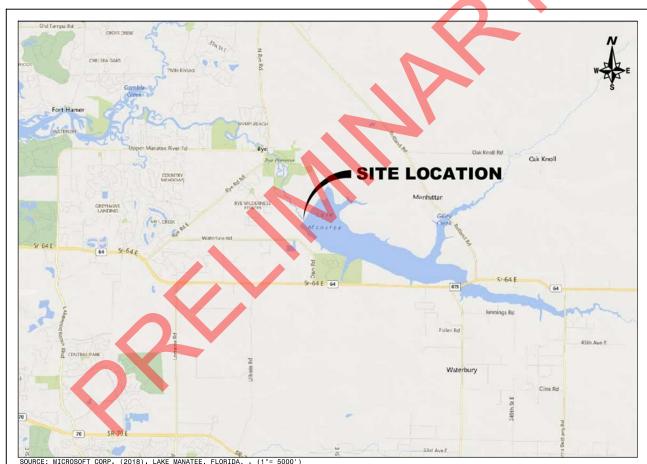
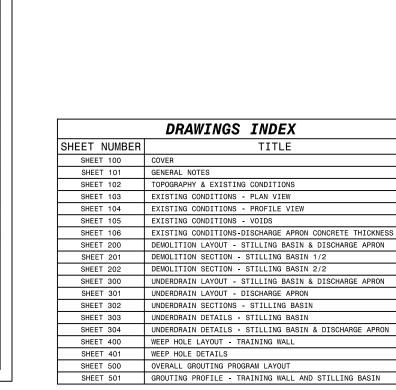
DESIGN DRAWINGS FOR: MANATEE COUNTY UTILITIES DEPARTMENT **DOWNSTREAM REPAIRS** LAKE MANATEE RESERVOIR

MANATEE COUNTY, FLORIDA

AMEC PROJECT NUMBER: 300472x4 April 10, 2018





DRAWINGS INDEX

TITLE

DEMOLITION LAYOUT - STILLING BASIN & DISCHARGE APRON

UNDERDRAIN DETAILS - STILLING BASIN & DISCHARGE APRO



PLANS PREPARED FOR:



401 N. Cattleman Road Sarasota, Florida 34232-6441

PLANS PREPARED BY:

amec foster wheeler

Amec Foster Wheeler Environment & Infrastructure, Inc.

1000 Channelsite Drive, Suite 200, Tampa, FL 33602 Phone: 1.813.289.0750 Fax: 1.813.289.5474 www.amecfw.com CA-5392

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MANATEE COUNTY, FLORIDA SECTION 25, TOWNSHIP 34 SOUTH, RANGE 19 EAST

ROLES

- 1. OWNER: MANATEE COUNTY UTILITIES DEPARTMENT (COUNTY)
- 2. DESIGNER: AMEC FOSTER WHEELER (ENGINEER)

GENERAL NOTES

- SUBMIT TO THE COUNTY, FOR APPROVAL, A PROPOSED CONSTRUCTION WORK PLAN PRIOR TO BEGINNING WORK.
- 2. INVESTIGATE, LOCATE, SUPPORT, PROTECT AND/OR RESTORE ALL EXISTING UTILITIES, WHETHER SHOWN ON THESE PLANS OR NOT. CALL THE UTILITIES PROTECTION SERVICE AT LEAST 72 HOURS PRIOR TO ANY CONSTRUCTION, AND SHALL NOTIFY ALL UTILITY COMPANIES AT LEAST 48 HOURS PRIOR TO WORK IN THE VICINITY OF THEIR UNDERGROUND LINES. COORDINATING WITH OWNER AND LOCATE PRIVATE UTILITIES ON SITE
- 3. CONFIRM ALL FIELD MEASUREMENTS NECESSARY FOR EXECUTION OF THE WORK PRIOR TO ORDERING ANY MATERIAL.
- 4. IF CONTRACTOR ACCESSES THE PROJECT VIA ADJACENT PROPERTY, OR UTILIZES OTHER PROPERTY FOR PROJECT WORK, ARRANGE AND PROCURE ANY PERMITS, COORDINATION, CONSTRUCTION MAINTENANCE, AND CLEAN-UP ON THE PRIVATE PROPERTIES.
- 5. MAINTAIN THE STABILITY OF EXISTING STRUCTURES, AND TEMPORARY/PERMANENT EARTH SLOPES THROUGHOUT CONSTRUCTION OPERATIONS, SUCH AS BY INSTALLING TEMPORARY SUPPORTS, SHORING, BRACING OR OTHER MEASURE AS MAY BE NECESSARY AT NO ADDITIONAL COSTS.
- MAINTAIN TEMPORARY CONSTRUCTION EXCAVATION IN ACCORDANCE WITH OSHA, STATE, AND FEDERAL REGULATIONS.
- ON-SITE CONSTRUCTION BY OTHERS, INCLUDING ROUTINE
 MAINTENANCE WORK MAY OCCUR THROUGHOUT THIS CONTRACT.
 COORDINATE CONSTRUCTION ACTIVITIES THROUGH THE OWNER TO
 MINIMIZE INTERFERENCE WITH OTHERS.
- 8. COORDINATE ANY ROAD CLOSURE, REROUTING OF TRAFFIC, OR INSTALLATION OF TRAFFIC MANAGEMENT DEVICES WITH OWNER.
- COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS GOVERNING THE WORK.
- 10. OWNER RESERVES THE RIGHT TO HALT OR STOP WORK FOR ANY REASON DURING THE PERIOD OF CONSTRUCTION. IF WORK IS STOPPED DUE TO FAULT OF CONTRACTOR (UNSAFE PRACTICES, DAMAGE TO PROPERTY, DISRUPTION TO FACILITY, ETC.), NO COMPENSATION FOR DELAYS OR OTHER MONETARY LOSSES WILL BE PROVIDED.
- 11. NOTE THAT WORK IS TO BE PERFORMED ALONG AN ACTIVE IMPOUNDMENT. EXERCISE EXTREME CARE TO KEEP FROM FROM ADVERSELY AFFECTING EARTHEN DAM. CONTINUOUSLY MONITOR PERFORMANCE OF DAM AND NOTIFY OWNER AND ENGINEER IMMEDIATELY OF NOTICEABLE SLOPE INSTABILITY.
- 12. AREA OF DISTURBANCE IS EXPECTED TO BE LESS THAN 1 ACRE. IF LAND DISTURBING ACTIVITIES EXCEED 1 ACRE, OBTAIN NPDES PERMIT TO INCLUDE, BUT NOT BE LIMITED TO A STORMWATER POLLUTION PREVENTION PLAN, IF REQUIRED. CONTRACTOR SHALL FOLLOW EROSION AND SEDIMENT CONTROL, BEST MANAGEMENT PRACTICES IN ACCORDANCE WITH FDEP FOR ON-SITE CONSTRUCTION ACTIVITIES.
- 13. TEMPORARILY BRACE ALL STRUCTURES AS REQUIRED FOR STABILITY AND SAFETY.

WORKS BY OTHERS

 ALL WORK ON THIS PROJECT SHALL BE CONSTRUCTED BY THE CONTRACTOR, UNLESS NOTED OTHERWISE.

SPECIFICATIONS

- PERFORM THE WORK IN ACCORDANCE WITH THESE DRAWINGS. IN ADDITION TO THESE PLANS, REFERENCE TO THE FOLLOWING DOCUMENTS SHALL BE CONSIDERED PART OF THE PROJECT DOCUMENTS:
 - A. FLORIDA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS". 2018 EDITION.
 - B. FLORIDA BUILDING CODE, 2017
- 2. IF THERE IS ANY CONFLICT BETWEEN AGENCIES, PLANS, ETC., THE MOST STRINGENT CRITERIA GOVERN.
- 3. IF THERE IS ANY CONFLICT BETWEEN PLANS AND REFERENCED SPECIFICATIONS. THE PLANS GOVERN.

DESIGN NOTES

- 1. ALL DIMENSIONS ARE IN US CUSTOMARY UNITS.
- VERTICAL ELEVATIONS ON THE PROJECT PLANS ARE SHOWN WITH REFERENCE TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
- 3. DRAWINGS HAVE BEEN PREPARED BASED ON SURVEY DATA AND OTHER AVAILABLE INFORMATION. THE CONTRACTOR CAN EXPECT AND SHOULD PLAN ON ENCOUNTERING VARIANCES AND DEVIATIONS BETWEEN THE INFORMATION IN THE DRAWINGS AND THE EXISTING SITE CONDITIONS. ACTUAL FIELD CONDITIONS MAY REQUIRE MODIFICATIONS IN CONSTRUCTION DETAILS AND QUANTITIES.
- 4. DO NOT SCALE DIMENSIONS FROM THE CONTRACT PLANS FOR CONSTRUCTION PURPOSES. SCALES ARE SHOWN FOR INFORMATION ONLY. FIELD VERIFY ALL DETAILS INCLUDING GEOMETRY AND ELEVATIONS PRIOR TO THE FABRICATION AND INSTALLATION OF ANY MATERIALS. SUBMIT COPIES OF FIELD SURVEYS AND VERIFICATIONS TO THE ENGINEER FOR INCLUSION INTO THE CONSTRUCTION RECORDS FOR THE PROJECT.
- 5. ALL DIMENSIONS AND ELEVATIONS SHOWN IN THESE PLANS APPLY TO THE PROPOSED FINISHED GRADE AND STRUCTURE.
- ELEVATIONS SHOWN IN THESE PLANS ARE BASED ON SURVEY CONTROL POINT ELEVATIONS ESTABLISHED IN THE FIELD.

