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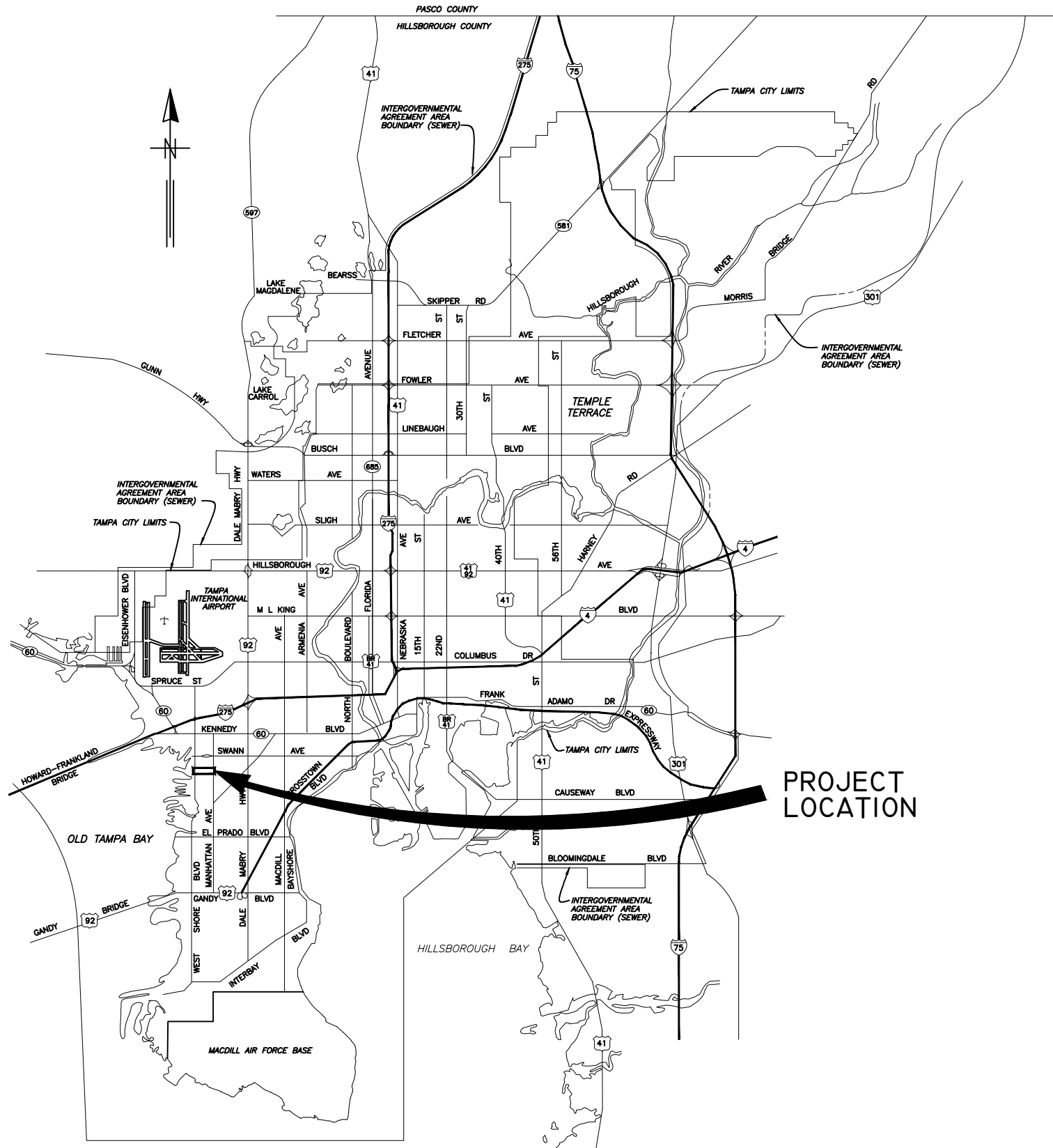
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LOCATION MAP

SW



CITY of TAMPA



DEPARTMENT OF TRANSPORTATION
AND STORMWATER SERVICES

PROJECT
LOCATION

PLANS FOR

WATROUS CANAL REHABILITATION PROJECT
CONTRACT No. 15-C-00036

100% SUBMITTAL

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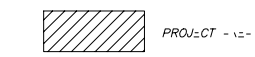
MATTHEW D. CAMPO, P.E. #53988
CAMPO ENGINEERING, INC.
FBPR CERT. OF AUTHORIZATION NO.: 26726

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CITY of TAMPA
Department of Transportation
and Stormwater Services
Stormwater Engineering Division

COVER SHEET

W.O. 500N
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PROJECT LOCATION MAP

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CITY of TAMPA
 Department of Transportation
 and Street Services
 Stormwater Engineering Division

**WATROUS CANAL
 REHABILITATION PROJECT**
 INDEX, LEGEND & LOCATION MAP

LEGEND

| | | |
|--------------------------------|--------------------------------|-------------------------|
| <u>EX SEWERS</u> | <i>UP to 24" & SMALLER</i> | <i>24" & LARGER</i> |
| EX FORCE MAIN | | |
| EX SAN SEWER & MANHOLES | | |
| EX STORM SEWER & MANHOLES | | |
| <u>PROP SEWERS</u> | | |
| PROP STORM SEWER & MANHOLES | | |
| <u>OTHER FEATURES</u> | | |
| RIGHT of WAY LINE | | |
| EDGE of PAVEMENT | | |
| WATER LINE | | |
| GAS LINE | | |
| FIBER OPTIC CABLE | | |
| BRIGHT HOUSE CABLE | | |
| CATCH BASIN, GRATE | | |
| LIGHT POLE | | |
| POWER POLE | | |
| BUILDING LIMIT | | |
| FENCE | | |
| EXISTING FIRE HYDRANT ASSEMBLY | | |

ABBREVIATIONS

| | | | |
|--------------------------|-----------|---------------------------------|-------|
| ELEVATION | EL | DUCTILE IRON PIPE | DIP |
| INVERT ELEVATION | IE or INV | REINFORCED CONCRETE PIPE | RCP |
| RIGHT of WAY | R/W | CONCRETE PIPE | CP |
| MANHOLE | MH | APPROXIMATE LOCATION | AL |
| POLYVINYL CHLORIDE PIPE | PVC | FORCE MAIN | FM |
| VITRIFIED CLAY PIPE | VCP | SANITARY | SAN |
| ADVANCED DRAINAGE SYSTEM | ADS | WATER MAIN | WM |
| MITERED END SECTION | M.E.S. | CORRUGATED METAL PIPE | CMP |
| REINFORCED CONCRETE PIPE | RCP | ELLIPTICAL REINFORCED CONG PIPE | ERCP |
| EXISTING | EXIST | PROPOSED | PROP |
| SQUARE FEET | SF | LINEAR FEET | LF |
| CONCRETE | CONC | CONSTRUCT | CONST |

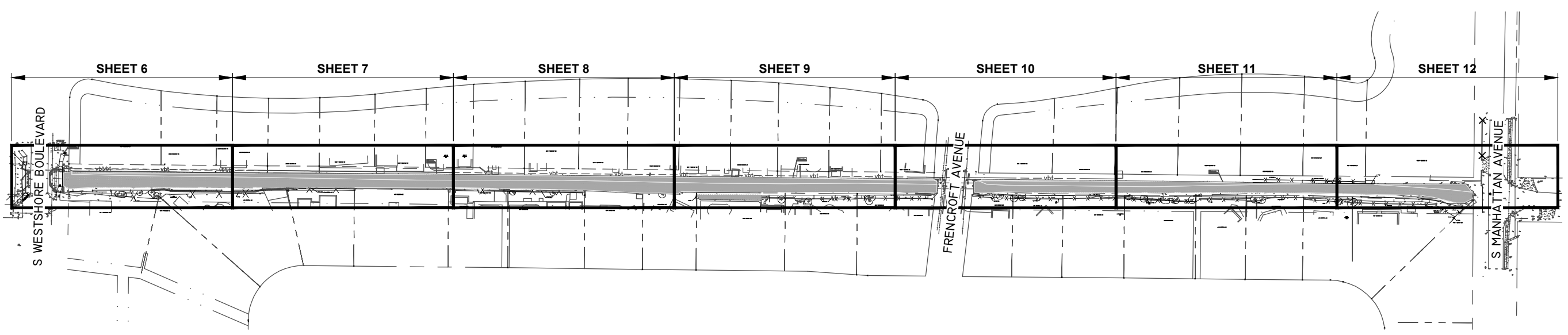
SURFACE WATER AREAS

TOTAL EX. T.O.B. AREA (SURFACE WATER) = 42,751 SF = 0.98 AC
 TOTAL PROP. T.O.B. AREA (SURFACE WATER) = 42,751 SF = 0.98 AC
 NET CHANGE = 0 SF (0 AC) NO CHANGE IN SURFACE WATER

OTHER FEATURES (CONTINUED)

| | | | |
|---|--|-----------------------------|--|
| PROPOSED STRUCTURAL BACKFILL | | EXISTING TREE | |
| PROPOSED 6" LARGE DIA. STONE | | EXISTING TREE TO BE REMOVED | |
| PROPOSED RUBBLE RIP-RAP W/6" LARGE DIA. STONE | | | |
| PROPOSED CONCRETE | | | |
| PROPOSED SILT FENCE | | | |
| PROPOSED INTERLOCKING BLOCKWALL | | | |

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KEY MAP

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 Stormwater Engineering Division

**WATROUS CANAL
 REHABILITATION PROJECT**
 INDEX, LEGEND & LOCATION MAP

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GENERAL NOTES:

1. ELEVATIONS BASED ON NATIONAL AMERICAN VERTICAL DATUM 1988 (NAVD88).
2. LOCATIONS, ELEVATIONS AND DIMENSIONS OF THE EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF THE PREPARATION OF THESE PLANS BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS, AND DIMENSIONS, OF ALL EXISTING UTILITIES, STRUCTURE, AND OTHER FEATURES AFFECTING HIS WORK PRIOR TO CONSTRUCTION. GAS, VERIZON, WATER MAIN, WATER SERVICES, SEWER LATERALS AND OTHER SUBSURFACE PIPING HAS NOT BEEN LOCATED. ENGINEER OF RECORD SHOWS LOCATIONS AS APPROXIMATE AS PROVIDED BY OTHERS.
3. EXISTING UTILITIES AND TOPOGRAPHIC INFORMATION DENOTED BY UPPER AND LOWER CASE. PROPOSED WORK DENOTED BY ALL UPPER CASE.
4. THE CONTRACTOR SHALL CALL SUNSHINE (1-800-432-4770) AT LEAST 72 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITIES.
5. WHEN IN CONFLICT, UTILITY POLES, GAS LINES, UNDERGROUND ELECTRIC, TELEPHONE AND OTHER COMMUNICATION CABLES AND CONDUIT WILL BE RELOCATED BY THE RESPECTIVE UTILITY OWNERS AT THEIR OWN EXPENSE AS DIRECTED BY THE ENGINEER.
6. PRIOR TO ANY CONSTRUCTION, CONTACT TAMPA ELECTRIC COMPANY (PH 228-4111) FOR EXACT LOCATION OF UNDERGROUND LINES. TECO TO RELOCATE ANY CONFLICTING LINES.
7. PRIOR TO ANY CONSTRUCTION, CONTACT VERIZON FOR EXACT LOCATION OF UNDERGROUND LINES. VERIZON TO RELOCATE ANY CONFLICTING LINES.
8. STATIONS AND OFFSETS GIVEN ARE TO THE CENTER LINE OF THE INLETS AND MANHOLES, AND REFER TO THE SURVEY BASE LINES.
9. THE SOLID WASTE DEPARTMENT IS TO BE NOTIFIED PRIOR TO ANY STREET CLOSURES IN THE PROJECT AREA.
10. TREE REMOVAL CONTRACTOR IS RESPONSIBLE FOR OBTAINING SITE CLEARING PERMIT PRIOR TO START OF ANY CONSTRUCTION.
11. NECESSARY ROOT PRUNING AND TRIMMING OF BRANCHES SHALL BE DONE BY A CERTIFIED ARBORIST.
12. THE CONTRACTOR SHALL COMPLY WITH THE PROVISIONS OF THE LATEST "TREE ORDINANCE" OF THE CITY OF TAMPA. THE CONTRACTOR IS REQUIRED TO RELOCATE THE TREES REMOVED AS A PART OF THE NECESSARY CONSTRUCTION INDICATED ON PLANS. HOWEVER, NO TREE SHALL BE REMOVED WITHOUT APPROVAL OF THE PARKS DEPARTMENT.
13. SOD ALL THE DISTURBED AREAS AS DIRECTED BY THE ENGINEER AND NOTED ON PLANS.
14. WHERE CONNECTIONS TO EXISTING DRIVES AND WALKS ARE NOT INDICATED ON THE PLANS, PROPER CONNECTIONS SHALL BE MADE AT THE DIRECTION OF THE ENGINEER.
15. STREET SIGNS, STREET MARKERS AND R-O-W MARKERS SHALL BE REMOVED AND RELOCATED AS DIRECTED BY THE ENGINEER.
16. MAILBOXES SHALL BE REMOVED AND REPLACED AS NECESSARY.
17. DRIVEWAYS SHALL BE RECONSTRUCTED IN ACCORDANCE WITH CHAPTER 25 OF THE CITY CODE AND THE TRANSPORTATION TECHNICAL MANUAL. DEVIATION FROM ESTABLISHED STANDARDS SHALL BE APPROVED BY THE CITY TRAFFIC ENGINEER.
18. THE CONTRACTOR SHALL PROTECT ALL TREES IN THE VICINITY OF THE PROPOSED CONSTRUCTION IN ACCORDANCE WITH CHAPTER 13 OF THE CITY OF TAMPA CODE. NO TREES SHALL BE PRUNED WITHOUT PRIOR APPROVAL FROM THE CITY OF TAMPA PARKS & RECREATION DEPARTMENT, NATURAL RESOURCES DIVISION, AND SHALL BE COMPLETED BY A CERTIFIED ARBORIST. ROOT PRUNING MAY BE REQUIRED AT CERTAIN LOCATIONS AND SHALL BE COMPLETED IN ACCORDANCE WITH CHAPTER 13 TECHNICAL MANUAL SPECIFICATIONS.
19. ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE CITY OF TAMPA DEPARTMENT ORDINANCES AND REGULATIONS.
20. THE CONTRACTOR SHALL MAINTAIN COPIES OF ALL APPLICABLE PERMITS ON-SITE AND SHALL BE RESPONSIBLE TO ADHERE TO ALL PERMIT CONDITIONS DURING CONSTRUCTION.
21. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL PRECAST AND MANUFACTURED ITEMS TO THE ENGINEER FOR APPROVAL. FAILURE TO OBTAIN APPROVAL BEFORE INSTALLATION MAY RESULT IN REMOVAL AND REPLACEMENT AT CONTRACTOR'S EXPENSE.
22. COMPACTION FOR PIPE BACKFILL SHALL COMPLY WITH AASHTO T-99 (100%).

SITE NOTES:

1. ALL DESIGN AND CONSTRUCTION MUST CONFORM TO THE MINIMUM STANDARDS SET DOWN IN CITY OF TAMPA STORMWATER TECHNICAL MANUAL, FDOT DESIGN STANDARDS AND FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
 2. ALL RIGHT-OF-WAY INSTALLATIONS MUST COMPLY WITH THE CITY OF TAMPA STANDARDS AND TECHNICAL MANUALS, FDOT DESIGN STANDARDS AND FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
 4. PAVEMENT RESTORATION WITHIN S. WESTSHORE BLVD SHALL BE PER HILLSBOROUGH COUNTY TRANSPORTATION TECHNICAL MANUAL
 5. IN AREAS WHERE FILL MATERIAL IS REQUIRED, THE EXISTING VEGETATION AND ROOTS SHALL BE REMOVED PRIOR TO PLACING ANY FILL MATERIAL. THE FILL SHALL BE PLACED IN LIFTS NO GREATER THAN 12 INCHES AS MEASURED LOOSE, AND COMPACTED TO A UNIFORM DENSITY ASTM D698. THE MATERIAL SHALL BE COMPACTED AT A MOISTURE CONTENT PERMITTING THE SPECIFIED COMPACTION. THE FILL SHALL BE TESTED BY AN INDEPENDENT TESTING LABORATORY AND THE RESULTS SUPPLIED TO THE ENGINEER.
 6. THE CONTRACTOR SHALL CONTACT THE ENGINEER'S OFFICE IMMEDIATELY ON ANY CONFLICTS ARISING DURING CONSTRUCTION OF ANY IMPROVEMENTS SHOWN ON THESE DRAWINGS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONSULT WITH THE ENGINEER FOR MAKING ANY AND ALL REQUIRED INTERPRETATIONS OF THE PLANS. HOWEVER, THIS IN NO WAY RELIEVES THE CONTRACTOR OF HIS RESPONSIBILITY FOR CONSTRUCTING THE PROJECT TO ACCOMPLISH THE INTENT OF THE PLANS.
 7. REPAIR AND REPLACEMENT OF ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN EXISTING BEFORE COMMENCING CONSTRUCTION UNLESS SPECIFICALLY EXEMPTED BY THE PLANS.
 8. EROSION/SEDIMENTATION CONTROL: THE CONTRACTOR IS TO PROVIDE EROSION CONTROL/SEDIMENTATION BARRIER (HAY BALES OR SILTATION CURTAIN), IF REQUIRED TO PREVENT SILTATION OF ADJACENT PROPERTY, STREETS, STORM SEWERS AND WATERWAYS. IN ADDITION, THE CONTRACTOR SHALL PLACE STRAW, MULCH OR OTHER SUITABLE MATERIAL ON THE GROUND, AS REQUIRED, IN AREAS WHERE CONSTRUCTION RELATED TRAFFIC IS TO ENTER AND EXIT THE SITE. IF, IN THE OPINION OF THE ENGINEER AND/OR LOCAL AUTHORITIES, EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE, EITHER BY NATURAL DRAINAGE OR BY VEHICLE TRAFFIC, THE CONTRACTOR IS TO REMOVE AND CLEAN SAID EARTH TO THE SATISFACTION OF THE ENGINEER AND/OR LOCAL AUTHORITIES.
 9. LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS, BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES AFFECTING HIS WORK PRIOR TO CONSTRUCTION.
 10. CONTRACTOR SHALL SPRINKLE OR OTHERWISE APPLY WATER TO AFFECTED CONSTRUCTION AREA TO CONTROL BOTH SIGNIFICANT WIND EROSION OR FUGITIVE DUST.
 11. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. PORTLAND CEMENT SHALL CONFORM TO ASTM C150. AGGREGATE SHALL CONFORM TO ASTM C33. WIRE FABRIC SHALL CONFORM TO ASTM A185. READY MIXED CONCRETE SHALL CONFORM TO ASTM C-04. SIX-INCH (6") MESH, 10-GAUGE WIRE FABRIC SHALL BE USED IN SLABS FOUR INCHES (4") THICK. SIX-INCH (6") MESH WIRE FABRIC SHALL BE USED IN SLABS THICKER THAN FOUR INCHES (4"). SUBSURFACE SHALL BE FREE FROM TROWEL OR MACHINE MARKS. SURFACE VARIATIONS SHALL NOT EXCEED 1/4 INCH UNDER TEN-FOOT (10') STRAIGHT EDGE.
- CONSTRUCTION NOTES:**
1. CONTRACTOR TO CLEAN ENTIRE LIMITS OF DITCH AND REMOVE ALL EXISTING DEBRIS, RUBBLE, ROCK, ETC IN AREAS AS DEPICTED ON THE PLANS.
 2. CONTRACTOR TO DISPOSE OF EXISTING ROCK, CONCRETE, & GRANITE CURB AND RUBBLE RIP RAP FROM SITE. AS AN ALTERNATIVE CONTRACTOR MAY REUSE MATERIAL ONSITE WITH THE APPROVAL OF ENGINEER AND CITY. ALL PROPOSED RUBBLE RIP-RAP NEEDED SHALL BE CRUSHED CONCRETE, IF SOURCE OF CRUSHED CONCRETE CANNOT BE FOUND OR CANNOT FULFILL QUANTITY REQUIRED THEN CRUSHED LIMESTONE FROM APPROPRIATE SOURCE SHALL BE USED. UNDER NO CIRCUMSTANCES SHALL LIMEROCK BE USED IN OPEN DRAINAGE AREAS.
 3. CONTRACTOR TO SOD DISTURBED RIGHT-OF-WAY WITH BAHIA SOD.
 4. CONTRACTOR TO RESTORE DISTURBED RESIDENTIAL YARDS WITHIN FENCE AND CONSTRUCTION LIMITS WITH BAHIA, ST. AUGUSTINE, AND/OR LIKE KIND OF SOD.
 5. CONTRACTOR TO PROTECT EXISTING IRRIGATION SYSTEMS AND ANY OTHER UTILITIES IN RESIDENTIAL YARDS WITHIN CONSTRUCTION LIMITS AND/OR RESTORE ANY DAMAGED SYSTEMS DURING CONSTRUCTION BACK TO EXISTING CONDITIONS.
 6. CONTRACTOR TO PROTECT EXISTING PRIVATE FENCES DURING CONSTRUCTION OR REPLACE IN LIKE KIND.
 7. CONTRACTOR TO PROTECT THE EXISTING CONDUIT THAT IS TO REMAIN.
 8. ALL REMOVAL WITHIN PROPOSED EXCAVATION AREAS IS PART OF PIPE, WALL, & DITCH CONSTRUCTION.
 9. PRICE FOR ALL REMOVAL, AS SHOWN ON THE PLANS OUTSIDE OF CONSTRUCTION EXCAVATION AREA, SHALL BE INCLUDED IN THE VARIOUS ITEMS OF THE STORMWATER UNIT PRICE ITEMS.
 10. CONTRACTOR SHALL CONTACT SUNSHINE WITHIN 48 HOURS PRIOR TO ANY CONSTRUCTION.
 11. CONTRACTOR TO PROTECT ALL POWER POLES & SUBSURFACE UTILITIES. IN THE EVENT OF A CONFLICT THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY PROVIDER.
 12. ALL RCP PIPES SHALL BE CLASS IV, WITH MIN. COVER OF 12".
 13. CONTRACTOR TO DEWATER/BYPASS PUMP THE CHANNELIZED FLOW AS NECESSARY TO MAINTAIN EXISTING FLOW PATTERNS DURING CONSTRUCTION. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE THE NECESSARY DIKE/TEMPORARY DAM AS NEEDED TO CONTROL AND PUMP DURING CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE A PUMPING PLAN TO THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION.
 14. EXISTING TREES TO BE REMOVED ADJACENT TO SEA WALLS TO REMAIN SHALL BE CUT DOWN WITH STUMP FLUSH TO GRADE AND TREAT WITH APPROPRIATE HERBICIDE TO PREVENT FUTURE GROWTH.
 15. PRIVATE UTILITIES WILL BE MOVED PRIOR TO THE CITY'S START OF CONSTRUCTION AND WILL PROVIDE THE CONTRACTOR WITH AS-BUILTS (HORIZONTAL AND VERTICAL PLACEMENT) OF THEIR RELOCATED SERVICES.
 16. CONTRACTOR TO PROVIDE SIGNED AND SEALED SHOP DRAWINGS FOR THE BOX CULVERTS AND HEADWALLS PER FDOT INDEX 289, 291, & 292.
 17. SIDE YARD FENCING SHALL MATCH EXISTING FENCING IN MATERIAL TYPE AND SIZE.

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CITY of TAMPA
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 Stormwater Engineering Division

**WATROUS CANAL
 REHABILITATION PROJECT**
 GENERAL & CONSTRUCTION NOTES

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TREE PROTECTION NOTES:

1. PROTECTIVE BARRICADES SHALL BE PLACED AROUND ALL PROTECTED TREES AND GRAND TREES DURING SITE CLEARING, AND SHALL REMAIN IN PLACE UNTIL LAND ALTERATION, SITE CLEARING AND CONSTRUCTION ACTIVITIES ARE COMPLETE. BARRICADES SHALL BE ERECTED AT A MINIMUM DISTANCE OF TEN FEET (10') FROM THE BARK OF PROTECTED TREES AND TWENTY FEET (20') FROM THE BARK OF GRAND TREES.
2. REQUIRED TREE BARRICADES AND EROSION CONTROL MEASURES MUST REMAIN INTACT THROUGHOUT CONSTRUCTION. ENCROACHMENT INTO OR FAILURE TO MAINTAIN TREE BARRICADES WILL RESULT IN ENFORCEMENT ACTION WHICH MAY INCLUDE CITATIONS AND/OR PERMIT REVOCATION.
3. A MINIMUM DISTANCE OF TEN FEET (10') SHALL BE MAINTAINED FROM ALL PROTECTED TREES WHEN INSTALLING UNDERGROUND UTILITIES. IF THIS RESULTS IN UNREASONABLE HARDSHIP, A SOIL AUGER SHALL BE USED TO TUNNEL UNDER THE ROOT SYSTEMS.
4. THE CONTRACTOR IS REQUIRED TO PREVENT DAMAGE TO TREES WHICH ARE TO REMAIN. THE CONTRACTOR SHALL BE LIABLE FOR FINES DUE TO ALL DAMAGE OF TREES THAT ARE DESIGNATED TO BE SAVED DURING CONSTRUCTION. SPECIAL CARE IS REQUIRED TO PREVENT DAMAGE TO TREES WHICH ARE TO REMAIN.
5. INSTALLATION OF ARTIFICIAL BARRIERS SUCH AS PROTECTIVE BARRICADES, FENCES, POSTS, OR WALLS SHALL NOT DESTROY OR IRREVERSIBLY HARM THE ROOT SYSTEM OF PROTECTED TREES AND GRAND TREES. FOOTERS FOR WALLS SHALL BE AT THE POINT WHERE LARGER ROOTS ARE ENCOUNTERED, AND THE ROOTS SHALL BE BRIDGED. POST HOLES AND TRENCHES LOCATED CLOSE TO PROTECTED TREES OR GRAND TREES SHALL BE ADJUSTED TO AVOID DAMAGE TO MAJOR ROOTS.
6. ALL ROOTS TO BE REMOVED DURING THE SITE CLEARING PHASE SHALL BE SEVERED CLEAN AT THE PERIMETER OF THE DESIGNATED PROTECTED RADIUS AND SHALL BE DONE BY A CERTIFIED ARBORIST.
7. ALL TREES SHALL BE PROTECTED, ROOT PRUNING AND CANOPY PRUNING SHALL BE PERFORMED BY A CERTIFIED ARBORIST. ALL ROOT PRUNING AS WELL AS CANOPY PRUNING SHALL BE PERFORMED UNDER THE CITY OF TAMPA PARKS DEPARTMENT SUPERVISION.
8. A TWO-INCH (2") LAYER OF MULCH SHALL BE APPLIED OVER THE SURFACE OF EXPOSED ROOTS OF PROTECTED TREES AND GRAND TREES DURING THE SITE CLEARING PHASE.

NPDES/FDEP NOTICE OF INTENT AND REPORTING NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREPARATION OF THE EROSION AND SEDIMENTATION CONTROL PLAN TO BE SUBMITTED TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION. THE PLAN SHALL INCLUDE THE FOLLOWING:
 - A. NARRATIVE: A BRIEF DESCRIPTION OF THE OVERALL STRATEGY FOR EROSION AND SEDIMENT CONTROL.
 - B. MAP/SITE PLAN: SITE PLAN WHICH SHOWS THE EXISTING AND FINAL ELEVATION CONTOURS, CRITICAL AREAS WITHIN OR NEAR THE PROJECT AREA, EXISTING VEGETATION, LIMITS OF CLEARING AND GRADING, AND LOCATIONS AND NAMES OF EROSION AND SEDIMENT CONTROL MEASURES, WITH DIMENSIONS.
 - C. CONSTRUCTION DETAILS
 - D. CALCULATIONS: INCLUDE CALCULATIONS USED TO SIZE THE CONTROL MEASURES AND THE DESIGN ASSUMPTIONS FOR SEDIMENT BASINS AND TRAPS.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED BEFORE AND AFTER EACH RAIN EVENT OF 1/4 INCH OR MORE.
3. DISTURBED AREAS WHICH HAVE BEEN BROUGHT TO FINAL GRADE OR WHICH WILL REMAIN AT ROUGH GRADE FOR 14 DAYS OR MORE SHALL RECEIVE PERMANENT STABILIZATION IMMEDIATELY.
4. CONTRACTOR SHALL MAINTAIN ON-GOING INSPECTION REPORTS FOR EROSION & SEDIMENT CONTROL INSPECTIONS AND MAINTENANCE.
5. CONTRACTOR SHALL HAVE A CERTIFIED INSPECTOR ON STAFF AND BE RESPONSIBLE FOR ALL NPDES REPORTING.
6. ANY AREAS SUBJECT TO EROSION MUST BE ADEQUATELY STABILIZED WITH VEGETATIVE MATERIAL THAT WILL, WITHIN A REASONABLE TIME FRAME, DETER SOIL DISTURBANCE. SODDING, PLUGGING, SPRIGGING, OR SEEDING IS ACCEPTABLE FOR STABILIZATION; HOWEVER, SODDING MAY BE REQUIRED IN AREAS OF EROSION-PRONE SOILS OR WHERE SLOPES ARE GREATER THAN 5:1. VEGETATION OTHER THAN GRASS IS ACCEPTABLE UNLESS OTHERWISE SPECIFIED.
7. THE CONTRACTOR SHALL SUBMIT THE REQUIRED NPDES/FDEP NOTICE OF INTENT 30 DAYS PRIOR TO STARTING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL RAINFALL AND DISCHARGE LOGS DURING CONSTRUCTION. UPON COMPLETION OF CONSTRUCTION A NOTICE OF TERMINATION SHALL BE FILED WITH FDEP.

