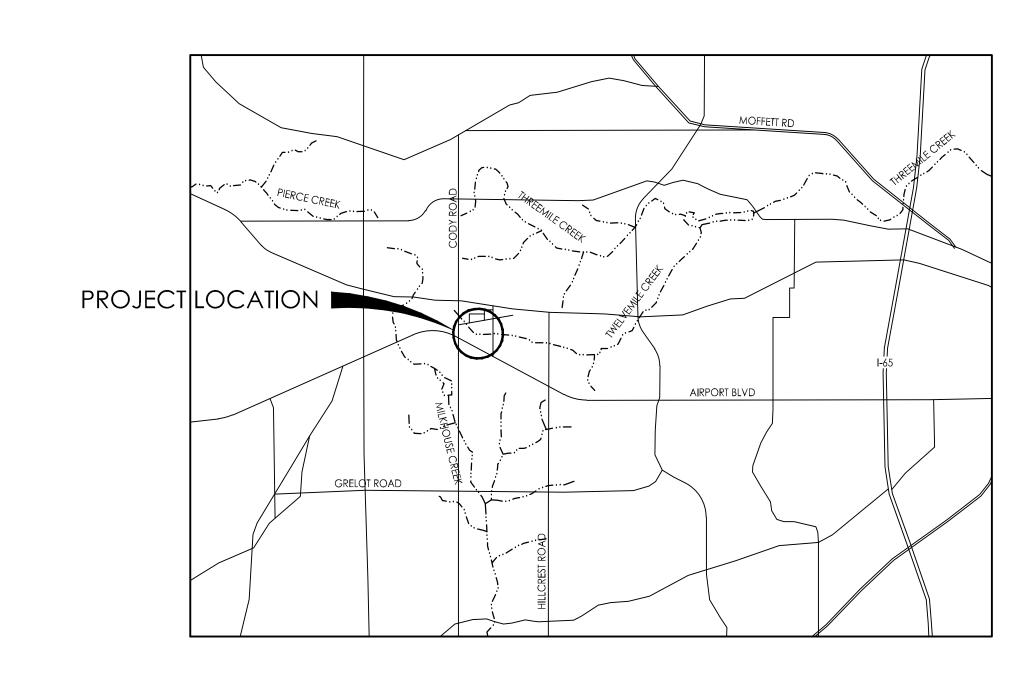


### MOBILE BAY NATIONAL ESTUARY PROGRAM







# TWELVE MILE CREEK HEADWATERS RESTORATION

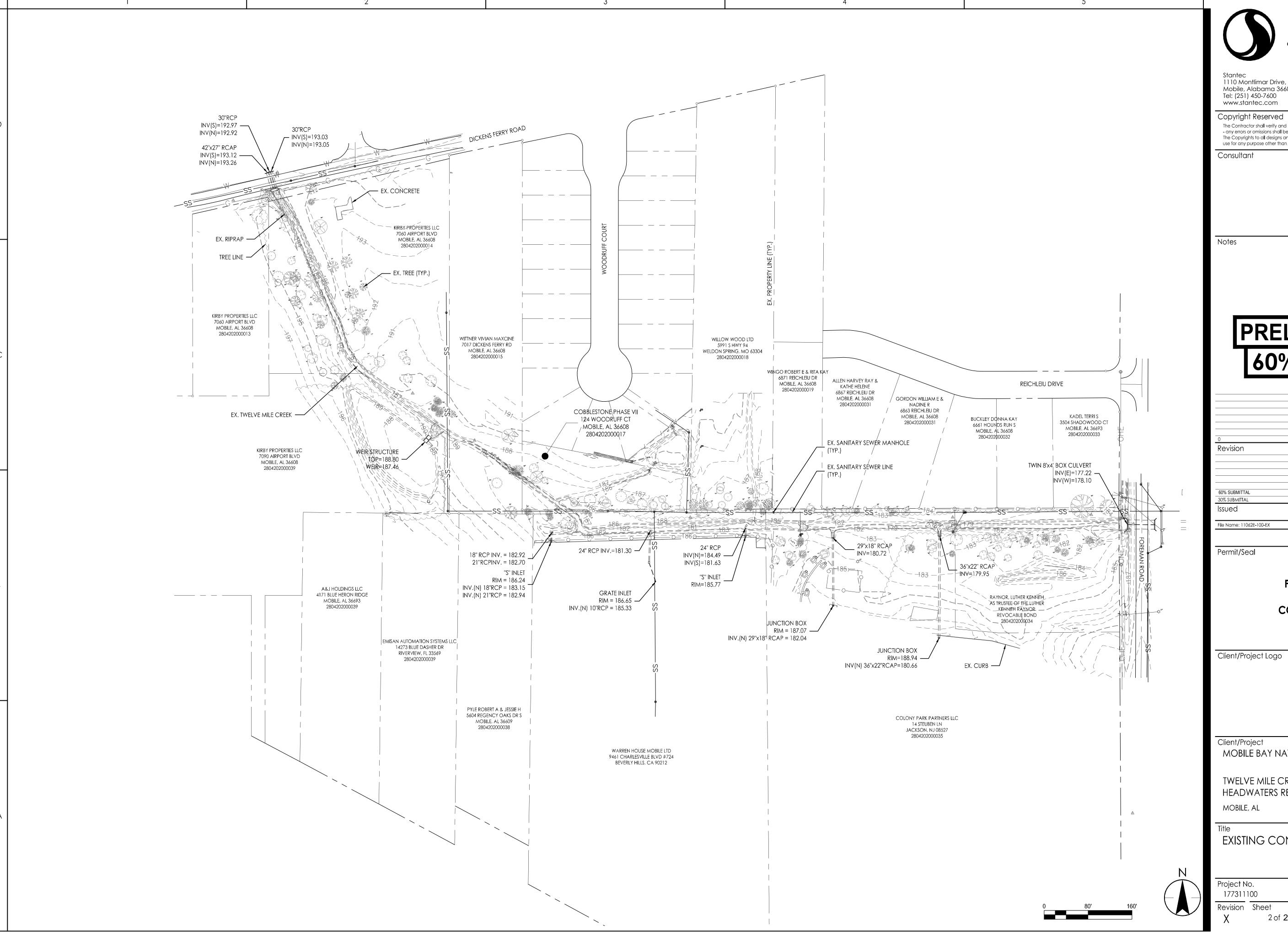
MOBILE, AL

60% SUBMITTAL 2018.11.01

PROJECT NUMBER: 177311100

### INDEX OF SHEETS

SHEET NO.	<u>TITLE</u>
1	COVER SHEET
2	EXISTING CONDITIONS
3	PROPOSED CONDITIONS
4	TYPICAL CROSS SECTIONS
5-9	PLAN & PROFILE
10-11	CROSS SECTIONS
12-14	STREAM RESTORATION DETAILS
15-16	PLANTING PLAN
EC-1 - EC-2	EROSION & SEDIMENT CONTROL PLANS
EC-3 - EC-5	EROSION & SEDIMENT CONTROL DETAILS





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TWELVE MILE CREEK **HEADWATERS RESTORATION** 

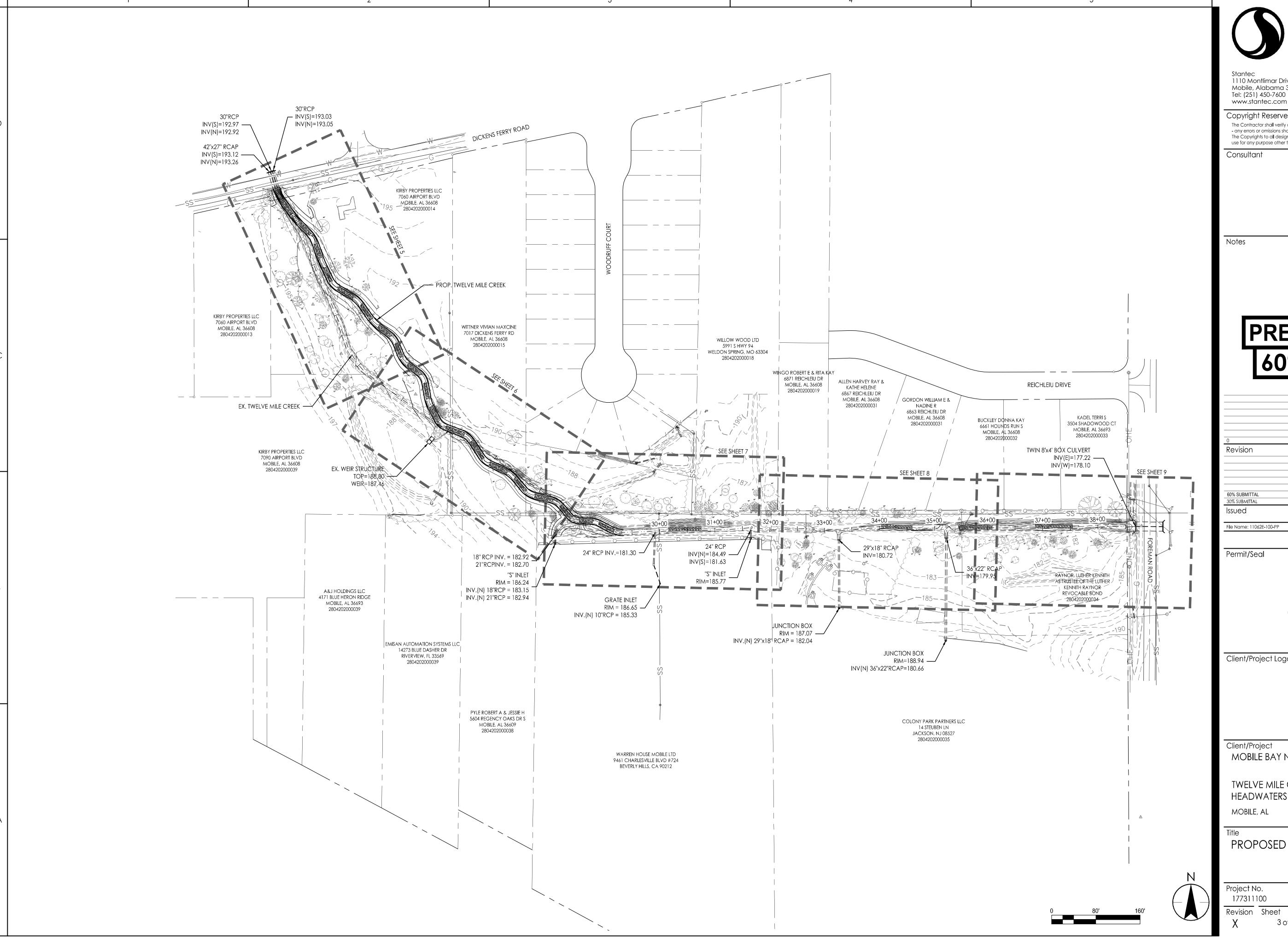
EXISTING CONDITIONS

Project No. 177311100 Revision Sheet

**AS NOTED** Drawing No.

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2 of **21** 





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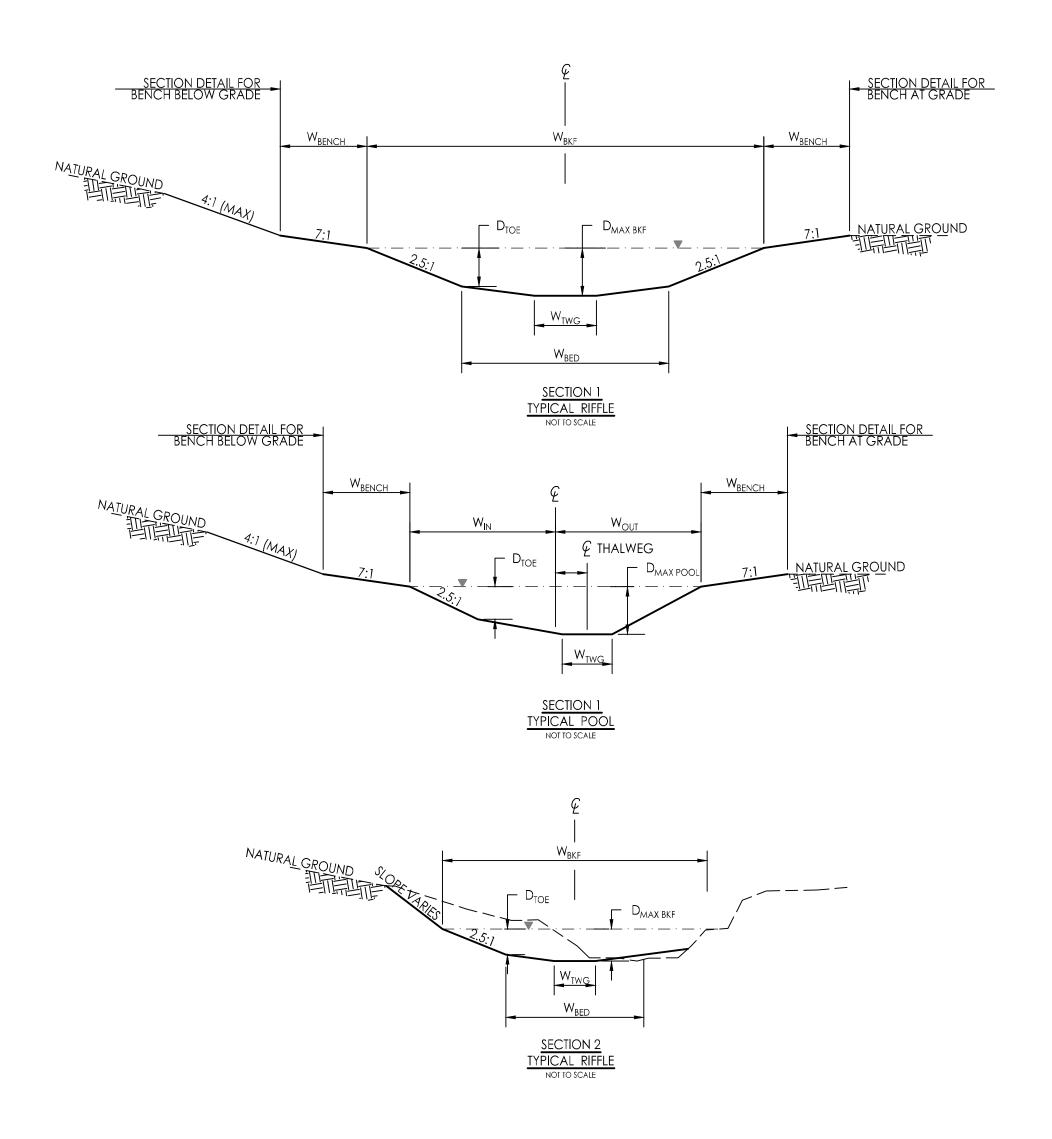
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TWELVE MILE CREEK HEADWATERS RESTORATION