CONTROL OF ALL WORK

ALL METHODS OF HANDLING WORK AFFECTING PLANT TRAFFIC AND THE SAFETY OF PLANT OPERATIONS MUST BE APPROVED BY THE OWNER BEFORE PROCEEDING WITH THAT PORTION OF THE WORK.

PREMOBILIZATION ACTIVITIES

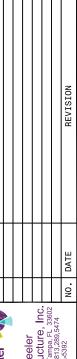
- AFTER REQUIRED PERMITS HAVE BEEN OBTAINED FROM LOCAL, STATE, AND FEDERAL AUTHORITIES, AND PRIOR TO THE COMMENCEMENT OF WORK, PERFORM ANY ADDITIONAL GEOTECHNICAL INVESTIGATION AND BATHYMETRY SURVEY REQUIRED TO COMPLETE THE WORK.
- 2. ESTABLISH AND MAINTAIN HORIZONTAL AND VERTICAL CONTROL, SURVEY BASELINE, DISPOSAL DETAILS, VOLUME AND QUANTITY REQUIREMENTS, AND ANY ENVIRONMENTAL PROTECTION MEASURES.
- 3. ALL MOBILIZATION ACTIVITIES REQUIRE ENVIRONMENTAL PROTECTION, INCLUDING HANDLING OF HAZARDOUS MATERIALS, SPILL PREVENTION, NOISE ABATEMENT, AND GENERAL ENVIRONMENTAL AWARENESS. CONDUCT WORK SO THAT ALL APPLICABLE LAWS, REGULATIONS, AND ORDINANCES IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL AUTHORITIES ARE MET.

SERVICE BRIDGE ALLOWABLE LOADING

- THE SERVICE BRIDGE OVER THE EXISTING TAINTER GATES IS RATED FOR A 35 TON, 4 AXLE TRUCK (FDOT STANDARD S/U-4). PLAN THE WORK SO THAT THE CAPACITY OF THE BRIDGE IS NOT EXCEEDED.
- 2. LIMIT VEHICLE SPEED ON THE SERVICE BRIDGE TO 10 MPH OR LESS.
- 3. DO NOT SUBJECT THE 1" X 8" WELDED STEEL GALVANIZED GRATING OVER THE STOP LOG RECESS TO VEHICLE LOADING.

ACCESS ACROSS MANATEE RIVER

- THE MANATEE RIVER MAY BE CROSSED WITH HEAVY TRAFFIC IMMEDIATELY DOWNSTREAM OF THE SERVICE SPILLWAY ALONG AN EXISTING RIPRAP ROAD. UPGRADE AND MAINTAIN THE ROAD AS NECESSARY FOR USE DURING CONSTRUCTION.
- 2. THE EXISTING RIPRAP ROAD IS SUBJECT TO PERIODIC INUNDATION BY THE RIVER DURING HIGH STORM EVENTS THAT MAY OCCUR THROUGHOUT THE YEAR, PARTICULARLY BETWEEN JUNE AND SEPTEMBER.



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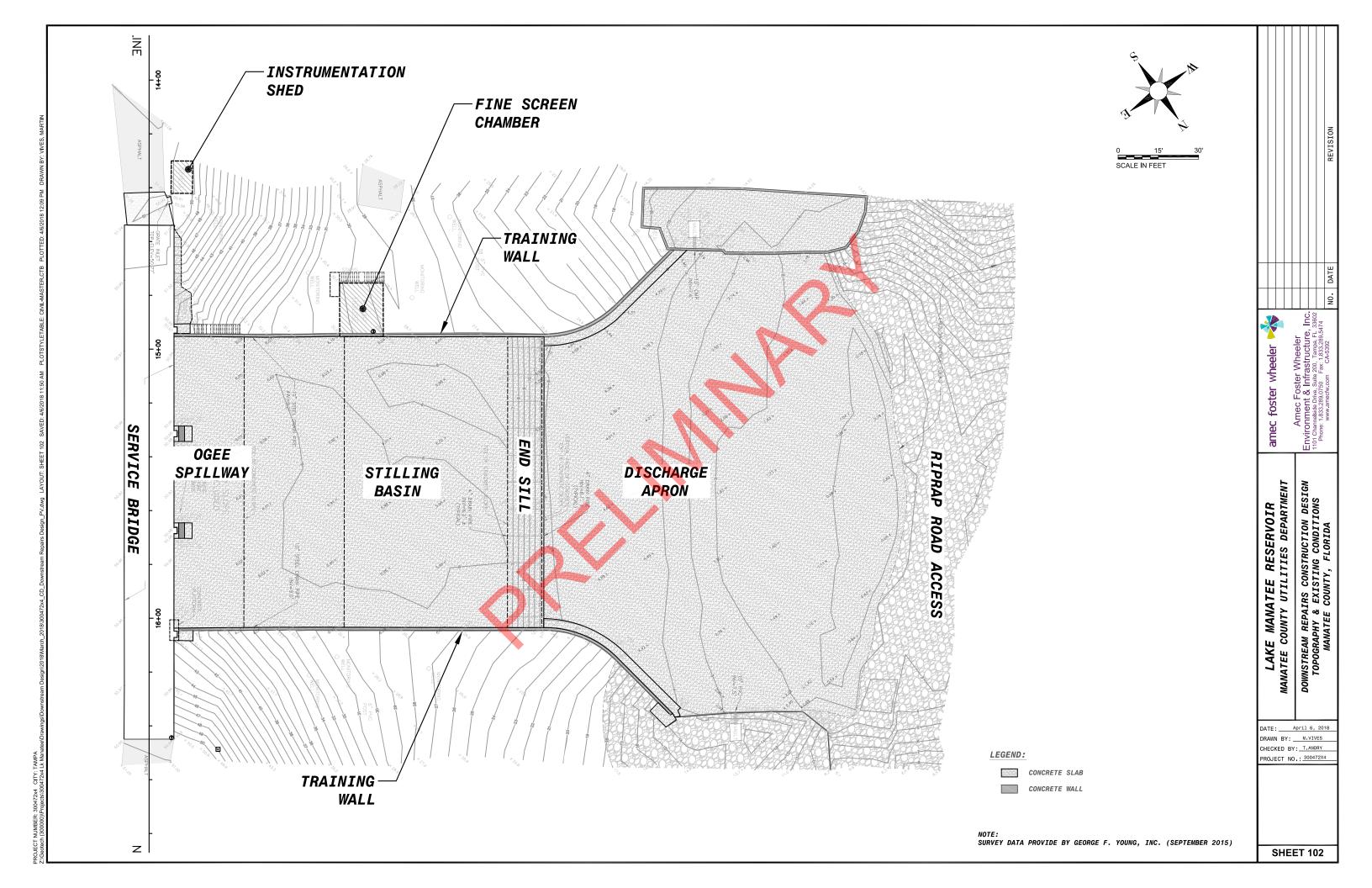
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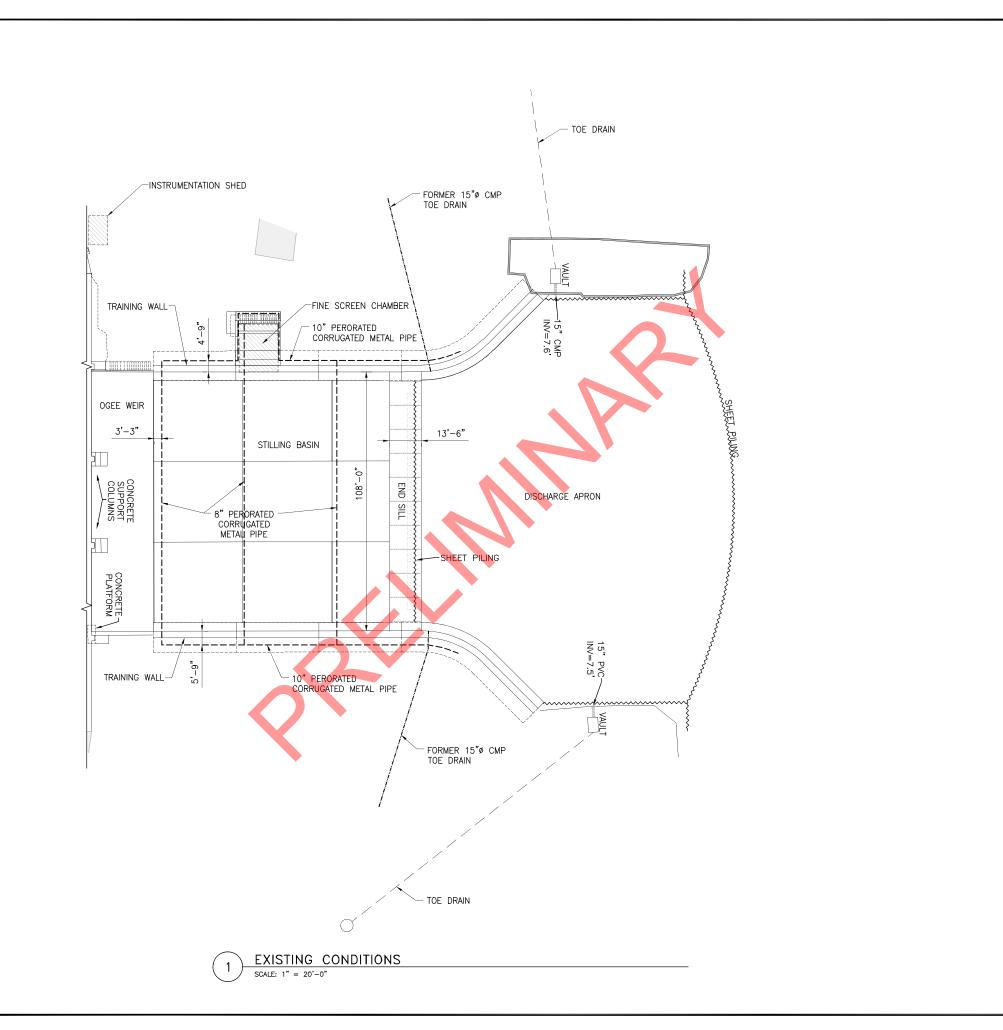
Amec Foster \
Environment & Infra
1101 Channelside Drive, Sulte 20
Phone: 1.813.289.0750 Fa

