CITY OF TAMPA

Bob Buckhorn, Mayor **CONTRACT ADMINISTRATION DEPARTMENT**

Michael W. Chucran, Director

ADDENDUM 2

DATE: July 13, 2017

Contract 17-C-00042; Hillsborough River Dam MFL Low Flow Control Gate

Bidders on the above referenced project are hereby notified that the following addendum is made to the Contract Documents. BIDS TO BE SUBMITTED SHALL CONFORM TO THIS NOTICE.

Item 1: The Bid Date for the above referenced project is hereby changed to August 1, 2017.

Item 2: A site visit will be conducted Tuesday, July 18 at 8:30 a.m.

Address: 7801 N. 30th Street, Tampa

Directions:
From the North or South Using I-275
Take the Sligh Avenue Exit
Turn East and proceed to N. 30th Street
Turn North on N. 30th Street
Continue on No. 30th Street to Dead End (past Rogers Park Golf Course)

From the North or South Using Florida or Nebraska Avenues
Turn East on Sligh Avenue, proceed as described above

From the East or West
Use 1-275 or Florida or Nebraska Avenues
Proceed as described above

Security: Water Dept. staff will meet visitors at Security Gate
This will be a guided tour
Attendees are asked to be prompt

Item 3: Attached for information are as-built drawings from the re-construction and expansion of the dam that occurred in 1944 and 1945.

Item 4: Attached for information are drawings of repair work undertaken in the vicinity of the abandoned sluice gate bay. The sluice gate was abandoned in 1953.

Item 5: Attached for information are Borings undertaken in 1925 at the north end of the current structure, approximately 300 to 350 ft. north of the construction area of the proposed work.

Item 6: Attached for information is a Geotechnical investigation report conducted in 2010 along the tailrace of the dam.

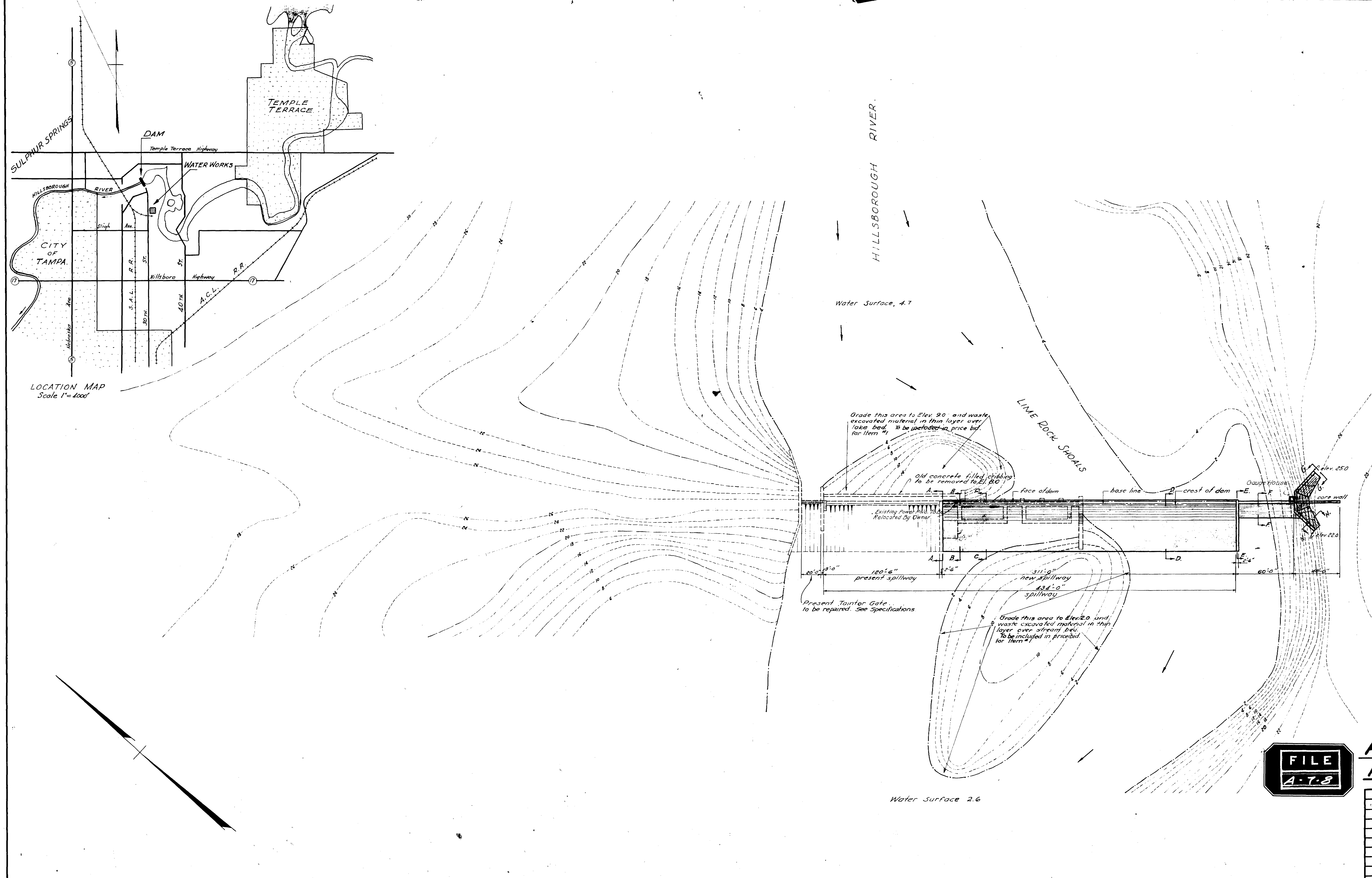
Item 7: Attached for information is a soil boring location map related to Item 6.

Item 8: Attached for reference is a copy of the pre-bid meeting sign-in sheet.

All other provisions of the Contract Documents and Specifications not in conflict with this Addendum shall remain in full force and effect. Questions are to be e-mailed to Contract Administration@tampagov.net.

Jim Greiner

Jim Greiner, P.E., Contract Management Supervisor



LOCATION MAP
Scale 1" = 4000'
SULPHUR SPRINGS
TEMPLE TERRACE
DAM
WATER WORKS
Temple Terrace Highway
HILLSBOROUGH RIVER
CITY OF TAMPA
Sligh Ave.
Hillsboro Highway
S.A.L. R.R.
A.C.L. R.R.
30TH ST.
40TH ST.
Nebraska Ave.
HILLSBOROUGH RIVER
Water Surface, 4.7
LIME ROCK SHOALS
Grade this area to Elev. 9.0 and waste excavated material in thin layer over lake bed. To be included in price bid. for Item #1
Old concrete filled cribbing to be removed to El. 8.0
Existing Power Pole. To Be Relocated By Owner
face of dam
base line
crest of dam
Gauge House
core wall
Elev. 25.0
Elev. 22.0
20'-0"
3'-0"
120'-6"
present spillway
2'-6"
311'-0"
new spillway
434'-0"
spillway
60'-0"
Present Taintor Gate to be repaired. See Specifications
Grade this area to Elev. 12.0 and waste excavated material in thin layer over stream bed. To be included in pricebid. for Item #1
Water Surface 2.6
FILE
A-7-8

PROPOSED DAM

PLOT PLAN - 1" = 40'-0"

