FOURSQUARE AT STERLING RANCH EAST FILING NO. 1

COUNTY OF EL PASO, STATE OF COLORADO

CONSTRUCTION PLANS

NOVEMBER 2022

(SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST)

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 DPW. 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 DPW.
10. CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY DPW 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.
16. SIDEWALK TO BE 6" AT DRIVEWAY LOCATIONS.

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 DEPARTMENT OF PUBLIC WORKS.
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 DEPARTMENT OF PUBLIC WORKS (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:

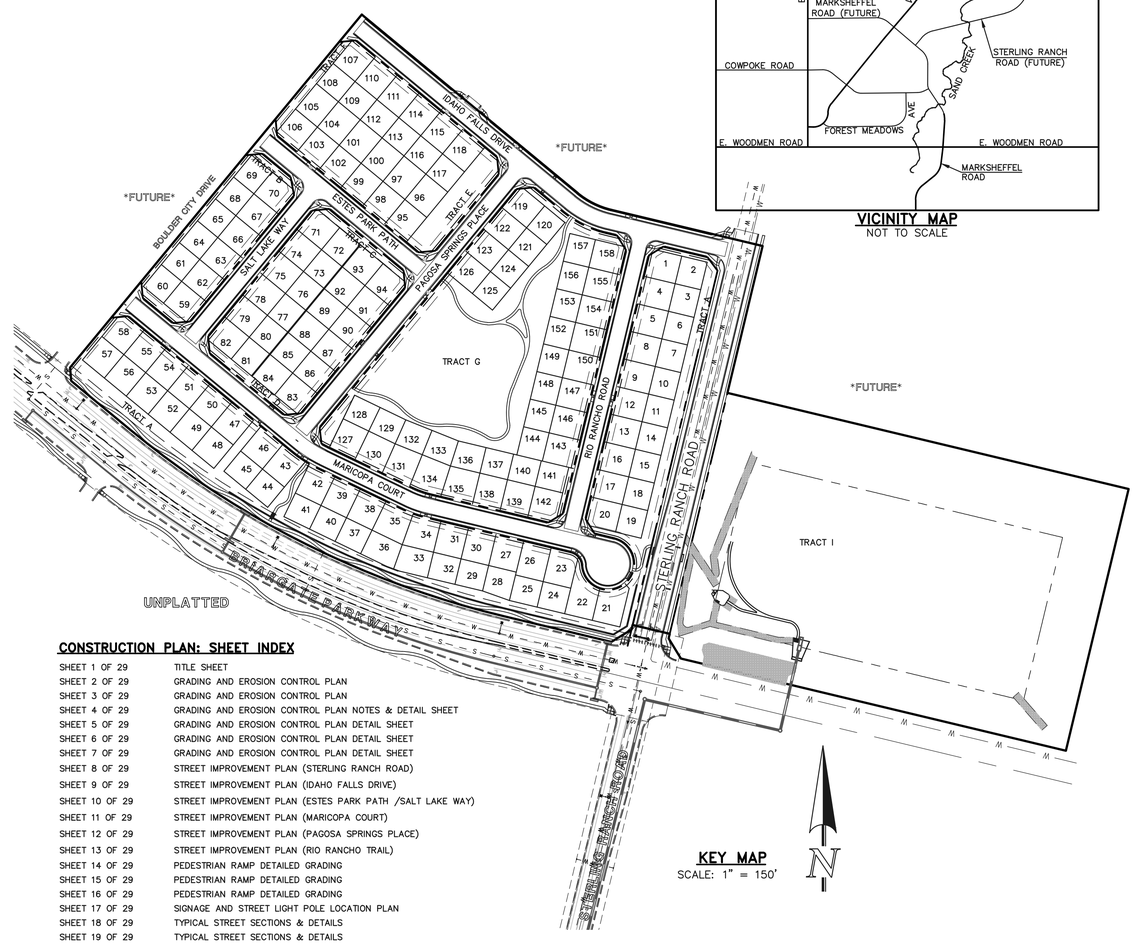
A. A
ELEV. = 7

A
ELEV. = 7

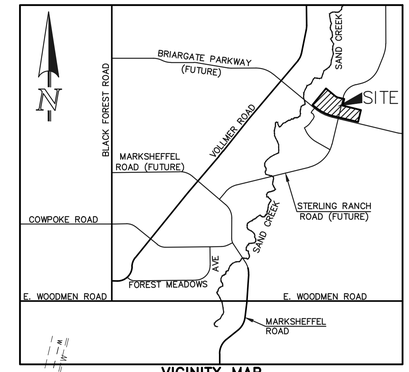
B.

Unresolved:
Fill in information for benchmarks and include basis of bearings.

ADDED BENCHMARKS



KEY MAP
SCALE: 1" = 150'



VICINITY MAP
NOT TO SCALE

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 ENGINEERS & SURVEYORS 619 N. CASCADE AVENUE, SUITE 200 COLORADO SPRINGS, CO 80903 MR. KYLE R. CAMPBELL, P.E. (719) 785-2800
COUNTY ENGINEERING:	EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, CO 80910 MR. JEFF RICE, (719) 520-7877
WATER & SANITATION DISTRICT:	STERLING RANCH METROPOLITAN DISTRICT
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

CONSTRUCTION PLAN: SHEET INDEX

SHEET 1 OF 29	TITLE SHEET
SHEET 2 OF 29	GRADING AND EROSION CONTROL PLAN
SHEET 3 OF 29	GRADING AND EROSION CONTROL PLAN
SHEET 4 OF 29	GRADING AND EROSION CONTROL PLAN NOTES & DETAIL SHEET
SHEET 5 OF 29	GRADING AND EROSION CONTROL PLAN DETAIL SHEET
SHEET 6 OF 29	GRADING AND EROSION CONTROL PLAN DETAIL SHEET
SHEET 7 OF 29	GRADING AND EROSION CONTROL PLAN DETAIL SHEET
SHEET 8 OF 29	STREET IMPROVEMENT PLAN (STERLING RANCH ROAD)
SHEET 9 OF 29	STREET IMPROVEMENT PLAN (IDAHO FALLS DRIVE)
SHEET 10 OF 29	STREET IMPROVEMENT PLAN (ESTES PARK PATH /SALT LAKE WAY)
SHEET 11 OF 29	STREET IMPROVEMENT PLAN (MARICOPA COURT)
SHEET 12 OF 29	STREET IMPROVEMENT PLAN (PAGOSA SPRINGS PLACE)
SHEET 13 OF 29	STREET IMPROVEMENT PLAN (RIO RANCHO TRAIL)
SHEET 14 OF 29	PEDESTRIAN RAMP DETAILED GRADING
SHEET 15 OF 29	PEDESTRIAN RAMP DETAILED GRADING
SHEET 16 OF 29	PEDESTRIAN RAMP DETAILED GRADING
SHEET 17 OF 29	SIGNAGE AND STREET LIGHT POLE LOCATION PLAN
SHEET 18 OF 29	TYPICAL STREET SECTIONS & DETAILS
SHEET 19 OF 29	TYPICAL STREET SECTIONS & DETAILS
SHEET 20 OF 29	STORM SEWER PLAN & PROFILE (MAIN 1)
SHEET 21 OF 29	STORM SEWER PLAN & PROFILE (MAIN 2)
SHEET 22 OF 29	STORM SEWER PLAN & PROFILE (MAIN 1 LATERALS)
SHEET 23 OF 29	PRIVATE EXTENDED DETENTION BASIN PLAN SET
SHEET 24 OF 29	FOREBAY DETAILS
SHEET 25 OF 29	OUTLET BOX DETAILS
SHEET 26 OF 29	OUTLET BOX DETAILS
SHEET 27 OF 29	OUTLET BOX DETAILS
SHEET 28 OF 29	DETAILS SHEET
SHEET 29 OF 29	DETAILS SHEET

UTILITY CONSTRUCTION PLAN: SHEET INDEX

TITLE SHEET	SHEET 1 OF 11
SANITARY SEWER PLAN – STERLING RANCH ROAD	SHEET 2 OF 11
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SANITARY SEWER PLAN – RIO RANCHO TRAIL	SHEET 4 OF 11
SANITARY SEWER PLAN – PAGOSA SPRINGS PLACE / IDAHO FALLS DRIVE	SHEET 5 OF 11
SANITARY SEWER PLAN – SALT LAKE WAY	SHEET 6 OF 11
SANITARY SEWER PLAN – ESTES PARK PATH	SHEET 7 OF 11
PUBLIC 8" PVC WATER SYSTEM PLAN	SHEETS 8–9 OF 11
UTILITY SERVICE PLAN	SHEETS 10–11 OF 11

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.

DAVID L GIBSON, COLORADO P.E. #46477 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.

COUNTY ENGINEER / ECM ADMINISTRATOR DATE

EDARP FILE # SF2236

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:

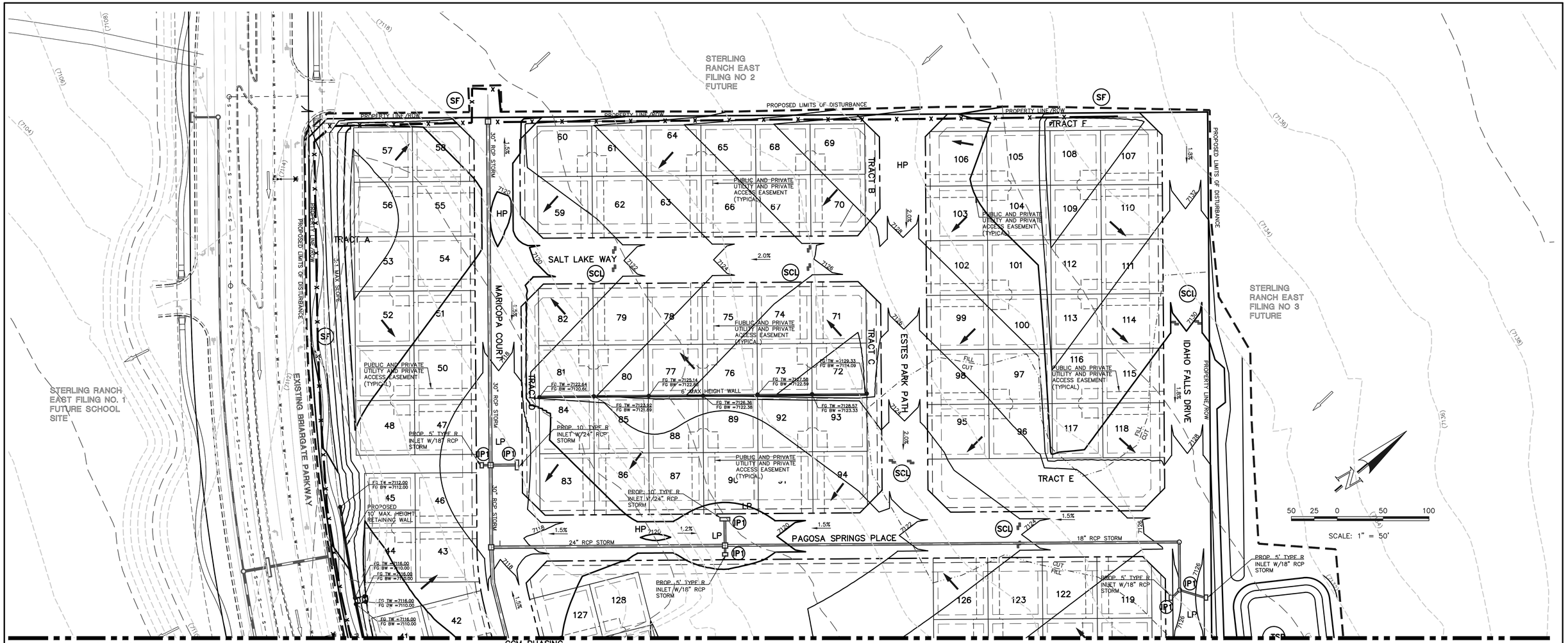
PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

DAVID L GIBSON, COLORADO P.E. #46477 DATE

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

FOURSQUARE AT STERLING RANCH EAST FILING NO. 1
CONSTRUCTION PLANS
TITLE SHEET

DESIGNED BY	JRH	SCALE		DATE	09/19/22
DRAWN BY	JRH	(H) 1"=	N/A	SHEET 1	OF 29
CHECKED BY		(V) 1"=	N/A	JOB NO.	1183.23



LEGEND

(7700)	EXISTING CONTOUR
7700	PROPOSED CONTOUR
	PROPOSED LIMITS OF GRADING/ CONSTRUCTION SITE BOUNDARY
	BOUNDARY/R.O.W. LINE
	EXISTING FLOW DIRECTION
	PROPOSED FLOW
	PROPOSED INLET
	PROPOSED STORM SEWER PIPE
HP	PROPOSED HIGH POINT
LP	PROPOSED LOW POINT

CONCRETE WASHOUT AREA, MULCHING, SEEDING, STABLIZED STAGING AREA, AND STOCKPILE MANAGEMENT TO BE DETERMINED BY THE CONTRACTOR

CCM 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)
MU	MULCHING	(INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)
TS	TEMPORARY SEEDING	(INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)
CWA	CONCRETE WASHOUT AREA	(INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)
SP	STOCKPILE MANAGEMENT	(INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)
SSA	STABILIZED STAGING AREA	(INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)

MATCHLINE (SEE SHEET 3)

RS	ROCK SOCK	(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.

NOTES:

THE SITE HAS BEEN PREVIOUSLY DISTURBED WITH MASS GRADING OPERATIONS AND VEGETATION IS SPARSE AND OF NATURAL GRASSLAND CONSISTENCY (NO TREES OR SHRUBS).

48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS
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NO.	REVISION	DATE

REVIEW:

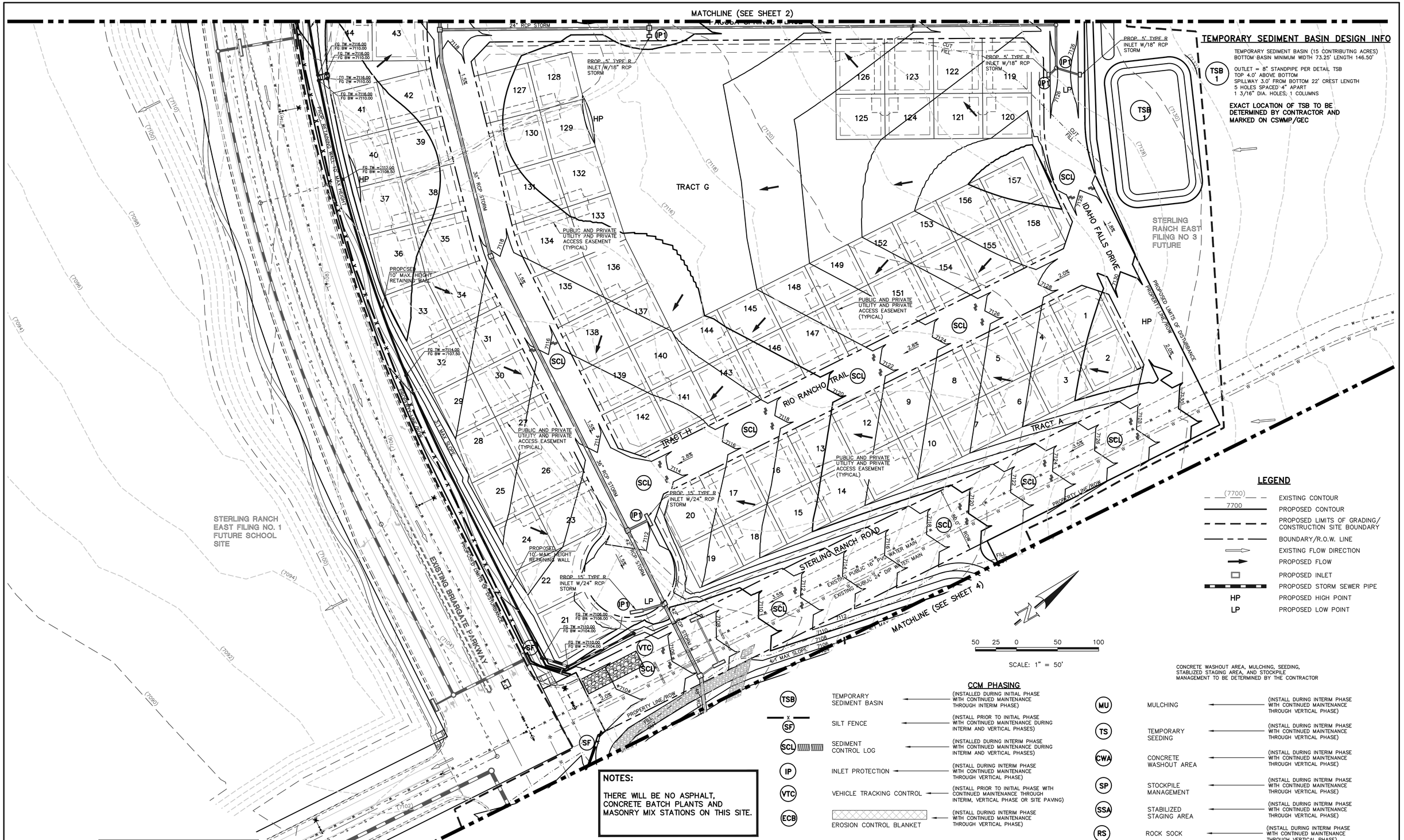
PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

DAVID L GIBSON, COLORADO P.E. #46477 DATE

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

FOURSQUARE AT STERLING RANCH EAST FILING NO. 1
GRADING AND EROSION CONTROL PLAN

DESIGNED BY	DLG	SCALE	DATE	11-30-22
DRAWN BY	DLG	(H) 1"=	SHEET	2 OF 29
CHECKED BY		(V) 1"=	JOB NO.	1183.23



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NO.	REVISION	DATE

REVIEW:

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DAVID L GIBSON, COLORADO P.E. #46477 DATE

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Colorado Springs, Colorado 80903
(719)785-0790
(719)785-0799(Fax)

FOURSQUARE AT STERLING RANCH EAST FILING NO. 1

GRADING AND EROSION CONTROL PLAN

DESIGNED BY	DLG	SCALE	DATE 03-10-23
DRAWN BY	DLG	(H) 1"=	SHEET 3 OF 29
CHECKED BY		(V) 1"=	JOB NO. 1183.23

LEGEND

(7700)	EXISTING CONTOUR
7700	PROPOSED CONTOUR
	PROPOSED LIMITS OF GRADING/ CONSTRUCTION SITE BOUNDARY
	BOUNDARY/R.O.W. LINE
	EXISTING FLOW DIRECTION
	PROPOSED FLOW
	PROPOSED INLET
	PROPOSED STORM SEWER PIPE
HP	PROPOSED HIGH POINT
LP	PROPOSED LOW POINT

CCM 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)
MU	MULCHING	(INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)
TS	TEMPORARY SEEDING	(INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)
CWA	CONCRETE WASHOUT AREA	(INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)
SP	STOCKPILE MANAGEMENT	(INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)
SSA	STABILIZED STAGING AREA	(INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)
RS	ROCK SOCK	(INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)

CONCRETE WASHOUT AREA, MULCHING, SEEDING, STABLIZED STAGING AREA, AND STOCKPILE MANAGEMENT TO BE DETERMINED BY THE CONTRACTOR

Unresolved comment from Review 1: Show location on plans or notate that ECB is to be placed as needed (like on slopes 3:1 or greater).

ADDED NOTE TO INSTALL AS NEEDED ON 3:1 SLOPES OR GREATER

NOTES:

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

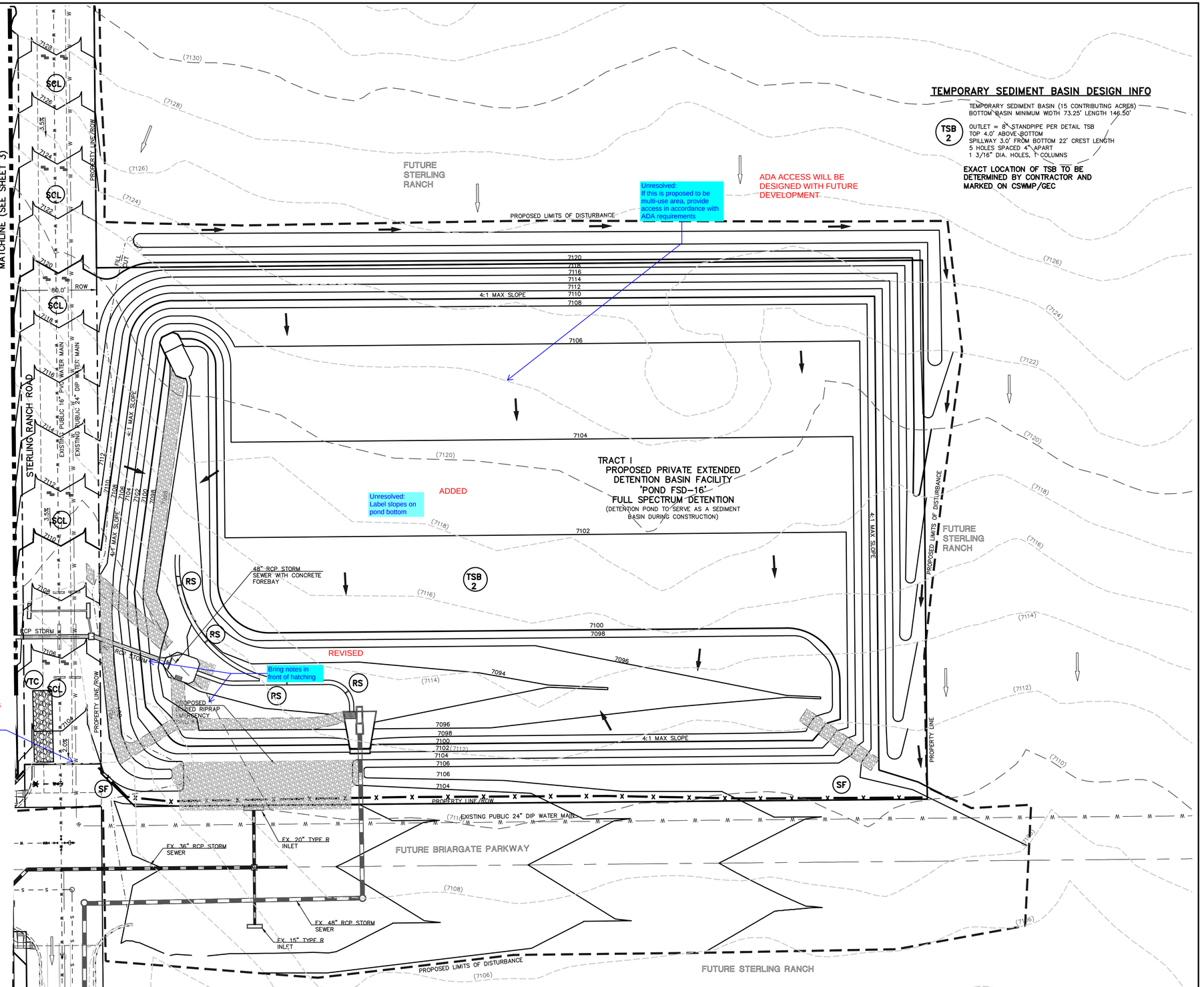
NOTES:

THE SITE HAS BEEN PREVIOUSLY DISTURBED WITH MASS GRADING OPERATIONS AND VEGETATION IS SPARSE AND OF NATURAL GRASSLAND CONSISTENCY (NO TREES OR SHRUBS).

N

50 25 0 50 100

SCALE: 1" = 50'



TEMPORARY SEDIMENT BASIN DESIGN INFO

TEMPORARY SEDIMENT BASIN (15 CONTRIBUTING ACRES)
BOTTOM BASIN MINIMUM WIDTH 73.25' LENGTH 146.50'

TSB 2

OUTLET = 8" STANDPIPE PER DETAIL TSB
TOP 4.0' ABOVE-BOTTOM
SPILLWAY 3.0' FROM BOTTOM 22' CREST LENGTH
5 HOLES SPACED 4" APART
1 3/16" DIA. HOLES, 1 COLUMNS

EXACT LOCATION OF TSB TO BE DETERMINED BY CONTRACTOR AND MARKED ON CSWMP/GEC

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

DAVID L GIBSON, COLORADO P.E. #46477 DATE

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

FOURSQUARE AT STERLING RANCH EAST FILING NO. 1

GRADING AND EROSION CONTROL PLAN

DESIGNED BY	DLG	SCALE	DATE	11-30-22
DRAWN BY	DLG	(H) 1"=	SHEET 4	OF 29
CHECKED BY		(V) 1"=	JOB NO.	1183.23

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

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

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

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

CONSTRUCTION CONTROL MEASURES 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 (SHEETS 2-7) 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

NO PORTIONS OF THE FOURSQUARE AT STERLING RANCH FILING NO. 1 ARE LOCATED WITHIN A FLOODPLAIN AS DETERMINED BY THE FLOOD INSURANCE RATE MAPS (F.I.R.M.) MAP NUMBERS 08041C 05356, EFFECTIVE DATE, DECEMBER 7, 2018

THE AVERAGE SOIL CONDITION REFLECTS HYDROLOGIC SOIL GROUP "A", BLAKELAND LOAMY SAND AND COLUMBINE GRAVELLY 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.

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.

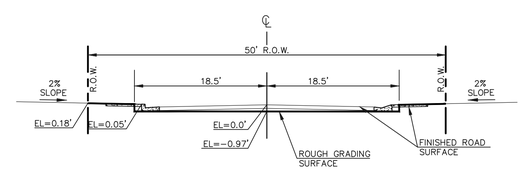
LOCATION OF THE CONCRETE WASHOUT, STORAGE FOR MAINTENANCE EQUIPMENT AND TEMPORARY DISPOSAL AREAS WILL BE ADDED TO THIS PLAN BY SWMP ADMINISTRATOR UPON COORDINATION WITH SELECTED CONTRACTOR.

