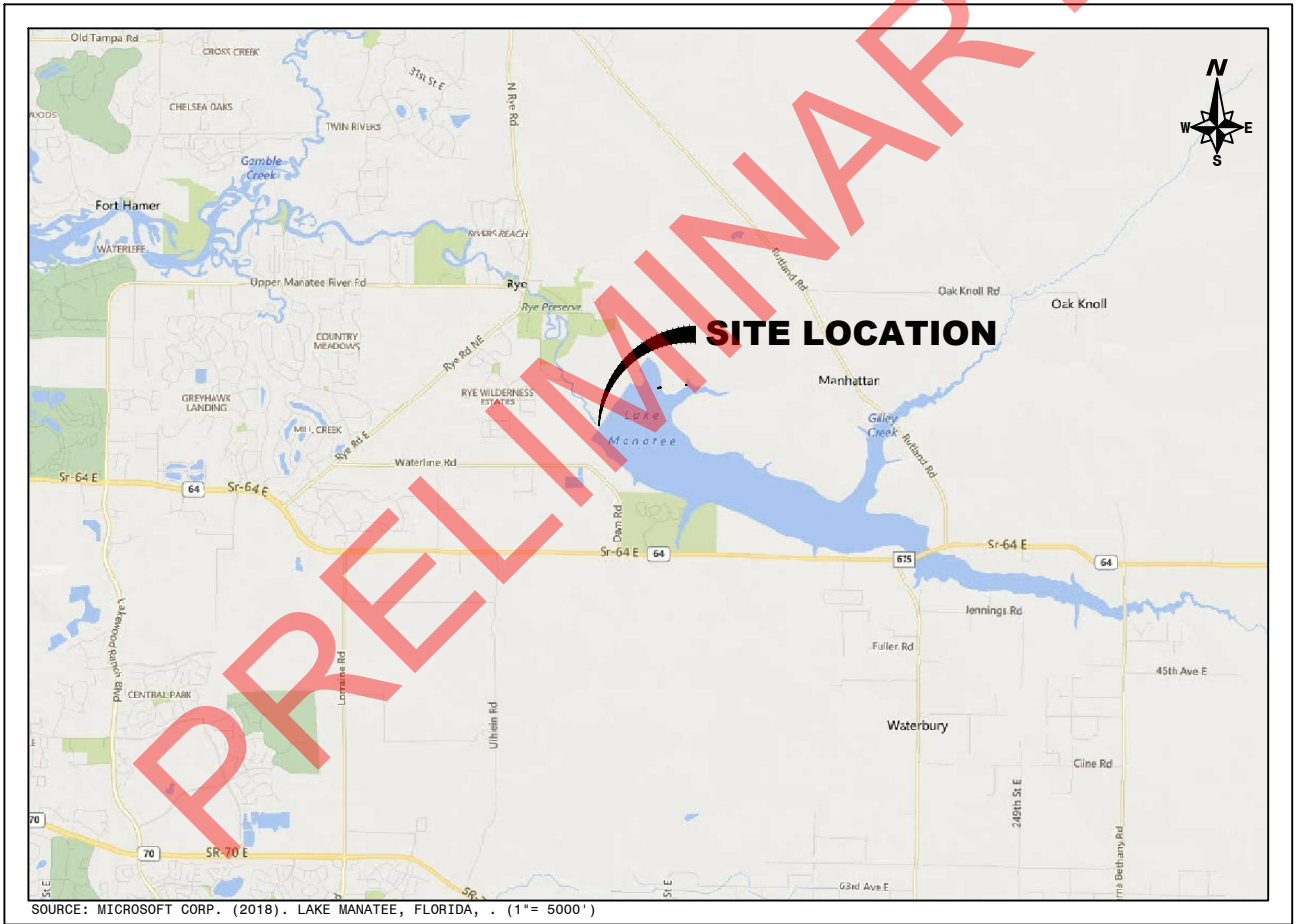
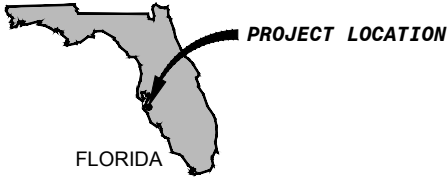


ENGINEERING DESIGN FOR:  
**MANATEE COUNTY UTILITIES DEPARTMENT**  
**SUPPLEMENTAL CUTOFF WALL AND APPROACH S**  
**LAKE MANATEE RESERVOIR**  
**MANATEE COUNTY, FLORIDA**

AMEC PROJECT NUMBER: 300472x4

April 10, 2018



D	
SHEET NUMBER	
SHEET 1	COVER
SHEET 2	GENERAL
SHEET 3	LAYOUT
SHEET 4	COFFEE
SHEET 5	SUPPLE
SHEET 6	DAM CE
SHEET 7	PROPOS
SHEET 8	DEMOLI
SHEET 9	DEMOLI
SHEET 10	SELECT
SHEET 11	PLAN L
SHEET 12	PLAN L
SHEET 13	APPROA

**S I T E   L O C A T I O N   M A P**

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

**PLANS PREPARED BY:**



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

ROLES

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

GENERAL NOTES

- 1. 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.
- 6. MAINTAIN TEMPORARY CONSTRUCTION EXCAVATION IN ACCORDANCE WITH OSHA, STATE, AND FEDERAL REGULATIONS.
- 7. 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.
- 9. 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

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

SPECIFICATIONS

- 1. 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.
- 2. 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.
- 6. ELEVATIONS SHOWN IN THESE PLANS ARE BASED ON SURVEY CONTROL POINT ELEVATIONS ESTABLISHED IN THE FIELD.

CONTROL OF ALL WORK

- 1. 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

- 1. 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.

