

OWNER/DEVELOPER: SR LAND, LLC
20 BOULDER CRESCENT, SUITE 201
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY (719) 471-1742

CIVIL ENGINEER: JR ENGINEERING, LLC
5475 TECH CENTER DRIVE
COLORADO SPRINGS, CO 80919
MIKE BRAMLEY P.E. (303) 267-6240

COUNTY ENGINEERING: EL PASO COUNTY PLANNING
AND COMMUNITY DEVELOPMENT
2880 INTERNATIONAL CIRCLE, SUITE 110
COLORADO SPRINGS, CO 80910
JEFF RICE, P.E. (719) 520-6300

TRAFFIC ENGINEERING: EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS
3275 AKERS DRIVE
COLORADO SPRINGS, CO 80922
JENNIFER IRVINE, P.E. (719) 520-6460

WATER RESOURCES: STERLING RANCH METRO DISTRICT ENGINEERS
JDS-HYDRO CONSULTANTS
545 E. PIKES PEAK AVE., SUITE 300
COLORADO SPRINGS, CO 80903
JOHN MCGINN (719) 668-8769

FIRE DISTRICT: BLACK FOREST FIRE PROTECTION DISTRICT
11445 TEACHTOWN ROAD
COLORADO SPRINGS, CO 80908
CHIEF BRYAN JACK (719) 495-4300

GAS DEPARTMENT: COLORADO SPRINGS UTILITIES
7110 DURANT DR.
COLORADO SPRINGS, CO 80947
TIM WENDT (719) 668-3556

ELECTRIC DEPARTMENT: MOUNTAIN VIEW ELECTRIC
11140 E. WOODMEN ROAD
FALCON, CO 80831
(719) 495-2283

COMMUNICATIONS: QWEST COMMUNICATIONS
(U.N.C.C. LOCATORS) (800) 922-1987
AT&T (LOCATORS) (719) 635-3674

STORMWATER: STORMWATER ENTERPRISE
30 S. NEVADA AVENUE, SUITE 401
COLORADO SPRINGS, CO 80903

COMMUNICATIONS: QWEST COMMUNICATIONS
(U.N.C.C. LOCATORS) (800) 922-1987
AT&T (LOCATORS) (719) 635-3674

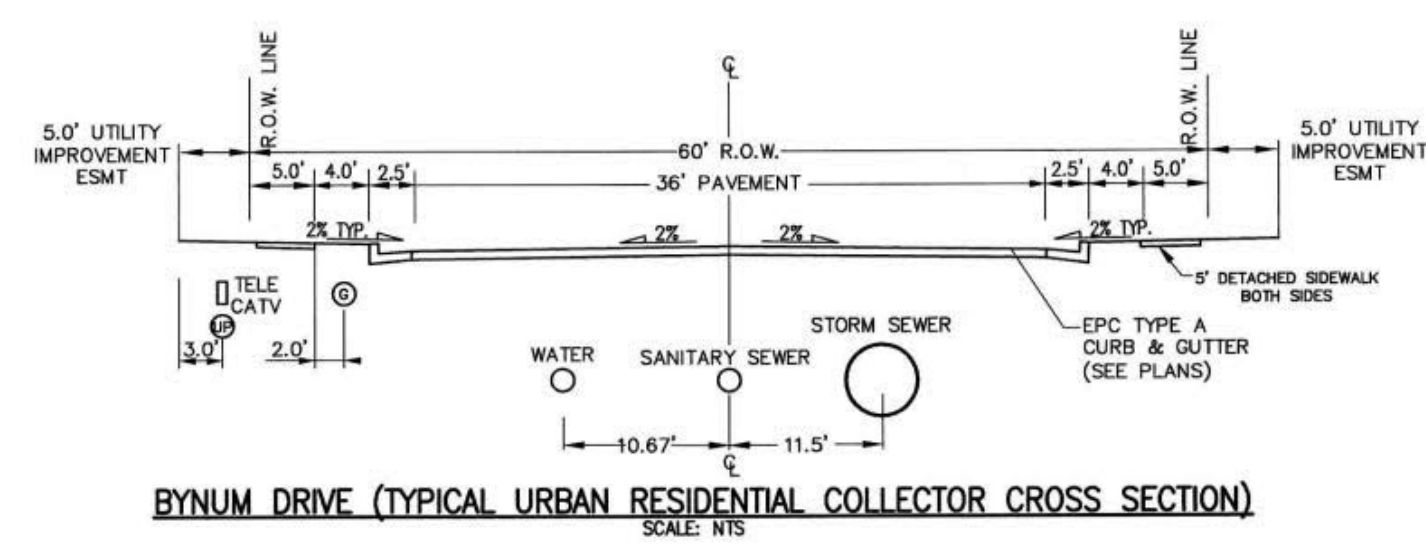
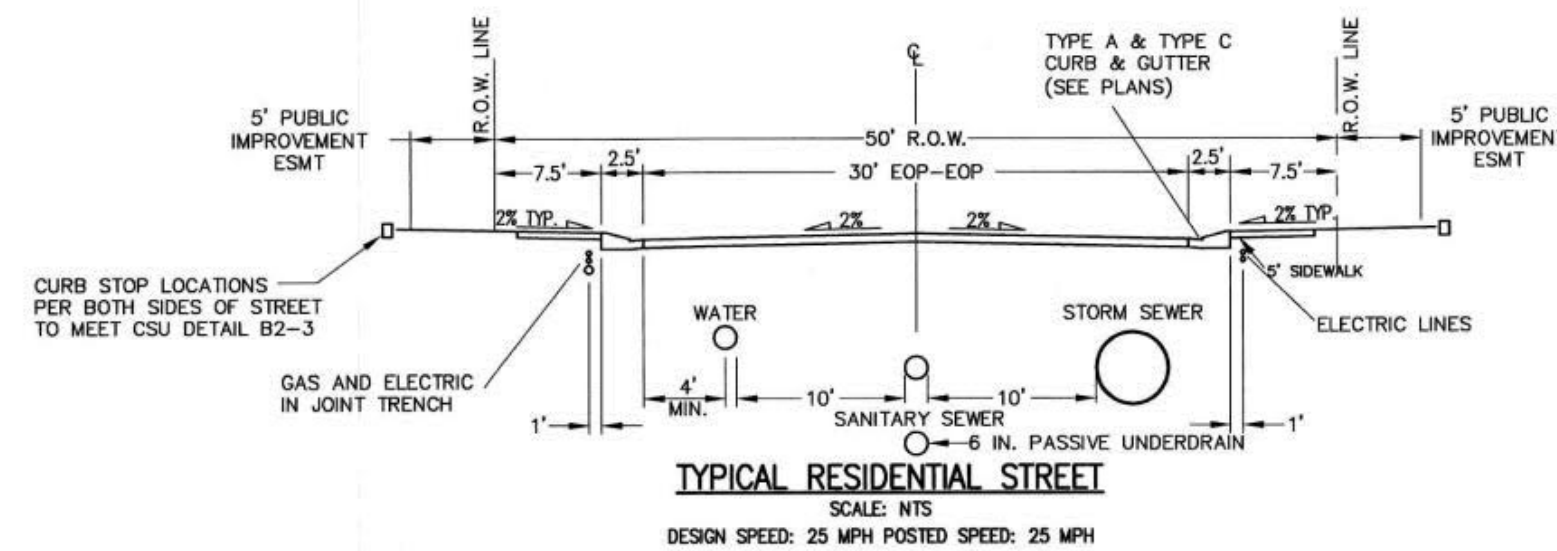
STORMWATER: STORMWATER ENTERPRISE
30 S. NEVADA AVENUE, SUITE 401
COLORADO SPRINGS, CO 80903
(719) 385-5980

TRAFFIC: TRAFFIC AND TRANSPORTATION ENGINEERING
30 S. NEVADA AVE.
COLORADO SPRINGS, CO 80903
(719)-385-5908

GAS: STEPHEN BACON
SR. ROW AGENT II
COLORADO INTERSTATE GAS CO. (KINDER MORGAN)
2 N. NEVADA AVE.
COLORADO SPRINGS, CO 80903
(719) 659-5936

GAS: CRAIG KEIRSEY
REAL ESTATE | MAGELLAN MIDSTREAM PARTNERS, L.P.
ONE WILLIAMS CENTER, OTC-B, TULSA, OK 74172
918-574-7986

1. THE TOP OF AN ALUMINUM SURVEYORS CAP,
STAMPED "9853", AT THE SOUTHEAST BOUNDARY
CORNER OF BARBARICK SUBDIVISION
NORTHING = 41146.273
EASTING = 235167.071
ELEVATION = 7023.42
2. THE TOP OF A RED PLASTIC SURVEYORS CAP,
ILLEGIBLE, AT THE NORTHWEST BOUNDARY
CORNER OF PANWEE RANCHEROS SUBDIVISION
NORTHING = 41005.174
EASTING = 235052.131
ELEVATION = 7000.40
3. THE TOP OF A RED PLASTIC SURVEYORS CAP,
STAMPED "38141", AT THE SOUTHWEST BOUNDARY
CORNER OF BARBARICK SUBDIVISION
NORTHING = 411399.427
EASTING = 233849.817
ELEVATION = 7030.82



I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH ALL OF THE REQUIREMENTS SPECIFIED IN THESE DETAILED PLANS AND SPECIFICATIONS.

James F. Morley 4/20/21
JAMES F. MORLEY DATE

SR LAND, LLC
20 BOULDER CRESCENT, SUITE 201
COLORADO SPRINGS, CO 80903

COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND ENGINEERING CRITERIA MANUAL AS AMENDED.

IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTORS DISCRETION.

JENNIFER IRVINE, P.E.
COUNTY ENGINEER/ECM ADMINISTRATOR

APPROVED
Engineering Department
11/17/2021 9:30:25 AM
adnijkamp
EPC Planning & Community
Development Department

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECT SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR DETAILED ROADWAY, DRAINAGE, GRADE, AND EROSION CONTROL PLANS. SAID SPECIFIC PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLAN AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE UTILITIES ARE DESIGNED AND CONSTRUCTED. I, THE UNDERSIGNED, KNOW AND BELIEVE I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

Mike Bramlett

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314


FOR AND ON BEHALF OF JR ENGINEERING, LLC

04/20/21

DATE

THESE DOCUMENTS HAVE BEEN REVIEWED AND APPROVED FOR STORM DRAIN AND ASSOCIATED UTILITY SERVICE CONSTRUCTION.

Sanctus 4/20/21
FOR AND ON BEHALF OF THE STERLING RANCH METRO DISTRICT DATE

STERLING RANCH FILING NO.2		H-SCALE		N/A	No. REVISION		BY		DATE		 J.R. ENGINEERING A Welding Company Central 303-740-5553 • Colorado Springs, 719-593-2598 Fort Collins 970-491-8888 • www.jrengineering.com		PREPARED FOR SR LAND, LLC 20 BOULDER CRESCENT SUITE 201 COLORADO SPRINGS, CO 80903 JAVIER@SR-LLC.COM (719) 471-1742		UNTIL SUCH TIME AS THE DESIGN HAS BEEN APPROVED BY THE APPROPRIATE REVIEWING OFFICIALS. NO REVIEWING OFFICIALS SHALL BE APPROVED FOR THEIR USE ONLY FOR THE PURPOSES OF THE PROJECT. WRITTEN AUTHORIZATION.	
COVER SHEET		V-SCALE		N/A												
		DATE		04/15/21												
		DESIGNED BY		RAB												
		DRAWN BY		RAB												
		CHECKED BY														
SHEET 1 OF 25																
JOB NO. 25188.01																



Know what's below.
Call before you dig.

STANDARD CONSTRUCTION NOTES:

- ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD LOCATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC).
- CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOILS AND GEOTECHNICAL REPORT AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIME INCLUDING THE FOLLOWING:
 - EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
 - CITY OF COLORADO SPRINGS/EL PASO COUNTY ENGINEERING CRITERIA MANUAL VOLUMES 1 AND 2.
 - COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARDS SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION.
 - CDOT M&S STANDARDS.
- IT IS THE DESIGN ENGINEERS RESPONSIBILITY TO ACCURACY SHOW EXISTING CONDITION BOTH ONSITE AND OFFSITE ON THE CONSTRUCTION PLANS. ANY MODIFICATION NECESSARY DUE TO CONFLICT OMISSIONS OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPERS RESPONSIBILITY TO RECTIFY.
- IT IS THE CONTRACTORS RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES AND TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORM WATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, US ARMY CORPS OF ENGINEER ISSUED 401 AND/OR 404 PERMITS AND COUNTY AND STATE FUGITIVE DUST PERMITS.
- ANY TEMPORARY SIGNAGE AND STRIPING SHALL COMPLY WITH EL PASO COUNTY PCD AND MUTCD CRITERIA.
- CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DOT INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
- THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFFSITE DISTURBANCE GRADING, OR CONSTRUCTION.

STORM SEWER GENERAL NOTES

- ALL STATIONING IS ALONG STORM SEWER CENTERLINE UNLESS OTHERWISE INDICATED. ALL ELEVATIONS ARE INVERT UNLESS OTHERWISE INDICATED.
- ALL STORM SEWER BENDS AND WYES SHOWN ON THE PLAN SHALL BE PREFABRICATED.
- HORIZONTAL AND VERTICAL BENDS ARE INDICATED ON THE PLANS.
- JOINTS SHALL BE IN ACCORDANCE WITH ASTM C443 "STANDARD SPECIFICATIONS FOR JOINTS FOR CIRCULAR CONCRETE SEWER AND CULVERT PIPE USING RUBBER GASKET." IN NO CASE SHALL THE MAXIMUM JOINT OPENING FOR STRAIGHT ALIGNMENT EXCEED 1 INCH OR ONE AND ONE-HALF INCH ON CURVED ALIGNMENT. PIPES WITH WATERTIGHT JOINTS REQUIRE 100-YEAR DESIGN LIFE.
- INLET DIMENSIONS SHOWN ON PLANS REFER TO DISTANCES FROM INSIDE FACES OF BOX BETWEEN THE WIDTHS AND LENGTHS.
- MANHOLE WIDTHS AND LENGTHS SHOWN ON PLAN REFER TO THE EXTERIOR WALL DIMENSIONS.
- ALL STORM SEWER SHALL BE A MINIMUM OF CLASS III REINFORCED CONCRETE PIPE. SPECIFIC SEGMENTS OF STORM SEWER SHALL BE REQUIRED TO BE CONSTRUCTED OF A MINIMUM OF 5000 PSI CONCRETE DUE TO EXCESSIVE VELOCITIES. REFER TO ADDITIONAL NOTES WITHIN CONSTRUCTION PLANS.
- SINCE ALL PIPE ENTRIES INTO THE BASE ARE VARIABLE, THE DIMENSIONS SHOWN ARE TYPICAL. ACTUAL DIMENSIONS AND QUANTITIES FOR CONCRETE AND REINFORCEMENT SHALL BE AS REQUIRED IN THE WORK.
- THE MH RING (FRAME) SHALL BE SET IN A BED OF GROUT. THE FRAME SHALL BE SURROUNDED WITH A GROUT IN UNPAVED AREA, OR A CONCRETE COLLAR IN PAVED AREA.
- PRECAST MANHOLES AND REINFORCEMENT SHALL CONFORM TO ASTM C 478 (AASHTO M 199).
- CAST IN PLACE MANHOLES SHALL BE CLASS B CONCRETE.
- STEPS SHALL BE REQUIRED WHEN THE MANHOLE DEPTH EXCEEDS 3'-6" AND SHALL BE IN ACCORDANCE WITH AASHTO M 199.
- ALL REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 60,000 PSI. VERTICAL STEEL SHALL BE PLACED AT $\frac{1}{4}$ OF WALL. ALL BARS SHALL HAVE A 2" MINIMUM CLEARANCE.
- FLOW CHANNELS AND INVERTS SHALL BE FORMED BY SHAPING WITH CLASS B CONCRETE OR APPROVED GROUT.
- STUB-OUTS SHALL EXTEND 4 FT MINIMUM BEYOND OUTSIDE WALL SURFACE OF MANHOLE AND BE SATISFACTORILY PLUGGED.
- CHECK WITH THE LOCAL GOVERNMENT AUTHORITY FOR ANY ADDITIONAL STORM SEWER SPECIFICATIONS, DETAILS, OR REGULATIONS.
- THE SLOPE OF THE MANHOLE COVER SHALL MATCH THE ROADWAY PROFILE AND CROSS SLOPE.
- THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF ALL PREFABRICATED STRUCTURES TO THE ENGINEER FOR REVIEW PRIOR TO INSTALLATION.

SOIL RIPRAP NOTES:

- THE SOIL MATERIAL SHALL BE NATIVE OR TOPSOIL AND MIXED WITH SIXTY FIVE PERCENT (65%) RIPRAP AND THIRTY FIVE PERCENT (35%) SOIL BY VOLUME.
- SOIL RIPRAP SHALL CONSIST OF A UNIFORM MIXTURE OF SOIL AND RIPRAP WITHOUT VOIDS.
- CONTRACTOR SHALL COOPERATE WITH ENGINEER IN OBTAINING AND PROVIDED SAMPLES OF ALL SPECIFIED MATERIALS.
- CONTRACTOR SHALL SUBMIT CERTIFIED LABORATORY TEST CERTIFICATES FOR ALL ITEMS REQUIRED FOR SOIL RIPRAP.
- RIPRAP USED SHALL BE THE TYPE DESIGNATED ON THE DRAWINGS AND SHALL CONFORM TO TABLE SHOWN TO THE RIGHT.
- THE RIPRAP DESIGNATION AND TOTAL THICKNESS OF RIPRAP SHALL BE AS SHOWN ON THE DRAWINGS. THE MAXIMUM STONE SIZE SHALL NOT LARGER THAN THE THICKNESS OF THE RIPRAP.
- NEITHER WIDTH NOR THICKNESS OF A SINGLE STONE OF RIPRAP SHALL BE LESS THAN ONE-THIRD ($\frac{1}{3}$) OF ITS LENGTH.
- THE SPECIFIC GRAVITY OF THE RIPRAP SHALL BE TWO AND ONE-HALF (2.5) OR GREATER.
- MINIMUM DENSITY FOR ACCEPTABLE RIPRAP SHALL BE ONE HUNDRED AND SIXTY FIVE (165) POUNDS PER CUBIC FOOT.
- RIPRAP SPECIFIC GRAVITY SHALL BE ACCORDING TO THE BULK-SATURATED, SURFACE-DRY BASIS, IN ACCORDANCE WITH AASHTO T85.
- BROKEN CONCRETE OR ASPHALT PAVEMENT SHALL NOT BE ACCEPTABLE FOR USE IN THE WORK.
- ROUNDED RIPRAP (RIVER ROCK) IS NOT ACCEPTABLE, UNLESS SPECIFICALLY DESIGNATED ON THE DRAWINGS.

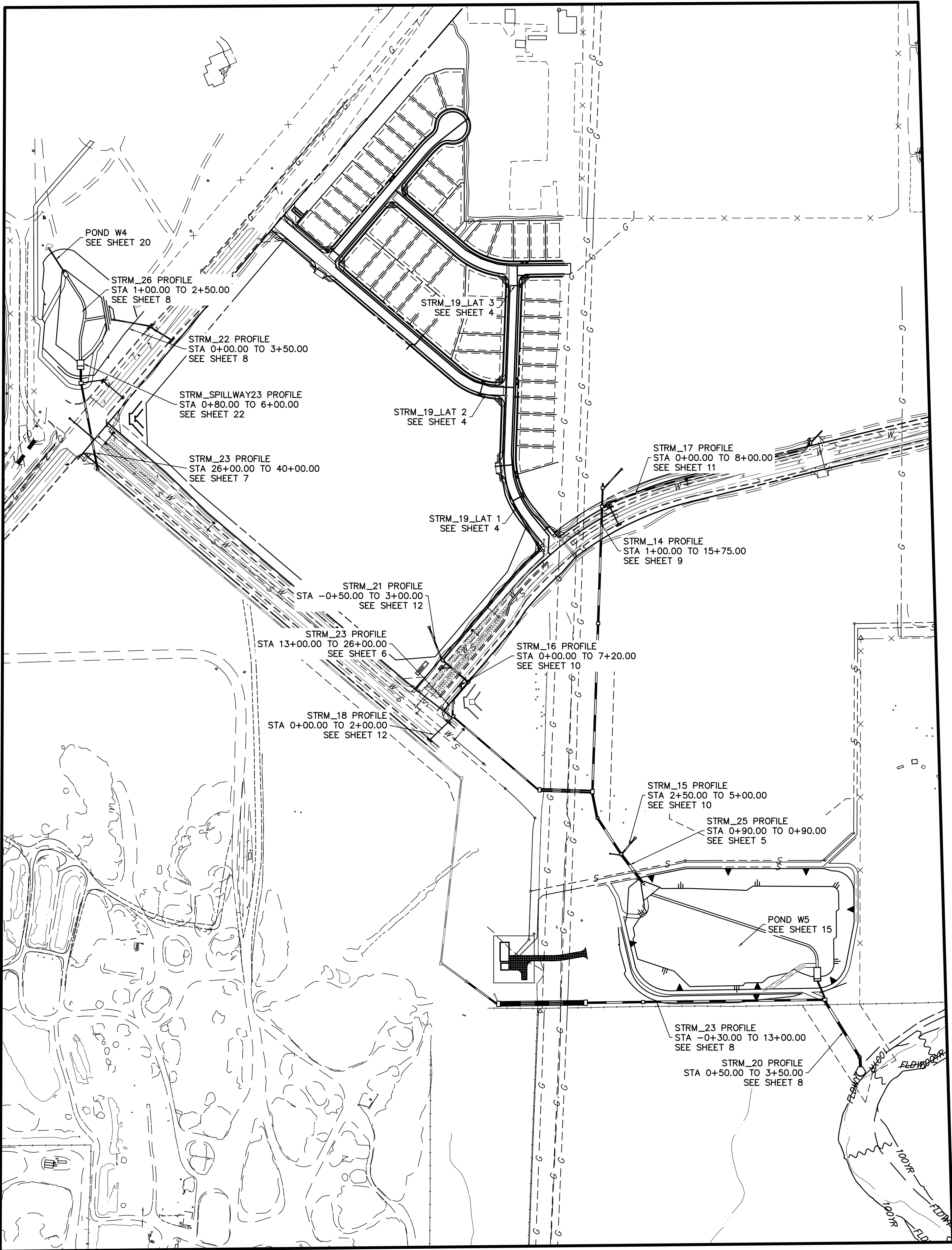
STRUCTURAL CONCRETE NOTES:

- ALL CONSTRUCTION INVOLVING THE PLACEMENT OF STRUCTURAL CONCRETE SHALL BE COMPLETED IN ACCORDANCE WITH STANDARD SPECIFICATIONS, AND AS SUPPLEMENTED BY THE COLORADO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION.
- STEEL REINFORCING SHALL BE GRADE 60 FOR ALL REINFORCING STEEL GREATER THAN #4. SPLICING, LAP SPLICING SHALL BE MINIMUM IN THE FOLLOWING TABLE UNLESS OTHERWISE SPECIFIED:

BAR SIZE	#4	#5	#6	#7	#8
SPLICE LENGTH	1'-9"	2'-2"	2'-7"	3'-4"	4'-3"

ALL REINFORCING SHALL HAVE A 2-INCH MINIMUM COVER UNLESS OTHERWISE SPECIFIED. ALL REINFORCED STEEL TO BE EPOXY COATED.
- CAST-IN-PLACE CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f_c) OF 4,000 PSI AT 28 DAYS. ALL CONCRETE PLACED AGAINST SOIL SHALL BE TYPE II PORTLAND CEMENT. ALL EXPOSED CORNERS SHALL BE FORMED WITH A 3/4" CHAMFER UNLESS OTHERWISE SPECIFIED.
- EXPANSION JOINT MATERIAL SHALL MEET AASHTO SPECIFICATION M-213.
- BACKFILL AGAINST STRUCTURES SHALL NOT COMMENCE UNTIL ALL SUPPORTING DIAPHRAGMS ARE IN PLACE AND CONCRETE HAS OBTAINED ITS FULL SEVEN DAY STRENGTH. BACKFILL SHALL BE PLACED EQUALLY ON EACH SIDE OF RETAINING WALL STRUCTURES AND CUTOFF WALLS UNTIL THE FINAL GRADE IS REACHED.
- FOOTING EXCAVATIONS SHALL BE EXAMINED BY THE GEOTECHNICAL ENGINEER WITH A 24-HOUR MINIMUM NOTIFICATION FOR SOIL AND/OR CONCRETE TESTING. PLACEMENT OF CONCRETE IN THE ABSENCE OF TESTING SHALL BE COMPLETED AT THE SOLE RISK OF THE CONTRACTOR.
- PRIOR TO THE PLACEMENT OF CONCRETE IN AREAS WHERE SOIL IS PRESENT, THE SOIL SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 6-INCHES. THE MOISTURE CONTENT SHALL BE ADJUSTED TO WITHIN PLUS OR MINUS 2 PERCENT OF THE OPTIMUM MOISTURE CONTENT AND RECOMPACTED TO AT LEAST 95 PERCENT RELATIVE COMPACTION (AASHTO-T-180).

ABBREVIATIONS
E.C. --- EPOXY COATED O.F. --- OUTSIDE FACE E.F. --- EACH FACE E.W. --- EACH WAY I.F. --- INSIDE FACE N.F. --- NEAR FACE
T.O.C. --- TOP OF CONCRETE B.O.C. --- BOTTOM OF CONCRETE CONT. --- CONTINUOUS



EPC 11/17/2021

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION

Mike Bramlett

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314

FOR AND ON BEHALF OF JR ENGINEERING

DATE 8/18/2021

STERLING RANCH FILING NO.2

NOTES

SHEET 2 OF 26

JOB NO. 25188.01

PREPARED FOR

SR LAND, LLC
20 BOULDER CRESCENT
SUITE 201
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

J.R. ENGINEERING
A Westman Company



Central 303-740-9888 • Colorado Springs 719-583-2583
Fort Collins 970-491-9888 • www.jrengineering.com

BY DATE

No. REVISION

N/A

N/A

08/18/21

DATE

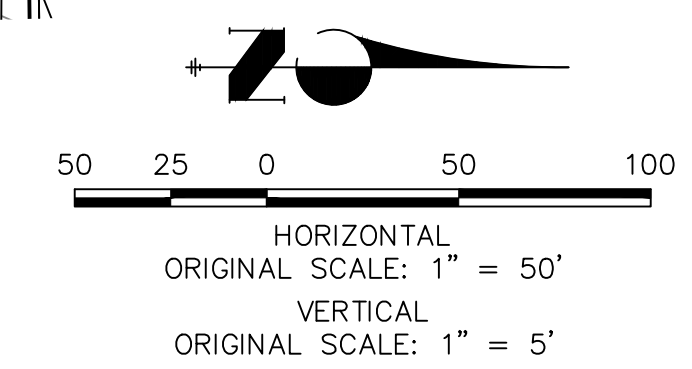
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RAB

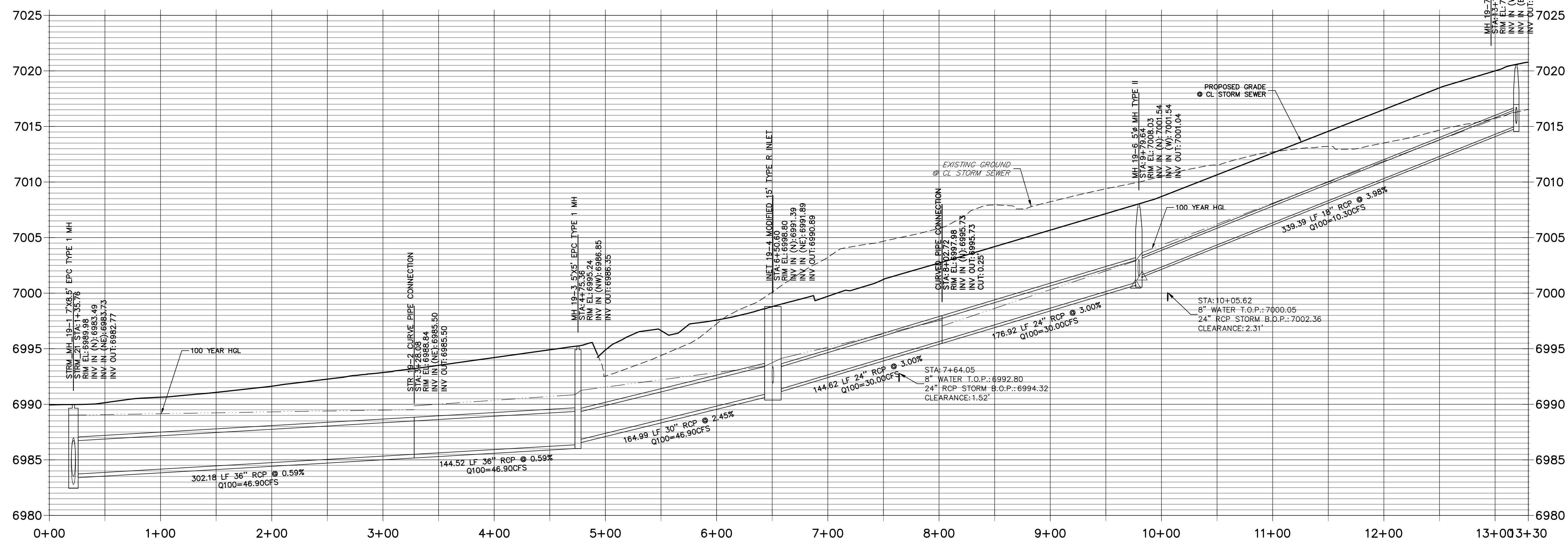
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KRW

CHECKED BY



STRM_19 PROFILE
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PUBLIC



NOTE
WATER TIGHT JOINTS
REQUIRED WHERE HGL IS
OUTSIDE OF THE PIPE.

EPC 11/17/2021

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION

PREPARED ORDER BY DIRECT SUPERVISOR

[Handwritten signature]

Mike Brant

MIKE A. BRAMLETT, P.E.

