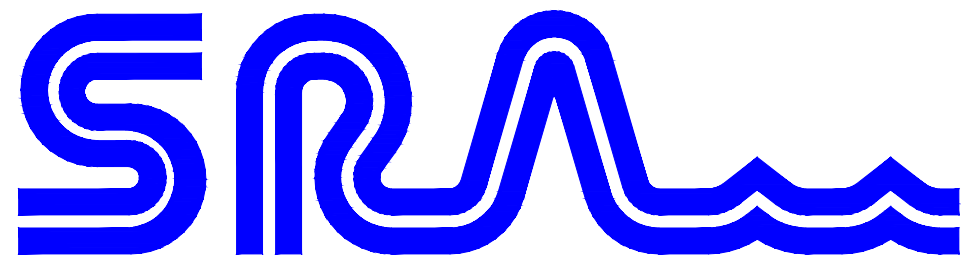
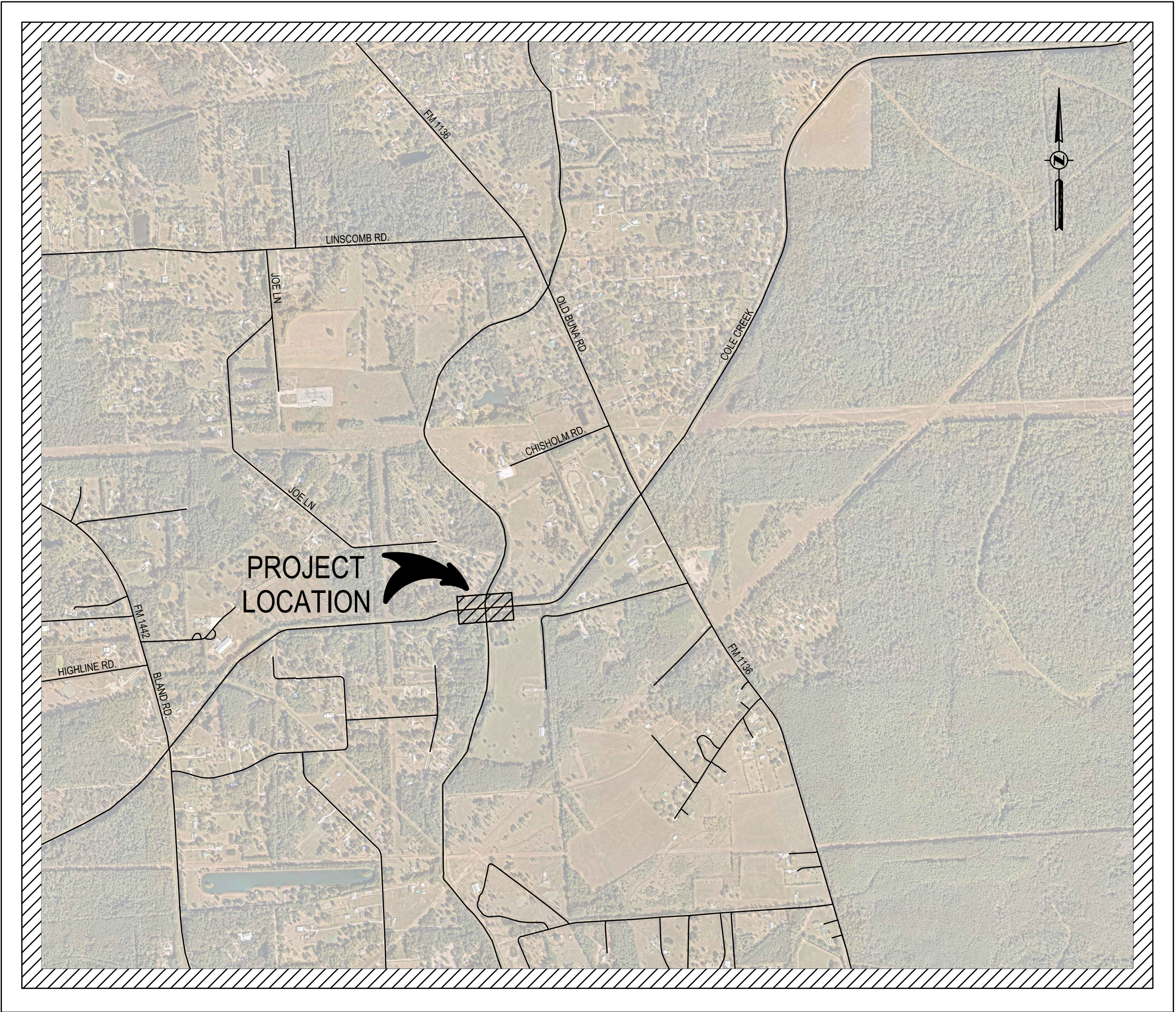


SABINE RIVER AUTHORITY



COLE CREEK SIPHON PROJECT



PROJECT LOCATION

N.T.S.

PREPARED BY:



GANNETT FLEMING

3100 W. ALABAMA
HOUSTON, TEXAS 77098
(713) 520-9570
T.B.P.E.L.S. FIRM REGISTRATION #1800

JULY 2025

INDEX OF DRAWINGS	
SHEET No.	TITLE
1	COVER SHEET
2	CONSTRUCTION NOTES
3	EXISTING SITE PLAN
4	PROPOSED SITE PLAN
5	PROPOSED PLAN AND PROFILE
6	PROPOSED SECTIONS
7	PROPOSED SIPHON AND HEADWALL PLANVIEW
8	HEADWALL PLAN VIEW AND ELEVATION
9	HEADWALL DETAILS
10	MISCELLANEOUS DETAILS
11	ACCESS ROUTE
12	TEMPORARY LOW WATER CROSSING



BY: Yvonne Rivera
YVONNE RIVERA, P.E. No. 87863

07/07/2025
DATE

CONSTRUCTION NOTES:

1. ALL ELEVATIONS SHOWN ARE NAVD 88 DATUM.
2. CONTRACTOR TO VERIFY LOCATION AND ELEVATION FACILITES PRIOR TO CONSTRUCTION OF PROPOSED FACILITIES.
3. PLAN AND PROFILE STATIONING IS BASED ON CENTERLINE STATIONING UNLESS OTHERWISE SHOWN.
4. SPOIL FORM CONSTRUCTION SHALL BE REDISTRIBUTED AT CONSTRUCTION SITE PER SRA DIRECTION.
5. ALL AREAS DISTRUBED BY CONSTRUCTION ACTIVITY SHALL BE RESTORED TO AN EQUAL OR BETTER CONDITION AT THE EXPENSE OF THE CONTRACTOR.
6. UTILITIY LOCATIONS AND OTHER OBSTRUCTIONS SHOWN ON THE PLANS ARE FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT EXACT. THE ENGINEER AND THE OWNER ASSUME NO RESPONSIBILITY FOR VARIATION IN LOCATION AND GRADES, CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING FACILITES PRIOR TO CONSTRUCTION OF PROPOSED FACILITIES. DISCREPANCIES BETWEEN THE TWO SHALL BE IMMEDIATELY REPORTED TO THE OWNER OR ENGINEER.
7. CONTRACTOR WILL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES WITH EXISTING FACILITES IN THE AREAS OF CONSTRUCTION 48-HOURS PRIOR TO CONSTRUCTION IN AREAS OF POSSIBLE UNDERGROUND UTILITIES WHICH MAY OR MAY NOT BE SHOWN ON DRAWING. CONTRACTOR IS RESPONSIBLE FOR MAKING THE TEXAS ONE CALL AND FOLLOWING ALL REQUIRMENTS SET FORTH THROUGH THAT AGENCY.
8. ANY EXCESS SOIL THAT IS NOT HAULED OFF MAY HE USED AS FILL FOR RUTS AND BACKFILL TO RESHAPE DRAINAGE DITCH. ANY FILL SHALL BE PLACED AND GRADED TO FACILITATE DRAINAGE. EXISTING SURFACE DRAINAGE SHALL NOT BE IMPAIRED.
9. ALL DISTURBED AREAS SHALL BE SEEDED TO PREVENT EROSION.
10. ALL PROPOSED CONSTRUCTION SHALL BE PREFORMED WITHIN THER BOUNDARY OF THE SRA PROPERTY AND/OR EASEMENTS UNLESS OTHERWISE APPROVED.
11. ALL MATERIAL SUCH AS TREES, DIRT, SHRUBS, ROOTS, BROKEN CONCRETE, ASPHALT, AND OTHER DEBRIS ENCOUNTERED AND REMOVED DURING CONSTRUCTION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF BY CONTRACTOR AT CONTRACTOR'S EXPENSE.
12. ALL SIPHON PIPE AND OTHER DRAINAGE FACILITES SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION OPERATIONS. CULVERTS, ETC. DAMAGED AS A RESULT OF CONTRACTOR'S NEGLIGENCE SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.
13. THE CONTRACTOR SHALL INFORM UTILITY OWNERS SUFFICIENTLY IN ADVANCE OF THE CONTRACTOR'S OPERATIONS TO ENABLE SUCH UTILITY OWNERS TO REROUTE, PROVIDE TEMPORARY DETOURS, OR TO MAKE OTHER ADJUSTMENTS TO UTILITY LINES IN ORDER THAT THE CONTRACTOR MAY PROCEED WITH HIS WORK WITH A MINIMUM AMOUNT OF DELAY AND EXPENSE. THE CONTRACTOR SHALL COOPERATE WITH ALL UTILITY OWNERS CONCERNED IN EFFECTING ANY UTILITY ADJUSTMENTS NECESSARY AND SHALL NOT HOLD THE OWNER LIABLE FOR ANY EXPENSES DUE TO DELAY OR ADDITIONAL WORK BECAUSE OF CONFLICTS.
14. CONTRACTOR SHALL FURNISH, ERECT, AND MAINTAIN ALL BARRICADES, WARNING SIGNS, AND MARKINGS FOR HAZARDS NECESSARY TO PROTECT THE PUBLIC AND THE WORK SITE. WHEN USESD DURING PERIODS OF DARKNESS, SUCH BARRICADES, WARNING SIGNS AND HAZARD MARKINGS SHALL BE SUITABLY ILLUMINATED. ALL TRAFFIC CONTROL DEVICES AND THEIR PLACEMENT SHALL BE IN ACCORDANCE WITH THE LATEST TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
15. THE CONTRACTOR SHALL PROVIDE A TELEPHONE NUMBER AND OTHER CONTACT INFORMATION TO SRA DURING CONSTRUCTION. THE CONTRATOR SHALL BE ON-CALL DURING CONSTRUCTION 24-HOURS EACH DAY, SEVEN DAYS PER WEEK.
16. CONTRACTOR SHALL KEEP A MINIMUM OF ONE COMPLETE SET OF CONSTRUCTION DRAWINGS AND SPECIFICATIONS ON-SITE AT ALL TIMES.
17. ANY WORK THAT IS CALLED FOR IN THE PLANS THAT IS NOT INCLUDED IN A SPECIFIC BID ITEM SHALL BE CONSIDERED INCIDENTAL TO THE APPROPRIATE BID ITEMS, WITH NO ADDITIONAL COST TO THE OWNER.
18. THE ENGINEER SHALL VIDEO ALL ROADWAYS, RIGHT-OF-WAY, ACCESS POINTS, AND EASEMENTS IN WHICH WORK SHALL BE PERFORMED OR USED TO ACCESS THE PROJECT SITE. THE CONTRACTOR SHALL BE REQUIRED TO REPAIR ANY DAMAGES CAUSED BY HIS OPERATIONS, EMPLOYEES, SUB-CONSULTANTS, OR SUPPLIERS TO THESE AREAS (INCLUDING ROADS). THE CONTRACTOR SHALL RETURN THOSE AREAS TO PRE-CONSTRUCTION CONDITIONS (AS SHOWN ON THE VIDEO) OR BETTER, PAYMENT FOR THIS WORK SHALL BE CONSIDERED SUBSIDIARY TO "MOBLIZATION".
19. INGRESS AND EGRESS ADJACENT TO THE PROJECT SHALL MAINTAINED BY THE CONTRACTOR AT ALL TIMES. THE CONTRACTOR WILL BE RESPONSIBLE FOR KEEPING MUD AND DEBRIS OFF EXISTING PUBLIC STREETS ADJACANT TO THE SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLOSING AND SECURING ALL ACCESS GATES WHEN ENTERING AND LEAVING SITE.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL MATERIAL TESTING REQUIRED IN THE PROJECT THROUGH AN OWNER APPROVED TESTING LABORATORY. THE OWNER SHALL PAY FOR ALL MATERIAL TESTING.
21. NOTE-INGROUND CONCRETE REMNANTS TO BE REMOVED BY CONTRACTOR. CONCRETE MAY BE REUSED AS RIP RAP, IF IT MEETS SPECIFICATIONS.

