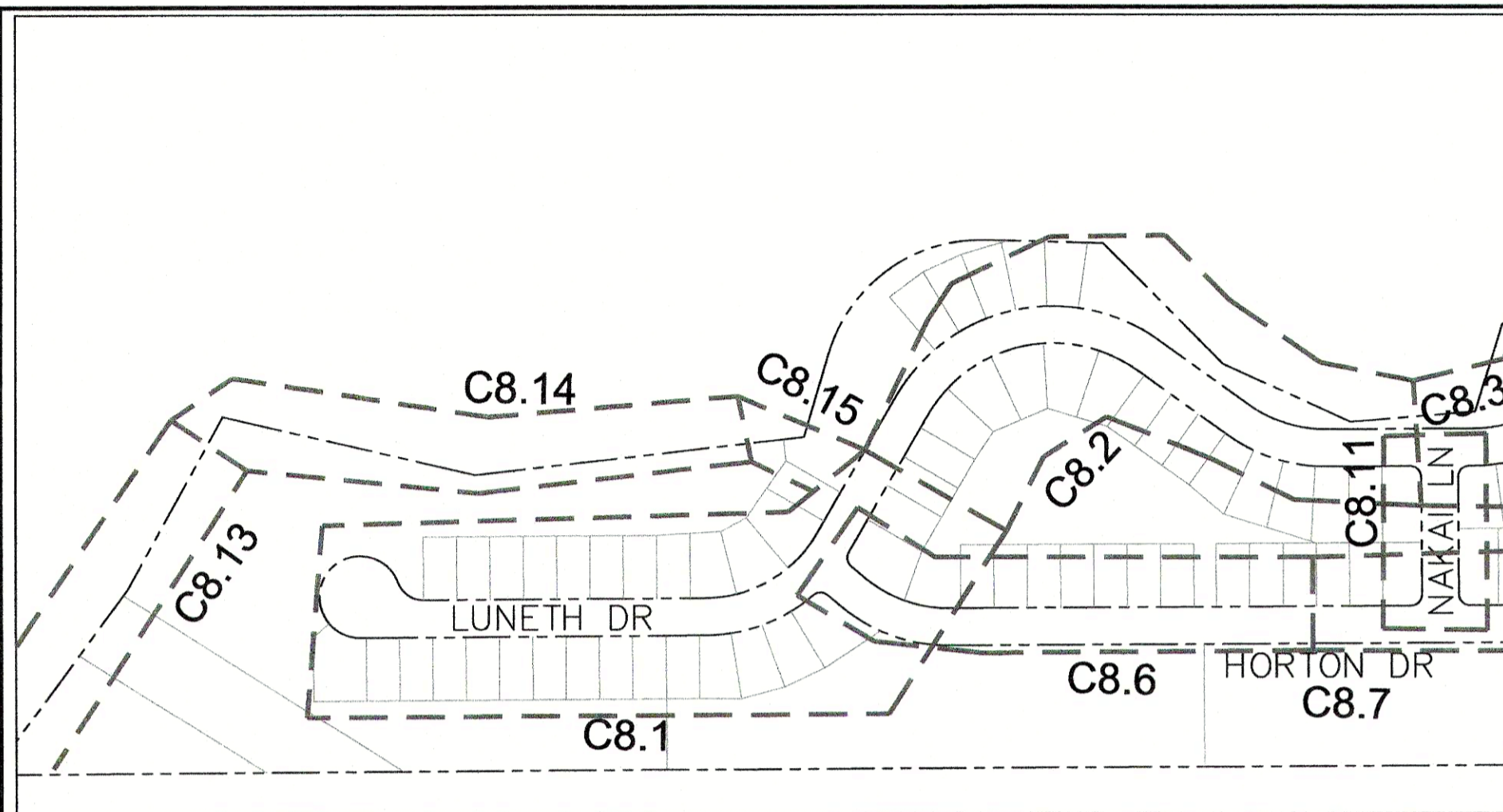


CONSTRUCTION PLANS
FOR
CREEKSIDE SOUTH AT LORSON RANCH
SANITARY SEWER AND WATERMAIN
CONSTRUCTION PLANS

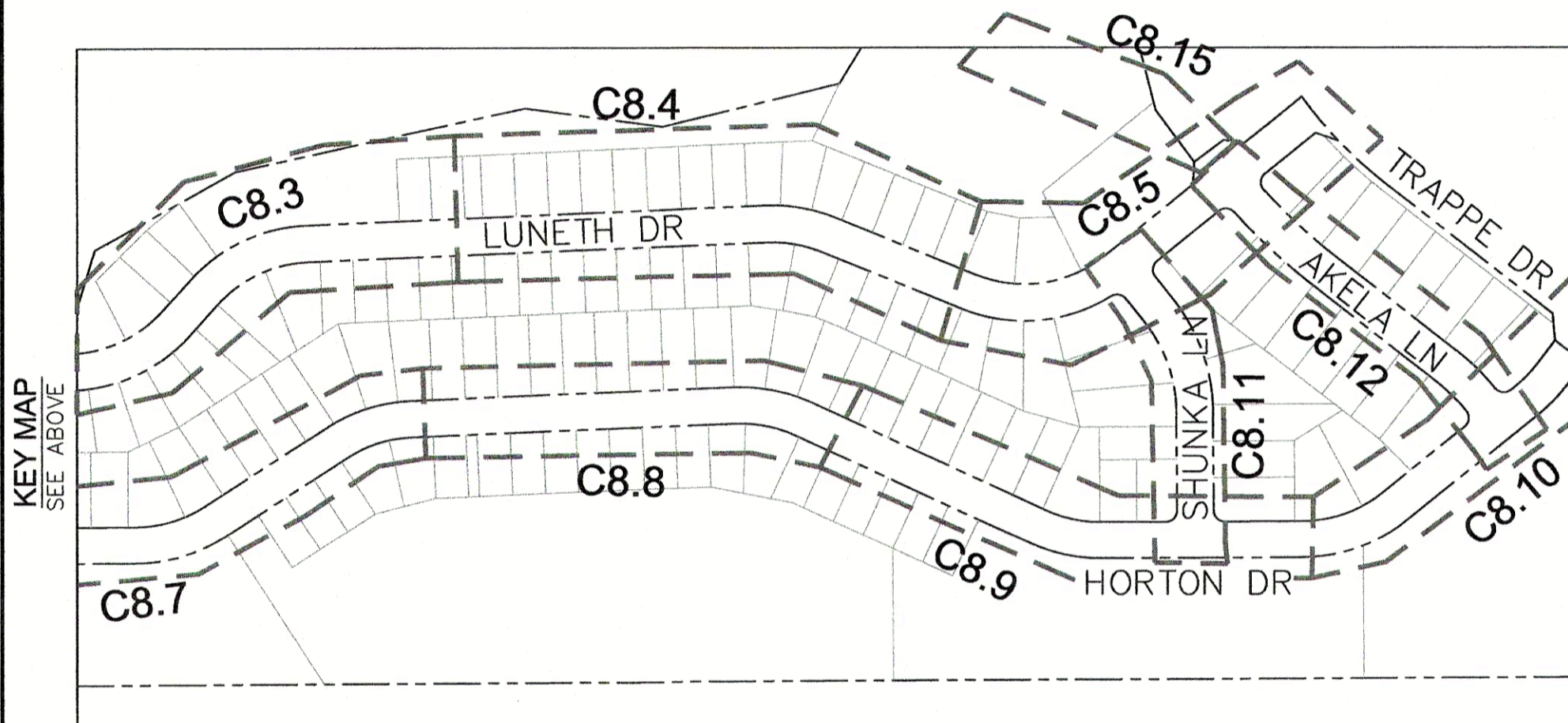


Know what's below.
Call before you dig.

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



KEY MAP
SEE BELOW



KEY MAP
SEE ABOVE



VICINITY MAP
NO SCALE

PREPARED FOR:
LORSON, LLC
15004 1ST AVENUE, 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.

SHEET INDEX	
SHEET NO.	SHEET DESCRIPTION
C1.1	COVER SHEET
C1.2	NOTES
C1.3	TYPICAL SECTIONS
C2.1-C2.2	STREET HORIZONTAL CONTROL
C3.1-C3.2	UTILITY SERVICE PLAN
C8.1-C8.15	PLAN AND PROFILES
C12.1	DETAILS
S1	CONCRETE PIER STRUCTURAL DRAWING

DEVELOPER'S STATEMENT

THE UNDERSIGNED OWNER/DEVELOPER HAS READ AND WILL COMPLY WITH ALL THE REQUIREMENTS SPECIFIED IN THESE CONSTRUCTION PLANS AND THE ACCOMPANYING DRAINAGE REPORT.

BUSINESS NAME LORSON, LLC
BY [Signature] DATE 7/7/20
TITLE Manager
ADDRESS 212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, CO 80903

FIRE DISTRICT APPROVAL

THE NUMBER OF FIRE HYDRANTS AND HYDRANT LOCATIONS TOGETHER WITH THE MAIN SIZES INDICATED ON THIS WATER INSTALLATION PLAN ARE ADEQUATE TO SATISFY THE REQUIREMENTS OF THE SECURITY FIRE PROTECTION DISTRICT'S FIRE AND RESCUE DEPARTMENT. THIS APPROVAL IS BASED ON THE INFORMATION IN THESE PLANS, SPECIFICATIONS AND SUPPLEMENTAL INFORMATION PROVIDED BY THE DESIGN ENGINEER WHOSE SIGNATURE APPEARS IN THESE PLANS, AND THE WIDEFIELD WATER AND SANITATION DISTRICT.

SIGNED [Signature] DATE 7-9-2020
BY FIRE PROTECTION CHIEF OR COORDINATOR

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
CONDITIONS:

ENGINEER'S APPROVAL

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 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

CORE ENGINEERING GROUP
15004 1ST AVENUE S.
BURNSVILLE, MN 55306
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@cegi.com

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

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

**CREEKSIDE SOUTH AT LORSON RANCH
SANITARY / WATERMAIN
CONSTRUCTION PLANS**



DATE:
MAY 12, 2020

PROJECT NO.
100.051

SHEET NUMBER
C0.1
TOTAL SHEETS: 24

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

TELEPHONE
CENTURYLINK
7925 INDUSTRY ROAD
COLORADO SPRINGS, CO 80939
719-278-4651

GAS
BLACK HILLS ENERGY
7060 ALLEGRE ST.
FOUNTAIN, CO 80817
719-393-6639

EL PASO COUNTY
PLANNING AND COMMUNITY DEVELOPMENT
2880 INTERNATIONAL CIRCLE
COLORADO SPRINGS, CO 80910
719-520-6300

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 89°41'52" 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.

DISTRICT APPROVAL (WATER)

THE WIDEFIELD WATER AND SANITATION DISTRICT RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN. THE WIDEFIELD WATER AND SANITATION DISTRICT HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY.

WIDEFIELD WATER AND SANITATION DISTRICT
WATER DESIGN APPROVAL
DATE July 14, 2020 BY Robert K. Brantner
PROJECT NO. _____

IN CASE OF ERRORS OR OMISSIONS WITH THE WATER DESIGN AS SHOWN ON THIS DOCUMENT THE STANDARDS AS DEFINED IN THE "RULES AND REGULATIONS FOR INSTALLATION OF WATER MAINS AND SERVICES" SHALL RULE.

APPROVAL EXPIRES 180 DAYS FROM DESIGN APPROVAL

DISTRICT APPROVAL (WASTEWATER)

THE WIDEFIELD WATER AND SANITATION DISTRICT RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN. THE WIDEFIELD WATER AND SANITATION DISTRICT HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY.

WIDEFIELD WATER AND SANITATION DISTRICT
WATER DESIGN APPROVAL
DATE July 14, 2020 BY Robert K. Brantner
PROJECT NO. _____

IN CASE OF ERRORS OR OMISSIONS WITH THE WATER DESIGN AS SHOWN ON THIS DOCUMENT THE STANDARDS AS DEFINED IN THE "RULES AND REGULATIONS FOR INSTALLATION OF WATER MAINS AND SERVICES" SHALL RULE.

APPROVAL EXPIRES 180 DAYS FROM DESIGN APPROVAL

PUDSP-20-001

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 DREXEL, BARRELL & CO., JULY, 2005. SUPPLEMENTAL SURVEY DATA WAS OBTAINED FOR MARKSHEFFEL ROAD FROM M&S CIVIL GROUP IN NOVEMBER, 2016. 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 LORSON RANCH.

WIDEFIELD WATER AND SANITATION DISTRICT GENERAL NOTES

- ALL UTILITY CONSTRUCTION TO BE CONDUCTED IN CONFORMANCE WITH THE CURRENT WIDEFIELD WATER AND SANITATION DISTRICT SPECIFICATIONS. COMPACTION REQUIREMENTS SHALL BE 95% STANDARD PROCTOR AS DETERMINED BY ASTM D698, UNLESS OTHERWISE APPROVED BY THE WIDEFIELD WATER AND SANITATION DISTRICT OR A HIGHER STANDARD IS IMPOSED BY ANOTHER AGENCY HAVING RIGHT-OF-WAY JURISDICTION.
- ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE WIDEFIELD WATER AND SANITATION DISTRICT. THE WIDEFIELD WATER AND SANITATION DISTRICT RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS STANDARDS AND SPECIFICATIONS.
- THE DEVELOPER OR HIS ENGINEER HAS LOCATED ALL FIRE HYDRANTS AND FUTURE SERVICE STUBS. ANY REQUIRED REALIGNMENT, EITHER HORIZONTAL OR VERTICAL, SHALL BE AT THE EXPENSE OF THE DEVELOPER.
- ALL DUCTILE IRON PIPE, TO INCLUDE FITTINGS, VALVES AND FIRE HYDRANTS WILL BE WRAPPED WITH POLYETHYLENE TUBING, BONDED AT EACH JOINT AND ELECTRICALLY ISOLATED.
- ALL DUCTILE IRON PIPE SHALL BE DOUBLE BONDED. DIP SHALL HAVE CATHODIC PROTECTION USING NO. 6 WIRE WITH 17 LB. MAGNESIUM ANODES EVERY 400 FEET.
- PVC MAIN LINES SHALL BE INSTALLED WITH COATED NO. 12 TRACER WIRE.
- ALL FITTINGS SHALL BE DUCTILE IRON -MECHANICAL JOINT AND HAVE 9 LB. MAGNESIUM ANODES AT EVERY FITTING.
- THE CONTRACTOR IS REQUIRED TO NOTIFY THE WIDEFIELD WATER AND SANITATION DISTRICT (390-7111) A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL ALSO NOTIFY AFFECTED UTILITY COMPANIES 48 HOURS PRIOR TO CONSTRUCTION ADJACENT TO THE KNOWN UTILITY LINES.
- THE LOCATION OF ALL UTILITIES AS SHOWN ON THESE DRAWINGS ARE APPROXIMATE ONLY. THE LOCATION OF ALL UTILITIES SHALL BE VERIFIED PRIOR TO CONSTRUCTION BY THE CONTRACTOR.
- THE CONTRACTOR SHALL FIELD EXCAVATE AND VERIFY THE VERTICAL AND HORIZONTAL LOCATION OF ALL TIE-INS. CONTRACTOR SHALL NOTIFY THE WIDEFIELD WATER AND SANITATION DISTRICT AND THE ENGINEER OF THE FIELD VERIFIED INFORMATION PRIOR TO CONSTRUCTION.
- ALL BENDS SHALL BE FIELD STAKED PRIOR TO CONSTRUCTION.
- ANY WATER UTILITY MATERIAL REMOVED AND NOT REUSED SHALL BE RETURNED TO THE WIDEFIELD WATER AND SANITATION DISTRICT IF THE DISTRICT SO REQUESTS.
- THE CONTRACTOR SHALL AT HIS EXPENSE SUPPORT AND PROTECT ALL UTILITY MAINS SO THAT THEY WILL FUNCTION CONTINUOUSLY DURING CONSTRUCTION. SHOULD A UTILITY MAIN FAIL AS A RESULT OF THE CONTRACTOR'S OPERATION, IT WILL BE REPLACED IMMEDIATELY BY EITHER THE CONTRACTOR OR THE WIDEFIELD WATER AND SANITATION DISTRICT AT FULL COST OF LABOR AND MATERIALS TO THE CONTRACTOR.
- ANY PUMPING OR BYPASS OPERATIONS MUST BE REVIEWED AND APPROVED PRIOR TO EXECUTION BY BOTH THE WIDEFIELD WATER AND SANITATION DISTRICT AND THE ENGINEER.
- DISINFECTION SHALL BE ACCOMPLISHED BY GLUING TABLETS TO THE TOP OF THE LINE. POWDER OR GRANULER HTH SHALL NOT BE USED. SEE WIDEFIELD SPECS FOR FURTHER DEFINITION OF DISINFECTION TECHNIQUES.
- CONTRACTOR MUST REPLACE OR REPAIR ANY DAMAGE TO ALL SURFACE IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO FENCES, CURB AND GUTTER AND/OR ASPHALT THAT MAY BE CAUSED DURING CONSTRUCTION.
- ALL WATER LINES 6" AND LARGER, AND ALL SEWER LINES 8" AND LARGER, SHALL HAVE AS "AS-BUILT" PLANS PREPARED AND APPROVED PRIOR TO FINAL ACCEPTANCE BY THE WIDEFIELD WATER AND SANITATION DISTRICT.
- PRIOR TO CONSTRUCTION, A PRE-CONSTRUCTION CONFERENCE IS REQUIRED A MINIMUM OF 72 HOURS IN ADVANCE OF COMMENCEMENT OF WORK. TO SET THE PRE-CONSTRUCTION CONFERENCE, CONTACT BRANDON BERNARD-WATER DEPARTMENT MANAGER AND/OR JASON DREESEN, WASTEWATER DEPARTMENT MANAGER OF THE WIDEFIELD WATER AND SANITATION DISTRICT AT 719-955-0548 FOR A TIME. NO PRE-CONSTRUCTION CONFERENCE TIMES WILL BE SET UNTIL 4 SETS OF SIGNED DRAWINGS ARE RECEIVED BY THE WIDEFIELD W & S DISTRICT. PRE-CONSTRUCTION DATE /INITIALS

WIDEFIELD WATER AND SANITATION DISTRICT UTILITY CONSTRUCTION NOTES

- ALL DUCTILE IRON PIPE AND FITTINGS SHALL HAVE CATHODIC PROTECTION AND 9 LB MAGNESIUM ANODES AT EVERY FITTING.
- ALL FIRE HYDRANTS SHALL BE GUARDIAN K-81D HYDRANT KENNEDY VALVE OR AMERICAN AVK SERIES 2700, (MODERN)

UNDERDRAIN CONSTRUCTION NOTES

- SUMP PUMP DISCHARGES FROM HOUSES MUST DISCHARGE TO UNDERGROUND UNDERDRAIN LATERALS, OPEN SPACE, PONDS, OR SWALES AND ARE NOT ALLOWED TO FLOW OVER PUBLIC SIDEWALK OR CURB/GUTTER.
- ALL PVC UNDERDRAIN MAINS SHALL BE 4" PVC, SDR 35.
- UNDERDRAIN LATERALS SHALL BE 3" PVC, SDR 35
- UNDERDRAIN CLEANOUT BOXES ON THE MAINS SHALL BE A CAST IRON TWO PIECE HEAVY DUTY VALVE BOX MANUFACTURED BY STAR PIPE PRODUCTS OR APPROVED EQUAL. THE TOP PIECE SHALL BE 16" TALL AND THE BOTTOM PIECE SHALL BE 36" TALL.
- PVC MAIN LINES SHALL BE INSTALLED WITH COATED NO. 12 TRACER WIRE.
- ALL FITTINGS SHALL BE DUCTILE IRON -MECHANICAL JOINT AND HAVE 1 LB. MAGNESIUM ANODES AT EVERY FITTING.
- THE LOCATION OF ALL UTILITIES AS SHOWN ON THESE DRAWINGS ARE APPROXIMATE ONLY. THE LOCATION OF ALL UTILITIES SHALL BE VERIFIED PRIOR TO CONSTRUCTION BY THE CONTRACTOR.
- THE CONTRACTOR SHALL FIELD EXCAVATE AND VERIFY THE VERTICAL AND HORIZONTAL LOCATION OF ALL TIE-INS. CONTRACTOR SHALL NOTIFY THE ENGINEER OF THE FIELD VERIFIED INFORMATION PRIOR TO CONSTRUCTION.
- ALL BENDS SHALL BE FIELD STAKED PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL AT HIS EXPENSE SUPPORT AND PROTECT ALL UTILITY MAINS SO THAT THEY WILL FUNCTION CONTINUOUSLY DURING CONSTRUCTION. SHOULD A UTILITY MAIN FAIL AS A RESULT OF THE CONTRACTOR'S OPERATION, IT WILL BE REPLACED IMMEDIATELY BY THE CONTRACTOR AT FULL COST OF LABOR AND MATERIALS TO THE CONTRACTOR.

CORE
ENGINEERING GROUP
15004 1ST AVENUE S.
BURNSVILLE, MN 55306
PH: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rls@cegi.com

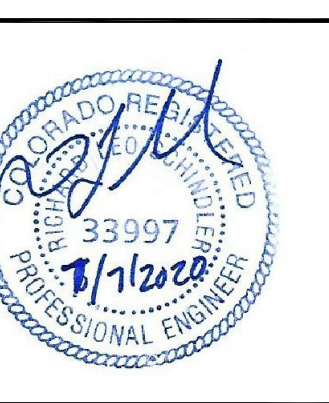
DATE
DESCRIPTION
NO.

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

PROJECT:
CREEKSIDE SOUTH AT LORSON RANCH
TRAPPE DR - HORTON DR
COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

CREEKSIDE SOUTH AT LORSON RANCH
SANITARY SEWER/WATERMAIN
NOTES

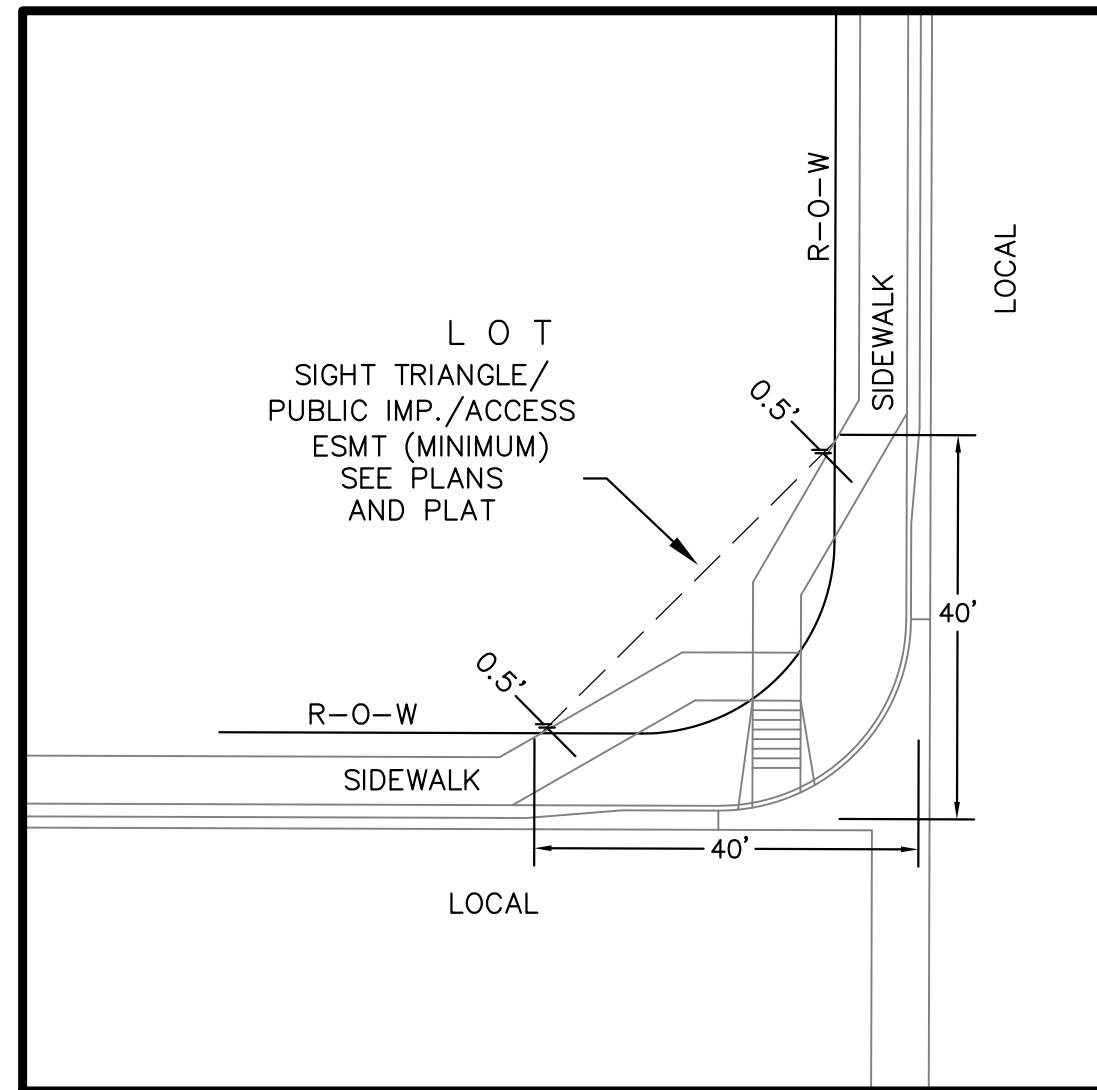


DATE:
MAY 12, 2020

PROJECT NO.
100.051

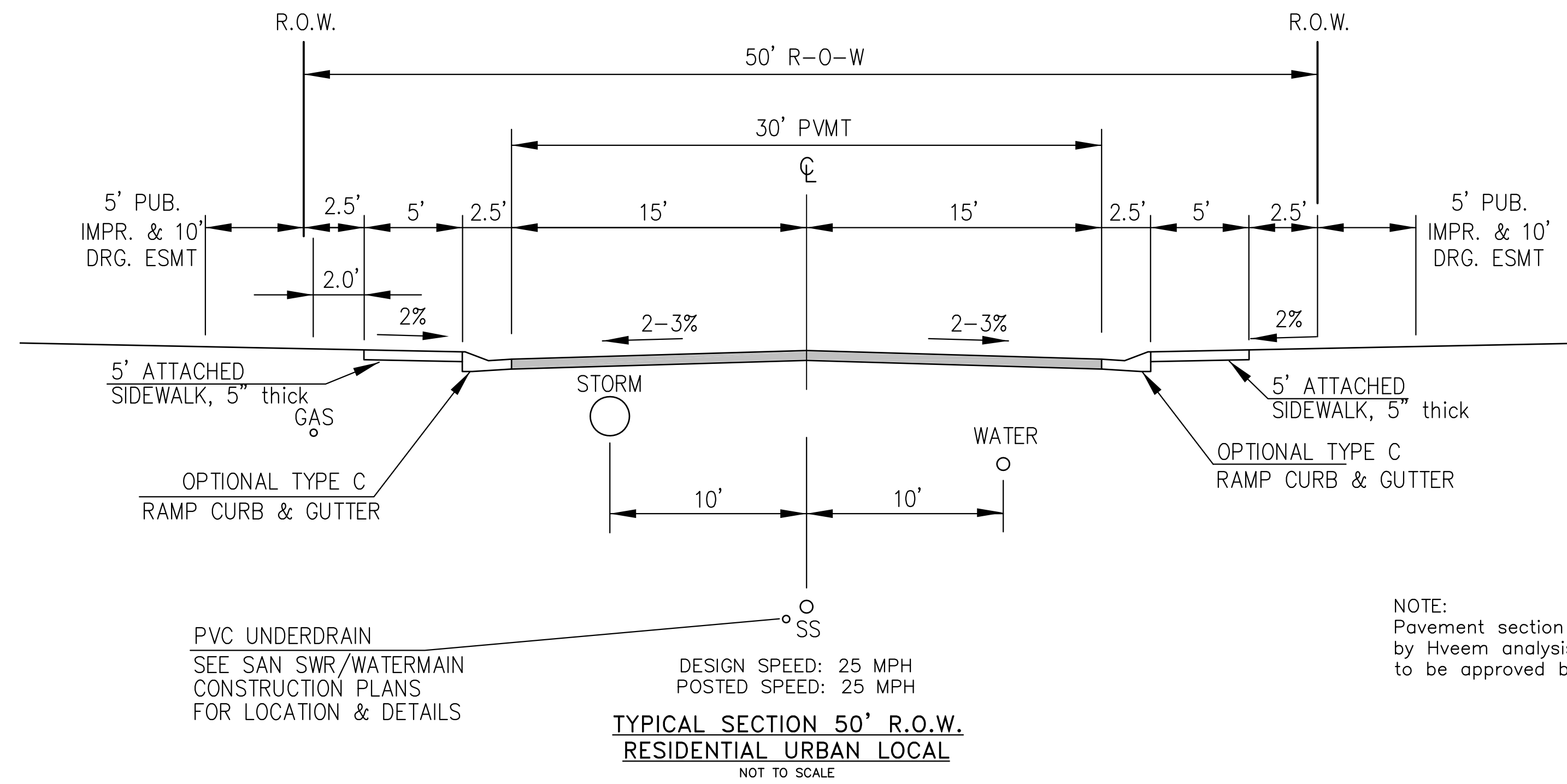
SHEET NUMBER
C1.2

TOTAL SHEETS: 24



**LOCAL ROADWAY SIGHT TRIANGLE
PUBLIC IMPROVEMENT ESMT.**
NOT TO SCALE

NOTE:
ADDITIONAL PUBLIC IMPROVEMENT EASEMENTS ARE REQUIRED WHERE
SIDEWALK ENCLOSES INTO THE PRIVATE LOTS. SEE CONSTRUCTION DRAWINGS
AND THE FINAL PLAT. SEE CONSTRUCTION DRAWINGS AND PLAT FOR SIGHT TRIANGLES



