STERLING RANCH EAST FILING NO. 3

COUNTY OF EL PASO, STATE OF COLORADO

CONSTRUCTION PLANS

JULY 2024

GENERAL CONSTRUCTION NOTES:

1. THE LOCATION OF EXISTING UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND MAY NOT INCLUDE ALL UTILITIES. THE EXCAVATION CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATED AND PRESERVE ANY AND ALL UTILITIES.
2. BEFORE COMMENCING ANY EXCAVATION, CALL **1-800-922-1987** FOR EXISTING UTILITY LOCATIONS.
3. 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.
4. ALL BACKFILL, SUB-BASE AND/OR BASE COURSE (CLASS 6) MATERIAL SHALL BE COMPACTED TO THE SOILS ENGINEER'S RECOMMENDATIONS, AND APPROVED BY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (PCD).
5. ALL STATIONING IS CENTERLINE UNLESS OTHERWISE INDICATED. ALL ELEVATIONS ARE CENTERLINE UNLESS OTHERWISE INDICATED.
6. THE CONTRACTOR SHALL REVEGETATE ALL DISTURBED AREAS AS SOON AS POSSIBLE AND EROSION CONTROL SHALL BE INSTALLED AND MAINTAINED IN A FUNCTIONAL MANNER AT ALL TIMES. DEVELOPER RESPONSIBLE FOR MAINTAINING DISTURBED AREAS UNTIL REVEGETATION IS COMPLETE.
7. ALL DISTURBED PAVEMENT EDGES SHALL BE CUT TO NEAT LINES. REPAIR SHALL CONFORM TO THE EPC ECM APPENDIX K – 1.2C.
8. ADDITIONAL EROSION CONTROL STRUCTURES MAY BE REQUIRED AT THE TIME OF CONSTRUCTION.
9. BUILDING CONTRACTORS WILL BE RESPONSIBLE FOR CONSTRUCTING POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES.
10. 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 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 PLANNING AND COMMUNITY DEVELOPMENT PRIOR TO CONSTRUCTION.
11. THE CONTRACTOR SHALL REVEGETATE ALL DISTURBED AREAS WITHIN 21 DAYS OF SUBSTANTIAL GRADING COMPLETION. EROSION CONTROL SHALL BE INSTALLED AND MAINTAINED IN A FUNCTIONAL MANNER AT ALL TIMES. DEVELOPER IS RESPONSIBLE FOR MAINTAINING DISTURBED AREAS UNTIL REVEGETATION IS COMPLETE.
12. TYPE M RIP-RAP WITH 4" OF TYPE II GRANULAR BEDDING AND MIRAFI 180N OR EQUAL MAY BE SUBSTITUTED WHERE TYPE L RIP-RAP WITH MIRAFI FW 700 OR EQUAL IS SPECIFIED
13. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN COMPLIANCE WITH ANY AND ALL APPLICABLE EL PASO COUNTY STANDARDS.
14. LOCATION OF THE CONCRETE WASHOUT, STORAGE FOR MAINTENANCE EQUIPMENT AND TEMPORARY DISPOSAL AREAS WILL BE ADDED TO THIS PLAN BY SWMP ADMINISTRATOR UPON COORDINATION WITH SELECTED CONTRACTOR.

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 – 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 DEPARTMENT OF PUBLIC WORKS AND MUTCD CRITERIA.
14. 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.
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.

SIGNING AND STRIPING NOTES:

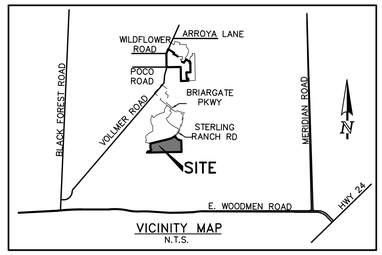
1. ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN COMPLIANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED BY A METHOD THAT DOES NOT MATERIALLY DAMAGE THE PAVEMENT. THE PAVEMENT MARKINGS SHALL BE REMOVED TO THE EXTENT THAT 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.

BENCHMARKS:

A. EAST 1/16TH CORNER OF SECTION 28, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE SIXTH PRINCIPLE MERIDIAN LOCATED AT SOUTHEAST CORNER OF VOLLMER ROAD AND POCO ROAD APPROXIMATELY 50 FEET SOUTH OF THE CENTERLINE OF POCO ROAD.
ELEVATION = 7211.95

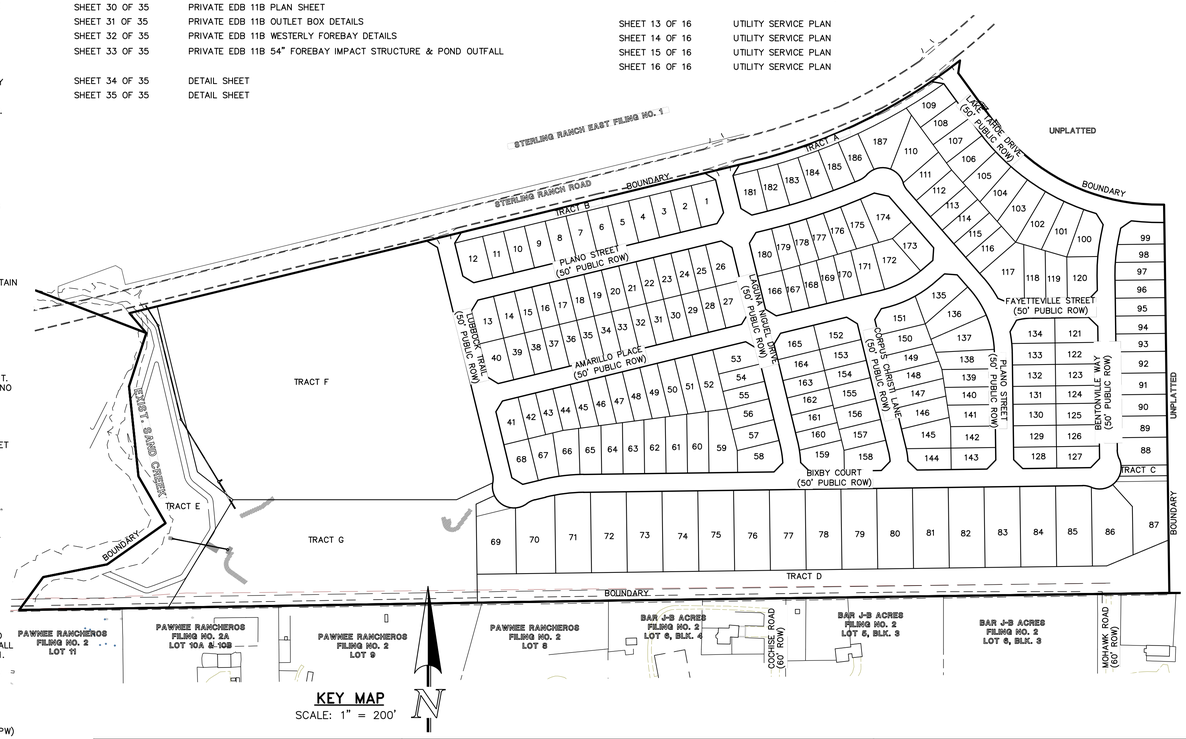
B. THE SOUTH LINE OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 28, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE SIXTH PRINCIPAL MERIDIAN, BEING MONUMENTED AT THE WEST END WHICH IS THE SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 28, BY A 3-1/4" ALUMINUM SURVEYORS CAP STAMPED "ESI PLS 10376, 2006" AND AT THE EAST END, WHICH IS A 30' WITNESS CORNER TO THE EAST OF THE EAST QUARTER CORNER OF SAID SECTION 28, BY A 3-1/4" ALUMINUM SURVEYORS CAP STAMPED "ESI 10376, 2006", IS ASSUMED TO BEAR N89°08'28"E, A DISTANCE OF 1356.68 FEET.

CONSTRUCTION PLAN: SHEET INDEX



VICINITY MAP
N.T.S.

UTILITY PLAN: SHEET INDEX (SEPARATE PLAN SET)



KEY MAP
SCALE: 1" = 200'

AGENCIES:

DEVELOPER:	CLASSIC SRJ LAND, LLC 2138 FLYING HORSE CLUB DR. COLORADO SPRINGS, CO 80921 MR. LOREN J. MORELAND (719) 592-9333
CIVIL ENGINEER:	CLASSIC CONSULTING 619 N. CASCADE AVENUE, SUITE 200 COLORADO SPRINGS, CO 80903 MR. MARC A. WHORTON, P.E. (719) 785-2802
COUNTY ENGINEERING:	EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, CO 80910 MS. CHARLENE DURHAM, (719) 520-7951
WATER & SANITATION:	FALCON AREA WATER & WASTEWATER AUTHORITY (FAWWA)
FIRE DISTRICT:	BLACK FOREST FIRE PROTECTION DISTRICT 11445 TEACHOUT ROAD COLORADO SPRINGS, CO 80908 CHIEF BRYAN JACK, (719) 495-4300
GAS COMPANY:	BLACK HILLS ENERGY 37 WIDEFIELD BOULEVARD WIDEFIELD, COLORADO 80911 MR. GEORGE M. PETERSON, (719) 392-3491
ELECTRIC COMPANY:	MOUNTAIN VIEW ELECTRIC P.O. BOX 1600 LIMON, COLORADO 80828 MR. LES ULFERS, (719) 495-2283
TELEPHONE COMPANY:	CENTURY LINK COMMUNICATIONS (LOCATORS) (800)-922-1987 A.T.&T. (LOCATORS) (719) 635-3674

APPROVALS:

DESIGN ENGINEER'S STATEMENT:

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND 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 PLANS 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 DIRECTLY CAUSED BY THE NEGLIGENT ACTS, ERRORS, OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

MARC A. WHORTON, COLORADO P.E. #37155 — DATE
FOR AND ON THE BEHALF OF CLASSIC CONSULTING ENGINEERS & SURVEYORS

OWNER/DEVELOPER'S STATEMENT:

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

LOREN J. MORELAND — DATE
CLASSIC SRJ LAND, LLC
2138 FLYING HORSE CLUB DR.
COLORADO SPRINGS, CO 80921

EL PASO COUNTY:

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 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 DIRECTOR'S DISCRETION.

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

PCD No. SF-2428

48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS
811
UTILITY NOTIFICATION CENTER OF COLORADO
IT'S THE LAW

THE LOCATIONS OF EXISTING 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 UNDERGROUND UTILITIES.

NO.	REVISION	DATE

REVIEW:

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

MARC A. WHORTON, COLORADO P.E. #37155 — DATE

CLASSIC CONSULTING SM
619 N. Cascade Avenue, Suite 200 (719)785-0790
Colorado Springs, Colorado 80903 (719)785-0799(Fax)

STERLING RANCH EAST
FILING NO. 3
CONSTRUCTION PLANS
TITLE SHEET

DESIGNED BY	ESO	SCALE		DATE	7/03/20234
DRAWN BY	ESO	(H) 1"= N/A		SHEET	1 OF 35
CHECKED BY		(V) 1"= N/A		JOB NO.	1183.33

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EL PASO COUNTY GRADING AND EROSION CONTROL 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 (SWMP) 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 CEC. 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 APRIL 19, 2022 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

BMP NOTES:

1. CONTRACTOR TO DETERMINE AREAS USED FOR STAGING, STORAGE OF MATERIALS, SOILS (STOCKPILES) OR WASTES AND SHALL MARK ON THE SITE SWMP AT ALL TIMES. THE USE OF CONSTRUCTION OFFICE TRAILERS REQUIRES PCD PERMITTING.

2. THE PROPOSED GRADING/EROSION CONTROL PLAN SHOW AND CALL-OUT THE 'INITIAL' AND 'INTERIM' STAGE OF CONSTRUCTION CONTROL MEASURES.

3. 'FINAL' CONSTRUCTION CONTROL MEASURES ARE STABILIZED/DEVELOPED LOTS, CONSTRUCTED ROADS, RE-SEEDED OPEN SPACE, AND CONSTRUCTED DETENTION PONDS. A PLAN IS NOT NEEDED FOR THE FINAL STAGE.

EROSION CONTROL CRITERIA:

EROSION CONTROL MEASURES SHALL BE IMPLEMENTED IN A MANNER THAT WILL PROTECT PROPERTIES AND PUBLIC FACILITIES FROM THE ADVERSE EFFECTS OF EROSION AND SEDIMENTATION AS A RESULT OF CONSTRUCTION AND EARTHWORK ACTIVITIES WITHIN THE PROJECT SITE.

1.) THE OMISSION FROM OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NON-EXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES.

2.) DURING GRADING OPERATIONS, LOCATE AND SET THE STRAW BALE CHECK DAMS AND SILT FENCES AS SHOWN ON THE EROSION CONTROL PLAN. AT THIS TIME RESEED ALL DISTURBED AREAS WITH AN EL PASO COUNTY APPROVED SEED MIX.

3.) SEEDING APPLICATION: DRILLED TO A DEPTH OF .25" TO .50" INTO SOIL WHERE POSSIBLE. BROADCAST AND RAKED TO COVER ON STEEPER THAN 3:1 SLOPES WHERE ACCESS IS LIMITED OR UNSAFE FOR EQUIPMENT.

4.) MULCHING REQUIREMENT AND APPLICATION: 1.5 TONS PER ACRE NATIVE HAY MECHANICALLY CRIMPED INTO SOIL.

5.) THE STRAW BALE CHECK DAMS AND SILT FENCES SHALL BE KEPT IN PLACE AND MAINTAINED UNTIL EROSION AND SEDIMENTATION POTENTIAL IS MITIGATED. REMOVAL OF SILT AND SEDIMENT COLLECTED BY THE STRAW BALES IS REQUIRED ONCE IT REACHES HALF THE HEIGHT OF THE STRAW BALES OR SILT FENCE.

6.) SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN TWENTY-ONE (21) CALENDAR DAYS AFTER FINAL GRADING, OR FINAL EARTH DISTURBANCE, HAS BEEN COMPLETED. DISTURBED AREAS AND STOCKPILES WHICH ARE NOT AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAT 30 DAYS SHALL ALSO BE MULCHED WITHIN 21 DAYS AFTER INTERIM GRADING. AN AREA THAT IS GOING TO REMAIN IN AN INTERIM STATE FOR MORE THAT 60 DAYS SHALL ALSO BE SEEDED. ON A CASE-BY-CASE BASIS, THE MS4 PERMITTEE MAY ALLOW ANOTHER APPROPRIATE BMP TO BE IN PLACE THAT PREVENTS SEDIMENT FROM LEAVING THE SITE. ALL TEMPORARY SORIL EROSION CONTROL MEASURES AND BMPS SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED.

7.) ALL FACILITIES, VEGETATION AND OTHER ITEMS REQUIRED BY THE APPROVED FINAL GRADING, EROSION CONTROL AND RECLAMATION PLAN SHALL BE PROPERLY MAINTAINED BY THE OWNERS OF THE PROPERTY. SUCH MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO KEEPING ALL EROSION CONTROL FACILITIES IN GOOD ORDER AND FUNCTIONAL, REPAIRING ANY EROSION DAMAGE THAT OCCURS, KEEPING ALL VEGETATION HEALTHY AND IN GROWING CONDITION AND REPLACING ANY DEAD VEGETATION AS SOON AS PRACTICABLE.

8.) ALL SILT FENCES ARE TO BE REGULARLY INSPECTED AND REPAIRED AS NEEDED.

9.) THE CONTRACTOR SHALL PROVIDE VEHICLE TRACKING CONTROL FACILITIES FOR EACH ENTRANCE/EXIT TO THE SITE. THE CONTRACTOR SHALL SUBMIT A PLAN WHICH WILL ASSURE USAGE OF THIS FACILITY BY ALL VEHICLES LEAVING THE SITE.

10.) EROSION CONTROL MEASURES SHALL BE CHECKED AFTER EACH STORM EVENT AND REPAIRED WHEN NECESSARY.

11.) CONTRACTOR SHALL MAINTAIN ALL TEMPORARY EROSION CONTROL FACILITIES IN GOOD WORKING ORDER UNTIL SUCH TIME AS PERMANENT FACILITIES ARE IN PLACE AND THE CONSTRUCTION MANAGER HAS APPROVED THEIR REMOVAL.

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

13.) THE EROSION CONTROL MEASURES OUTLINED ON THE PLAN ARE THE RESPONSIBILITY OF THE DEVELOPER TO MONITOR AND REPLACE, REGRADE AND REBUILD AS NECESSARY UNTIL VEGETATION IS ESTABLISHED.

14.) MAXIMUM ACREAGE OPEN AT ANY GIVEN TIME IS TO BE 30 ACRES.

SEEDING GUIDELINES:

1. SEEDBED PREPARATION

THE SEEDBED SHOULD BE WELL-SETTLED AND FIRM, BUT FRIABLE ENOUGH THAT THE SEED CAN BE PLACED AT THE SPECIFIED DEPTHS. COMPETITIVE STANDS OF WEEDS THAT ARE PRESENT BEFORE SEEDING MUST BE CONTROLLED BY SHALLOW TILLAGE OR BY APPLICATION OF HERBICIDES. SOILS THAT HAVE BEEN OVER-COMPACTED BY TRAFFIC OR EQUIPMENT, ESPECIALLY WHEN WET, SHOULD BE TILLED TO BREAK UP ROOTING-RESTRICTIVE LAYERS, THAN HARROWED, ROLLED, OR PACKED TO PREPARE THE REQUIRED FIRM SEEDBED.

2. FERTILIZER

FERTILIZER SHOULD BE APPLIED AT A RATE OF 50 POUNDS OF AVAIL-ABLE NITROGEN PER ACRE AND 40 POUNDS OF AVAILABLE PHOSPHATE PER ACRE. THE TIME OF APPLICATION SHOULD BE IMMEDIATELY PRIOR TO SEEDING, AT THE TIME OF SEEDING, OR IMMEDIATELY FOL-LOWING SEEDING, DEPENDING ON THE KIND OF FERTILIZER AND TYPE OF EQUIPMENT USED.

3. SEEDING

SEED SHOULD BE PLANTED WITH A GRASS DRILL ON ALL SLOPES OF 33% (3:1) OR FLATTER. SEED MAY BE BROADCAST BY HAND, BY MECHANICAL SPREADER, OR BY HYDRAULIC EQUIPMENT ON AREAS THAT ARE SMALL, TOO STEEP, OR NOT ACCESSIBLE FOR SEED DRILL OPERATIONS. SEED PLANTED WITH A DRILL SHOULD BE COVERED WITH SOIL TO A DEPTH OF 1/4 TO 3/4 INCH. SEED PLANTED BY THE BROADCAST METHOD SHALL BE INCORPORATED INTO THE SOIL SURFACE, NOT TO EXCEED A DEPTH OF 3/4 INCH, BY RAKING, HARROWING, OR OTHER PROVEN METHOD. THE TIME OF SEEDING IS FROM OCTOBER 15TH - MAY 31ST. SEED PLANTED IN THE LATE FALL WILL REMAIN DORMANT UNTIL SPRING, WHEN IT WILL GERMINATE.

4. MULCHING

SEEDED AREAS SHOULD BE MULCHED TO CONSERVE MOISTURE; PREVENT SURFACE COMPACTION OR CRUSTING; REDUCE RUNOFF AND EROSION; CONTROL INSECTS; AND HELP ESTABLISH PLANT COVER.

NATIVE HAY OR STRAW SHOULD BE APPLIED AT A RATE OF 4,000 POUNDS PER ACRE AND CRIMPED INTO THE GROUND. ON SLOPES GREATER THAN 3:1, AN AGRONOMY BLANKET SHOULD BE USED.

5. SUPPLEMENTAL WATER

IN LOW RAINFALL AREAS, WHERE WATER IS AVAILABLE AND WHERE RAPID ESTABLISHMENT IS NEEDED, IRRIGATION OF NEW SEEDING SHOULD BE PERFORMED DURING THE FIRST GROWING SEASON. WATER SHOULD BE APPLIED AT APPROXIMATELY ONE WEEK INTERVALS, AT A RATE OF 3/4 TO 1 INCH PER APPLICATION, WHEN RAINFALL IS DEFI-CIENT FOR PLANT DEVELOPMENT.

NOTES:

AT LEAST TEN DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB 1 ACRE OR MORE, THE OWNER OR OPERATOR OF THE 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:

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WATER QUALITY CONTROL DIVISION
WQCD - PERMITS
4300 CHERRY CREEK DRIVE SOUTH
DENVER, CO 80246-1530
ATTN: PERMITS UNIT

PORTIONS OF THE STERLING RANCH EAST FILING NO. 3 ARE LOCATED WITHIN A FLOODPLAIN AS DETERMINED BY THE FLOOD INSURANCE RATE MAPS (F.I.R.M.) MAP NUMBERS 08041C0533G, EFFECTIVE DATE, DECEMBER 7, 2018

THE AVERAGE SOIL CONDITION REFLECTS HYDROLOGIC SOIL GROUP "A", BLAKELAND LOAMY SAND AND COLUMBINE GRAVELLY SANDY LOAM AND SOIL GROUP "B", PRING COARSE SANDY LOAM AS DETERMINED BY THE "SOIL SURVEY OF EL PASO COUNTY AREA" PREPARED BY THE U.S. SOIL CONSERVATION SERVICE.

EXISTING VEGETATION CONSISTS OF NATIVE GRASSES.

EMERGENCY OVERFLOW SWALES FOR INLETS IN THE INTERIM UNTIL CURB AND ASPHALT IS INSTALLED WILL BE THE LOTS, FINAL WILL BE TO OVERTOP THE HIGH POINT IN ROADWAY TO THE NEXT AVAILABLE INLET OR TO PROPOSED POND.

STOCKPILE LOCATIONS FOR HOMEBUILDING TO BE ON EACH INDIVIDUAL LOT THAT IS BEING BUILT UPON WITH ANY EXCESS MATERIAL PLACED WITHIN THE FUTURE ELEMENTARY SCHOOL SITE AS SHOWN ON SHEET 4.

LIMITS OF DISTURBANCE FOR THIS PLAN INCLUDE UTILITY INSTALLATION AND ROADWAY CONSTRUCTION WITHIN THE R.O.W., AND OVERLOT GRADING FOR DEVELOPMENT THEN INDIVIDUAL LOTS FOR HOMEBUILDING ONCE CONSTRUCTION OF THE HOME BEGINS.

GRADING WITHIN THIS PHASE WILL BE FULLY DEVELOPED WITH HOME BUILDING OPERATIONS.

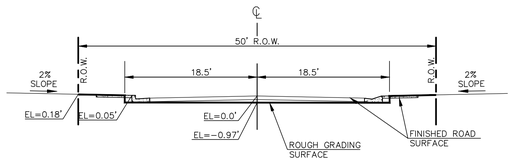
LOCATION OF THE CONCRETE WASHOUT, STORAGE FOR MAINTENANCE EQUIPMENT AND TEMPORARY DISPOSAL AREAS WILL BE ADDED TO THIS PLAN BY SWMP ADMINISTRATOR UPON COORDINATION WITH SELECTED CONTRACTOR.

ALL AREAS ARE TO BE RESEEDED OUTSIDE OF LOTS AND ROADWAYS. RESEED ALL AREAS AS NEEDED TO PREVENT EROSION AND SEDIMENT RUNOFF ONTO CONSTRUCTION ACTIVITIES.

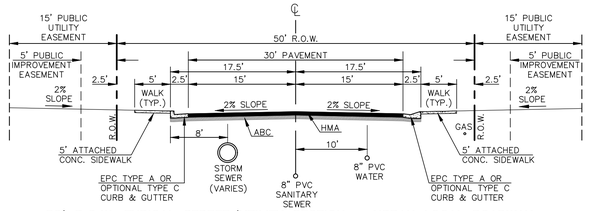
SCHEDULE OF ANTICIPATED CONSTRUCTION ACTIVITY:

1. INSTALL INITIAL BMP'S
2. INSPECTION OF INTIAL BMP'S BY COUNTY STAFF
3. PRECONSTRUCTION MEETING WITH COUNTY STAFF

BEGIN CONSTRUCTION	ACTIVITY	COMPLETION	EROSION CONTROL
UPON APPROVAL	ALL SITE ROADWAY GRADING AND UTILITY INSTALLATION	6 MONTHS	ALL SHOWN ON GRADING PLAN



50' R.O.W. TYPICAL STREET SECTION
HOLD-DOWN OVERLOT GRADING IN ROADWAYS
SCALE 1" = 10'



50' R.O.W. TYPICAL STREET/UTILITY SECTION - URBAN LOCAL ROADWAY
SCALE 1" = 10'

Please include the design speed

48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS
811
UTILITY NOTIFICATION CENTER OF COLORADO
IT'S THE LAW

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NO.	REVISION	DATE

REVIEW:

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

MARC A. WHORTON, COLORADO P.E. #37155 — DATE

CLASSIC SM CONSULTING
619 N. Cascade Avenue, Suite 200 (719)785-0790
Colorado Springs, Colorado 80903 (719)785-0799(Fax)

STERLING RANCH EAST
FILING NO. 3
GRADING AND EROSION CONTROL PLAN
NOTES AND DETAILS

CLASSIC CONSULTING

DESIGNED BY	ESO	SCALE		DATE	7/03/2024
DRAWN BY	ESO	(H) 1"= 50'		SHEET	2 OF 35
CHECKED BY		(V) 1"= N/A		JOB NO.	1183.33

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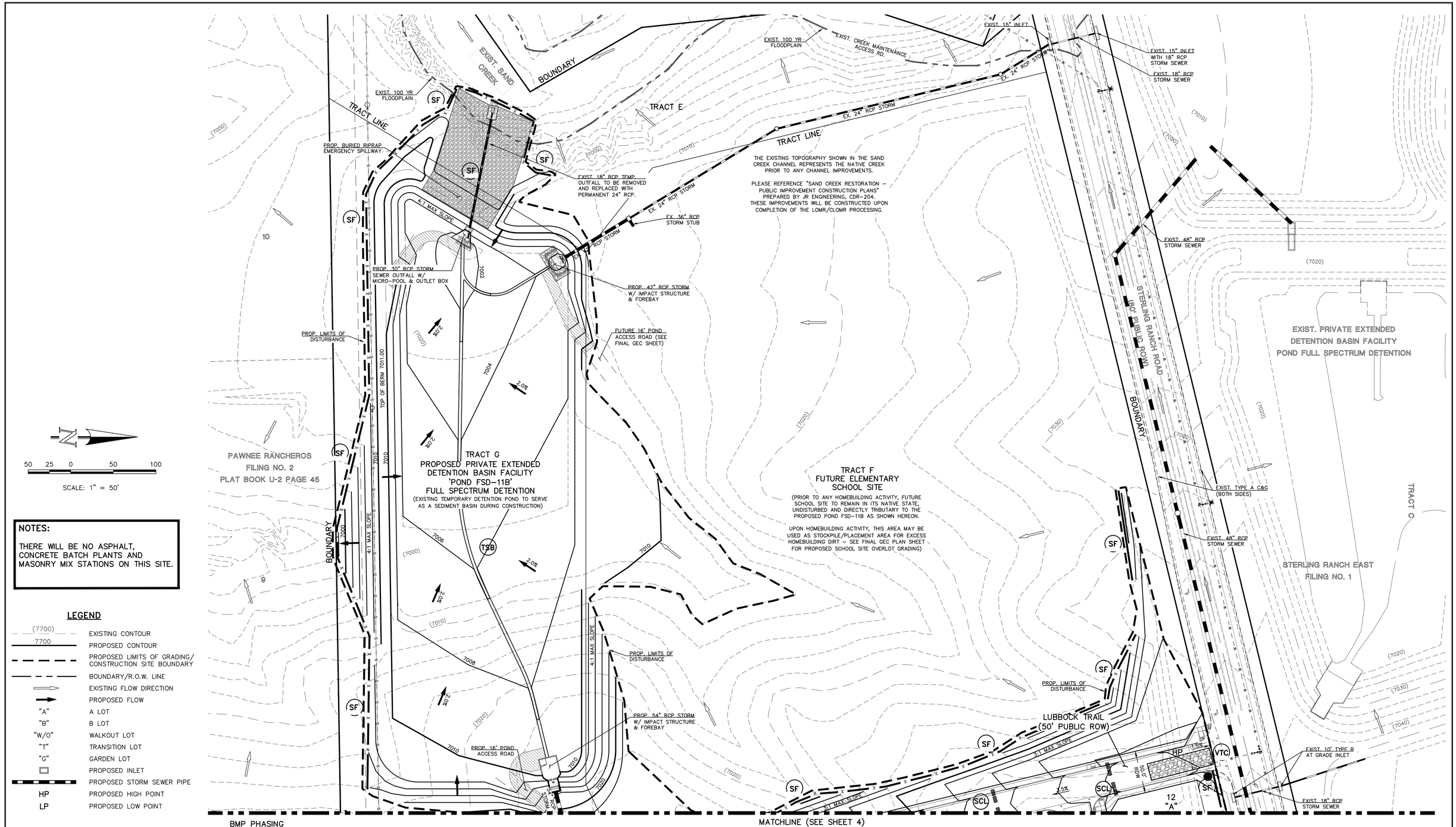

50 25 0 50 100

SCALE: 1" = 50'

NOTES:

THERE WILL BE NO ASPHALT, CONCRETE BATCH PLANTS AND MASONRY MIX STATIONS ON THIS SITE.

LEGEND

(7700)	EXISTING CONTOUR
7700	PROPOSED CONTOUR
	PROPOSED LIMITS OF GRADING/ CONSTRUCTION SITE BOUNDARY
	BOUNDARY/R.O.W. LINE
	EXISTING FLOW DIRECTION
	PROPOSED FLOW
"A"	A LOT
"B"	B LOT
"W/O"	WALKOUT LOT
"T"	TRANSITION LOT
"G"	GARDEN LOT
	PROPOSED INLET
	PROPOSED STORM SEWER PIPE
HP	PROPOSED HIGH POINT
LP	PROPOSED LOW POINT

BMP PHASING

TSB	TEMPORARY SEDIMENT BASIN	(INSTALLED DURING INITIAL PHASE WITH CONTINUED MAINTENANCE THROUGH INTERIM PHASE)
SF	SILT FENCE	(INSTALL PRIOR TO INITIAL PHASE WITH CONTINUED MAINTENANCE DURING INTERIM AND VERTICAL PHASES)
SCL	SEDIMENT CONTROL LOG	(INSTALLED DURING INTERIM PHASE WITH CONTINUED MAINTENANCE DURING INTERIM AND VERTICAL PHASES)
IP	INLET PROTECTION	(INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)
VTC	VEHICLE TRACKING CONTROL	(INSTALL PRIOR TO INITIAL PHASE WITH CONTINUED MAINTENANCE THROUGH INTERIM, VERTICAL PHASE OR SITE PAVING)
ECB	EROSION CONTROL BLANKET	(INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)

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NO.	REVISION	DATE

REVIEW:

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

MARC A. WHORTON, COLORADO P.E. #37155 DATE

CLASSIC CONSULTING SM
619 N. Cascade Avenue, Suite 200 (719)785-0790
Colorado Springs, Colorado 80903 (719)785-0799(Fax)

STERLING RANCH EAST
FILING NO. 3
GRADING AND EROSION CONTROL PLAN
NO GRADING OF SCHOOL SITE

CLASSIC CONSULTING

DESIGNED BY	MAW	SCALE	DATE	7/03/2023
DRAWN BY	ESO	(H) 1"= 50'	SHEET	3 OF 35
CHECKED BY		(V) 1"= N/A	JOB NO.	1183.33

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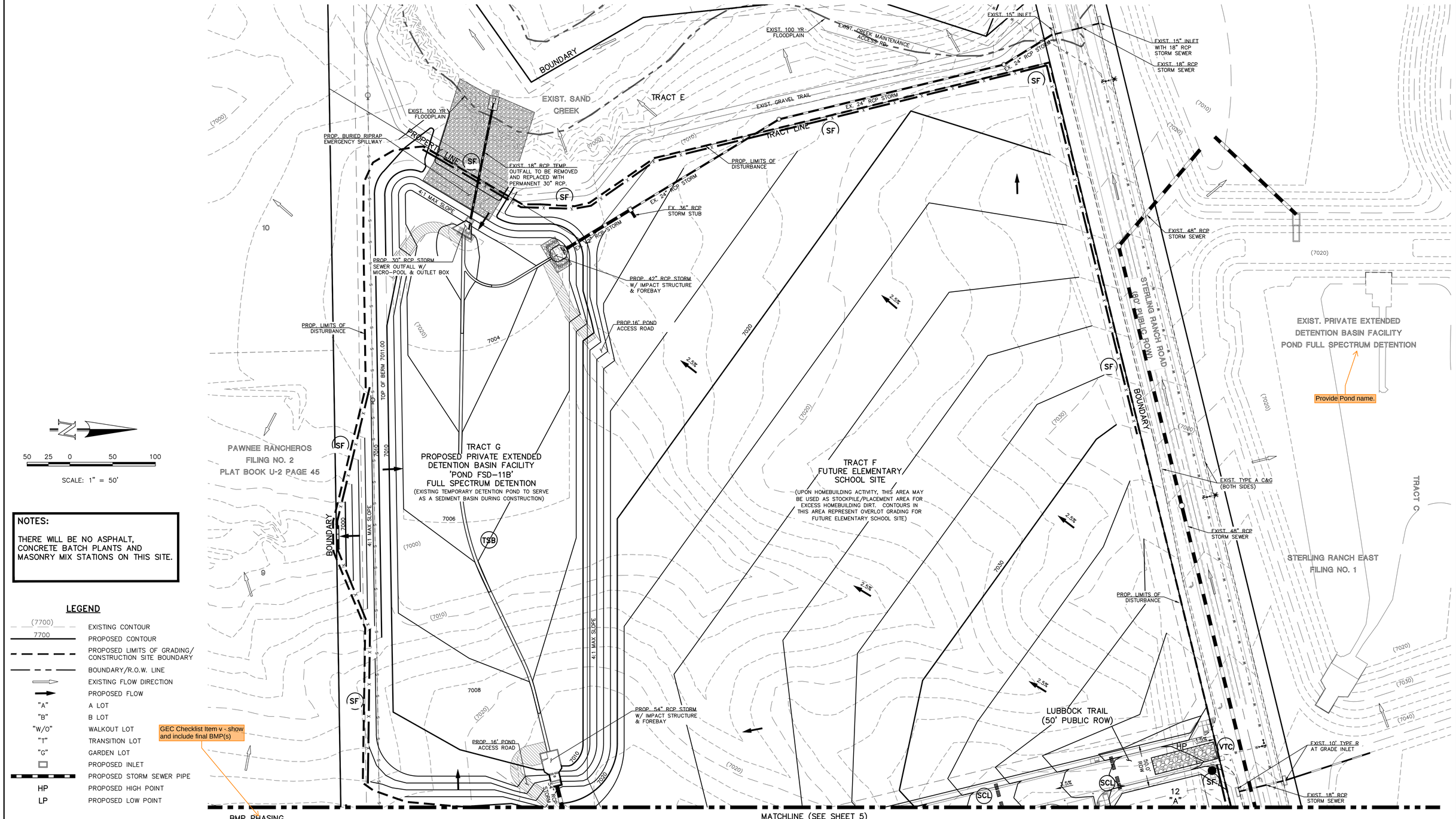

50 25 0 50 100

SCALE: 1" = 50'

NOTES:

THERE WILL BE NO ASPHALT, CONCRETE BATCH PLANTS AND MASONRY MIX STATIONS ON THIS SITE.

