



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.

**STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS**

- 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 SOIL 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 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 VERSIONS 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 INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.
- CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND PCD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.
- CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER EDM 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 ARE IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED IN SIGHT TRIANGLES.
- SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS AND MUTCD CRITERIA.
- CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
- 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.

**LEGAL DESCRIPTION**

A TRACT OF LAND BEING A PART OF THE SOUTHWEST QUARTER OF SECTION 16 AND THE SOUTHEAST QUARTER OF SECTION 17, ALL IN TOWNSHIP 12 SOUTH, RANGE 64 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF COUNTY OF EL PASO, STATE OF COLORADO, DESCRIBED AS FOLLOWS:  
 BEGINNING AT THE SOUTHWEST CORNER OF SAID SECTION 17 AND CONSIDERING THE SOUTH LINE OF SAID SECTION 17 TO BEAR NORTH 89°25'57" WEST, WITH ALL BEARINGS CONTAINED HEREIN RELATIVE THERETO; THENCE NORTH 89°25'57" WEST, ALONG SAID SOUTH LINE, A DISTANCE OF 1054.94 FEET TO THE SOUTHWEST CORNER OF THE TRAILS FILING NO. 9, A SUBDIVISION FILED AT RECEPTION NO. \_\_\_\_\_ IN THE RECORDS OF THE OFFICE OF THE EL PASO COUNTY CLERK AND RECORDER; THENCE NORTHERLY ALONG THE EASTERLY LINE OF SAID SUBDIVISION THE FOLLOWING 3 COURSES:  
 1) NORTH 00°33'13" WEST, A DISTANCE OF 519.03 FEET;  
 2) NORTH 89°26'47" EAST, A DISTANCE OF 21.08 FEET;  
 3) NORTH 00°33'13" WEST, A DISTANCE OF 603.84 FEET TO A POINT ON THE SOUTH LINE OF LOT 2, THE TRAILS FILING NO. 7A, A SUBDIVISION RECORDED AT RECEPTION NO. 207712671, SAID EL PASO COUNTY RECORDS;  
 7A) THENCE NORTH 89°26'47" EAST, ALONG SAID SOUTH LINE AND ALONG THE SOUTH LINE OF TRACT 'B', THE TRAILS FILING NO. 7, A SUBDIVISION RECORDED AT RECEPTION NO. 205057689, SAID EL PASO COUNTY RECORDS, A DISTANCE OF 434.92 FEET TO THE SOUTHWEST CORNER OF SAID TRACT B; THENCE NORTH 01°31'40" WEST, ALONG THE EASTERLY LINE OF SAID TRACT 'B', A DISTANCE OF 10.52 FEET TO THE SOUTHWEST CORNER OF THE TRAILS FILING NO. 8, A SUBDIVISION RECORDED AT RECEPTION NO. 207712541, SAID EL PASO COUNTY RECORDS; THENCE NORTH 89°25'01" EAST ALONG THE SOUTH LINE OF SAID SUBDIVISION, A DISTANCE OF 599.99 FEET TO THE SOUTHWEST CORNER THEREOF; THENCE NORTH 89°26'24" EAST, DEPARTING SAID SOUTH LINE, A DISTANCE OF 399.67 FEET; THENCE SOUTH 69°28'15" EAST, A DISTANCE OF 792.26 FEET; THENCE NORTH 13°09'30" EAST, A DISTANCE OF 1831.60 FEET; THENCE SOUTH 77°03'29" EAST, A DISTANCE OF 570.18 FEET; THENCE SOUTH 13°09'11" WEST, A DISTANCE OF 46.86 FEET; THENCE SOUTH 78°51'33" EAST, A DISTANCE OF 570.25 FEET TO A POINT ON THE WESTERLY LINE OF EASTONVILLE ROAD; THENCE SOUTHERLY ALONG SAID WESTERLY LINE THE FOLLOWING FOUR (4) COURSES:  
 1) SOUTH 13°08'39" WEST, ALONG SAID WESTERLY LINE, A DISTANCE OF 855.51 FEET TO A POINT OF CURVE;  
 2) 1108.21 FEET ALONG THE ARC OF A CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 19°38'12", A RADIUS OF 3233.52 FEET AND CHORD WHICH BEARS SOUTH 03°19'33" WEST, A DISTANCE OF 1102.79 FEET;  
 3) SOUTH 06°29'33" EAST, A DISTANCE OF 419.61 FEET TO A POINT OF CURVE;  
 4) 34.09 FEET ALONG THE ARC OF A CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 02°54'54", A RADIUS OF 670.00 FEET AND CHORD WHICH BEARS SOUTH 05°02'06" EAST, A DISTANCE OF 34.08 FEET TO A POINT ON THE SOUTH LINE OF SAID SECTION 16;  
 THENCE NORTH 89°26'11" WEST ALONG SAID SOUTH LINE, A DISTANCE OF 2440.92 FEET TO THE "POINT OF BEGINNING", CONTAINING 125.577 ACRES OR 5,470,135 SQUARE FEET, MORE OR LESS.

**FLOODPLAIN STATEMENT**

THIS SITE IS NOT WITHIN A DESIGNATED F.E.M.A. FLOODPLAIN, AS DETERMINED BY THE FLOOD INSURANCE RATE MAP FOR EL PASO COUNTY, COLORADO, PANEL NUMBER 08041C03396, EFFECTIVE DATE DECEMBER 7, 2018.

**BASIS OF BEARING**

THE BASIS OF BEARINGS IS THE WESTERLY LINE OF TRACT, B, WOODMOOR PLACER, BEING MONUMENTED BY A 1-1/4" YELLOW PLASTIC CAP ILLIGIBLE AT BOTH ENDS. SAID LINE BEARING N26°20'33"E AS REFERENCED TO COLORADO STATE PLANE CENTRAL ZONE.

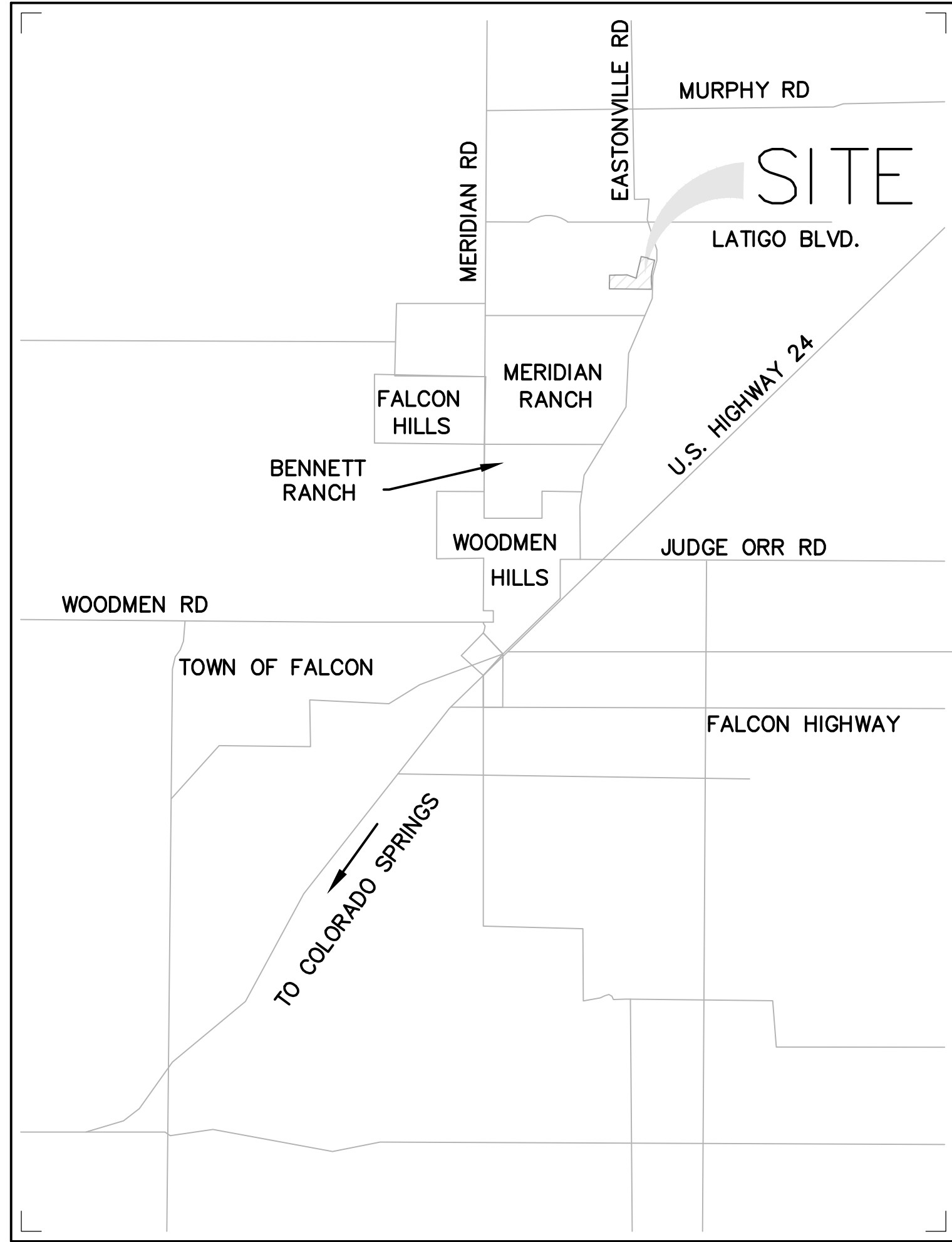
**BENCHMARK**

NGS MONUMENT T 294 BEING MONUMENTED BY A 3-1/4" BRASS DISC SET IN A 4'x4" BOULDER, LOCATED 1.8 MILES EAST ALONG HIGBY ROAD FROM ITS INTERSECTION WITH JACKSON CREEK PARKWAY, 40 FEET SOUTH OF THE CENTERLINE OF THE ROAD, 6 FEET SOUTH OF A FENCE, AND 6.2 FEET SOUTH OF A WITNESS POST. SAID MONUMENT HAVING A PUBLISHED ELEVATION OF 7247.10 FEET, NAVD88.

# LATIGO TRAILS FILING NO. 10

## EL PASO COUNTY, COLORADO

### PUBLIC UTILITY PLAN



**VICINITY MAP**  
NOT TO SCALE

**SHEET INDEX**

- 1 CV-1 COVER SHEET
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- 4 WT-1 CONESTOGA TRAIL SOUTH WATER PLAN
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- 6 WT-3 IRISH HUNTER TRAIL WATER PLAN
- 7 DT-1 DETAILS
- 8 DT-2 DETAILS

**OWNER'S STATEMENT**

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

ROBERT C. IRWIN, MANAGER, BRJM, LLC. DATE \_\_\_\_\_

**DESIGN ENGINEER'S STATEMENT**

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO CRITERIA ESTABLISHED BY THE COUNTY FOR THE 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.