STRUCTURAL

GENERAL

1. CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH APPLICABLE OSHA, STATE, AND LOCAL REGULATIONS. THIS DESIGN IS NOT INTENDED TO CONFLICT WITH SAFETY OR APPLICABLE REGULATIONS OR TO RELIEVE THE CONTRACTOR OF COMPLIANCE WITH THESE REQUIREMENTS. IN CASE OF CONFLICT WITH SAFETY OR APPLICABLE REGULATIONS, CONTACT THE ENGINEER FOR GUIDANCE BEFORE PROCEEDING WITH FABRICATION OR CONSTRUCTION.
2. PRIOR TO FABRICATION OR CONSTRUCTION:

A. FIELD VERIFY ALL EXISTING CONDITIONS, INCLUDING LOCATION AND DIMENSIONS OF ALL EXISTING CONSTRUCTION AND UTILITIES.

B. NOTIFY OWNER'S REPRESENTATIVE OF ANY CONSTRUCTABILITY ISSUES OR DISCREPANCIES REGARDING EXISTING CONDITIONS.
3. REMOVE ALL ABANDONED FOUNDATIONS, UTILITIES, PIPELINES, ETC THAT INTERFERE WITH NEW CONSTRUCTION.
4. PROVIDE EXCAVATION SHORING TO PROTECT AND SUPPORT FOUNDATION SOILS UNDER EXISTING STRUCTURES.
5. THE STRUCTURE IS DESIGNED FOR STABILITY IN THE FINAL CONDITION ONLY. PROVIDE TEMPORARY BRACING AND SHORING AS REQUIRED FOR STABILITY DURING CONSTRUCTION.
6. PLANS, SECTIONS, AND DETAILS ARE NOT TO BE SCALED FOR DETERMINATION OF QUANTITIES, LENGTHS, OR FIT OF MATERIALS.

FOUNDATION

1. FOUNDATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT "GEOTECHNICAL ENGINEERING REPORT - COLE CREEK SIPHON REPLACEMENT - SABINE RIVER AUTHORITY OF TEXAS - MAURICEVILLE, TEXAS", DATED AUGUST 20, 2024, PREPARED BY TOLUNAY-WONG ENGINEERS, INC. 2455 WEST CARDINAL DR, SUITE A BEAUMONT, TX 77705, TWE PROJECT NO. 24.23.122 / REPORT NO. 156201.
2. EXCAVATION DESIGN AND SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR. ANY SLOPES SHOWN ARE A MAXIMUM AND SHALL BE DECREASED AS REQUIRED FOR SAFETY OR TO MEET OSHA REQUIREMENTS.
3. EXCAVATION AND SUBGRADE PREPARATION.

A. REMOVE THE SURFICIAL VEGETATION, WASTE AND LOOSE SOILS TO A MINIMUM DEPTH OF 12 INCHES.

B. EXCAVATE THE SITE TO 2'-0" BEYOND THE PERIMETER OF THE FOUNDATION.

C. SCARIFY THE EXPOSED SUBGRADE TO A DEPTH OF 6 INCHES, ADJUST THE MOISTURE CONTENT AS NECESSARY AND MAINTAIN IT TO WITHIN 2 PERCENT OF OPTIMUM AND RECOMPACT THE SOIL TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 (STANDARD PROCTOR).

D. BACKFILL SHALL BE PLACED IN MAXIMUM 8" LOOSE LIFTS FOR HEAVY EQUIPMENT AND LOOSE LIFTS FOR HAND-DIRECTED EQUIPMENT. COMPACT TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 (STANDARD PROCTOR), AND AT A MOISTURE CONTENT WITHIN -2 TO 2 PERCENT OF THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D698. IN-PLACE FIELD DENSITY TESTS SHALL BE CONDUCTED AT A RATE OF ONE TEST PER 3,000 SQUARE FEET FOR EVERY LIFT.

E. THE SUBGRADE MOISTURE CONTENT AND DENSITY SHALL BE MAINTAINED DURING CONSTRUCTION.
4. BACKFILL SHALL BE AS INDICATED IN DRAWINGS.
5. ALL FOUNDATIONS SHALL BEAR ON SOUND, UNDISTURBED, LEVEL EXCAVATIONS. REMOVE ANY AND ALL LOOSE DEBRIS FROM EXPOSED BEARING SURFACE. SUITABLE BEARING MATERIAL SHALL BE VERIFIED BY A GEOTECHNICAL PROFESSIONAL ENGINEER
6. ALLOWABLE NET BEARING PRESSURES USED FOR FOUNDATION DESIGNS ARE AS FOLLOWS:

A. HEADWALL STRUCTURE 2000 PSF.
7. MOISTURE CONTENT IN FOOTING EXCAVATIONS SHALL BE MAINTAINED UNTIL FOOTING IS PLACED. FOOTINGS SHALL BE PLACED AS SOON AS PRACTICAL AFTER EXCAVATIONS ARE COMPLETED.

CONCRETE

1. CONCRETE CONSTRUCTION SHALL CONFORM TO THE LATEST EDITIONS OF ACI 301 AND ACI 350.
2. CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH AS FOLLOWS:

A. SLABS AND WALLS: 5,000 PSI.

B. W/C RATIO: 0.4 MAXIMUM.

C. AGGREGATE: ASTM C 33, 1" MAXIMUM, CLASS 3M.

D. ENTRAINED AIR: ACI 318, EXPOSURE CLASS F1.

E. SLUMP: 4" (+/-1").
3. ALL REINFORCING SHALL BE IN ACCORDANCE WITH ASTM A615, GRADE 60, DEFORMED.
4. CONCRETE CLEAR COVER OVER REINFORCING SHALL BE AS INDICATED IN DRAWINGS.
5. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4" INSIDE FORMS OR TOOLED TO 3/4" RADIUS ON SLABS UNLESS NOTED OTHERWISE.
6. ALL CONSTRUCTION JOINTS (CJ) SHALL BE THOROUGHLY CLEANED AND PURPOSELY ROUGHENED TO 1/4" PRIOR TO PLACING ADJACENT CONCRETE.
7. PENETRATIONS OTHER THAN SHOWN SHALL NOT BE ALLOWED WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
8. IN CASES WHERE REINFORCING BARS CANNOT BE EXTENDED AS FAR AS REQUIRED DUE TO THE LIMITED EXTENT OF THE ADJACENT CONCRETE STRUCTURE, THE BARS SHALL EXTEND AS FAR AS POSSIBLE AND END IN STANDARD HOOKS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL FORMING, TEMPORARY BRACING AND SHORING.
10. UNLESS NOTED OTHERWISE, HOOKS SHOWN ON DRAWINGS SHALL BE ASSUMED TO BE STANDARD HOOKS PER ACI 318.
11. UNLESS NOTED OTHERWISE, LAP SPLICES IN BEAMS AND WALLS SHALL BE STAGGERED.
12. ALL REINFORCING SHALL BE CONTINUOUS. CONTINUOUS BARS SHALL LAP 48 BAR DIAMETERS OF SMALLER BAR LAPPED, UNLESS NOTED OTHERWISE. ALL REBAR EMBEDMENT LENGTHS SHALL BE 36 BAR DIAMETERS, UNLESS NOTED OTHERWISE.

CONTACT INFORMATION FOR SRA NOTIFICATION AND ACCESS

COMPANY	CONTACT	PHONE NUMBER
SRA NOTIFICATION	DAVID WILLIAMS	409-746-2111

NOTE: ADJACANT LAND OWNER INFORMATION TO BE FURNISHED BY SRA.

Date: 06/13

File Path:
G:\1110\080078 Sabine River Authority Cole
Creek Siphon\01 DESIGN\01_Sheets
DWG. NAME: 02 - CONSTRUCTION NOTES.dwg
Jul 07, 2025 - 10:11am BY USER: bmurray

