

# HANNAH RIDGE AT FEATHERGRASS FILING NO. 6

COUNTY OF EL PASO, STATE OF COLORADO

## UTILITY CONSTRUCTION PLANS

OCTOBER 2018

### GENERAL CONSTRUCTION NOTES:

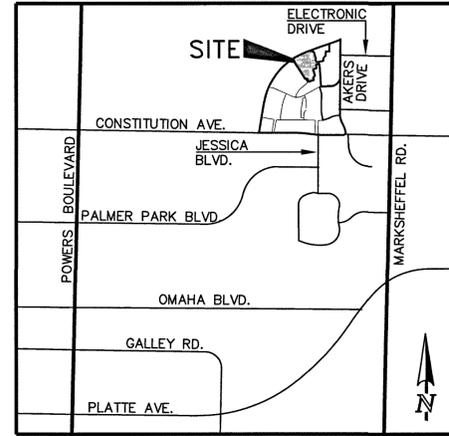
1. THE LOCATION OF EXISTING UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND MAY NOT INCLUDE ALL UTILITIES. THE EXCAVATION CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES.
2. BEFORE COMMENCING ANY EXCAVATION, CALL 811 FOR EXISTING UTILITY LOCATIONS.
3. THE CONTRACTOR WILL TAKE THE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES FROM DAMAGE DUE TO THIS OPERATION. ANY DAMAGE TO THE UTILITIES WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, AND ANY SERVICE DISRUPTION WILL BE SETTLED BY THE CONTRACTOR.
4. ALL BACKFILL, SUB-BASE AND/OR BASE COURSE (CLASS 6) MATERIAL SHALL BE COMPACTED TO THE SOILS ENGINEER'S RECOMMENDATIONS, AND APPROVED BY EL PASO COUNTY DEVELOPMENT SERVICES ENGINEERING DIVISION.
5. ALL STATIONING IS CENTERLINE UNLESS OTHERWISE INDICATED. ALL ELEVATIONS ARE CENTERLINE UNLESS OTHERWISE INDICATED.
6. THE CONTRACTOR SHALL REVEGETATE ALL DISTURBED AREAS AS SOON AS POSSIBLE AND EROSION CONTROL SHALL BE INSTALLED AND MAINTAINED IN A FUNCTIONAL MANNER AT ALL TIMES. DEVELOPER RESPONSIBLE FOR MAINTAINING DISTURBED AREAS UNTIL REVEGETATION IS COMPLETE.
7. ALL DISTURBED PAVEMENT EDGES SHALL BE CUT TO NEAT LINES. REPAIR SHALL CONFORM TO THE EPC ECM APPENDIX K - 1.2C.
8. ADDITIONAL EROSION CONTROL STRUCTURES MAY BE REQUIRED AT THE TIME OF CONSTRUCTION.
9. BUILDING CONTRACTORS WILL BE RESPONSIBLE FOR CONSTRUCTING POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES.
10. ASPHALT THICKNESS AND BASE COURSE THICKNESS (COMPACTED) FOR ROADS SHALL BE PER DESIGN REPORT BY OWNER'S GEOTECHNICAL ENGINEER. OWNER'S GEOTECHNICAL ENGINEER TO BE ON SITE AT TIME OF ROAD CONSTRUCTION TO EVALUATE SOIL CONDITIONS AND DETERMINE IF ADDITIONAL MEASURES ARE NECESSARY TO ASSURE STABILITY OF THE NEW ROADS. PAVEMENT DESIGN SHALL BE APPROVED BY DEVELOPMENT SERVICES DEPARTMENT PRIOR TO CONSTRUCTION.
11. THE CONTRACTOR SHALL REVEGETATE ALL DISTURBED AREAS WITHIN 21 DAYS OF SUBSTANTIAL GRADING COMPLETION. EROSION CONTROL SHALL BE INSTALLED AND MAINTAINED IN A FUNCTIONAL MANNER AT ALL TIMES. DEVELOPER IS RESPONSIBLE FOR MAINTAINING DISTURBED AREAS UNTIL REVEGETATION IS COMPLETE.
12. TYPE M RIP-RAP WITH 4" OF TYPE II GRANULAR BEDDING AND MIRAFI 180N OR EQUAL MAY BE SUBSTITUTED WHERE TYPE L RIP-RAP WITH MIRAFI FW 700 OR EQUAL IS SPECIFIED.

