REVIEW DOCUMENTS FOR THE
CEDAR CREST IMPROVEMENTS
GLENWOOD SPRINGS, COLORADO

ABBREVIATIONS

APROX	*APPROXIMATE*	GA	*GAUGE*	QTY	*QUANTITY*
ARCH	*ARCHITECT*	GAL	*GALLON*		
AVG	*AVERAGE*	GALV	*GALVANIZED*	R	*RADIUS*
		GB	*GRADE BREAK*	RE	*REFERENCE*
B&B	*BALLED AND BURLAPPED*	GC	*GENERAL CONTRACT(OR)*	REINF	*REINFORCE(D), (ING)*
BLDG	*BUILDING*	GPM	*GALLON PER MINUTE*	REQ'D	*REQUIRED*
BM	*BENCHMARK*			REV	*REVISION(S), REVISED*
BOC	*BACK OF CURB*	HORIZ	*HORIZONTAL*	RIM	*RIM ELEVATION*
BOV	*BLOW OFF VALVE*	HP	*HIGH POINT*	ROW	*RIGHT-OF-WAY*
BR	*BOTTOM OF RAMP*	HT	*HEIGHT*	RP	*RADIUS POINT*
BS	*BOTTOM OF STEP*				
BW	*BOTTOM OF WALL*	ID	*INSIDE DIAMETER*	SAN	*SANITARY*
		INV	*INVERT ELEVATION*	SCH	*SCHEDULE*
CAL	*CALIPER*	IN	*INCHES*	SD	*STORM DRAIN*
CF	*CUBIC FEET*	INCL	*INCLUDE(D)*	SEC	*SECTION*
CIP	*CAST-IN-PLACE*	IRR	*IRRIGATION*	SF	*SQUARE FOOT (FEET)*
CJ	*CONTROL JOINT*			SHT	*SHEET*
CL	*CENTERLINE*	JT	*JOINT(S)*	SIM	*SIMILAR*
CLR	*CLEAR(ANCE)*			SPECS	*SPECIFICATIONS*
C/O	*CLEANOUT*	LIN	*LINEAR*	SQ	*SQUARE*
COMP	*COMPACTED*	LP	*LOW POINT*	STA	*STATION*
CONC	*CONCRETE*	LT	*LIGHT*	STD	*STANDARD*
CONT	*CONTINUOUS*			STL	*STEEL*
CONTR	*CONTRACTOR*	MATL	*MATERIAL*	STRUCT	*STRUCTURAL*
CU	*CUBIC*	MAX	*MAXIMUM*	SYM	*SYMMETRICAL*
		MECH	*MECHANICAL*		
DBL	*DOUBLE*	MH	*MANHOLE*	TBC	*TOP OF BACK OF CURB*
DEG	*DEGREE*	MIN	*MINIMUM*	TC	*TOP OF CURB*
DEMO	*DEMOLISH, DEMOLITION*	MISC	*MISCELLANEOUS*	THK	*THICK*
DIA	*DIAMETER*			T LF	*TOP OF LIGHT FOOTING*
DIM	*DIMENSION*	NIC	*NOT IN CONTRACT*	TO	*TOP OF*
DN	*DOWN*	NOM	*NOMINAL*	TOPO	*TOPOGRAPHY*
DTL	*DETAIL*	NTS	*NOT TO SCALE*	TR	*TOP OF RAMP*
DWG	*DRAWING*			TRANS	*TRANSFORMER*
		OC	*ON CENTER(S)*	TS	*TOP OF STEP*
EA	*EACH*	OD	*OUTSIDE DIAMETER*	TW	*TOP OF WALL*
EF	*EACH FACE*	OPP	*OPPOSITE*	TYP	*TYPICAL*
EJ	*EXPANSION JOINT*				
ELEV	*ELEVATION*	PA	*PLANTING AREA*	UNFIN	*UNFINISHED*
ELECT	*ELECTRICAL*	PC	*POINT OF CURVATURE*		
ENG	*ENGINEER*	PERF	*PERFORATE(D)*	VAR	*VARIES*
EOP	*CURB LIP*	PED	*PEDESTRIAN*	VERT	*VERTICAL*
EQ	*EQUAL*	PERM	*PERIMETER*	VEH	*VEHICLE*
EST	*ESTIMATE*	PI	*POINT OF INTERSECTION*	VOL	*VOLUME*
EW	*EACH WAY*	PL	*PROPERTY LINE*		
EXIST	*EXISTING*	POB	*POINT OF BEGINNING*	W/	*WITH*
		PSF	*POUNDS PER SQUARE FOOT*	W/O	*WITHOUT*
FG	*FINISHED GRADE*	PSI	*POUNDS PER SQUARE INCH*	WT	*WEIGHT*
FIN	*FINISH*	PT	*POINT, POINT OF TANGENCY*	WWF	*WELDED WIRE FABRIC*
FL	*FLOW LINE*	PVC	*POLYVINYL CHLORIDE*		
FOB	*FACE OF BUILDING*	PVMT	*PAVEMENT*	YD	*YARD*
FOW	*FACE OF WALL*	PVR	*PAVER(S)*		
FS	*FINISH SURFACE*				
FT	*FOOT (FEET)*				
FTG	*FOOTING*				

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V.3	SUE & Demolition-Cedar Crest Dr. & Tanager Dr.
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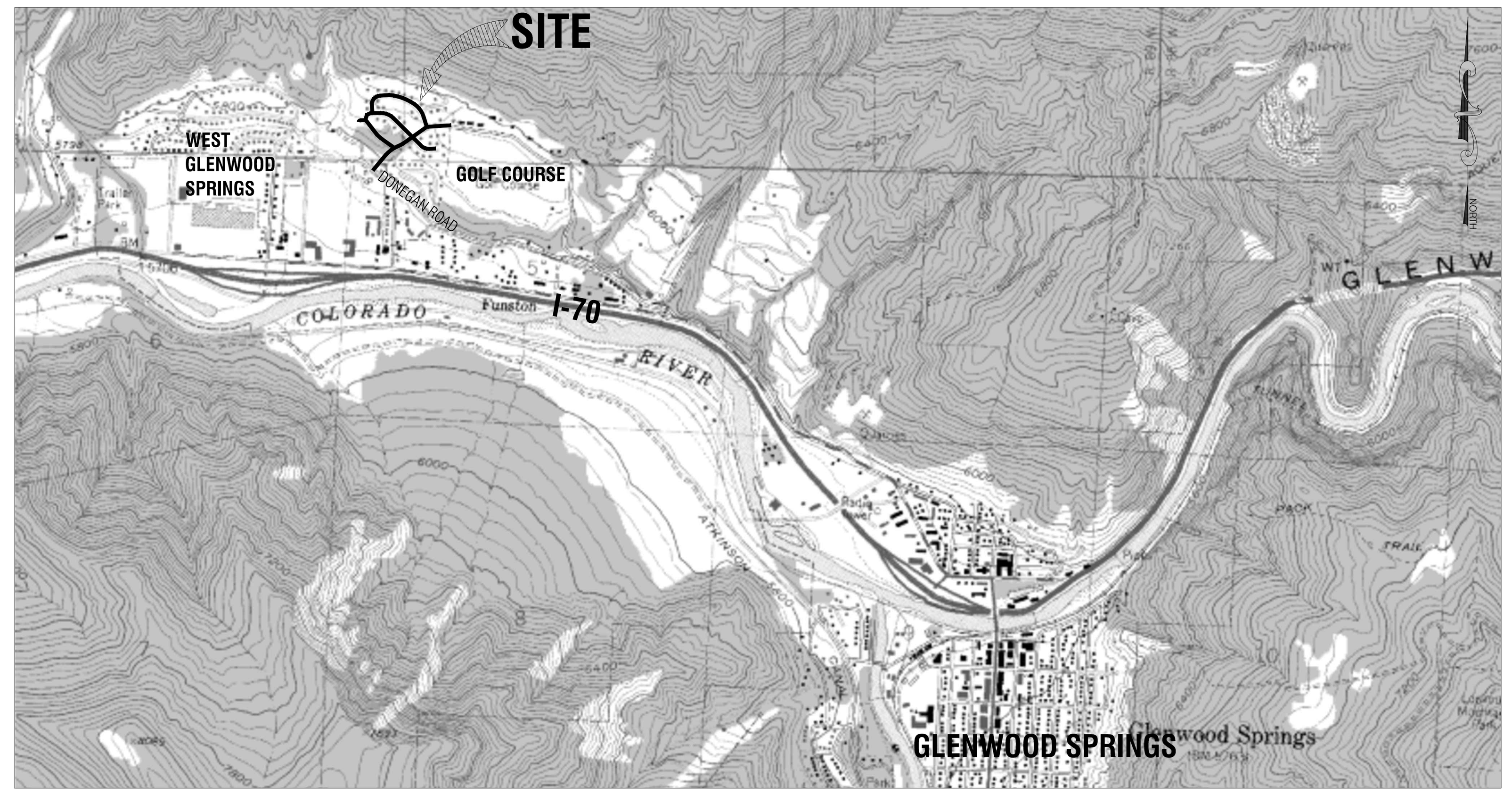
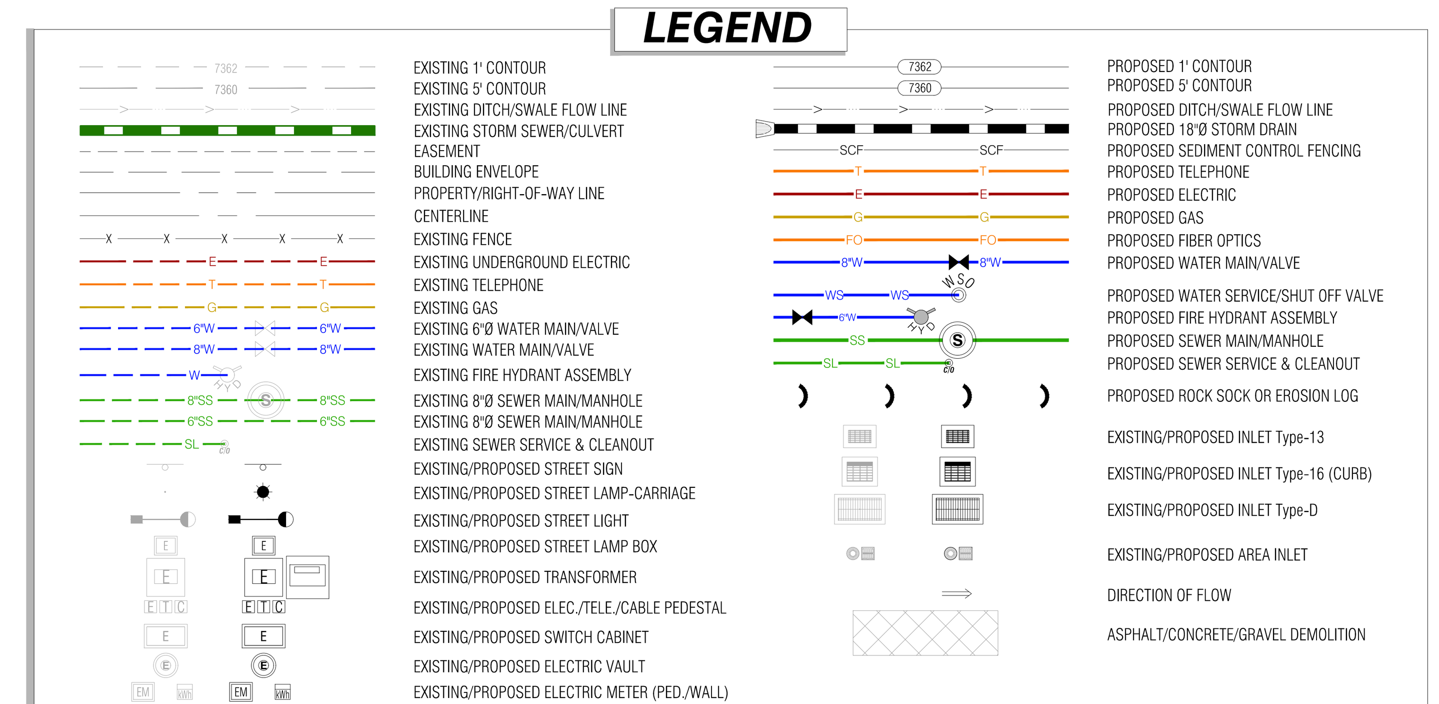


VICINITY MAP
Scale: 1"=2000'

NOTES:

THIS PLAN SET IS INTENDED TO BE PLOTTED IN COLOR. FAILURE TO DO SO MAY RESULT IN MISSING DATA & INFORMATION CRITICAL TO THE PROJECT.



Boundaries Unlimited Inc.
Civil Engineering
Surveying
& Beyond
923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE)
Required Project: ***See Notes***
If "Yes", SUE Certification by:
Firm: ***N/A***
Job #: ***Precision Hyrovac***
Date: ***Nov. 2018***

Engineer or Surveyor Seal

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

0 2000' 4000
Scale: 1" = 2000'

811 Know what's **below.** **Call** before you dig.

GENERAL NOTES

1. THE WARRANTY PERIOD SHALL BE TWO (2) YEARS FROM THE DATE OF ACCEPTANCE.
2. CONSTRUCTION WORK. ANY NOISE CREATED BY OPERATING OR CAUSING TO BE OPERATED ANY EQUIPMENT (MECHANICAL OR NON-MECHANICAL, SELF-PROPELLED OR MANUALLY MANIPULATED) USED IN CONSTRUCTION, REPAIR, ALTERATION OR DEMOLITION WORK ON BUILDINGS, STRUCTURES, STREETS, ALLEYS OR APPURTENANCES AT ANY TIME OTHER THAN BETWEEN THE HOURS OF 7:00 A.M. AND 8:00 P.M. ON MONDAY THROUGH FRIDAY, AND 8:00 A.M. AND 6:00 P.M. ON SATURDAY AND SUNDAY. THE CITY MANAGER IS HEREBY AUTHORIZED TO ISSUE A CONSTRUCTION WORK NOISE PERMIT ALLOWING CONSTRUCTION WORK NOISE TO OCCUR AT A TIME OTHER THAN THE TIME SET FORTH HEREIN BASED ON CIRCUMSTANCES WHICH NECESSITATE SUCH CONSTRUCTION WORK. IN THE EVENT THE CITY MANAGER ISSUES SUCH A PERMIT, THE CITY COUNCIL SHALL BE ADVISED OF SUCH ISSUANCE AT THE NEXT REGULAR CITY COUNCIL MEETING.
3. IN ORDER OF PRECEDENCE, ALL CONSTRUCTION SHALL MEET OR EXCEED THE PROJECT PLANS AND TECHNICAL SPECIFICATIONS; STANDARDS ESTABLISHED IN THE LATEST EDITIONS OF THE CITY PUBLIC WORKS MANUAL AND/OR ENGINEERING STANDARDS; AND CDOT SPECIFICATIONS, AS REFERENCED HEREIN, AND BE SUBJECT TO OBSERVATION BY THE PROJECT ENGINEER, TOWN/CITY AND CDOT, AS APPLICABLE.
4. IN CASE OF A CONFLICT BETWEEN VARYING SPECIFICATIONS, THE MOST STRINGENT SHALL APPLY.
5. THE CONTRACTOR SHALL OBTAIN A COPY OF THE LATEST STANDARD SPECIFICATIONS AND DETAILS OF ALL AGENCIES EXERCISING JURISDICTION OVER THIS PROJECT. A COPY OF THESE SPECIFICATIONS AND DETAILS SHALL BE MAINTAINED ON THE JOBSITE AT ALL TIMES.
6. THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT ALL TIMES TWO (2) SIGNED COPIES OF THE LATEST PLANS, STANDARDS, AND SPECIFICATIONS AS APPROVED BY THE APPROPRIATE GOVERNING AGENCY AND PROJECT ENGINEER. THE CONTRACTOR SHALL NOT CHANGE OR DEVIATE FROM THESE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE OWNER, PROJECT ENGINEER, AND GOVERNING AGENCY.
7. ALL WORK SHALL CONFORM TO ALL LOCAL, STATE, AND FEDERAL APPLICABLE LAWS AND REGULATIONS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL JOB SITE SAFETY ON THE PROJECT. THIS SHALL INCLUDE THE SAFETY OF HIS OWN PERSONNEL, SUBCONTRACTORS, ALL VISITORS TO THE SITE, AND THE GENERAL PUBLIC. ALL JOB SITE SAFETY SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS AND CODES, AND ENSURE COMPLIANCE INCLUDING, BUT NOT LIMITED TO, THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS.
9. THE CONTRACTOR SHALL CONTACT ONE CALL OF COLORADO AT #811 (1-800-922-1987, FOR THE MARKING OF MEMBER UNDERGROUND UTILITIES. (www.uncc2.org)) A MINIMUM OF SEVENTY TWO (72) HOURS (EXCLUDING WEEKENDS AND HOLIDAYS) IN ADVANCE OF ANY EXCAVATION.
10. ALL MATERIALS SHALL BE NEW UNLESS OTHERWISE INDICATED IN THE PLANS, AND SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE OWNER, PROJECT ENGINEER, TOWN/CITY AND CDOT, AS APPLICABLE.
11. LOCATIONS AND ELEVATIONS OF EXISTING IMPROVEMENTS TO BE MET (OR AVOIDED) BY THE PROPOSED WORK SHALL BE CONFIRMED BY THE CONTRACTOR THROUGH FIELD EXPLORATIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL REPORT TO THE PROJECT ENGINEER ANY DISCREPANCIES BETWEEN HIS MEASUREMENTS AND THESE PLANS.
12. THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES SHOWN IN THE PLANS AND/OR SPECIFICATIONS. THE CONTRACTOR SHALL NOT SCALE DRAWINGS FOR CONSTRUCTION PURPOSES. ANY MISSING DIMENSIONS OR DISCREPANCIES IN PLANS, FIELD STAKING, OR PHYSICAL FEATURES SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER. IF THE CONTRACTOR PROCEEDS WITH THE WORK WITHOUT NOTIFYING THE PROJECT ENGINEER, HE DOES SO AT HIS OWN RISK.
13. ALL ESTIMATES OF QUANTITIES ARE FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR DETERMINING ACTUAL QUANTITIES, AND SHALL PROVIDE ALL WORK AND MATERIALS NECESSARY TO CONSTRUCT THE PROJECT IN ITS ENTIRETY.
14. THE CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS NOT DESIGNATED FOR REMOVAL AND THOSE IMPROVEMENTS THAT ARE OUTSIDE THE LIMITS OF THE PROPOSED CONSTRUCTION. CONTRACTOR SHALL TAKE CARE TO AVOID DAMAGE THERETO AND SHALL PROVIDE TEMPORARY FENCING, BARRICADES, SUPPORTS, RESTRAINTS, AND/OR BRACING WHERE REQUIRED TO PROTECT EXISTING IMPROVEMENTS. DAMAGE TO EXISTING IMPROVEMENTS SHALL BE REPAIRED AND/OR REPLACED TO EQUAL OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE.
15. ALL GRADING AND CONSTRUCTION ACTIVITIES SHALL BE CONFINED TO THE OWNER'S PROPERTY, PUBLIC RIGHT-OF-WAY, PERMANENT EASEMENTS, AND TEMPORARY CONSTRUCTION EASEMENTS. THE CONTRACTOR SHALL NOT OPERATE OUTSIDE THIS AREA WITHOUT THE PRIOR CONSENT OF THE PROPERTY OWNER INVOLVED. ANY DAMAGE TO PRIVATE PROPERTY BY THE CONTRACTOR OUTSIDE THESE LIMITS WITHOUT THE PERMISSION OF THE PRIVATE PROPERTY OWNER WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS NOT OBTAINED BY THE OWNER OR OWNER'S REPRESENTATIVES, AND PAY ALL FEES AS REQUIRED BY THE CONSTRUCTION COVERED IN THESE PLANS.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE APPROPRIATE GOVERNING AGENCIES AND LOCAL FIRE DEPARTMENT OF ALL STREET CLOSURES AND EXISTING FIRE HYDRANTS/FIRE SUPPRESSION TAKEN OUT OF SERVICE AT LEAST SEVENTY TWO (72) HOURS PRIOR TO CONSTRUCTION.
18. THE CONTRACTOR IS RESPONSIBLE FOR ALL SITE SECURITY AND SHALL PROPERLY PROTECT AND BARRICADE THE CONSTRUCTION SITE UNTIL CONSTRUCTION IS COMPLETE. STORAGE, LOSS DUE TO THEFT, OR VANDALISM OF MATERIALS AND EQUIPMENT (SECURED OR UNSECURED) WILL BE SOLELY AT THE CONTRACTOR'S EXPENSE.
19. PRIOR TO BEGINNING THE WORK, THE CONTRACTOR SHALL OBTAIN ANY WRITTEN AGREEMENTS FOR INGRESS AND EGRESS TO THE WORK FROM ADJACENT PRIVATE PROPERTY OWNERS. ACCESS TO ANY ADJACENT PRIVATE PROPERTY SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD, DURING ALL HOURS OF OPERATION FOR THE BUSINESS LOCATED ON THOSE PARCELS.
20. FOR ANY CHANGES OR DEVIATIONS FROM THESE PLANS PROPOSED BY THE CONTRACTOR, SHOP DRAWINGS AND MATERIAL SPECIFICATIONS SHALL BE SUBMITTED TO THE PROJECT ENGINEER FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT OF MATERIAL.
21. CONTRACTOR MUST COORDINATE ALL CONSTRUCTION WITH THE OWNER'S DEDICATED CONSTRUCTION PROJECT MANAGER OR THE PROJECT ENGINEER.
22. CONTRACTOR SHALL PROTECT AND PRESERVE ALL SURVEY CONTROL AND PROPERTY MONUMENTATION. ANY DAMAGED MONUMENTS SHALL BE RESET BY A PROFESSIONAL LAND SURVEYOR LICENSED IN THE PROJECT'S STATE AT THE CONTRACTOR'S EXPENSE.
23. PRIOR TO MOVING OFF THE JOB SITE THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR THE OWNER'S CONSTRUCTION PROJECT MANAGER TO PERFORM THE FINAL WALK-THROUGH OF THE CONSTRUCTION SITE.
24. TEMPORARY POWER, TELEPHONE, WATER, SANITARY SEWER AND WASTE DISPOSAL SERVICE FOR THE SITE IS THE CONTRACTOR'S RESPONSIBILITY UNLESS OTHERWISE SPECIFIED.
25. NO BELOW GRADE WORK SHALL BE BACKFILLED (INCLUDING BEDDING MATERIAL ABOVE THE SPRING LINE OF THE PIPE) UNTIL THE CONSTRUCTION HAS BEEN INSPECTED AND APPROVED FOR BACKFILLING BY THE APPROPRIATE GOVERNING AGENCY, PROJECT ENGINEER AND/OR OWNER'S CONSTRUCTION PROJECT MANAGER. INSPECTIONS SHALL BE SCHEDULED AT LEAST FORTY EIGHT (48) HOURS PRIOR.
26. THE CONTRACTOR SHALL PROVIDE ALL TRAFFIC CONTROL NECESSARY TO COMPLETE THE WORK. ALL TRAFFIC CONTROL DEVICES AND METHODS OF CONTROLLING TRAFFIC THROUGH CONSTRUCTION ZONES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND ALL REVISIONS THERETO INCLUDING LOCAL AND STATE SUPPLEMENTS. ADDITIONAL WORK IN THE RIGHT-OF-WAY OR TRAFFIC CONTROL PERMITS MAY BE NECESSARY AND SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
27. FOR ANY CONSTRUCTION ACTIVITY WITHIN A ROAD RIGHT-OF-WAY, CONTRACTOR SHALL PROVIDE ALL WARNING LIGHTS, SIGNS, BARRICADES, FLAG MEN OR OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY IN ACCORDANCE WITH THE LASTED EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL CONSTRUCTION ZONE TRAFFIC CONTROL. A CONSTRUCTION TRAFFIC CONTROL PLAN MUST BE SUBMITTED FOR REVIEW AND APPROVAL TO THE TOWN/CITY AND PROJECT ENGINEER, 7 DAYS PRIOR TO COMMENCING CONSTRUCTION WITHIN A PUBLIC RIGHT-OF-WAY.
28. CONTRACTOR SHALL DESIGNATE A CERTIFIED TRAFFIC CONTROL SUPERVISOR (TCS) TO MANAGE CONSTRUCTION SIGNAGE AND SAFETY OF OPERATIONS DURING ACTIVITIES WITHIN THE RIGHT OF WAY. A TRAFFIC CONTROL SUPERVISOR SHALL BE AVAILABLE WHENEVER WORK IS IN PROGRESS.
29. IF UNANTICIPATED HAZARDOUS MATERIALS OF ANY KIND ARE ENCOUNTERED IN THE WORK, THE CONTRACTOR SHALL IMMEDIATELY CEASE ALL CONSTRUCTION OPERATIONS AND NOTIFY THE PROJECT ENGINEER AND/OR OWNER'S CONSTRUCTION PROJECT MANAGER FOR FURTHER DIRECTION.
30. ALL DEBRIS RESULTING FROM CONSTRUCTION AND DEMOLITION SHALL BE HAULED OFF SITE AND DISPOSED OF PROPERLY AND LEGALLY AND SHALL BE CONSIDERED PART OF THE WORK.
31. THE CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES IN ALL DIRECTIONS. DRAINAGE FACILITIES MAY NEED TO BE CONSTRUCTED & MAINTAINED AS NECESSARY TO PROTECT PUBLIC & PRIVATE PROPERTY.
32. ALL CONSTRUCTION SHALL BE SUBJECT TO OBSERVATION AND REVIEW BY THE TOWN/CITY AND THE PROJECT ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF OBSERVATIONS AND REVIEW OF ALL INSTALLATIONS. OBSERVATIONS AND REVIEW OF CONSTRUCTION WORK IN PROGRESS ARE NOT TO BE CONSTRUED AS A GUARANTEE OR WARRANTY BY THE OBSERVER OF THE COMPLETED WORK. ALL GUARANTEES OR WARRANTIES REMAIN WITH THE CONTRACTOR.
33. ALL DISTURBED AREAS MUST BE RECLAIMED WITH VEGETATION AS DIRECTED BY CITY AND/OR THE ENGINEER OF RECORD. THE CONTRACTOR SHALL REPAIR OR REPLACE ALL AFFECTED OR DAMAGED LANDSCAPING, INCLUDING IRRIGATION, WITH SIMILAR MATERIALS AND PLANTS. SOD SHALL BE USED TO REPLACE LAWN.
34. THE CONTRACTOR SHALL TAKE APPROPRIATE PRECAUTIONS TO SIGNIFICANTLY REDUCE POTENTIAL POLLUTION FROM CONSTRUCTION ACTIVITIES, INCLUDING VEHICLE FUELING & MAINTENANCE, AND STORAGE AND USE OF CHEMICALS & FERTILIZERS. THE CONTRACTOR SHALL IDENTIFY BEST MANAGEMENT PROCEDURES FOR HANDLING POTENTIAL POLLUTANTS AND SUBMIT SPILL PREVENTION AND RESPONSE PROCEDURES TO THE TOWN/CITY AND PROJECT ENGINEER PRIOR TO ANY ACTIVITY AT THE PROJECT SITE.
35. THE CONTRACTOR SHALL VERIFY EXISTING PIPE OR MANHOLE INVERTS/DEPTHS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER.
36. THE CITY WILL PROVIDE THE CONTRACTOR WITH A TAX EXEMPT FORM FOR USE IN PURCHASING OF MATERIALS AND SUPPLIES.
37. ALL PRODUCT INFORMATION SHOWN IS AS PROVIDED BY THE MANUFACTURER. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND COMPLYING WITH THE MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS FOR THE INSTALLATION OF ALL MATERIALS WITH SPECIAL ATTENTION TO PROPER SEALING OF MATING SURFACES. THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE ENGINEER IF ANY DISCREPANCIES ARE FOUND BETWEEN THE DELIVERED PRODUCTS AND THOSE SHOWN ON THIS PLAN.
38. ALL SIGNS REMOVED FROM THE RIGHT-OF-WAY WILL BE RETURNED TO THE CITY OR STORED ONSITE. CONTRACTOR TO RECORD PHOTOS OF THE AREA AND REINSTALL SIGNS THAT ARE REMOVED DURING CONSTRUCTION.
39. ANY MUD OR OTHER MATERIAL TRACKED OR OTHERWISE DEPOSITED ON THE ROADWAY SHALL BE REMOVED DAILY OR AS ORDERED BY THE DEPARTMENT INSPECTOR.
40. THE CONTRACTOR SHALL PROVIDE ON-SITE SANITARY FACILITIES UNLESS FACILITIES ARE ALREADY PROVIDED THAT ARE REASONABLY CLOSE TO THE CONSTRUCTION SITE.
41. THE CONTRACTOR SHALL COORDINATE AND MAINTAIN ACCESS TO AFFECTED PROPERTY OWNERS AT ALL TIMES DURING CONSTRUCTION AT NO ADDITIONAL COST.
42. THE CONTRACTOR SHALL COMPLY WITH ALL AGREEMENTS BETWEEN THE CITY AND PRIVATE PROPERTY OWNERS.
43. ADDITIONAL NOTES ARE LOCATED THROUGHOUT THE CONSTRUCTION DOCUMENTS.

STORMWATER MANAGEMENT AND EROSION/SEDIMENT CONTROL NOTES

1. THE PREPARATION OF STORMWATER MANAGEMENT PLANS, PERMITTING AND COMPLIANCE ARE THE RESPONSIBILITY OF THE CONTRACTOR. THIS PROJECT MAY ALSO REQUIRE A PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY FROM THE STATE OF COLORADO. THE CONTRACTOR IS TO COMMENCE WORK ON THIS SITE ONLY AFTER AN ACTIVE PERMIT NUMBER HAS BEEN OBTAINED FROM THE STATE OF COLORADO. THE STORMWATER MANAGEMENT PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO APPLYING FOR THE PERMIT. THE CONTRACTOR IS TO PROVIDE EROSION CONTROL IN ACCORDANCE WITH STATE OF COLORADO GUIDELINES.
2. THE CONTRACTOR SHALL CONTINUOUSLY PROVIDE ADEQUATE STORMWATER MANAGEMENT IN ACCORDANCE WITH AN APPROVED STORMWATER MANAGEMENT PLAN (SWMP) FROM THE STATE OF COLORADO.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE PUBLIC STREETS, ACCESS ROUTES, AND WATERWAYS IN THE VICINITY OF THE JOB SITE CLEAN AND FREE OF ROCKS, SOIL AND DEBRIS.
4. THE CONTRACTOR SHALL INSTALL EROSION AND SEDIMENTATION CONTROL "BEST MANAGEMENT PRACTICES" (BMPS) PRIOR TO ANY SITE PREPARATION WORK (E.G., CLEARING, GRUBBING, DEMOLITION, OR EXCAVATION).
5. A GROUNDWATER DISCHARGE PERMIT MAY BE REQUIRED FROM THE STATE GOVERNING AUTHORITY PRIOR TO DISCHARGE. GROUNDWATER SHALL BE SAMPLED AND SENT TO AN APPROVED LABORATORY FOR TESTING PRIOR TO BEING DISCHARGED. TESTING SHALL BE IN ACCORDANCE WITH THE PERMIT FOR STORMWATER DISCHARGE.
6. A WATER SOURCE MUST BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
7. ALL DITCHES & EROSION CONTROL SHOULD BE COMPLETED TO THE RECEIVING STREAM.
8. THE PLACEMENT OF EROSION AND SEDIMENT BMPS SHALL BE IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLAN IF IT WAS PREPARED FOR THE PROJECT. CONTRACTOR TO ADJUST QUANTITY, LOCATION, AND TYPE OF EROSION AND SEDIMENT CONTROL BMPS AS NECESSARY FOR THE VARIOUS PHASES OF THE WORK AND AS ACTUAL CONDITIONS WARRANT. CONTRACTOR SHALL CONTINUOUSLY MODIFY THE EROSION AND SEDIMENT CONTROL PLAN WITH CURRENT BMPS IN ACCORDANCE WITH THE CONSTRUCTION STORMWATER PERMIT REQUIREMENTS. ADDITIONAL EROSION AND SEDIMENT CONTROL BMPS EMPLOYED BY THE CONTRACTOR AT HIS DISCRETION WILL NOT BE MEASURED OR PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.
9. APPROVED EROSION AND SEDIMENT CONTROL BMPS SHALL BE MAINTAINED AND KEPT IN GOOD REPAIR FOR THE DURATION OF THIS PROJECT. UNLESS OTHERWISE REQUIRED BY THE STATE'S CONSTRUCTION STORMWATER PERMIT, AT A MINIMUM THE CONTRACTOR SHALL INSPECT ALL BMPS EVERY 14 DAYS, AND AFTER ALL SIGNIFICANT PRECIPITATION EVENTS I.E. RAINFALL, SNOWMELT. ALL NECESSARY MAINTENANCE AND REPAIR ACTIVITIES SHALL BE COMPLETED WITHIN TWENTY-FOUR (24) HOURS AFTER DIRECTION BY THE INSPECTOR. ACCUMULATED SEDIMENT AND CONSTRUCTION DEBRIS SHALL BE REMOVED WEEKLY FROM ALL BMPS, OR AT ANY TIME THAT SEDIMENT OR CONSTRUCTION DEBRIS ADVERSELY IMPACTS THE FUNCTIONING OF THE BMPS.
10. TOPSOIL AND SUITABLE EARTHEN MATERIALS SHALL BE SEGREGATED AND STOCKPILED WITHIN THE LIMITS OF CONSTRUCTION FOR USE ON AREAS TO BE FILLED AND RE-VEGETATED. ANY AND ALL STOCKPILES SHALL BE PLACED IN AN APPROVED LOCATION AND PROTECTED FROM EROSIVE ELEMENTS USING MEASURES SPECIFIED IN THE EROSION/SEDIMENT CONTROL PLAN AND APPROVED STORMWATER MANAGEMENT PLAN (SWMP) FROM THE STATE OF COLORADO.
11. SOILS THAT WILL BE STOCKPILED FOR MORE THAN THIRTY (30) DAYS SHALL BE MULCHED AND SEEDED WITH A TEMPORARY OR PERMANENT GRASS COVER WITHIN FOURTEEN (14) DAYS OF STOCKPILE CONSTRUCTION.
12. ANY SETTLEMENT OR SOIL ACCUMULATIONS BEYOND THE LIMITS OF CONSTRUCTION DUE TO GRADING OR EROSION SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR REMEDIATION OF ANY ADVERSE IMPACTS TO ADJACENT WATERWAYS, WETLANDS, PROPERTIES, ETC. RESULTING FROM WORK DONE AS PART OF THIS PROJECT.
13. THE CONTRACTOR MUST KEEP ALL POLLUTANTS, INCLUDING SEDIMENT, CONSTRUCTION DEBRIS, AND TRENCH BACKFILL MATERIALS FROM ENTERING THE STORM SEWER SYSTEM.
14. ALL SPILLS INCLUDING, BUT NOT LIMITED TO, PETROLEUM PRODUCTS, SOLVENTS, AND CEMENT SHALL BE CLEANED UP IMMEDIATELY. THE LOCAL TOWN/CITY/COUNTY AND STATE'S GOVERNING AUTHORITY SHALL BE NOTIFIED IMMEDIATELY.
15. THE CONTRACTOR SHALL ENSURE THAT ALL LOADS OF CUT AND FILL MATERIAL IMPORTED TO OR EXPORTED FROM THE SITE SHALL BE PROPERLY COVERED TO PREVENT LOSS OF THE MATERIAL DURING TRANSPORT ON PUBLIC RIGHT-OF-WAY. ALL MATERIAL EXPORTED FROM THE SITE SHALL BE DISPOSED OF AT A SITE PERMITTED TO ACCEPT SUCH MATERIAL.
16. THE USE OF REBAR, STEEL STAKES OR STEEL FENCE POSTS FOR STAKING DOWN STRAW OR HAY BALES, OR TO SUPPORT SILT FENCING USED AS AN EROSION CONTROL MEASURE, IS PROHIBITED.
17. THE CLEANING OF CONCRETE DELIVERY TRUCK CHUTES IS RESTRICTED TO APPROVED LOCATIONS ON THE JOB SITE. THE DISCHARGE OF WATER CONTAINING WASTE CEMENT TO THE STORM SEWER SYSTEM IS PROHIBITED. ALL CONCRETE WASTE SHALL BE PROPERLY CLEANED UP AND DISPOSED OF AT AN APPROPRIATE LOCATION.
18. CONTRACTOR SHALL PROVIDE A COMPLETED "NOTICE OF TERMINATION" TO OWNER, FOR OWNERS SUBMITTAL TO THE STATE'S GOVERNING AUTHORITY ONCE THE PROJECT IS COMPLETE, ALL DISTURBED AREAS HAVE BEEN STABILIZED AND TEMPORARY BMPS HAVE BEEN REMOVED.
19. THE CONTRACTOR SHALL CLEAN OUT ALL EXISTING AND PROPOSED INLETS, PIPES AND MANHOLES OF DEBRIS AND SEDIMENTATION AT COMPLETION OF SITEWORK. THIS WORK SHALL BE DONE TO THE SATISFACTION OF THE OWNER AND LOCAL AUTHORITIES. ANY CONSTRUCTION DEBRIS OR MUD DROPPED INTO MANHOLES, INLETS, PIPES OR TRACKED ONTO EXISTING ROADWAYS SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR. THE CONTRACTOR SHALL REPAIR ANY EXCAVATIONS OR PAVEMENT FAILURES CAUSED BY HIS CONSTRUCTION.
20. THE CONTRACTOR SHALL TAKE ALL APPROPRIATE PRECAUTIONS TO SIGNIFICANTLY REDUCE ANY POTENTIAL POLLUTION CAUSED BY HIS ACTIVITIES, INCLUDING VEHICLE FUELING, STORAGE OF FERTILIZERS OR CHEMICALS, ETC. THE CONTRACTOR SHALL HAVE IDENTIFIED PROCEDURES FOR HANDLING POTENTIAL POLLUTANTS AND HAVE IDENTIFIED SPILL PREVENTION AND RESPONSE PROCEDURES PRIOR TO ANY ACTIVITIES AT THE PROJECT SITE.
21. ALL EROSION CONTROL FABRIC SHALL BE NORTH AMERICAN GREEN SC250 OR ENGINEER APPROVED EQUAL UNLESS SPECIFIED DIRECTLY.

SITE PLAN NOTES

1. DIMENSIONS SHOWN ON THE SITE PLAN ARE TO FACE OF CURB LINE (FLOWLINE) IN CURBED AREAS, EDGE OF ASPHALT, AND EXTERIOR FACE OF BUILDING, UNLESS OTHERWISE SPECIFIED.
2. ALL SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION.

GRADING PLAN NOTES

1. PRIOR TO ANY GRADING OPERATIONS, ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE ADEQUATELY IN PLACE. REFER TO THE EROSION AND SEDIMENT CONTROL PLAN, IF PROVIDED, FOR REQUIREMENTS.
2. THE CONTOUR LINES, SPOT ELEVATIONS AND BUILDING FLOOR ELEVATIONS SHOWN ARE TO FINISH GRADE FOR SURFACE OF PAVEMENT, TOP OF SIDEWALKS AND CURBS, TOP OF FLOOR SLABS, ETC. REFER TO TYPICAL SECTIONS FOR MULCH, SOD, PAVING, SLAB AND AGGREGATE BASE THICKNESS TO DEDUCT FOR SUBGRADE ELEVATIONS.
3. IF APPLICABLE, ALL TOP OF CURB AND SIDEWALK ELEVATIONS SHALL BE 0.5' ABOVE GUTTER ELEVATIONS UNLESS OTHERWISE NOTED. IN AREAS WITH SIDEWALK ABUTTING BACK OF CURB, TOP OF CURB ELEVATIONS SHALL BE EQUAL TO SIDEWALK ELEVATIONS.
4. THE CONTRACTOR SHALL CONSTRUCT FINISH GRADE SLOPES NO STEEPER THAN AS SHOWN ON THESE PLANS.
5. SITE , UTILITY AND ROAD PREPARATION, GRADING AND EXCAVATION PROCEDURES SHALL CONFORM TO THE RECOMMENDATIONS OUTLINED IN THE PROJECT GEOTECHNICAL REPORT.
6. THE CONTRACTOR SHALL GRADE LANDSCAPED AREAS TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS AND SIDEWALKS IN CONFORMANCE WITH THE REQUIREMENTS OF THE PROJECT GEOTECHNICAL REPORT.
7. IN CASE OF ANY DISCREPANCIES REGARDING EARTHWORK BETWEEN THE GEOTECHNICAL REPORT AND THE SPECIFICATIONS SHOWN IN THESE PLANS, NOTIFY THE PROJECT ENGINEER AND OWNER'S CONSTRUCTION PROJECT MANAGER IMMEDIATELY.
8. THE UPPER 24" OF ALL UTILITY TRENCHES IN UNPAVED AREAS SHALL BE BACKFILLED WITH COMPACTED COHESIVE SOILS. SEE GEOTECHNICAL REPORT FOR COMPACTION AND MOISTURE RECOMMENDATIONS.
9. FINAL PAVEMENT SUBGRADES SHALL BE PROOF-ROLLED WITHIN TWENTY FOUR (24) HOURS PRIOR TO THE PLACEMENT OF THE PAVEMENT TO DETECT LOCALIZED AREAS OF INSTABILITY.
10. SUITABLE FILL MATERIALS SHALL BE PLACED IN THIN LIFTS OF 4 TO 8 INCHES LOOSE MEASUREMENT, UNLESS OTHERWISE ALLOWED IN THE GEOTECHNICAL REPORT.
11. IF REQUIRED, THE CONTRACTOR SHALL OBTAIN ALL LOCAL AND STATE PERMITS AND AUTHORIZATION TO DISCHARGE FROM DEWATERING ACTIVITIES.
12. THE CONTRACTOR SHALL DEWATER ALL EXCAVATIONS AND TRENCHES AS NEEDED FOR THE CONSTRUCTION OF THE PROJECT USING MEANS/METHODS OF HIS CHOICE. REFER TO THE GEOTECHNICAL REPORT FOR ANTICIPATED LEVELS OF GROUNDWATER AND DEWATERING RECOMMENDATIONS.
13. ALL EXCAVATIONS, RETAINING WALLS, ROADWAYS, DRAINAGE FACILITIES, BUILDING STRUCTURES AND TRENCHES SHALL BE SLOPED/SHORED/BRACED FOR PROTECTION OF PERSONNEL IN ACCORDANCE WITH OSHA AND/OR CDOT REGULATIONS AND AT THE CONTRACTOR'S FULL DISCRETION BASED ON THE SITE CONDITIONS. OPEN EXCAVATIONS SHALL BE ADEQUATELY PROTECTED AND/OR FENCED AS NECESSARY AND FOR THE SAFETY OF THE PUBLIC.

