

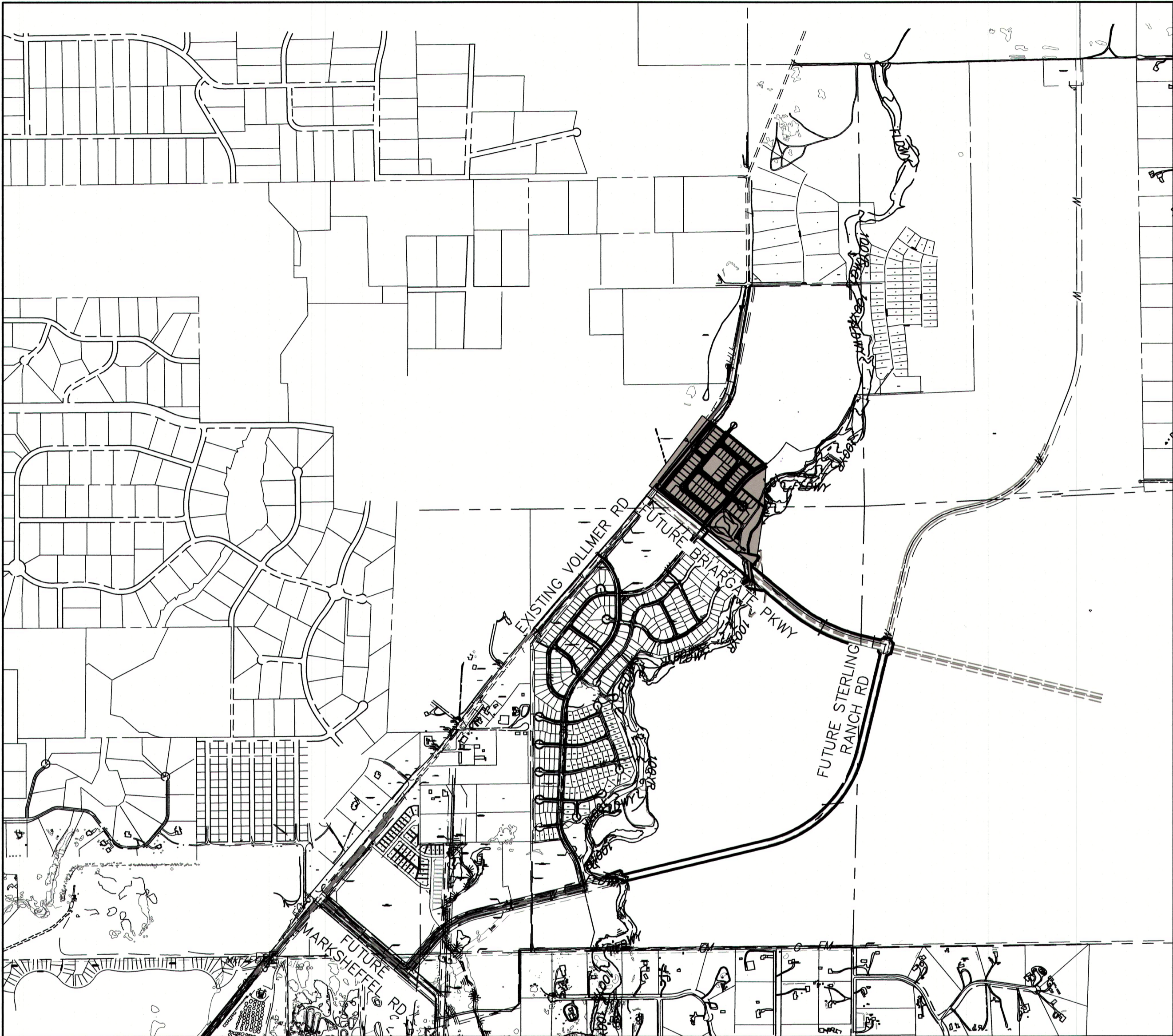
HOMESTEAD NORTH AT STERLING RANCH FILING NO. 1
COUNTY OF EL PASO, STATE OF COLORADO
SEPTEMBER 2022
STORM SEWER PLANS

AGENCIES

- 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 BRAMLETT 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 TEACHOUT ROAD, COLORADO SPRINGS, CO 80908, CHIEF BRYAN JACK (719) 495-4300
- GAS DEPARTMENT: COLORADO SPRINGS UTILITIES, 7710 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, (719) 385-5980
- 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 | MACELLAN MIDSTREAM PARTNERS, L.P., ONE WILLIAMS CENTER, OTC-8, TULSA, OK 74172, 918-574-7986

BENCHMARKS

- 1. THE TOP OF AN ALUMINUM SURVEYORS CAP, STAMPED "9853", AT THE SOUTHEAST BOUNDARY CORNER OF BARBARICK SUBDIVISION. NORTHING = 411416.273, EASTING = 235167.071, ELEVATION = 7023.42
- 2. THE TOP OF A RED PLASTIC SURVEYORS CAP, ILLEGIBLE, AT THE NORTHWEST BOUNDARY CORNER OF PAWNEE RANCHEROS SUBDIVISION. NORTHING = 410095.404, 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 = 411399.962, EASTING = 233849.817, ELEVATION = 7030.82



VICINITY MAP
SCALE : 1"=1,000'

SHEET INDEX

- 1 COVER SHEET
- 2 NOTES
- 3-9 STORM SEWER PLANS
- 10-14 POND DETAILS
- 15-16 DETAIL SHEET

OWNER/DEVELOPER STATEMENT

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

Signature of James F. Morley, dated 9/9/2022. SR LAND, LLC, 20 BOULDER CRESCENT, SUITE 201, COLORADO SPRINGS, CO 80903.

EL PASO COUNTY STATEMENT

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 E.C.M. 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.

APPROVED stamp for Joshua Palmer, P.E., County Engineer/ECM Administrator, dated 01/19/2023 2:58:19 PM.

ENGINEER'S STATEMENT

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, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID 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 FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. 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.

Signature of Mike A. Bramlett, dated 09/09/22. MIKE A. BRAMLETT, P.E., COLORADO P.E. 32314, FOR AND ON BEHALF OF JR ENGINEERING.

DISTRICT APPROVALS

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

Signature of James F. Morley, dated 9/9/2022. FOR AND ON BEHALF OF THE STERLING RANCH METRO DISTRICT.



Vertical sidebar containing: 811 logo, project title 'HOMESTEAD NORTH AT STERLING RANCH FILING NO. 1', sheet number '1 OF 16', and agency information for SR LAND, LLC and JR ENGINEERING.

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.
- 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, WITH WATERTIGHT JOINTS WHERE INDICATED. 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 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 (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.

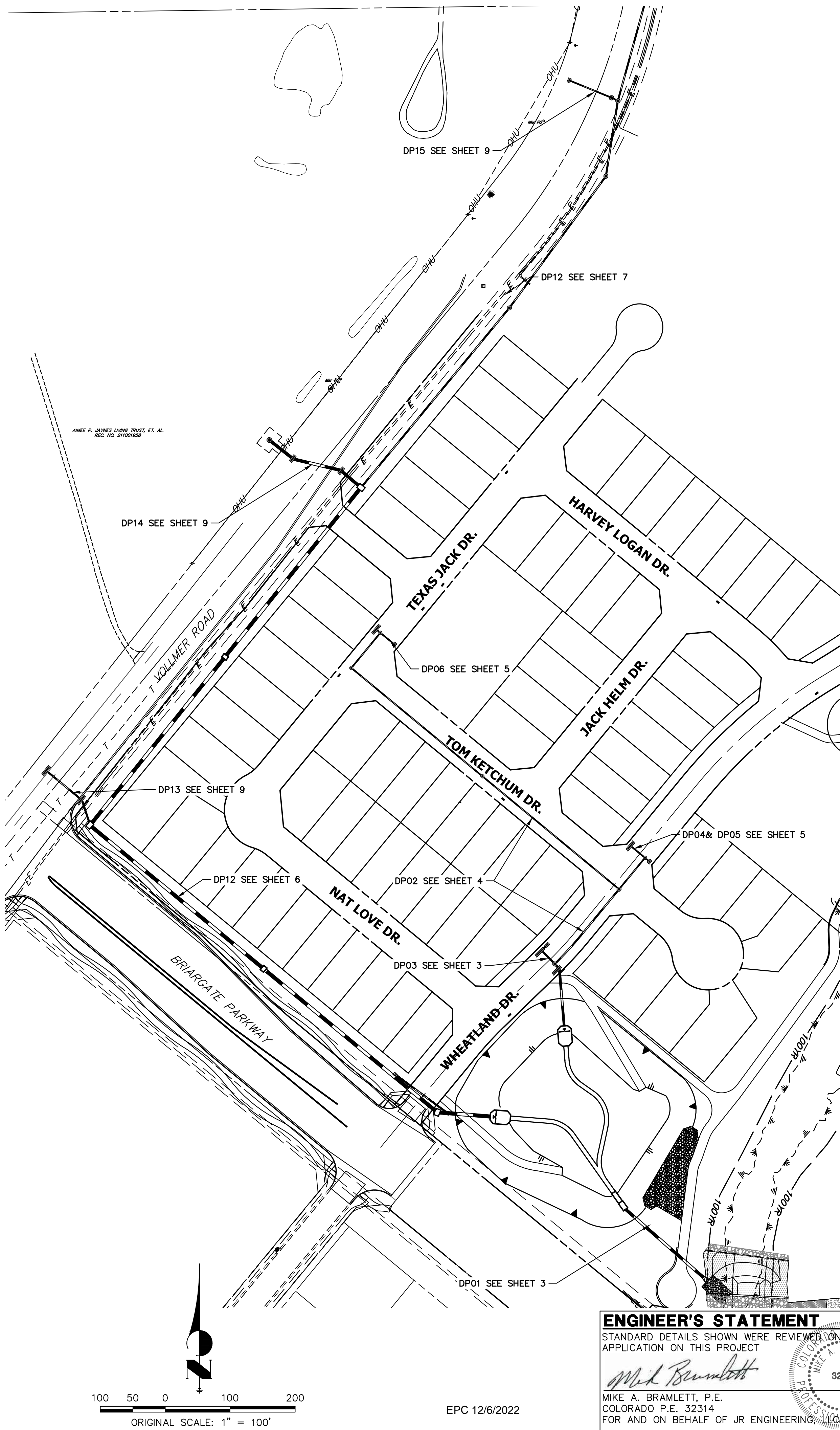
STRUCTURAL CONCRETE NOTES:

- 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<sub>c</sub>) 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).

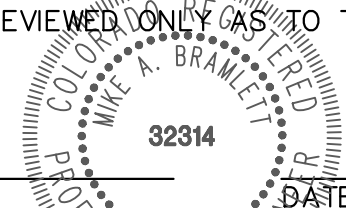
ABBREVIATIONS  
EC --- EPOXY COATED O.F. --- OUTSIDE FACE E.F. --- EACH FACE E.W. --- EACH WAY I.F. --- INSIDE FACE N.F. --- NEAR FACE  
T.O.C. --- TOP OF CONCRETE B.O.C. --- BOTTOM OF CONCRETE CONT. --- CONTINUOUS



ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

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



DATE 09/09/22

HOMESTEAD NORTH AT  
STERLING RANCH FILING NO.

GENERAL NOTES

SHEET 2 OF 16

JOB NO. 25188.00

BY	DATE	No.	REVISION

H-SCALE	1"=100'
V-SCALE	N/A
DATE	10/24/22
DESIGNED BY	RAB
DRAWN BY	RAB
CHECKED BY	

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING AGENCIES, THEIR USE APPROVES THEIR USES DESIGNATED BY WRITTEN AUTHORIZATION.

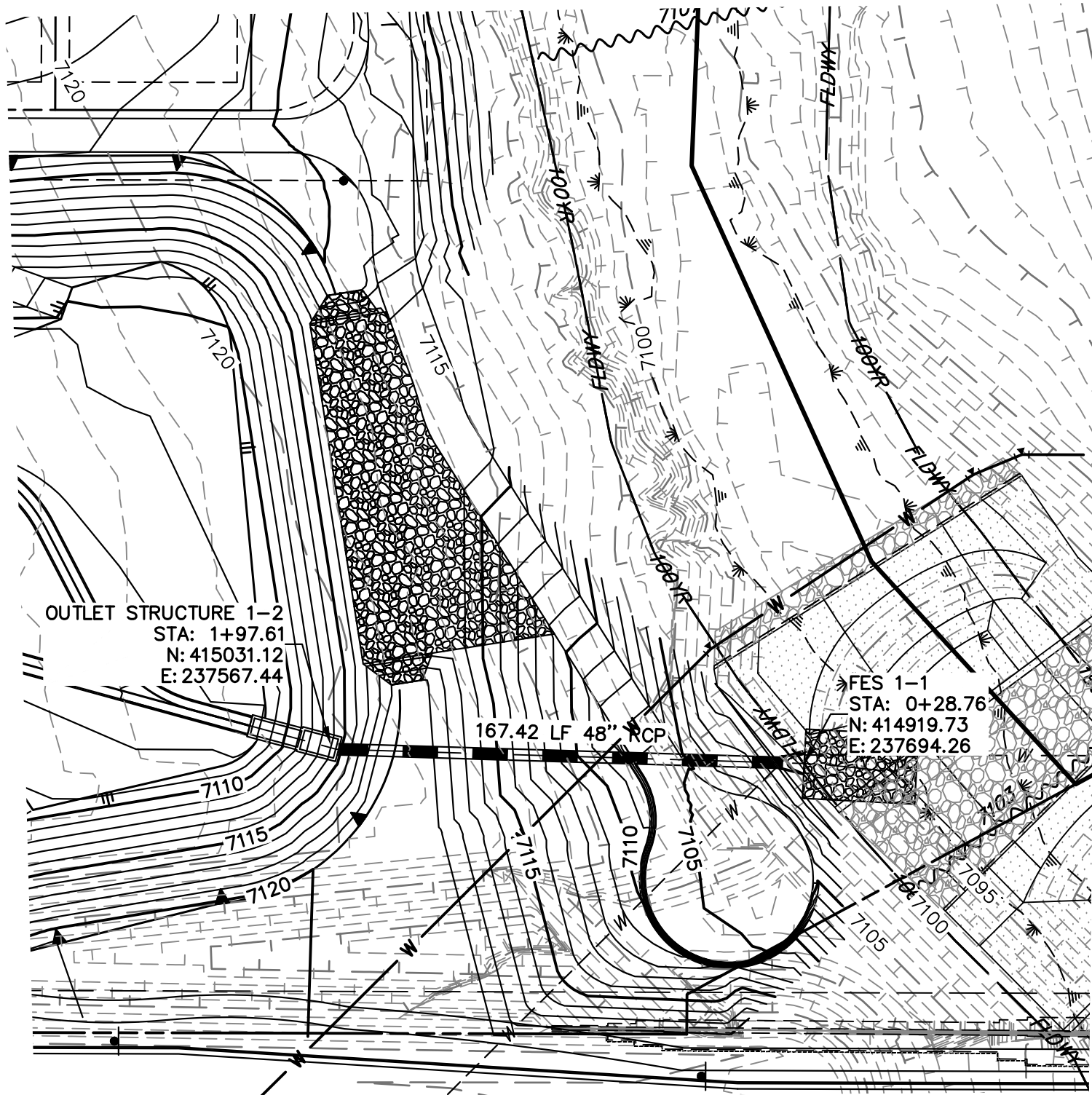
PREPARED FOR

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

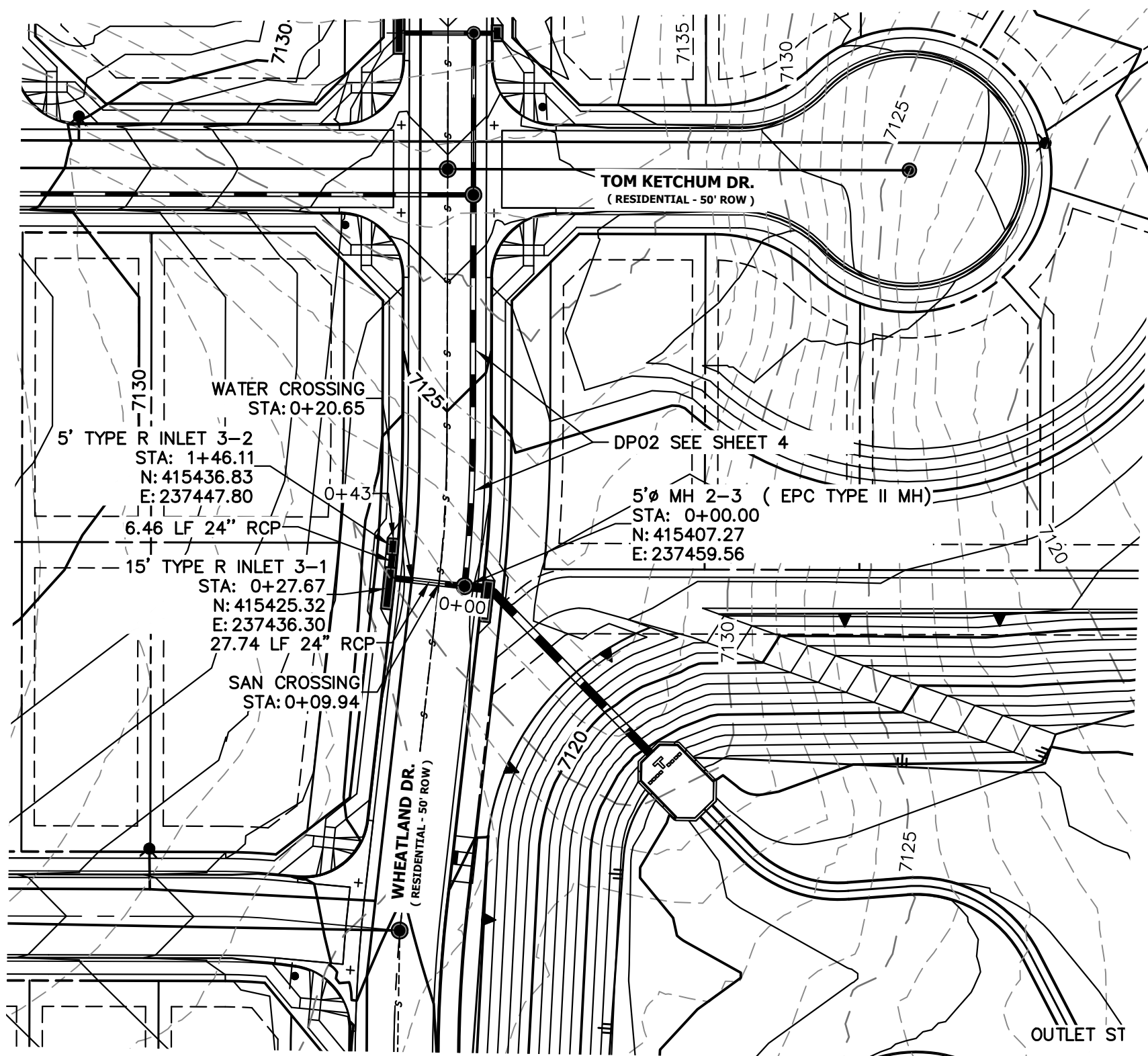
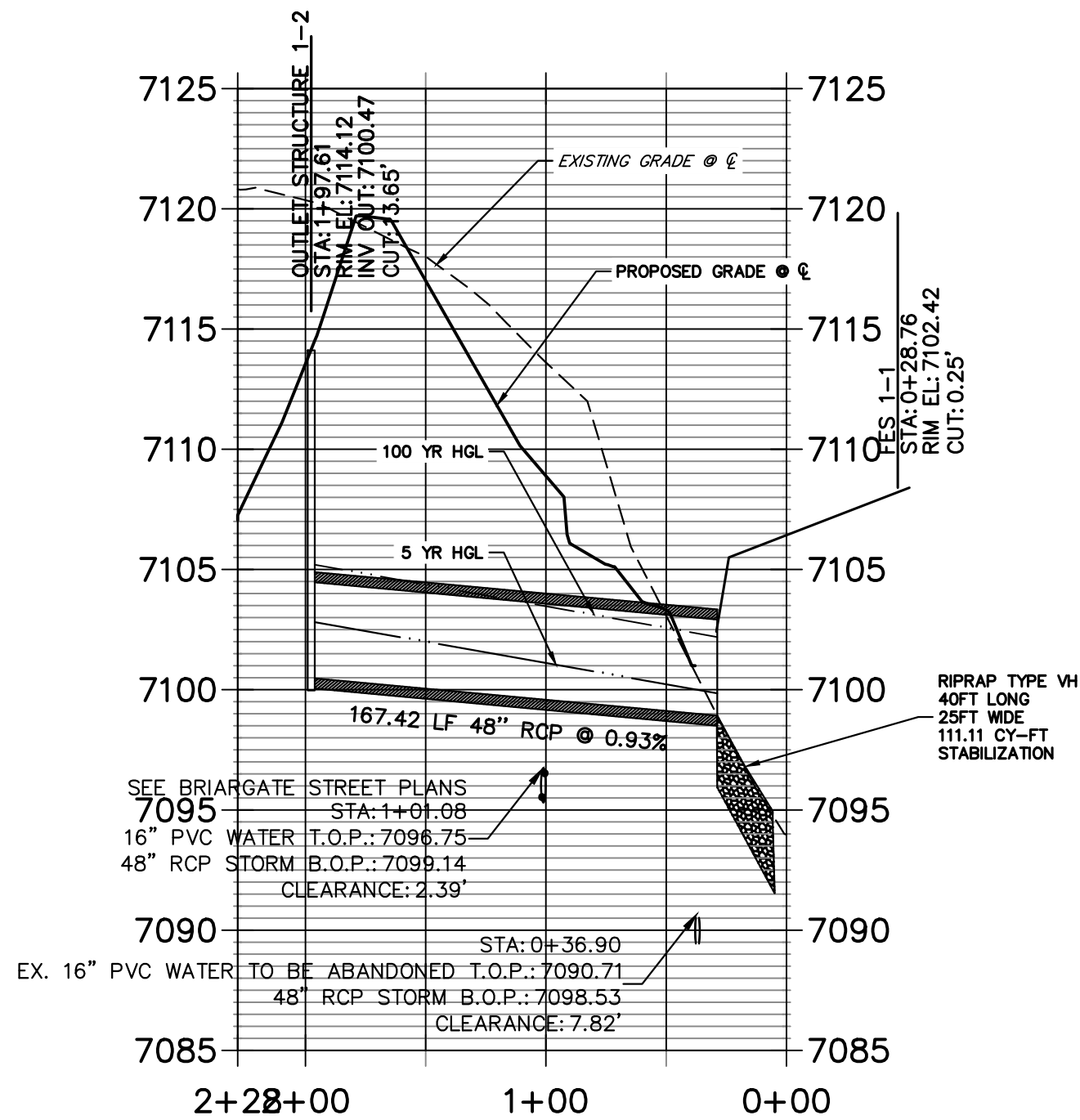
J.R. ENGINEERING  
A Westman Company