REVISED			
No.	CHECKED DATE	CHECKED BY	DRAWN BY

ROBERT AND COMPANY
INCORPORATED
ARCHITECTS AND ENGINEERS
ATLANTA

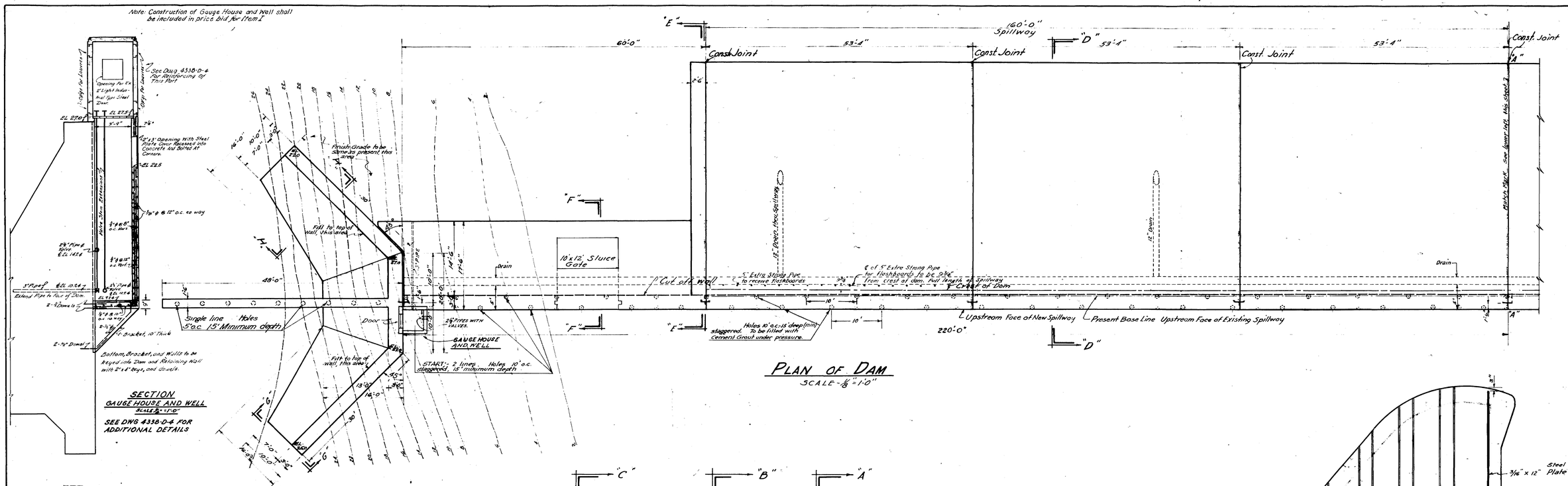
CITY OF TAMPA,
TAMPA, FLORIDA.

IN CHARGE OF R. G. HICKLIN
DRAWN BY Wm. R. K. SCALE 1" = 40'
CHECKED BY J. M. R. DATE
SHEET No. 4338-D-1

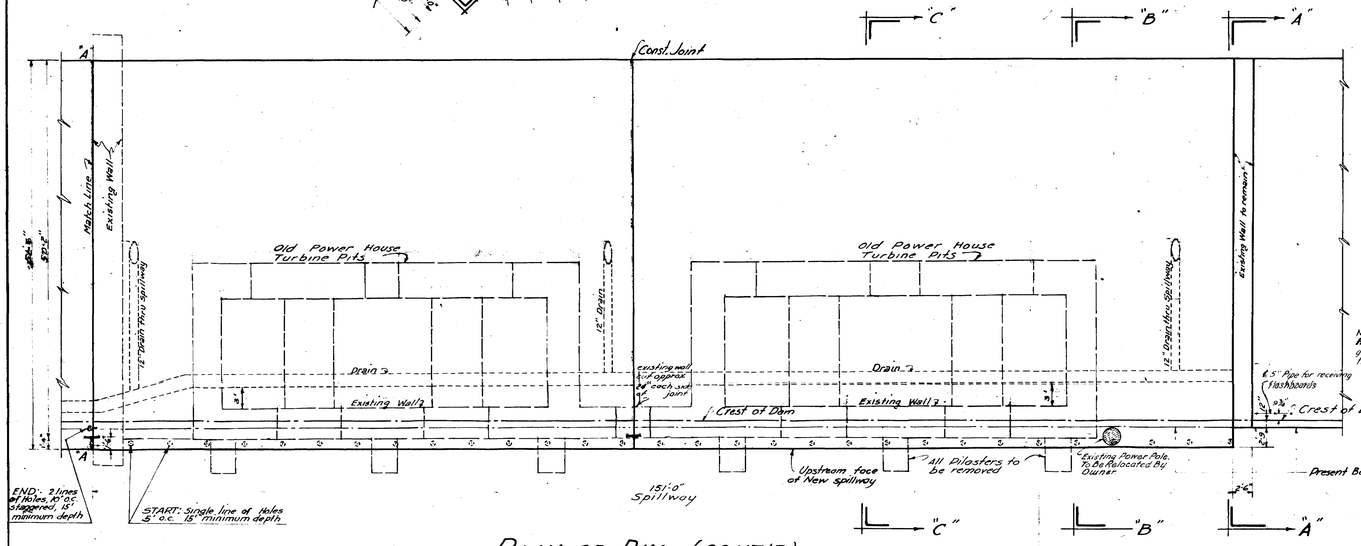
Note: Construction of Gauge House and Well shall be included in price bid for Item I

SECTION
GAUGE HOUSE AND WELL
SCALE-½"=1'-0"

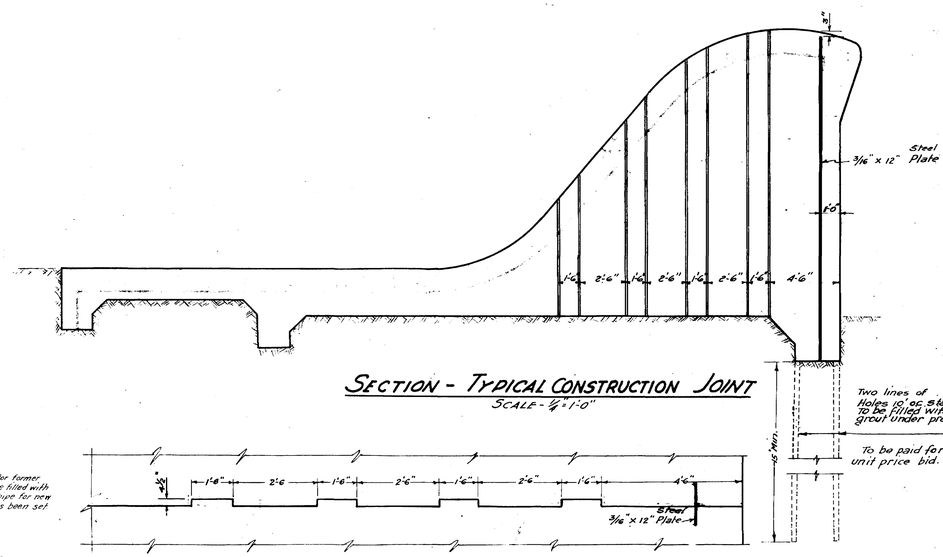
SEE DWG 4338-D-6 FOR ADDITIONAL DETAILS



PLAN OF DAM
SCALE-⅛"=1'-0"



PLAN OF DAM (CONT'D)
SCALE-⅛"=1'-0"



SECTION - TYPICAL CONSTRUCTION JOINT
SCALE-½"=1'-0"

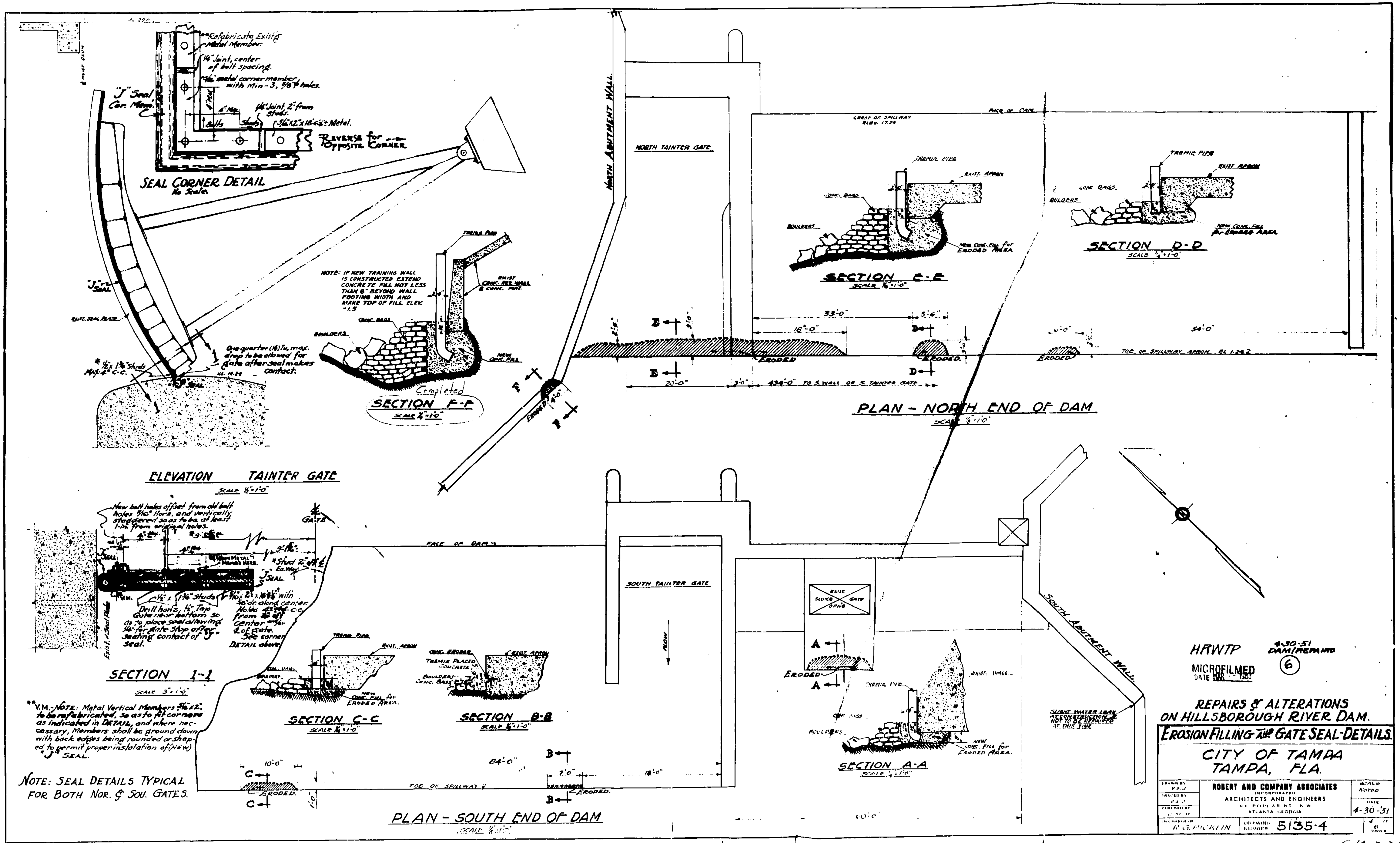
PLAN - TYPICAL CONSTRUCTION JOINT
SCALE-½"=1'-0"

