- 2. ALL WATER SYSTEM MAINS PIPE MATERIAL SHALL BE POLYVINAL CHLORIDE (PVC) CLASS 200 (DR-14) PER AWWA C-900 AND ASTM D241 SPECIFICATIONS, EXCEPT WHERE NOTED. SPECIFICALLY, SECTIONS OF WATER PIPE THAT CROSS UNDER MAJOR DRAINAGE WAYS OR MAJOR THOROUGHFARES SHALL BE DUCTILE IRON PIPE.
- 3. ALL FITTINGS SHALL BE CONSTRUCTED OF GRAY-IRON MATERIAL AND FURNISHED WITH MECHANICAL JOINT ENDS. ALL FITTINGS SHALL HAVE A MINIMUM PRESSURE RATING OF 250 PSI AND SHALL BE WRAPPED WITH A 9-MIL THICKNESS POLYETHYLENE MATERIAL PER AWWA STANDARD C105
- 4. ALL WATER PIPES SHALL BE INSTALLED WITH A MINIMUM COVER OF FIVE (5) FEET BELOW FINISHED GRADE.
- 5. ALL BENDS, TEES FIRE HYDRANTS, BLOW-OFF, AND PLUGS AT DEAD END MAINS SHALL BE INSTALLED WITH CONCRETE THRUST BLOCKS
- 6. VALVE BOXES SHALL BE TYLER SLIP; TYPE "C" CAST IRON VALVE BOX ASSEMBLY SERIES 6860 WITH NO. 160 OVAL BASE OR APPROVED EQUAL.
- 7. ALL WATER SYSTEM COMPONENTS SHALL BE FLUSHED AND CHLORINATED PER AWWA C-601, "DISINFECTING WATER MAINS" PRIOR TO ACCEPTANCE. THE CONTRACTOR SHALL PRODUCE A 25 MG/L SOLUTION BY ADHERING CHLORINE TABLETS TO THE PIPE SECTION WITH PERMATEX CLEAR TRV INSIDE THE SYSTEM. CHLORINATION SHALL OCCUR PRIOR TO HYDROSTATIC TESTING. THE CONTRACTOR SHALL OBTAIN A BACTERIOLOGICAL SAMPLE AFTER THE SYSTEM HAS BEEN FLUSHED. A CLEAN BACTERIOLOGICAL SAMPLE MUST BE OBTAINED PRIOR TO THE SYSTEM BEING PLACED INTO
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- 10. WHEN IT IS NECESSARY TO RAISE OR LOWER WATER MAINS AT OTHER UTILITY CROSSINGS THE CONTRACTOR SHALL INSURE A MINIMUM CLEARANCE OF 18" WHERE POSSIBLE BETWEEN THE OUTSIDE DIAMETERS OF PIPES.
- 11. WHILE CONSTRUCTING THE WATER AND WASTE WATER SYSTEM THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT LEAST ONE "APPROVED FOR CONSTRUCTION" SET OF UPDATED PLANS AT ALL TIMES. APPROVED FIELD MODIFICATIONS TO THE PLAN SETS SHALL BE CLEARLY IDENTIFIED IN RED INK ON THE PLANS BY THE CONTRACTOR PER FIELD CONSTRUCTION. THESE AS-BUILT CHANGES SHALL BE DATED AND SUBMITTED TO THE ENGINEER OF RECORD. THE ENGINEER OF RECORD SHALL PREPARE A COMPLETE SET OF "AS CONSTRUCTED" DRAWINGS AND DELIVER THE SETS TO THE CHEROKEE METROPOLITAN DISTRICT PRIOR TO FINAL ACCEPTANCE OF THE WATER SYSTEM.
- 12. PRIOR TO TAPPING ANY EXISTING WATER MAIN THE CONTRACTOR SHALL SUBMIT AND RECEIVE APPROVAL FOR SAID TAP IN ACCORDANCE WITH THE CHEROKEE METROPOLITAN DISTRICT STANDARDS.
- 13. ALL NONMETALLIC PIPES SHALL HAVE TRACER WIRE ATTACHED TO ITS TOP DURING CONSTRUCTION. THE TRACER WIRE SHALL BE #12 AWG INSULATED COPPER WIRE WITH NO. 12 COPPER CONNECTIONS AND SHALL BE PERMANENTLY AFFIXED TO THE TOP OF THE PIPE USING TAPE AT 4' INTERVALS. TRACER WIRE SHALL BE JOINED 3-WAY OR 4-WAY LOCKABLE MECHANICAL CONNECTORS SPECIFICALLY MANUFACTURED FOR USE IN UNDERGROUND TRACER WIRE INSTALLATIONS. NON-LOCKING FRICTION FIT, TWIST-ON, OR TAPED CONNECTIONS ARE NOT PERMITTED. THE TRACER WIRE SHALL ALSO BE CORROSION BY EPOXY OR SILICON COATING. ROUTE TRACER WIRES TO SURFACE AT ALL VALVE BOXES.
- 14. THE CONTRACTOR ASSUMES RESPONSIBILITY FOR THE PROTECTION OF ALL UTILITIES DURING THE WORK. PRIOR TO EXCAVATION, CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO AT (800) 922-1987 AT LEAST TWO WORKING DAYS PRIOR TO DIGGING.
- 15. SANITARY SEWER PIPE SHALL CONFORM TO ASTM D3034 SDR35 PVC.
- 16. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING INVERTS PRIOR TO INSTALLATION OF NEW SANITARY SEWER SYSTEM.
- 17. ALL SANITARY SEWER MANHOLES, LIDS, BASES AND OTHER APPURTENANCES SHALL BE IN ACCORDANCE WITH CHEROKEE METROPOLITAN DISTRICT STANDARD MANHOLE DETAILS (5' MIN DIAMETER). EXCEPT AS NOTED ON THESE PLANS. WHERE REQUIRED ON THESE PLANS, WATER TIGHT MANHOLES, LIDS AND CONNECTIONS SHALL BE PROVIDED BY COLORADO SPRINGS STANDARDS. ALL NEW MANHOLES (IF ANY) SHALL BE COATED & LINED PER CMD STANDARDS.
- 18. SANITARY SEWER SERVICE LINES SHALL BE LOCATED PER THE DETAIL ON THE UTILITY SERVICE PLAN, OR AT THE DIRECTION OF THE INSPECTOR.
- 19. OVERLOT GRADING AND STREET SUB-GRADE MUST BE WITHIN +/\_ ONE (1) FOOT PRIOR TO ANY UTILITY INSTALLATION.
- 20. TRACER WIRE IS TO BE INSTALLED WITH ALL SANITARY SEWER MAIN LINES AND SERVICES (FROM THE MAIN LINE TO THE BUILDING STRUCTURE). AS OUTLINED IN COMMENT #13.
- 21. MINIMUM DEPTH OF SANITARY SEWER IS 6 FEET OF COVER. THE FOLLOWING ALLOWABLE DEPTH RULES APPLY FOR BURY DEPTHS BETWEEN 1' AND 30' IN CONSIDERATION OF THE MINIMUM DEPTH SHALL BE APPLIED: (SEE CSU WASTEWATER LESS 2.5.B FOR MORE INFORMATION)
- DEPTH GREATER THAN 4 FEET (AND LESS THAN 20'): MATERIAL TYPE DR 11 HDPE
- DEPTH BETWEEN 2 & 4 FEET (AND UP TO 20 FEET): MATERIAL TYPE SDR 26 OR SDR 35 PVC/PS 46
- DEPTH BETWEEN 1 & 2 FEET (AND BETWEEN 20 & 30 FEET): MATERIAL TYPE DIP.
- 22. WATER SERVICE MUST BE OVER THE SEWER AT ALL TIMES (MINIMUM 18" INCHES) OTHERWISE STEEL CASING MUST BE USED, SEWER SERVICE PIPE LOCATED WITHIN ONE FOOT OF THE WATER SERVICE LINE MUST BE CONSTRUCTED WITH SCH 40 PIPE OR DIP.
- 23. ALL EXTERIOR SEWER CLEAN OUTS (CO) MUST HAVE A CAST IRON, TRAFFIC RATED COVER, OR EQUIVALENT CONCRETE COLLAR.
- 24. UPON COMPLETION OF CONSTRUCTION AND PRIOR TO ACCEPTANCE BY THE DISTRICT, TWO (2) COPIES OF "AS-CONSTRUCTED" PLANS AND TWO (2) SETS OF ELECTRONIC DATA FILES OF THE PLANS SHALL BE SUBMITTED TO THE DISTRICT FOR RECORD.
- a. THE TWO (2) COPIES SHALL BE COMPLETE WITH ALL "AS-CONSTRUCTED" INFORMATION TOGETHER WITH A CERTIFICATION BY THE PARTY RESPONSIBLE FOR CONSTRUCTION THAT ALL DATA THEREON IS ACCURATE AND REPRESENTS ACTUAL CONSTRUCTED CONDITIONS.
- b. THE TWO PLAN SETS SHALL BE SUBMITTED ON SHEETS THAT ARE 22" X 34" IN SIZE.
- c. THE PLAN SET SHALL BE ON A DURABLE MEDIA THAT CAN BE RUN THROUGH PHOTOCOPYING EQUIPMENT.
- d. THE TWO ELECTRONIC DATA FORMATS SHALL BE SUBMITTED. THE FIRST ELECTRONIC DATA FILE SET SHALL BE IN AUTOCAD 2006 OR NEWER FORMAT WITH NO EXTERNAL REFERENCE DRAWINGS. ALL EXTERNAL REFERENCES MUST BE BOUND INTO THE DRAWING SET. THE SECOND SET OF ELECTRONIC DATA FILES SHALL BE IN ADOBE ACROBAT .PDF FORMAT.
- e. "AS-CONSTRUCTED" PLANS SHALL BE SUBMITTED WITHIN TWO WEEKS OF COMPLETION OF THE WATER AND/OR SANITARY SEWER UTILITIES.
- f. NO AUTHORIZATION TO CONNECT TO THE SYSTEM OR DISCHARGE TO THE SYSTEM WILL BE ALLOWED UNTIL THE "AS-CONSTRUCTED" DOCUMENTS HAVE BEEN RECEIVED AND ACCEPTED BY THE DISTRICT.
- g. ALL PLANS, SPECIFICATIONS AND SUPPORTING DOCUMENTS SHALL BE PREPARED BY OR UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF COLORADO. ALL PLANS AND SPECIFICATIONS SHALL BEAR THE SEAL AND SIGNATURE OF SAID LICENSED PROFESSIONAL ENGINEER.

