

CONSTRUCTION PLANS  
FOR  
**CARRIAGE MEADOW SOUTH AT  
LORSON RANCH FILING NO. 2**  
FINAL GRADING PLANS  
AND DETAILED GRADING PLANS



Know what's below.  
Call before you dig.

CALL 2-BUSINESS DAYS IN ADVANCE  
BEFORE YOU DIG, GRADE OR  
EXCAVATE FOR THE MARKING OF  
UNDERGROUND MEMBER UTILITIES

SHEET INDEX	
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CO.3	TYPICAL SECTIONS
C4.1 ~ C4.8	DETAILED GRADING PLANS (for information only)
C4.9 ~ C4.11	EARLY GRADING PLAN AND DETAILS



VICINITY MAP  
NO SCALE

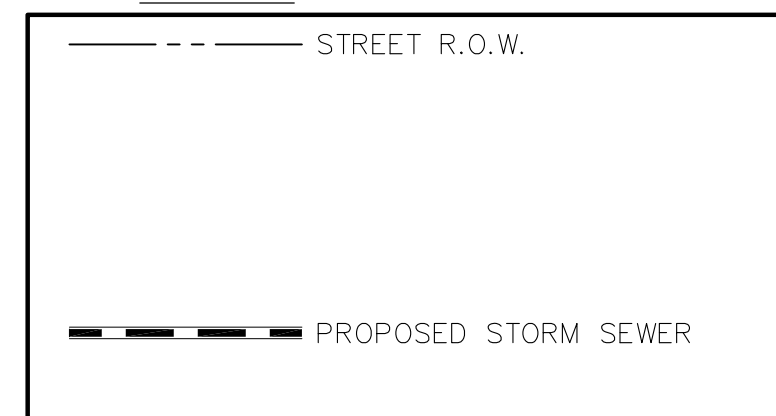
**DEVELOPER'S STATEMENT**

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE  
REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN.

OWNER SIGNATURE \_\_\_\_\_

DATE \_\_\_\_\_

**LEGEND**



**WATER / SANITARY**  
WIDEFIELD WATER AND SANITATION  
DISTRICT  
8495 FONTAINE BLVD.  
COLORADO SPRINGS, CO 80925  
719-390-7111

**CABLE**  
COMCAST  
P.O. BOX 173838  
DENVER, CO 80217  
970-641-4774

**ELECTRIC**  
MOUNTAIN VIEW ELECTRIC  
11140 E. WOODMEN RD.  
COLORADO SPRINGS, CO 80831  
719-495-2283

**SECURITY FIRE PROTECTION  
DISTRICT**  
400 SECURITY BOULEVARD  
SECURITY, CO 80911  
719-392-7121

PREPARED FOR:  
**LORSON, LLC**  
N. WAHSATCH AVE., SUITE 301  
COLORADO SPRINGS, CO 80903  
719-635-3200  
CONTACT: JEFF MARK

PREPARED BY:  
**CORE ENGINEERING GROUP**  
15004 1ST AVENUE S.  
BURNSVILLE, MN 55306  
719-570-1100  
CONTACT: RICHARD L. SCHINDLER P.E.

**CONSTRUCTION APPROVAL**

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 MANUALS VOLUME 1 AND 2, AND  
ENGINEERING CRITERIA MANUAL AS AMENDED. IN ACCORDANCE WITH ECM  
SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR  
CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL  
PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE  
TWO YEARS THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL,  
INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY  
DEVELOPMENT DIRECTOR'S DISCRETION

JENNIFER IRVINE, COUNTY ENGINEER/ECM ADMINISTRATOR DATE

**ENGINEER'S APPROVAL**

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

RICHARD L. SCHINDLER, P.E. # 33997  
FOR AND ON BEHALF OF CORE ENGINEERING GROUP

**BASIS OF BEARING**

BEARINGS ARE BASED ON THE SOUTH LINE OF THE NORTH HALF OF SECTION 23, TOWNSHIP 15 SOUTH, RANGE  
65 WEST OF THE 6TH PRINCIPAL MERIDIAN AS BEING SOUTH 8941'52" WEST. THE EAST QUARTER CORNER OF  
SAID SECTION 23 IS A FOUND 3-1/2" ALUMINUM CAP MONUMENT AND THE WEST QUARTER CORNER OF SAID  
SECTION 23 IS A FOUND 2-1/2" ALUMINUM CAP MONUMENT

**BENCHMARK**

FIMS MONUMENT F204 LOCATED AT THE NORTHWEST CORNER OF FONTAINE BLVD AND COTTONWOOD GROVE DR.  
ELEVATION 5724.072 (N.G.V.D. 29)

**TRAFFIC CONTROL NOTE**

THE CONTRACTOR SHALL PROVIDE ALL TRAFFIC CONTROL DEVICES AND MONITORING NECESSARY TO  
SAFELY COMPLETE THE WORK SHOWN IN THESE CONSTRUCTION DOCUMENTS IN CONFORMANCE WITH  
M.U.T.C.D. GUIDELINES. THE CONTRACTOR SHALL COMPLETE ALL NECESSARY WORK FOR PLAN  
REVIEW, PERMITS AND PROCESSING. TRAFFIC CONTROL WILL NOT BE PAID SEPARATELY BUT IS  
INCLUDED IN THE COST OF THE PROJECT.

**CORE  
ENGINEERING GROUP**

15004 1ST AVENUE S.  
BURNSVILLE, MN 55306  
PH: 719-659-7800  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@cog1.com

DATE: \_\_\_\_\_  
DESCRIPTION: \_\_\_\_\_  
NO. \_\_\_\_\_  
PREPARED FOR:  
**LORSON, LLC**  
212 N. WAHSATCH AVE, SUITE 301  
COLORADO SPRINGS, COLORADO 80903  
CONTACT: JEFF MARK  
PROJECT: CARRIAGE MEADOWS  
SOUTH AT LORSON  
RANCH FILING NO. 2  
FONTAINE BLVD-CARRIAGE MEADOWS DR  
COLORADO SPRINGS, COLORADO

DRAWN: RLS  
DESIGNED: RLS  
CHECKED: RLS

COVER SHEET  
FINAL GRADING  
AND EROSION CONTROL PLANS

DATE:  
JUNE 4, 2020  
PROJECT NO.  
100.046  
SHEET NUMBER  
C0.1  
TOTAL SHEETS: 14

SF 20-011

**CONSTRUCTION NOTES**

- ALL WORK SHALL COMPLY WITH THE CODES AND POLICIES FOR EL PASO COUNTY.
- EXISTING TOPOGRAPHIC INFORMATION SHOWN ON THIS GRADING PLAN WAS OBTAINED FROM AERIAL CONTOURS AND PREVIOUS CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE TO EXAMINE THE SITE AND BE FAMILIAR WITH THE EXISTING CONDITIONS.
- DEPTH OF MOISTURE-DENSITY CONTROL FOR THIS PROJECT SHALL BE AS FOLLOWS:  
BASE OF ALL CUTS AND FILLS – 12 INCHES,  
FULL DEPTH OF ALL EMBANKMENTS
- THE CONTRACTOR IS RESPONSIBLE FOR THE RE-ESTABLISHMENT OF ALL SURVEY MONUMENTS DISTURBED WITHIN THE PROJECT LIMITS.
- THE CONTRACTOR SHALL PROTECT ALL WORK AREAS AND FACILITIES FROM FLOODING AT ALL TIMES. AREAS AND FACILITIES SUBJECTED TO FLOODING, REGARDLESS OF THE SOURCE OF WATER, SHALL BE PROMPTLY DEWATERED AND RESTORED.
- PRIOR TO PAVING OPERATIONS, THE ENTIRE SUBGRADE SHALL BE PROOF-ROLLED WITH A LOADED 988 FRONT-END LOADER OR SIMILAR HEAVY RUBBER Tired VEHICLE (GVW OF 50,000 POUNDS WITH 18 KIP PER AXLE AT TIRE PRESSURES OF 90 PSI) TO DETECT ANY SOFT OR LOOSE AREAS. IN AREAS WHERE SOFT OR LOOSE SOILS, PUMPING OR EXCESSIVE MOVEMENT IS OBSERVED, THE EXPOSED MATERIALS SHALL BE OVER-EXCAVATED TO A MINIMUM DEPTH OF TWO FEET BELOW PROPOSED FINAL GRADE OR TO A DEPTH AT WHICH SOILS ARE STABLE. AFTER THIS HAS BEEN COMPLETED, THE EXPOSED MATERIALS SHALL BE SCARIFIED TO A DEPTH OF 12 INCHES AND MOISTURE CONDITIONED. THE SUBGRADE SHALL THEN BE UNIFORMLY COMPACTED TO A MINIMUM OF 95% OF STANDARD PROCTOR DENSITY (ASTM D-698) AT 0 TO +4.0% OF OPTIMUM MOISTURE CONTENT FOR A-6 AND A-7-6 SOILS ENCOUNTERED. OTHER SUBGRADE TYPES SHALL BE UNIFORMLY COMPACTED TO A MINIMUM OF 95% OF MODIFIED PROCTOR DENSITY (ASTM D-1557) AT PLUS OR MINUS 2.0% OF OPTIMUM MOISTURE CONTENT. AREAS WHERE STABLE NATURAL SOILS ARE ENCOUNTERED AT PROPOSED SUBGRADE ELEVATION SHALL ALSO BE SCARIFIED (18 INCHES FOR A-7-6 SOILS BELOW FULL-DEPTH ASPHALT CONCRETE) AND COMPACTED AS OUTLINED ABOVE PRIOR TO PAVING OPERATIONS. SUBGRADE FILL SHALL BE PLACED IN SIX-INCH LIFTS AND UNIFORMLY COMPACTED, MEETING THE REQUIREMENTS AS PREVIOUSLY DESCRIBED.
- SUBGRADE MATERIALS DEEMED UNSUITABLE BY THE ENGINEER SHALL BE EXCAVATED, DISPOSED OF AND REPLACED WITH APPROVED MATERIALS.
- FILL SHALL BE PLACED IN 8-INCH MAXIMUM LOOSE LIFTS AND SHALL BE COMPACTED PRIOR TO SUCCESSIVE LIFTS.
- THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING AND CONTROLLING EROSION DURING CONSTRUCTION ACTIVITIES AT ALL TIMES DURING GRADING AND CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE THE FOLLOWING EROSION AND SEDIMENT CONTROL MEASURES:  
– HAY BALE BARRIERS WHERE NEEDED AND/OR AS DIRECTED BY THE ENGINEER.  
– SILT FENCE WHERE NEEDED AND/OR AS DIRECTED BY THE ENGINEER.  
– TEMPORARY SEDIMENTATION BASINS WHERE NEEDED AND/OR AS DIRECTED BY THE ENGINEER.  
– MULCHING AND SEEDING OF EXCESSIVE SLOPED AREAS AS NEEDED OR AS DIRECTED BY THE ENGINEER.  
– TEMPORARY VEHICLE TRACKING CONTROL AS NEEDED AND/OR DIRECTED BY THE ENGINEER.  
– CONCRETE WASH AREAS.  
– INLET PROTECTION.  
THESE AND ALL EROSION CONTROL BEST MANAGEMENT PRACTICES AS SHOWN IN THE GRADING AND EROSION CONTROL PLANS SHALL BE STRICTLY ADHERED TO.
- FINISHED CONTOURS/SPOT ELEVATIONS SHOWN HEREON REPRESENT FINISHED GRADES. ALL PAVEMENT SUBGRADES ARE BASED ON THE COMPOSITE ASPHALT PAVEMENT RECOMMENDATIONS MADE IN THE "GEOTECHNICAL STUDY" FOR THIS PROJECT.