FOR SECTIONS A-A, B-B, C-C AND D-D SEE SHEET 4338-D-4

FOR SECTIONS E-E, F-F, G-G AND H-H SEE SHEET 4338-D-3

PLAN & SECTION

REVISED				ROBERT AND COMPANY ASSOCIATES ARCHITECTS AND ENGINEERS ATLANTA
No.	CHECKED DATE	BY	DRAWN BY	
				CITY OF TAMPA
				TAMPA, FLORIDA
				IN CHARGE OF R.S. HICKLIN
				DRAWN BY E.S.G. DATE Noted
				CHECKED BY H.L. DATE
				SHEET No. 4338-D-2


SEAL CORNER DETAIL
No Scale.
"J" Seal Cor. Mem.
Reverse for Opposite Corner
ELEVATION TAINTER GATE
SCALE 1/2"=1'-0"
"J" Seal
One quarter (1/4) in. max. drop to be allowed for gate after seal makes contact.
NOTE: IF NEW TRAINING WALL IS CONSTRUCTED EXTEND CONCRETE FILL NOT LESS THAN 6" BEYOND WALL FOOTING WIDTH AND MAKE TOP OF FILL ELEV. -1.5
Completed
SECTION F-F
SCALE 1/4"=1'-0"
NORTH ABUTMENT WALL
NORTH TAINTER GATE
SECTION E-E
SECTION D-D
SCALE 1/4"=1'-0"
ERODED
TO S. WALL OF S. TAINTER GATE
PLAN - NORTH END OF DAM
SCALE 1/8"=1'-0"
New bolt holes offset from old bolt holes 5/16" Hors. and vertically staggered so as to be at least 1-in. from original holes.
Drill horiz. 1/2" Tap Gate near bottom so as to place seal allowing 1/4" for gate stop after seating contact of "J" seal.
See corner DETAIL above.
SECTION 1-1
SCALE 3"=1'-0"
**V.M.-NOTE: Metal Vertical Members 5/16"x2", to be refabricated, so as to fit corners as indicated in DETAIL, and where necessary, Members shall be ground down with back edges being rounded or shaped to permit proper instalation of (NEW) "J" SEAL.
NOTE: SEAL DETAILS TYPICAL FOR BOTH NOR. & SOU. GATES.
FACE OF DAM
SOUTH TAINTER GATE
FLOW
SECTION C-C
SECTION B-B
SECTION A-A
TOE OF SPILLWAY
ERODED
PLAN - SOUTH END OF DAM
SOUTH ABUTMENT WALL
HRWTP
4-30-51 DAM REPAIRS
MICROFILMED
6
REPAIRS & ALTERATIONS ON HILLSBOROUGH RIVER DAM.
EROSION FILLING AND GATE SEAL-DETAILS.
CITY OF TAMPA
TAMPA, FLA.
ROBERT AND COMPANY ASSOCIATES
INCORPORATED
ARCHITECTS AND ENGINEERS
ATLANTA, GEORGIA
SCALE Noted
DATE 4-30-51
DRAWING NUMBER 5135-4
C 14-2-34

TAMPA WATER WORKS DEPT
TAMPA FLORIDA

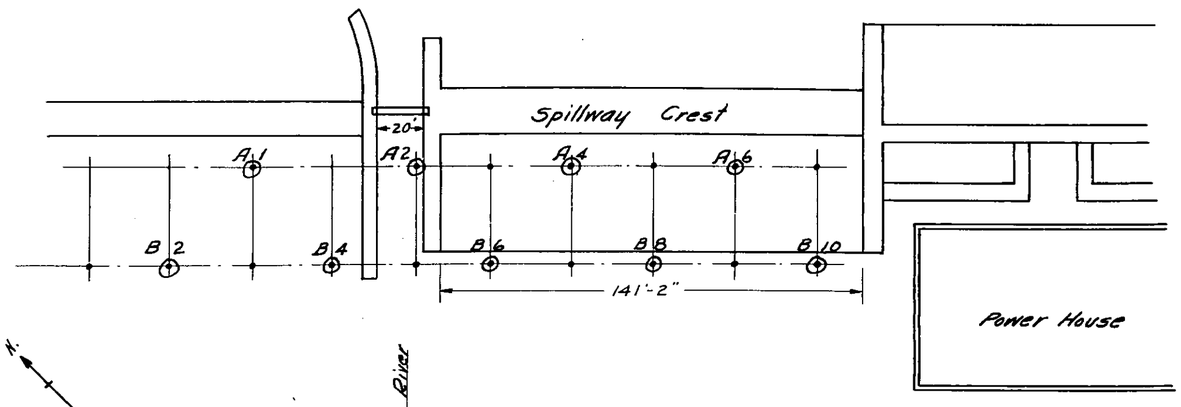
Details showing Location and Character of Materials Encountered by Test (Core) Borings Made by Tampa Electric Co. Jan. 21, 1925 At Site of their Dam on the Hillsborough River

Scale: $\frac{3}{8}$" = 1'