EROSION/TURBIDITY CONTROL NOTES:

1. THE INSTALLATION OF TEMPORARY EROSION CONTROL BARRIERS SHALL BE COORDINATED WITH THE CONSTRUCTION OF THE PERMANENT EROSION CONTROL FEATURES TO THE EXTENT NECESSARY TO ASSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS CONTROL OF EROSION AND WATER POLLUTION THROUGHOUT THE LIFE OF THE CONSTRUCTION PHASE.
2. THE TYPE OF EROSION CONTROL BARRIERS USED SHALL BE GOVERNED BY THE NATURE OF THE CONSTRUCTION OPERATION AND SOIL TYPE THAT WILL BE EXPOSED. SILTY AND CLAYEY MATERIAL USUALLY REQUIRE SOLID SEDIMENT BARRIERS TO PREVENT TURBID WATER DISCHARGE, WHILE SANDY MATERIAL MAY NEED ONLY SILT SCREENS OR HAY BALES TO PREVENT EROSION. FLOATING TURBIDITY CURTAINS SHALL BE USED IN OPEN WATER SITUATIONS. DIVERSION DITCHES OR SWALES MAY BE REQUIRED TO PREVENT TURBID STORMWATER RUNOFF FROM BEING DISCHARGED TO WETLANDS OR OTHER WATER BODIES. IT MAY BE NECESSARY TO EMPLOY A COMBINATION OF BARRIERS, DITCHES AND OTHER EROSION/TURBIDITY CONTROL MEASURES IF CONDITIONS WARRANT.
3. CONSTRUCTION OPERATIONS IN OR ADJACENT TO WETLANDS SHALL BE RESTRICTED TO THOSE AREAS IDENTIFIED IN THE PLANS AND IN THE SPECIFICATIONS.
4. EXCAVATED MATERIAL SHALL NOT BE DEPOSITED IN THE WETLANDS OR IN A POSITION CLOSE ENOUGH THERETO TO BE WASHED AWAY BY HIGH WATER OR RUNOFF.
5. WHERE PUMPS ARE TO BE USED TO REMOVE TURBID WATERS FROM CONSTRUCTION AREAS, THE WATER SHALL BE TREATED PRIOR TO DISCHARGE TO THE WETLANDS. TREATMENT METHODS INCLUDE AND ARE NOT LIMITED TO, TURBID WATER BEING PUMPED INTO GRASSED SWALES OR APPROPRIATE VEGETATED AREAS, SEDIMENT BASINS, OR CONFINED BY AN APPROPRIATE ENCLOSURE SUCH AS TURBIDITY BARRIERS, AND KEPT CONFINED UNTIL ITS TURBIDITY LEVEL MEETS STATE WATER QUALITY STANDARDS.
6. THE CONTRACTOR SHALL SCHEDULE HIS OPERATIONS SUCH THAT THE AREA OF UNPROTECTED ERODIBLE EARTH EXPOSED AT ANY ONE TIME IS NOT LARGER THAN THE MINIMUM AREA NECESSARY FOR EFFICIENT CONSTRUCTION OPERATIONS, AND THE DURATION OF EXPOSED, UNCOMPLETED CONSTRUCTION TO THE ELEMENTS SHALL BE AS SHORT AS PRACTICABLE. CLEARING AND GRUBBING SHALL BE SO SCHEDULED AND PERFORMED THAT GRADING OPERATIONS CAN FOLLOW IMMEDIATELY THEREAFTER, AND GRADING OPERATIONS SHALL BE SCHEDULED AND PERFORMED THAT PERMANENT EROSION CONTROL FEATURES CAN FOLLOW IMMEDIATELY THEREAFTER IF CONDITIONS ON THE PROJECT PERMIT.
7. THE CONTRACTOR AND/OR OWNER'S REPRESENTATIVE SHALL PROVIDE ROUTINE MAINTENANCE OF PERMANENT AND TEMPORARY EROSION CONTROL FEATURES UNTIL THE PROJECT IS COMPLETE AND ALL BARED SOILS ARE STABILIZED.
8. SILT FENCE SHALL BE LOCATED AT THE PERIMETER OF CONSTRUCTION LIMITS, AS DEFINED BY FIELD CONDITIONS.
9. CONTRACTOR IS TO PROVIDE EROSION CONTROL AND SEDIMENTATION BARRIER (HAY BALES OR SILTATION CURTAIN) TO PREVENT SILTATION OF ADJACENT PROPERTY, STREETS, STORM SEWERS AND WATERWAYS. IN ADDITION, CONTRACTOR SHALL PLACE STRAW, MULCH OR OTHER SUITABLE MATERIAL ON GROUND IN AREAS WHERE CONSTRUCTION RELATED TRAFFIC IS TO ENTER AND EXIT SITE. IF, IN THE OPINION OF THE ENGINEER AND/OR LOCAL AUTHORITIES, EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE EITHER BY NATURAL DRAINAGE OR BY VEHICULAR TRAFFIC, THE CONTRACTOR IS TO REMOVE SAID EARTH TO THE SATISFACTION OF THE ENGINEER AND/OR AUTHORITIES.
10. IF WIND EROSION BECOMES SIGNIFICANT DURING CONSTRUCTION, THE CONTRACTOR SHALL STABILIZE THE AFFECTED AREA USING SPRINKLING, IRRIGATION OR OTHER ACCEPTABLE METHODS.

BIDDING NOTES:

1. ALL REMOVAL WITHIN PROPOSED EXCAVATION AREAS ARE PART OF PIPE, INLET AND / OR MANHOLE CONSTRUCTION.
2. PRICE FOR ALL REMOVAL, AS SHOWN ON THE PLANS OUTSIDE OF CONSTRUCTION EXCAVATION AREA, SHALL BE INCLUDED IN THE VARIOUS ITEMS OF THE STORMWATER UNIT PRICES.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR PULLING RIGHT-OF-WAY USE PERMITS FOR CITY OF TAMPA.
- 4.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PULLING RIGHT-OF-WAY USE PERMIT FOR HILLSBOROUGH COUNTY IF DETERMINED ONE IS NEEDED.
6. CONTRACTOR RESPONSIBLE FOR OBTAINING TREE REMOVAL PERMITS AND GRAND TREE REMOVAL NOTICING.
7. CONTRACTOR RESPONSIBLE FOR SUPPLYING ALL MOT PLANS.
8. PRIOR TO CONSTRUCTION CONTRACTOR TO WALK DITCH WITH ENGINEER AND/OR CITY STAFF AND IDENTIFY ALL AREAS OF EXISTING CONCRETE SEA WALL TO BE REPAIRED. REPAIR AREAS SHALL INCLUDE TOP BEAM, WALL SURFACE, AND FOOTER.
9. ALL BOX CULVERTS AND STORMPIPE SHALL BE WATER TIGHT. BOX CULVERT AND STORMPIPE TRENCH BACKFILLING SHALL CONFORM TO FDOT STANDARD SPECIFICATIONS 125. BOX CULVERT BACKFILLING WILL BE UNDER WET CONDITIONS AND SHALL CONFORM SPECIFICALLY TO FDOT STANDARD SPECIFICATION 125.8.3.4 WITH COARSE AGGREGATE PIPE BEDDING WRAPPED IN FILTER FABRIC.

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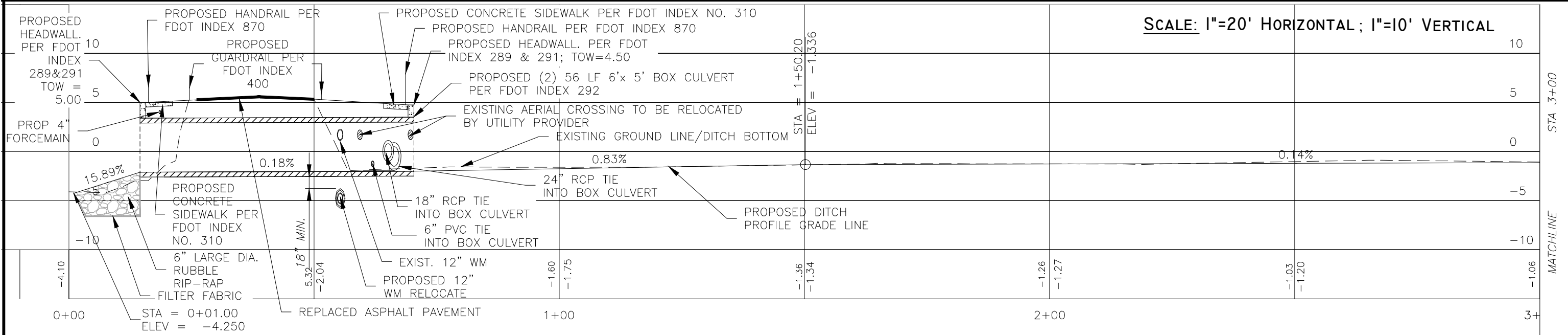
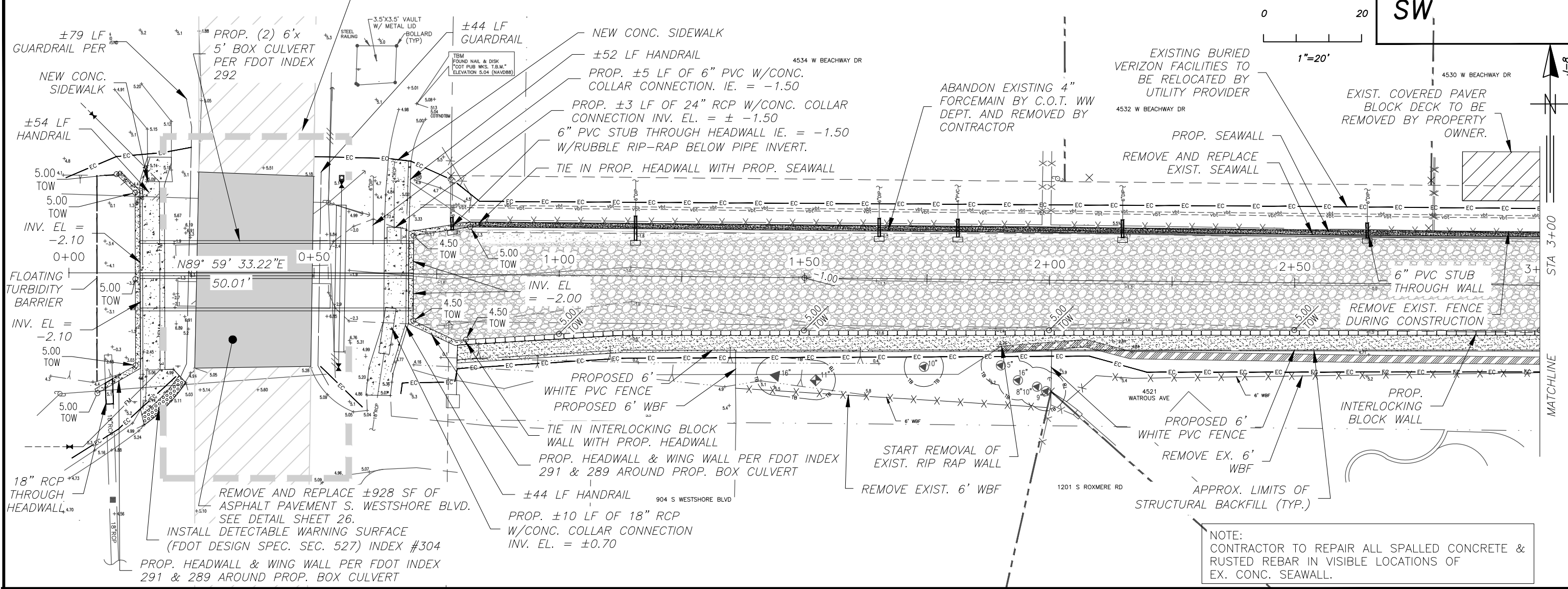
CITY of TAMPA
 Department of Transportation
 and Stormwater Services
 Stormwater Engineering Division

**WATROUS CANAL
 REHABILITATION PROJECT**
 GENERAL & CONSTRUCTION NOTES

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FOR DEMOLITION AND RELOCATION/REMOVAL OF WATER/SEWER & ADDITIONAL DETAILS SEE SHEETS 25, 26, & 26A



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DATE: 2/14

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Department of Transportation
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Stormwater Engineering Division

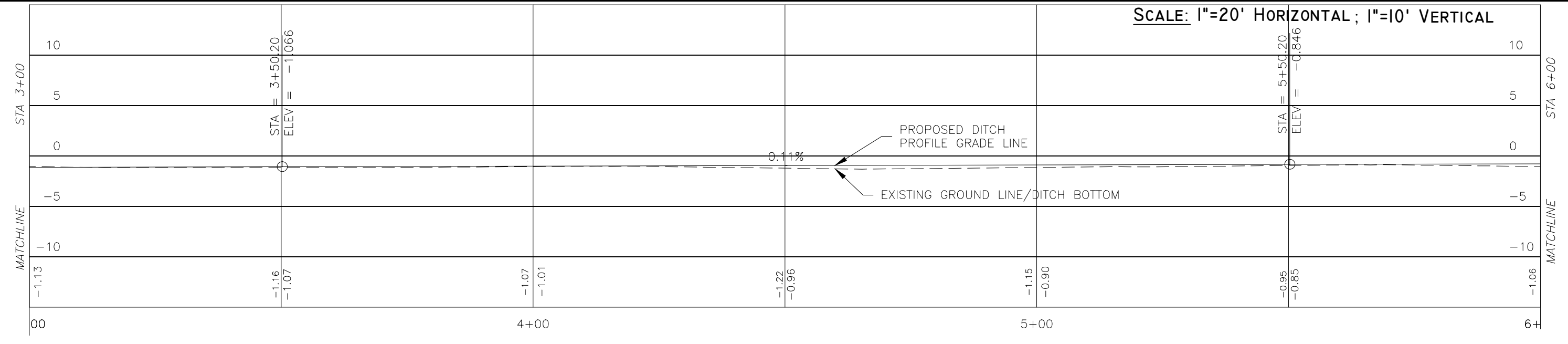
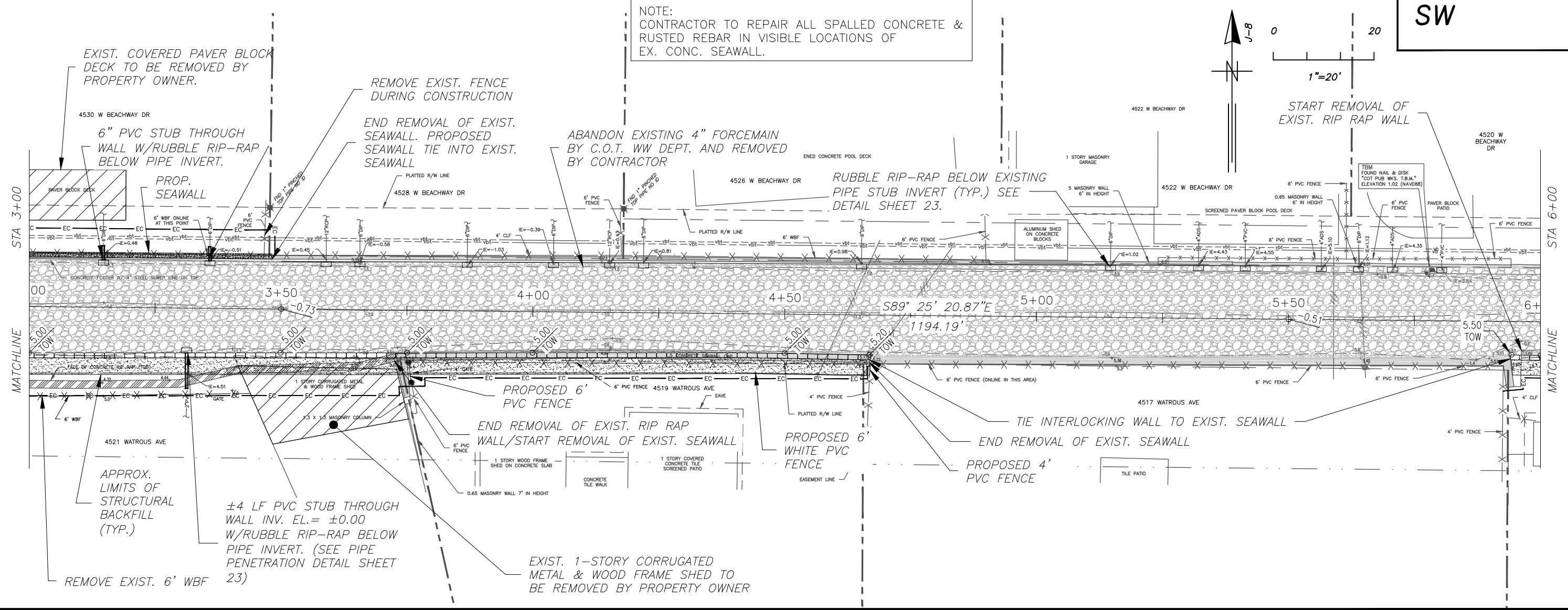
**WATROUS CANAL
REHABILITATION PROJECT**
STORMWATER PLAN & PROFILE

SHEET
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NOTE:
CONTRACTOR TO REPAIR ALL SPALLED CONCRETE &
RUSTED REBAR IN VISIBLE LOCATIONS OF
EX. CONC. SEAWALL.

SW



SCALE: 1"=20' HORIZONTAL ; 1"=10' VERTICAL

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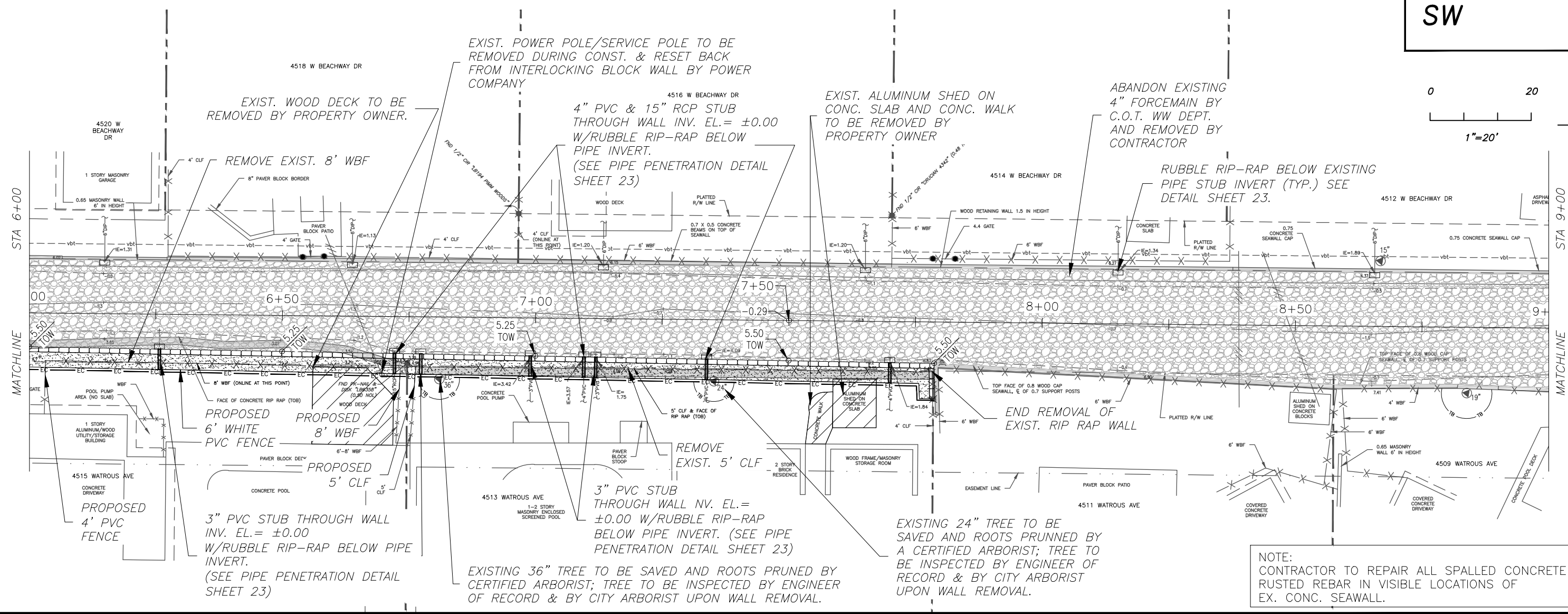
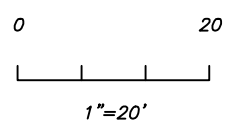
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Stormwater Engineering Division

**WATROUS CANAL
REHABILITATION PROJECT**
STORMWATER PLAN & PROFILE

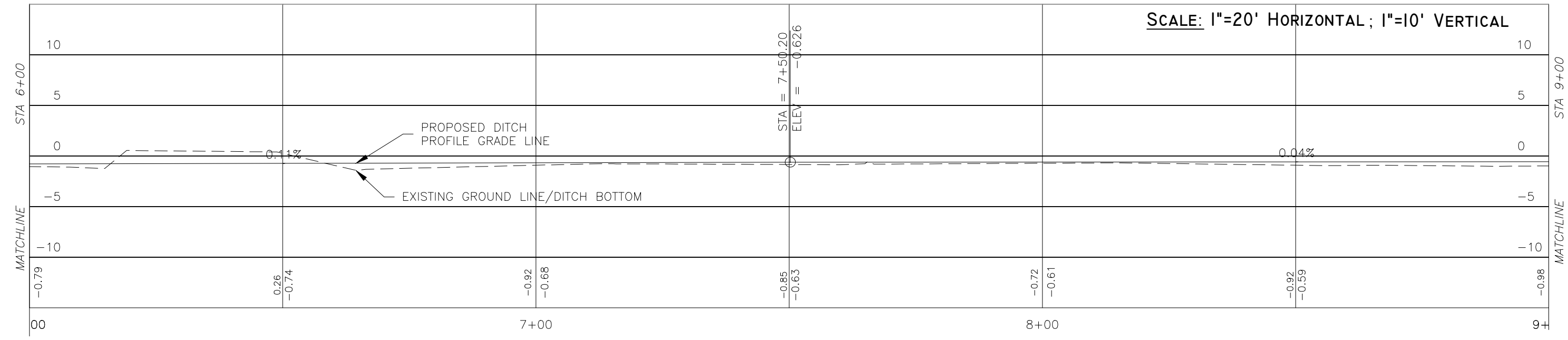
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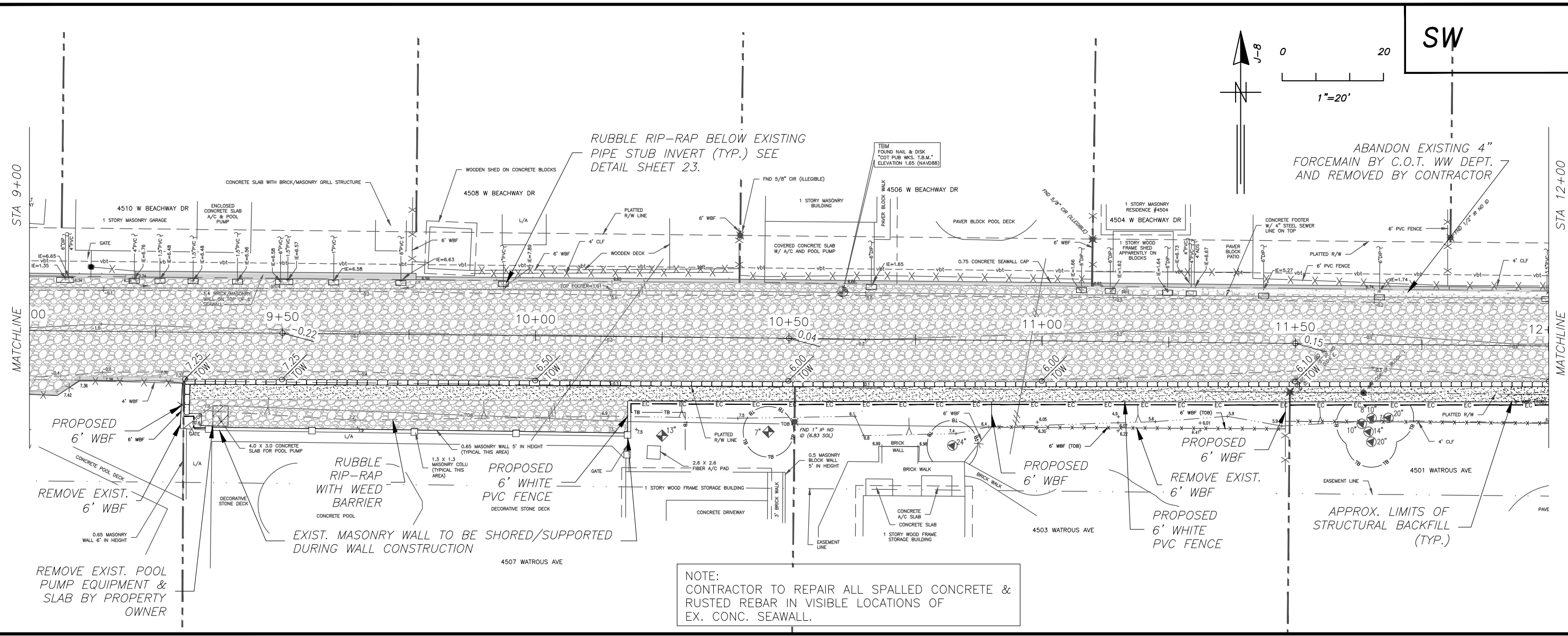
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DATE: 2/14

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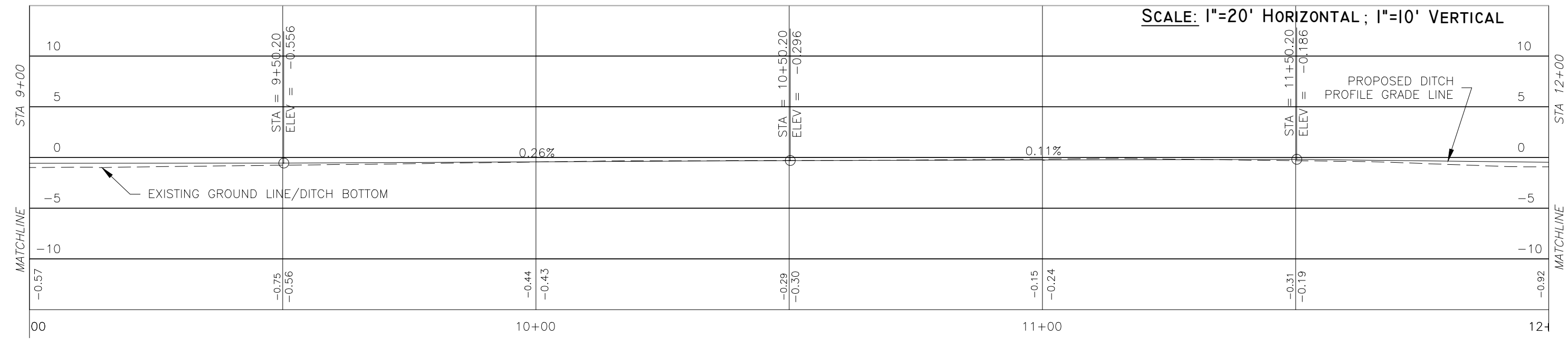
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REHABILITATION PROJECT**
STORMWATER PLAN & PROFILE

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NOTE:
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SCALE: 1"=20' HORIZONTAL ; 1"=10' VERTICAL

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Stormwater Engineering Division

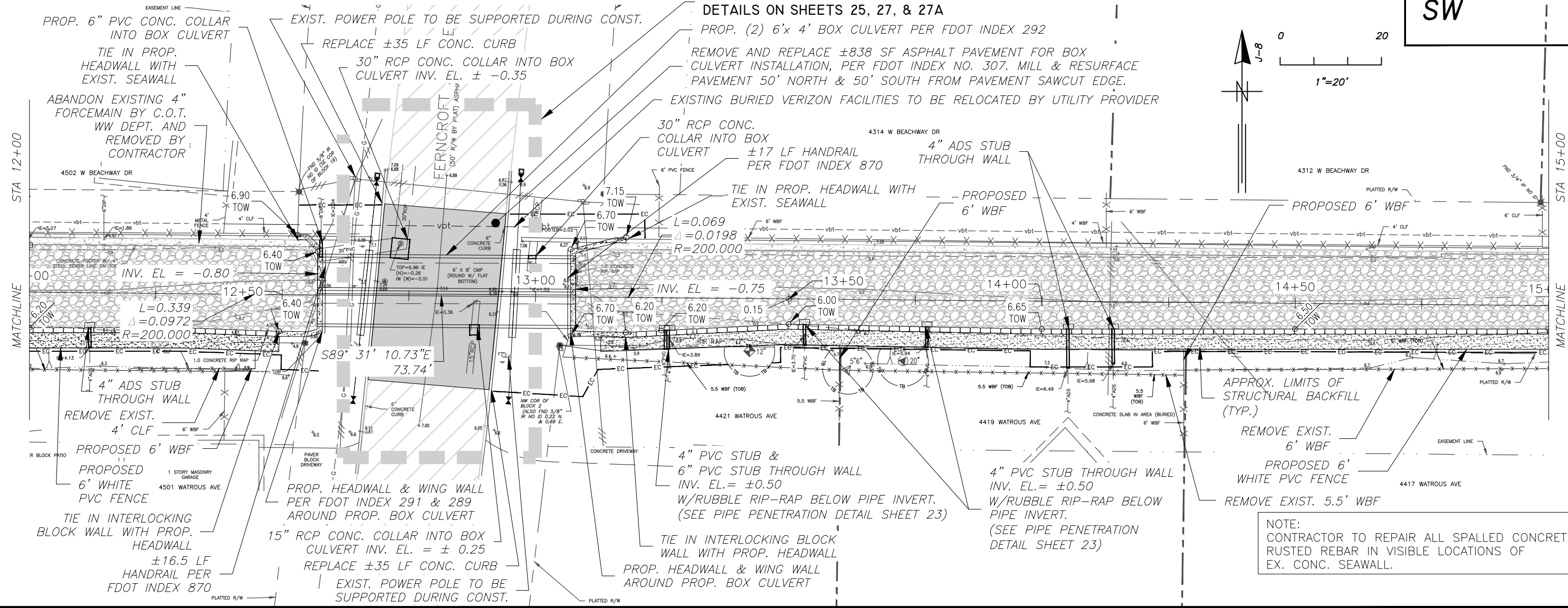
**WATROUS CANAL
REHABILITATION PROJECT**
STORMWATER PLAN & PROFILE

SHEET
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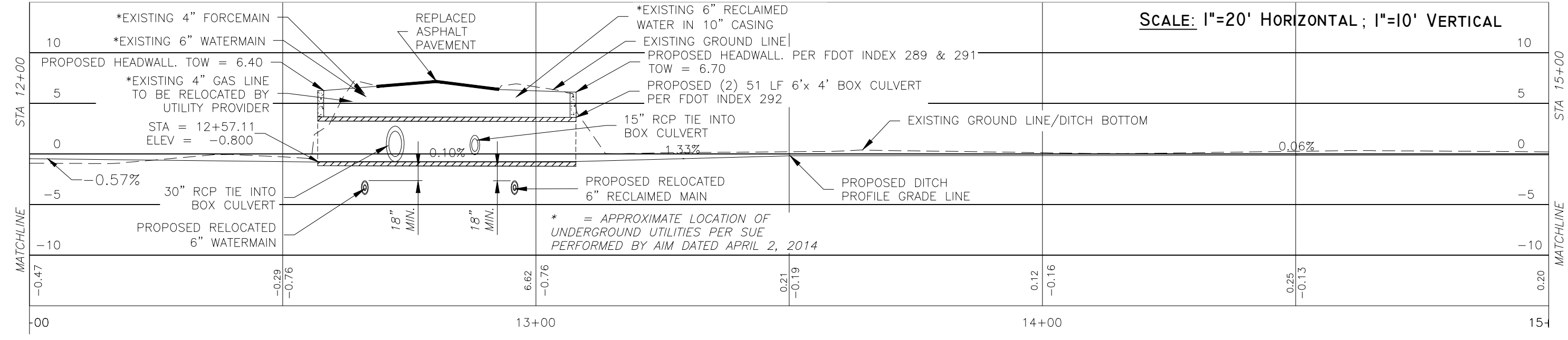
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FOR DEMOLITION AND RELOCATION/REMOVAL OF WATER/SEWER & ADDITIONAL DETAILS ON SHEETS 25, 27, & 27A

SW



NOTE: CONTRACTOR TO REPAIR ALL SPALLED CONCRETE & RUSTED REBAR IN VISIBLE LOCATIONS OF EX. CONC. SEAWALL.