COLORADO P.E. 32314

FOR AND ON BEHALF OF JR ENGINEERING,

32314 08/18/2021

DATE _____



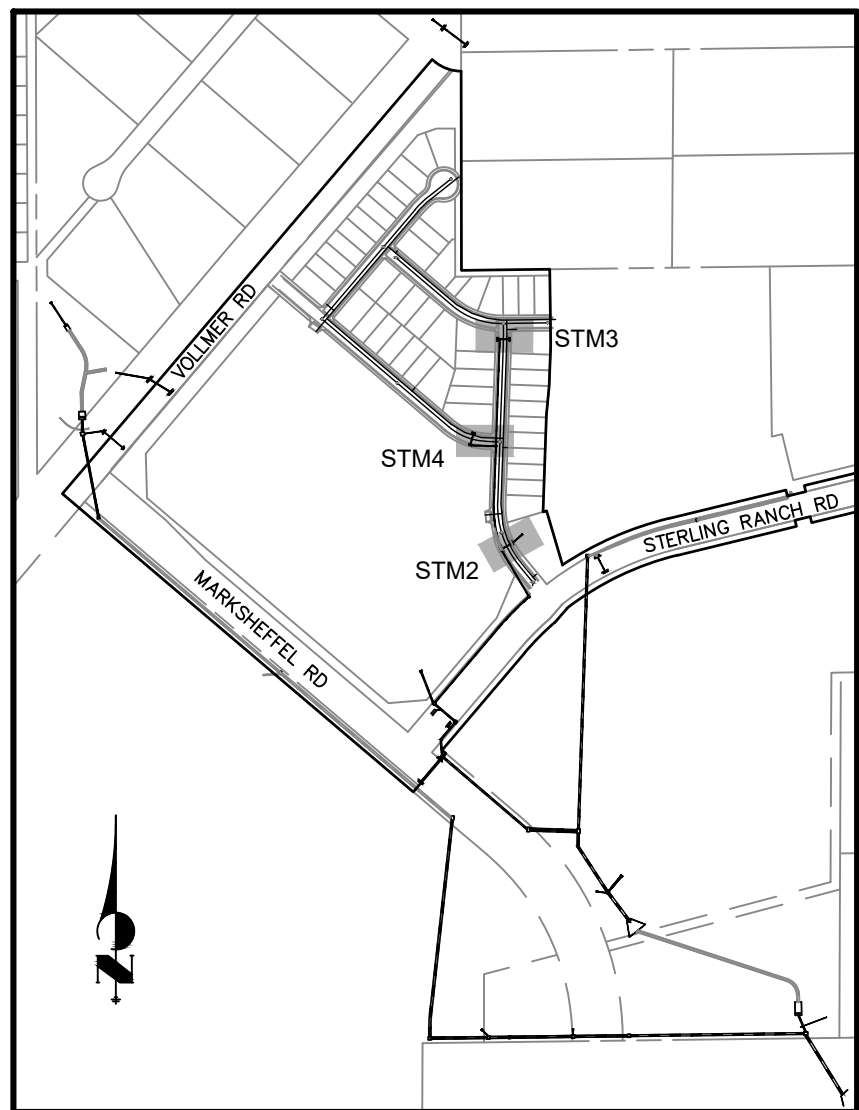
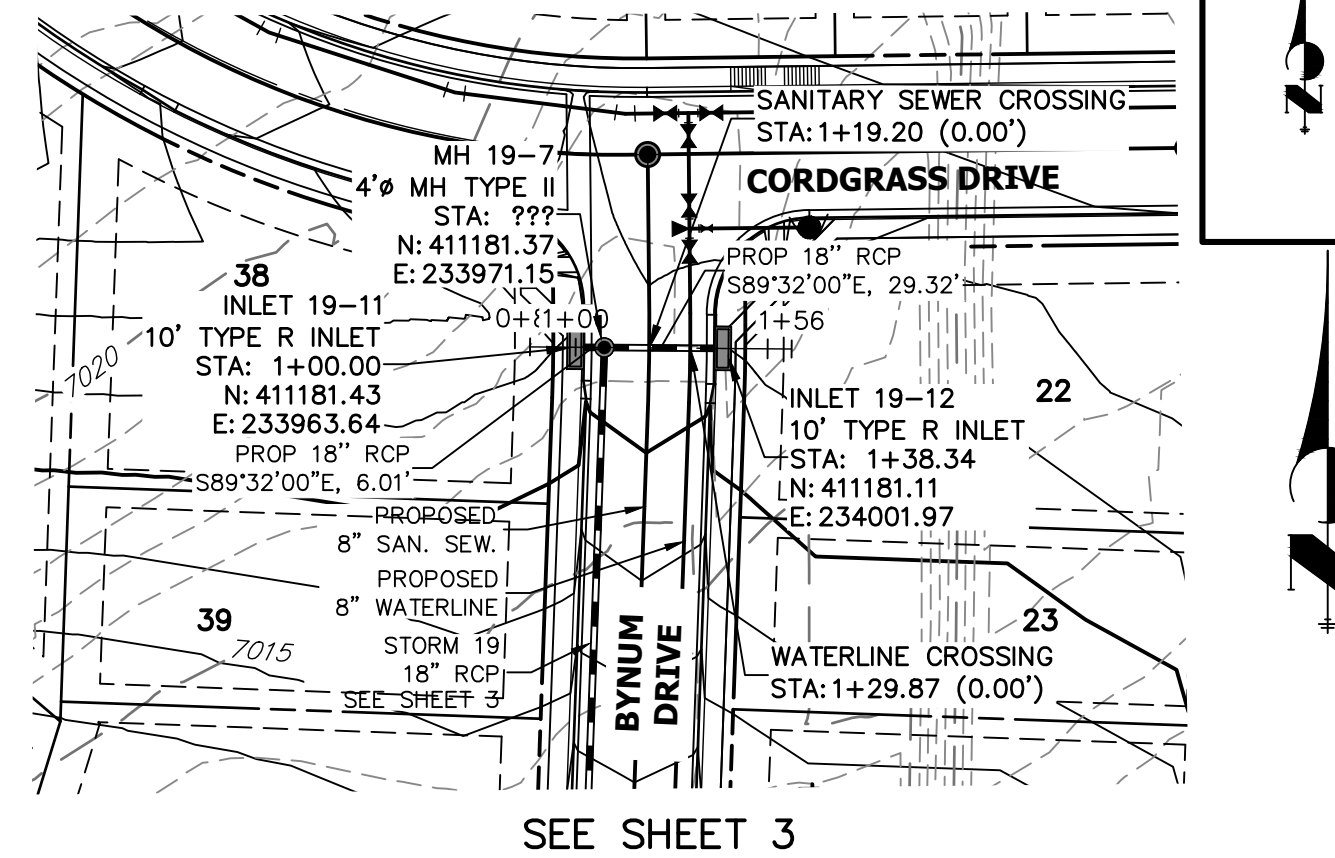
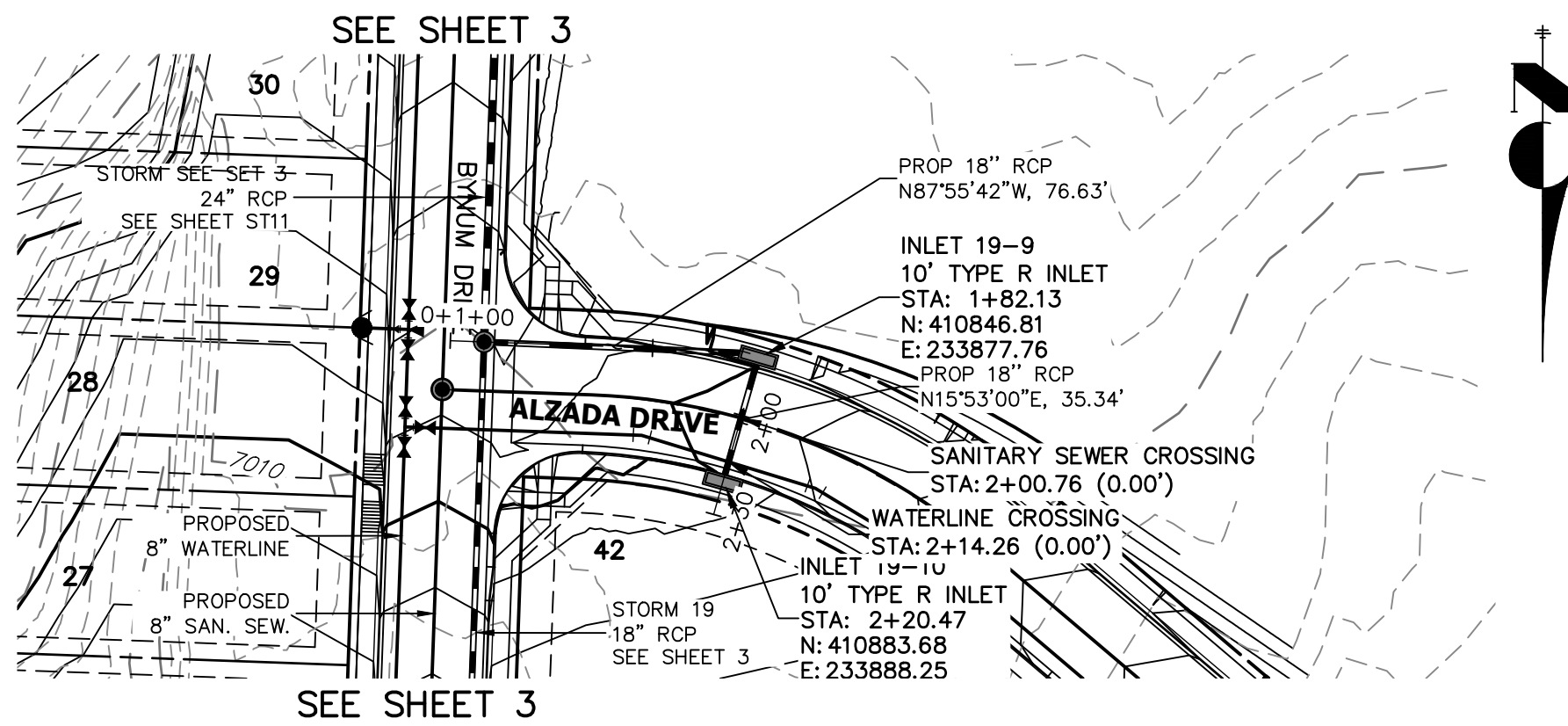
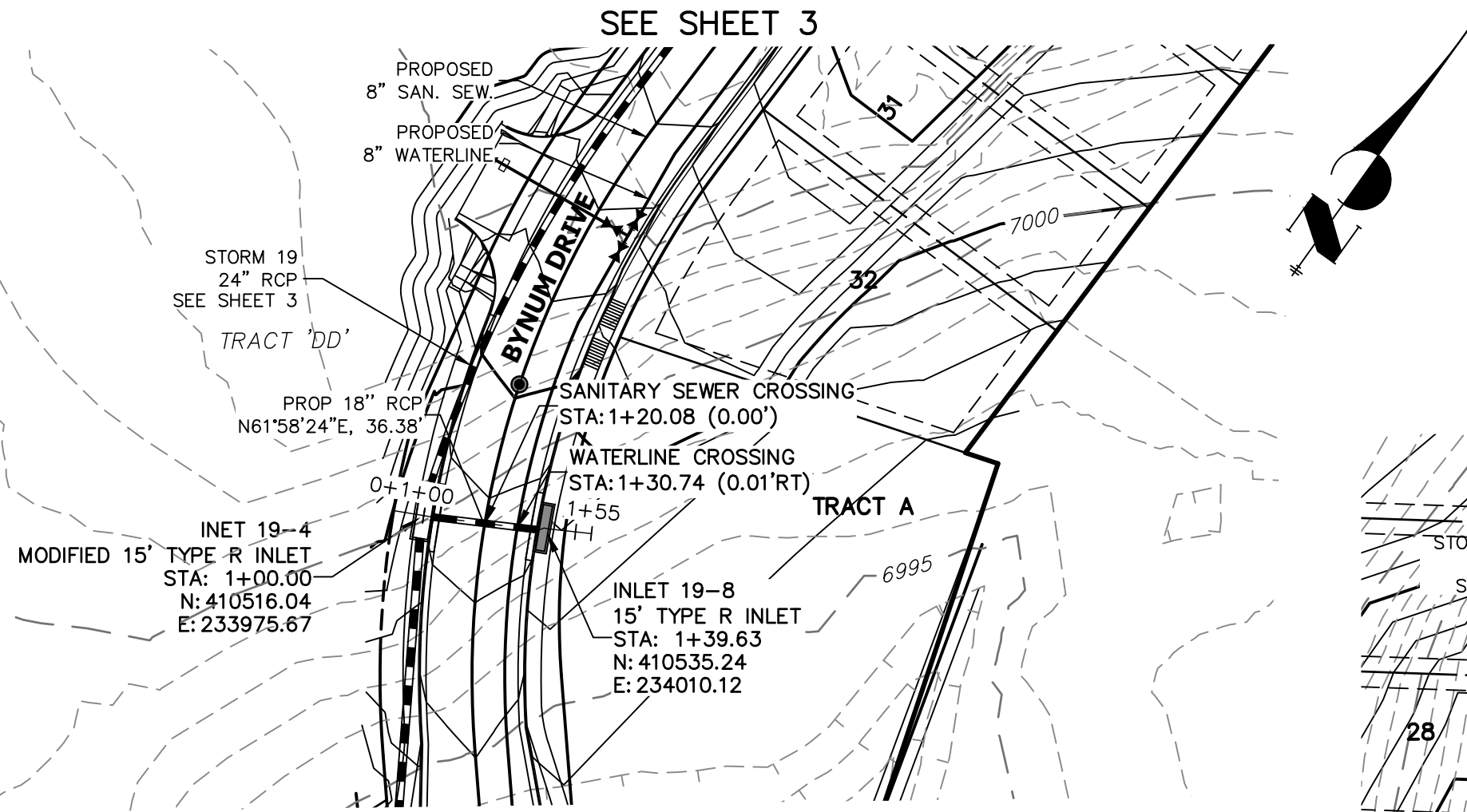
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STERLING RANCH FILING NO.2		H-SCALE 1"=50'	No.	REVISION	BY	DATE
STORM SEWER PLANS		V-SCALE 1"=5'				
		DATE 08/18/21				
		DESIGNED BY RAB				
		DRAWN BY KRW				
		CHECKED BY				



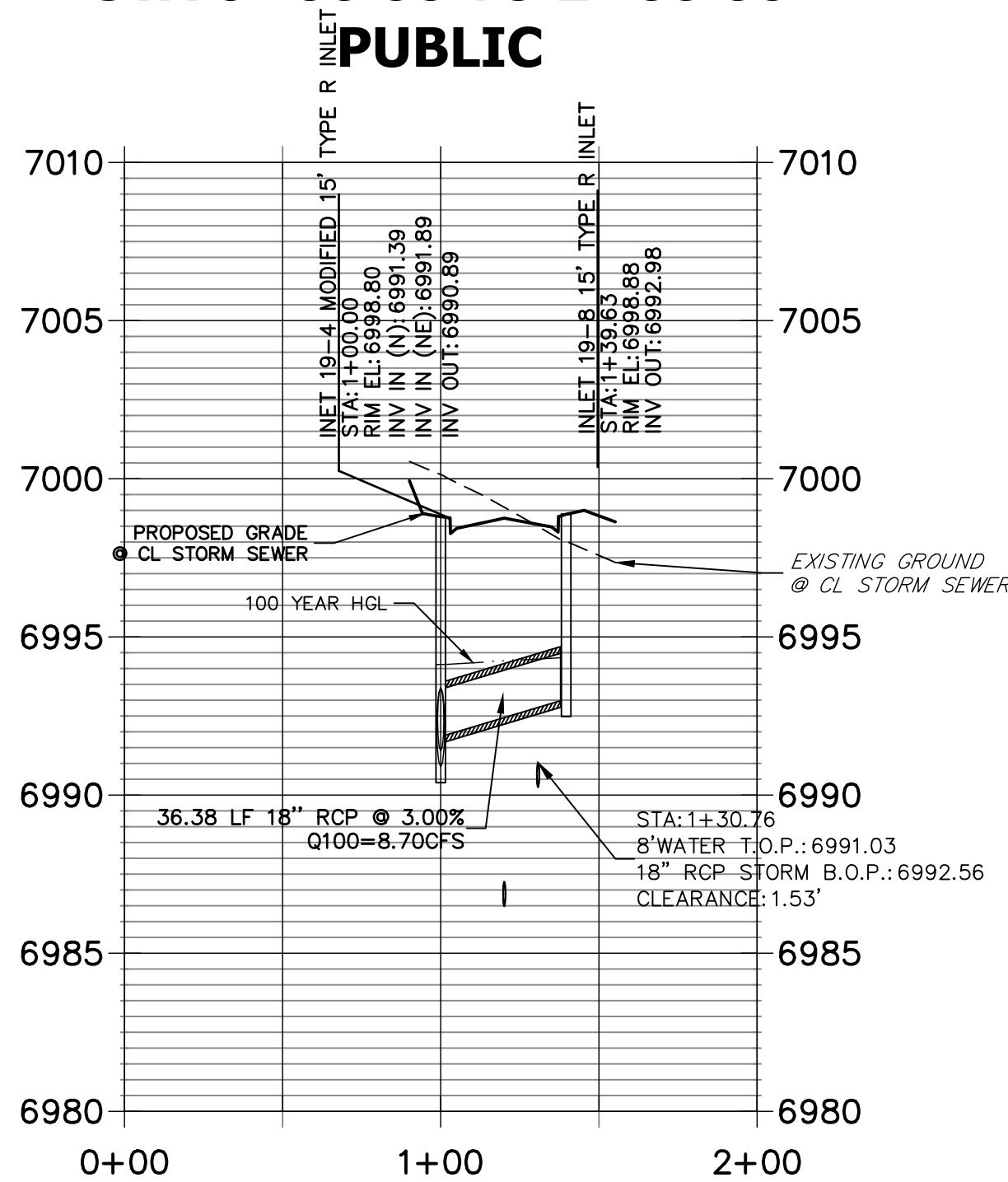
Know what's below.
Call before you dig.

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HORIZONTAL
ORIGINAL SCALE: 1" = 50'
VERTICAL
ORIGINAL SCALE: 1" = 5'

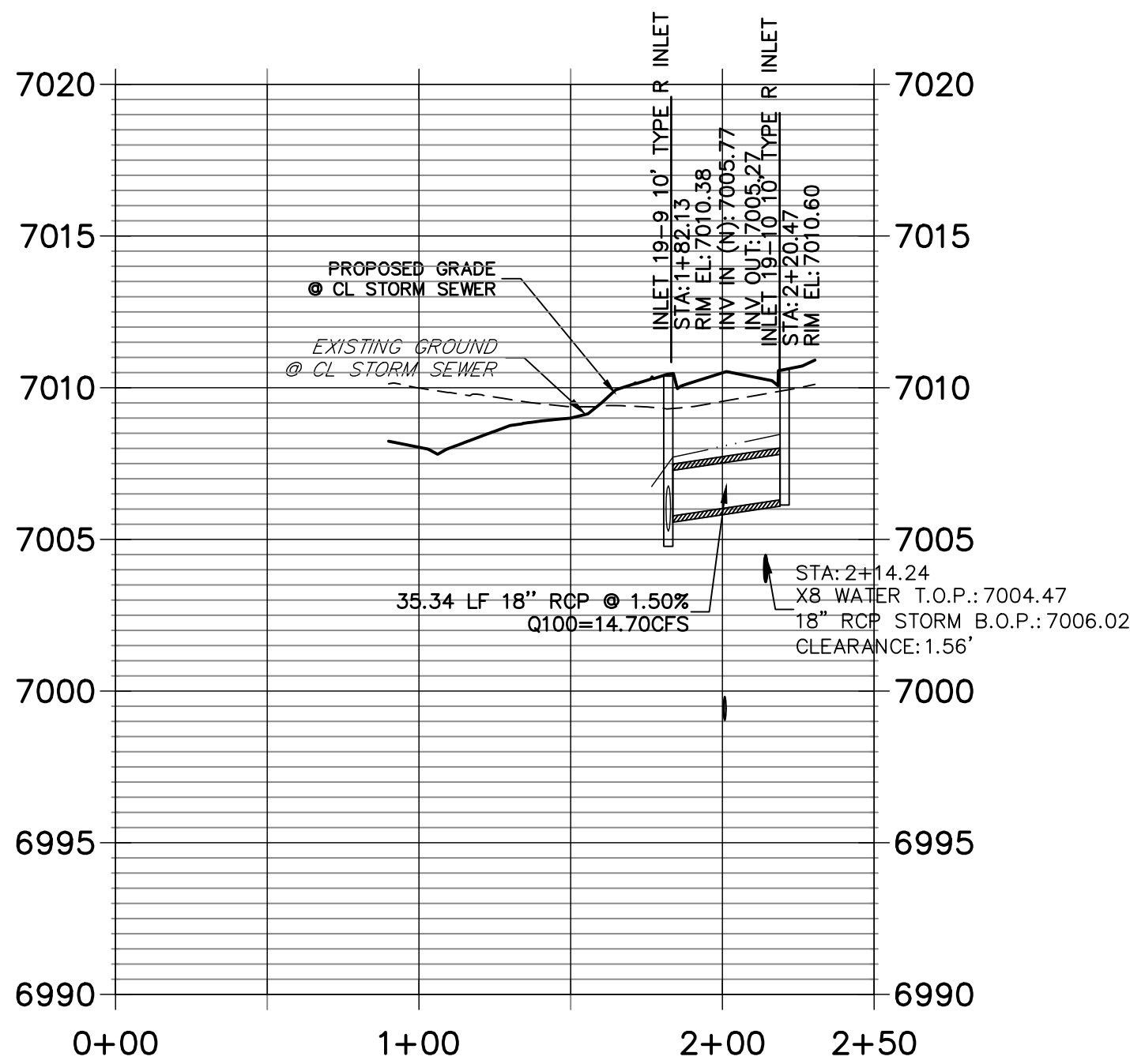


KEY MAP
NTS

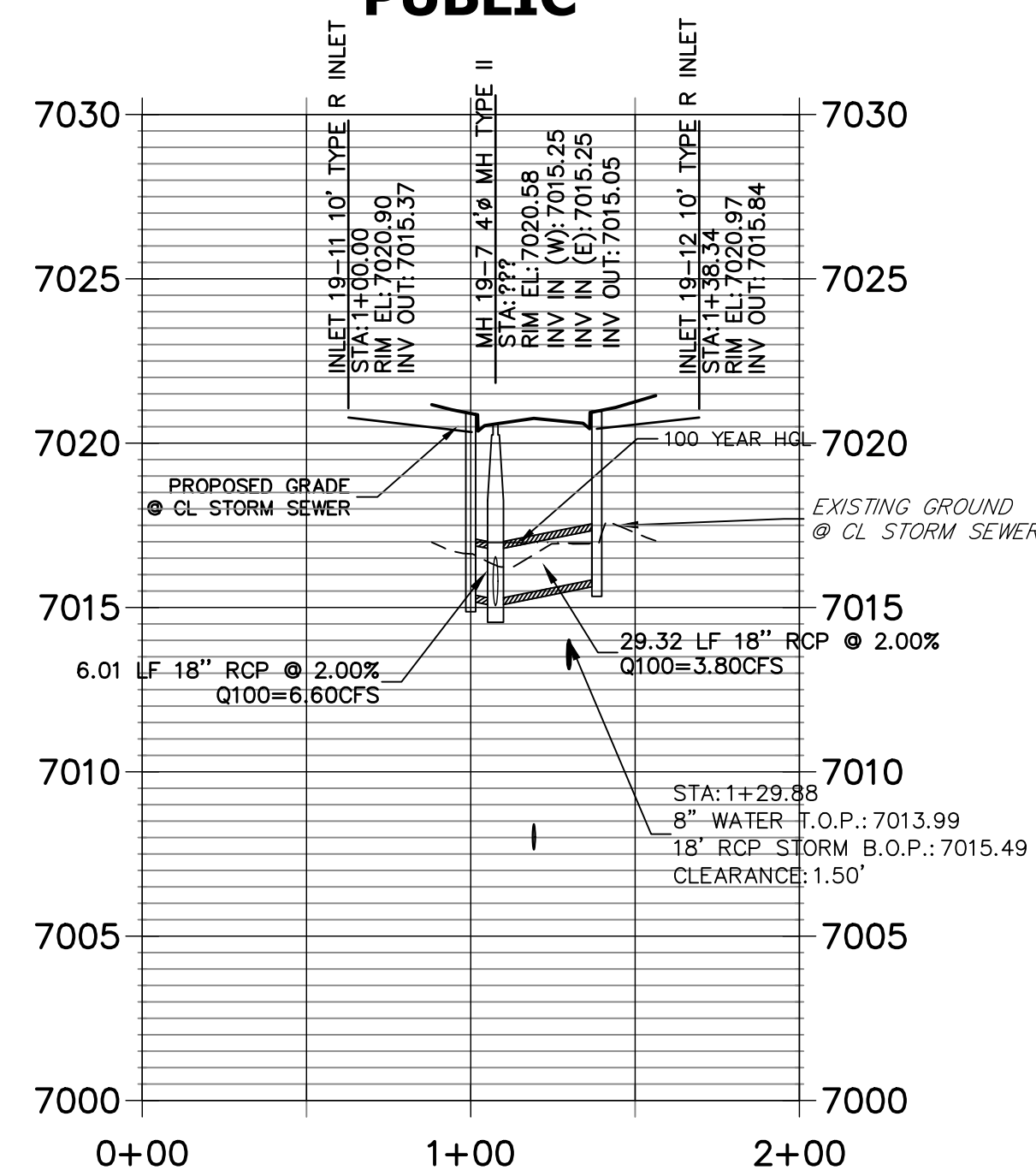
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PUBLIC



STRM_19_LAT 3 PROFILE
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PUBLIC



NOTE
WATER TIGHT JOINTS
REQUIRED WHERE HGL IS
OUTSIDE OF THE PIPE.