TIM D. MCCONNELL DATE \_\_\_\_\_  
P.E.# 33797

**EL PASO COUNTY**

COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR THE COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL, AND ENGINEERING CRITERIA MANUAL AS AMENDED.

JOSHUA PALMER, P.E. DATE \_\_\_\_\_  
COUNTY ENGINEER

**NOTE**

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

**MERIDIAN SERVICE METROPOLITAN DISTRICT**

MSMD PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH DISTRICT DESIGN CRITERIA. THE DISTRICT IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE DISTRICT THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

DISTRICT ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

**APPROVALS**

ALL FIRE HYDRANTS SHALL BE INSTALLED ACCORDING TO MERIDIAN RANCH METRO DISTRICT SPECIFICATIONS. THE NUMBER OF FIRE HYDRANTS AND HYDRANT LOCATIONS AS SHOWN ON THIS WATER INSTALLATION PLAN ARE CORRECT AND ADEQUATE TO SATISFY THE FIRE PROTECTION REQUIREMENTS AS SPECIFIED BY THE FALCON FIRE DEPARTMENTS.

SIGNED \_\_\_\_\_ DATE \_\_\_\_\_  
FALCON FIRE DEPARTMENT  
PLAN REVIEW NUMBER \_\_\_\_\_

WATER INSTALLATION CORROSION CONTROL REQUIREMENTS: SEE PLAN FOR PLACEMENT

WATER PLAN APPROVAL

SIGNED \_\_\_\_\_ DATE \_\_\_\_\_  
MERIDIAN SERVICE METRO DISTRICT  
WORK ORDER NUMBER \_\_\_\_\_ PROJECT NUMBER \_\_\_\_\_

DISTRICT ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

**CONTACTS**

**OWNER/DEVELOPER:** BRJM, LLC  
CONTACT: BOB IRWIN  
101 N. CASCADE, SUITE 200  
COLORADO SPRINGS, CO 80903  
(719) 475-7474

**CIVIL ENGINEER:** DREXEL BARRELL & CO.  
CONTACT: TIM D. MCCONNELL, P.E.  
101 SAHWATCH STREET, #100  
COLORADO SPRINGS, CO 80903  
(719) 260-0887

**EL PASO COUNTY:** PLANNING AND COUNTY DEVELOPMENT  
2880 INTERNATIONAL CIRCLE, SUITE 110  
COLORADO SPRINGS, COLORADO 80910  
(719) 520-6819

DEPARTMENT OF PUBLIC WORKS  
3257 AKERS DR  
COLORADO SPRINGS, CO 80910  
(719) 529-6460

**DISTRICT:** MERIDIAN SERVICE METROPOLITAN DISTRICT  
11886 STAPLETON DR  
PEYTON, CO 80831  
(719) 495-6567

**FIRE PROTECTION DISTRICT:** FALCON FIRE FPD  
7030 N MERIDIAN RD  
FALCON, CO 80831  
(719) 494-4050

**ELECTRIC:** MOUNTAIN VIEW ELECTRIC ASSOC., INC.  
11140 EAST WOODMEN ROAD  
FALCON, COLORADO 80831  
(719)495-2283

PREPARED BY:



CLIENT:

FALCON LATIGO, LLC  
5350 S. ROSLYN ST. STE #400  
ENGLEWOOD, CO 80111-2125  
(303) 694-0862

PUBLIC UTILITY PLAN FOR:  
**LATIGO TRAILS**  
**FILING NO. 10**  
EL PASO COUNTY  
FALCON, COLORADO

ISSUE	DATE
INITIAL ISSUE	9/18/24

DESIGNED BY:	SBN
DRAWN BY:	SBN
CHECKED BY:	TD
FILE NAME:	21820-01CV2

PREPARED UNDER MY DIRECT SUPERVISION FOR AND BEHALF OF DREXEL, BARRELL & CO.

DRAWING SCALE:  
HORIZONTAL: N/A  
VERTICAL: N/A

**COVER SHEET**

PROJECT NO. 21820-01CSCV  
DRAWING NO.

**CV-1**

SHEET: 1 OF 8



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**METROPOLITAN DISTRICT GENERAL UTILITY NOTES  
FOR MERIDIAN SERVICE METROPOLITAN DISTRICT  
LAST MODIFIED JUNE 19, 2012  
MSMD BOARD APPROVED JULY 11, 2012**

