



DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
P.O. BOX 4970
JACKSONVILLE, FLORIDA 32232-0019

REPLY TO
ATTENTION OF

OCT 16 2014

Planning Division
Environmental Branch

Ms. Rose Ortiz
Coastal Zone Management Consistency Office
Puerto Rico Planning Board
P.O. Box 41119, Minillas Station
San Juan, Puerto Rico 00940

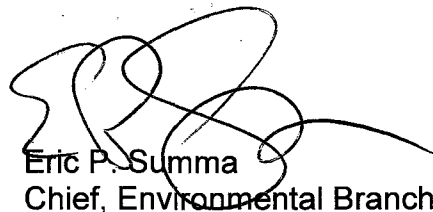
Dear Ms. Ortiz:

I have enclosed seven copies of an application for Certification of Consistency with the Puerto Rico Coastal Zone Management Program for the Rio Culebrinas Flood Risk Management Project in Aguadilla and Aguada, Puerto Rico. This project involves the construction of two levees, a by-pass channel, and mitigation for wetland impacts (see enclosed maps, drawings, and description).

Additional information on this project is available on the internet http://www.saj.usace.army.mil/About/DivisionsOffices/Planning/EnvironmentalBranch/EnvironmentalDocuments.aspx#Puerto_Rico. Also a revised Finding of No Significant Impact and a revised Detailed Project Report will be posted on this internet page when they are available.

If you have any questions, please contact Kenneth Dugger at 904-232-1686 (kenneth.r.dugger@usace.army.mil).

Sincerely,



Eric P. Summa
Chief, Environmental Branch

Enclosures

Commonwealth of Puerto Rico
Office of the Governor
Puerto Rico Planning Board
Physical Planning Area
Land Use Planning Bureau

Application for Certification of Consistency with the
Puerto Rico Coastal Management Program

General Instructions:

- A. Attach a 1:20,000 scale, U.S. Geological Survey topographic quadrangular base map of the site.
- B. Attach a reasonably scaled plan or schematic design of the proposed object, indicating the following:
 - 1. Peripheral areas
 - 2. Bodies of water, tidal limit and natural systems.
- C. You may attach any further information you consider necessary for proper evaluation of the proposal.
- D. If any information requested in the questionnaire does not apply in your case, indicate by writing "N/A"(not applicable).
- E. Submit a minimum of seven (7) copies of this application.

DO NOT WRITE IN THIS BOX

Type of application: _____

Application Number: _____

Date received: _____

Date of Certification: _____

Evaluation result:

☐ Objection

☐ Acceptance

☐ Negotiation

Technician: _____

Supervisor: _____

Comments: _____

- 1. Name of Federal Agency: _____
- 2. Federal Program Catalog Number: _____
- 3. Type of Action:
 - ☐ Federal Activity
 - ☐ License or permit
 - ☐ Federal Assistance
- 4. Name of Applicant: _____

Postal Address: _____

Telephone: _____ Fax: _____
- 5. Project name: _____
- 6. Physical Description of Project Location (area, facilities such as vehicular access, drainage, storm and sanitary sewer placement, etc.): _____

Lambert Coordinates: X = _____ Y = _____

7. Type of construction or other work proposed:

- ☐ drainage
- ☐ channeling
- ☐ landfill
- ☐ sand extraction
- ☐ pier
- ☐ bridge
- ☐ residential
- ☐ tourist

others (specify and explain) _____

Description of proposed work: _____

8. Natural, artificial, historic or cultural systems likely to be affected by the project

Place an X opposite any of the systems indicated below that are in the project area or its surroundings, which are likely to be affected by that activity. Indicate the distance from the project to any outside system that would likely be affected.

System	Within Project	Outside Project	Distance (meters)	Local name of affected system
beach, dunes				
marshes				
coral, reefs				
river, estuary				
bird sanctuary				
pond, lake, lagoon				
agricultural unit				
forest, wood				
cliff, breakwater				
cultural or tourist area				
other (explain)				

Describe the likely impact of the project on the identified system (s).

Positive ☐

Negative ☐

Explain:

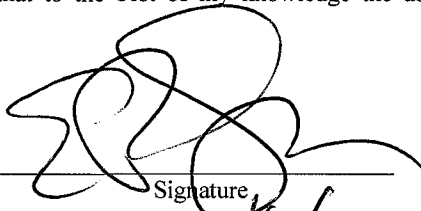
9. Indicate permits, approvals and endorsements of the proposal by Federal and Puerto Rican government agencies. Evidence of such support should be attached to the proposal.

	Yes	No	Pending	Application Number
a. Planning Board	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
b. Regulation and Permits Administration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c. Environmental Quality Board	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
d. Department of Natural Resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
e. State Historic Preservation Office	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f. U.S. Army Corps of Engineers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
g. U.S. Coast Guard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
h. Other (s) (specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