EPC 11/17/2021

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION

Mike Bramlett

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314

FOR AND ON BEHALF OF JR ENGINEERING

DATE 8/18/2021
PROFESSIONAL ENGINEER
32314

STERLING RANCH FILING NO.2

STORM SEWER PLANS

SHEET 4 OF 26

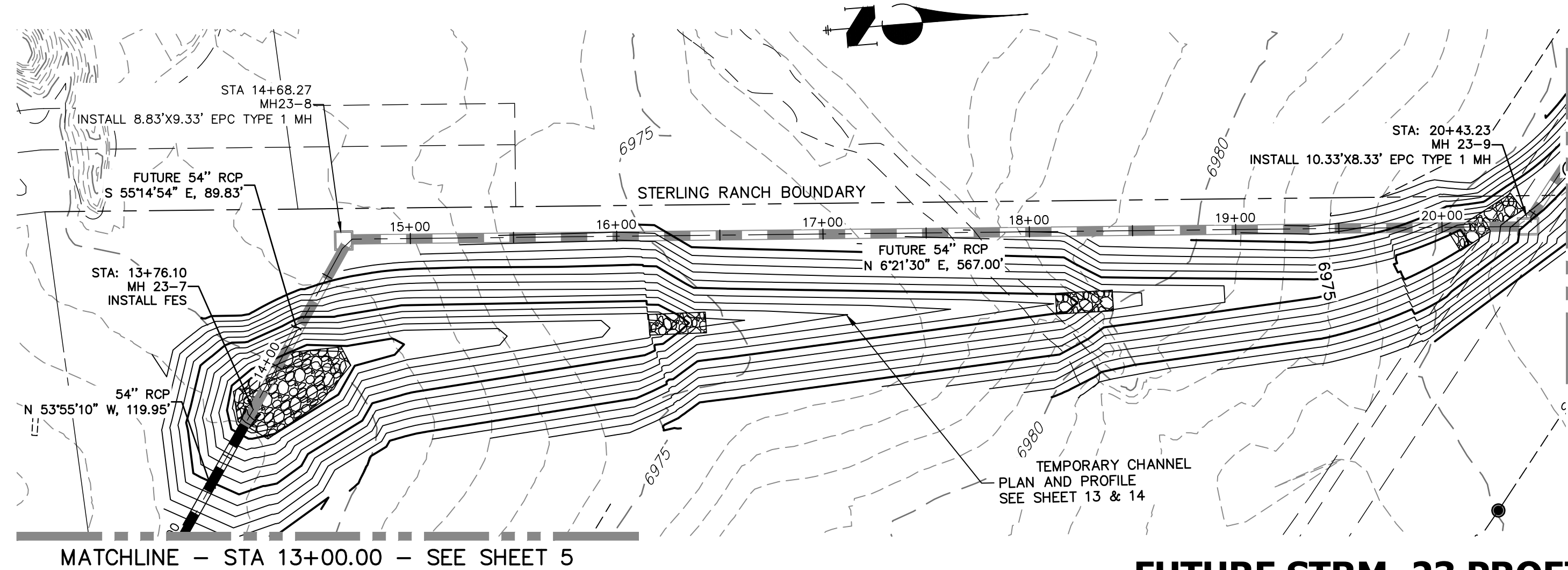
JOB NO. 25188.01

J.R. ENGINEERING
A Western Company

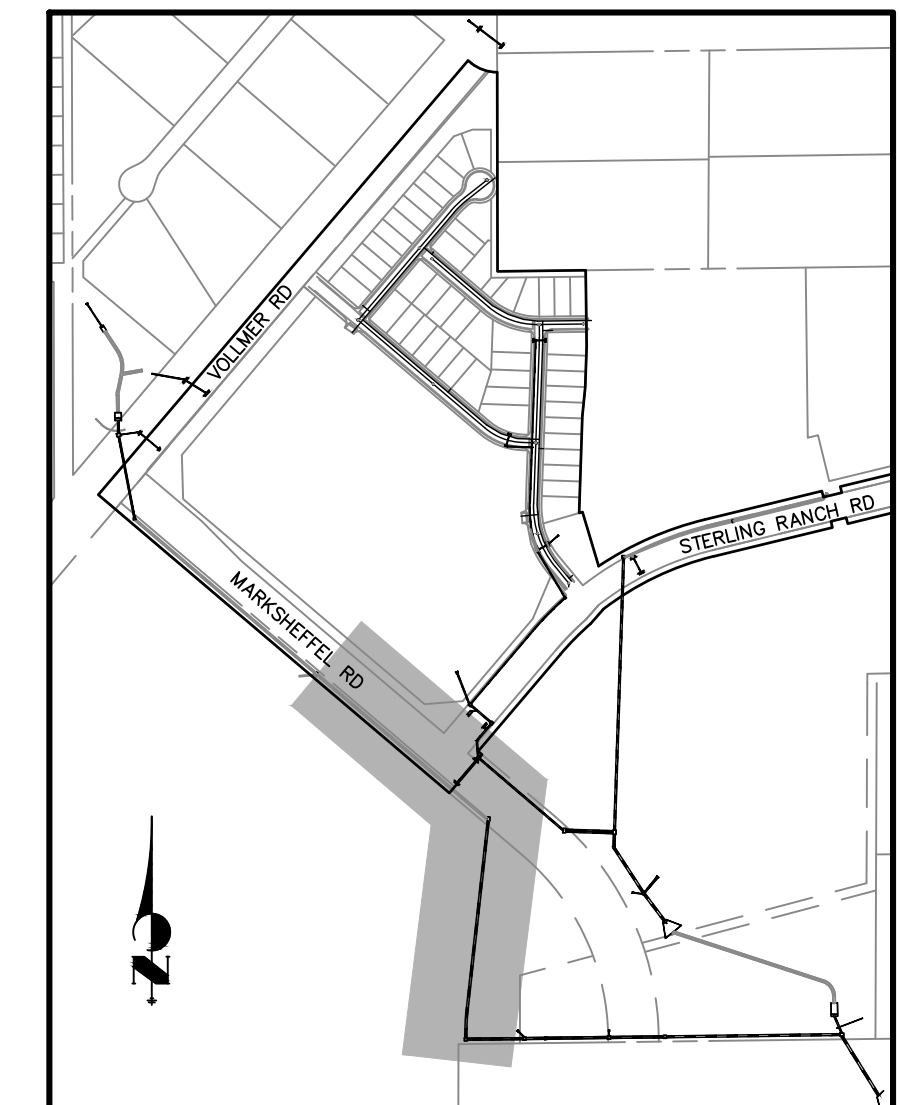
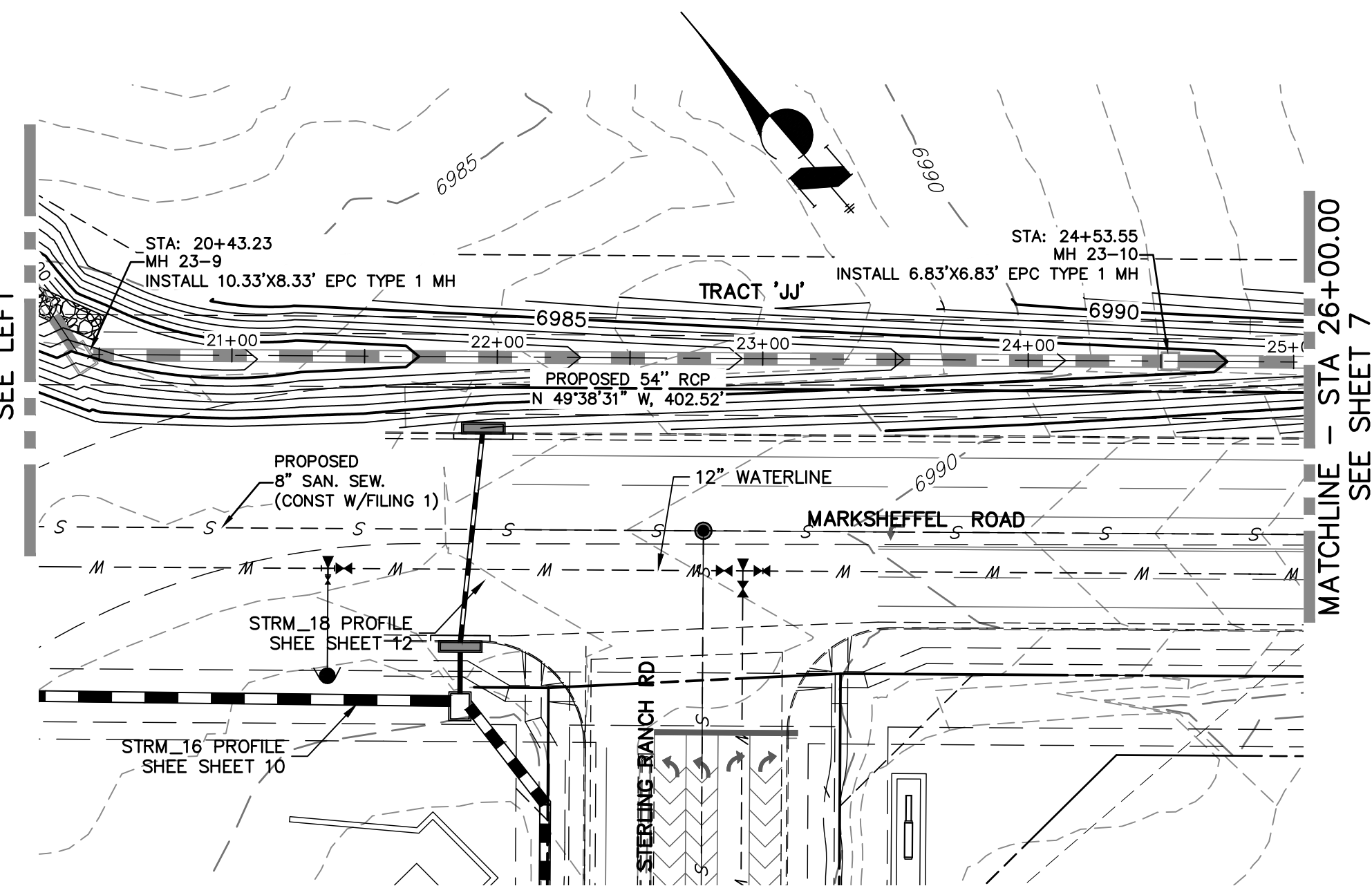
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PREPARED FOR
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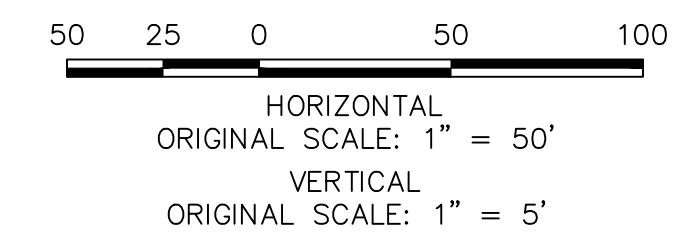
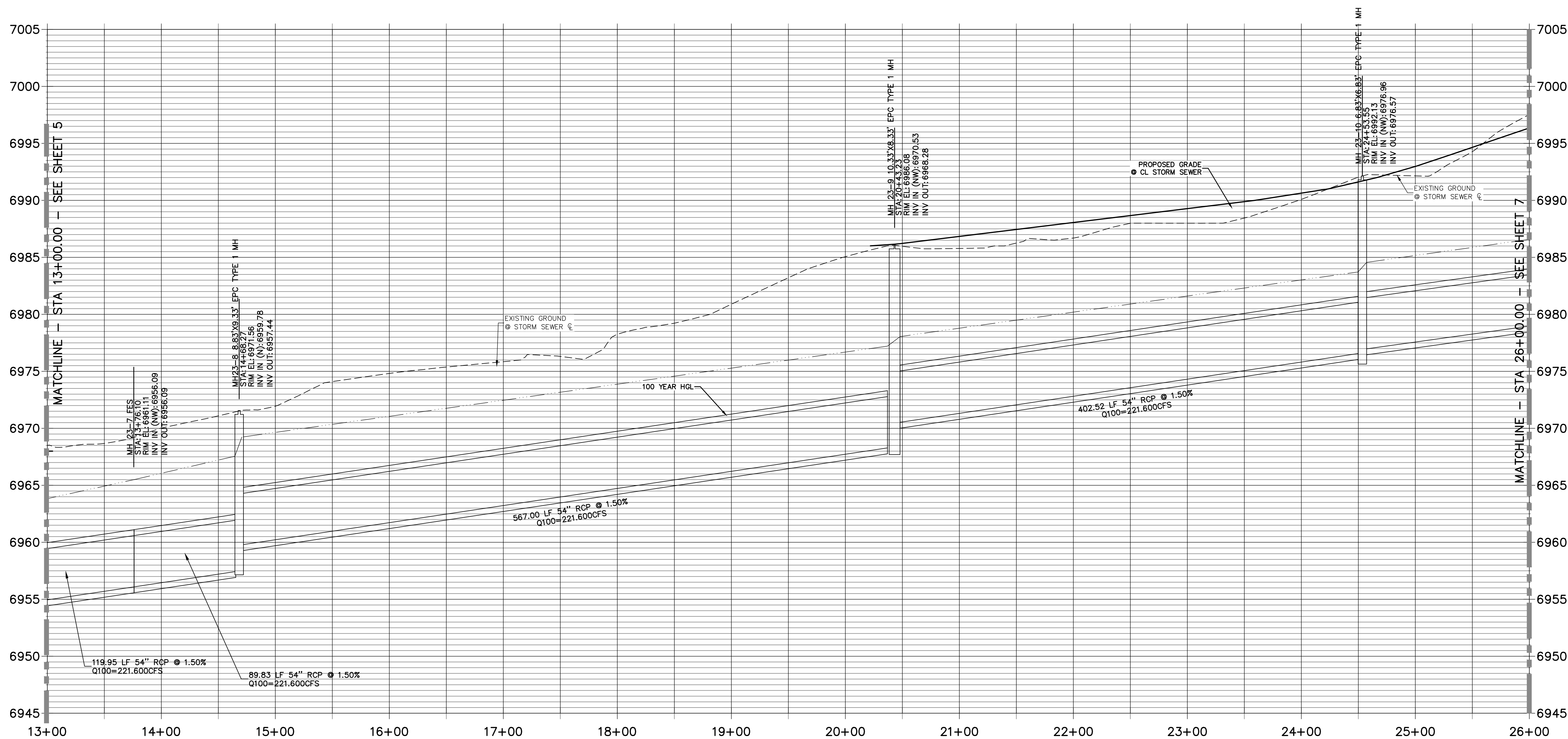
**FUTURE STRM_23 PROFILE
STA 13+00.00 TO 26+00.00
PRIVATE (SRMD)**



KEY MAP
NTS



Know what's below.
Call before you dig.



NOTE

WATER TIGHT JOINTS
REQUIRED WHERE HGL IS
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ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION

Mike Bramlett
MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314

FOR AND ON BEHALF OF JR ENGINEERING

DATE: 8/18/2021
32314
COLORADO REGISTERED PROFESSIONAL ENGINEER
LOCAL INCH

STERLING RANCH FILING NO.2

FUTURE STORM SEWER
PLANS

SHEET 6 OF 26

JOB NO. 25188.01

BY: DATE: REVISION: No. 1"=50' 1"=5' 08/18/21 RAB KRW

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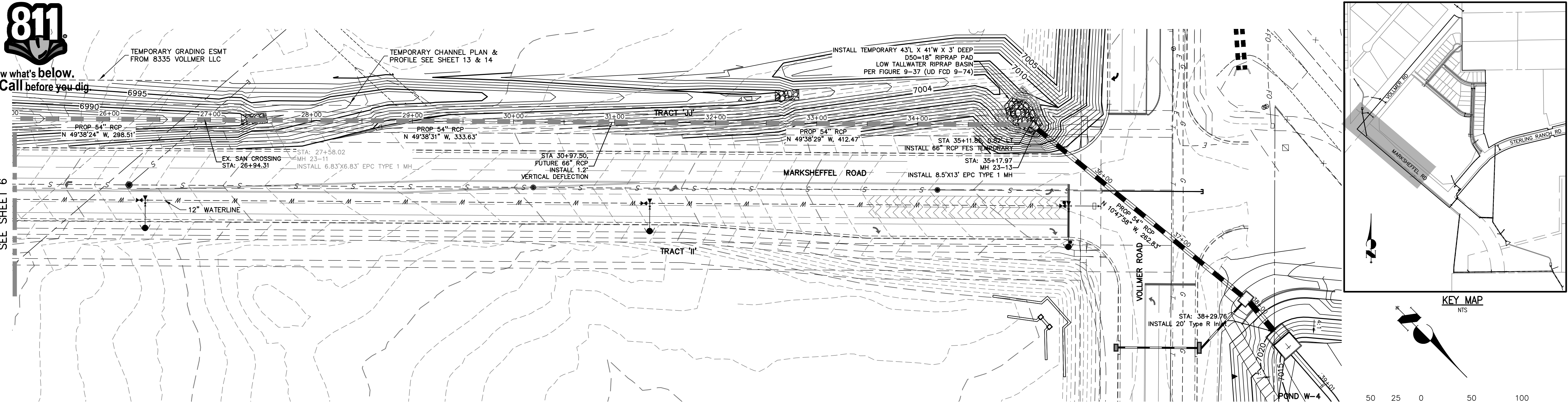
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(719) 471-1742

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AUTHORIZATION.

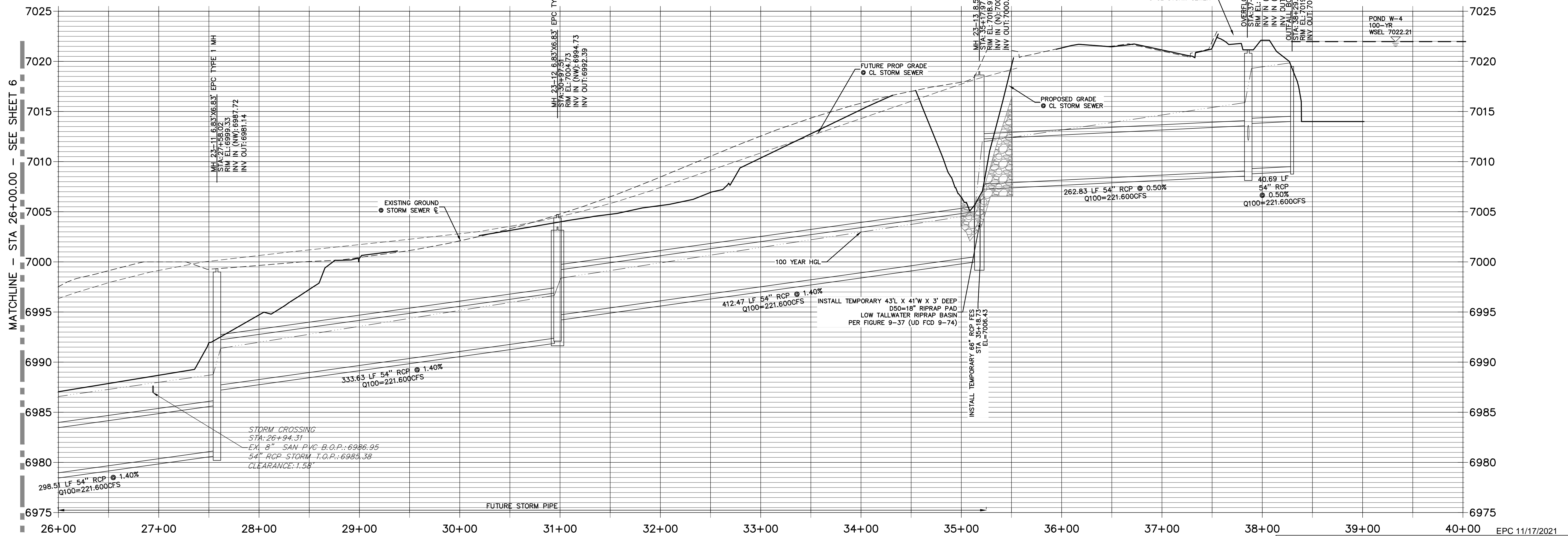


Know what's below.
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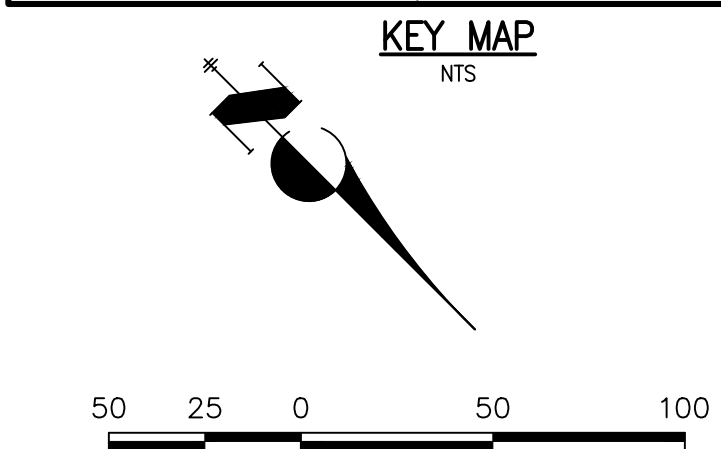
MATCHLINE - STA 26+00.00
SEE SHEET 6



**STRM_23 PROFILE
STA 26+00.00 TO 40+00.00
PRIVATE (STRMD)**



MATCHLINE - STA 26+00.00 - SEE SHEET 6



NOTE
WATER TIGHT JOINTS
REQUIRED WHERE HGL IS
OUTSIDE OF THE PIPE.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION

Mike Bramlett
MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314

FOR AND ON BEHALF OF JR ENGINEERING

DATE: 8/18/2021
32314

STERLING RANCH FILING NO.2

STORM SEWER PLANS

SHEET 7 OF 26
JOB NO. 25188.01

BY DATE

No. REVISION

1"=50'

1"=5'

DATE

08/18/21

DESIGNED BY

RAB

DRAWN BY

KRW

CHECKED BY

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

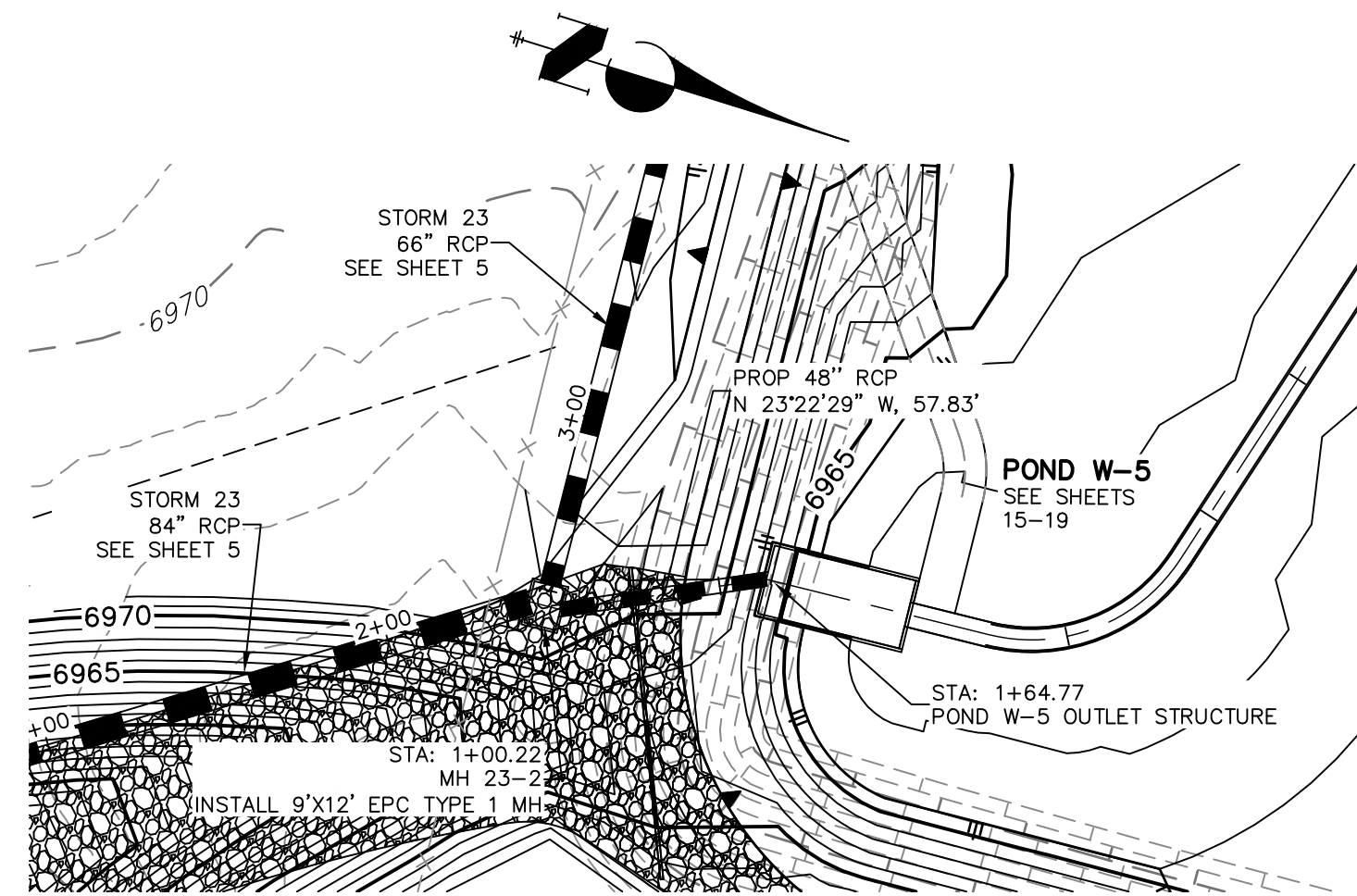
DATE

DATE

DATE

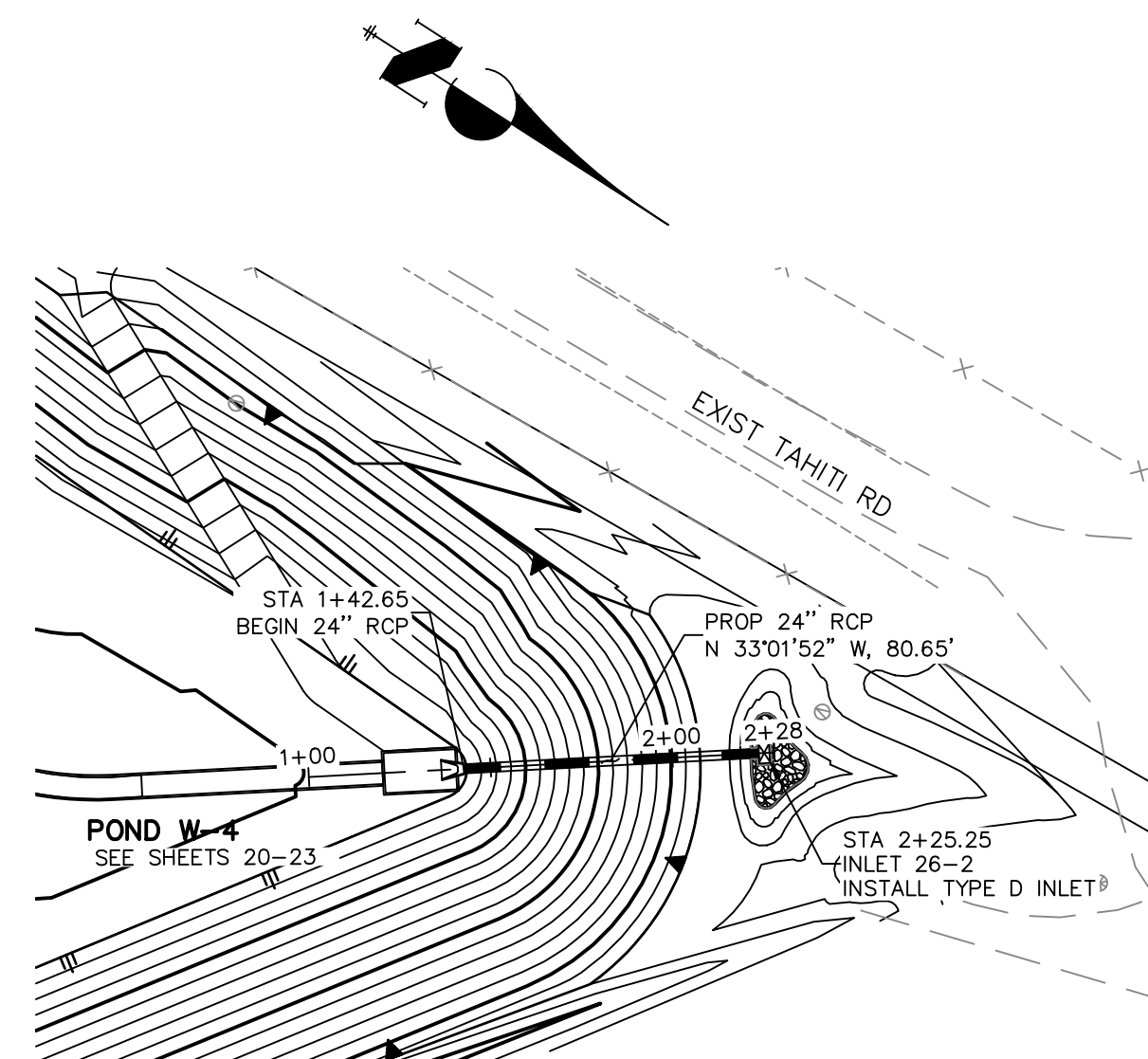
DATE

DATE



Profile view of the proposed 48-inch RCP storm sewer. The vertical axis shows elevation from 6930 to 6980 feet. The horizontal axis shows stationing from 0+50 to 3+50. The profile shows the existing ground line, the proposed sewer grade, and the sewer invert. Key features include:

- Inlet 20.5 x 12 EPC Type 1 MH at station 1+00 (Elev. 6972.23)
- Inlet 20.5 x 20 Type R Inlet at station 2+00 (Elev. 6966.00)
- Pond W-5 100-YR WSEL at station 2+00 (Elev. 6969.93)
- Proposed grade for the CL storm sewer at station 2+00 (Elev. 6961.50)
- 57.83 LF 48" RCP @ 2.00% slope, Q100=149.200 CFS



PROPOSED GRADE
● CL STORM SEWER

FES 26-1 24" FES
STAT 1+42.65
RIM EL 7019.25
INV IN (NW) 7016.00

POND W-4 100-YR
WSCL 7022.21

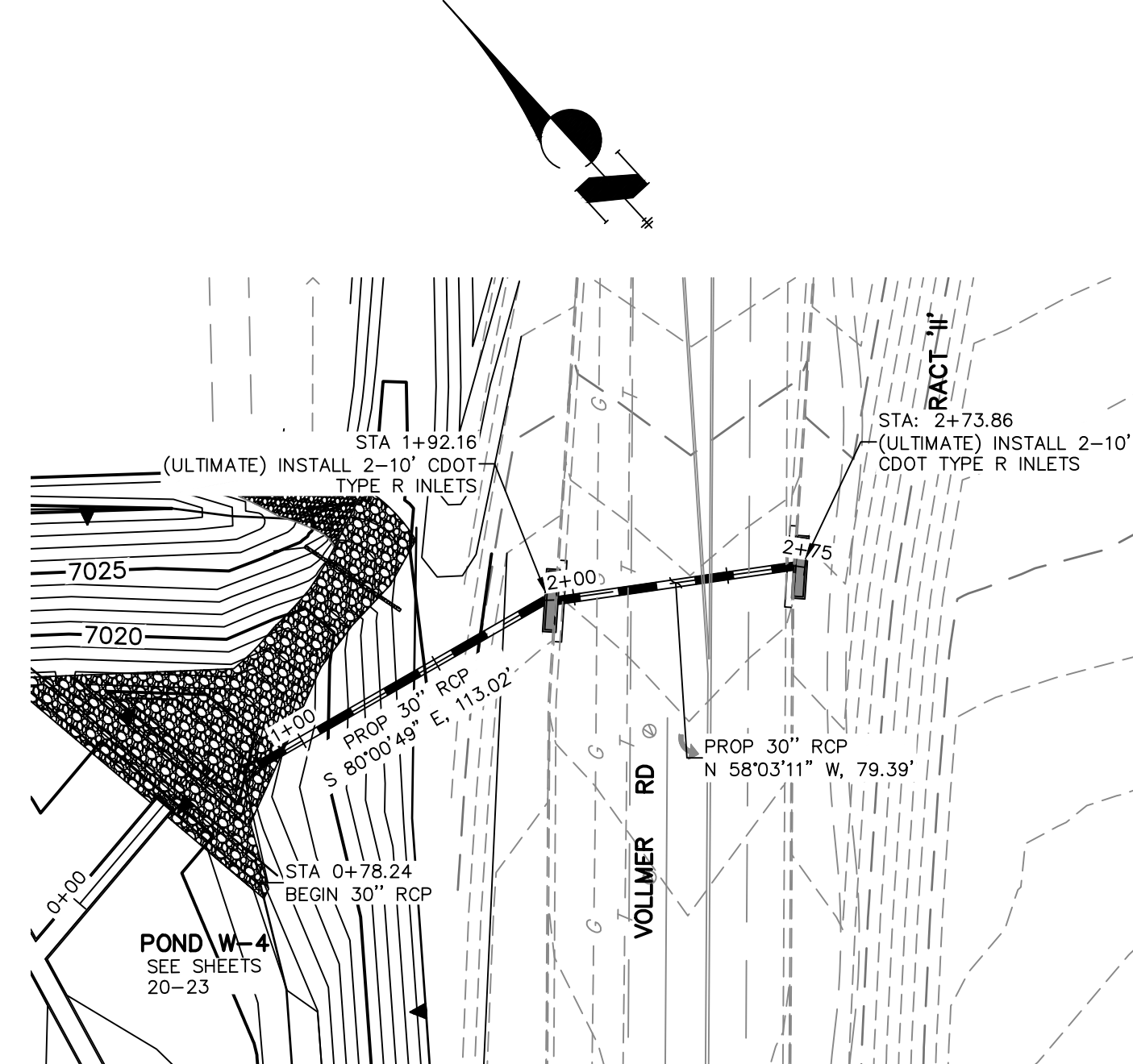
100 YEAR HGL

24" RCP ● 1.00%
Q100=14.50CFS

SILET 26-1 TYPE D INLET
INLET EL 7025.25
INLET DIA 36"
INV OUT 7016.81

7035
7030
7025
7020
7015
7010
7005

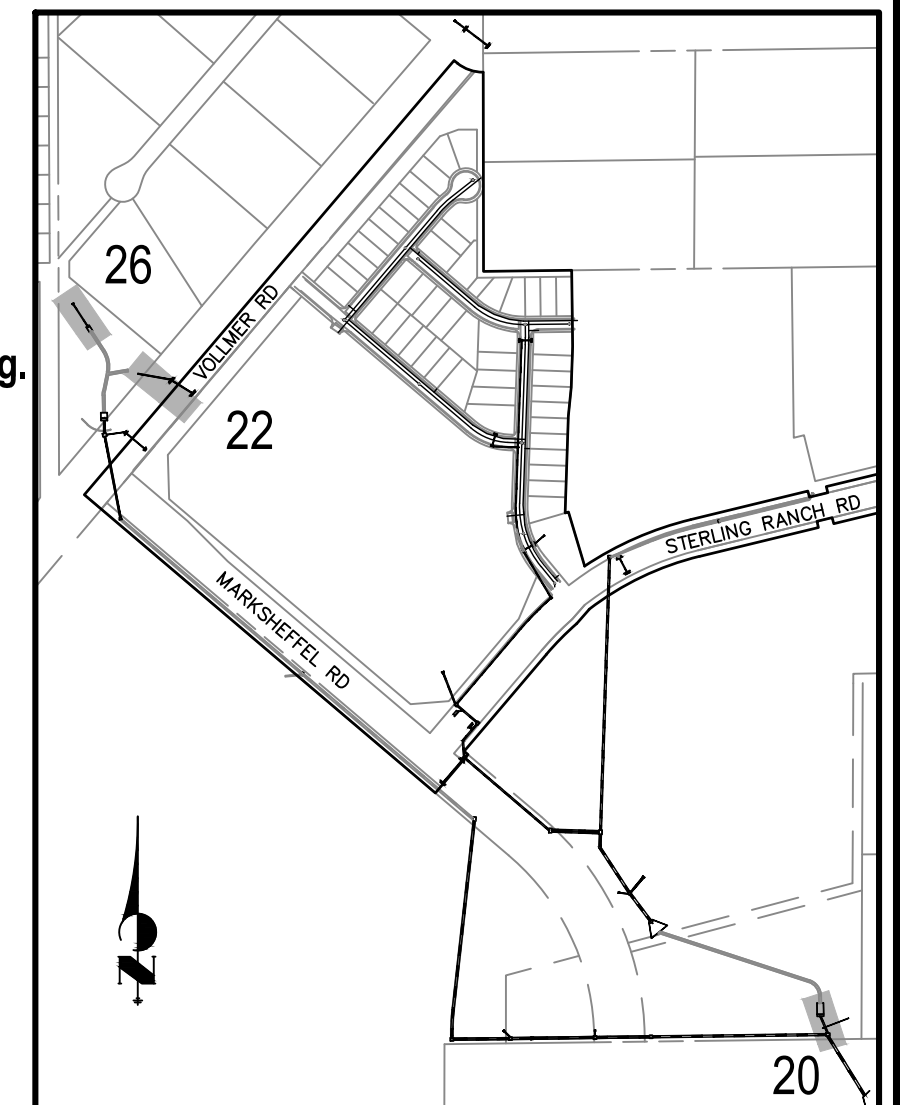
1+00 2+00 2+50



Profile view of the proposed storm sewer system. The vertical axis shows elevation from 6995 to 7035 feet. The horizontal axis shows stationing from 0+00 to 3+50. The profile includes the existing ground line, the proposed storm sewer grade, and the 100-year high water level (HGL). Key features include:

- Pond W-4 (100-YR WSEL: 7022.11) at station 0+00.
- FFS 20'-1 FFS at station 1+00.
- Inlet 22-2 (20' Type R Inlet) at station 2+00.
- Inlet 22-3 (20' Type R Inlet) at station 3+00.
- Proposed grade and 100-year HGL are shown as solid and dashed lines, respectively.
- Storm sewer is 30 inches in diameter with a 0.50% slope for the first section and a 0.86% slope for the second section.
- 100-year HGL is 7022.11 feet at station 0+00.