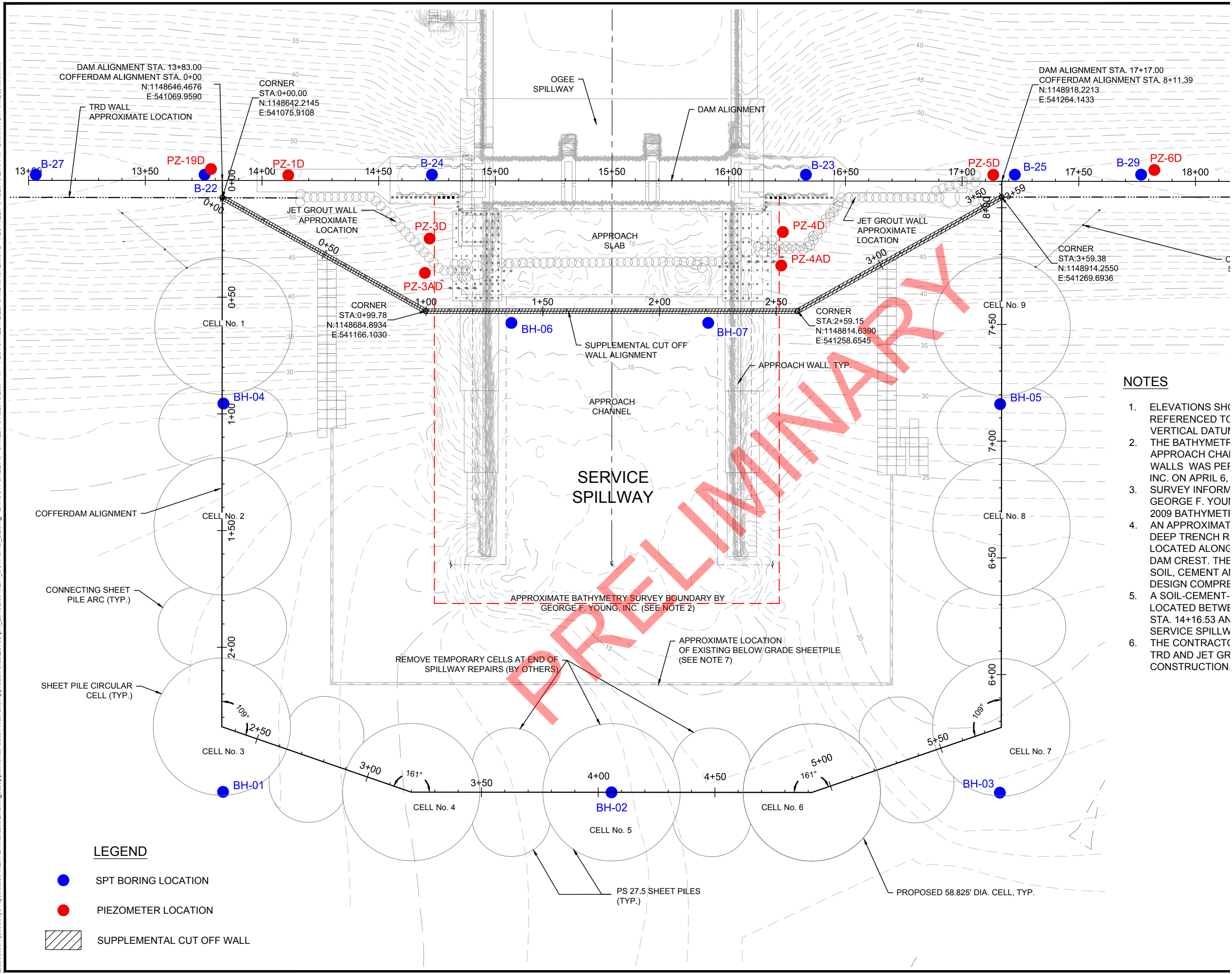
SERVICE BRIDGE ALLOWABLE LOADING

- 1. THE SERVICE BRIDGE OVER THE EXISTING TANTER GATES IS RA1 FOR A 35 TON, 4 AXLE TRUCK (FDOT STANDARD S/U-4). PLAN THE ' SO THAT THE CAPACITY OF THE BRIDGE IS NOT EXCEEDED.
- 2. LIMIT VEHICLE SPEED ON THE SERVICE BRIDGE TO 10 MPH OR LE:
- 3. DO NOT SUBJECT THE 1" X 8" WELDED STEEL GALVANIZED GRATIN OVER THE STOP LOG RECESS TO VEHICLE LOADING.