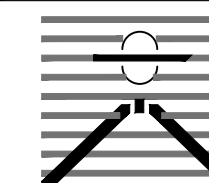
- ALL SANITARY SEWERS, UNDER DRAIN, POTABLE WATER, RECLAIMED WATER, RAW WATER AND STORM DRAIN SYSTEMS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE CURRENT MERIDIAN SERVICE METROPOLITAN DISTRICT (MSMD) SPECIFICATIONS. MSMD SPECIFICATIONS HEREINAFTER SHALL BE CONSISTENT WITH THE 2010 COLORADO SPRINGS UTILITIES SPECIFICATIONS (CSUS) UNLESS OTHERWISE NOTED AND APPROVED.
- ALL PLANS ON THE JOB SITE SHALL BE SIGNED AND APPROVED BY MSMD AND MSMD'S ENGINEER. ANY REVISION TO THE PLANS SHALL BE APPROVED BY MSMD AND MSMD'S ENGINEER AND SO NOTED ON THE PLANS.
- SANITARY SEWER MAIN LENGTHS ARE MH CENTER TO MH CENTER. ALL SANITARY SEWER PIPES SHALL BE SDR 35 PVC OR EQUAL AND HAVE A MINIMUM COVER DEPTH OF 5'-6" INSTALLED WITH A COATED 12 GAUGE U.F. TRACER WIRE. USE PRE-MANUFACTURED IN-LINE PVC PUSH-ON WYES FOR SANITARY SEWER LATERAL CONNECTIONS TO THE SANITARY SEWER MAIN. TAPPING SADDLES MAY ONLY BE USED FOR TAPPING PRE-EXISTING SANITARY SEWER MAINS. ALL LOTS SHALL RECEIVE A 4" SANITARY SEWER SERVICE LATERAL. THE END OF EACH SANITARY SEWER SERVICE LATERAL SHALL BE "LOCATED" WITH A 2" X 4" PIECE OF WOOD FROM THE END OF THE SERVICE AND EXTENDING 4' ABOVE GROUND DIRECTLY ABOVE THE END OF THE SANITARY SEWER LATERAL WITH THE 2X4 PAINTED GREEN. EXTEND THE COATED 12 GAUGE U.F. TRACER WIRE TO END OF EACH SANITARY SEWER LATERAL UP TO THE SURFACE COILED AROUND THE 2" X 4" MARKER. ALL TRACER WIRE CONNECTIONS SHALL BE WATER TIGHT STYLE OF APPROVED ELECTRICAL CONNECTORS SUCH AS A DBY (DIRECT BURY YELLOW) OR EQUAL.
- ALL SANITARY SEWER MANHOLES SHALL BE MINIMUM FIVE (5) FOOT IN DIAMETER. ALL MANHOLE JOINT EXTERIORS SHALL BE WRAPPED WITH MINIMUM 12" WIDE CON-SEAL CS-212 APPLIED OVER APPROPRIATE MSMD APPROVED JOINT PRIMER. THE WHOLE EXTERIOR OF THE MANHOLES SHALL BE COATED WITH CONCRETE WATER PROOFING TAR AND APPLIED PER CSUS.
- THE UNDER DRAIN SYSTEM SHALL BE PASSIVE, WATER TIGHT, NO PERFORATED PIPE, AND THE MAIN LINE SIZE SHALL BE DESIGNED BY THE ENGINEER. ALL UNDER DRAIN PIPES AND FITTINGS SHALL BE SDR 35 PVC, OR MSMD APPROVED EQUAL, INSTALLED PER THE SAME INSTALLATION STANDARDS AS OUTLINED BY CSUS FOR SANITARY SEWER SYSTEMS. THE UNDER DRAIN SYSTEM AT EACH SANITARY SEWER MANHOLE SHALL CONTAIN 6" CLEAN-OUTS IN EACH SEWER MAIN DIRECTION PER MSMD STANDARD DETAIL. ALL LOTS SHALL RECEIVE A WHITE 3" UNDER DRAIN SERVICE LATERAL ADJACENT TO THE SANITARY SEWER SERVICE LATERAL. TESTING OF THE UNDER DRAIN SYSTEM WILL CONSIST OF VISUAL INSPECTIONS FOR WATER IN THE SYSTEM. THE ALLOWABLE WATER IN THE UNDER DRAIN SYSTEM SHALL BE THE SAME AS FOR SANITARY SEWER SYSTEMS AS PER CSUS. IF EXCESS WATER IS OBSERVED IN THE UNDER DRAIN SYSTEM, THE CONTRACTOR SHALL LOCATE THE SOURCE OF WATER INFILTRATION AND REPAIR AS NECESSARY. UNDER DRAIN MAIN LINES SHALL DRAIN, WHERE EVER POSSIBLE, INTO BELOW GRADE MSMD APPROVED UNDER DRAIN DISPERSION PITS. UNDER DRAIN DISPERSION PITS SHALL BE DESIGNED WITH OVERFLOW LINES FOR FUTURE INSTALLATION OF ADDITIONAL DISPERSION PITS AS NEEDED. WHEN INSTALLING DISPERSION PITS THERE SHALL BE NO UNDERGROUND WATER IN THE DISPERSION PIT.
- ALL WATER MAIN PIPES SHALL BE AWWA C900 PVC, PRESSURE CLASS 200, INSTALLED WITH A MAXIMUM JOINT DEFLECTION OF 3 DEGREES, OR MSMD APPROVED EQUAL. ALL WATER MAIN FITTINGS SHALL HAVE MECHANICAL RESTRAINTS AND THRUST BLOCKS. ALL WATER MAIN PIPES SHALL HAVE A MINIMUM COVER DEPTH OF 5'-6" INSTALLED WITH A COATED 12 GAUGE U.F. TRACER WIRE. ALL LOTS SHALL RECEIVE A MINIMUM 3/4" COPPER WATER SERVICE INSTALLED PER APPROVED PLANS AND MSMD SPECIFICATIONS INCLUDING A ROMAC 202 BS OR EQUAL TAPPING SADDLE, AND A CURB STOP VALVE INSIDE A CURB STOP BOX AT THE END OF THE WATER SERVICE. ALL 100' OR LONGER WATER SERVICES SHALL BE UPSIZED TO A 1" COPPER WATER SERVICE. ALL 1/3 ACRE OR GREATER LOTS SHALL RECEIVE A 1" MINIMUM COPPER WATER SERVICE. ALL CURB STOP VALVES SHALL BE 1/2" UNLESS OTHERWISE NOTED ON THE PLANS. ALL 1" WATER SERVICES SHALL RECEIVE A 1" INLET BY 3/4" OUTLET CURB STOP VALVE MANUFACTURED BY AY MCDONALD MODEL NUMBER 6104 (FLARE X FLARE) OR EQUIVALENT. THE CURB STOP VALVE AND BOX AT THE END OF EACH WATER SERVICE SHALL BE "LOCATED" WITH A 8" LONG 2" X 4" PIECE OF WOOD, PAINTED BLUE, BURIED 4" INTO THE GROUND AND 4" STICKING ABOVE GROUND DIRECTLY BEHIND THE CURB STOP VALVE AND BOX. ALL TRACER WIRE CONNECTIONS SHALL BE MADE WITH DBY (DIRECT BURY YELLOW) WATER TIGHT STYLE ELECTRICAL CONNECTORS OR EQUAL.
- ALL NON-POTABLE WATER MAINS SHALL BE AWWA NON-POTABLE STANDARD (PURPLE PIPE) C900 PVC, PRESSURE CLASS 200 OR GREATER INSTALLED WITH A MAXIMUM JOINT DEFLECTION OF 3 DEGREES, OR MSMD APPROVED EQUAL. ALL WATER MAIN FITTINGS SHALL HAVE MECHANICAL RESTRAINTS AND THRUST BLOCKS. ALL WATER MAIN PIPES SHALL HAVE A MINIMUM COVER DEPTH OF 5'-6" INSTALLED WITH A COATED 12 GAUGE U.F. TRACER WIRE.
- ALL POTABLE WATER VALVES SHALL BE OPEN CLOCKWISE WITH THE VALVE OPERATING NUT INSTALLED LOW NEAR THE MAIN LINE AND PAINTED RED. ALL POTABLE AND RAW WATER VALVES NOT WITHIN PAVED STREETS SHALL BE MARKED WITH CARSONITE MARKERS. ALL RAW WATER VALVES SHALL BE OPEN COUNTERCLOCKWISE WITH THE VALVE OPERATING NUT INSTALLED HIGH WITHIN 1' FROM THE SURFACE AND PAINTED BLACK.
- ALL NON-POTABLE WATER VALVES SHALL BE OPEN COUNTER CLOCKWISE WITH A VALVE EXTENSION, EXTENDING TO WITHIN 1' OF THE SURFACE AND PAINTED PURPLE WITH AN OPEN DIRECTION ARROW.
- ALL POTABLE WATER, RAW WATER AND NON-POTABLE WATER VALVES 12" OR GREATER SHALL BE BUTTERFLY VALVES WITH A SIDE OPERATING NUT THE OPERATIONAL DEPTH OF THE POTABLE WATER VALVES SHALL NOT EXCEED 6' IN OVERALL DEPTH NOR SHALL IT BE CLOSER TO THE SURFACE THEN 4'
- ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY MSMD. MSMD RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO MSMD STANDARDS AND SPECIFICATIONS.
- FIRE HYDRANT LOCATION SHALL BE REVIEWED AND APPROVED BY THE APPLICABLE FIRE DEPARTMENT AUTHORITY.
- FIRE HYDRANTS SHALL BE AVK MODEL 2780 NOSTALGIC OPEN RIGHT WITH A 1 1/2" PENTAGON OPERATING NUT AND SERVICE CAPS, STANDARD 4" PUMPER NOZZLE ALONG WITH TWO 1 1/2" SIDE NOZZLES.
- ALL WATER AND SANITARY SEWER SERVICE LATERAL LOCATIONS SHALL BE CLEARLY MARKED BY STAMPING AN "S" FOR SEWER AND A "W" FOR WATER ON THE CURB FACE AT EACH SERVICE LATERAL LOCATION.
- ALL DUCTILE IRON PIPES, FITTINGS, VALVES AND FIRE HYDRANTS SHALL BE WRAPPED WITH POLYETHYLENE TUBING, DOUBLE BONDED AT EACH JOINT AND ELECTRICALLY ISOLATED. BONDING AND ANODE CONNECTIONS SHALL BE THOROUGHLY COATED WITH BITUMINOUS COATINGS.
- ALL DUCTILE IRON PIPE AND FITTINGS LESS THAN 12 INCHES IN DIAMETER SHALL HAVE CATHODIC PROTECTION USING TWO NO. 6 WIRES WITH 17 LB MAGNESIUM ANODES EVERY 400 FEET AND 9 LB MAGNESIUM ANODES AT EACH FITTING. ALL DUCTILE IRON PIPE AND FITTINGS 12 INCHES AND GREATER SHALL HAVE CATHODIC PROTECTION USING TWO NO. 6 WIRES WITH 17 LB MAGNESIUM ANODES EVERY 300 FEET AND 9 LB MAGNESIUM ANODES AT EACH FITTING. CATHODIC PROTECTION AND ANODES SHALL BE INSTALLED PER MSMD SPECIFICATIONS.
- ALL SANITARY SEWER MAINS, SANITARY SEWER LATERALS AND WATER MAIN LINES (PVC & DUCTILE IRON) SHALL BE INSTALLED WITH COATED 12 GAUGE U.F. TRACER WIRE PER MSMD SPECIFICATIONS. SANITARY SEWER TRACER WIRE SHALL BE EXTENDED INTO THE MANHOLES AND WRAPPED AROUND THE TOP STEP OF THE MANHOLE AND EXTENDED TO EACH SANITARY SEWER LATERAL 2" X 4" MARKER AS NOTED ABOVE. EXTEND TRACER WIRE TO THE TOP OF WATER VALVE BOXES A MINIMUM OF EVERY 500 FEET.
- ALL PIPE MATERIAL, BACKFILL AND INSTALLATION SHALL CONFORM TO THE APPLICABLE SPECIFICATIONS OF THE EL PASO COUNTY DEPARTMENT OF TRANSPORTATION, COLORADO SPRINGS UTILITIES, MSMD, DISTRICT ENGINEER AND THE SOILS ENGINEER.
- ALL UTILITY TRENCH BACKFILL SHALL BE PLACED PER THE APPROVED SOILS REPORT RECOMMENDATIONS AND UNDER THE DIRECTION OF THE SOILS ENGINEER. TRENCH BACKFILL SHALL BE MOISTURE CONDITIONED TO WITHIN 2 PERCENT OF OPTIMUM AND COMPACTED TO AT LEAST 92 PERCENT OF MAXIMUM MODIFIED PROCTOR DRY DENSITY (ASTM D 1557) OR HIGHER STANDARD AS REQUIRED BY THE EL PASO COUNTY DEPARTMENT OF TRANSPORTATION. THIS SHALL INCLUDE ALL MAIN LINE, VALVES, FIRE HYDRANT RUNS, WATER & SEWER SERVICE LINES, CLEAN OUTS, INLET BOXES, MANHOLES, ETC. A QUALIFIED SOILS ENGINEER SHALL OBSERVE AND TEST THE BACKFILL AND COMPACTION OF ALL TRENCHES AND ALL REPORTS SHALL BE SUBMITTED TO MSMD FOR REVIEW AND APPROVAL.
- CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING FACILITIES (ABOVEGROUND AND UNDERGROUND) WITHIN THE PROJECT SITE SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT THE REVISIONS OF THE CONSTRUCTION DRAWINGS IF IT IS FOUND THAT THE ACTUAL LOCATIONS ARE IN CONFLICT WITH THE PROPOSED WORK.
- BENDS, DEFLECTION & CUT PIPE LENGTHS SHALL BE USED TO HOLD HORIZONTAL ALIGNMENT OF SEWER AND WATER LINES TO NO MORE THAN 05 FROM THE DESIGNED ALIGNMENT.
- AT ALL LOCATIONS WHERE CAP AND STUB IS NOTED ON DRAWINGS, PROVIDE A PLUG AT THE END OF THE PIPE JOINT NEAREST THE SPECIFIED STATION. PROVIDE A REVERSE ANCHOR AT ALL WATER LINE PLUGS AND BLOW OFFS.
- ALL EXISTING WATER UTILITY MATERIAL REMOVED AS PART OF THE WORK ON THESE DRAWINGS SHALL BE RETURNED TO MSMD AS REQUESTED.
- ALL EXISTING UTILITY MAINS SHALL BE SUPPORTED AND PROTECTED IN PLACE AND FUNCTION CONTINUOUSLY DURING ALL CONSTRUCTION OPERATIONS. SHOULD A MSMD UTILITY FAIL OR BE DAMAGED AS A RESULT OF THE CONSTRUCTION OPERATION, IT SHALL BE REPAIRED IMMEDIATELY BY CONTRACTOR PER ALL MSMD SPECIFICATIONS. IN THE EVENT THE CONTRACTOR CANNOT IMMEDIATELY MAKE THE REPAIRS TO THE FAILED OR DAMAGED MSMD UTILITY TO THE SATISFACTION OF MSMD, MSMD MAY REPAIR OR CAUSE THE REPAIR AND BACK CHARGE ALL SUCH COSTS TO THE CONTRACTOR.
- ANY WATER SHUT DOWNS THAT NEED TO OCCUR ON THE CRITICAL LINES AS DEFINED BY THE MSMD SOP (STANDARD OPERATION PROCEDURE) MANUAL WILL BE COORDINATED WITH DISTRICT STAFF FOR NIGHT TIME SHUT DOWNS.
- CONTRACTOR SHALL MAKE ALL NECESSARY CONNECTIONS TO EXISTING WATER MAINS WITHOUT A SHUTDOWN OF THE WATER SYSTEM. IN THE EVENT THAT A SHUTDOWN OF A WATER SYSTEM IS NECESSARY, CONTRACTOR SHALL ACQUIRE A PERMIT FROM MSMD.
- PUMPING OR BYPASS OPERATIONS SHALL BE REVIEWED AND APPROVED BY MSMD AND THE ENGINEER OF RECORD PRIOR TO EXECUTION.
- CONTRACTOR SHALL REPLACE OR REPAIR ANY AND ALL DAMAGE CAUSED BY CONTRACTOR DURING CONSTRUCTION ACTIVITIES TO ALL ABOVE OR BELOW GROUND IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO FENCES, LANDSCAPING, CURB, GUTTER, SIDEWALK, ASPHALT, ELECTRIC SYSTEMS, GAS SYSTEMS, TELEPHONE/TELEVISION SYSTEMS, ETC.
- A PRECONSTRUCTION CONFERENCE MEETING SHALL BE HELD AT THE PROJECT SITE A MINIMUM OF 7 DAYS BEFORE CONSTRUCTION BEGINS AND SHALL BE ATTENDED BY ALL REPRESENTATIVES RESPONSIBLE FOR CONSTRUCTION, INSPECTION, SUPERVISION, TESTING AND ALL OTHER ASPECTS OF THE WORK. THE CONTRACTOR SHALL NOTIFY MSMD AND ALL AFFECTED UTILITY COMPANIES ADJACENT TO THE PROPOSED UTILITY CONSTRUCTION A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF CONSTRUCTION FOR SCHEDULING. CONTRACTOR SHALL SCHEDULE BI-WEEKLY CONSTRUCTION MEETINGS AT THE PROJECT SITE OR MORE FREQUENTLY AS DEEMED NECESSARY BY MSMD.