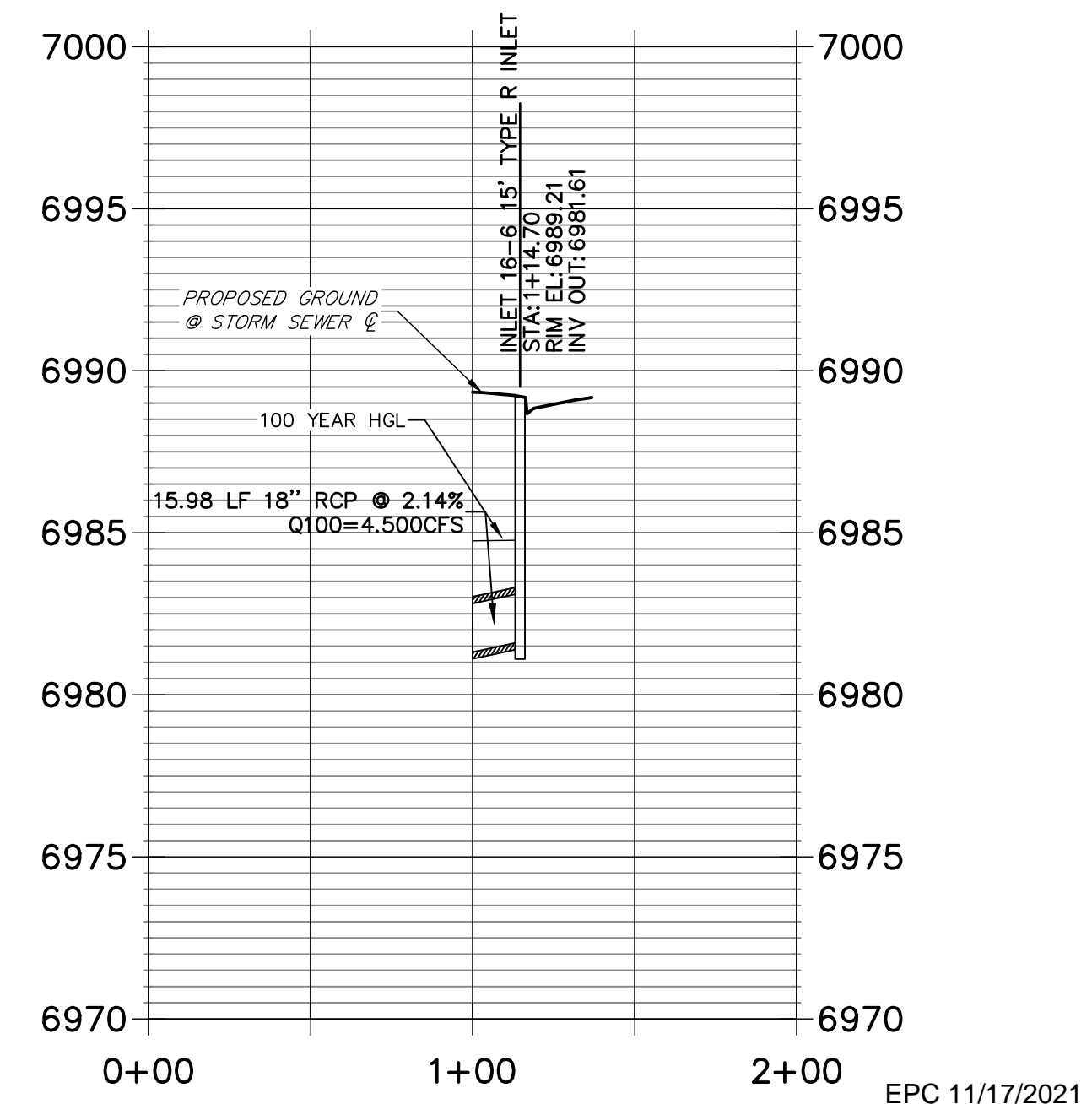
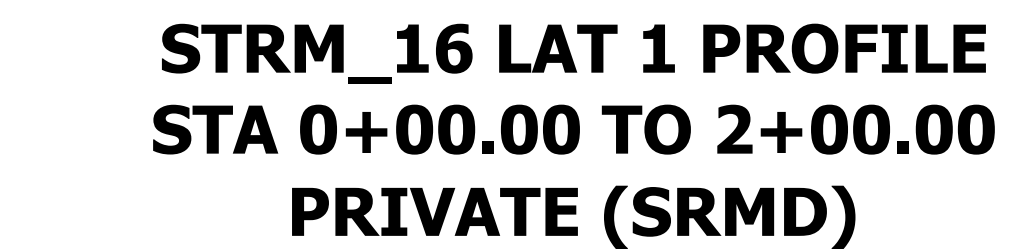
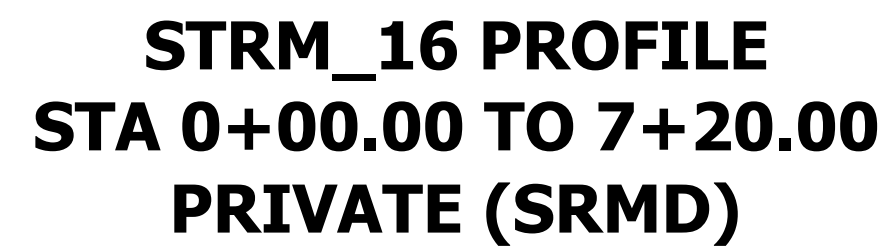
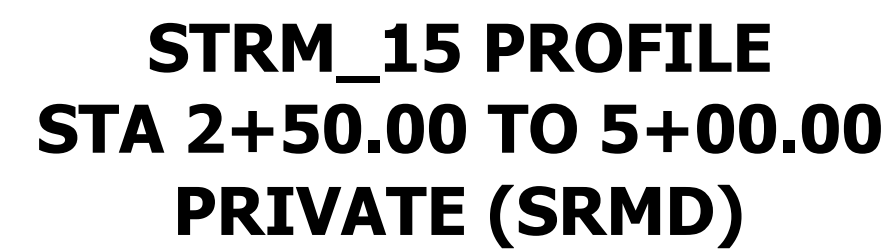
32314 8/18/2021



SR LAND, LLC
20 BOULDER CRESCENT
SUITE 201
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

[illegible]

STERLING RANCH FILING NO.2			
STORM SEWER PLANS			
SHEET	8	OF	26
JOB NO.	25188.01		



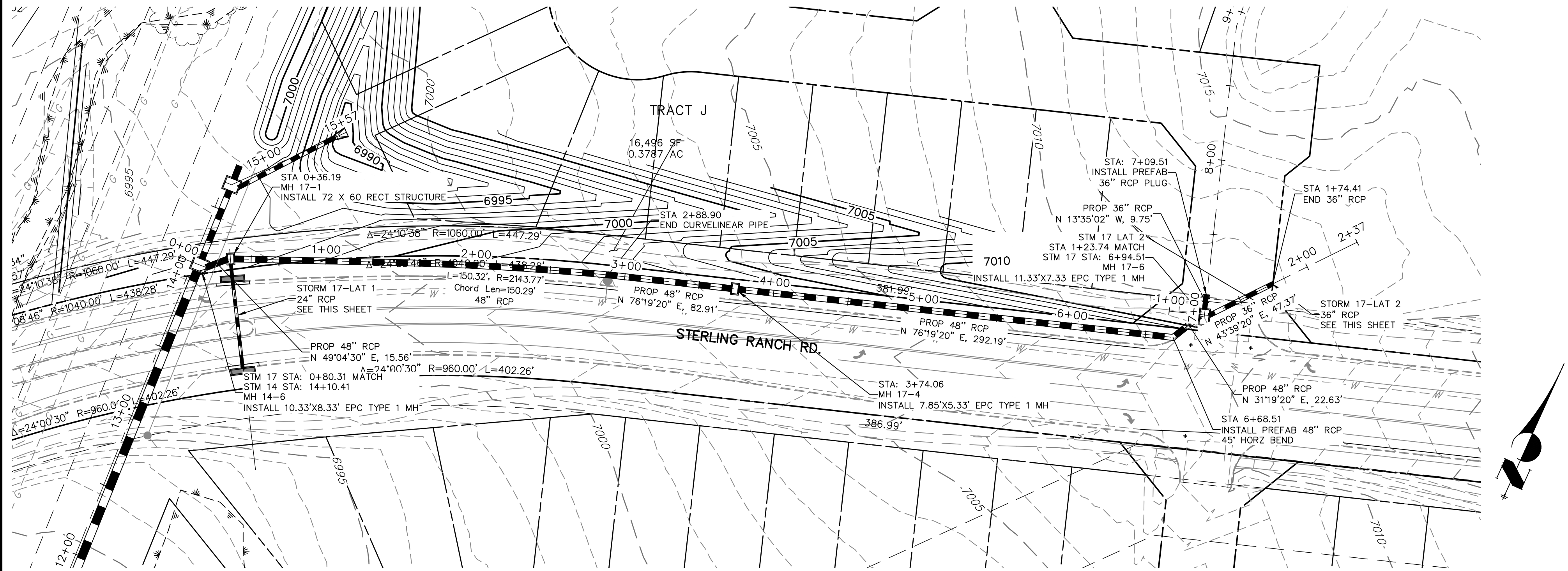
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SR LAND, LLC
20 BOULDER CRESCENT
SUITE 201
COLORADO SPRINGS, CO 80901
JAMES F. MORLEY
(719) 471-1742

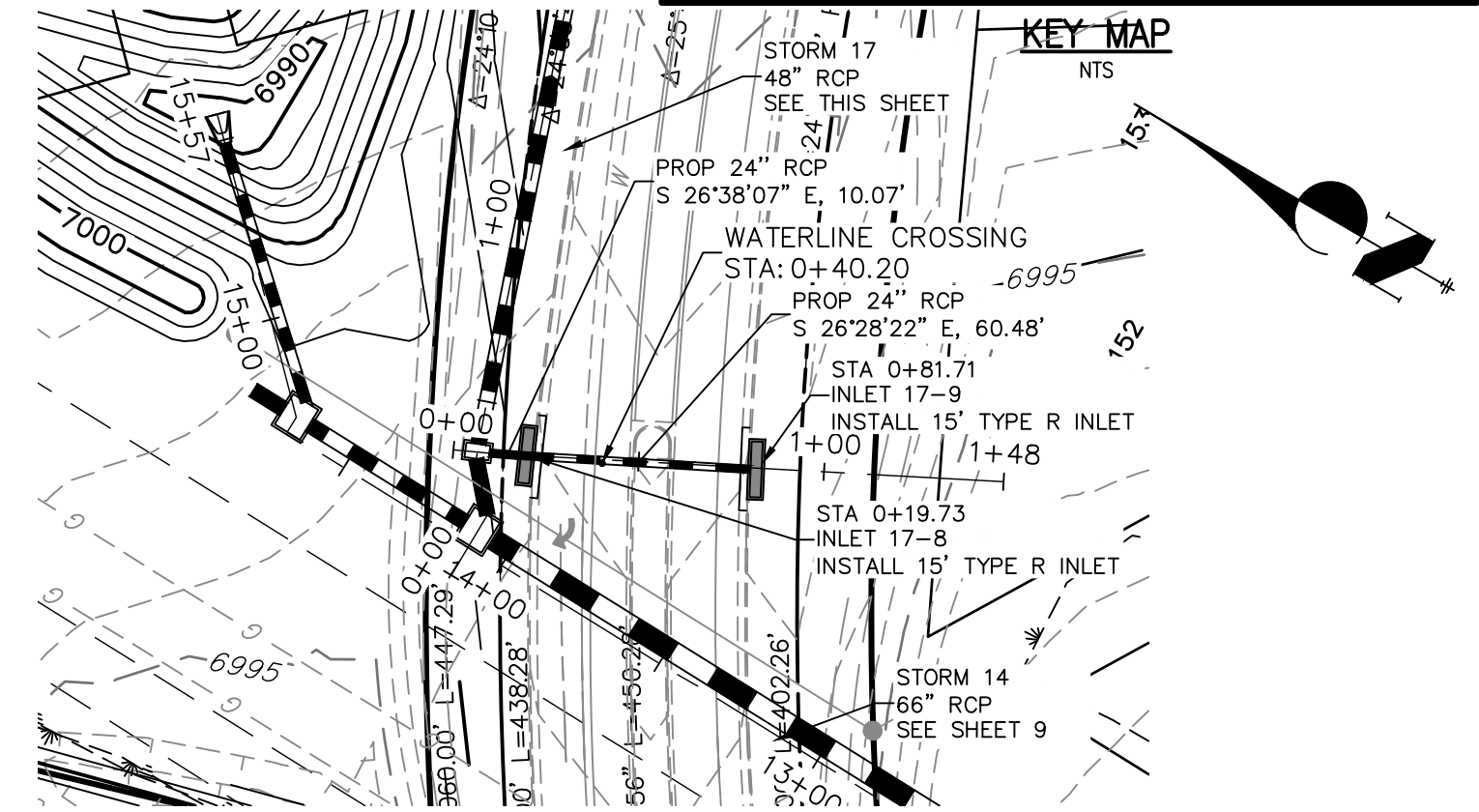
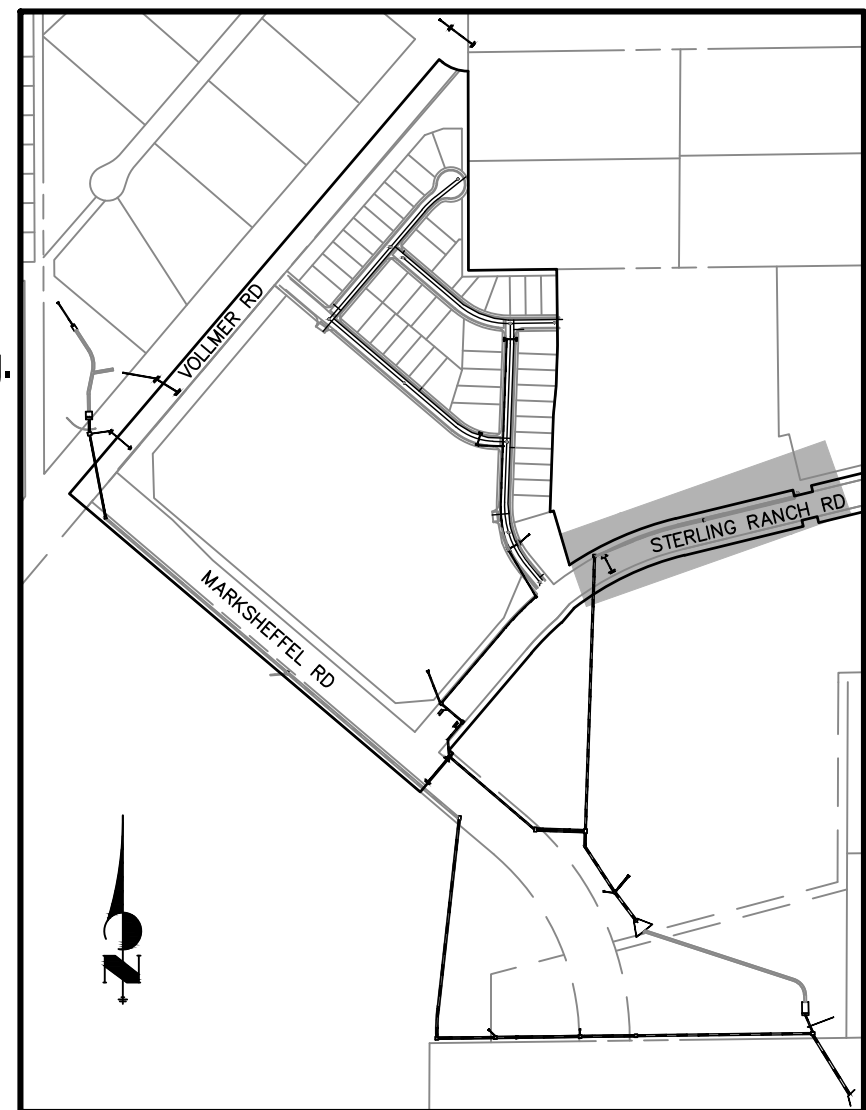
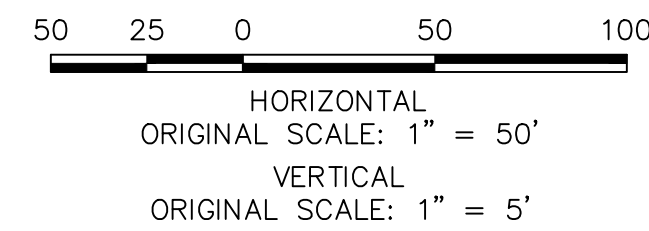


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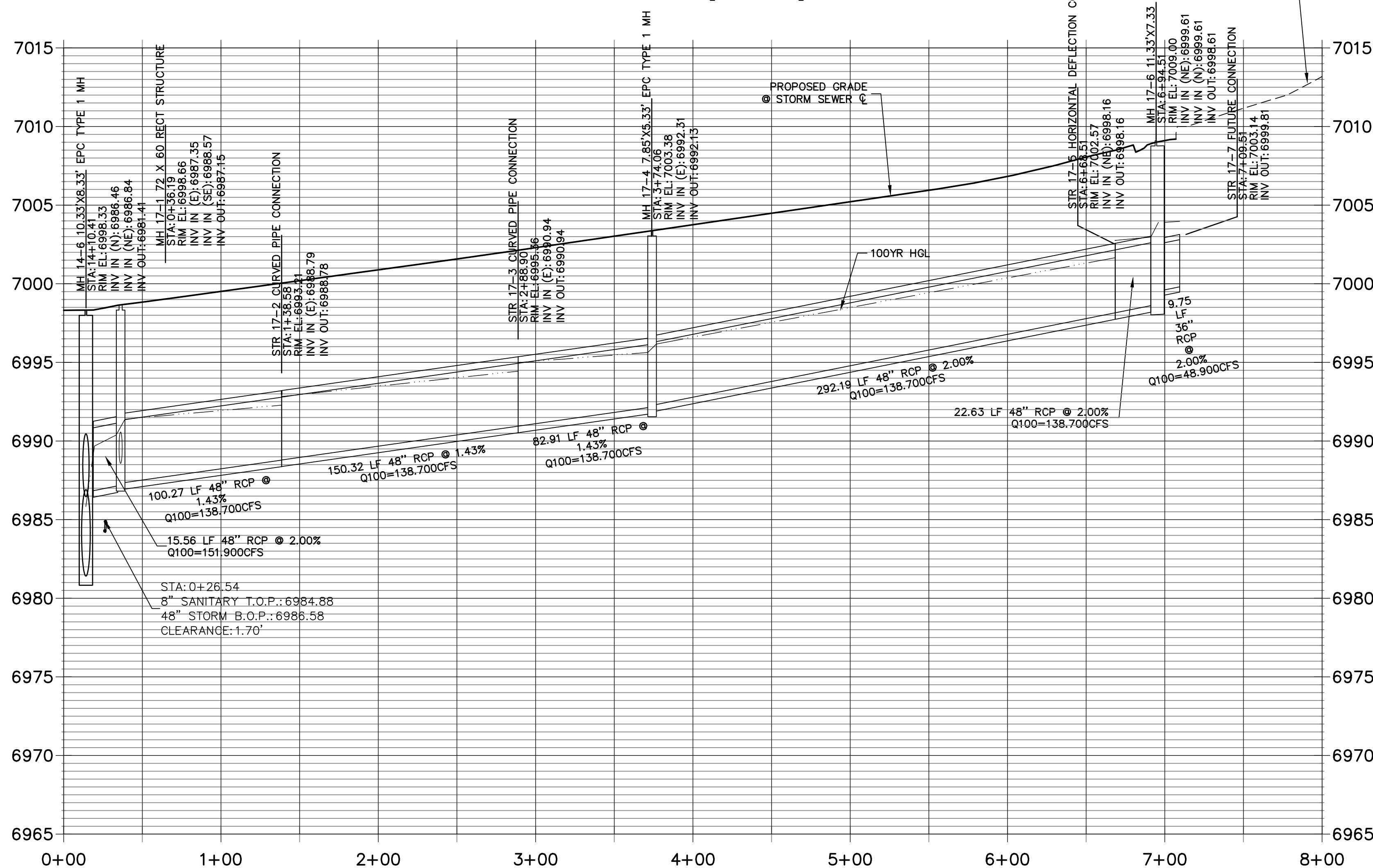


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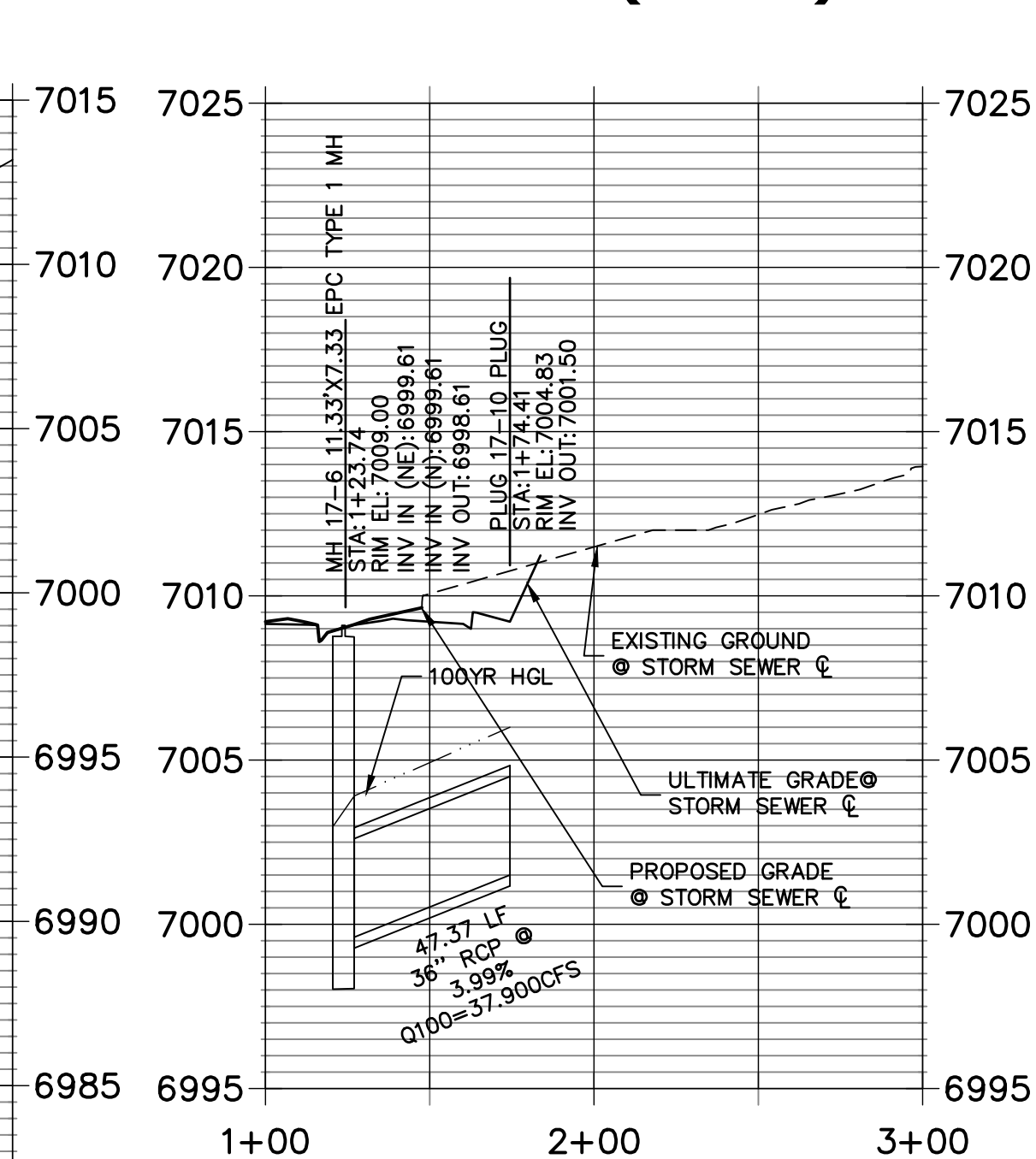


NOTE
WATER TIGHT JOINTS
REQUIRED WHERE HGL IS
OUTSIDE OF THE PIPE.

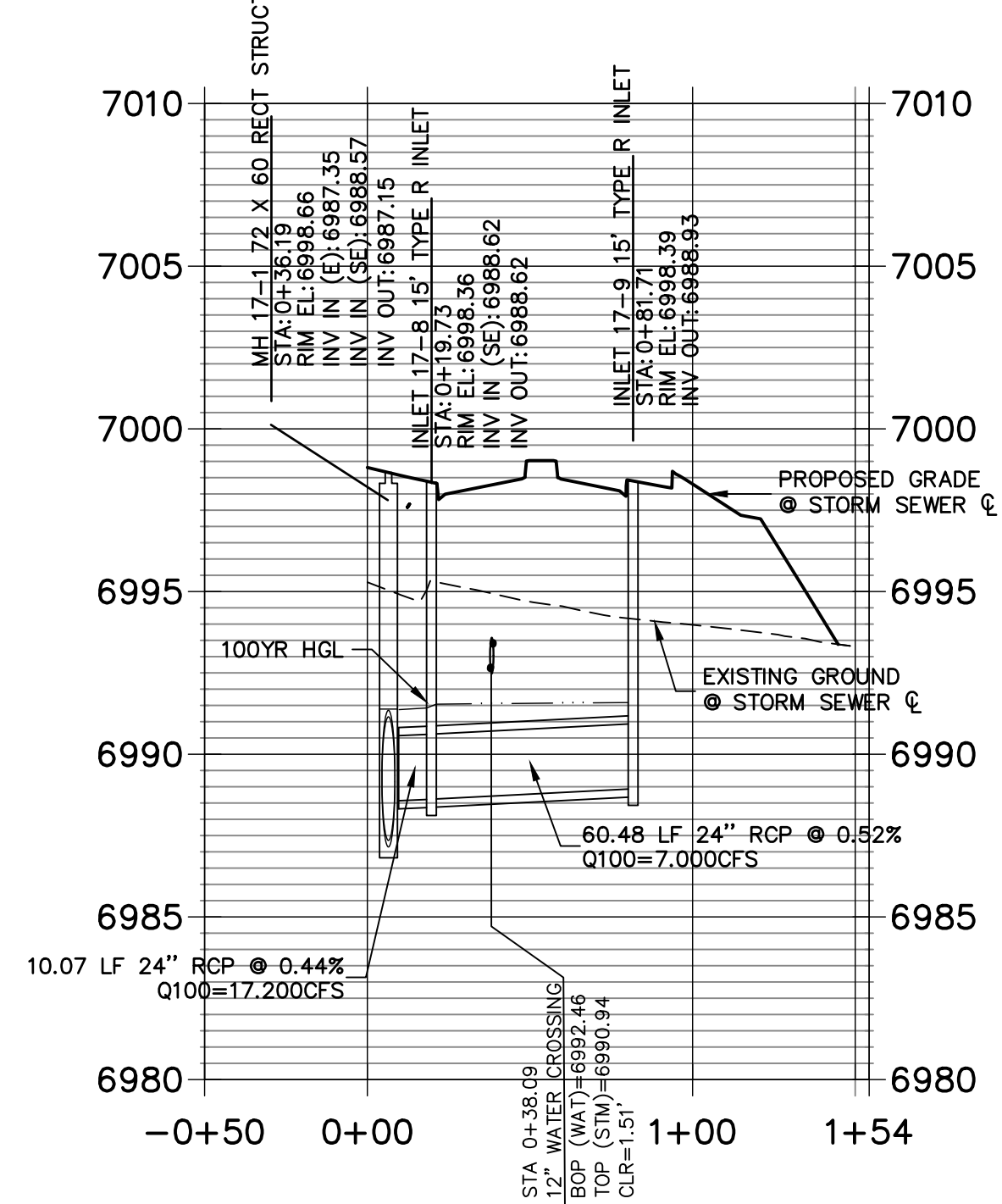
**STRM_17 PROFILE
STA 0+00.00 TO 8+00.00
PRIVATE (SRMD)**



**STRM_17 LAT 2 PROFILE
STA 1+00.00 TO 3+00.00
PRIVATE (SRMD)**



**STRM_17 LAT 1 PROFILE
STA -0+50.00 TO 1+54.28
PUBLIC**



ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION

Mike Bramlett
MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314

FOR AND ON BEHALF OF JR ENGINEERING

DATE 8/18/2021

STERLING RANCH FILING NO.2

STORM SEWER PLANS

SHEET 11 OF 26

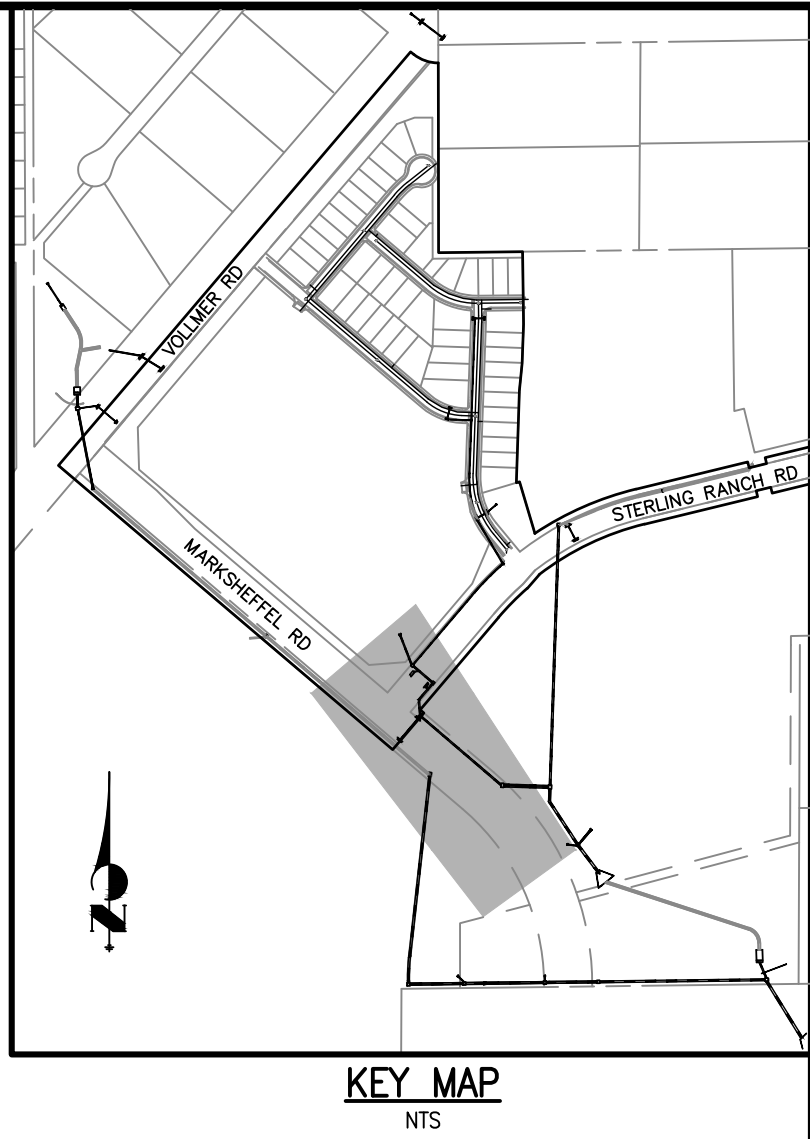
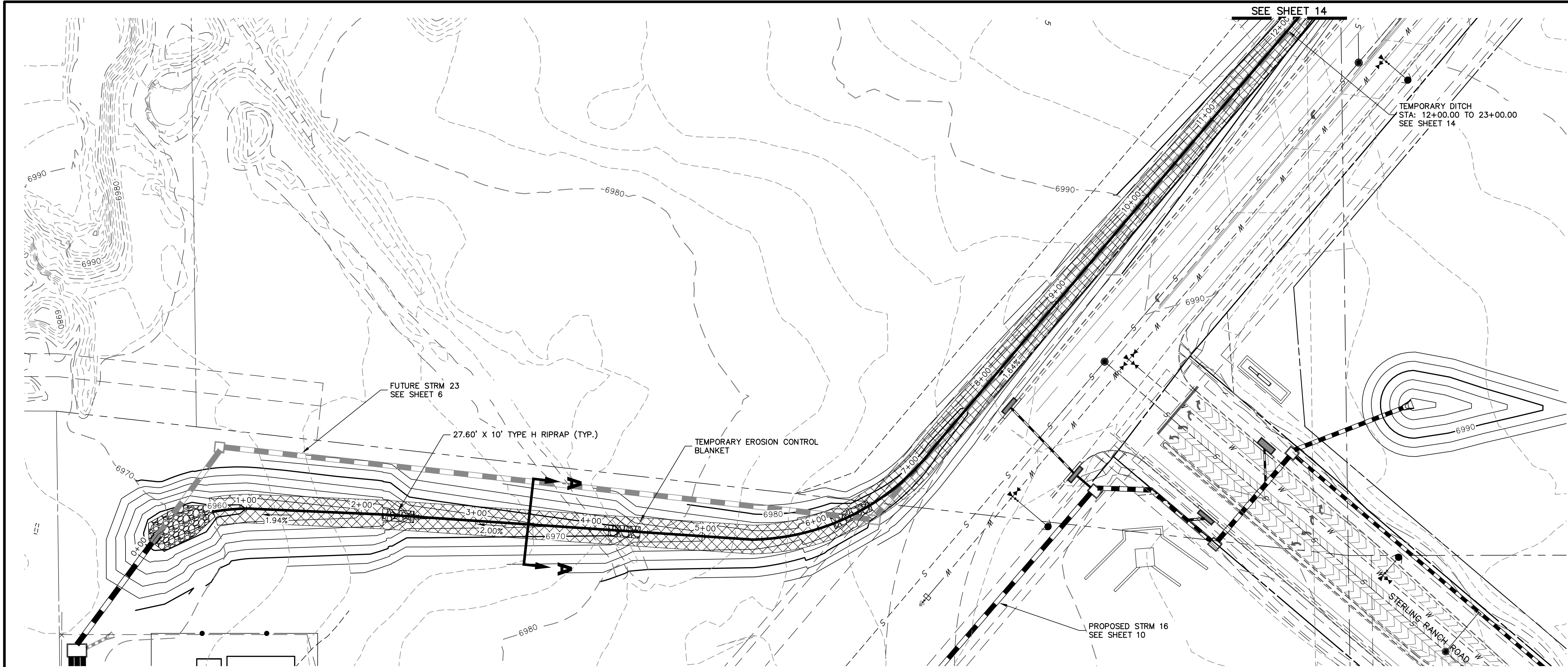
JOB NO. 25188.01