LEGEND

(7700)	EXISTING CONTOUR
7700	PROPOSED CONTOUR
	PROPOSED LIMITS OF GRADING/ CONSTRUCTION SITE BOUNDARY
	BOUNDARY/R.O.W. LINE
	EXISTING FLOW DIRECTION
	PROPOSED FLOW
"A"	A LOT
"B"	B LOT
"W/O"	WALKOUT LOT
"T"	TRANSITION LOT
"G"	GARDEN LOT
	PROPOSED INLET
	PROPOSED STORM SEWER PIPE
HP	PROPOSED HIGH POINT
LP	PROPOSED LOW POINT
TSB	TEMPORARY SEDIMENT BASIN
SF	SILT FENCE
SCL	SEDIMENT CONTROL LOG
IP	INLET PROTECTION
VTC	VEHICLE TRACKING CONTROL
ECB	EROSION CONTROL BLANKET

GEC Checklist Item v - show and include final BMP(s)

BMP PHASING

- TSB — TEMPORARY SEDIMENT BASIN — (INSTALLED DURING INITIAL PHASE WITH CONTINUED MAINTENANCE THROUGH INTERIM PHASE)
- SF — SILT FENCE — (INSTALL PRIOR TO INITIAL PHASE WITH CONTINUED MAINTENANCE DURING INTERIM AND VERTICAL PHASES)
- SCL — SEDIMENT CONTROL LOG — (INSTALLED DURING INTERIM PHASE WITH CONTINUED MAINTENANCE DURING INTERIM AND VERTICAL PHASES)
- IP — INLET PROTECTION — (INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)
- VTC — VEHICLE TRACKING CONTROL — (INSTALL PRIOR TO INITIAL PHASE WITH CONTINUED MAINTENANCE THROUGH INTERIM, VERTICAL PHASE OR SITE PAVING)
- ECB — EROSION CONTROL BLANKET — (INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)

Show seeding and mulching and identify as final BMP.

Will this be interim through final? If the BMP is not clearly labeled as final it should be removed at the end of the project. Is that the intent of the ECB?

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619 N. Cascade Avenue, Suite 200
Colorado Springs, Colorado 80903
(719)785-0790
(719)785-0799(Fax)

STERLING RANCH EAST
FILING NO. 3
GRADING AND EROSION CONTROL PLAN
SCHOOL SITE OVERLOT GEC PLAN

CLASSIC CONSULTING

DESIGNED BY	MAW	SCALE		DATE	7/03/2023
DRAWN BY	ESO	(H) 1"=	50'	SHEET	4 OF 35
CHECKED BY		(V) 1"=	N/A	JOB NO.	1183.33

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Show maintenance access path extending to roadway

MATCHLINE (SEE SHEET 3 AND 4)

LOT 8
PAWNEE RANCHEROS
FILING NO. 2
PLAT BOOK U-2 PAGE 45

LOT 6 BLOCK 4
BAR J-B ACRES
FILING 2

BOUNDARY

TRACT D

TRACT B

LUBBOCK TRAIL (50' PUBLIC ROW)

AMARILLO PLACE (50' PUBLIC ROW)

BIXBY COURT (50' PUBLIC ROW)

PLANO STREET (50' PUBLIC ROW)

LAGUNA NIGUEL DRIVE (50' PUBLIC ROW)

STERLING RANCH ROAD (80' PUBLIC ROW)

STERLING RANCH EAST FILING NO. 1

PROP. 5' TYPE R SUMP INLET W/18" RCP STORM

PROP. TYPE 1 STORM MH (TYP.)

PROP. TYPE 2 STORM MH (TYP.)

PROP. UTILITY AND DRAINAGE EASEMENT

PROP. 10' TYPE R SUMP INLET W/30" RCP STORM

PROP. 10' TYPE R AT GRADE INLET W/24" RCP STORM

PROP. 10' TYPE R AT GRADE INLET W/18" RCP STORM

54" RCP STORM

36" RCP STORM

30" RCP STORM

48" RCP STORM

24" RCP STORM

18" RCP STORM

EXIST. 48" RCP STORM

EXIST. TYPE A C&G (BOTH SIDES)

The drainage report discusses these sections of roadway, what work is proposed with this filing? The storm drain is called out as existing but is shown as proposed. Clarify and clearly state this area is existing in the drainage report if so.

MATCHLINE (SEE SHEET 6)

LEGEND

(7700)	EXISTING CONTOUR
7700	PROPOSED CONTOUR
	PROPOSED LIMITS OF GRADING/ CONSTRUCTION SITE BOUNDARY
	BOUNDARY/R.O.W. LINE
	EXISTING FLOW DIRECTION
	PROPOSED FLOW
"A"	A LOT
"B"	B LOT
"W/O"	WALKOUT LOT
"T"	TRANSITION LOT
"G"	GARDEN LOT
	PROPOSED INLET
	PROPOSED STORM SEWER PIPE
HP	PROPOSED HIGH POINT
LP	PROPOSED LOW POINT
TSB	TEMPORARY SEDIMENT BASIN
SF	SILT FENCE

SCL	SEDIMENT CONTROL LOG	(INSTALLED DURING INTERIM PHASE WITH CONTINUED MAINTENANCE DURING INTERIM AND VERTICAL PHASES)
IP	INLET PROTECTION	(INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)
VTC	VEHICLE TRACKING CONTROL	(INSTALL PRIOR TO INITIAL PHASE WITH CONTINUED MAINTENANCE THROUGH INTERIM, VERTICAL PHASE OR SITE PAVING)
ECB	EROSION CONTROL BLANKET	(INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)

BMP PHASING

(INSTALLED DURING INITIAL PHASE WITH CONTINUED MAINTENANCE THROUGH INTERIM PHASE)

(INSTALL PRIOR TO INITIAL PHASE WITH CONTINUED MAINTENANCE DURING INTERIM AND VERTICAL PHASES)

SWMP Checklist Item 17d/GEC Checklist Item p - Show areas of cut/fill. Typical comment for all GEC sheets. GEC Checklist Item bb - Show all existing and proposed permanent stormwater management facilities. Show the two existing ponds the site is using for treatment with Pond identifier. Also show the proposed RPA treatment areas. These areas need to be specified to have 80% vegetative density.

NOTES:

THERE WILL BE NO ASPHALT, CONCRETE BATCH PLANTS AND MASONRY MIX STATIONS ON THIS SITE.

50 25 0 50 100

SCALE: 1" = 50'

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NO.	REVISION	DATE

REVIEW:

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

MARC A. WHORTON, COLORADO P.E. #37155 — DATE

CLASSIC CONSULTING SM
619 N. Cascade Avenue, Suite 200 (719)785-0790
Colorado Springs, Colorado 80903 (719)785-0799(Fax)

STERLING RANCH EAST
FILING NO. 3
GRADING AND EROSION CONTROL PLAN

CLASSIC CONSULTING

DESIGNED BY	MAW	SCALE		DATE	7/03/2023
DRAWN BY	ESO	(H) 1"= 50'		SHEET	5 OF 35
CHECKED BY		(V) 1"= N/A		JOB NO.	1183.33

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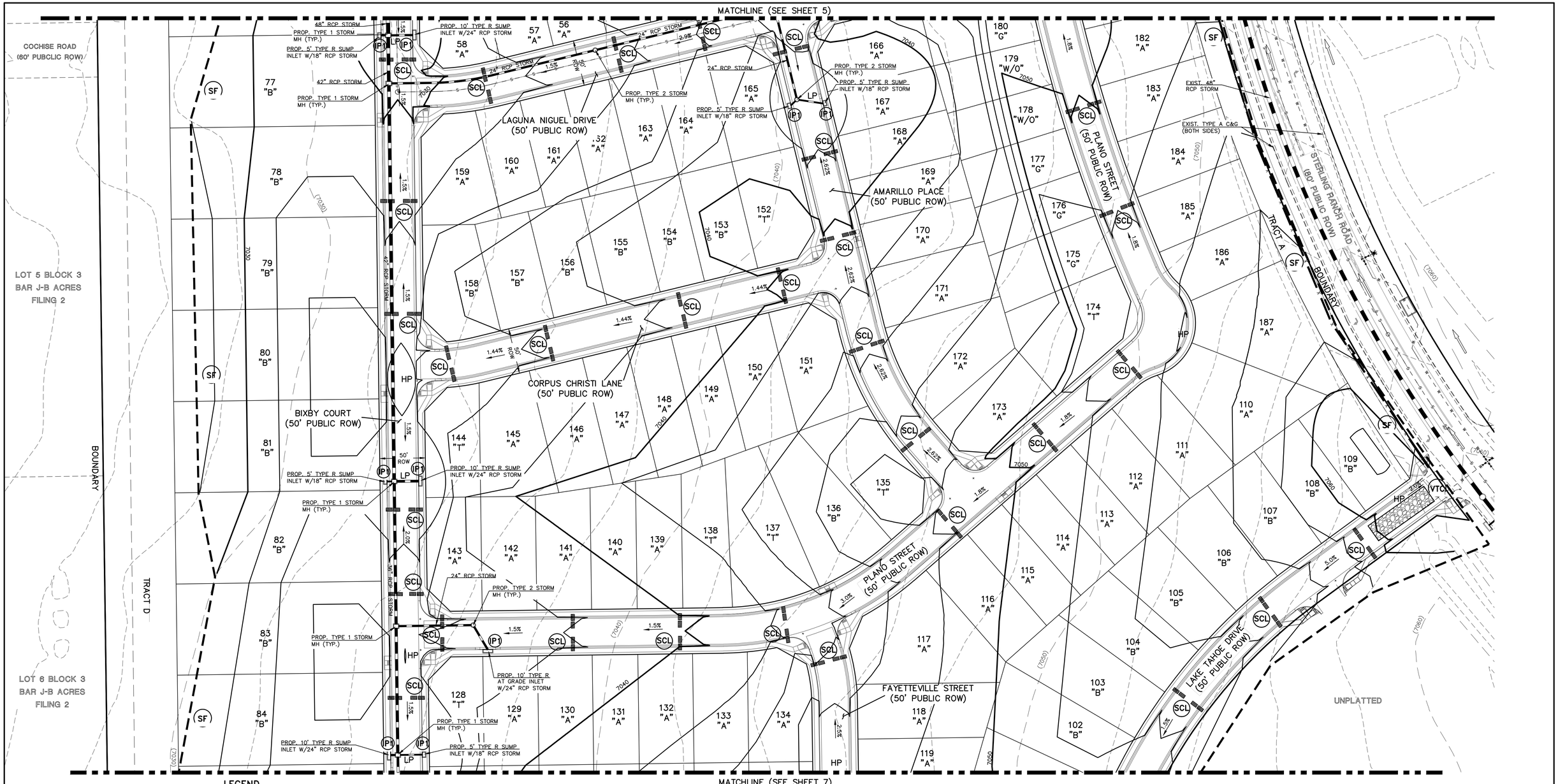

LEGEND

- (7700) — EXISTING CONTOUR
- 7700 — PROPOSED CONTOUR
- PROPOSED LIMITS OF GRADING/ CONSTRUCTION SITE BOUNDARY
- BOUNDARY/R.O.W. LINE
- EXISTING FLOW DIRECTION
- PROPOSED FLOW
- "A" — A LOT
- "B" — B LOT
- "W/O" — WALKOUT LOT
- "T" — TRANSITION LOT
- "G" — GARDEN LOT
- PROPOSED INLET
- PROPOSED STORM SEWER PIPE
- HP — PROPOSED HIGH POINT
- LP — PROPOSED LOW POINT
- TSB — TEMPORARY SEDIMENT BASIN
- x / SF — SILT FENCE

BMP PHASING

- TEMPORARY SEDIMENT BASIN ← (INSTALLED DURING INITIAL PHASE WITH CONTINUED MAINTENANCE THROUGH INTERIM PHASE)
- SILT FENCE ← (INSTALL PRIOR TO INITIAL PHASE WITH CONTINUED MAINTENANCE DURING INTERIM AND VERTICAL PHASES)

- SCL — SEDIMENT CONTROL LOG ← (INSTALLED DURING INTERIM PHASE WITH CONTINUED MAINTENANCE DURING INTERIM AND VERTICAL PHASES)
- IP — INLET PROTECTION ← (INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)
- VTC — VEHICLE TRACKING CONTROL ← (INSTALL PRIOR TO INITIAL PHASE WITH CONTINUED MAINTENANCE THROUGH INTERIM, VERTICAL PHASE OR SITE PAVING)
- ECB — EROSION CONTROL BLANKET ← (INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)

NOTES:

THERE WILL BE NO ASPHALT, CONCRETE BATCH PLANTS AND MASONRY MIX STATIONS ON THIS SITE.

50 25 0 50 100

SCALE: 1" = 50'

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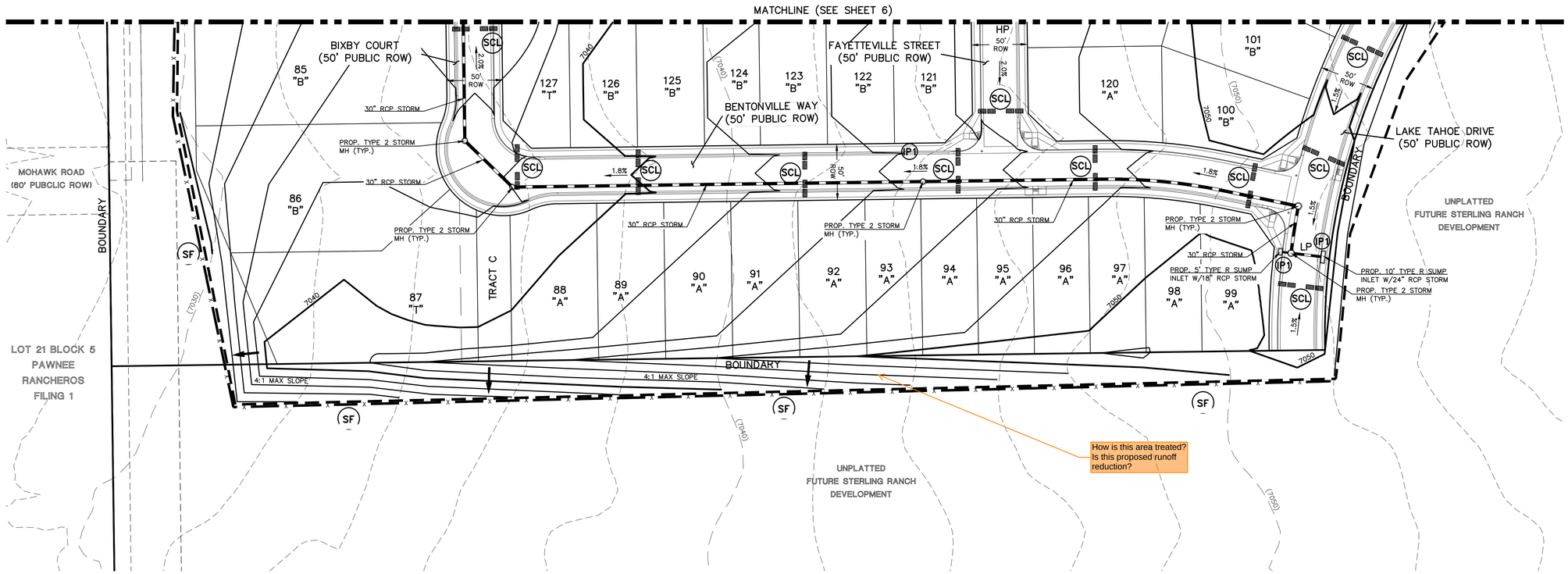

LEGEND

(7700)	EXISTING CONTOUR
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	BOUNDARY/R.O.W. LINE
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"T"	TRANSITION LOT
"G"	GARDEN LOT
	PROPOSED INLET
	PROPOSED STORM SEWER PIPE
HP	PROPOSED HIGH POINT
LP	PROPOSED LOW POINT

BMP PHASING		
TSB	TEMPORARY SEDIMENT BASIN	(INSTALLED DURING INITIAL PHASE WITH CONTINUED MAINTENANCE THROUGH INTERIM PHASE)
SF	SILT FENCE	(INSTALL PRIOR TO INITIAL PHASE WITH CONTINUED MAINTENANCE DURING INTERIM AND VERTICAL PHASES)
SCL	SEDIMENT CONTROL LOG	(INSTALLED DURING INTERIM PHASE WITH CONTINUED MAINTENANCE DURING INTERIM AND VERTICAL PHASES)
IP	INLET PROTECTION	(INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)
VTC	VEHICLE TRACKING CONTROL	(INSTALL PRIOR TO INITIAL PHASE WITH CONTINUED MAINTENANCE THROUGH INTERIM, VERTICAL PHASE OR SITE PAVING)
ECB	EROSION CONTROL BLANKET	(INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)

NOTES:

THERE WILL BE NO ASPHALT, CONCRETE BATCH PLANTS AND MASONRY MIX STATIONS ON THIS SITE.

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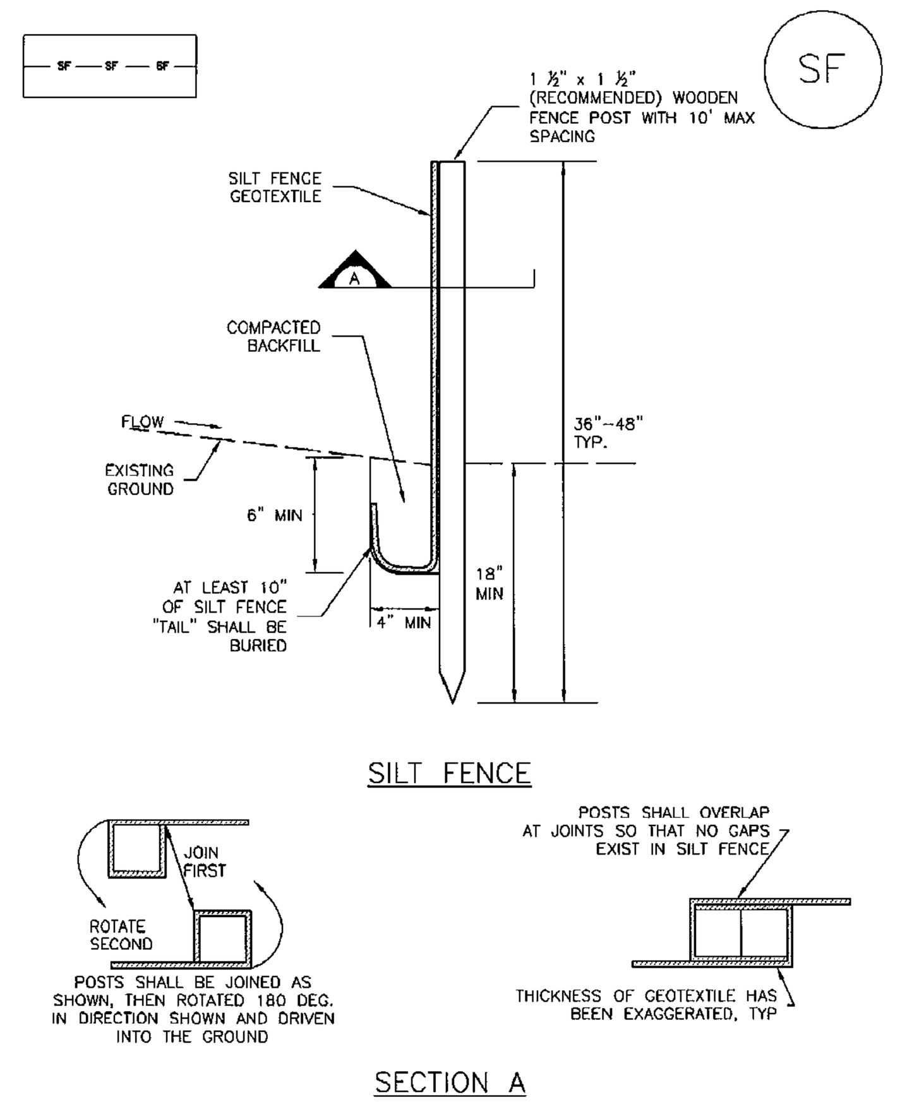
Silt Fence (SF) SC-1



SF-1. SILT FENCE

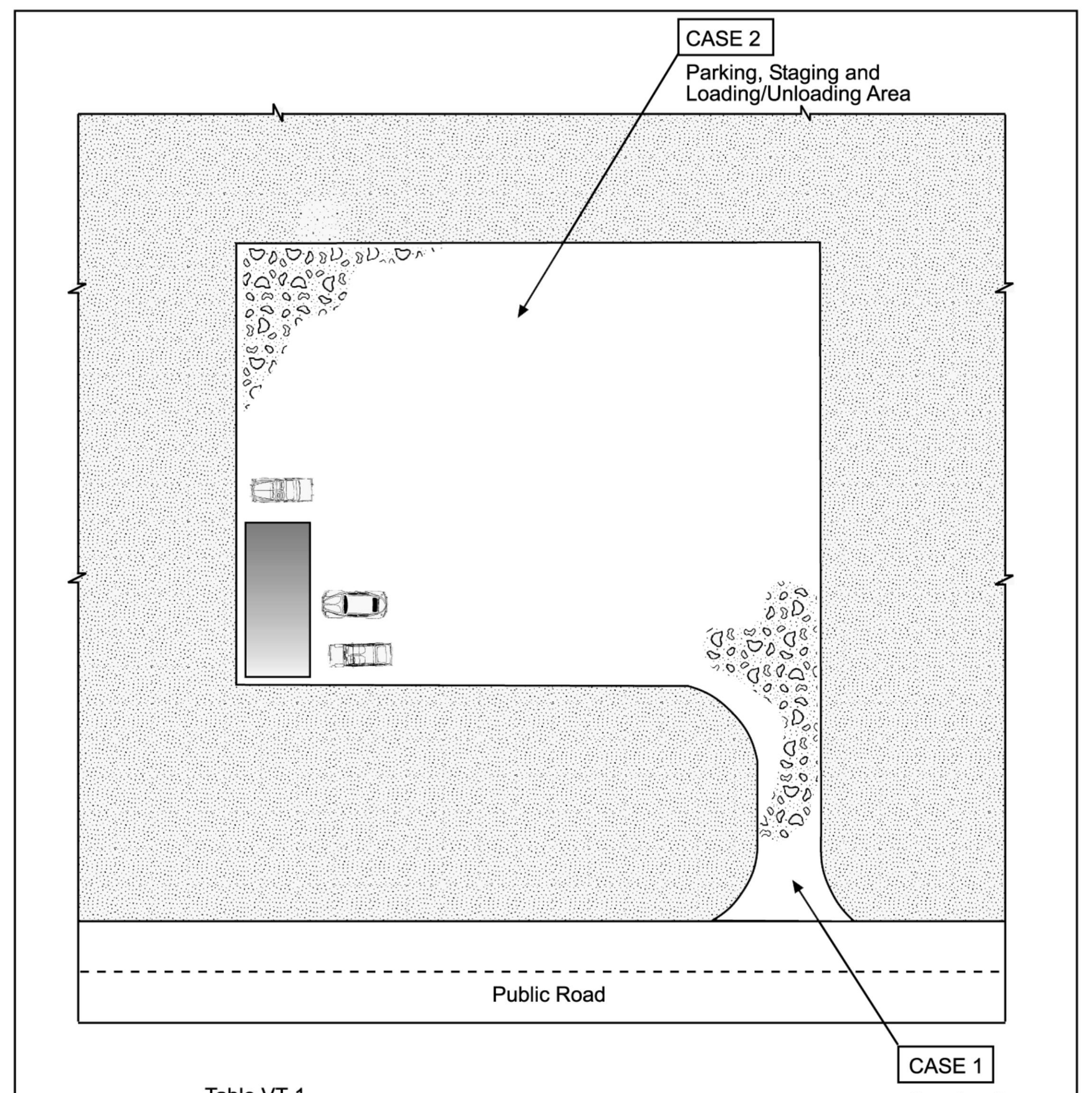
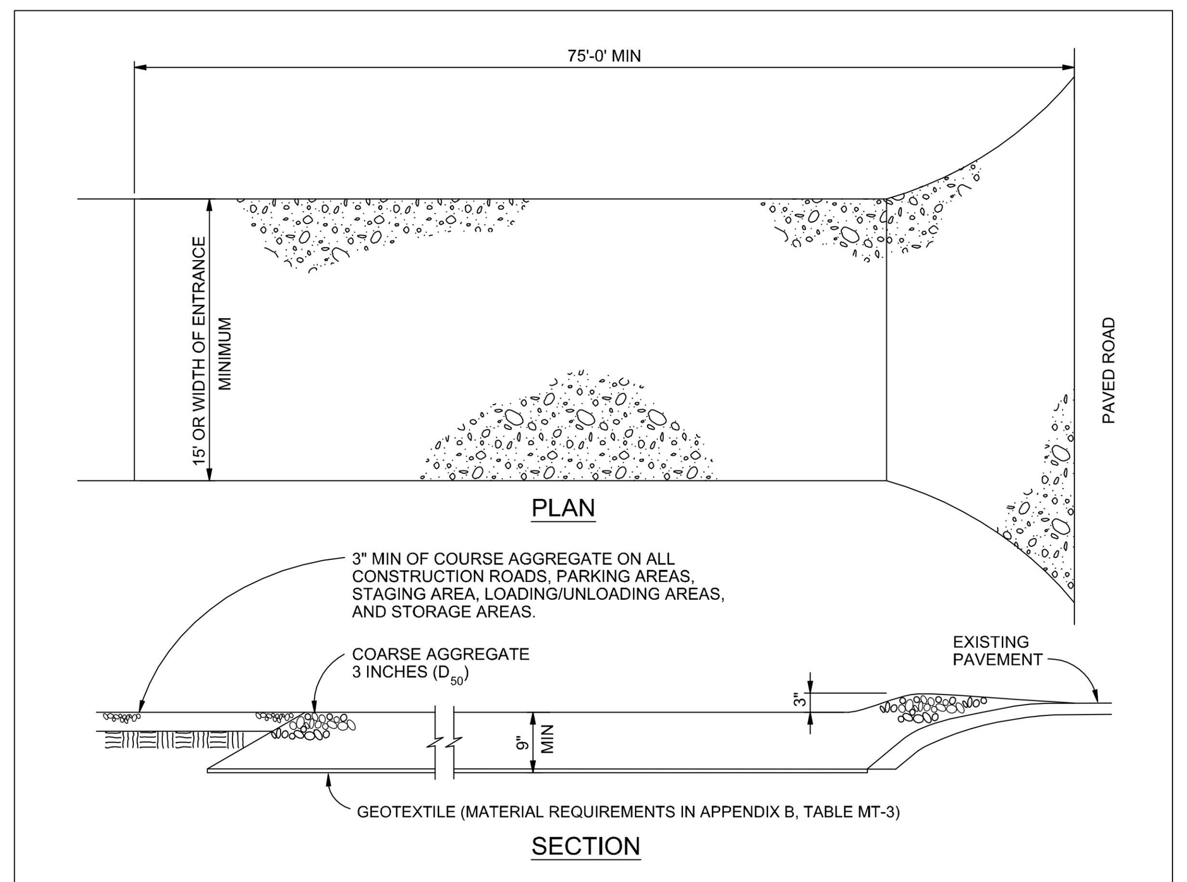


Table VT-1

	Case 1	Case 2
Gravel Thickness	9"	3"
Filter Fabric	YES	NO

City of Colorado Springs Storm Water Quality | Figure VT-1 Vehicle Tracking Application Examples



VEHICLE TRACKING
NTS

VEHICLE TRACKING NOTES

INSTALLATION REQUIREMENTS

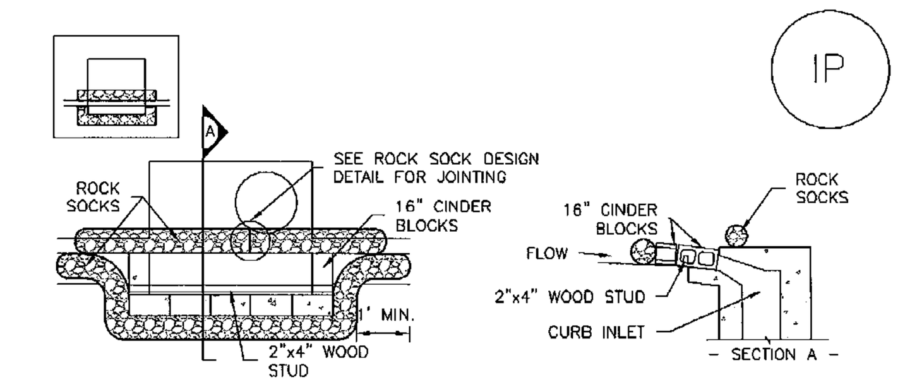
1. ALL ENTRANCES TO THE CONSTRUCTION SITE ARE TO BE STABILIZED PRIOR TO CONSTRUCTION BEGINNING.
2. CONSTRUCTION ENTRANCES ARE TO BE BUILT WITH AN APRON TO ALLOW FOR TURNING TRAFFIC, BUT SHOULD NOT BE BUILT OVER EXISTING PAVEMENT EXCEPT FOR A SLIGHT OVERLAP.
3. AREAS TO BE STABILIZED ARE TO BE PROPERLY 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

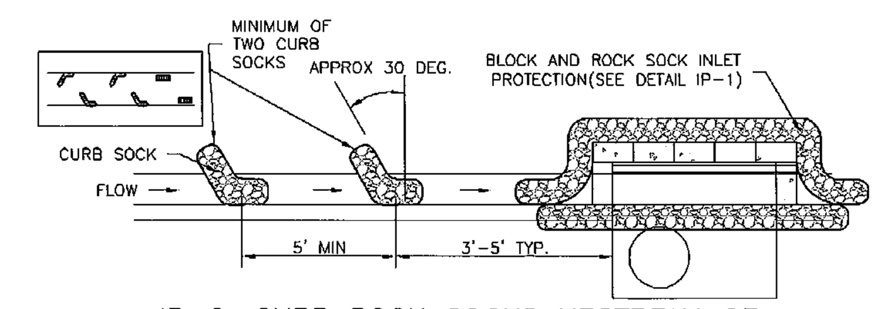
SC-6 Inlet Protection (IP)



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.

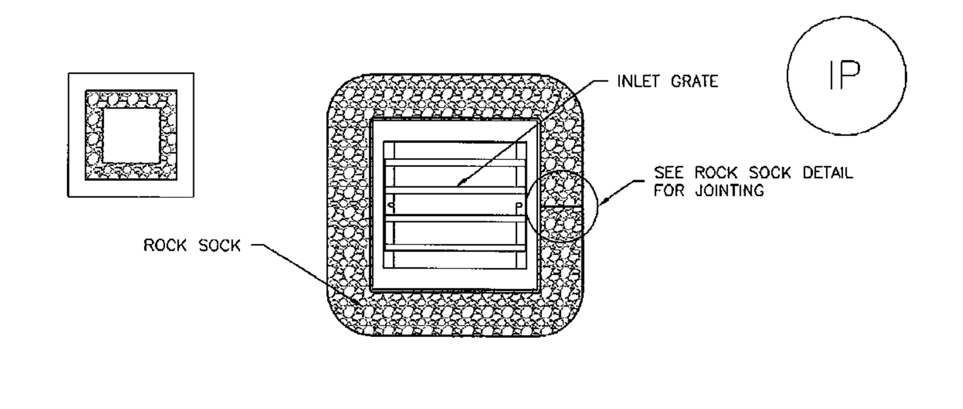


IP-2. CURB ROCK SOCKS UPSTREAM OF INLET PROTECTION

CURB ROCK SOCK INLET PROTECTION INSTALLATION NOTES

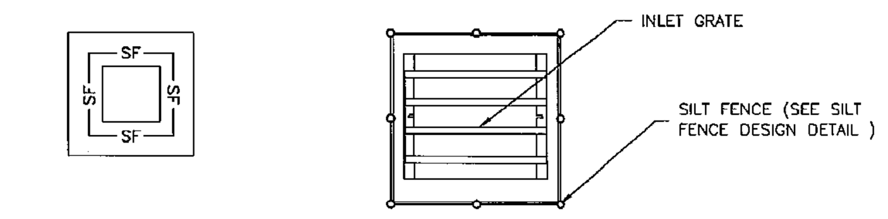
1. SEE ROCK SOCK DESIGN DETAIL INSTALLATION REQUIREMENTS.
2. PLACEMENT OF THE SOCK SHALL BE APPROXIMATELY 30 DEGREES FROM PERPENDICULAR IN THE OPPOSITE DIRECTION OF FLOW.
3. SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED A MINIMUM OF 5 FEET APART.
4. AT LEAST TWO CURB SOCKS IN SERIES ARE REQUIRED UPSTREAM OF ON-GRADE INLETS.

Inlet Protection (IP) SC-6



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.

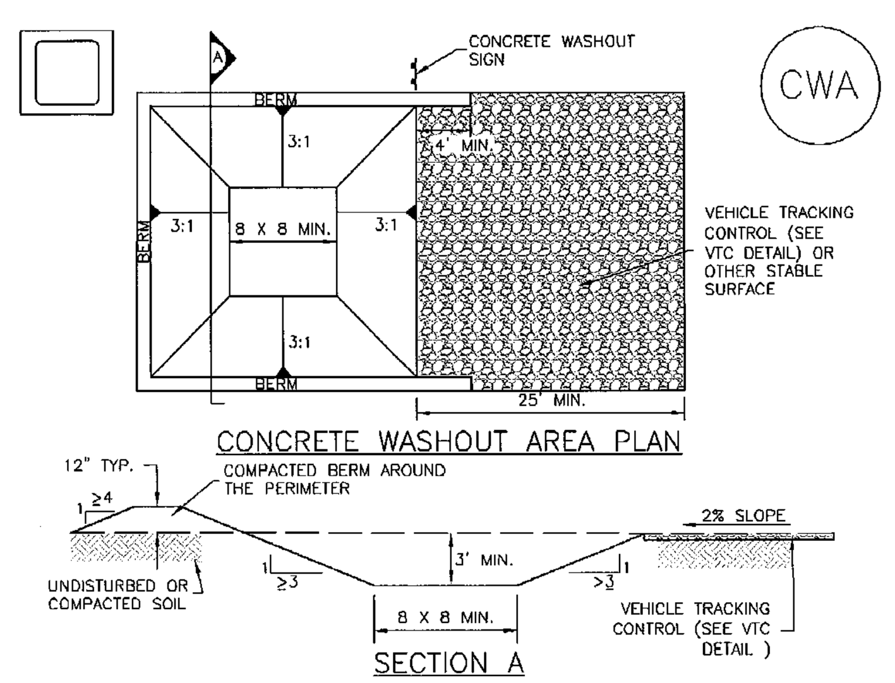


IP-4. SILT FENCE FOR SUMP INLET PROTECTION

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.

Concrete Washout Area (CWA) MM-1



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.

MM-1 Concrete Washout Area (CWA)

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.

Mulching (MU) EC-4

Description

Photograph MU-1. An area that was recently seeded, mulched, and crimped.

Mulching consists of evenly applying straw, hay, shredded wood mulch, rock, bark or compost to disturbed soils and securing the mulch by crimping, tackifiers, netting or other measures. Mulching helps reduce erosion by protecting bare soil from rainfall impact, increasing infiltration, and reducing runoff. Although often applied in conjunction with temporary or permanent seeding, it can also be used for temporary stabilization of areas that cannot be reseeded due to seasonal constraints.

Mulch can be applied either using standard mechanical dry application methods or using hydromulching equipment that hydraulically applies a slurry of water, wood fiber mulch, and often a tackifier.

Appropriate Uses

Use mulch in conjunction with seeding to help protect the seedbed and stabilize the soil. Mulch can also be used as a temporary cover on low to mild slopes to help temporarily stabilize disturbed areas where growing season constraints prevent effective reseeding. Disturbed areas should be properly mulched and tacked, or seeded, mulched and tacked promptly after final grade is reached (typically within no longer than 14 days) on portions of the site not otherwise permanently stabilized.

Standard dry mulching is encouraged in most jurisdictions; however, hydromulching may not be allowed in certain jurisdictions or may not be allowed near waterways.

Do not apply mulch during windy conditions.

Design and Installation

Prior to mulching, surface-roughen areas by rolling with a crimping or punching type roller or by track walking. Track walking should only be used where other methods are impractical because track walking with heavy equipment typically compacts the soil.

A variety of mulches can be used effectively at construction sites. Consider the following:

Mulch	
Functions	
Erosion Control	Yes
Sediment Control	Moderate
Site/Material Management	No

Temporary and Permanent Seeding (TS/PS) EC-2

Description

Photograph TS/PS -1. Equipment used to drill seed. Photo courtesy of Douglas County.

Temporary seeding can be used to stabilize disturbed areas that will be inactive for an extended period. Permanent seeding should be used to stabilize areas at final grade that will not be otherwise stabilized. Effective seeding includes preparation of a seedbed, selection of an appropriate seed mixture, proper planting techniques, and protection of the seeded area with mulch, geotextiles, or other appropriate measures.