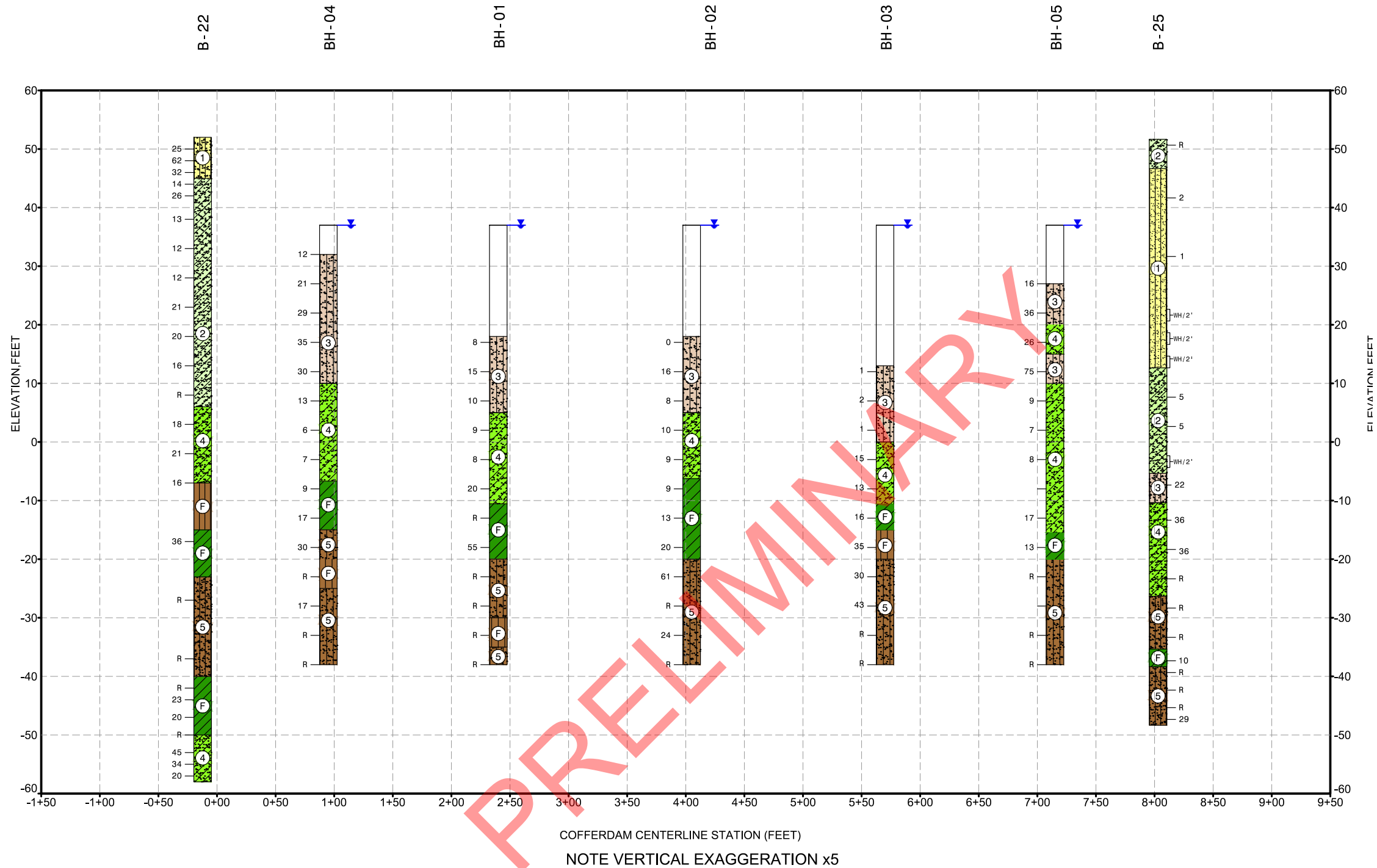
ACCESS ACROSS MANATEE RIVER

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

PROJECT NUMBER: 300472x4 CITY: TAMPA Z:\Geotech\9000000\Projects\300472x4 Lk Manatee\Drawings\Supplemental Cutoff Wall and Approach Slab\2018\April\_2018\300472x4\_SCW & AS\_BLDwg LAYOUT: SHEET 3 SAVED: 4/10/2018 2:37 PM PLOTSTYLETABLE: CIVIL-MASTER.CTB PLOTTED: 4/10/2018 2:40 PM DRAWN BY: VIVES, MARTIN







## EXPLANATION

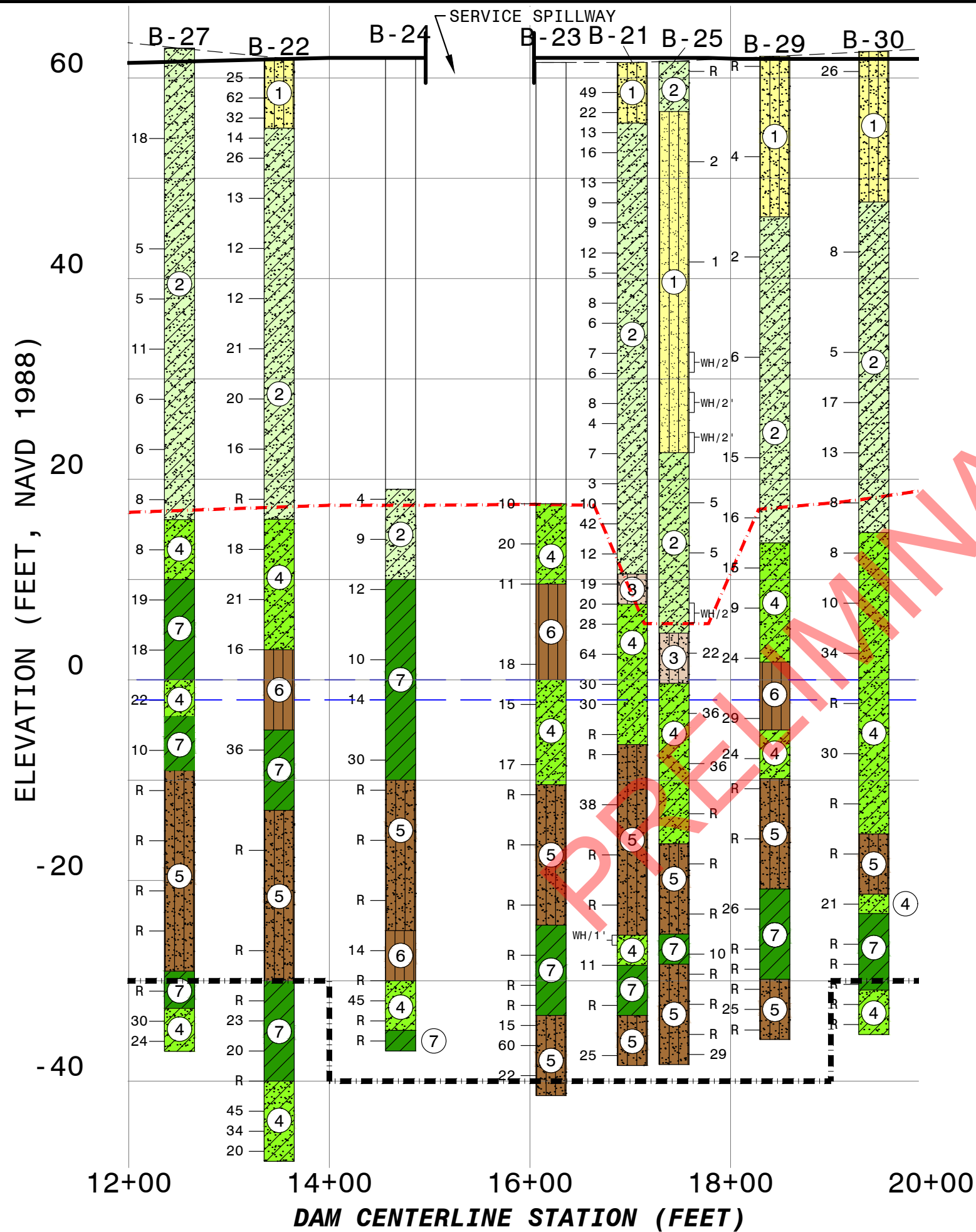
- ① DARK BROWN, BROWN, LIGHT GRAY, GREENISH GRAY, SAND TO SAND WITH SILT TO SAND WITH CLAY TO SILTY SAND (SP, SP-SM, SM, SP-SC) POORLY GRADED SANDS, TRACE ORGANICS, VARIABLELY CLAYEY (FILL)
- ② LIGHT GREENISH GRAY, GREENISH GRAY, CLAYEY SAND (SC) TRACE PHOSPHATIC SANDS, TRACE SILTS, TRACE CALCAREOUS (FILL)
- ③ DARK BROWN, BROWN, LIGHT GRAY, GREENISH GRAY, SAND TO SAND WITH SILT TO SAND WITH CLAY TO SILTY SAND (SP, SP-SM, SM, SP-SC) POORLY GRADED SANDS, TRACE ORGANICS, VARIABLELY SILTY, VARIABLELY CLAYEY (NATIVE)
- ④ LIGHT GREENISH GRAY, GREENISH GRAY, CLAYEY SAND (SC) TRACE PHOSPHATIC SANDS, TRACE SILTS, TRACE CALCAREOUS (NATIVE)