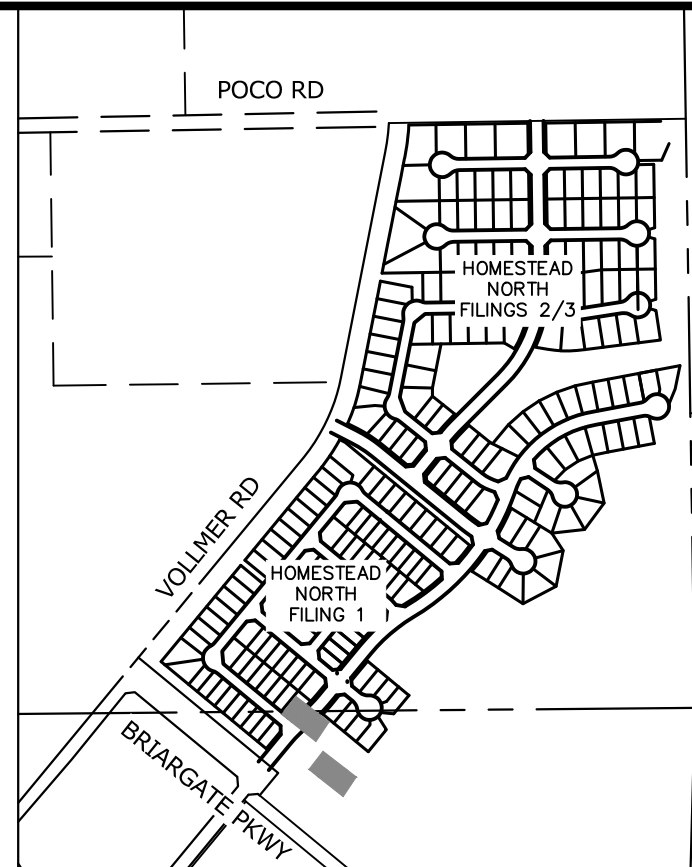
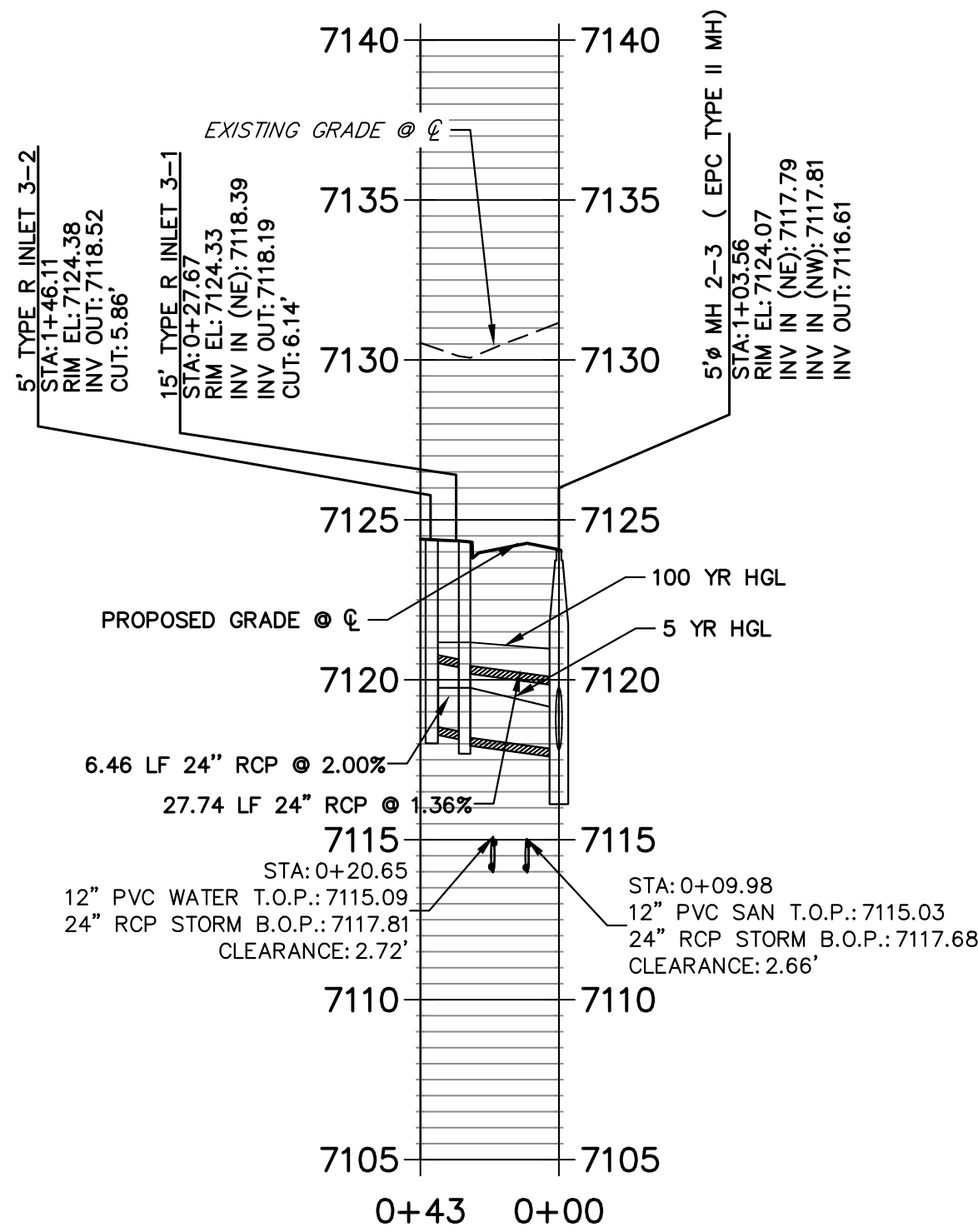
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DP01 PROFILE  
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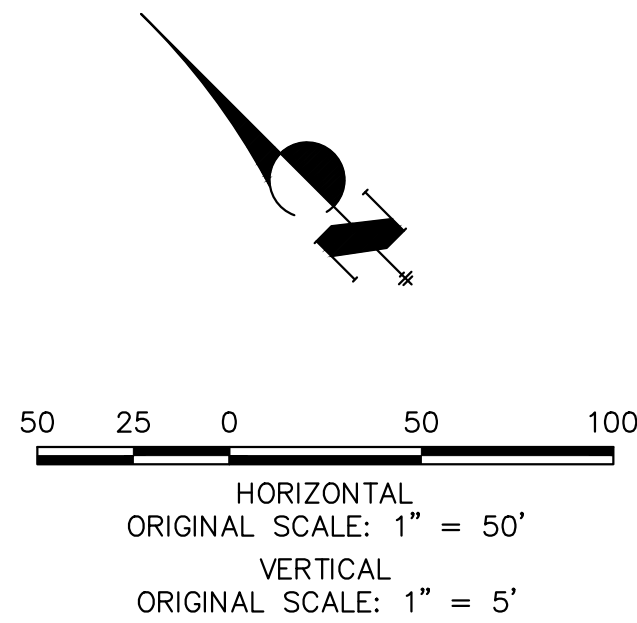


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KEY MAP  
SCALE: NTS

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

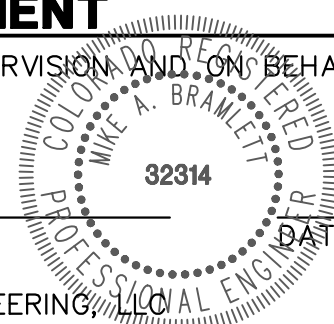


**ENGINEER'S STATEMENT**

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

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

FOR AND ON BEHALF OF JR ENGINEERING



DATE 09/09/22

HOMESTEAD NORTH AT  
STERLING RANCH FILING NO. 1

STORM SEWER PLAN

SHEET 3 OF 16

JOB NO. 25188.00

**J.R. ENGINEERING**  
A Western Company

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PREPARED FOR

**SR LAND, LLC**

20 BOULDER CRESCENT

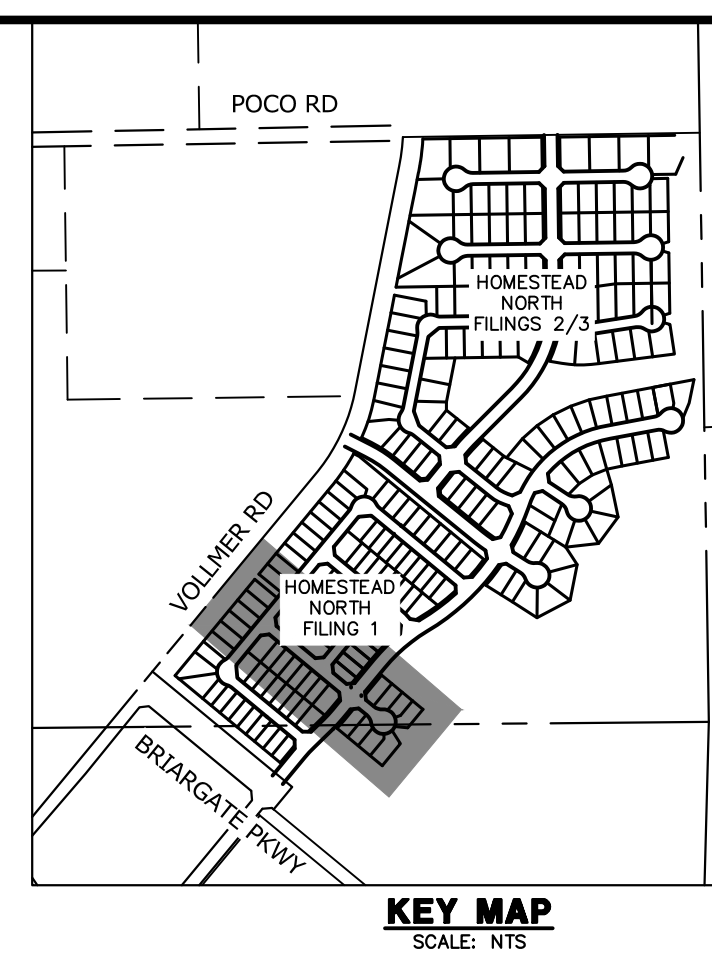
SUITE 201

COLORADO SPRINGS, CO 80903

JAMES F. MORLEY

(719) 471-1742

UNTIL SUCH TIME AS  
THESE DRAWINGS ARE  
APPROVED BY THE  
APPROPRIATE REVIEWING  
AGENCIES, JR ENGINEERING  
APPROVES THEIR USE  
DESIGNATED BY WRITTEN  
AUTHORIZATION.

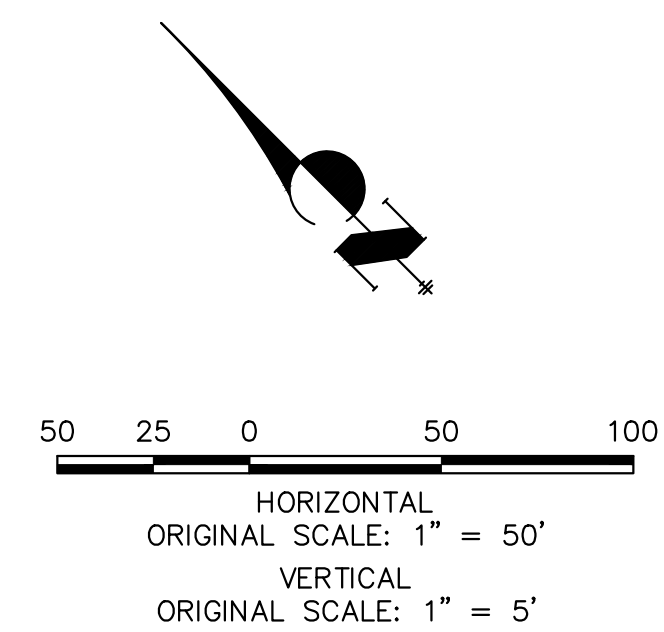


PREPARED FOR  
**SR LAND, LLC**  
20 BOULDER CRESCENT  
SUITE 201  
COLORADO SPRINGS, CO 80903  
JAMES F. MORLEY  
(719) 471-1742



**J.R. ENGINEERING**  
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Know what's **below**.  
**Call** before you dig.

### ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR  
ENGINEERING

*Mike Bramlett*

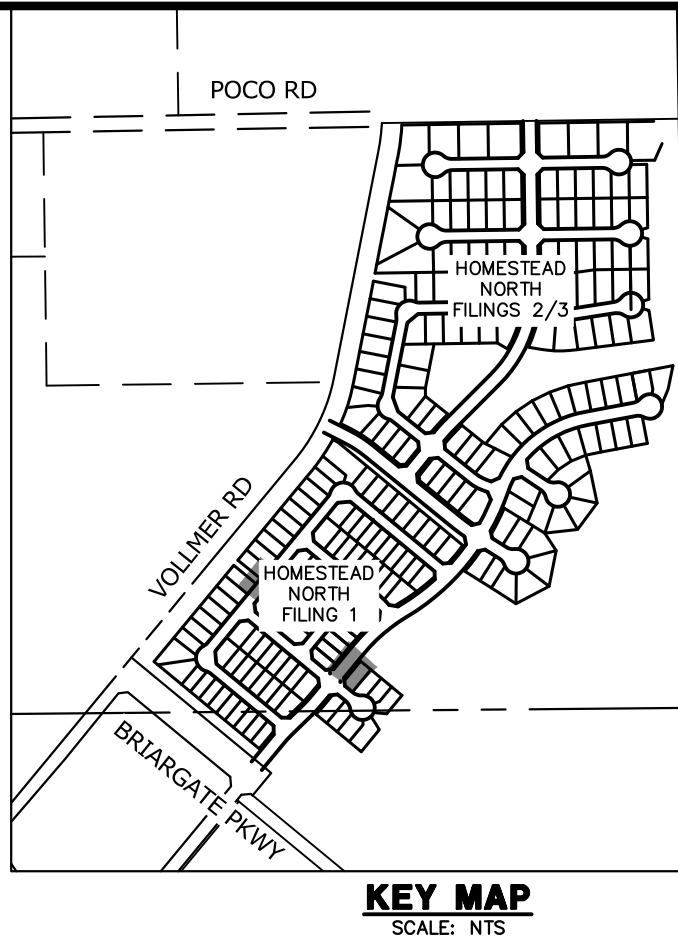
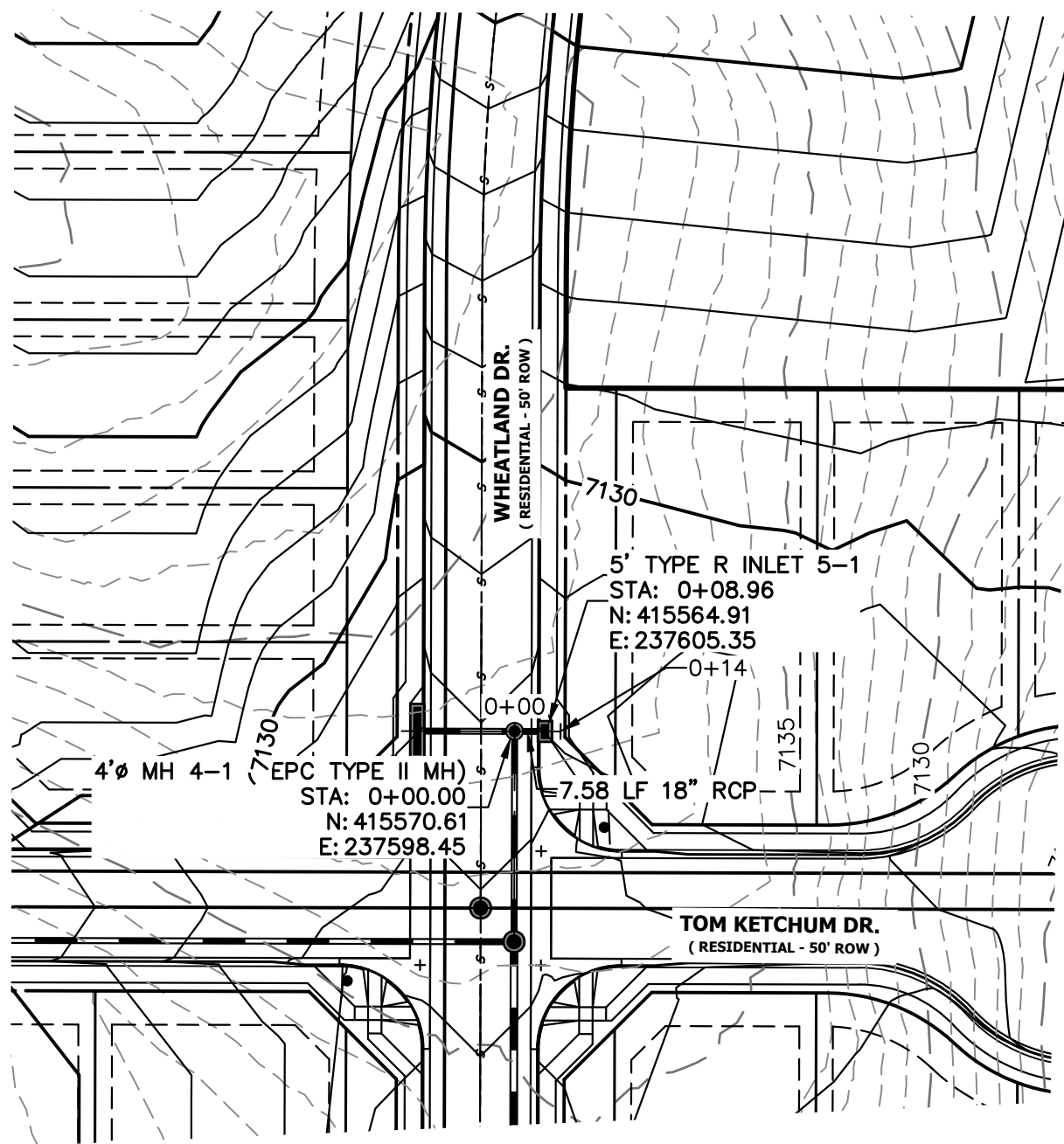
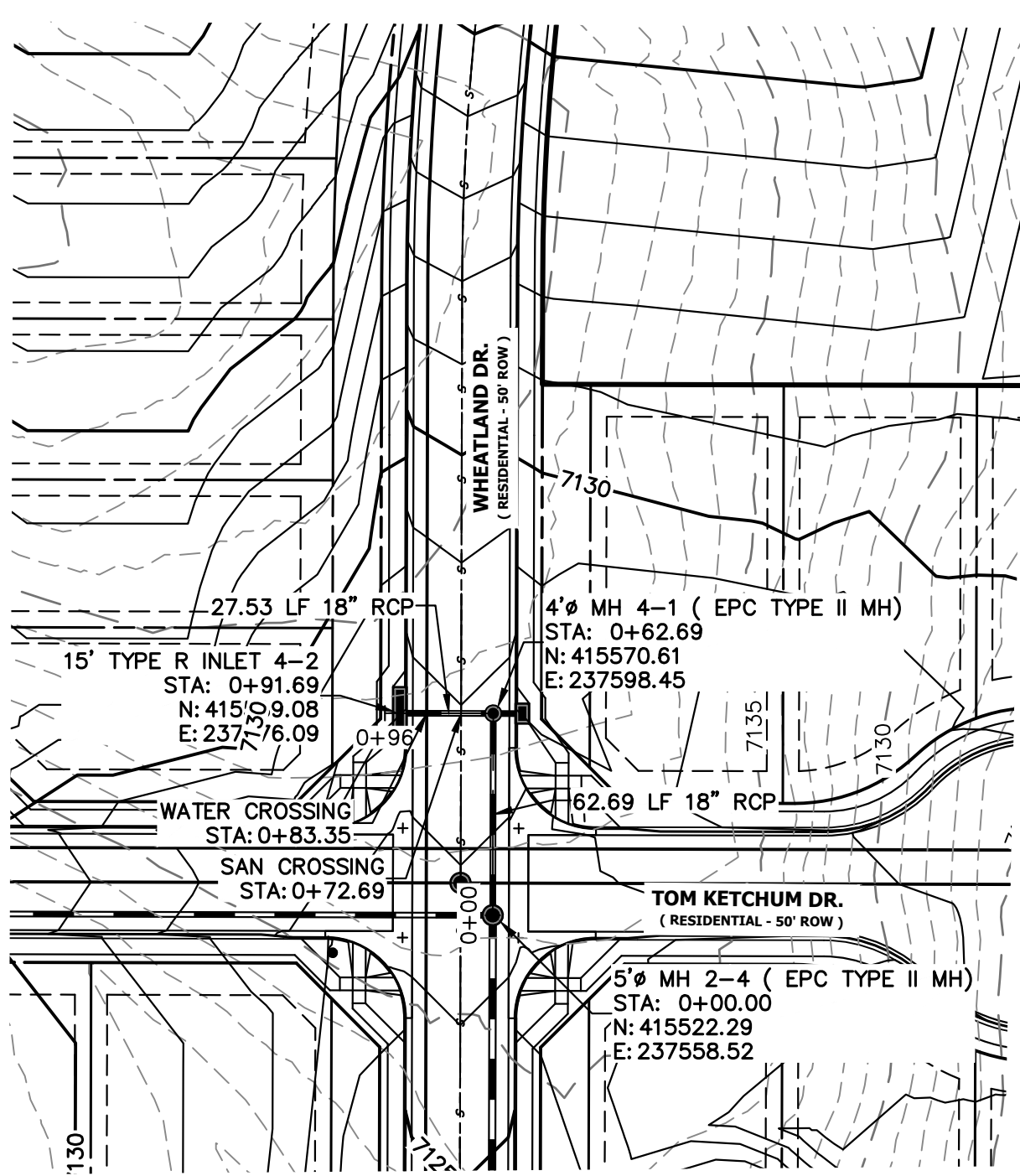
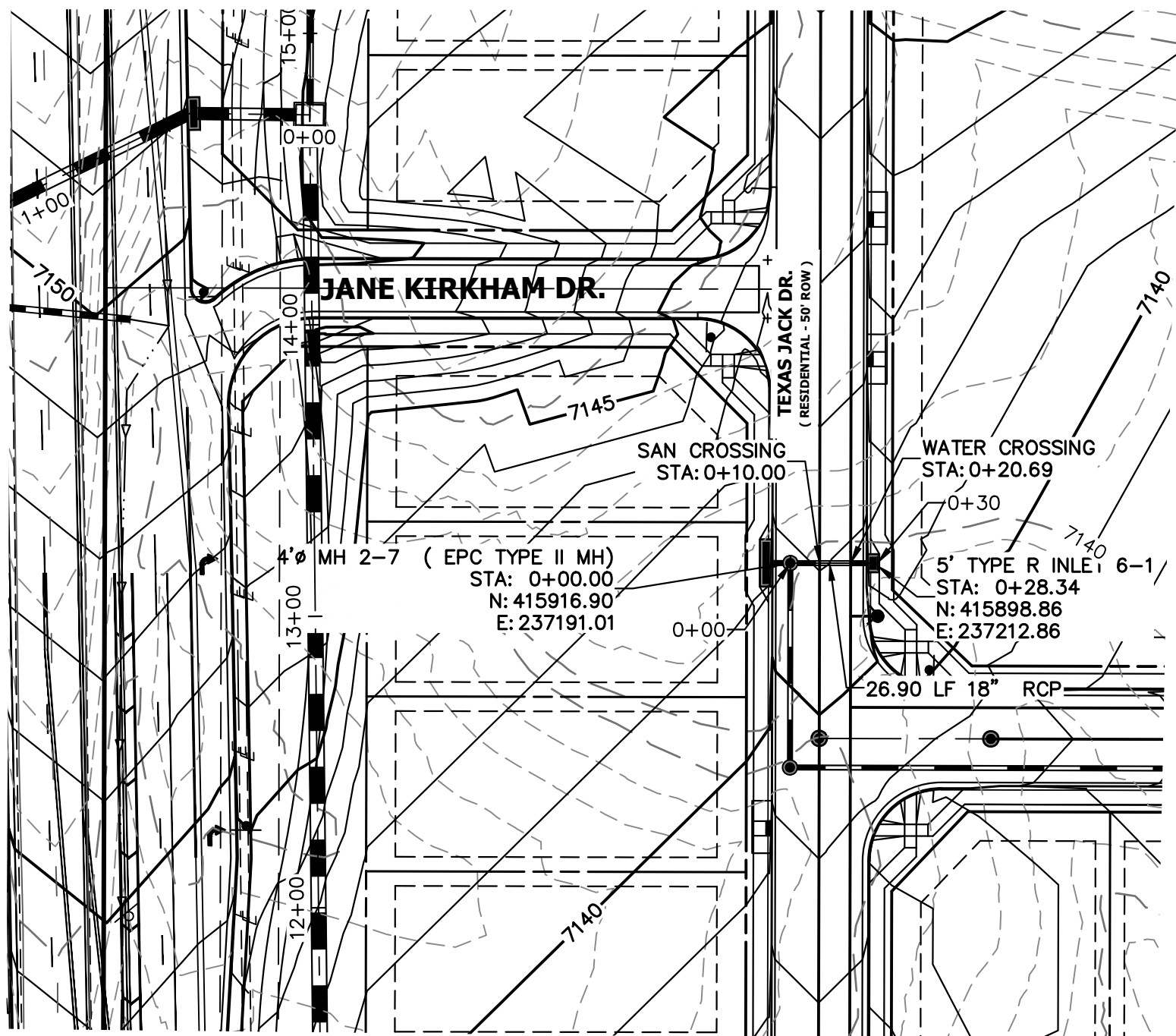
MIKE A. BRAMLETT, P.E.  
COLORADO P.E. 32314