PAVING NOTES

1. ALL PAVING WORK AND SUBGRADE PREPARATION/STABILIZATION SHALL CONFORM TO THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT, PREPARED BY CTL-THOMPSON, INC. DATED 12/21/18, PROJECT NO. GS06309.000-125. IN CASE OF ANY CONFLICT WITH THESE PLANS, NOTIFY ENGINEER IMMEDIATELY.
2. IF REQUIRED, ALL CONCRETE PAVEMENT AND CONSTRUCTION SHALL MEET SPECIFICATIONS OUTLINED IN THE GEOTECHNICAL REPORT. CONCRETE PAVEMENT SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4200 PSI, TYPE I/II PORTLAND CEMENT (UNLESS OTHERWISE SPECIFIED IN THE GEOTECHNICAL REPORT FOR HIGHER SULFATE RESISTANCE), CONFORMING TO ASTM C 150.
3. ALL RADIUS DIMENSIONS SHOWN ON THE PAVING PLAN ARE TO FLOWLINE OF CURB UNLESS OTHERWISE NOTED.
4. 95% STANDARD PROCTOR IS REQUIRED FOR ALL ROADWAY & DRIVEWAY CONSTRUCTION AND TRENCH BACKFILL UNDER THE ROADWAYS, PARKING AREAS, TRAILS, SIDEWALKS, PUBLIC ROW, ACCESS EASEMENTS UNLESS NOTED OTHERWISE. COMPACTION IN REQUIRED AREAS MUST BE ATTAINED AND COMPACTION RESULTS SUBMITTED TO THE TOWN/CITY AND THE PROJECT ENGINEER PRIOR TO ACCEPTANCE. TEST RESULTS SHOULD BE FURNISHED TO THE ENGINEER BEFORE ACCEPTANCE BY THE OWNER. FAILING TESTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR & THE ENGINEER, & ANY NECESSARY RETEST SHALL BE PERFORMED UNTIL A PASSING RESULT IS OBTAINED. ALL UTILITY MAINS & SERVICE LINES WITHIN PUBLIC RIGHT OF WAY OR EASEMENT SHALL BE TESTED. ALL COMPACTION SHALL MEET OR EXCEED 95% STANDARD PROCTOR.
5. IF APPLICABLE, THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL ACCESSIBLE AREAS AND ROUTES ARE BUILT IN ACCORDANCE WITH THE PLANS AND THE "2010 ADA STANDARDS FOR ACCESSIBLE DESIGN". THE SITE MAY BE INSPECTED BY TOWN/CITY PERSONNEL FOR COMPLIANCE WITH THE STANDARDS.
6. ALL CONCRETE SHALL CONTAIN CDOT APPROVED FIBER MESH REINFORCEMENT AT 3.5 LBS PER CUBIC YARD.
7. CONCRETE SIDEWALK THICKNESS SHALL BE 4" MIN. AND INCREASED TO 6" MIN. AT RAMPS, DRIVEWAY CROSSINGS, OR AS INDICATED ON THE DETAILS. CONCRETE PAVEMENT THICKNESS IN ROADWAYS SHALL BE PER THE DETAILS. COLOR ADMIXTURES: COLOR SAMPLES SHALL BE PROVIDED TO THE PROJECT ENGINEER FOR SELECTION PRIOR TO CONSTRUCTION.
8. CALCIUM CHLORIDE OR ADMIXTURES CONTAINING MORE THAN 0.05% CHLORIDE IONS OR THIOCYANATES ARE NOT PERMITTED.
9. ALL REINFORCING STEEL SHALL BE EPOXY COATED GRADE 40 FOR #4 AND SMALLER AND GRADE 60 FOR #5 AND LARGER. ALL REINFORCING STEEL IN SLABS AND WALLS SHALL BE HELD AT CORRECT DISTANCE FROM FORMS BY ADEQUATE CONCRETE BLOCKS, STEEL CHAIRS, OR TIES IN ACCORDANCE WITH LATEST ACI DETAILING PRACTICES.
10. DOWELS SHALL BE 12" EPOXY COATED #4 REBAR OR LARGER, CENTERED ON THE JOINT, AND GROUTED INTO PLACE.
11. USE 1/4" RADIUS ON ALL EDGES UNLESS NOTED OTHERWISE.
12. EXPANSION JOINTS SHALL BE INSTALLED EVERY 90 LF IN SIDEWALK AND/OR WHEN ABUTTING EXISTING CONCRETE OR A FIXED STRUCTURE. EXPANSION JOINT MATERIAL SHALL BE 1/2 INCH THICK AND SHALL EXTEND THE FULL DEPTH OF THE CONTACT SURFACE AND SEALED OVER THE JOINT.
13. THE CONTRACTOR SHALL, UNLESS OTHERWISE SHOWN ON THE PLANS, SELECT AND USE A BOND BREAKER AT INLETS, MANHOLES AND SIMILAR SIZE STRUCTURES. SMALLER STRUCTURES SUCH AS VALVE AND MONUMENT BOXES SHALL NOT REQUIRE A BOND BREAKER.
14. CURE FOR 72 HOURS USING CURING COMPOUND, PLASTIC COVERING OR CONTROLLED MOISTURE.
15. MILL EDGES OF SAWCUT ASPHALT PER CITY STANDARDS. ALL ASPHALT AND CONCRETE LOCATED WITHIN THE GLENWOOD SPRINGS RIGHT-OF-WAY OR PRIVATE PROPERTIES SHALL BE REPLACED PER THE DETAILS. WHEN REPLACING ASPHALT OR CONCRETE, MATCH VERTICAL EDGES OF SAWCUT AND MAINTAIN INTEGRITY OF DRAINAGE PATTERNS.

UTILITY NOTES

1. THE CONTRACTOR SHALL AT ALL TIMES KEEP TWO FULL SETS OF CONTRACT DRAWINGS MARKED UP TO INDICATE THE AS-BUILT LOCATION OF SUBSURFACE UTILITIES INSTALLED AND ENCOUNTERED. ALL INSTALLED AND ENCOUNTERED UTILITIES SHALL BE TOPOGRAPHICALLY SURVEYED BY A PROFESSIONAL ENGINEER AND ASBUILT DRAWINGS IN COMPLIANCE WITH SENATE BILL 18-167 SHALL BE PROVIDED IN ELECTRONIC .DWG AND .PDF FORM TO THE CITY AND THE PROJECT ENGINEER UPON COMPLETION OF THE WORK. ALL SURVEY DATA SHALL BE ON CITY COORDINATES AND DATUM.
2. ALL UTILITIES, BOTH UNDERGROUND OR OVERHEAD, SHALL BE MAINTAINED IN CONTINUOUS SERVICE THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD, EXCEPT AS NOTED IN THE SPECIAL CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE AND LIABLE FOR ANY DAMAGES TO, OR INTERRUPTION OF, SERVICES CAUSED BY THE CONSTRUCTION.
3. ALL UTILITIES SHALL BE INSTALLED AND TESTED PER CITY OF GLENWOOD SPRINGS CODE/STANDARDS.
4. INSTALLATION, RELOCATION OR REMOVAL OF UTILITIES SHALL BE COORDINATED WITH THE CITY AND UTILITY AGENCIES AFFECTED.
5. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES AT PROPOSED POINTS OF HORIZONTAL AND VERTICAL CONNECTION AND CONFIRM EXACT LOCATIONS/SIZES OF ALL UTILITY SERVICE LINES PRIOR TO UTILITIES CONSTRUCTION.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ARRANGING ONSITE MEETINGS WITH THE TOWN/CITY, GOVERNING AGENCIES, AND UTILITY OWNERS PRIOR TO THE START OF ANY CONSTRUCTION OR INSTALLATION OF UTILITIES.
7. THE CONTRACTOR SHALL CONSTRUCT ALL POTABLE WATER, SANITARY SEWER, ELECTRIC, GAS, TELECOMMUNICATION MAINS/SERVICE LINES/CONNECTIONS IN ACCORDANCE WITH THE APPLICABLE STANDARDS AND SPECIFICATIONS OF THE TOWN/CITY AND/OR UTILITY PROVIDER. ALL WORK AND MATERIALS WILL BE SUBJECT TO INSPECTION AND APPROVAL BY THE CITY, PROJECT ENGINEER OF UTILITY PRIOR TO BACKFILL.
8. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING UTILITY SERVICE CONNECTIONS WITH THE APPROPRIATE UTILITY COMPANY/OWNER, AND TO OBTAIN ALL PERMITS AND PAY ALL FEES AS REQUIRED FOR SERVICE CONNECTIONS TO UTILITY MAINS.
9. UTILITY TRENCHES AND STRUCTURE EXCAVATIONS ARE TO BE SLOPED OR BRACED AND SHEETED AS NECESSARY FOR THE SAFETY OF THE WORKMEN AND THE PROTECTION OF OTHER UTILITIES IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REQUIREMENTS.
10. UNLESS OTHERWISE NOTED, CONTRACTOR SHALL PROVIDE TRENCHING FOR ALL UTILITY SERVICE LINES.
11. CONTRACTOR TO SET AND ADJUST ALL PROPOSED UTILITY STRUCTURES, CLEANOUTS, VALVES, METER PITS, ETC. TO FINISH GRADE. EXISTING ITEMS AFFECTED BY THE WORK SHALL BE ADJUSTED AS REQUIRED TO MATCH FINISH GRADE.
12. THE CONTRACTOR SHALL VERIFY EXISTING PIPE OR MANHOLE INVERTS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER.
13. ALL NEW OR REPLACED SANITARY SEWER MAIN AND SERVICES SHALL BE C900 PVC, UNLESS NOTED DIFFERENTLY.
14. SANITARY SEWER SERVICES MUST INTERCONNECT INTO SEWER MAINS, NOT AT MANHOLES.
15. MANHOLE RIMS SHALL BE SET AT AN ELEVATION 1/4" BELOW ASPHALT ELEVATION. PRECAST PRECISION MANHOLE COVER SYSTEMS OR ENGINEER APPROVED EQUALS SHALL BE USED TO ADJUST RIM ELEVATIONS TO FINAL GRADE. THE MAXIMUM ACCEPTED VERTICAL ADJUSTMENT IS 12 INCHES AND COVER SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
16. THE CONTRACTOR SHALL TEMPORARILY PLUG OR COVER SEWER INVERTS AS NECESSARY TO PREVENT DEBRIS FROM ENTERING THE SEWER MAIN DURING CONSTRUCTION OF EACH INDIVIDUAL SEWER MANHOLE.
17. CONTRACTOR SHALL BE PREPARED TO INSTALL COUPLINGS AND FITTINGS AS NECESSARY TO MAKE CONNECTIONS BETWEEN VARIED TYPES OF PIPE, INCLUDING BUT NOT LIMITED TO PVC, TRANSITE, CLAY, ORANGEBURG AND DUCTILE IRON. ONLY FERNCO STRONGBACK RC COUPLINGS OR ENGINEER APPROVED EQUAL SHALL BE INSTALLED.
18. THE CONTRACTOR SHALL COORDINATE WATER MAIN WORK WITH THE FIRE DEPARTMENT TO ENSURE ADEQUATE FIRE PROTECTION IS CONSTANTLY AVAILABLE TO THE SITE AND ADJACENT PROPERTIES. CONTRACTOR WILL BE RESPONSIBLE FOR ARRANGING/PROVIDING ANY REQUIRED WATER MAIN SHUT OFFS WITH THE TOWN/CITY DURING CONSTRUCTION. ANY COSTS ASSOCIATED WITH WATER MAIN SHUT OFFS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AT HIS EXPENSE.
19. POTABLE WATER LINES AND SERVICES SHALL HAVE A MINIMUM OF 5.5 FEET OF COVER, MINIMUM. SANITARY SEWER LINES AND SERVICES SHALL HAVE A MINIMUM OF 3.5 FEET OF COVER.
20. PROVIDE 10 FEET MINIMUM HORIZONTAL SEPARATION BETWEEN WATER AND SANITARY/STORM SEWER LINES WHERE POSSIBLE. WHERE THIS SEPARATION CANNOT BE MAINTAINED ENCASE PER COLORADO DEPARTMENT OF HEALTH REQUIREMENTS. ALL PIPE JOINTS LOCATED WITHIN 10 FEET OF A WATER AND SANITARY/STORM CROSSING SHALL BE ENCASED IF THE WATER MAIN IS EXISTS BELOW OR IS LESS THAN 18 INCHES ABOVE THE CROSSING SANITARY SEWER/STORM LINE.
21. ALL TEES, (H & V) BENDS, PLUGS, HYDRANTS, ETC. MUST BE PROVIDED WITH CONCRETE REACTION BLOCKING AND JOINT RESTRAINTS.
22. ALL NEW OR REPLACED WATER MAIN SHALL BE CLASS 52 DIP, WITH POLYWRAP.
23. EXISTING VALVE & VALVE BOXES THAT ARE TO BE REMOVED ARE TO BE RETURNED TO THE CITY OF GLENWOOD SPRINGS.
24. CONTRACTOR TO NOTIFY UTILITY USERS AT LEAST 72 HOURS IN ADVANCE OF ANY WATER OR SEWER SHUT DOWN. MORE NOTICE MAY BE REQUIRED FOR MAJOR CONNECTIONS.
25. WATER LINE BEND ANGLES ARE SHOWN AS A GUIDELINE, ADDITIONAL HORIZONTAL AND VERTICAL BENDS MAY BE REQUIRED TO MAINTAIN ALIGNMENT AND MINIMUM COVER.
26. ALL CONDUITS SHALL BE ELECTRIC GRADE SCH.80 PVC. CONDUITS FOR PRIMARY ELECTRIC SHALL BE INSTALLED AT LOCATIONS SHOWN WITH 48" MINIMUM COVER. CONDUITS FOR SECONDARY ELECTRIC AND TELECOMMUNICATIONS SHALL BE INSTALLED AT LOCATIONS SHOWN WITH 24" MINIMUM COVER UNDER SIDEWALKS AND 30" MINIMUM COVER UNDER ROADWAYS. INSTALL DETECTABLE WARNING TAPE 12" ABOVE ALL CONDUITS.
27. THE CONTRACTOR SHALL USE CAUTION IN VICINITY OF WATER MAINS, WATER SERVICES, SEWER MAINS, SEWER SERVICES, IRRIGATION MAINS, IRRIGATION SERVICES, GAS LINES, FIBER OPTICS, OVERHEAD OR UNDERGROUND ELECTRIC/TELEPHONE/CATV CONDUITS AND BUILDING STRUCTURES.
28. CONTRACTOR SHALL ADJUST ALL MANHOLE RIMS, GRATES, VALVE/CURB/IRRIGATION BOXES, METER PIT RIMS, ETC. TO 1/4" BELOW FINISH GRADE ELEVATION. FIRE HYDRANTS SHALL BE ADJUSTED SUCH THAT THE BOTTOM OF FLANGE IS 3"-6" ABOVE THE FINISH GRADE WHILE MAINTAINING MINIMUM COVER REQUIREMENTS.
29. UPON COMPLETION OF THE PIPELINE INSTALLATION WORK, ALL RUBBISH, EXCESS MATERIALS, TEMPORARY STRUCTURES AND EQUIPMENT ARE TO BE REMOVED AND THE SITE CLEANED AND RESTORED TO THE SATISFACTION OF THE CITY. DISTURBED AREAS SHALL BE SEEDED OR OTHERWISE PROTECTED TO CONTROL EROSION AS SPECIFIED OR REQUIRED BY THE CITY.

STORM SEWER NOTES

1. STORM SEWER PIPE MATERIALS SHALL BE WATER TIGHT HDPE DOUBLE-WALL, SMOOTH INTERIOR PIPE (ADS N-12-WT OR ENGINEER APPROVED EQUAL) OR RUBBER GASKET REINFORCED CONCRETE PIPE (RCP) UNLESS OTHERWISE SPECIFIED IN THE PLANS.
2. STORM SEWER PIPE SHALL BE BEDDED, INSTALLED, AND BACKFILLED IN ACCORDANCE WITH THE DETAILS INCLUDED IN THE PLANS, MANUFACTURER'S INSTALLATION REQUIREMENTS, AND/OR STANDARD DETAILS INCLUDED BY REFERENCE.
3. ALL CAST-IN-PLACE CONCRETE DRAINAGE STRUCTURES SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI, TYPE II CEMENT (UNLESS OTHERWISE SPECIFIED) WITH AIR ENTRAINING ADMIXTURES AND SHALL CONFORM TO THE LOCAL TOWN/CITY'S SPECIFICATIONS.

SITE BENCHMARK::

CONTOURS ARE SHOWN AT ONE FOOT INTERVALS. HORIZONTAL AND VERTICAL CONTROL IS BASED CITY DATUM.

THE THREE (3) UTILIZED CONTROL POINTS ARE :

• ROSEBUD (#303)	28797.34N	20966.05E	ELEV. 5855.47 (NAVD29)
• TWO RIVERS (#304)	43946.35N	15920.32E	ELEV. 5900.68 (NAVD29)
• GLENWOOD (#305)	45509.43N	7077.60E	ELEV. 5710.02 (NAVD29)

REQUIRED SHOP DRAWINGS:

- AGGREGATES
- CONCRETE
- STEEL
- ASPHALT MIX DESIGN
- FLOWABLE FILL
- ALL UTILITY STRUCTURES, PIPE & FITTINGS, CONDUITS
- ANY OTHERS INDICATED WITHIN THE PLANS OR AS REQUIRED BY THE TOWN/CITY OR THE ENGINEER.

UTILITY PROVIDERS/OWNERS:

ELECTRIC:	DOUG HAZZARD	CITY ELECTRIC SYSTEM	970.384.6353
FIBER OPTIC:	ERIC ARNETTE	CITY BROADBAND	970.384.6416
WATER/SAN. SEWER:	BRADLEY ZACHMAN	CITY W/WW	970.384.6388
STORM/IRRIGATION:	TERRI PARTCH	CITY ENGINEERING	970.384.6435
STREETS:	JAKE VELASQUEZ	CITY STREETS	970.384.6379
NATURAL GAS:	JASON COX	BLACK HILLS ENERGY	970.456.3117
TELECOMMUNICATIONS:	MICHAEL JOHNSON	COMCAST	970.930.4713
TELECOMMUNICATIONS:	JASON SHARPE	CENTURYLINK	970.384.0238

MATERIAL TESTING/QUALITY ASSURANCE NOTES:

1. ALL TESTS AND INSPECTIONS AS REQUIRED BY CODES, ORDINANCES OR FOR MATERIAL CERTIFICATION AND CONSTRUCTION AS NOTED IN THE PLANS AND SPECIFICATIONS SHALL BE PAID BY THE CONTRACTOR. WHEN NOT SPECIFIED AS AN INDIVIDUAL LINE ITEM IN THE BID SCHEDULE, THE COSTS OF TESTING PAID BY THE CONTRACTOR AND SHALL BE INCLUDED IN THE COST OF THE ASSOCIATED ITEM OF WORK.
2. TESTS SHALL BE MADE BY AN INDEPENDENT TESTING LABORATORY AND BE ACCEPTABLE TO THE CITY, PROJECT MANAGER AND PROJECT ENGINEER. EXCEPT AS OTHERWISE PROVIDED, SAMPLING OF MATERIALS, TESTING METHODS AND TESTING EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS OR TENTATIVE METHOD OF THE REFERENCED SPECIFICATIONS.
3. CONTRACTOR TO NOTIFY ENGINEER OF RECORD WHEN TOPSOIL/ORGANICS HAVE BEEN STRIPPED TO CONFIRM REMOVAL IS ADEQUATE.
4. ENGINEER OF RECORD AND TESTING AGENT TO FIELD VERIFY SUBGRADE BY WITNESSING A LOADED TANDEM WHEEL ROLL TEST OF SUBGRADE FOR CURB/ASPHALT.
5. TESTING FREQUENCY SHALL CONFORM TO THE CDOT FIELD MATERIALS MANUAL, LATEST EDITION, OR THE FOLLOWING, WHICHEVER IS MORE FREQUENT. AT A MINIMUM, TESTING AGENT TO PERFORM NUCLEAR DENSITY TESTING OF THE FOLLOWING:

5.a.	TRENCHES:	EVERY 100-FEET FOR THE LOWER 12-INCHES OF FILL AND EACH 24-INCHES OF FILL THEREAFTER.
5.b.	STRUCTURAL FILL:	EVERY 100-FEET, OR 3 TESTS PER BLOCK MIN., FOR EACH 2-FEET OF FILL.
5.c.	SUBGRADE:	EVERY 100-FEET, OR 3 TESTS PER BLOCK MIN.
5.d.	BASE COURSE:	EVERY 100-FEET, OR 3 TESTS PER BLOCK MIN.
5.e.	ASPHALT:	EVERY 100-FEET, OR 3 TESTS PER BLOCK MIN.

6. TESTING AGENT SHALL OBTAIN CONCRETE CYLINDERS FOR TESTING EACH DAY CONCRETE IS POURED.
7. TESTING AGENT SHALL PERFORM A MARSHAL TEST OF THE ASPHALT.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE MATERIAL AND COMPACTION TESTING WITH THE PROJECT ENGINEER AND TESTING AGENT AND ADHERING TO THE TESTING SCHEDULE DEFINED.
9. CONTRACTOR SHALL PROVIDE THE CITY AND ENGINEER OF RECORD WITH COPIES OF ALL TEST RESULTS AND REPORTS CONFIRMING COMPLIANCE.

CONTACT INFORMATION:

- PROJECT MANAGER:

  MATTHEW LANGHORST-CITY OF GLENWOOD SPRINGS, PUBLIC WORKS DEPT.

  970.384.6438
- QUALITY ASSURANCE - PROJECT ENGINEER/ENGINEER OF RECORD:

  DERIC J. WALTER, PE

  BOUNDARIES UNLIMITED INC.

  970.945.5252
- MATERIALS TESTING - TESTING AGENT:

  BY THE CONTRACTOR AND AS APPROVED BY THE TOWN/CITY.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Cover Sheet

95% Progress Set - Not For Construction

No.	Date	Revision	By
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PROJECT NO. ***18034***
Designer: ***DJW***
Drafter: ***BUI***
Date: ***11/13/19***

Sheet ***T.1***

File Name: ***18034-c-cover.dwg***

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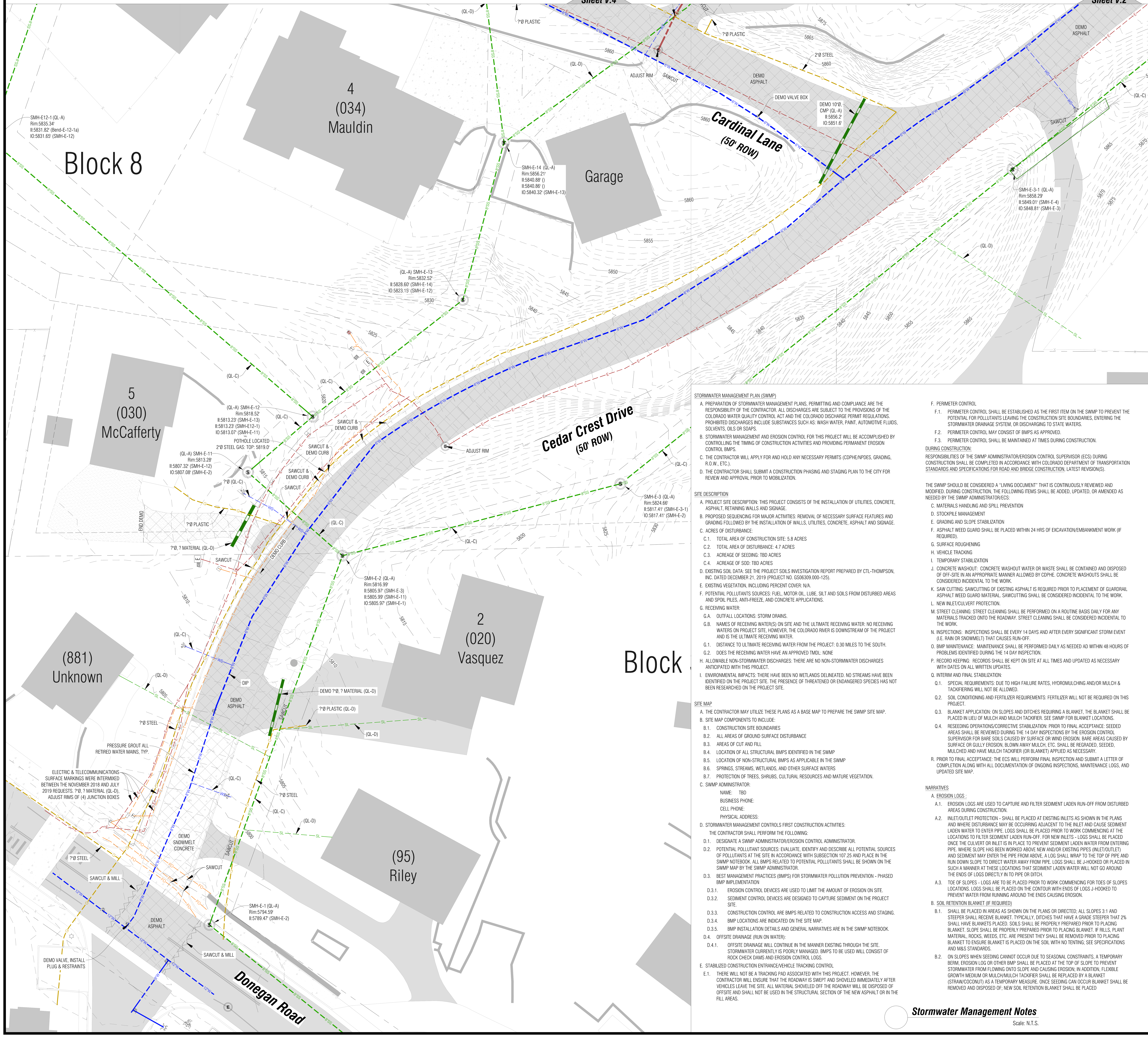

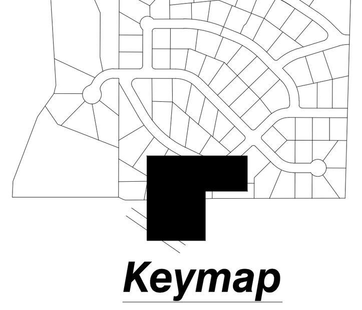

STORMWATER MANAGEMENT PLAN (SWMP)

A. PREPARATION OF STORMWATER MANAGEMENT PLANS, PERMITTING AND COMPLIANCE ARE THE RESPONSIBILITY OF THE CONTRACTOR. ALL DISCHARGES ARE SUBJECT TO THE PROVISIONS OF THE COLORADO WATER QUALITY CONTROL ACT AND THE COLORADO DISCHARGE PERMIT REGULATIONS. PROHIBITED DISCHARGES INCLUDE SUBSTANCES SUCH AS: WASH WATER, PAINT, AUTOMOTIVE FLUIDS, SOLVENTS, OILS OR SOAPS.

B. STORMWATER MANAGEMENT AND EROSION CONTROL FOR THIS PROJECT WILL BE ACCOMPLISHED BY CONTROLLING THE TIMING OF CONSTRUCTION ACTIVITIES AND PROVIDING PERMANENT EROSION CONTROL BMPS.

C. THE CONTRACTOR WILL APPLY FOR AND HOLD ANY NECESSARY PERMITS (CDPHE/NPDES, GRADING, R.O.W., ETC.).

D. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION PHASING AND STAGING PLAN TO THE CITY FOR REVIEW AND APPROVAL PRIOR TO MOBILIZATION.

SITE DESCRIPTION

A. PROJECT SITE DESCRIPTION: THIS PROJECT CONSISTS OF THE INSTALLATION OF UTILITIES, CONCRETE, ASPHALT, RETAINING WALLS AND SIGNAGE.

B. PROPOSED SEQUENCING FOR MAJOR ACTIVITIES: REMOVAL OF NECESSARY SURFACE FEATURES AND GRADING FOLLOWED BY THE INSTALLATION OF WALLS, UTILITIES, CONCRETE, ASPHALT AND SIGNAGE.

C. ACRES OF DISTURBANCE:
- C.1. TOTAL AREA OF CONSTRUCTION SITE: 5.8 ACRES
- C.2. TOTAL AREA OF DISTURBANCE: 4.7 ACRES
- C.3. ACREAGE OF SEEDING: TBD ACRES
- C.4. ACREAGE OF SOD: TBD ACRES

D. EXISTING SOIL DATA: SEE THE PROJECT SOILS INVESTIGATION REPORT PREPARED BY CTL-THOMPSON, INC. DATED DECEMBER 21, 2019 (PROJECT NO. GS06309.000-125).

E. EXISTING VEGETATION, INCLUDING PERCENT COVER: N/A.

F. POTENTIAL POLLUTANTS SOURCES: FUEL, MOTOR OIL, LUBE, SILT AND SOILS FROM DISTURBED AREAS AND SPOIL PILES, ANTI-FREEZE, AND CONCRETE APPLICATIONS.

G. RECEIVING WATER:
- G.A. OUTFALL LOCATIONS: STORM DRAINS.
- G.B. NAMES OF RECEIVING WATER(S) ON SITE AND THE ULTIMATE RECEIVING WATER: NO RECEIVING WATERS ON PROJECT SITE, HOWEVER, THE COLORADO RIVER IS DOWNSTREAM OF THE PROJECT AND IS THE ULTIMATE RECEIVING WATER.
- G.1. DISTANCE TO ULTIMATE RECEIVING WATER FROM THE PROJECT: 0.30 MILES TO THE SOUTH.
- G.2. DOES THE RECEIVING WATER HAVE AN APPROVED TMDL: NONE

H. ALLOWABLE NON-STORMWATER DISCHARGES: THERE ARE NO NON-STORMWATER DISCHARGES ANTICIPATED WITH THIS PROJECT.

I. ENVIRONMENTAL IMPACTS: THERE HAVE BEEN NO WETLANDS DELINEATED. NO STREAMS HAVE BEEN IDENTIFIED ON THE PROJECT SITE. THE PRESENCE OF THREATENED OR ENDANGERED SPECIES HAS NOT BEEN RESEARCHED ON THE PROJECT SITE.

SITE MAP

A. THE CONTRACTOR MAY UTILIZE THESE PLANS AS A BASE MAP TO PREPARE THE SWMP SITE MAP.

B. SITE MAP COMPONENTS TO INCLUDE:
- B.1. CONSTRUCTION SITE BOUNDARIES
- B.2. ALL AREAS OF GROUND SURFACE DISTURBANCE
- B.3. AREAS OF CUT AND FILL
- B.4. LOCATION OF ALL STRUCTURAL BMPS IDENTIFIED IN THE SWMP
- B.5. LOCATION OF NON-STRUCTURAL BMPS AS APPLICABLE IN THE SWMP
- B.6. SPRINGS, STREAMS, WETLANDS, AND OTHER SURFACE WATERS
- B.7. PROTECTION OF TREES, SHRUBS, CULTURAL RESOURCES AND MATURE VEGETATION.

C. SWMP ADMINISTRATOR:

NAME: TBD
BUSINESS PHONE:
CELL PHONE:
PHYSICAL ADDRESS:

D. STORMWATER MANAGEMENT CONTROLS FIRST CONSTRUCTION ACTIVITIES:

THE CONTRACTOR SHALL PERFORM THE FOLLOWING:
- D.1. DESIGNATE A SWMP ADMINISTRATOR/EROSION CONTROL ADMINISTRATOR.
- D.2. POTENTIAL POLLUTANT SOURCES: EVALUATE, IDENTIFY AND DESCRIBE ALL POTENTIAL SOURCES OF POLLUTANTS AT THE SITE IN ACCORDANCE WITH SUBSECTION 107.25 AND PLACE IN THE SWMP NOTEBOOK. ALL BMPS RELATED TO POTENTIAL POLLUTANTS SHALL BE SHOWN ON THE SWMP MAP BY THE SWMP ADMINISTRATOR.
- D.3. BEST MANAGEMENT PRACTICES (BMPS) FOR STORMWATER POLLUTION PREVENTION - PHASED BMP IMPLEMENTATION
  - D.3.1. EROSION CONTROL DEVICES ARE USED TO LIMIT THE AMOUNT OF EROSION ON SITE.
  - D.3.2. SEDIMENT CONTROL DEVICES ARE DESIGNED TO CAPTURE SEDIMENT ON THE PROJECT SITE.
  - D.3.3. CONSTRUCTION CONTROL ARE BMPS RELATED TO CONSTRUCTION ACCESS AND STAGING.
  - D.3.4. BMP LOCATIONS ARE INDICATED ON THE SITE MAP.
  - D.3.5. BMP INSTALLATION DETAILS AND GENERAL NARRATIVES ARE IN THE SWMP NOTEBOOK.
- D.4. OFFSITE DRAINAGE (RUN ON WATER):
  - D.4.1. OFFSITE DRAINAGE WILL CONTINUE IN THE MANNER EXISTING THROUGH THE SITE. STORMWATER CURRENTLY IS POORLY MANAGED. BMPS TO BE USED WILL CONSIST OF ROCK CHECK DAMS AND EROSION CONTROL LOGS.

E. STABILIZED CONSTRUCTION ENTRANCE/VEHICLE TRACKING CONTROL
- E.1. THERE WILL NOT BE A TRACKING PAD ASSOCIATED WITH THIS PROJECT. HOWEVER, THE CONTRACTOR WILL ENSURE THAT THE ROADWAY IS SWEPT AND SHOVELED IMMEDIATELY AFTER VEHICLES LEAVE THE SITE. ALL MATERIAL SHOVELED OFF THE ROADWAY WILL BE DISPOSED OF OFFSITE AND SHALL NOT BE USED IN THE STRUCTURAL SECTION OF THE NEW ASPHALT OR IN THE FILL AREAS.

F. PERIMETER CONTROL
- F.1. PERIMETER CONTROL SHALL BE ESTABLISHED AS THE FIRST ITEM ON THE SWMP TO PREVENT THE POTENTIAL FOR POLLUTANTS LEAVING THE CONSTRUCTION SITE BOUNDARIES, ENTERING THE STORMWATER DRAINAGE SYSTEM, OR DISCHARGING TO STATE WATERS.
- F.2. PERIMETER CONTROL MAY CONSIST OF BMPS AS APPROVED.
- F.3. PERIMETER CONTROL SHALL BE MAINTAINED AT TIMES DURING CONSTRUCTION.

DURING CONSTRUCTION:

RESPONSIBILITIES OF THE SWMP ADMINISTRATOR/EROSION CONTROL SUPERVISOR (ECS) DURING CONSTRUCTION SHALL BE COMPLETED IN ACCORDANCE WITH COLORADO DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST REVISION(S).

THE SWMP SHOULD BE CONSIDERED A "LIVING DOCUMENT" THAT IS CONTINUOUSLY REVIEWED AND MODIFIED. DURING CONSTRUCTION, THE FOLLOWING ITEMS SHALL BE ADDED, UPDATED, OR AMENDED AS NEEDED BY THE SWMP ADMINISTRATOR/ECS:

C. MATERIALS HANDLING AND SPILL PREVENTION

D. STOCKPILE MANAGEMENT

E. GRADING AND SLOPE STABILIZATION

F. ASPHALT WEED GUARD SHALL BE PLACED WITHIN 24 HRS OF EXCAVATION/EMBANKMENT WORK (IF REQUIRED).

G. SURFACE ROUGHENING

H. VEHICLE TRACKING

I. TEMPORARY STABILIZATION

J. CONCRETE WASHOUT: CONCRETE WASHOUT WATER OR WASTE SHALL BE CONTAINED AND DISPOSED OF OFF-SITE IN AN APPROPRIATE MANNER ALLOWED BY CDPHE. CONCRETE WASHOUTS SHALL BE CONSIDERED INCIDENTAL TO THE WORK.

K. SAW CUTTING: SAWCUTTING OF EXISTING ASPHALT IS REQUIRED PRIOR TO PLACEMENT OF GUARDRAIL ASPHALT WEED GUARD MATERIAL. SAWCUTTING SHALL BE CONSIDERED INCIDENTAL TO THE WORK.

L. NEW INLET/CULVERT PROTECTION.

M. STREET CLEANING: STREET CLEANING SHALL BE PERFORMED ON A ROUTINE BASIS DAILY FOR ANY MATERIALS TRACKED ONTO THE ROADWAY. STREET CLEANING SHALL BE CONSIDERED INCIDENTAL TO THE WORK.

N. INSPECTIONS: INSPECTIONS SHALL BE EVERY 14 DAYS AND AFTER EVERY SIGNIFICANT STORM EVENT (I.E. RAIN OR SNOWMELT) THAT CAUSES RUN-OFF.

O. BMP MAINTENANCE: MAINTENANCE SHALL BE PERFORMED DAILY AS NEEDED AD WITHIN 48 HOURS OF PROBLEMS IDENTIFIED DURING THE 14 DAY INSPECTION.

P. RECORD KEEPING: RECORDS SHALL BE KEPT ON SITE AT ALL TIMES AND UPDATED AS NECESSARY WITH DATES ON ALL WRITTEN UPDATES.

Q. INTERIM AND FINAL STABILIZATION:
- Q.1. SPECIAL REQUIREMENTS: DUE TO HIGH FAILURE RATES, HYDROMULCHING AND/OR MULCH & TACKIFIERING WILL NOT BE ALLOWED.
- Q.2. SOIL CONDITIONING AND FERTILIZER REQUIREMENTS: FERTILIZER WILL NOT BE REQUIRED ON THIS PROJECT.
- Q.3. BLANKET APPLICATION: ON SLOPES AND DITCHES REQUIRING A BLANKET, THE BLANKET SHALL BE PLACED IN LIEU OF MULCH AND MULCH TACKIFIER. SEE SWMP FOR BLANKET LOCATIONS.
- Q.4. RESEEDING OPERATIONS/CORRECTIVE STABILIZATION: PRIOR TO FINAL ACCEPTANCE: SEEDED AREAS SHALL BE REVIEWED DURING THE 14 DAY INSPECTIONS BY THE EROSION CONTROL SUPERVISOR FOR BARE SOILS CAUSED BY SURFACE OR WIND EROSION. BARE AREAS CAUSED BY SURFACE OR GULLY EROSION, BLOWN AWAY MULCH, ETC. SHALL BE REGRADED, SEEDED, MULCHED AND HAVE MULCH TACKIFIER (OR BLANKET) APPLIED AS NECESSARY.

R. PRIOR TO FINAL ACCEPTANCE: THE ECS WILL PERFORM FINAL INSPECTION AND SUBMIT A LETTER OF COMPLETION ALONG WITH ALL DOCUMENTATION OF ONGOING INSPECTIONS, MAINTENANCE LOGS, AND UPDATED SITE MAP.