## WATER INSTALLATION CORROSION CONTROL REQUIREMENTS

REQUIRED, DESCRIBED AS FOLLOWS: PROVIDE CATHODIC PROTECTION & WRAP ALL METAL JOINTS, VALVES, PIPES AND HYDRANTS

### **BENCHMARKS:**

- 1. FIMS MONUMENT F81, LOCATED ON THE NORTH SIDE OF EAST PLAT AVE. 50' WEST OF FORD STREET. ELEV.=6275.86' (NAVD88)
- MUELLER BOLT ON HYDRANT FLANGE, HYDRANT LOCATED AT THE SW CORNER OF LOT 3. ELEV.=6265.48' (NAVD88)

### BASIS OF BEARINGS

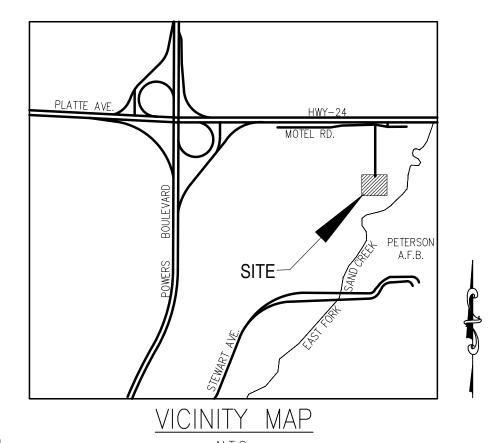
THE EASTERLY LINE OF LOTS 2 AND 3, OF "CLEARWAY NO 2" PLAT NO 10231 OF THE RECORDS OF EL PASO COUNTY, COLORADO, BEING MONUMENTED AT THE SOUTH END BY A 1.5" ALUMINUM CAP STAMPED PLS 38658, FROM WHICH A NAIL & WASHER, EL: 6267.44 BEARS N00°00'00"W, A DISTANCE OF 300.02 FEET.

