HOMESTEAD NORTH AT STERLING RANCH FILING 3

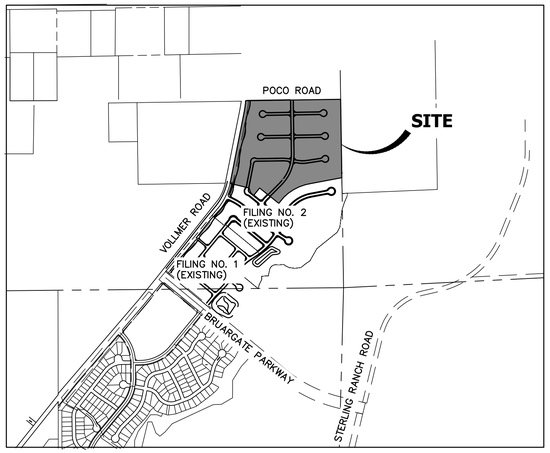
A PORTION OF THE SW1/4 OF THE SW1/4 OF SECTION 27, THE E1/2 OF SECTION 28 AND NE1/4 OF SECTION 33, ALL IN TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN CITY OF COLORADO SPRINGS, COUNTY OF EL PASO, STATE OF COLORADO

GRADING AND EROSION CONTROL PLAN

Add text:

PCD Filing No.: SF2229

JR Response:addressed



VICINITY MAP
SCALE: 1"=1000'

SHEET INDEX

BASIS OF BEARINGS

THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M. AS MONUMENTED AT THE SOUTHWEST CORNER OF SAID SOUTHWEST QUARTER BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624" AND AT THE SOUTHEAST CORNER OF SAID SOUTHWEST QUARTER BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624", SAID LINE BEARS N89°14'14"E A DISTANCE OF 2,722.69 FEET.

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

THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.

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 DR. #235 COLORADO SPRINGS, CO 80919 MIKE BRAMLETT P.E. (303) 267-6240
COUNTY ENGINEERING	EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT COLORADO SPRINGS, 80910 CHARLENE DURHAM, P.E. (719) 520-7951
TRAFFIC ENGINEERING	EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS 3275 AKERS DRIVE COLORADO SPRINGS, CO 80922 JOSHUA PALMER, 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

JR Response:addressed

SF-22-029

OWNER/DEVELOPER STATEMENT

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

JAMES F. MORLEY — DATE

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 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.

JOSHUA PALMER, P.E. — DATE

INTERIM COUNTY ENGINEER/ECM ADMINISTRATOR

ENGINEER'S STATEMENT

THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND EROSION CONTROL PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLANS.

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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

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

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

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 200
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=1000'	DESIGNED BY	PL
V-SCALE	N/A	DRAWN BY	PL
DATE	08/01/22	CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING 3

COVER SHEET

SHEET 1 OF 12

JOB NO. 25188.12

LEGEND

KEY	SYMBOL DESCRIPTION
CD	CHECK DAM(INTERIM/ FINAL)
CWA	CONCRETE WASHOUT AREA (INITIAL)
DD	DIVERSION DITCH AND DIKE, TEMPORARY (INTERIM/ FINAL)
DV	DIVERSION CHANNEL, TEMPORARY (INTERIM/ FINAL)
ECB	EROSION CONTROL BLANKET (FINAL)
IP	INLET PROTECTION (INITIAL/ INTERIM)
LOD	LIMITS OF CONSTRUCTION/DISTURBANCE
OP	OUTLET PROTECTION (INITIAL/ INTERIM)
	FLOW ARROW
SCL	SEDIMENT CONTROL LOG (INITIAL/ INTERIM)
	CUT/FILL MARK (C/F)
SF	SILT FENCE (INITIAL)
CF	CONSTRUCTION FENCE
SSA	STABILIZED STAGING AREA (INITIAL)
MU PS	PERMANENT SEEDING & MULCHING (FINAL)
VTC	VEHICLE TRACKING CONTROL (INITIAL)
SB	SEDIMENT BASIN (INITIAL)
TSP	TEMP. STOCK PILE (INITIAL)
TSW	TEMP. SWALE

LAYER LINETYPE LEGEND

EXISTING / PROPOSED

- PHASE LINE
- MATCH LINE
- SECTION LINE
- BOUNDARY LINE
- PROPERTY LINE
- EASEMENT LINE
- RIGHT OF WAY
- R.O.W. A LINE (A)
- CENTERLINE
- CITY LIMITS
- WIRE FENCE
- CHAIN LINK FENCE
- WOOD FENCE
- MASONRY FENCE
- GUARDRAIL
- CONC. BARRIER
- CABLE TV (TV)
- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS MAIN (G)
- IRRIGATION MAIN (IRR)
- OIL/PETRO. MAIN (O)
- OVERHEAD UTILITY (OHU)
- SANITARY SEWER (S)
- STORM DRAIN
- TELEPHONE (T)
- WATER MAIN (W)
- RAW WATER LINE (RWL)
- SWALE/WATERWAY FLOWLINE
- DIVERSION DITCH
- DIVERSION CHANNEL
- MAJOR DRAINAGE BASIN
- MINOR DRAINAGE BASIN
- TOP OF SLOPE
- TOE OF SLOPE
- EDGE OF WATER
- INDEX CONTOUR (6100)
- INTERMEDIATE CONTOUR
- DEPRESSION CONT. (INDEX) (6100)
- DEPRESSION CONT. (INTER)
- TOP OF CUTS
- TOE OF FILLS
- CUT AND FILL LINE (C/F)
- SILT FENCE (SF)
- 100 YEAR FLOODPLAIN (100YR)
- 500 YEAR FLOODPLAIN (500YR)
- FLOODWAY (FLDWY)
- BASE FLOOD ELEVATION
- EDGE OF WETLANDS
- STONE WALL

UTILITIES LEGEND

EXISTING / PROPOSED

STORM SEWER
- MANHOLE
- STORM INLET
- AREA INLET – SQUARE
- AREA INLET – ROUND
- FLARED END SECTION
- RIPRAP

SANITARY SEWER
- LINE MARKER (Mkr San)
- SERVICE MARKER
- CLEAN–OUT
- MANHOLE W/ DIRECTIONAL FLOW ARROW

WATER LINE
- LINE MARKER (Mkr W)
- SERVICE MARKER
- FIRE HYDRANT
- FIRE CONNECTION
- MANHOLE
- BEND
- BLOW–OFF VALVE
- WELL (WELL)
- METER
- VALVE
- REDUCER
- THRUST BLOCK
- CROSS
- PLUG W/ THRUST BLOCK
- TEE
- REVERSE ANCHOR
- ANODE
- AIR & VACUUM VALVE ASSEMBLY
- TRANSMISSION BLOW–OFF ASSEMBLY

GAS LINE
- MARKER (Mkr G)
- SERVICE MARKER
- METER
- VALVE
- PLUG
- TEE

DRY UTILITIES
- CABLE TV MARKER (Mkr TV)
- CABLE TELEVISION PEDESTAL
- ELECTRIC MARKER (Mkr E)
- ELECTRIC SERVICE MARKER
- ELECTRICAL PEDESTAL
- ELECTRICAL METER
- ELECTRICAL MANHOLE
- FIBER–OPTIC MARKER (Mkr FO)
- IRRIGATION PEDESTAL
- TELEPHONE MARKER (Mkr T)
- TELEPHONE PEDESTAL
- TELEPHONE MANHOLE
- UTILITY POLE
- GUY ANCHOR
- GUY POLE

MISC. UTILITIES
- VENT PIPE (VP)
- TEST HOLE DESIGNATOR (TH#, FIRM/AGENCY)

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ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

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

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 200
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

J·R ENGINEERING
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Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	N/A
V-SCALE	N/A
DATE	08/01/22
DESIGNED BY	N/A
DRAWN BY	N/A
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING 3
LEGEND

SHEET 2 OF 12
JOB NO. 25188.12

GRADING AND EROSION CONTROL STANDARD NOTES

1. STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.

2. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.

3. A SEPARATE STORMWATER MANAGEMENT PLAN (SMWP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.

4. ONCE THE ESQCP IS APPROVED AND A "NOTICE TO PROCEED" HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.

5. CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER. CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.

6. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES ARE NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER MANAGEMENT PLAN.

7. TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS.

8. FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLANT DENSITY OF 70 PERCENT OF PRE-DISTURBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.

9. ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT AFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.

10. EARTH DISTURBANCES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY MINIMIZE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME. PRE-EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED WITHIN 50 HORIZONTAL FEET OF A WATERS OF THE STATE UNLESS SHOWN TO BE INFEASIBLE AND SPECIFICALLY REQUESTED AND APPROVED.

11. COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OR WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED. IF COMPACTION PREVENTION IS NOT FEASIBLE DUE TO SITE CONSTRAINTS, ALL AREAS DESIGNATED FOR INFILTRATION AND VEGETATION CONTROL MEASURES MUST BE LOOSENED PRIOR TO INSTALLATION OF THE CONTROL MEASURE(S).

12. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF SITE.

13. CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO ENTER STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUTS SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY, CREEK OR STREAM.

14. DURING DEWATERING OPERATIONS OF UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.

15. EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.

16. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.

17. WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. CONTROL MEASURES MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.

18. TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.

19. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, SOIL, AND SAND THAT MAY ACCUMULATE IN ROADS, STORM DRAINS AND OTHER DRAINAGE CONVEYANCE SYSTEMS AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.

20. THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.

21. NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ONSITE UNLESS PERMISSION FOR THE USE OF SUCH CHEMICAL(S) IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S), SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.

22. BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ONSITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.

23. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.

24. OWNER/DEVELOPER AND THEIR AGENTS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE, DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (1041, NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND OTHER LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, LOCAL, OR COUNTY AGENCIES, THE MOST RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.

25. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.

26. PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.

27. A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND SHALL BE UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.

28. THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY ENTECH ENGINEERING, INC. (DATED 04/07/2020) AND SHALL BE CONSIDERED A PART OF THESE PLANS.

29. AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB ONE (1) ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL DIVISION
WQCD - PERMITS
4300 CHERRY CREEK DRIVE SOUTH
DENVER, CO 80246-1530
ATTN: PERMITS UNIT

STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS

1. 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.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD NOTIFICATION 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).

3. CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOIL AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:
   3.1. EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
   3.2. CITY OF COLORADO SPRINGS/ EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
   3.3. COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS AND BRIDGE CONSTRUCTION
   3.4. CDOT M&S STANDARDS

4. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSIONS OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE EINGEERI9NG CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER-THE-FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.

5. IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ONSITE AND OFFSITE, ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.

6. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.

7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.

8. CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND PCD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.

9. CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.

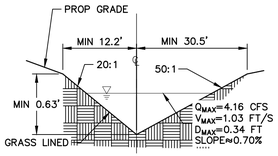
10. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.

11. SIGHT VISIBILITY TRIANGLES ARE IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED IN SIGHT TRIANGLES.

12. SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS AND MUTCD CRITERIA.

13. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.

14. THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWENER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF-SITE DISTURBANCE, GRADING, OR CONSTRUCTION.



SWALE SECTION A-A
TYPICAL DETAIL
SCALE:NTS

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

32314

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

DATE

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

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 200
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

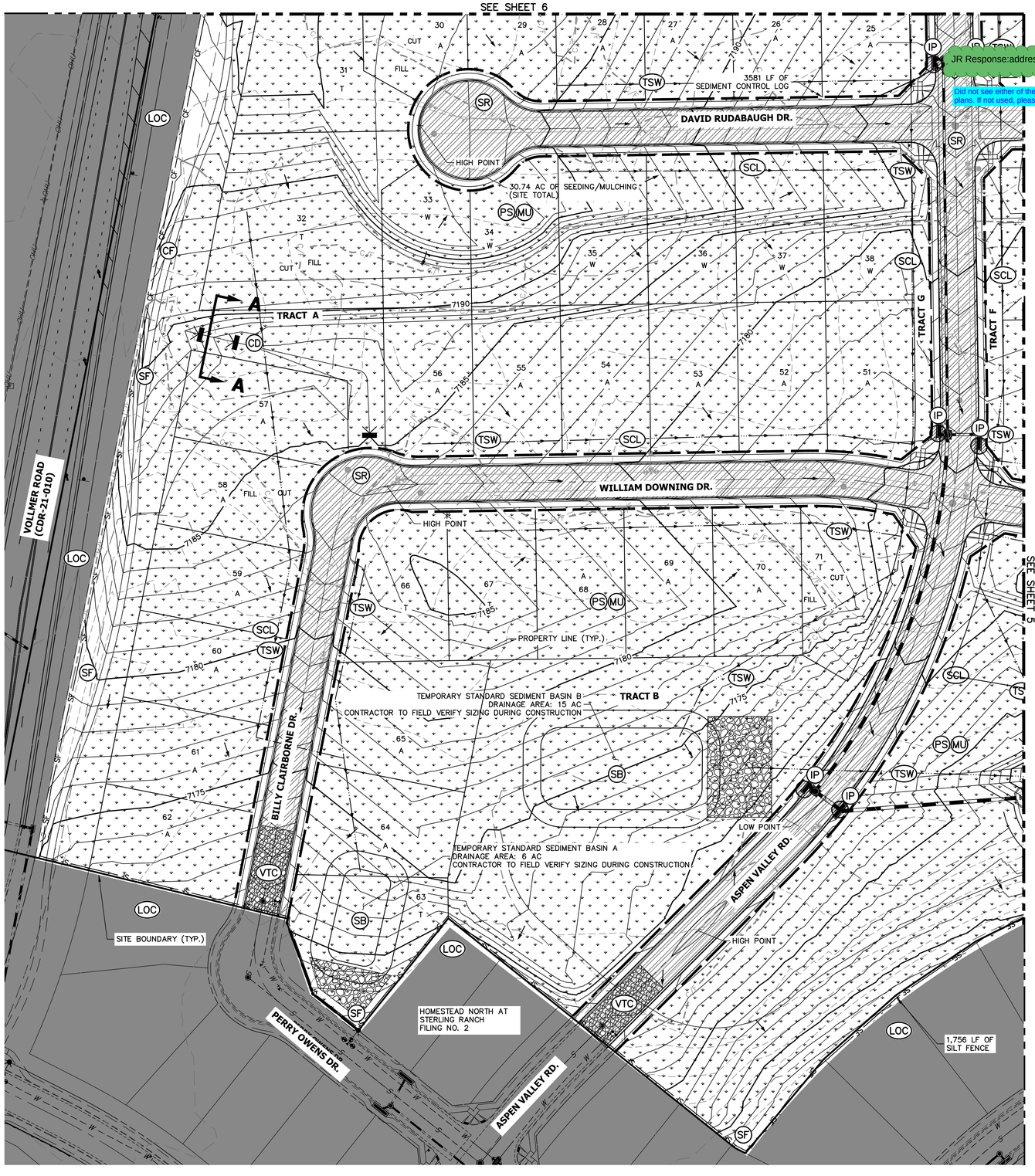
H-SCALE	N/A
V-SCALE	N/A
DATE	08/01/22
DESIGNED BY	N/A
DRAWN BY	N/A
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING 3

TYPICAL SECTIONS & NOTES

SHEET 3 OF 12

JOB NO. 25188.12



LEGEND

	KEY	SYMBOL
CHECK DAM(INTERIM/ FINAL)	CD	
CONCRETE WASHOUT AREA (INITIAL)	CWA	
DIVERSION DITCH AND DIKE, TEMPORARY (INTERIM/ FINAL)	DD	
DIVERSION CHANNEL, TEMPORARY (INTERIM/ FINAL)	DV	
EROSION CONTROL BLANKET (FINAL)	ECB	
INLET PROTECTION (INITIAL/ INTERIM)	IP	
LIMITS OF CONSTRUCTION/DISTURBANCE	LOD	
OUTLET PROTECTION (INITIAL/ INTERIM)		
FLOW ARROW		
SEDIMENT CONTROL LOG (INITIAL/ INTERIM)	SCL	
CUT/FILL MARK		C/F
SILT FENCE (INITIAL)	SF	SF
CONSTRUCTION FENCE	CF	CF
STABILIZED STAGING AREA (INITIAL)	SSA	
PERMENANT SEEDING & MULCHING (FINAL)	MU PS	
VEHICLE TRACKING CONTROL (INITIAL)	VTC	
SEDIMENT BASIN (INITIAL)	SB	
TEMP. STOCK PILE (INITIAL)	TSP	
TEMP. SWALE	TSW	

JR Response:addressed

Did not see either of these in plans. If not used, please remove

Change to LOC to match plans

JR Response:addressed

Add Surface Roughening (SR) to legend

JR Response:addressed

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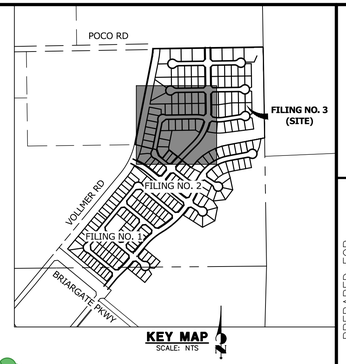
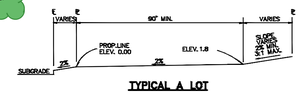
GEC Checklist item "i" - discuss condition of existing vegetation.

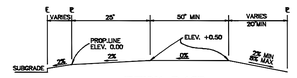
JR Response:addressed



KEY MAP
SCALE: NTS



TYPICAL A LOT
NOT TO SCALE



TYPICAL B LOT
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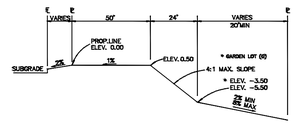

TYPICAL WALKOUT LOT (W/O) OR GARDEN (G)
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NOTE:
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BMP PHASING

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1. INSTALL VTC
2. INSTALL CWA
3. ESTABLISH SSA
4. INSTALL SILT AND CONSTRUCTION FENCE
5. INSTALL SEDIMENT BASINS
6. INSTALL SR
7. INSTALL SCL
8. INSTALL TEMPORARY SWALE
9. ATTN ADD CHECK DAMS IF NECESSARY

INTERIM (SPRING 2024)
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3. INSTALL INLET AND OUTLET PROTECTION
4. INSTALL EROSION CONTROL BLANKETS

FINAL (SUMMER 2024)
1. INSTALL MULCH AND TEMPORARY SEEDING IN ALL DISTURBED AREA
2. REMOVE ALL TEMPORARY BMP'S AFTER FINAL STABILIZATION

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

50 25 0 50 100
ORIGINAL SCALE: 1" = 50'

ENGINEER'S STATEMENT

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COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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

PREPARED FOR
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20 BOULDER CRESCENT
SUITE 200
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
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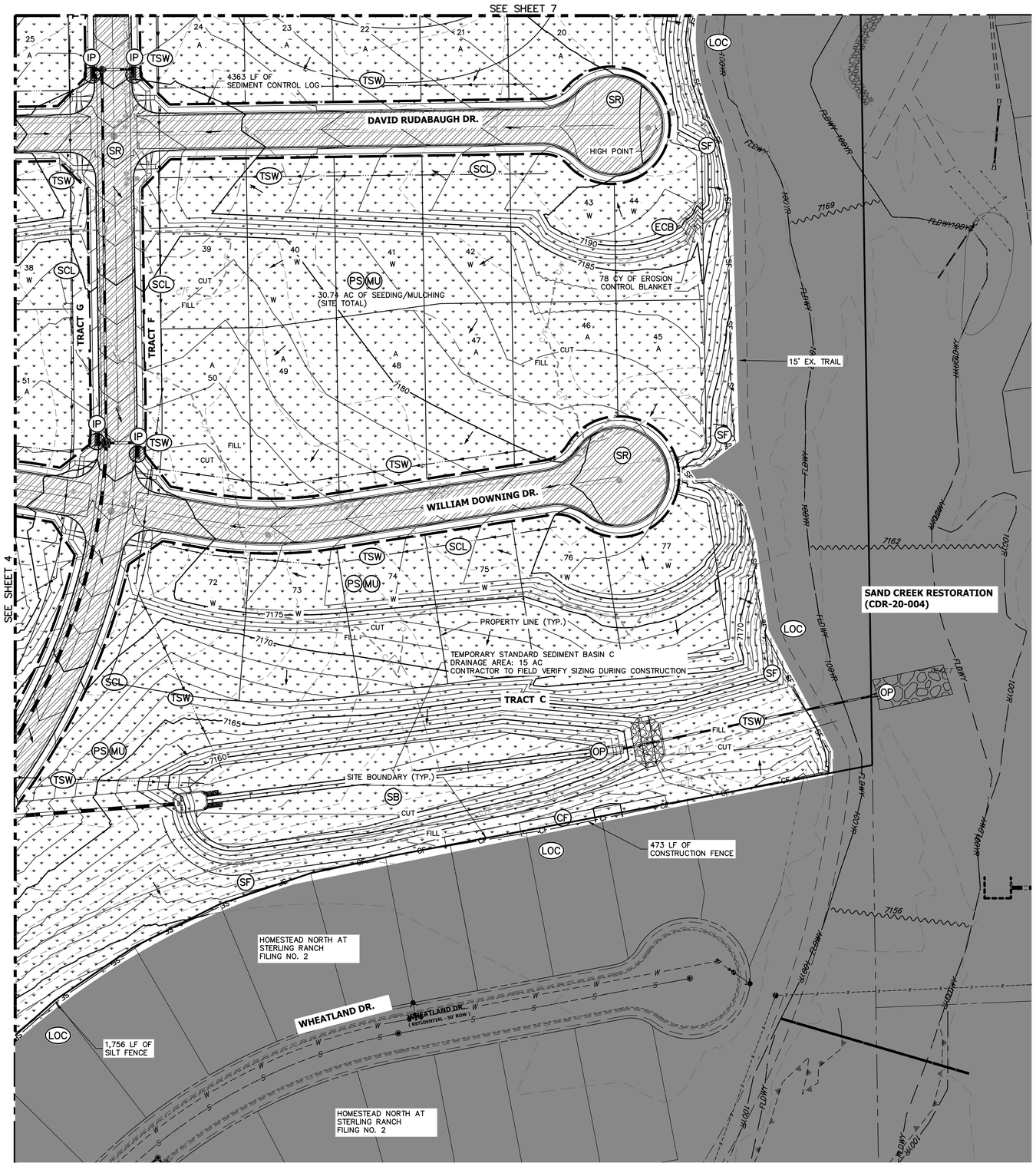
HOMESTEAD NORTH AT STERLING RANCH FILING 3

GRADING AND EROSION CONTROL PLANS

SHEET 4 OF 12
JOB NO. 25188.12



LEGEND

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EROSION CONTROL BLANKET (FINAL)	ECB	
INLET PROTECTION (INITIAL/ INTERIM)	IP	
LIMITS OF CONSTRUCTION/DISTURBANCE	LOD	
OUTLET PROTECTION (INITIAL/ INTERIM)	OP	
FLOW ARROW		
SEDIMENT CONTROL LOG (INITIAL/ INTERIM)	SCL	
CUT/FILL MARK		C/F
SILT FENCE (INITIAL)	SF	SF
CONSTRUCTION FENCE	CF	CF
STABILIZED STAGING AREA (INITIAL)	SSA	
PERMENANT SEEDING & MULCHING (FINAL)	MU PS	
VEHICLE TRACKING CONTROL (INITIAL)	VTC	
SEDIMENT BASIN (INITIAL)	SB	
TEMP. STOCK PILE (INITIAL)	TSP	
TEMP. SWALE	TSW	

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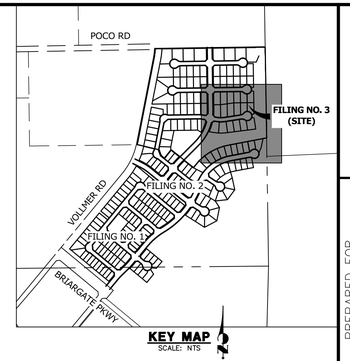
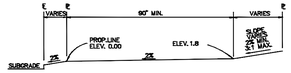
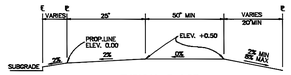




TYPICAL A LOT
NOT TO SCALE



TYPICAL B LOT
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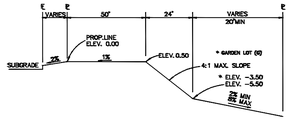

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COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
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SUITE 200
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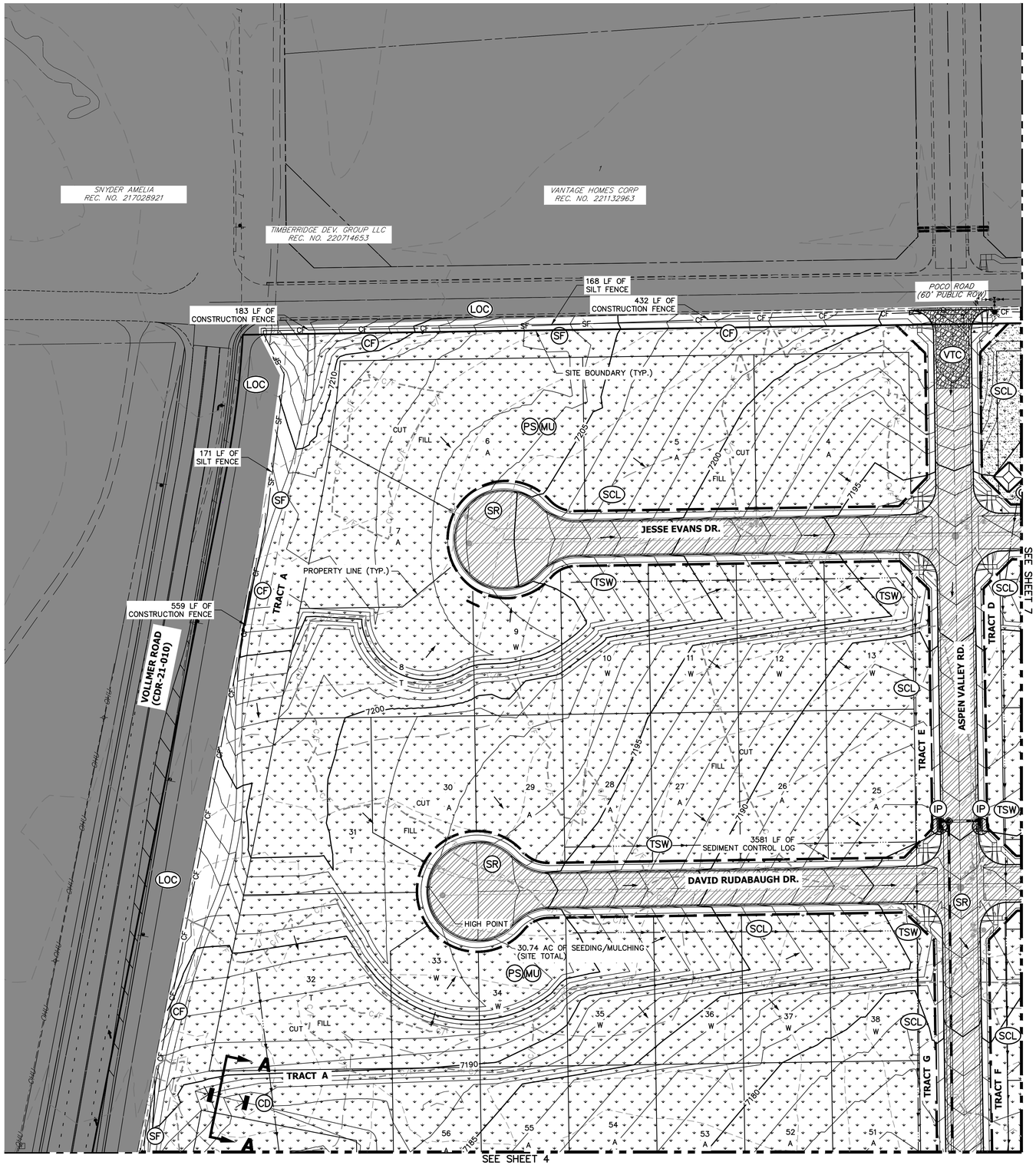
HOMESTEAD NORTH AT STERLING RANCH FILING 3

GRADING AND EROSION CONTROL PLANS

SHEET 5 OF 12

JOB NO. 25188.12



LEGEND

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INLET PROTECTION (INITIAL/ INTERIM)	IP	
LIMITS OF CONSTRUCTION/DISTURBANCE	LOD	
OUTLET PROTECTION (INITIAL/ INTERIM)	OP	
FLOW ARROW		
SEDIMENT CONTROL LOG (INITIAL/ INTERIM)	SCL	
CUT/FILL MARK		C/F
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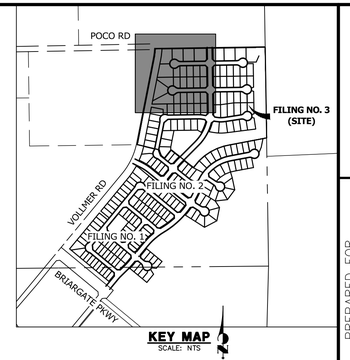
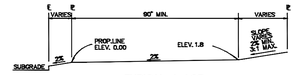
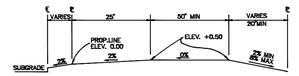


KEY MAP
SCALE: NTS



TYPICAL A LOT
NOT TO SCALE



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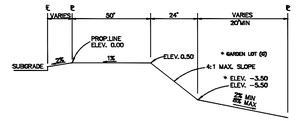

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DRAWN BY	PL		
CHECKED BY			

HOMESTEAD NORTH AT STERLING RANCH FILING 3

GRADING AND EROSION CONTROL PLANS

SHEET 6 OF 12

JOB NO. 25188.12

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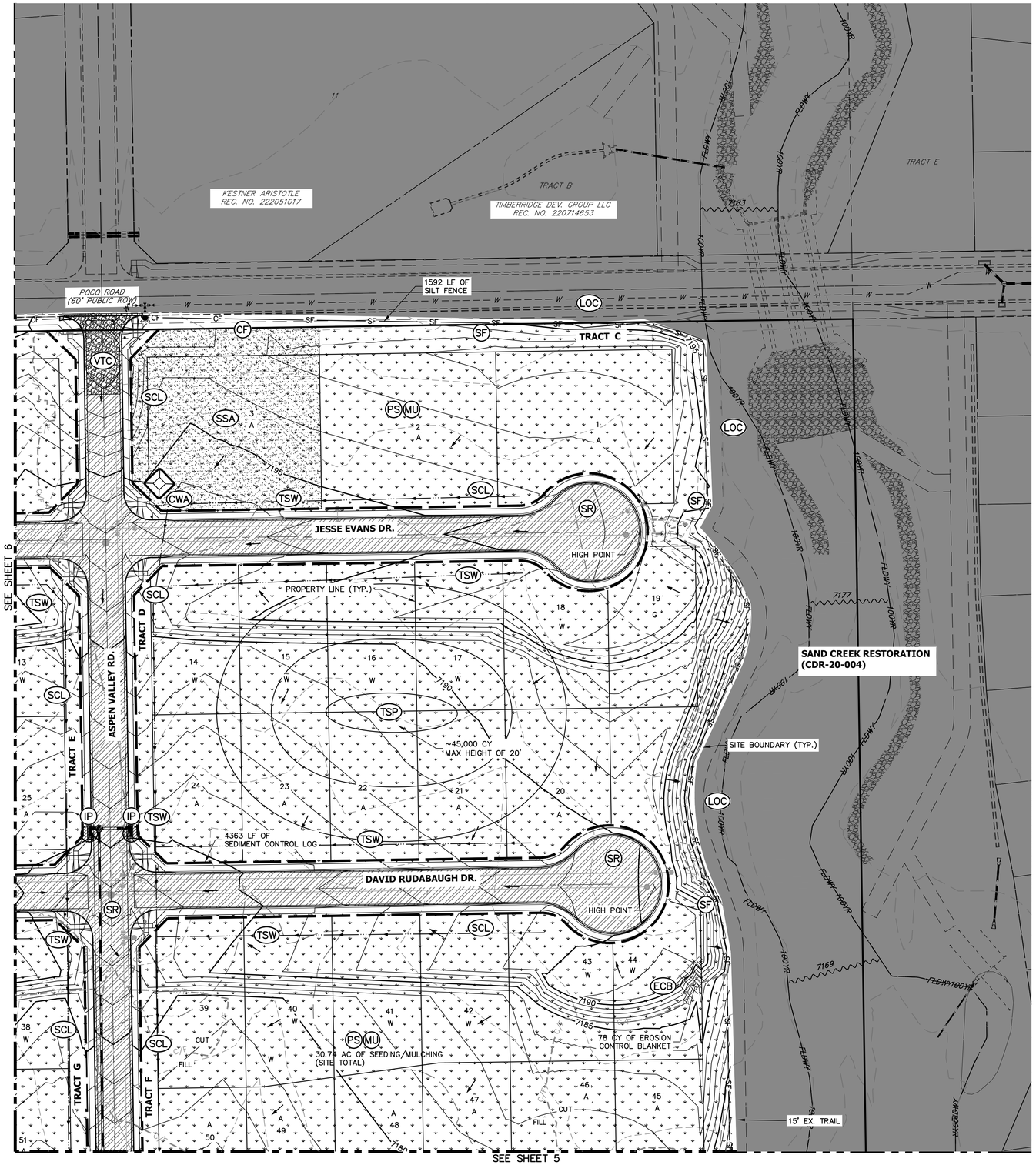

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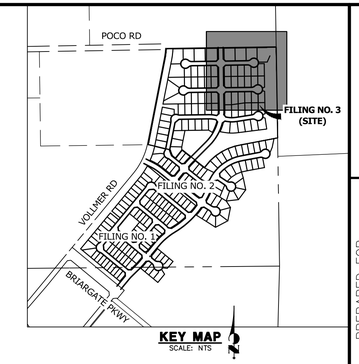

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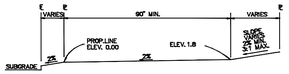
SCALE: NTS



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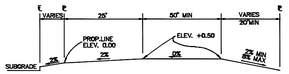
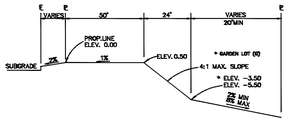


TYPICAL B LOT
NOT TO SCALE



TYPICAL WALKOUT LOT (W/O) OR GARDEN (G)
NOT TO SCALE

NOTE:
"T" LOTS OR "TRANSITION " LOTS OCCUR IN PLACES WHERE BOTH PROPERTY LINES CANNOT BE GRADED AS THE TYPICAL STANDARD LOT TEMPLATES SHOWN. THESE LOTS WILL STILL BE GRADED TO CREATE POSITIVE DRAINAGE AWAY FROM THE STRUCTURE.

NOTE:
SIDE LOT SWALES WILL BE PROVIDED WHEN APPROPRIATE.

BMP PHASING

INITIAL (WINTER 2023)
1. INSTALL VTC
2. INSTALL CWA
3. ESTABLISH SSA
4. INSTALL SILT AND CONSTRUCTION FENCE
5. INSTALL SEDIMENT BASINS
6. INSTALL SR
7. INSTALL SCL
8. INSTALL TEMPORARY SWALE
9. ATTN ADD CHECK DAMS IF NECESSARY

INTERIM (SPRING 2024)
1. MAINTAIN ALL BMP'S
2. LOCATE/INSTALL TEMPORARY STOCK PILE
3. INSTALL INLET AND OUTLET PROTECTION
4. INSTALL EROSION CONTROL BLANKETS

FINAL (SUMMER 2024)
1. INSTALL MULCH AND TEMPORARY SEEDING IN ALL DISTURBED AREA
2. REMOVE ALL TEMPORARY BMP'S AFTER FINAL STABILIZATION

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

50 25 0 50 100
ORIGINAL SCALE: 1" = 50'

N

ENGINEER'S STATEMENT

THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND EROSION CONTROL PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLANS.

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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

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

PREPARED FOR
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COLORADO SPRINGS, CO 80903
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Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=50'
V-SCALE	N/A
DATE	08/01/22
DESIGNED BY	PL
DRAWN BY	PL
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING 3

GRADING AND EROSION CONTROL PLANS

SHEET 7 OF 12

JOB NO. 25188.12

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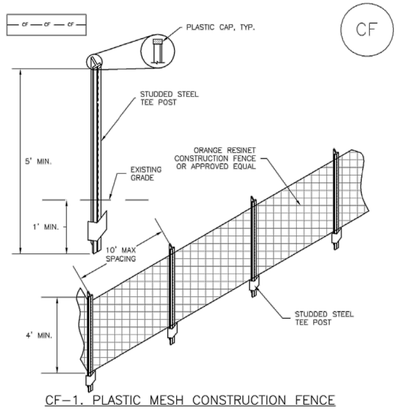


CF–1. PLASTIC MESH CONSTRUCTION FENCE

CONSTRUCTION FENCE INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –LOCATION OF CONSTRUCTION FENCE.

2. CONSTRUCTION FENCE SHOWN SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

3. CONSTRUCTION FENCE SHALL BE COMPOSED OF ORANGE, CONTRACTOR–GRADE MATERIAL THAT IS AT LEAST 4' HIGH. METAL POSTS SHOULD HAVE A PLASTIC CAP FOR SAFETY.

4. STUDDED STEEL TEE POSTS SHALL BE UTILIZED TO SUPPORT THE CONSTRUCTION FENCE. MAXIMUM SPACING FOR STEEL TEE POSTS SHALL BE 10'.

5. CONSTRUCTION FENCE SHALL BE SECURELY FASTENED TO THE TOP, MIDDLE, AND BOTTOM OF EACH POST.

CONSTRUCTION FENCE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

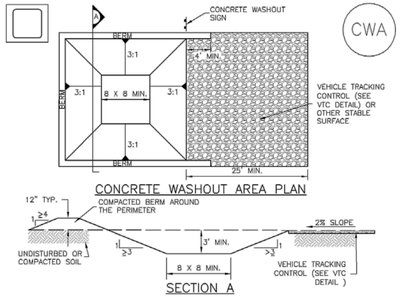
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. CONSTRUCTION FENCE SHALL BE REPAIRED OR REPLACED WHEN THERE ARE SIGNS OF DAMAGE SUCH AS RIPS OR SAGS. CONSTRUCTION FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

5. WHEN CONSTRUCTION FENCES ARE REMOVED, ALL DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND/OR REMOVAL OF THE FENCE SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)



CWA–1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –CWA INSTALLATION LOCATION.

2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.

3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.

4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3" DEEP.

5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.

6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.

7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.

8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

CWA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS, ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.

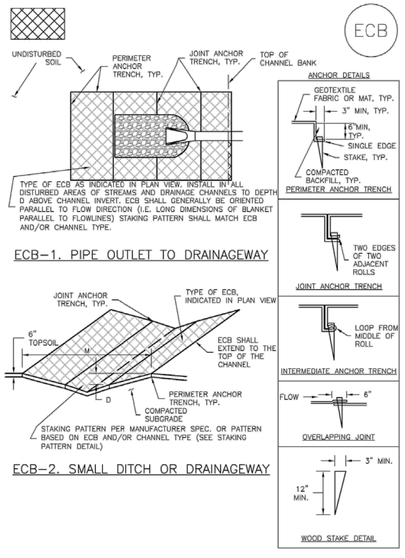
5. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER–TIGHT CONTAINER AND DISPOSED OF PROPERLY.

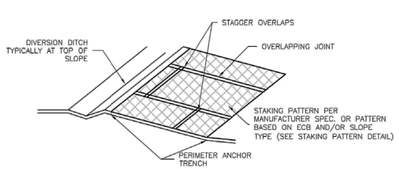
6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.

7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

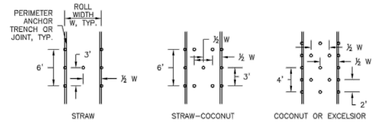
(DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD).

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

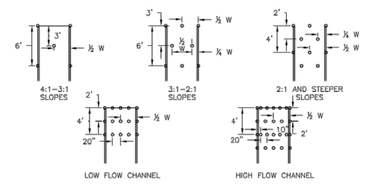




ECB–3. OUTSIDE OF DRAINAGEWAY



STAKING PATTERNS BY ECB TYPE



STAKING PATTERNS BY SLOPE OR CHANNEL TYPE

EROSION CONTROL BLANKET INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –LOCATION OF ECB.
   –TYPE OF ECB (STRAW, STRAW–COCONUT, COCONUT, OR EXCELSIOR).
   –AREA, A, IN SQUARE YARDS OF EACH TYPE OF ECB.

2. 100% NATURAL AND BIODEGRADABLE MATERIALS ARE PREFERRED FOR RECPs, ALTHOUGH SOME JURISDICTIONS MAY ALLOW OTHER MATERIALS IN SOME APPLICATIONS.

3. IN AREAS WHERE ECBs ARE SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOIST PRIOR TO ECB INSTALLATION AND THE ECB SHALL BE IN FULL CONTACT WITH SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.

4. PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.

5. JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL ECBs EXCEPT STRAW WHICH MAY USE AN OVERLAPPING JOINT.

6. INTERMEDIATE ANCHOR TRENCH SHALL BE USED AT SPACING OF ONE–HALF ROLL LENGTH FOR COCONUT AND EXCELSIOR ECBs.

7. OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER FOR ECBs ON SLOPES.

8. MATERIAL SPECIFICATIONS OF ECBs SHALL CONFORM TO TABLE ECB–1.

9. ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING ECBS SHALL BE RESEEDED AND MULCHED.

10. DETAILS ON DESIGN PLANS FOR MAJOR DRAINAGEWAY STABILIZATION WILL GOVERN IF DIFFERENT FROM THOSE SHOWN HERE.

TABLE ECB–1. ECB MATERIAL SPECIFICATIONS

TYPE	COCONUT CONTENT	STRAW CONTENT	EXCELSIOR CONTENT	RECOMMENDED NETTING**
STRAW*	–	100%	–	DOUBLE/ NATURAL
STRAW–COCONUT	30% MIN	70% MAX	–	DOUBLE/ NATURAL
COCONUT	100%	–	–	DOUBLE/ NATURAL
EXCELSIOR	–	–	100%	DOUBLE/ NATURAL

*STRAW ECBs MAY ONLY BE USED OUTSIDE OF STREAMS AND DRAINAGE CHANNEL.
**ALTERNATE NETTING MAY BE ACCEPTABLE IN SOME JURISDICTIONS

EROSION CONTROL BLANKET MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ECBs SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE, UNLESS REQUESTED TO BE REMOVED BY THE LOCAL JURISDICTION.

5. ANY ECB PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW THE GEOTEXTILE THAT HAVE ERODED TO CREATED A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE ECB REINSTALLED.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO AND TOWN OF PARKER COLORADO, NOT AVAILABLE IN AUTOCAD)

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

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

COLORADO MIKE A. BRAMLETT PROFESSIONAL ENGINEER 32314

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

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

PREPARED FOR
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JAMES F. MORLEY
(719) 471–1742

J·R ENGINEERING
A Westrian Company
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Fort Collins 970–491–9888 • www.jrengineering.com

No.	REVISION	BY	DATE

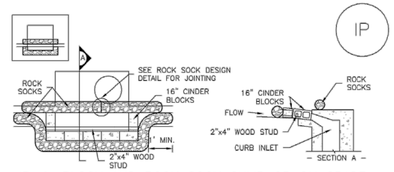
H–SCALE	N/A
V–SCALE	N/A
DATE	08/01/22
DESIGNED BY	N/A
DRAWN BY	N/A
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING 3

DETAILS

SHEET 8 OF 12

JOB NO. 25188.12



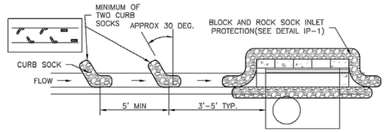
IP-1. BLOCK AND ROCK SOCK SUMP OR ON GRADE INLET PROTECTION

BLOCK AND CURB SOCK INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.

2. CONCRETE "CINDER" BLOCKS SHALL BE LAID ON THEIR SIDES AROUND THE INLET IN A SINGLE ROW, ABUTTING ONE ANOTHER WITH THE OPEN END FACING AWAY FROM THE CURB.

3. GRAVEL BAGS SHALL BE PLACED AROUND CONCRETE BLOCKS, CLOSELY ABUTTING ONE ANOTHER AND JOINTED TOGETHER IN ACCORDANCE WITH ROCK SOCK DESIGN DETAIL.



IP-2. CURB ROCK SOCKS UPSTREAM OF INLET PROTECTION

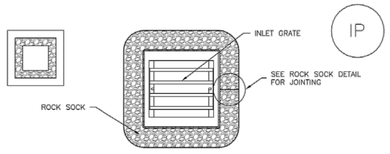
CURB ROCK SOCK INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL INSTALLATION REQUIREMENTS.

2. PLACEMENT OF THE SOCK SHALL BE APPROXIMATELY 30 DEGREES FROM PERPENDICULAR IN THE OPPOSITE DIRECTION OF FLOW.

3. SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED A MINIMUM OF 5 FEET APART.

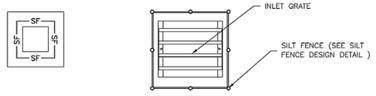
4. AT LEAST TWO CURB SOCKS IN SERIES ARE REQUIRED UPSTREAM OF ON-GRADE INLETS.



IP-3. ROCK SOCK SUMP/AREA INLET PROTECTION

ROCK SOCK SUMP/AREA INLET PROTECTION INSTALLATION NOTES
1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.

2. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF ROCK SOCKS FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.



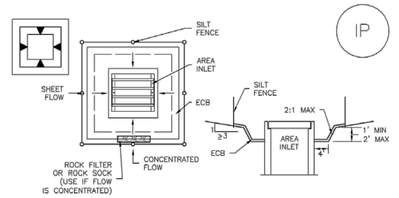
IP-4. SILT FENCE FOR SUMP INLET PROTECTION

SILT FENCE INLET PROTECTION INSTALLATION NOTES

1. SEE SILT FENCE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.

2. POSTS SHALL BE PLACED AT EACH CORNER OF THE INLET AND AROUND THE EDGES AT A MAXIMUM SPACING OF 3 FEET.

3. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF SILT FENCE FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.



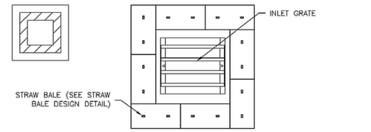
IP-5. OVEREXCAVATION INLET PROTECTION

OVEREXCAVATION INLET PROTECTION INSTALLATION NOTES

1. THIS FORM OF INLET PROTECTION IS PRIMARILY APPLICABLE FOR SITES THAT HAVE NOT YET REACHED FINAL GRADE AND SHOULD BE USED ONLY FOR INLETS WITH A RELATIVELY SMALL CONTRIBUTING DRAINAGE AREA.