ALL AREAS ARE TO BE RESEEDED OUTSIDE OF THE FILING NO. 1 AREA. 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'

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

DAVID L GIBSON, COLORADO P.E. #46477 DATE

CLASSIC CONSULTING
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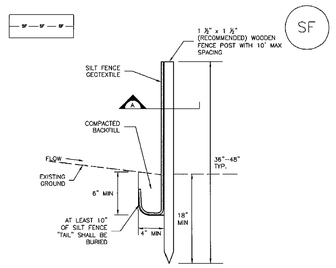
PCD FILE #

FOURSQUARE AT STERLING RANCH EAST FILING NO. 1
GRADING AND EROSION CONTROL PLAN
NOTES & DETAIL SHEET

DESIGNED BY	MES	SCALE	DATE	11-30-22
DRAWN BY	MES	(H) 1"= N/A	SHEET 5	OF 29
CHECKED BY		(V) 1"= N/A	JOB NO.	1183.23

Silt Fence (SF) SC-1



SF–1. SILT FENCE

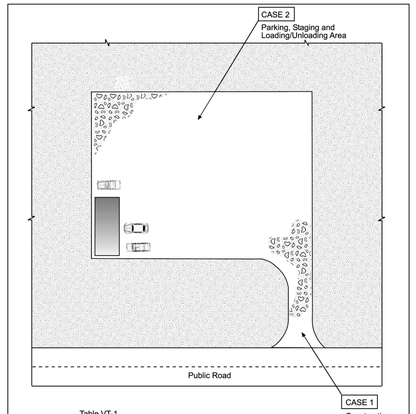


Table VT-1

	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

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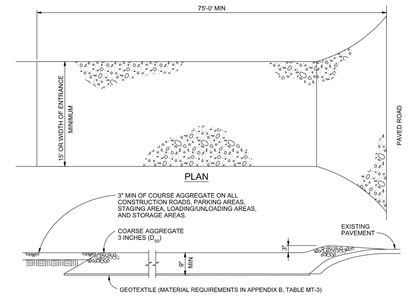


VEHICLE TRACKING
NTS

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.

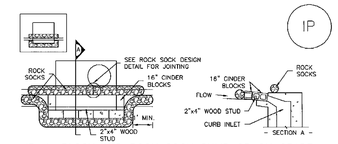
3. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED DAILY BY SHOVELING OR SWEEPING. SEDIMENT IS NOT TO BE WASHED DOWN STORM SEWER DRAINS.

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)



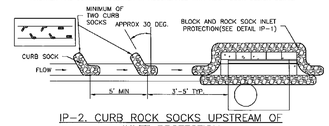
IP–1. BLOCK AND ROCK SOCK SUMP OR ON GRADE INLET PROTECTION

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

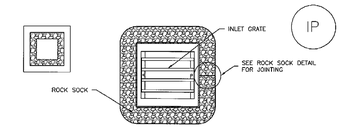
1. SEE ROCK SOCK DESIGN DETAIL INSTALLATION REQUIREMENTS.

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.

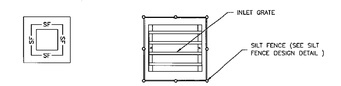
Inlet Protection (IP) SC-6



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

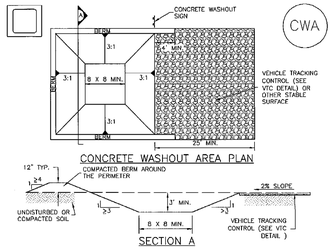
SILT FENCE INLET PROTECTION INSTALLATION NOTES

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 2' 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.

Mulching (MU) EC-4

Description

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.

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

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

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.

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

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.

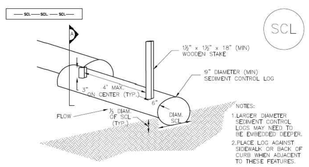
Drill seeding is the preferred seeding method. Hydroseeding is not recommended except in areas where steep slopes prevent use of drill seeding equipment, and even in these instances it is preferable to hand seed and mulch. Some jurisdictions do not allow hydroseeding or hydromulching.

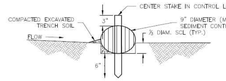
Seedbed Preparation

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

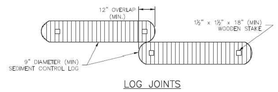
Temporary and Permanent Seeding	
Functions	
Erosion Control	Yes
Sediment Control	No
Site/Material Management	No

Sediment Control Log (SCL) SC-2





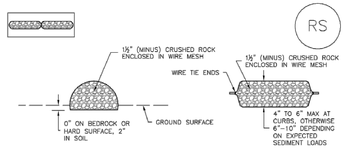
SECTION Ⓐ
TRENCHED SEDIMENT CONTROL LOG



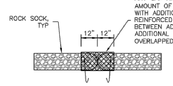
LOG JOINTS

SCL–1. TRENCHED SEDIMENT CONTROL LOG

SC-5 Rock Sock (RS)



ROCK SOCK SECTION ROCK SOCK PLAN



ROCK SOCK JOINTING

ANY GAP AT JOINT SHALL BE FILLED WITH AN ADEQUATE AMOUNT OF 1½" (MINUS) CRUSHED ROCK AND WRAPPED WITH ADDITIONAL WIRE MESH SECURED TO ENDS OF ROCK REINFORCED SOCK. AS AN ALTERNATIVE TO FILLING JOINTS BETWEEN ADJOINING ROCK SOCKS WITH CRUSHED ROCK AND ADDITIONAL WIRE WRAPPING, ROCK SOCKS CAN BE OVERLAPPED (TYPICALLY 12–INCH OVERLAP) TO AVOID GAPS.

GRADATION TABLE	
SIEVE SIZE	MASS PERCENT PASSING SQUARE MESH SIEVES
	NO. 4
2"	100
1½"	90 – 100
1"	20 – 55
¾"	0 – 15
⅜"	0 – 5
MATCHES SPECIFICATIONS FOR NO. 4 COARSE AGGREGATE FOR CONCRETE PER AASHTO M43. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES.	

ROCK SOCK INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
–LOCATION(S) OF ROCK SOCKS.

2. CRUSHED ROCK SHALL BE 1½" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET (1½" MINUS).

3. WIRE MESH SHALL BE FABRICATED OF 10 GAGE POULTRY MESH, OR EQUIVALENT, WITH A MAXIMUM OPENING OF ½", RECOMMENDED MINIMUM ROLL WIDTH OF 48"

4. WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6" CENTERS ALONG ALL JOINTS AND AT 2" CENTERS ON ENDS OF SOCKS.

5. SOME MUNICIPALITIES MAY ALLOW THE USE OF FILTER FABRIC AS AN ALTERNATIVE TO WIRE MESH FOR THE ROCK ENCLOSURE.

RS–1. ROCK SOCK PERIMETER CONTROL

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.

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

DAVID L GIBSON, COLORADO P.E. #46477 DATE

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

FOURSQUARE AT STERLING RANCH EAST FILING NO. 1
GRADING AND EROSION CONTROL PLAN
DETAIL SHEET

DESIGNED BY	DLG	SCALE	DATE	02–24–23
DRAWN BY	DLG	(H) 1"= N/A	SHEET 6 OF 29	
CHECKED BY		(V) 1"= N/A	JOB NO. 1183.30	

Sediment Basin (SB) SC-7

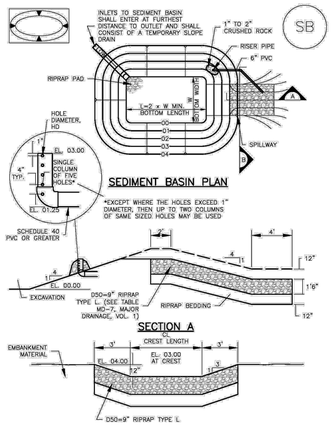


TABLE SB-1. SIZING INFORMATION FOR STANDARD SEDIMENT BASIN			
Upstream Drainage Area (rounded to nearest acre), (ac)	Basin Bottom Width (W), (ft)	Spillway Crest Length (CL), (ft)	Hole Diameter (HD), (in)
1	12 ½	2	9/32
2	21	3	11/64
3	28	5	3/8
4	33 ½	6	13/64
5	38 ½	8	17/32
6	43	9	17/32
7	47 ½	11	17/32
8	51	12	17/32
9	55	13	3/8
10	58 ½	15	11/64
11	61	16	9/32
12	64	18	1
13	67 ½	19	1 1/4
14	70 ½	21	1 3/8
15	73 ½	22	1 11/64

SEDIMENT BASIN INSTALLATION NOTES

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

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

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

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

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

6. PIPE SCH 40 OR GREATER SHALL BE USED.

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

SEDIMENT BASIN MAINTENANCE NOTES

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

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

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

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

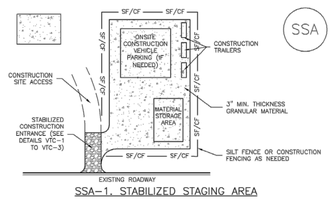
5. SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS ACCEPTED BY THE LOCAL JURISDICTION.

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

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO)

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

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.

STABILIZED STAGING AREA MAINTENANCE NOTES

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

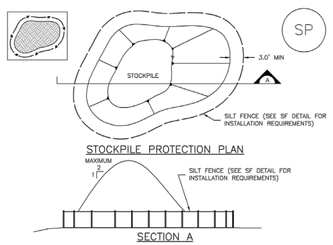
6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

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



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

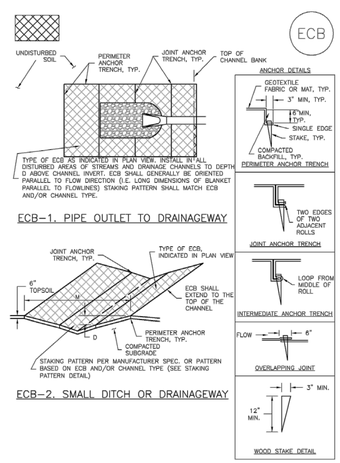
4. IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORKDAY.

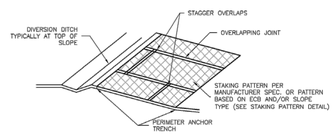
5. STOCKPILE PERIMETER CONTROLS CAN BE REMOVED ONCE ALL THE MATERIAL FROM THE STOCKPILE HAS BEEN USED.

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

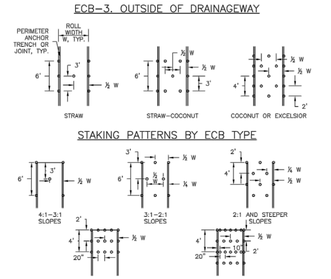
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

EC-6 Rolled Erosion Control Products (RECP)





ECB–3. OUTSIDE OF DRAINAGEWAY



STAKING PATTERNS BY ECB TYPE

STAKING PATTERNS BY SLOPE OR CHANNEL TYPE

EROSION CONTROL BLANKET INSTALLATION NOTES

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

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

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

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

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

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

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

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

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

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

TABLE ECB–1. ECB MATERIAL SPECIFICATIONS				
TYPE	COCONUT CONTENT	STRAW CONTENT	EXCELSIOR CONTENT	RECOMMENDED NETTING**
STRAW*	–	100%	–	DOUBLE/ NATURAL
STRAW–COCONUT	30% MIN	70% MAX	–	DOUBLE/ NATURAL
COCONUT	100%	–	–	DOUBLE/ NATURAL
EXCELSIOR	–	–	100%	DOUBLE/ NATURAL

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

EROSION CONTROL BLANKET MAINTENANCE NOTES

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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.

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

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UTILITY NOTIFICATION CENTER OF COLORADO
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NO.	REVISION	DATE

REVIEW:

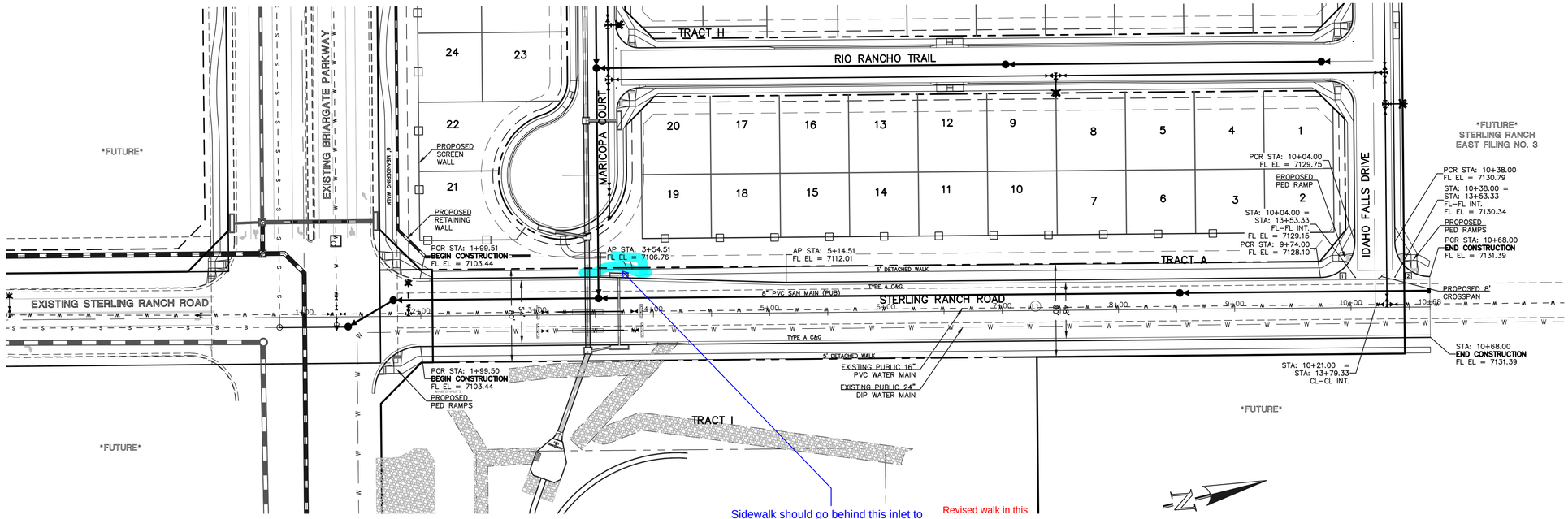
PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

DAVID L GIBSON, COLORADO P.E. #46477 DATE

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

FOURSQUARE AT STERLING RANCH EAST
FILING NO. 1
GRADING AND EROSION CONTROL PLAN
DETAIL SHEET

DESIGNED BY	DLG	SCALE	DATE	02–24–23
DRAWN BY	DLG	(H) 1"= N/A	SHEET 7 OF 29	
CHECKED BY		(V) 1"= N/A	JOB NO.	1183.30



Sidewalk should go behind this inlet to allow for adequate connection to the sidewalk from the west and meet ADA requirements, and / or move the connection further north

Revised walk in this area

STERLING RANCH ROAD (PUBLIC)
(80' R.O.W.)

DESIGN SPEED – 40 mph NON-RESIDENTIAL COLLECTOR

50' 25' 0 50' 100'

SCALE: 1" = 50'

CENTERLINE LINE TABLE		
LINE	LENGTH	BEARING
L1	968.00	N13°28'29"E

CURB CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
1	47.12	30.00	90°00'00"
2	47.12	30.00	90°00'00"

NOTES:

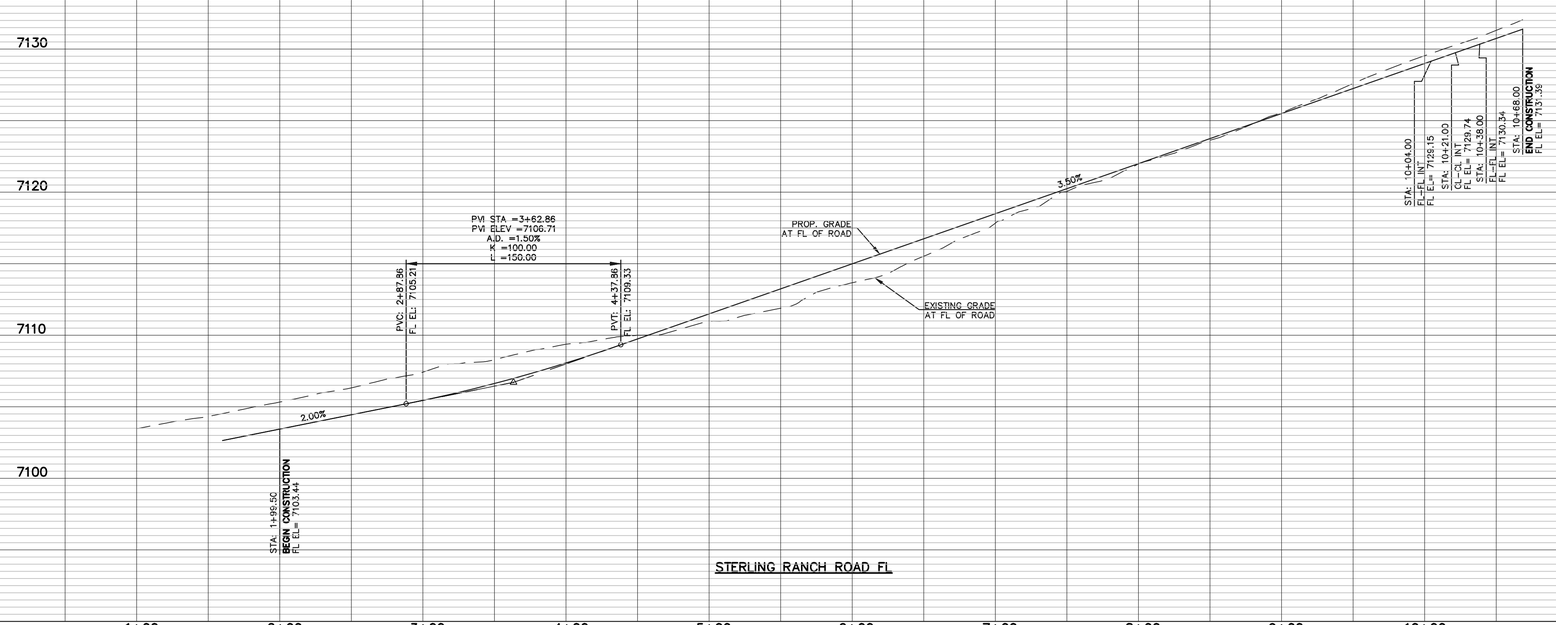
DEVELOPER IS REQUIRED TO CONSTRUCT SIDEWALK ADJACENT TO AND THRU ALL TRACTS AS SHOWN (TYPICAL) THE WIDTH OF THE PEDESTRIAN RAMPS MUST MATCH THE WIDTH OF SIDEWALKS

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.

Removed note

Partially resolved;
2 years per signature block (the statement is not required by EPC)



STERLING RANCH ROAD FL

LEGEND

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

50 25 0 50 100

SCALE: 1" = 50' HORIZ./5' VERT.

WALK CONSTRUCTION:

4" THICK SIDEWALK ALLOWED ALONG OPEN SPACE TRACTS & 'ESTATE LOT' FRONTAGE. 5" THICK SIDEWALK TYPICAL ALONG RESIDENTAL 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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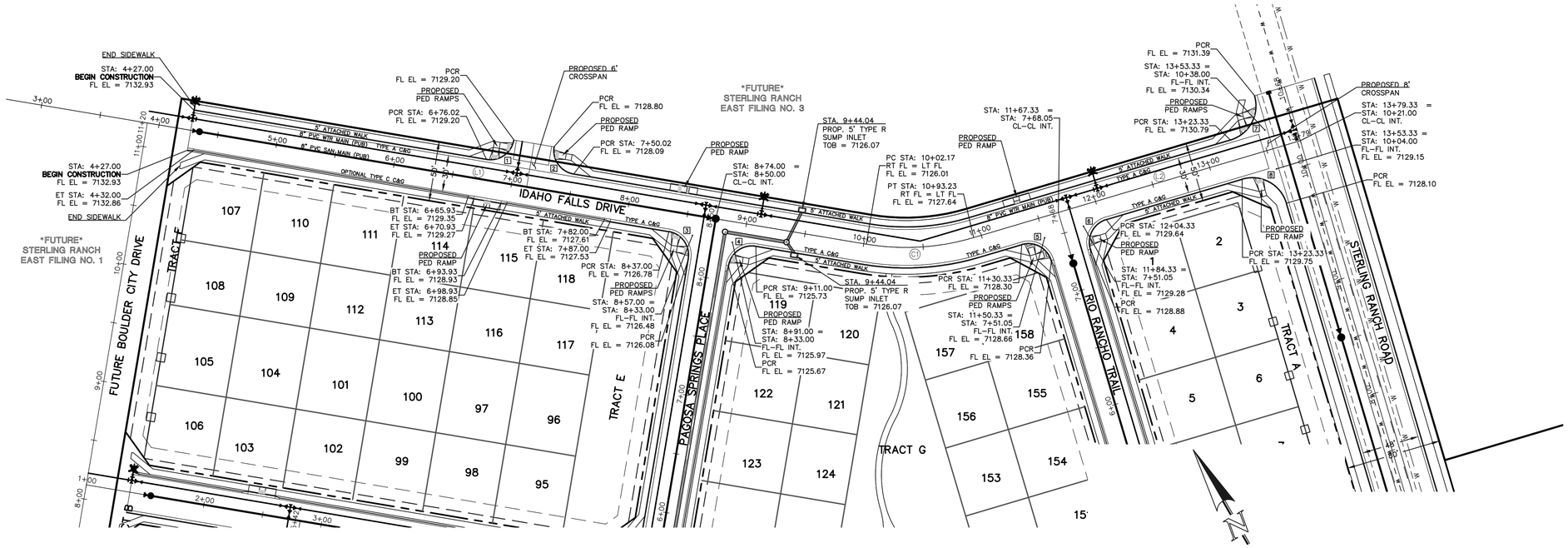
Colorado Springs, Colorado 80903
(719)785-0790
(719)785-0799(Fax)

FOURSQUARE AT STERLING RANCH EAST FILING NO. 1

STREET IMPROVEMENT PLANS

DESIGNED BY	DLG	SCALE	DATE 11-12-22
DRAWN BY	JRH	(H) 1"= 50'	SHEET 8 OF 29
CHECKED BY		(V) 1"= 5'	JOB NO. 1183.23



IDAHO FALLS DRIVE (PUBLIC)
(50' R.O.W.)