STATE OF TEXAS

YVONNE RIVERA

113240

PROFESSIONAL ENGINEER

07/07/2025

No.	Revisions	By	Checked	Date

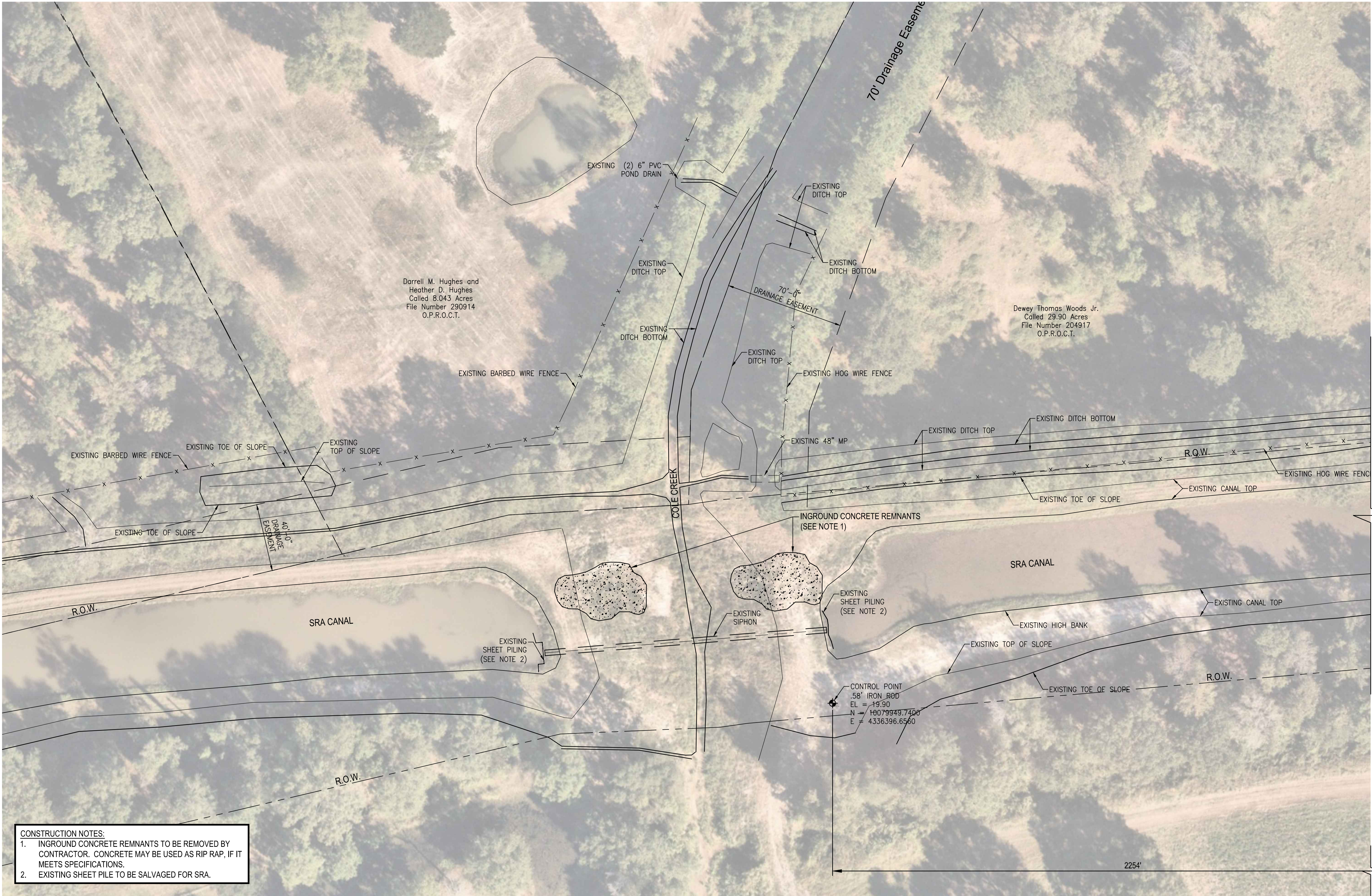
GANNETT FLEMING

3100 W. ALABAMA
HOUSTON, TEXAS 77098
(713) 520-9570
T.B.P.E.L.S. FIRM REGISTRATION #1800

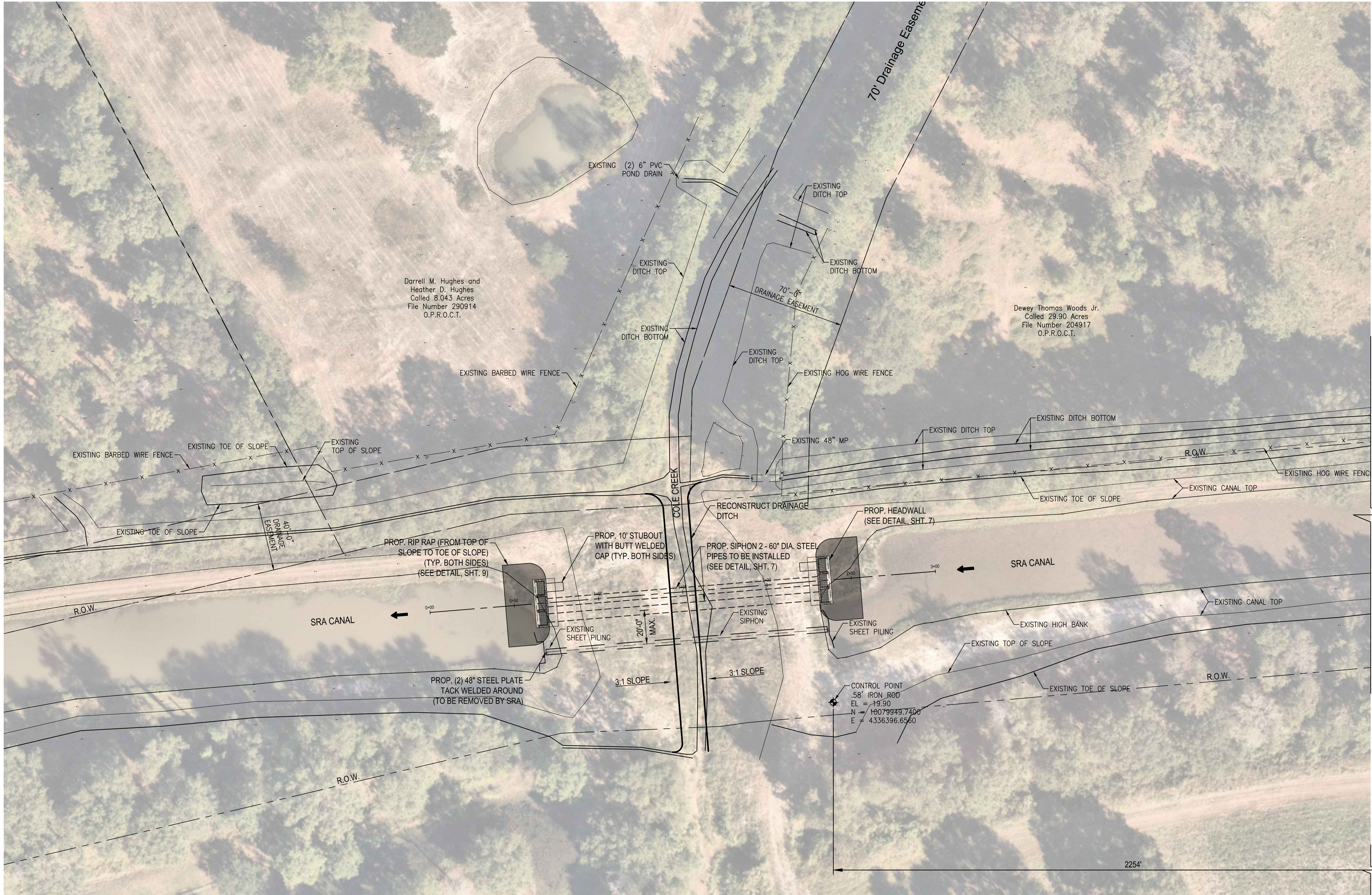
SABINE RIVER AUTHORITY
COLE CREEK SIPHON

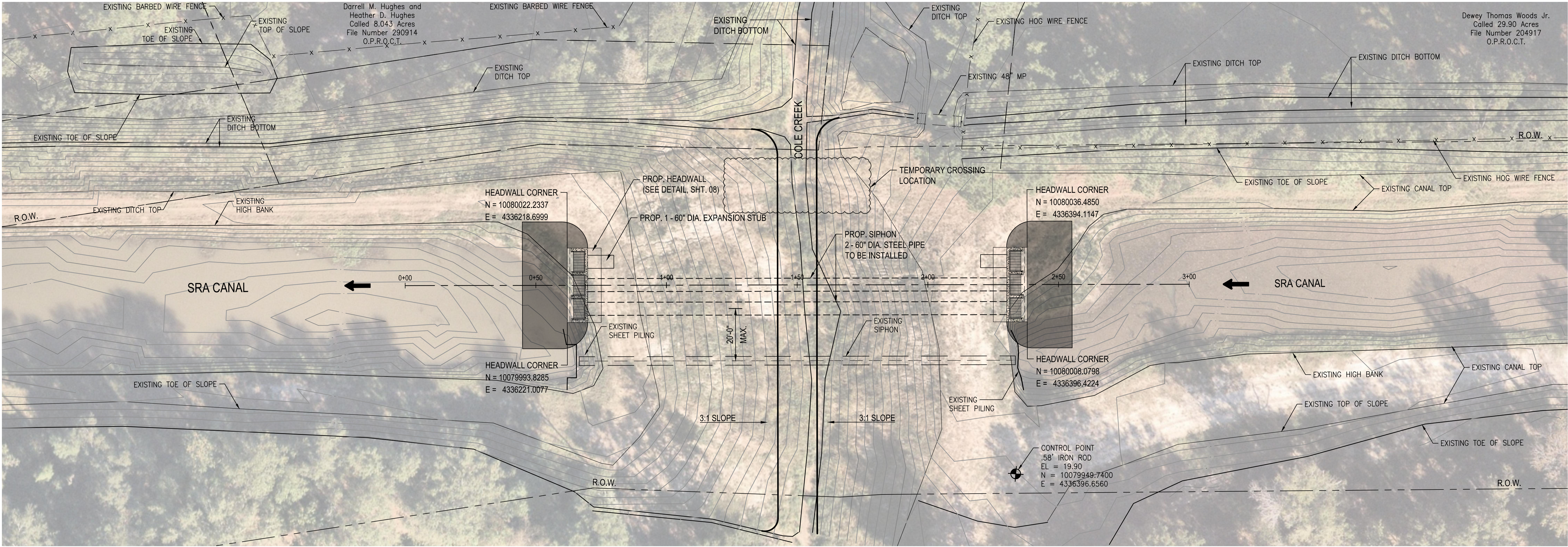
CONSTRUCTION NOTES

Action	Name	Date
Design	YR	06/13
Drawn	BAM	06/13
Checked	YR	06/13
Approved	YR	06/13
Scale	N.T.S.	
Sheet	2 of 12	

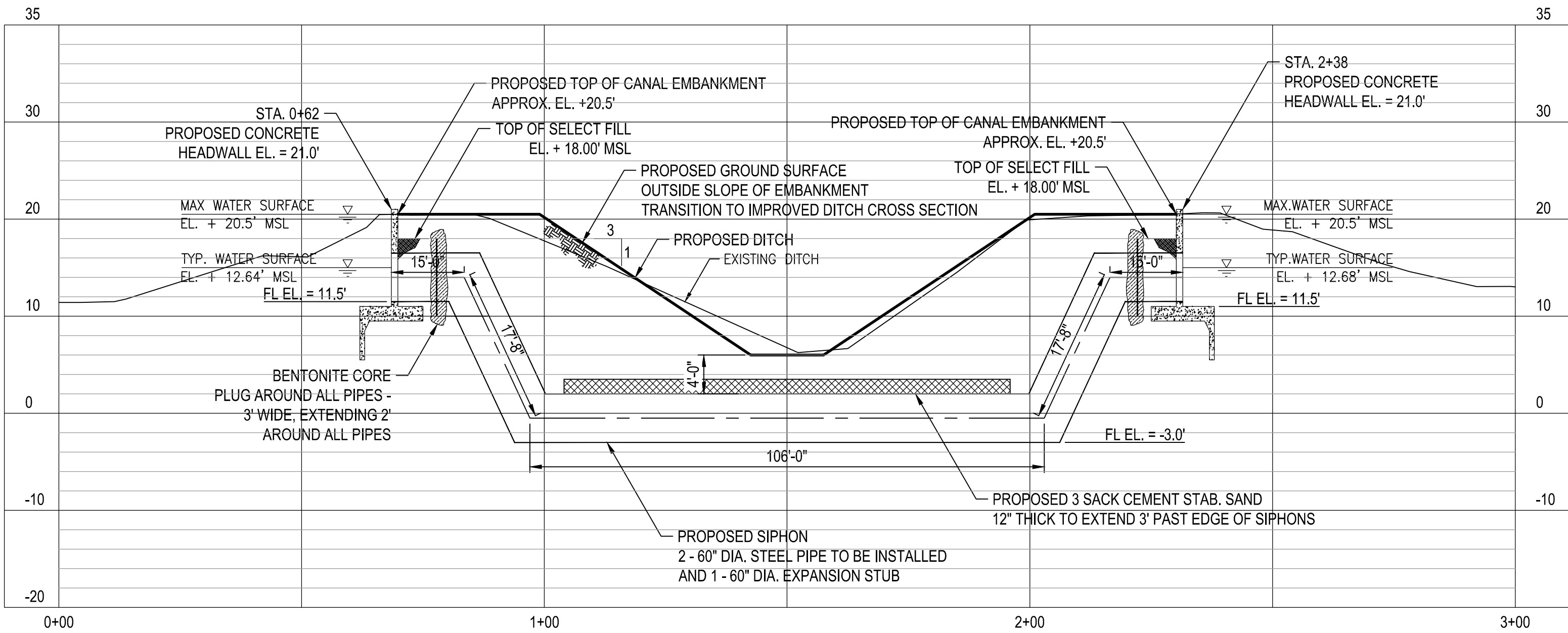


- CONSTRUCTION NOTES:
1. INGROUND CONCRETE REMNANTS TO BE REMOVED BY CONTRACTOR. CONCRETE MAY BE USED AS RIP RAP, IF IT MEETS SPECIFICATIONS.
 2. EXISTING SHEET PILE TO BE SALVAGED FOR SRA.