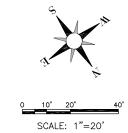
LAKE MANATEE DAM
MANATEE COUNTY UTILITIES DEPARTMENT
DOWNSTREAM REPAIRS CONSTRUCTION DESIGN
GENERAL NOTES
MANATEE COUNTY, FLORIDA

DATE: April 9, 2018
DRAWN BY: M.VIVES
CHECKED BY: T.ANDRY
PROJECT NO.: 300472X4

SHEET 101







 LAKE MANATEE DAM
 amec foster wheeler

 MANATEE COUNTY UTILITIES DEPARTMENT
 Amec Foster Wheeler

 DOWNSTREAM REPAIRS CONSTRUCTION DESIGN
 Environment & Infrastructure, Inc.

 EXISTING CONDITIONS - PLAN VIEW
 PLAN VIEW

 MANATEE COUNTY, FLORIDA
 NO.

DATE: __April 10, 2018
DRAWN BY: __J.VINCENT
CHECKED BY: _M.LEON
PROJECT NO.: 300472X4

FLA. REG. NO.

DATE:

FINE SCREEN CHAMBER TAINTER GATE TRAINING WALL OGEE WEIR STILLING BASIN 10"Ø PERFORATED CORRUGATED METAL PIPE END SILL 30"x30"Ø DOWNSTREAM RELEASE PORT F.L. ELEV. = 6.50 10"Ø OUTLET PIPE IN TRAINING WALL SUBSURFACE DRAINAGE MANIFOLD (TYP.) T/END SILL ELEV. = 12.25 ___ INVERT_ELEV. = 6.50 BOT./DISCHARGE APRON ELEV. VARIES BOTT./ SLAB ELEV. = 1.00 BOTT./SLAB ELEV. = 2.50 $\frac{\text{Q PIPE}}{\text{ELEV.} = 1.50}$ INNER FILTER (TYP.) STEEL SHEET PILE CUT-OFF WALL OUTER FILTER (TYP.) NOTE: DISCHARGE APRON SHEET PILING NOT SHOWN. SECTION OF EXISTING STILLING BASIN AND UNDERDRAIN SYSTEM SCALE: 1" = 10'-0"

SCALE: 1"=10'

LAKE MANATEE DAM MANATEE COUNTY UTILITIES DEPARTMENT DOWNSTREAM REPAIRS CONSTRUCTION DESIGN EXISTING CONDITIONS - PROFILE VIEW MANATEE COUNTY, FLORIDA

