6.3.4.2. The application will state the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's timely achievement of Substantial Completion, whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for work on the Project) to adapt the design to the proposed substitute item and whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.

6.5.6.3.4.3. All variations of the proposed substitute item from that specified will be identified in the application, and available engineering, sales, maintenance, repair, and replacement services will be indicated.

6.5.6.3.4.4. The application will also contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change, all of which will be considered by Owner's Representative in the evaluation of the proposed substitute item.

6.5.6.3.4.5. Owner's Representative may require Contractor to furnish additional data about the proposed substitute item.

6.5.6.3.5. Owner's Representative shall make the decision on the "substitute" material with sufficient time so as not to alter the critical path. If no comment by the Owner's Representative is made within said period of time, the Contractor will have the right to Claim pursuant the provisions of Article 11.5 if said delay impacts the critical path.

6.5.6.3.6. Owner's Representative's basis for rejection of a "substitute" material shall be written and may be subject to appeal and Claim by Contractor, as specified in Article 11.5.

6.5.6.4. If a Substitute item is approved by the Owner and such change affects the Contract Price, then the Contract Price shall be equitably adjusted.

6.5.7. Substitute Construction Methods or Procedures.

6.5.7.1. If a specific means, method, technique, sequence, or procedure of construction is shown, or indicated in, or expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Owner's Representative.

6.5.7.1.1. Contractor shall submit sufficient information to allow Owner's Representative, in Owner's

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

Representative's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. Such submittal shall be made with sufficient time as to allow the Owner's Representative to review it.

6.5.7.1.1.1. The procedure for review by Owner's Representative will be similar to that provided in section 6.5.6 but no Claim may be made by contractor due to untimely evaluation by Owner.

6.5.8. Owner's Representative's Evaluation.

6.5.8.1. Owner's Representative or Architect/Engineer will be allowed a reasonable time, which will not unreasonably delay the critical path of the Work, within which to evaluate each proposal or submittal made pursuant to Article 6.5.

6.5.8.2. Except as provided above, Owner's Representative will be the sole judge of acceptability.

6.5.8.3. No "or-equal" or substitute will be ordered, installed or utilized until Owner's Representative's review is complete, which will be evidenced by written approval by Owner for a substitute or an approved Shop Drawing or an "or-equal."

6.5.8.4. Owner's Representative will advise Contractor in writing of any negative determination.

6.5.8.5. Owner's Representative will charge Contractor for any overtime expenses and other costs incurred in the evaluation of a proposed substitute, similar, or equal materials, unless said proposal was submitted by Contractor with reasonable time as to afford the Owner the time necessary to analyze the submittal without affecting the Project Schedule.

6.5.9. Special Guarantee.

6.5.9.1. Owner's Representative may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

6.5.10. Contractor's Expense.

6.5.10.1. Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.5.11. Approval of Submittals.

6.5.11.1. If within the periods of time provided under this Article 6 for approval of submittals made by the Contractor, the Owner's Representative fails to render his decision as to any submittal and the critical path is adversely affected, the Contractor shall require in writing the approval of the Owner's Representative, who shall have ten (10) working days to issue his decision. If no decision is forthcoming from the Owner's Representative within the stated time, for reasons other than due to the fault of Contractor, the submittal shall be considered approved, provided Contractor has also given the same timely notice directly to Owner required in Article 17.3.2

6.6 Review of Contract Documents

6.6.1. The Contractor shall carefully study and compare the Contract Documents with each other and with

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

Information furnished by the Owner and shall at once report to the Owner, Architect/Engineer, and Owner's Representative any error, inconsistency or omission he may discover.

6.6.1.1. The Contractor shall not be liable to the Owner for any errors, inconsistencies or omissions in the Contract Documents.

6.6.1.2. The Contractor shall not take advantage of any such errors, inconsistencies, or omissions.

6.6.1.3. The Owner's Representative after being notified by the Contractor of such errors, inconsistencies or omissions will make the corrections and interpretations deemed necessary for fulfilling the intent of the Contract Documents, within a reasonable time so as not to alter the programmed progress of the Work. If no comment by the Owner's Representative is made within said time the Contractor will have the right to Claim pursuant the provisions of Article 11.5 if said delay impacts the critical path.

6.7 Patent, Fees and Royalties

6.7.1. Contractor shall pay all license fees and royalties and assume all costs incident to the use, in the performance of the Work or the incorporation in the Work, of any invention, design, process, product, or device which is the subject or patent rights or copyrights held by others.

6.7.2. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner or Architect/Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

6.7.3 To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner, Architect/Engineer, Architect/Engineer's Consultants, and the officers, directors, partners, employees or agents, and other consultants of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges or engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.8 Permits

6.8.1. Unless otherwise indicated in the Contract Documents, the responsibilities for securing and paying for permits, governmental fees and licenses for work to be performed are as follows:

6.8.1.1. To obtain the Construction Permit, the Contractor shall pay the premiums to secure the State Insurance Fund policy and the Municipal Construction Taxes, at the rate that is in effect at bid date, unless the Contractor is explicitly not obligated to pay said taxes under the terms and provisions of the Contract Documents, in which case, shall so be specifically stated in the Contract Documents. The Owner shall secure all the Architect or Engineer's and Owner's Representative's certificates necessary and pertinent needed to secure the Construction Permit as well as submit applications and secure the permits for the Plan CES and for the Federal Storm Water Drainage plan, if same is required for the Project.

6.8.1.2. To obtain the Use Permit, the Contractor shall secure the endorsements required for said Use Permit from all government agencies, unless one or more of these cannot be obtained due to circumstances beyond the control of the

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

Contractor. The Owner must ascertain that the reports required for the Use Permit from the Architect or Engineer and Owner's Representative are duly filed with "Oficina de Gerencia de Permisos" and must also obtain any of the above mentioned endorsements that cannot be obtained due to circumstances beyond the control of Contractor.

6.8.1.3. All payments due, or to become due, to any agency, public or private, for connection to, or improvement of any of said agencies' infrastructure (Impact Fees) shall be paid by the Owner with sufficient time so as not to adversely affect the critical path of the Work.

6.8.1.4. The Contractor shall secure and pay for all incidental permits required for the completion of the Work, unless such incidental permits deviate from the normal procedures, or costs, of the requiring agency and shall do so in a timely manner so as not to adversely affect the critical path of the Work.

6.8.1.5. Any other fees or charges related to permitting to be paid by the Contractor will be indicated in the special conditions.

6.8.1.6. The duties of Owner and of Contractor stated in this Article 6.8 shall be performed in a timely manner as to not adversely affect the critical path of the Work.

6.9 Laws and Regulations

6.9.1. Contractor shall give all notices and comply with all Laws and Regulations applicable to the performance of the Work.

6.9.1.1. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner, nor Owner's Representative nor Architect/Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

6.9.1.2. Should the Contractor observe that the Contract Documents are at variance with any Federal, Commonwealth and Municipal laws, ordinances, rules, regulations, by-laws, and all orders or decrees, he shall promptly notify the Owner's Representative in writing and the Owner's Representative shall instruct the Contractor, also in writing, as to how Contractor is to proceed. Any additional cost and /or extra time incurred by the Contractor to comply with Laws and Regulations enacted after the bid opening date, it may file a claim for equitable adjustment of the Contract Price or the Contract Time or both, as shall any decrease in cost or time resulting therefrom.

6.9.1.3. If the Contractor performs any work knowing it to be contrary to Federal, Commonwealth and Municipal laws, ordinances, rules, regulations, by-laws, orders or decrees, the Contractor shall assume full responsibility therefore, and shall bear all cost arising there from.

6.9.1.4. The Contractor shall save the Owner and its authorized representatives harmless from any claim or liability arising from or based on the infraction or violation of any such laws, ordinances, rules, regulations, by-laws, all orders or decrees, except if the infractions or violations are caused by acts of the Owner, or of Owner's authorized representatives.

6.9.1.5. If Contractor performs any Work knowing or having reason to know that he is acting contrary to said Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred as a consequence thereof. It shall not be Contractor's primary responsibility to make certain

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not release Contractor of Contractor's obligations hereunder.

6.10 Taxes

6.10.1. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work and which were in effect at the bid opening date.

6.10.1.1. Among said taxes, the Contractor shall pay the municipal construction taxes applicable to the Project in a timely fashion, but no later than fifteen (15) calendar days after the first partial (certification) payment is made by the Owner to Contractor.

6.10.1.2. If specifically stated in the Contract Documents, the Municipal Construction tax rate may be determined between Owner and the municipal government where the project is to be located, in such case a specific rate shall be established by the mayor and the municipal legislature, and notified to the Contractor before bid time. If no such rate is indicated in the Contract Documents regarding such arrangement between Owner and the municipal government, then the Contractor shall pay at the rates prevailing at the time of the bid.

6.10.1.1.1. The Contractor shall furnish and deliver to the Owner written evidence that said payment(s) was made before the second partial (certification) payment is made by the Owner to Contractor.

6.10.1.1.2. In case that the Contractor does not furnish and deliver said evidence of payment, the Owner shall deduct from said partial (certification) payments the undisputed amount of municipal tax plus any penalties and fines and pay it directly to the municipality.

6.10.1.1.2.1. If the amount of the second partial (certification) payment is not enough to cover the total amount of the municipal tax, the Owner shall continue to deduct from the following partial (certification) payments until the undisputed amount is paid in full.

6.10.1.1.2.2. The direct payment provided for in Article 6.10.1.1.2 shall be effected after the retainage required in Article 13.2.2 is deducted.

6.11 Use of Site and Other Areas

6.11.1. Limitation on Use of Site and Other Areas.

6.11.1.1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment.

6.11.1.1.1. Contractor shall assume full responsibility for any damage to any such land or area, or to the Owner or occupant thereof, or of any adjacent land or areas, resulting from the performance of the Work.

6.11.1.1.2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly resolve the dispute with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

6.11.1.1.3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold Owner, Architect/Engineer, Architect/Engineer's Consultant, and the officers, directors, partners, employees, agents, and other consultants of each and any of them harmless from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Architect/Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

6.11.2. Removal of Debris during Performance of the Work.

6.11.2.1. During the progress of the Work, Contractor shall keep the Site and other areas free from excessive accumulations of waste materials, rubbish, and other debris caused by his operations on the Site.

6.11.2.1.1. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

6.11.3. Cleaning.

6.11.3.1. Prior to Substantial Completion of the Work Contractor shall clean the Site and make it ready for utilization by Owner.

6.11.3.1.1. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

6.11.3.1.1.1. If the Contractor fails to clean up as indicated above, the Owner may do so and the cost thereof shall be charged to the Contractor.

6.11.4. Loading Structures.

6.11.4.1. Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.11.4.2. Owner's Representative shall not permit any of the Owner's Other Contractors, his personnel, or any other entity performing work for him directly at the Site, to load any part of any structure in any manner that will endanger the structure, nor shall Owner's Representative subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.11.5. Rights To and Use of Materials Found On the Work.

6.11.5.1. The Contractor, with the prior written approval of the Owner's Representative, may use to perform the Work materials obtained from existing structures at the Site which are to be removed that are determined by the Owner's Representative to be acceptable for a use approved in writing by Owner's Representative.

6.11.5.2. Unless otherwise provided in the Contract Documents, material from any existing structures to be removed may be used temporarily by the Contractor in the erection of new structures.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

6.11.5.2.1. If the material is to be salvaged for the Owner, its modification will not be permitted except as approved by the Owner's Representative.

6.11.5.2.2. Unless otherwise specified in the Contract Documents, all soil existing at the Project Site will be considered fit to be used as fill in the performance of the Work if such soil meets the Project's field fill criteria.

6.12 Record Document

6.12.1. Contractor shall maintain in a safe place at the Site one (1) record copy of all Drawings, Specifications, Addenda, Written Amendments, Change Orders, Extra Work Orders, Work Change Directives, Field Orders, permits, and written interpretations and clarifications in good order and annotated showing changes made during construction.

6.12.1.1. Said documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Architect/Engineer and the Owner's Representative.

6.12.1.2. If not previously submitted, prior to Final Acceptance, said documents, Samples, and Shop Drawings will be delivered to Owner's Representative for delivery to Owner.

6.13 Safety and Protection

6.13.1. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

6.13.1.1. all persons on the Site or who may be affected by the Work;

6.13.1.2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

6.13.1.3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

6.13.2. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.

6.13.2.1. Contractor shall notify owners of adjacent property and of Underground Facilities and utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

6.13.2.2. All damage, injury, or loss to any property referred to in Articles 6.13.1.2 or 6.13.1.3 caused, directly or indirectly, in whole or in part, by Contractor any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Architect/Engineer or Architect/Engineer's Consultant, or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

indirectly employed by any of them).

6.13.2.3. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Owner's Representative has issued a notice to Owner and Contractor of Final Acceptance of the Work (except as otherwise expressly provided in connection with Substantial Completion).

6.13.3. If so provided in the bid documents, the Owner has the right to establish any reasonable monetary penalties for violations of this Section 6.13.

6.14 Safety Representative

6.14.1. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs. The safety representative at the Site may have other duties assigned to him.

6.15 Hazard Communication Programs

6.15.1. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available at the Site in accordance with Laws or Regulations.

6.16 Plans and Working Drawings; As-Built Plans.

6.16.1. Plans and Working Drawings.

6.16.1.1. The detail Plans and Specifications for the Project have been prepared by licensed and collegiate competent Architect/Engineer exercising reasonable care and are intended to show as clearly as is practicable the Work required to be performed. Contractor will rely on the accuracy of said drawings, specifically in their compliance with all applicable codes and regulations in effect on the bid opening date.

6.16.1.1.1. The Contractor realizes, however, that construction details cannot always be accurately anticipated and that in executing the Work, field conditions may require reasonable minor modifications in the details of plans and quantities of Work.

6.16.1.1.1.1. Therefore, all Work must be carried out taking into account the mentioned considerations as well as field conditions, to the satisfaction of the Owner's Representative, and in accordance with his instructions and with the Contract Documents.

6.16.2 Working Drawings

6.16.2.1. The Plans will be supplemented by such Working Drawings as are necessary to adequately control the Work.

6.16.2.2. Working Drawings for structures shall be furnished by the Contractor and shall consist of such detailed Plans as may be required to adequately control the Work and to complement the Plans furnished by the Owner.

6.16.2.3. They shall include, among others, stress sheets, shop drawings, erection plans, false work plans,

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

cofferdam plans, bending diagrams for reinforcing steel or any other supplementary plans or similar data required of the Contractor.

6.16.3. Working Drawings and related documents submitted for manufactured and shop-fabricated products shall be accompanied by a certification from the manufacturer that the materials and/or equipment meet all the requirements of the Specifications.

6.16.3.1. In the event that any item is not exactly in accordance with the requirements of the Plans and Specifications, the certificate shall identify and explain each such difference.

6.16.4. Unless otherwise indicated, all Working Drawings are subject to review and acceptance by the Owner's Representative.

6.16.4.1. Such review and acceptance shall not release the Contractor from any of his responsibilities for the safe and successful completion of the Work.

6.16.4.2. The cost of preparing and furnishing all required Working Drawings is included in the Contract Price and no separate payment will be made for such Drawings.

6.17 As Built Record Drawings

6.17.1. The Contractor shall keep at the Site a copy of the Drawings marked in a neat manner that record all changes made during construction.

6.17.1.1. The set of provisional record Drawings shall be kept up to date and submitted for the inspection and approval of the Owner's Representative, at least five (5) days prior to any partial monthly payment, unless otherwise required in the Contract Documents.

6.17.2. Prior to Final Acceptance, the Contractor shall deliver the as built Drawings to the Owner's Representative.

6.17.2.1. These Drawings will be used as the draft for the preparation of the final As Built Drawings for the Project by Architect/Engineer.

6.17.3. The Architect/Engineer will, with the full cooperation of Contractor and of the Owner's representative prepare final as-built record drawings in reproducible form as reasonably required by Owner, to be delivered to the Owner.

6.17.3.1. The Owner will cause the Architect/Engineer to submit, with enough time so as not to adversely alter the critical path of the Work, the revised as-built drawings to the required governmental entities and obtain the approval of an amended Construction Permit, if same is required, and deliver the same to Owner and Contractor. This amended Construction Permit will be used to obtain the Use Permit for the project.

6.18 Notice to Proceed.

6.18.1. After the Agreement has been executed, the Contractor will be formally notified to proceed with the Work or service provided in the Contract Documents.

6.18.1.1. The Notice to Proceed will stipulate the date on which Owner expects the Contractor will begin construction and the date on which Contract Time will commence to run.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

6.18.1.2. Pre-Construction Conference.

6.18.1.2.1. Prior to the start of the Project the Owner will summon all interested parties to a Pre-construction Conference in order to organize the start of the work and other matters. If no such conference is summoned by the Owner, and in any event, the Contractor may start the Work on the date stated in the Notice to Proceed.

6.18.2. Prosecution and Progress.

6.18.2.1. After obtaining written permission issued by the Owner, the Contractor may assemble materials and equipment and start preliminary Work as soon as he is notified of the award, but no responsibility for acceptance and payment of the Work so performed shall be assumed by the Owner until and unless the Contract has been executed and the order to proceed issued.

6.18.2.2. The rate of progress in the prosecution of the Work shall be compared in accordance with Articles 4.2 and 4.3 with approved Progress Schedule as the Work progresses.

6.18.2.2.1. If the Contractor is at fault for falling thirty (30) working days or more behind the approved schedule or ten percent (10%) of Contract Time, whichever is less, Contractor shall submit a revised schedule for completion of the Work within the Contract Time and modify his operations, including, but not limited to, working overtime and on Saturdays, Sundays and legal holidays, to providing such additional materials, equipment and labor as necessary to comply with the revised schedule. Any additional cost caused by the modified schedule will be at Contractor's expense.

6.18.2.3. Should the prosecution of the Work be discontinued for any reason, the Contractor shall notify the Owner's Representative at least twenty-four (24) hours in advance of resuming operations.

6.18.3. Conformity with Plans and Specifications.

6.18.3.1. All work performed and materials furnished shall be in reasonably close conformity with the Plans and other Contract Documents requirements.

6.18.3.2. Plan dimensions and Contract Specification values are to be considered the target values to be strived for and complied with as the design values to which any allowed tolerances are applied.

6.18.3.2.1. Materials and workmanship shall be uniform in character and shall be reasonably close to the prescribed target value or to the middle portion of the tolerance range.

6.18.3.3. When the Specifications include an acceptance plan for any construction or characteristic of materials, the acceptance plan will be used by the parties to determine the attainment of Reasonably Close Conformity with plans and specifications and to assign a value to the non-conforming work which does not meet that standard.

6.18.4 Cooperation with Utilities.

6.18.4.1. The Owner will notify all utility companies, all pipe line owners, or other parties affected, and endeavor to have all necessary adjustments of the public or private utility fixtures, pipe lines, and other

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

appurtenances within or adjacent to the limits of construction, which are not to be performed by the Contractor, made in accordance with the Project construction schedule.

6.18.4.2. Water lines, gas lines, wire lines, service connections, water and gas meter boxes, water and gas valve boxes, light standards, cableways, signals, and all other utility appurtenances within the limits of the proposed construction which are to be relocated or adjusted, are to be moved by their respective owners except for those to be moved by the Contractor as specifically provided in the Contract Documents.

6.18.4.3. It is understood and agreed that the Contractor has considered in his proposal all of the permanent and temporary utility appurtenances in their present or relocated positions as if same are shown on the plans and that no additional compensation will be considered for any delays, inconvenience, or damages sustained by Contractor due to any interference from the said known utility appurtenances or the operations of moving them, except in the case of failure by a utility to reasonably comply with its responsibility in relocating or adjusting its facility as required.

6.18.4.4. Prior to commencing Work, the Contractor shall make arrangements to protect the properties of all public and private utilities and other property within and adjacent to the Work area, if indicated in the Contract Documents, from damage by his construction operations.

6.18.4.5. Contractor shall cooperate with the utility owners in the removal and rearrangement of any underground or overhead utility lines or facilities to minimize interruption to service and duplication of work by the utility owners.

6.18.4.6. In the event of interruption to water or other utility services as a result of accidental breakage, or as a result of being exposed or unsupported, the Contractor shall promptly notify the proper authorities and shall cooperate with them in the restoration of service as promptly as possible.

6.18.4.7. Fire hydrants shall be kept accessible to the Fire Department at all times and no Work shall be undertaken near fire hydrants until provisions for continued service have been made.

6.18.4.8. Contractor shall be responsible for the repair costs of any damage to utility facilities caused by his equipment or operations, except for underground facilities whose existence or approximate location was previously unknown.

6.18.5. Materials.

6.18.5.1. Source of Supply and Quality Requirements.

6.18.5.1.1. The materials used in the Work shall meet all quality requirements of the Contract Documents.

6.18.5.1.2. Unless otherwise provided in the Contract Documents, all materials used in the Work shall be furnished by the Contractor from sources selected by the Contractor.

6.18.5.1.3. Materials will be tested and approved when delivered to the Project or in their final position after incorporation to the Work as provided by the individual specifications.

6.18.5.1.4. At the option of the Owner's Representative, sources of materials may be given preliminary approval before delivery is started.

6.18.5.2. Procurement and Delivery of Materials.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

6.18.5.2.1. The Contractor shall schedule the delivery at the Site of all materials and equipment required for the execution and completion of the Work at a time convenient to him so as to avoid delays in the prosecution of the Work and to allow completion of the Work within the Contract Time specified in the Contract Documents.

6.18.5.3. Earthwork Material Sources.

6.18.5.3.1. Designated Sources.

6.18.5.3.1.1. Specific sources of materials from offsite or onsite locations may be designated on the Plans and described in the Contract Documents.

6.18.5.3.1.2. Unless otherwise provided in the Contract Documents, direct payment will be made for development, preparation, erosion control, hauling and restoration of material sources or related work areas and sites.

6.18.5.3.2. Contractor Sources.

6.18.5.3.2.1. When no materials sources are designated in the Contract Documents, or if the Contractor desires to use materials from sources other than those designated, the Contractor shall be responsible for acquiring the necessary rights to take materials from the sources selected, for determining that the materials meet the specified requirements, and he shall bear all expenses for the exploration, development, erosion control and restoration of such sources, and for all costs of hauling the materials. Contractor will make sure that his sources of materials have the required permits.

6.18.5.4. Contractor's Quality Control.

6.18.5.4.1. The Contractor is responsible for the quality of all materials and workmanship furnished in the construction of the Project.

6.18.5.4.1.1. If specifically required in the Supplementary General Conditions, the Contractor shall provide his own quality control system and procedures including all personnel, equipment, supplies and facilities necessary to obtain samples, perform tests, evaluate test results and adequately control his work in order to insure that all such materials and workmanship meet the Contract requirements.

6.18.5.4.2. The Contractor shall, in all instances, perform his own process control sampling, testing and inspection during all phases of the Work as often and at a rate sufficient to assure that the Work conforms to the Contract requirements.

6.18.5.4.2.1. The Contractor shall insure that all of the testing equipment to be used is properly calibrated and meets the specifications applicable to each specified test procedure.

6.18.5.4.3. The cost of complying with Contractor's quality control obligations referred to in Article 6.18.5.4 is included in the Contract Price and no additional payment will be made therefore.

6.18.5.5. Storage of Materials.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

6.18.5.5.1. Materials shall be so stored as to assure the preservation of their quality and fitness for incorporation to the Work.

6.18.5.5.1.1. Stored materials, even though approved before storage, may again be inspected at any time prior to or during their incorporation to the Work.

6.18.5.5.1.2. Stored materials shall be located so as to facilitate their prompt inspection.

6.18.5.5.2. When authorized by the Owner's Representative, portions of the Project Site may be used for storage purposes and for the placing of the Contractor's plant/facilities and equipment provided that they are located so as not to constitute a hazard to the construction of the Project or otherwise.

6.18.5.5.2.1. Any additional space required therefore must be provided by the Contractor at his expense.

6.18.5.5.3. Private property may be used for storage purpose with written permission of the Owner or lessee, and, if requested by the Owner's Representative, copies of such written permission shall be furnished to him.

6.18.5.5.4. All temporary storage areas and plant sites shall be restored to their original condition by the Contractor, at his expense, in a manner acceptable to the Owner's Representative.

6.18.5.6. Handling of Materials.

6.18.5.6.1. All materials shall be handled in such manner as to preserve their quality and fitness for incorporation to the Work.

6.18.5.7. Materials Furnished by the Owner.

6.18.5.7.1. The Contractor shall furnish all materials required to complete the Work, except those indicated in the Contract Documents to be furnished by the Owner.

6.18.5.7.2. Except as provided in Article 6.18.5.7.4, if the material to be furnished by the Owner is to be delivered to the jobsite, the Owner, unless specified otherwise in the Contract Documents, will furnish the material to the Contractor at no cost to the Contractor and the Owner will pay for all transportation, insurance, taxes and other cost related to the furnishing of the material to the jobsite. Cost of unloading is included in the Contract Price and Contractor shall receive no additional compensation for unloading.

6.18.5.7.3. If the material to be furnished by the Owner is to be delivered to the jobsite, the Contract Documents will indicate the delivery schedule. If no such schedule is indicated, the delivery will be made as agreed by the parties. Owner shall program the delivery schedule as not to adversely affect the critical path.

6.18.5.7.4. If the material to be furnished by the Owner is not to be delivered to the jobsite the Contract Documents will indicate the terms and conditions of said delivery. If no terms and conditions are included in the Contract Documents then the cost of delivery to the jobsite is not included in the Contract Price.

6.18.5.7.5. If the material to be furnished by the Owner is not to be delivered to the jobsite the Contract Documents will indicate the date and time of availability of the material. If no such date and time is indicated, the material will be available by agreement as not to impact the critical path.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

6.18.5.7.6. The material to be furnished by the Owner will include all ancillary items included in the Technical Specification that describes the material to be furnished by the Owner, unless indicated otherwise in the Contract Documents.

6.18.5.7.7. The Owner warrants that the materials furnished by the Owner to the Contractor are of a quality sufficient for the purpose of their use. The Owner further warrants that the material to be furnished is Equal or Similar to that specified in the Technical Specification that describes the material to be furnished by the Owner.

6.18.5.7.8. The material furnished by the Owner will be of sufficient quantity including normal construction breakage, waste and shrinkage to complete the Work, unless the Contract Documents indicate otherwise.

6.18.5.7.9. The Contractor will be responsible for all Owner furnished materials delivered or made available to him in accordance with the terms and conditions of this section. If due to the fault of the Contractor, the Owner has to supply more material to the Contractor than indicated in the Contract Documents, the Owner may deduct this cost from any Partial Payment or Retainage due to the Contractor.

6.18.5.7.10. If the Owner's Representative has informed in a timely manner, the date or schedule of delivery of the material, the Contractor will be liable for all demurrage charges if he fails to receive the Owner furnished material within the time limit or schedule specified.

+ 6.18.5.7.11. Unless otherwise indicated in the Contract Documents, all costs at jobsite including unloading, handling, warehousing and installation of the Owner furnished material are included in the Contract Price and Contractor shall not receive additional compensation therefore.

6.18.5.8. Certification of Compliance.

6.18.5.8.1. When a certification of a material or assembly is required by the Contract, each lot of such materials or assemblies delivered to the Site shall be accompanied by certificate of compliance in which the delivered material or assembly is clearly identified.

6.18.5.8.2. Commercially manufactured products shall be accompanied by certificates signed by the manufacturer and, when required, supported by tests performed by the manufacturer. Certified copies of such test results shall be furnished to the Owner's Representative.

6.18.5.8.3. Materials or assemblies accompanied by certificates of compliance may be sampled and tested at any time and if found not to be in conformity with Contract Documents will be subject to rejection at any time whether incorporated to the Work or not.

6.18.5.8.3.1. Removal of such rejected materials will be at the Contractor's expense, unless such materials have been supplied by the Owner and it was Owner's duty to test for conformity with the Contract Documents.

6.18.6 Contractor shall carry on the Work and adhere as reasonably as possible to the Progress Schedule during all Disputes or disagreements with Owner.

6.18.6.1. If the Dispute or disagreement hinders the ability of the Contractor to carry on the Work, the Contractor shall so inform the Owner.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

6.18.6.2. If the Dispute allows more than one course of action to be followed in the prosecution of the Work, the Owner's Representative may instruct the Contractor on the course of action to be followed.

6.18.6.3. No Work shall be delayed or postponed pending resolution of any Disputes or disagreements, except as permitted in section 15.4 or as Owner's Representative and Contractor may otherwise agree in writing.

6.18.7. Limitations on Operations.

6.18.7.1. Unless otherwise specified in the Contract Documents, the Contractor shall not open up new Work to the prejudice or detriment of Work already started.

6.18.7.1.1. In lineal projects, the Owner's Representative may require the Contractor to finish a section on which Work is in progress before Work is started on any additional section, if the opening of such section is essential to public safety or convenience.

6.18.7.1.2. If said order causes the Project to be delayed, the Contract Price and/or Contract Time shall be equitable adjusted.

6.19 Contractor's General Warranty and Guarantee

A 6.19.1. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be deficient. Contractor's warranty and guarantee hereunder excludes defects or damage after substantial, or partial completion and occupancy caused by:

6.19.1.1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

6.19.1.2. normal wear and tear under normal usage by Owner or individuals or entities for whom Owner is responsible.

6.19.2. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

6.19.2.1. observations by Architect/Engineer and/or Owner's Representative;

6.19.2.2. recommendation by Owner's Representative or payment by Owner of any progress or final payment;

6.19.3. the issuance of a certificate of Substantial Completion by Owner's Representative or any payment related thereto by Owner;

6.19.4. use or occupancy of the Work or any part thereof by Owner;

6.19.3. The Contractor warrants to the Owner that all materials and equipment furnished under this Contract will be new unless otherwise specified, and that all Work will be free from faults and defects and in conformance with the Contract Documents for the time periods specified in the Contract Documents or for one (1) year, whichever is

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

longer, unless otherwise specified in the Contract Documents.

6.19.3.1. If required by the Owner's Representative, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

6.20 Indemnification

6.20.1. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner, Architect/Engineer, Architect/Engineer's Consultants, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out or relating to the performance of the Work, provided that any such claim, cost, loss, or damage:

6.20.1.1. is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting there from; and

6.20.1.2. only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.

6.20.2. The indemnification obligations of Contractor under section 6.20.1 shall not extend to the Architect/Engineer and Architect/Engineer's Consultants or to their officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them arising out of:

6.20.2.1. errors and/or omissions in the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or

6.20.2.2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 Subcontractors, Suppliers and Others

6.21.1. Award of Subcontracts for Portions of The Work.

6.21.1.1. Unless otherwise specified in the Contract Documents the Contractor, as soon as practicable after the signing of the Contract, shall furnish to the Owner's Representative in writing for his acceptance a list of the names of the main Suppliers and Subcontractors proposed for the principal portions of the Work.

6.21.1.1.1. The Owner's Representative shall promptly notify the Contractor in writing if he, after due investigation, has reasonable objection to any Supplier or Subcontractor on such list and does not accept him. Said reasonable objection may include, but are not limited to, previous default by said Subcontractor or Supplier with Owner, a record of flagrant safety violations or an unsatisfactory past performance with Owner.