FOR AND ON BEHALF OF JR ENGINEERING

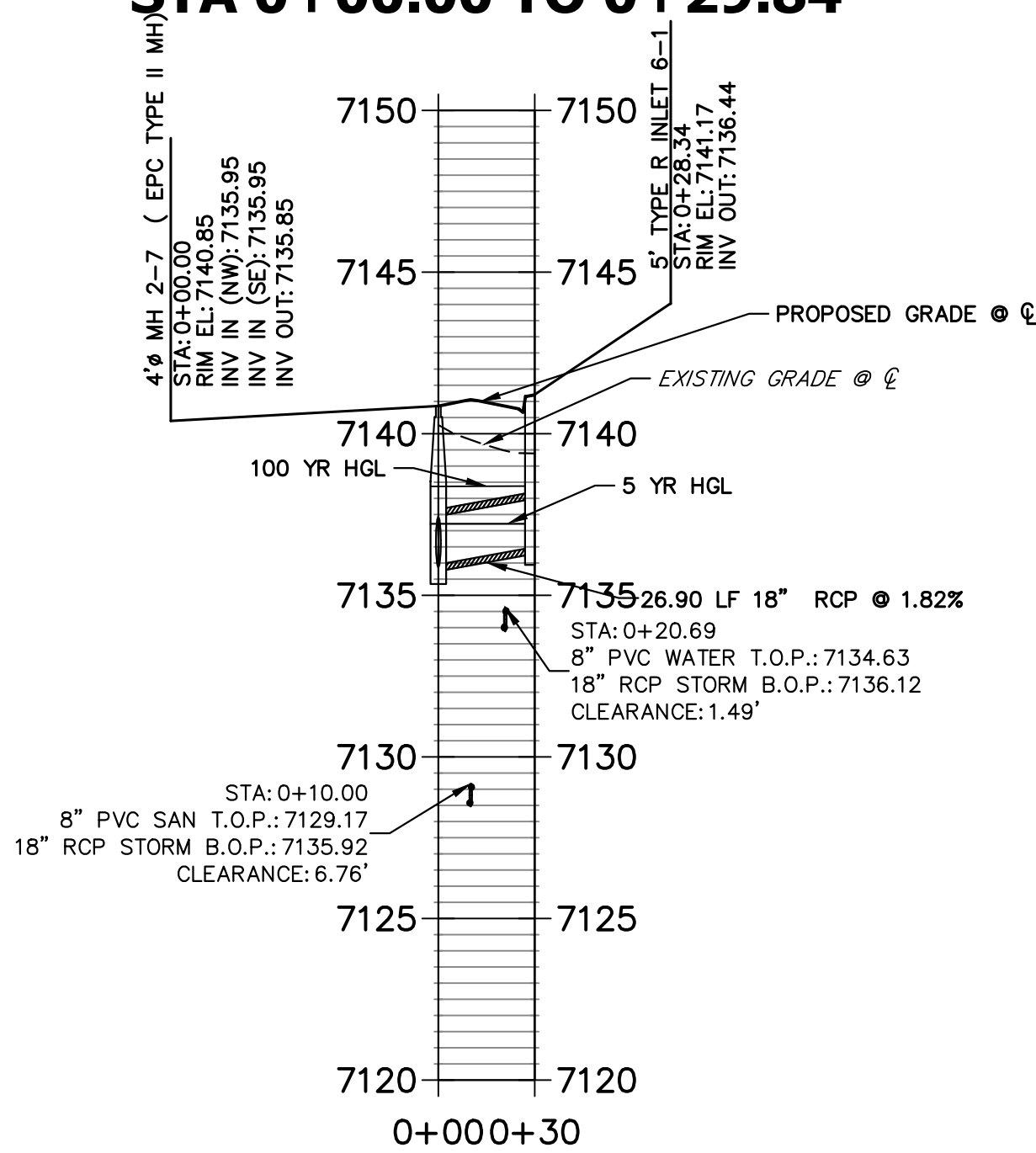
32314

DATE 09/09/22

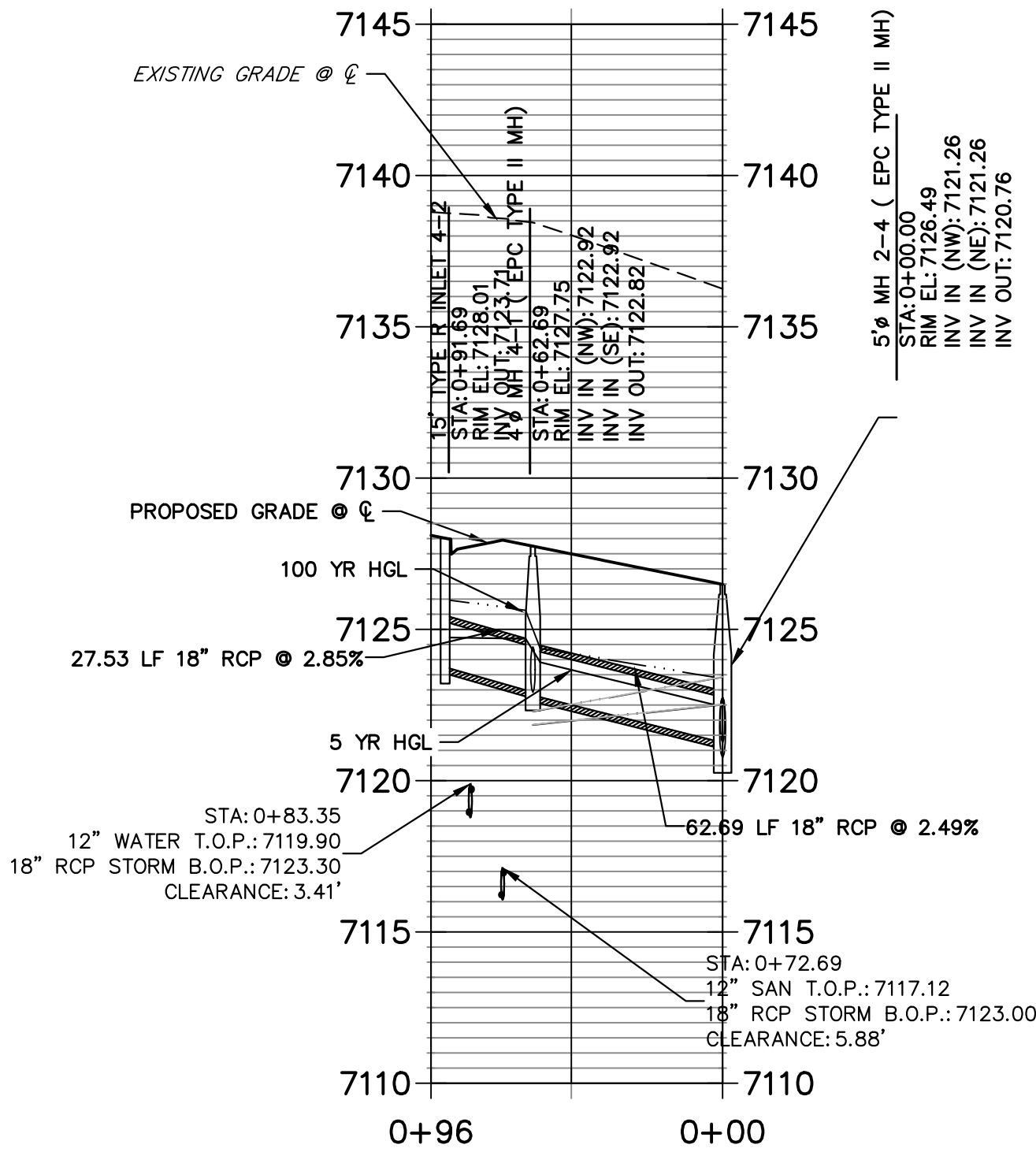
JOB NO.	25188.00		
SHEET	4 OF 16		
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STORM SEWER PLAN	DESIGNED BY ARJ DRAWN BY ARJ CHECKED BY		
No.	REVISION	BY	DATE



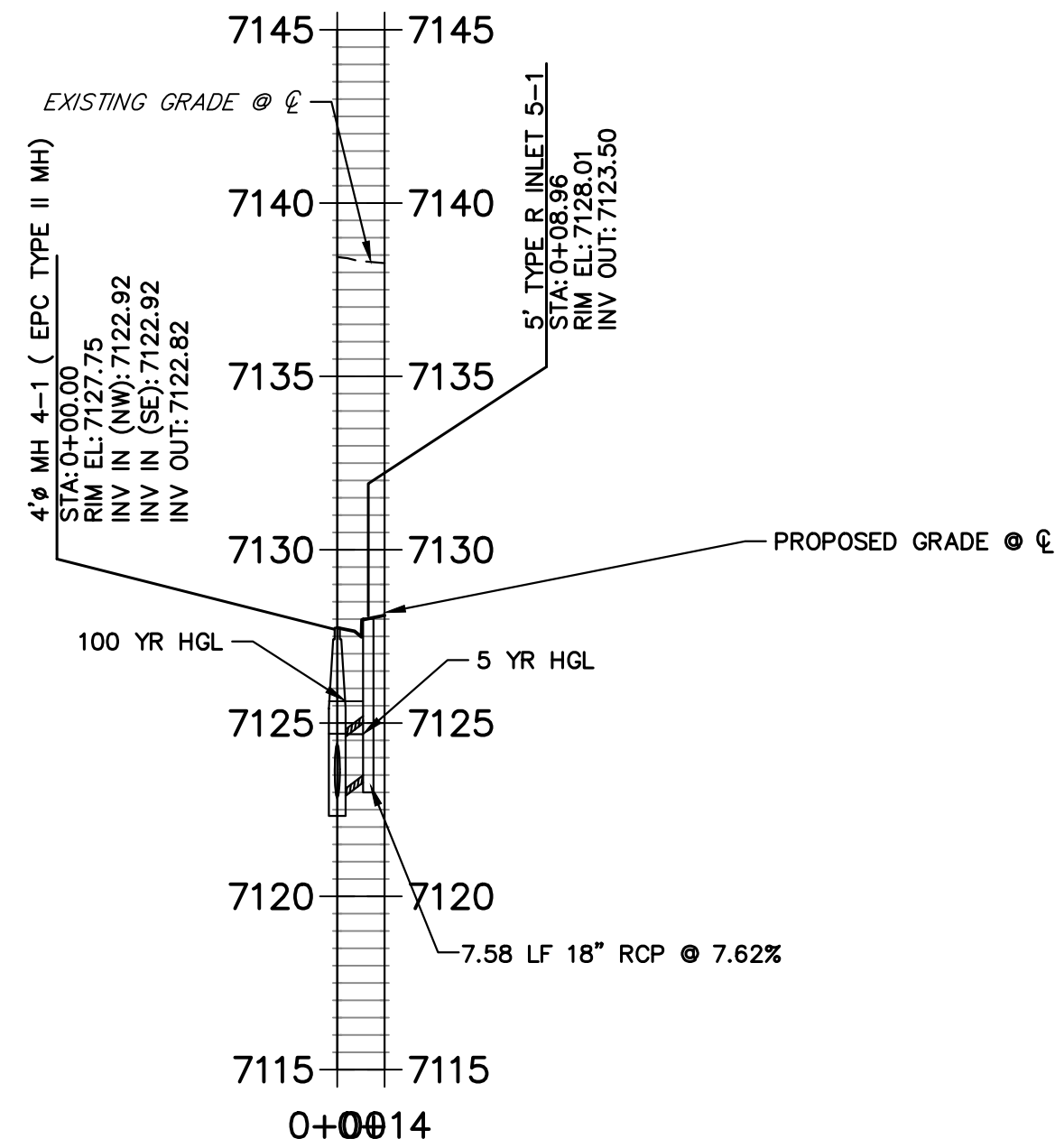
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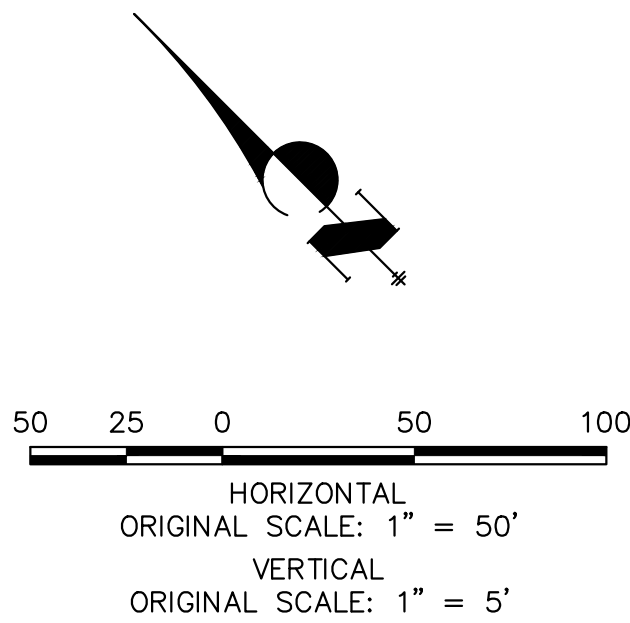
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DP05 PROFILE  
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NOTE  
WATER TIGHT JOINT REQUIRED WHERE  
HGL IS OUTSIDE OF THE PIPE.

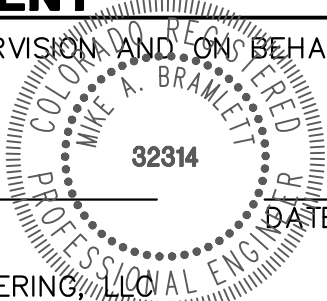


ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

Mike A. Bramlett  
COLORADO P.E. 32314

FOR AND ON BEHALF OF JR ENGINEERING



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HOMESTEAD NORTH AT  
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SHEET 5 OF 16

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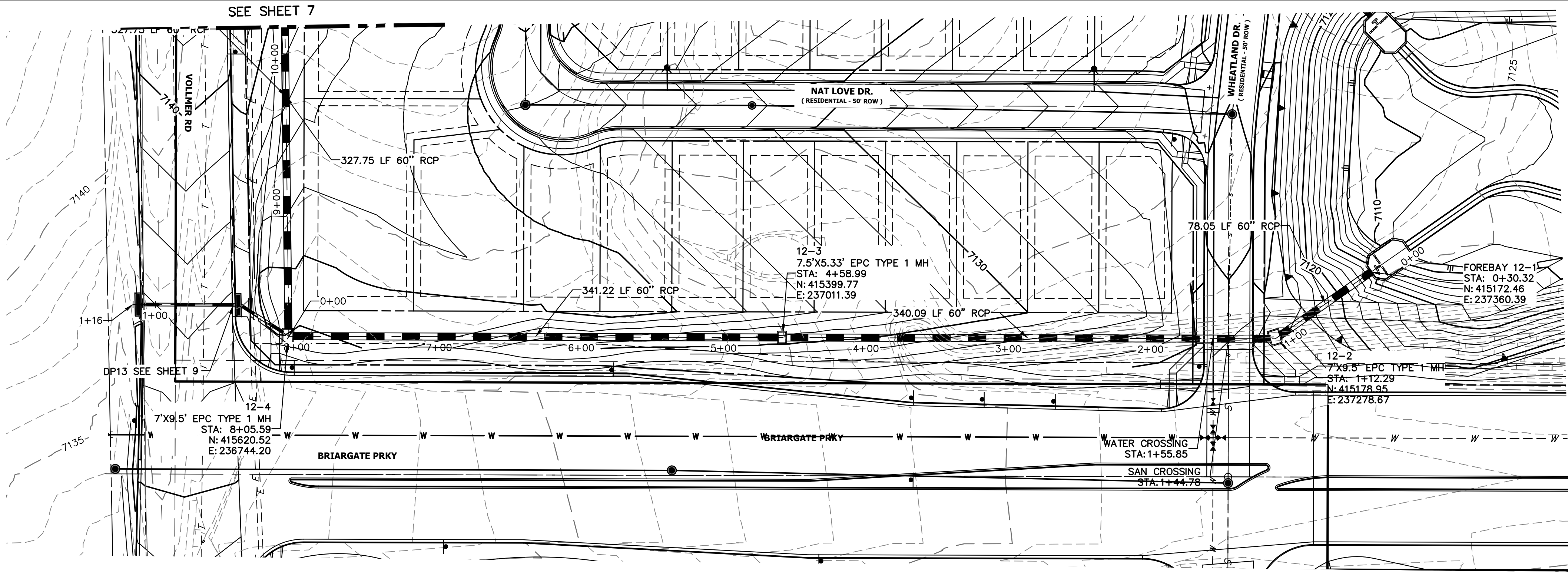
PREPARED FOR

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20 BOULDER CRESCENT  
SUITE 201

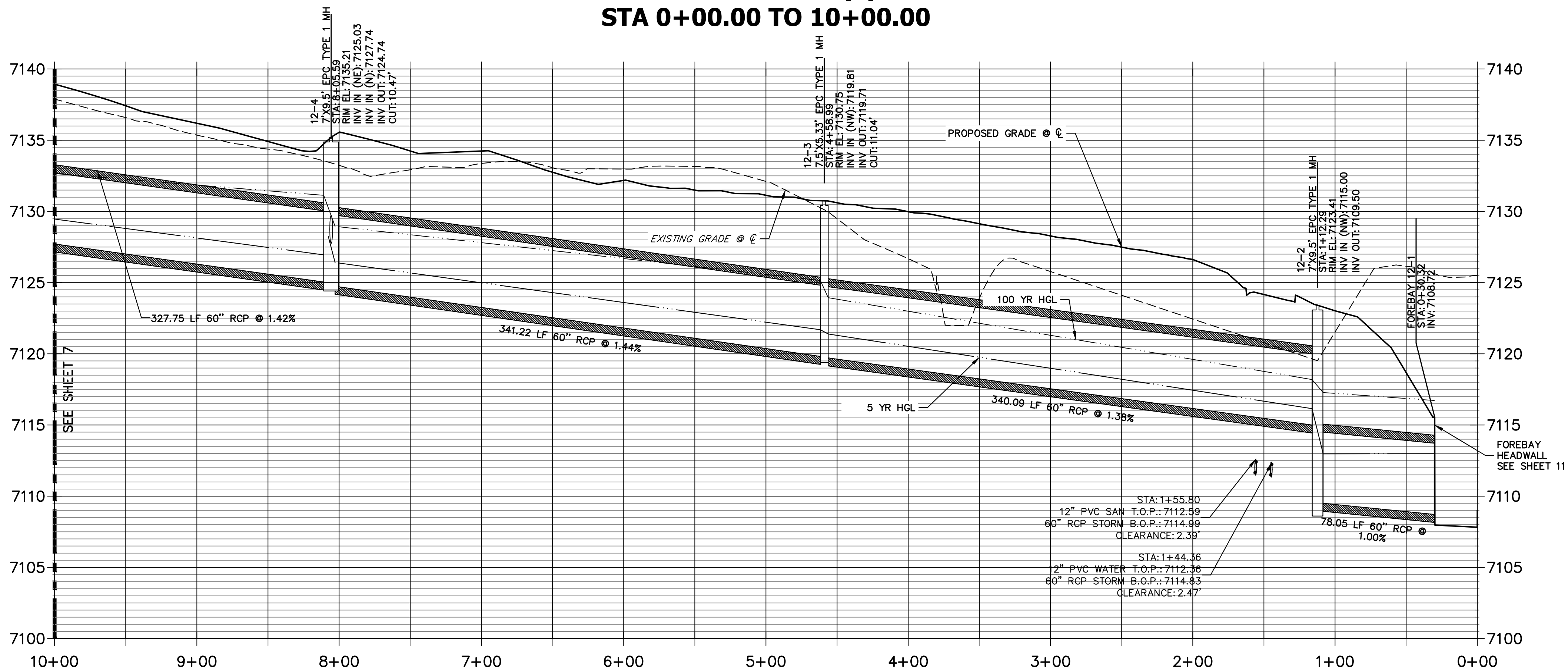
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JAMES F. MORLEY  
(719) 471-1742

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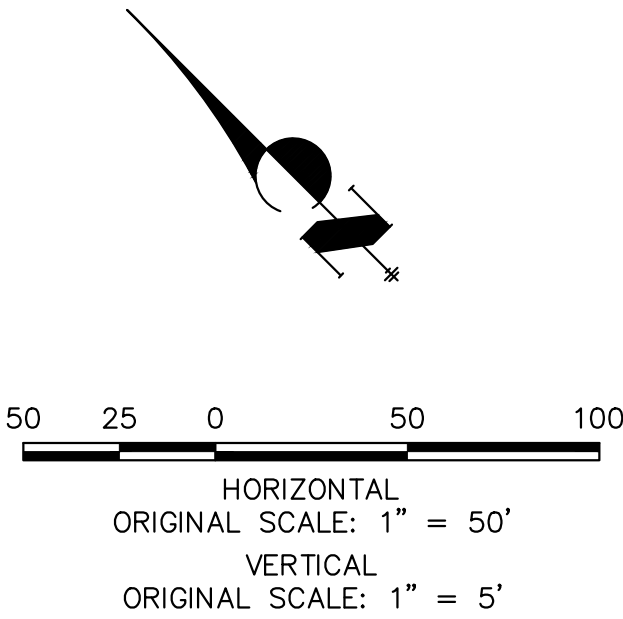
EPC 12/6/2022