2. WHEN USING FOR CONCENTRATED FLOWS, SHAPE BASIN IN 2:1 RATIO WITH LENGTH ORIENTED TOWARDS DIRECTION OF FLOW.

3. SEDIMENT MUST BE PERIODICALLY REMOVED FROM THE OVEREXCAVATED AREA.

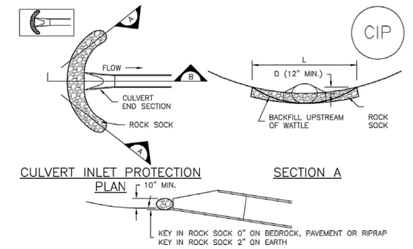


IP-6. STRAW BALE FOR SUMP INLET PROTECTION

STRAW BALE BARRIER INLET PROTECTION INSTALLATION NOTES

1. SEE STRAW BALE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.

2. BALES SHALL BE PLACED IN A SINGLE ROW AROUND THE INLET WITH ENDS OF BALES TIGHTLY ABUTTING ONE ANOTHER.



CULVERT INLET PROTECTION PLAN

SECTION A

SECTION B

CIP-1. CULVERT INLET PROTECTION

CULVERT INLET PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR
-LOCATION OF CULVERT INLET PROTECTION.

2. SEE ROCK SOCK DESIGN DETAIL FOR ROCK GRADATION REQUIREMENTS AND JOINTING DETAIL.

CULVERT INLET PROTECTION MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. SEDIMENT ACCUMULATED UPSTREAM OF THE CULVERT SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS ½ THE HEIGHT OF THE ROCK SOCK.

5. CULVERT INLET PROTECTION SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

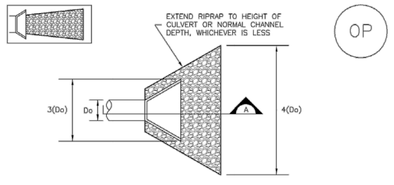
(DETAILS ADAPTED FROM AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

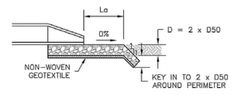
- Clean, weed-free and seed-free cereal grain straw should be applied evenly at a rate of 2 tons per acre and must be tacked or fastened by a method suitable for the condition of the site. Straw mulch must be anchored (and not merely placed) on the surface. This can be accomplished mechanically by crimping or with the aid of tackifiers or nets. Anchoring with a crimping implement is preferred, and is the recommended method for areas flatter than 3:1. Mechanical crimpers must be capable of tucking the long mulch fibers into the soil to a depth of 3 inches without cutting them. An agricultural disk, while not an ideal substitute, may work if the disk blades are dull or blunted and set vertically; however, the frame may have to be weighted to afford proper soil penetration.
- Grass hay may be used in place of straw; however, because hay is comprised of the entire plant including seed, mulching with hay may seed the site with non-native grass species which might in turn out-compete the native seed. Alternatively, native species of grass hay may be purchased, but can be difficult to find and are more expensive than straw. Purchasing and utilizing a certified weed-free straw is an easier and less costly mulching method. When using grass hay, follow the same guidelines as for straw (provided above).
- On small areas sheltered from the wind and heavy runoff, spraying a tackifier on the mulch is satisfactory for holding it in place. For steep slopes and special situations where greater control is needed, erosion control blankets anchored with stakes should be used instead of mulch.
- Hydraulic mulching consists of wood cellulose fibers mixed with water and a tackifying agent and should be applied at a rate of no less than 1,500 pounds per acre (1,425 lbs of fibers mixed with at least 75 lbs of tackifier) with a hydraulic mulcher. For steeper slopes, up to 2000 pounds per acre may be required for effective hydroseeding. Hydromulch typically requires up to 24 hours to dry; therefore, it should not be applied immediately prior to inclement weather. Application to roads, waterways and existing vegetation should be avoided.
- Erosion control mats, blankets, or nets are recommended to help stabilize steep slopes (generally 3:1 and steeper) and waterways. Depending on the product, these may be used alone or in conjunction with grass or straw mulch. Normally, use of these products will be restricted to relatively small areas. Biodegradable mats made of straw and jute, straw-coconut, coconut fiber, or excelsior can be used instead of mulch. (See the ECM/TRM BMP for more information.)
- Some tackifiers or binders may be used to anchor mulch. Check with the local jurisdiction for allowed tackifiers. Manufacturer's recommendations should be followed at all times. (See the Soil Binder BMP for more information on general types of tackifiers.)
- Rock can also be used as mulch. It provides protection of exposed soils to wind and water erosion and allows infiltration of precipitation. An aggregate base course can be spread on disturbed areas for temporary or permanent stabilization. The rock mulch layer should be thick enough to provide full coverage of exposed soil on the area it is applied.

Maintenance and Removal

After mulching, the bare ground surface should not be more than 10 percent exposed. Reapply mulch, as needed, to cover bare areas.



TEMPORARY OUTLET PROTECTION PLAN



SECTION A

TABLE OP-1, TEMPORARY OUTLET PROTECTION SIZING TABLE			
PIPE DIAMETER, Do (INCHES)	DISCHARGE, Q (CFS)	APRON LENGTH, La (FT)	RIPRAP D50 DIAMETER MIN (INCHES)
8	2.5 5	5 10	4 6
12	5 10	10 13	4 6
18	10 20 30 40	10 16 23 26	6 9 12 16
24	30 40 50 60	16 26 26 30	9 9 12 16

OP-1. TEMPORARY OUTLET PROTECTION

TEMPORARY OUTLET PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR
-LOCATION OF OUTLET PROTECTION.
-DIMENSIONS OF OUTLET PROTECTION.

2. DETAIL IS INTENDED FOR PIPES WITH SLOPE ≤ 10%. ADDITIONAL EVALUATION OF RIPRAP SIZING AND OUTLET PROTECTION DIMENSIONS REQUIRED FOR STEEPER SLOPES.

3. TEMPORARY OUTLET PROTECTION INFORMATION IS FOR OUTLETS INTENDED TO BE UTILIZED LESS THAN 2 YEARS.

TEMPORARY OUTLET PROTECTION INSPECTION AND MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM AURORA, COLORADO AND PREVIOUS VERSION OF VOLUME 3, NOT AVAILABLE IN AUTOCAD)

GENERAL INLET PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
-LOCATION OF INLET PROTECTION.
-TYPE OF INLET PROTECTION (IP.1, IP.2, IP.3, IP.4, IP.5, IP.6)

2. INLET PROTECTION SHALL BE INSTALLED PROMPTLY AFTER INLET CONSTRUCTION OR PAVING IS COMPLETE (TYPICALLY WITHIN 48 HOURS). IF A RAINFALL/RUNOFF EVENT IS FORECAST, INSTALL INLET PROTECTION PRIOR TO ONSET OF EVENT.

3. MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

INLET PROTECTION MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. SEDIMENT ACCUMULATED UPSTREAM OF INLET PROTECTION SHALL BE REMOVED AS NECESSARY TO MAINTAIN BMP EFFECTIVENESS, TYPICALLY WHEN STORAGE VOLUME REACHES 50% OF CAPACITY, A DEPTH OF 6" WHEN SILT FENCE IS USED, OR ¼ OF THE HEIGHT FOR STRAW BALES.

5. INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED, UNLESS THE LOCAL JURISDICTION APPROVES EARLIER REMOVAL OF INLET PROTECTION IN STREETS.

6. WHEN INLET PROTECTION AT AREA INLETS IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

NOTE: THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF INLET PROTECTION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY PROPRIETARY INLET PROTECTION METHODS ON THE MARKET. UDFCD NEITHER ENDORSES NOR DISCOURAGES USE OF PROPRIETARY INLET PROTECTION; HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THE SWMP AND THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN IN THE MANUFACTURER'S DETAILS.

NOTE: SOME MUNICIPALITIES DISCOURAGE OR PROHIBIT THE USE OF STRAW BALES FOR INLET PROTECTION. CHECK WITH LOCAL JURISDICTION TO DETERMINE IF STRAW BALE INLET PROTECTION IS ACCEPTABLE.

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

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

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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

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

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DESIGNED BY N/A
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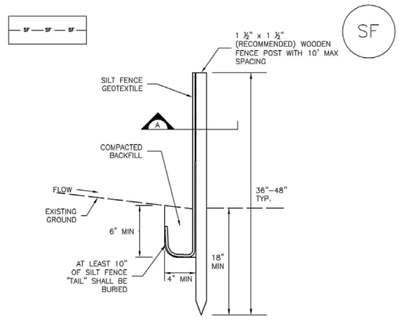
CHECKED BY

HOMESTEAD NORTH AT STERLING RANCH FILING 3

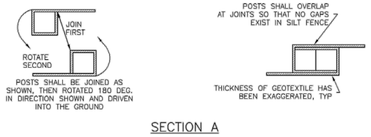
DETAILS

SHEET 9 OF 12

JOB NO. 25188.12



SILT FENCE



SECTION A

SF–1. SILT FENCE

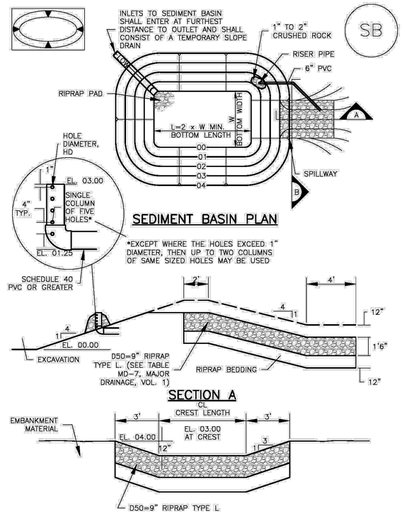


TABLE SB–1. SIZING INFORMATION FOR STANDARD SEDIMENT BASIN

Upstream Drainage Area (rounded to nearest acre), (ac)	Basin Bottom Width (W), (ft)	Spillway Crest Length (CL), (ft)	Hole Diameter (HD), (in)
1	12 ½	2	9/32
2	21	3	11/32
3	28	5	7/32
4	33 ½	6	9/32
5	38 ½	8	23/32
6	43	9	25/32
7	47 ¼	11	27/32
8	51	12	29/32
9	55	13	31/32
10	58 ¼	15	1 1/32
11	61	16	1 3/32
12	64	18	
13	67 ½	19	1 1/16
14	70 ½	21	1 3/16
15	73 ¼	22	1 5/16

SEDIMENT BASIN A

SEDIMENT BASIN B AND C

SEDIMENT BASIN INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –LOCATION OF SEDIMENT BASIN.
   –TYPE OF BASIN (STANDARD BASIN OR NONSTANDARD BASIN).
   –FOR STANDARD BASIN, BOTTOM WIDTH W, CREST LENGTH CL, AND HOLE DIAMETER, HD.
   –FOR NONSTANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT H, NUMBER OF COLUMNS N, HOLE DIAMETER HD AND PIPE DIAMETER D.

2. FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.

3. SEDIMENT BASINS SHALL BE INSTALLED PRIOR TO ANY OTHER LAND-DISTURBING ACTIVITY THAT RELIES ON ON BASINS AS AS A STORMWATER CONTROL.

4. EMBANKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL, AND ROCKS OR CONCRETE GREATER THAN 3 INCHES AND SHALL HAVE A MINIMUM OF 15 PERCENT BY WEIGHT PASSING THE NO. 200 SIEVE.

5. EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.

6. PIPE SCH 40 OR GREATER SHALL BE USED.

7. THE DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SEDIMENT BASIN(S) FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASIN(S) THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS LARGER THAN 15 ACRES.

SEDIMENT BASIN MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. SEDIMENT ACCUMULATED IN BASIN SHALL BE REMOVED AS NEEDED TO MAINTAIN BMP EFFECTIVENESS. TYPICALLY WHEN SEDIMENT DEPTH REACHES ONE FOOT (I.E., TWO FEET BELOW THE SPILLWAY CREST).

5. SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS ACCEPTED BY THE LOCAL JURISDICTION.

6. WHEN SEDIMENT BASINS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

SILT FENCE INSTALLATION NOTES

1. SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2–5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.

2. A UNIFORM 6" X 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.

3. COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.

4. SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.

5. SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3" ALONG THE FABRIC DOWN THE STAKE.

6. AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "J–HOOK." THE "J–HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' – 20').

7. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

SILT FENCE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".

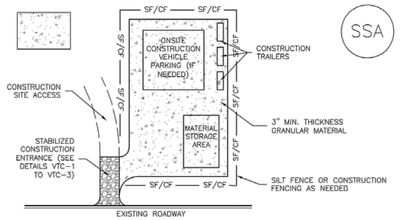
5. REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.

6. SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.

7. WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.



SSA–1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

1. SEE PLAN VIEW FOR
   –LOCATION OF STAGING AREA(S).
   –CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.

2. STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.

3. STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.

4. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.

5. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

6. ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

STABILIZED STAGING AREA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

STABILIZED STAGING AREA MAINTENANCE NOTES

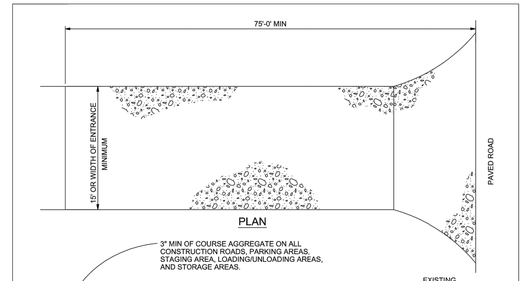
5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.

6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE–ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)



SECTION

VEHICLE TRACKING
NTS

VEHICLE TRACKING NOTES

INSTALLATION REQUIREMENTS

1. ALL ENTRANCES TO THE CONSTRUCTION SITE ARE TO BE STABILIZED PRIOR TO CONSTRUCTION BEGINNING.

2. CONSTRUCTION ENTRANCES ARE TO BE BUILT WITH AN APRON TO ALLOW FOR TURNING TRAFFIC, BUT SHOULD NOT BE BUILT OVER EXISTING PAVEMENT EXCEPT FOR A SLIGHT OVERLAP.

3. AREAS TO BE STABILIZED ARE TO BE PROPERLY GRADED AND COMPACTED PRIOR TO LAYING DOWN GEOTEXTILE AND STONE.

4. CONSTRUCTION ROADS, PARKING AREAS, LOADING/UNLOADING ZONES, STORAGE AREAS, AND STAGING AREAS ARE TO BE STABILIZED.

5. CONSTRUCTION ROADS ARE TO BE BUILT TO CONFORM TO SITE GRADES, BUT SHOULD NOT HAVE SIDE SLOPES OR ROAD GRADES THAT ARE EXCESSIVELY STEEP.

MAINTENANCE REQUIREMENTS

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL STABILIZED AREAS, ESPECIALLY AFTER STORM EVENTS.

2. STONES ARE TO BE REAPPLIED PERIODICALLY AND WHEN REPAIR IS NECESSARY.

3. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED DAILY BY SHOVELING OR SWEEPING. SEDIMENT IS NOT TO BE WASHED DOWN STORM SEWER DRAINS.

4. STORM SEWER INLET PROTECTION IS TO BE IN PLACE, INSPECTED, AND CLEANED IF NECESSARY.

5. OTHER ASSOCIATED SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED TO ENSURE GOOD WORKING CONDITION.

City of Colorado Springs Stormwater Quality	Figure VT-2 Vehicle Tracking Application Examples

3-54

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

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

COLORADO REGISTERED MIKE A. BRAMLETT PROFESSIONAL ENGINEER 32314

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

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

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DATE 08/01/22
DESIGNED BY N/A
DRAWN BY N/A
CHECKED BY

HOMESTEAD NORTH AT STERLING RANCH FILING 3

DETAILS

SHEET 10 OF 12

JOB NO. 25188.12

Seeding dates for the highest success probability of perennial species along the Front Range are generally in the spring from April through early May and in the fall after the first of September until the ground freezes. If the area is irrigated, seeding may occur in summer months, as well. See Table TS/PS-3 for appropriate seeding dates.

Table TS/PS-1. Minimum Drill Seeding Rates for Various Temporary Annual Grasses

Species[a] (Common name)	Growth Season[b]	Pounds of Pure Live Seed (PLS)/acre[c]	Planting Depth (inches)
1. Oats	Cool	35 - 50	1 - 2
2. Spring wheat	Cool	25 - 35	1 - 2
3. Spring barley	Cool	25 - 35	1 - 2
4. Annual ryegrass	Cool	10 - 15	½
5. Millet	Warm	3 - 15	½ - ¾
6. Sudangrass	Warm	5–10	½ - ¾
7. Sorghum	Warm	5–10	½ - ¾
8. Winter wheat	Cool	20–35	1 - 2
9. Winter barley	Cool	20–35	1 - 2
10. Winter rye	Cool	20–35	1 - 2
11. Triticale	Cool	25–40	1 - 2

[a] Successful seeding of annual grass resulting in adequate plant growth will usually produce enough dead-plant residue to provide protection from wind and water erosion for an additional year. This assumes that the cover is not disturbed or mowed closer than 8 inches.

Hydraulic seeding may be substituted for drilling only where slopes are steeper than 3:1 or where access limitations exist. When hydraulic seeding is used, hydraulic mulching should be applied as a separate operation, when practical, to prevent the seeds from being encapsulated in the mulch.

[b] See Table TS/PS-3 for seeding dates. Irrigation, if consistently applied, may extend the use of cool season species during the summer months.

[c] Seeding rates should be doubled if seed is broadcast, or increased by 50 percent if done using a Brillion Drill or by hydraulic seeding.

Table TS/PS-2. Minimum Drill Seeding Rates for Perennial Grasses

Common[a] Name	Botanical Name	Growth Season[b]	Growth Form	Seeds/ Pound	Pounds of PLS/acre
Alakali Soil Seed Mix					
Alkali sacaton	*Sporobolus airoides*	Cool	Bunch	1,750,000	0.25
Basin wildrye	*Elymus cinereus*	Cool	Bunch	165,000	2.5
Sodar streambank wheatgrass	*Agropyron riparium 'Sodar'*	Cool	Sod	170,000	2.5
Jose tall wheatgrass	*Agropyron elongatum 'Jose'*	Cool	Bunch	79,000	7.0
Arriba western wheatgrass	*Agropyron smithii 'Arriba'*	Cool	Sod	110,000	5.5
Total					**17.75**
Fertile Loamy Soil Seed Mix					
Ephriam crested wheatgrass	*Agropyron cristatum 'Ephriam'*	Cool	Sod	175,000	2.0
Dural hard fescue	*Festuca ovina 'duriuscula'*	Cool	Bunch	565,000	1.0
Lincoln smooth brome	*Bromus inermis leyss 'Lincoln'*	Cool	Sod	130,000	3.0
Sodar streambank wheatgrass	*Agropyron riparium 'Sodar'*	Cool	Sod	170,000	2.5
Arriba western wheatgrass	*Agropyron smithii 'Arriba'*	Cool	Sod	110,000	7.0
Total					**15.5**
High Water Table Soil Seed Mix					
Meadow foxtail	*Alopecurus pratensis*	Cool	Sod	900,000	0.5
Redtop	*Agrostis alba*	Warm	Open sod	5,000,000	0.25
Reed canarygrass	*Phalaris arundinacea*	Cool	Sod	68,000	0.5
Lincoln smooth brome	*Bromus inermis leyss 'Lincoln'*	Cool	Sod	130,000	3.0
Pathfinder switchgrass	*Panicum virgatum 'Pathfinder'*	Warm	Sod	389,000	1.0
Alkar tall wheatgrass	*Agropyron elongatum 'Alkar'*	Cool	Bunch	79,000	5.5
Total					**10.75**
Transition Turf Seed Mix[c]					
Ruebens Canadian bluegrass	*Poa compressa 'Ruebens'*	Cool	Sod	2,500,000	0.5
Dural hard fescue	*Festuca ovina 'duriuscula'*	Cool	Bunch	565,000	1.0
Citation perennial ryegrass	*Lolium perenne 'Citation'*	Cool	Sod	247,000	3.0
Lincoln smooth brome	*Bromus inermis leyss 'Lincoln'*	Cool	Sod	130,000	3.0
Total					**7.5**

Table TS/PS-2. Minimum Drill Seeding Rates for Perennial Grasses (cont.)

Common Name	Botanical Name	Growth Season[b]	Growth Form	Seeds/ Pound	Pounds of PLS/acre
Sandy Soil Seed Mix					
Blue grama	*Bouteloua gracilis*	Warm	Sod-forming bunchgrass	825,000	0.5
Camper little bluestem	*Schizachyrium scoparium 'Camper'*	Warm	Bunch	240,000	1.0
Prairie sandreed	*Calamovilfa longifolia*	Warm	Open sod	274,000	1.0
Sand dropseed	*Sporobolus cryptandrus*	Cool	Bunch	5,298,000	0.25
Vaughn sideoats grama	*Bouteloua curtipendula 'Vaughn'*	Warm	Sod	191,000	2.0
Arriba western wheatgrass	*Agropyron smithii 'Arriba'*	Cool	Sod	110,000	5.5
Total					**10.25**
Heavy Clay, Rocky Foothill Seed Mix					
Ephriam crested wheatgrass[d]	*Agropyron cristatum 'Ephriam'*	Cool	Sod	175,000	1.5
Oahe Intermediate wheatgrass	*Agropyron intermedium 'Oahe'*	Cool	Sod	115,000	5.5
Vaughn sideoats grama[e]	*Bouteloua curtipendula 'Vaughn'*	Warm	Sod	191,000	2.0
Lincoln smooth brome	*Bromus inermis leyss 'Lincoln'*	Cool	Sod	130,000	3.0
Arriba western wheatgrass	*Agropyron smithii 'Arriba'*	Cool	Sod	110,000	5.5
Total					**17.5**

[a] All of the above seeding mixes and rates are based on drill seeding followed by crimped straw mulch. These rates should be doubled if seed is broadcast and should be increased by 50 percent if the seeding is done using a Brillion Drill or is applied through hydraulic seeding. Hydraulic seeding may be substituted for drilling only where slopes are steeper than 3:1. If hydraulic seeding is used, hydraulic mulching should be done as a separate operation.

[b] See Table TS/PS-3 for seeding dates.

[c] If site is to be irrigated, the transition turf seed rates should be doubled.

[d] Crested wheatgrass should not be used on slopes steeper than 6H to 1V.

[e] Can substitute 0.5 lbs PLS of blue grama for the 2.0 lbs PLS of Vaughn sideoats grama.

Table TS/PS-3. Seeding Dates for Annual and Perennial Grasses

	Annual Grasses (Numbers in table reference species in Table TS/PS-1)		Perennial Grasses	
Seeding Dates	**Warm**	**Cool**	**Warm**	**Cool**
January 1–March 15			✓	✓
March 16–April 30	4	1,2,3	✓	✓
May 1–May 15	4		✓	
May 16–June 30	4,5,6,7			
July 1–July 15	5,6,7			
July 16–August 31				
September 1–September 30		8,9,10,11		
October 1–December 31			✓	✓

Mulch

Cover seeded areas with mulch or an appropriate rolled erosion control product to promote establishment of vegetation. Anchor mulch by crimping, netting or use of a non-toxic tackifier. See the Mulching BMP Fact Sheet for additional guidance.

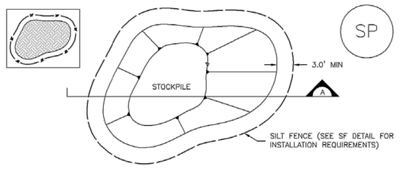
Maintenance and Removal

Monitor and observe seeded areas to identify areas of poor growth or areas that fail to germinate. Reseed and mulch these areas, as needed.

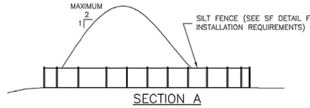
An area that has been permanently seeded should have a good stand of vegetation within one growing season if irrigated and within three growing seasons without irrigation in Colorado. Reseed portions of the site that fail to germinate or remain bare after the first growing season.

Seeded areas may require irrigation, particularly during extended dry periods. Targeted weed control may also be necessary.

Protect seeded areas from construction equipment and vehicle access.



STOCKPILE PROTECTION PLAN



SECTION A

SP–1. STOCKPILE PROTECTION

STOCKPILE PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –LOCATION OF STOCKPILES.
   –TYPE OF STOCKPILE PROTECTION.

2. INSTALL PERIMETER CONTROLS IN ACCORDANCE WITH THEIR RESPECTIVE DESIGN DETAILS. SILT FENCE IS SHOWN IN THE STOCKPILE PROTECTION DETAILS; HOWEVER, OTHER TYPES OF PERIMETER CONTROLS INCLUDING SEDIMENT CONTROL LOGS OR ROCK SOCKS MAY BE SUITABLE IN SOME CIRCUMSTANCES. CONSIDERATIONS FOR DETERMINING THE APPROPRIATE TYPE OF PERIMETER CONTROL FOR A STOCKPILE INCLUDE WHETHER THE STOCKPILE IS LOCATED ON A PERVIOUS OR IMPERVIOUS SURFACE, THE RELATIVE HEIGHTS OF THE PERIMETER CONTROL AND STOCKPILE, THE ABILITY OF THE PERIMETER CONTROL TO CONTAIN THE STOCKPILE WITHOUT FAILING IN THE EVENT THAT MATERIAL FROM THE STOCKPILE SHIFTS OR SLUMPS AGAINST THE PERIMETER, AND OTHER FACTORS.

3. STABILIZE THE STOCKPILE SURFACE WITH SURFACE ROUGHENING, TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS, OR SOIL BINDERS. SOILS STOCKPILED FOR AN EXTENDED PERIOD (TYPICALLY FOR MORE THAN 60 DAYS) SHOULD BE SEEDED AND MULCHED WITH A TEMPORARY GRASS COVER ONCE THE STOCKPILE IS PLACED (TYPICALLY WITHIN 14 DAYS). USE OF MULCH ONLY OR A SOIL BINDER IS ACCEPTABLE IF THE STOCKPILE WILL BE IN PLACE FOR A MORE LIMITED TIME PERIOD (TYPICALLY 30–60 DAYS).

4. FOR TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRADIENT CONTROLS, INCLUDING PERIMETER CONTROL, ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.

STOCKPILE PROTECTION MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

STOCKPILE PROTECTION MAINTENANCE NOTES

4. IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORKDAY.

5. STOCKPILE PERIMETER CONTROLS CAN BE REMOVED ONCE ALL THE MATERIAL FROM THE STOCKPILE HAS BEEN USED.

(DETAILS ADAPTED FROM PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

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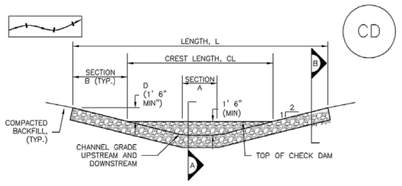
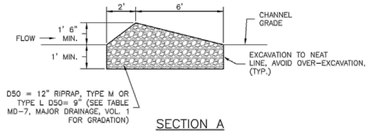
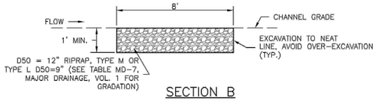


CHECK DAM ELEVATION VIEW



SECTION A



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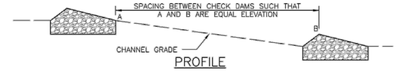

PROFILE

CD–1. CHECK DAM

CHECK DAM INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –LOCATION OF CHECK DAMS.
   –CHECK DAM TYPE (CHECK DAM OR REINFORCED CHECK DAM).
   –LENGTH (L), CREST LENGTH (CL), AND DEPTH (D).

2. CHECK DAMS INDICATED ON INITIAL SWMP SHALL BE INSTALLED AFTER CONSTRUCTION FENCE, BUT PRIOR TO ANY UPSTREAM LAND DISTURBING ACTIVITIES.

3. RIPRAP UTILIZED FOR CHECK DAMS SHOULD BE OF APPROPRIATE SIZE FOR THE APPLICATION. TYPICAL TYPES OF RIPRAP USED FOR CHECK DAMS ARE TYPE M (D50 12") OR TYPE L (D50 9").

4. RIPRAP PAD SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 1'.

5. THE ENDS OF THE CHECK DAM SHALL BE A MINIMUM OF 1' 6" HIGHER THAN THE CENTER OF THE CHECK DAM.

CHECK DAM MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. SEDIMENT ACCUMULATED UPSTREAM OF THE CHECK DAMS SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS WITHIN ½ OF THE HEIGHT OF THE CREST.

5. CHECK DAMS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

6. WHEN CHECK DAMS ARE REMOVED, EXCAVATIONS SHALL BE FILLED WITH SUITABLE COMPACTED BACKFILL. DISTURBED AREA SHALL BE SEEDED AND MULCHED AND COVERED WITH GEOTEXTILE OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

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Know what's below. Call before you dig.

ENGINEER'S STATEMENT

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

COLORADO MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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

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

PREPARED FOR
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No.	REVISION	BY	DATE

H-SCALE	N/A	DESIGNED BY	N/A
V-SCALE	N/A	DRAWN BY	N/A
DATE	08/01/22	CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING 3

DETAILS

SHEET 11 OF 12

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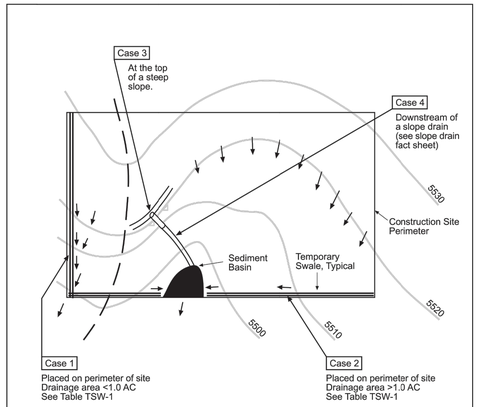

Table TSW-1

Temporary Swale Used as Perimeter Control	Case 1 DA < 1.0 AC	Case 2 DA > 1.0 AC
Continuous Grade	OK (1)	OK (1)
Area of Concentrated Flow	NO (3)	NO (2)

(1) Silt Fence or Straw Bale Barrier may be used as alternative to a Temporary Swale.
(2) With Temporary Swales Sediment Basin is required for concentrated flow from drainage areas > 1.0 AC.
(3) Check Dam is required at concentrated flow for drainage areas >1.0 acres.

City of Colorado Springs Storm Water Quality	Figure TSW-1 Temporary Swale Application Examples

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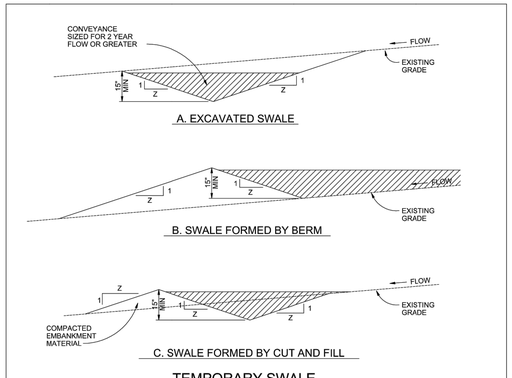


TEMPORARY SWALE

NTS

TEMPORARY SWALE NOTES

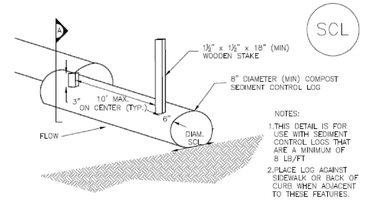
INSTALLATION REQUIREMENTS

1. TEMPORARY SWALES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
2. THE AREA UNDER WHICH THE EMBANKMENT IS TO BE INSTALLED SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ALL VEGETATION AND ROOT MAT.
3. EMBANKMENT MATERIAL SHALL CONSIST OF SOIL WITH A MINIMUM OF 15% PASSING A #200 SIEVE. EXCAVATED SOIL CAN BE USED IF IT MEETS THIS REQUIREMENT.
4. EMBANKMENT IS TO BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT ACCORDING TO ASTM D 698.
5. SWALES WITH SLOPE > 2% SHALL BE LINED, SEE FIGURE TSW-3.
6. SWALES ARE TO DRAIN INTO A SEDIMENT BASIN OR OTHER STABILIZED OUTLET.
7. Z SHALL BE 3 OR GREATER.

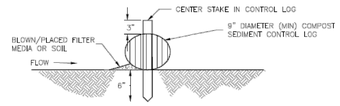
MAINTENANCE REQUIREMENTS

1. CONTRACTOR SHALL INSPECT SWALES AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS OF NO RAINFALL.
2. SWALES SHALL BE ROUTINELY CLEARED OF ANY DEBRIS OR ACCUMULATION OF SEDIMENT.
3. ERODED SLOPES OR DAMAGED LININGS SHALL IMMEDIATELY BE REPAIRED.
4. TEMPORARY SWALES SHALL REMAIN OPERATIONAL AND PROPERLY MAINTAINED UNTIL THE SITE AREA IS PERMANENTLY STABILIZED WITH ADEQUATE VEGETATIVE COVER AND/OR OTHER PERMANENT STRUCTURE AS APPROVED BY THE CITY.

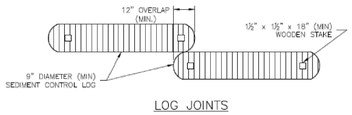
City of Colorado Springs Stormwater Quality	Figure TSW-2 Temporary Swale Construction Detail and Maintenance Requirements



COMPOST SEDIMENT CONTROL LOG (WEIGHTED)



SECTION (A)
COMPOST SEDIMENT CONTROL LOG



LOG JOINTS

SCL-2. COMPOST SEDIMENT CONTROL LOG (WEIGHTED)

SEDIMENT CONTROL LOG INSTALLATION NOTES

1. SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.
2. SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND-DISTURBING ACTIVITIES.
3. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND OBVIOUS WEAR.
4. SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES. HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS.
5. IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY ½ OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING. COMPOST LOGS THAT ARE 8 LB/FT DO NOT NEED TO BE TRENCHED.
6. THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL OR FILTER MATERIAL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER OR BLOWN IN PLACE.
7. FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4' CENTERS AND EMBEDDED A MINIMUM OF 6" INTO THE GROUND. 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED. COMPOST LOGS SHOULD BE STAKED 10' ON CENTER.

SEDIMENT CONTROL LOG MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY ½ OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.
5. SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION.COMPOST FROM COMPOST LOGS MAY BE LEFT IN PLACE AS LONG AS BAGS ARE REMOVED AND THE AREA SEEDED. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, JEFFERSON COUNTY, COLORADO, DOUGLAS COUNTY, COLORADO, AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

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

DATE

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PREPARED FOR
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No.	REVISION	BY	DATE

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DATE	08/01/22
DESIGNED BY	N/A
DRAWN BY	N/A
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING 3

DETAILS

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HOMESTEAD NORTH AT STERLING RANCH FILING NO.3

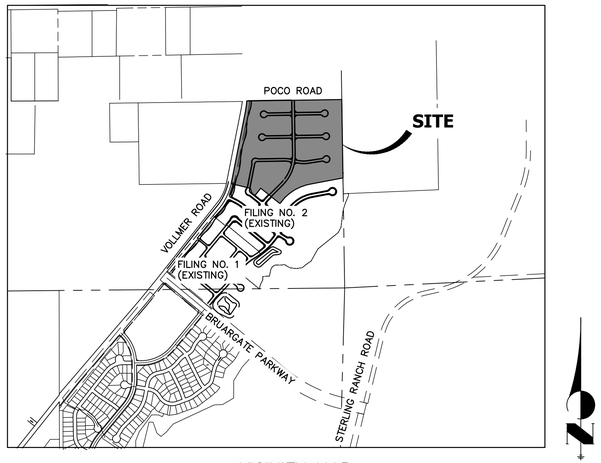
COUNTY OF EL PASO, STATE OF COLORADO

STREET IMPROVEMENT PLAN

PCD-ENGINEERING REVIEW COMMENTS IN BLUE BOXES WITH BLUE TEXT

AGENCIES

OWNER/DEVELOPER:	SR LAND, LLC 20 BOULDER CRESCENT, SUITE 200 COLORADO SPRINGS, CO 80903 JAMES MORLEY (719) 491-3024	FIRE DISTRICT:	BLACK FOREST FIRE PROTECTION DISTRICT 11445 TEACHOUT ROAD COLORADO SPRINGS, CO 80908 CHIEF BRYAN JACK (719) 495-4300
CIVIL ENGINEER:	JR ENGINEERING, LLC 5475 TECH CENTER DRIVE COLORADO SPRINGS, CO 80919 MIKE BRAMLETT P.E. (303) 267-6240	GAS DEPARTMENT:	COLORADO SPRINGS UTILITIES 7710 DURANT DR. COLORADO SPRINGS, CO 80947 TIM WENDT (719) 668-3556
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	ELECTRIC DEPARTMENT:	MOUNTAIN VIEW ELECTRIC 11140 E. WOODMEN ROAD FALCON, CO 80831 (719) 495-2283
TRAFFIC ENGINEERING:	EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS 3275 AKERS DRIVE COLORADO SPRINGS, CO 80922 JENNIFER IRVINE, P.E. (719) 520-6460	COMMUNICATIONS:	QWEST COMMUNICATIONS (U.N.C.C. LOCATORS) (800) 922-1987 AT&T (LOCATORS) (719) 635-3674
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		



VICINITY MAP
SCALE: 1"=1000'

SHEET INDEX

Update sheet index

JR Response: Updated.

BASIS OF BEARINGS

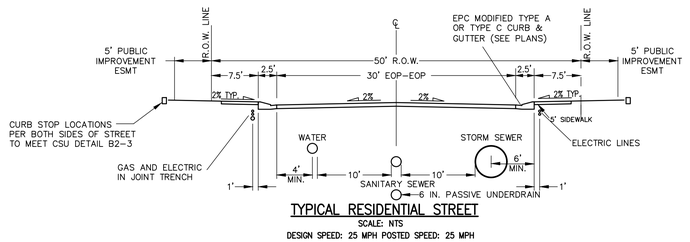
THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M. AS MONUMENTED AT THE SOUTHWEST CORNER OF SAID SOUTHWEST QUARTER BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624" AND AT THE SOUTHEAST CORNER OF SAID SOUTHWEST QUARTER BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624", SAID LINE BEARS N89°14'14"E A DISTANCE OF 2,722.69 FEET.

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



TYPICAL RESIDENTIAL STREET
SCALE: NTS
DESIGN SPEED: 25 MPH POSTED SPEED: 25 MPH

NOTE

- VOLLMER ROAD (NORTH) STREET IMPROVEMENT PLAN PCD FILE NO. CDR-21-10
- SAND CREEK RESTORATION PUBLIC IMPROVEMENT CONSTRUCTION PLANS PCD FILE NO. CDR-20-004
- HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2 PCD FILE NO. SF2218
- HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3 STORM SEWER AND POND PLANS
- HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3 EARLY SANITARY SYSTEM PLAN
- HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3 EARLY WATER SYSTEM PLAN

SP-22-007

JR Response: Updated.

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.

COLORADO REGISTERED MIKE K. BRAMLETT 32314 PROFESSIONAL ENGINEER

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

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 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.

Remove Interim

JR Response: Updated.

JOSHUA PALMER, P.E. — DATE
INTERIM COUNTY ENGINEER/ECM ADMINISTRATOR

DISTRICT APPROVALS

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

FOR AND ON BEHALF OF THE STERLING RANCH METRO DISTRICT — DATE

OWNER/DEVELOPER STATEMENT

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

JAMES F. MORLEY — DATE
SR LAND, LLC
20 BOULDER CRESCENT, SUITE 201
COLORADO SPRINGS, CO 80903

SF-22-29

JR Response: Updated.

Know what's below. Call before you dig.

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESENT
SUITE 200
COLORADO SPRINGS, CO 80903
ATTN: JAMES MORLEY
JMORLEY3870@AOL.COM

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	N/A
V-SCALE	N/A
DATE	08/05/22
DESIGNED BY	QNL
DRAWN BY	QNL
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3

COVER SHEET

SHEET 1 OF 15

JOB NO. 2518812

GENERAL CONSTRUCTION NOTES:

1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES ALONG THE ROUTE OF THE WORK. THE OMISSION FROM OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NONEXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES.

2. THE CONTRACTOR WILL TAKE THE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES FROM DAMAGE DUE TO THIS OPERATION. ANY DAMAGE TO THE UTILITIES WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, AND ANY SERVICE DISRUPTION WILL BE SETTLED BY THE CONTRACTOR.

3. ADDITIONAL EROSION CONTROL STRUCTURES MAY BE REQUIRED AT THE TIME OF CONSTRUCTION.

4. ALL BACKFILL, SUB-BASE, AND/OR BASE COURSE (CLASS 6) MATERIAL SHALL BE COMPACTED PER THE SOILS ENGINEER'S RECOMMENDATIONS, AND APPROVED BY EL PASO COUNTY PCD.

5. ALL STATIONING IS CENTERLINE OF IMPROVEMENTS UNLESS OTHERWISE INDICATED. ALL ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE INDICATED AS TOP BACK OF CURB (TBC), ASPHALT (ASP), OR TOP OF INLET OR BOX (TOB).

6. ALL DISTURBED PAVEMENT EDGES SHALL BE CUT TO NEAT LINES. REPAIR SHALL CONFORM TO EPC ECM APPENDIX K – 1.2C.

7. ALL INTERSECTION ACCESSES TO BE CONSTRUCTED WITH A 25 FOOT SIGHT VISIBILITY TRIANGLES IS REQUIRED AND THERE SHALL BE NO OBSTRUCTIONS GREATER THAN 18" VERTICAL IN THIS AREA.

8. ALL CULVERTS AND STORM DRAIN PIPES SHALL BE SMOOTH INTERIOR CORRUGATED POLYETHYLENE PIPE (HDPE), REINFORCED CONCRETE PIPE (RCP). ALL CULVERTS SHALL BE PLACED COMPLETE WITH FLARED END SECTIONS. ADEQUACY OF MATERIAL THICKNESS FOR ANY CSP INSTALLED SHALL BE VERIFIED BY OWNER'S GEOTECHNICAL ENGINEER TO SUPPORT MINIMUM 50 YEAR DESIGN LIFE. CULVERTS MUST CONFORM TO EPC ECM SECTION 3.32 – CULVERTS.

9. ASPHALT THICKNESS AND BASE COURSE THICKNESS (COMPACTED) FOR ROADS SHALL BE PER DESIGN REPORT BY OWNER'S GEOTECHNICAL ENGINEER. OWNER'S GEOTECHNICAL ENGINEER TO BE ON SITE AT THE TIME OF ROAD CONSTRUCTION TO EVALUATE SOIL CONDITIONS AND DETERMINE IF ADDITIONAL MEASURES ARE NECESSARY TO ASSURE STABILITY OF THE NEW ROADS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY DEVELOPMENT SERVICES ENGINEERING DIVISION PRIOR TO CONSTRUCTION.

SIGNING AND STRIPING NOTES:

1. ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN COMPLIANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED BY A METHOD THAT DOES NOT MATERIALLY DAMAGE THE PAVEMENT. THE PAVEMENT MARKINGS SHALL BE REMOVED TO THE EXTENT THAT THEY WILL NOT BE VISIBLE UNDER DAY OR NIGHT CONDITIONS. AT NO TIME WILL IT BE ACCEPTABLE TO PAINT OVER EXISTING PAVEMENT MARKINGS.
3. ANY DEVIATION FROM THE STRIPING AND SIGNING PLAN SHALL BE APPROVED BY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT.
4. ALL SIGNS SHOWN ON THE SIGNING AND STRIPING PLAN SHALL BE NEW SIGNS. EXISTING SIGNS MAY REMAIN OR BE REUSED IF THEY MEET CURRENT EL PASO COUNTY AND MUTCD STANDARDS.
5. STREET NAME AND REGULATORY STOP SIGNS SHALL BE ON THE SAME POST AT INTERSECTIONS.
6. ALL REMOVED SIGNS SHALL BE DISPOSED OF IN A PROPER MANNER BY THE CONTRACTOR.
7. ALL STREET NAME SIGNS SHALL HAVE "D" SERIES LETTERS, WITH LOCAL ROADWAY SIGNS BEING 4" UPPER-LOWER CASE LETTERING ON 8" BLANK AND NON-LOCAL ROADWAY SIGNS BEING 6" LETTERING, UPPER-LOWER CASE ON 12" BLANK, WITH A WHITE BORDER THAT IS NOT RECESSED. MULTI-LANE ROADWAYS WITH SPEED LIMITS OF 40 MPH OR HIGHER SHALL HAVE 8" UPPER-LOWER CASE LETTERING ON 18" BLANK WITH A WHITE BORDER THAT IS NOT RECESSED. THE WIDTH OF THE NON-RECESSED WHITE BORDERS SHALL MATCH PAGE 255 OF THE 2012 MUTCD "STANDARD HIGHWAY SIGNS"
8. ALL TRAFFIC SIGNS SHALL HAVE A MINIMUM HIGH INTENSITY PRISMATIC GRADE SHEETING.
9. ALL LOCAL RESIDENTIAL STREET SIGNS SHALL BE MOUNTED ON A 1.75" X 1.75" SQUARE TUBE SIGN POST AND STUB POST BASE. FOR OTHER APPLICATIONS, REFER TO THE CDOT STANDARD S-614-8 REGARDING USE OF THE P2 TUBULAR STEEL POST SLIPBASE DESIGN.
10. ALL SIGNS SHALL BE SINGLE SHEET ALUMINUM WITH 0.100" MINIMUM THICKNESS.
11. ALL LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS SHALL BE A MINIMUM 125 MIL THICKNESS PREFORMED THERMOPLASTIC PAVEMENT MARKINGS WITH TAPERED LEADING EDGES PER CDOT STANDARD S-627-1. WORD AND SYMBOL MARKINGS SHALL BE THE NARROW TYPE. STOP BARS SHALL BE 24" IN WIDTH. CROSSWALKS LINES SHALL BE 12" WIDE AND 8' LONG PER CDOT S-627-1.
12. ALL LONGITUDINAL LINES SHALL BE A MINIMUM 15MIL THICKNESS EPOXY PAINT. ALL NON-LOCAL RESIDENTIAL ROADWAYS SHALL INCLUDE BOTH RIGHT AND LEFT EDGE LINE STRIPING AND ANY ADDITIONAL STRIPING AS REQUIRED BY CDOT S-627-1.
13. THE CONTRACTOR SHALL NOTIFY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (719) 520-6819 PRIOR TO AND UPON COMPLETION OF SIGNING AND STRIPING.
14. THE CONTRACTOR SHALL OBTAIN A WORK IN THE RIGHT OF WAY PERMIT FROM THE EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS (DPW) PRIOR TO ANY SIGNAGE OR STRIPING WORK WITHIN AN EXISTING EL PASO COUNTY ROADWAY.

STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS:

1. 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.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD NOTIFICATION 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).

3. 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 TIMES, INCLUDING THE FOLLOWING:
   a. EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
   b. CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
   c. COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
   d. CDOT M & S STANDARDS

4. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER-THE-FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.

5. IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ONSITE AND OFFSITE, ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.

6. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (PCD) – INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.

7. IT IS THE CONTRACTOR'S 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 STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.

8. CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND PCD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.

9. ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY PCD.

10. CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.

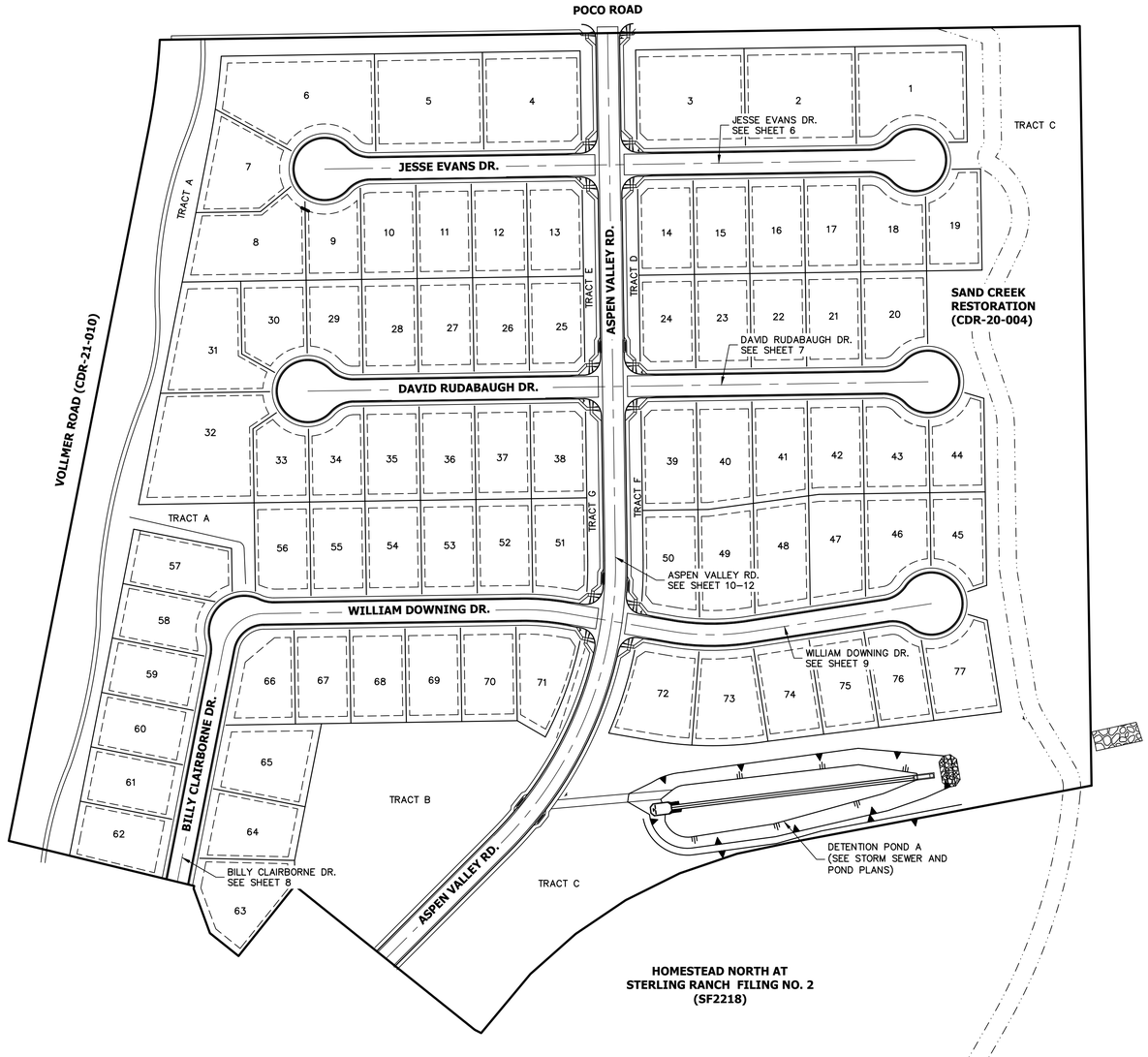
11. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.

12. SIGHT VISIBILITY TRIANGLES AS IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED WITHIN SIGHT TRIANGLES.

13. SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY PCD AND MUTCD CRITERIA. [IF APPLICABLE, ADDITIONAL SIGNING AND STRIPING NOTES WILL BE PROVIDED.]

14. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DPW, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.

15. 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 OFF-SITE DISTURBANCE, GRADING, OR CONSTRUCTION.



Key Map

JR Response: Updated.

SITE MAP
SCALE: 1"=100'

100 50 0 100 200
ORIGINAL SCALE: 1" = 100'

811
Know what's **below.**
Call before you dig.

ENGINEER'S STATEMENT

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

COLORADO REGISTERED MIKE A. BRAMLETT PROFESSIONAL ENGINEER 32314

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

DATE

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

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESENT
SUITE 200
COLORADO SPRINGS, CO 80903
ATTN: JAMES MORLEY
JMORLEY3870@AOL.COM

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=100'	DESIGNED BY	QNL
V-SCALE	N/A	DRAWN BY	QNL
DATE	08/05/22	CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3

GENERAL NOTES

SHEET 2 OF 15

JOB NO. 2518812

LAYER LINETYPE LEGEND

	EXISTING	PROPOSED
PHASE LINE		
MATCH LINE		
SECTION LINE		
BOUNDARY LINE		
PROPERTY LINE		
EASEMENT LINE		
RIGHT OF WAY		
R.O.W. A LINE	A	A
CENTERLINE		
CITY LIMITS		
WIRE FENCE		
CHAIN LINK FENCE		
WOOD FENCE		
MASONRY FENCE		
GUARDRAIL		
CONC. BARRIER		
CABLE TV	TV	TV
ELECTRIC	E	E
FIBER OPTIC	FO	FO
GAS MAIN	G	G
IRRIGATION MAIN	IRR	IRR
OIL/PETRO. MAIN	O	O
OVERHEAD UTILITY	OHU	OHU
SANITARY SEWER	S	
STORM DRAIN		
TELEPHONE	T	T
WATER MAIN	W	
RAW WATER LINE	RWL	RWL
SWALE/WATERWAY FLOWLINE		
DIVERSION DITCH		
DIVERSION CHANNEL		
MAJOR DRAINAGE BASIN		
MINOR DRAINAGE BASIN		
TOP OF SLOPE		
TOE OF SLOPE		
EDGE OF WATER		
INDEX CONTOUR	6100	6100
INTERMEDIATE CONTOUR		
DEPRESSION CONT. (INDEX)	6100	6100
DEPRESSION CONT. (INTER)		
TOP OF CUTS		
TOE OF FILLS		
CUT AND FILL LINE		C/F
SILT FENCE	SF	SF
100 YEAR FLOODPLAIN	100YR	100YR
500 YEAR FLOODPLAIN	500YR	500YR
FLOODWAY	FLDWY	FLDWY
BASE FLOOD ELEVATION		
EDGE OF WETLANDS		
STONE WALL		

UTILITIES LEGEND

	EXISTING	PROPOSED
STORM SEWER		
MANHOLE		
STORM INLET		
AREA INLET – SQUARE		
AREA INLET – ROUND		
FLARED END SECTION		
RIPRAP		
SANITARY SEWER		
LINE MARKER	Mkr San	
SERVICE MARKER		
CLEAN–OUT		
MANHOLE W/ DIRECTIONAL FLOW ARROW		
WATER LINE		
LINE MARKER	Mkr W	
SERVICE MARKER		
FIRE HYDRANT		
FIRE CONNECTION		
MANHOLE		
BEND		
BLOW–OFF VALVE		
WELL	WELL	WELL
METER		
VALVE		
REDUCER		
THRUST BLOCK		
CROSS		
PLUG W/ THRUST BLOCK		
TEE		
REVERSE ANCHOR		
ANODE		
AIR & VACUUM VALVE ASSEMBLY		
TRANSMISSION BLOW–OFF ASSEMBLY		
GAS LINE		
MARKER	Mkr G	
SERVICE MARKER		
METER		
VALVE		
PLUG		
TEE		
DRY UTILITIES		
CABLE TV MARKER	Mkr TV	
CABLE TELEVISION PEDESTAL		
ELECTRIC MARKER	Mkr E	
ELECTRIC SERVICE MARKER		
ELECTRICAL PEDESTAL		
ELECTRICAL METER		
ELECTRICAL MANHOLE		
FIBER–OPTIC MARKER	Mkr FO	
IRRIGATION PEDESTAL		
TELEPHONE MARKER	Mkr T	
TELEPHONE PEDESTAL		
TELEPHONE MANHOLE		
UTILITY POLE		
GUY ANCHOR		
GUY POLE		
MISC. UTILITIES		
VENT PIPE	VP	VP
TEST HOLE DESIGNATOR	TH# FIRM/AGENCY	

TRAFFIC LEGEND

	EXISTING	PROPOSED
PARKING METER		
TRAFFIC SIGNAL BOX		
TRAFFIC SIGNAL POLE		
TRAFFIC SIGNAL		
BARRICADE		
GUARD RAIL POST		
IMPACT ATTENUATOR		
BRIDGE STYLE HIGHWAY SIGN POST		
CANTILEVER STYLE HIGHWAY SIGN POST		
RAILROAD MARKER/SIGN		
STREET LIGHT		
STREET LIGHT – SINGLE		
STREET LIGHT – DOUBLE		
LUMINAIRE		
ALTERNATE LUMINAIRE		
SIGNAL MAST ARM W/ LUMINAIRE		
PEDESTAL POLE FOUNDATION		
TRAFFIC SIGNAL POLE		
ROUND PULL BOX		
MEDIUM PULL BOX		
LARGE PULL BOX (20X33X15)		
SIGNAL HEAD WITHOUT BACK PLATE		
SIGNAL HEAD WITH BACK PLATE		
PEDESTRIAN SIGNAL HEAD		
VIDEO IMAGE DETECTOR		
OPTICOM DETECTOR		
VEHICLE DETECTION ZONE		V

LANDSCAPE LEGEND

	EXISTING	PROPOSED
TREE – CONIFEROUS		
TREE – DECIDUOUS		
SHRUB/BUSH		
SHRUBS AND BUSHES		
IRRIGATION BOX		
IRRIGATION SPRINKLER		
IRRIGATION VALVE		
BOLLARD		
FLAGPOLE		FP

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

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

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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

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

PREPARED FOR
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SUITE 200
COLORADO SPRINGS, CO 80903
ATTN: JAMES MORLEY
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No.	REVISION	BY	DATE

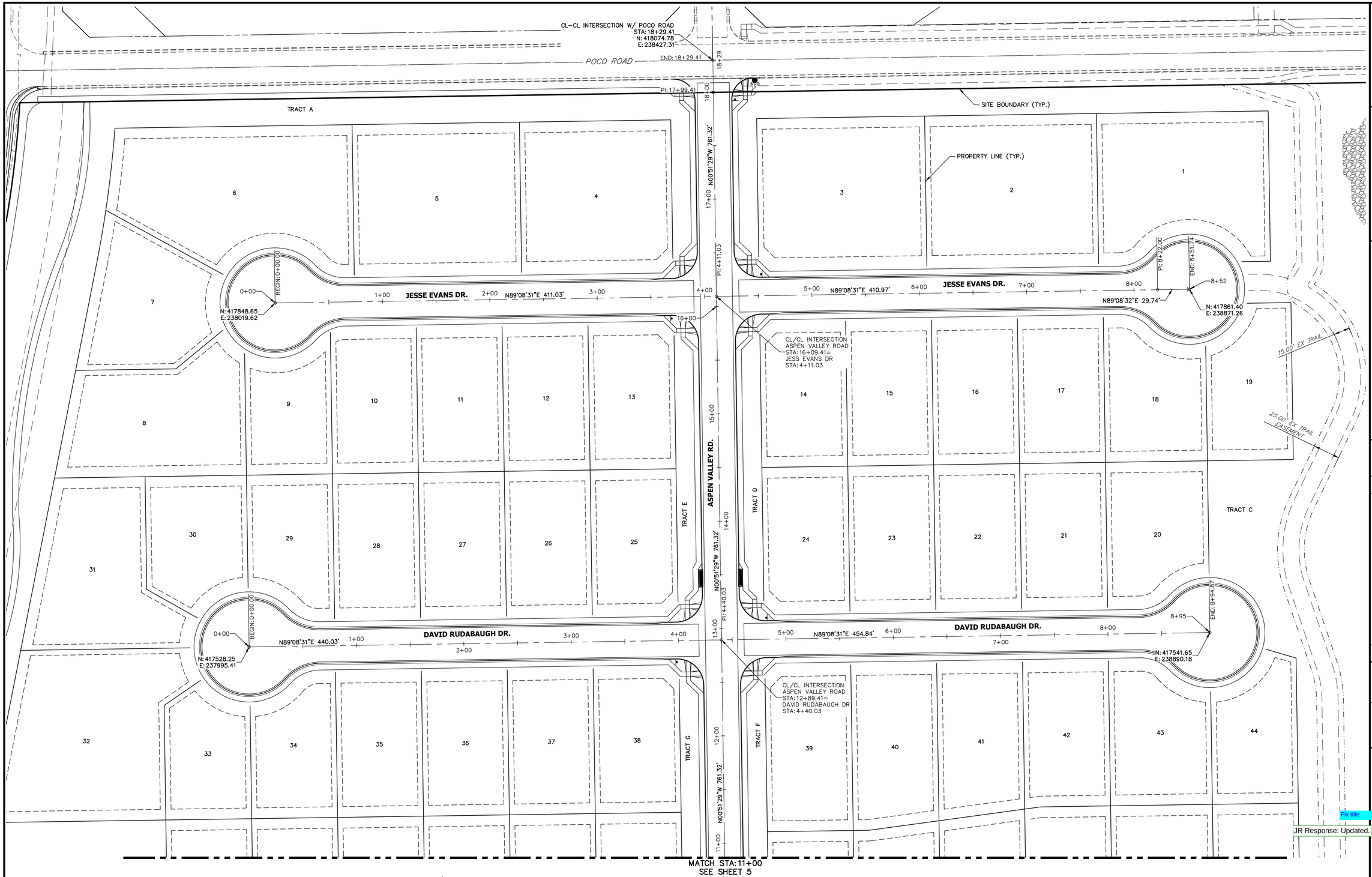
H-SCALE	N/A	DESIGNED BY	
V-SCALE	N/A	DRAWN BY	QNL
DATE	08/05/22	CHECKED BY	QNL

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3

LEGEND

SHEET 3 OF 15

JOB NO. 2518812



Fix title

JR Response: Updated.

40 20 0 40 80

ORIGINAL SCALE: 1" = 40'

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

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

DATE

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

PREPARED FOR
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No.	REVISION	BY	DATE

H–SCALE	1"=40'	DESIGNED BY	AL
V–SCALE	N/A	DRAWN BY	PL
DATE	08/05/22	CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3
HORIZONTAL CONTROL PLAN

SHEET 4 OF 15

JOB NO. 2518812

X:\2510000.all\2518812\Drawings\Sheet Dwgs\CD\Sheet Plans\2518812HCH1.dwg, HCH1, 8/3/2022 3:30:28 PM, GS

SEE SHEET 4
MATCH STA: 11+00

TRACT A
WILLIAM DOWNING DR.
N89°08'31"E 371.05'
Δ=78°01'19" R=60.00' L=81.70'
PC:10+41.17
PT:11+22.87
Δ=10°34'41" R=350.00' L=64.62'
PC:14+93.92
PT:15+58.53
TRACT G
PT:10+38.09
Δ=45°48'17" R=565.00' L=451.69'
TRACT F
Δ=18°33'05" R=350.00' L=113.32'
PC:17+13.12
PT:18+26.44
S80°16'48"E 86.87'
S80°16'48"E 67.71'
N81°10'07"E 265.96'
END:20+92.41
20+92
N: 417221.69
E: 238894.97
CL/CL INTERSECTION
ASPEN VALLEY ROAD
STA: 9+50.68=
BILLY CLAIRBORNE DR– WILLIAM DOWNING DR.
STA: 16+26.25
BILLY CLAIRBORNE DR.
N11°07'11"E 368.88'
TRACT B
PROPERTY LINE (TYP.)
Δ=45°48'17" R=565.00' L=451.69'
PC:5+86.40
ASPEN VALLEY RD.
N44°56'48"E 278.37'
BEGIN FILING NO. 3 IMPROVEMENTS
STA: 6+96.10
N: 416820.25
E: 237807.11
SITE BOUNDARY (TYP.)
PT:6+72.28
PC:6+06.92
PERRY OWENS DR.
PT:3+06.03
PC:2+50.66
BEGIN FILING NO. 3 IMPROVEMENTS
STA: 3+51.20
N: 416709.47
E: 238107.95
HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2 (SF2218)
TRACT C
POND A
JR Response: Updated.
Label street
Fix title
JR Response: Updated.

40 20 0 40 80
ORIGINAL SCALE: 1" = 40'

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, LLC DATE

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESENT
SUITE 200
COLORADO SPRINGS, CO 80903
ATTN: JAMES MORLEY
JMORLEY3870@AOL.COM

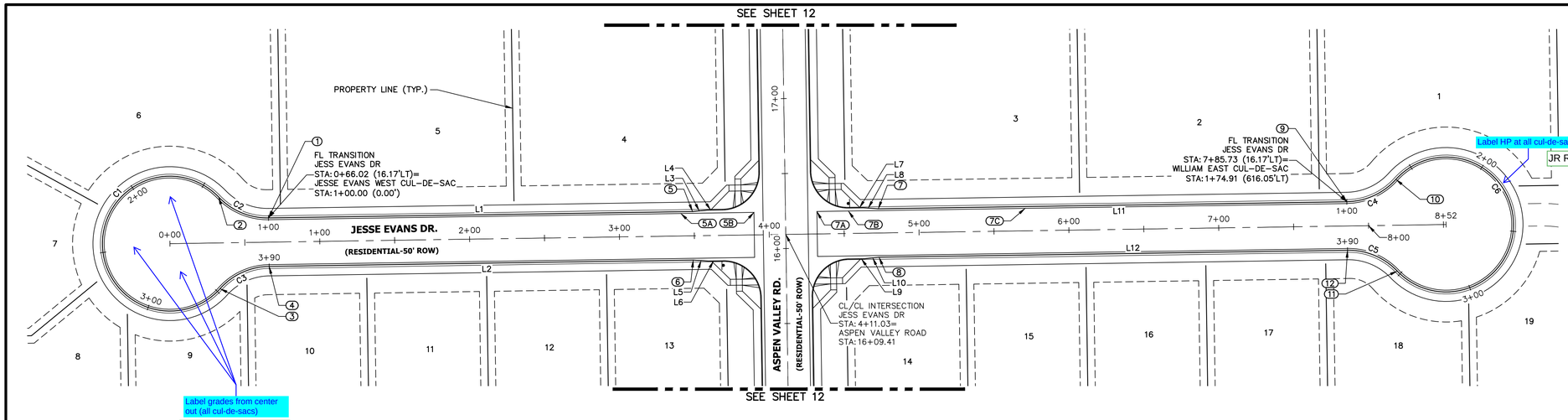
J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

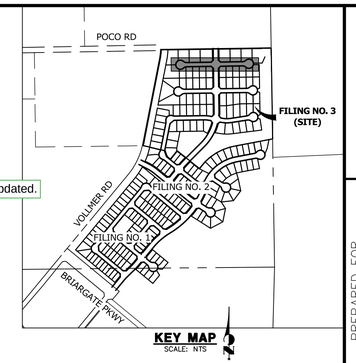
No.	REVISION	BY	DATE

H-SCALE	1"=40'
V-SCALE	N/A
DATE	08/05/22
DESIGNED BY	AL
DRAWN BY	PL
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2
HORIZONTAL CONTROL PLAN

SHEET 5 OF 15
JOB NO. 2518812





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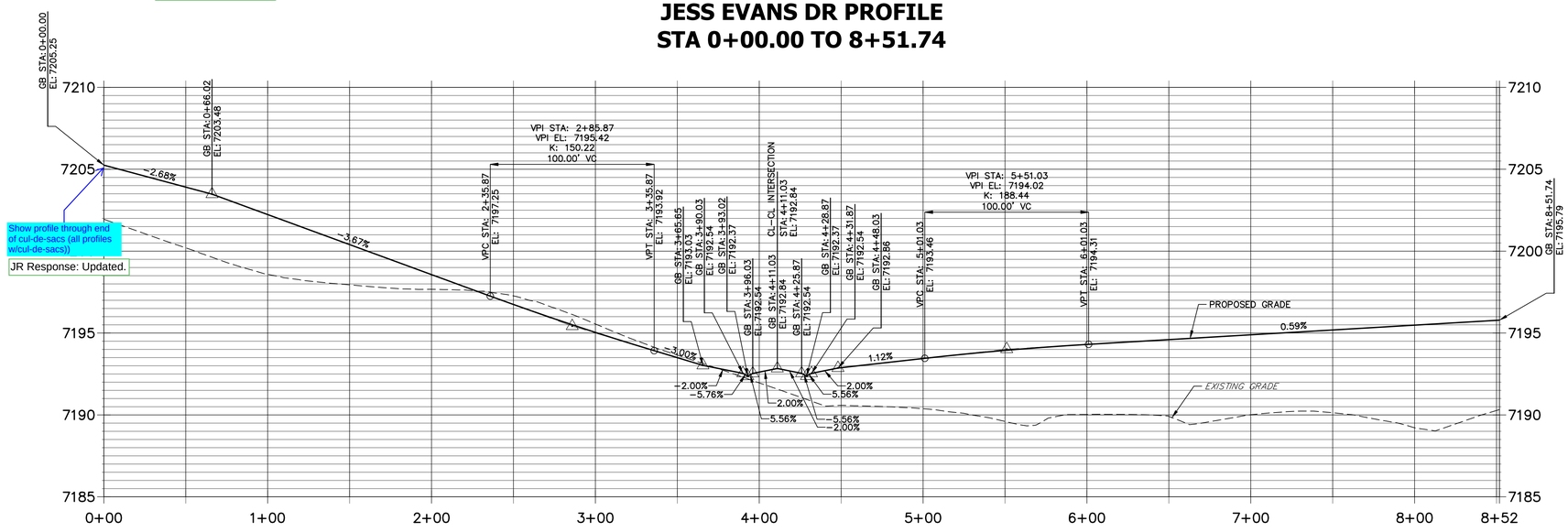
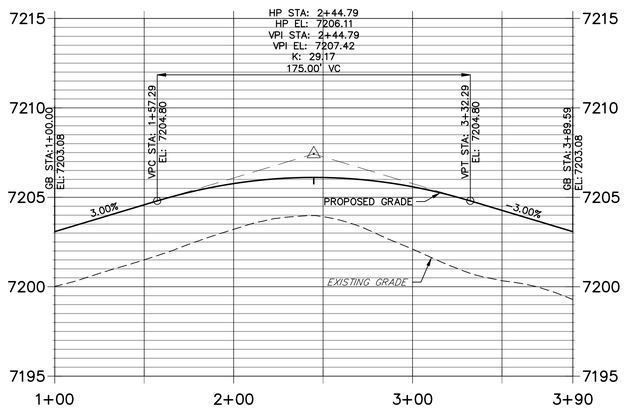
PREPARED FOR
SR LAND, LLC
20 BOULDER CRESENT
SUITE 200
COLORADO SPRINGS, CO 80903
ATTN: JAMES MORLEY
JMORLEY3870@AOL.COM

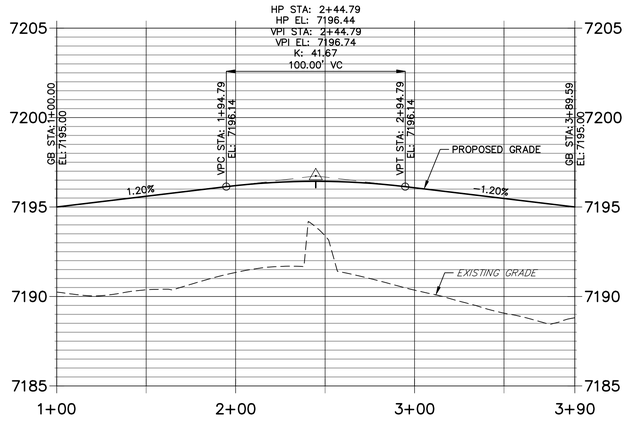
JESS EVANS DR PROFILE
STA 0+00.00 TO 8+51.74



JESSE EVANS WEST CUL-DE-SAC PROFILE
STA 1+00.00 TO 3+89.59



JESSE EVANS EAST CUL-DE-SAC PROFILE
STA 1+00.00 TO 3+89.59



CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C1	274°21'53"	45.00'	215.47'
C2	47°10'57"	45.00'	37.06'
C3	47°10'57"	45.00'	37.06'
C4	47°10'57"	45.00'	37.06'
C5	47°10'57"	45.00'	37.06'
C6	274°21'53"	45.00'	215.47'

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N89°08'31"E	283.02'
L2	S89°08'31"W	283.02'
L3	N84°22'42"E	10.03'
L4	N89°08'31"E	10.00'
L5	N86°05'40"W	10.03'
L6	S89°08'31"W	10.00'
L7	S89°08'31"W	10.00'
L8	N86°05'40"W	10.03'
L9	N89°08'31"E	10.00'
L10	N84°22'42"E	10.03'
L11	S89°08'31"W	312.70'
L12	N89°08'31"E	312.70'

POINT TABULATION					
POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
1	0+66.02	16.17' (LT)	Jess Evans Dr	7203.08	FL-PC
2	0+33.01	30.58' (LT)	Jess Evans Dr	7204.19	FL-PRC
3	0+33.01	30.58' (RT)	Jess Evans Dr	7204.19	FL-PRC
4	0+66.02	16.17' (RT)	Jess Evans Dr	7203.08	FL-PT
5	3+49.03	16.17' (LT)	Jess Evans Dr	7193.45	C&G TRANSITION
5A	3+41.18	15.00' (LT)	Jess Evans Dr	7193.46	LIP GB
5B	3+90.03	15.00' (LT)	Jess Evans Dr	7192.96	LIP
6	3+49.03	16.17' (RT)	Jess Evans Dr	7193.29	C&G TRANSITION
7	4+73.03	16.17' (LT)	Jess Evans Dr	7193.37	C&G TRANSITION
7A	4+32.03	15.00' (LT)	Jess Evans Dr	7192.96	LIP
7B	4+53.03	15.00' (LT)	Jess Evans Dr	7193.20	LIP GB
7C	5+71.03	15.00' (LT)	Jess Evans Dr	7193.81	LIP GB
8	4+73.03	16.17' (RT)	Jess Evans Dr	7192.81	C&G TRANSITION
9	7+85.73	16.17' (LT)	Jess Evans Dr	7195.00	FL-PC
10	8+18.74	30.58' (LT)	Jess Evans Dr	7195.44	FL-PRC
11	8+18.74	30.58' (RT)	Jess Evans Dr	7195.44	FL-PRC
12	7+85.73	16.17' (RT)	Jess Evans Dr	7195.00	FL-PT

40 20 0 40 80
HORIZONTAL
ORIGINAL SCALE: 1" = 40'
VERTICAL
ORIGINAL SCALE: 1" = 4'

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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

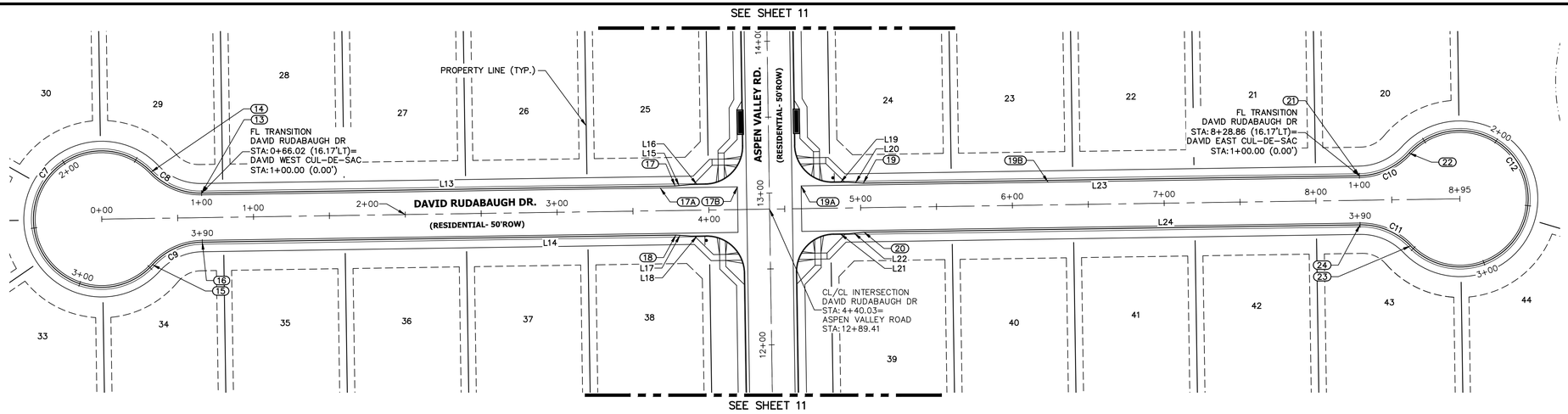
J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

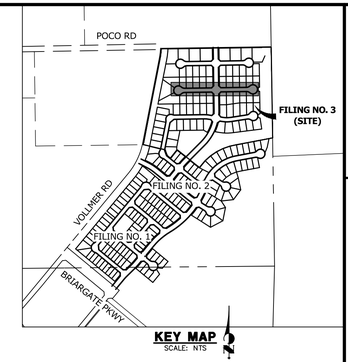
No.	REVISION	BY	DATE

H-SCALE	1"=40'
V-SCALE	1"=4'
DATE	08/05/22
DESIGNED BY	QNL
DRAWN BY	QNL
CHECKED BY	

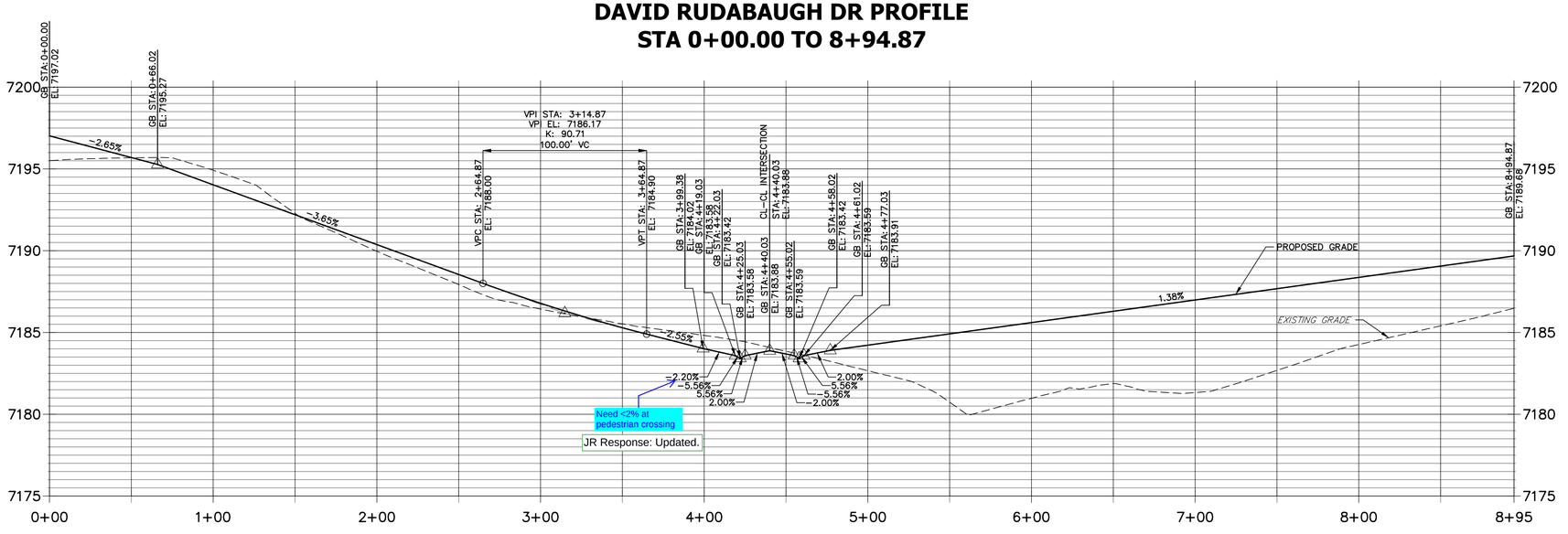
HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3
ROADWAY PLAN AND PROFILE

SHEET 6 OF 15
JOB NO. 2518812

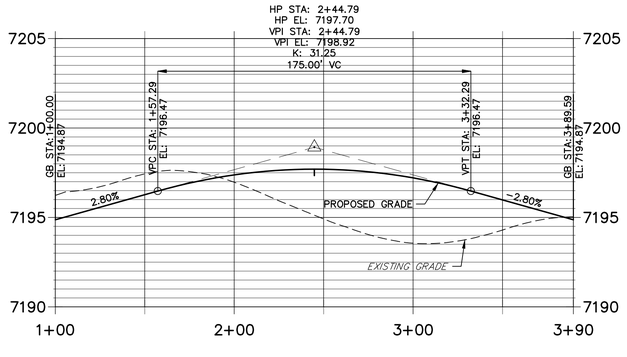




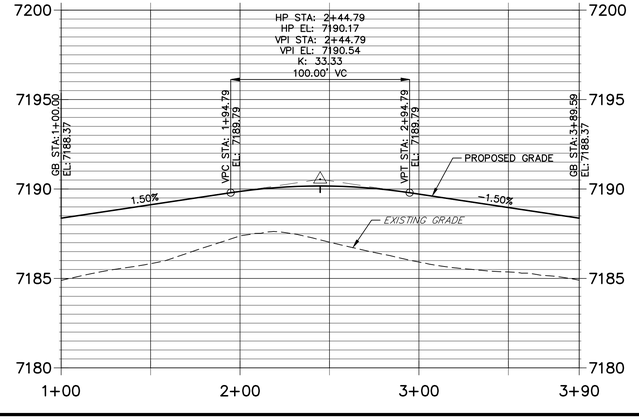
DAVID RUDABAUGH DR PROFILE
STA 0+00.00 TO 8+94.87



DAVID WEST CUL-DE-SAC PROFILE
STA 1+00.00 TO 3+89.59



DAVID EAST CUL-DE-SAC PROFILE
STA 1+00.00 TO 3+89.59



CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C7	274°21'53"	45.00'	215.47'
C8	47°10'57"	45.00'	37.06'
C9	47°10'57"	45.00'	37.06'
C10	47°10'57"	45.00'	37.06'
C11	47°10'57"	45.00'	37.06'
C12	274°21'53"	45.00'	215.47'

LINE TABLE		
LINE	BEARING	DISTANCE
L13	N89°08'31"E	312.02'
L14	S89°08'31"W	312.02'
L15	N84°22'42"E	10.03'
L16	N89°08'31"E	10.00'
L17	N86°05'40"W	10.03'
L18	S89°08'31"W	10.00'
L19	S89°08'31"W	10.00'
L20	N86°05'40"W	10.03'
L21	N89°08'31"E	10.00'
L22	N84°22'42"E	10.03'
L23	S89°08'31"W	326.82'
L24	N89°08'31"E	326.82'

POINT TABULATION					
POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
13	0+66.02	16.17' (LT)	David Rudabaugh Dr	7194.87	FL-PC
14	0+33.01	30.58' (LT)	David Rudabaugh Dr	7195.91	FL-PRC
15	0+33.01	30.58' (RT)	David Rudabaugh Dr	7195.91	FL-PRC
16	0+66.02	16.17' (RT)	David Rudabaugh Dr	7194.87	FL-PT
17	3+78.03	16.17' (LT)	David Rudabaugh Dr	7184.43	C&G TRANSITION
17A	3+68.18	15.00' (LT)	David Rudabaugh Dr	7184.51	LIP GB
17B	4+19.03	15.00' (LT)	David Rudabaugh Dr	7184.00	LIP
18	3+78.03	16.17' (RT)	David Rudabaugh Dr	7184.28	C&G TRANSITION
19	5+02.03	16.17' (LT)	David Rudabaugh Dr	7184.44	C&G TRANSITION
19A	4+61.03	15.00' (LT)	David Rudabaugh Dr	7184.01	LIP
19B	6+23.73	15.00' (LT)	David Rudabaugh Dr	7185.64	LIP GB
20	5+02.03	16.17' (RT)	David Rudabaugh Dr	7183.96	C&G TRANSITION
21	8+28.86	16.17' (LT)	David Rudabaugh Dr	7188.37	FL-PC
22	8+61.87	30.58' (LT)	David Rudabaugh Dr	7188.93	FL-PRC
23	8+61.87	30.58' (RT)	David Rudabaugh Dr	7188.93	FL-PRC
24	8+28.86	16.17' (RT)	David Rudabaugh Dr	7188.37	FL-PT

40 20 0 40 80

HORIZONTAL
ORIGINAL SCALE: 1" = 40'
VERTICAL
ORIGINAL SCALE: 1" = 4'

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, LLC

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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PREPARED FOR
SR LAND, LLC
20 BOULDER CRESENT
SUITE 200
COLORADO SPRINGS, CO 80903
ATTN: JAMES MORLEY
JMORLEY3870@AOL.COM

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A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE 1"=40'
V-SCALE 1"=4'
DATE 08/05/22
DESIGNED BY QNL
DRAWN BY QNL
CHECKED BY

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3

ROADWAY PLAN AND PROFILE

SHEET 7 OF 15

JOB NO. 2518812

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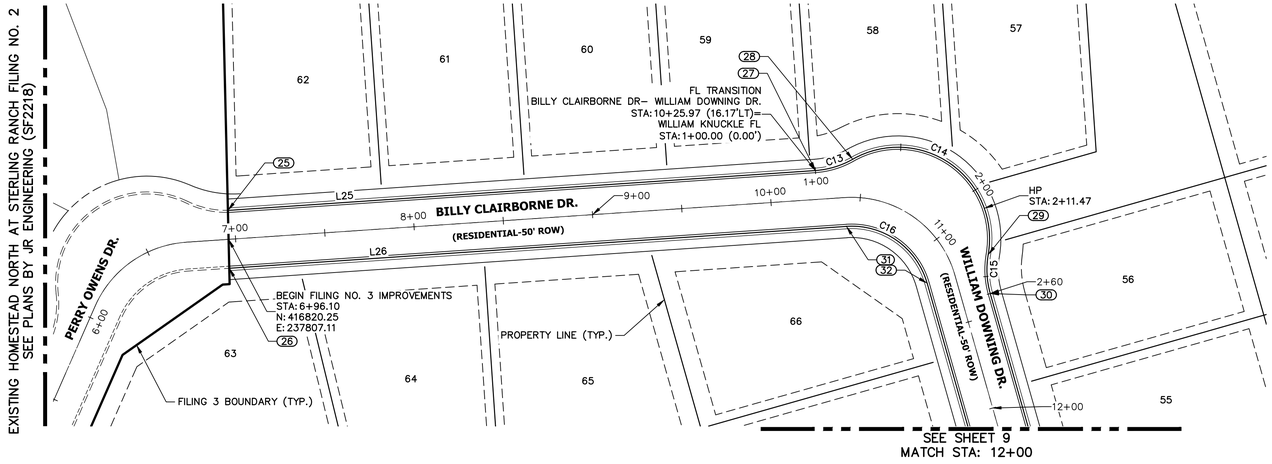
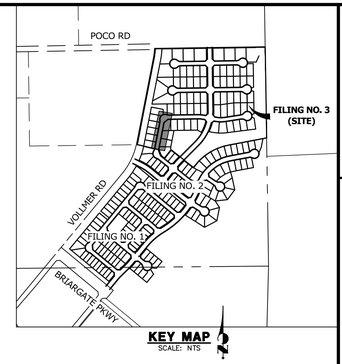
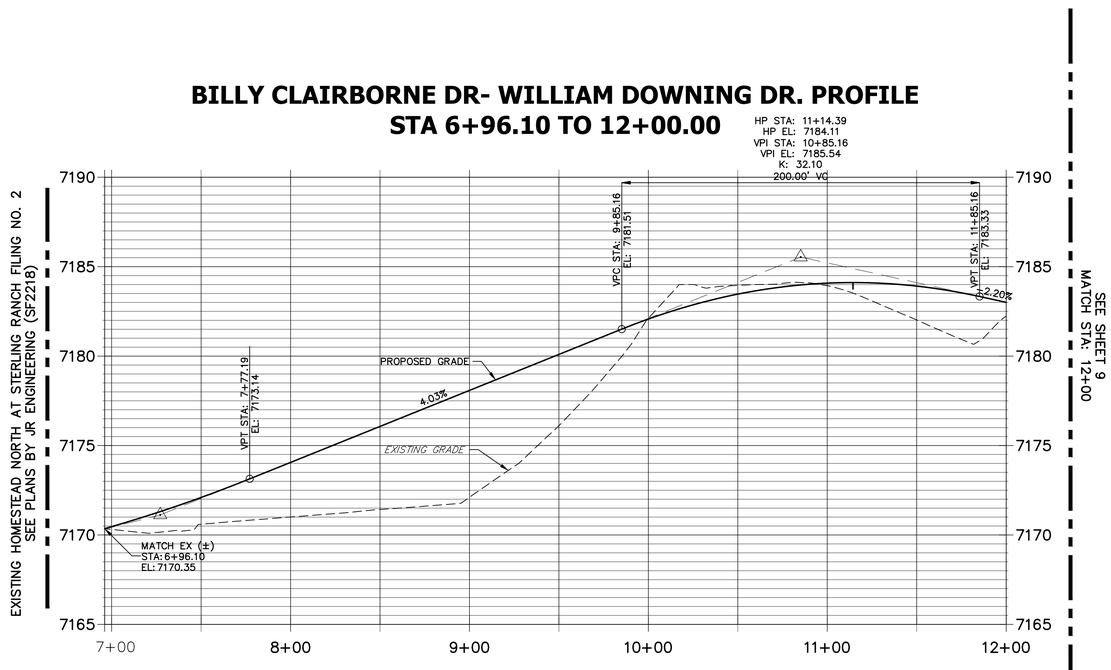
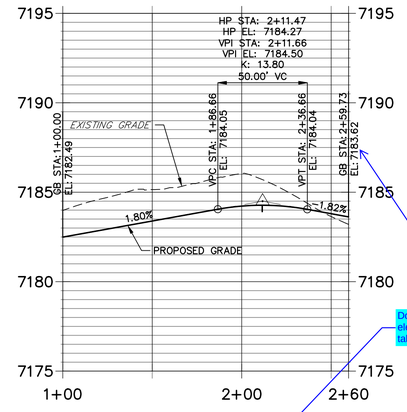




BILLY CLAIRBORNE DR- WILLIAM DOWNING DR. PROFILE
STA 6+96.10 TO 12+00.00



WILLIAM KNUCKLE FL PROFILE
STA 1+00.00 TO 2+59.73



Doesn't match with elevation shown in point table

JR Response: Updated.