- ⑤ GRAY, LIGHT GRAY, GREENISH GRAY, POORLY GRADED FINE QUARTZ. SAND, VARIABLE SILTY TO CLAYEY (SP, SP-SM, SM, SP-SC), ABUNDANT PHOSPHATIC SANDS, VARIABLE CEMENTED FRAGMENTS.
- F GRAY, LIGHT GRAY, GREENISH GRAY, SILT WITH SAND (ML, MH) POORLY GRADED SANDS, TRACE ORGANICS, TRACE PHOSPHATIC SANDSTONE PEBBLES, TRACE CALCARIOUS/DOLOMITIC, CEMENTED (NATIVE)
- F LIGHT GREENISH GRAY, GREENISH GRAY, CLAY WITH SAND (CL, CH) TRACE PHOSPHATIC SANDS TO PEBBLES, TRACE SILTS, TRACE CALCARIOUS/DOLOMITIC, VARIABLE THINLY BEDDED, FINE PHOSPHATIC SAND SEAMS, IRON MOTTLING (NATIVE)

- SP UNIFIED SOIL CLASSIFICATION
- 78 SPT N-value
- Depth of water table
- WR Weight of Rod
- WH Weight of Hammer
- NR No Recovery
- R Refusal



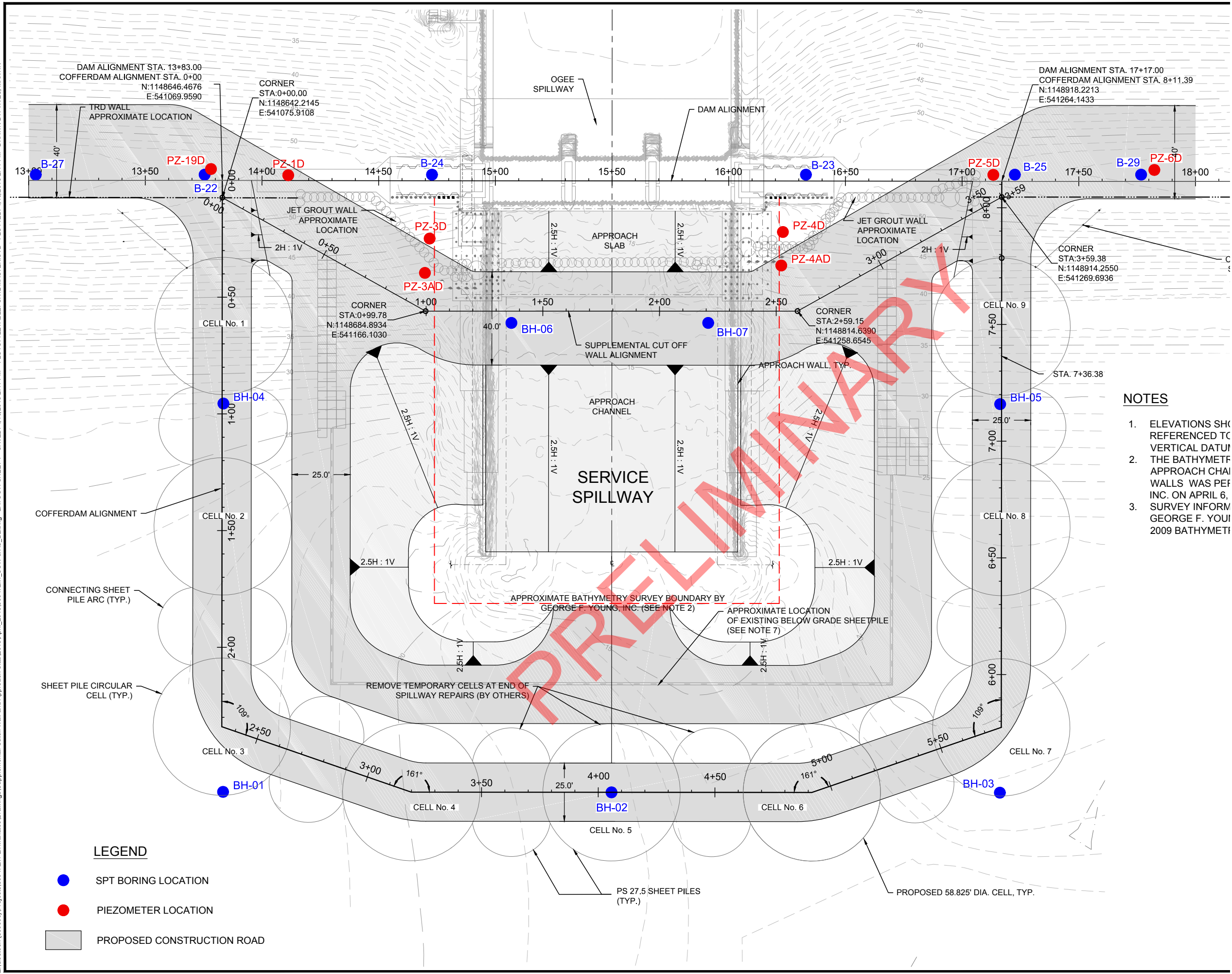
PROJECT NUMBER: 300472x4 CITY: TAMPA Z:\Geotech (300000)\Projects\300472x4 Lk Manatee\Drawings\Supplemental Cutoff Wall and Approach Slab\2018\300472x4\_SOW & AS Profiles.dwg LAYOUT: SHEET 6 - SAVED: 4/5/2018 2:54 PM PLOTSTYLETABLE: CIVIL-MASTER.CTB PLOTTED: 4/9/2018 11:57 AM DRAWN BY: VIVES MARTIN