DP12 PROFILE (1)  
STA 0+00.00 TO 10+00.00



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



**ENGINEER'S STATEMENT**

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

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

FOR AND ON BEHALF OF JR ENGINEERING



DATE 09/09/22

HOMESTEAD NORTH AT  
STERLING RANCH FILING NO. 1

STORM SEWER PLAN

SHEET 6 OF 16

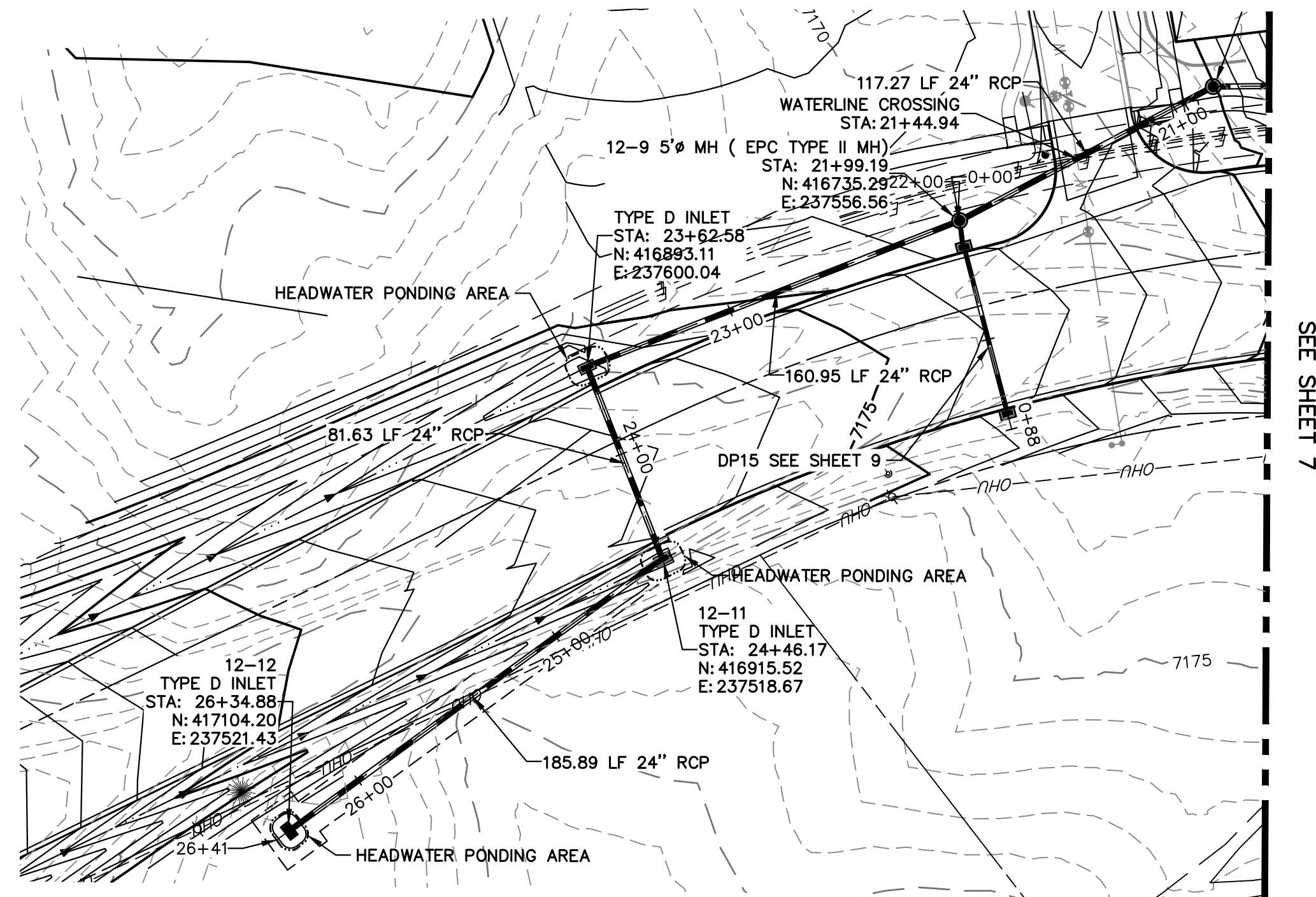
JOB NO. 25188.00

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JAMES F. MORLEY  
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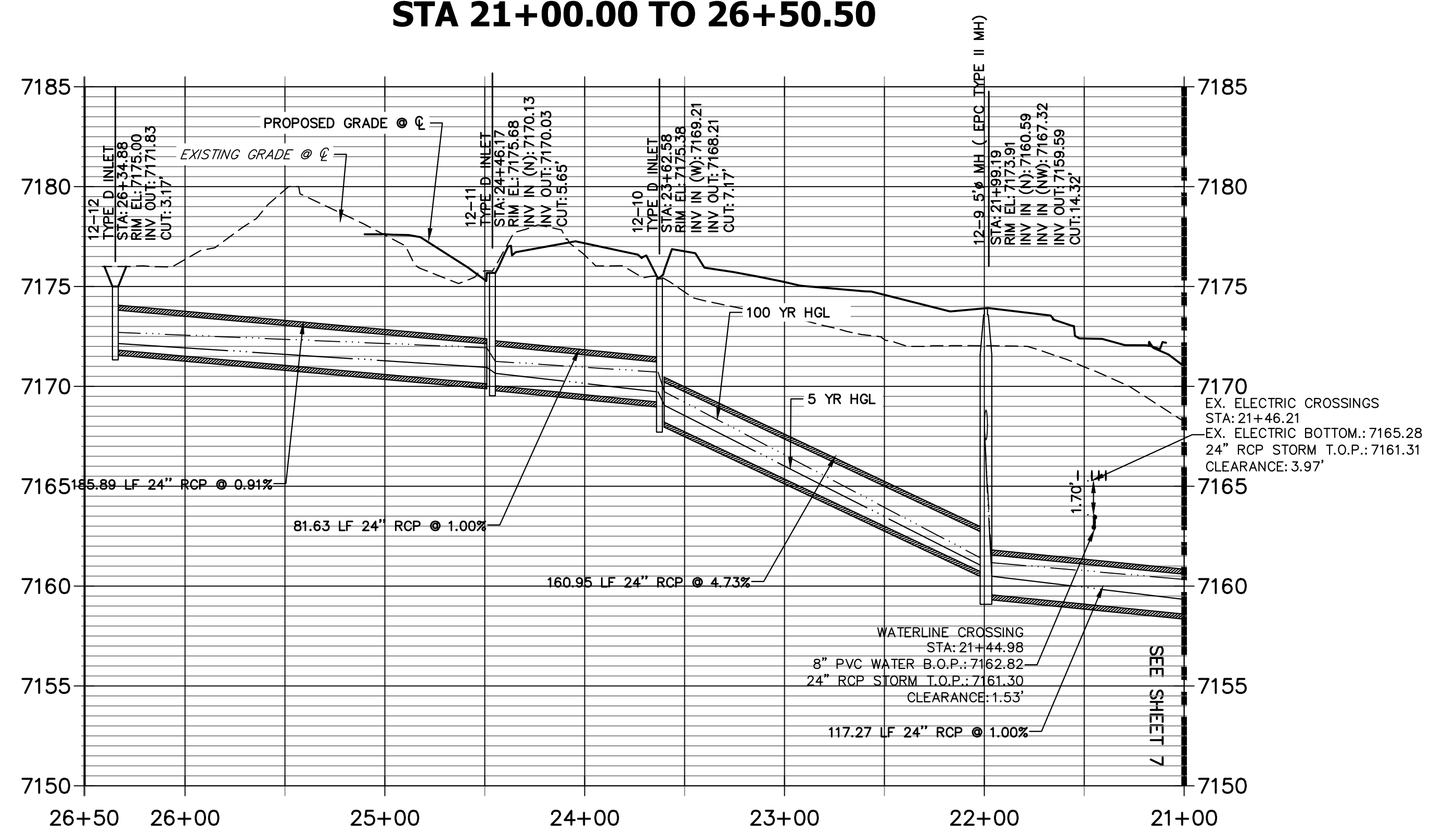


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JAMES F. MORLEY  
(719) 471-1742

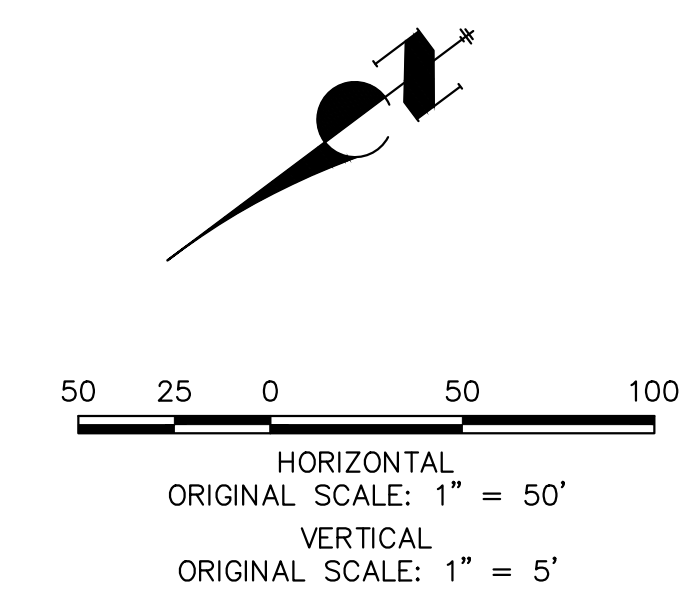
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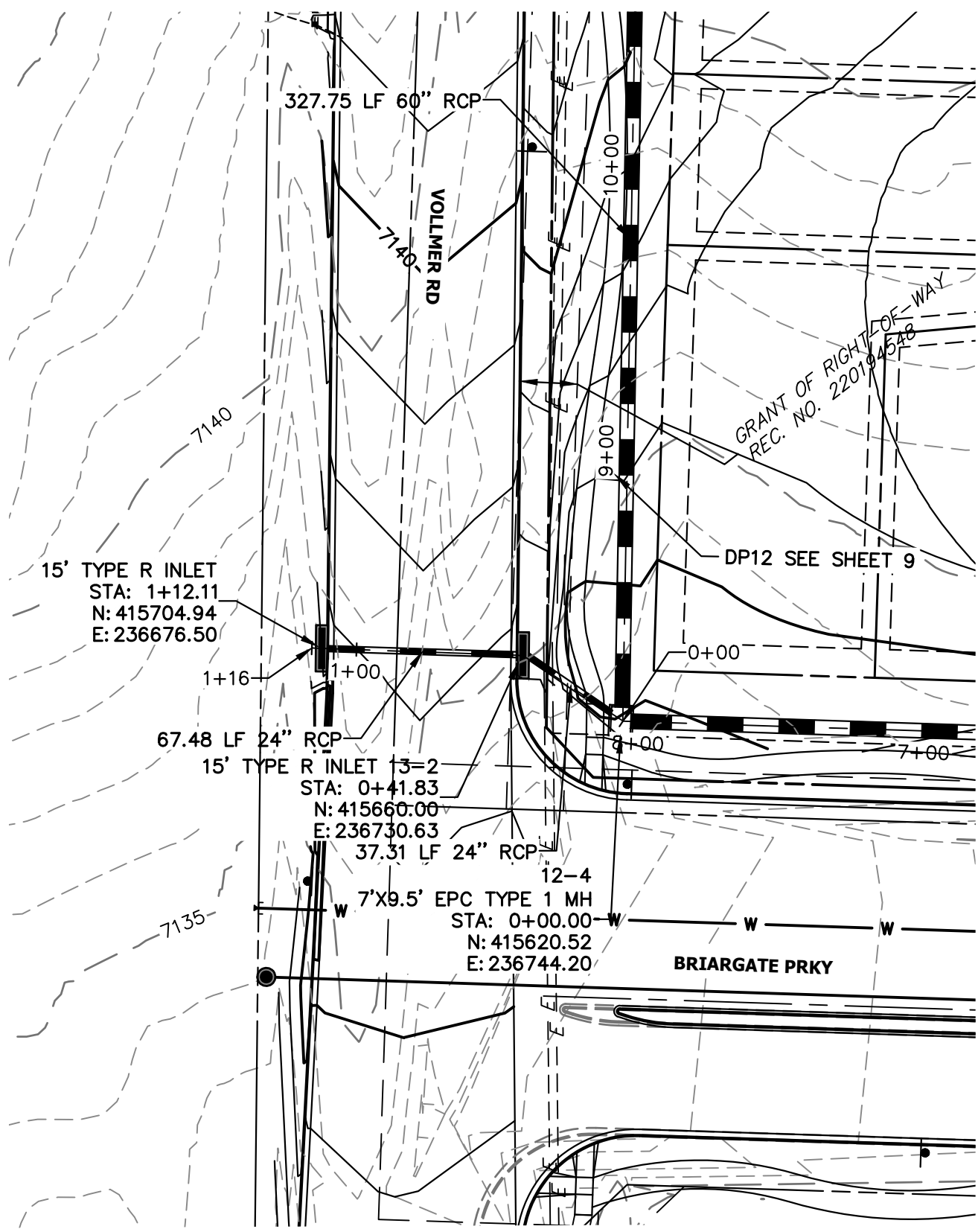
**DP12 PROFILE (3)**  
**STA 21+00.00 TO 26+50.50**



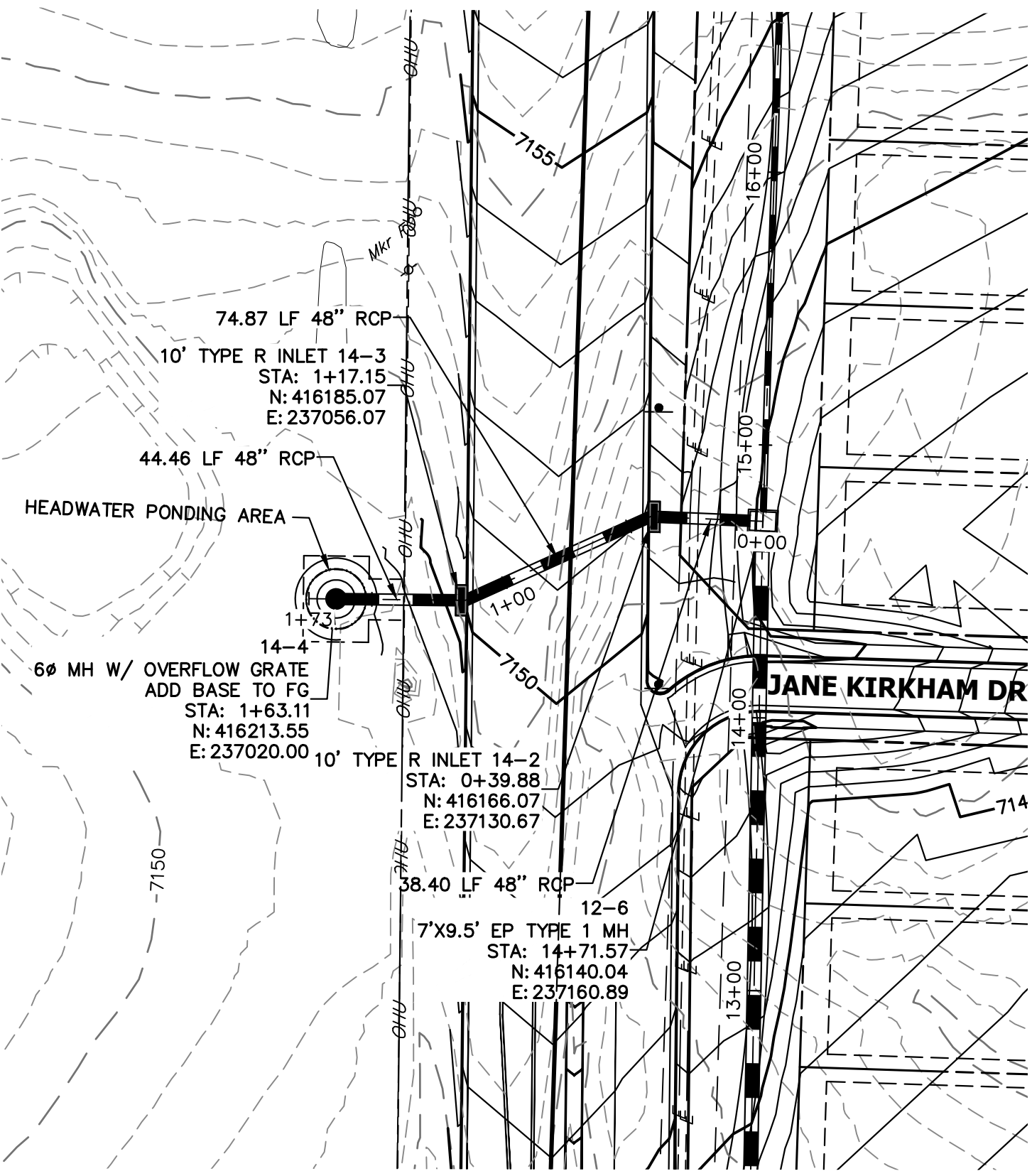
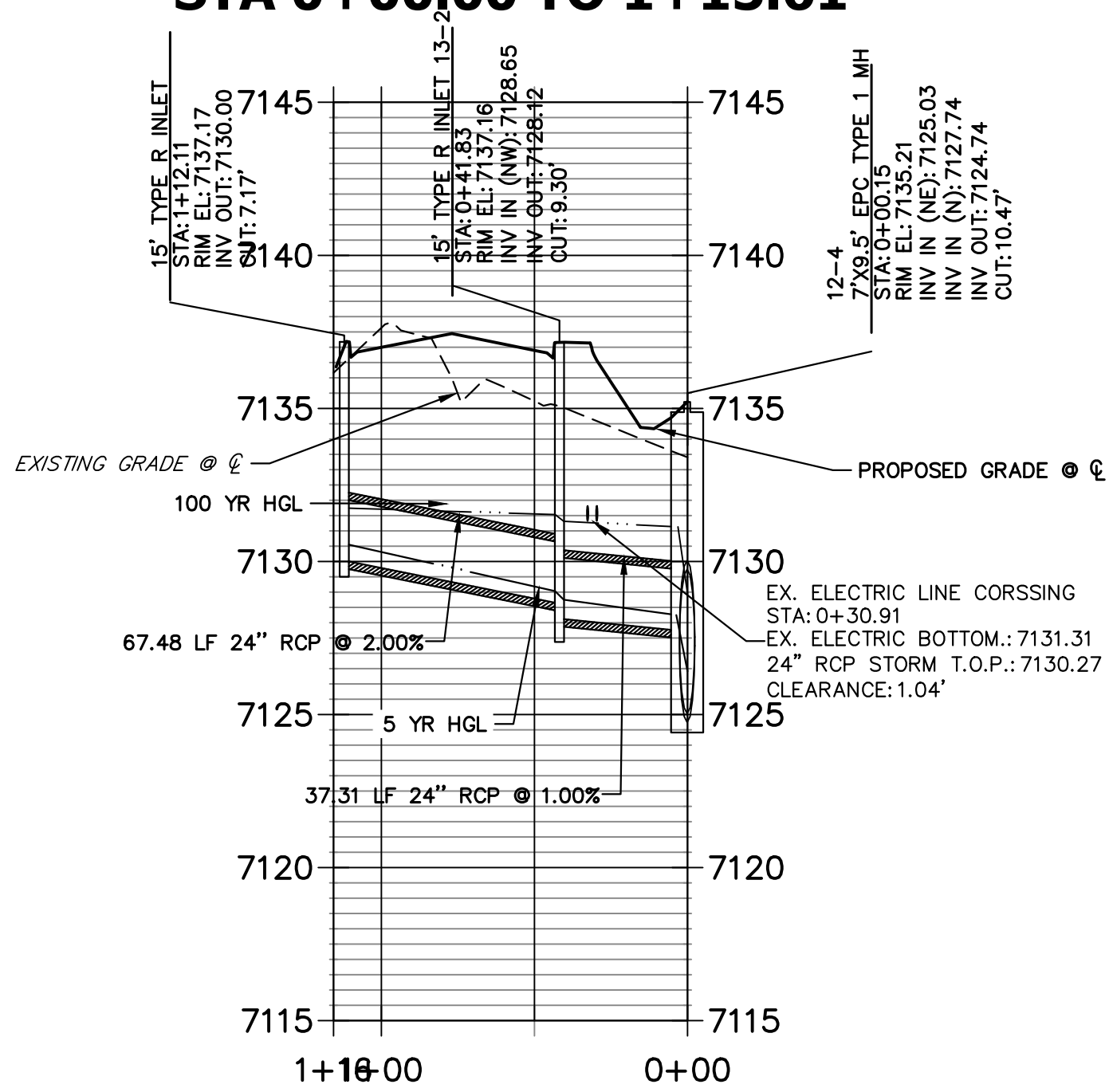
**NOTE**  
WATER TIGHT JOINT REQUIRED WHERE  
HGL IS OUTSIDE OF THE PIPE.