6.21.1.1.1.1. The Owner's Representative shall specify in writing the reasons for such objection

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

6.21.1.1.1.2. If within fifteen (15) calendar days from submittal by the Contractor, the Owner's Representative fails to make objections to any Supplier or Subcontractor on the list, the Contractor shall request the approval of the list by the Owner's Representative who shall have ten (10) days to issue his decision. If no reply is forthcoming from the Owner's Representative within the stated time, the list of Suppliers or Subcontractors shall be deemed approved.

6.21.1.1.2. The Contractor shall not contract with any Supplier or Subcontractor or any person or organization (including those who are to furnish materials or equipment fabricated to a special design) that has been rejected by the Owner's Representative in the manner indicated in Article 6.21.1.1.1, above.

6.21.1.1.3. If the Owner's Representative refuses to accept any Supplier, Subcontractor, person, or organization on a list submitted by the Contractor in response to the requirements of the Contract Documents, the Contractor shall submit an acceptable substitute.

6.21.1.1.3.1. No increase in the Contract Sum shall be allowed for any such substitution of a rejected Subcontractor and/or Supplier or other in accordance with Article 6.21.

6.21.1.1.3.2. No acceptance by Owner's Representative of any such Subcontractor, Supplier, or other individual or entity, whether initially, or as a replacement, shall constitute a waiver of any right of Owner's Representative or Engineer to reject defective Work.

6.21.1.1.4. Unless otherwise specified in the Contract Documents, the Contractor shall execute, with his own forces and organization, Work amounting to not less than twenty-five percent (25%) of the original total Contract Price.

6.21.1.1.4.1. Any items designated in the Contract Documents as "Specialty Trades or Items" shall be deducted from original total cost before computing the amount of the work required to be performed by the Contractor with his own forces and organization.

6.21.2. Payments to Subcontractors.

6.21.2.1. The Contractor shall pay each Subcontractor for work performed in the Project in accordance with the terms and conditions stipulated in the contract executed by and between the Contractor and the Subcontractor.

6.21.2.1.1. The Contractor shall also require the Subcontractor to make similar payments to his Sub-Subcontractors.

6.21.3. Flow Down of Applicable Agreement Provisions.

6.21.3.1. The Contractor shall cause the inclusion, in all agreements executed by contractor with Subcontractors and Suppliers, of all applicable provisions of the Agreement with which Subcontractors and Suppliers need to comply for their proper performance on behalf of Contractor, of the duties and obligations imposed by the Contract Documents. Contractor shall also cause Subcontractor and Suppliers to include in their respective agreements with Sub-Subcontractors, and Sub-Suppliers the same duties to flow down to all lower tier agreements such applicable Agreement provisions.

6.21.4. The Contractor shall be considered as an independent contractor for all purposes under the Contract, and no persons engaged or contracted by the Contractor for the performance of Contractor's obligations shall be considered an employees or agents of the Owner.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

6.21.5. Contractor shall be fully responsible to Owner's Representative, Owner and Architect/Engineer for all acts and omissions of the Subcontractors, Suppliers, and other such individuals or entities performing or furnishing any of the Work.

6.21.5.1. Nothing in the Contract Documents shall create for the benefit of any Subcontractor or Supplier a contractual relationship between Owner's Representative, Owner or Architect/Engineer, nor shall it create any obligation on the part of Owner's Representative, Owner or Architect/Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws or Regulations.

6.21.6. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other such individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

6.21.7. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Owner's Representative only through Contractor.

6.21.8. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner's Representative, Owner and Architect/Engineer, including required contract provisions applicable to Federal Agency funded projects.

6.21.8.1. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in section 3.6, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights (including subrogation) against Owner, Contractor, Architect/Engineer, Architect/Engineer's Consultants, and all other individuals or entities identified in the Contract Documents to be listed as insured or additional insured (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to Work.

6.21.8.1.1. If the insurers underwriting any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

ARTICLE 7 - ARCHITECT/ENGINEER AND DESIGNATED INSPECTOR

7.1 Administration of the Contract

7.1.1. The Owner will provide general Administration of the Construction Contract, including performance of the functions hereinafter described, through the Owner's Representative.

7.1.2. The Owner, prior to the start of the Project, will inform the Contractor in writing the name of the Owner's Representative. If the Owner's Representative is changed during the course of the project the Owner will inform the Contractor in writing the name of the new Owner's Representative. If the Contractor has valid reasons for objecting said designation, Contractor shall so inform the Owner in writing and, if Owner deems Contractor's reasons valid, a different Owner's representative shall be chosen by the Owner.

7.1.3. The Owner may from time to time change the person or entity designated as Owner's Representative, or may

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

assume and/or change the functions of the Owner's Representative, and the Architect/Engineer by notifying the Contractor in writing.

7.2 Duties of Architect/Engineer and the Owner's Representative

7.2.1. The Architect/Engineer is the person or entity who prepares the Drawings and Specifications for the Owner and is responsible for the analysis, design, and code compliance of the Project.

7.2.1.1. The Architect/Engineer will make periodic visits to the site to familiarize himself generally with the progress and quality of the Work and to determine in general if the Work is proceeding in accordance with the Contract Documents.

7.2.1.1.1. Based on on-Site observations, the Architect/Engineer will keep the Owner informed of the progress of the Work, and will endeavor to safeguard the Owner against defects and deficiencies in the Work.

7.2.1.1.2. The Architect/Engineer will be the Owner's representative for technical matters related to the Contract.

7.2.1.1.3. The Architect/Engineer will be the primary interpreter of the plans and specifications.

7.2.1.1.4. The Architect/Engineer and Owner's Representative will not be responsible for the acts or omissions of the Contractor, or any Subcontractor and vice-versa, or any of their agents or employees, or any other persons performing any of the Work.

7.2.2. The Owner's Representative will represent the Owner in the interpretation of all contractual and non-technical matters. The Owner's Representative will have authority to act on behalf of the Owner to the extent provided in the Contract Documents.

7.2.2.1. All communications related to this Contract between the Contractor and Architect/Engineer shall be made thru the Owner's Representative, except that any party may directly communicate orally or by written communication with the others if authorized by the Owner's Representative, or in case of an Emergency.

7.2.2.2. The Owner's Representative may delegate some or all of his functions to Project Inspectors and/or Inspectors.

7.2.2.2.1. The Owner's Representative will inform the Contractor the name of the Project Inspectors and/or Inspectors. If the Contractor has a valid reason for not accepting the designated Project Inspector, he shall so inform the Owner in writing and if Owner deems the reason valid a different Owner's representative shall be chosen by the Owner.

7.2.2.2.2. Inspectors employed by the Owner, the Architect/Engineer and/or the Owner's Representative are authorized to inspect all work done and materials furnished, including the preparation, fabrication or manufacture of the materials to be used.

7.2.2.2.3. Inspectors also have the authority to reject any materials and work until any questions at issue can be resolved.

7.2.2.3. Owner's Representative and/or inspectors are not authorized to alter or waive the provisions of the

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

Contract, to issue instructions contrary to the plans and specifications, or to act as foremen for the Contractor.

7.2.2.4. Based on his observations and the Contractor's Application for Payment, the Owner's Representative will determine the amount owed to the Contractor and will recommend approval of Payment in such amount.

7.2.2.4.1. If the Owner so requires, Architect/Engineer will also review, and approve, the Contractor's Application for Payment.

7.2.2.5. The Owner's Representative will prepare Change Orders, and Extra Work Orders, in accordance with these General Conditions.

7.2.3. The Owner's Representative, the Architect/Engineer and/or the Owner shall at all times have access to the Work either in preparation or in progress. The Contractor shall provide access to the Work so that at all times Owner's Representative may perform his duties under the Contract Documents, and Contractor shall provide such information and assistance, as is required, to make a complete and detailed inspections.

7.2.3.1. If the Owner's Representative, and/or the Owner, request it, the Contractor, at any time before Final Acceptance of the Work, shall remove or uncover such portions of the finished Work as instructed. After examination, the Contractor shall restore said portions of the Work to the standard required by the specifications.

A 7.2.3.1.1. Should the Work so exposed and examined prove acceptable, the uncovering, or removing, and the replacing of the covering will be paid by the Owner as extra work; but should the Work so exposed or examined prove unacceptable, the uncovering, removing, remediation and the replacing of the covering will be at the Contractor's expense.

7.2.3.1.2. Any Work done or materials used without supervision or inspection by an authorized Owner's representative may be ordered removed and replaced at the Contractor's expense unless the Owner representative failed to inspect after having been given a written notice of at least two (2) Working Days prior to the date in which Work was performed.

7.2.3.1.3. When any government agency or any utility is to accept or pay for any portion of the Work, its respective representatives shall have the right to inspect the Work. Such inspection shall not make the government agency or utility a party to the Contract. Contractor and Owner shall diligently perform all necessary actions to promote the timely inspection of the Work in a manner that does not affect the critical path.

7.2.3.1.4. The inspection of the Work and materials by the Owner shall not release the Contractor of any of his obligations under the Contract as prescribed in the plans, specifications and other Contract Documents.

7.2.3.1.5. The Owner's Representative will conduct inspections to determine the dates of Substantial Completion and final completion and will receive and review written guarantees and related documents submitted by the Contractor.

7.2.3.1.6. In case of any dispute between the Contractor and any one Project Inspector or Inspector as to materials furnished or the manner of performing the Work, the Project Inspector or the Inspector shall have the authority to reject materials or suspend the work until the question at issue can be referred to and decided by the Owner's Representative, within reasonable promptness, so as not to alter the critical path or modify substantially the float and the programmed progress of the job.

7.2.4. The Owner's Representative will be, in the first instance, the interpreter of the requirements of the Contract

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

Documents, except as indicated in Article 7.2.1.3. The Owner's Representative will, within a reasonable time, render such interpretations that he, or the Contractor, if so requested, may deem necessary for the proper execution or progress of the Work.

7.2.4.1. All interpretations and decisions of the Owner's Representative shall be consistent with the intent of the Contract Documents. In his capacity as interpreter, he will exercise his best efforts to insure faithful performance under the Contract.

7.2.4.2. Claims, disputes and other matters in question relating to the execution or progress of the Work or the interpretations of the Contract Documents shall be submitted initially to the Owner's Representative for a decision in accordance with Article 11.

7.2.5. The Owner's Representative will have authority to reject work only when such work does not conform to the Contract Documents. Whenever, in his reasonable opinion, he considers it necessary or advisable, to insure the proper implementation of the intent of the Contract Documents, he will have authority to require special inspection or testing of the Work in accordance with Article 12.3 whether or not such Work is then fabricated, installed or completed.

7.2.5.1. However, neither the Owner's Representative's authority to act under this Article, nor any decision made by him in good faith either to exercise or not to exercise such authority, shall give rise to any duty or responsibility of the Owner, Owner's Representative or Architect/Engineer to the Contractor, any Subcontractor, any of their agents or employees, or any other person performing any of the Work, nor will the Contractor be released from any of his obligations under the Contract.

7.2.5.1.1. The Owner's Representative shall have the authority to stop the Work in whole or in part when such stoppage is necessary to insure the proper execution of the Work and compliance by contractor with the Contract.

ARTICLE 8 - OTHER WORK AND SEPARATE CONTRACTS

8.1 Owner's Right to Award Separate Contract, Perform Work with Owner's Employees and Utility Workers. Related Work at Site

8.1.1. Owner's Right to Award Separate Contract, Perform Work with Owner's Employees and Utility Workers.- Owner may perform other work related to the Project at the Site with Owner's employees, or by awarding separate contracts, or by having the work performed by utility workers. Written notice thereof will be given to Contractor prior to starting any such other work.

8.1.1.1. If the terms and conditions of the work to be performed by Owner's employees, separate contractors or by others, are not described in the Contract Documents prior to the bid, the Contract Time and Sum will be equitably adjusted as a result of said work and any other work to the extent that such work performed by Owner's employees, separate contractors or by others affects the Contractor's Work.

8.1.1.2. If the terms and conditions of the work to be performed by Owner's employees, separate contractors or by others are described in the Contract Documents prior to the bid, then the Contract Time and Sum will be equitably adjusted but only to the extent that said work differs from the work indicated in the Contract Documents that is to be performed by Owner's employees, separate contractors or by others.

8.1.1.3. Should the performance of other work related to the Project at the Site by Owner's employees,

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

separate contractors, utility workers, that was not indicated in the Contract Documents, cause damages, delays or interferes with the Work being performed by the Contractor, the Owner will assume full responsibility and pay for all costs, expenses, and delays to which the Contractor is subjected caused by the execution and/or performance of said other work described herein if the critical path is adversely affected.

8.1.1.4. In the event one or more contracts are awarded related to the Project, the "contractor" in the contract document in each case, will be the contractor who signs each separate contract.

8.1.1.5. If there is under construction other work for Owner, by written contract or otherwise, adjacent to the limits of the site, the Contractor, if so ordered by the Owner, shall permit access to others performing such work through the Site.

8.1.1.5.1. If Owner authorizes the other contractors performing work adjacent to the Site to use said access. Owner shall prescribe limitations and conditions for such use as required to protect Contractor's operations and the Work.

8.1.1.5.1.1. In accordance with this Article 8.1, the Owner will be responsible for any damages, costs, or delays caused to the Contractor by such order.

8.1.1.6. If Owner and Contractor are unable to agree on entitlement to or on the amount or time, if any, of any adjustment in the Contract Price or Contract Time necessary as a result of such other work, a Claim may be made therefore as provided in Article 11.5.

8.1.2. Coordination of the Separate Contracts and Work by Others.

8.1.2.1. Unless otherwise specified in accordance with Article 8.1.2.4, Owner shall be responsible for the coordination of the Work between the Contractor, Owner's employees, the separate contractors and any others, as to the interaction and scheduling of the various work and the proper and safe access to the Site and storage of the equipment and materials of the Contractor, the Owner's employees, the separate contractors and others contracted by Owner.

8.1.2.2. Contractor shall fully cooperate with the Owner in the coordination of the Contractor's Work with that of the Owner's employees, the separate contractors and any work by others as to the interaction and scheduling of the various work and the proper and safe access to the Site and storage of the equipment and materials of the Contractor, the separate contractors and others.

8.1.2.3. The Owner may delegate this coordination, in whole or in part, to a Construction Manager or separate contractor and must give prior notice to Contractor in writing, containing the terms and conditions of this delegation.

8.1.2.3.1. The Construction Manager or the separate contractor will act on behalf of Owner strictly within the limits of such delegation.

8.1.2.4. The Owner may delegate this coordination responsibility in whole or in part to one of the separate contractors or to the Contractor as follows:

8.1.2.4.1. If prior to the bid opening date, the Owner requires that the Contractor be responsible for the coordination of the Owner's employees, separate contractors or any work by others, the Owner will indicate the

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

terms and conditions of such obligation in the bid documents and it shall be the Contractor's responsibility to include in the Contract Price whatever costs are required for this coordination of the work.

8.1.2.4.2. If the Owner requires that Contractor be responsible for the coordination of Owner's employees, separate contracts or work by others after the bid has been awarded, the Owner will indicate the terms and conditions of such obligation as a Change Order.

8.1.2.5. Contractor Coordination Meetings:

8.1.2.5.1. If the Owner, or the party with the coordinating responsibility so requires it, the Contractor shall attend coordination meetings with the Owner's employees, separate contractors or others performing work at a site to be determined by the coordinator.

8.1.2.5.1.1. The purpose of the coordination meeting shall be for the Contractor and all separate contractors and/or others performing work to coordinate schedules and construction activities to enable the construction of the different work under the separate contracts to occur on a coordinated, efficient and expeditious manner.

8.1.2.5.1.2. The coordination meeting shall also serve as forum for the Contractor and all separate contractors and/or others performing work at the site to discuss, and try to avoid and try to resolve between and among themselves any conflicts in their respective schedules or construction activities and prevent delays in one contractor's activities caused by another.

8.1.2.5.2. If the different contractors cannot reach an agreement on the coordination of the construction activities and schedule to be followed, the Owner, or his designated coordinating representative, will decide on the course of action to be followed and shall provide the necessary instructions to the Contractor, Owner's employees, separate contractors and others performing work on how to proceed, as a Field Order or, if required, as a Change Order.

8.1.3. Contractor, and any other entity contracted by the Owner to perform direct work related to the Project, shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate such other work with the work of the Contractor or any other entity contracted by the Owner to perform related work on the Project.

8.1.3.1. Contractor, or any other entity contracted by the Owner to perform related work on the Project, shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of Owner and the others whose work will be affected.

8.1.4. The duties and responsibilities of Contractor under this Article are for the benefit of such utility owners and separate contractors to the extent that there are comparable provisions for the benefit of Contractor, including general, supplemental and special conditions, as well as similar insurance and hold harmless clauses, in said direct contracts between Owner and such utility owners and separate contractors.

8.1.4.1. Furthermore, the Owner will verify that the schedule of others contracted to perform related work on the Project does not interfere with the Project Schedule.

8.1.4.1.1. If in order to accommodate the work performed by others contracted by the Owner to perform related work in the Project, the critical path is adversely affected and/or any damage to the Work occurs, the Owner will compensate the Contractor in time and/or adjustment to Contract Price.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

8.1.5. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article, Contractor shall promptly inspect such other work and, within ten (10) working days, report to Owner in writing any delays, defects, or deficiencies in such other work that, in his opinion, render it unavailable or unsuitable for the proper execution and results of the Work.

8.1.5.1. Contractor's failure to report will constitute acknowledgement that said work is suitable, except for hidden latent defects in such work.

8.1.5.2. The same rules stated herein will apply if other entities contracted by the Owner to perform related work in the Project depend on Work performed by the Contractor.

8.2 Owner's Right to Award Separate Contract.

8.2.1. The Owner may award separate contracts in connection with other portions of the Project or additional work to the Work covered by the Contract, and if such work affects the Work, Contractor will be notified by Owner in a timely manner of the award of such separate contract.

8.2.1.1. The Owner may assign these separate contracts, as a Change Order, to the Contractor for a fee, as indicated on Article 10.5.

8.2.2. When Separate Contracts are let within the limits of any project, the Owner shall coordinate the work of each contractor so as not to interfere with or hinder the progress or completion of the Work being performed by Separate Contractors.

8.2.2.1. Contractors working on the same Project shall fully cooperate with each other.

8.2.2.2. Furthermore, the Owner will be responsible to verify that the schedule of the Separate Contractors contracted to perform Work on the Project does not interfere with the Contractor's Project Programmed Schedule previously approved for the Project.

8.2.2.2.1. Owner will compensate the Contractor, in time and/or adjustment to Contract Price, if his schedule has to be varied, and/or any damage occurs, to accommodate the work performed by other entities contracted by the Owner to perform related work in the Site.

8.3 Mutual Responsibility of Contractors

8.3.1. Each Contractor involved shall assume all liability, financial or otherwise, in connection with his Contract and shall protect and save harmless the Owner from any and all damages or claims that may arise out of the performance of the Contractor's Work.

8.3.1.1. The Owner will require from each Separate Contractor and other entities working on the Project, Contract Documents, including General, Supplemental and Special Conditions, similar to those executed with the Contractor and to include similar insurance clauses and hold harmless clauses.

8.3.1.2. The Owner will also be responsible to verify that the schedule of the Separate Contractors) and other entities working on the project do not interfere with the Contractor's Project Programmed Schedule previously approved for the Project.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

8.3.2. Should the Contractor cause damage to the work or property of any separate contractor and/or others working on the Project, the Contractor shall, be liable for said damage.

8.3.2.1. If such other separate contractor files a claim against Owner on account of any such damage alleged to have been so sustained, Contractor shall have the right to defend Owner, either by itself or in conjunction with Owner, and Contractor shall compensate Owner for damages, costs and expenses sustained therefore by Owner which are attributable to Contractor.

8.3.2.1.1. If the Contractor is found to be responsible for the alleged defects claimed by the separate contractor and any judgment or award against the Owner arises therefrom, the Contractor shall pay or satisfy it and shall reimburse the Owner for all attorney's fees and court, arbitration costs or other costs which the Owner has therefore incurred.

8.3.2.1.2. If the Contractor is found not to be responsible for the alleged defects claimed by the separate contractor, then the Owner shall pay for any judgment or award against him as well as reimburse the Contractor for all attorney's fees and court or arbitration costs incurred in defending the Owner.

ARTICLE 9-TIME

9.1 Progress and Completion

9.1.1 All time limits stated in the Contract Documents are of the essence of the Contract.

9.1.2 The time limit for the execution of this Contract has been figured out based on the Architect/Engineer and/or Owner's estimate.

9.1.2.1. Such time limit to into consideration all Sundays, legal holidays indicated in Article 1.1.1.4,1, included within the said time limit.

9.1.2.2. The Contractor will be entitled to work premium time (overtime) as required to comply with the schedule of the Project.

9.1.2.2.1. No work shall be performed on Saturdays, Sundays or legal holidays, except in cases of emergency, or unless prior written permission has been granted by the Owner's Representative.

9.1.2.2.1.1. Except in cases of emergency, request for permission to Work on Saturdays, Sundays or legal holidays shall be filed with the Owner's Representative not less than twenty four (24) hours in advance of said date, if the activity affects the critical path and not less than forty eight (48) hours if the proposed activity does not affect the critical path.

9.1.2.2.1.2. Said permission shall not be unreasonably denied.

9.1.2.2.2. Premium time (overtime) necessary in case of emergency, or for completion of daily work, or to comply with the Project schedule, shall be notified to the Project Inspector during the course of the day that said premium time will be worked.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

9.1.3. The date of commencement of the Work shall be stated in the Notice to Proceed.

9.1.3.1. The Contractor shall begin the Work on such date of commencement fixed by the Notice to Proceed.

9.1.3.2. The Contractor shall carry out the Work expeditiously with adequate forces and shall complete it within the Contract Time

9.1.3.3. A Notice to Proceed issued without the Owner having furnished all required permits and/or endorsements necessary to commence the Work which fixes a commencement date which cannot be complied with due to the lack of such permits shall constitute a valid basis for a claim by Contractor under Article 11.5 if such act adversely affects the Project's critical path and no concurrent cause of delay by the Contractor is present.

9.1.4. The Contract Time limit to execute the Work until it is substantially complete shall be that number of calendar days resulting from the sum of the original Contract Time and the authorized extensions to the original Contract Time. Said Contract Time shall start to run on the date fixed in the Notice to Proceed (the commencement date) and shall end on the date of Substantial Completion. If the work is Substantially Completed prior to said time limit, the Contractor will have achieved early completion, if Work is not Substantially Completed within said time limit, the Contractor will not have completed the Work on time in accordance with the Contract.

9.1.4.1. Time under the Contract will, stop running on the date of Substantial Completion.

9.2 Change of Contract Time

9.2.1. The Contract Time (or Milestones) may only be changed with a Change Order, Extra Work Order or by a Written Amendment.

9.2.1.1. Any Claim for an adjustment in the Contract Time (or Milestones) shall be based on a written notice submitted by the party making the claim to the Owner in accordance with the provisions of Article 11.5.

9.2.2. Any adjustment of the Contract Time (or Milestones) due to any delay beyond the control of Contractor, will be made in an amount equal to the time lost due to such delay, including its consequences, if a Claim is made therefore as provided in Article 11.5 only if such delay affect the critical path, as reflected in the monthly Progress Schedule.

9.2.2.1. Delays beyond the control of Contractor shall include, but are not limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated on these General Conditions, lack of, or lapse, of any permit, or endorsement, issued by the governmental entities having jurisdiction in the Project which are the responsibility of Owner, fires, floods, epidemics, weather conditions, or acts of God.

9.3 Delays and Extensions of Time

9.3.1. No extension of the Contract Time will be allowed for any reason except as provided below:

9.3.1.1. If satisfactory fulfillment of the Contract with authorized extension and increases requires the performance of Work in greater quantities than those set forth in the proposal so that the total final payment is

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

greater than the total original Contract Price, then the time allowance will be equitably adjusted taking into account the amount and difficulty of the additional Work and only if the scope of the Work is increased or the critical path of the Project Schedule is affected.

9.3.1.2. In case of total suspension ordered by the Owner and not due to any fault of the Contractor, the total number of calendar days during which the Work is suspended shall be added to the Contract Time. In case of suspension of part of the Work ordered by the Owner not due to any fault of the Contractor, the Contract Time shall be extended to the extent that the effect that such suspension has on the Contract Time, and only to the extent the critical path of the Project Schedule is affected.

9.3.1.2.1. After Contractor has taken all reasonable steps to minimize Project overhead during the suspension, the Project fixed overhead costs incurred during the suspension by the Contractor will be reimbursed to Contractor by the Owner.

9.3.1.3. In case of damage to the Work due to Force Majeure, the Owner shall equitably adjust Contract Time based on the time required to repair the damage, provided the critical path is affected.

9.3.1.4. In case of delays or interruptions to the Work caused by any act of the Owner, or by any separate Contractor employed by the Owner or by any other cause not attributable to the fault or negligence of the Contractor, then the Contract Time shall be equitably adjusted.

9.3.1.4.1. The Project reasonable fixed overhead costs incurred by the Contractor due to the time extension caused by the acts described in Article 9.3.1.4, will be reimbursed to the Contractor by the Owner.

9.3.1.5. Every Change Order, Extra Work Order or Supplemental Agreement, if any, shall include all adjustments to Contract Time and to Contract Price related thereto, if any.

9.3.1.6. Unless otherwise specified in the Contract Documents, additional Contract Time will be allowed due to weather conditions, and their consequences, which render the performance of Work impossible.

9.3.1.7. Except as otherwise stated in this Article 9, where Contractor is prevented from completing any part of the Work within the Contract Time (or Milestones) due to delays beyond the control of both Owner and Contractor, if the critical path of the Project Schedule is affected, an extension of the Contract Time (or Milestones) for a period of time equal to the time lost due to such delay shall be Contractor's sole and exclusive remedy for such delay.

9.3.2. Extension in Contract Time shall not be considered or allowed for the following reasons:

9.3.2.1. Suspensions of Work ordered by the Owner or Owner's Representative due to the fault of the Contractor or his Subcontractor.

9.3.2.2. Unauthorized suspensions of Work by the Contractor.

9.3.2.3. Delays within the control of Contractor.

9.3.2.3.1. Delays attributable to or within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

9.3.3 All notifications of claims for extension of time shall be made in writing by the Contractor to the Owner's Representative not more than thirty (30) working days after acquiring knowledge of the occurrence of the delay. Once made, the Contractor must supplement such claim by notice to Owner within thirty (30) working days after the event that caused the delay has concluded. If proper notification of a claim or subsequent supplemental notice is not given to Owner, then all related claims regarding increases to Contract Time, and Contract Price will be deemed waived by Contractor.

9.3.3.1. Claims for extension of time shall include:

9.3.3.1.1. the reasons for the time extension as required by the Owner's Representative;

9.3.3.1.2. the operation(s) alleged to have been delayed;

9.3.3.1.3. the calendar dates on which the operation(s) were delayed;

9.3.3.1.4. the number of calendar days by which Contractor requests Contract Time be extended;

9.3.3.1.5. a complete and detailed statement as to how the critical path was affected; and

9.3.3.1.6. a complete and detailed breakdown of adjustment to Contract Price to be claimed due to the claimed time extension, if adjustment to Contract Price is to be claimed.

9.4 Delay Damages

9.4.1. In no event shall Owner or Architect/Engineer be liable to Contractor, any Subcontractor, any Supplier, or any other person or organization, or to any surety for or employee or agent of any of them, for damages arising out of or resulting from:

9.4.1.1. delays caused by or within the control of Contractor; or

9.4.1.2. delays caused by Force Majeure and/or beyond the control of both Owner and Contractor.

9.4.1.3. delays not notified within the time specified in Article 9.3.3 or contrary to Article 9.3.3.1.

9.4.2. Nothing in this Article 9 bars a change in Contract Price to compensate Contractor due to delay, interference, or disruption directly attributable to actions or inactions of Owner or anyone for whom Owner is responsible, provided Contractor complies with the requirements of Articles 9.3.3. and 9.3.3.1.

9.5 Liquidated Damages

9.5.1. Unless otherwise specified in the Contract Documents should the Contractor or, the Surety in case of Termination for Cause, fail to complete all the Work within the time specified in the Contract or as extended by the written authorization of the Owner, a deduction of the amount stipulated herein will be made for each and every calendar day that the Work is not completed after the expiration of the time limit to execute the Work described in Article 9.1.4:

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

SCHEDULE OF LIQUIDATED DAMAGES		
Original Contract Price		Daily Charge
From More Than	To and Including	
\$ 0.00	\$ 99,999.99	\$ 300.00
\$ 100,000.00	\$ 499,999.99	\$ 400.00
\$ 500,000.00	\$ 999,999.99	\$ 800.00
\$ 1,000,000.00	\$ 1,999,999.99	\$ 1,000.00
\$ 2,000,000.00	\$ 4,999,999.99	\$ 2,000.00
\$ 5,000,000.00	\$ 9,999,999.99	\$ 3,000.00
\$ 10,000,000.00	\$ 19,999,999.99	\$ 4,000.00
\$ 20,000,000.00	\$ 29,999,999.99	\$ 5,000.00
\$ 30,000,000.00	\$ 39,999,999.99	\$ 6,000.00
\$ 40,000,000.00	\$ 49,999,999.99	\$ 7,000.00
Over \$50,000,000.00	Unlimited	\$8,000.00 or as otherwise indicated in the Special Conditions

9.5.2. This amount will be deducted from any money due or that may become due the Contractor or his Surety by Owner.

9.5.3. The Original Contract Price in the above schedule of Liquidated Damages for unit price projects refers to the total original contract amount including all the units in a multi-unit contract. Liquidated damages will be applied on multi-unit contracts based on the daily charges applicable to the total original contract amount.

9.5.4. The amount stipulated in Article 9.5.1, or otherwise if otherwise specified in the Contract Document, as the case may be, shall be considered and treated not as a penalty, but as a total, fixed, and agreed upon liquidated damages due the Owner by the Contractor or, by the Surety in case of Termination for Cause, for and including but not limited to, public inconvenience, obstruction to traffic, interference with and/or loss of business, increase of engineering, inspection and administrative cost to the Owner; and other costs and expenses which have caused an expenditure of public funds, resulting from the Contractor's, or in case of Termination for Cause of the Surety's, failure to complete the work within the time specified in the Contract.

9.5.5. Permitting the Contractor to continue and finish the Work or any part thereof after expiration of the time limit for Substantial Completion described in Article 9.1.4 shall in no way operate as a waiver of any right or remedy available to Owner under this Contract or at law.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

9.6 Early Completion Incentive

9.6.1. Unless otherwise stated in the Contract Documents, should Contractor Substantially Complete the Work before expiration of the Contract Time as extended by the Owner, the Contractor shall receive an incentive pay from the Owner equal to one half (1/2) of the stipulated liquidated damages for each calendar day the Work is Substantially Completed prior to the time limit to complete the Work described in Article 9.1.4.

ARTICLE 10 - CHANGE OF CONTRACT PRICE, COST OF THE WORK AND UNIT PRICE WORK

10.1 Change of Contract Price

10.1.1. The Contract Price may only be changed by a Change Order or by a Written Amendment. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Owner in accordance with Article 11.5.

10.1.2. The value of the Work covered by a Change Order or covered by a Claim for an adjustment in the Contract Price will be determined as follows:

10.1.2.1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of section 10.4); or

10.1.2.2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with section 10.5) or by newly agreed unit prices; or

10.1.2.3. where the Work involved is either: (a) not covered by unit prices contained in the Contract Documents, or (b) agreement as to a lump sum is not reached (under Article 10.1.2.2.) the value of the work shall be computed on the basis of the Cost of the Work (determined as provided in Article 10.2) plus a Contractor's fee for overhead and profit (as provided in Article 10.5).