LUNETH DR, HORTON DR, NAKAI LN, SHUNKA LN, AKELA LN

NOTE:
Pavement section to be determined
by Hveem analysis and design. Design
to be approved by El Paso County PCD Engineering

CORE
ENGINEERING GROUP
15004 1ST AVENUE S.
BURNSVILLE, MN 55306
PH: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@cegi.com

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

PROJECT:
**CREEKSIDE SOUTH
AT LORSON RANCH**
TRAPPE DR - HORTON DR
COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

TYPICAL SECTIONS

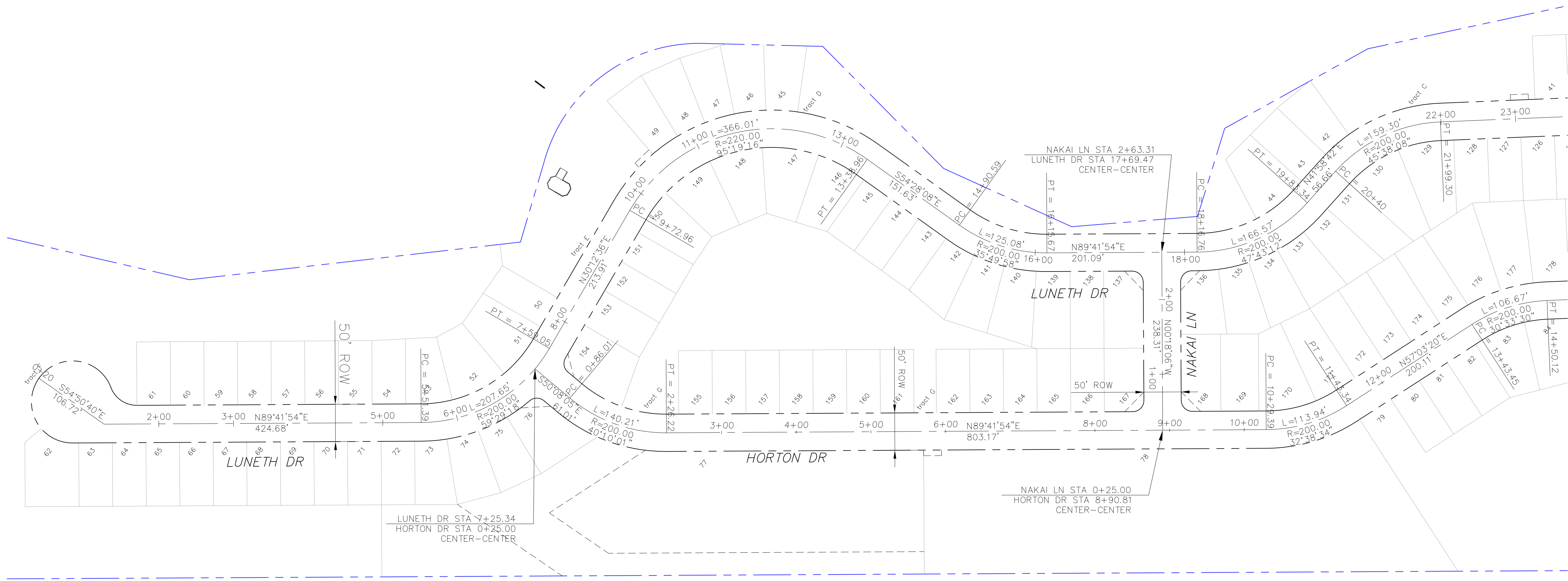


DATE:
MAY 12, 2020

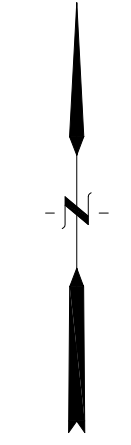
PROJECT NO.
100.051

SHEET NUMBER
C1.3

TOTAL SHEETS: 24



MATCH LINE
SEE SHEET G2.2



CORE
ENGINEERING GROUP
15004 1ST AVENUE S,
DENVER, CO 80202
PHONE: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg1.com

NO. _____ DATE _____
DESCRIPTION _____
DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

PROJECT: CREEKSIDE SOUTH AT LORSON RANCH
TRAPPE DR - HORTON DR
COLORADO SPRINGS, COLORADO

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

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

CREEKSIDE SOUTH
AT LORSON RANCH
HORIZONTAL CONTROL PLAN

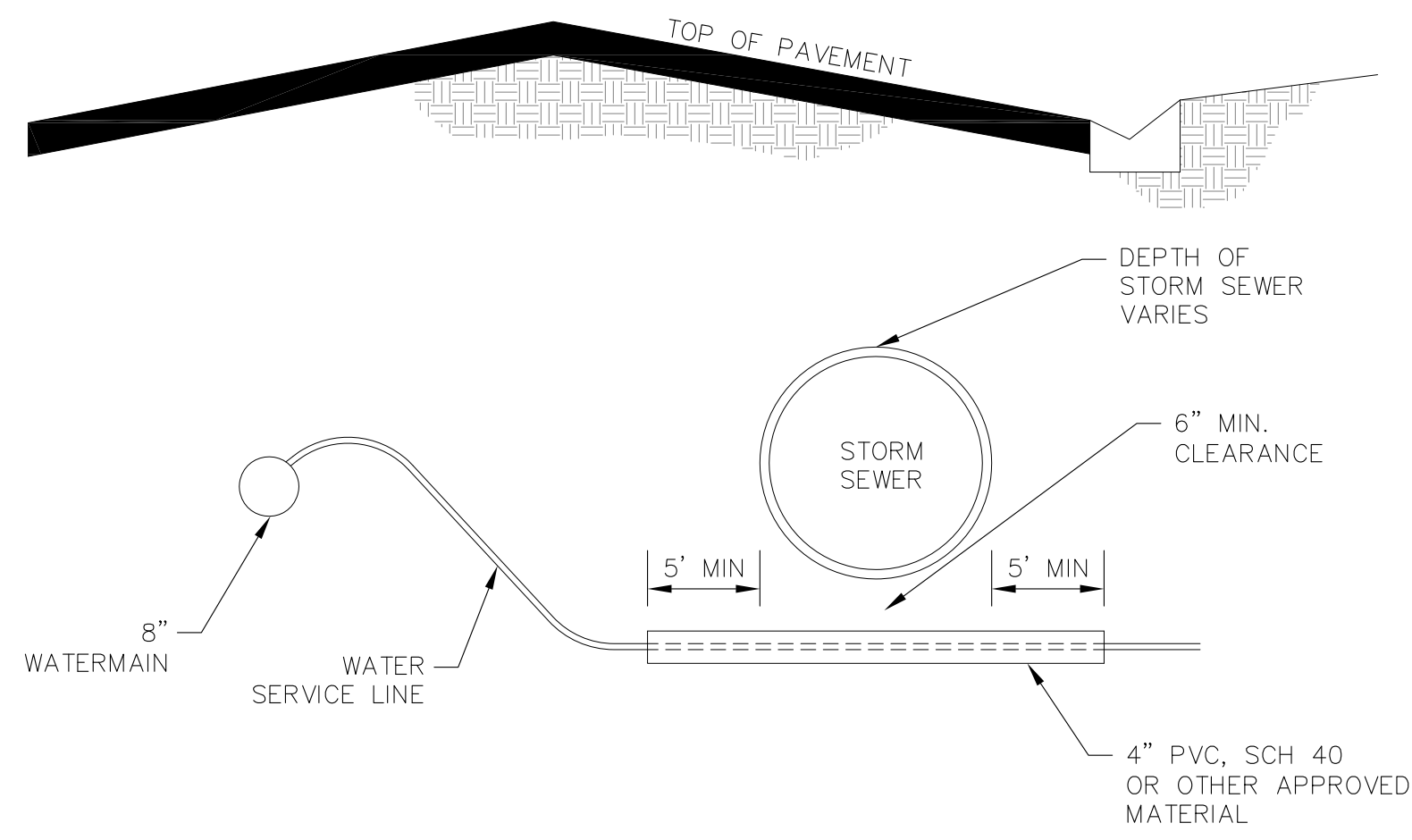


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PROJECT NO.
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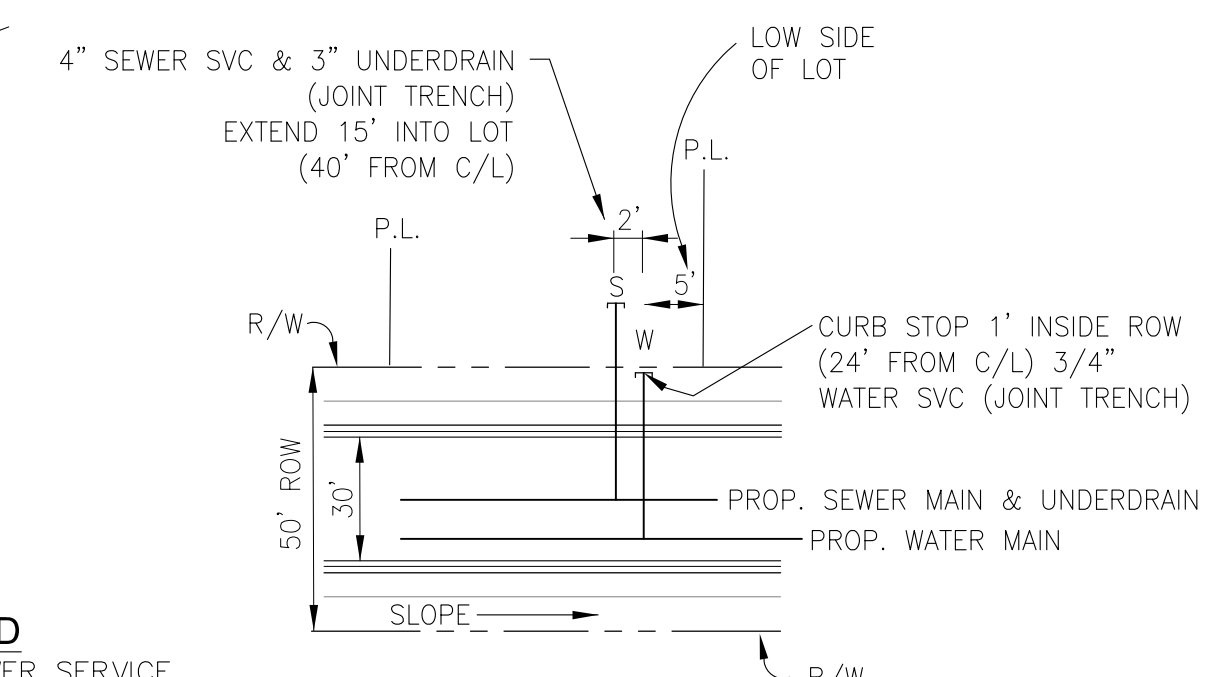
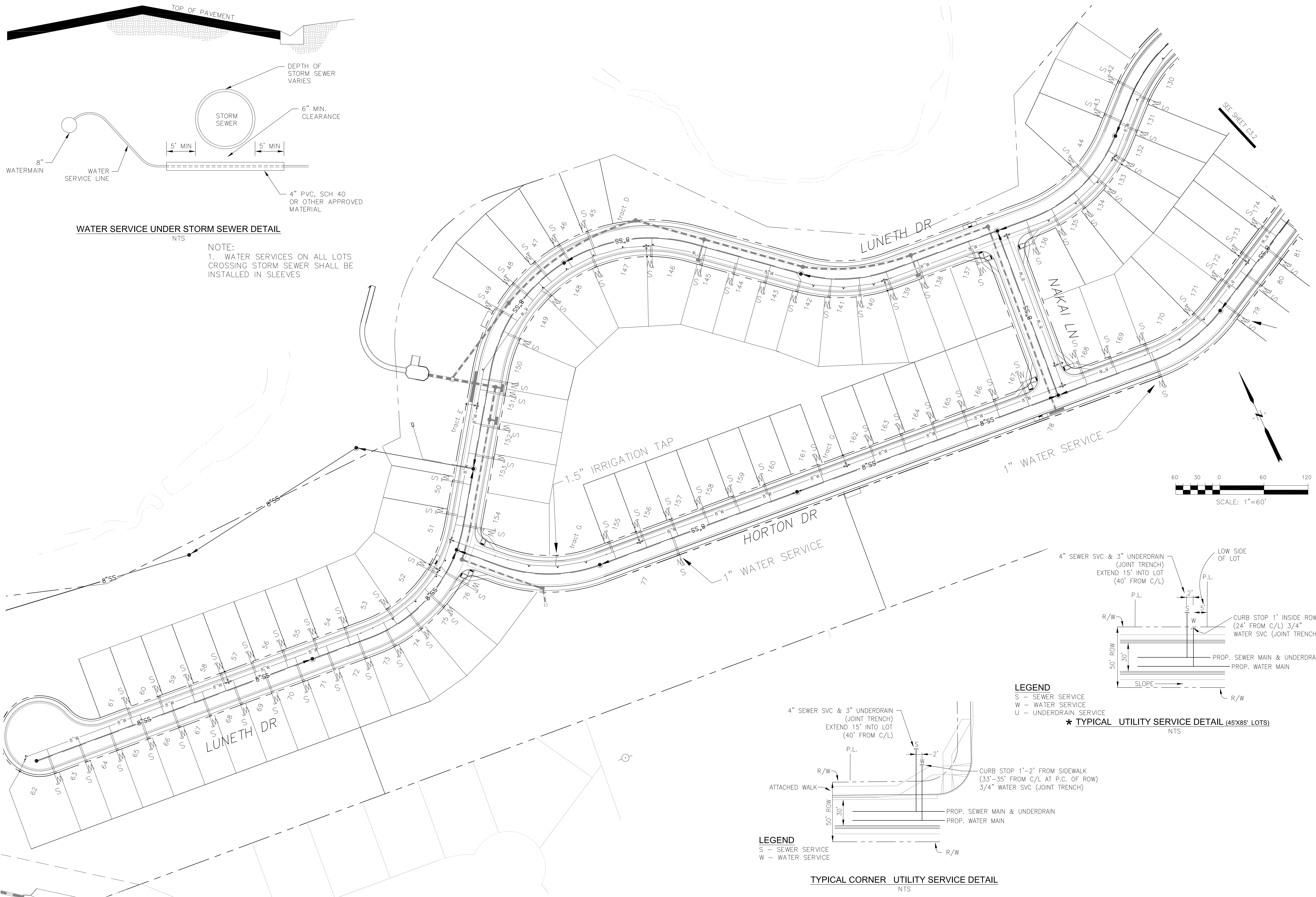
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TOTAL SHEETS: 24

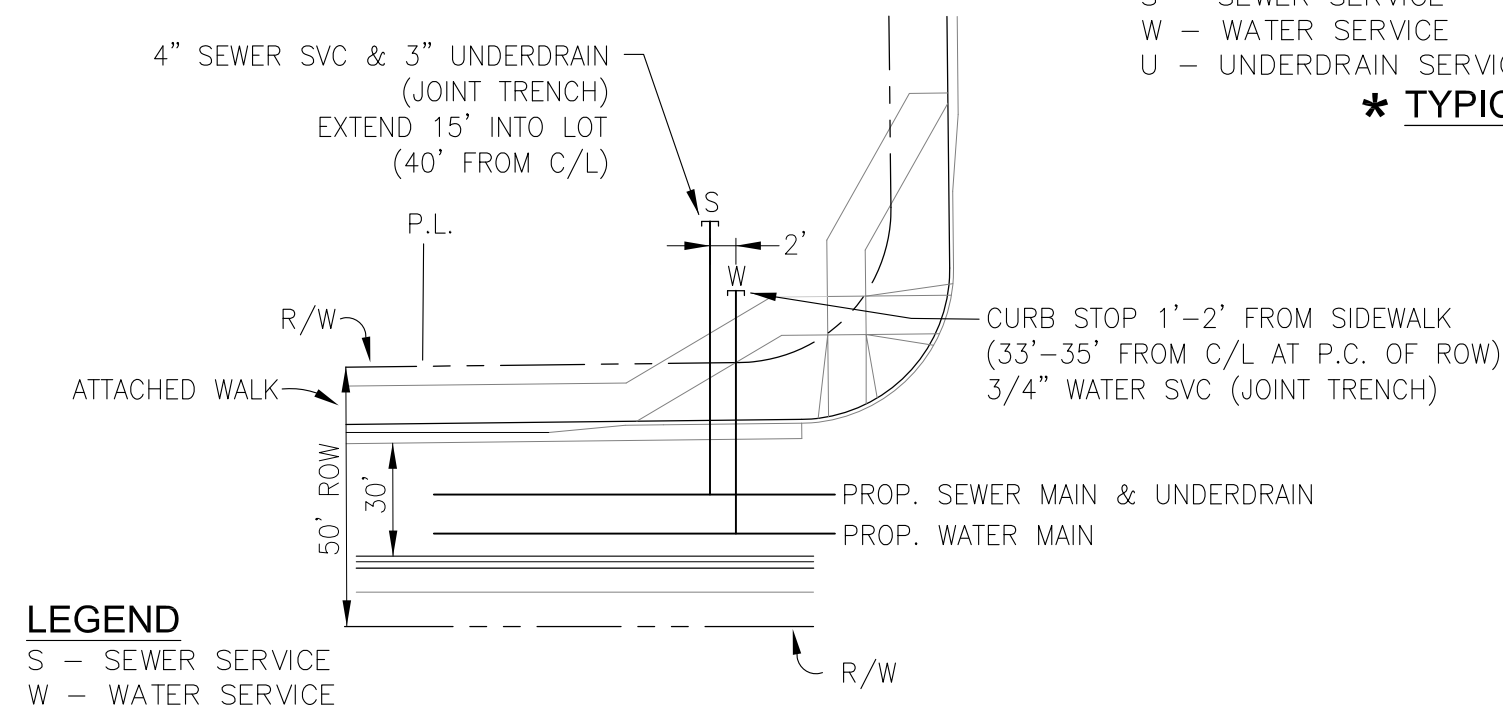


WATER SERVICE UNDER STORM SEWER DETAIL
NTS

NOTE:
1. WATER SERVICES ON ALL LOTS CROSSING STORM SEWER SHALL BE INSTALLED IN SLEEVES



LEGEND
S - SEWER SERVICE
W - WATER SERVICE
U - UNDERDRAIN SERVICE
*** TYPICAL UTILITY SERVICE DETAIL (45'x85' LOTS)**
NTS

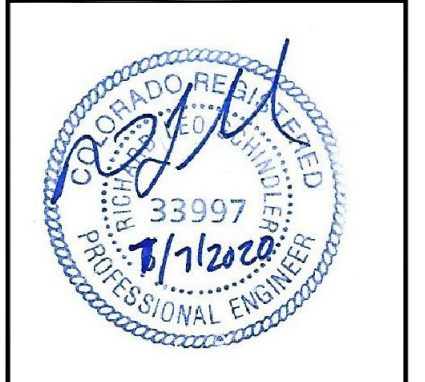


LEGEND
S - SEWER SERVICE
W - WATER SERVICE
TYPICAL CORNER UTILITY SERVICE DETAIL
NTS

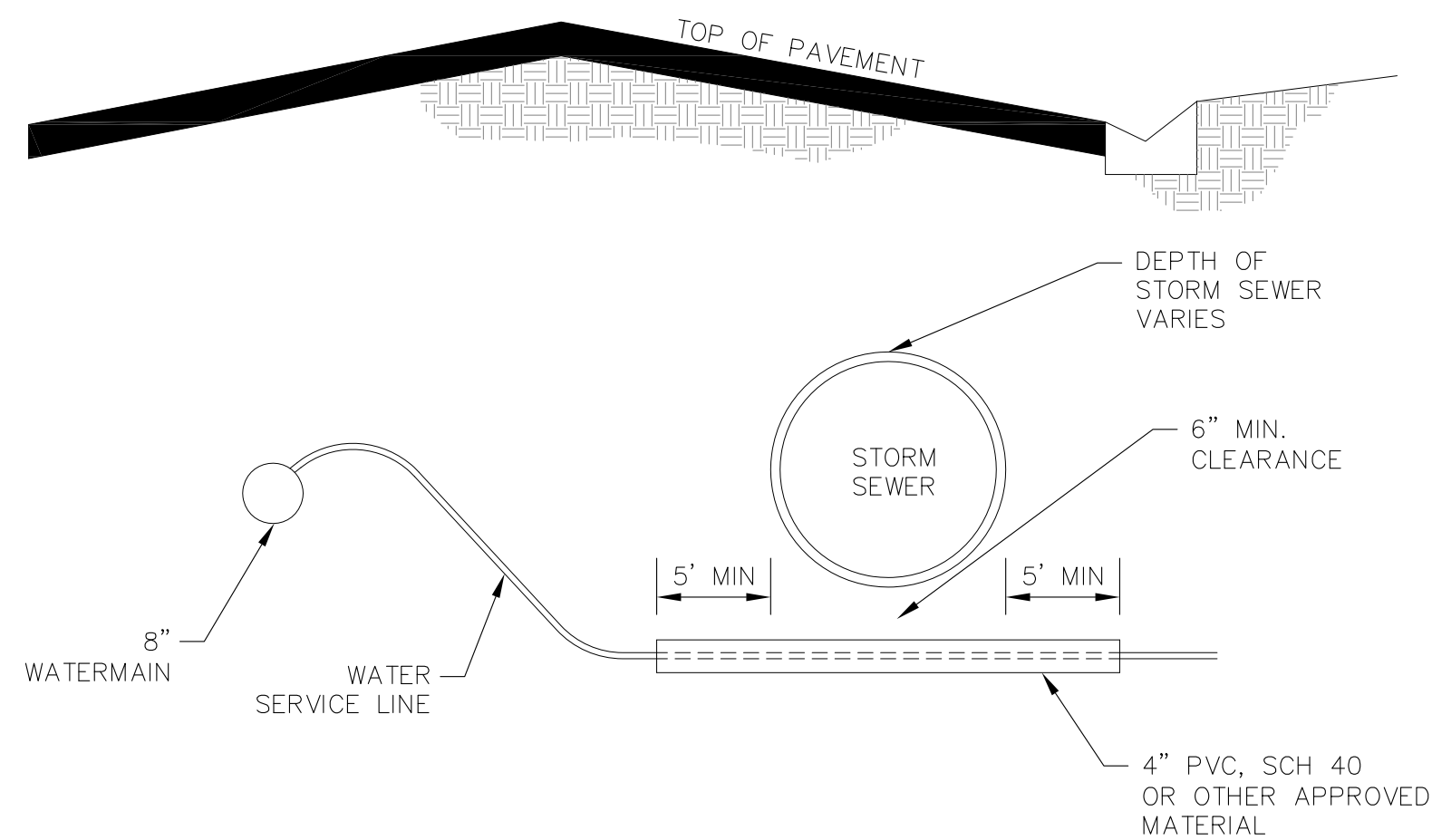
CORE ENGINEERING GROUP
15004 1ST AVENUE S.
BURNSVILLE, MN 55306
PH: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: rich@cegi.com

DATE: _____
DESCRIPTION: _____
NO. _____
DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS
PROJECT: CREEKSIDE SOUTH AT LORSON RANCH
PREPARED FOR: LORSON, LLC
212 N. WAHSATCH AVE. SUITE 301
COLORADO SPRINGS, COLORADO 80903
CONTACT: JEFF MARK

CREEKSIDE AT LORSON RANCH FIL NO. 1
UTILITY SERVICES PLAN

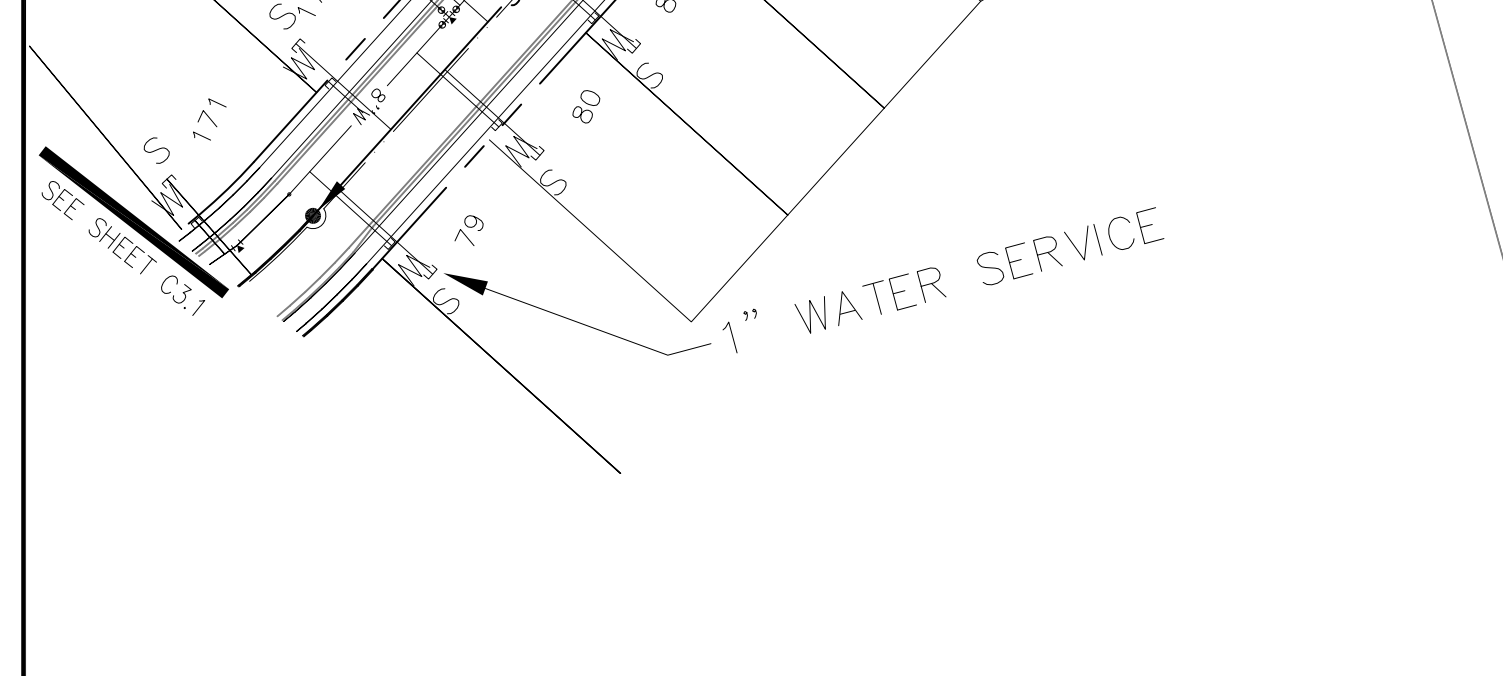
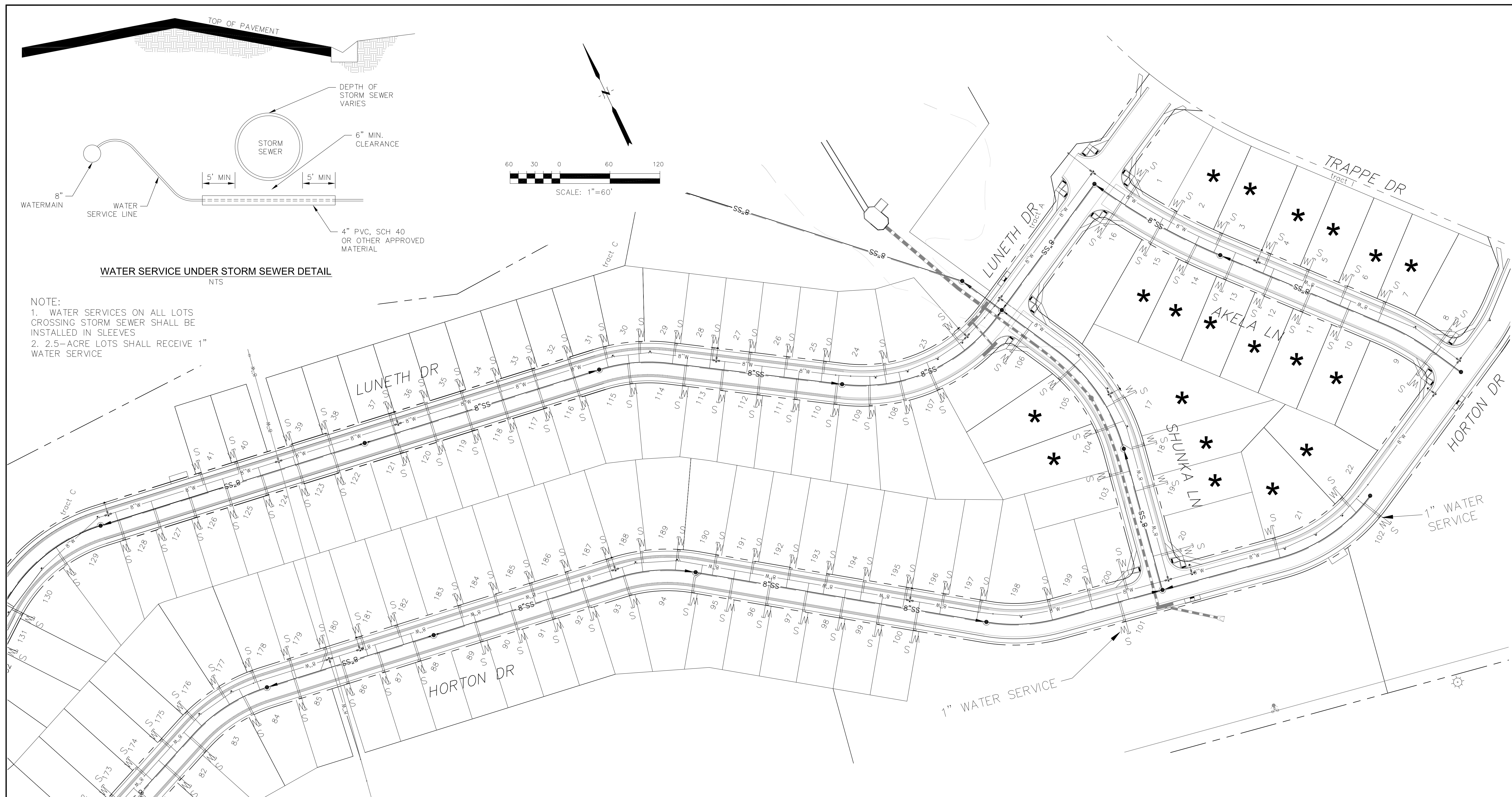
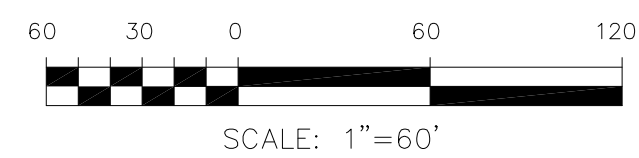