NARRATIVES

A. EROSION LOGS :
- A.1. EROSION LOGS ARE USED TO CAPTURE AND FILTER SEDIMENT LADEN RUN-OFF FROM DISTURBED AREAS DURING CONSTRUCTION.
- A.2. INLET/OUTLET PROTECTION - SHALL BE PLACED AT EXISTING INLETS AS SHOWN IN THE PLANS AND WHERE DISTURBANCE MAY BE OCCURRING ADJACENT TO THE INLET AND CAUSE SEDIMENT LADEN WATER TO ENTER PIPE. LOGS SHALL BE PLACED PRIOR TO WORK COMMENCING AT THE LOCATIONS TO FILTER SEDIMENT LADEN RUN-OFF. FOR NEW INLETS - LOGS SHALL BE PLACED ONCE THE CULVERT OR INLET IS IN PLACE TO PREVENT SEDIMENT LADEN WATER FROM ENTERING PIPE. WHERE SLOPE HAS BEEN WORKED ABOVE NEW AND/OR EXISTING PIPES (INLET/OUTLET) AND SEDIMENT MAY ENTER THE PIPE FROM ABOVE, A LOG SHALL WRAP TO THE TOP OF PIPE AND RUN DOWN SLOPE TO DIRECT WATER AWAY FROM PIPE. LOGS SHALL BE J-HOOKED OR PLACED IN SUCH A MANNER AT THESE LOCATIONS THAT SEDIMENT LADEN WATER WILL NOT GO AROUND THE ENDS OF LOGS DIRECTLY IN TO PIPE OR DITCH.
- A.3. TOE OF SLOPES - LOGS ARE TO BE PLACED PRIOR TO WORK COMMENCING FOR TOES OF SLOPES LOCATIONS. LOGS SHALL BE PLACED ON THE CONTOUR WITH ENDS OF LOGS J-HOOKED TO PREVENT WATER FROM RUNNING AROUND THE ENDS CAUSING EROSION.

B. SOIL RETENTION BLANKET (IF REQUIRED)
- B.1. SHALL BE PLACED IN AREAS AS SHOWN ON THE PLANS OR DIRECTED; ALL SLOPES 3:1 AND STEEPER SHALL RECEIVE BLANKET. TYPICALLY, DITCHES THAT HAVE A GRADE STEEPER THAT 2% SHALL HAVE BLANKETS PLACED. SOILS SHALL BE PROPERLY PREPARED PRIOR TO PLACING BLANKET. SLOPE SHALL BE PROPERLY PREPARED PRIOR TO PLACING BLANKET. IF RILLS, PLANT MATERIAL, ROCKS, WEEDS, ETC. ARE PRESENT THEY SHALL BE REMOVED PRIOR TO PLACING BLANKET TO ENSURE BLANKET IS PLACED ON THE SOIL WITH NO TENTING; SEE SPECIFICATIONS AND M&S STANDARDS.
- B.2. ON SLOPES WHEN SEEDING CANNOT OCCUR DUE TO SEASONAL CONSTRAINTS, A TEMPORARY BERM, EROSION LOG OR OTHER BMP SHALL BE PLACED AT THE TOP OF SLOPE TO PREVENT STORMWATER FROM FLOWING ONTO SLOPE AND CAUSING EROSION; IN ADDITION, FLEXIBLE GROWTH MEDIUM OR MULCH/MULCH TACKIFIER SHALL BE REPLACED BY A BLANKET (STRAW/COCONUT) AS A TEMPORARY MEASURE. ONCE SEEDING CAN OCCUR BLANKET SHALL BE REMOVED AND DISPOSED OF; NEW SOIL RETENTION BLANKET SHALL BE PLACED

Stormwater Management Notes
Scale: N.T.S.

SUBSURFACE UTILITY ENGINEERING (SUE) NOTES:

1. THIS IS A UTILITY MAP. IT IS NOT A LAND SURVEY PLAT OR IMPROVEMENT SURVEY PLAT.
2. THE DESIGN OF THIS PROJECT COMMENCED PRIOR TO ANY CLARIFICATIONS BY THE STATE OF COLORADO, 811 OR THE AMERICAN COUNCIL OF ENGINEERING COMPANIES (ACEC) ON THE APPROPRIATE PROCEDURES AND/OR BEST PRACTICES FOR LOCATING SUBSURFACE UTILITIES TO LEVEL "B" AND IT WAS AGREED UPON BY THE CLIENT (CITY) THAT THE USE OF ELECTRO-MAGNETIC EQUIPMENT WAS AN ACCEPTABLE TOOL FOR LEVEL "B" LOCATING OF ALL UTILITIES AND HYDRO-EXCAVATION WAS AN ACCEPTABLE TOOL FOR LEVEL "A" LOCATING OF THE SANITARY SEWER MAINS NEAR THE ANTICIPATED POINT OF CROSSING FOR THE NEW WATER MAINS.
3. BASED ON SUBSEQUENT CLARIFICATIONS BY 811/ACEC, THE USE OF ELECTRO-MAGNETIC EQUIPMENT MAY BE INTERPRETED AS LEVEL "C" UNDER ASCE 38-02 STANDARDS.
4. INFORMATION HEREIN IS BASED ON MAPPING INFORMATION PROVIDED BY OTHERS, SURFACE PAINT MARKINGS PROVIDED BY 811/UTILITY PROVIDERS USING ELECTRO-MAGNETIC EQUIPMENT, SUBCONTRACTED PROFESSIONAL UTILITY LOCATORS USING ELECTRO-MAGNETIC EQUIPMENT, AND OBSERVATION OF ABOVE GROUND STRUCTURES. BOUNDARIES UNLIMITED INC. WAS NOT CONTRACTED TO PERFORM SURFACE GEOPHYSICAL METHODOLOGY OR TO PHYSICALLY EXPOSE ANY EXISTING SUBSURFACE UTILITIES OR STRUCTURES BEYOND THE ANTICIPATED SANITARY SEWER CROSSINGS. AS SUCH, BOUNDARIES UNLIMITED INC. MAKES NO GUARANTY, EXPRESSED OR IMPLIED, FOR THE HORIZONTAL OVER VERTICAL LOCATION OF THE SUBSURFACE UTILITIES OR STRUCTURES AT A LEVEL OF DETAIL GREATER THAN WHAT IS TYPICALLY OBTAINED THROUGH ELECTRO-MAGNETIC LOCATING PRACTICES OR THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREAS, EITHER IN SERVICE OR ABANDONED. BOUNDARIES UNLIMITED INC. FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH IT DOES CERTIFY THAT THE UTILITIES ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. PUBLIC UTILITY LOCATE REQUEST WERE MADE BY SUBCONTRACTORS PRECISION HYDROVAC & JETTER SERVICES, INC. AND CTL-THOMPSON, INC. (NOVEMBER 2018) AND UNDER TICKET NUMBERS A919102240-00A, A919102260-00A, A919102260-01A, A919102266-00A & A919102270-00A, (JULY 2019).
5. THE FOLLOWING 811 POSITIVE RESPONSE INFORMATION WAS RECEIVED:
   - 5.1. BLACK HILLS ENERGY: MAPPING WHICH INDICATED THE GENERAL LOCATION OF BURIED PIPELINES AND THE MATERIAL TYPE WAS RECEIVED BUT DID NOT INCLUDE THE PIPELINE SIZES OR DETAILS. PHYSICAL SURFACE MARKINGS WERE PROVIDED. TWO REQUESTS WERE MADE TO JASON COX FOR ADDITIONAL INFORMATION, BUT NONE WAS RECEIVED. MATERIALS ARE AS INDICATED. ALL SIZES ARE UNKNOWN.
   - 5.2. CENTURY-LINK: MAPPING WHICH INDICATED THE GENERAL LOCATION OF LOCAL BURIED COPPER CABLE ASSETS WAS RECEIVED. NO FIBER OPTICS INFORMATION WAS PROVIDED. PHYSICAL SURFACE MARKINGS WERE OBTAINED BY TOM VONDETTE OF MOUNTAIN LOCATING (970.319.9064). ALL SIZES ARE UNKNOWN.
   - 5.3. CITY OF GLENWOOD SPRINGS ELECTRIC: PHYSICAL SURFACE MARKINGS WERE PROVIDED. NO MAPS WERE RECEIVED. MATERIALS AND SIZES ARE UNKNOWN.
   - 5.4. CITY OF GLENWOOD SPRINGS WATER: MAPPING WHICH INDICATED THE GENERAL LOCATION OF BURIED PIPELINES AND SIZE FOR MAINLINE INFRASTRUCTURE WAS RECEIVED. PHYSICAL SURFACE MARKINGS WERE PROVIDED. IT WAS VERBALLY RELAYED BY BRAD ZACHMAN (970.384.6388) THAT WATER MAIN MATERIALS ARE DUCTILE IRON PIPE. MAIN SIZES ARE AS INDICATED. WATER SERVICE MATERIALS AND SIZES ARE UNKNOWN.
   - 5.5. WEST GLENWOOD SANITATION DISTRICT: MAPPING AND REPORTS WHICH INDICATED THE GENERAL LOCATION OF BURIED SANITARY SEWER MAINS,THE SIZE OF MAINLINE INFRASTRUCTURE AND MANHOLE DEPTHS. PHYSICAL SURFACE MARKINGS WERE PROVIDED. SANITARY SEWER SERVICE MATERIALS AND SIZES ARE UNKNOWN.
   - 5.6. COMCAST: RECEIVED THE RESPONSE, "BASED ON THE DESCRIPTION PROVIDED ON YOUR LOCATE REQUEST TICKET, IDENTIFIED ABOVE, COMCAST FACILITIES ARE NOT BELIEVE TO BE IN CONFLICT."
   - 5.7. BOUNDARIES UNLIMITED INC. IS NOT AWARE OF ANY OTHER UTILITY OWNERS HAVING INFRASTRUCTURE WITHIN THE PROJECT BOUNDARY.
6. THIS PLAN HAS BEEN PREPARED FOR DESIGN ONLY. THE CONTRACTOR SHALL POTHOLE ALL EXISTING UTILITIES CROSSING NEW OR REPLACED UTILITIES PRIOR TO EXCAVATION OR CONSTRUCTION TO ENSURE THAT NO CONFLICTS EXIST. THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY IF ANY CONFLICTS ARE DISCOVERED.
7. CONTOURS ARE SHOWN AT ONE FOOT INTERVALS. HORIZONTAL AND VERTICAL CONTROL IS BASED CITY DATUM. THE THREE (3) UTILIZED CONTROL POINTS ARE :
   - ROSEBUD(#303) 28797.34N 20966.05E ELEV. 5855.47 (NAVD29)
   - TWO RIVERS (#304) 43946.35N 15920.32E ELEV. 5900.68 (NAVD29)
   - GLENWOOD (#305) 45509.43N 7077.60E ELEV. 5710.02 (NAVD29)
8. FIELD WORK FOR THIS SURVEY WAS PERFORMED IN NOVEMBER, 2018 AND JULY 2019.
9. ALL ELEVATIONS NOTED, REFER TO EXISTING GROUND ELEVATION WHERE SURVEY WAS TAKEN. DEPTH INDICATORS NOTED DOWN TO SERVICE, REPRESENT APPROX. DEPTH TO TOP OF SERVICE, AS MARKED UP ON SITE USING ELECTRO-MAGNETIC LOCATING.
6. ALL SURVEYED UTILITIES ARE DEPICTED AS ASCE 38-02 "QUALITY LEVEL B" UNLESS NOTED OTHERWISE. QUALITY LEVEL DEFINITIONS AS PER ASCE 28-02
   - QL-D INVOLVES UTILITY RECORDS RESEARCH AND INTERVIEWS WITH KNOWLEDGEABLE UTILITY PERSONNEL.
   - QL-C INVOLVES SURFACE SURVEY AND IDENTIFYING AND RECORDING ABOVEGROUND FEATURES OF SUBSURFACE UTILITIES, SUCH AS MANHOLES, VALVES, AND HYDRANTS.
   - QL-B INVOLVES APPLICATION OF "SURFACE GEOPHYSICAL METHODS," SUCH AS EM-BASED LOCATING INSTRUMENTS, GPR, RADAR TOMOGRAPHY, METAL DETECTORS, AND OPTICAL INSTRUMENTS, TO GATHER AND RECORD APPROXIMATE HORIZONTAL (AND, IN SOME CASES, VERTICAL) POSITIONAL DATA. SEE NOTE #2 ABOVE.
   - QL-A INVOLVES PHYSICAL EXPOSURE VIA "SOFT-DIGGING" (VACUUM EXCAVATION OR HAND-DIGGING) AND PROVIDES PRECISE HORIZONTAL AND VERTICAL POSITIONAL DATA.

DEMOLITION NOTES:

1. SEE WATER LINE PLANS TO DETERMINE WHICH EXISTING WATER SERVICES AND/OR WATER SHUTOFF VALVES ARE TO BE REMOVED AND/OR REPLACED.
2. SEE THE SANITARY SEWER PLANS TO DETERMINE WHICH MANHOLES ARE TO BE ADJUSTED AND/OR ABANDONED AND WHICH SEWER SERVICES ARE TO BE REPLACED.
3. PRIOR TO BIDDING, CONTRACTOR SHALL VISIT THE SITE TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS OF THE PROJECT AREA AND ANTICIPATED DEMOLITION REQUIREMENTS.
4. CONTRACTOR TO PROTECT ALL UTILITY, PAVING, BUILDINGS, ETC. OUTSIDE OF LIMITS OF PROPOSED CONSTRUCTION DURING DEMOLITION OPERATIONS.
5. ALL EXISTING PAVEMENT AND CONCRETE WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED WHERE NOTED.
6. ALL EXISTING HERBACEOUS VEGETATION AND TOPSOIL SHALL BE STRIPPED TO A MINIMUM DEPTH OF 12" AND REMOVED FROM SITE OR STOCKPILED FOR LATER USE IN LANDSCAPED AREAS. TREES DESIGNATED FOR REMOVAL SHALL BE COMPLETELY REMOVED, INCLUDING STUMPS AND ROOT SYSTEMS.
7. CONTRACTOR SHALL REFER TO DEMOLITION PLANS PLANS FOR DETAILS ON LIMITS OF DEMOLITION AND THE SITE AND/OR GRADING PLAN(S) FOR PERIMETER EROSION CONTROLS.
8. PRIOR TO DEMOLITION WORK, EROSION CONTROL DEVICES ARE TO BE INSTALLED. EROSION CONTROL MEASURES SHALL BE ADJUSTED AS DEMOLITION AND CONSTRUCTION SEQUENCING WARRANTS.
9. ALL DEMOLITION WORK ON THIS CONSTRUCTION SITE SHALL BE IN CONFORMANCE WITH LOCAL STANDARDS AND GUIDELINES.
10. THE DEMOLITION PLAN DEPICTS THE ANTICIPATED REMOVALS NECESSARY FOR CONSTRUCTION OF THE PROJECT. MISCELLANEOUS AND MINOR REMOVALS MAY NOT BE SHOWN IN DETAIL BUT ARE CONSIDERED OBLIGATORY TO THE PROJECT. ADDITIONAL REMOVALS MAY BE NECESSARY AND THE CONTRACTOR WILL BE REQUIRED TO REMOVE ALL EXISTING IMPROVEMENTS THAT ARE IN CONFLICT WITH THE PROPOSED CONSTRUCTION AND AS OTHERWISE DIRECTED BY THE PROJECT ENGINEER OR OWNER'S CONSTRUCTION PROJECT MANAGER.
11. CONTRACTOR SHALL COORDINATE DEMOLITION AND/OR RELOCATION OF EXISTING UTILITIES WITH THE APPROPRIATE UTILITY OWNER AND IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS. INTERRUPTIONS IN SERVICE SHALL BE COORDINATED WITH THE UTILITY OWNER AND PROPERTY OWNER(S) IMPACTED. CONTRACTOR SHALL COORDINATE WITH THE RESPECTIVE UTILITY COMPANY FOR PORTIONS OF THE WORK TO BE PERFORMED BY UTILITY COMPANY'S FORCES, AND PROVIDE ADEQUATE NOTICE FOR SCHEDULING. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES, UNLESS OTHERWISE PAID BY THE OWNER PRIOR TO CONSTRUCTION. UTILITY REMOVAL TRENCHES SHALL BE BACKFILLED WITH APPROVED MATERIAL AND MEET COMPACTION REQUIREMENTS PER THE GEOTECHNICAL REPORT.
12. THE SITE MAY CONTAIN EXISTING FOOTINGS OR OTHER UNDERGROUND STRUCTURES THAT ARE NOT DEPICTED ON THIS PLAN. CONTRACTOR SHALL TAKE CARE TO REMOVE ALL NECESSARY STRUCTURES AND BACKFILL IN CONFORMANCE WITH THE GEOTECHNICAL REPORT. BOTTOM OF EXCAVATION SUBGRADE SHALL BE INSPECTED BY THE GEOTECHNICAL TESTING ENGINEER AND APPROVED PRIOR TO ANY BACKFILL.
13. ALL EXISTING PAVEMENT, UTILITIES, BURIED DEBRIS, RUBBLE, AND/OR STRUCTURES/FOUNDATIONS ENCOUNTERED WITHIN AREAS OF DISTURBANCE SHALL BE COMPLETELY REMOVED IF NOTED. WASTED MATERIAL SHALL NOT BE BURIED ONSITE WITHOUT THE PRIOR APPROVAL OF THE ENGINEER OR OWNER'S REPRESENTATIVE.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOADING AND HAULING SUPPLIED MATERIALS FROM THE CITY MATERIALS STORAGE YARD LOCATED NEAR THE AIRPORT (AKA "BONEYARD").
15. IF NOTED, ALL EXISTING UNUSED SERVICE LINES FOR WATER AND WASTEWATER SHALL BE REMOVED PER LOCAL UTILITY COMPANY STANDARDS. ALL EXISTING UNUSED GAS, TELEPHONE, FIBER OR ELECTRIC LINE/SERVICE SHALL BE COORDINATED FOR REMOVAL WITH THE UTILITY PROVIDER.
16. THE CONTRACTOR IS RESPONSIBLE FOR DEMOLITION, REMOVAL, AND DISPOSING IN A MANNER APPROVED BY ALL GOVERNING AUTHORITIES FOR ALL STRUCTURES, PADS, WALLS, PANS, FOUNDATIONS, PAVEMENT, UTILITIES, ETC. TO BE DEMOLISHED, SUCH THAT THE IMPROVEMENTS SHOWN ON THE PLANS CAN BE CONSTRUCTED. DEMOLITION AND DISPOSAL PERMITS SHALL BE THE CONTRACTOR'S RESPONSIBILITY. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO APPROVED GRADE AND BROUGHT UP TO PROPOSED GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER THE GEOTECHNICAL REPORT.
17. DURING DEMOLITION OPERATIONS, THE CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES USING MEANS OF THEIR CHOICE.
18. CONTRACTOR SHALL PRESERVE ALL LANDSCAPING NOT TO BE REMOVED FOR CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ALL AREAS DISTURBED BY CONSTRUCTION.
19. SAWCUT ALL ASPHALT AND CONCRETE TO BE REMOVED AND MILL ASPHALT EDGES PER CITY STANDARDS. SAWCUTS SHALL BE TO FULL DEPTH OF EXISTING PAVEMENT. CONCRETE PAVEMENT SHALL BE REMOVED TO THE NEAREST EXISTING JOINT WHEN LESS THAN 5' FROM A PROPOSED SAWCUT.
20. A GRADING PERMIT AND A SIDEWALK/CURB/GUTTER PERMIT ARE NOT REQUIRED FOR THIS PROJECT.

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF COLORADO.

DERIC J. WALTER, P.E.
COLORADO LICENSE NUMBER: 37110

A PRAGMATIC EFFORT HAS BEEN MADE TO SYSTEMATICALLY DESIGNATE AND DEPICT BURIED UTILITIES WITHIN THE CORRIDOR TO THE EXTENT PRACTICAL FOR THE AUTHORIZED PROJECT BUDGET. FINAL UTILITY PLANS ARE FOR DESIGN PURPOSES ONLY AND REFLECT SUBSURFACE UTILITY CONDITIONS AT THE TIME SURVEYED. EXISTING UTILITY LOCATIONS DEPICTED ON THE PLANS DO NOT SUPERSEDE 811 DEMARCATIONS OF BURIED UTILITIES, OR RELIEVE THE CONTRACTOR FROM THE LEGAL REQUIREMENT TO CALL 811 TWO WORKING DAYS PRIOR TO CONSTRUCTION. THE PROJECT DESIGN ENGINEER SHOULD BE NOTIFIED OF ANY DISCREPANCIES BETWEEN THE UTILITY DESIGNATING / LOCATING SURVEY AND 811 MARKINGS, AND THE CONTRACTOR SHALL USE CAUTION UNTIL DISCREPANCIES ARE RESOLVED.

Boundaries Unlimited Inc.
Civil Engineering
Surveying
& Beyond
923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE)
Required Project: **See Notes**
If "Yes", SUE Certification by:
Firm: ***N/A***
Job #: ***Precision Hyrovac***
Date: ***Nov. 2018***

Engineer or Surveyor Seal

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH
0 20' 40'
Scale: 1" = 20'

811
Know what's **below.**
Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements
SUE & Demolition-Cedar Crest Dr.
95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
3.			
4.			
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PROJECT NO. ***18034***
Designer: ***DJW***
Drafter: ***BUI***
Date: ***11/13/19***

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File Name: ***18034-c-sue-demo.dwg***

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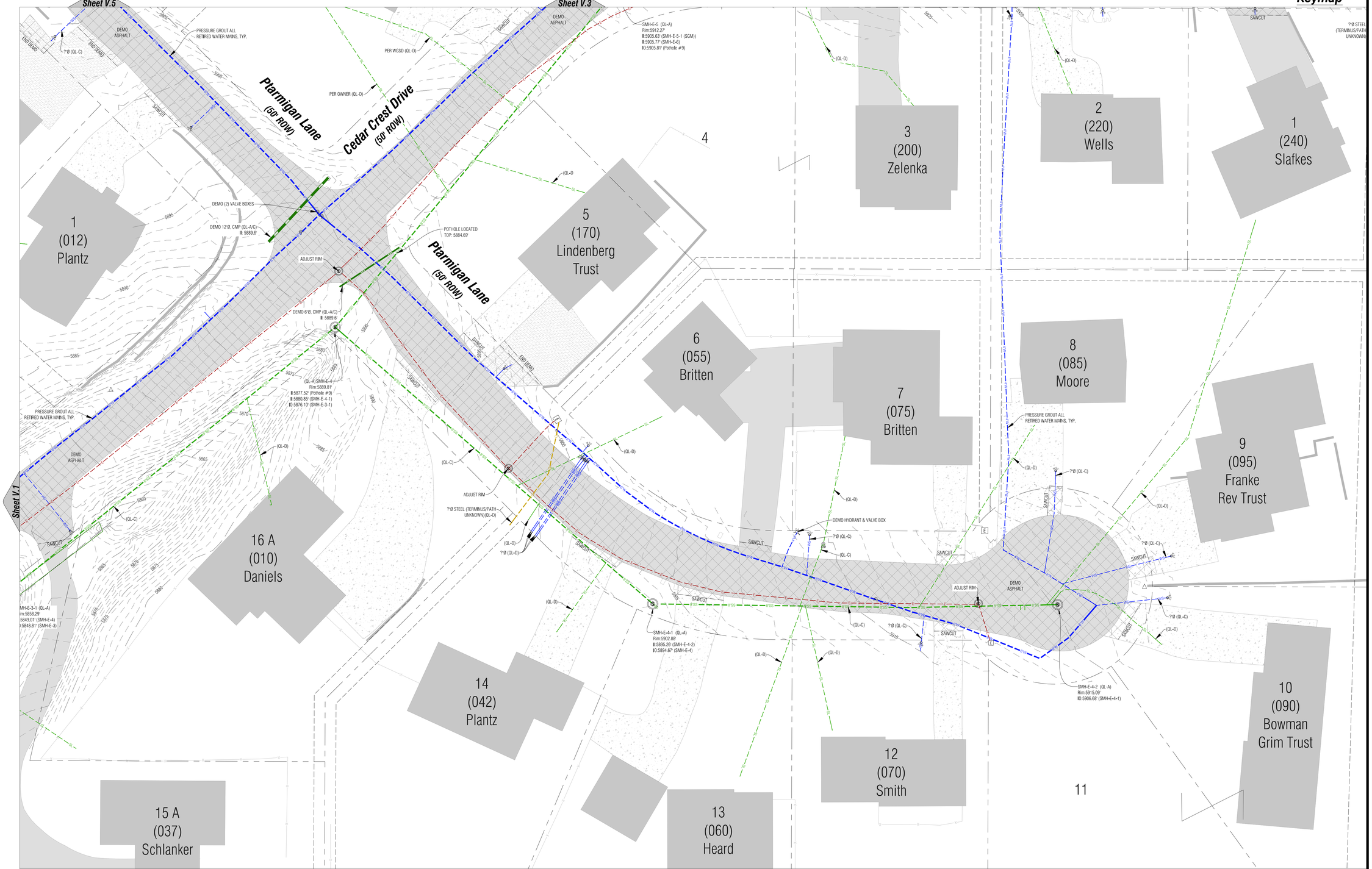

Keymap

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Subsurface Utility Engineering (SUE)
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GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

SUE & Demolition-Cedar Crest Dr. & Ptarmigan Ln.

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
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PROJECT NO.
18034
Designer:
DJW
Drafter:
BUI
Date:
11/13/19

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File Name: **18034-c-sue-demo.dwg**

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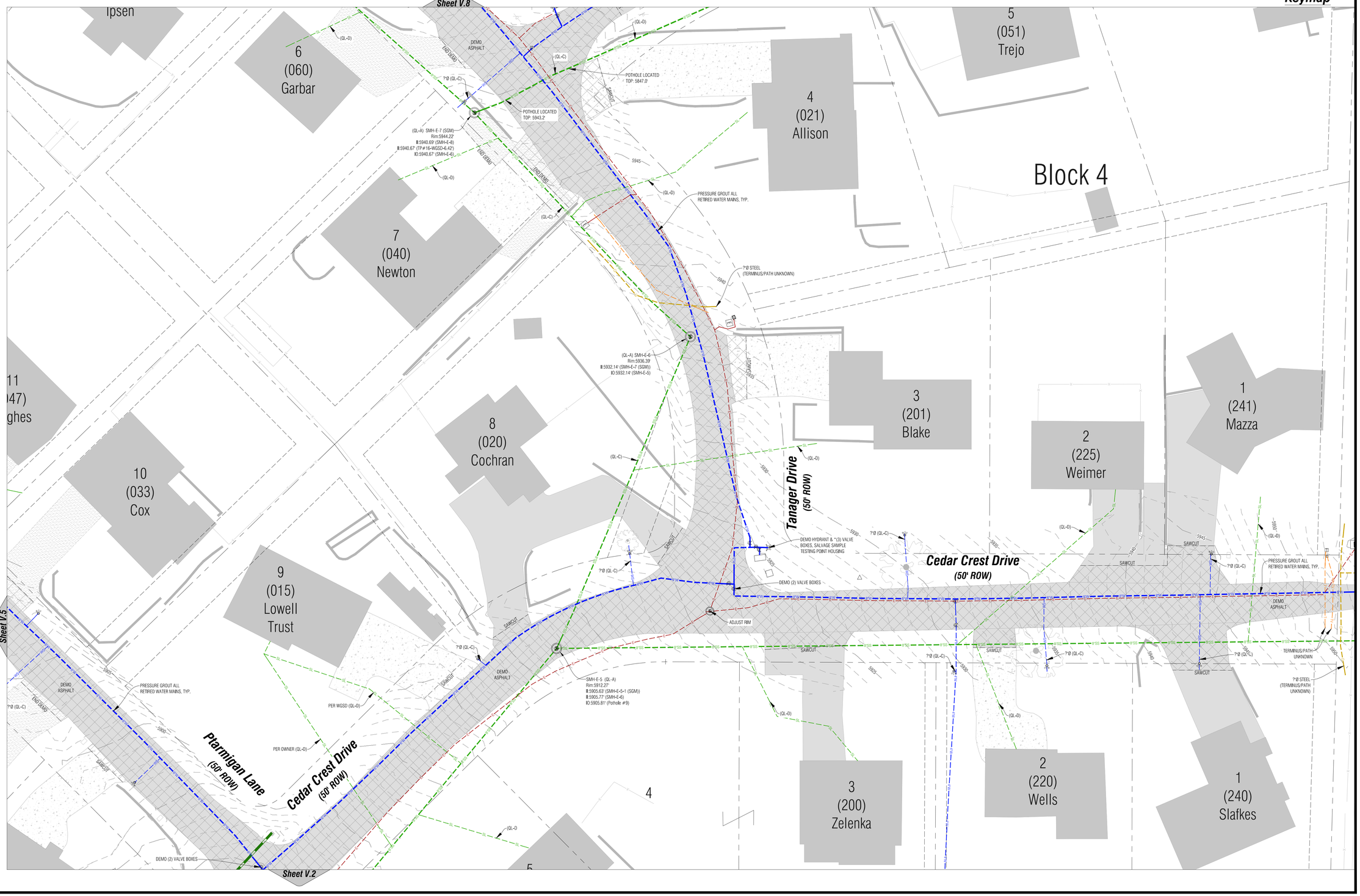

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923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE) Required Project: **See Notes**

If "Yes", SUE Certification by:
Firm: **N/A**
Job #: **Precision Hyrovac**
Date: **Nov. 2018**

Engineer or Surveyor Seal

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

0 20' 40'
Scale: 1" = 20'

811
Know what's **below.**
Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

SUE & Demolition-Cedar Crest Dr. & Tanager Dr.

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
3.			
4.			
5.			
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9.			

PROJECT NO. **18034**
Designer: **DJW**
Drafter: **BUI**
Date: **11/13/19**

Sheet **V.3**

File Name: **18034-c-sue-demo.dwg**

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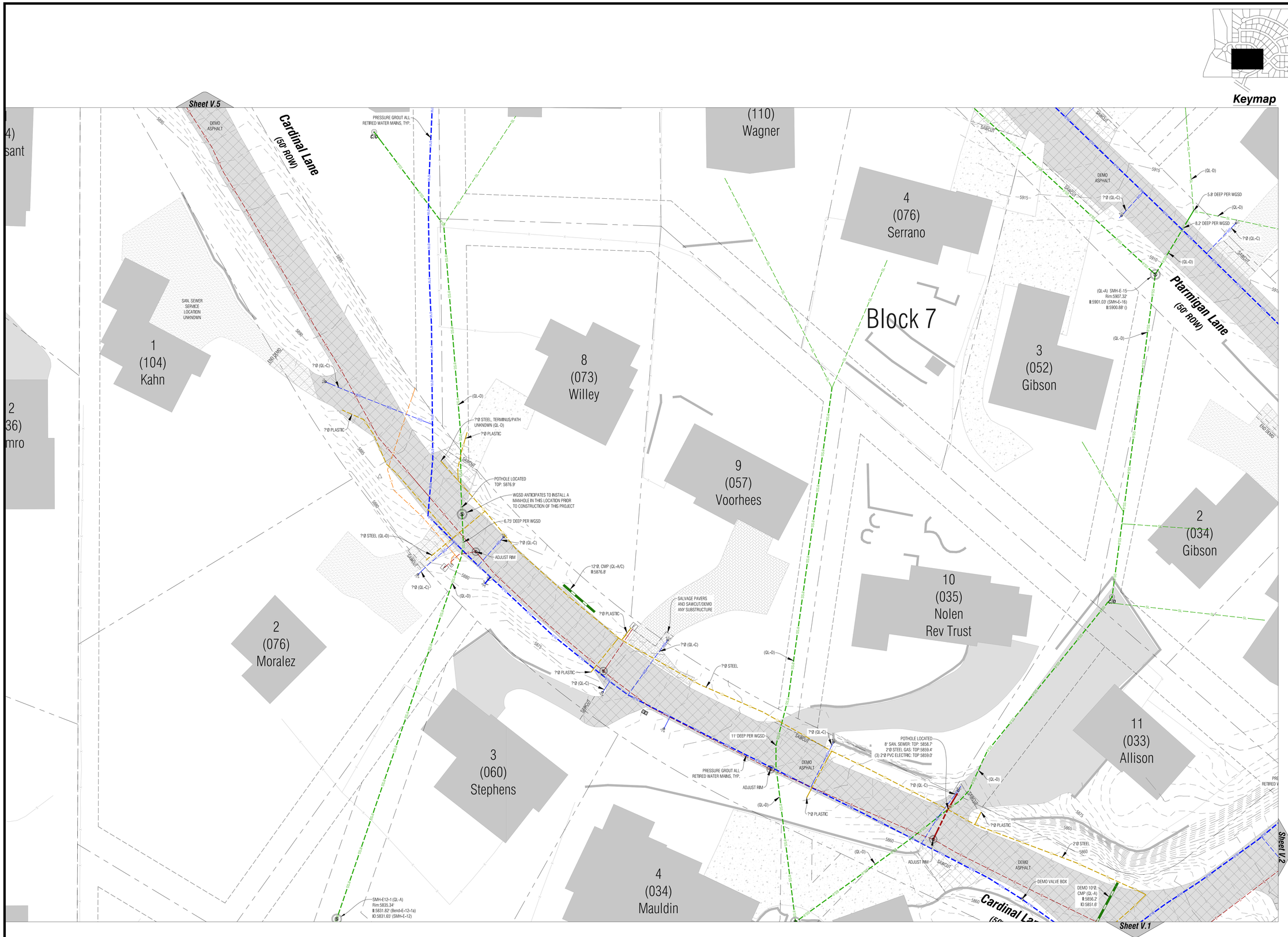

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Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE)
Required Project: **See Notes**
If "Yes", SUE Certification by:
Firm: **N/A**
Job #: **Precision Hyrovac**
Date: **Nov. 2018**

Engineer or Surveyor Seal

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH
0 20' 40'
Scale: 1" = 20'

811
Know what's **below.**
Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

SUE & Demolition-Cardinal Ln.

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

PROJECT NO. **18034**
Designer: **DJW**
Drafter: **BUI**
Date: **11/13/19**

Sheet **V.4**

File Name: **18034-c-sue-demo.dwg**

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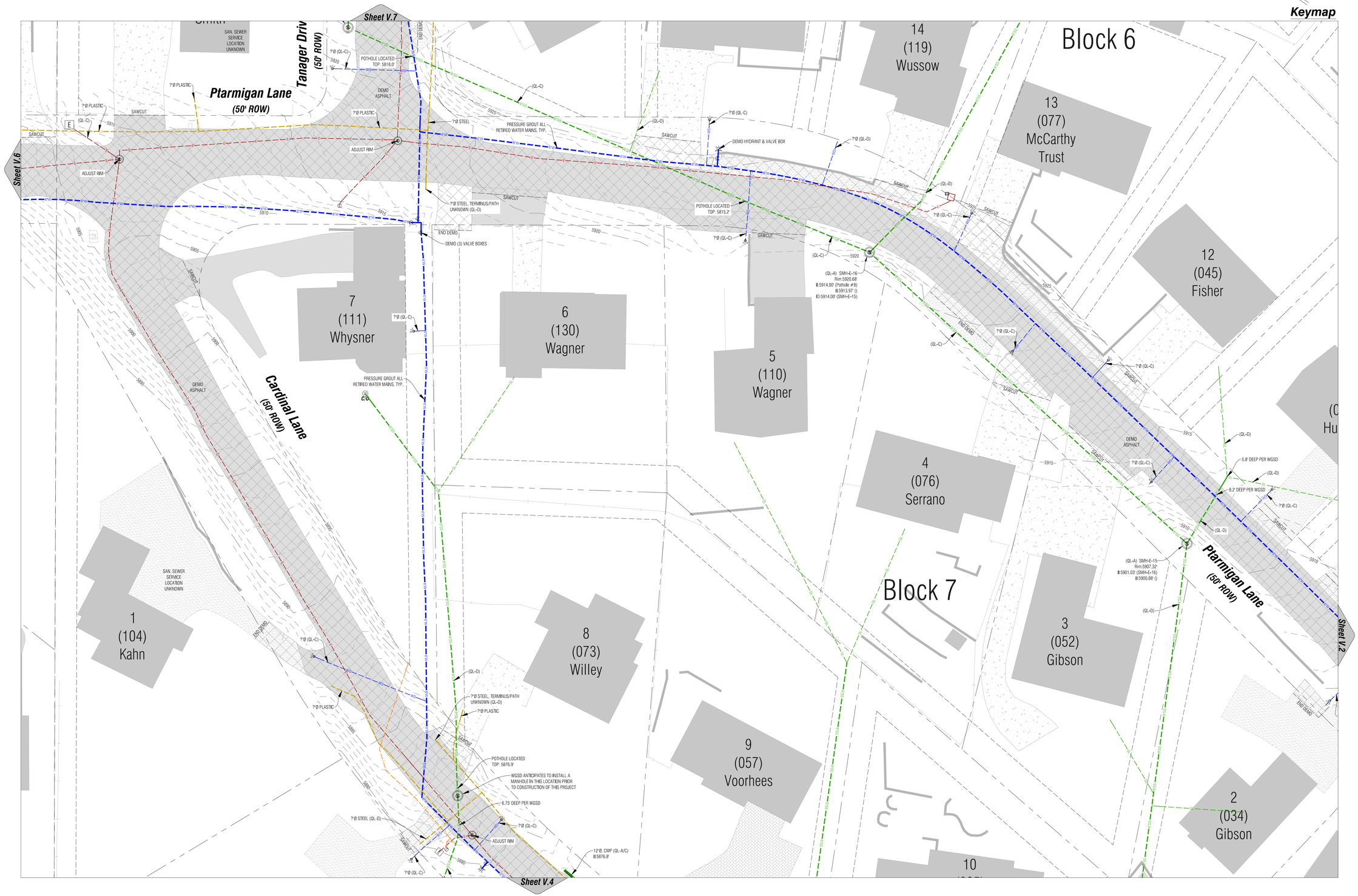

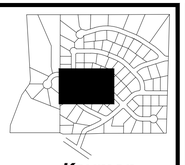

Keymap

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www.bu-inc.com

Subsurface Utility Engineering (SUE)
Required Project: **See Notes**
If "Yes", SUE Certification by:
Firm: **N/A**
Job #: **Precision Hyrovac**
Date: **Nov. 2018**

Engineer or Surveyor Seal

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

0 20' 40'
Scale: 1" = 20'

811
Know what's **below.**
Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

SUE & Demolition-Cardinal Ln. & Ptarmigan Ln.

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
3.			
4.			
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PROJECT NO. **18034**
Designer: **DJW**
Drafter: **BUI**
Date: **11/13/19**

Sheet **V.5**

File Name: **18034-c-sue-demo.dwg**

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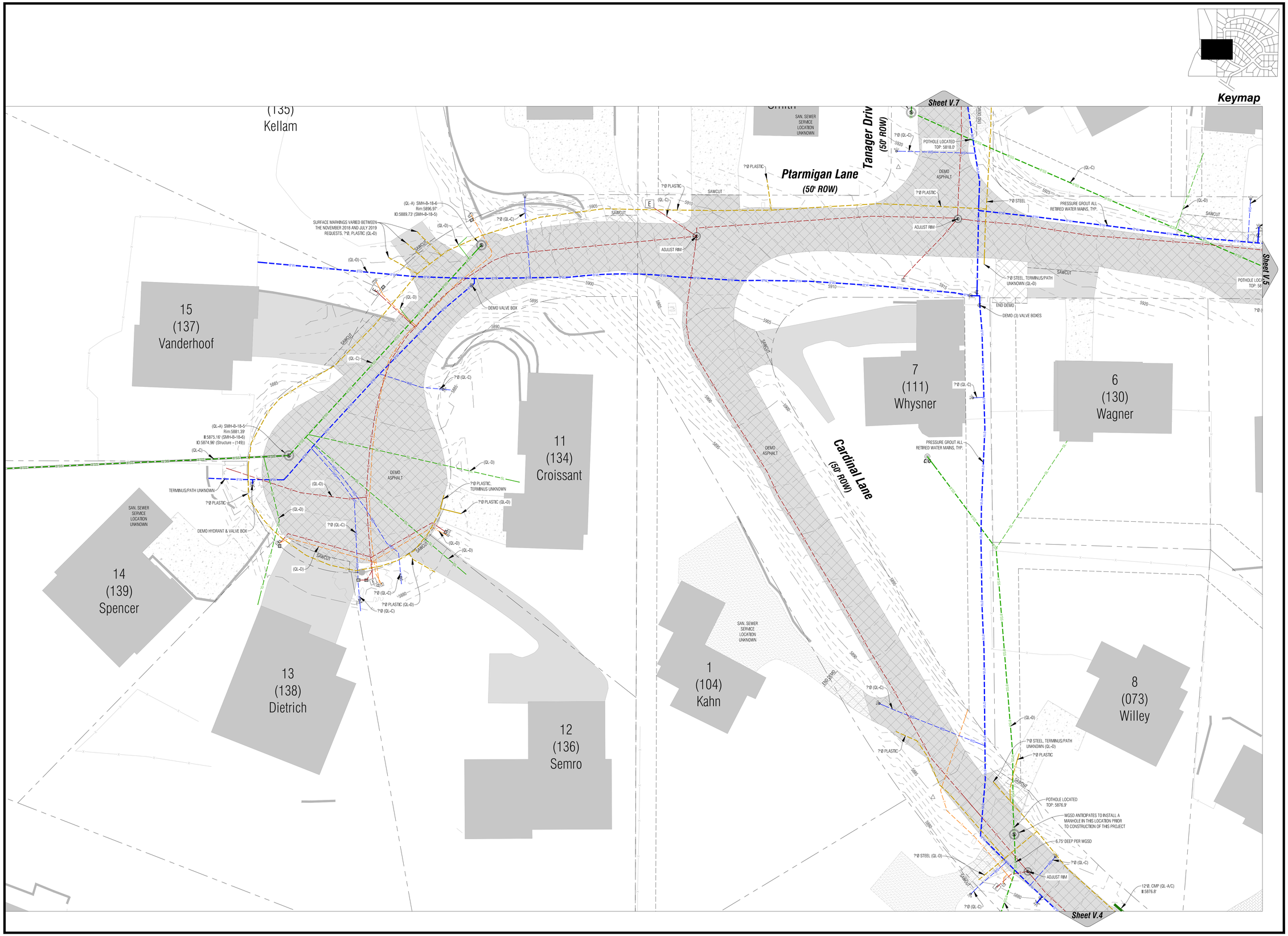

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(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE) Required Project: **See Notes**

If "Yes", SUE Certification by:
Firm: **N/A**
Job #: **Precision Hyrovac**
Date: **Nov. 2018**

Engineer or Surveyor Seal

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

0 20' 40'
Scale: 1" = 20'

811
Know what's **below.**
Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

SUE & Demolition-Cardinal Ln. & Ptarmigan Ln.