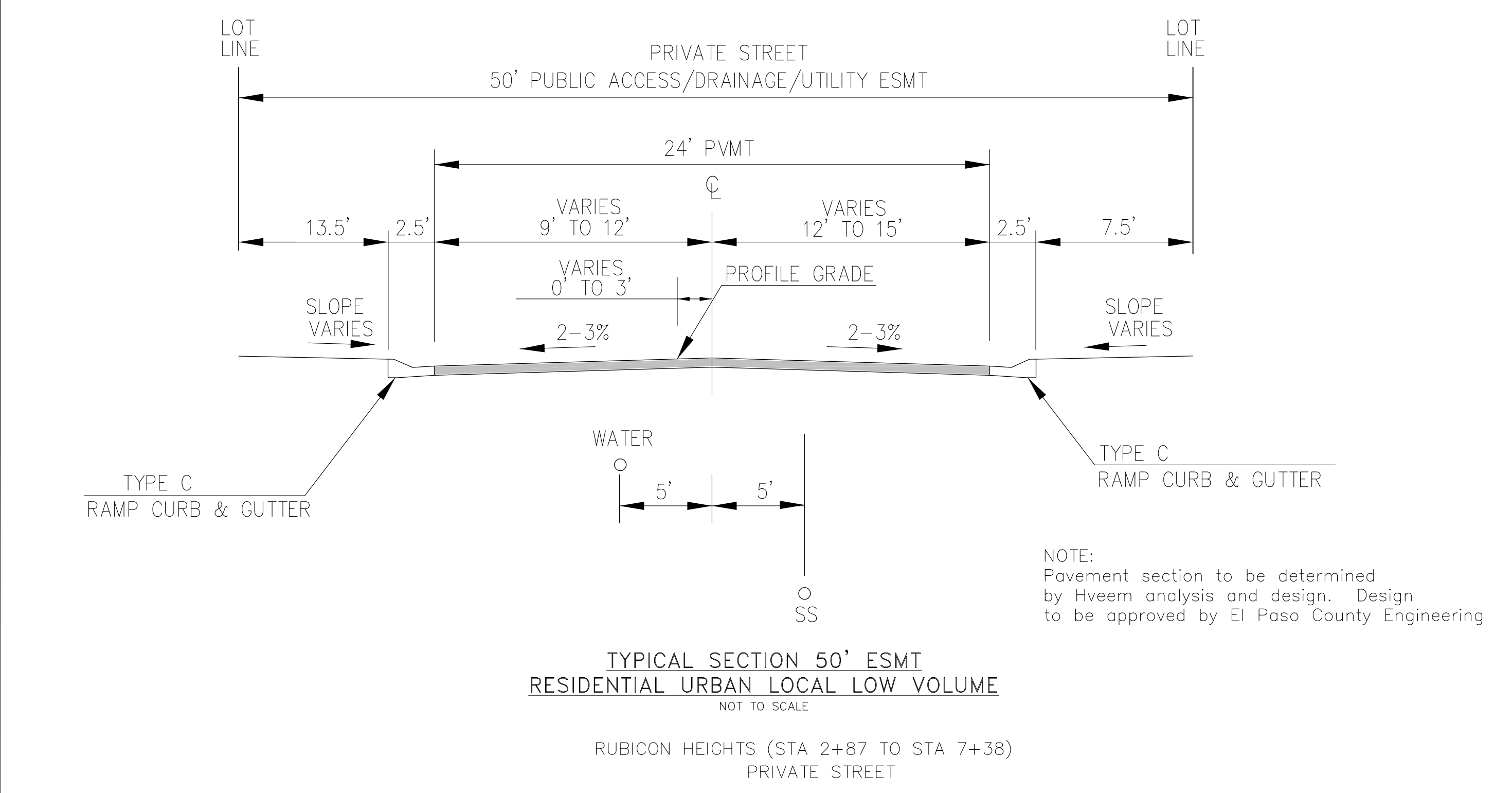
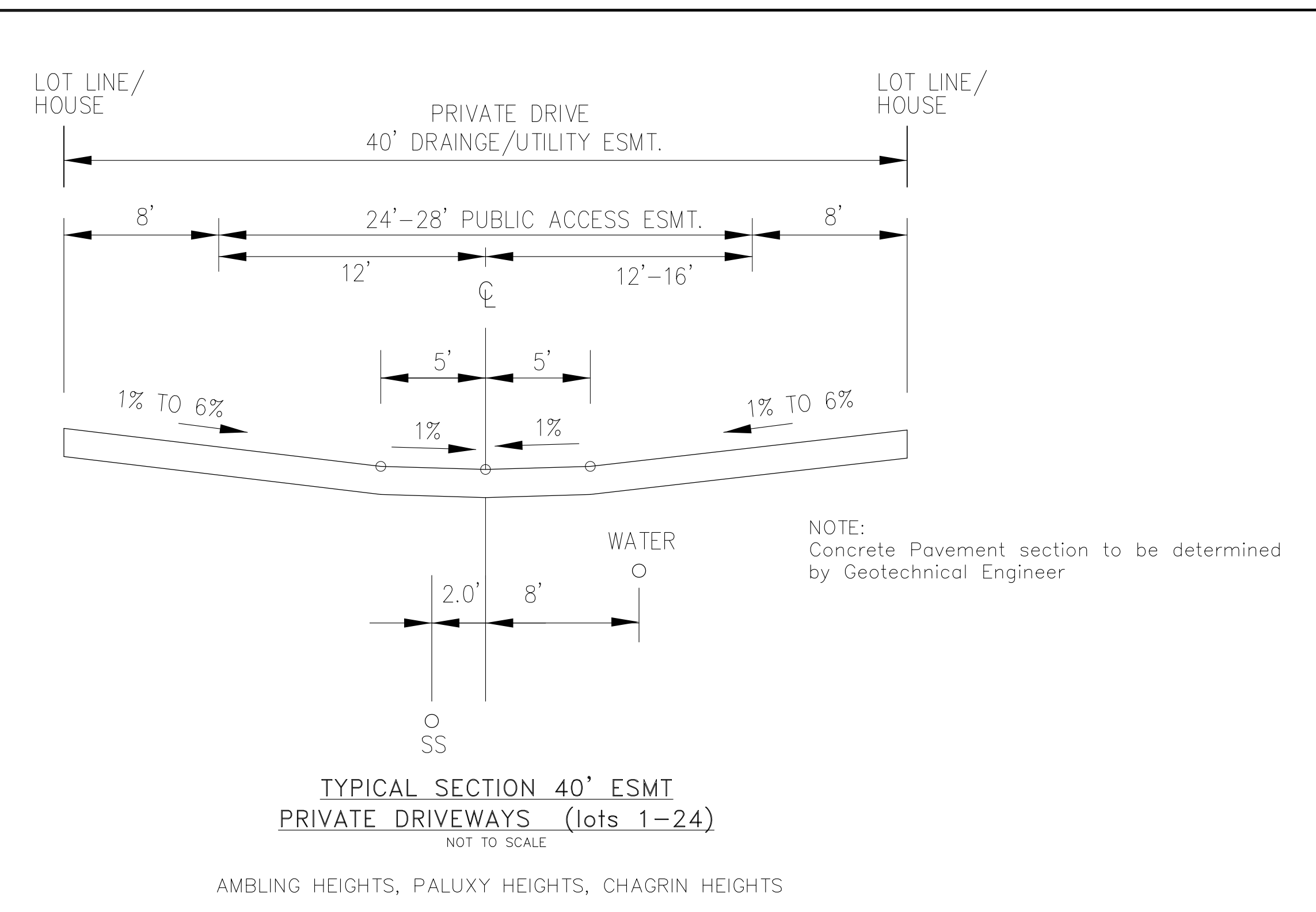
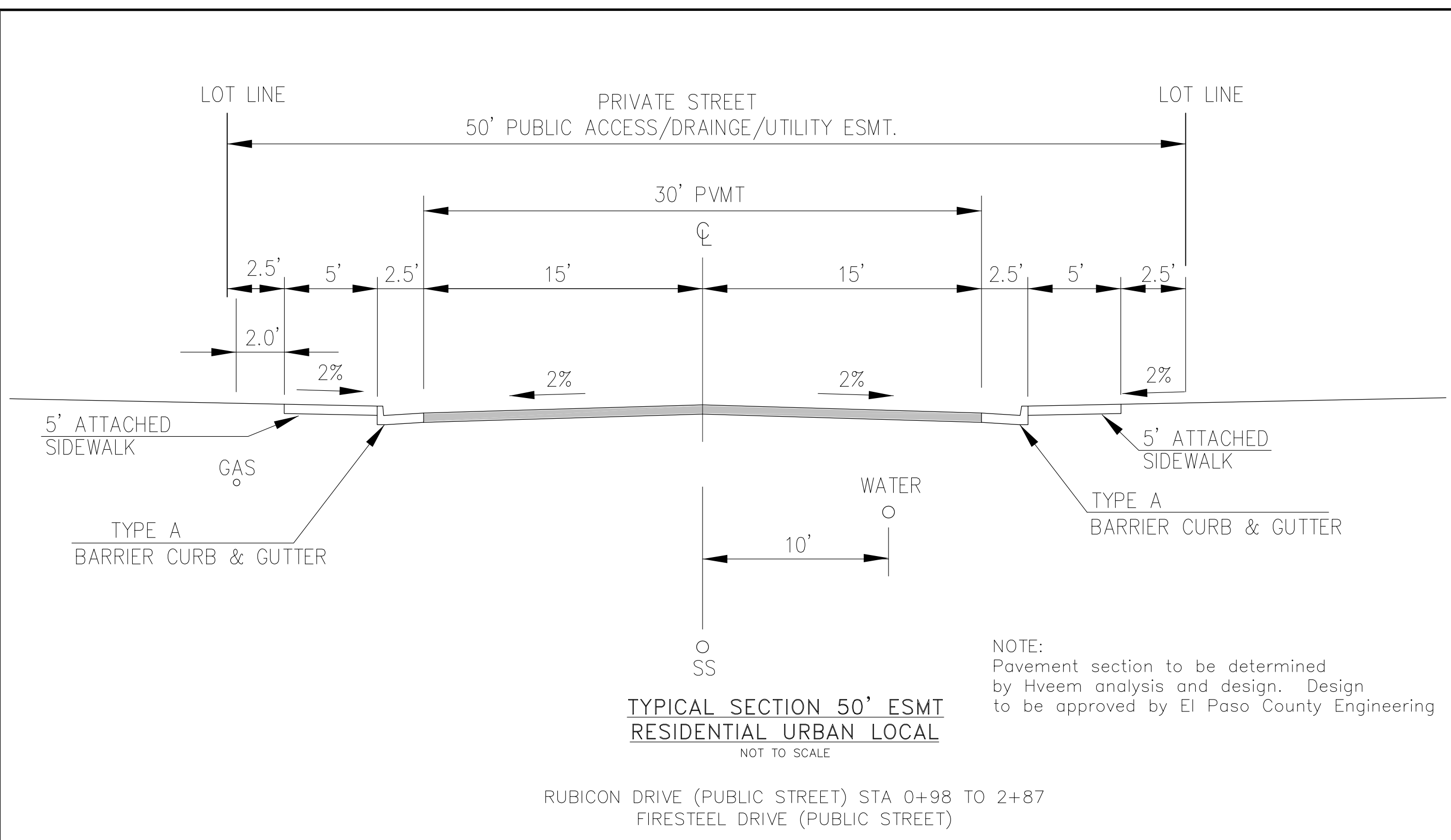
**EL PASO COUNTY STANDARD CONSTRUCTION NOTES:**

- ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD 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).
- 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:
  - EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
  - CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
  - COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
  - CDOT M & S STANDARDS
- 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.
- 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.
- CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (PCD) – INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.
- 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.
- CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND DSD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.
- ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY PCD.
- CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
- 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.
- SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY PUBLIC WORK DEPARTMENT AND MUTCD CRITERIA.
- CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY PWD, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
- THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF-SITE DISTURBANCE, GRADING, OR CONSTRUCTION.

**STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS (rev. 7/02/2019)**

- 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.
- 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.
- 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.
- 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.
- 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.
- All temporary sediment and erosion control measures shall be maintained and remain in effective operating condition until permanent soil erosion control measures are implemented and final stabilization is established. All persons engaged in land disturbance activities shall assess the adequacy of control measures at the site and identify if changes to those control measures are needed to ensure the continued effective performance of the control measures. All changes to temporary sediment and erosion control measures must be incorporated into the Stormwater Management Plan.
- 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.
- 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.
- 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.
- 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.
- 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).
- 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.
- 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.
- 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.
- Erosion control blanketing or other protective covering shall be used on slopes steeper than 3:1.
- 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.
- 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.
- Tracking of soils and construction debris off-site shall be minimized. Materials tracked off-site shall be cleaned up and properly disposed of immediately.
- 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.
- 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.
- 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.
- 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.
- No person shall cause the impediment of stormwater flow in the curb and gutter or ditch except with approved sediment control measures.
- 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.
- All construction traffic must enter/exit the site only at approved construction access points.
- Prior to construction the permittee shall verify the location of existing utilities.
- 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.
- The soils report for this site has been prepared by RMG, "GEOLOGY AND SOILS STUDY FOR CARRIAGE MEADOWS SOUTH AT LORSON RANCH FIL NO. 2", DATED OCTOBER 7, 2019 and shall be considered a part of these plans.
- 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

<b>CORE ENGINEERING GROUP</b>	1500 WEST AVENUE, SUITE 600 DENVER, CO 80202 PH: 719-659-7800 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: Rich@cgl.com											
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PROJECT: CARRIAGE MEADOWS SOUTH AT LORSON RANCH FILING NO. 2 FONTAINE BLVD – CARRIAGE MEADOWS DR COLORADO SPRINGS, COLORADO	PREPARED FOR: <b>LORSON, LLC</b> 212 N. WAHSATCH AVE. SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 635-3200 CONTACT: JEFF MARK											
DRAWN: RLS DESIGNED: RLS CHECKED: RLS	<b>EARLY SITE GRADING AND EROSION CONTROL PLAN NOTES</b>											
DATE: JUNE 4, 2020	PROJECT NO. 100.046											
SHEET NUMBER <b>C0.2</b>	TOTAL SHEETS: 14											



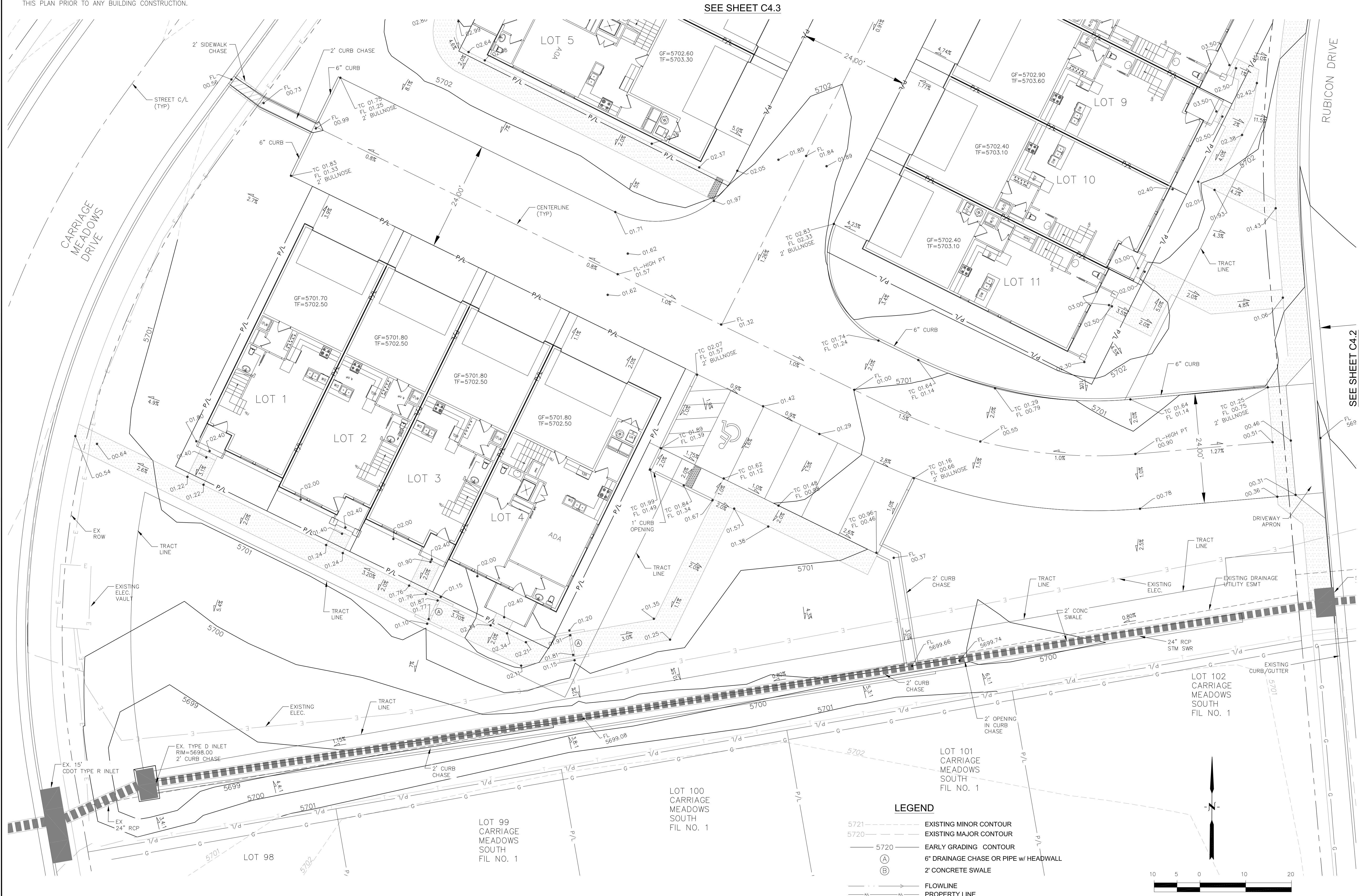
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15004 1ST AVENUE S. BURNSVILLE, MN 55306 PH: 719-659-7800 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: Rich@ceg1.com	
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PROJECT: CARRIAGE MEADOWS SOUTH AT LORSON RANCH FILING NO. 2 FONTAINE BLVD - CARRIAGE MEADOWS DR COLORADO SPRINGS, COLORADO	