DATE: MAY 12, 2020
PROJECT NO. 100.051
SHEET NUMBER C3.1
TOTAL SHEETS: 24



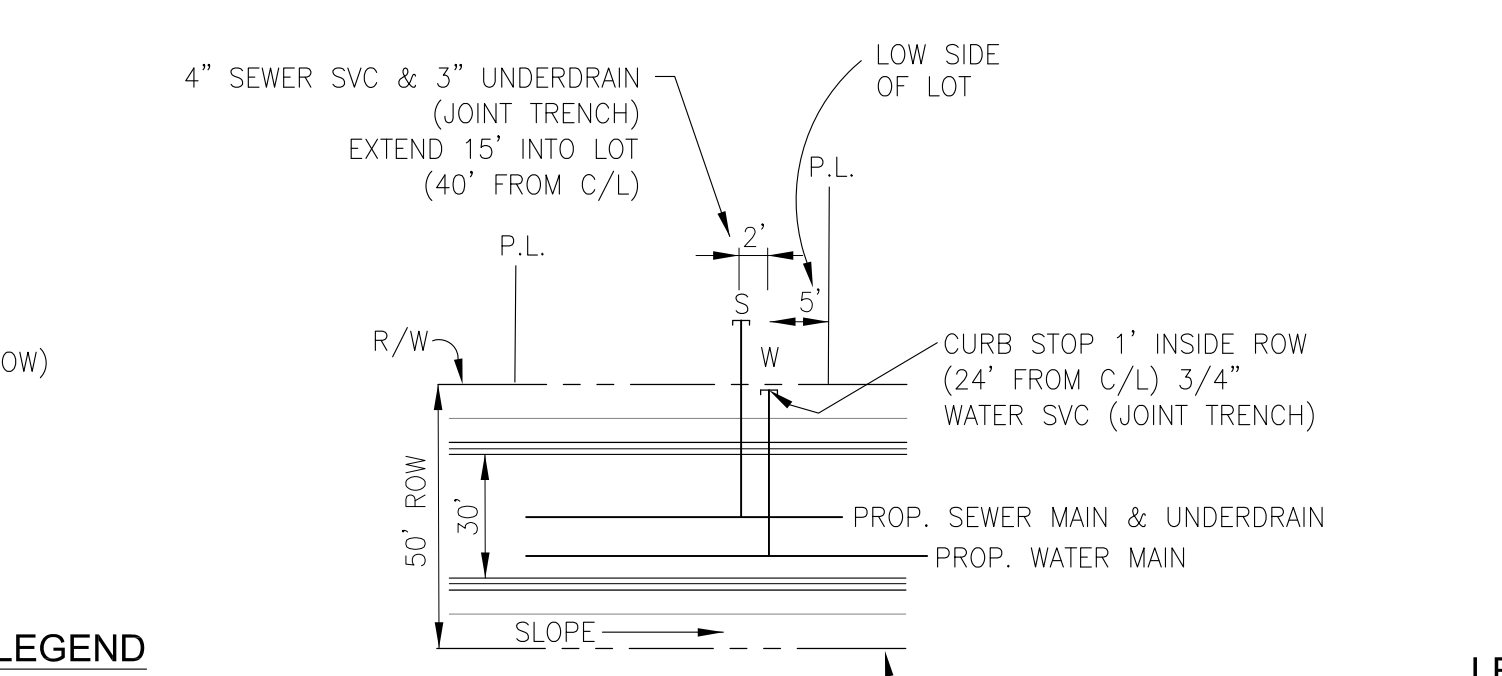
WATER SERVICE UNDER STORM SEWER DETAIL
NTS

NOTE:
1. WATER SERVICES ON ALL LOTS CROSSING STORM SEWER SHALL BE INSTALLED IN SLEEVES
2. 2.5-ACRE LOTS SHALL RECEIVE 1" WATER SERVICE



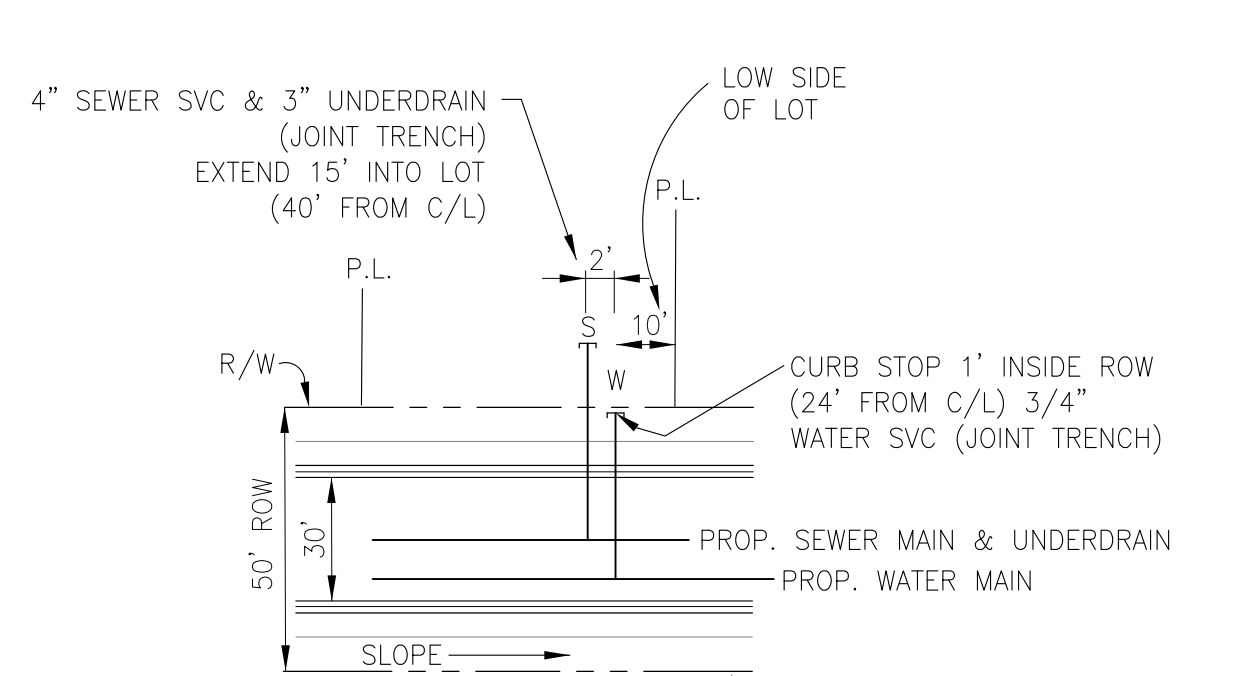
TYPICAL CORNER UTILITY SERVICE DETAIL
NTS

LEGEND
S - SEWER SERVICE
W - WATER SERVICE



TYPICAL UTILITY SERVICE DETAIL (45'x85' LOTS)
NTS

LEGEND
S - SEWER SERVICE
W - WATER SERVICE
U - UNDERDRAIN SERVICE



*** TYPICAL UTILITY SERVICE DETAIL (LOTS 2-7, 10-15, 17-19, 21-22, 103-104)**
NTS

LEGEND
S - SEWER SERVICE
W - WATER SERVICE
U - UNDERDRAIN SERVICE

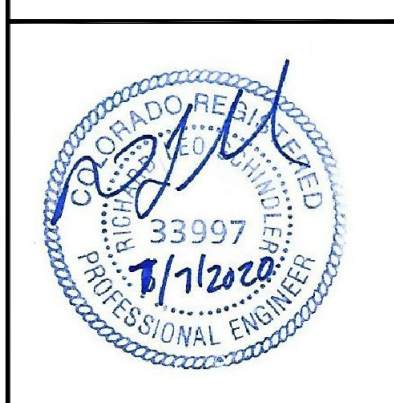
CORE ENGINEERING GROUP
15004 1ST AVENUE S.
BURNSVILLE, MN 55306
PH: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: rich@cegi.com

DATE: _____
DESCRIPTION: _____
NO. _____
DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

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

PROJECT:
CREEKSIDE SOUTH AT LORSON RANCH
TRAPPE DR - HORTON DR

CREEKSIDE SOUTH AT LORSON RANCH
UTILITY SERVICES PLAN



DATE:
MAY 12, 2020

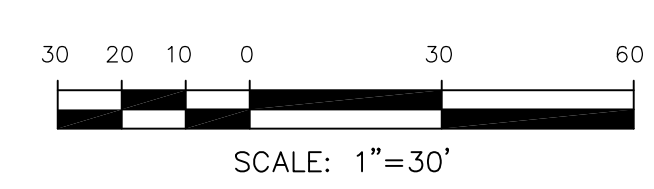
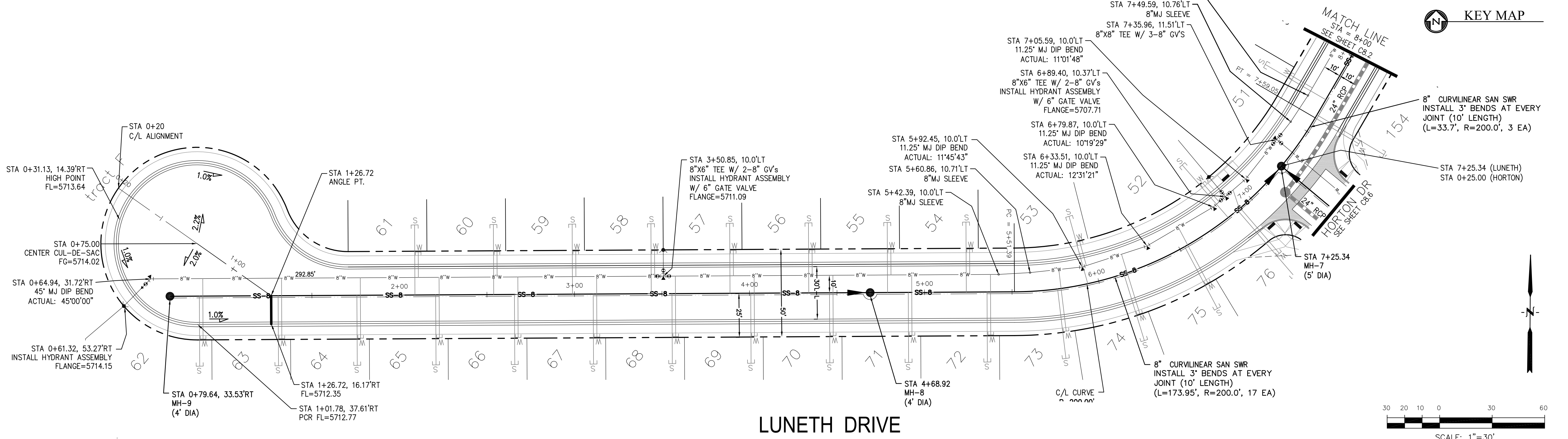
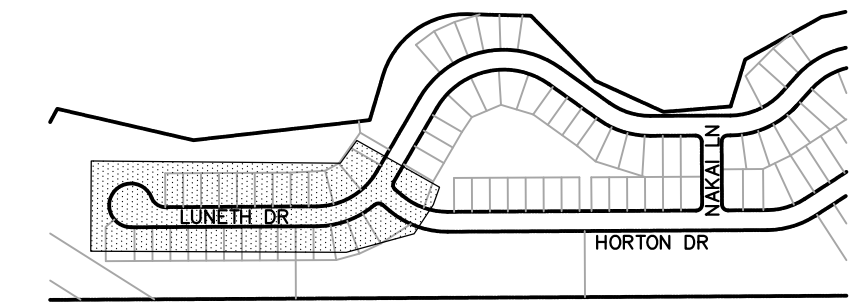
PROJECT NO.
100.051

SHEET NUMBER
C3.2

TOTAL SHEETS: 24

NOTES

1. STATIONING IS AT ROADWAY CENTERLINE.
2. WATERMAIN ELEVATIONS ARE TO TOP UNLESS NOTED OTHERWISE
3. ALL 8" & 12" WATERMAIN IS PVC, C900.
4. ALL WATERMAIN FITTINGS ARE M.J. DIP
5. ALL WATERMAIN BENDS & TEES REQUIRE CTRB'S

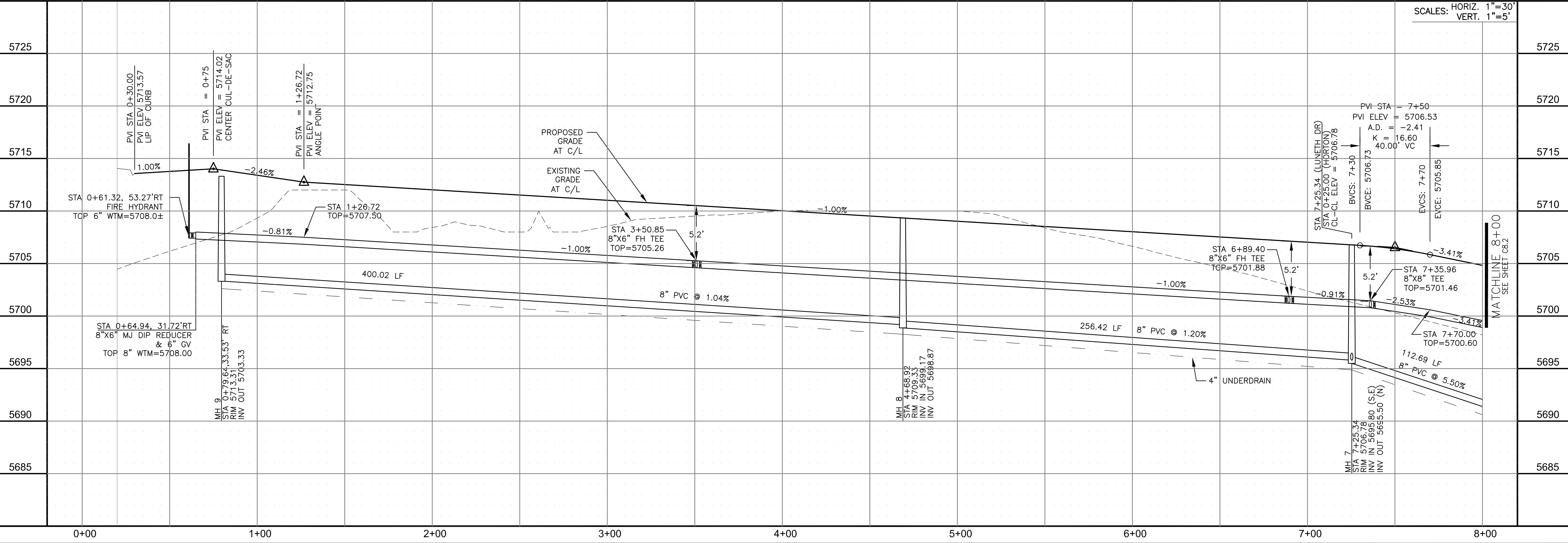


CORE ENGINEERING GROUP
 15004 1ST AVENUE S.
 BLDG 790
 P.O. BOX 5701100
 COLORADO SPRINGS, COLORADO 80903
 CONTACT: RICHARD L. SCHINDLER, P.E.
 EMAIL: Rich@ceg1.com

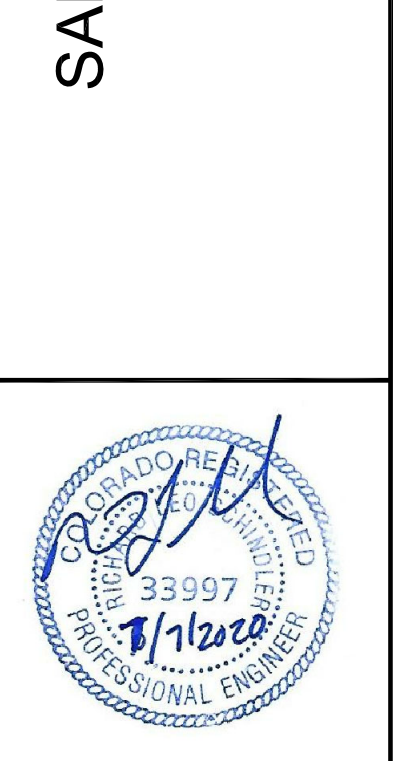
DATE: _____
 DESCRIPTION: _____
 NO: _____

PREPARED FOR:
LORSON, LLC
 212 N. WAHSATCH AVE., SUITE 301
 COLORADO SPRINGS, COLORADO 80903
 PROJECT:
CREEKSIDE SOUTH AT LORSON RANCH
 TRAPPE DR - HORTON DR
 COLORADO SPRINGS, COLORADO
 CONTACT: JEFF MARK

DRAWN: RLS
 DESIGNED: RLS
 CHECKED: RLS



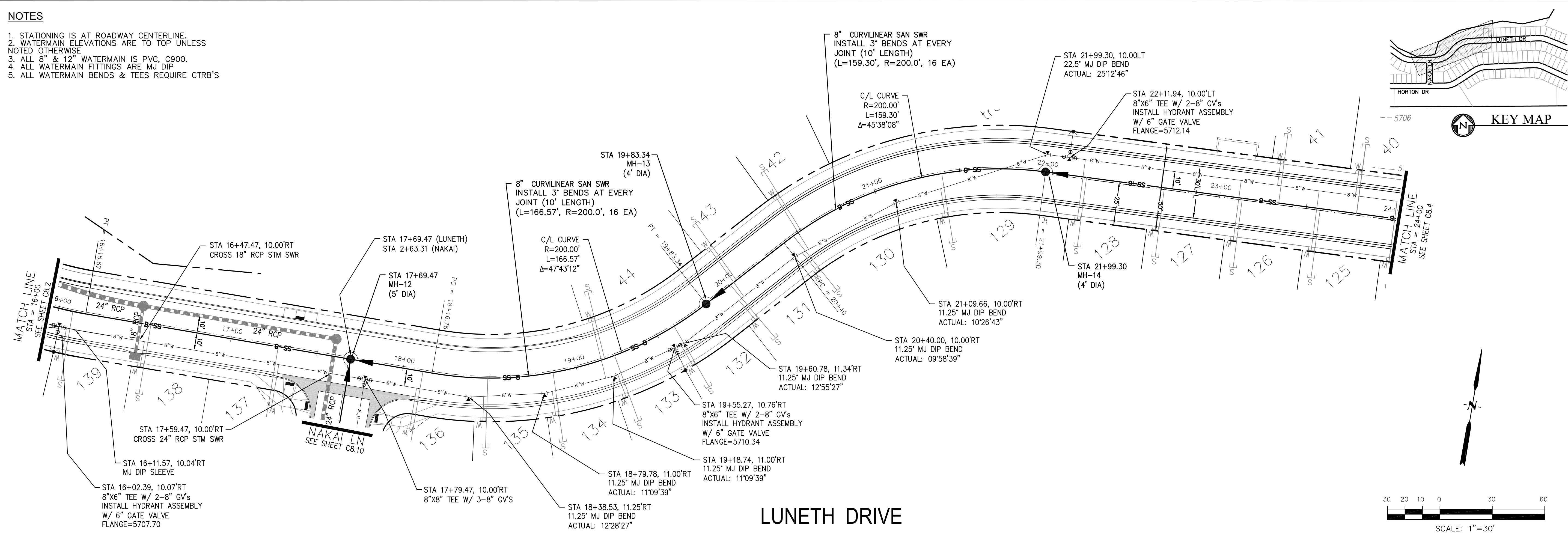
SANITARY / WATERMAIN
LUNETH DRIVE
STA 0+00 TO 8+00



DATE: MAY 12, 2020
 PROJECT NO: 100.051
 SHEET NUMBER: C8.1
 TOTAL SHEETS: 24

NOTES

1. STATIONING IS AT ROADWAY CENTERLINE.
2. WATERMAIN ELEVATIONS ARE TO TOP UNLESS NOTED OTHERWISE
3. ALL 8" & 12" WATERMAIN IS PVC, C900.
4. ALL WATERMAIN FITTINGS ARE MJ DIP
5. ALL WATERMAIN BENDS & TEES REQUIRE CTRB'S

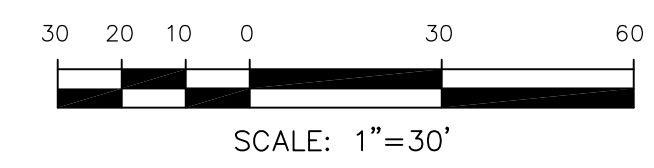


CORE ENGINEERING GROUP
 15004 1ST AVENUE S, SUITE 301
 BLDG 79, FLDG 1100
 COLORADO SPRINGS, COLORADO 80903
 CONTACT: RICHARD L. SCHINDLER, P.E.
 EMAIL: Rich@cegi.com

DATE: _____
 DESCRIPTION: _____
 NO: _____
 DRAWN: RLS
 DESIGNED: RLS
 CHECKED: RLS

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

PROJECT:
CREEKSIDE SOUTH AT LORSON RANCH
 TRAPPE DR - HORTON DR
 COLORADO SPRINGS, COLORADO



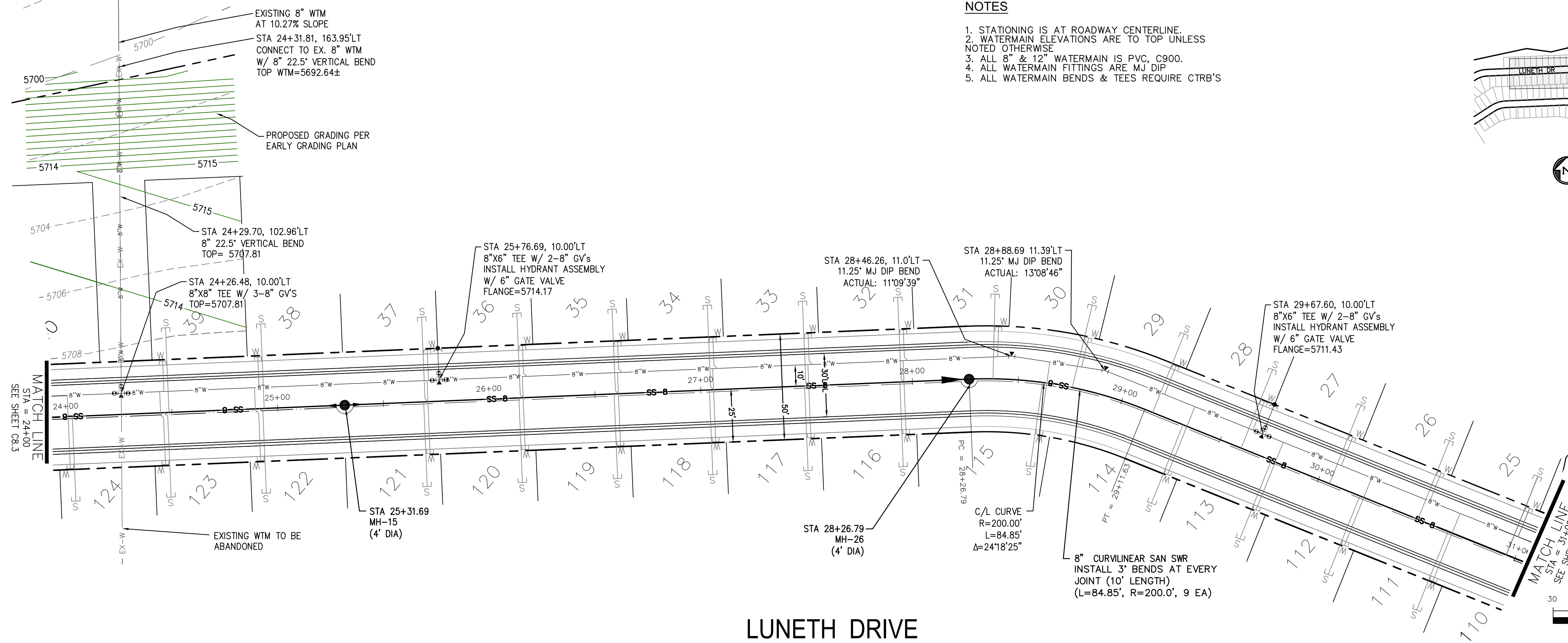
Station	Description	Station	Description
5725		5725	
5720		5720	
5715		5715	
5710		5710	
5705		5705	
5700		5700	
5695		5695	
5690		5690	
5685		5685	

Station	Grade	Length	Material
16+00 to 17+00	0.80%	278.88 LF	8" PVC @ 0.80%
17+00 to 18+00	0.00%	213.87 LF	8" PVC @ 0.80%
18+00 to 19+00	1.76%	215.96 LF	8" PVC @ 0.80%
19+00 to 20+00	0.70%	332.41 LF	8" PVC @ 1.04%
20+00 to 21+00	0.70%		
21+00 to 22+00	0.70%		
22+00 to 23+00	0.70%		
23+00 to 24+00	0.70%		