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
3.			
4.			
5.			
6.			
7.			
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9.			

PROJECT NO. **18034**
Designer: **DJW**
Drafter: **BUI**
Date: **11/13/19**

Sheet **V.6**

File Name: **18034-c-sue-demo.dwg**

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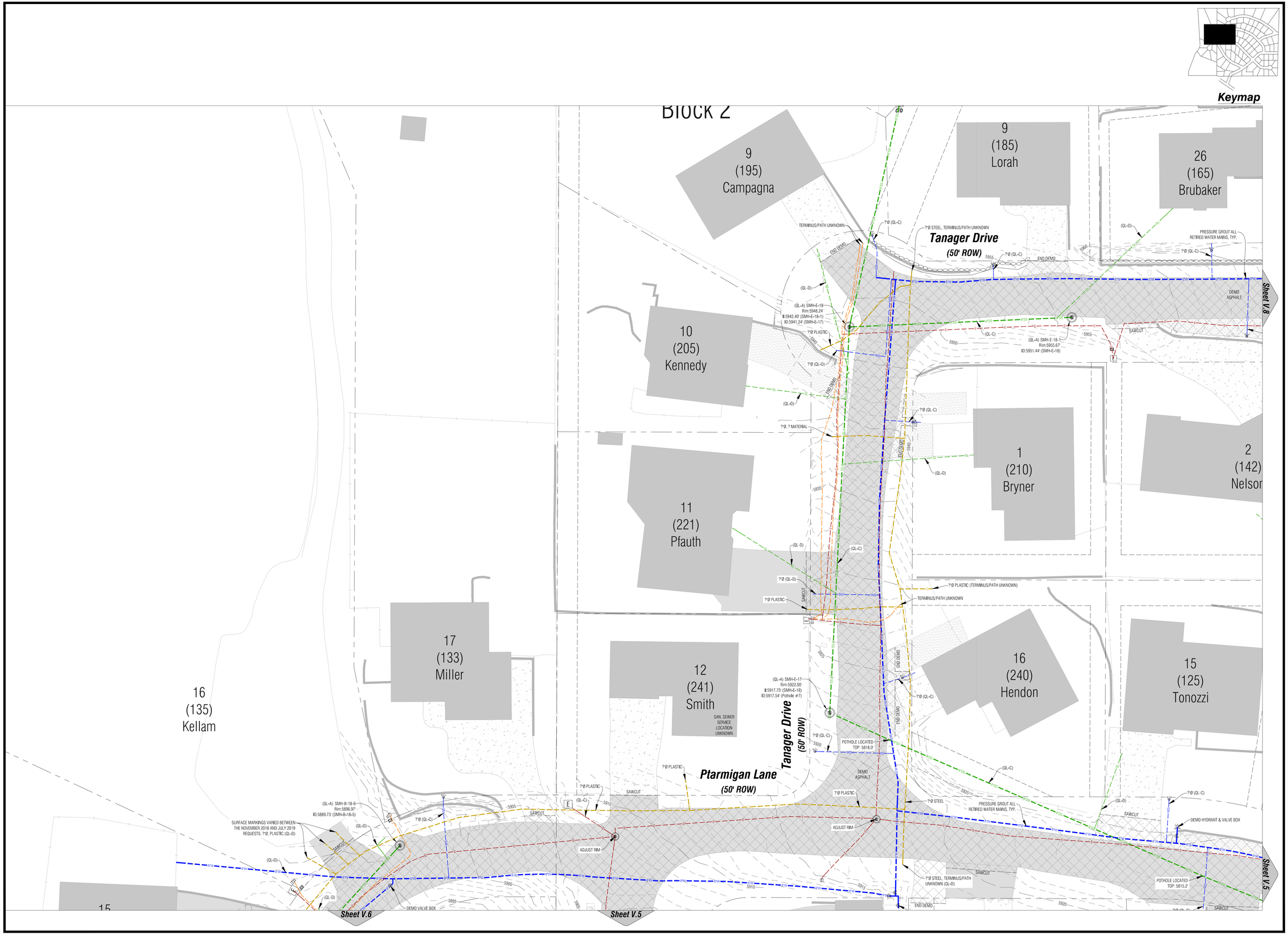

Keymap

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Subsurface Utility Engineering (SUE) Required Project: **See Notes**

If "Yes", SUE Certification by:
Firm: **N/A**
Job #: **Precision Hyrovac**
Date: **Nov. 2018**

Engineer or Surveyor Seal

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH
0 20' 40'
Scale: 1" = 20'

811
Know what's **below.**
Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

SUE & Demolition-Ptarmigan Ln. & Tanager Dr.

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
3.			
4.			
5.			
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7.			
8.			
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PROJECT NO. **18034**
Designer: **DJW**
Drafter: **BUI**
Date: **11/13/19**

Sheet **V.7**

File Name: **18034-c-sue-demo.dwg**

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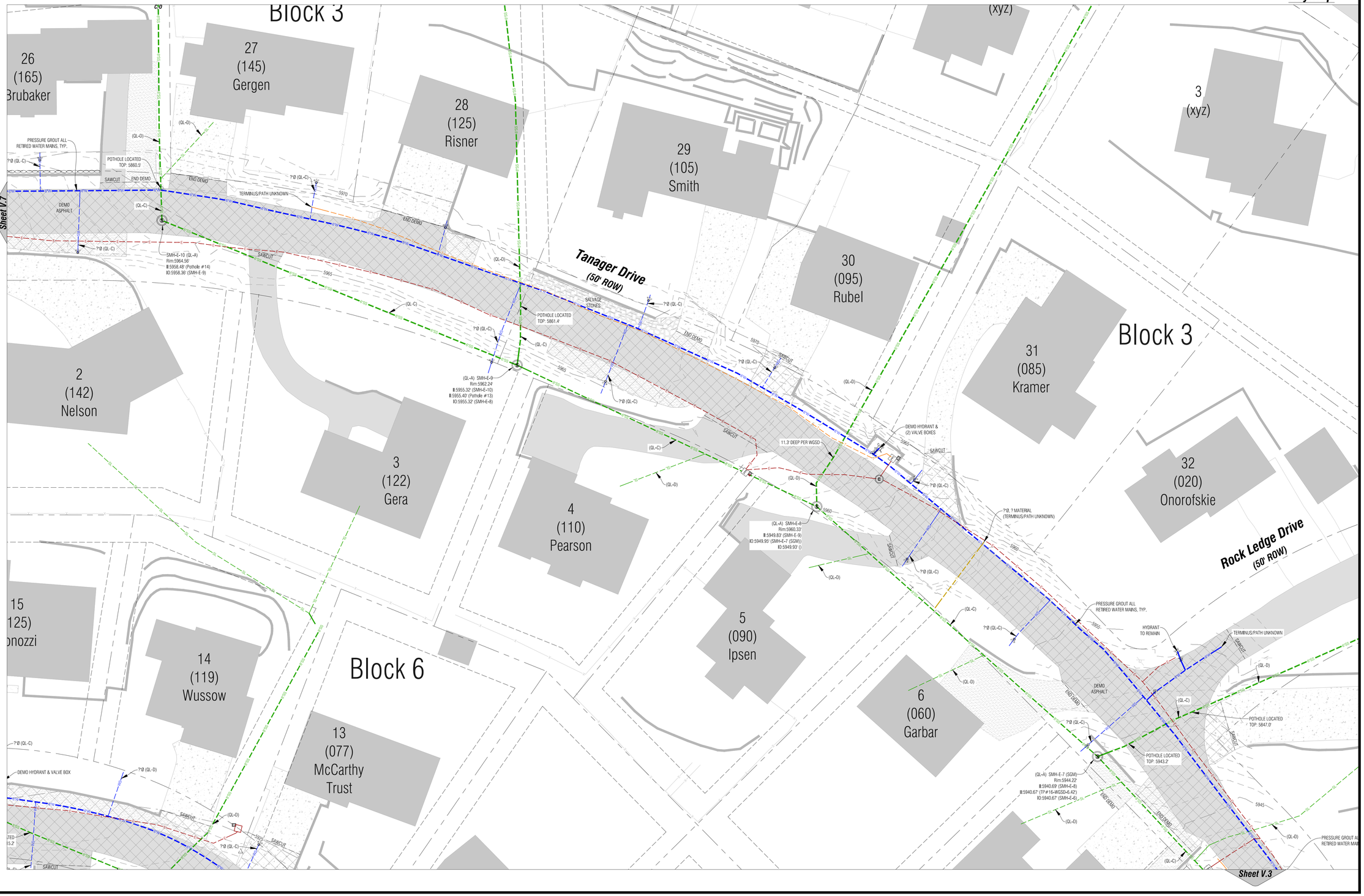

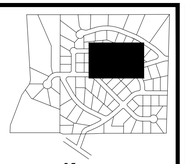

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923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
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Subsurface Utility Engineering (SUE)
Required Project: **See Notes**
If "Yes", SUE Certification by:
Firm: **N/A**
Job #: **Precision Hyrovac**
Date: **Nov. 2018**

Engineer or Surveyor Seal

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

0 20' 40'
Scale: 1" = 20'

811
Know what's **below.**
Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

SUE & Demolition-Tanager Dr.

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
3.			
4.			
5.			
6.			
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PROJECT NO. **18034**
Designer: **DJW**
Drafter: **BUI**
Date: **11/13/19**

Sheet **V.8**

File Name: **18034-c-sue-demo.dwg**

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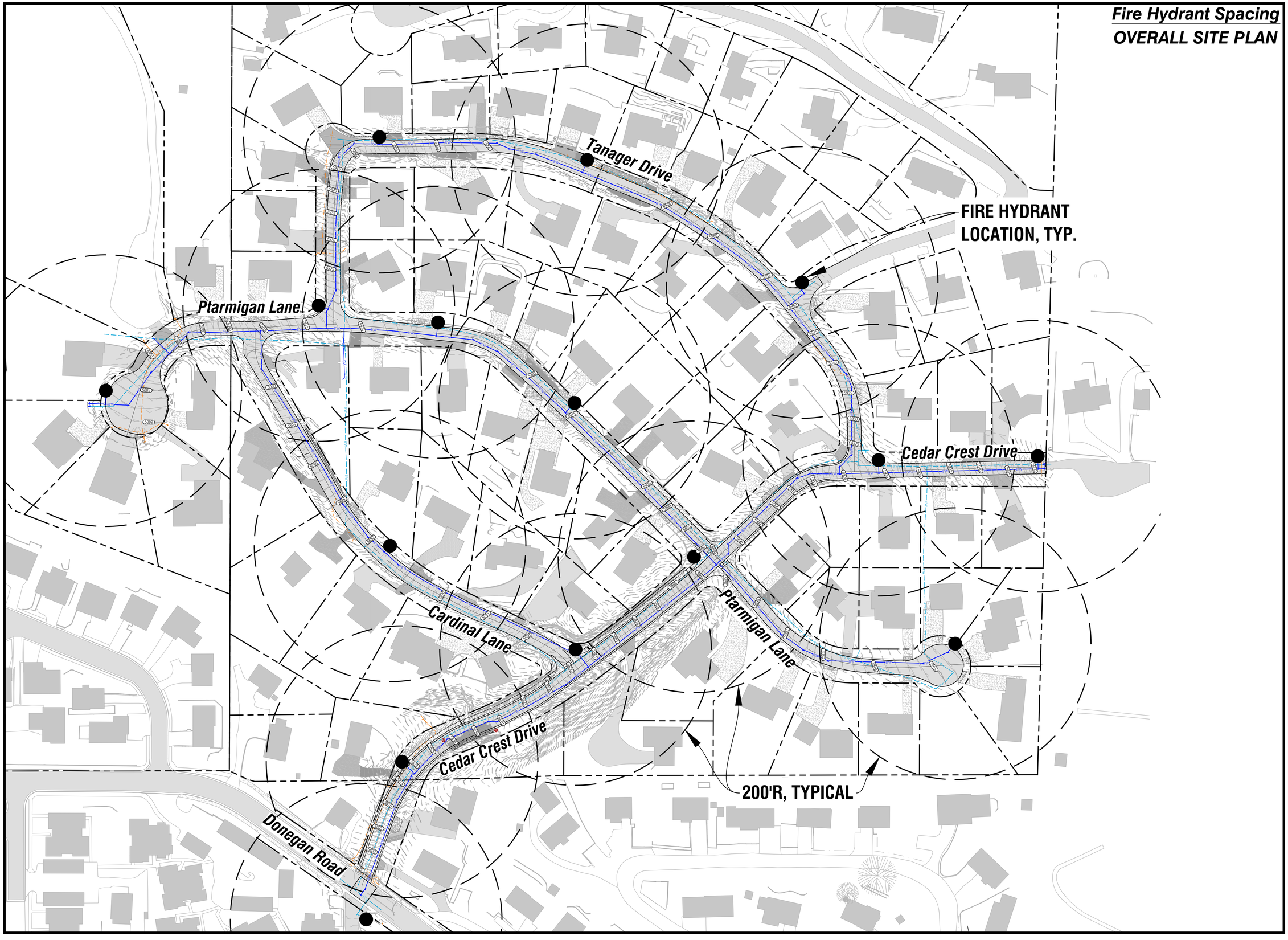
Fire Hydrant Spacing
OVERALL SITE PLAN



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fax: 970.384.2833

Engineer or Surveyor Seal

NOT FOR CONSTRUCTION
PRELIM

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

0 60' 120'
Scale: 1" = 60'

811
Know what's below.
Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Fire Hydrant Spacing
95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
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PROJECT NO.
18034
FILE NAME:
18034-C-water.dwg
Designer:
KVW
Drafter:
BJI
Date:
11/13/19

Sheet
W.1

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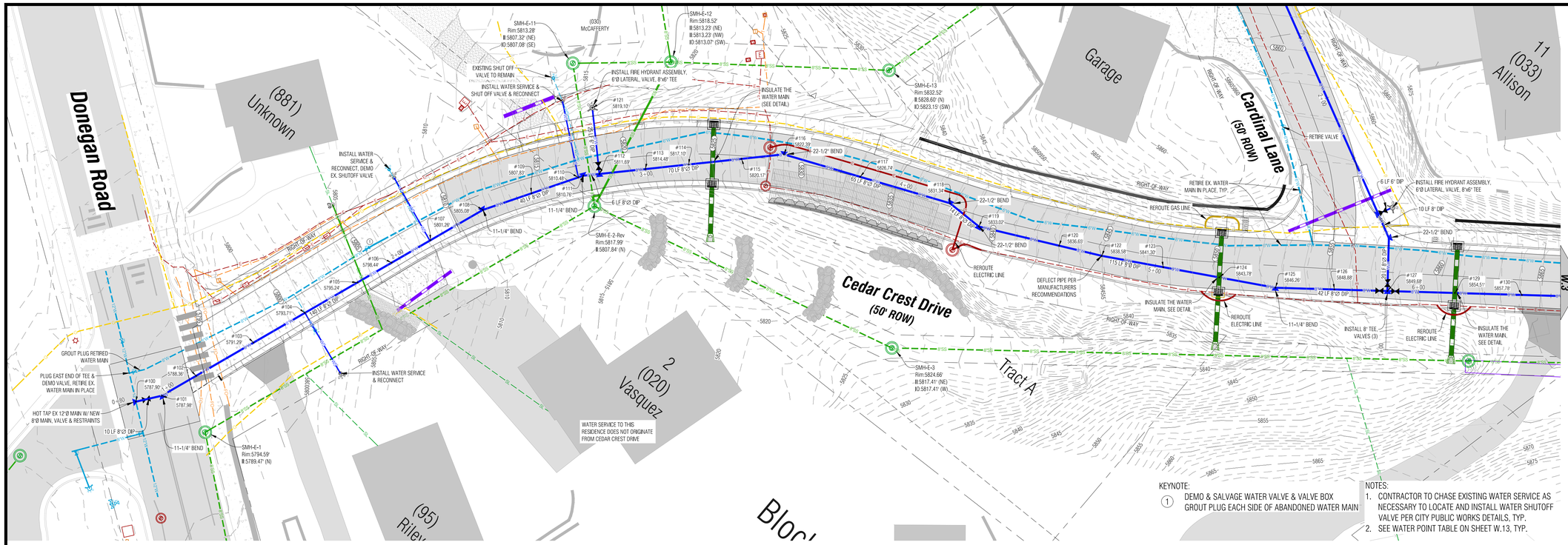
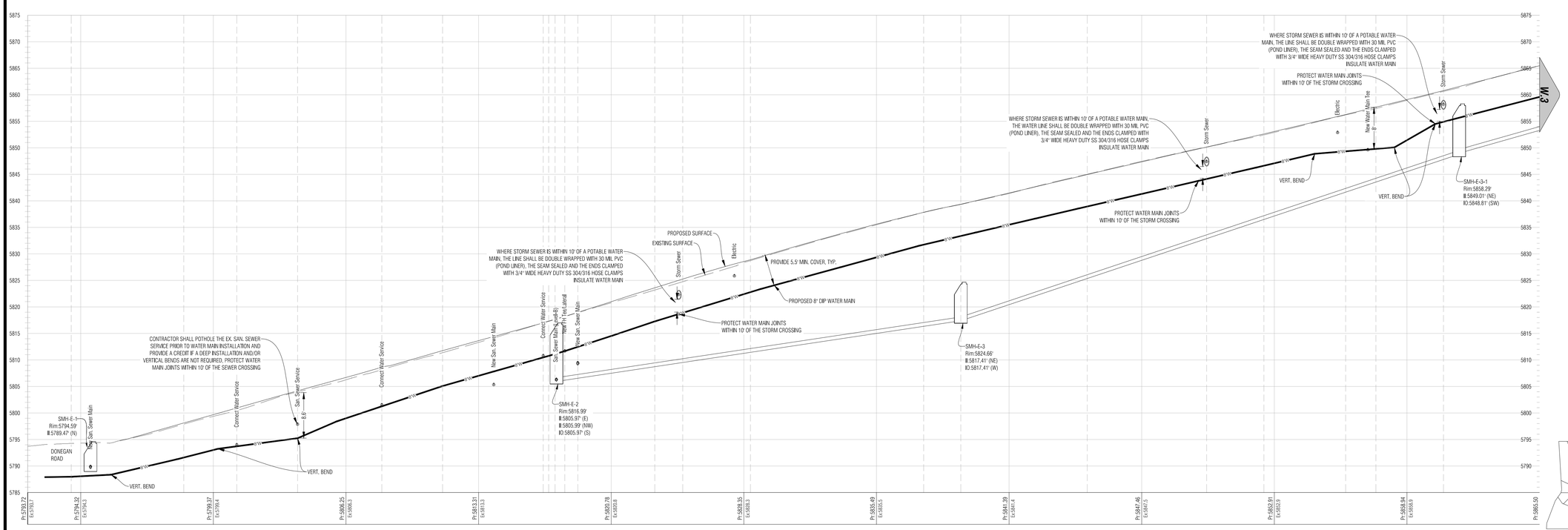


KEYNOTE:

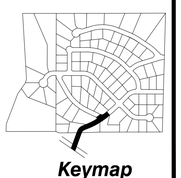
1. DEMO & SALVAGE WATER VALVE & VALVE BOX GROUT PLUG EACH SIDE OF ABANDONED WATER MAIN

NOTES:

1. CONTRACTOR TO CHASE EXISTING WATER SERVICE AS NECESSARY TO LOCATE AND INSTALL WATER SHUTOFF VALVE PER CITY PUBLIC WORKS DETAILS, TYP.
2. SEE WATER POINT TABLE ON SHEET W.13, TYP.



Profile: Water-Cedar Crest, Sta:0+80 to Sta:6+50
Scale: Vert.=10', Horiz.=20'



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Suite 201
Glenwood Springs, CO 81601
tele: 970.945.5252
fax: 970.384.2833

Engineer or Surveyor Seal

NOT FOR PRELIM CONSTRUCTION

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

0 20' 40'
Scale: 1" = 20'

811 Know what's below. Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Cedar Crest Drive Water Line - Sta. 0+80 To 6+50

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
3.			
4.			
5.			
6.			
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PROJECT NO. 18034
FILE NAME: 18034-C-water.dwg
Designer: DJW
Drafter: BJJ
Date: 11/13/19

Sheet
W.2

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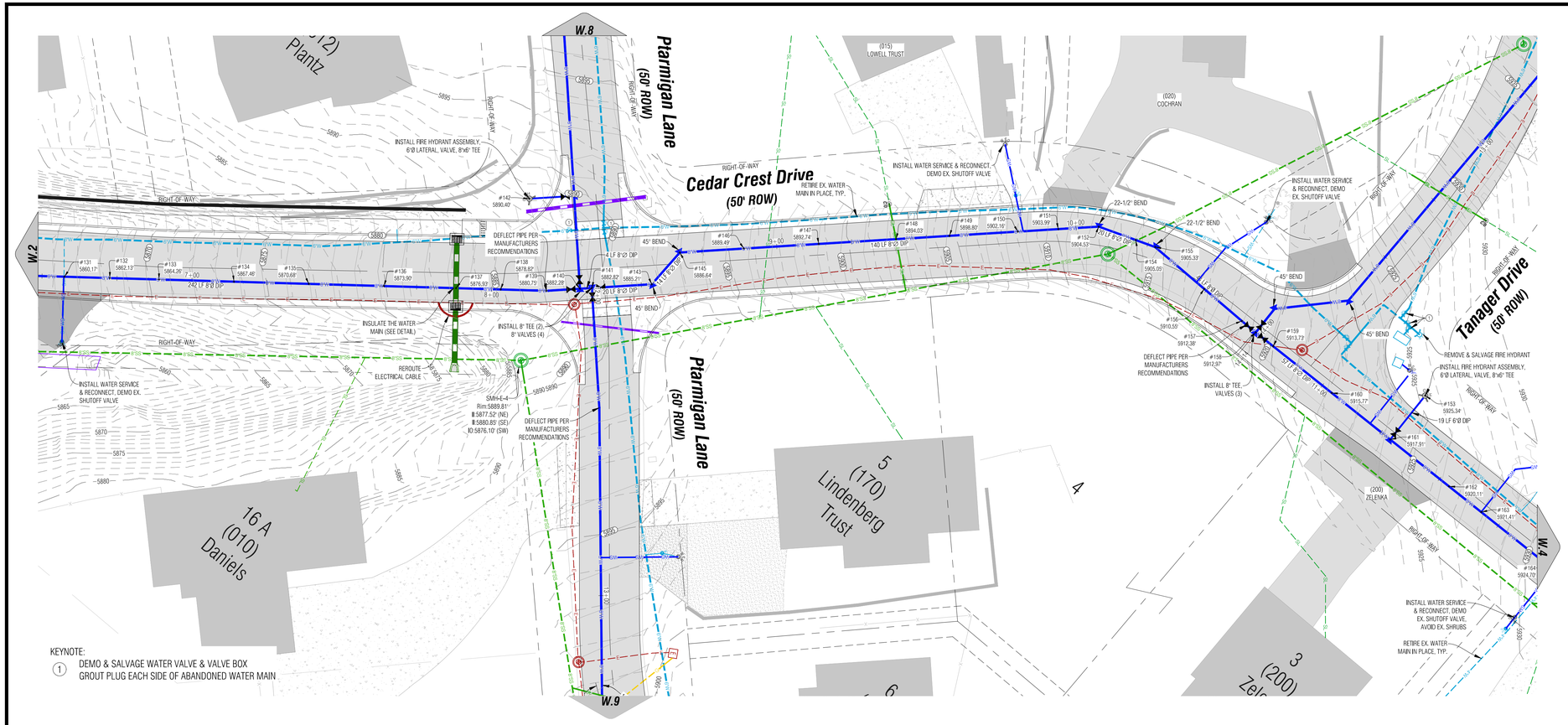
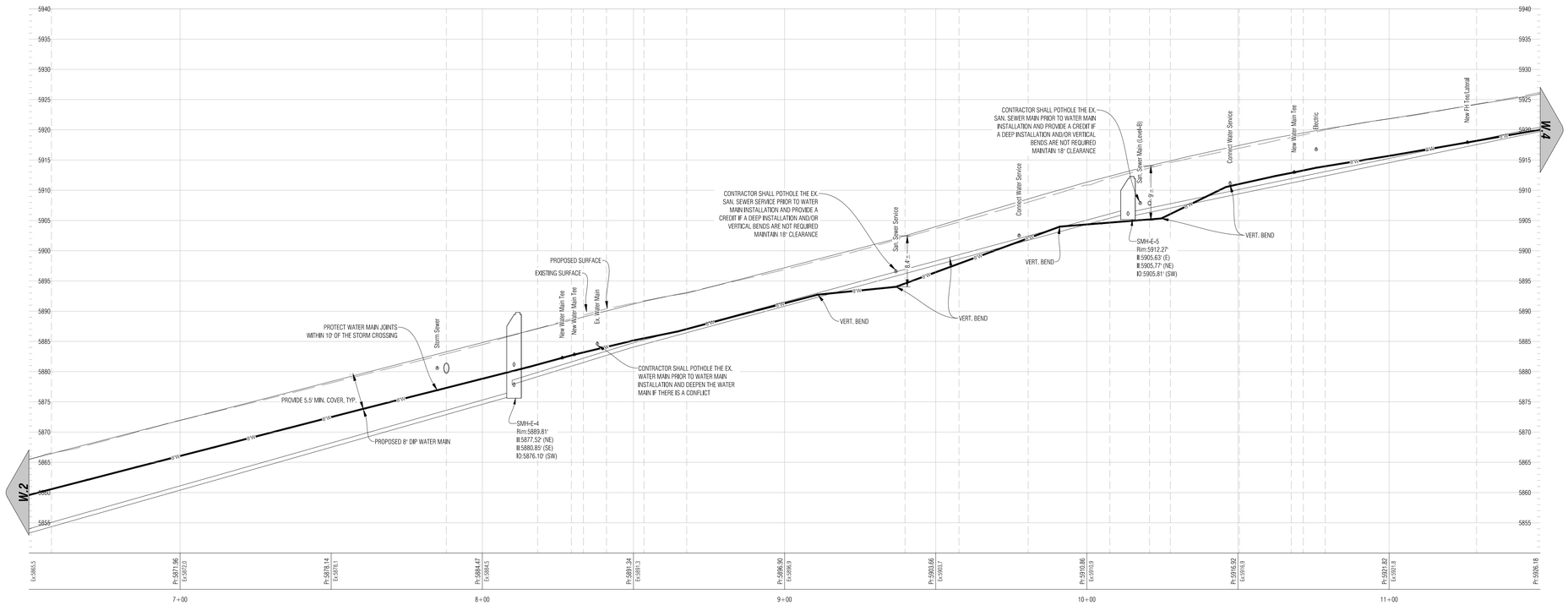


KEYNOTE:

1. DEMO & SALVAGE WATER VALVE & VALVE BOX GROUT PLUG EACH SIDE OF ABANDONED WATER MAIN



Profile: Water-Cedar Crest, Sta:6+50 to Sta:11+50
Scale: Vert.=10', Horiz.=20'

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923 Cooper Avenue
Suite 201
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fax: 970.384.2833

Engineer or Surveyor Seal

NOT FOR CONSTRUCTION
PRELIM

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

0 20' 40'
Scale: 1" = 20'

811
Know what's below. Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Cedar Crest Drive Water Line - Sta. 6+50 To 11+50

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
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PROJECT NO. 18034
FILE NAME: 18034-c-water.dwg
Designer: KJW
Drafter: BLB
Date: 11/13/19

Sheet
W.3

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KEYNOTE:

1. DEMO & SALVAGE WATER VALVE & VALVE BOX
GROUT PLUG EACH SIDE OF ABANDONED WATER MAIN

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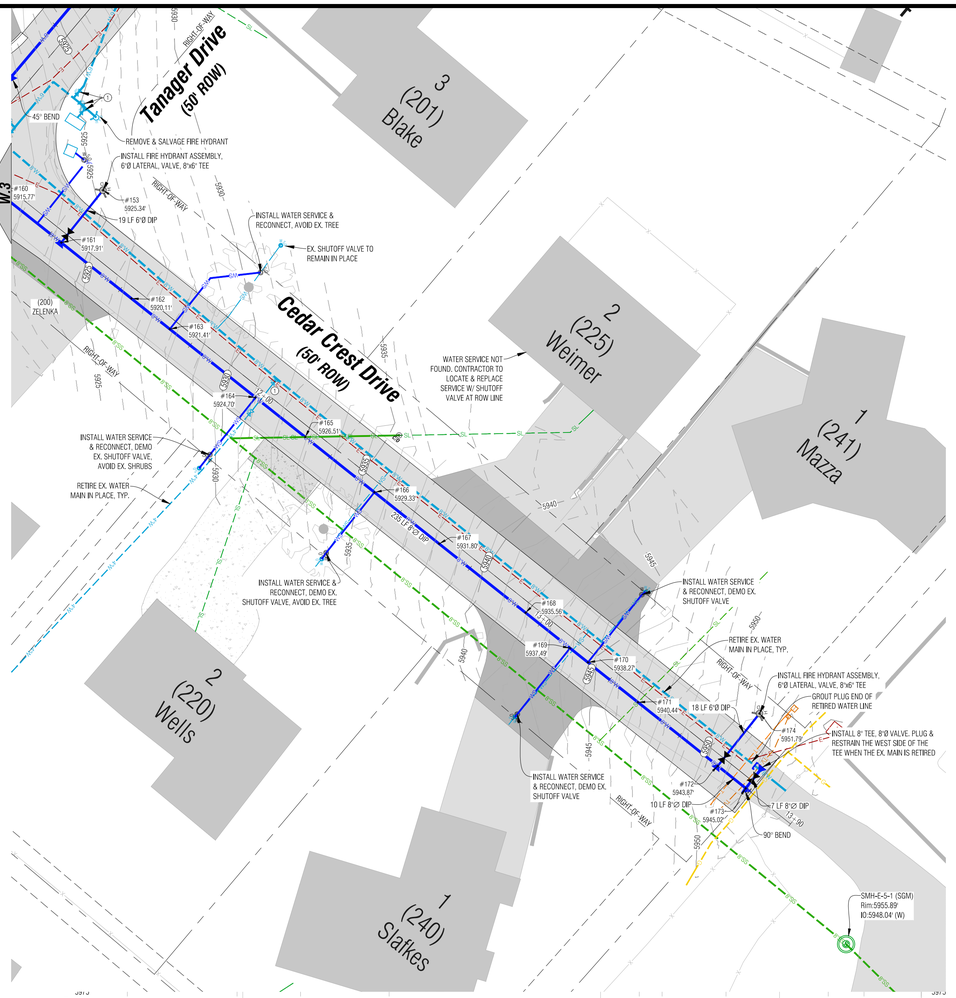

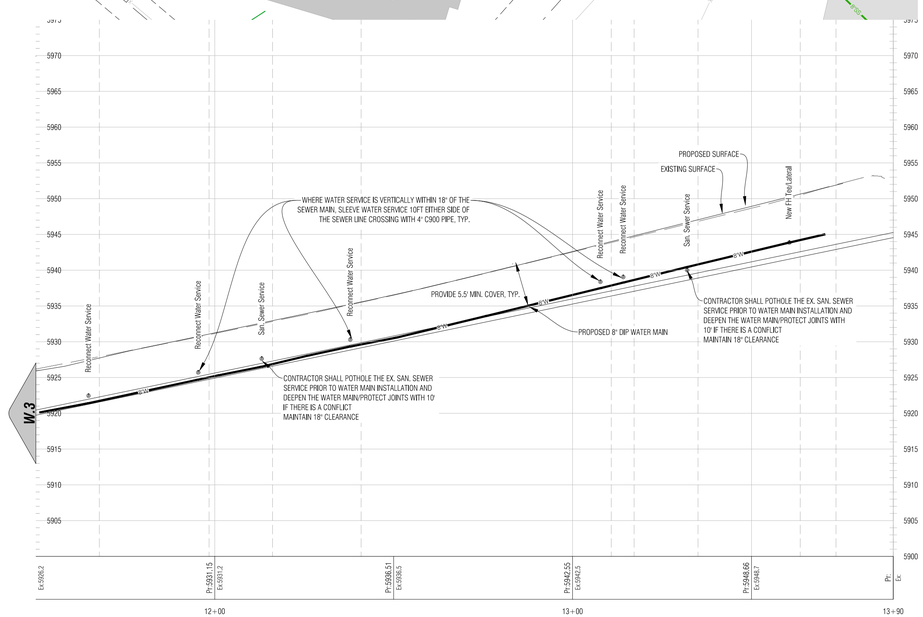

Profile: Water-Cedar Crest, Sta:11+50 to Sta:13+90
Scale: Vert.=10', Horiz.=20'

Keymap

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& Beyond
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Suite 201
Glenwood Springs, CO 81601
tele: 970.945.5252
fax: 970.384.2833

Engineer or Surveyor Seal

NOT FOR CONSTRUCTION
PRELIM

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

0 20' 40'
Scale: 1" = 20'

811
Know what's below.
Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Cedar Crest Drive Water Line - Sta. 11+50 To End

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
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5.			
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PROJECT NO.
18034
FILE NAME:
18034-C-Water.dwg
Designer:
DJW
Drafter:
BJI
Date:
11/13/19

Sheet
W.4

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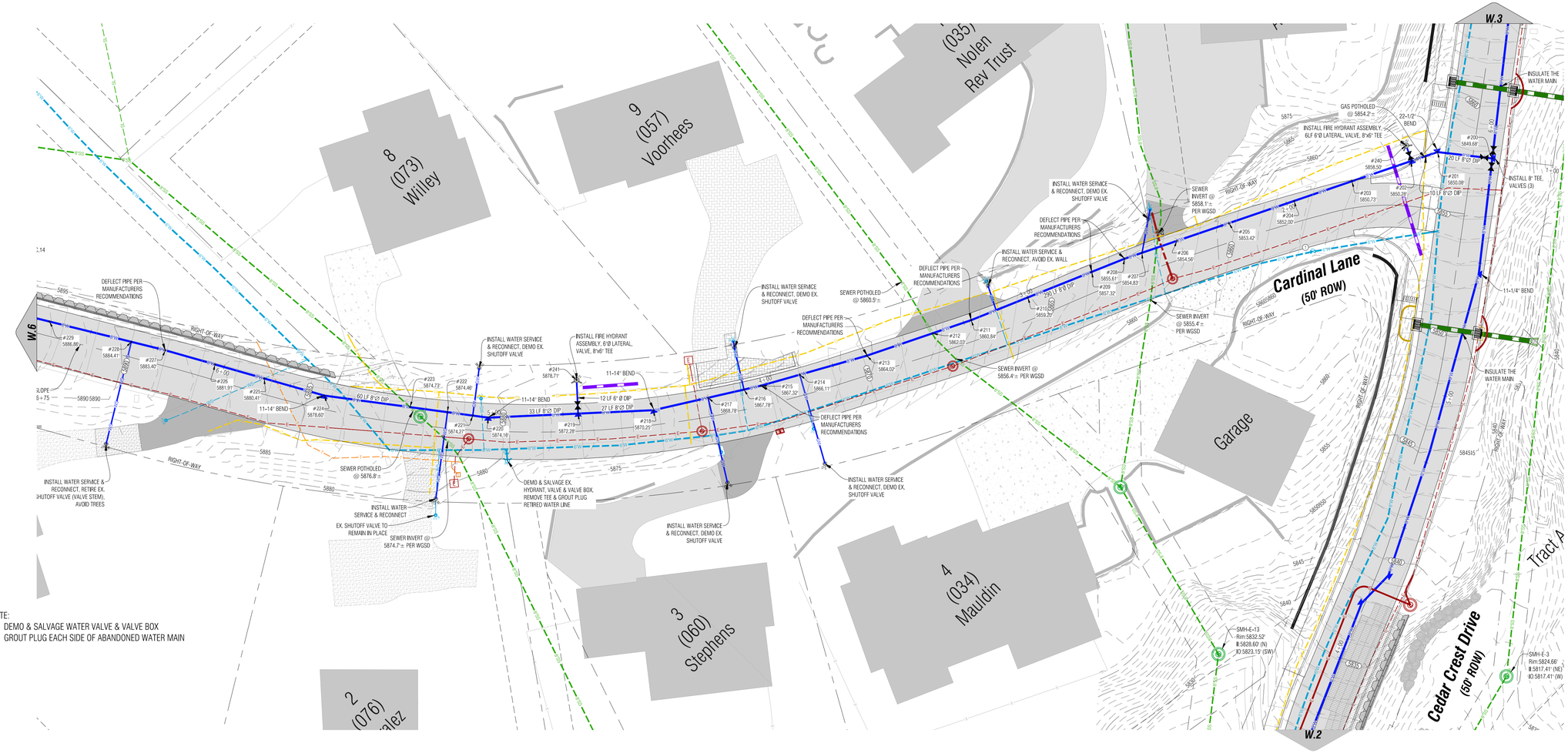
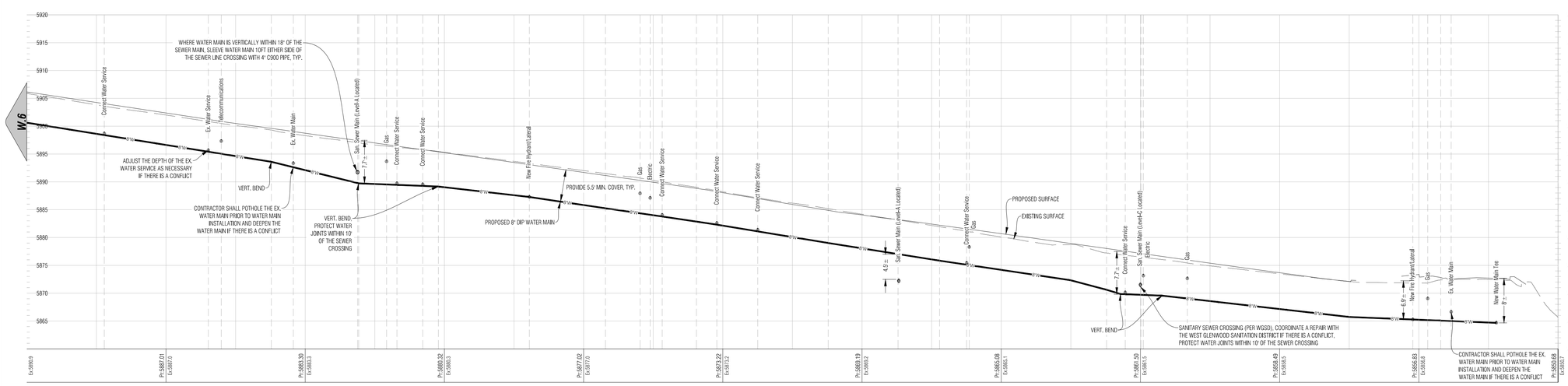
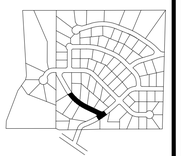


KEYNOTE:

1. DEMO & SALVAGE WATER VALVE & VALVE BOX GROUT PLUG EACH SIDE OF ABANDONED WATER MAIN



Profile: Water-Cardinal, Sta:1+00 to Sta:6+50
Scale: Vert.=10', Horiz.=20'



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923 Cooper Avenue
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Glenwood Springs, CO 81601
tele: 970.945.5252
fax: 970.384.2833

Engineer or Surveyor Seal

NOT FOR CONSTRUCTION PRELIM

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

Scale: 1" = 20'

811 Know what's below. Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Cardinal Lane Water Line - Sta. 1+00 To 6+50

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
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PROJECT NO. 18034
FILE NAME: 18034-c-water.dwg
Designer: DJW
Drafter: BLB
Date: 11/13/19

Sheet **W.5**

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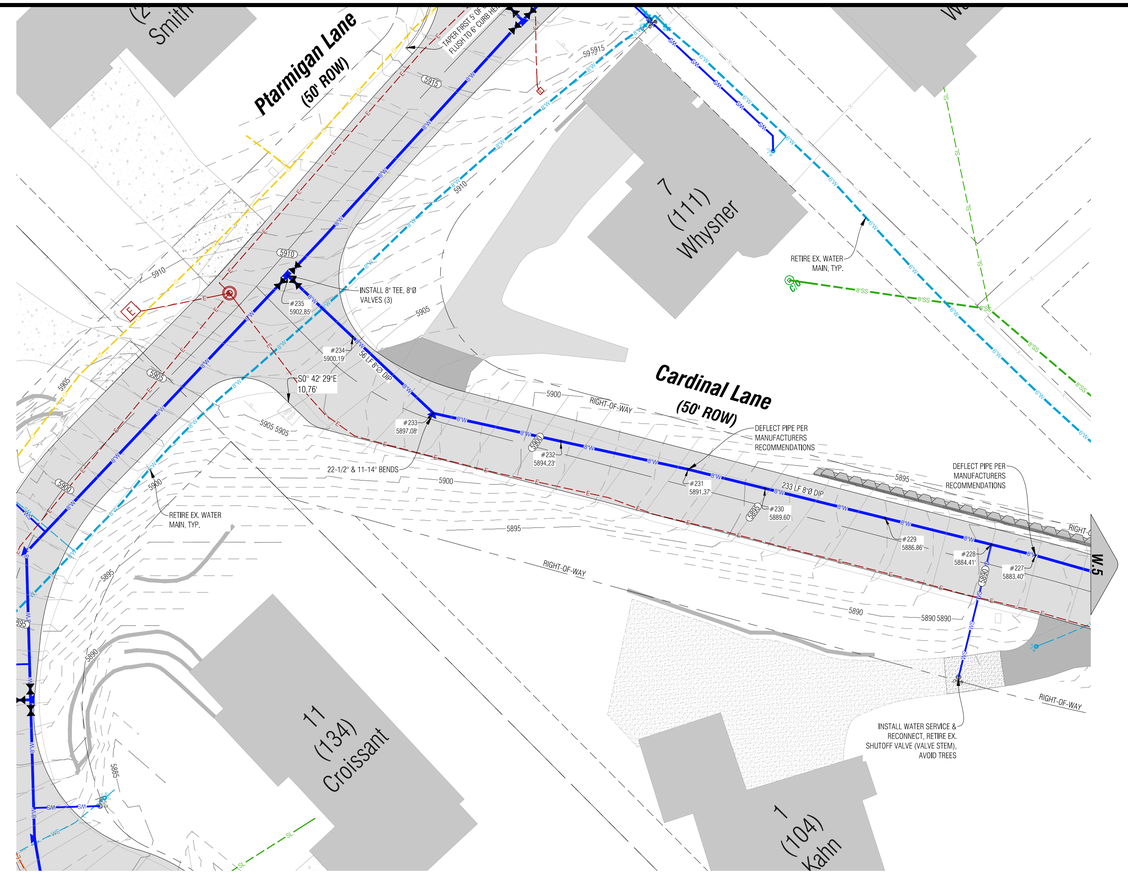

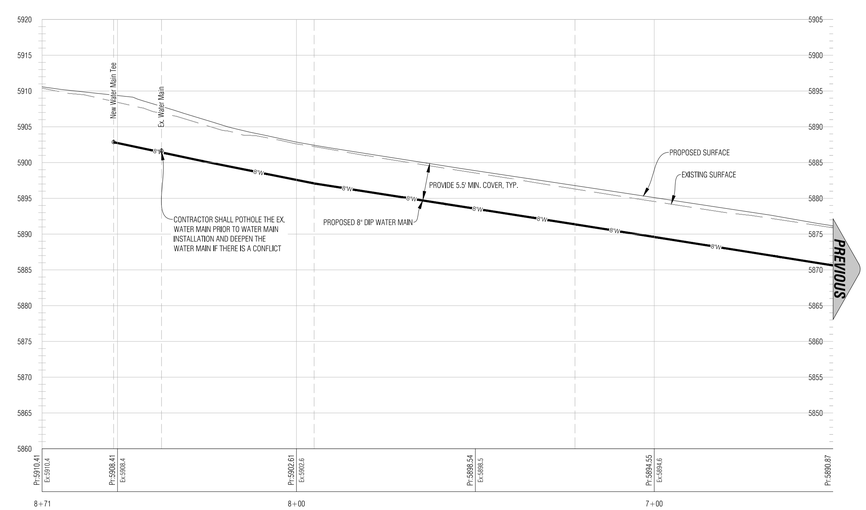

Profile: Water-Cardinal, Sta:6+50 to Sta:8+71
Scale: Vert.=10', Horiz.=20'

Keymap

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923 Cooper Avenue
Suite 201
Glenwood Springs, CO 81601
tele: 970.945.5252
fax: 970.384.2833

Engineer or Surveyor Seal

NOT FOR CONSTRUCTION
PRELIM

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH
0 20' 40'
Scale: 1" = 20'

811 Know what's below. Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Cardinal Lane Water Line - Sta. 6+50 To End

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
3.			
4.			
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6.			
7.			
8.			
9.			