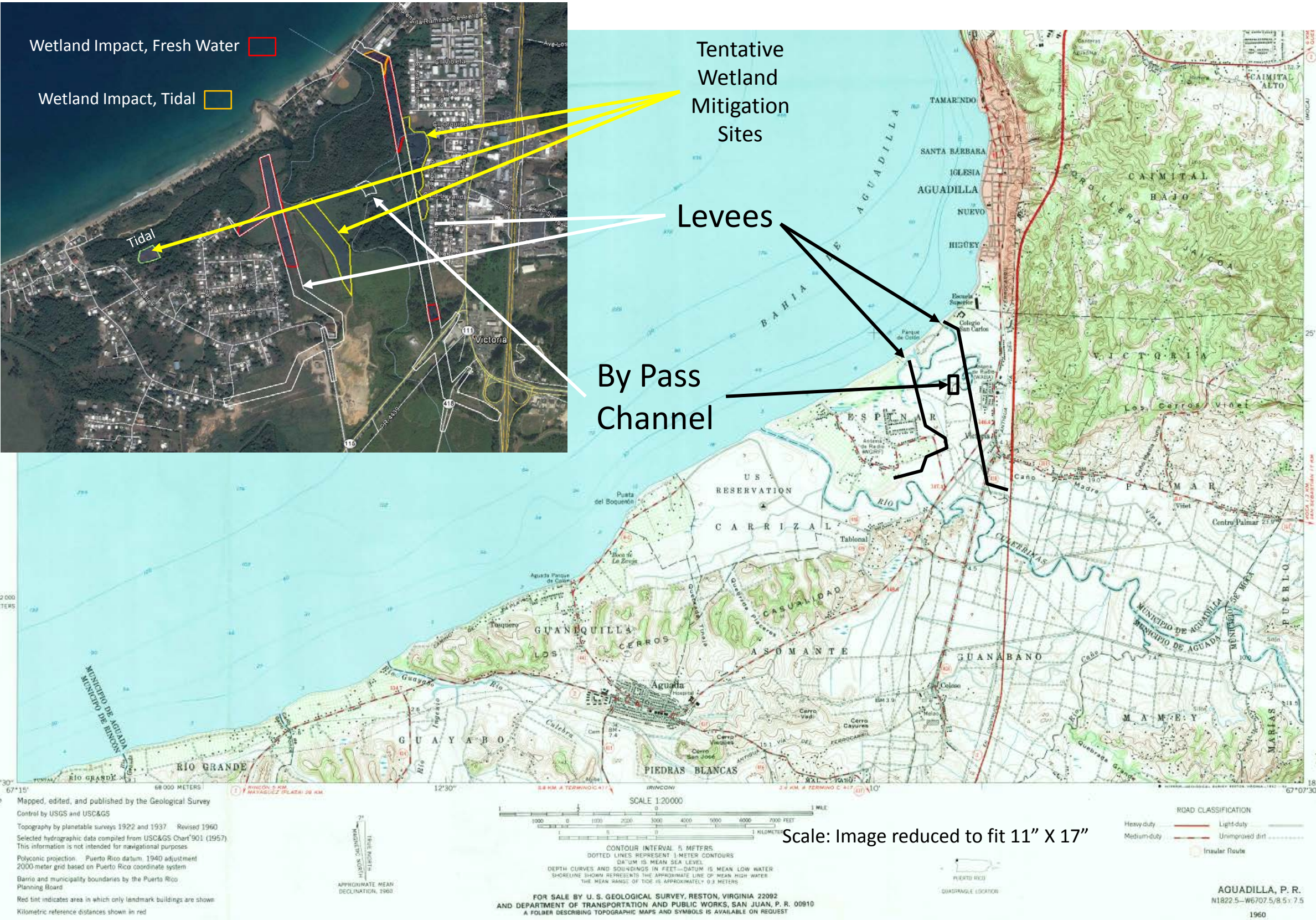
CERTIFICATION

I CERTIFY THAT (project name) the Rio Culebrinas Flood Risk Management Project is consistent with the Puerto Rico Coastal Zone Management Program, and that to the best of my knowledge the above information is true.

Eric P. Summa
Name (legible)
Chief, Environmental Branch
Position


Signature
10/16/14
Date

Rio Culebrinas Flood Risk Management Project



Río Culebrinas, Puerto Rico
Section 205, Continuing Authorities Program
Flood Risk Management Project
Project Narrative

In 2002, the Draft Detailed Project Report (DPR) and Environmental Assessment (EA) for Río Culebrinas at Aguadilla and Aguada, Puerto Rico, was circulated to Federal and Commonwealth resource agencies, organizations, and interested public. On the basis of evaluations presented and agency and public responses, the District Engineer signed a Finding of No Significant Impact (FONSI) on June 1, 2004.

Since the signing of this earlier finding, there have been some changes in the project with respect to cost, benefit, and current engineering practices. Design changes being considered include use of concrete (instead of metal) culverts and levee side slopes of 3:1 instead of 2.5:1 (resulting in an average levee right of way width of approximately 36.05 meters instead of 33.6 meters).

Currently proposed is also the creation of 11.69 acres of wetland by excavation of 13.35 acres to mitigate for impacts to 10.25 acres of mostly degraded wetland within the levee right of way (mostly former “Coloso” sugar cane fields). While the mitigation will remain conceptually the same, the final location, size, and configuration of the wetland mitigation areas are subject to change based on additional investigations on the elevation and character of material to be excavated as well as socio-economic considerations. The goal is (1) to achieve wetland hydrologic conditions (flooding or saturation of the soil for sufficient duration and frequency) (2) to excavate material suitable for levee construction to the extent practicable, (3) to minimize the amount of unusable excavated material needing disposal, and (4) to minimize impacts to residential, commercial, recreational, and cultural interests.