DESIGN SPEED – 25 mph URBAN LOCAL

CENTERLINE LINE TABLE		
LINE	LENGTH	BEARING
L1	902.17	S50°26'12"E
L2	286.10	S76°31'31"E

CENTERLINE CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	91.07	200.00	26°05'19"

CURB CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
1	31.42	20.00	90°00'00"
2	31.42	20.00	90°00'00"
3	31.42	20.00	90°00'00"
4	31.42	20.00	90°00'00"
5	31.42	20.00	90°00'00"
6	31.42	20.00	90°00'00"
7	47.12	30.00	90°00'00"
8	47.12	30.00	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:

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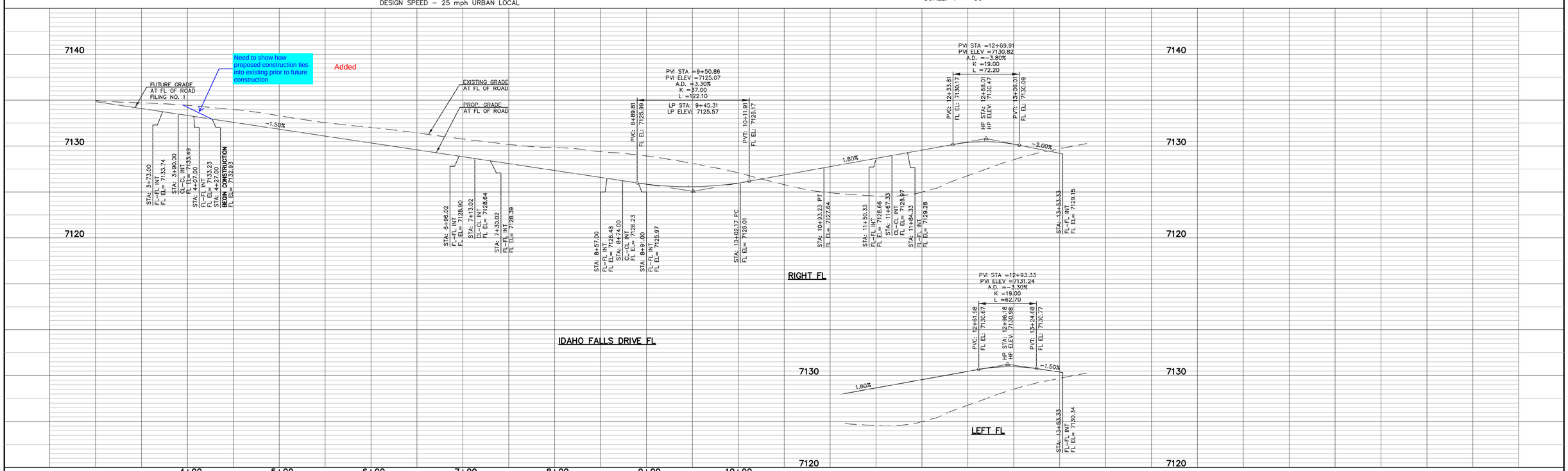

LEGEND

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

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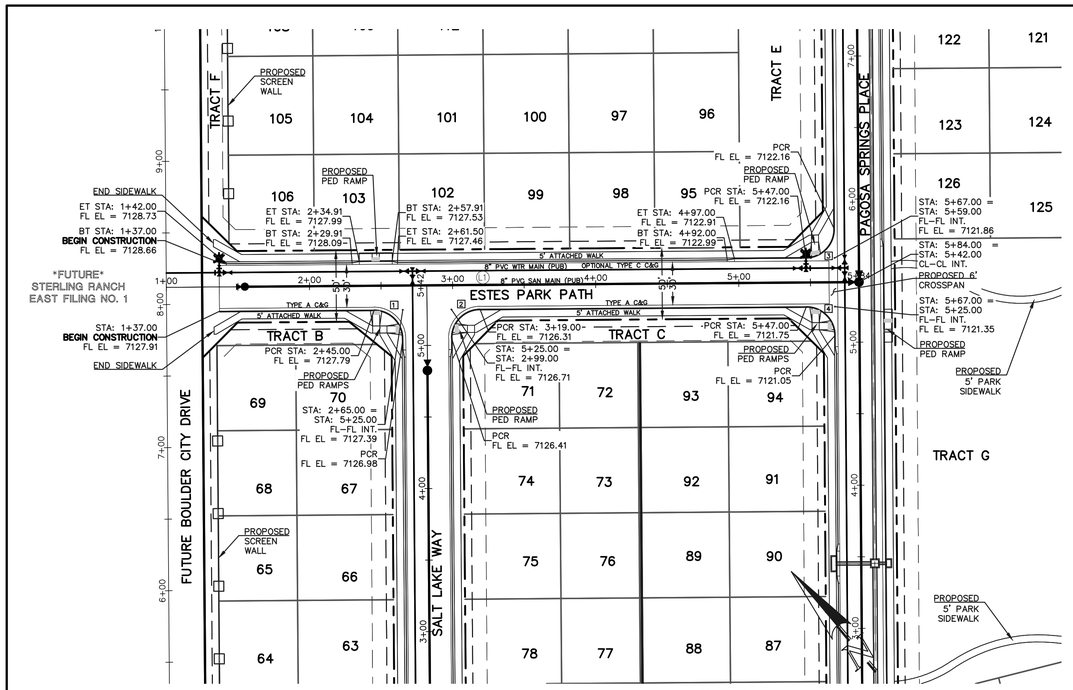
Colorado Springs, Colorado 80903
(719)785-0790
(719)785-0799(Fax)

FOURSQUARE AT STERLING RANCH EAST
FILING NO. 1
STREET IMPROVEMENT PLANS

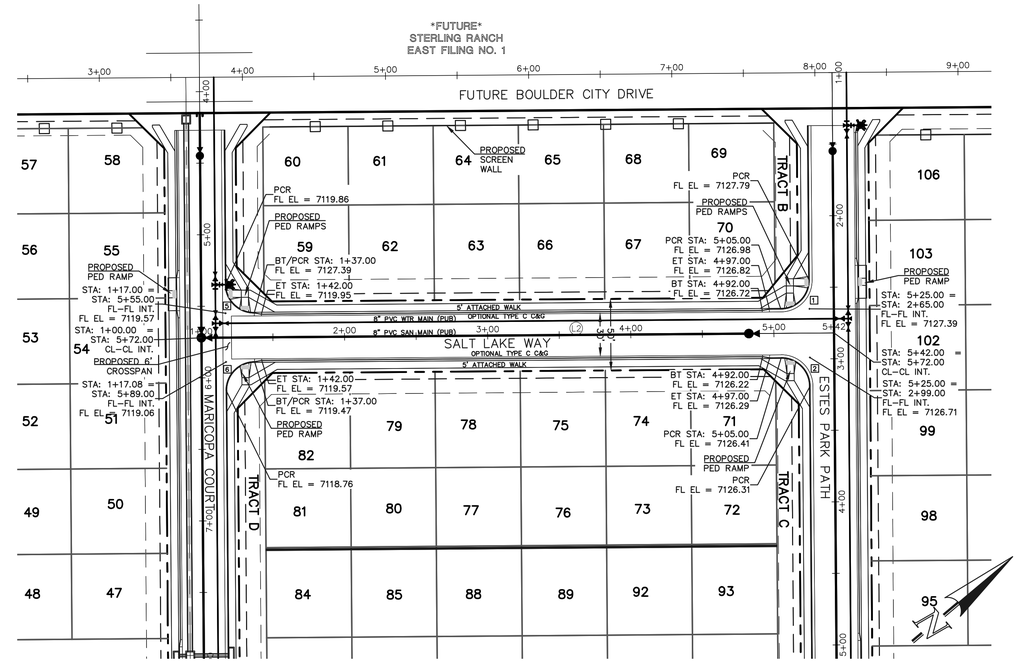
DESIGNED BY	DLG	SCALE		DATE	11-12-22
DRAWN BY	JRH	(H) 1"= 50'		SHEET 9	OF 29
CHECKED BY		(V) 1"= 5'		JOB NO.	1183.23



ESTES PARK (PUBLIC)
(50' R.O.W.)

DESIGN SPEED – 25 mph URBAN LOCAL

SCALE: 1" = 50'



SALT LAKE (PUBLIC)
(50' R.O.W.)

DESIGN SPEED – 25 mph URBAN LOCAL

SCALE: 1" = 50'

CENTERLINE LINE TABLE		
LINE	LENGTH	BEARING
L1	484.00	S50°26'12"E
L2	442.00	N39°33'48"E

CURB CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
1	31.42	20.00	90°00'00"
2	31.42	20.00	90°00'00"
3	31.42	20.00	90°00'00"
4	31.42	20.00	90°00'00"
5	31.42	20.00	90°00'00"
6	31.42	20.00	90°00'00"

NOTES:

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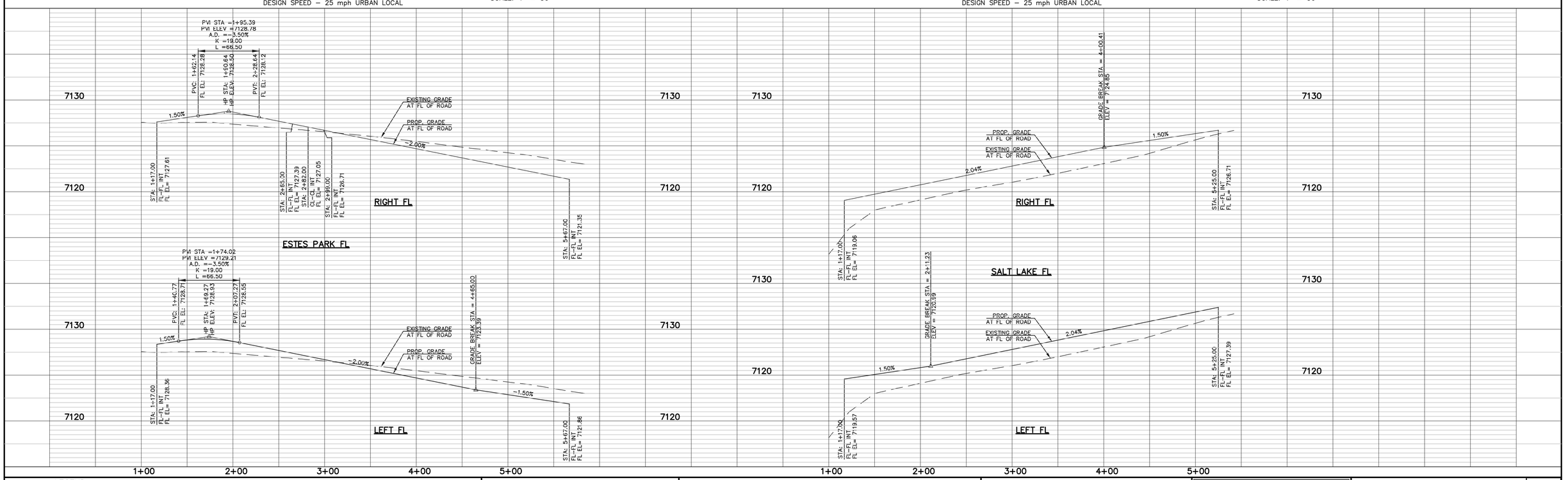

LEGEND

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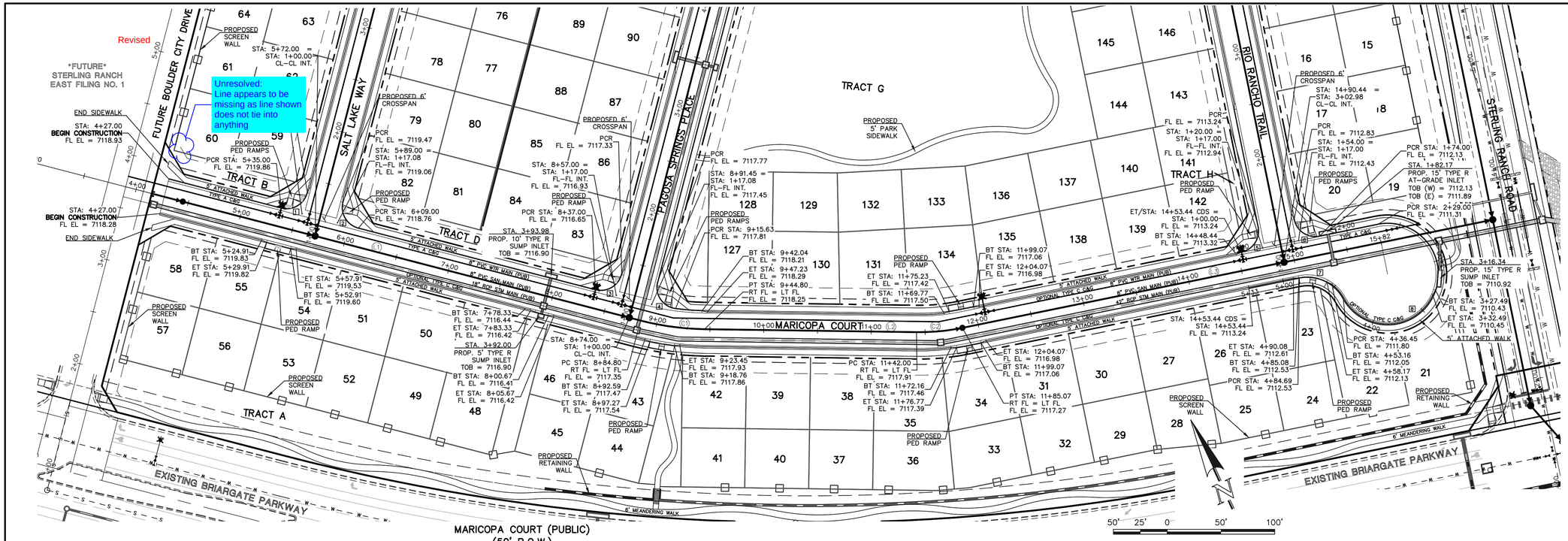
(719)785-0799(Fax)

FOURSQUARE AT STERLING RANCH EAST FILING NO. 1

STREET IMPROVEMENT PLANS

DESIGNED BY	DLG	SCALE		DATE	11-12-22
DRAWN BY	JRH	(H) 1"= 50'		SHEET 10	OF 29
CHECKED BY		(V) 1"= 5'		JOB NO.	1183.23



CENTERLINE LINE TABLE		
LINE	LENGTH	BEARING
L1	784.80	S50°26'12"E
L2	197.20	S64°11'17"E
L3	397.37	S76°31'31"E

CENTERLINE CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	60.00	250.00	13°45'05"
C2	43.07	200.00	12°20'14"

CURB CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
1	31.42	20.00	90°00'00"
2	31.42	20.00	90°00'00"
3	31.42	20.00	90°00'00"
4	33.88	20.00	97°03'54"
5	31.42	20.00	90°00'00"
6	31.42	20.00	90°00'00"
7	48.35	38.00	72°53'43"
8	207.45	47.00	252°53'43"

NOTES:

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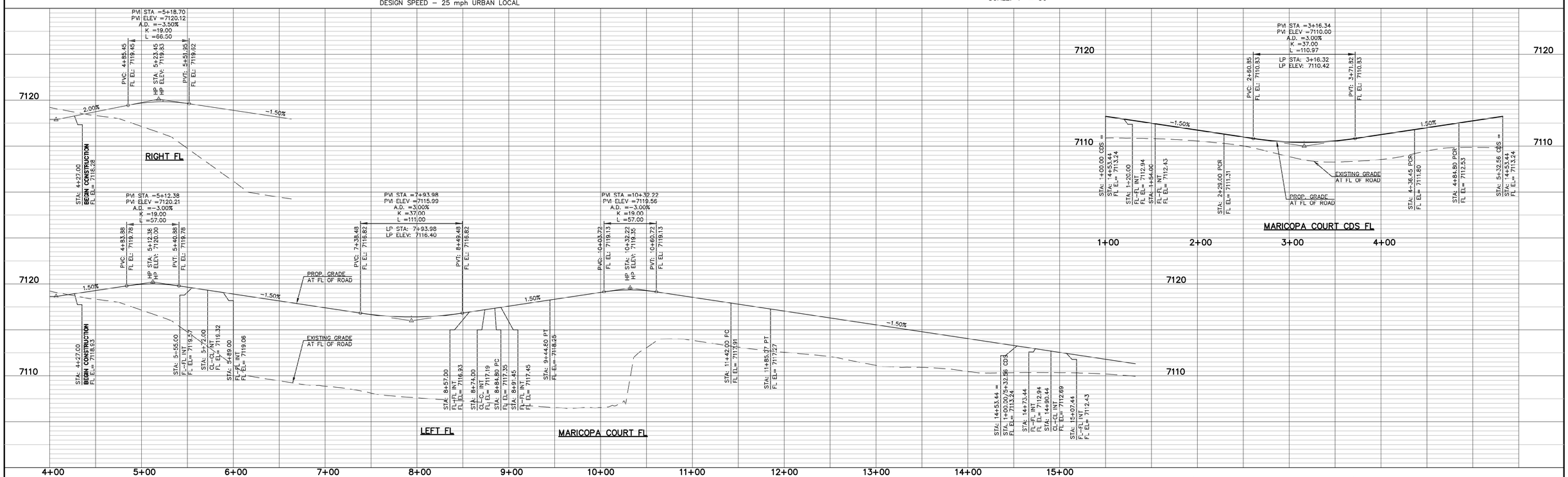

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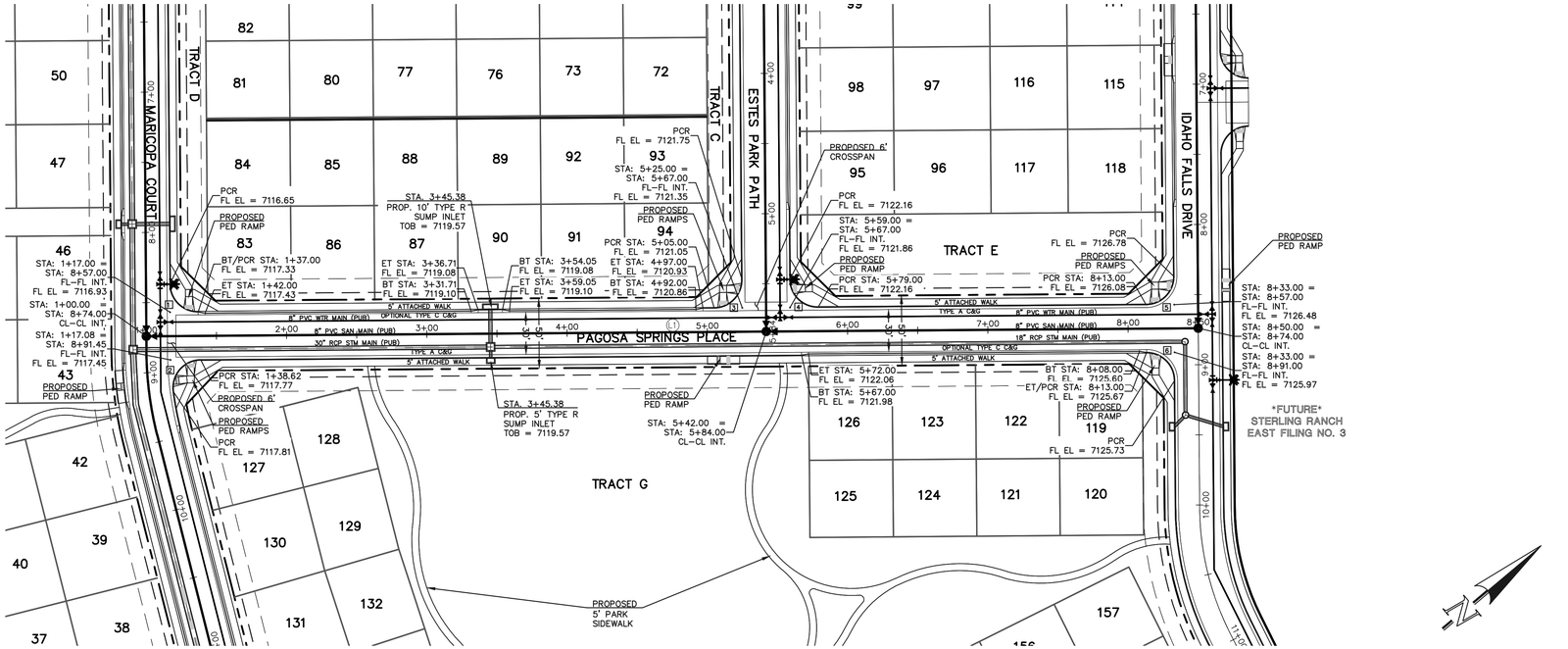
Colorado Springs, Colorado 80903 (719)785-0799(Fax)

FOURSQUARE AT STERLING RANCH EAST FILING NO. 1

STREET IMPROVEMENT PLANS

DESIGNED BY	DLG	SCALE	DATE 11-12-22
DRAWN BY	JRH	(H) 1"= 50'	SHEET 11 OF 29
CHECKED BY		(V) 1"= 5'	JOB NO. 1183.23



PAGOSA SPRINGS PLACE (PUBLIC)
(50' R.O.W.)

DESIGN SPEED – 30 mph URBAN LOCAL

50' 25' 0 50' 100'

SCALE: 1" = 50'

CENTERLINE LINE TABLE		
LINE	LENGTH	BEARING
L1	750.00	N39°33'48"E

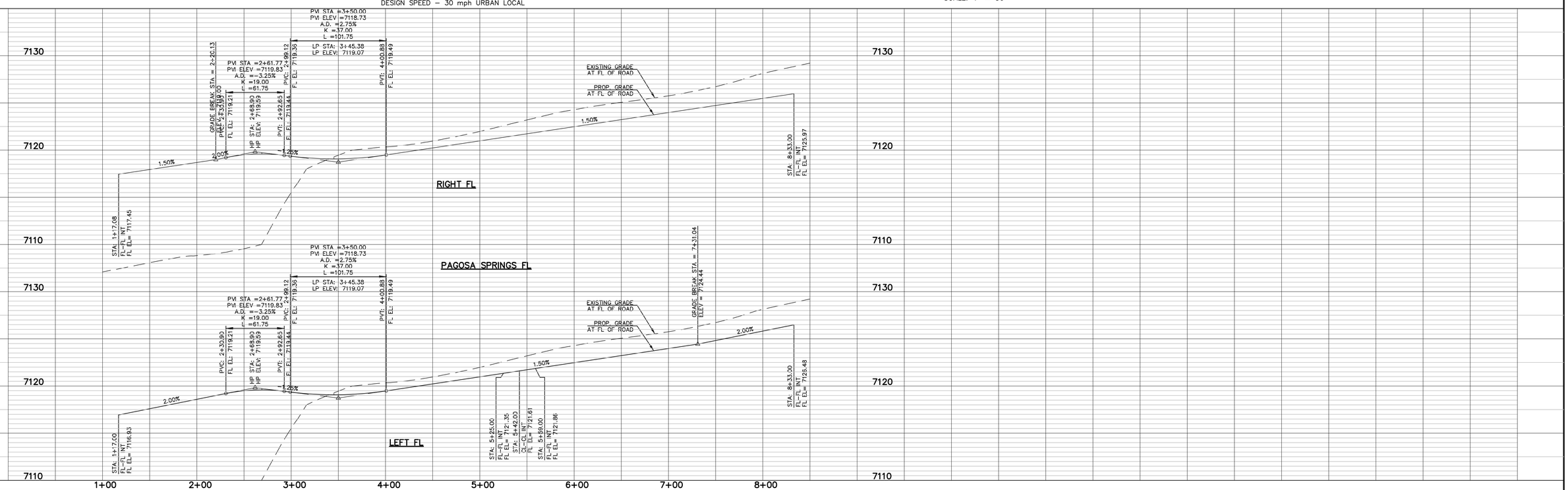
CURB CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
1	31.42	20.00	90°00'00"
2	33.88	20.00	97°03'54"
3	31.42	20.00	90°00'00"
4	31.42	20.00	90°00'00"
5	31.42	20.00	90°00'00"
6	31.42	20.00	90°00'00"

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.



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

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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

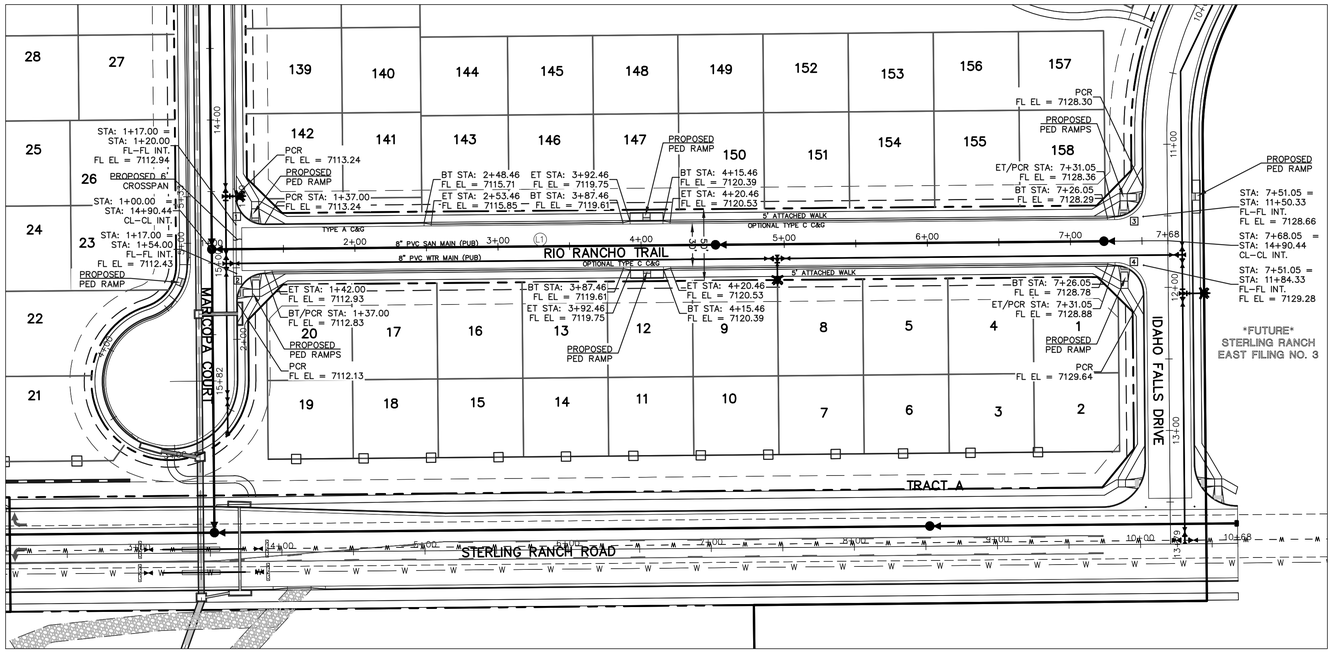
DAVID L GIBSON, COLORADO P.E. #46477 DATE

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

FOURSQUARE AT STERLING RANCH EAST FILING NO. 1

STREET IMPROVEMENT PLANS

DESIGNED BY	DLG	SCALE	DATE	11-12-22
DRAWN BY	JRH	(H) 1"= 50'	SHEET 12	OF 29
CHECKED BY		(V) 1"= 5'	JOB NO.	1183.23



RIO RANCHO TRAIL (PUBLIC)
(50' R.O.W.)