PROPOSED CONDITIONS

Scale Project No. 177311100 AS NOTED

Drawing No. 3 of **21** 



### TEMPORARY SOIL EROSION AND SEDIMENT CONTROL:

TOTAL AREA DISTURBED = XX ACRES

- EROSION AND SEDIMENT CONTROL MEASURES ARE REQUIRED AS A PART OF THIS PROJECT. THE EROSION AND SEDIMENTATION CONTROL PLAN REFLECTS A SCHEMATIC DIAGRAM OF THE INTENDED MEASURES FOR COMPLIANCE WITH THE STATE STANDARDS. GENERAL PRACTICE AND/OR SITE FIELD CONDITIONS MAY WARRANT VARIATION IN THE PLACEMENT OR USE OF THE SPECIFIED CONTROLS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROVIDING NECESSARY AND ADEQUATE MEASURES FOR PROPER CONTROL OF EROSION AND SEDIMENT RUNOFF FOR THE SITE ALONG WITH PROPER
- MAINTENANCE AND INSPECTION IN COMPLIANCE WITH LOCAL AND STATE REGULATIONS. 2. THE CONTRACTOR SHALL INSTALL AND MAINTAIN THROUGHOUT THE PROJECT CONSTRUCTION ALL EROSION CONTROL MEASURES WITHIN THESE PLANS IN ACCORDANCE WITH APPLICABLE ADEM EROSION AND SEDIMENT CONTROL REGULATIONS, ALL LAND-DISTURBING ACTIVITIES SHALL BE SUBJECT TO INSPECTION AND SITE INVESTIGATION. FAILURE TO COMPLY WITH THESE REGULATIONS IS SUBJECT TO LEGAL
- 3. SOIL STABILIZATION SHALL BE ACHIEVED ON ANY AREA OF A SITE WHERE LAND-DISTURBING ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED ACCORDING TO THE FOLLOWING SCHEDULE: 3.1. ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 7 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.
- all other disturbed areas shall be provided temporary or permanent stabilization with ground cover as soon as practicable but in any event within 14 calendar days from
- 4. ALL SOIL STOCKPILES SHALL BE PROTECTED FROM EROSION BY PERIMETER CONTROL DEVICES SUCH AS STRAW BALE DIKES OR SILT FENCES. THESE PERIMETER CONTROL DEVICES SHALL BE MAINTAINED
- THROUGHOUT THE LIFE OF THE PROJECT. EXCAVATED MATERIALS SHALL NOT BE STORED ON EXISTING PUBLIC ROADWAY PAVEMENTS. THIS INCLUDES EXCESS OR UNUSABLE EXCAVATED SOIL. 5. THE CONTRACTOR SHALL DISPOSE OF ALL EXCESS EXCAVATION. DISPOSAL OF EXCESS SOIL, DEBRIS AND MATERIALS MUST BE DONE IN AN ENVIRONMENTALLY SOUND MANNER IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. THERE SHALL BE NO DISPOSAL IN OR NEAR ANY WATER BODY, FLOODPLAIN, WETLAND, DRAINAGE COURSE, OR ENVIRONMENTALLY SENSITIVE AREA, EVEN WITH PERMISSION OF THE PROPERTY OWNER. IF MATERIALS ARE DISPOSED ON PROPERTY WITHIN CITY LIMITS, THE CONTRACTOR SHALL PROVIDE A COPY OF THE SIGNED AGREEMENT AND A COPY OF THE GRADE AND FILL PERMIT OBTAINED FROM THE DEVELOPMENT DEPARTMENT.

### EQUIPMENT MAINTENANCE AND REFUELING:

- ALL REFUELING AND MAINTENANCE SHALL BE PERFORMED A MINIMUM OF 50' FROM ANY BODY OF
- WATER, WETLAND AND/OR "WET AREA".
- 2. THE CONTRACTOR SHALL SUBMIT A WRITTEN PLAN FOR "REFUELING OPERATIONS" INCLUDING
- PROCEDURES FOR FUEL HANDLING, SPILL/LEAK CONTAINMENT, CLEANUP AND DISPOSAL OF FUEL CONTAMINATED MATERIAL, TEN (10) DAYS PRIOR TO THE START OF ANY PROJECT WORK.
- 3. CLEANUP AND DISPOSAL OF CONTAMINATED MATERIAL SHALL BE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL LAWS AND AT NO ADDITIONAL COST TO THE OWNER.
- 4. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF ON-SITE FUEL STORAGE NEEDS. IF FUEL IS TO BE STORED ON THE PROJECT SITE, THE CONTRACTOR SHALL PROVIDE A COPY OF A WRITTEN AGREEMENT WITH THE LAND OWNER TO STORE FUEL ON THEIR PROPERTY. THE WRITTEN AGREEMENT SHALL BE SUBMITTED TO THE ENGINEER AS PART OF THE "REFUELING OPERATIONS" PLAN.

### **TABEL 1: SECTION DIMENSIONS** RIFFLE DIMENSIONS POOL DIMENSIONS REACH W<sub>TWG</sub> | D<sub>MAX BKF</sub> | D<sub>TOE</sub> SECTION [ft] | [ft] | [ft] STA. 20+00 - 29+33.80 11.5 | 6.0 | 1.8 | 1.38 | 1.11 | 6.9 | 5.75 | 2.07 | 6 | 13.5 29+33.80 - END 2 | 12.7 | 6.6 | 2.0 | 1.54 | 1.23 | - | - | -

### **ABBREVIATIONS** THALWEG WIDTH BED WIDTH BANKFULL WIDTH DEPTH OF TOE MAX DEPTH **BANKFULL AREA** BANKFULL

- THE CONTRACTOR SHALL FOLLOW THE SEQUENCE OF CONSTRUCTION IN ACCORDANCE WITH THE PLANS AND AS DIRECTED BY THE ENGINEER. THE CONTRACTOR'S SURVEYOR SHALL STAKE THE PROPOSED STREAM CENTERLINE AND LIMITS OF DISTURBANCE IN THE FIELD. THE CONTRACTOR SHALL IDENTIFY THE PROJECT BOUNDARIES, SENSITIVE AREAS, STAGING AREAS, AND CONSTRUCTION ENTRANCES. THE ENGINEER RESERVES THE RIGHT TO
- CHANGE THE PROPOSED ALIGNMENT PRIOR TO CONSTRUCTION BEGINNING. THE CONTRACTOR SHALL SET UP A PRE-CONSTRUCTION MEETING WITH THE LOCAL EROSION CONTROL INSPECTOR AND THE ENGINEER. THIS MEETING MUST OCCUR A MINIMUM OF 48 HOURS PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- THE CONTRACTOR SHALL INSTALL ANY AND ALL EROSION CONTROL MEASURES IN ACCORDANCE WITH SPECIFICATIONS, SAFETY FENCING, AND PROJECT SIGNAGE PRIOR TO THE START OF ANY CONSTRUCTION OPERATION THAT MAY CAUSE ANY SEDIMENTATION OR SILTATION AT THE SITE. CLEARING ONLY SUFFICIENT ENOUGH TO INSTALL THESE MEASURES SHALL BE ALLOWED UNTIL THE MEASURES ARE IMPLEMENTED.
- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED CONTINUOUSLY BY THE CONTRACTOR. REMOVE EXISTING FEATURES FROM THE PROJECT SITE AS INDICATED ON THE PLANS. CLEAR AND GRUB THOSE AREAS WHICH HAVE BEEN PROTECTED WITH
- erosion control measures. No trees greater than 6" shall be removed without the permission of the engineer.
- NO DISTURBED AREA WILL BE DENUDED FOR MORE THAN 7 DAYS IF IT IS TO REMAIN DORMANT FOR MORE THAN 21 DAYS UNLESS AUTHORIZED BY THE GOVERNING JURISDICTION'S INSPECTOR. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DISTURBED AREAS WITHIN 7 DAYS AFTER
- FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. 8. SUITABLE LOGS AND WOODY DEBRIS PER THE ENGINEER SHALL BE STOCKPILED FOR USE IN CONSTRUCTION. TOPSOIL SHALL BE STOCKPILED FOR FUTURE USE AS SPECIFIED. SPECIFIED AREAS SHOWN ON THE PLANS HAVE BEEN ESTABLISHED AS HAUL ROADS AND STAGING AREAS, ALL STOCKPILE AREAS MUST BE INSIDE THE LIMITS OF DISTURBANCE. STOCKPILE AREAS SHALL NOT BE LOCATED IN FORESTED AREAS. SILT FENCE SHALL BE REQUIRED IN AREAS WHERE
- LOOSE SOIL HAS BEEN PLACED IN THE STAGING AND STOCKPILE AREAS. 9. STREAM CHANNELS SHALL BE CONSTRUCTED FROM UPSTREAM TO DOWNSTREAM. THE PROPOSED CHANNEL SHALL NOT BE CONNECTED TO THE EXISTING
- CHANNEL UNTIL ALL STABILIZATION OF THE NEW CHANNEL IS COMPLETE. 10. EXCAVATE THE PROPOSED CHANNEL PER THE PROFILE, SECTIONS, AND PROPOSED GRADING. FILL SHALL BE PLACED IN A MAXIMUM OF 12" LIFTS (BEFORE
- COMPACTION). 11. INSTALL ALL IN-STREAM AND BANK STABILIZATION STRUCTURES. THE ENGINEER MUST APPROVE OF THE WORK BEFORE FLOWS MAY BE TURNED INTO THE NEW CHANNEL. THE CONTRACTOR SHALL NOT UNDERTAKE MORE WORK THAN WHAT CAN BE COMPLETED IN A SPECIFIC TIME FRAME IN ORDER TO MAINTAIN ADEQUATE SEDIMENT AND EROSION CONTROL VIA A PUMP AROUND. PUMP AROUND SYSTEMS SHALL BE USED TO ALLOW WORK TO BE PERFORMED "IN
- 12. ALL WORK ON PERMANENT STRUCTURES SHALL BE CARRIED OUT IN AREAS FREE FROM WATER. TEMPORARY DIKES, LEVEES, COFFERDAMS, DRAINAGE CHANNELS, AND STREAM DIVERSIONS NECESSARY TO PROTECT THE AREAS TO BE OCCUPIED BY THE PERMANENT WORKS SHALL BE INSTALLED, AS WELL AS
- PUMPING AND OTHER EQUIPMENT REQUIRED FOR REMOVAL OF WATER FROM VARIOUS PARTS OF THE WORK. 13. AFTER HAVING SERVED THEIR PURPOSE, ALL TEMPORARY PROTECTIVE WORKS SHALL BE REMOVED OR LEVELED AND GRADED TO THE EXTENT REQUIRED TO
- PREVENT OBSTRUCTION OF THE FLOW OF WATER. 14. STREAM DIVERSIONS SHALL BE MAINTAINED UNTIL THE FULL FLOW CAN BE PASSED THROUGH A COMPLETED AND STABILIZED SECTION OF STREAM.
- 15. THE CONTRACTOR SHALL COMPLETE ALL GRADING AND PLANT VEGETATION ACCORDING TO THE PLANTING PLAN. 16. IF ANY SOIL IS TRANSPORTED OFFSITE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THIS ACTION IS CONDUCTED UNDER AN EROSION CONTROL PERMIT. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE REGULATORY AUTHORITIES BEFORE ANY SPOIL IS TRANSPORTED OFFSITE. ALL PERMITS
- REQUIRED FO THE OFFSITE DISPOSAL OF SITE SPOIL IS THE RESPONSIBILITY OF THE CONTRACTOR.
- 17. OBTAIN FINAL APPROVAL FROM THE ENGINEER. 18. AT THE COMPLETION OF CONSTRUCTION, REMOVAL OF ALL TEMPORARY SEDIMENT AND EROSION CONTROL, ALL SAFETY FLAGGING, FENCING, AND SIGNAGE ONLY AFTER FINAL APPROVALS HAVE BEEN OBTAINED. ALL DENUDED AREAS SHOULD BE STABILIZED PRIOR TO THE REMOVAL OF SEDIMENT AND
- EROSION CONTROL MEASURES. 19. THE CONTRACTOR SHALL ENSURE THAT THE SITE IS FREE OF TRASH AND LEFTOVER CONSTRUCTION MATERIALS PRIOR TO DEMOBILIZATION OF EQUIPMENT

- CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION. CONTACT 811 OR 1-800-292-8525 PRIOR TO EXCAVATION. THE LOCATION OF THE UTILITIES SHOWN ARE APPROXIMATE AND ARE BASED ON INFORMATION PROVIDED BY OTHERS. THE CONTRACTOR SHALL LOCATE ALL ON-SITE UTILITIES
- PRIOR TO EXCAVATION AND SHALL ASSUME RESPONSIBILITY FOR DAMAGE CAUSED BY ACTIVITIES COMPLETED UNDER THIS CONTRACT.
- PRIOR TO REQUESTING A FINAL INSPECTION, THE CONTRACTOR MUST SUBMIT RECORD DRAWINGS AND ENGINEER'S CERTIFICATION TO THE ENGINEERING DEPARTMENT. THE CONTRACTOR SHALL FOLLOW ALL REQUIREMENTS FOR A CITY OF MOBILE LAND DISTURBANCE PERMIT.
- ALL WORK MUST CARRY A MINIMUM ONE-YEAR WARRANTY TO COVER ALL DEFECTS IN MATERIALS AND WORKMANSHIP.
- PRIOR TO BEGINNING ANY WORK, THE CONTRACTOR MUST NOTIFY THE CITY OF MOBILE ENGINEERING DEPARTMENT TO ARRANGE FOR A CONSTRUCTION INSPECTION. ALL WORK SHALL CONFORM TO THE LATEST EDITION OF THE ALDOT STANDARD SPECIFICATIONS UNLESS OTHERWISE SPECIFIED IN THE PROJECT MANUAL OR IN THE DRAWINGS.
- ENGINEER WILL PROVIDE CONTRACTOR WITH AUTOCAD 2014 DRAWING TO BE USED FOR CONSTRUCTION STAKING. INCORPORATION OF LAYOUT AND ANY CHANGES TO CONTRACT DRAWING WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY IMPROVEMENT TO THE ROAD CONDITIONS, GATES, AND FENCES REQUIRED FOR ACCESS DURING CONSTRUCTION. 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGED ITEMS DURING CONSTRUCTION INCLUDING, BUT NOT LIMITED TO, EXISTING ROADS, GATES, FENCES, ETC. 10. THE CONTRACTOR SHALL KEEP STREETS AFFECTED BY HIS CONSTRUCTION FREE OF DIRT, SEDIMENT, OR MUD. THE ENGINEER MAY DIRECT THE CONTRACTOR TO PERFORM STREET CLEANING (ON AN AS-NEEDED BASIS), AND IS REQUIRED THROUGH THE DURATION OF THIS CONSTRUCTION PROJECT. THIS INCLUDES SWEEPING, POWER CLEANING, AND (IF
- NECESSARY) MANUAL REMOVAL OF DIRT OR MUD IN THE STREET GUTTERS. 11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING NECESSARY TRAFFIC CONTROLS ASSOCIATED WITH THE PROJECT SITE ACCESS. IT IS RECOMMENDED THAT
- CONSTRUCTION TRAFFIC SHOULD BE SCHEDULED AROUND THE LOCAL SCHOOL SCHEDULE TO REDUCE THE RISK TO PUBLIC SAFETY.
- 12. ALL WORK SHALL BE WITHIN 0.1' OF THE REQUIRED ELEVATION(S) SHOWN ON THE PLANS UNLESS OTHERWISE SPECIFIED.
- 13. ALL WORK SHALL BE WITHIN 0.5' OF THE REQUIRED HORIZONTAL LOCATION(S) SHOWN ON THE PLANS AND TYPICAL SECTIONS UNLESS OTHERWISE SPECIFIED. 14. DIRECTIONS "LEFT (LT.)" AND "RIGHT (RT.)" ARE DETERMINED RELATIVE TO THE CHANNEL AS IF FACING DOWNSTREAM.
- 15. PRESERVATION OF EXISTING VEGETATION IS A PRIORITY ALONG THE CHANNEL CORRIDOR. ANY TREE OR SHRUB DISTURBANCE SHALL BE APPROVED BY THE ENGINEER PRIOR TO
- STARTING WORK. ANY TREES OR SHRUBS NOT TO BE DISTURBED SHALL BE PROTECTED. VEGETATION MAY BE CUT BACK (PRUNED) TO FACILITATE ACCESS TO THE WORK. 16. CONSTRUCTION SHALL BE LIMITED TO THE HOURS OF 8AM UNTIL 5 PM, MONDAY THROUGH FRIDAY. ADDITIONAL WORK HOURS ARE CONTINGENT ON THE APPROVAL OF THE PROPERTY OWNERS.

### LEGEND

SURVEY CONTROL POINT

PROPERTY CORNER PHOTO IDENTIFIER POINT

UTILITY POLE W/ANCHOR LIGHT POLE

HIGH TENSION POWER POLE

STORM DRAIN MANHOLE

SANITARY SEWER MARKER

SANITARY SEWER MANHOLE SANITARY SEWER CLEAN OUT

OVERHEAD UTILITIES

STORM DRAIN PIPE

WATER LINE SANITARY SEWER LINE

NATURAL GAS LINE

WOOD PRIVACY FENCE CHAIN LINK FENCE

WIRE FENCE RIPRAP TREE LINE

========

\_\_\_\_X \_\_\_\_X \_\_\_\_

LIVE OAK TREE OAK TREE

PINE TREE

PECAN TREE CHERRY TREE

CAMPHOR TREE

SYCAMORE TREE SWEETGUM TREE

POPCORN TREE



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TWELVE MILE CREEK **HEADWATERS RESTORATION** 

MOBILE, AL

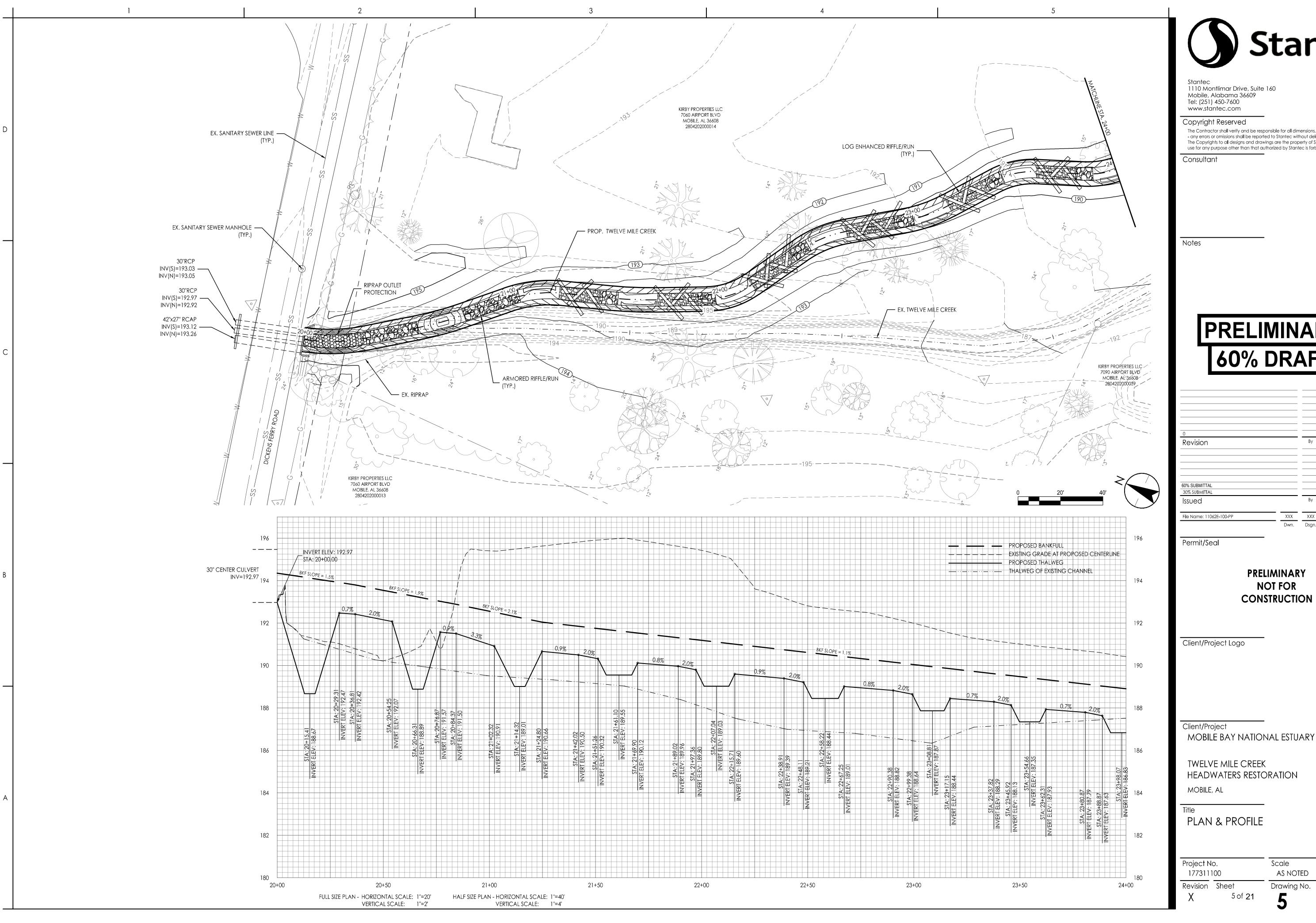
TYPICAL CROSS SECTIONS

Project No. 177311100 Revision Sheet

Drawing No.