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C13	25°47'50"	48.83'	21.99'
C14	129°37'00"	51.17'	115.75'
C15	25°47'50"	48.83'	21.99'
C16	78°01'19"	43.83'	59.69'

LINE TABLE		
LINE	BEARING	DISTANCE
L25	N11°07'11"E	329.16'
L26	N11°07'11"E	345.73'

POINT TABULATION					
POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
25	6+96.83	16.17' (LT)	BILLY CLAIRBORNE DR– WILLIAM DOWNING DR.	7169.98	CONNECT TO EX FL
26	6+95.43	16.17' (RT)	BILLY CLAIRBORNE DR– WILLIAM DOWNING DR.	7169.94	CONNECT TO EX FL
27	10+25.97	16.17' (LT)	BILLY CLAIRBORNE DR– WILLIAM DOWNING DR.	7182.50	FL–PC
28	10+45.64	21.26' (LT)	BILLY CLAIRBORNE DR– WILLIAM DOWNING DR.	7182.98	FL–PRC
29	11+18.39	21.26' (LT)	BILLY CLAIRBORNE DR– WILLIAM DOWNING DR.	7184.11	FL–PRC
30	11+38.06	16.17' (LT)	BILLY CLAIRBORNE DR– WILLIAM DOWNING DR.	7183.67	FL–PT
31	10+41.17	16.17' (RT)	BILLY CLAIRBORNE DR– WILLIAM DOWNING DR.	7182.88	FL–PC
32	11+22.87	16.17' (RT)	BILLY CLAIRBORNE DR– WILLIAM DOWNING DR.	7183.70	FL–PT

40 20 0 40 80

HORIZONTAL
ORIGINAL SCALE: 1" = 40'
VERTICAL
ORIGINAL SCALE: 1" = 4'

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ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO P.E. 32314 MIKE A. BRAMLETT REGISTERED PROFESSIONAL ENGINEER

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

DATE

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No.	REVISION	BY	DATE

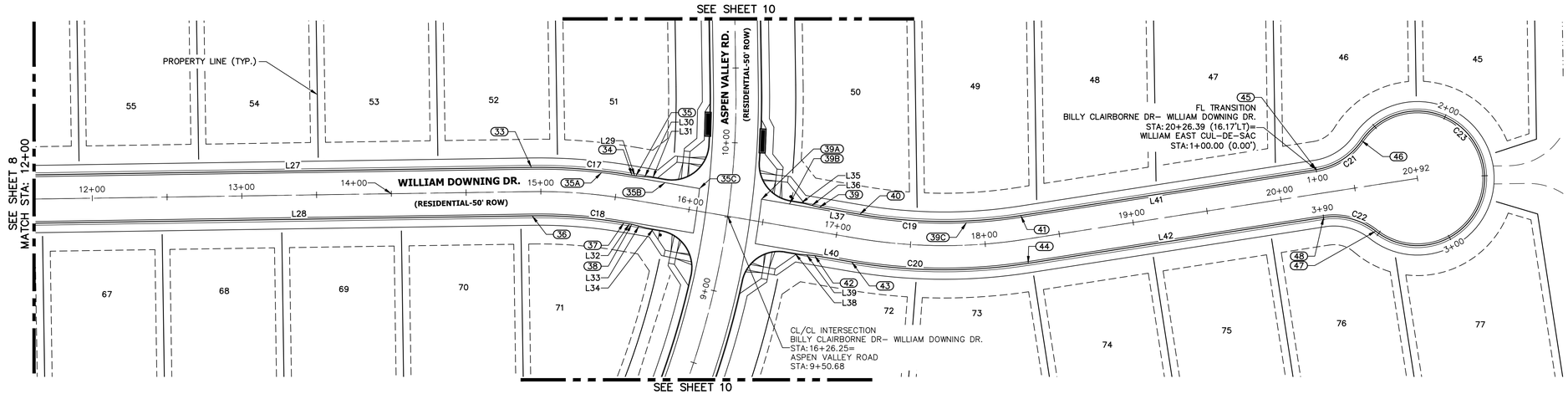
H-SCALE	1"=40'
V-SCALE	1"=4'
DATE	08/05/22
DESIGNED BY	QNL
DRAWN BY	QNL
CHECKED BY	

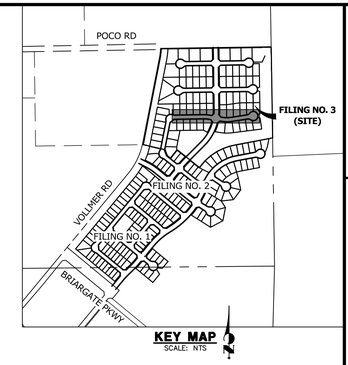
HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3

ROADWAY PLAN AND PROFILE

SHEET 8 OF 15

JOB NO. 2518812

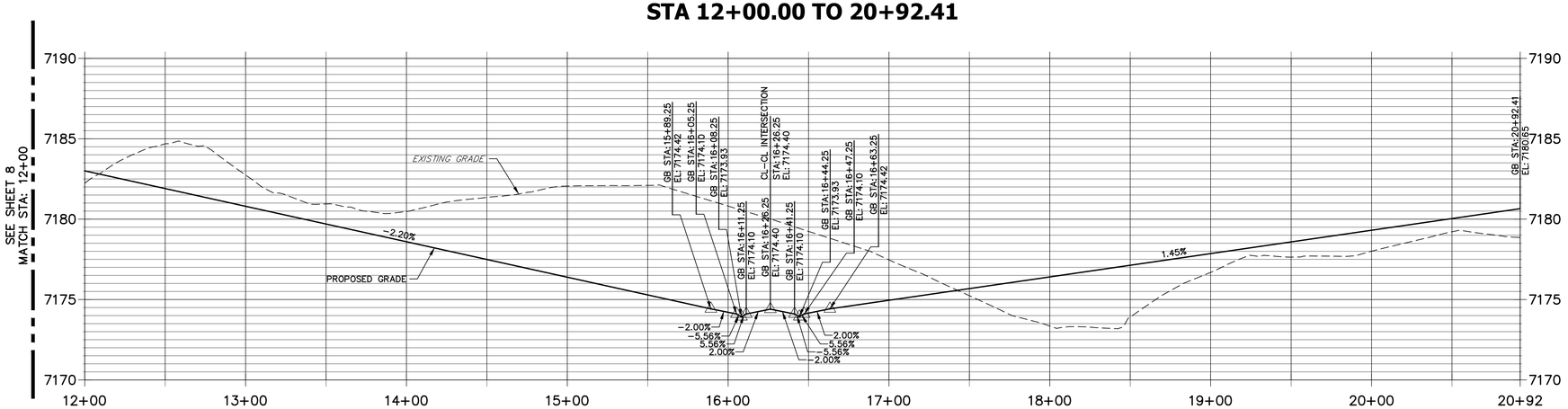




CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C17	10°34'41"	366.17'	67.60'
C18	10°34'41"	333.83'	61.63'
C19	18°33'05"	333.83'	108.09'
C20	18°33'05"	366.17'	118.56'
C21	47°10'57"	45.00'	37.06'
C22	47°10'57"	45.00'	37.06'
C23	274°21'53"	45.00'	215.47'

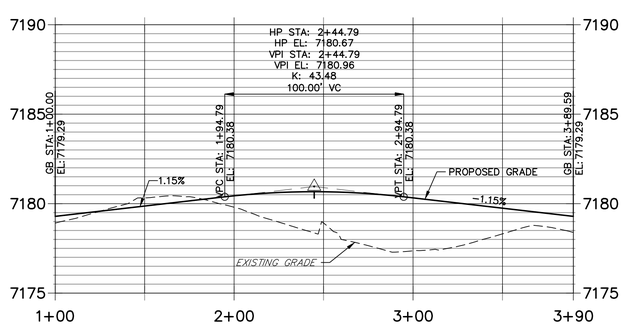
LINE TABLE		
LINE	BEARING	DISTANCE
L27	N89°08'31"E	355.85'
L28	N89°08'31"E	371.05'
L29	S80°16'48"E	2.64'
L30	S85°02'37"E	10.03'
L31	S80°16'48"E	10.00'
L32	S80°16'48"E	5.36'
L33	S75°30'59"E	10.03'
L34	S80°16'48"E	10.00'
L35	N80°16'48"W	10.00'
L36	N75°30'59"W	10.03'
L37	N80°16'48"W	27.48'
L38	S80°16'48"E	10.00'
L39	S85°02'37"E	10.03'
L40	S80°16'48"E	25.14'
L41	S81°10'07"W	199.94'
L42	N81°10'07"E	199.94'

BILLY CLAIRBORNE DR- WILLIAM DOWNING DR. PROFILE (1)
STA 12+00.00 TO 20+92.41



POINT TABULATION					
POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
33	14+93.92	16.17' (LT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7176.13	FL-PC
34	15+58.53	16.17' (LT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7175.09	FL-PT
35	15+61.17	16.17' (LT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7175.05	C&G TRANSITION
35A	15+38.98	15.00' (LT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7175.23	LIP GB
35B	15+81.16	15.00' (LT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7174.81	LIP GB
35C	16+04.56	15.00' (LT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7174.53	LIP
36	14+93.92	16.17' (RT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7176.13	FL-PC
37	15+58.53	16.17' (RT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7174.86	FL-PT
38	15+63.90	16.17' (RT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7174.75	C&G TRANSITION
39	16+85.64	16.17' (LT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7174.98	C&G TRANSITION
39A	16+46.63	15.00' (LT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7174.49	LIP
39B	16+65.57	15.00' (LT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7174.73	LIP GB
39C	17+88.13	15.00' (LT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7175.93	LIP GB
40	17+13.12	16.17' (LT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7175.23	FL-PC
41	18+26.44	16.17' (LT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7176.39	FL-PT
42	16+87.98	16.17' (RT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7174.49	C&G TRANSITION
43	17+13.12	16.17' (RT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7174.86	FL-PC
44	18+26.44	16.17' (RT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7176.39	FL-PT
45	20+26.39	16.17' (LT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7179.29	FL-PC
46	20+59.40	30.58' (LT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7179.72	FL-PRC
47	20+59.40	30.58' (RT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7179.72	FL-PRC

WILLIAM EAST CUL-DE-SAC PROFILE
STA 1+00.00 TO 3+89.59



POINT TABULATION					
POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
48	20+26.39	16.17' (RT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7179.29	FL-PT

40 20 0 40 80

HORIZONTAL
ORIGINAL SCALE: 1" = 40'
VERTICAL
ORIGINAL SCALE: 1" = 4'

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, LLC

PREPARED FOR
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Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

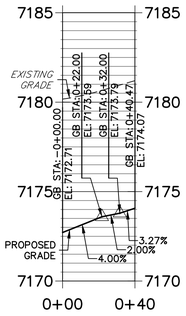
H-SCALE	1"=40'
V-SCALE	1"=4'
DATE	08/05/22
DESIGNED BY	QNL
DRAWN BY	QNL
CHECKED BY	

HOMESTEAD NORTH AT
STERLING RANCH FILING NO. 3
ROADWAY PLAN AND PROFILE

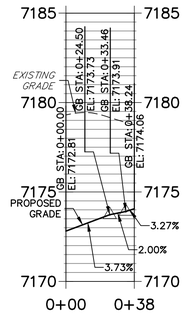
SHEET 9 OF 15
JOB NO. 2518812

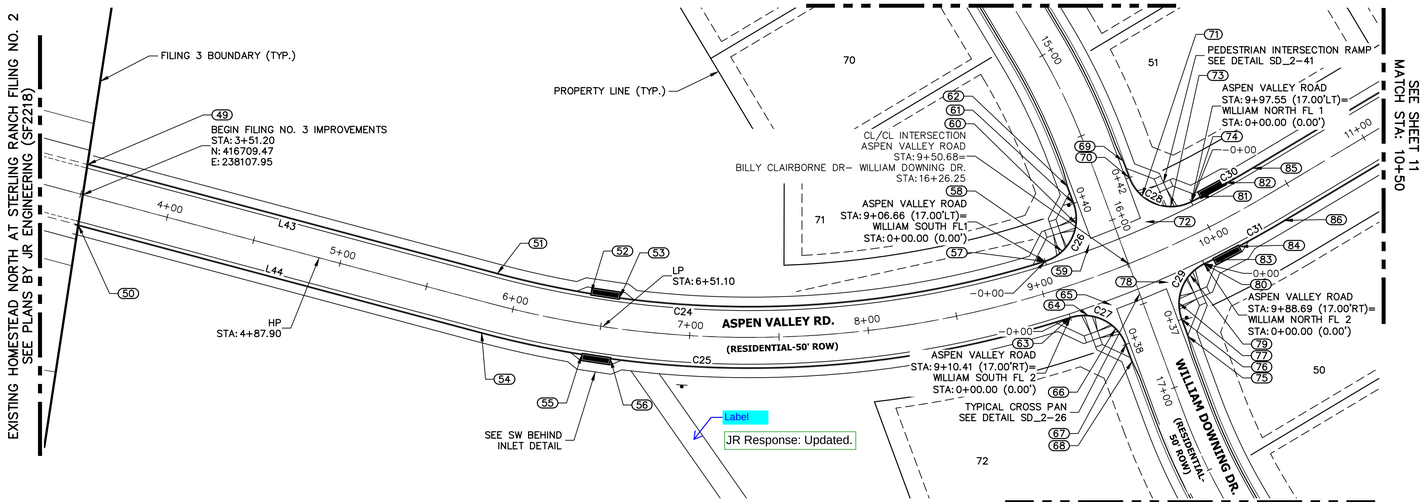
Know what's below. Call before you dig.

WILLIAM SOUTH FL1 PROFILE
STA 0+00.00 TO 0+40.47

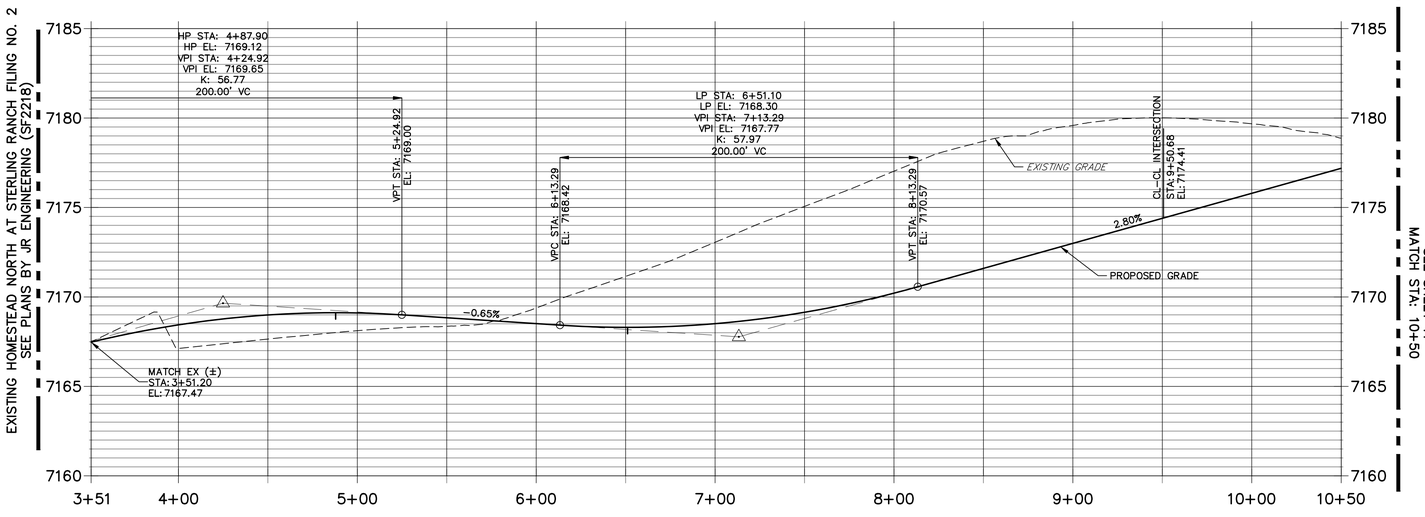


WILLIAM SOUTH FL 2 PROFILE
STA 0+00.00 TO 0+38.24

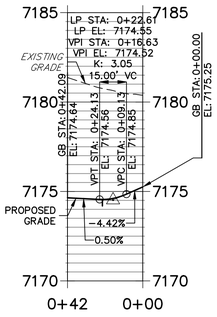




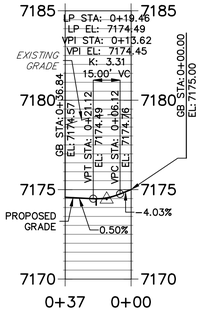
ASPEN VALLEY ROAD PROFILE
STA 3+51.20 TO 10+50.00



WILLIAM NORTH FL 1 PROFILE
STA 0+00.00 TO 0+42.09



WILLIAM NORTH FL 2 PROFILE
STA 0+00.00 TO 0+36.84



CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C24	32°28'36"	548.00'	310.62'
C25	32°51'27"	582.00'	333.76'
C26	92°45'00"	25.00'	40.47'
C27	87°37'51"	25.00'	38.24'
C28	96°28'02"	25.00'	42.09'
C29	84°25'51"	25.00'	36.84'
C30	4°06'39"	548.00'	39.32'
C31	5°00'32"	582.00'	50.88'

LINE TABLE		
LINE	BEARING	DISTANCE
L43	S44°56'48"W	237.06'
L44	N44°56'48"E	233.34'

POINT TABULATION

POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
49	3+49.35	17.00' (LT)	Aspen Valley Road	7166.96	CONNECT TO EX FL
50	3+53.06	17.00' (RT)	Aspen Valley Road	7167.05	CONNECT TO EX FL
51	5+86.40	17.00' (LT)	Aspen Valley Road	7168.13	FL-PC
52	6+41.57	17.50' (LT)	Aspen Valley Road	7168.33	INLET SIDE TBC
53	6+58.43	17.50' (LT)	Aspen Valley Road	7168.33	INLET SIDE TBC
54	5+86.40	17.00' (RT)	Aspen Valley Road	7168.13	FL-PC
55	6+42.08	17.50' (RT)	Aspen Valley Road	7168.34	INLET SIDE TBC
56	6+57.92	17.50' (RT)	Aspen Valley Road	7168.34	INLET SIDE TBC
57	9+06.66	17.00' (LT)	Aspen Valley Road	7172.71	FL-PT/PCR
58	9+18.01	19.42' (LT)	Aspen Valley Road	7173.17	RAMP MID PT
59	9+33.68	18.00' (LT)	Aspen Valley Road	7173.47	FL-FL INTERCEPT
60	9+30.84	31.34' (LT)	Aspen Valley Road	7173.73	RAMP MID PT
61	15+83.90	17.00' (RT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7174.07	FL-PCR
62	15+73.90	17.00' (RT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7174.42	C&G TRANSITION
63	9+10.41	17.00' (RT)	Aspen Valley Road	7172.81	FL-PT/PCR
64	9+19.89	19.08' (RT)	Aspen Valley Road	7173.19	RAMP MID PT
65	9+33.68	18.00' (RT)	Aspen Valley Road	7173.47	FL-FL INTERCEPT
66	9+31.52	31.05' (RT)	Aspen Valley Road	7173.79	RAMP MID PT
67	16+67.98	17.00' (RT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7174.06	FL-PCR

POINT TABULATION

POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
68	16+77.98	17.00' (RT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7174.35	C&G TRANSITION
69	15+71.17	17.00' (LT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7174.99	C&G TRANSITION
70	15+81.17	17.00' (LT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7174.64	FL-PCR
71	9+73.08	31.88' (LT)	Aspen Valley Road	7174.58	RAMP MID PT
72	9+68.82	18.00' (LT)	Aspen Valley Road	7174.45	FL-FL INTERCEPT
73	9+85.55	19.72' (LT)	Aspen Valley Road	7174.76	RAMP MID PT
74	9+97.55	17.00' (LT)	Aspen Valley Road	7175.25	FL-PC/PCR
75	16+75.64	17.00' (LT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7174.91	C&G TRANSITION
76	16+65.64	17.00' (LT)	BILLY CLAIRBORNE DR- WILLIAM DOWNING DR.	7174.57	FL-PCR
77	9+67.59	31.02' (RT)	Aspen Valley Road	7174.52	RAMP MID PT
78	9+66.65	18.00' (RT)	Aspen Valley Road	7174.39	FL-FL INTERCEPT
79	9+79.20	19.09' (RT)	Aspen Valley Road	7174.64	RAMP MID PT
80	9+88.69	17.00' (RT)	Aspen Valley Road	7175.00	FL-PC/PCR
81	10+03.38	17.50' (LT)	Aspen Valley Road	7175.86	INLET SIDE TBC
82	10+20.24	17.50' (LT)	Aspen Valley Road	7176.31	INLET SIDE TBC
83	9+94.16	17.50' (RT)	Aspen Valley Road	7175.41	INLET SIDE TBC
84	10+10.00	17.50' (RT)	Aspen Valley Road	7176.11	INLET SIDE TBC
85	10+38.09	17.00' (LT)	Aspen Valley Road	7176.39	FL-PT
86	10+38.09	17.00' (RT)	Aspen Valley Road	7176.39	FL-PT

40 20 0 40 80

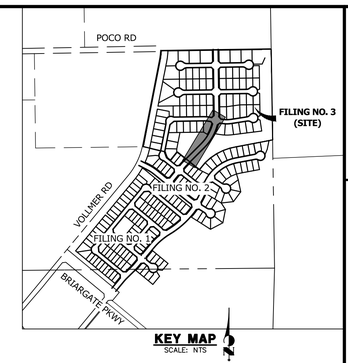
HORIZONTAL
ORIGINAL SCALE: 1" = 40'
VERTICAL
ORIGINAL SCALE: 1" = 4'

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, LLC

32314 — DATE



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

PREPARED FOR
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Fort Collins 970-491-9888 • www.jrengineering.com

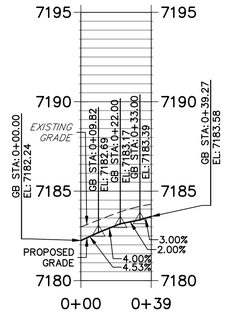
No.	REVISION	BY	DATE

H-SCALE 1"=40' | V-SCALE 1"=4' | DATE 08/05/22
DESIGNED BY QNL | DRAWN BY QNL | CHECKED BY

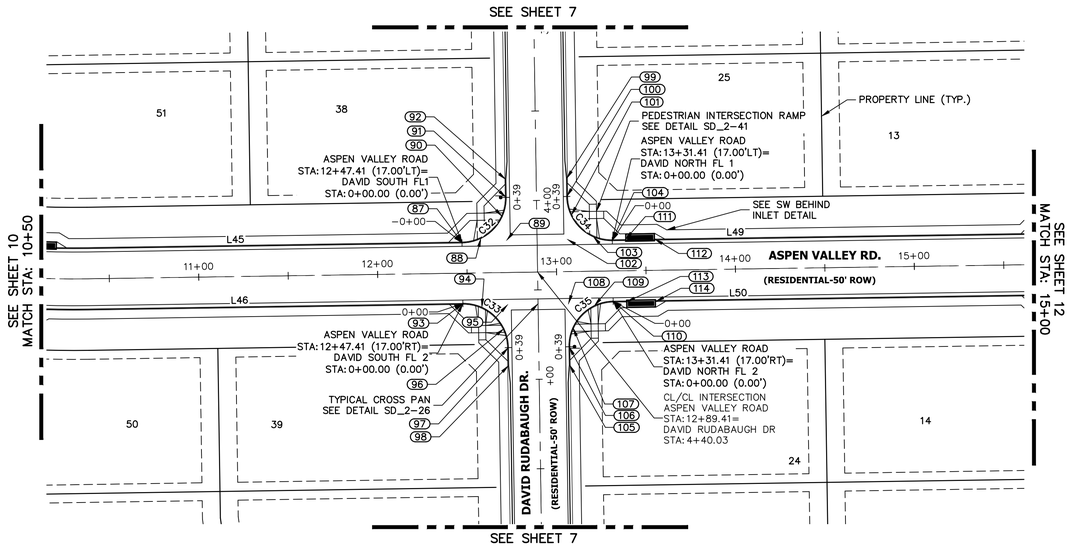
HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3
ROADWAY PLAN AND PROFILE

SHEET 10 OF 15
JOB NO. 2518812

DAVID SOUTH FL1 PROFILE
STA 0+00.00 TO 0+39.27



DAVID SOUTH FL 2 PROFILE
STA 0+00.00 TO 0+39.27



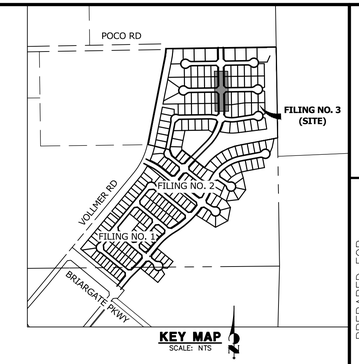
ASPEN VALLEY ROAD PROFILE (2)
STA 10+50.00 TO 15+00.00

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C32	90°00'00"	25.00'	39.27'
C33	90°00'00"	25.00'	39.27'
C34	90°00'00"	25.00'	39.27'
C35	90°00'00"	25.00'	39.27'

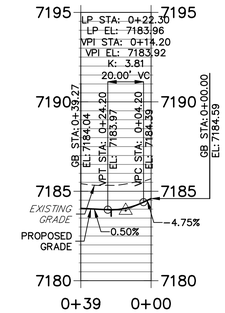
LINE TABLE		
LINE	BEARING	DISTANCE
L45	N00°51'29"W	209.32'
L46	N00°51'29"W	209.32'
L49	N00°51'29"W	236.00'
L50	N00°51'29"W	236.00'

POINT TABULATION					
POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
87	12+47.41	17.00' (LT)	Aspen Valley Road	7182.24	FL-PCR
88	12+58.03	19.37' (LT)	Aspen Valley Road	7182.73	RAMP MID PT
89	12+72.41	18.00' (LT)	Aspen Valley Road	7182.95	FL-FL INTERCEPT
90	12+70.04	31.38' (LT)	Aspen Valley Road	7183.30	RAMP MID PT
91	3+98.03	17.00' (RT)	David Rudabaugh Dr	7183.58	FL-PCR
92	3+88.03	17.00' (RT)	David Rudabaugh Dr	7183.95	C&G TRANSITION
93	12+47.41	17.00' (RT)	Aspen Valley Road	7182.24	FL-PCR
94	12+57.96	19.34' (RT)	Aspen Valley Road	7182.72	RAMP MID PT
95	12+72.39	18.00' (RT)	Aspen Valley Road	7182.95	FL-FL INTERCEPT
96	12+70.07	31.43' (RT)	Aspen Valley Road	7183.24	RAMP MID PT
97	4+82.03	17.00' (RT)	David Rudabaugh Dr	7183.50	FL-PCR
98	4+92.03	17.00' (RT)	David Rudabaugh Dr	7183.73	C&G TRANSITION
99	3+88.03	17.00' (LT)	David Rudabaugh Dr	7184.26	C&G TRANSITION
100	3+98.03	17.00' (LT)	David Rudabaugh Dr	7184.04	FL-PCR

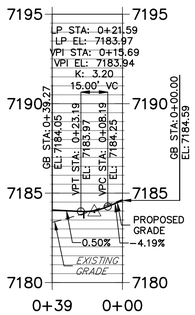
POINT TABULATION					
POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
101	13+08.75	31.44' (LT)	Aspen Valley Road	7183.99	RAMP MID PT
102	13+06.41	18.00' (LT)	Aspen Valley Road	7183.90	FL-FL INTERCEPT
103	13+20.85	19.34' (LT)	Aspen Valley Road	7184.16	RAMP MID PT
104	13+31.41	17.00' (LT)	Aspen Valley Road	7184.59	FL-PCR
105	4+92.03	17.00' (LT)	David Rudabaugh Dr	7184.27	C&G TRANSITION
106	4+82.03	17.00' (LT)	David Rudabaugh Dr	7184.05	FL-PCR
107	13+08.75	31.44' (RT)	Aspen Valley Road	7184.00	RAMP MID PT
108	13+06.41	18.00' (RT)	Aspen Valley Road	7183.90	FL-FL INTERCEPT
109	13+20.85	19.34' (RT)	Aspen Valley Road	7184.17	RAMP MID PT
110	13+31.41	17.00' (RT)	Aspen Valley Road	7184.59	FL-PCR
111	13+38.81	17.50' (LT)	Aspen Valley Road	7185.10	INLET SIDE TBC
112	13+55.14	17.50' (LT)	Aspen Valley Road	7185.76	INLET SIDE TBC
113	13+38.82	17.50' (RT)	Aspen Valley Road	7185.10	INLET SIDE TBC
114	13+55.15	17.50' (RT)	Aspen Valley Road	7185.76	INLET SIDE TBC



DAVID NORTH FL 1 PROFILE
STA 0+00.00 TO 0+39.27



DAVID NORTH FL 2 PROFILE
STA 0+00.00 TO 0+39.27



40 20 0 40 80

HORIZONTAL
ORIGINAL SCALE: 1" = 40'
VERTICAL
ORIGINAL SCALE: 1" = 4'

Know what's below.
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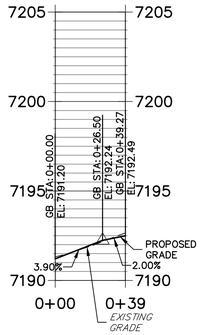
HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3

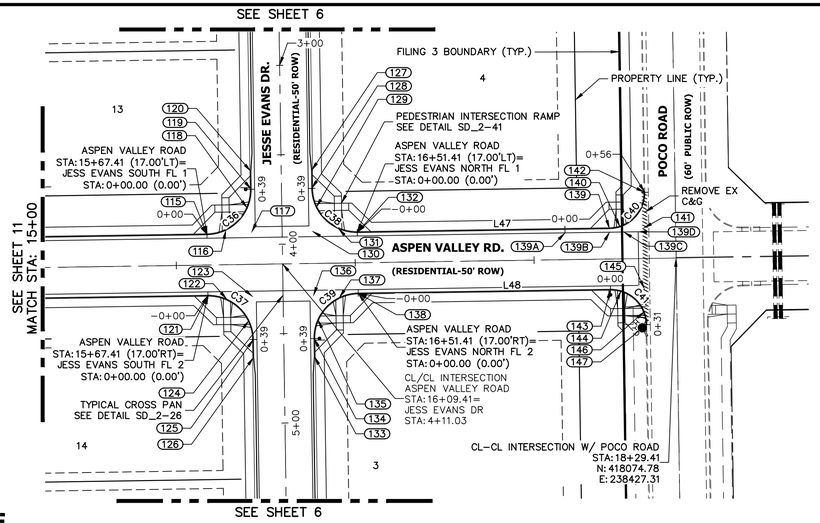
ROADWAY PLAN AND PROFILE

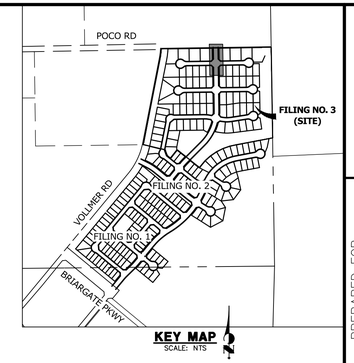
SHEET 11 OF 15

JOB NO. 2518812

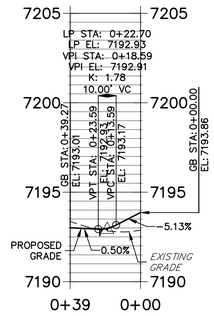
JESS EVANS SOUTH FL 1 PROFILE
STA 0+00.00 TO 0+39.27



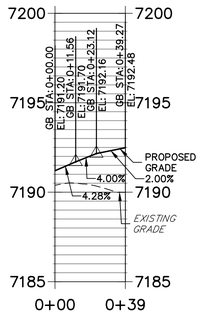




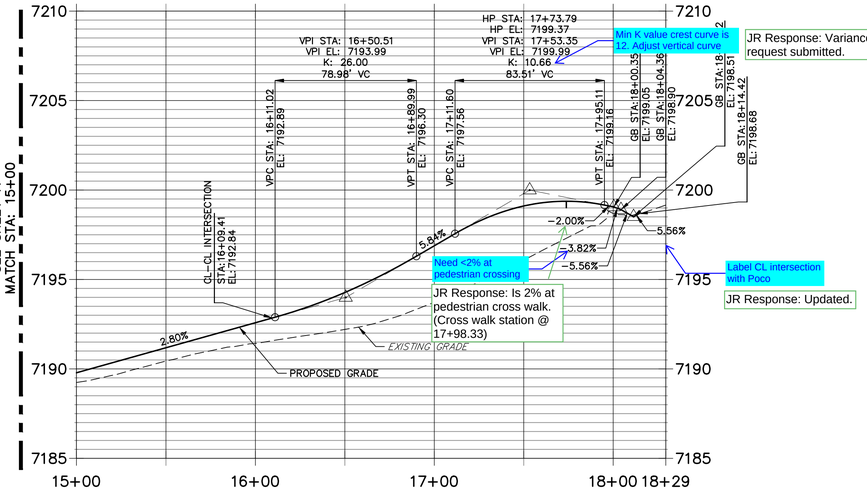
JESS EVANS NORTH FL 1 PROFILE
STA 0+00.00 TO 0+39.27



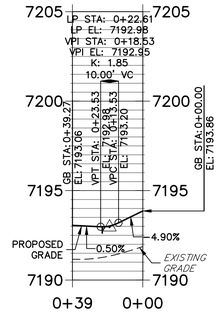
JESS EVANS SOUTH FL 2 PROFILE
STA 0+00.00 TO 0+39.27



ASPEN VALLEY ROAD PROFILE (3)
STA 15+00.00 TO 18+29.41



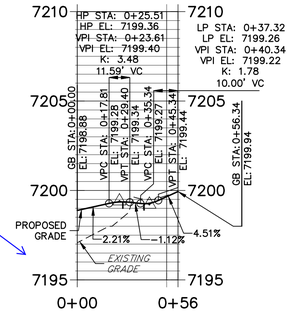
JESS EVANS NORTH FL 2 PROFILE
STA 0+00.00 TO 0+39.27



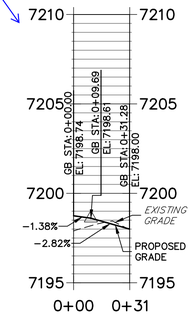
JR Response: Updated.

Label these profiles on layout

ASPEN VALLY WEST FL PROFILE
STA 0+00.00 TO 0+56.34



ASPEN VALLEY EAST FL PROFILE
STA 0+00.00 TO 0+31.42



CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C36	90°00'00"	25.00'	39.27'
C37	90°00'00"	25.00'	39.27'
C38	90°00'00"	25.00'	39.27'
C39	90°00'00"	25.00'	39.27'
C40	90°00'03"	20.00'	31.42'
C41	89°59'57"	20.00'	31.42'

LINE TABLE		
LINE	BEARING	DISTANCE
L47	N00°51'29"W	141.01'
L48	N00°51'29"W	141.01'

POINT TABULATION					
POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
115	15+67.41	17.00' (LT)	Aspen Valley Road	7191.20	FL-PCR
116	15+78.00	19.35' (LT)	Aspen Valley Road	7191.63	RAMP MID PT
117	15+92.41	18.00' (LT)	Aspen Valley Road	7191.90	FL-FL INTERCEPT
118	15+90.08	31.47' (LT)	Aspen Valley Road	7192.28	RAMP MID PT
119	3+69.03	17.00' (RT)	Jess Evans Dr	7192.49	FL-PCR
120	3+59.03	17.00' (RT)	Jess Evans Dr	7193.04	C&G TRANSITION
121	15+67.41	17.00' (RT)	Aspen Valley Road	7191.20	FL-PCR
122	15+77.97	19.34' (RT)	Aspen Valley Road	7191.67	RAMP MID PT
123	15+92.41	18.00' (RT)	Aspen Valley Road	7191.90	FL-FL INTERCEPT
124	15+90.07	31.44' (RT)	Aspen Valley Road	7192.27	RAMP MID PT
125	4+53.03	17.00' (RT)	Jess Evans Dr	7192.48	FL-PCR
126	4+63.03	17.00' (RT)	Jess Evans Dr	7192.64	C&G TRANSITION
127	3+59.03	17.00' (LT)	Jess Evans Dr	7193.39	C&G TRANSITION

POINT TABULATION					
POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
128	3+69.03	17.00' (LT)	Jess Evans Dr	7193.01	FL-PCR
129	16+28.75	31.44' (LT)	Aspen Valley Road	7192.96	RAMP MID PT
130	16+26.41	18.00' (LT)	Aspen Valley Road	7192.85	FL-FL INTERCEPT
131	16+40.85	19.34' (LT)	Aspen Valley Road	7193.31	RAMP MID PT
132	16+51.41	17.00' (LT)	Aspen Valley Road	7193.86	FL-PCR
133	4+63.03	17.00' (LT)	Jess Evans Dr	7193.24	C&G TRANSITION
134	4+53.03	17.00' (LT)	Jess Evans Dr	7193.06	FL-PCR
135	16+28.75	31.44' (RT)	Aspen Valley Road	7193.00	RAMP MID PT
136	16+26.41	18.00' (RT)	Aspen Valley Road	7192.85	PCR
137	16+40.85	19.34' (RT)	Aspen Valley Road	7193.33	RAMP MID PT
138	16+51.41	17.00' (RT)	Aspen Valley Road	7193.86	FL-PCR
139	17+92.42	17.00' (LT)	Aspen Valley Road	7199.36	FL-PCR
139D	0+37.50	7.20' (RT)	ASPEN VALLY WEST FL	7199.11	LIP

POINT TABULATION					
POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
139C	0+31.84	3.39' (RT)	ASPEN VALLY WEST FL	7199.37	LIP GB
139B	0+24.92	2.00' (RT)	ASPEN VALLY WEST FL	7199.48	LIP GB
139A	0+00.00	2.00' (RT)	ASPEN VALLY WEST FL	7199.07	LIP
140	17+98.33	17.89' (LT)	Aspen Valley Road	7199.32	RAMP MID PT
141	18+11.42	17.00' (LT)	Aspen Valley Road	7199.19	FL-FL INTERCEPT
142	18+12.42	37.00' (LT)	Aspen Valley Road	7199.94	CONNECT TO EX FL
143	17+92.42	17.00' (RT)	Aspen Valley Road	7198.74	FL-PCR
144	17+98.33	17.89' (RT)	Aspen Valley Road	7198.66	RAMP MID PT
145	18+11.42	17.00' (RT)	Aspen Valley Road	7198.50	FL-FL INTERCEPT
146	18+11.07	29.77' (RT)	Aspen Valley Road	7198.21	RAMP MID PT
147	18+12.42	37.00' (RT)	Aspen Valley Road	7198.00	CONNECT TO EX FL

40 20 0 40 80

HORIZONTAL
ORIGINAL SCALE: 1" = 40'
VERTICAL
ORIGINAL SCALE: 1" = 4'

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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

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

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 200
COLORADO SPRINGS, CO 80903
ATTN: JAMES MORLEY
JMORLEY3870@AOL.COM

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE 1"=40'
V-SCALE 1"=40'
DATE 08/05/22
DESIGNED BY QNL
DRAWN BY QNL
CHECKED BY

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3

ROADWAY PLAN AND PROFILE

SHEET 12 OF 15

JOB NO. 2518812

X:\2518000.all\2518812\Drawings\Sheet Dwgs\CD\Street Plans\2518812SB01.dwg, SI07, 8/3/2022 3:35:42 PM, CS

MATCH STA: 11+50
SEE SHEET 14

POINT TABULATION				
POINT NUMBER	STATION	OFFSET	ALIGNMENT	DESCRIPTION
1	17+92.42	20.00' (RT)	Aspen Valley Road	STOP SIGN AND STREET SIGNS
2	3+69.03	20.00' (RT)	Jess Evans Dr	STOP SIGN AND STREET SIGNS
3	4+53.03	20.00' (LT)	Jess Evans Dr	STOP SIGN AND STREET SIGNS
4	3+98.03	20.00' (RT)	David Rudabaugh Dr	STOP SIGN AND STREET SIGNS
5	4+82.03	20.00' (LT)	David Rudabaugh Dr	STOP SIGN AND STREET SIGNS

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

40 20 0 40 80
ORIGINAL SCALE: 1" = 40'

ENGINEER'S STATEMENT

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COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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

DATE

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No.	REVISION	BY	DATE

H-SCALE	1"=30'	DESIGNED BY	AL
V-SCALE	N/A	DRAWN BY	PL
DATE	08/05/22	CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3

SIGNAGE PLAN

SHEET 13 OF 15

JOB NO. 2518812

SEE SHEET 13
MATCH STA: 11+50

TRACT A

WILLIAM DOWNING DR.
ASPEN VALLEY RD.
STOP
R1-1
(30"x30")
& D3-1
(30"X8")
⑥

TRACT G

TRACT F

WILLIAM DOWNING DR.
ASPEN VALLEY RD.
STOP
R1-1
(30"x30")
& D3-1
(30"X8")
⑦

WILLIAM DOWNING DR.

DOG WASTE
IT'S THE LAW!
10003HP-C
(SEE DETAIL
ON SHEET 15)
⑨
N: 417056.01
E: 239027.65

DOG WASTE
IT'S THE LAW!
10003HP-C
(SEE DETAIL
ON SHEET 15)
⑧

TRACT B

TRACT C

POND A

BILLY CLAIRBORNE DR.

ASPEN VALLEY RD.

PERRY OWENS DR.

PROPERTY LINE (TYP.)

SITE BOUNDARY (TYP.)

HOMESTEAD NORTH AT
STERLING RANCH FILING NO.
2 (SF2218)

POINT TABULATION				
POINT NUMBER	STATION	OFFSET	ALIGNMENT	DESCRIPTION
6	15+83.90	20.00' (RT)	BILLY CLAIRBORNE DR– WILLIAM DOWNING DR.	STOP SIGN AND STREET SIGNS
7	16+65.64	20.00' (LT)	BILLY CLAIRBORNE DR– WILLIAM DOWNING DR.	STOP SIGN AND STREET SIGNS
8	6+97.43	28.71' (RT)	Aspen Valley Road	PET WASTE
9	9+23.57	609.05' (RT)	Aspen Valley Road	PET WASTE

40 20 0 40 80
ORIGINAL SCALE: 1" = 40'

811 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

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

DATE

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V-SCALE N/A
DATE 08/05/22
DESIGNED BY AL
DRAWN BY PL
CHECKED BY

HOMESTEAD NORTH AT
STERLING RANCH FILING NO. 3

SIGNAGE PLAN

SHEET 14 OF 15
JOB NO. 2518812

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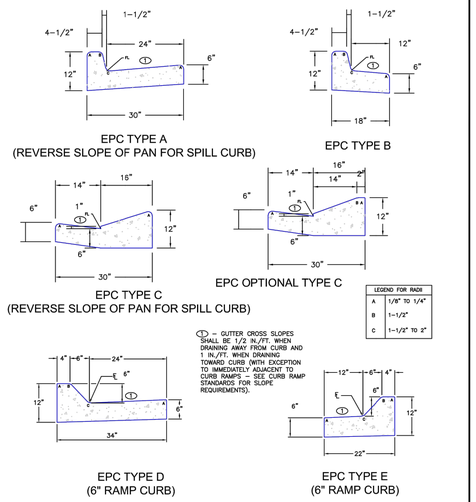
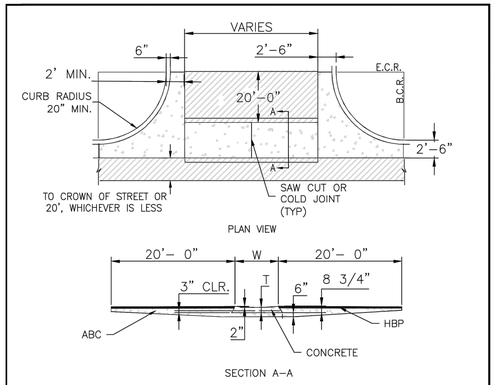


6/23/20 DATE APPROVED: Jennifer E. Irvine DEPARTMENT OF PUBLIC WORKS	Typical Curb and Gutter Details Standard Drawing REVISION DATE: 6/23/20 FILE NAME: SD_2–20	DEPARTMENT OF PUBLIC WORKS

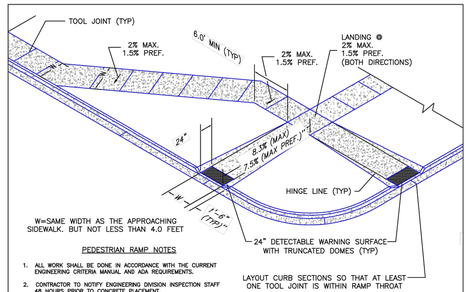


NOTES

1. W – WIDTH SHALL BE 6' FOR LOCAL, 8' FOR COLLECTORS, AND 10' FOR ARTERIAL ROADS.
2. T – SQUARED–OFF RETURN TO BE POURED MONOLITHICALLY, 8" PCC FOR LOCAL ROADS, 9" FOR COLLECTORS WITH 6x6 – 4.4 W.W.F. OR #4 REINFORCING BAR @ 18" EACH WAY.
3. ▨ = 3" MINIMUM ASPHALT DEPTH (2 LIFTS).
4. DESIGN TO SPECIFY ELEVATIONS AT PI AND PCR.

SCALE: NOT TO SCALE

8/11/11 DATE APPROVED: André P. Brackin DEPARTMENT OF TRANSPORTATION	Typical Cross Pan Layout Detail Standard Drawing REVISION DATE: 12/8/15 FILE NAME: SD_2–26	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION



PEDESTRIAN RAMP NOTES

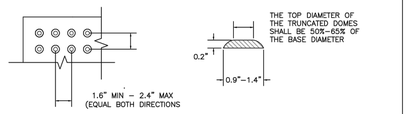
1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT ENGINEERING CRITERIA MANUAL AND ADA REQUIREMENTS.
2. CONTRACTOR TO NOTIFY ENGINEERING DIVISION INSPECTION STAFF 48 HOURS PRIOR TO CONCRETE PLACEMENT.
3. PEDESTRIAN CURB RAMP CONSTRUCTION SHALL BE A MINIMUM 4,500 PSI CONCRETE, MINIMUM 4" THICK, NON–COLORED, NON–SCORED, COARSE BROOM FINISH.
4. PEDESTRIAN CURB RAMP LOCATION AND LENGTH MAY REQUIRE MODIFICATION TO MAINTAIN THE 8.3% MAXIMUM RUNNING RAMP SLOPE DUE TO STREET INTERSECTION GRADES AND/OR ALIGNMENTS. SEE ECM SECTION 6.3.6 FOR PEDESTRIAN PUSHBUTTON LOCATION REQUIREMENTS.
5. DETECTABLE WARNING SURFACE SHALL START A MINIMUM OF 6" BUT NOT MORE THAN 8" FROM THE FLOWLINE OF THE CURB AT ANY POINT.
6. DETECTABLE WARNING SURFACE SHALL BE PREFABRICATED, CAST IRON (PATINA NATURAL FINISH) AND IN ACCORDANCE WITH ECM CHAPTER 6 AND SD_2–42. THERMOPLASTIC TRUNCATED DOMES AND PAVERS WILL NOT BE ACCEPTED.
7. THE DETECTABLE WARNING SURFACE SHALL BE 24" IN LENGTH AND THE FULL WIDTH OF THE RAMP.
8. PEDESTRIAN CURB RAMP WIDTH REQUIRED IS SAME AS APPROACHING SIDEWALK, 4' MINIMUM.
9. ALL PEDESTRIAN CURB RAMPS WILL BE PERPENDICULAR TO TRAFFIC WITH THE EXCEPTION OF MID–BLOCK OR TERMINAL RAMPS WHICH MAY BE PARALLEL. SUBJECT TO APPROVAL.
10. DRAINAGE STRUCTURES, TRAFFIC SIGNAL/SIGNAGE, UTILITIES/JUNCTION BOXES, OR OTHER OBSTRUCTIONS WITHIN PROPOSED PEDESTRIAN CURB RAMP AREAS AND LANDINGS ARE PROHIBITED.
11. THE COUNTER SLOPE OF THE GUTTER OR ROAD AT THE FOOT OF A RAMP SHALL NOT EXCEED 5%.

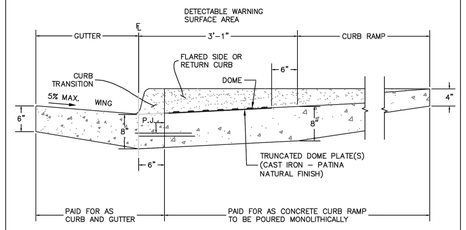
GENERAL NOTES

1. WHERE THE 1'–6" FLARED SIDE(S) OF A PERPENDICULAR CURB RAMP IS (ARE) CONTIGUOUS WITH A PEDESTRIAN OR HARD SURFACE AREA (PEDESTRIAN CIRCULATION PATH), THE MAXIMUM FLARE SLOPE SHALL NOT EXCEED 10:1.
2. PEDESTRIAN WALKWAY (PEDESTRIAN ACCESS ROUTE) AND/OR LOCATION OF EXISTING OR FUTURE PEDESTRIAN RAMPS ON OPPOSITE CORNERS SHALL BE REVIEWED BEFORE CONSTRUCTING NEW RAMPS.
3. AT MARKED PEDESTRIAN CROSSINGS, THE BOTTOM OF THE RAMPS, EXCLUSIVE OF THE FLARE SIDES, SHALL BE TOTALLY CONTAINED WITHIN THE MARKINGS.

6/23/20 DATE APPROVED: Jennifer E. Irvine DEPARTMENT OF PUBLIC WORKS	Pedestrian Curb Ramp Detail Standard Drawing REVISION DATE: 6/23/20 FILE NAME: SD_2–41	DEPARTMENT OF PUBLIC WORKS

TRUNCATED DOME DETAILS

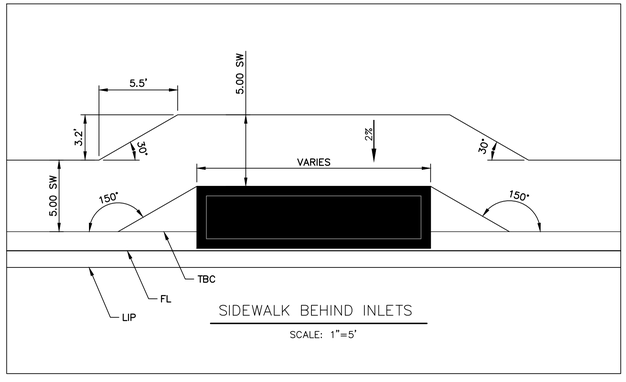




P.J.= PERMISSABLE JOINT WITH EPOXY–COATED DEFORMED NO. 4 BARS CONFORMING TO AASHTO M 284 AT 18 IN. SPACING

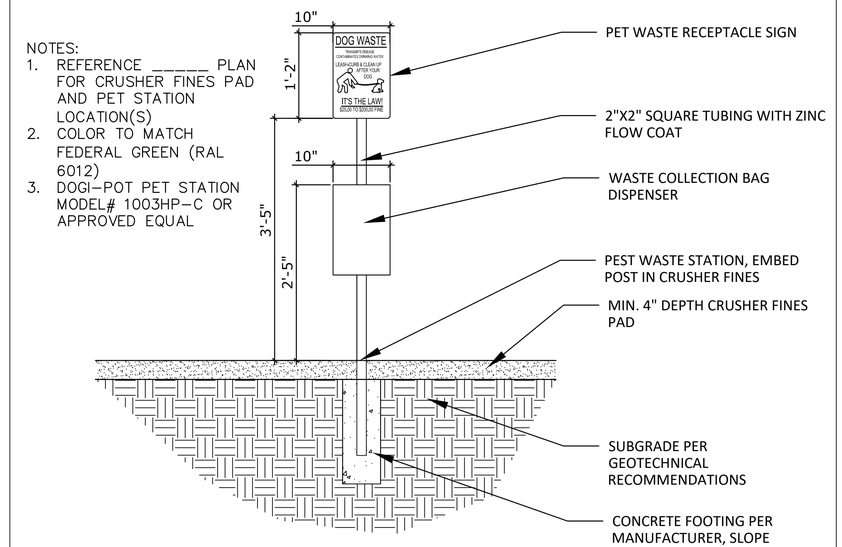
SIDE CROSS SECTION VIEW OF
DETECTABLE WARNING SURFACE, CURB AND GUTTER

6/23/20 DATE APPROVED: Jennifer E. Irvine DEPARTMENT OF PUBLIC WORKS	Detectable Warning Surface Details Standard Drawing REVISION DATE: 6/23/20 FILE NAME: SD_2–42	DEPARTMENT OF PUBLIC WORKS



811
Know what's below.
Call before you dig.

NOTES:
1. REFERENCE _____ PLAN FOR CRUSHER FINES PAD AND PET STATION LOCATION(S)
2. COLOR TO MATCH FEDERAL GREEN (RAL 6012)
3. DOGI–POT PET STATION MODEL# 1003HP–C OR APPROVED EQUAL



PET WASTE STATION
SCALE: 1"=1'

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

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESENT
SUITE 200
COLORADO SPRINGS, CO 80903
ATTN: JAMES MORLEY
JMORLEY3870@AOL.COM

J·R ENGINEERING
A Westrian Company
Centennial 303–740–9393 • Colorado Springs 719–593–2593
Fort Collins 970–491–9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H–SCALE	N/A
V–SCALE	N/A
DATE	08/05/22
DESIGNED BY	QNL
DRAWN BY	QNL
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3

DETAIL SHEET

SHEET 15 OF 15

JOB NO. 2518812

HOMESTEAD NORTH AT STERLING RANCH FILING NO.3

COUNTY OF EL PASO, STATE OF COLORADO

STORM PLANS

& Pond

JR Response: Updated.