DESIGN SPEED – 30 mph URBAN LOCAL

50' 25' 0 50' 100'

SCALE: 1" = 50'

CENTERLINE LINE TABLE		
LINE	LENGTH	BEARING
L1	668.05	N13°28'29"E

CURB CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
1	31.42	20.00	90°00'00"
2	31.42	20.00	90°00'00"
3	31.42	20.00	90°00'00"
4	31.42	20.00	90°00'00"

NOTES:

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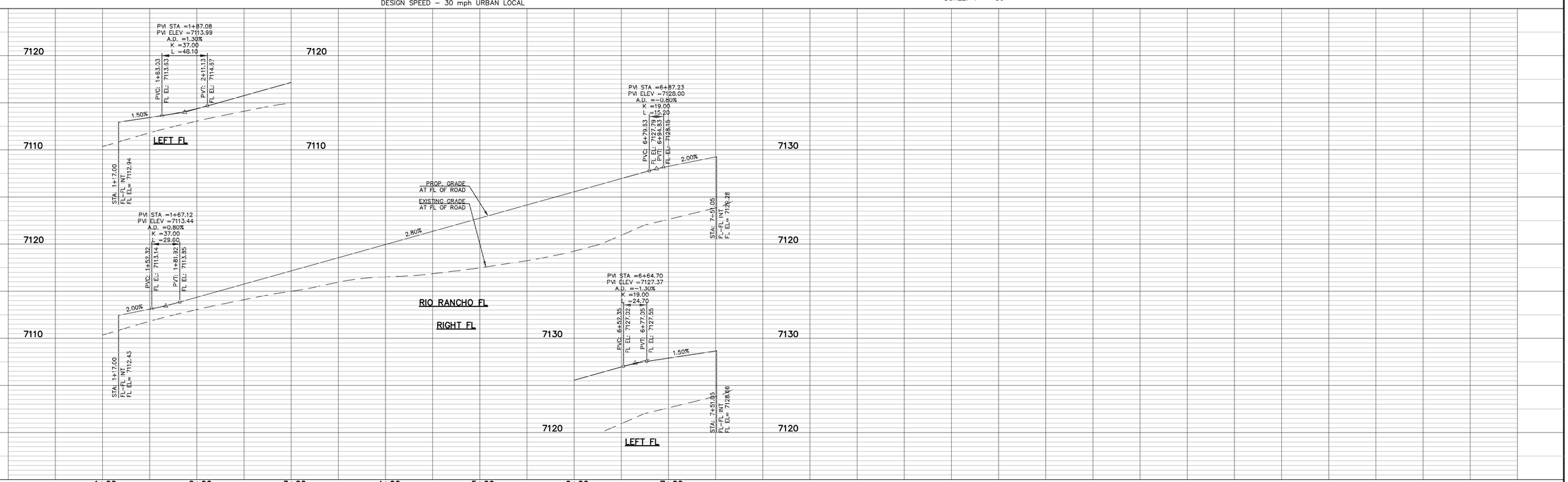

LEGEND

- BOUNDARY LINE
- ROW LINE
- LOT LINE
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- SIGN
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STREET IMPROVEMENT PLANS

DESIGNED BY	DLG	SCALE		DATE	11-12-22
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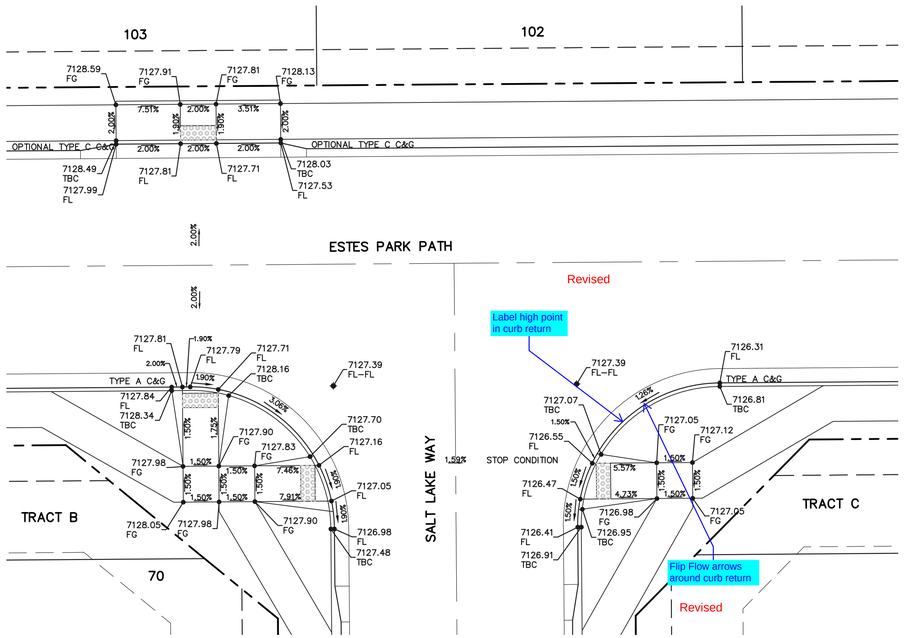
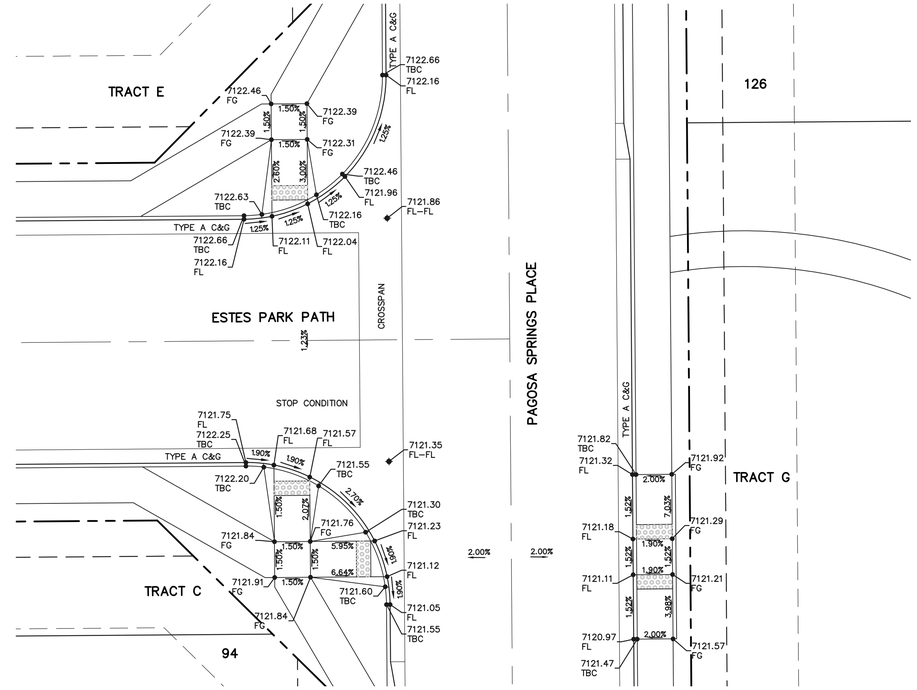
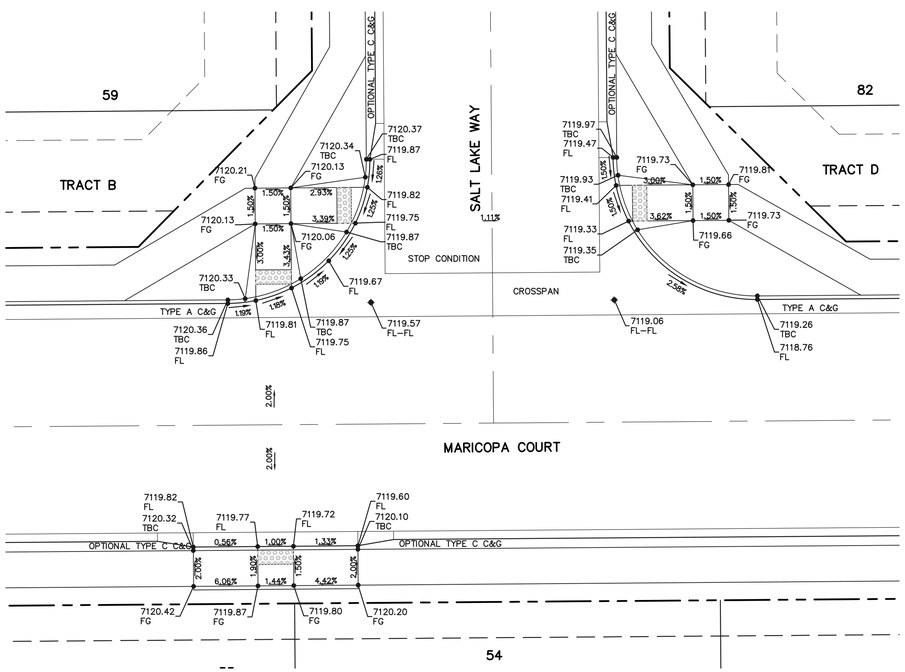
CHECKED BY		(V) 1"=	5'	JOB NO.	1183.23



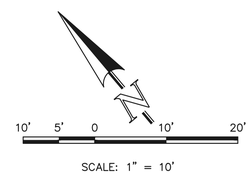
INTERSECTION
ESTES PARK PATH AND SALT LAKE WAY

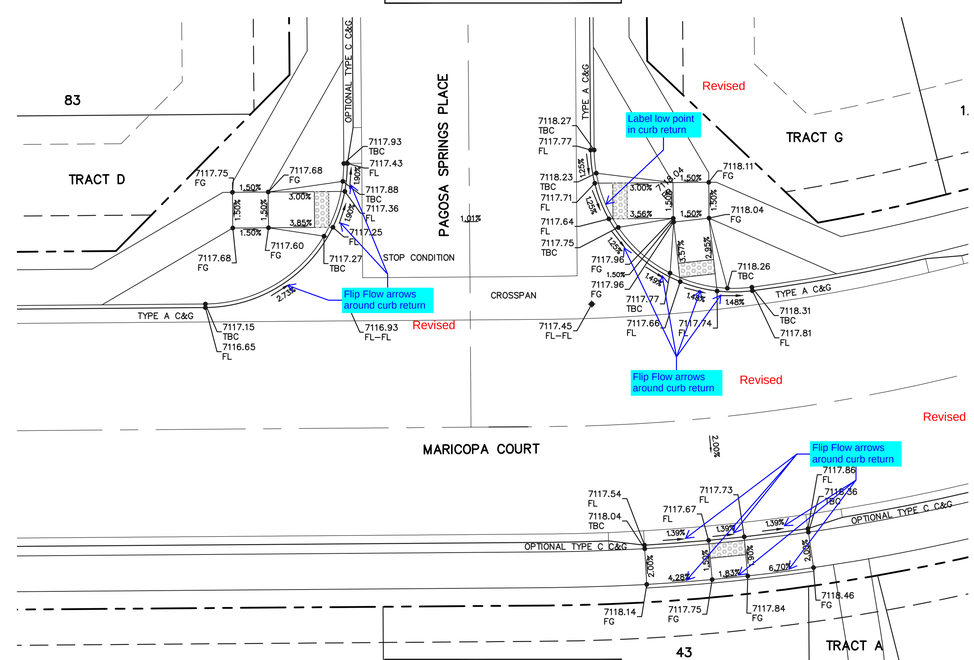


INTERSECTION
ESTES PARK PATH AND PAGOSA SPRINGS DRIVE



INTERSECTION
MARICOPA COURT AND SALT LAKE WAY





INTERSECTION
MARICOPA COURT AND PAGOSA SPRINGS PLACE

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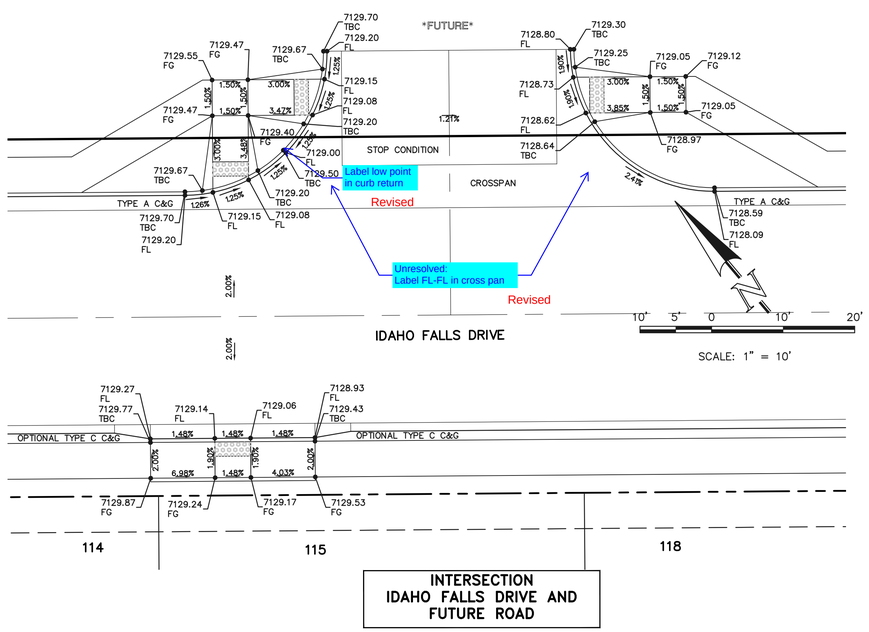
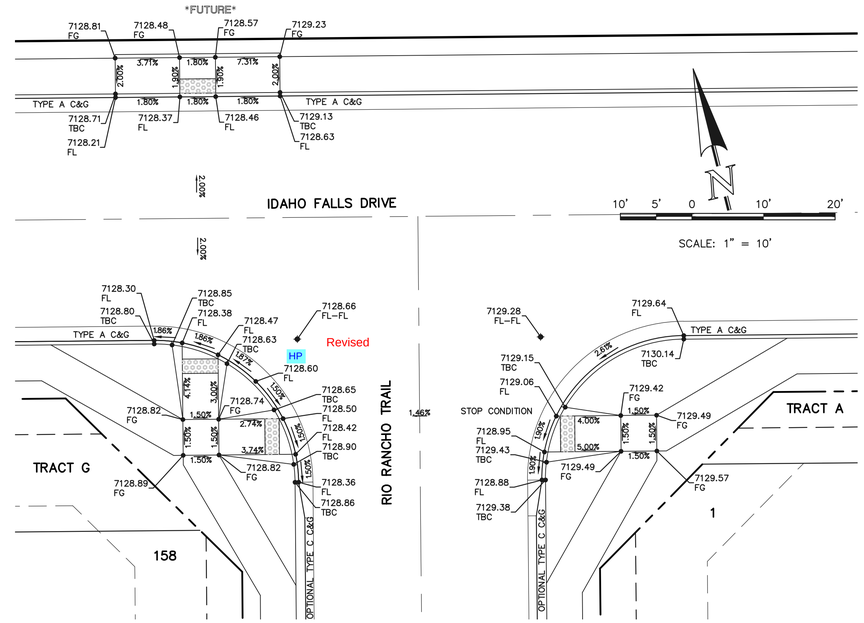
FOURSQUARE AT STERLING RANCH EAST
FILING NO. 1
STREET IMPROVEMENT PLANS
PED RAMP DETAILS

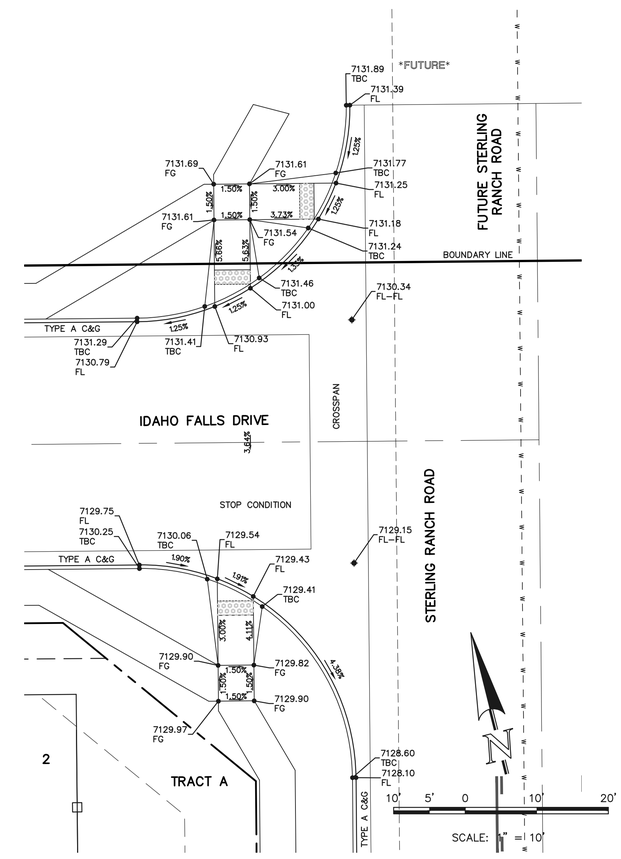
DESIGNED BY	DLG	SCALE	DATE 11-12-22
DRAWN BY	JRH	(H) 1"= 10'	SHEET 14 OF 29
CHECKED BY		(V) 1"= N/A	JOB NO. 1183.23



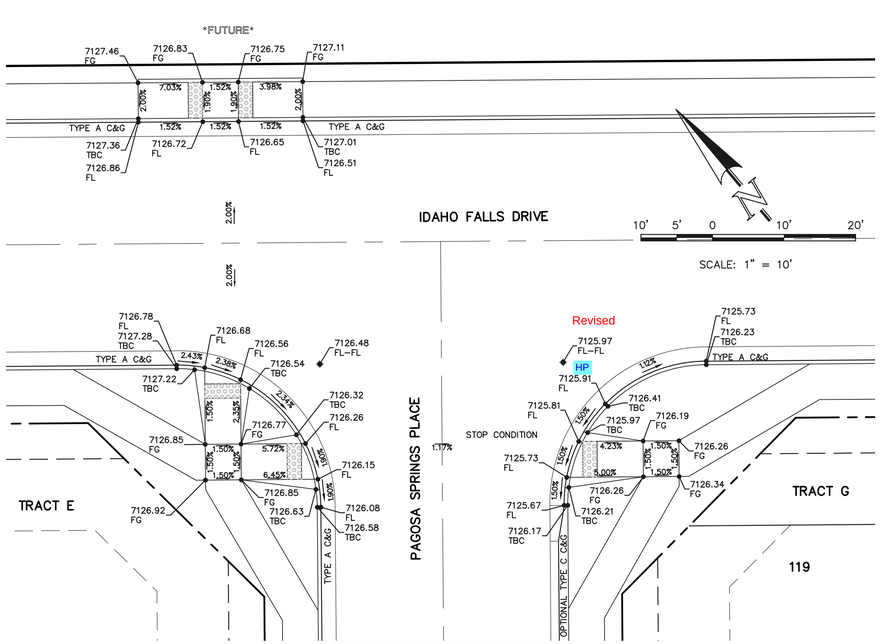
INTERSECTION
IDAHO FALLS DRIVE AND
FUTURE ROAD



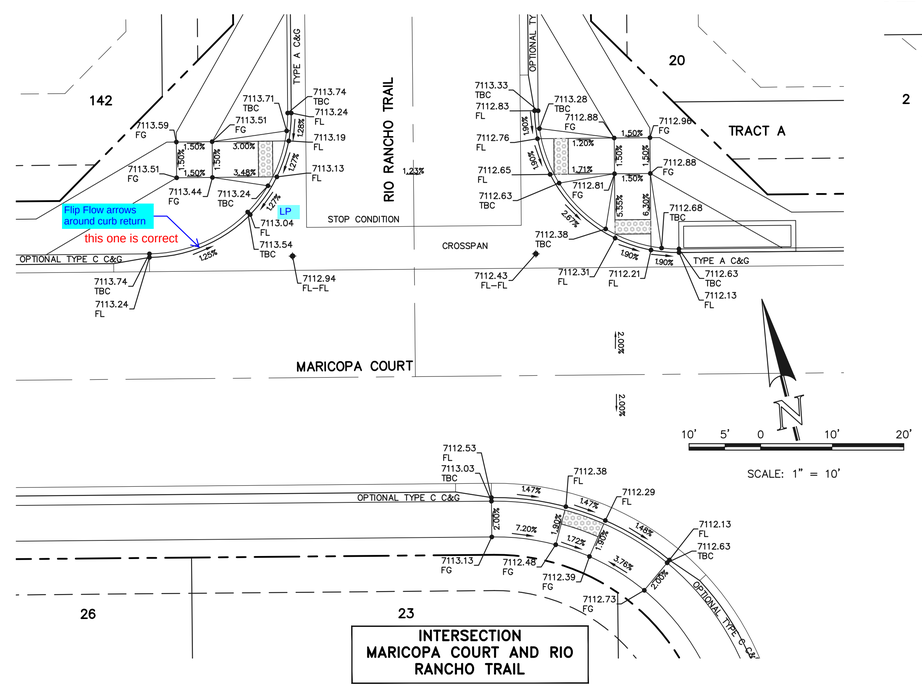
INTERSECTION
IDAHO FALLS DRIVE AND RIO
RANCHO TRAIL



INTERSECTION
IDAHO FALLS DRIVE AND
STERLING RANCH ROAD



INTERSECTION
IDAHO FALLS DRIVE AND
PAGOSA SPRINGS PLACE



INTERSECTION
MARICOPA COURT AND RIO
RANCHO TRAIL

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FILING NO. 1
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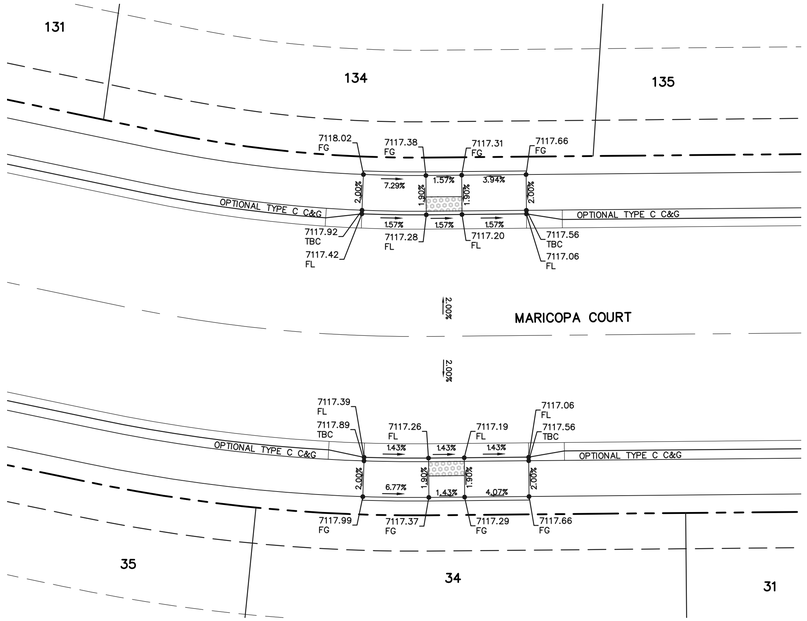
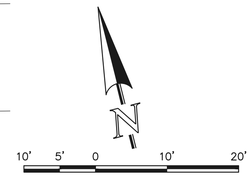
PED RAMP DETAILS

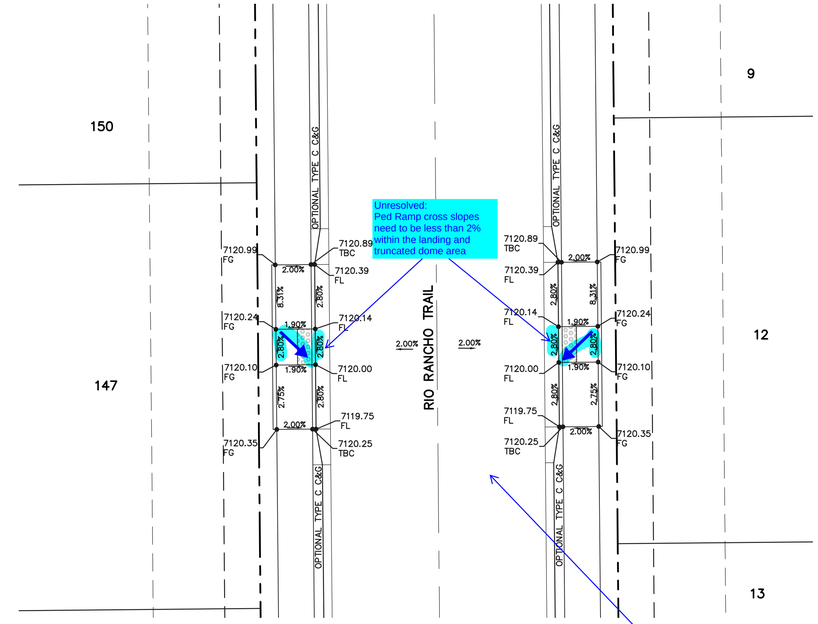
DESIGNED BY	DLG	SCALE		DATE	11-12-22
DRAWN BY	JRH	(H) 1"= 10'		SHEET	15 OF 29
CHECKED BY		(V) 1"= N/A		JOB NO.	1183.23



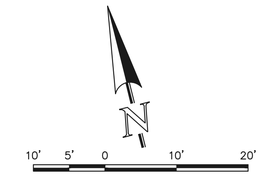
MID-BLOCK
MARICOPA COURT



SCALE: 1" = 10'



MID-BLOCK
RIO RANCHO TRAIL



SCALE: 1" = 10'

Is this crossing needed?

yes, crossing is needed per criteria and spacing.

this is a midblock pedramp without a stop condition. slope of ramp must match slope of street.