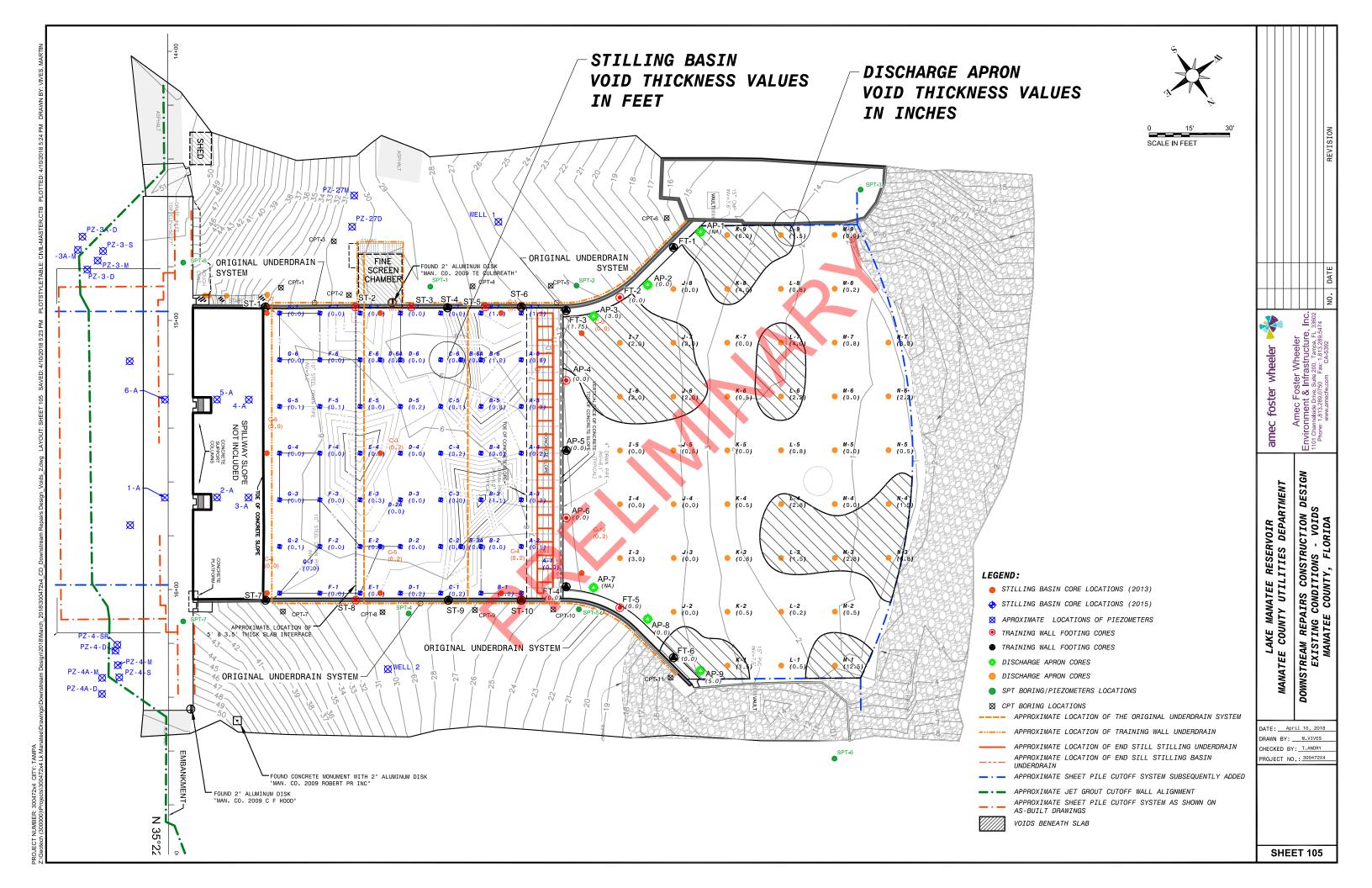
amec foster wheeler 😽

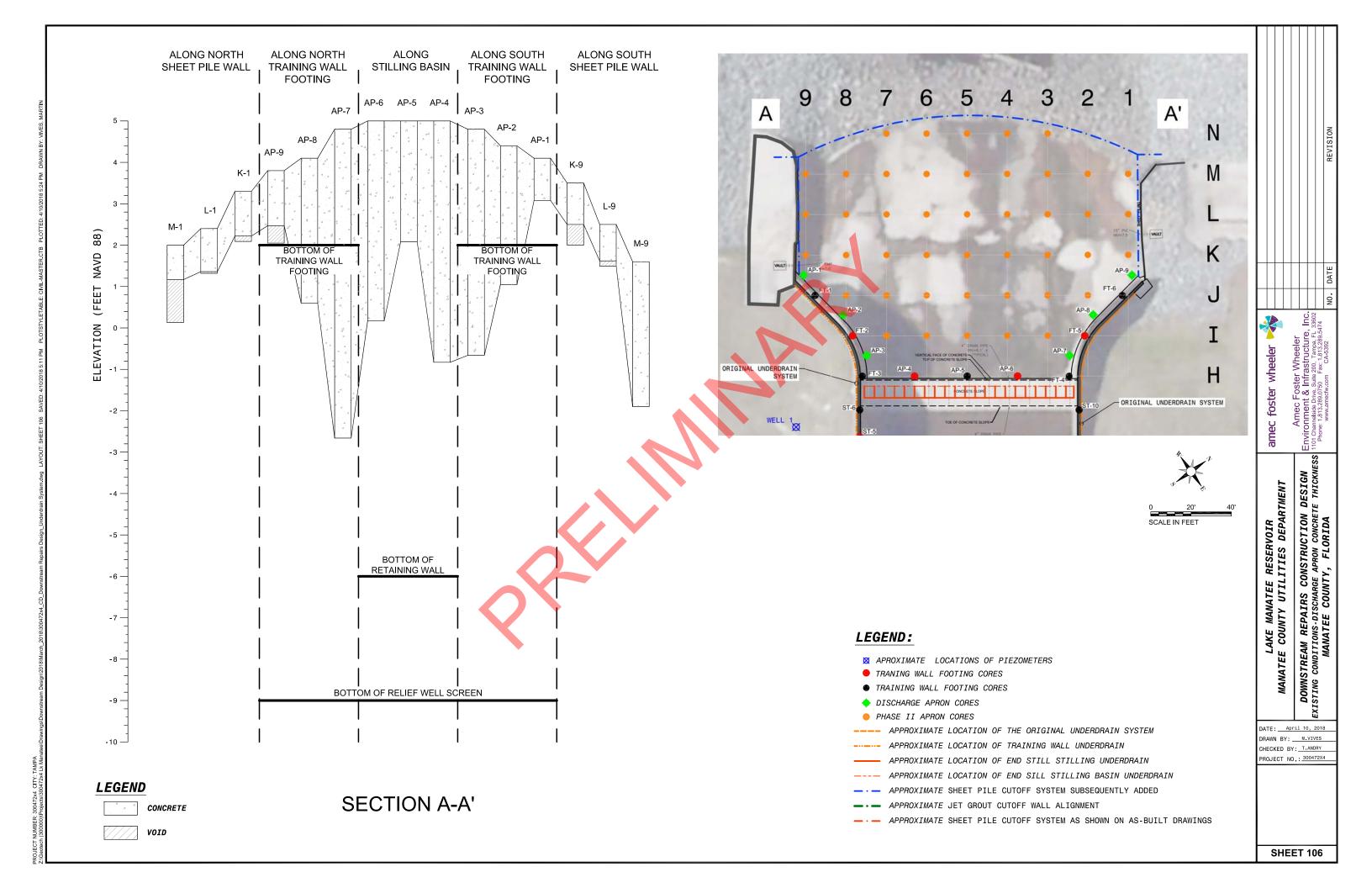
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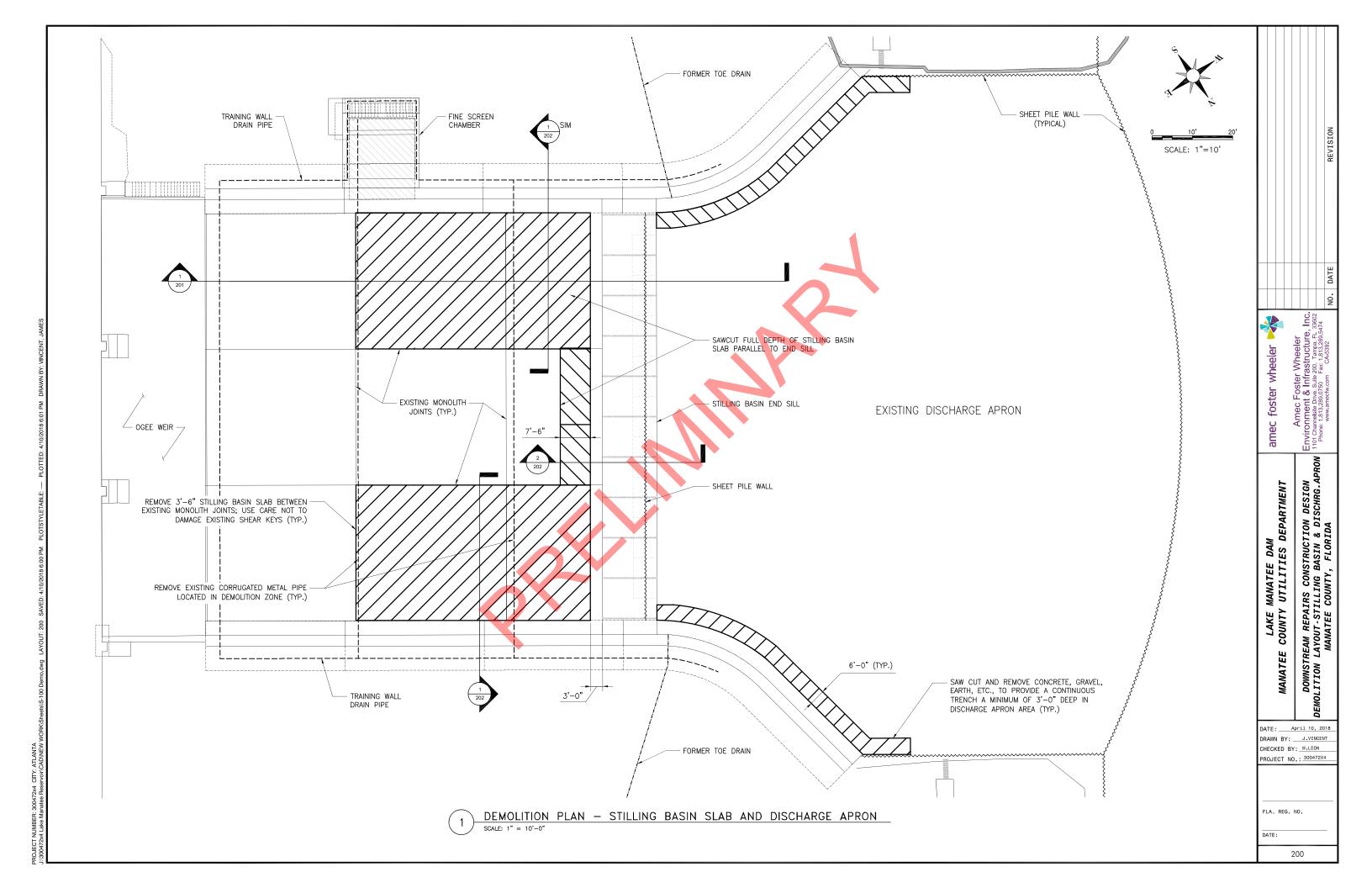
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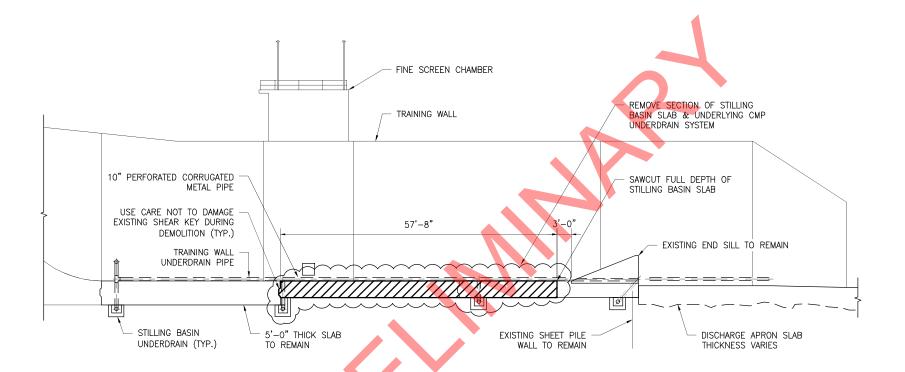
104

DATE: ____April 10, 2018 DRAWN BY: ____J.VINCENT CHECKED BY: M.LEON PROJECT NO.: 300472X4









DEMOLITION - TYPICAL SECTION THROUGH STILLING BASIN SLAB

SCALE: 1"=10'