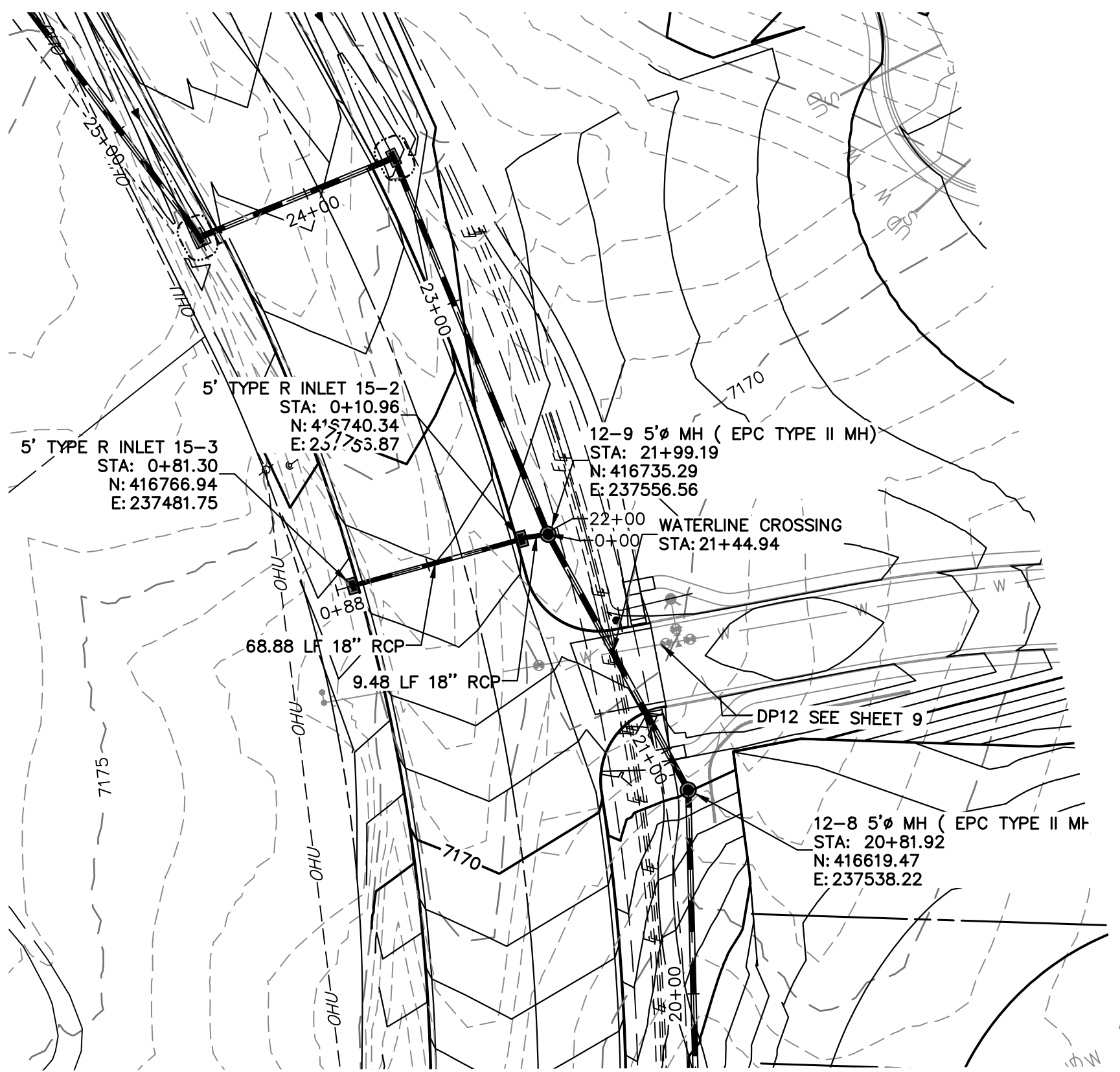
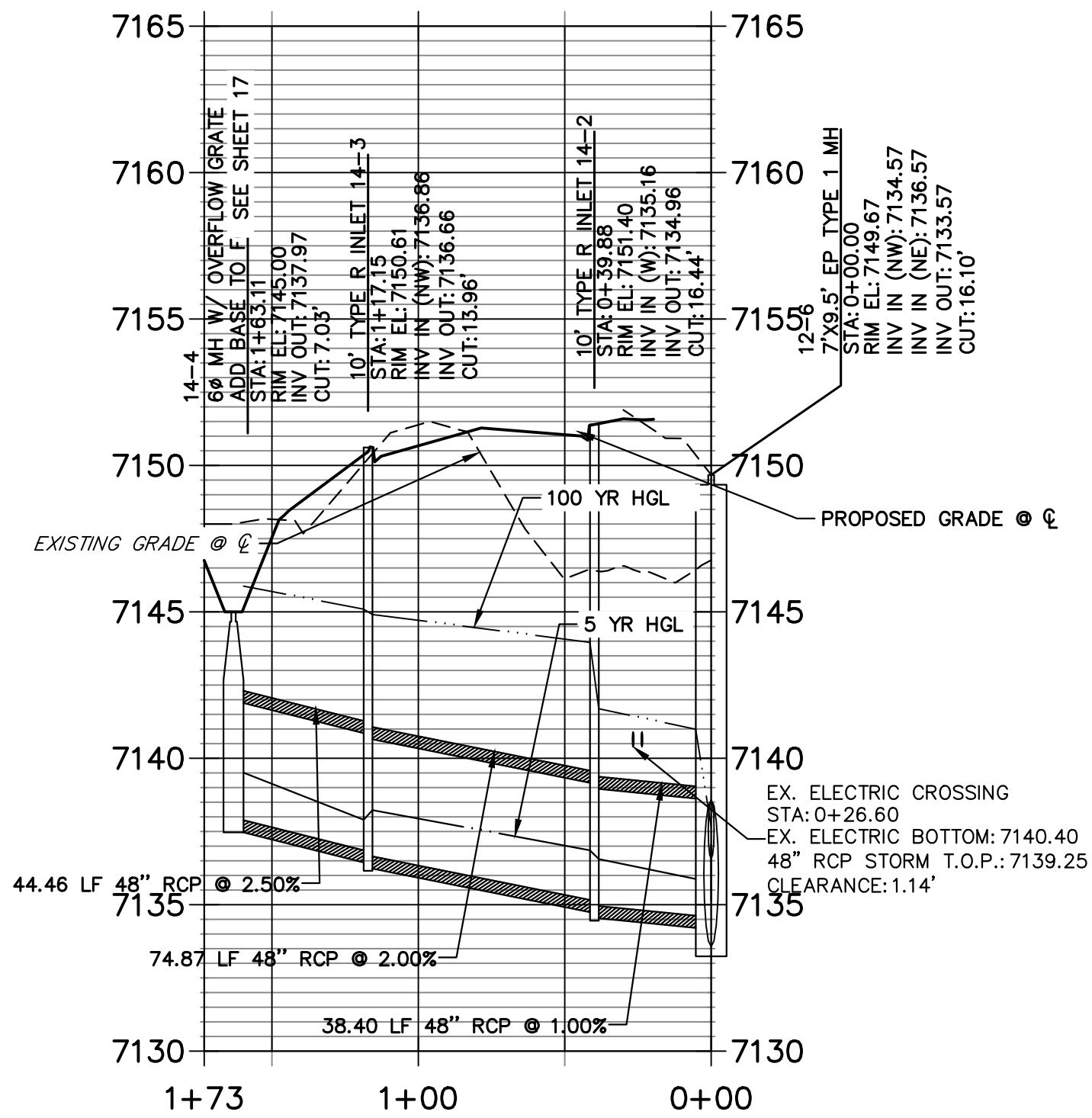
**ENGINEER'S STATEMENT**  
 PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR  
 ENGINEERING  
  
 MIKE A. BRAMLETT, P.E.  
 COLORADO P.E. 32314  
 FOR AND ON BEHALF OF JR ENGINEERING, LOCAL ENGINEERING



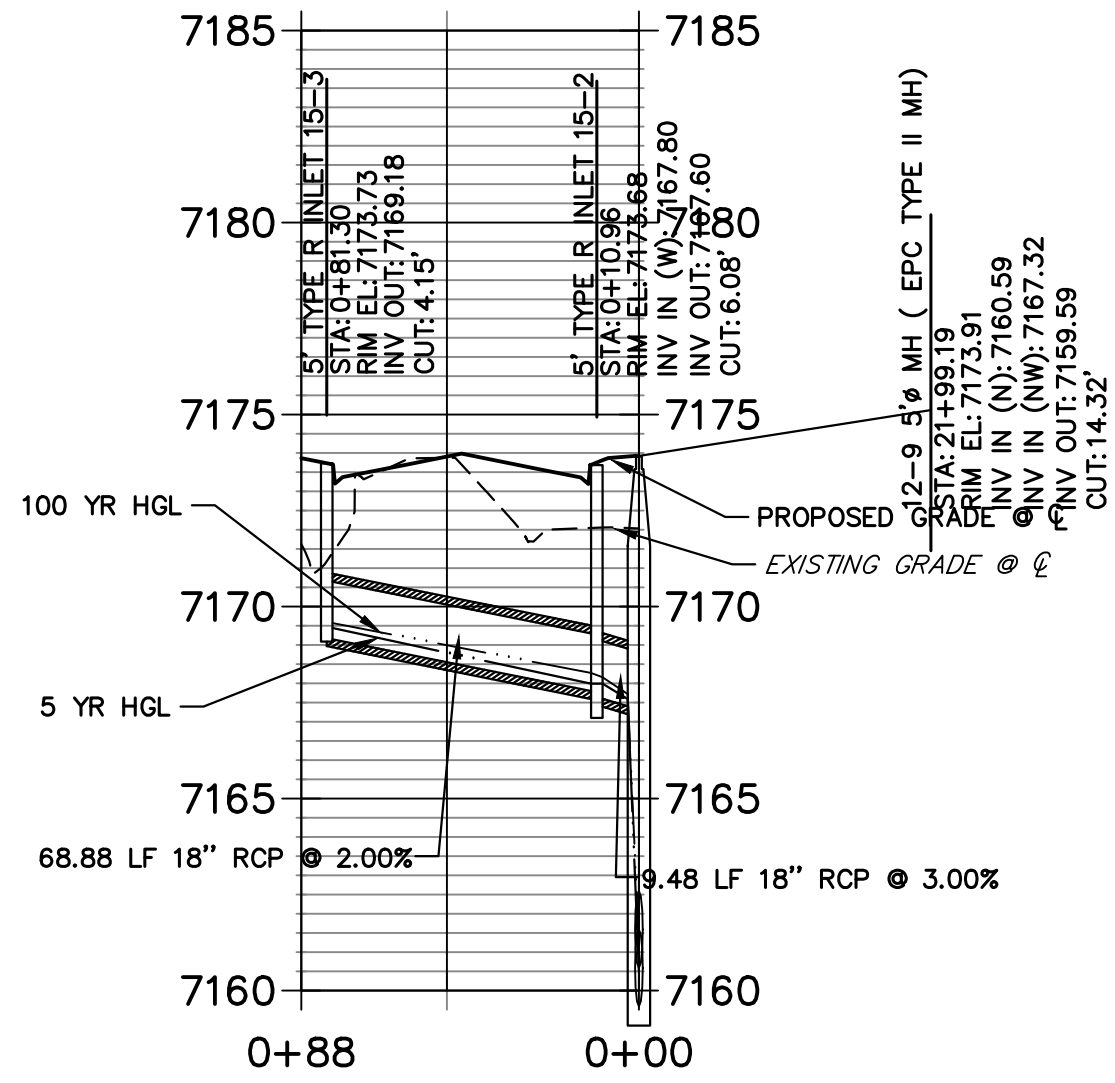
DP13 PROFILE  
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DP14 PROFILE  
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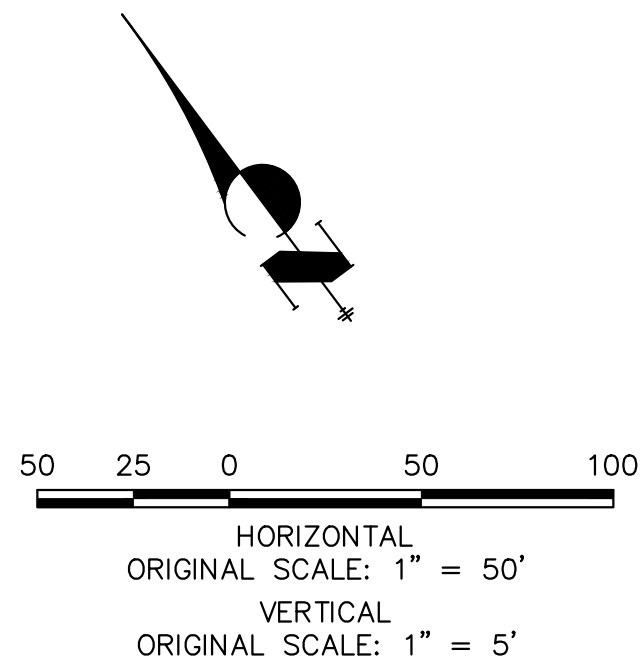


DP15 PROFILE  
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NOTE

WATER TIGHT JOINT REQUIRED WHERE  
HGL IS OUTSIDE OF THE PIPE.

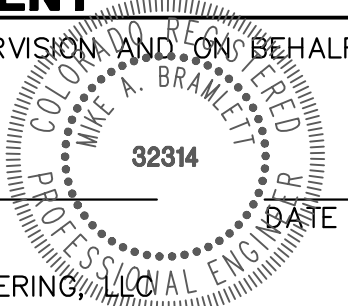


ENGINEER'S STATEMENT

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Mike A. Bramlett  
COLORADO P.E. 32314

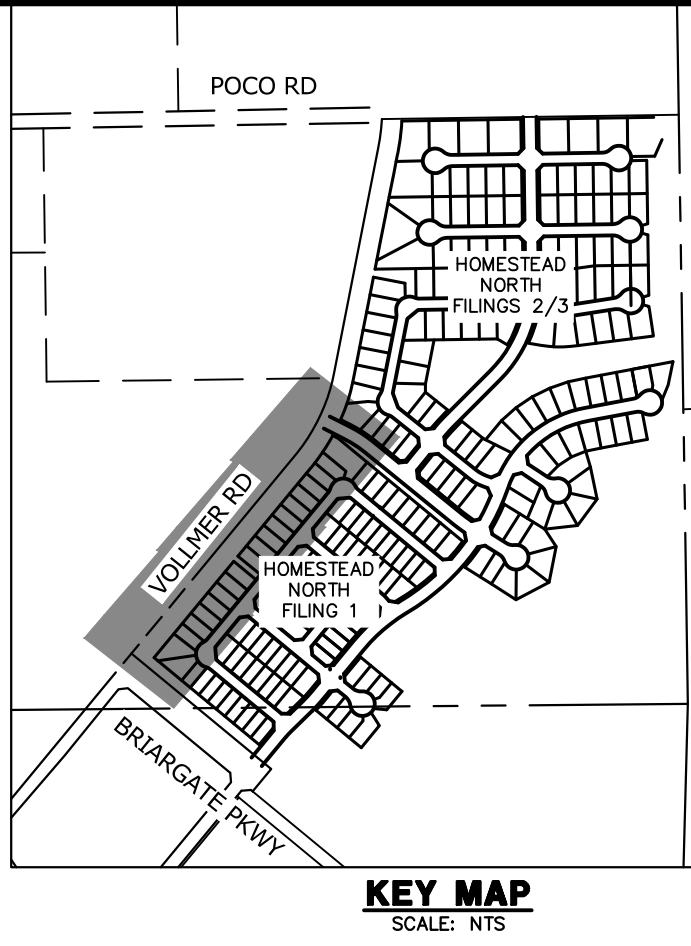
DATE 09/09/22  
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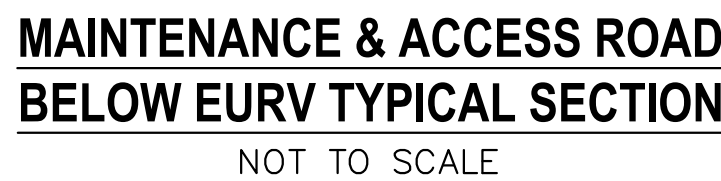
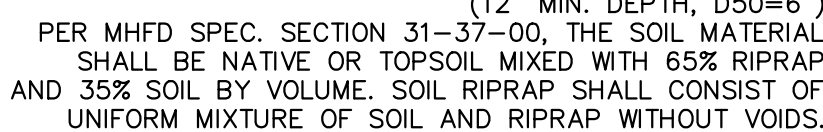
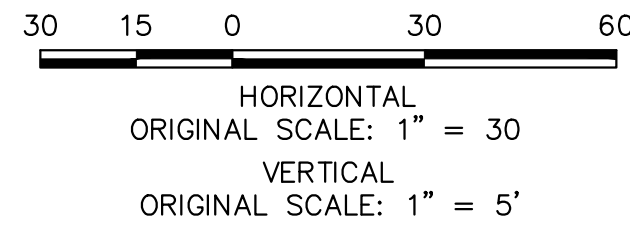


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(719) 471-1742

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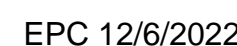




<div>KEY MAP</div> <div>SCALE: NTS</div>			
POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
63	FOREBAY	N: 415170.03 E: 237390.85	7109.69
64	OUTLET STRUCTURE	N: 415056.03 E: 237549.70	7107.05
65	TOE	N: 415254.20 E: 237409.37	7111.99
66	TOE	N: 415258.14 E: 237532.14	7110.00
67	TOP	N: 415233.64 E: 237654.88	7121.59
68	TOP	N: 415173.04 E: 237676.75	7120.13
69	TOP	N: 415203.70 E: 237674.43	7120.81
70	TOP	N: 415351.68 E: 237496.12	7124.60
71	TOP	N: 415353.86 E: 237466.63	7124.72
72	TOP	N: 415346.59 E: 237435.99	7124.85
73	TOP	N: 415325.90 E: 237404.45	7125.00
74	TOP	N: 415284.11 E: 237364.84	7125.28
75	TOP	N: 415258.79 E: 237340.82	7125.45
76	TOP	N: 415191.71 E: 237306.41	7123.38
77	TOP	N: 415162.66 E: 237308.27	7122.14
78	TOP	N: 415122.36 E: 237325.44	7119.98
79	TOP	N: 415070.46 E: 237381.53	7120.19
80	TOP	N: 415008.80 E: 237510.38	7120.14
81	TOP	N: 415001.97 E: 237534.87	7120.00
82	TOP	N: 415013.54 E: 237580.12	7119.71



1. ALL PROPOSED COLOURS ARE TO FINISHED GRADE.
2. EARTHEN CUT AND FILL SLOPES SHALL BE 3:1 MAXIMUM. SLOPES IN EXCESS OF 4:1 AND AREAS OTHERWISE INDICATED BY WITHIN THESE PLANS, SHALL BE COVERED WITH SOIL RETENTION BLANKET OVER 4" MIN. THICKNESS OF TOPSOIL AND SEEDED.
3. IF THE PROJECT IS CONSTRUCTED DURING THE SUMMER WHEN SEEDING IS NOT ALLOWED, APPLY 1-1/2 TONS OF CERTIFIED WEED FREE MULCH PER ACRE MECHANICALLY CRIMPED INTO THE SOIL IN COMBINATION WITH AN ORGANIC MULCH TACKIFIER.
4. PRIOR TO ANY CONSTRUCTION ACTIVITIES THE PROPOSED SILT FENCE SHOWN ON THE PROPOSED EROSION CONTROL PLAN SHALL BE INSTALLED AND THE FENCE BE REMOVED UPON THE LATER OF STABILIZATION OF THE SITE OR COMPLETION OF CONSTRUCTION.
5. TO REDUCE THE POTENTIAL FOR CLOGGING OF DEBRIS GRATES, NO STRAW MULCH SHALL BE USED WITHIN THE VICINITY OR UP-DRY OF A DETENTION BASIN. INSTALL EROSION CONTROL BLANKETS SHALL BE INSTALLED FOR A WIDTH OF AT LEAST 6 FEET ON EITHER SIDE OF CONCRETE LOW-FLOW CHANNELS. THE BLANKETS SHALL COMPLY WITH THE MATERIALS AND INSTALLATION REQUIREMENTS FOR EROSION CONTROL BLANKETS (STRAW COCONUT OR PROPOSED COCONUT). SRI - SPECIFIC CONDITIONS MAY REQUIRE ADDITIONAL BLANKET OR OTHER EROSION CONTROL MEASURES.



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

32314

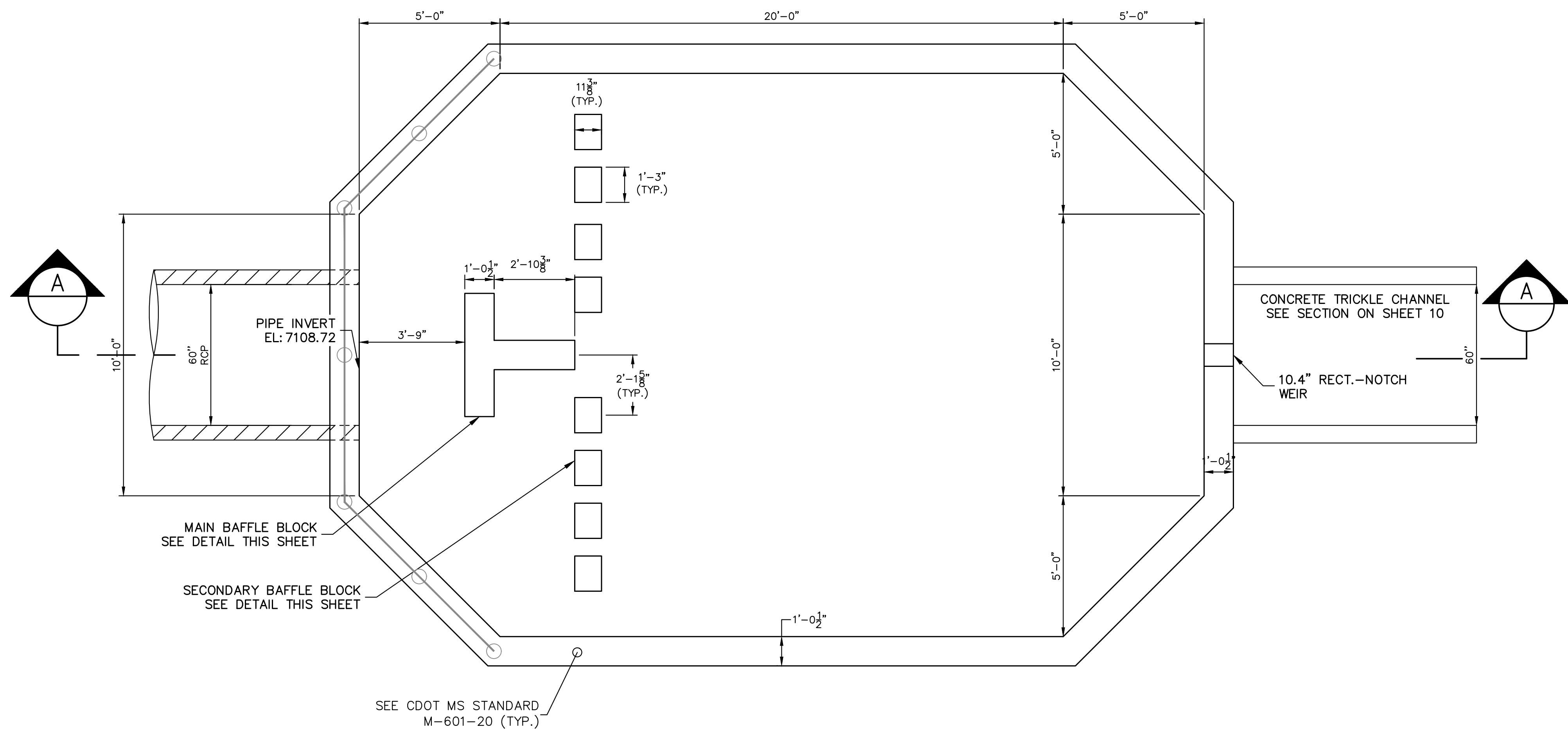
No.	REVISION	BY	DATE
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HOMESTEAD NORTH AT  
STERLING RANCH FILING NO. 1