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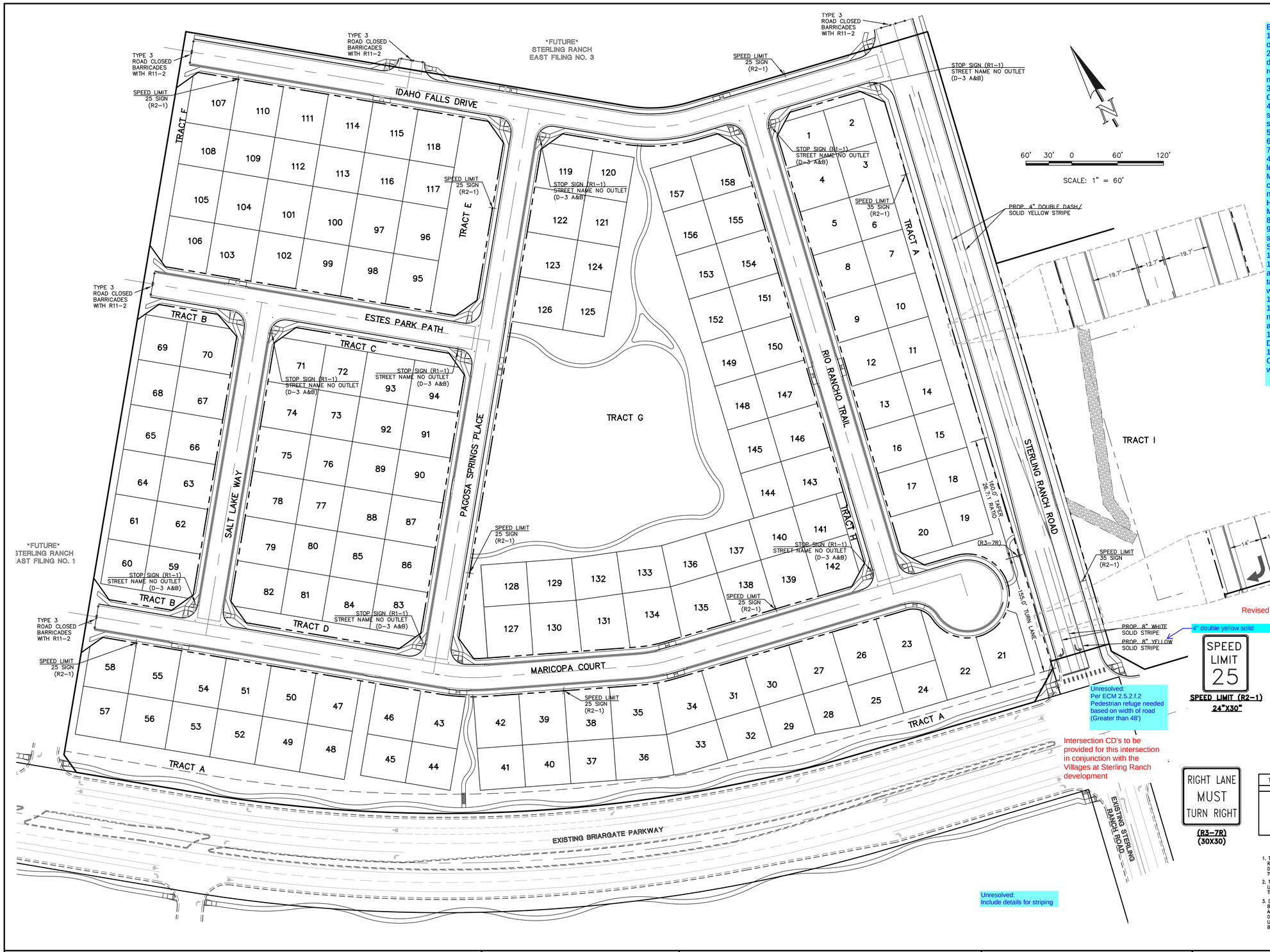
STREET IMPROVEMENT PLANS
PED RAMP DETAILS

DESIGNED BY	DLG	SCALE		DATE	11-12-22
DRAWN BY	JRH	(H) 1"= 10'		SHEET 16	OF 29
CHECKED BY		(V) 1"= N/A		JOB NO.	1183.23



STRIPING AND SIGNAGE GENERAL NOTES:

El Paso County Standard 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 35 mph or higher shall have 8" upper-lower case lettering on 12" 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". Signal pole mounted and overhead street name signs shall be per MUTCD size standards.
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. Stop bars shall be 24" in width. Crosswalks lines shall be 24" wide and a minimum of 9' long.
12.Word and symbol markings shall be the narrow type.
13.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.
14.The contractor shall notify El Paso County Planning and Community Development (719) 520-6819 prior to and upon completion of signing and striping.
15.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.

removed notes,
duplicated on
cover sheet

SPEED LIMIT 25 (R2-1) 24"X30"

SPEED LIMIT 35 (R2-1) 24"X30"

STREET NAME NO OUTLET
STREET NAME (D-3)

STOP (R1-1) (30X30)

RIGHT LANE MUST TURN RIGHT (R3-7R) (30X30)

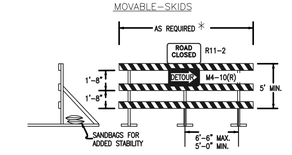
NOTE:
ALL INTERNAL SIGNS SHALL BE
4" FONT LETTER SIZE.
6" FONT LETTER SIZE ON ALL STREETS POSTED
30MPH OR GREATER

RAIL LENGTH TABLE *

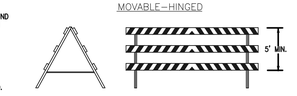
TYPE 3 BARRICADE FIXED	TYPE 3 BARRICADE MOVABLE	LENGTH
F – A	M – A	8'– 14'
F – B	M – B	15'– 24'
F – C	M – C	25'– 35'
F – D	M – D	> 35'

NOTES
1. TYPE 3 BARRICADES HAVE 3 REFLECTORIZED 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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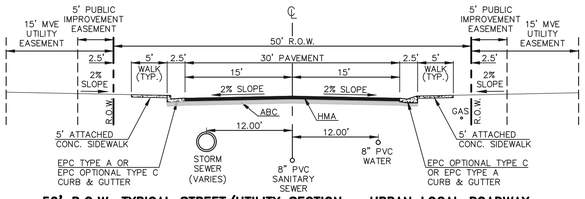
DRAWN BY	JRH	(H) 1"= 50'	SHEET 17 OF 29
CHECKED BY		(V) 1"= 5'	JOB NO. 1183.23

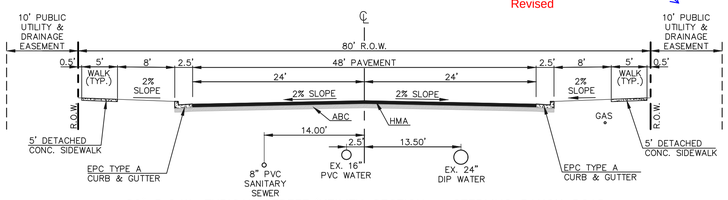


50' R.O.W. TYPICAL STREET/UTILITY SECTION – URBAN LOCAL ROADWAY

SCALE 1" = 10'

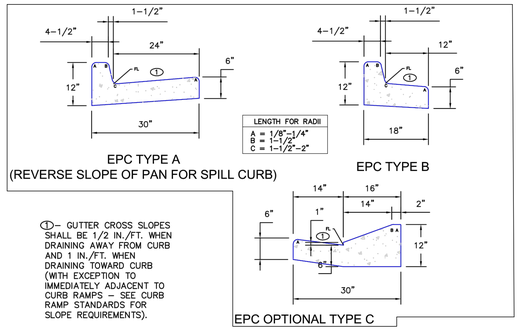
Plat does not show 10' easement on east side of road - add to plat

Revised



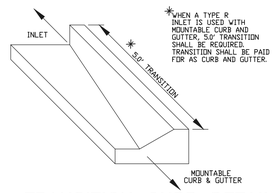
80' R.O.W. TYPICAL STREET/UTILITY SECTION – STERLING RANCH ROAD

SCALE 1" = 10'



① – GUTTER CROSS SLOPES SHALL BE 1/2 IN./FT. WHEN DRAINING AWAY FROM CURB AND 1 IN./FT. WHEN DRAINING TOWARD CURB (WITH EXCEPTION TO IMMEDIATELY ADJACENT TO CURB RAMPS – SEE CURB RAMP STANDARDS FOR SLOPE REQUIREMENTS).

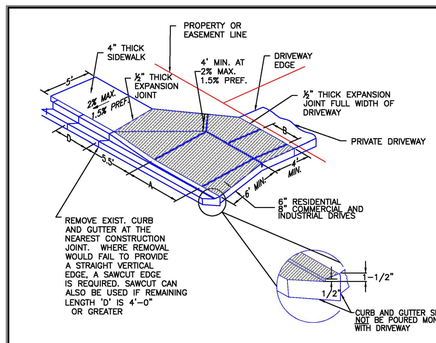
CURB AND GUTTER DETAILS



*WHEN A TYPE R INLET IS USED WITH MOUNTABLE CURB AND GUTTER, 50' TRANSITION SHALL BE REQUIRED. TRANSITION SHALL BE PAID FOR AS CURB AND GUTTER.

TRANSITION CURB DETAIL

N.T.S.



NOTES

1. PROVIDE CENTERLINE CONSTRUCTION OR TOOL JOINT WHEN DRIVEWAY WIDTH (EDGE TO EDGE) IS 14' OR GREATER.

2. ALL TOOL JOINTS SHALL BE A MINIMUM OF 1-½" DEEP.

3. WHEN REPLACING EXISTING CURB AND GUTTER WITH NEW DRIVEWAY, ENTIRE CURB AND GUTTER SECTION SHALL BE REMOVED AND REPLACED WITH CURB AND GUTTER (VARIABLE-CURB-HEIGHT) AS SHOWN. DO NOT BREAK CURB FROM GUTTER SECTION.

4. FLARED PORTION OF DRIVEWAY SHALL BE POURED MONOLITHIC WITH MAIN RECTANGULAR PORTION OF DRIVEWAY.

5. WHERE THERE IS MORE THAN ONE DRIVEWAY ON A LOT, THE SPACING OF THE DRIVEWAYS SHALL MEET REQUIREMENTS IN ECM.

6. WHERE AN EXISTING SIDEWALK IS IN PLACE, AND ITS THICKNESS IS LESS THAN 6" (RESIDENTIAL) OR 8" (COMMERCIAL AND INDUSTRIAL) THE SIDEWALK THROUGH THE DRIVEWAY SHALL BE REMOVED AND REPLACED WITH PORTLAND CEMENT CONCRETE AT THE REQUIRED THICKNESS.

7. WHEN A DRIVEWAY IS TO BE TAKEN OUT OF SERVICE, THE ENTIRE LENGTH OF CURB AND GUTTER SHALL BE REMOVED AND REPLACED WITH NEW CURB AND GUTTER MATCHING THE ABUTTING SECTIONS.

8. ALL PROVISIONS IN THE LAND DEVELOPMENT CODE SHALL BE MET, WITH REGARD TO MINIMUM SETBACK FROM INTERSECTION AND SIDE PROPERTY LINES, MINIMUM SPACING, MAXIMUM WIDTH, ETC.

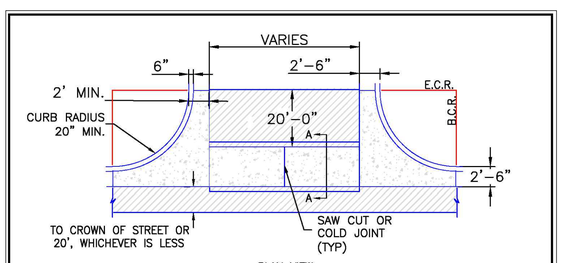
9. SIDEWALKS ACROSS DRIVEWAYS SHALL BE ACCESSIBLE AND COMPLIANT WITH REQUIREMENTS OF ECM CHAPTER 6.

TOOLS JOINT SPACING

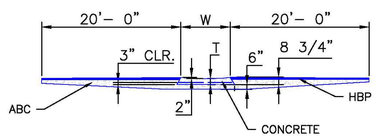
DRIVEWAY WIDTH	A	B
12'	6'	3'
14'	7'	3'-6"
16'	8'	4'
18'	9'	4'-6"
20'	10'	5'
22'	11'	5'-6"
24'	8'	4'
26'	8'-8"	4'-4"
28'	9'-4"	4'-8"
30'	10'	5'

SCALE: NOT TO SCALE

6/23/20 DATE APPROVED: Jennifer E. Irvine DEPARTMENT OF PUBLIC WORKS	Driveway Detail With Attached Sidewalk Standard Drawing REVISION DATE: 6/23/20 FILE NAME: SD_2-24	DEPARTMENT OF PUBLIC WORKS



PLAN VIEW



SECTION A–A

NOTES

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

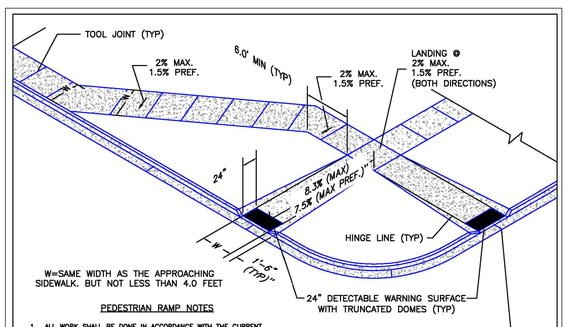
2. T – SQUARED-OFF RETURN TO BE POURED MONOLITHICALLY, 8" PCC FOR LOCAL ROADS, 9" FOR COLLECTORS WITH 6x6 – 4.4 W.W.F. OR #4 REINFORCING BAR @ 18" EACH WAY.

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



W=SAME WIDTH AS THE APPROACHING SIDEWALK. BUT NOT LESS THAN 4.0 FEET

PEDESTRIAN RAMP NOTES

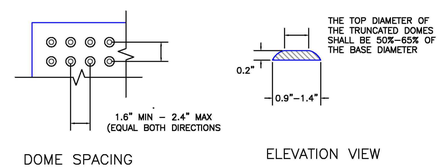
1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT ENGINEERING CRITERIA MANUAL AND ADA REQUIREMENTS.
2. CONTRACTOR TO NOTIFY ENGINEERING DIVISION INSPECTION STAFF 48 HOURS PRIOR TO CONCRETE PLACEMENT.
3. PEDESTRIAN CURB RAMP CONSTRUCTION SHALL BE A MINIMUM 4,500 PSI CONCRETE, MINIMUM 4" THICK,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

GENERAL NOTES

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

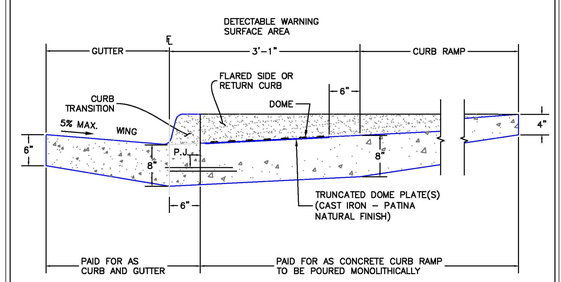
6/23/20 DATE APPROVED: Jennifer E. Irvine DEPARTMENT OF PUBLIC WORKS	Pedestrian Curb Ramp Detail Standard Drawing REVISION DATE: 6/23/20 FILE NAME: SD_2-41	DEPARTMENT OF PUBLIC WORKS

TRUNCATED DOME DETAILS



DOME SPACING

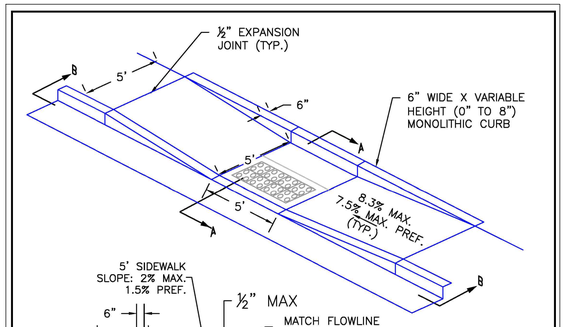
ELEVATION VIEW



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

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

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



SECTION B–B

SCALE: NOT TO SCALE

6/23/20 DATE APPROVED: Jennifer E. Irvine DEPARTMENT OF PUBLIC WORKS	Parallel Pedestrian Curb Ramp Detail Standard Drawing REVISION DATE: 6/23/20 FILE NAME: SD_2-50	DEPARTMENT OF PUBLIC WORKS

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

DAVID L GIBSON, COLORADO P.E. #46477 DATE

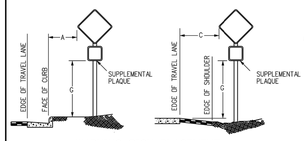
CLASSIC CONSULTING ENGINEERS & SURVEYORS
619 N. Cascade Avenue, Suite 200
Colorado Springs, Colorado 80903
(719)785-0790
(719)785-0799(Fax)

FOURSQUARE AT STERLING RANCH EAST FILING NO. 1

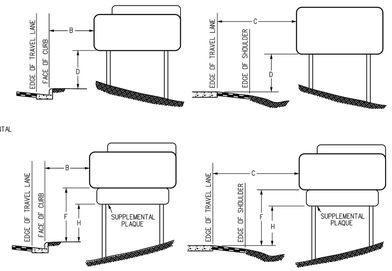
STREET IMPROVEMENT PLANS

TYPICAL STREET SECTIONS & DETAILS

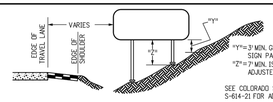
DESIGNED BY	DLG	SCALE		DATE	11-12-22
DRAWN BY	JRH	(H) 1"= 50'		SHEET 18	OF 29
CHECKED BY		(V) 1"= 5'		JOB NO.	1183.23



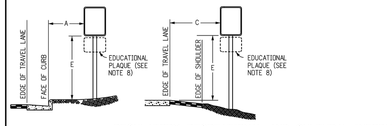
WARNING SIGN PLACEMENT

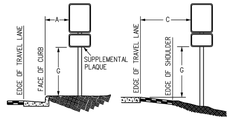


CLASS III SIGN PLACEMENT

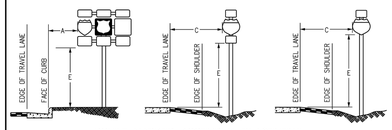


CLASS III SIGNS, PANEL GROUND CLEARANCE

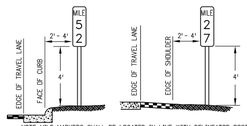




REGULATORY, RECREATIONAL AND CULTURAL INFORMATION SIGN PLACEMENT



ROUTE MARKER ASSEMBLY PLACEMENT



NOTE: MILE MARKERS SHALL BE LOCATED IN LINE WITH DELINEATOR POSTS.

MILE MARKER PLACEMENT

GENERAL NOTES

1. THE ENGINEER WILL ESTABLISH GRADES AND LOCATIONS FOR ALL SIGN POSTS IN ACCORDANCE WITH DETAILS SHOWN ON THE PLANS.
2. SPECIAL CARE SHALL BE TAKEN IN SIGN LOCATION TO ENSURE AN UNOBSTRUCTED VIEW OF EACH SIGN.
3. MINIMUM POST EMBEDMENT SHALL BE 3 FT. FOR U-2 POSTS AND 4 IN. X 4 IN. TIMBER POSTS, AND 5 FT. FOR 6 IN. X 6 IN. TIMBER POSTS. FOR FOOTING DEPTH SEE THE APPLICABLE STANDARD.
4. IF A SHOULDER IS WIDER THAN 6 FEET, THE MINIMUM LATERAL OFFSET DISTANCE SHOULD BE 6 FEET FROM EDGE OF SHOULDER, EXCEPT FOR MILE MARKER SIGNS. SEE FIGURE 2A-2(B) OF THE 2009 MUTCD.
5. NORMAL LATERAL PLACEMENT IS MEASURED FROM THE EDGE OF TRAVEL LANE.
6. IN URBAN AREAS, A LATERAL CLEARANCE OF 1 FT. FROM THE CURB FACE IS PERMISSIBLE WHERE SIDEWALK WIDTH IS LIMITED OR WHERE EXISTING POLES ARE CLOSE TO THE CURB.
7. TYPICAL POST MOUNTING HEIGHTS FROM GROUND TO BOTTOM OF SIGN PANEL ARE 7, OR 8 FEET. OTHER HEIGHTS MAY BE REQUIRED WHEN SIGNS ARE MOUNTED ON STEEPER FILL OR CUT SLOPES.
8. "EDUCATIONAL PLAQUES" FOR SYMBOL SIGNS WILL NOT BE CONSIDERED WHEN DETERMINING VERTICAL PLACEMENT. FOR INFORMATION OF EDUCATIONAL PLAQUE, SEE PAGE 3 OF THE 2012 CDOT GUIDE SIGNING POLICIES & PROCEDURES, AND SECTION 2M.06 OF THE 2009 MUTCD.
9. WHEN LATERAL PLACEMENT IS 30 FT. OR MORE FOR SIGNS WITHOUT A SUPPLEMENTAL PLAQUE, VERTICAL PLACEMENT D MAY BE REDUCED TO 5 FT. WHEN LATERAL PLACEMENT IS 30 FT. OR MORE, FOR SIGNS WITH A SUPPLEMENTAL PANEL, VERTICAL PLACEMENT E DOES NOT APPLY – USE ONLY VERTICAL PLACEMENT G.
10. NORMAL ANGULAR PLACEMENT IS 0 DEG. SIGNS CLOSER THAN 30 FT. SHOULD BE TURNED SLIGHTLY AWAY TO MINIMIZE SPECULAR REFLECTION. SIGNS PLACED 30 FT. OR MORE SHOULD GENERALLY BE TURNED TOWARD THE ROAD.
11. THE EXIT PANEL IS MOUNTED ON THE RIGHT HAND SIDE FOR RIGHT HAND EXITS AND THE LEFT SIDE FOR LEFT HAND EXITS.
12. POST SHALL BE INSTALLED PLUMB, VERTICAL DEVIATION SHALL NOT EXCEED ½ IN. IN 10 FT.
13. ON ALL TWO-LANE, UNDIVIDED HIGHWAYS, THE MILE MARKER AND POST SHALL BE INSTALLED ON THE RIGHT SHOULDER IN THE ASCENDING DIRECTION, WITH THE MILE MARKER PANELS DISPLAYED ON THE FRONT AND BACK SIDE OF THE POST.
14. ON ALL UNDIVIDED MULTI-LANE AND DIVIDED HIGHWAYS, AND INTERSTATES, THE MILE MARKER AND POST SHALL BE INSTALLED ON THE OUTSIDE SHOULDER (OR SIDEWALK IF APPLICABLE) IN BOTH DIRECTIONS OF TRAVEL.
15. VERTICAL SPACING BETWEEN SIGN PANELS SHALL BE 1 TO 1½ IN., TYPICAL.

PLACEMENT TABLES

KEY	LATERAL PLACEMENT: ALL CLASSES OF STREETS AND HIGHWAYS — MINIMUM	NORMAL
A	2'-0"	15'-0"PLUS CURB
B	2'-0"	30'-0" OR MORE INCLUDES CURB
C	2'-0"	6'-0"PLUS EDGE OF 6'+ WIDE SHOULDER. IF NONE, 15'-0" FROM EDGE OF TRAVEL LANE

KEY	VERTICAL PLACEMENT: FREEWAYS AND EXPRESSWAYS — MIN.	CONVENTIONAL STREETS AND HIGHWAYS — URBAN MIN.	URBAN MAX.	RURAL MIN.	RURAL MAX.
D	7'-0" OR NOTE NO. 9	12'-0"	7'-0"	8'-0"	5'-0" 8'-0"
E	7'-0"	8'-0"	7'-0"	8'-0"	5'-0" 8'-0"
F	8'-0" OR NOTE NO. 9	12'-0"	8'-0"	9'-0"	5'-0" 9'-0"
G	6'-0"	7'-0"	6'-0"	7'-0"	4'-0" 7'-0"
H	5'-0"	10'-0"	6'-0"	7'-0"	4'-0" 7'-0"

Computer File Information	
Creation Date: 07/04/12	Initials: KCM
Last Modification Date: 12/12/14	Initials: KEN
Full Path: cdot.gov/library/traffic/traffic-standards/2012-s-standard-plans	
Drawing File Name: S-614-01_1of2.dgn	
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	

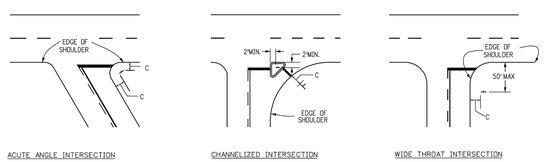
Sheet Revisions	
Date:	Comments
07/24/12	ADDED NOTES 14 AND 15 ON SHEET 1
03/07/14	SHEET 1 - UPDATED DIMENSIONS TO MUTCD STDS
12/12/14	SHEET 1 - CORRECTED BOTTOM PANELS TO 7' MIN.

Colorado Department of Transportation
2829 W. Howard Place
Denver, Colorado 80204
Phone: 303-757-9543 FAX: 303-757-9219
Safety & Traffic Engineering KCM

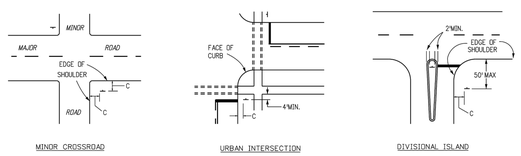
GROUND SIGN PLACEMENT

Issued By: Safety & Traffic Engineering Branch July 4, 2012

STANDARD PLAN NO.
S-614-1
Sheet No. 1 of 2

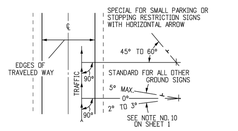


ACUTE ANGLE INTERSECTION — CHANNELIZED INTERSECTION — WIDE THROAT INTERSECTION



MINOR CROSSROAD — URBAN INTERSECTION — DIVISIONAL ISLAND

TYPICAL LOCATIONS-STOP SIGNS AND YIELD SIGNS



NORMAL ANGULAR PLACEMENT IS 0°. SIGNS CLOSER THAN 30 FT. SHOULD BE TURNED SLIGHTLY AWAY TO MINIMIZE SPECULAR REFLECTION. SIGNS PLACED 30' OR MORE SHOULD GENERALLY BE TURNED TOWARD THE ROAD.