**TYPICAL STREET AND DRIVEWAY SECTIONS**

DATE:	JUNE 4, 2020
PROJECT NO.	100.046
SHEET NUMBER	<b>C0.3</b>
TOTAL SHEETS:	14



**NOTE:**  
 HOME BUILDER OR CONTRACTOR SHALL AS-BUILT ALL IMPROVEMENTS PRIOR TO CONSTRUCTING ANY BUILDINGS. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY FROM THIS PLAN PRIOR TO ANY BUILDING CONSTRUCTION.

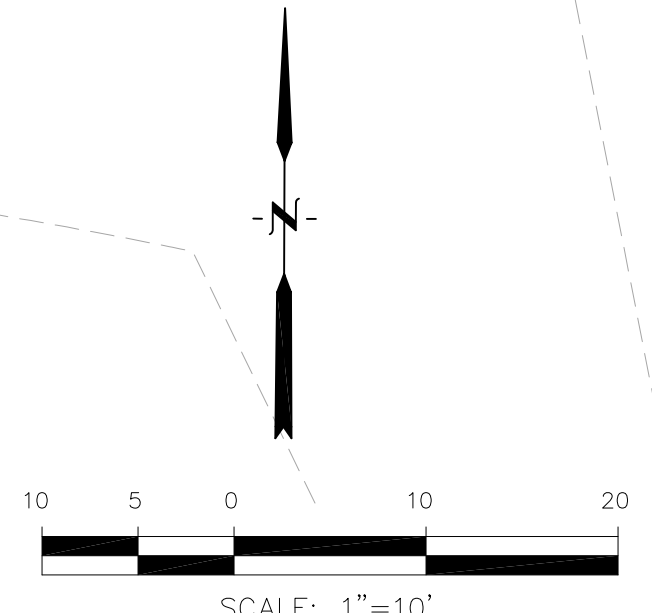


SEE SHEET C4.3

SEE SHEET C4.2

**LEGEND**

- 5721 - - - - - EXISTING MINOR CONTOUR
- 5720 - - - - - EXISTING MAJOR CONTOUR
- 5720 ———— EARLY GRADING CONTOUR
- (A) ———— 6" DRAINAGE CHASE OR PIPE w/ HEADWALL
- (B) ———— 2" CONCRETE SWALE
- FLOWLINE
- PROPERTY LINE



**CORE ENGINEERING GROUP**  
 1515 AVENUE S.  
 BOULDER, CO 80506  
 PH: 719-659-7800  
 CONTACT: RICHARD L. SCHINDLER, P.E.  
 EMAIL: Rich@ceg1.com

DATE: \_\_\_\_\_  
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 PREPARED FOR: **LORSON, LLC**  
 212 N. WAHSATCH AVE, SUITE 301  
 COLORADO SPRINGS, COLORADO 80903  
 FONTAINE BLVD-CARRIAGE MEADOWS DR  
 COLORADO SPRINGS, COLORADO  
 CONTACT: JEFF MARK

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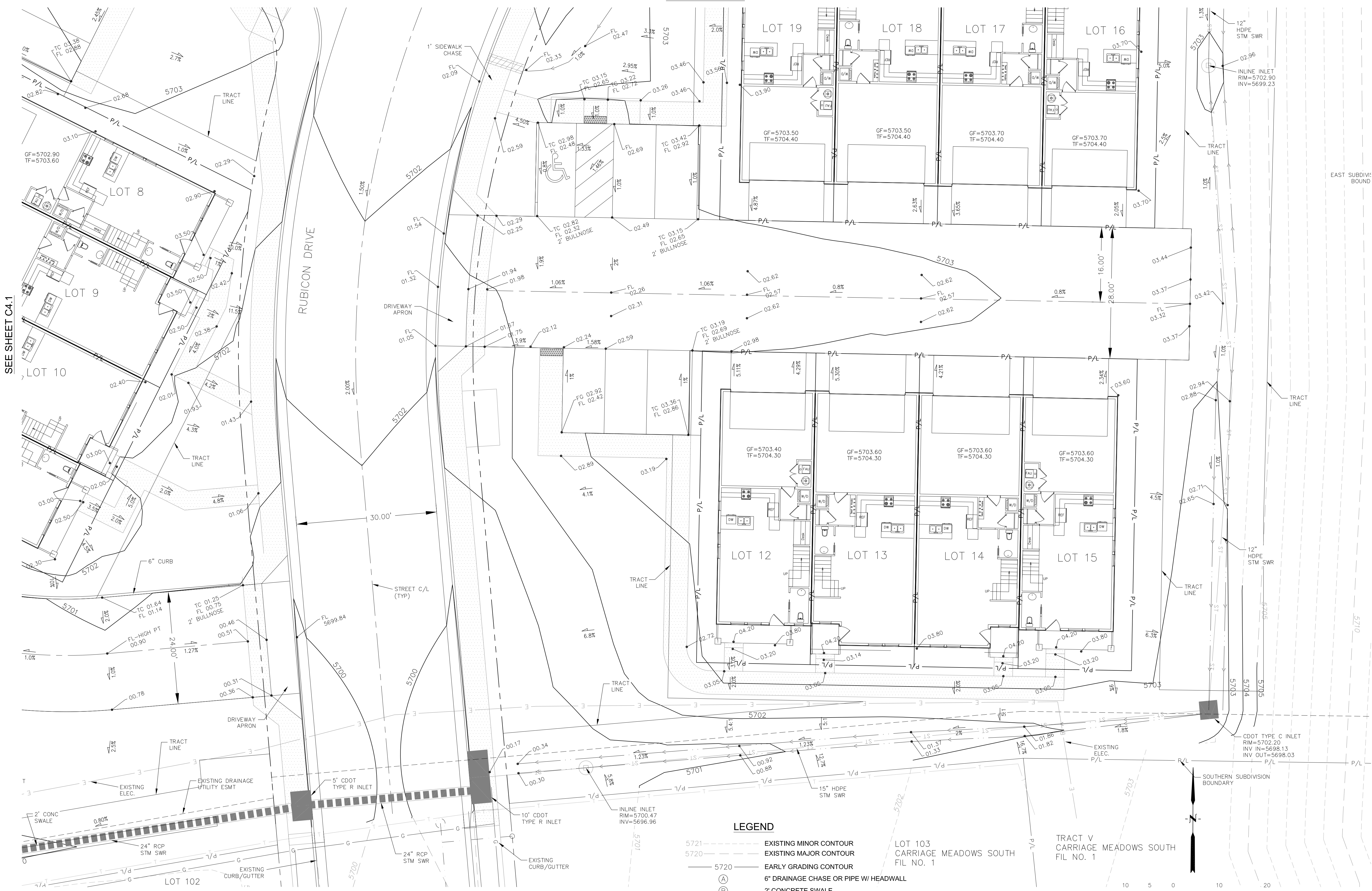
**CARRIAGE MEADOWS SOUTH  
 AT LORSON RANCH FIL. NO. 2  
 DETAILED GRADING PLAN**

DATE: JUNE 4, 2020  
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 TOTAL SHEETS: 14



NOTE:  
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SEE SHEET C4.4



SEE SHEET C4.1

RUBICON DRIVE  
SEE SF 17-011

- LEGEND**
- 5721 --- EXISTING MINOR CONTOUR
  - 5720 --- EXISTING MAJOR CONTOUR
  - EARLY GRADING CONTOUR
  - (A) --- 6" DRAINAGE CHASE OR PIPE W/ HEADWALL
  - (B) --- 2' CONCRETE SWALE
  - FLOWLINE
  - PROPERTY LINE



**CORE ENGINEERING GROUP**  
1500 S. W. AVENUE, SUITE 100  
DENVER, CO 80202  
PH: 719-659-7800  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@ceg1.com

DATE: \_\_\_\_\_  
DESCRIPTION: \_\_\_\_\_  
NO: \_\_\_\_\_

PREPARED FOR:  
**LORSON, LLC**  
212 N. WAHSATCH AVE, SUITE 301  
COLORADO SPRINGS, COLORADO 80903  
CONTACT: JEFF MARK

PROJECT: CARRIAGE MEADOWS SOUTH AT LORSON RANCH FILING NO. 2  
FONTAINE BLVD-CARRIAGE MEADOWS DR  
COLORADO SPRINGS, COLORADO

DRAWN: RLS  
DESIGNED: RLS  
CHECKED: RLS

**CARRIAGE MEADOWS SOUTH  
AT LORSON RANCH FIL. NO. 2  
DETAILED GRADING PLAN**

DATE:  
JUNE 4, 2020

PROJECT NO.  
100.046

SHEET NUMBER  
**C4.2**

TOTAL SHEETS: 14

**LEGEND**

- 5721 ----- EXISTING MINOR CONTOUR
- 5720 ----- EXISTING MAJOR CONTOUR
- 5720 ----- EARLY GRADING CONTOUR
- (A) ----- 6" DRAINAGE CHASE OR PIPE W/ HEADWALL
- (B) ----- 2' CONCRETE SWALE
- FLOWLINE
- PROPERTY LINE

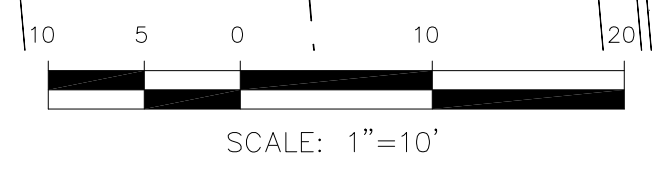
SEE SHEET C4.5

**NOTE:**  
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SEE SHEET C4.1

SEE SHEET C4.4



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CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@ceg1.com

DATE: \_\_\_\_\_  
DESCRIPTION: \_\_\_\_\_  
NO: \_\_\_\_\_  
DRAWN: RLS  
DESIGNED: RLS  
CHECKED: RLS

PROJECT: CARRIAGE MEADOWS SOUTH AT LORSON RANCH FILING NO. 2  
PREPARED FOR: LORSON, LLC  
212 N. WAHSATCH AVE, SUITE 301  
COLORADO SPRINGS, COLORADO 80903  
FONTAINE BLVD - CARRIAGE MEADOWS DR  
COLORADO SPRINGS, COLORADO  
CONTACT: JEFF MARK

**CARRIAGE MEADOWS SOUTH AT LORSON RANCH FIL. NO. 2 DETAILED GRADING PLAN**

DATE: JUNE 4, 2020  
PROJECT NO. 100.046  
SHEET NUMBER C4.3  
TOTAL SHEETS: 14



NOTE:  
 HOME BUILDER OR CONTRACTOR SHALL AS-BUILT ALL IMPROVEMENTS PRIOR TO CONSTRUCTING ANY BUILDINGS. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY FROM THIS PLAN PRIOR TO ANY BUILDING CONSTRUCTION.