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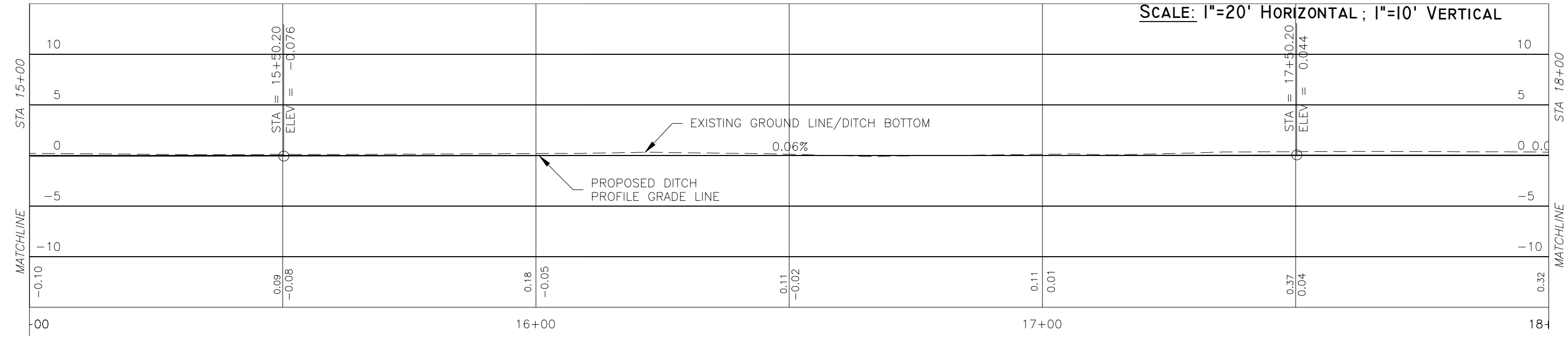
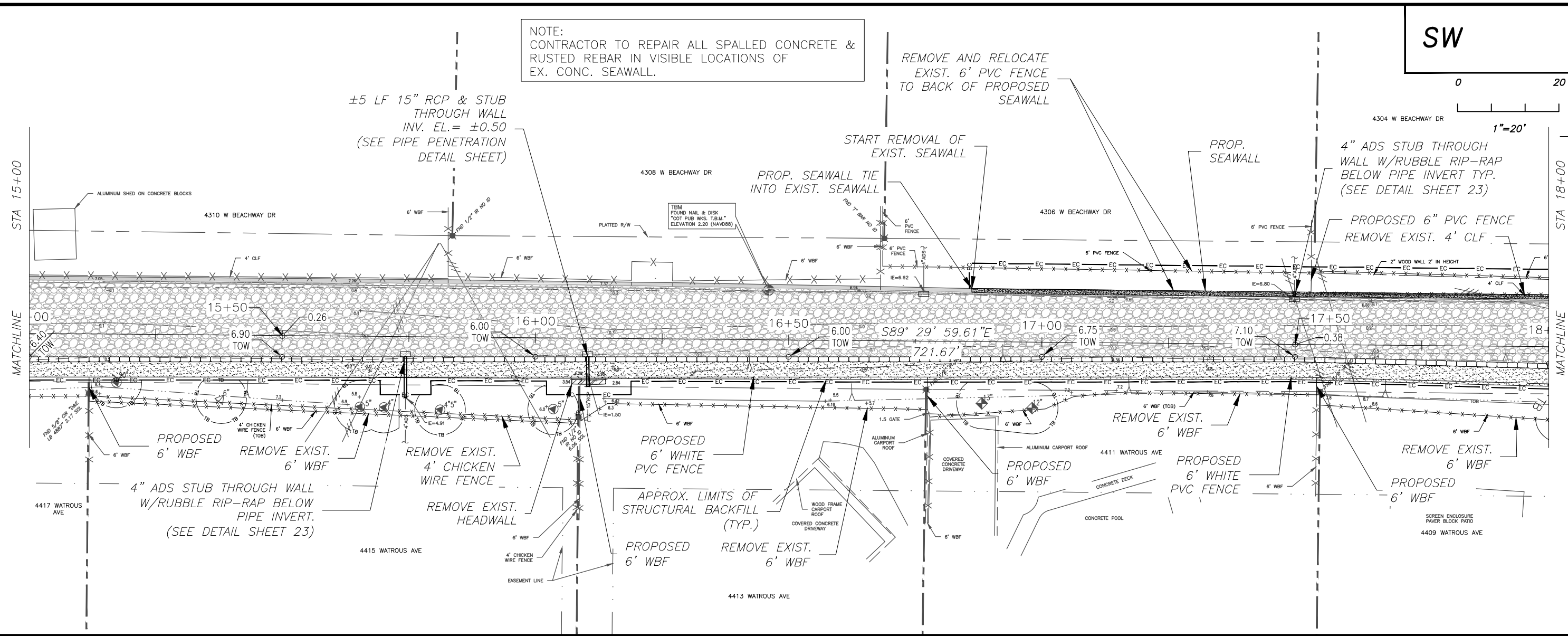
**WATROUS CANAL
 REHABILITATION PROJECT**
 STORMWATER PLAN & PROFILE

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NOTE:
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EX. CONC. SEAWALL.

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SCALE: 1"=20' HORIZONTAL ; 1"=10' VERTICAL

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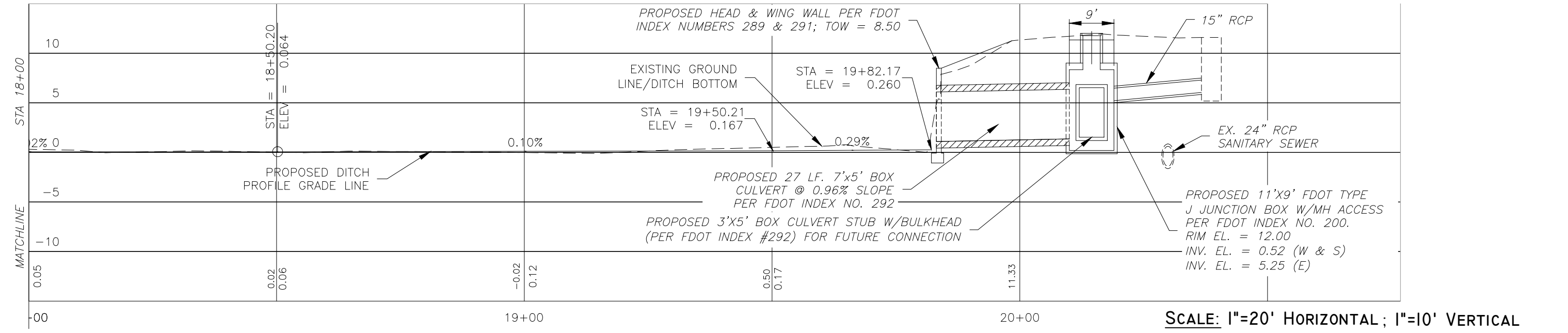
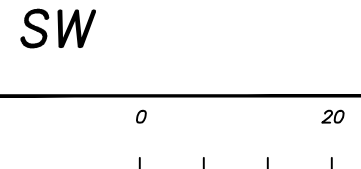
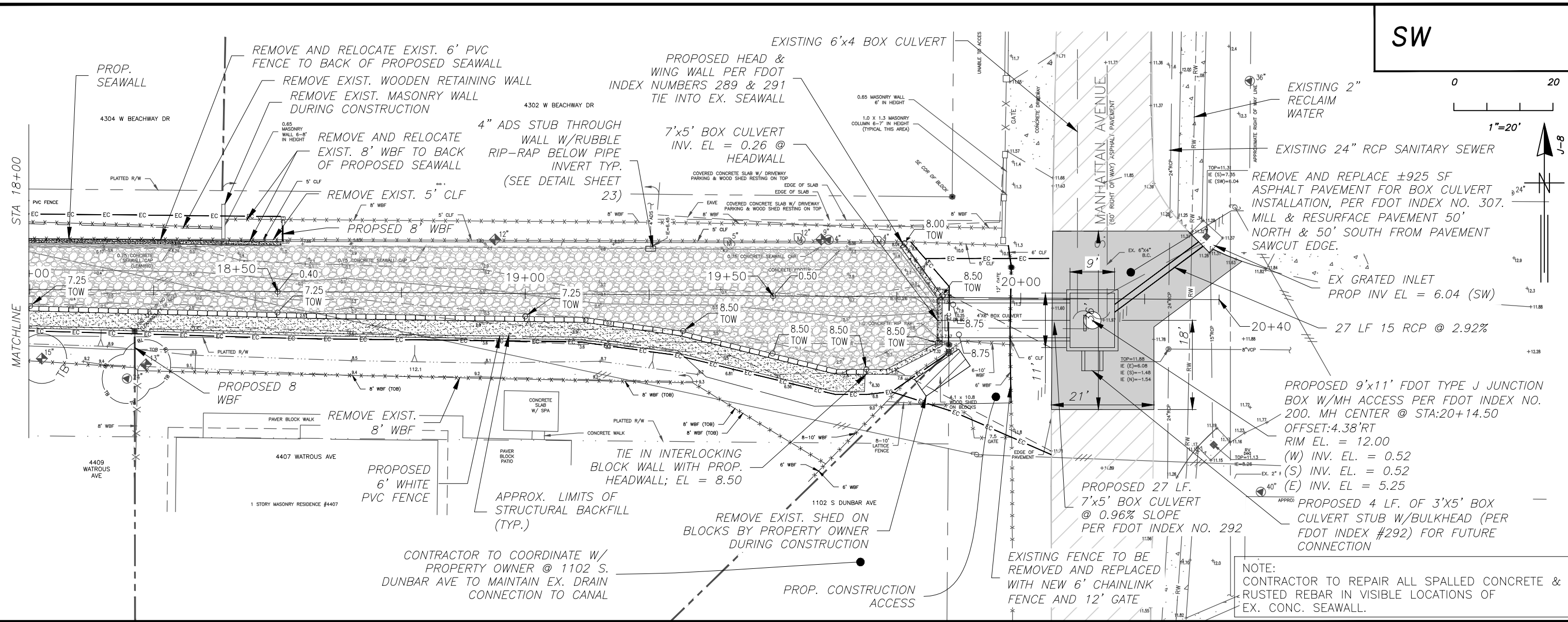
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**WATROUS CANAL
REHABILITATION PROJECT**
STORMWATER PLAN & PROFILE

SHEET
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SCALE: 1"=20' HORIZONTAL ; 1"=10' VERTICAL

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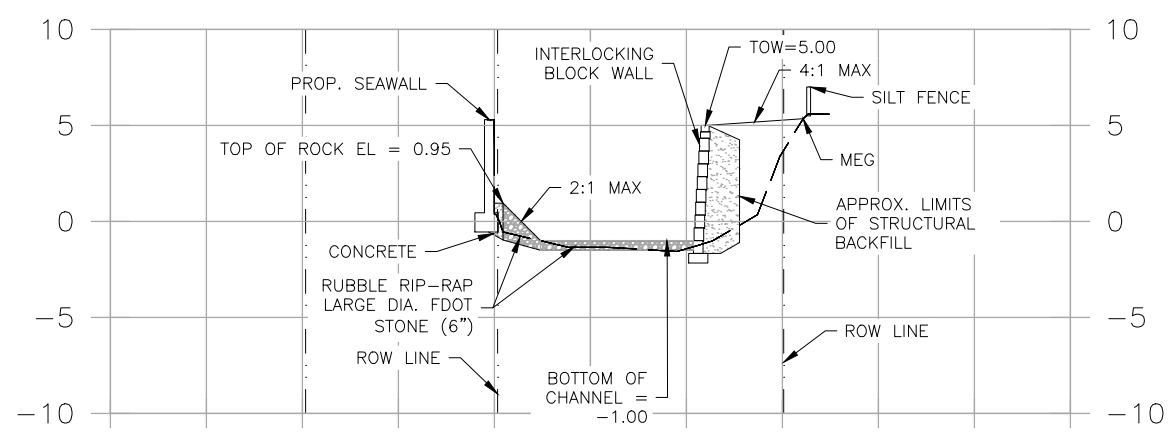
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**WATROUS CANAL
 REHABILITATION PROJECT**
 STORMWATER PLAN & PROFILE

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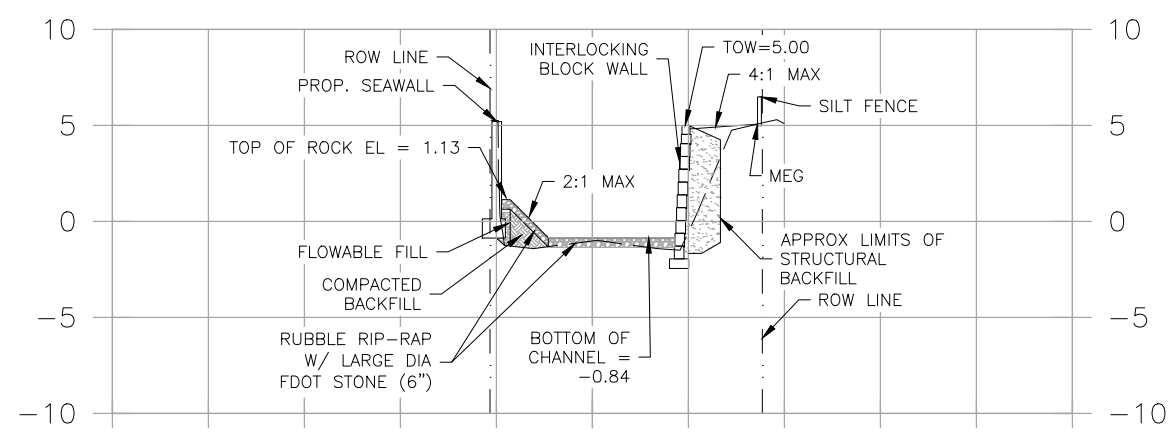
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NOTE:
LIMITS OF STRUCTURAL BACKFILL ARE ONLY APPROXIMATE AS DEPICTED ON THESE PLANS. ACTUAL STRUCTURAL DESIGN AND REINFORCEMENT TO BE SPECIFIED BY WALL INSTALLER



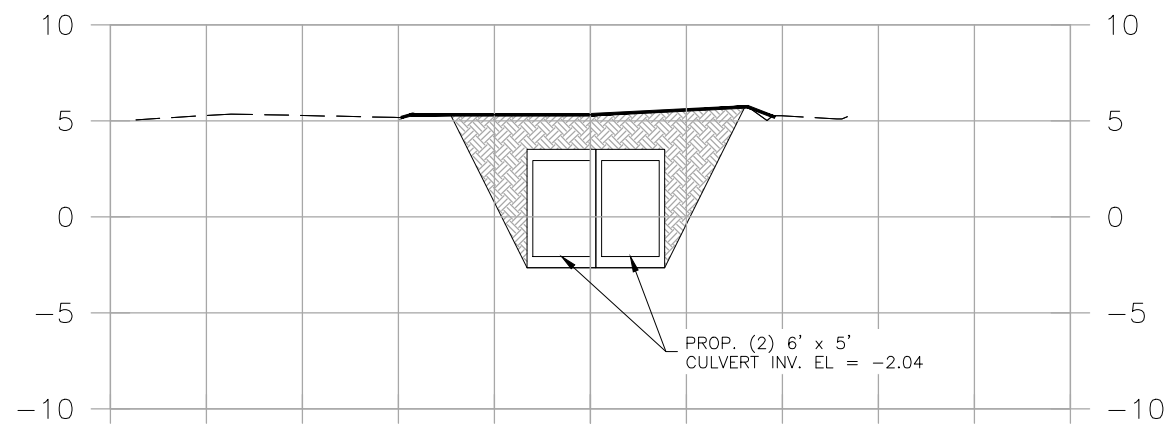
SECTION 1+50

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1"=10' VERTICAL



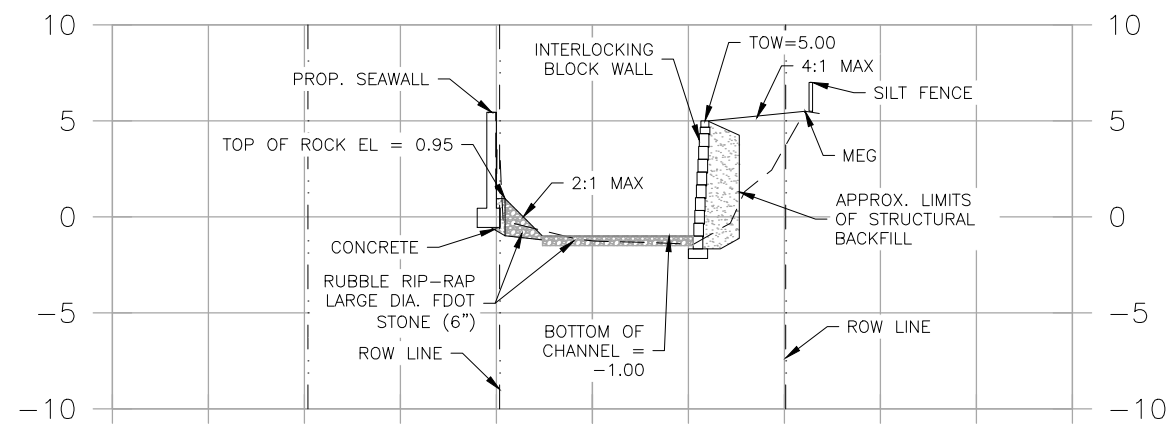
SECTION 2+50

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SECTION 0+50

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SECTION 1+75

SCALE: 1"=20' HORIZONTAL
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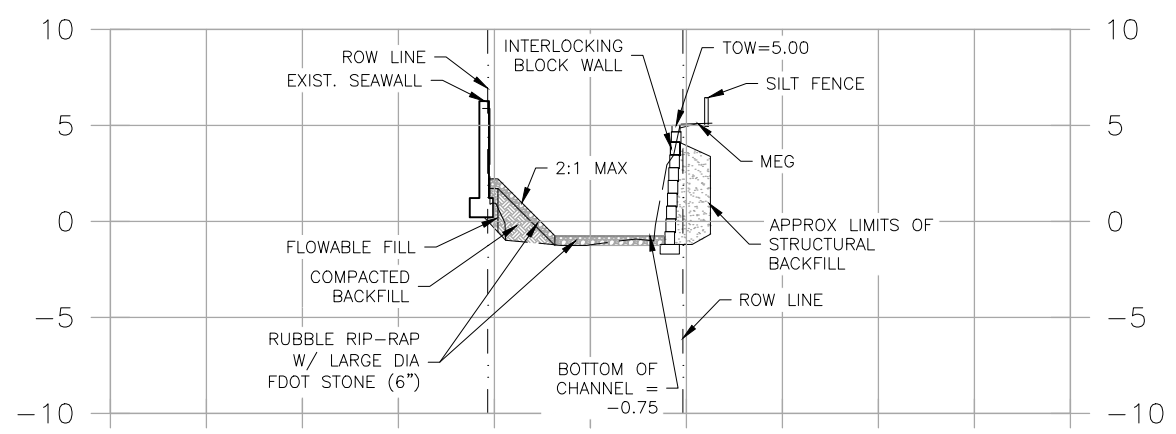
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**WATROUS CANAL
REHABILITATION PROJECT**
CROSS SECTIONS

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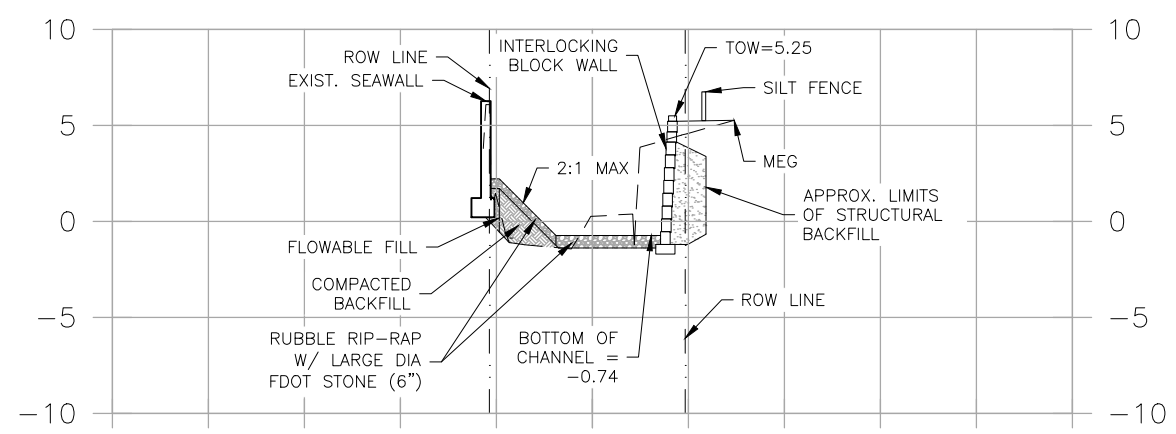
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NOTE:
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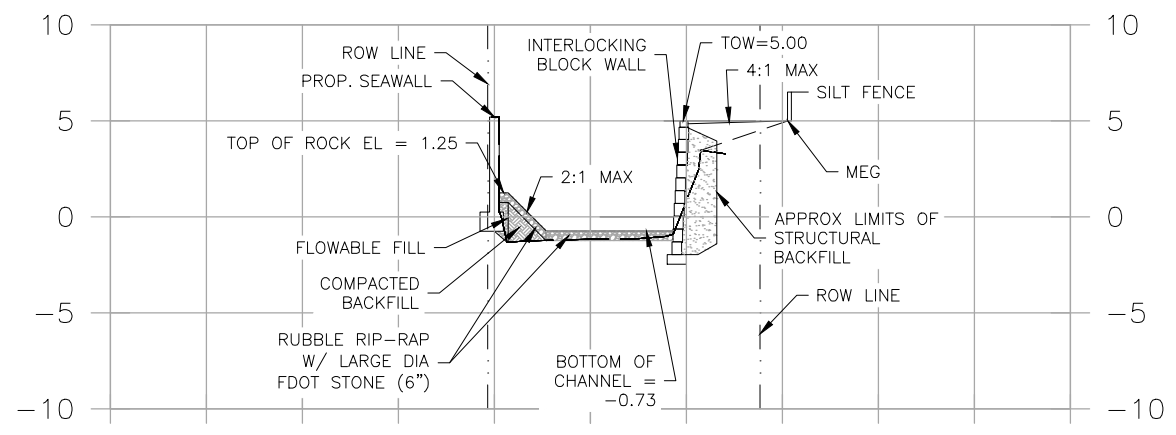
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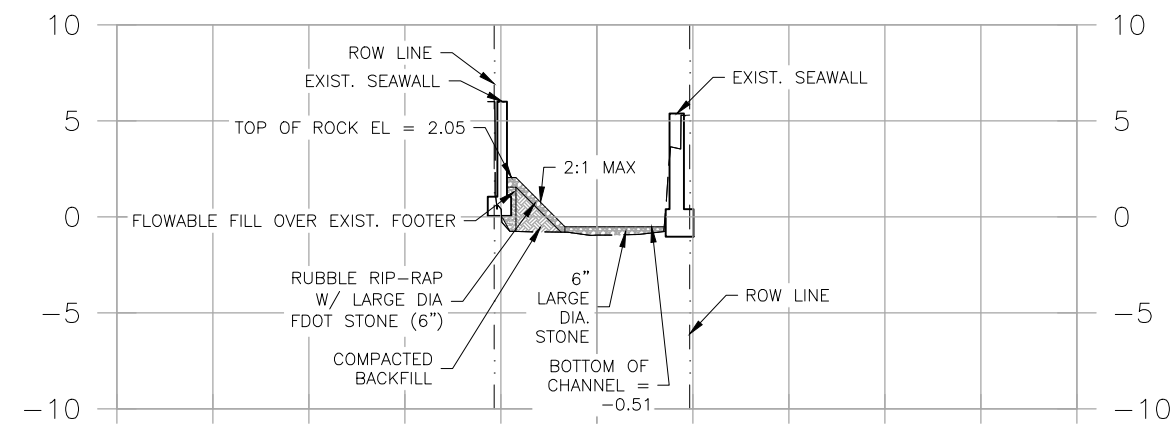
SECTION 6+50

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1"=10' VERTICAL



SECTION 3+50

SCALE: 1"=20' HORIZONTAL
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SECTION 5+50

SCALE: 1"=20' HORIZONTAL
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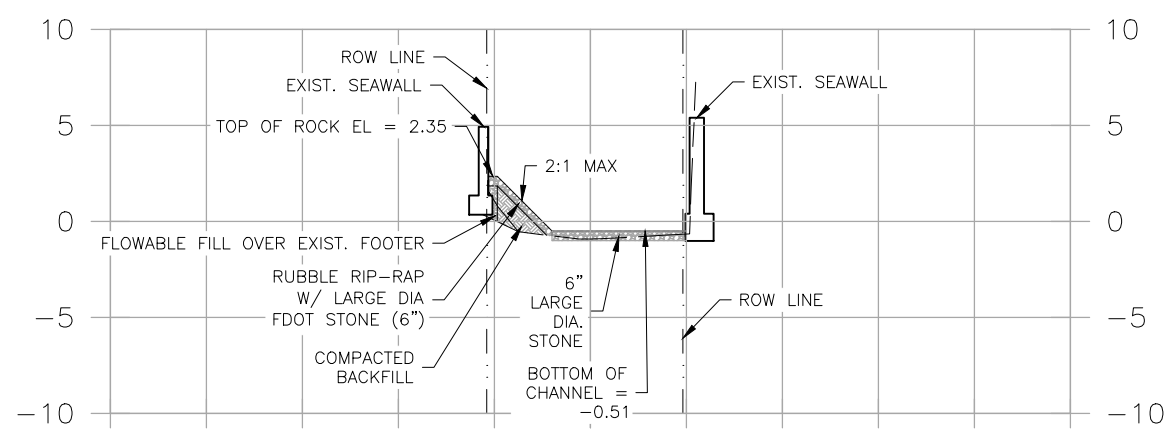
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**WATROUS CANAL
REHABILITATION PROJECT**
CROSS SECTIONS

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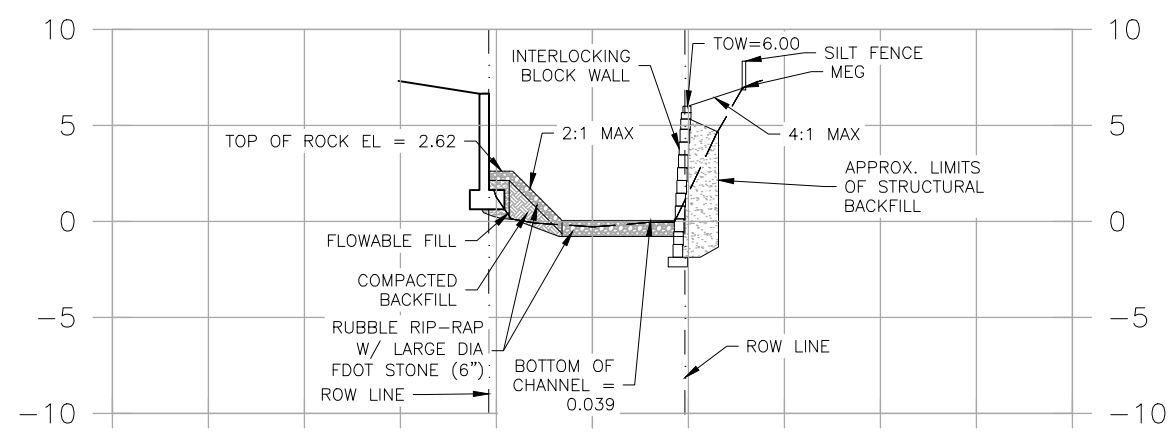
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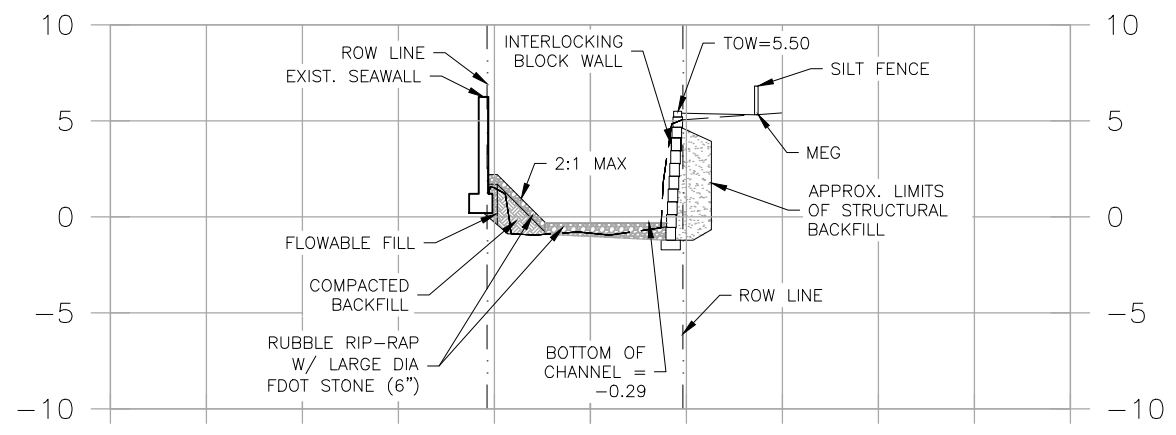
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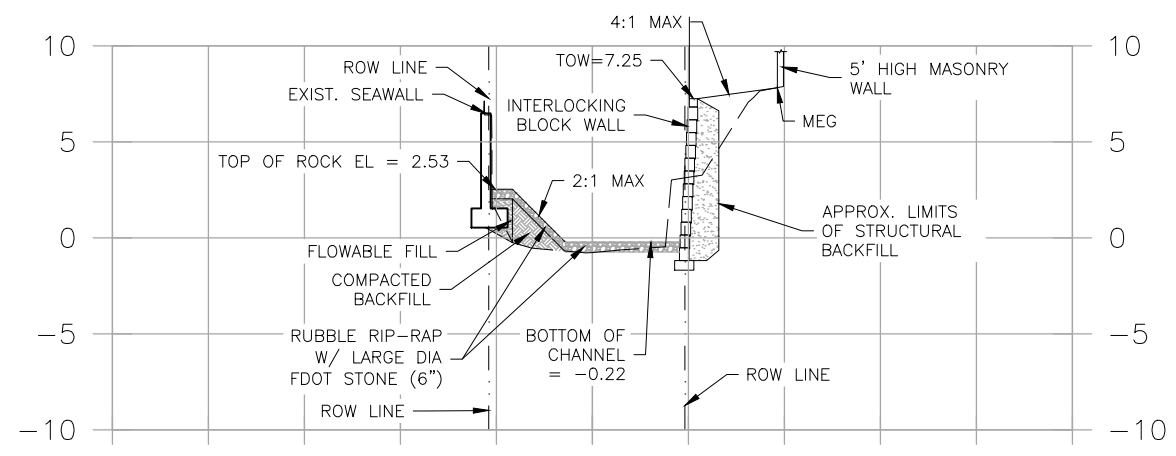
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SECTION 7+50