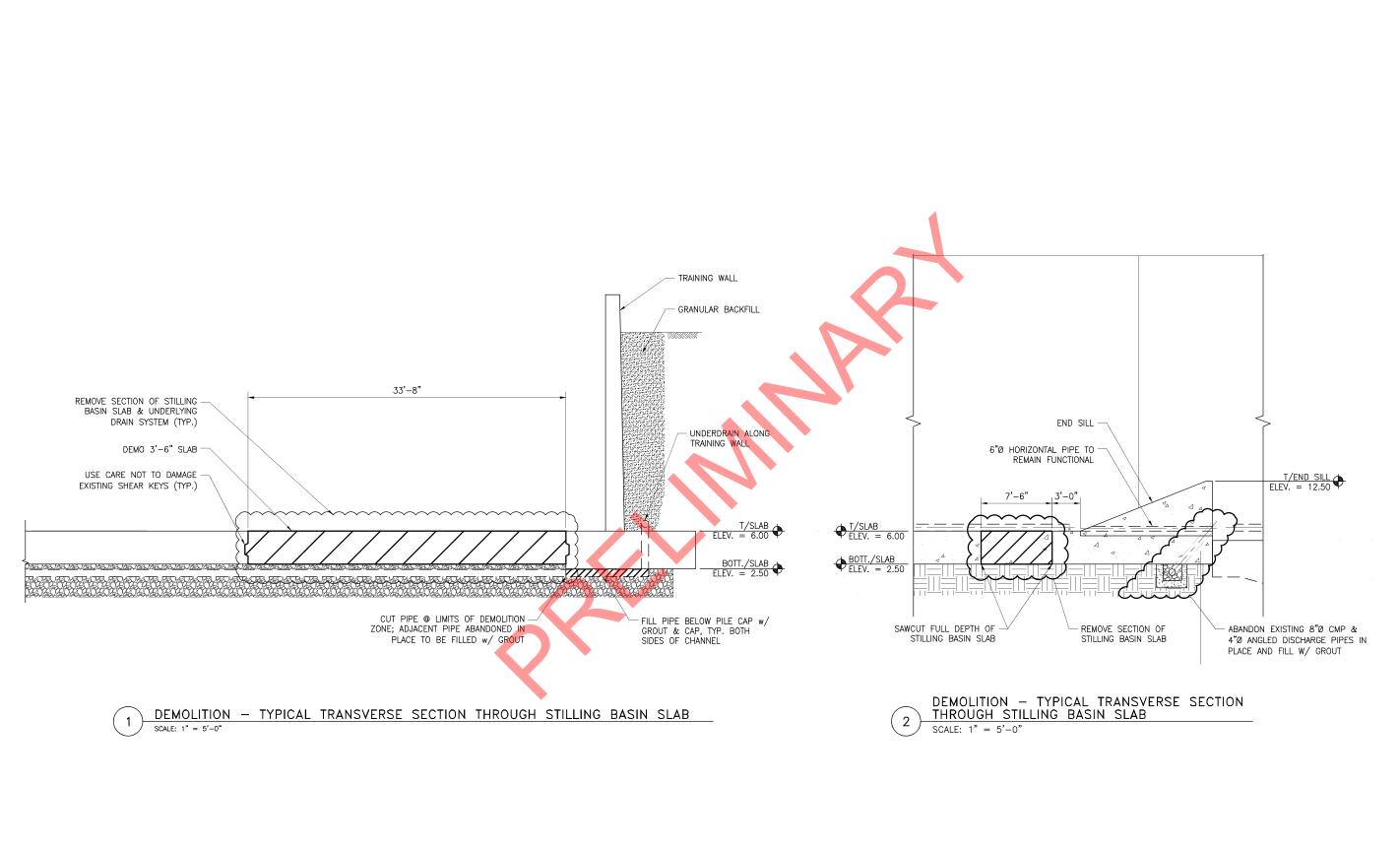
amec foster wheeler 😽 LAKE MANATEE DAM MANATEE COUNTY UTILITIES DEPARTMENT

DOWNSTREAM REPAIRS CONSTRUCTION DESIGN DEMOLITION SECTION - STILLING BASIN 1 OF MANATEE COUNTY, FLORIDA

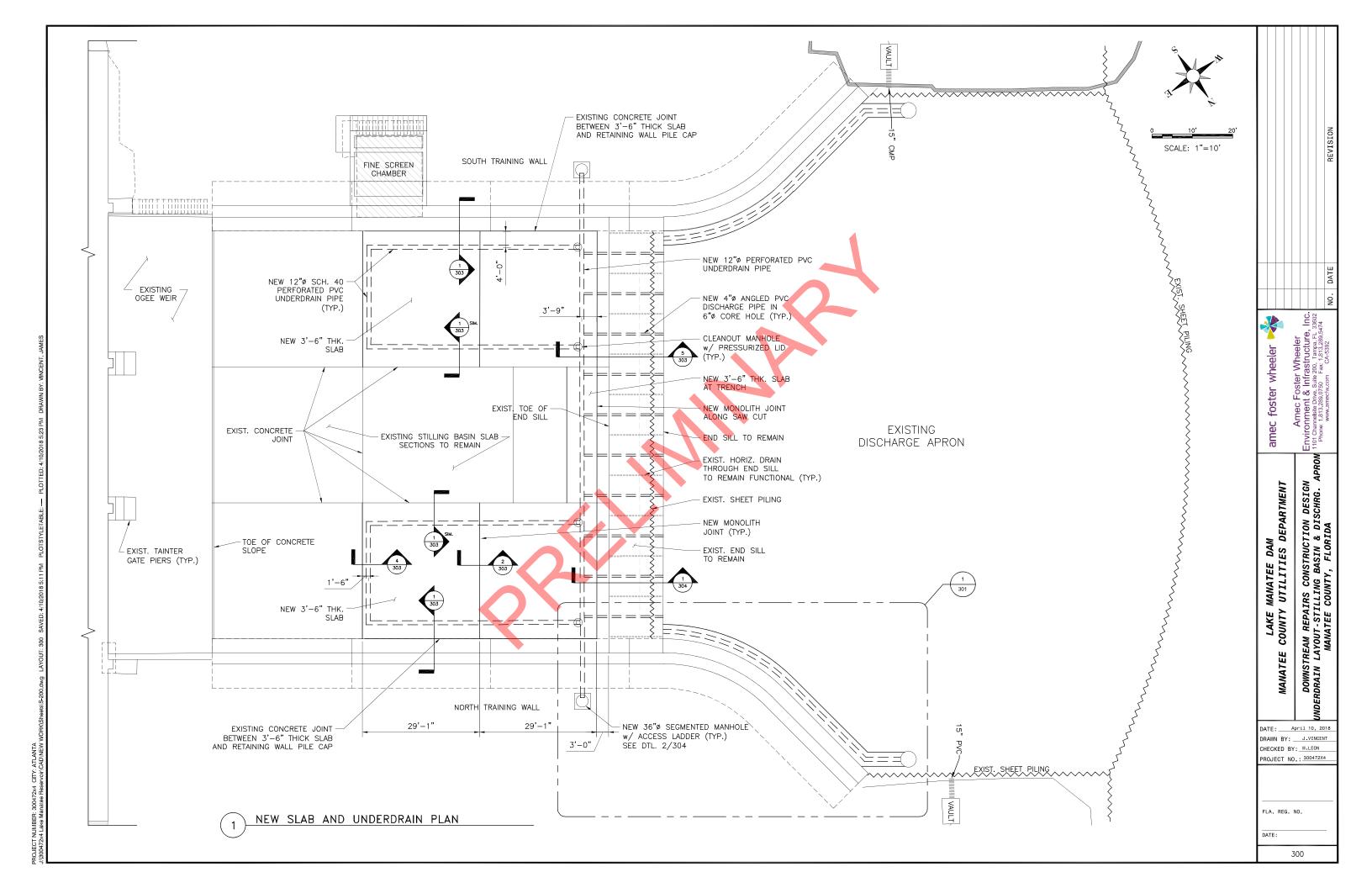
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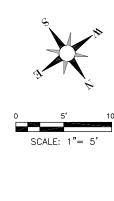
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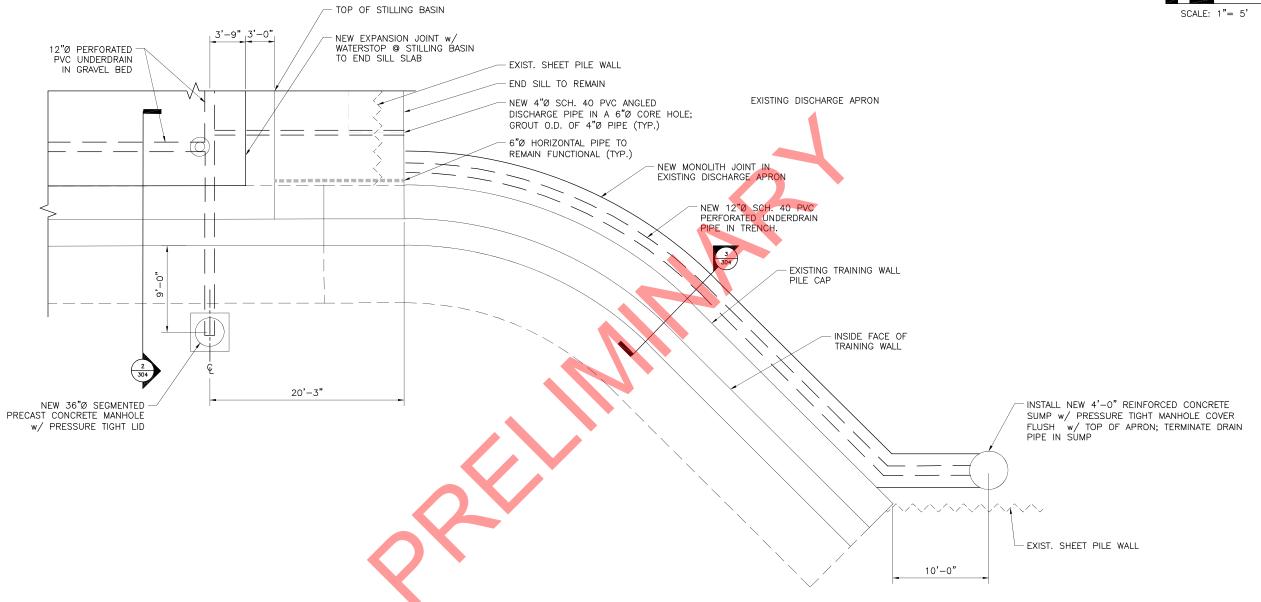
DATE:



0 5' 10' SCALE: 1"= 5' | MANATEE COUNTY UTILITIES DEPARTMENT | Amec foster wheeler | MANATEE COUNTY UTILITIES DEPARTMENT | Amec foster Wheeler | Amec foster Wheeler | Amec Foster Wheeler | Amec Foster Wheeler | Downstream Repairs Construction Design | Environment & Infrastructure, | Inf







1 ENLARGED PLAN AT DISCHARGE APRON ALONG WING WALL

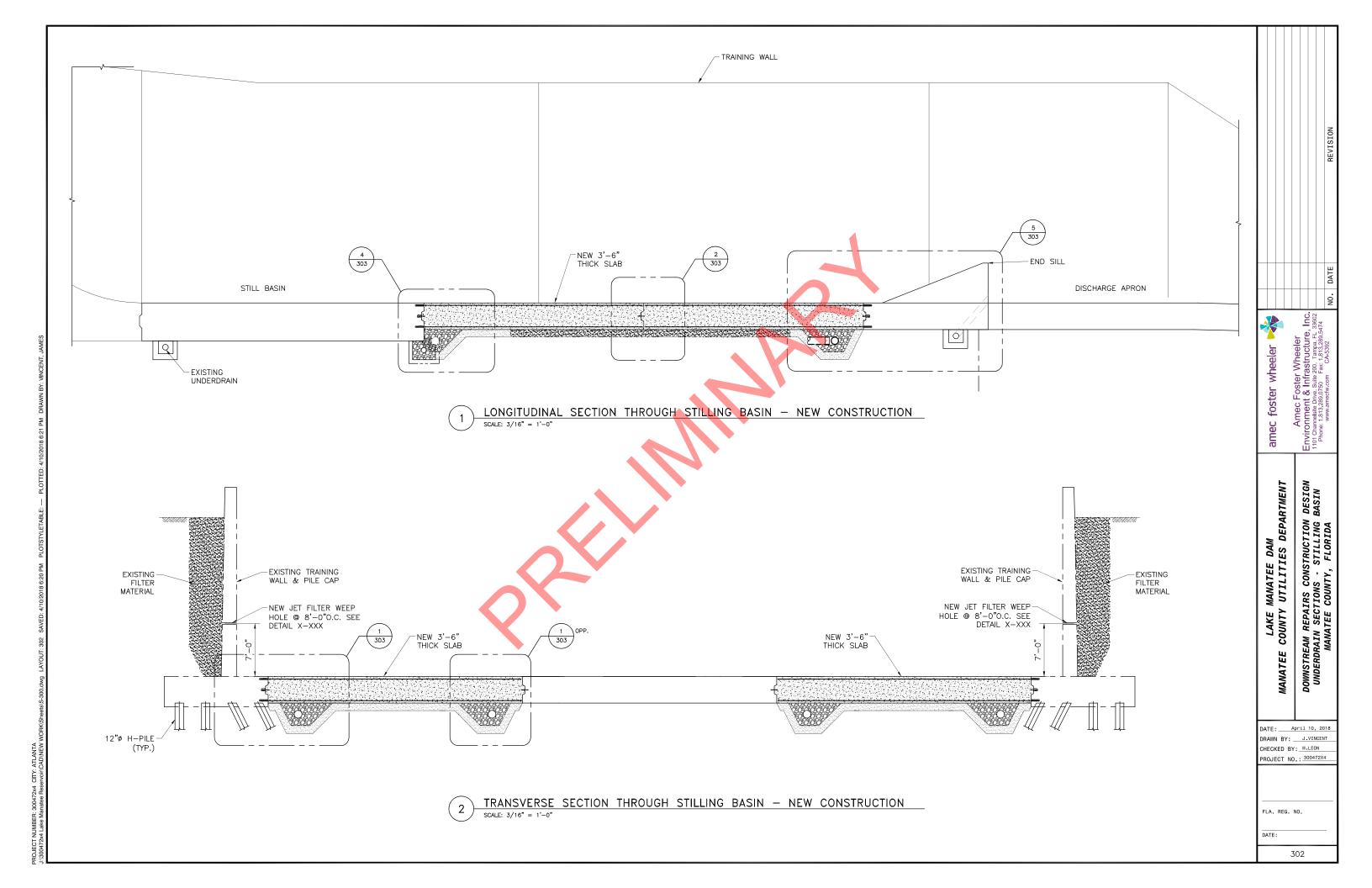
LAKE MANATEE DAM
MANATEE COUNTY UTILITIES DEPARTMENT
DOWNSTREAM REPAIRS CONSTRUCTION DESIGN
UNDERDRAIN LAYOUT - DISCHARGE APRON
MANATEE COUNTY, FLORIDA

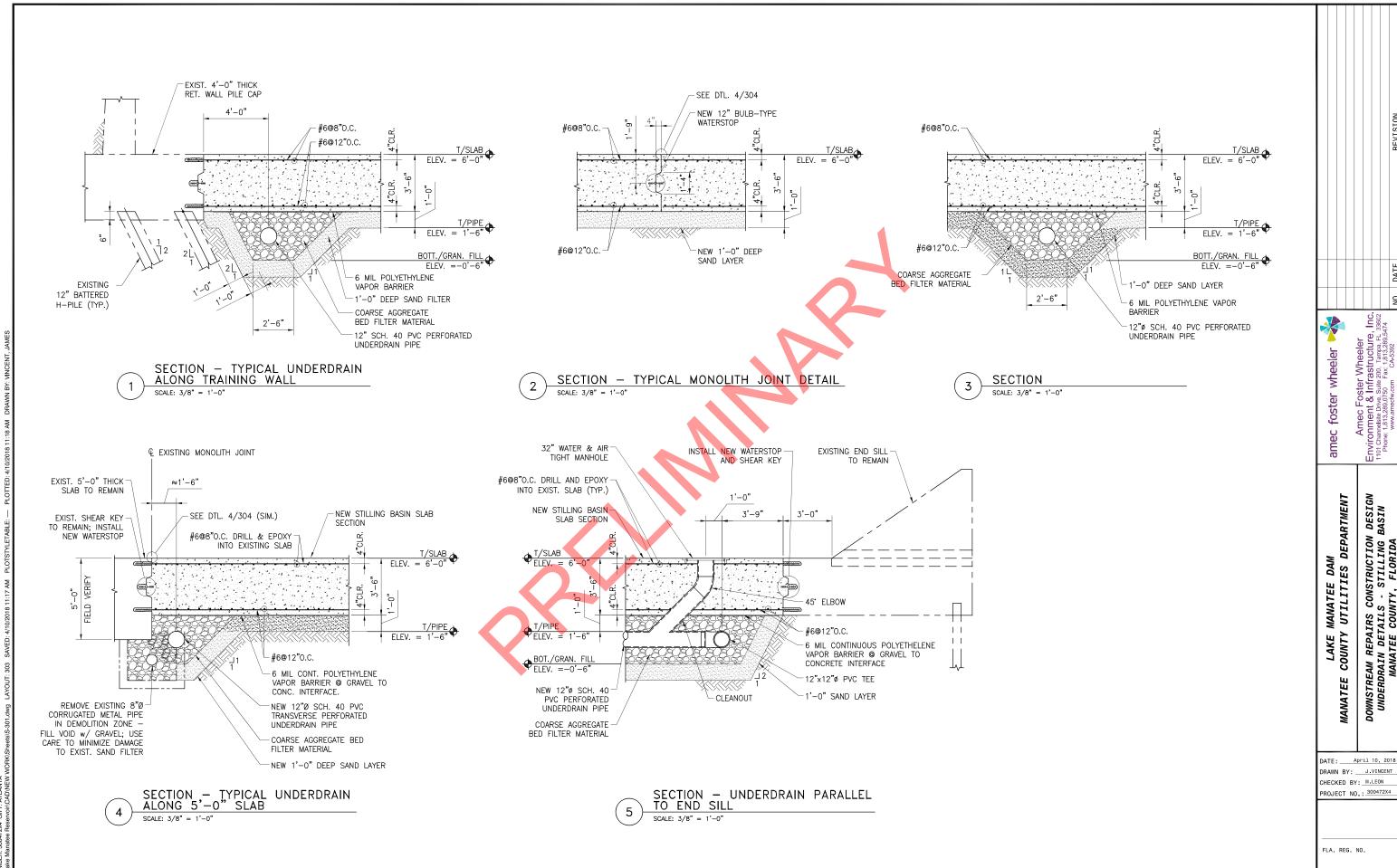
amec foster wheeler

DATE: April 10, 2018
DRAWN BY: J.VINCENT
CHECKED BY: M.LEON
PROJECT NO.: 300472X4

FLA. REG. NO.