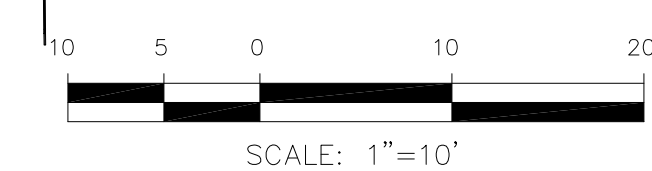
SEE SHEET C4.5

LEGEND

- 5721----- EXISTING MINOR CONTOUR
- 5720----- EXISTING MAJOR CONTOUR
- 5720----- EARLY GRADING CONTOUR
- (A)----- 6" DRAINAGE CHASE OR PIPE W/ HEADWALL
- (B)----- 2' CONCRETE SWALE
- FLOWLINE
- PROPERTY LINE



SEE SHEET C4.2



**CORE ENGINEERING GROUP**  
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 CONTACT: RICHARD L. SCHINDLER, P.E.  
 EMAIL: Rich@ceg1.com

DATE: \_\_\_\_\_  
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 212 N. WAHSATCH AVE, SUITE 301  
 COLORADO SPRINGS, COLORADO 80903  
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 CONTACT: JEFF MARK

DRAWN: RLS  
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 CHECKED: RLS

**CARRIAGE MEADOWS SOUTH  
 AT LORSON RANCH FIL. NO. 2  
 DETAILED GRADING PLAN**

DATE:  
 JUNE 4, 2020  
 PROJECT NO.  
 100.046  
 SHEET NUMBER  
**C4.4**  
 TOTAL SHEETS: 14



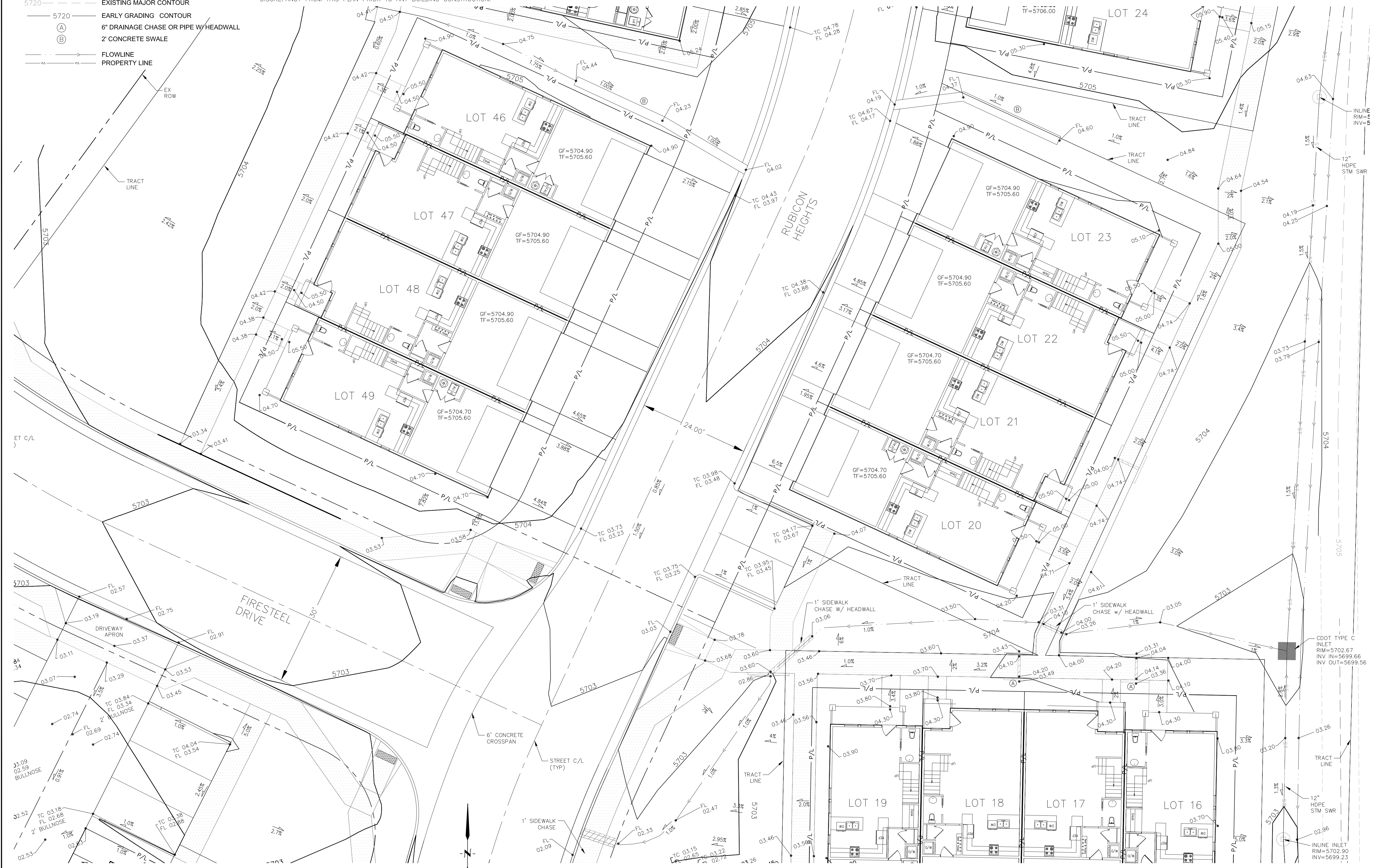
**LEGEND**

- 5721 ----- EXISTING MINOR CONTOUR
- 5720 ----- EXISTING MAJOR CONTOUR
- 5720 ----- EARLY GRADING CONTOUR
- (A) ----- 6" DRAINAGE CHASE OR PIPE W/ HEADWALL
- (B) ----- 2' CONCRETE SWALE
- FLOWLINE
- PROPERTY LINE

**NOTE:**

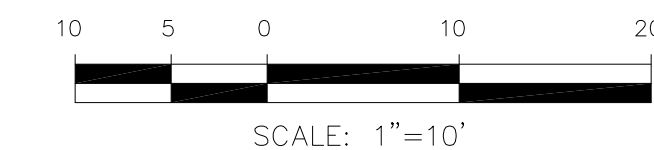
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SEE SHEET C4.6



SEE SHEET C4.3

SEE SHEET C4.4



**CORE ENGINEERING GROUP**  
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 BOULDER, CO 80506  
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 CONTACT: RICHARD L. SCHINDLER, P.E.  
 EMAIL: Rich@ceg1.com

DATE: \_\_\_\_\_  
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 NO: \_\_\_\_\_  
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 212 N. WAHSATCH AVE, SUITE 301  
 COLORADO SPRINGS, COLORADO 80903  
 PROJECT: **CARRIAGE MEADOWS SOUTH AT LORSON RANCH FILING NO. 2**  
 FONTAINE BLVD-CARRIAGE MEADOWS DR  
 COLORADO SPRINGS, COLORADO  
 CONTACT: JEFF MARK

DRAWN: RLS  
 DESIGNED: RLS  
 CHECKED: RLS

**CARRIAGE MEADOWS SOUTH AT LORSON RANCH FIL. NO. 2 DETAILED GRADING PLANS**

DATE: **JUNE 4, 2020**  
 PROJECT NO: **100.046**  
 SHEET NUMBER: **C4.5**  
 TOTAL SHEETS: 14



**LEGEND**

- 5721----- EXISTING MINOR CONTOUR
- 5720----- EXISTING MAJOR CONTOUR
- 5720----- EARLY GRADING CONTOUR
- (A)----- 6" DRAINAGE CHASE OR PIPE W/ HEADWALL
- (B)----- 2" CONCRETE SWALE
- FLOWLINE
- PROPERTY LINE

**NOTE:**

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SEE SHEET C4.7



SEE SHEET C4.5

**CORE ENGINEERING GROUP**  
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 BOULDER, CO 80506  
 PH: 719-459-7800  
 CONTACT: RICHARD L. SCHINDLER, P.E.  
 EMAIL: Rich@cegi.com

DATE: \_\_\_\_\_  
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 212 N. WAHSATCH AVE, SUITE 301  
 COLORADO SPRINGS, COLORADO 80903  
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 COLORADO SPRINGS, COLORADO  
 CONTACT: JEFF MARK

DRAWN: RLS  
 DESIGNED: RLS  
 CHECKED: RLS

**CARRIAGE MEADOWS SOUTH AT LORSON RANCH FIL. NO. 2 DETAILED GRADING PLAN**

DATE: JUNE 4, 2020  
 PROJECT NO. 100.046  
 SHEET NUMBER **C4.6**  
 TOTAL SHEETS: 14



**LEGEND**

- 5721----- EXISTING MINOR CONTOUR
- 5720----- EXISTING MAJOR CONTOUR
- 5720----- EARLY GRADING CONTOUR
- (A)----- 6" DRAINAGE CHASE OR PIPE W/ HEADWALL
- (B)----- 2' CONCRETE SWALE
- FLOWLINE
- PROPERTY LINE

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SEE SHEET C4.8



SEE SHEET C4.6



<b>CORE ENGINEERING GROUP</b>													
1500 S. 151ST AVENUE, SUITE 100 DENVER, CO 80232 PH: 719-659-7800 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: Rich@cegi.com													
<p>PROJECT: CARRIAGE MEADOWS SOUTH AT LORSON RANCH FIL. NO. 2</p> <p>PREPARED FOR: LORSON, LLC 212 N. WAHSATCH AVE, SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 635-3200 CONTACT: JEFF MARK</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">NO.</th> <th style="width: 80%;">DESCRIPTION</th> <th style="width: 10%;">DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	NO.	DESCRIPTION	DATE									
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<p><b>CARRIAGE MEADOWS SOUTH AT LORSON RANCH FIL. NO. 2</b></p> <p><b>DETAILED GRADING PLAN</b></p>													
<p>DATE: JUNE 4, 2020</p> <p>PROJECT NO: 100.046</p> <p>SHEET NUMBER: C4.7</p> <p>TOTAL SHEETS: 14</p>													



**LEGEND**

- 5721 --- EXISTING MINOR CONTOUR
- 5720 --- EXISTING MAJOR CONTOUR
- 5720 --- EARLY GRADING CONTOURS
- (A) --- 6" DRAINAGE CHASE OR PIPE W/ HEADWALL
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- FLOWLINE
- PROPERTY LINE

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CARRIAGE MEADOWS DRIVE

STREET C/L (TYP)

2' SIDEWALK CHASE (PRIVATE)

2' SIDEWALK CHASE (PRIVATE)

SEE SHEET C4.7

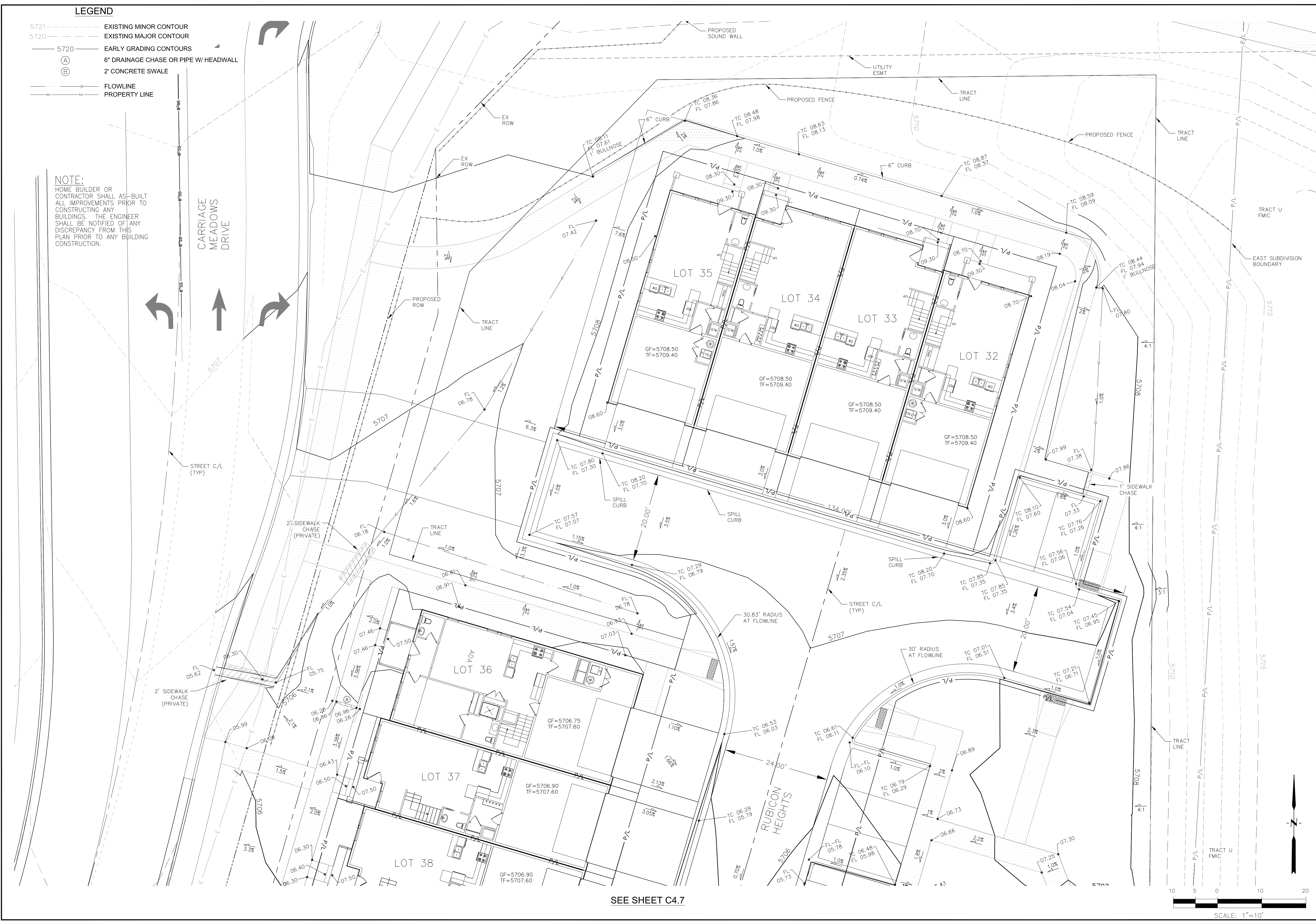
**CORE ENGINEERING GROUP**  
1515 AVENUE 135  
BOULDER, CO 80506  
PH: 719-659-7800  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@ceg1.com