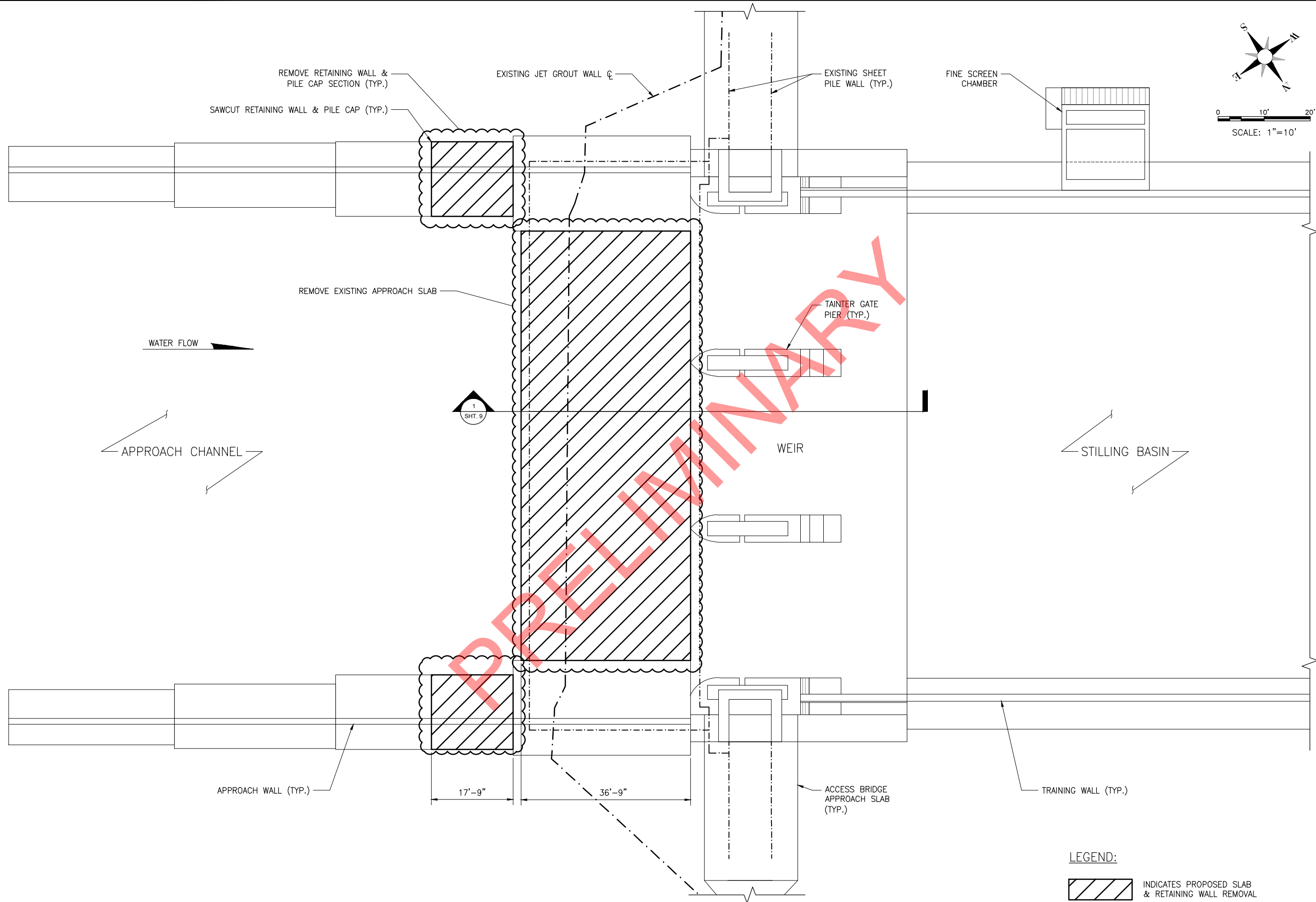
**NOTE:**  
ELEVATIONS TAKEN FROM ORIGINAL DESIGN I



PROJECT NUMBER: 300472x4 CITY: TAMPA  
Z:\Geotech\9000000\Projects\300472x4 Lk Manatee\Drawings\Supplemental Cutoff Wall and Approach Slab\2018\April\_2018\300472x4\_SCW & AS\_BLD.dwg LAYOUT: SHEET 7  
SAVED: 4/10/2018 2:41 PM PLOTSTYLETABLE: CIVIL-MASTER.CTB PLOTTED: 4/10/2018 2:41 PM DRAWN BY: VIVES, MARTIN



PROJECT NUMBER: 300472x4 CITY: ATLANTA  
J:\300472x4 Lake Manatee Reservoir\UPSTREAM DESIGN\CAD\Sheets\100 Demo.dwg LAYOUT: SHEET 8 SAVED: 4/11/2018 10:54 AM PLOTSTYLETABLE: AECSTDBANDW.CTB PLOTTED: 4/11/2018 11:02 AM DRAWN BY: VINCENT, JAMES



1 DEMOLITION PLAN - APPROACH CHANNEL  
SCALE: 1" = 10'-0"

LEGEND:  
 INDICATES PROPOSED SLAB & RETAINING WALL REMOVAL

 Amec Foster Wheeler Environment & Infrastructure, Inc. 1101 Charmingwood Drive, Suite 200, Tampa, FL 33602 Phone: 813.280.7500 Fax: 813.547.5474 www.amecfw.com CA-5382	
LAKE MANATEE DAM MANATEE COUNTY UTILITIES DEPARTMENT	
SUPPLEMENTAL CUTOFF WALL AND APPROACH SLAB DEMOLITION LAYOUT - APPROACH CHANNEL MANATEE COUNTY, FLORIDA	
DATE: April 10, 2018	REVISION
DRAWN BY: J. VINCENT	
CHECKED BY: J. BERISWILL	
PROJECT NO.: 300472X4	
SHEET 8	