DATE:





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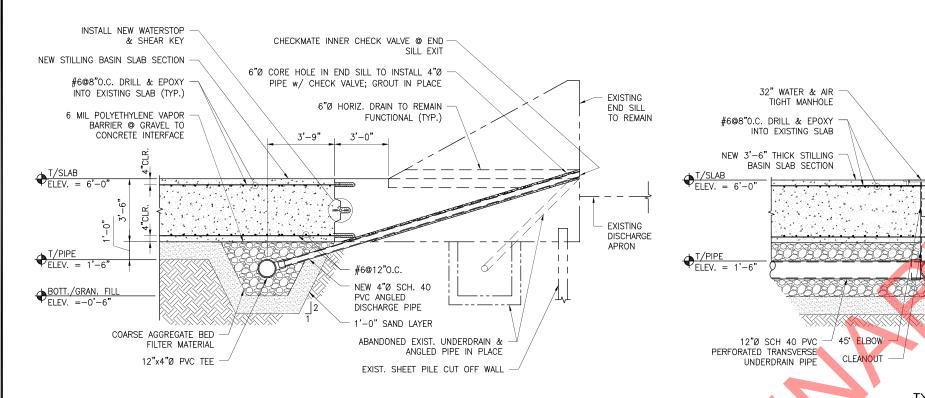
DATE:

Wheeler astructure 200, Tampa, FL Fax: 1.813.289.

Foster V t & Infred hrive, Suite 2

' DESIGN BASIN

DOWNSTREAM REPAIRS CONSTRUCTION UNDERDRAIN DETAILS - STILLING E MANATEE COUNTY, FLORIDA



EXIST. TRAINING WALL & PILE CAP 36"Ø SEGMENTED PRECAST CONCRETE MANHOLE W/ LADDER, SUMP PUMP, & 4'-0" PRESSURE TIGHT COVER INSTALL NEW WATERSTOP & SHEAR KEY GROUT BOTT./FOOTING ELEV. = -1'-0" 12"Ø SCH 40 PVC PIPE; NO PERFORATIONS IN SECTION UNDER PILE CAP; SEAL EXTERIOR OF #6@12"O.C. - 12"Ø PVC TEE

SECTION - TYPICAL AT ANGLED DISCHARGE PIPE SCALE: 3/8" = 1'-0"

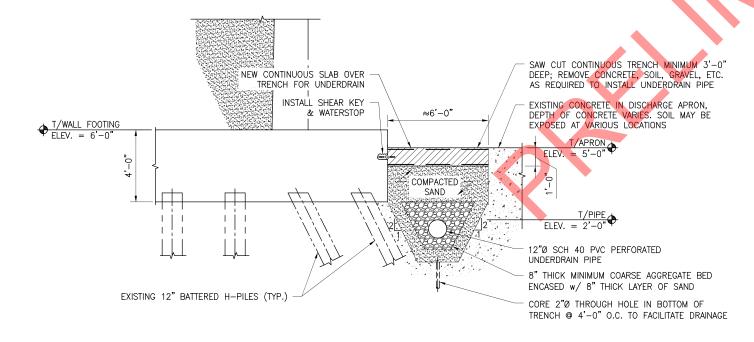
SECTION - UNDERDRAIN DISCHARGE APRON

SCALE: 3/8" = 1'-0"

TYP. SECTION — TRANSVERSE PIPE PASSES UNDER TRAINING WALL

SCALE: 3/8" = 1'-0"

NOTE: EXIST. PILES NOT SHOWN FOR CLARITY.



1/2" RADIUS TYPICAL AT MONOLITH JOINTS 4

JOINT DETAIL SCALE:

FLA. REG. NO. DATE:

DATE: April 10, 2018 DRAWN BY: ___J.VINCENT CHECKED BY: M.LEON PROJECT NO.: 300472X4

foster wheeler

amec

MANATEE DAM UTILITIES DEPARTMENT

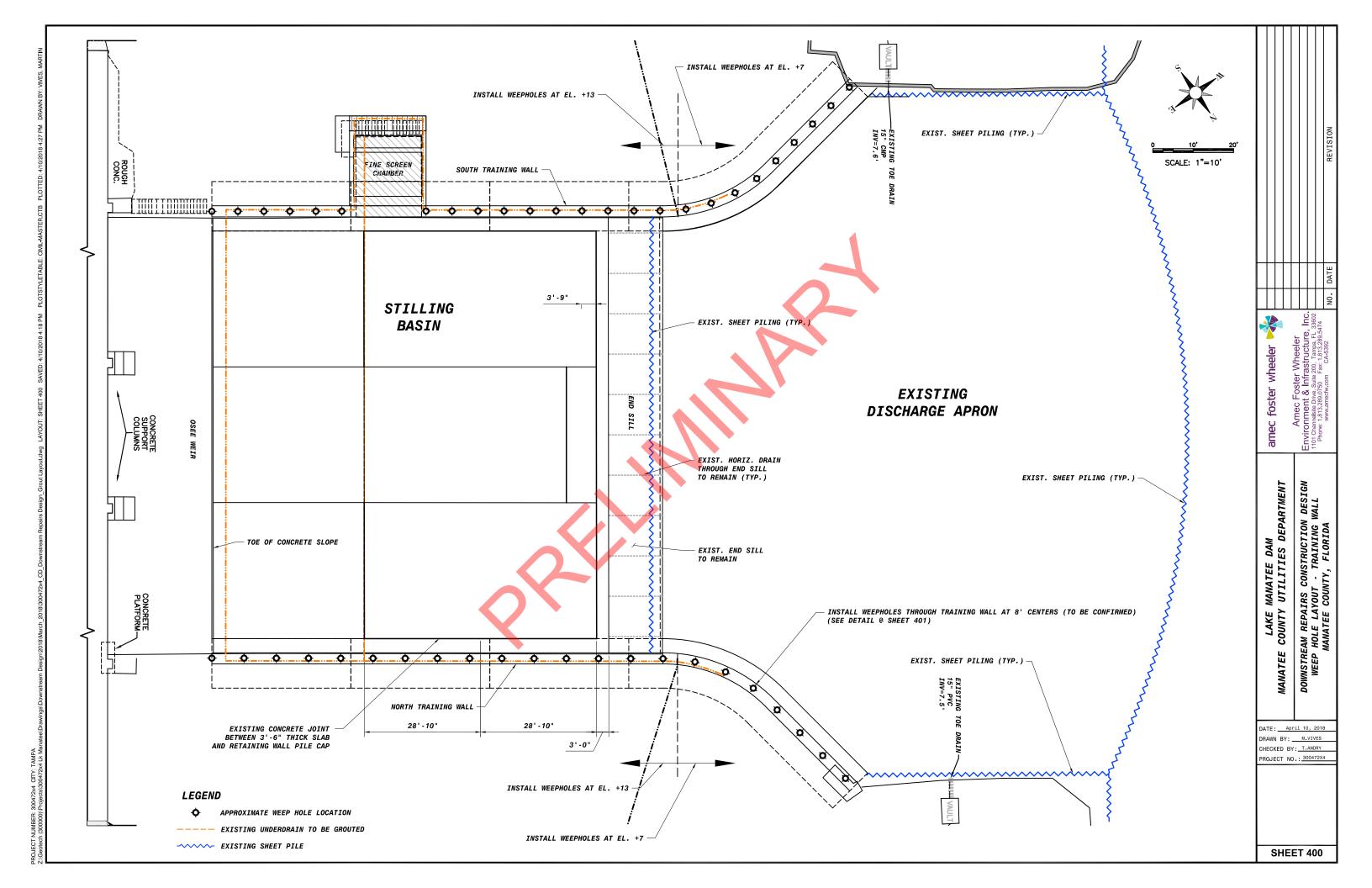
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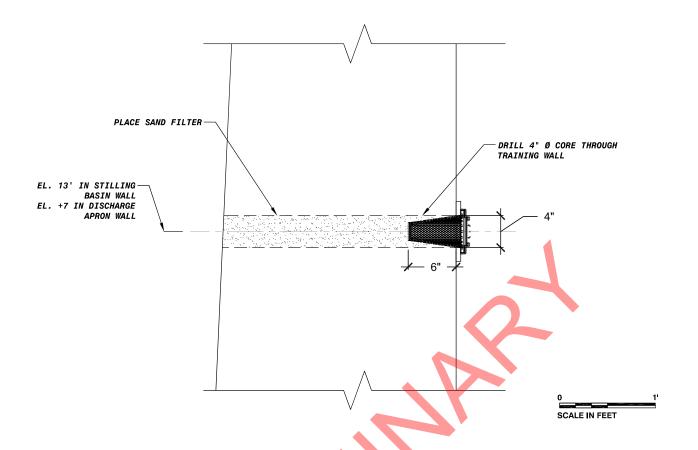
MANATEE