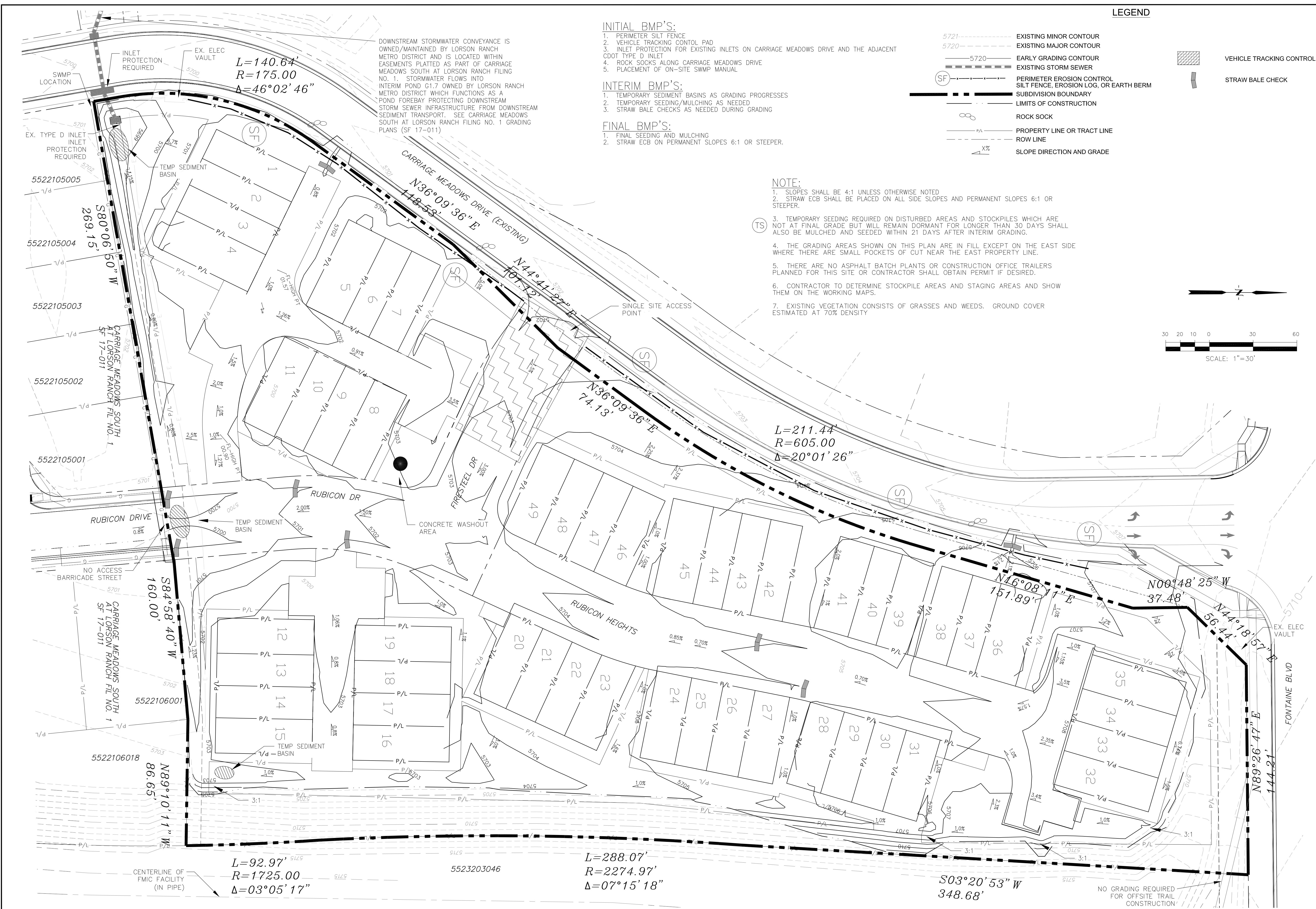
DATE: \_\_\_\_\_  
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PROJECT: CARRIAGE MEADOWS SOUTH AT LORSON RANCH FILING NO. 2  
PREPARED FOR: LORSON, LLC  
212 N. WAHSATCH AVE, SUITE 301  
COLORADO SPRINGS, COLORADO 80903  
FONTAINE BLVD-CARRIAGE MEADOWS DR  
COLORADO SPRINGS, COLORADO  
CONTACT: JEFF MARK

DRAWN: RLS  
DESIGNED: RLS  
CHECKED: RLS

**CARRIAGE MEADOWS SOUTH AT LORSON RANCH FIL. NO. 2 GRADING AND EROSION CONTROL PLAN**

DATE: JUNE 4, 2020  
PROJECT NO. 100.046  
SHEET NUMBER C4.8  
TOTAL SHEETS: 14





- INITIAL BMP'S:**
1. PERIMETER SILT FENCE
  2. VEHICLE TRACKING CONTROL PAD
  3. INLET PROTECTION FOR EXISTING INLETS ON CARRIAGE MEADOWS DRIVE AND THE ADJACENT CDOT TYPE D INLET
  4. ROCK SOCKS ALONG CARRIAGE MEADOWS DRIVE
  5. PLACEMENT OF ON-SITE SWMP MANUAL

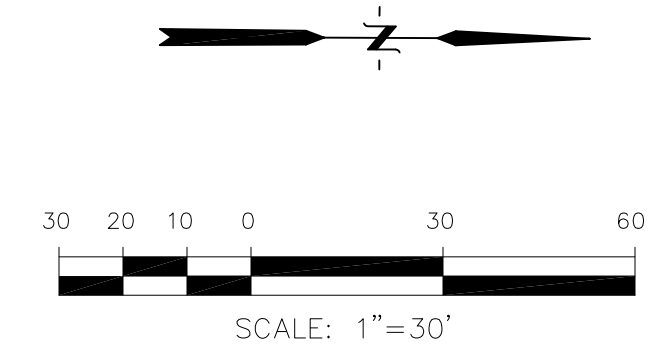
- INTERIM BMP'S:**
1. TEMPORARY SEDIMENT BASINS AS GRADING PROGRESSES
  2. TEMPORARY SEEDING/MULCHING AS NEEDED
  3. STRAW BALE CHECKS AS NEEDED DURING GRADING

- FINAL BMP'S:**
1. FINAL SEEDING AND MULCHING
  2. STRAW ECB ON PERMANENT SLOPES 6:1 OR STEEPER.

**LEGEND**

- 5721 - EXISTING MINOR CONTOUR
- 5720 - EXISTING MAJOR CONTOUR
- 5720 - EARLY GRADING CONTOUR
- - EXISTING STORM SEWER
- (SF) --- - PERIMETER EROSION CONTROL SILT FENCE, EROSION LOG, OR EARTH BERM
- - SUBDIVISION BOUNDARY
- - LIMITS OF CONSTRUCTION
- ∞ - ROCK SOCK
- P/L - PROPERTY LINE OR TRACT LINE
- - ROW LINE
- X% - SLOPE DIRECTION AND GRADE
- [Hatched Box] - VEHICLE TRACKING CONTROL
- [Line with Tick] - STRAW BALE CHECK

- NOTE:**
1. SLOPES SHALL BE 4:1 UNLESS OTHERWISE NOTED
  2. STRAW ECB SHALL BE PLACED ON ALL SIDE SLOPES AND PERMANENT SLOPES 6:1 OR STEEPER.
  3. TEMPORARY SEEDING REQUIRED ON DISTURBED AREAS AND STOCKPILES WHICH ARE NOT AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS SHALL ALSO BE MULCHED AND SEEDED WITHIN 21 DAYS AFTER INTERIM GRADING.
  4. THE GRADING AREAS SHOWN ON THIS PLAN ARE IN FILL EXCEPT ON THE EAST SIDE WHERE THERE ARE SMALL POCKETS OF CUT NEAR THE EAST PROPERTY LINE.
  5. THERE ARE NO ASPHALT BATCH PLANTS OR CONSTRUCTION OFFICE TRAILERS PLANNED FOR THIS SITE OR CONTRACTOR SHALL OBTAIN PERMIT IF DESIRED.
  6. CONTRACTOR TO DETERMINE STOCKPILE AREAS AND STAGING AREAS AND SHOW THEM ON THE WORKING MAPS.
  7. EXISTING VEGETATION CONSISTS OF GRASSES AND WEEDS. GROUND COVER ESTIMATED AT 70% DENSITY



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 COLORADO SPRINGS, COLORADO 80903  
 CONTACT: JEFF MARK

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 FONTAINE BLVD-CARRIAGE MEADOWS DR  
 COLORADO SPRINGS, COLORADO

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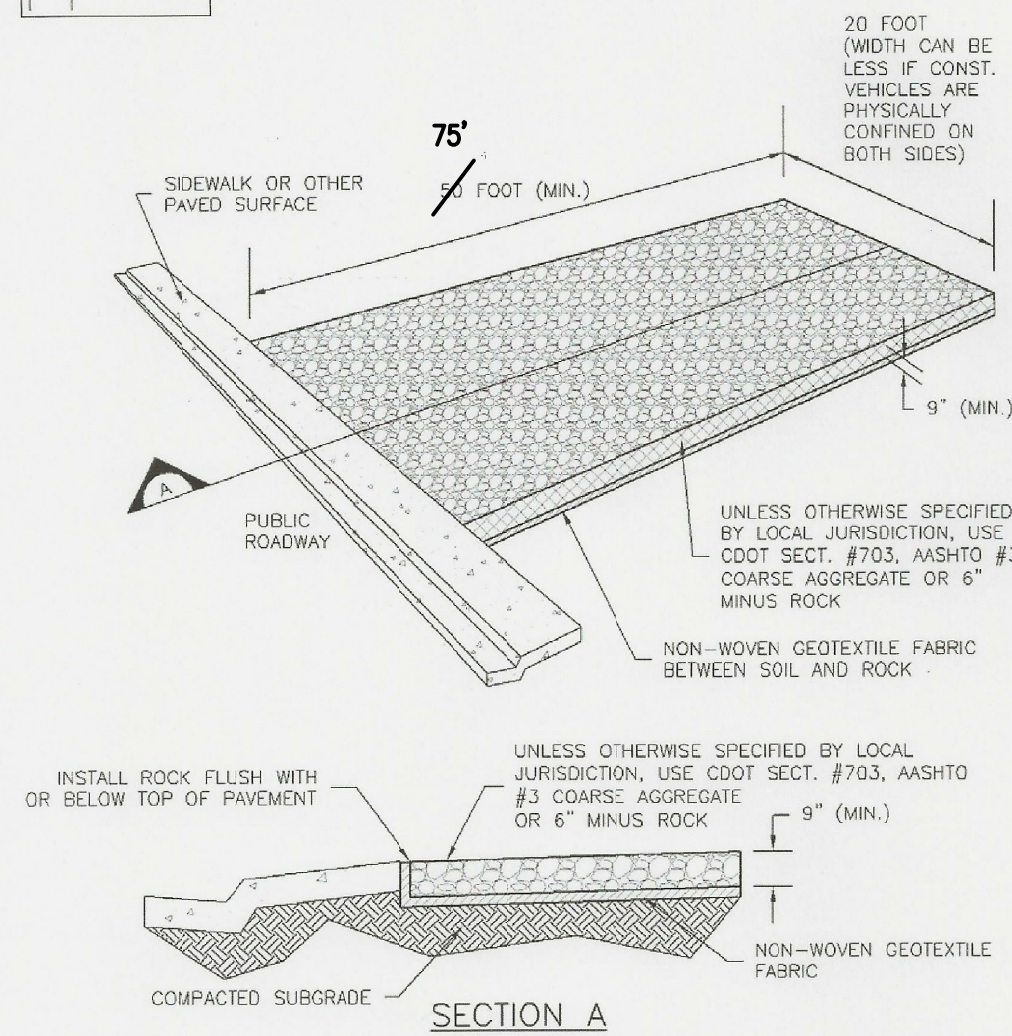
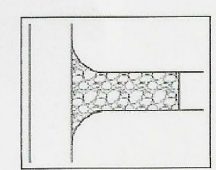
**CARRIAGE MEADOWS SOUTH AT LORSON RANCH FIL. NO. 2 GRADING AND EROSION CONTROL PLAN**