# CLEARWAY, LOT 5

COUNTY OF EL PASO, STATE OF COLORADO

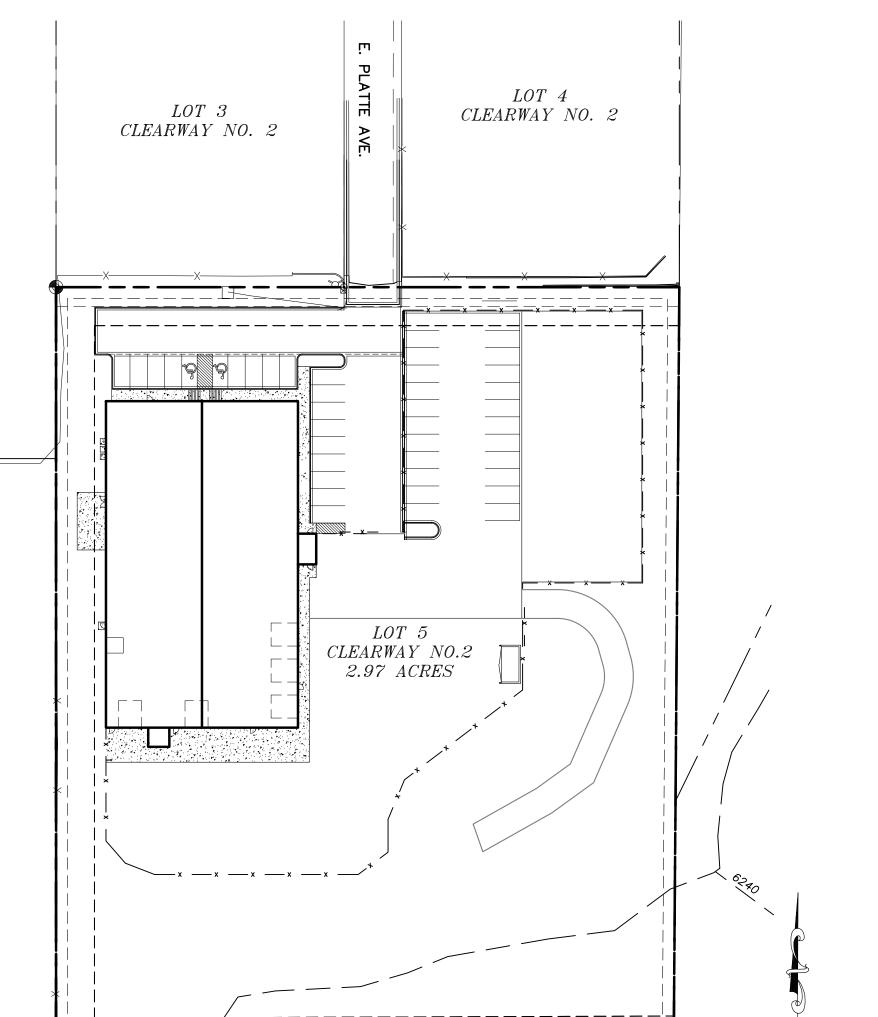
# WATER PLANS (INCLUDING UTILITY SERVICE PLAN)

**JUNE 2023** 



### SHEET INDEX

SHEET 1 TITLE SHEET SHEET 2 PLAN & PROFILE (INCLUDING UTILITY SERVICES) DETAILS



**AGENCIES:** 

CIVIL ENGINEER:

WATER RESOURCES:

FIRE DISTRICT

OWNER/DEVELOPER: WIRENUT HOME SERVICES 6395 E PLATTE AVE.

COLORADO SPRINGS, CO 80915 TRENT URBAN (719) 227-0500

48 HRS BEFORE YOU DIG M & S CIVIL CONSULTANTS, INC. 212 N. WAHSATCH, SUITE 305 CALL 1-800-922-1987 COLORADO SPRINGS, CO 80903 VIRGIL A. SANCHEZ P.E. (719) 955-5485

COUNTY ENGINEERING: EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, CO 80910

(719) 520-6300

TRAFFIC ENGINEERING: EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS 3275 AKERS DRIVE

> COLORADO SPRINGS, CO 80922 JOSHUA PALMER, P.E. (719) 520-6460

CHEROKEE METROPOLITAN DISTRICT

6250 PALMER PARK BOULEVARD COLORADO SPRINGS, CO 80915-1721

JEFF MUNGER (719) 597-5080

CIMARRON HILLS FIRE DEPARTMENT 1835 TUSKEGEE PLACE

COLORADO SPRINGS, CO 80915 (719) 591-0960

GAS DEPARTMENT COLORADO SPRINGS UTILITIES 7710 DURANT DR.

COLORADO SPRINGS, CO 80947 TIM WENDT (719) 668-3556

**ELECTRIC DEPARTMENT:** COLORADO SPRINGS UTILITIES 7710 DURANT DR.

> COLORADO SPRINGS, CO 80947 TIM WENDT (719) 668-3556

**COMMUNICATIONS:** QWEST COMMUNICATIONS (U.N.C.C. LOCATORS) (800) 922-1987 AT&T (LOCATORS) (719) 635-3674

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLANS HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE CHEROKEE METROPOLITAN DISTRICT. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS REPORT.

VIRGIL A. SANCHEZ, COLORADO P.E. #37160 FOR AND ON BEHALF OF M & S CIVIL CONSULTANTS, INC.

# CHEROKEE METROPOLITAN DISTRICT WATER & WASTEWATER

THE CHEROKEE METROPOLITAN DISTRICT RECOGNIZES THE DESIGN PROFESSIONAL OF RECORD AS THE LICENSED ENGINEER HAVING RESPONSIBILITY FOR THE SUBMITTED DESIGN AND THE DISTRICT HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY. AS SUCH. THE APPROVAL GRANTED HEREIN IS FOR THE CONSTRUCTION OF THE FACILITIES AS REPRESENTED ON THESE DOCUMENTS. APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE BELOW AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

APPROVED BY:

CIMARRON HILLS FIRE DEPARTMENT

ACCORDING TO THE MODELED CALCULATIONS REVIEWED BY THE GOVERNING WATER DISTRICT AND/OR COLORADO REGISTERED CIVIL ENGINEER/DESIGNER: THE THEORETICAL AVAILABLE FIRE FLOW AT NODE "FH-1" IS 2000 GPM UNDER MAXIMUM DAILY DEMAND CONDITIONS AT 28.3PSI RESIDUAL. THE ACTUAL FIRE FLOW MAY VARY DUE TO VARIOUS PARAMETERS. UPON DETAILED REVIEW OF THE AVAILABLE WATER SUPPLY, FIRE HYDRANT LOCATIONS AND HOSE LAY DISTANCES, THESE PLANS ARE HEREBY CONSIDERED

FIRE DEPARTMENT SIGNATURE: \_\_\_\_

## OWNER/DEVELOPER'S STATEMENT:

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

DANNY MIENTKA (MANAGER) COLORADO SPRINGS EQUITIES LLC

## EL PASO COUNTY

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

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND ENGINEERING CRITERIA MANUAL AS AMENDED.

IN ACCORDANCE WITH 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 DIRECTORS DISCRETION.