10.2 Cost of the Work

10.2.1. Costs Included: The term Cost of the Work means the sum of all costs necessarily incurred and paid by Contractor in the proper performance of a change in the Work. When the value of any Work covered by a Change Order, Extra Work Order or Construction Change Directive or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work. Except as otherwise agreed in writing by Owner's Representative, such costs shall be in amounts no higher than those prevailing in the locality of the Project and shall include only the items indicated below:

10.2.1.1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classification agreed upon by Owner's Representative and Contractor.

10.2.1.1.1. Such employees shall include without limitation engineers, superintendents, foremen, and other supervisory, safety, security and clerical personnel employed full time at the Site.

10.2.1.1.2. Payroll costs for employees not working exclusively in connection with the Work shall be apportioned based on their time spent working on the Work.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

10.2.1.1.3. Payroll costs shall include, but shall not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, union, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto.

10.2.1.1.4. The expenses of performing Work outside the regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above mentioned costs, to the extent authorized by Owner's Representative.

10.2.1.2. Actual cost of all necessary materials and equipment furnished and incorporated in the Work, including costs of transportation, taxes and reasonable and necessary storage thereof, and Suppliers' field services required in connection therewith.

10.2.1.2.1. All cash discounts with regard to the purchase by Contractor of materials and equipment shall accrue for the benefit of Contractor unless Owner deposits funds with Contractor with which to purchase the materials and equipment, in which case the cash discounts shall accrue to Owner.

10.2.1.2.2. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that these discounts etc. may be obtained.

10.2.1.3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors.

10.2.1.3.1. If required by Owner's Representative, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Architect/Engineer, which bids, if any, will be acceptable.

10.2.1.3.2. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Article 10.2.

10.2.1.4. Reasonable and necessary costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services exclusively related to the Work.

10.2.1.5. Supplemental costs including the following:

10.2.1.5.1. The proportion of reasonable and necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work. Airplane travel shall be on coach class and the car transportation, hotel and subsistence shall be at moderate cost.

10.2.1.5.2. Reasonable cost, including transportation, taxes and maintenance, of all materials, supplies, equipment, machinery, appliances, computers, office, warehousing and temporary facilities exclusively related to the Contract, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

10.2.1.5.3. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner's Representative with the advice of Architect/Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

removal thereof.

10.2.1.5.3.1. All such costs shall be in accordance with the terms of said rental agreements.

10.2.1.5.3.2. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

10.2.1.5.4. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, imposed by Laws and Regulations.

10.2.1.5.5. In such instances (only) where Contractor is insured under OCIP, or where the Owner assumes responsibility for some part of the required projects insurances (such as Builder's Risk) losses and damages (and related expenses) caused by damage to the Work, not compensated by said insurance, sustained by Contractor in connection with the performance of the Work, provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable.

10.2.1.5.5. 1. Such losses shall include settlements made with the written consent and approval of Owner's Representative. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

10.2.1.5.6. The cost of all utilities, telephone, data, fax, internet, security services, fuel, and sanitary facilities within the Site.

10.2.1.5.7. When the Cost of the Work is used to determine the value of a Change Order, or Construction Change Directive, Extra Work Order or of a Claim, the cost of premiums for additional Bonds and insurance required because of the changes in the Work.

10.2.1.5.8. An amount of the Contractor's main office overhead costs, when applicable, reached by mutual accord between the parties. If no mutual accord can be reached, the cost for main office overhead shall be computed using the Eichleay case and subsequent case law. If the Contractor does not have financial statements prepared externally by a recognized CPA, he must prepare them in order to be able to present a claim for this purpose.

10.2.2 Costs Excluded: The term Cost of the Work shall not include any of the following items:

10.2.2.1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor who work at Contractor's principal, branch or other office, other than Contractor's office at the Site, for general administration of the Work, all of which are to be considered administrative costs covered by the Contractor's fee, and not specifically included in the agreed upon schedule of job classifications referred to in Article 10.2.1.1 or specifically covered by Article 10.2.1.4.

10.2.2.2. Expenses of Contractor's principal, branch or other offices, other than Contractor's office at the Site.

10.2.2.3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

for the Work and charges against Contractor for delinquent payments.

10.2.2.4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, or making good any damage to property.

10.2.2.5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Articles 10.2.1.1 and 10.2.1.2, unless proven as a valid reasonable and necessary expense directly and exclusively related to the Project.

10.2.3. Contractor's Fee. When the value of any Work covered by a Change Order/Extra Work Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Article 10.5.

10.2.4. Documentation: Whenever the Cost of the Work for any purpose is to be determined pursuant to Articles 10.2.1 and 10.2.2, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Architect/Engineer, or Owner's Representative, an itemized cost breakdown together with supporting documentation and data.

10.2.5. Time Extension: Whenever additional time is required to perform extra work, said time allotment shall be included as part of the Change Order.

A 10.2.6. If the requirement specified in Article 10.1.2.3, above, causes a delay in the project completion, the costs of said delays, including project and main office overhead shall be added to the cost of the Work and a reasonable time extension provided under the Contract.

10.3 Cash Allowances

10.3.1. Unless otherwise stated in the Contract Documents, it is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents.

10.3.2. Items covered by allowances shall be supplied for such amount and by such persons or entities as the Owner's Representative may direct, but the contractor shall not be required to employ persons or entities against which the Contractor makes written reasonable objections.

10.3.3. If the allowance covers the cost of only furnishing material or , the allowance should include:

10.3.3.1. The cost to Contractor (less any applicable discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

10.3.3.2. Contractor's costs for unloading and handling on the Site. Labor and installation costs, have been included in the Contract Price.

10.3.4. If the allowances include the cost of furnishing and installing material or equipment to be furnished and installed by the Contractor the allowances include the cost to Contractor (less any applicable discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes plus the total cost of installation including unloading and handling.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

10.3.5 If the allowances include the cost of furnishing and installing material or equipment to be furnished and installed by a Subcontractor the allowances include the cost to the Contractor of the subcontractor's price.

10.3.6 Unless otherwise provided in the Contract Documents, insurances and bonds do not form part of the allowance price, but are included as part of the Contract Price.

10.3.7 An appropriate Change Order/Extra Work Order will be issued to reflect any difference in the actual cost of the allowance versus the amount specified in said allowance in the Contract Documents. Said amount will be due to Contractor, or credited to Owner as the case may be, on account of Work covered by allowances, and the Contract Price, and Contract Time, if necessary, shall be correspondingly equitably adjusted. Said Change Order/Extra Work Order will include the costs of bonds, insurances and fee stated in Article 10.5. If the change order is a credit, the amount credited will be the net amount due the Owner.

10.4 Unit Price Work

10.4.1 Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include, for all Unit Price Work, an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

10.4.1.1. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of bids and determining an initial Contract Price.

10.4.1.1.1. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Owner's Representative subject to the provisions of Article 13.2.1.

10.4.2 Each unit price will be deemed to include an amount considered by Contractor in the proposal to be adequate to cover Contractor's overhead and profit for each separately identified item.

10.4.3 Owner and Contractor may make a Claim for an adjustment in the Contract Price in accordance with Article 11.5 if:

10.4.3.1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

10.4.3.2. there is no corresponding adjustment with respect any other item of Work; and

10.4.3.3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

10.5 Contractor's Fee: The Contractor's fee for overhead and profit for Work performed under a Change Order/Extra Work Order shall be determined as follows:

10.5.1. a mutually acceptable fixed fee; or

10.5.2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

10.5.2.1. for costs incurred under Articles 10.2.1.1 and 10.2.1.2, the Contractor's fee shall be fifteen (15) percent;

10.5.2.2. for costs incurred under Article 10.2.1.3, 10.2.1.4 and 10.2.1.5, the Contractor's fee shall be ten (10) percent;

10.5.2.3. where one (1) or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Article 10.5.2.1 is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of fifteen (15) percent of the costs incurred by such Subcontractor under Articles 10.2.1.1 and 10.2.1.2 and that any higher tier Subcontractor and Contractor will each be paid a fee often (10) percent of the amount paid to the next lower tier Subcontractor;

10.5.2.4. no fee shall be payable on the basis of costs itemized under Articles 10.1.2.1 and 10.1.2.2;

10.5.2.5. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost; and

10.5.2.6. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed based on the net change in accordance with Article 10.5.2.1 through 10.5.2.5, inclusive.

ARTICLE 11 - CHANGES IN THE WORK

11.1 Authorized Changes in the Work

11.1.1 Without invalidating the Agreement and without notice to any surety, Owner, through the Owner's Representative, may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Written Amendment, a Change Order, an Extra Work Order, Work Change Directive, or a Construction Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved, which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

11.1.2 If there is agreement that said request will include an adjustment either in the Contract Sum, the Contract Time, or both, the adjustment shall be based on one of the following methods:

11.1.2.1. Mutual acceptance of a lump sum properly itemized and supported with sufficient substantiating data and documentation to permit evaluation and mutually acceptance of adjustment to Contract Time, and Contract Price if necessary;

11.1.2.2. Contract Price and Contract Time to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage Contractor's fee; or

11.1.2.3. As provided in Articles 9.2 and 10.

11.1.3 The Owner's Representative shall have authority to order minor changes in the Work not involving any adjustment in the Contract Sum or an extension of the Contract Time and not inconsistent with the intent of the Contract Documents.

11.1.3.1. Such changes shall be made by a written Field Order, or by other written orders.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

11.1.3.2. Such changes shall be binding on the Owner and the Contractor.

11.1.3.2.1. If the Contractor is not in agreement that such order does not increase either the Contract Sum or the Contract Time, the Contractor shall promptly present his Claim in the method specified in Article 11.5, herein.

11.1.4. The Owner's Representative may issue written Field Orders covering minor changes in the Work without change in Contract Sum or Contract Time.

11.1.4.1. If the Contractor is not in agreement that such Field Order does not increase either the Contract Sum or the Contract Time, he shall promptly present his claim in the method specified in Article 11.5, herein.

11.1.5. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Time, or both, that should be allowed as a result of a Work Change Directive or a Construction Change Directive, a claim may be made therefore as provided in Article 11.5.

11.2 Unauthorized Changes in the Work

11.2.1. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Time with respect to any Work performed that is not required by the Contract Documents as amended, modified, or supplemented, except in the case of an emergency as provided in Article 14.13 or in the case of testing and/or uncovering Work as provided in Articles 12.3 and 12.4.

11.3 Execution of Change Orders and Extra Work Orders

11.3.1. Owner and Contractor shall execute appropriate written Change Orders and/or Extra Work Orders (or Written Amendments) recommended by Owner's Representative covering:

11.3.1.1. changes in the Work, which are:

11.3.1.1.1. ordered by Owner's Representative pursuant to Article 11.1;

11.3.1.1.2. required because of acceptance of defective Work under Article 12.7.1 or Owner's Representative's correction of defective Work under Article 12.8; or

11.3.1.1.3. agreed to by the parties;

11.3.1.2. changes in the Contract Price or Contract Time which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive or a Construction Change Directive; and

11.3.1.3. changes in the Contract Price or Contract Time which embody the substance of any written decision rendered by Owner's Representative pursuant to Article 11.5; provided that in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws or Regulations, but during any such appeal of the Dispute, Contractor shall carry on the Work and adhere to the Progress Schedule and the Owner shall pay for such work performed subject to final resolution of the Dispute.

11.3.1.4. Owner, with the approval of the Change Order/Extra Work Order, shall submit written evidence to the Contractor that the money to pay for said Change Order Work has been assigned to make payment under the Contract.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

11.4 Notification to Surety

11.4.1. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to Contract Price or Contract Time) is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be Contractor's responsibility. The penal sum of each applicable Bond will be adjusted to reflect the effect of any such change.

11.4.1.1. Owner shall submit to the pertinent government agencies any documentation required by law or regulation to be submitted for the validity or enforceability of any Change Order Work, and shall provide proof of the proper submittal of said documentation if requested in writing by the Contractor.

11.5 Claims and Disputes

11.5.1. Written notice stating the general nature of each Claim, Dispute, or other matter shall be delivered by Contractor to Owner, through Owner's Representative, promptly (but in no event later than 30 days) after the start of the event giving rise thereto.

11.5.1.1. Notice of the amount or extent of the Claim, Dispute, or other matter with supporting data shall be delivered to the Owner within sixty (60) days after the end of such event (unless Owner's Representative allows additional time for claimant to submit additional or more accurate data in support of such Claim, dispute, or other matter).

11.5.1.2. A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Article 11.1.2.

11.5.1.3. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of Article 9.2.2.

11.5.1.4. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event.

11.5.2. If the Dispute is not decided by the Owner's Representative, or said decision notified to Contractor within thirty (30) days following the receipt of the notice of Dispute by the Owner's Representative, the Claim shall be deemed rejected.

11.5.3. Owner's Representative's Decision: Owner's Representative will render a formal decision in writing within thirty (30) days after receipt of the submittal of the Claim. Owner's Representative's written decision regarding the Dispute, or other matter, will be final and binding upon Owner and Contractor unless:

11.5.3.1. An appeal from Owner's Representative's decision is taken within the time limits and in accordance with the dispute resolution procedure set forth in Article 16.

11.5.4. No Claim for an adjustment in Contract Price or Contract Time (or Milestones) will be valid if not submitted in accordance with this section 11.5.

ARTICLE 12 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

12.1 Notice of Defects

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

12.1.1. Prompt notice of all defective Work of which Owner, Owner's Representative and Architect/Engineer has actual knowledge will be given to Contractor. If no notice is promptly given to Contractor of previously known defective Work, it shall be deemed acceptable to Owner.

12.1.2. All defective Work may be rejected, corrected, or accepted as provided in this Article.

12.2 Access to Work

12.2.1. Owner, Owner's Representative, Architect/Engineer, Architect/Engineer's Consultant, other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspecting, and testing. Said access shall be previously coordinated with Contractor.

12.2.1.1. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's Site safety procedures and programs so that they may comply therewith as applicable.

12.3 Tests and Inspections

12.3.1. Inspection of Materials

12.3.1.1. Unless otherwise specified in the Contract Documents, all materials are subject to inspection, sampling, testing, retesting and rejection by the Owner's Representative as provided in the specifications and prior to acceptance of the Work.

12.3.1.2. Any work in which untested and unaccepted materials are used without the approval of the Owner's Representative, except if said material is the one specified in the Contract Documents, will be performed at the Contractor's risk.

12.3.1.2.1. Material found to be unacceptable will not be paid for and, if directed by the Owner's Representative, shall be removed at the Contractor's expense.

12.3.1.3. Unless otherwise indicated in the Contract Documents, the sampling of materials for testing will be performed by Owner's Representative personnel or by other personnel designated by the Owner, at Owner's expense.

12.3.1.3.1. Where sampling by the Contractor is specified, the samples shall be taken using approved Contractor furnished sampling devices, under the supervision of the Owner's Representative, and at such times or intervals as directed.

12.3.1.3.2. When materials are tested by the Owner, copies of the test reports will be furnished to the Contractor. Unless otherwise required in the Contract Documents, tests may or may not be performed by Owner and the Contractor shall not rely on the results of the Owner testing being available for process control.

12.3.1.4. Plant Inspection: Owner's Representative may undertake the inspection of materials at the production plant. In the event plant inspection is undertaken the following conditions shall be met:

12.3.1.4.1. The Owner's Representative shall have the cooperation and assistance of the Contractor and the producer with whom he has contracted for materials.

12.3.1.4.2. The Owner's Representative shall have full entry at all times to such parts of the plant as may

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

concern the manufacture or production of the materials being furnished.

12.3.1.1.4.3. Adequate safety measures shall be provided and maintained.

12.3.2 Contractor shall give Owner's Representative timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspections and testing personnel to facilitate required inspections or tests. No delays, or hindrance in the performance of the Work, shall be caused by tardiness in Owner's Representative's inspection of the Work.

12.3.2.1. The Contractor shall submit to the Owner's Representative, within twenty (20) calendar days following the date of Notice to Proceed, the name of the local testing laboratory (ies) proposed for use with respect to the Work.

12.3.2.1.1. The Owner's Representative shall, within ten (10) calendar days after receipt of the submittal of the proposed testing laboratory(ies), approve said laboratory (ies), or submit written reasons for his disapproval.

12.3.2.1.2. If no notice of approval or disapproval is received within said period of time, Contractor shall submit the request for approval to the Chief of Construction or equivalent division head of Owner who shall have ten (10) calendar days to issue his decision. If the Chief of Construction or equivalent division head of Owner does not render his decision within said time, the testing laboratory (ies) will be deemed approved by the Owner's Representative.

12.3.3. Unless otherwise provided in the Contract Documents, Owner's Representative shall employ and pay for the services of independent testing entities to perform all inspections, tests, or approvals required by the Contract Documents except for inspections, tests, or approvals covered by Article 12.3.4. The costs incurred in connection with tests or inspections conducted pursuant to Article 12.4.2.1 shall be paid as provided in Article 12.4.

12.3.3.1 Whenever Contractor is responsible for arranging, obtaining and paying for costs in connection with any inspection, test, or approval required for Owner's Representative's or Architect/Engineer's acceptance of materials, mix designs, or equipment, the inspecting or testing entity shall be submitted for approval by Owner's Representative and the inspection or test shall be performed prior to Contractor purchasing such materials, mix designs, or equipment for incorporation to the Work.

12.3.3.1.1. Unless otherwise indicated in the Contract Documents, such inspections, tests, or approvals shall be performed by organizations acceptable to Owner, Owner's Representative and Architect/Engineer, whose acceptance shall not be unreasonably denied.

12.3.4. If Laws or Regulations of any public body having jurisdiction, at bid opening date, require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Owner's Representative the required certificates of inspection or approval. If said Laws and Regulations are enacted after bid opening date, the costs for said inspections shall be borne by the Owner.

12.4 Uncovering Work

12.4.1. If a portion of the Work, whether or not inspected, tested or approved is covered contrary to the Owner's Representative written request or to requirements specifically expressed in the Contract Documents,

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

it must, if required in writing by the Owner's Representative be uncovered for the Owner's Representative observation and be replaced or reconstructed at the Contractors expense without change in the Contract Time and Amount.

12.4.2. If a portion of the Work whether or not inspected, tested or approved has been covered and the Owner's Representative had not specifically required its inspection in writing prior to being covered, the Owner's Representative may required its inspection and it shall be uncovered by the Contractor.

12.4.2.1. If it is found that such Work is defective, Contractor shall pay all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others.)

12.4.2.2. If however, such Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Time (or Milestones), or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction.

12.5 Correction or Removal of Deficient Work

12.5.1. Contractor shall correct all deficient Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Owner's Representative's, remove it from the Project and replace it with Work that is not deficient. Contractor shall bear, exclusively, the cost of correcting such deficient Work.

12.6 Correction Period

12.6.1. If within one (1) year after the date of Substantial Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be deficient; or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations, at the Effective Date of the Agreement, as contemplated in Article 6.11.1 is found to be deficient, in all such instances Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

12.6.1. 1. repair such deficient land or areas; or

12.6.1.2. correct such deficient Work or, if the deficient Work has been rejected by Owner, remove it from the Project and replace it with Work that is not deficient, and

12.6.1.3. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or other's land or areas resulting therefrom.

12.6.1.3.1. If Contractor does not, after a ten (10) day written notice from Owner, promptly start complying and diligently comply with the terms of such instructions, (or in an emergency where delay would cause serious risk of loss or damage), Owner may have the deficient Work corrected or repaired or may have the rejected Work removed and replaced, and all costs, arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

12.6.2. In special circumstances where a particular item of equipment is placed in continuous service, at the request of the Owner's Representative, before Substantial Completion of all the Work, the correction period for that item shall start to run from the date that said equipment is placed on service.

12.6.3. Where deficient Work (and damage to other Work resulting there from) has been corrected or removed and replaced under this section 12.6, the correction period hereunder with respect to such Work will be extended for an additional period of one (1) year after such correction or removal and replacement has been satisfactorily completed.

12.7 Acceptance of Non-Compliant Work

12.7.1. If both parties agree, instead of requiring correction or removal and replacement of deficient Work, and Owner (prior to Architect/Engineer's recommendation of final payment) prefers to accept it, Owner may do so.

12.7.1.1. If both parties cannot reach agreement on acceptance of deficient work, then the Contractor shall correct such deficient Work to Owner's satisfaction or either party may make a Claim as provided in Article 11.5.

12.7.2. If any such acceptance occurs prior to Owner's Representative's recommendation of final payment, a Change Order/Extra Work Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted.

12.7.2.1. If the parties are unable to agree as to the amount thereof, either party may Claim as provided in Article 11.5.

12.8 Owner's Right to Correct Deficient Work

12.8.1. If Contractor fails within a reasonable time after written notice from Owner's Representative to start correction of deficient Work or to diligently prosecute correction or to remove and replace rejected Work as required by Engineer in accordance with Article 12.6.1, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to substantially comply with any other provision of the Contract Documents, Owner may, after seven (7) days written notice to Contractor, correct and remedy any such deficiency.

12.8.2. In exercising the rights and remedies under this paragraph, Owner shall proceed expeditiously.

12.8.2.1. In connection with such corrective and remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere.

12.8.2.2. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Architect/Engineer and Architect/Engineer's Consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.

12.8.3. All costs incurred or sustained by Owner in exercising the rights and remedies under this Article 12.8 will be

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

charged to Contractor.

12.8.3.1. If the parties are unable to agree as to the amount of the adjustment, a Claim therefore may be made as provided in Article 11.5.

12.8.3.1.1. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's deficient Work.

12.8.4. Contractor shall not be allowed an extension of the Contract Time (or Milestones) because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Article 12.8.

ARTICLE 13 - PAYMENTS AND COMPLETION

13.1 Proposal Schedule and Schedule of Values

13.1.1. Proposal Schedule (Unit-Price Contracts)

13.1.1.1. In Unit-Price Contracts, the quantities in the proposal schedule are approximate only and the actual quantities to be paid for cannot be determined until the work is performed and accepted. Increases or decreases in the proposal schedule quantities will be considered as normal overruns or underruns, and the Contractor shall accept as payment in full, so far as contract items are concerned, payment at the original contract unit prices for the accepted quantities of work performed.

13.1.1.2. Payments to the Contractor shall be made only for the actual quantities of each contract item, performed and accepted in accordance with the plans and specifications and, if upon completion of the construction, these actual quantities shall show either a decrease or increase from the quantities in the proposal schedule, the contract unit prices will prevail.

13.1.1.2.1. In Unit-Price Contracts, the Contractor will submit for approval to the Owner's Representative a schedule of values for those Lump-Sum bid items only.

13.1.1.2.2. This schedule, when approved by the Owner's Representative, shall be used solely as a basis for the monthly partial payments.

13.1.1.3. If the "Basis of Payment" in the specifications relating to any unit price in the bid schedule requires that said unit price cover and be considered compensation for certain work or material essential to the item, this same work or material will not also be measured or paid for under any other pay item which may appear elsewhere in the Contract Documents.

13.1.2. Schedule of Values (Lump-Sum Contracts)

13.1.2.1. In Lump-Sum Contracts, the Contractor, within fifteen (15) days after the date of the Notice to Proceed, will submit for approval, to the Owner's Representative, a schedule of values prepared in approved forms of the various portions of the Work aggregating the total Contract Sum, divided so as to facilitate monthly partial payments.

13.1.2.2. Each item in the schedule of values shall include its proper share of overhead and profit. Initial disbursements items such as mobilization, temporary facilities, premiums for insurance, and bonds and all cost of government fees and permits required for work, shall be separately itemized to facilitate first partial payment.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

13.1.2.3. This schedule, when approved by the Owner's Representative, shall be used solely as a basis for the monthly partial payments and not as unit prices for changes in the Work.

13.1.2.4. The schedule of values shall be approved, or rejected in writing for cause notified to Contractor within fifteen (15) calendar days after receipt by Owner's Representative.

13.1.2.4.1. Any individual item on the schedule of values that is rejected by the Owner's Representative must be properly identified and reason for rejection substantiated and notified to the Contractor within said time period.

13.1.2.4.2. The Owner's Representative may allow certain individual items to appear in the schedule of values as lump sum items. These items must be broken down into individual items prior to request any partial payment regarding said individual item.

13.1.2.5. If the Owner's Representative does not reject the schedule of values as specified herein, then the same shall be deemed approved.

13.2 Progress Payments

13.2.1. Applications for Payments

13.2.1.1. The Progress Payment Period shall be one (1) month long unless otherwise indicated in the Contract Documents. The end of the Progress Payment period shall be the last day of the month unless otherwise established in the Contract Documents. The Contractor does not have to submit an application for payment every month if he so chooses.

13.2.1.2. At least twenty (20) days before the date established for each progress payment, Contractor shall submit to Owner's Representative for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.

13.2.1.3. The determination of quantities of acceptable completed Work under the terms of the Contract Documents will be jointly made by the Owner's Representative and Contractor. It will be based on measurements made by them, or their assistants, according to the units of measurement for each item as shown in the schedule of values and by the method indicated in the corresponding specification, if so indicated in said specification for said item.

13.2.1.4. If the requested payment is based on materials and equipment not incorporated in the Work, but delivered and suitably stored at the Site, or at another location, agreed to in writing, the Application for Payment shall also be accompanied by: (i) a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and (ii) evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein. All evidence required herein shall be in form satisfactory to Owner.

13.2.1.4.1. Such advance payment may be made to the Contractor for the cost of materials that are to be incorporated into the work, provided the materials meet the requirements of the plans and specifications and are on hand at the Site or stored in acceptable storage places.

13.2.1.4.1.1. No advance payment will be made on living or perishable plant materials.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

13.2.1.4.1.2. In the case of materials that have been purchased by the Contractor, the cost shall be determined by the vendors invoice.

13.2.1.4.1.3. In the case of materials manufactured or obtained by the Contractor through the use of his own workmen or equipment, the cost will be determined by the Owner's Representative in accordance with and based upon that particular unit of the Project in which the materials are to be utilized.

13.2.1.4.2. The Contractor shall present signed receipts or other documentary evidence to prove that the cost of the materials for which he is to receive advance payment has been paid in full or, if the materials have not been paid for, the invoice shall be accompanied by a release from the materials dealer expressing his agreement with the payment for such materials to the Contractor by the Owner.

13.2.1.4.3. If at any time after the Contractor has received advance payment for materials on hand at the Site, the Owner or Owner's Representative obtains evidence indicating that said materials, or any part or parts thereof, are defective, or that said materials, or parts thereof, do not conform to the specifications, the Owner will proceed to deduct from any of the succeeding partial payments due the Contractor for work actually performed, a sum sufficient to cover the cost of the materials, or part or parts thereof, found to be defective.

13.2.1.4.4. Materials for which the Contractor has received advance payment shall be properly housed at the Site or in acceptable storage places in the vicinity of the Project in a secure manner that will insure the preservation of their quality and fitness for the Work.

13.2.1.4.4.1. Moreover, the Contractor shall not withdraw said materials for any purpose other than incorporation into the Project, unless he has written consent from the Owner or Owner's Representative to do so.

13.2.1.4.4.2. Storage and protection costs and the cost of replacing lost or damaged materials shall be borne by the Contractor.

13.2.1.4.5. Approval of partial payments for stockpiled materials will not constitute acceptance of such materials for use in completing items of Work.

13.2.1.4.6. An amount equal to the value of materials incorporated into the Work and for which an advance payment has been made, shall be deducted from the partial estimates.

13.2.1.4.7. Unless otherwise specified in the Contract Documents, Payment shall be made to the Contractor for materials fabricated, pre-cast or otherwise produced for the Project and stored at an approved site in Puerto Rico other than in the immediate vicinity of the Project, provided the Contractor furnish and file with the Owner insurance which shall protect the Contractor and the Owner from all risk of physical loss or damage to these materials.

13.2.1.4.7.1. The amount of such insurance shall not be less than the value of such materials.

13.2.2. Retainage

13.2.2.1. The amount of retainage with respect to progress payments shall be as stipulated in the bid documents.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

13.2.2.1.1. Unless otherwise specified in the Contract Documents, such retainage shall be five percent (5%) of each partial payment made to the Contractor.

13.2.2.1.1.1. In cases in which a ten percent (10%) Retainage is required by Owner, then after fifty percent (50%) of the Work has been completed to the Owner's Representative's satisfaction and the Project is on schedule and the quality of Work is satisfactory to the Owner's Representative, all the remaining payments may be made in full.

13.2.2.1.2. Immediately after the Owner's Representative, on the basis of an inspection, has determined and certified that the Work is sufficiently complete, or the Work has been occupied for the use for which it was intended, the Owner will release to the Contractor fifty percent (50%) of the amount previously retained provided the following conditions are met.

13.2.2.1.2.1. A written consent of Surety to make such payment is submitted.

13.2.2.1.2.2. There are no claims to be settled from the Owner to the Contractor.

13.2.2.1.2.3. There are no liquidated damages due.

13.2.2.1.2.3.1. However, at Owner's discretion, the Owner may release to Contractor the difference between fifty percent (50%) of the retainage and the amount of liquidated damages.

13.2.3. Review of Applications

13.2.3.1. The Owner's Representative will review the Application for Payment as soon as it is received and will notify the Contractor within five (5) working days of any exceptions he may have. The Contractor will make the necessary corrections and resubmit the Application.

4 13.2.3.2. The Owner's Representative will, within seven (7) days of the Contractor's date of submittal or five (5) days from the date of resubmission, if the corrections are acceptable, submit the approved Application for Payment to the Owner with all required documentation and approvals from the Architect/Engineer and the Owner's Representative.

13.2.3.3. Owner's Representative's recommendation of any payment requested in an Application for Payment will constitute a representation by Owner's Representative to Owner, based on Owner's Representative's observations on the Site of the executed Work as an experienced and qualified professional and on Owner's Representative's review of the Application for Payment and the accompanying data and schedules, that to the best of Owner's Representative's knowledge, information and belief.

13.2.3.3.1. the Work has progressed to the point indicated

13.2.3.3.2. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent test called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work, and to any other qualifications stated in the recommendation); and

13.2.3.3.3. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

in so far as it is Owner's Representative's responsibility to observe the Work.

13.2.3.4. By recommending any such payment, Owner's Representative will not thereby be deemed to have represented that:

13.2.3.4.1. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Owner's Representative in the Contract Documents; or

13.2.3.4.2. that there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

13.2.3.5. Neither Owner's Representative's review of Contractor's Work for the purposes of recommending payments nor Owner's Representative's recommendation of any payment, including final payment, will impose responsibility on Owner's Representative to supervise, direct, or control the Work or for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work.

13.2.3.5.1. Additionally, said review or recommendation will not impose responsibility on Owner's Representative to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

13.2.3.6. Owner's Representative may refuse to recommend in whole or in part any payment if, in Owner's Representative's reasonable opinion, it would be untruthful to make the representations to Owner referred to in Article 13.2.3.3.

13.2.3.6.1. Owner's Representative may also (i) refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, (ii) revise or (iii) revoke any such payment recommendation previously made, to such extent as may be necessary in Owner's Representative's reasonable opinion to protect Owner from loss because:

13.2.3.6.1.1. the Work is defective, or completed Work has been damaged, requiring correction or replacement;

13.2.3.6.1.2. the Contract Price has been reduced by Written Amendment, Change Orders or Extra Work Orders to the extent that justifies withholding payment;

13.2.3.6.1.3. Owner has been required to correct deficient Work or complete Work and has not yet done so; or

13.2.3.6.1.4. Owner's Representative has actual knowledge of the occurrence of any of the events enumerated in Article 15.2.1.