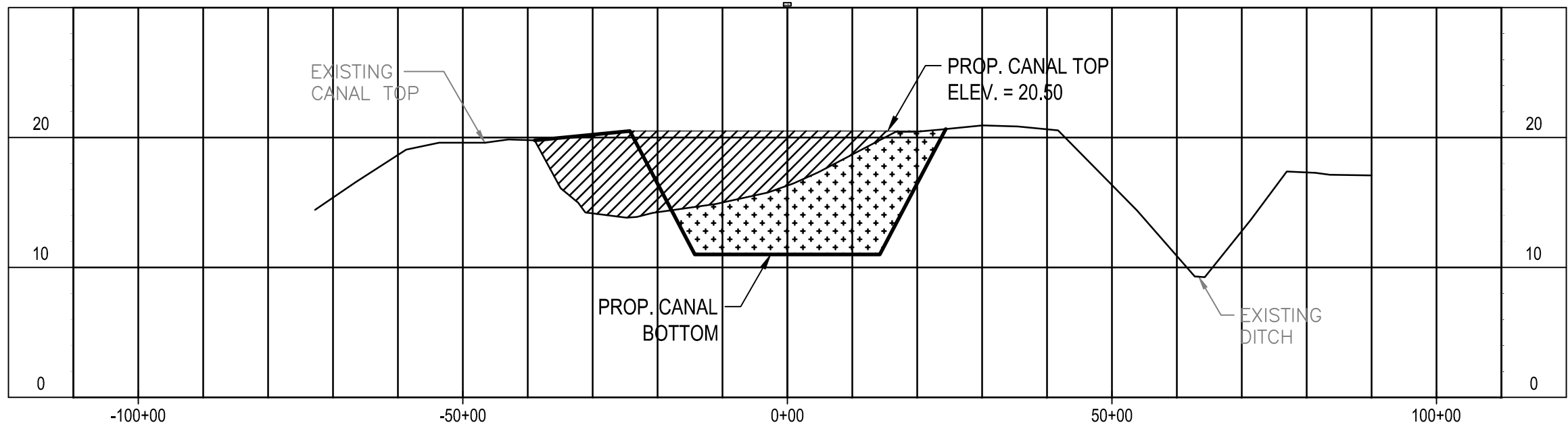




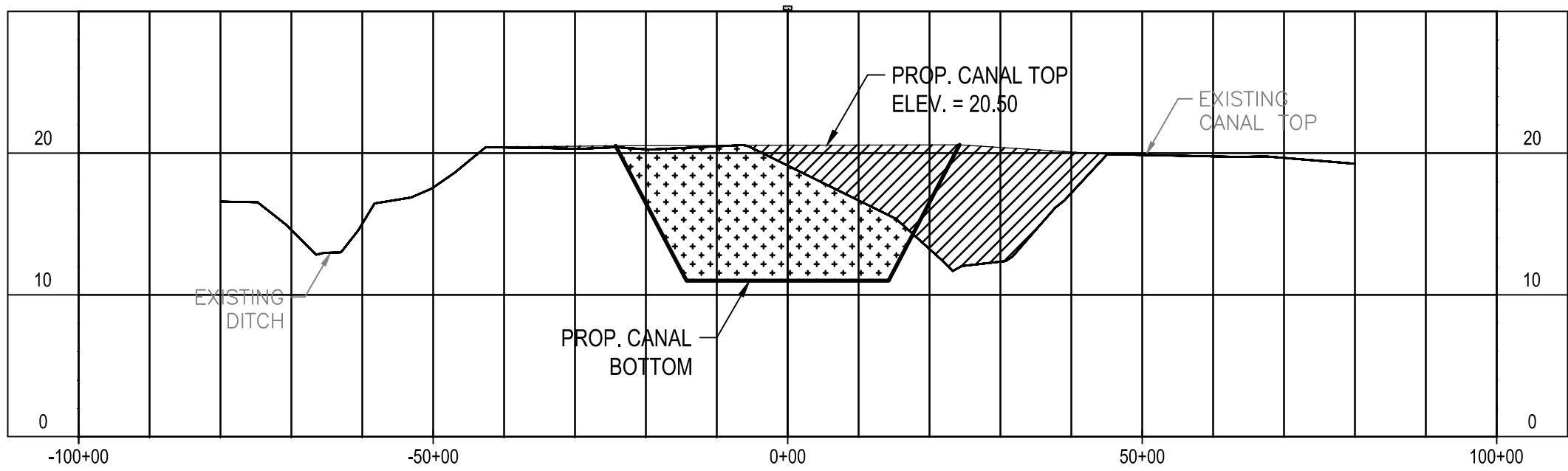
SCALE: 1" = 20'-0"
WHEN PRINTED 22"x 34"



SCALE: HORIZ. 1" = 20'-0"
VERT. 1"=10'-0"



STA. 0+50

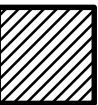


STA. 2+50



HORIZONTAL SCALE: 1" = 20'-0"
VERTICAL SCALE: 1" = 10'-0"
WHEN PRINTED 22"x 34"

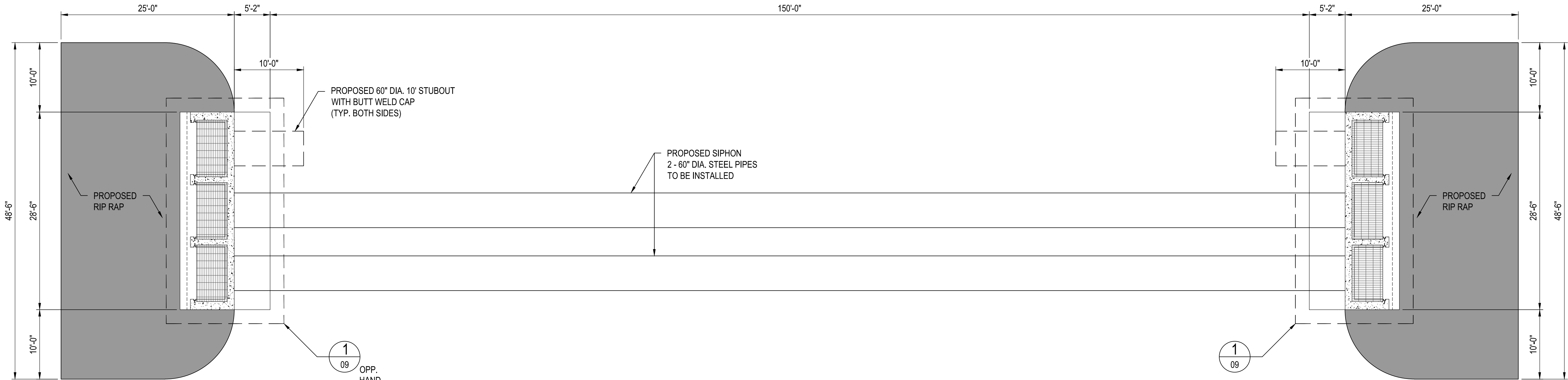
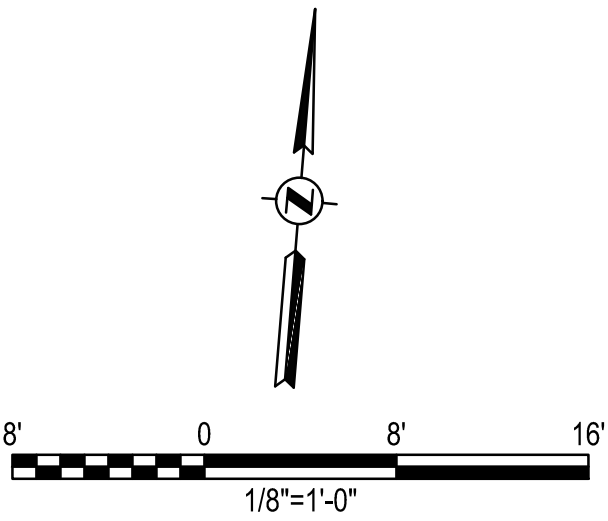
LEGEND



PROPOSED FILL

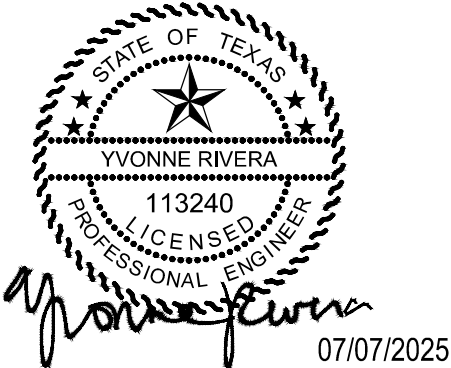


PROPOSED CUT



PROP. (2) 60" DIA. SIPHON PIPES AND HEADWALL
PLAN VIEW
SCALE: 3/8" = 1'-0"

Date: 06/13
File Path:
G:\11110\080078 Sabine River Authority Cole
Creek Siphon\01 DESIGN\01_Sheets
DWG. NAME: 07 - PROPOSED SIPHON PLANVIEW.dwg
Jul 07, 2025 - 10:53am BY USER: bmurray