PURPOSE AND NEED

The primary purpose of the DPR and EA was to investigate in detail the frequent flooding and related problems, caused by overflows from Río Culebrinas into Caño Madre Vieja, in the southwest portions of the town of Aguadilla and the community of Espinar in the Municipality of Aguada. The study also investigated if feasible alternatives for reducing the flooding problems exist without causing adverse impacts to the communities, the environment, and the existing infrastructure of the area, and recommends the most appropriate course of action within the Federal and Commonwealth of Puerto Rico guidelines and regulations. The recommended project would provide protection against 1 percent recurrence probability flooding (the “100 year” return frequency flood).

THE PROPOSED ACTION, PREFERRED ALTERNATIVE

The recommended plan consists of two segments of earthen levees with a total length of approximately 3,300 meters (3.3 kilometers), a short cutoff channel, to connect two

meanders of the stream where the Aguadilla Levee will interrupt it, drainage structures, interior drainage channels, three paved road ramps across the levees, and a borrow area located in Aguada. The plan would reduce flood damage to the southwest portion of Aguadilla and the community of Espinar in Aguada. The plan is design to protect against the 100-Year flood and would reduce 87 percent of the total annual flood damage. This plan maximizes the net national economic development benefits.

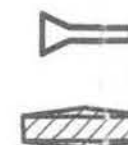
PUBLIC AND AGENCY INVOLVEMENT

Environmental scoping was begun on February 26, 1991, during the Reconnaissance level studies. Additional scoping with Federal and Commonwealth agencies took place via letter dated July 14, 1995. Responses were received from the Office of the Governor of Puerto Rico, Puerto Rico Department of Agriculture, Puerto Rico Department of Natural and Environmental Resources, Puerto Rico Land Administration, Puerto Rico Planning Board (PRPB), Administración de Servicios Municipales, Municipio de Aguadilla, Colegio de Ingenieros y Agrimensores de Puerto Rico, Puerto Rico Industrial Development Company, Oficina Estatal de Preservación Histórica (State Historic Preservation Office, SHPO), National Marine Fisheries Service (NMFS), and U.S. Fish and Wildlife Service (USFWS). These comments and responses to these comments can be seen in Attachment A to the 2003 EA in the 2004 DPR. These documents are available on our Environmental Documents web page <http://www.saj.usace.army.mil/About/DivisionsOffices/Planning/EnvironmentalBranch/EnvironmentalDocuments.aspx>.

REVISED FONSI

A Notice of Availability (NOA) of an Updated FONSI will be issued for review and comment for 30 days.

BAHIA DE AGUADILLA



CMP DRAINAGE STRUCTURES

ROAD RAMP ACROSS LEVEE



RIO CULEBRINAS @ AGUADA /AGUADILLA, PUERTO RICO
DETAILED PROJECT REPORT

PROJECT PLAN ROAD RAMPS /UTILITIES RELOCATIONS

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

NOT TO SCALE

DATE: NOVEMBER 1999

(REVISED: MARCH 2001)