Scale

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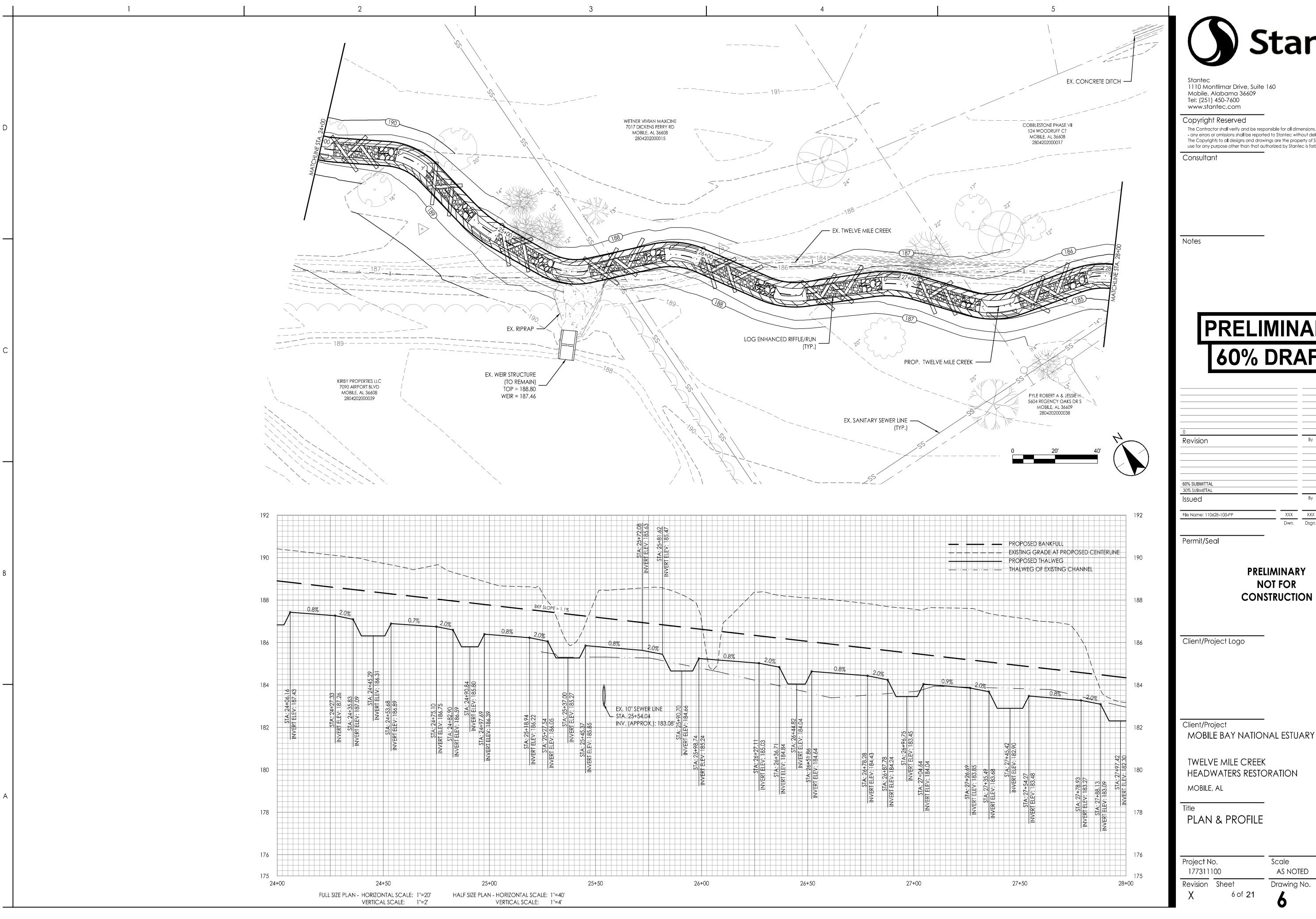
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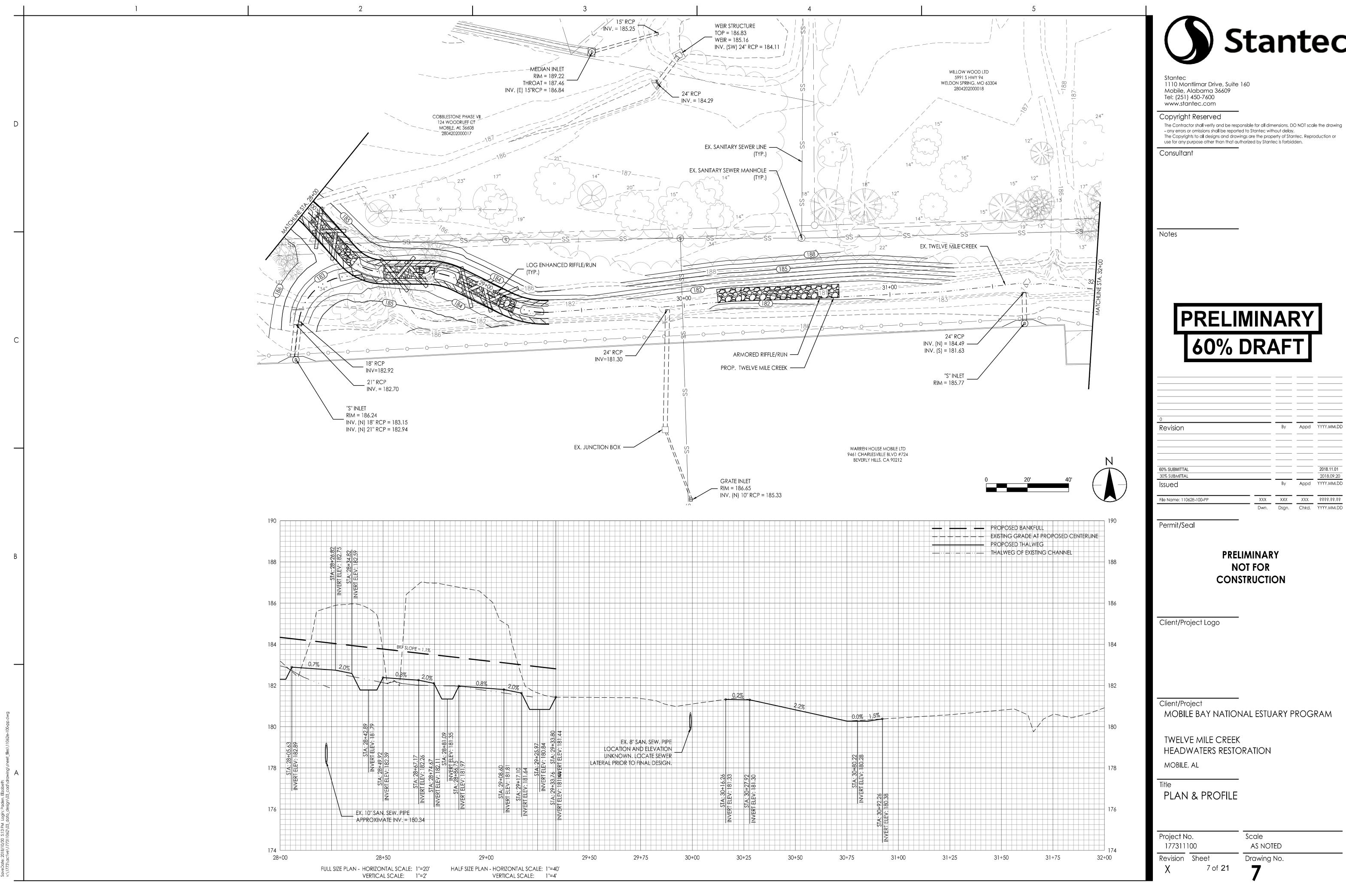
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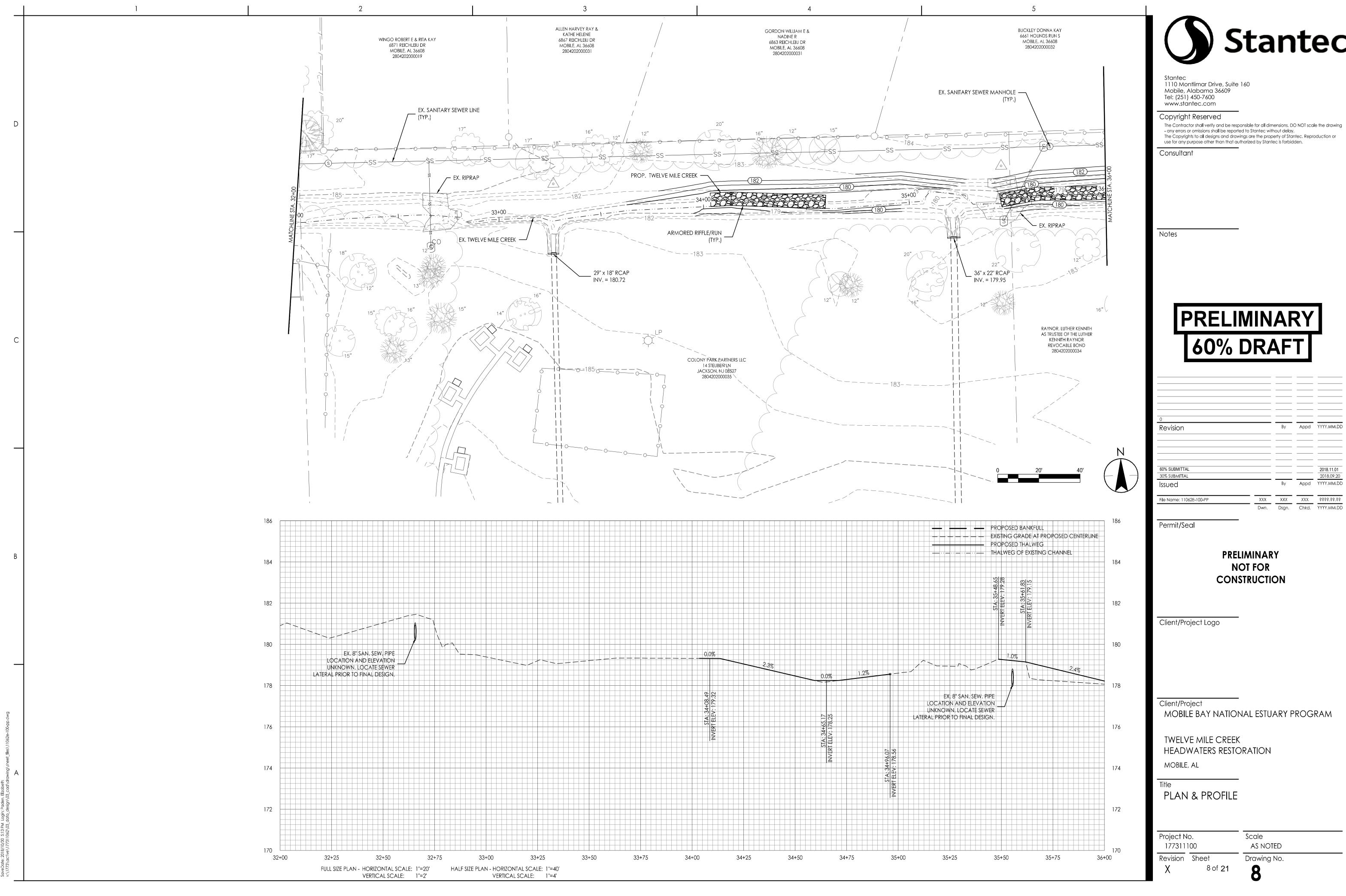
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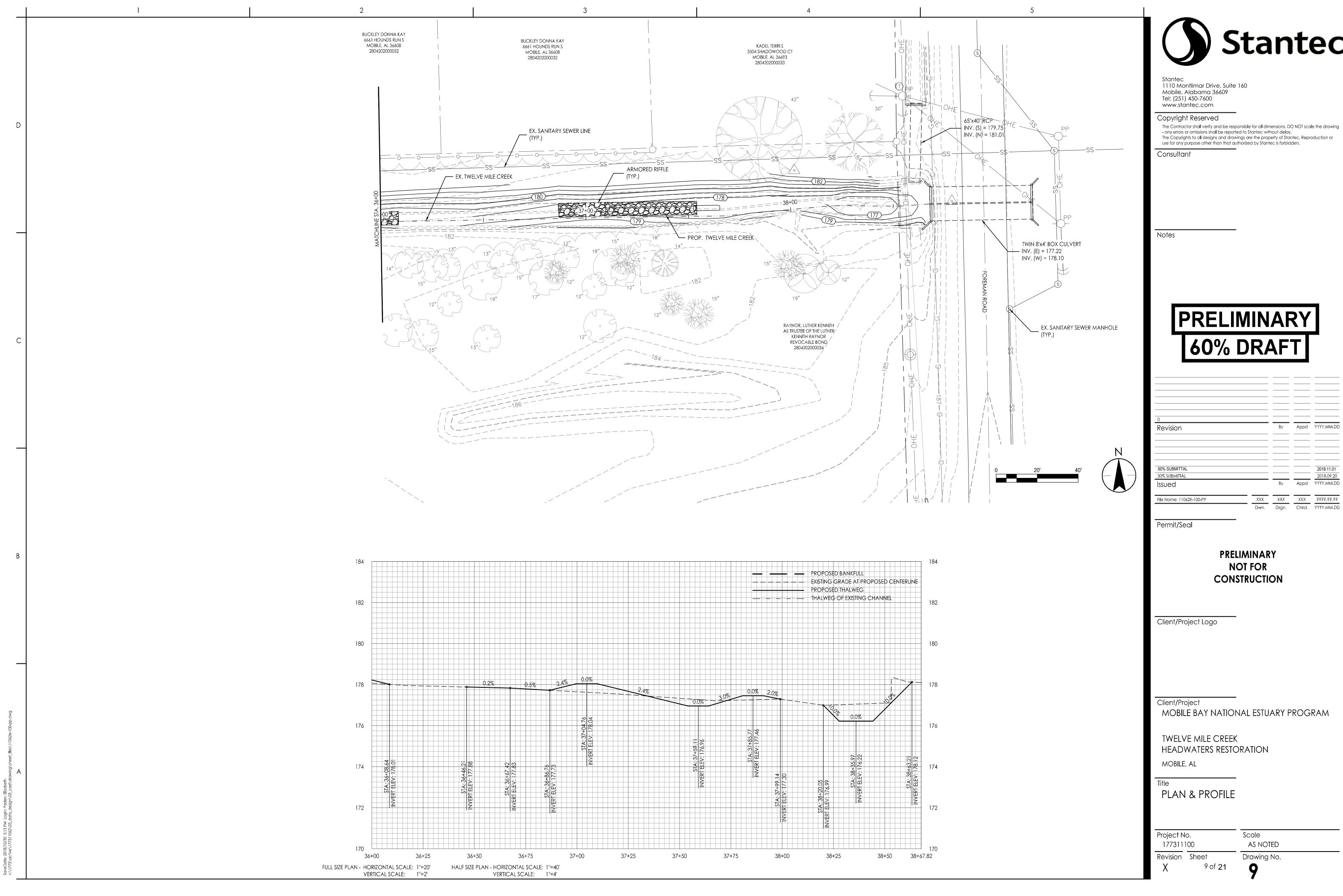