Appropriate Uses

When the soil surface is disturbed and will remain inactive for an extended period (typically 30 days or longer), proactive stabilization measures should be implemented. If the inactive period is short-lived (on the order of two weeks), techniques such as surface roughening may be appropriate. For longer periods of inactivity, temporary seeding and mulching can provide effective erosion control. Permanent seeding should be used on finished areas that have not been otherwise stabilized.

Typically, local governments have their own seed mixes and timelines for seeding. Check jurisdictional requirements for seeding and temporary stabilization.

Design and Installation

Effective seeding requires proper seedbed preparation, selection of an appropriate seed mixture, use of appropriate seeding equipment to ensure proper coverage and density, and protection with mulch or fabric until plants are established.

The USDCM Volume 2 *Revegetation* Chapter contains detailed seed mix, soil preparations, and seeding and mulching recommendations that may be referenced to supplement this Fact Sheet.

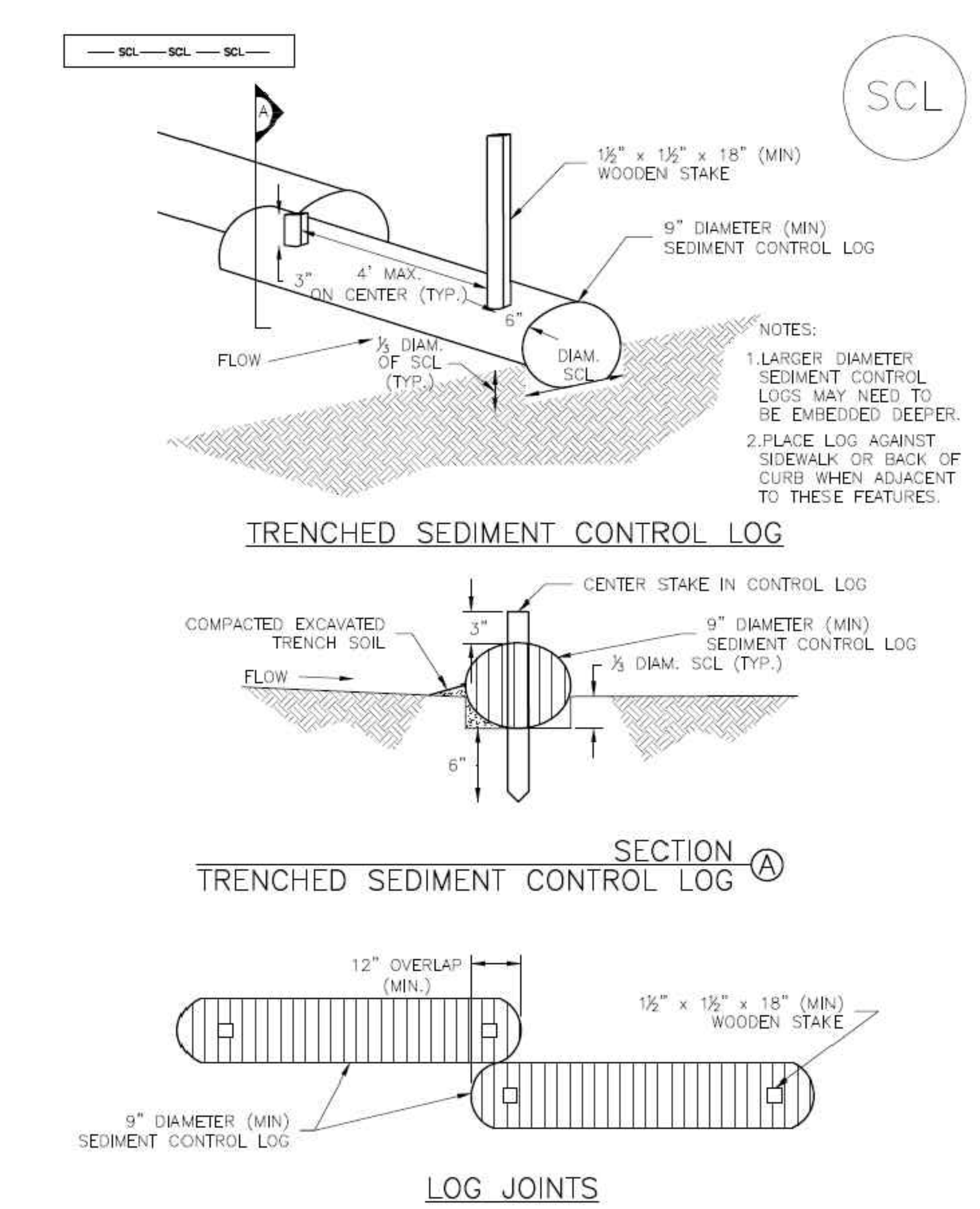
Drill seeding is the preferred seeding method. Hydroseeding is not recommended except in areas where steep slopes prevent use of drill seeding equipment, and even in these instances it is preferable to hand seed and mulch. Some jurisdictions do not allow hydroseeding or hydromulching.

Seedbed Preparation

Prior to seeding, ensure that areas to be revegetated have soil conditions capable of supporting vegetation. Overlot grading can result in loss of topsoil, resulting in poor quality subsoils at the ground surface that have low nutrient value, little organic matter content, few soil microorganisms, rooting restrictions, and conditions less conducive to infiltration of precipitation. As a result, it is typically necessary to provide stockpiled topsoil, compost, or other

Temporary and Permanent Seeding	
Functions	
Erosion Control	Yes
Sediment Control	No
Site/Material Management	No

Sediment Control Log (SCL) SC-2



SCL-1. TRENCHED SEDIMENT CONTROL LOG

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DETAIL SHEET

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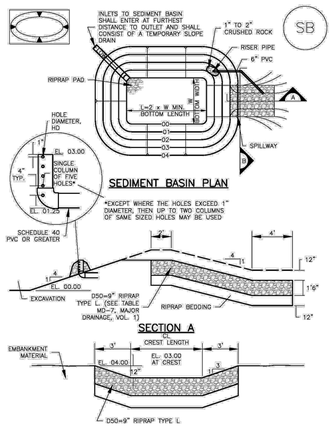
CHECKED BY		(V) 1"= N/A	JOB NO. 1183.33

Sediment Basin (SB) SC-7



SC-7 Sediment Basin (SB)

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	5/32
2	21	3	3/16
3	28	5	1/4
4	33 ½	6	9/32
5	38 ½	8	11/32
6	43	9	13/32
7	47 ¼	11	15/32
8	51	12	7/16
9	55	13	1/2
10	58 ¼	15	19/32
11	61	16	21/32
12	64	18	3/4
13	67 ½	19	1 3/4
14	70 ½	21	1 1/2
15	73 ¼	22	1 19/32

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 (SB) SC-7

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).

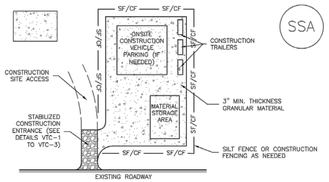
5. SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS ACCEPTED BY THE LOCAL JURISDICTION.

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.

Stabilized Staging Area (SSA) SM-6



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.

SM-6 Stabilized Staging Area (SSA)

STABILIZED STAGING AREA MAINTENANCE NOTES

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

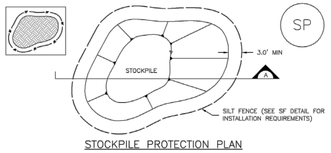
6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

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.

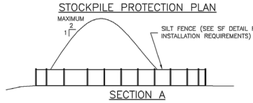
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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

Stockpile Management (SP) MM-2



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.

MM-2 Stockpile Management (SM)

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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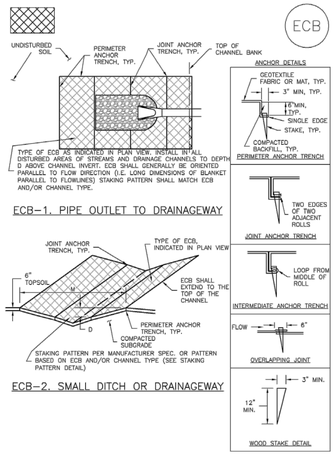
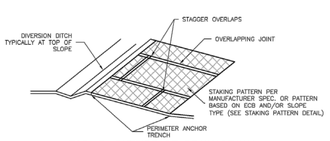
EC-6 Rolled Erosion Control Products (RECP)



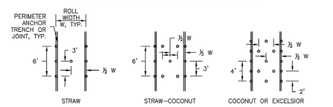
ECB-1. PIPE OUTLET TO DRAINAGEWAY

ECB-2. SMALL DITCH OR DRAINAGEWAY

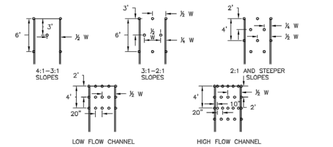
Rolled Erosion Control Products (RECP) EC-6



ECB-3. OUTSIDE OF DRAINAGEWAY



STAKING PATTERNS BY ECB TYPE



STAKING PATTERNS BY SLOPE OR CHANNEL TYPE

EC-6 Rolled Erosion Control Products (RECP)

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

Rolled Erosion Control Products (RECP) EC-6

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)

48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS
811
UTILITY NOTIFICATION CENTER OF COLORADO
IT'S THE LAW

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NO.	REVISION	DATE

REVIEW:

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

MARC A. WHORTON, COLORADO P.E. #37155 DATE

CLASSIC CONSULTING SM
619 N. Cascade Avenue, Suite 200 (719)785-0790
Colorado Springs, Colorado 80903 (719)785-0799(Fax)

STERLING RANCH EAST
FILING NO. 3
GRADING AND EROSION CONTROL PLAN
DETAIL SHEET

CLASSIC CONSULTING

DESIGNED BY	ESO	SCALE		DATE	7/03/2023
DRAWN BY	ESO	(H) 1"= 50'		SHEET	9 OF 35
CHECKED BY		(V) 1"= N/A		JOB NO.	1183.33

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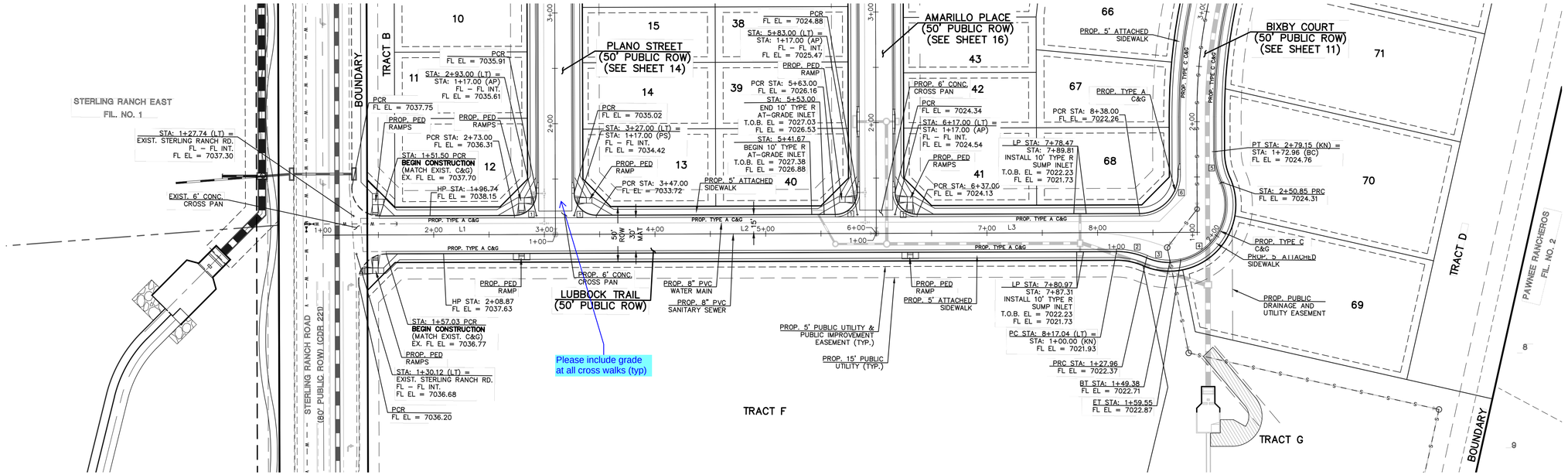


CENTERLINE LINE TABLE

LINE	LENGTH	BEARING
L1	210.00	S13°40'40"E
L2	290.00	S13°40'40"E
L3	290.00	S13°40'40"E

☐ CURB CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA
1	31.42	20.00	90°00'00"
2	27.96	68.00	23°33'23"
3	21.43	52.00	23°36'33"
4	91.30	51.17	102°14'03"
5	28.30	68.83	23°33'23"
6	54.98	35.00	90°00'00"

NOTES:

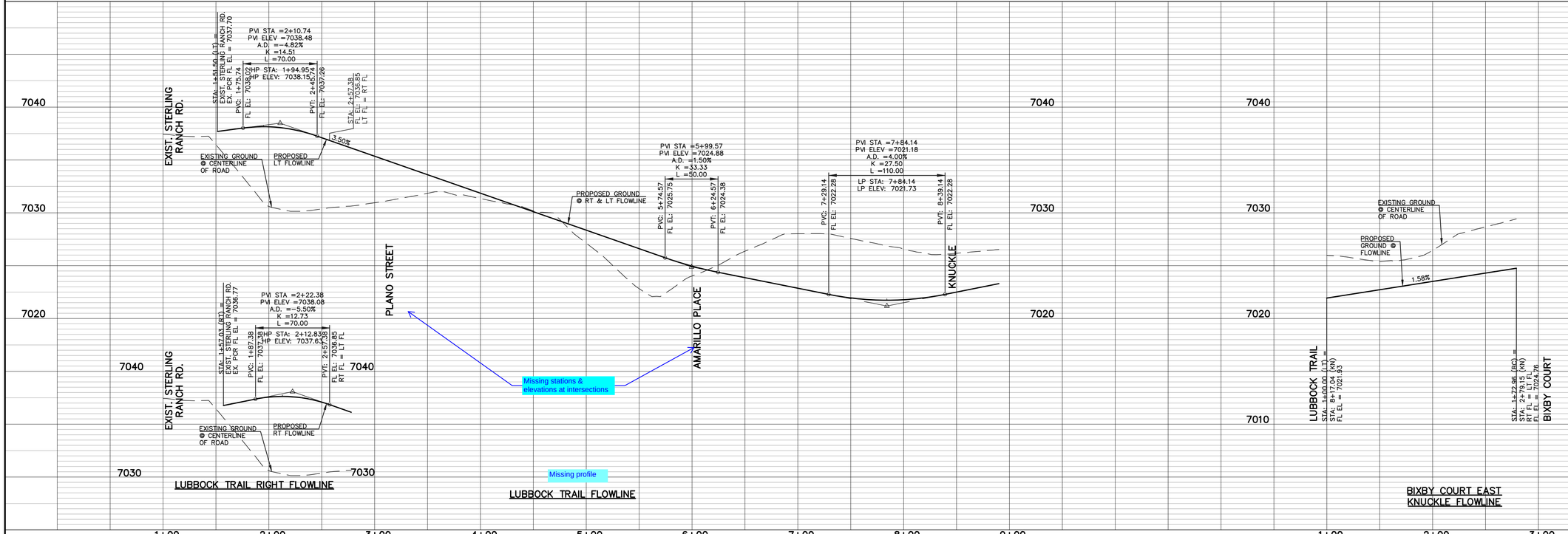
DEVELOPER IS REQUIRED TO CONSTRUCT SIDEWALK ADJACENT TO AND THRU ALL TRACTS AS SHOWN (TYPICAL) THE WIDTH OF THE PEDESTRIAN RAMPS MUST MATCH THE WIDTH OF SIDEWALKS

STATEMENTS:

EL PASO COUNTY RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN; THE COUNTY HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY. RESUBMITTAL IS REQUIRED IF CONSTRUCTION HAS NOT COMMENCED WITHIN 180 DAYS OF REVIEW DATE.

LUBBOCK TRAIL (PUBLIC) (50' R.O.W.)

DESIGN SPEED – 25 mph URBAN LOCAL



LUBBOCK TRAIL RIGHT FLOWLINE

LUBBOCK TRAIL FLOWLINE

Missing profile

Missing stations & elevations at intersections

BIXBY COURT EAST KNUCKLE FLOWLINE

LEGEND

- BOUNDARY LINE
- ROW LINE
- LOT LINE
- CURB & GUTTER
- PED RAMP
- LIGHT POLE
- SIGN
- TYPE R INLET

48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS

811

UTILITY NOTIFICATION CENTER OF COLORADO
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619 N. Cascade Avenue, Suite 200 (719)785-0790
Colorado Springs, Colorado 80903 (719)785-0799(Fax)

STERLING RANCH EAST FILING NO. 3

STREET IMPROVEMENT PLANS

LUBBOCK TRAIL

DESIGNED BY	ESO	SCALE		DATE	7/03/2023
DRAWN BY	ESO	(H) 1"=	50'	SHEET	10 OF 35
CHECKED BY		(V) 1"=	5'	JOB NO.	1183.33

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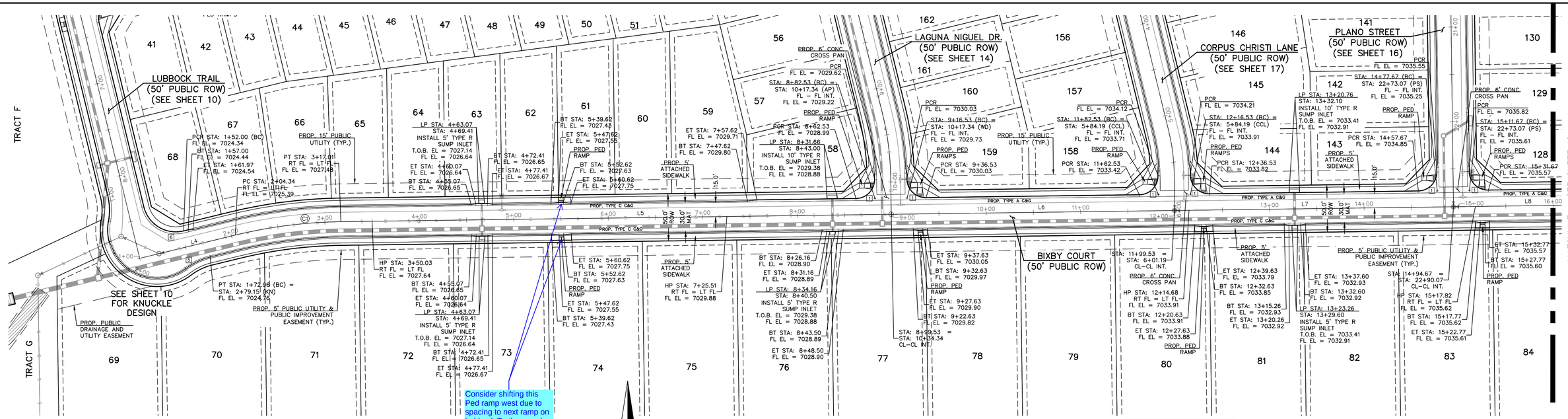

STATEMENTS:

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NOTES:

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□ CURB CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA
1	31.42	20.00	90°00'00"
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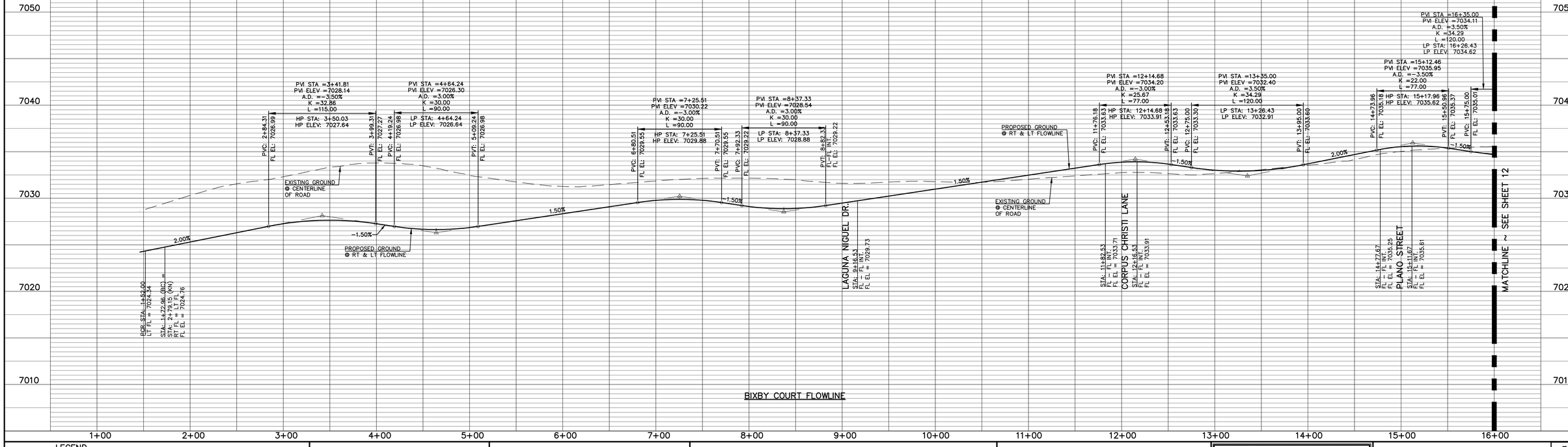
CENTERLINE LINE TABLE

LINE	LENGTH	BEARING
L4	104.34	N76°19'20"E
L5	582.53	N89°14'00"E
L6	300.00	N89°14'00"E
L7	295.14	N89°14'00"E
L8	290.00	N89°14'00"E

○ CENTERLINE CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA
C1	112.67	500.00	12°54'40"



LEGEND

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MARC A. WHORTON, COLORADO P.E. #37155 — DATE

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619 N. Cascade Avenue, Suite 200 (719)785-0790
Colorado Springs, Colorado 80903 (719)785-0799(Fax)

STERLING RANCH EAST
FILING NO. 3
STREET IMPROVEMENT PLANS
BIXBY COURT

DESIGNED BY	ESO	SCALE		DATE	7/03/2023
DRAWN BY	ESO	(H) 1"=	50'	SHEET	11 OF 35
CHECKED BY		(V) 1"=	5'	JOB NO.	1183.33

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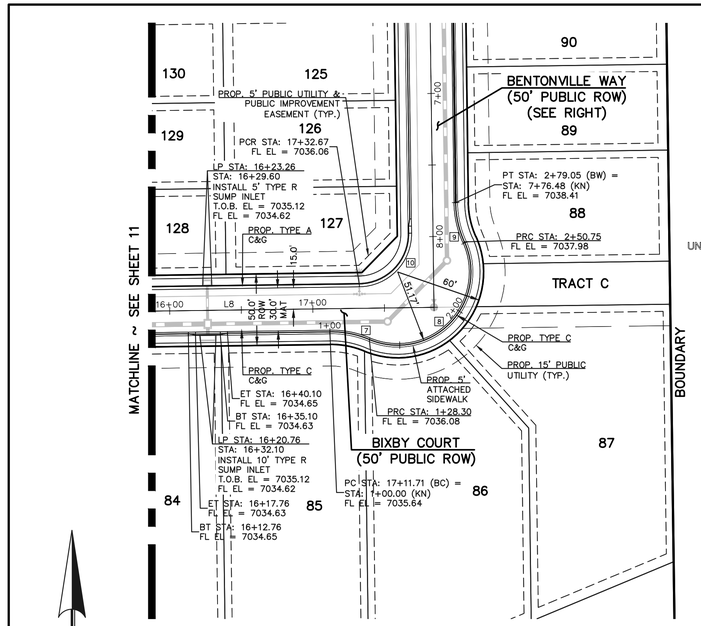

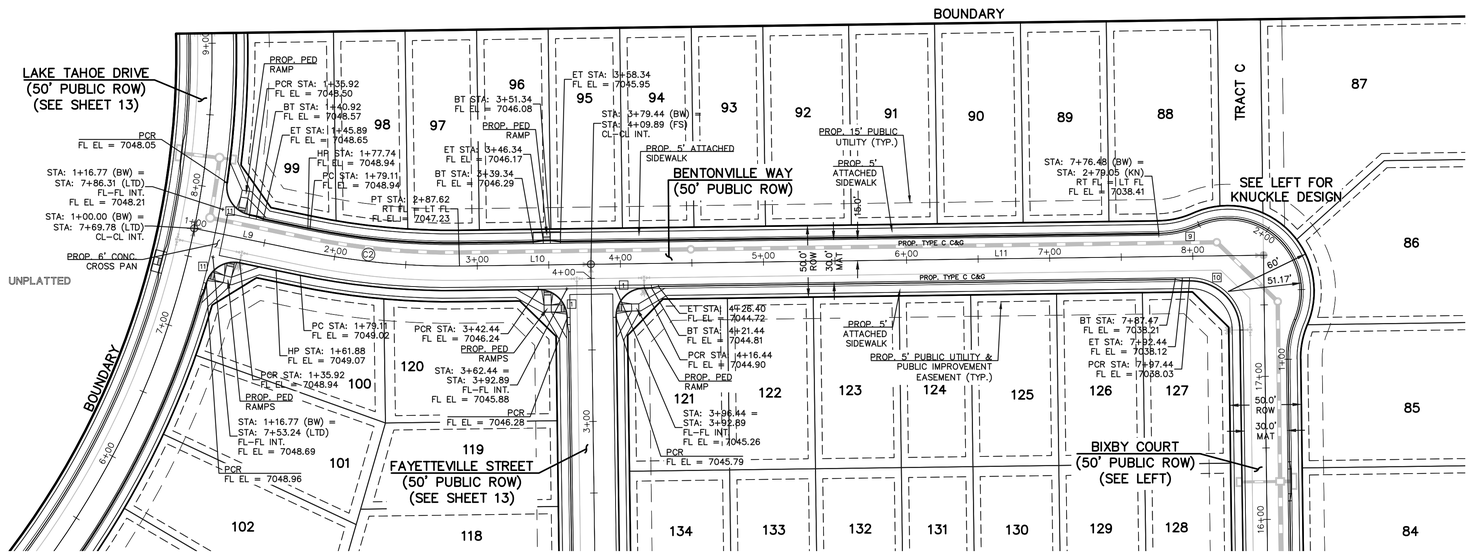

50' 25' 0 50' 100'

SCALE: 1" = 50'

BIXBY COURT (PUBLIC)
(50' R.O.W.)
DESIGN SPEED – 25 mph URBAN LOCAL

STATEMENTS:

EL PASO COUNTY RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN; THE COUNTY HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY. RESUBMITTAL IS REQUIRED IF CONSTRUCTION HAS NOT COMMENCED WITHIN 180 DAYS OF REVIEW DATE.

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50' 25' 0 50' 100'

SCALE: 1" = 50'

BENTONVILLE WAY (PUBLIC)
(50' R.O.W.)
DESIGN SPEED – 25 mph URBAN LOCAL

☐ CURB CURVE TABLE

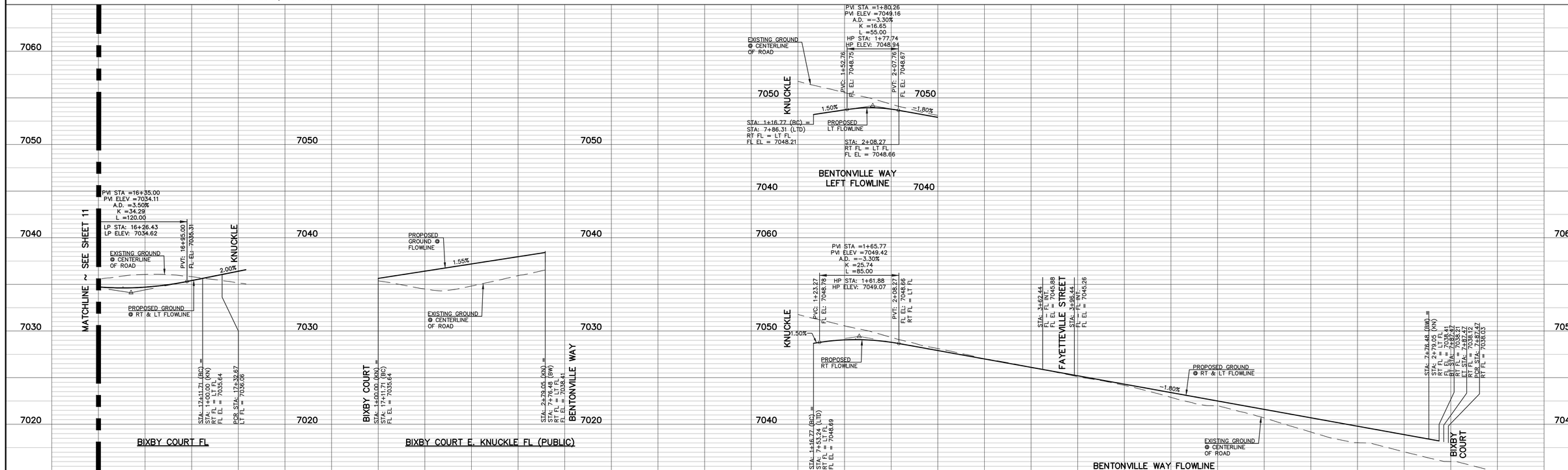
CURVE	LENGTH	RADIUS	DELTA
1	31.42	20.00	90°00'00"
7	28.30	68.83	23°33'23"
8	122.45	51.17	137°06'47"
9	28.30	68.83	23°33'23"
10	54.98	35.00	90°00'00"
11	30.25	20.00	86°40'12"

CENTERLINE LINE TABLE

LINE	LENGTH	BEARING
L8	290.00	N89°14'00"E
L9	79.11	S11°40'00"W
L10	91.82	S00°46'00"E
L11	470.00	S00°46'00"E

○ CENTERLINE CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA
C2	108.50	500.00	12°26'00"



LEGEND

- BOUNDARY LINE
- ROW LINE
- LOT LINE
- CURB & GUTTER
- PED RAMP
- LIGHT POLE
- SIGN
- TYPE R INLET

48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS
811
UTILITY NOTIFICATION CENTER OF COLORADO
IT'S THE LAW

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NO.	REVISION	DATE

REVIEW:

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

MARC A. WHORTON, COLORADO P.E. #37155 — DATE

CLASSIC SM
CONSULTING ENGINEERS & SURVEYORS
619 N. Cascade Avenue, Suite 200 (719)785-0790
Colorado Springs, Colorado 80903 (719)785-0799(Fax)

STERLING RANCH EAST
FILING NO. 3
STREET IMPROVEMENT PLANS
BIXBY COURT & BENTONVILLE WAY

CLASSIC CONSULTING ENGINEERS & SURVEYORS

DESIGNED BY	ESO	SCALE		DATE	7/03/2023
DRAWN BY	ESO	(H) 1"= 50'		SHEET	12 OF 35
CHECKED BY		(V) 1"= 5'		JOB NO.	1183.33

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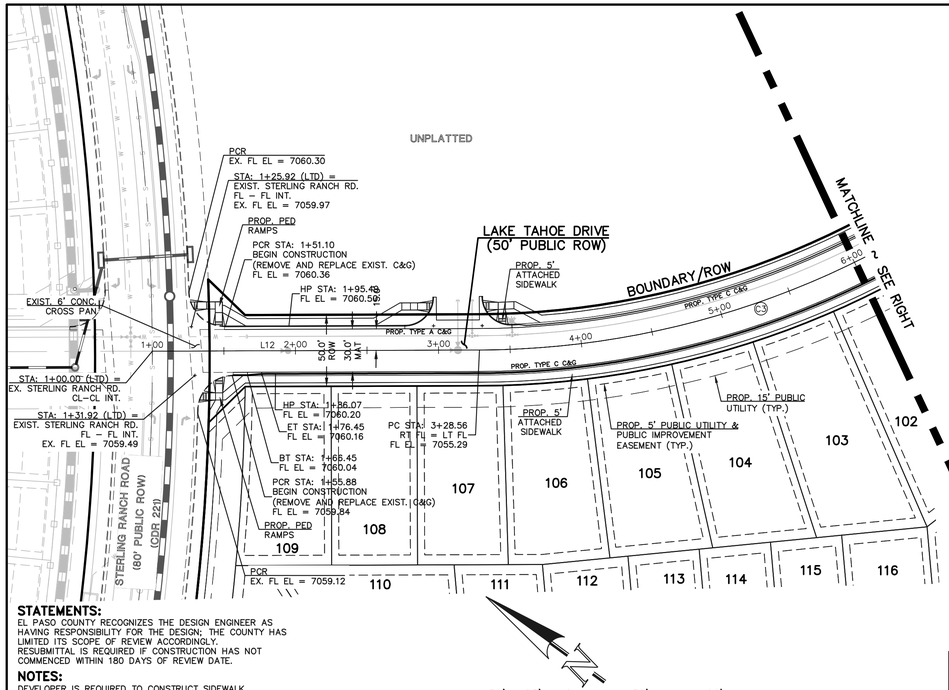
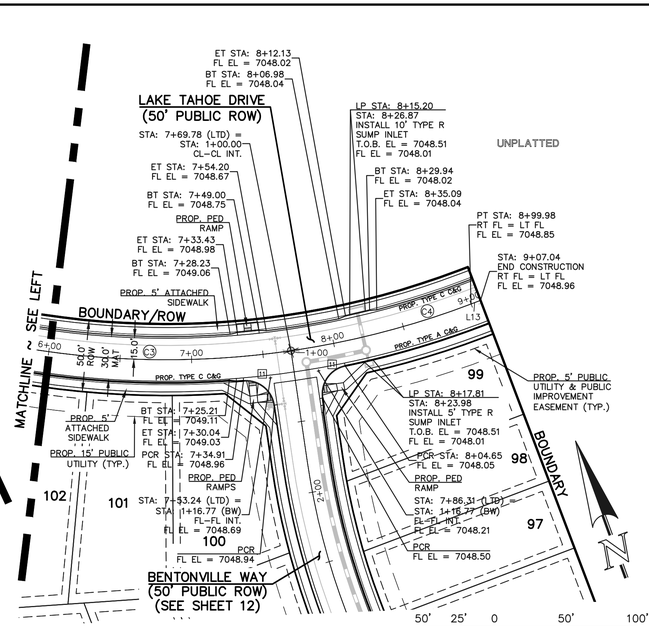
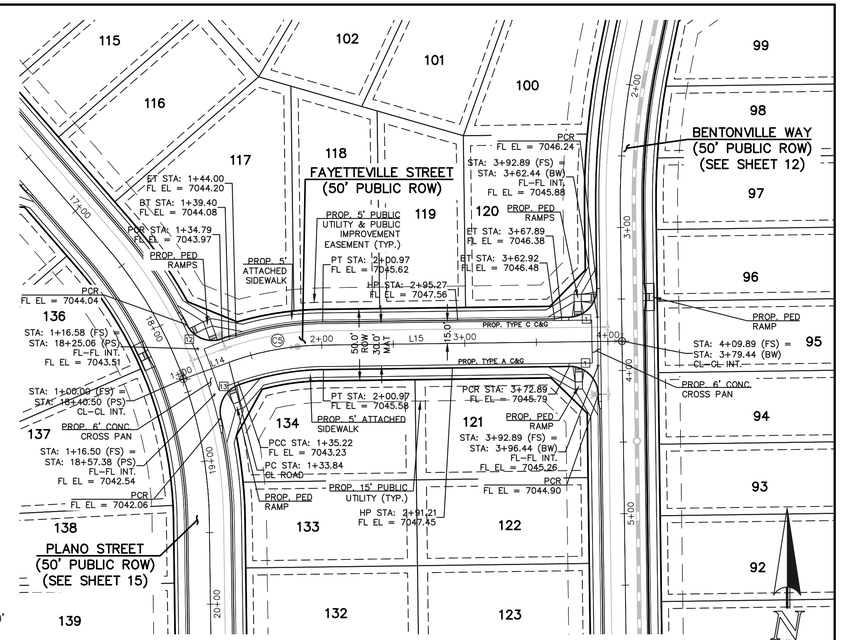






STATEMENTS:
EL PASO COUNTY RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN; THE COUNTY HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY. RESUBMITTAL IS REQUIRED IF CONSTRUCTION HAS NOT COMMENCED WITHIN 180 DAYS OF REVIEW DATE.