Foster t & Infragine 2 Suite 2

DOWNSTREAM REPAIRS CONSTRUCTION DESIGN RDRAIN DETAILS - STILLING BASIN & DISCHRG. AMANATEE COUNTY, FLORIDA

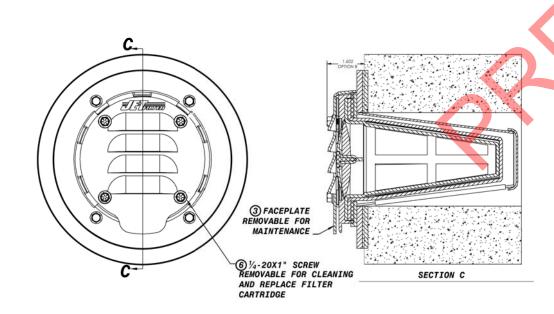
PIPE PENETRATION UNDER PILE CAP w/ GROUT

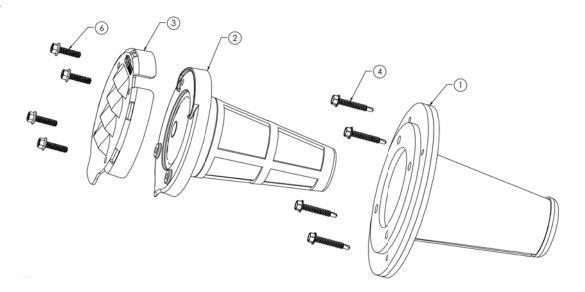




WEEP HOLE INSTALLATION DETAIL (TYP)

SCALE: 1'= 3"





JET FILTER SYSTEM

NOT TO SCALE

ITEM	NUMBER	DESCRIPTION	QTY.
1	EV-10898	BULKHEAD CAGE ASSEMBLY	1
2	EV-10910	FILTER CARTRIDGE ASSEMBLY	1
3	EV-10905	FACEPLATE	1
4	3" SCREW	3" LONG WEDGE ANCHORS	4
5	1½" SCREW	1/4-20 X 11/2" SCREW	0
6	1" SCREW	1/4-20 X 1" SCREW	4

::IPD CANADA TEE DAM	pril		MEED UOI E DETA	WEET HOLE DELY.	MANATEE COUNTY, FLORIDA	
amec foster wheeler	Amec Foster Wheeler	Environment & Infrastructure Inc	1101 Channelsite Drive. Suite 200. Tampa. Fl. 33602	Phone: 1.813.289.0750 Fax: 1.813.289.5474	www.amecfw.com CA-5392 NO. DATE	
					DATE REVISION	

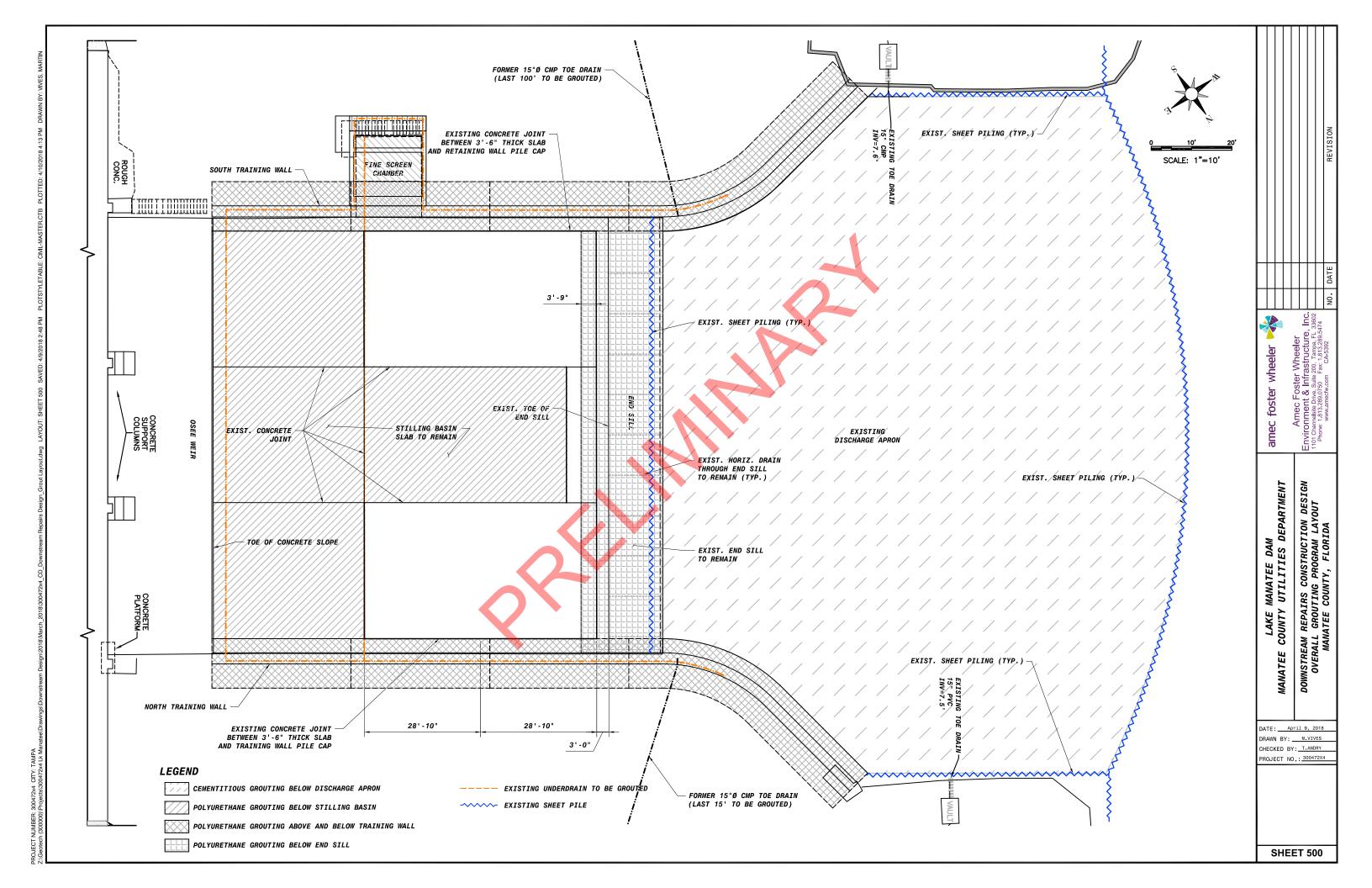
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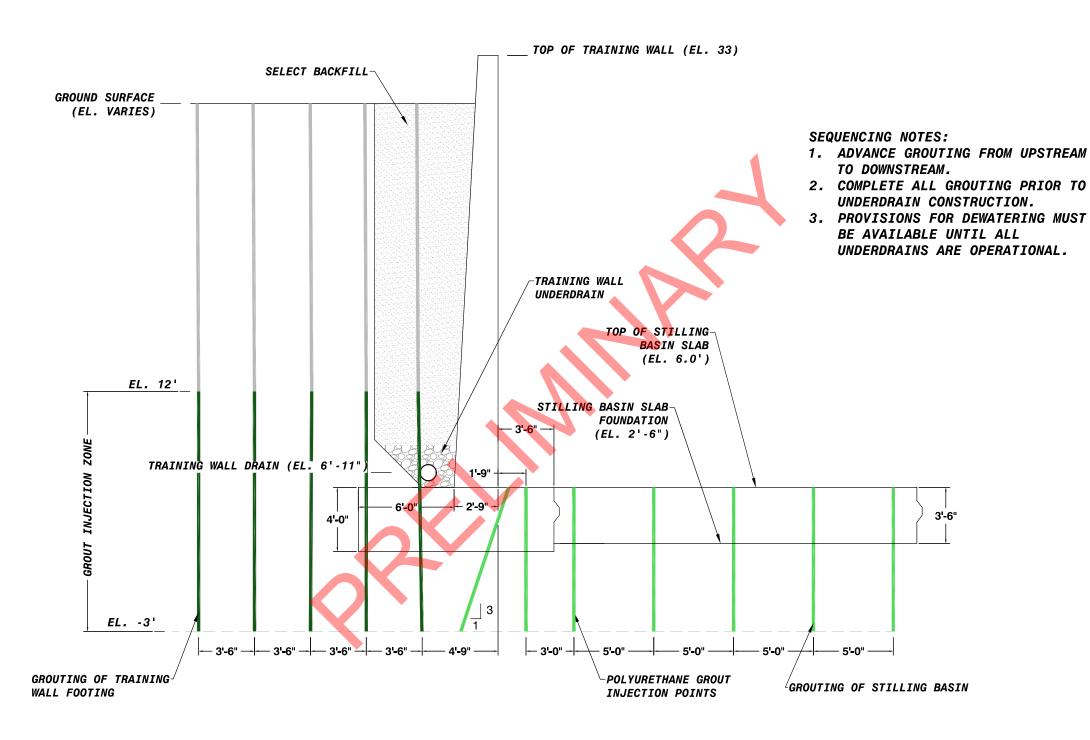
DRAWN BY: __M.VIVES

CHECKED BY: __T.ANDRY

PROJECT NO.: 300472X4

SHEET 401





TYPICAL TRAINING WALL STILLING BASIN GROUTING SECTION

SCALE: 1"=3'



SCALE IN FEET

DRAWN BY: ____M.VIVES CHECKED BY: T.ANDRY PROJECT NO.: 300472X4

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SHEET 501