PROJECT NO. 18034
FILE NAME: 18034-c-water.dwg
Designer: BJW
Drafter: BLB
Date: 11/13/19

Sheet
W.6

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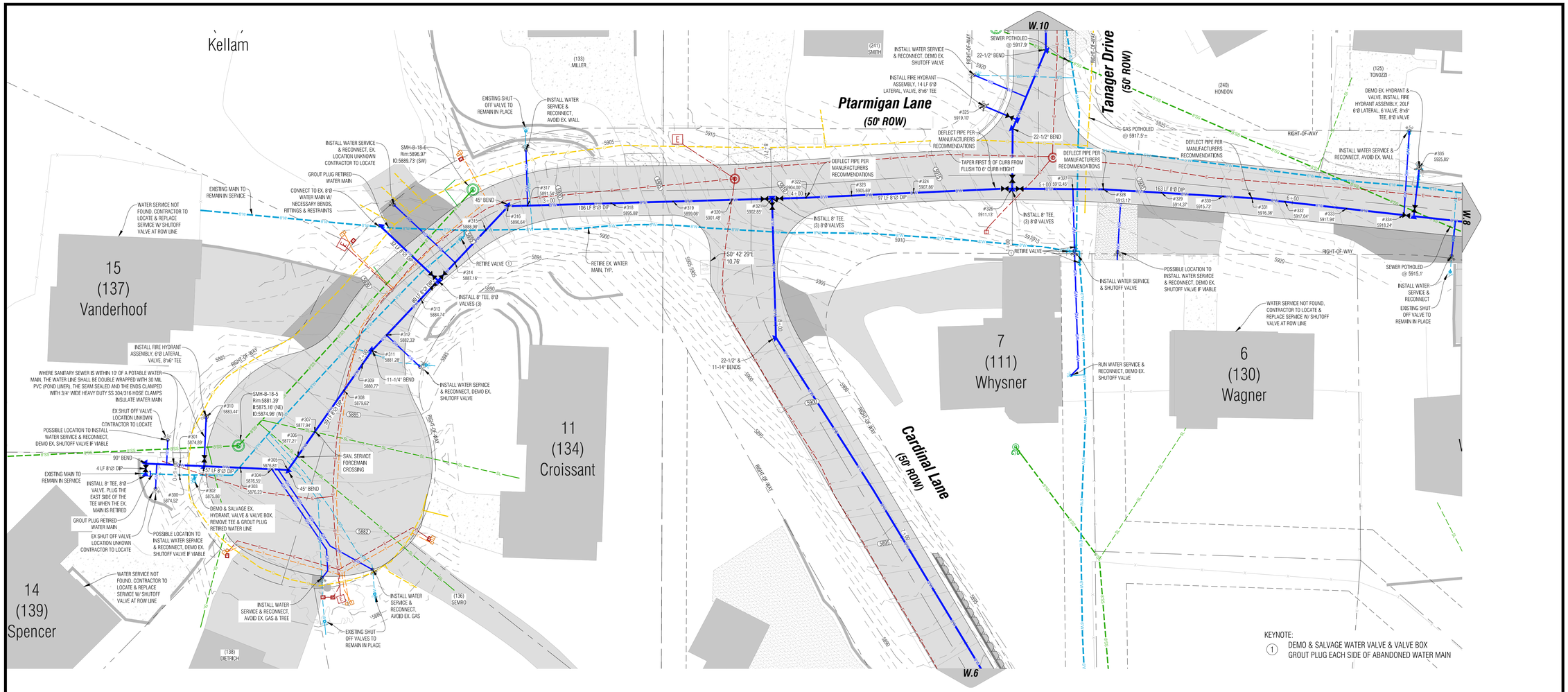

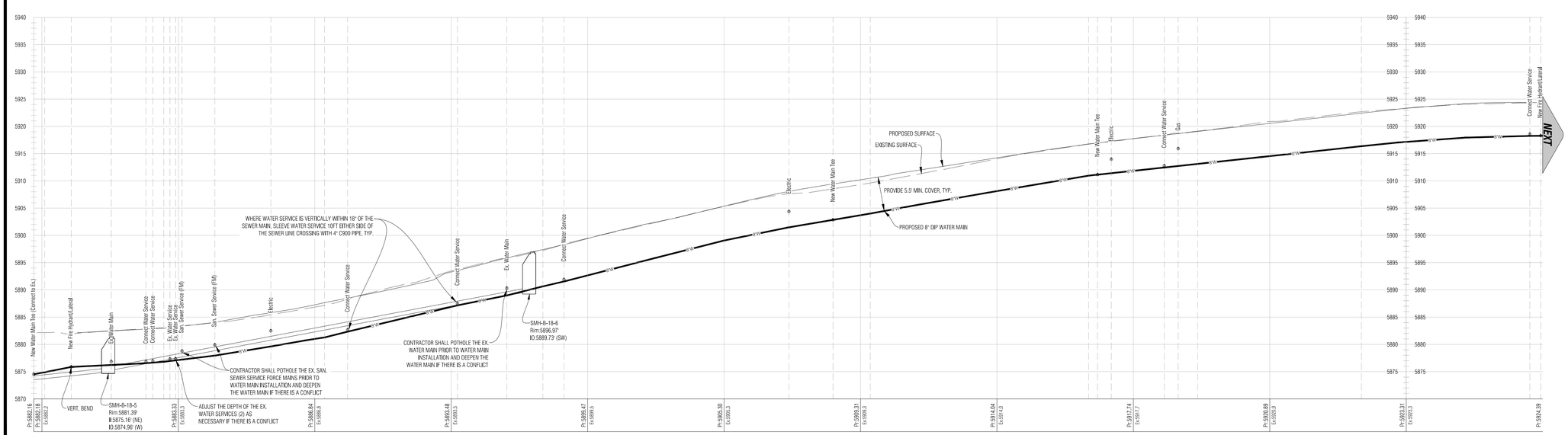

Profile: Water-Ptarmigan Lane, Sta:0+97 to Sta:6+00
Scale: Vert.=10', Horiz.=20'

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Boundaries Unlimited Inc.
Civil Engineering Surveying & Beyond
923 Cooper Avenue
Suite 201
Glenwood Springs, CO 81601
tele: 970.945.5252
fax: 970.384.2833

Engineer or Surveyor Seal

NOT FOR CONSTRUCTION PRELIM

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

0 20' 40'
Scale: 1" = 20'

811 Know what's below. Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Ptarmigan Lane Water Line - Sta. 1+00 To 7+00

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
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PROJECT NO. 18034
FILE NAME: 18034-C-water.dwg
Designer: DJW
Drafter: BUI
Date: 11/13/19

Sheet
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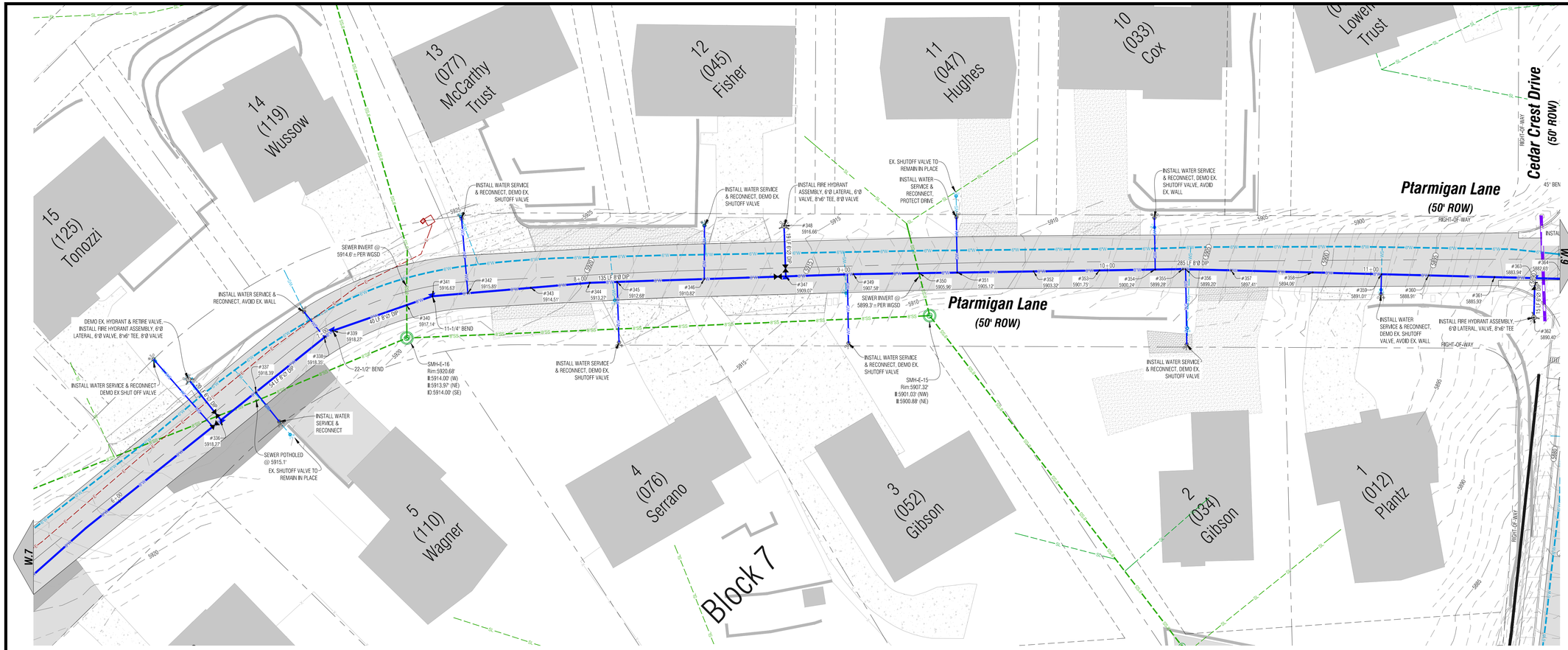

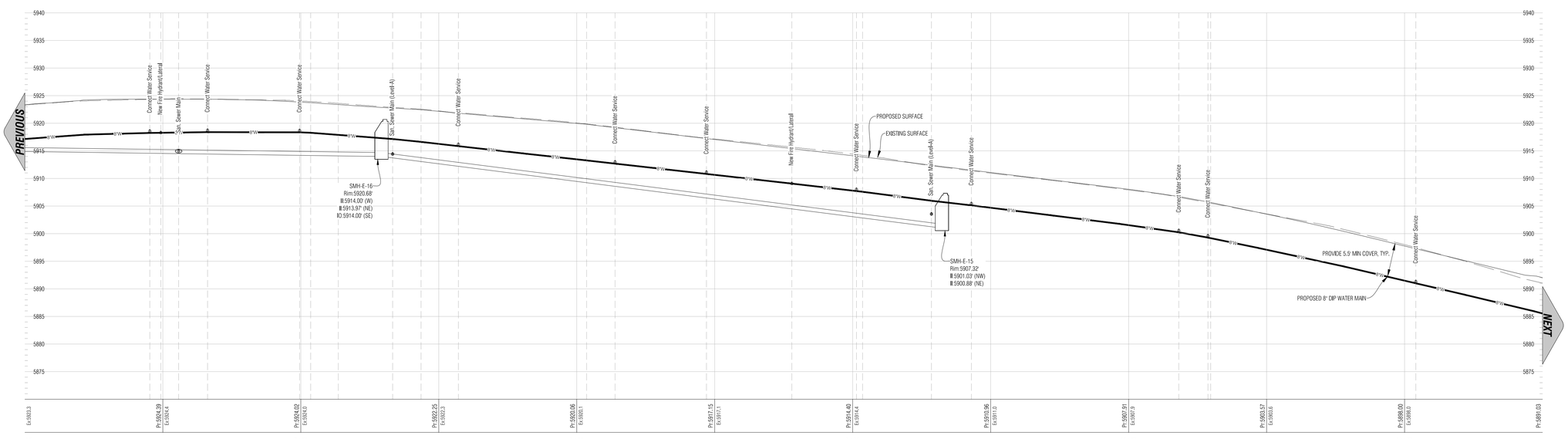

Profile: Water-Ptarmigan Lane, Sta:6+00 to Sta:11+50
Scale: Vert.=10', Horiz.=20'

Keymap

Boundaries Unlimited Inc.
Civil Engineering Surveying & Beyond
923 Cooper Avenue
Suite 201
Glenwood Springs, CO 81601
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Engineer or Surveyor Seal

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Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

Scale: 1" = 20'

811 Know what's below. Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Ptarmigan Lane Water Line - Sta. 7+00 To 12+50

95% Progress Set - Not For Construction

No.	Date	Revision	By
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PROJECT NO. 18034
FILE NAME: 18034-c-water.dwg
Designer: DJW
Drafter: BJB
Date: 11/13/19

Sheet W.8

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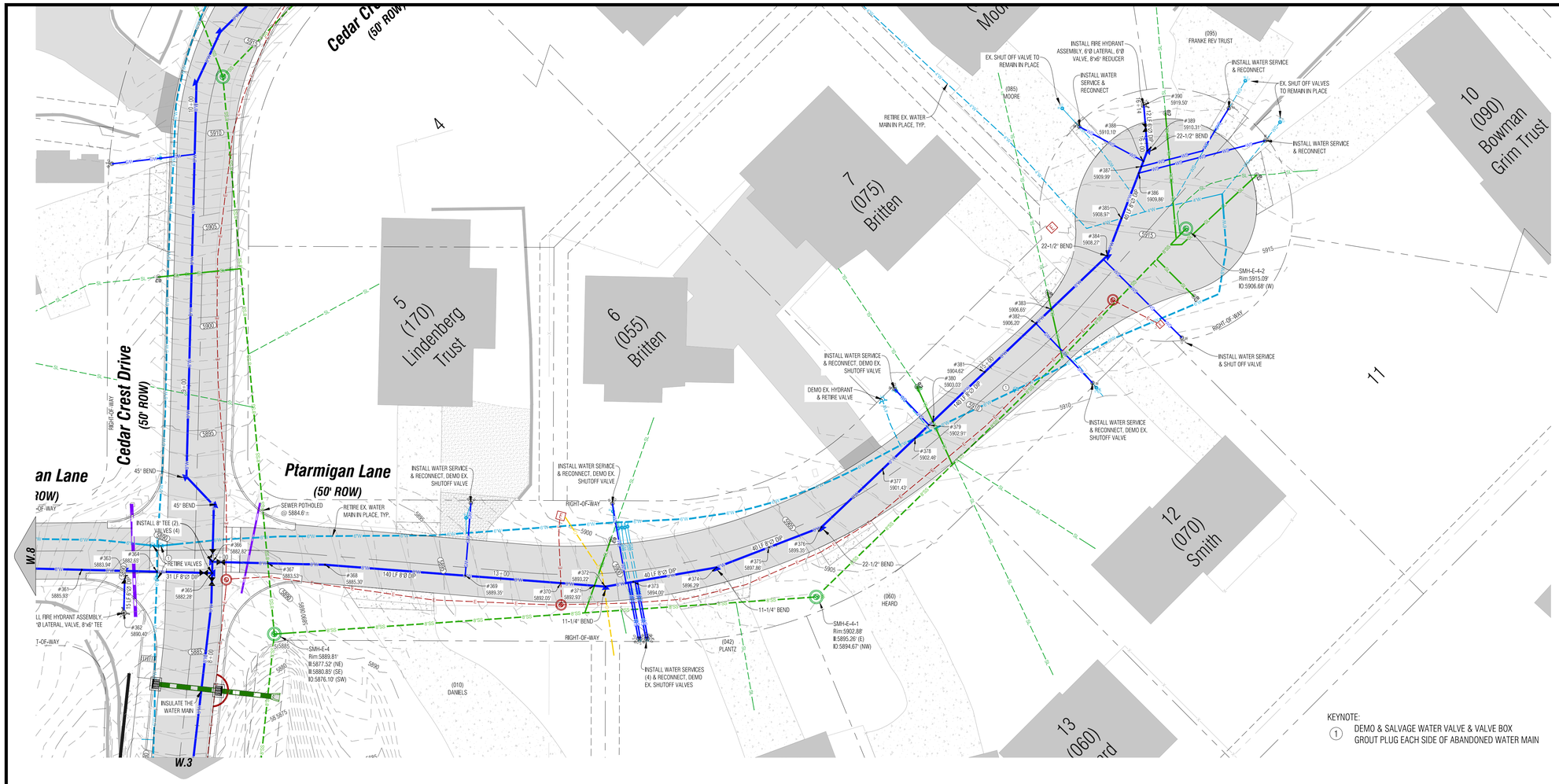
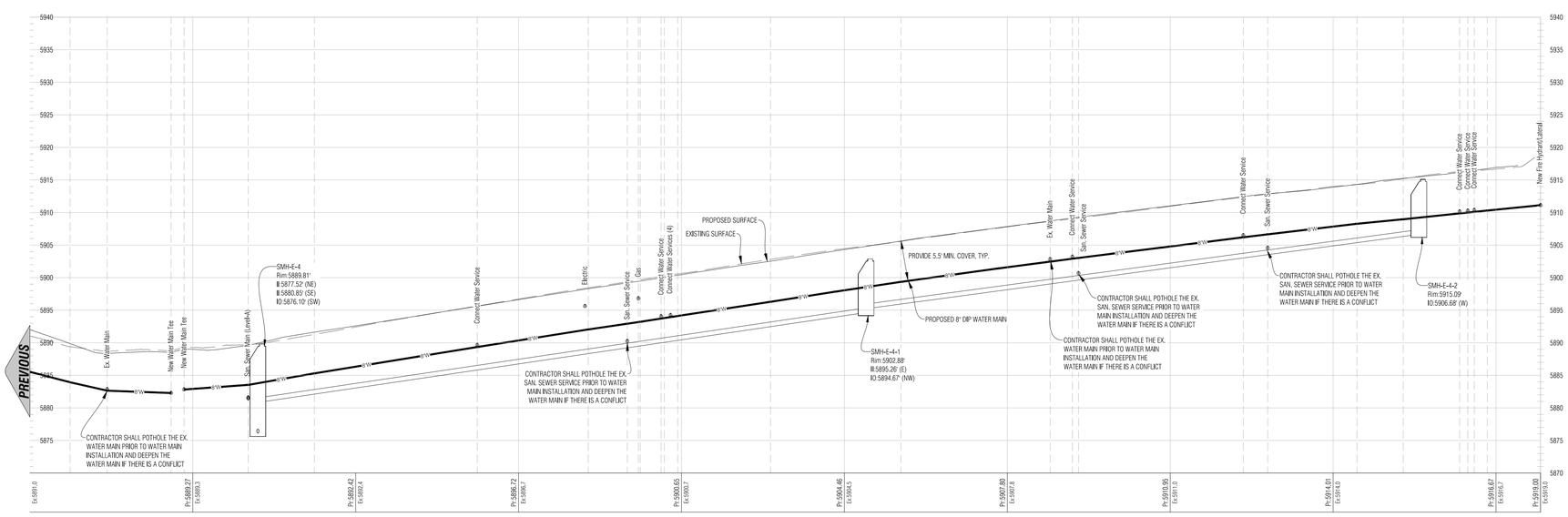


KEYNOTE:

1. DEMO & SALVAGE WATER VALVE & VALVE BOX GROUT PLUG EACH SIDE OF ABANDONED WATER MAIN



Profile: Water-Ptarmigan Lane, Sta:11+50 to Sta:16+14
Scale: Vert.=10', Horiz.=20'

Keymap

Boundaries Unlimited Inc.
Civil Engineering Surveying & Beyond
923 Cooper Avenue
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Glenwood Springs, CO 81601
tele: 970.945.5252
fax: 970.384.2833

Engineer or Surveyor Seal

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PRELIM

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

0 20' 40'
Scale: 1" = 20'

811 Know what's below. Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Ptarmigan Lane Water Line - Sta. 12+50 To End

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
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PROJECT NO. 18034
FILE NAME: 18034-c-water.dwg
Designer: DJW
Drafter: BLB
Date: 11/13/19

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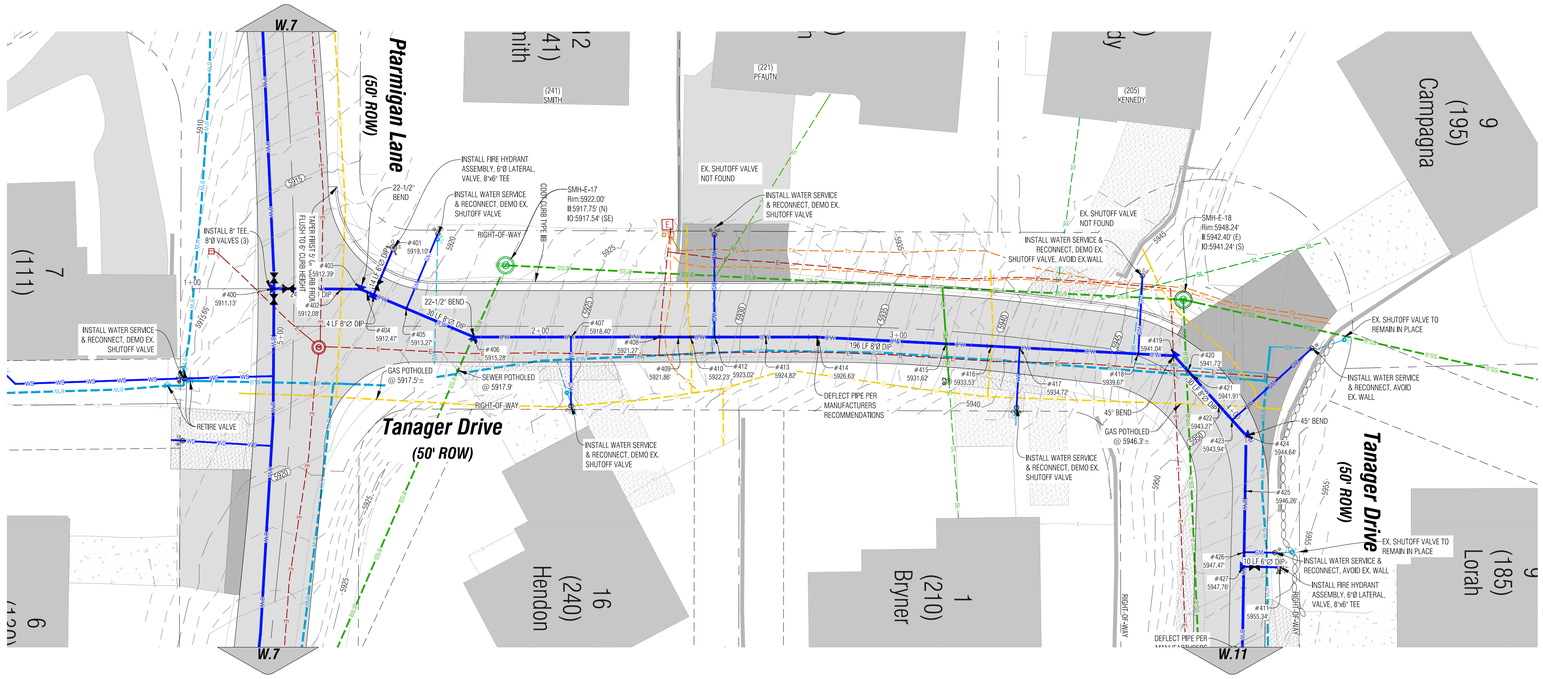
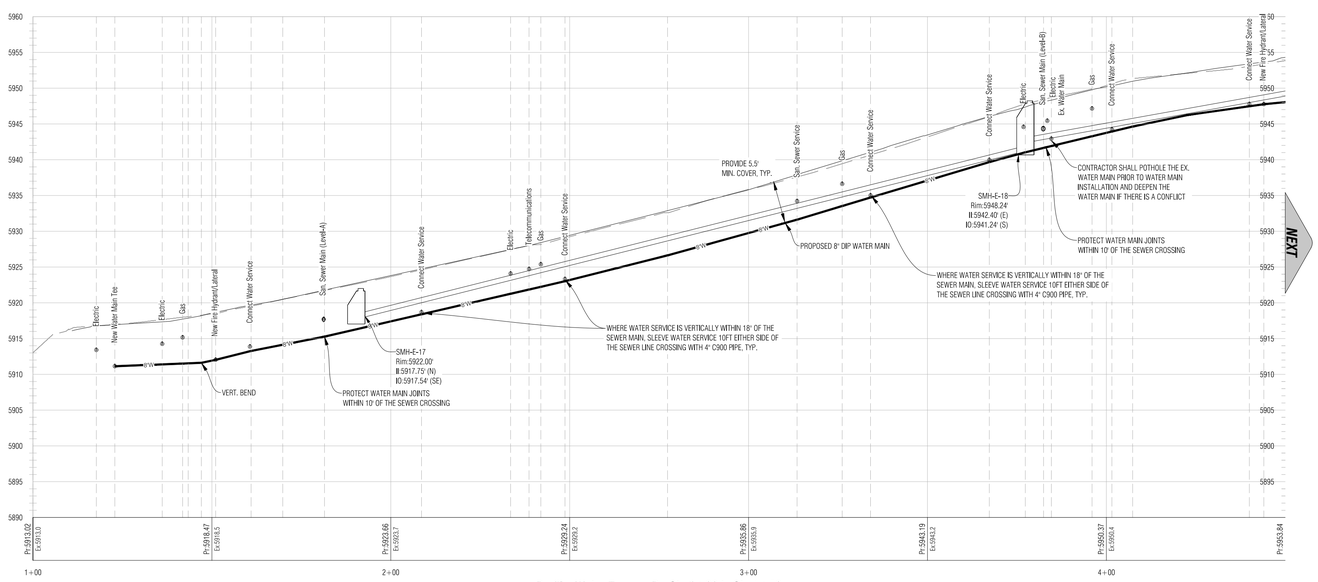
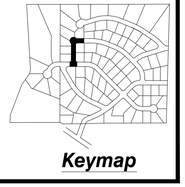




Profile: Water-Tanager Dr, Sta:1+00 to Sta:4+50
Scale: Vert.=10', Horiz.=20'



Boundaries Unlimited Inc.
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& Beyond
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Engineer or Surveyor Seal

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PRELIM

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

0 20' 40'
Scale: 1" = 20'

811
Know what's below.
Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Tanager Drive Water Line - Sta. 1+00 To 3+50
95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
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PROJECT NO.
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FILE NAME:
18034-C-water.dwg
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DJW
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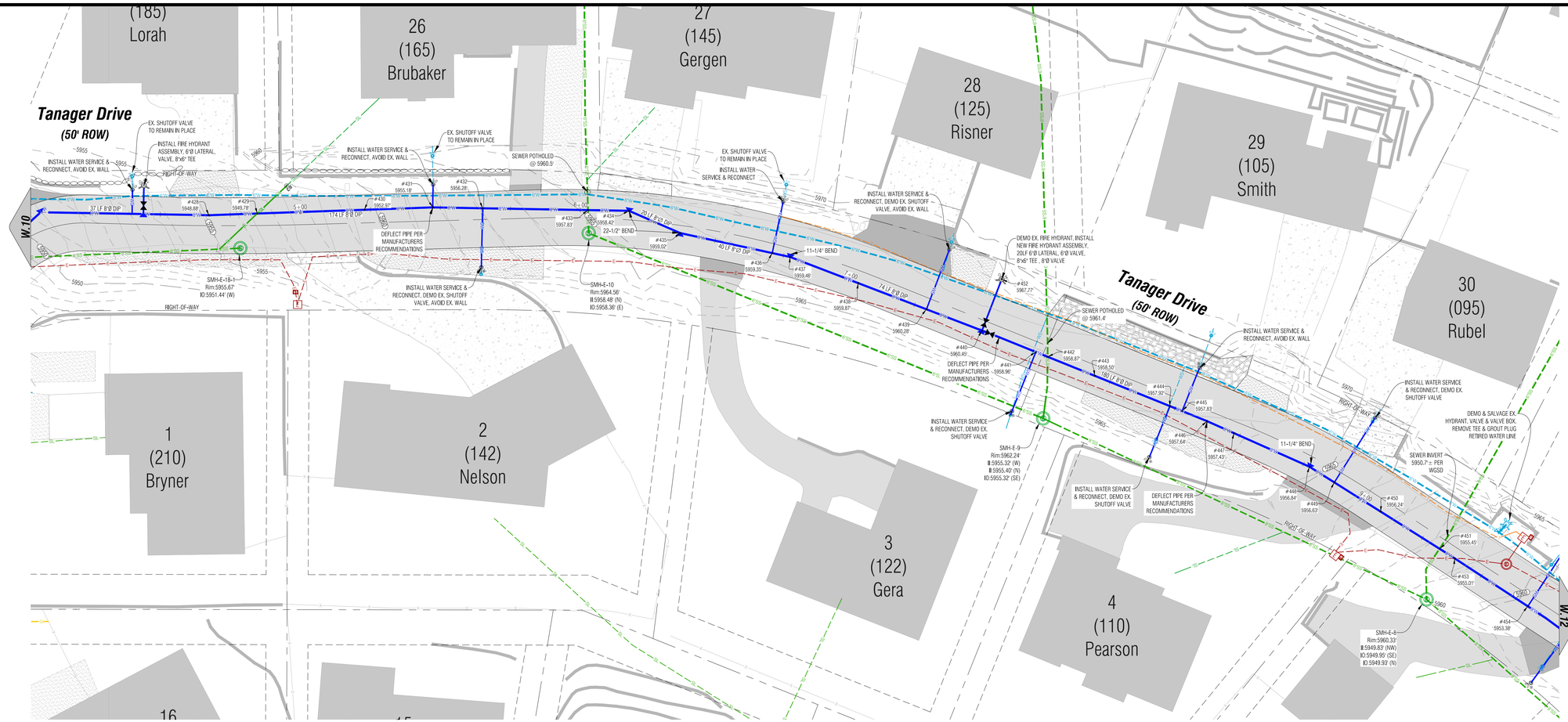

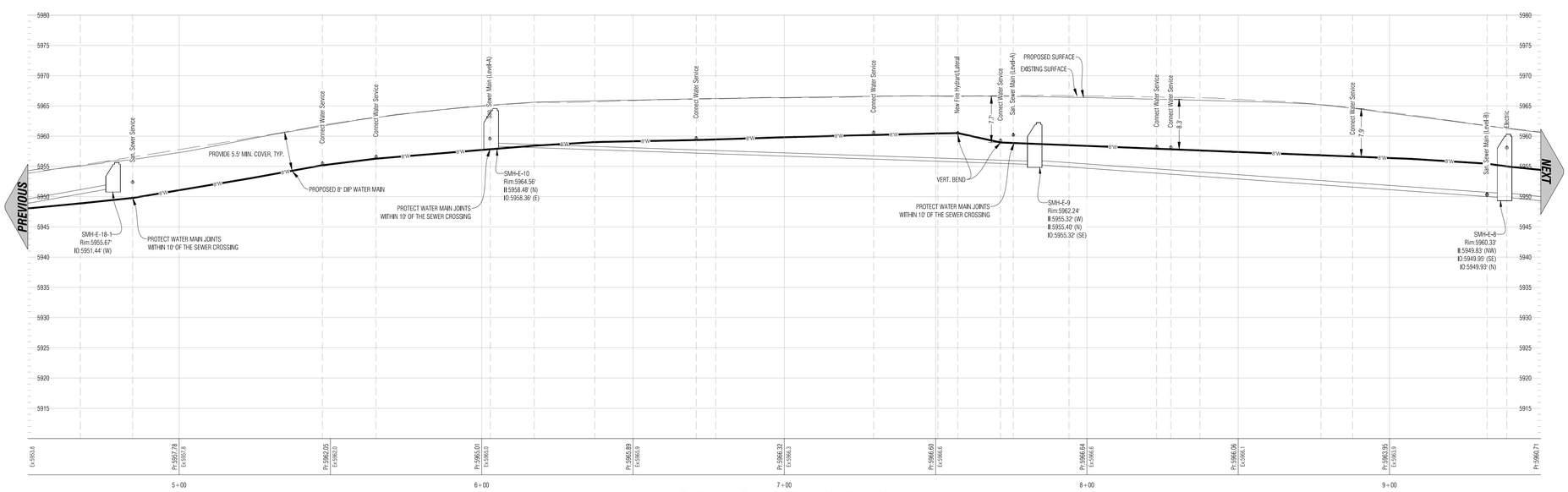

Profile: Water-Tanager Dr, Sta:4+50 to Sta:9+50
Scale: Vert.=10', Horiz.=20'

Keymap

Boundaries Unlimited Inc.
Civil Engineering Surveying & Beyond
923 Cooper Avenue
Suite 201
Glenwood Springs, CO 81601
tele: 970.945.5252
fax: 970.384.2833

Engineer or Surveyor Seal

NOT FOR CONSTRUCTION PRELIM

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

0 20' 40'
Scale: 1" = 20'

811 Know what's below. Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Tanager Drive Water Line - Sta. 3+50 To 9+50
95% Progress Set - Not For Construction

No.	Date	Revision	By
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PROJECT NO. 18034
FILE NAME: 18034-C-water.dwg
Designer: DJW
Drafter: BLB
Date: 11/13/19

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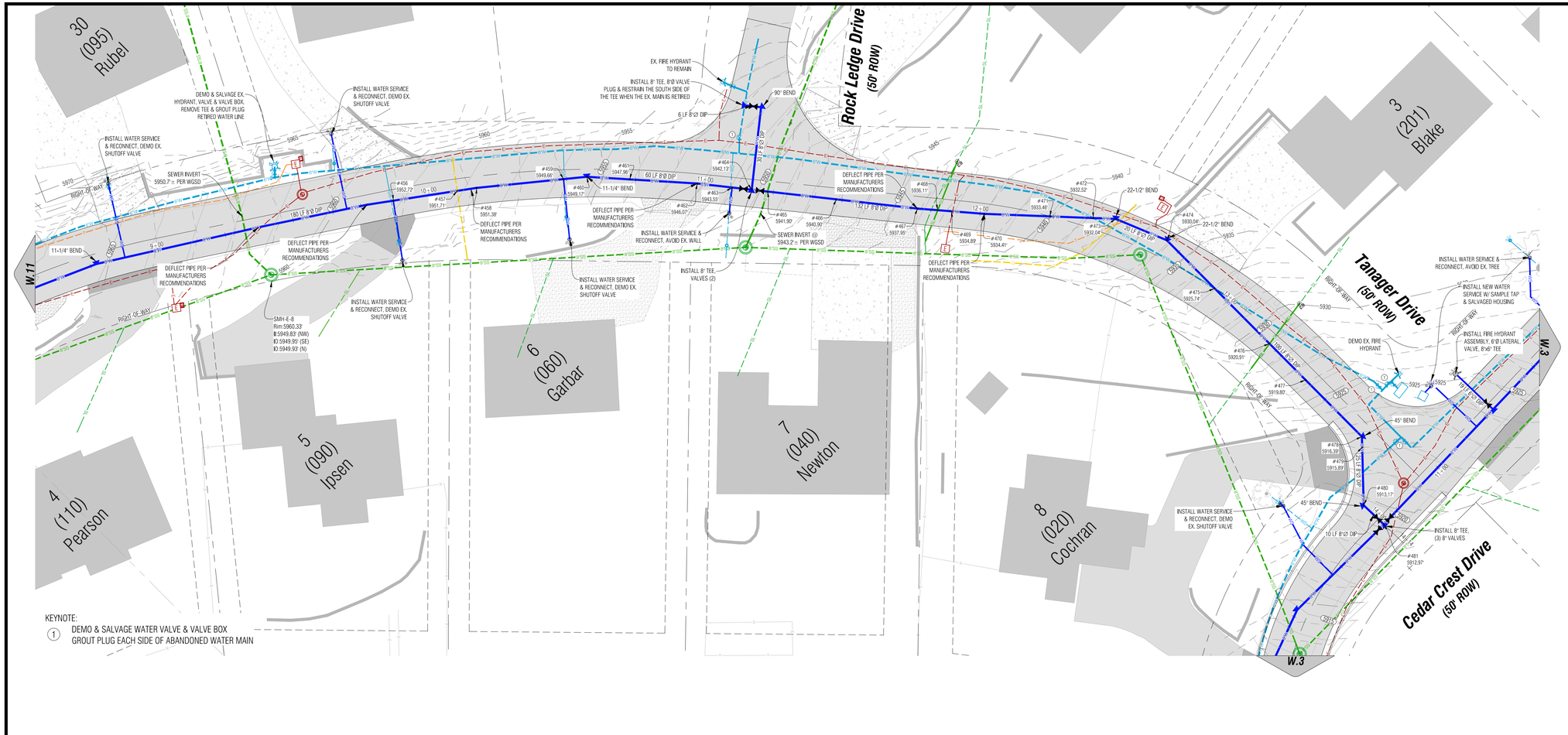
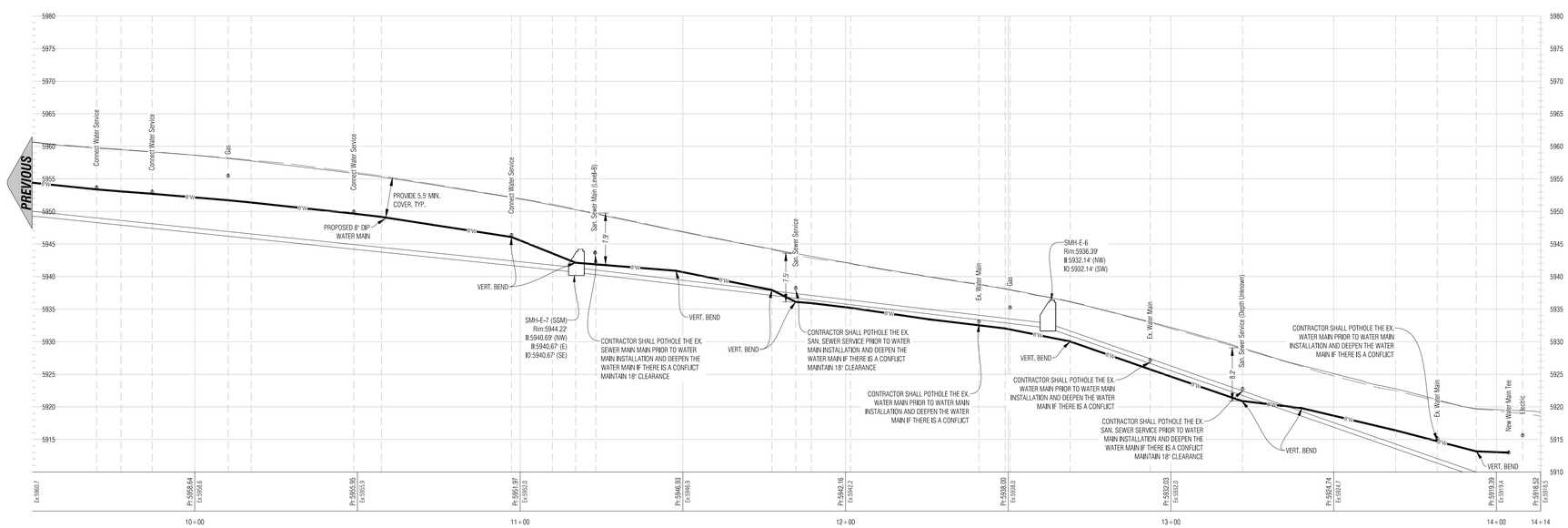