NOTES:
DEVELOPER IS REQUIRED TO CONSTRUCT SIDEWALK ADJACENT TO AND THRU ALL TRACTS AS SHOWN (TYPICAL)
THE WIDTH OF THE PEDESTRIAN RAMPS MUST MATCH THE WIDTH OF SIDEWALKS

50' 25' 0 50' 100'

SCALE: 1" = 50'

LAKE TAHOE DRIVE
PUBLIC (50' R.O.W.)
DESIGN SPEED – 25 mph URBAN LOCAL

SCALE: 1" = 50'

○ CENTERLINE CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C3	441.22	600.00	42°08'00"
C4	130.20	600.00	12°26'00"
C5	67.14	200.00	19°14'00"

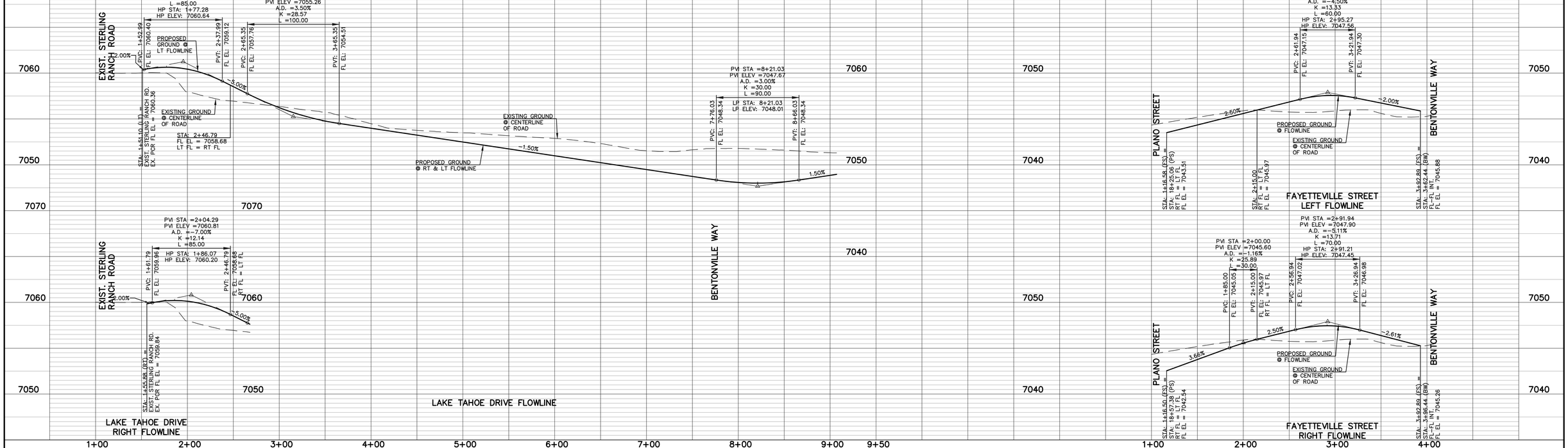
CENTERLINE LINE TABLE		
LINE	LENGTH	BEARING
L12	228.56	S36°12'00"E
L13	7.06	S89°14'00"W
L14	33.84	N00°46'00"E
L15	208.91	N89°14'00"E

□ CURB CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
1	31.42	20.00	90°00'00"
11	30.25	20.00	86°40'12"
12	29.12	20.00	83°25'29"
13	29.35	20.00	84°05'31"

50' 25' 0 50' 100'

SCALE: 1" = 50'

FAYETTEVILLE STREET (PUBLIC)
(50' R.O.W.)
DESIGN SPEED – 25 mph URBAN LOCAL



LEGEND
BOUNDARY LINE
ROW LINE
LOT LINE
CURB & GUTTER
PED RAMP
LIGHT POLE
SIGN
TYPE R INLET

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NO.	REVISION	DATE

REVIEW:
PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

MARC A. WHORTON, COLORADO P.E. #37155 DATE

CLASSIC SM
CONSULTING
ENGINEERS & SURVEYORS
619 N. Cascade Avenue, Suite 200 (719)785-0790
Colorado Springs, Colorado 80903 (719)785-0799(Fax)

STERLING RANCH EAST
FILING NO. 3
STREET IMPROVEMENT PLANS
LAKE TAHOE DRIVE & FAYETTEVILLE STREET

DESIGNED BY	ESO	SCALE		DATE	7/03/2023
DRAWN BY	ESO	(H) 1"=	50'	SHEET	13 OF 35
CHECKED BY		(V) 1"=	5'	JOB NO.	1183.33

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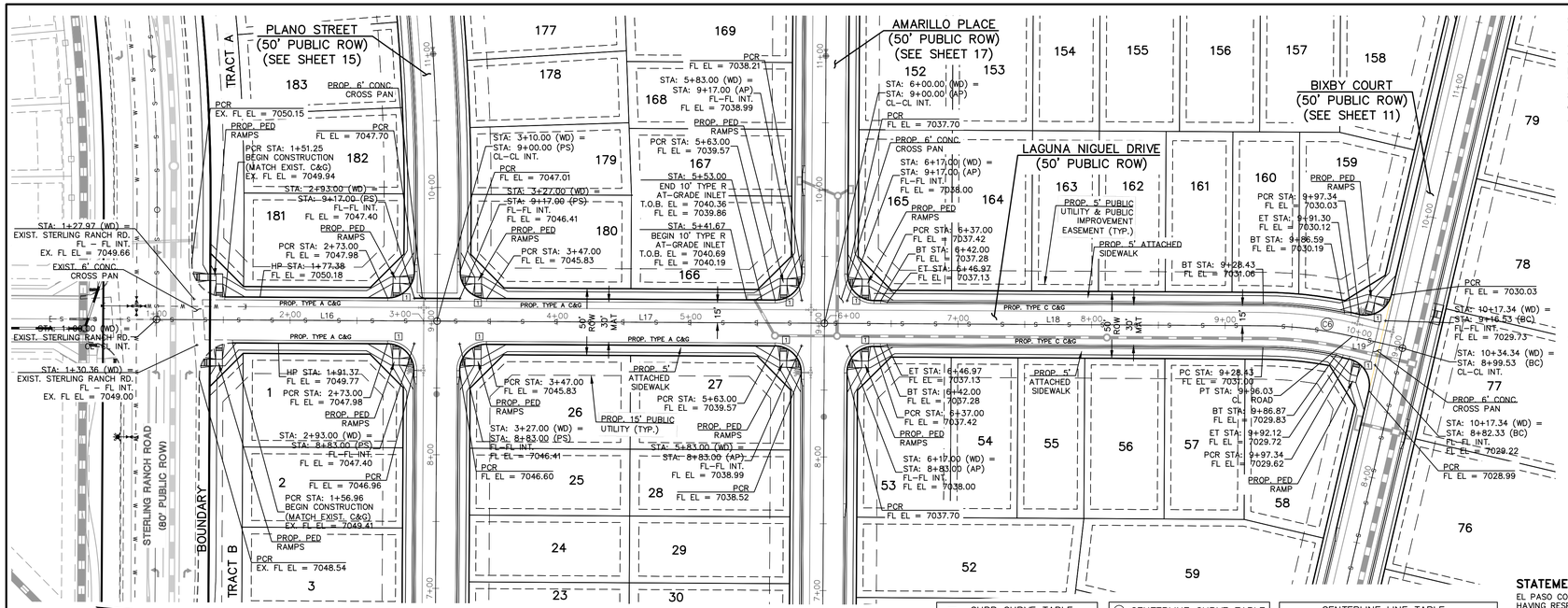

CURB CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
1	31.42	20.00	90°00'00"

CENTERLINE CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C6	67.60	300.00	12°54'40"

CENTERLINE LINE TABLE		
LINE	LENGTH	BEARING
L16	210.00	S13°40'40"E
L17	290.00	S13°40'40"E
L18	328.43	S13°40'40"E
L19	38.31	S00°46'00"E
L20	800.00	N76°19'20"E

STATEMENTS:

EL PASO COUNTY RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN; THE COUNTY HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY. RESUBMITTAL IS REQUIRED IF CONSTRUCTION HAS NOT COMMENCED WITHIN 180 DAYS OF REVIEW DATE.

NOTES:

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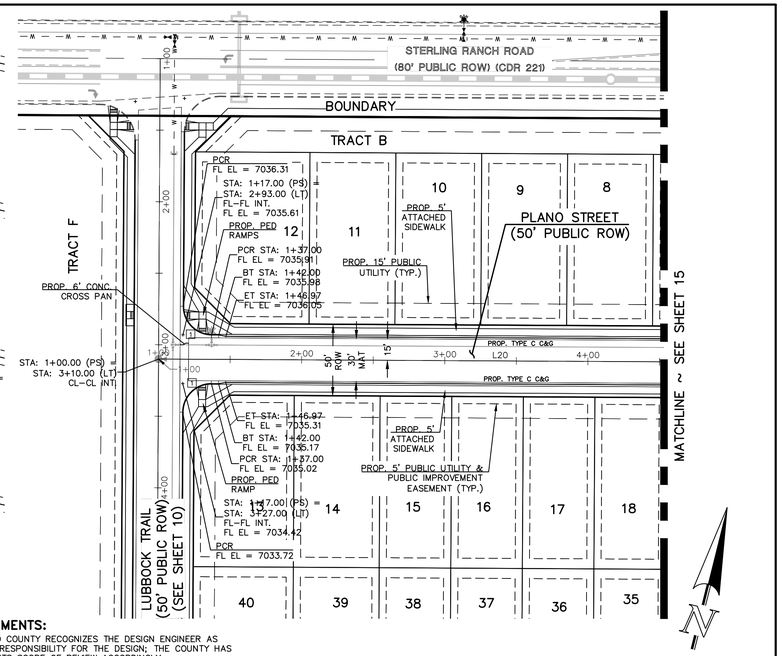

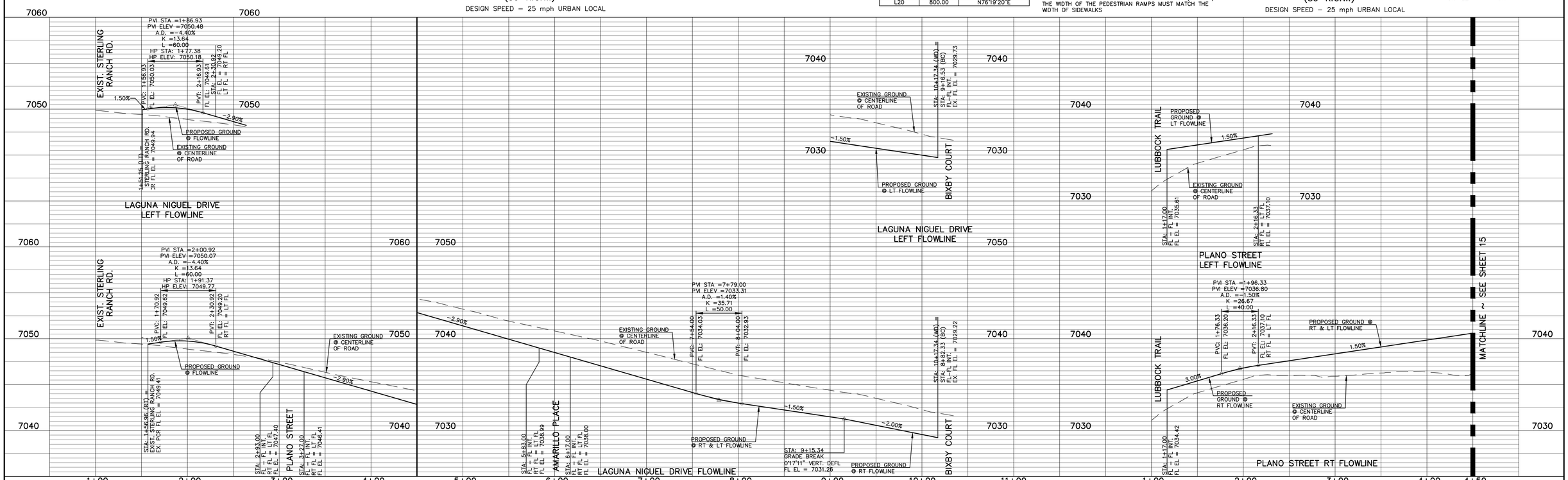

LEGEND

- BOUNDARY LINE
- ROW LINE
- LOT LINE
- CURB & GUTTER
- PED RAMP
- LIGHT POLE
- SIGN
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CONSULTING ENGINEERS & SURVEYORS
619 N. Cascade Avenue, Suite 200 (719)785-0790
Colorado Springs, Colorado 80903 (719)785-0799(Fax)

STERLING RANCH EAST
FILING NO. 3
STREET IMPROVEMENT PLANS
LAGUNA NIGUEL DRIVE & PLANO STREET

DESIGNED BY	ESO	SCALE		DATE	7/03/2023
DRAWN BY	ESO	(H) 1"=	50'	SHEET	14 OF 35
CHECKED BY		(V) 1"=	5'	JOB NO.	1183.33

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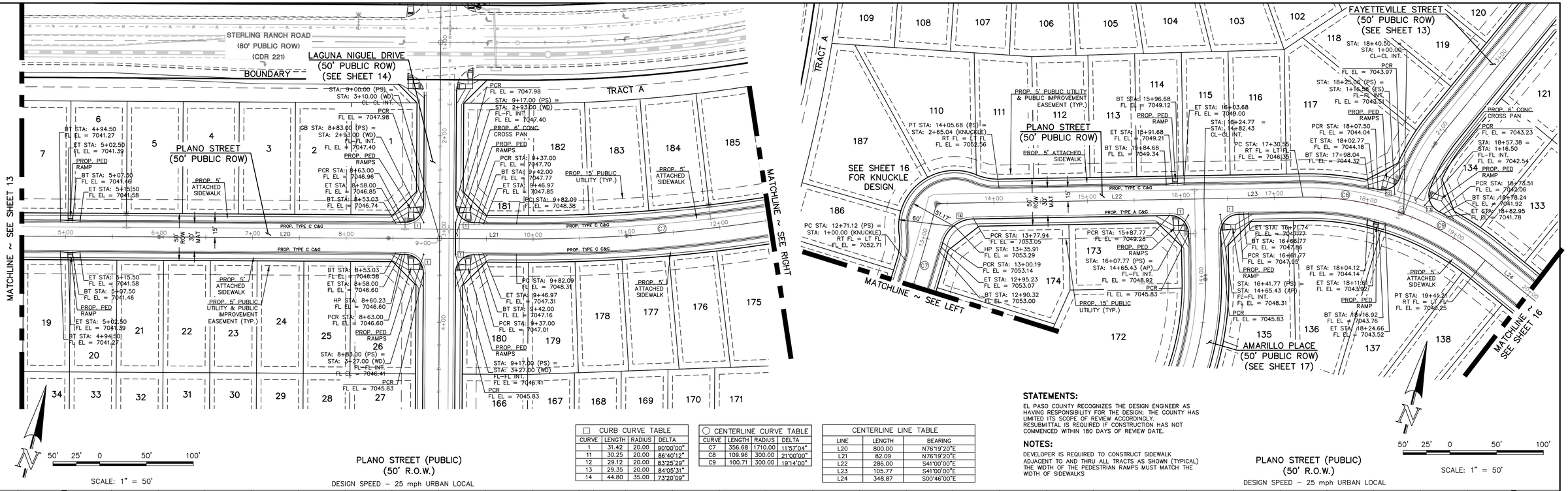

PLANO STREET (PUBLIC)
(50' R.O.W.)
DESIGN SPEED – 25 mph URBAN LOCAL

CURB CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
1	31.42	20.00	90°00'00"
11	30.25	20.00	86°40'12"
12	29.12	20.00	83°25'29"
13	29.35	20.00	84°05'31"
14	44.80	35.00	73°20'09"

CENTERLINE CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C7	356.68	1710.00	11°57'04"
C8	109.96	300.00	21°00'00"
C9	100.71	300.00	19°14'00"

CENTERLINE LINE TABLE		
LINE	LENGTH	BEARING
L20	800.00	N76°19'20"E
L21	82.09	N76°19'20"E
L22	286.00	S41°00'00"E
L23	105.77	S41°00'00"E
L24	348.87	S00°46'00"E

STATEMENTS:

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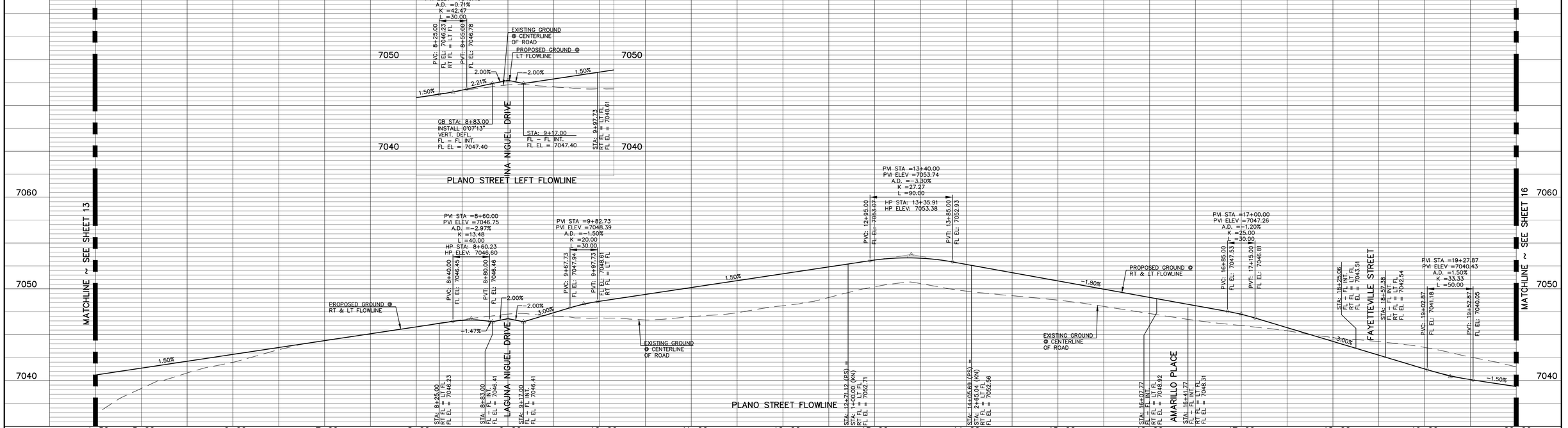
PLANO STREET (PUBLIC)
(50' R.O.W.)
DESIGN SPEED – 25 mph URBAN LOCAL



LEGEND

- BOUNDARY LINE
- ROW LINE
- LOT LINE
- CURB & GUTTER
- PED RAMP
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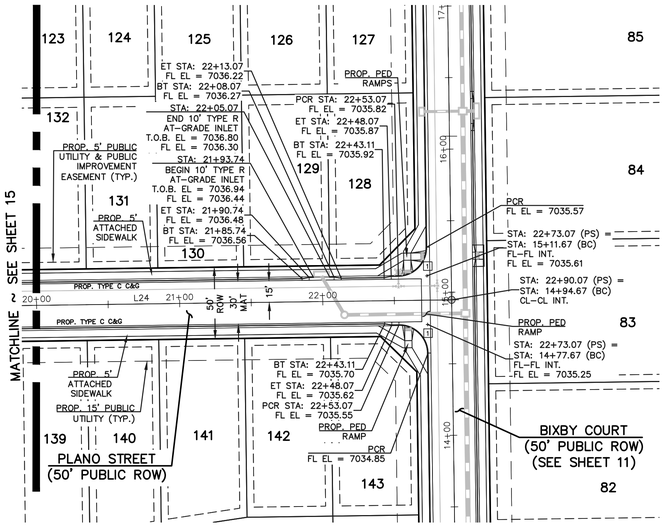
Colorado Springs, Colorado 80903 (719)785-0799(Fax)

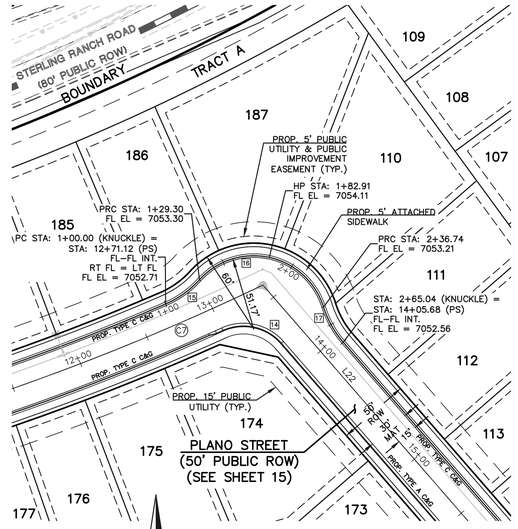
STERLING RANCH EAST
FILING NO. 3
STREET IMPROVEMENT PLANS
PLANO STREET

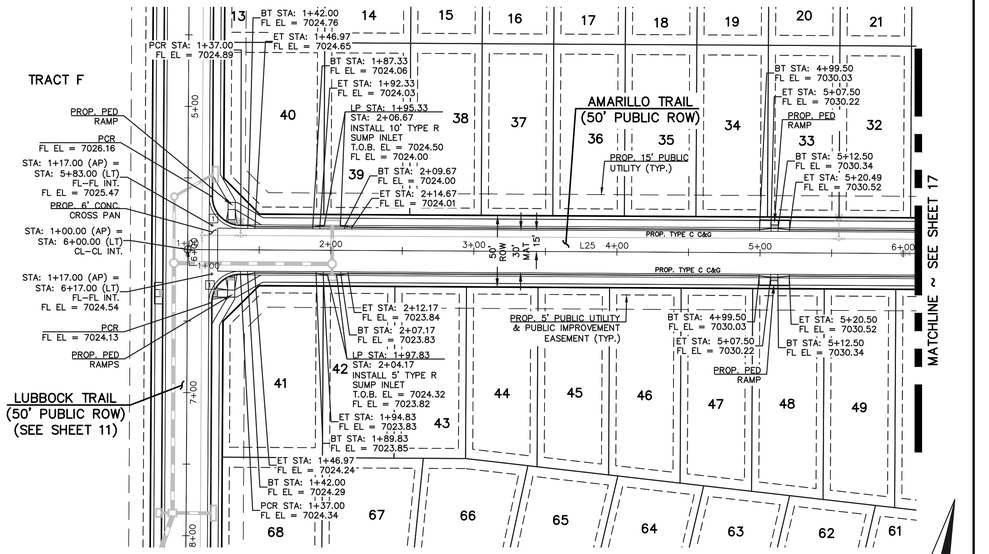
CLASSIC CONSULTING ENGINEERS & SURVEYORS

DESIGNED BY	ESO	SCALE		DATE	7/03/2023
DRAWN BY	ESO	(H) 1"=	50'	SHEET	15 OF 35
CHECKED BY		(V) 1"=	5'	JOB NO.	1183.33

N:\1183.33\DRAWINGS\CONSTRUCTION\STREETS\1183.33-St-15.dwg, 9/25/2024 3:59:14 PM, 1:1







SCALE: 1" = 50'

PLANO STREET (PUBLIC)
(50' R.O.W.)
DESIGN SPEED – 25 mph URBAN LOCAL

NOTES:

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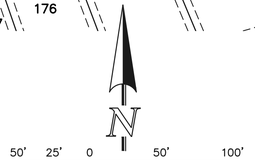


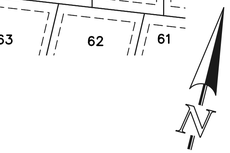
SCALE: 1" = 50'

PLANO STREET
KNUCKLE
DESIGN SPEED – 25 mph URBAN LOCAL

○ CENTERLINE CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C7	356.68	1710.00	11°57'04"

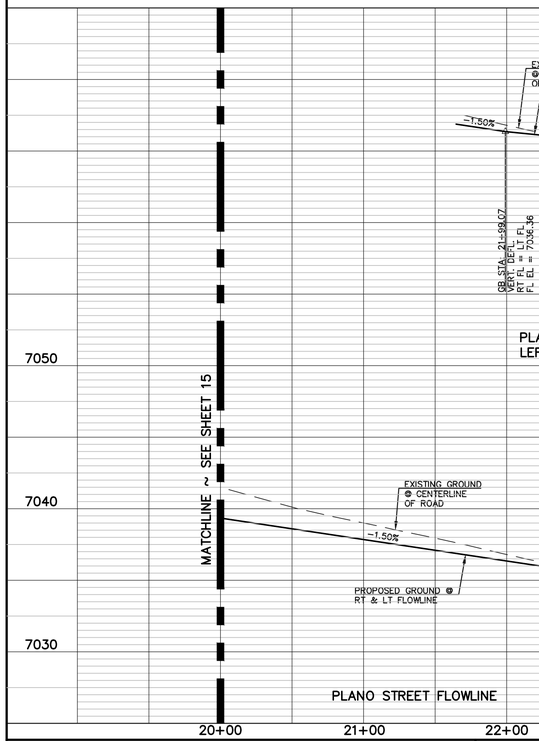
□ CURB CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
1	31.42	20.00	90°00'00"
11	30.25	20.00	86°40'12"
12	29.12	20.00	83°25'29"
13	29.35	20.00	84°05'31"
14	44.80	35.00	73°20'09"
15	29.30	68.83	24°23'17"
16	107.44	51.17	120°18'24"
17	28.30	68.83	23°33'23"

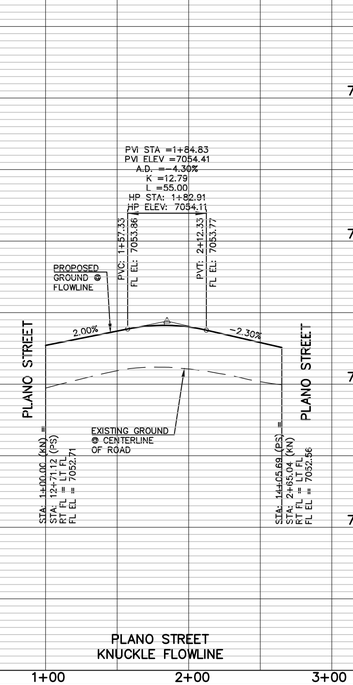
CENTERLINE LINE TABLE		
LINE	LENGTH	BEARING
L20	800.00	N76°19'20"E
L21	82.09	N76°19'20"E
L22	286.00	S41°00'00"E
L23	105.77	S41°00'00"E
L24	348.87	S00°46'00"E
L25	800.00	S76°19'20"W

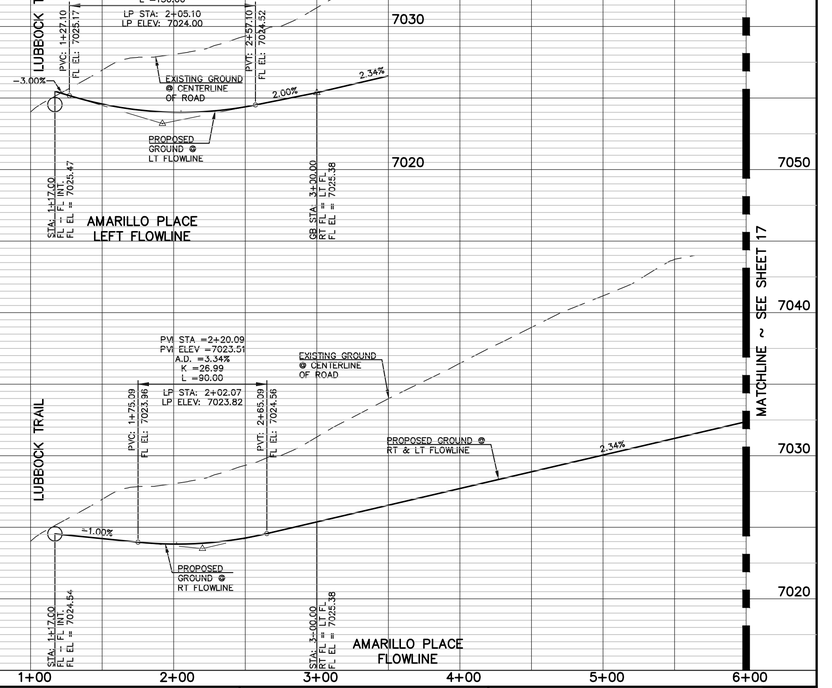


SCALE: 1" = 50'

AMARILLO PLACE
DESIGN SPEED – 25 mph URBAN LOCAL







LEGEND

- BOUNDARY LINE
- ROW LINE
- LOT LINE
- CURB & GUTTER
- PED RAMP
- LIGHT POLE
- SIGN
- TYPE R INLET

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NO.	REVISION	DATE

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PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

MARC A. WHORTON, COLORADO P.E. #37155 — DATE

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619 N. Cascade Avenue, Suite 200 (719)785-0790
Colorado Springs, Colorado 80903 (719)785-0799(Fax)

STERLING RANCH EAST
FILING NO. 3
STREET IMPROVEMENT PLANS
PLANO STREET & AMARILLO PLACE

DESIGNED BY	ESO	SCALE		DATE	7/03/2023
DRAWN BY	ESO	(H) 1"=	50'	SHEET	16 OF 35
CHECKED BY		(V) 1"=	5'	JOB NO.	1183.33

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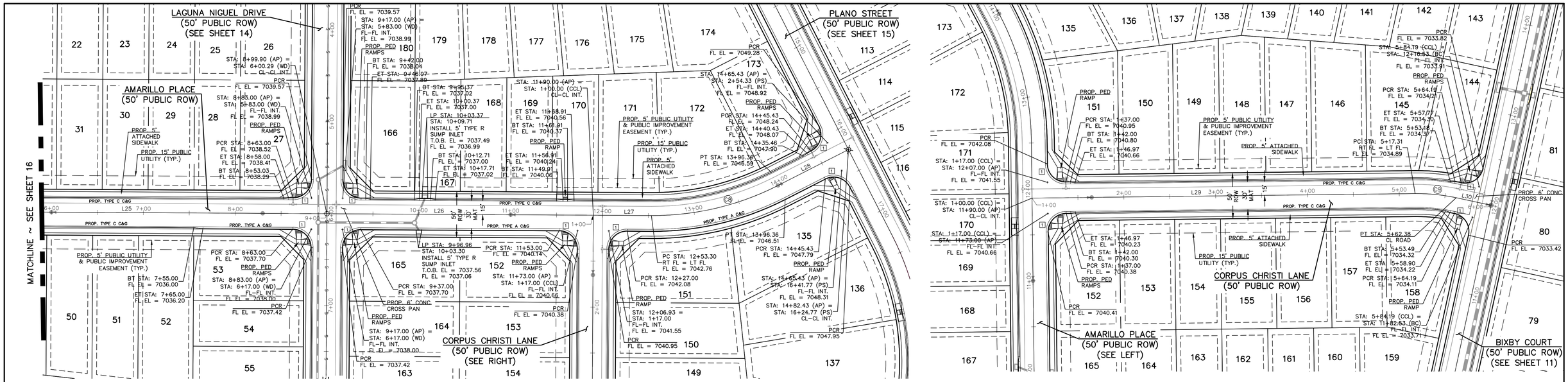

○ CENTERLINE CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C8	143.06	300.00	27°19'20"
C9	45.07	200.00	12°54'40"

□ CURB CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
1	31.42	20.00	90°00'00"
11	30.25	20.00	86°40'12"
12	29.12	20.00	83°25'29"
13	29.35	20.00	84°05'31"
14	44.80	35.00	73°20'09"
15	29.30	68.83	24°23'17"
16	107.44	51.17	120°18'24"
17	28.30	68.83	23°33'23"

CENTERLINE LINE TABLE		
LINE	LENGTH	BEARING
L24	348.87	S00°46'00"E
L25	800.00	N76°19'20"E
L26	290.16	N76°19'20"E
L27	63.30	N76°19'20"E
L28	86.06	N49°00'00"E
L29	417.31	S13°40'40"E
L30	38.81	S00°46'00"E

NOTES:

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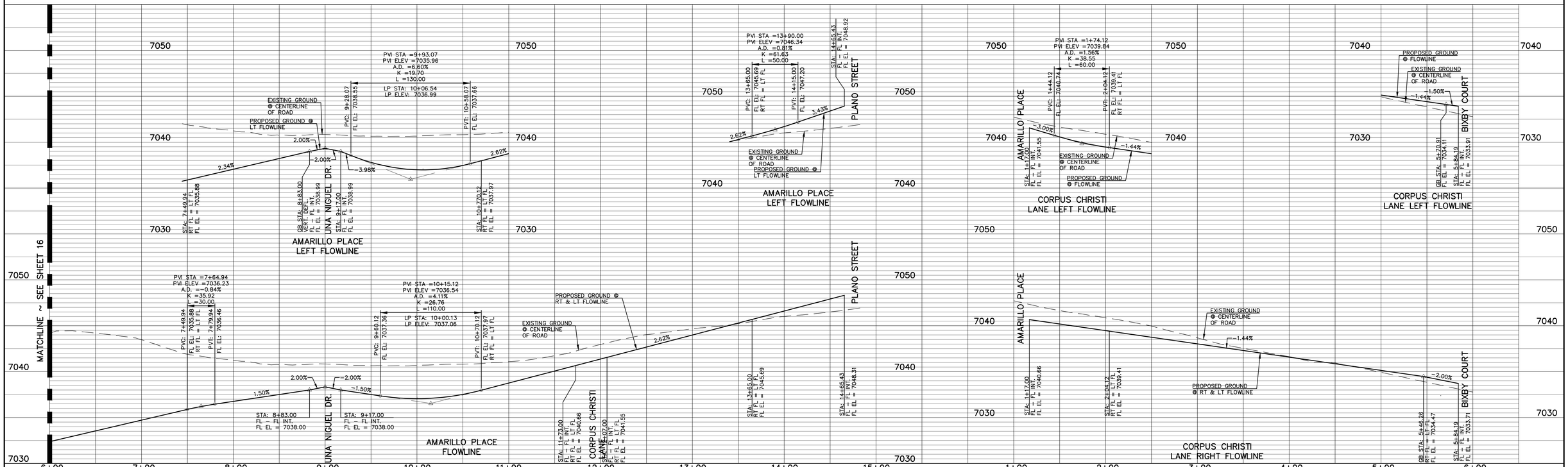
AMARILLO PLACE
DESIGN SPEED – 25 mph URBAN LOCAL

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

CORPUS CHRISTI LANE
DESIGN SPEED – 25 mph URBAN LOCAL

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



LEGEND

- BOUNDARY LINE
- ROW LINE
- LOT LINE
- CURB & GUTTER
- PED RAMP
- LIGHT POLE
- SIGN
- TYPE R INLET

WALK CONSTRUCTION:

4" THICK SIDEWALK ALLOWED ALONG OPEN SPACE TRACTS & 'ESTATE LOT' FRONTAGE. 5" THICK SIDEWALK TYPICAL ALONG RESIDENTIAL LOTS PER EL PASO COUNTY DIRECTION. 6" REQUIRED AT DRIVEWAY CONNECTIONS. WALK NOT INSTALLED AT 6" THICKNESS WILL BE RE-CONSTRUCTED WITH DRIVEWAY PERMIT AND INSTALLATION AS REQUIRED.