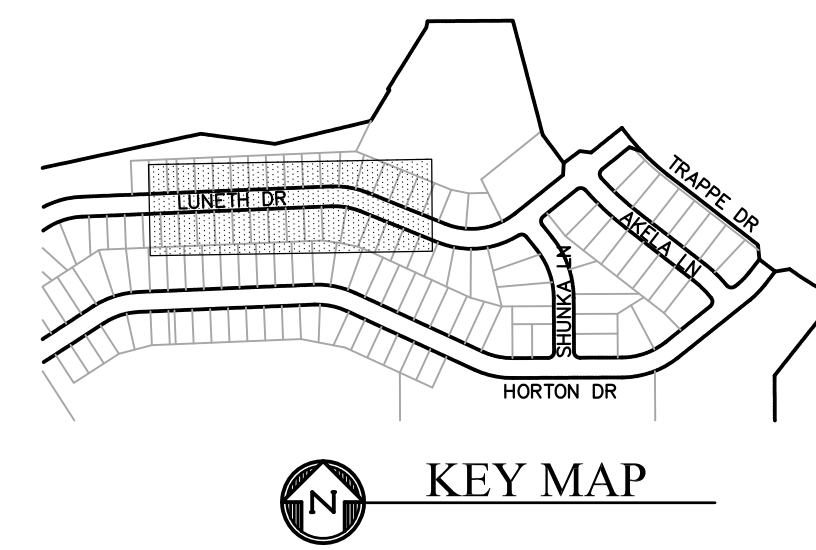
SCALES: HORIZ. 1"=30'
 VERT. 1"=5'

SANITARY / WATERMAIN
LUNETH DRIVE
STA 16+00 TO 24+00

DATE: MAY 12, 2020
 PROJECT NO. 100.051
 SHEET NUMBER C8.3
 TOTAL SHEETS: 24



- NOTES**
1. STATIONING IS AT ROADWAY CENTERLINE.
 2. WATERMAIN ELEVATIONS ARE TO TOP UNLESS NOTED OTHERWISE
 3. ALL 8" & 12" WATERMAIN IS PVC, C900.
 4. ALL WATERMAIN FITTINGS ARE MJ DIP
 5. ALL WATERMAIN BENDS & TEES REQUIRE CTRB'S



CORE ENGINEERING GROUP
 15004 1ST AVENUE S.
 BIRCH CREEK, CO 80150
 PHONE: 303.570.1100
 CONTACT: RICHARD L. SCHINDLER, P.E.
 EMAIL: Rich@cegi.com

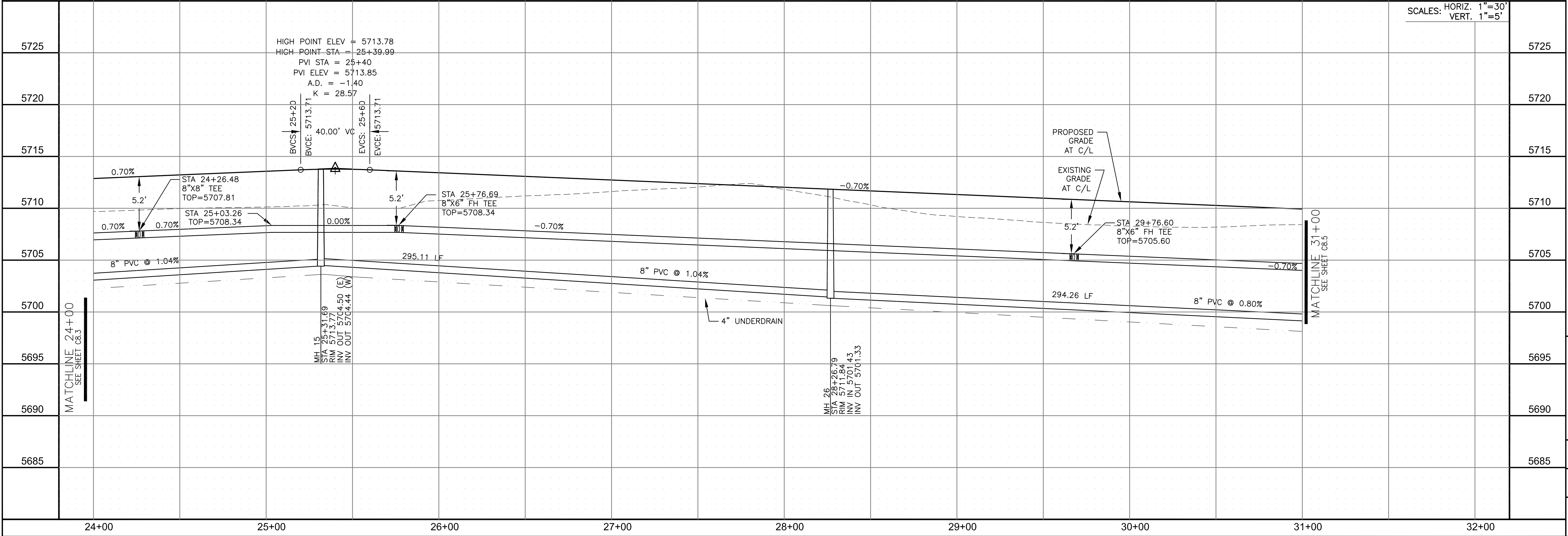
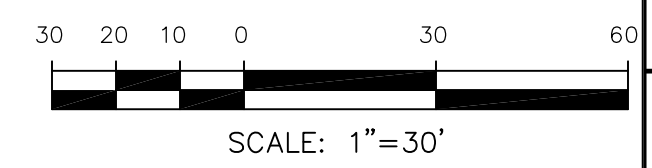
DATE: _____
 DESCRIPTION: _____
 NO. _____

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

PROJECT:
**CREEKSIDE SOUTH
 AT LORSON RANCH**
 TRAPPE DR - HORTON DR
 COLORADO SPRINGS, COLORADO

DRAWN: RLS
 DESIGNED: RLS
 CHECKED: RLS

LUNETH DRIVE



STREET/STORM
LUNETH DRIVE
STA 24+00 TO 31+00



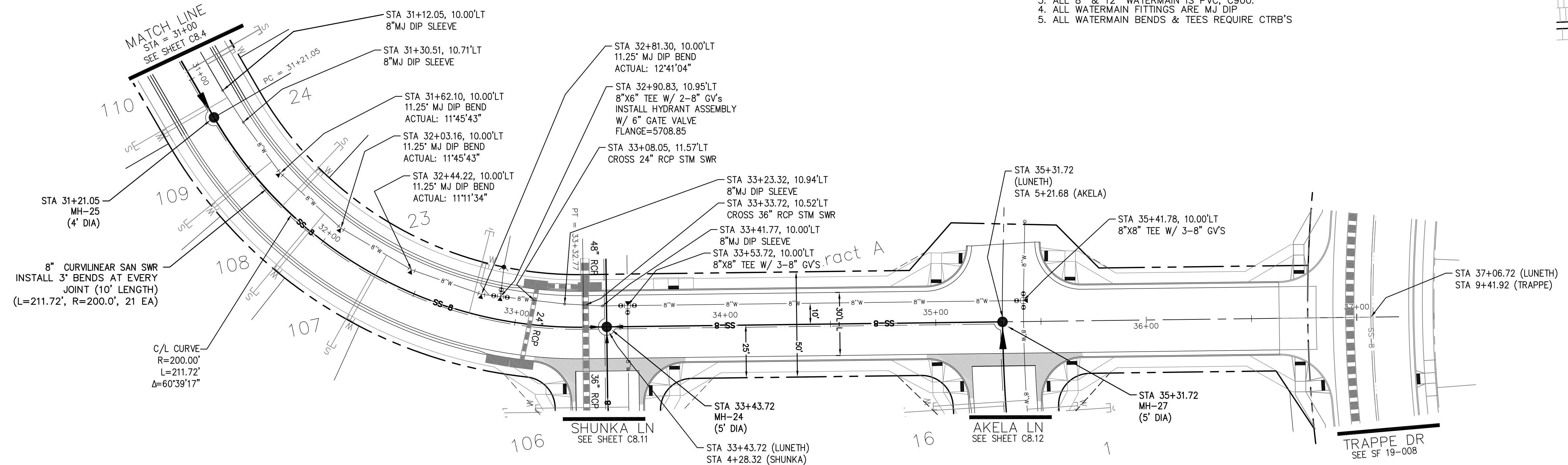
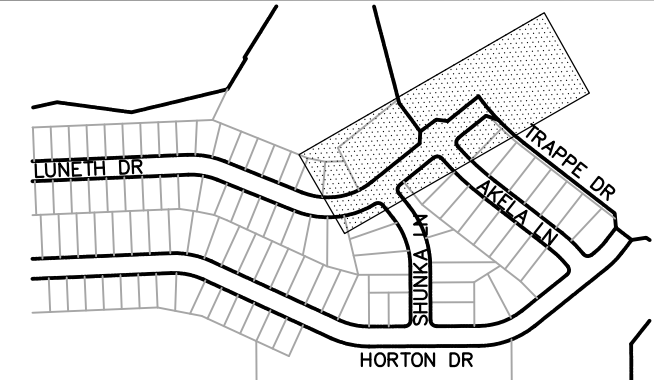
DATE:
 MAY 12, 2020

PROJECT NO.
 100.051

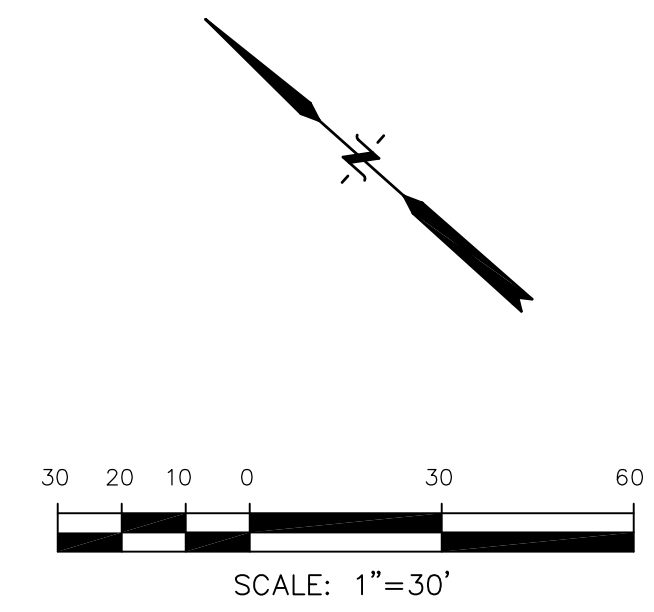
SHEET NUMBER
 C8.4

TOTAL SHEETS: 24

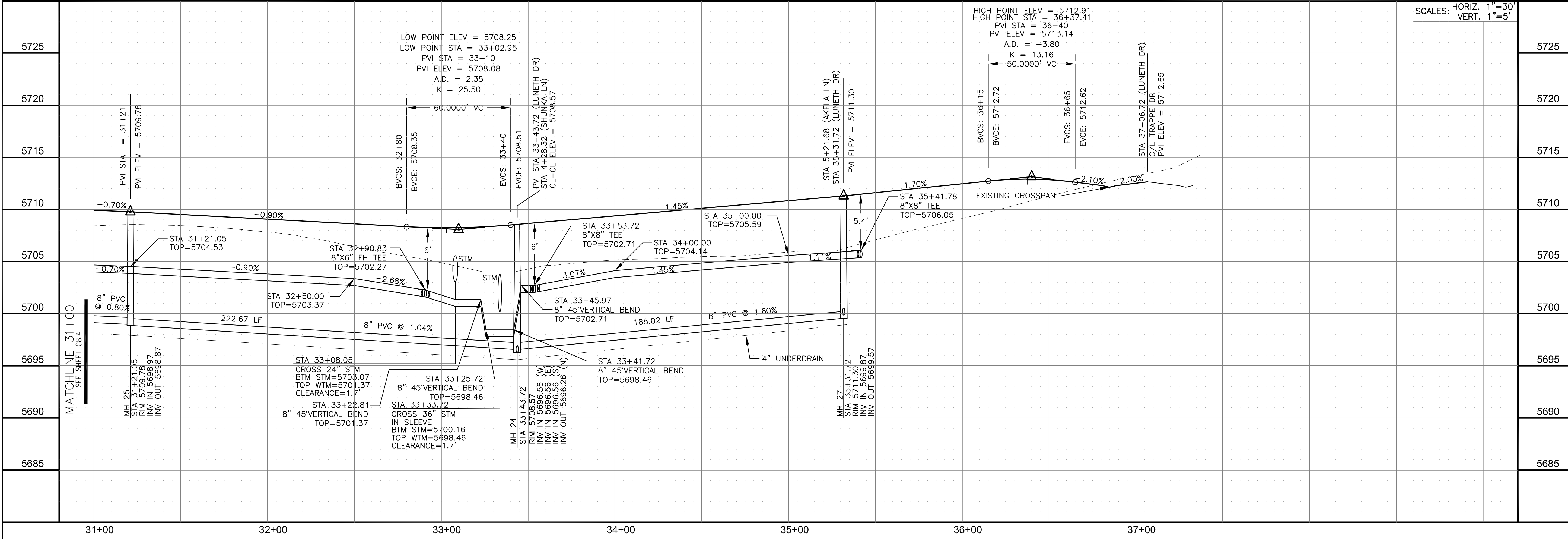
- NOTES**
1. STATIONING IS AT ROADWAY CENTERLINE.
 2. WATERMAIN ELEVATIONS ARE TO TOP UNLESS NOTED OTHERWISE.
 3. ALL 8" & 12" WATERMAIN IS PVC, C900.
 4. ALL WATERMAIN FITTINGS ARE MJ DIP
 5. ALL WATERMAIN BENDS & TEES REQUIRE CTRB'S



KEY MAP



LUNETH DRIVE



SCALES: HORIZ. 1"=30'
VERT. 1"=5'

CORE ENGINEERING GROUP
15004 1ST AVENUE S.
BIRMGHAM, AL 35206
PH: 205.979.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@cegi.com

DATE: _____
DESCRIPTION: _____
NO. _____

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

PROJECT: **CREEKSIDE SOUTH AT LORSON RANCH**
TRAPPE DR - HORTON DR
COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

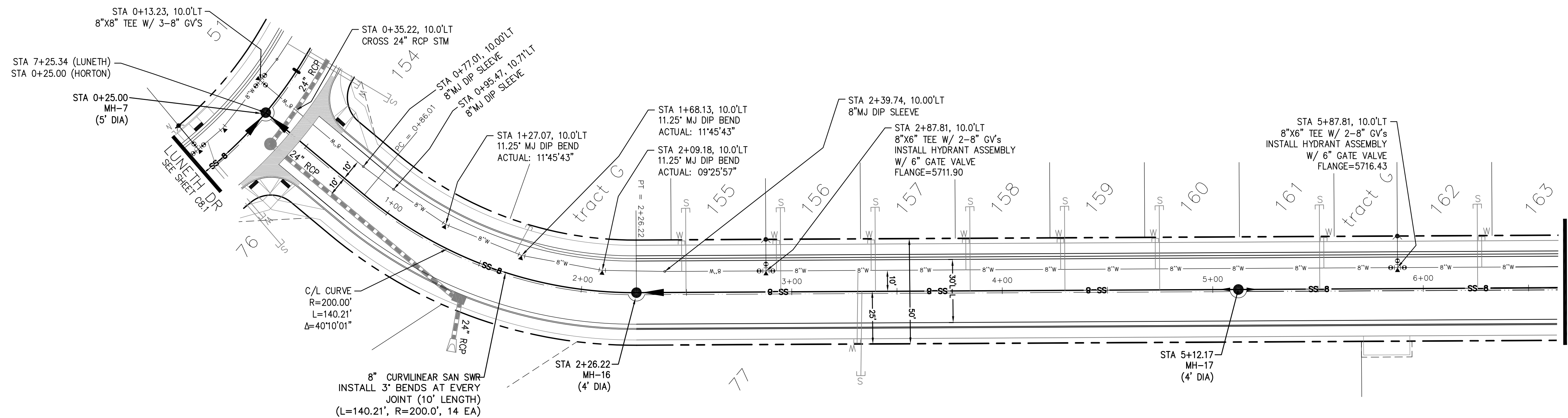
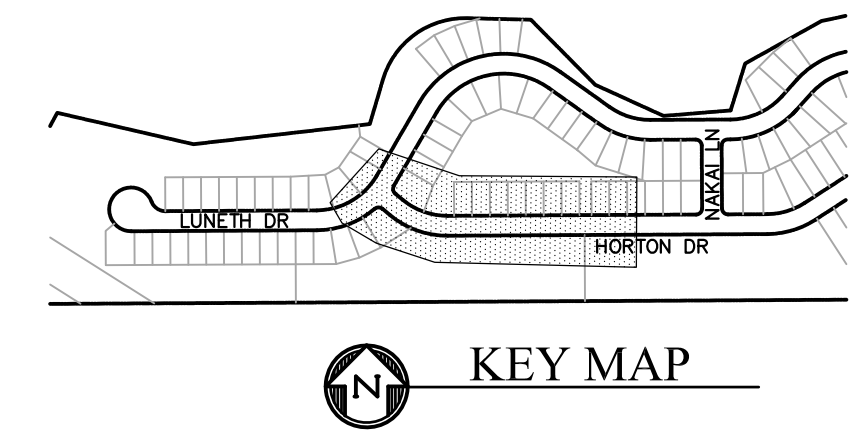
SANITARY / WATERMAIN
LUNETH DRIVE
STA 31+00 TO 37+06



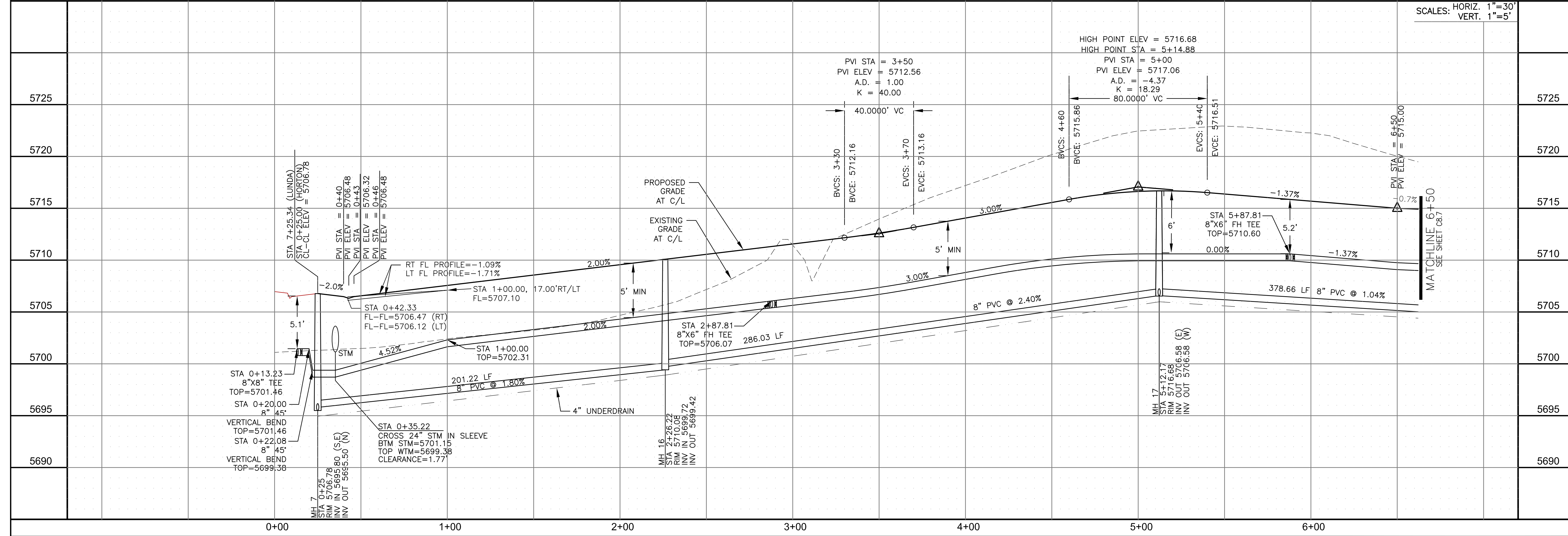
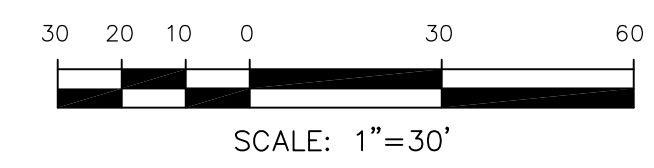
DATE: MAY 12, 2020
PROJECT NO. 100.051
SHEET NUMBER C8.5
TOTAL SHEETS: 24

NOTES

1. STATIONING IS AT ROADWAY CENTERLINE.
2. WATERMAIN ELEVATIONS ARE TO TOP UNLESS NOTED OTHERWISE.
3. ALL 8" & 12" WATERMAIN IS PVC, C900.
4. ALL WATERMAIN FITTINGS ARE MJ DIP.
5. ALL WATERMAIN BENDS & TEES REQUIRE CTRB'S



HORTON DRIVE



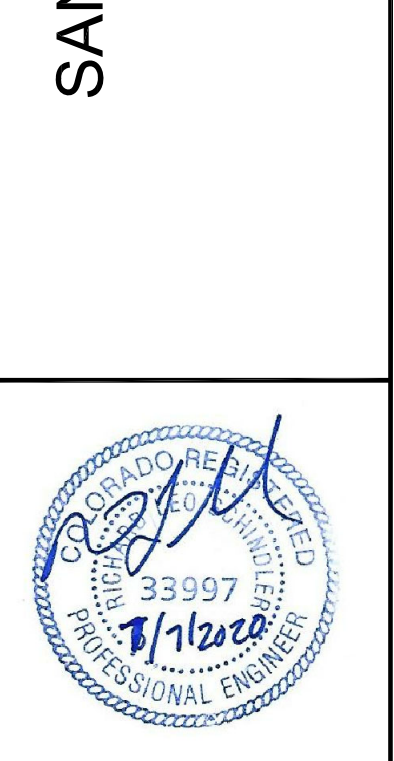
CORE ENGINEERING GROUP
 15004 1ST AVENUE S.
 BURNING WOODS, CO 80903
 PHONE: 719.576.1100
 CONTACT: RICHARD L. SCHINDLER, P.E.
 EMAIL: Rich@cegi.com

DATE: _____
 DESCRIPTION: _____
 NO.: _____

PREPARED FOR:
LORSON, LLC
 212 N. WAHSATCH AVE., SUITE 301
 COLORADO SPRINGS, COLORADO 80903
 PROJECT:
CREEKSIDE SOUTH AT LORSON RANCH
 TRAPPE DR - HORTON DR
 COLORADO SPRINGS, COLORADO
 CONTACT: JEFF MARK

DRAWN: RLS
 DESIGNED: RLS
 CHECKED: RLS

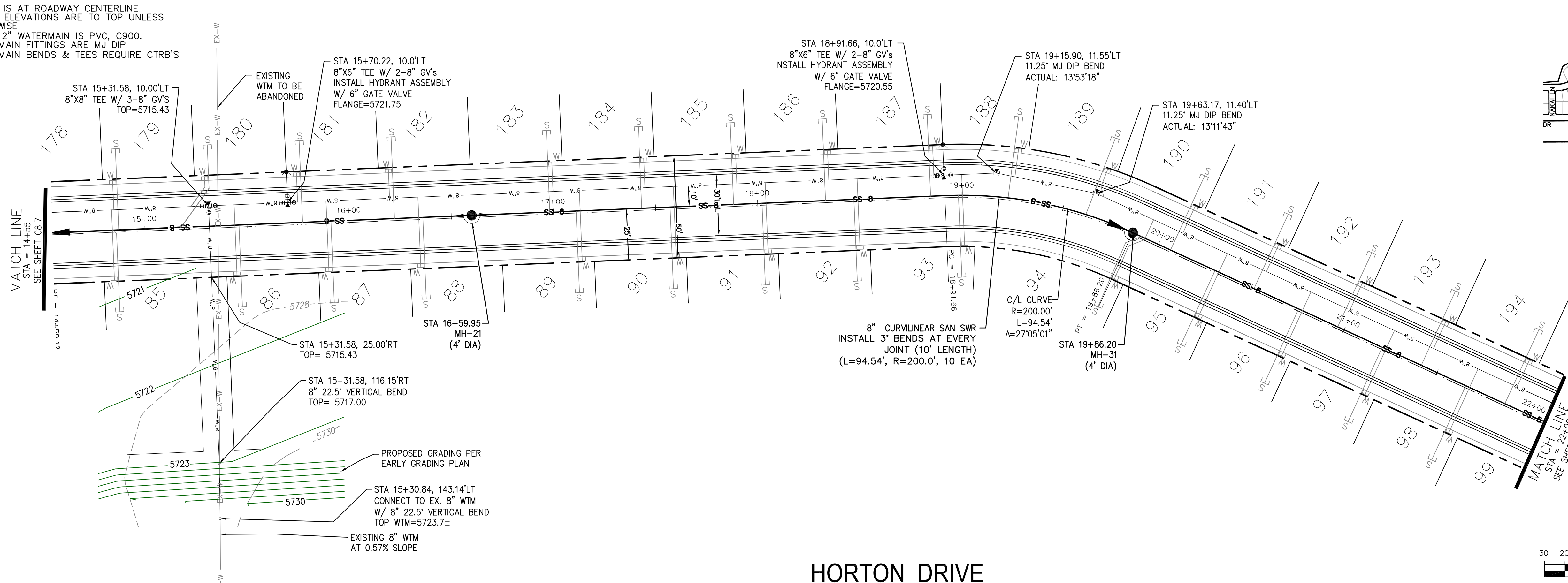
SANITARY / WATERMAIN
HORTON DRIVE
STA 0+00 TO 6+50



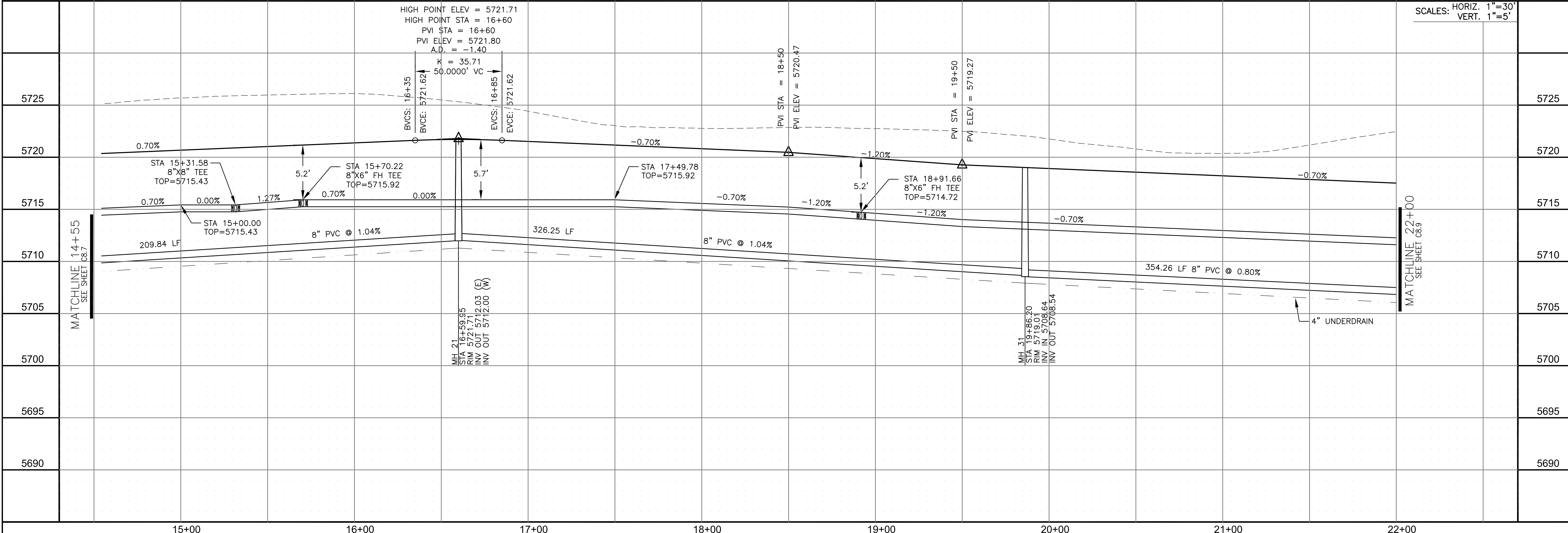
DATE:
MAY 12, 2020
 PROJECT NO.
100.051
 SHEET NUMBER
C8.6
 TOTAL SHEETS: 24

NOTES

1. STATIONING IS AT ROADWAY CENTERLINE.
2. WATERMAIN ELEVATIONS ARE TO TOP UNLESS NOTED OTHERWISE.
3. ALL 8" & 12" WATERMAIN IS PVC, C900.
4. ALL WATERMAIN FITTINGS ARE MJ DIP.
5. ALL WATERMAIN BENDS & TEES REQUIRE CTRB'S