BASIS OF BEARINGS

THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M. AS MONUMENTED AT THE SOUTHWEST CORNER OF SAID SOUTHWEST QUARTER BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624" AND AT THE SOUTHEAST CORNER OF SAID SOUTHWEST QUARTER BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624", SAID LINE BEARS N89°14'14"E A DISTANCE OF 2,722.69 FEET.

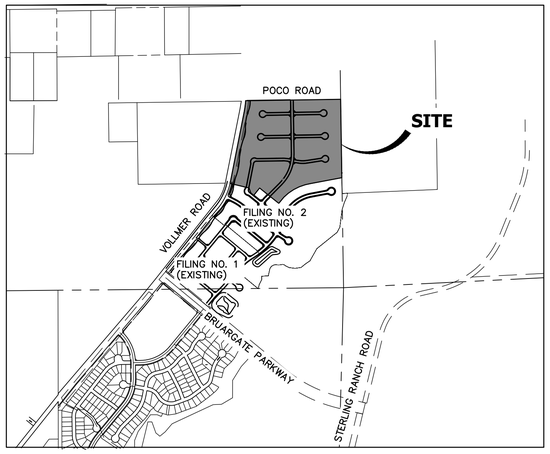
BENCHMARKS

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

SHEET INDEX



VICINITY MAP
SCALE: 1"=1000'

AGENCIES

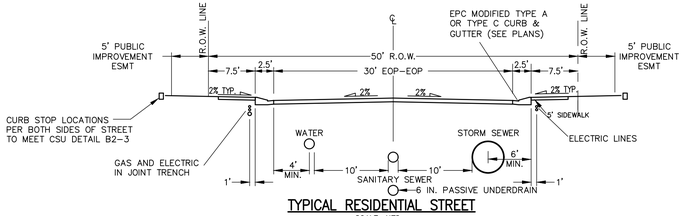
OWNER/DEVELOPER:	SR LAND, LLC 20 BOULDER CRESCENT, SUITE 200 COLORADO SPRINGS, CO 80903 JAMES MORLEY (719) 491-3024
CIVIL ENGINEER:	JR ENGINEERING, LLC 5475 TECH CENTER DRIVE COLORADO SPRINGS, CO 80919 MIKE BRAMLETT P.E. (303) 267-6240
COUNTY ENGINEERING:	EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT 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

NOTE

- VOLLMER ROAD (NORTH) STREET IMPROVEMENT PLAN PCD FILE NO. CDR-21-10
- SAND CREEK RESTORATION PUBLIC IMPROVEMENT CONSTRUCTION PLANS PCD FILE NO. CDR-20-004
- HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2 PCD FILE NO. SF2218
- HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3 STREET IMPROVEMENT PLANS
- HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3 EARLY SANITARY SYSTEM PLAN
- HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3 EARLY WATER SYSTEM PLAN

SP-22-007

JR Response: Updated.



TYPICAL RESIDENTIAL STREET
SCALE: NTS
DESIGN SPEED: 25 MPH POSTED SPEED: 25 MPH

Remove Interim

JR Response: Updated.

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.

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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

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 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.

JOSHUA PALMER, P.E. — DATE
INTERIM COUNTY ENGINEER/ECM ADMINISTRATOR

DISTRICT APPROVALS

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

FOR AND ON BEHALF OF THE STERLING RANCH METRO DISTRICT — DATE

OWNER/DEVELOPER STATEMENT

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

JAMES F. MORLEY — DATE

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

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Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	N/A	DESIGNED BY	SAV	CHECKED BY	
V-SCALE	N/A	DRAWN BY	SAV		
DATE	08/05/22				

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3

COVER SHEET

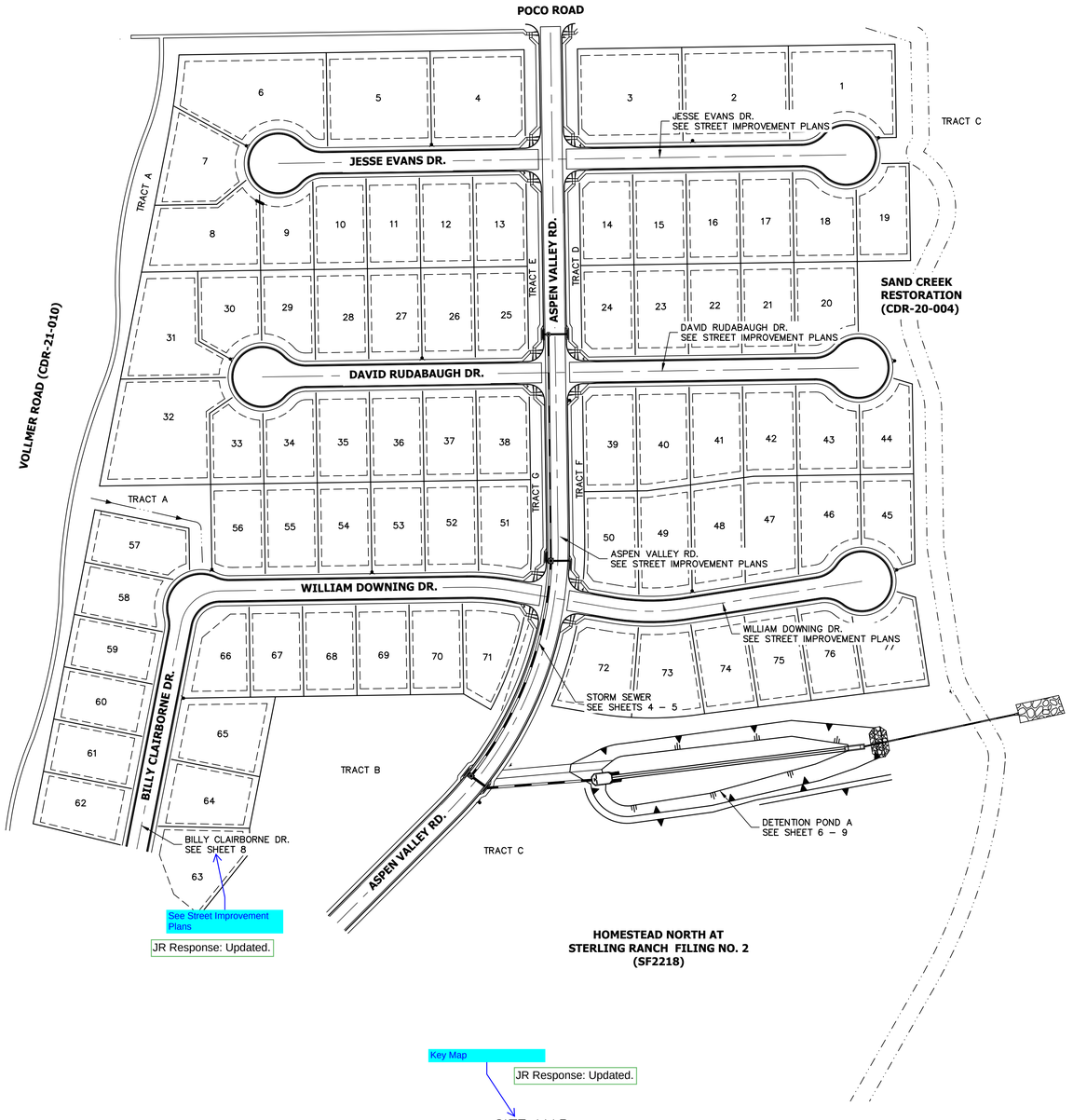
SHEET 1 OF 13

JOB NO. 2518812

x:\2518000.all\2518812\Drawings\sheet dwgs\CD\Storm Plans\2518812_CV01.dwg, 24x36 Construction Title, 8/4/2022 1:40:23 PM, CS

GENERAL NOTES

1. ALL UTILITY CONSTRUCTION TO BE CONDUCTED IN CONFORMANCE WITH THE CURRENT STERLING RANCH METROPOLITAN DISTRICT (SRMD, THE DISTRICT) SPECIFICATIONS.
2. ALL PLANS ON THE JOB SITE SHALL BE SIGNED BY THE DISTRICT AND THE DISTRICT'S ENGINEER. ANY REVISION TO THE PLANS SHALL BE SO NOTED WITH THE OLD DRAWING MARKED NOT VALID.
3. ALL STATIONING IS CENTERLINE UNLESS OTHERWISE NOTED. ALL ELEVATIONS ARE CENTERLINE UNLESS OTHERWISE NOTED.
4. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE DISTRICT. THE DISTRICT RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS STANDARDS AND SPECIFICATIONS.
5. ALL WATER AND SEWER SERVICE LOCATIONS SHALL BE CLEARLY MARKED ON EITHER THE CURB HEAD OR THE FACE OF THE CURB, WITH AN "S" FOR SEWER AND A "W" FOR WATER.
6. DUCTILE IRON PIPES, INCLUDING FITTINGS, VALVES AND FIRE HYDRANTS, SHALL BE WRAPPED WITH POLYETHYLENE TUBING, DOUBLE BONDED AT EACH JOINT AND ELECTRICALLY ISOLATED. BONDING AND ANODE CONNECTIONS SHALL BE THOROUGHLY COATED WITH BITUMINUOUS COATINGS.
7. ALL DUCTILE IRON PIPE LESS THAN 12 INCHES AND FITTINGS SHALL HAVE CATHODIC PROTECTION USING TWO NO. 6 WIRES WITH 17 LB MAGNESIUM ANODES EVERY 400 FEET AND 9 LB MAGNESIUM ANODES AT EACH FITTING. ALL DUCTILE IRON PIPE 12 INCHES AND GREATER AND FITTINGS SHALL HAVE CATHODIC PROTECTION USING TWO NO. 6 WIRES WITH 17 LB MAGNESIUM ANODES EVERY 300 FEET AND 9 LB MAGNESIUM ANODES AT EACH FITTING.
8. ALL PIPE MATERIAL, BACKFILL AND INSTALLATION SHALL CONFORM TO THE APPLICABLE SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS, COLORADO DEPARTMENT OF TRANSPORTATION, EL PASO COUNTY DEPARTMENT OF TRANSPORTATION, COLORADO SPRINGS UTILITIES AND THE GEOTECHNICAL ENGINEER.
9. COMPACTION TESTS SHALL BE 95% STANDARD PROCTOR AS DETERMINED BY ASTM D698, UNLESS OTHERWISE APPROVED BY THE DISTRICT OR HIGHER STANDARD AS IMPOSED BY ANOTHER AGENCIES HAVING RIGHT-OF-WAY JURISDICTION. THIS SHALL INCLUDE ALL VALVES, FIRE HYDRANT RUNS, WATER & SEWER SERVICE LINES AND MANHOLES. ALL REPORTS SHALL BE SUBMITTED TO THE DISTRICT FOR REVIEW AND APPROVAL.
10. THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY. THE LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. THE DISTRICT SHALL BE NOTIFIED OF ANY DEVIATIONS TO THE LINE AND/OR GRADE AS DEPICTED ON THE PLANS. CONTRACTOR SHALL SUBMIT TO THE DISTRICT AND THE ENGINEER OF RECORD A REPORT OF THE FIELD VERIFIED INFORMATION PRIOR TO THE START OF CONSTRUCTION.
11. ALL BENDS SHALL BE FIELD STAKED PRIOR TO THE START OF CONSTRUCTION.
12. BENDS, DEFLECTION & CUT PIPE LENGTHS SHALL BE USED TO HOLD HORIZONTAL ALIGNMENT OF SEWER AND WATER LINES TO NO MORE THAN 0.5' FROM THE DESIGNED ALIGNMENT. CONSTRUCTION STAKES TO BE AT 25' INTERVALS ALONG CURVES TO ASSURE LOCATION OF PIPE LINE CONSTRUCTION.
13. AT ALL LOCATIONS WHERE CAP AND STUB IS NOTED ON DRAWINGS, PROVIDE A PLUG AT THE END OF THE PIPE JOINT NEAREST THE SPECIFIED STATION. PROVIDE A REVERSE ANCHOR AT ALL WATER LINE PLUGS.
14. ALL UNUSED SALVAGED WATER UTILITY MATERIAL SHALL BE RETURNED TO THE METROPOLITAN DISTRICT AS REQUESTED.
15. AT THE CONTRACTOR'S EXPENSE, ALL UTILITY MAINS SHALL BE SUPPORTED AND PROTECTED SUCH THAT THEY SHALL FUNCTION CONTINUOUSLY DURING CONSTRUCTION OPERATIONS. SHOULD A UTILITY MAIN FAIL AS A RESULT OF THE CONTRACTOR'S OPERATION, IT SHALL BE REPLACED IMMEDIATELY BY THE CONTRACTOR OR BY THE DISTRICT AT FULL COST OF LABOR AND MATERIALS TO THE CONTRACTOR/DEVELOPER.
16. PUMPING OR BYPASS OPERATIONS SHALL BE REVIEWED AND APPROVED BY BOTH THE DISTRICT AND THE DISTRICT ENGINEER PRIOR TO EXECUTION.
17. THE CONTRACTOR SHALL REPLACE OR REPAIR DAMAGE TO ALL SURFACE IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO FENCES, LANDSCAPING, CURB AND GUTTER AND/OR ASPHALT THAT MAY BE CAUSED DURING CONSTRUCTION.
18. ALL CONTRACTORS WORKING ON OR NEAR A WATER OR SEWER FACILITY (TO INCLUDE SERVICE LINE) SHALL HAVE LIABILITY INSURANCE NAMING THE DISTRICT AS AN ADDITIONAL INSURED AND SHALL PROVIDE A CURRENT COPY OF WORKERS COMPENSATION INSURANCE ON FILE WITH THE DISTRICT. NO WORK CAN PROCEED WITHOUT CURRENT CERTIFICATES ON FILE AT THE DISTRICTS' OFFICE.
19. THE CONTRACTOR SHALL NOTIFY THE DISTRICT AND ALL AFFECTED UTILITY COMPANIES ADJACENT TO THE PROPOSED UTILITY CONSTRUCTION A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF CONSTRUCTION. A WEEKLY CONSTRUCTION MEETING SHALL BE REQUIRED WITH THE CONTRACTOR, DISTRICT ENGINEER AND ALL OTHER PARTIES AS DEEMED NECESSARY BY THE DISTRICT.
20. COMMENCEMENT OF CONSTRUCTION OF WATER/SEWER SYSTEMS WITHIN THE METROPOLITAN DISTRICT:
    a. PRIOR TO THE START OF CONSTRUCTION, A PRE-CONSTRUCTION MEETING IS REQUIRED A MINIMUM OF 48 HOURS IN ADVANCE OF COMMENCEMENT OF WORK. A REPRESENTATIVE OF THE OWNER OR DEVELOPER, A REPRESENTATIVE OF THE CONTRACTOR AND DESIGN ENGINEER ARE REQUIRED TO ATTEND. CONTACT THE DISTRICT TO SCHEDULE THE PRE-CONSTRUCTION MEETING. NO PRE-CONSTRUCTION MEETING CAN BE SCHEDULED PRIOR TO FOUR (4) SIGNED/ APPROVED PLAN SETS ARE RECEIVED BY THE DISTRICT.
    b. THE CONTRACTOR IS REQUIRED TO NOTIFY THE DISTRICT A MINIMUM OF 48 HOURS AND A MAXIMUM OF 2 WEEKS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL ALSO NOTIFY AFFECTED UTILITY COMPANIES AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION ADJACENT TO THE KNOWN UTILITY LINES.
21. TESTING OF FACILITIES:
    a. THE CONTRACTOR SHALL NOTIFY THE DISTRICT A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF ANY TESTING.
    b. ALL SECTIONS OF WATER LINE ARE TO MEET THE FOLLOWING PRESSURE TESTING REQUIREMENTS:
        - TEST 100% OF ALL LINES
        - MUST PASS PRESSURE TEST TO 200 PSI FOR TWO HOURS (UNLESS OTHERWISE APPROVED ON THE PLANS).
    c. ALL SANITARY SEWER FACILITIES ARE TO MEET THE FOLLOWING TESTING REQUIREMENTS
        - ALL LINES SHALL BE JET CLEANED PRIOR TO VACUUM OR PRESSURE TESTING
        - ALL MANHOLES SHALL BE VACUUM TESTED WITH DISTRICT STAFF PRESENT PRIOR TO CCTV INSPECTION.
        - SEWER MAINS TO BE PRESSURE TEST PRIOR TO CCTV INSPECTION
        - ALL LINES SHALL BE CCTV INSPECTED AND VIDEO SHALL TO BE SUBMITTED TO THE DISTRICT FOR REVIEW AND APPROVAL.
22. PRELIMINARY ACCEPTANCE SHALL BE DEFINED AS THE POINT IN TIME THAT THE DISTRICT ACCEPTS THE FACILITY FOR USE. ALL SURFACE IMPROVEMENTS AND RESTORATION SHALL BE COMPLETED WITHIN 30 DAYS OF COMMENCEMENT. SHOULD THE CONTRACTOR FAIL TO COMPLETE ALL SURFACE IMPROVEMENTS AND RESTORATION WITHIN 30 DAYS OF COMMENCEMENT OF SERVICE, THE DISTRICT, AT THEIR DISCRETION, MAY ELECT TO COMPLETE THE IMPROVEMENTS AT THE CONTRACTORS COST.
23. FINAL ACCEPTANCE BY THE DISTRICT OF ANY LINE OR SYSTEM SHALL NOT OCCUR UNTIL COMPLETION OF FINAL ASPHALT LAYERS AND/OR FINAL COMPLETION AND/OR RESTORATION OF ALL SURFACE IMPROVEMENTS. THE WARRANTY PERIOD FOR ALL FACILITIES PRIOR TO FINAL ACCEPTANCE SHALL BE 24 MONTHS COMMENCING AFTER PRELIMINARY ACCEPTANCE.
24. ACCEPTANCE:
    a. THE DISTRICT MAY GIVE PRELIMINARY ACCEPTANCE ONCE ALL OF THE TESTS ON ALL THE LINES HAVE BEEN COMPLETED AND A WALK-THRU HAS OCCURRED.
    b. A SECOND ACCEPTANCE MAY OCCUR ONCE FIRST LIFT OF ASPHALT GOES DOWN AND A SECOND WALK-THRU OF THE SYSTEM OCCURS. IF ALL FACILITIES ARE CLEAN AND ACCESSIBLE, A FINAL ACCEPTANCE MAY OCCUR (THE DISTRICT MAY REQUIRE CLEANING AND RE-VIDEO OF THE SYSTEM, DEPENDING ON THE SEVERITY OF THE CONTAMINATION).
25. ALL WATER AND SEWER MAINS, INCLUDING SERVICE LINES, SHALL HAVE "AS-BUILT" DRAWINGS PREPARED AND APPROVED PRIOR TO PRELIMINARY ACCEPTANCE BY THE DISTRICT.
26. ALL COMMERCIAL/BUSINESS DEVELOPMENTS SHALL HAVE AN EIGHT INCH (MIN.) WATER MAIN LOOPED THROUGH THE PROPOSED PROPERTY WITH GATE VALVES LOCATED WHERE THE MAIN ENTERS THE PROPERTY LINE. AN EIGHT INCH SEWER MAIN SHALL BE INSTALLED FOR SERVICE TO COMMERCIAL/BUSINESS DEVELOPMENTS, AND A MANHOLE SHALL BE LOCATED WHERE THE MAIN ENTERS THE PROPERTY. THE END OF THE MAINS SHALL BE MARKED WITH THE APPROPRIATE COLORED CARSONITE MARKER ALONG WITH TRACER WIRE.
27. AFTER REVIEW AND APPROVAL OF PLANS FOR THE EXTENSION OF LINES, FACILITIES AND/OR SERVICES, CONSTRUCTION MUST BE COMMENCED WITHIN 18 MONTHS FOR RESIDENTIAL SUBDIVISIONS AND 12 MONTHS FOR ANY COMMERCIAL INSTALLATIONS.
28. INSPECTION FEES: CALL THE DISTRICT (719-495-2500) FOR FEE SCHEDULE.



See Street Improvement Plans

JR Response: Updated.

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2 (SF2218)

Key Map

JR Response: Updated.

SITE MAP
SCALE: 1"=100'

100 50 0 100 200
ORIGINAL SCALE: 1" = 100'

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

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

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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

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

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESENT STE 200
COLORADO SPRINGS, CO 80903
ATTN: JAMES F. MORLEY
JMORLEY3870@AOL.COM

J·R ENGINEERING
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Fort Collins 970-491-9888 • www.jrengineering.com

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V-SCALE	N/A		
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DESIGNED BY	SAV		
DRAWN BY	SAV		
CHECKED BY			

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3
GENERAL NOTES

SHEET 2 OF 13

JOB NO. 2518812

LAYER LINETYPE LEGEND

	EXISTING	PROPOSED
PHASE LINE		
MATCH LINE		
SECTION LINE		
BOUNDARY LINE		
PROPERTY LINE		
EASEMENT LINE		
RIGHT OF WAY		
R.O.W. A LINE	A	A
CENTERLINE		
CITY LIMITS		
WIRE FENCE		
CHAIN LINK FENCE		
WOOD FENCE		
MASONRY FENCE		
GUARDRAIL		
CONC. BARRIER		
CABLE TV	TV	TV
ELECTRIC	E	E
FIBER OPTIC	FO	FO
GAS MAIN	G	G
IRRIGATION MAIN	IRR	IRR
OIL/PETRO. MAIN	O	O
OVERHEAD UTILITY	OHU	OHU
SANITARY SEWER	S	
STORM DRAIN		
TELEPHONE	T	T
WATER MAIN	W	
RAW WATER LINE	RWL	RWL
SWALE/WATERWAY FLOWLINE		
DIVERSION DITCH		
DIVERSION CHANNEL		
MAJOR DRAINAGE BASIN		
MINOR DRAINAGE BASIN		
TOP OF SLOPE		
TOE OF SLOPE		
EDGE OF WATER		
INDEX CONTOUR	6100	6100
INTERMEDIATE CONTOUR		
DEPRESSION CONT. (INDEX)	6100	6100
DEPRESSION CONT. (INTER)		
TOP OF CUTS		
TOE OF FILLS		
CUT AND FILL LINE		C/F
SILT FENCE	SF	SF
100 YEAR FLOODPLAIN	100YR	100YR
500 YEAR FLOODPLAIN	500YR	500YR
FLOODWAY	FLDWY	FLDWY
BASE FLOOD ELEVATION		
EDGE OF WETLANDS		
STONE WALL		

UTILITIES LEGEND

	EXISTING	PROPOSED
STORM SEWER		
MANHOLE		
STORM INLET		
AREA INLET – SQUARE		
AREA INLET – ROUND		
FLARED END SECTION		
RIPRAP		
SANITARY SEWER		
LINE MARKER	Mkr San	
SERVICE MARKER		
CLEAN–OUT		
MANHOLE W/ DIRECTIONAL FLOW ARROW		
WATER LINE		
LINE MARKER	Mkr W	
SERVICE MARKER		
FIRE HYDRANT		
FIRE CONNECTION		
MANHOLE		
BEND		
BLOW–OFF VALVE		
WELL	WELL	WELL
METER		
VALVE		
REDUCER		
THRUST BLOCK		
CROSS		
PLUG W/ THRUST BLOCK		
TEE		
REVERSE ANCHOR		
ANODE		
AIR & VACUUM VALVE ASSEMBLY		
TRANSMISSION BLOW–OFF ASSEMBLY		
GAS LINE		
MARKER	Mkr G	
SERVICE MARKER		
METER		
VALVE		
PLUG		
TEE		
DRY UTILITIES		
CABLE TV MARKER	Mkr TV	
CABLE TELEVISION PEDESTAL		
ELECTRIC MARKER	Mkr E	
ELECTRIC SERVICE MARKER		
ELECTRICAL PEDESTAL		
ELECTRICAL METER		
ELECTRICAL MANHOLE		
FIBER–OPTIC MARKER	Mkr FO	
IRRIGATION PEDESTAL		
TELEPHONE MARKER	Mkr T	
TELEPHONE PEDESTAL		
TELEPHONE MANHOLE		
UTILITY POLE		
GUY ANCHOR		
GUY POLE		
MISC. UTILITIES		
VENT PIPE	VP	VP
TEST HOLE DESIGNATOR	TH# FIRM/AGENCY	

TRAFFIC LEGEND

	EXISTING	PROPOSED
PARKING METER		
TRAFFIC SIGNAL BOX		
TRAFFIC SIGNAL POLE		
TRAFFIC SIGNAL		
BARRICADE		
GUARD RAIL POST		
IMPACT ATTENUATOR		
BRIDGE STYLE HIGHWAY SIGN POST		
CANTILEVER STYLE HIGHWAY SIGN POST		
RAILROAD MARKER/SIGN		
STREET LIGHT		
STREET LIGHT – SINGLE		
STREET LIGHT – DOUBLE		
LUMINAIRE		
ALTERNATE LUMINAIRE		
SIGNAL MAST ARM W/ LUMINAIRE		
PEDESTAL POLE FOUNDATION		
TRAFFIC SIGNAL POLE		
ROUND PULL BOX		
MEDIUM PULL BOX		
LARGE PULL BOX (20X33X15)		
SIGNAL HEAD WITHOUT BACK PLATE		
SIGNAL HEAD WITH BACK PLATE		
PEDESTRIAN SIGNAL HEAD		
VIDEO IMAGE DETECTOR		
OPTICOM DETECTOR		
VEHICLE DETECTION ZONE		V

LANDSCAPE LEGEND

	EXISTING	PROPOSED
TREE – CONIFEROUS		
TREE – DECIDUOUS		
SHRUB/BUSH		
SHRUBS AND BUSHES		
IRRIGATION BOX		
IRRIGATION SPRINKLER		
IRRIGATION VALVE		
BOLLARD		
FLAGPOLE		FP

Fix title

JR Response: Updated.

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

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

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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

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

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESENT STE 200
COLORADO SPRINGS, CO 80903
ATTN: JAMES F. MORLEY
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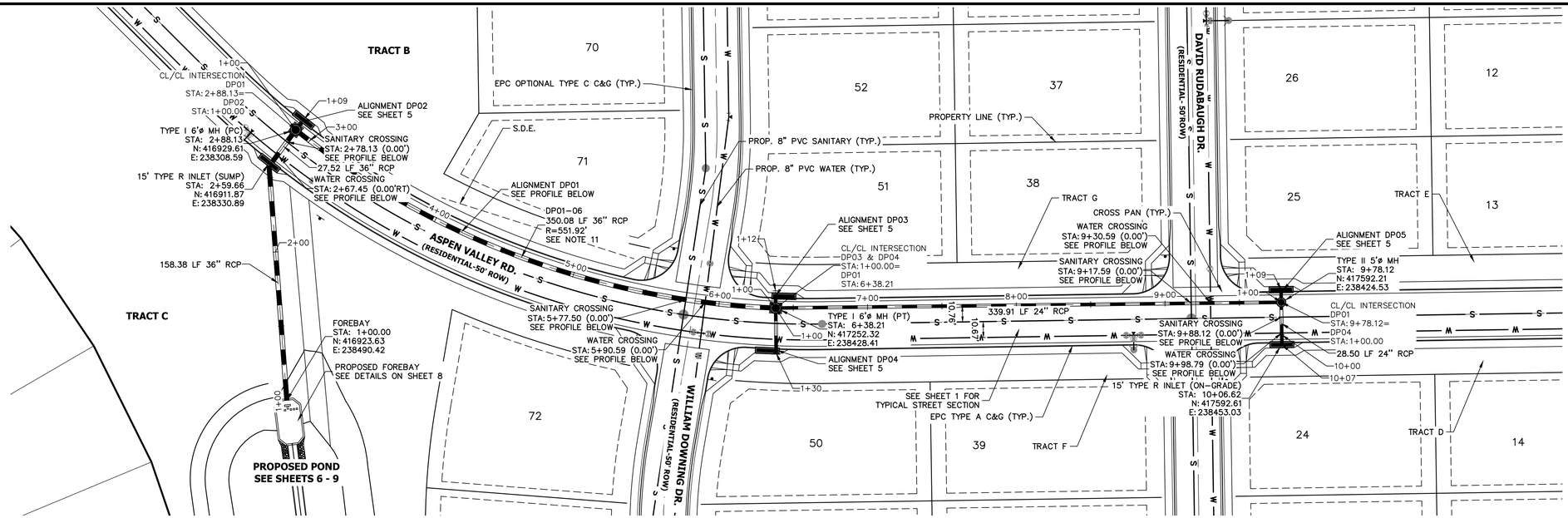
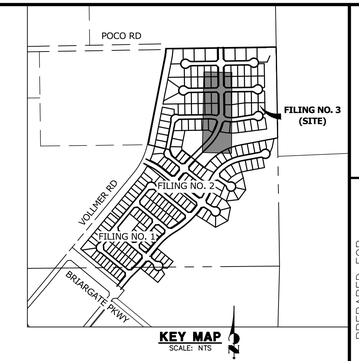
CHECKED BY				

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3
LEGEND

SHEET 3 OF 13
JOB NO. 2518812



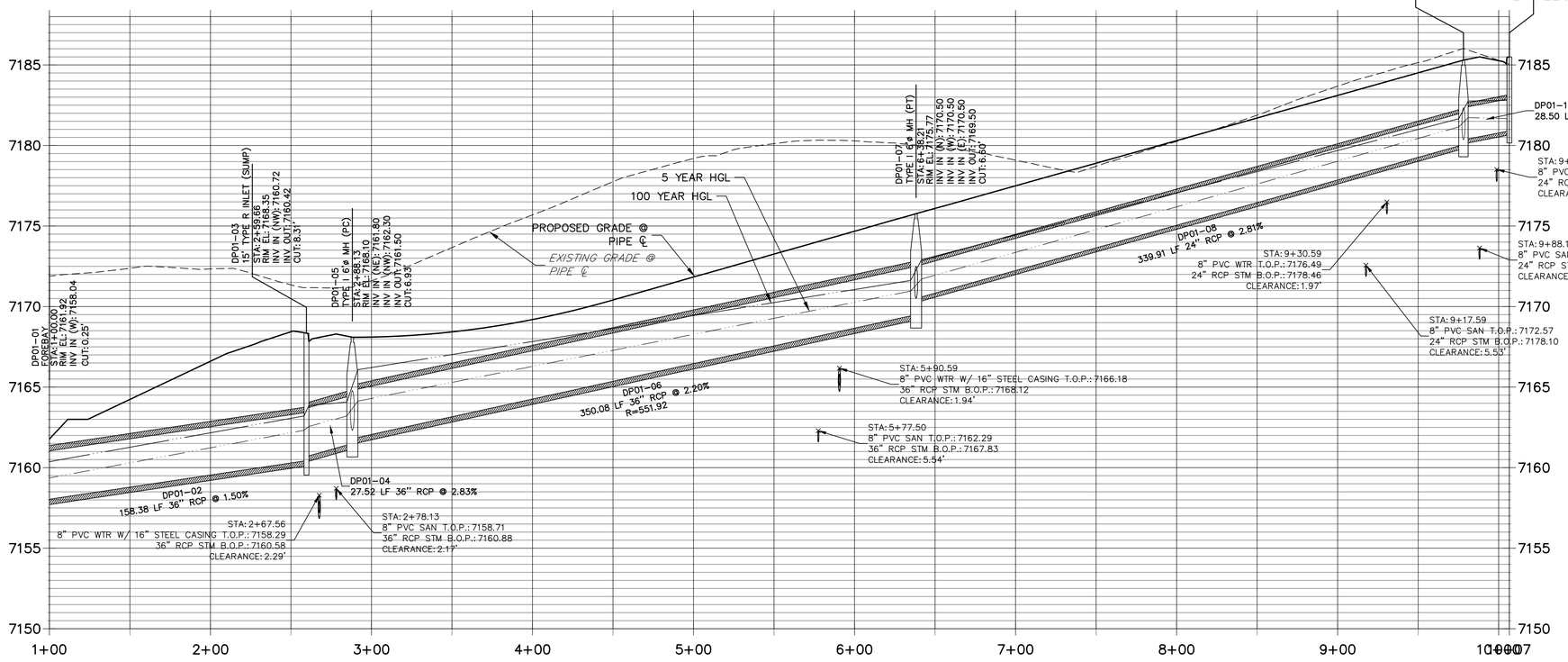


Storm Plan & Profiles will be reviewed with next submittal when Storm design (StormCAD) is provided

NOTES

1. SEE SHEET 1 FOR BENCHMARK. SEE SHEET 3 FOR LEGEND.
2. ALL STATIONING IS PIPE CENTERLINE UNLESS OTHERWISE NOTED.
3. ALL RCP STORM SEWER SHALL BE CLASS III UNLESS OTHERWISE NOTED.
4. PIPE LENGTHS ARE FROM INSIDE INLET WALL TO INSIDE INLET WALL, FROM CENTER OF MANHOLE TO INSIDE INLET WALL, OR FROM CENTER OF MANHOLE TO CENTER OF MANHOLE. PIPE LENGTHS INCLUDE FES OR HEADWALL.
5. ALL MANHOLE COVERS SHALL BE ORIENTED TO AVOID CURB, GUTTER, SIDEWALK AND CROSSPANS UNLESS OTHERWISE NOTED.
6. ALL MANHOLES ARE EL PASO COUNTY TYPE II UNLESS OTHERWISE SPECIFIED.
7. ALL MANHOLES HAVE AN ECCENTRIC CONE UNLESS OTHERWISE SPECIFIED.
8. ALL ON-GRADE INLETS ARE TO MATCH TBC ELEVATIONS AT EACH END, FOLLOWING STREET GRADES. SEE ROADWAY PLANS FOR REQUIRED ELEVATIONS.
9. INLET STATIONING IS TO CENTER OF INLET.
10. PIPES SHALL HAVE JOINT RESTRAINTS ON LAST 3 JOINTS AT PIPE OUTFALL.
11. ALL CURVED PIPES SHALL BE BUILT IN ACCORDANCE WITH THE AMERICAN CONCRETE PIPE ASSOCIATION (ACPA) DESIGN DATA 21. PIPE MANUFACTURER TO BE USED MUST BE ABLE TO MEET LENGTH AND JOINT OPENING CRITERIA PER ACPA & ALL APPLICABLE EL PASO COUNTY CRITERIA AND STANDARDS.
12. ALL STORM SEWER PIPES, INLETS, MANHOLES, AND APPURTENANCES WITHIN THE R.O.W. ARE PUBLIC. STORM FACILITIES OUTSIDE OF THE PUBLIC R.O.W. ARE PRIVATE, UNLESS OTHERWISE NOTED.
13. WHERE PIPES ENTER STRUCTURES ON A SKEW, CONTRACTOR IS REQUIRED TO EXTEND PIPE TO ENSURE THAT BOTH EDGES OF THE PIPE EXTEND INTO THE STRUCTURE. CONTRACTOR WILL THEN BE REQUIRED TO CUT PIPE FLUSH WITH THE INSIDE FACE OF THE STRUCTURE AND GROUT IN PLACE. UNLESS OTHERWISE NOTED.
14. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN COMPLIANCE WITH MANUFACTURERS SPECIFICATIONS AND EL PASO COUNTY STANDARDS AND SPECIFICATION.
15. SEE DETAIL SHEETS 10-12 FOR APPLICABLE DETAILS.
16. ALL INLETS REQUIRE A CURB TYPE AND FL TRANSITION (LOCAL DEPRESSION) DETAILED PER CDOT (M-604-12) TYPE R INLET DETAIL. SEE JR ROADWAY PLAN SHEETS AND DETAIL SHEET.
17. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR ALL EL PASO COUNTY TYPE I MANHOLES PRIOR TO CONSTRUCTION OR ORDERING MATERIALS.

DP01 PROFILE
STA 1+00.00 TO 10+06.62



40 20 0 40 80

HORIZONTAL
ORIGINAL SCALE: 1" = 40'
VERTICAL
ORIGINAL SCALE: 1" = 4'

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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

DATE

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PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT STE 200
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No.	REVISION	BY	DATE

H-SCALE	1"=40'	DESIGNED BY	SAV
V-SCALE	1"=4'	DRAWN BY	SAV
DATE	08/05/22	CHECKED BY	

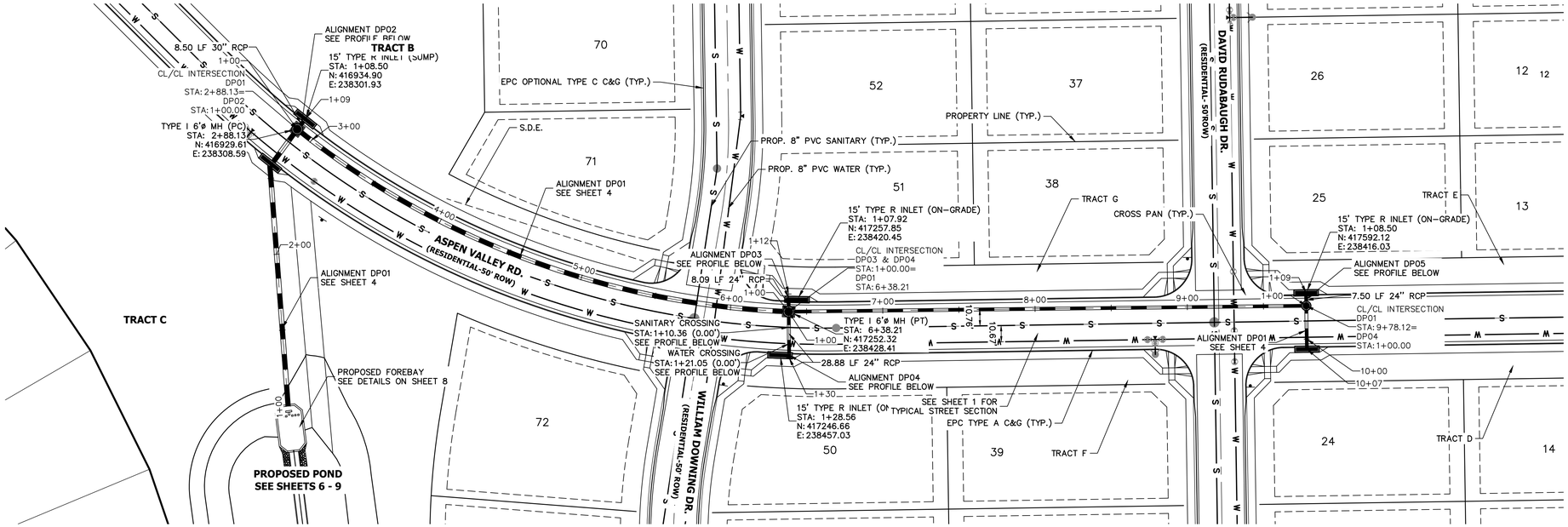
HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3

STORM PLANS

SHEET 4 OF 13

JOB NO. 2518812

X:\2518000.all\2518812\Drawings\Sheet Dwgs\CD\Storm Plans\2518812SP01.dwg, DP01, 8/4/2022 2:42:13 PM, CS



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DP02 PROFILE
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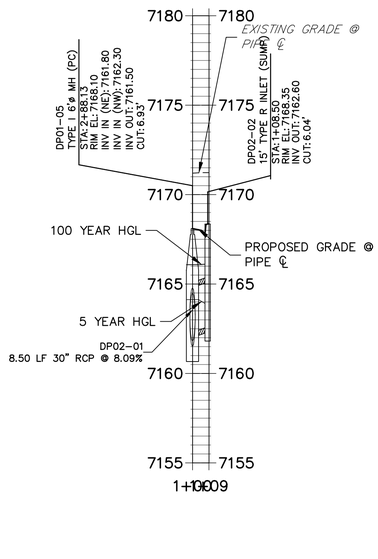

DP03 PROFILE
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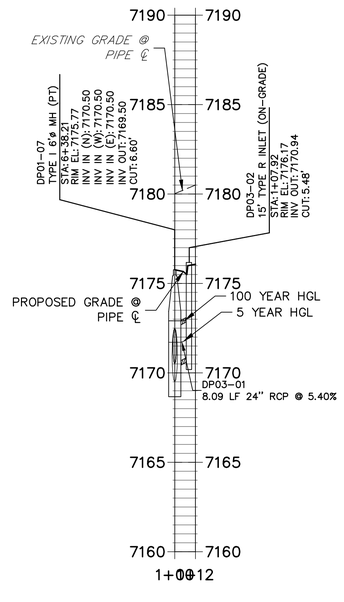

DP04 PROFILE
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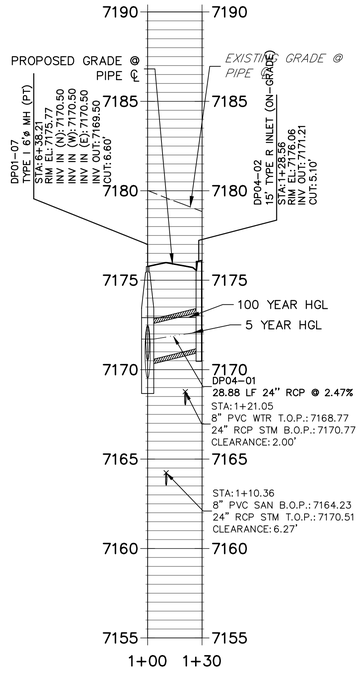

DP05 PROFILE
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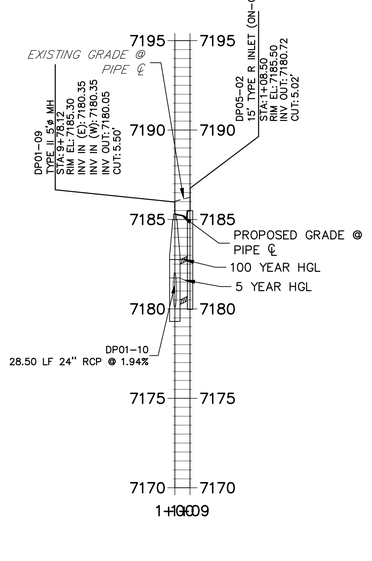

NOTES

1. SEE SHEET 1 FOR BENCHMARK. SEE SHEET 3 FOR LEGEND.
2. ALL STATIONING IS PIPE CENTERLINE UNLESS OTHERWISE NOTED.
3. ALL RCP STORM SEWER SHALL BE CLASS III UNLESS OTHERWISE NOTED.
4. PIPE LENGTHS ARE FROM INSIDE INLET WALL TO INSIDE INLET WALL, FROM CENTER OF MANHOLE TO INSIDE INLET WALL, OR FROM CENTER OF MANHOLE TO CENTER OF MANHOLE. PIPE LENGTHS INCLUDE FES OR HEADWALL.
5. ALL MANHOLE COVERS SHALL BE ORIENTED TO AVOID CURB, GUTTER, SIDEWALK AND CROSSPANS UNLESS OTHERWISE NOTED.
6. ALL MANHOLES ARE EL PASO COUNTY TYPE II UNLESS OTHERWISE SPECIFIED.
7. ALL MANHOLES HAVE AN ECCENTRIC CONE UNLESS OTHERWISE SPECIFIED.
8. ALL ON-GRADE INLETS ARE TO MATCH TBC ELEVATIONS AT EACH END, FOLLOWING STREET GRADES. SEE ROADWAY PLANS FOR REQUIRED ELEVATIONS.
9. INLET STATIONING IS TO CENTER OF INLET.
10. PIPES SHALL HAVE JOINT RESTRAINTS ON LAST 3 JOINTS AT PIPE OUTFALL.
11. ALL CURVED PIPES SHALL BE BUILT IN ACCORDANCE WITH THE AMERICAN CONCRETE PIPE ASSOCIATION (ACPA) DESIGN DATA 21. PIPE MANUFACTURER TO BE USED MUST BE ABLE TO MEET LENGTH AND JOINT OPENING CRITERIA PER ACPA & ALL APPLICABLE EL PASO COUNTY CRITERIA AND STANDARDS.
12. ALL STORM SEWER PIPES, INLETS, MANHOLES, AND APPURTENANCES WITHIN THE R.O.W. ARE PUBLIC. STORM FACILITIES OUTSIDE OF THE PUBLIC R.O.W. ARE PRIVATE, UNLESS OTHERWISE NOTED.
13. WHERE PIPES ENTER STRUCTURES ON A SKEW, CONTRACTOR IS REQUIRED TO EXTEND PIPE TO ENSURE THAT BOTH EDGES OF THE PIPE EXTEND INTO THE STRUCTURE. CONTRACTOR WILL THEN BE REQUIRED TO CUT PIPE FLUSH WITH THE INSIDE FACE OF THE STRUCTURE AND GROUT IN PLACE. UNLESS OTHERWISE NOTED.
14. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN COMPLIANCE WITH MANUFACTURERS SPECIFICATIONS AND EL PASO COUNTY STANDARDS AND SPECIFICATION.
15. SEE DETAIL SHEETS 10-12 FOR APPLICABLE DETAILS.
16. ALL INLETS REQUIRE A CURB TYPE AND FL TRANSITION (LOCAL DEPRESSION) DETAILED PER CDOT (M-604-12) TYPE R INLET DETAIL. SEE JR ROADWAY PLAN SHEETS AND DETAIL SHEET.
17. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR ALL EL PASO COUNTY TYPE I MANHOLES PRIOR TO CONSTRUCTION OR ORDERING MATERIALS.