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NO.	REVISION	DATE

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MARC A. WHORTON, COLORADO P.E. #37155 DATE

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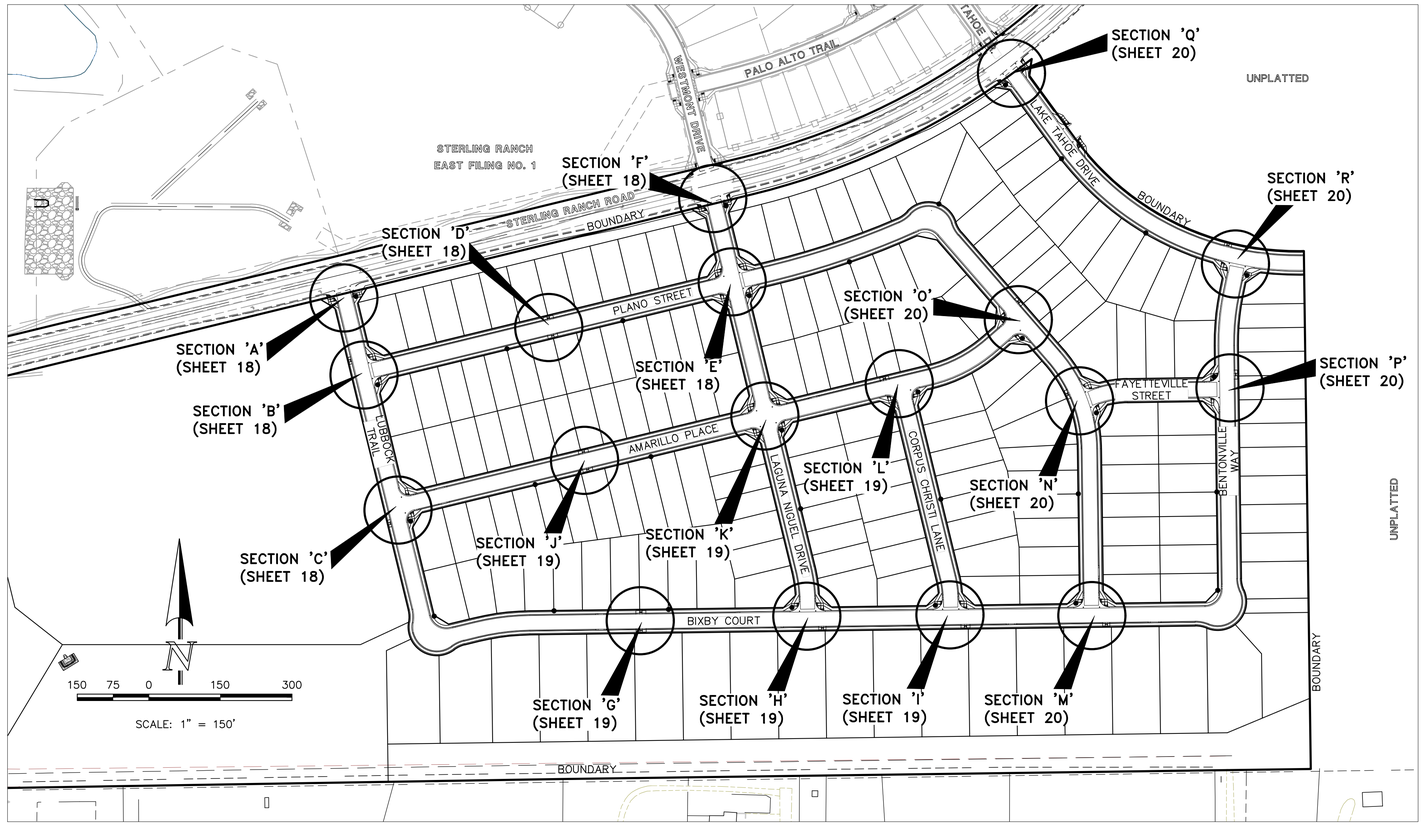
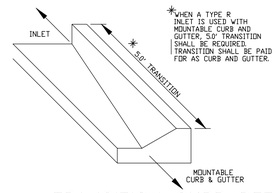
619 N. Cascade Avenue, Suite 200 (719)785-0790
Colorado Springs, Colorado 80903 (719)785-0799(Fax)

STERLING RANCH EAST
FILING NO. 3
STREET IMPROVEMENT PLANS
AMARILLO PLACE & CORPUS CHRISTI LANE

DESIGNED BY	ESO	SCALE		DATE	7/03/2023
DRAWN BY	ESO	(H) 1"= 50'		SHEET	17 OF 35
CHECKED BY		(V) 1"= 5'		JOB NO.	1183.33

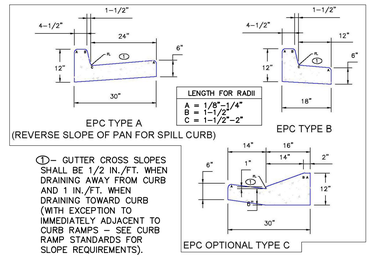
N:\1183\3\DRAWINGS\CONSTRUCTION\STREETS\1183333-SHEET17.dwg, 9/25/2024 4:02:54 PM, 1:1



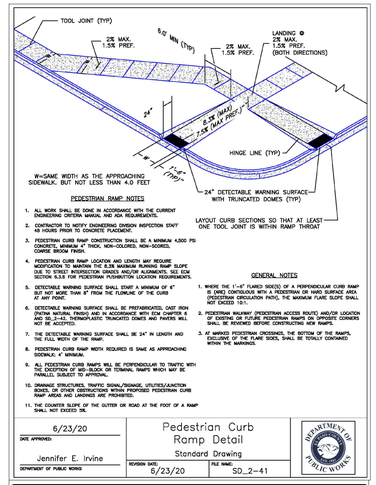


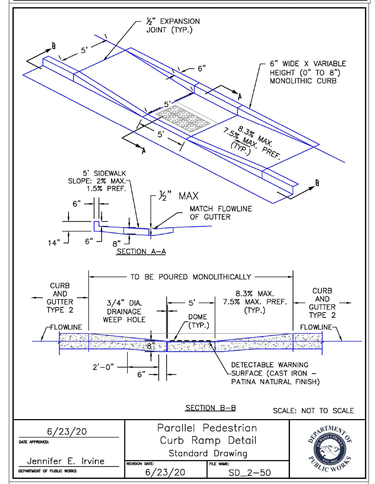
TRANSITION CURB DETAIL

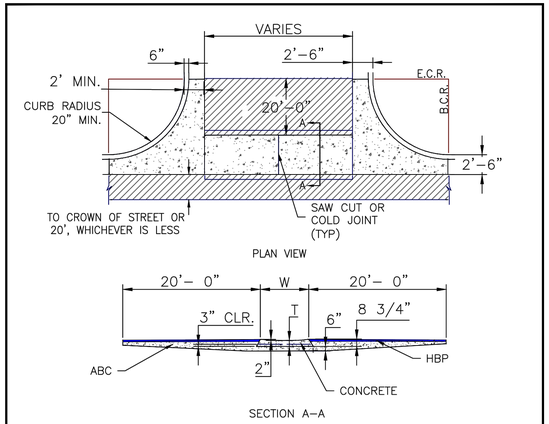
N.T.S.



CURB AND GUTTER DETAILS







NOTES

1. W – WIDTH SHALL BE 6' FOR LOCAL, 8' FOR COLLECTORS, AND 10' FOR ARTERIAL ROADS.

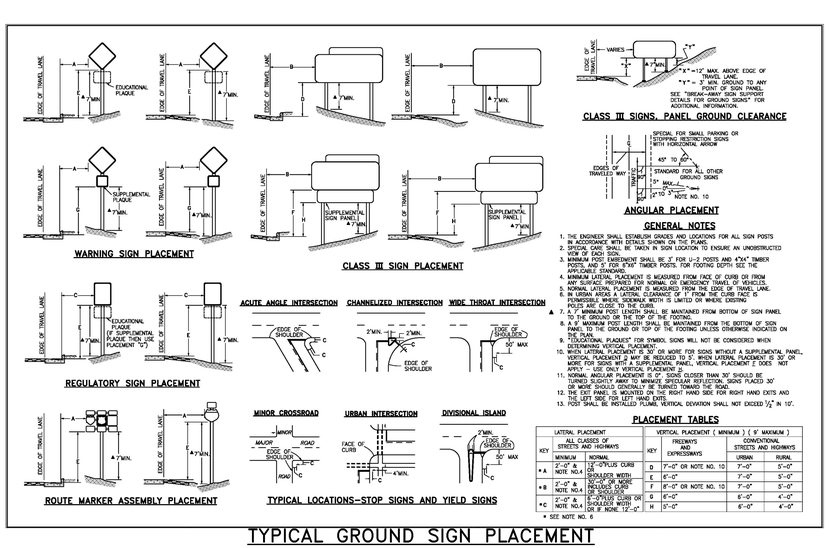
2. T – SQUARED–OFF RETURN TO BE POURED MONOLITHICALLY, 8" PCC FOR LOCAL ROADS, 9" FOR COLLECTORS WITH 6x6 – 4.4 W.W.F. OR #4 REINFORCING BAR @ 18" EACH WAY.

3. ▨ = 3" MINIMUM ASPHALT DEPTH (2 LIFTS).

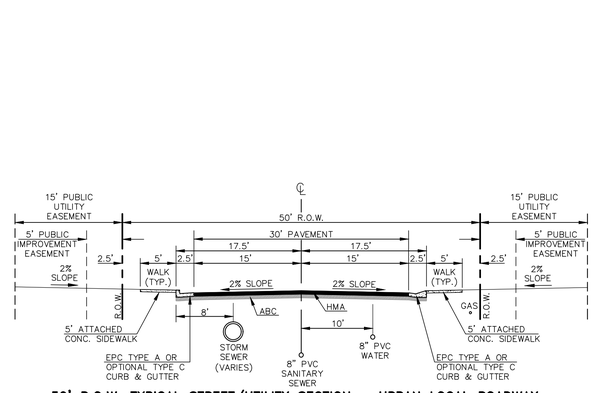
4. DESIGN TO SPECIFY ELEVATIONS AT PI AND PCR.

SCALE: NOT TO SCALE

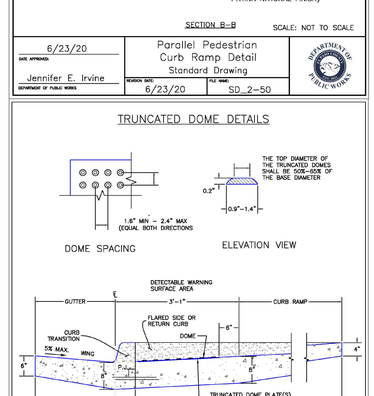
8/11/11
DATE APPROVED:
André P. Brackin
DEPARTMENT OF TRANSPORTATION
Typical Cross Pan Layout Detail
Standard Drawing
REVISION DATE: 12/8/15
FILE NAME: SD_2–26
EL PASO COUNTY DEPARTMENT OF TRANSPORTATION



TYPICAL GROUND SIGN PLACEMENT



Please include design speed



48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS
811
UTILITY NOTIFICATION CENTER OF COLORADO
IT'S THE LAW

THE LOCATIONS OF EXISTING 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 UNDERGROUND UTILITIES.

NO.	REVISION	DATE

REVIEW:

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

MARC A. WHORTON, COLORADO P.E. #37155 DATE

CLASSIC CONSULTING SM
619 N. Cascade Avenue, Suite 200 (719)785–0790
Colorado Springs, Colorado 80903 (719)785–0799(Fax)

STERLING RANCH EAST
FILING NO. 3
PED. RAMP KEY MAP WITH TYPICAL DETAILS

CLASSIC CONSULTING

DESIGNED BY	ESO	SCALE		DATE	7/03/2023
DRAWN BY	ESO	(H) 1"=	N/A	SHEET	18 OF 35
CHECKED BY		(V) 1"=	N/A	JOB NO.	1183.33

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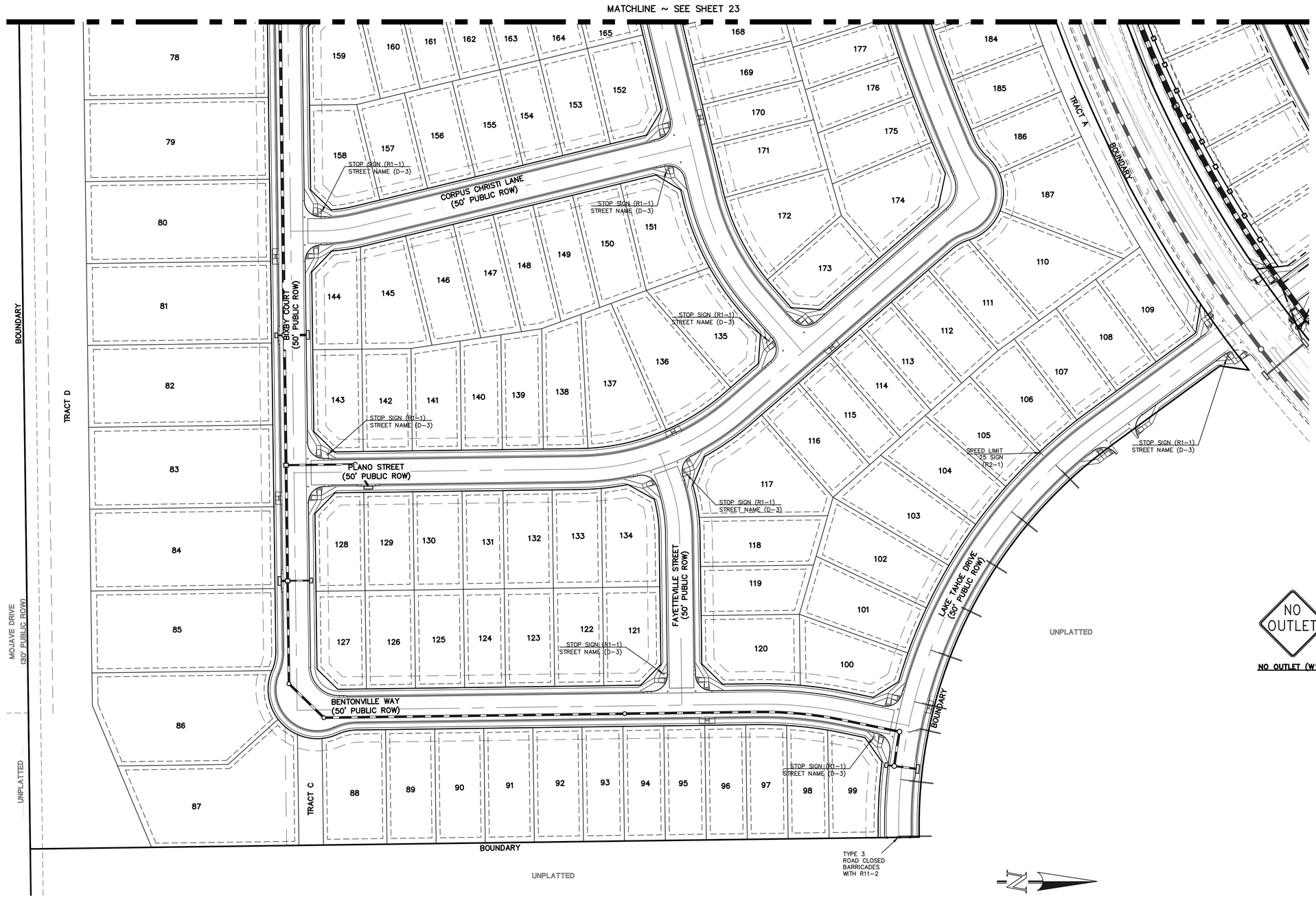


60' 30' 0 60' 120'

SCALE: 1" = 60'

STRIPING AND SIGNAGE GENERAL NOTES:

1. INSTALLATION OF ALL STRIPING, SIGNS AND PAVEMENT MARKERS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REMOVAL OF EXISTING PAVEMENT MARKINGS (SCARRING OF PAVEMENT IS NOT PERMITTED). AT NO TIME WILL IT BE ACCEPTABLE TO PAINT OVER EXISTING PAVEMENT MARKINGS.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR OVERLAYING OR CHIP SEALING ROADWAY, IF SCARRING OCCURS DURING REMOVAL OF EXISTING OR TEMPORARY PAVEMENT MARKINGS. THE CITY TRAFFIC ENGINEER WILL DETERMINE METHOD OF PAVEMENT REPAIR.
4. ALL STRIPING AND SIGNING SHALL CONFORM TO THE MOST RECENT ADOPTED EDITION OF THE FOLLOWING MANUALS AND THEIR SUPPLEMENTAL AMENDMENTS:
   - MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.)
   - CITY OF COLORADO SPRINGS SIGNS AND MARKINGS GUIDELINES
   - CITY OF COLORADO SPRINGS STANDARD SPECIFICATIONS
   - CITY OF COLORADO SPRINGS PUBLIC WORKS DESIGN MANUAL
5. ALL SIGNING AND STRIPING IS SUBJECT TO THE APPROVAL OF THE CITY TRAFFIC ENGINEER PRIOR TO INSTALLATION AND/OR REMOVAL.
6. CONTRACTOR SHALL REMOVE ALL CONFLICTING STRIPING, PAVEMENT MARKINGS AND LEGENDS BY HYDROBLASTING, SANDBLASTING AND/OR GRINDING. ANY DEBRIS SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
7. SIGN POSTS SHALL BE INSTALLED WITH A MINIMUM OF 1 3/4" X 10' SQUARE PERFORATED STEEL TUBING WITH SLEEVE PER CITY OF COLORADO SPRINGS STANDARD.
8. ALL TRAFFIC SIGNS SHALL HAVE A MINIMUM OF HIGH INTENSITY GRADE SHEETING.
9. ANY DEVIATION FROM THE STRIPING AND SIGNING PLANS SHALL BE APPROVED BY THE ENGINEER OF WORK AND THE CITY TRAFFIC ENGINEER PRIOR TO ANY CHANGES BEING MADE IN THE FIELD.
10. ALL SIGNS SHOWN ON THE STRIPING AND SIGNING PLANS SHALL BE NEW SIGNS PROVIDED AND INSTALLED BY THE CONTRACTOR, EXCEPT FOR EXISTING SIGNS SPECIFICALLY INDICATED TO BE RELOCATED OR TO REMAIN.
11. STRIPED CROSSWALKS SHALL HAVE AN INSIDE DIMENSION OF 10 FEET AND CONTINENTAL CROSSWALKS SHALL HAVE A MINIMUM WIDTH OF 9 FEET UNLESS INDICATED OTHERWISE.
12. ALL LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS (EXCEPT WITHIN BIKE LANES) SHALL BE A MINIMUM OF 90MIL THICKNESS THERMOPLASTIC OR PREFORM PLASTIC TAPE.
13. ALL LONGITUDINAL LINES SHALL BE A MINIMUM OF 15 MIL THICKNESS EPOXY.
14. CONTRACTOR TO DELIVER ALL REMOVED SIGNS TO THE CITY OF COLORADO SPRINGS SIGNS/MARKINGS SHOP AT 404 FONTANERO STREET, (719)385-6720.
15. CONTRACTOR SHALL NOTIFY CITY TRAFFIC ENGINEER (719) 385-5907 A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO AND UPON COMPLETION OF STRIPING AND SIGNAGE.

NO OUTLET (W14-2)

SPEED LIMIT (R2-1) 24"X30"

STREET NAME (D-3)

STOP (R1-1) (30X30)

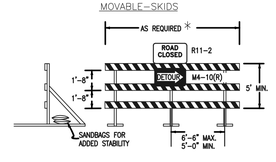
NOTE:
ALL INTERNAL SIGNS SHALL BE
4" FONT LETTER SIZE.
6" FONT LETTER SIZE ON ALL STREETS POSTED 30MPH OR GREATER

RAIL LENGTH TABLE *

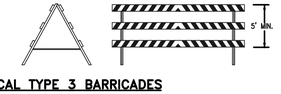
TYPE 3 BARRICADE		LENGTH
FIXED	MOVABLE	
F - A	M - A	8'- 14'
F - B	M - B	15'- 24'
F - C	M - C	25'- 35'
F - D	M - D	> 35'

NOTES
1. TYPE 3 BARRICADES HAVE 3 RETROREFLECTORIZED RAIL FACES IF FACING TRAFFIC IN ONE DIRECTION AND 6 IF FACING TRAFFIC IN TWO DIRECTIONS.
2. THE PORTION OF THE POST ABOVE THE GROUND LINE SHALL BE PAINTED IN ACCORDANCE WITH THE APPROPRIATE GENERAL NOTE.
3. DETACHABLE EXTENSION WING RAILS FOR BYPASSING OF CONSTRUCTION EQUIPMENT ARE PERMITTED, WHEN NECESSARY, ON FIXED OR MOVABLE TYPE 3 BARRICADES. THE LENGTH SHALL BE ADEQUATE TO CLOSE THE BORROW PIT AND/OR SHOULDER AS REQUIRED.

MOVABLE-SKIDS



MOVABLE-HINGED



TYPICAL TYPE 3 BARRICADES

SIDEWALK NOTES:

DEVELOPER IS REQUIRED TO CONSTRUCT SIDEWALK ADJACENT TO ALL TRACTS. (TYPICAL) AS SHOWN THE WIDTH OF THE PEDESTRIAN RAMPS MUST MATCH THE WIDTH OF SIDEWALKS. (TYPICAL)

ADDITIONAL NOTES

1. 4" LETTERS ON STREET NAME SIGNS INTERSECTING STREET OF 25 MPH OR LESS.
   6" LETTERS ON STREET NAME SIGNS INTERSECTING STREETS OF 30 TO 40 MPH'S.
   8" LETTERS ON STREET NAME SIGNS INTERSECTING STREETS OF GREATER THAN 40 MPH.
2. PRIVATE STREET NAME SIGNS TO BE WHITE ON BROWN

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NO.	REVISION	DATE

REVIEW:

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

MARC A. WHORTON, COLORADO P.E. #37155 DATE

CLASSIC SM
CONSULTING ENGINEERS & SURVEYORS
619 N. Cascade Avenue, Suite 200 (719)785-0790
Colorado Springs, Colorado 80903 (719)785-0799(Fax)

STERLING RANCH EAST
FILING NO. 3
STREET IMPROVEMENT PLANS
STREET SIGNAGE

DESIGNED BY	ESO	SCALE		DATE	7/03/2023
DRAWN BY	ESO	(H) 1"= 60'		SHEET	22 OF 35
CHECKED BY		(V) 1"= N/A		JOB NO.	1183.33

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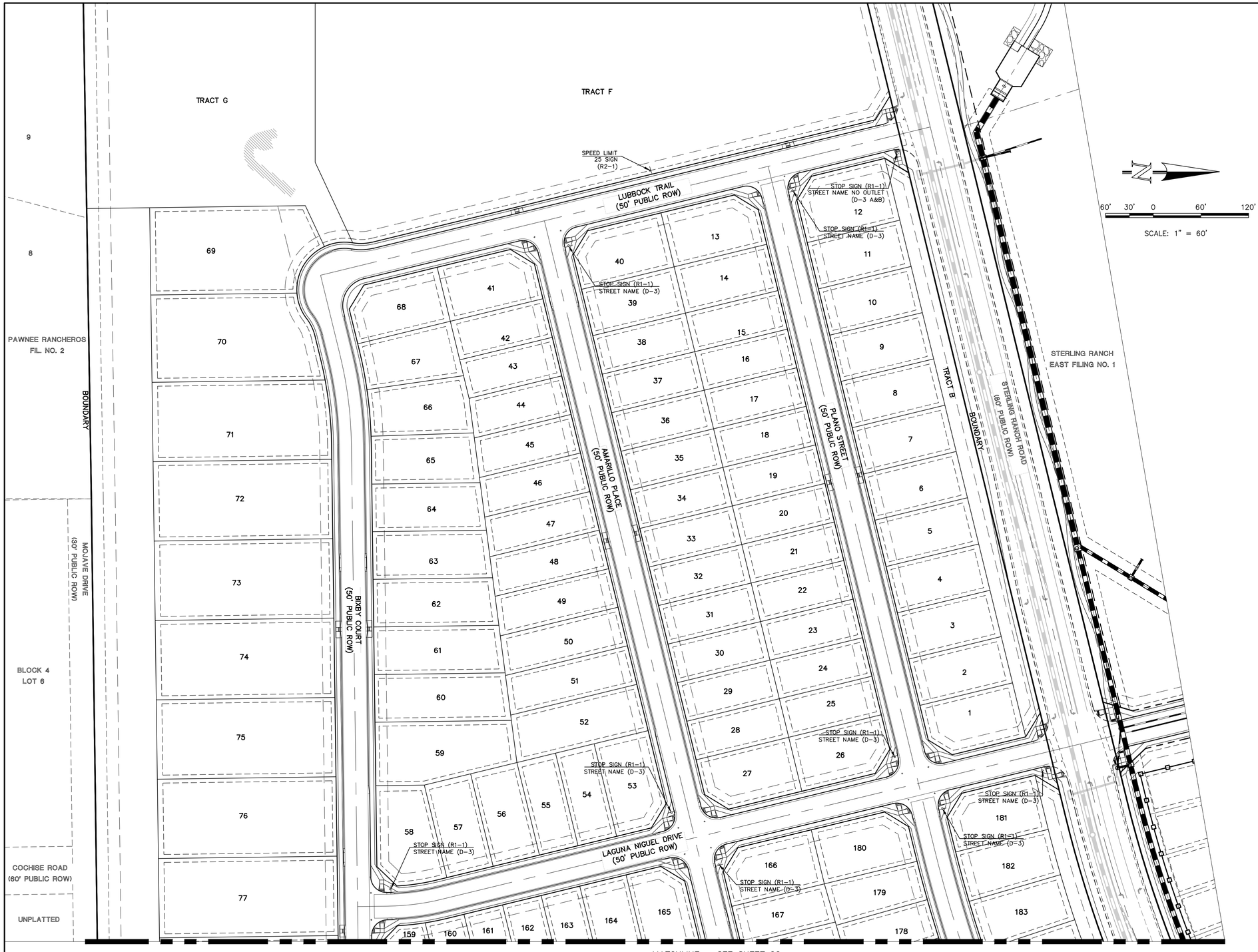

60' 30' 0 60' 120'

SCALE: 1" = 60'

MATCHLINE ~ SEE SHEET 22

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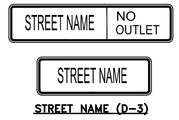
SPEED LIMIT (R2-1)
24"X30"



STREET NAME (D-3)

STOP (R1-1)
(30X30)

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6" FONT LETTER SIZE ON ALL STREETS POSTED 30MPH OR GREATER

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NO.	REVISION	DATE

REVIEW:

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

MARC A. WHORTON, COLORADO P.E. #37155 DATE

CLASSIC SM
CONSULTING
ENGINEERS & SURVEYORS
619 N. Cascade Avenue, Suite 200 (719)785-0790
Colorado Springs, Colorado 80903 (719)785-0799(Fax)

STERLING RANCH EAST
FILING NO. 3
STREET IMPROVEMENT PLANS
STREET SIGNAGE

CLASSIC CONSULTING ENGINEERS & SURVEYORS

DESIGNED BY	ESO	SCALE		DATE	3/01/2023
DRAWN BY	ESO	(H) 1"= 60'		SHEET	23 OF 35
CHECKED BY		(V) 1"= N/A		JOB NO.	1183.33

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American Revolution LED
Series 247L

PRODUCT OVERVIEW

Features:

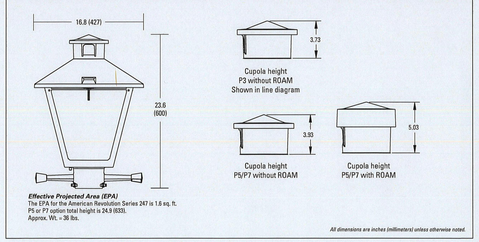
- Die-cast aluminum housing and hood for long-life performance
- Die-cast trigger latch (TL) and captive thumb screws option available for easy access to internal components
- Optical assembly designed for maximum performance, available in Type II, Type III and Type V
- Hinged hood and captive thumb screws provision afford quick, easy access to electrical and optical area for servicing
- Slipfitter with three set screws allows secure installation to pole sizes 2-3/8" or 3" O.D.
- Surge protection device (standard) exceeds ANSI C62.41 Category C1 criteria (surge tested at 10kV/5kA)
- Complies with ANSI: C136.2, C136.10, C136.15
- CSA listed and suitable for up to 30°C ambient
- Rated L70, LED life greater than 100,000 hours at 25°C
- Replaces up to 150W HPS light source incumbant models
- LED electronic 0V-10V dimmable driver
- DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

Applications:

Streetscapes
Walkways
Pathways
Parks

MVEA SPEC # 247L 10LEDE10 MVOLT 4K R5 AY PCLL

DIMENSIONS



Effective Projected Area (EPA)
The EPA for the American Revolution Series 247 is 1.6 sq. ft.
P5 or P7 option total height is 24.9 (633).
Approx. Wt. = 36 lbs.

All dimensions are inches (millimeters) unless otherwise noted.

Note: Specifications subject to change without notice.
American Revolution Series 247L LED

AEL American Electric Lighting

American Revolution LED
Series 247L

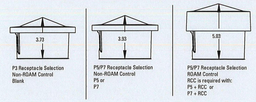
ORDERING INFORMATION

Example: 247L 20LEDE70 MVOLT 4K R3 AY

Series	Performance Package		Voltage		Color Temperature (CCT)	
247L	American Revolution LED	**20LEDE10**	20 Chips, 1050 mA Driver, 72 input watts	**MVOLT**	Multi-volt, 120-277V	**3K**	3000K
		20LEDE70	20 Chips, 700 mA Driver, 45 input watts	**347**	347V	**4K**	4000K
		10LEDE10	10 Chips, 1050 mA Driver, 36 input watts	**480**	480V	**5K**	5000K
		10LEDE70	10 Chips, 700 mA Driver, 25 input watts				
		10LEDES3	10 Chips, 525 mA Driver, 18 input watts				
		10LEDE35	10 Chips, 350 mA Driver, 13 input watts				

Distribution	Optics	Options			
R2 Type II	**AY** Acrylic	Paint [1]		Miscellaneous	
R3 Type III	**PY** Polycarbonate	**(blank)**	Black (standard)	**SS**	Stainless steel hardware
R5 Type V		**GY**	Gray	**NL**	NEMA Label
		DDB	Dark Bronze	**XL**	Not CSA Listed
		WH	White	**TL**	Tool-less Entry
		BZ	Bronze	**LDR** [1]	Ladder Rest
				SH	Shorting Cap
		Photocontrol		**SKX** [4]	Not CSA Listed Shorting Cap
		(blank)	3 pin NEMA Photocontrol Receptacle (standard)	**HSB**	House Side Shield Black
				HSW	House Side Shield White
		NR [1]	No Photocontrol Receptacle	**CR**	Enhanced Corrosion Resistant Finish
		P5 [1]	5 pin NEMA Photocontrol Receptacle (dimmable driver included)	**RCC** [1]	ROAM Dimming Node Cupola Cover
		P7 [1]	7 pin NEMA Photocontrol Receptacle (dimmable driver included)	Accessories	
		PCLL [4,5]	Solid State Long Life Photocontrol	**RNCS7** [1]	ROAM Dimming Node Cupola Cover
		PCSS [4,5,6]	Not CSA Listed Solid State Long Life Photocontrol (120-277V)		

Cupola size based on type of control and receptacle



Notes:
1. Other colors available, please contact factory
2. PC and SH not available with NR option
3. Taller cupola cover (RCC) is required when used with ROAM or other similar wireless monitoring control systems
4. Standard failure mode="Fail On"
5. Photocontrols supplied with ANSI Standard Turn-On levels
6. XL option is required
7. Ships with unit, field installed
8. Required when using ROAM or other similar wireless monitoring control systems

AEL American Electric Lighting®
AEL Headquarters, 3825 Columbus Road, Granville, OH 43023
www.americanelectriclighting.com
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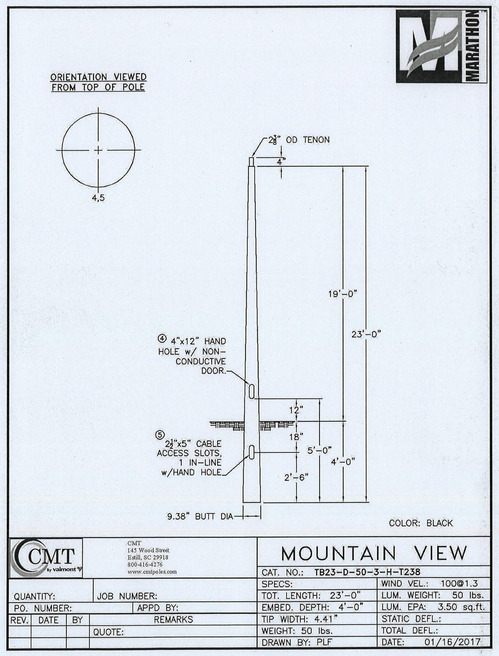
Warranty Five-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx
Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.
Please contact your sales representative for the latest product information.



LIGHT POLE OWNERSHIP AND RESPONSIBILITY:

DEVELOPER RESPONSIBLE FOR COST OF POLE DESIGN AND INSTALL

LOCAL DISTRICT RESPONSIBLE FOR OWNERSHIP AND MAINTENANCE OF LIGHT POLES UPON INSTALL AND LIGHT POLE ELECTRICITY COSTS

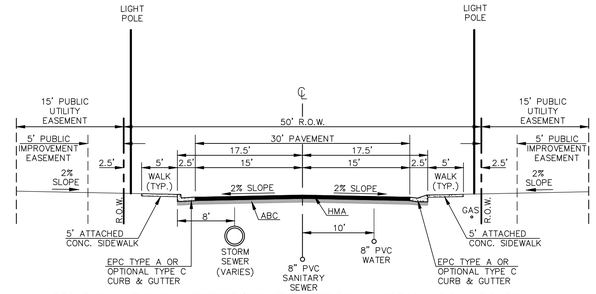
THE ROW LICENSE AGREEMENT IS NOT ASSIGNABLE WITHOUT BOCC CONSENT

LIGHT POLE LOCATION WITHIN URBAN ROADWAY:

CRITERIA PER ECM 4.3.5.D.2

URBAN LOCAL CLEAR ZONE = 12'

POLE LOCATION = 6.5' MIN. FROM TBC AND 1.0' INSIDE 50' ROW



50' R.O.W. TYPICAL STREET/UTILITY SECTION – URBAN LOCAL ROADWAY
SCALE 1" = 10'

48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS
811
UTILITY NOTIFICATION CENTER OF COLORADO
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NO.	REVISION	DATE

REVIEW:

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

MARC. A. WHORTON, COLORADO P.E. #37155 DATE

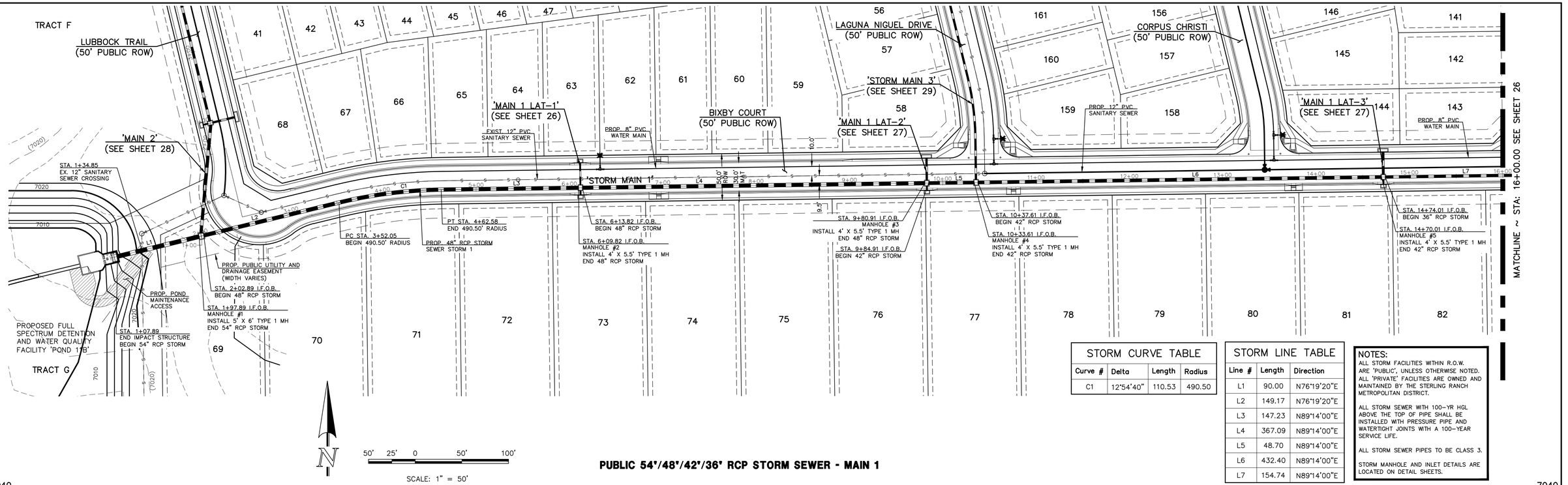
CLASSIC CONSULTING SM
619 N. Cascade Avenue, Suite 200 (719)785-0790
Colorado Springs, Colorado 80903 (719)785-0799(Fax)

STERLING RANCH EAST
FILING NO. 3
STREET LIGHT POLE LOCATION PLAN

CLASSIC CONSULTING

DESIGNED BY	MAW	SCALE		DATE	3-07-24
DRAWN BY	MAW	(H) 1"= 120'		SHEET	24 OF 35
CHECKED BY		(V) 1"= N/A		JOB NO.	1183.25

V:\1183.25\DRAWINGS\CONSTRUCTION\STREETS\1183.25-SLP4.dwg, 9/25/2024 4:10:11 PM, ltl



PUBLIC 54"/48"/42"/36" RCP STORM SEWER - MAIN 1

STORM CURVE TABLE			
Curve #	Delta	Length	Radius
C1	12°54'40"	110.53	490.50

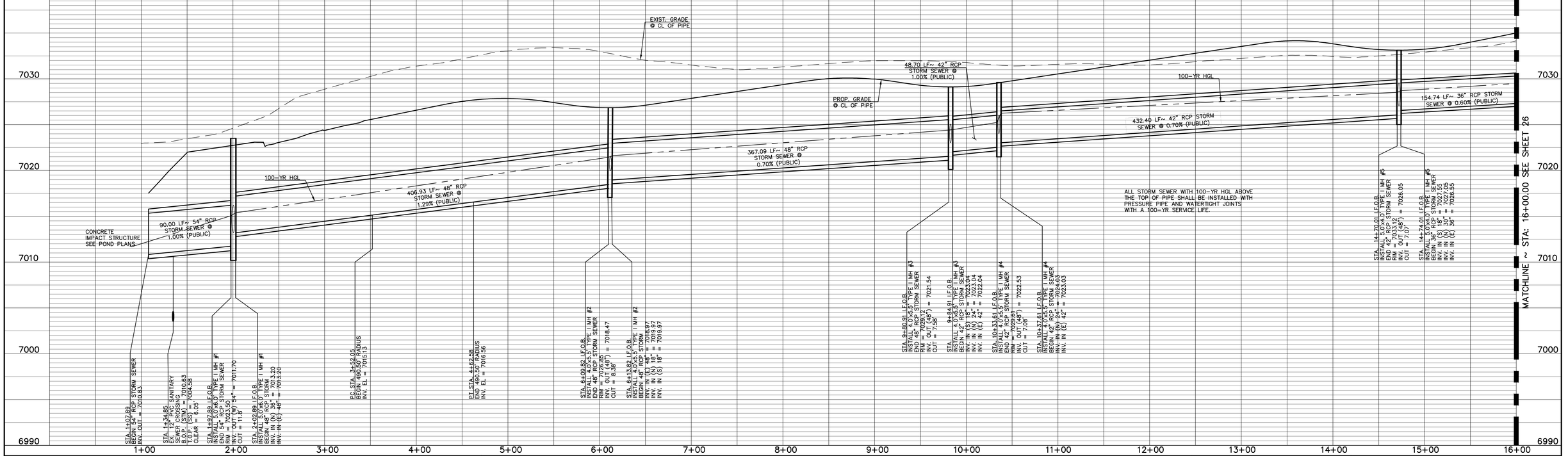
STORM LINE TABLE		
Line #	Length	Direction
L1	90.00	N76°19'20"E
L2	149.17	N76°19'20"E
L3	147.23	N89°14'00"E
L4	367.09	N89°14'00"E
L5	48.70	N89°14'00"E
L6	432.40	N89°14'00"E
L7	154.74	N89°14'00"E

NOTES:
ALL STORM FACILITIES WITHIN R.O.W. ARE 'PUBLIC', UNLESS OTHERWISE NOTED. ALL 'PRIVATE' FACILITIES ARE OWNED AND MAINTAINED BY THE STERLING RANCH METROPOLITAN DISTRICT.