DATE: JUNE 4, 2020  
 PROJECT NO: 100.046  
 SHEET NUMBER: C4.9  
 TOTAL SHEETS: 14



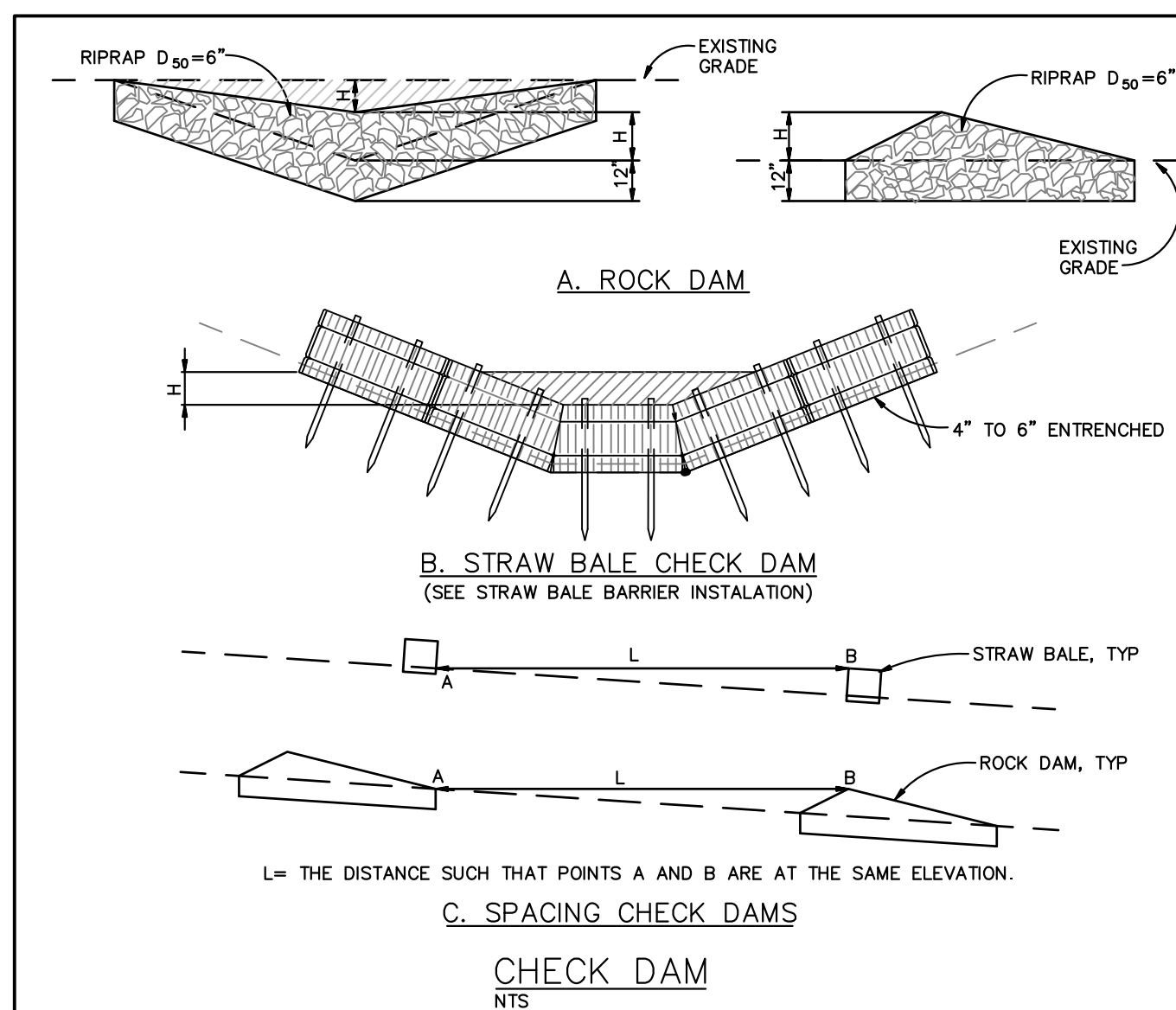
**Vehicle Tracking Control (VTC)**

**SM-4**



**VTC-1. AGGREGATE VEHICLE TRACKING CONTROL**

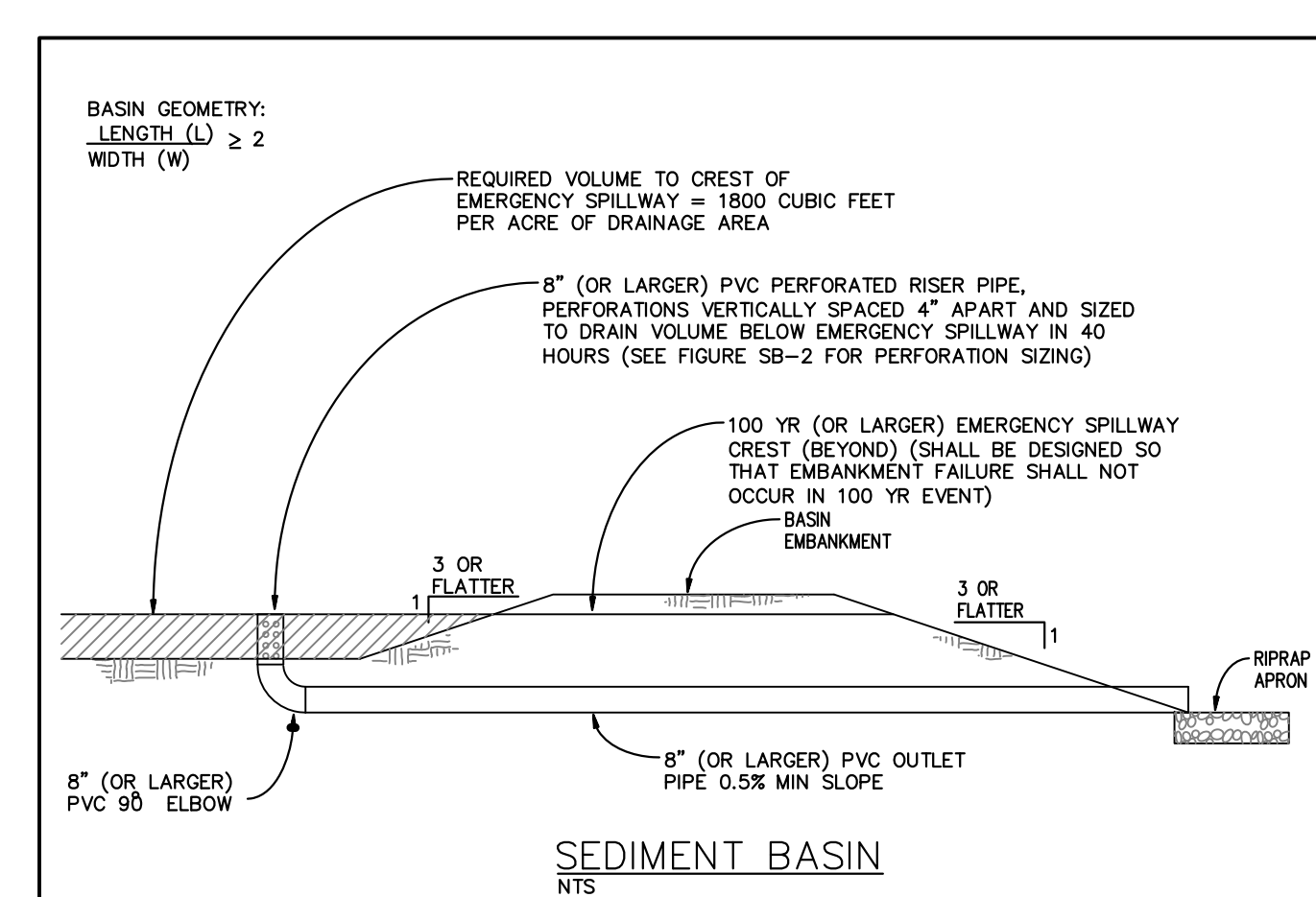
November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 VTC-3



**CHECK DAM NOTES**

- |                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>INSTALLATION REQUIREMENTS</b></p> <ol style="list-style-type: none"> <li>1. STRAW BALES USED AS CHECK DAMS ARE TO MEET THE REQUIREMENTS STATED IN FIGURE SBB-2.</li> <li>2. THE "H" DIMENSION SHALL BE SELECTED TO PROVIDE WEIR FLOW CONVEYANCE FOR 2-YEAR FLOW OR GREATER.</li> </ol> | <p><b>MAINTENANCE REQUIREMENTS</b></p> <ol style="list-style-type: none"> <li>1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL CHECK DAMS, ESPECIALLY AFTER STORM EVENTS.</li> <li>2. REPLACE STONE AS NECESSARY TO MAINTAIN THE CORRECT HEIGHT OF THE DAM.</li> <li>3. ACCUMULATED SEDIMENT AND DEBRIS IS TO BE REMOVED FROM BEHIND THE DAMS AFTER EACH STORM OR WHEN 1/2 OF THE ORIGINAL HEIGHT OF THE DAM IS REACHED.</li> <li>3. CHECK DAMS ARE TO REMAIN IN PLACE AND OPERATIONAL UNTIL THE DRAINAGE AREA AND CHANNEL ARE PERMANENTLY STABILIZED.</li> <li>4. WHEN CHECK DAMS ARE REMOVED THE CHANNEL LINING OR VEGETATION IS TO BE RESTORED.</li> </ol> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

City of Colorado Springs Stormwater Quality **Figure CD-1 Check Dam** Construction Detail and Maintenance Requirements



**SEDIMENT BASIN NOTES**

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>INSTALLATION REQUIREMENTS</b></p> <ol style="list-style-type: none"> <li>1. SEDIMENT BASINS SHALL BE INSTALLED BEFORE ANY CLEARING AND/OR GRADING IS UNDERTAKEN.</li> <li>2. THE AREA UNDER WHICH THE EMBANKMENT IS TO BE INSTALLED SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ALL VEGETATION AND ROOT MAT.</li> <li>3. THE OUTLET OF THE BASIN SHALL BE DESIGNED TO DRAIN ITS VOLUME IN 40 HOURS.</li> <li>4. THE OUTLET IS TO BE LOCATED AT THE FURTHEST DISTANCE FROM THE INLET OF THE BASIN. Baffles MAY BE NEEDED TO INCREASE THE FLOW LENGTH AND SETTLING TIME.</li> <li>5. EMBANKMENT MATERIAL SHALL CONSIST OF SOIL WITH A MINIMUM OF 15% PASSING A #200 SIEVE. EXCAVATED SOIL CAN BE USED IF IT MEETS THIS REQUIREMENT.</li> <li>6. EMBANKMENT IS TO BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT ACCORDING TO ASTM D 698.</li> <li>7. WHEN A BASIN IS INSTALLED NEAR A RESIDENTIAL AREA, FOR SAFETY REASONS, A SIGN SHALL BE POSTED AND THE AREA SECURED WITH A FENCE.</li> </ol> | <p><b>MAINTENANCE REQUIREMENTS</b></p> <ol style="list-style-type: none"> <li>1. CONTRACTOR SHALL INSPECT SEDIMENT BASINS AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS OF NO RAINFALL.</li> <li>2. SEDIMENT BASINS SHALL BE CLEANED OUT BEFORE SEDIMENT HAS FILLED HALF THE VOLUME OF THE BASIN.</li> <li>3. SEDIMENT BASINS SHALL REMAIN OPERATIONAL AND PROPERLY MAINTAINED UNTIL THE SITE AREA IS PERMANENTLY STABILIZED WITH ADEQUATE VEGETATIVE COVER AND/OR OTHER PERMANENT STRUCTURE AS APPROVED BY THE CITY.</li> </ol> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

City of Colorado Springs Stormwater Quality **Figure SB-1 Sediment Basin** Construction Detail and Maintenance Requirements

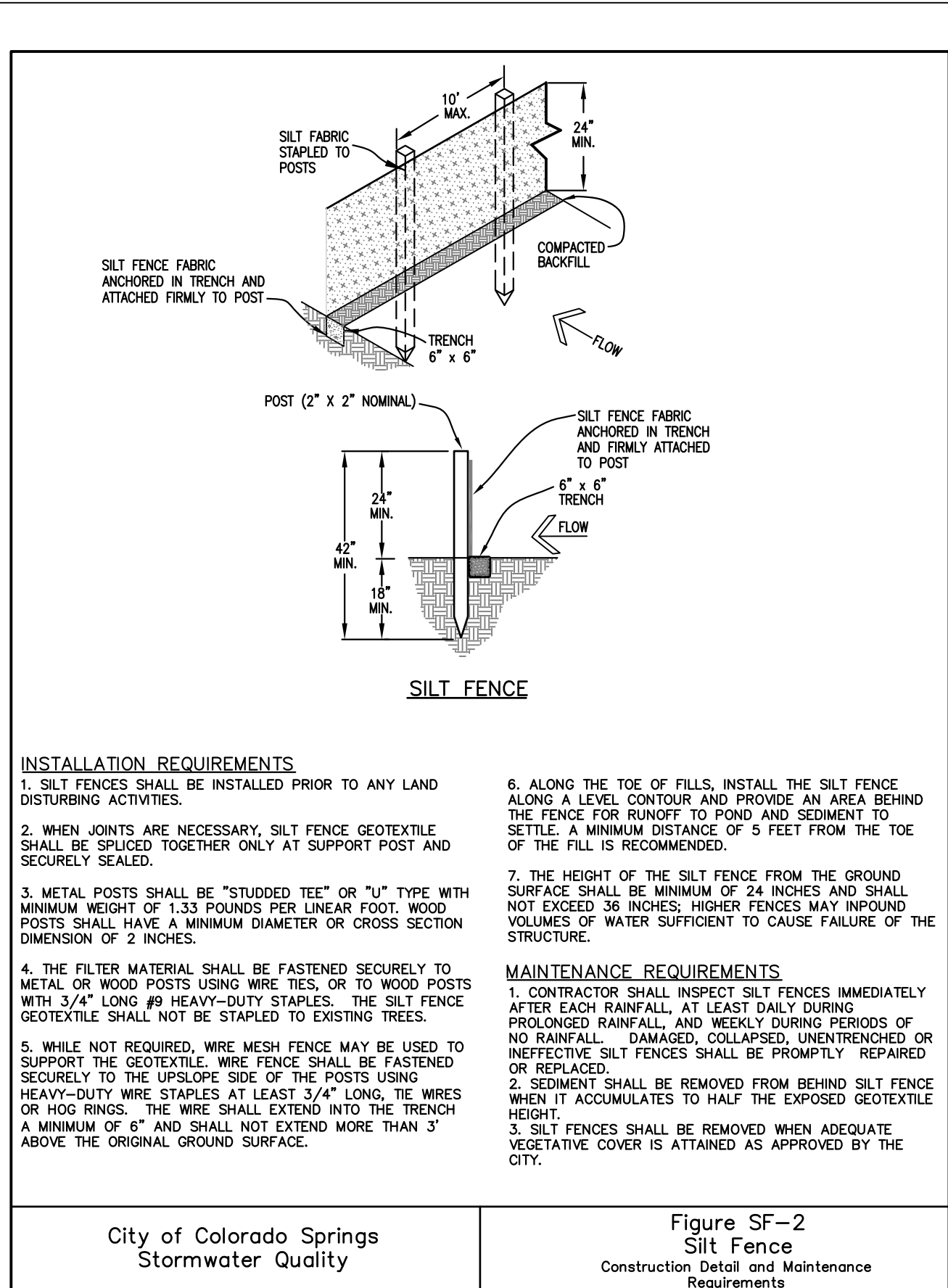
SEED MIX TABLE		
GRASS MIX FOR QUICK REVEGETATION ALL SITES:		
GRASS	VARIETY	AMOUNT IN PLS LBS PER ACRE
CRESTED WHEAT GRASS	EPHRAIM OR HYCREST	4.0
PERENNIAL RYE	LINN	2.0
WESTERN WHEAT GRASS	BARTON	3.0
SMOOTH BROME GRASS	LINCOLN OR MANCHAR	5.0
SIDEOTS GRAMA	EL RENO	2.5
		TOTAL 16.5 LBS
GRASS MIX FOR SANDY SOILS:		
GRASS	VARIETY	AMOUNT IN PLS LBS PER ACRE
SIDEOTS GRAMA	EL RENO	3.0
WESTERN WHEAT GRASS	BARTON	2.5
SLENDER WHEAT GRASS	NATIVE	2.0
LITTLE BLUESTEM	PASTURA	2.0
SAND DROPSEED	NATIVE	0.5
SWITCH GRASS	NEBRASKA 28	1.0
WEEPING LOVE GRASS	MORPHA	1.0
		TOTAL 14.0 LBS
GRASS MIX FOR HEAVIER SOIL AREAS:		
GRASS	VARIETY	AMOUNT IN PLS LBS PER ACRE
WESTERN WHEAT GRASS	BARTON	5.0
SIDEOTS GRAMA	EL RENO	3.0
SLENDER WHEAT GRASS	SODAR	2.5
SMOOTH BROME	LINCOLN OR MANCHAR	4.0
CRESTEDWHEAT GRASS	EPHRAIM	3.0
		TOTAL 17.5 LBS