N

40 20 0 40 80

HORIZONTAL
ORIGINAL SCALE: 1" = 40'
VERTICAL
ORIGINAL SCALE: 1" = 4'

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

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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

DATE

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

PREPARED FOR
SR LAND, LLC
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JMORLEY3870@AOL.COM

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Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

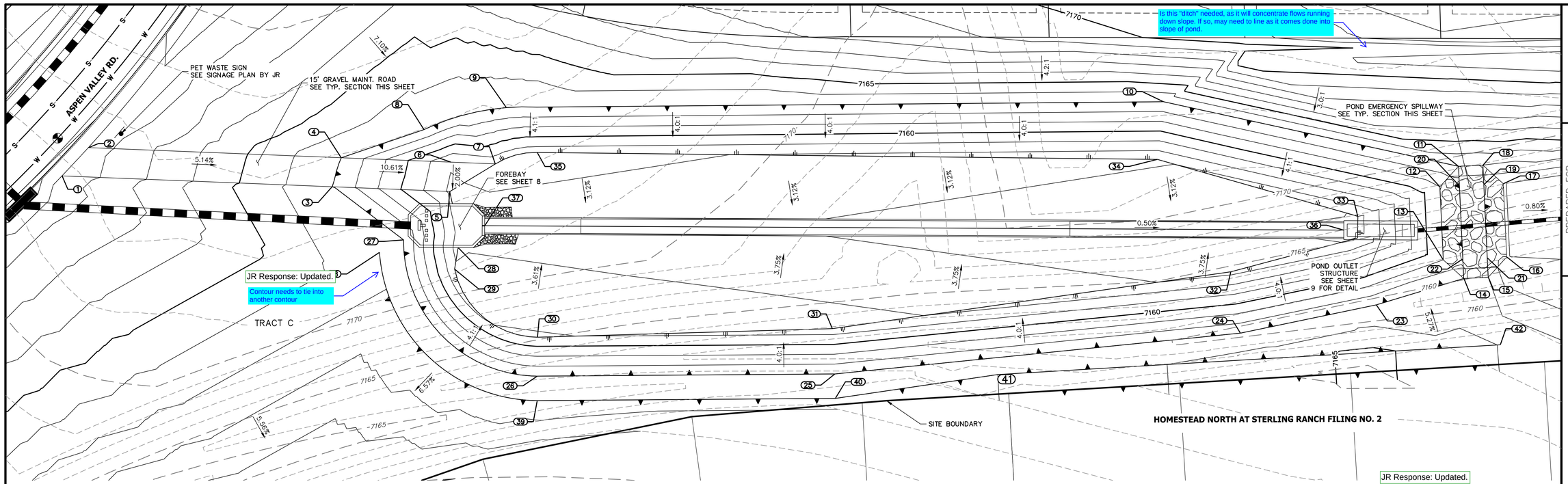
H-SCALE	1"=40'
V-SCALE	1"=4'
DATE	08/05/22
DESIGNED BY	SAV
DRAWN BY	SAV.
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3

STORM PLANS

SHEET 5 OF 13

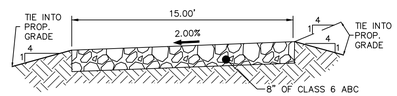
JOB NO. 2518812



POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
1	MAINT. ROAD	N: 416925.58 E: 238346.46	7168.46
2	MAINT. ROAD	N: 416938.44 E: 238355.71	7168.53
3	MAINT. ROAD/ TOP	N: 416935.24 E: 238456.61	7163.00
4	MAINT ROAD/ TOP	N: 416947.47 E: 238458.76	7163.00
5	MAINT. ROAD/TOE	N: 416939.44 E: 238504.56	7157.84
6	MAINT. ROAD	N: 416951.39 E: 238503.52	7158.08
7	MAINT. ROAD/ TOE	N: 416952.98 E: 238521.59	7158.34
8	TOP	N: 416963.20 E: 238490.88	7163.00
9	TOP	N: 416976.40 E: 238523.13	7163.00
10	TOP	N: 417012.92 E: 238789.24	7163.00
11	SPILLWAY TOP	N: 417002.06 E: 238912.15	7163.00
12	SPILLWAY CREST	N: 416992.84 E: 238905.69	7161.01
13	SPILLWAY CREST	N: 416963.30 E: 238910.89	7161.01
14	SPILLWAY TOP	N: 416956.84 E: 238920.11	7163.00
15	SPILLWAY TOP	N: 416958.57 E: 238929.96	7163.00

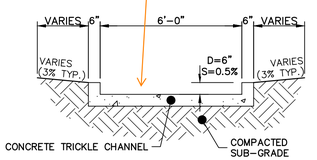
POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
16	SPILLWAY CREST	N: 416967.79 E: 238936.42	7161.01
17	SPILLWAY CREST	N: 416997.34 E: 238931.22	7161.01
18	SPILLWAY TOP	N: 417003.80 E: 238922.00	7163.00
19	SPILLWAY CREST	N: 416995.96 E: 238923.38	7161.01
20	SPILLWAY CREST	N: 416994.22 E: 238913.53	7161.01
21	SPILLWAY CREST	N: 416966.41 E: 238928.58	7161.01
22	SPILLWAY CREST	N: 416964.68 E: 238918.73	7161.01
23	TOP	N: 416941.58 E: 238885.99	7163.00
24	TOP	N: 416923.08 E: 238832.47	7163.00
25	TOP	N: 416885.45 E: 238670.18	7163.00
26	TOP	N: 416869.09 E: 238549.63	7163.00
27	TOP	N: 416917.40 E: 238488.30	7163.00
28	TOE/ FOREBAY	N: 416917.09 E: 238510.82	7157.49
29	TOE	N: 416908.16 E: 238510.50	7158.27
30	TOE	N: 416884.87 E: 238547.58	7159.09

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
31	TOE	N: 416903.70 E: 238666.80	7158.39
32	TOE	N: 416947.47 E: 238825.40	7156.68
33	TOE	N: 416976.57 E: 238873.97	7156.06
34	TOE	N: 416989.21 E: 238789.73	7157.09
35	TOE	N: 416959.79 E: 238537.88	7158.41
36	TRICKLE CHANNEL	N: 416970.22 E: 238868.98	7155.44
37	TRICKLE CHANNEL	N: 416927.35 E: 238520.44	7157.20
38	BERM	N: 416911.05 E: 238479.19	7163.00
39	BERM	N: 416859.17 E: 238550.91	7163.00
40	BERM	N: 416875.54 E: 238671.52	7163.00
41	BERM	N: 416893.67 E: 238736.21	7163.00
42	BERM	N: 416931.84 E: 238938.32	7163.97



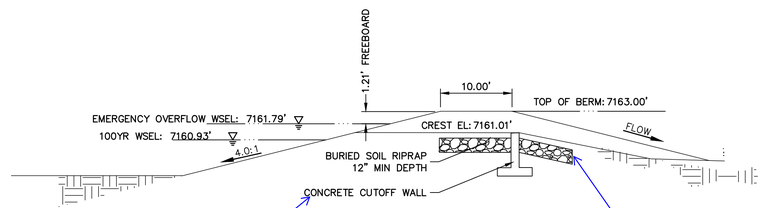
15' GRAVEL MAINTENANCE ACCESS ROAD TYPICAL SECTION

N.T.S.



POND TRICKLE CHANNEL

SCALE: 1"=3'



DETENTION POND SECTION
SPILLWAY PROFILE

SCALE: NTS

Provide detail

JR Response: Added.

Riprap should extend to toe of slope. See detail in appendix C of drainage report

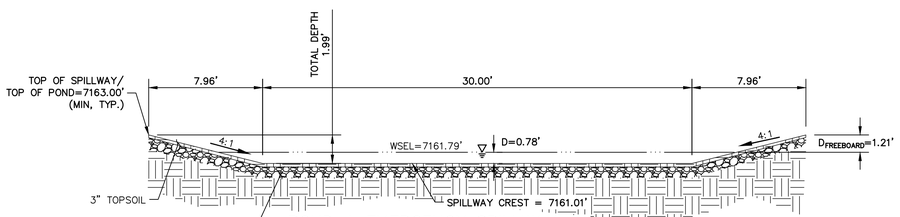
JR Response: The slope after the spillway doesn't follow the typ. design of having a slope of 33%. Our design has a slope of ~0.75% after the spillway. This reduce slope leads to less damages from erosion and requires less rip-rap. Slope added to detail.

20 10 0

ORIGINAL SCALE: 1" = 20'

JR Response: Updated.

Consider having control joints every ~10ft.



POND A EMERGENCY SPILLWAY
TYP. SECTION

SCALE: 1"=5'

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

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COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

DATE

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No.	REVISION	BY	DATE

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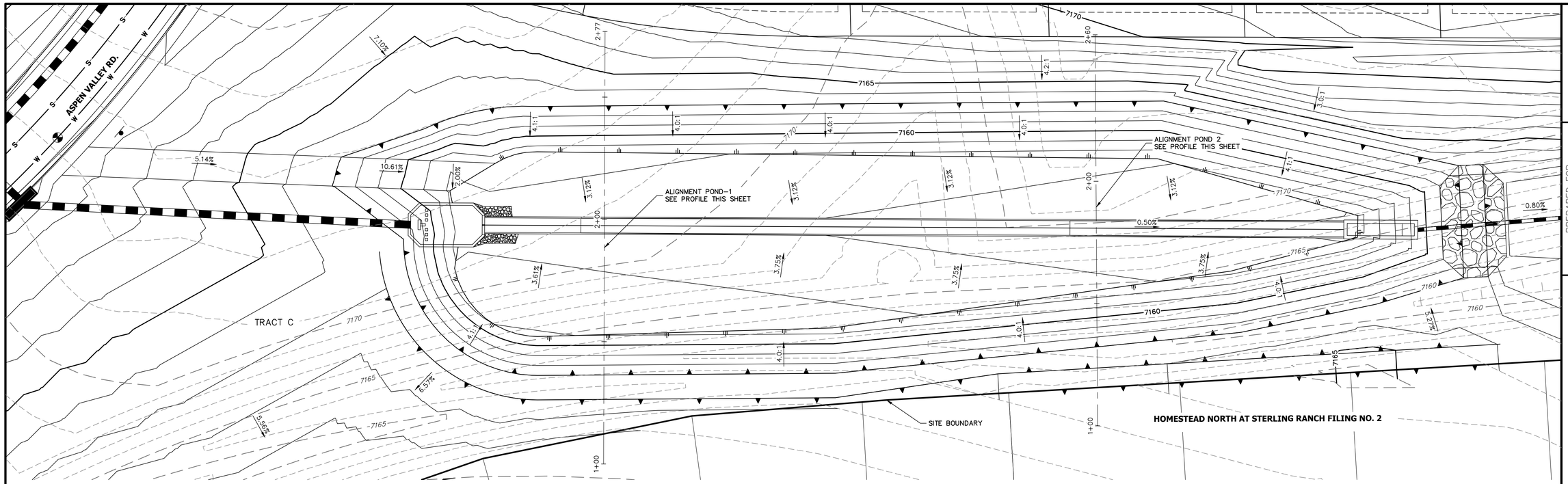
V-SCALE	N/A	DRAWN BY	APL
DATE	08/05/22	CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3

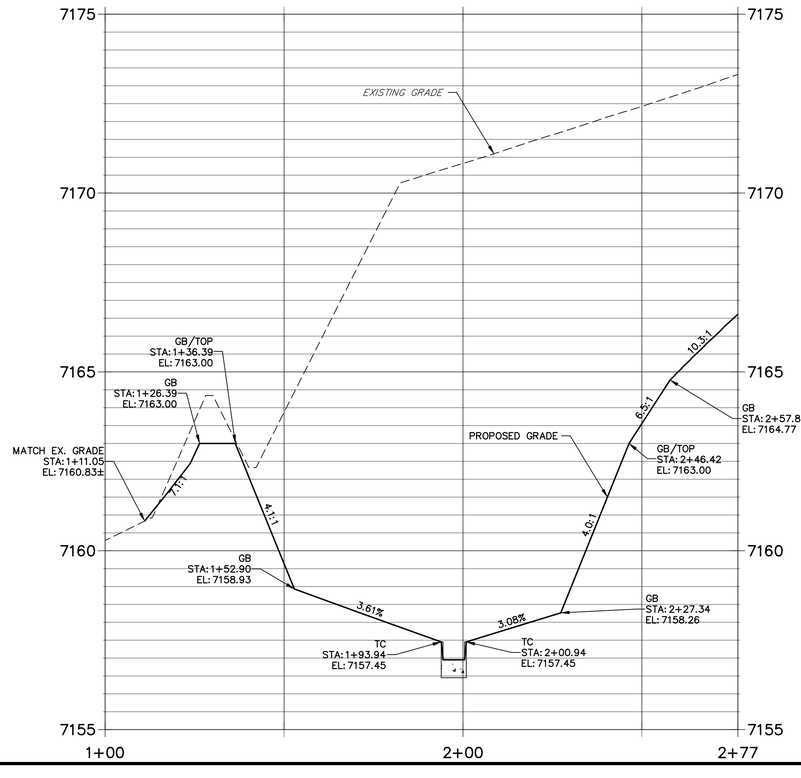
POND PLANS

SHEET 6 OF 13

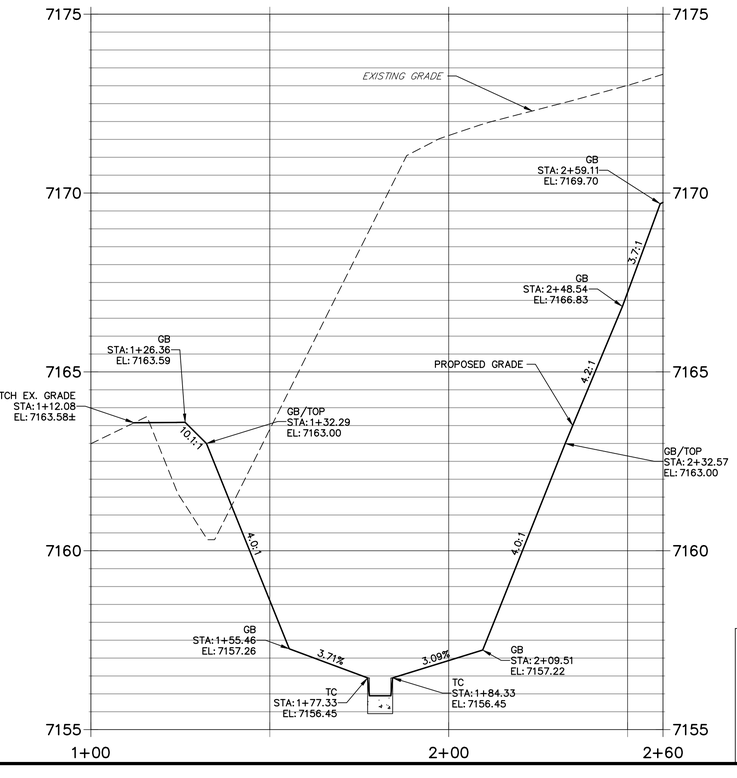
JOB NO. 2518812



POND-1 PROFILE
STA 1+00.00 TO 2+76.86



POND 2 PROFILE
STA 1+00.00 TO 2+59.90



20 10 0 20 40

HORIZONTAL
ORIGINAL SCALE: 1" = 20'
VERTICAL
ORIGINAL SCALE: 1" = 2'

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MIKE A. BRAMLETT, P.E. DATE
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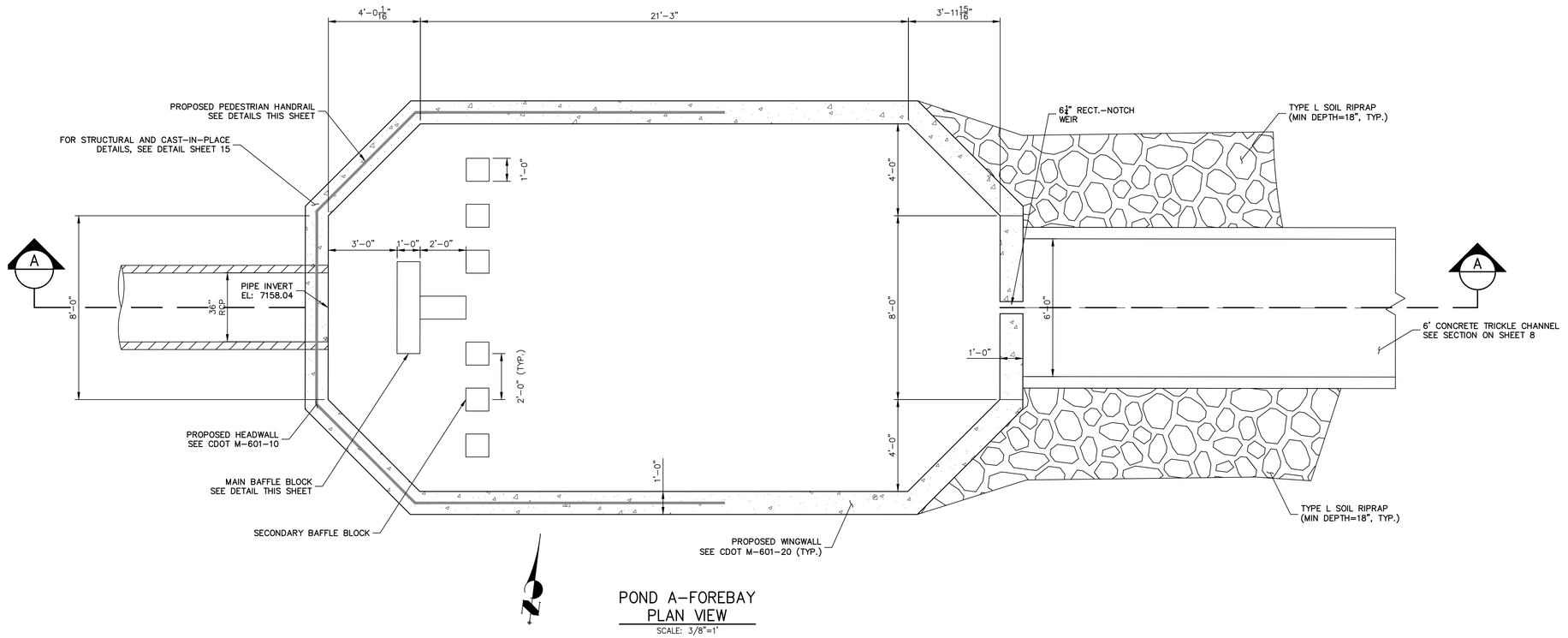
V-SCALE	1"=2'
DATE	08/05/22
DESIGNED BY	APL
DRAWN BY	APL
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3

POND PLANS

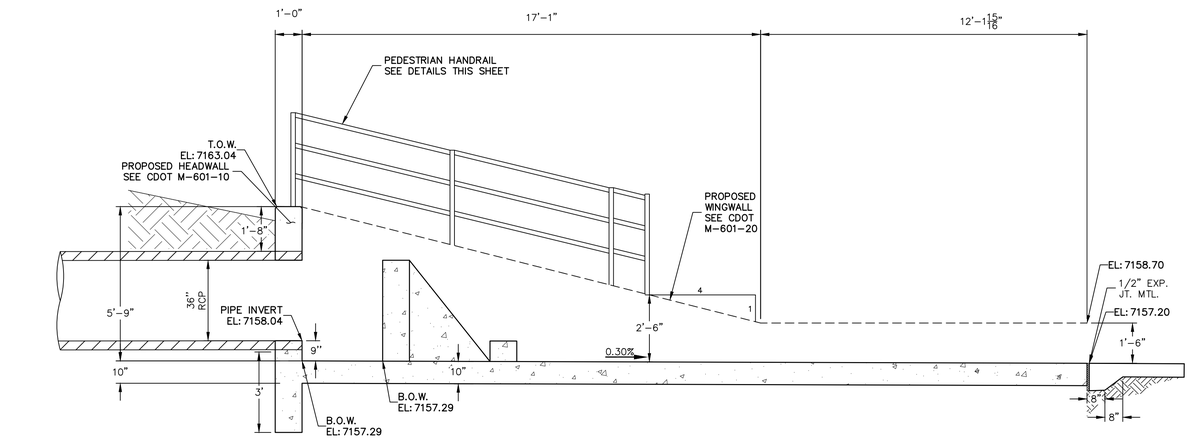
SHEET 7 OF 13

JOB NO. 2518812



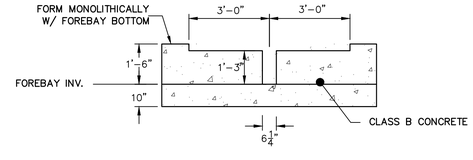
POND A-FOREBAY PLAN VIEW

SCALE: 3/8"=1'



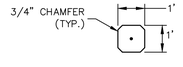
POND A – FOREBAY CROSS SECTION A-A

SCALE: 3/8"=1'



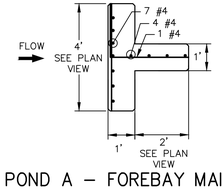
POND A – FOREBAY SECTION AT WEIR

SCALE: 3/8"=1'



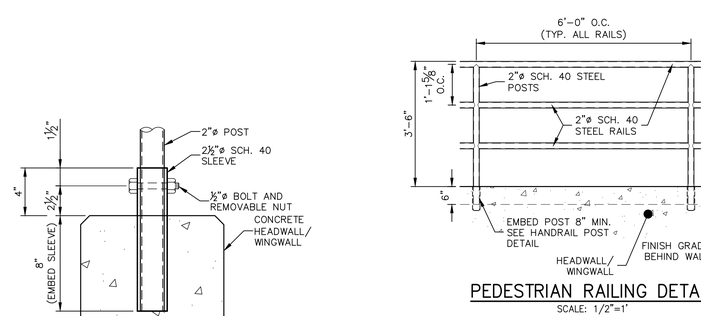
POND A – FOREBAY SECONDARY BAFFLE BLOCK PLAN VIEW

SCALE: 3/8"=1'



POND A – FOREBAY MAIN BAFFLE BLOCK PLAN

SCALE: 3/8"=1'

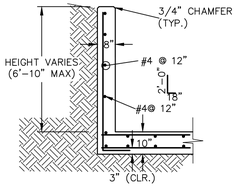


PEDESTRIAN RAILING DETAIL

SCALE: 1/2"=1'

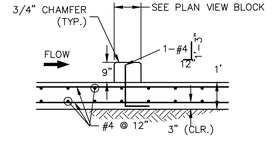
HANDRAIL POST DETAIL

SCALE: 1"=6'



POND A FOREBAY WINGWALL REINFORCING DETAIL (TYP.)

SCALE: N.T.S.



POND A FOREBAY SECONDARY BAFFLE BLOCK DETAILS

SCALE: 3/8"=1'

ENGINEER'S STATEMENT

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COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
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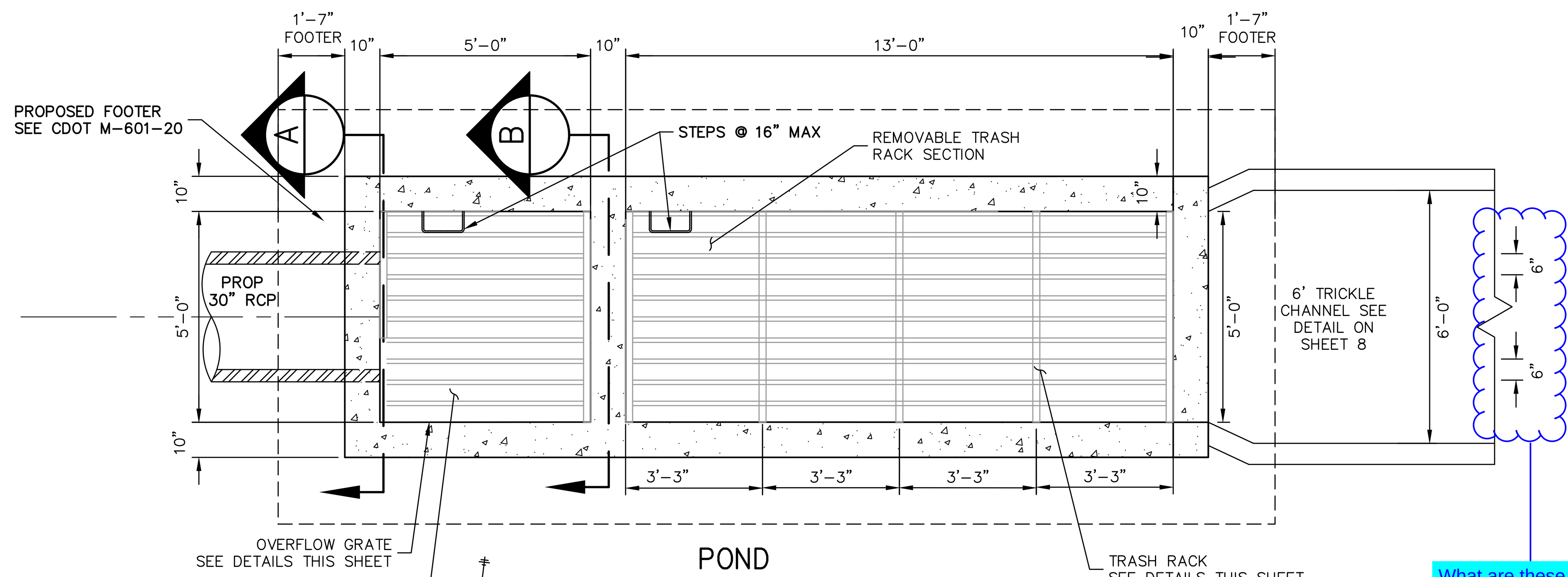
V-SCALE	VARIES	DRAWN BY	APL
DATE	08/05/22	CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3
POND A PLANS

SHEET 8 OF 13

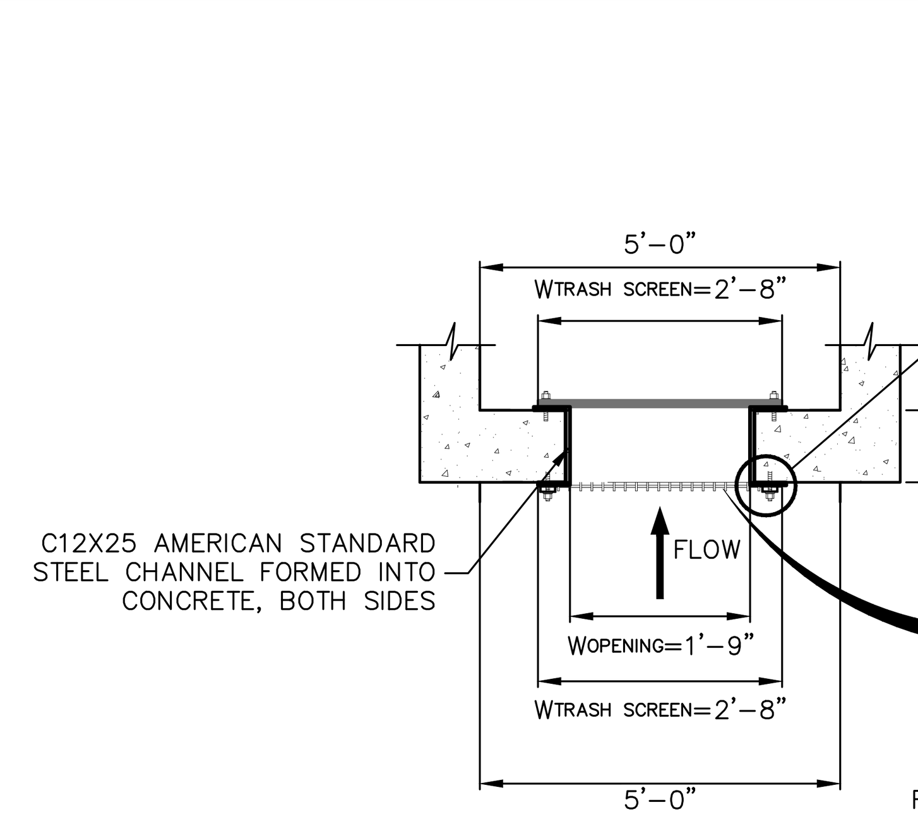
JOB NO. 2518812



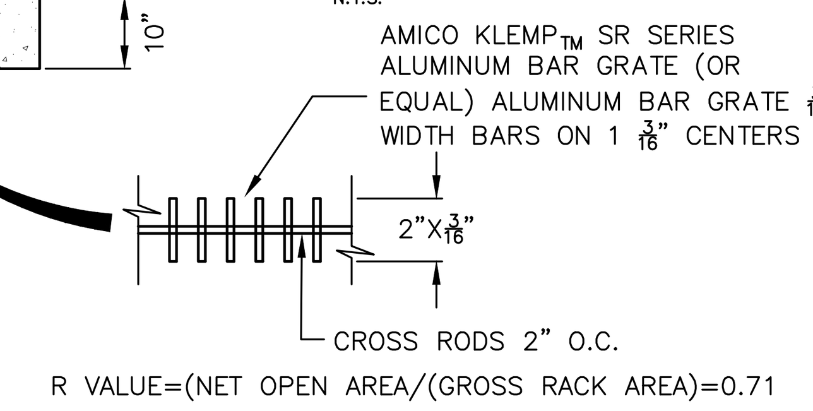
POND
OUTLET STRUCTURE PLAN
SCALE: 3/8"=1'

What are these dimensions for? appear to be in wrong place or need to be deleted

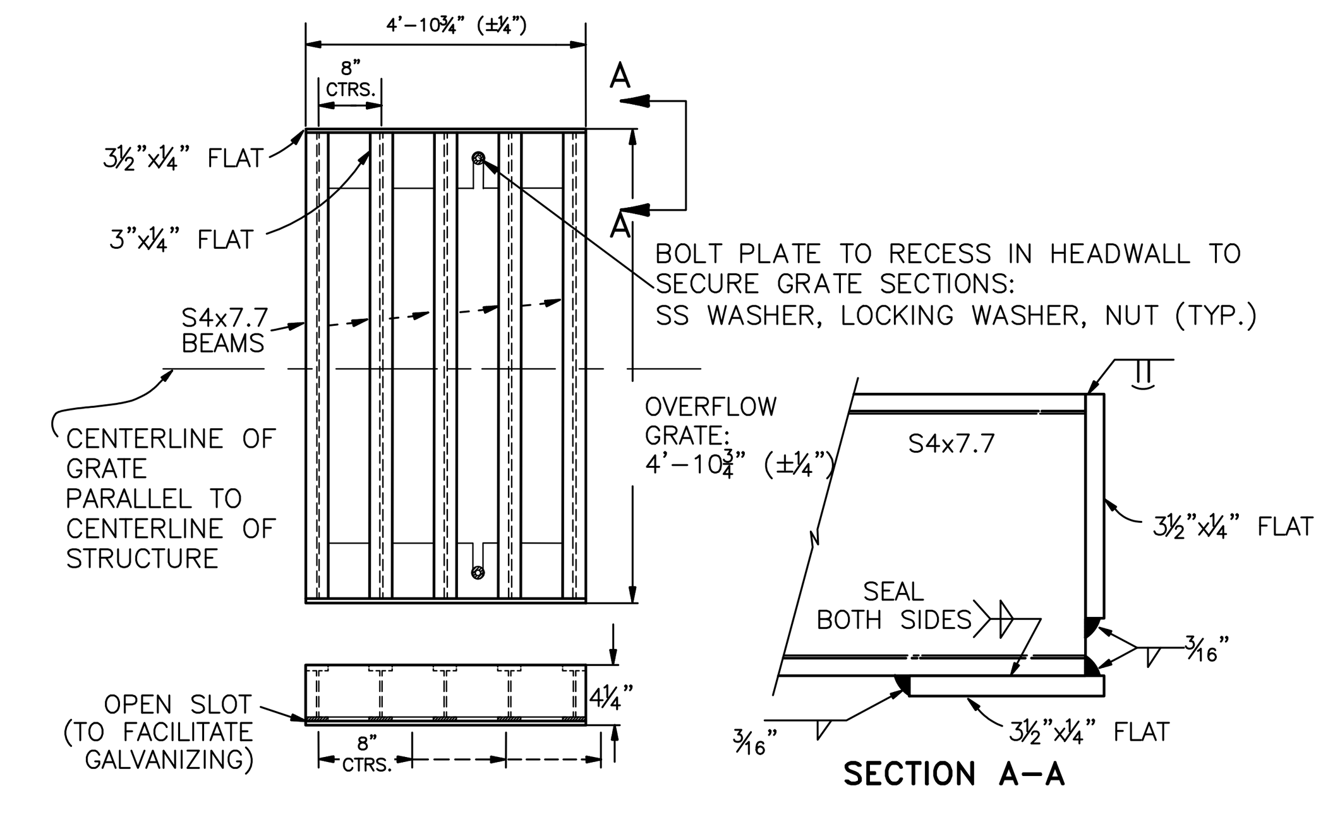
JR Response: Updated.



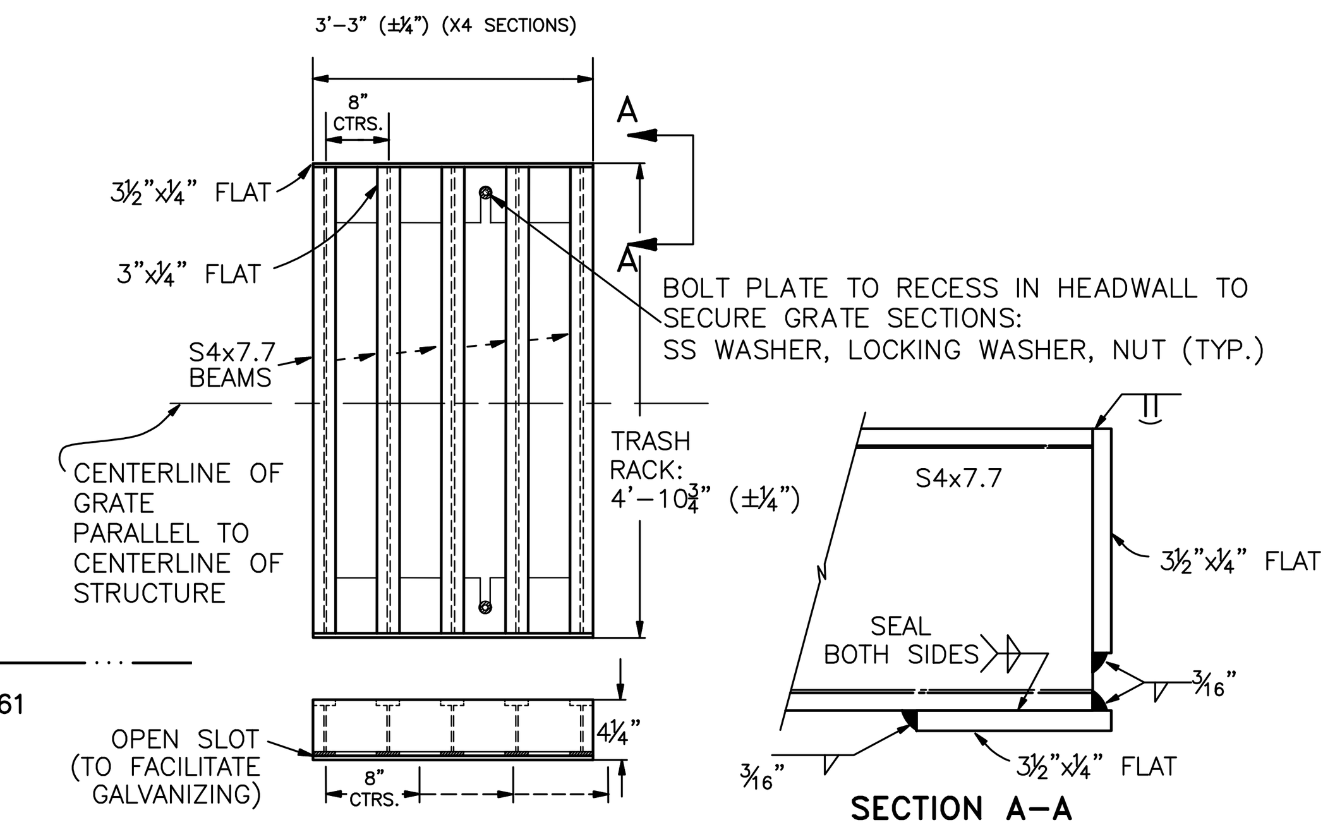
TRASH RACK AND PLATE DETAIL (PLAN)
N.T.S.



TRASH RACK DETAIL
N.T.S.

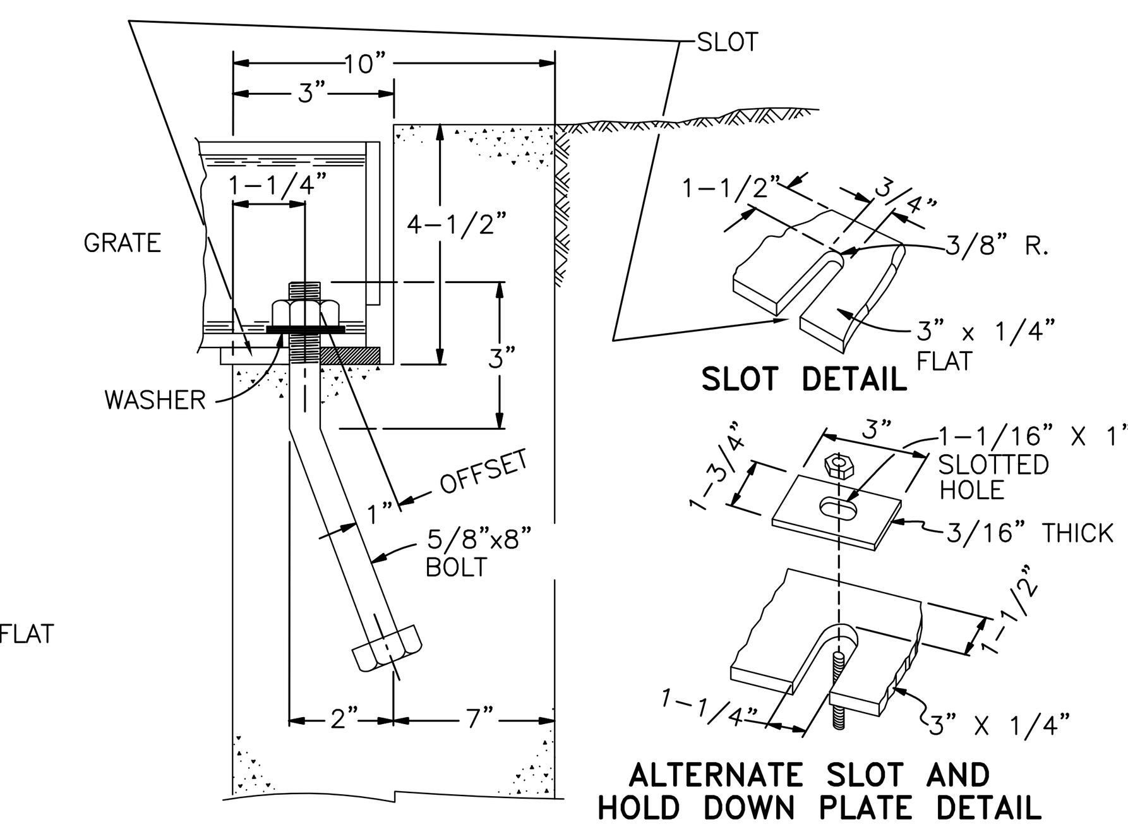


OVERFLOW GRATE DETAILS
N.T.S.



TRASH RACK DETAILS
N.T.S.

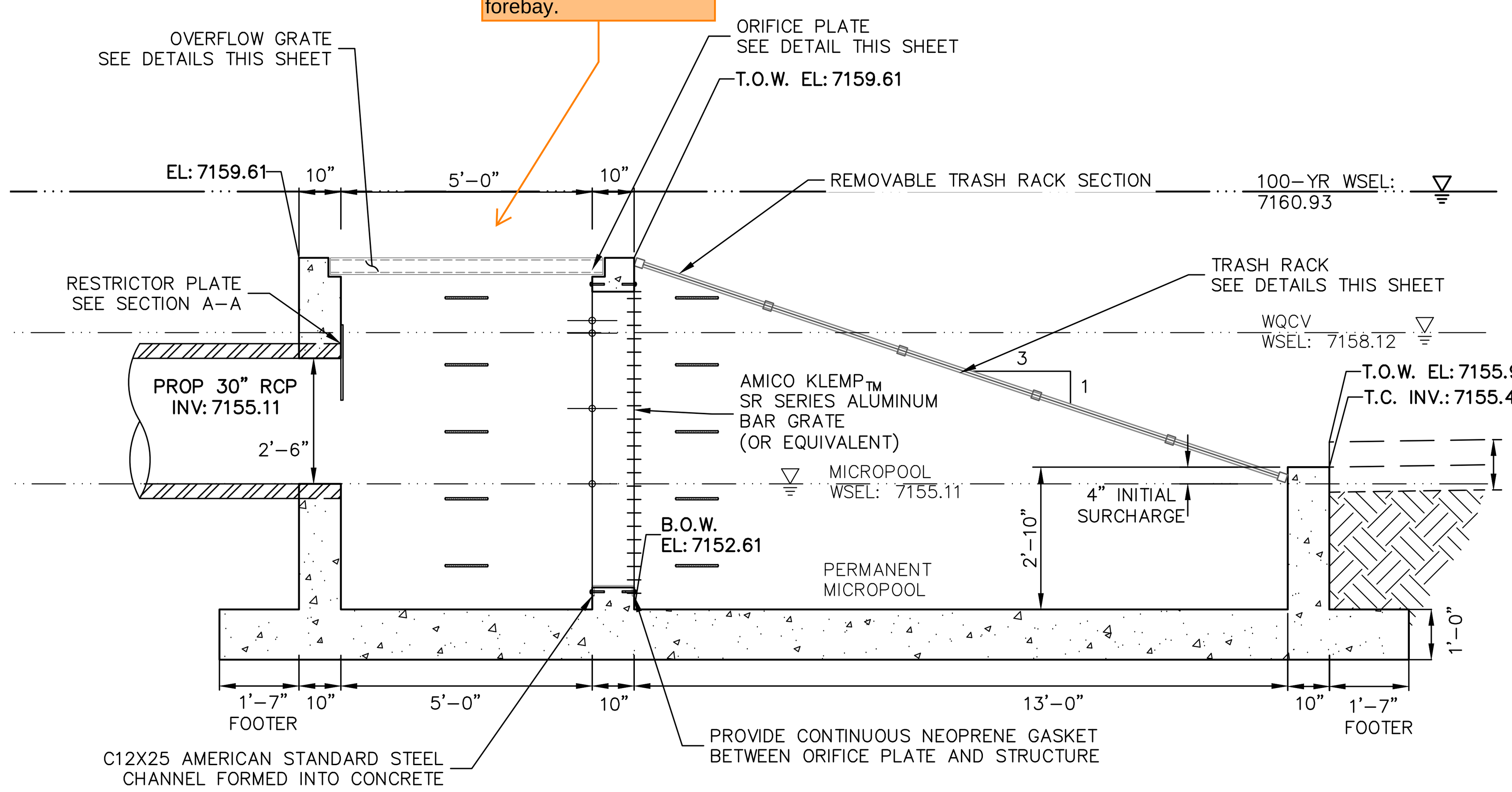
JR Response: Updated.



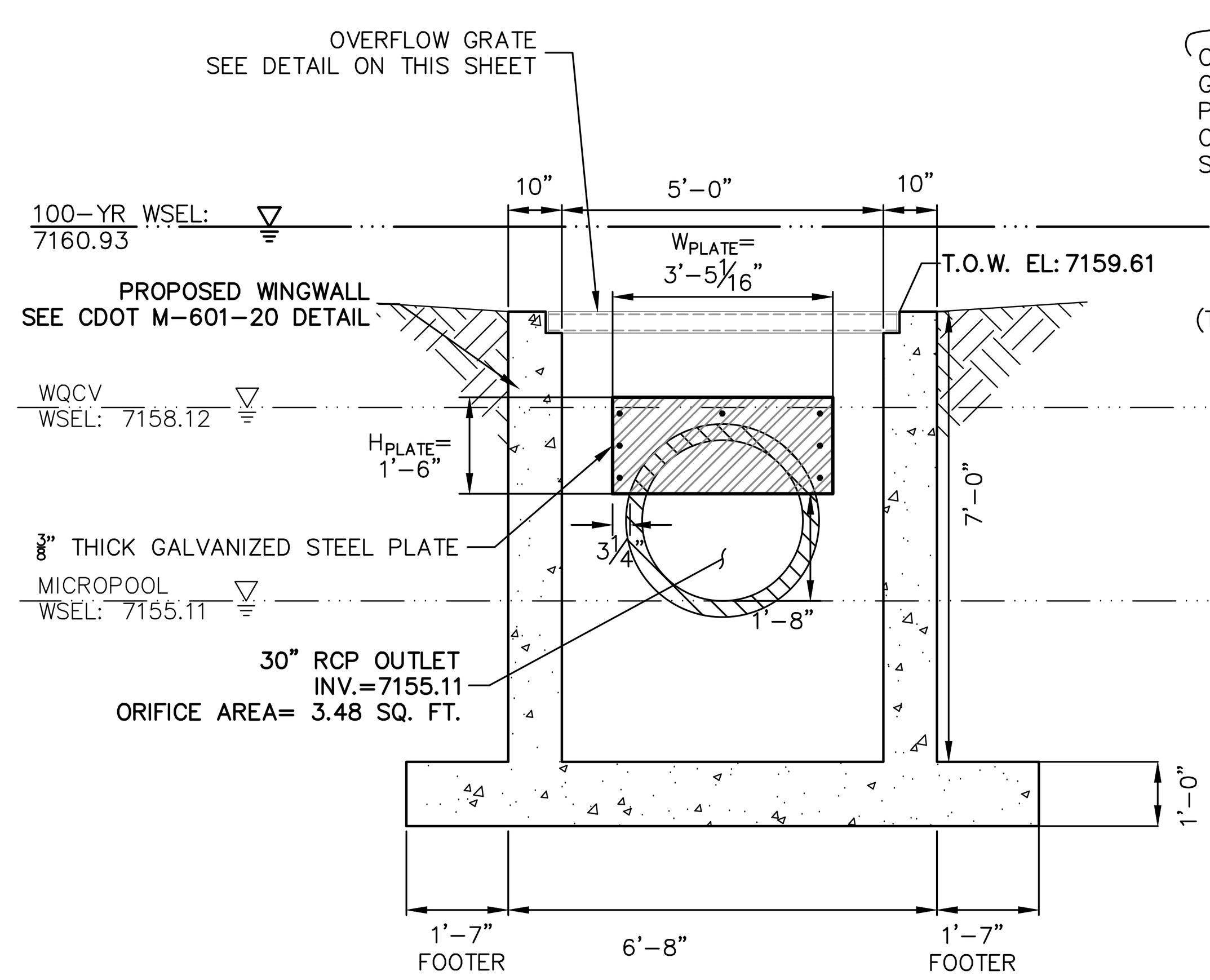
OVERFLOW GRATE/TRASH RACK INSTALLATION DETAIL
N.T.S.