### WATER SYSTEM CONSTRUCTION NOTES:

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH CHEROKEE METROPOLITAN DISTRICT STANDARDS AND THE CITY OF COLORADO SPRINGS CONSTRUCTION STANDARDS UNLESS NOTED OTHERWISE. IN THE EVENT OF CONFLICTING STANDARDS CHEROKEE METROPOLITAN DISTRICT STANDARDS SHALL GOVERN.
2. ALL WATER SYSTEM MAINS PIPE MATERIAL SHALL BE POLYVINYL 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 THROUGHFARES 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 AT A MINIMUM DEPTH OF FIVE (5) FEET BELOW FINISHED GRADE.
5. ALL BENDS, TEE, FIRE HYDRANTS, BLOW-OFFS, AND PLUGS AT DEAD END MAINS SHALL BE INSTALLED WITH CONCRETE THRUST BLOCKS.
6. FIRE HYDRANT ASSEMBLIES SHALL INCLUDE ALL PIPES, FITTINGS, APPURTENANCES, MATERIALS AND LABOR THAT ARE NECESSARY TO INSTALL A COMPLETE AND USEABLE FIRE HYDRANT. FIRE HYDRANT ASSEMBLIES SHALL BE ONE OF THE FOLLOWING TYPES:
  - MUELLER CENTURION, MODEL A-473
  - KENNEDY VALVE
  - AMERICAN A/V
  - OR ENGINEER/DISTRICT APPROVED EQUAL
  - FURNISH CHEROKEE METROPOLITAN DISTRICT STANDARD FH W/ RH OPEN CONVENTION
7. VALVE BOXES SHALL BE TYLER SLIP; TYPE "C" CAST IRON VALVE BOX ASSEMBLY SERIES 6880 WITH NO. 160 OVAL BASE OR APPROVED EQUAL.
8. CONTRACTOR SHALL PRESSURE TEST THE SYSTEM PRIOR TO CONNECTING TO EXISTING MAINS.
9. 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 TRY 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 SERVICE.
10. HYDROSTATIC TESTING:
  - ALL WATER SYSTEM MAINS SHALL BE FIELD PRESSURE TESTED TO A MINIMUM OF 150 PSI OR 1 1/2 TIMES THE STATIC OPERATING PRESSURE, WHICH EVER IS GREATER. MAXIMUM ALLOWABLE LEAKAGE FOR EACH SECTION OF PIPE BETWEEN LINE VALVES SHALL NOT EXCEED THE FOLLOWING: \*10 GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY.
11. ALL VALVES SHALL CONFORM TO OPEN LEFT CONVENTION PER CHEROKEE METROPOLITAN DISTRICT STANDARDS. SERVICE LINE STOP VALVES/BOXES SHALL BE LOCATED A MINIMUM OF 7 FEET BEYOND THE PROPERTY LINE OR PER THE SERVICE DETAIL ON THE UTILITY SERVICE PLAN. ALL OTHER VALVES SHALL BE LOCATED PER THESE PLANS.
12. 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 DIAMETER OF PIPES.
13. WHILE CONSTRUCTING THE 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 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.
14. COMPACTION TESTING RESULTS OF ALL TRENCHES AND BEDDING MATERIAL SHALL BE SUBMITTED TO THE ENGINEER OF RECORD PRIOR TO ACCEPTANCE OF THE WATER SYSTEM.
15. 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.
16. PVC PIPE MUST BE PRESSURIZED PRIOR TO TAPPING.
17. THE WATER SYSTEM CONTRACTOR SHALL INSTALL ALL IRRIGATION TAPS AND METERS PER THESE PLANS.
18. FIRE FLOW DEMAND IS 1500 GPM FOR A 3 HOUR DURATION AT A 20-PSI MINIMUM RESIDUAL MAIN LINE PRESSURE.
19. ALL NONMETALLIC PIPES SHALL HAVE A TRACER WIRE ATTACHED TO ITS TOP DURING CONSTRUCTION. THE TRACER WIRE SHALL BE #12 TYPE YD575 INSULATED COPPER WIRE WITH #12 TYPE YD575 COPPER CONNECTORS AND SHALL BE PERMANENTLY AFFIXED TO THE TOP OF THE PIPE USING TAPE AT 4' INTERVALS. THE TRACER WIRE SHALL ALSO BE PERMANENTLY CONNECTED TO ALL FIRE HYDRANT TEE, METALLIC PIPE BENDS, MAIN VALVE AND OTHER METALLIC FITTINGS AND APPURTENANCES. ALL POINTS OF CONNECTION SHALL BE PROTECTED FROM CORROSION BY AN EPOXY OR SILICON COATING. GROUND TRACER WIRES TO SURFACE AT ALL VALVE BOXES.
20. THE CONTRACTOR ASSUMES RESPONSIBILITY FOR THE PROTECTION OF ALL UTILITIES DURING THE WORK. PRIOR TO ANY EXCAVATION, CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO AT (800) 922-1987 AT LEAST TWO WORKING DAYS PRIOR TO DIGGING.
21. ALL VALVES SHALL BE INSTALLED IN ACCORDANCE WITH CHEROKEE METROPOLITAN DISTRICT EXCEPT FOR NOTE 11 ABOVE. SPACING SHALL BE EQUIDISTANT FROM TEES, ELBOWS, BENDS AND OTHER APPURTENANCES AT 3 FOOT WHERE POSSIBLE.
22. TAPS WILL NOT BE RELEASED UNTIL THE FOLLOWING CONDITIONS ARE MET:
  - A. WATER AND SEWER LINES ARE INSTALLED AND PRESSURE TESTED TO THE DISTRICT STANDARDS. ALL 2x4 MARKERS ARE INTACT AND PAINTED FOR SERVICES. WATER AND SEWER SERVICES TO INCLUDE 4" TALL STAMPS IN THE TOP OF THE CURB HEAD TO MARK THE ACCURATE WATER SERVICE LOCATION (MARKED WITH "W") AND SANITARY SEWER SERVICE LOCATION (MARKED WITH "S") FOR EACH INDIVIDUAL LOT.
  - B. AS CONSTRUCTED DRAWINGS HAVE BEEN SUBMITTED TO THE DISTRICT. DRAWINGS TO INCLUDE ANY CHANGES FROM CONSTRUCTION DRAWINGS. THE LENGTH, DEPTH, GRADE AND LOCATION OF ALL SEWER SERVICES. THE LENGTH, DEPTH AND LOCATION OF WATER SERVICES.
  - C. ALL ELECTRIC AND GAS UTILITIES ARE INSTALLED.
23. CONTRACTOR IS TO NOTIFY CHEROKEE METROPOLITAN DISTRICTS' INSPECTOR 24 HOURS PRIOR TO ALL STORM SEWER CRITICAL CROSSING OVER WATER AND SEWER LINES, TO VERIFY CLEARANCE.
24. FIRE HYDRANTS MUST BE PAINTED, BLUE CAPS AND BONNETS AND WHITE BARREL SECTIONS. CONTACT JONATHAN SMITH AT CHEROKEE METROPOLITAN DISTRICT FOR COLOR CODES (719) 597-5080.