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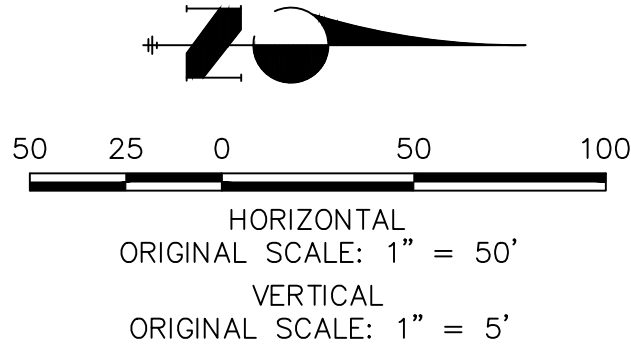
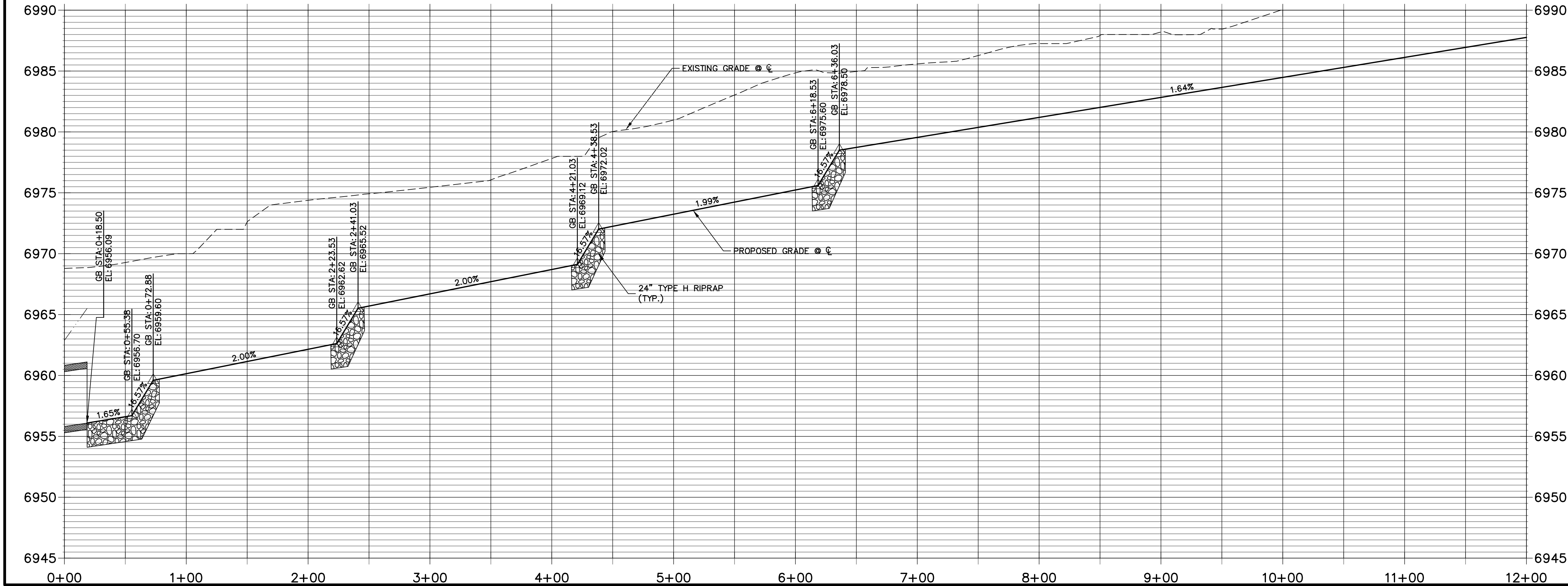
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SR LAND, LLC
20 BOULDER CRESCENT
SUITE 201
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

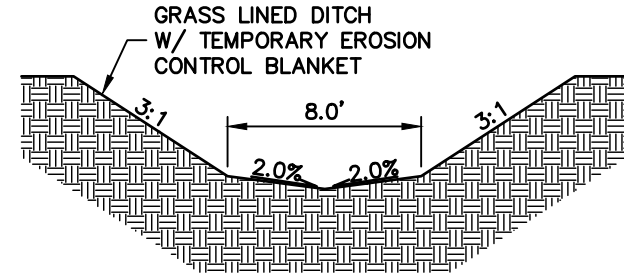
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AUTHORIZATION.



TEMPORARY DITCH PROFILE
STA 0+00.00 TO 12+00.00



VELOCITY 1.87 FT/S
SHEAR STRESS 2.75 LB/FT²



TYPICAL DITCH CROSS SECTION A-A



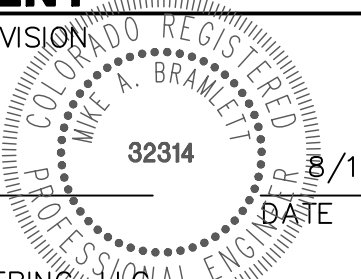
EPC 11/17/2021


ENGINEER'S STATEMENT

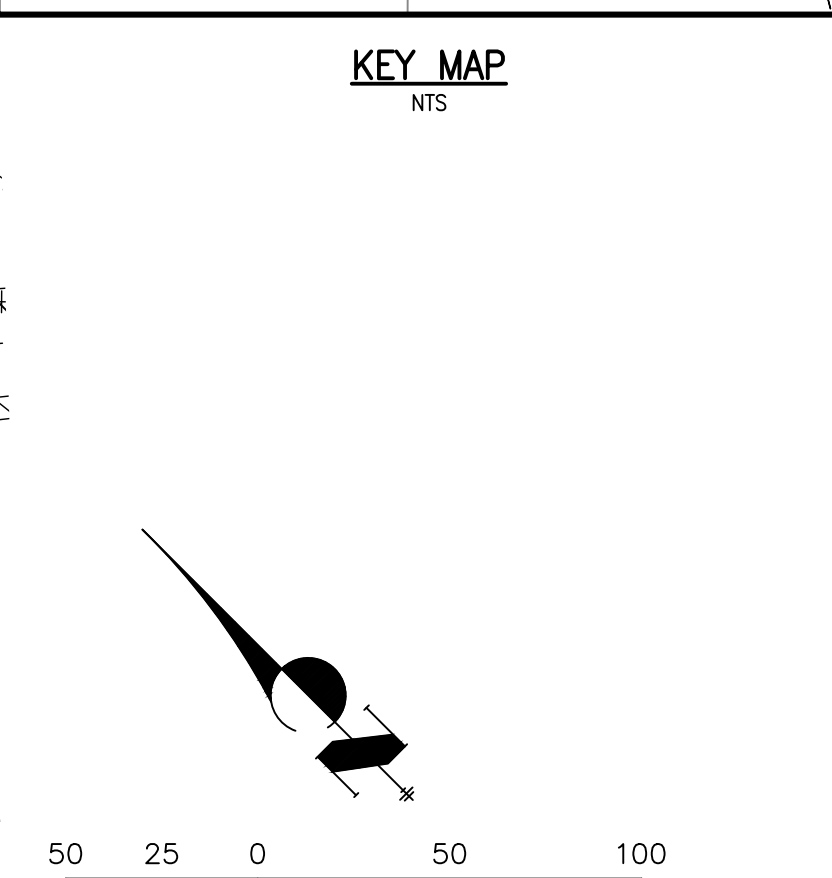
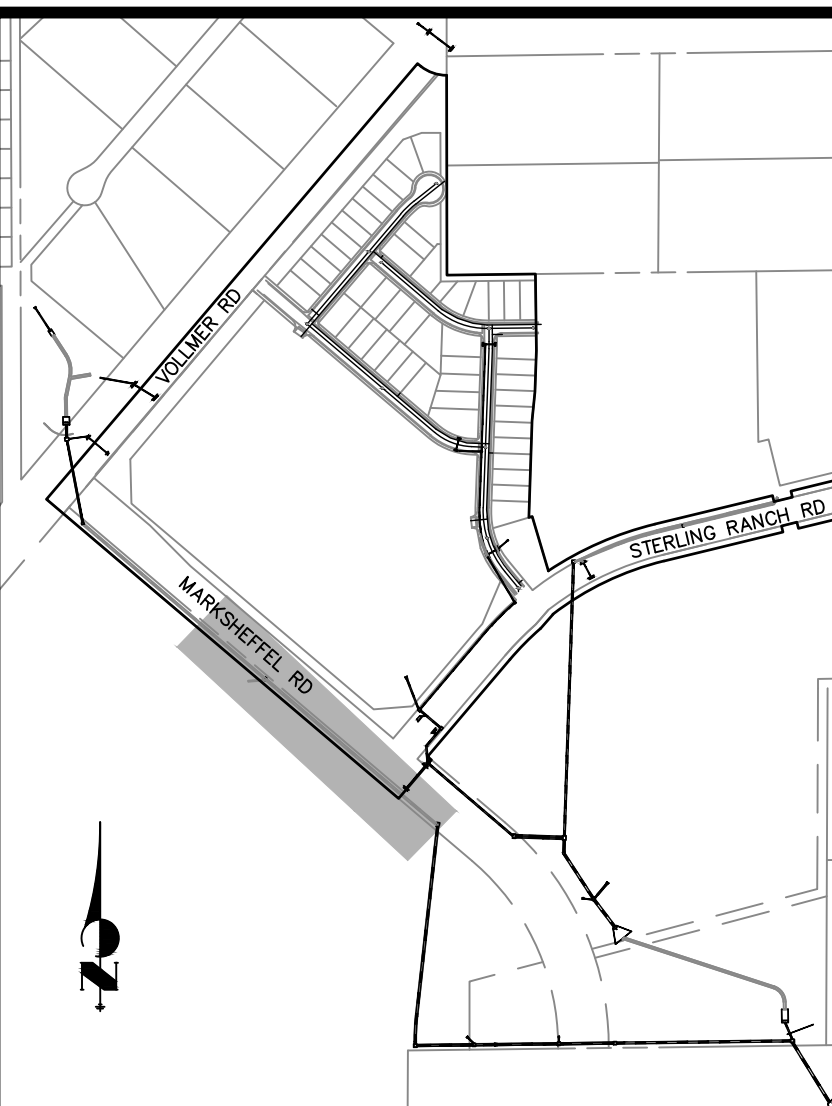
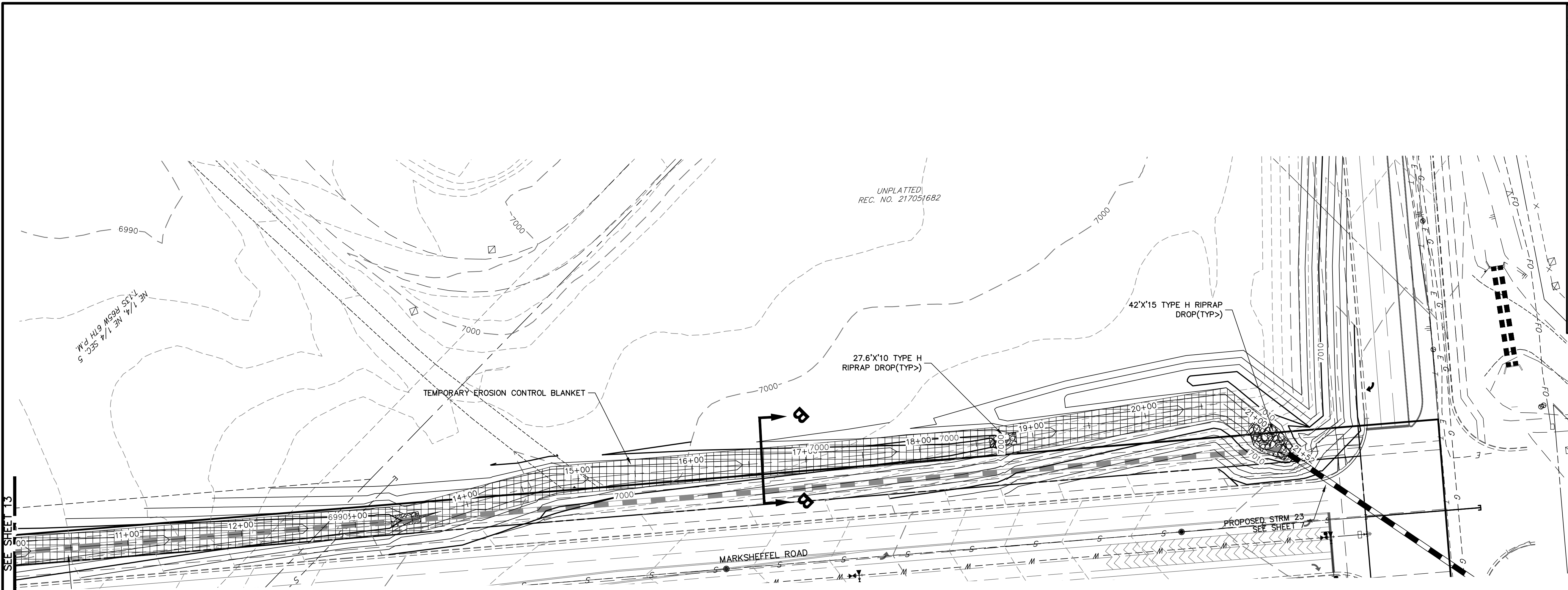
PREPARED UNDER MY DIRECT SUPERVISION

Mike Bramlett

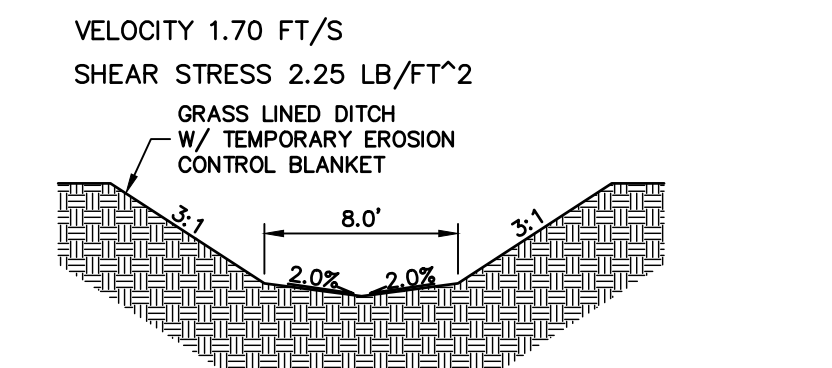
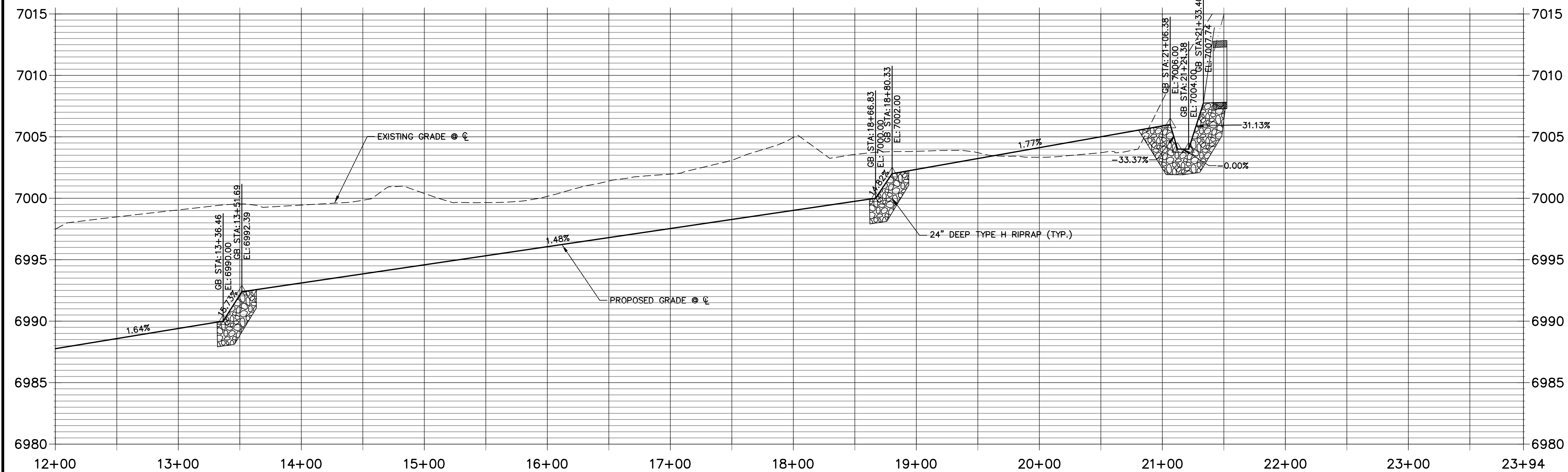
MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING



STERLING RANCH FILING NO.2		H-SCALE 1"=50'		No.		REVISION		BY		DATE		UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USES ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.	
TEMPORARY DITCH		V-SCALE 1"=5'		08/18/21								SR LAND, LLC 20 BOULDER CRESCENT SUITE 201 COLORADO SPRINGS, CO 80903 JAMES F. MORLEY (719) 471-1742	
		DATE		DESIGNED BY		RAB						J-R ENGINEERING A Western Company  Central 303-740-9888 • Colorado Springs 719-583-2583 Fort Collins 970-491-9888 • www.jrengineering.com	
		DRAWN BY		RAB									
		CHECKED BY											
SHEET 13 OF 26													
JOB NO. 25188.01													



**TEMPORARY DITCH PROFILE
STA 12+00.00 TO 23+93.57**



TYPICAL DITCH CROSS SECTION B-B

ENGINEER'S STATEMENT

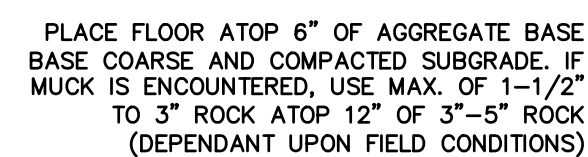
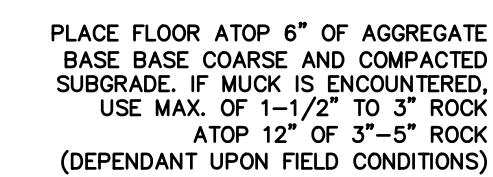
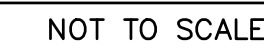
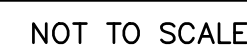
PREPARED UNDER MY DIRECT SUPERVISION

Mike Bramlett

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING

DATE 8/18/2021

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J.R. ENGINEERING A Western Company		STERLING RANCH FILING NO.2		TEMPORARY DITCH	
CENTRAL 303-740-9888 • Colorado Springs 719-583-2583 Fort Collins 970-491-9888 • www.jrengineering.com		SHEET 14 OF 26		JOB NO. 25188.01	
BY		DATE		REVISION	
1"=50'		1"=5'		08/18/21	
H-SCALE		V-SCALE		DESIGNED BY	
DRAWN BY		CHECKED BY		RAB	



FULL SPECTRUM DETENTION

POND W-5 FOREBAY PLAN

NOT TO SCALE

EPC 11/17/2021

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION

Mike Bramlett

MIKE A. BRAMLETT, P.E.

COLORADO P.E. 32314
FOR AND ON BEHALF OF

FOR AND ON BEHALF OF JR ENGINEERING,///

32314 8/18/2021

Signature

ELCA C
"MUMM"

STERLING RANCH FILING NO.2

POND DETAILS

SHEET 16 OF 26

JOB NO. 25188.01

PREPARED FOR

SR LAND, LLC

20 BOULDER CRESCENT

SUITE 201
COLORADO SPRINGS, CO 80903

AMES F. MORLEY

(19) 471-1742

L.D. FRIEDBERG

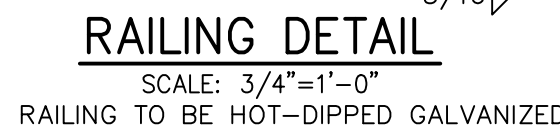
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STERLING RANCH FILING NO.2	
POND DETAILS	
SHEET 18 OF 26	
JOB NO.	25188.01

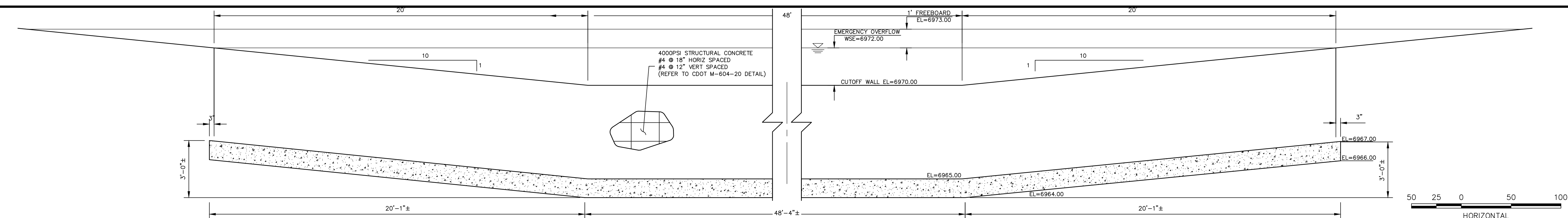


811
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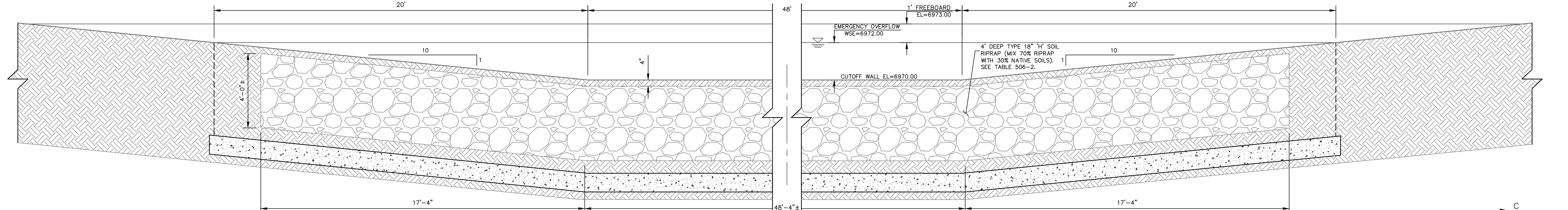
32314 8/18
DATE

EPC 11/17/2021



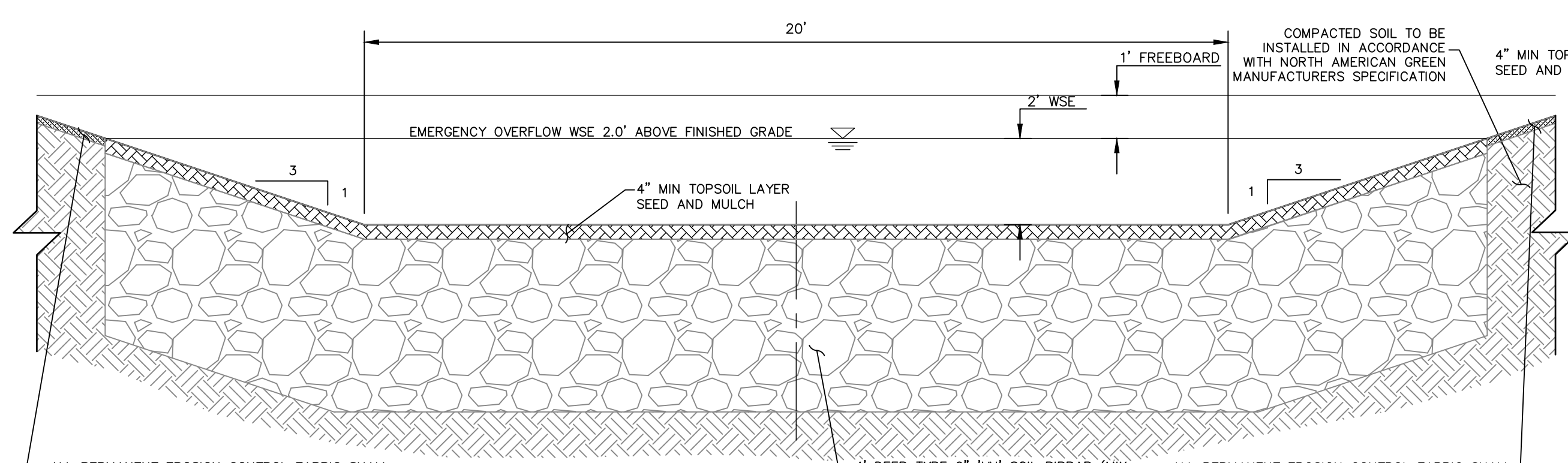
SECTION A-A CONCRETE CUTOFF WALL - ELEVATION

NOT TO SCALE



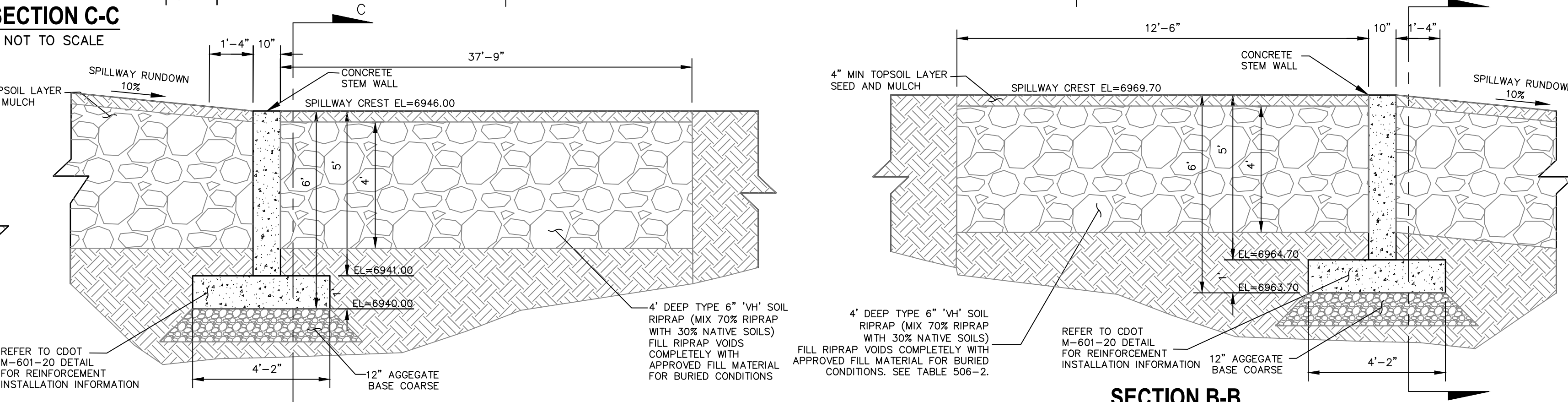
SECTION C-C

NOT TO SCALE



SPILLWAY RUNDOWN INTO SAND CREEK - SECTION D-D

NOT TO SCALE



SECTION B-B

NOT TO SCALE



SECTION E-E

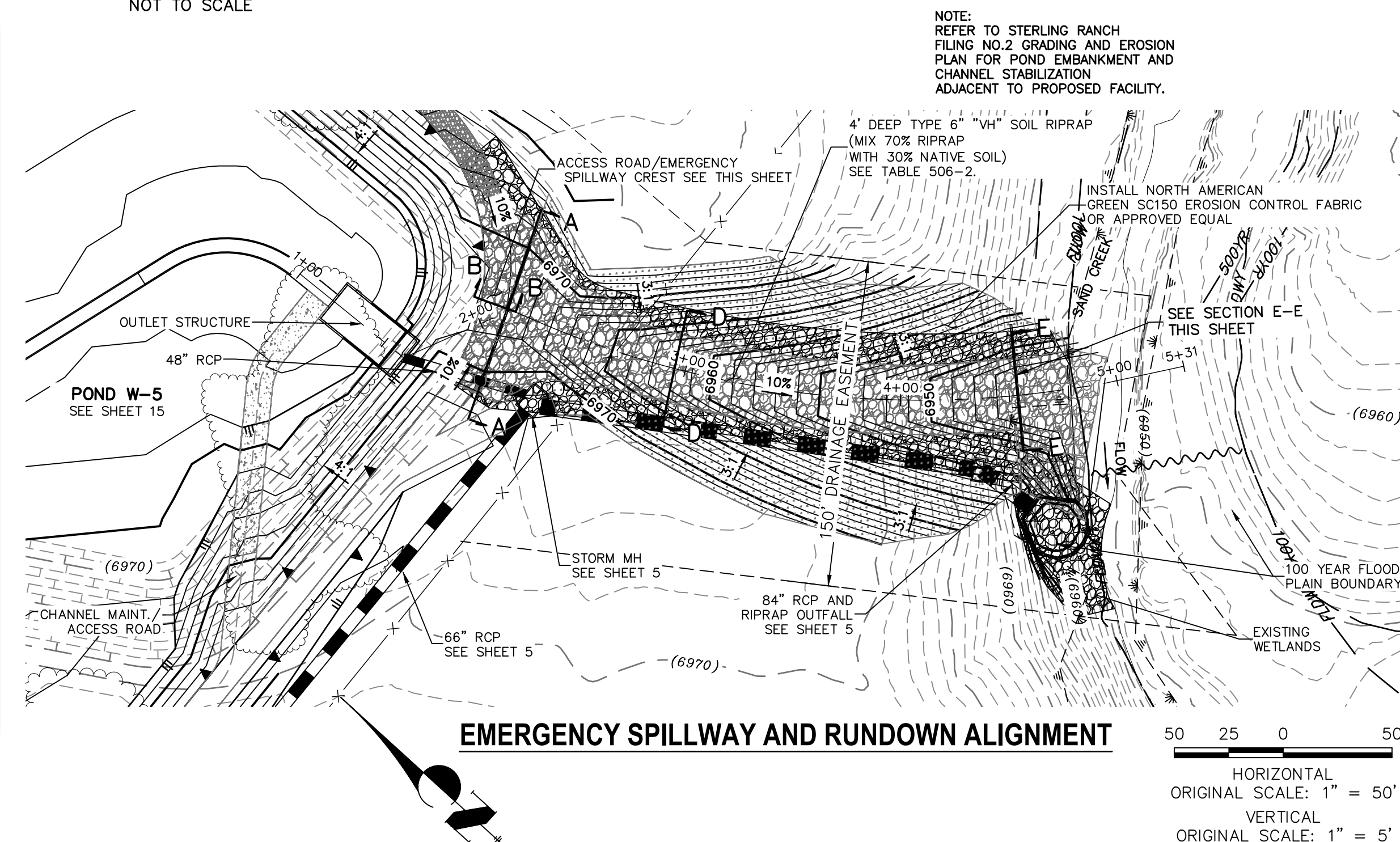
NOT TO SCALE

Pay Item		Percent of Material Smaller Than Typical Stone ²	Typical Stone Dimensions ¹ (Inches)	Typical Stone Weight ⁴ (Pounds)
	Stone Size d50 ¹ (Inches)			
Riprap	6	70-100	12	85
		50-70	9	35
		35-50	6	10
TYPE VL		2-10	2	0.4
Riprap	9	70-100	15	160
		50-70	12	85
		35-50	9	35
TYPE L		2-10	3	1.3
Riprap	12	70-100	21	440
		50-70	18	275
		35-50	12	85
TYPE M		2-10	4	3
Riprap	18	100	30	1280
		50-70	24	650
		35-50	18	275
TYPE H		2-10	6	10
Riprap	24	100	42	3500
		50-70	33	1700
		35-50	24	650
TYPE VH		2-10	9	35


¹d50 = nominal stone size
²based on typical rock mass
³equivalent spherical diameter
⁴based on a specific gravity = 2.5

Nominal stone size and total thickness of the riprap shall be as shown on the plans.