- TESTING OF FACILITIES:
  - CONTRACTOR SHALL NOTIFY MSMD A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF ANY TESTING TO ALLOW MSMD STAFF TO BE PRESENT AT ALL TIMES DURING TESTING. ALL TESTING SHALL BE PER MSMD SPECIFICATIONS OR CSUS, WHICHEVER IS GREATER.
  - ALL SECTIONS OF WATER LINES MUST FIRST PASS A CHLORINE TEST WITH A MINIMUM OF 50 PARTS PER MILLION OF RESIDUAL AFTER 24 HOURS. THE WHOLE SECTION OF LINE BEING TESTED MUST BE RE-CHLORINATED AND RE-TESTED IF IT DOES NOT PASS. ONCE THE SECTION OF LINE BEING TESTED PASSES THE CHLORINE TEST THE LINE MUST BE FLUSHED AND BAC-T TESTED PER CSUS. ONCE THE BAC-T TEST PASSES THE SECTION OF LINE MAY BE PRESSURE TESTED. WATER FLUSHED FROM THE WATER SYSTEM MUST BE PROPERLY DE-CHLORINATED DURING THE FLUSHING PROCESS.
  - ALL SECTIONS OF WATER LINES MUST PASS A 200 PSI PRESSURE TEST FOR TWO HOURS. LITHE PRESSURE TEST FAILS, THE SECTIONS OF LINE THAT FAILED MUST AGAIN PASS THE CHLORINE TEST, BE FLUSHED AND PASS THE BAC-T TEST PRIOR TO CONDUCTING A NEW PRESSURE TEST.
  - ALL SANITARY SEWER FACILITIES SHALL MEET THE FOLLOWING TESTING REQUIREMENTS:
    - ALL SANITARY SEWER MAIN SHALL BE PRESSURE TESTED PER CSUS.
    - ALL SEWER MAIN SHALL BE PROPERLY BALLED/MANDRILL
    - ALL SANITARY SEWER MANHOLES SHALL BE VACUUM TESTED PER CSUS.
    - ALL SANITARY SEWER MAINS SHALL BE CCTV INSPECTED WITH TWO VIDEOS ON DVDS SUBMITTED TO MSMD FOR REVIEW AND APPROVAL. ALL SANITARY SEWER MAINS SHALL BE JET CLEANED AND FLUSHED DIRECTLY PRIOR TO CCTV INSPECTION WITH RUNNING WATER IN THE SANITARY SEWER MAIN DURING THE CCTV INSPECTION. SANITARY SEWER MAINS THAT DO NOT MEET MSMD STANDARDS SHALL BE REPLACED AND OR REPAIRED AS NECESSARY AND RE-TESTED.
- COMMENCEMENT OF USE OF WATER LINES AND/OR SYSTEMS. NO WATER FACILITY SHALL BE PLACED IN SERVICE UNTIL
  - MSMD HAS APPROVED ALL TESTS AND COMPACTION TESTING REPORTS AND AS-BUILT DRAWINGS ARE SUBMITTED TO AND APPROVED BY MSMD.
  - ALL WATER LINES ARE COMPLETED AND THE FIRST LIFT OF ASPHALT IS COMPLETED OVER THE LINE. IN THE CASE WHERE NO ASPHALT IS TO BE PLACED OVER THE LINE, SURFACE IMPROVEMENTS SHALL BE COMPLETED PRIOR TO USE OF THE FACILITY.
  - ALL EASEMENTS (PLATTED OR DEEDED) ARE DEDICATED, EXECUTED TO MSMD, AND RECORDED.
- COMMENCEMENT OF USE OF ANY SANITARY SEWER LINES AND/OR SYSTEMS. NO SANITARY SEWER FACILITY SHALL BE PLACED IN SERVICE UNTIL:
  - MSMD HAS APPROVED ALL TESTS AND COMPACTION TESTING REPORTS, AS-BUILT DRAWINGS AND REVIEWS ARE SUBMITTED TO AND APPROVED BY MSMD.
  - ALL SANITARY SEWER LINES ARE COMPLETED AND THE FIRST LIFT OF ASPHALT IS COMPLETED OVER THE LINE. IN THE CASE WHERE NO ASPHALT IS TO BE PLACED OVER THE LINE, ANY REQUIRED SURFACE IMPROVEMENTS SHALL BE COMPLETED PRIOR TO USE OF THE FACILITY. ALL NECESSARY EASEMENTS (PLATTED OR DEEDED) ARE DEDICATED, EXECUTED TO MSMD, AND RECORDED.
  - DOWN STREAM PLUG CAN BE REMOVED ONCE FIRST LIFT OF ASPHALT IS DOWN AND THE ABOVE REQUIREMENTS ARE MET.
- PRELIMINARY ACCEPTANCE SHALL BE DEFINED AS THE POINT IN TIME, THE MSMD ACCEPTS THE FACILITY FOR USE AND ALL SURFACE IMPROVEMENTS AND RESTORATION ARE COMPLETE.
- FINAL ACCEPTANCE BY MSMD OF ANY UTILITY LINE OR SYSTEM SHALL NOT OCCUR UNTIL COMPLETION OF FINAL ASPHALT LAYERS AND/OR FINAL COMPLETION AND/OR RESTORATION OF ALL SURFACE IMPROVEMENTS. THE WARRANTY PERIOD FOR ALL FACILITIES SHALL BE 12 MONTHS COMMENCING WITH FINAL ACCEPTANCE. MSMD MAY REQUIRE RETESTING OF THE UTILITY SYSTEM PRIOR TO FINAL ACCEPTANCE.
- INSPECTION FEES: CALL MSMD FOR FEE SCHEDULE.
- ALL COMMERCIAL/BUSINESS DEVELOPMENTS SHALL HAVE A MINIMUM EIGHT INCH DIAMETER WATER MAIN LOOPED THROUGH THE PROPOSED PROPERTY WITH GATE VALVES LOCATED WHERE THE MAIN ENTERS AND EXISTS THE PROPERTY AND A MINIMUM EIGHT INCH SANITARY SEWER MAIN WITH A MANHOLE IN THE STREET WHERE THE MAIN ENTERS THE PROPERTY. THE MAINS AND END OF THE MAINS SHALL BE MARKED WITH THE APPROPRIATE COLORED CARSONITE MARKERS AND TRACER WIRE.
- IRRIGATION SERVICES SHALL HAVE A STOP AND WASTE CURB STOP VALVE INSTALLED ALONG WITH A TRACER WIRE EXTENDING BACK TO THE MAIN LINE.
- AFTER REVIEW AND APPROVAL OF PLANS FOR THE EXTENSION OF LINES, FACILITIES AND/OR SERVICES, CONSTRUCTION MUST BE COMPLETED WITHIN 18 MONTHS FOR RESIDENTIAL SUBDIVISIONS AND 12 MONTHS FOR ANY COMMERCIAL INSTALLATIONS. IF WORK IS NOT COMPLETED WITHIN THIS TIME FRAME AND NO EXTENSION HAS BEEN GIVEN, THEN ALL PLANS MUST BE RE-SUBMITTED TO MSMD FOR REVIEW (WITH NEW FEES PAID) AND APPROVAL.
- ANY FACILITIES OUTSIDE OF PAVED ROADS MUST BE MARKED APPROPRIATELY WITH CARSONITE MARKERS AT EACH VALVE, MANHOLE, TEST STATION AND ANY OTHER FACILITIES MSMD DEEMS NECESSARY
- MSMD CONTACT NUMBERS:  
MERIDIAN SERVICE METROPOLITAN DISTRICT ON SITE OFFICE 719-495-6567.  
MSMD MANAGEMENT COMPANY 303-381-4965.

**MERIDIAN SERVICE METROPOLITAN DISTRICT  
HOME INSTALLATION STANDARDS  
UPDATED 7/2012**

- NO CORRUGATED PIPE IS ALLOWED ON THE UNDER DRAIN SYSTEM FROM THE SERVICE CONNECTION TO THE HOUSES PERIMETER DRAIN. IF CORRUGATED PIPE IS USED IT MUST BE BEDDED IN 3/4" ROCK OR SMALLER, WRAPPED IN FILTER FABRIC AND ROCKED 12" ABOVE THE PIPE.
- WHEN CONNECTING TO THE HOUSE PERIMETER DRAIN TO THE DISTRICTS UNDER DRAIN STUB AND A CORRUGATED CONNECTION IS NEEDED YOU MUST USE A CORRUGATED BY SEWER AND DRAIN CONNECTION MANUFACTURED BY GPK OR EQUIVALENT
- EVERY HOUSE MUST HAVE AT LEAST ONE SEWER CLEAN-OUT AND IF THE SERVICE IS GREATER THAN 75' ONE WILL BE REQUIRED EVERY 75'.
- NO 45 DEGREE FITTINGS ARE ALLOWED IN THE SEWER SERVICE. IF 22 DEGREE FITTINGS ARE USED THE MINIMUM SPACE BETWEEN THE FITTINGS SHALL BE 18".
- ALL WET UTILITY TRENCHES MUST HAVE A COMPACTION TEST DONE IN TWO FOOT LIFT AND MUST MEET 95% STANDARD PROCTOR AS DETERMINED BY ASTM D698. THE REPORTS MUST BE FILED WITH THE MSMD PRIOR TO SIGNATURE OF THE PERMIT CARD.
- NO FLEXIBLE TYPES OF COUPLINGS ARE ALLOWED ON THE UNDER-DRAIN AND OR SEWER SYSTEM PIPING.
- ALL SEWER SERVICE PIPES MUST BE SDR35 OR GREATER WITH A MINIMUM 1% FALL.
- ALL WATER SERVICE PIPES ARE TO BE TYPE K COPPER WITH FLARED FITTINGS.
- NO WATER LINE COUPLINGS WILL BE ALLOWED ON SERVICE RUNS SHORTER THAN 100'
- ALL WATER SERVICE CURB STOP BOXES MUST BE RAISED A MINIMUM OF 2" ABOVE FINISHED GRADE WITH 1 1/2" PVC INSIDE THE STOP BOX SO AS TO KEEP THE VALVE EASILY ACCESSIBLE.
- IN ALL FININGS BUILT AFTER 2012 A TRACER WIRE HAS BEEN INSTALLED WITH THE SEWER CONNECTION STUB (12 GAUGE UF COATED). THIS WIRE WILL NEED TO BE CONNECTED TO AND RAN WITH THE SEWER SERVICE AND TERMINATED AT THE CLEANOUT CLOSEST TO THE HOUSE. THIS WIRE WILL NEED TO BE BROUGHT TO THE SURFACE AND WRAPPED AROUND THE CLEANOUT, FOR FUTURE LOCATING PURPOSES.