KEYNOTE:

1. DEMO & SALVAGE WATER VALVE & VALVE BOX GROUT PLUG EACH SIDE OF ABANDONED WATER MAIN



Profile: Water-Tanager Dr, Sta:9+50 to Sta:14+14
Scale: Vert.=10', Horiz.=20'

Keymap

Boundaries Unlimited Inc.
Civil Engineering Surveying & Beyond
923 Cooper Avenue
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Engineer or Surveyor Seal

NOT FOR CONSTRUCTION PRELIM

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

0 20' 40'
Scale: 1" = 20'

811 Know what's below. Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Tanager Drive Water Line - Sta. 9+50 To End

95% Progress Set - Not For Construction

No.	Date	Revision	By
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PROJECT NO. 18034
FILE NAME: 18034-c-water.dwg
Designer: DJW
Drafter: BLB
Date: 11/13/19

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Point Table

Point #	Raw Description	Elevation	Northing	Easting
100	Water-TOP	5787.90'	46744.62	9984.40
101	Water-TOP	5787.98'	46752.60	9990.42
102	Water-TOP	5788.36'	46766.71	9995.53
103	Water-TOP	5791.29'	46790.21	10004.05
104	Water-TOP	5793.71'	46811.28	10011.68
105	Water-TOP	5795.24'	46832.84	10019.50
106	Water-TOP	5798.44'	46846.83	10024.57
107	Water-TOP	5801.26'	46862.69	10030.32
108	Water-TOP	5805.08'	46884.23	10038.12
109	Water-TOP	5807.83'	46900.75	10048.12
110	Water-TOP	5810.48'	46916.70	10057.77
111	Water-TOP	5810.76'	46918.45	10058.83
112	Water-TOP	5811.69'	46922.83	10063.05
113	Water-TOP	5814.48'	46935.44	10075.19
114	Water-TOP	5817.10'	46947.26	10086.57
115	Water-TOP	5820.17'	46961.67	10100.45
116	Water-TOP	5822.39'	46973.24	10111.59
117	Water-TOP	5826.74'	46985.24	10139.09
118	Water-TOP	5831.34'	46999.37	10171.46
119	Water-TOP	5833.02'	46999.63	10185.44
120	Water-TOP	5836.65'	47013.55	10213.27
121	FIRE HYDRANT	5819.10'	46940.29	10044.92
122	Water-TOP	5838.58'	47020.95	10228.06
123	Water-TOP	5841.30'	47032.59	10248.57
124	Water-TOP	5843.78'	47043.18	10267.23
125	Water-TOP	5846.26'	47053.83	10285.99
126	Water-TOP	5848.88'	47067.62	10303.43
127	Water-TOP	5849.68'	47080.02	10319.12
129	Water-TOP	5854.51'	47095.82	10339.11
130	Water-TOP	5857.78'	47111.49	10358.93
131	Water-TOP	5860.17'	47122.92	10373.39
132	Water-TOP	5862.13'	47132.29	10385.24
133	Water-TOP	5864.26'	47142.50	10398.15
134	Water-TOP	5867.46'	47158.00	10417.76
135	Water-TOP	5870.68'	47173.51	10437.37
136	Water-TOP	5873.90'	47189.01	10456.99
137	Water-TOP	5876.93'	47203.94	10475.88
138	Water-TOP	5878.82'	47213.20	10487.58
139	Water-TOP	5880.75'	47222.66	10499.55
140	Water-TOP	5882.28'	47230.37	10507.67
141	Water-TOP	5882.82'	47233.12	10510.56
142	FIRE HYDRANT	5890.40'	47242.54	10475.46
143	Water-TOP	5885.21'	47246.90	10525.06
145	Water-TOP	5886.64'	47261.04	10525.42
146	Water-TOP	5889.49'	47275.78	10540.94
147	Water-TOP	5892.74'	47293.00	10559.06
148	Water-TOP	5894.03'	47310.79	10577.78
149	Water-TOP	5898.80'	47323.09	10590.72
150	Water-TOP	5902.16'	47338.87	10607.33
151	Water-TOP	5903.99'	47348.17	10617.12

Point Table

Point #	Raw Description	Elevation	Northing	Easting
152	Water-TOP	5904.53'	47357.48	10626.91
153	FIRE HYDRANT	5925.34'	47384.26	10746.54
154	Water-TOP	5905.05'	47361.96	10639.21
155	Water-TOP	5905.33'	47364.33	10645.70
156	Water-TOP	5910.55'	47364.16	10667.20
157	Water-TOP	5912.38'	47364.02	10683.70
158	Water-TOP	5912.97'	47364.11	10689.70
159	Water-TOP	5913.73'	47364.29	10697.10
160	Water-TOP	5915.77'	47364.92	10722.09
161	Water-TOP	5917.91'	47365.54	10747.01
162	Water-TOP	5920.11'	47366.17	10772.08
163	Water-TOP	5921.41'	47366.51	10785.79
164	Water-TOP	5924.70'	47367.28	10816.44
165	Water-TOP	5926.51'	47367.73	10834.18
166	Water-TOP	5929.33'	47368.35	10858.92
167	Water-TOP	5931.80'	47368.92	10882.02
168	Water-TOP	5935.56'	47369.70	10912.94
169	Water-TOP	5937.49'	47370.10	10928.82
170	Water-TOP	5938.27'	47370.26	10935.19
171	Water-TOP	5940.44'	47370.70	10953.05
172	Water-TOP	5943.87'	47371.42	10981.61
173	Water-TOP	5945.02'	47371.67	10991.60
174	FIRE HYDRANT	5951.79'	47390.13	10981.14
200	Water-TOP	5849.68'	47080.02	10319.12
201	Water-TOP	5850.08'	47095.71	10306.72
202	Water-TOP	5850.28'	47100.12	10297.74
203	Water-TOP	5850.73'	47110.20	10277.23
204	Water-TOP	5852.00'	47119.97	10257.36
205	Water-TOP	5853.42'	47131.00	10234.92
206	Water-TOP	5854.56'	47139.82	10216.97
207	Water-TOP	5854.83'	47145.69	10205.03
208	Water-TOP	5855.61'	47148.64	10199.02
209	Water-TOP	5857.32'	47153.69	10187.21
210	Water-TOP	5859.20'	47163.54	10164.22
211	Water-TOP	5860.84'	47172.25	10143.86
212	Water-TOP	5862.03'	47178.83	10130.48
213	Water-TOP	5864.02'	47189.89	10107.96
214	Water-TOP	5866.11'	47202.22	10085.87
215	Water-TOP	5867.32'	47209.39	10073.04
216	Water-TOP	5867.78'	47212.73	10067.73
217	Water-TOP	5868.78'	47219.83	10056.43
218	Water-TOP	5870.25'	47230.69	10039.18
219	Water-TOP	5872.28'	47249.12	10019.01
220	Water-TOP	5874.16'	47271.16	9994.89
221	Water-TOP	5874.27'	47275.64	9991.47
222	Water-TOP	5874.46'	47283.01	9985.86
223	Water-TOP	5874.73'	47293.92	9977.53
224	Water-TOP	5878.60'	47318.87	9958.51
225	Water-TOP	5880.41'	47338.66	9947.50
226	Water-TOP	5881.91'	47354.98	9938.43

Point Table

Point #	Raw Description	Elevation	Northing	Easting
227	Water-TOP	5883.40'	47371.31	9929.35
228	Water-TOP	5884.41'	47382.16	9922.81
229	Water-TOP	5886.86'	47408.45	9906.96
230	Water-TOP	5889.60'	47437.98	9889.16
231	Water-TOP	5891.37'	47456.96	9877.73
232	Water-TOP	5894.23'	47487.68	9858.10
233	Water-TOP	5897.08'	47518.40	9838.47
234	Water-TOP	5900.19'	47549.41	9837.59
235	Water-TOP	5902.85'	47574.40	9836.88
240	FIRE HYDRANT	5858.50'	47105.44	10300.36
241	FIRE HYDRNT	5878.71'	47258.14	10027.25
300	Water-TOP	5874.52'	47463.00	9597.95
301	Water-TOP	5874.89'	47466.99	9598.12
302	Water-TOP	5875.86'	47466.56	9607.86
303	Water-TOP	5876.23'	47465.91	9622.52
304	Water-TOP	5876.55'	47465.34	9635.21
305	Water-TOP	5876.81'	47465.05	9641.74
306	Water-TOP	5877.21'	47470.52	9645.59
307	Water-TOP	5877.94'	47480.35	9652.50
308	Water-TOP	5879.62'	47497.15	9664.32
309	Water-TOP	5880.77'	47507.86	9671.86
310	FIRE HYDRANT	5883.44'	47486.54	9638.75
311	Water-TOP	5881.28'	47513.24	9675.64
312	Water-TOP	5882.33'	47519.38	9681.44
313	Water-TOP	5884.74'	47534.01	9695.27
314	Water-TOP	5887.16'	47548.64	9709.09
315	Water-TOP	5888.98'	47561.79	9721.51
316	Water-TOP	5890.64'	47571.39	9730.59
317	Water-TOP	5891.54'	47571.61	9738.32
318	Water-TOP	5895.88'	47572.56	9771.99
319	Water-TOP	5899.06'	47573.27	9796.98
320	Water-TOP	5901.48'	47573.94	9820.74
321	Water-TOP	5902.85'	47574.40	9836.88
322	Water-TOP	5904.00'	47574.79	9850.54
323	Water-TOP	5905.69'	47575.63	9868.94
324	Water-TOP	5907.86'	47576.77	9893.91
325	FIRE HYDRANT	5919.10'	47611.84	9922.31
326	Water-TOP	5911.13'	47578.42	9933.74
327	Water-TOP	5912.45'	47578.26	9958.20
328	Water-TOP	5913.12'	47578.18	9970.46
329	Water-TOP	5914.37'	47576.80	9993.83
330	Water-TOP	5915.73'	47575.33	10018.79
331	Water-TOP	5916.36'	47574.65	10030.35
332	Water-TOP	5917.04'	47573.15	10043.69
333	Water-TOP	5917.94'	47570.38	10068.53
334	Water-TOP	5918.24'	47567.79	10091.68
335	FIRE HYDRANT	5925.85'	47586.97	10097.84
336	Water-TOP	5918.27'	47567.35	10095.65
337	Water-TOP	5918.39'	47565.46	10112.47
338	Water-TOP	5918.35'	47561.76	10145.62

Point Table

Point #	Raw Description	Elevation	Northing	Easting
339	Water-TOP	5918.27'	47561.31	10149.61
340	Water-TOP	5917.14'	47548.35	10176.34
341	Water-TOP	5916.63'	47543.86	10185.60
342	Water-TOP	5915.85'	47535.13	10195.95
343	Water-TOP	5914.51'	47519.71	10214.24
344	Water-TOP	5913.27'	47505.19	10231.47
345	Water-TOP	5912.68'	47498.13	10239.00
346	Water-TOP	5910.82'	47475.49	10263.17
347	Water-TOP	5909.07'	47454.35	10285.75
348	FIRE HYDRANT	5916.66'	47468.36	10298.87
349	Water-TOP	5907.58'	47436.82	10304.46
350	Water-TOP	5905.96'	47419.44	10322.37
351	Water-TOP	5905.12'	47409.36	10332.77
352	Water-TOP	5903.32'	47389.18	10353.57
353	Water-TOP	5901.75'	47371.78	10371.51
354	Water-TOP	5900.24'	47357.03	10386.72
355	Water-TOP	5899.28'	47349.68	10394.29
356	Water-TOP	5899.20'	47349.05	10394.89
357	Water-TOP	5897.41'	47336.44	10406.87
358	Water-TOP	5894.06'	47313.97	10428.22
359	Water-TOP	5891.01'	47295.07	10446.18
360	Water-TOP	5888.91'	47282.07	10458.53
361	Water-TOP	5885.93'	47263.95	10475.75
362	FIRE HYDRANT	5890.40'	47242.54	10475.46
363	Water-TOP	5883.94'	47252.85	10486.31
364	Water-TOP	5882.65'	47244.58	10494.16
365	Water-TOP	5882.28'	47230.37	10507.67
366	Water-TOP	5882.82'	47233.12	10510.56
367	Water-TOP	5883.53'	47218.85	10524.12
368	Water-TOP	5885.30'	47204.13	10538.12
369	Water-TOP	5889.35'	47166.13	10570.61
370	Water-TOP	5892.05'	47140.24	10592.76
371	Water-TOP	5892.93'	47131.15	10600.54
372	Water-TOP	5893.22'	47128.13	10603.11
373	Water-TOP	5894.00'	47122.36	10611.28
374	Water-TOP	5896.29'	47105.07	10635.80
375	Water-TOP	5897.86'	47096.94	10654.07
376	Water-TOP	5899.35'	47088.82	10672.35
377	Water-TOP	5901.43'	47088.06	10702.34
378	Water-TOP	5902.46'	47087.65	10718.16
379	Water-TOP	5902.91'	47087.48	10724.97
380	Water-TOP	5903.03'	47087.43	10726.86
381	Water-TOP	5904.62'	47086.78	10752.32
382	Water-TOP	5906.20'	47086.14	10777.42
383	Water-TOP	5906.65'	47085.95	10784.90
384	Water-TOP	5908.27'	47085.25	10812.30
385	Water-TOP	5908.97'	47091.04	10825.28
386	Water-TOP	5909.86'	47098.08	10841.07
387	Water-TOP	5909.99'	47099.10	10843.35
388	Water-TOP	5910.10'	47099.92	10845.18

Point Table

Point #	Raw Description	Elevation	Northing	Easting
389	Water-TOP	5910.31'	47101.54	10848.83
390	FIRE HYDRANT	5919.50'	47113.98	10859.44
400	Water-TOP	5911.13'	47578.42	9933.74
401	FIRE HYDRANT	5919.10'	47611.84	9922.31
402	Water-TOP	5912.08'	47597.38	9933.87
403	Water-TOP	5912.39'	47602.60	9933.90
404	Water-TOP	5912.47'	47606.29	9935.46
405	Water-TOP	5913.27'	47615.41	9939.31
406	Water-TOP	5915.28'	47634.08	9947.28
407	Water-TOP	5918.40'	47661.42	9947.28
408	Water-TOP	5921.27'	47686.33	9947.28
409	Water-TOP	5921.86'	47691.49	9947.28
410	Water-TOP	5922.23'	47694.74	9947.28
411	FIRE HYDRANT	5955.34'	47859.78	10011.63
412	Water-TOP	5923.02'	47701.53	9947.28
413	Water-TOP	5924.82'	47715.83	9947.28
414	Water-TOP	5926.63'	47730.20	9947.28
415	Water-TOP	5931.62'	47766.35	9949.18
416	Water-TOP	5933.53'	47778.94	9949.84
417	Water-TOP	5934.72'	47786.85	9950.25
418	Water-TOP	5939.67'	47820.01	9951.99
419	Water-TOP	5941.04'	47830.06	9952.52
420	Water-TOP	5941.73'	47833.92	9956.81
421	Water-TOP	5941.91'	47834.92	9957.92
422	Water-TOP	5943.27'	47842.53	9966.36
423	Water-TOP	5943.94'	47846.25	9970.50
424	Water-TOP	5944.64'	47850.13	9974.81
425	Water-TOP	5946.26'	47849.86	9990.32
426	Water-TOP	5947.47'	47849.56	10007.40
427	Water-TOP	5947.76'	47849.49	10011.45
428	Water-TOP	5948.88'	47849.09	10034.80
429	Water-TOP	5949.78'	47849.69	10052.08
430	Water-TOP	5952.97'	47851.02	10090.28
431	Water-TOP	5955.18'	47851.88	10114.75
432	Water-TOP	5956.28'	47851.57	10132.49
433	Water-TOP	5957.83'	47850.91	10170.10
434	Water-TOP	5958.42'	47850.66	10184.74
435	Water-TOP	5959.02'	47842.68	10203.08
436	Water-TOP	5959.35'	47835.57	10235.85
437	Water-TOP	5959.46'	47834.19	10242.17
438	Water-TOP	5959.87'	47824.85	10266.53
439	Water-TOP	5960.28'	47815.50	10290.88
440	Water-TOP	5960.45'	47807.89	10310.70
441	Water-TOP	5958.96'	47800.24	10329.93
442	Water-TOP	5958.87'	47798.56	10334.10
443	Water-TOP	5958.50'	47791.76	10350.92
444	Water-TOP	5957.92'	47780.91	10377.79
445	Water-TOP	5957.83'	47779.16	10382.11
446	Water-TOP	5957.64'	47775.56	10391.03
447	Water-TOP	5957.43'	47771.28	10400.64

Point Table

Point #	Raw Description	Elevation	Northing	Easting
448	Water-TOP	5956.84'	47759.29	10427.57
449	Water-TOP	5956.63'	47753.70	10436.44
450	Water-TOP	5956.24'	47743.28	10452.95
451	Water-TOP	5955.45'	47730.01	10473.98
452	FIRE HYDRANT	5967.77'	47826.22	10317.74
453	Water-TOP	5955.01'	47726.55	10479.42
454	Water-TOP	5953.38'	47709.46	10505.48
456	Water-TOP	5952.72'	47699.69	10519.47
457	Water-TOP	5951.71'	47685.87	10538.32
458	Water-TOP	5951.38'	47681.69	10544.03
459	Water-TOP	5949.66'	47661.73	10568.45
460	Water-TOP	5949.17'	47656.38	10575.00
461	Water-TOP	5947.96'	47644.76	10585.28
462	Water-TOP	5946.07'	47626.42	10601.51
463	Water-TOP	5943.55'	47616.54	10609.36
464	Water-TOP	5942.13'	47610.97	10613.79
465	Water-TOP	5941.90'	47606.45	10617.39
466	Water-TOP	5940.90'	47586.89	10632.95
467	Water-TOP	5937.95'	47563.81	10651.31
468	Water-TOP	5936.11'	47558.24	10656.07
469	Water-TOP	5934.89'	47554.52	10659.25
470	Water-TOP	5934.41'	47545.42	10667.01
471	Water-TOP	5933.46'	47527.99	10683.15
472	Water-TOP	5932.52'	47516.48	10693.81
473	Water-TOP	5932.04'	47510.56	10699.29
474	Water-TOP	5930.04'	47492.05	10706.88
475	Water-TOP	5925.74'	47467.49	10706.79
476	Water-TOP	5920.91'	47439.38	10706.69
477	Water-TOP	5919.80'	47420.89	10706.62
478	Water-TOP	5916.39'	47392.05	10706.52
479	Water-TOP	5915.89'	47389.28	10703.88
480	Water-TOP	5913.17'	47374.10	10689.45
481	Water-TOP	5912.97'	47364.11	10689.70

NOTE:
1. CONTRACTOR TO VERIFY WATER LINE & SERVICES & MAINTAIN 5.5' COVER, TYP.

Boundaries Unlimited Inc.
Civil Engineering
Surveying
& Beyond
923 Cooper Avenue
Suite 201
Glenwood Springs, CO 81601
tele: 970.945.5252
fax: 970.384.2833

Engineer or Surveyor Seal

NOT FOR CONSTRUCTION
PRELIM

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

0 1' 2'
Scale: 1" = 1'

811
Know what's below.
Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Water Point Table

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

PROJECT NO.
18034
FILE NAME:
18034-c-water.dwg
Designer:
KJW
Drafter:
BLR
Date:
11/13/19

Sheet
W.13

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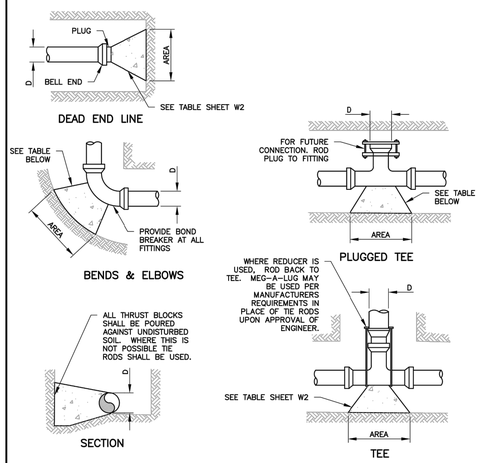


City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Concrete Thrust Block Details	Approved: XX Date: 2/23/16 Modified: 2/23/16 File: WaterThrustBlocks	Drawing #
	Division: Water Standard Details		W01

SIZE	BENDS				TEES, DEAD ENDS, AND CROSS w DEAD END BRANCHES
	90°	45°	22 1/2°	11 1/2°	
3	1.0	0.6	0.3	0	0.7
4	1.8	1.0	0.5	0	1.3
6	4.0	2.2	1.1	0	2.8
8	7.1	3.8	2.0	1.0	5.0
10	11.1	6.0	3.0	1.5	7.8
12	16.0	8.6	4.4	2.2	11.3
14	21.7	11.8	6.0	3.0	15.4
15	25.0	13.5	7.0	3.5	17.6
16	28.4	15.3	8.0	4.0	20.0
18	36.0	19.4	10.0	5.0	25.4
20	44.2	24.0	12.2	6.1	31.4
21	49.0	26.5	13.5	6.8	34.6
22	54.0	29.0	14.8	7.4	38.0
24	64.0	34.5	17.7	8.8	45.0
30	100.0	54.0	27.6	13.8	71.0
36	144.0	78.0	40.0	20.0	102.0

BEARING AREAS (IN SQ. FT.)

NOTE: TEE SIZE IS BRANCH SIZE.

AREAS GIVEN IN TABLE ARE BASED UPON INTERNAL STATIC PRESSURE OF 100 P.S.I. AND SOIL BEARING CAPACITY OF 1,000 lbs. PER SQ. FT.

BEARING AREAS FOR ANY PRESSURE AND SOIL BEARING CAPACITY MAY BE OBTAINED BY MULTIPLYING TABULATED VALUES BY A CORRECTION FACTOR "F"

$$F = \frac{\text{ACTUAL SPECIFIED TEST PRESSURE IN HUNDREDS OF lbs.}}{\text{ACTUAL SOIL BEARING CAPACITY IN THOUSANDS OF lbs.}}$$

SOIL BEARING CAPACITIES SHALL BE DETERMINED BY THE ENGINEER

ALL WATER LINE PLANS SHALL CONTAIN THE FOLLOWING TABLE, WITH THE VALUES FILLED IN BY THE ENGINEER:

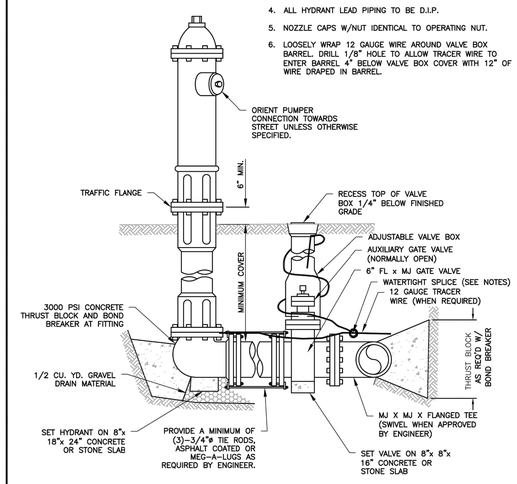
SOIL BEARING CAPACITY – _____LBS/SQ. FT.
TEST PRESSURE – _____ P.S.I.
BEARING AREA MULTIPLIER (F) – _____

CONCRETE THRUST BLOCK DETAILS
N.T.S.

City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Concrete Thrust Block Details	Approved: XX Date: 2/23/16 Modified: 2/23/16 File: WaterThrustBlocksAND	Drawing #
	Division: Water Standard Details		W02

NOTES:

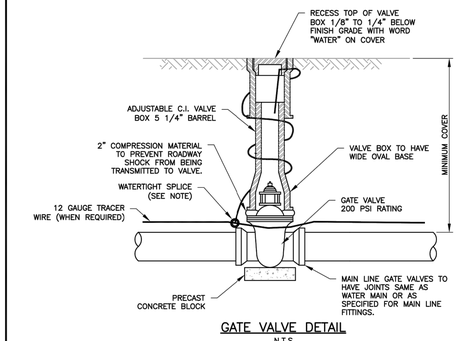
1. ALL JOINTS FROM MAIN TO HYDRANT SHALL BE HARNESSED MECHANICAL JOINTS OR FLANGED JOINTS.
2. HYDRANT, VALVE & FITTINGS TO BE 250 PSI RATED.
3. POLYETHYLENE WRAP (WHEN REQUIRED) SHALL COVER ASSEMBLY FROM HYDRANT BASE TO WATER MAIN.
4. ALL HYDRANT LEAD PIPING TO BE D.I.P.
5. NOZZLE CAPS W/NUT IDENTICAL TO OPERATING NUT.
6. LOOSELY WRAP 12 GAUGE WIRE AROUND VALVE BOX BARREL. DRILL 1/8" HOLE TO ALLOW TRACER WIRE TO ENTER BARREL 4" BELOW VALVE BOX COVER WITH 12" OF WIRE DRAPED IN BARREL.



FIRE HYDRANT ASSEMBLY DETAIL
N.T.S.

City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Fire Hydrant Assembly Detail	Approved: XX Date: 2/23/16 Modified: 2/23/16 File: WaterFireHydrantDetail	Drawing #
	Division: Water Standard Details		W03

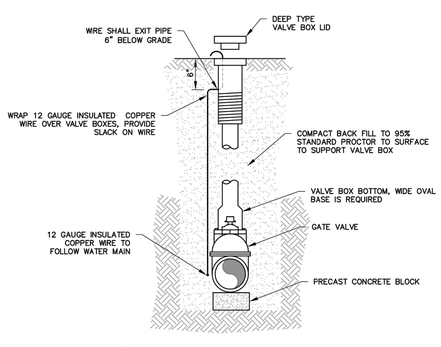
NOTE:
LOOSELY WRAP 12 GAUGE WIRE AROUND VALVE BOX BARREL. DRILL 1/8" HOLE TO ALLOW TRACER WIRE TO ENTER BARREL 4" BELOW VALVE BOX COVER WITH 12" OF WIRE DRAPED IN BARREL.



GATE VALVE DETAIL
N.T.S.

City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Gate Valve Detail	Approved: XX Date: 2/23/16 Modified: 2/23/16 File: WaterGateValveDetail	Drawing #
	Division: Water Standard Details		W04

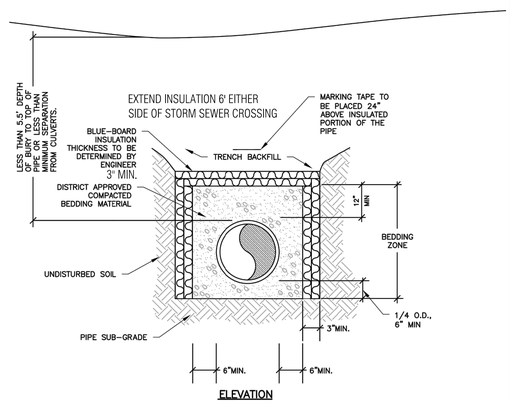
IF THE DISTANCE TO THE TOP OF THE OPERATING NUT TO THE TOP OF THE VALVE COVER IS GREATER THAN 9', AN EXTENSION STEM WILL BE REQUIRED ON THE OPERATING NUT. THE EXTENSION MUST BE SECURED TO THE VALVE OPERATING NUT.



GENERAL NOTE
1. VALVE BOX IS TO BE INSTALLED PLUMB, LEVEL, AND CENTERED ON 2" NUT

GATE VALVE & BOX ASSEMBLY DETAIL
N.T.S.

City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Gate Valve And Box Assembly	Approved: XX Date: 2/23/16 Modified: 2/23/16 File: GateValveAndBoxAssembly	Drawing #
	Division: Water Standard Details		W05



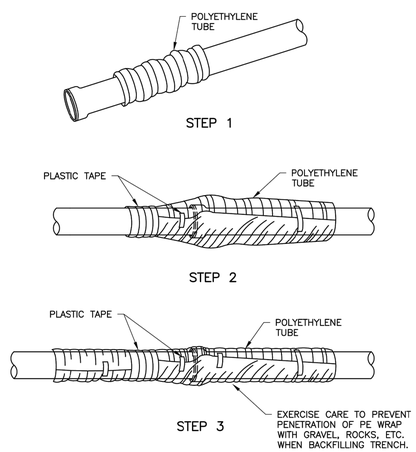
ELEVATION

GENERAL NOTES

1. CONDITION OF LESS THAN MINIMUM BURY DEPTH ALLOWED ONLY WITH WRITTEN APPROVAL FROM THE CITY PRIOR TO CONSTRUCTION. INSULATION SHALL BE INSTALLED ON ALL PIPE THAT DOES NOT MEET MINIMUM BURY REQUIREMENTS.
2. SEE SEWER AND WATER PIPE BEDDING DETAIL FOR BACKFILL MATERIAL AND COMPACTION SPECS.
3. INSULATION SHALL BE INSTALLED ON ALL PIPE THAT IS WITHIN TWO FEET OF ANY DRAINAGE CULVERT. THIS APPLIES TO THE BOTTOM OF THE PIPE IF IT CROSSES OVER TOP OF THE CULVERT.

WATER PIPE INSULATION DETAIL
N.T.S.

City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Water Pipe Insulation Detail	Approved: XX Date: 2/23/16 Modified: 2/23/16 File: WaterPipeInsulationDetail	Drawing #
	Division: Water Standard Details		W06



FIELD INSTALLATION – POLYETHYLENE WRAP

WHERE SPECIFICALLY REQUIRED FOR SOIL APPLICATIONS

STEP 1 – PLACE TUBE OF POLYETHYENE MATERIAL ON PIPE PRIOR TO LOWERING IT INTO PLACE

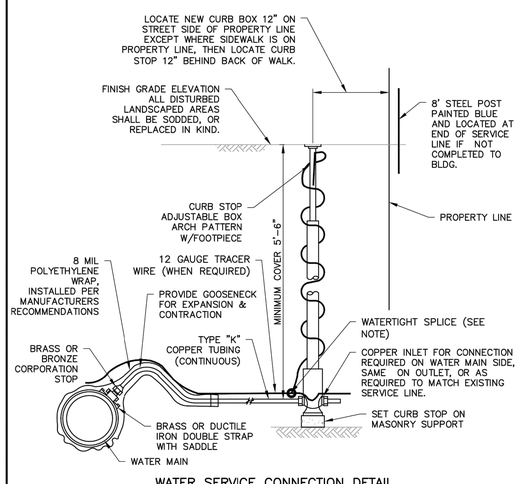
STEP 2 – PULL THE TUBE OVER THE LENGTH OF THE PIPE. TAPE TUBE TO PIPE AT JOINT. FOLD MATERIAL AROUND THE ADJACENT SPIGOT END AND WRAP WITH TAPE TO HOLD THE PLASTIC TUBE IN PLACE.

STEP 3 – OVERLAP FIRST TUBE WITH ADJACENT TUBE AND SECURE WITH PLASTIC ADHESIVE TAPE. THE POLYETHYLENE TUBE MATERIAL COVERING THE PIPE SHALL BE LOOSE. EXCESS MATERIAL SHALL BE NEATLY DRAWN UP AROUND THE PIPE BARREL, FOLDED ON TOP OF PIPE AND TAPED IN PLACE.

POLYWRAP DETAIL
N.T.S.

City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Polywrap Detail	Approved: XX Date: 2/23/16 Modified: 2/23/16 File: WaterPolywrapDetail	Drawing #
	Division: Water Standard Details		W07

NOTE:
LOOSELY WRAP 12 GAUGE WIRE AROUND VALVE BOX BARREL. DRILL 1/8" HOLE TO ALLOW TRACER WIRE TO ENTER BARREL 4" BELOW VALVE BOX COVER WITH 12" OF WIRE DRAPED IN BARREL.



WATER SERVICE CONNECTION DETAIL
N.T.S.

City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Water Service Connection Detail	Approved: XX Date: 2/23/16 Modified: 2/23/16 File: WaterServiceDetail	Drawing #
	Division: Water Standard Details		W08

Boundaries Unlimited Inc.
Civil Engineering
Surveying
& Beyond
923 Cooper Avenue
Suite 201
Glenwood Springs, CO 81601
tele: 970.945.5252
fax: 970.384.2833

Engineer or Surveyor Seal

NOT FOR CONSTRUCTION
PRELIM

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

0 1' 2'
Scale: 1" = 1'

811
Know what's below.
Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Water Details

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

PROJECT NO. 18034
FILE NAME: 18034-C-water.dwg
Designer: DJW
Drafter: MJI
Date: 11/13/19

Sheet
W.14

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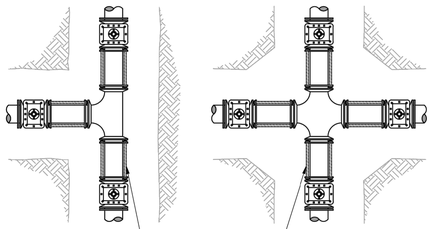
NOTE: USE OF FOSTER ADAPTERS OR SWIVEL TEES SHALL BE ALLOWED, IF APPROVED BY THE CITY.



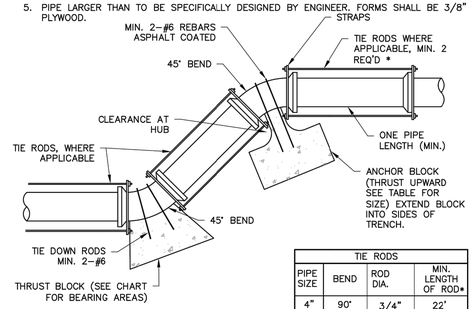
LINE VALVES AT TEES AND CROSSES

N.T.S.

City of Glenwood Springs, 101 West 8th Street, Glenwood Springs, CO 81601, 970.384.6435, www.ci.glenwood-springs.co.us | Line Valves at Tees and Crosses | Division: Water Standard Details | Approved: XX | Date: 2/23/16 | Modified: 2/23/16 | File: Water\Valves\LineValves | Drawing # W10

NOTES

1. USE CONCRETE THRUST BLOCKS & ANCHOR BLOCK FOR PLASTIC PIPE, (NO TIERODS).
2. FOR CAST IRON PIPE USE EITHER TIE RODS OR CONCRETE BLOCKS.
3. ANCHOR BLOCK WEIGHTS AND TIE ROD SIZE & LENGTH BASED ON 200 PSI PRESSURE & 4–1/2 FT. OF COVER. WHERE WORKING PRESSURE EXCEEDS ABOVE, ANCHORS TO BE SPECIAL CONSTRUCTION.
4. MEGA–LUG MAY BE USED PER MANUFACTURERS REQUIREMENTS IN PLACE OF TIE RODS UPON APPROVAL OF ENGINEER.
5. PIPE LARGER THAN TO BE SPECIFICALLY DESIGNED BY ENGINEER. FORMS SHALL BE 3/8" PLYWOOD.



MIN WEIGHT OF ANCHOR BLOCK			
PIPE SIZE	90° BEND	45° BEND	22 1/2° BEND
2"	150#	150#	150#
3"	900#	450#	150#
4"	1600#	900#	450#
6"	6050#	2400#	700#
8"	12,300#	5750#	2000#
10"	22,500#	12,100#	6200#
12"	32,100#	17,400#	8900#

NOTE:

WEIGHT OF CONCRETE EQUALS 150#/CU. FT.

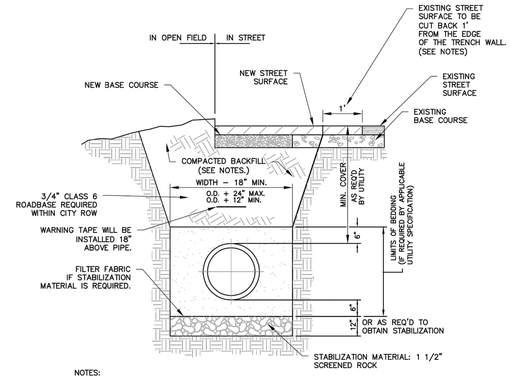
TIE RODS			
PIPE SIZE	BEND	ROD DIA.	MIN. LENGTH OF ROD*
4"	90°	3/4"	22'
	45°	3/4"	7'
	22 1/2°	3/4"	2'
6"	90°	3/4"	35'
	45°	3/4"	10'
	22 1/2°	3/4"	3'
8"	90°	1"	48'
	45°	3/4"	14'
	22 1/2°	3/4"	4'
12"	90°	1 1/4"	78'
	45°	3/4"	22'
	22 1/2°	3/4"	6'

* ACTUAL LENGTH OF ROD TO BE SUCH THAT STRAP CAN BE PLACED BEYOND FIRST COLLAR OR HUB AT OR BEYOND THE MINIMUM LENGTH SHOWN.

VERTICAL BEND ANCHOR DETAIL

N.T.S.

City of Glenwood Springs, 101 West 8th Street, Glenwood Springs, CO 81601, 970.384.6435, www.ci.glenwood-springs.co.us | Vertical Bend Anchor Detail | Division: Water Standard Details | Approved: XX | Date: 2/23/16 | Modified: 2/23/16 | File: Water\Vertical\BendAnchor | Drawing # W11



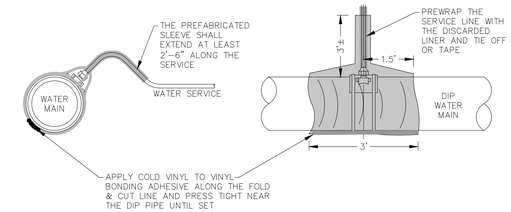
NOTES:

1. RIGHT OF WAY & EASEMENT AREAS SHALL BE GRADED (CUT & FILL) TO SUBGRADE (+/–0.5) AT UTILITY LOCATIONS INCLUDING SERVICES, PRIOR TO UTILITY INSTALLATION.
2. BACKFILL TO BE COMPACTED TO 95% AND WITHIN TWO (2)% OF OPTIMUM MOISTURE CONTENT AS DETERMINED BY A.S.T.M. D–698 DENSITY IN ALL AREAS UNLESS OTHERWISE NOTED.
3. TRENCH EXCAVATION SHALL COMPLY WITH ALL OSHA STANDARDS.
4. FILTER FABRIC IS REQUIRED IF STABILIZATION MATERIAL IS USED. THE FABRIC SHALL BE INSTALLED AS SHOWN IN THE DETAIL.
5. A ONE FOOT CUT BACK IS NOT REQUIRED IF FLOW FILL IS USED FOR BACKFILL.

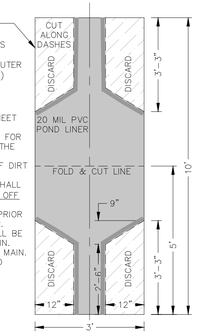
TRENCH EXCAVATION & BACKFILL DETAIL

N.T.S.