ALL STORM SEWER WITH 100-YR HGL ABOVE THE TOP OF PIPE SHALL BE INSTALLED WITH PRESSURE PIPE AND WATERTIGHT JOINTS WITH A 100-YEAR SERVICE LIFE.

ALL STORM SEWER PIPES TO BE CLASS 3.

STORM MANHOLE AND INLET DETAILS ARE LOCATED ON DETAIL SHEETS.



LEGEND

PROPOSED FIRE HYDRANT	EXISTING FIRE HYDRANT
PROPOSED WATER MAIN	EXISTING WATER MAIN
PROPOSED SANITARY SEWER MAIN	EXISTING SANITARY SEWER MAIN
PROPOSED STORM SEWER	EXISTING STORM SEWER
PROPOSED STORM INLET	EXISTING STORM INLET
ROW/BOUNDARY LINE	EXISTING GAS MAIN
	EXISTING ELECTRIC

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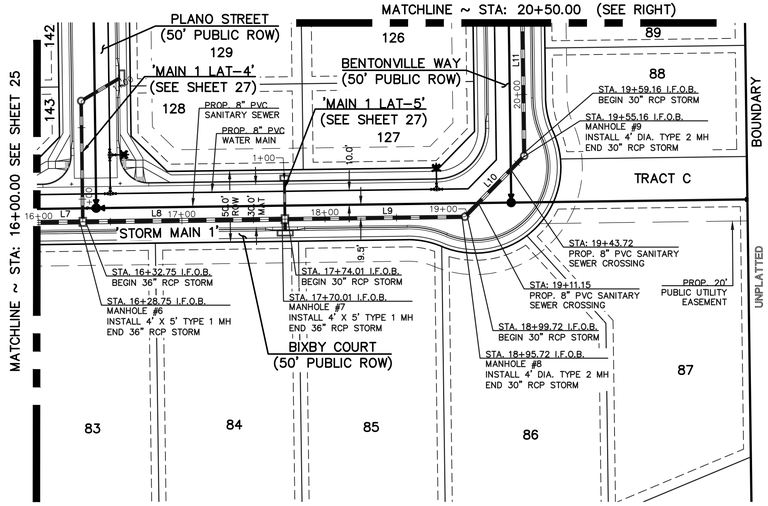
619 N. Cascade Avenue, Suite 200 (719)785-0790
Colorado Springs, Colorado 80903 (719)785-0799(Fax)

STERLING RANCH EAST
FILING NO. 3
PUBLIC STORM SEWER PLAN
BIXBY COURT

CLASSIC CONSULTING ENGINEERS & SURVEYORS

DESIGNED BY	ESO	SCALE		DATE	4/05/2024
DRAWN BY	ESO	(H) 1"=	50'	SHEET	25 OF 35
CHECKED BY		(V) 1"=	5'	JOB NO.	1183.33

N:\1183\5\DRAWINGS\CONSTRUC FON\STORM\1833-STM-25.dwg, 9/25/2024 6:00:33 PM, 1:1



PUBLIC 36"/30"/24" RCP STORM SEWER - MAIN 1

NOTES:
ALL STORM FACILITIES WITHIN R.O.W. ARE 'PUBLIC', UNLESS OTHERWISE NOTED. ALL 'PRIVATE' FACILITIES ARE OWNED AND MAINTAINED BY THE STERLING RANCH METROPOLITAN DISTRICT.

ALL STORM SEWER WITH 100-YR HGL ABOVE THE TOP OF PIPE SHALL BE INSTALLED WITH PRESSURE PIPE AND WATERTIGHT JOINTS WITH A 100-YEAR SERVICE LIFE.

ALL STORM SEWER PIPES TO BE CLASS 3.

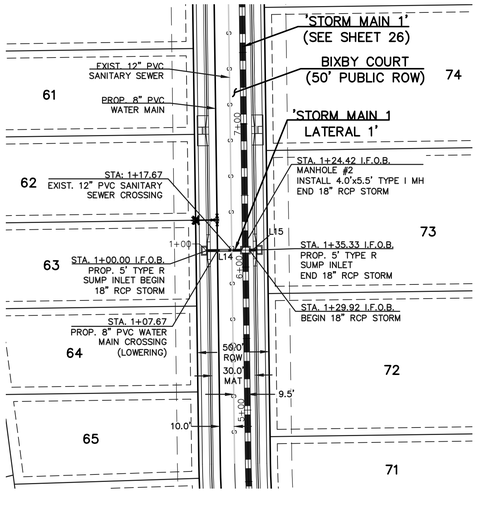
STORM MANHOLE AND INLET DETAILS ARE LOCATED ON DETAIL SHEETS.

STORM LINE TABLE

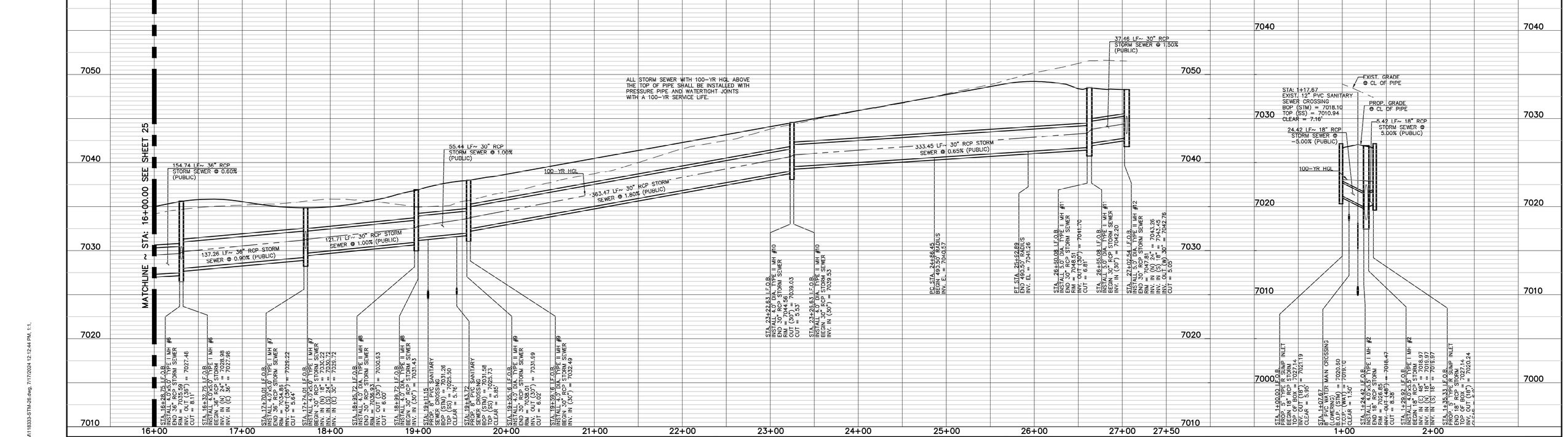
Line #	Length	Direction
L7	154.74	N89°14'00"E
L8	137.26	N89°14'00"E
L9	121.71	N89°14'00"E
L10	55.44	N44°14'00"E
L11	363.47	N00°46'00"W
L12	159.82	N00°46'00"W
L13	67.19	N11°40'00"E
L14	24.42	S00°46'00"E
L15	5.42	S00°46'00"E

STORM CURVE TABLE

Curve #	Delta	Length	Radius
C2	12°26'00"	106.44	490.50
C3	3°31'17"	37.46	609.50



PUBLIC 18" RCP STORM SEWER - MAIN 1 LATERAL 1



LEGEND

PROPOSED FIRE HYDRANT	EXISTING FIRE HYDRANT
PROPOSED WATER MAIN	EXISTING WATER MAIN
PROPOSED SANITARY SEWER MAIN	EXISTING SANITARY SEWER MAIN
PROPOSED STORM SEWER	EXISTING STORM SEWER
PROPOSED STORM INLET	EXISTING STORM INLET
ROW/BOUNDARY LINE	EXISTING GAS MAIN
	EXISTING ELECTRIC

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NO.	REVISION	DATE

REVIEW:

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MARC A. WHORTON, COLORADO P.E. #37155 DATE

CLASSIC CONSULTING ENGINEERS & SURVEYORS SM
619 N. Cascade Avenue, Suite 200 (719)785-0790
Colorado Springs, Colorado 80903 (719)785-0799(Fax)

STERLING RANCH EAST
FILING NO. 3
PUBLIC STORM SEWER PLAN
BIXBY COURT & BENTONVILLE WAY

CLASSIC CONSULTING ENGINEERS & SURVEYORS

DESIGNED BY	ESO	SCALE		DATE	7/03/2024
DRAWN BY	ESO	(H) 1"= 50'		SHEET	26 OF 35
CHECKED BY		(V) 1"= 5'		JOB NO.	1183.33

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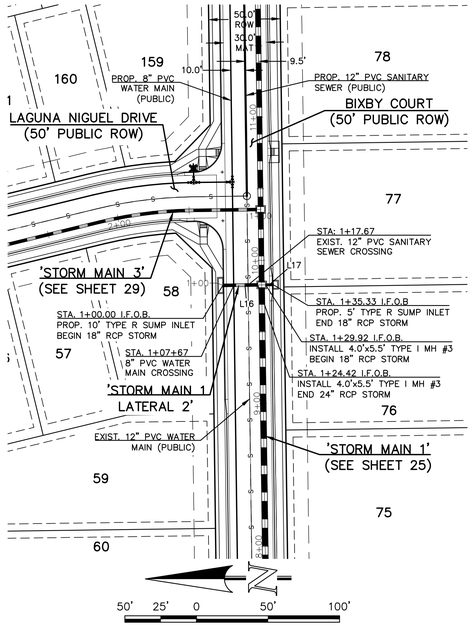
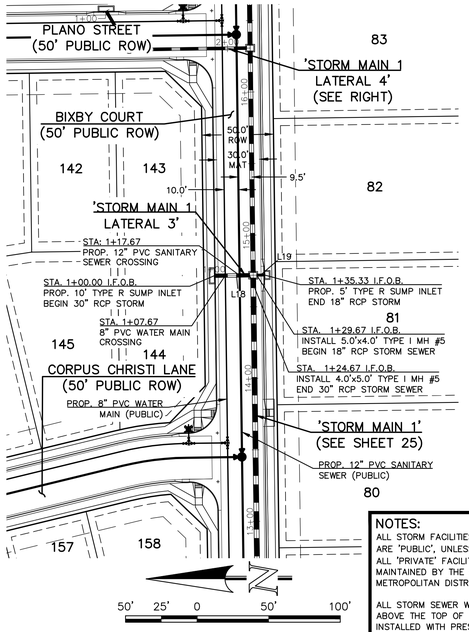


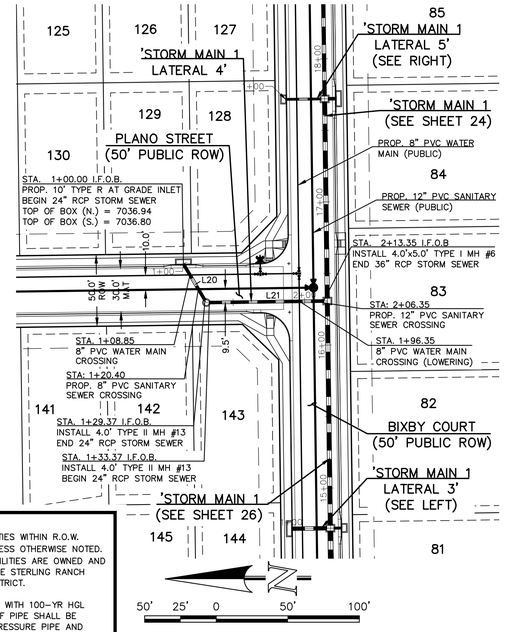
SCALE: 1" = 50'

PUBLIC 24"/18" RCP STORM SEWER MAIN 1 LATERAL 2



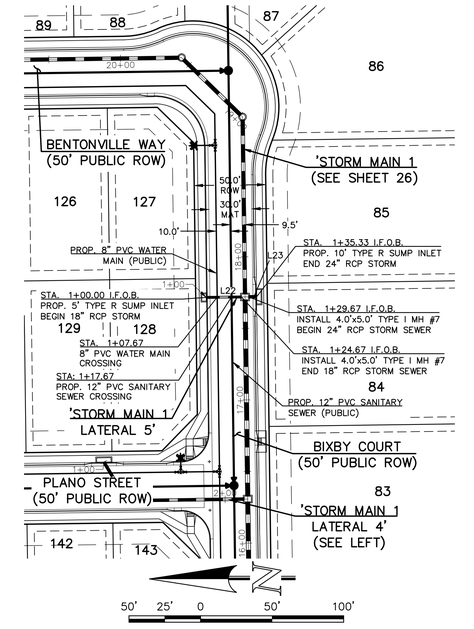
SCALE: 1" = 50'

PUBLIC 30"/18" RCP STORM SEWER MAIN 1 LATERAL 3



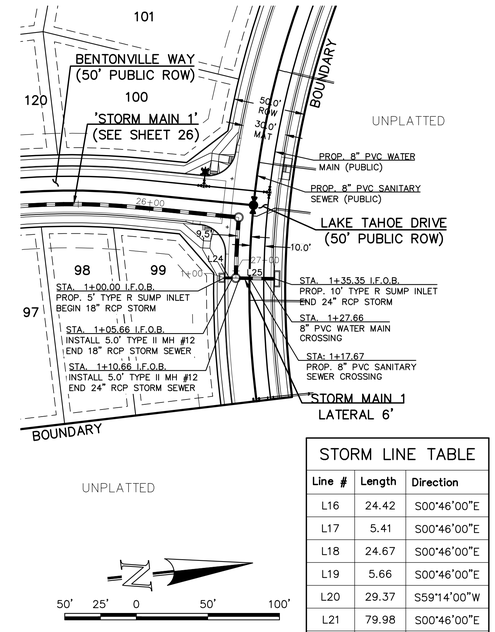
SCALE: 1" = 50'

PUBLIC 24" RCP STORM SEWER MAIN 1 LATERAL 4



SCALE: 1" = 50'

PUBLIC 18"/24" RCP STORM SEWER MAIN 1 LATERAL 5



SCALE: 1" = 50'

PUBLIC 18"/24" RCP STORM SEWER MAIN 1 LATERAL 6

NOTES:

ALL STORM FACILITIES WITHIN R.O.W. ARE 'PUBLIC', UNLESS OTHERWISE NOTED. ALL 'PRIVATE' FACILITIES ARE OWNED AND MAINTAINED BY THE STERLING RANCH METROPOLITAN DISTRICT.

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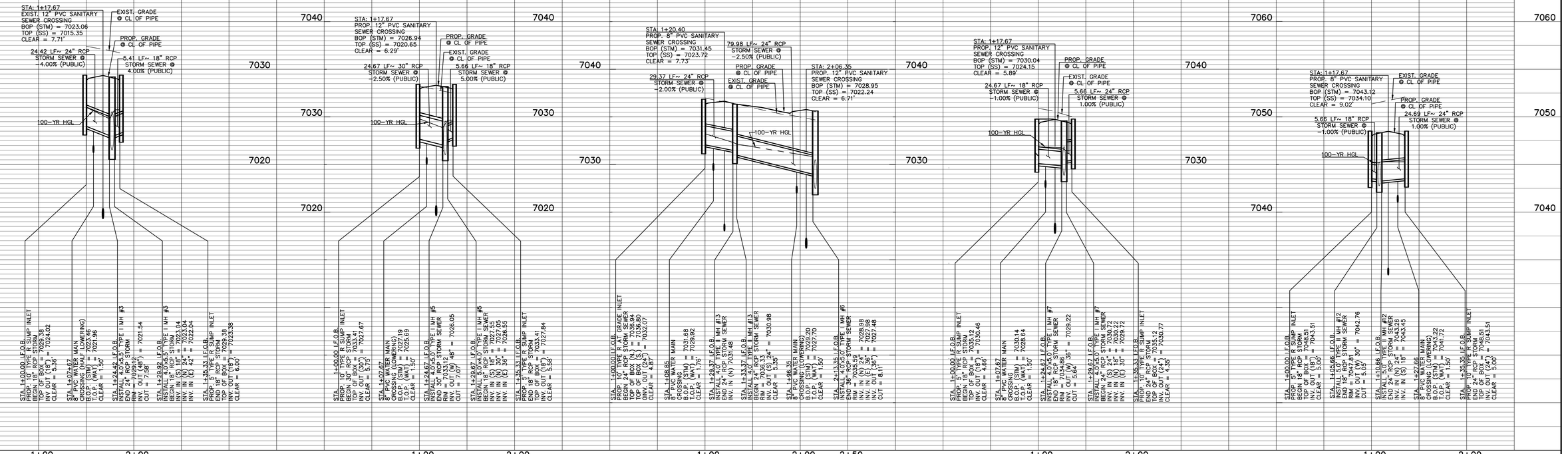
ALL STORM SEWER PIPES TO BE CLASS 3.

STORM MANHOLE AND INLET DETAILS ARE LOCATED ON DETAIL SHEETS.

STORM LINE TABLE

Line #	Length	Direction
L16	24.42	S00°46'00"E
L17	5.41	S00°46'00"E
L18	24.67	S00°46'00"E
L19	5.66	S00°46'00"E
L20	29.37	S59°14'00"W
L21	79.98	S00°46'00"E
L22	24.67	S00°46'00"E
L23	5.66	S00°46'00"E
L24	5.66	N07°00'14"E
L25	24.69	N07°00'14"E



LEGEND

PROPOSED FIRE HYDRANT	EXISTING FIRE HYDRANT
PROPOSED WATER MAIN	EXISTING WATER MAIN
PROPOSED SANITARY SEWER MAIN	EXISTING SANITARY SEWER MAIN
PROPOSED STORM SEWER	EXISTING STORM SEWER
PROPOSED STORM INLET	EXISTING STORM INLET
ROW/BOUNDARY LINE	EXISTING GAS MAIN
	EXISTING ELECTRIC

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NO.	REVISION	DATE

REVIEW:

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MARC A. WHORTON, COLORADO P.E. #37155 DATE

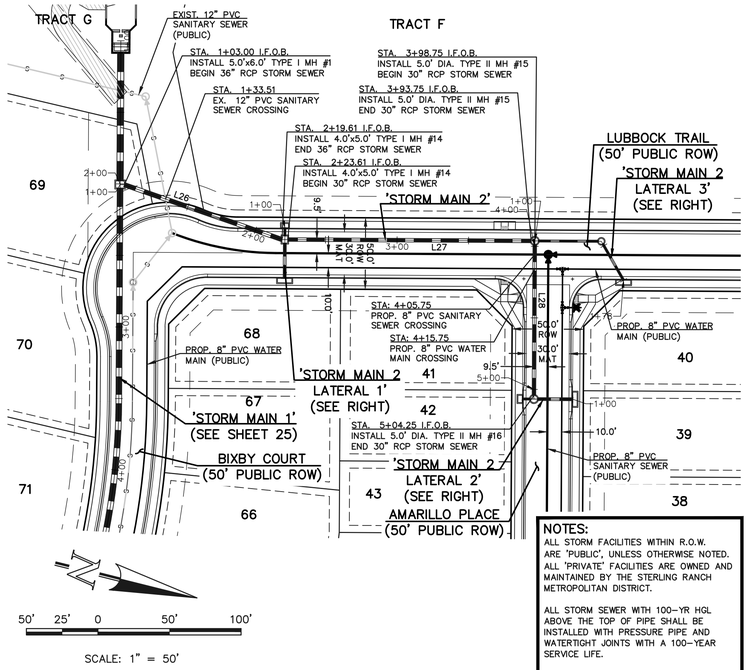
CLASSIC CONSULTING ENGINEERS & SURVEYORS
619 N. Cascade Avenue, Suite 200 (719)785-0790
Colorado Springs, Colorado 80903 (719)785-0799(Fax)

STERLING RANCH EAST
FILING NO. 3
PUBLIC STORM SEWER PLAN
BIXBY COURT LATERALS & PLANO ST.

CLASSIC CONSULTING ENGINEERS & SURVEYORS

DESIGNED BY	ESO	SCALE		DATE	7/03/2024
DRAWN BY	ESO	(H) 1"=	50'	SHEET	27 OF 35
CHECKED BY		(V) 1"=	5'	JOB NO.	1183.33

N:\1183\3\DRAWINGS\CONSTRUCTION\STORM\1183.3-STM-27.dwg, 9/25/2024 4:18:18 PM, 1:1



SCALE: 1" = 50'

PUBLIC 36"/30" RCP STORM SEWER MAIN - MAIN 2

NOTES:

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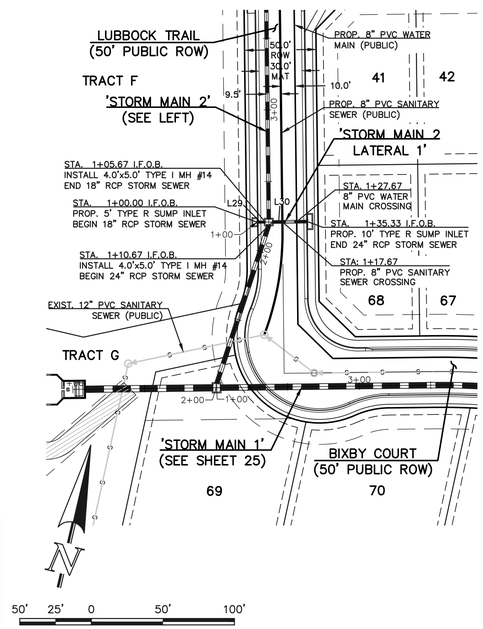
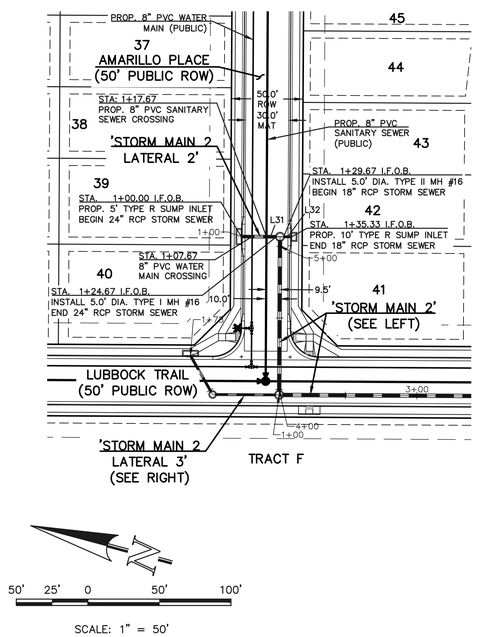


SCALE: 1" = 50'

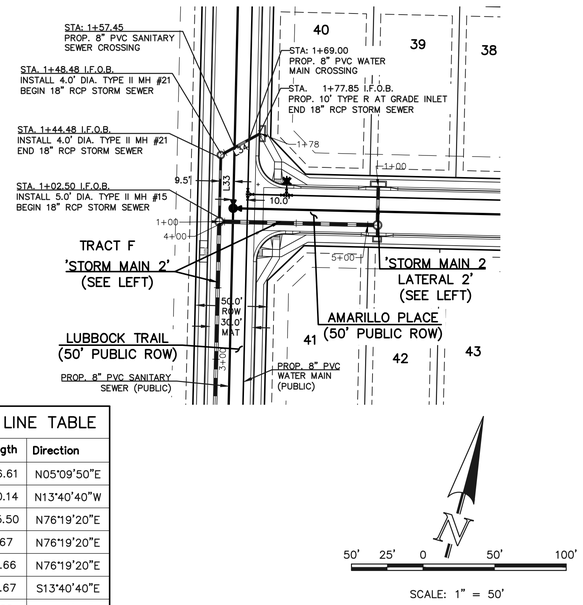
PUBLIC 18"/24" RCP STORM SEWER MAIN - MAIN 2 LATERAL 1



SCALE: 1" = 50'

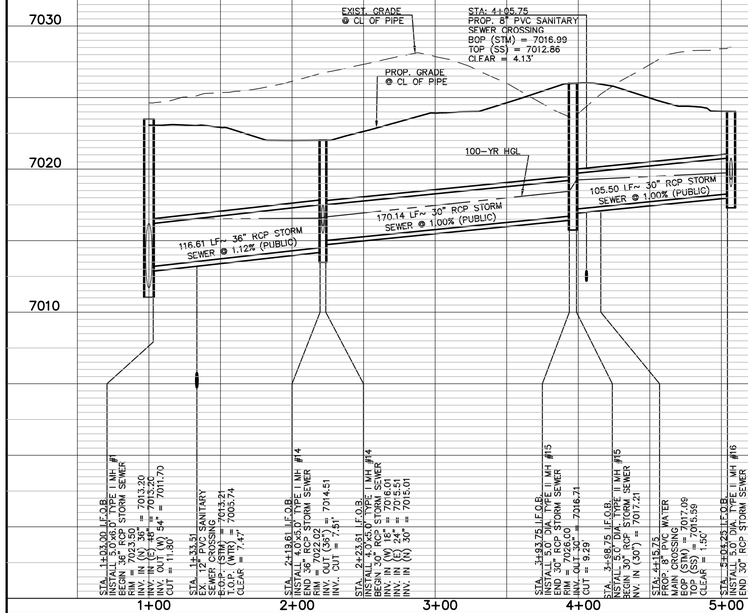
PUBLIC 18"/24" RCP STORM SEWER MAIN - MAIN 2 LATERAL 2

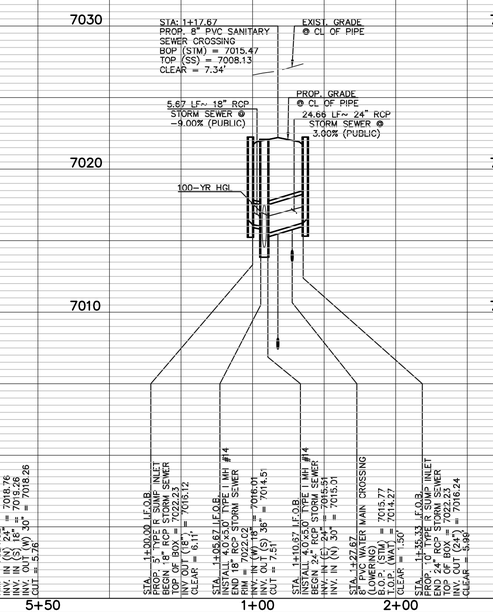
STORM LINE TABLE		
Line #	**Length**	**Direction**
L26	116.61	N05°09'50"E
L27	170.14	N13°40'40"W
L28	105.50	N76°19'20"E
L29	5.67	N76°19'20"E
L30	24.66	N76°19'20"E
L31	24.67	S13°40'40"E
L32	5.66	S13°40'40"E
L33	41.98'	S13°40'40"E
L34	29.37'	N46°19'20"E

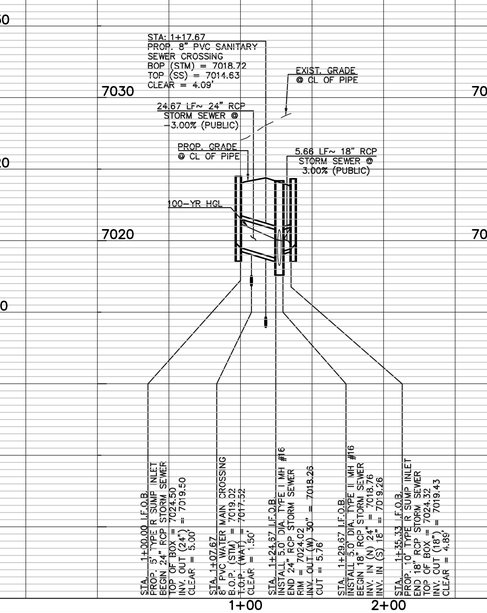


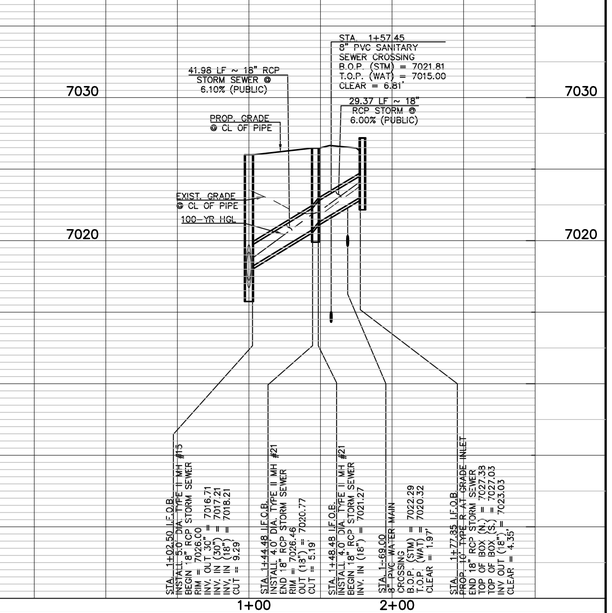
SCALE: 1" = 50'

PUBLIC 18" RCP STORM SEWER MAIN - MAIN 2 LATERAL 3









LEGEND

PROPOSED FIRE HYDRANT	EXISTING FIRE HYDRANT
PROPOSED WATER MAIN	EXISTING WATER MAIN
PROPOSED SANITARY SEWER MAIN	EXISTING SANITARY SEWER MAIN
PROPOSED STORM SEWER	EXISTING STORM SEWER
PROPOSED STORM INLET	EXISTING STORM INLET
ROW/BOUNDARY LINE	EXISTING GAS MAIN
	EXISTING ELECTRIC

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NO.	REVISION	DATE

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MARC A. WHORTON, COLORADO P.E. #37155 DATE

CLASSIC SM
CONSULTING
ENGINEERS & SURVEYORS

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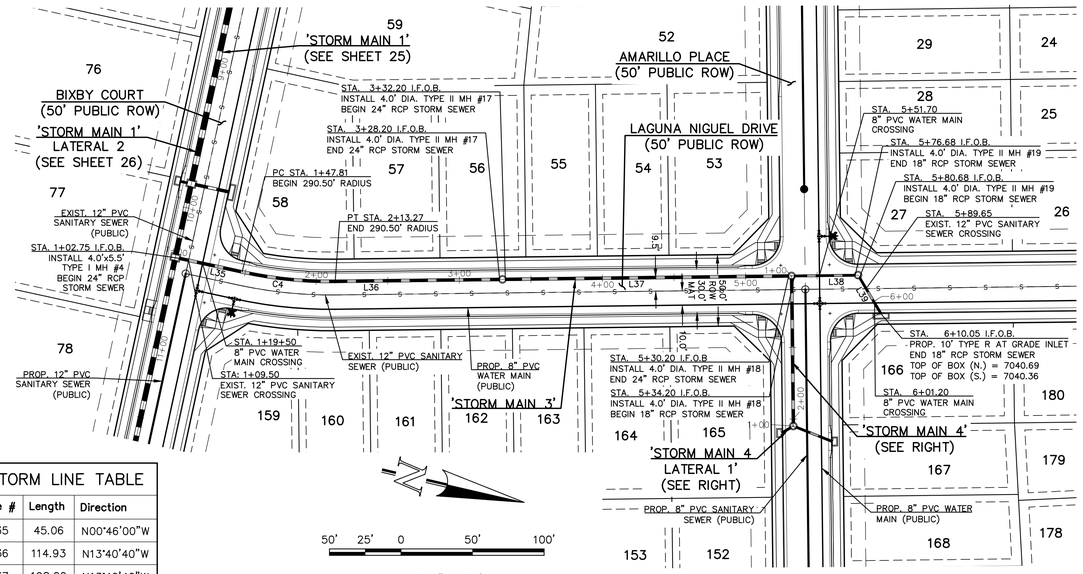
Colorado Springs, Colorado 80903 (719)785-0799(Fax)

STERLING RANCH EAST
FILING NO. 3
PUBLIC STORM SEWER PLAN
LUBBOCK TRAIL & AMARILLO PLACE

CLASSIC CONSULTING ENGINEERS & SURVEYORS

DESIGNED BY	ESO	SCALE		DATE	7/03/2024
DRAWN BY	ESO	(H) 1"=	50'	SHEET	28 OF 35
CHECKED BY		(V) 1"=	5'	JOB NO.	1183.33

N:\1183333\DRAWINGS\CONSTRUCTION\STORM\1183333-STM-28.dwg, 7/17/2024 12:14:12 PM, 1:1, KS

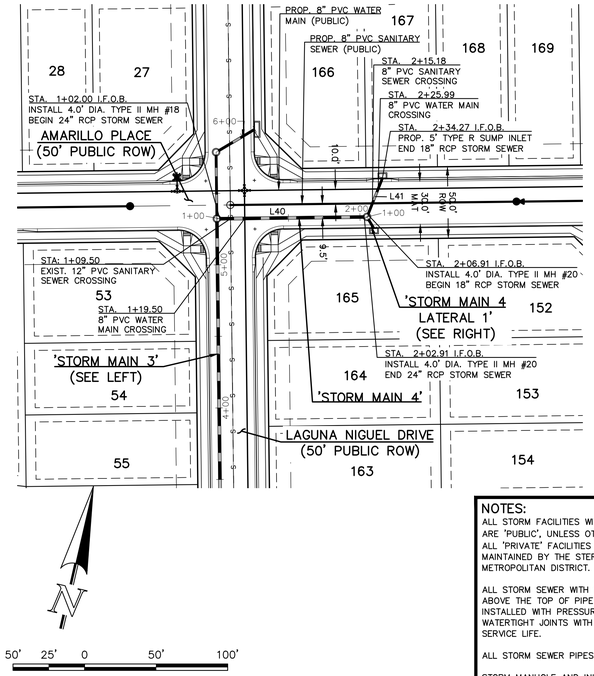


SCALE: 1" = 50'

STORM LINE TABLE		
Line #	Length	Direction
L35	45.06	N00°46'00"W
L36	114.93	N13°40'40"W
L37	198.00	N13°40'40"W
L38	42.48	N13°40'40"W
L39	29.37	N46°19'20"E
L40	100.91	N76°19'20"E
L41	27.36	N08°35'31"E
L42	7.43	S43°40'40"E

STORM CURVE TABLE			
Curve #	Delta	Length	Radius
C4	12°54'40"	65.46	290.50

PUBLIC 24"/18" RCP STORM SEWER MAIN - MAIN 3



SCALE: 1" = 50'

PUBLIC 24"/18" RCP STORM SEWER MAIN - MAIN 4

NOTES:
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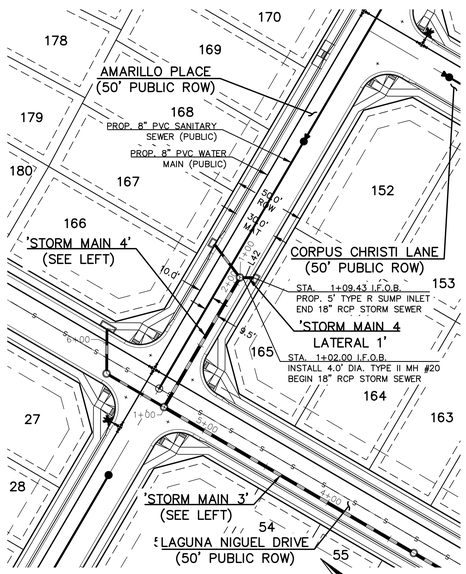
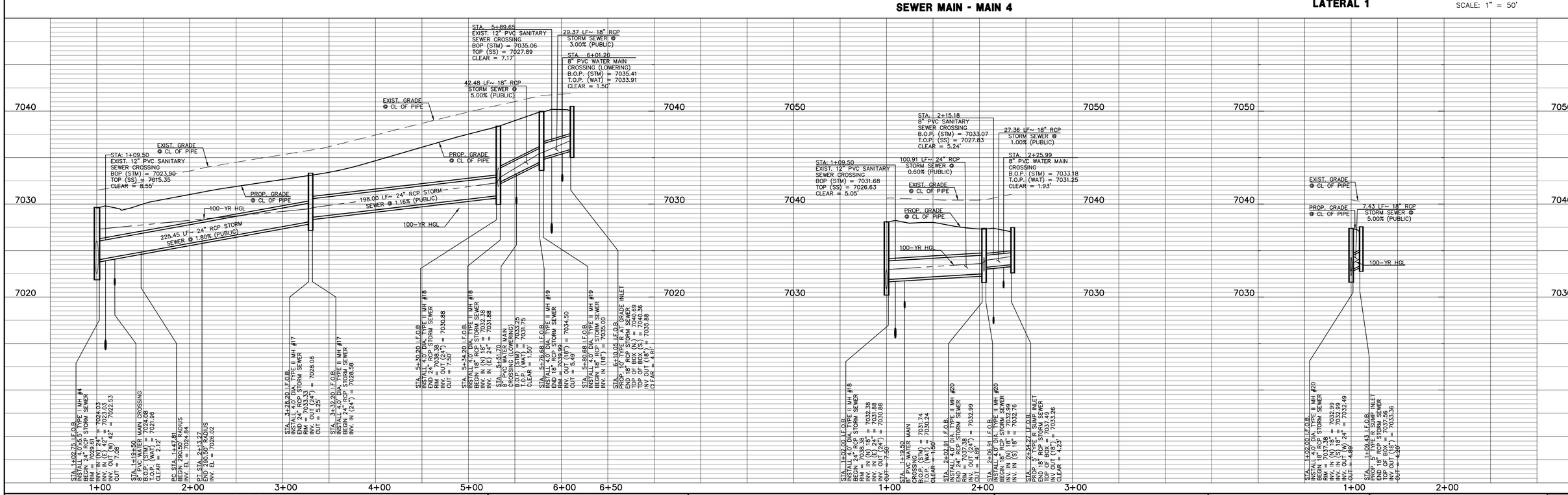
ALL STORM SEWER PIPES TO BE CLASS 3.