PLATE C-1

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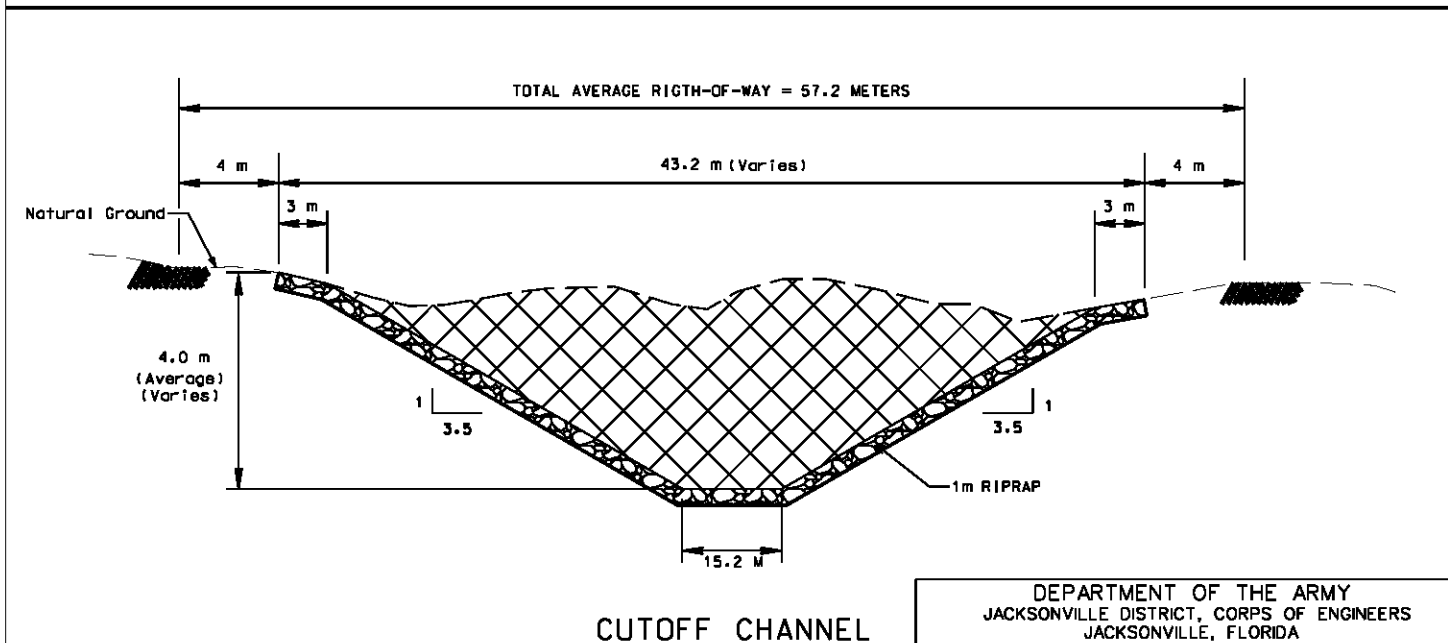
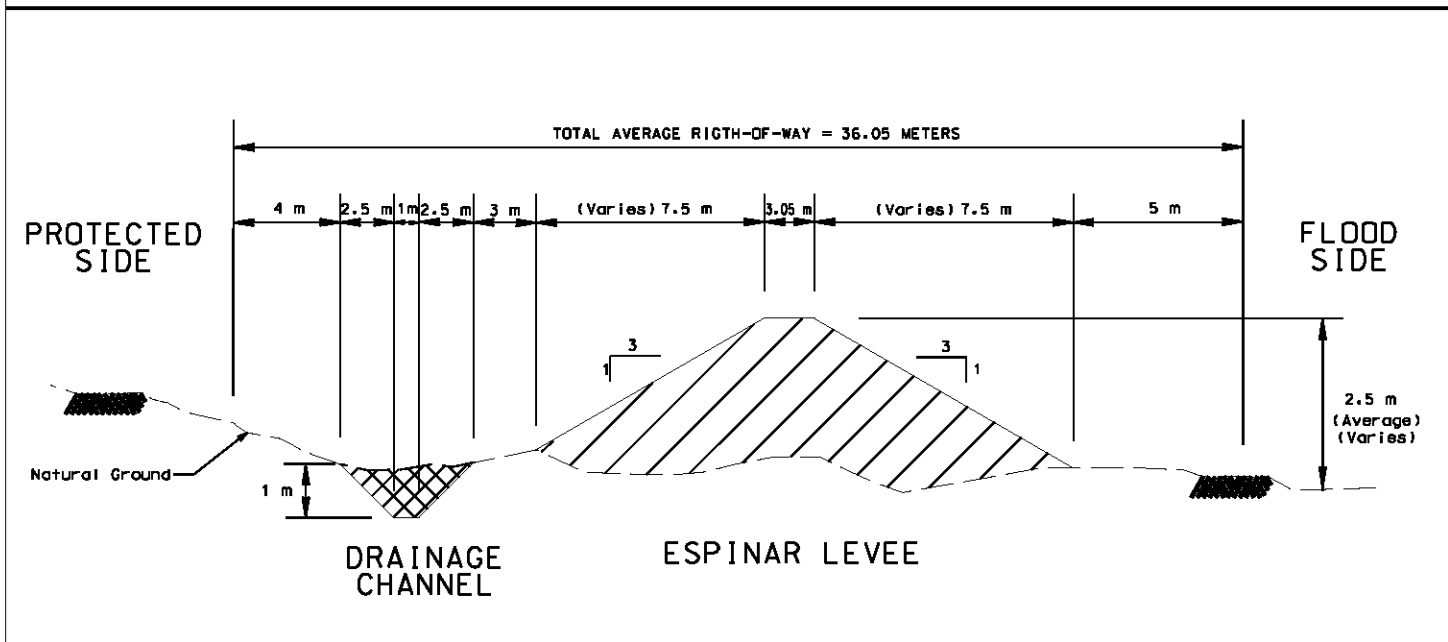