City of Glenwood Springs, 101 West 8th Street, Glenwood Springs, CO 81601, 970.384.6435, www.ci.glenwood-springs.co.us | Trench Excavation & Backfill Detail | Division: Water Standard Details | Approved: XX | Date: 2/23/16 | Modified: 2/23/16 | File: Trench Excavation & Backfill Detail | Drawing # W13



TO PREFABRICATE THE SLEEVE
1) FOLD
2) CUT & SAVE 'DISCARD' PIECES
3) APPLY COLD VINYL TO VINYL BONDING ADHESIVE TO THE OUTER 1" OF SLEEVE (SHADED LINES)
4) CUT ALONG THE FOLD

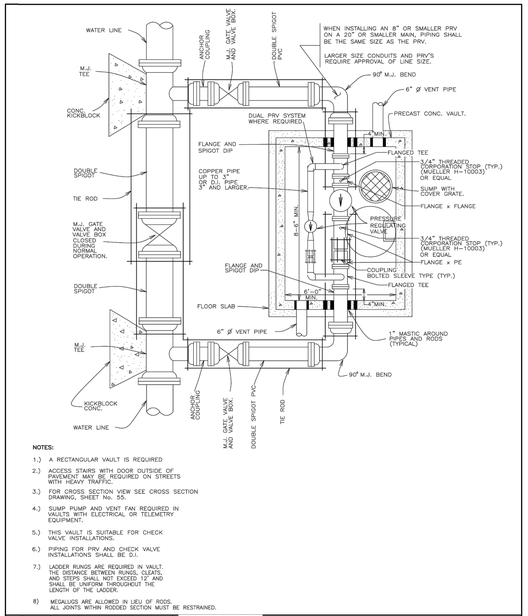


NOTE:

1. THE SLEEVE SHALL CONSIST OF A CONTINUOUS 3'x10' SHEET OF 20 MIL PVC POND LINER PREFABRICATED AS SHOWN.
2. ONCE FABRICATED, THE SLEEVE SHALL BE LEFT TO CURE FOR AT LEAST 24 HOURS BEFORE BEING INSTALLED AROUND THE SERVICE LINE.
3. THE MAIN AND SERVICE LINES SHALL BE WIPED CLEAN OF DIRT AND DEBRIS PRIOR TO SLEEVING.
4. THE SERVICE LINE END WHICH CONNECTS TO THE MAIN SHALL BE PREWRAPPED WITH 4' OF DISCARDED LINER AND TIED OFF WITH TWINE OR TAPE.
5. THE SLEEVE SHALL BE PULLED OVER THE SERVICE LINE PRIOR TO MAKING THE CONNECTION TO THE CORPORATION STOP.
6. THE CONNECTION SHALL BE MADE AND THE SLEEVE SHALL BE PULLED BACK DOWN AND WRAPPED AROUND THE DIP MAIN. ADHERE THE LINER OVERLAP ON THE BACK SIDE OF THE MAIN.
7. ALL SEAM CLOSURES SHALL BE VISUALLY INSPECTED AND CORRECTED IF NECESSARY PRIOR TO BACKFILLING.

WATER SERVICE SLEEVING DETAIL

(N.T.S.)

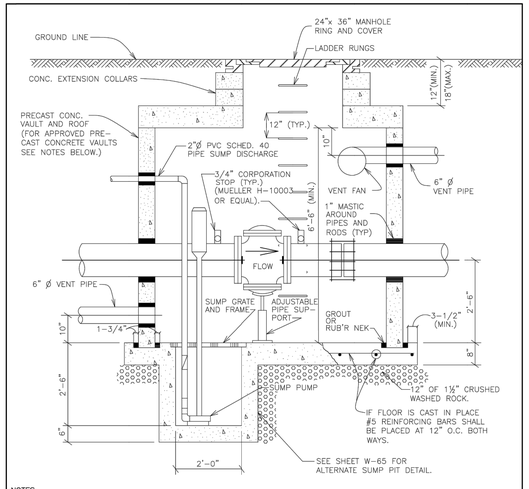


NOTES:

1.) A RECTANGULAR VAULT IS REQUIRED
2.) ACCESS STAIRS WITH DOOR OUTISIDE OF PAVEMENT MAY BE REQUIRED ON STREETS WITH HEAVY TRAFFIC.
3.) FOR CROSS SECTION VIEW SEE CROSS SECTION DRAWING, SHEET No. 55.
4.) SUMP PUMP AND VENT FAN REQUIRED IN VAULTS WITH ELECTRICAL OR TELEMETRY EQUIPMENT.
5.) THIS VAULT IS SUITABLE FOR CHECK VALVE INSTALLATIONS.
6.) PIPING FOR PRV AND CHECK VALVE INSTALLATIONS SHALL BE D.I.
7.) LADDER RUNGS ARE REQUIRED IN VAULT. THE DISTANCE BETWEEN RUNGS, CLEATS, AND STEPS SHALL NOT EXCEED 12" AND SHALL BE UNIFORM THROUGHOUT THE LENGTH OF THE LADDER.
8) MEGALUGS ARE ALLOWED IN LIEU OF RODS. ALL JOINTS WITHIN RODDED SECTION MUST BE RESTRAINED.

PRESSURE REGULATING VALVE RECTANGULAR VAULT TYPICAL PLAN

Approved: WMS | Date: 11/6/02 | Scale: NTS | dwn: | dwg #: W-54 | No. Dwn. Date Revision | ENGINEERING DIVISION OF PUBLIC WORKS DEPT.



NOTES:

1.) APPROVED PRECAST CONCRETE VAULTS: AMCOR CONC. INC.– 10' X 10' X 7' 7080M, 7080–12. ADAMS CITY MFG.–11' X 12', 6' X 8'–6", 7' X 12'–6"
2.) CITY ENGINEERS APPROVAL IS REQUIRED FOR SUMP PUMP DISCHARGE TO STORM SEWERS.
3.) SEE SHEET W–54 FOR PLAN VIEW AND ADDITIONAL NOTES.
4.) BYPASS NOT SHOWN THIS VIEW

PRESSURE REGULATING VALVE RECTANGULAR VAULT CROSS SECTION

Approved: WMS | Date: 11/6/02 | Scale: NTS | dwn: | dwg #: W-55 | No. Dwn. Date Revision | ENGINEERING DIVISION OF PUBLIC WORKS DEPT.

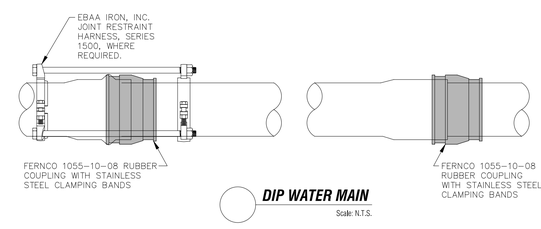
PRV VAULT PIPING AND APPURTENANCES NOTES

DESIGNATION	DESCRIPTION AND/OR SPECIFICATION
VAULT	H–20 BRIDGE LOADING
VENT PIPING	6" PVC, SCHEDULE 40, FITTINGS AND SCREEN
GATE VALVES	MJ, WHEEL OPERATOR, AWWA C–509, RESILIENT SEAT, OPEN LEFT.
PRV	PRESSURE REGULATING VALVE CLA–VAL 92–G02, CL. 150, 30 TO 300 PSI UP, 20 TO 200 PSI DOWN OR SINGER BRAND MODEL 106–S. PRV TO BE SUPPLIED WITH POSITION INDICATOR ASSEMBLY, OPEN AND CLOSE SPEED CONTROLS, SUSTAINER AND PRESET PILOT VALVES IN ACCORDANCE WITH CITY SPECIFIED PRESSURES.
SUMP GRATE AND FRAME	NEENAH R–4380 OR EQUAL.
GAUGE	FLUID GAUGE 0–150 PSI, ASHCROFT OR MARSHALL TOWN OR EQUAL.
MANHOLE FRAME AND COVER	NEENAH R–1741–D OR EQUAL.
SUMP PUMP	1/3 HP SUBMERSIBLE SUMP PUMP, GORMAN–RUPP S–1 1/2 A3A OR EQUAL.
VENT FAN	240 CFM VENT FAN.
TELEMETRY	SEE STANDARD SPECIFICATIONS SECTION 30.2.10
ELECTRICAL	WEATHER PROOF: WEATHER HEAD: BREAKER, JUNCTION AND SWITCH BOXES, SWITCHES, DUPLEX RECEPTACLE WITH COVER. EXPLOSION PROOF: LIGHT FIXTURES AND 75 WATT BULBS. TUBING, CONDUIT, GROUND ROD, WIRE, METER ETC.
MISCELLANEOUS	TIE RODS, COPPER TUBING, TELEPHONE CONDUIT, ANCHOR BLOCKS, TAPPING SADDLES, MASTIC, SEALS COLD APPLIED TAPE, ETC.

SEE DRAWINGS: W–54 AND W–55 FOR PLAN VIEW, CROSS SECTION AND ADDITIONAL NOTES.

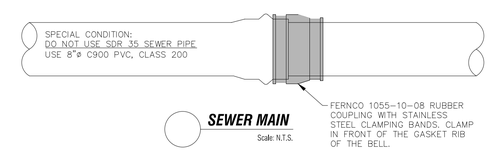
PRESSURE REGULATING VALVE SYSTEM PIPING & APPURTENANCES

Approved: WMS | Date: 11/6/02 | Scale: NTS | dwn: | dwg #: W-56 | No. Dwn. Date Revision | ENGINEERING DIVISION OF PUBLIC WORKS DEPT.



DIP WATER MAIN

Scale: N.T.S.



SEWER MAIN

Scale: N.T.S.

NOTE:
1. ALL WATER AND SEWER MAIN JOINTS WITHIN 10' OF EACH OTHER SHALL BE PROTECTED FROM INFILTRATION/EXFILTRATION WITH A RUBBER COUPLING.

JOINT PROTECTION DETAIL WHERE NORMAL CONDITIONS FOR WATER & SEWER SEPARATION CANNOT BE FEASIBLY MET

(N.T.S.)

Boundaries Unlimited Inc.
Civil Engineering Surveying & Beyond
923 Cooper Avenue
Suite 201
Glenwood Springs, CO 81601
tele: 970.945.5252
fax: 970.384.2833

Engineer or Surveyor Seal

NOT FOR CONSTRUCTION PRELIM

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

Scale: 1" = 1'

811 Know what's below. Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Water Details

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
3.			
4.			
5.			
6.			
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9.			

PROJECT NO. 18034
FILE NAME: 18034-c-water.dwg
Designer: DJW
Drafter: MJI
Date: 11/13/19

Sheet W.15

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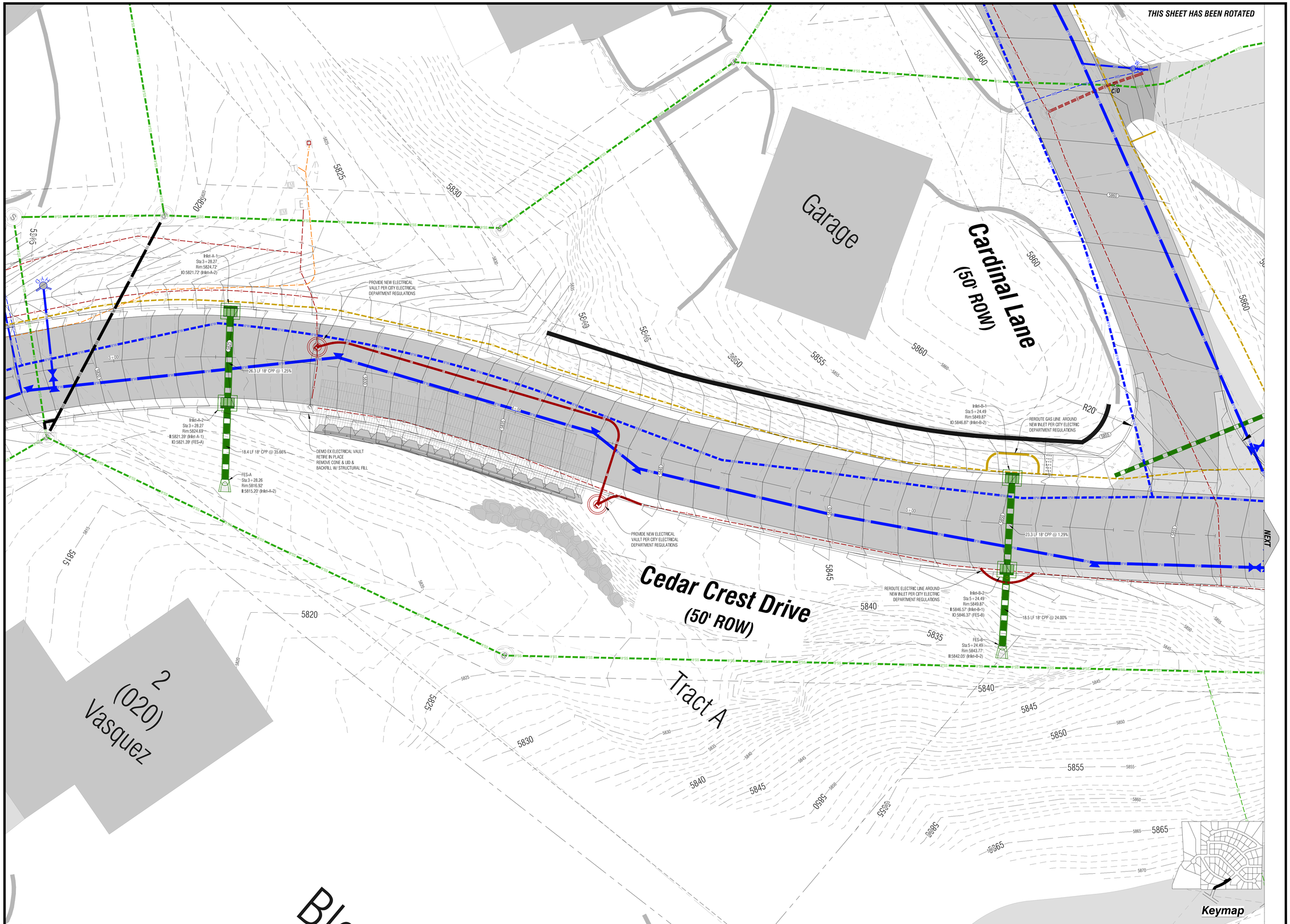

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& Beyond
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Glenwood Springs, CO 81601
tele: 970.945.5252
fax: 970.384.2833

Engineer or Surveyor Seal

NOT FOR CONSTRUCTION
PRELIM

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

0 10' 20'
Scale: 1" = 10'

811
Know what's below.
Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Storm Sewer Plans

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
3.			
4.			
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9.			

PROJECT NO.
18034
FILE NAME:
18034-c-storm.dwg
Designer:
RJW
Drafter:
BUI
Date:
11/13/19

Sheet
SD-1

N:\PROJECTS\2018\18034-GWS-Cedar Crest\dwg\18034-C-Storm.dwg 11/13/2019 11:58 AM

THIS SHEET HAS BEEN ROTATED

11
(033)
Allison

1
(012)
Plantz

Cedar Crest D
(50' ROW)

Ptarmigan Lane
(50' ROW)

Inlet-C-1
Sta:6 + 13.58
Rim:5860.53'
IO:5857.53' (Inlet-C-2)

Inlet-C-2
Sta:6 + 13.58
Rim:5860.53'
II:5857.29' (Inlet-C-1)
IO:5857.09' (FES-C)

FES-C
Sta:6 + 13.58
Rim:5857.80'
II:5856.08' (Inlet-C-2)

24.4 LF 18" CPP @ 1.00%

16.9 LF 18" CPP @ 6.00%

REROUTE ELECTRIC LINE AROUND NEW INLET PER CITY ELECTRIC DEPARTMENT REGULATIONS

Inlet-D-1
Sta:7 + 87.72
Rim:5882.99'
IO:5879.99' (Inlet-D-2)

Inlet-D-2
Sta:7 + 87.72
Rim:5882.99'
II:5879.78' (Inlet-D-1)
IO:5879.58' (FES-D)

FES-D
Sta:7 + 87.72
Rim:5879.30'
II:5877.58' (Inlet-D-2)

21.3 LF 18" CPP @ 1.00%

20.1 LF 18" CPP @ 10.00%

REROUTE ELECTRIC LINE AROUND NEW INLET PER CITY ELECTRIC DEPARTMENT REGULATIONS

20'

NEXT

Keymap

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Boundaries Unlimited Inc.
Civil Engineering
Surveying
& Beyond
923 Cooper Avenue
Suite 201
Glenwood Springs, CO 81601
tele: 970.945.5252
fax: 970.384.2833

Engineer or Surveyor Seal

NOT FOR CONSTRUCTION
PRELIM

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

Scale: 1" = 10'

Know what's below.
Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Storm Sewer Plans

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
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3.			
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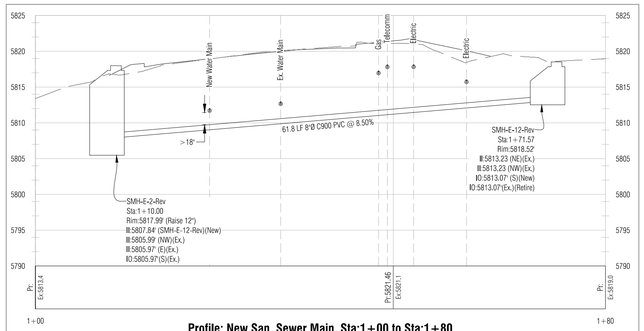
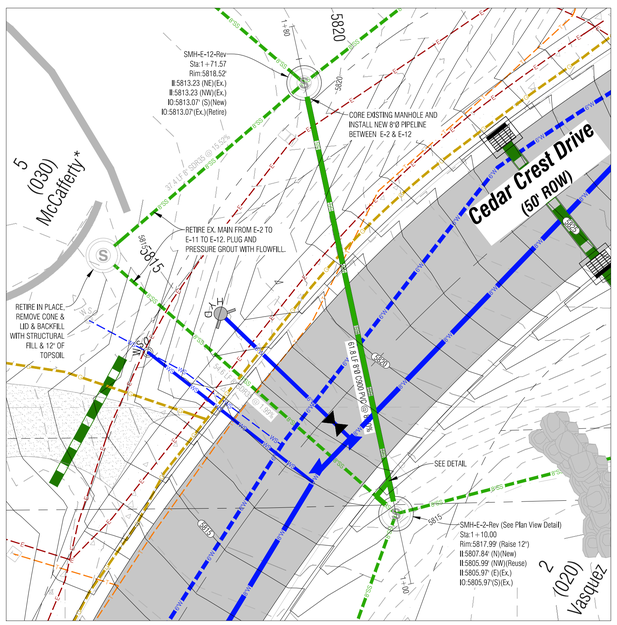
PROJECT NO.
18034
FILE NAME:
18034-c-storm.dwg
Designer:
DJW
Drafter:
BJB
Date:
11/13/19

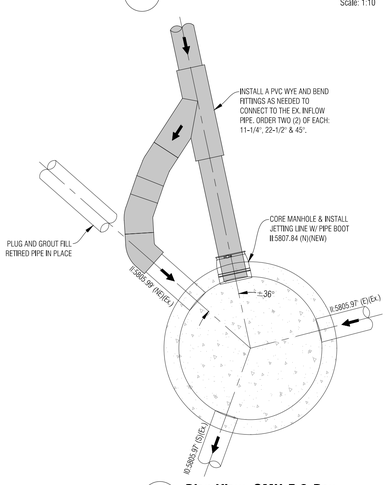
Sheet
SD-2



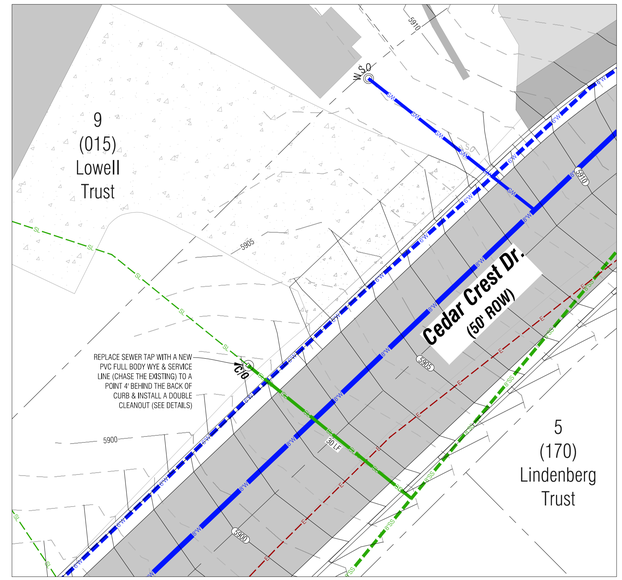
Profile: New San. Sewer Main, Sta:1+00 to Sta:1+80
Scale: Vert.=10', Horiz.=10'



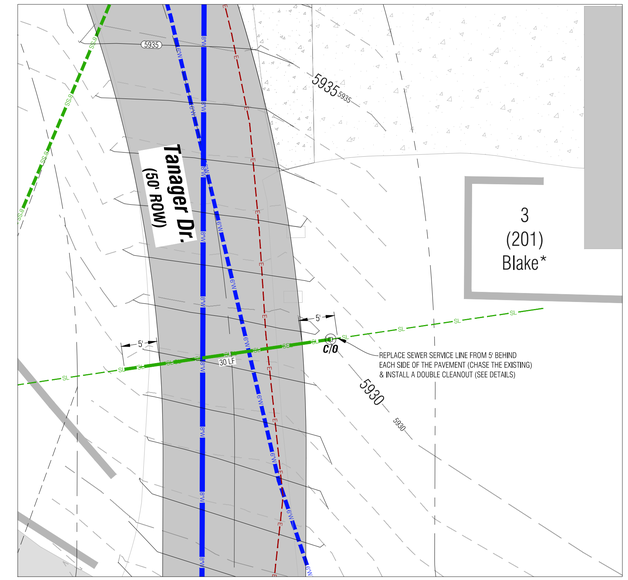
New Sewer Main - Cedar Crest Dr.
Scale: 1:10



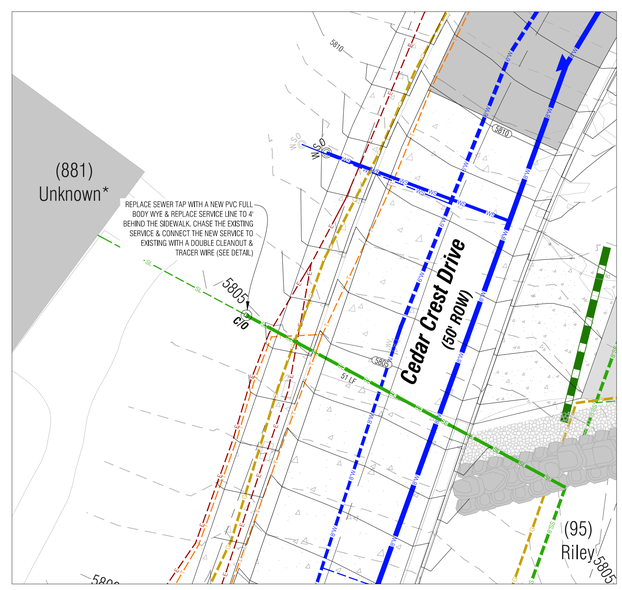
Plan View: SMH-E-2-Rev
Scale: N.T.S.



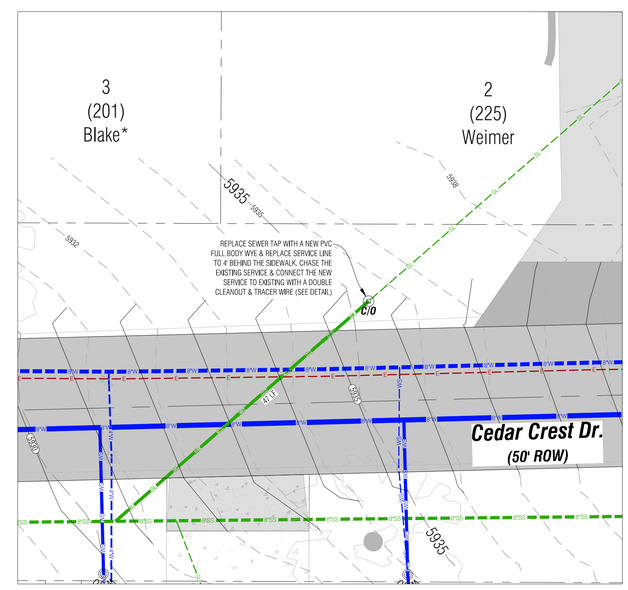
San. Sewer Service - 015 Cedar Crest Dr.
Scale: 1:10



San. Sewer Service - 201 Cedar Crest Dr. (on Tanager)
Scale: 1:10



San. Sewer Service - 881 Donegan Rd.
Scale: 1:10



San. Sewer Service - 225 Cedar Crest Dr.
Scale: 1:10

Keymap

Boundaries Unlimited Inc.
Civil Engineering
Surveying
& Beyond
923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE)
Required Project: ***See Notes***
If "Yes", SUE Certification by:
Firm: ***N/A***
Job #: ***Precision Hyrovac***
Date: ***Nov. 2018***

Engineer or Surveyor Seal

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH
0 10' 20'
Scale: 1" = 10'

811
Know what's **below.**
Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

San. Sewer Improvements - on Cedar Crest
95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
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PROJECT NO. ***18034***
Designer: ***DJW***
Drafter: ***BUI***
Date: ***11/13/19***

Sheet
SS.1

File Name: ***18034-c-sswr.dwg***

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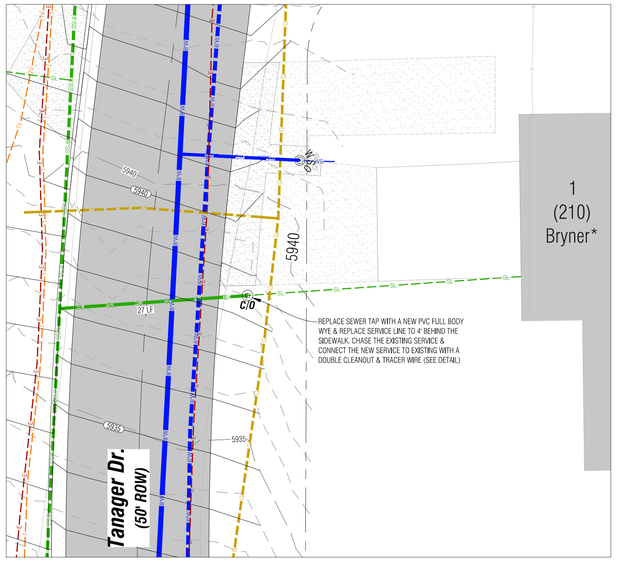
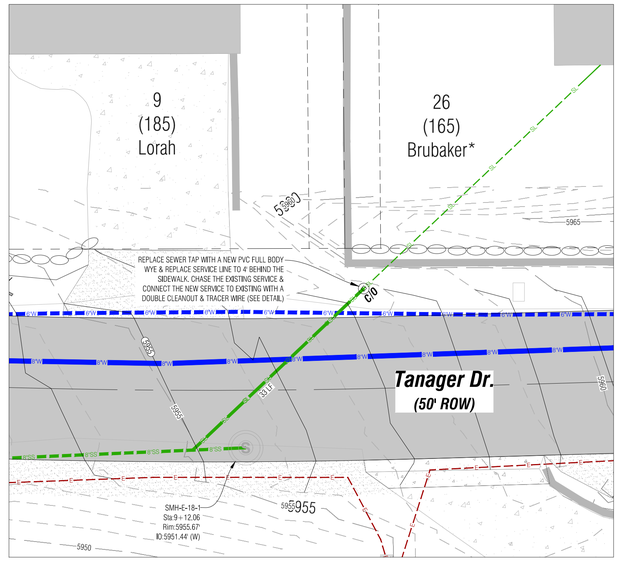
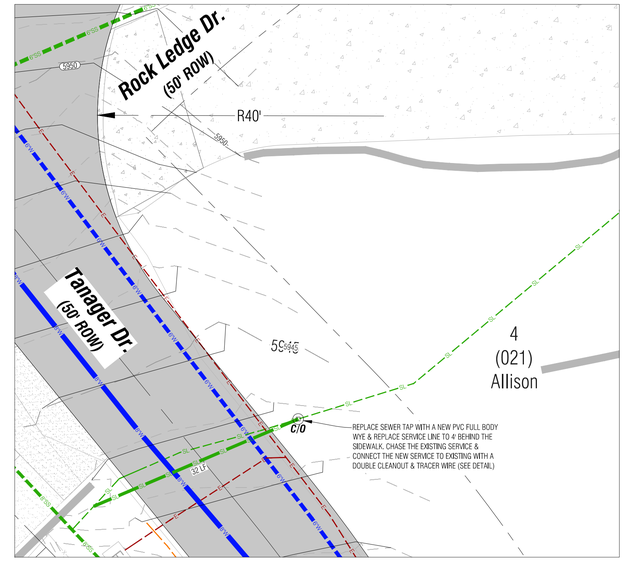


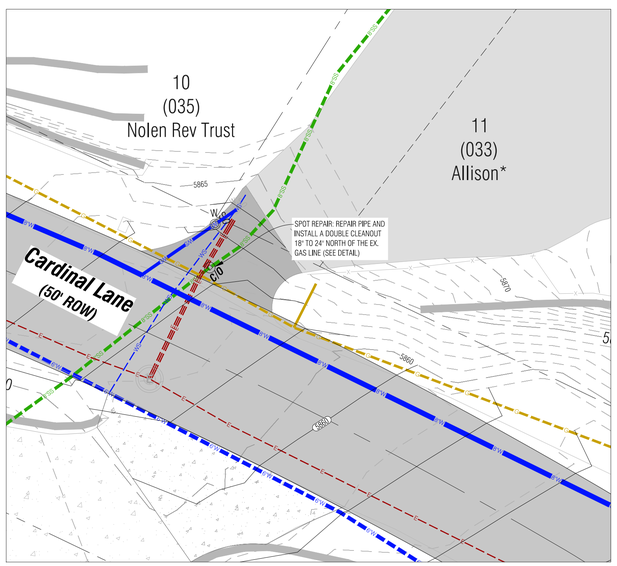
San. Sewer Service - 201 Tanager Dr.
Scale: 1:10



San. Sewer Service - 165 Tanager Dr.
Scale: 1:10



San. Sewer Main Repair - 021 Tanager Dr.
Scale: 1:10



San. Sewer Service - 033 Cardinal Ln.
Scale: 1:10

Keymap

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& Beyond
923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE)
Required Project: ***See Notes***
If "Yes", SUE Certification by:
Firm: ***N/A***
Job #: ***Precision Hyrovac***
Date: ***Nov. 2018***

Engineer or Surveyor Seal

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH
0 10' 20'
Scale: 1" = 10'

811
Know what's **below.**
Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

San. Sewer Improvements - on Cardinal & Tanager
95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
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PROJECT NO. ***18034***
Designer: ***DJW***
Drafter: ***BUI***
Date: ***11/13/19***

Sheet
SS.2

File Name: ***18034-c-sswr.dwg***

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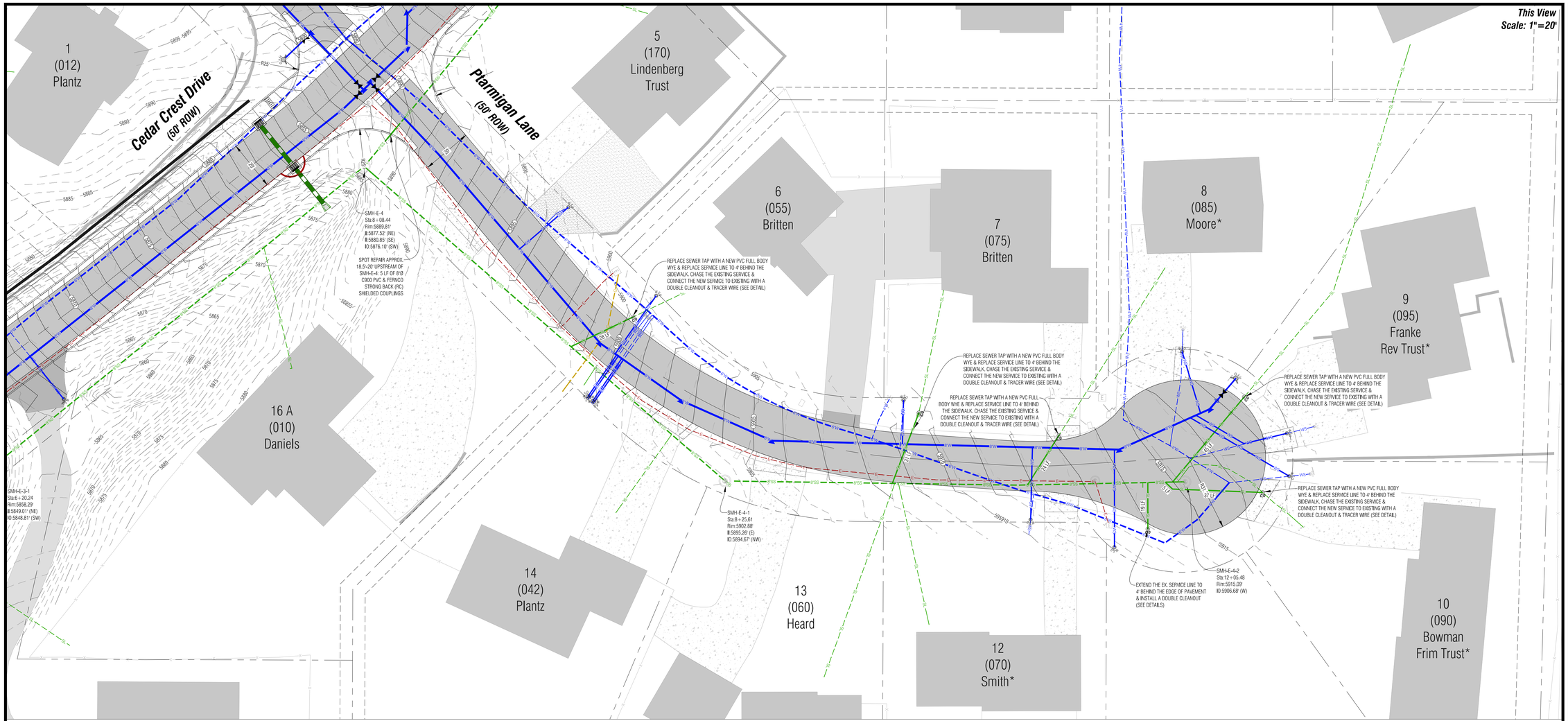

San. Sewer Main & Services - 055, 075, 085, 090 (2) & 095

Scale: 1:20

Keymap

Boundaries Unlimited Inc.
Civil Engineering
Surveying
& Beyond

923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE)
Required Project: ***See Notes***

If "Yes", SUE Certification by:
Firm: ***N/A***
Job # ***Precision Hyrovac***
Date: ***Nov. 2018***

Engineer or Surveyor Seal

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

0 20' 40'
Scale: 1" = 20'

811
Know what's **below.**
Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

San. Sewer Improvements - on Ptarmigan
95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
3.			
4.			
5.			
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7.			
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PROJECT NO.
18034
Designer:
DJW
Drafter:
BUI
Date:
11/13/19

Sheet
SS.3

File Name: ***18034-c-sswr.dwg***

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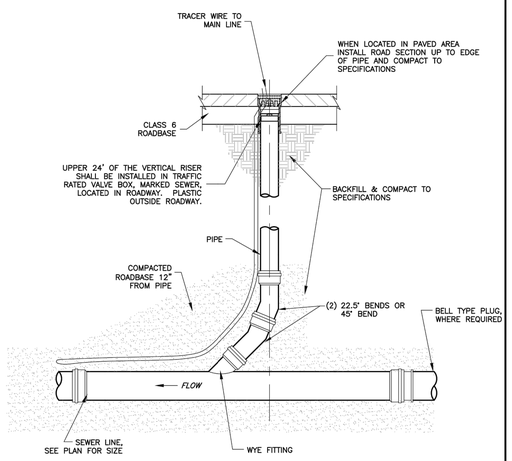


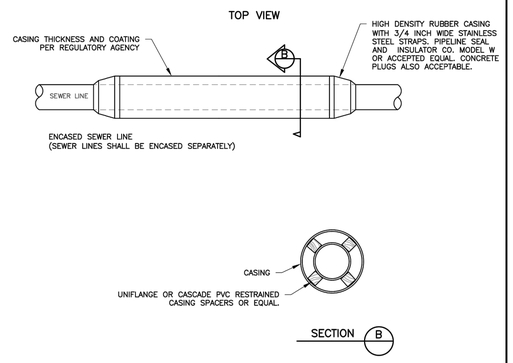
NOTES:

1. MUST BE TRAFFIC RATED IF INSTALLED IN TRAFFIC AREAS.

SEWER CLEAN–OUT

N.T.S.

City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Sewer Clean-Out	Approved: XX Date: 3/22/16 Modified: 3/22/16	Drawing #
Division:	Sewer Standard Details	File: SewerCleanOutDetail	S05



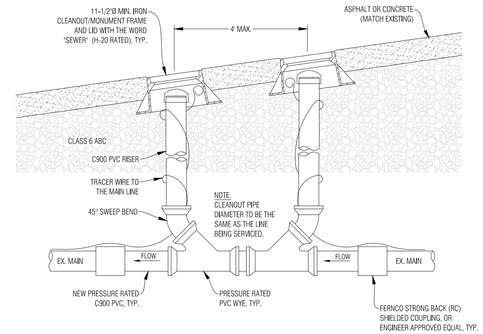
GENERAL NOTES:

1. CASING DIAMETER AND LENGTH SHALL BE DETERMINED AND ADEQUATELY SIZED BY ENGINEER.

CASING DETAIL

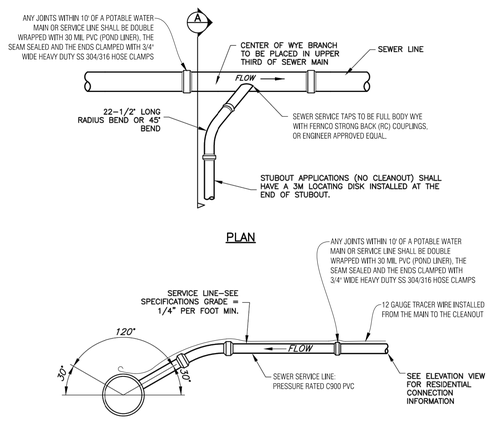
NTS

City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Casing Detail	Approved: XX Date: 3/22/16 Modified: 3/22/16	Drawing #
Division:	Sewer Standard Details	File: CasingDetail	S04



Double Sewer Main Cleanout

Scale: N.T.S.



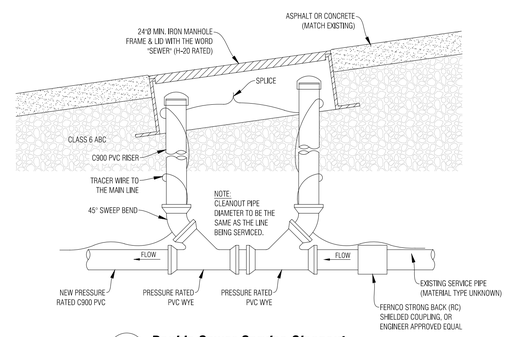
NOTES:

1. MINIMUM SEPARATION BETWEEN TAPS SHALL BE 5' PER STANDARDS.
2. BACKFILL UNDER WYE TO BE ROADBASE AGGREGATE BASE COURSE. 95% COMPACTION DENSITY PER ASTM D–698.

SEWER SERVICE CONNECTION

N.T.S.

City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Sewer Service Connection Detail	Approved: XX Date: 3/22/16 Modified: 3/22/16	Drawing #
Division:	Sewer Standard Details	File: SewerServiceConnect	S06



Double Sewer Service Cleanout

Scale: N.T.S.