HORTON DRIVE

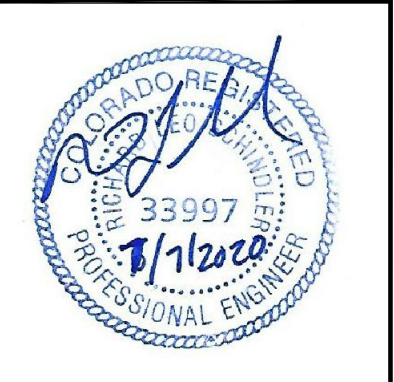


CORE ENGINEERING GROUP
 15004 1ST AVENUE S.
 BLDG 79 570 1100
 COLORADO SPRINGS, CO 80903
 CONTACT: RICHARD L. SCHINDLER, P.E.
 EMAIL: Rich@cegi.com

DATE: _____
 NO. _____
 DESCRIPTION: _____
 PREPARED FOR: **LORSON, LLC**
 212 N. WAHSATCH AVE., SUITE 301
 COLORADO SPRINGS, COLORADO 80903
 CONTACT: JEFF MARK

DRAWN: RLS
 DESIGNED: RLS
 CHECKED: RLS

SANITARY / WATERMAIN
HORTON DRIVE
STA 14+55 TO 22+00



DATE: **MAY 12, 2020**

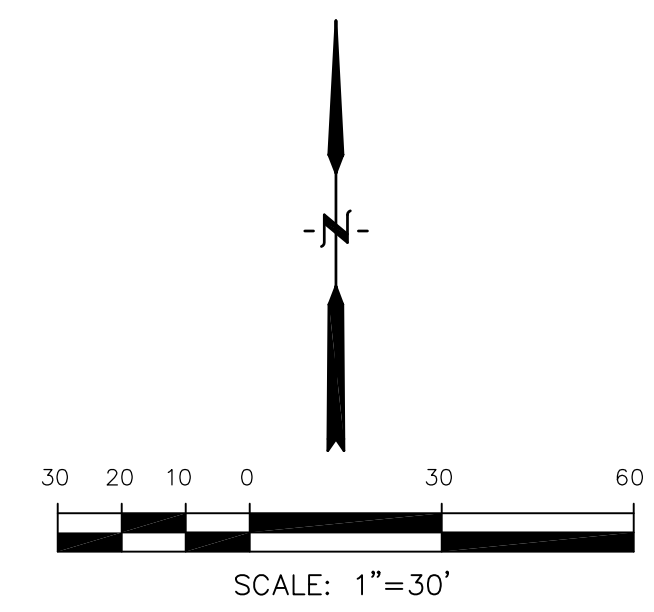
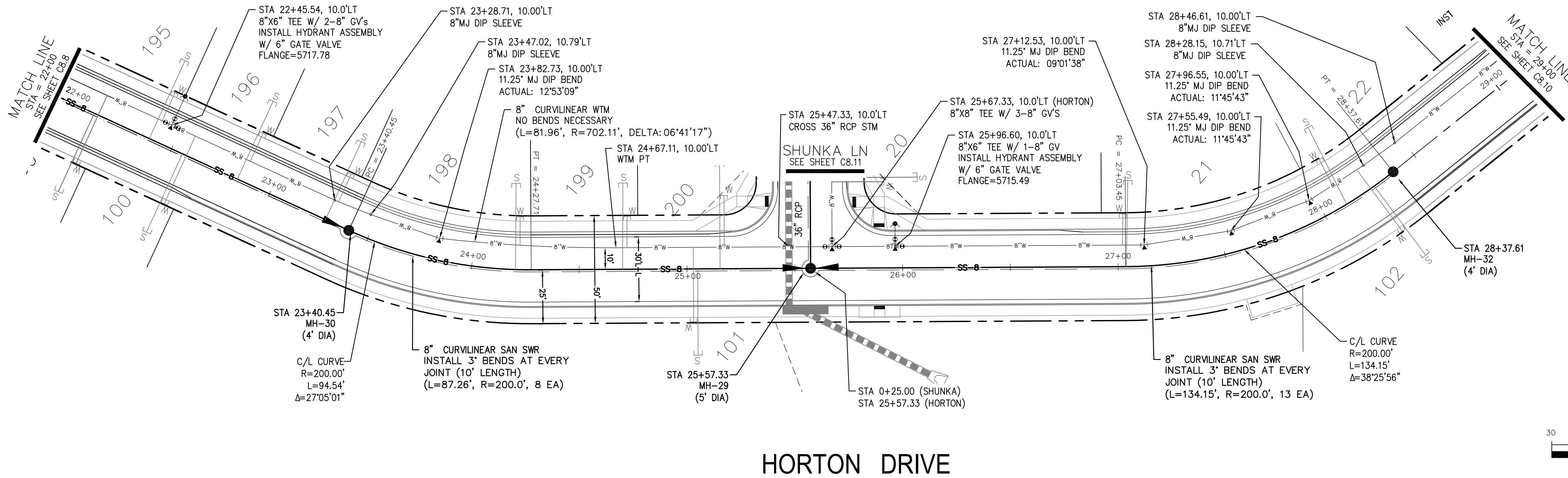
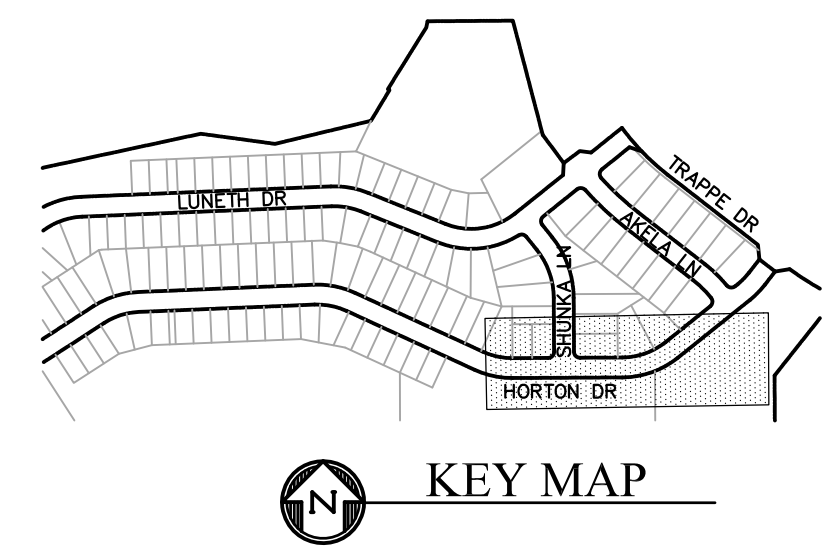
PROJECT NO. **100.051**

SHEET NUMBER **C8.8**

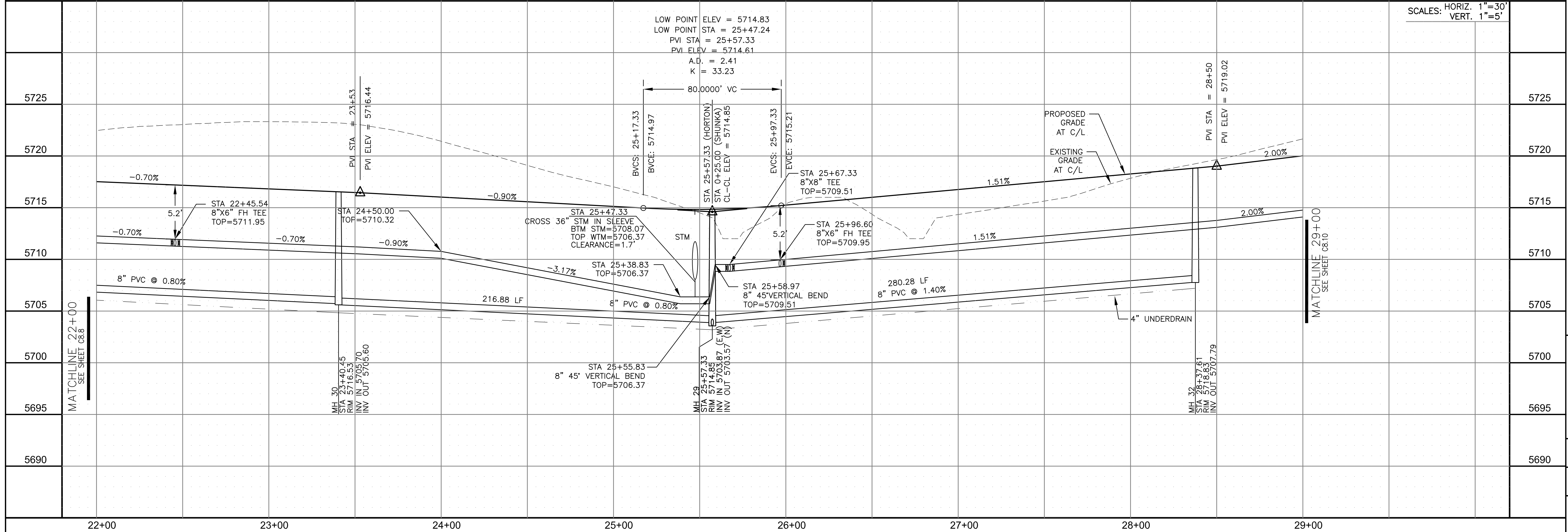
TOTAL SHEETS: 24

NOTES

1. STATIONING IS AT ROADWAY CENTERLINE.
2. WATERMAIN ELEVATIONS ARE TO TOP UNLESS NOTED OTHERWISE
3. ALL 8" & 12" WATERMAIN IS PVC, C900.
4. ALL WATERMAIN FITTINGS ARE MJ DIP
5. ALL WATERMAIN BENDS & TEES REQUIRE CTRB'S



HORTON DRIVE



SCALES: HORIZ. 1"=30'
VERT. 1"=5'

CORE ENGINEERING GROUP
15004 1ST AVENUE S.
BURNING WOODS, CO 80506
PHONE: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@cegi.com

DATE: _____
DESCRIPTION: _____
NO: _____
DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

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

PROJECT:
CREEKSIDE SOUTH AT LORSON RANCH AT LORSON DR
TRAPPE DR - HORTON DR
COLORADO SPRINGS, COLORADO

SANITARY / WATERMAIN
HORTON DRIVE
STA 22+00 TO 29+00



DATE:
MAY 12, 2020

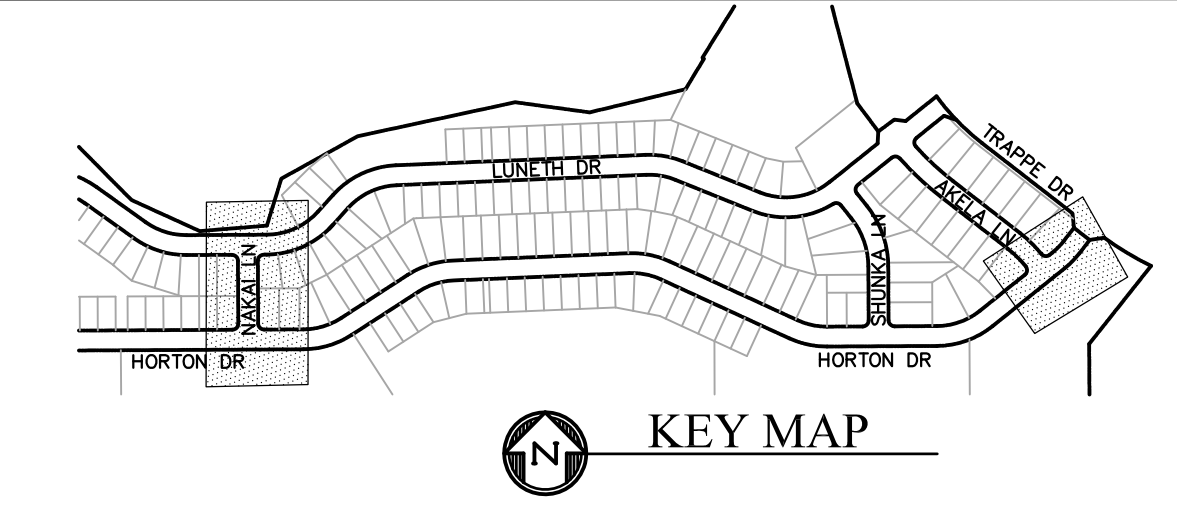
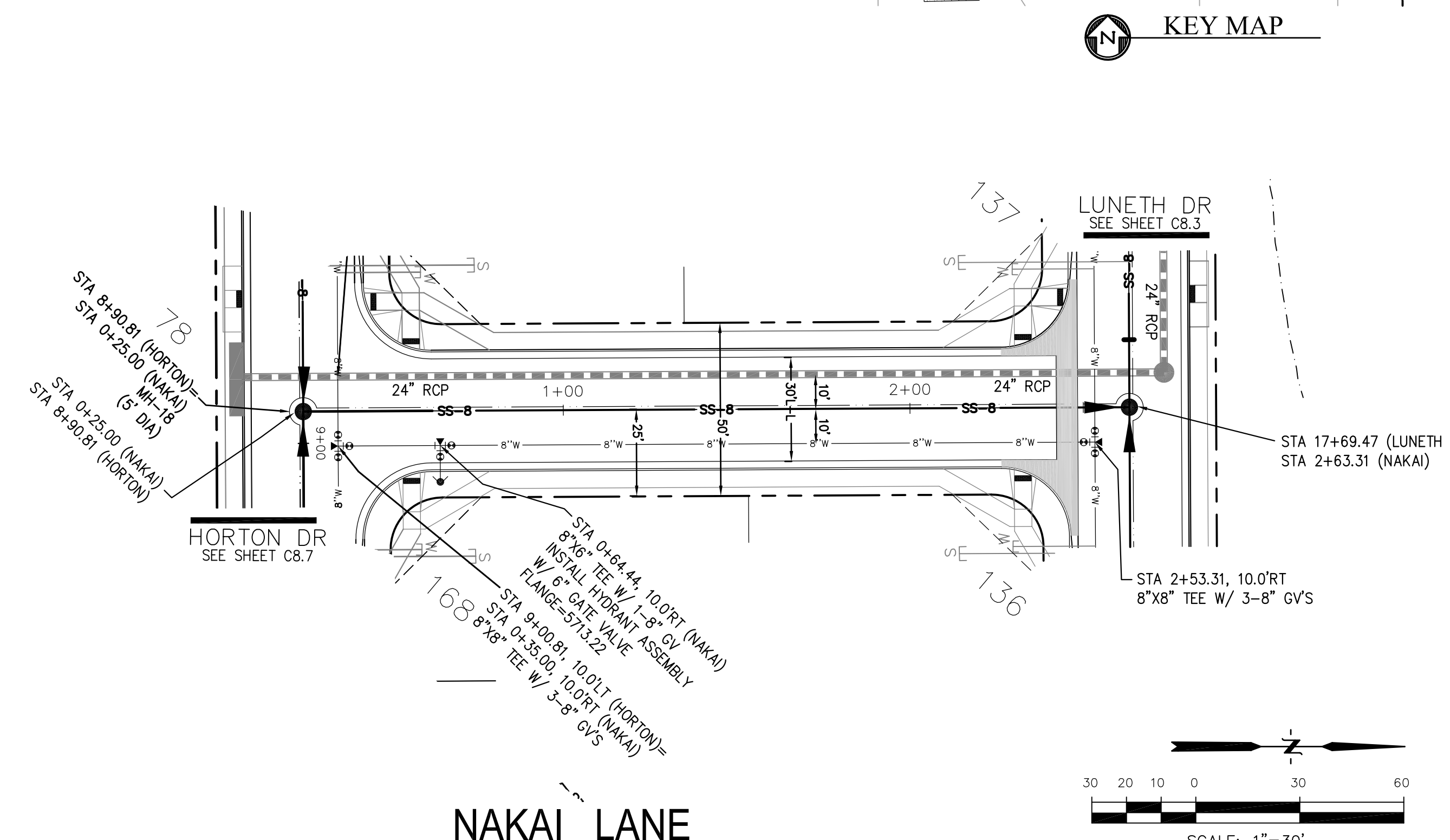
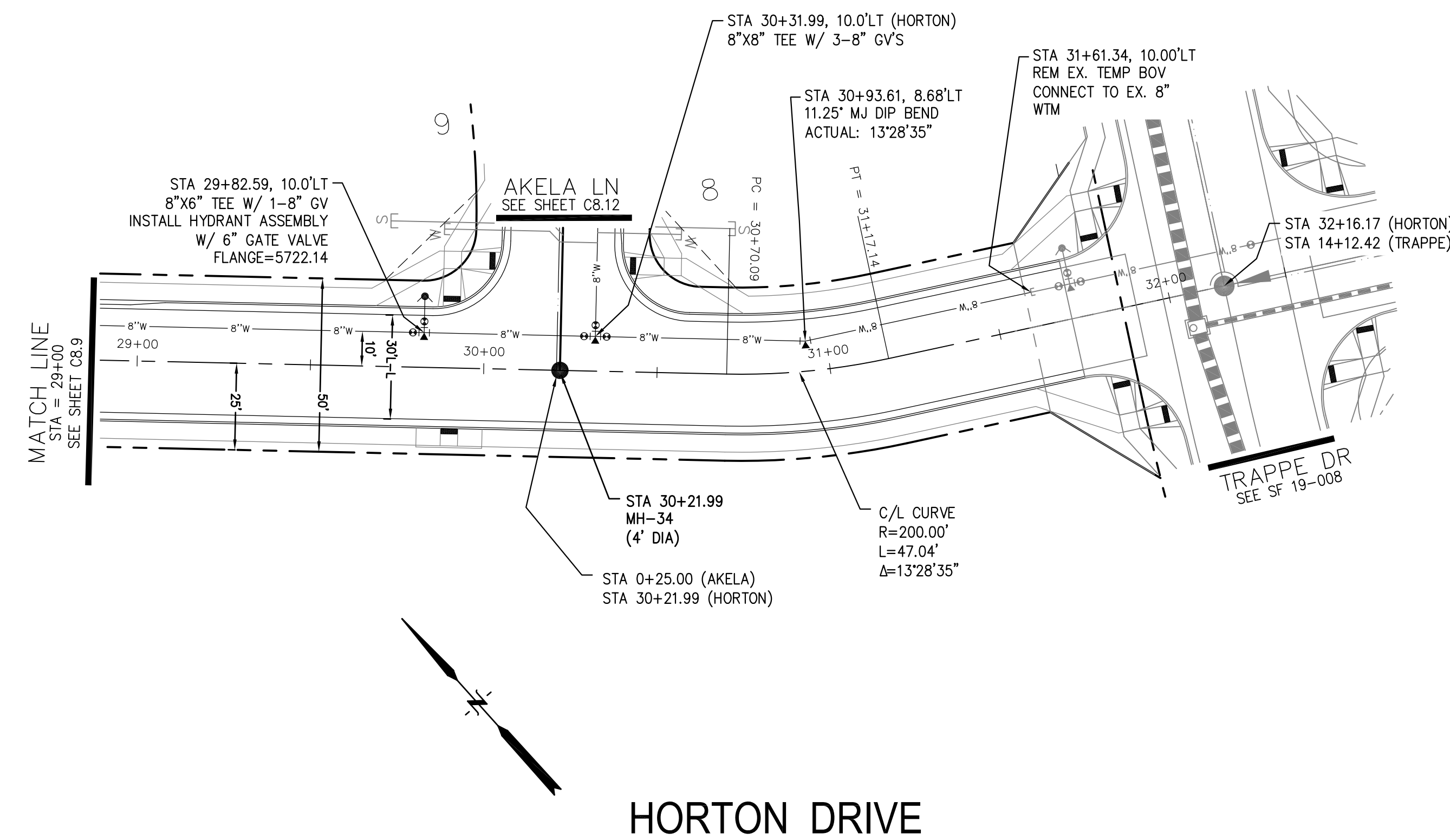
PROJECT NO.
100.051

SHEET NUMBER
C8.9

TOTAL SHEETS: 24

NOTES

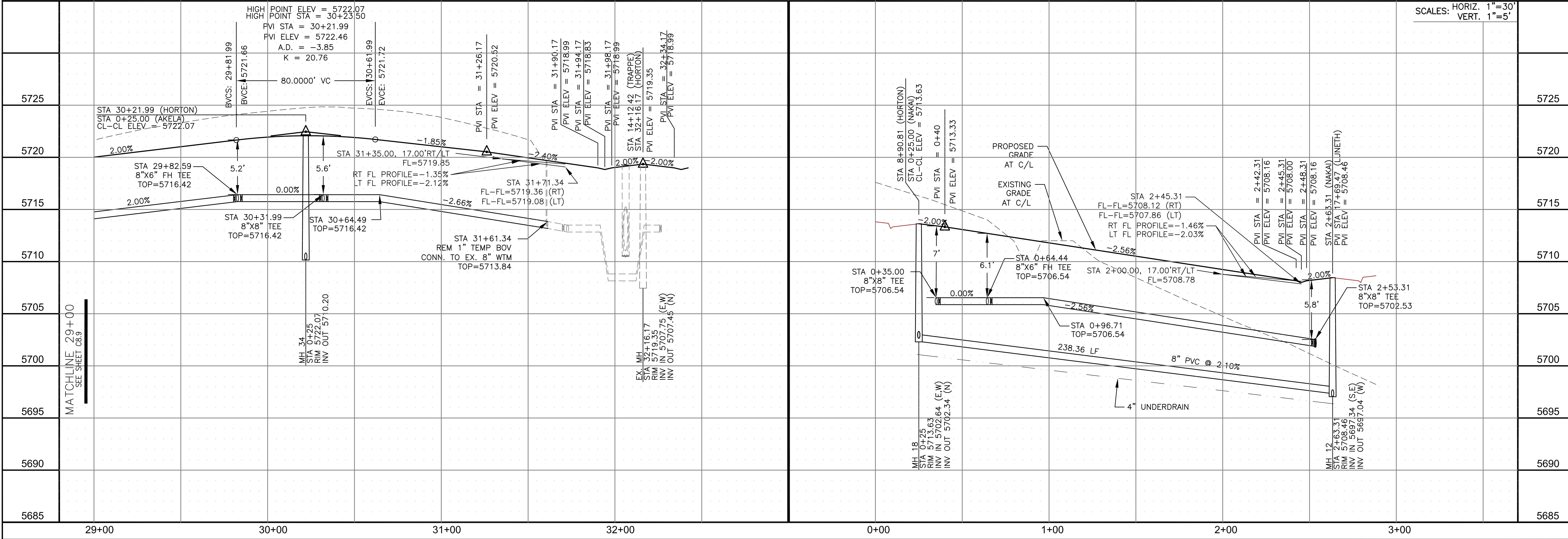
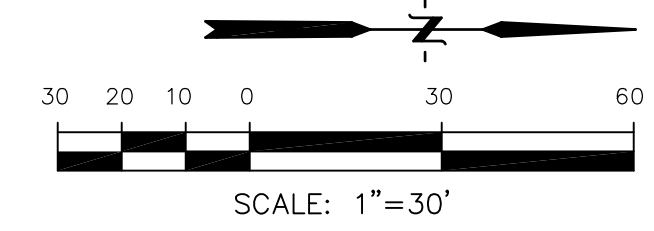
1. STATIONING IS AT ROADWAY CENTERLINE.
2. WATERMAIN ELEVATIONS ARE TO TOP UNLESS NOTED OTHERWISE
3. ALL 8" & 12" WATERMAIN IS PVC, C900.
4. ALL WATERMAIN FITTINGS ARE MJ DIP
5. ALL WATERMAIN BENDS & TEES REQUIRE CTRB'S



KEY MAP

HORTON DRIVE

NAKAI LANE



SCALES: HORIZ. 1"=30'
VERT. 1"=5'

CORE
ENGINEERING GROUP
15004 1ST AVENUE S.
BURNING WOODS, CO 80506
PHONE: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@cegi.com

DATE: _____
DESCRIPTION: _____
NO. _____
DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

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

PROJECT:
CREEKSIDE SOUTH
AT LORSON RANCH
TRAPPE DR - HORTON DR
COLORADO SPRINGS, COLORADO

SANITARY / WATERMAIN
HORTON DRIVE (STA 29+00 TO 32+17)
NAKAI LANE



DATE:
MAY 12, 2020

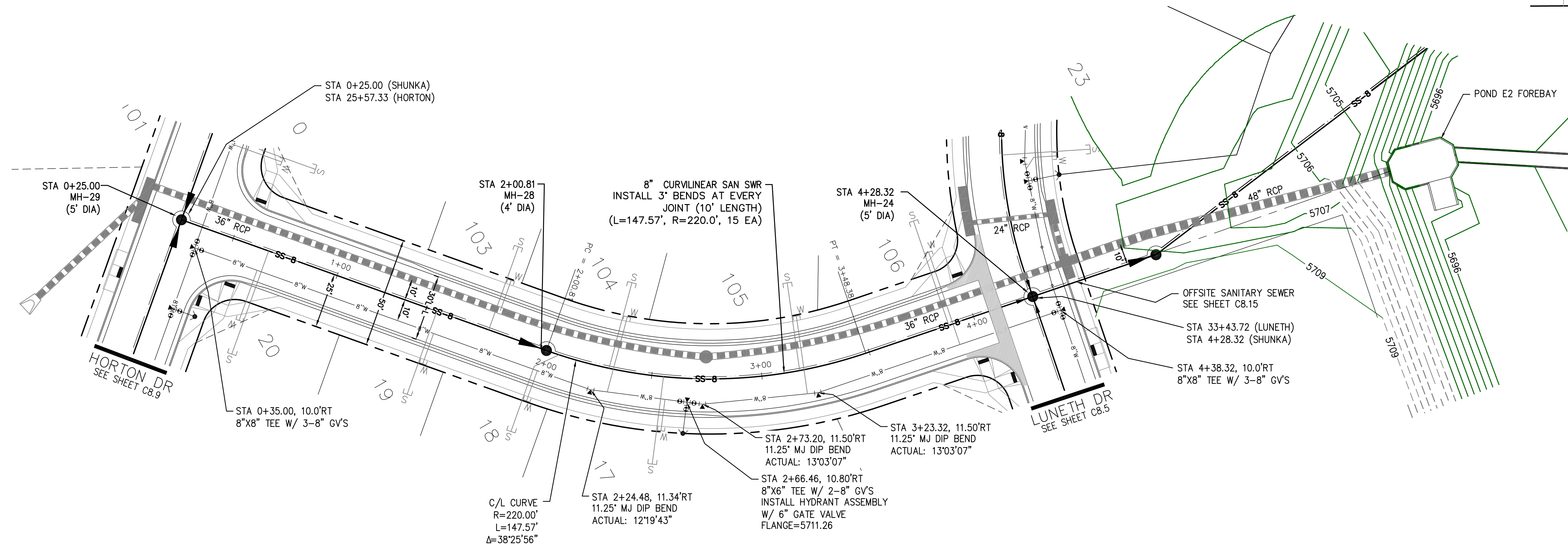
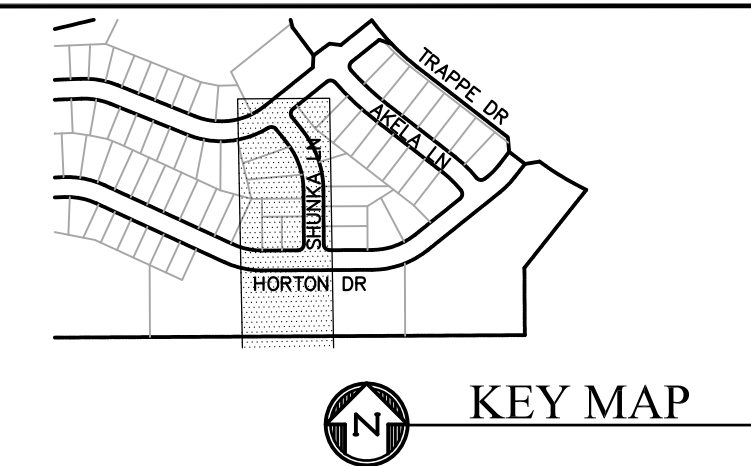
PROJECT NO.
100.051