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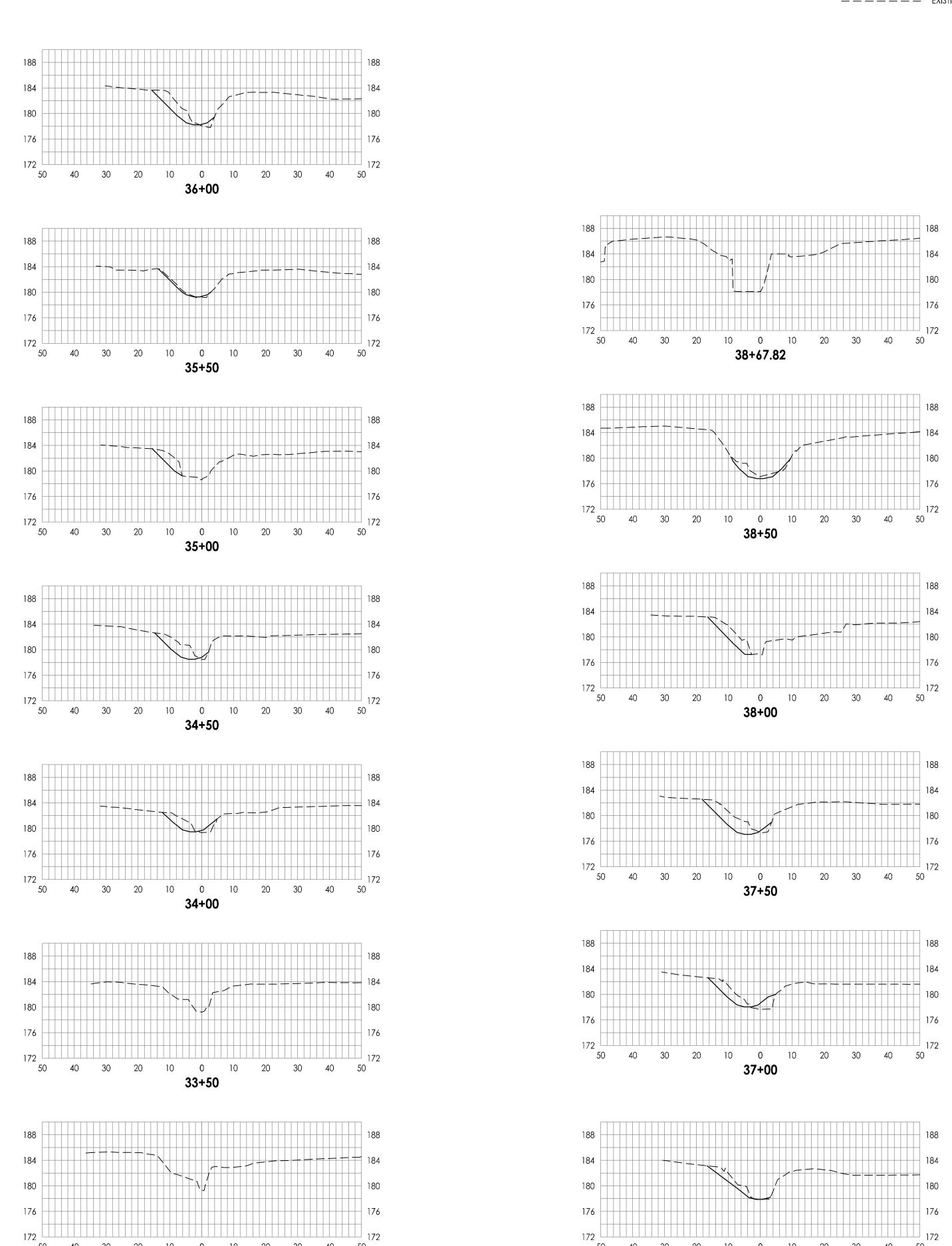
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MOBILE BAY NATIONAL ESTUARY PROGRAM

**HEADWATERS RESTORATION** 

**AS NOTED** Drawing No.



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MOBILE BAY NATIONAL ESTUARY PROGRAM

TWELVE MILE CREEK HEADWATERS RESTORATION

MOBILE, AL

CROSS SECTIONS

Project No.

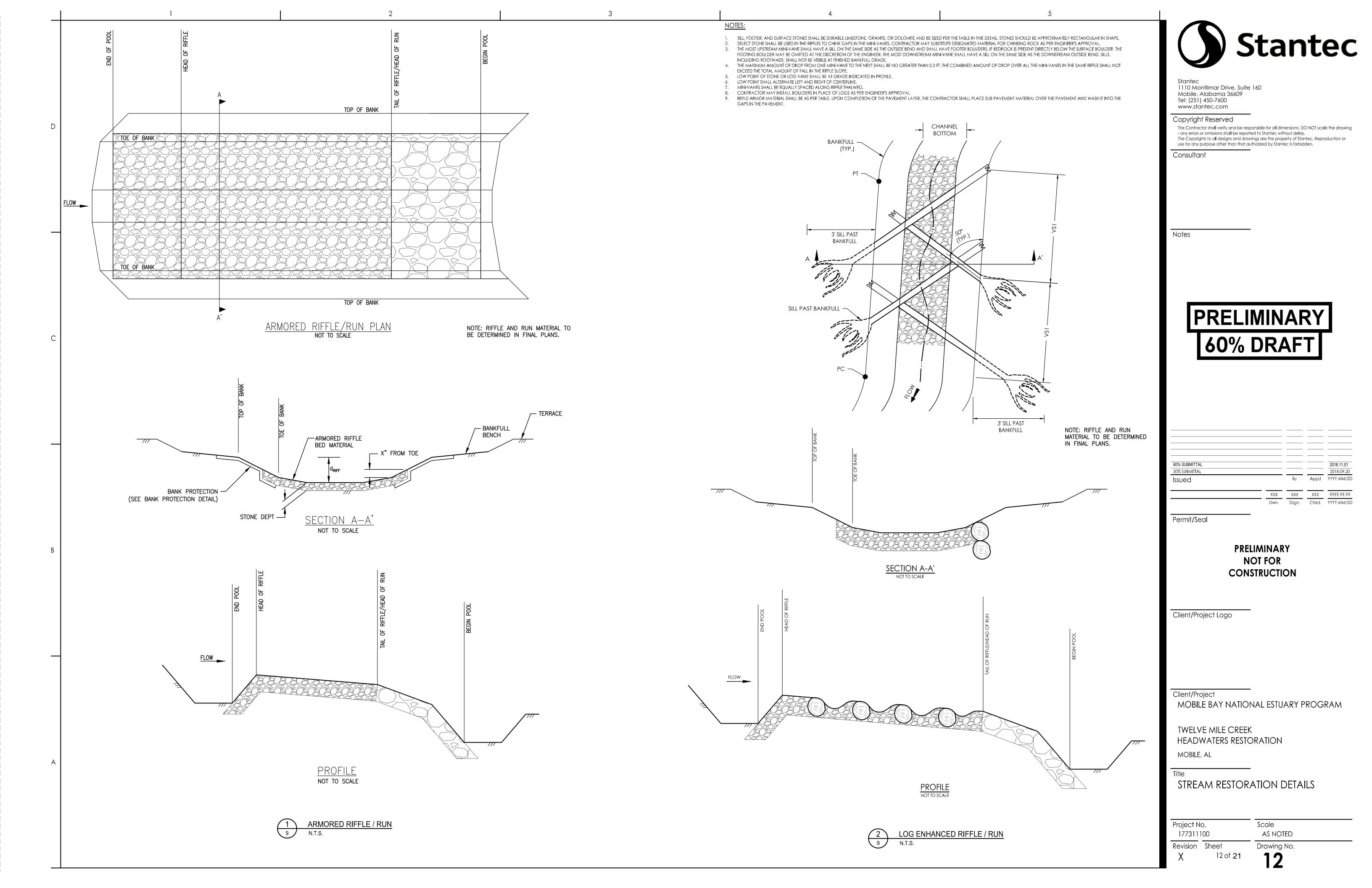
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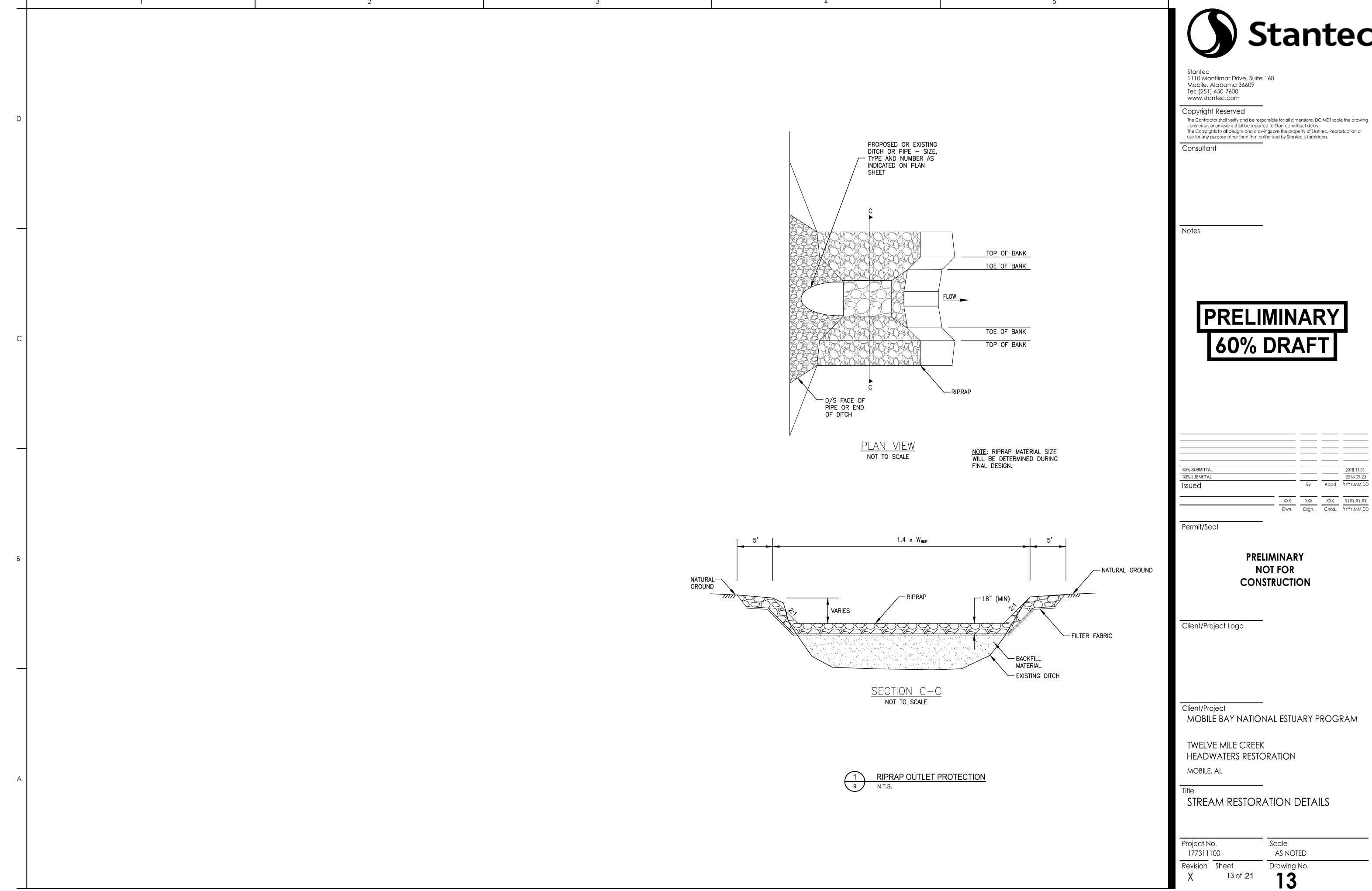
Revision Sheet

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Scale
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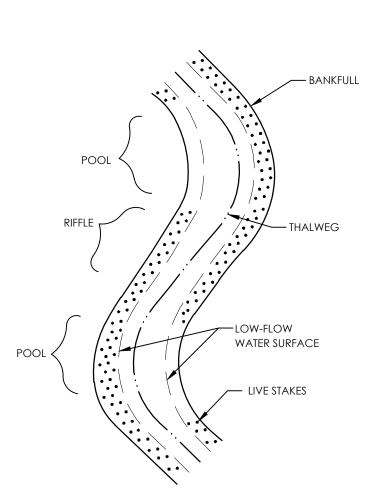


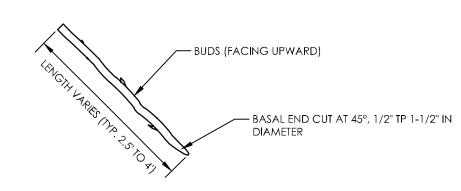




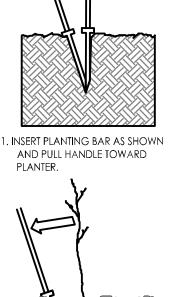
2' (MIN) COIR FIBER MATTING -PROPOSED BANKFULL — TOE MATTING INTO CHANNEL BED BY COIR MATTING FROM TOE OF INSTALLING BED MATERIAL AFTER — CHANNEL TO 2 FT. BEYOND -PROPOSED INSTALLATION OF MATTING BANKFULL CHANNEL TOE -- SEED AND STRAW - 2"X2"X18" HARDWOOD STAKES ON 2' - ANCHORS ON 3' CENTERS 2"X2"X18" HARDWOOD STAKES ON 2' CENTERS w/ 2" GALVANIZED ROOFING NAIL AT THE TOP TO SECTION A-A HOLD MATTING - PROPOSED BANKFULL COIR MATTING SHALL BE PLACED . ALONG THE OUTSIDE OF ALL BENDS AND ALONG BOTH SIDES OF THE COIR MATTING FROM TOE OF SLOPE CHANNEL IN RIFFLE AREAS. Bankfull to — 2 FT. BEYOND BANKFULL 6" MIN. VERTICAL\_\_\_  $-- 700 \,\mathrm{g/m^2}$ COIR FIBER MATTING 6" MIN. HORIZONTAL OVERLAP SECTION B-B 1. ALL MATERIALS ARE TO BE APPROVED BY ENGINEER OR ENGINEER'S ONSITE CONSTRUCTION 6" MIN.— 2. BEFORE INSTALLING COIR MATTING, TILL UPPER 3"-4" OF SOIL TO HELP VEGETATION TO — 2' LONG 1" x 2" WOOD STAKES HORIZONTAL ESTABLISH. RAKE SOIL LEVEL AND ADD SEED AND MULCH BEFORE INSTALLING COIR FIBER MATTING STAKING VIEW W/ 2" GALVANIZED ROOFING NAIL OVERLAP AT THE TOP TO HOLD MATTING 3. MATTING SHALL TERMINATE AND BE BURIED AT THE EDGE OF CHANNEL SUBSTRATE. MATTING SHALL NOT EXTEND BELOW LOW-FLOW STAGE IN TWO-STAGE RIFFLE.