STORM MANHOLE AND INLET DETAILS ARE LOCATED ON DETAIL SHEETS.



SCALE: 1" = 50'

PUBLIC 18" RCP STORM SEWER MAIN - MAIN 4 LATERAL 1



LEGEND

PROPOSED FIRE HYDRANT	EXISTING FIRE HYDRANT
PROPOSED WATER MAIN	EXISTING WATER MAIN
PROPOSED SANITARY SEWER MAIN	EXISTING SANITARY SEWER MAIN
PROPOSED STORM SEWER	EXISTING STORM SEWER
PROPOSED STORM INLET	EXISTING STORM INLET
ROW/BOUNDARY LINE	EXISTING GAS MAIN
	EXISTING ELECTRIC

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NO.	REVISION	DATE

REVIEW:
PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

MARC A. WHORTON, COLORADO P.E. #37155 DATE

CLASSIC CONSULTING ENGINEERS & SURVEYS SM
619 N. Cascade Avenue, Suite 200 (719)785-0790
Colorado Springs, Colorado 80903 (719)785-0799(Fax)

STERLING RANCH EAST
FILING NO. 3
PUBLIC STORM SEWER PLAN
LAGUNA NIGUEL DRIVE & CORPUS CHRISTI LANE

CLASSIC CONSULTING ENGINEERS & SURVEYORS

DESIGNED BY	ESO	SCALE		DATE	7/03/2024
DRAWN BY	ESO	(H) 1"=	50'	SHEET	29 OF 35
CHECKED BY		(V) 1"=	5'	JOB NO.	1183.33

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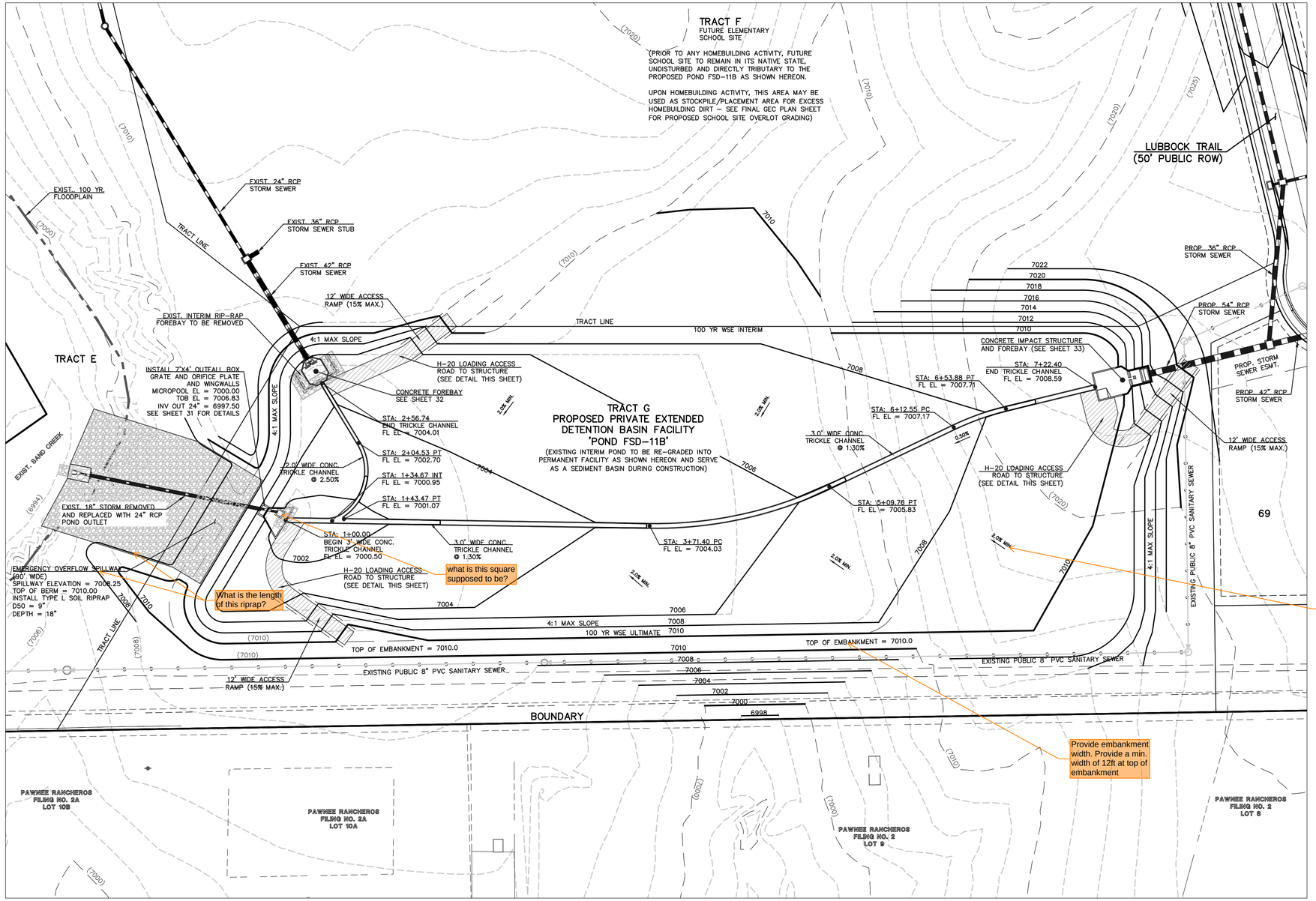
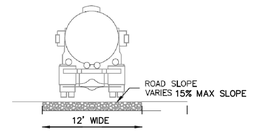
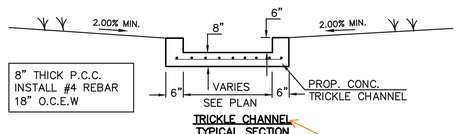




ACCESS ROADS

Consider having control joints every ~10ft

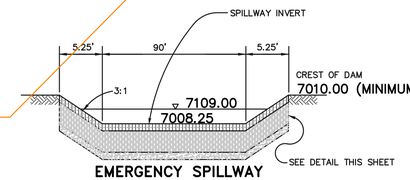


TRICKLE CHANNEL TYPICAL SECTION
N.T.S.

Trickle Channel will be reviewed further once calcs are provided.

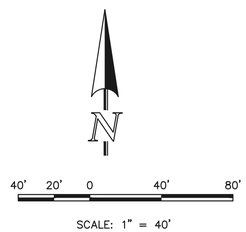
NOTES:
- POND BOTTOM TO SLOPE TOWARD TRICKLE CHANNEL AT 2% MIN.

Pond bottom should have a minimum slope of 3% to the trickle channel and micropool (USDCM Vol 3, detail T-5). Please adjust to minimize future maintenance needs.



EMERGENCY SPILLWAY SECTION
SCALE: N.T.S.

100 YEAR WATER SURFACE = **7008.15**
(PONDING PER UD-DETENTION



SCALE: 1" = 40'

RESEEDING NOTE:
ALL AREAS OF LAND DISTURBANCE ARE TO BE RESEEDED. REAPPLY SEED & OTHER EROSION CONTROL MEASURES AS NEEDED TO PREVENT EROSION AND SEDIMENT RUNOFF ONTO AND FROM CONSTRUCTION ACTIVITIES.

LEGEND

PROPOSED FIRE HYDRANT	EXISTING FIRE HYDRANT
PROPOSED WATER MAIN	EXISTING WATER MAIN
PROPOSED SANITARY SEWER MAIN	EXISTING SANITARY SEWER MAIN
PROPOSED STORM SEWER	EXISTING STORM SEWER
PROPOSED STORM INLET	EXISTING STORM INLET
ROW/BOUNDARY LINE	EXISTING GAS MAIN
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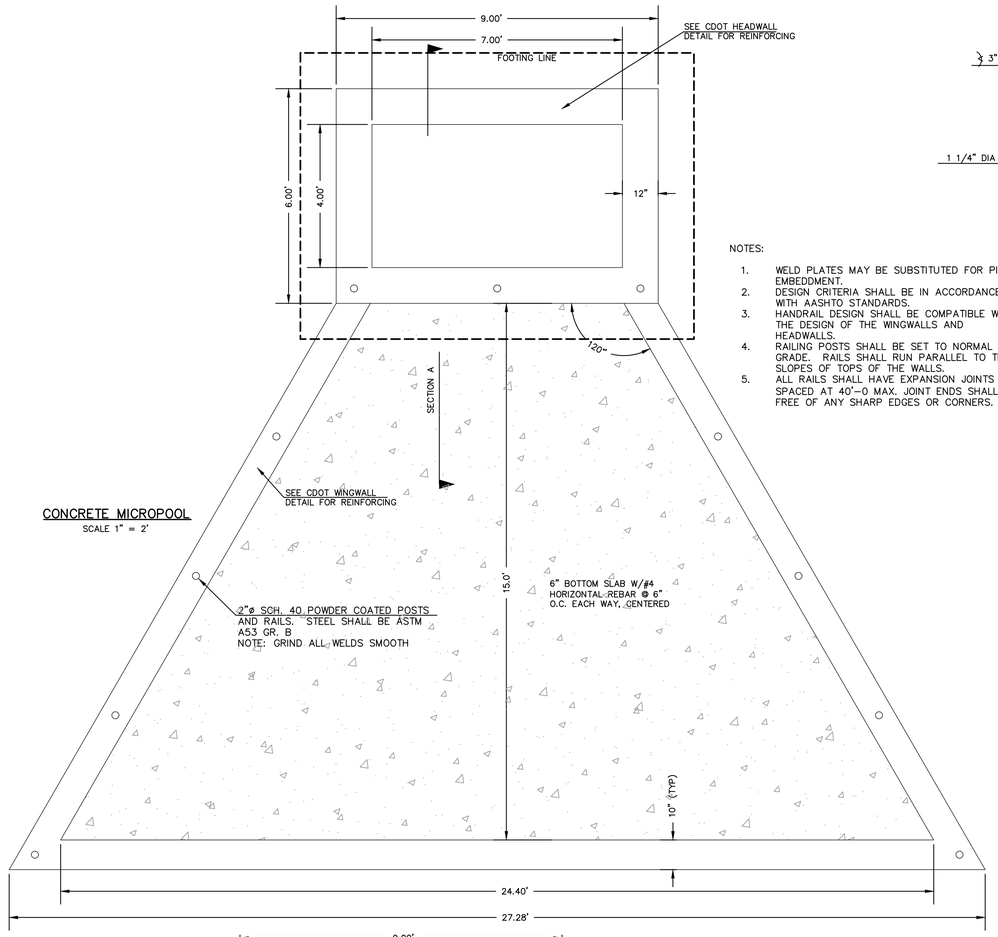
Colorado Springs, Colorado 80903 (719)785-0799(Fax)

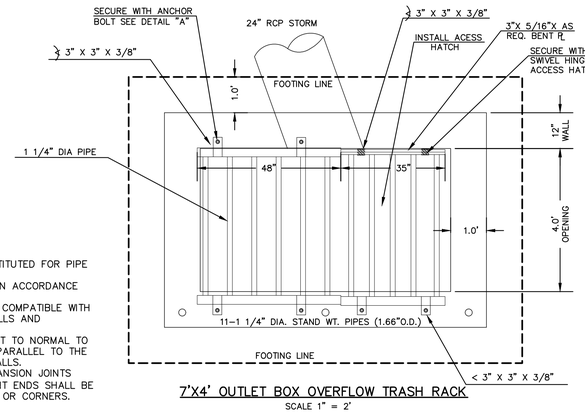
STERLING RANCH EAST
FILING NO. 3
PRIVATE EXTENDED DETENTION BASIN 11B
POND PLAN SHEET

DESIGNED BY	MAW	SCALE		DATE	7/03/2024
DRAWN BY	ESO	(H) 1"=	50'	SHEET	30 OF 35
CHECKED BY		(V) 1"=	5'	JOB NO.	1183.33

N:\1183\33\DRAWINGS\CONSTRUCTION\POND\1183333-POND-30.dwg, 7/17/2024 12:15:38 PM, 1:1, KS



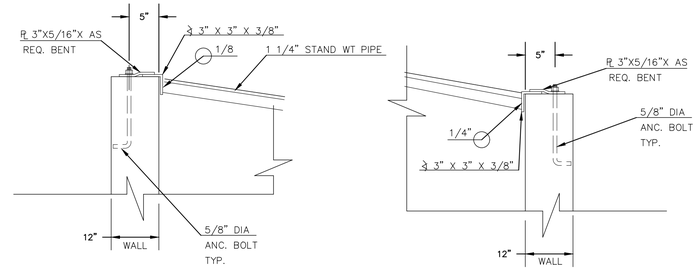
CONCRETE MICROPOOL
SCALE 1" = 2'



7'X4' OUTLET BOX OVERFLOW TRASH RACK
SCALE 1" = 2'

NOTES:

1. WELD PLATES MAY BE SUBSTITUTED FOR PIPE EMBEDDMENT.
2. DESIGN CRITERIA SHALL BE IN ACCORDANCE WITH AASHTO STANDARDS.
3. HANDRAIL DESIGN SHALL BE COMPATIBLE WITH THE DESIGN OF THE WINGWALLS AND HEADWALLS.
4. RAILING POSTS SHALL BE SET TO NORMAL TO GRADE. RAILS SHALL RUN PARALLEL TO THE SLOPES OF TOPS OF THE WALLS.
5. ALL RAILS SHALL HAVE EXPANSION JOINTS SPACED AT 40'-0 MAX. JOINT ENDS SHALL BE FREE OF ANY SHARP EDGES OR CORNERS.



(ALL MATERIALS PER EL PASO COUNTY SPECIFICATIONS)

ORIFICE PLATE NOTES:

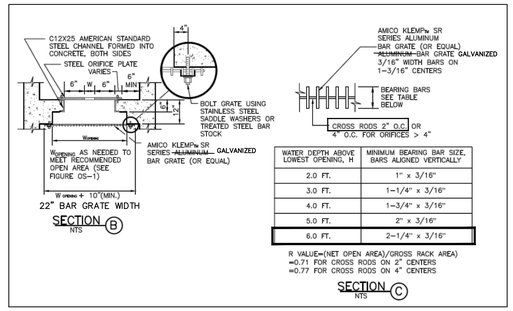
1. PROVIDE CONTINUOUS NEOPRENE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE.
2. BOLT PLATE TO CONCRETE 12" MAX. ON CENTER

EURV AND WQCV TRASH RACKS:

1. WELL-SCREEN TRASH RACKS SHALL BE POWDER COATED STAINLESS STEEL AND SHALL BE ATTACHED BY INTERMITTENT WELDS ALONG THE EDGE OF THE MOUNTING FRAME.
2. BAR GRATE TRASH RACKS SHALL BE ALUMINUM AND SHALL BE BOLTED USING STAINLESS STEEL HARDWARE.
3. TRASH RACK OPEN AREAS ARE FOR SPECIFIED TRASH RACK MATERIALS. TOTAL TRASH RACK SIZE MAY NEED TO BE ADJUSTED FOR MATERIALS HAVING DIFFERENT OPEN AREA/ GROSS AREA RATIO (R VALUE).
4. STRUCTURAL DESIGN OF TRASH RACKS SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF RACK.

OVERFLOW TRASH RACKS:

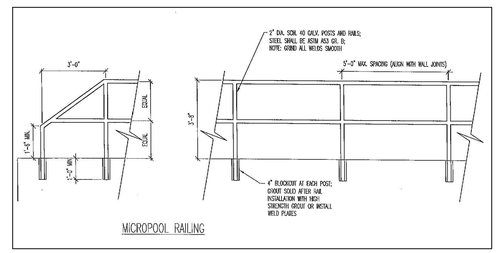
1. ALL TRASH RACKS SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED AND LOCKABLE OR BOLTABLE ACCESS PANELS
2. TRASH RACKS SHALL BE STAINLESS STEEL, ALUMINUM, OR STEEL. STEEL TRASH RACKS SHALL BE HOT DIP GALVANIZED AND MAY BE HOT POWDER COATED AFTER GALVANIZING.
3. TRASH RACKS SHALL BE DESIGNED SUCH THAT THE DIAGONAL DIMENSION OF EACH OPENING IS SMALLER THAN THE DIAMETER OF THE OUTLET PIPE.
4. STRUCTURAL DESIGN OF THE TRASH RACKS SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF THE RACK.



WATER DEPTH ABOVE LOWEST OPENING, H	MINIMUM BEARING BAR SIZE, BARS ALIGNED VERTICALLY
2.0 FT.	1" x 3/16"
3.0 FT.	1-1/4" x 3/16"
4.0 FT.	1-3/4" x 3/16"
5.0 FT.	2" x 3/16"
6.0 FT.	2-1/4" x 3/16"

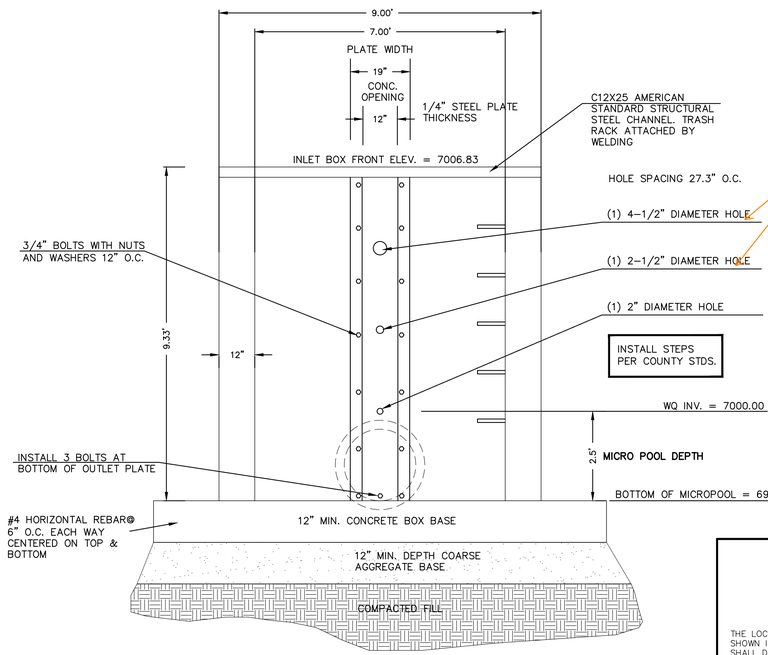
R VALUE=(NET OPEN AREA)/GROSS RACK AREA)
=0.71 FOR CROSS RODS ON 2" CENTERS
=0.77 FOR CROSS RODS ON 4" CENTERS

SECTION (C)
NTS

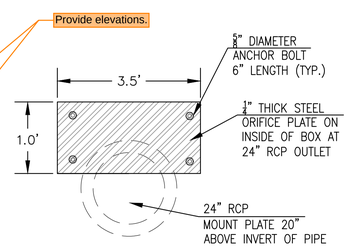


MICROPOOL RAILING

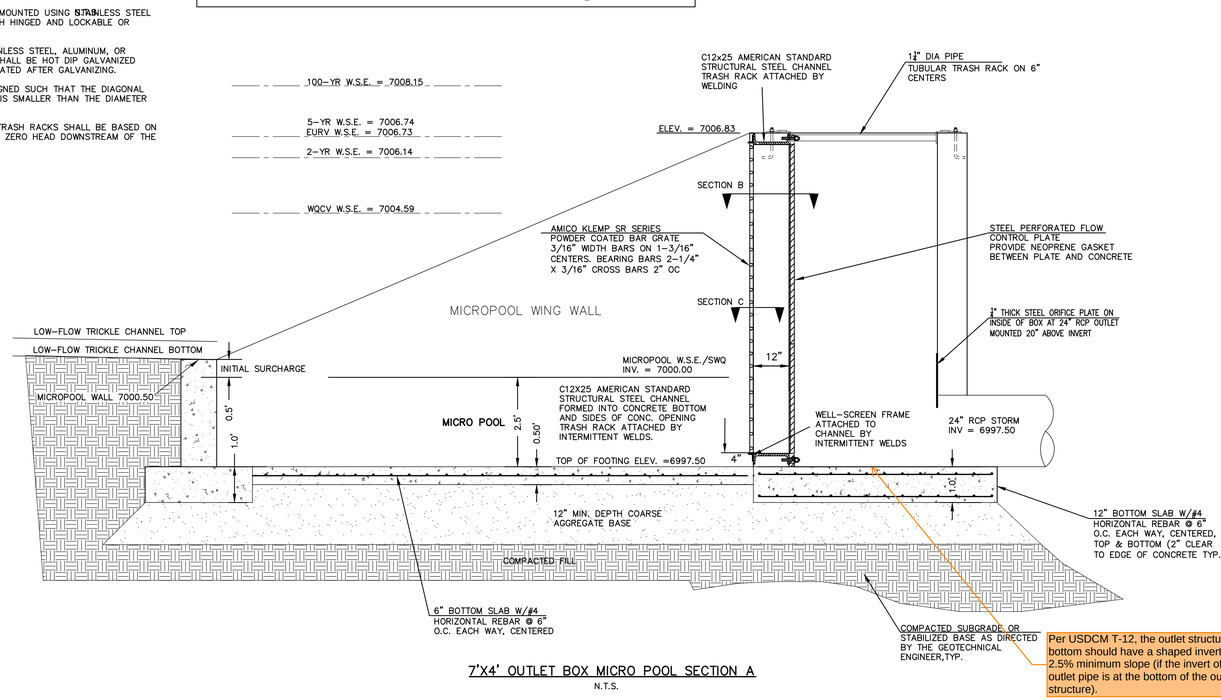
OUTLET BOX RAILING



7X4' OUTLET BOX ORIFICE PLATE
SCALE 1" = 2'



OUTLET BOX ORIFICE PLATE – 1/4" STEEL



7'X4' OUTLET BOX MICRO POOL SECTION A
N.T.S.

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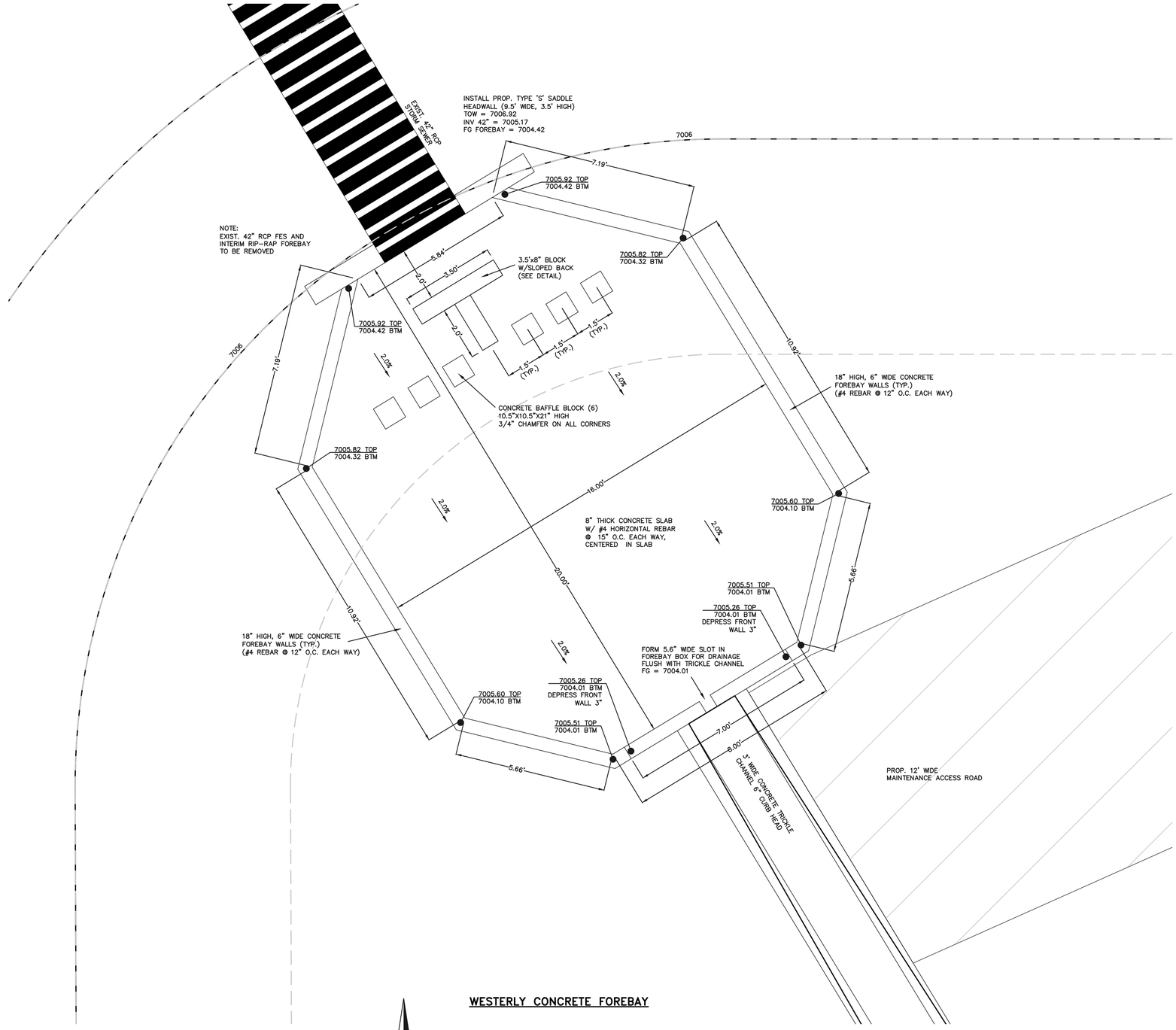
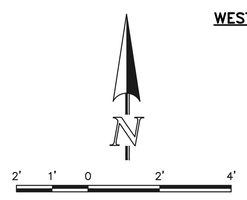
STERLING RANCH EAST
FILING NO. 3
PRIVATE EXTENDED DETENTION BASIN 11B
OUTLET BOX DETAILS

DESIGNED BY	MAW	SCALE		DATE	7/15/24
DRAWN BY	MAW	(H) 1"=	N/A	SHEET	31 OF 35
CHECKED BY		(V) 1"=	N/A	JOB NO.	1183.33

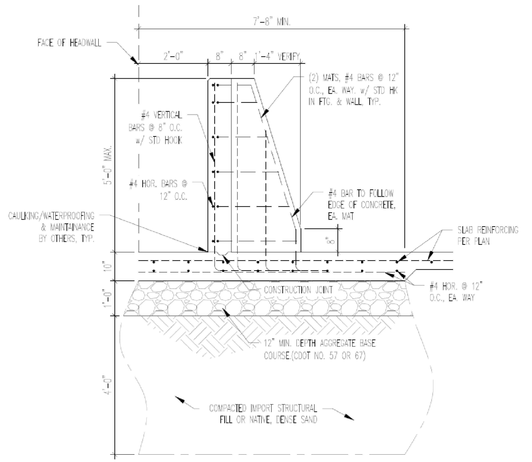
N:\11833\0\DRAWINGS\CONSTRUCTION\POND\11833S-POND-31.dwg, 7/17/2024 12:15:44 PM, 1:1, KS



WESTERLY CONCRETE FOREBAY

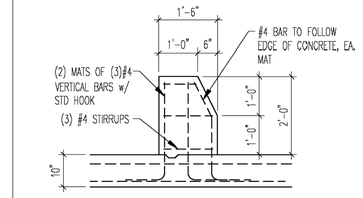


SCALE: 1" = 2'

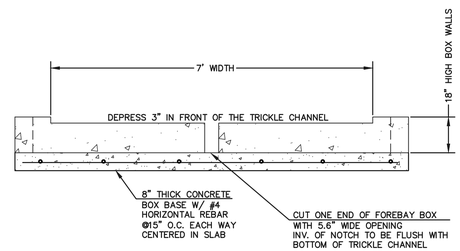


1 BAFFLE STRUCTURE

SCALE: 3/8 = 1'-0"



2 BAFFLE BLOCKS



CONCRETE FOREBAY NOTCH

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FILING NO. 3
PRIVATE EXTENDED DETENTION BASIN 11B
WESTERLY FOREBAY DETAILS

DESIGNED BY	MAW	SCALE		DATE	7/03/2024
DRAWN BY	ESO	(H) 1"= 2'		SHEET	32 OF 35
CHECKED BY		(V) 1"= N/A		JOB NO.	1183.33

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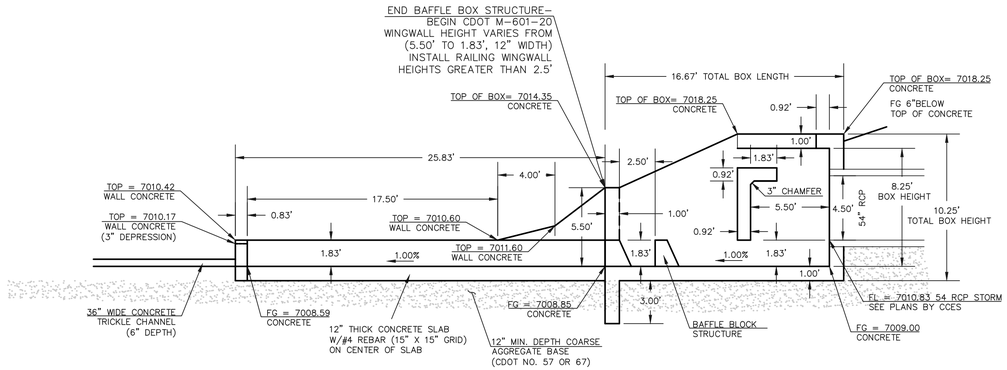
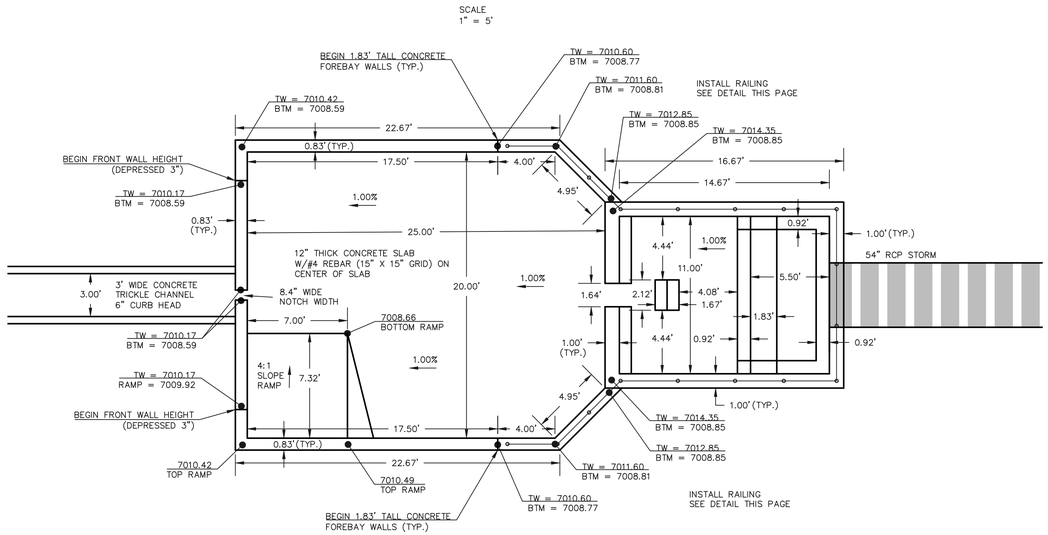


MHFCD USBR TYPE VI IMPACT STILLING BASIN

PROPOSED FOREBAY AT 54" PIPE – POND STRUCTURE (PROFILE VIEW)



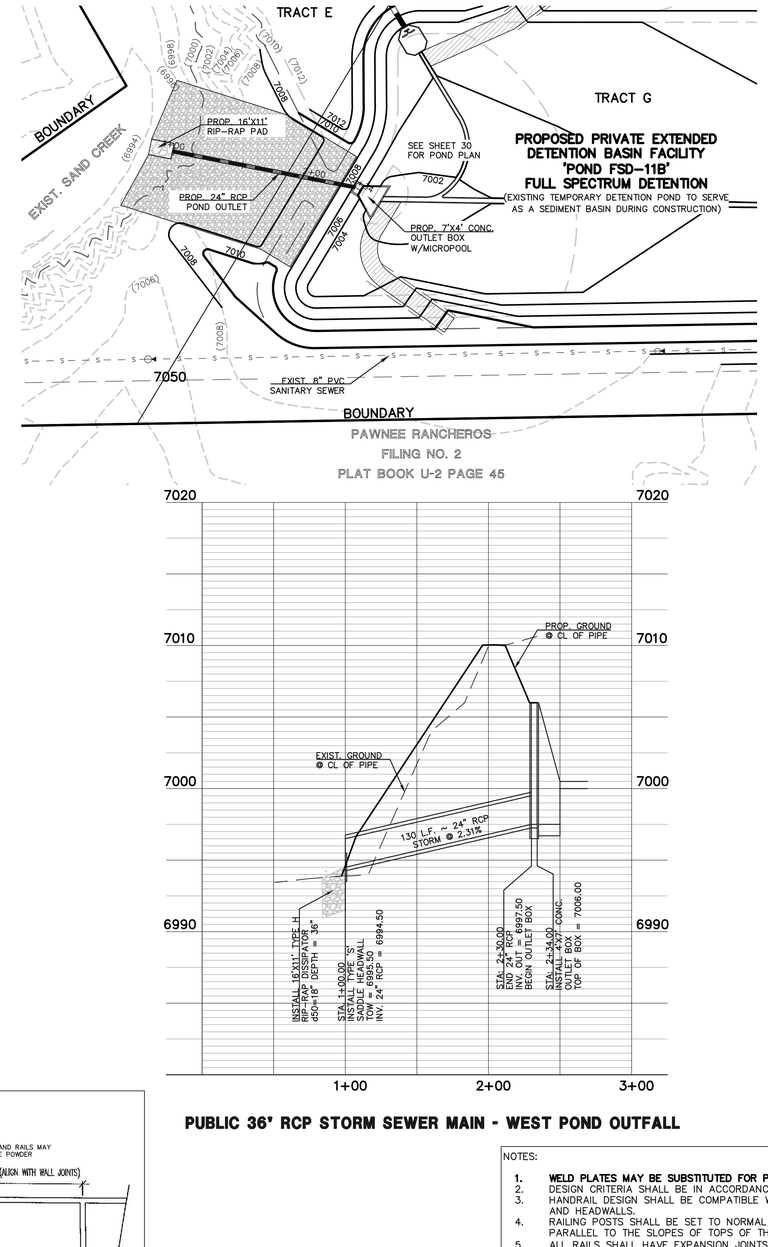
CONSTRUCT EARTHEN RAMP ON THE
OUTSIDE OF FOREBAY TO ALLOW
ACCESS TO RAMP FROM POND BOTTOM
NO RAILING IN THIS AREA

PROPOSED FOREBAY AT 54" PIPE – POND STRUCTURE (PLAN VIEW)

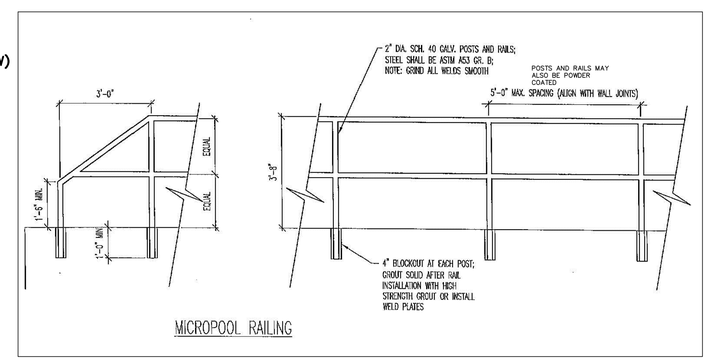
SCALE
1" = 5'

54" PIPE – POND STRUCTURE (FACE VIEW)

SCALE
1" = 5'



PUBLIC 36" RCP STORM SEWER MAIN - WEST POND OUTFALL



MICROPOOL RAILING

FOREBAY RAILING

N.T.S.