No.	Revisions	By	Checked	Date



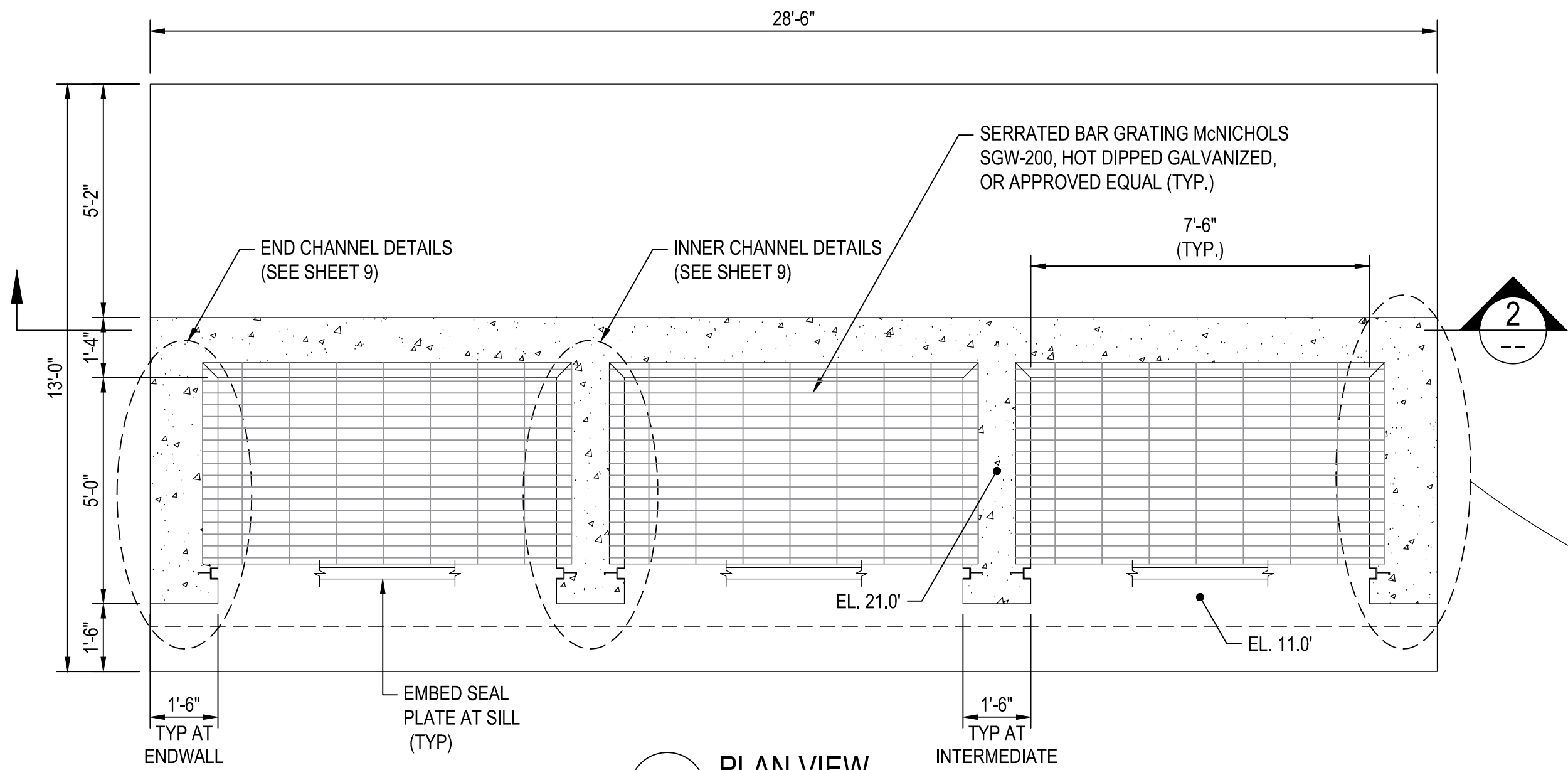
GANNETT FLEMING

3100 W. ALABAMA
HOUSTON, TEXAS 77098
(713) 520-9570
T.B.P.E.L.S. FIRM REGISTRATION #1800

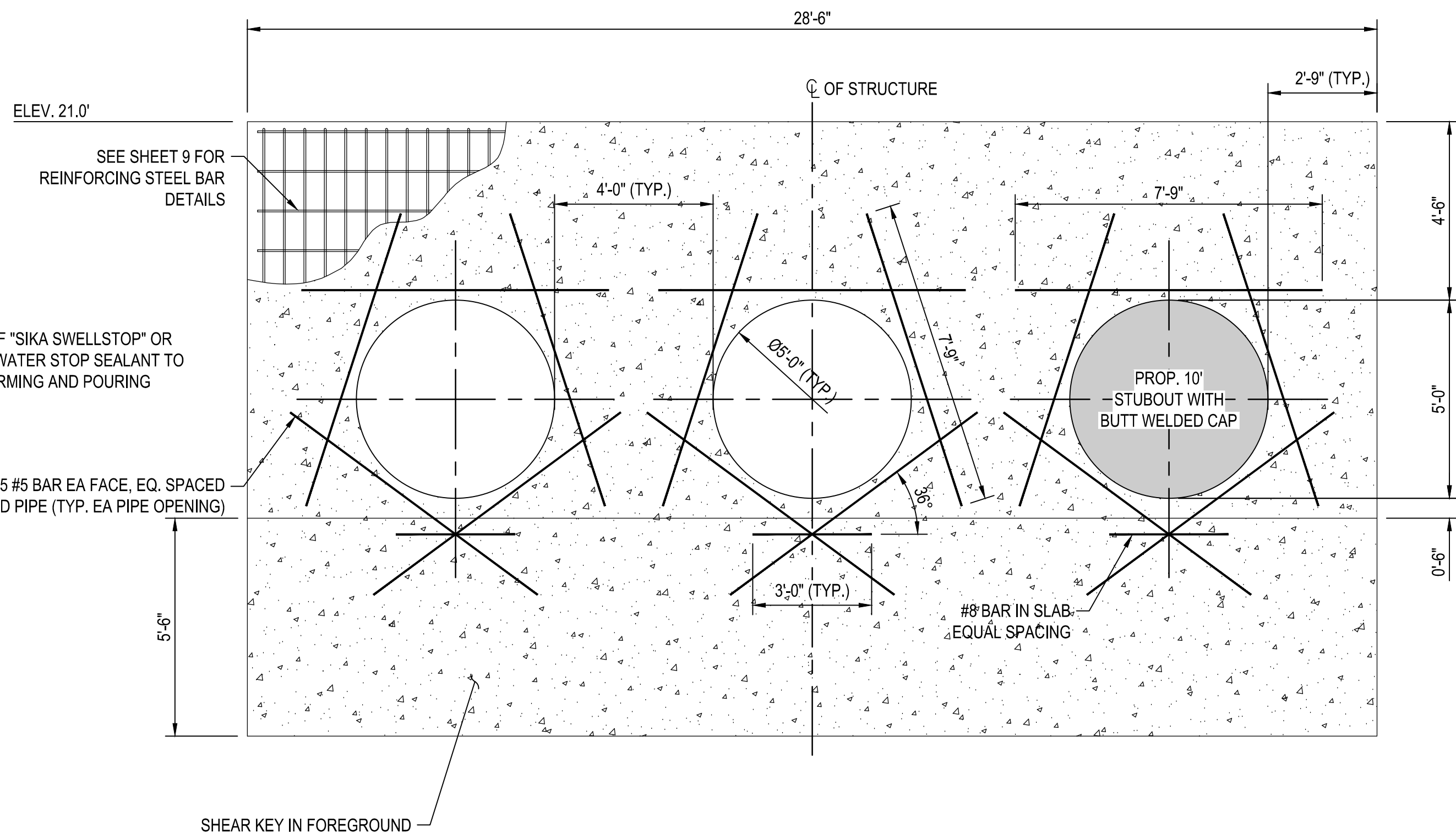
SABINE RIVER AUTHORITY
COLE CREEK SIPHON

PROPOSED SIPHON
AND
HEADWALL PLAN VIEW

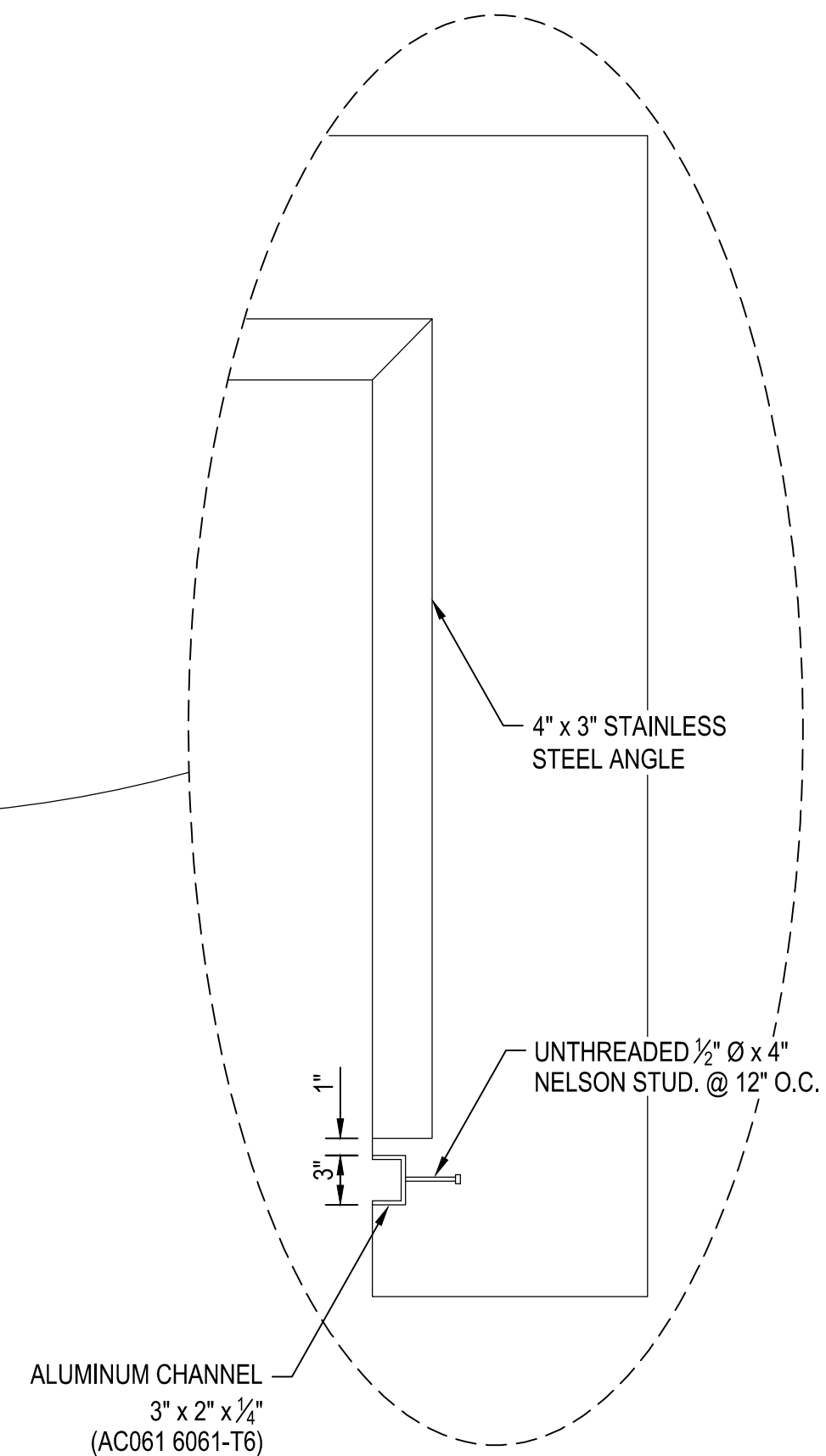
Action	Name	Date
Design	YR	06/13
Drawn	BAM	06/13
Checked	YR	06/13
Approved	YR	06/13
Scale	AS SHOWN	
Sheet	7	of 12