### SANITARY SEWER CONSTRUCTION NOTES:

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH CHEROKEE METROPOLITAN DISTRICT STANDARDS AND THE CITY OF COLORADO SPRINGS CONSTRUCTION STANDARDS UNLESS NOTED OTHERWISE. IN THE EVENT OF CONFLICTING STANDARDS CHEROKEE METROPOLITAN DISTRICT STANDARDS SHALL GOVERN.
2. SANITARY SEWER PIPE SHALL CONFORM TO ASTM D3034 SDR35 PVC OR SDR26 PVC AS INDICATED ON THE DRAWINGS.
3. ALL SANITARY SEWER PIPELINES WITH A COVER DEPTH GREATER THAN 14' SHALL BE INSTALLED USING ASTM D3034 SDR26 PVC PIPE EMBEDDED IN 3/4" RECYCLED CONCRETE AGGREGATE FROM 6" BELOW THE PIPE TO 12" ABOVE THE PIPE.
4. TRACER WIRE IS TO BE INSTALLED WITH ALL SANITARY SEWER MAIN LINES AND SERVICES FROM THE MAINLINE TO THE BUILDING STRUCTURE. ALL NONMETALLIC PIPES SHALL HAVE A TRACER WIRE ATTACHED TO ITS TOP DURING CONSTRUCTION. THE TRACER WIRE SHALL BE #12 AWG INSULATED COPPER WIRE WITH #12 TYPE YD575 COPPER CONNECTORS AND SHALL BE PERMANENTLY AFFIXED TO THE TOP OF THE PIPE USING TAPE AT 4' INTERVALS.
5. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING INVERTS PRIOR TO INSTALLATION OF NEW SANITARY SEWER SYSTEM.
6. THE CONTRACTOR ASSUMES RESPONSIBILITY FOR THE PROTECTION OF ALL UTILITIES DURING THE WORK. PRIOR TO ANY EXCAVATION, CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO AT 811 AT LEAST TWO WORKING DAYS PRIOR TO DIGGING.
7. INFILTRATION AND EXFILTRATION TESTS CONDUCTED BY AND AT THE EXPENSE OF THE CONTRACTOR SHALL BE PERFORMED ON A REPRESENTATIVE PORTION OF THE PROJECT IN ACCORDANCE WITH SECTION 7.04 OF THE CITY OF COLORADO SPRINGS CONSTRUCTION STANDARDS.
8. ALL SANITARY SEWER MANHOLES, LIDS, BASES AND OTHER APPURTENANCES SHALL BE IN ACCORDANCE WITH (IAW) CHEROKEE METROPOLITAN DISTRICT DETAILS STANDARD MANHOLE DETAIL WW-3, EXCEPT AS NOTED ON THESE PLANS. WHERE REQUIRED ON THESE PLANS, WATER TIGHT MANHOLES, LIDS AND CONNECTIONS SHALL BE PROVIDED IAW CHEROKEE METROPOLITAN DISTRICT STANDARDS.
9. ALL SANITARY SEWER MANHOLES SHALL BE 5.0' INSIDE DIAMETER (ID) MANHOLES.
10. WHERE NECESSARY, THE CONTRACTOR SHALL PROVIDE 3 DEGREE BENDS ON ALL CURVILINEAR SANITARY SEWER PIPE.
11. SANITARY SEWER SERVICE LINES SHALL BE LOCATED PER THE DETAIL ON THE UTILITY SERVICE PLAN, OR AT THE DIRECTION OF THE CONSTRUCTION MANAGER.
12. OVERLOT GRADING AND STREET SUBGRADE MUST BE WITHIN ±0.06 (1) FOOT PRIOR TO ANY UTILITY INSTALLATION.
13. WHILE CONSTRUCTING THE SANITARY SEWER 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 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 SANITARY SEWER SYSTEM.
14. CONTRACTOR TO CONSTRUCT ALL MANHOLES AND STRUCTURES TO FINISHED GRADE.
  - A. THE BOTTOM OF THE PIPE TRENCH SHALL BE PLATE TAMPED PRIOR TO THE INSTALLATION OF ANY PIPE OR BEDDING MATERIAL.
  - B. SELECT BEDDING MATERIAL SHALL BE INSTALLED PER CHAPTER 2 OF THE "COLORADO SPRINGS UTILITIES, WASTEWATER STANDARDS".
  - C. TRENCH BACKFILL MATERIAL SHALL BE INSTALLED PER CHAPTER 2 OF THE "COLORADO SPRINGS UTILITIES, WASTEWATER STANDARDS".
- PIPELINES FOR LESS THAN 1.04% SHALL BE "AS CONSTRUCTED" BY A LICENSED SURVEYOR OR A APPOINTED REPRESENTATIVE UNDER HIS DIRECT SUPERVISION. THE "AS CONSTRUCTED" MANHOLE INVERTS SHALL BE RECORDED ON THE RECORD DRAWING(S) SUBMITTED TO THE CHEROKEE METROPOLITAN DISTRICT.



### BENCHMARKS:

- A #5 REBAR LOCATED APPROXIMATELY 170 FEET NORTHEAST OF THE NORTHEASTERLY CORNER OF TRACTS JJ AS PLATTED IN HANNAH RIDGE AT FEATHERGRASS FILING NO. 1, LABELED AS PANEL POINT #11 ELEVATION = 6523.79 (NAVD 1929) (FIMS)
- A 1 INCH ORANGE PLASTIC CAP STAMPED "13225" LOCATED AT THE SOUTHWESTERLY CORNER OF TRACT AA AS PLATTED IN HANNAH RIDGE AT FEATHERGRASS FILING NO. 1 ELEVATION = 6485.00 (NAVD 1929) (FIMS)

### BASIS OF BEARINGS:

BEARING REFERRED TO HEREIN ARE BASED ON THE SOUTH LINE OF TRACT FF, HANNAH RIDGE AT FEATHERGRASS FILING NO. 1. ASSUMED TO BEAR N89°39'18"W MONUMENTED AT EACH END W/ NO. 5 REBAR W/ ALUMINUM CAP MARKED "POLARIS, PLS 27605".