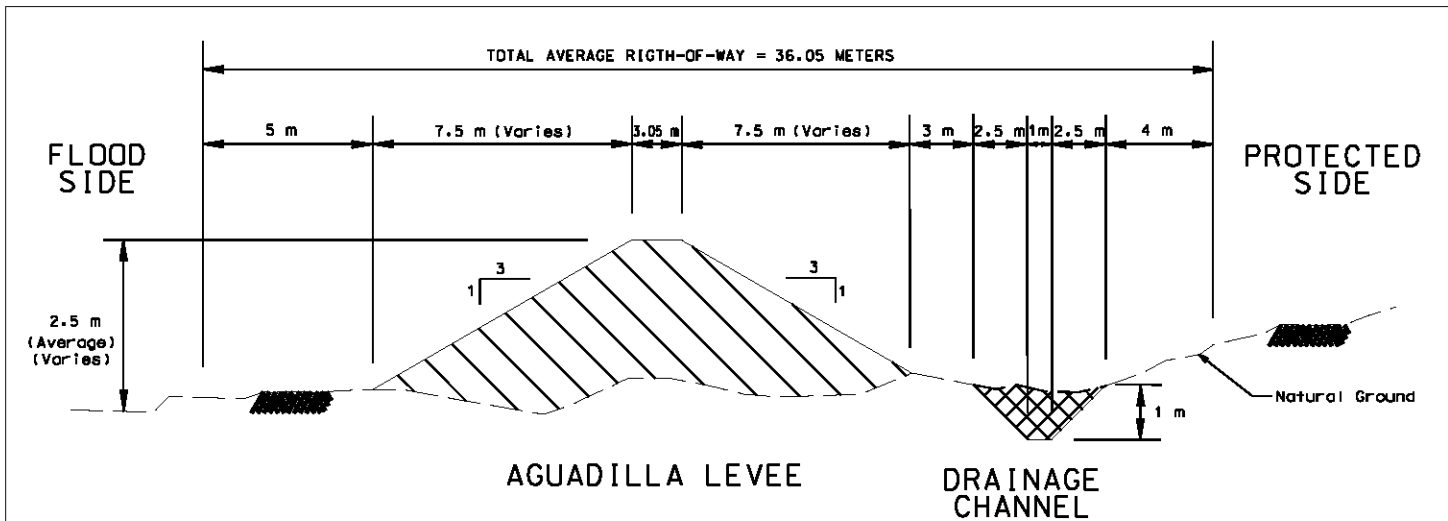
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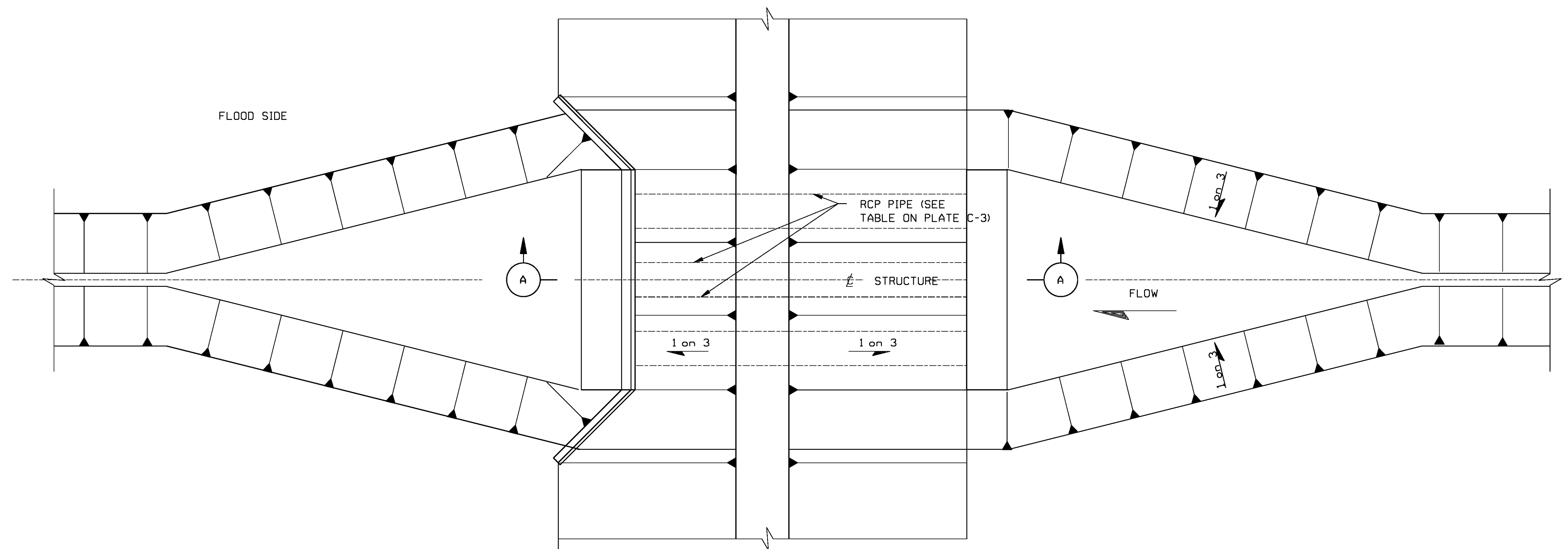
DWN. BY:

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CKD. BY:



DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA			
DETAILED PROJECT REPORT RIO CULEBRINAS AGUADA\AGUADILLA, PUERTO RICO			
TYPICAL CROSS SECTIONS			
INV. NO.		SIZE	DRAWING NO.
DATED:		FIGURE 9	
SCALE: NTS	DATED: 03-25-02	SHEET 1 OF 1	



SITE PLAN

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J.D.H.	
DWN BY:	CKD BY:
D.W.P.	

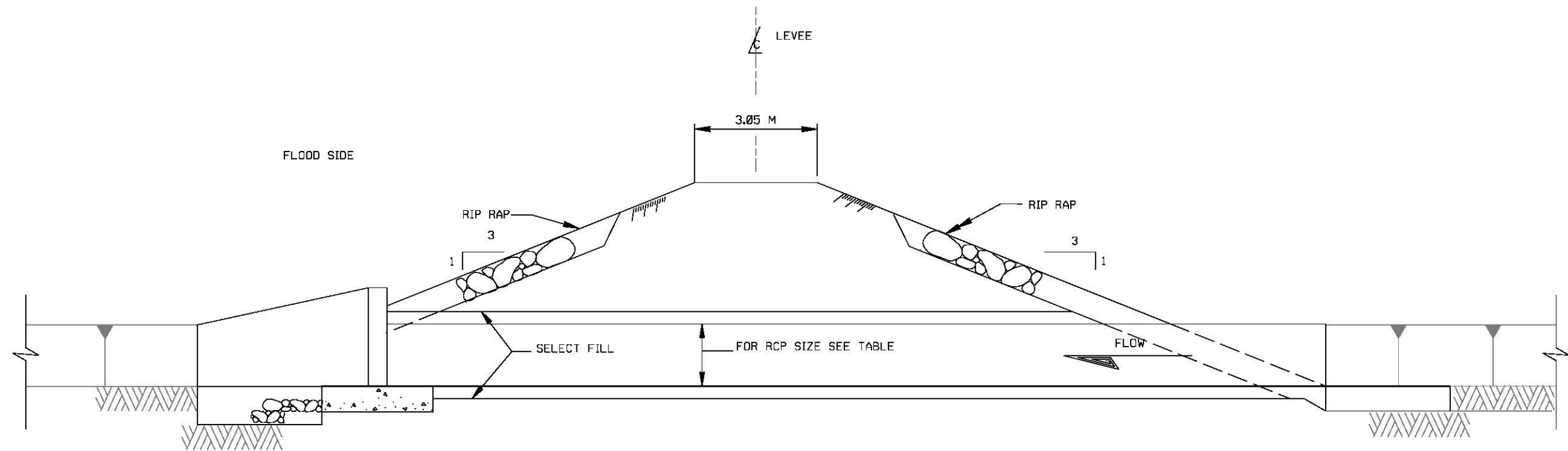
RIO CULEBRINAS @ AGUADA /AGUADILLA, PUERTO RICO
DETAILED PROJECT REPORT

AQUADILLIA CONTROL STRUCTURES

SITE PLAN

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

NOT TO SCALE



SECTION A-A

STRUCTURE	LEVEE STATION	NO RCP	RCP SIZE (METERS)	RCP SIZE (INCHES)	GATE TYPE	CHANNEL EL. (METERS)	CULVERT INVERT (METERS)	TOP OF LEVEE (METERS)	TOTAL LENGTH OF PIPE (METERS)
AL-S-1	1+39.5	3	1.524	60	FLAP	-0.3	-0.3	3.67	96.7
AL-S-2	6+05.5	6	1.524	60	FLAP	-0.3	-0.3	4.37	223.7
AL-S-3	10+52.9	3	1.524	60	FLAP	-0.3	-0.3	4.68	118.5
EL-S-1A	2+50.0	2	1.524	60	FLAP	-0.3	-0.3	4.40	75.0

NOTE:
HEADWALL DISTANCE DOES NOT
INCLUDE WINGWALL DISTANCE

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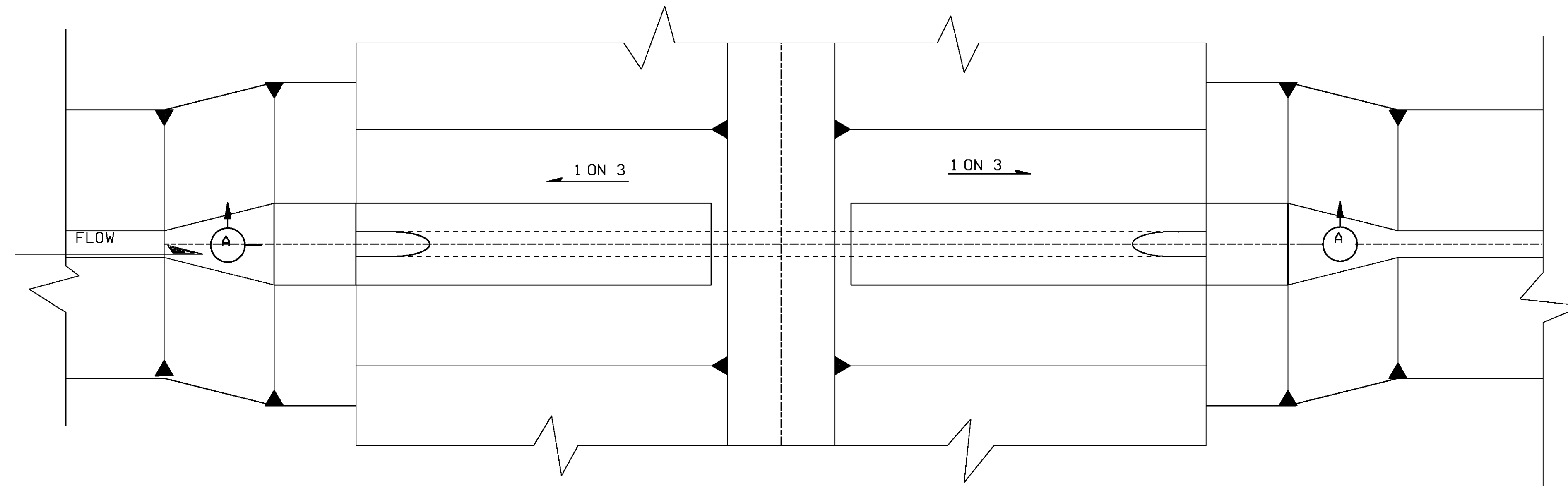
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DETAILED PROJECT REPORT