JOSHUA PALMER, P.E. COUNTY ENGINER / ECM ADMINISTRATOR

FOR LOCATING & MARKING ELECTRIC WATER & **TELEPHONE** 

FOR BURIED UTILITY INFORMATION

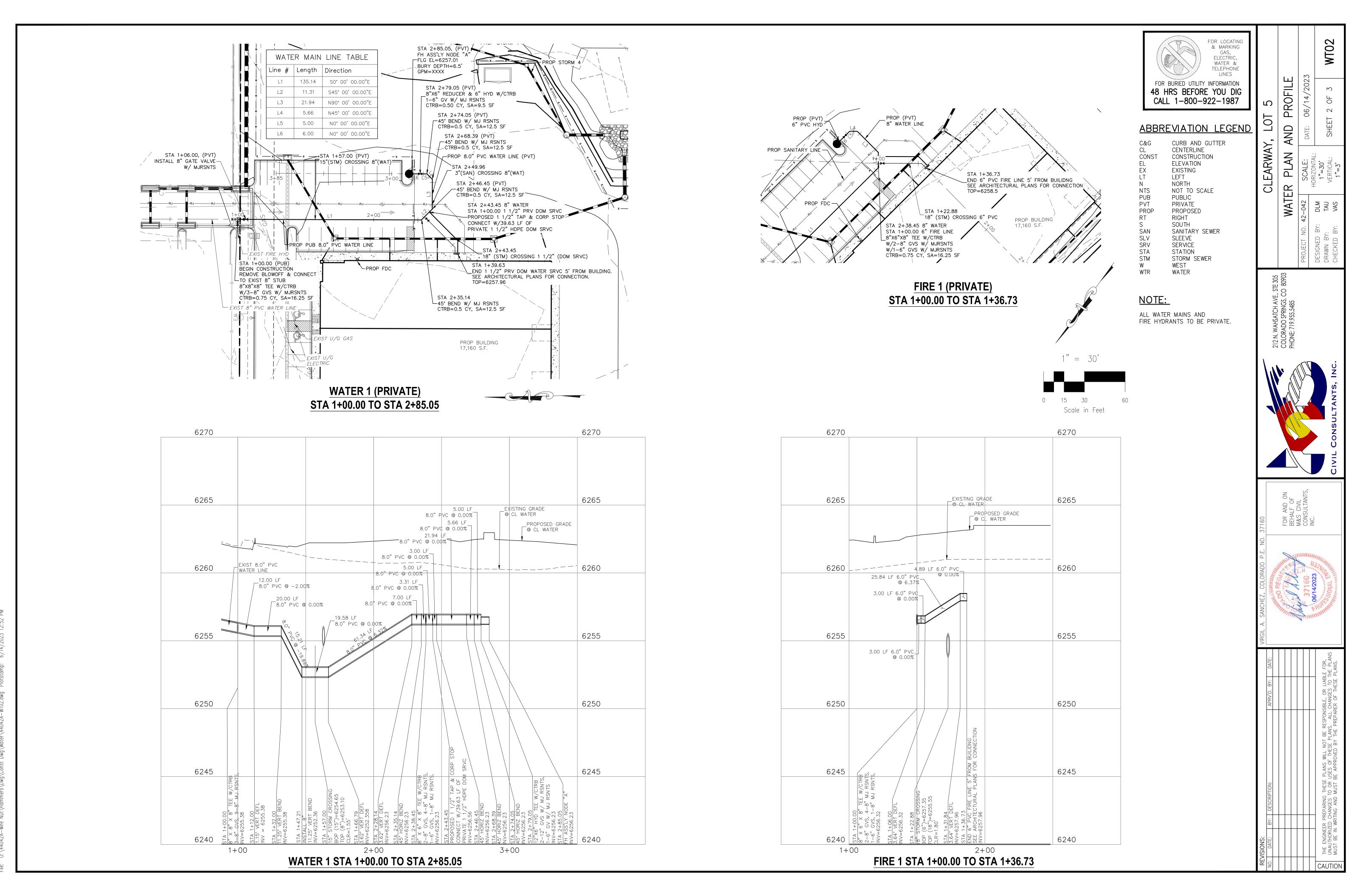
LOT

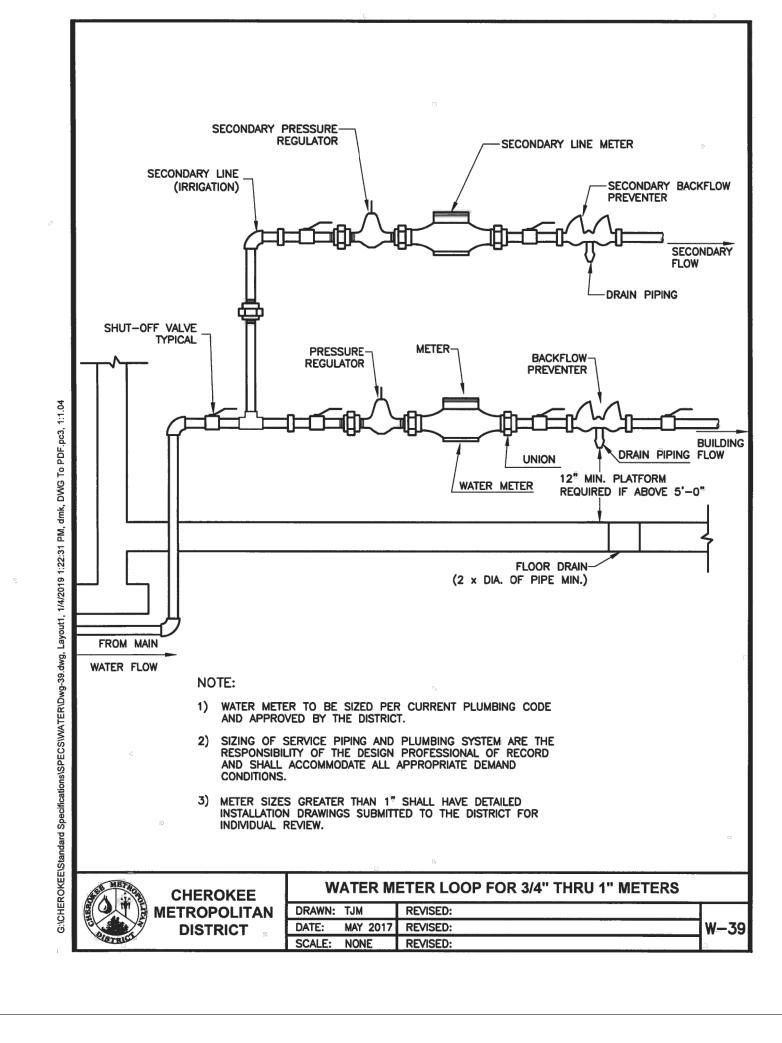
CLEARWAY,

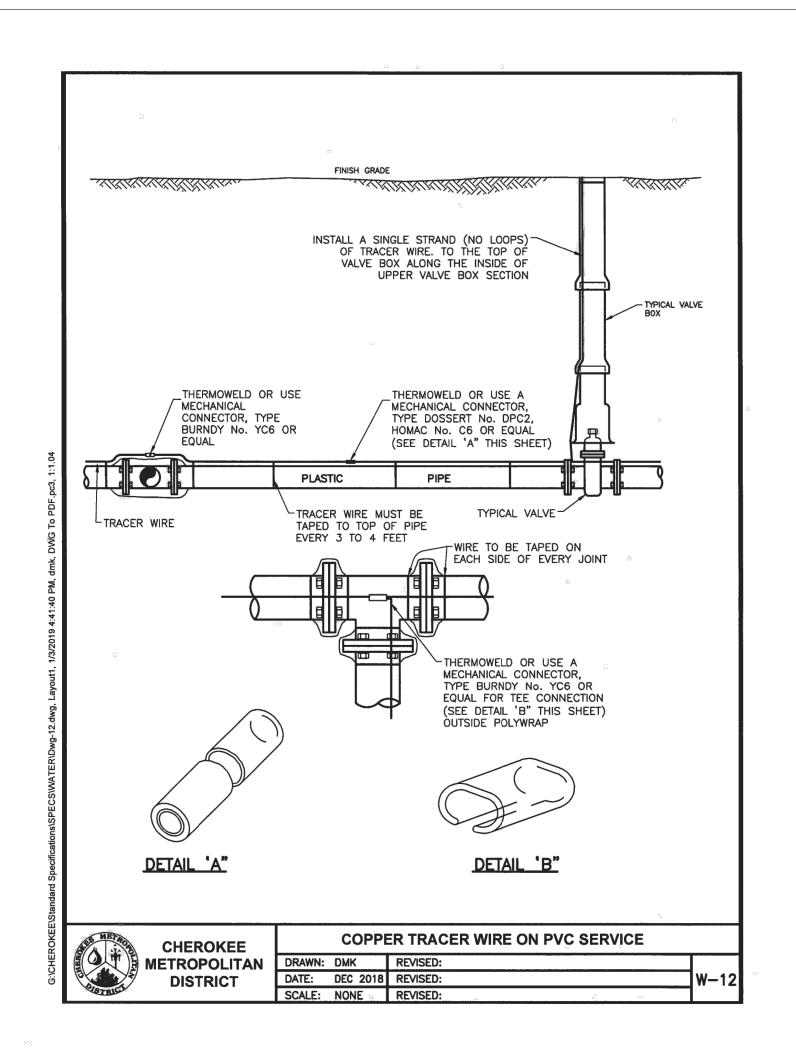


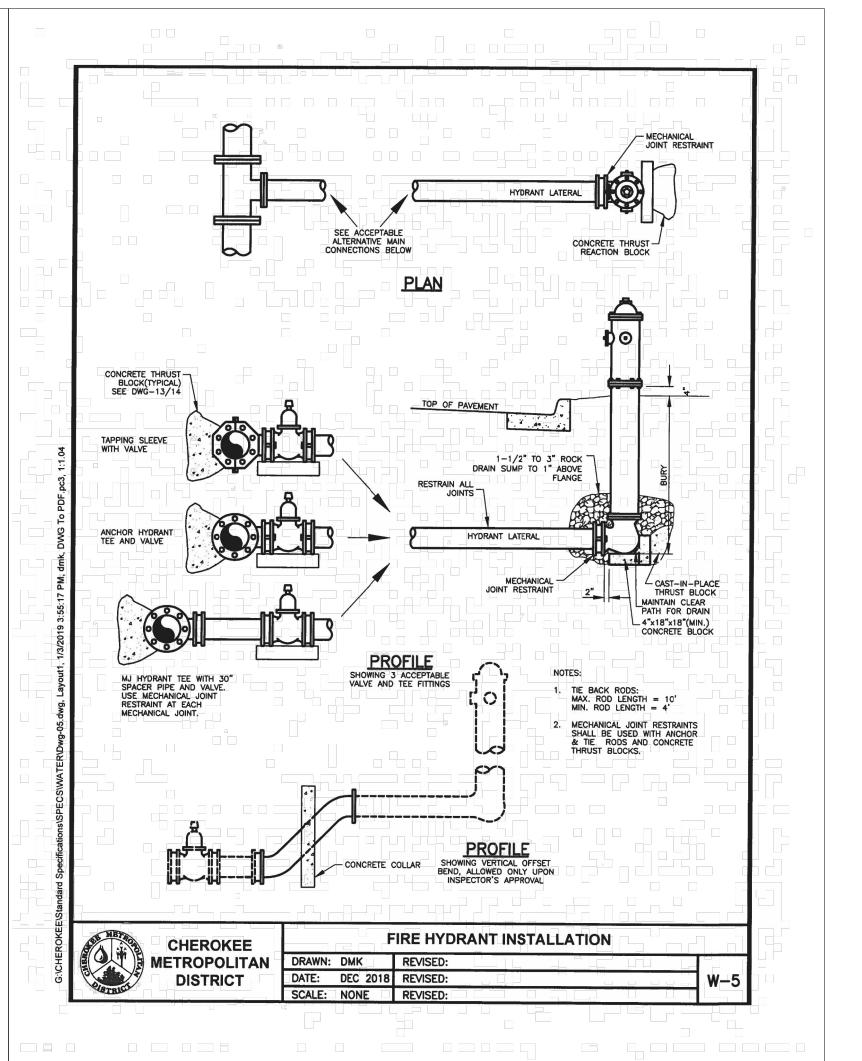


EAST FORK SAND CREEK











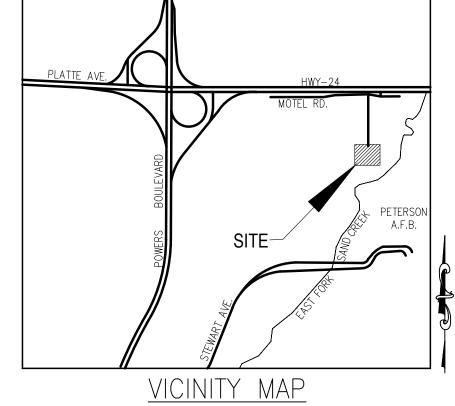
5 LOT DE CLEARWAY,

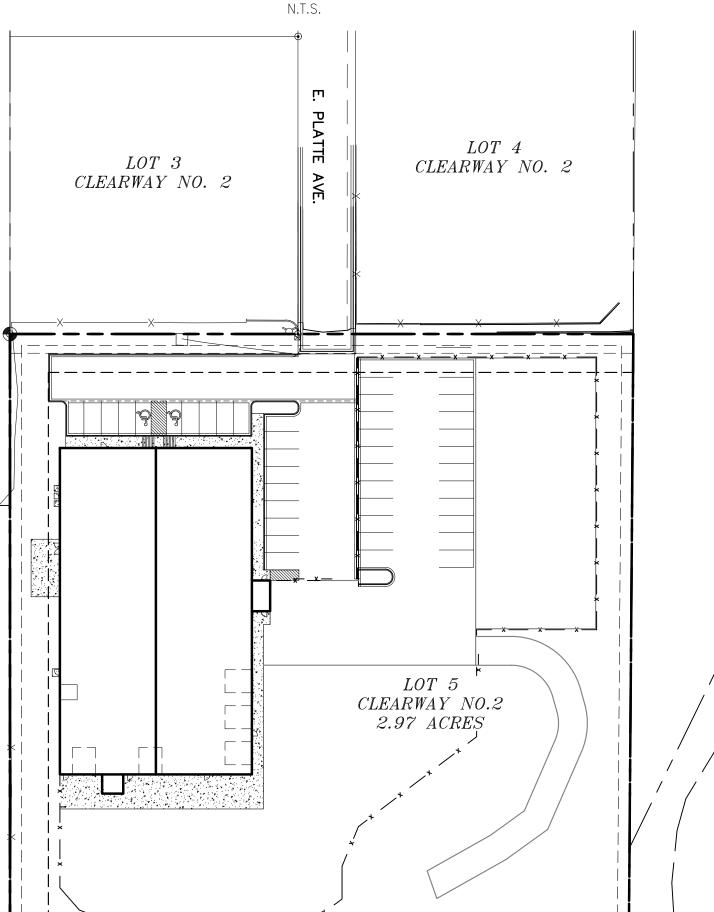
# CLEARWAY, LOT 5

COUNTY OF EL PASO, STATE OF COLORADO

# SANITARY SEWER PLAN ~ FORCE MAIN

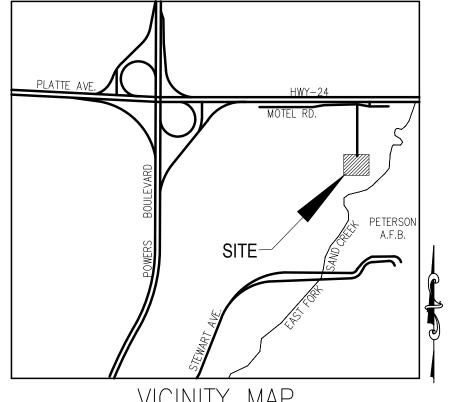
**JUNE 2023** 





\_\_\_\_\_\_

EAST FORK SAND CREEK



VIRGIL A. SANCHEZ, COLORADO P.E. #37160

# PRIVATE MAIN EXTENSIONS WATER STATEMENTS

WIRENUT HOME SERVICES 6395 E PLATTE AVE.

COLORADO SPRINGS, CO 80915

TRENT URBAN (719) 227-0500

20 BOULDER CRESCENT, ST 110

CHEROKEE METROPOLITAN DISTRICT