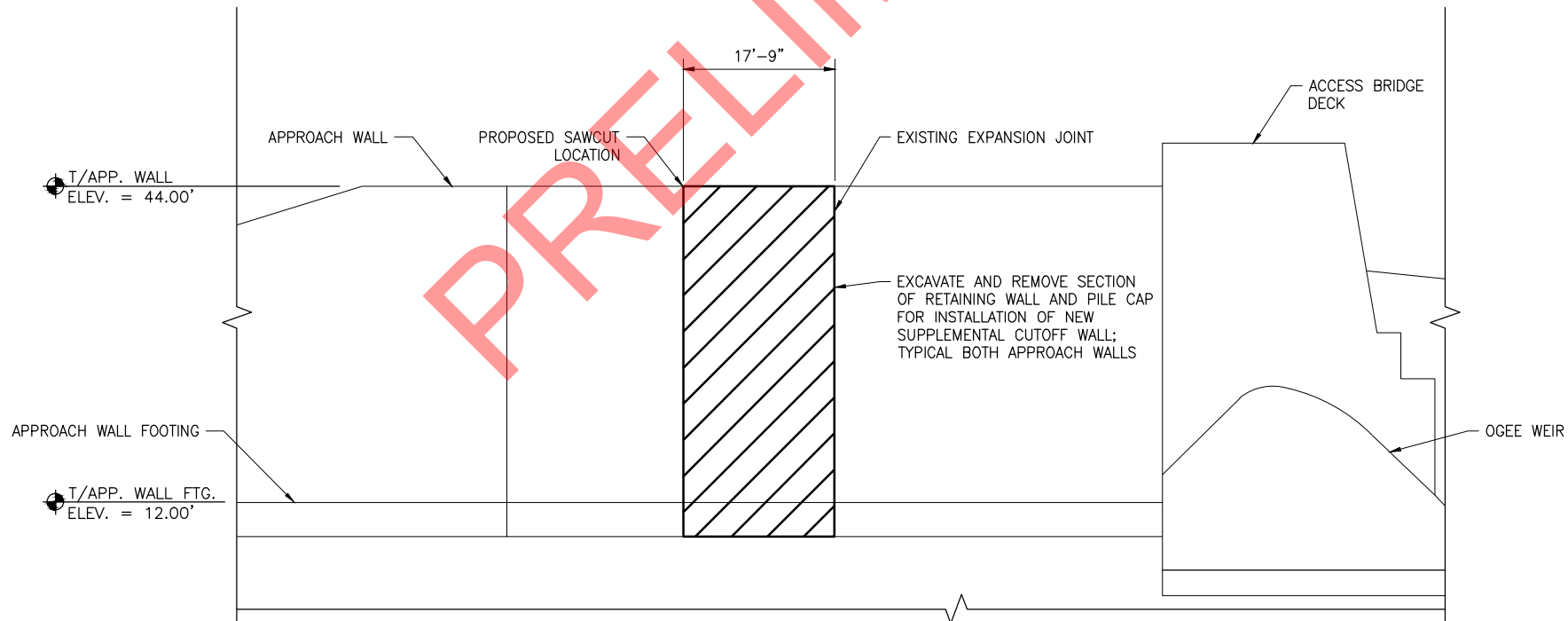


**Amec Foster Wheeler  
Environment & Infrastructure, Inc.**  
1101 Channelside Drive, Suite 200, Tampa, FL 33602  
Phone: 1.813.289.0750 Fax: 1.813.289.5474  
[www.amecwf.com](http://www.amecwf.com) CA-5392

**LAKE MANATEE DAM  
MANATEE COUNTY UTILITIES DEPARTMENT**

**SUPPLEMENTAL CUTOFF WALL AND APPROACH SLAB  
DEMOLITION PROFILE - APPROACH SLAB  
MANATEE COUNTY, FLORIDA**

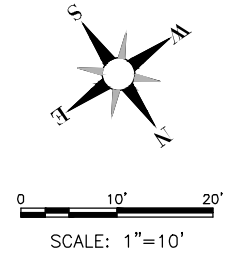
DATE: April 10, 2018  
DRAWN BY: J.VINCENT  
CHECKED BY: J.BERISWILL  
PROJECT NO.: 300472X4



2 ELEVATION - SELECTIVE DEMOLITION APPROACH WALL  
SCALE: 1" = 10'-0"



INDICATES PROPOSED  
RETAINING WALL REMOVAL



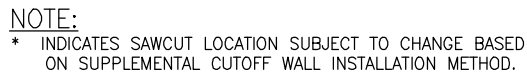
 amec foster wheeler

**Amec Foster Wheeler  
Environment & Infrastructure, Inc.**  
1101 Channelside Drive, Suite 200, Tampa, FL 33602  
Phone: 1.813.289.0750 Fax: 1.813.289.5474  
[www.amecfw.com](http://www.amecfw.com) CA-5392

**LAKE MANATEE DAM  
MANATEE COUNTY UTILITIES DEPARTMENT**

**SUPPLEMENTAL CUTOFF WALL AND APPROACH SLAB  
SELECTIVE DEMOLITION-APPROACH WALL & FOUNDATION  
MANATEE COUNTY, FLORIDA**

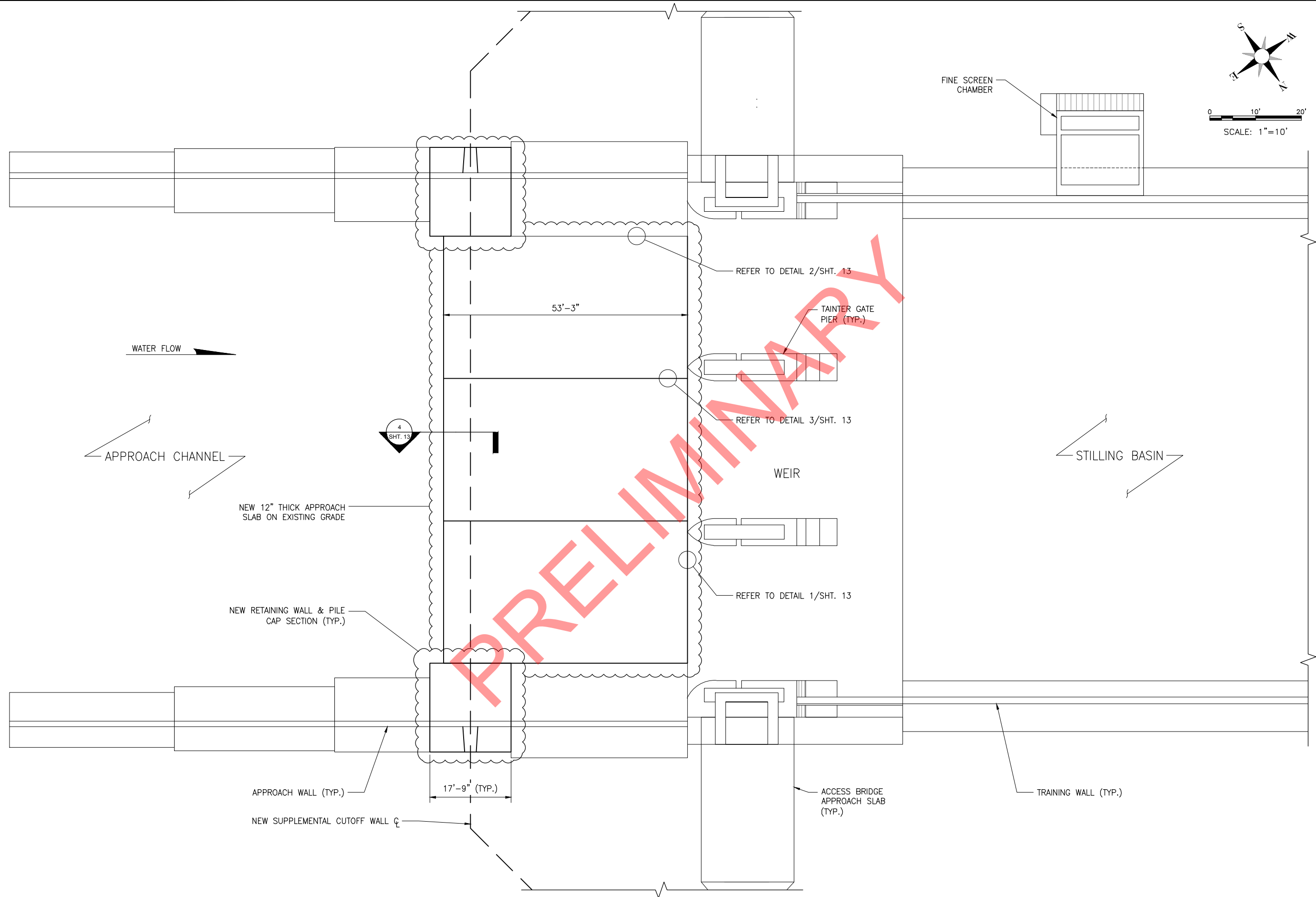
DATE: April 10, 2018  
DRAWN BY: J.VINCENT  
CHECKED BY: J.BERISWILL  
PROJECT NO.: 300472X4