**CORE ENGINEERING GROUP**  
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 (719) 635-3200  
 CONTACT: JEFF MARK

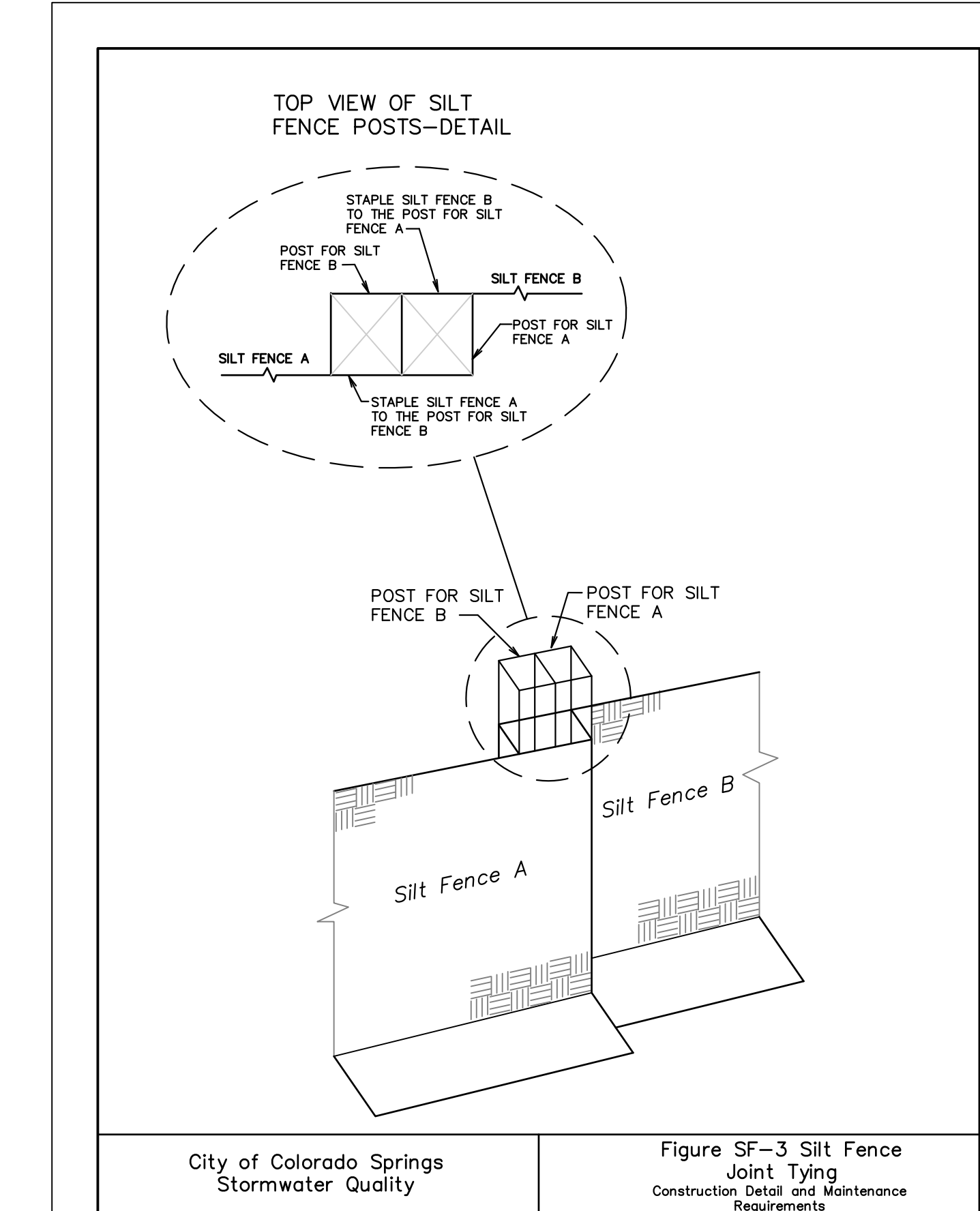
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 FONTAINE BLVD-CARRIAGE MEADOWS DR  
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DATE: \_\_\_\_\_  
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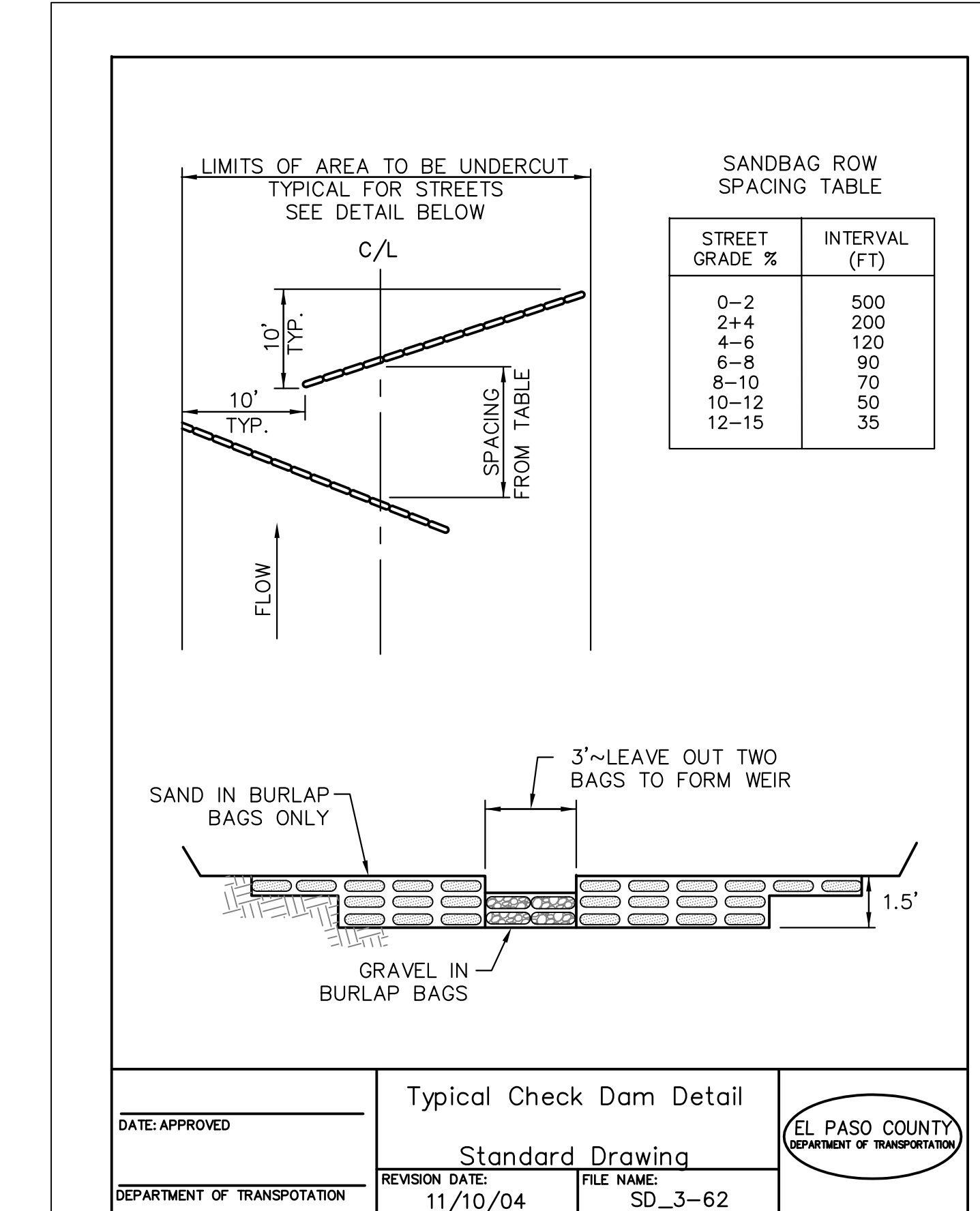


- INSTALLATION REQUIREMENTS**
1. SILT FENCES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
  2. WHEN JOINTS ARE NECESSARY, SILT FENCE GEOTEXTILE SHALL BE SPICED TOGETHER ONLY AT SUPPORT POST AND SECURELY SEALED.
  3. METAL POSTS SHALL BE "STUDDED TEE" OR "U" TYPE WITH MINIMUM WEIGHT OF 1.33 POUNDS PER LINEAR FOOT. WOOD POSTS SHALL HAVE A MINIMUM DIAMETER OR CROSS SECTION DIMENSION OF 2 INCHES.
  4. THE FILTER MATERIAL SHALL BE FASTENED SECURELY TO METAL OR WOOD POSTS USING WIRE TIES, OR TO WOOD POSTS WITH 3/4" LONG #9 HEAVY-DUTY STAPLES. THE SILT FENCE GEOTEXTILE SHALL NOT BE STAPLED TO EXISTING TREES.
  5. WHILE NOT REQUIRED, WIRE MESH FENCE MAY BE USED TO SUPPORT THE GEOTEXTILE. WIRE FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 3/4" LONG. TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 6" AND SHALL NOT EXTEND MORE THAN 3' ABOVE THE ORIGINAL GROUND SURFACE.
  6. ALONG THE TOE OF FILLS, INSTALL THE SILT FENCE ALONG A LEVEL CONTOUR AND PROVIDE AN AREA BEHIND THE FENCE FOR RUNOFF TO POND AND SEDIMENT TO SETTLE. A MINIMUM DISTANCE OF 5 FEET FROM THE TOE OF THE FILL IS RECOMMENDED.
  7. THE HEIGHT OF THE SILT FENCE FROM THE GROUND SURFACE SHALL BE MINIMUM OF 24 INCHES AND SHALL NOT EXCEED 36 INCHES. HIGHER FENCES MAY INBOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE.
- MAINTENANCE REQUIREMENTS**
1. CONTRACTOR SHALL INSPECT SILT FENCES IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS OF NO RAINFALL. DAMAGED, COLLAPSED, UNENTRENCHED OR INEFFECTIVE SILT FENCES SHALL BE PROMPTLY REPAIRED OR REPLACED.
  2. SEDIMENT SHALL BE REMOVED FROM BEHIND SILT FENCE WHEN IT ACCUMULATES TO HALF THE EXPOSED GEOTEXTILE HEIGHT.
  3. SILT FENCES SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED AS APPROVED BY THE CITY.

City of Colorado Springs Stormwater Quality **Figure SF-2 Silt Fence** Construction Detail and Maintenance Requirements



City of Colorado Springs Stormwater Quality **Figure SF-3 Silt Fence Joint Tying** Construction Detail and Maintenance Requirements