### AGENCIES:

- DEVELOPER: ELITE PROPERTIES OF AMERICA, INC. 6385 CORPORATE DRIVE, SUITE 200 COLORADO SPRINGS, CO 80919 MR. JIM BOULTON (719) 592-9333
- CIVIL ENGINEER: CLASSIC CONSULTING ENGINEERS & SURVEYORS 619 N. CASCADE AVENUE, SUITE 200 COLORADO SPRINGS, CO 80903 MR. KYLE R. CAMPBELL, P.E. (719) 785-0790
- COUNTY ENGINEERING: DEVELOPMENT SERVICES DEPARTMENT 2880 INTERNATIONAL CIRCLE COLORADO SPRINGS, COLORADO 80910 MR. GILBERT LoFORCE, (719) 520-7945
- WATER & SANITATION DISTRICT: CHEROKEE METRO DISTRICT 6250 PALMER PARK BLVD COLORADO SPRINGS, COLORADO 80915 MR. JEFF MUNGER, P.E. (719) 597-5080
- FIRE DISTRICT: CIMARRON HILLS FIRE PROTECTION DISTRICT 1835 TUSKEGEE PLACE COLORADO SPRINGS, COLORADO 80915 CHIEF CONNER (719) 591-0960
- GAS COMPANY: CITY OF COLORADO SPRINGS 101 SOUTH CONEJOS STREET COLORADO SPRINGS, COLORADO 80903 MR. TIM BENEDICT, (719) 688-3574
- ELECTRIC COMPANY: MOUNTAIN VIEW ELECTRIC P.O. BOX 1600 LIMON, COLORADO 80828 MR. LES ULFERS, (719) 495-2283
- TELEPHONE COMPANY: CENTURY LINK COMMUNICATIONS 308 E. PIKES PEAK AVENUE COLORADO SPRINGS, COLORADO 80903 MS. MELISSA SPENCER (719) 636-4748 MELISSA.SPENCER@CENTURYLINK.COM

ANTICIPATED HOMES WITH LESS 4,800 GROSS SQUARE FEET WILL BE BUILT IN THIS SUBDIVISION.

CONSTRUCTION TYPE	VB
GROSS SQUARE FOOTAGE	4,800 S.F.
REQUIRED FIRE FLOW	1,750 GPM
REQUIRED # OF HYDRANTS	1
AVERAGE SPACING	500 FEET
MAX HOSE DISTANCE	250 FEET

### CHEROKEE METROPOLITAN DISTRICT WASTEWATER PLAN APPROVAL

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 SCOPE OF REVIEW ACCORDING 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: *[Signature]* DATE: 07/09/2019

### CHEROKEE METROPOLITAN DISTRICT WATER PLAN APPROVAL

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 SCOPE OF REVIEW ACCORDING 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: *[Signature]* DATE: 07-09-2019

### FALCON FIRE DEPARTMENT:

ACCORDING TO THE MODELLED CALCULATIONS REVIEWED BY THE GOVERNING WATER DISTRICT AND/OR COLORADO REGISTERED CIVIL ENGINEER/DESIGNER; THE THEORETICAL AVAILABLE FIRE FLOW AT NODE "A" IS 1,250 GALLONS PER MINUTE UNDER MAXIMUM DAILY DEMAND CONDITIONS AT 20PSI RESIDUAL. THE ACTUAL FIRE FLOW MAY VARY DUE TO VARIOUS PARAMETERS.

UPON DETAILED REVIEW OF THE AVAILABLE WATER SUPPLY, FIRE HYDRANT LOCATIONS AND HOSE DISTANCES, THESE PIPES ARE HEREBY CONSIDERED APPROVED (6 PROPOSED HYDRANTS)

*[Signature]* 1/25/19  
FALCON FIRE DEPARTMENT SIGNATURE DATE

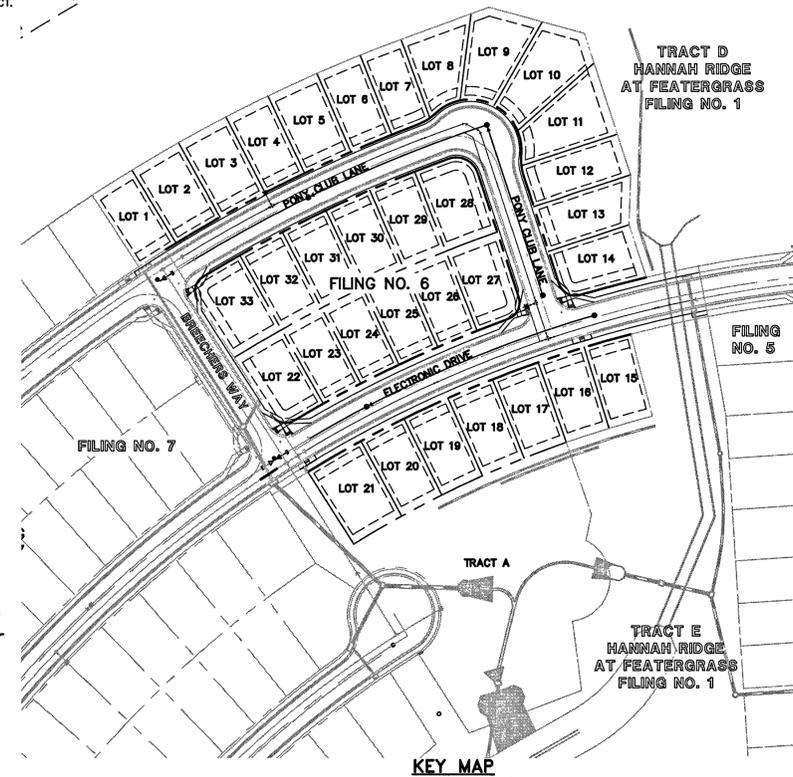
### OWNER / DEVELOPER STATEMENT:

THE OWNER WILL COMPLY WITH THE REQUIREMENTS OF THIS UTILITY CONSTRUCTION PLANS.

*[Signature]*  
OWNER/DEVELOPER DATE

### SHEET INDEX:

TITLE SHEET	SHEET 1 OF 4
PUBLIC 8" PVC SANITARY SEWER PLAN & PROFILE	SHEET 2 OF 4
PUBLIC 8" & 12" PVC WATER SYSTEM PLAN INCLUDING UTILITY SERVICES	SHEET 3 OF 4
PUBLIC 8" & 12" PVC WATER SYSTEM PROFILES	SHEET 4 OF 4