AGUADILLA /ESPINAR CONTROL STRUCTURE

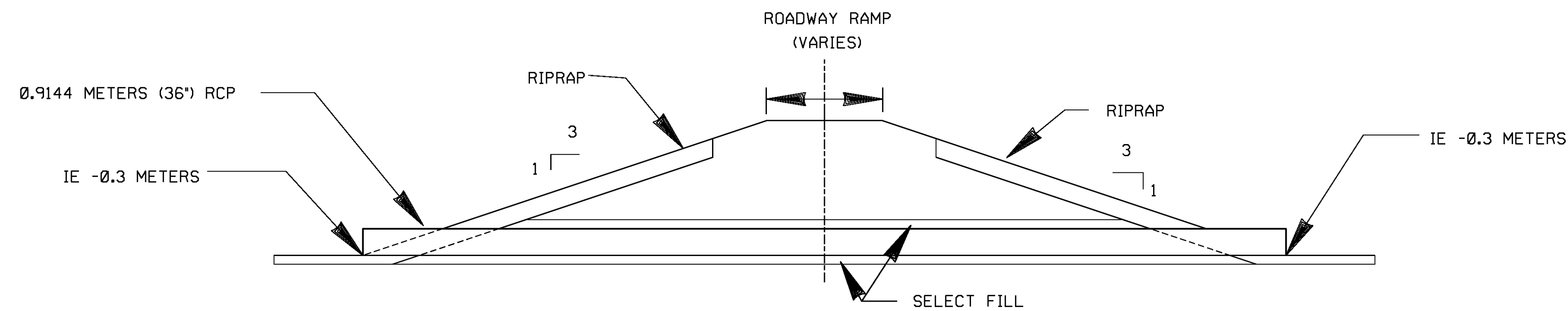
TYPICAL SECTION

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

NOT TO SCALE



TYPICAL 0.91 METER (36") RCP CULVERT PLAN



SECTION

RIO CULEBRINAS @ AGUADA /AGUADILLA, PUERTO RICO
DETAILED PROJECT REPORT

TYPICAL 0.91 METER (36") RCP CULVERT STRUCTURE SITE PLAN AND SECTION

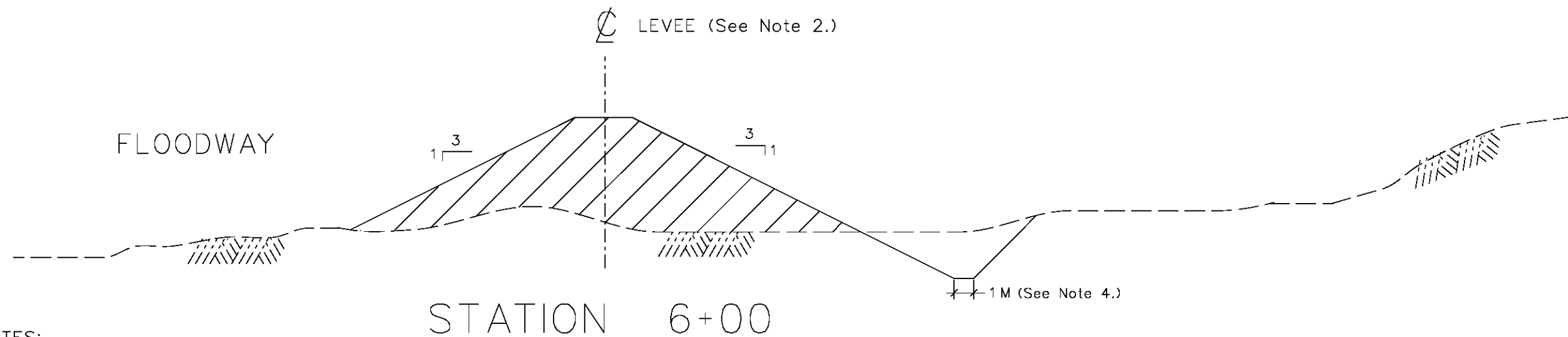
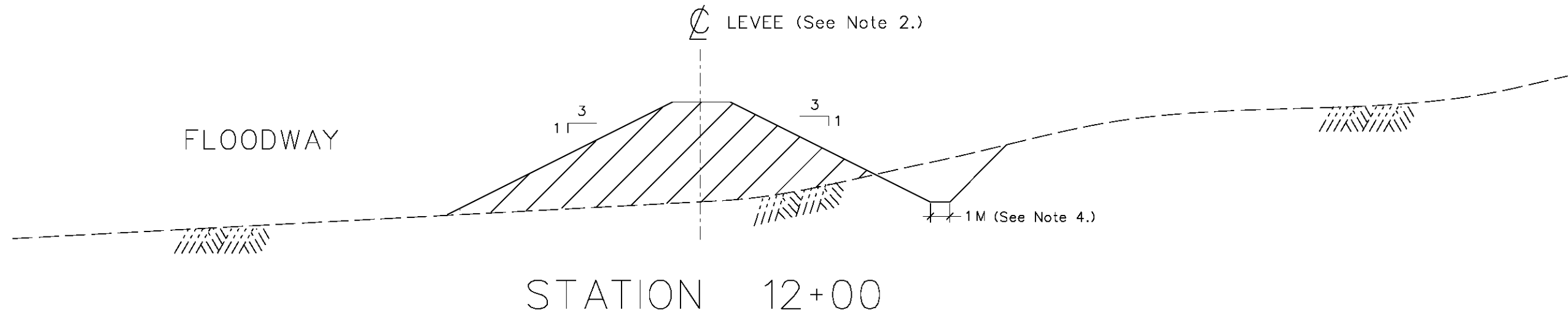
DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

NOT TO SCALE

DESIGN ENG.: J.D.H.	
DWN BY:	CKD BY:

WEST

EAST



NOTES:

1. DRAINAGE STRUCTURES WOULD BE PROVIDED THROUGH THE LEVEES AT APPROXIMATELY AS FOLLOWS:

- AL-S-1 AT STATION 1+39.5 (3-60" CMP W/ FLAPGATES)
- AL-S-2 AT STATION 6+05.5 (6-CMP" CMP W/ FLAPGATES)
- AL-S-3 AT STATION 10+52.9 (3-60" CMP W/ FLAPGATES)

2. LEVEE CROWN WIDTH IS 3 METERS. ELEVATIONS AT STATION POINTS ALONG THE LEVEE ARE PROVIDED IN APPENDIX A.

3. ROAD RAMPS WOULD BE CONSTRUCTED AT PR HIGHWAYS 115 AND 418, AND LOW-FLOW DRAINAGE CULVERTS WOULD BE INSTALLED ON THE PROTECTED SIDE OF THE LEVEE.