J.S. Long, Supt.
W.N. Jones, Engineer
Dr. W.H.M.
Tr. W.H.M.
11-9-33

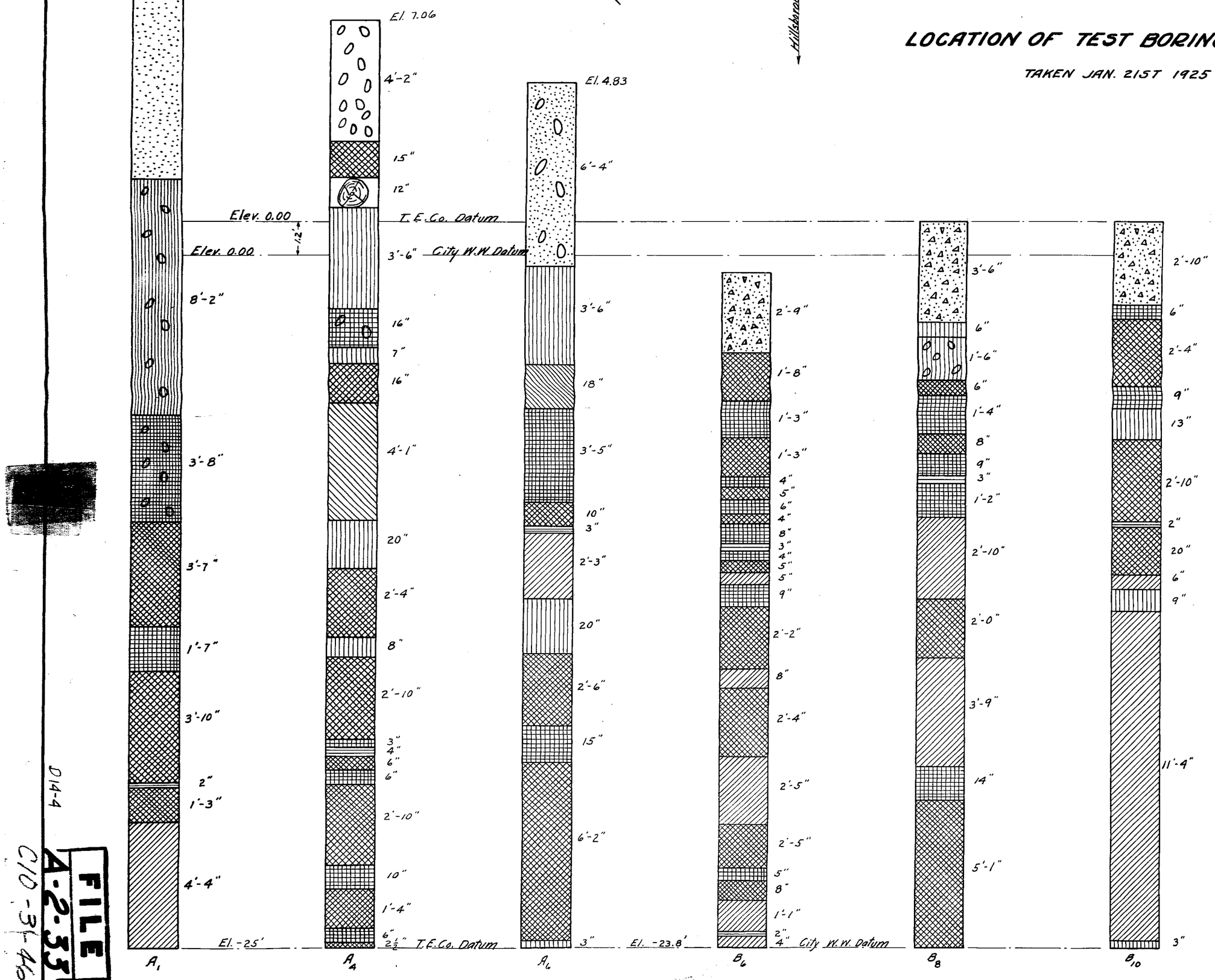
LEGEND

- Clay
- Concrete
- Hard Limestone
- Sand
- Soft Limestone
- Extra Hard Limestone
- Flint
- Medium Soft Limestone
- Boulders



LOCATION OF TEST BORINGS

TAKEN JAN. 21ST 1925



D14-4

FILE
A-2-33

C10-31-40

RESULTS OF
SUBSURFACE INVESTIGATION

HILLSBOROUGH RIVER DAM
TAMPA, FLORIDA

Driggers Engineering Services Incorporated

DRIGGERS ENGINEERING SERVICES INCORPORATED
Geotechnical Engineering & Construction Materials Testing

Camp, Dresser & McKee
11 British American Boulevard
Latham, New York 12110

January 24, 2011

Attention: Mr. Bill Friers

RE: Report for the Subsurface Investigation
Hillsborough River Dam
Hillsborough County, Florida
Our File: DES 106663

Dear Mr. Friers:

In accordance with your request, **DRIGGERS ENGINEERING SERVICES, INC.** has performed the requested test borings and monitoring well or piezometer installations. Included herein are the results of our field studies.

SUBSURFACE INVESTIGATION

To investigate subsurface conditions beneath the dam sill/apron, three (3) borings/cores were requested at locations depicted on the plan provided for our use. The location of the test borings and piezometer locations are illustrated on the attached Plate I. It was requested that the test borings were performed by utilizing the Standard Penetration Test (SPT) method until soils were encountered that warranted securing NX size cores. The SPT portion of each boring was conducted in general accordance with ASTM D-1586. Where securing cores was warranted, we performed 18-inch core runs using 5 feet long, NX core barrel. Test borings TB-1, TB-2 and TB-3 were advanced to requested depth of 14.5, 14.0 and 15.7 feet respectively below the top of the existing concrete apron. The sampling and testing was utilized to provide soil samples for visual classification, plus to develop Standard Penetration resistance data reflective of the strength and bearing capability of the soils penetrated. Representative samples and cores were returned to the laboratory for examination by the project undersigned.

The designated Unified Soil Classifications were based solely on visual examination. Should you desire to assign laboratory classification tests, some modification in Unified Soil Classification may results. The NX cores will be retained for 30 days in the event you may wish to assign compressive strength tests.

Upon completion of the test borings, the locations were properly grouted to the top of the sill/apron and finished off flush. The material utilized for grouting the boreholes consisted of a fast set/high strength grout. A set of 3x6 grout cylinders were cast to ensure requested compressive strength were reached. The grout compressive strengths are attached herein.

PIEZOMETERS - Three (3) piezometers were also installed at the locations depicted on the boring location plan (Plate I). We installed the piezometers in general accordance with the attached cross-sectional detail (Plate II). We utilized a watertight/airtight cap that maintains internal pressure for pressure head measurements so as to eliminate the need for a standpipe open to atmospheric pressure. The piezometer included the installation of a pressure transducer at the bottom of the piezometer with the ability to record pressure head at preselected time intervals and store the data for acquisition of the data recorded. The head pressure data from the transducers will be transmitted via cable to the catwalk on top of the dam.

EXISTING SAW CUT AREAS- Pursuant to your request, we excavated debris in three (3) existing saw cut areas to determine their depth with respect to the top of the concrete apron. The approximate locations and dimensions of the saw cut areas are described on Plate I. The areas were excavated utilizing hand auger equipment and a shovel. The saw cut area were apparently filled with fine sand and debris which was most likely from years of water and sediment flowing over the dam face. The depths from the top of the apron to the concrete bottom ranged from 14 to 28 inches.

DRIGGERS ENGINEERING SERVICES, INC. appreciates the opportunity to assist you and we trust if you have any questions concerning our report, you will not hesitate to contact the undersigned at your convenience.

Respectfully submitted,
DRIGGERS ENGINEERING SERVICES, INC.

Jeffry A. Driggers, P.E.
Project Engineer
FL Registration No. 70598

JEFFRY A. DRIGGERS LICENSE No. 70598 1/24/11 STATE OF FLORIDA PROFESSIONAL ENGINEER

F. Jaime Driggers, P.E.
President
FL Registration No. 16989

JAD-REP\106663
Copies submitted: (3)

APPENDIX

PLATE I - TEST BORING AND PIEZOMETER LOCATION PLAN

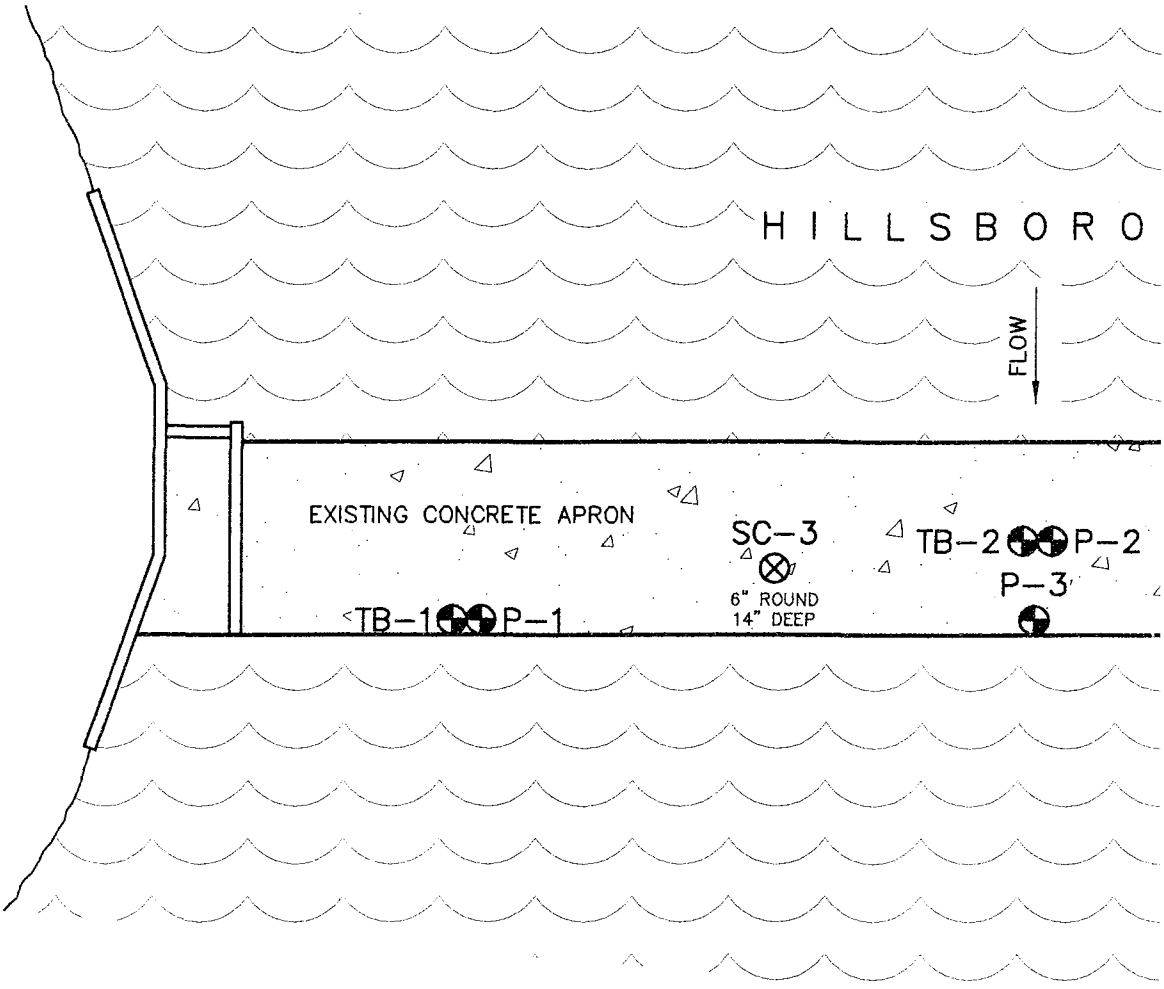
PLATE II - PIEZOMETER INSTALLATION DETAILS