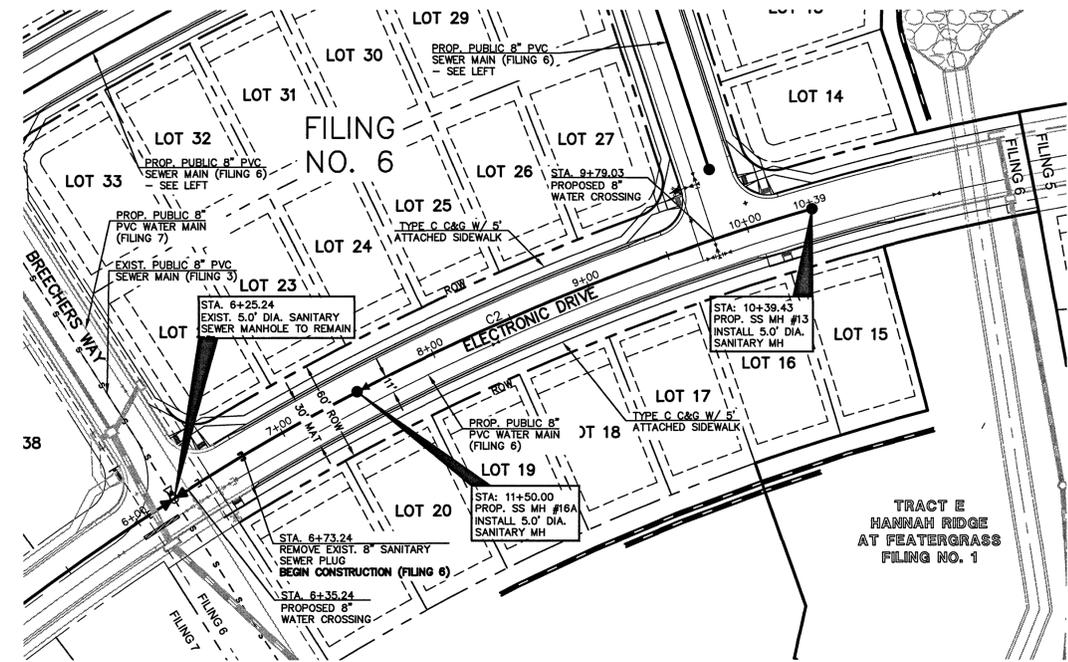
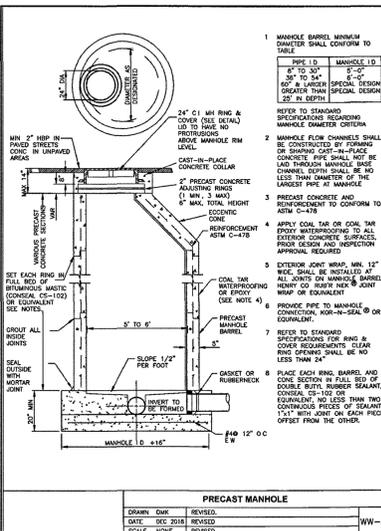
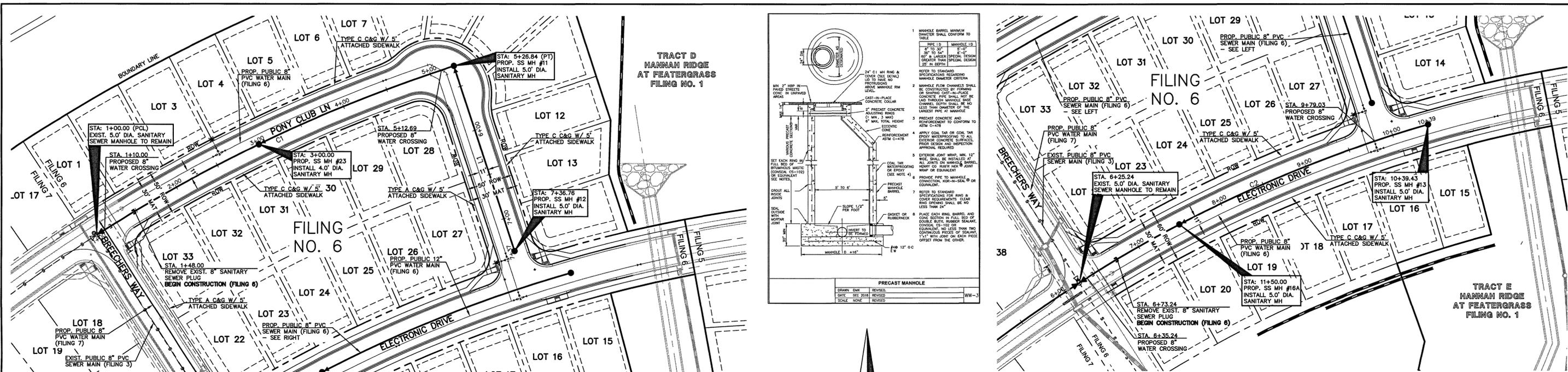
48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS 811 UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW	NO. REVISION	DATE	REVIEW:
THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.			PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS & SURVEYORS, LLC <i>[Signature]</i> KYLE R. CAMPBELL, COLORADO P.E. #29794 DATE 10/24/19

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HANNAH RIDGE AT FEATHERGRASS FILING NO. 6 UTILITY CONSTRUCTION DRAWINGS TITLE SHEET			
DESIGNED BY	KRC	SCALE	DATE 10/12/18
DRAWN BY	KC	(H) 1"=VARIES	SHEET 1 OF 4
CHECKED BY	(V) 1"= NA	JOB NO.	1116.06

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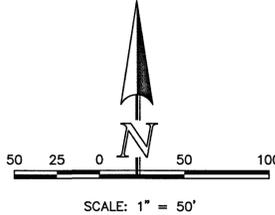


**NOTE:**  
EXISTING UTILITIES AND STORM SEWER SHOWN IN AN APPROXIMATE WAY ONLY. ALL EXISTING UTILITIES AND STORM SEWER TO BE POTHOLED AND VERIFIED BOTH HORIZONTALLY & VERTICALLY PRIOR TO CONSTRUCTION & CONFLICTS REPORTED TO ENGINEER.