6250 PALMER PARK BOULEVARD COLORADO SPRINGS, CO 80915-1721

CIMARRON HILLS FIRE DEPARTMENT

U.S. WEST COMMUNICATIONS (LOCATORS)

COLORADO SPRINGS, CO 80915

COLORADO SPRINGS, CO 80903

MS CIVIL CONSULTANTS, INC

VIRGIL A. SANCHEZ, P.E.

1835 TUSKEGEE PLACE

719-491-0818

JEFF MUNGER 719-597-5080

719-591-0960

800-922-1987

AT&T (LOCATORS)

719-635-3674

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE

ESTABLISHED BY THE CHEROKEE METROPOLITAN DISTRICT. I ACCEPT

AND BELIEF. SAID PLANS HAS BEEN PREPARED ACCORDING TO THE CRITERIA

RESPONSIBILITY FOR ANY LIABILITY CAUSED BY NEGLIGENT ACTS, ERRORS OR

THE UNDERSIGNED OWNER/DEVELOPER AGREES THAT THE INSTALLATION OF THESE PROPOSED WATER FACILITIES WILL BE MAKE IN ACCORDANCE WITH CHEROKEE METROPOLITAN DISTRICT SPECIFICATIONS AND SHALL PROVIDE A MINIMUM OF 5 FET AND A MAXIMUM OF 6 FEET OF COVER OVER THE WATER MAIN(S). THE UNDERSIGNED UNDERSTANDS THAT ALL WATER INSTALLATION PLAN SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE MAINTAINED BY THE OWNER.

OWNER / DEVELOPER WATER PLAN APPROVAL SIGNED BY: CHEROKEE METROPOLITAN DISTRICT APPROVAL EXPIRES ONE YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR

REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

### FIMS MONUMENT F81, LOCATED ON THE NORTH SIDE OF EAST PLAT AVE. 50' WEST OF FORD STREET.

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### BASIS OF BEARINGS

ELEV.=6275.86' (NAVD88)

**BENCHMARKS:** 

CONTACTS

OWNER/DEVELOPER:

WATER AND WASTEWATER

CIVIL ENGINEER

FIRE DEPARTMENT

TELEPHONE COMPANY

ENGINEER'S STATEMENT

OMISSIONS ON MY PART IN PREPARING THIS REPORT.

FOR AND ON BEHALF OF M & S CIVIL CONSULTANTS, INC.

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SHEET 1 TITLE SHEET SHEET 2 SANITARY SEWER ~ FORCE MAIN PLAN & PROFILE SHEET 3 DETAILS