JR Response: No need for safety measures given the trash rack, overflow grade, and elev. of surrounding surface.

Consider need for safety railing around outlet structure similar to forebay.



POND
OUTLET STRUCTURE PROFILE
SCALE: 3/8"=1'



A A-A SECTION
SCALE: 3/8"=1'

Revise to "Pond A"

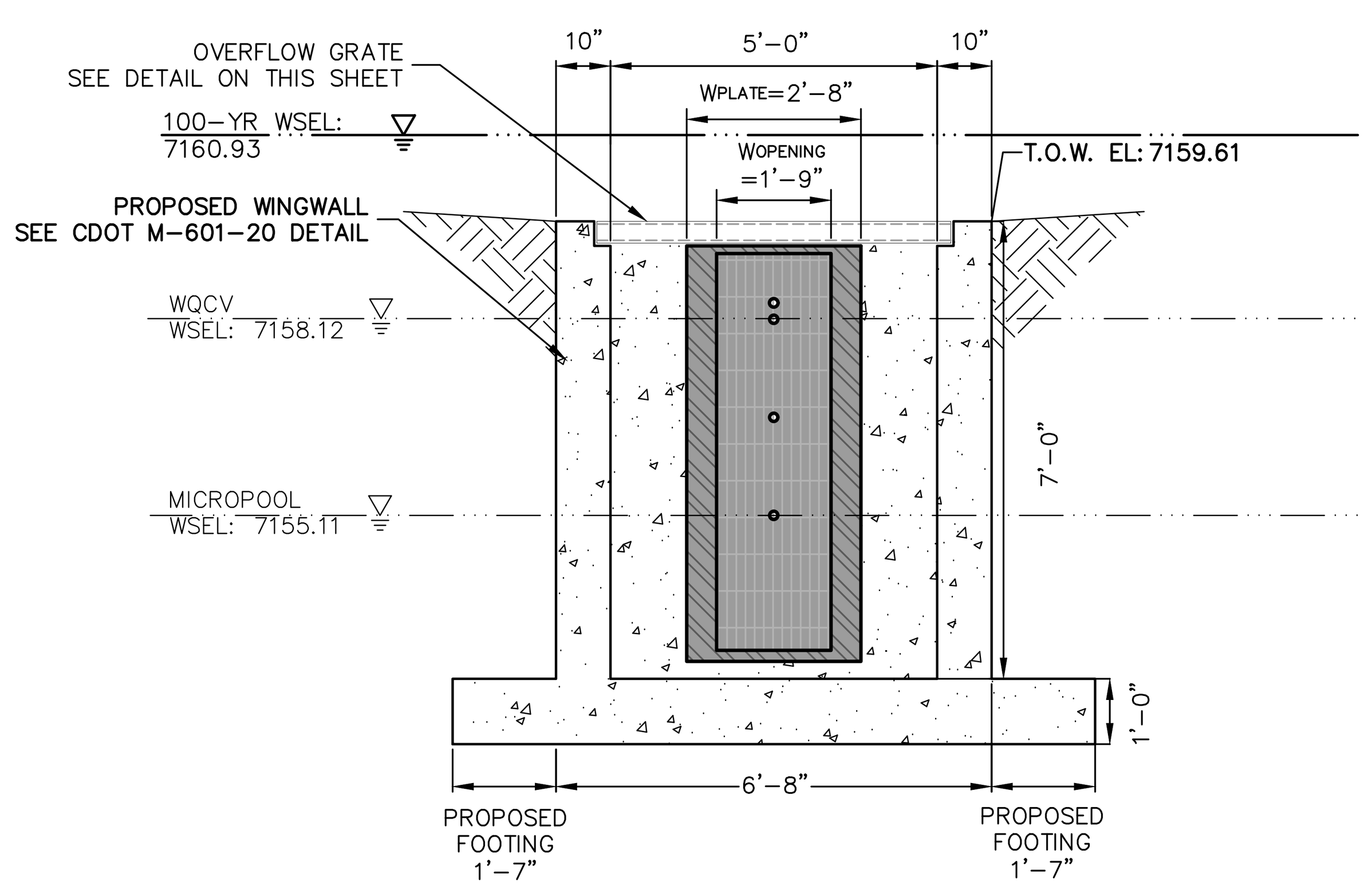
POND C OUTLET STRUCTURE NOTES:

ORIFICE PLATE:

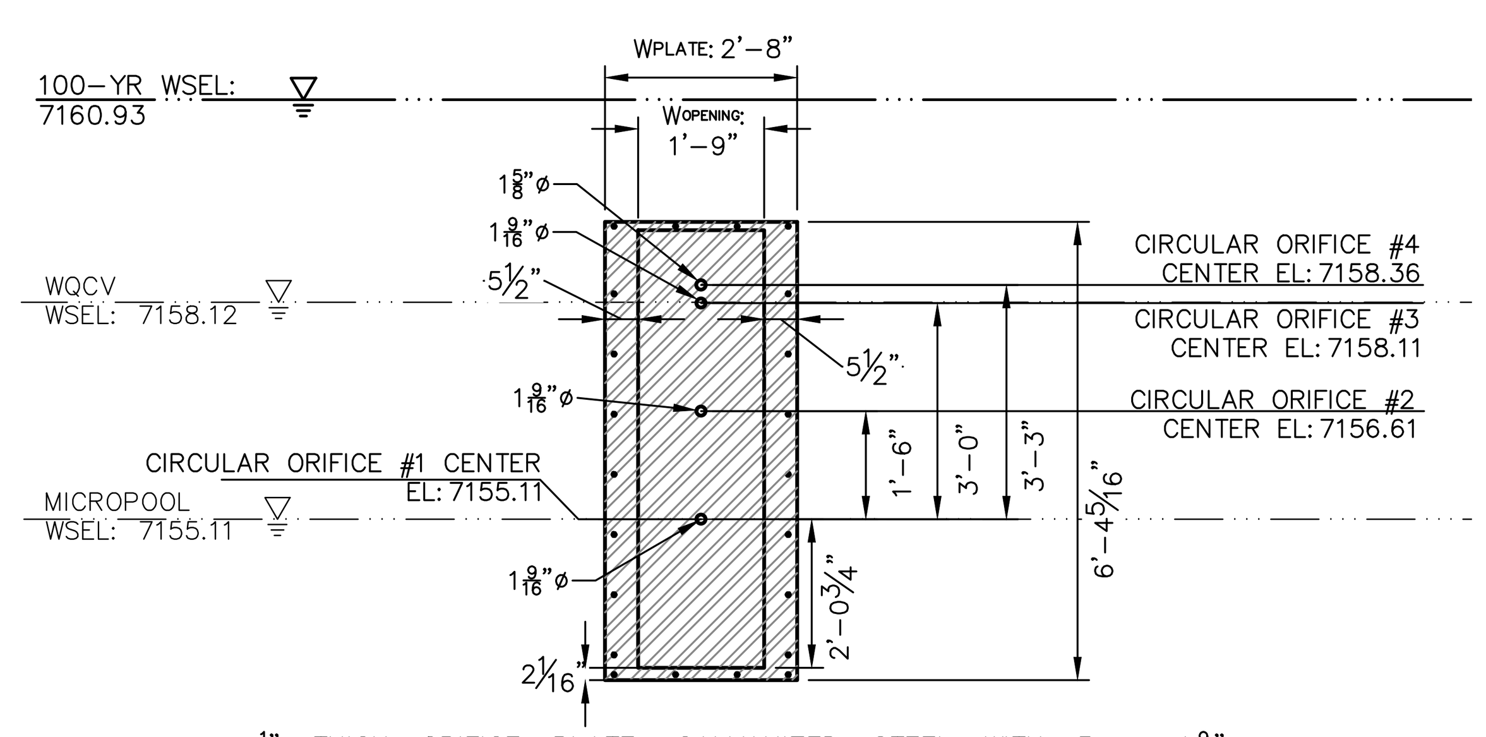
1. PROVIDE CONTINUOUS NEOPRENE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE AND BETWEEN THE RESTRICTOR PLATE AND CONCRETE.
2. BOLT PLATE TO CONCRETE 12" MAX. ON CENTER.

TRASH RACKS:

3. TRASH RACKS SHALL BE 1¼" SCH.40 STEEL PIPE, GALVANIZED, @ 6" CENTERS. SUPPORT BARS SHALL BE ⅜"x2" STEEL RECTANGULAR BARS, GALVANIZED, @ 36". ALL TRASH RACKS SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE.
4. REMOVABLE TRASH RACK SECTIONS SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED & LOCKABLE OR BOLTABLE ACCESS PANELS AS SHOWN ON THE PLANS.
5. STEEL TRASH RACKS SHALL BE HOT DIP GALVANIZED AND MAY BE HOT POWDER COATED AFTER GALVANIZING.
6. STRUCTURAL STEEL FOR GRATES, ORIFICE PLATES, AND BARS SHALL BE GALVANIZED AND SHALL BE IN ACCORDANCE WITH CDOT STANDARD SPECIFICATIONS, SUBSECTION 712.06.
7. ALL HARDWARE, BOLTS, AND FASTENERS SHALL BE STAINLESS STEEL.
8. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL PLATES AND GRATING FOR ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION.



B B-B SECTION
SCALE: 3/8"=1'



¼" THICK ORIFICE PLATE, GALVANIZED STEEL WITH 3 – 1 9/16"ø CIRCULAR ORIFICE, AND 1 – 1 3/16" CIRCULAR ORIFICE BOLT PLATE TO CONCRETE @ 10" O.C. MAX. PROVIDE GASKET BETWEEN ORIFICE PLATE AND CONCRETE

ORIFICE PLATE DETAIL
SCALE: 3/8"=1'

811
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V-SCALE	VARIES
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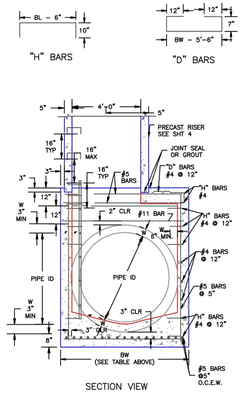
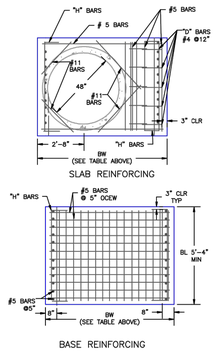
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3
POND PLANS

SHEET 9 OF 13
JOB NO. 2518812





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..

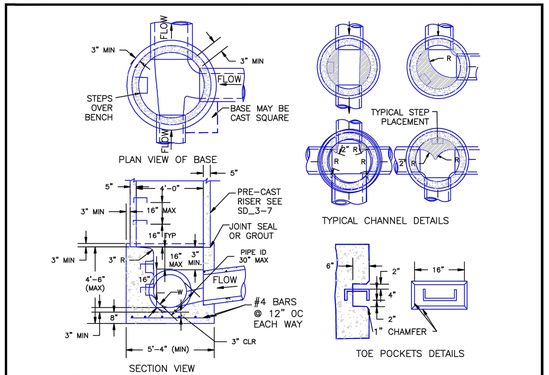
2. VIEW AND DETAILS SHOWN ARE TYPICAL FOR STRAIGHT THROUGH DESIGN ONLY. DESIGN ENGINEER SHALL DETERMINE MANHOLE BASE CONFIGURATION AND DIMENSIONS FOR PARTICULAR PIPE SIZES AND ALIGNMENT.

3. EITHER LADDER OR STEPS SHALL BE INSTALLED WHEN MANHOLE DEPTH EXCEEDS 30". LOWEST STEP SHALL BE A MAXIMUM OF 16" ABOVE THE FLOOR.

4. FLOOR OF THE MANHOLE SHALL BE TROWELLED TO A SMOOTH, HARD SURFACE AND SHALL SLOPE TOWARDS THE OUTLET (8:1 MAX., ½" PER FT. MIN). FLOOR SHALL BE SHAPED AND CHANNELED; SEE SD_3-2 FOR TYPICAL CHANNEL DETAILS.

SCALE: NOT TO SCALE

DATE APPROVED: 7/9/09 André Brackin DEPARTMENT OF TRANSPORTATION	Storm Sewer Manhole Detail Type I Standard Drawing	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION
	REVISION DATE: 7/9/09	FILE NAME: SD_3-1



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.

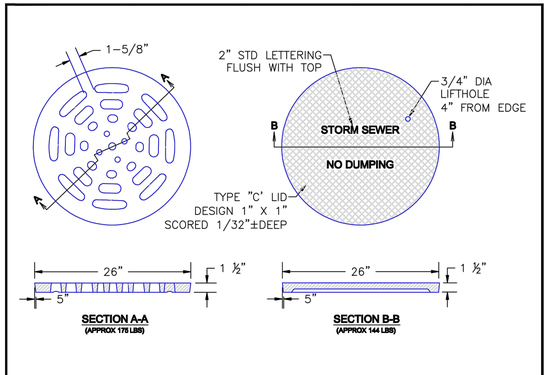
4. PIPES SHALL BE TRIMMED TO FINAL SHAPE AND SET BEFORE MANHOLE IS POURED.

5. BENCH SHALL BE SLOPED TOWARD CENTER OF MANHOLE BASE (4:1 MAX., ½" PER FOOT. MIN.).

6. FLOOR OF MANHOLE SHALL BE TROWELLED 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.

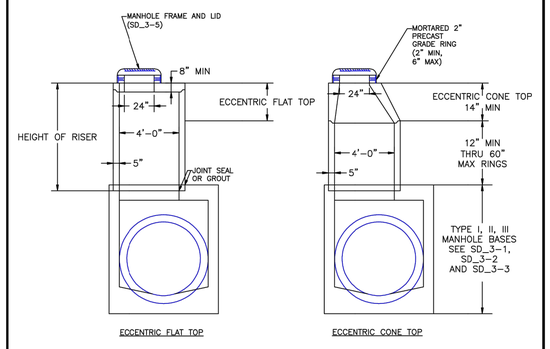
SCALE: NOT TO SCALE

DATE APPROVED: André P. Brackin DEPARTMENT OF TRANSPORTATION	Storm Sewer Manhole Detail Type II Standard Drawing	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION
	REVISION DATE: 11/10/04	FILE NAME: SD_3-2



SCALE: NOT TO SCALE

DATE APPROVED: 9/16/10 André P. Brackin DEPARTMENT OF TRANSPORTATION	Storm Sewer Manhole Details Standard Drawing	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION
	REVISION DATE: 9/16/10	FILE NAME: SD_3-5



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

DATE APPROVED: 8/11/11 André P. Brackin DEPARTMENT OF TRANSPORTATION	Storm Sewer Manhole Riser and Cover Detail Standard Drawing	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION
	REVISION DATE: 11/23/04	FILE NAME: SD_3-7

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

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESENT STE 200
COLORADO SPRINGS, CO 80903
ATTN: JAMES F. MORLEY
JMORLEY3870@AOL.COM

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Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	N/A
V-SCALE	N/A
DATE	08/05/22
DESIGNED BY	QNL
DRAWN BY	PL
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3
DETAIL SHEET

SHEET 10 OF 13
JOB NO. 2518812

Know what's below. Call before you dig.

TABLE ONE ~ BAR LIST FOR CURB INLETS, TYPE "R"

MARK	BAR # OR SIZE	O.C. SPACING	TYPE	ALL INLETS L = 5 FT. NO. REQ'D.	LENGTH	INLETS: H ≤ 5 FT. L = 10 FT. NO. REQ'D.	LENGTH	L = 15 FT. NO. REQ'D.	LENGTH	INLETS: H > 5 FT. L = 10 FT. NO. REQ'D.	LENGTH	L = 15 FT. NO. REQ'D.	LENGTH
401	4	11"	II	15	*	21	*	26	*	11	*	11	*
402	4	11"	II	7	*	13	*	18	*	7	*	7	*
403	4	9"	II	*	4'-0"	*	4'-0"	*	4'-0"	*	4'-0"	*	4'-0"
405	4	6"	VI	11	6'-10"	21	6'-10"	31	6'-10"	11	6'-10"	11	6'-10"
406	4	6"	VIII	7	8'-10"	7	13'-10"	7	18'-10"	7	8'-10"	7	8'-10"
407	4	9"	II	*	5'-10"	*	10'-10"	*	15'-10"	*	5'-10"	*	5'-10"
408	4	12"	II	3	6'-10"	3	11'-10"	3	16'-0"	3	11'-10"	3	16'-0"
409	4	8"	II	6	5'-10"	6	10'-10"	6	15'-10"	6	10'-10"	6	15'-10"
410	4	11"	VII							3		3	*
411	4	11"	II							3	5'-2"	3	10-2"
412	4	11"	II							3	2'-9"	3	2'-9"
413	4	9"	II							7	10'-10"	7	15'-10"
501	5	5½"	IV	11	3'-4"	22	3'-4"	33	3'-4"	22	3'-4"	33	3'-4"
502	5	5½"	III							11	11'-5"	17	11'-5"
503	5	5½"	II	5	3'-6"	16	3'-6"	27	3'-6"	6	3'-6"	6	3'-6"
504	5	5½"	IX									5	8'-4"
601	6	2½"	V	2	8'-10"	2	8'-10"	2	8'-10"	2	8'-10"	4	8'-10"
■8[8.5				1	5'-10"	1	10'-10"	1	15'-10"	1	10'-10"	1	15'-10"
				2 BARS, 1 RODS	——	4 BARS, 3 RODS	——	8 BARS, 5 RODS	——	4 BARS, 3 RODS	——	8 BARS, 5 RODS	——

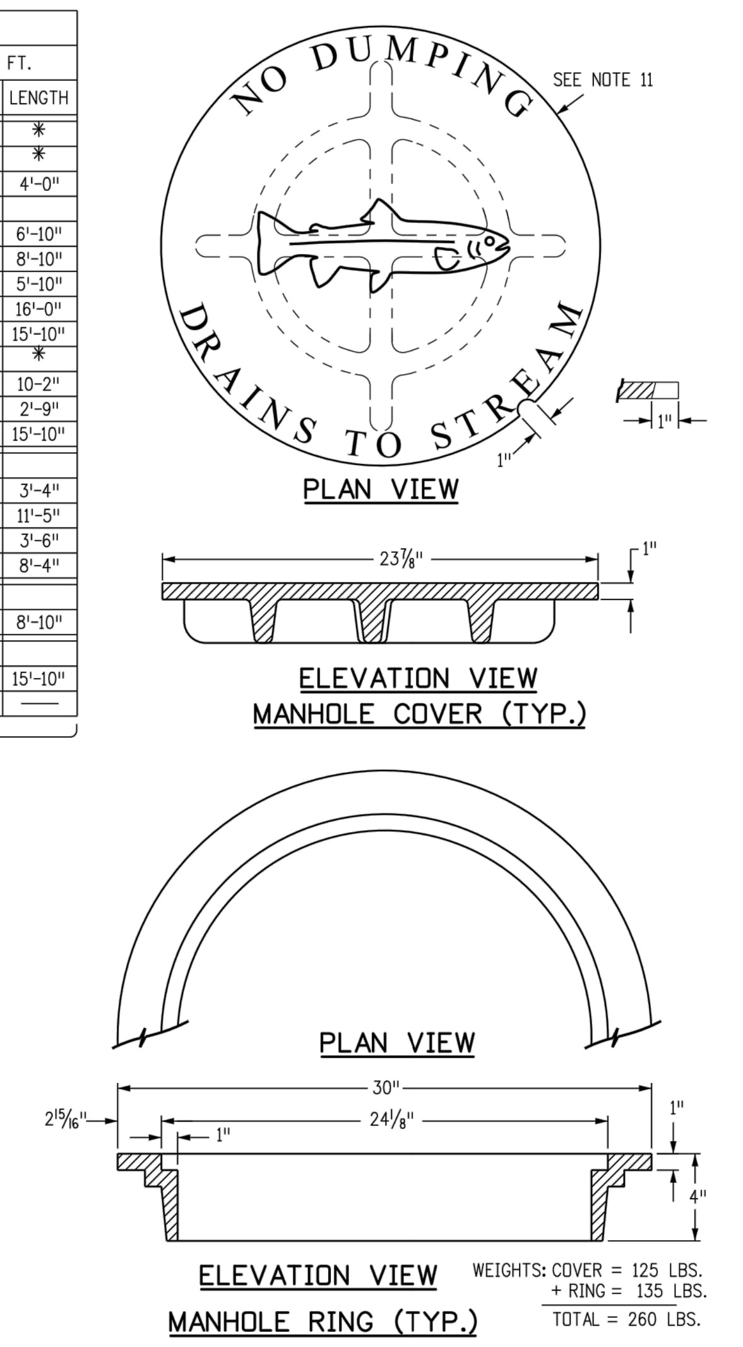
REGULAR INLETS (INLETS: H ≤ 5 FT.) — DROP BOX INLETS (INLETS: H > 5 FT.)

* VARIABLE REFER TO TABLE TWO.
■ INCLUDE #4, 18 IN. BARS (SEE CHANNEL LAYOUT).

TABLE TWO ~ BARS AND QUANTITIES VARIABLE WITH "H"

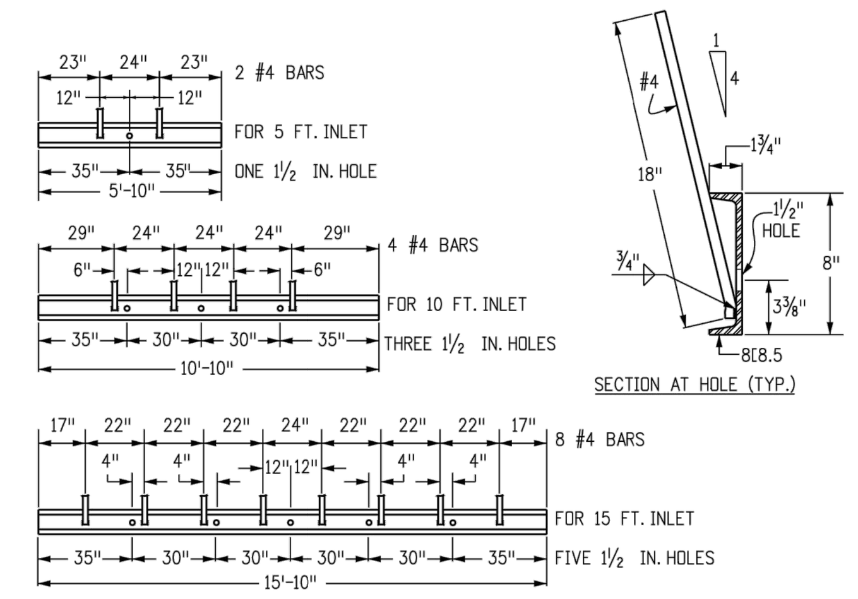
"H"	LENGTH 401	LENGTH 402	LENGTH 410	NO. REQ'D. REGULAR 403	REGULAR 407	NO. REQ'D. DROP BOX 403	DROP BOX 407	L = 5 FT. CONC. CU. YDS.	STEEL LBS.	L = 10 FT. CONC. CU. YDS.	STEEL LBS.	L = 15 FT. CONC. CU. YDS.	STEEL LBS.
3'-0"	2'-8"	1'-8"		10	7			3.2	285	5.3	497	7.4	706
3'-6"	3'-2"	2'-2"		10	7			3.4	305	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"		14	11			4.1	354	6.7	602	9.3	844
5'-6"	5'-2"	4'-2"	3'-5"	16	13	15	6	4.4	375	6.0	607	7.4	850
6'-0"	5'-8"	4'-8"	3'-11"	16	13	16	6	4.6	382	6.2	616	7.6	860
6'-6"	6'-2"	5'-2"	4'-5"	18	15	18	8	4.8	402	6.4	637	7.8	880
7'-0"	6'-8"	5'-8"	4'-11"	20	17	19	10	5.0	423	6.6	654	8.0	897
7'-6"	7'-2"	6-2"	5'-5"	20	17	20	10	5.3	430	6.9	664	8.3	907
8'-0"	7'-8"	6'-8"	5'-11"	22	19	22	12	5.5	451	7.1	684	8.5	927
8'-6"	8'-2"	7'-2"	6'-5"	24	21	23	14	5.7	471	7.3	702	8.7	944
9'-0"	8'-8"	7'-8"	6'-11"	24	21	24	14	6.0	479	7.6	711	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"	28	25	28	18	6.7	527	8.3	759	9.7	1001
11'-0"	10'-8"	9'-8"	8'-11"	30	27	30	20	6.9	547	8.5	779	9.9	1022

NOTES: FOR L = 5 FT., L = 10 FT., AND L = 15 FT.
REGULAR INLETS: TOTAL QUANTITIES NEEDED ARE OUTSIDE THE HEAVY BLACK LINE.
DROP BOX INLETS: TOTAL QUANTITIES NEEDED ARE INSIDE THE HEAVY BLACK LINE.
STEEL WEIGHTS DO NOT INCLUDE STRUCTURAL STEEL CHANNEL.

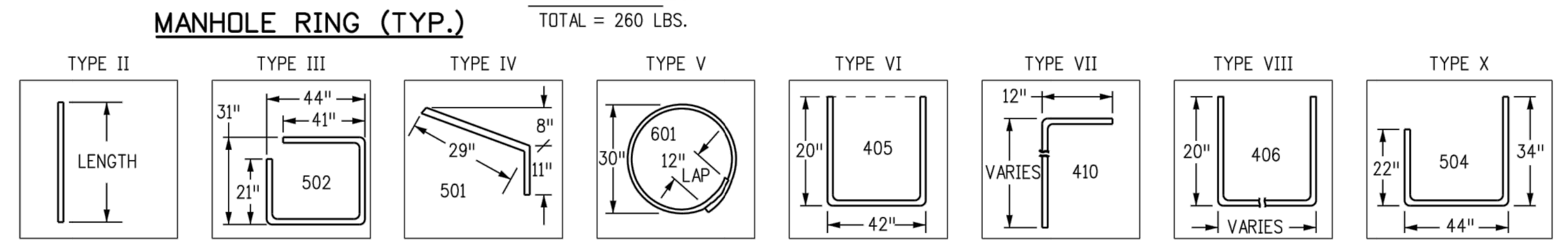


GENERAL NOTES

1. CONCRETE SHALL BE CLASS B. INLET MAY BE CAST-IN-PLACE OR PRECAST.
2. CONCRETE WALLS SHALL BE FORMED ON BOTH SIDES AND SHALL BE 8 INCHES THICK.
3. INLET STEPS SHALL BE IN CONFORMANCE WITH AASHTO M 199.
4. CURB FACE ASSEMBLY SHALL BE GALVANIZED AFTER WELDING.
5. EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED ¾ OF A INCH. CURB AND GUTTER CORNERS SHALL BE FINISHED TO MATCH THE EXISTING CURB AND GUTTER BEYOND THE TRANSITION GUTTER.
6. REINFORCING BARS SHALL BE DEFORMED AND SHALL HAVE A 2 INCH MINIMUM CLEARANCE. ALL REINFORCING BARS SHALL BE GRADE 60 AND EPOXY COATED.
7. DIMENSIONS AND WEIGHTS OF TYPICAL MANHOLE RING AND COVER ARE NOMINAL.
8. MATERIAL FOR MANHOLE RINGS AND COVERS SHALL BE GRAY OR DUCTILE CAST IRON IN ACCORDANCE WITH SUBSECTION 712.06.
9. SINCE PIPE ENTRIES INTO THE INLET ARE VARIABLE, THE DIMENSIONS SHOWN ARE TYPICAL. ACTUAL DIMENSIONS AND QUANTITIES FOR CONCRETE AND REINFORCEMENT SHALL BE AS REQUIRED IN THE WORK. QUANTITIES INCLUDE VOLUMES OCCUPIED BY PIPES.
10. STRUCTURAL STEEL SHALL BE GALVANIZED AND SHALL BE IN ACCORDANCE WITH SUBSECTION 712.06.
11. ALL MANHOLE COVERS SHALL BE CAST WITH A "NO DUMPING DRAINS TO STREAM" MESSAGE AND A FISH SYMBOL. THE SURFACE OF THE MANHOLE COVER SHALL HAVE A NON-SLIP PATTERN.



CHANNEL LAYOUT DETAILS
SEE CURB FACE ASSEMBLY ON SHEET 1.



BAR BENDING DIAGRAMS ~ (DIMENSIONS ARE OUT-TO-OUT OF BAR)

Computer File Information		Sheet Revisions	
Creation Date: 07/31/19		Date:	Comments
Designer Initials: JBK	(R-X)		
Last Modification Date: 07/31/19	(R-X)		
Detailer Initials: LTA	(R-X)		
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	(R-X)		

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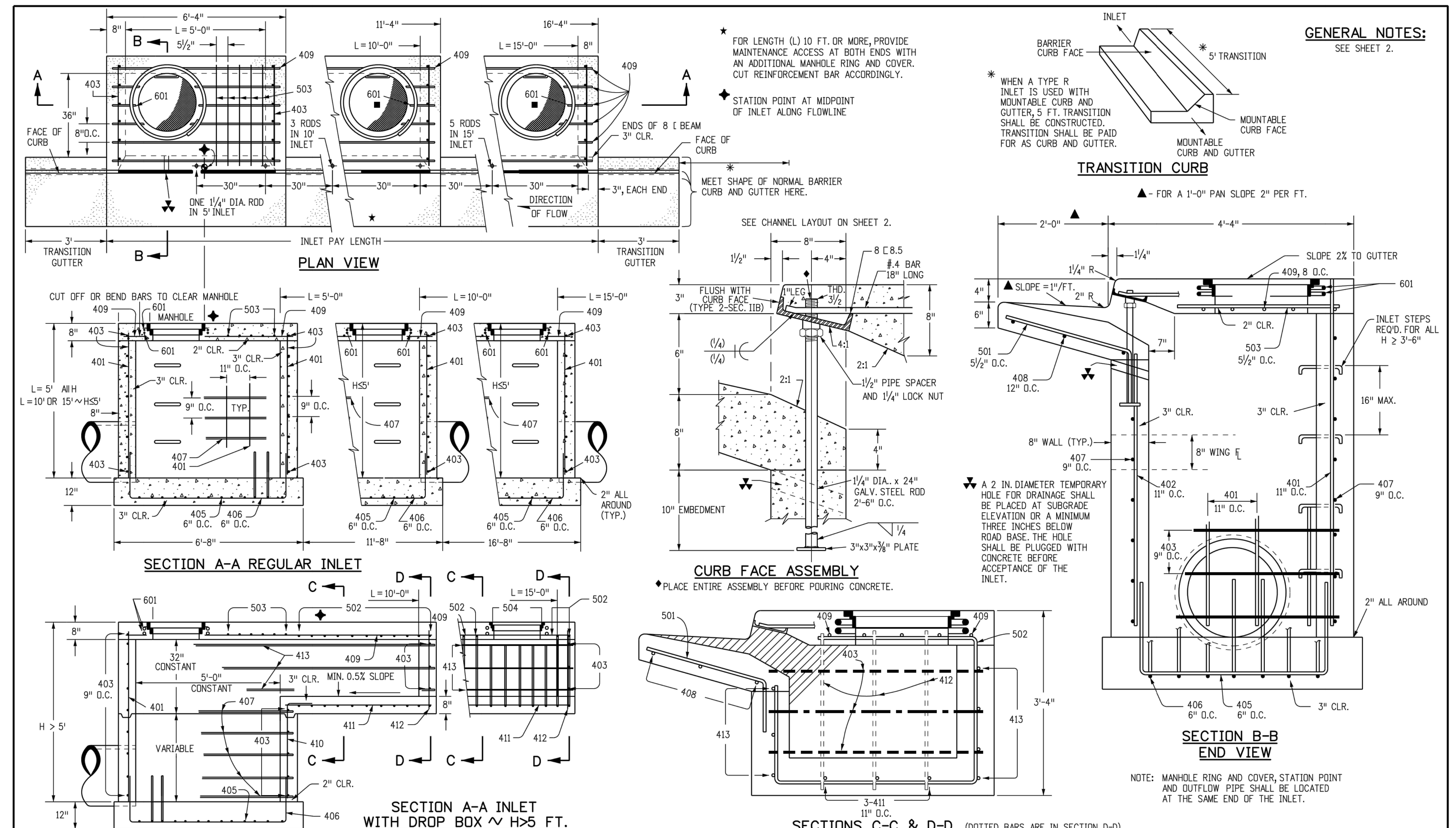
CURB INLET TYPE R

STANDARD PLAN NO. M-604-12
Standard Sheet No. 2 of 2
Issued by the Project Development Branch: July 31, 2019
Project Sheet Number:



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Creation Date: 07/31/19		Date:	Comments
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CURB INLET TYPE R

STANDARD PLAN NO. M-604-12
Standard Sheet No. 1 of 2
Issued by the Project Development Branch: July 31, 2019
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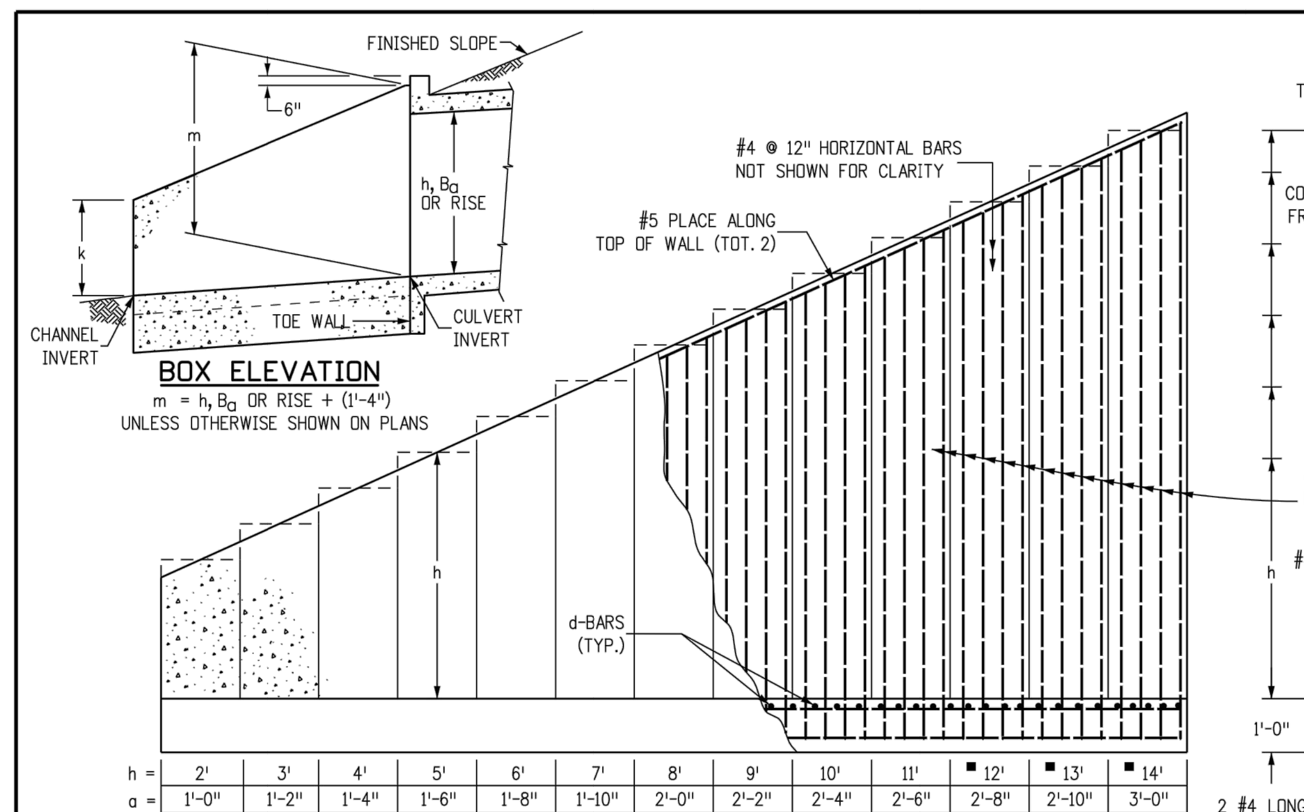
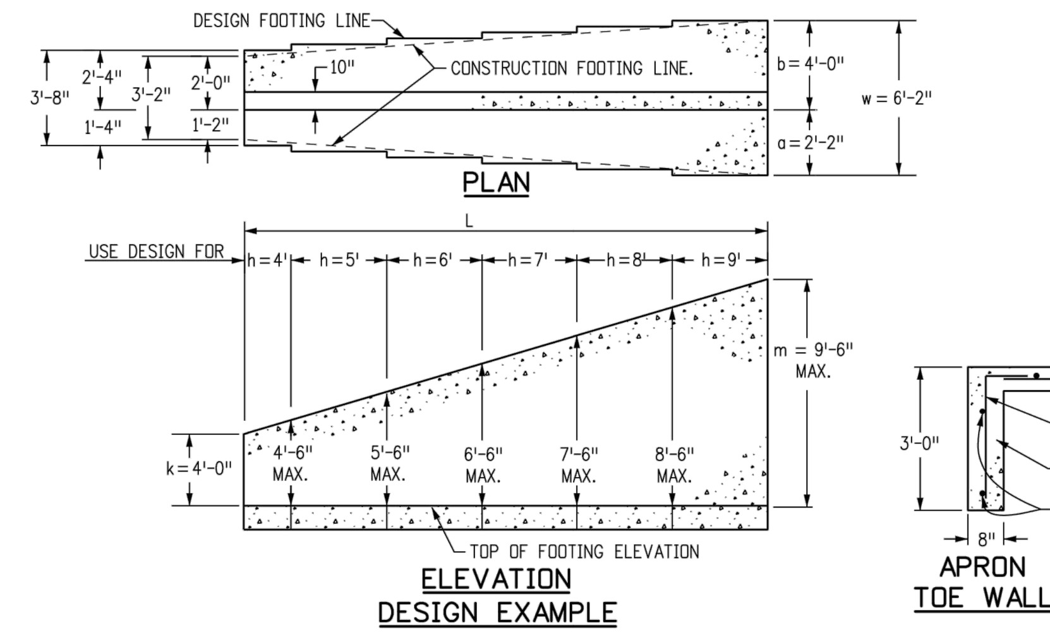
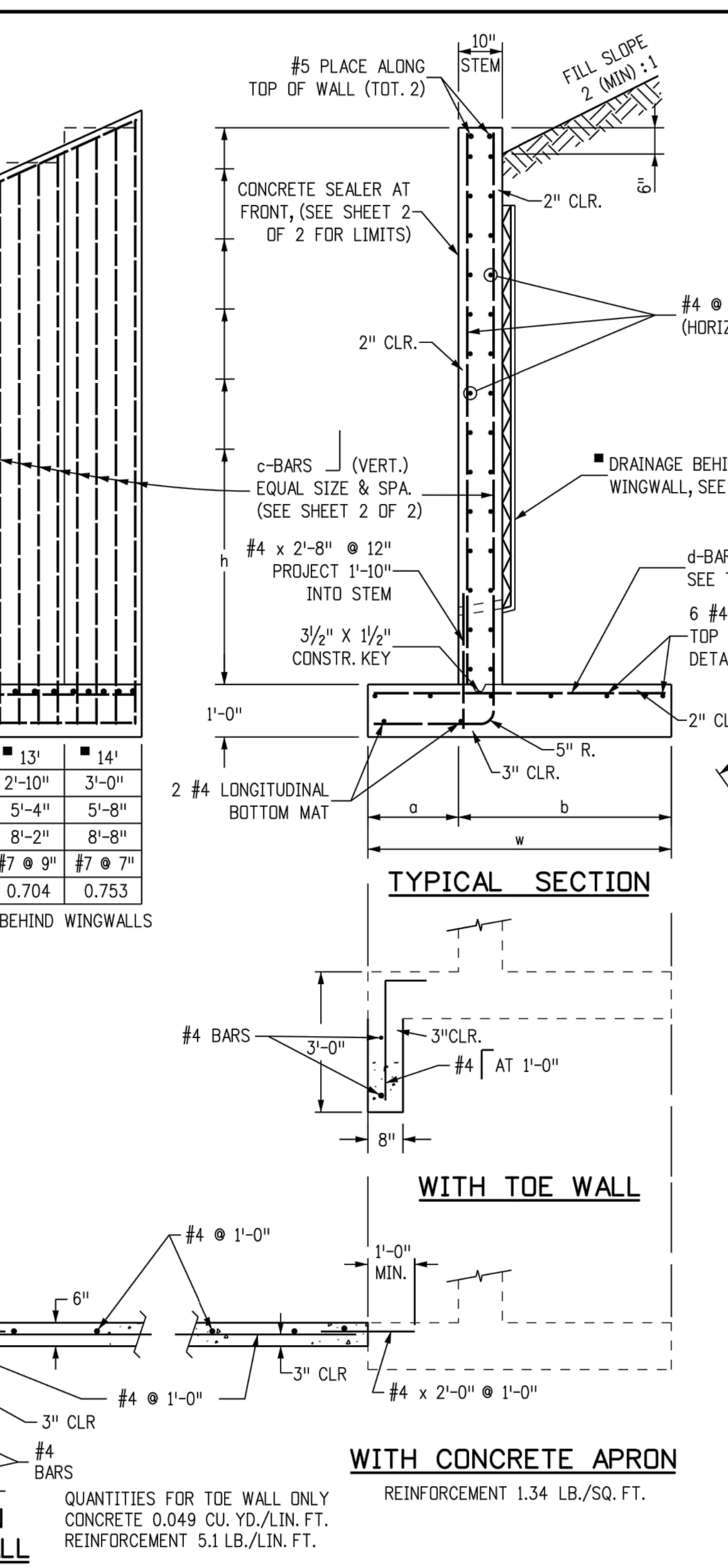
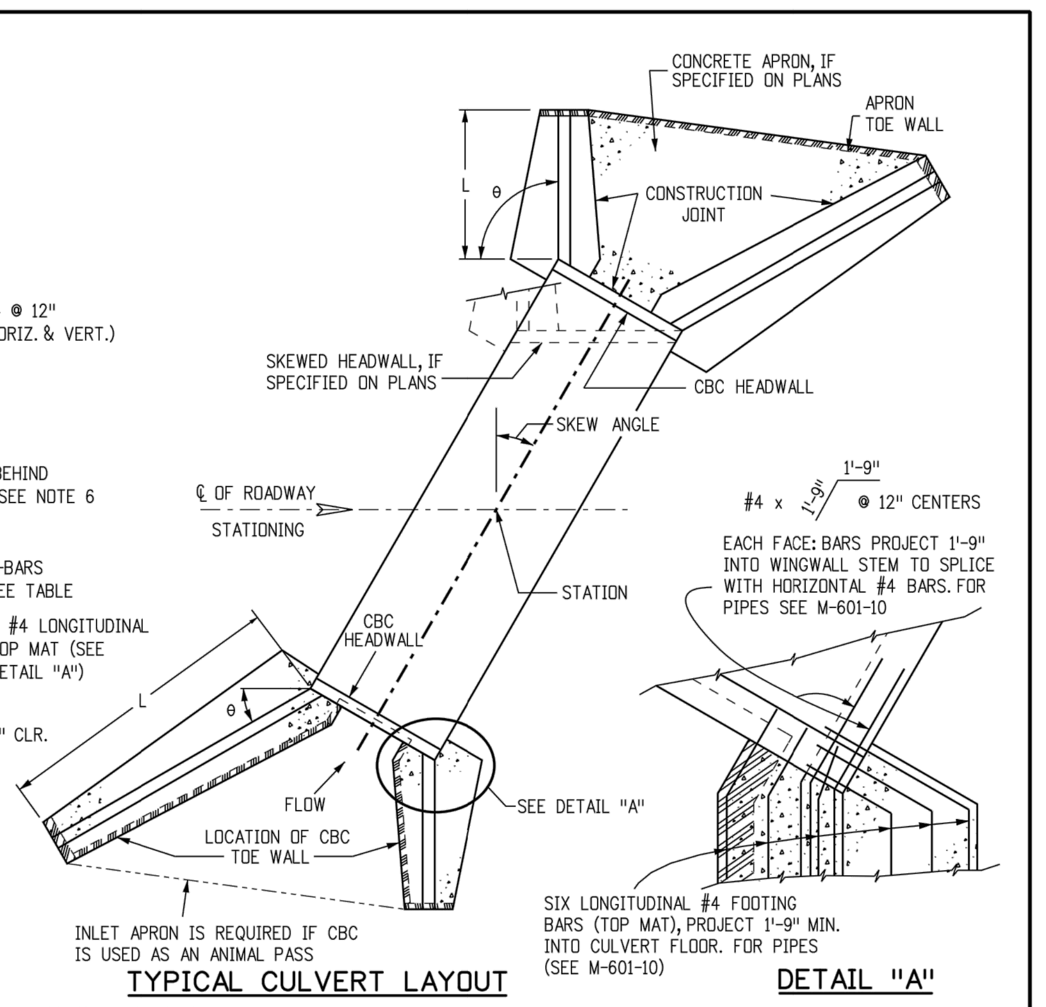


h =	2'	3'	4'	5'	6'	7'	8'	9'	10'	11'	■ 12'	■ 13'	■ 14'
a =	1'-0"	1'-2"	1'-4"	1'-6"	1'-8"	1'-10"	2'-0"	2'-2"	2'-4"	2'-6"	2'-8"	2'-10"	3'-0"
b =	1'-8"	2'-0"	2'-4"	2'-8"	3'-0"	3'-4"	3'-8"	4'-0"	4'-4"	4'-8"	5'-0"	5'-4"	5'-8"
w =	2'-8"	3'-2"	3'-8"	4'-2"	4'-8"	5'-2"	5'-8"	6'-2"	6'-8"	7'-2"	7'-8"	8'-2"	8'-8"
d-BARS	#4 @ 9"	#4 @ 9"	#4 @ 9"	#4 @ 9"	#4 @ 9"	#4 @ 9"	#5 @ 11"	#5 @ 10"	#5 @ 10"	#5 @ 8"	#6 @ 8"	#7 @ 9"	#7 @ 7"
* CONC. CY/LF	0.161	0.210	0.259	0.309	0.358	0.407	0.457	0.506	0.556	0.605	0.654	0.704	0.753

* DOES NOT INCLUDE TOE WALL QUANTITIES
SEE SHEET 2 OF 2 FOR REINFORCING STEEL QUANTITY
■ REQUIRED DRAINAGE BEHIND WINGWALLS
SEE NOTE 6







DESIGN DATA:

AASHTO LRFD EIGHTH EDITION, 2017
DESIGN METHOD: LOAD AND RESISTANCE FACTOR DESIGN, YIELD LINE METHOD

REINFORCED CONCRETE:
CONCRETE CLASS D (BOX CULVERT): f'_c = 4,500 PSI
REINFORCING STEEL: f_y = 60,000 PSI

LOADING:
AT-REST EARTH (FLUID) PRESSURE FOR CONCRETE STEM DESIGN = 55 PCF FOR 2 (MIN.) : 1 SLOPED BACKFILL
ACTIVE EARTH (FLUID) PRESSURE FOR CONCRETE FOOTING DESIGN = 40 PCF FOR 2 (MIN.) : 1 SLOPED BACKFILL
LIVE LOAD SURCHARGE = 2'
MINIMUM RESISTANCE FOR SOIL BEARING = 5.5 KSF
SOIL BEARING RESISTANCE FACTOR = 0.45

GENERAL NOTES:

1. ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED ¾ IN.
2. WINGWALL FOOTING AND FLOOR OF BOX CULVERT SHALL BE PLACED MONOLITHICALLY.
3. DIMENSIONS "h", "k", "L", "m" AND ANGLE "θ" FOR WINGWALL SHALL BE AS SHOWN ON THE PLANS.
4. MINIMUM CLASS B LAP SPLICE LENGTH FOR BLACK REINFORCING BARS:

BAR SIZE:	#4	#5	#6	#7
SPLICE LENGTH:	1'-6"	1'-11"	2'-3"	2'-7"

5. DESIGN DOES NOT CONSIDER ANY SCOUR EFFECTS.
6. WINGWALL DRAIN SHALL BE REQUIRED IF "h" ≥ 12.0 FT., SEE SHEET 2 OF 2 FOR DETAILS.