TEST BORING LOGS

GROUT COMPRESSION TEST RESULTS

METHOD OF TESTING

PLATE I - TEST BORING AND PIEZOMETER LOCATION PLAN

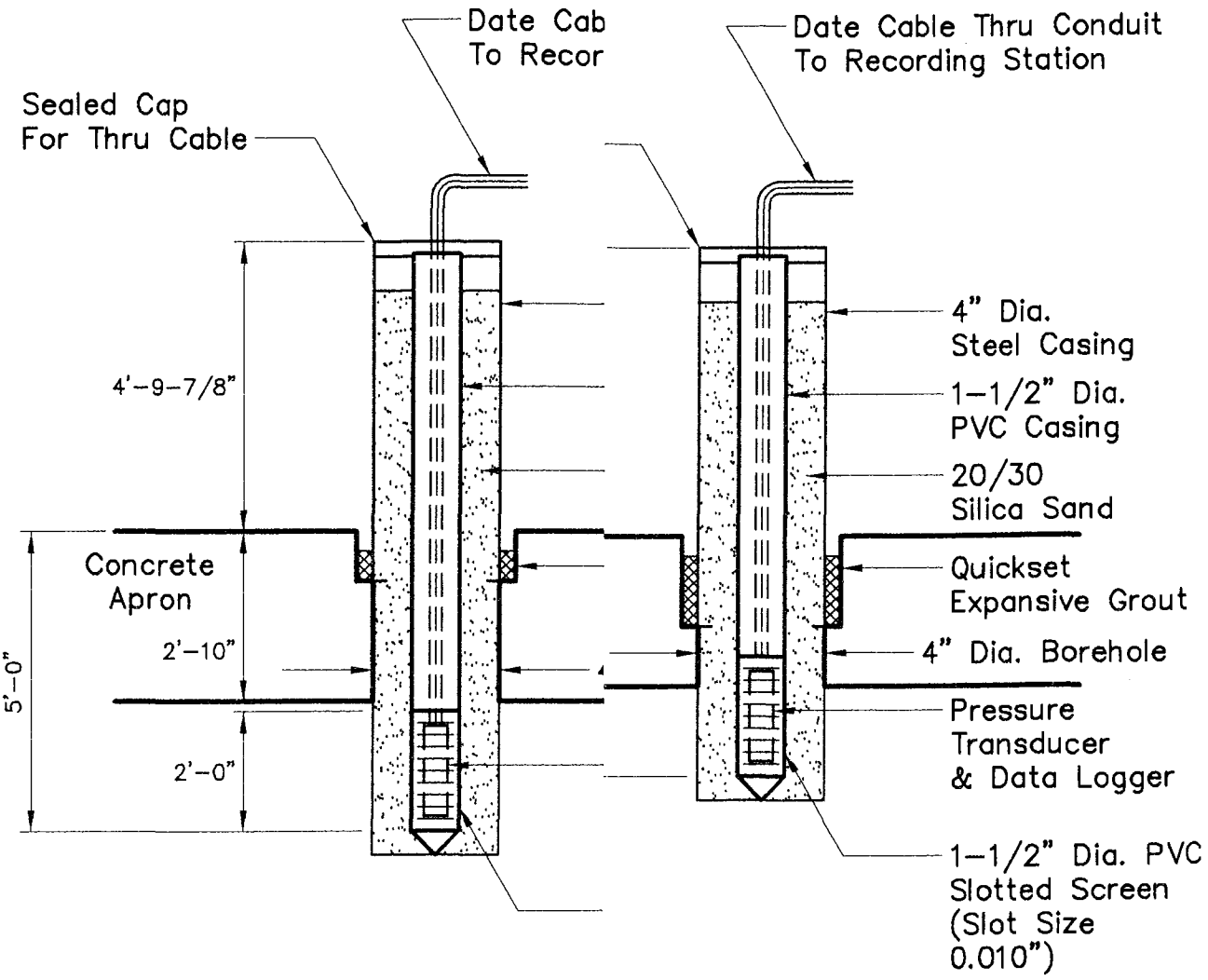


LEGEND:

- STANDARD PENETRATION TEST BORING LOCATION
- 13"x13" SQUARE 28" DEEP — EXISTING SAW-CUT AREA IN CONCRETE APRON WITH OVERALL DIMENSIONS & DEPTH

CAD / ENGINEER	SHEET TITLE
R.D.B. / J.A.D.	BORING LOCATION PLA
PREPARED BY	PROJECT NAME
DRIGGERS ENGINEERING SERVICES, INCORPORATED	HILLSBOROUGH RIVER D HILLSBOROUGH COUNTY, FL

PLATE II - PIEZOMETER INSTALLATION DETAILS



PIEZOMETER P-1 DETAIL

PIEZOMETER P-3 DETAIL

CAD / ENGINEER		DATE
R.D.B. / J.A.D.	1	1/12/11
PREPARED BY		SHEET NO.
DRIGGERS ENGINEERING SERVICES, INCORPORATED		PLATE II

TEST BORING LOGS

DRIGGERS ENGINEERING SERVICES INCORPORATED

Project No. DES 106663 **BORING NO.** TB-1

Project Hillsborough River Dam, Hillsborough County, Florida

Location See Plate I **Foreman** J.R.

Completion Depth 14.5' **Date** 12/7/10 **Depth To Water** ** **Time** _____ **Date** 12/7/10

DEPTH, FT	SYMBOL	SAMPLES	SOIL DESCRIPTION	BLOWS ON SAMPLER PER 6" OR PEN. STR.	STANDARD PENETRATION TEST BLOWS/FT. ON 2" O.D. SAMPLER-140 LB. HAMMER, 30" DROP (10 20 40 60 80)
			SURF. EL:		
0			2'-9-1/2" Concrete Apron		
2.5			2-1/2" Void below Concrete Apron - 100% loss of circulation at depth 3.0'	3/7/11	●
5			Very stiff green CLAY with cream colored calcareous CLAY and SILT (CH/CL/ML) - limestone fragments at depth 6.0'	3/6/10	●
7.5			Very stiff to hard green CLAY (CH) to (CL)	7/7/11	●
				7/7/8	●
				31/50*	* 0.3' Penetration
10			Cream colored to gray LIMESTONE NX Core Run: 9.7' to 11.5' Recovery: 18.75" % Rec.: 87% RQD: 46%		
12.5			NX Core Run: 11.5' to 13.0' Recovery: 9.0" % Rec.: 50% RQD: 50% - trace of green CLAY at depth 13.0'		
			Cream colored clayey LIMESTONE with trace of green sandy CLAY	11/12/22	●
15			Hard green sandy CLAY with trace of cream colored LIMESTONE (CL)		

Run:	Time:	Run:	Time:
9.7'-10.5'	1:49	11.5'-12.0'	1:14
10.5'-11'5'	3:27	12.0'-13.0'	2:54

Remarks ** Water Table recorded at 0.3' below Top of Apron (same level as river)

Borehole Grouted **Casing Length** 5.0'

DRIGGERS ENGINEERING SERVICES INCORPORATED

Project No. DES 106663 **BORING NO.** TB-2

Project Hillsborough River Dam, Hillsborough County, Florida

Location See Plate I **Foreman** J.R.