TELEPHONE FOR BURIED UTILITY INFORMATION 48 HRS BEFORE YOU DIG CALL 1-800-922-1987

ORCE LOT

& MARKING

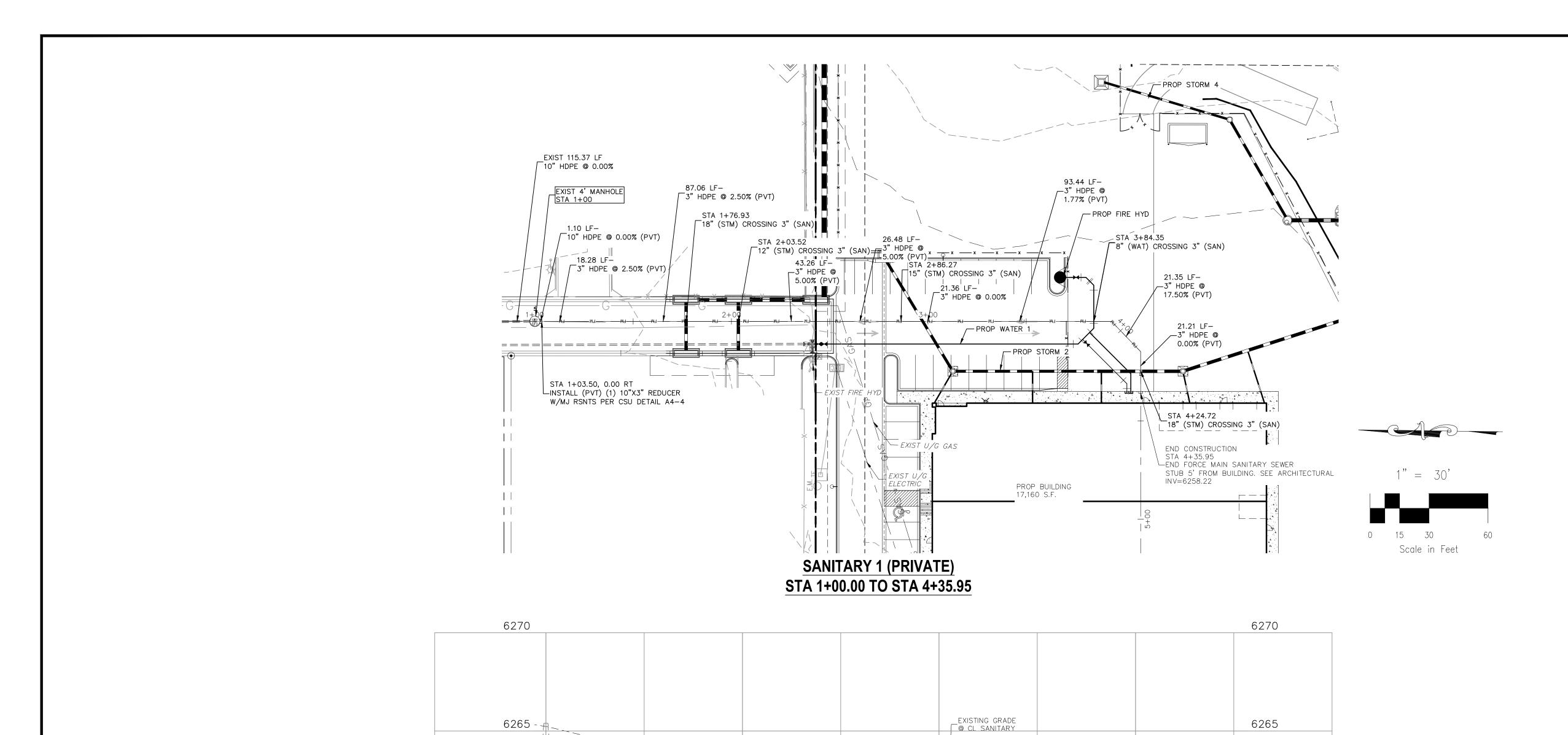
WATER &

CLEARWAY,



# WATER AND SANITARY SEWER SERVICE INSTALLATIONS GENERAL NOTES:

- 1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE CHEROKEE METROPOLITAN DISTRICT STANDARDS AND THE CITY OF COLORADO SPRINGS CONSTRUCTION STANDARDS UNLESS OTHERWISE NOTED. IN THE EVENT OF CONFLICTING STANDARDS CHEROKEE METROPOLITAN DISTRICT STANDARDS SHALL GOVERN.
- 2. ALL WATER SYSTEM MAINS PIPE MATERIAL SHALL BE POLYVINAL CHLORIDE (PVC) CLASS 200 (DR-14) PER AWWA C-900 AND ASTM D241 SPECIFICATIONS, EXCEPT WHERE NOTED. SPECIFICALLY, SECTIONS OF WATER PIPE THAT CROSS UNDER MAJOR DRAINAGE WAYS (SAND CREEK) OR MAJOR THOROUGHFARES SHALL BE DUCTILE IRON PIPE.
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- 21. MINIMUM DEPTH OF SANITARY SEWER IS 6 FEET OF COVER, IF THIS MINIMUM CANNOT BE ACHIEVED DUE TO SHALLOW SEWER STUB THEN THE FOLLOWING APPLIES: OTHERWISE THE SEWER SERVICE MUST HAVE 6 FEET OF COVER:
- DEPTH GREATER THAN 6 FEET: MATERIAL TYPE SDR 35
- DEPTH BETWEEN 4 FEET AND 6 FEET: MATERIAL TYPE SCH 40 OR CAST IRON (CIP) DEPTH LESS THAN 4 FEET: MATERIAL TYPE SCH 40 OR CIP WITH CONCRETE CAP.
- 22. WATER SERVICE MUST BE OVER THE SEWER AT ALL TIMES (MINIMUM 18" INCHES) OTHERWISE STEEL CASING MUST BE USED, SEWER SERVICE PIPE LOCATED WITHIN ONE FOOT OF THE WATER SERVICE LINE MUST BE CONSTRUCTED WITH SCH 40 PIPE OR
- 23. ALL EXTERIOR SEWER CLEAN OUTS (CO) MUST HAVE A CAST IRON, TRAFFIC RATED COVER, OR EQUIVALENT CONCRETE COLLAR.
- 24. UPON COMPLETION OF CONSTRUCTION AND PRIOR TO ACCEPTANCE BY THE DISTRICT, TWO (2) COPIES OF "AS-CONSTRUCTED" PLANS AND TWO (2) SETS OF ELECTRONIC DATA FILES OF THE PLANS SHALL BE SUBMITTED TO THE DISTRICT FOR RECORD.
- a. THE TWO (2) COPIES SHALL BE COMPLETE WITH ALL "AS-CONSTRUCTED" INFORMATION TOGETHER WITH A CERTIFICATION BY THE PARTY RESPONSIBLE FOR CONSTRUCTION THAT ALL DATA THEREON IS ACCURATE AND REPRESENTS ACTUAL CONSTRUCTED
- b. THE TWO PLAN SETS SHALL BE SUBMITTED ON SHEETS THAT ARE 24" X 36" IN SIZE. c. THE PLAN SET SHALL BE ON A DURABLE MEDIA THAT CAN BE RUN THROUGH PHOTOCOPYING EQUIPMENT.
- d. THE TWO ELECTRONIC DATA FORMATS SHALL BE SUBMITTED. THE FIRST ELECTRONIC DATA FILE SET SHALL BE IN AUTOCAD 2006 OR NEWER FORMAT WITH NO EXTERNAL REFERENCE DRAWINGS. ALL EXTERNAL REFERENCES MUST BE BOUND INTO THE DRAWING SET. THE SECOND SET OF ELECTRONIC DATA FILES SHALL BE IN ADOBE ACROBAT .PDF FORMAT.
- e. "AS-CONSTRUCTED" PLANS SHALL BE SUBMITTED WITHIN TWO WEEKS OF COMPLETION OF THE WATER AND/OR SANITARY SEWER
- f. NO AUTHORIZATION TO CONNECT TO THE SYSTEM OR DISCHARGE TO THE SYSTEM WILL BE ALLOWED UNTIL THE "AS-CONSTRUCTED" DOCUMENTS HAVE BEEN RECEIVED AND ACCEPTED BY THE DISTRICT.
- g. ALL PLANS, SPECIFICATIONS AND SUPPORTING DOCUMENTS SHALL BE PREPARED BY OR UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF COLORADO. ALL PLANS AND SPECIFICATIONS SHALL BEAR THE SEAL AND SIGNATURE OF SAID LICENSED PROFESSIONAL ENGINEER.