SHEET NUMBER
C8.10

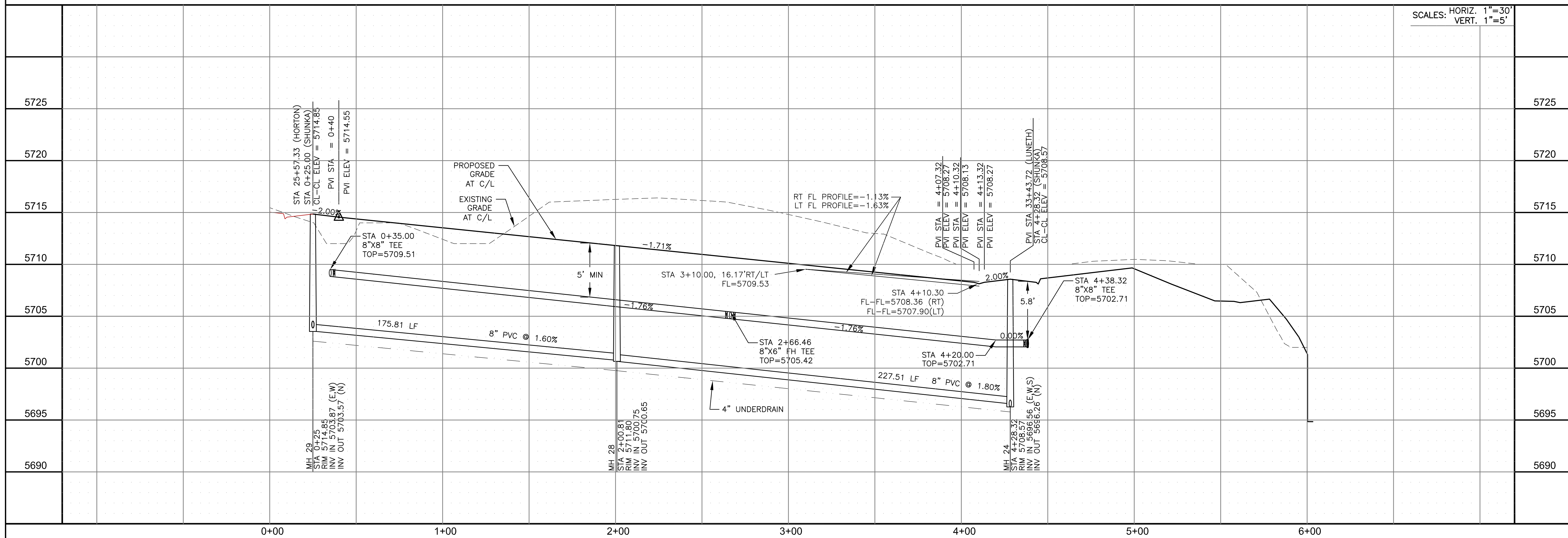
TOTAL SHEETS: 24

NOTES

1. STATIONING IS AT ROADWAY CENTERLINE.
2. WATERMAIN ELEVATIONS ARE TO TOP UNLESS NOTED OTHERWISE
3. ALL 8" & 12" WATERMAIN IS PVC, C900.
4. ALL WATERMAIN FITTINGS ARE MJ DIP
5. ALL WATERMAIN BENDS & TEES REQUIRE CTRB'S



SHUNKA LANE



SCALES: HORIZ. 1"=30'
VERT. 1"=5'

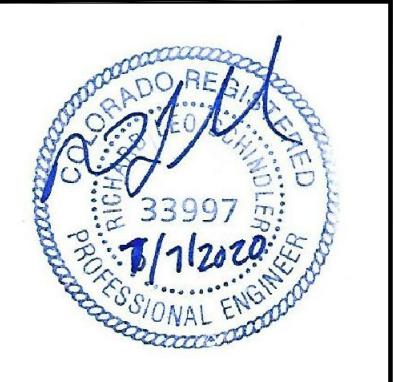
CORE ENGINEERING GROUP
15004 1ST AVENUE S.
DENVER, CO 80202
PHONE: 303.750.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@cegi.com

DATE: _____
DESCRIPTION: _____
NO: _____
DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

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

PROJECT:
CREEKSIDE SOUTH AT LORSON RANCH
AT LORSON RANCH
TRAPPE DR - HORTON DR
COLORADO SPRINGS, COLORADO

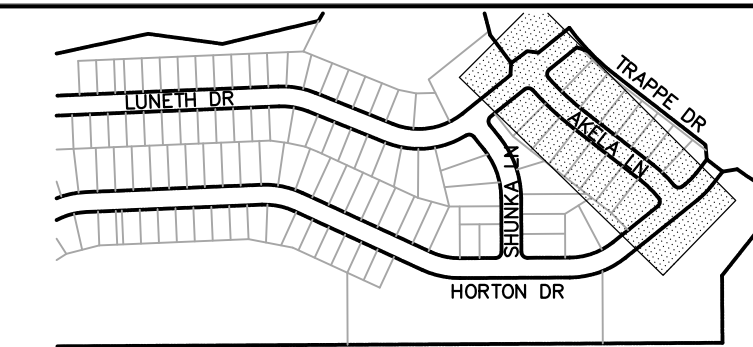
SANITARY / WATERMAIN
SHUNKA LANE
STA 0+00 TO 6+00.22



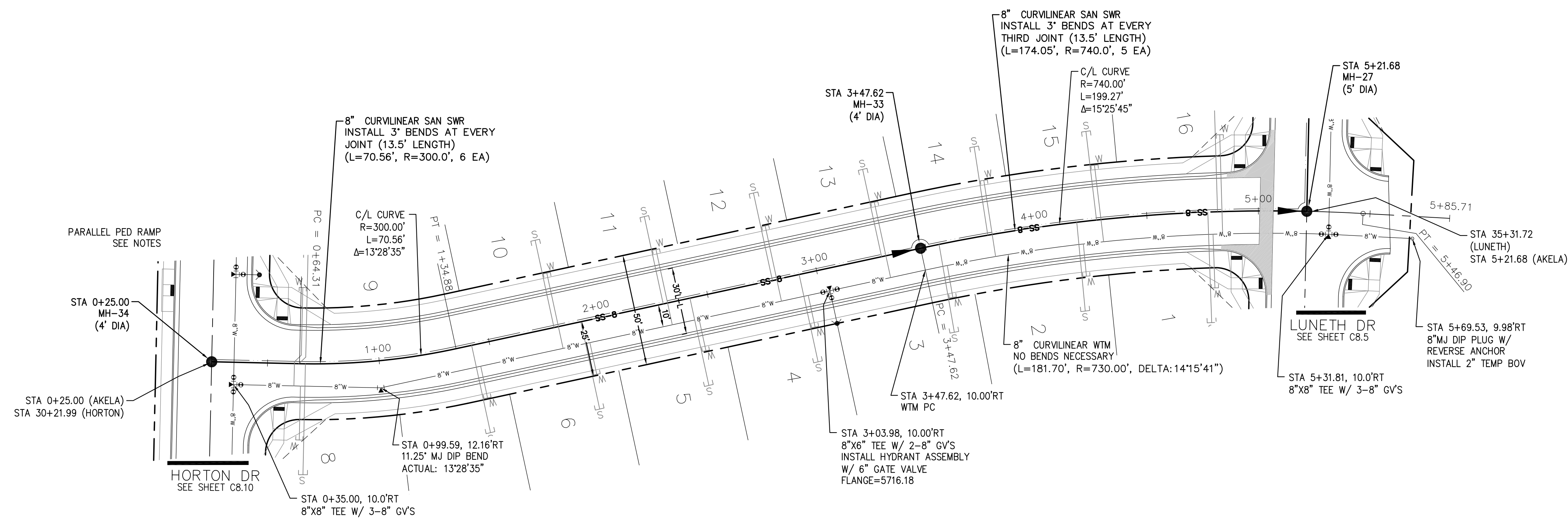
DATE: MAY 12, 2020
PROJECT NO. 100.051
SHEET NUMBER C8.11
TOTAL SHEETS: 24

NOTES

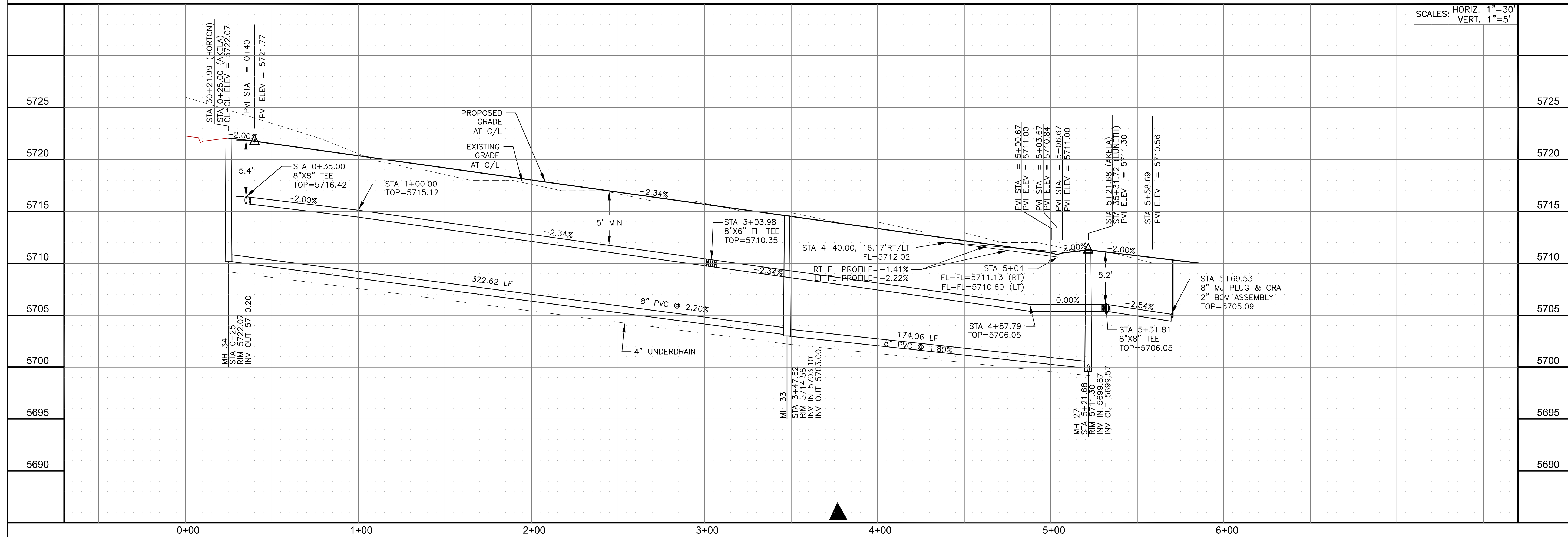
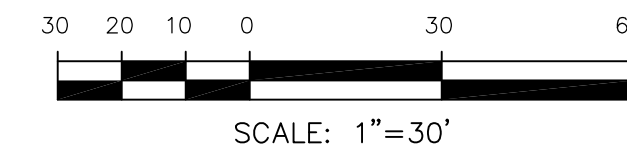
1. STATIONING IS AT ROADWAY CENTERLINE.
2. WATERMAIN ELEVATIONS ARE TO TOP UNLESS NOTED OTHERWISE.
3. ALL 8" & 12" WATERMAIN IS PVC, C900.
4. ALL WATERMAIN FITTINGS ARE MJ DIP.
5. ALL WATERMAIN BENDS & TEES REQUIRE CTRB'S



KEY MAP



AKELA LANE



SCALES: HORIZ. 1"=30'
VERT. 1"=5'

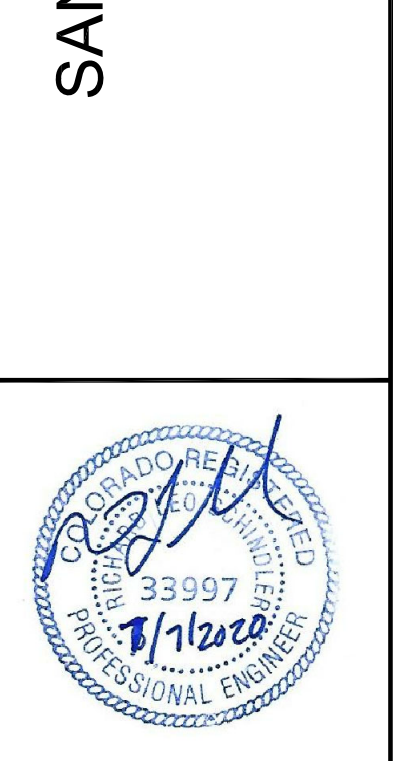
CORE ENGINEERING GROUP
15004 1ST AVENUE S.
DENVER, CO 80202
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@cegi.com

DATE: _____
DESCRIPTION: _____
NO. _____

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

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

SANITARY / WATERMAIN
AKELA LANE
STA 0+00 TO 5+60

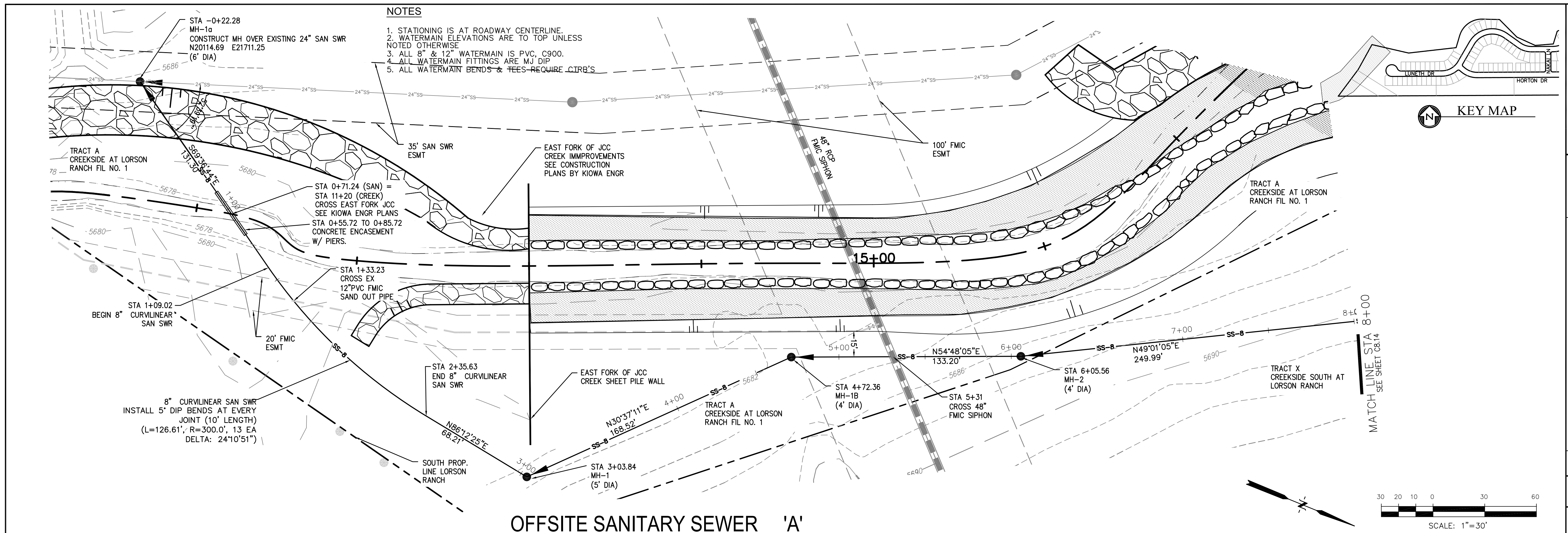


DATE: MAY 12, 2020

PROJECT NO. 100.051

SHEET NUMBER C8.12

TOTAL SHEETS: 24



CORE ENGINEERING GROUP
 15004 1ST AVENUE S.
 BURNING WOODS, CO 80906
 PH: 719.576.1100
 CONTACT: RICHARD L. SCHINDLER, P.E.
 EMAIL: Rich@cegi.com

DATE: _____

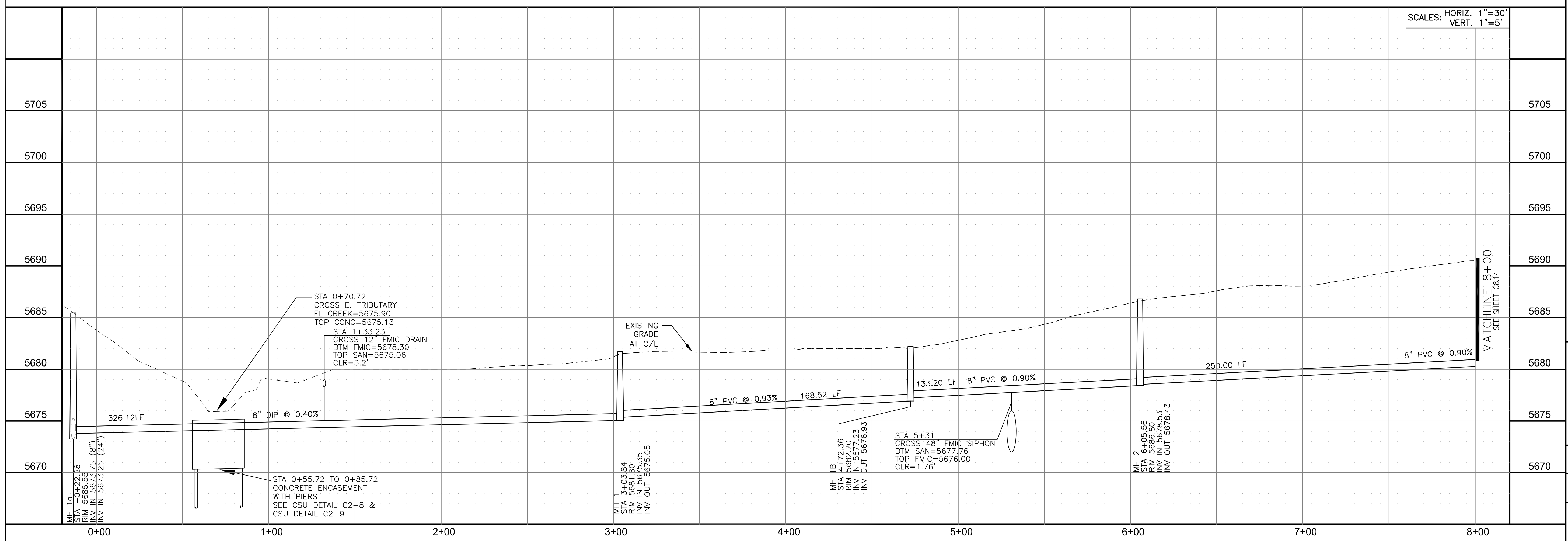
DESCRIPTION: _____

NO: _____

PROJECT: **CREEKSIDE SOUTH AT LORSON RANCH**
 212 N. WAHSATCH AVE., SUITE 301
 COLORADO SPRINGS, COLORADO 80903
 (719) 635-3200
 CONTACT: JEFF MARK

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

DRAWN: RLS
 DESIGNED: RLS
 CHECKED: RLS



COLORADO REGISTERED PROFESSIONAL ENGINEER
 33997
 1/12/20

DATE: **MAY 12, 2020**

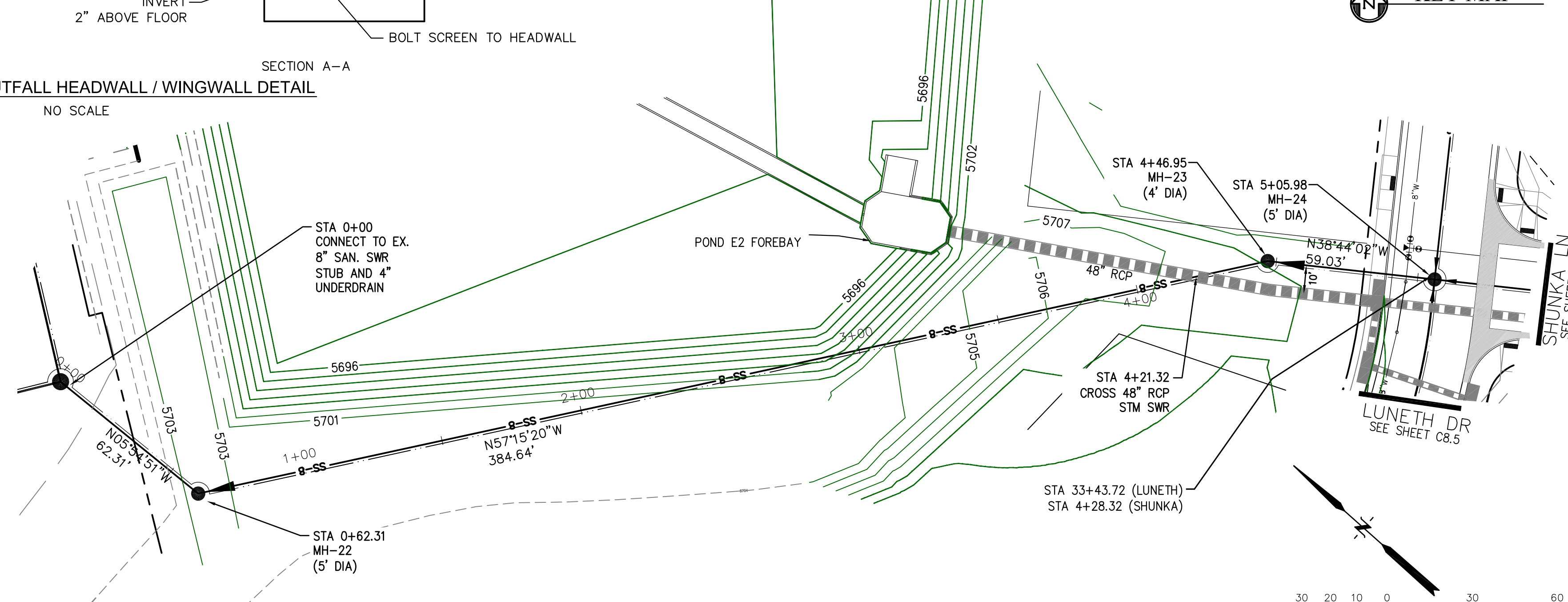
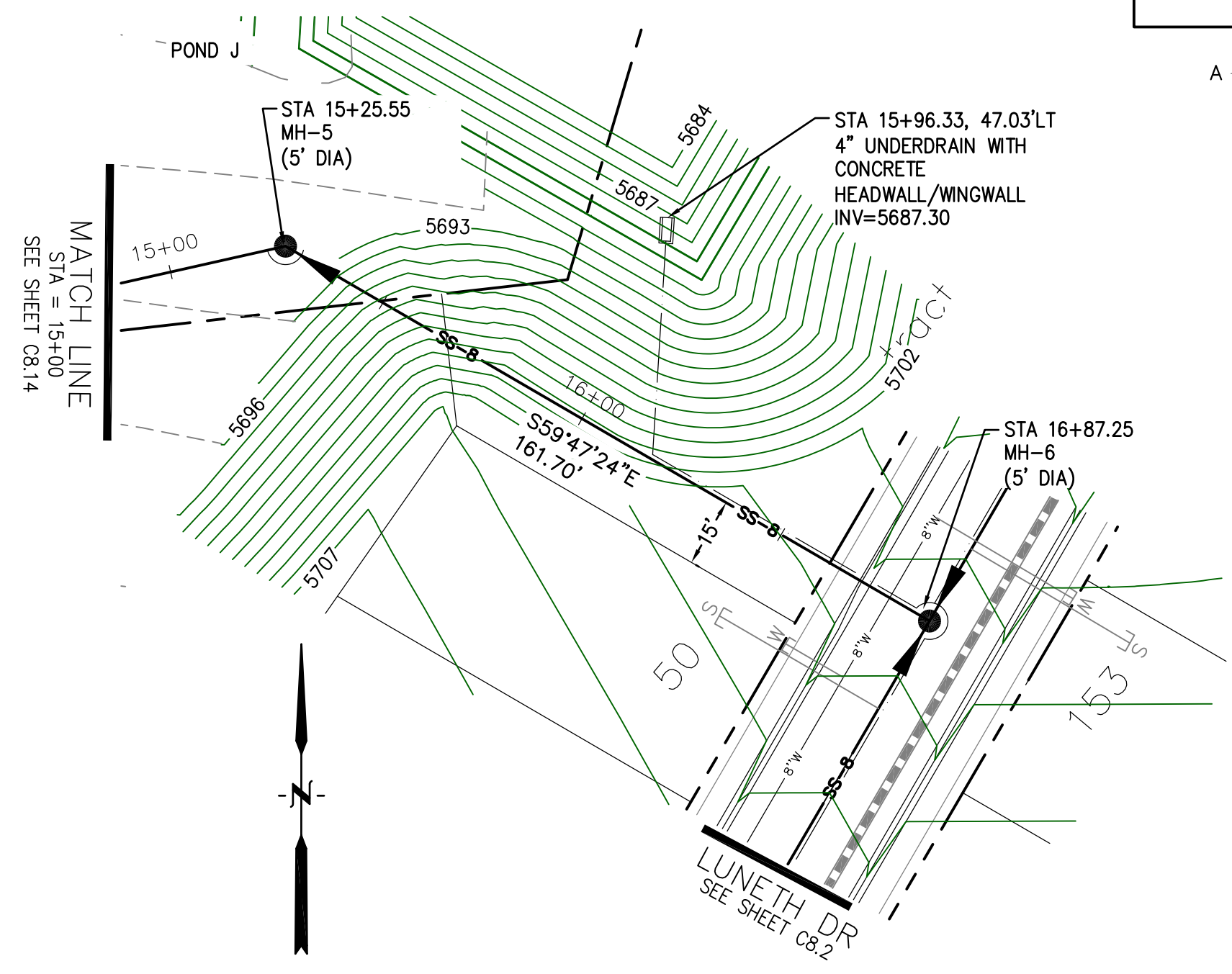
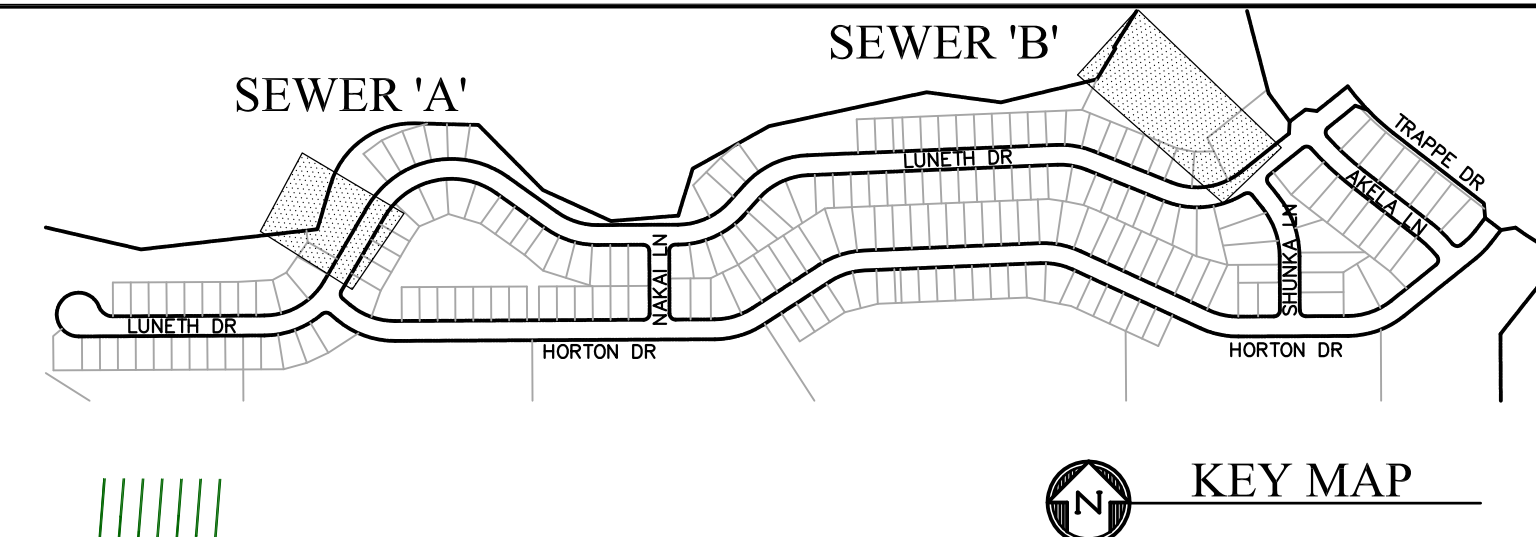
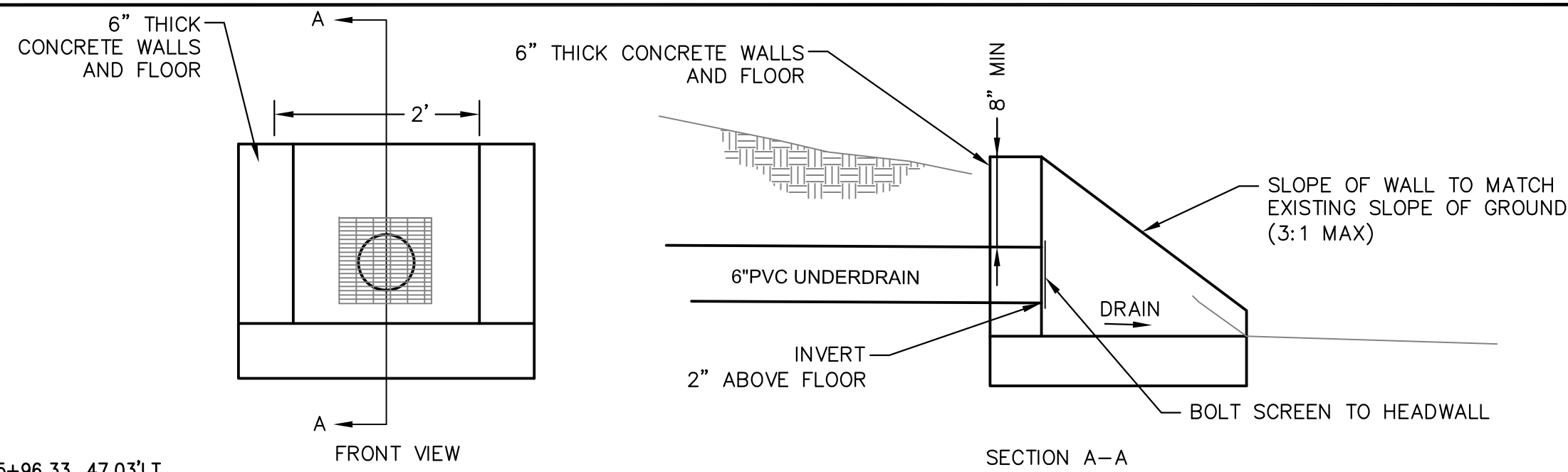
PROJECT NO: **100.051**

SHEET NUMBER: **C8.13**

TOTAL SHEETS: 24

NOTES

1. STATIONING IS AT ROADWAY CENTERLINE.
2. WATERMAIN ELEVATIONS ARE TO TOP UNLESS NOTED OTHERWISE.
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4. ALL WATERMAIN FITTINGS ARE MJ DIP.
5. ALL WATERMAIN BENDS & TEES REQUIRE CTRB'S.