PREPARED BY:



**DREXEL, BARRELL & CO.**  
Engineers • Surveyors  
101 SAHWATCH ST. #100  
COLORADO SPGS, COLORADO 80903  
CONTACT: TIM D. MCCONNELL, P.E.  
(719)260-0887  
COLORADO SPRINGS • LAFAYETTE

CLIENT:

FALCON LATIGO, LLC  
5350 S. ROSLYN ST. STE #400  
ENGLEWOOD, CO 80111-2125  
(303) 694-0862

PUBLIC UTILITY PLAN FOR:  
**LATIGO TRAILS  
FILING NO. 10**  
EL PASO COUNTY  
FALCON, COLORADO

ISSUE	DATE
INITIAL ISSUE	9/18/24
DESIGNED BY:	TDM
DRAWN BY:	GES
CHECKED BY:	TDM
FILE NAME:	21820-01NT2

PREPARED UNDER MY DIRECT SUPERVISION FOR AND BEHAF OF DREXEL, BARRELL & CO.

DRAWING SCALE:  
HORIZONTAL: N/A  
VERTICAL: N/A

NOTES

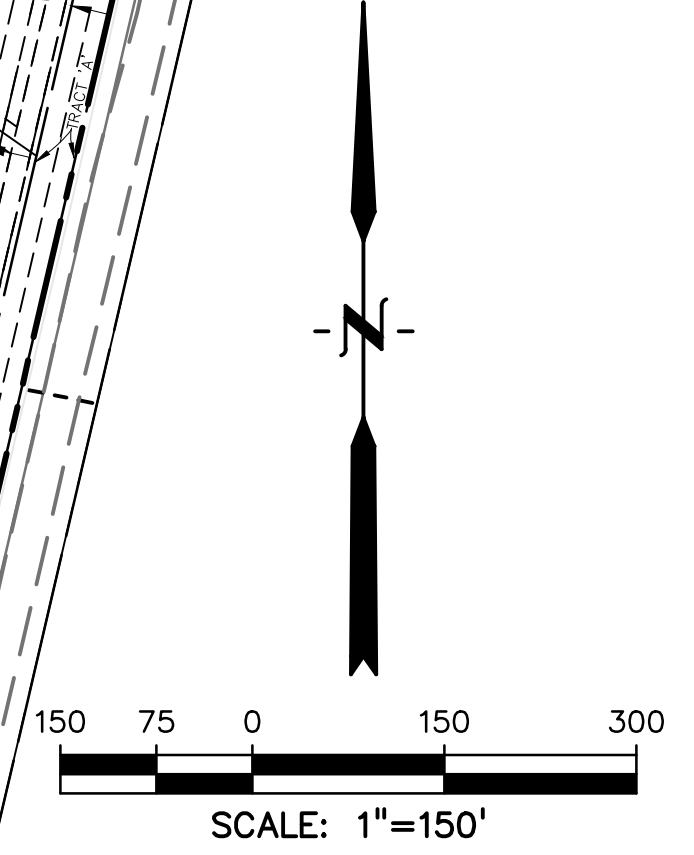
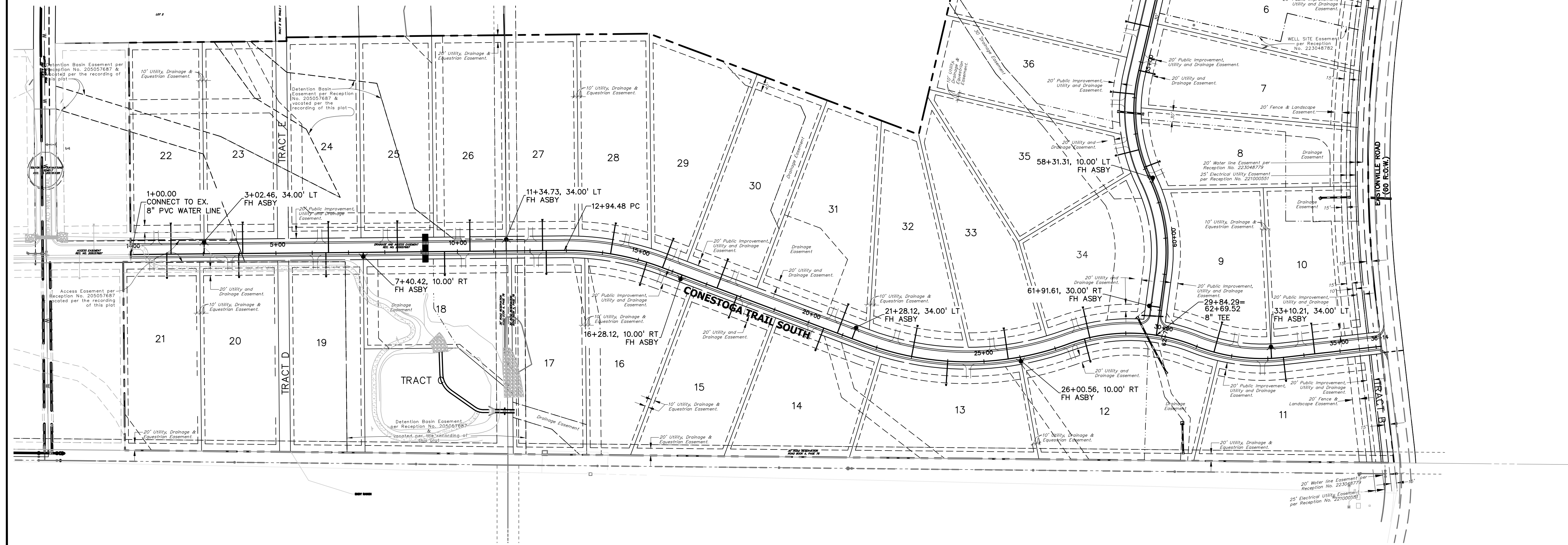
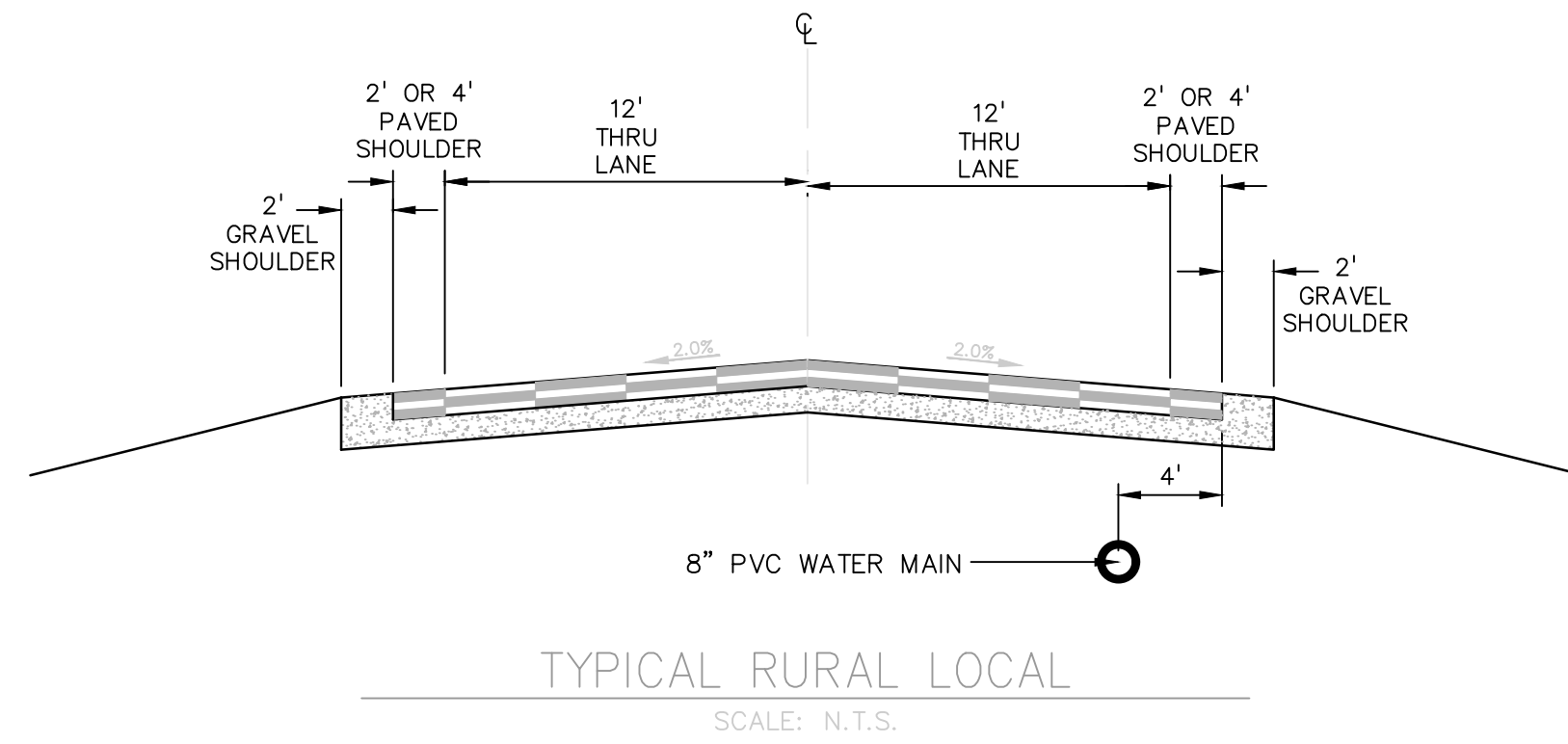
PROJECT NO. 21820-01CSCV  
DRAWING NO.