NOTE: CDOT SECTION 506
REQUIREMENTS APPLY



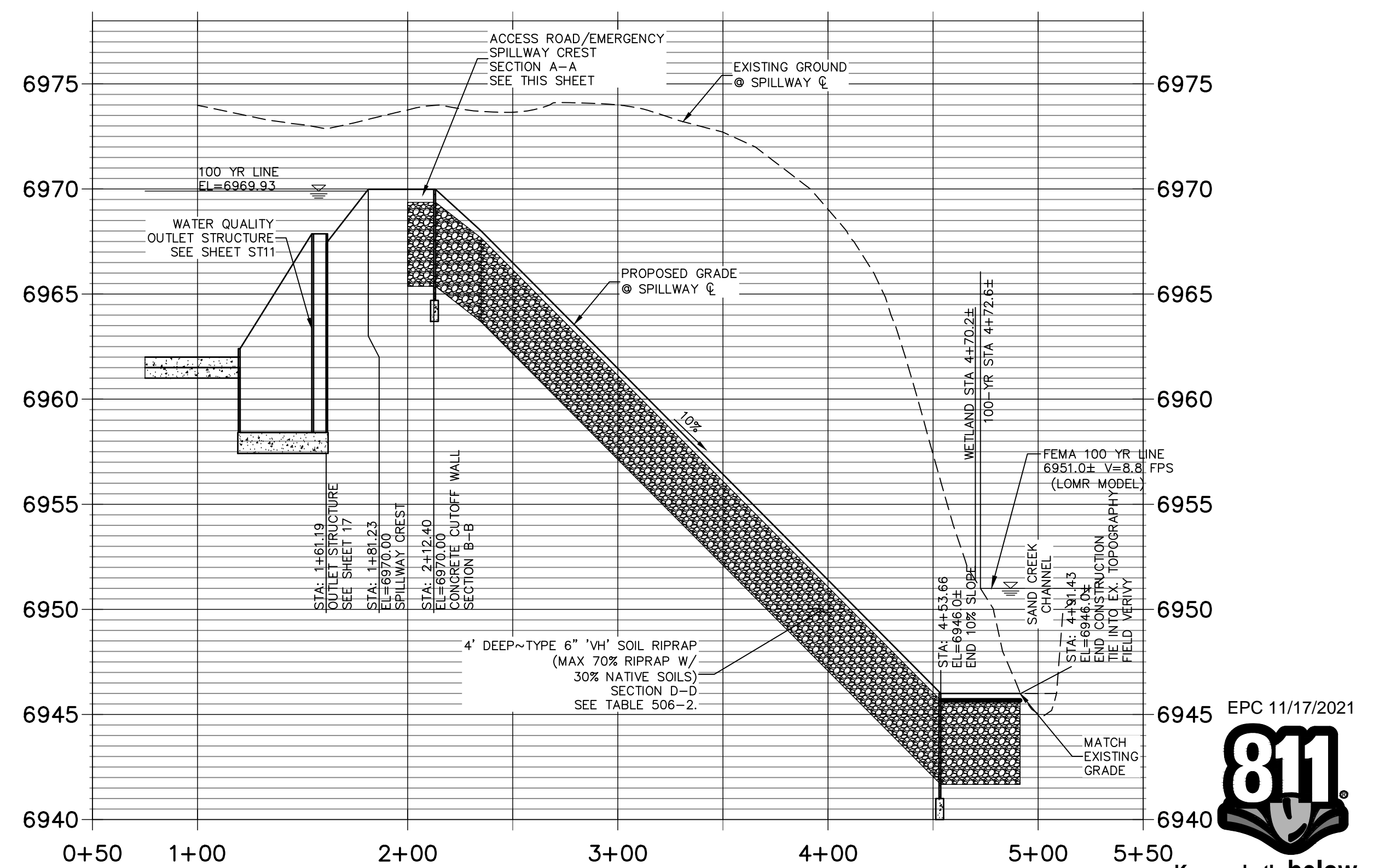
EMERGENCY SPILLWAY AND RUNDOWN ALIGNMENT



HORIZONTAL

HORIZONTAL
ORIGINAL SCALE: 1" = 50'

VERTICAL



EMERGENCY SPILLWAY PROFILE

6945 EPC 11/17/202

6940

0

811[®]

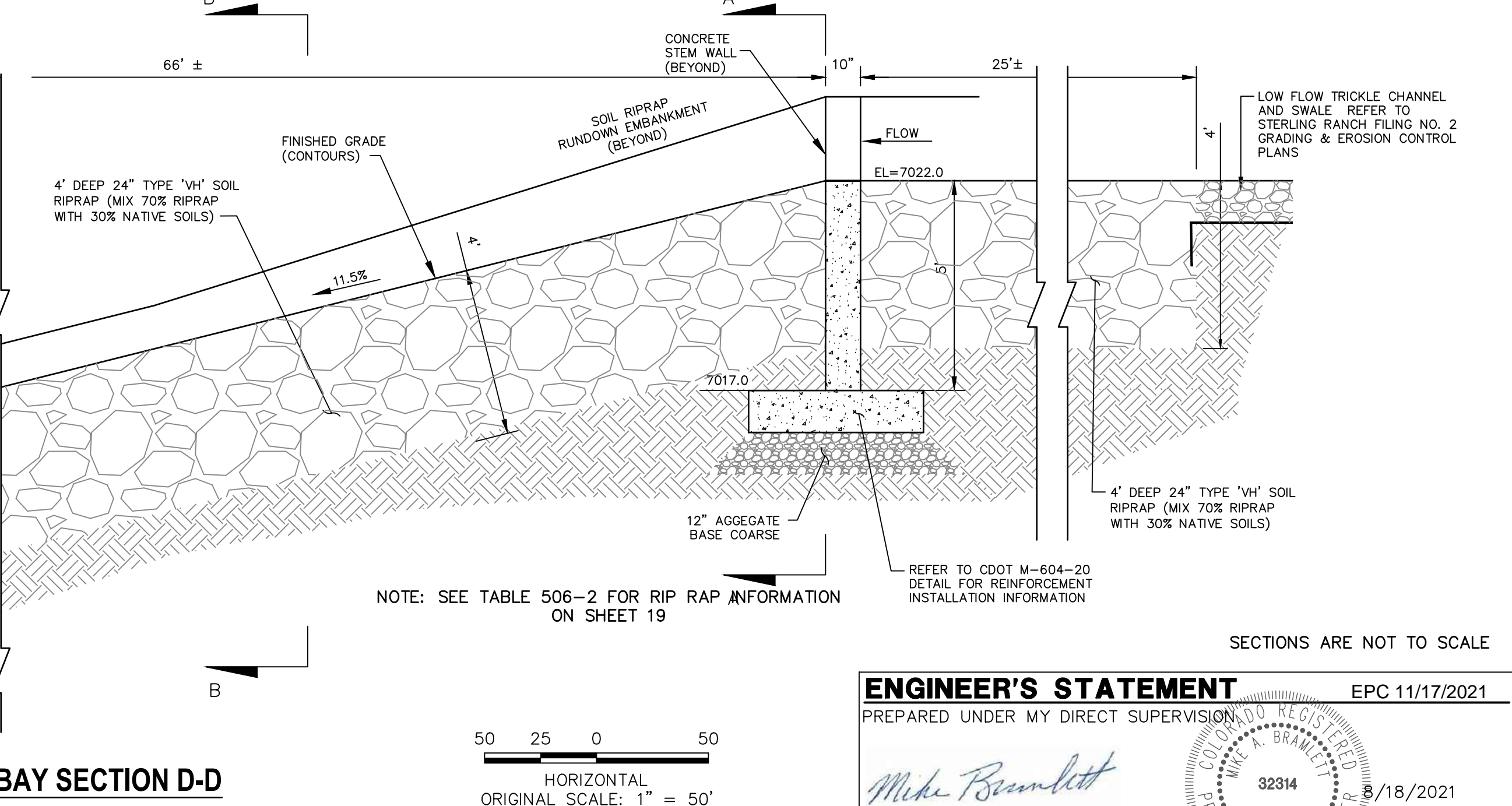
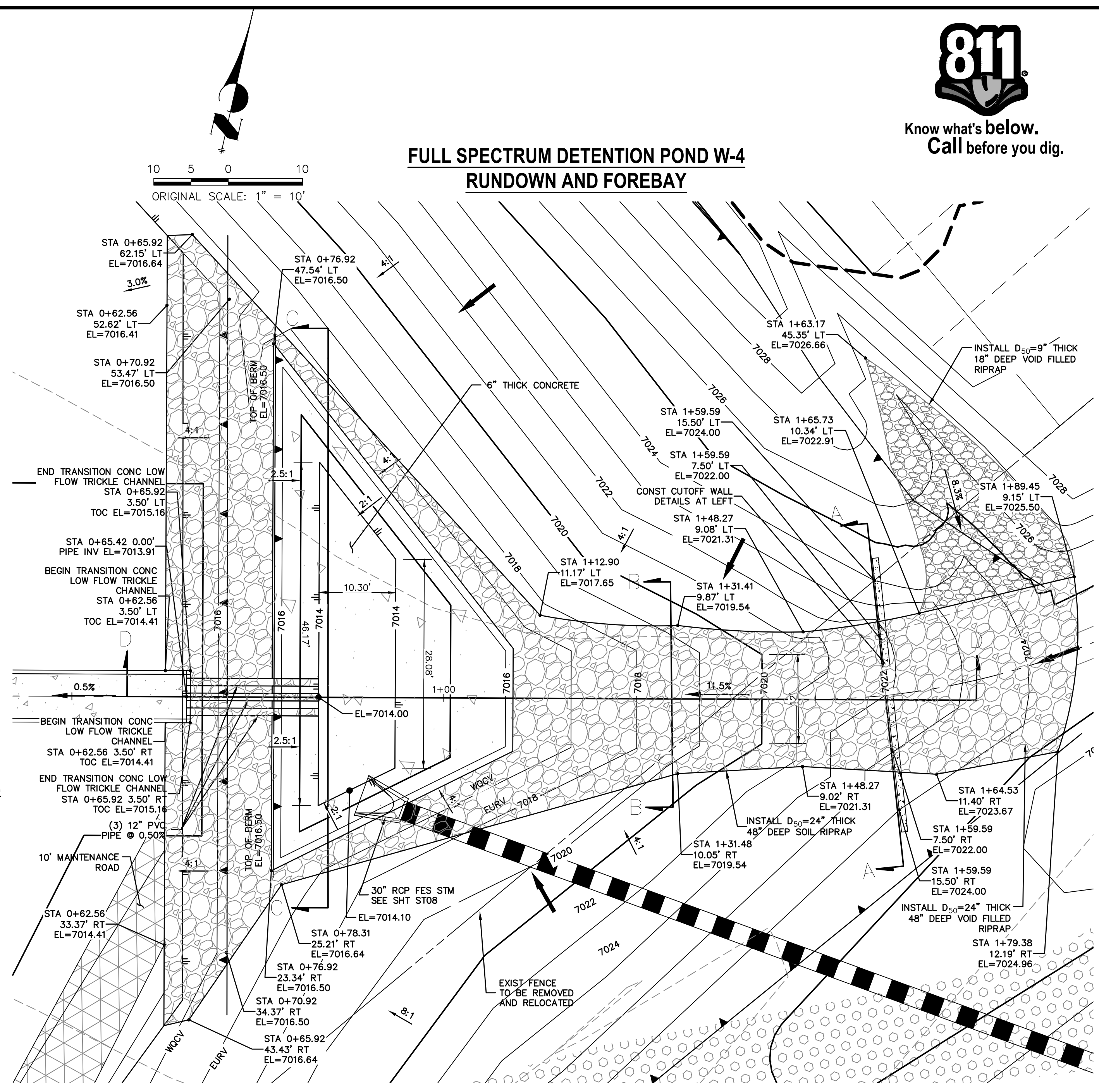
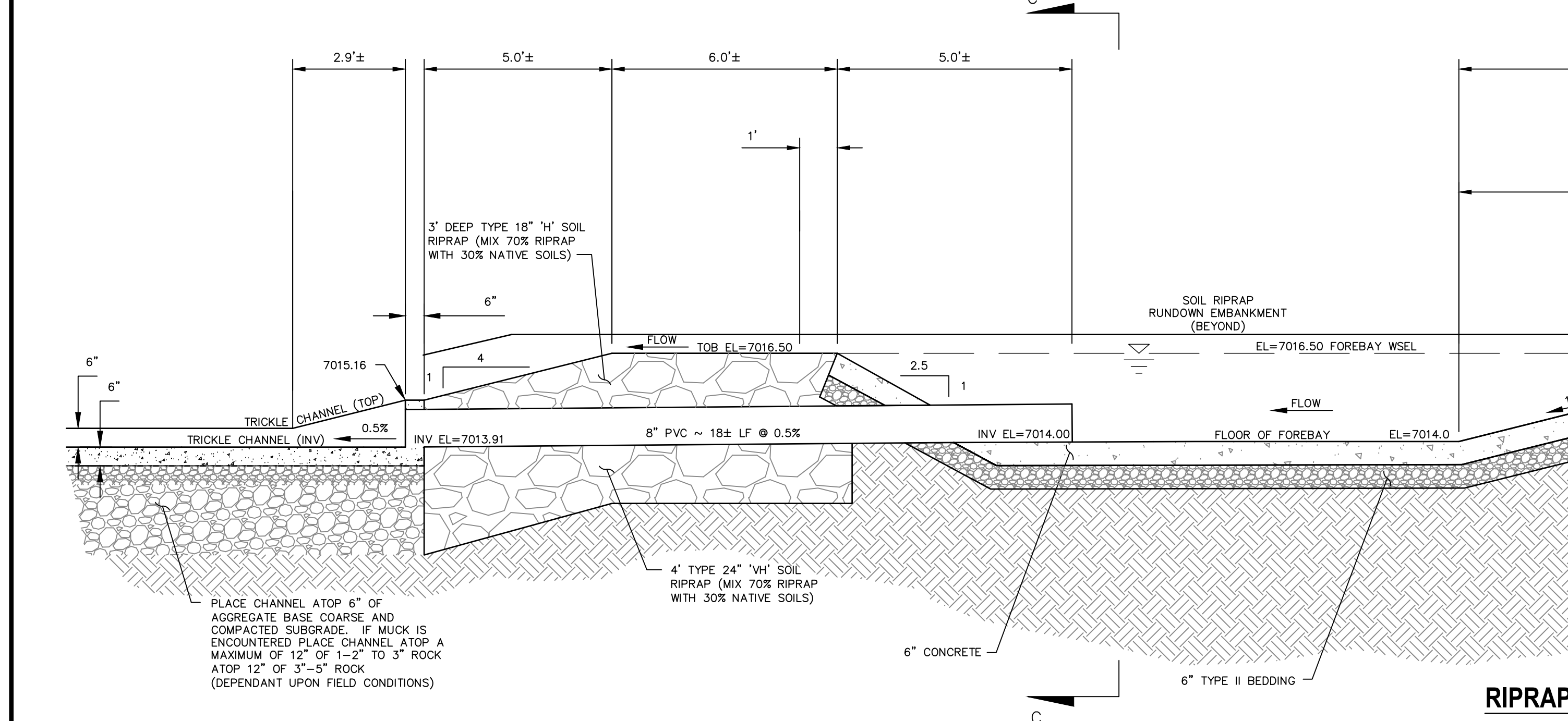
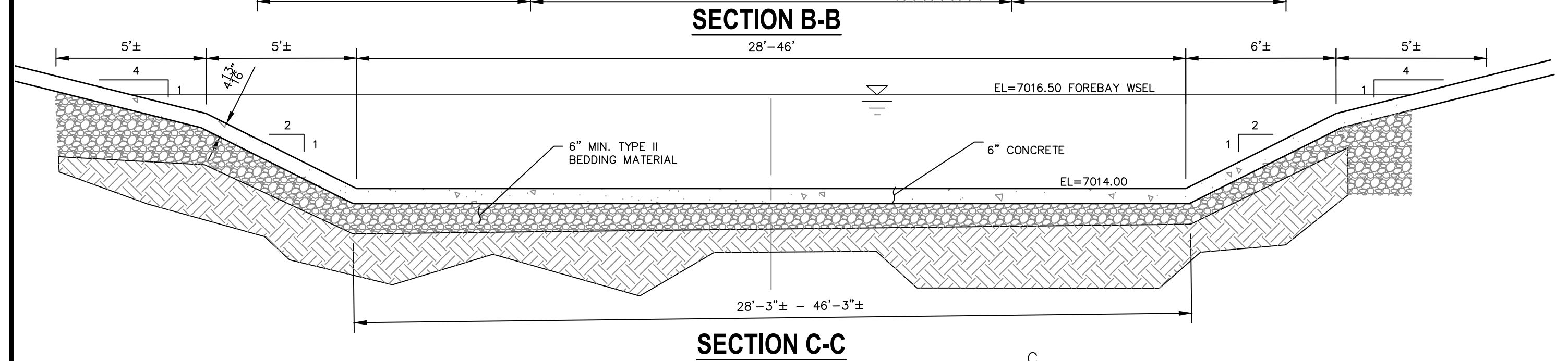
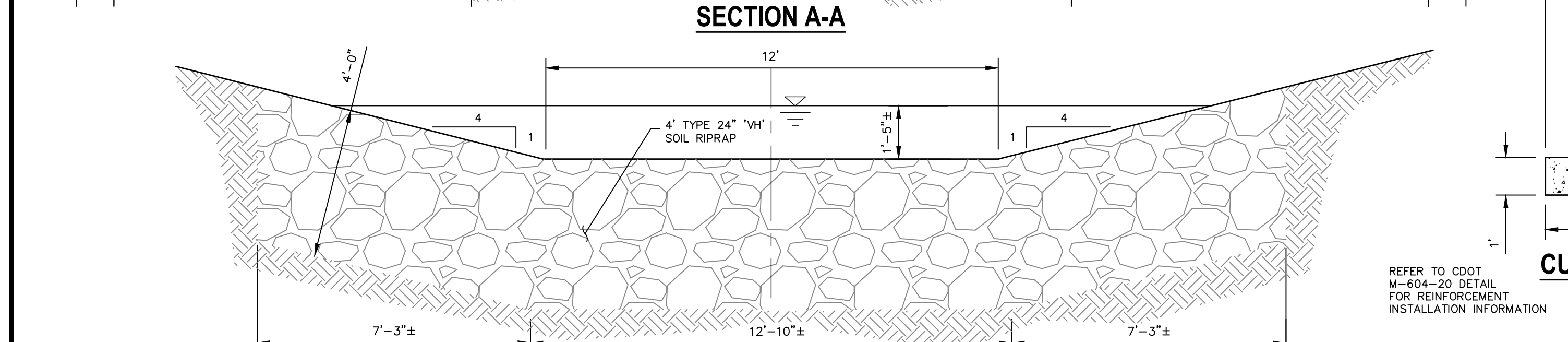
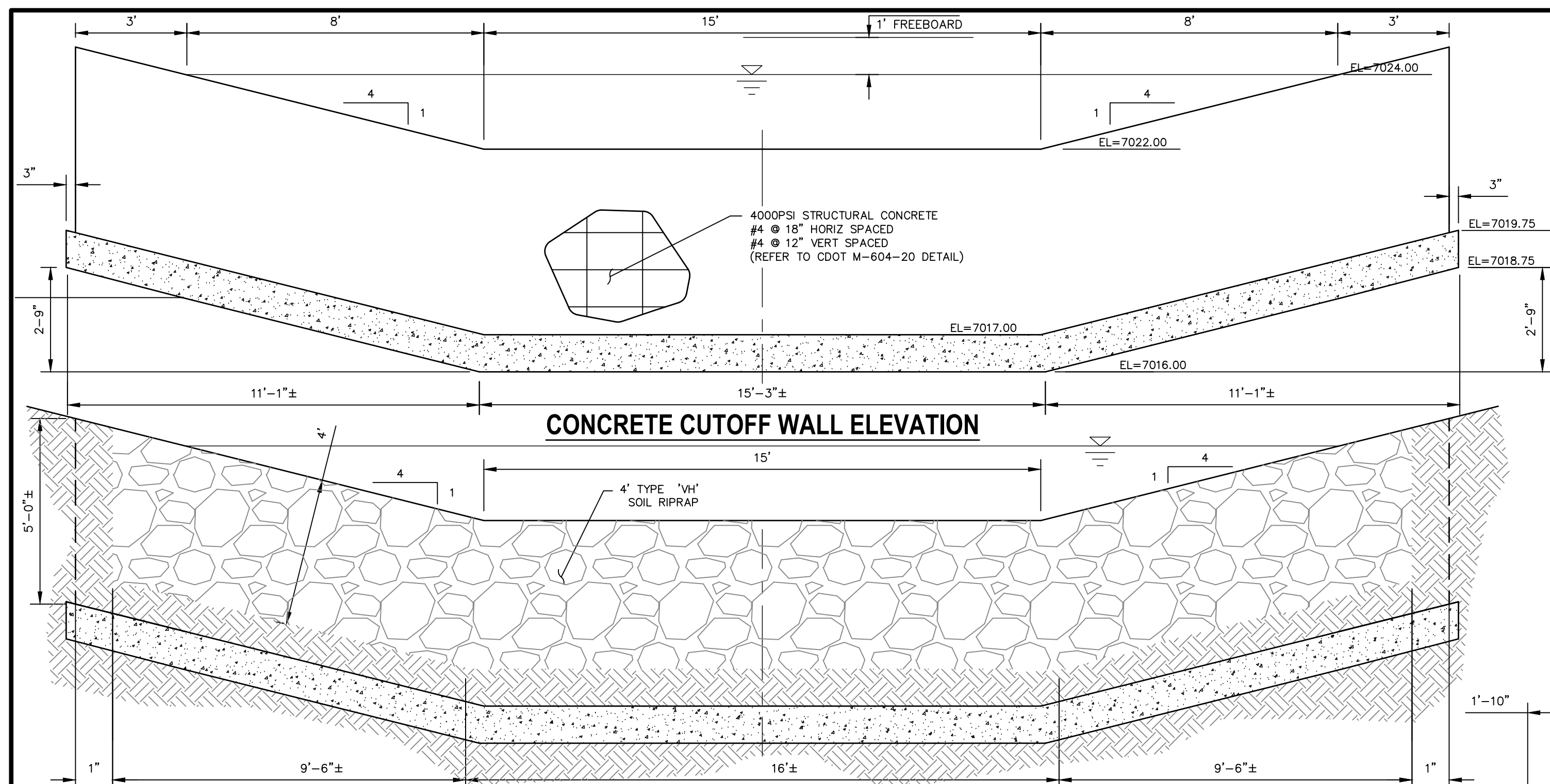
Know what's **below**.
Call before you dig.

JOB NO.	SHEET	STERLING RANCH FILING NO.2	H-SCALE	1"=50'	No.	REVISION	BY	DATE
			V-SCALE	1"=5'				
25188.01	19	OF	26	DATE	08/18/21			
				DESIGNED BY	RAB			
				DRAWN BY	KRW			
				CHECKED BY				

JOB NO. 25188.01

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PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 201
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

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[illegible]

STERLING RANCH FILING NO.2		H-SCALE 1"=50'	V-SCALE 1"=5'
POND DETAILS		DATE	08/18/22
		DESIGNED BY	RAB
		DRAWN BY	KRW
		CHECKED BY	

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION

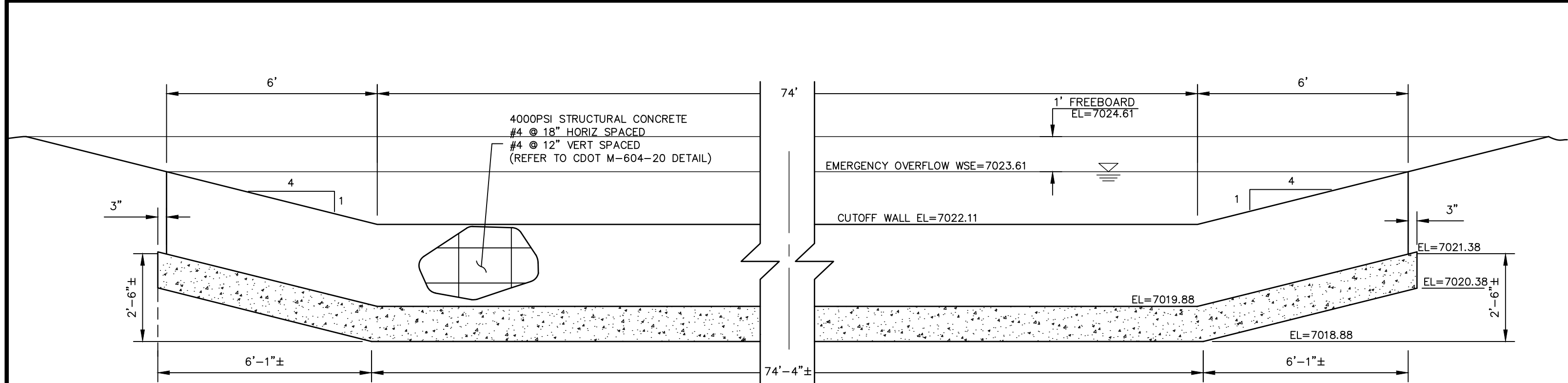
Mike Bramlett

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LOCAL ENGINEERING

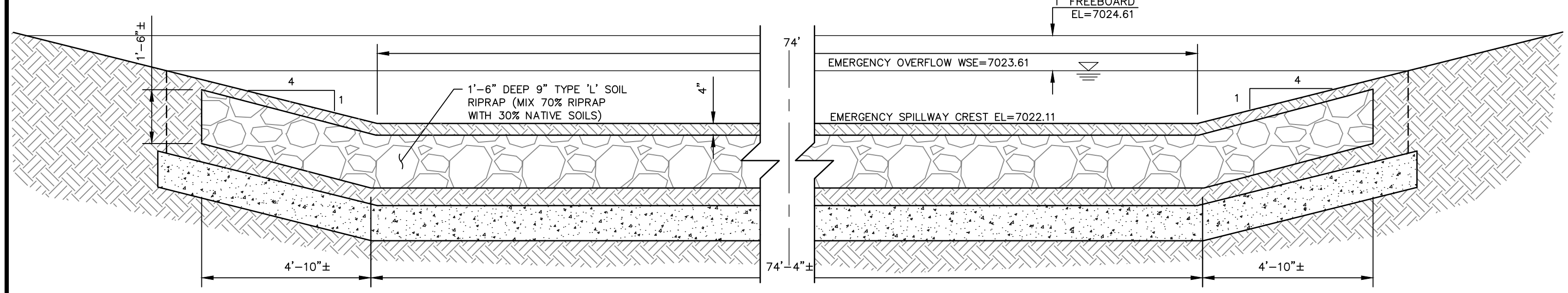
32314

8/18/2021

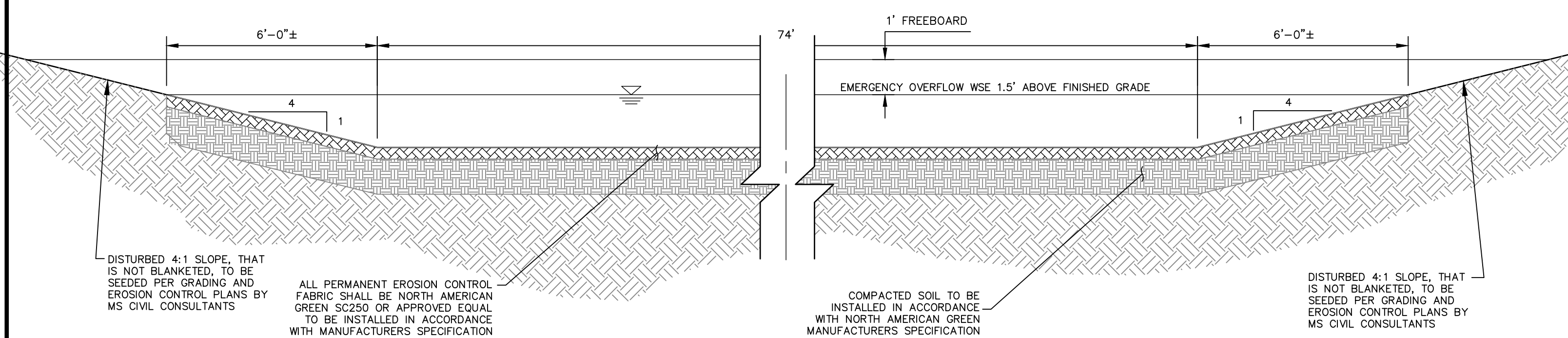
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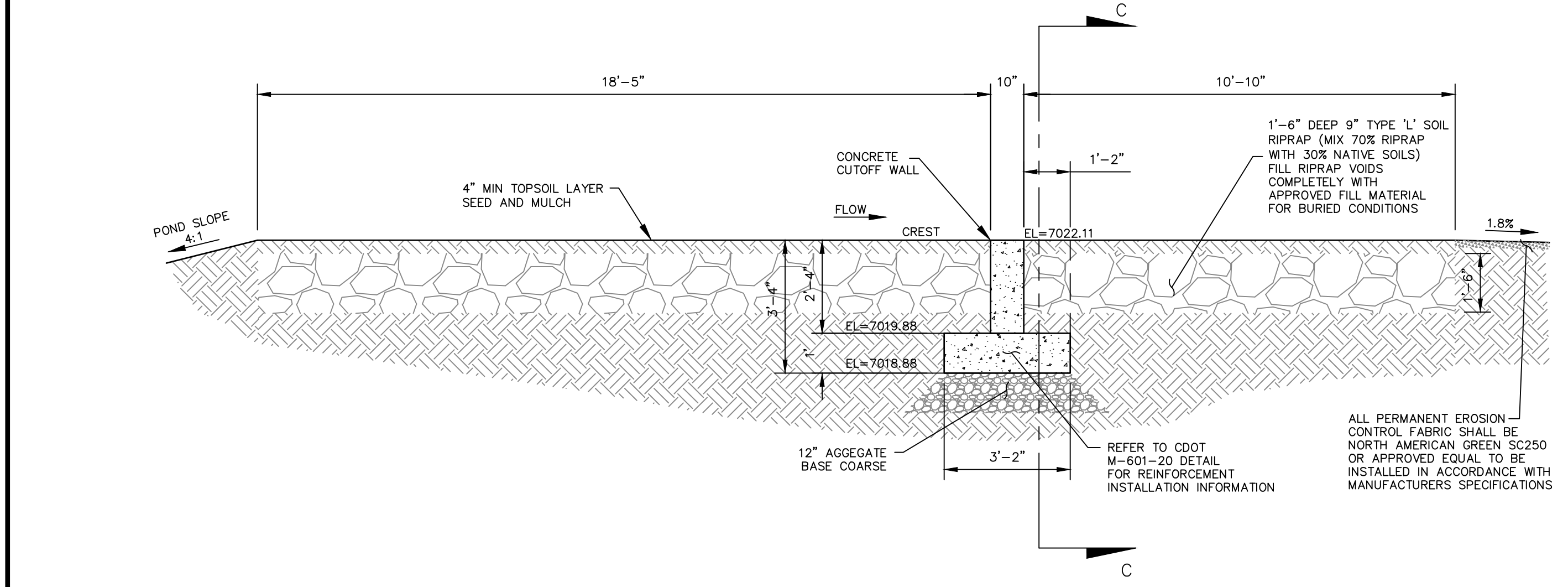
SECTION A-A CONCRETE CUTOFF WALL - ELEVATION
NOT TO SCALE