OFFSITE SANITARY SEWER 'A'

OFFSITE SANITARY SEWER 'B'

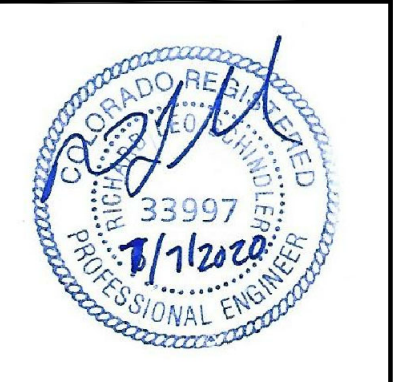
SCALES: HORIZ. 1"=30'		VERT. 1"=5'	
5710	5710	5720	
5705	5705	5715	5715
5700	5700	5710	5710
5695	5695	5705	5705
5690	5690	5700	5700
5685	5685	5695	5695
5680	5680	5690	5690
5675	5675	5685	5685

CORE
ENGINEERING GROUP
 15004 1ST AVENUE S.
 BLDG 790 570 1100
 COLORADO SPRINGS, CO 80903
 CONTACT: RICHARD L. SCHINDLER, P.E.
 EMAIL: Rich@cegi.com

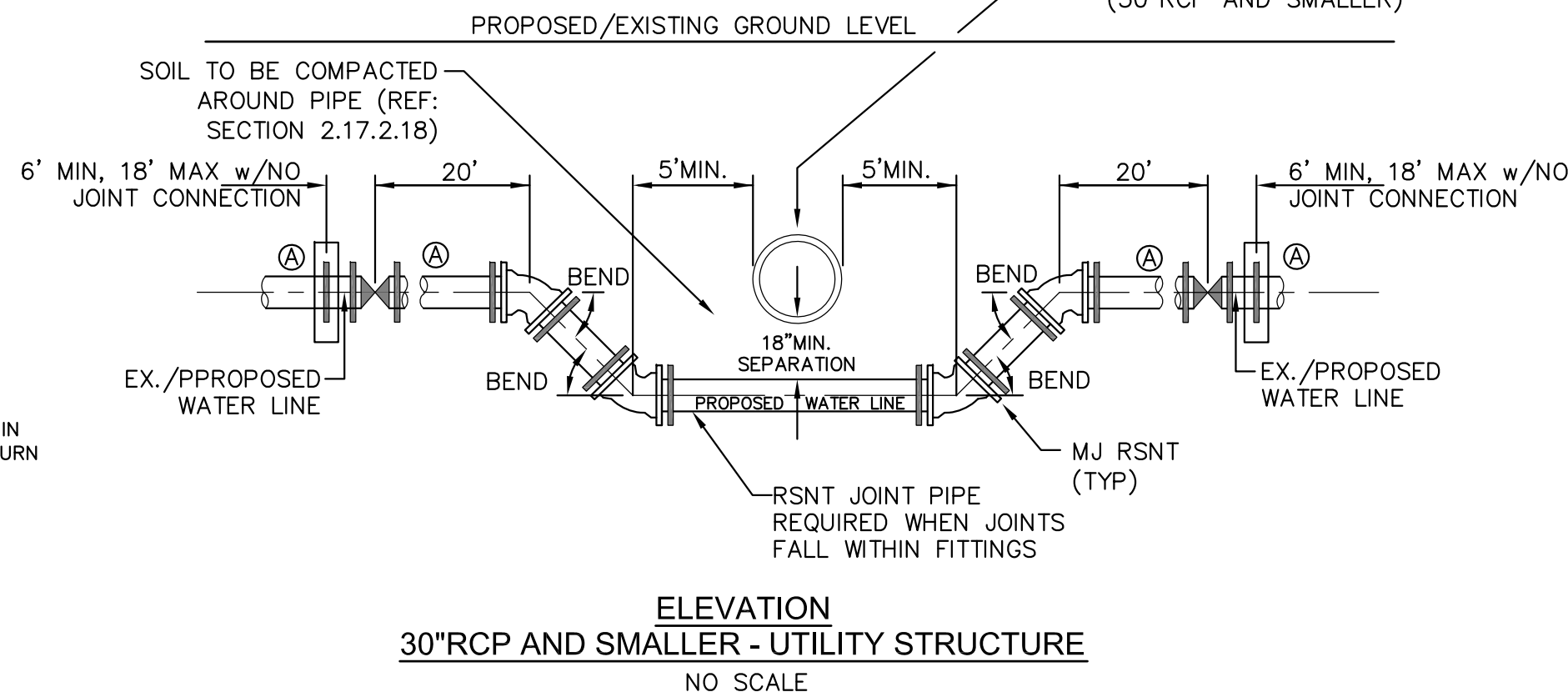
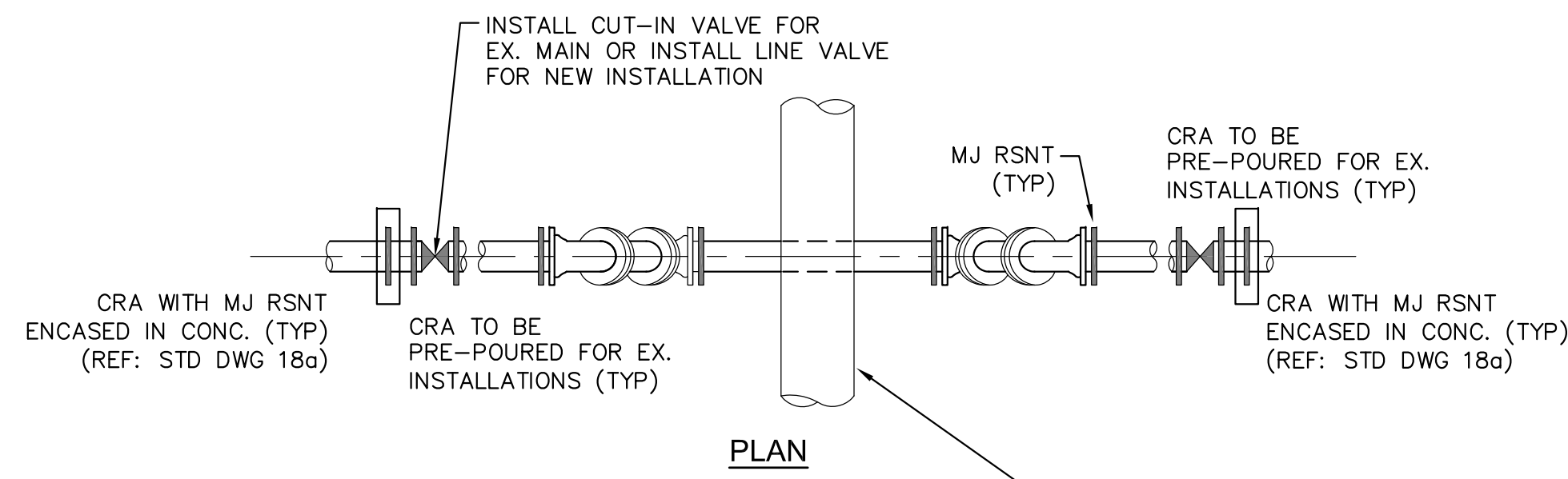
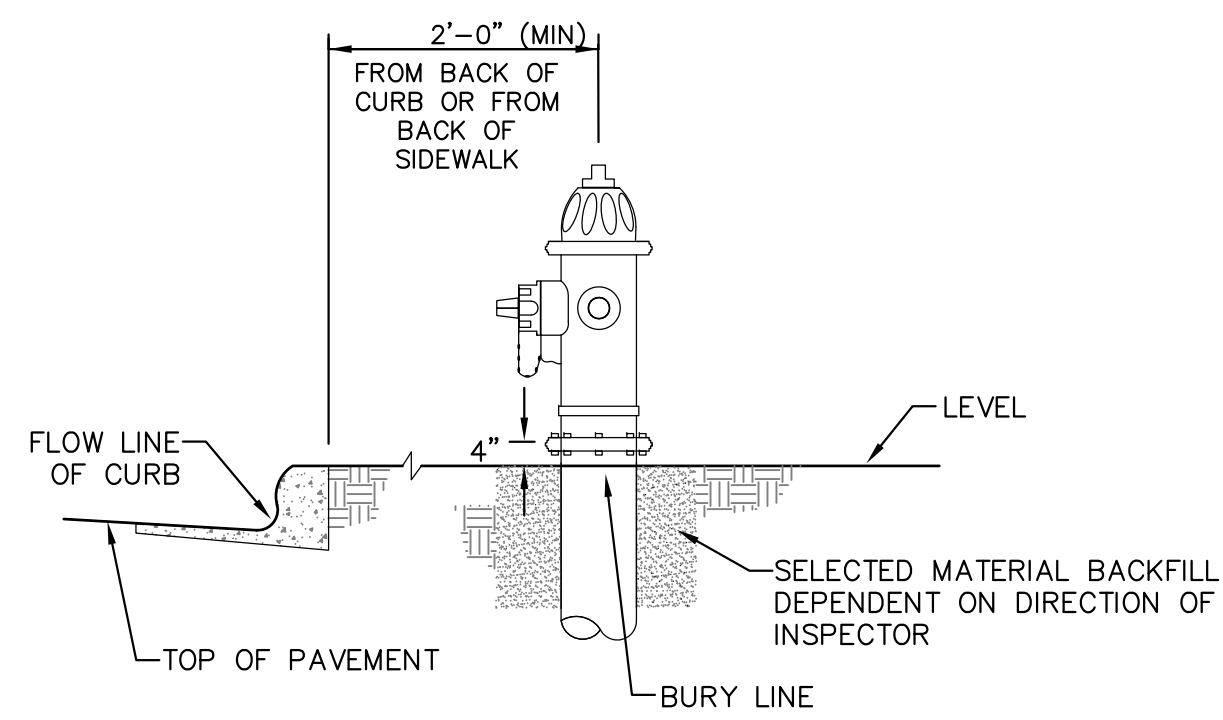
DATE: _____
 DESCRIPTION: _____
 NO. _____
 DRAWN: RLS
 DESIGNED: RLS
 CHECKED: RLS

PREPARED FOR:
LORSON, LLC
 212 N. WAHSATCH AVE, SUITE 301
 COLORADO SPRINGS, COLORADO 80903
 PROJECT:
CREEKSIDE SOUTH
AT LORSON RANCH
 TRAPPE DR - HORTON DR
 COLORADO SPRINGS, COLORADO
 CONTACT: JEFF MARK

SANITARY / WATERMAIN
 SANITARY SEWER 'A' (15+00 TO 16+87)
 AND SANITARY SEWER 'B'



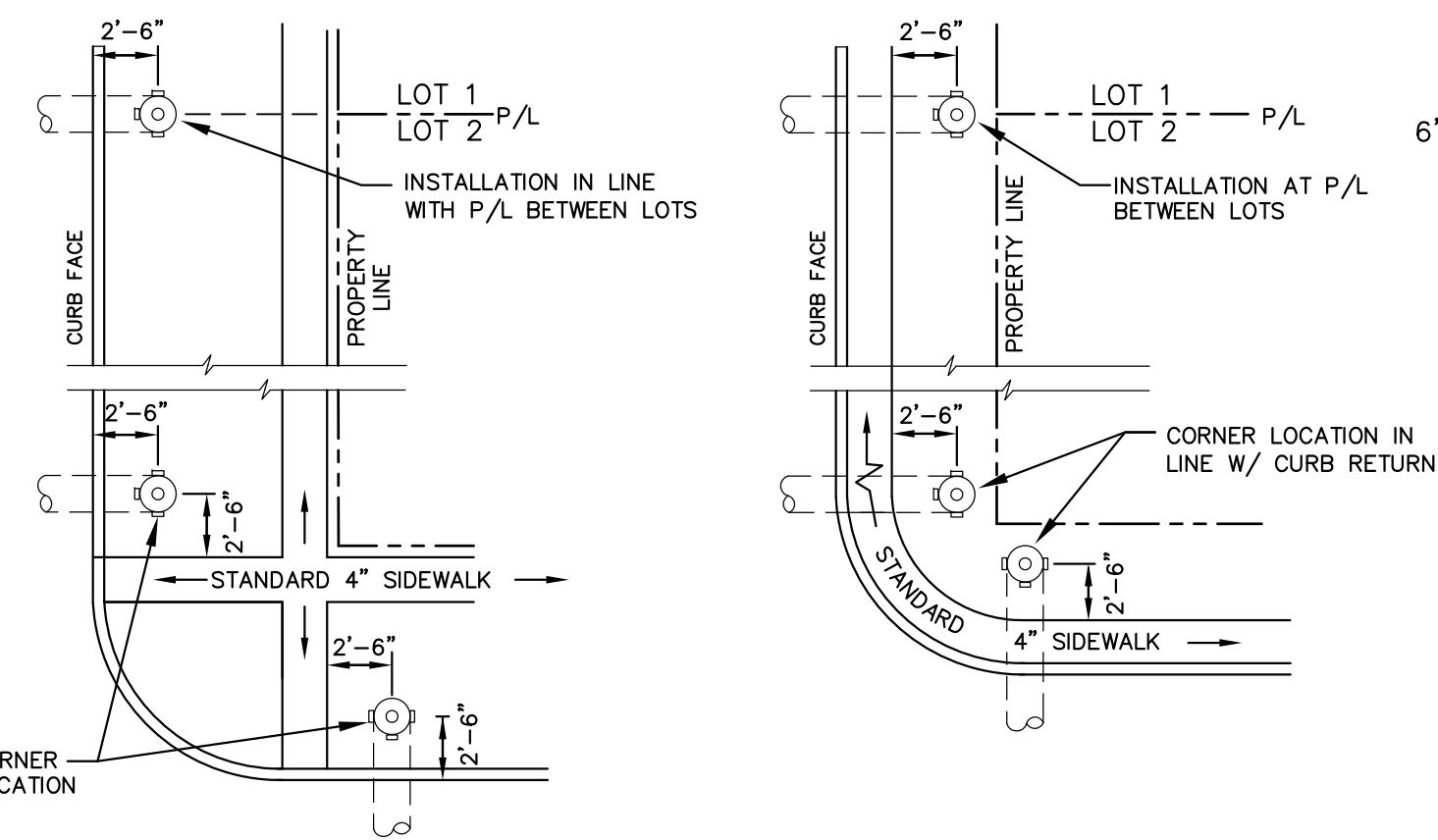
DATE:
 MAY 12, 2020
 PROJECT NO.
 100.051
 SHEET NUMBER
 C8.15
 TOTAL SHEETS: 24



GENERAL NOTES

- D.I.P. PIPE REQUIRED IN LOWERINGS (AT THE DISCRETION OF THE WRD/INSPECTOR PVC PIPE MAYBE APPROVED).
- Ⓐ LOWERINGS TO BE CATHODIC PROTECTED UNDER THE DIRECTION OF THE WRD INSPECTOR. (17 lb).
- ALL FITTINGS SHALL HAVE MJ RSNTS. SEE DRAWINGS NO. 27, 28 & SECTION 5.14 OF THE WRD SPECIFICATIONS.
- EXAMPLE CAN VARY DUE TO SITE CONDITIONS AND INSPECTOR'S DIRECTION'S.

LOWERING DETAIL WITH MJ RSNT FITTINGS AND RSNT JOINT PIPE (w/APPROVAL OF W.R.D.) (PER CSU STANDARD # 20a) NO SCALE



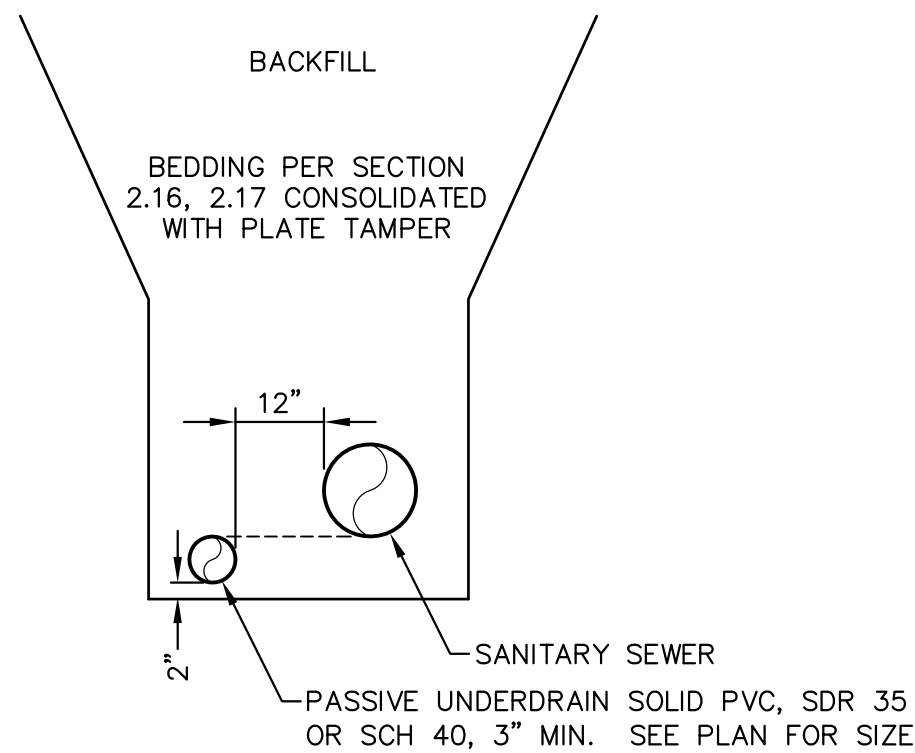
DETACHED SIDEWALK LOCATION NO SCALE

NOTE
ALL HYDRANTS SHALL BE GUARDIAN K-81D OR AVK SERIES 2700.

NOTES

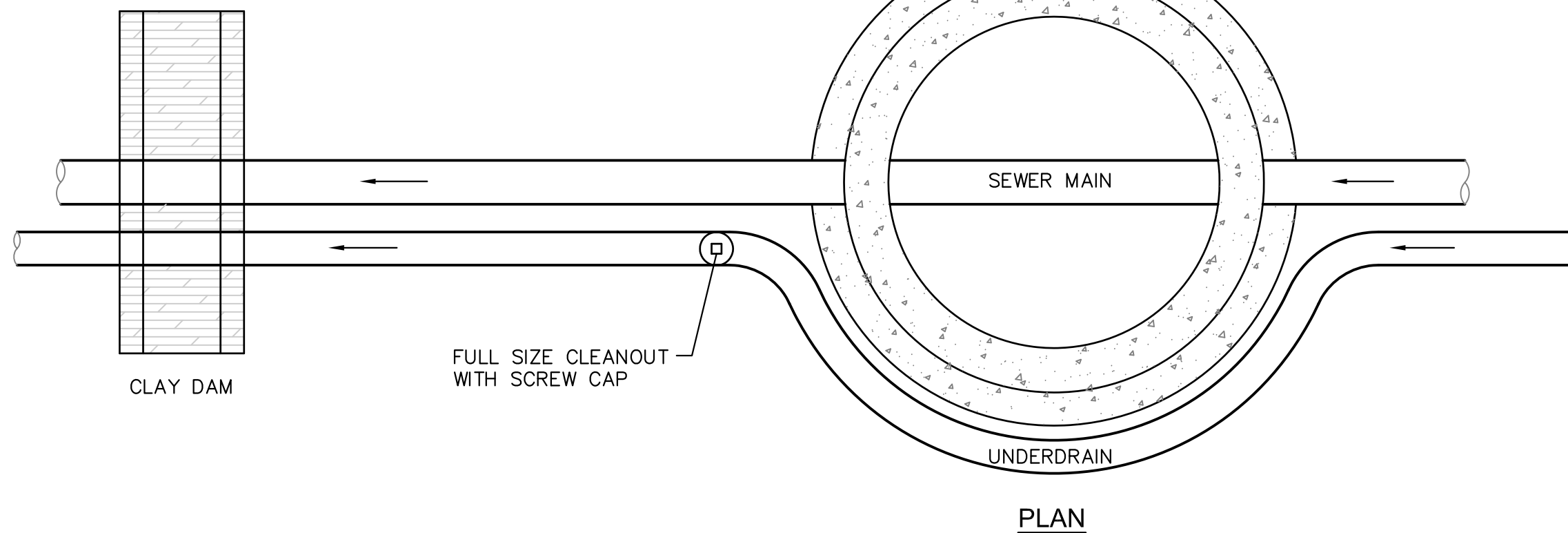
- HYDRANT NOZZLE SHALL BE POSITIONED AT RIGHT ANGLES TO CURB. IF NO CURB OR SIDEWALK EXIST, NOZZLE SHALL BE PLACED AT RIGHT ANGLE TO STREET OR ALLEY.
- HYDRANTS WILL BE PLACED A MINIMUM OF 5.0 FEET FROM ANY UTILITY OR DRAINAGE STRUCTURE (TO BE CO-ORDINATED WITH JOINT TRENCH INSTALLATION)
- ANY HYDRANT BEING INSTALLED WITH CONDITIONS OTHER THAN THOSE MENTIONED AND/OR DETAILED BELOW WILL REQUIRE SIGNED APPROVAL FROM SECURITY FIRE PROTECTION DISTRICT.

FIRE HYDRANT LOCATIONS NO SCALE

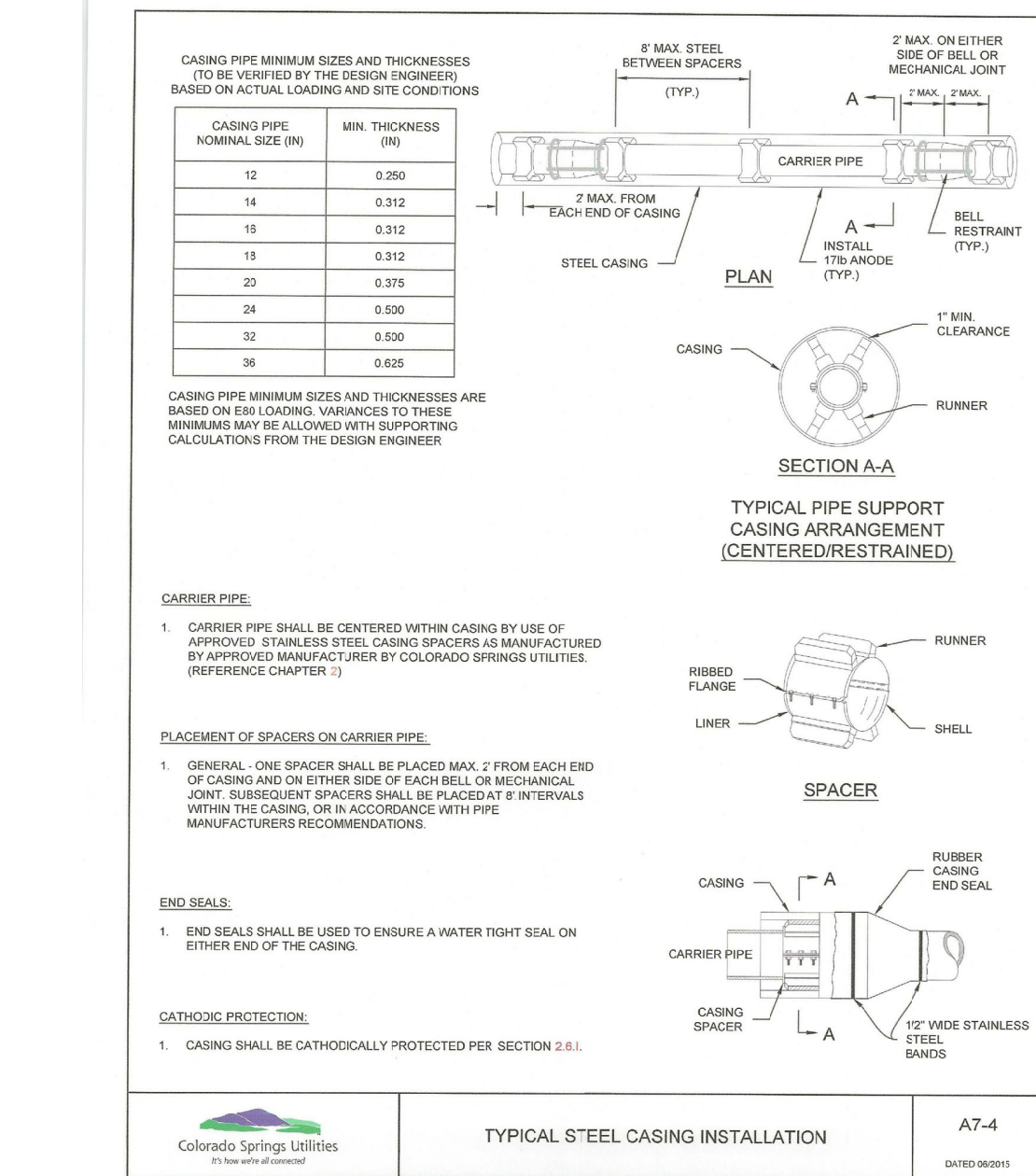


SANITARY SEWER PASSIVE UNDERDRAIN DETAIL (PER CSU STANDARD # WW-11A) NO SCALE

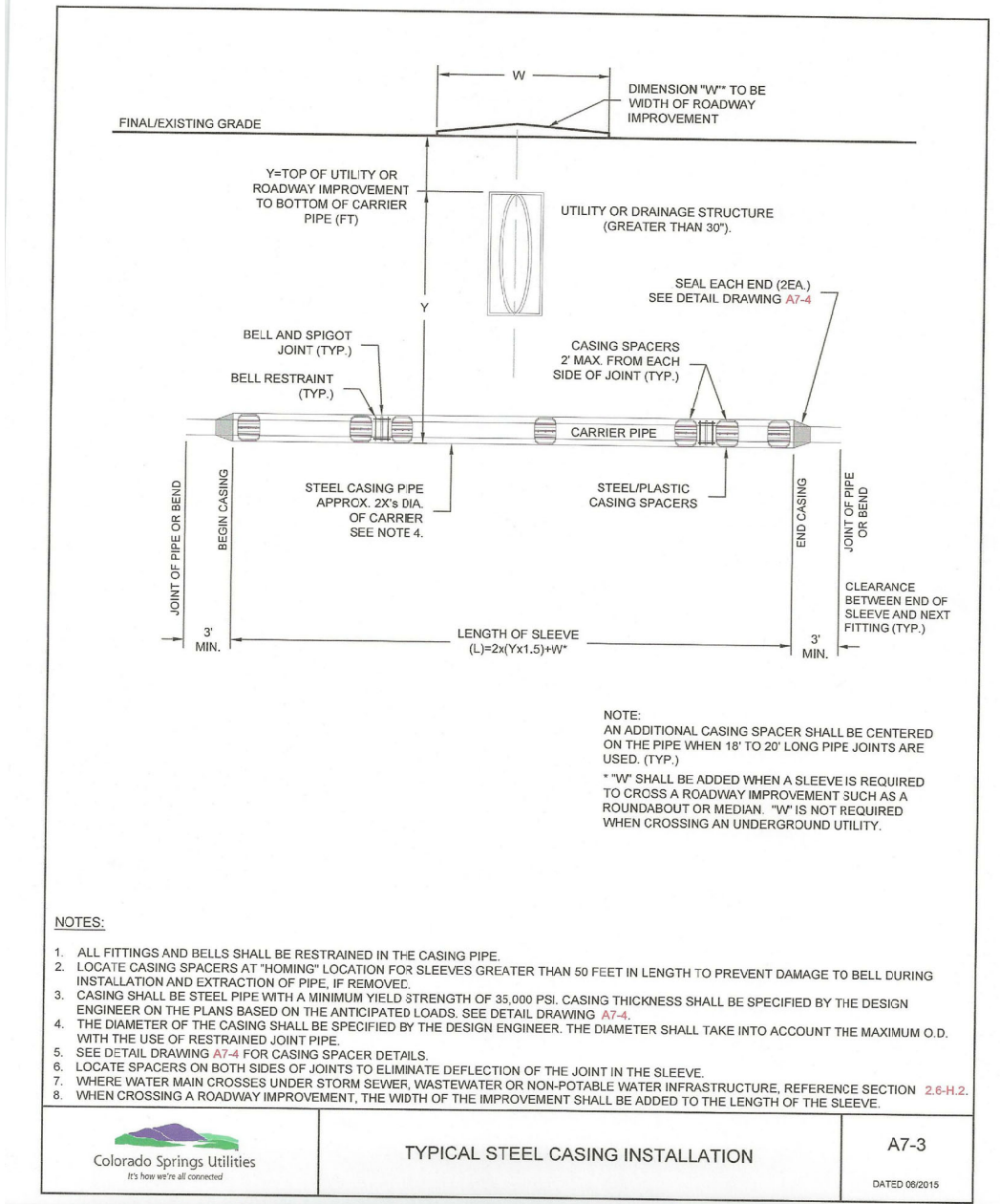
NOTE:
POINT OF DISCHARGE TO PUBLIC SYSTEM IS REQUIRED. UNDERDRAIN CONNECTIONS SHALL BE 3\"/>