Completion Depth 14.0' **Date** 12/8/10 **Depth To Water** ** **Time** **Date** 12/8/10

DEPTH, FT	SYMBOL	SAMPLES	SOIL DESCRIPTION SURF. EL:	BLOWS ON SAMPLER PER 6" OR PEN. STR.	STANDARD PENETRATION TEST BLOWS/FT. ON 2" O.D. SAMPLER-140 LB. HAMMER, 30" DROP 10 20 40 60 80
0			2'-6" Concrete Apron		
2.5			Soft green sandy CLAY with grayish-brown silty, clayey Fine SAND and trace of limestone gravel (CH/SM-SC)	3/2/2	•
			Concrete in top of spoon		
5			Loose green clayey Fine SAND (SC)	3/3/2	•
			- limestone fragments at depth 5.5'	3/6/16	•
			Very loose green clayey Fine SAND grading to cream colored to gray clayey LIMESTONE (SC)		
7.5			Very stiff green calcareous CLAY with cream colored calcareous CLAY and SILT and limestone fragments (CL/ML)	15/15/50*	* 0.1' Penetration
			Hard green calcareous, cemented, sandy CLAY (CL)	50*	* 0.3' Penetration
				50*	* 0.4' Penetration
10				50*	* 0.3' Penetration
			Green cemented CLAY (CL) NX Core Run: 10.0' to 11.5' Recovery: 10.0" % Rec.: 56% RQD: 22% NX Core Run: 11.5' to 13.0' Recovery: 10.25" % Rec.: 57% RQD: 0%		
			Gray LIMESTONE		
12.5			Gray dolomitic LIMESTONE		
			Green CLAY (CH)		
			Hard grayish-green calcareous, cemented CLAY (CL)	12/50*	* 0.5' Penetration
15			Run: Time: Run: Time: 10.0-10.5' 8:26 11.5'-12.0' 1:01 10.5'-11.0' 3:35 12.0'-12.5' 1:45 11.0'-11.5' 3:29 12.5'-13.0' 9:36		

Remarks ** Water Table recorded at 0.2' below Top of Apron

Borehole Grouted **Casing Length**

DRIGGERS ENGINEERING SERVICES INCORPORATED

Project No. DES 106663 **BORING NO.** TB-3

Project Hillsborough River Dam, Hillsborough County, Florida

Location See Plate I **Foreman** J.R.

Completion Depth 15.7' **Date** 12/8/10 **Depth To Water** ** **Time** _____ **Date** 12/8/10

DEPTH, FT	SYMBOL	SAMPLES	SOIL DESCRIPTION	BLOWS ON SAMPLER PER 6" OR PEN. STR.	STANDARD PENETRATION TEST BLOWS/FT. ON 2" O.D. SAMPLER-140 LB. HAMMER, 30" DROP
			SURF. EL:		10 20 40 60 80
0			3'-7" Concrete Apron		
2.5			Hard green CLAY and cream colored LIMESTONE (CL)	35/50*	* 0.3' Penetration
5			- trace of green CLAY at depth 4.4' Cream colored LIMESTONE		
			Green CLAY (CH)		
			Very stiff green sandy CLAY (CH)		
7.5			Hard green cemented, sandy CLAY with seams of cream colored LIMESTONE (CL)	8/15/16	
			Hard green sandy CLAY and cream colored LIMESTONE (CL)	22/30/32	
10			Very stiff green sandy CLAY with trace of cream colored LIMESTONE (CL)	14/40/41	
			Hard green sandy CLAY and cream colored LIMESTONE (CL)		
			- trace of cream colored LIMESTONE at depth 10.5' Very stiff to hard green sandy CLAY (CH) - trace of cream colored LIMESTONE below depth 11.5'	9/12/17	
12.5			Hard green cemented, sandy CLAY with trace of cream colored LIMESTONE (CL)	13/50*	* 0.2' Penetration
			Green CLAY (CH)		
			Gray dolomitic LIMESTONE		
			Green cemented CLAY (CL)		
15			Dense green weakly cemented, clayey Fine SAND (SC)	13/24/12	

NX Core Run: 12.7' to 14.2'
Recovery: 14.0" % Rec.: 78% RQD: 0%

Run:	Time:
12.7'-13.2'	0:48
13.2'-13.7'	0:47
13.7'-14.2'	1:57

Remarks ** Water Table recorded at 0.0' below Top of Apron
Borehole Grouted **Casing Length** _____

DRIGGERS ENGINEERING SERVICES INCORPORATED

Project No. DES 106663 **BORING NO. P-1**

Project Hillsborough River Dam, Hillsborough County, Florida

Location See Plate I **Foreman** J.R.

Completion Depth 6.5' **Date** 12/7/10 **Depth To Water** ** **Time** _____ **Date** 12/7/10

DEPTH, FT	SYMBOL	SAMPLES	SOIL DESCRIPTION	BLOWS ON SAMPLER PER 6" OR PEN. STR.	STANDARD PENETRATION TEST BLOWS/FT. ON 2" O.D. SAMPLER-140 LB. HAMMER, 30" DROP (10 20 40 60 80)
			SURF. EL:		
0			2'-10" Concrete Apron		
2.5			- 100% loss of circulation at depth 2.8'		
			Very stiff to stiff green CLAY with cream colored calcareous CLAY and SILT (CH/ML)	2/7/13	
5			Cream colored clayey LIMESTONE with some green CLAY	5/6/8	
			Very stiff green CLAY with cream colored calcareous CLAY and SILT (CH/ML)		
7.5			Note: Set Piezometer at depth 5.0'. (See Piezometer Detail Sheet)		
10					
12.5					
15					

Remarks ** Water Table recorded at 0.3' below Top of Apron (same level as river)

Borehole Grouted **Casing Length** _____

DRIGGERS ENGINEERING SERVICES INCORPORATED

Project No. DES 106663 **BORING NO.** P-2

Project Hillsborough River Dam, Hillsborough County, Florida

Location See Plate I **Foreman** J.R.

Completion Depth 10.9' **Date** 12/7/10 **Depth To Water** ** **Time** _____ **Date** 12/7/10

DEPTH, FT	SYMBOL	SAMPLES	SOIL DESCRIPTION	BLOWS ON SAMPLER PER 6" OR PEN. STR.	STANDARD PENETRATION TEST BLOWS/FT. ON 2" O.D. SAMPLER-140 LB. HAMMER, 30" DROP (10 20 40 60 80)
			SURF. EL:		
0			8'-0" Concrete Apron		
2.5					
5					
				50*	* 0.1' Penetration
7.5			Hard green cemented, sandy CLAY (CL)		
				44/50*	* 0.3' Penetration
10				42/50*	* 0.4' Penetration
			Note: Set Piezometer at depth 10.0'. (See Piezometer Detail Sheet)		
12.5					
15					

Remarks ** Water Table recorded at 2.2' above Top of Apron in casing

Borehole Grouted **Casing Length** _____

DRIGGERS ENGINEERING SERVICES INCORPORATED

Project No. DES 106663 **BORING NO.** P-3

Project Hillsborough River Dam, Hillsborough County, Florida

Location See Plate I **Foreman** J.R.

Completion Depth 5.5' **Date** 12/7/10 **Depth To Water** ** **Time** _____ **Date** 12/7/10

DEPTH, FT	SYMBOL	SAMPLES	SOIL DESCRIPTION SURF. EL:	BLOWS ON SAMPLER PER 6" OR PEN. STR.	STANDARD PENETRATION TEST BLOWS/FT. ON 2" O.D. SAMPLER-140 LB. HAMMER, 30" DROP 10 20 40 60 80
0			2'-6" Concrete Apron		
2.5			6" Gravel or Broken Concrete Very loose green silty, clayey Fine SAND (SM-SC)	1/1/2	•
5			Note: Set Piezometer at depth 4.0'. (See Piezometer Detail Sheet)		
7.5					
10					
12.5					
15					

Remarks ** Water Table recorded at 0.2' below Top of Apron in casing

Borehole Grouted **Casing Length** _____

GROUT COMPRESSION TEST RESULTS

DRIGGERS ENGINEERING SERVICES INCORPORATED
Geotechnical Engineering & Construction Materials Testing

CONCRETE TEST REPORT

Date Reported

Client CDM — File No. 106663 — 1/14/11

Project Hillsborough River Dam — Report No. ____

Location of Placement Sampled Piezometer Locations

Date Cylinders Received ____ Condition of Cyls When Recd. GOOD

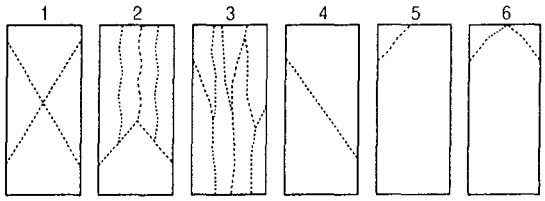
COMPRESSION TEST RESULTS

Set No.	No. Cyls.	Size (In.)	Failure Load (Pounds)	**Compressive Strength (p.s.i.)**	Age Days	Date Tested	Type of Break	Tested By	Area In Square Inches
	A	3	35700	4990	10	12/17/10	3	RP	7.159
	B	x	43665	6200	38	01/14/11	2	RB	7.045
	C	6	42315	5990	38	01/14/11	3	RB	7.068

NOTES:

1. Unless Otherwise Specified, hold cylinders will be discarded 42 days after date molded.
2. Hold Cyls. Will Be Billed As if Tested.
3. Field information furnished to Driggers Engineering Services Incorporated by client when cylinders molded by other than Driggers Engineering Personnel.