**NOTE:**  
NO TREES WILL BE ALLOWED WITHIN 15' OF ANY PUBLIC WATER/WASTEWATER MAINLINES.

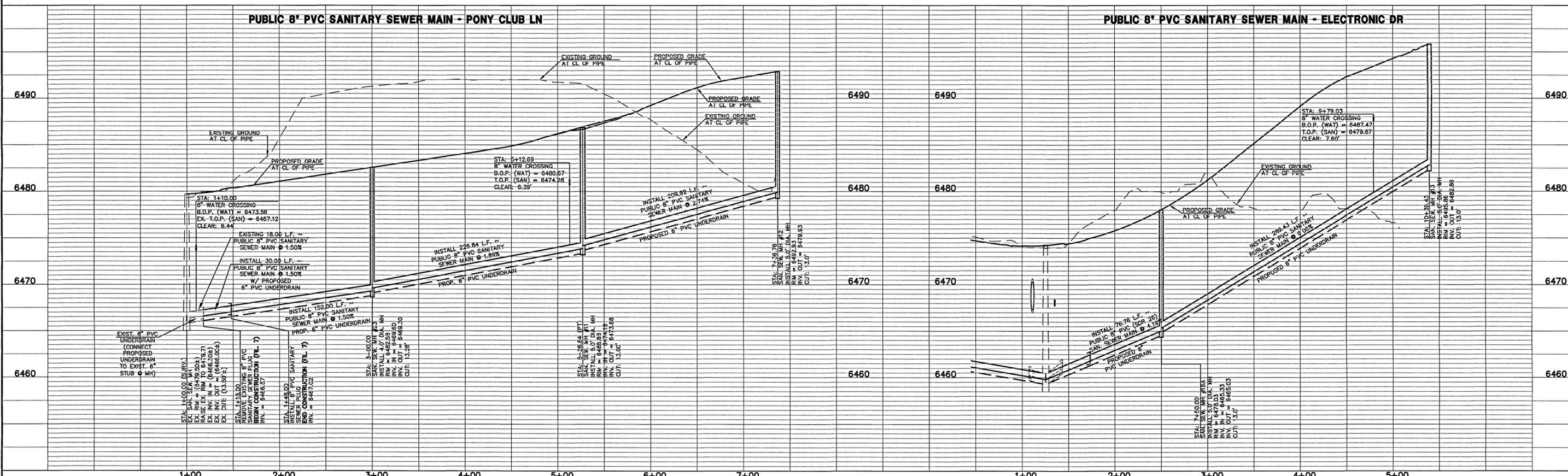
Parcel Line Table			
Line #	Length	Direction	
L1	209.91	N18° 09' 54.26"W	
Curve Table			
Curve #	Length	Radius	Delta
C1	408.84	1682.58	13.92

**STREET ABBREVIATION INDEX:**  
PCL  
ETD  
BCW



Curve Table			
Curve #	Length	Radius	Delta
C2	396.19	1432.58	15.85

- SANITARY SEWER CONSTRUCTION NOTE:**
- SANITARY SEWER PIPE AND FITTINGS: PVC 4"-8" ASTM D3034, TYPE PSM, SDR 35; PUSH-ON JOINTS AND MOLDED RUBBER GASKETS. MAXIMUM HORIZONTAL DEFLECTION, AFTER INSTALLATION AND BACK FILLING SHALL NOT EXCEED 3% OF THE PIPE DIAMETER. (MINIMUM CURVE RADIUS FOR 8" PVC SANITARY SEWER MAIN MUST BE WITHIN MANUFACTURER'S RECOMMENDATIONS). ALL HORIZONTAL DEFLECTIONS SHALL BE ACCOMPLISHED BY BENDING THE PIPE RATHER THAN DEFLECTING THE PIPE JOINTS.
  - SANITARY SEWER UNDERDRAIN PIPE AND SERVICES: 3" & 6" SDR 35 ASTM D3034 SOLID PVC SOLVENT WELD PIPE TO BE WHITE IN COLOR.



**LEGEND**

	PROPOSED FIRE HYDRANT		EXISTING FIRE HYDRANT
	PROPOSED WATER MAIN		EXISTING WATER MAIN
	PROPOSED SANITARY SEWER MAIN		EXISTING SANITARY SEWER MAIN
	PROPOSED STORM SEWER		EXISTING STORM SEWER
	PROPOSED STORM INLET		EXISTING STORM INLET
	ROW/BOUNDARY LINE		EXISTING GAS MAIN
			EXISTING ELECTRIC

48 HOURS BEFORE YOU DIG,  
CALL UTILITY LOCATORS  
**811**  
UTILITY NOTIFICATION CENTER OF COLORADO  
IT'S THE LAW

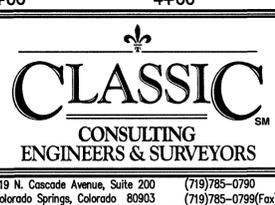
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NO. REVISION	DATE	REVIEW:

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

*Kyle Campbell*  
KYLE R. CAMPBELL, COLORADO LICENSED ENGINEER 29794

*uzley*  
DATE

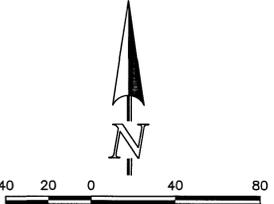


HANNAH RIDGE AT FEATHERGRASS FILING NO. 6 PUBLIC 8" PVC SANITARY SEWER PLAN			
DESIGNED BY	KRC	SCALE	DATE 10/12/18
DRAWN BY	KC	(H) 1" = 50'	SHEET 2 OF 4
CHECKED BY	(V) 1" = 5'	JOB NO.	1116.06

N:\111606\DRAWINGS\CONSTRUCTION\FILING 6\UTILITIES\02-111606-SAN-01.dwg, 6/27/2019 10:21:43 AM, 1:1

**STREET ABBREVIATION INDEX:**

PCL PONY CLUB LANE  
 ETD ELECTRONIC DRIVE  
 BCW BREECHERS WAY



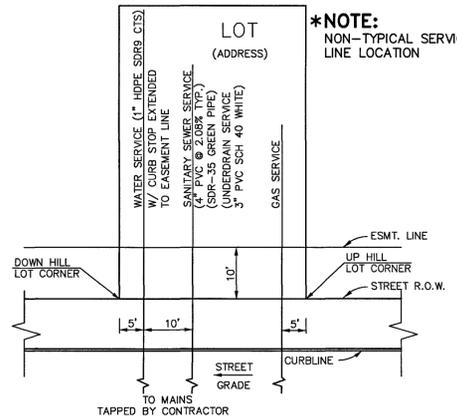
**\*NOTE:**  
 NON-TYPICAL SERVICE  
 LINE LOCATION