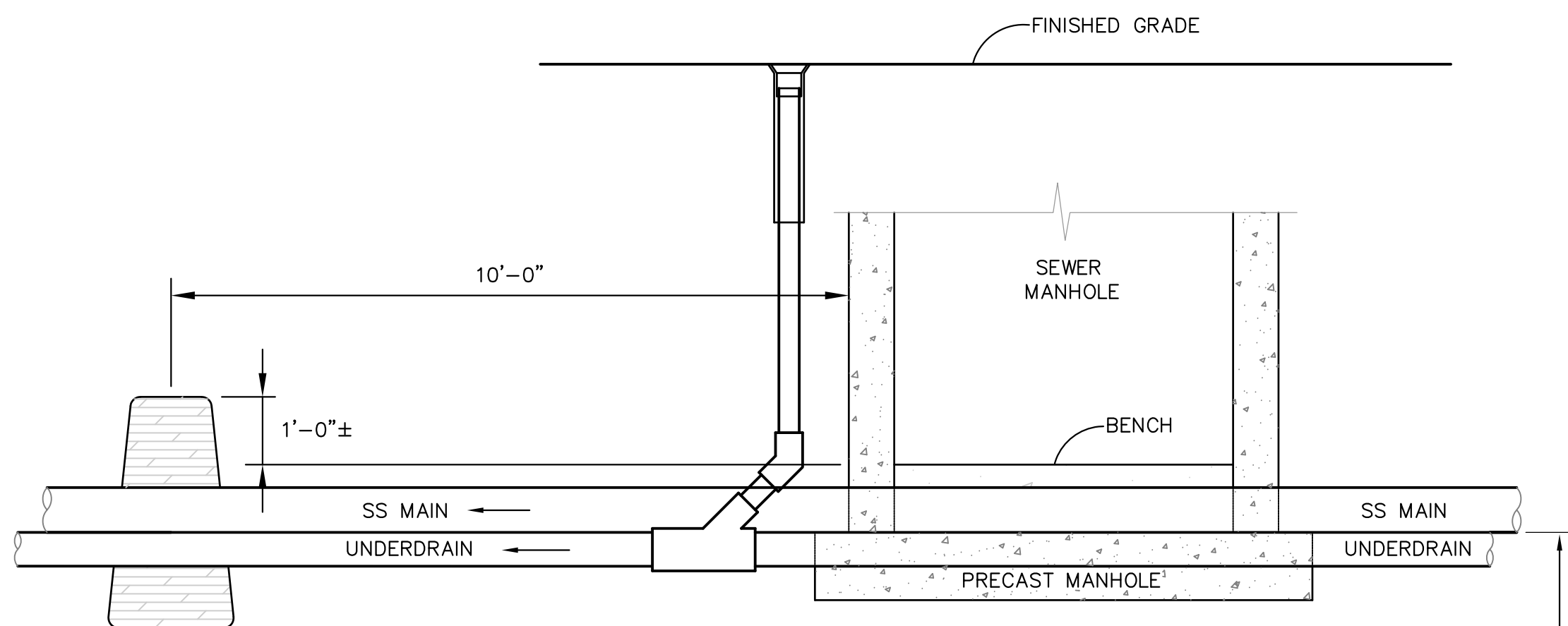
PLAN



TYPICAL STEEL CASING INSTALLATION A7-4



TYPICAL STEEL CASING INSTALLATION A7-3



SECTION

GROUNDWATER UNDERDRAIN CLEANOUT (PASSIVE) LOCATIONS OUTSIDE MANHOLE

(PER CSU STANDARD # WW-12) NO SCALE

TOP OF UNDERDRAIN EQUALS BOTTOM OF SEWER MAIN UNLESS NOTED OTHERWISE

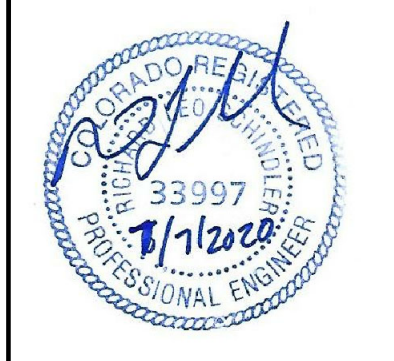
CORE ENGINEERING GROUP
15004 1ST AVENUE S.
BURNSVILLE, MN 55306
PH: 718.970.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: rich@cegi.com

DATE: _____
DESCRIPTION: _____
NO. _____

PREPARED FOR: **LORSON, LLC**
PROJECT: **CREEKSIDE SOUTH AT LORSON RANCH**
212 N. WAHSAATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
CONTACT: JEFF MARK

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

WATER/SEWER DETAILS



DATE: **MAY 12, 2020**

PROJECT NO. **100.051**

SHEET NUMBER **C12.1**

TOTAL SHEETS: **24**

GENERAL STRUCTURAL NOTES

1. APPLICABLE CODES:
 A. These general notes apply to all structural drawings. This project is designed in accordance with the International Building Code (IBC), 2015 Edition, and the Minimum Design Loads for Buildings and Other Structures (ASCE 1-10) and The Pikes Peak Regional Building Code, (2011 Edition).
 B. All material and workmanship shall be in accordance with applicable provisions of the codes specified above.

2. CONCRETE:
 A. Concrete has been designed and shall be constructed in accordance with the American Concrete Institute "Building Code Requirement Reinforced Concrete" and "Specifications for Structural Concrete for Buildings" (ACI 318 and ACI 308) latest editions, section 13 "Inspection of ACI 318 is deleted in its entirety see 'Field Observations' paragraph. All concrete shall be of stone aggregate, unless noted otherwise.
 B. **Concrete mixes:**
 See specifications for any additional durability requirements.
Mix 'A' For drilled piers:
 3500 psi minimum compressive strength at age of 28 days.
 Type I/II Cement, minimum of 564 pounds per cubic yard.
 Fly ash not allowed.
 3/4" maximum aggregate size.
 6" minimum - 8" maximum slump.
Mix 'B' For footings, grade beams, and miscellaneous concrete:
 4000 psi minimum compressive strength at age of 28 days.
 Type I/II Cement, minimum of 611 pounds per cubic yard.
 3/4" maximum aggregate size.
 6% ± Entrained air.
 4" (8" with superplasticizer) maximum slump.

C. Reinforcing is to be new billet steel ASTM A615, Grade-60, except ties and bars to be welded shall be Grade-40. Provide not less than (2) #5 around all sides of all openings in concrete and extend 2'-0" past edges of openings. No splices of reinforcement are permitted except as detailed or authorized by structural engineer. Where permitted, use contact lap splices, (36) bar diameters minimum. Welded Wire Fabric (WWF) shall be in accordance with ASTM A185. Lap (1) full mesh minimum at splices. No welding of reinforcement permitted unless detailed.
 D. **Placing of Reinforcement:** Provide chairs, bolsters, additional reinforcement, and accessories necessary to support reinforcement at position shown on drawings. Support of reinforcement on form ties, wood, brick, brickbat or other unacceptable material, will not be permitted.

E. Reinforcement shall be placed so that the following minimum concrete protection is provided, unless noted otherwise:
 1) Concrete surfaces poured against ground . . . 3" Clear
 2) Formed surfaces exposed to ground or weather:
 a) Bars #5 and larger . . . 2" Clear
 b) Bars #5 and smaller . . . 1 1/2" Clear
 3) Slabs . . . 1 1/2" Clear
 4) Concrete not exposed to earth or weather . . . 3/4"
 5) Beams, Columns, Ties, Stirrups or spirals around primary reinforcement, or primary reinforcement with no ties, stirrups or spirals . . . 1 1/2"

F. The contractor is responsible for determining when it is safe to remove forms and/or shoring. Forms and shoring must not be removed until the walls are strong enough to carry their own weight and any anticipated superimposed loads. For foundation walls, this typically requires at least 12 hours of cumulative curing time at a temperature of 50°F or more. Concrete must be adequately covered during cold periods to maintain this surface temperature. Due to varying weather conditions, alternative curing processes, and the use of Type I/II cement, Rocky Mountain Group suggests forms remain in place a minimum of 3 days to assure this performance specification has been met. When forms are stripped there must be no excessive deflection or distortion or discoloration and no evidence of damage to the concrete. Adequate thermal protection of the concrete shall be continued after stripping for a cumulative period of 48 hours at 50°F, or more, after the initial pour. See applicable notes for specifications on when to backfill foundation walls.

3. DRILLED PIER FOUNDATIONS:
 A. The foundation design has been completed in accordance with pertinent standards, recommended design soil parameters, accepted engineering design procedures, and is based on the best information available at the time of completion. The design is intended to minimize differential movement as described in the reference Geotechnical Report. It must be recognized that foundation components will undergo movement. It shall be the responsibility of the contractor and/or present owner to inform any subsequent owners of the soil condition and advised to maintain good practices in the future with regard to surface and subsurface drainage, framing of partitions above floor slabs, and finish work above the floor slabs, etc.
 B. Foundation design is based on soil report No. 117822 prepared by RMG Engineers dated 4-29-20. The Contractor shall thoroughly review and understand all pertinent construction aspects of this report before beginning any work.

C. The structure is to be founded on concrete grade beams bearing on drilled piers. Design of drilled piers is based on the following criteria:
 Maximum allowable end bearing pressure . . . 24,000 psf
 Maximum allowable side shear . . . 3,200 psf
 (For the portion of the pier in bedrock and at least 7'-7 1/2" below bottom of grade beam)
 Maximum penetration into bedrock . . . 8'-0"
 Minimum total length . . . 30'-0"
 Minimum spacing . . . 3 PIER DIA.

D. The maximum variation of the center of any drilled pier at its top from the required location shall not be more than 5% of its diameter, and no pier shall be out of plumb more than 1% of its overall length.
 E. A representative of the Geotechnical engineer shall provide full time observation of the drilling operation and reinforcement / concrete placement to verify that the soil type and conditions are consistent with design criteria of the soil report. If the soil properties are found to be different from this criteria, the foundation engineer shall be promptly notified so that the foundation design may be reviewed.
 F. The bottom of all piers shall be thoroughly cleaned and dewatered prior to concrete placement.
 G. Continuous horizontal bars and corner bars in grade beams supported on piers shall be spliced only where necessary for purposes of handling and bar length. Bar splices shall be placed in accordance with the following requirements:

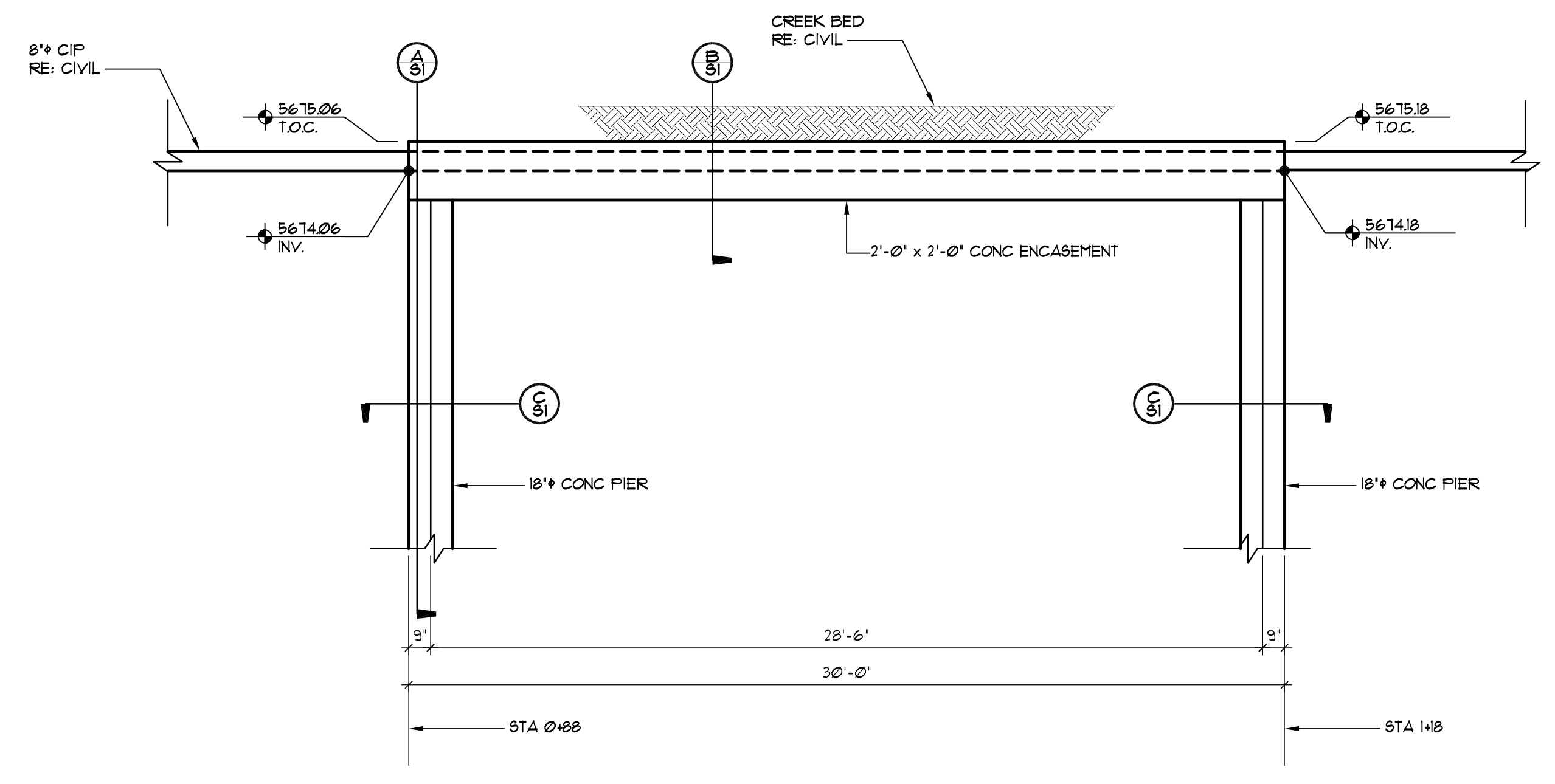
Bar Location	Splice Location	Minimum Lap
Bottom bars	at support	(36) bar diameters
Top bars	at mid-span	(42) bar diameters
Corner top bars	at corner	(42) bar diameters
Other bars	staggered	(36) bar diameters

4. FIELD OBSERVATIONS:
 A. The Contractor shall inform the Engineer of Record at least 24 hours prior to casting any concrete so as to allow the Engineer of Record the opportunity to review the placement of reinforcement and/or embedded items. Contact Rocky Mountain Group: (719) 548-0600.

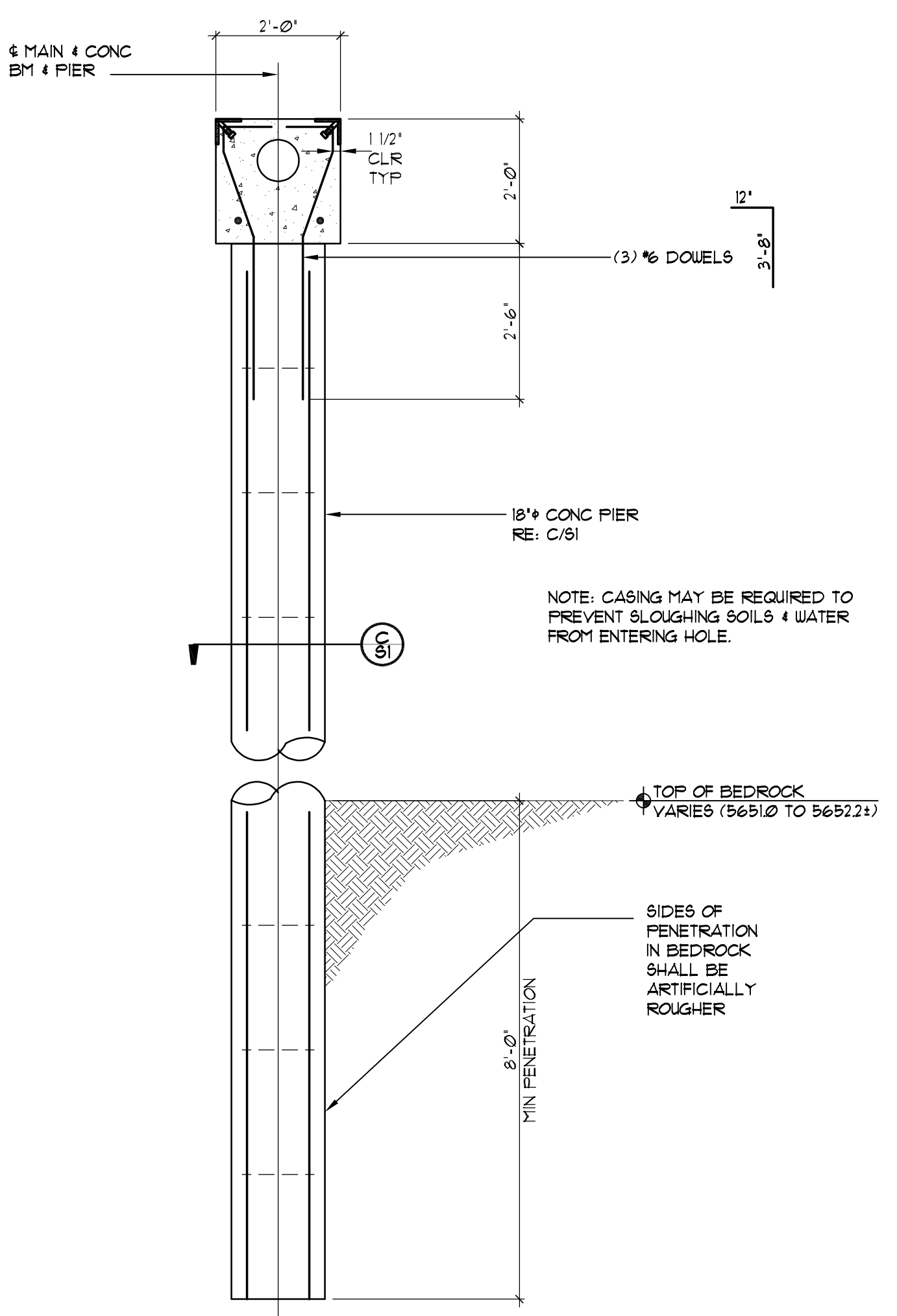
REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION (IBC 2015 SPECIAL INSPECTIONS)				
VERIFICATION AND INSPECTION (a)	CONTINUOUS	PERIODIC	REFERENCED STANDARD	IBC REFERENCE
1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT		X	ACI 318: Ch. 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4
2. REINFORCING BAR WELDING: a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A106 b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 1/8", AND c. INSPECT ALL OTHER WELDS.	X	X	AWS D14, ACI 318: 26.6.4	
3. INSPECT ANCHORS CAST IN CONCRETE		X	ACI 318: 17.8.2	
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS (b) a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS. b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a	X	X	ACI 318: 17.8.2.4 ACI 318: 17.8.2	
5. VERIFY USE OF REQUIRED DESIGN MIX.		X	ACI 318: Ch. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.1, 1908.3
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS PERFORM SLUMP AND AIR CONTENT TEST, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X		ASTM C173, ASTM C31 ACI 318: 26.4, 26.12	1908.10
7. INSPECT CONCRETE AND SHORCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X		ACI 318: 26.5	1908.6, 1908.1, 1908.8
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.		X	ACI 318: 26.5.3-26.5.5	1908.9
9. INSPECT PRESTRESSED CONCRETE FOR: a. APPLICATION OF PRESTRESSING FORCES AND b. GROUTING OF BONDED PRESTRESSING TENDONS	X	X	ACI 318: 26.10	
10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.		X	ACI 318: Ch. 26.8	
11. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.		X	ACI 318: 26.11.2	
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED		X	ACI 318: 26.11.2 (b)	

KEYNOTES:
 a. THE ITEMS LISTED IN THIS SCHEDULE ARE PER THE 2015 IBC. ALL ITEMS LISTED MAY NOT APPLY AND SHALL BE ADDRESSED AS APPLICABLE TO THE SPECIFIC PROJECT.
 b. SPECIFIC REQUIREMENTS FOR SPECIAL INSPECTION SHALL BE INCLUDED IN THE RESEARCH REPORT FOR THE ANCHOR ISSUED BY AN APPROVED SOURCE IN ACCORDANCE WITH 17.8.2 IN ACI 318, OR OTHER QUALIFICATION PROCEDURES WHERE SPECIFIC REQUIREMENTS ARE NOT PROVIDED. SPECIAL INSPECTION REQUIREMENTS SHALL BE SPECIFIED BY THE REGISTERED DESIGN PROFESSIONAL AND SHALL BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO THE COMMENCEMENT OF THE WORK.

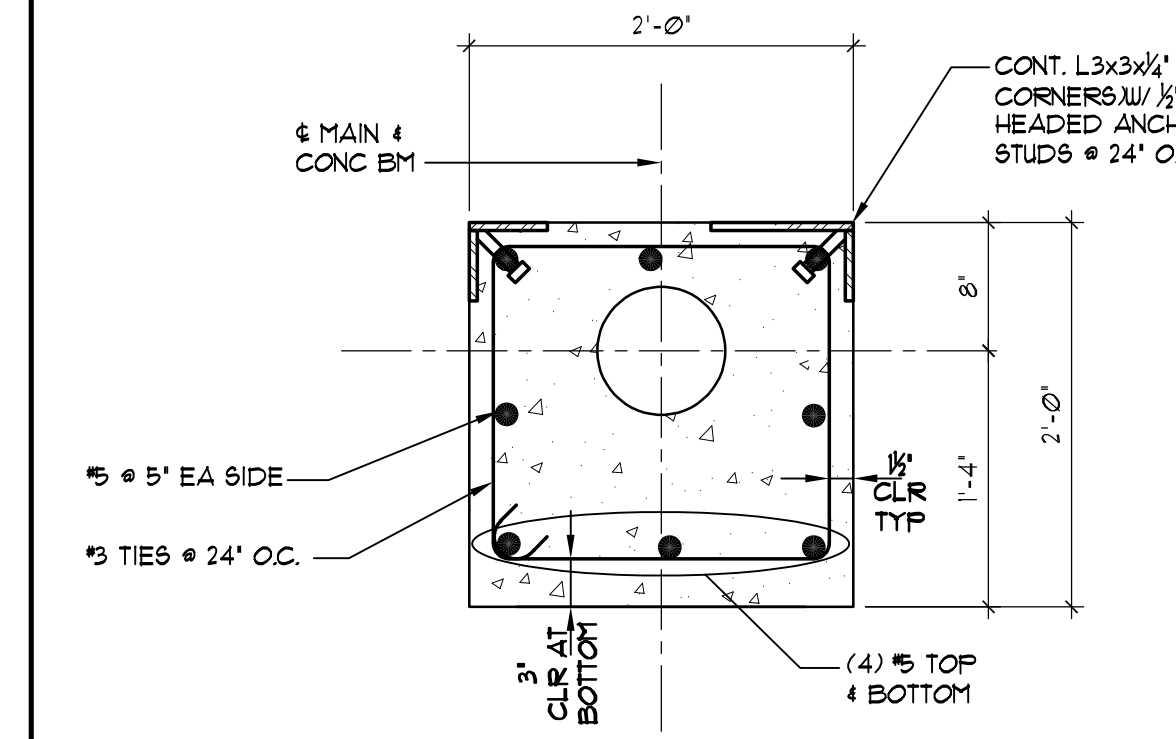
REQUIRED VERIFICATION AND INSPECTION OF SOILS (IBC 2015 SPECIAL INSPECTIONS)		
VERIFICATION AND INSPECTION	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY		X
2. VERIFY EXCAVATIONS ARE EXTENDED TO THE PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		X
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS		X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	X	
5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY		X



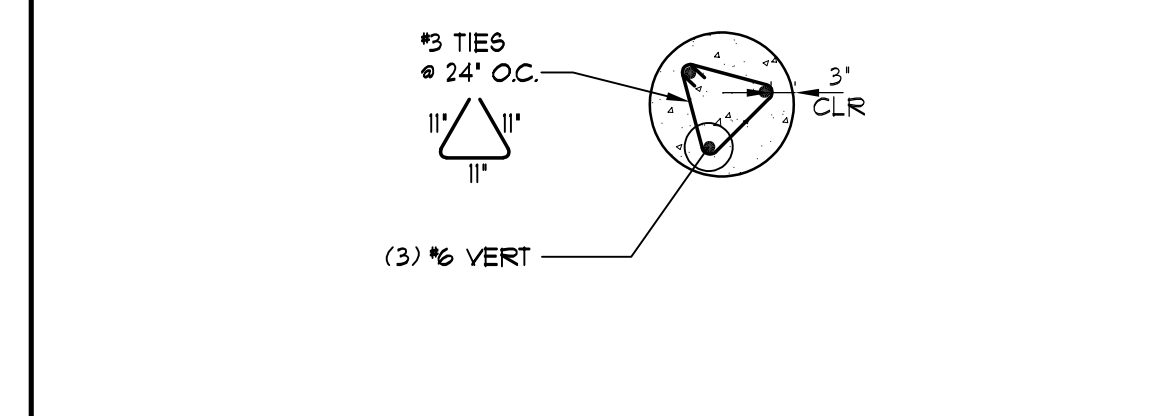
1 STREAM CROSSING ELEVATION
 S1 SCALE: 1/4" = 1'-0"



A DRILLED PIER DETAIL
 S1 SCALE: 1/2" = 1'-0"



B CONC ENCASEMENT DETAIL
 S1 SCALE: 1" = 1'-0"



C 18" DRILLED PIER DETAIL
 S1 SCALE: 1/2" = 1'-0"

ROCKY MOUNTAIN GROUP
 ARCHITECTS
RMG
 ENGINEERS
 2910 AUSTIN BLVD. #200
 DENVER, CO 80202
 303.733.8888

COLORADO REGISTERED
 PROFESSIONAL ENGINEER
 No. 501120
 31528
 FOR STRUCTURAL ONLY

CREEKSIDE SOUTH AT LORSON RANCH
 LUNA DRIVE
 EL PASO COUNTY, COLORADO

DRILLED PIER DETAILS AT STREAM CROSSING

FOR CONSTRUCTION

PROJECT STATUS: FOR CONSTRUCTION

ARCHENGS: MDW
 DRAWN: CL
 CHECKED: MDW
 DATE: 5-01-2020

#	REVISION	DATE

JOB NO.: 173922
 SHEET NO.: S1
 S4 of 24