TYPES OF BREAKS



FIELD AND INSPECTION INFORMATION

FIELD RESULTS

Date Molded 12/07/10
Cyls. Cast By Jeff Driggers
Design Strength 5000 PS.I.
@ 28 Days
Slump ____
Conc. Temp ____ o
Air Temp ____ o
Entrained Air Content ____ %
Field Plastic Wt. ____ P.C.F.
Dry Weight ____ P.C.F.

PRODUCER DATA

Supplier ____
Truck # ____
Invoice # ____
Mix # ____
Time Batched ____
Time Arrived ____
Time Sampled 10:30

TOTAL YARDS Batched ____

ADDITION OF WATER

Gallons Added Before Test ____
Estimated Yards Remaining ____
Authorized By ____
Gallons Added After Test ____
Estimated Yards Remaining ____
Authorized By ____

APPLICABLE A.S.T.M. PROCEDURES

Sampling C-172
Slump C-143
Air Content C-231
Curing C-31
Capping C-1231/C-617
Compression C-39
Conc. Temp C-1064

TECHNICIAN TIME

Requested by ____
Time Requested ____
Time Arrived ____
Time Departed ____
Time (Portal to Portal) ____
Cylinder Pick Up Time ____
Total Tech. Time ____

Copies:

Remarks:

Sarasota
Phone: 941.371.3949
Fax: 941.371.8962
aroffice@driggers-eng.com

Clearwater
12220 49th Street North • Clearwater, Florida 33762
Phone: 727.571.1313 • Fax: 727.572.4090
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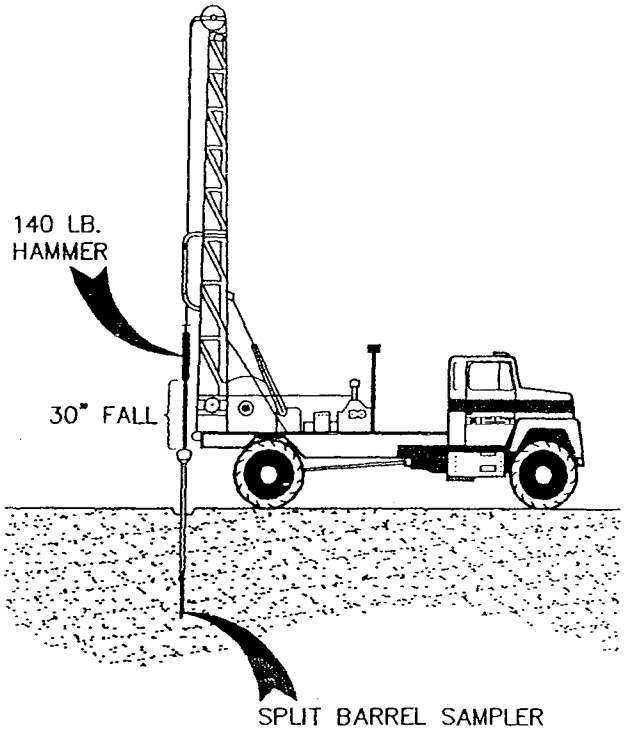
Phone: 813.948.6027
Fax: 813.948.7645
tpaoffice@driggers-eng.com

METHOD OF TESTING

STANDARD PENETRATION TEST WITH AUTOMATIC HAMMER AND SOIL CLASSIFICATION

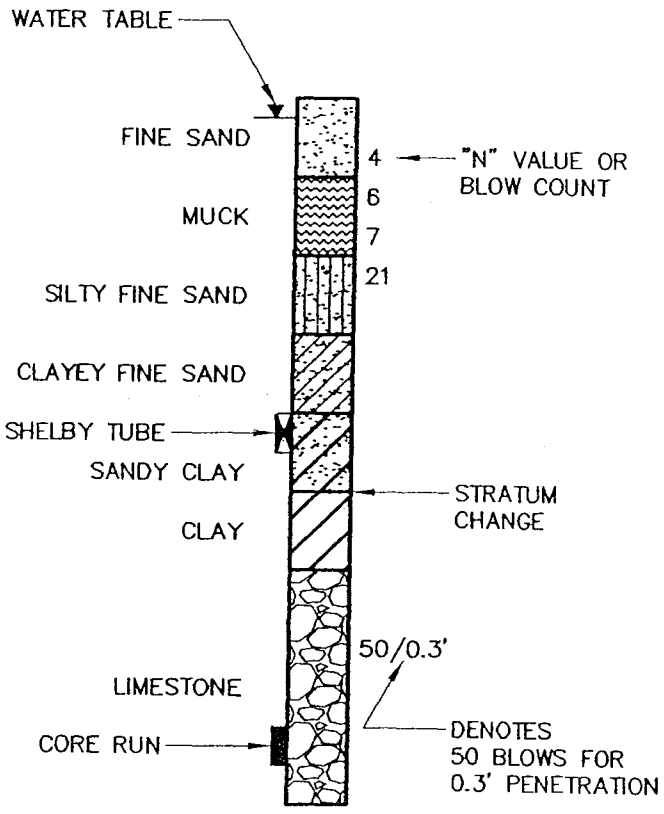


STANDARD PENETRATION TEST (ASTM D-1586)

In the Standard Penetration Test borings, a rotary drilling rig is used to advance the borehole to the desired test depth. A viscous drilling fluid is circulated through the drill rods and bit to stabilize the borehole and to assist in removal of soil and rock cuttings up and out of the borehole.

Upon reaching the desired test depth, the 2 inch O.D. split-barrel sampler or "split-spoon", as it is sometimes called, is attached to an N-size drill rod and lowered to the bottom of the borehole. A 140 pound automatic hammer, attached to the drill string at the ground surface, is then used to drive the sampler into the formation. The hammer is successively raised and dropped for a distance of 30 inches using an automated lifting mechanism. The number of blows is recorded for each 6 inch interval of penetration or until virtual refusal is achieved. In the above manner, the samples are ideally advanced a total of 18 inches. The sum of the blows required to effect the final 12 inches of penetration is called the blowcount, penetration resistance or "N" value of the particular material at the sample depth.

After penetration, the rods and sampler are retracted to the ground surface where the core sample is removed, sealed in a glass jar and transported to the laboratory for verification of field classification and storage.



SOIL SYMBOLS AND CLASSIFICATION

Soil and rock samples secured in the field sampling operation were visually classified as to texture, color and consistency. Soil classifications are presented descriptively and symbolically for ease of interpretation. The stratum identification lines represent the approximate boundary between soil types. In many cases, this transition may be gradual.

Consistency of the soil as to relative density or undrained shear strength, unless otherwise noted, is based upon Standard Penetration resistance values of "N" values and industry-accepted standards. "N" values, or blowcounts, are presented in both tabular and graphical form on each respective boring log at each sample interval. The graphical plot of blowcount versus depth is for illustration purposes only and does not warrant continuity in soil consistency or linear variation between sample intervals.