**Parcel Line Table**

Line #	Length	Direction
L1	19.91	S63° 24' 42.05"E
L2	255.86	S18° 09' 54.26"E

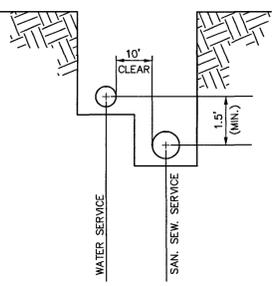
**Curve Table**

Curve #	Length	Radius	Delta
C1	443.23	1692.58	15.00
C2	567.58	1422.58	22.86



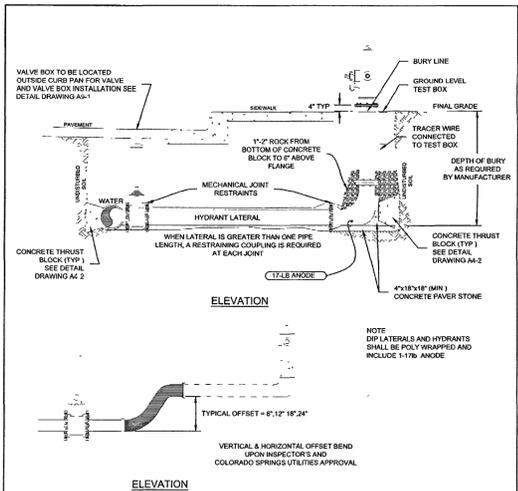
**DETAIL: UTILITY SERVICE LOCATIONS**  
 N.T.S.

- UTILITY SERVICE LOCATION NOTES:**
- 1.) DIMENSIONS SHOWN ARE TYPICAL UNLESS OTHERWISE NOTED ON PLANS.
  - 2.) SEE PLANS FOR MAINLINE SIZES.
  - 3.) ALL WATER SERVICES TO BE 1" HDPE SDR9 CTS (COPPER TUBE SIZE) UNLESS OTHERWISE SHOWN ON PLANS. ALL WATER SERVICES ARE 3/4" x 8" TAPS BY DEVELOPER UNLESS OTHERWISE NOTED ON PLANS.
  - 4.) ALL CLEANOUTS TO BE INSTALLED PER CHEROKEE METROPOLITAN DISTRICT STANDARD DETAILS.
  - 5.) SEE DETAIL FOR JOINT TRENCH SERVICE LOCATIONS.
  - 6.) ALL WASTEWATER SERVICES TO BE 4" PVC UNLESS OTHERWISE SHOWN ON PLANS. ALL WASTEWATER SERVICES ARE 4" x 8" TAPS UNLESS OTHERWISE NOTED ON PLANS.
  - 7.) WATER CURB STOPS AND SANITARY SEWER CLEANOUTS NOT TO BE WITHIN DRIVEWAYS OR SIDEWALKS.
  - 8.) INSTALL WATER CURB STOP LOCATION PER CHEROKEE METROPOLITAN DISTRICT STANDARD DETAILS.



**DETAIL: SERVICE TRENCH**  
 N.T.S.

**NOTE:**  
 SEE SHEET 4 FOR FILING  
 6 WATER MAIN PROFILES



- NOTES:**
1. MECHANICAL JOINT RESTRAINTS SHALL BE INSTALLED PER DETAIL DRAWINGS A4.4, A4.5 & CHAPTER 3
  2. TRACER WIRE AND GROUND LEVEL TEST BOX TO BE INSTALLED WITH EACH FIRE HYDRANT PLACE TEST BOX WITHIN 6' FROM THE HYDRANT
  3. REFER TO DETAIL DRAWINGS A5.1 & A5.2 FOR FIRE HYDRANT LOCATION
  4. INSTALLATION OF A PRIVATE FIRE HYDRANT WILL REQUIRE A SECONDARY VALVE INSTALLED AT THE PROPERTY LINE
  5. HYDRANT BASE BLOCK SHALL BE PLACED ON UNDISTURBED EARTH
  6. DO NOT BLOCK WEEP HOLES WITH POLYWRAP
  7. COVER BRASS ROCK WITH POLYWRAP PRIOR TO BACKFILL
  8. FOR HORN HYDRANT CONNECTIONS SEE DETAIL DRAWING A10.9
  9. FOR PRIVATE FIRE HYDRANTS A SECONDARY VALVE SHALL BE INSTALLED ON THE PROPERTY LINE OR RIGHT-OF-WAY LINE

**WATER CROSSING NOTE:**  
 WHEN WATER MAIN CROSSES UNDER A WASTEWATER MAIN OR STORM SEWER MAIN SECONDARY CONTAINMENT MUST BE PROVIDED.  
 -WATER MAIN OR ABOVE UTILITY SHALL BE CONSTRUCTED WITHOUT MECHANICAL JOINTS FOR 9 FEET ON EITHER SIDE OF THE CROSSING.



**LEGEND**

	PROPOSED FIRE HYDRANT		EXISTING FIRE HYDRANT
	PROPOSED WATER MAIN		EXISTING WATER MAIN
	PROPOSED SANITARY SEWER MAIN		EXISTING SANITARY SEWER MAIN
	PROPOSED STORM SEWER		EXISTING STORM SEWER
	PROPOSED STORM INLET		EXISTING STORM INLET
	ROW/BOUNDARY LINE		EXISTING GAS MAIN
			EXISTING ELECTRIC