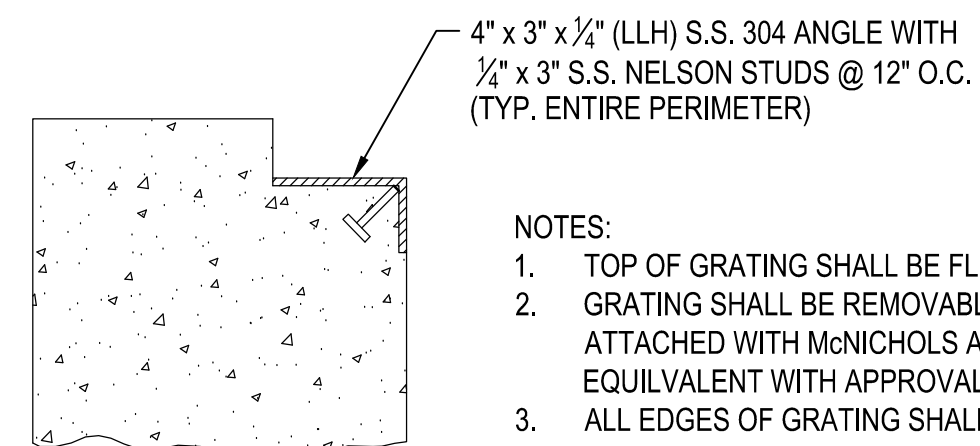
1 PLAN VIEW
SCALE: 3/8" = 1'-0"



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



CHANNEL & STUD DETAILS



TYP. EMBEDS FOR GRATING

- NOTES:
1. TOP OF GRATING SHALL BE FLUSHED WITH TOP OF CONCRETE.
 2. GRATING SHALL BE REMOVABLE AND MECHANICALLY ATTACHED WITH McNICHOLS ACCESSORIES PRODUCTS OR EQUIVALENT WITH APPROVAL.
 3. ALL EDGES OF GRATING SHALL BE Banded.

Date: 06/13

File Path:
G:\1110\080078 Sabine River Authority Cole
Creek Siphon\01 DESIGN\01_Sheets
DWG. NAME: 08 - HEADWALL PLANVIEW AND ELEVATION.dwg
Jul 07, 2025 - 11:43am BY USER: bmurray



Theodore R. Krull
JULY 7, 2025

No.	Revisions	By	Checked	Date



GANNETT FLEMING

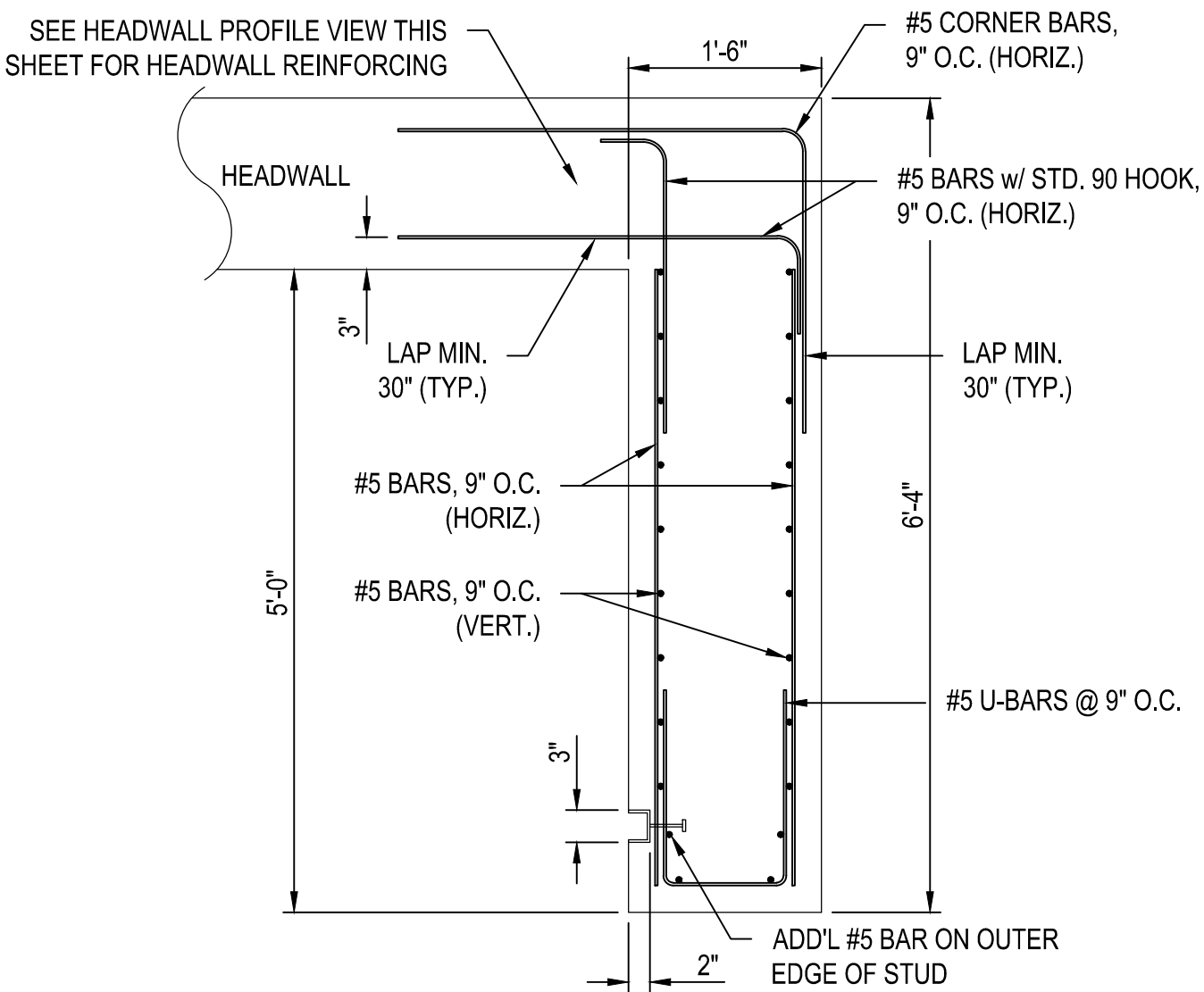
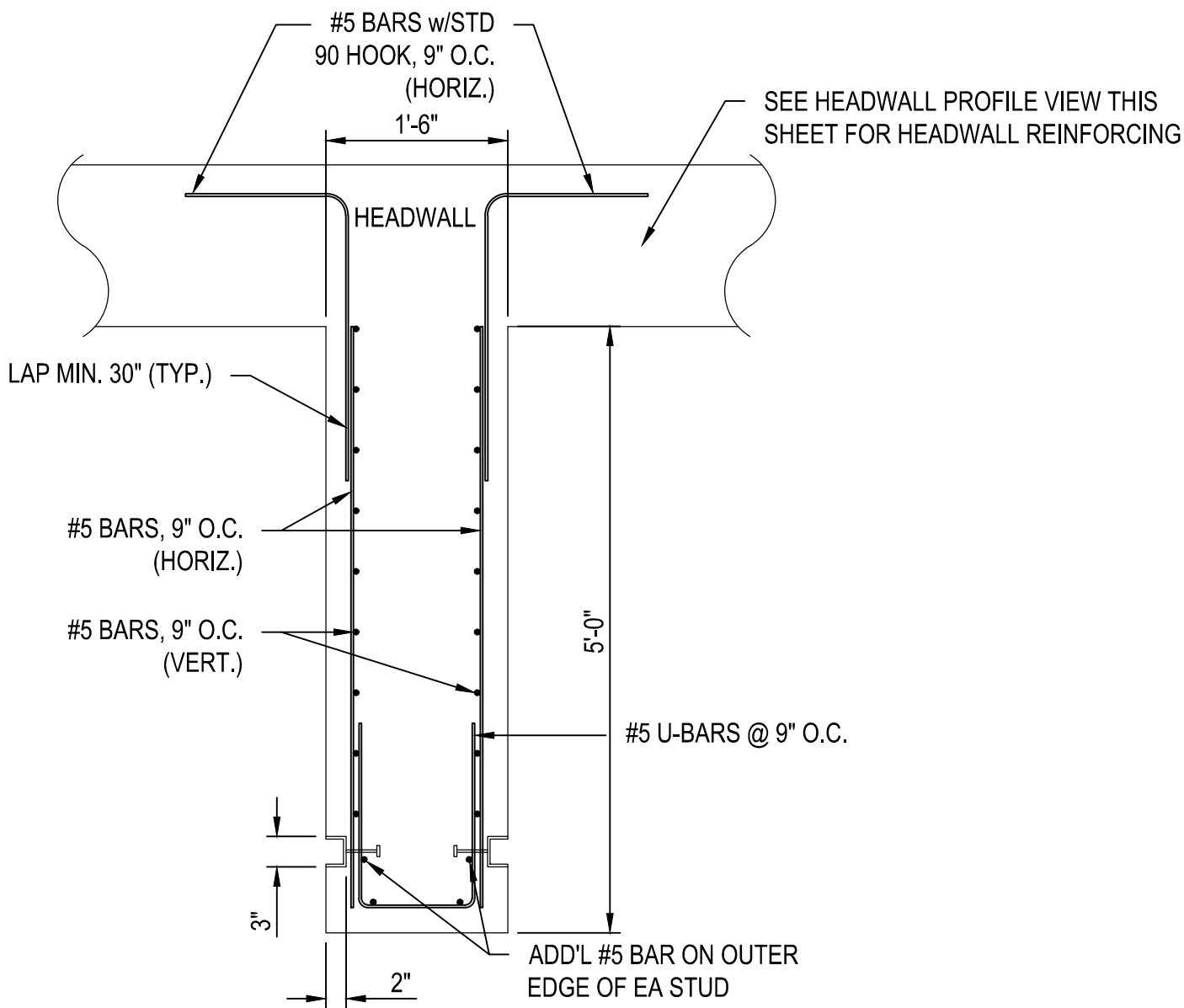
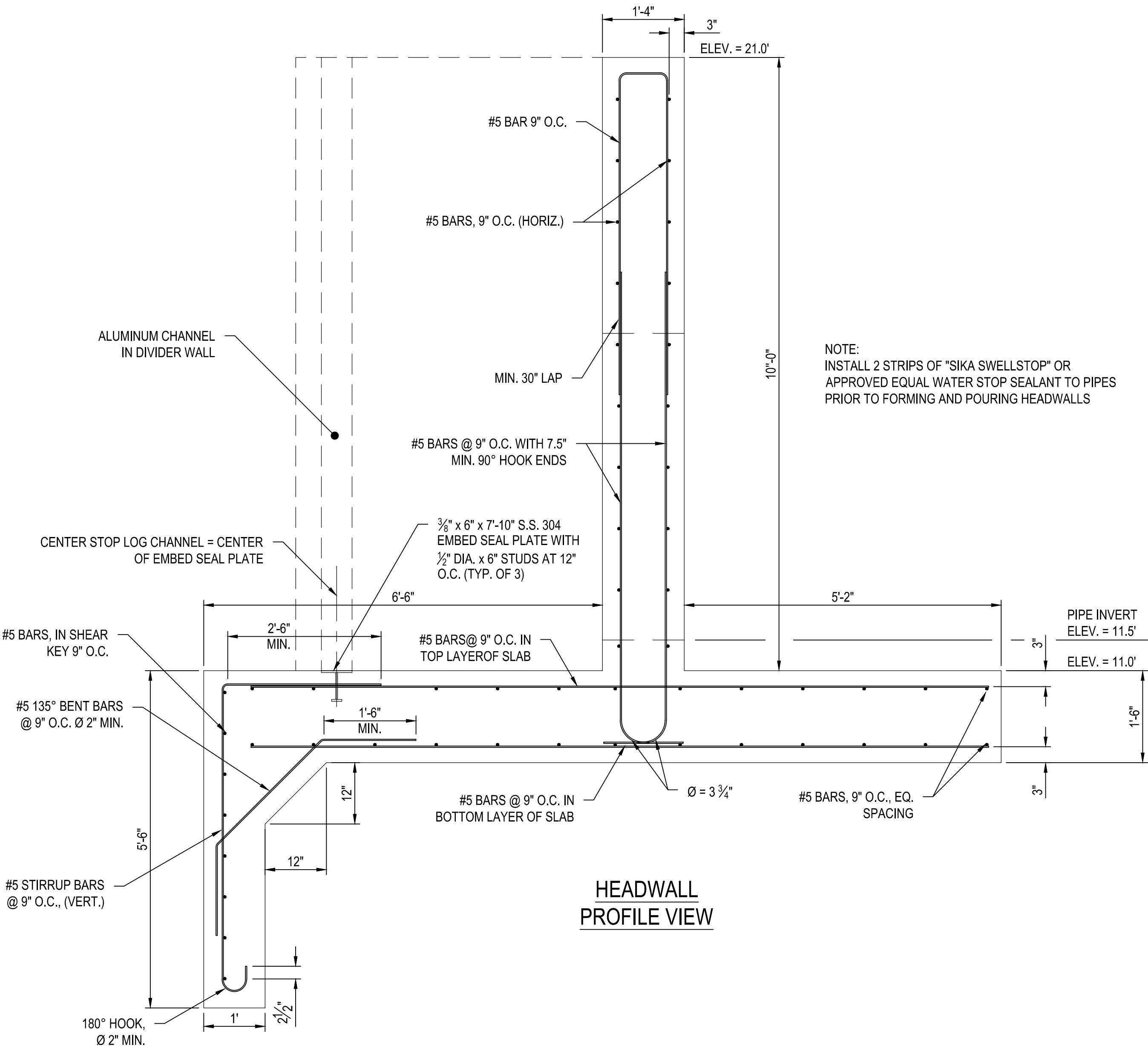
3100 W. ALABAMA
HOUSTON, TEXAS 77098
(713) 520-9570
T.B.P.E.I.S. FIRM REGISTRATION #1800