ANGULAR PLACEMENT

PLACEMENT TABLES

KEY	LATERAL PLACEMENT: ALL CLASSES OF STREETS AND HIGHWAYS — MINIMUM	NORMAL
*A	2'-0" & NOTE NO.4	15'-0"PLUS CURB OR SHOULDER WIDTH
*B	2'-0" & NOTE NO.4	30'-0" OR MORE INCLUDES CURB OR SHOULDER
*C	2'-0" & NOTE NO.4	6'-0"PLUS CURB OR SHOULDER WIDTH OR IF NONE 15'-0"

KEY	VERTICAL PLACEMENT (MINIMUM) (9' MAXIMUM) FREEWAYS AND EXPRESSWAYS	CONVENTIONAL STREETS AND HIGHWAYS — URBAN	RURAL
D	7'-0" OR NOTE NO. 10	7'-0"	5'-0"
E	6'-0"	7'-0"	5'-0"
F	8'-0" OR NOTE NO. 10	7'-0"	5'-0"
G	6'-0"	6'-0"	4'-0"
H	5'-0"	6'-0"	4'-0"

* SEE NOTE NO. 6 ON SHEET 1

Computer File Information	
Creation Date: 07/04/12	Initials: KCM
Last Modification Date:	Initials:
Full Path: cdot.gov/library/traffic/traffic-standards/2012-s-standard-plans	
Drawing File Name: S-614-01_1of2.dgn	
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	

Sheet Revisions	
Date:	Comments

Colorado Department of Transportation
2829 W. Howard Place
Denver, Colorado 80204
Phone: 303-757-9543 FAX: 303-757-9219
Safety & Traffic Engineering KCM

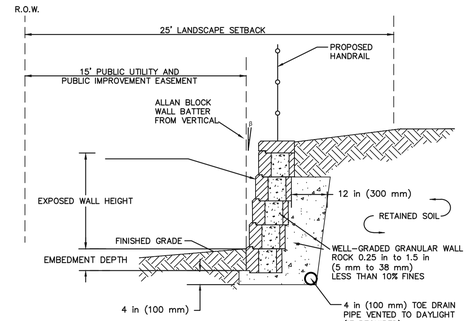
GROUND SIGN PLACEMENT

Issued By: Safety & Traffic Engineering Branch July 4, 2012

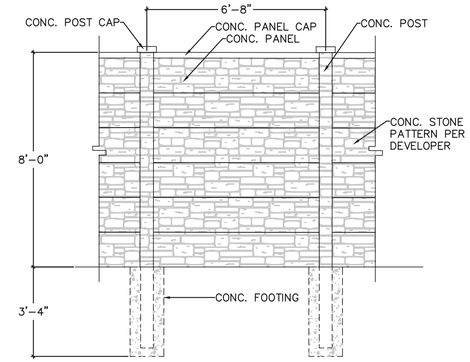
STANDARD PLAN NO.
S-614-1
Sheet No. 2 of 2

There is a 2019 version of this detail. (CDOT S Standards issued July 31, 2019) It looks like only sheet 1 should be needed with newer sheets.

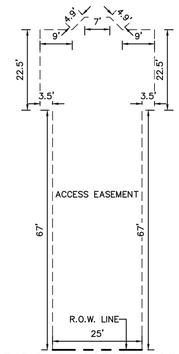
Revised



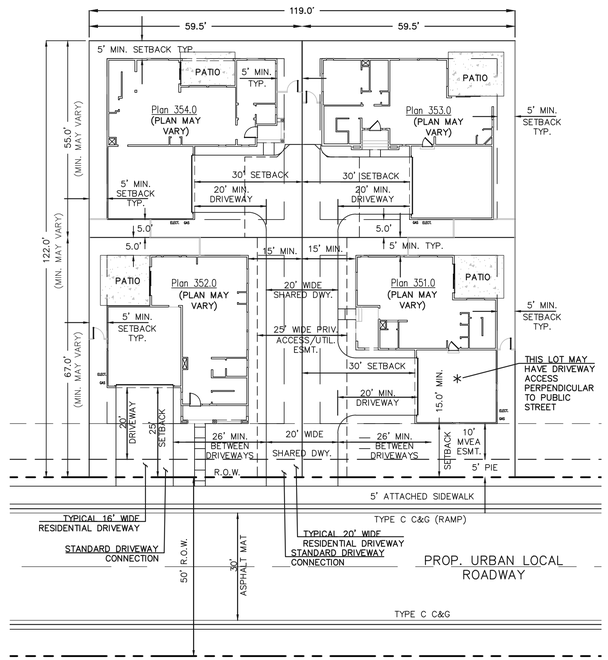
TYPICAL RETAINING WALL DETAIL (STRUCTURAL DESIGN BY OTHERS)
NOT TO SCALE



6' CONCRETE PANEL WALL
SCALE: N.T.S.



TYPICAL ACCESS EASEMENT
SCALE: 1" = 20'



NOTES:

TYPICAL DETAIL SHOWN IS FOR SETBACK AND ACCESS PURPOSES ONLY. SPECIFIC HOUSE PLAN AND DRIVEWAY ACCESS CONFIGURATIONS MAY VARY.

LOT LINE DIMENSIONS MAY VARY (SEE SITE PLAN)
NO TRASH OR DELIVERY TRUCKS TO USE SHARED DRIVEWAY. REAR LOT TRASH CANS TO BE TAKEN TO CURB.

TYPICAL LOT DETAIL
SCALE: 1" = 20'

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:

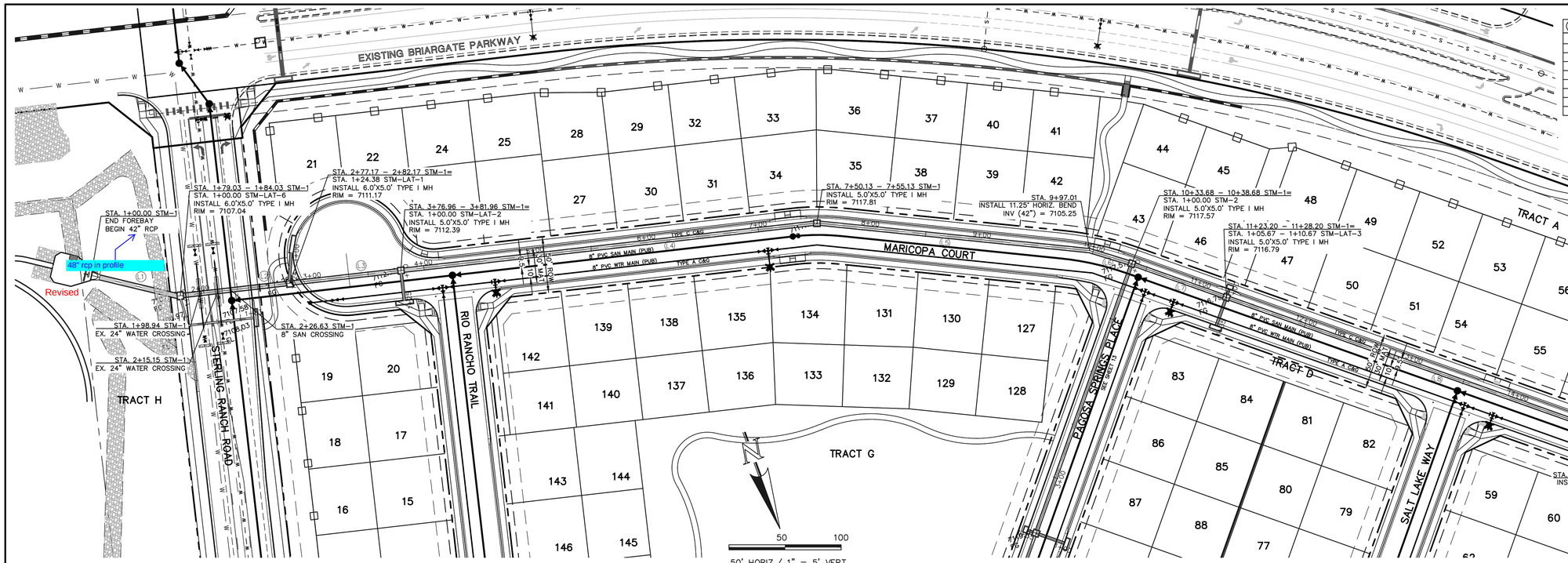
PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

DAVID L GIBSON, COLORADO P.E. #46477 DATE

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

FOURSQUARE AT STERLING RANCH EAST
FILING NO. 1
STREET IMPROVEMENT PLANS
TYPICAL STREET SECTIONS & DETAILS

DESIGNED BY	DLG	SCALE	DATE 11-12-22
DRAWN BY	JRH	(H) 1"= 50'	SHEET 19 OF 29
CHECKED BY		(V) 1"= 5'	JOB NO. 1183.23

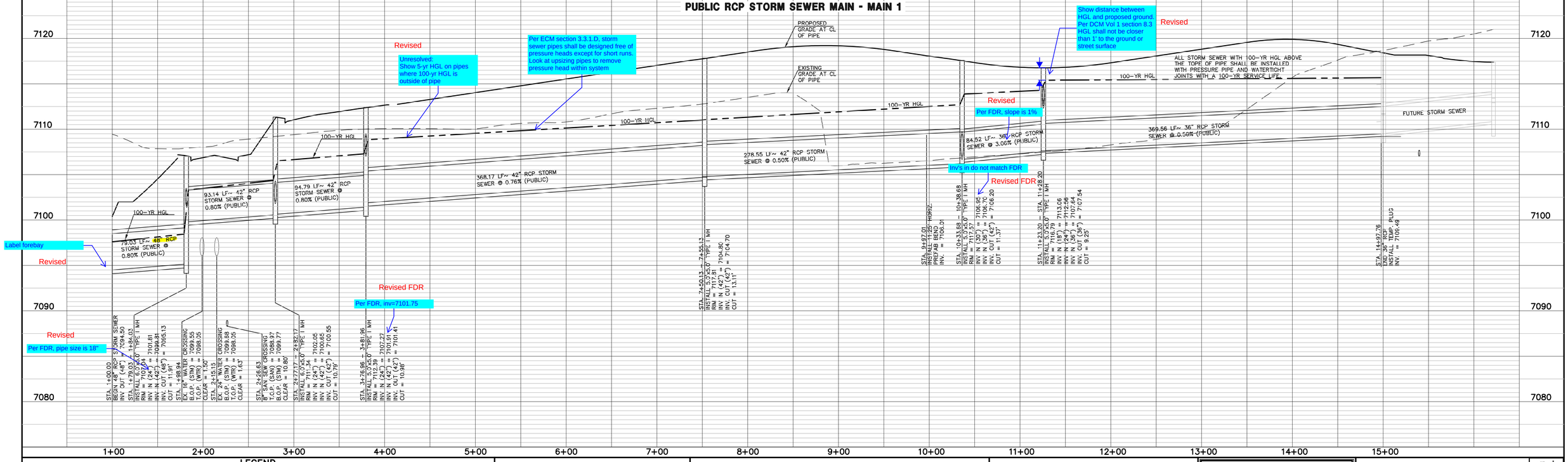


CENTERLINE LINE TABLE				
LINE	LENGTH	BEARING	SIZE/MATERIAL	PIPE #
L1	79.03	S56°31'31"E	48" RCP STORM PUBLIC	PIPE 17
L2	93.14	S76°31'31"E	42" RCP STORM PUBLIC	PIPE 17
L3	94.79	S76°31'31"E	42" RCP STORM PUBLIC	PIPE 15
L4	368.17	S76°31'31"E	42" RCP STORM PUBLIC	PIPE 13
L5	241.89	S64°11'17"E	42" RCP STORM PUBLIC	PIPE 13
L6	36.67	S52°56'17"E	42" RCP STORM PUBLIC	PIPE 13
L7	84.52	S50°26'12"E	36" RCP STORM PUBLIC	PIPE 6
L8	401.48	S50°26'12"E	36" RCP STORM PUBLIC	PIPE 3

KEY MAP
NOT TO SCALE

ALL STORM SEWER IS PUBLIC UNLESS OTHERWISE NOTED.

PUBLIC RCP STORM SEWER MAIN - MAIN 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

48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS
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NO.	REVISION	DATE

REVIEW:

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

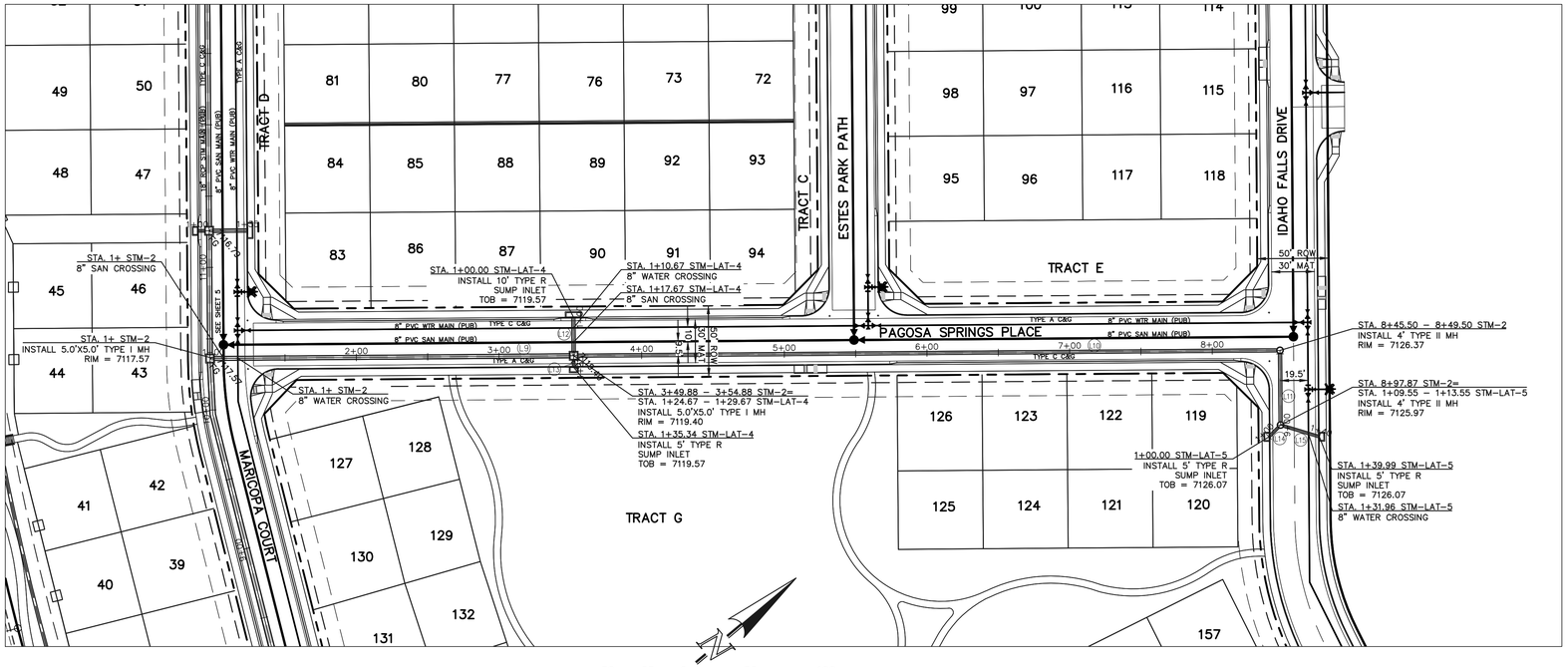
DAVID L GIBSON, COLORADO P.E. #46477 DATE

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

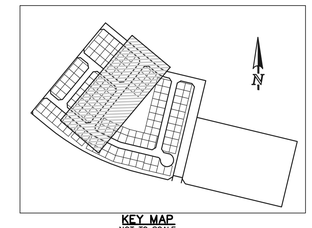
FOURSQUARE AT STERLING RANCH EAST FILING NO. 1

PUBLIC STORM SEWER

DESIGNED BY	JRH	SCALE		DATE	10/07/22
DRAWN BY	JRH	(H) 1"= 50'		SHEET 20	OF 29
CHECKED BY		(V) 1"= 5'		JOB NO.	1183.23

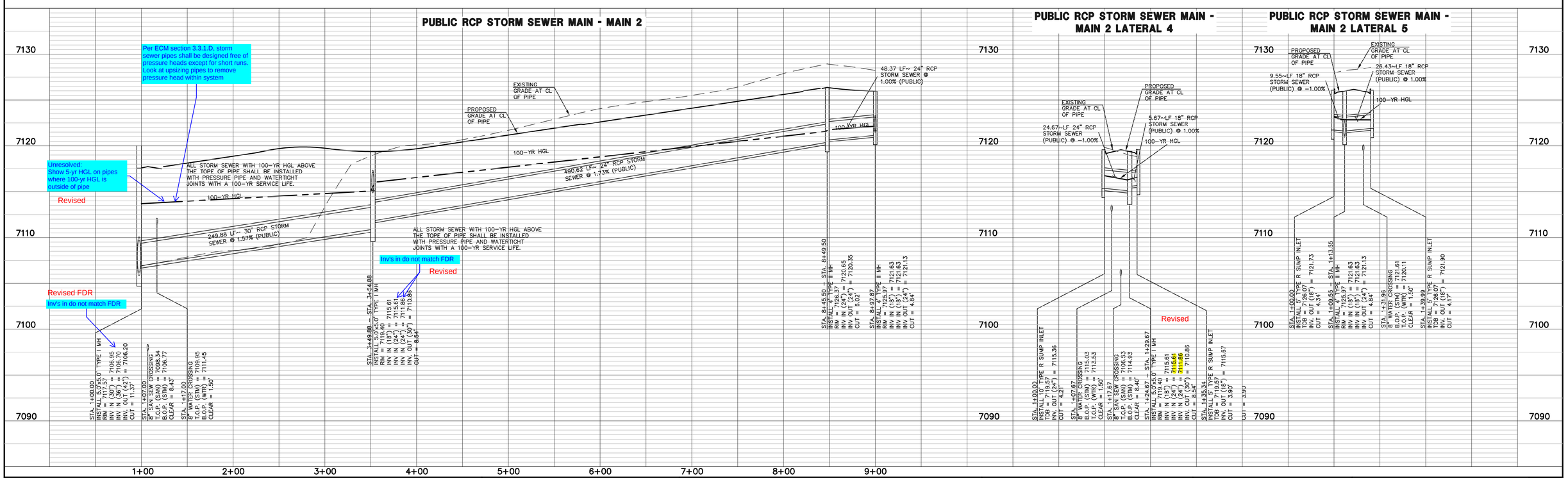


CENTERLINE LINE TABLE				
LINE	LENGTH	BEARING	SIZE/MATERIAL	PIPE #
L9	249.88	S39°33'48"W	30" RCP STORM PUBLIC	PIPE 12
L10	490.62	S39°33'48"W	24" RCP STORM PUBLIC	PIPE 9
L11	48.37	N50°26'12"W	24" RCP STORM PUBLIC	PIPE 9
L12	5.67	S50°26'12"E	24" RCP STORM PUBLIC	PIPE 10
L13	24.67	S50°26'12"E	18" RCP STORM PUBLIC	PIPE 11
L14	9.55	N05°26'12"W	18" RCP STORM PUBLIC	PIPE 7
L15	26.43	N56°41'51"E	18" RCP STORM PUBLIC	PIPE 8



KEY MAP
NOT TO SCALE

ALL STORM SEWER IS PUBLIC UNLESS OTHERWISE NOTED.



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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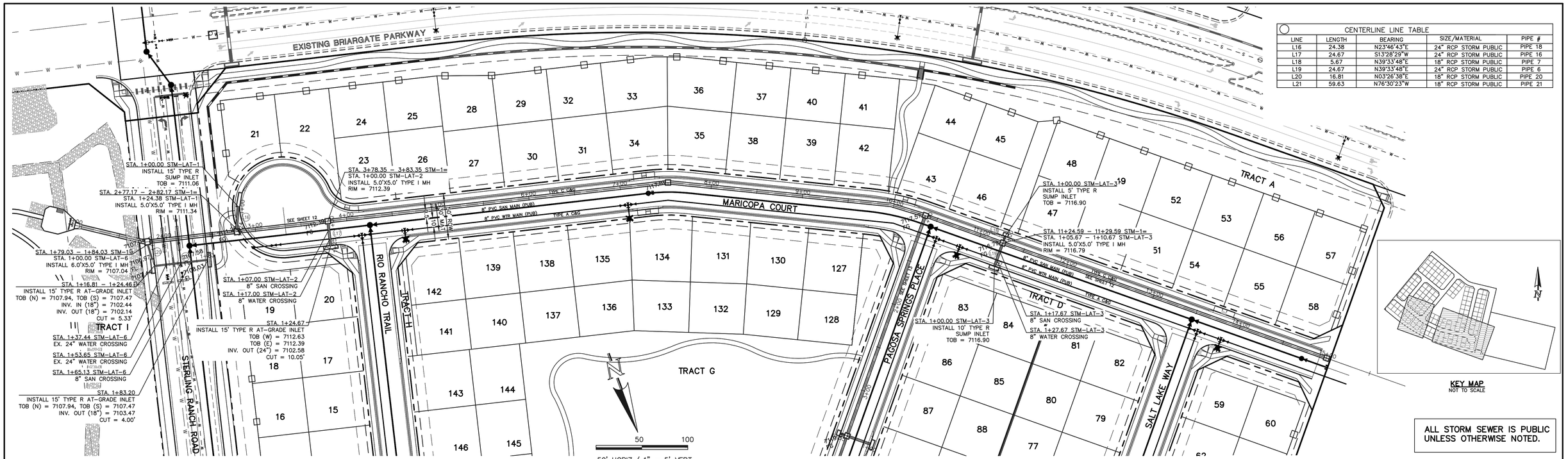
FOURSQUARE AT STERLING RANCH EAST FILING NO. 1

PUBLIC STORM SEWER

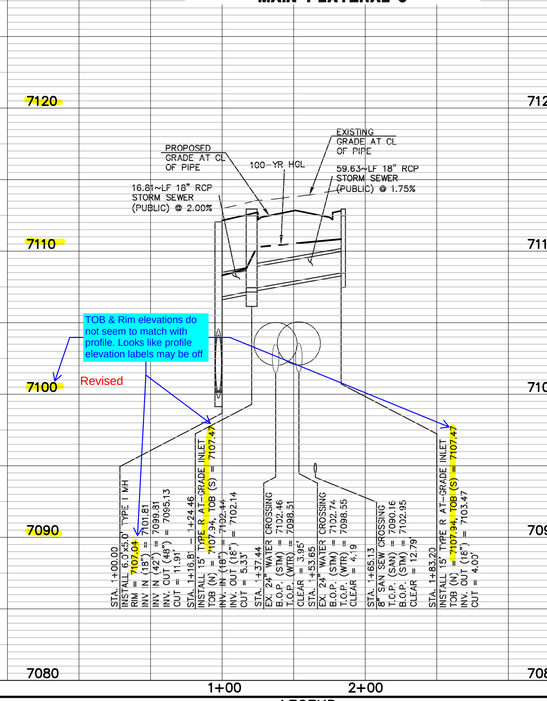
DESIGNED BY	JRH	SCALE		DATE	10/07/22
DRAWN BY	JRH	(H) 1"=	50'	SHEET	21 OF 29
CHECKED BY		(V) 1"=	5'	JOB NO.	1183.23



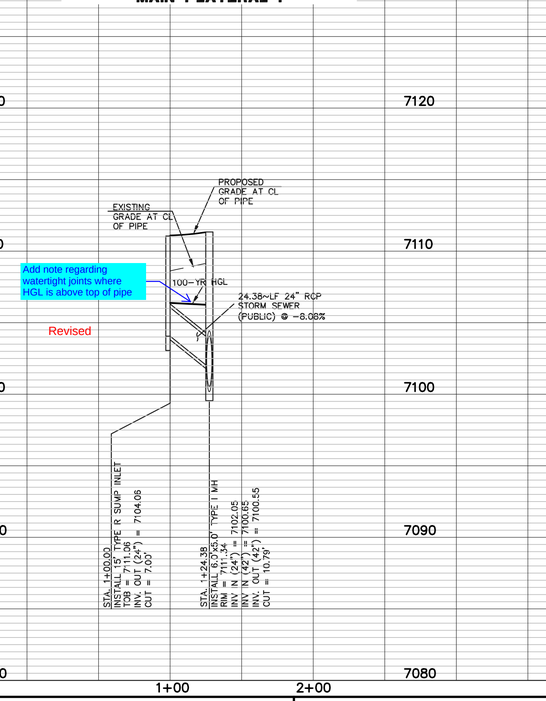
CENTERLINE LINE TABLE				
LINE	LENGTH	BEARING	SIZE/MATERIAL	PIPE #
L16	24.38	N23°46'43"E	24" RCP STORM PUBLIC	PIPE 18
L17	24.67	S13°28'29"W	24" RCP STORM PUBLIC	PIPE 16
L18	5.67	N39°33'48"E	18" RCP STORM PUBLIC	PIPE 7
L19	24.67	N39°33'48"E	24" RCP STORM PUBLIC	PIPE 6
L20	16.81	N03°26'38"E	18" RCP STORM PUBLIC	PIPE 20
L21	59.63	N76°30'23"W	18" RCP STORM PUBLIC	PIPE 21

ALL STORM SEWER IS PUBLIC UNLESS OTHERWISE NOTED.