**NT-1**

SHEET: 2 OF 8

LOT #	TAP STATION	PIPE ALIGNMENT
LOT 1	41+14.16	WTR2
LOT 2	42+86.48	WTR2
LOT 3	45+20.00	WTR2
LOT 4	48+00.00	WTR2
LOT 5	51+25.00	WTR2
LOT 6	52+72.00	WTR2
LOT 7	55+23.40	WTR2
LOT 8	57+95.00	WTR2
LOT 9	31+50.00	WTR1
LOT 10	34+30.00	WTR1
LOT 11	33+43.00	WTR1
LOT 12	27+85.00	WTR1
LOT 13	24+00.00	WTR1
LOT 14	20+45.00	WTR1
LOT 15	17+90.12	WTR1
LOT 16	15+25.00	WTR1
LOT 17	12+44.58	WTR1
LOT 18	9+64.45	WTR1
LOT 19	6+37.67	WTR1
LOT 20	3+97.42	WTR1
LOT 21	1+99.42	WTR1
LOT 22	2+11.23	WTR1

LOT #	TAP STATION	PIPE ALIGNMENT
LOT 23	4+08.69	WTR1
LOT 24	6+44.83	WTR1
LOT 25	8+34.73	WTR1
LOT 26	10+34.73	WTR1
LOT 27	12+34.58	WTR1
LOT 28	14+22.31	WTR1
LOT 29	15+70.45	WTR1
LOT 30	17+31.12	WTR1
LOT 31	20+85.00	WTR1
LOT 32	22+99.66	WTR1
LOT 33	25+67.23	WTR1
LOT 34	28+00.00	WTR1
LOT 35	57+44.34	WTR2
LOT 36	55+90.00	WTR2
LOT 37	54+00.00	WTR2
LOT 38	51+76.01	WTR2
LOT 39	49+67.61	WTR2
LOT 40	47+44.03	WTR2
LOT 41	45+60.00	WTR2
LOT 42	43+22.04	WTR2
LOT 43	41+04.16	WTR2



PREPARED BY:



CLIENT:

FALCON LATIGO, LLC  
5350 S. ROSLYN ST. STE #400  
ENGLEWOOD, CO 80111-2125  
(303) 694-0862

PUBLIC UTILITY PLAN FOR:  
**LATIGO TRAILS**  
**FILING NO. 10**  
EL PASO COUNTY  
FALCON, COLORADO

ISSUE	DATE
INITIAL ISSUE	9/18/24

DESIGNED BY:	TDM
DRAWN BY:	GES
CHECKED BY:	TDM
FILE NAME:	21820-01WS1

PREPARED UNDER MY DIRECT SUPERVISION FOR AND BEHALF OF DREXEL, BARRELL & CO.

DRAWING SCALE:  
HORIZONTAL: 1" = 150'  
VERTICAL: N/A

**WATER SERVICE PLAN**

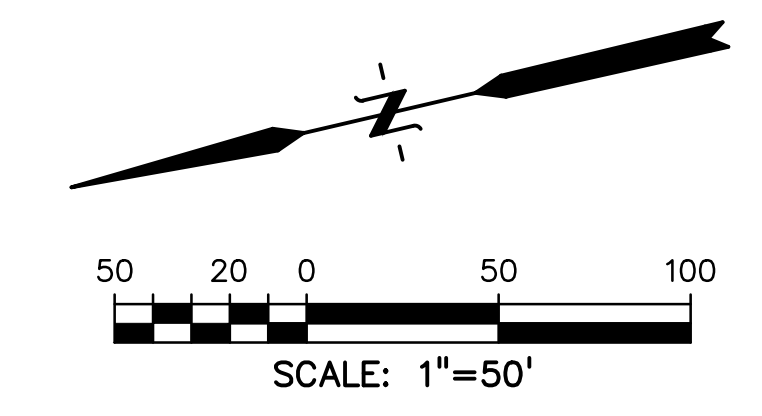
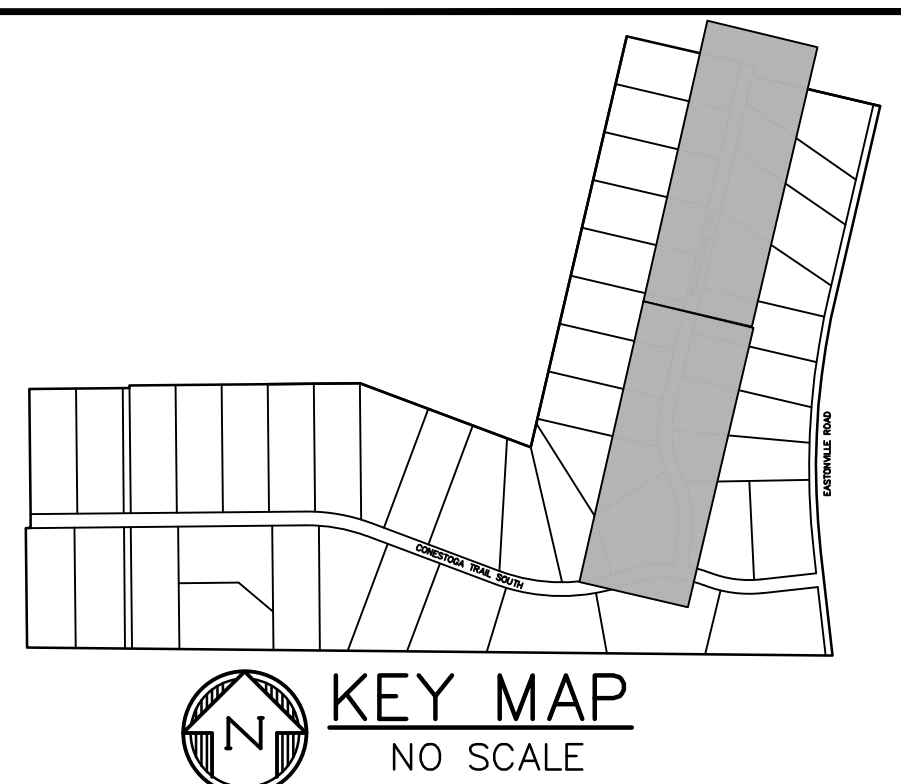
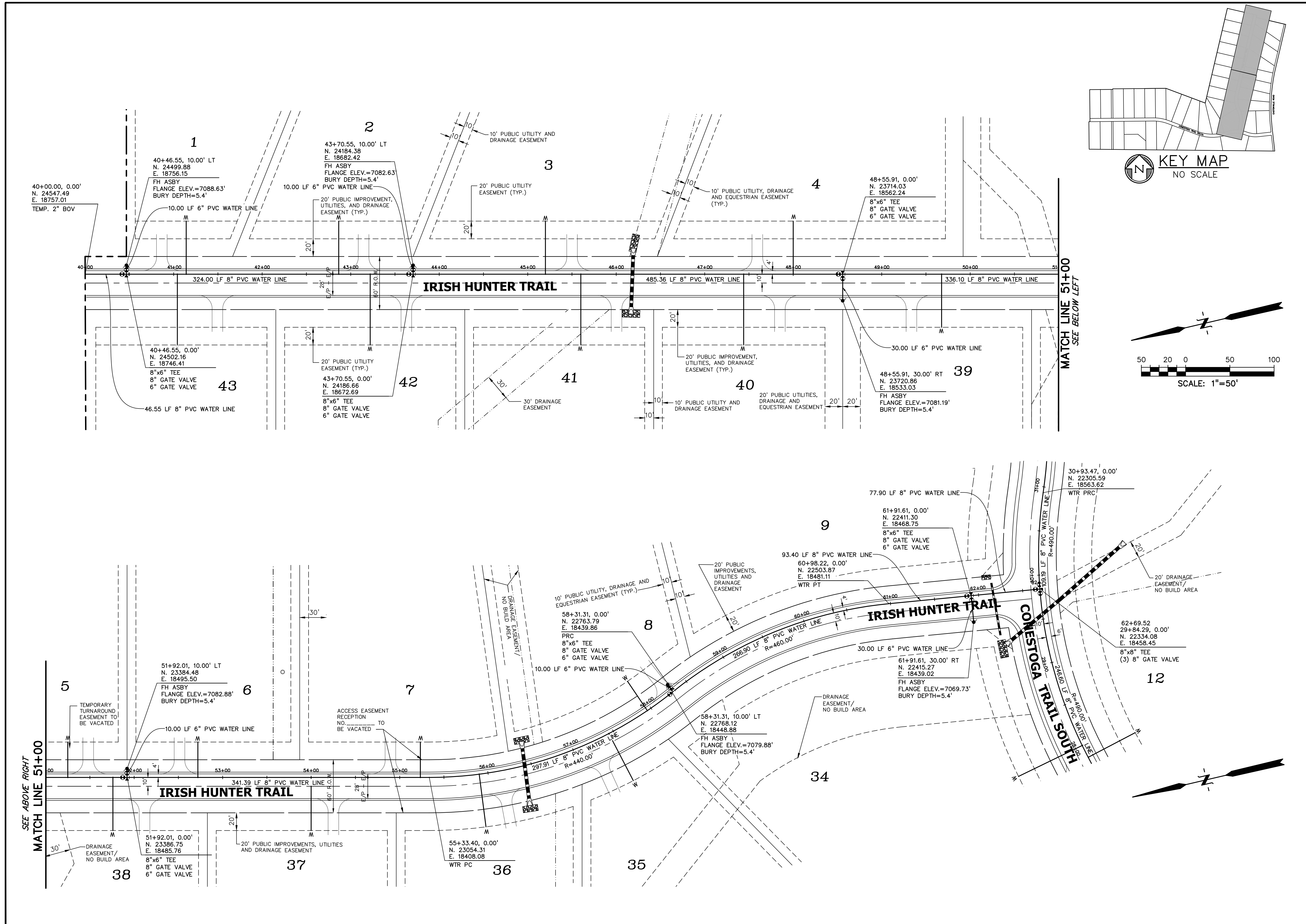
PROJECT NO. 21820-01CSCV  
DRAWING NO.