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SECTION 9+50

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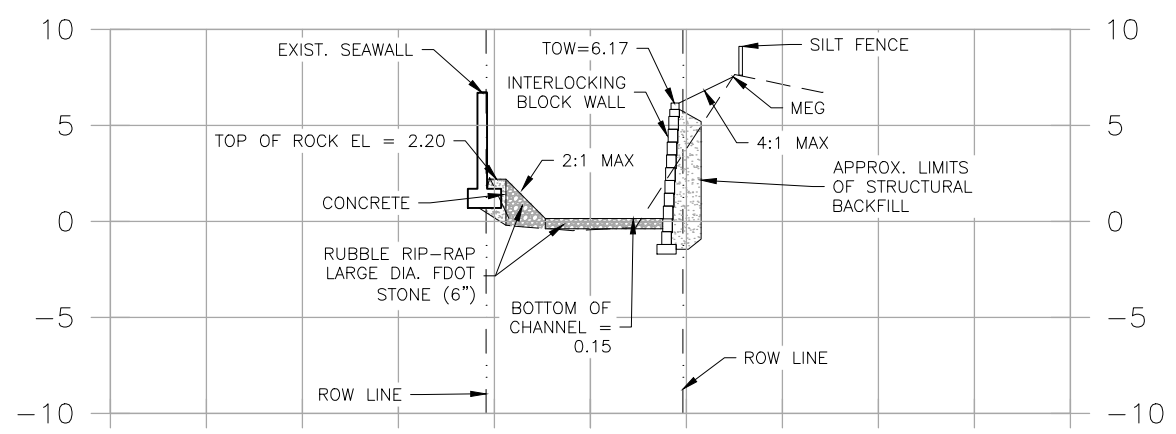
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**WATROUS CANAL
REHABILITATION PROJECT**
CROSS SECTIONS

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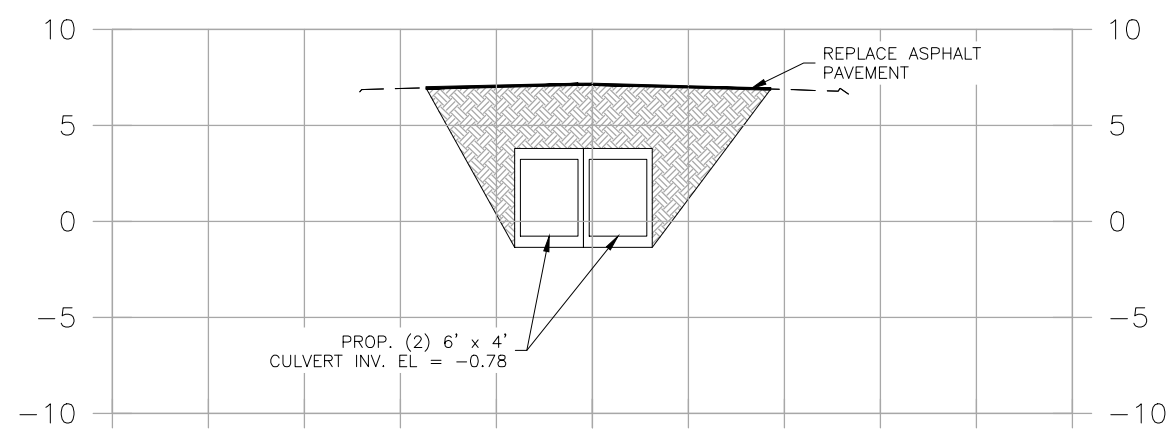
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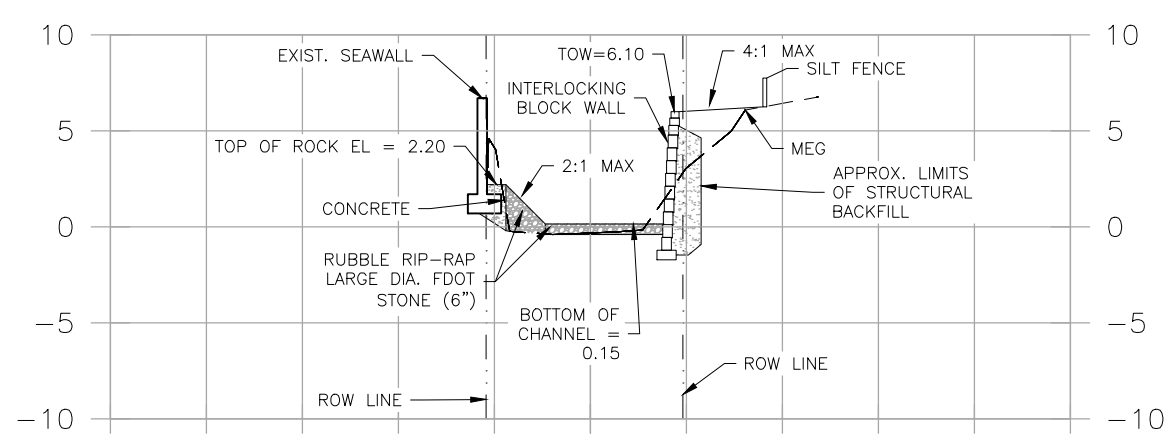
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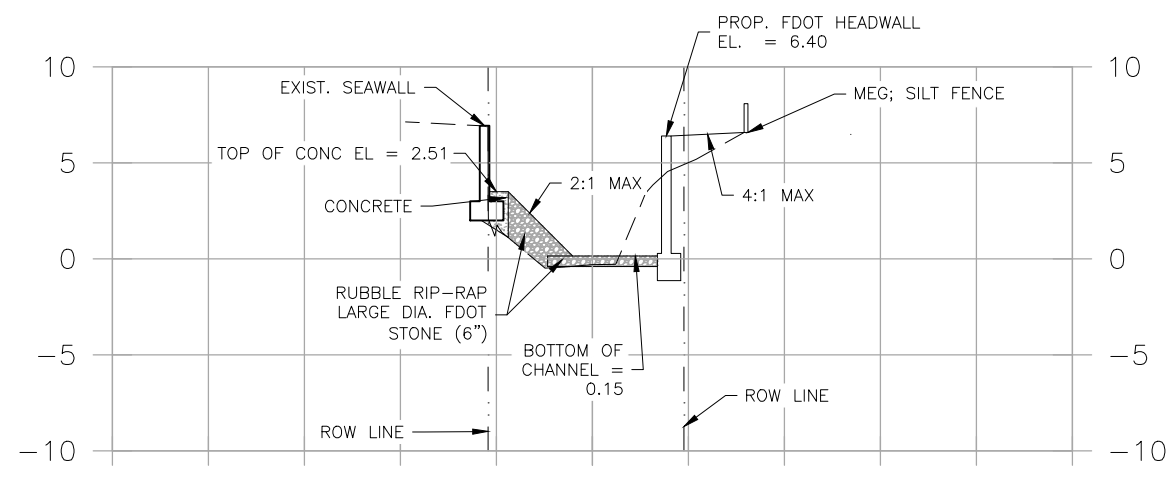
SECTION 12+80

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SECTION 11+50

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SECTION 12+50

SCALE: 1"=20' HORIZONTAL
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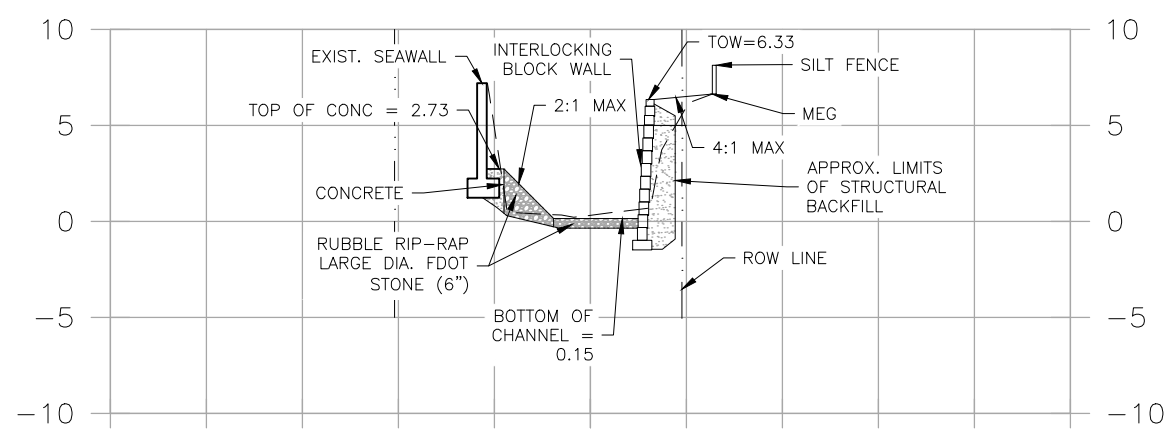
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Stormwater Engineering Division

**WATROUS CANAL
REHABILITATION PROJECT**
CROSS SECTIONS

SHEET
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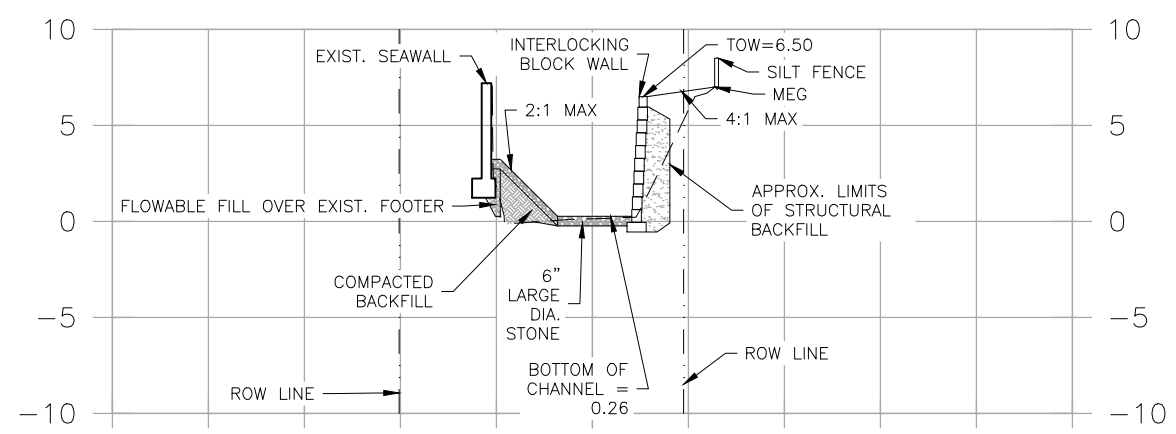
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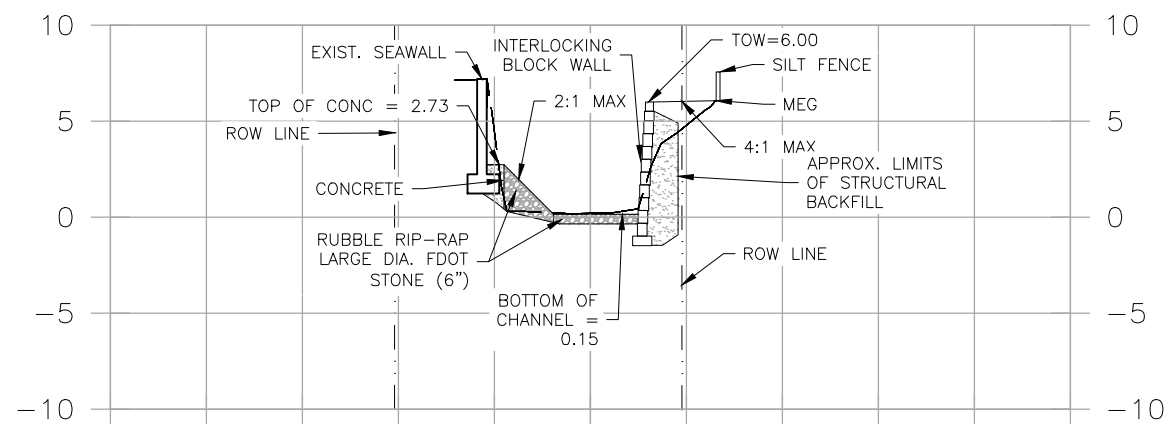
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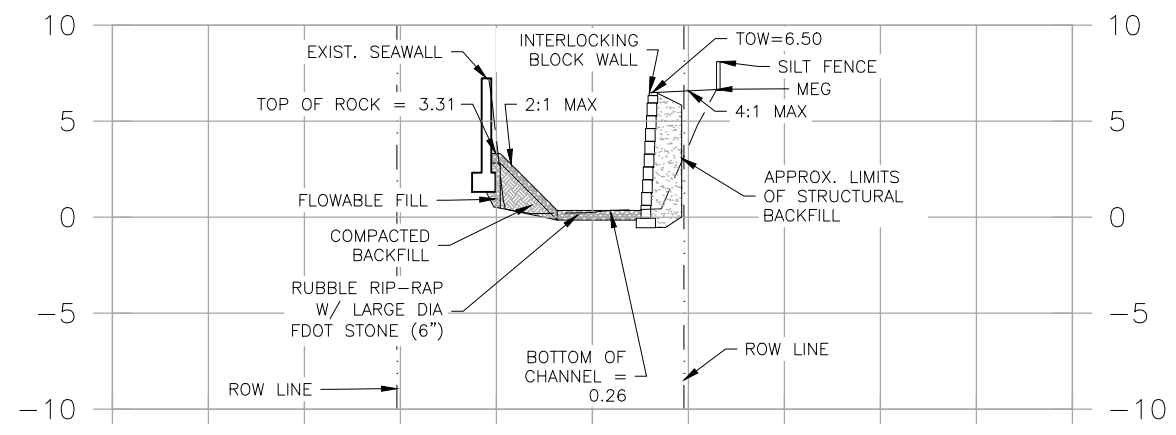
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SECTION 13+50

SCALE: 1"=20' HORIZONTAL
1"=10' VERTICAL



SECTION 14+50

SCALE: 1"=20' HORIZONTAL
1"=10' VERTICAL

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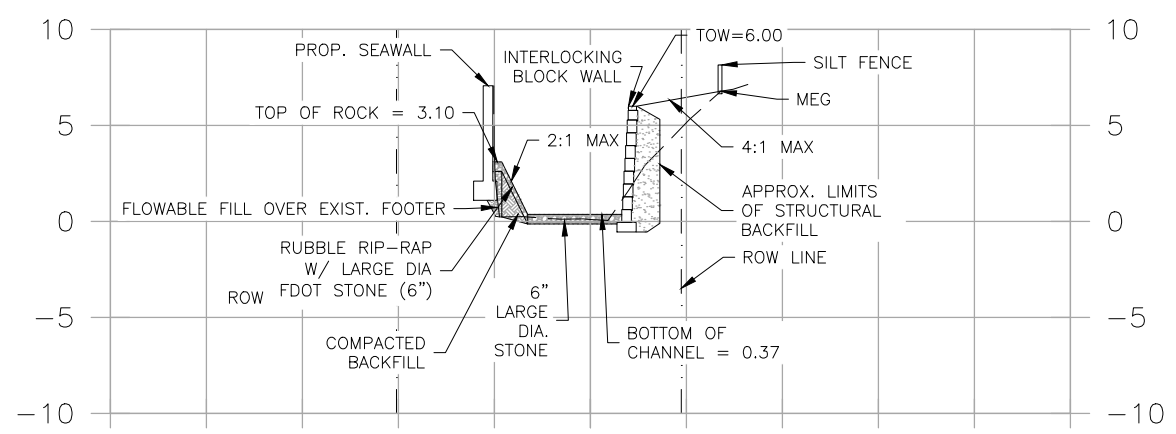
CITY of TAMPA
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**WATROUS CANAL
REHABILITATION PROJECT**
CROSS SECTIONS

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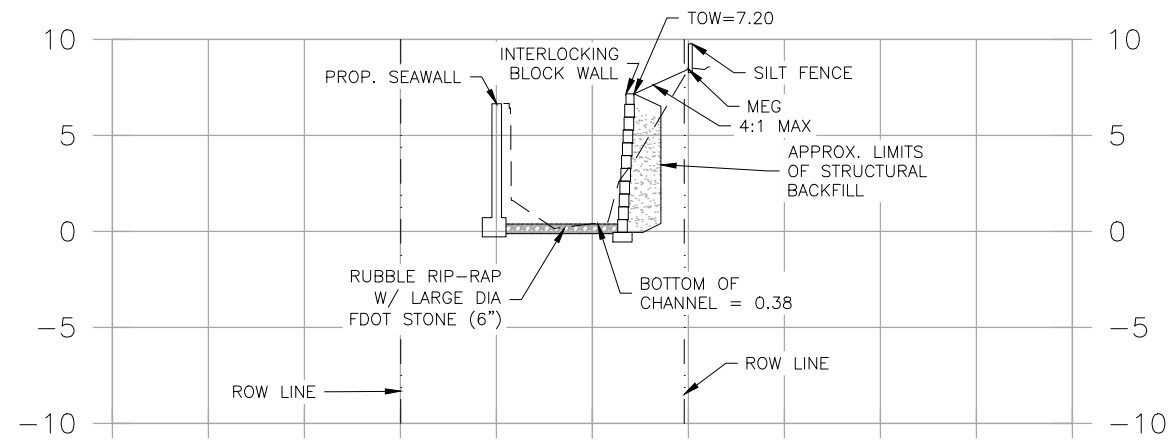
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NOTE:
LIMITS OF STRUCTURAL BACKFILL ARE ONLY APPROXIMATE AS DEPICTED ON THESE PLANS. ACTUAL STRUCTURAL DESIGN AND REINFORCEMENT TO BE SPECIFIED BY WALL INSTALLER



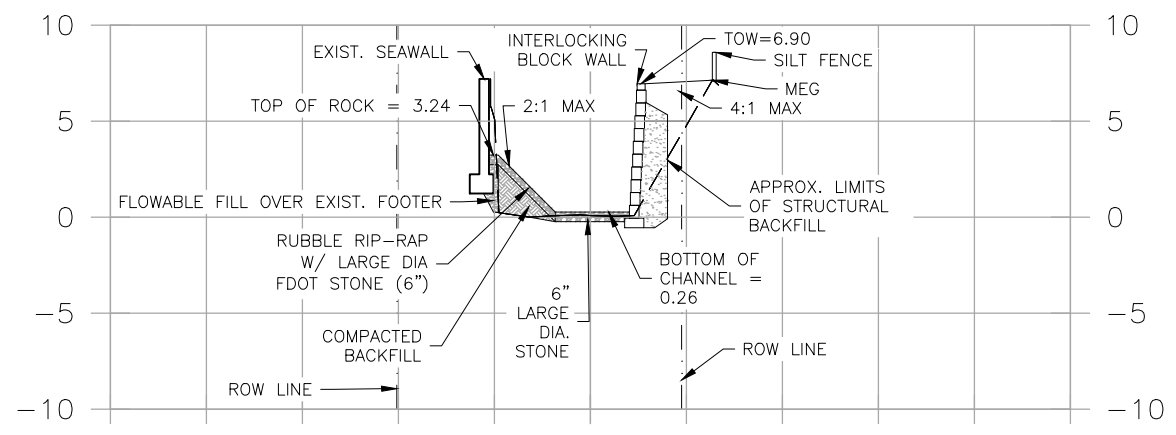
SECTION 16+50

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1"=10' VERTICAL



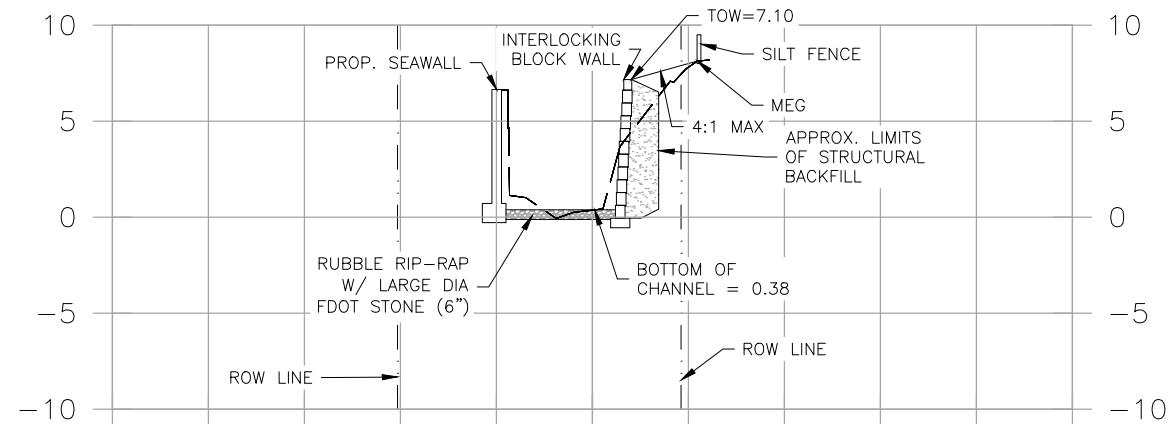
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1"=10' VERTICAL



SECTION 15+50

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SECTION 17+50

SCALE: 1"=20' HORIZONTAL
1"=10' VERTICAL

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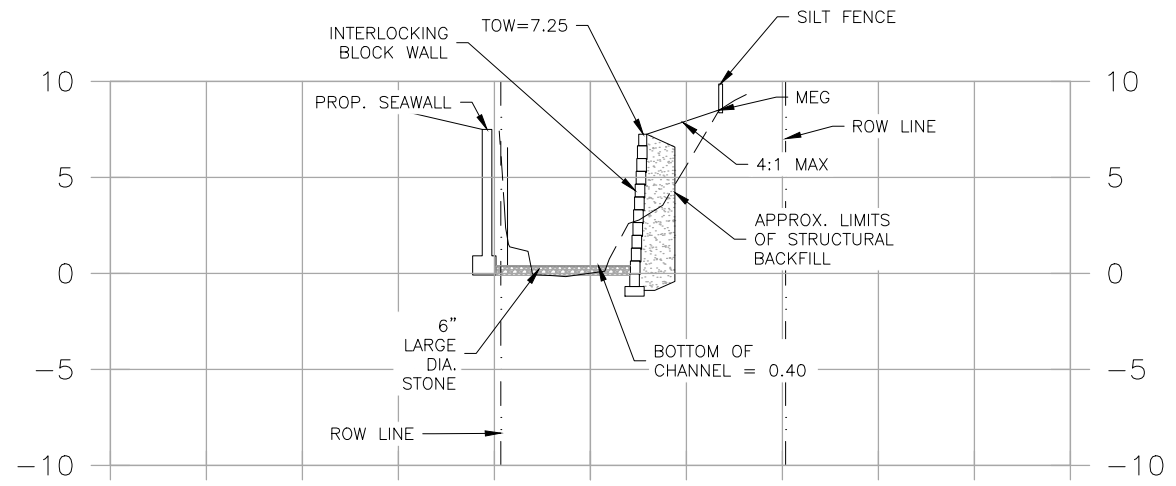
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and Stormwater Services
Stormwater Engineering Division

**WATROUS CANAL
REHABILITATION PROJECT**
CROSS SECTIONS

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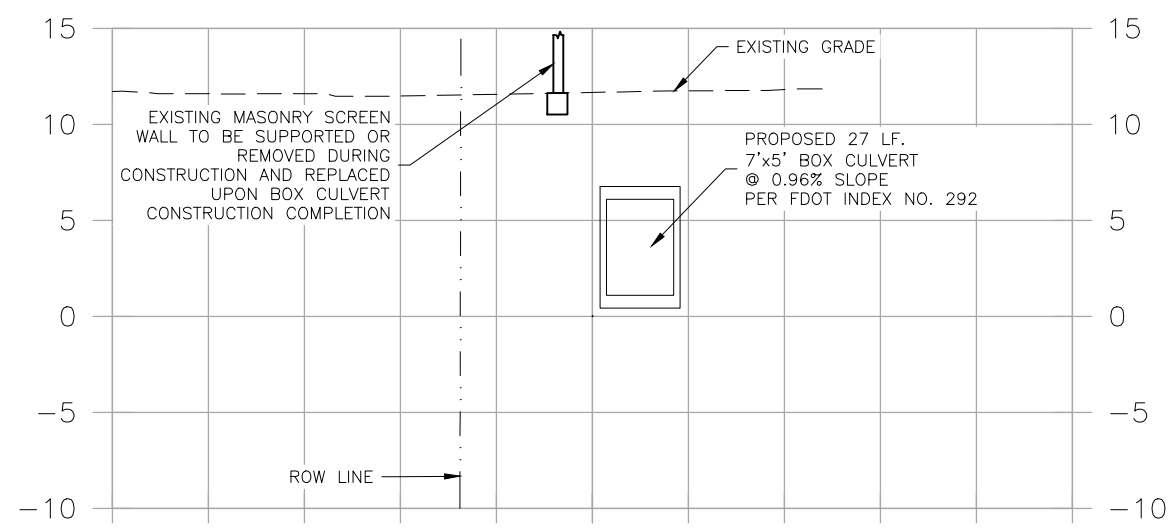
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NOTE:
LIMITS OF STRUCTURAL BACKFILL ARE ONLY APPROXIMATE AS DEPICTED ON THESE PLANS. ACTUAL STRUCTURAL DESIGN AND REINFORCEMENT TO BE SPECIFIED BY WALL INSTALLER



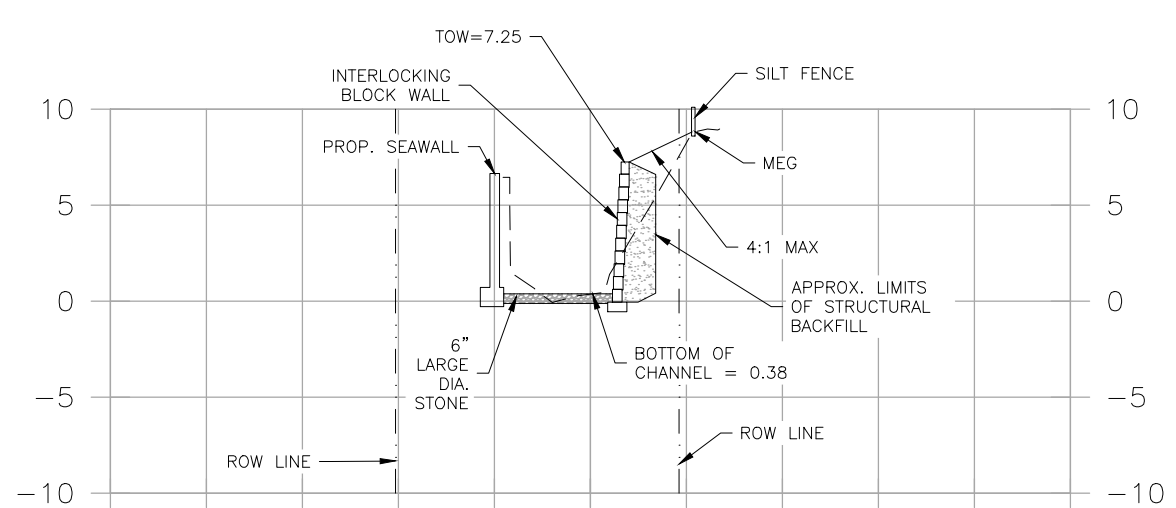
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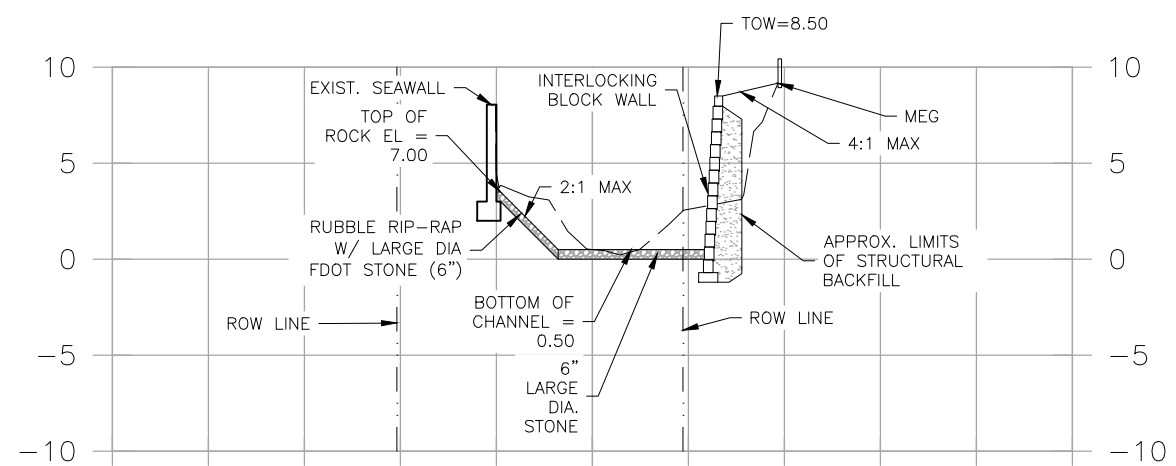
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SCALE: 1"=20' HORIZONTAL
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SECTION 17+87

SCALE: 1"=20' HORIZONTAL
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SECTION 19+50

SCALE: 1"=20' HORIZONTAL
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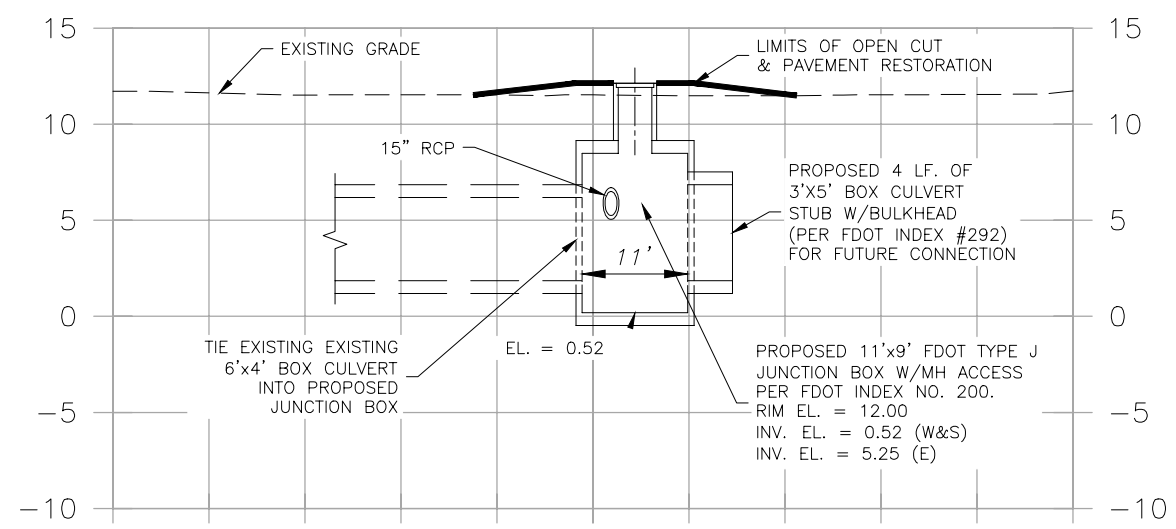
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and Stormwater Services
Stormwater Engineering Division