13.2.4. Payments Becomes Due

13.2.4.1. Unless otherwise specified in the Contract Documents, forty (40) days after Owner's approval of the Application for Payment, with Owner's Representative's recommendation, the amount recommended will become due, and when due, shall be paid by Owner to Contractor.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

13.2.5. Reduction in Payment

13.2.5.1. The Owner's Representative, without incurring in liability, may decline to approve any Application for Payment or, because of subsequently discovered evidence or subsequent inspection, he may nullify the whole or any part of any Application for Payment previously issued, to such extent as may be necessary in his opinion to protect the Owner from loss because of:

13.2.5.1.1. Deficient Work not remedied; or

13.2.5.1.2. Failure of the Contractor to comply with any requirements of the Contract Documents.

13.2.5.2. Owner may refuse to make payment of the full amount recommended by Owner's Representative because:

13.2.5.2.1. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;

13.2.5.2.2. Liens have been filed in connection with the Work, except where Contractor has delivered a specific Bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;

13.2.5.2.3. there are other items entitling Owner to a set-off against the amount recommended; or

13.2.5.2.4. Owner has actual knowledge of the occurrence of any of the events enumerated in Article 13.2.3.6 or 15.2.1.

13.2.5.3. If Owner refuses to make payment of the full amount recommended by Owner's Representative, Owner must give Contractor immediate written notice (with a copy to Owner's Representative) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld.

13.2.5.3.1. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor corrects to Owner's Representative's satisfaction the reasons for such action.

13.2.5.3.2. If it is subsequently determined that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Article 13.2.4.

13.2.5.4. Partial payments may be suspended when in the judgment of the Owner the Work has not proceeded according to the terms of the Contract Documents.

13.2.5.5. If at any time during the construction of the Project, the Owner receives proper notice from a third party stating a claim under Civil Code Article 1489, the Contractor shall settle the claim with the third party within fifteen (15) calendar days from the notice to the Owner and inform the Owner of said settlement or otherwise if Contractor disputes the validity of said claim, post a bond, acceptable to Owner, for the benefit of Owner to protect Owner against liability for payment to the third party under Civil Code Article 1489 in which case partial payment therefore will not be withheld. This will apply in any project where there is no Payment or Performance Bond, or the penal sum of such bond is an amount less than one hundred (100) percent of the Contract Sum.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

13.2.5.5.1. If no settlement is reached or a bond is not posted and accepted, the Owner, the Contractor, and the claimant third party shall meet within thirty (30) days after the expiration of the fifteen (15) calendar days to ascertain the amount of the alleged debt.

13.2.5.5.2. Contractor shall then pay within five (5) calendar days the undisputed amount. If no payment is made, the Owner shall retain said amount from the next partial payment and proceed to pay directly the undisputed amount to the third party. If the Contractor posts a bond as provided in Article 13.2.5.5 the Owner will not withhold said amount from Contractor and will not pay the amount to the third party claimant until the Contractor or the third party claimant notify Owner that the dispute among them has been resolved at which time Owner will act accordingly.

13.2.6. Scope of Payment

13.2.6.1. The payment of any partial estimate or of any retained percentage, in no way shall release the obligation of the Contractor to renew or repair any deficient materials used in the construction, or to be responsible for all damage due to such deficiencies.

13.2.6.2. No payment will be made for any unauthorized work.

13.2.6.3. No certificate for a progress payment, nor any progress payment, or any partial or entire use or occupancy of the Project by the Owner shall constitute an acceptance of any Work not in accordance with the Contract Documents.

13.3 Contractor's Warranty of Title

13.3.1. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment, and will pass free and clear of all Liens, Claims, security interests or encumbrances. Contractor also warrants and guarantees that no Work, materials, or equipment covered by an Application for Payment has been acquired by the Contractor, subject to an agreement under which an interest therein, or an encumbrance thereon, is retained by the seller or otherwise imposed by the Contractor or such other person. This will also apply to any other person performing the Work for the Project on behalf of Contractor, or furnishing materials and equipment for the Project.

13.4 Substantial Completion

13.4.1. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Owner's Representative in writing that the entire Work is Substantially Complete (except for items specifically listed by Contractor as incomplete) and request that Owner's Representative issue a Certificate of Substantial Completion. Owner may, at its sole option, request that part of the Work be declared Substantially Complete as provided in Article 13.5.1.

13.4.1.1. Within five (5) working days after such request, Owner, Contractor and Owner's Representative shall make an inspection of Work to determine the state of completion. If within this time period, the Owner's Representative fails to make objections or respond, the Contractor shall request the approval of the Chief of Construction or equivalent division head of Owner which shall have fifteen (15) working days to issue its approval or disapproval of the Certificate of Substantial Completion.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

13.4.1.1.1. If Owner's Representative does not consider the Work substantially complete, Owner's Representative will notify Contractor in writing, within five (5) working days after the inspection, giving the reasons therefore.

13.4.1.1.2. If Owner's Representative considers the Work substantially complete, Owner's Representative will prepare and deliver to Owner, within ten (10) working days after the inspection, a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion.

13.4.1.1.3. There shall be attached to the certificate a tentative list of items (punch list) to be completed or corrected before final payment.

13.4.1.2. Owner shall have ten (10) working days after receipt of the tentative certificate during which to make written objection to Owner's Representative as to any provisions of the certificate of Substantial Completion or attached list.

13.4.1.3. If, after considering such objections, indicated on Article 13.4.1.2, Owner's Representative concludes that the Work is not substantially complete, Owner's Representative will within fifteen (15) working days after submission of the tentative certificate of Substantial Completion to Owner notify Contractor in writing, stating the reasons therefore.

13.4.1.4. If, after consideration of Owner's objections, indicated on Article 13.4.1.2, Owner's Representative considers the Work Substantially Complete, Owner's Representative will, within said fifteen (15) working days, execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised final punch list of items to be completed or corrected). Such final certificate will reflect such changes from the tentative certificate as Owner's Representative believes justified, after consideration of any objections from Owner.

13.4.1.5. At the time of issuance of the certificate of Substantial Completion, Owner will assume all responsibilities with respect to security, operation, safety, and protection of the Work, maintenance, utilities, insurance, and Contractor warranties and guarantees periods will start to run.

13.4.1.6. Unless Owner and Contractor agree otherwise in writing and inform Owner's Representative also in writing prior to Owner's Representative's issuing the definitive certificate of Substantial Completion, Owner's Representative's aforesaid recommendation will be binding on Owner and Contractor until final payment is made.

13.4.2. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion, but Owner shall allow Contractor reasonable access to complete or correct items on the final punch list.

13.5 Partial Utilization

13.5.1 Use by Owner, at Owner's option, of any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Owner's Representative, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose, without significant interference with Contractor's performance of the remainder of the Work, may be effected (put to such use) prior to Substantial Completion of all the Work subject to the following:

13.5.1.1. Owner at any time may request Contractor in writing to permit Owner to use any such part of the Work which Owner believes to be ready of its intended use and substantially complete.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

13.5.1.1.1. If Contractor agrees that such part of the Work is substantially complete, Contractor will certify to Owner and Owner's Representative that such part of the Work is substantially complete and request Owner's Representative to issue a certificate of Substantial Completion for that part of the Work.

13.5.1.1.2. Contractor at any time may notify Owner and Owner's Representative in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Owner's Representative to issue a certificate of Substantial Completion for that part of the Work.

13.5.1.1.2.1. Within a reasonable time (not more than fifteen (15) days) after either party's request, Owner, Contractor, and Owner's Representative shall make an inspection of that part of the Work subject to the request to determine its state of completion.

13.5.1.1.2.2. If Owner's Representative does not consider that part of the Work to be substantially complete, Owner's Representative will notify Owner and Contractor in writing giving the reasons therefore.

13.5.1.1.2.3. If Owner's Representative issues a certificate of Substantial Completion for said part of the Work thereupon all applicable provisions of Article 13.4 shall apply.

13.5.1.1.3. No occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Article 13.4.1.5 regarding property insurance.

13.6 Final Inspection

13.6.1. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Owner's Representative will, within five (5) working days, make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars this inspection reveals with regard to incomplete or deficient Work.

13.6.1.1. Contractor shall immediately take measures to complete such Work and remedy such deficiencies.

13.7 Final Payment

13.7.1. Application for Payment

13.7.1.1. After Contractor has, in the opinion of Owner's Representative, satisfactorily remedied all incomplete and deficient Work identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, Bonds, certificates or other evidence of insurance, certificates of inspection, marked-up record documents, and other documents required by the Contract, Contractor may make application for final payment following the procedure for progress payments.

13.7.1.2. The final Application for Payment shall be accompanied, except if previously delivered to Owner's Representative, by:

13.7.1.2.1. all documentation, guarantees, Bonds and insurance called for in the Contract; and

13.7.1.2.2. consent of the surety, if any, to final payment; and

13.7.1.2.3. complete and legally effective releases, or waivers, (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

13.7.1.3. In lieu of the releases or waivers of Liens specified in Article 13.7.1.2.3, if approved by Owner, Contractor may furnish payment receipts or releases in full as part of an affidavit executed by Contractor to the effect that:

13.7.1.3.1. the releases and receipts include all liabilities related to labor, services, material, and equipment for which a Lien could be filed; and

13.7.1.3.2. all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner and Owner's property might in any way be responsible, have been paid or otherwise satisfied.

13.7.1.3.3. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a Bond or other collateral satisfactory to Owner to indemnify Owner against liability related to any such Lien.

13.7.2 Review of Final Application for Payment and Acceptance of the Work.

13.7.2.1. If, on the basis of Owner's Representative's observation of the Work during construction and final inspection, and Owner's Representative's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Owner's Representative is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Owner's Representative will, within fifteen (15) days after receipt of the final Application for Payment, indicate to Owner in writing Owner's Representative's recommendation regarding payment and if payment is recommended present the Application for Payment to Owner, for payment.

13.7.2.1.1. At the same time, Owner's Representative will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Article 13.9.

13.7.2.1.2. Otherwise, within the time specified in Article 13.7.2.1, Owner's Representative will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment. If within said fifteen (15) days after submittal of the final Application for Payment by Contractor the Owner's Representative fails to make objections or respond, the Contractor shall request approval directly from the Owner who shall have fifteen (15) working days to issue approval or disapproval, provided Contractor has also given the same timely notice directly to Owner as required in Article 13.7.2. If no reply is forthcoming from the Owner within the stated time, the final Application for Payment shall be deemed approved.

13.7.3. Final Payment Becomes Due

13.7.3.1. Unless otherwise specified in the Contract Documents, forty (40) days after Owner's approval of the Application for Final Payment, with accompanying documentation, the amount recommended by Owner's Representative will become due, and when due, shall be paid by Owner to Contractor.

13.7.3.2. If payment is not made within the time stated in Article 13.7.3.1., thereafter Owner will pay Contractor interest at the legal rate on the amount due.

13.8 Final Completion Delayed

13.8.1. If, through no fault of the Contractor, final completion of the Work is significantly delayed, and if Owner's

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

Representative so confirms, Owner shall, upon receipt of Contractor's final Application for Payment and recommendation of Owner's Representative, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted.

13.8.2. If the remaining balance to be held by Owner for Work not fully completed, or corrected, is less than the retainage stipulated in the Agreement, and if Bonds have been furnished as required in Article 3, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Owner's Representative with Application for such payment.

13.8.2.1. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of any claim or of any right under the Contract.

13.9 Waiver of Claims

13.9.1. The making and acceptance of final payment will constitute:

13.9.1.1. a waiver of all Claims by Owner against Contractor, except for Claims arising from unsettled Liens, from deficient Work appearing after final inspection as the result of failure to comply with the Contract Documents, from special guarantees or from Contractor's continuing obligations under the Contract Documents; and

13.9.1.2. a waiver of all other unsettled Claims by Contractor against Owner, other than those previously made in a timely manner in writing.

13.10 Unilateral Liquidation

13.10.1. The procedures established in this section will be applicable whenever the Contractor is not available in order for the Owner to issue the final payment in accordance with Article 13.7.

13.10.1.1. For purposes of this section, the term "unavailable" shall mean that the Contractor repeatedly fails to answer Owner's requests to meet with the Owner and/or to submit the required documentation under Article 13.7 in order to proceed with the final payment and Project liquidation.

13.10.2. If Contractor is unavailable, Owner shall proceed to issue and process the final application for payment. In order to accomplish this, whenever possible, the Owner will seek to obtain the documentation required under Article 13.7.1.2 and 13.7.1.3.

13.10.2.1. When Owner can not obtain documentation required under Article 13.7.1.2 and 13.7.1.3 such documentation it may be waived by Owner in order to proceed to the issuance of final payment. However, in case of such waiver, Owner may impose those reasonable conditions Owner deems relevant in order to protect Owner's interests and safeguard against claims by third parties.

13.10.3. If after finalizing liquidation of the Contract, payment is due Contractor and Contractor remains unavailable, Owner will retain such payment until Contractor is available to collect such payment. If the Final Payment is negative (i.e., the balance is in favor of the Owner), the Owner shall compensate such amount from any other payment in favor of Contractor, if any, and/or proceed to collect it by any means available.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

ARTICLE 14 - PROTECTION OF PERSONS AND PROPERTY

14.1 Public Convenience and Safety

14.1.1. The Contractor shall at all times conduct the Work in a manner that insures the public safety and convenience and the protection of persons and property.

14.1.1.1. Contractor shall perform the Work in a manner that will not cause unreasonable inconvenience to the general public.

14.1.2. The Contractor shall comply with all laws, rules, codes and regulations applicable to the class of work being performed pertaining to public safety and the protection of persons and property.

14.2 Laws to be Observed

14.2.1. It is the Contractor's responsibility to be fully informed of and comply with all Federal, Commonwealth and municipal laws, ordinances, safety codes and regulations, and all such orders or decrees presently in effect or that may be enacted prior to Final Acceptance or which in any way affect the prosecution of the Work.

14.2.1.1. The Contractor shall at all times observe and comply with all such laws, ordinances, safety codes, regulations, orders and decrees; and shall protect Owner and its representatives against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by himself, his employees, his subcontractors, his suppliers, his agents, or the employees of any of them or by anyone for whom Contractor is responsible.

14.2.1.2. When the United States Government pays all or any portion of the cost of the Work, the federal laws and the rules and regulations pursuant to such laws, if applicable, must be observed by the Contractor, and the Work may be subject to the inspection by any appropriate federal agency.

14.2.2. All costs related to compliance with all laws, rules and regulations enacted after bid opening date, shall be paid for by the Owner and any resulting adjustment to the Contract Price or the Contract Time shall be made by a Change Order to the Contract.

14.2.2.1. If Owner's Representative and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of any such adjustment, a Claim may be made therefore as provided in Article 11.5.

14.2.2.2. Payment under this paragraph is contingent to those situations not covered under Article 14.4.4.

14.3 Sanitary, Health and Safety Provisions

14.3.1. The Contractor shall comply with all Federal, Commonwealth and local laws, rules and regulations concerning construction safety and health standards and shall admit without delay any inspector from such health and safety agencies upon presentation of proper credentials.

14.3.2. Contractor shall provide and maintain in orderly sanitary condition such facilities as necessary for the use of his employees, in compliance with the Commonwealth Departments of Health and Labor and other bodies having jurisdiction.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

14.3.3. The Contractor shall not require work to be performed under unsanitary, hazardous or dangerous conditions.

14.4 Labor Relations and Wages

14.4.1. The Contractor shall comply with all the applicable Federal and Commonwealth laws, rules and regulations concerning fair labor practices including minimum wages, work hours, equal employment opportunities, non-discrimination, civil rights, employment of minors, and other labor relation matters.

14.4.2. The minimum wage rates to be paid shall be according to the regulations of the Minimum Wage Board of the Puerto Rico Department of Labor as indicated in the latest issue of its mandatory decree at any time during the execution of the Project.

14.4.3. The Contractor shall pay weekly, in lawful money of the United States of America, including payment by check or direct deposit, the entire amount of wages, less legally authorized or mandated deductions, earned by each of the laborers and employees engaged in the Work.

14.4.3.1. The Contractor shall make available to the Owner for inspection the project payrolls and shall submit copies of such payrolls to the Owner when required.

14.4.3.2. Any irregularities noted will be brought to the attention of the Contractor by the Owner for appropriate corrective action and payment of any pending wages.

14.4.3.2.1. Should the Contractor fail to take the necessary action, he will be subject to such civil and criminal proceedings provided by law and regulations.

14.4.3.3. Payment of wages to laborers and employees of the Contractor for their work shall have preference over the payment of other debts of the Contractor, except as otherwise established by law.

A 14.4.4. If during the term of the Contract, federal minimum wages are increased and said increase is applied to Puerto Rico, or if labor costs and/or fringe benefits are increased by local legislation, the cost of the increase in the Work shall be considered as a Change Order and proven cost increases, including fringe benefits and insurance costs, shall be paid to the Contractor, unless those increases have been legislated, or included as part of a resolution, by either the Commonwealth or Federal Legislative chambers prior to the bid opening date. If after the bid opening date, new local legislation or regulation is imposed which directly increases Contractor's costs of materials or transportation, the Contractor may present a Claim under Article 11.5 for such increases. Such increases in costs must be evidenced and substantiated by the Contractor.

14.4.4.1. If Owner's Representative and Contractor are unable to agree as to entitlement, amount or extent, if any, of any such adjustment under Article 14.4.4, a Claim may be made therefore as provided in Article 11.5.

14.5 Environmental Protection

14.5.1. Contractor shall comply with all Federal, Commonwealth and local environmental laws and regulations.

14.5.1.1. Contractor shall take all necessary precautions to prevent pollution of streams, lakes, ponds, and reservoirs with fuels, oil, bitumen, chemicals, or other harmful materials and to prevent pollution of the

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

atmosphere with particulate or gaseous matter.

14.5.2. Unless otherwise approved in writing by the Owner, construction operations in rivers, streams, lakes and other bodies of water shall be restricted to those areas where channel changes are shown on the plans and to those areas which must be entered for the construction of temporary or permanent structures.

14.5.2.1. Rivers, streams, lakes and reservoirs shall be promptly cleared of all false work, piling, debris, or other obstructions placed therein or caused by the construction operations.

14.5.3. Frequent fording of live streams with construction equipment will not be permitted. Temporary bridges or other structures shall be used wherever an appreciable number of stream crossings are necessary.

14.5.3.1. Unless otherwise approved in writing by the Owner, mechanized equipment shall not be operated in live streams except as may be required to construct channel changes and temporary or permanent structures.

14.5.4. Contractor shall comply with all the requirements regarding soil erosion and water pollution control included in the Environmental Quality Board's regulations, the Owner's other standard specifications, the Plans and other Contract Documents.

14.5.5. If the Contractor should encounter or expose during construction operations any abnormal condition, which may indicate the presence of a hazardous and/or toxic waste, the Contractor shall proceed in accordance with Article 4.7.

14.5.5.1. Abnormal conditions shall include, but shall not be limited, to the following, presence of barrels, discolored earth, metal or wood; obnoxious or unusual odors; visible fumes; excessively hot earth; smoke; or any other condition which appears to be a possible indication of hazardous and/or toxic waste.

14.6 Construction Over or Adjacent to Navigable Waters

14.6.1. All Work and related activity, over, on or adjacent to navigable waters shall be conducted so that free navigation of the waterways will not be interfered with and that the existing navigable depths and clearances will not be impaired except as allowed by permit issued by the U.S. Coast Guard and/or the U.S. Army Corps of Engineers, as applicable.

14.7 Traffic Protection Devices

14.7.1. The Contractor, when applicable, shall provide, erect and maintain all necessary advance warning signs, barricades, suitable and sufficient lights, danger signals, signs, and other traffic control devices; shall provide a sufficient number of watchmen and flag persons, and shall take all necessary precautions for the protection of the Work and the safety of the public in accordance with the plans and other Contract Documents.

14.8 Use of Explosives

14.8.1. When the use of explosives is necessary for the prosecution of the Work, the Contractor shall comply with all the Laws and Regulations concerning the use, storage, transporting, handling and detonating of explosives.

14.8.1.1. The Contractor shall exercise the utmost care with the explosives so as not to endanger life and

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

property and he shall be responsible for any and all damages that may result from his use of explosives.

14.8.2. Prior to initiating the use of explosives, the Contractor shall submit to the Owner evidence that his comprehensive general liability insurance required under Article 3 provides coverage for the use of explosives and blasting.

14.8.3. Blasting operations shall be conducted under the most careful and experienced supervision. The Contractor shall keep the Owner informed as to his drilling, blasting and demolition operations.

14.8.4. The Contractor shall furnish and erect special signs to warn the public of his blasting operations.

14.8.4.1. Such signs shall be placed at appropriate points within the Project limits, shall be maintained so as to be clearly evident to the public during all critical periods of the blasting operations and, if blasting is by means of electric detonators, shall include a warning statement to have radio transmitters turned off.

14.8.5. The Contractor shall notify each property owner and public utility company having structures in the proximity to the Site and the Work of his intention to use explosives.

14.8.5.1. Such notice shall be given sufficiently in advance to enable the parties being warned to take steps necessary to protect persons and property from injury.

14.9 Protection and Restoration of Property

14.9.1. The Contractor shall be responsible for the preservation of all public and private property, and shall carefully protect from disturbance or damages all land monuments and property marks until the Owner has witnessed or otherwise referenced their location, and shall not move them until directed.

14.9.2. When the Contractor's excavating operations encounter items of archeological interest such as remains of pre-columbine people's dwelling sites or artifacts of historical, paleontological or archeological significance, operations in the vicinity of such findings shall be temporarily discontinued and the Owner notified.

14.9.2.1. The Owner will contact the proper authorities to determine the disposition thereof.

14.9.2.2. When directed by the Owner, the Contractor shall excavate the site in such a manner as to preserve the artifacts encountered and shall remove them for delivery to the custody of the proper authorities.

14.9.2.2.1. Such specialized excavation and time delay costs, if any, will be considered and paid for as Extra Work unless the Owner elects to undertake such recovery work by other means.

14.9.2.2.2. If the Owner elects to perform this work by other means, he shall be responsible to the Contractor for costs associated with delay to the Work, only if said delay affects the critical path.

14.9.3. Contractor shall be responsible for all damages or injury to property of any character during the prosecution of the Work resulting from any act, omission, neglect or misconduct in the Contractor's manner or method of executing the Work, or at any time due to deficient work or materials. The Contractor's responsibility will not be released until the Project has been completed and accepted.

14.9.4. When any direct or indirect damage or injury is caused to public or private property by or on account of an

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

act, omission, neglect or misconduct in the execution of the work, or as a consequence of the non-execution thereof, by Contractor, such property shall be restored at the Contractor's expense to a condition similar or equal to that existing before such damage or injury was caused by repairing, rebuilding or otherwise restoring the same, or Contractor shall make good such damage or injury in a manner acceptable to owner.

14.9.5 Contractor shall comply with all necessary soil erosion and water pollution control measures, as indicated in the Contract Documents, and shall exercise due care in their implementation, to avoid causing erosion and drainage problems in all areas inside and outside the Project construction limits.

14.10 Forest Protection

14.10.1. In carrying out Work or related activity within or adjacent to Commonwealth or National Forests, the Contractor shall comply with all regulations of the Commonwealth Fire Service, Puerto Rico Department of Agriculture, United States Forest Service or other authority having jurisdiction, governing the protection of forests and the carrying out of Work within forests, and shall observe all sanitary laws and regulations with respect to the performance of work in forest areas.

14.10.1.1. Contractor shall keep all areas affected by construction related activities in an orderly condition, dispose of all refuse, obtain permits for the construction and maintenance of all construction camps, stores, warehouses, residences, latrines, cesspools, septic tanks, and other structures in accordance with the requirements of the agency having jurisdiction of the forest.

14.10.2 The Contractor shall take all reasonable precautions to prevent and suppress forest fires and shall require his employees and subcontractors, both independently and at the request of forest officials, to do all that is reasonably within their power to prevent and suppress and to assist in the prevention and suppressing forest fires. They shall make every possible effort to notify a forest official at the earliest possible moment of the location and extent of any fire seen by them.

14.11 Responsibility for Damage Claims

14.11.1. The Contractor shall indemnify and save harmless the Owner as follows:

14.11.1.1. The Contractor for itself, agents, employees, successors and assigns agrees to save harmless the Owner, its Officers, Agents, Employees and Architect/Engineer from and against any and all claims, demands and/or suits, except as stated below, whether judicial or extra judicial for any cost whatever arising out or related to the execution of the Contract, and its insurers shall defend the Owner, its Officers, agents, Employees and Architect/Engineer from such claims, demands and/or suits and shall bear all the expenses for such defense contemplated within the coverage limits provided by the Contractor's general liability policy, except where such claims, demands and/or suits are due solely to the negligence of the Owner, its Officers, Agents, employees and negligence, errors and/or omissions of the work performed by the Architect/Engineer. In case that the amount to be paid exceeds the policy amount, then the Contractor shall be responsible for the exceeding amount.

14.12 Contractor's Responsibility for Work

14.12.1. Until the final written acceptance of the Work by the Owner, the Work shall be under the charge and care of the Contractor. He shall take every necessary precaution to protect it from injury or damage to any part thereof by the action of the elements or from any other cause whether arising from the execution or non-execution of the Work.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

14.12.2. The Contractor shall rebuild, repair, restore and make good any damages to any portion of the Work occasioned by any of the causes indicated in paragraph 14.12.1, above, before its completion and acceptance, and shall bear the expense thereof, except damages to the Work due to unforeseeable causes beyond the control of and without fault or negligence of the Contractor, including but not restricted to acts of God, such as earthquake, hurricane, tidal wave, major flooding or other cataclysmic phenomenon of nature, acts of the public enemy or of the government.

14.12.3. In case of suspension of Work from any cause whatsoever, the Contractor shall be responsible for the Work under the Contract and shall take such precautions as may be necessary to prevent damage to the Project, provide suitable drainage and erect necessary temporary structures, signs or other facilities.

14.12.3.1. During such period of suspension of work, the Contractor shall properly and continuously maintain in acceptable growing conditions all living material in newly established plantings, seeding, and sodding furnished under his contract, and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

14.12.3.2. All costs for the work described above attributable to a suspension by the Owner shall be reimbursed to the Contractor by the Owner.

14.12.3.3. If the temporary suspension of Work is caused by the Contractor, then he will bear the expenses in such event.

14.12.4. When Work is suspended by the Contractor without authorization from the Owner, or is suspended by the Owner due to the fault of the Contractor, the costs of providing the protective measures specified in paragraph 14.12.3, above, during the period of suspension shall be borne by the Contractor.

4 14.13 Emergencies

14.13.1. In any emergency affecting the safety of persons or property, the Contractor shall act at his discretion to prevent damage, injury, or loss.

14.13.1.1. Any additional compensation or extension of time claimed by the Contractor on account of emergency Work shall be determined as provided in Article 11. Additional costs incurred by the Contractor in a case of an emergency need not be authorized by the Owner's Representative when there is insufficient time to seek Owner's authorization.

14.13.2. If an emergency affects the safety of persons or property at the Site or property adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Either the Owner or the Contractor can declare an emergency.

14.13.2.1. Contractor shall give Owner's Representative prompt notice if Contractor believes that any significant changes in the Work or variations from what is provided by the Contract Documents have been caused by the emergency or are required as a result thereof.

14.13.2.1.1. If Owner's Representative determines that an amendment to the Contract Price or Contract Time is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive, a Change Order or an Extra Work Order will be issued.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.1 Suspension of Work

15.1.1. At any time and without cause, Owner may, with a minimum of seven (7) calendar days written notice, suspend the Work or any portion thereof for a period of not more than ninety (90) consecutive days by notice in writing to Contractor and Architect/Engineer. Said notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be allowed an adjustment in the Contract Price or an extension of the Contract Time, or both, directly attributable to any such suspension if Contractor makes a timely Claim therefore as provided in Article 11.5. Said adjustment shall be computed based on the following factors:

15.1.1.1. Fixed Project expenses (after all reasonable reduction and mitigation of expenses) for the period of the Work stoppage, such as: (i) the Contractor's and subcontractor's supervisory, administrative, and operations personnel salaries, together with their corresponding fringe benefits and insurance costs if this personnel has been kept in the Contractor's payroll and are not gainfully utilized by Contractor or someone else elsewhere, (ii) utilities, (iii) Project's fixed equipment, and (iv) miscellaneous expenses such as safety, and vigilance.

15.1.1.1.1. At any time during the suspension, the Owner may order the Contractor to demobilize, paying the Contractor the de-mobilization costs and any future mobilization costs to re-start the Project.

15.1.1.1.2. Cancellation costs and cost increases for materials already ordered which had to be canceled and reordered, provided that such costs are not in excess of reasonable market prices.

15.1.1.1.3. Differential increases in labor costs, and its corresponding fringe and insurance benefits, in the Project for the period that the work is stopped.

15.1.1.1.4. Construction equipment use costs for the stoppage period if said equipment remains stationed at the site (idle equipment rates), or transportation costs if the Owner orders in writing that it be removed from the site. If the equipment is owned by the Contractor, he will be paid the cost (depreciation) of said equipment.

15.1.1.1.5. Insurance costs whose rates are based on the time such insurance is in effect, such as Builder's Risk Insurance, for the period that the work is stopped.

15.1.1.1.6. Contractor's overhead and profit in the amount equivalent to fifteen percent (15%) of all expenses detailed above.

15.1.1.1.7. An amount of the Contractor's main office overhead costs (exclusively in this instance and solely related to suspension) reached by mutual accord between the parties or if no mutual accord can be reached, the cost for main office overhead shall be computed using the Eichleay formula using as base the previous two (2) years of Contractor's main office overhead cost taken from the previous two (2) years financial statements which have been externally audited by a recognized CPA. If the Contractor does not have financial statements prepared externally by a recognized CPA, he must prepare them in order to be able to present a claim for this purpose.

15.1.1.1.8. Contractor shall exert his best effort to mitigate the costs included in this Article 15.1.1.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

15.1.2. At any time, the Owner's Representative may, with a minimum of seven (7) calendar days written notice, for the following causes suspend the Work or part of the Work due to:

15.1.2.1. the repeated and persistence failure of the Contractor to perform his contractual obligations;

15.1.2.2. the repeated and persistent failure of the Contractor to have sufficient labor and the trades necessary to maintain the quality and progress required in the Contract Documents;

15.1.2.3. the repeated and persistent failure of the Contractor to have sufficient material necessary to maintain the quality and progress required in the Contract Documents;

15.1.2.4. the repeated and persistent failure of the Contractor to have sufficient equipment and type of equipment necessary to maintain the quality and progress required in the Contract Documents.

15.1.3. The Contractor will be responsible for all of his costs due the suspension of the Work indicated in Article 15.1.2 and there will be no increase in Contract Price or extension to the Contract Time as a result of such suspension for cause.

15.1.3.1. The suspension for cause under Article 15.1.2 will last until the Contractor remedies the situation or until termination.

15.1.3.2. The Contractor shall also be responsible for the inspection costs made necessary by overtime work to restore the project to its intended schedule due to delays caused by the actions mentioned in Article 15.1.2. Said costs will consist of the actual cost paid therefore by and to the Inspector, if his presence is required or necessary.