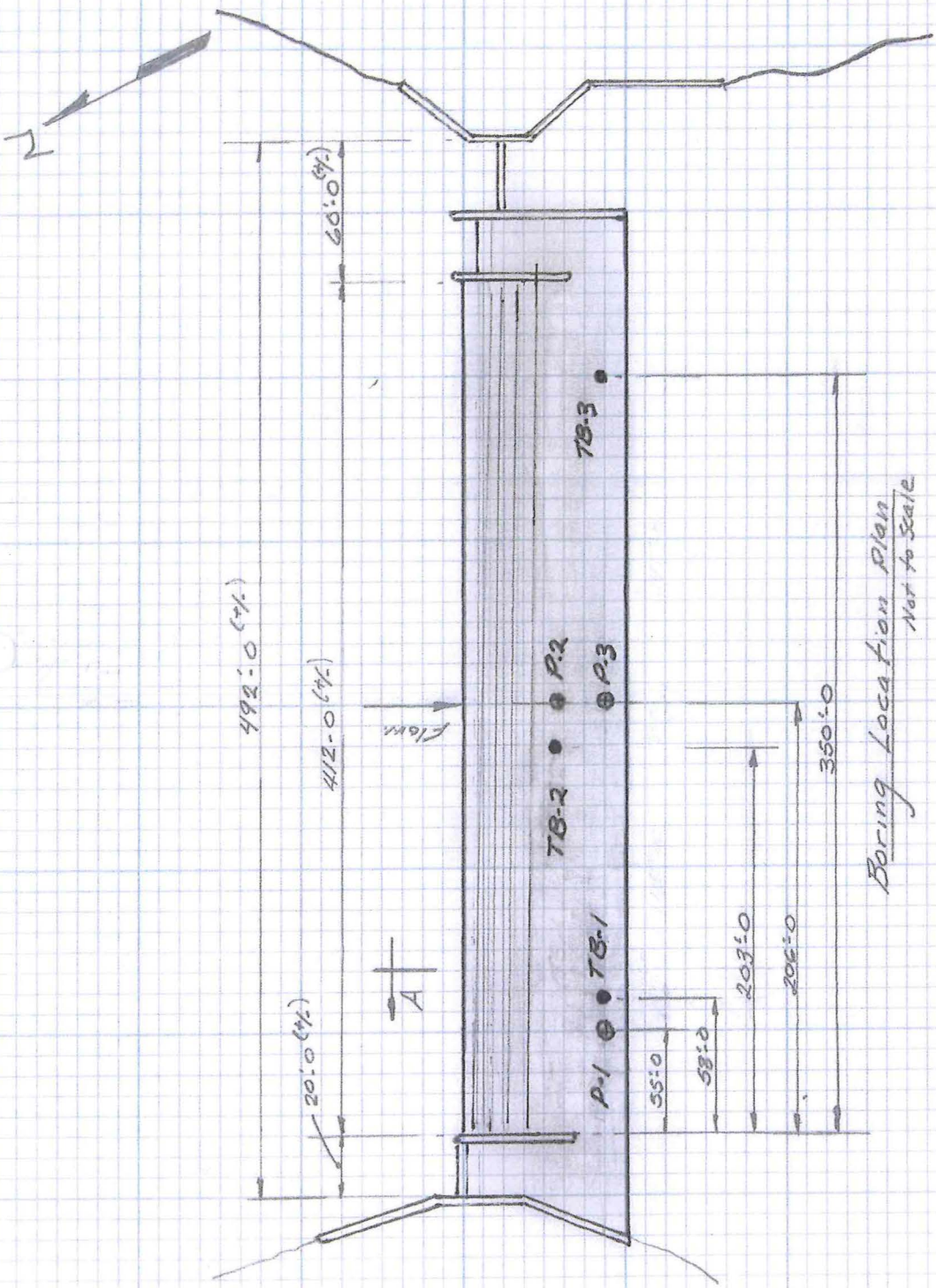
The borings represent subsurface conditions at respective boring locations and sample intervals only. Variations in subsurface conditions may occur between boring locations. Groundwater depths shown represent water depths at the dates and time shown only. The absence of water table information does not necessarily imply that groundwater was not encountered.

CDM

CLIENT
PROJECT Hillsborough River Dam
DETAIL Boring Plan

JOB NO.
DATE CHECKED
CHECKED BY

COMPUTED BY WJF
DATE 6/7/10
PAGE NO.



Boring Location Plan
Not to Scale

SK-1

CDM

CLIENT City of Tampa
PROJECT Hillsborough River Dam
DETAIL Boring Plan

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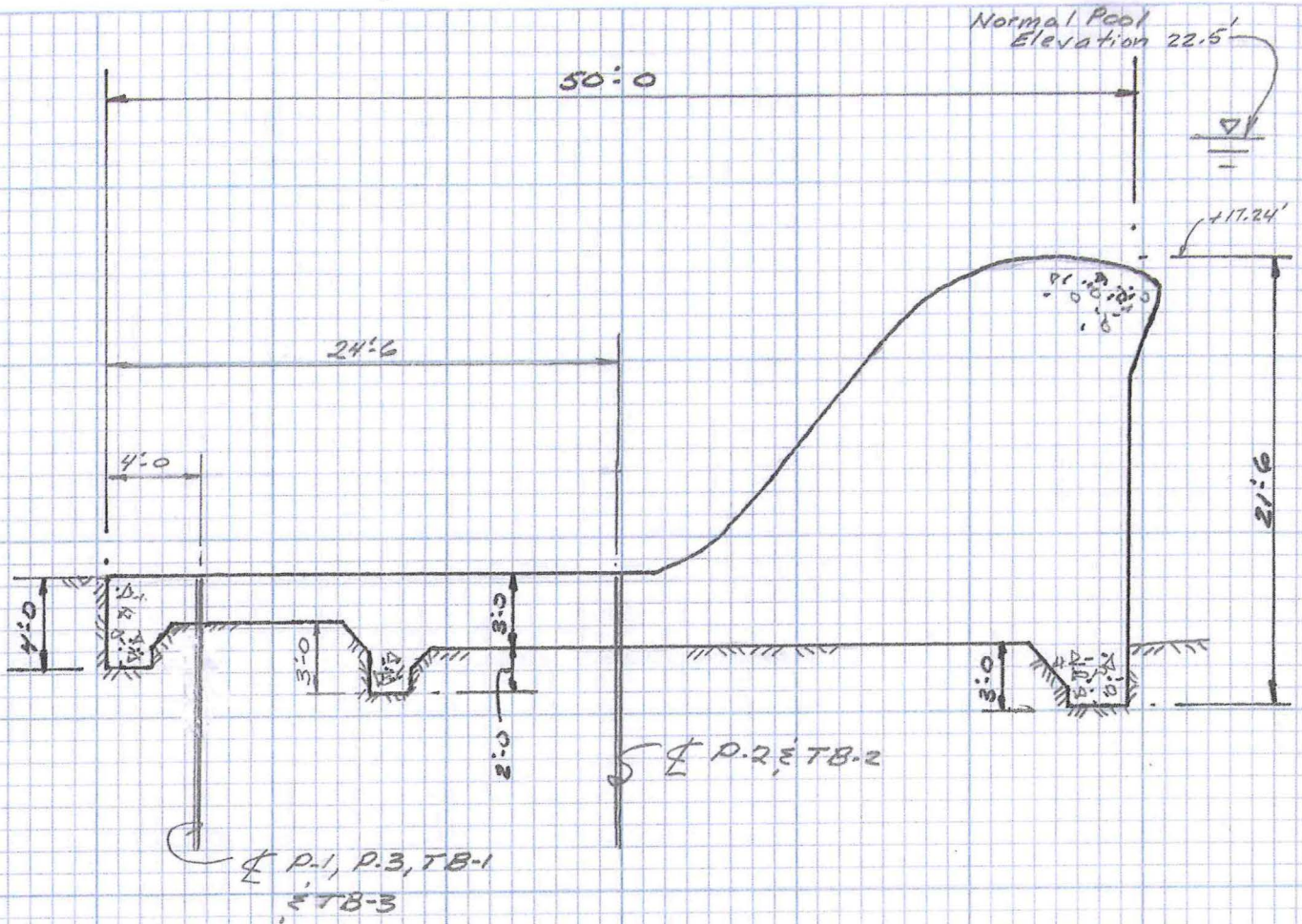
COMPUTED BY WJF
DATE 6/7/10
PAGE NO.



Section A-A
Not to scale

SK-2

CONTRACT 17-C-00042; Hillsborough River Dam MFL Low Flow Control Gate - Pre-Bid Mtg. 7/11/2017; 2:30p.m.

E-Mail to **Register as a Plan Holder** and E-Mail All **Questions** to; **ContractAdministration@tampagov.net**

Sign-In Sheet ☐ Please Print — City of Tampa, Contract Administration Department

	Name	Organization	E-Mail OR Phone
1	*Jim Greiner, PE*	*Tampa Contract Administration Dept.*	*Jim.Greiner@tampagov.net*
	Scott Burch	Gannett Fleming	sburch@gfnet.com
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5	Derrek Offutt	Gator Dredging	d.offutt@gatordredging.com
6	Bret Sapp	Gator Dredging	Bret@gatordredging.com
7	Cody Jensen	Kiewit Infrastructure So. Co.	Cody.Jensen@kiewit.com
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