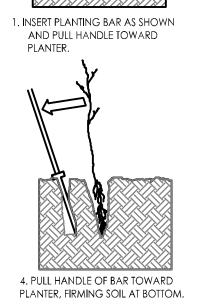


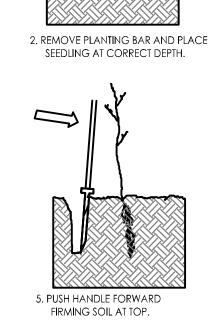


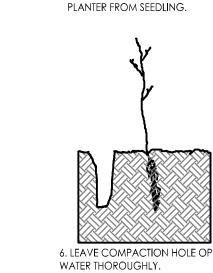


- 1. LIVE STAKES SHALL BE INSTALLED WHERE INDICATED ON THE DRAWINGS AND DETAILS.
- LIVE STAKES SHALL BE CUT FROM AN APPROVED SOURCE WITH A SHARP TOOL. STAKE SHALL BE FREE FROM DISEASE OR EXCESS DEAD TWIGS, 2.5 TO 4 FEET IN LENGTH WITH A BASAL END 0.5 TO 1.5 INCH IN DIAMETER. PRIOR TO INSTALLATION BASAL END SHALL BE CUT AT A 45 DEGREE ANGLE AND THE TOP END SHALL BE CUT FLAT WITHOUT CRACKS.
- 3. LIVE STAKES SHALL BE INSTALLED BY GENTLY TAMPING INTO THE SOIL LEAVING 20% EXPOSED. STAKES SHALL BE PLACED IN A RANDOM PATTERN AT A RATE OF 1 LIVE STAKE PER SQUARE YARD ALONG BANKS FOR 8 FEET WIDTH.
- 4. LIVE STAKES SHALL BE INSTALLED WHEN THEY ARE DORMANT, WHICH TYPICALLY OCCURS BETWEEN OCTOBER 31 AND MARCH 31.
- 5. SEE PLANTING SCHEDULE.





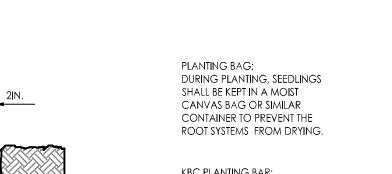


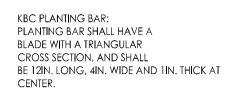




3. INSERT PLANTING BAR 2IN. TOWARD

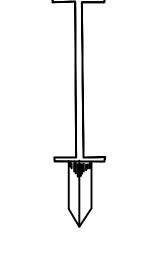






- BANKFULL BENCH

ROOT PRUNING: ALL SEEDLINGS SHALL BE ROOT PRUNED, IF NECESSARY, SO THAT NO ROOTS EXTEND MORE THAN 10 INCHES (10IN.) BELOW THE ROOT COLLAR.



### NOTES:

- 1. TREE REFORESTATION SHALL BE PLANTED 6' TO 10' ON CENTER, RANDOM SPACING, AVERAGING 8' ON CENTER, APPROXIMATELY 680 PLANTS PER ACRE.
- 2. OTHER PLANTING METHOD CAN BE USED WITH THE PERMISSION OF THE PLANTING SUPERVISOR.
- 3. ALL MATERIALS ARE TO BE APPROVED BY ENGINEER OR ENGINEER'S ONSITE CONSTRUCTION MANAGER.



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Notes

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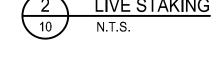
MOBILE BAY NATIONAL ESTUARY PROGRAM

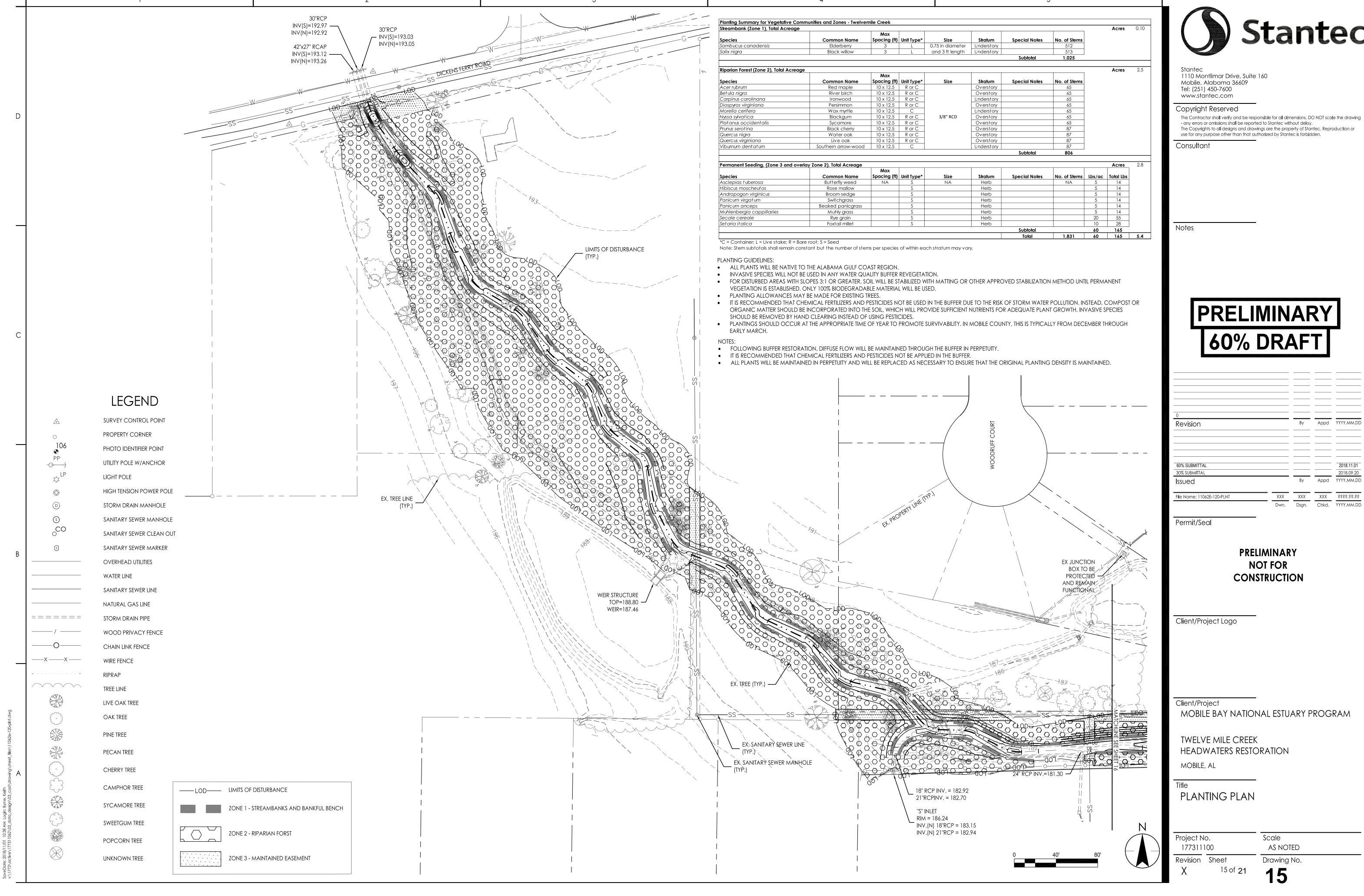
TWELVE MILE CREEK HEADWATERS RESTORATION

MOBILE, AL

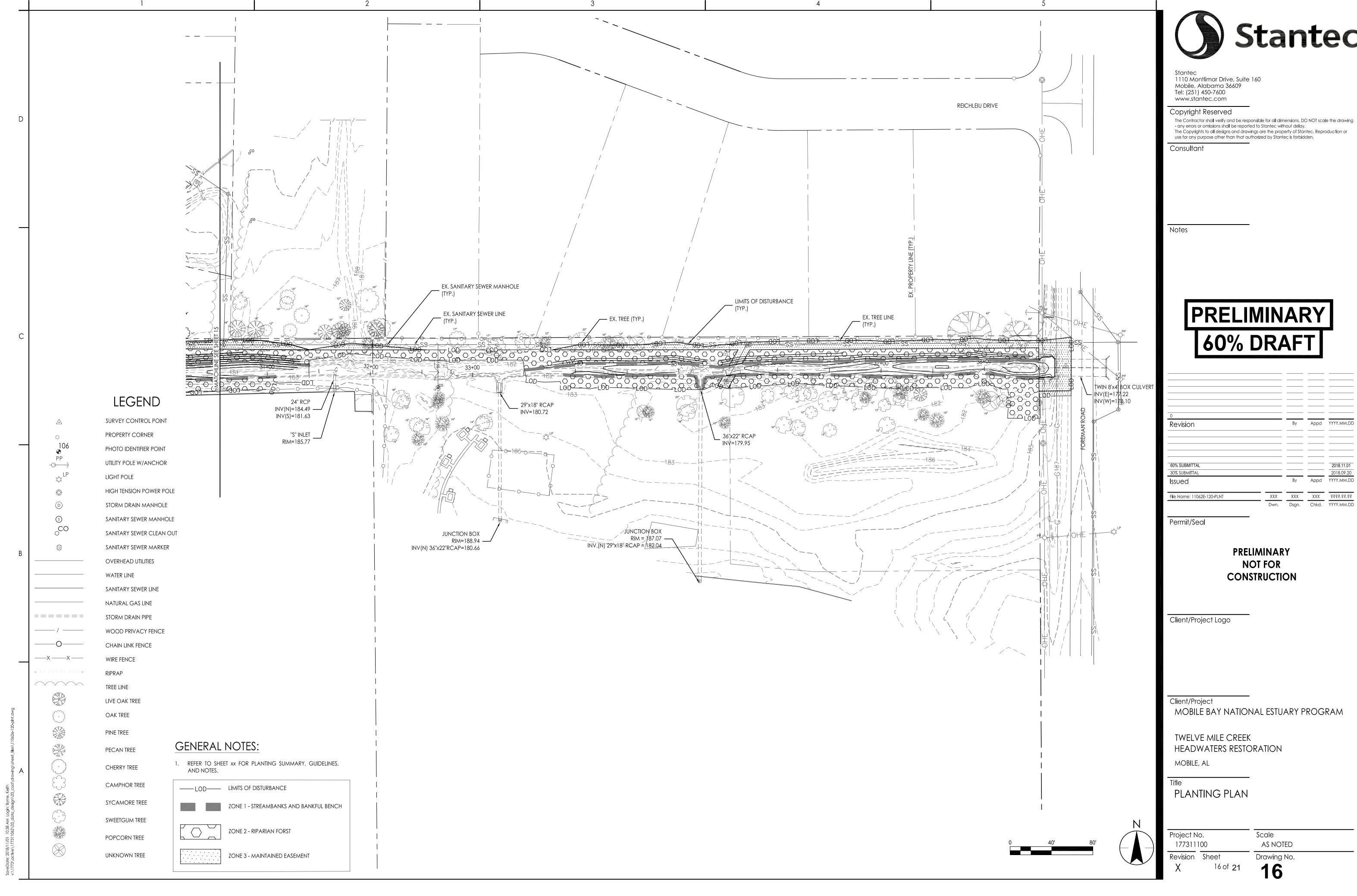
STREAM RESTORATION DETAILS

Project No. 177311100 Revision Sheet Scale AS NOTED Drawing No.