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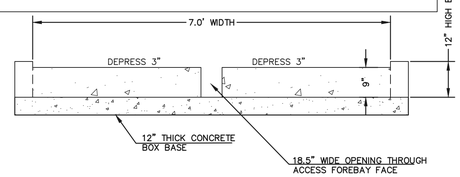

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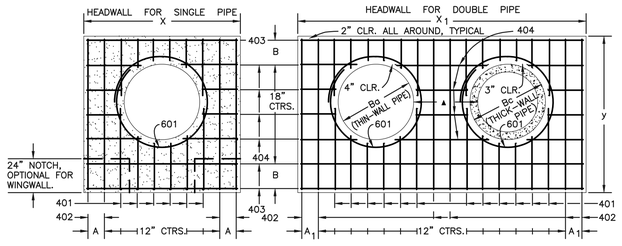
FILING NO. 3
PRIVATE FULL SPECTRUM DETENTION POND 11B
54" IMPACT STRUCTURE & POND OUTALL

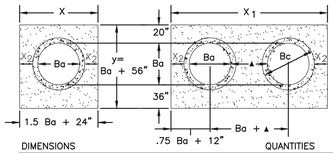
CLASSIC CONSULTING

DESIGNED BY	MAW	SCALE		DATE	6/24/24
DRAWN BY	MAW	(H) 1"=	5'	SHEET	33 OF 35
CHECKED BY		(V) 1"=	N/A	JOB NO.	1183.33

V:\1183.33\DRAWINGS\CONSTRUCTION\POND\1183.33-POND-33.dwg, 7/18/2024 3:31:15 PM, 1:1



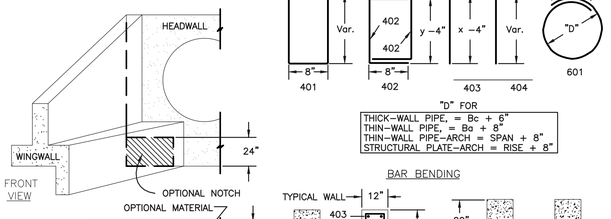
TYPICAL BAR LAYOUT FOR CONCRETE HEADWALLS



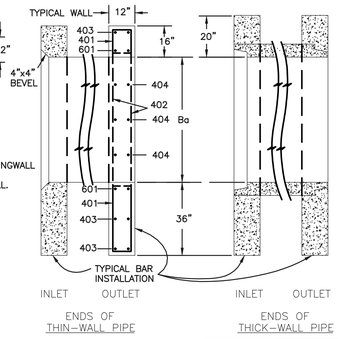
DIMENSIONS / QUANTITIES

Ba in.	Bc in.	X ft.-in	A in.	X_1 ft.-in	A_1 in.	y ft.-in	B in.	X_2 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	306	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 THICK – WALL ROUND PIPE



BAR BENDING



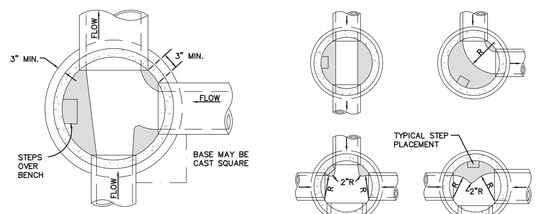
GENERAL NOTES

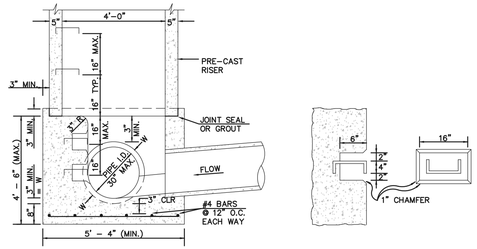
1. CONCRETE SHALL BE CLASS B.
2. HEADWALL SHALL BE PERPENDICULAR TO THE CULVERT ℄ UNLESS OTHERWISE SHOWN ON THE PLANS. TABULATED DIMENSIONS AND QUANTITIES MUST BE ADJUSTED FOR SKEWED INSTALLATIONS.
3. FOR WINGWALL DETAILS, SEE STANDARD M–601–20.
4. VOLUME OCCUPIED BY PIPE HAS BEEN DEDUCTED FROM STEEL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

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

■ ADD 0.89 x (X OR X_1) (LB.) WHEN APRON IS REQUIRED.

CDOT M–601–10 – HEADWALL DETAIL

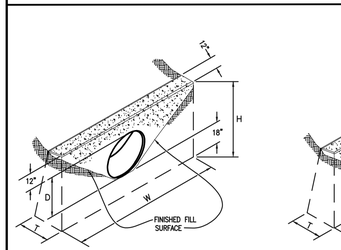




NOTES

1. TYPE II MANHOLES SHALL BE USED ONLY WITH APPROVAL OF THE CITY ENGINEER AND ONLY 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 OR 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., 1/2" PER FT. MIN).
6. FLOOR OF MANHOLE SHALL BE TROWELLED TO A SMOOTH, HARD SURFACE AND SHALL SLOPE TOWARDS THE OUTLET (8:1 MAX., 1/2" PER FT. MIN.). FLOOR SHALL BE SHAPED AND CHANNELED; SEE DETAILS THIS SHEET.

STORM SEWER MANHOLE – TYPE II



CONCRETE HEADWALL INSTALLATIONS
SEE M–601–10 FOR REINFORCING DETAILS.

GENERAL NOTES

1. FOR SIZE AND LOCATION OF CULVERTS, SEE PLANS.
2. ALL CONCRETE SHALL BE CLASS B.
3. FOOTINGS IN ROCK SHALL BE POURED OUT TO ROCK AND NOT FORMED. IN ACCORDANCE WITH SUBSECTION 601.09(B)
4. EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 3/4 IN.
5. HEADWALL SHALL HAVE REINFORCING STEEL INSTALLED IN A PATTERN SIMILAR TO STANDARD PLAN M–601–10 (ABOVE)
6. COST OF REINFORCING STEEL SHALL BE INCLUDED IN THE WORK UNLESS THE STEEL QUANTITIES ARE LISTED IN THE PLANS

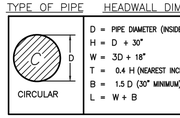
QUANTITIES FOR ONE CONCRETE HEADWALL (CUBIC YARDS)

PIPE		DIAMETER (AND EQUIVALENT DIAMETER) (INCHES)											
		18		24		30		36		42		48	
TYPE	MATERIAL	SINGLE	DOUBLE	SINGLE	DOUBLE	SINGLE	DOUBLE	SINGLE	DOUBLE	SINGLE	DOUBLE	SINGLE	DOUBLE
CIRCULAR	RCP	1.0	1.3	1.5	2.0	2.0	2.7	2.8	3.6	3.6	4.6	4.6	6.0
	CMP OR PLASTIC	1.1	1.4	1.6	2.1	2.2	3.0	3.0	4.0	3.9	5.3	5.0	6.8
ELLIPTICAL	RCP	23 x 14		30 x 19		38 x 24		45 x 29		53 x 34		60 x 38	
		0.9	1.2	1.3	1.6	1.7	2.2	2.3	2.9	2.9	3.7	3.5	4.4
ARCH	CMP	22 x 13		29 x 18		36 x 22		43 x 27		50 x 31		58 x 36	
		0.9	1.3	1.4	1.9	1.8	2.4	2.4	3.4	3.2	4.4	3.4	5.0

CULVERT OUTLET PAVING (CUBIC YARDS)

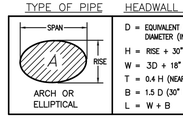
THICKNESS	MATERIAL	DIAMETER (INCHES)						
		18	24	30	36	42	48	
4"	CONCRETE	0.4	0.8	1.2				
6"	CONCRETE				2.6	3.6	4.7	
18"	RIPRAP	2.0	3.5	5.4	7.8	10.7	13.9	

TYPE OF PIPE / HEADWALL DIMENSIONS



D = PIPE DIAMETER (INSIDE)
H = D + 30"
W = 3D + 18"
T = 0.4 H (NEAREST INCH)
B = 1.5 D (30" MINIMUM)
L = W + B

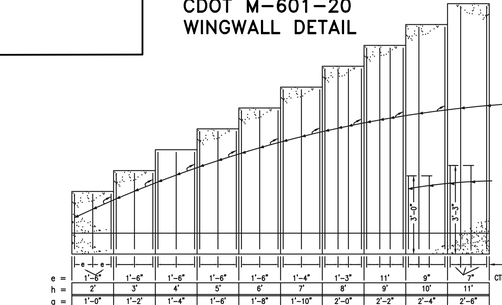
TYPE OF PIPE / HEADWALL DIMENSIONS



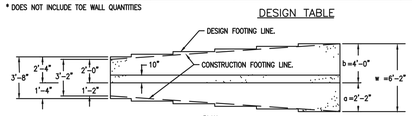
D = EQUIVALENT CIRCULAR DIAMETER (INSIDE)
H = RISE + 30"
W = 3D + 18"
T = 0.4 H (NEAREST INCH)
B = 1.5 D (30" MINIMUM)
L = W + B

NOTE: VOLUME OCCUPIED BY PIPE HAS BEEN DEDUCTED.

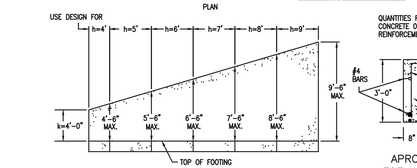
CDOT M–601–20 WINGWALL DETAIL



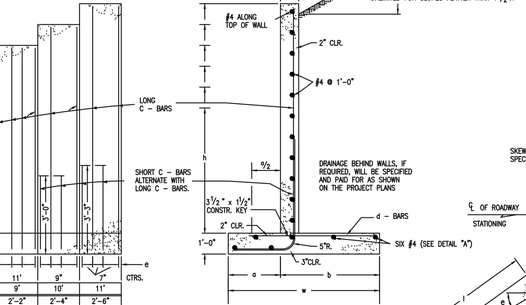
DESIGN TABLE



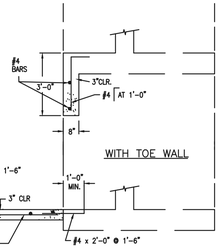
WING WALL

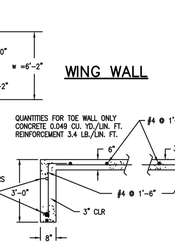


DESIGN EXAMPLE



TYPICAL SECTION



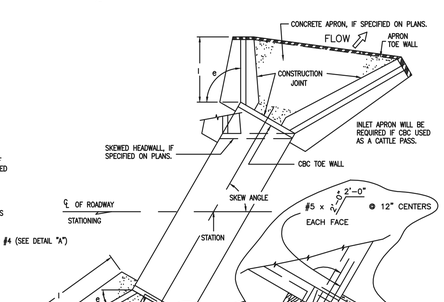


CDOT M–601–20

GENERAL NOTES

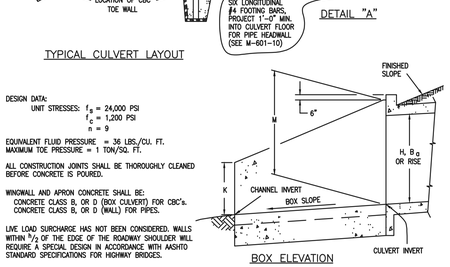
1. ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 3/4".
2. WINGWALL FOOTINGS AND FLOOR OF BOX CULVERT SHALL BE PLACED MONOLITHICALLY.
3. DIMENSIONS "H", "Bo", "RISE", "k", "t", "m" AND ANGLES FOR WINGWALLS SHALL BE AS SHOWN ON THE PLANS.
4. REINFORCING STEEL SHALL BE GRADE 60.
5. THE MINIMUM SPLICE LENGTH FOR COMMON BAR SIZES SHALL BE:

BAR	#4	#5	#6
SPLICE LENGTH	1'-3"	1'-7"	2'-0"



DETAIL "A"

TYPICAL CULVERT LAYOUT



BOX ELEVATION

M = H, Bo OR RISE + (1'-4")
UNLESS OTHERWISE SHOWN ON PLANS.

DESIGN DATA:
UNIT STRESSES: f_s = 24,000 PSI
f_c = 1,200 PSI
n = 9

EQUIVALENT FLUID PRESSURE = 36 LBS./CU. FT.
MAXIMUM TOE PRESSURE = 1 TON/SQ. FT.

ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED BEFORE CONCRETE IS POURED.

WINGWALL AND APRON CONCRETE SHALL BE:
CONCRETE CLASS B, OR D (BOX CULVERT) FOR CBC's.
CONCRETE CLASS B, OR D (WALL) FOR PIPES.

LIVE LOAD SURCHARGE HAS NOT BEEN CONSIDERED. WALLS WITHIN ½ OF THE EDGE OF THE ROADWAY SHOULDER WILL REQUIRE A SPECIAL DESIGN IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.

APRON REQUIRED AT INLET OF THE CBC, IF USED FOR CATTLE PASSAGE.

48 HOURS BEFORE YOU DIG,
CALL UTILITY LOCATORS
811
UTILITY NOTIFICATION CENTER OF COLORADO
IT'S THE LAW

THE LOCATIONS OF EXISTING 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 UNDERGROUND UTILITIES.

NO.	REVISION	DATE

REVIEW:

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

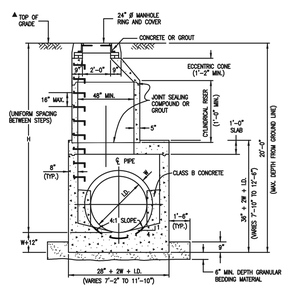
MARC A. WHORTON, COLORADO P.E. #37155 DATE

CLASSIC SM CONSULTING ENGINEERS & SURVEYORS
619 N. Cascade Avenue, Suite 200 (719)785-0790
Colorado Springs, Colorado 80903 (719)785-0799(Fax)

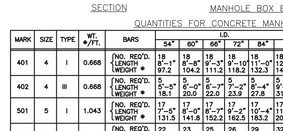
STERLING RANCH EAST
FILING NO. 3
DETAIL SHEET

DESIGNED BY	MAW	SCALE	DATE 3/01/2024
DRAWN BY	ESO	(H) 1"= 5'	SHEET 34 OF 35
CHECKED BY		(V) 1"= N/A	JOB NO. 1183.33

N:\1183\33\DRAWINGS\CONSTRUCTION\1833-DET-34.dwg, 7/17/2024 10:34:00 AM, 1:1

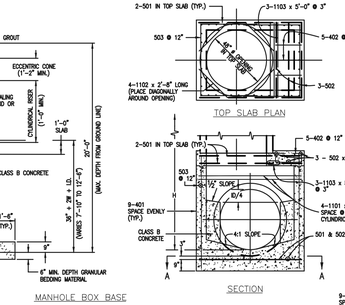


SECTION



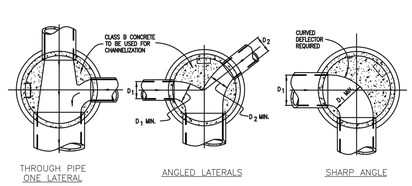
MANHOLE BOX BASE

PLAN



SECTION

TOP SLAB PLAN

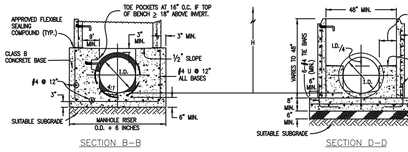


THROUGH PIPE ONE LATERAL

ANGLED LATERALS

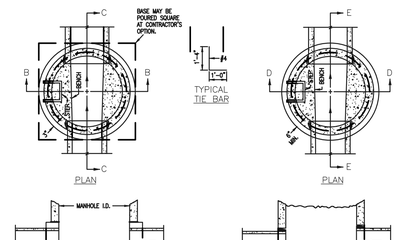
SHARP ANGLE

TYPICAL CHANNELIZATION DETAILS



SECTION B–B

SECTION D–D



PLAN

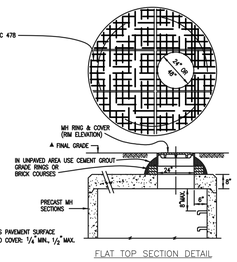
PLAN

SECTION C–C

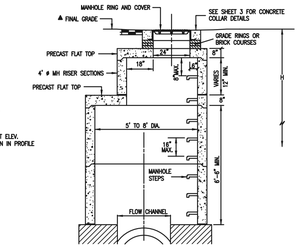
CAST–IN–PLACE SLAB BASE

SECTION E–E

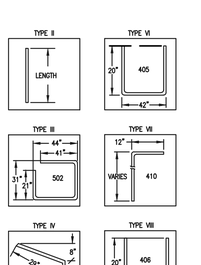
PRECAST SLAB BASE



FLAT TOP SECTION DETAIL



MANHOLE SLAB BASE



BAR BENDING DIAGRAMS ~ (Dimensions are Out-to-Out of bar)

QUANTITIES FOR CONCRETE MANHOLE BOX BASE

MARK	SIZE	TYPE	WT. #/FT.	BARS	I.D. 54"	60"	66"	72"	84"	96"	FORMULAS
401	4	I	0.668	(NO. REQ'D. LENGTH WEIGHT ◆	18 8'-1" 97.2	18 8'-8" 104.2	18 9'-3" 111.2	18 9'-10" 118.2	18 11'-3" 132.3	18 12'-8" 146.3	401 BAR LENGTH = 32"+2W+I.D.
402	4	III	0.668	(NO. REQ'D. LENGTH WEIGHT ◆	5 5'-5" 18.1	5 6'-0" 20.0	5 6'-7" 22.0	5 7'-2" 23.9	5 8'-4" 27.8	5 9'-6" 31.7	402 BAR LENGTH = I.D. + 2W
501	5	I	1.043	(NO. REQ'D. LENGTH WEIGHT ◆	17 7'-5" 131.5	17 8'-0" 141.8	17 8'-7" 152.2	17 9'-2" 162.5	17 10'-4" 183.2	17 11'-6" 203.9	501 BAR LENGTH = 24" + I.D. + 2W
502	5	I	1.043	(NO. REQ'D. LENGTH WEIGHT ◆	22 5'-0" 114.7	23 5'-0" 119.9	25 5'-0" 130.4	26 5'-0" 135.6	29 5'-0" 151.2	32 5'-0" 166.9	502 NUMBER BARS REQ'D. = 3 + (24+I.D.+2W / 6" +1)
503	5	II	1.043	(NO. REQ'D. LENGTH WEIGHT ◆	16 12'-10" 214.2	16 13'-5" 223.9	18 14'-0" 252.8	18 14'-7" 273.8	20 15'-9" 328.5	24 16'-1" 423.5	503 NUMBER BARS REQ'D. = 2 (13+I.D.+2W / 12" +1) BAR LENGTH = 4'-9"+2(16+W+I.D./2)
504	5	I	1.043	(NO. REQ'D. LENGTH WEIGHT ◆	12 8'-1" 101.2	14 8'-8" 126.6	14 9'-3" 135.1	16 9'-10" 164.1	18 11'-0" 206.5	20 12'-2" 253.8	504 NUMBER BARS REQ'D. = 2 (2W+I.D.+4 / 12" +1) BAR LENGTH = 32"+2W+I.D.
1101	11	I	5.313	(NO. REQ'D. LENGTH WEIGHT ◆	4 7'-2" 152.3	4 7'-9" 164.7	4 8'-4" 177.1	4 8'-11" 189.5	4 10'-1" 214.3	4 11'-3" 239.1	1101 BAR LENGTH = 21" + I.D. + 2W
1102	11	I	5.313	(NO. REQ'D. LENGTH WEIGHT ◆	4 2'-8" 56.7	4 2'-8" 56.7	4 2'-8" 56.7	4 2'-8" 56.7	4 2'-8" 56.7	4 2'-8" 56.7	BENDING TYPE I STRAIGHT
1103	11	I	5.313	(NO. REQ'D. LENGTH WEIGHT ◆	3 5'-0" 79.7	3 5'-0" 79.7	3 5'-0" 79.7	3 5'-0" 79.7	3 5'-0" 79.7	3 5'-0" 79.7	TYPE II 4'-9" 16"+W+I.D./2
REINFORCING STEEL TOTAL ◆					985.6	1,037.5	1,127.2	1,204.0	1,380.2	1,601.6	TYPE III 12" 12" I.D.+2W-38
CONCRETE ~ CUBIC YARDS ~ TOTAL					6.0	6.6	7.3	8.0	9.5	11.1	

NOTE: QUANTITIES ARE BASED ON SAME SIZE PIPE ENTRANCE TO AND EXIT FROM, BASE AND A 4 FT. MANHOLE ENTRANCE INTO TOP SLAB OF BASE.

GENERAL NOTES

1. SINCE ALL PIPE ENTRIES INTO THE BASE ARE VARIABLE, THE DIMENSIONS SHOWN ARE TYPICAL. ACTUAL DIMENSIONS AND QUANTITIES FOR CONCRETE AND REINFORCEMENT SHALL BE AS REQUIRED IN THE WORK.
2. THE PRECAST FLAT TOP MAY BE USED ON ANY MANHOLE. THE ECCENTRIC CONE MAY BE USED WHEN THE MANHOLE "H" HEIGHT IS AT LEAST 8 FT.
3. THE MH RING (FRAME) SHALL BE SET IN A BED OF GROUT. THE FRAME SHALL BE SURROUNDED WITH A CEMENT GROUT IN UNPAVED AREA, OR A CONCRETE COLLAR IN PAVED AREA. SEE DETAILS ON SHEETS 2 AND 3.
4. DESIGN OF BOX BASE IS BASED ON STRAIGHT RUNS OF CONDUIT OR CHANGE IN DIRECTION OF LESS THAN 45°. SPECIAL DESIGN IS REQUIRED FOR 45° OR GREATER.
5. PRECAST MANHOLES AND REINFORCEMENT SHALL CONFORM TO ASTM C 478 (AASHTO M 199).
6. CAST–IN–PLACE MANHOLES SHALL BE CLASS B CONCRETE.
7. STEPS SHALL BE REQUIRED WHEN THE MANHOLE DEPTH EXCEEDS 3 FT.–6 IN. AND SHALL BE IN ACCORDANCE WITH AASHTO M 199.
8. ALL REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 60,000 PSI. VERTICAL STEEL SHALL BE PLACED AT ℄ OF WALL. ALL BARS SHALL HAVE A 2 IN.MINIMUM CLEARANCE.
9. ALL PIPE ENTRIES INTO THE BASE OF MANHOLE SHALL BE CONNECTED BY OPEN CHANNELIZATION ADJUSTED FOR PIPE SIZE, SHAPE, TYPE, AND DIRECTION OF FLOW. DETAILS SHOWN ARE TYPICAL FOR INSTALLATIONS WITH ALL INVERTS OF SAME RELATIVE ELEVATION. FOR EXCESSIVE ELEVATION DIFFERENCE BETWEEN INVERTS, SPECIAL BASE/CHANNEL DETAILS WILL BE SHOWN ON THE PLANS.
10. FLOW CHANNELS AND INVERTS SHALL BE FORMED BY SHAPING WITH CLASS B CONCRETE OR APPROVED GROUT.
11. STUB–OUTS SHALL EXTEND 2 FT. MINIMUM BEYOND OUTSIDE WALL SURFACE OF MANHOLE AND BE SATISFACTORILY PLUGGED.
12. CHECK WITH THE LOCAL GOVERNMENT AUTHORITY FOR ANY ADDITIONAL SANITARY SEWER SPECIFICATIONS, DETAILS, OR REGULATIONS.
13. THE SLOPE OF THE MANHOLE COVER SHALL MATCH THE ROADWAY PROFILE AND CROSS SLOPE.

LEGEND

SUITABLE SUBGRADE

GRANULAR BEDDING MATERIAL

CONCRETE

PRECAST MANHOLE BASES:

1. THE BASE SLAB SHALL BE POURED MONOLITHICALLY WITH BOTTOM RISER SECTION.
2. PRECAST MANHOLE BASES SHALL FIT THE CONDITIONS AND LOCATIONS FOR WHICH THEY ARE INTENDED WITHOUT ANY FIELD MODIFICATIONS. ANY MANHOLE BASE WHICH REQUIRES FIELD CUTTING OR MODIFICATION IN ORDER TO FIT THE LOCATIONS INTENDED WILL BE REJECTED BY THE ENGINEER AND REMOVED AND REPLACED BY THE CONTRACTOR AT NO COST TO THE DEPARTMENT.
3. PRECAST MANHOLE BASES SHALL BE BEDDED ON AN APPROVED GRANULAR BEDDING MATERIAL AS SHOWN ABOVE.

CDOT MANHOLES
STD. PLAN NO: M–604–20

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

MARK	DIA IN.	O.C. SPACING	TYPE	ALL INLETS L = 5'		INLETS. H ≤ 5' 10'		15'		INLETS. H > 5' 10'		15'	
				NO.REQ'D.	LENGTH	NO.REQ'D.	LENGTH	NO.REQ'D.	LENGTH	NO.REQ'D.	LENGTH	NO.REQ'D.	LENGTH
401		11"	II	15	*	21	*	26	*	11	*	11	*
402		11"	II	7	*	13	*	18	*	7	*	7	*
403		9 "	II	*	4'-10"	*	4'-0"	*	4'-0"	*	4'-0"	*	4'-10"
405		6 "	VI	11	6'-10"	21	6'-10"	31	6'-10"	11	6'-10"	11	6'-10
406		6 "	VIII	7	8'-10"	7	13'-10"	7	18'-10"	7	8'-10"	7	8'-10"
407	1/2"	9 "	II	*	5'-10"	*	10'-10	*	15'-10"	*	5'-10"	*	5'-10"
408		12"	II	3	6'-10"	3	11'-0"	3	16'-0"	3	11'-0"	3	16'-0"
409		8 "	II	6	5'-10"	6	10'-10"	6	15'-10"	6	10'-10"	6	15'-10"
410		11"	VII							3	*	3	*
411		11"	II							3	5'-2"	3	10'-2"
412		11"	II							3	2'-9"	3	2'-9"
413		9 "	II							7	10'-10"	7	15'-10"
501		5½"	IV	11	3'-4"	22	3'-4"	33	3'-4"	22	3'-4"	33	3'-4"
502	5/8"	5½"	III							11	11'-5"	17	11'-5"
503		5½"	II	5	3'-6"	16	3'-6"	27	3'-6"	6	3'-6"	6	3'-6"
504		5½"	IX									5	8'-4"
601	3/4"	2½"	V	2	8'-10"	2	8'-10"	2	8'-10"	2	8'-10"	4	8'-10"
ø8(8.5				1	5'-10"	1	10'-10"	1	15'-10"	1	10'-10"	1	15'-10"
				2BARS,1ROD	——	4BARS,3RODS	——	5BARS,5RODS	——	4BARS,3RODS	——	5BARS,5RODS	——

REGULAR INLETS | DROP BOX INLETS

* VARIABLE, REFER TO TABLE TWO.
◆ INCLUDE 18" NO. 4 BARS (SEE CHANNEL LAYOUT DETAIL).
▼ SEE CURB FACE ASSEMBLY ON SHEET 1 AND CHANNEL LAYOUT DETAILS ON THIS SHEET.

TABLE TWO ~ BARS AND QUANTITIES VARIABLE WITH "H"

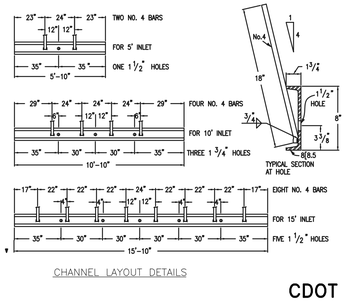
'H'	LENGTH 401	402	410	NO. REQ'D. REGULAR 403	407	NO. REQ'D. DROP BOX 403	407	L=5' CU.YD.CONC.	LB.STEEL	L=10' CU.YD.CONC.	LB.STEEL	L=15' CU.YD.CONC.	LB.STEEL
3'-0"	2'-8"	1'-8"		10	7			3.2	285	5.3	497	7.4	706
3'-6"	3'-2"	2'-2"		10	7			3.4	305	5.7	528	7.9	747
4'-0"	3'-8"	2'-8"		12	9			3.7	326	6.0	559	8.4	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

NOTE: FOR L=5', L=10' AND L=15' REGULAR INLETS: TOTAL QUANTITIES NEEDED ARE OUTSIDE OF THE HEAVY BLACK LINE.
DROP BOX INLETS: TOTAL QUANTITIES NEEDED ARE INSIDE OF THE HEAVY BLACK LINE

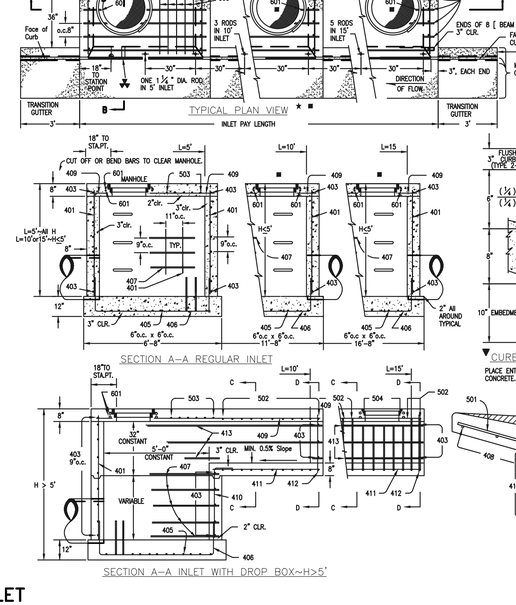
STEEL WEIGHTS DO NOT INCLUDE STRUCTURAL STEEL.

GENERAL NOTES

1. ALL CONCRETE SHALL BE CLASS B.
2. CONCRETE WALLS SHALL BE FORMED ON BOTH SIDES AND SHALL BE 8 IN. THICK.
3. INLET STEPS SHALL BE IN ACCORDANCE WITH AASHTO M 199.
4. CURB FACE ASSEMBLY SHALL BE GALVANIZED AFTER WELDING.
5. EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED ¾ IN. 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 IN. MINIMUM CLEARANCE. ALL REINFORCING BARS SHALL BE 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 CONFORMING TO 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 CONFORM TO THE REQUIREMENTS OF 712.06.



CHANNEL LAYOUT DETAILS



CDOT TYPE R INLET
STD. PLAN NO: M–604–12

48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS
811
UTILITY NOTIFICATION CENTER OF COLORADO
IT'S THE LAW

THE LOCATIONS OF EXISTING 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 UNDERGROUND UTILITIES.

NO.	REVISION	DATE
6		

REVIEW:

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

MARC A. WHORTON, COLORADO P.E. #37155 DATE

CLASSIC SM CONSULTING ENGINEERS & SURVEYORS

619 N. Cascade Avenue, Suite 200 (719)785–0790
Colorado Springs, Colorado 80903 (719)785–0799(Fax)

STERLING RANCH EAST
FILING NO. 3
DETAIL SHEET

CLASSIC CONSULTING ENGINEERS & SURVEYORS

DESIGNED BY	MAW	SCALE	DATE 3/01/2024
DRAWN BY	ESO	(H) 1"= 5'	SHEET 35 OF 35
CHECKED BY		(V) 1"= N/A	JOB NO. 1183.33

N:\1183.33\DRAWINGS\CONSTRUCTION\1183.33-DET-35.dwg, 7/17/2024 10:36:37 AM, 1:1