4. INVERT ELEVATION VARIES. REFER TO TABLE A-9 IN APPENDIX A.



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REH

CKD. BY:

RIO CULEBRINAS @ AGUADA / AGUADILLA, PUERTO RICO
DETAILED PROJECT REPORT

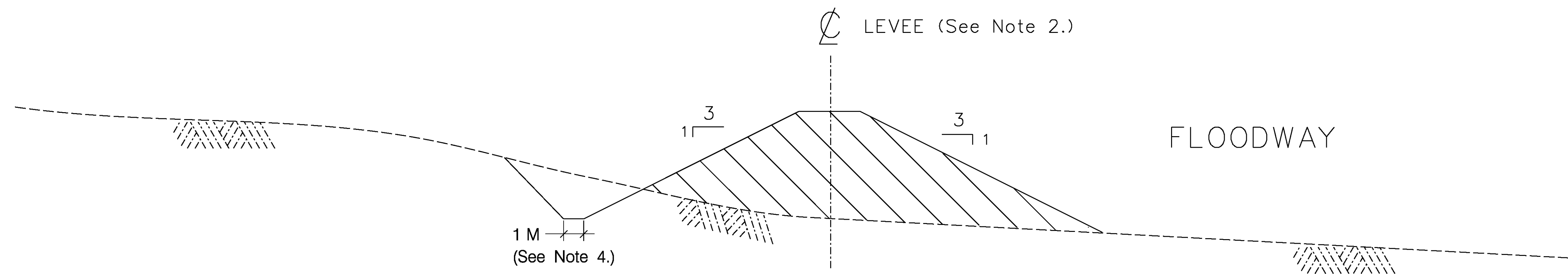
TYPICAL SECTIONS
AGUADILLA LEVEE

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

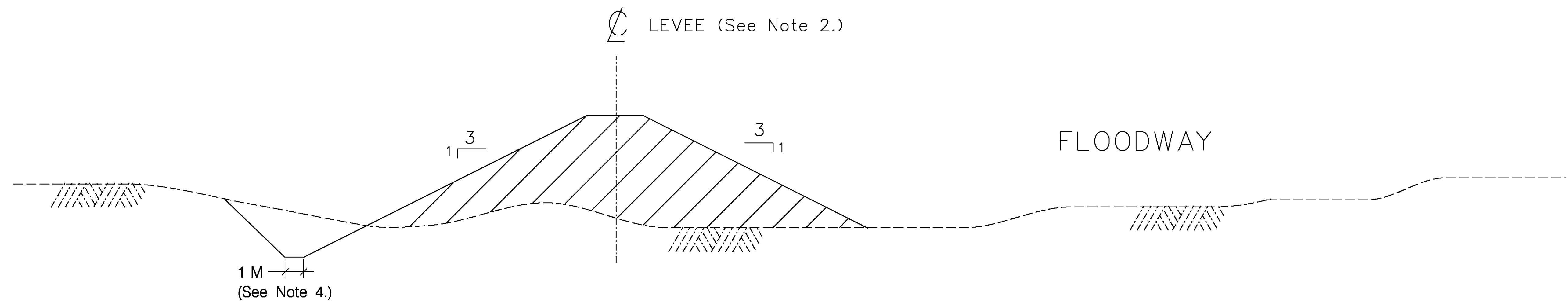
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WEST

EAST



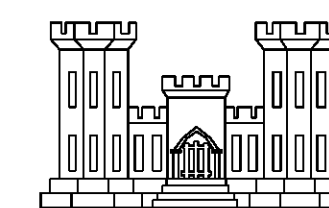
STATION 10+00



STATION 5+00

NOTES:

1. A DRAINAGE STRUCTURE EL-S-1 WOULD BE PLACED THROUGH THE LEVEE AT APPROXIMATELY STATION 1+10.8. STRUCTURE WOULD CONSIST OF 2-60" CMP WITH FLAPGATES AND 1-24" CMP WITH SLIDEGATE.
2. LEVEE CROWN WIDTH IS 3 METERS. ELEVATIONS AT STATION POINTS ALONG THE LEVEE ARE PROVIDED IN APPENDIX A.
3. A ROAD RAMP WOULD BE CONSTRUCTED AT PR HIGHWAY 442, AND A LOW-FLOW DRAINAGE CULVERT WOULD BE INSTALLED ON THE PROTECTED SIDE ON THE LEVEE.
4. INVERT ELEVATION VARIES. REFER TO TABLE A-9 IN APPENDIX A.



RIO CULEBRINAS @ AGUADA /AGUADILLA, PUERTO RICO
DETAILED PROJECT REPORT

TYPICAL SECTIONS
ESPINAR LEVEE

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

NOT TO SCALE

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