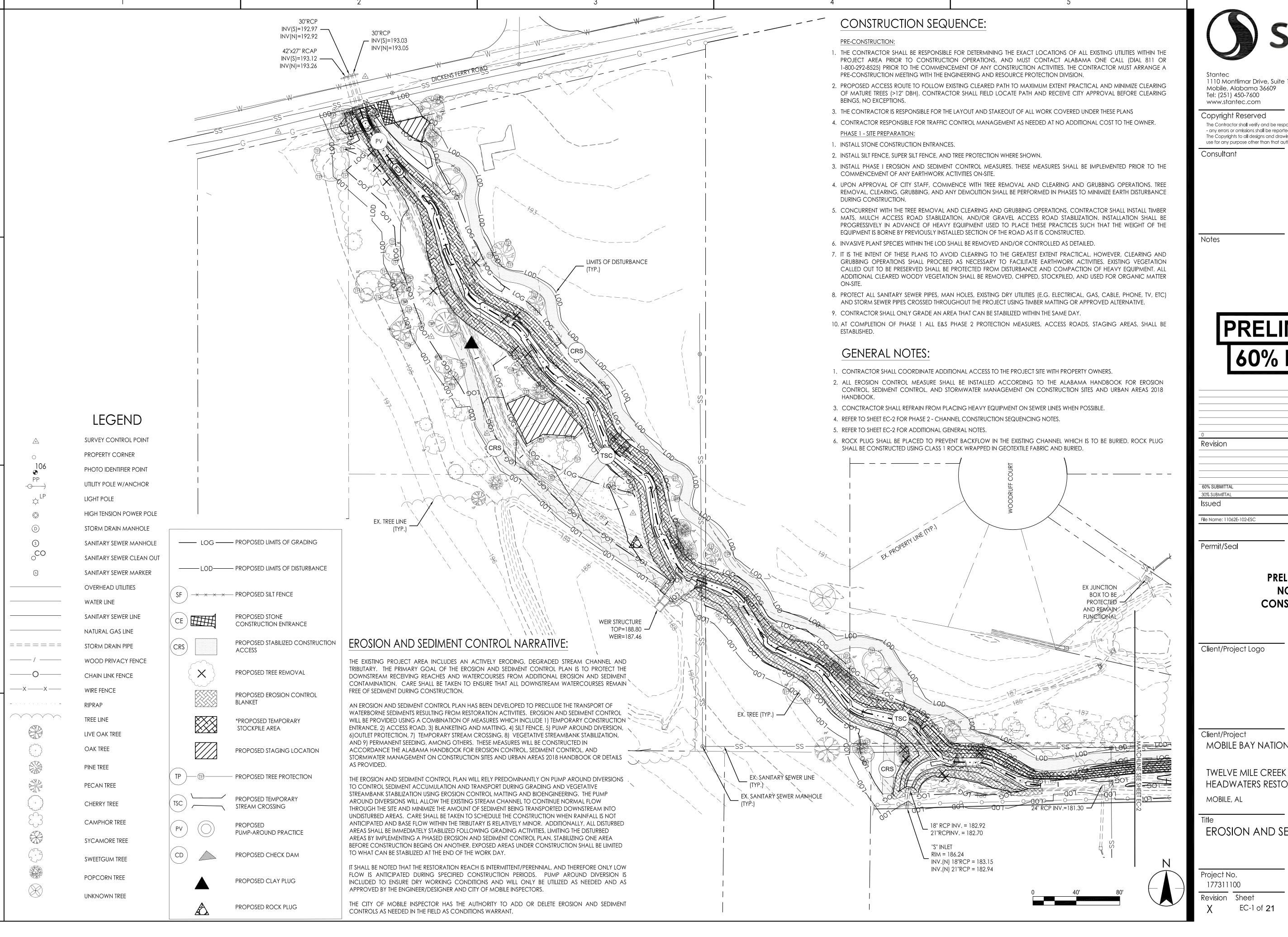


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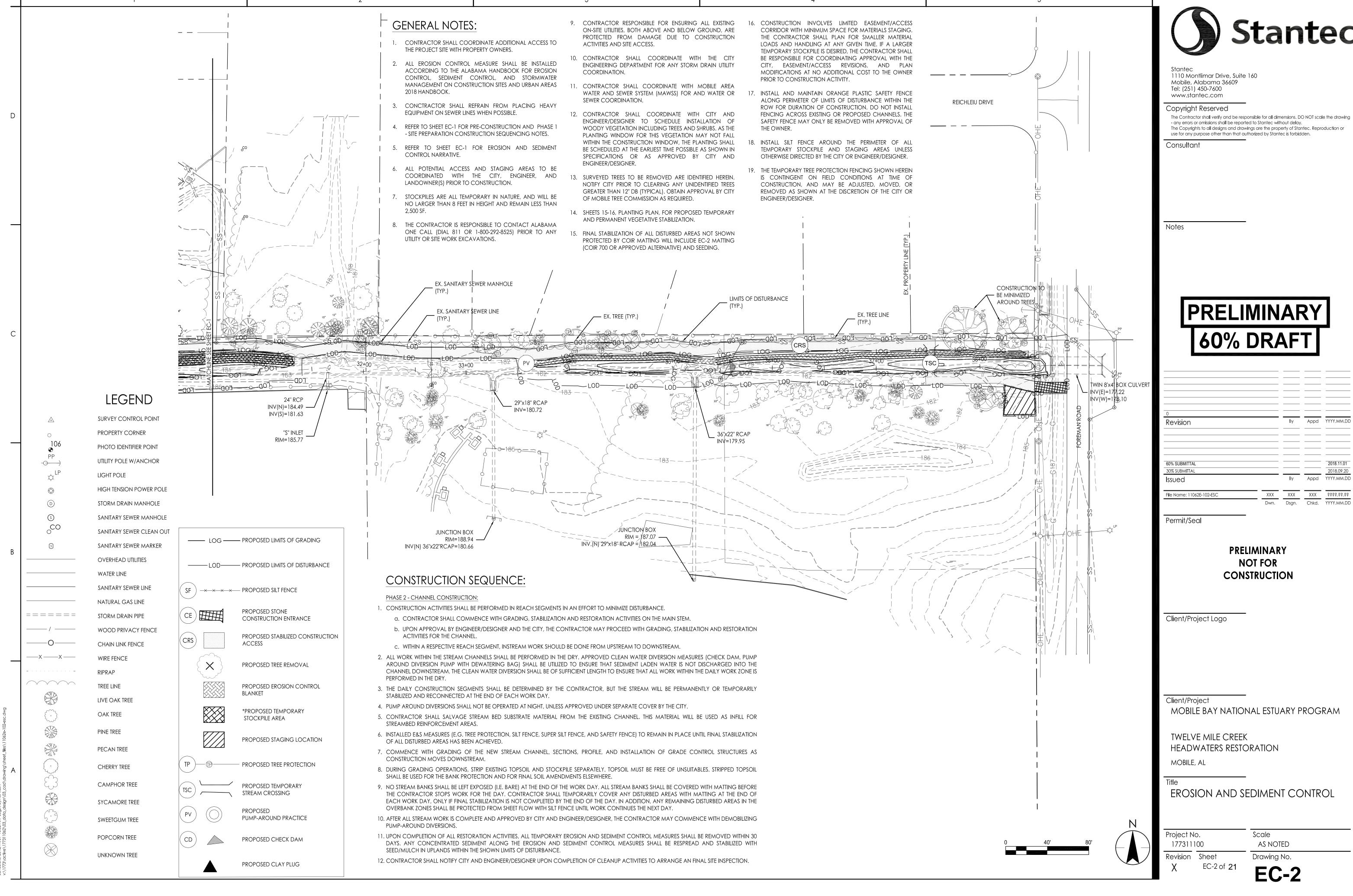
MOBILE BAY NATIONAL ESTUARY PROGRAM

HEADWATERS RESTORATION

**EROSION AND SEDIMENT CONTROL** 

Scale AS NOTED

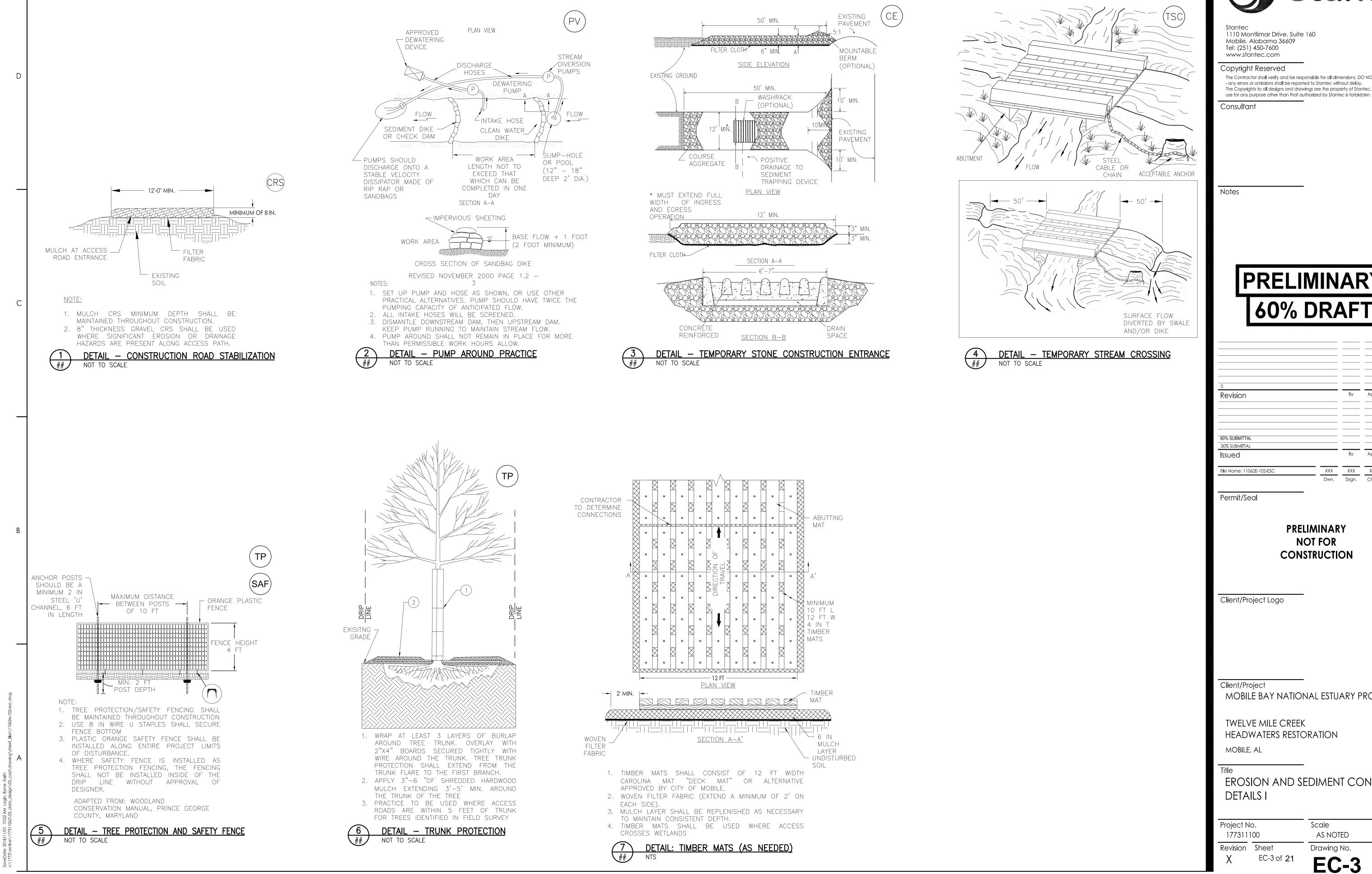
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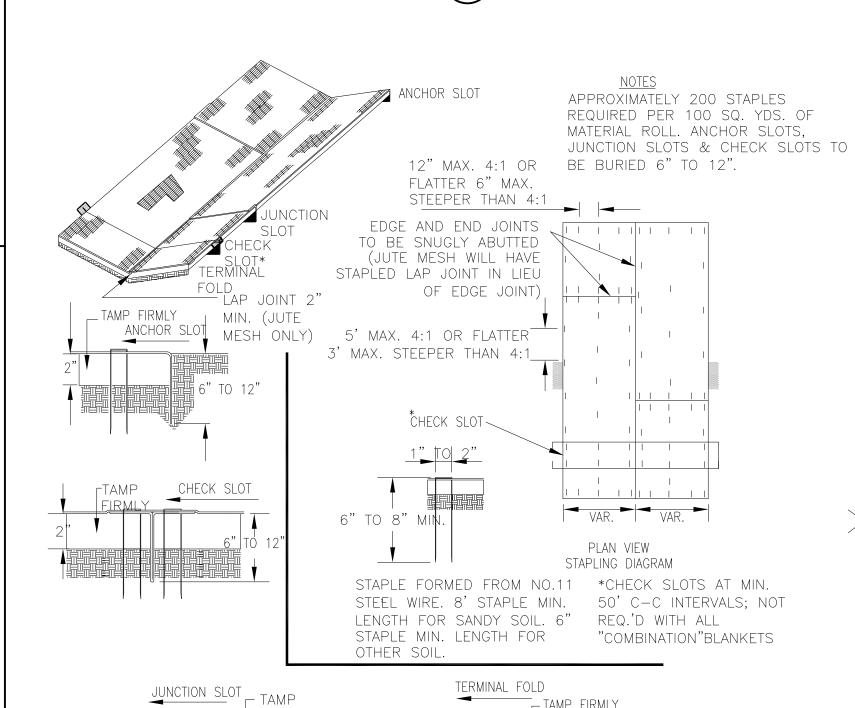
MOBILE BAY NATIONAL ESTUARY PROGRAM