SABINE RIVER AUTHORITY
COLE CREEK SIPHON

HEADWALL
PLANVIEW AND ELEVATION


Action	Name	Date
Design	YR	06/13
Drawn	BAM	06/13
Checked	YR	06/13
Approved	YR	06/13
Scale	AS NOTED	
Sheet	8 of 12	


- NOTES:
- ALL DIMS TO BE FIELD VERIFIED AND ARE SUBJECT TO CHANGE.
 - REINFORCING STEEL AROUND PIPE IN PROFILE VIEW OMITTED FOR CLARITY SEE ELEVATION VIEW SHEET 8 FOR DETAILS.
 - PROVIDE 3" COVER ON ALL REINFORCING STEEL.



Date: 06/13


File Path:
G:\11110\080078 Sabine River Authority Cole
Creek Siphon\01 DESIGN\01_Sheets
DWG. NAME: 09 - HEADWALL DETAILS.dwg
Jul 07, 2025 - 10:55am BY USER: bmurray





JULY 7, 2025

No.	Revisions	By	Checked	Date



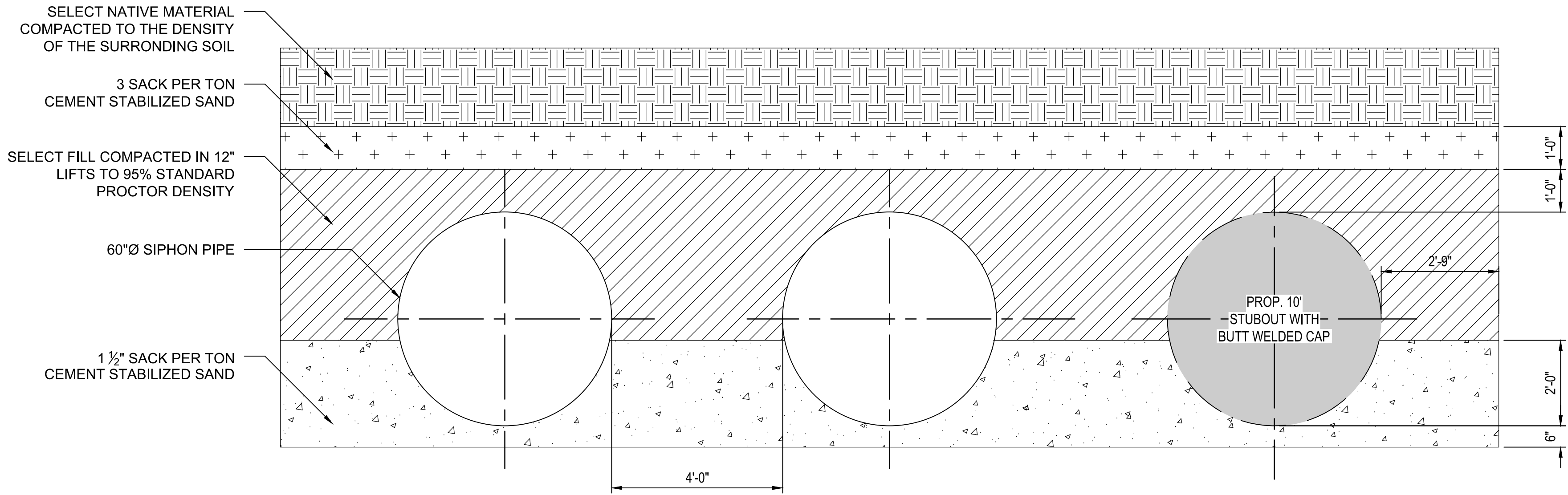
GANNETT FLEMING

3100 W. ALABAMA
HOUSTON, TEXAS 77098
(713) 520-9570
T.B.P.E.I.S. FIRM REGISTRATION #1800

SABINE RIVER AUTHORITY
COLE CREEK SIPHON

HEADWALL DETAILS

Action	Name	Date
Design	YR	06/13
Drawn	BAM	06/13
Checked	YR	06/13
Approved	YR	06/13
Scale	AS NOTED	
Sheet	9 of 12	