**WATROUS CANAL
REHABILITATION PROJECT**
CROSS SECTIONS

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NOTE:
LIMITS OF STRUCTURAL BACKFILL ARE ONLY APPROXIMATE AS DEPICTED ON THESE PLANS. ACTUAL STRUCTURAL DESIGN AND REINFORCEMENT TO BE SPECIFIED BY WALL INSTALLER



SECTION 20+16

SCALE: 1"=20' HORIZONTAL
1"=10' VERTICAL

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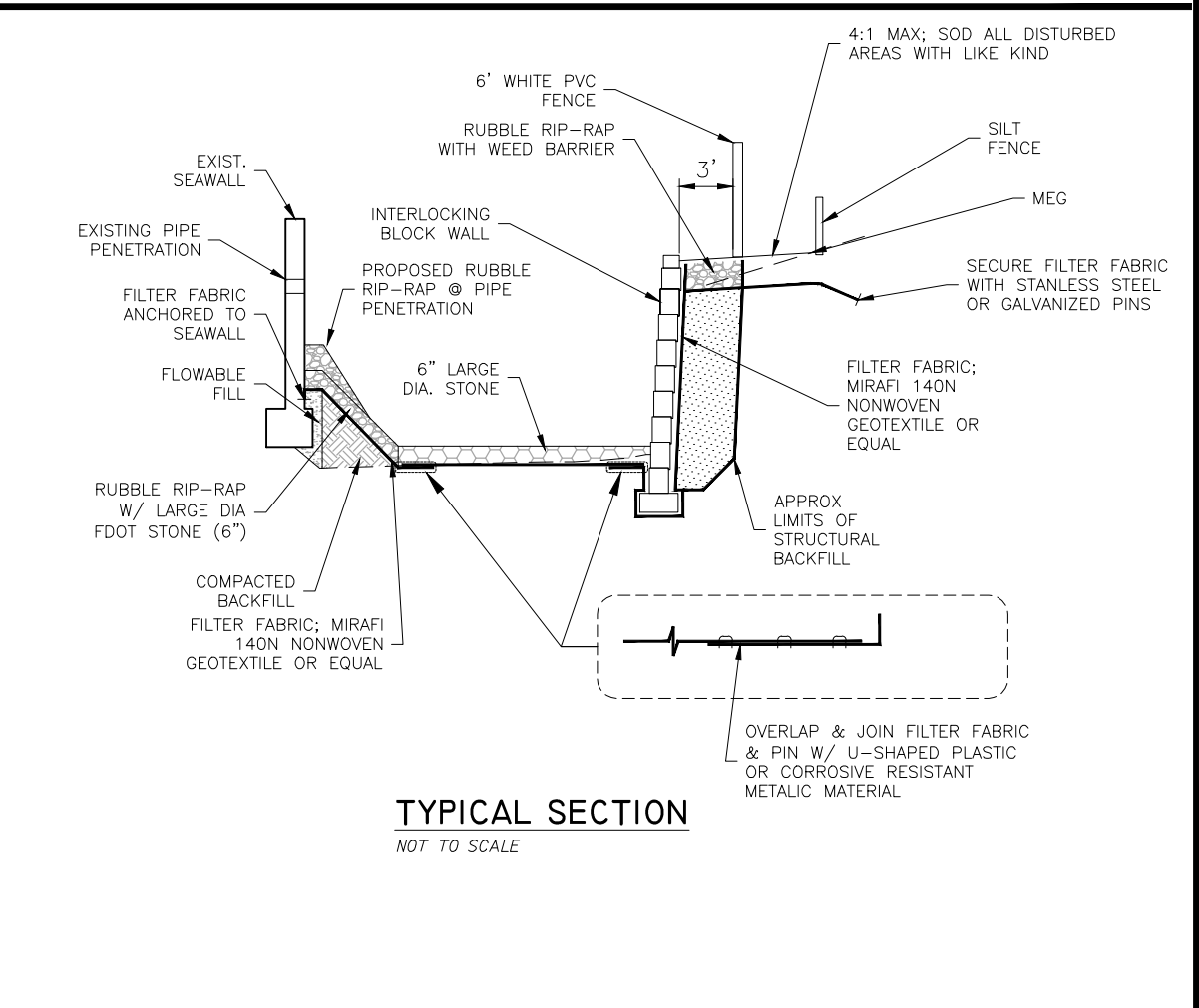
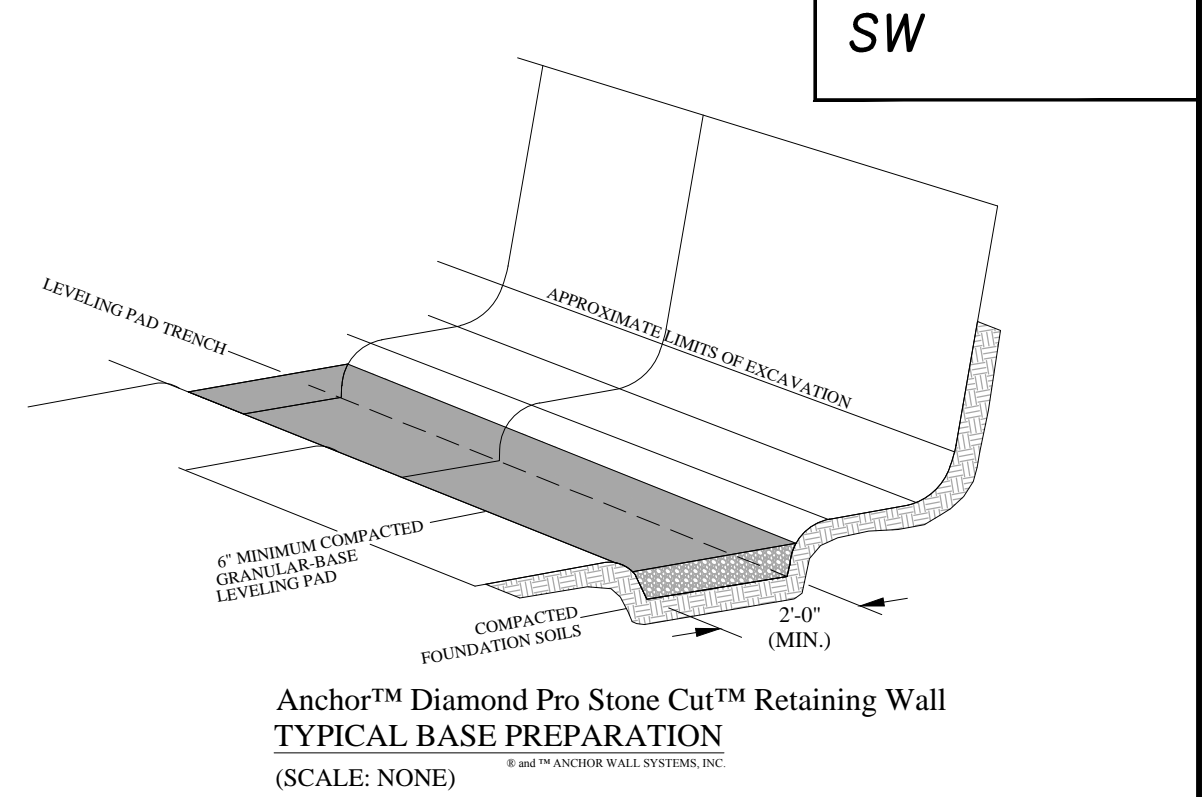
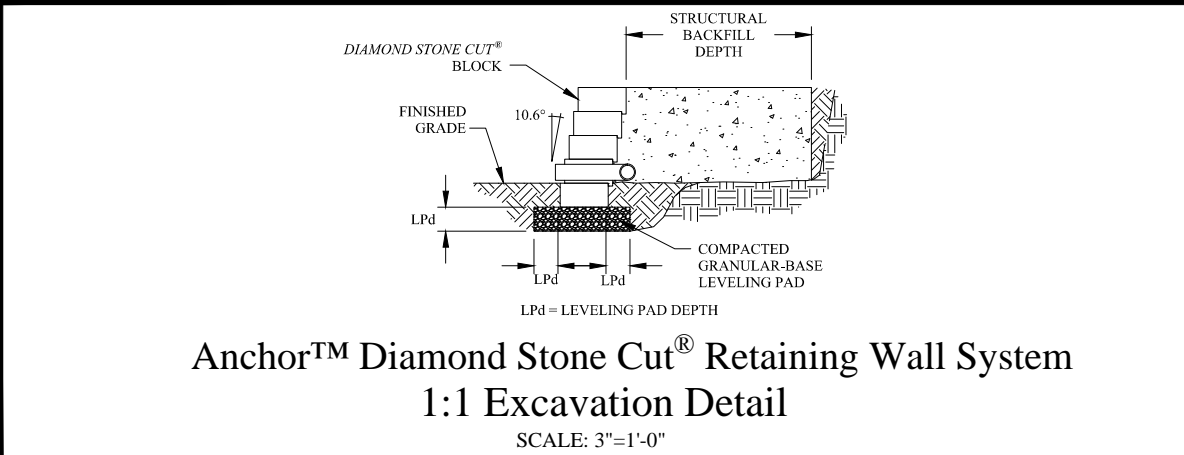
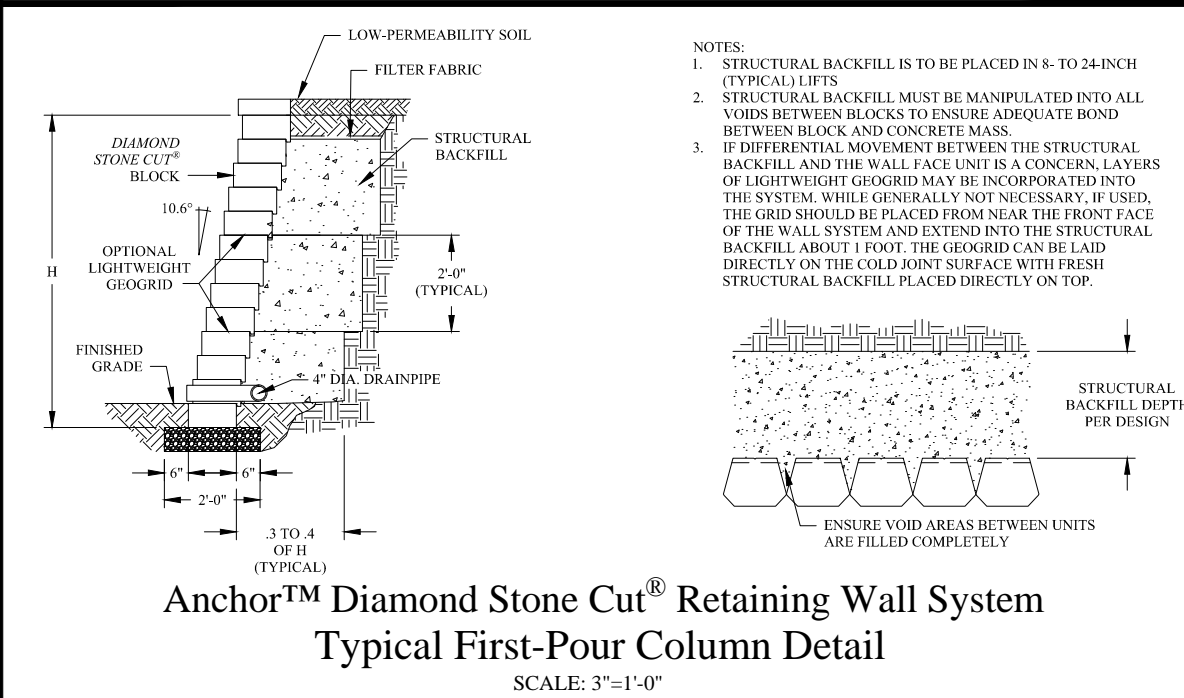
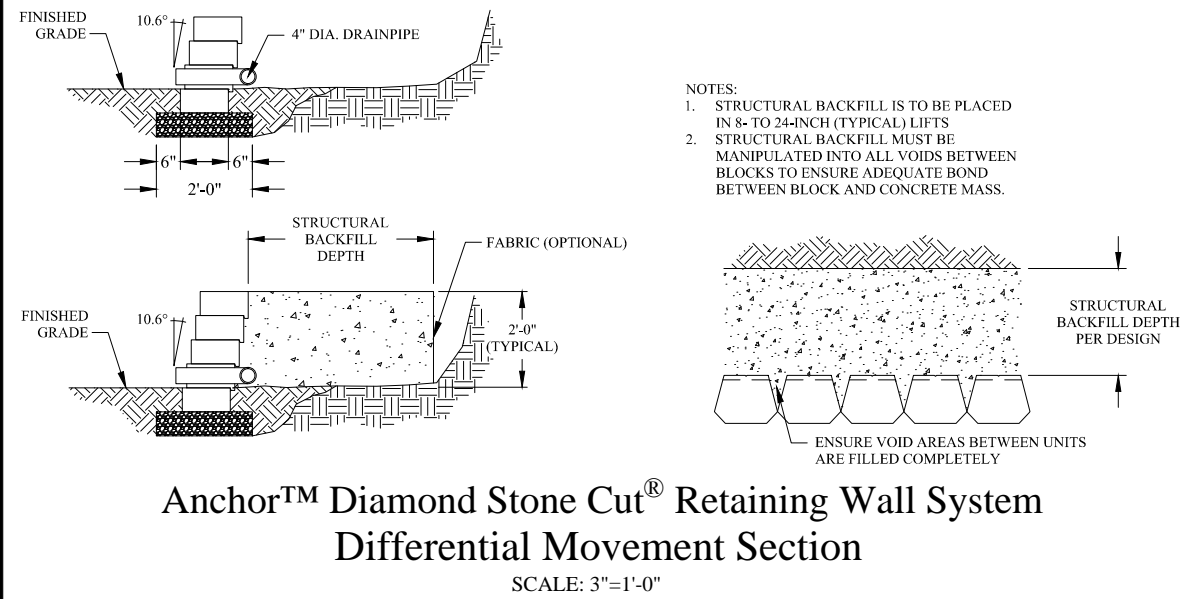
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Street Engineering Division

WATROUS CANAL
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CROSS SECTIONS

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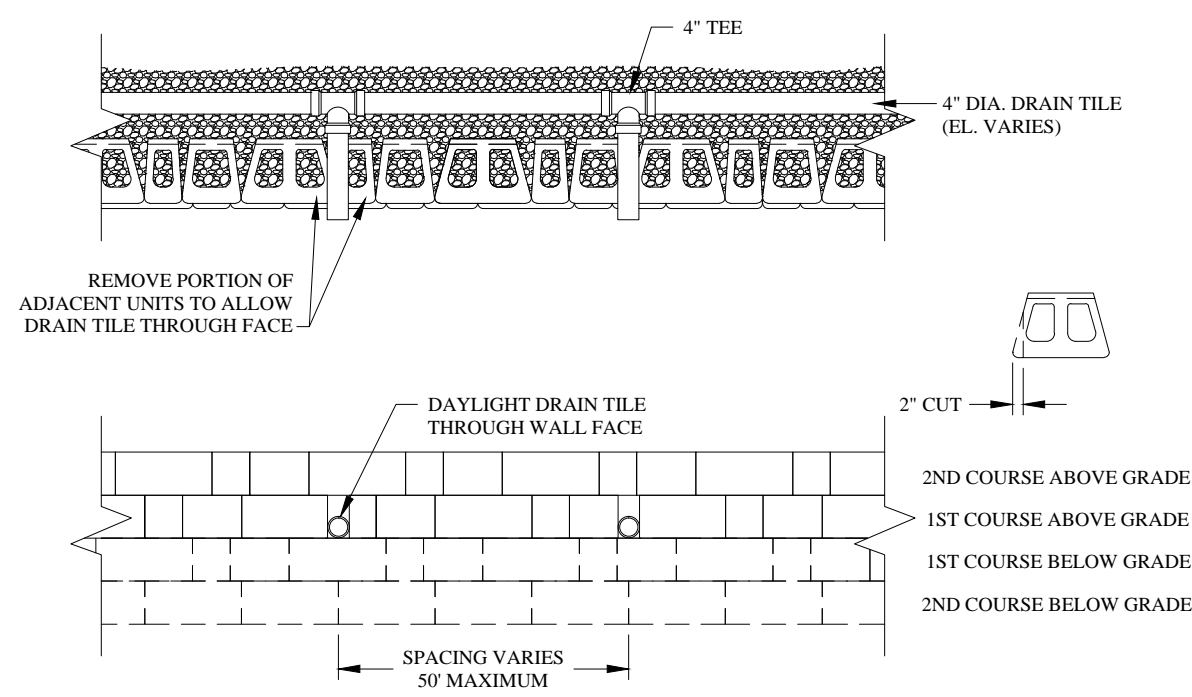
CITY of TAMPA
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and Stormwater Services
Stormwater Engineering Division

**WATROUS CANAL
REHABILITATION PROJECT**
MISCELLANEOUS DETAILS

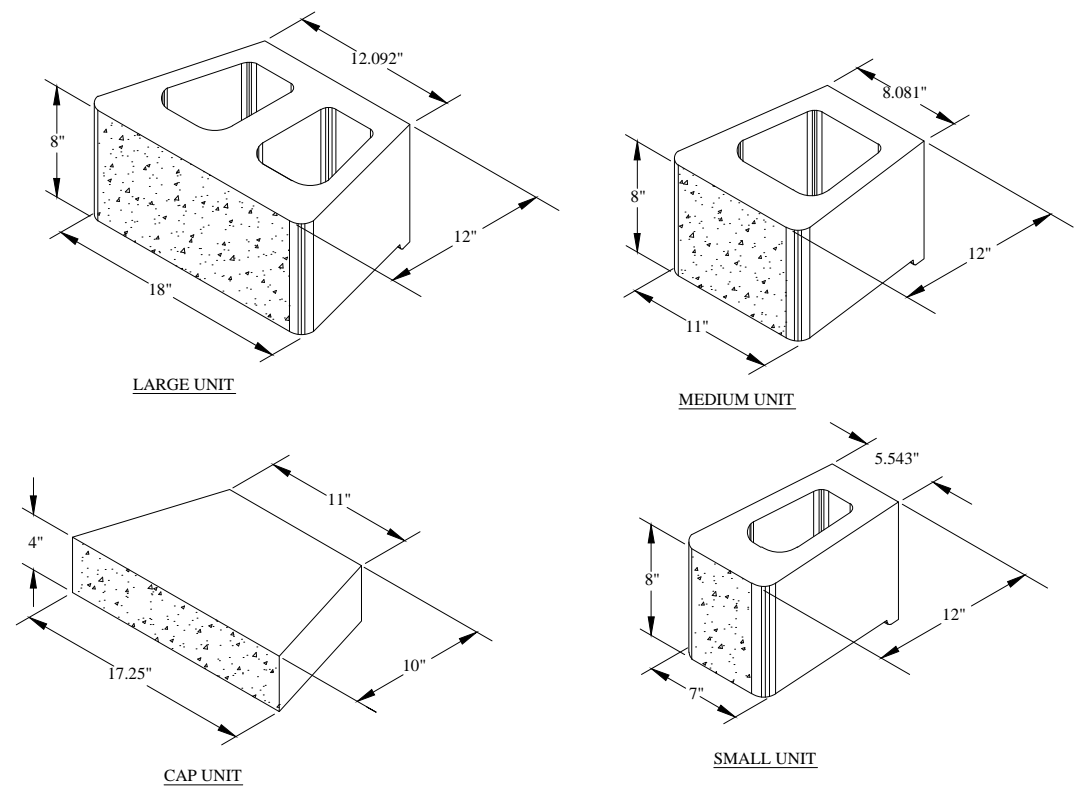
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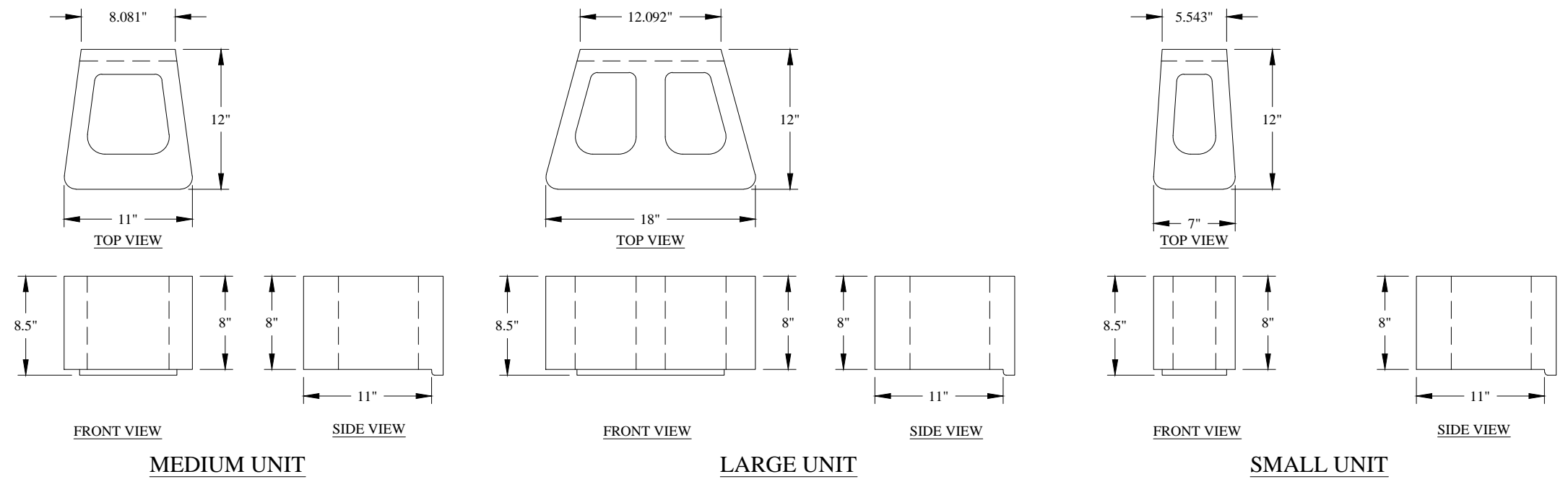
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DAYLIGHTING DRAINTILE THROUGH WALL FACE**
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ISOMETRIC BLOCK VIEWS**
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INDIVIDUAL BLOCK VIEWS**
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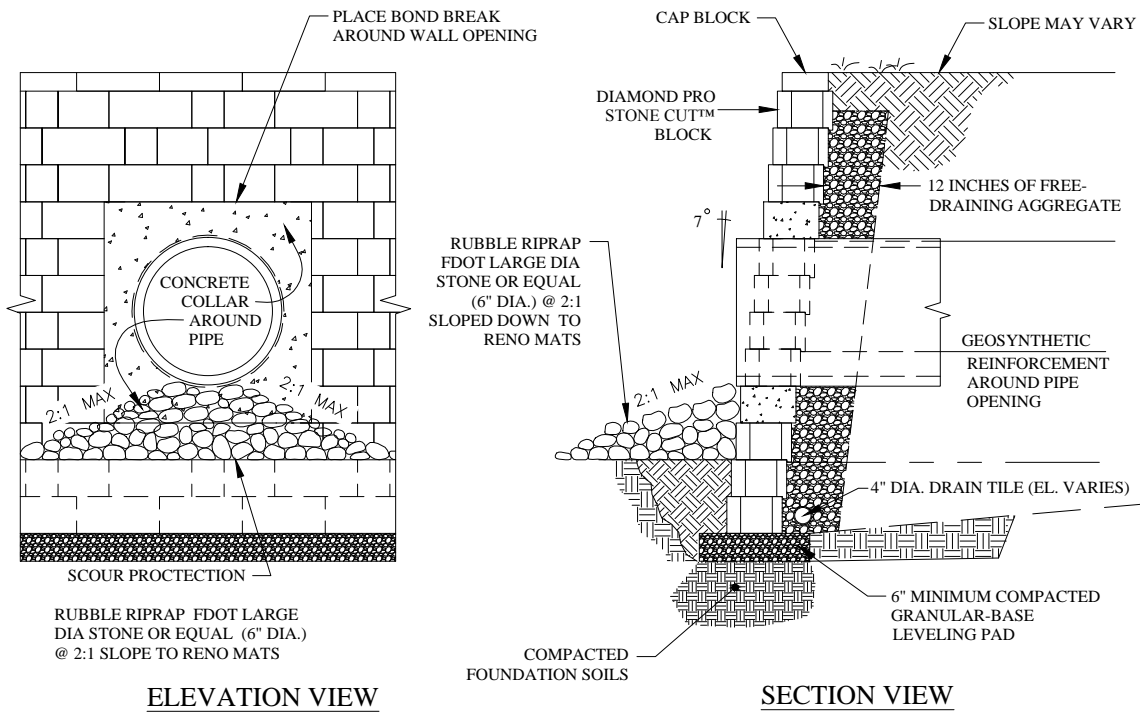
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Stormwater Engineering Division

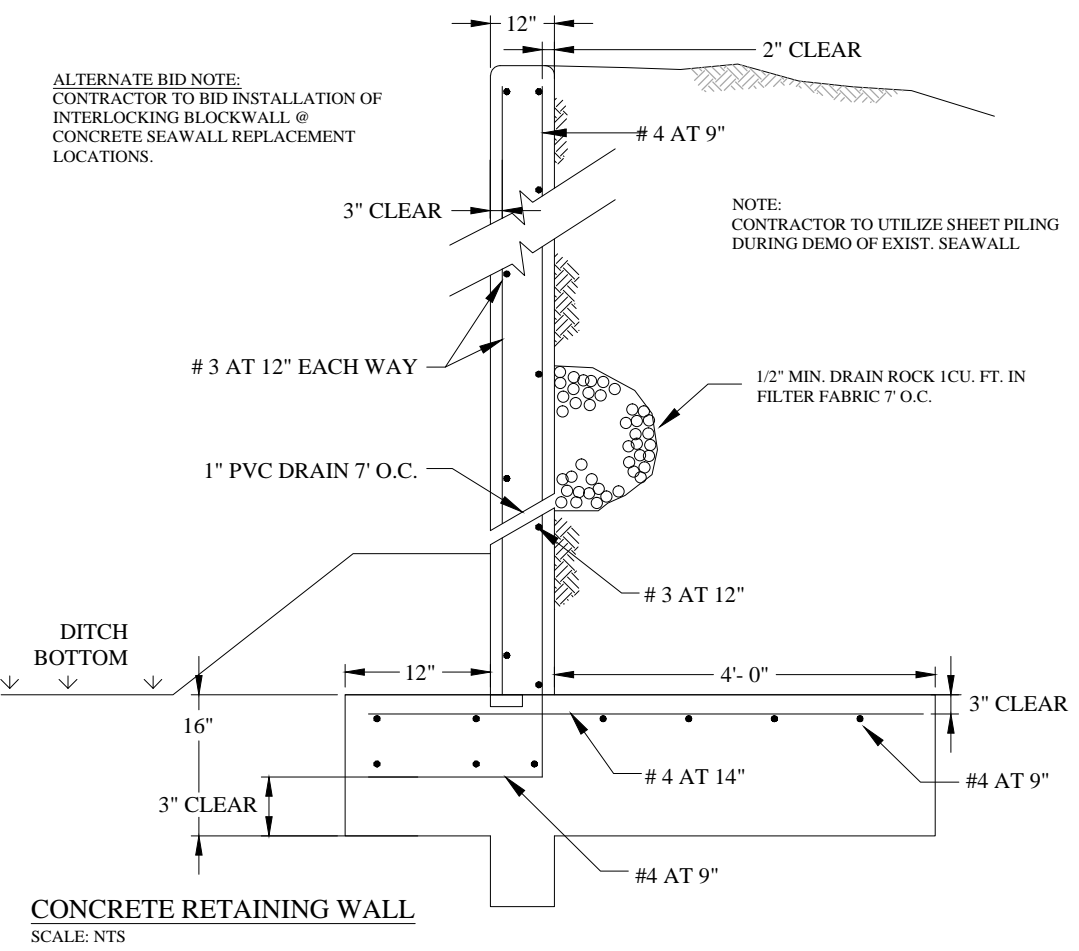
**WATROUS CANAL
REHABILITATION PROJECT**
MISCELLANEOUS DETAILS

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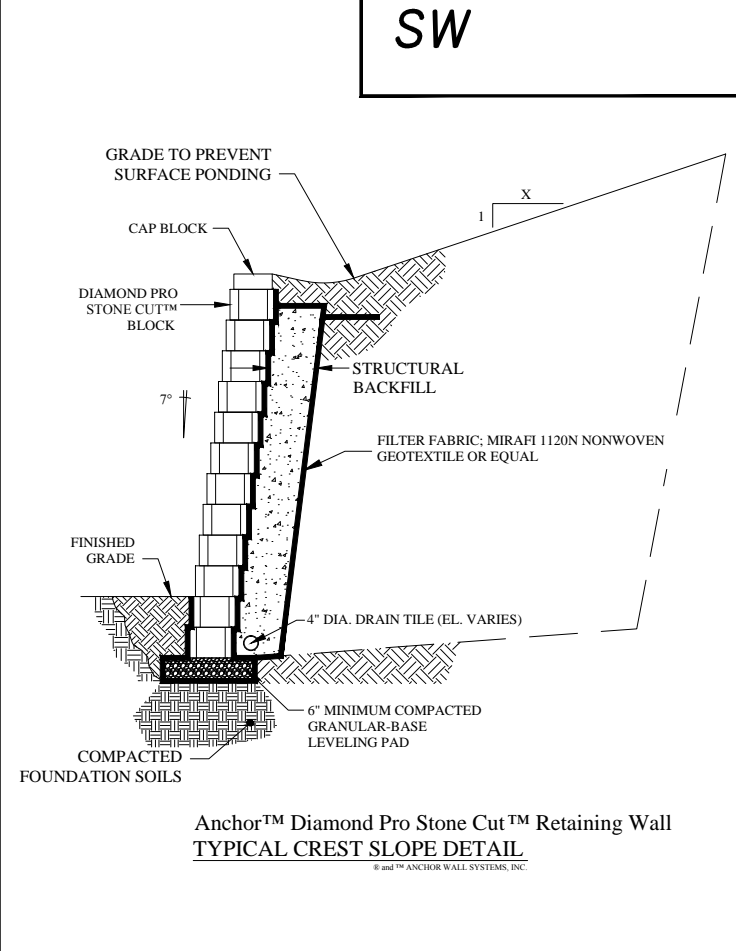
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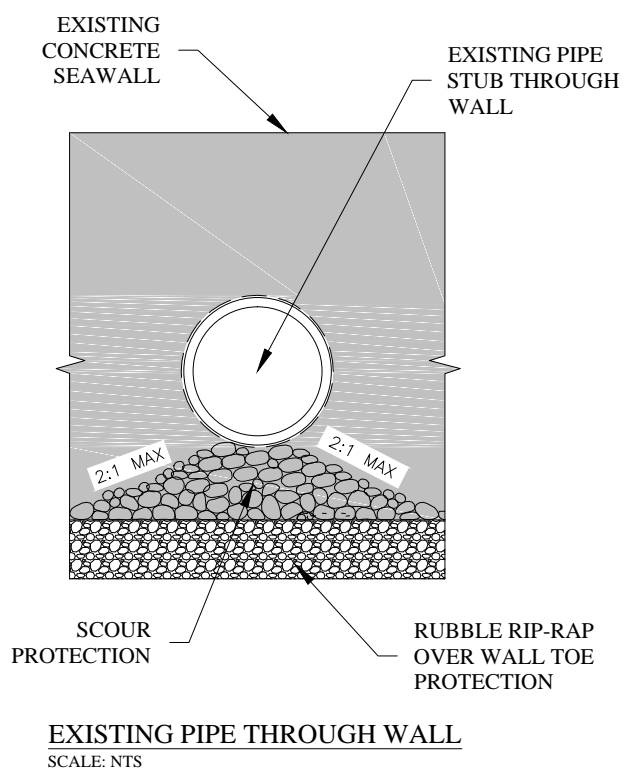
**Anchor™ Diamond Pro Stone Cut™ Retaining Wall
PIPE THROUGH WALL -- HIGH FLOW**
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CONCRETE RETAINING WALL
SCALE: NTS