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WINGWALLS FOR PIPE OR BOX CULVERTS

STANDARD PLAN NO. M-601-20
Standard Sheet No. 1 of 2
Issued by the Project Development Branch: July 31, 2019
Project Sheet Number:

c-BARS AND REINFORCING STEEL QUANTITY (EXCLUDE TOE WALL)

* REINFORCING STEEL QUANTITY INCLUDES STEM AND FOOTING QUANTITIES, BUT DOES NOT INCLUDE TOE WALL QUANTITIES.

L (MULTIPLE OF m), ≤ (1.0 x m) to ≤ (2.0 x m):

m (FT)	k (FT)	≤ (1.0 x m) c-BARS	* REINF. LB./L.F.	≤ (1.25 x m) c-BARS	* REINF. LB./L.F.	≤ (1.5 x m) c-BARS	* REINF. LB./L.F.	≤ (1.75 x m) c-BARS	* REINF. LB./L.F.	≤ (2.0 x m) c-BARS	* REINF. LB./L.F.
14	4	#4 @ 10"	53.60	#5 @ 10"	57.95	#5 @ 10"	57.10	#5 @ 8"	60.22	#5 @ 7"	62.43
	5	#4 @ 10"	55.86	#5 @ 10"	60.46	#5 @ 10"	59.60	#5 @ 8"	62.89	#5 @ 7"	65.23
	6	#5 @ 10"	64.43	#6 @ 10"	70.60	#6 @ 10"	69.69	#6 @ 8"	74.93	#6 @ 8"	74.45
	7	#5 @ 10"	67.29	#6 @ 10"	73.76	#6 @ 10"	72.83	#6 @ 8"	78.32	#6 @ 8"	77.84
	8	#5 @ 8"	74.71	#6 @ 8"	83.46	#6 @ 7"	87.09	#6 @ 6"	92.54	#7 @ 7"	99.47
	9	#5 @ 8"	78.10	#6 @ 8"	87.23	#6 @ 7"	91.03	#6 @ 6"	96.72	#7 @ 7"	103.93
13	4	#4 @ 10"	50.51	#4 @ 10"	49.25	#5 @ 10"	53.71	#5 @ 10"	53.09	#5 @ 10"	52.36
	5	#4 @ 10"	52.66	#4 @ 10"	51.37	#5 @ 10"	56.09	#5 @ 10"	55.46	#5 @ 10"	54.99
	6	#4 @ 10"	54.92	#5 @ 10"	59.48	#5 @ 9"	60.31	#6 @ 9"	67.56	#6 @ 9"	67.08
	7	#4 @ 10"	57.36	#5 @ 10"	62.16	#5 @ 9"	63.05	#6 @ 9"	70.66	#6 @ 9"	70.16
	8	#5 @ 10"	66.39	#6 @ 10"	72.82	#6 @ 8"	77.97	#6 @ 7"	81.68	#6 @ 7"	81.19
	9	#5 @ 10"	69.37	#6 @ 10"	76.10	#6 @ 8"	81.49	#6 @ 7"	85.37	#6 @ 7"	84.87
12	2	#4 @ 10"	43.91	#4 @ 10"	42.65	#4 @ 10"	41.82	#4 @ 10"	41.22	#4 @ 10"	40.78
	3	#4 @ 10"	45.82	#4 @ 10"	44.55	#4 @ 10"	43.71	#4 @ 10"	43.11	#4 @ 10"	42.66
	4	#4 @ 10"	47.80	#4 @ 10"	46.51	#4 @ 10"	45.65	#5 @ 10"	50.06	#5 @ 10"	49.59
	5	#4 @ 10"	49.84	#4 @ 10"	48.53	#4 @ 10"	47.66	#5 @ 10"	52.33	#5 @ 10"	51.85
	6	#4 @ 10"	51.99	#4 @ 10"	50.65	#5 @ 10"	55.34	#5 @ 8"	58.41	#5 @ 8"	57.93
	7	#4 @ 10"	54.30	#5 @ 10"	58.80	#5 @ 10"	57.87	#5 @ 8"	61.10	#5 @ 8"	60.61
	8	#5 @ 10"	62.91	#5 @ 10"	61.45	#5 @ 7"	67.46	#5 @ 6"	70.68	#5 @ 6"	70.20
	9	#5 @ 10"	65.64	#5 @ 10"	64.15	#5 @ 7"	70.44	#5 @ 6"	73.82	#5 @ 6"	73.33
11	2	#4 @ 10"	41.70	#4 @ 10"	40.42	#4 @ 10"	39.57	#4 @ 10"	38.96	#4 @ 10"	38.50
	3	#4 @ 10"	43.57	#4 @ 10"	42.27	#4 @ 10"	41.40	#4 @ 10"	40.79	#4 @ 10"	40.33
	4	#4 @ 10"	45.48	#4 @ 10"	44.16	#4 @ 10"	43.28	#4 @ 10"	42.66	#4 @ 9"	43.09
	5	#4 @ 10"	47.46	#4 @ 10"	46.10	#4 @ 10"	45.21	#4 @ 10"	44.58	#4 @ 9"	45.06
	6	#4 @ 10"	49.52	#4 @ 10"	48.14	#4 @ 9"	48.23	#5 @ 10"	51.88	#5 @ 10"	51.38
	7	#4 @ 10"	51.73	#4 @ 10"	50.31	#4 @ 9"	50.43	#5 @ 10"	54.29	#5 @ 10"	53.78
	8	#4 @ 10"	54.00	#5 @ 10"	58.44	#5 @ 10"	57.45	#5 @ 8"	60.64	#5 @ 7"	62.92
	9	#4 @ 10"	56.20	#5 @ 10"	60.87	#5 @ 10"	59.85	#5 @ 8"	63.21	#5 @ 7"	65.60
10	2	#4 @ 10"	39.84	#4 @ 10"	38.53	#4 @ 10"	37.65	#4 @ 10"	37.03	#4 @ 10"	36.57
	3	#4 @ 10"	41.68	#4 @ 10"	40.35	#4 @ 10"	39.47	#4 @ 10"	38.84	#4 @ 10"	38.36
	4	#4 @ 10"	43.58	#4 @ 10"	42.22	#4 @ 10"	41.31	#4 @ 10"	40.67	#4 @ 10"	40.19
	5	#4 @ 10"	45.53	#4 @ 10"	44.14	#4 @ 10"	43.21	#4 @ 10"	42.56	#4 @ 10"	42.07
	6	#4 @ 10"	47.58	#4 @ 10"	46.14	#4 @ 10"	45.20	#4 @ 10"	44.53	#4 @ 10"	44.03
	7	#4 @ 10"	49.79	#4 @ 10"	48.31	#4 @ 10"	47.34	#5 @ 10"	51.97	#5 @ 10"	51.45
	8	#4 @ 10"	52.06	#4 @ 10"	50.54	#4 @ 10"	49.54	#5 @ 10"	54.43	#5 @ 10"	53.89
9	2	#4 @ 10"	38.01	#4 @ 10"	36.75	#4 @ 10"	35.85	#4 @ 10"	35.21	#4 @ 10"	34.73
	3	#4 @ 10"	39.93	#4 @ 10"	38.56	#4 @ 10"	37.64	#4 @ 10"	36.99	#4 @ 10"	36.51
	4	#4 @ 10"	41.81	#4 @ 10"	40.40	#4 @ 10"	39.47	#4 @ 10"	38.81	#4 @ 10"	38.31
	5	#4 @ 10"	43.75	#4 @ 10"	42.30	#4 @ 10"	41.35	#4 @ 10"	40.67	#4 @ 10"	40.17
	6	#4 @ 10"	45.79	#4 @ 10"	44.30	#4 @ 10"	43.31	#4 @ 10"	42.62	#4 @ 10"	42.10
	7	#4 @ 10"	48.04	#4 @ 10"	46.50	#4 @ 10"	45.49	#4 @ 10"	44.77	#5 @ 10"	49.29
	8	#4 @ 10"	50.43	#4 @ 10"	48.84	#4 @ 10"	47.80	#4 @ 10"	47.06	#5 @ 10"	51.83
8	2	#4 @ 10"	36.41	#4 @ 10"	35.01	#4 @ 10"	34.08	#4 @ 10"	33.42	#4 @ 10"	32.92
	3	#4 @ 10"	38.23	#4 @ 10"	36.80	#4 @ 10"	35.85	#4 @ 10"	35.18	#4 @ 10"	34.67
	4	#4 @ 10"	40.09	#4 @ 10"	38.61	#4 @ 10"	37.64	#4 @ 10"	36.95	#4 @ 10"	36.44
	5	#4 @ 10"	41.99	#4 @ 10"	40.47	#4 @ 10"	39.47	#4 @ 10"	38.76	#4 @ 10"	38.24
	6	#4 @ 10"	43.97	#4 @ 10"	42.40	#4 @ 10"	41.36	#4 @ 10"	40.64	#4 @ 10"	40.10
	7	#4 @ 10"	46.19	#4 @ 10"	44.56	#4 @ 10"	43.49	#4 @ 10"	42.74	#4 @ 10"	42.18
7	2	#4 @ 10"	34.90	#4 @ 10"	33.44	#4 @ 10"	32.47	#4 @ 10"	31.78	#4 @ 10"	31.27
	3	#4 @ 10"	36.73	#4 @ 10"	35.23	#4 @ 10"	34.23	#4 @ 10"	33.53	#4 @ 10"	33.00
	4	#4 @ 10"	38.59	#4 @ 10"	37.04	#4 @ 10"	36.01	#4 @ 10"	35.29	#4 @ 10"	34.75
	5	#4 @ 10"	40.48	#4 @ 10"	38.86	#4 @ 10"	37.80	#4 @ 10"	37.06	#4 @ 10"	36.50
	6	#4 @ 10"	42.39	#4 @ 10"	40.71	#4 @ 10"	39.61	#4 @ 10"	38.84	#4 @ 10"	38.26

L (MULTIPLE OF m), ≤ (2.25 x m) to ≤ (3.5 x m):

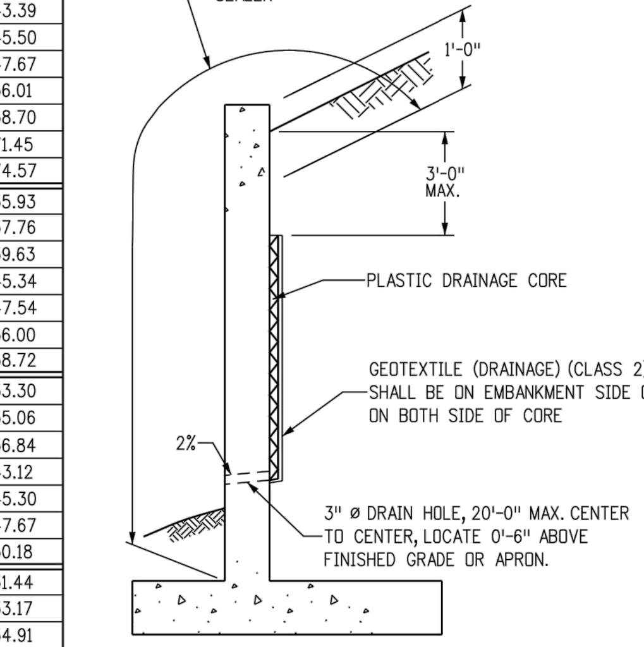
m (FT)	k (FT)	≤ (2.25 x m) c-BARS	* REINF. LB./L.F.	≤ (2.5 x m) c-BARS	* REINF. LB./L.F.	≤ (2.75 x m) c-BARS	* REINF. LB./L.F.	≤ (3.0 x m) c-BARS	* REINF. LB./L.F.	≤ (3.25 x m) c-BARS	* REINF. LB./L.F.	≤ (3.5 x m) c-BARS	* REINF. LB./L.F.
14	4	#5 @ 7"	62.09	#5 @ 6"	65.38	#5 @ 6"	65.15	#6 @ 8"	67.10	#6 @ 8"	66.94	#6 @ 7"	70.66
	5	#5 @ 7"	64.88	#5 @ 6"	68.34	#5 @ 6"	68.11	#6 @ 8"	70.17	#6 @ 8"	70.00	#6 @ 7"	73.90
	6	#6 @ 7"	78.30	#6 @ 6"	83.64	#6 @ 6"	83.40	#6 @ 6"	83.22	#6 @ 6"	83.05	#7 @ 7"	89.64
	7	#6 @ 7"	81.87	#6 @ 6"	87.45	#6 @ 6"	87.21	#6 @ 6"	87.02	#6 @ 6"	86.86	#7 @ 7"	93.73
	8	#7 @ 7"	99.08	#7 @ 6"	107.11	#7 @ 6"	106.86	#7 @ 6"	106.66	#7 @ 6"	106.49	#7 @ 6"	106.35
	9	#7 @ 7"	103.54	#7 @ 6"	111.90	#7 @ 6"	111.65	#7 @ 6"	111.45	#7 @ 6"	111.28	#7 @ 6"	111.13
13	4	#5 @ 9"	53.85	#5 @ 8"	55.54	#5 @ 7"	57.85	#5 @ 7"	57.67	#5 @ 7"	57.51	#6 @ 9"	59.93
	5	#5 @ 9"	56.29	#5 @ 8"	58.08	#5 @ 7"	60.51	#5 @ 7"	60.33	#5 @ 7"	60.17	#6 @ 9"	62.72
	6	#6 @ 9"	66.70	#6 @ 8"	69.53	#6 @ 8"	69.28	#6 @ 7"	73.12	#6 @ 7"	72.95	#6 @ 7"	72.81
	7	#6 @ 9"	69.78	#6 @ 8"	72.75	#6 @ 8"	72.50	#6 @ 7"	76.52	#6 @ 7"	76.35	#6 @ 7"	76.20
	8	#6 @ 6"	86.67	#6 @ 6"	86.37	#7 @ 7"	93.18	#7 @ 7"	92.97	#7 @ 7"	92.80	#7 @ 7"	92.64
	9	#6 @ 6"	90.59	#6 @ 6"	90.29	#7 @ 7"	97.39	#7 @ 7"	97.18	#7 @ 7"	97.00	#7 @ 7"	96.85
12	2	#4 @ 9"	41.29	#5 @ 10"	44.61	#5 @ 10"	44.37	#5 @ 10"	44.18	#5 @ 10"	44.01	#5 @ 10"	43.87
	3	#4 @ 9"	43.22	#5 @ 10"	46.75	#5 @ 10"	46.51	#5 @ 10"	46.32	#5 @ 10"	46.15	#5 @ 10"	46.01
	4	#5 @ 10"	49.23	#5 @ 10"	48.94	#5 @ 10"	48.69	#5 @ 9"	50.00	#5 @ 8"	51.72	#5 @ 8"	51.57
	5	#5 @ 10"	51.48	#5 @ 10"	51.19	#5 @ 10"	50.94	#5 @ 9"	52.33	#5 @ 8"	54.14	#5 @ 8"	54.00
	6	#6 @ 10"	60.60	#6 @ 10"	60.29	#6 @ 9"	62.42	#6 @ 9"	62.22	#6 @ 9"	62.04	#6 @ 8"	64.89
	7	#6 @ 10"	63.43	#6 @ 10"	63.11	#6 @ 9"	65.35	#6 @ 9"	65.15	#6 @ 9"	64.97	#6 @ 8"	67.96
	8	#6 @ 7"	76.44	#6 @ 7"	76.13	#6 @ 7"	75.87	#6 @ 6"	81.30	#6 @ 6"	81.12	#6 @ 6"	80.98
	9	#6 @ 7"	79.86	#6 @ 7"	79.54	#6 @ 7"	79.28	#6 @ 6"	84.95	#6 @ 6"	84.77	#6 @ 6"	84.62
11	2	#4 @ 10"	38.15	#4 @ 10"	37.87	#4 @ 10"	37.63	#4 @ 9"	38.25	#5 @ 10"	41.46	#5 @ 10"	41.31
	3	#4 @ 10"	39.97	#4 @ 10"	39.69	#4 @ 10"	39.45	#4 @ 9"	40.12	#5 @ 10"	43.54	#5 @ 10"	43.39
	4	#5 @ 10"	46.57	#5 @ 10"	46.27	#5 @ 10"	46.02	#5 @ 10"	45.82	#5 @ 10"	45.65	#5 @ 10"	45.50
	5	#5 @ 10"	48.74	#5 @ 10"	48.44	#5 @ 10"	48.19	#5 @ 10"	47.99	#5 @ 10"	47.81	#5 @ 10"	47.67
	6	#5 @ 9"	52.57	#5 @ 9"	52.27	#5 @ 8"	53.99	#5 @ 8"	53.79	#5 @ 7"	56.16	#5 @ 7"	56.01
	7	#5 @ 9"	55.04	#5 @ 9"	54.73	#5 @ 8"	56.55	#5 @ 8"	56.35	#5 @ 7"	58.84	#5 @ 7"	58.70
	8	#5 @ 6"	66.25	#5 @ 6"	65.94	#5 @ 6"	65.69	#6 @ 8"	67.76	#6 @ 8"	67.57	#6 @ 7"	71.45
	9	#5 @ 6"	69.09	#5 @ 6"	68.78	#5 @ 6"	68.52	#6 @ 8"	70.69	#6 @ 8"	70.51	#6 @ 7"	74.57
10	2	#4 @ 10"	36.20	#4 @ 10"	35.91	#4 @ 10"	35.67	#4 @ 10"	35.48	#4 @ 9"	36.07	#4 @ 9"	35.93
	3	#4 @ 10"	38.00	#4 @ 10"	37.71	#4 @ 10"	37.46	#4 @ 10"	37.27	#4 @ 9"	37.91	#4 @ 9"	37.76
	4	#4 @ 10"	39.82	#4 @ 10"	39.53	#4 @ 10"	39.28	#4 @ 10"	39.08	#4 @ 9"	39.77	#4 @ 9"	39.63
	5	#5 @ 10"	46.44	#5 @ 10"	46.13	#5 @ 10"	45.87	#5 @ 10"	45.67	#5 @ 10"	45.49	#5 @ 10"	45.34
	6	#5 @ 10"	48.67	#5 @ 10"	48.35	#5 @ 10"	48.08	#5 @ 10"	47.88	#5 @ 10"	47.69	#5 @ 10"	47.54
	7	#5 @ 10"	51.04	#5 @ 9"	52.29	#5 @ 9"	52.03	#5 @ 8"	53.79	#5 @ 8"	53.61	#5 @ 7"	56.00
	8	#5 @ 10"	53.47	#5 @ 9"	54.80	#5 @ 9"	54.53	#5 @ 8"	56.39	#5 @ 8"	56.20	#5 @ 7"	58.72
9	2	#4 @ 10"	34.36	#4 @ 10"	34.06	#4 @ 10"	33.81	#4 @ 10"	33.61	#4 @ 10"	33.44	#4 @ 10"	33.30
	3	#4 @ 10"	36.13	#4 @ 10"	35.83	#4 @ 10"	35.58	#4 @ 10"	35.38	#4 @ 10"	35.21	#4 @ 10"	35.06
	4	#4 @ 10"	37.93	#4 @ 10"	37.63	#4 @ 10"	37.37	#4 @ 10"	37.17	#4 @ 10"	36.99	#4 @ 10"	36.84
	5	#4 @ 10"	39.78	#4 @ 10"	39.47	#4 @ 10"	39.20	#4 @ 9"	39.86	#5 @ 10"	43.28	#5 @ 10"	43.12
	6	#4 @ 10"	41.71	#4 @ 10"	41.39	#4 @ 10"	41.12	#4 @ 9"	41.82	#5 @ 10"	45.46	#5 @ 10"	45.30
	7	#5 @ 10"	48.86	#5 @ 10"	48.53	#5 @ 10"	48.24	#5 @ 10"	48.03	#5 @ 10"	47.84	#5 @ 10"	47.67
	8	#5 @ 10"	51.40	#5 @ 10"	51.05	#5 @ 10"	50.77	#5 @ 10"	50.54	#5 @ 10"	50.35	#5 @ 10"	50.18
8	2	#4 @ 10"	32.54	#4 @ 10"	32.23	#4 @ 10"	31.97	#4 @ 10"	31.77	#4 @ 10"	31.59	#4 @ 10"	31.44
	3	#4 @ 10"	34.28	#4 @ 10"	33.97	#4 @ 10"	33.70	#4 @ 10"	33.50	#4 @ 10"	33.32	#4 @ 10"	33.17
	4	#4 @ 10"	36.04	#4 @ 10"	35.72	#4 @ 10"	33.45	#4 @ 10"	35.25	#4 @ 10"	35.07	#4 @ 10"	34.91
	5	#4 @ 10"	37.83	#4 @ 10"	37.50	#4 @ 10"	37.23	#4 @ 10"	37.02	#4 @ 10"	36.84	#4 @ 10"	36.68
	6	#4 @ 10"	39.68	#4 @ 10"	39.35	#4 @ 10"	39.07	#4 @ 9"	43.33	#5 @ 10"	43.13	#5 @ 10"	42.96
	7	#4 @ 10"	41.75	#4 @ 10"	41.41	#4 @ 10"	41.13	#4 @ 9"	45.65	#5 @ 10"	45.45	#5 @ 10"	45.28
7	2	#4 @ 10"	30.86	#4 @ 10"	30.54	#4 @ 10"	30.27	#4 @ 10"	30.06	#4 @ 10"	29.88	#4 @ 10"	29.72
	3	#4 @ 10"	32.59	#4 @ 10"	32.26	#4 @ 10"	31.99	#4 @ 10"	31.78	#4 @ 10"	31.59	#4 @ 10"	31.43
	4	#4 @ 10"	34.33	#4 @ 10"	33.99	#4 @ 10"	33.71	#4 @ 10"	33.50	#4 @ 10"	33.31	#4 @ 10"	33.14
	5	#4 @ 10"	36.07	#4 @ 10"	35.73	#4 @ 10"	35.44	#4 @ 10"	35.22	#4 @ 10"	35.03	#4 @ 10"	34.86
	6	#4 @ 10"	37.82	#4 @ 10"	37.47	#4 @ 10"	37.17	#4 @ 10"	36.95	#4 @ 10"	36.75	#4 @ 10"	36.58

EXAMPLE:

SELECT THE c-BARS SIZE, SPACING AND STEEL QUANTITY FOR A 25.0 FEET LONG WINGWALL WITH m = 11.8 FT. AND k = 6.3 FT.

SOLUTION:

1. DETERMINE WINGWALL LENGTH IN MULTIPLE OF m:
   L / m = 25.0 / 11.8 = 2.12
   L = (2.12 x m), USE L ≤ (2.25 x m)
2. ROUND TO REAREST WHOLE NUMBER FOR m AND k:
   m = 11.8 FT., USE m = 12.0 FT.
   k = 6.3 FT., USE k = 6.0 FT.
3. DETERMINE c-BARS BY USING THE TABLE:
   L ≤ (2.25 x m)
   m = 12
   k = 6
   c-BARS: #6 @ 10"
   REINF. STEEL = 60.60 LB / LF
4. DETERMINE REINFORCING STEEL QUANTITY OF WHOLE WINGWALL:
   REINFORCING STEEL QUANTITY = 25.0 x 60.60 = 1,515 LB.



LIMITS OF CONCRETE SEALER AND WINGWALL DRAIN DETAILS

NOTES: 1. THE GEOCOMPOSITE SHALL BE SECURED TO THE WALL TO PREVENT MOVEMENT DURING BACKFILLING.
2. COST OF GEOCOMPOSITE DRAIN AND CONCRETE SEALER SHALL BE INCLUDED IN THE WORK.

Computer File Information		Sheet Revisions	
Creation Date: 07/31/19		Date:	Comments
Designer Initials: JBK	(R-X)		
Last Modification Date: 07/31/19	(R-X)		
Detailer Initials: LTA	(R-X)		
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	(R-X)		

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Project Development Branch JBK

WINGWALLS FOR PIPE OR BOX CULVERTS

STANDARD PLAN NO. M-601-20
Standard Sheet No. 2 of 2
Issued by the Project Development Branch: July 31, 2019
Project Sheet Number:

811
Know what's below. Call before you dig.

ENGINEER'S STATEMENT

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

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

COLORADO REGISTERED PROFESSIONAL ENGINEER MIKE A. BRAMLETT 32314

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

PREPARED FOR
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No.	REVISION	BY	DATE

H-SCALE	N/A
V-SCALE	N/A
DATE	08/05/22
DESIGNED BY	QNL
DRAWN BY	PL
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3
DETAIL SHEET

SHEET 11 OF 13
JOB NO. 2518812

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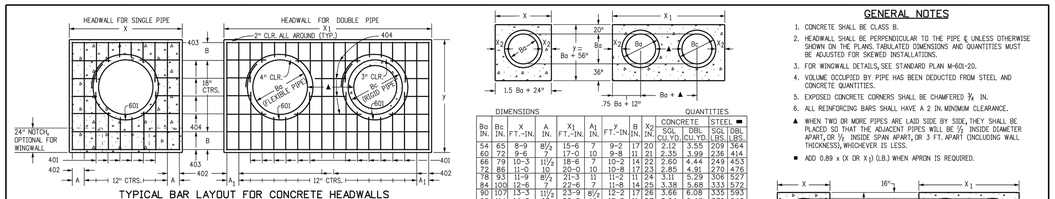


GENERAL NOTES

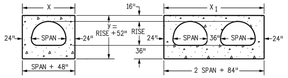
1. CONCRETE SHALL BE CLASS B.
2. HEADWALL SHALL BE PERPENDICULAR TO THE PIPE ℄ UNLESS OTHERWISE SHOWN ON THE PLANS. TABULATED DIMENSIONS AND QUANTITIES MUST BE ADJUSTED FOR SKEWED INSTALLATIONS.
3. FOR WINGWALL DETAILS, SEE STANDARD PLAN M-601-20.
4. VOLUME OCCUPIED BY PIPE HAS BEEN DEDUCTED FROM STEEL AND CONCRETE QUANTITIES.
5. EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED ¾ IN.
6. ALL REINFORCING BARS SHALL HAVE A 2 IN. MINIMUM CLEARANCE.

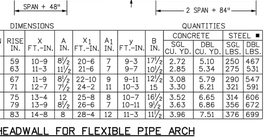
▲ WHEN TWO OR MORE PIPES ARE LAID SIDE BY SIDE, THEY SHALL BE PLACED SO THAT THE ADJACENT PIPES WILL BE ½ INSIDE DIAMETER APART, OR ½ INSIDE SPAN APART, OR 3 FT. APART (INCLUDING WALL THICKNESS), WHICHEVER IS LESS.

● ADD 0.89 x (X OR X1) (LB.) WHEN APRON IS REQUIRED.

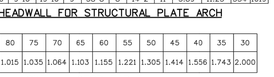
DIMENSIONS								QUANTITIES			
Ba IN.	Bc IN.	X FT.-IN.	A IN.	X1 FT.-IN.	A1 IN.	Y FT.-IN.	B IN.	X2 IN.	CONCRETE SGL. CU. YD.	CONCRETE DBL. CU. YD.	STEEL ■ SGL. LBS.	STEEL ■ DBL. LBS.
54	65	8-9	8½	15-6	7	9-2	17	20	2.12	3.55	209	364
60	72	9-6	7	17-0	10	9-8	11	21	2.35	3.99	236	414
66	79	10-3	11½	18-6	7	10-2	14	22	2.60	4.44	249	453
72	86	11-0	10	20-0	10	10-8	17	23	2.85	4.91	270	476
78	93	11-9	8½	21-3	11	11-2	11	24	3.11	5.29	308	527
84	100	12-6	7	22-6	7	11-8	14	25	3.38	5.68	333	572
90	107	13-3	11½	23-9	8½	12-2	17	26	3.66	6.08	335	593
96	114	14-0	10	25-0	10	12-8	11	27	3.94	6.48	379	649
102	121	14-9	8½	26-3	11½	13-2	14	28	4.24	6.89	400	664
108	128	15-6	7	27-6	7	13-8	17	29	4.54	7.30	424	707

HEADWALL FOR RIGID ROUND PIPE





HEADWALL FOR FLEXIBLE ROUND PIPE



WHEN APRON IS REQUIRED

DIMENSIONS									QUANTITIES			
EQUIV. Ba IN.	SPAN IN.	RISE IN.	X FT.-IN.	A IN.	X1 FT.-IN.	A1 IN.	Y FT.-IN.	B IN.	CONCRETE SGL. CU. YD.	CONCRETE DBL. CU. YD.	STEEL ■ SGL. LBS.	STEEL ■ DBL. LBS.
72	81	59	10-9	8½	20-6	7	9-3	17½	2.72	5.10	250	467
78	87	63	11-3	11½	21-6	7	9-7	10½	2.85	5.34	275	531
84	95	67	11-9	8½	22-10	9	9-11	12½	3.08	5.79	290	547
90	103	71	12-7	7½	24-2	11	10-3	15	3.30	6.21	321	591
96	112	75	13-4	12	25-8	8	10-7	16½	3.52	6.65	314	606
102	117	79	13-9	8½	26-6	7	10-11	9½	3.63	6.86	356	672
108	128	83	14-8	8	28-4	12	11-3	11½	3.96	7.51	376	699

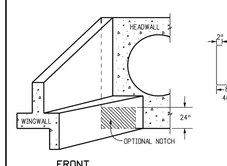
HEADWALL FOR FLEXIBLE PIPE ARCH

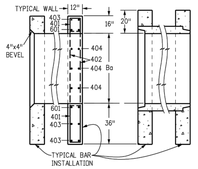
DIMENSIONS										QUANTITIES			
EQUIV. Ba IN.	SPAN FT.-IN.	RISE FT.-IN.	X FT.-IN.	A IN.	X1 FT.-IN.	A1 IN.	Y FT.-IN.	B IN.		CONCRETE SGL. CU. YD.	CONCRETE DBL. CU. YD.	STEEL ■ SGL. LBS.	STEEL ■ DBL. LBS.
66	6-1	4-7	10-1	10½	19-2	11	8-11	15½		2.52	4.70	232	424
75	7-0	5-1	11-0	10	21-0	10	9-5	9½		2.80	5.25	282	509
84	7-11	5-7	11-11	9½	22-10	9	9-11	12½		3.08	5.79	291	540
93	8-10	6-1	12-10	9	24-8	8	10-5	15½		3.36	6.33	309	622
102	9-9	6-7	13-9	8½	26-6	7	10-11	9½		3.63	6.86	379	673
111	10-11	7-1	14-11	9½	28-10	9	11-5	12½		4.05	7.67	377	711
120	11-10	7-7	15-10	9	30-8	8	11-11	15½		4.36	8.28	395	731
132	12-10	8-4	16-10	9	32-8	8	12-8	11		4.75	9.03	441	839
141	14-1	8-9	18-1	10½	35-2	11	13-1	13½		5.17	9.86	448	931
150	15-4	9-3	19-4	12	37-8	8	13-7	16½		5.69	10.88	490	953
159	15-10	9-10	19-10	9	38-8	8	14-2	11		5.89	11.25	534	1019

HEADWALL FOR STRUCTURAL PLATE ARCH

SKEW ANGLE A°	90	85	80	75	70	65	60	55	50	45	40	35	30
FACTOR (cosecA°)	1.000	1.004	1.015	1.035	1.064	1.103	1.155	1.221	1.305	1.414	1.556	1.743	2.000

SKEW FACTOR TABLE





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

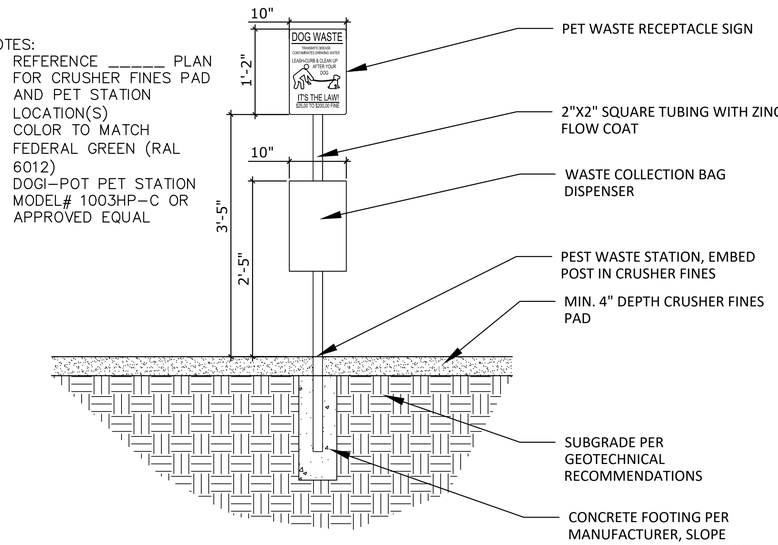
Colorado Department of Transportation
2829 West Howard Place
CDOT HQ, 3rd Floor
Denver, CO 80204
Phone: 303-757-9021 FAX: 303-757-9868
Project Development Branch JBK

HEADWALL FOR PIPES

Issued by the Project Development Branch: July 31, 2019

STANDARD PLAN NO. M-601-10
Standard Sheet No. 1 of 1
Project Sheet Number:

NOTES:
1. REFERENCE _____ PLAN FOR CRUSHER FINES PAD AND PET STATION LOCATION(S)
2. COLOR TO MATCH FEDERAL GREEN (RAL 6012)
3. DOGI-POT PET STATION MODEL# 1003HP-C OR APPROVED EQUAL



PET WASTE STATION
SCALE: 1"=1'

CAST-IN-PLACE STRUCTURAL NOTES:

1. ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED BEFORE FRESH CONCRETE IS POURED.
2. ALL CONSTRUCTION JOINTS NOT SHOWN ON THE PLANS SHALL BE APPROVED BY THE ENGINEER.
3. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.
4. DO NOT BACKFILL UNTIL CONCRETE HAS REACHED DESIGN STRENGTH, F'c.
5. ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED ¾".
6. CONTRACTOR SHALL SUBMIT STEEL REINFORCING SHOP DRAWINGS FOR ALL CAST-IN-PLACE STRUCTURES FOR ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION.
7. HEADWALLS FOR PIPES SHALL BE CONSTRUCTED PER CDOT M-601-10.
8. WINGWALLS SHALL BE CONSTRUCTED PER CDOT M-601-20.

GENERAL STRUCTURE NOTES:

ALL WORK SHALL BE DONE IN ACCORDANCE WITH CITY OR COUNTY STANDARD CONSTRUCTION SPECIFICATIONS.
EXCEPT AS SHOWN IN THE PLANS, STRUCTURE EXCAVATION AND BACKFILL SHALL BE IN ACCORDANCE WITH CDOT M-206-1, AND M-206-2 EXPANSION JOINT MATERIAL SHALL MEET AASHTO SPECIFICATION M-213

THE INFORMATION SHOWN ON THESE PLANS CONCERNING THE TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO A 1-800-922-1987 AT LEAST 2 DAYS (NOT INCLUDING THE DAY OF NOTIFICATION) PRIOR TO ANY EXCAVATION OF OTHER.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DESIGNING AND PROVIDING ALL BRACING AND SHORING AS REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE EXCAVATION PROCEDURES INCLUDING ANY SHORING REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL METHODS AND MEANS OF CONSTRUCTION AS WELL AS ALL JOB SITE SAFETY & HEALTH PRECAUTIONS.

ALL SOILS WORK INCLUDING (BUT NOT LIMITED TO) PIER DRILLING AND CONSTRUCTION, SOILS EXCAVATION, FILL PLACEMENT, AND STRUCTURE BACKFILL SHALL BE IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT, UNLESS MORE STRINGENT REQUIREMENTS ARE PRINTED ON THE "IRRIGATION NOTES".

BACKFILL SHALL NOT BEGIN UNTIL CONCRETE WALLS REACH COMPRESSION STRENGTH AT LEAST 80 PERCENT OF THE REQUIRED 28 DAY STRENGTH, 0.8fc'.

REINFORCED CONCRETE:
CLASS D CONCRETE: fc'=4,500 psi
REINFORCING STEEL: fy=60,000 psi
ALL CAST-IN-PLACE CONCRETE SHALL BE CLASS D UNLESS NOTED OTHERWISE.

REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60 U.N.O.
REINFORCING BARS TO BE WELDED SHALL CONFORM TO ASTM A706, GRADE 60.
ALL REINFORCING, EXCEPT PIER REINFORCING, SHALL BE EPOXY COATED AND SHALL CONFORM TO ASTM A775.
ALL REINFORCING SHALL HAVE 2" CONCRETE COVER, U.N.O. ON PLANS, 3" AGAINST GROUND (BOTTOM SLAB)
ALL REINFORCING SHALL BE HOOKED AROUND CORNERS AND LAPPED, SEE DETAILS.
ALL LAP SPLICE LOCATIONS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

THE FOLLOWING TABLE GIVES THE MINIMUM CLASS B (STAGGERED) LAP SPLICE LENGTH FOR EPOXY COATED REINFORCING BARS PLACE IN ACCORDANCE WITH SUBSECTION 602.06. THESE SPLICE LENGTHS SHALL BE INCREASED BY 25% FOR BARS SPACED AT LESS THAN 6" ON CENTER. INCREASED BY 40% FOR HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE BELOW (TOP BARS.), AND INCREASED BY 75% IF BOTH CONDITIONS EXIST. THE INCREASES ABOVE FOR #6 THRU #11 BARS MAY BE 25%, 13%, AND 42% RESPECTIVELY.

#4	1'-3"	#5	1'-7"
#6	2'-5"	#7	2'-10"
#8	3'-8"	#9	4'-8"
#10	5'-11"	#11	7'-3"

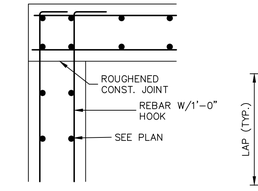
WHEN THE CONTRACTOR ELECTS TO SUBSTITUTE EPOXY COATED REINFORCEMENT FOR BLACK REINFORCING BARS. THE MINIMUM LAP SPLICE SHALL BE AS DESCRIBED ABOVE.

STATIONS, ELEVATIONS, AND DIMENSIONS CONTAINED IN THESE PLANS ARE CALCULATED FROM A RECENT FIELD SURVEY. THE CONTRACTOR SHALL VERIFY ALL DEPENDENT DIMENSIONS IN THE FIELD BEFORE ORDERING OR FABRICATING ANY MATERIAL.

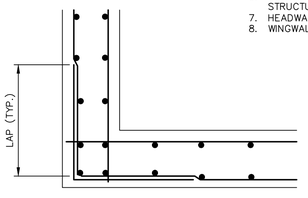
THE CONTRACTOR SHALL SUBMIT REINFORCING STEEL PLACING DRAWINGS (PRIOR TO CONSTRUCTION) TO THE ENGINEER FOR REVIEW FOR CONFORMANCE WITH THE DESIGN DRAWINGS. THE DESIGN DRAWINGS SHALL GOVERN OVER PLACING DRAWINGS IN ALL CASES UNLESS MODIFICATIONS ARE APPROVED IN WRITING BY ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.

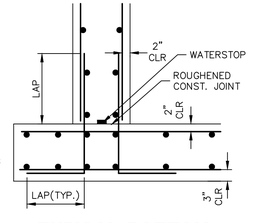
E.F.	=	EACH FACE	O.F.	=	OUTSIDE FACE
F.E.	=	FAR FACE	T.&B.	=	TOP AND BOTTOM
N.F.	=	NEAR FACE	T.F.	=	TOP FACE
I.F.	=	INSIDE FACE	B.F.	=	BOTTOM FACE
T.W.	=	TWO WAY	T.F.	=	TWO FACES
E.S.	=	EACH SIDE	Lp	=	LAP LENGTH



TYPICAL TOP CORNER WALL SECTION DETAIL



TYPICAL WALL CORNER PLAN VIEW



TYPICAL BOTTOM CORNER WALL SECTION DETAIL

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

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

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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

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

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESENT STE 200
COLORADO SPRINGS, CO 80903
ATTN: JAMES F. MORLEY
JMORLEY3870@AOL.COM

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	N/A	DESIGNED BY	QNL
V-SCALE	N/A	DRAWN BY	PL
DATE	08/05/22	CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3

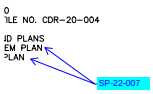
DETAIL SHEET

SHEET 12 OF 13

JOB NO. 2518812

ENG-SF2229-R1-CDs.pdf Markup Summary

Callout (26)



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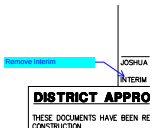
SP-22-007



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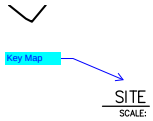

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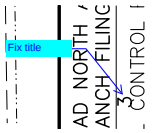
Key Map



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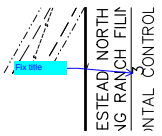

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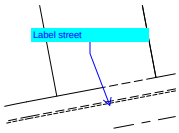

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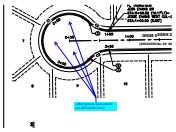
Label street



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Page Label: [6] 6 SI01
Author: CDurham
Date: 9/29/2022 4:25:14 PM
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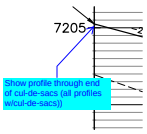
Label grades from center out (all cul-de-sacs)



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Page Label: [6] 6 SI01
Author: CDurham
Date: 9/29/2022 4:25:47 PM
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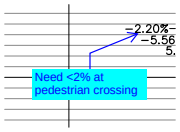
Show profile through end of cul-de-sacs (all profiles w/cul-de-sacs))



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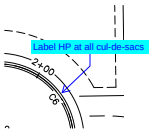
Need <2% at pedestrian crossing



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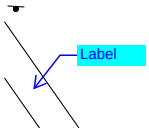
Label HP at all cul-de-sacs



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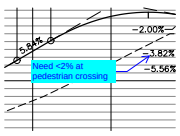

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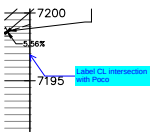
Need <2% at pedestrian crossing



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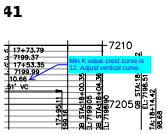
Label CL intersection with Poco



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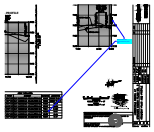
Min K value crest curve is 12. Adjust vertical curve



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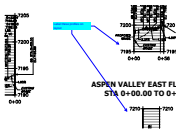
Doesn't match with elevation shown in point table



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Label these profiles on layout

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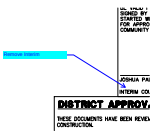
& Pond



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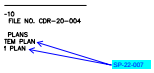

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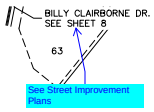
SP-22-007



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Page Label: [15] 15 DT01
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See Street Improvement Plans

Subject: Callout
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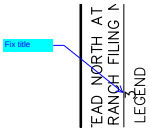
Key Map



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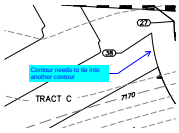
Layer:
Space:

Fix title



Subject: Callout
Page Label: [15] 15 DT01
Author: CDurham
Date: 9/29/2022 5:11:42 PM
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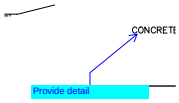
Contour needs to tie into another contour



Subject: Callout
Page Label: [15] 15 DT01
Author: CDurham
Date: 9/29/2022 5:12:01 PM
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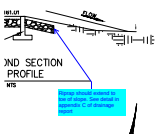
Provide detail



Subject: Callout
Page Label: [15] 15 DT01
Author: CDurham
Date: 9/29/2022 5:12:36 PM
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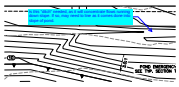
Riprap should extend to toe of slope. See detail in appendix C of drainage report



Subject: Callout
Page Label: [15] 15 DT01
Author: CDurham
Date: 9/29/2022 5:13:58 PM
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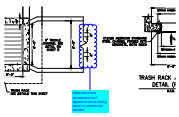
Space:

Is this "ditch" needed, as it will concentrate flows running down slope. If so, may need to line as it comes done into slope of pond.

Cloud+ (1)



Subject: Cloud+
Page Label: [15] 15 DT01
Author: CDurham
Date: 9/29/2022 5:15:59 PM
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Color:
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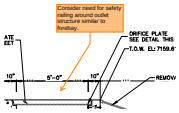
Space:

What are these dimensions for? appear to be in wrong place or need to be deleted

PCD Comment Legend (1)

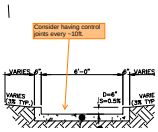
Subject: PCD Comment Legend
Page Label: [1] 1 Construction Title
Author: CDurham
Date: 9/29/2022 4:01:56 PM
Status:
Color:
Layer:
Space:

SW - Textbox with Arrow (3)



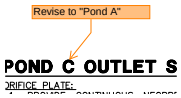
Subject: SW - Textbox with Arrow
Page Label: [15] 15 DT01
Author: Glenn Reese - EPC Stormwater
Date: 9/13/2022 10:21:20 AM
Status:
Color:
Layer:
Space:

Consider need for safety railing around outlet structure similar to forebay.



Subject: SW - Textbox with Arrow
Page Label: [15] 15 DT01
Author: Glenn Reese - EPC Stormwater
Date: 9/13/2022 10:22:01 AM
Status:
Color:
Layer:
Space:

Consider having control joints every ~10ft.



Subject: SW - Textbox with Arrow
Page Label: [15] 15 DT01
Author: Glenn Reese - EPC Stormwater
Date: 9/13/2022 10:23:25 AM
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Color:
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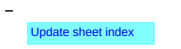
Space:

Revise to "Pond A"

Text Box (4)



Subject: Text Box
Page Label: [1] 1 Construction Title
Author: CDurham
Date: 9/29/2022 4:01:19 PM
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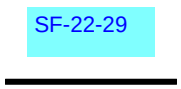
Space:

Update sheet index



Subject: Text Box
Page Label: [1] 1 Construction Title
Author: CDurham
Date: 9/29/2022 4:11:00 PM
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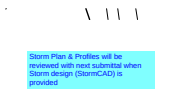
SF-22-29



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Author: CDurham
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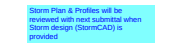
Space:

Storm Plan & Profiles will be reviewed with next submittal when Storm design (StormCAD) is provided



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Author: CDurham
Date: 9/29/2022 5:11:04 PM
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Storm Plan & Profiles will be reviewed with next submittal when Storm design (StormCAD) is provided