SECTION C-C
NOT TO SCALE



SECTION D-D SWALE RUNDOWN INTO VOLLMER DITCH
NOT TO SCALE

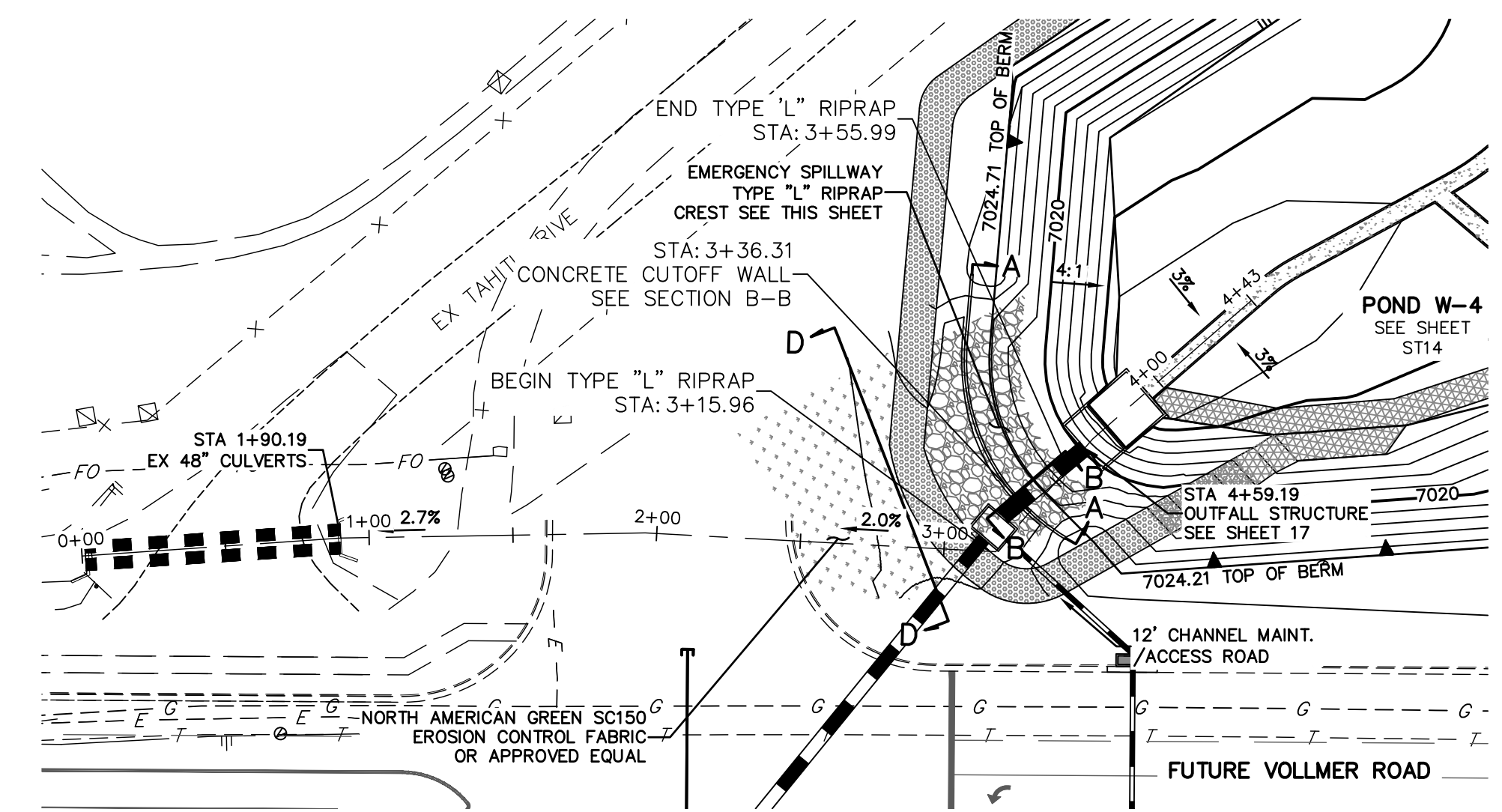


SECTION B-B
NOT TO SCALE

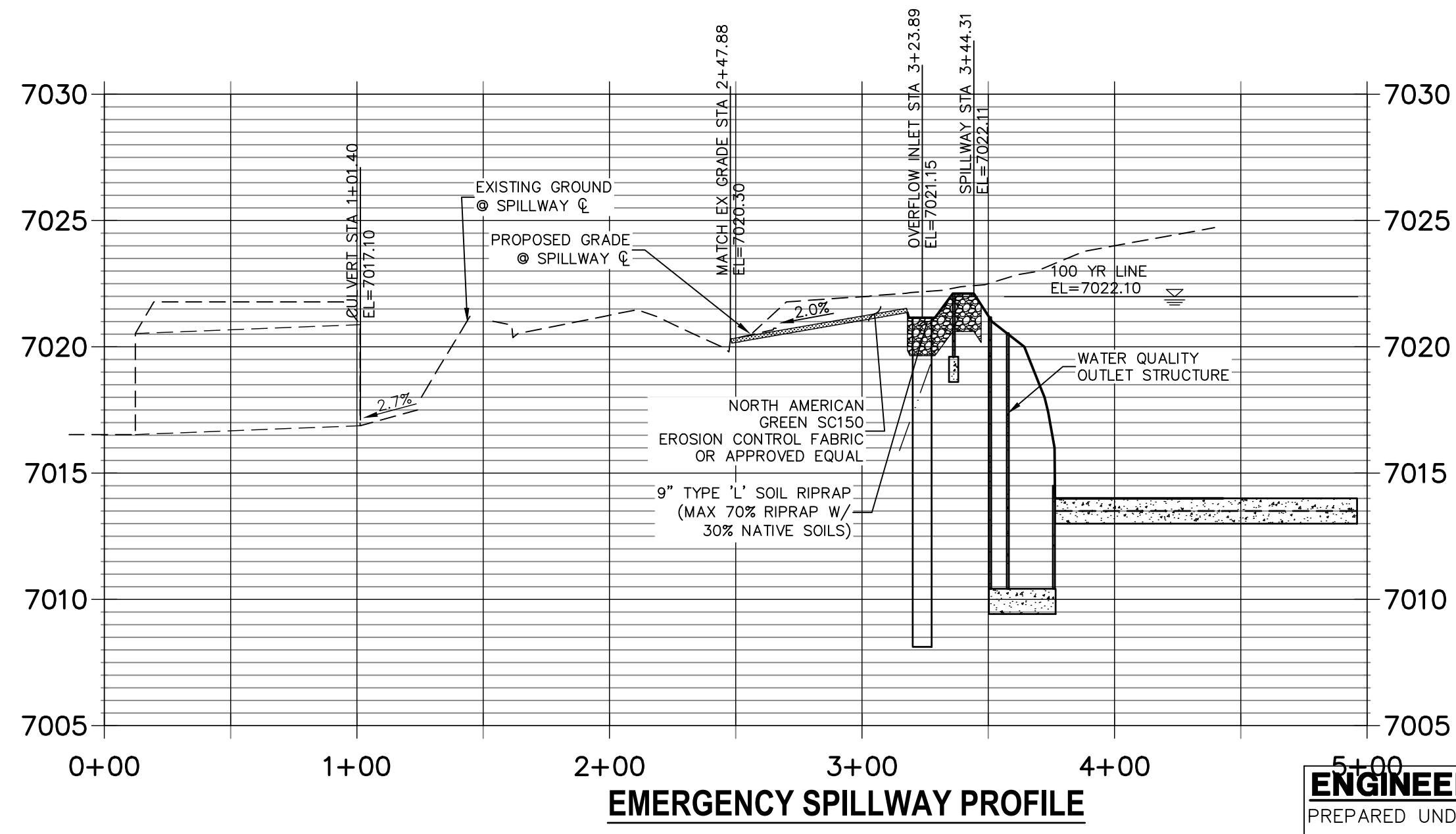
NOTE:
SEE CDOT GRADATION TABLE 506-2
ON SHEET 19 FOR ADDITIONAL
INFORMATION ON RIP RAP MATERIAL

NOTE:
REFER TO STERLING RANCH
FILING NO.2 GRADING AND EROSION
PLAN FOR POND EMBANKMENT AND
CHANNEL STABILIZATION
ADJACENT TO PROPOSED FACILITY.

- LEGEND**
- | | | | |
|------|---|--|---|
| EX | EXISTING | | RIPRAP LOW FLOW CHANNEL |
| FUT | FUTURE | | EX. FLOW ARROW |
| PROP | PROPOSED | | PROP. FLOW ARROW |
| | PROP MAJ CONT | | PROPERTY LINE |
| | PROP MIN CONT | | EX PROPERTY LINE |
| | EXIST MAJ CONT | | PROP STORM SEWER PIPE |
| | EXIST MIN CONT | | EX. STORM SEWER PIPE |
| | NORTH AMERICAN GREEN
SC150 PERM EROSION
CONTROL BLANKET | | WARNING SIGN |
| | NORTH AMERICAN GREEN
SC250 PERM EROSION
CONTROL BLANKET | | SHOULDER EDGE |
| | GROUTED RIPRAP | | EX. FENCE |
| | RIPRAP TYP. | | STABILIZED MAINTENANCE ROAD
ABOVE EURL |
| | | | STABILIZED MAINT. ROAD
BELOW EURL |



POND W4 EMERGENCY SPILLWAY4
STA 0+00.00 TO 5+00.00
PRIVATE (SRMD)



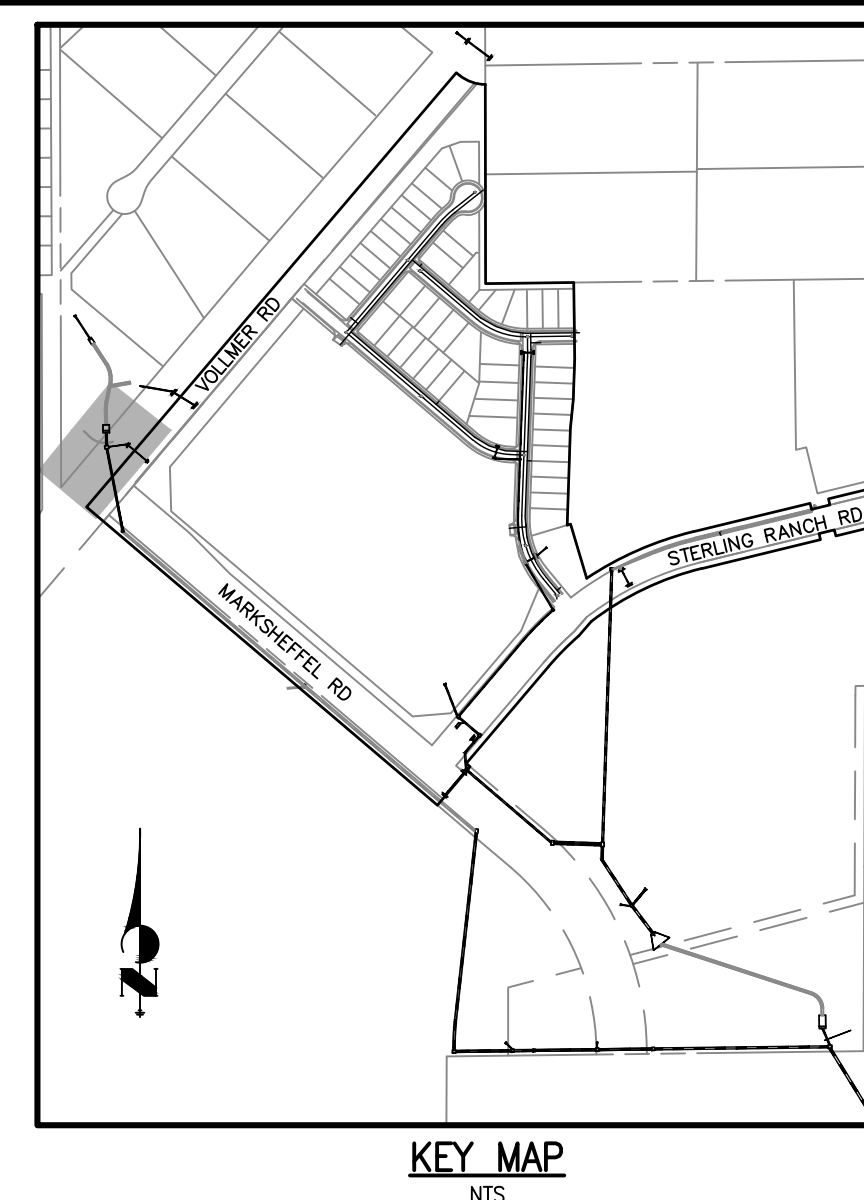
50 25 0 50
HORIZONTAL
ORIGINAL SCALE: 1" = 50'
VERTICAL
ORIGINAL SCALE: 1" = 5'



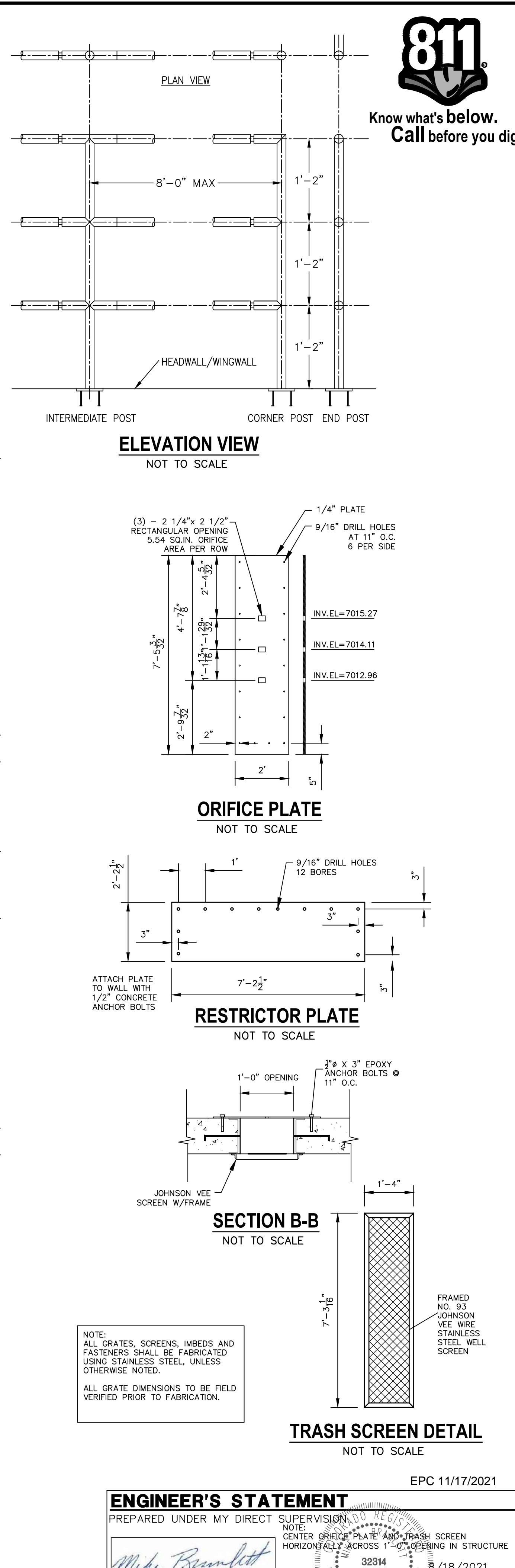
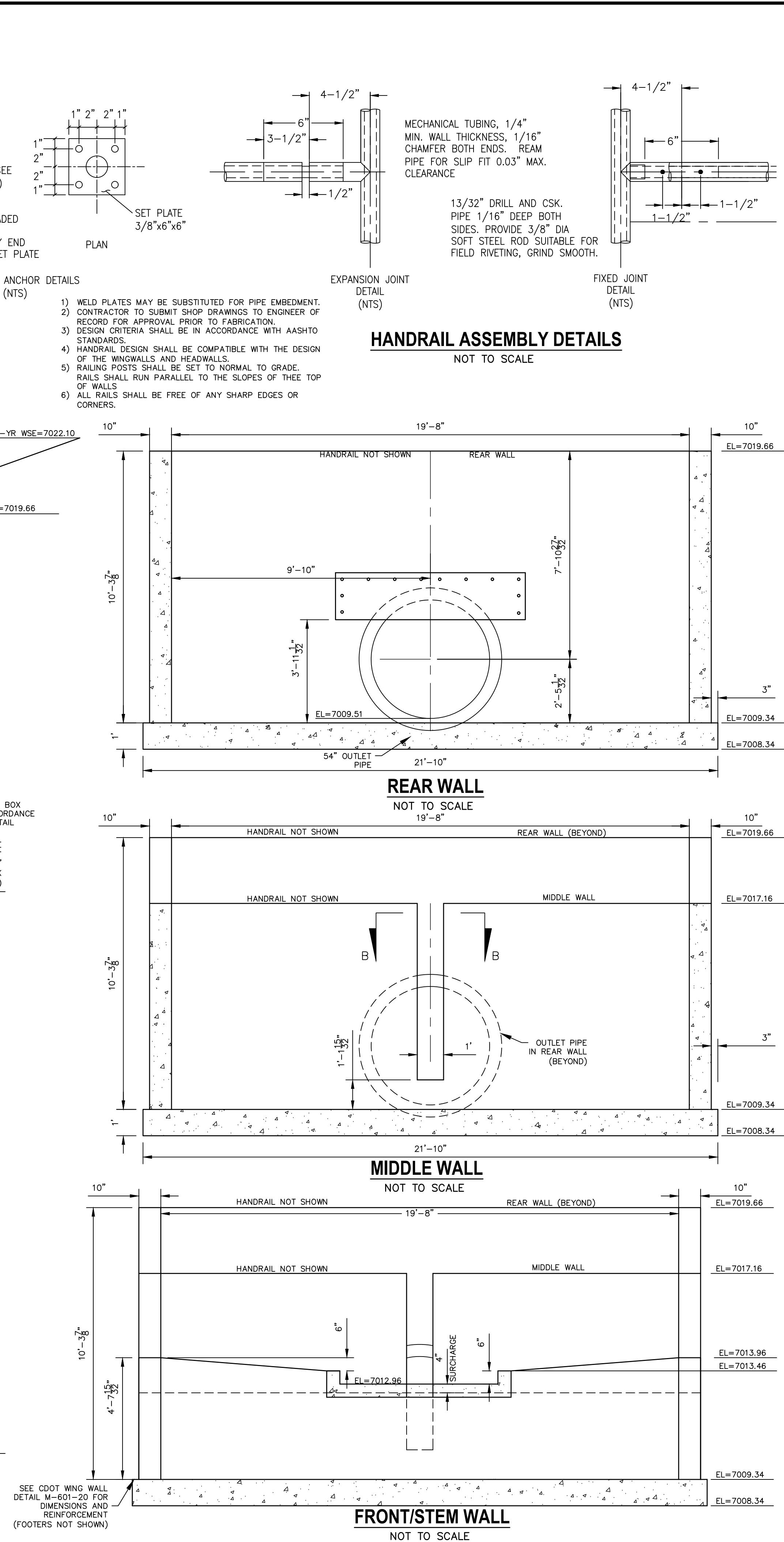
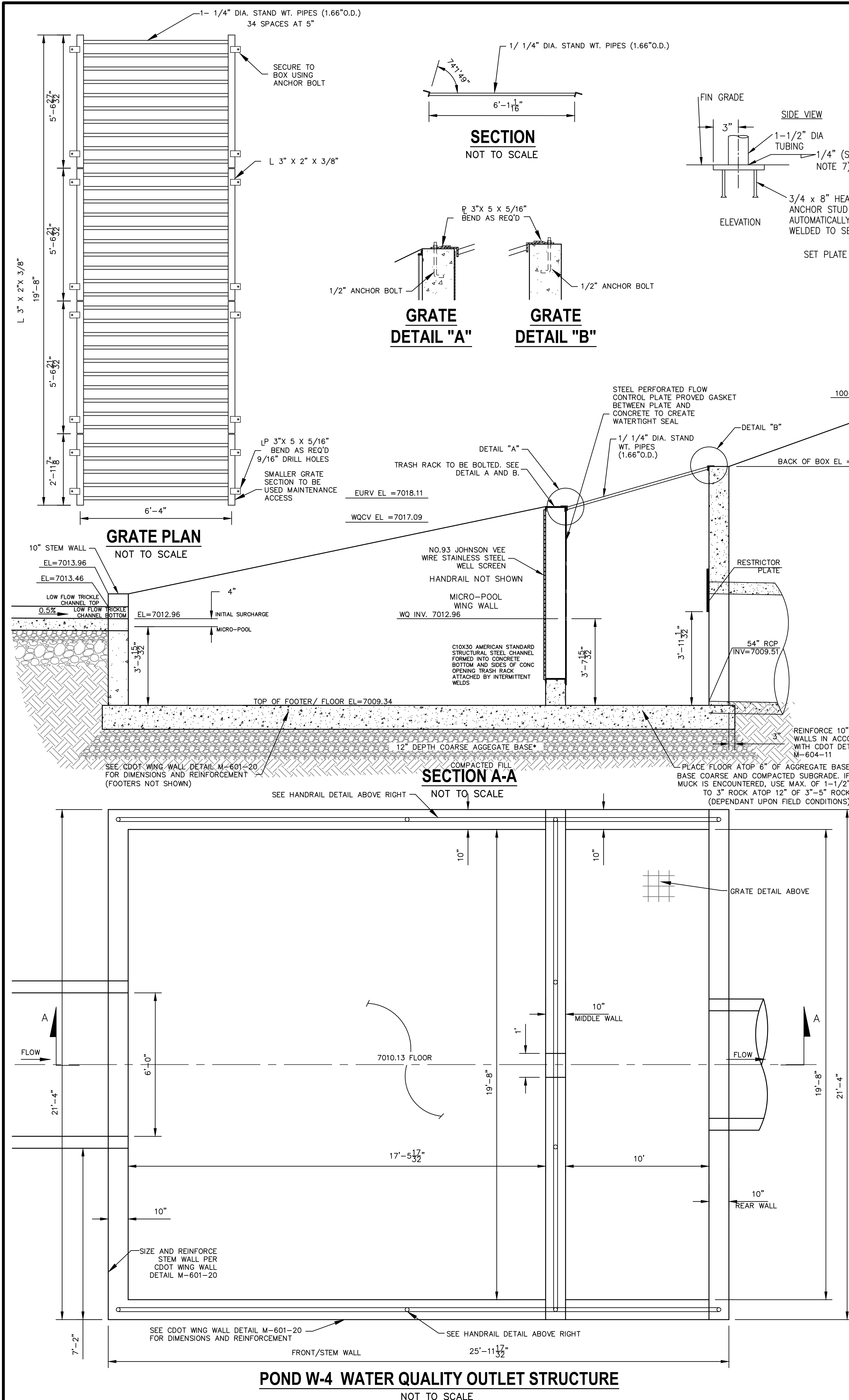
ENGINEER'S STATEMENT
PREPARED UNDER MY DIRECT SUPERVISION
Mike Bramlett
MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING

DATE: 8/18/2021

EPC 11/17/2021



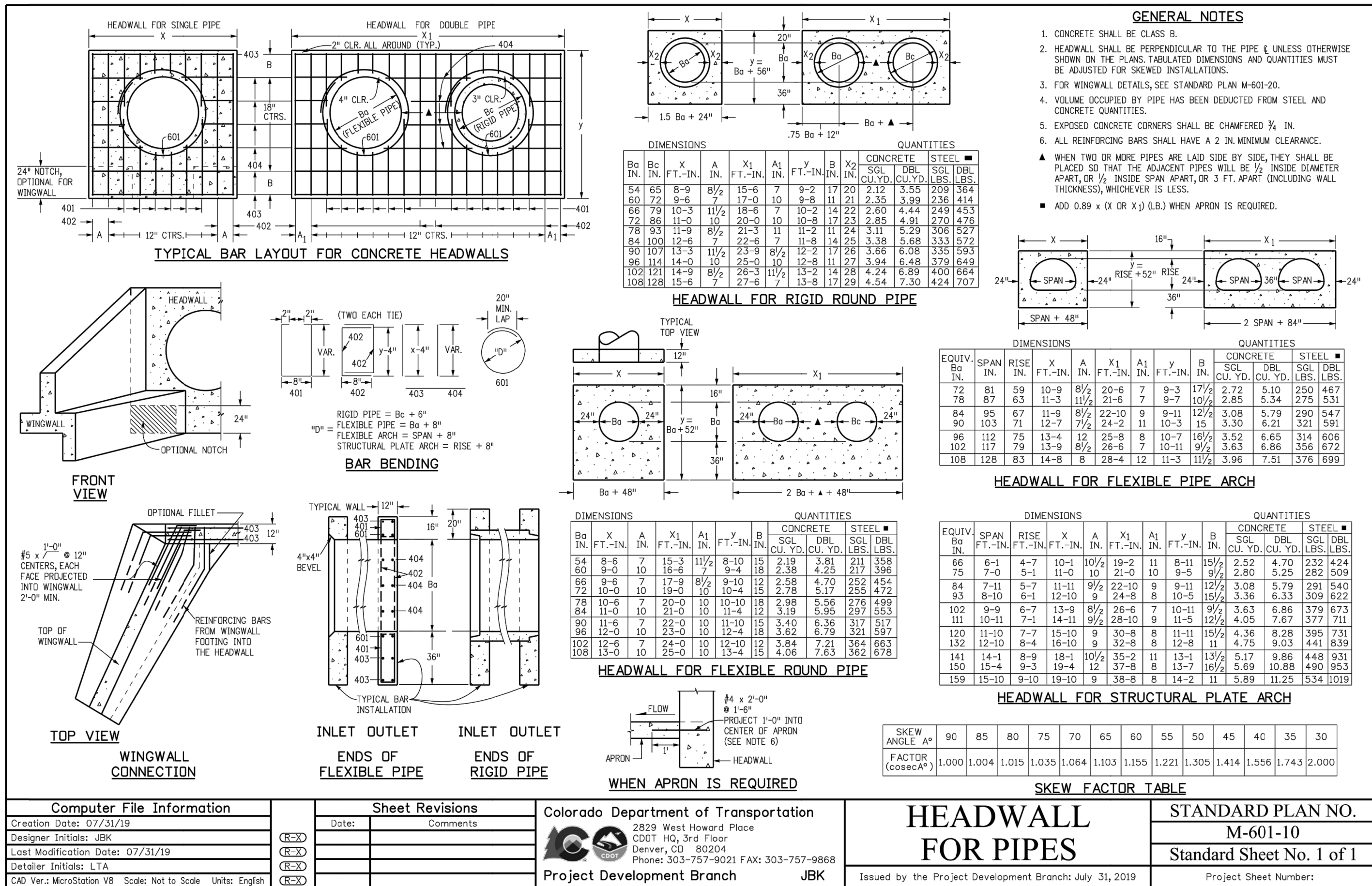
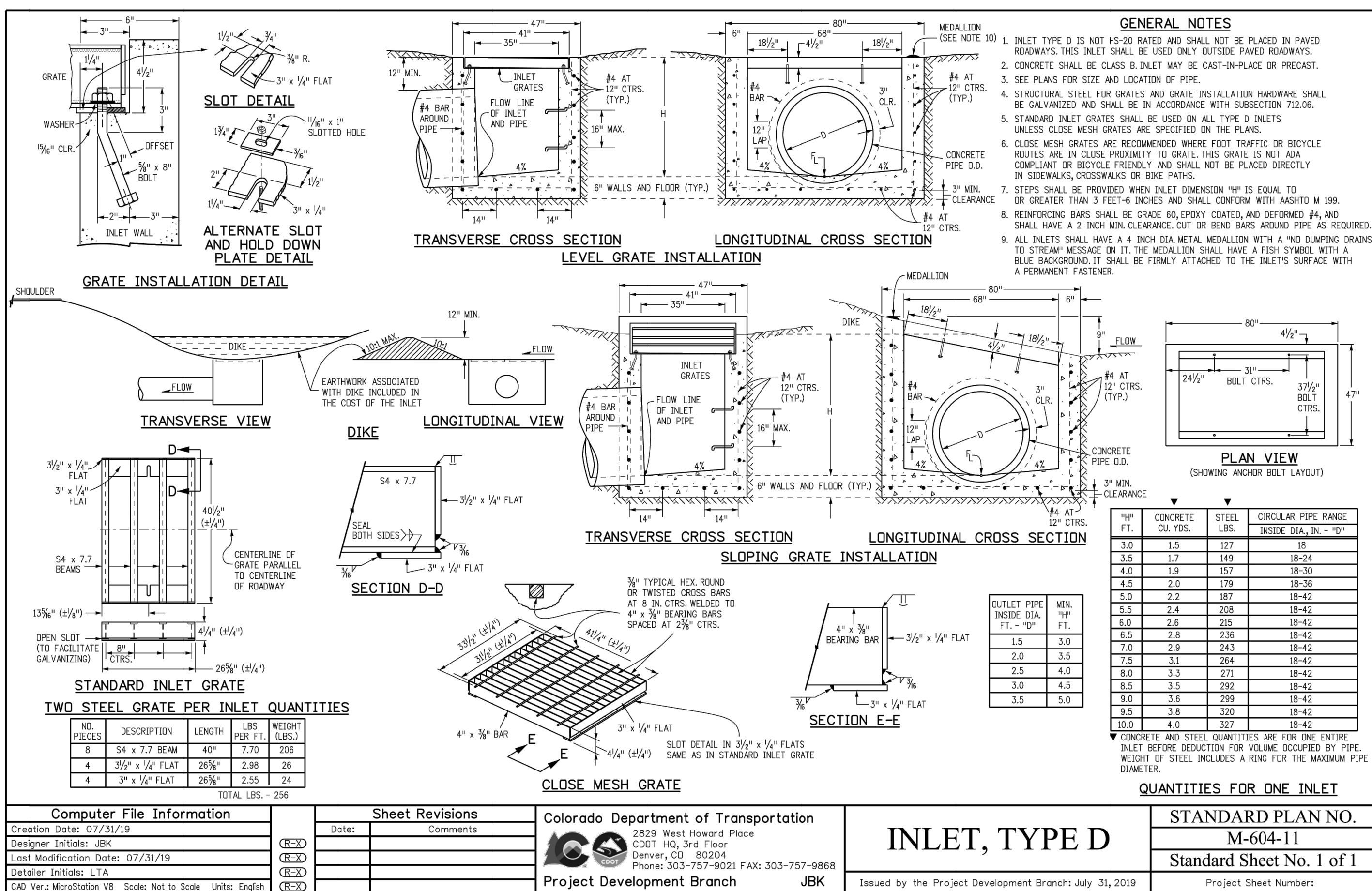
UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, THESE DRAWINGS ARE NOT TO BE USED FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.	PREPARED FOR SR LAND, LLC 20 BOULDER CRESCENT SUITE 201 COLORADO SPRINGS, CO 80903 JAMES F. MORLEY (719) 471-1742	J-R ENGINEERING A Western Company Centennial 303-740-9888 • Colorado Springs 719-593-2933 Fort Collins 970-491-9888 • www.jrengineering.com	DATE	BY	REVISION	No.
			1"=50'	1"=5'	08/18/21	RAB
STERLING RANCH FILING NO.2			POND DETAILS			
SHEET 22 OF 26			JOB NO. 25188.01			