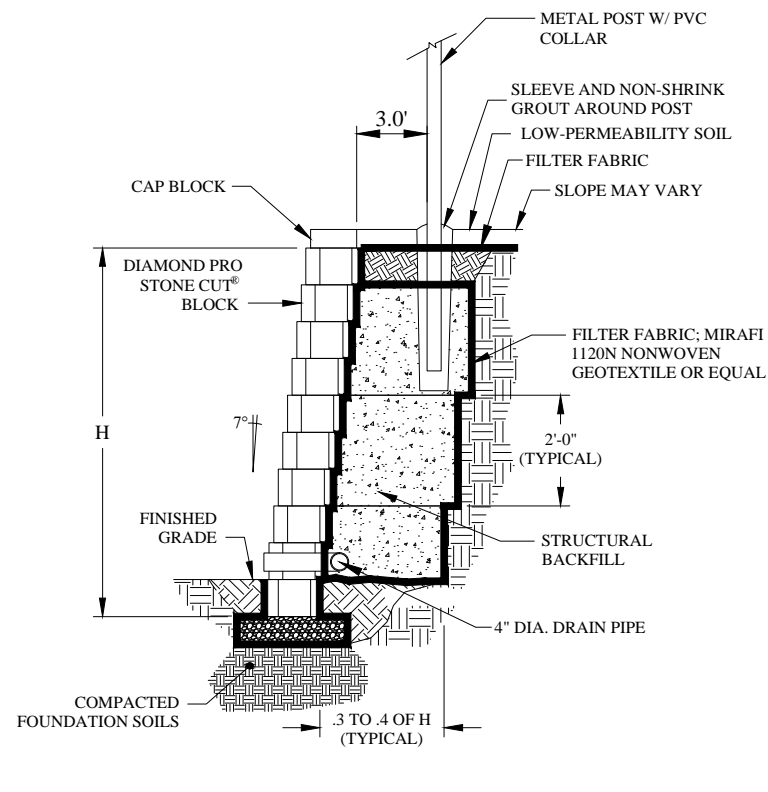
**Anchor™ Diamond Pro Stone Cut™ Retaining Wall
TYPICAL CREST SLOPE DETAIL**
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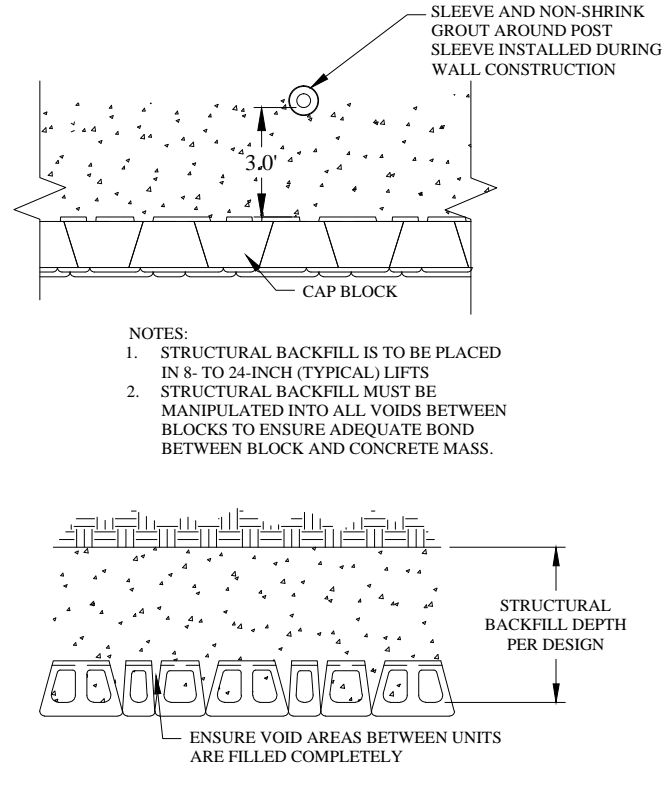
EXISTING PIPE THROUGH WALL
SCALE: NTS

WALL NOTES:

1. THE WALL SECTION DETAILS ARE TO SERVE AS THE GUIDELINES FOR THE DESIGN OF THE WALL AS PROVIDED BY THE MANUFACTURER. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS WITH CALCULATIONS SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF FLORIDA. THESE SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
2. CONCRETE RETAINING WALL DETAIL PROVIDED FOR BIDDING PURPOSES ONLY. CONTRACTOR TO PROVIDE STRUCTURAL DESIGN THAT INCORPORATES A GEOTECHNICAL STUDY (PROVIDED BY CONTRACTOR) SIGNED AND SEALED BY FLORIDA LICENSED PROFESSIONAL ENGINEER.
3. FINAL WALL DESIGN SHALL INCLUDE A SURCHARGE LOAD IN THE EVENT A PROPERTY OWNER WANTS TO PLACE A STRUCTURE WITHIN CLOSE PROXIMITY TO THE RETAINING WALL.
4. CONTRACTOR SHALL SUPPLY SHOP DRAWINGS WITH PRODUCT INFO AND CONSTRUCTION METHODS FOR FENCE POST SLEEVE, METAL POST, GROUT, PVC COLLAR & FENCING SYSTEM, AND ANY OTHER PERTINENT PVC FENCE ITEMS ADJACENT TO INTERLOCKING BLOCK WALL.



TYPICAL RETAINING WALL SECTION W/ANCHOR PLEX
SCALE: NTS



- NOTES:**
1. STRUCTURAL BACKFILL IS TO BE PLACED IN 8- TO 24-INCH (TYPICAL) LIFTS
 2. STRUCTURAL BACKFILL MUST BE MANIPULATED INTO ALL VOIDS BETWEEN BLOCKS TO ENSURE ADEQUATE BOND BETWEEN BLOCK AND CONCRETE MASS.

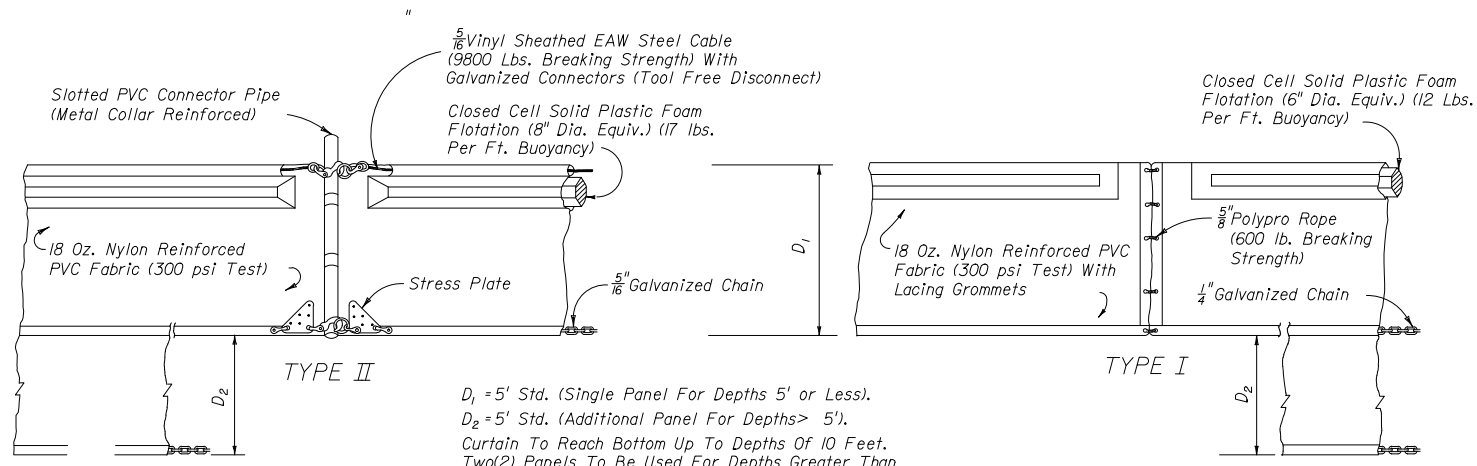
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Department of Transportation
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**WATROUS CANAL
REHABILITATION PROJECT**
MISCELLANEOUS DETAILS

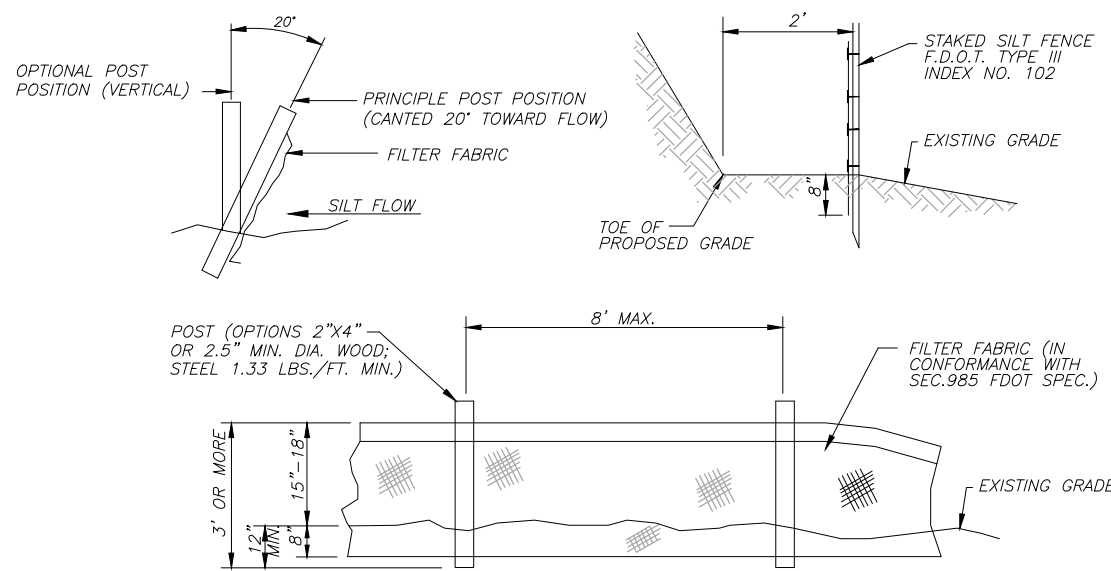
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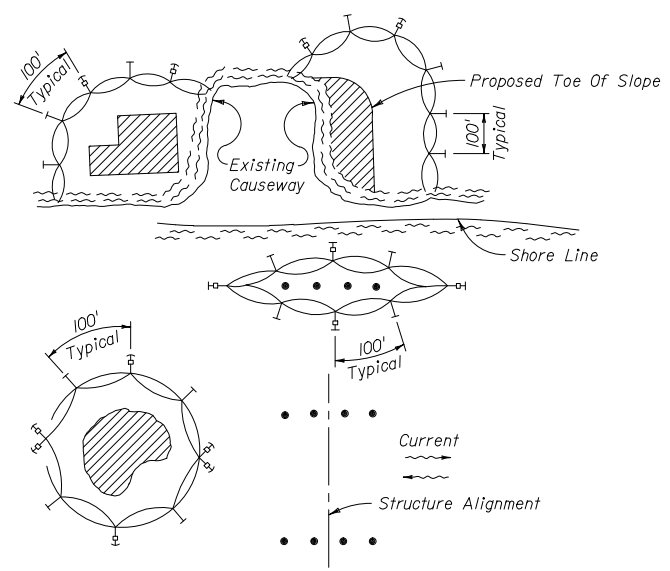
$D_1 = 5'$ Std. (Single Panel For Depths 5' or Less).
 $D_2 = 5'$ Std. (Additional Panel For Depths > 5').
 Curtain To Reach Bottom Up To Depths Of 10 Feet.
 Two(2) Panels To Be Used For Depths Greater Than 10 Feet Unless Special Depth Curtains Specifically Called For In The Plans Or As Determined By The Engineer.

NOTICE: COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.

FLOATING TURBIDITY BARRIERS

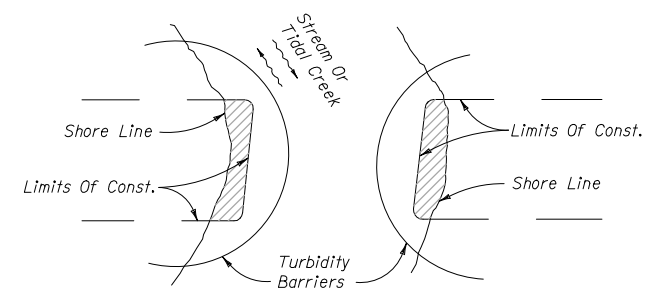


STAKED TURBIDITY BARRIER



LEGEND

- Pile Locations
- ▨ Dredge Or Fill Area
- ⊕ Mooring Buoy w/Anchor
- Anchor
- Barrier Movement Due To Current Action



- NOTES:
1. Turbidity barriers are to be used in all permanent bodies of water regardless of water depth.
 2. Number and spacing of anchors dependent on current velocities.
 3. Deployment of barrier around pile locations may vary to accommodate construction operations.
 4. Navigation may require segmenting barrier during construction operations.
 5. For additional information see Section 104 of the Standard Specifications.

Note:
 Turbidity barriers for flowing streams and tidal creeks may be either floating, or staked types or any combinations of types that will suit site conditions and meet erosion control and water quality requirements. The barrier type(s) will be at the Contractors option unless otherwise specified in the plans, however payment will be under the pay item(s) established in the plans for Floating Turbidity Barrier and/or Staked Turbidity Barrier. Posts in staked turbidity barriers to be installed in vertical position unless otherwise directed by the Engineer.

GENERAL NOTES

1. Floating and staked turbidity barriers are to be paid for under the contract lump sum price for Erosion Control and Tree Protection.

TURBIDITY BARRIER APPLICATIONS

TURBIDITY BARRIERS

NOT TO SCALE

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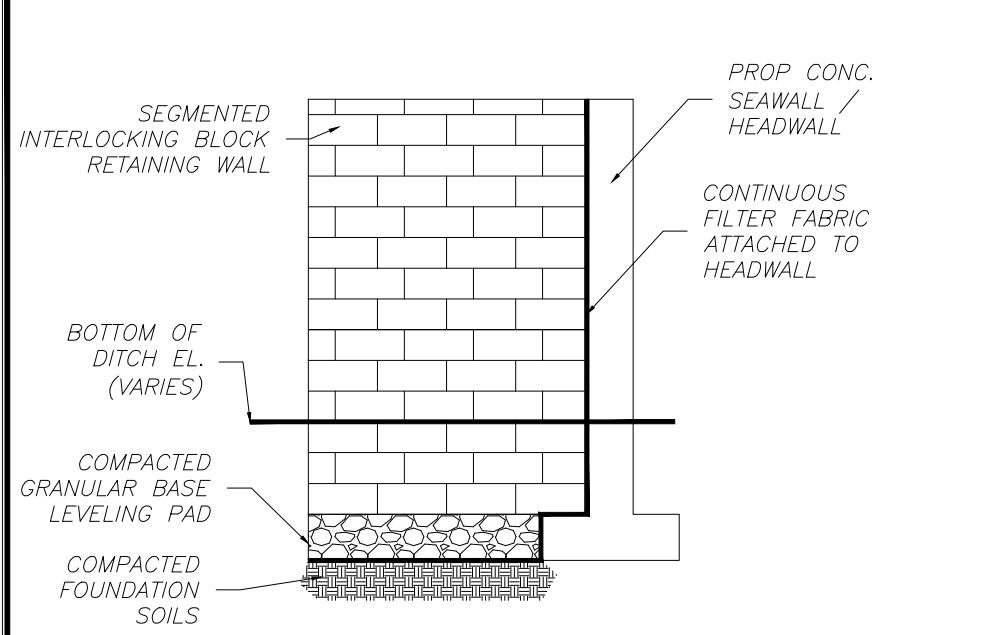
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**WATROUS CANAL
 REHABILITATION PROJECT**
 MISCELLANEOUS DETAILS

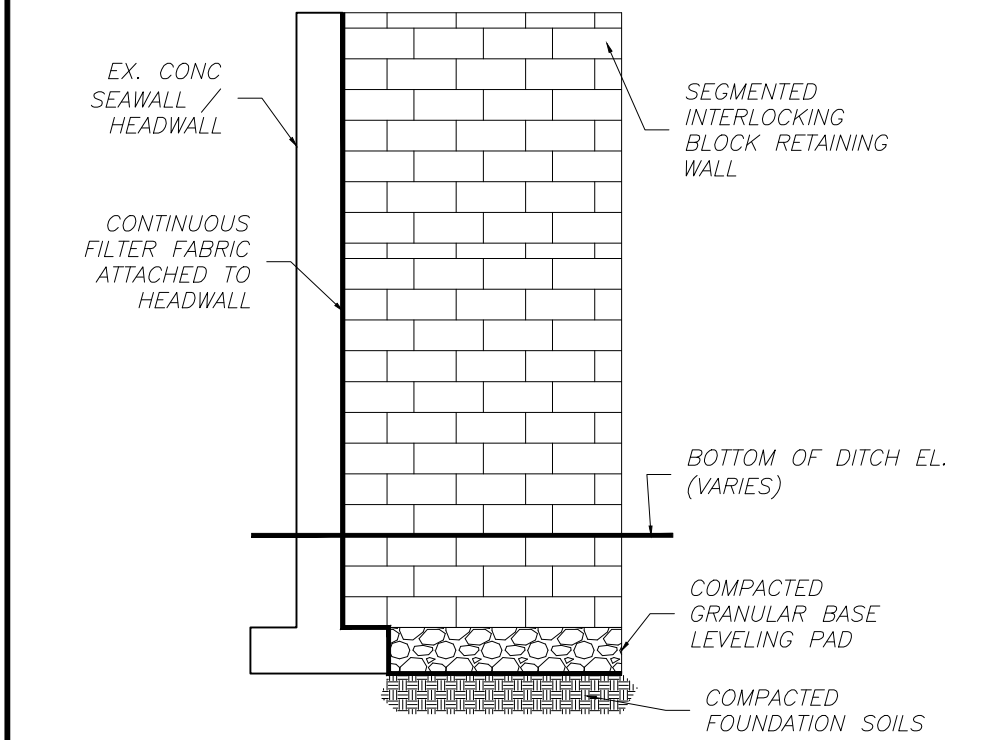
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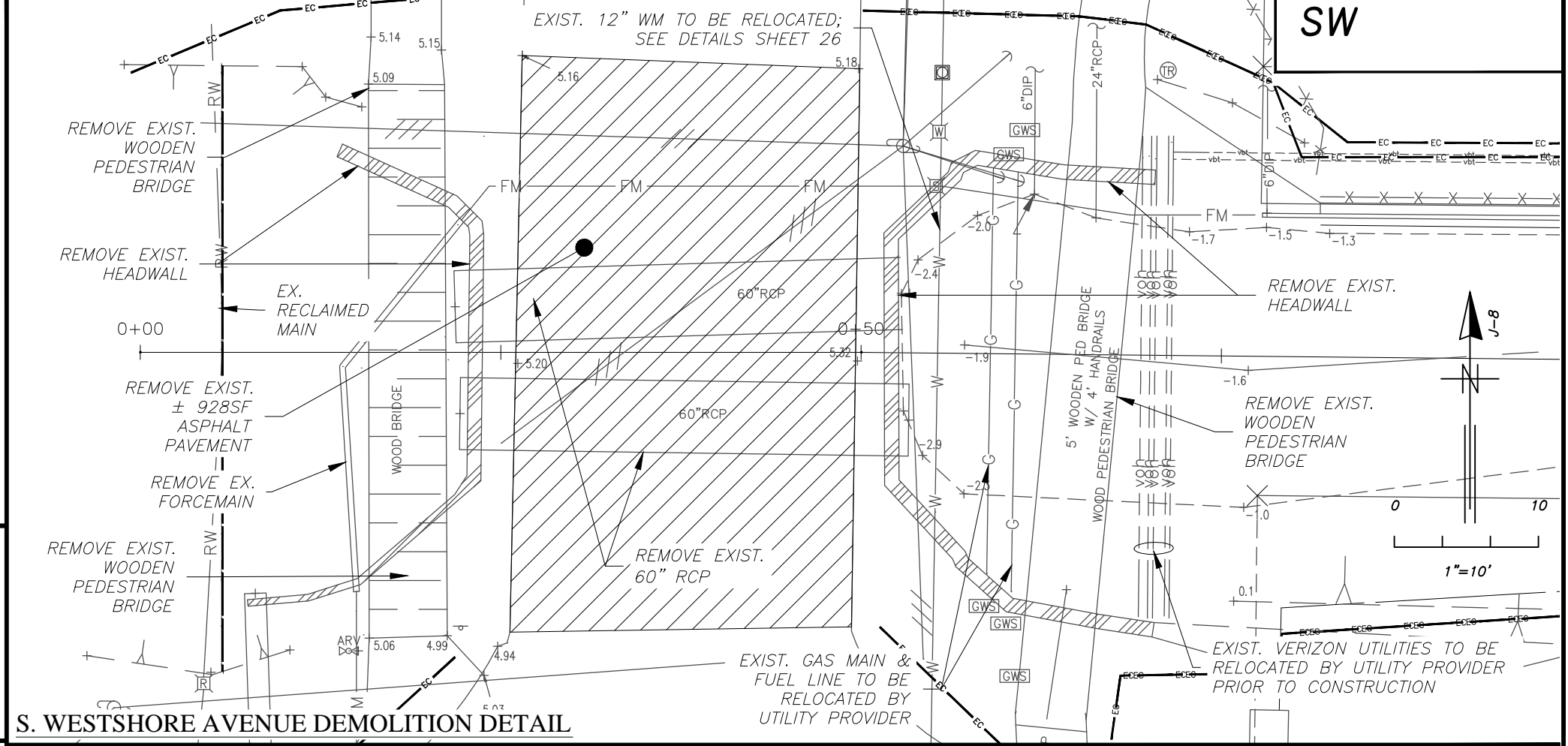


RETAINING WALL TIE IN TO PROPOSED HEADWALL DETAIL (NTS)

NOTE: CONTRACTOR SHALL PROVIDE SHOP DRAWINGS WITH CALCULATIONS SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF FLORIDA FOR INTERLOCKING BLOCK WALL DESIGN AND FOR THE FDOT HEADWALLS PER INDEX NO. 289, 291 AND 292. THE SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. IT SHALL BE THE WALL DESIGNERS' TO DETERMINE WHETHER ADDITIONAL STRUCTURAL RIGID CONNECTIONS ARE NEEDED BETWEEN THE INTERLOCKING BLOCK WALL AND THE CONCRETE STRUCTURAL SEAWALL AND HEADWALL WHERE THE TWO WALL TYPES JOIN.



RETAINING WALL TIE IN TO EXIST. HEADWALL/SEAWALL DETAIL (NTS)



S. WESTSHORE AVENUE DEMOLITION DETAIL



FERNCROFT AVENUE DEMOLITION DETAIL

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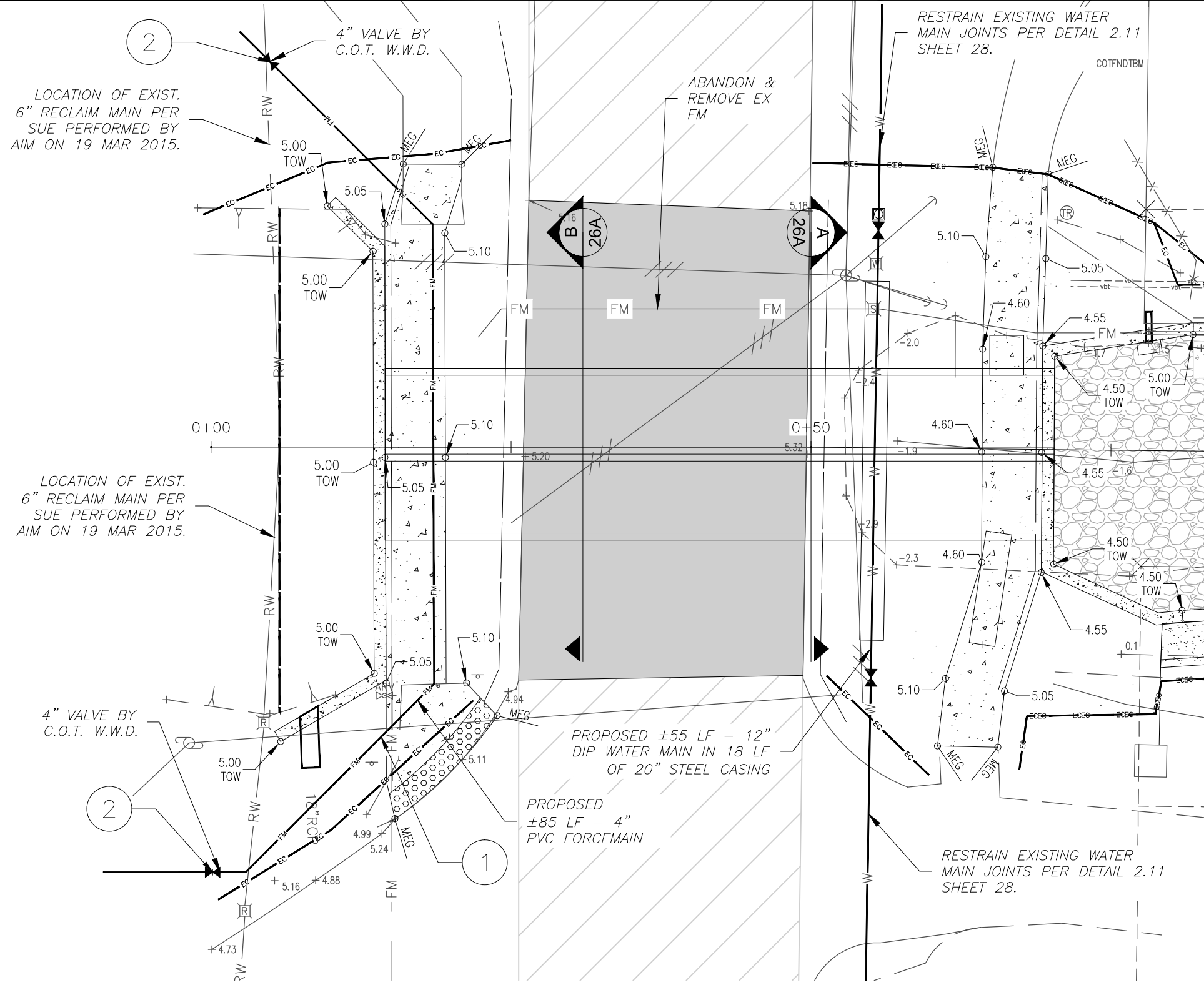
**WATROUS CANAL
 REHABILITATION PROJECT**

MISCELLANEOUS DETAILS

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SW



- NOTES:
1. PROPOSED ±50 LF OF 4" PVC WW FM PIPE (C-900 DR-18 W/ DIP BENDS (PROTECTO 401 LINED))
 2. CONNECT PROPOSED 4" WW FM TO EXISTING WW FM. CONTRACTOR SHALL COORDINATE THE CONSTRUCTION ACTIVITIES FOR THIS CONNECTION WITH THE CONTRACT ADMINISTRATION DEPARTMENT, WASTEWATER PERSONNEL AND PUMPING STATION OPERATIONS.