DATE APPROVED: \_\_\_\_\_  
 DEPARTMENT OF TRANSPORTATION

REVISION DATE: 11/10/04  
 FILE NAME: SD\_3-62

EL PASO COUNTY DEPARTMENT OF TRANSPORTATION

**GRADING AND EROSION CONTROL DETAILS**

DATE: JUNE 4, 2020

PROJECT NO. 100.046

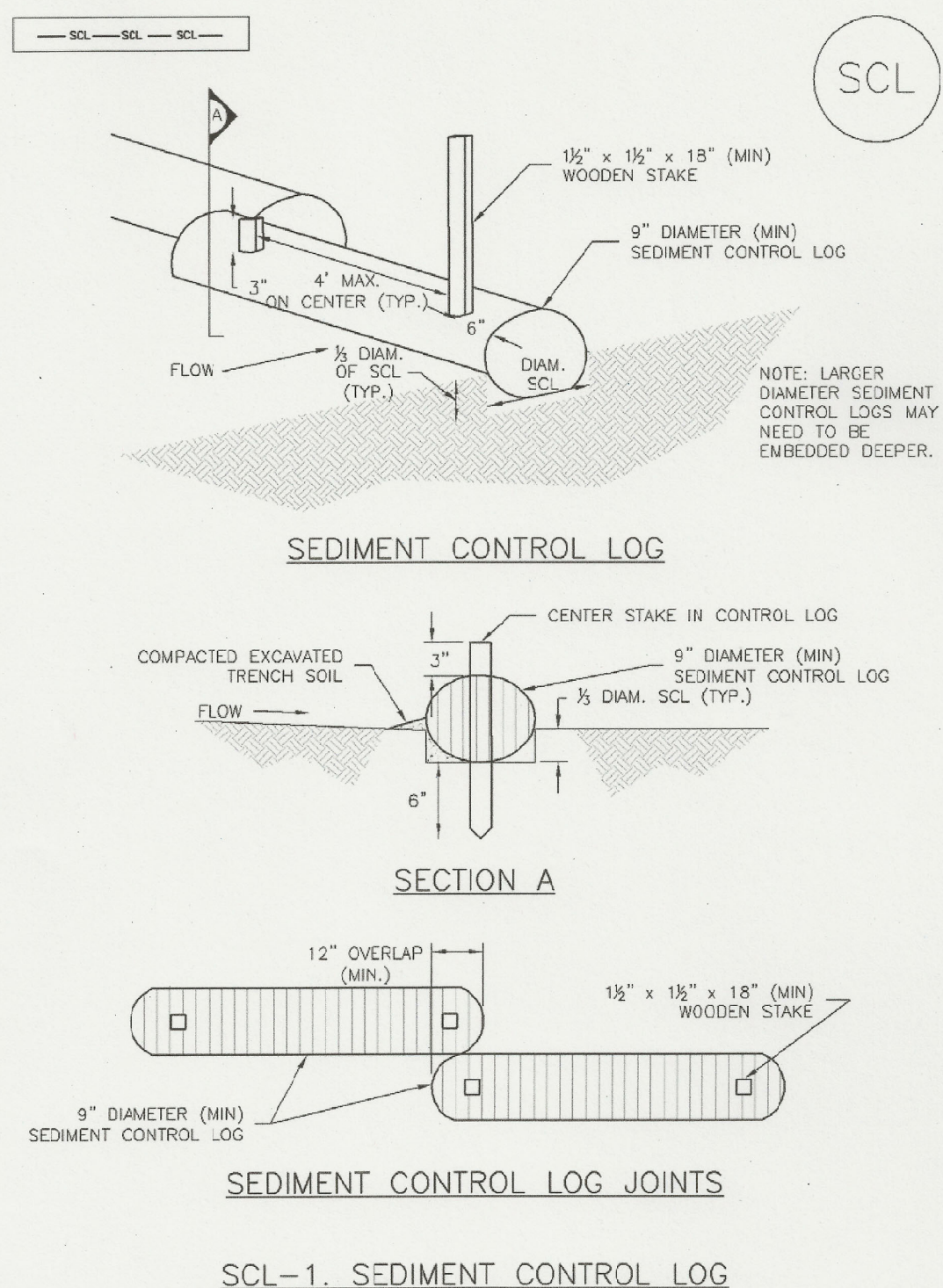
SHEET NUMBER C4.10

TOTAL SHEETS: 14



**Sediment Control Log (SCL)**

SC-2



SEDIMENT CONTROL LOG

SECTION A

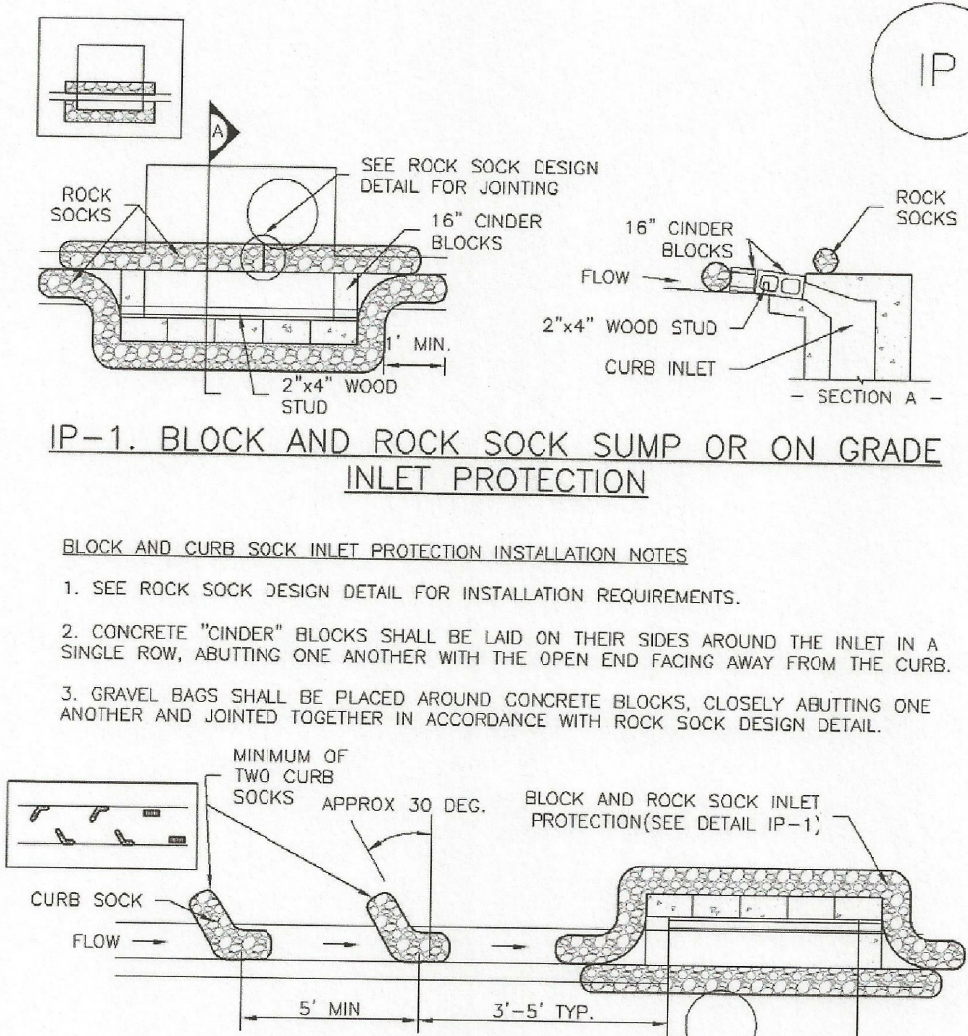
SEDIMENT CONTROL LOG JOINTS

SCL-1. SEDIMENT CONTROL LOG

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SCL-3

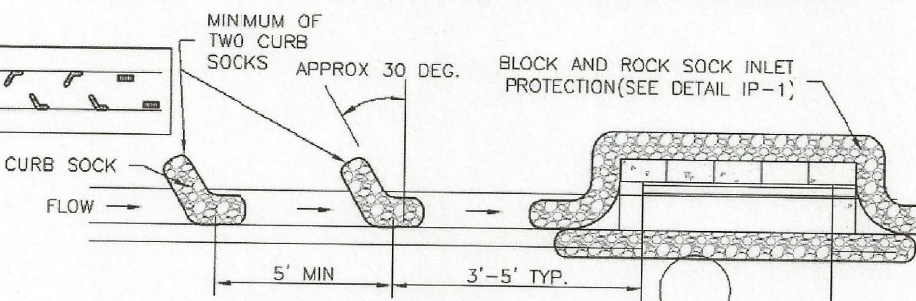
**SC-6**

**Inlet Protection (IP)**



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

- BLOCK AND CURB SOCK INLET PROTECTION INSTALLATION NOTES**
- SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
  - 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.
  - GRAVEL BAGS SHALL BE PLACED AROUND CONCRETE BLOCKS, CLOSELY ABUTTING ONE ANOTHER AND JOINED TOGETHER IN ACCORDANCE WITH ROCK SOCK DESIGN DETAIL.



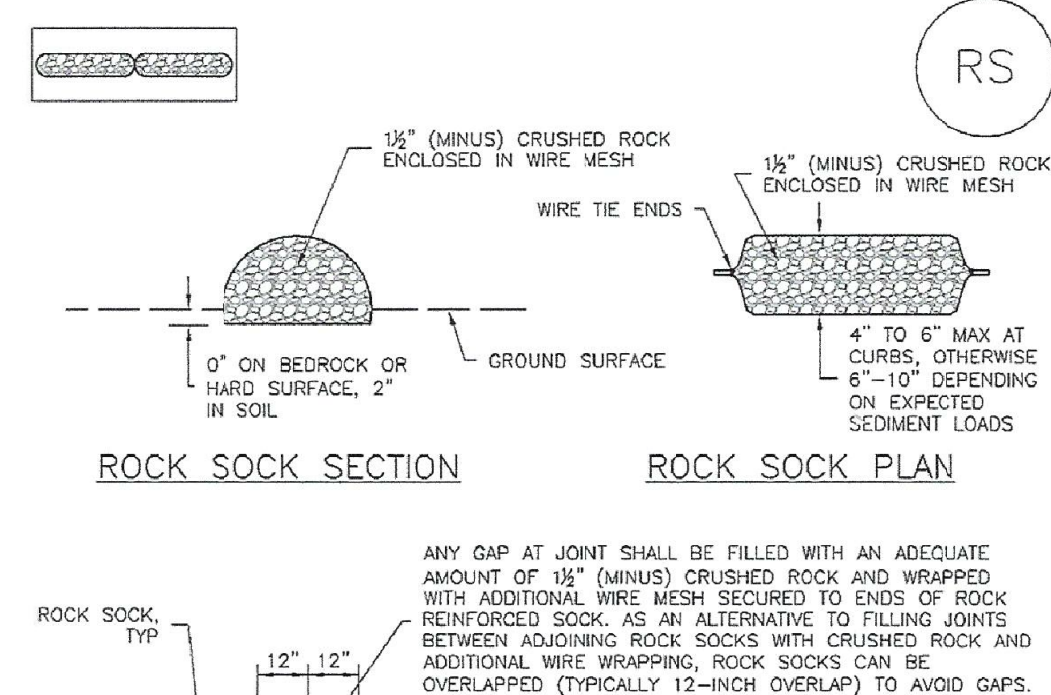
IP-2. CURB ROCK SOCKS UPSTREAM OF INLET PROTECTION

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

IP-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 August 2013

**SC-5**

**Rock Sock (RS)**



ROCK SOCK SECTION

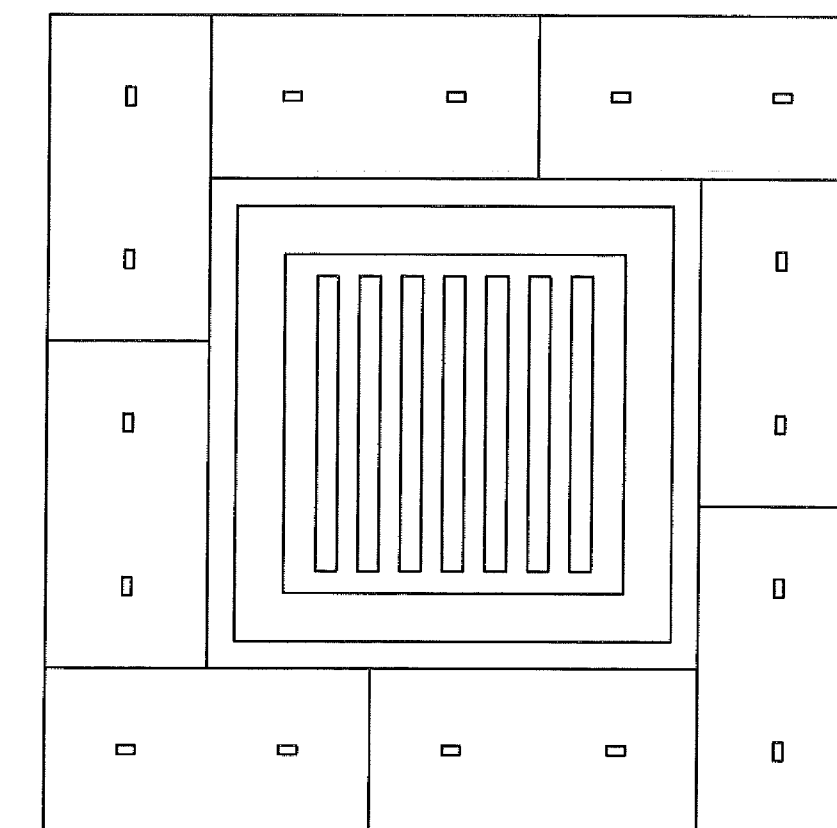
ROCK SOCK PLAN

ROCK SOCK JOINTING

- ROCK SOCK INSTALLATION NOTES**
- SEE PLAN VIEW FOR: -LOCATION(S) OF ROCK SOCKS.
  - CRUSHED ROCK SHALL BE 1/2" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET (1/2" MINUS).
  - WIRE MESH SHALL BE FABRICATED OF 10 GAGE POULTRY MESH, OR EQUIVALENT, WITH A MAXIMUM OPENING OF 1/2". RECOMMENDED MINIMUM ROLL WIDTH OF 48"
  - 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.
  - 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

RS-2 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010



STRAW BALE INLET PROTECTION  
NTS

**STRAW BALE INLET PROTECTION NOTES**

**INSTALLATION REQUIREMENTS**

- INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY AFTER CONSTRUCTION OF INLET.
- BALES ARE TO BE PLACED IN A SINGLE ROW AROUND THE INLET WITH THE END OF THE BALES TIGHTLY ABUTTING ONE ANOTHER.
- SEE STRAW BALE BARRIER FIGURE SBB-2 FOR INSTALLATION REQUIREMENTS.

**MAINTENANCE REQUIREMENTS**

- CONTRACTOR SHALL INSPECT STRAW BALE INLET PROTECTION IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS NO RAINFALL.
- DAMAGED OR INEFFECTIVE INLET PROTECTION SHALL PROMPTLY BE REPAIRED, REPLACING BALES IF NECESSARY, AND UNENTRENCHED BALES NEED TO BE REPAIRED WITH COMPACTED BACKFILL MATERIAL.
- SEDIMENT SHALL BE REMOVED FROM BEHIND STRAW BALES WHEN IT ACCUMULATES TO APPROXIMATELY 1/3 THE HEIGHT OF THE BARRIER.
- INLET PROTECTION SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED WITHIN THE DRAINAGE AREA AS APPROVED BY THE CITY.

City of Colorado Springs  
Stormwater Quality

Figure IP-2  
Straw Bale Inlet Protection  
Construction Detail and Maintenance  
Requirements

3-26

**CORE**  
ENGINEERING GROUP  
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SUITE 100  
P.O. BOX 719  
COLORADO SPRINGS, COLORADO 80903  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@egi.com

DATE: \_\_\_\_\_  
DESCRIPTION: \_\_\_\_\_  
NO: \_\_\_\_\_  
PREPARED FOR: **LORSON, LLC**  
212 N. WAHSATCH AVE, SUITE 301  
COLORADO SPRINGS, COLORADO 80903  
PROJECT: **CARRIAGE MEADOWS SOUTH AT LORSON RANCH FILING NO. 2**  
FONTAINE BLVD-CARRIAGE MEADOWS DR  
COLORADO SPRINGS, COLORADO  
CONTACT: JEFF MARK

DRAWN: RLS  
DESIGNED: RLS  
CHECKED: RLS

**GRADING AND EROSION CONTROL DETAILS**

DATE: JUNE 4, 2020

PROJECT NO. 100.046

SHEET NUMBER C4.11

TOTAL SHEETS: 14

1/1/08

DATE APPROVED:

John A. McCarty

DEPARTMENT OF TRANSPORTATION

Concrete Washout Structure

Standard Drawing

REVISION DATE: 7/17/07

FILE NAME: SD\_3-84