**WS-1**

SHEET: 3 OF 8







PREPARED BY:  
  
**DREXEL, BARRELL & CO.**  
 Engineers • Surveyors  
 101 SAWATCH ST. #100  
 COLORADO SPGS, COLORADO 80903  
 CONTACT: TIM D. McCONNELL, P.E.  
 (719) 260-0887  
 COLORADO SPRINGS • LAFAYETTE

CLIENT:  
 FALCON LATIGO, LLC  
 5350 S. ROSLYN ST. STE #400  
 ENGLEWOOD, CO 80111-2125  
 (303) 694-0862

PUBLIC UTILITY PLAN FOR:  
**LATIGO TRAILS**  
**FILING NO. 10**  
 EL PASO COUNTY  
 FALCON, COLORADO

ISSUE	DATE
INITIAL ISSUE	9/18/24
DESIGNED BY:	TDM
DRAWN BY:	GES
CHECKED BY:	TDM
FILE NAME:	21820-01WT2

PREPARED UNDER MY DIRECT SUPERVISION FOR AND BEHALF OF DREXEL, BARRELL & CO.

DRAWING SCALE:  
 HORIZONTAL: 1" = 50'  
 VERTICAL: N/A

**IRISH HUNTER WATER PLAN**

PROJECT NO. 21820-01CSCV  
 DRAWING NO.

**WT-3**

SHEET: 6 OF 8



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.

**THRUST BLOCK DIMENSIONS AND VOLUMES - PVC & DIP 200 psi**

PIPE SIZE (IN)	TYPE OF FITTING	MINIMUM BEARING SURFACE AREA (SQ FT)	MINIMUM SURF. PRESS. (PSI)	MINIMUM SURF. PRESS. (PSI)	MINIMUM SURF. PRESS. (PSI)	MINIMUM SURF. PRESS. (PSI)	APPROXIMATE VOLUME (CU FT)
4	11.25" BEND	1.00	1.00	1.00	0.25	0.25	0.25
4	22.5" BEND	2.00	1.41	1.41	0.21	0.21	0.25
4	45" BEND	3.50	1.07	1.07	0.42	0.20	0.25
4	TEE & DEAD END	4.75	0.76	0.76	0.07	0.00	0.25
6	11.25" BEND	2.00	1.41	1.41	0.25	0.20	0.25
6	22.5" BEND	3.75	1.04	1.04	0.20	0.20	0.25
6	45" BEND	7.25	0.76	0.76	0.26	0.20	0.25
6	TEE & DEAD END	9.50	0.58	0.58	0.10	0.20	0.25
8	11.25" BEND	3.00	1.00	1.00	0.20	0.20	0.25
8	22.5" BEND	6.50	0.76	0.76	0.40	0.20	0.25
8	45" BEND	12.50	0.57	0.57	0.07	0.20	0.25
8	TEE & DEAD END	16.25	0.44	0.44	0.00	0.20	0.25

**THRUST BLOCK DIMENSIONS AND VOLUMES - PVC (Maximum Static Pressure = 170 psi)**

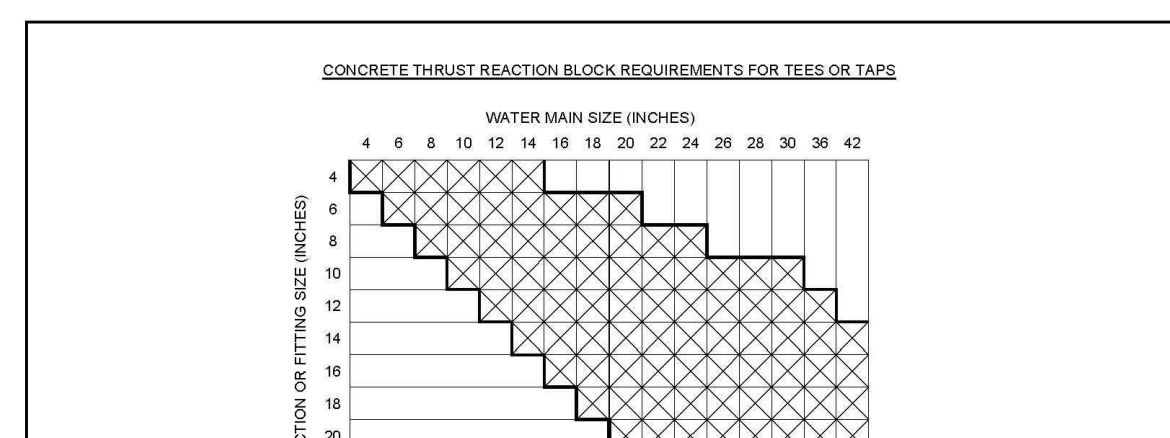
PIPE SIZE (IN)	TYPE OF FITTING	MINIMUM BEARING SURFACE AREA (SQ FT)	MINIMUM SURF. PRESS. (PSI)	MINIMUM SURF. PRESS. (PSI)	MINIMUM SURF. PRESS. (PSI)	MINIMUM SURF. PRESS. (PSI)	APPROXIMATE VOLUME (CU FT)	
12	11.25" BEND	4.75	2.76	2.76	0.46	1.30	0.20	0.25
12	22.5" BEND	9.25	0.94	0.94	0.04	1.00	0.20	0.25
12	45" BEND	18.00	0.40	0.40	0.00	1.00	0.20	0.25
12	TEE & DEAD END	23.00	0.42	0.42	0.00	1.00	0.20	0.25
16	11.25" BEND	6.00	2.00	2.00	0.44	1.30	0.20	0.25
16	22.5" BEND	16.50	0.47	0.47	0.06	1.30	0.20	0.25
16	45" BEND	31.00	0.27	0.27	0.00	1.30	0.20	0.25
16	TEE & DEAD END	40.00	0.19	0.19	0.00	1.30	0.20	0.25

**THRUST BLOCK DIMENSIONS AND VOLUMES - DIP (Maximum Static Pressure = 250 psi)**

PIPE SIZE (IN)	TYPE OF FITTING	MINIMUM BEARING SURFACE AREA (SQ FT)	MINIMUM SURF. PRESS. (PSI)	MINIMUM SURF. PRESS. (PSI)	MINIMUM SURF. PRESS. (PSI)	MINIMUM SURF. PRESS. (PSI)	APPROXIMATE VOLUME (CU FT)	
12	11.25" BEND	6.75	3.00	3.00	0.40	1.30	0.20	0.25
12	22.5" BEND	13.50	0.99	0.99	0.04	1.30	0.20	0.25
12	45" BEND	26.25	0.37	0.37	0.00	1.30	0.20	0.25
12	TEE & DEAD END	34.50	0.36	0.36	0.00	1.30	0.20	0.25
16	11.25" BEND	11.75	3.45	3.45	0.44	1.30	0.20	0.25
16	22.5" BEND	23.25	0.29	0.29	0.06	1.30	0.20	0.25
16	45" BEND	46.50	0.15	0.15	0.00	1.30	0.20	0.25
16	TEE & DEAD END	60.00	0.07	0.07	0.00	1.30	0.20	0.25

**CONCRETE THRUST REACTION BLOCKS** A4-2

Colorado Springs Utilities  
DATE: 06/20/14



**CONCRETE THRUST REACTION BLOCKS** A4-3

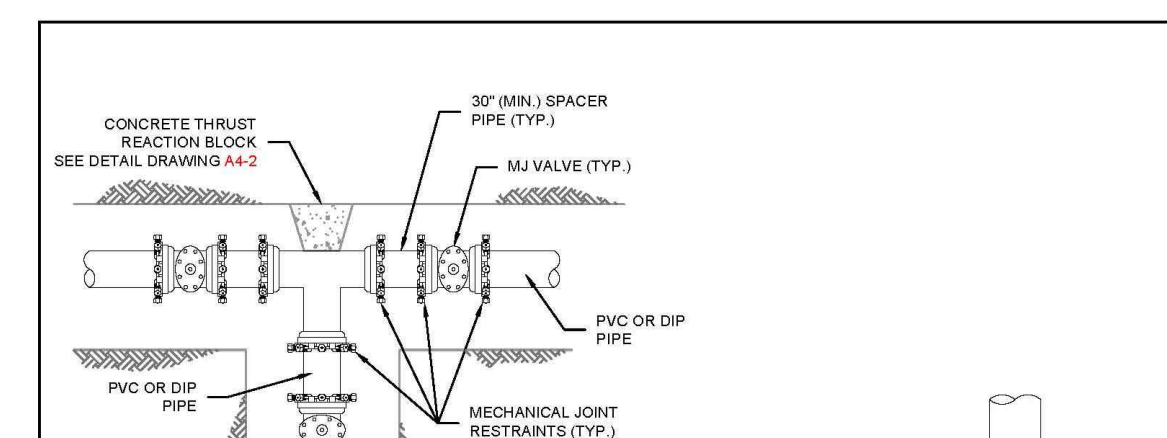
Colorado Springs Utilities  
DATE: 06/20/14

**L = MINIMUM RESTRAINED PIPE LENGTH (FEET)**

PIPE DIAMETER	45° BEND	22-1/2° BEND	11-1/4° BEND
6 INCH	100	100	100
8 INCH	120	120	120
12 INCH	150	150	150
16 INCH	200	200	200
20 INCH	250	250	250
24 INCH	300	300	300
30 INCH	350	350	350
36 INCH	400	400	400