SOUTH WESTSHORE BOULEVARD WATER/SEWER OFFSET PLAN

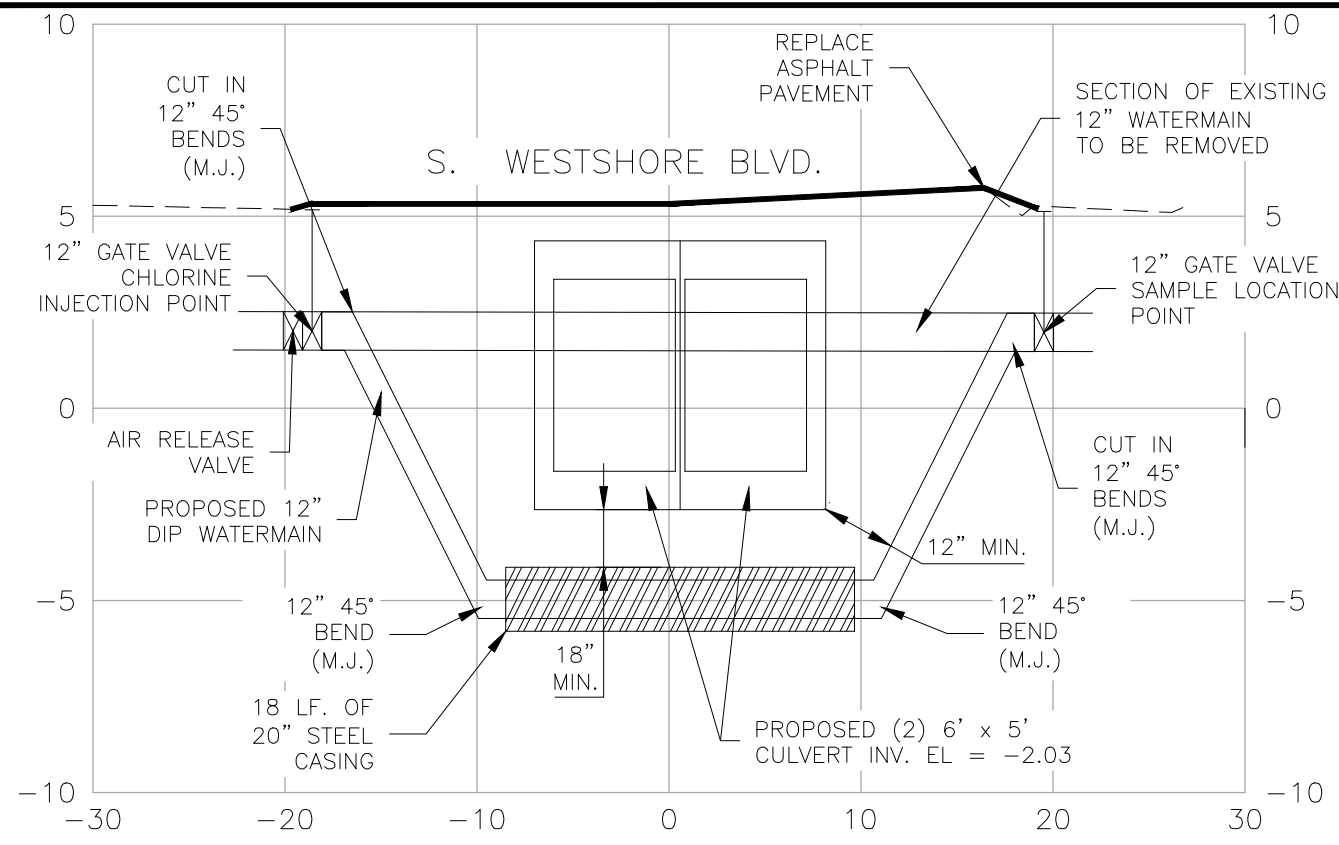
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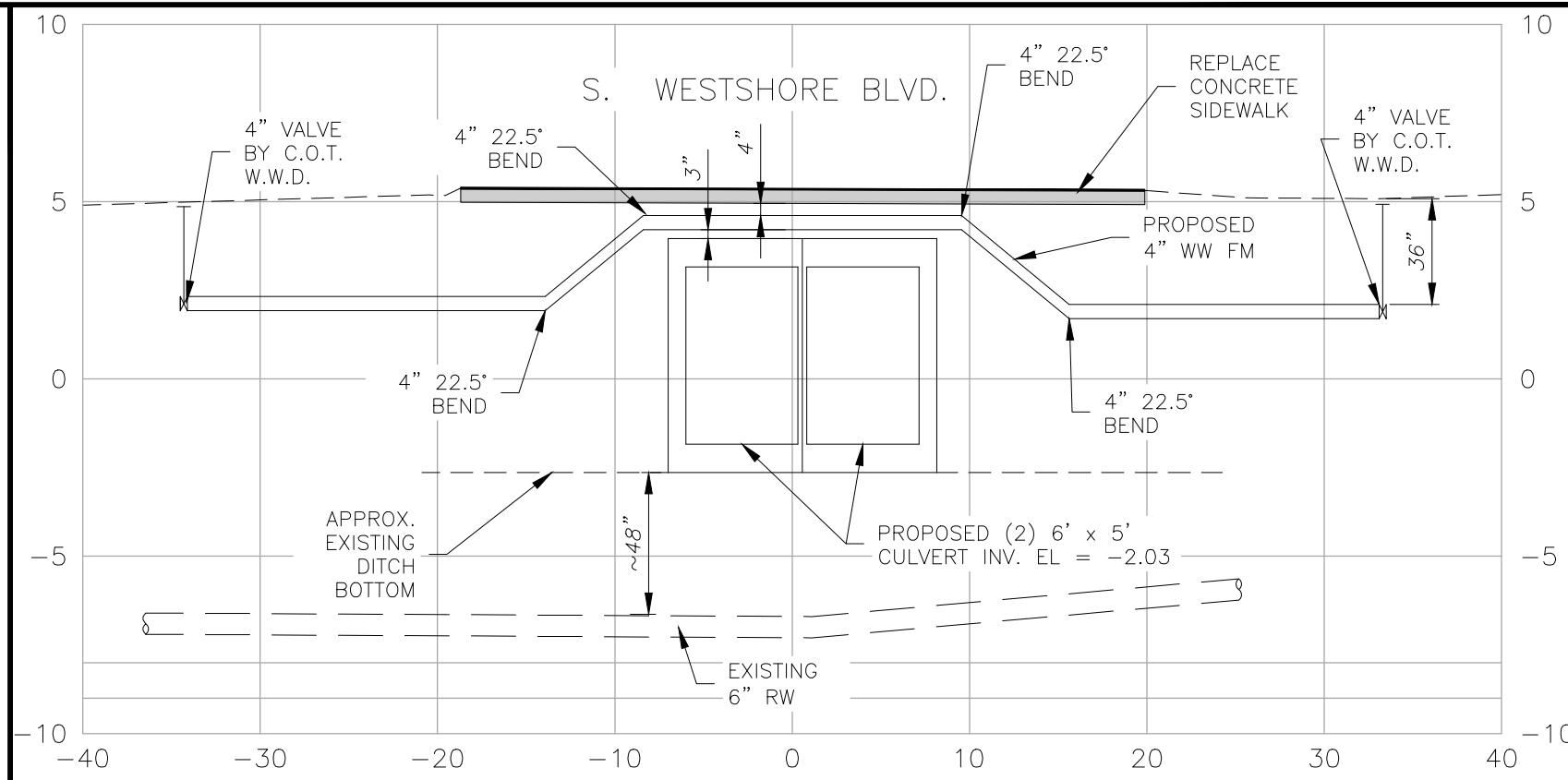
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**WATROUS CANAL
 REHABILITATION PROJECT**
 UTILITY CONNECTIONS - PLAN AND PROFILE

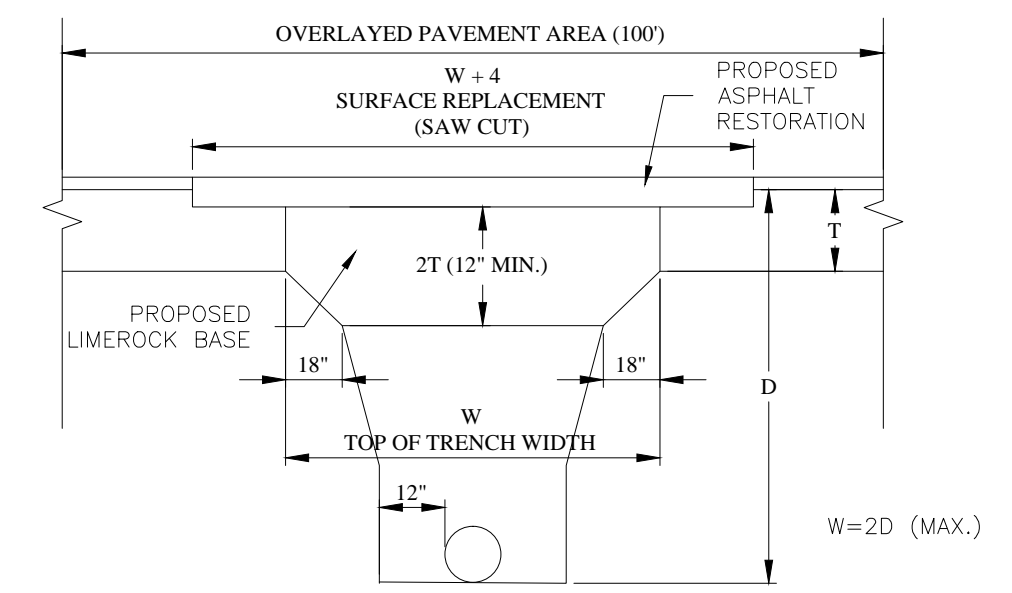
SHEET
26
 OF 34



A
26
CROSS SECTION WATER MAIN OFFSET
SCALE: HOR 1" = 10'; VER 1" = 5'



B
26
CROSS SECTION FORCEMAIN OFFSET
SCALE: HOR 1" = 10'; VER 1" = 5'



**SOUTH WESTSHORE BOULEVARD
PAVEMENT REPLACEMENT DETAIL**
SCALE: N.T.S.

BACKFILL PROCEDURE:

THE BACKFILL AND BEDDING MATERIAL SHALL BE OF THE A-1, A-2, A-3, OR A-2-4 CLASSIFICATION AS PER AASHTO, UNLESS OTHERWISE APPROVED BY THE COUNTY ENGINEER.

THE BACKFILL SHALL BE COMPACTED IN 12" LAYERS WITH MECHANICAL TAMPERS TO THE FULL WIDTH OF THE TRENCH AND UP TO THE BOTTOM OR THE ROADWAY BASE. PARTICULAR ATTENTION MUST BE GIVEN TO THE ADEQUATE COMPACTION OF THE FILL BENEATH THE HAUNCHES OF THE PIPE. THE BACKFILL SHALL BE COMPACTED TO 98% MAXIMUM DENSITY AS DETERMINED BY AASHTON T-180-37. ONE DENSITY TEST SHALL BE TAKEN AT THE SPRING LINE OF THE PIPE, AT ONE FOOT ABOVE THE CROWN OF THE PIPE, AND EVERY FOOT VERTICALLY THEREAFTER. A MINIMUM OF TWO COMPLETE SETS OF BACKFILL DENSITY TESTS ARE REQUIRED. FLOWABLE FILL IN ACCORDANCE WITH SECTION 121 OF THE F.D.O.T. STANDARD SPECIFICATIONS MAY BE SUBSTITUTED.

IF WELL POINTS ARE USED TO PROVIDE A DRY TRENCH FOR LAYING THE UTILITY, THEY SHALL REMAIN IN OPERATION UNTIL THE BACKFILL IS COMPLETE AND TESTED.

PAVEMENT AND BASE REPLACEMENT:

BASE, INSTALLED TO A THICKNESS OF TWO TIMES THE THICKNESS OF THE EXISTING BASE OR 12" WHICHEVER IS GREATER, SHALL BE INSTALLED IN 6" LIFTS. THE BASE SHALL BE COMPACTED TO 98% THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180-57. A MINIMUM OF TWO DENSITY TESTS PER LIFT IS REQUIRED. NINE (9) INCHES OF SUPERPAVE ASPHALT INSTALL IN THREE (3) INCH LIFTS MAY BE SUBSTITUTED.

THE SURFACE COURSE SHALL BE F.D.O.T. SUPERPAVE AC WITH A THICKNESS EQUAL TO THE EXISTING OR 1-3/4", WHICHEVER IS GREATER. PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED. THE PATCH AREA SHALL BE A SMOOTH PLANE SUCH THAT A STRAIGHT EDGE PLACED ACROSS THE PATH, PARALLEL TO TRAFFIC FLOW AND EXTENDING TO UNDISTURBED PAVEMENT SHALL SHOW NO MORE THE 1/4" IRREGULARITY, ANY IRREGULARITIES SHALL BE CORRECTED IN SUBSTANTIAL COMPLIANCE WITH F.D.O.T. SPECS. THE TRENCH SHALL BE OVERLAID WITH 1" OF SUPERPAVE ASPHALT A MINIMUM OF 100 FEET CENTERED ON TRENCH.

DISTURBED ROADWAYS CONSTRUCTED OF FULL DEPTH ASPHALT SHALL BE REPLACED IN KIND.

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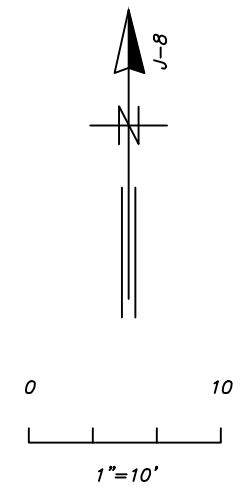
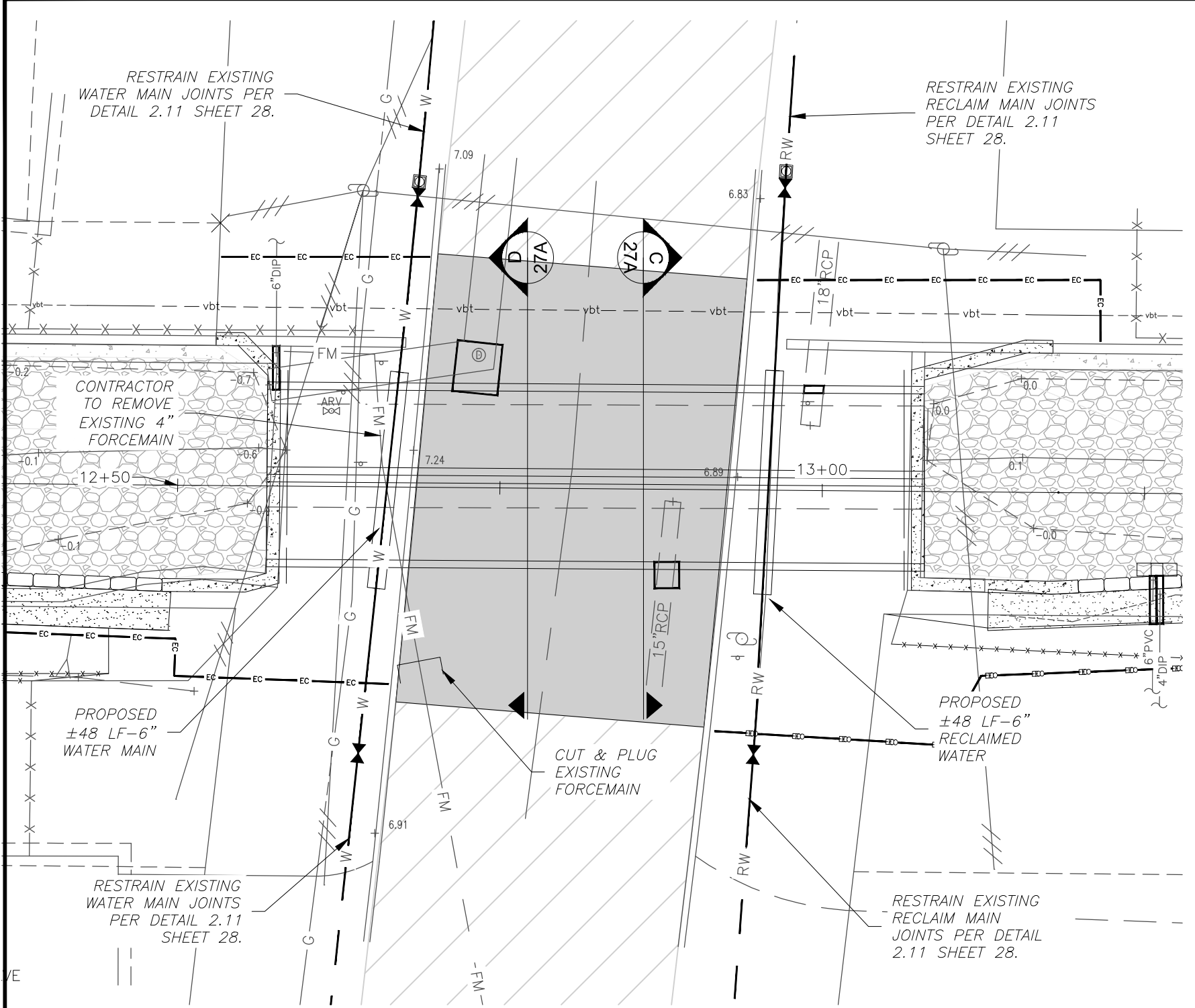
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**WATROUS CANAL
REHABILITATION PROJECT**
UTILITY CONNECTIONS - PLAN AND PROFILE

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FERNCROFT AVENUE WATER/SEWER OFFSET PLAN

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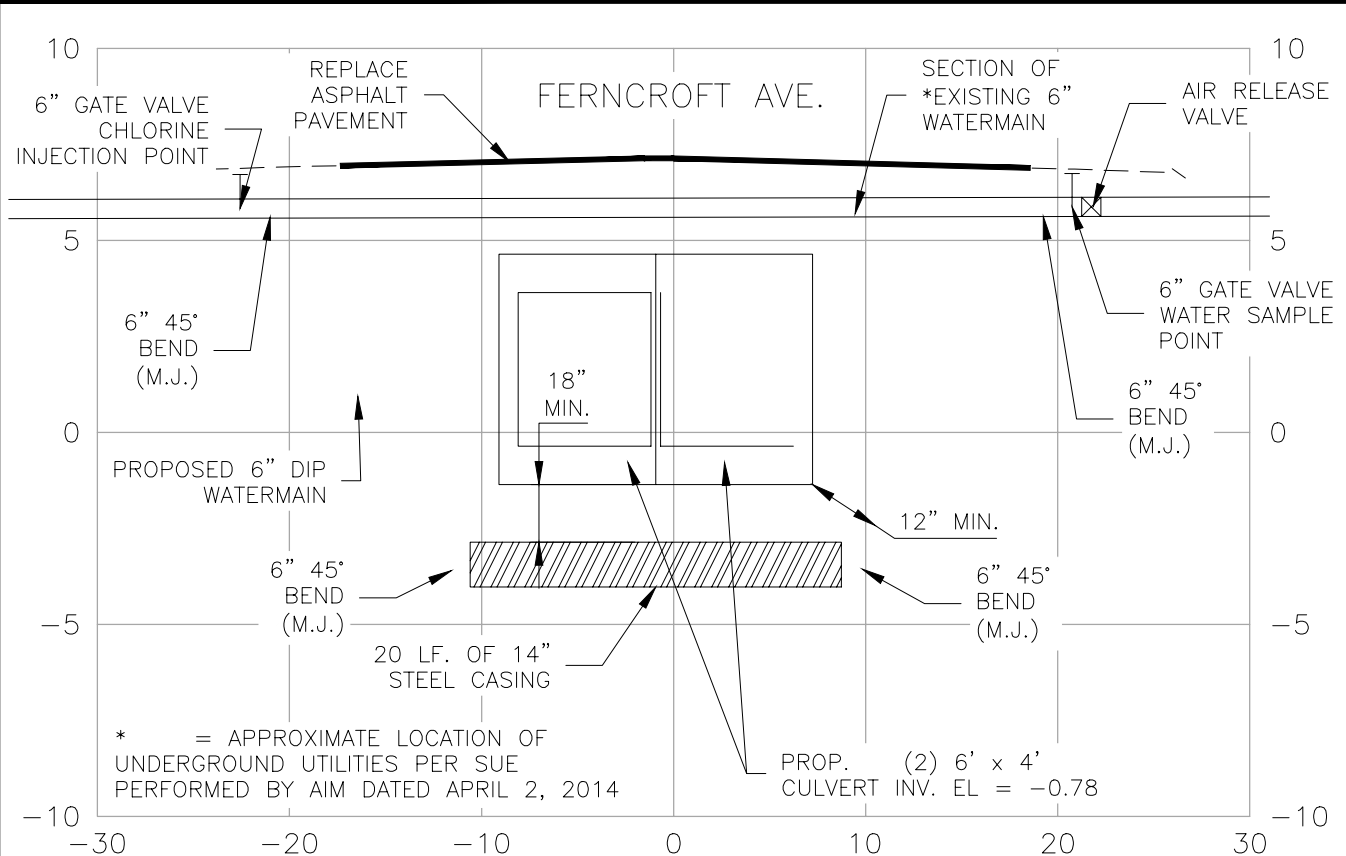
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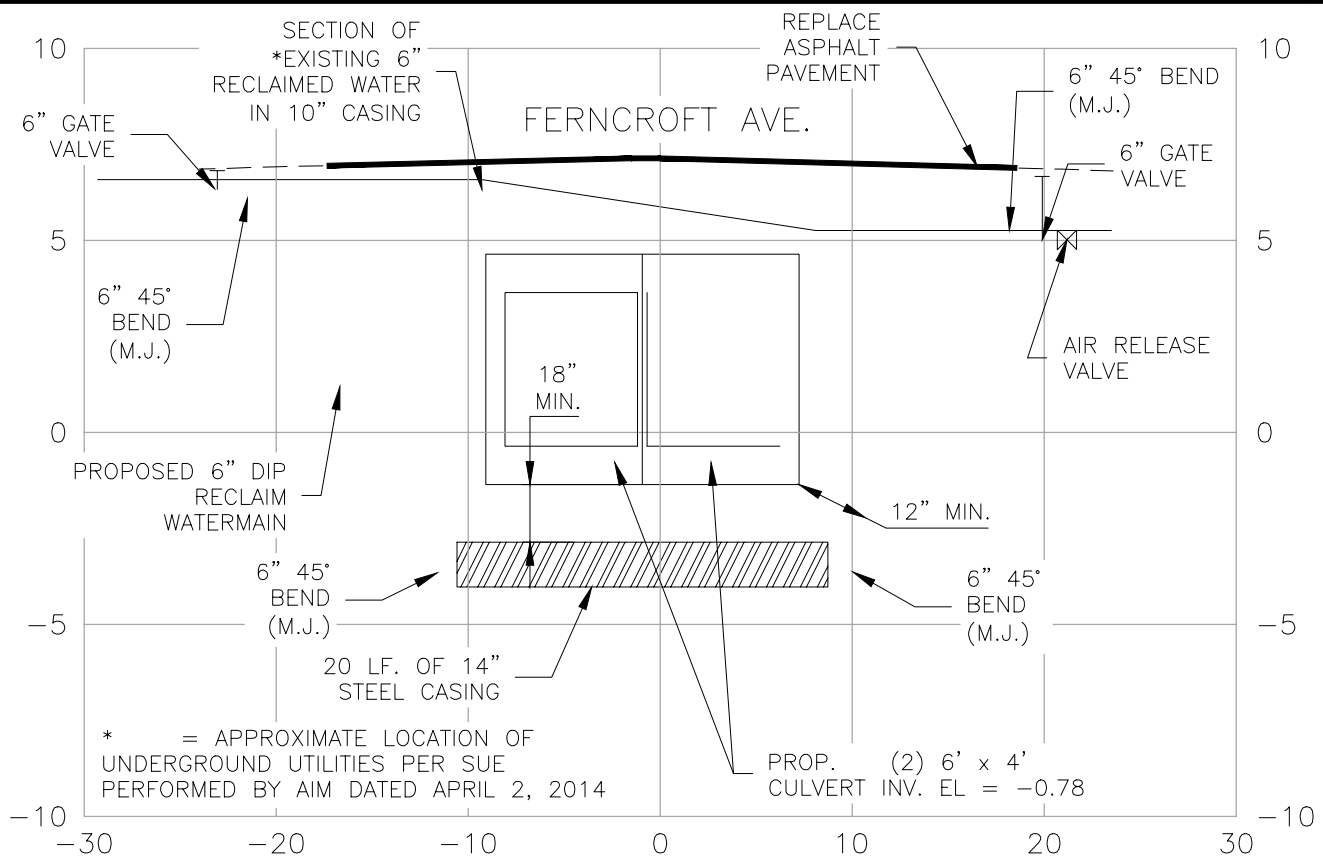
**WATROUS CANAL
 REHABILITATION PROJECT**
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C
27
CROSS SECTION WATER MAIN OFFSET
SCALE: HOR 1" = 10'; VER 1" = 5'



D
27
CROSS SECTION RECLAIM WATER MAIN OFFSET
SCALE: HOR 1" = 10'; VER 1" = 5'

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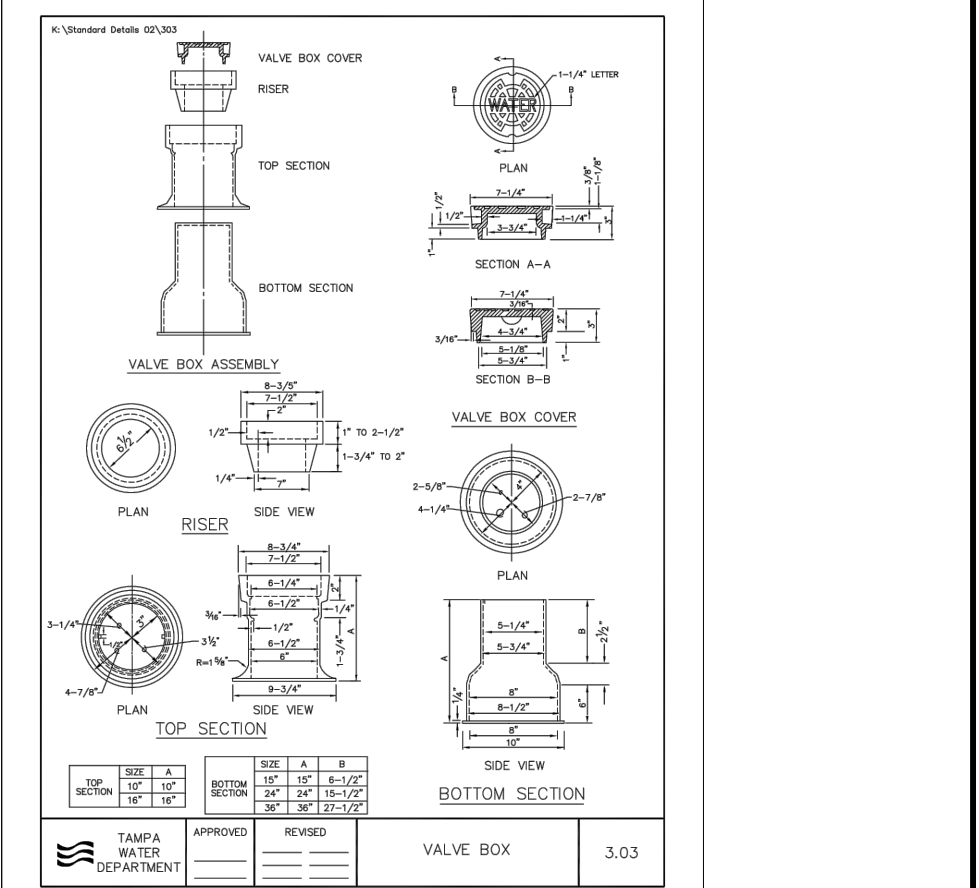
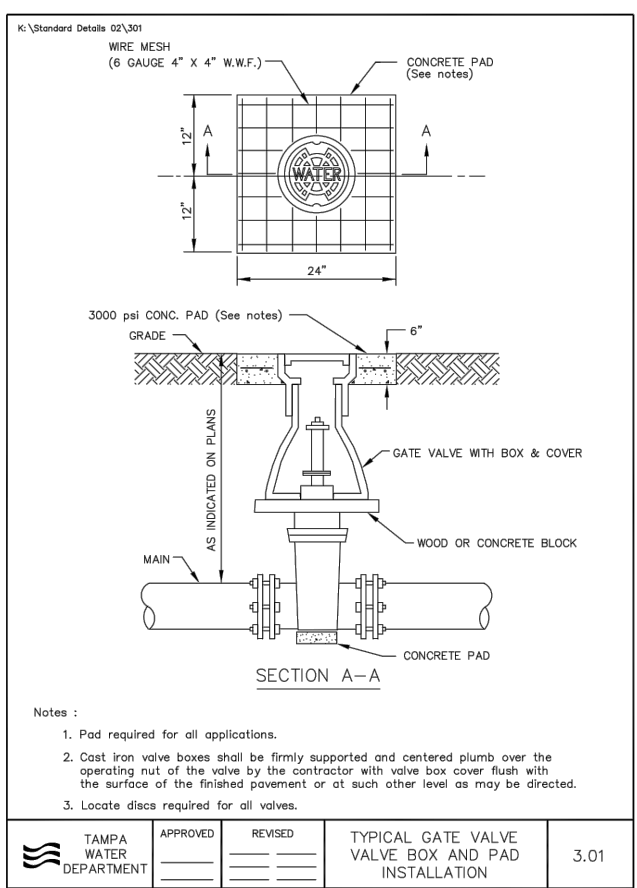
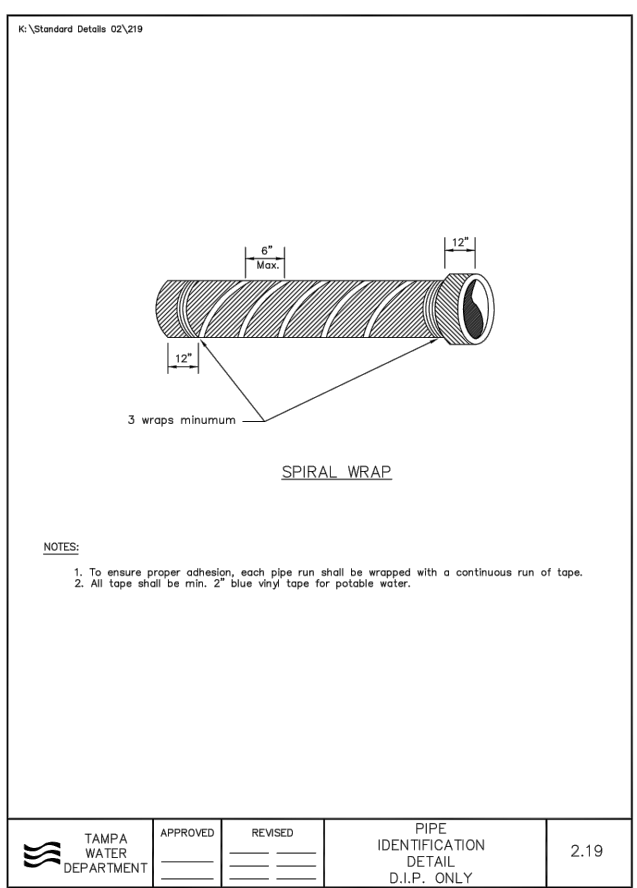
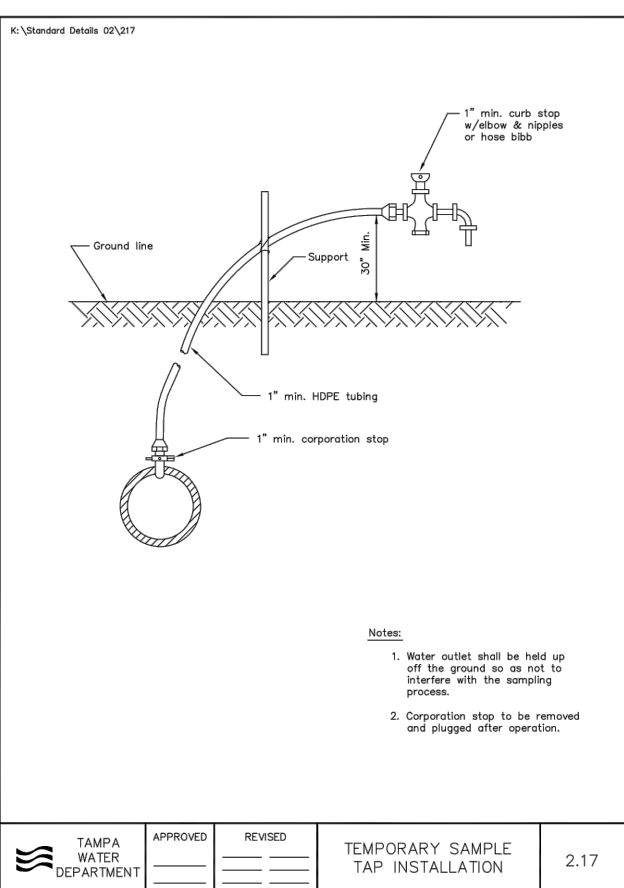
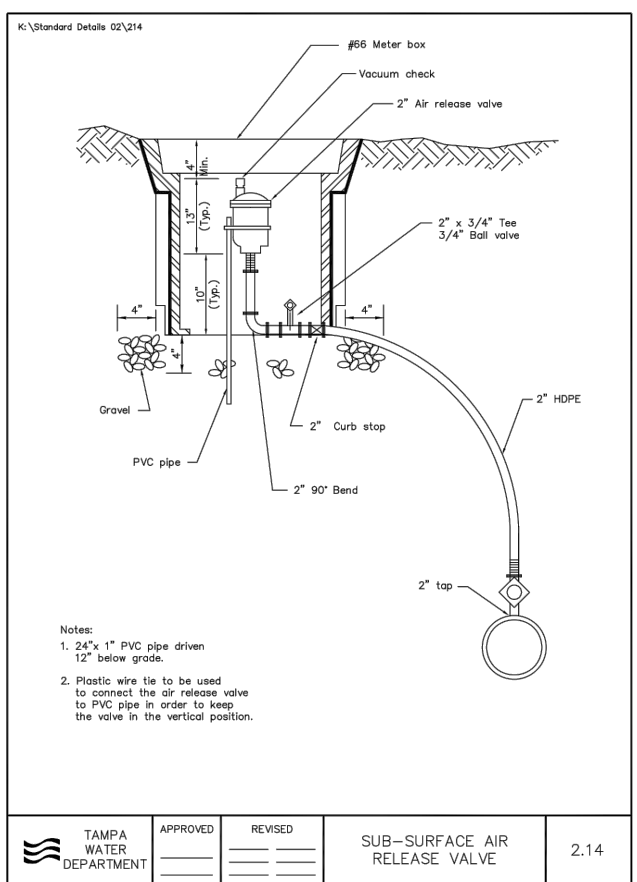
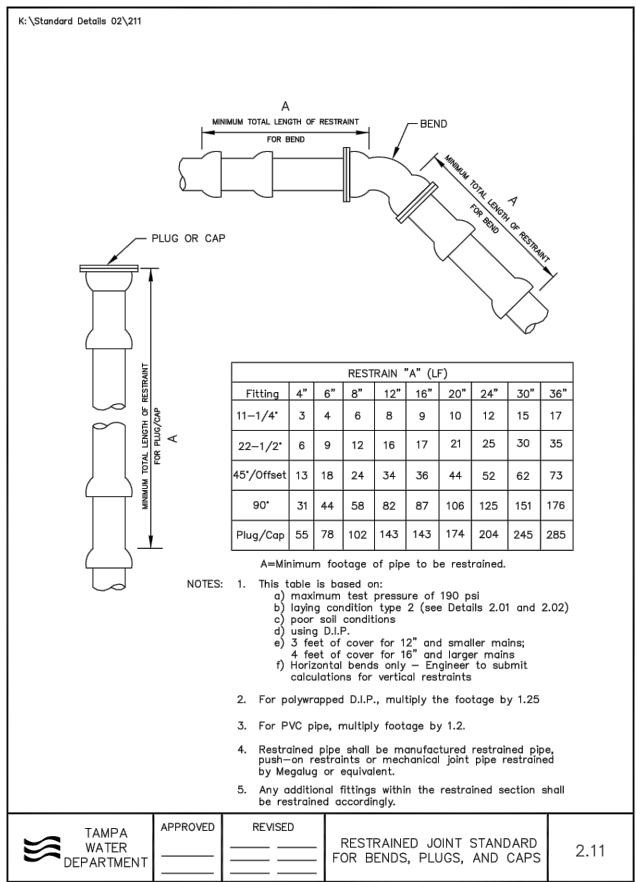
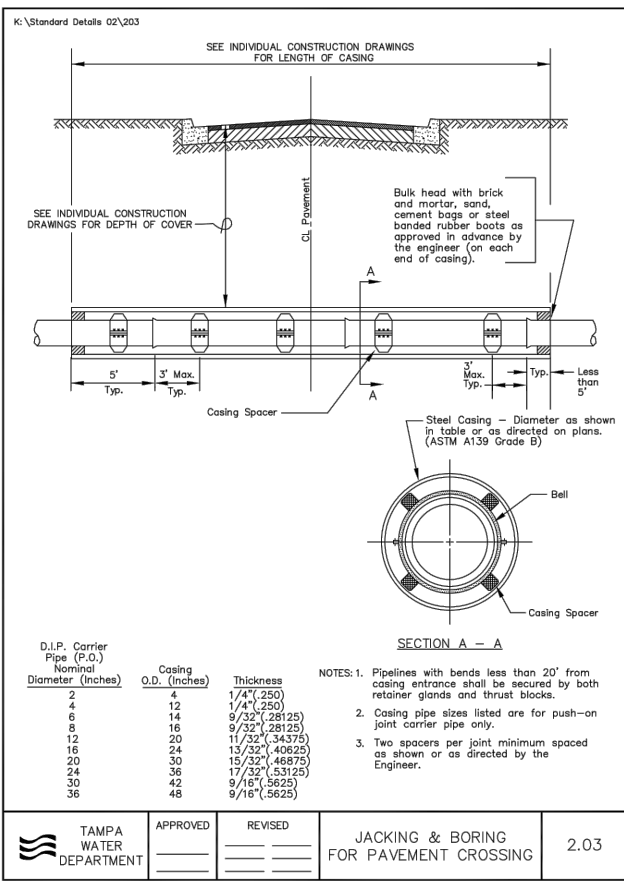
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REHABILITATION PROJECT**
UTILITY CONNECTIONS - PLAN AND PROFILE