15.1.4. At any time, the Owner's Representative or the Contractor may suspend the work or part of the work without advanced notice due to any danger or potential danger that may exist to life, limb or property or any emergency whether on the Site or off the Site.

15.1.4.1. The Contractor will be responsible for all of his costs due the suspension and there will be no time extension to the Contract Time if the suspension is due to the failure of the Contractor to perform his contractual obligations.

15.1.4.2. The Owner will compensate the reasonable costs incurred by Contractor if the suspension is due to causes other than the failure of the Contractor to perform his contractual obligations and such causes are attributable to Owner.

15.1.5. In case of suspension of Work for any cause whatsoever, the Contractor shall be responsible for the Work under the Contract and shall take such precautions as may be necessary to prevent damage to the Project, provide suitable drainage and erect necessary temporary structures, signs or other facilities.

15.1.5.1. During such period of suspension, the Contractor shall properly and continuously maintain in acceptable growing conditions all living material in newly established plantings, seeding, and sodding furnished under his contract, and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

15.1.5.2. When Work is suspended by the Contractor without authorization from the Owner, or is suspended by the Owner due to the causes specified in Article 15.1.2, the costs of providing the protective measures specified in Article 15.1.5. and 15.1.5.1, during the period of suspension shall be borne by the Contractor.

15.1.5.3. The Contractor will be responsible for all of its costs due to the suspension and there will be no time extension to the Contract Time if the suspension is due to the failure of the Contractor to perform its contractual obligations, or other causes attributable to Contractor.

15.1.5.4 The Owner will compensate the reasonable costs incurred by Contractor if the suspension is due to causes other than the failure of the Contractor to perform his contractual obligations and such causes are attributable to Owner.

15.2 Owner May Terminate for Cause

15.2.1. The occurrence of any one or more of the following events will justify termination for cause:

15.2.1.1. Contractor's persistent or repeated failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under the Contract, as adjusted from time to time); or

15.2.1.2. Contractor's egregious disregard of Laws or Regulations of any public body having jurisdiction; or

15.2.1.3. Contractor's persistent or repeated disregard of the authority of Architect/Engineer, Owner or Owner's Representative; or

15.2.1.4. Contractor's persistent and repeated violation of any substantial provisions of the Contract Documents; and does not start curing and without interruption continues to cure same prior to termination.

15.2.1.5. Contractor is adjudged bankrupt, or is a party to a fraud; or

15.2.1.6. Contractor should make a general assignment for the benefit of his creditors; or

15.2.1.7. A receiver be appointed on account of the Contractor's insolvency; or

15.2.1.8. An attachment is made upon a substantial amount the Contractor's properties utilized to perform the Work, and it is not lifted, or the claim otherwise secured, within five (5) working days thereafter; or

15.2.1.9. Contractor persistently fails to make prompt payment to subcontractors, as per Article 6.2.1.2, or for materials, services, or labor already paid to Contractor by the Owner; or

15.2.1.10. Contractor abandons or discontinues the prosecution of the Work without Owner's written authorization.

15.2.1.10.1. Nevertheless, Contractor may discontinue the prosecution of the Work during: (i) Holy Thursday; (ii) the Friday after Thanksgiving; and (iii) the time period commencing on the Saturday before Christmas Day (December 25) and ending on the Sunday after Three Kings' Day (January 6) without incurring in an event of default due to discontinuance of the Work.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

15.2.2. If one or more of the events identified in Article 15.2.1 occur, Owner may, after giving Contractor (and the surety, if any) seven (7) days written notice to cure such default, terminate the services of Contractor, exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools and appliances at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion), incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and finish the Work as Owner may deem expedient. In such case, Contractor shall not be entitled to receive any further payment until the Work is finished.

15.2.3. In Lump Sum contracts, if the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor.

15.2.4. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Owner's Representative as to their reasonableness and, when so approved by Owner's Representative, incorporated in a Change Order or Extra Work Order. When exercising any rights or remedies under this paragraph Owner shall not be required to obtain the lowest price for the Work performed, but shall assume all reasonable means to complete the work at a reasonable cost.

15.2.5. When Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

15.2.5.1. Termination of the Contract, as stated above, will not release the Contractor of his responsibilities for the Work completed, nor shall said termination release surety from its obligations.

15.3 Owner May Terminate the Contract For Convenience

15.3.1. Upon seven (7) days written notice to Contractor and Architect/Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, elect to terminate the Contract for convenience.

15.3.2. After receipt of notice of termination for convenience from the Owner, the Contractor shall submit, within sixty (60) calendar days of the effective termination date, a Claim for compensation damages and/or costs. In such Claim, if presented, Contractor shall be paid, without duplication of any items, the following:

15.3.2.1. In lump sum contracts, the work performed and accepted by the Owner shall be paid in accordance with the schedule of values approved by the Owner.

15.3.2.2. The actual cost of all acceptable materials for which orders have been placed by the Contractor for use under this Contract, provided that, if required by the Owner, the Contractor shall make every reasonable effort to cancel such orders. If said orders can be canceled, the Owner shall pay for all restocking, or other charges, associated with said cancellation.

15.3.2.3. The actual cost of acceptable raw material ordered or purchased for fabrication, or materials already fabricated, whether those materials are located in the shop, the project, or in transit.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

15.3.2.4. The actual amounts paid by the Contractor for construction equipment rentals up to the time of termination, plus any amounts accrued, or payable, under written contracts for the rental of such equipment. Contractor shall make every possible effort to cancel any such contracts. In the event that the rental contracts can be canceled by the Contractor, the Owner shall pay for all reasonable costs incurred directly caused by the rental cancellation. If the equipment is owned by the Contractor, he will be paid the cost (depreciation) of said equipment.

15.3.2.5. The actual costs disbursed by to the Contractor of bonds, insurance, taxes, and deposits required under the Contract, unless previously paid by Owner.

15.3.2.6. Contractor's overhead and profit in the amount equivalent to fifteen percent (15%) of all payments made under Articles 15.3.2.2 to 15.3.2.5.

15.3.2.7. Contractor shall exert his best effort to mitigate the costs mentioned in Articles 15.3.2.2 to 15.3.2.5.

15.3.2.7.1. From the total sum of all the costs indicated in Articles 15.3.2.2 to 15.3.2.6. there shall be deducted all payments therefore previously made and all proper charges to the Contractor in relation therewith.

15.3.3. In the event that the Work is suspended under Article 15.1, thereby stopped for a period of time, and after said suspension is cancelled, the amounts due to the Contractor under the Contract will be first calculated for the suspension period as per Article 15.1 hereunder and then calculated for the cancellation afterwards as per Article 15.3, hereunder. The total amount due the Contractor will be the sum of both.

15.3.4. If the Contract is terminated for convenience, the Owner shall assume all security, and insurance of the project on the effective date of the termination, or cancellation.

15.3.5. Termination of the Contract for convenience, as stated above, will not release Contractor from his responsibilities for the Work completed, nor shall it release his surety of its obligations.

15.3.6. Contractor shall not be entitled to payment on account of loss of anticipated or expected profits or revenues or other economic loss arising out of or resulting from such termination for convenience under this Article 15.3.

15.4 Contractor's Right to Terminate the Contract

15.4.1. The Contractor has the right to Terminate the Contract and recover from the Owner payment for all work executed as specified in Article 15.3.2, herein, if the Owner:

15.4.1.1. substantially stops the work for any reason whatsoever through no act, or fault, of the Contractor for a period of ninety (90) days starting from the written stoppage notice of the Owner and/or the Owner's Representative, or

15.4.1.2. fails to pay the duly approved Request for Payments within eighty (80) calendar days after the same was due.

15.4.2 The foregoing provisions are in addition to, and not in limitation of the rights of the Contractor under any other provisions of the Contract.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

ARTICLE 16 - DISPUTE RESOLUTION

16.1 Disputes

16.1.1. In case of any timely Claim, Dispute or other matter involving the interpretation of the Contract Documents, a change in the Contract Sum, and or an Extension of Contract Time, and other matters in question arising out of, or relating to this Contract or the breach thereof, except for Claims which have been waived by the acceptance of final payment, shall be submitted to and decided first by the Owner's Representative as provided in Article 11.5.

16.1.2. If the Dispute submitted to the Owner's Representative as provided for in Article 11.5 is not decided by him within the thirty (30) day period established therein, the Claim shall be deemed rejected.

16.1.3. If the party establishing the Claim is not satisfied with the decision or automatic rejection by the Owner's Representative, the party will have fifteen (15) days to appeal the decision to the Chief of Construction, or equivalent division head, of the Owner.

16.1.4. The Chief of Construction shall have a period of thirty (30) days from the date of receipt of the notice of appeal during which he must render a decision.

16.1.4.1. However, if the Chief of Construction requires additional time to review the Claim, because of the nature or complexity of the Claim or if additional documents and/or information are needed from the Contractor to make a determination, the Chief of Construction shall submit, within five (5) calendar days of receipt of the notice of appeal, a written notice with an estimate of the additional time needed to review said claim and its justification. This additional time, shall not exceed thirty (30) days, unless more time is agreed upon by the parties.

16.1.4.2. If the Chief of Construction does not render a decision within the time allotted, including extensions, then the Claim shall be deemed rejected.

16.1.5. If the Contractor is not satisfied with the decision or automatic rejection by the Chief of Construction, the Claim shall be referred to the Owner and the Contractor. The parties will meet for negotiations within ten (10) working days of the notice of referral of said Claim. If the Dispute has not been resolved within thirty (30) days after said referral (which may be extended by mutual agreement) and subject to any rights to injunctive relief and unless otherwise specifically provided for herein, the parties shall proceed in accordance with Article 16.2.

16.1.6 Contractor shall carry on the Work and adhere to the progress schedule during all Disputes or disagreements with Owner. The Owner will continue making payments under the Contract for Work performed that is not in Dispute.

16.1.7. No Work shall be delayed or postponed pending resolution of any Disputes or disagreement unless Owner and Contractor otherwise agree in writing.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

16.2 Remedies

16.2.1. All Disputes not resolved by the method indicated in Article 16.1, upon written agreement of the parties, shall be submitted to non-binding mediation as indicated in Article 16.3. Either party may, at any time, give written notice to the other party that it does not wish to mediate or to continue to mediate a Dispute. Such notice shall conclude the mediation process.

16.2.2. If the parties fail to agree to submit the Dispute to mediation, or one party decides to cancel the mediation after the mediation has started, or if the mediation process does not resolve all Disputed matters, then the remaining Disputes shall be decided by arbitration, upon timely demand for arbitration, notified by one party to the other within ten (10) days after the mediation process has concluded, if the amount of the claim does not exceed the limits established in Article 16.4.1. The mediation process shall conclude on the date notice is delivered by one party to the other stating that the party does not wish to mediate or to continue to mediate. Any undecided Disputes that exceed the limits established in Article 16.4.1, will be decided by the General Court of Justice of Puerto Rico.

16.3 Mediation

16.3.1. If the parties agree to mediate the Dispute they may chose between:

16.3.1.1. a mutually agreed mediation procedure; or

16.3.1.2. a mediation procedure under the supervision of the Bureau of Claim Resolution by Alternate Methods the Office of the General Court of Justice; or

16.3.1.3. a mediation procedure administered by the American Arbitration Association under its Construction Industry Mediation Rules.

16.3.2. All costs incurred as a result of the mediation shall be borne equally by the parties, unless the mediator orders otherwise in accordance to Article 16.3.4.

4 16.3.3. The parties will be required to exchange their positions as to the Dispute, fully and in good faith, with a detailed description of the facts and of the applicable law and shall fully exchange supporting documents. If after agreeing to mediate a Dispute a party is substantially unprepared to participate in the proceedings, or fails to participate in good faith, the Mediator at his discretion may require said party to pay all or part of the costs of the mediation incurred by the other party due to the non-compliance with this Article.

16.4 Arbitration

16.4.1. Disputes to be arbitrated shall be limited to those Disputes, which when all sums claimed therefore under the Contract are added, total an aggregate sum of five percent (5%) or less of the Contract Price or \$500,000.00 or less, whichever is lower. Only such Disputes where the aggregate amount claimed is below said threshold shall be resolved through the arbitration procedures established in this Article 16.4. The aggregate sum shall be determined on the date of the notice of the demand for arbitration taking into consideration all pending Disputes regarding the Contract submitted by the Contractor pursuant to Articles 11.5 and 16. In order to qualify for resolution thru arbitration, all issues and Claims regarding liability and damages relating to a particular Dispute must be submitted together, within the same arbitration proceeding. The parties are specifically prohibited from submitting the issue of liability to arbitration and thereafter submitting the issue of damages (regarding the same Dispute) to another arbitration proceeding or to the court.

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

16.4.1.1. The \$500,000.00 threshold will be adjusted every five (5) years. The adjustment will be based on the Consumer Price Index (CPI) published by the Government of Puerto Rico. The base year for such adjustment shall be the year 2010.

16.4.1.2. If Contractor invokes the provisions of this Article 16.4, but at a later date submits additional Claims to the Owner under the same Contract, pursuant to Article 11.5 and/or Article 16, for an additional sum which, if added to the amount claimed under the original Dispute(s), surpasses the threshold amount established in Article 16.4.1, then said additional Disputes that surpass the threshold may not be submitted to arbitration and shall be decided by the General Court of Justice of Puerto Rico. Nevertheless, the already pending arbitration proceedings under Article 16.4 shall continue until concluded. If additional Disputes are submitted after the arbitration proceedings are concluded and final award has been entered, then the amounts of the original Claims that were arbitrated and concluded shall not count towards the threshold stated in Article 16.4.1.

16.4.2. Procedure For Binding Arbitration.

16.4.2.1. Contractor shall submit to the Owner, together with the notice of demand for arbitration of a Dispute, a list of no less than five (5) proposed arbitrators, together with their respective curriculum vitae and a disclosure statement from each as to possible conflicts of interest.

16.4.2.2. Within five (5) working days of receipt of the notice of demand for arbitration, Owner shall either: (i) select one (1) arbitrator from the Contractor's list, or (ii) if all arbitrators proposed by Contractor are unacceptable to Owner, submit to Contractor a list of no less than five (5) proposed arbitrators, together with their respective curriculum vitae and a disclosure statement from each as to possible conflicts of interest.

16.4.2.3. Within five (5) working days of receipt of the Owner's list, contractor shall either: (i) select one (1) arbitrator from such list or (ii) reject all arbitrators from the Owner's list. If within the following ten (10) days the parties cannot agree as to an arbitrator or a panel of arbitrators, then each party within the following five (5) days will unilaterally appoint and notify to the other one arbitrator, and the two (2) arbitrators so appointed shall within ten (10) days after the appointment of both arbitrators select a third arbitrator and notify the Owner and the Contractor of said selection, and the three (3) arbitrators shall constitute the panel of arbitrators that shall decide the Dispute. The arbitrators so appointed or selected need not be on the original lists of arbitrators. Within ten (10) days of the selection of the third arbitrator, each arbitrator shall notify Owner and Contractor their respective curriculum vitae and statement as to possible bias or conflict of interest.

16.4.2.4. The arbitration proceedings shall be conducted under the provisions of the Puerto Rico Arbitration Act, Act No. 376 of May 8, 1951, as amended.

16.4.3. Award

16.4.3.1. The award entered need not include written determinations of fact and conclusions of law and the award shall be final and not be reviewable or appealable due to errors of fact or of law. Nevertheless, the arbitrators will endeavor to ascertain the facts and follow the law.

ARTICLE 17 - MISCELLANEOUS

17.1 **Governing Law.** The Contract Documents, and all questions relating to their validity, performance, interpretation and enforcement, shall be governed by and construed in accordance with the laws of the

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

Commonwealth of Puerto Rico. Any legal action brought concerning the above shall be brought in accordance with the contract and thereafter exclusively in the courts of the Commonwealth of Puerto Rico.

17.2 Federal Funds

17.2.1. When the United States government or any of its agencies finances or pays for all or any portion of the cost of the Work, federal laws and the applicable rules and regulations must be observed by the Contractor. The Owner will identify in the bid documents the program providing such funds.

17.2.2. If the Contract Documents include a specific provisions issued by such federal funding agency in case of conflict with other provisions of the Contract Documents, said federally issued provisions shall govern.

17.2.3. Unless specified elsewhere in the Contract Documents, the funding federal agency is not a party to this Contract.

17.2.4 When the United States government funds Work covered by the Contract Documents, the Work shall be under the supervision of the Owner but subject to the inspection by the appropriate Federal agency and in accordance with the applicable Federal statutes and rules and regulations.

17.2.4.1. Such inspection shall in no way make the Federal Government a party to this Contract and will in no way interfere with the rights of either party hereunder.

17.2.4.2. The Contractor shall extend the same courtesies to the representatives of the Federal government as required to be extended to representatives of the Commonwealth government.

17.3 Notice

17.3.1. Unless otherwise specified in the Agreement or in the Contract Documents, written notice shall be deemed to have been duly served if delivered:

17.3.1.1. to Contractor if delivered in person to the individual, to a member or partner of the firm or entity, or to an officer of the corporation for which it was intended; or if delivered at, or sent by registered or certified mail or by courier service providing proof of delivery to, the last business address known to the party giving notice.

17.3.1.2. to Owner if delivered in person to the Owner's Representative or to the Project Inspector; or if delivered at, or sent by registered or certified mail or by courier service providing proof of delivery to, the last business address known to the party giving notice with the requirements established in Article 17.3.2.

17.3.2. All notices whereby a consent, approval or action is required to be performed by the recipient within a specific period shall include, in bold and capitalized font, at the top of the transmittal communication the following legend: "IMPORTANT RIGHTS MAY BE LOST BY FAILURE OF [NAME OF PARTY] TO ACT PROMPTLY. SPECIFIC ACTION(S) AND/OR APPROVAL(S) ARE HEREIN REQUESTED. IN CASE OF AUTOMATIC APPROVAL DUE TO FAILURE TO ACT BY THE RECIPIENT THE NOTICE MUST STATE: THIS SUBMISSION WILL BE DEEMED APPROVED _____ BUSINESS DAYS AFTER RECEIPT BY [NAME OF PARTY] IF REJECTION IS NOT NOTIFIED TO [NAME OF SENDER]."

17.4 **Computation of Time.** When a period of time is to be computed for any purposes under the Contract Documents, the number of days within such period will exclude the first and include the last day. If the last day of

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

any such period falls on a Saturday, a Sunday or on a Holiday listed in Article 1.1.1.41, such day will be excluded from the computation.

17.5 Ownership of Documents. Any reports, information, findings, data, or any other documents prepared or assembled by the Contractor regarding the Contract will be the sole property of the Owner and shall not be made available by Contractor to any individual or organization without the prior written approval of the Owner, unless required by court order.

17.6 Personal Liability of Public Officials. In exercising rights or carrying out duties under the Contract, the Owner's Representative, the Contracting Officer, and their authorized representatives shall not be personally liable, it being understood that they act as the agents and representatives of Owner.

17.7 No Waiver of Legal Rights

17.7.1. In Unit Price Contracts, the Owner shall not be precluded or stopped by any measurement, estimate, or certificate made either before or after the completion and acceptance of the Work (and payment made therefore), from showing the true amount and character of the Work performed and materials furnished by the Contractor, nor from showing that any such measurement, estimate or certificate is untrue or is incorrectly made, nor from showing that the work or materials do not in fact conform to the Contract.

17.7.2. The Owner shall not be precluded or stopped, notwithstanding any such measurement, estimate or certificate and payment in accordance therewith, from recovering from the Contractor or his sureties, or both, such damage as Owner may have sustain by reason of his failure to comply with the terms of the Contract. Neither the acceptance by the Owner or any representative of the Owner nor any payment for or acceptance of the whole or any part of the Work, nor any extension of time, nor any possession taken by the Owner, shall operate as a waiver by Owner of any right hereunder.

17.7.3. A waiver by the Owner, or Contractor, of any breach of the Contract shall not be held to be a waiver as to any other breach.

17.7.4. The Contractor, shall be liable to the Owner for latent defects, fraud, (or such gross mistakes as may amount to fraud), and every contractual warranty or guaranty.

17.8 Cumulative Remedies. The duties and obligations imposed by these General Conditions and the rights and remedies available thereunder are in addition to, and are not to be construed in any way as a limitation of any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents, and the provisions of this Article will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.9 Successors and Assigns. The Owner and the Contractor each binds himself, his partners, successors, assigns and legal representatives to the other party hereto and to the partners, successors, assigns and legal representatives of such other party in respect to all covenants, agreements and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract or sublet it as a whole without the written consent of the other, nor shall the Contractor assign any moneys due or to become due to him hereunder, without the previous written consent of the Owner.

17.10 Survival of Obligations. All representations, indemnifications, warranties, and guarantees made in,

UNIFORM GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work and termination or completion of the Agreement.

17.11 Language. These Uniform General Conditions were enacted by the Secretary and approved by the Governor of Puerto Rico in the English language, according to the Legislative authorization found in Law No. 1 of January 28, 1993.

17.12 Amendments. These Uniform General Conditions shall be amended whenever the Secretary deems it necessary in order to fulfill its purpose.

PART C. ADDITIONAL PROVISIONS

ARTICLE 1: SEPARABILITY CLAUSE; EFFECTIVENESS

1.1 Separability Clause. If any provision authorized in these regulations is declared unconstitutional or void by a Court of Competent jurisdiction, the remaining provisions of this Uniform General Conditions shall continue in effect.

1.2 Effectiveness. These Uniform General Conditions shall enter into effect thirty (30) days after having been filed and enacted by the Department of State, except with regard to Contracts whose Contract Price is paid by one or more Federal Agency in which case these Uniform General Condition, with regard to such Contracts, shall enter into effect immediately after said Federal Agencies, which provide such funds, consent in writing to their use as part of the Contract Documents. At the time of said effectiveness and from that moment forward, general conditions used and issued by a government agency, department, public corporation and instrumentality, may no longer be validly incorporated in Contracts for public works, with the exception of these Uniform General Conditions.

APPROVED ON

February 22, 2011, IN SAN JUAN, PUERTO RICO.


Eng. Rubén Hernández Gregorat, MEM, PE
Secretary
Department of Transportation and Public Works

Attachment 3

CONTRACT CLAUSES REQUIRED IN PURCHASES AND CONTRACTS WITH FEDERAL FUNDS



Contract Clauses Required in Purchases and Contracts with Federal Funds

“Cláusulas Contractuales Requeridas en Compras y Contratos con Fondos Federales”

(2 C.F.R. PART 200, Appendix II)

Any acquisition to be paid with partial or completely federal funds, must comply with all the terms and conditions included as part of this quote request. Any supplier interested in participating in this process, agrees to comply with each of the terms and conditions set forth herein. The Contractor certifies that is in compliance with the requirements established by state laws and regulations and federal regulations established in 2 CFR §200.

“Cualquier adquisición a ser pagada con fondos parciales o completamente federales, debe cumplir con todos los términos y condiciones incluidos como parte de esta solicitud de cotización. Cualquier proveedor interesado en participar en este proceso, se compromete a cumplir con cada uno de los términos y condiciones aquí establecidos. El Contratista certifica que cumplirá con los requisitos establecidos por las leyes y reglamentos estatales y los reglamentos federales establecidos en 2 CFR §200.”

1. **Record retention and access to records** The Contractor and the Agency shall afford any authorized representative of NGB, DoD or the Comptroller General of the United States access to and the right to examine all records, books, papers and documents that are parts of this contract. The Agency and the contractor agree to comply with the record retention and provide, as is required, all intact record for at least ten (10) years following closeout of the award.

“El Contratista y la Agencia otorgarán a cualquier representante autorizado de NGB, DoD o el Contralor General de los Estados Unidos acceso y el derecho de examinar todos los registros, libros y documentos que forman parte de este contrato. La Agencia y el contratista acuerdan cumplir con la retención de registros y proporcionar, si es necesario, todos los registros intactos durante al menos diez (10) años después del cierre de la adjudicación.”

2. **Clean Air Act. Water Pollution Control Act (APLICA A CONSTRUCCION DE \$150,000 O MÁS)** The Contractor and the Agency agrees to comply with all applicable standards, order or regulations issued pursuant to the Clean Air Act and the Federal Water Pollution Control Act (42 U.S.C., Section 7401 t 7671 and 33 U.S.C. Section 1318) violations should be reported to NGB and Environmental Protection Agency (EPA).

“El Contratista y la Agencia acuerdan cumplir con todas las normas, órdenes o regulaciones aplicables emitidas de conformidad con la Ley de Aire Limpio y la Ley Federal de Control de la Contaminación del Agua (42 USC, Sección 7401 t 7671 y 33 USC Sección 1318), las violaciones deben informarse a NGB y Agencia de Protección Ambiental (EPA).”

3. **Use of US Flags Carriers** The Contractor agrees to use US Flag Air Carriers for international air transportation of people and property to the extent that such service is available, in accordance with the International Air Transportation Fair Competitive Practices Act of 1974 (49 U.S.C. 40118), and their intraoperative guideline by the Comptroller General of the United States.

“El Contratista acuerda utilizar US Flag Air Carriers para el transporte aéreo internacional de personas y propiedades en la medida en que dicho servicio esté disponible, de conformidad con la Ley de Prácticas Competitivas de la FERIA Internacional de Transporte Aéreo de 1974 (49 USC 40118), y su directriz intraoperatoria por El Contralor.”

4. **Debarment and Suspension: EXECUTIVE ORDERS 12549 and 12689 (APLICA A CONSTRUCCION DE \$100,000 o más)** The Contractor agrees to comply with 2CFR Part 180 by certifying that neither it, subcontractor nor its principals or its affiliates are excluded or disqualified from the Excluded Parties List System (EPLS) or the System for Awards Management (SAM), at the current OMB website. This certification is a material representation of fact upon which the agency relies in entering this contract. The Contractor will include a provision requiring such compliance in its lower tier transactions. This verification shall be documented on the Contract File and shall be subject to audit (31 U.S.C. 1352). The Contractor and or bidder will provide the required certification as part of the bid and the contract.

“El Contratista acuerda cumplir con 2CFR Parte 180 al certificar que ni él, el subcontratista ni sus directores o sus afiliados están excluidos o descalificados en el Sistema de Lista de Partes (EPLS) excluidas o el Sistema de Gestión de Premios (SAM), en el sitio web actual de OMB. Esta certificación es una representación material de hecho en la cual la agencia se basa para firmar este contrato. El contratista incluirá una disposición que requiera dicho cumplimiento en sus transacciones de nivel inferior. Esta verificación se documentará en el archivo del contrato y estará sujeta a auditoría (31 U.S.C.1352). El Contratista y/o el oferente proporcionarán la certificación requerida como parte de la oferta y el contrato.”

5. **Byrd Anti-lobbying amendment (APLICA A CONSTRUCCION- DESDE EL BID, REQUIERE CERTIFICACION; APLICA \$100,000 o más)**. The Contractor certifies that each tier to the tier above will not and has not used Federal appropriated funds to pay any organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, or an officer of Congress, or an employee of a member of Congress in connection with obtaining any federal contract, grant, or any other awards covered by federal actions.

“El Contratista certifica que cada nivel del nivel anterior no utilizará ni ha utilizado los fondos federales apropiados para pagar a ninguna organización por influir o intentar influir un funcionario o empleado de cualquier agencia, un miembro del Congreso o un funcionario del Congreso, o un empleado de un miembro del Congreso en relación con la obtención de cualquier contrato federal, subvención o cualquier otro premio cubierto por acciones federales.”

6. **Buy American Act** The Contractor agrees to comply with the Buy American Act (41 U.S.C. 10a et seq.) giving preference to domestic end products and domestic construction material.

“El Contratista acepta cumplir con la Ley de Compras de Estados Unidos (41 U.S.C. 10a et seq.) Dando preferencia a los productos finales nacionales y al material de construcción nacional.”

7. **Central Contractor Registration** The parties agree to comply with the System for Award Management (SAM) and Data Universal Numbering System (DUNS) Requirements.

“Las partes acuerdan cumplir con el System for Award Management (SAM) y Data Universal Numbering Requirements (DUNS).”

8. **False or Fraudulent Statement of Claims** The Contractor acknowledges that 31 U.S.C. Chapter 38, applies to its actions pertaining to this contract. The Contractor certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, it may make, or causes to be made, pertaining to this contract. The Contractor agrees to include the above language in each subcontract under this contract, modified only to identify the subcontractor that will be subject to these provisions.

“El Contratista reconoce que 31 U.S.C., Capítulo 38 se aplica a sus acciones relacionadas con este contrato. El Contratista certifica o afirma la veracidad y exactitud de cualquier declaración que haya

hecho, haga, pueda hacer o haga que se haga en relación con este contrato. El Contratista acuerda incluir el lenguaje anterior en cada subcontrato bajo este contrato, modificado solo para identificar al subcontratista que estará sujeto a estas disposiciones.”

9. **Contract Work Hours and Safety Standards Act (APLICA A CONSTRUCCION DE \$100,000 o más)** The Contractor will comply with the contracts work hours and Safety Standard Act (40 USC Sections 3701-3708) as supplemented by the Department of Labor Regulations (29 CFR Part 5).

“El Contratista cumplirá con los contratos de horas de trabajo y la Ley de Normas de Seguridad (40 U.S.C. Secciones 3701-3708) según lo complementado por el Departamento de Regulaciones Laborales (29 CFR “Parte 5”).

10. **Davis-Bacon Act (APLICA A CONSTRUCCION DE \$2,000 o más)** The Contractor agrees to comply with the Davis-Bacon Act (40 U.S.C. & 3141-3148). That establishes the requirement for paying the local prevailing wages on public works projects for laborers and mechanics.

“El Contratista acepta cumplir con la Ley Davis-Bacon (40 U.S.C. y 3141-3148). Eso establece el requisito de pagar los salarios locales vigentes en proyectos de obras públicas para trabajadores y mecánicos.”

11. **Copeland Anti-kickback act 40 U.S.C. 3145. (APLICA A CONSTRUCCION DE \$2,000 o más y debe ir acompañada de la cláusula DAVIS BACON ACT)**. The Contractor or Sub-recipient will comply with the Copeland Anti-kickback Act (40 U.S.C. 3145). By this means the Contractor acknowledges and certify that will not induce any person employed in the construction, completion, or repair of any public work, to give up any part of the compensation to which he or she is otherwise entitled.

“El Contratista o el Sub-receptor cumplirán con la Ley contra el Soborno Copeland (40 U.S.C.3145). Por este medio, el Contratista reconoce y certifica que no inducirá a ninguna persona empleada en la construcción, finalización o reparación de ninguna obra pública a renunciar a ninguna parte de la compensación a la que tiene derecho de otra manera.”

12. **Energy Policy and Conservation Act** The Contractor agrees to comply with mandatory standards and policies relating to energy efficiency which are contained in the State Energy Conservation Plan issued in compliance with the Federal Energy Policy and Conservation Act.

“El Contratista acepta cumplir con las normas y políticas obligatorias relacionadas con la eficiencia energética que figuran en el Plan Estatal de Conservación de Energía emitido de conformidad con la Ley Federal de Política y Conservación de Energía.”

13. **Seat Belt Use. Executive Order 13043.** In Accordance with the Executive Order No. 13043 the Contractor will enforce Seat Belt use policies and programs for its employees when operating agency cars, rented or personally owned vehicles.