EROSION AND SEDIMENT CONTROL

APPLICABLE SLOPE RANGE	PRODUCT NAME	WEIGHT/SY (OZ)	OPEN AREA (%)	WET TENSILE STRENGTH (LB/IN) (MD-TD)	ELONGATION AT FAILURE (%)	MAX ALLOWABLE SHEAR STRESS (LB/FT)	MAX ALLOWABLE VELOCITY (FT/S)
2:1 OR STEEPER	NAG C700BN <sup>1</sup>	74	50.00	1271/834	39/41	2.35	10.00
3:1 - 2:1	GEOCOIR 700 <sup>1</sup>	20.60	50.00	86/41	64/48	4.46	10.00
SHALLOWER THAN 3:1	EXCEL SR-1 ALL NATURAL	8.00	22.00	9.0/6.3	20/20	1.60	5.00

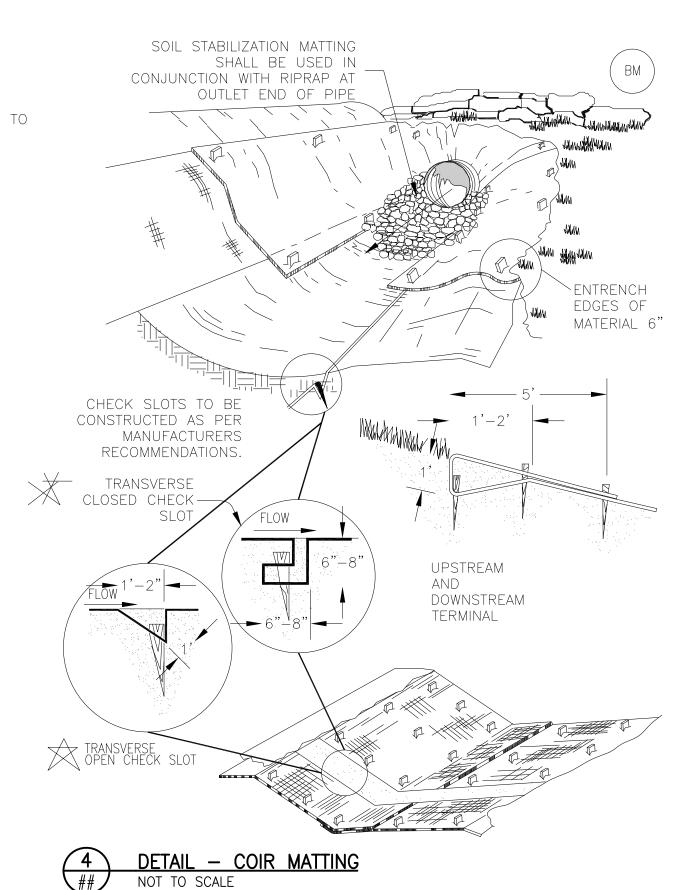
1. OR APPROVED ALTERNATIVE 2. MATTING THAT USES PLASTIC NETTING WILL NOT BE APPROVED

> DETAIL - EROSION CONTROL MATTING SPECIFICATION NOT TO SCALE





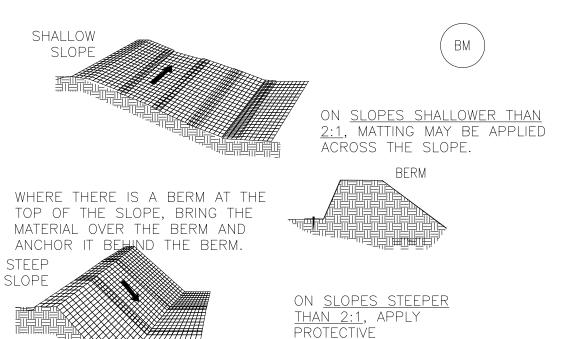
FIRMLY



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LEVEL AREA BEFORE TERMINATING THE INSTALLATION. TURN THE END UNDER 4" AND STAPLE AT 12" INTERVALS.

DETAIL - COIR INSTALLATION

BRING MATERIAL DOWN TO A

NOT TO SCALE

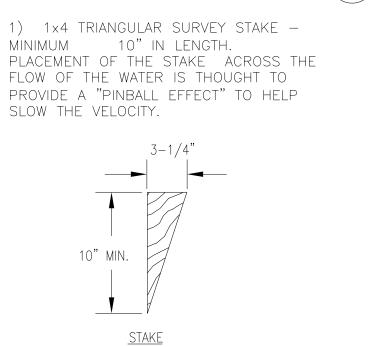
IN DITCHES, APPLY PROTECTIVE COVERING PARALLEL TO THE DIRECTION OF FLOW. USE CHECK SLOTS AS REQUIRED. AVOID JOINING MATERIAL IN THE CENTER OF THE DITCH IF AT ALL POSSIBLE.

COVERING PARALLEL

TO THE DIRECTION

OF FLOW AND ANCHOR SECURELY.





( BM )

DETAIL - MATTING ANCHORS



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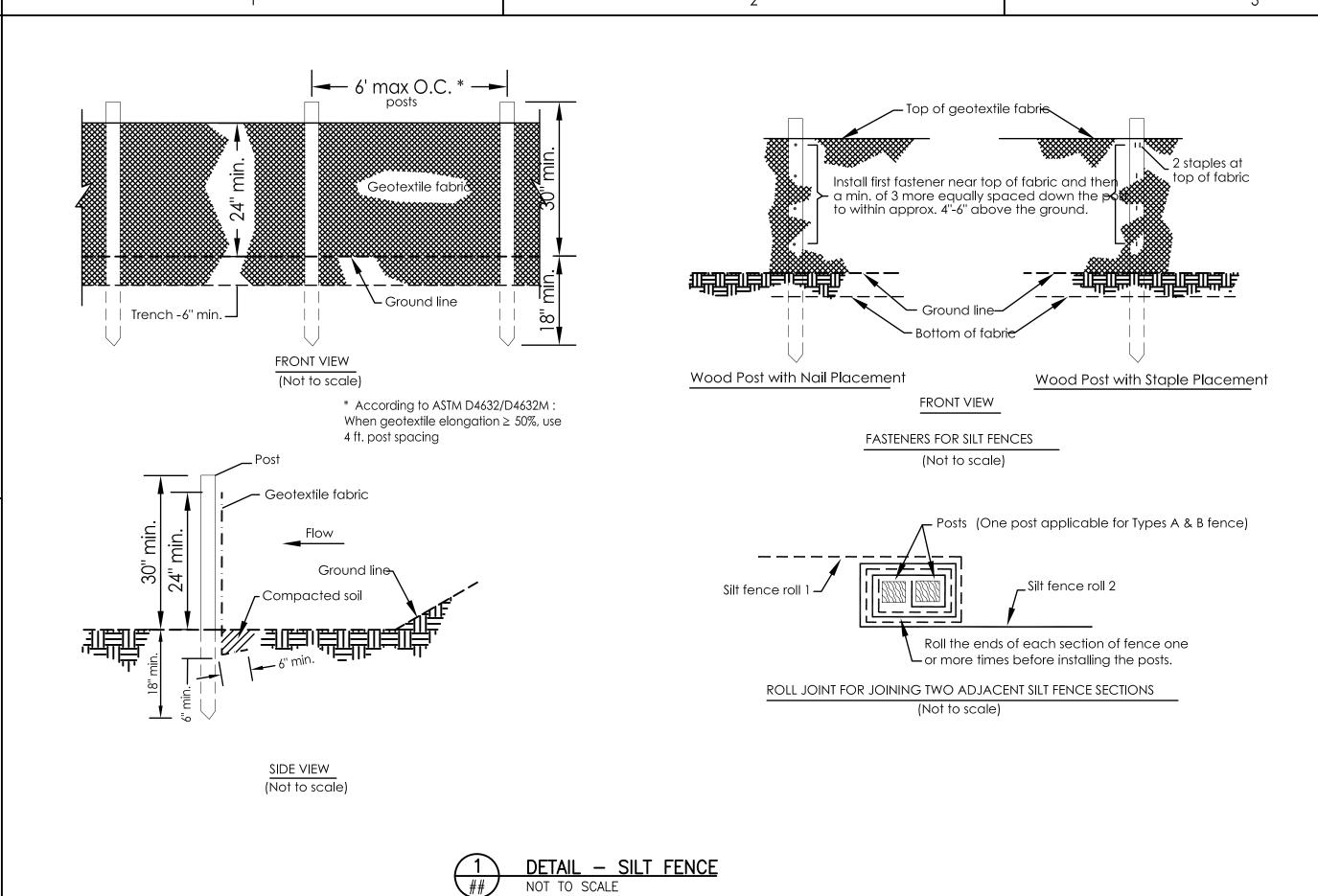
TWELVE MILE CREEK HEADWATERS RESTORATION

MOBILE, AL

EROSION AND SEDIMENT CONTROL **DETAILS II** 

Scale Project No. 177311100 AS NOTED Revision Sheet Drawing No.

EC-4 of **21** 



SIDE VIEW (Not to scale)

DETAIL - ROCK CHECK DAM

**∽** Geotextile

FRONT VIEW

(Not to scale)

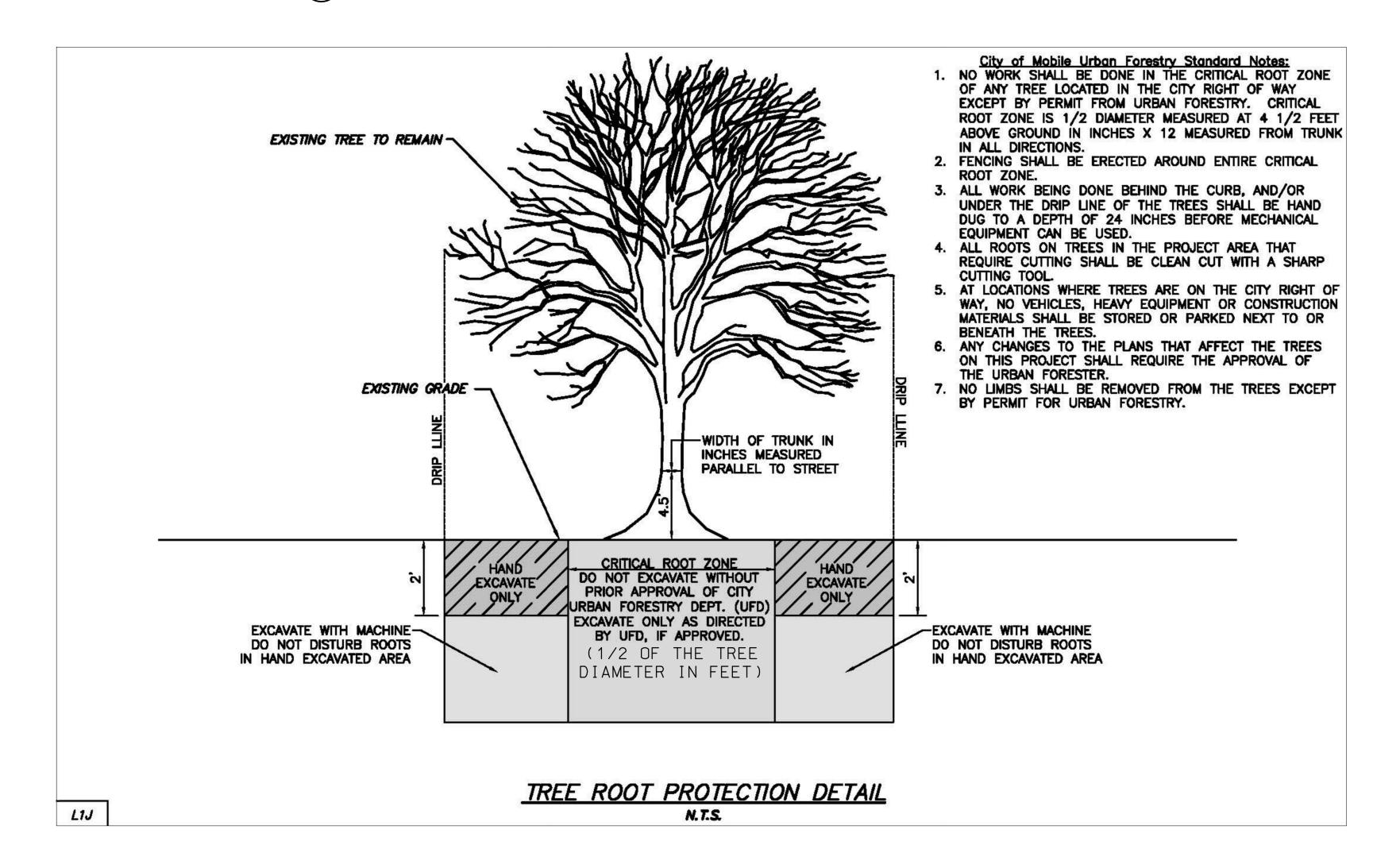
Existing ground

or flatter

\_\_\_ 2' (min. overflow depth + freeboard)

- Ground line

8' max. @ center





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Client/Project

MOBILE BAY NATIONAL ESTUARY PROGRAM

TWELVE MILE CREEK
HEADWATERS RESTORATION

MOBILE, AL

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EROSION AND SEDIMENT CONTROL DETAILS III

Project No. 177311100

AS NOTED

Drawing No.

Scale

Revision Sheet Drawing

X EC-5 of 21