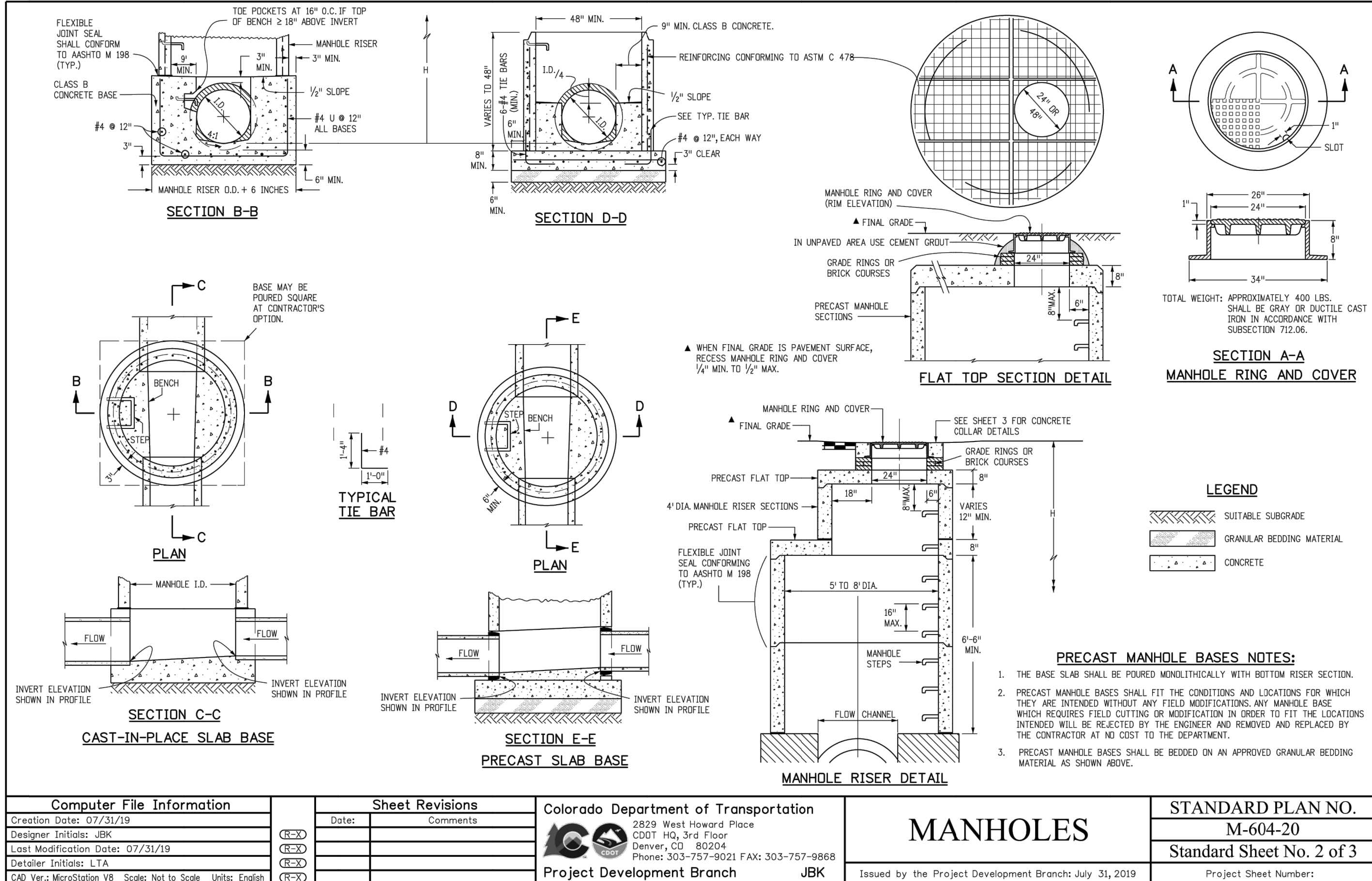
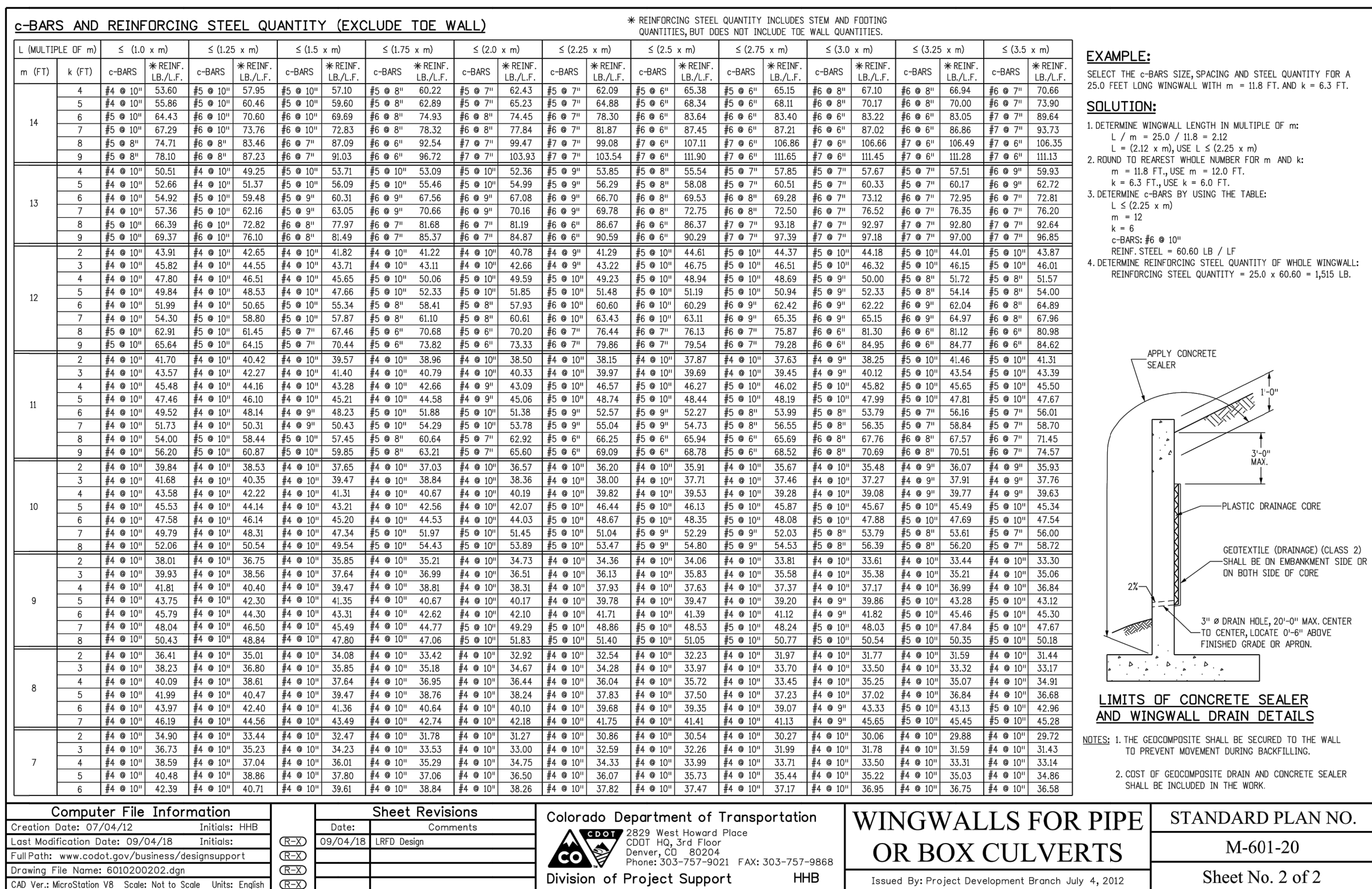


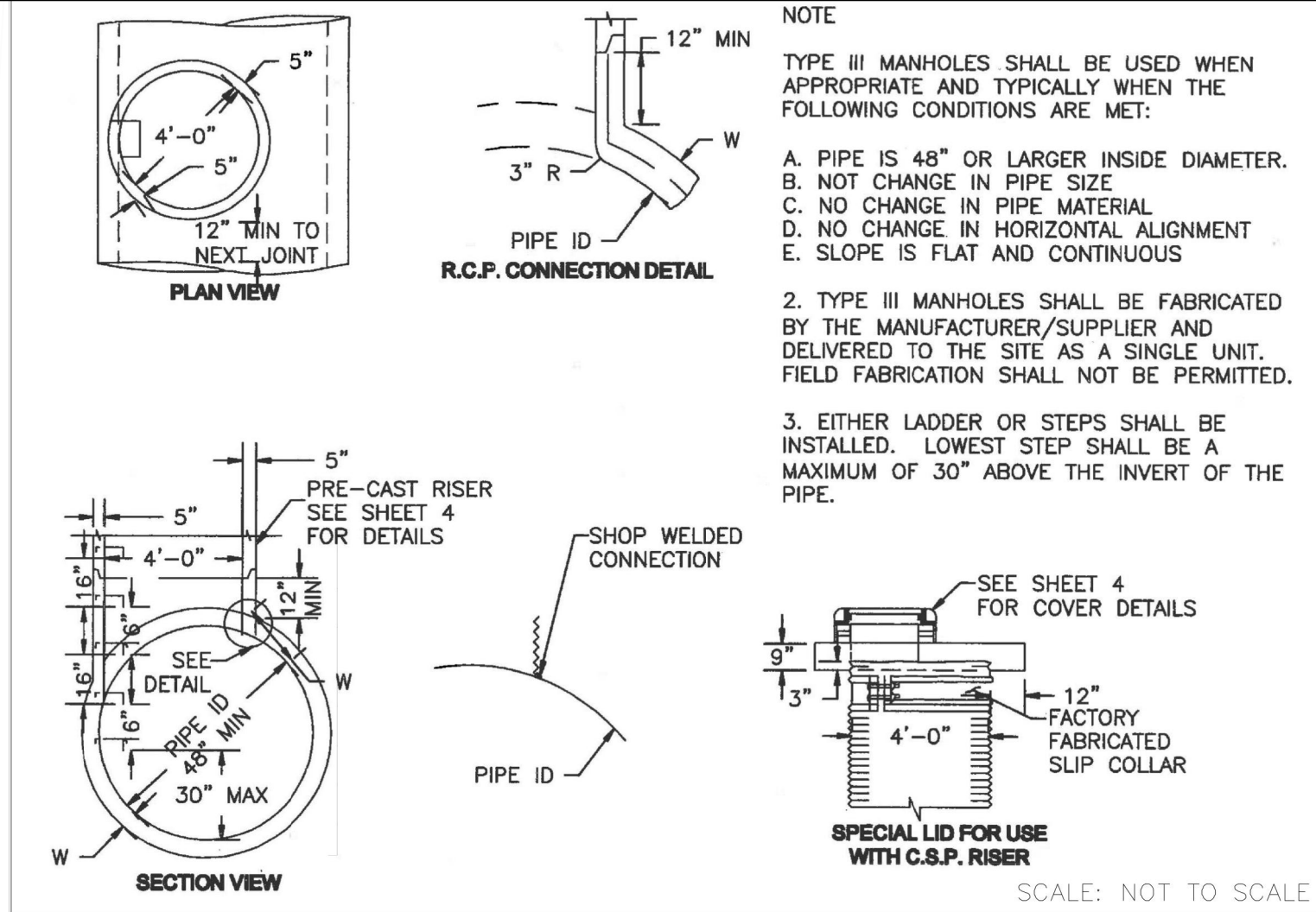
Know what's below.
Call before you dig.

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.				PREPARED FOR SR LAND, LLC 20 BOULDER CRESCENT SUITE 201 COLORADO SPRINGS, CO 80903 JAMES F. MORLEY (719) 471-1742			
J-R ENGINEERING A Western Company				Centennial 303-740-9988 • Colorado Springs 719-589-2593 Fort Collins 970-491-9888 • www.jrengineering.com			
DATE	BY	REVISION	NO.	H-SCALE	V-SCALE	DATE	DESIGNED BY
				1"=50'	1"=5'	08/18/21	RAB
							DRAWN BY
							KRW
							CHECKED BY
STERLING RANCH FILING NO.2				POND DETAILS			
SHEET 23 OF 26				JOB NO. 25188.01			

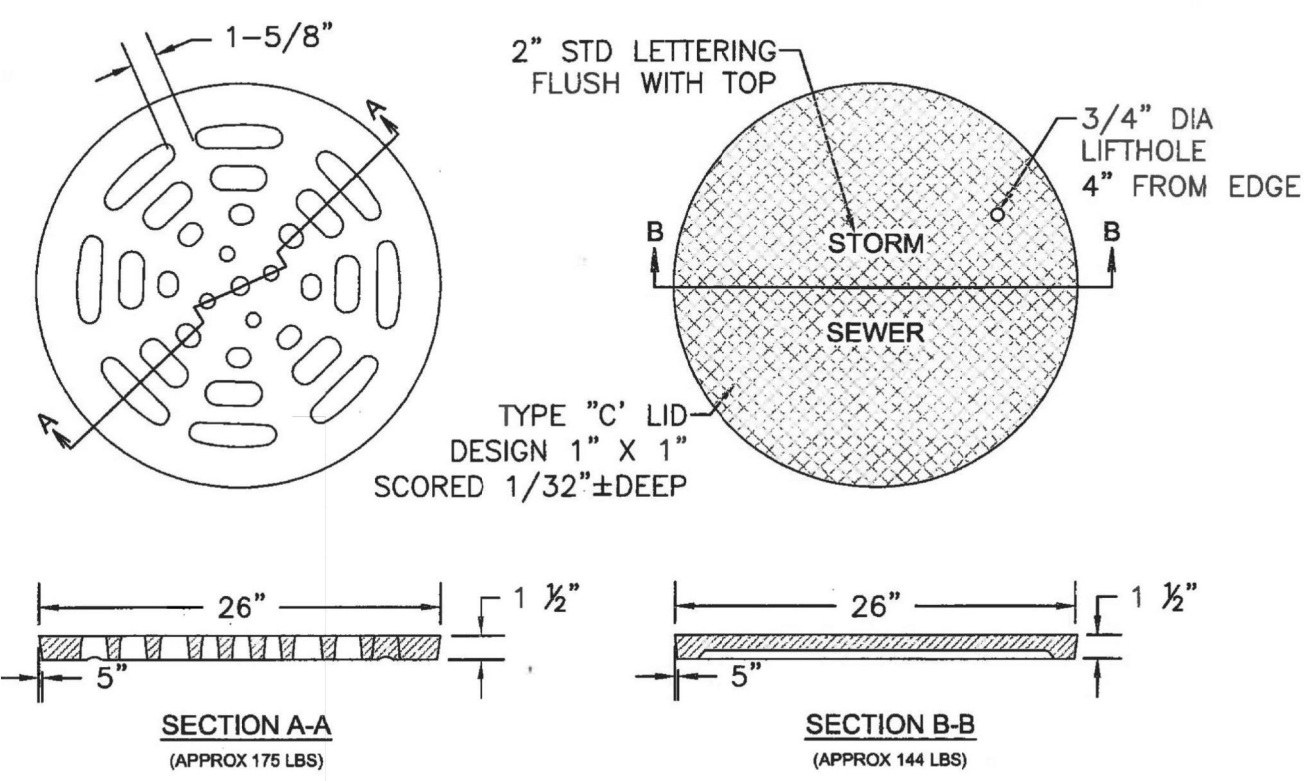
ENGINEER'S STATEMENT
 PREPARED UNDER MY DIRECT SUPERVISION
 NOTE: CENTER ORIFICE PLATE AND TRASH SCREEN HORIZONTALLY ACROSS 1'-0" OPENING IN STRUCTURE
 32314
 8/18/2021
 DATE
 MIKE A. BRAMLETT, P.E.
 COLORADO P.E. 32314
 FOR AND ON BEHALF OF JR ENGINEERING



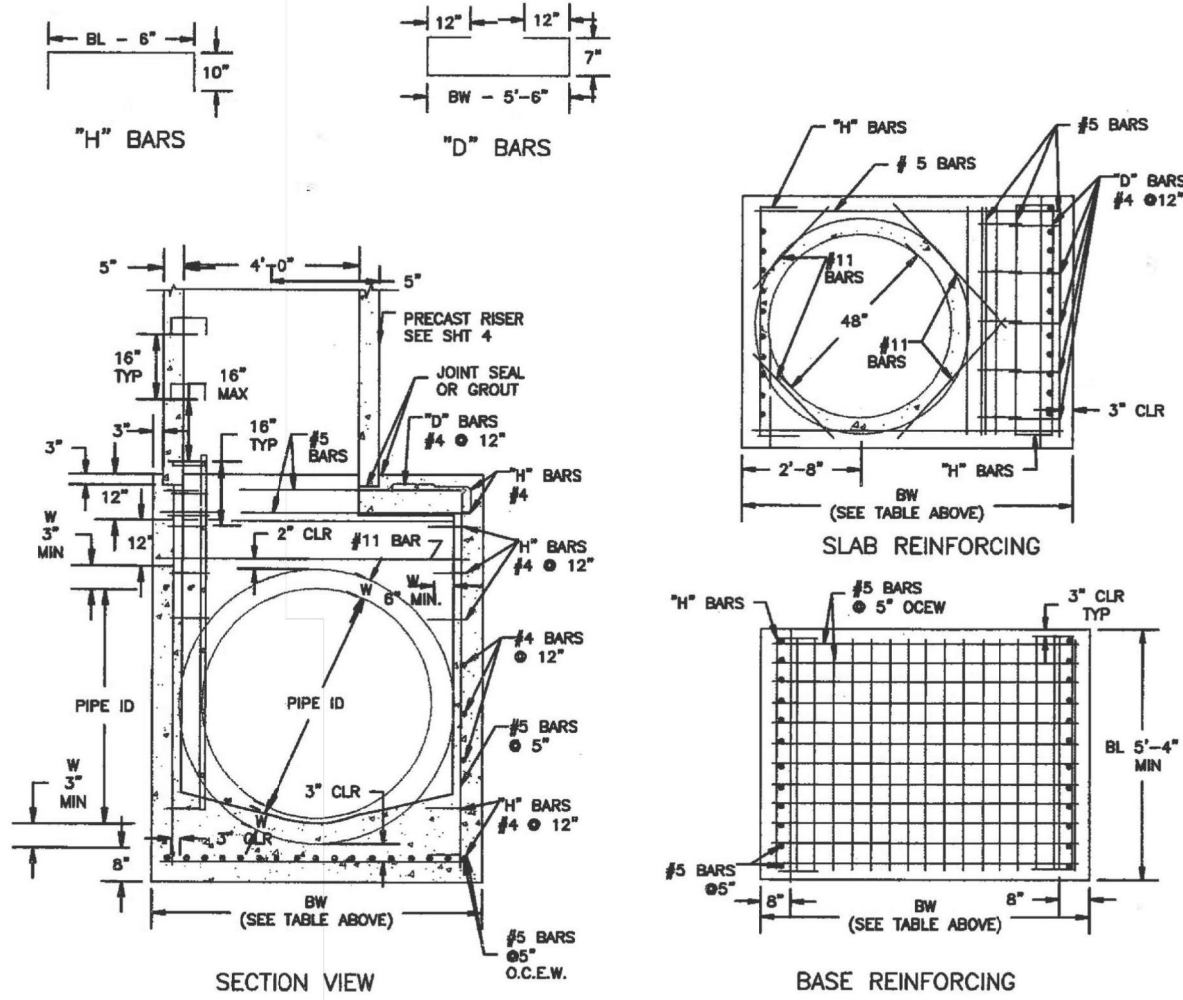




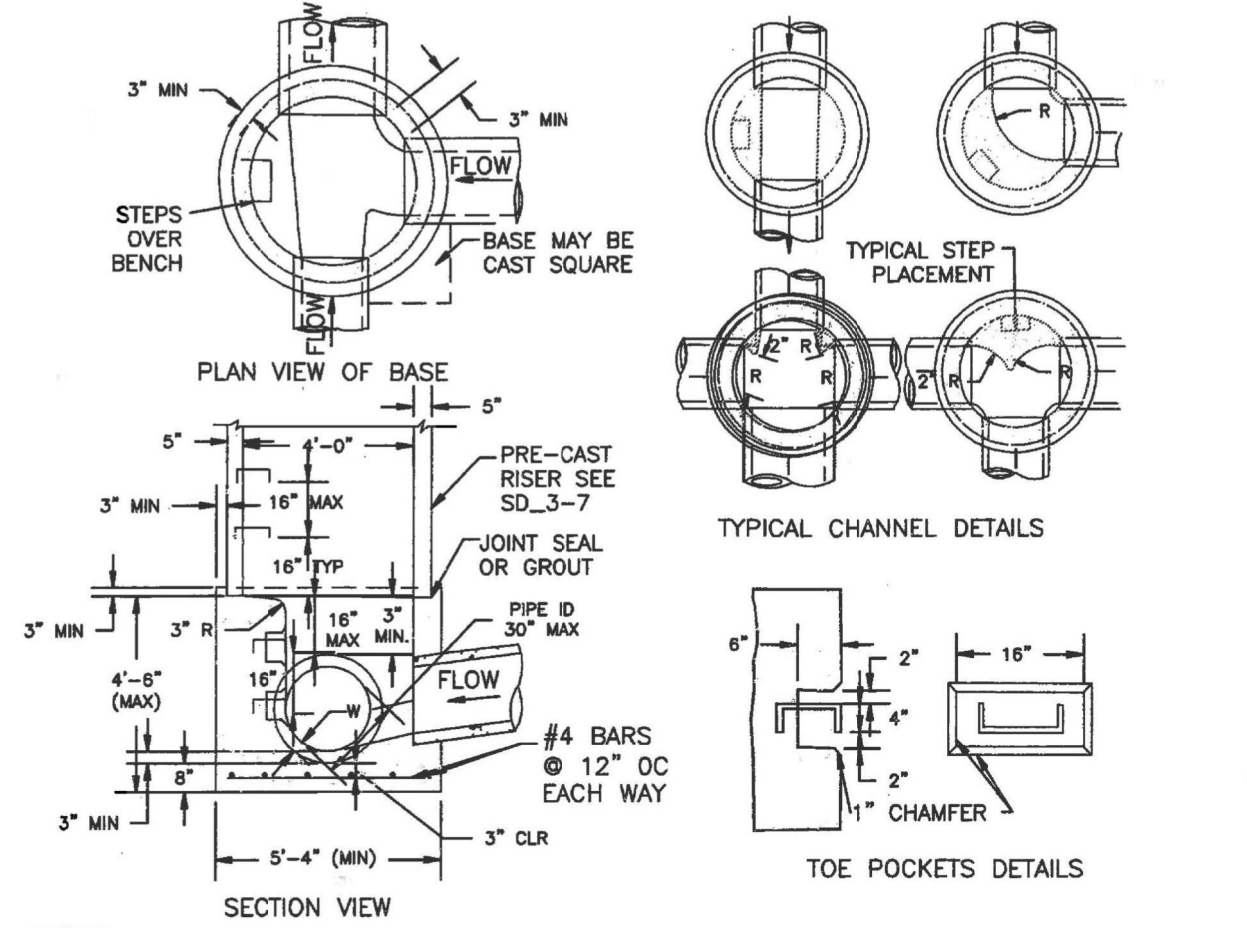
STORM SEWER MANHOLE DETAIL
TYPE III SD 3-3



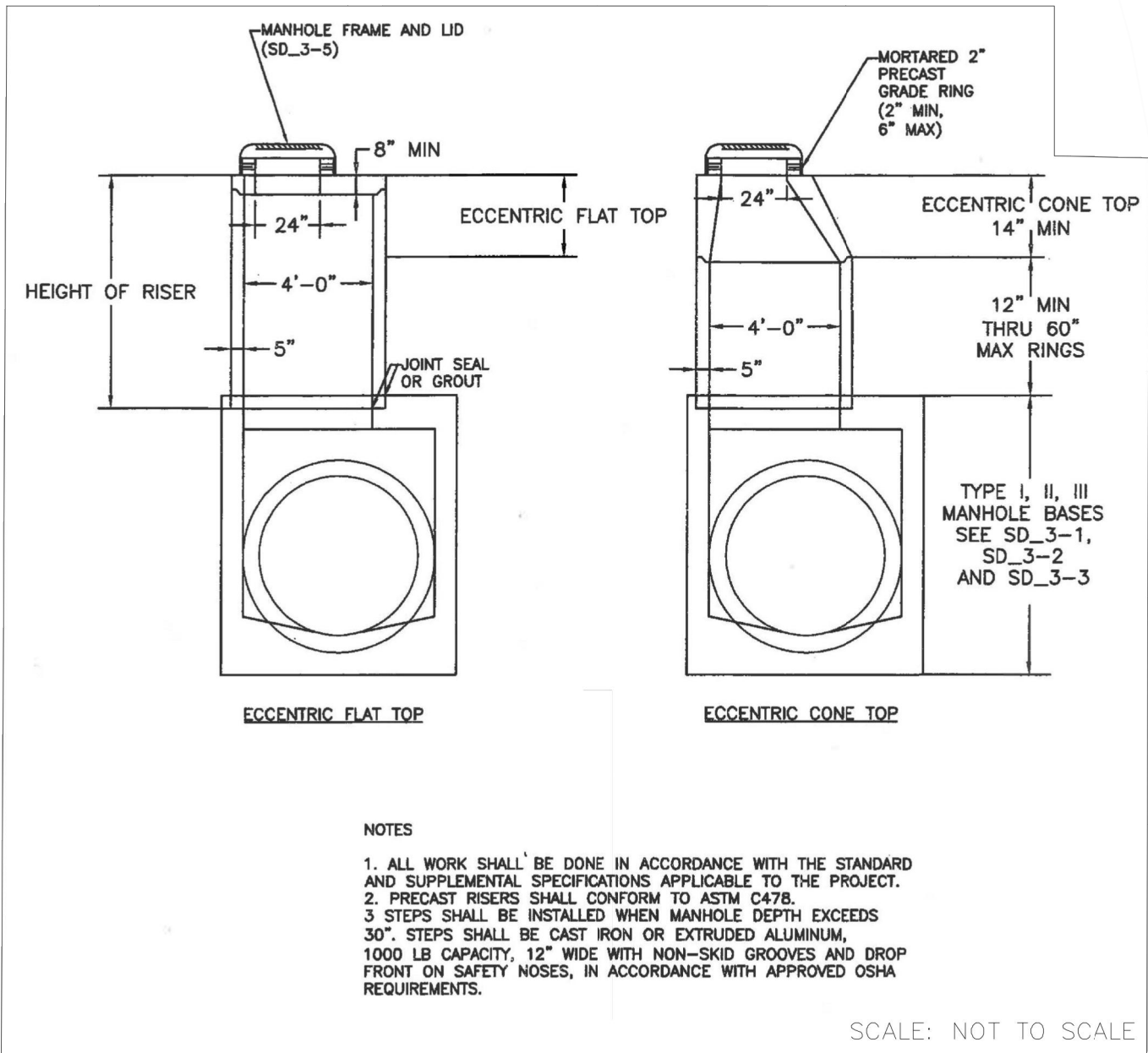
STORM SEWER MANHOLE L
LID DETAILS SD 3-2



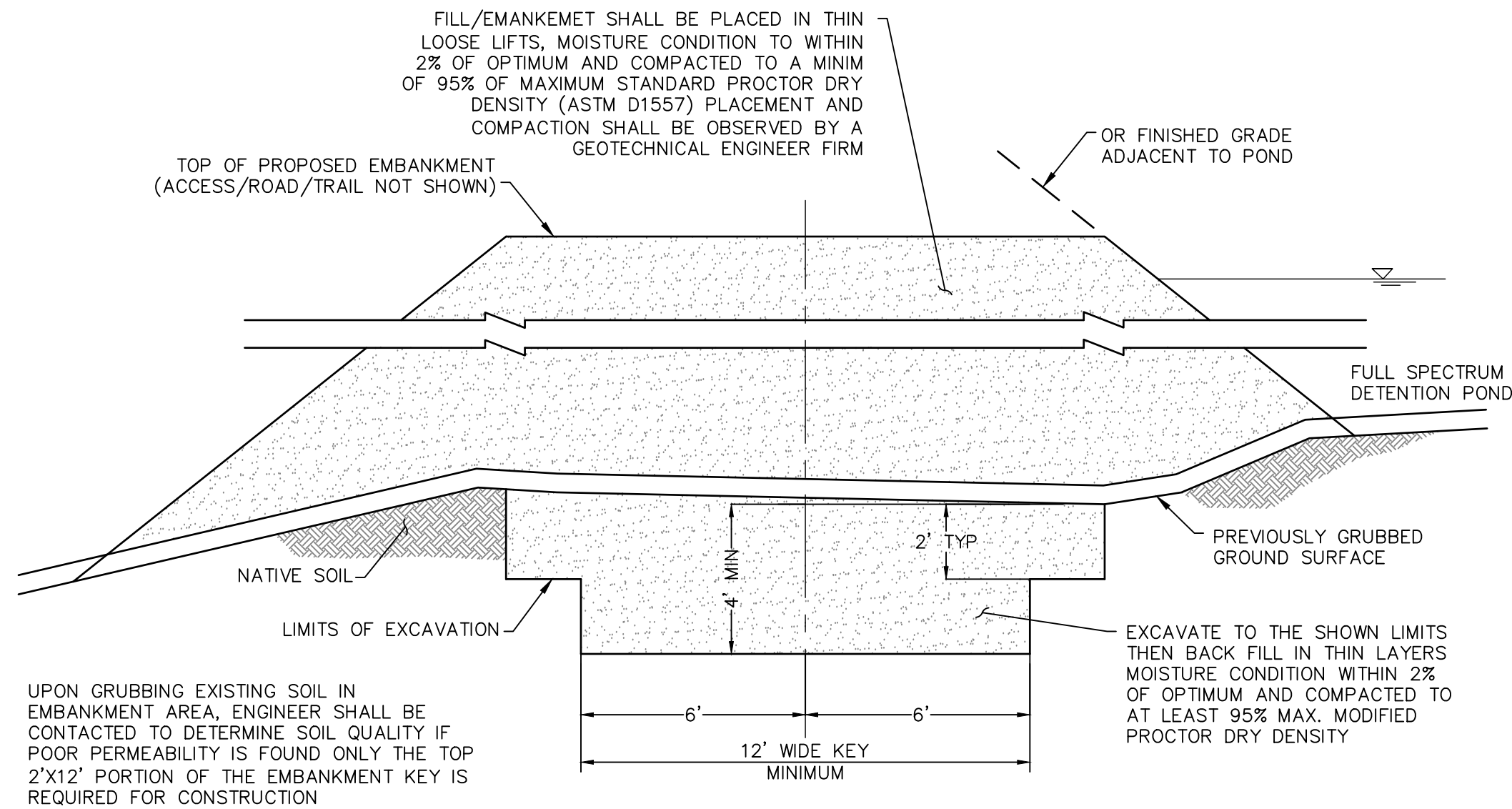
STORM SEWER MANHOLE DETAIL
TYPE I SD 3-1



STORM SEWER MANHOLE DETAIL
TYPE II SD 3-2



STORM SEWER MANHOLE
RISER AND COVER DETAIL
TYPE SD 3-7



EMBANKMENT DETAIL
NOT TO SCALE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE, THESE DRAWINGS ARE NOT TO BE USED WITHOUT WRITTEN AUTHORIZATION.

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 201
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

J.R. ENGINEERING
A Westman Company
Central 303-740-9383 • Colorado Springs 719-583-2583
Fort Collins 970-491-9888 • www.jrengineering.com

BY	DATE	REVISION	No.	N/A	H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
							08/18/21	RAB	KRW	

STERLING RANCH FILING NO.2	DETAILS
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SHEET 26 OF 26

JOB NO. 25188.01