“De acuerdo con la Orden Ejecutiva No. 13043, el Contratista hará cumplir el uso del cinturón de seguridad de las políticas y programas para sus empleados cuando operen automóviles de agencias, vehículos alquilados o de propiedad personal.”

14. **Compliance with Federal Law, Regulations and Executive Orders.** The Contractor will comply with all applicable federal laws, regulations and executive orders and National Guard policies, procedures and directives.

“El Contratista cumplirá con todas las leyes, regulaciones y órdenes ejecutivas federales aplicables y las políticas, procedimientos y directivas de la Guardia Nacional.”

15. **No Obligation by Federal Government:** The federal government is not a party to this contract and is not subject to any obligations or liabilities to the Agency, contractor, or any other party pertaining to any matter resulting from this contract.

“El gobierno federal no es parte de este contrato y no está sujeto a ninguna obligación o responsabilidades con la Agencia, el contratista o cualquier otra parte relacionada con cualquier asunto resultante de este contrato.”

16. Privacy Act

The Contractor agrees to:

- (1) Comply with the Privacy Act of 1974 (the Act) and the agency rules and regulations issued under the Act in the design, development, or operation of any system of records on individuals to accomplish an agency function when the contract specifically identifies-
 - a. The systems of records; and
 - b. The design, development, or operation work that the contractor is to perform.
 - c. Include the Privacy Act notification contained in this contract in every solicitation and resulting subcontract and in every subcontract awarded without a solicitation, when the work statement in the proposed subcontract requires the redesign, development, or operation of a system of records on individuals that is subject to the Act; and
- (2) Include this clause, including this paragraph,
- (3) in all subcontracts awarded under this contract which requires the design, development, or operation of such a system of records.

In the event of violations of the Act, a civil action may be brought against the agency involved when the violation concerns the design, development, or operation of a system of records on individuals to accomplish an agency function, and criminal penalties may be imposed upon the officers or employees of the agency when the violation concerns the operation of a system of records on individuals to accomplish an agency function. For purposes of the Act, when the contract is for the operation of a system of records on individuals to accomplish an agency function, the Contractor is an employee of the agency.

"Operation of a system of records," as used in this clause, means performance of any of the activities associated with maintaining the system of records, including the collection, use, and dissemination of records. "Record," as used in this clause, means any item, collection, or grouping of information about an individual that is maintained by an agency, including, but not limited to, education, financial transactions, medical history, and criminal or employment history and that contains the person's name, or the identifying number, symbol, or other identifying particular assigned to the individual, such as a fingerprint or voiceprint or a photograph.

"System of records on individuals," as used in this clause, means a group of any records under the control of any agency from which information is retrieved by the name of the individual or by some identifying number, symbol, or other identifying particular assigned to the individual.

“El Contratista acepta:

- (1) *Cumplir con la Ley de Privacidad de 1974 (la Ley) y las reglas y regulaciones de la agencia emitidas bajo la Ley en el diseño, desarrollo u operación de cualquier sistema de registros de individuos para cumplir una función de la agencia cuando el contrato identifica específicamente:*
 - a. *Los sistemas de registros; y*
 - b. *El trabajo de diseño, desarrollo u operación que el contratista debe realizar;*
 - c. *Incluir la notificación de la Ley de Privacidad contenida en este contrato en cada solicitud y subcontracto resultante y en cada subcontracto otorgado sin una solicitud, cuando la declaración de trabajo en el subcontracto propuesto requiera el rediseño, desarrollo u operación de un sistema de registros de individuos que está sujeto a la Ley; e*
- (2) *Incluir esta cláusula, incluido este párrafo,*
- (3) *en todos los subcontratos adjudicados en virtud de este contrato que requiera el diseño, desarrollo u operación de dicho sistema de registros.*

“En caso de violaciones de la Ley, se puede entablar una acción civil contra la agencia involucrada cuando la violación se refiere al diseño, desarrollo u operación de un sistema de registros de individuos para cumplir una función de la agencia, y se pueden imponer sanciones penales a los oficiales o empleados de la agencia cuando la violación se refiere a la operación de un sistema de registros de individuos para cumplir una función de la agencia. Para propósitos de la Ley, cuando el contrato es

para la operación de un sistema de registros de individuos para cumplir una función de agencia, el Contratista se considera un empleado de la agencia."

"Operación de un sistema de registros", como se usa en esta cláusula, significa el desempeño de cualquiera de las actividades asociadas con el mantenimiento del sistema de registros, incluida la recopilación, uso y difusión de registros.

"Registro", como se usa en esta cláusula, significa cualquier elemento, recopilación o agrupación de información sobre un individuo que es mantenida por una agencia, que incluye, entre otros, educación, transacciones financieras, historial médico e historial criminal o laboral y que contiene el nombre de la persona, o el número de identificación, símbolo u otra identificación particular asignada a la persona, como una huella digital o una huella de voz o una fotografía.

"Sistema de registros de individuos", como se usa en esta cláusula, significa un grupo de registros bajo el control de cualquier agencia de la cual se recupera información por el nombre del individuo o por algún número de identificación, símbolo u otro identificador particular asignado al individuo."

- 17. Procurement of Recovered Materials: (APLICA A CONTRATOS DE \$10,000 o más)** The Contractor agrees to provide a preference for products and services that conserve natural resources that protect the environment and maximizes energy establishing an affirmative program for procurement of recovered materials identified as EPA guidelines.

"El Contratista acuerda proporcionar una preferencia por los productos y servicios que conservan los recursos naturales que protegen el medio ambiente y maximiza la energía estableciendo un programa afirmativo para la adquisición de materiales recuperados identificados como pautas de la EPA."

- 18. Equal Employment Opportunity (EEO)** The Contractor agrees to obey all laws and regulations regarding discrimination for reasons of race, color, gender, natural origin or social condition, sexual orientation, age, political or religious belief or any other discriminatory cause in the provision of services contained in this contract. It will also have the responsibility to avoid creating a hostile environment, free of all types of harassment, to include sexual harassment; having the responsibility of notifying the Executive Officer for State Affairs or the person designated by PRNG immediately of any situation that arises to this effect. Failure to comply in this regard will cause the contract to be terminated without further notice. According to Executive Order No. 11246, Amendment No. 11375, 41 CFR Part 60, Americans with Disabilities Act of 1990 (ADA) and 2 CFR Part 200.

"El Contratista acuerda obedecer todas las leyes y regulaciones con respecto a la discriminación por motivos de raza, color, género, origen natural o condición social, orientación sexual, edad, creencias políticas o religiosas o cualquier otra causa discriminatoria en la provisión de servicios contenidos en este contrato. También tendrá la responsabilidad de evitar crear un ambiente hostil, libre de todo tipo de acoso, para incluir el acoso sexual; tener la responsabilidad de notificar al Oficial Ejecutivo de Asuntos del Estado o la persona designada por PRNG de inmediato de cualquier situación que surja a este efecto. El incumplimiento a este respecto hará que el contrato se rescinda sin previo aviso. De acuerdo con la Orden Ejecutiva No. 11246, Enmienda No. 11375, 41 CFR Parte 60, estadounidenses con la Ley Americana de Discapacidades de 1990 (ADA) y 2 CFR Parte 200."

- 19. Termination for Cause and Convenience** Any of the parties may rescind the contract at any moment, through written notification to the other party, with fifteen (15) days in advance to the date in which the contractual resolution shall be effective. However, the requirement of prior notification will not apply when probable cause for arrest is determined against the Contractor, for any State or Federal crime, and for any of the grounds established in the contract. PRNG will be able to immediately terminate the contract in the event of negligence, abandonment of duties or non- fulfillment of any of the contractual obligations. Non-fulfillment, among other things, will include the Contractor not providing services required by PRNG after having requested them in writing or by any other approved means of communications.

NO services are to be paid for that are in violation to this clause, since it is understood that any official that request and/or accepts services from another part that is in violation to this disposition, is doing so

without any appropriate legal authority.

“Cualquiera de las partes puede rescindir el contrato en cualquier momento, mediante notificación escrita a la otra parte, con quince (15) días de anticipación a la fecha en que la resolución contractual será efectiva. Sin embargo, el requisito de notificación previa no se aplicará cuando se determine la causa probable del arresto contra el Contratista, por cualquier delito del Estado o Federal y por cualquiera de los motivos establecidos en el contrato. PRNG podrá rescindir inmediatamente el contrato en caso de negligencia, causa probable de arresto contra el Contratista, por cualquier delito del Estado Federal y por cualquiera de los abandonos de funciones o incumplimiento de cualquiera de las obligaciones contractuales. El incumplimiento, entre otras cosas, incluirá que el Contratista no brinde los servicios requeridos por PRNG después de haberlos solicitado por escrito o por cualquier otro medio de comunicación aprobado.

NO se pagarán servicios que infrinjan esta cláusula, ya que se entiende que cualquier funcionario que solicite y/ o acepte servicios de otra parte que infrinja esta disposición, lo hará sin ninguna autoridad legal adecuada.”

- 20. Contractual Legal Remedies Controversies and Pertinent Laws** This contract will be governed by the laws of the Government of Puerto Rico and the United States of America. Should any disposition, cause or part of this contract be contested for any reason before a Court of Law and declared unconstitutional or null, such determination will not affect, undermine or invalidate the remaining dispositions or clauses of this contract, rather, in its effect will limit only to the disposition declared unconstitutional or null. Both parties accept that the San Juan Superior Court (First Instance) will be the court with pertinent jurisdiction to elucidate any judicial action originating from this contract.

“Este contrato se registrará por las leyes del Gobierno de Puerto Rico y los Estados Unidos de América. Si alguna disposición, causa o parte de este contrato se impugna por algún motivo ante un Tribunal de Justicia y se declara inconstitucional o nula, dicha determinación no afectará, socavará ni invalidará las disposiciones o cláusulas restantes de este contrato, sino que, en su efecto, limitará solo a la disposición declarada inconstitucional o nula. Ambas partes aceptan que el Tribunal Superior de San Juan (Primera Instancia) será el tribunal con jurisdicción pertinente para dilucidar cualquier acción judicial que se origine en este contrato.”

- 21. Drug Free Work Place** The Contractor certifies that it will maintain a drug free working environment. It also certifies the publication and distribution of material related to the prohibition of controlled substances and the penalties that these are subject to and that prevention and detection of drug programs have been established. The Contractor will inform PRNG in case of a conviction for drugs in the workplace area and the disciplinary actions that will be taken against any employee convicted for criminal offenses related to the use and abuse of controlled substances according to the “Drug Free Workplace Act”.

“El Contratista certifica que mantendrá un ambiente de trabajo libre de drogas. También certifica la publicación y distribución de material relacionado con la prohibición de sustancias controladas y las sanciones a las que están sujetas y que se han establecido programas de prevención y detección de drogas. El Contratista informará a PRNG en caso de una condena por drogas en el área de trabajo y las medidas disciplinarias que se tomarán contra cualquier empleado condenado por delitos relacionados con el uso y abuso de sustancias controladas de acuerdo con la “Ley de Lugar de Trabajo Libre de Drogas”.

- 22. Prohibition on Contracting for Covered Telecommunications Equipment and Services** Section 889(b)(1) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (FY2019 NDAA) and 2 C.F.R. § 200.216, as implemented by FEMA Policy 405-143-1, Prohibitions on Expending FEMA Award Funds for Covered Telecommunications Equipment or Services (Interim), prohibit the obligation or expending of federal award funds on certain telecommunication products or from certain entities for national security reasons. Effective August 13, 2020, FEMA recipients and subrecipients, as well as their contractors and subcontractors, may not obligate or expend any FEMA award funds to:

- (1) Procure or obtain any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology of any system;
- (2) Enter into, extend, or renew a contract to procure or obtain any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology of any system; or
- (3) Enter into, extend, or renew contracts with entities that use covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system.

“La Sección 889(b)(1) de la Ley de Autorización de Defensa Nacional John S. McCain para el año fiscal 2019 (FY2019 NDAA) y 2 C.F.R. § 200.216, según lo implementado por la Política 405-143-1 de FEMA, Prohibición de la utilización de fondos adjudicados por FEMA para la compra equipos o servicios de telecomunicaciones cubiertos, prohíbe la inversión o el gasto de fondos de adjudicación federal en ciertos productos de telecomunicaciones o de ciertas entidades por razones de seguridad nacional. A partir del 13 de agosto de 2020, los recipientes y Subrecipientes de FEMA, así como sus contratistas y subcontratistas, no pueden invertir ni gastar fondos de adjudicación de FEMA para:

- (1) Adquirir u obtener cualquier equipo, sistema o servicio que utilice equipos o servicios de telecomunicaciones cubiertos como componente sustancial o esencial de cualquier sistema, o como tecnología crítica de cualquier sistema;*
- (2) Celebrar, extender o renovar un contrato para adquirir u obtener cualquier equipo, sistema o servicio que use equipos o servicios de telecomunicaciones cubiertos como un componente sustancial o esencial de cualquier sistema, o como tecnología crítica de cualquier sistema; o*
- (3) Celebrar, extender o renovar contratos con entidades que utilicen equipos o servicios de telecomunicaciones cubiertos como un componente sustancial o esencial de cualquier sistema, o como tecnología crítica como parte de cualquier sistema.”*

- 23. Domestic Preferences for Procurement** As appropriate, and to the extent consistent with law, the contractor should, to the greatest extent practicable, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States. This includes, but is not limited to iron, aluminum, steel, cement, and other manufactured products.

For purposes of this clause:

Produced in the United States means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.

Manufactured products mean items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.”

“Según aplique, y en la medida en que lo permita la ley, el contratista debe, en la mayor medida posible, dar preferencia a la compra, adquisición o uso de bienes, productos o materiales producidos en los Estados Unidos. Esto incluye, entre otros, hierro, aluminio, acero, cemento y otros productos manufacturados.

Para efectos de esta cláusula:

Producido en los Estados Unidos significa, para los productos de hierro y acero, que todos los procesos de fabricación, desde la etapa inicial de fusión hasta la aplicación de recubrimientos, ocurrieron en los Estados Unidos.

Los productos manufacturados significan artículos y materiales de construcción compuestos total o parcialmente de metales no ferrosos como el aluminio; plásticos y productos a base de polímeros como tubería de cloruro de polivinilo; agregados tales como concreto; vidrio, incluida la fibra óptica; y madera.”

Included by Legal Office Judge Advocate (JAG)

- 24. Police Record Check** The Contractor agrees to submit to a background check prior to providing services to PRNG. The background check will be completed by PRNG and includes a criminal record check, verification against the national sex offenders register and any other verification that deem necessary in relationship with the services to be provided by the Contractor. The background checks must show no

convictions or pending criminal charges that would render the Contractor to provide the services requested in the contract.

"El Contratista se compromete a someterse a una verificación de antecedentes antes de prestar servicios a PRNG. La verificación de antecedentes será realizada por la PRNG e incluye una verificación de antecedentes penales, verificación contra el registro nacional de ofensores sexuales y cualquier otra verificación que se considere necesaria con relación a los servicios que brindará el Contratista. Las verificaciones de antecedentes deben mostrar no condenas o cargos penales pendientes que harían que el Contratista no pueda brindar los servicios solicitados en el Contrato".

25. Annual Threat Awareness and Reporting Program (TARP) Training All Contractor's Employee will complete an annual Threat Awareness and Reporting Program (TARP) training provided by a Counterintelligence Agent, IAW (DoDD 5240.06 Counterintelligence Awareness and Reporting). The Contractor shall submit the certificates of completion of the training for each employee or a memorandum for record to the COR or Contracting Officer (if a COR is not assigned), within five (5) calendar days after completion of the training.

"Todos los Empleados del Contratista completaran una capacitación anual del Programa de Informes y Concientización sobre Amenazas (TARP) brindada por un Agente de Contraineligencia, IAW "(DoDD 5240.06 Counterintelligence Awareness and Reporting). El Contratista deberá presentar los certificados de finalización de la capacitación para cada empleado o un memorando para su registro al COR o al Oficial de Contrataciones (si no se asigna un COR), dentro de los cinco (5) días calendario posteriores a la finalización de la capacitación.

We certify that we will comply with the clauses and conditions established by the aforementioned laws and regulations.

Certificamos que cumpliremos con las cláusulas y condiciones establecidas por las leyes y reglamentos antes mencionados.

Company/Compañía

Name/Nombre

Signature/Firma

Corporate Seal/Sello Corporativo

Position/Puesto que Ocupa

Date/Fecha

Attachment 4

HUD GENERAL PROVISIONS



HUD GENERAL PROVISIONS

In the case of Contracts to be funded in whole or in part by funding from the Housing and Urban Development (HUD) Community Development Block Grant (CDBG), the clauses listed below are required to ensure compliance with program requirements.

“En el caso de los Contratos que se financiarán en su totalidad o en parte con fondos de la Subvención en Bloque de Desarrollo Comunitario (CDBG, por sus siglas en inglés) del Departamento de la Vivienda y el Desarrollo Urbano (HUD, por sus siglas en inglés), las cláusulas que se enumeran a continuación son necesarias para garantizar el cumplimiento de los requisitos del programa.”

HUD General Provisions

The following terms and conditions apply to any contract for which any portion of the funding is derived from a grant made by the United States Department of Housing and Urban Development (“HUD”). In addition, the Agency and the Contractor shall comply with the Federal Labor Standards Provisions set forth in Form HUD4010, available at <http://www.hud.gov/offices/adm/hudclips/forms/files/4010.pdf>.

These general provisions may be updated from time to time. It is the sole responsibility of the Agency and the Contractor to be aware of any changes hereto, to amend and implement such changes and to ensure subcontracts terms and conditions are modified as necessary, if any.

“Los siguientes términos y condiciones se aplican a cualquier contrato para el cual una parte de los fondos se derive de una subvención otorgada por el Departamento de Vivienda y Desarrollo Urbano de los Estados Unidos (“HUD”). Además, la Agencia y el Contratista deberán cumplir con las Disposiciones de las Normas Laborales Federales establecidas en el Formulario HUD4010, disponible en <http://www.hud.gov/offices/adm/hudclips/forms/files/4010.pdf>.

Estas disposiciones generales pueden ser actualizadas periódicamente. Es responsabilidad exclusiva de la Agencia y el Contratista estar al tanto de cualquier cambio al presente, modificar e implementar dichos cambios y garantizar que los términos y condiciones de los subcontratos se modifiquen según sea necesario, si corresponde.”

General Provisions:

- Provisions Required by Law Deemed inserted** Each and every provision of law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein and the Contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, the Contract shall forthwith be physically amended to make such insertion or correction.

“Todas y cada una de las disposiciones de la ley y las cláusulas requeridas por la ley para ser insertadas en este Contrato se considerarán insertadas en el presente y el Contrato se leerá y ejecutará como si estuviera incluido en el presente, y si por error o de otro modo, dicha disposición no se cumple, insertado, o no se inserta correctamente, entonces, a solicitud de cualquiera de las partes,

el Contrato se modificará físicamente de inmediato para realizar dicha inserción o corrección.”

2. **Statutory and Regulatory Compliance** The Agency and the Contractor shall comply with all laws and regulations applicable to the Community Development Block Grant-Disaster Recovery funds appropriated by the Supplemental Appropriations for Disaster Relief Requirements, 2017 (Pub. L. 115-56), approved September 8, 2017 (Appropriations Act), as amended, including but not limited to the applicable Office of Management and Budget Circulars, which may impact the administration of funds and/or set forth certain cost principles, including if certain expenses are allowed.

“La Agencia y el Contratista deberán cumplir con todas las leyes y reglamentaciones aplicables a los fondos de Subvención en Bloque para el Desarrollo Comunitario-Recuperación de Desastres asignados por las Asignaciones Suplementarias para los Requisitos de Manejo de Desastres, 2017 (Pub. L. 115-56), aprobado el 8 de septiembre de 2017 (“Appropriations Act”), según enmendada, incluidas, entre otras, las circulares de la Oficina de Gerencia y Presupuesto aplicables, que pueden afectar la administración de fondos y/o establecer ciertos principios de costos, incluso si se permiten ciertos gastos.”

3. **Breach of Agency Agreement Terms**

The Agency and the Contractor reserve the right to all administrative, contractual, or legal remedies, including but not limited to suspension or termination of this Contract, in instances where the Agency or any of its subcontractors violate or breach any Contract term. If the Agency or any of its subcontractors violate or breach any Contract term, they shall be subject to such sanctions and penalties as may be appropriate. The duties and obligations imposed by the Contract documents, and the rights and remedies available thereunder, shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.

“La Agencia y el Contratista se reservan el derecho a todos los recursos administrativos, contractuales o legales, incluidos, entre otros, la suspensión o terminación de este Contrato, en los casos en que la Agencia o cualquiera de sus subcontratistas viole o incumpla cualquier término del Contrato. Si la Agencia o cualquiera de sus subcontratistas violan o incumplen cualquier término del Contrato, estarán sujetos a las sanciones y penalidades que correspondan. Los deberes y obligaciones impuestos por los documentos del Contrato, y los derechos y recursos disponibles en virtud de los mismos, se sumarán y no limitarán los deberes, obligaciones, derechos y recursos impuestos o disponibles por ley.”

4. **Reporting Requirements**

The Agency shall complete and submit all reports, in such form and according to such schedule, as may be required by the PRDOH and/or the Government of Puerto Rico. The Agency shall cooperate with all the PRDOH and/or the Government of Puerto Rico efforts to comply with HUD requirements and regulations pertaining to reporting, including but not limited to 2 C.F.R. § 200.328 and 24 C.F.R. § 570.507, when applicable.

“La Agencia completará y someterá todos los informes, en la forma y según el cronograma, que sean requeridos por Vivienda y/o el Gobierno de Puerto Rico. La Agencia cooperará con todos los esfuerzos de Vivienda y/o el Gobierno de Puerto Rico para cumplir con los requisitos y reglamentos de HUD relacionados con la presentación de informes, incluidos, entre otros, 2 C.F.R. § 200.328 y 24 C.F.R. § 570.507, cuando corresponda.”

5. **Access To Records**

The Government of Puerto Rico, the PRDOH, HUD, the Comptroller General of the United States, or any of their duly authorized representatives, shall have at any time and from time to time during normal business hours, access to any work product, books, documents, papers, and records of the which are related to this Contract, for the purpose of inspection, audits, examinations, and making excerpts, copies and transcriptions.

“El Gobierno de Puerto Rico, Vivienda, HUD, el Contralor General de los Estados Unidos, o cualquiera

de sus representantes debidamente autorizados, tendrán en cualquier momento y de vez en cuando durante el horario normal de trabajo, acceso a cualquier producto de trabajo, libros, documentos, papeles y registros de los que se relacionen con este Contrato, para efectos de inspección, auditoría, examen y realización de extractos, copias y transcripciones.”

6. Maintenance/Retention of Records

The Agency and the Contractor shall retain all official records on programs and individual activities shall be retained for the greater of five (5) years, starting from the closeout of the grant between PRDOH and HUD, or the end of the affordability period for each housing activity, whichever is longer. If any other laws and regulations as described in 24 C.F.R. § 570.490 applies to a project, the record retention period may be extended. All records involved in litigation, claims, audits, negotiations, or other actions, which have started before the expiration date of their retention, will be kept until completion of the action and resolution of all issues or the end of the regular five (5) year period, whichever is longer. (See 2 C.F.R. § 200.333 and 24 C.F.R. § 570.490(d).)

La Agencia y el Contratista conservarán todos los registros oficiales de los programas y las actividades individuales durante cinco (5) años, el término que sea mayor, a partir del cierre de la subvención entre Vivienda y HUD, o el final del período de asequibilidad para cada vivienda. actividad, lo que sea más largo. Si cualquier otra ley y reglamento como se describe en 24 C.F.R. § 570.490 se aplica a un proyecto, el período de retención de registros puede extenderse. Todos los registros involucrados en litigios, reclamos, auditorías, negociaciones u otras acciones, que hayan comenzado antes de la fecha de vencimiento de su retención, se conservarán hasta la finalización de la acción y resolución de todos los asuntos o el final de los cinco (5) días regulares. periodo de un año, el que sea mayor. (Ver 2 C.F.R. § 200.333 y 24 C.F.R. § 570.490(d).)

7. Small And Minority Firms. Women’s Business Enterprises. And Labor Surplus Area Firms

The Agency and the Contractor will take necessary affirmative steps to assure that minority firms, women’s business enterprises, and labor surplus area firms are used in subcontracting when possible. Steps include, but are not limited to:

- a. Placing qualified small and minority businesses and women’s business enterprises on solicitation lists;
- b. Assuring that small and minority businesses, and women’s business enterprises are solicited whenever they are potential sources;
- c. Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority business, and women’s business enterprises;
- d. Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority business, and women’s business enterprises; and
- e. Using the services and assistance of the Small Business Administration, and the Minority Business Development Agency of the Department of Commerce.

Additionally, for contracts of \$10,000 or more, the Agency and the Contractor shall file Form HUD 2516 (Contract and Subcontract Activity) with the PRDOH on a quarterly basis.

“La Agencia y el Contratista tomarán las medidas afirmativas necesarias para garantizar que las empresas minoritarias, las empresas comerciales de mujeres y las empresas del área de mano de obra excedente se utilicen en la subcontratación cuando sea posible. Los pasos incluyen, pero no se limitan a:

- a. *Colocar empresas calificadas de minorías y pequeñas empresas y empresas comerciales de mujeres en listas de solicitud;*
- b. *Asegurar que las empresas pequeñas y minoritarias y las empresas comerciales de mujeres sean solicitadas siempre que sean fuentes potenciales;*
- c. *Dividir los requisitos totales, cuando sea económicamente factible, en tareas o cantidades más pequeñas para permitir la máxima participación de empresas pequeñas y minoritarias, y empresas comerciales de mujeres;*

- d. *Establecer cronogramas de entrega, cuando el requisito lo permita, que fomenten la participación de empresas pequeñas y minoritarias, y empresas comerciales de mujeres; y*
- e. *Utilizar los servicios y la asistencia de la Administración de Pequeñas Empresas y la Agencia de Desarrollo de Empresas Minoritarias del Departamento de Comercio.*

Además, para contratos de \$10,000 o más, la Agencia y el Contratista deberán presentar el Formulario HUD 2516 (Actividad de Contratos y Subcontratos) con Vivienda trimestralmente.”

8. Rights To Inventions Made Under A Contract Or Agreement

Contracts or agreements for the performance of experimental, developmental, or research work shall provide for the rights of the Federal Government and the recipient in any resulting invention in accordance with 37 CFR Part 401, “Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements”, and any implementing regulations issued by HUD.

“Los contratos o acuerdos para la realización de trabajos experimentales, de desarrollo o de investigación deberán estipular los derechos del gobierno federal y del destinatario sobre cualquier invención resultante de conformidad con 37 CFR Parte 401, “Derechos a las invenciones realizadas por organizaciones sin fines de lucro y pequeñas empresas comerciales Bajo Subsidios del Gobierno, Contratos y Acuerdos Cooperativos”, y cualquier reglamento de implementación emitido por HUD.”

9. Title VI of the Civil Rights Act Of 1964

The Agency and the Contractor will comply with the provisions of Title VI of the Civil Rights Act of 1964, which prohibits discrimination on the basis of race, color, or national origin in any program or activity that receives Federal funds or other Federal financial assistance. Programs that receive Federal funds cannot distinguish among individuals on the basis of race, color or national origin, either directly or indirectly, in the types, quantity, quality or timeliness of program services, aids or benefits that they provide or the manner in which they provide them. This prohibition applies to intentional discrimination as well as to procedures, criteria or methods of administration that appear neutral but have a discriminatory effect on individuals because of their race, color, or national origin. Policies and practices that have such an effect must be eliminated unless a recipient can show that they were necessary to achieve a legitimate nondiscriminatory objective.

“La Agencia y el Contratista cumplirán con las disposiciones del Título VI de la Ley de Derechos Civiles de 1964, que prohíbe la discriminación por motivos de raza, color u origen nacional en cualquier programa o actividad que reciba fondos federales u otra asistencia financiera federal. Los programas que reciben fondos federales no pueden distinguir entre las personas por motivos de raza, color u origen nacional, ya sea directa o indirectamente, en los tipos, la cantidad, la calidad o la puntualidad de los servicios del programa, las ayudas o los beneficios que brindan o la forma en que proveerles. Esta prohibición se aplica a la discriminación intencional, así como a los procedimientos, criterios o métodos de administración que parecen neutrales pero tienen un efecto discriminatorio sobre las personas debido a su raza, color u origen nacional. Las políticas y prácticas que tengan tal efecto deben eliminarse a menos que un destinatario pueda demostrar que fueron necesarias para lograr un objetivo legítimo no discriminatorio.”

10. Section 109 of the Housing And Community Development Act Of 1974

The Agency and the Contractor shall comply with the provisions of Section 109 of the Housing and Community Development Act of 1974. No person in the United States shall on the grounds of race, color, national origin, or sex be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity funded in whole or in part with funds made available under this title. Section 109 further provides that discrimination on the basis of age under the Age Discrimination Act of 1975 or with respect to an otherwise qualified handicapped individual as provided in Section 504 of the Rehabilitation Act of 1973, as amended, is prohibited.

“La Agencia y el Contratista deberán cumplir con las disposiciones de la Sección 109 de la Ley de Vivienda y Desarrollo Comunitario de 1974. Ninguna persona en los Estados Unidos por motivos de

raza, color, origen nacional o sexo será excluida de participar en, ser negado los beneficios de, o ser objeto de discriminación en virtud de cualquier programa o actividad financiada en su totalidad o en parte con los fondos disponibles en virtud de este título. El artículo 109 dispone además que está prohibida la discriminación basada en la edad en virtud de la Ley de discriminación por edad de 1975 o con respecto a una persona discapacitada calificada según lo dispuesto en el artículo 504 de la Ley de rehabilitación de 1973, enmendada.”

11. Section 504 of the Rehabilitation Act Of 1973

The Agency and the Contractor shall comply with Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. § 794), as amended, and any applicable regulations. The Agency and the Contractor agrees that no qualified individual with a disability shall, solely on the basis of their disability, be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any program or activity that receives Federal financial assistance from HUD.

“La Agencia y el Contratista deberán cumplir con la Sección 504 de la Ley de Rehabilitación de 1973 (29 U.S.C. § 794), según enmendada, y cualquier reglamento aplicable. La Agencia y el Contratista acuerdan que ninguna persona calificada con una discapacidad será excluida de la participación, se le negarán los beneficios o de otra manera estará sujeta a discriminación bajo cualquier programa o actividad que reciba fondos federales, únicamente en base a su discapacidad. asistencia de HUD.”

12. Age Discrimination Act Of 1975

The Agency and the Contractor shall comply with the Age Discrimination Act of 1975 (42 U.S.C. § 6101 et seq.), as amended, and any applicable regulations. No person in the United States shall, on the basis of age, be excluded from participation in, be denied the benefits of, or be subjected to, discrimination under, any program or activity receiving Federal financial assistance.

“La Agencia y el Contratista deberán cumplir con la Ley de Discriminación por Edad de 1975 (42 U.S.C. § 6101 et seq.), según enmendada, y cualquier reglamento aplicable. Ninguna persona en los Estados Unidos, por motivos de edad, será excluida de la participación, se le negarán los beneficios o será objeto de discriminación en virtud de cualquier programa o actividad que reciba asistencia financiera federal.”

13. Debarment, Suspension, And Ineligibility

The Agency and the Contractor represents and warrants that it and its subcontractors are not debarred or suspended or otherwise excluded from or ineligible for participation in Federal assistance programs subject to 2 C.F.R. Part 2424.