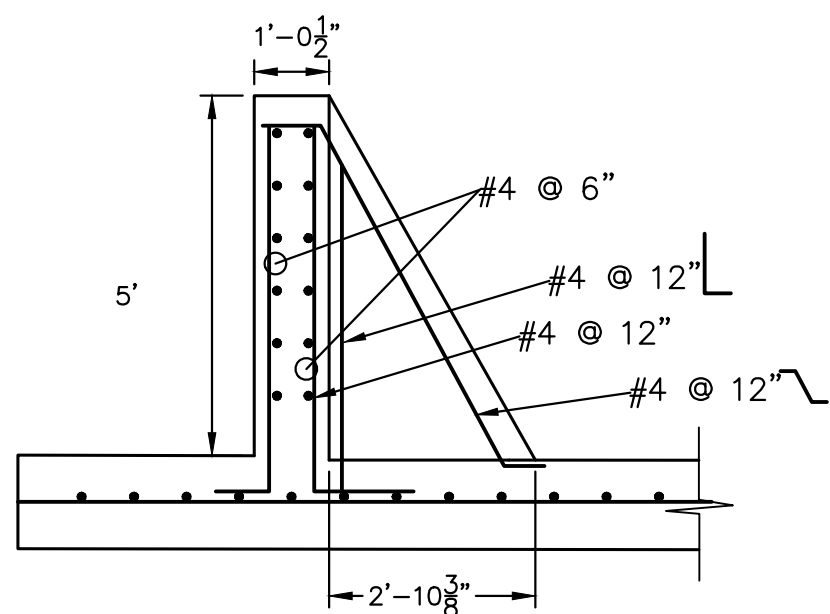
POND GRADING PLAN

SHEET 10 OF 16

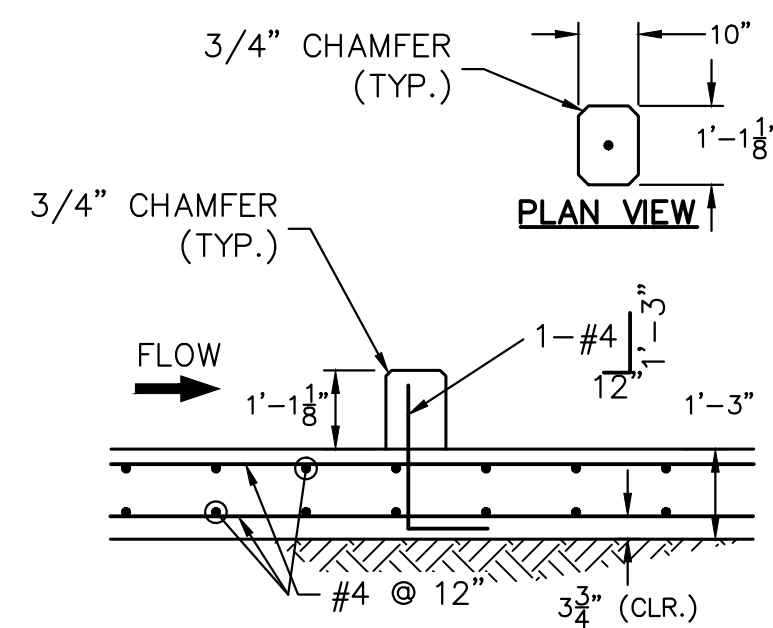
JOB NO. 25188.00



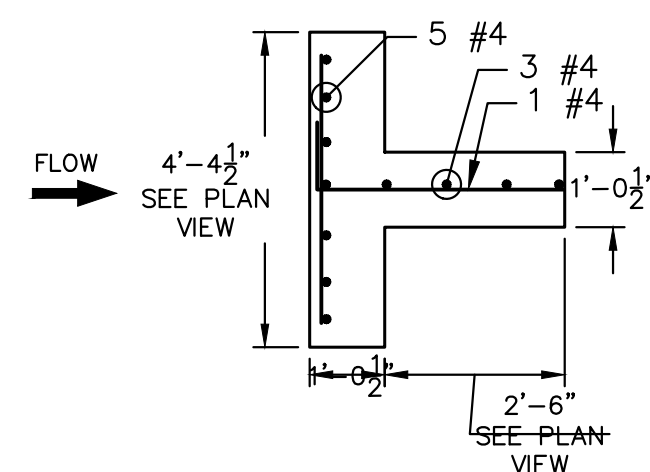
POND C FOREBAY 2  
PLAN VIEW (PRIVATE)  
SCALE: 3/8"=1'



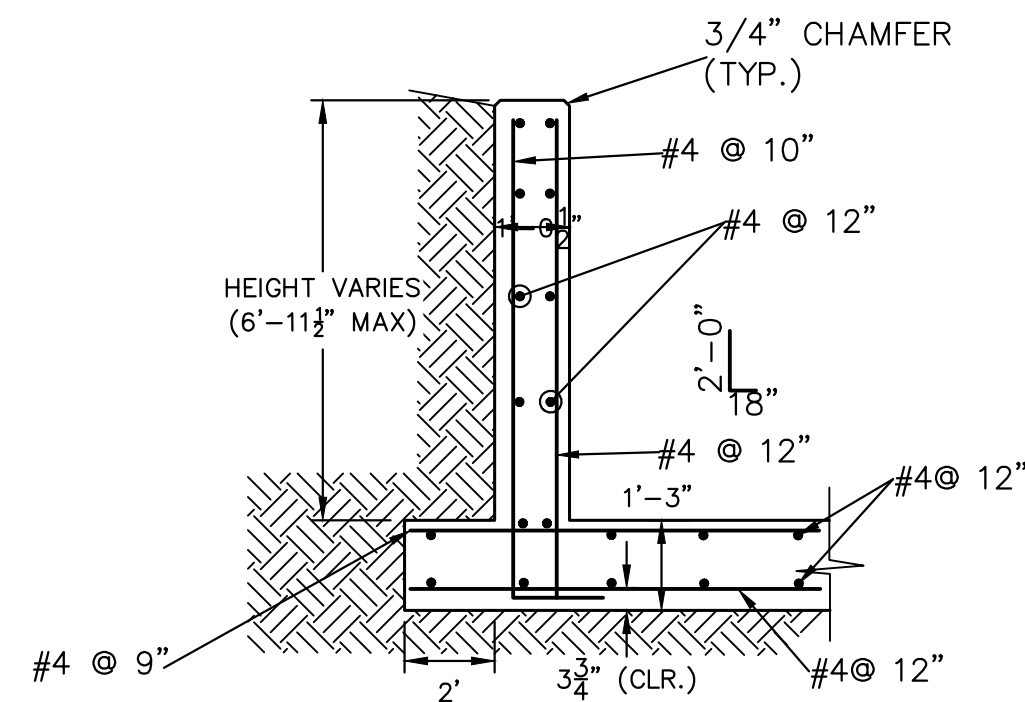
POND C FOREBAY 2 BAFFLE SECTION (PRIVATE)  
SCALE: 3/8"=1'



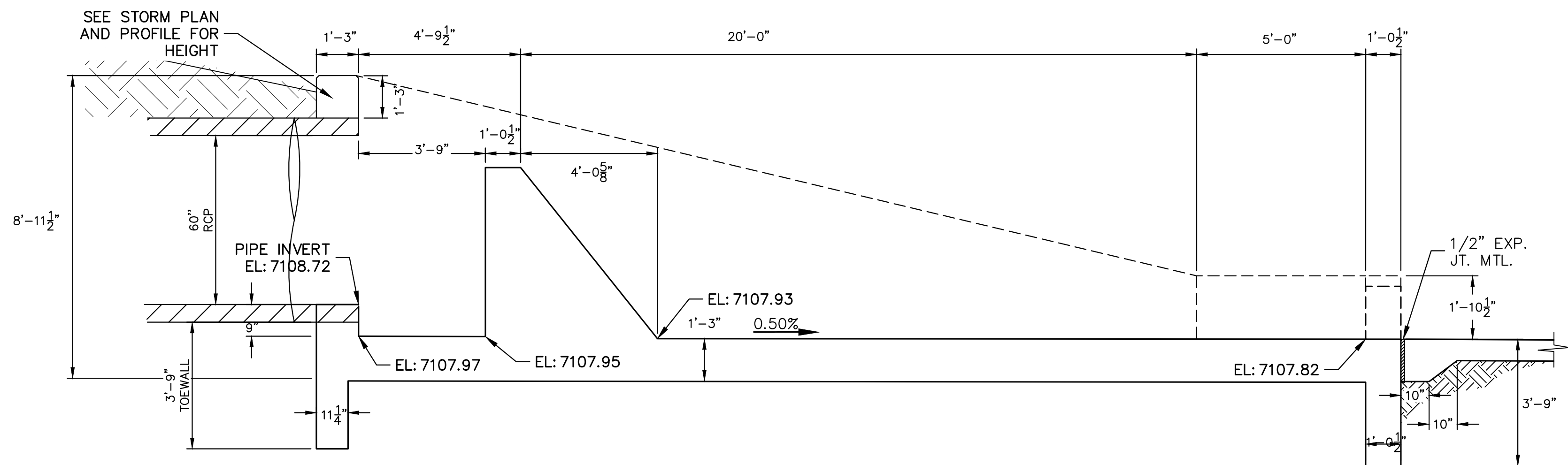
POND C FOREBAY 2 SECONDARY  
BAFFLE BLOCK DETAILS  
SCALE: 3/8"=1'



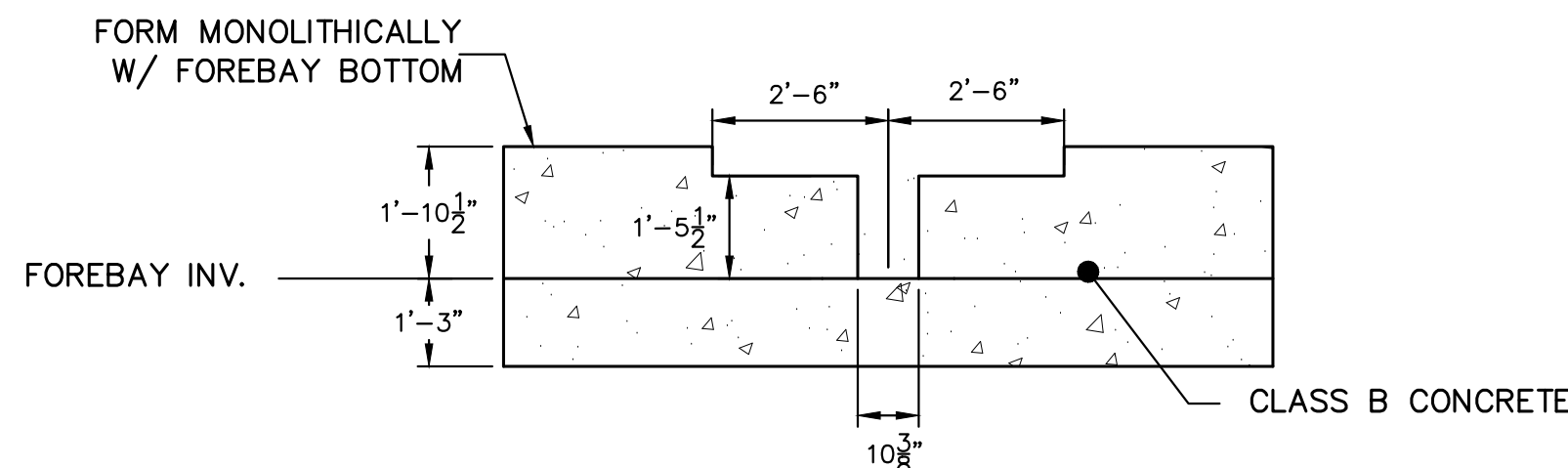
POND C FOREBAY 2 MAIN  
BAFFLE BLOCK PLAN  
SCALE: 3/8"=1'



POND C FOREBAY 2 WINGWALL  
REINFORCING DETAIL  
SCALE: N.T.S.



POND C FOREBAY 2 CROSS SECTION A-A (PRIVATE)  
SCALE: 3/8"=1'



POND C FOREBAY 2  
SECTION AT WEIR  
SCALE: 3/8"=1'



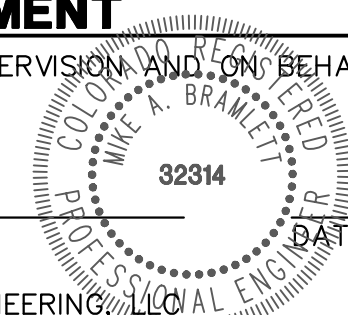
Know what's below.  
Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR  
ENGINEERING

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

FOR AND ON BEHALF OF JR ENGINEERING



09/09/22

HOMESTEAD NORTH AT  
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FOREBAY DETAILS

SHEET 11 OF 16

JOB NO. 25188.00

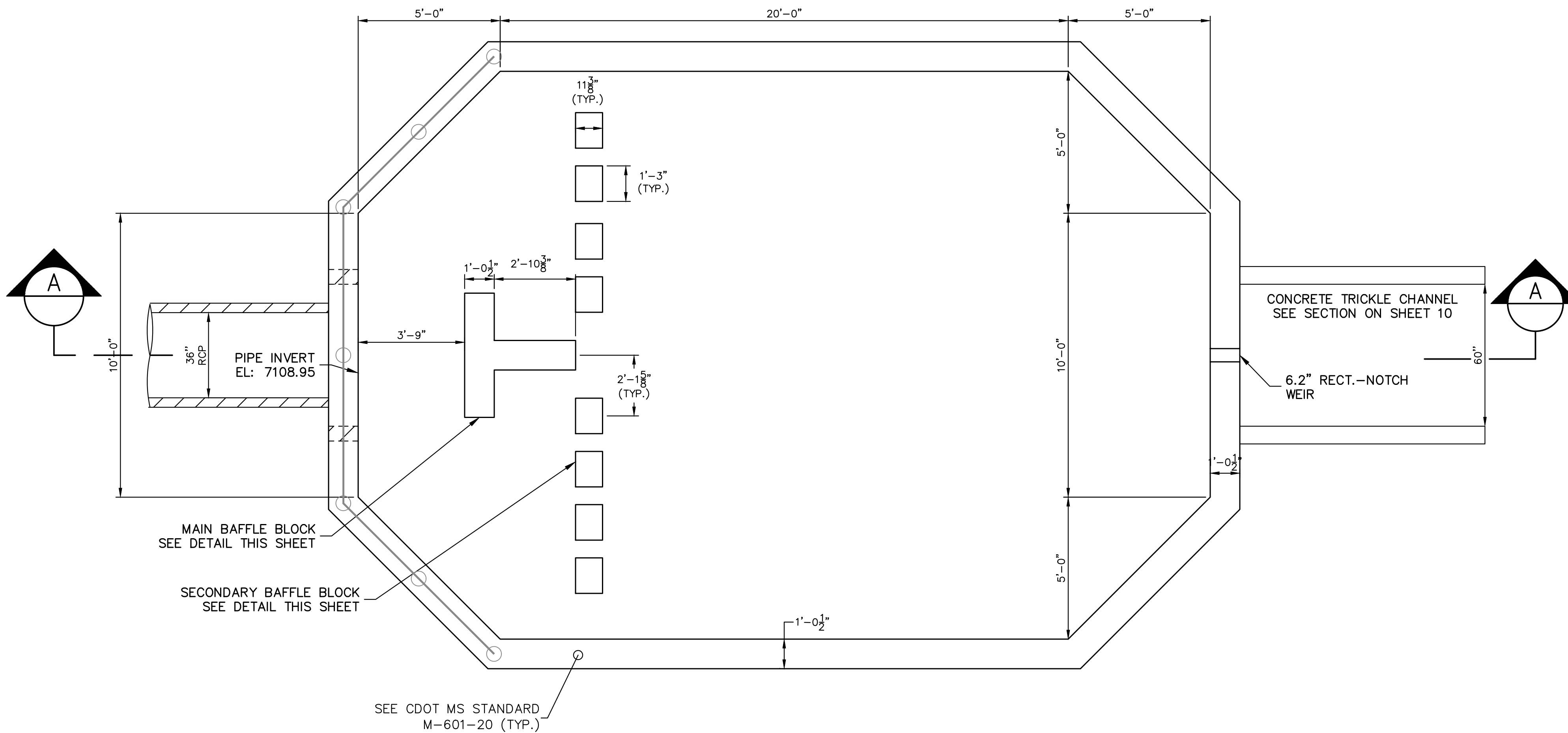
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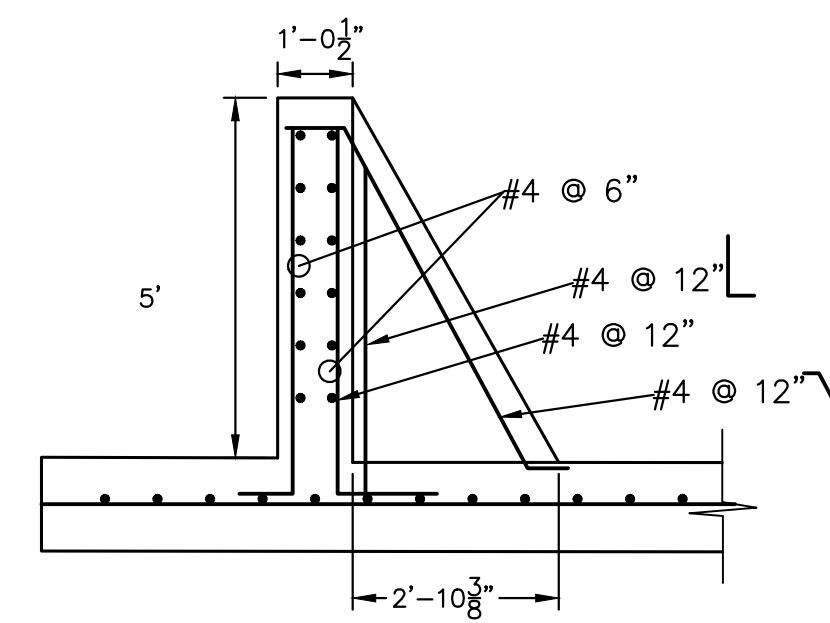
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20 BOULDER CRESCENT  
SUITE 201  
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JAMES F. MORLEY  
(719) 471-1742

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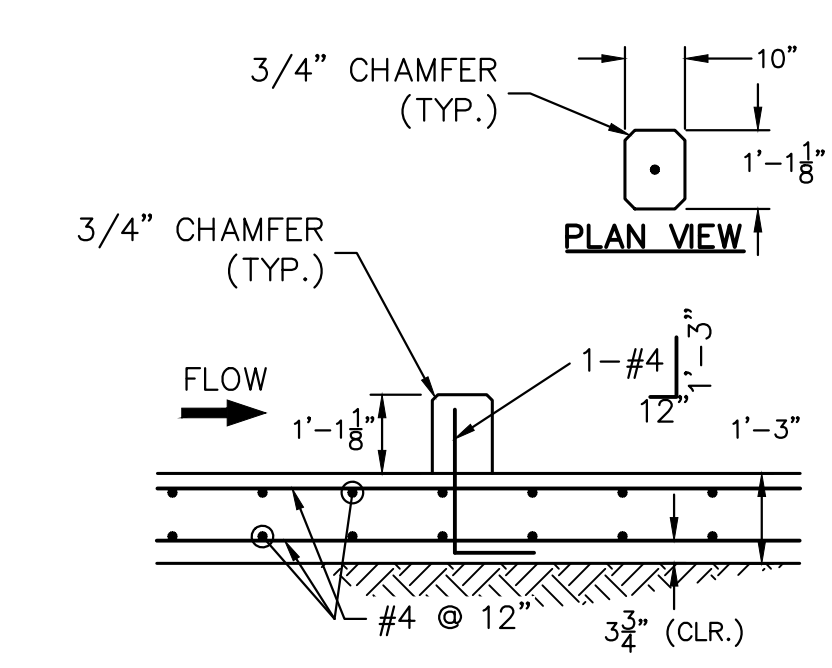
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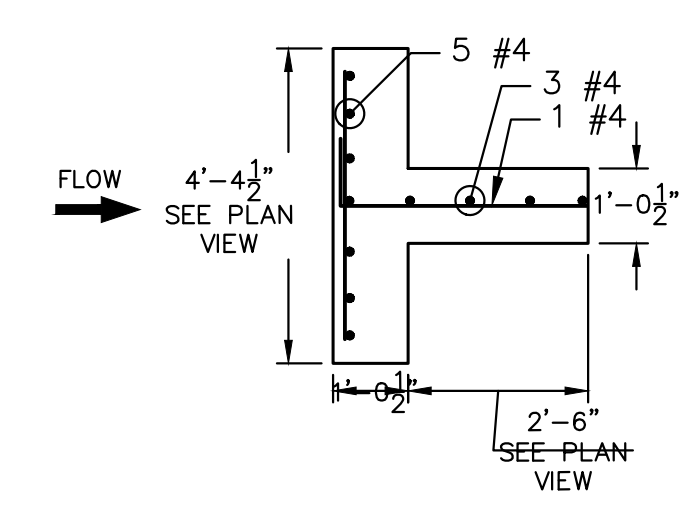
POND C FOREBAY 1  
PLAN VIEW (PRIVATE)  
SCALE: 3/8"=1"



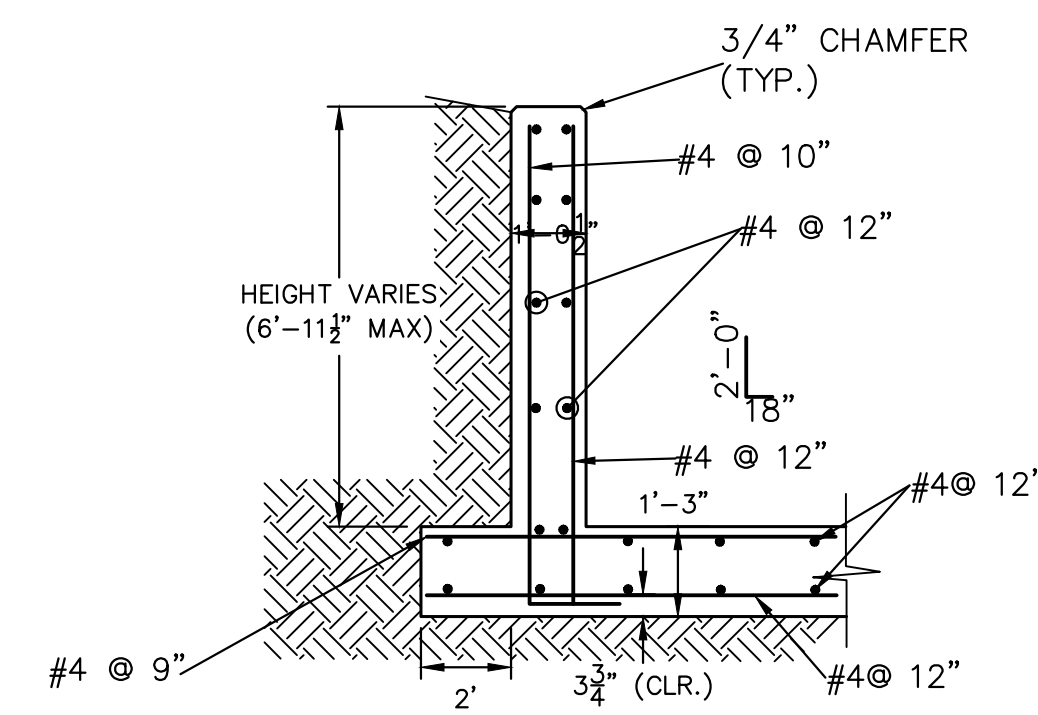
POND C FOREBAY 1 Baffle Section (PRIVATE)  
SCALE: 3/8"=1"