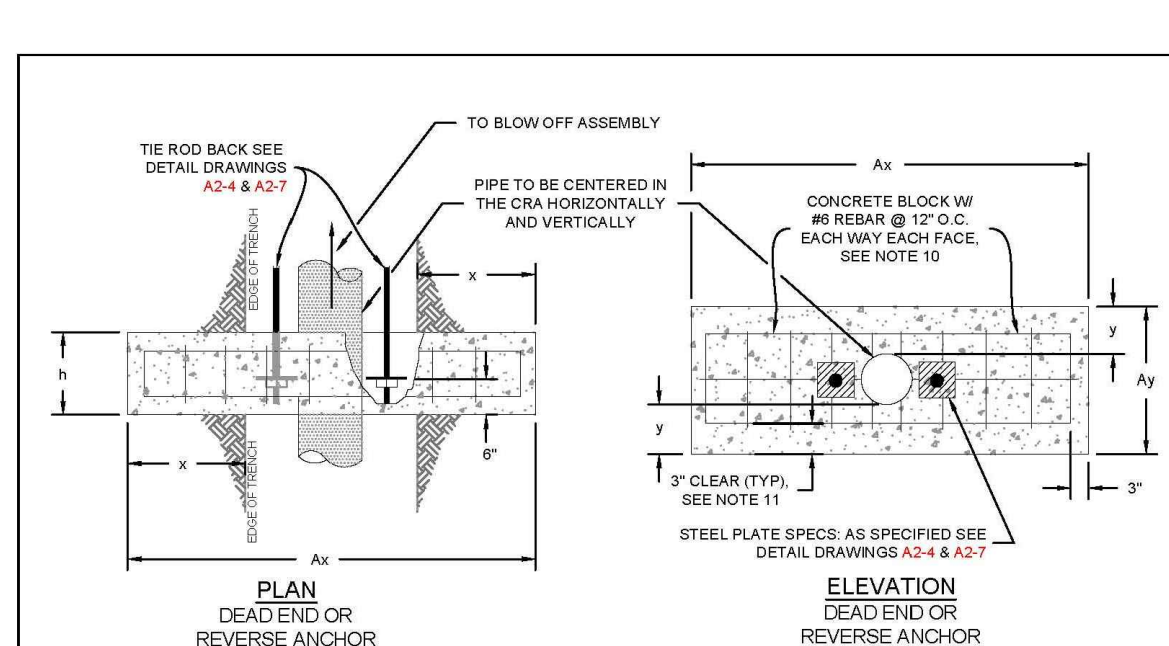
**RESTRAINED PIPE LENGTH (FEET) W/MECHANICAL JOINT RESTRAINTS** A4-4

Colorado Springs Utilities  
DATE: 06/20/14



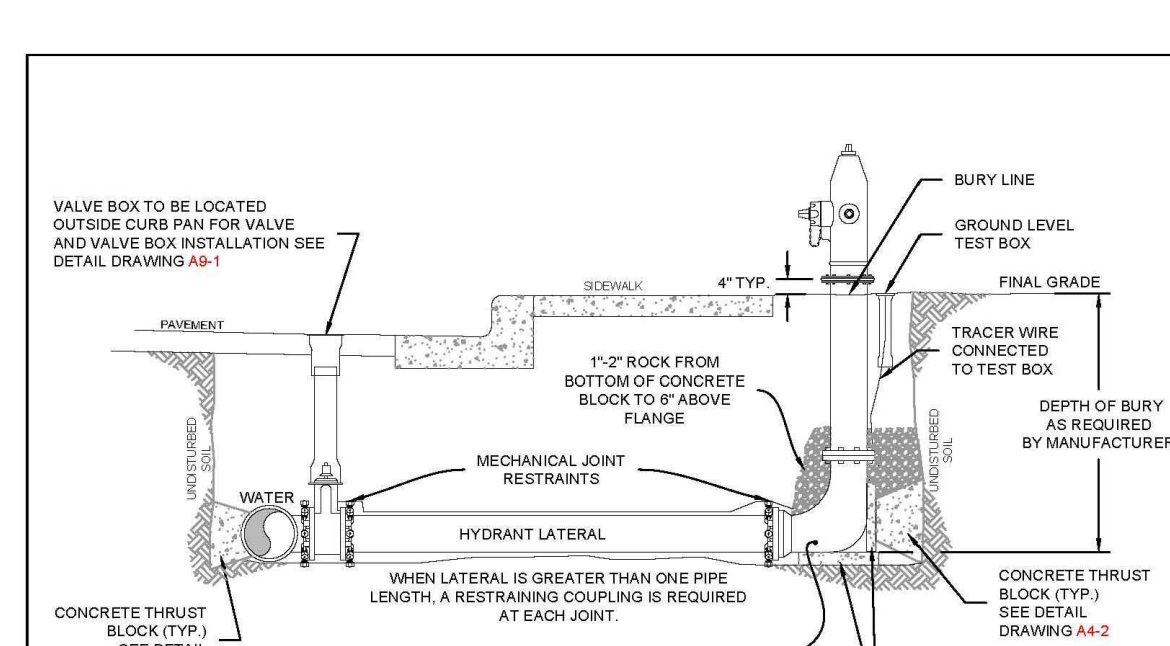
**VALVE AND FITTINGS W/ MECHANICAL JOINT RESTRAINTS** A4-5

Colorado Springs Utilities  
DATE: 06/20/14



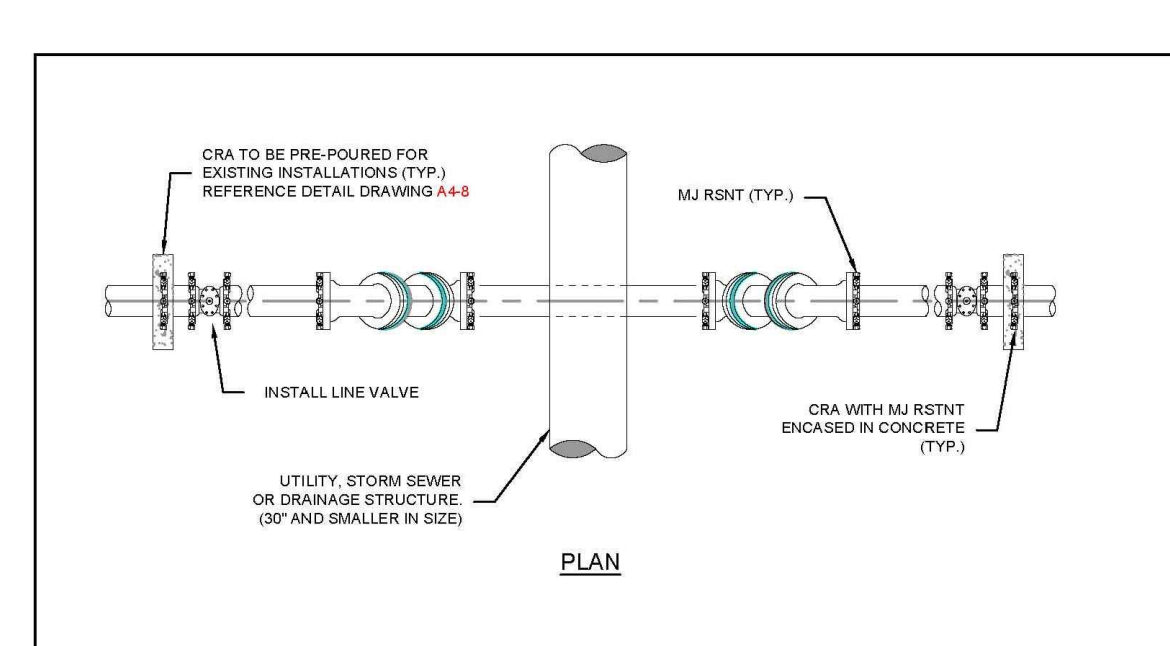
**CONCRETE REVERSE ANCHOR DIMENSIONS FOR THE ROD RESTRAINT** A4-7

Colorado Springs Utilities  
DATE: 06/20/14



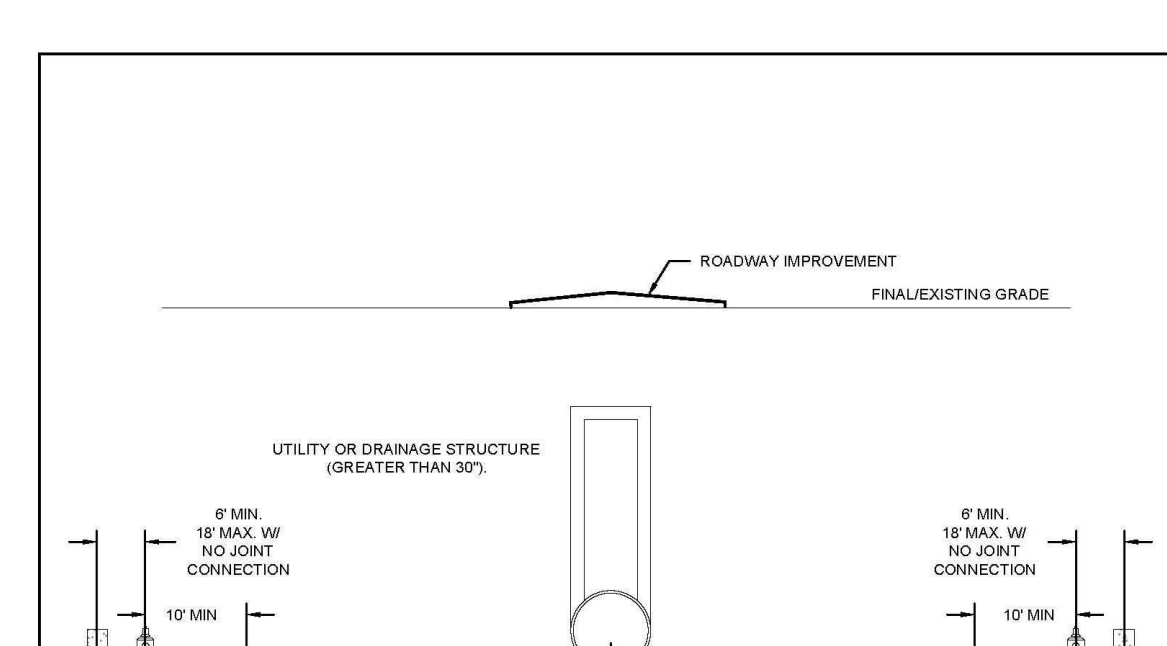
**FIRE HYDRANT INSTALLATION** A5-3

Colorado Springs Utilities  
DATE: 06/20/14



**LOWERING DETAIL UTILITY CROSSING 30° & SMALLER** A7-1

Colorado Springs Utilities  
DATE: 06/20/14



**LOWERING DETAIL W/ CASING UTILITY CROSSING GREATER THAN 30°** A7-2

Colorado Springs Utilities  
DATE: 06/20/14

PREPARED BY:  
DREXEL, BARRELL & CO.  
Engineers • Surveyors  
101 SAHAWATCH ST. #100  
COLORADO SPGS, COLORADO 80903  
CONTACT: TIM D. MCCONNELL, P.E.  
(719) 260-0857  
COLORADO SPRINGS • LAFAYETTE

CLIENT:  
FALCON LATIGO, LLC  
5350 S. ROSLYN ST. STE #400  
ENGLEWOOD, CO 80111-2125  
(303) 694-0862

PUBLIC UTILITY PLAN FOR:  
LATIGO TRAILS  
FILING NO. 10  
EL PASO COUNTY  
FALCON, COLORADO

ISSUE	DATE
INITIAL ISSUE	9/18/24

DESIGNED BY: TDM  
DRAWN BY: GES  
CHECKED BY: TDM  
FILE NAME: 21820-01DT2

PREPARED UNDER MY DIRECT SUPERVISION FOR AND BEHALF OF DREXEL, BARRELL & CO.

DRAWING SCALE:  
HORIZONTAL: N/A  
VERTICAL: N/A

DETAILS  
PROJECT NO. 21820-01CSCV  
DRAWING NO.

DT-1  
SHEET: 7 OF 8