“La Agencia y el Contratista declaran y garantizan que ni ella ni sus subcontratistas están inhabilitados, suspendidos o excluidos o inelegibles para participar en programas de asistencia federal sujetos a 2 C.F.R. Parte 2424.”

14. Conflicts Of Interest

The Agency and the Contractor shall notify the PRDOH as soon as possible if this Contract or any aspect related to the anticipated work under this Contract raises an actual or potential conflict of interest (as defined 2 C.F.R. § 200.318(c), if applicable). The Agency and the Contractor shall explain the actual or potential conflict in writing in sufficient detail so that the PRDOH is able to assess such actual or potential conflict. The Agency and the Contractor shall provide the PRDOH any additional information necessary to fully assess and address such actual or potential conflict of interest. The Agency and the Contractor shall accept any reasonable conflict mitigation strategy employed by the PRDOH, including but not limited to the use of an independent subcontractor(s) to perform the portion of work that gives rise to the actual or potential conflict.

La Agencia y el Contratista notificarán a Vivienda lo antes posible si este Contrato o cualquier aspecto relacionado con el trabajo anticipado bajo este Contrato plantea un conflicto de interés real o potencial (como se define en 2 C.F.R. § 200.318(c), si corresponde). La Agencia y el Contratista deberán explicar el conflicto real o potencial por escrito con suficiente detalle para que Vivienda pueda evaluar

dicho conflicto real o potencial. La Agencia y el Contratista proporcionarán a VIVIENDA cualquier información adicional necesaria para evaluar completamente y abordar dicho conflicto de interés real o potencial. La Agencia y el Contratista aceptarán cualquier estrategia razonable de mitigación de conflictos empleada por Vivienda, que incluye, entre otros, el uso de subcontratistas independientes para realizar la parte del trabajo que da lugar al conflicto real o potencial.

15. Subcontracting

When subcontracting, the Agency and the Contractor shall solicit for and contract with such subcontractors in a manner providing for fair competition. Some of the situations considered to be restrictive of competition include, but are not limited to:

- a. Placing unreasonable requirements on firms in order for them to qualify to do business;
- b. Requiring unnecessary experience and excessive bonding;
- c. Noncompetitive pricing practices between firms or between affiliated Companies;
- d. Noncompetitive awards to consultants that are on retainer contracts,
- e. Organizational conflicts of interest;
- f. Specifying only a brand name product instead of allowing an equal product to be offered and describing the performance of other relevant requirements of the procurement; and
- g. Any arbitrary action in the procurement process.

The Agency and the Contractor represents to the PRDOH that all work shall be performed by personnel experienced in the appropriate and applicable profession and areas of expertise, taking into account the nature of the work to be performed under this Contract.

The Agency and the Contractor will include these HUD General Provisions in every subcontract issued by it, so that such provisions will be binding upon each of its subcontractors as well as the requirement to flow down such terms to all lower-tiered subcontractors.

“Al subcontratar, la Agencia y el Contratista solicitarán y contratarán a dichos subcontratistas de manera que se establezca una competencia justa. Algunas de las situaciones consideradas restrictivas de la competencia incluyen, pero no se limitan a:

- a. Imponer requisitos irrazonables a las empresas para que califiquen para hacer negocios;*
- b. Requerir experiencia innecesaria y vinculación excesiva;*
- c. Prácticas de fijación de precios no competitivas entre firmas o entre Compañías afiliadas;*
- d. Premios no competitivos a consultores que tienen contratos de retención,*
- e. Conflictos de intereses organizacionales;*
- f. Especificar solo un producto de marca en lugar de permitir que se ofrezca un producto igual y describir el desempeño de otros requisitos relevantes de la contratación; y*
- g. Cualquier acción arbitraria en el proceso de contratación.*

La Agencia y el Contratista declaran a Vivienda que todo el trabajo será realizado por personal con experiencia en la profesión y áreas de especialización apropiadas y aplicables, teniendo en cuenta la naturaleza del trabajo que se realizará en virtud de este Contrato.

La Agencia y el Contratista incluirán estas Disposiciones generales de HUD en cada subcontrato que emita, de modo que dichas disposiciones sean vinculantes para cada uno de sus subcontratistas, así como el requisito de extender dichos términos a todos los subcontratistas de nivel inferior.”

16. Assignability

The Agency and the Contractor shall not assign any interest in this Agreement and shall not transfer any interest in the same (whether by assignment or novation) without prior written approval of the PRDOH.

“La Agencia y el Contratista no podrán ceder ningún interés en este Acuerdo y no transferirán ningún interés en el mismo (ya sea por cesión o novación) sin la aprobación previa por escrito de Vivienda.”

17. Indemnification

The Agency and the Contractor shall indemnify, defend, and hold harmless the Government of Puerto Rico and PRDOH, its agents and employees, from and against any and all claims, actions, suits, charges, and judgments arising from or related to the negligence or willful misconduct of the Agency and the Contractor in the performance of the services called for in this Contract.

“La Agencia y el Contratista indemnizarán, defenderán y eximirán de responsabilidad al Gobierno de Puerto Rico y Vivienda, sus agentes y empleados, de y contra cualquier y todo reclamo, acción, demanda, cargo y juicio que surja de o esté relacionado con la negligencia o dolo de la Agencia y el Contratista en la prestación de los servicios previstos en el presente Contrato.”

18. Copeland “Anti-Kickback” Act

(Applicable to all construction or repair contracts)

Salaries of personnel performing work under this Contract shall be paid unconditionally and not less often than once a month without payroll deduction or rebate on any account except only such payroll deductions as are mandatory by law or permitted by the applicable regulations issued by the Secretary of Labor pursuant to the Copeland “Anti-Kickback Act” of June 13, 1934 (48 Stat. 948; 62 Stat. 740; 63 Stat. 108; Title 18 U.S.C. § 874; and Title 40 U.S.C. § 276c). The AGENCY shall comply with all applicable “Anti- Kickback” regulations and shall insert appropriate provisions in all subcontracts covering work under this Agreement to ensure compliance by subcontractors with such regulations and shall be responsible for the submission of affidavits required of subcontractors thereunder except as the Secretary of Labor may specifically provide for variations of or exemptions from the requirements thereof.

“(Aplicable a todos los contratos de construcción o reparación)

Los salarios del personal que realice trabajos en virtud de este Contrato se pagarán incondicionalmente y con una frecuencia no menor a una vez al mes sin deducción de nómina o reembolso en ninguna cuenta, excepto solo las deducciones de nómina que sean obligatorias por ley o permitidas por las reglamentaciones aplicables emitidas por el secretario del Trabajo. de conformidad con la “Ley Antisoborno” de Copeland del 13 de junio de 1934 (48 Stat. 948; 62 Stat. 740; 63 Stat. 108; Título 18 U.S.C. § 874; y Título 40 U.S.C. § 276c). La AGENCIA cumplirá con todos los reglamentos “Anti-Sobornos” aplicables e insertará las disposiciones apropiadas en todos los subcontratos que cubran el trabajo bajo este Acuerdo para garantizar el cumplimiento de dichos reglamentos por parte de los subcontratistas, y será responsable de la presentación de las declaraciones juradas requeridas de los subcontratistas en virtud del mismo, excepto como el Secretario del Trabajo podrá disponer específicamente variaciones o exenciones de los requisitos del mismo.”

19. Contract Work Hours and Safety Standards Act

(Applicable to construction contracts exceeding \$2,000 and contracts exceeding \$2,500 that involve the employment of mechanics or laborers.)

The Agency and the Contractor shall comply with Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. §§ 327-330) as supplemented by Department of Labor regulations (29 C.F.R. Part 5). All laborers and mechanics employed by Agency, Contractor or subcontractors shall receive overtime compensation in accordance with and subject to the provisions of the Contract Work Hours and Safety Standards Act, and the Agency, Contractors and subcontractors shall comply with all regulations issued pursuant to that act and with other applicable Federal laws and regulations pertaining to labor standards.

“(Aplicable a contratos de construcción que excedan \$2,000 y contratos que excedan \$2,500 que involucren el empleo de mecánicos o trabajadores).

La Agencia y el Contratista deberán cumplir con las Secciones 103 y 107 de la Ley de Estándares de Seguridad y Horas de Trabajo por Contrato (40 U.S.C. §§ 327-330) complementado por las regulaciones del Departamento de Trabajo (29 C.F.R. Parte 5). Todos los trabajadores y mecánicos

empleados por la Agencia, el Contratista o los subcontratistas recibirán una compensación por horas extra de acuerdo con las disposiciones de la Ley de Normas de Seguridad y Horas de Trabajo por Contrato, y la Agencia, los Contratistas y los subcontratistas deberán cumplir con todos los reglamentos emitidos de conformidad con esa ley. y con otras leyes y reglamentos federales aplicables relacionados con las normas laborales.”

20. Davis-Bacon Act

(Applicable to construction contracts exceeding \$2,000 when required by Federal program legislation.) The Agency and the Contractor shall comply with the Davis Bacon Act (40 U.S.C. §§ 276a to 276a-7) as supplemented by Department of Labor regulations (29 C.F.R. Part 5). All laborers and mechanics employed by Agency, Contractor or subcontractor, including employees of other governments, on construction work assisted under this Contract, and subject to the provisions of the federal acts and regulations listed in this paragraph, shall be paid wages at rates not less than those prevailing on similar construction in the locality as determined by the Secretary of Labor in accordance with the Davis-Bacon Act. On a semi-annual basis, the Agency and the Contractor shall submit Form HUD 4710 (Semi-Annual labor Standards Enforcement Report) to PRDOH.

“(Aplicable a contratos de construcción que excedan los \$2,000 cuando lo exija la legislación del programa federal).

La Agencia y el Contratista deberán cumplir con la Ley Davis Bacon (40 U.S.C. §§ 276a a 276a-7) complementada por las reglamentaciones del Departamento de Trabajo (29 C.F.R. Parte 5). Todos los trabajadores y mecánicos empleados por la Agencia, el Contratista o el subcontratista, incluidos los empleados de otros gobiernos, en trabajos de construcción asistidos en virtud de este Contrato, y sujetos a las disposiciones de las leyes y reglamentos federales enumerados en este párrafo, recibirán salarios a tasas no inferiores a que las que prevalecen en construcciones similares en la localidad según lo determine el secretario de Trabajo de acuerdo con la Ley Davis-Bacon. Semestralmente, la Agencia y el Contratista deberán presentar el Formulario HUD 4710 (Informe Semestral de Cumplimiento de Normas Laborales) a Vivienda.”

21. Termination for Cause

(Applicable to contracts exceeding \$10,000)

if, through any cause, the Agency and the Contractor shall fail to fulfill in a timely and proper manner his or her obligations under this contract, or if the Agency and the Contractor shall violate any of the covenants, agreements, or stipulations of this contract, the Agency and the Contractor shall thereupon have the right to terminate this contract by giving written notice to the Agency and the Contractor of such termination and specifying the effective date thereof, at least five (5) days before the effective date of such termination. in such event, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs, and reports prepared by the Agency and the Contractor under this agreement shall, at the option of the Agency and the Contractor, become the Agency and the Contractor property and the Agency and the Contractor shall be entitled to receive just and equitable compensation for any work satisfactorily completed hereunder. Notwithstanding the above, the Agency and the Contractor shall not be relieved of liability to the Government of Puerto Rico and PRDOH for damages sustained by the Government of Puerto Rico and/or PRDOH by virtue of any breach of the Agreement by the Agency and the Contractor, and the Government of Puerto Rico and/or PRDOH may withhold any payments to the Agency and the Contractor for the purpose of set-off until such time as the exact amount of damages due to the Government of Puerto Rico and/or PRDOH from the Agency and the Contractor is determined.

“(Aplicable a contratos superiores a \$10,000)

si, por cualquier causa, la Agencia y el Contratista incumplen en tiempo y forma sus obligaciones bajo este contrato, o si la Agencia y el Contratista violan cualquiera de los convenios, acuerdos o estipulaciones de este contrato, la Agencia y el Contratista tendrán derecho a rescindir este contrato mediante notificación por escrito a la Agencia y al Contratista de dicha rescisión y especificando la fecha de vigencia de la misma, al menos cinco (5) días antes de la fecha de vigencia de dicha rescisión. en tal caso, todos los documentos, datos, estudios, encuestas, dibujos, mapas, modelos, fotografías e informes terminados o no terminados preparados por la Agencia y el Contratista en

virtud de este acuerdo, a opción de la Agencia y el Contratista, se convertirán en la propiedad de la Agencia y el Contratista y la Agencia y el Contratista tendrán derecho a recibir una compensación justa y equitativa por cualquier trabajo completado satisfactoriamente en virtud del presente. No obstante lo anterior, la Agencia y el Contratista no quedarán relevados de responsabilidad ante el Gobierno de Puerto Rico y Vivienda por daños sufridos por el Gobierno de Puerto Rico y/o Vivienda en virtud de cualquier incumplimiento del Acuerdo por parte de la Agencia y el Contratista. , y el Gobierno de Puerto Rico y/o VIVIENDA podrán retener cualquier pago a la Agencia y al Contratista con el propósito de compensar hasta el momento en que la cantidad exacta de daños adeudados al Gobierno de Puerto Rico y/o VIVIENDA del Se determina la Agencia y el Contratista."

22. Termination For Convenience

(Applicable to contracts exceeding \$10,000)

The Agency and the Contractor may terminate this contract at any time by giving at least ten (10) days' notice in writing to the Agency and the Contractor. if the contract is terminated by the Agency and the Contractor as provided herein, the Agency and the Contractor will be paid for the time provided and expenses incurred up to the termination date.

"(Aplicable a contratos superiores a \$10,000)

La Agencia y el Contratista podrán rescindir este contrato en cualquier momento mediante notificación por escrito a la Agencia y al Contratista con al menos diez (10) días de anticipación. si el contrato es rescindido por la Agencia y el Contratista según lo aquí dispuesto, se pagará a la Agencia y al Contratista por el tiempo prestado y los gastos incurridos hasta la fecha de rescisión."

23. Section 503 of the Rehabilitation Act Of 1973

(Applicable to contracts exceeding \$10,000)

The Agency and the Contractor shall comply with Section 503 of the Rehabilitation Act of 1973 (29 U.S.C. § 793), as amended, and any applicable regulations.

Equal Opportunity for Workers with Disabilities:

a. The Agency and The Contractor will not discriminate against any employee or applicant for employment because of physical or mental disability in regard to any position for which the employee or applicant for employment is qualified. The Agency and The Contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified individuals with disabilities without discrimination based on their physical or mental disability in all employment practices, including the following:

- Recruitment, advertising, and job application procedures;
- Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff and rehiring;
- Rates of pay or any other form of compensation and changes in compensation;
- Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;
- Leaves of absence, sick leave, or any other leave;
- Fringe benefits available by virtue of employment, whether or not administered by the Agency and the Contractor;
- Selection and financial support for training, including apprenticeship, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;
- Activities sponsored by the Agency and the Contractor including social or recreational programs; and
- Any other term, condition, or privilege of employment.

b. The Agency and the Contractor agree to comply with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.

- c. In the event of the Agency and the Contractor's noncompliance with the requirements of this clause, actions for noncompliance may be taken in accordance with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.
- d. The Agency and the Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the Deputy Assistant Secretary for Federal Contract Compliance Programs, provided by or through the contracting officer. Such notices shall state the rights of applicants and employees as well as the Agency and the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified employees and applicants with disabilities. The Agency and the Contractor must ensure that applicants and employees with disabilities are informed of the contents of the notice (e.g., the Agency and the Contractor may have the notice read to a visually disabled individual or may lower the posted notice so that it might be read by a person in a wheelchair).
- e. The Agency and the Contractor will notify each labor organization or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the AGENCY AND THE CONTRACTOR is bound by the terms of Section 503 of the Rehabilitation Act of 1973, as amended, and is committed to take affirmative action to employ and advance in employment individuals with physical or mental disabilities.
- f. The Agency and the Contractor will include the provisions of this clause in every subcontract or purchase order in excess of \$10,000, unless exempted by the rules, regulations, or orders of the Secretary issued pursuant to Section 503 of the Act, as amended, so that such provisions will be binding upon each subcontractor or vendor. The Agency and the Contractor will take such action with respect to any subcontract or purchase order as the Deputy Assistant Secretary for Federal Contract Compliance Programs may direct to enforce such provisions, including action for noncompliance.

“(Aplicable a contratos superiores a \$10,000)

La Agencia y el Contratista deberán cumplir con la Sección 503 de la Ley de Rehabilitación de 1973 (29 U.S.C. § 793), según enmendada, y cualquier reglamento aplicable.

Igualdad de Oportunidades para Trabajadores con Discapacidades:

- a. *La Agencia y el Contratista no discriminarán a ningún empleado o solicitante de empleo debido a una discapacidad física o mental con respecto a cualquier puesto para el cual el empleado o solicitante de empleo esté calificado. La Agencia y el Contratista acuerdan tomar medidas afirmativas para emplear, avanzar en el empleo y tratar a personas calificadas con discapacidades sin discriminación en función de su discapacidad física o mental en todas las prácticas laborales, incluidas las siguientes:*
 - *Procedimientos de contratación, publicidad y solicitud de empleo;*
 - *Contratación, ascenso, promoción, adjudicación de la tenencia, descenso de categoría, transferencia, cesantía, terminación, derecho de regreso de la cesantía y recontratación;*
 - *Tasas de pago o cualquier otra forma de compensación y cambios en la compensación;*
 - *Asignaciones de puestos, clasificaciones de puestos, estructuras organizativas, descripciones de puestos, líneas de progresión y listas de antigüedad;*
 - *Licencias de ausencia, licencia por enfermedad o cualquier otra licencia;*
 - *Beneficios complementarios disponibles en virtud del empleo, sean o no administrados por la Agencia y el Contratista;*
 - *Selección y apoyo financiero para la capacitación, incluido el aprendizaje, reuniones profesionales, conferencias y otras actividades relacionadas, y selección para licencias para continuar con la capacitación;*
 - *Actividades patrocinadas por la Agencia y el Contratista incluyendo sociales o recreativas*
 - *programas; y*

- *Cualquier otro término, condición o privilegio de empleo.*
- b. *La Agencia y el Contratista acuerdan cumplir con las normas, reglamentos y órdenes pertinentes del secretario del Trabajo emitidas de conformidad con la Ley.*
- c. *En caso de incumplimiento por parte de la Agencia y el Contratista de los requisitos de esta cláusula, se podrán tomar acciones por incumplimiento de conformidad con las normas, reglamentos y órdenes pertinentes del secretario del Trabajo emitidas de conformidad con la Ley.*
- d. *La Agencia y el Contratista acuerdan publicar en lugares visibles, disponibles para los empleados y solicitantes de empleo, avisos en la forma que prescriba el Subsecretario Adjunto de Programas de Cumplimiento de Contratos Federales, provistos por o a través del oficial de contratación. Dichos avisos deberán indicar los derechos de los solicitantes y empleados, así como la obligación de la Agencia y el Contratista conforme a la ley de tomar medidas afirmativas para emplear y promover en el empleo a empleados calificados y solicitantes con discapacidades. La Agencia y el Contratista deben asegurarse de que los solicitantes y empleados con discapacidades estén informados del contenido del aviso (p. ej., la Agencia y el Contratista pueden pedir que se lea el aviso a una persona con discapacidad visual o pueden bajar el aviso publicado para que pueda ser leído por una persona en silla de ruedas).*
- e. *La Agencia y el Contratista notificarán a cada organización laboral o representante de los trabajadores con los que tenga un acuerdo de negociación colectiva u otro acuerdo contractual, que la AGENCIA Y EL CONTRATISTA están sujetos a los términos de la Sección 503 de la Ley de Rehabilitación de 1973, según enmendada, y se compromete a tomar medidas afirmativas para emplear y promover en el empleo a las personas con discapacidades físicas o mentales.*
- f. *La Agencia y el Contratista incluirán las disposiciones de esta cláusula en todo subcontrato u orden de compra en exceso de \$10,000, a menos que estén exentos por las reglas, reglamentos u órdenes del secretario emitidas conforme a la Sección 503 de la Ley, según enmendada, para que dichas disposiciones serán vinculantes para cada subcontratista o proveedor. La Agencia y el Contratista tomarán las medidas con respecto a cualquier subcontrato u orden de compra que el Subsecretario Adjunto de Programas de Cumplimiento de Contratos Federales pueda ordenar para hacer cumplir dichas disposiciones, incluida la acción por incumplimiento.*

24. Equal Employment Opportunity

(Applicable to construction contracts and subcontracts exceeding \$10,000)

The Agency and the Contractor shall comply with Executive Order 11246 of September 24, 1965, entitled "Equal Employment Opportunity," as amended by Executive Order 11375 of October 13, 1967, and as supplemented in Department of Labor regulations (41 CFR chapter 60). During the performance of this Agreement, the Agency and the Contractor agrees as follows:

- a. The Agency and the Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Agency and the Contractor shall take affirmative action to ensure that applicants for employment are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.
- b. The Agency and the Contractor shall post in conspicuous places, available to employees and applicants for employment, notices to be provided by Contracting Officer setting forth the provisions of this non-discrimination clause. the Agency and the Contractor shall state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.
- c. The Agency and the Contractor will, in all solicitations or advertisements for employees placed by

or on behalf of the Agency and the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.

- d. The Agency and the Contractor will send to each labor union or representative of workers with which he or she has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the Agency contracting officer, advising the labor union or workers representative of the Agency and the Contractor's commitments under Section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- e. The Agency and the Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations and relevant orders of the Secretary of Labor.
- f. The Agency and the Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations and orders of the Secretary of Labor, or pursuant thereto, and will permit access to books, records and accounts by the contracting Agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.
- g. In the event of the Agency and the Contractor's non-compliance with the non-discrimination clause of this Agreement or with any of such rules, regulations or orders, this Agreement may be cancelled, terminated or suspended in whole or in part and the Agency and the Contractor may be declared ineligible for further government contracts in accordance with procedures authorized in Executive Order 11246 and such other sanctions as may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation or order of the Secretary of Labor, or as otherwise provided by law.
- h. The Agency and the Contractor shall incorporate the provisions of 1 through 7 above in every subcontract or purchase order unless exempted by rules, regulations or orders of the Secretary of Labor so that such provisions shall be binding on such subcontractor. The Agency and the Contractor will take such action with respect to any subcontract or purchase order as the contracting Agency may direct as a means of enforcing such provisions including sanctions for non-compliance, provided, however, that in the event the Agency and the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting Agency, the Agency and the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

“(Aplicable a contratos de construcción y subcontratos superiores a \$10,000)

La Agencia y el Contratista deberán cumplir con la Orden Ejecutiva 11246 del 24 de septiembre de 1965, titulada “Igualdad de Oportunidades en el Empleo”, según enmendada por la Orden Ejecutiva 11375 del 13 de octubre de 1967, y según complementada en los reglamentos del Departamento de Trabajo (41 CFR capítulo 60) . Durante la ejecución de este Acuerdo, la Agencia y el Contratista acuerdan lo siguiente:

- a. *La Agencia y el Contratista no discriminarán a ningún empleado o solicitante de empleo por motivos de raza, color, religión, sexo u origen nacional. La Agencia y el Contratista tomarán medidas afirmativas para garantizar que los solicitantes de empleo sean empleados y que los empleados sean tratados durante el empleo, sin distinción de raza, color, religión, sexo u origen nacional. Dicha acción incluirá, pero no se limitará a, lo siguiente: empleo, ascenso, descenso o transferencia; contratación o publicidad de contratación; despido o terminación; tasas de pago u otras formas de compensación; y selección para la formación, incluido el aprendizaje.*
- b. *La Agencia y el Contratista publicarán en lugares visibles, disponibles para los empleados y solicitantes de empleo, los avisos que proporcionará el Oficial de Contrataciones que establezcan las disposiciones de esta cláusula de no discriminación. la Agencia y el Contratista deberán*

declarar que todos los solicitantes calificados recibirán consideración para el empleo sin distinción de raza, color, religión, sexo u origen nacional.

- c. La Agencia y el Contratista, en todas las solicitudes o anuncios de empleados realizados por o en nombre de la Agencia y el Contratista, indicarán que todos los solicitantes calificados recibirán consideración para el empleo sin distinción de raza, color, religión, sexo u origen nacional.*
- d. La Agencia y el Contratista enviarán a cada sindicato o representante de los trabajadores con los que tenga un contrato colectivo de trabajo u otro contrato o entendimiento, un aviso, que será provisto por el oficial de contrataciones de la Agencia, informando al sindicato o representante de los trabajadores de la Agencia y los compromisos del Contratista bajo la Sección 202 de la Orden Ejecutiva 11246 del 24 de septiembre de 1965, y publicará copias del aviso en lugares visibles disponibles para los empleados y solicitantes de empleo.*
- e. La Agencia y el Contratista cumplirán con todas las disposiciones de la Orden Ejecutiva 11246 del 24 de septiembre de 1965 y de las normas, reglamentos y órdenes pertinentes del Secretario del Trabajo.*
- f. La Agencia y el Contratista proporcionarán toda la información e informes requeridos por la Orden Ejecutiva 11246 del 24 de septiembre de 1965, y por las reglas, reglamentos y órdenes del Secretario del Trabajo, o conforme a las mismas, y permitirán el acceso a los libros, registros y cuentas por la Agencia contratante y el Secretario del Trabajo con fines de investigación para verificar el cumplimiento de tales reglas, reglamentos y órdenes.*
- g. En caso de incumplimiento por parte de la Agencia y el Contratista de la cláusula de no discriminación de este Acuerdo o de cualquiera de dichas normas, reglamentos u órdenes, este Acuerdo podrá ser cancelado, rescindido o suspendido en su totalidad o en parte y el La Agencia y el Contratista pueden ser declarados inelegibles para futuros contratos gubernamentales de acuerdo con los procedimientos autorizados en la Orden Ejecutiva 11246 y cualquier otra sanción que se pueda imponer y los recursos invocados según lo dispuesto en la Orden Ejecutiva 11246 del 24 de septiembre de 1965, o por regla, reglamento o orden del Secretario del Trabajo, o según lo disponga la ley.*
- h. La Agencia y el Contratista incorporarán las disposiciones del 1 al 7 anteriores en cada subcontrato u orden de compra, a menos que estén exentos por normas, reglamentos u órdenes del secretario del Trabajo, de modo que dichas disposiciones sean vinculantes para dicho subcontratista. La Agencia y el Contratista tomarán las medidas con respecto a cualquier subcontrato u orden de compra que la Agencia contratante pueda indicar como un medio para hacer cumplir dichas disposiciones, incluidas las sanciones por incumplimiento, siempre que, sin embargo, en caso de que la Agencia y el Contratista se involucren, o se ve amenazado con, un litigio con un subcontratista o proveedor como resultado de dicha instrucción por parte de la Agencia contratante, la Agencia y el Contratista pueden solicitar a los Estados Unidos que inicien dicho litigio para proteger los intereses de los Estados Unidos.”*

25. Certification Of Nonsegregated Facilities

(Applicable to construction contracts exceeding \$10,000)

The Agency and the Contractor certifies that it does not maintain or provide for its establishments, and that it does not permit employees to perform their services at any location, under its control, where segregated facilities are maintained. It certifies further that it will not maintain or provide for employees any segregated facilities at any of its establishments, and it will not permit employees to perform their services at any location under its control where segregated facilities are maintained. The Agency and the Contractor agrees that a breach of this certification is a violation of the equal opportunity clause of this Agreement.

As used in this certification, the term “segregated facilities” means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms, and other

storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation and housing facilities provided for employees which are segregated by explicit directive or are, in fact, segregated on the basis of race, color, religion, or national origin because of habit, local custom, or any other reason.

The Agency and the Contractor further agrees that (except where it has obtained for specific time periods) it will obtain identical certification from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the equal opportunity clause; that it will retain such certifications in its files; and that it will forward the preceding notice to such proposed subcontractors (except where proposed subcontractors have submitted identical certifications for specific time periods).

“(Aplicable a contratos de construcción superiores a \$10,000)

La Agencia y el Contratista certifican que no mantienen ni proporcionan sus establecimientos, y que no permiten que los empleados presten sus servicios en ningún lugar, bajo su control, donde se mantengan instalaciones segregadas. Certifica además que no mantendrá ni proporcionará a los empleados ninguna instalación segregada en ninguno de sus establecimientos, y no permitirá que los empleados presten sus servicios en ningún lugar bajo su control donde se mantengan instalaciones segregadas. La Agencia y el Contratista acuerdan que el incumplimiento de esta certificación es una violación de la cláusula de igualdad de oportunidades de este Acuerdo.

Tal como se usa en esta certificación, el término "instalaciones segregadas" significa cualquier sala de espera, áreas de trabajo, baños y lavaderos, restaurantes y otras áreas para comer, relojes registradores, vestuarios y otras áreas de almacenamiento o vestidores, estacionamientos, bebederos, áreas de recreación o entretenimiento, instalaciones de transporte y vivienda provistas para empleados que están segregados por directiva explícita o que, de hecho, están segregados por motivos de raza, color, religión u origen nacional debido a hábitos, costumbres locales o cualquier otra razón.

La Agencia y el Contratista también acuerdan que (excepto cuando haya obtenido por períodos de tiempo específicos) obtendrá una certificación idéntica de los subcontratistas propuestos antes de la adjudicación de subcontratos que superen los \$10,000 que no estén exentos de las disposiciones de la cláusula de igualdad de oportunidades; que conservará dichas certificaciones en sus archivos; y que enviará el aviso anterior a dichos subcontratistas propuestos (excepto cuando los subcontratistas propuestos hayan presentado certificaciones idénticas para períodos de tiempo específicos)."

26. Certification of Compliance with Clean Air and Water Acts

(Applicable to contracts exceeding \$100,000)

The Agency and the Contractor and all subContractors shall comply with the requirements of the Clean Air Act, as amended, 42 U.S.C. § 1857 et seq., the Federal Water Pollution Control Act, as amended, 33 U.S.C. § 1251 et seq., and the regulations of the Environmental Protection Agency with respect thereto, at 40 C.F.R. Part 15 and 32, as amended, Section 508 of the Clean Water Act (33 U.S.C. § 1368) and Executive Order 11738. In addition to the foregoing requirements, all nonexempt Contractors and subContractors shall furnish to the owner, the following:

- a. A stipulation by the Agency and the Contractor or subContractors, that any facility to be utilized in the performance of any nonexempt contract or subcontract, is not listed on the Excluded Party Listing System pursuant to 40 C.F.R. 32 or on the List of Violating Facilities issued by the Environmental Protection Agency (EPA) pursuant to 40 C.F.R. Part 15, as amended.
- b. Agreement by the Agency and the Contractor to comply with all the requirements of Section 114 of the Clean Air Act, as amended, (42 U.S.C. § 1857 c-8) and Section 308 of the Federal Water Pollution Control Act, as amended, (33 U.S.C. § 1318) relating to inspection, monitoring, entry, reports and information, as well as all other requirements specified in said Section 114 and Section 308, and all regulations and guidelines issued thereunder.

- c. A stipulation that as a condition for the award of the Agreement, prompt notice will be given of any notification received from the Director, Office of Federal Activities, EPA, indicating that a facility utilized, or to be utilized for the Agreement, is under consideration to be listed on the Excluded Party Listing System or the EPA List of Violating Facilities.
- d. Agreement by the AGENCY AND THE CONTRACTOR that he or she will include, or cause to be included, the criteria and requirements in paragraph (1) through (4) of this section in every nonexempt subcontract and requiring that the Agency and the Contractor will take such action as the government may direct as a means of enforcing such provisions.