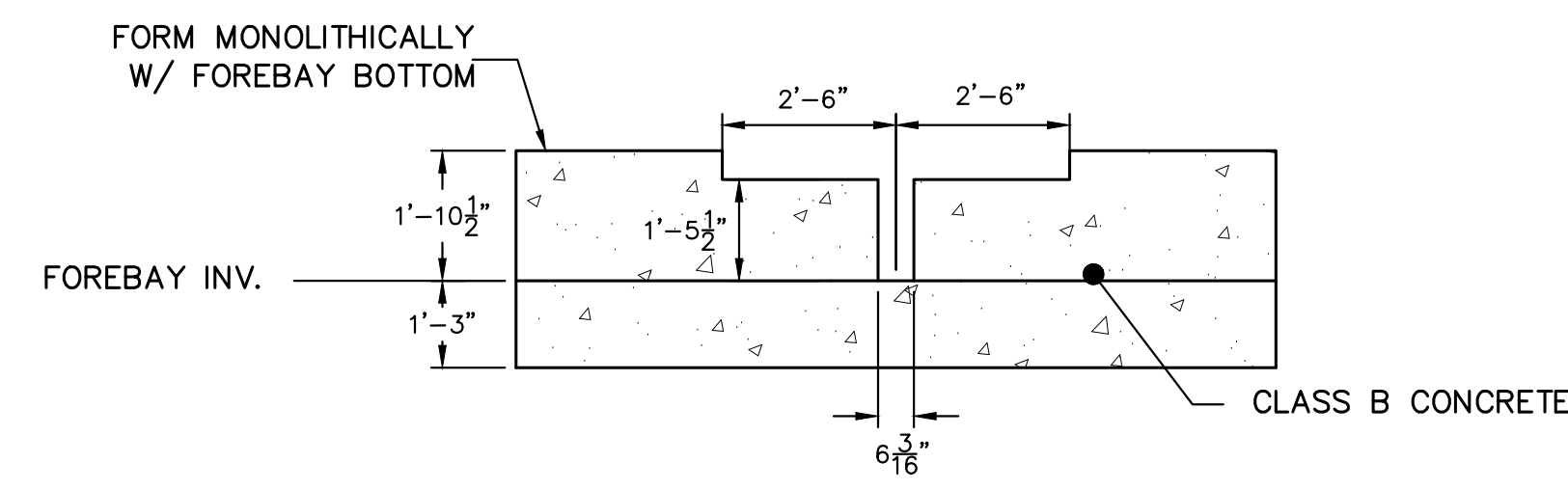
POND C FOREBAY 1 Secondary  
Baffle Block Details  
SCALE: 3/8"=1"



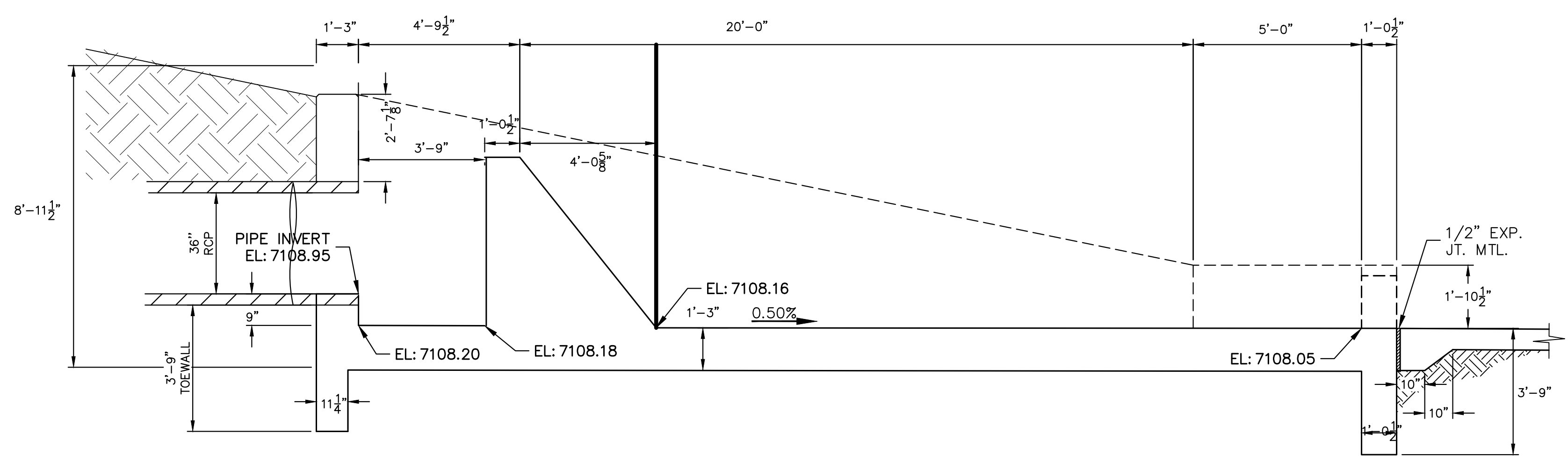
POND C FOREBAY 1 Main  
Baffle Block Plan  
SCALE: 3/8"=1"



POND C FOREBAY 1 Wingwall  
Reinforcing Detail  
SCALE: N.T.S.



POND C FOREBAY 1  
Section at Weir  
SCALE: 3/8"=1"

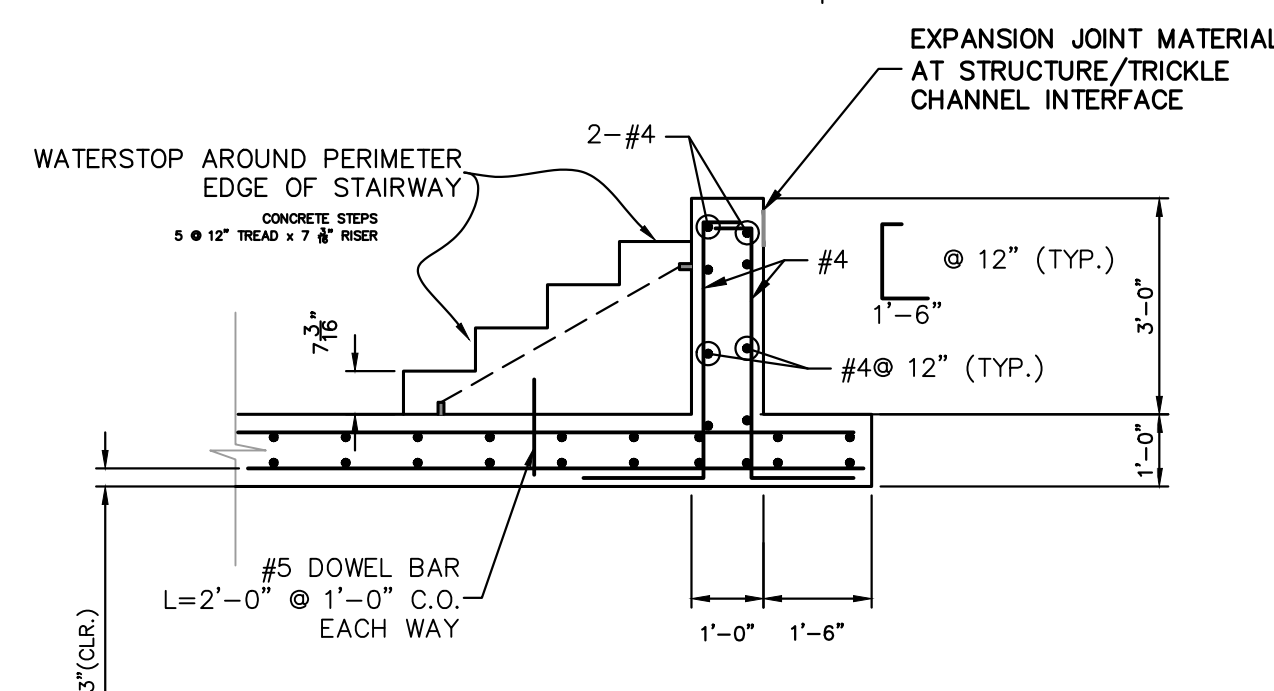
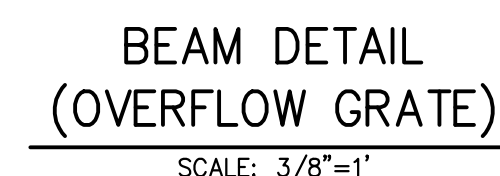


POND C FOREBAY 1 Cross Section A-A (PRIVATE)  
SCALE: 3/8"=1"



**ENGINEER'S STATEMENT**  
PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR  
ENGINEERING  
*Mike A. Bramlett*  
MIKE A. BRAMLETT, P.E.  
COLORADO P.E. 32314  
FOR AND ON BEHALF OF JR ENGINEERING, LLC  
DATE 09/09/22

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SHEET 13 OF 16

JOB NO. 25188.00

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

DATE

AT



\* VARIABLE REFER TO TABLE TWO.

■ INCLUDE #4, 18 IN. BARS (SEE CHANNEL LAYOUT).

REGULAR INLETS

DROP BOX INLETS

T <sup>1</sup>	LENGTH			NO. REQD.		NO. REQD.		L = 5 FT.		L = 10 FT.		L = 15 FT.	
	401	402	410	REGULAR		DROP BOX		CONC. YDS.	STEEL LBS.	CONC. YDS.	STEEL LBS.	CONC. YDS.	STEEL LBS.
				403	407	403	407						
3'-0"	2'-0"	1'-8"		10	7	12	285	5.3	497	7.4	706		
3'-6"	3'-2"	2'-2"		10	7		3.4	305	5.7	528	7.9	747	
4'-0"	3'-8"	2'-8"		12	9		3.7	326	6.0	559	8.4	786	
4'-6"	4'-2"	3'-2"		12	9		3.9	334	6.4	571	8.8	803	
5'-0"	4'-8"	3'-8"		11	8	15	354	8.7	602	9.4	944		
5'-6"	5'-2"	4'-2"	3'-6"	13	15	6	4.4	375	6.0	607	7.4	850	
6'-0"	5'-8"	4'-8"	3'-11"	16	13	6	4.6	382	6.2	616	7.6	860	
6'-6"	6'-2"	5'-2"	4'-5"	18	16	6	4.8	402	6.4	633	7.8	887	
7'-0"	6'-8"	5'-8"	4'-11"	20	18	10	5.0	423	6.6	654	8.0	897	
7'-6"	7'-2"	6'-2"	5'-5"	20	17	20	5.0	430	6.6	664	8.3	907	
8'-0"	7'-8"	6'-8"	5'-11"	22	19	22	5.5	451	7.1	684	8.5	927	
8'-6"	8'-2"	7'-2"	6'-5"	24	23	14	6.0	473	7.3	723	9.0	954	
9'-0"	8'-8"	7'-8"	6'-11"	24	21	24	14	6.0	479	7.6	710	9.0	954
9'-6"	9'-2"	8'-2"	7'-5"	26	23	26	16	6.2	499	7.8	732	9.2	974
10'-0"	9'-8"	8'-8"	7'-11"	28	25	27	18	6.4	520	8.0	749	9.4	992
10'-6"	10'-2"	9'-2"	8'-5"	30	27	30	19	6.7	527	8.3	769	9.7	1022
11'-0"	10'-8"	9'-8"	8'-11"	30	27	30	20	6.9	547	8.5	779	9.9	1062

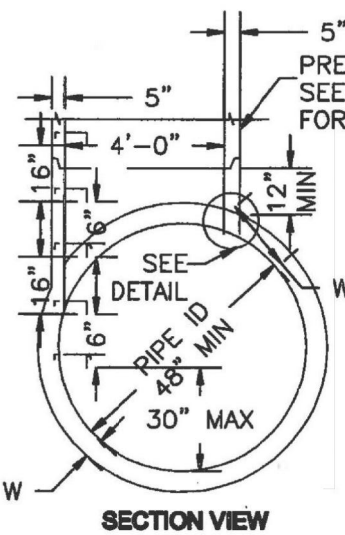
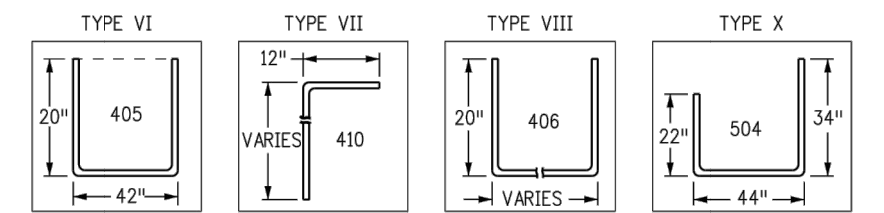
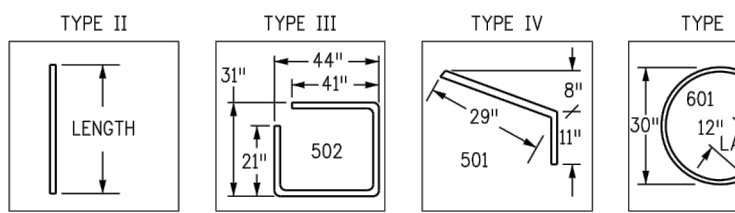
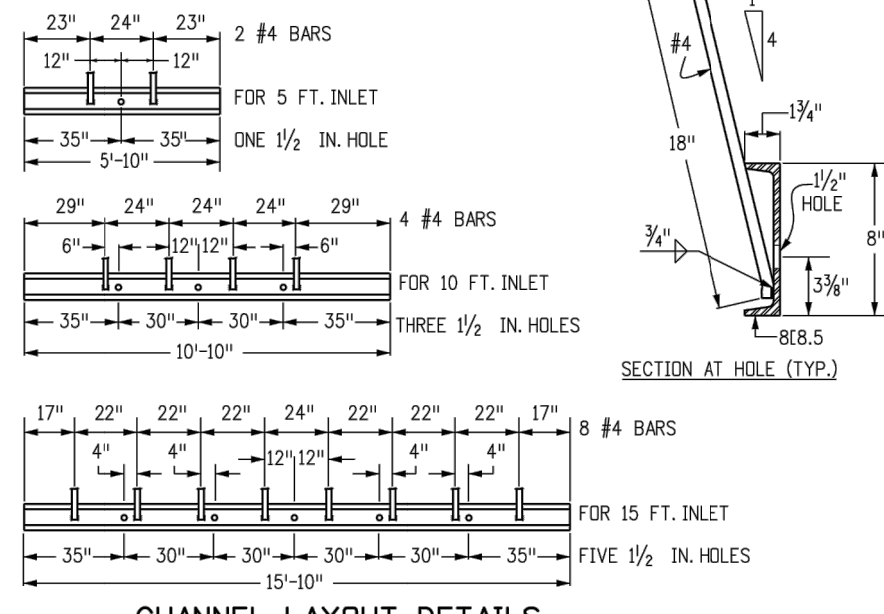
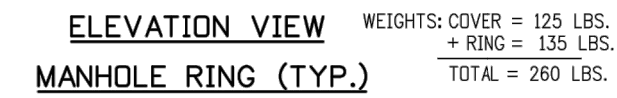
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Creation Date:	07/31/19	
Designer Initials:	J&K	
Last Modification Date:	07/31/19	
Detailer Initials:	LTA	
CAD Ver.:	MicroStation V8	Scale: Not to Scale Units: English

Sheet Revisions	
Date:	Comments

**Colorado Department of Transportation**  
 2829 West Howard Place  
 CDDT HQ, 3rd Floor  
 Denver, CO 80204  
 Phone: 303-757-9021 FAX: 303-757-9868  
**Project Development Branch** **JBK**

Issued by the Project Development Branch: July 31, 2019

STANDARD PLAN NO.  
M-604-12  
Standard Sheet No. 2 of 2  
Project Sheet Number:



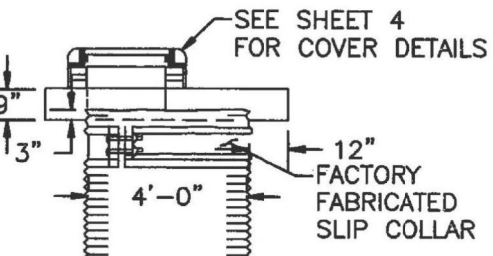
NOTE

TYPE III MANHOLES SHALL BE USED WHEN APPROPRIATE AND TYPICALLY WHEN THE FOLLOWING CONDITIONS ARE MET:

- A. PIPE IS 48" OR LARGER INSIDE DIAMETER.
- B. NOT CHANGE IN PIPE SIZE
- C. NO CHANGE IN PIPE MATERIAL
- D. NO CHANGE IN HORIZONTAL ALIGNMENT
- E. SLOPE IS FLAT AND CONTINUOUS

TYPE II MANHOLES SHALL BE FABRICATED BY THE MANUFACTURER/SUPPLIER AND SHALL BE LIMITED TO STEEP SINGLE UNIT FIELD FABRICATION SHALL NOT BE PERMITTED.

3. EITHER LADDER OR STEPS SHALL BE INSTALLED. LOWEST STEP SHALL BE A MAXIMUM OF 30" ABOVE THE INVERT OF THE PIPE.



SCALE: NOT TO SCALE

2" STD LETTERING  
FLUSH WITH TOP

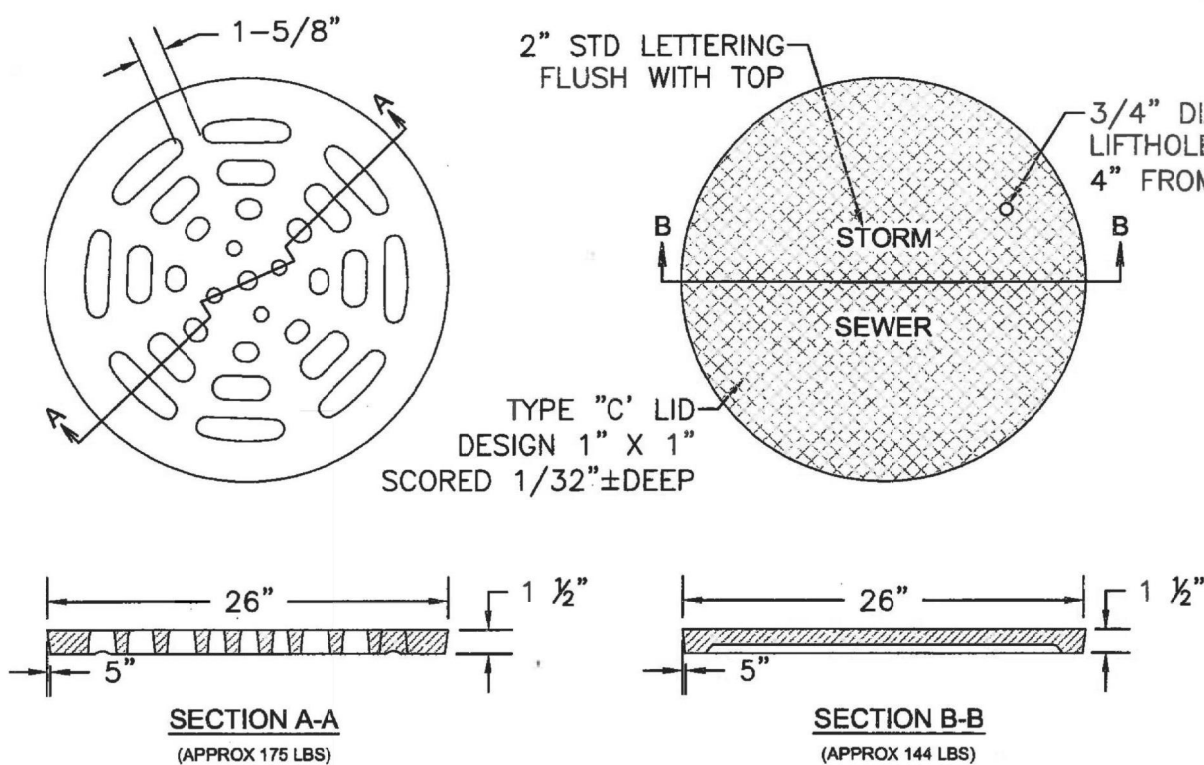
3/4" DIA  
LIFTHOLE  
4" FROM EDGE

STORM

SEWER

B B

TYPE "C" LID  
SIGN 1" X 1"  
1/32" ± DEEP



SCALE: NOT TO SCALE

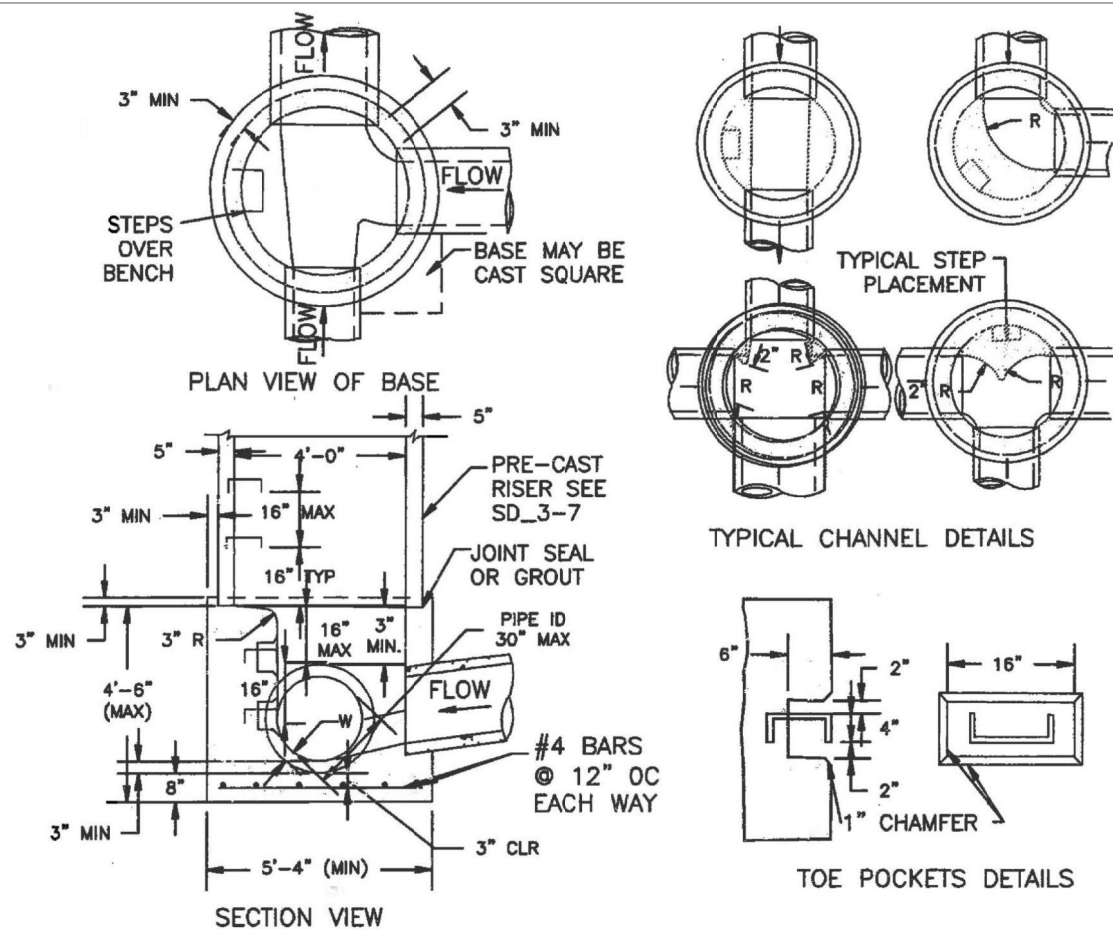
[illegible]

SCALE: NOT TO SCALE

PIPE ID	BW
48" AND SMALLER	6'-4"
54"	6'-10"
60" AND LARGER	OD + 16"

NOTES

1. TYPE I MANHOLE SHALL BE USED WHEN APPROPRIATE AND TYPICALLY FOR PIPE SIZES LARGER THAN 30 INCHES I.D..
2. VIEW AND DETAILS SHOWN ARE TYPICAL FOR STRAIGHT THROUGH DESIGN ONLY. DESIGN ENGINEER SHALL DETERMINE MANHOLE BASE CONFIGURATION AND DIMENSIONS FOR PARTICULAR PIPE SIZES AND ALIGNMENT.
3. EITHER LADDER OR STEPS SHALL BE INSTALLED WHEN MANHOLE DEPTH EXCEEDS 30". LOWEST STEP SHALL BE AT A MAXIMUM OF 18" ABOVE THE FLOOR.
4. FLOOR OF THE MANHOLE SHALL BE TROWELED TO A SMOOTH, HARD SURFACE AND SHALL SLOPE TOWARDS THE OUTLET (8:1 MAX), 1/4" PER FT. MIN). FLOOR SHALL BE SHAPED AND FINISHED SEE SD 3-2 FOR TYPICAL CHANNEL DETAILS.