1.10 LF / 10" HDPE @ 0.00% 18.28 LF / 3" HDPE @ -2.50%

6255

6250

6245

1+00



FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE

FOR BURIED UTILITY INFORMATION 48 HRS BEFORE YOU DIG CALL 1-800-922-1987

## ABBREVIATION LEGEND

SUTTER WER SRV STA STM SERVICE STATION

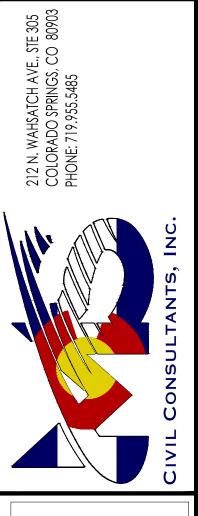
ALL STORM SEWER TO BE PRIVATE.

| ARRK  | <u>EVIATION</u> |
|-------|-----------------|
|       |                 |
| C&G   | CURB AND GU     |
| CL    | CENTERLINE      |
| CONST | CONSTRUCTION    |
| EL    | ELEVATION       |
| EX    | EXISTING        |
| LT    | LEFT            |
| N     | NORTH           |
| NTS   | NOT TO SCALE    |
| PUB   | PUBLIC          |
| PVT   | PRIVATE         |
| PROP  | PROPOSED        |
| RT    | RIGHT           |
| S     | SOUTH           |
| SAN   | SANITARY SEW    |
| SLV   | SLEEVE          |
| SEV   | SEE VE          |

STORM SEWER WEST WATER WTR

## NOTE:

CONTRACTOR TO CROSS REFERENCE DETAILED GRADING PLANS TO VERIFY TOP OF BOX OR GRATE ELEVATIONS



FORCE

LOT

CLEARWAY,



| $\geq$     |          |           |  |        |            |           |
|------------|----------|-----------|--|--------|------------|-----------|
| ٦.<br>آبه  |          | 0         | No.  | 35556  | (IIII)     |           |
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| COLORADO   | WHITE OF | 10 G/G    | 7  | 160    | /2023      | 30,000    |
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| ď.         |          |           | 10   | 1      | Alt.       |           |
| VIRGIL A   |          |           |  |        |            |           |
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|  |  |  | ILE FOR,<br>THE PLANS<br>PLANS.   |
|--|--|--|---|
|  |  |  | SIBLE, OR LIAB<br>CHANGES TO<br>RER OF THESE  |
|  |  |  | JT BE RESPON'<br>: PLANS. ALL<br>3Y THE PREPAF  |
|  |  |  | PLANS WILL NOT BE RESPONSIBLE, OR LIABLE FOR,<br>USES OF THESE PLANS. ALL CHANGES TO THE PLANS<br>BE APPROVED BY THE PREPARER OF THESE PLANS. |

SANITARY 1 STA 1+00.00 TO STA 4+35.95

26.48 LF / 3" HDPE @ -5.00%

121.36 LF / V3" HDPE @ 0.00% 93.44 LF 3" HDPE @ 1.77%

PROPOSED GRADE

© CL SANITARY

3" HDPE @ 0.00%

4+00

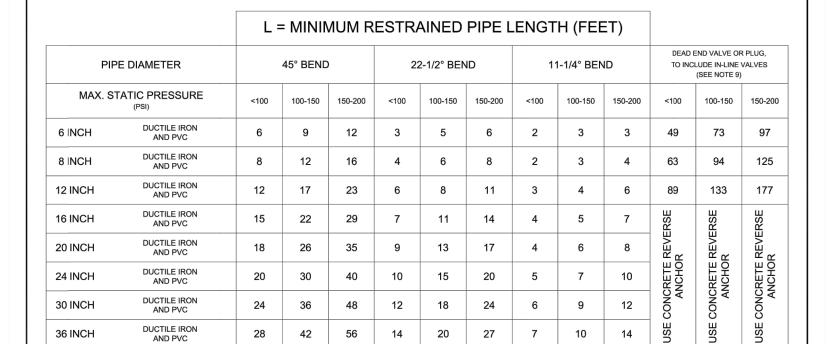
6260

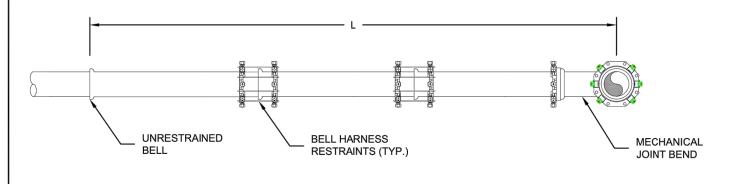
6255

6250

6245







- PRESSURE GREATER THAN 200 PSI REQUIRE SPECIAL DESIGN APPROVED BY SPRINGS UTILITIES. APPROVED BY COLORADO SPRINGS UTILITIES.
   LENGTH IS BASED ON MINIMUM 5 FEET OF GROUND COVER AND SOIL COMPACTED ACCORDING TO CHAPTER 5 OF THESE WATER LESS. IF THE DEPTH IS LESS THAN 5 FEET RESTRAINED ENGINEER.
- APPROVED METHODS OF RESTRAINED PIPE BEYOND INITIAL FITTING SHALL BE IN ACCORDANCE WITH CHAPTER 4. RESTRAINED PIPE LENGTH APPLIES TO CONDITIONS WHERE NO CONCRETE THRUST REACTION BLOCK IS PRESENT.
- CALCULATIONS ARE BASED ON A POORLY GRADED SANDS, GRAVEL AND GRAVEL-SAND MIXTURE, LITTLE OR NO FINES, TYPE 4 BEDDING CONDITIONS - "PIPE BEDDED IN SAND, GRAVEL OR CRUSHED STONE TO A DEPTH OF 1/8 PIPE DIAMETER (4" MIN.)." FACTOR OF SAFETY 2:1.
- FIGURES ARE BASED ON DIP WRAPPED IN POLYETHYLENE MATERIAL.
- MEASUREMENTS ARE IN FEET. . USE CRA FOR DOWN TURNING BENDS.
- 9. RESTRAINED LENGTH FOR DEAD END MAY BE USED AT THE DISCRETION OF COLORADO SPRINGS UTILITIES.

| Colorado Springs Utilities It's how we're all connected | W/MECH |
|---|--------|

RESTRAINED PIPE LENGTH (FEET) CHANICAL JOINT RESTRAINTS

DATED 03/2014

**SS03** 

LOT

CLEARWAY,