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WATER MAIN DIVERSION NOTES:

1. PRIOR TO STARTING ANY WORK CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING THROUGH CITY OF TAMPA WATER CONTRACT ADMIN/INSPECTION TEAM AT (813) 635-3400 TO DISCUSS PROCEDURES FOR SHUTTING DOWN THE WATER LINE. ITEMS TO DISCUSS AT MEETING: 1)WHAT VALVES DOES THE CONTRACTOR PROPOSE TO CLOSE?; 2) ARE THESE VALVES OPERABLE? 3) WHAT IS PLAN "B" IF THESE VALVE DO NOT WORK (SCHEDULE A PRE-VALVE EXERCISE) 4) HOW LONG DOES THE CONTRACTOR PROPOSE THE LINE TO BE OUT OF SERVICE AND HOW MANY CUSTOMERS WILL BE IMPACTED? IF LINE IS OUT OF SERVICE TOO LONG OR TOO MANY CUSTOMERS IMPACTED, LINE STOPS WILL BE NECESSARY.
2. CONTRACTOR TO COORDINATE WITH CITY OF TAMPA WATER DEPARTMENT ON THE EXISTING WATER MAIN DIVERSION. CLOSE OFF SEGMENT OF THE WATER MAIN TO TWO CLOSEST VALVES.
3. CUT WATER MAIN AND INSTALL TWO (2) GATE VALVES AT EITHER ENDS.
4. TEST AND DISINFECT NEW DIVERTED WATER MAIN SEGMENTS AND PULL AT LEAST ONE BACTERIOLOGICAL TEST.
5. TURN ON THE WATER AND COMPLETE A VISUAL INSPECTION ON THE TWO TOP 45° MJ FITTINGS TO INSURE NO LEAKS.
6. FLUSH GENTLY FROM THE NEAREST FIRE HYDRANT TO INSURE NO SEDIMENTS OR DIRTY WATER.
7. COMPLETE BACK FILL WITH COMPACTION AND PROCURE DENSITY TESTS.
8. AS-BUILT THE NEW ELEVATIONS AND VERIFY THE SEPARATION BETWEEN THE WATER MAIN AND THE NEW STORM AFTER THE WATER IS DIVERTED.
9. ALL PIPING TO BE DUCTILE IRON, ALL PIPING AND FITTINGS TO BE POLY WRAPPED.



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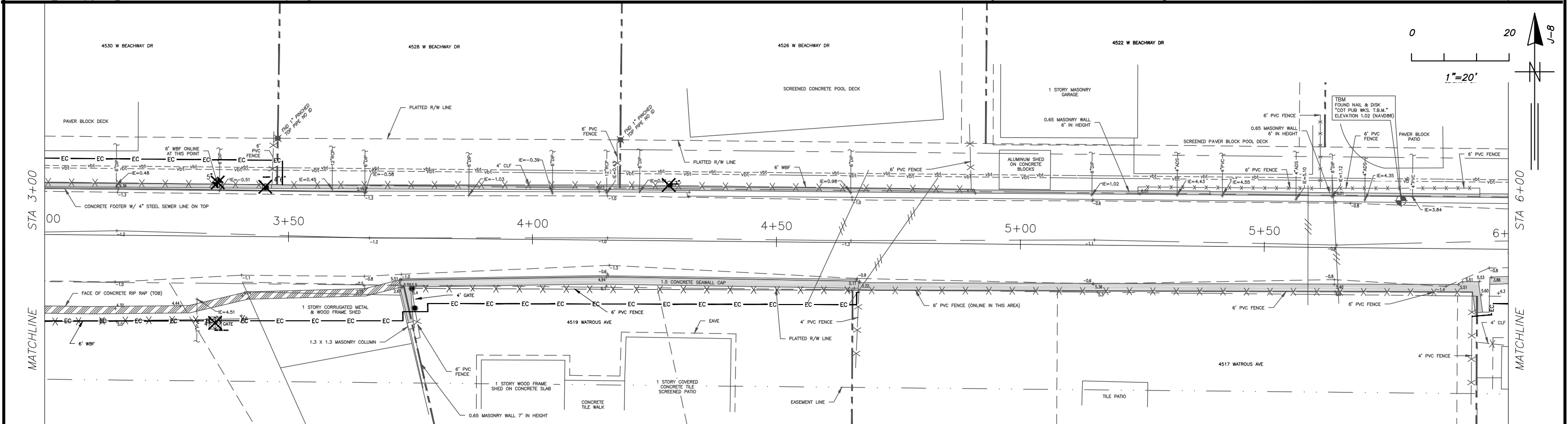
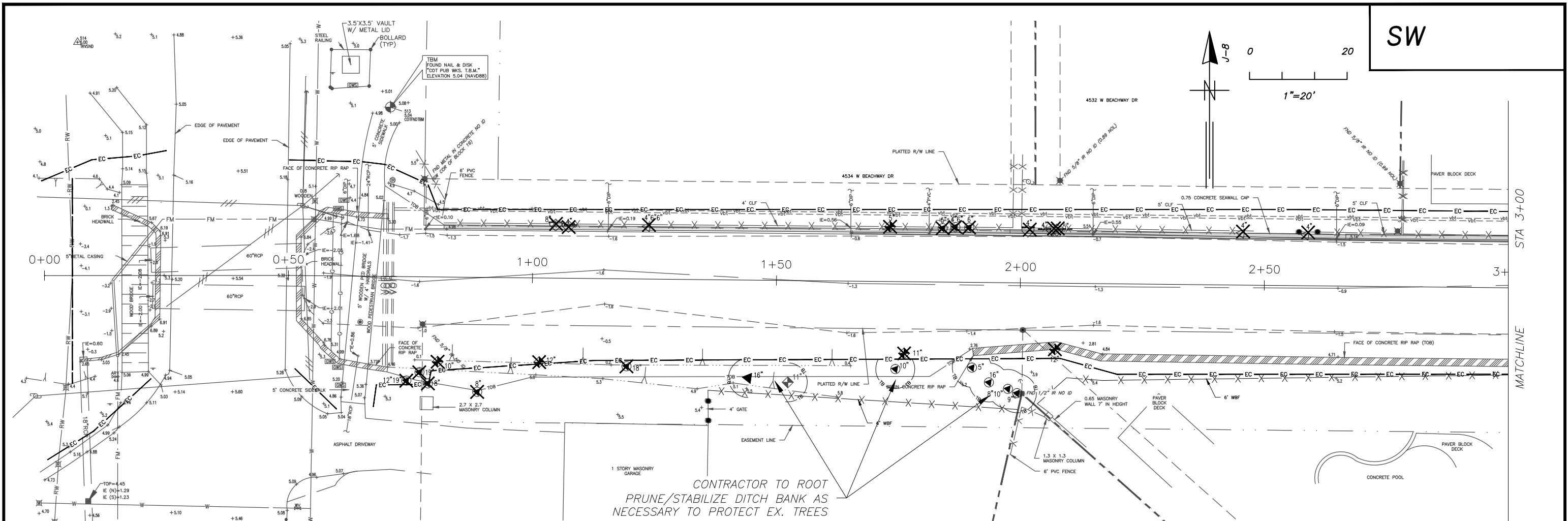
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**WATROUS CANAL
 REHABILITATION PROJECT**

WATER SEWER DETAILS

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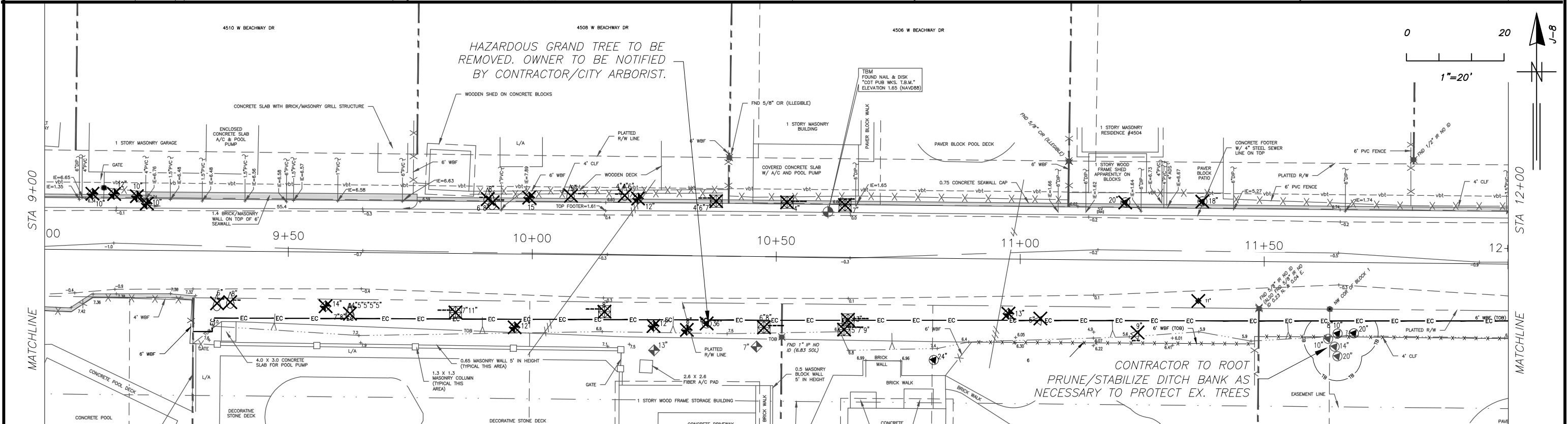
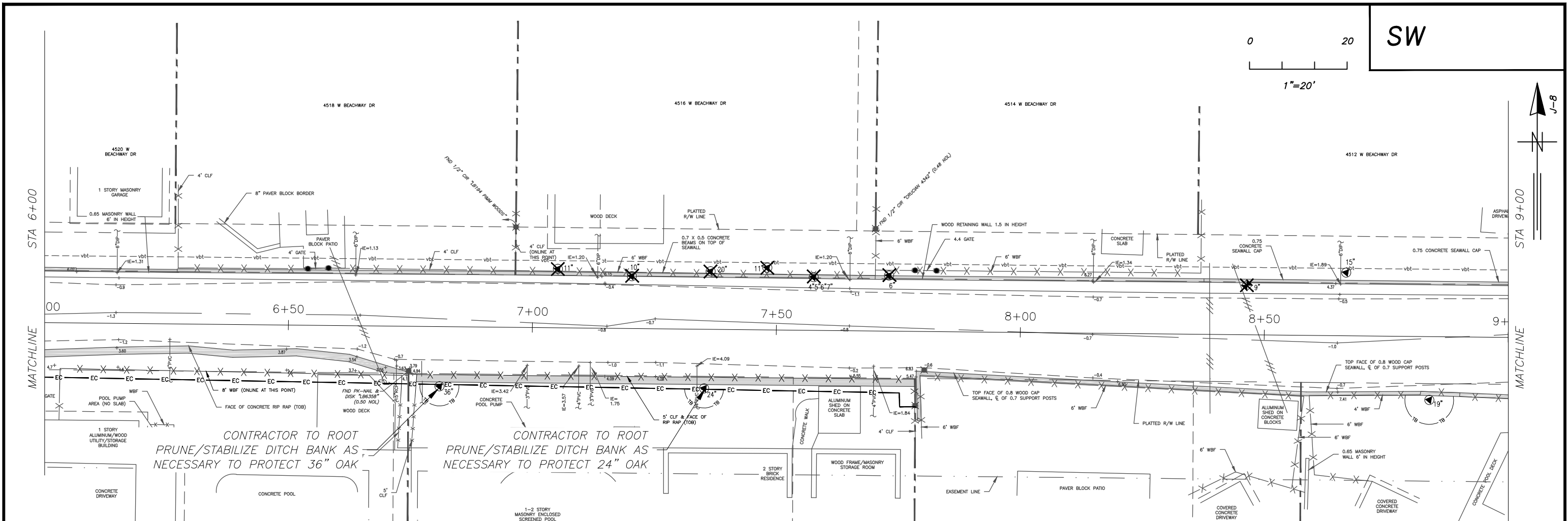
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**WATROUS CANAL
 REHABILITATION PROJECT**
TREE REMOVAL PLAN

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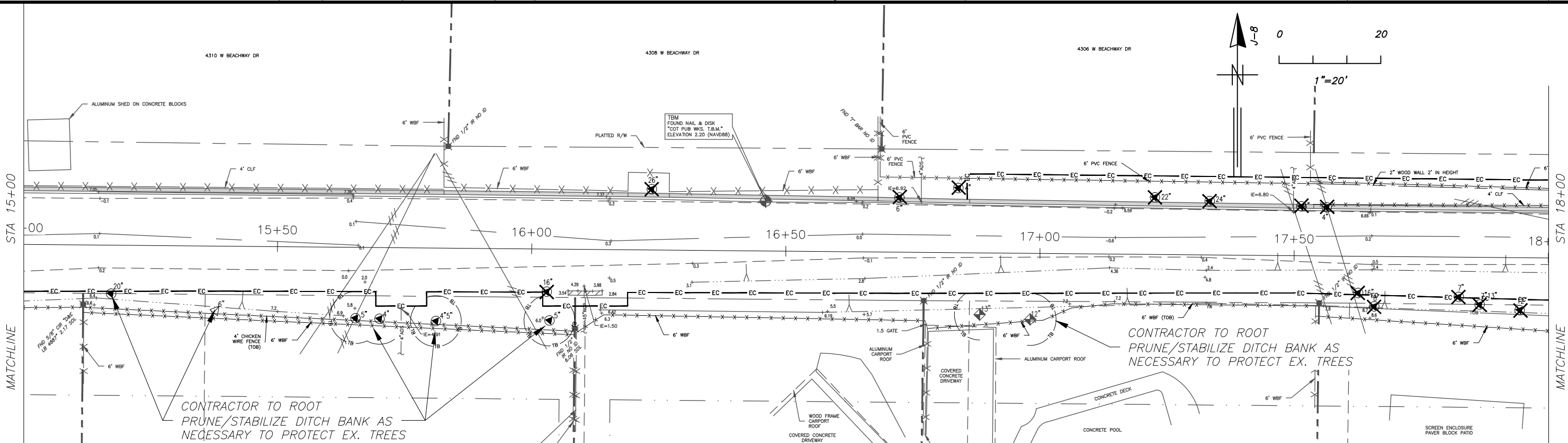
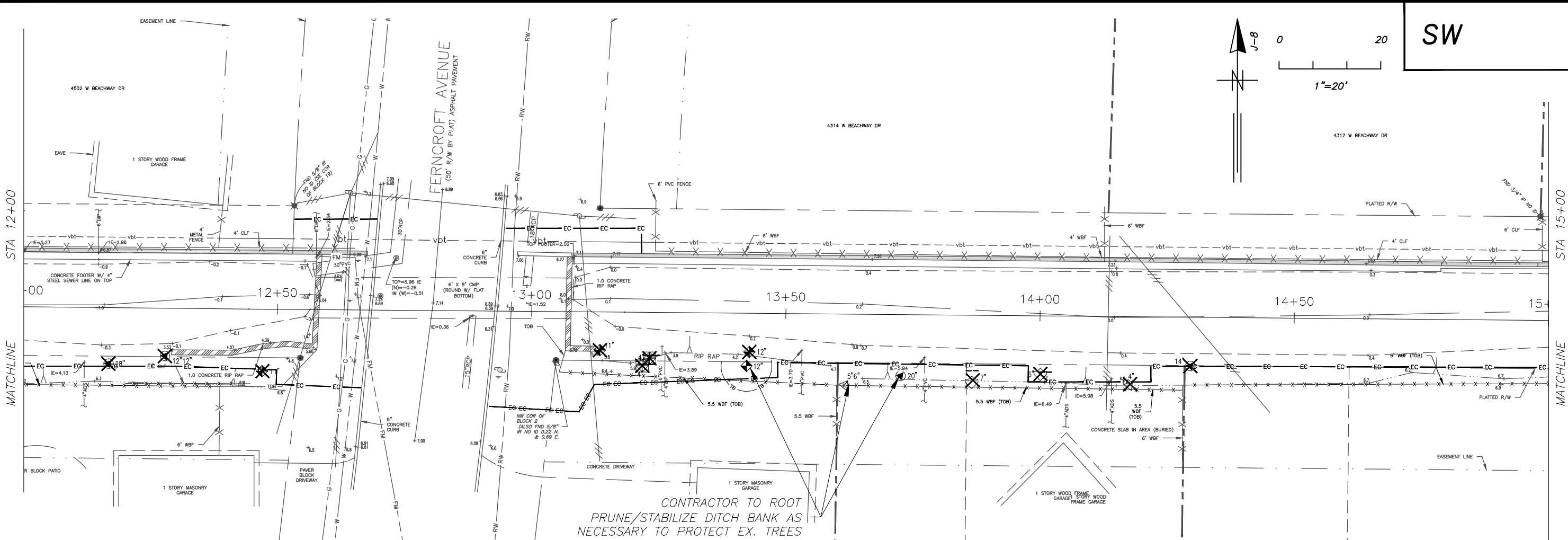
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TREE REMOVAL PLAN

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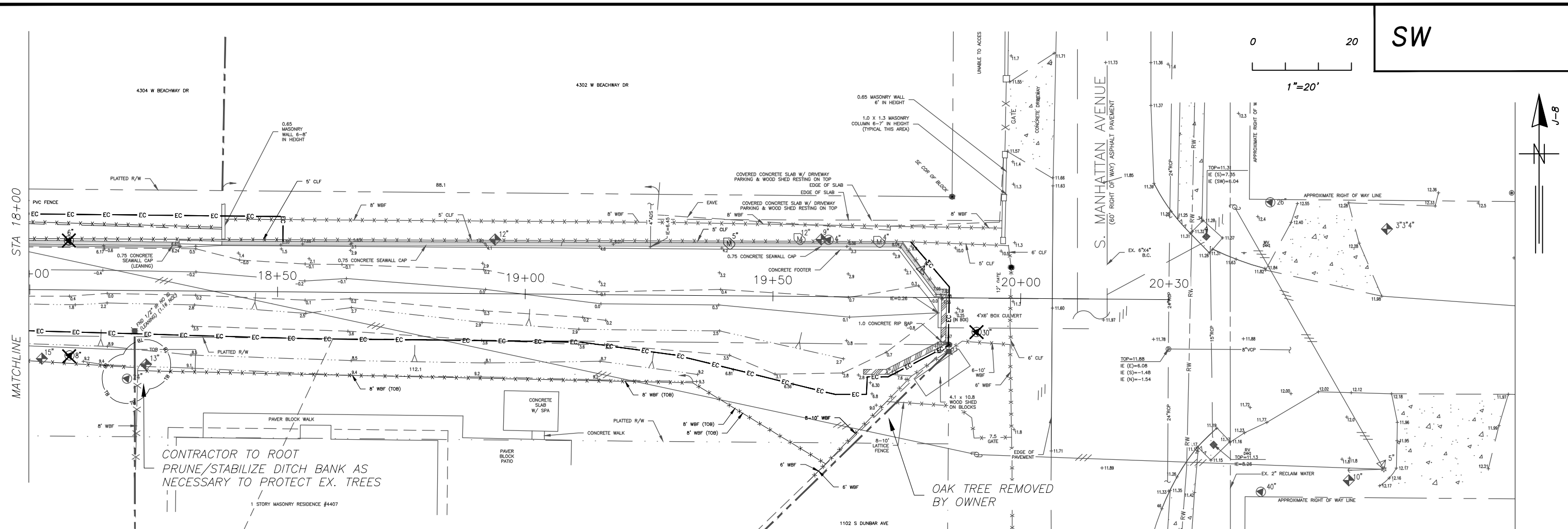
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**WATROUS CANAL
 REHABILITATION PROJECT**
 TREE REMOVAL PLAN

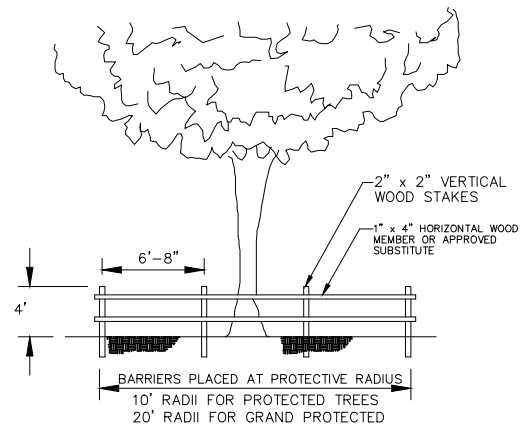
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TREE PROTECTION NOTES



PROTECTIVE BARRIERS are used during land alteration and construction activities to protect trees and natural areas to be retained on a site.

PROTECTIVE BARRIERS must be erected around TREES to be retained within an area where land alteration and construction activities will occur as well as along NATURAL AREAS where such areas are adjacent to permitted land alteration or construction activities. A PROTECTIVE BARRIER must remain in place until the land alteration and construction activities are completed or until commencement of grade finishing and sodding. No ground disturbance must occur within the barricaded area.

BARRIER SPECIFICATIONS FOR TREES:

Four corner upright stakes of no less than 2" x 2" lumber connected by horizontal members of no less than 1" x 4" lumber.

NATURAL AREAS - To restrict access into areas where land alteration and construction activities are not authorized, a physical structure not less than 3 feet in height is placed along the perimeter of such areas.

CITY OF TAMPA - Section 13-164. Tree protection standards:

Development on parcels shall comply with the following tree protection requirement:

- 1) Protective barricades shall be placed around all protected trees and grand trees during site clearing to create a protective radius and shall remain in place until land alteration, site clearing and construction activities are complete. Barricades for the protective radius shall be erected at a minimum distance of ten (10) feet from the edge of trunk of protected trees and twenty (20) feet from the edge of trunk of grand trees.
- 2) A minimum distance of ten (10) feet from all protected trees and twenty (20) feet from all grand trees shall be maintained when installing underground utilities. If this results in unreasonable hardship, a soil auger shall be used to tunnel under the root systems.
- 3) Installation of artificial barriers such as protective barricades, fences, posts or walls shall not destroy or irreversibly harm the root system of protected trees and grand trees. Footers for walls shall end at the point where larger roots are encountered, and the roots shall be bridged. Post holes and trenches located close to protected trees or grand trees shall be adjusted to avoid damage to major roots.
- 4) All roots to be removed during the site clearing phase shall be severed clean at the perimeter of the designated protective radius.
- 5) A two-inch layer of mulch shall be applied over the surface of exposed roots of protected trees and grand trees during the site clearing phase.
- 6) A protective dry well and drainage/aeration system shall be provided where protected trees or grand trees will be adversely affected by raising the grade.
- 7) A protective retaining wall shall be constructed at the perimeter of the protective radius around a protected tree or grand tree where the protected tree or grand tree will be adversely affected by lowering the grade.
- 8) All trimming of protected trees and grand trees during development shall be done by a qualified, licensed tree service.

TREE TABLE & LANDSCAPE CALCULATIONS

CREDIT TABLE:

| Diameter in Inches | *Retained on Site | Multiplier for Credit | Credit |
|--------------------|-------------------|-----------------------|-----------|
| 5" TO 7" | 8 | 0 | 0 |
| 8" TO 12" | 7 | 1 | 7 |
| 13" TO 19" | 4 | 2 | 8 |
| 20" TO 29" | 5 | 4 | 20 |
| 30" OR MORE | 1 | 10 | 10 |
| ALL PALMS | 7 | 1 | 7 |
| Total | 32 | ~ | 52 |

DEBIT TABLE:

| Diameter in Inches | *Removed on Site | Multiplier for Debit | Debit |
|--------------------|------------------|----------------------|------------|
| 5" TO 7" | 16 | 0 | 0 |
| 8" TO 12" | 14 | 1 | 14 |
| 13" TO 19" | 8 | 2 | 16 |
| 20" TO 29" | 7 | 4 | 28 |
| 30" OR MORE | 2* | Inch per Inch | 66 |
| ALL PALMS | 21 | 1 | 21 |
| Total | 68 | ~ | 145 |

* = 30", 36" (OAKS)

| | |
|--|-------------|
| DEBIT FOR TREES TO BE REMOVED | +144 |
| CREDIT FOR TREES TO REMAIN | - 53 |
| TOTAL REQUIRED 2" TREES TO BE PLANTED | = 91 |
| TOTAL PROPOSED 2" TREES TO BE PLANTED | = 0 |
| REMAINING BALANCE = 91 - 0 = 91 2" TREES MITIGATE VIA PAID INTO TREE FUND | |

TREE LEGEND

- ◆ = BAY TREE
- ⊗ = BOTTLE BRUSH TREE
- ⊙ = CAMPHOR TREE
- ◀ = CEDAR
- ⊖ = CHINABERRY TREE
- ◊ = CITRUS TREE
- ◁ = CYPRESS TREE
- ▽ = ELM TREE
- ◇ = EUCALYPTUS TREE
- ◆ = MAGNOLIA TREE
- ◊ = MAPLE TREE
- ⊙ = MULBERRY TREE
- ◇ = BRAZILLIAN PEPPER
- ⊙ = OAK TREE
- ◁ = OTHER SPECIES
- ◆ = PALM TREE
- = PECAN TREE
- ◇ = PERSIMMON TREE
- ▲ = PINE TREE
- ◊ = SYCAMORE TREE
- ◁ = WAX MYRTLE TREE
- ⊙ = WILLOW TREE
- ◊ = RAIN TREE
- ◊ = MANGO TREE
- ◊ = HONG KONG ORCHARD

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**WATROUS CANAL
 REHABILITATION PROJECT**
TREE REMOVAL PLAN

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