NOTES

1. TYPE II MANHOLES SHALL BE USED WHEN APPROPRIATE AND TYPICALLY WHEN THE PIPE SIZES ARE 30" OR LESS INSIDE DIAMETER.
2. VIEW AND DETAILS ARE TYPICAL. DESIGN ENGINEER SHALL DETERMINE MANHOLE BASE CONFIGURATION AND DIMENSIONS FOR PARTICULAR PIPE SIZES AND ALIGNMENT.
3. EITHER LADDER OF STEPS SHALL BE INSTALLED WHEN MANHOLE DEPTH EXCEEDS 30". STEPS IN BASE SHALL BE INSTALLED IN "TOE POCKETS" (SEE DETAIL THIS SHEET). LOWEST STEP SHALL BE A MAXIMUM OF 16" ABOVE THE FLOOR.
4. PIPES SHALL BE TRIMMED TO FINAL SHAPE AND SET BEFORE MANHOLE IS POURED.
5. BENCH SHALL BE SLOPED TOWARD CENTER OF MANHOLE BASE (4:1 MAX., ½" PER FOOT. MIN.).
6. FLOOR OF MANHOLE SHALL BE TROWELED TO A SMOOTH, HARD SURFACE AND SHALL SLOPE TOWARDS THE OUTLET (8:1, ½" PER FT. MIN.). FLOOR SHALL BE SHAPED AND CHANNELED; SEE DETAILS THIS SHEET.

SCALE: NOT TO SCALE

The image contains two technical drawings of manhole bases, labeled 'ECCENTRIC FLAT TOP' and 'ECCENTRIC CONE TOP'.

**ECCENTRIC FLAT TOP:** This drawing shows a cross-section of a manhole base. At the top, there is a 'MANHOLE FRAME AND LID (SD\_3-5)' with a thickness of '8" MIN'. Below this is a '24" x 24" x 4'-0" ECCENTRIC FLAT TOP' section. The base of this section is '5" thick'. A 'PORT SEAL / OR GROUT' is indicated at the bottom of the frame. The overall 'HEIGHT OF RISER' is shown as the distance from the bottom of the frame to the top of the base.

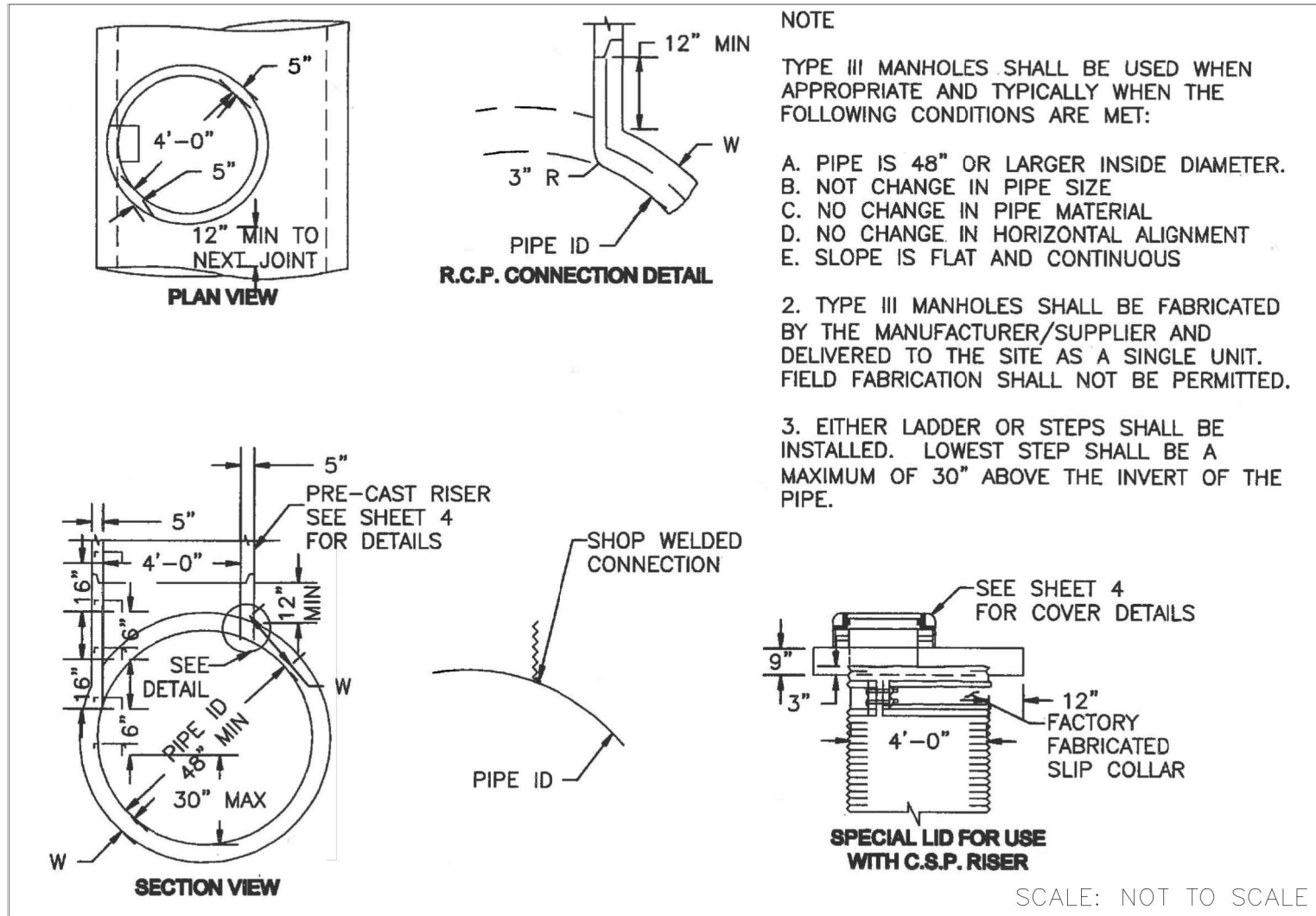
**ECCENTRIC CONE TOP:** This drawing shows a cross-section of a manhole base with a conical top. It features a 'MORTARED 2" PRECAST GRADE RING (2" MIN. 6" MAX)' at the top. Below this is a '24" x 24" x 4'-0" ECCENTRIC CONE TOP' section. The base of this section is '5" thick'. The overall height of the riser is '14" MIN'. The base is labeled '12" MIN THRU 60" MAX RINGS'. A note on the right side states: 'TYPE I, II, III MANHOLE BASES SEE SD\_3-1, SD\_3-2 AND SD\_3-3'.

NOTES

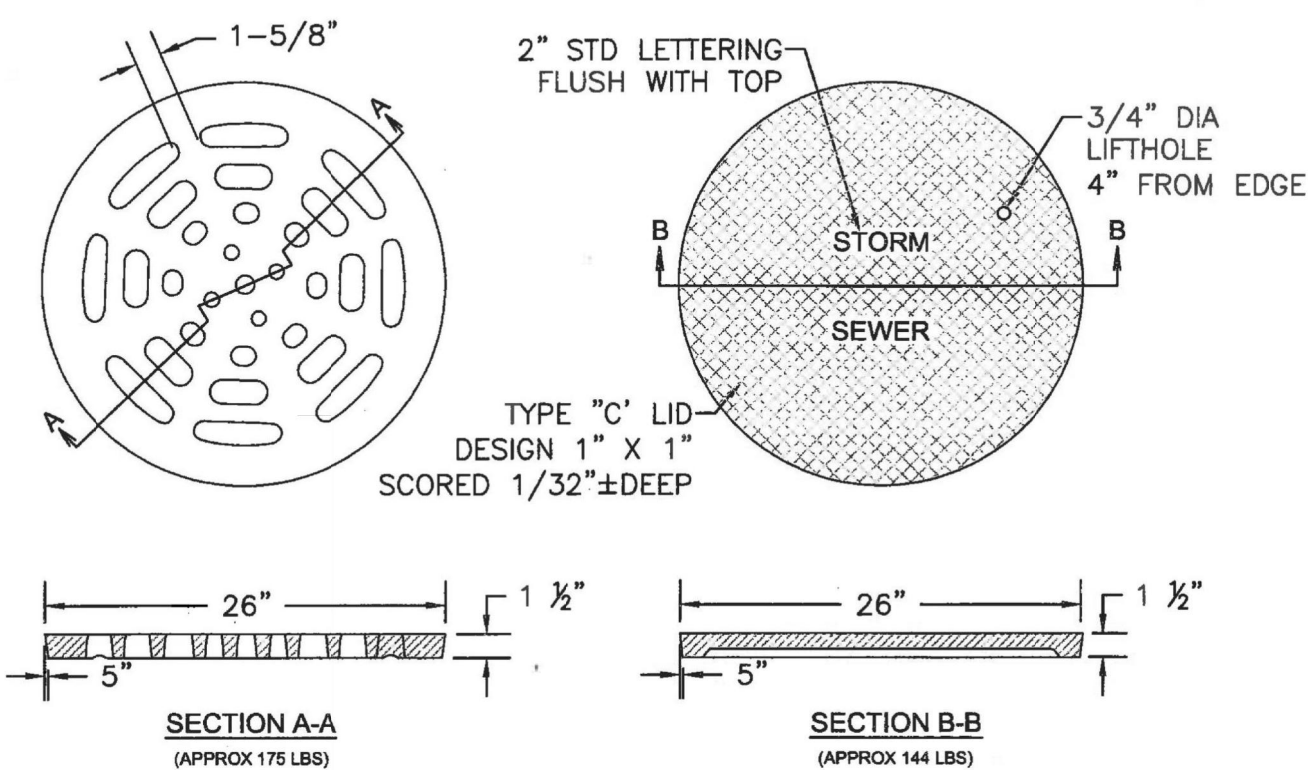
1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD AND SUPPLEMENTAL SPECIFICATIONS APPLICABLE TO THE PROJECT.
2. PRECAST RISERS SHALL CONFORM TO ASTM C478.
3. STEPS SHALL BE INSTALLED WHEN MANHOLE DEPTH EXCEEDS 30". STEPS SHALL BE CAST IRON OR EXTRUDED ALUMINUM, 1000 LB CAPACITY, 12" WIDE WITH NON-SKID GROOVES AND DROP FRONT ON SAFETY NOSES, IN ACCORDANCE WITH APPROVED OSHA REQUIREMENTS.

SCALE: NOT TO SCALE

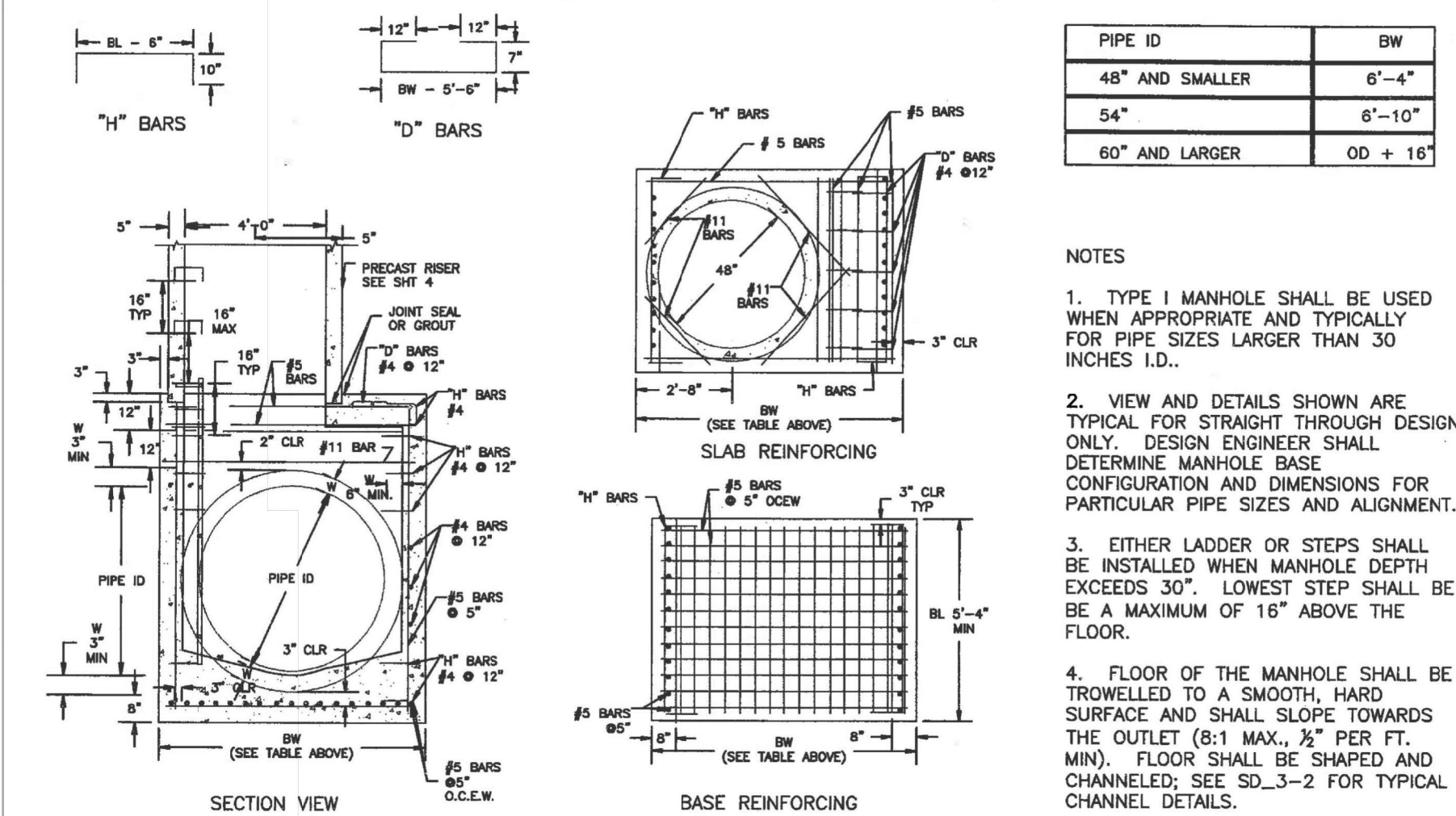
SHEET	15		OF	16	HOMESTEAD NORTH AT STERLING RANCH FILING NO. 1					H-SCALE	N/A	No.	REVISION	BY	DATE	
JOB NO.	25188.00				DETAIL SHEETS					V-SCALE	N/A					
										DATE	10/24/22					
										DESIGNED BY	RAB					
										DRAWN BY	RAB					
										CHECKED BY						



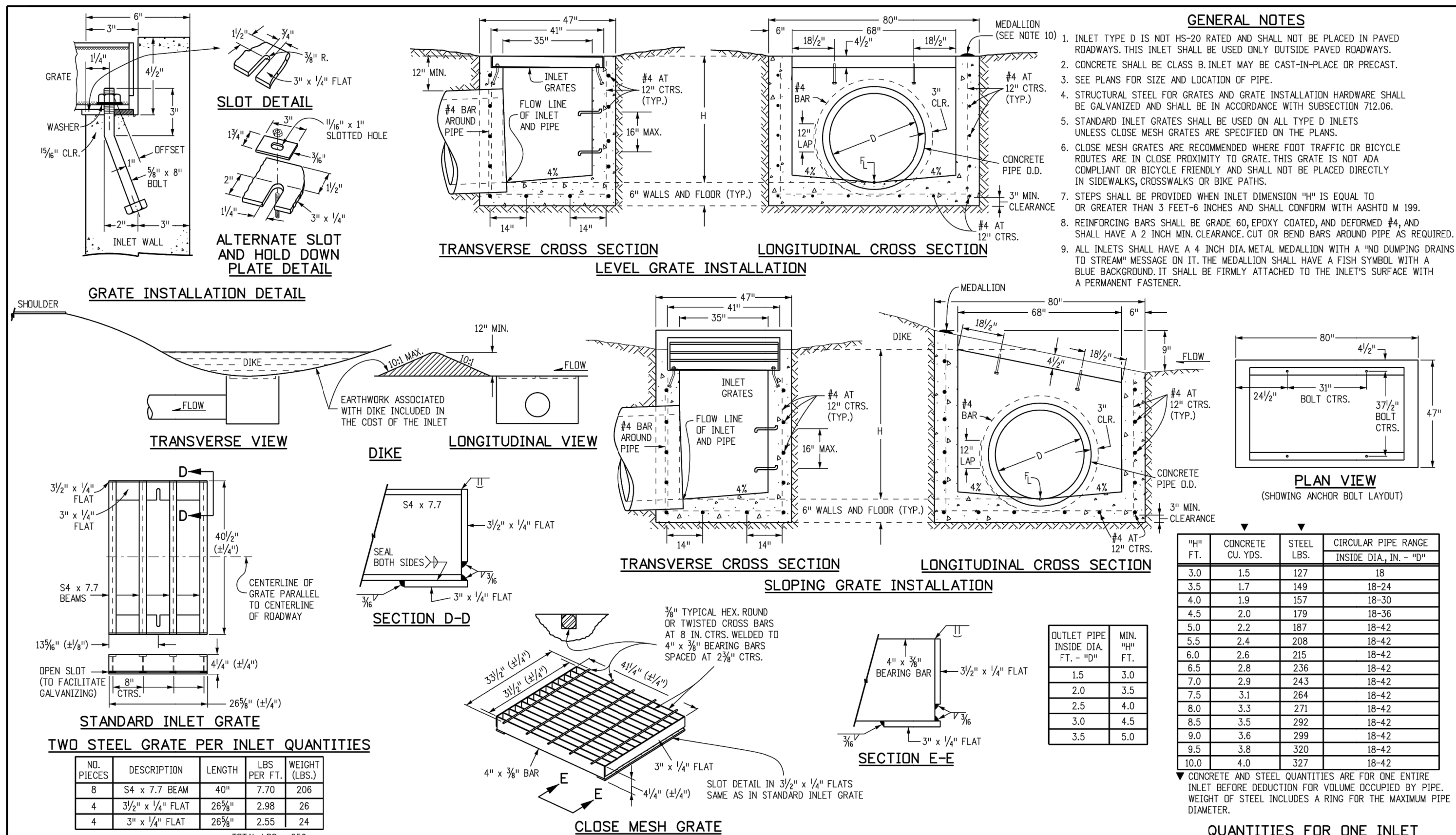
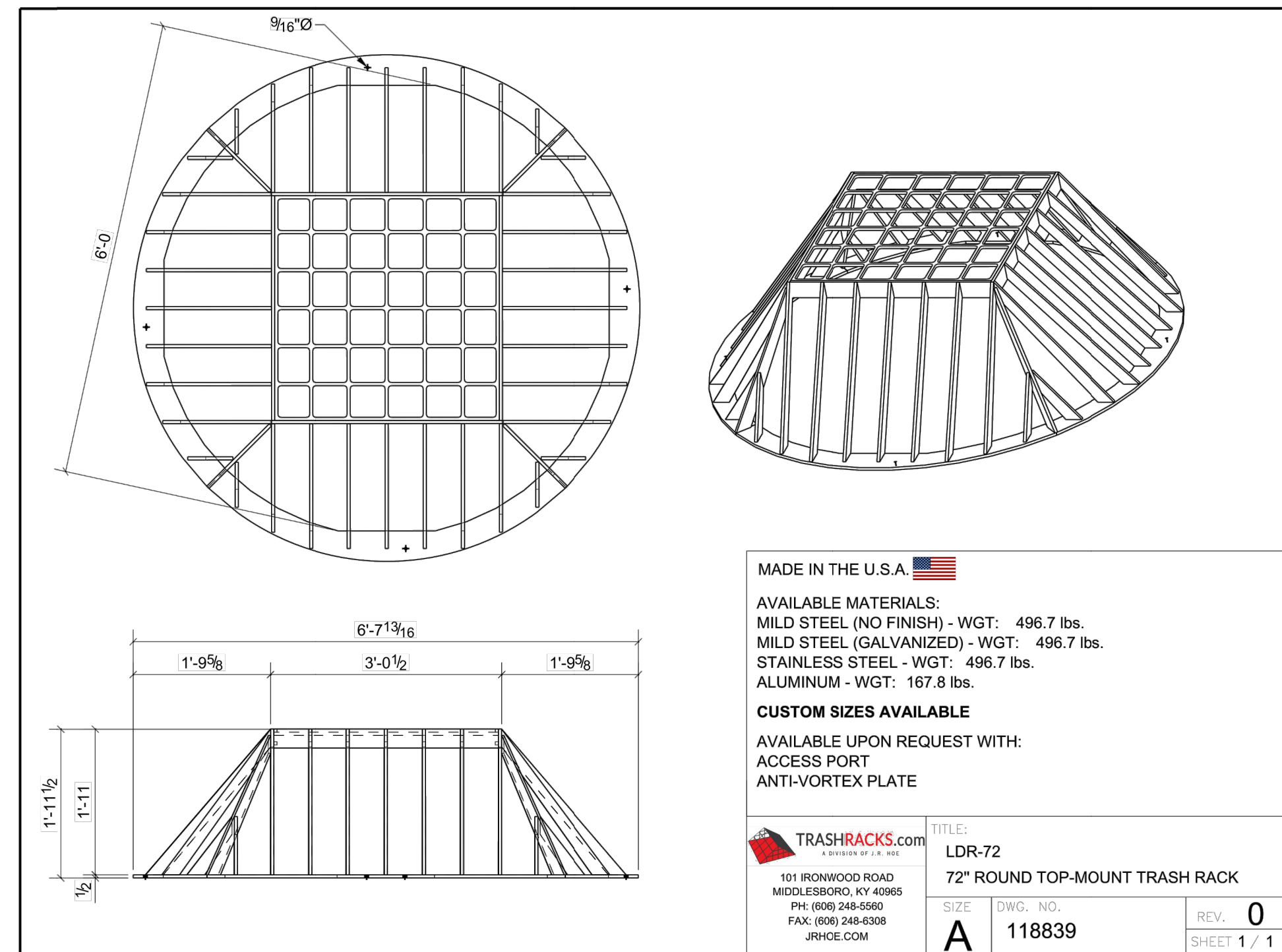
**STORM SEWER MANHOLE DETAIL  
TYPE III SD 3-3**



**STORM SEWER MANHOLE L  
LID DETAILS SD 3-2**



**STORM SEWER MANHOLE DETAIL  
TYPE I SD 3-1**



Computer File Information		Sheet Revisions		Colorado Department of Transportation		STANDARD PLAN NO.	
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Last Modification Date: 07/31/19				Denver, CO 80204			
Detailer Initials: LTA				Phone: 303-757-8021 FAX: 303-757-9868			
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**INLET, TYPE D**

Issued by the Project Engineer: EPC-12/6/2022 Date: July 31, 2019

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 FOR ANY PURPOSES WITHOUT WRITTEN AUTHORIZATION.

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								10/24/22	RAB	RAB	

**HOMESTEAD NORTH AT  
STERLING RANCH FILING NO. 1**

**DETAIL SHEETS**

SHEET 16 OF 16

JOB NO. 25188.00