1



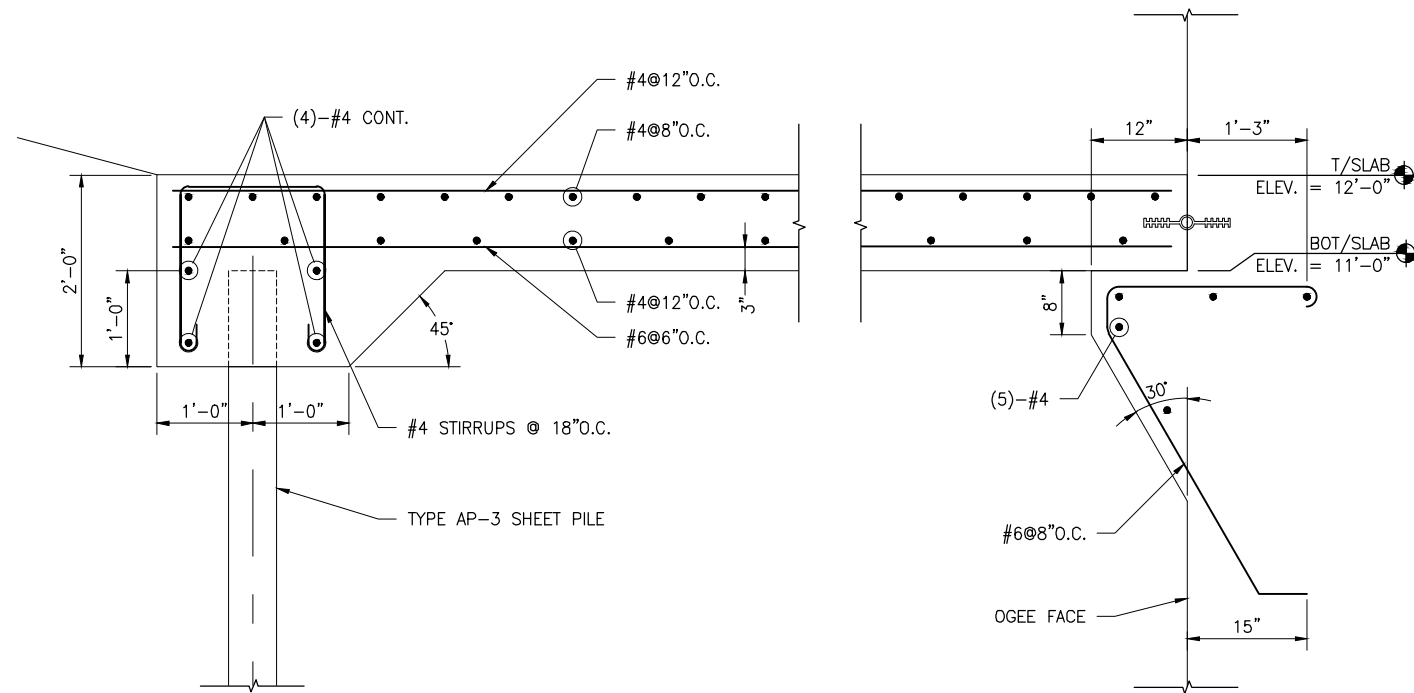
PROJECT NUMBER: 300472x4 CITY: ATLANTA  
J:\300472x4 Lake Manatee Reservoir\UPSTREAM DESIGN\CAD\Sheets\S-200.dwg LAYOUT: SHEET 12 SAVED: 4/11/2018 10:54 AM PLOTSTYLETABLE: AECSTDBANDW.CTB PLOTTED: 4/11/2018 11:03 AM DRAWN BY: VINCENT, JAMES



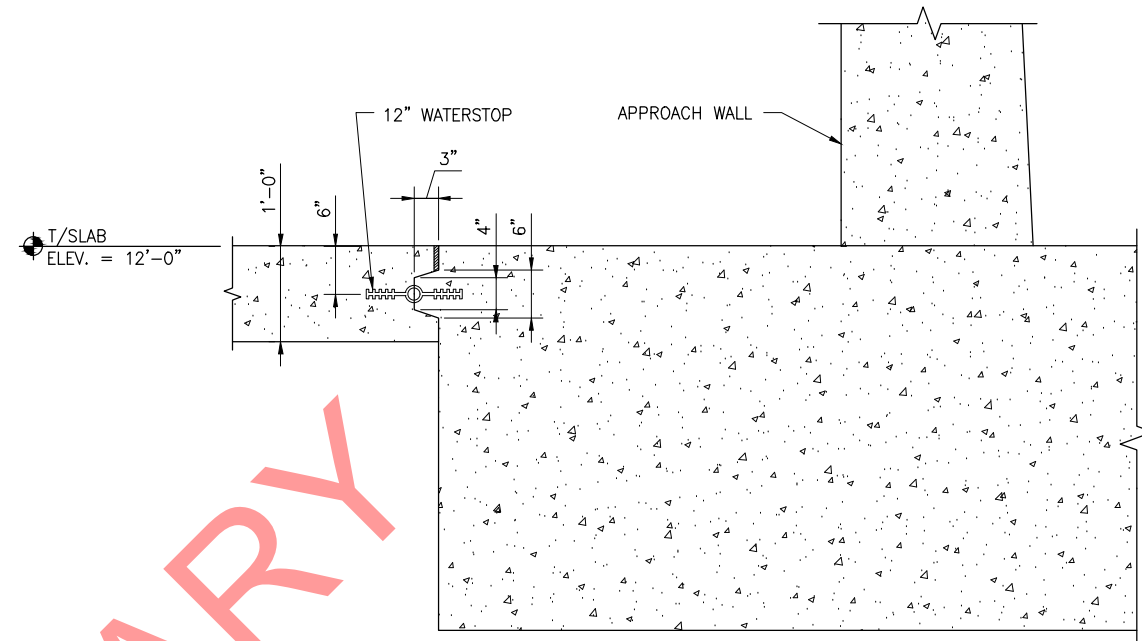
1 NEW CONSTRUCTION – APPROACH CHANNEL  
SCALE: 1" = 10'-0"