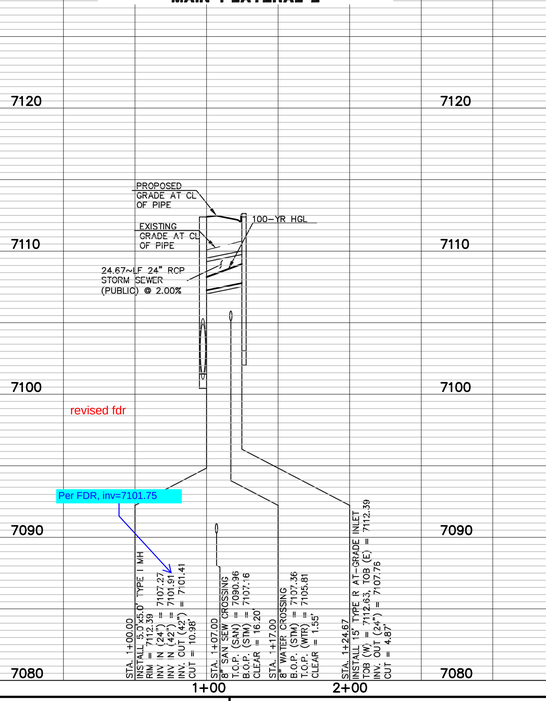
PUBLIC RCP STORM SEWER MAIN - MAIN 1 LATERAL 6



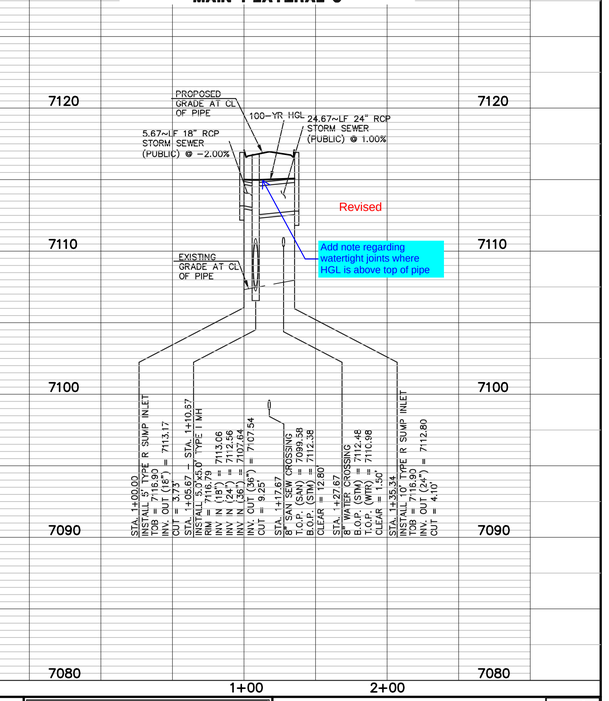
PUBLIC RCP STORM SEWER MAIN - MAIN 1 LATERAL 1



PUBLIC RCP STORM SEWER MAIN - MAIN 1 LATERAL 2



PUBLIC RCP STORM SEWER MAIN - MAIN 1 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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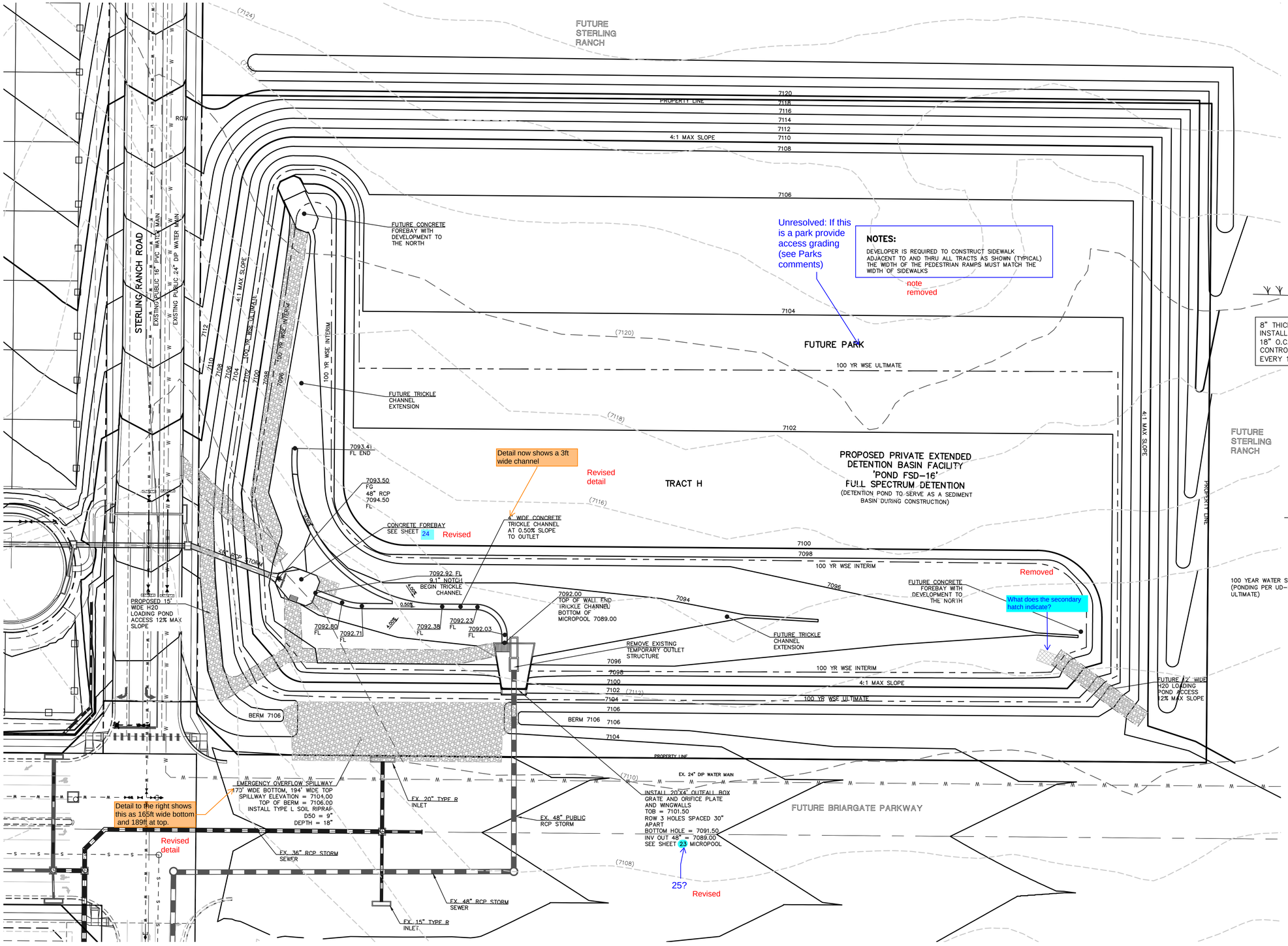
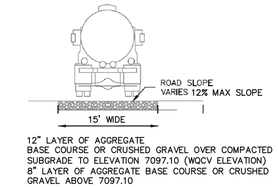
(719)785-0799(Fax)

FOURSQUARE AT STERLING RANCH EAST FILING NO. 1

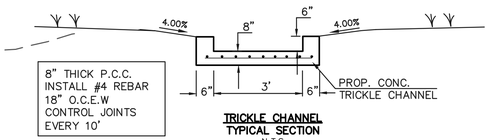
PUBLIC STORM SEWER

DESIGNED BY	JRH	SCALE		DATE	10/07/22
DRAWN BY	JRH	(H) 1"= 50'		SHEET 22	OF 29
CHECKED BY		(V) 1"= 5'		JOB NO.	1183.23





ACCESS ROAD

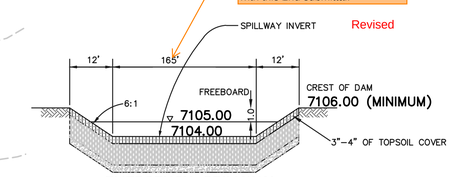


TRICKLE CHANNEL TYPICAL SECTION
N.T.S.

NOTES:
- POND BOTTOM TO SLOPE TOWARD TRICKLE CHANNEL AT 4%

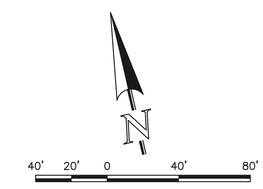
This length does match the calcs on FDR pg 88. Calcs show that this should be 170ft. It was shown as 165ft in calcs with the first submittal but now does not match with this 2nd submittal.

Revised



EMERGENCY SPILLWAY SECTION
SCALE: N.T.S.

100 YEAR WATER SURFACE = **7103.21** (PONDING PER UD-DETENTION FUTURE ULTIMATE)



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
	EXISTING ELECTRIC

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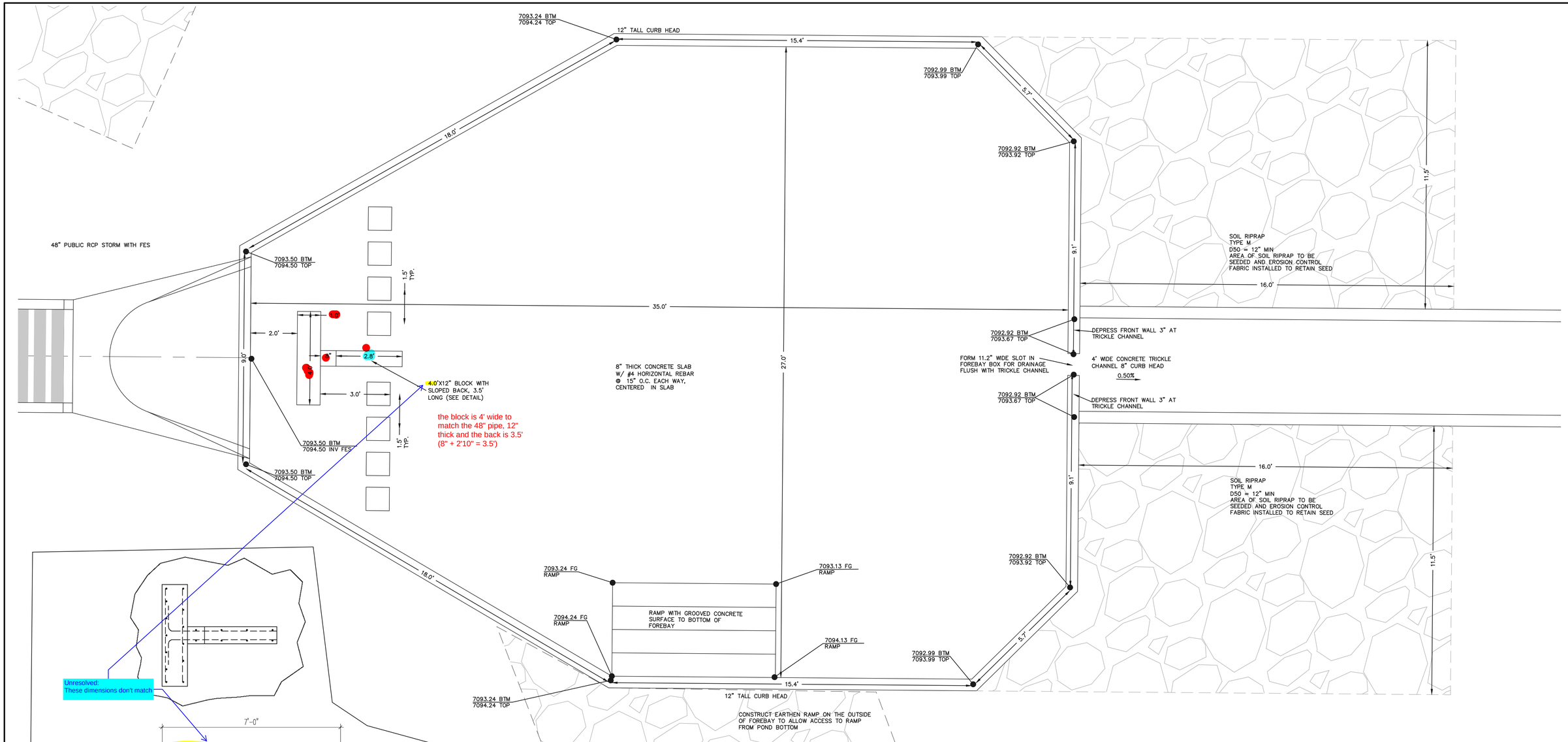
FOURSQUARE AT STERLING RANCH EAST FILING NO. 1
PRIVATE PERMANENT CONTROL MEASURE
PRIVATE EXTENDED DETENTION BASIN PLAN SET

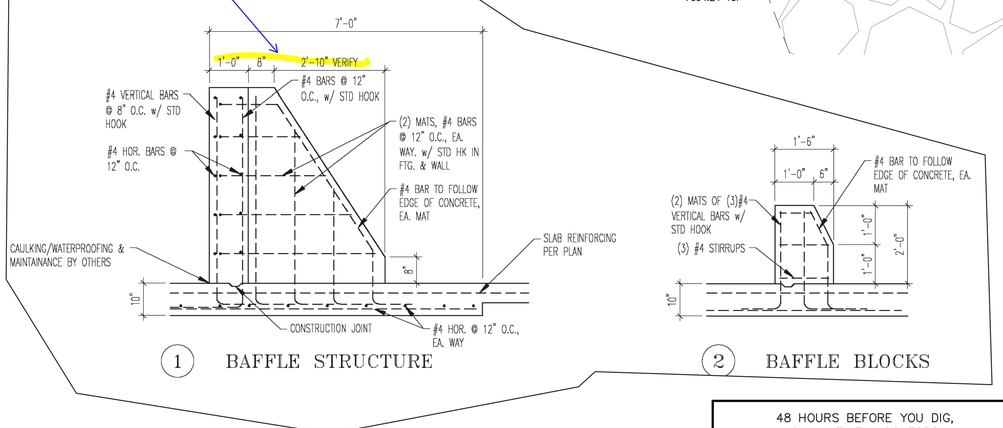
DESIGNED BY	JRH	SCALE		DATE	10/07/22
DRAWN BY	JRH	(H) 1"=	40'	SHEET	23 OF 29
CHECKED BY		(V) 1"=	N/A	JOB NO.	1183.23



CONCRETE FOREBAY

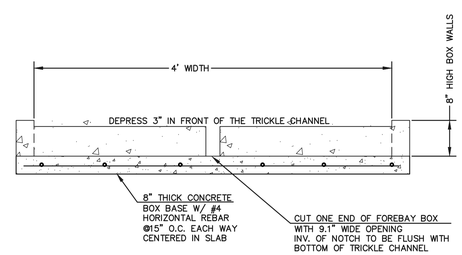
SCALE: 1" = 2'

Unresolved:
These dimensions don't match



1 BAFFLE STRUCTURE

2 BAFFLE BLOCKS



CONCRETE FOREBAY NOTCH

N.T.S

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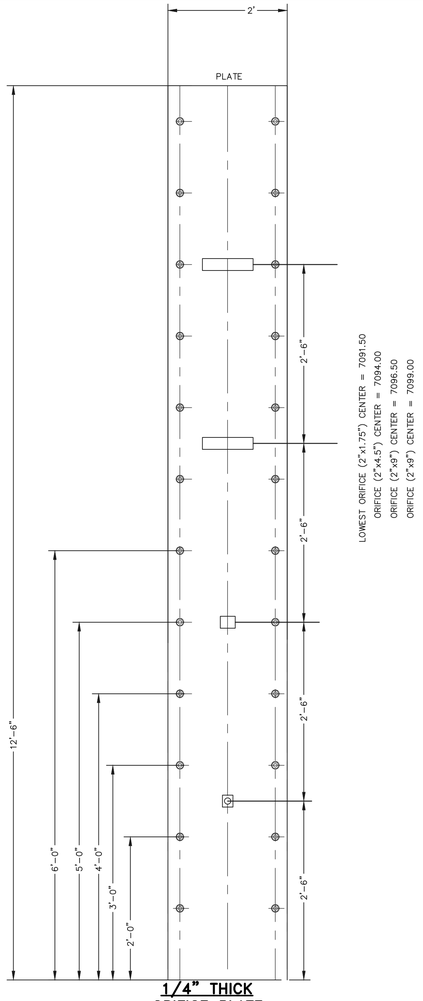
619 N. Cascade Avenue, Suite 200 (719)785-0790
Colorado Springs, Colorado 80903 (719)785-0799(Fax)

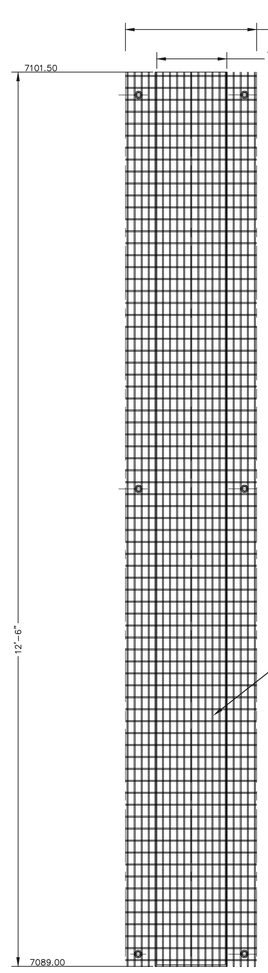
FOURSQUARE AT STERLING RANCH EAST
FIL. NO. 1
PUBLIC POND 16
FOREBAY DETAILS

DESIGNED BY	JRH	SCALE		DATE	10/11/22
DRAWN BY	JRH	(H) 1"= 2'		SHEET 24	OF 29
CHECKED BY		(V) 1"= N/A		JOB NO.	1183.23



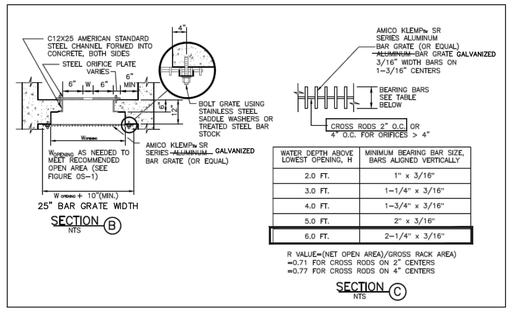
1/4" THICK ORIFICE PLATE

SCALE: 1"=1'

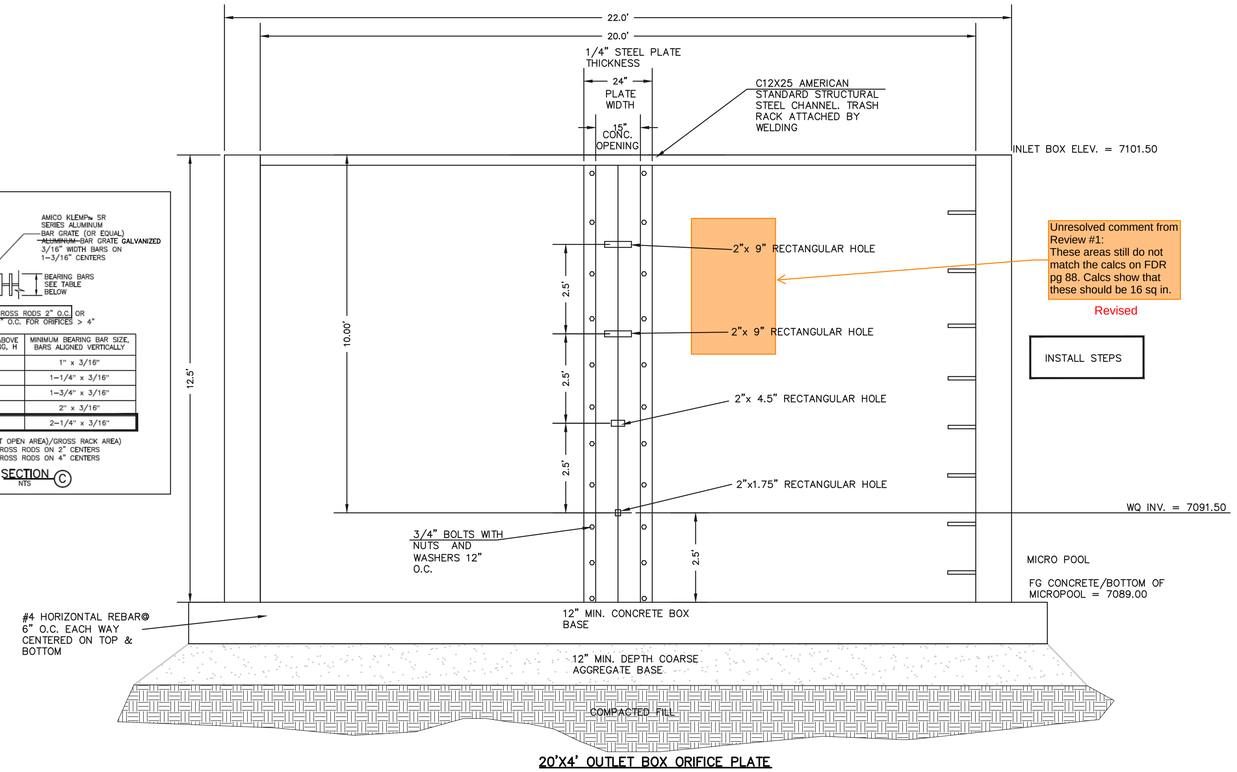


TRASH SCREEN

SCALE: 1"=1'



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"

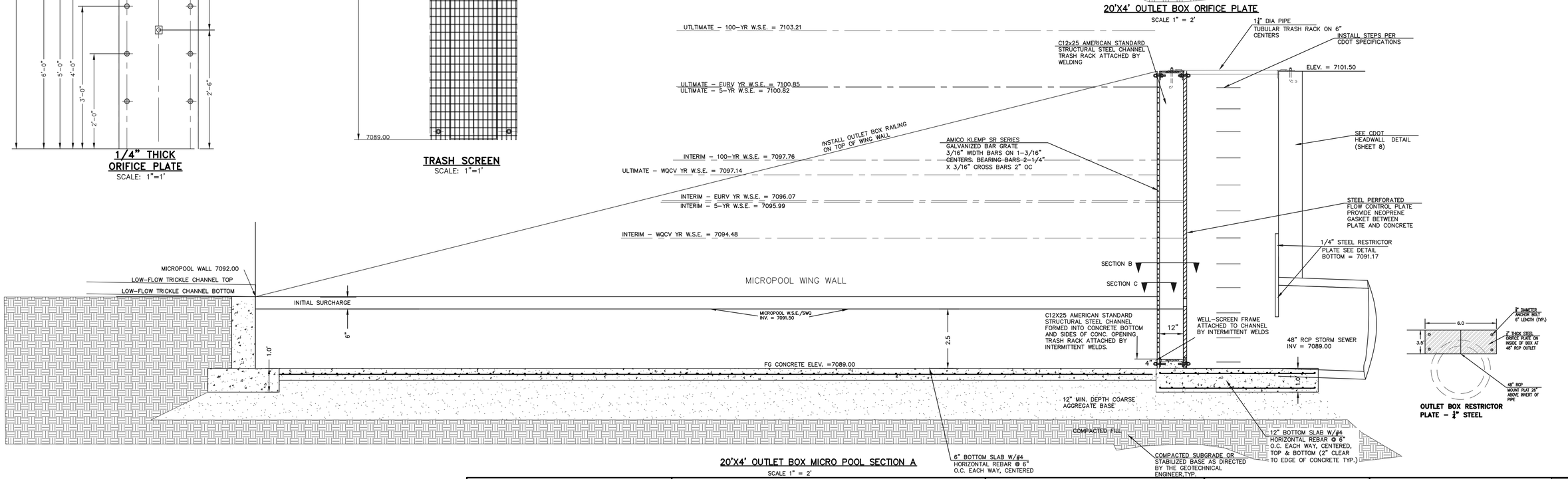


Unresolved comment from Review #1: These areas still do not match the calcs on FDR pg 88. Calcs show that these should be 16 sq in.

Revised

20'X4' OUTLET BOX ORIFICE PLATE

SCALE 1" = 2'



20'X4' OUTLET BOX MICRO POOL SECTION A

SCALE 1" = 2'

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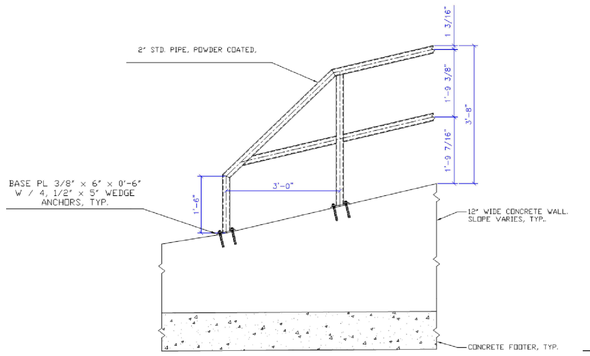
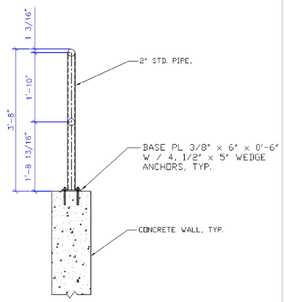
FOURSQUARE AT STERLING RANCH EAST FIL. NO. 1
PRIVATE PERMANENT CONTROL MEASURE

PRIVATE EXTENDED DETENTION BASIN
OUTLET BOX DETAILS

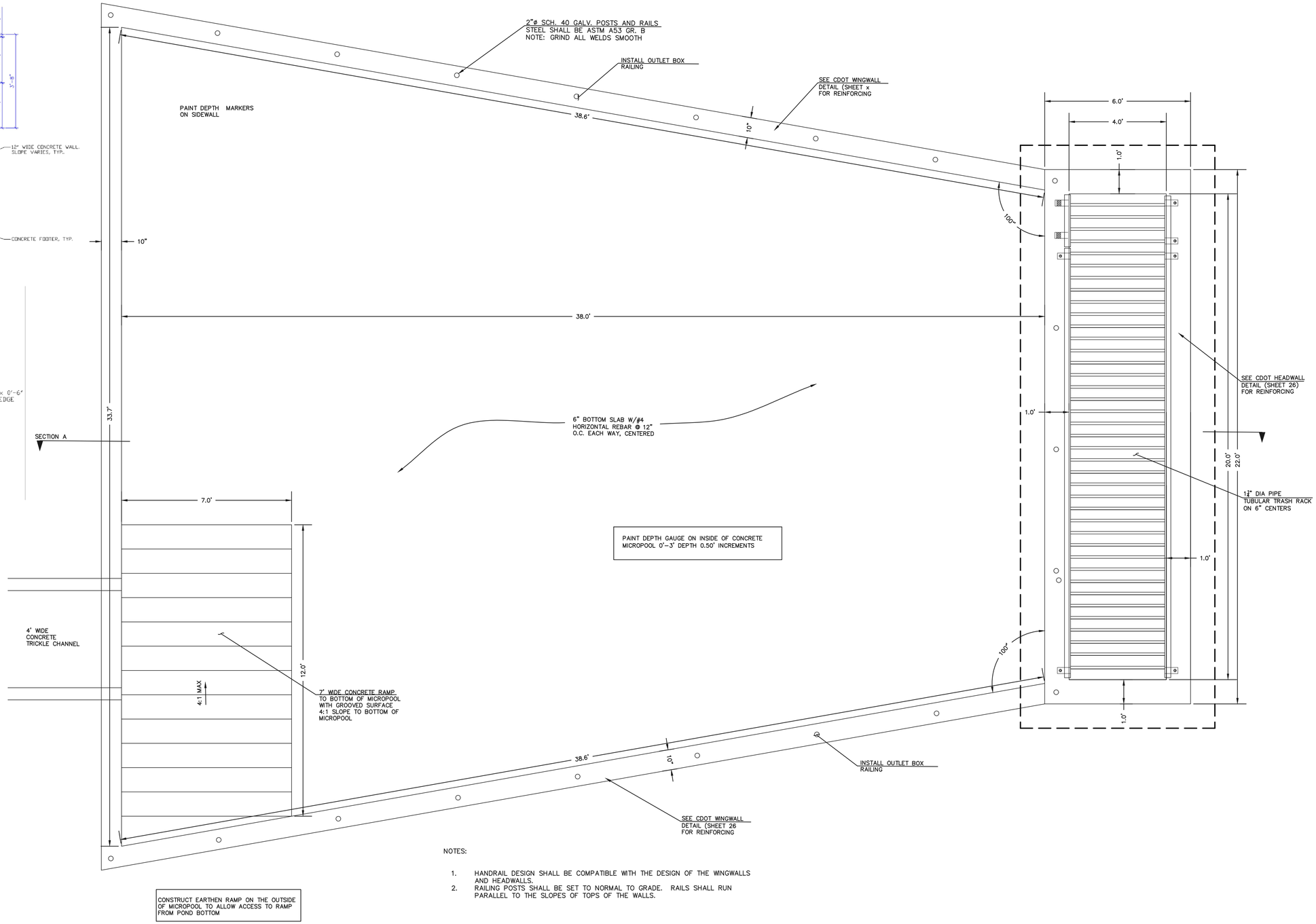
DESIGNED BY	JRH	SCALE		DATE	10/11/22
DRAWN BY	JRH	(H) 1"= 5'		SHEET 25	OF 29
CHECKED BY		(V) 1"= N/A		JOB NO.	1183.23





OUTLET BOX RAILING

N.T.S.