**48 HOURS BEFORE YOU DIG,  
 CALL UTILITY LOCATORS  
 811**  
 UTILITY NOTIFICATION CENTER OF COLORADO  
 IT'S THE LAW

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NO. REVISION	DATE

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

*[Signature]*  
 RYLEE CAMPBELL, COLORADO LICENSED ENGINEER #29794

*[Signature]*  
 DATE

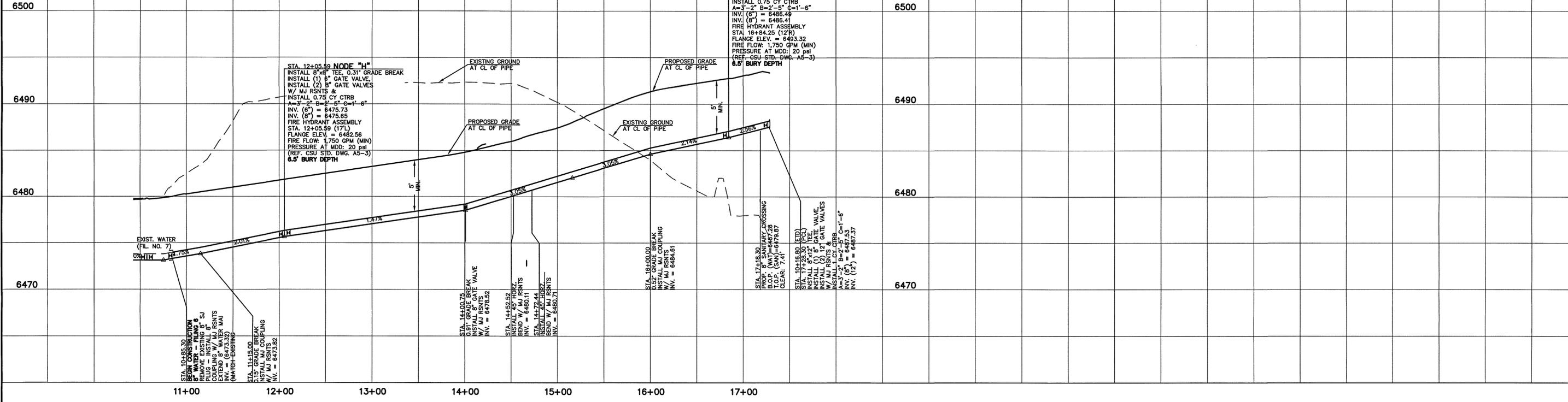
**CLASSIC CONSULTING ENGINEERS & SURVEYORS**

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

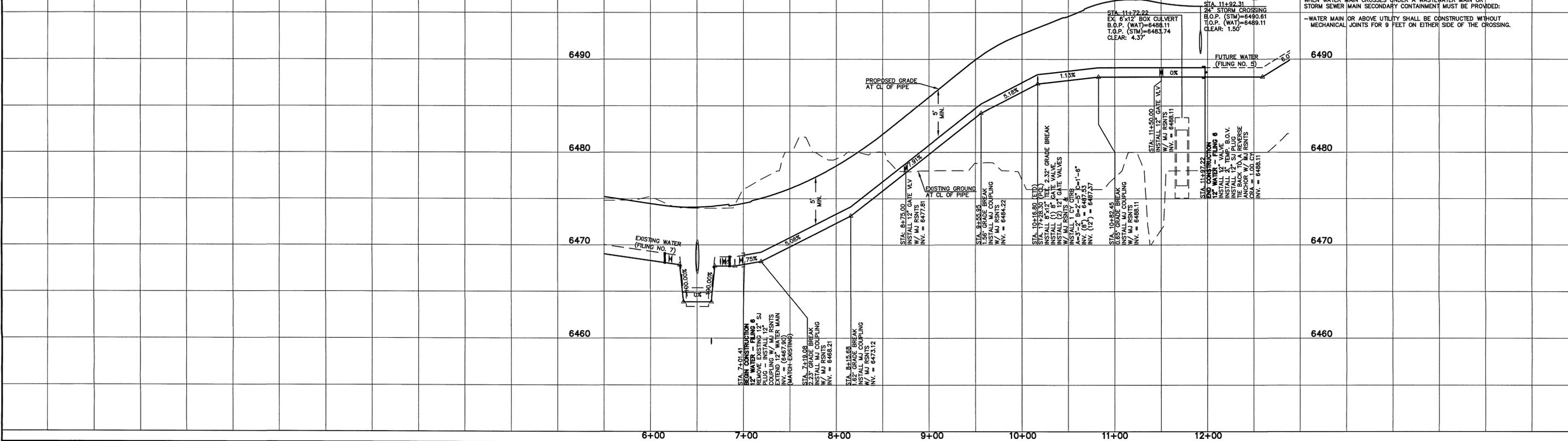
**HANNAH RIDGE AT FEATHERGRASS  
 FILING NO. 6  
 PUBLIC 8" & 12" PVC WATER SYSTEM PLANS  
 INCLUDING UTILITY SERVICES**

DESIGNED BY	KRC	SCALE	DATE	10/12/18
DRAWN BY	KC	(H) 1" = 40'	SHEET	3 OF 4
CHECKED BY	(V) 1" = NA	JOB NO.	1116.06	

# 8" WATER - PONY CLUB LN - FIL. 6



# 12" WATER - ELECTRONIC DR - FIL. 6



**WATER CROSSING NOTE:**  
 WHEN WATER MAIN CROSSES UNDER A WASTEWATER MAIN OR STORM SEWER MAIN SECONDARY CONTAINMENT MUST BE PROVIDED.  
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<p>48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS <b>811</b> UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW</p> <p>THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.</p>	<p>NO. REVISION</p> <table border="1"> <tr><td> </td><td> </td></tr> </table>													<p>DATE</p>	<p>REVIEW:</p> <p>PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS &amp; SURVEYORS, LLC</p> <p><i>Kyle R. Campbell</i> KYLE R. CAMPBELL, COLORADO 29794</p>	<p><b>CLASSIC</b> CONSULTING ENGINEERS &amp; SURVEYORS</p> <p>HANNAH RIDGE AT FEATHERGRASS FILING NO. 6 PUBLIC 8" &amp; 12" PVC WATER SYSTEM PROFILES</p> <p>DESIGNED BY: KRC DRAWN BY: KC CHECKED BY: <i>ded</i></p> <p>SCALE: (H) 1"= 50' (V) 1"= 5'</p> <p>DATE: 10/12/18 SHEET 4 OF 4 JOB NO. 1116.06</p>
<p>619 N. Cascade Avenue, Suite 200 Colorado Springs, Colorado 80903</p> <p>(719)785-0790 (719)785-0799(Fax)</p>																

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