 Amec Foster Wheeler Environment & Infrastructure, Inc. 1101 Chambers St., Suite 200, Tampa, FL 33602 Phone: 813.280.7500 Fax: 813.280.5474 www.amecfw.com CA-5352		REVISION	
LAKE MANATEE DAM MANATEE COUNTY UTILITIES DEPARTMENT		NO.	DATE
SUPPLEMENTAL CUTOFF WALL AND APPROACH SLAB PLAN LAYOUT - APPROACH CHANNEL MANATEE COUNTY, FLORIDA			
DATE: April 10, 2018 DRAWN BY: J. VINCENT CHECKED BY: J. BERISWILL PROJECT NO.: 300472X4			
SHEET 12			

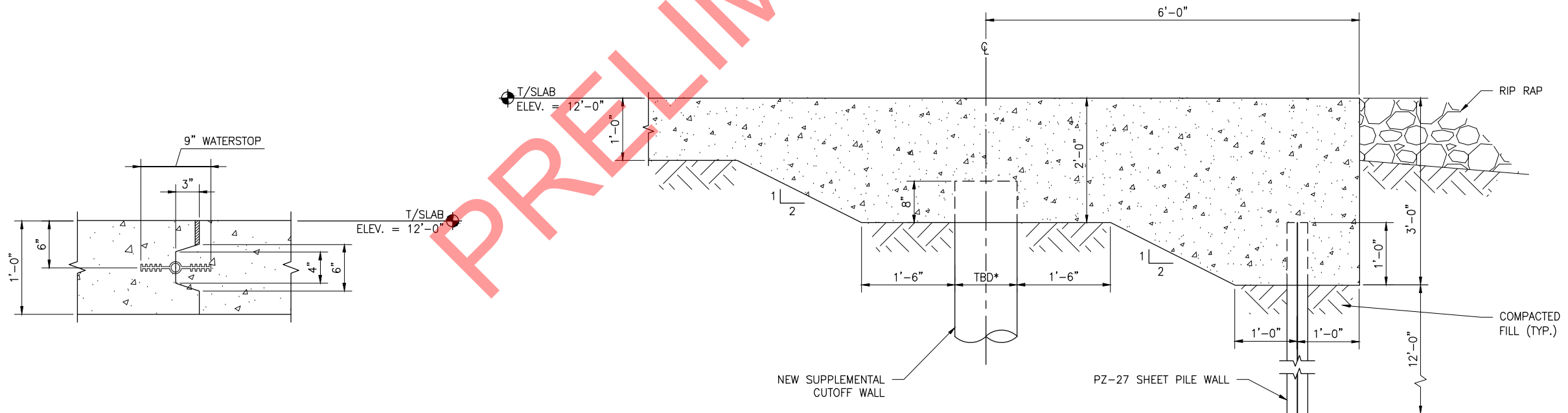
PROJECT NUMBER: 300472x4 CITY: ATLANTA J:\300472x4 Lake Manatee Reservoir\UPSTREAM DESIGN\CAD\Sheets\300.dwg LAYOUT: SHEET 13 SAVED: 4/11/2018 10:48 AM PLOTSTYLETABLE: AECSTDBANDW.CTB PLOTTED: 4/11/2018 11:03 AM DRAWN BY: VINCENT, JAMES



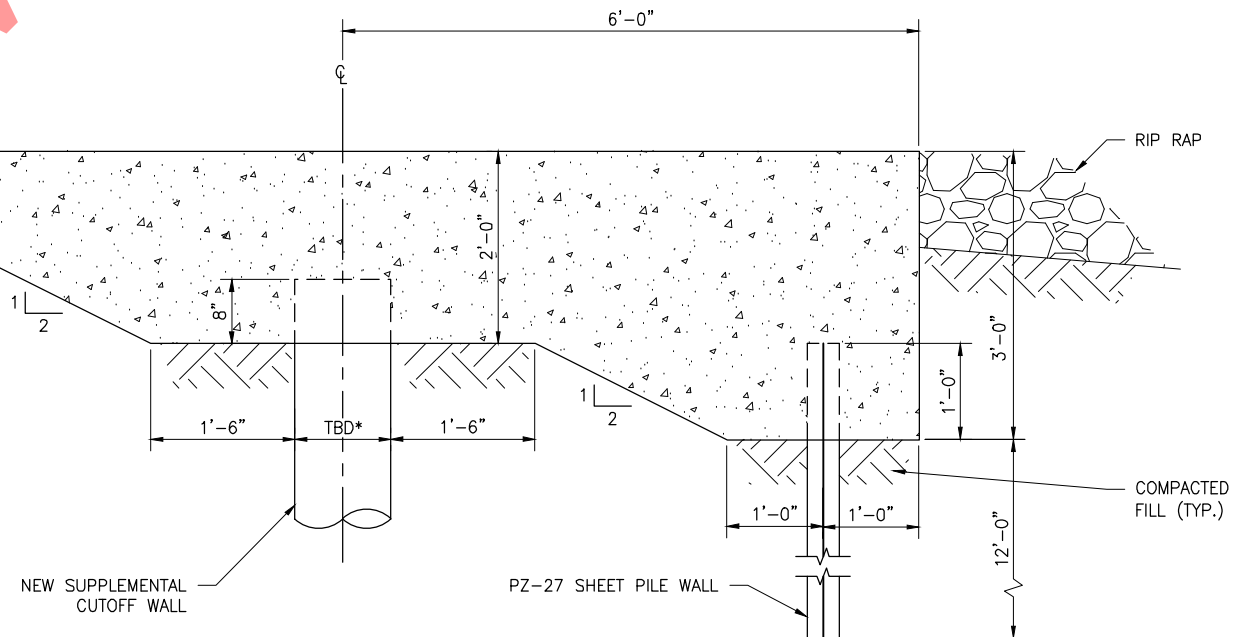
1 EXISTING APPROACH SLAB REINF. STEEL  
SCALE: 1" = 1'-0"



2 DETAIL - WATERSTOP AT TRAINING WALL FOOTING  
SCALE: 1" = 1'-0"



3 DETAIL - WATERSTOP AT JOINT  
SCALE: 1-1/2" = 1'-0"



4 NEW APPROACH SLAB END SECTION  
SCALE: 1" = 1'-0"

NOTE:  
\* INDICATES WIDTH OF CUTOFF WALL TO BE DETERMINED BASED ON  
SELECTED CONSTRUCTION METHOD.

**amec foster wheeler**  
Amec Foster Wheeler  
Environment & Infrastructure, Inc.  
1101 Chamblee Drive, Suite 200, Atlanta, GA 30342  
Phone: 770.287.5900 Fax: 770.287.5474  
www.amecfw.com CA-5352

**LAKE MANATEE DAM**  
**MANATEE COUNTY UTILITIES DEPARTMENT**  
**SUPPLEMENTAL CUTOFF WALL AND APPROACH SLAB**  
**APPROACH SLAB SECTIONS & DETAILS**  
**MANATEE COUNTY, FLORIDA**

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