NOTES:

1. HANDRAIL DESIGN SHALL BE COMPATIBLE WITH THE DESIGN OF THE WINGWALLS AND HEADWALLS.
2. RAILING POSTS SHALL BE SET TO NORMAL TO GRADE. RAILS SHALL RUN PARALLEL TO THE SLOPES OF TOPS OF THE WALLS.

CONCRETE MICROPOOL

SCALE 1" = 2'

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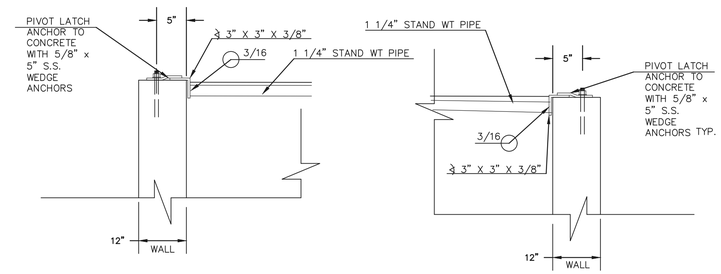
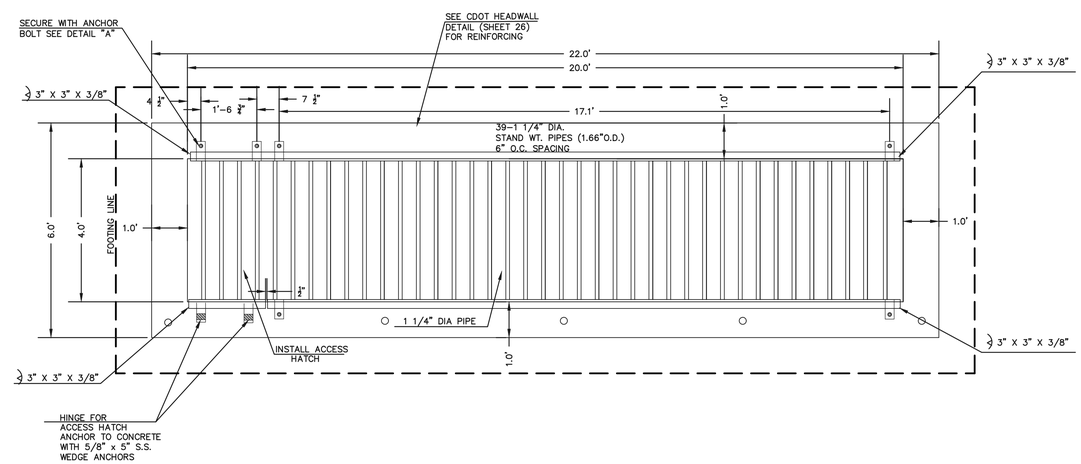
PRIVATE PERMANENT CONTROL MEASURE
PRIVATE EXTENDED DETENTION BASIN
OUTLET BOX DETAILS

DESIGNED BY	JRH	SCALE		DATE	10/11/22
DRAWN BY	JRH	(H) 1"= 5'		SHEET 26	OF 29
CHECKED BY		(V) 1"= N/A		JOB NO.	1183.23





20'X4' OUTLET BOX OVERFLOW TRASH RACK

SCALE 1" = 2'

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:

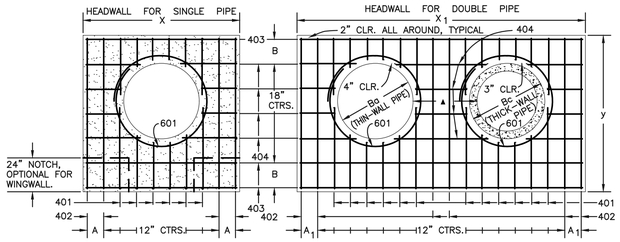
PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

DAVID L GIBSON, COLORADO P.E. #46477 DATE

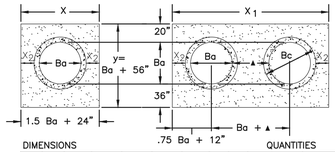
CLASSIC CONSULTING
619 N. Cascade Avenue, Suite 200
Colorado Springs, Colorado 80903
(719)785-0790
(719)785-0799(Fax)

FOURSQUARE AT STERLING RANCH FIL. NO. 1
PRIVATE PERMANENT CONTROL MEASURE
PRIVATE EXTENDED DETENTION BASIN
OUTLET BOX DETAILS

DESIGNED BY	JRH	SCALE		DATE	10/11/22
DRAWN BY	JRH	(H) 1"= 5'		SHEET 27	OF 29
CHECKED BY		(V) 1"= N/A		JOB NO.	1183.23

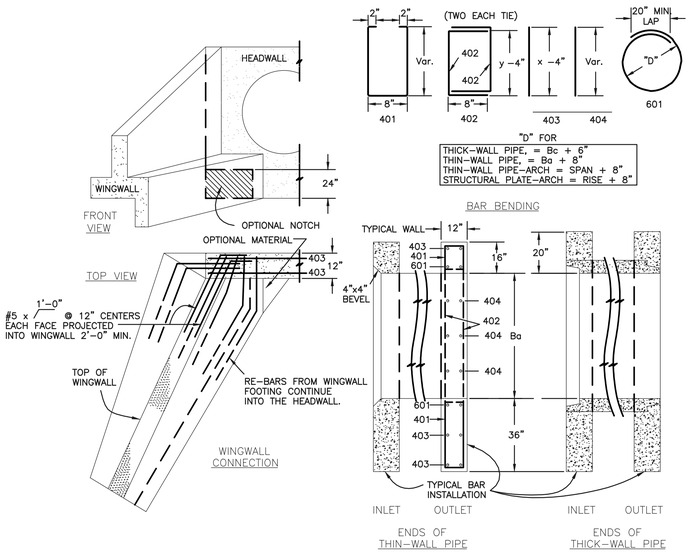


TYPICAL BAR LAYOUT FOR CONCRETE HEADWALLS



DIMENSIONS									QUANTITIES			
									CONCRETE		STEEL■	
Ba in.	Bc in.	X ft.–in.	A in.	X_1 ft.–in.	A_1 in.	y ft.–in.	B in.	X_2 in.	SGL cu.yd	DBL cu.yd	SGL lbs.	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



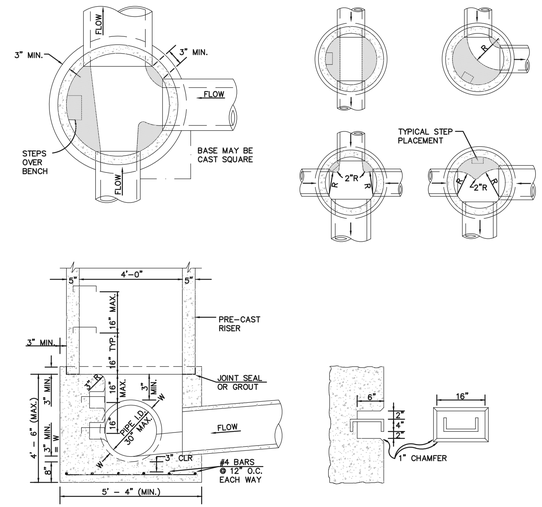
GENERAL NOTES

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

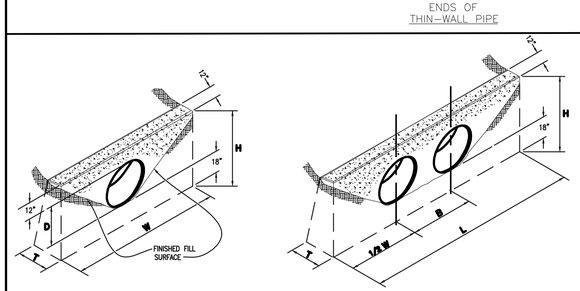


NOTES

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 CHANNELLED; SEE DETAILS THIS SHEET.

STORM SEWER MANHOLE – TYPE II

CDOT M–601–20 WINGWALL DETAIL



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.
2. 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

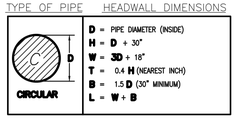
N/A

N/A

N/A

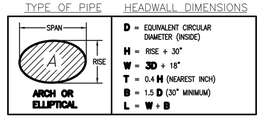
N/A

TYPE OF PIPE | HEADWALL DIMENSIONS



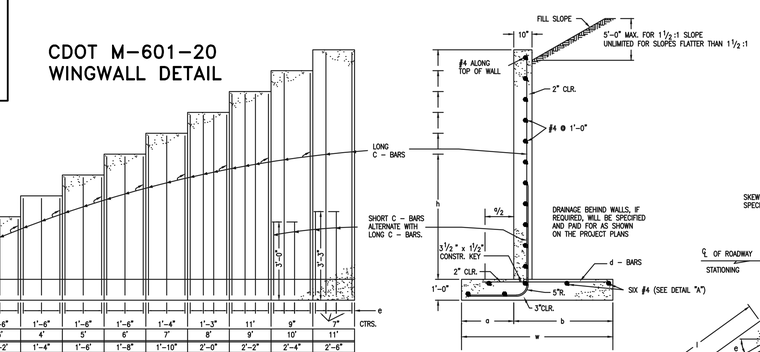
D = PIPE DIAMETER (INSIDE)
H = D + 30"
W = 3D + 18"
T = 0.4 H (NEAREST INCH)
B = 1.5 D (30" MINIMUM)
L = W + B

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.

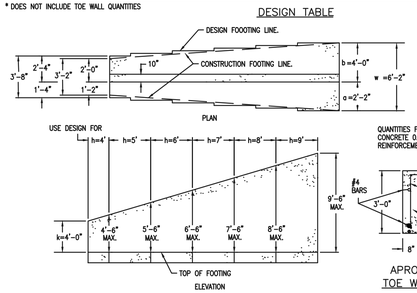


e =	1'–6"	1'–6"	1'–6"	1'–6"	1'–6"	1'–4"	1'–3"	11"	9"	7"	CTRS.
h =	2'	3'	4'	5'	6'	7'	8'	9'	10'	11'	
a =	1'–0"	1'–2"	1'–4"	1'–6'	1'–8"	1'–10"	2'–0"	2'–2"	2'–4"	2'–6"	
b =	1'–8"	2'–0"	2'–4"	2'–6"	3'–0"	3'–4"	3'–8"	4'–0"	4'–4"	4'–8"	
w =	2'–8"	3'–2"	3'–8"	4'–2"	4'–8"	5'–2"	5'–8"	6'–2"	6'–8"	7'–2"	
c & d BARS	#401'–6"	#401'–6"	#401'–6"	#401'–6"	#401'–6"	#401'–4"	#501'–3"	#5011"	#609"	#607"	CTRS.
* CONC.CU.YD./L.F.	0.161	0.210	0.259	0.308	0.358	0.407	0.457	0.506	0.556	0.604	
* REINF. LB./L.F.	8.0	9.3	10.7	12.1	14.3	16.4	23.0	28.6	41.8	54.6	

* DOES NOT INCLUDE TOE WALL QUANTITIES

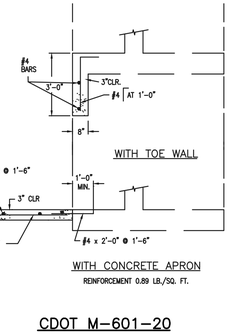
DESIGN TABLE

TYPICAL SECTION



DESIGN EXAMPLE

WING WALL



WITH TOE WALL

WITH CONCRETE APRON

REINFORCEMENT 0.89 LB./SQ. FT.

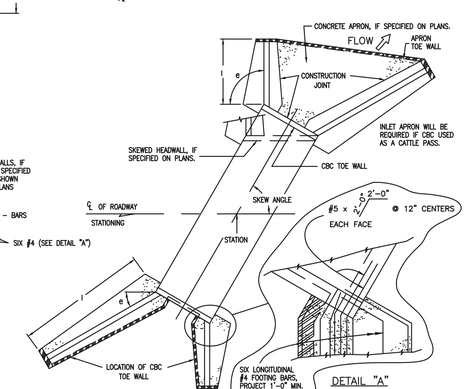
APRON TOE WALL

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", "Ba", "RISE", "X", "Y", "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"



TYPICAL CULVERT LAYOUT

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

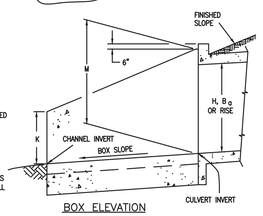
EQUIVALENT FLUID PRESSURE = 36 LBS./CU. FT.
MAXIMUM TOE PRESSURE = 1 TON/SQ. FT.

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.



BOX ELEVATION

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

48 HOURS BEFORE YOU DIG,
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UTILITY NOTIFICATION 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

DAVID L GIBSON, COLORADO P.E. #46477 DATE

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

FOURSQUARE AT STERLING RANCH EAST FIL. NO. 1
PRIVATE PERMANENT CONTROL MEASURE
PRIVATE EXTENDED DETENTION BASIN
DETAILS

DESIGNED BY	JRH	SCALE		DATE	10/11/22
DRAWN BY	JRH	(H) 1"=	5'	SHEET	28 OF 29
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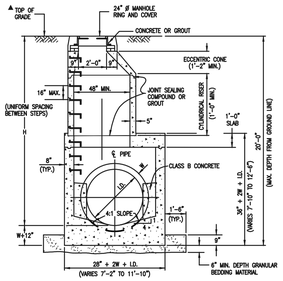
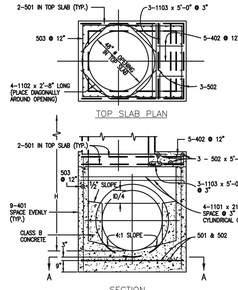
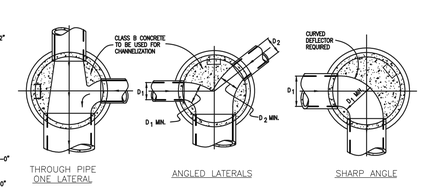


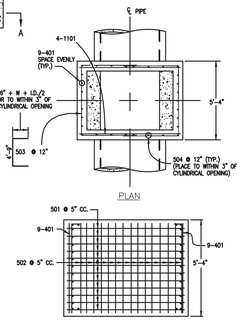
SECTION

MANHOLE BOX BASE





TYPICAL CHANNELIZATION DETAILS



QUANTITIES FOR CONCRETE MANHOLE BOX BASE

MARK	SIZE	TYPE	WT. #/FT.	BARS	I.D. 54"	60"	66"	72"	84"	96"
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'-0" 132.3	18 12'-2" 146.3
402	4	III	0.668	(NO. REQ'D. LENGTH WEIGHT ♦)	5 5'-5" 18.1	5 5'-6" 20.0	5 6'-7" 22.0	5 7'-2" 23.9	5 8'-4" 27.8	5 9'-6" 31.7
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
502	5	I	1.043	(NO. REQ'D. LENGTH WEIGHT ♦)	22 5'-0" 114.7	23 5'-0" 119.9	25 5'-0" 120.4	26 5'-0" 135.6	29 5'-0" 151.2	32 5'-0" 166.9
503	5	II	1.043	(NO. REQ'D. LENGTH WEIGHT ♦)	16 12'-10" 214.2	13 13'-5" 223.9	16 14'-0" 292.8	18 14'-7" 273.8	20 15'-9" 328.5	24 16'-11" 423.5
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
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
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
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
REINFORCING STEEL TOTAL ♦					985.6	1,037.5	1,127.2	1,204.0	1,380.2	1,601.6
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.

FORMULAS
401 BAR LENGTH = 32"+2W+I.D.
402 BAR LENGTH = I.D. + 2W
501 BAR LENGTH = 24" + I.D. + 2W
502 NUMBER BARS REQ'D. = $3 + \left(\frac{24+I.D.+2W}{6"} + 1\right)$
503 NUMBER BARS REQ'D. = $2\left(\frac{13+I.D.+2W}{6"} + 1\right)$ BAR LENGTH = 4'-9"+2(16+W+I.D./2)
504 NUMBER BARS REQ'D. = $2\left(\frac{2W+I.D.-4}{6"} + 1\right)$ BAR LENGTH = 32"+2W+I.D.
1101 BAR LENGTH = 21" + I.D. + 2W

BENDING

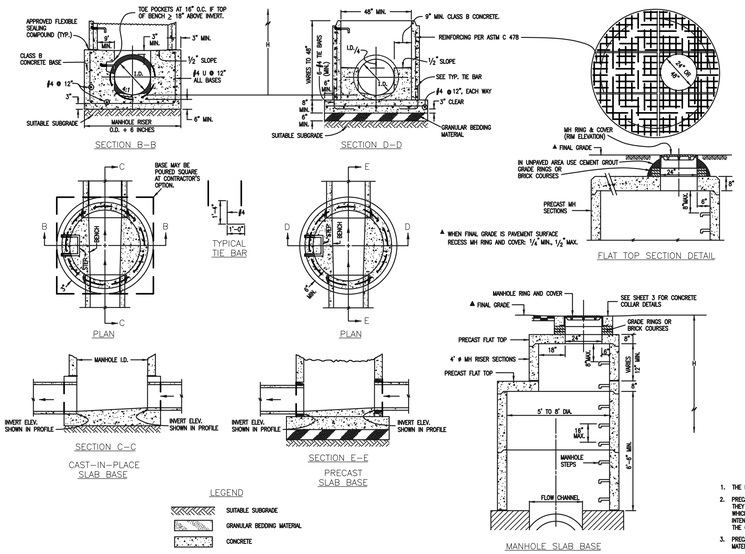
TYPE I: STRAIGHT

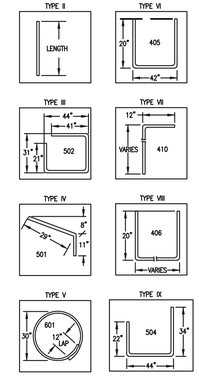
TYPE II: 4'-9"; 16"+W+I.D./2

TYPE III: 12"; 12"; 7"; I.D.+2W-38"

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, SLOPE, 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.

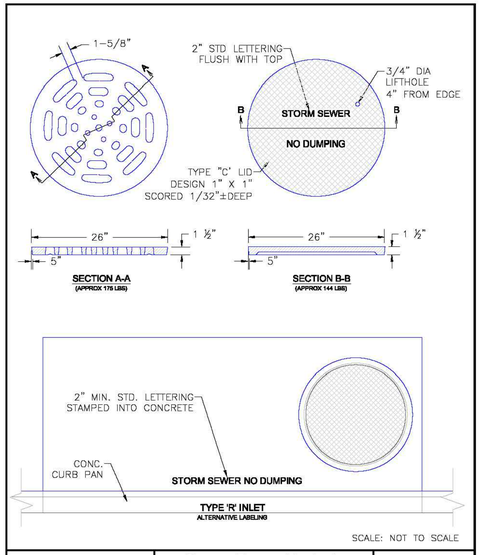




BAR BENDING DIAGRAMS ~ (Dimensions are Out-to-Out of bar)

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.



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

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' NO.REQ'D.	LENGTH	INLETS, H ≤ 5' 10' NO.REQ'D.	LENGTH	15' NO.REQ'D.	LENGTH	INLETS, H > 5' 10' NO.REQ'D.	LENGTH	15' 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		5 1/2"	IV	11	3'-4"	22	3'-4"	33	3'-4"	22	3'-4"	33	3'-4"
502	5/8"	5 1/2"	III							11	11'-5"	17	11'-5"
503		5 1/2"	II	5	3'-6"	16	3'-6"	27	3'-6"	6	3'-6"	6	3'-6"
504		5 1/2"	IX									5	8'-4"
	3/4"												
601		2 1/2"	V	2	8'-10"	2	8'-10"	2	8'-10"	2	8'-10"	4	8'-10"
#8(8.5				1	5'-10"	1	10'-10"	1	15'-10"	1	10'-10"	1	15'-10"
				2BARS,1ROD	——	4BARS,3RODS	——	8BARS,5RODS	——	4BARS,3RODS	——	8BARS,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"

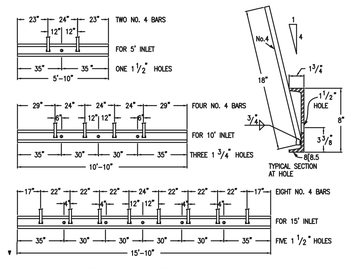
"H"	LENGTH 401	402	410	NO. REQ'D. REGULAR 403	407	NO. REQ'D. DROP BOX 403	407	L=5' CU.YD.CONC.	LB.STEEL	L=10' CU.YD.CONC.	LB.STEEL	L=15' CU.YD.CONC.	LB.STEEL
3'-0"	2'-8"	1'-8"		10	7			3.2	285	5.3	497	7.4	706
3'-6"	3'-2"	2'-2"		10	7			3.4	305	5.7	528	7.9	747
4'-0"	3'-8"	2'-8"		12	9			3.7	326	6.0	559	8.4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

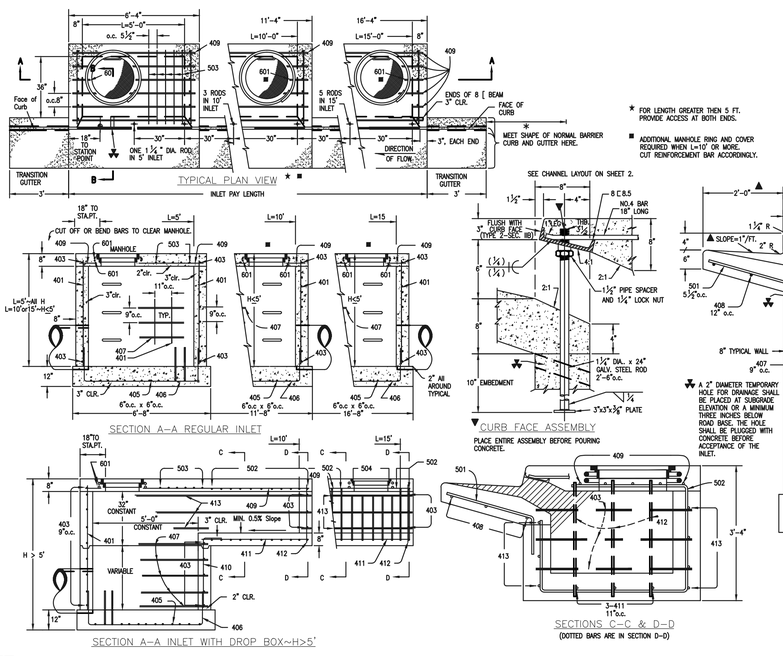
STEEL WEIGHTS DO NOT INCLUDE STRUCTURAL STEEL.

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 3/4 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

REVIEW:

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

DAVID L GIBSON, COLORADO P.E. #46477 DATE

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

FOURSQUARE AT STERLING RANCH EAST FILING NO. 1

DETAILS SHEET

DESIGNED BY	JRH	SCALE		DATE	10/11/22
DRAWN BY	JRH	(H) 1"= N/A		SHEET	29 OF 29
CHECKED BY		(V) 1"= N/A		JOB NO.	1183.23