“(Aplicable a contratos superiores a \$100,000)

La Agencia y el Contratista y todos los subcontratistas deberán cumplir con los requisitos de la Ley de Aire Limpio, según enmendada, 42 U.S.C. § 1857 et seq., la Ley Federal de Control de la Contaminación del Agua, según enmendada, 33 U.S.C. § 1251 et seq., y las reglamentaciones de la Agencia de Protección Ambiental al respecto, en 40 C.F.R. Partes 15 y 32, según enmendadas, Sección 508 de la Ley de Agua Limpia (33 U.S.C. § 1368) y Orden Ejecutiva 11738. Además de los requisitos anteriores, todos los Contratistas y subcontratistas no exentos deberán proporcionar al propietario lo siguiente:

- a. *Una estipulación por parte de la Agencia y el Contratista o subcontratistas, de que cualquier instalación que se utilizará en la ejecución de cualquier contrato o subcontrato no exento, no se incluye en el Sistema de listado de partes excluidas de conformidad con 40 C.F.R. 32 o en la Lista de instalaciones en infracción emitida por la Agencia de Protección Ambiental (EPA) de conformidad con 40 C.F.R. Parte 15, según enmendada.*
- b. *Acuerdo entre la Agencia y el Contratista para cumplir con todos los requisitos de la Sección 114 de la Ley de Aire Limpio, según enmendada, (42 U.S.C. § 1857 c-8) y la Sección 308 de la Ley Federal de Control de la Contaminación del Agua, según enmendada, (33 USC § 1318) en relación con la inspección, el control, la entrada, los informes y la información, así como todos los demás requisitos especificados en dicha Sección 114 y Sección 308, y todos los reglamentos y directrices emitidos en virtud de los mismos.*
- c. *C. Una estipulación de que, como condición para la adjudicación del Acuerdo, se dará notificación inmediata de cualquier notificación recibida del Director de la Oficina de Actividades Federales, EPA, que indique que se está considerando una instalación utilizada o que se utilizará para el Acuerdo. ser incluido en el Sistema de Listado de Partes Excluidas o en la Lista de Instalaciones Infractoras de la EPA.*
- d. *El acuerdo de la Agencia y el Contratista de que él o ella incluirá, o hará que se incluyan, los criterios y requisitos de los párrafos (1) a (4) de esta sección en cada subcontrato no exento y requiere que la Agencia y el Contratista tomarán la acción que el gobierno pueda ordenar como un medio para hacer cumplir tales disposiciones.”*

27. Anti-Lobbying

(Applicable to contracts exceeding \$100,000)

By the execution of this CONTRACT, the Agency and the Contractor certifies, to the best of his or her knowledge and belief, that:

- a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the Agency and the Contractor, to any person for influencing or attempting to influence an officer or employee of an Agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

- b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the Agency and the Contractor shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying", in accordance with its instructions.
- c. The Agency and the Contractor shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all Agency and the Contractor shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

“(Aplicable a contratos superiores a \$100,000)

Mediante la ejecución de este CONTRATO, la Agencia y el Contratista certifican, a su leal saber y entender, que:

- a. *No se han pagado ni se pagarán fondos federales asignados, por o en nombre de la Agencia y el Contratista, a ninguna persona por influir o intentar influir en un funcionario o empleado de una Agencia, un Miembro del Congreso, un funcionario o empleado de Congreso, o un empleado de un miembro del Congreso en relación con la adjudicación de cualquier contrato federal, la realización de cualquier subvención federal, la realización de cualquier préstamo federal, la celebración de cualquier acuerdo de cooperación y la extensión, continuación, renovación, enmienda o modificación de cualquier contrato federal, subvención, préstamo o acuerdo de cooperación.*
- b. *Si se han pagado o se pagarán fondos distintos de los fondos federales asignados a cualquier persona por influir o intentar influir en un funcionario o empleado de cualquier agencia, un miembro del Congreso, un funcionario o empleado del Congreso o un empleado de un miembro del Congreso en relación con este contrato federal, subvención, préstamo o acuerdo de cooperación, la Agencia y el Contratista completarán y presentarán el Formulario estándar-LLL, "Formulario de divulgación para informar cabildeo", de acuerdo con sus instrucciones.*
- c. *La Agencia y el Contratista exigirán que el lenguaje de esta certificación se incluya en los documentos de adjudicación para todas las subadjudicaciones en todos los niveles (incluidos los subcontratos, subsubvenciones y contratos bajo subvenciones, préstamos y acuerdos de cooperación) y que toda la Agencia y el Contratista certificar y divulgar en consecuencia. Esta certificación es una representación material de los hechos en los que se depositó confianza cuando se realizó o se celebró esta transacción. La presentación de esta certificación es un requisito previo para realizar o celebrar esta transacción impuesta por la Sección 1352, Título 31, Código de EE. UU. Cualquier persona que no presente la certificación requerida estará sujeta a una sanción civil de no menos de \$10,000 y no más de \$100,000 por cada incumplimiento.”*

28. Bonding Requirements

(Applicable to construction and facility improvement contracts exceeding \$100,000)

The Agency and the Contractor shall comply with Puerto Rico bonding requirements, unless they have not been approved by HUD, in which case the Agency and the Contractor shall comply with the following minimum bonding requirements:

- a. A bid guarantee from each bidder equivalent to five percent (5%) of the bid price. The “bid guarantee” shall consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of

his or her bid, execute such contractual documents as may be required within the time specified.

- b. A performance bond on the part of the Agency and the Contractor for one hundred percent (100%) of the Agreement price. A "performance bond" is one executed in connection with a contract to secure fulfillment of all the Agency and the Contractor's obligations under such contract.
- c. A payment bond on the part of the Agency and the Contractor for one hundred percent (100%) of the Agreement price. A "payment bond" is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract.

"(Aplicable a contratos de construcción y mejora de instalaciones que excedan los \$100,000)

La Agencia y el Contratista deberán cumplir con los requisitos de fianza de Puerto Rico, a menos que no hayan sido aprobados por HUD, en cuyo caso la Agencia y el Contratista deberán cumplir con los siguientes requisitos mínimos de fianza:

- a. *Una garantía de oferta de cada postor equivalente al cinco por ciento (5%) del precio de la oferta. La "garantía de oferta" consistirá en un compromiso firme, como una fianza de oferta, un cheque certificado u otro instrumento negociable que acompañe a una oferta como garantía de que el licitante, al aceptar su oferta, ejecutará los documentos contractuales que sean necesarios dentro del tiempo especificado.*
- b. *Garantía de cumplimiento por parte de la Agencia y el Contratista por el cien por ciento (100%) del precio del Contrato. Una "fianza de cumplimiento" es aquella ejecutada en relación con un contrato para garantizar el cumplimiento de todas las obligaciones de la Agencia y del Contratista en virtud de dicho contrato.*
- c. *Fianza de pago por parte de la Agencia y del Contratista por el cien por ciento (100%) del precio del Contrato. Una "fianza de pago" es aquella ejecutada en relación con un contrato para asegurar el pago requerido por la ley de todas las personas que suministren mano de obra y material en la ejecución del trabajo previsto en el contrato."*

29. Section 3 of the Housing And Urban Development Act Of 1968

(As required by applicable thresholds)

- a. The work to be performed under this Agreement is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. § 1701u (Section 3). The purpose of Section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by Section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.
- b. The parties to this Agreement agree to comply with HUD's regulations in 24 C.F.R. Part 135, which implement Section 3. As evidenced by their execution of this Agreement, the parties to this Agreement certify that they are under no contractual or other impediment that would prevent them from complying with the Part 135 regulations.
- c. The Agency and the Contractor agrees to send to each labor organization or representative of workers with which the Agency and the Contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the Agency and the Contractor's commitments under this Section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the Section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications

for each of the positions; and the anticipated date the work shall begin.

- d. The Agency and the Contractor agree to include this Section 3 clause in every subcontract subject to compliance with regulations in 24 C.F.R. Part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this Section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 C.F.R. Part 135. The Agency and the Contractor will not subcontract with any subcontractor where the Agency and the Contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 C.F.R. Part 135.
- e. The Agency and the Contractor will certify that any vacant employment positions, including training positions, that are filled: (1) after the Contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 C.F.R. Part 135 require employment opportunities to be directed, were not filled to circumvent the Contractor's obligations under 24 C.F.R. Part 135.
- f. Noncompliance with HUD's regulations in 24 C.F.R. Part 135 may result in sanctions, termination of this Agreement for default, and debarment or suspension from future HUD assisted contracts.
- g. With respect to work performed in connection with Section 3 covered Indian housing assistance, Section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. § 450e) also applies to the work to be performed under this Agreement. Section 7(b) requires that to the greatest extent feasible: (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this Agreement that are subject to the provisions of Section 3 and Section 7(b) agree to comply with Section 3 to the maximum extent feasible, but not in derogation of compliance with Section 7(b).
- h. For contracts exceeding \$100,000, the Agency and the Contractor shall submit Form HUD 60002 (Section 3 Summary Report) to PRDOH on a quarterly basis, notwithstanding the annual reporting requirement set forth in that form's instructions.

“(Según lo requieran los umbrales aplicables)”

- a. *El trabajo a realizar en virtud de este Acuerdo está sujeto a los requisitos de la Sección 3 de la Ley de Vivienda y Desarrollo Urbano de 1968, según enmendada, 12 U.S.C. § 1701u (Sección 3). El propósito de la Sección 3 es asegurar que el empleo y otras oportunidades económicas generadas por la asistencia de HUD o los proyectos asistidos por HUD cubiertos por la Sección 3, en la mayor medida posible, se dirijan a personas de bajos y muy bajos ingresos, en particular personas que son beneficiarios de asistencia de HUD para vivienda.*
- b. *Las partes de este Acuerdo acuerdan cumplir con las regulaciones de HUD en 24 C.F.R. Parte 135, que implementa la Sección 3. Como lo demuestra su ejecución de este Acuerdo, las partes de este Acuerdo certifican que no tienen ningún impedimento contractual o de otro tipo que les impida cumplir con las regulaciones de la Parte 135.*
- c. *La Agencia y el Contratista acuerdan enviar a cada organización laboral o representante de los trabajadores con la que la Agencia y el Contratista tengan un contrato colectivo de trabajo u otro acuerdo, si lo hubiere, un aviso notificando a la organización laboral o representante de los trabajadores de la Agencia y al Los compromisos del contratista bajo esta cláusula de la Sección 3, y publicará copias del aviso en lugares discretos en el lugar de trabajo donde tanto los empleados como los solicitantes de puestos de capacitación y empleo puedan ver el aviso. El aviso describirá la preferencia de la Sección 3, establecerá el número mínimo y los títulos de trabajo sujetos a contratación, la disponibilidad de puestos de aprendizaje y capacitación, las calificaciones para cada uno; y el nombre y ubicación de la(s) persona(s) que acepta(n) las solicitudes para cada uno de los puestos; y la fecha prevista de inicio de la obra.*

- d. *La Agencia y el Contratista acuerdan incluir esta cláusula de la Sección 3 en cada subcontrato sujeto al cumplimiento de las regulaciones en 24 C.F.R. Parte 135, y acepta tomar las medidas apropiadas, según lo dispuesto en una disposición aplicable del subcontrato o en esta cláusula de la Sección 3, al determinar que el subcontratista está violando las regulaciones en 24 C.F.R. Parte 135. La Agencia y el Contratista no subcontratarán con ningún subcontratista cuando la Agencia y el Contratista tengan notificación o conocimiento de que se ha encontrado que el subcontratista ha violado las reglamentaciones de 24 C.F.R. Parte 135.*
- e. *La Agencia y el Contratista certificarán que todos los puestos de trabajo vacantes, incluidos los puestos de capacitación, que se llenen: (1) después de que se seleccione al Contratista pero antes de que se ejecute el contrato, y (2) con personas distintas de aquellas a las que se aplican las reglamentaciones de 24 CFR La Parte 135 requiere que las oportunidades de empleo sean dirigidas, no fueron llenadas para eludir las obligaciones del Contratista bajo 24 C.F.R. Parte 135.*
- f. *Incumplimiento de las reglamentaciones de HUD en 24 C.F.R. La Parte 135 puede dar lugar a sanciones, la rescisión de este Acuerdo por incumplimiento y la inhabilitación o suspensión de futuros contratos asistidos por HUD.*
- g. *Con respecto al trabajo realizado en relación con la asistencia de vivienda indígena cubierta por la Sección 3, la Sección 7(b) de la Ley de Asistencia Educativa y Autodeterminación Indígena (25 U.S.C. § 450e) también se aplica al trabajo que se realizará en virtud de este Acuerdo. La sección 7(b) exige que, en la mayor medida posible: (i) se dé preferencia y oportunidades de capacitación y empleo a los indios, y (ii) se dé preferencia en la adjudicación de contratos y subcontratos a las organizaciones indias y a los indios- Empresas Económicas propias. Las partes de este Acuerdo que están sujetas a las disposiciones de la Sección 3 y la Sección 7(b) acuerdan cumplir con la Sección 3 en la mayor medida posible, pero sin perjuicio del cumplimiento de la Sección 7(b).*
- h. *Para contratos que excedan los \$100,000, la Agencia y el Contratista deberán presentar el Formulario HUD 60002 (Informe resumido de la Sección 3) a Vivienda trimestralmente, sin perjuicio del requisito de informe anual establecido en las instrucciones de ese formulario."*

30. Fair Housing Act

The Agency and the Contractor shall comply with the provisions of the Fair Housing Act of 1968, as amended. The Act prohibits discrimination in the sale or rental of housing, the financing of housing or the provision of brokerage services against any person on the basis of race, color, religion, sex, national origin, disability, or familial status. The Equal Opportunity in Housing Act prohibits discrimination against individuals on the basis of race, color, religion, sex or national origin in the sale, rental, leasing or other disposition of residential property, or in the use or occupancy of housing assisted with Federal funds.

"La Agencia y el Contratista deberán cumplir con las disposiciones de la Ley de Vivienda Justa de 1968, según enmendada. La Ley prohíbe la discriminación en la venta o alquiler de viviendas, la financiación de viviendas o la prestación de servicios de corretaje contra cualquier persona por motivos de raza, color, religión, sexo, origen nacional, discapacidad o estado familiar. La Ley de Igualdad de Oportunidades en la Vivienda prohíbe la discriminación contra las personas por motivos de raza, color, religión, sexo u origen nacional en la venta, alquiler, arrendamiento u otra disposición de propiedad residencial, o en el uso u ocupación de viviendas asistidas con fondos federales."

31. Energy Policy and Conservation Act

The Agency and the Contractor shall comply with mandatory standards and policies relating to energy efficiency as contained in the Government of Puerto Rico's energy conservation plan, issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. 6201 et seq).

"La Agencia y el Contratista deberán cumplir con las normas y políticas obligatorias relacionadas con la eficiencia energética contenidas en el plan de conservación de energía del Gobierno de Puerto

Rico, emitido en cumplimiento de la Ley de Política y Conservación de Energía (42 U.S.C. 6201 et seq)."

32. Hatch Act

The Agency and the Contractor agrees to comply with mandatory standards and policies relating to Hatch Act, Public Law 94-163, as amended. The Hatch Act applies to political activities of certain state and local employees. As a Puerto Rico Department of Housing Subrecipient, you may do any of the following activities be a candidate in nonpartisan elections; attend political meetings and conventions; contribute money; campaign in partisan elections; and hold office in political parties. The Agency and the Contractor may not do the following activities be a candidate in partisan elections; use official influence to interfere in elections; coerce political contributions from subordinates in support of political parties or candidates the office of special counsel operates a website that provides guidance concerning hatch act issues.

"La Agencia y el Contratista acuerdan cumplir con las normas y políticas obligatorias relacionadas con la Ley Hatch, Ley Pública 94-163, según enmendada. La Ley Hatch se aplica a las actividades políticas de ciertos empleados estatales y locales. Como subreceptor del Departamento de la Vivienda de Puerto Rico, podrá realizar cualquiera de las siguientes actividades: ser candidato en elecciones no partidistas; asistir a reuniones y convenciones políticas; aportar dinero; campaña en elecciones partidistas; y ocupar cargos en partidos políticos. La Agencia y el Contratista no podrán realizar las siguientes actividades: ser candidato en elecciones partidistas; utilizar la influencia oficial para interferir en las elecciones; coaccionar contribuciones políticas de subordinados en apoyo de partidos políticos o candidatos la oficina del abogado especial opera un sitio web que brinda orientación sobre asuntos relacionados con la ley Hatch."

33. Health And Safety Standards

All parties participating in this project agree to comply with Sections 107 and 103 of the Contract Work Hours and Safety Standards Act. Section 107 of the Act is applicable to construction work and provides that no laborer or mechanic shall be required to work in surroundings or under working conditions, which are unsanitary, hazardous, or dangerous to his or her health and safety as determined under construction, safety, and health standards promulgated by the Secretary of Labor. These requirements do not apply to the purchase of supplies or materials or articles ordinarily available on the open market, or contracts for transportation.

"Todas las partes que participan en este proyecto acuerdan cumplir con las Secciones 107 y 103 de la Ley de normas de seguridad y horas de trabajo por contrato. La Sección 107 de la Ley se aplica al trabajo de construcción y establece que no se exigirá a ningún trabajador o mecánico que trabaje en entornos o en condiciones de trabajo que sean antihigiénicas, peligrosas o peligrosas para su salud y seguridad, según se determine en las normas de construcción, seguridad, y normas sanitarias promulgadas por la Secretaría del Trabajo. Estos requisitos no se aplican a la compra de suministros o materiales o artículos normalmente disponibles en el mercado libre, o contratos de transporte."

34. Personnel

The Agency and the Contractor represents that it has, or will secure at its own expense, all personnel required in performing the services under this Agreement. Such personnel shall not be employees of, or have any contractual relationship with, the contracting party. All the services required hereunder will be performed by the Agency and the Contractor or under its supervision, and all personnel engaged in the work shall be fully qualified and shall be authorized or permitted under State and local law to perform such services. No person who is serving sentence in a penal or correctional institution shall be employed on work under this Contract.

"La Agencia y el Contratista declaran que tienen, o asegurarán a sus expensas, todo el personal requerido para prestar los servicios bajo este Acuerdo. Dicho personal no podrá ser empleado ni tener ninguna relación contractual con la parte contratante. Todos los servicios requeridos en virtud del presente serán realizados por la Agencia y el Contratista o bajo su supervisión, y todo el personal involucrado en el trabajo deberá estar completamente calificado y deberá estar autorizado o

autorizado según las leyes estatales y locales para realizar dichos servicios. Ninguna persona que esté cumpliendo sentencia en una institución penal o correccional podrá ser empleada en trabajos bajo este Contrato.”

35. Withholding Of Wages

If in the performance of this Agreement, there is any underpayment of wages by the Agency and the Contractor or by any subcontractor thereunder, the PRDOH may withhold from the Agency and the Contractor out of payment due to him or her an amount sufficient to pay to employees underpaid the difference between the wages required thereby to be paid and the wages actually paid such employees for the total number of hours worked. The amounts withheld may be disbursed by the PRDOH for and on account of the Agency and the Contractor or subcontractor to the respective employees to whom they are due.

“Si en el cumplimiento de este Acuerdo, hay algún pago insuficiente de salarios por parte de la Agencia y el Contratista o por cualquier subcontratista en virtud del mismo, Vivienda puede retener de la Agencia y el Contratista del pago adeudado a él o ella una cantidad suficiente para pagar a los empleados pagaron de menos la diferencia entre los salarios requeridos y los salarios realmente pagados a dichos empleados por el número total de horas trabajadas. Las cantidades retenidas podrán ser desembolsadas por Vivienda para y por cuenta de la Agencia y del Contratista o subcontratista a los respectivos empleados a quienes corresponda.”

36. Claims And Disputes Pertaining to Wage Rates

Claims and disputes pertaining to wage rates or to classifications of professional staff or technicians performing work under this Contract shall be promptly reported in writing by the Agency and the Contractor to the PRDOH for the latter's decision, which shall be final with respect thereto.

“Las reclamaciones y disputas relacionadas con las tarifas de salarios o con las clasificaciones del personal profesional o de los técnicos que realicen trabajos bajo este Contrato deberán ser notificadas por escrito de inmediato por la Agencia y el Contratista a Vivienda para la decisión de este último, que será final con respecto a los mismos.”

37. Discrimination Because Of Certain Labor Matters

No person employed on the services covered by this Agreement shall be discharged or in any way discriminated against because he or she has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable hereunder to his or her employer.

“No se despedirá a ninguna persona empleada en los servicios cubiertos por este Acuerdo ni se la discriminará de ninguna manera porque haya presentado una queja o iniciado o hecho que se inicie un procedimiento o haya testificado o esté a punto de testificar en cualquier procedimiento bajo o relacionado a las normas laborales aplicables en virtud de la presente a su empleador.”

38. Interest Of Members Of Local Public Agency And Others

The Agency and the Contractor agrees to establish safeguards to prohibit employees from using positions for a purpose that is or gives the appearance of being motivated by a desire for private gain for themselves or others, particularly those with whom they have a family, business, or other tie. The Agency and the Contractor will be aware of and avoid any violation of the laws of this State which prohibit municipal officers and employees from having or owning any interest or share, individually or as agent or employee of any person or corporation, either directly or indirectly, in any contract made or let by the governing authorities of such municipality for the construction or doing of any public work, or for the sale or purchase of any materials, supplies or property of any description, or for any other purpose whatsoever, or in any subcontract arising therefrom or connected therewith, or to receive, either directly or indirectly, any portion or share of any money or other thing paid for the construction or doing of any public work, or for the sale or purchase of any property, or upon any other contract made by the governing authorities of the municipality, or subcontract arising therefore or connected therewith.

The Agency and the Contractor will also be aware of and avoid any violation of the laws of this State which prescribe a criminal penalty for any public officer who has an interest in any contract passed by the board of which he or she is a member during the time he or she was a member and for one year thereafter.

“La Agencia y el Contratista acuerdan establecer salvaguardas para prohibir que los empleados utilicen puestos para un propósito que esté o parezca estar motivado por un deseo de ganancia privada para ellos mismos o para otros, particularmente aquellos con quienes tienen una familia, negocio o otra corbata. La Agencia y el Contratista estarán al tanto y evitarán cualquier violación de las leyes de este Estado que prohíben que los funcionarios y empleados municipales tengan o sean propietarios de cualquier interés o participación, individualmente o como agente o empleado de cualquier persona o corporación, ya sea directa o indirectamente. , en cualquier contrato hecho o otorgado por las autoridades gobernantes de dicho municipio para la construcción o ejecución de cualquier obra pública, o para la venta o compra de cualquier material, suministro o propiedad de cualquier tipo, o para cualquier otro propósito, o en cualquier subcontrato que surja o esté relacionado con el mismo, o para recibir, ya sea directa o indirectamente, cualquier porción o parte de cualquier dinero u otra cosa pagada por la construcción o realización de cualquier obra pública, o por la venta o compra de cualquier propiedad, o por cualquier otro contrato que celebren las autoridades rectoras del municipio, o subcontrato derivado o relacionado con el mismo.

La Agencia y el Contratista también conocerán y evitarán cualquier violación de las leyes de este Estado que prescriben una sanción penal para cualquier funcionario público que tenga interés en cualquier contrato aprobado por la junta de la que él o ella es miembro durante el tiempo que él o ella fue miembro y por un año a partir de entonces.”

39. Interest Of Certain Federal Officers

No member of, or delegate to, the Congress of the United States and no Resident Commissioner shall be admitted any share or part of this Agreement or to any benefit to arise therefrom.

“Ningún miembro o delegado del Congreso de los Estados Unidos y ningún Comisionado Residente serán admitidos en ninguna parte o parte de este Acuerdo o en cualquier beneficio que surja del mismo.”

40. Interest Of Agency and the Contractor

The Agency and the Contractor agrees that it presently has no interest and shall not acquire any interest, direct or indirect, in the above-described project or any parcels therein or any other interest which would conflict in any manner or degree with the performance of the Work hereunder. The Agency and the Contractor further agrees that no person having any such interest shall be employed in the performance of this Agreement.

“La Agencia y el Contratista acuerdan que actualmente no tiene ningún interés y no adquirirá ningún interés, directo o indirecto, en el proyecto descrito anteriormente o en cualquier parcela del mismo o cualquier otro interés que entraría en conflicto de alguna manera o grado con el desempeño del Trabajo a continuación. La Agencia y el Contratista acuerdan además que ninguna persona que tenga dicho interés será empleada en la ejecución de este Acuerdo”.

41. Political Activity

The Agency and the Contractor will comply with the provisions of the Hatch Act (5 U.S.C. 1501 et seq.), which limits the political activity of employees.

“La Agencia y el Contratista cumplirán con las disposiciones de la Ley Hatch (5 U.S.C. 1501 et seq.), que limita la actividad política de los empleados.”

42. Religious Activity

The Agency and the Contractor agrees to abstain from using any funds related to this Agreement for

inherently religious activities prohibited by 24 CFR 570.200(j), such as worship, religious instruction, or proselytization.

“La Agencia y el Contratista acuerdan abstenerse de utilizar cualquier fondo relacionado con este Acuerdo para actividades inherentemente religiosas prohibidas por 24 CFR 570.200(j), como culto, instrucción religiosa o proselitismo.”

43. Flood Disaster Protection Act Of 1973

The Agency and the Contractor will ensure that procedures and mechanisms are put into place to monitor compliance with all flood insurance requirements as found in the Flood Disaster Protection Act of 1973, 24 C.F.R. § 570.605.

La Agencia y el Contratista acuerdan abstenerse de utilizar cualquier fondo relacionado con este Acuerdo para actividades inherentemente religiosas prohibidas por 24 CFR 570.200(j), como culto, instrucción religiosa o proselitismo.

44. Lead Based Paint

The Agency and the Contractor must comply with the regulations regarding lead-based paint found at 24 C.F.R. § Part 35 on Lead-Based Paint Poisoning Prevention In Certain Residential Structures with regards to all housing units assisted using CDBG- DR funds.

La Agencia y el Contratista deben cumplir con las reglamentaciones sobre pintura a base de plomo que se encuentran en 24 C.F.R. § Parte 35 sobre la prevención del envenenamiento por pintura a base de plomo en ciertas estructuras residenciales con respecto a todas las unidades de vivienda asistidas con fondos de CDBG-DR.

45. Value Engineering

(Applicable to construction contracts exceeding \$2,000 when required by Federal program legislation.)

The Agency and the Contractor must comply with the regulations regarding systematic and organized approach to analyze functions of systems, equipment, facilities, services, and materials to ensure they achieve their essential functions at the lowest cost consistent to life cycle in execution, reliability, quality, and safety, in accordance with 2 C.F.R. § 200.318.(g).

(Aplicable a contratos de construcción que excedan los \$2,000 cuando lo exija la legislación del programa federal).

La Agencia y el Contratista deben cumplir con las normas relativas al enfoque sistemático y organizado para analizar las funciones de los sistemas, equipos, instalaciones, servicios y materiales para asegurar que logren sus funciones esenciales al menor costo consistente con el ciclo de vida en ejecución, confiabilidad, calidad. y seguridad, de acuerdo con 2 C.F.R. § 200.318.(g).

We certify that we will comply with the clauses and conditions established by the aforementioned laws and regulations.

Certificamos que cumpliremos con las cláusulas y condiciones establecidas por las leyes y reglamentos antes mencionados.

Company/Compañía

Name/Nombre

Corporate Seal/Sello Corporativo

Signature/Firma

Position/Puesto que Ocupa

Date/Fecha

Attachment 5

HUD 4010

Applicability

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

A. 1. (i) Minimum Wages. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible, place where it can be easily seen by the workers.

(ii) (a) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215-0140.)

(c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii)(b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part

of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

2. Withholding. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work, all or part of the wages required by the contract, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3. (i) Payrolls and basic records. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis-bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5 (a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been

communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017.)

(ii) (a) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i) except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this subparagraph for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to HUD or its designee. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149.)

(b) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under 29 CFR 5.5 (a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(c) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph A.3.(ii)(b).

(d) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under subparagraph A.3.(i) available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and Trainees.

(i) **Apprentices.** Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who

is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) **Trainees.** Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by

the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under 29 CFR Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR Part 3 which are incorporated by reference in this contract

6. Subcontracts. The contractor or subcontractor will insert in any subcontracts the clauses contained in subparagraphs 1 through 11 in this paragraph A and such other clauses as HUD or its designee may by appropriate instructions require, and a copy of the applicable prevailing wage decision, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this paragraph.

7. Contract termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act Requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.

10. (i) Certification of Eligibility. By entering into this contract the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be

awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1 01 0, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part: "Whoever, for the purpose of . . . influencing in any way the action of such Administration..... makes, utters or publishes any statement knowing the same to be false..... shall be fined not more than \$5,000 or imprisoned not more than two years, or both."

11. Complaints, Proceedings, or Testimony by Employees. No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. Contract Work Hours and Safety Standards Act. The provisions of this paragraph B are applicable where the amount of the prime contract exceeds \$100,000. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in subparagraph (1) of this paragraph.

(3) Withholding for unpaid wages and liquidated damages. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contract, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act which is held by the same prime contractor such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (2) of this paragraph.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs (1) through (4) of this paragraph.

C. Health and Safety. The provisions of this paragraph C are applicable where the amount of the prime contract exceeds \$100,000.

(1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91-54, 83 Stat 96). 40 USC 3701 et seq.

(3) The contractor shall include the provisions of this paragraph in every subcontract so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

Attachment 6

IMPERATIVE INCLUSION CLAUSES

**CLAUSULAS DE INCLUSION IMPERATIVA EN TODO CONTRATO
DE SERVICIOS PROFESIONALES O COMPRADOS EN EXCESO
DE \$10,000.00**

Cláusula de servicios interagenciales: Ambas partes contratantes reconocen y acceden a que los servicios contratados podrán ser brindados a cualquier entidad de la Rama Ejecutiva con la cual la entidad contratante realice un acuerdo interagencial o por disposición directa de la Secretaría de la Gobernación. Estos servicios se realizarán bajo los mismos términos y condiciones en cuanto a horas de trabajo y compensación consignados en este contrato. Para efectos de esta cláusula, el término “entidad de la Rama Ejecutiva” incluye a todas las agencias del Gobierno de Puerto Rico, así como a las instrumentalidades y corporaciones públicas y a la Oficina del Gobernador.

Cláusula de terminación: La Secretaría de la Gobernación tendrá la facultad de dar por terminado el presente contrato en cualquier momento.

Política de Revisión de Contratos de la Junta de Supervisión y Administración Financiera para Puerto Rico: Las Partes reconocen que el CONTRATISTA ha presentado la certificación titulada “Requisito de Certificación de Contratista” requerida de conformidad con la Política de Revisión de Contratos de la Junta de Supervisión y Administración Financiera para Puerto Rico, vigente a partir del 6 de noviembre de 2017 y según enmendada el 30 de octubre de 2020, firmada por el Director Ejecutivo del Contratista (u otro funcionario con una posición o autoridad equivalente para emitir tales certificaciones). Se incluye como anejo a este Contrato, copia firmada del “Requisito de Certificación del Contratista”.