BACKFILL AND BEDDING DETAIL

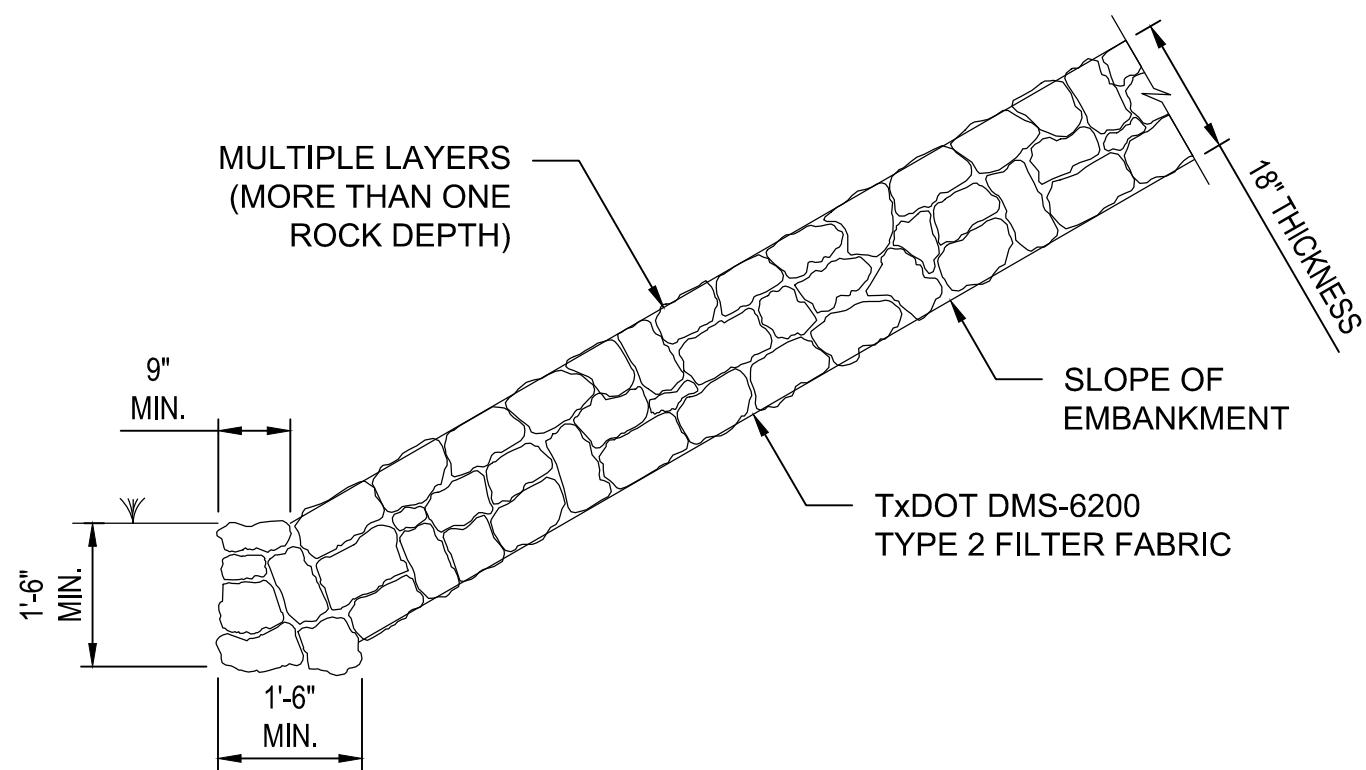
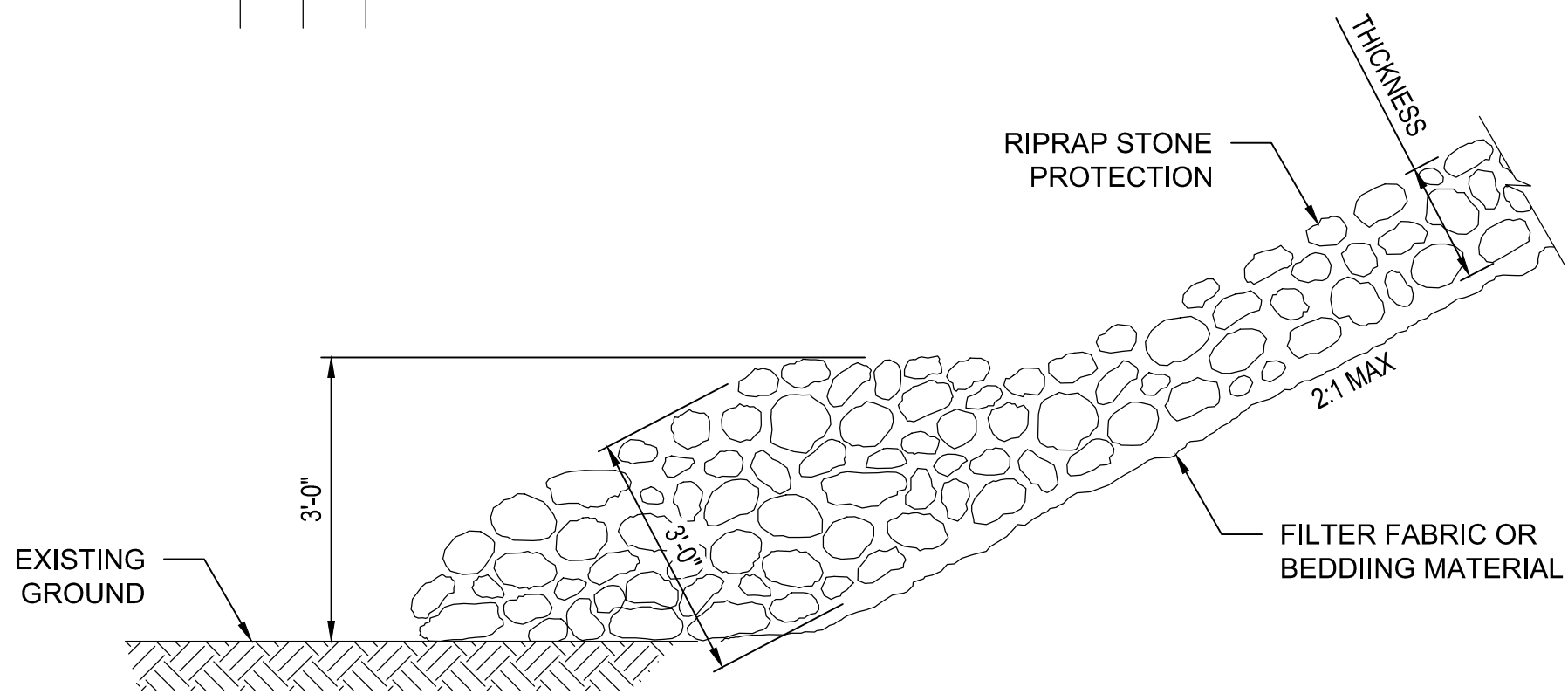
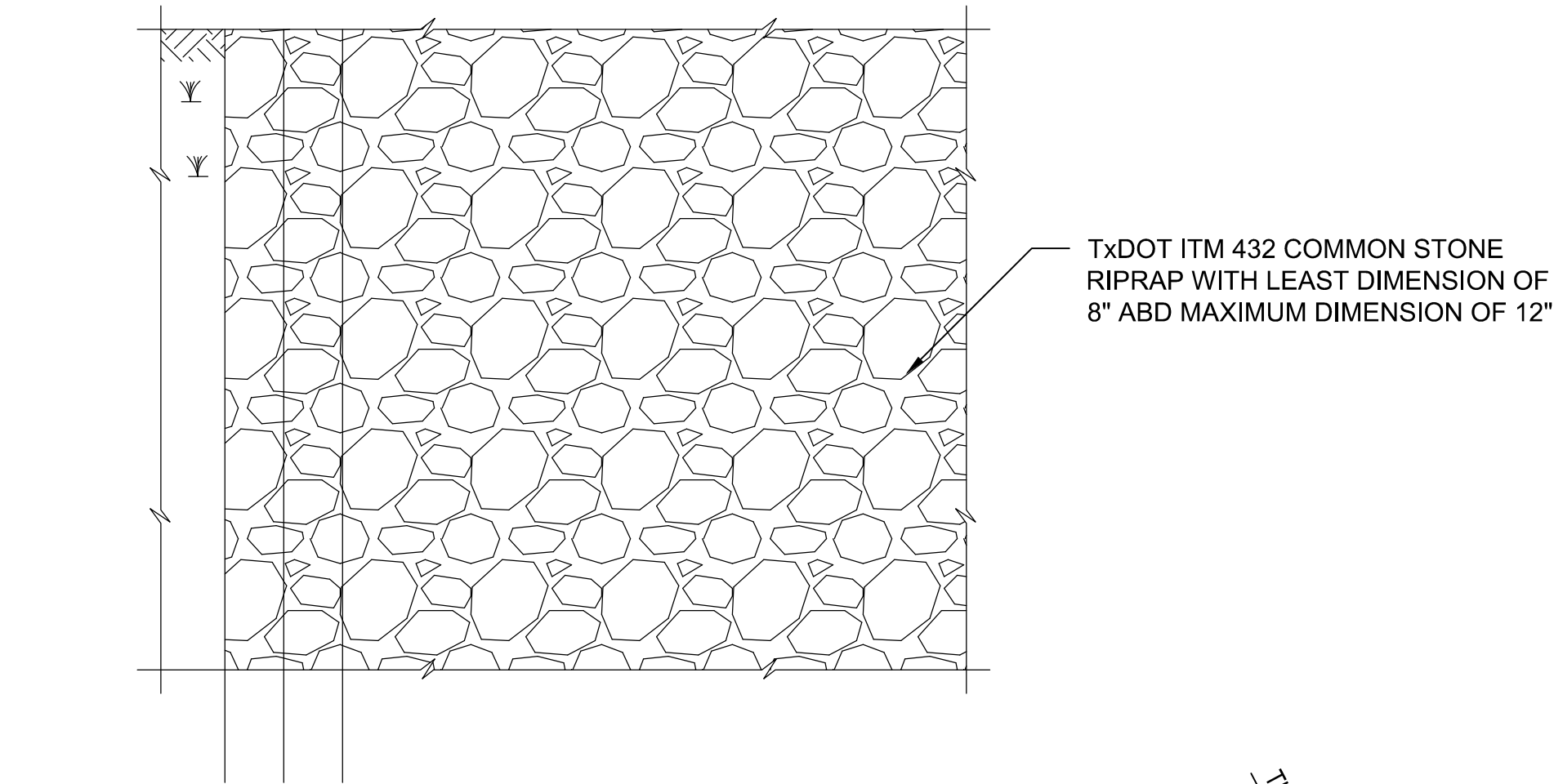
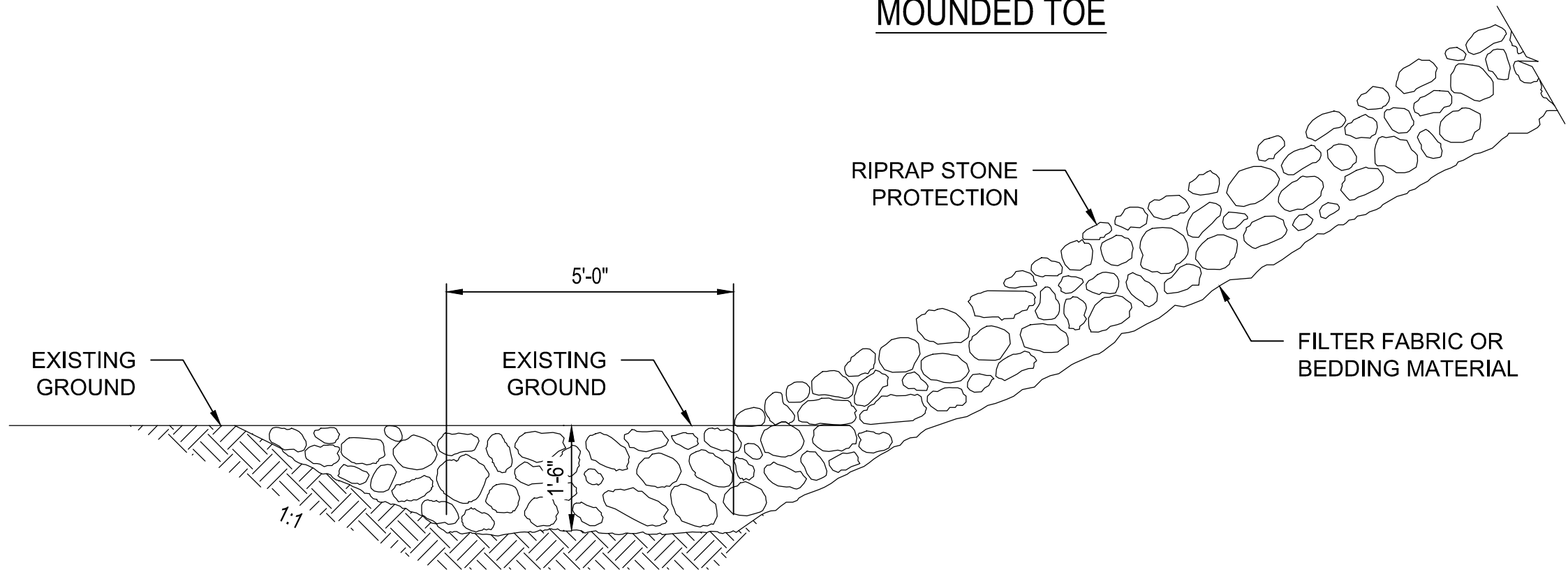


FIGURE 4 ~ COMMON STONE RIPRAP
DRY OR GROUTED

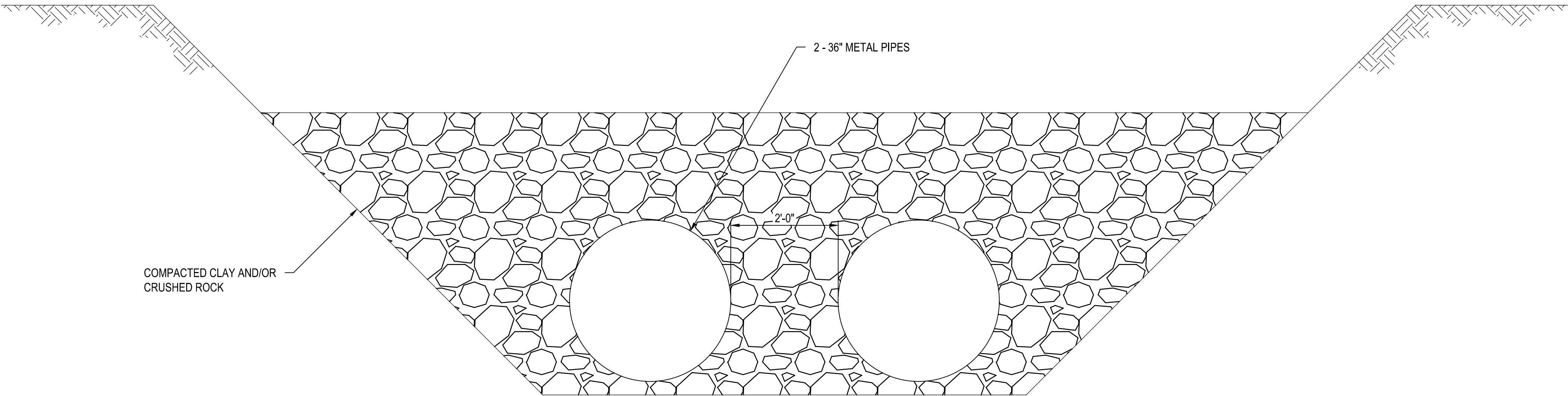


MOUNDED TOE



EXTENDED ROCK FILLED TRENCH
PROTECTION STONE RIPRAP TOE OPTIONS





TEMPORARY
LOW WATER CROSSING
N.T.S.