Boundaries Unlimited Inc.
Civil Engineering
Surveying
& Beyond
923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE)
Required Project: **See Notes**
If "Yes", SUE Certification by:
Firm: **N/A**
Job #: **Precision Hyrovac**
Date: **Nov. 2018**

Engineer or Surveyor Seal

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

0 10' 20'
Scale: 1" = 10'

811
Know what's **below.**
Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Sanitary Sewer Details

95% Progress Set - Not For Construction

No.	Date	Revision	By
1			
2			
3			
4			
5			
6			
7			
8			
9			

PROJECT NO. **18034**
Designer: **DJW**
Drafter: **BUI**
Date: **11/13/19**

Sheet **SS.4**

File Name: **18034-c-sswr.dwg**

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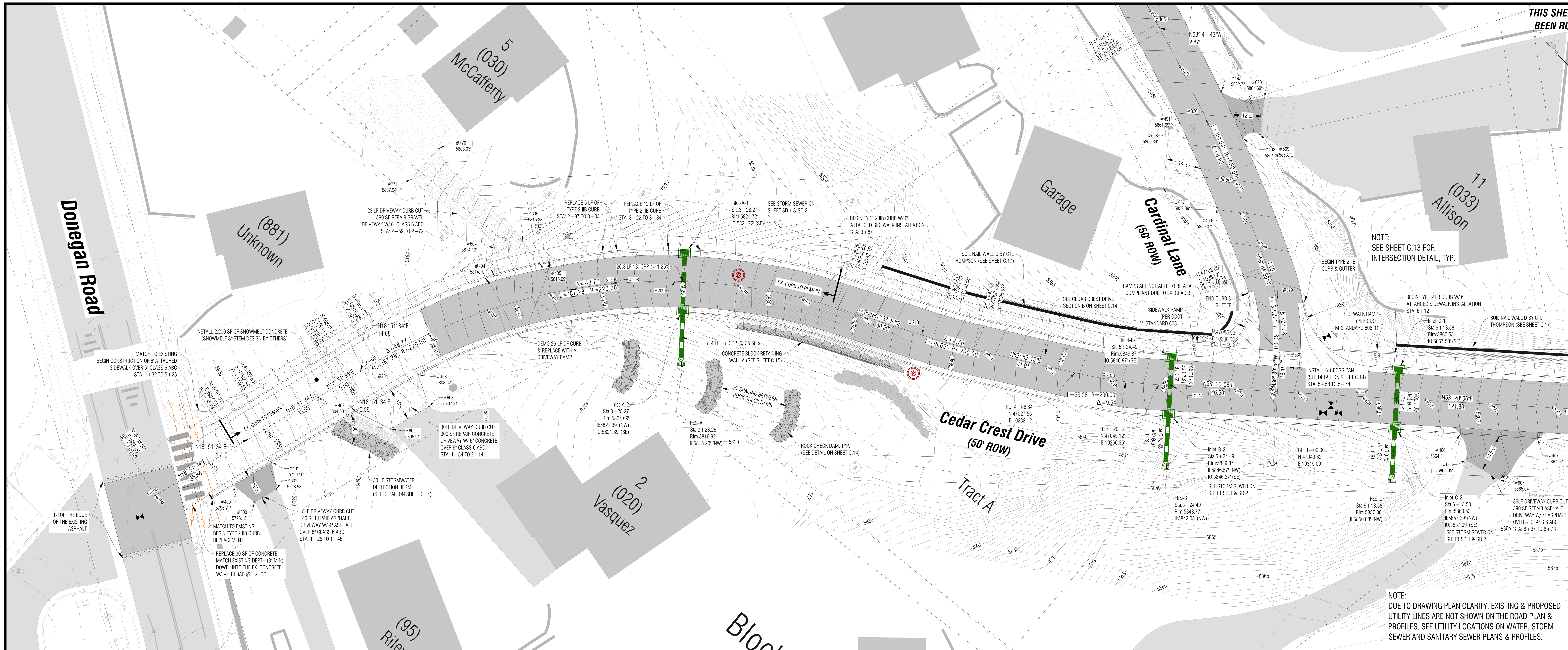

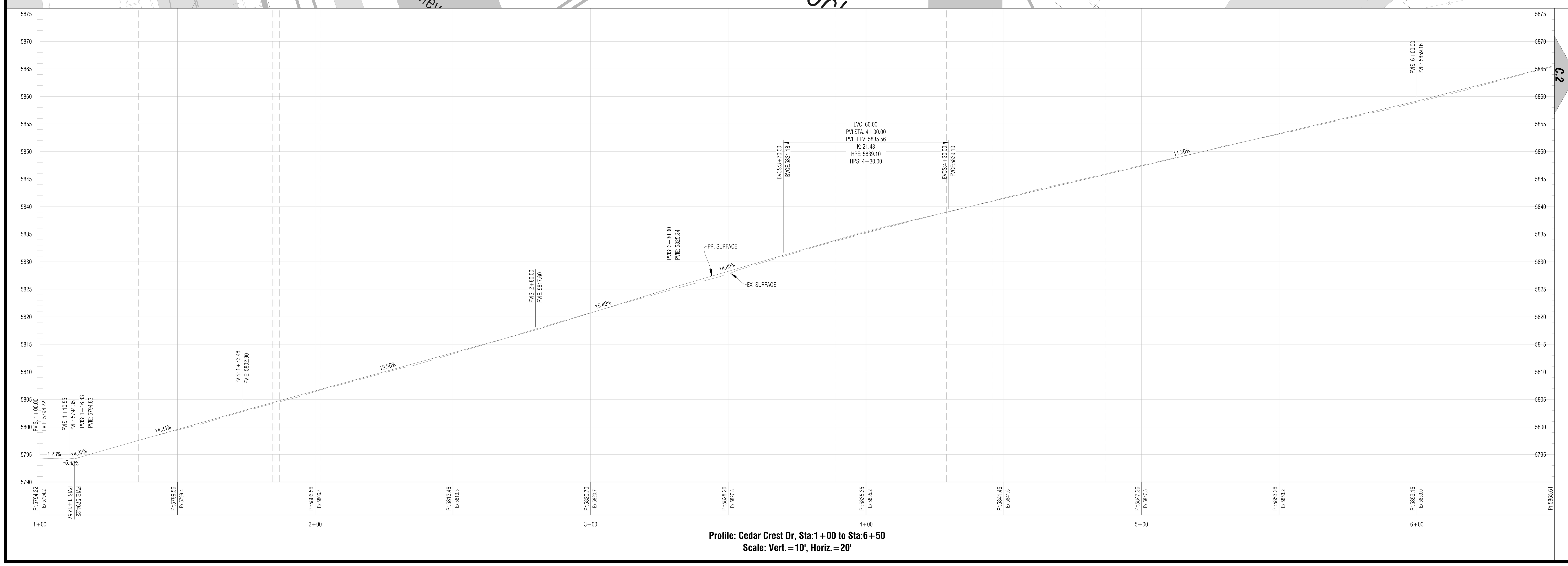

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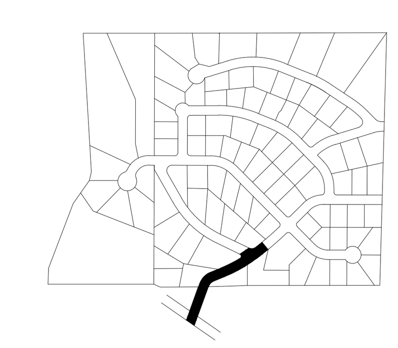
Scale: Vert.=10', Horiz.=20'



Keymap

Boundaries Unlimited Inc.
Civil Engineering Surveying & Beyond
923 Cooper Avenue
Suite 201
Glenwood Springs, CO 81601
tele: 970.945.5252
fax: 970.384.2833

Engineer or Surveyor Seal

NOT FOR Bid Set CONSTRUCTION

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

----

811 Know what's below. Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Cedar Crest Drive Road Plan & Profile - Sta. 0+80 To 6+50

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
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PROJECT NO. 18034
FILE NAME: 18034-c-civil3d.dwg
Designer: DJW
Drafter: BUI
Date: 11/13/19

Sheet
C.1

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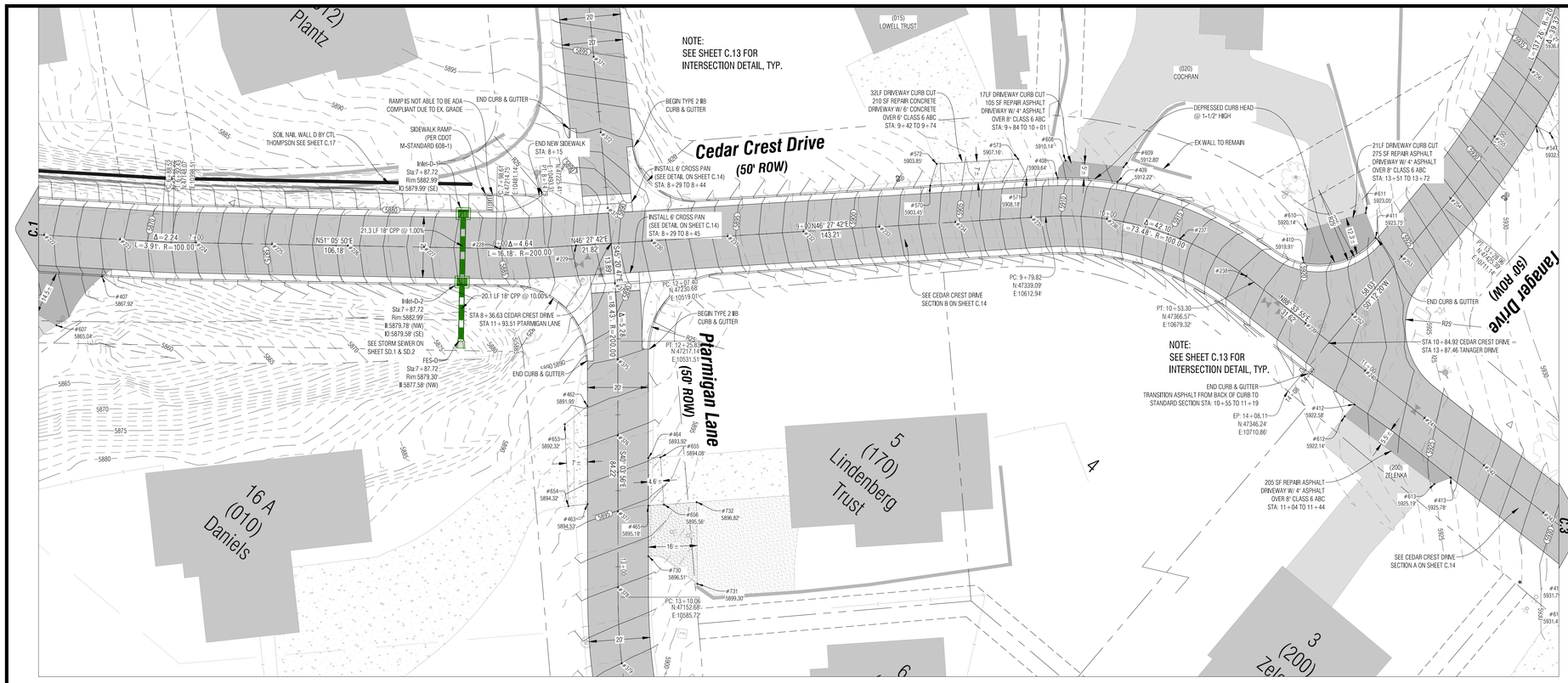

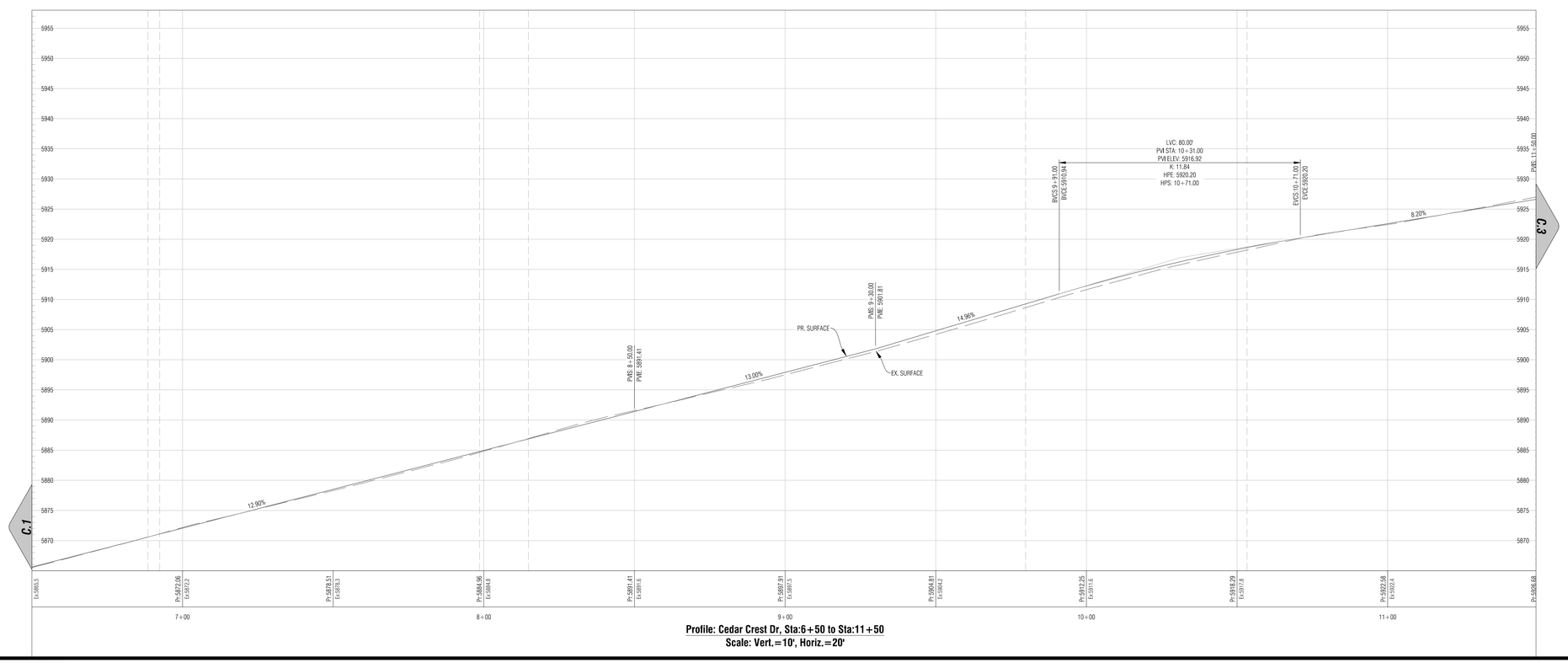

Profile: Cedar Crest Dr, Sta:6+50 to Sta:11+50
Scale: Vert.=10', Horiz.=20'

Keymap

Boundaries Unlimited Inc.
Civil Engineering Surveying & Beyond
923 Cooper Avenue
Suite 201
Glenwood Springs, CO 81601
tele: 970.945.5252
fax: 970.384.2833

Engineer or Surveyor Seal

NOT FOR CONSTRUCTION
Bid Set

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

0 20' 40'
Scale: 1" = 20'

811
Know what's below.
Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Cedar Crest Drive Road Plan & Profile - Sta. 6+50 To 11+50

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
3.			
4.			
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PROJECT NO. 18034
FILE NAME: 18034-C-CIVil3D.dwg
Designer: DJW
Drafter: BUI
Date: 11/13/19

Sheet
C.2

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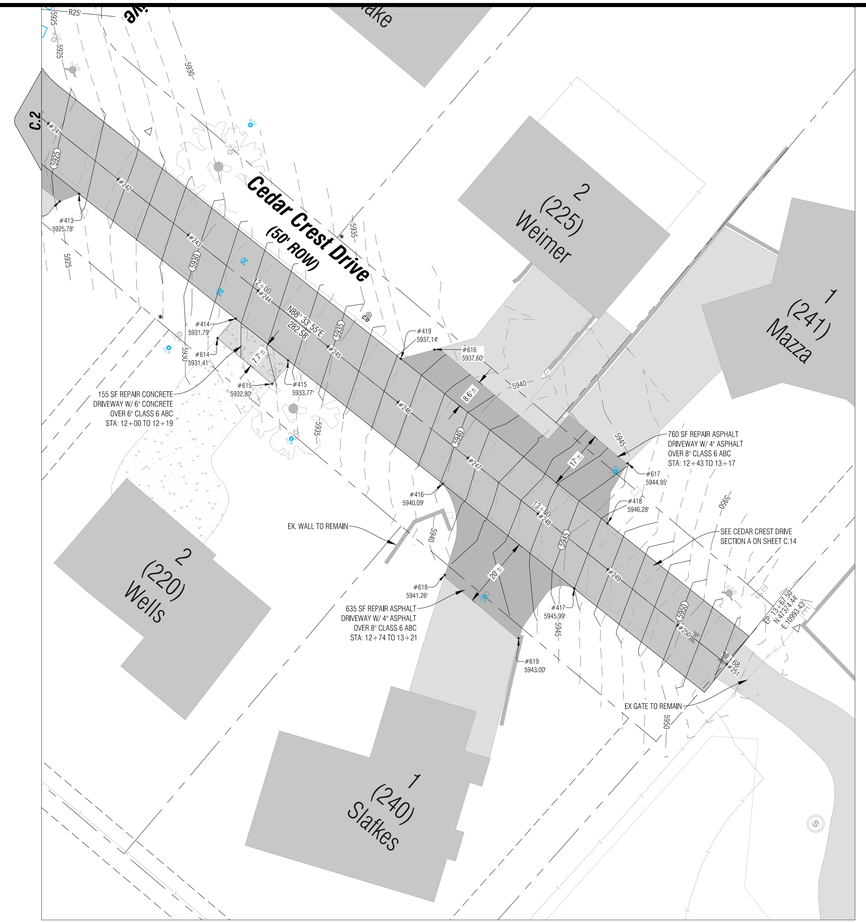

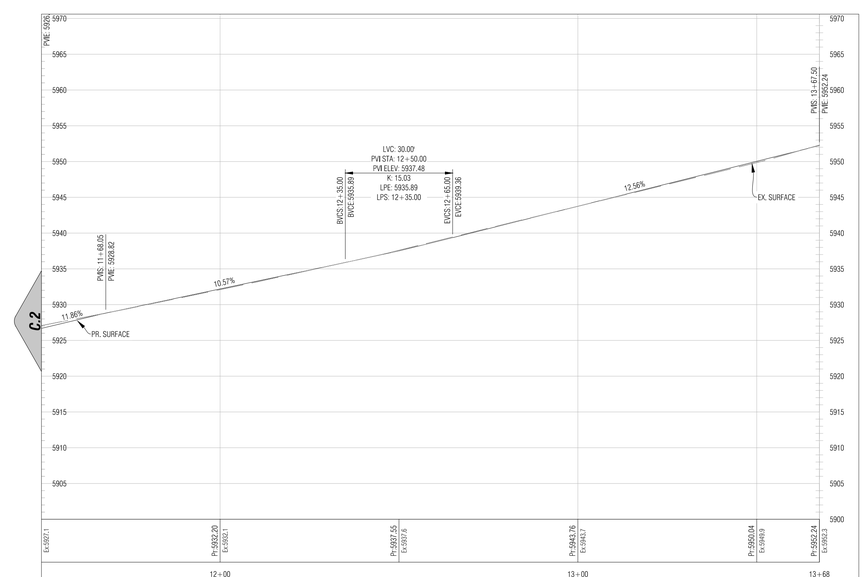

Profile: Cedar Crest Dr, Sta:11+50 to Sta:13+68
Scale: Vert.=10', Horiz.=20'

Keymap

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Surveying
& Beyond
923 Cooper Avenue
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Glenwood Springs, CO 81601
tele: 970.945.5252
fax: 970.384.2833

Engineer or Surveyor Seal

NOT FOR CONSTRUCTION
Bid Set

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

0 20' 40'
Scale: 1" = 20'

811
Know what's below.
Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Cedar Crest Drive Road Plan & Profile - Sta. 11+50 To End

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
3.			
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6.			
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9.			

PROJECT NO.
18034
FILE NAME:
18034-c-civil3d.dwg
Designer:
DJW
Drafter:
BJB
Date:
11/13/19

Sheet
C.3

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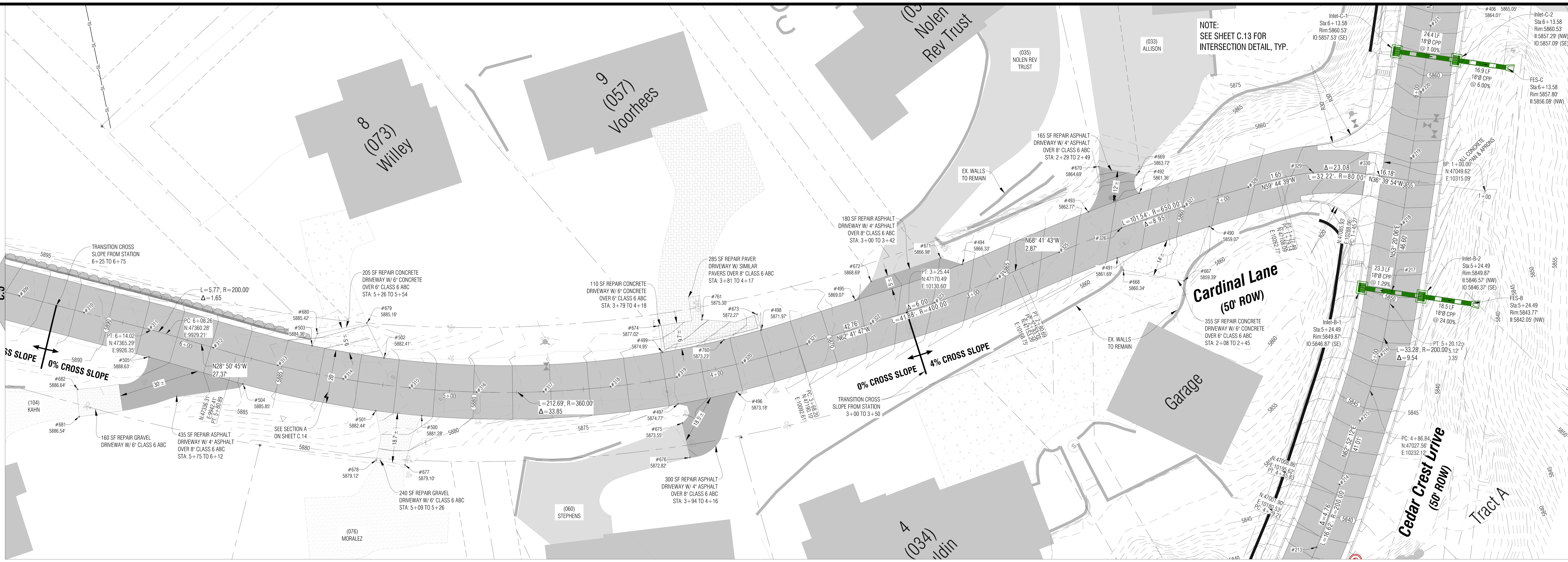

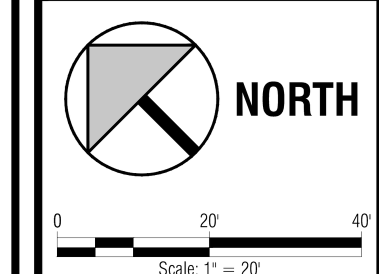

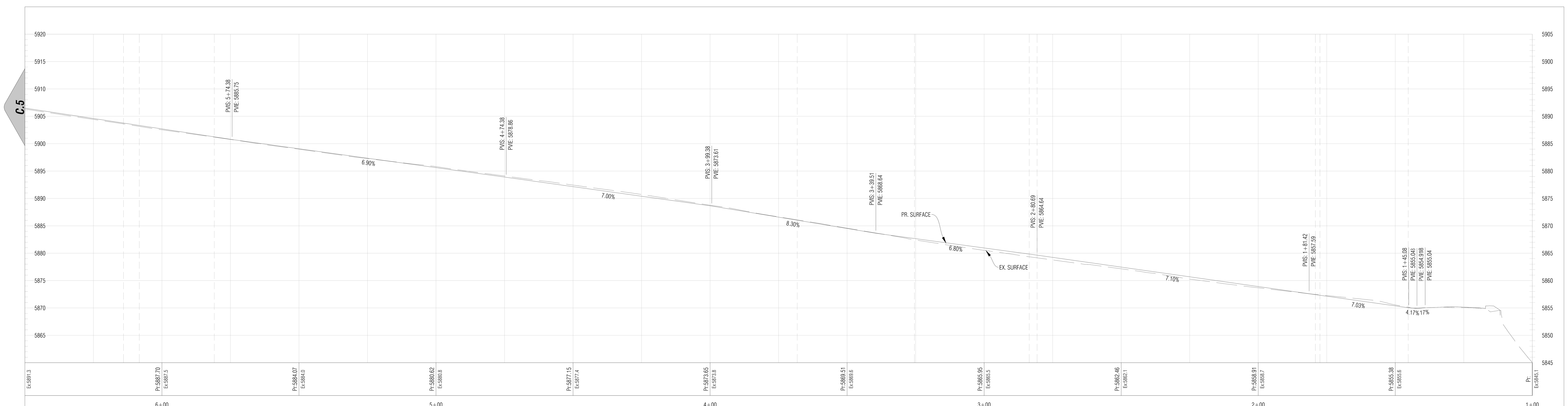

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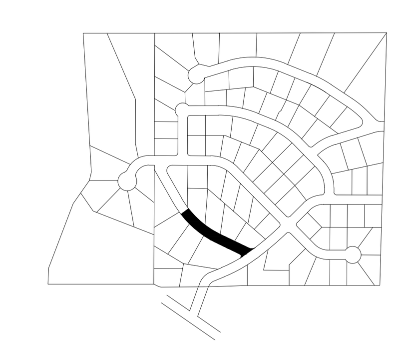
Scale: Vert.=10', Horiz.=20'



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Glenwood Springs, CO 81601
tele: 970.945.5252
fax: 970.384.2833

Engineer or Surveyor Seal

NOT FOR Bid Set CONSTRUCTION

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601
----

811 Know what's below. Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Cardinal Lane Road Plan & Profile - Sta. 1+00 To 7+00

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
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PROJECT NO. 18034
FILE NAME: 18034-c-civil3d.dwg
Designer: DJW
Drafter: BUI
Date: 11/13/19

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C.4

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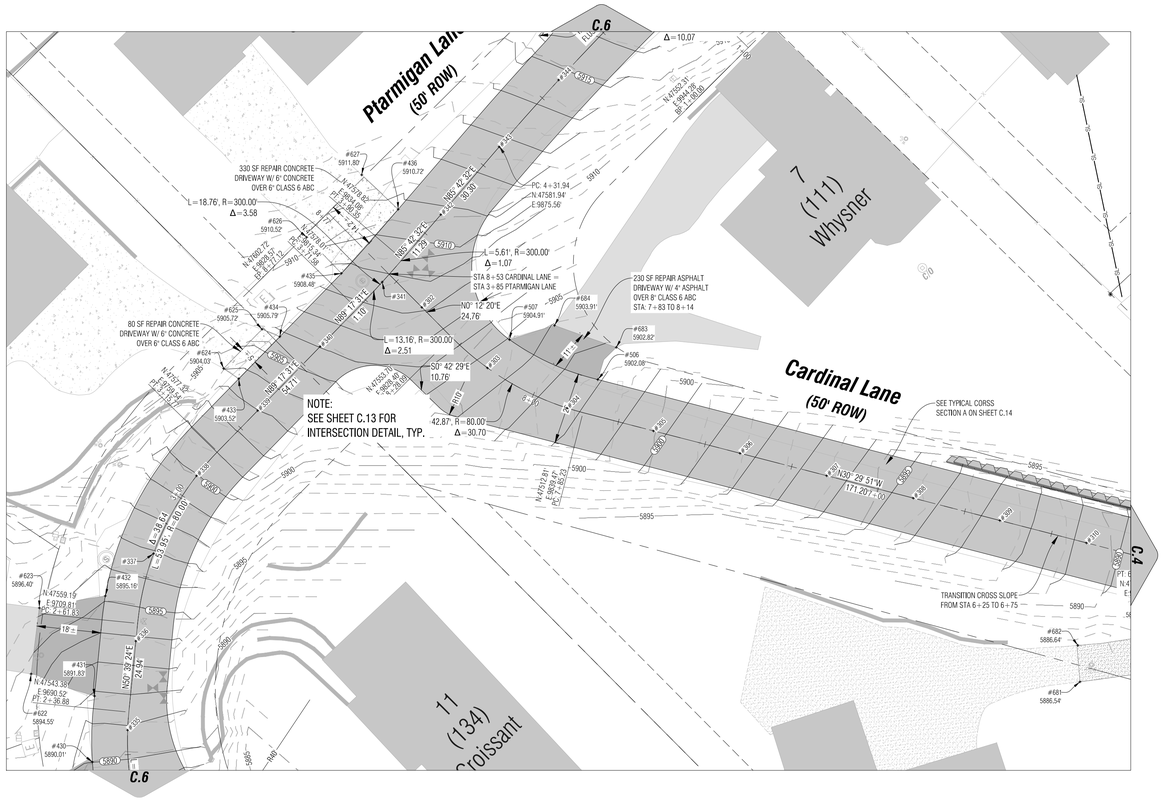

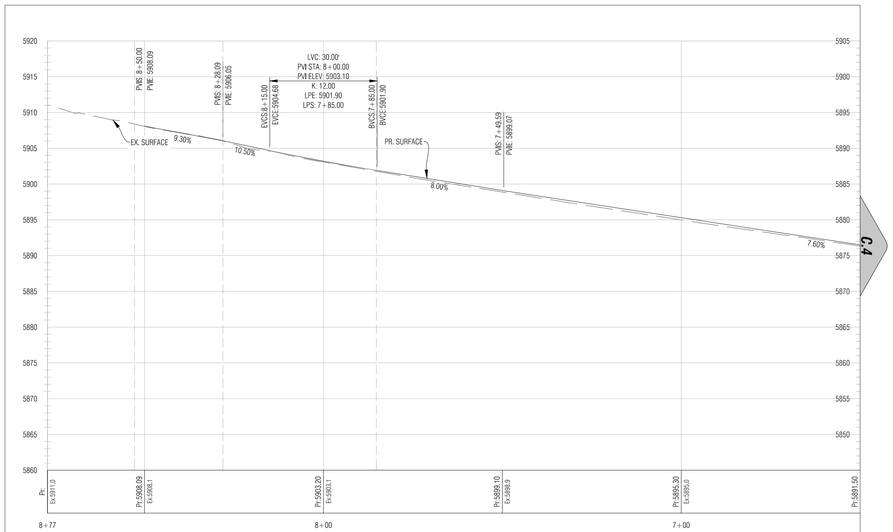

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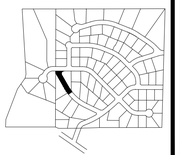
Scale: Vert.=10', Horiz.=20'



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Suite 201
Glenwood Springs, CO 81601
tele: 970.945.5252
fax: 970.384.2833

Engineer or Surveyor Seal

NOT FOR CONSTRUCTION
Bid Set

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

0 20' 40'
Scale: 1" = 20'

811
Know what's below. Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Cardinal Lane Road Plan & Profile - Sta. 7+00 To End

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
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PROJECT NO. 18034
FILE NAME: 18034-C-CIVil3d.dwg
Designer: DJW
Drafter: BLB
Date: 11/13/19

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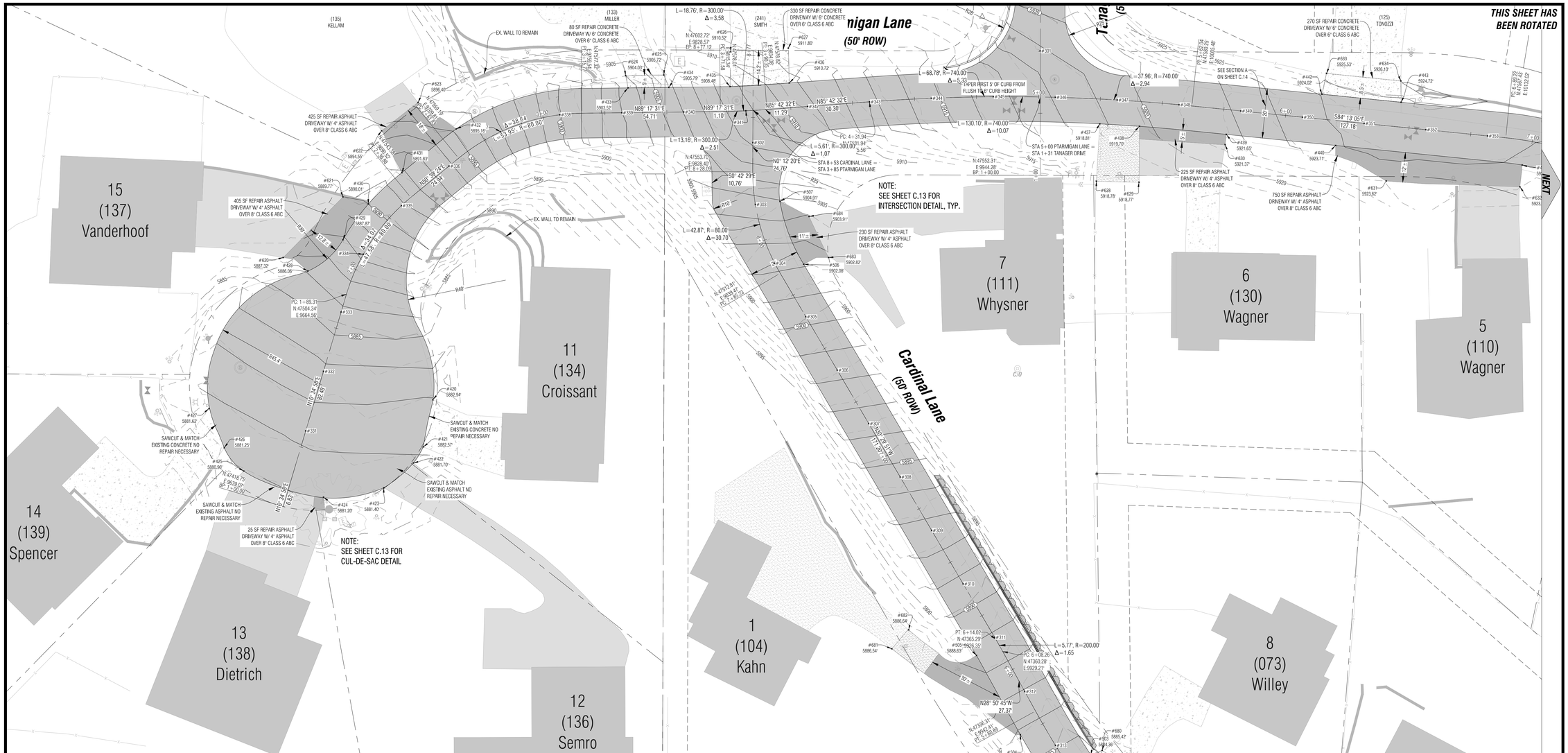

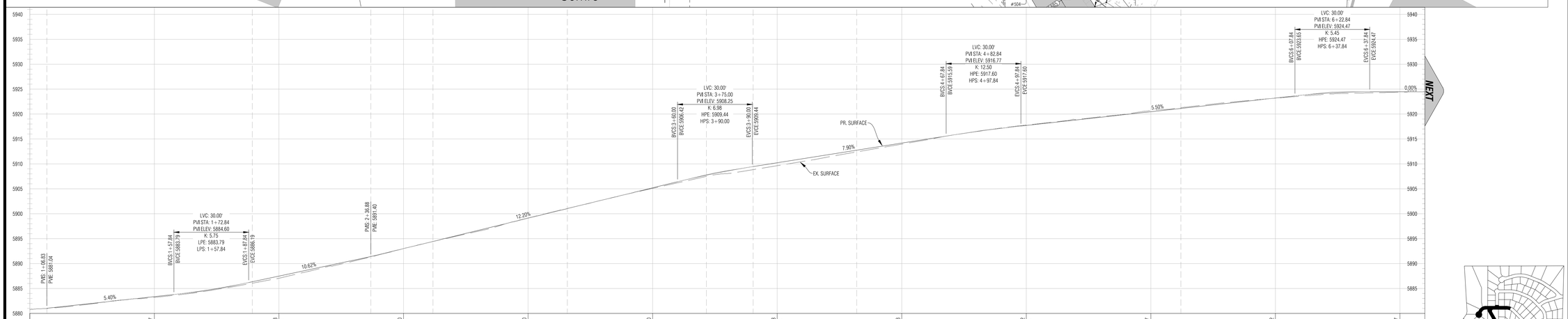

Profile: Ptarmigan Lane, Sta:1+00 to Sta:6+60
Scale: Vert.=10', Horiz.=20'

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fax: 970.384.2833

Engineer or Surveyor Seal
NOT FOR CONSTRUCTION
Bid Set

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH
0 20' 40'
Scale: 1" = 20'

811
Know what's below.
Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Ptarmigan Lane Plan & Profile - Sta. 1+00 To 7+00

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
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PROJECT NO. 18034
FILE NAME: 18034-C-Civil3d.dwg
Designer: DJW
Drafter: BLB
Date: 11/13/19

Sheet
C.6

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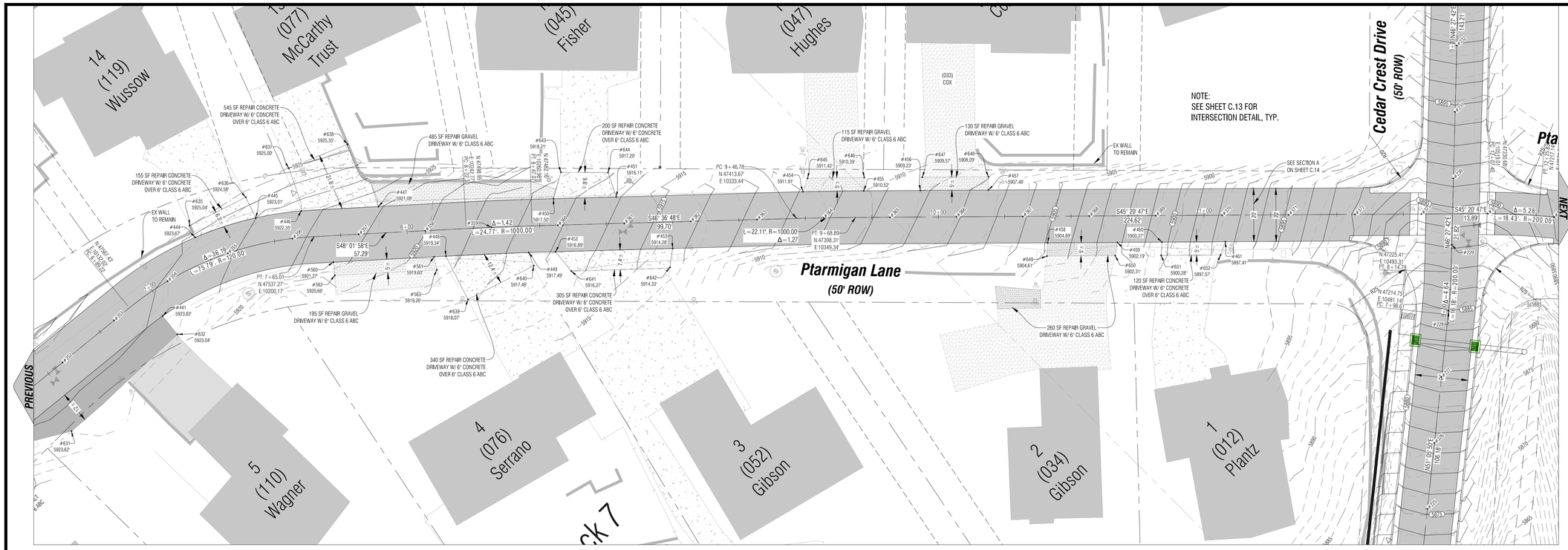

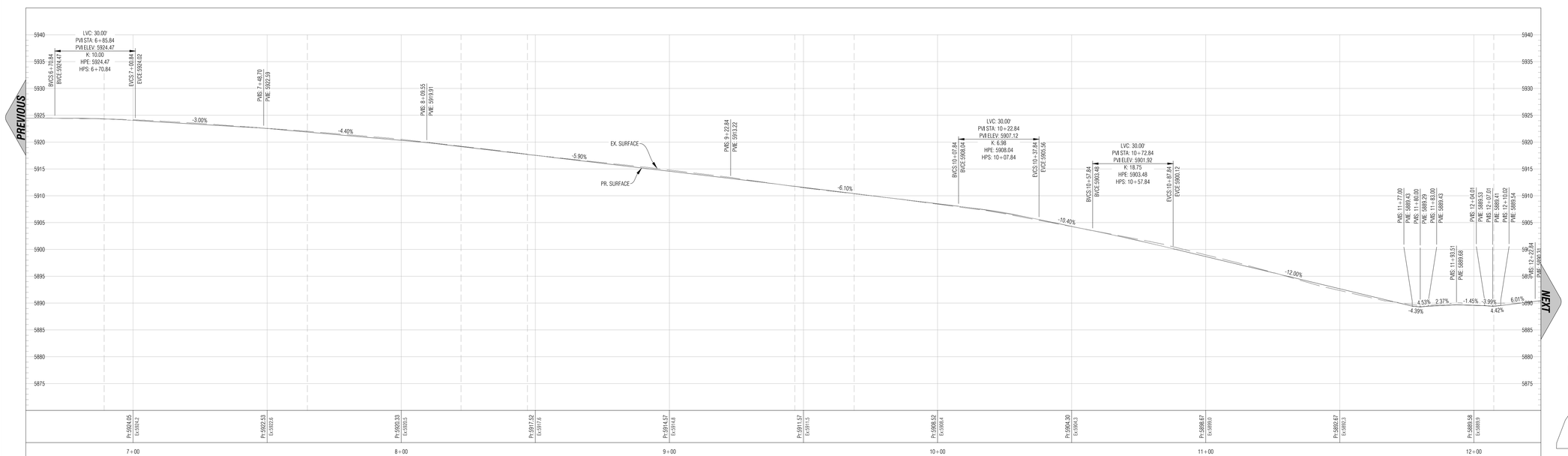

Profile: Ptarmigan Lane, Sta:6+60 to Sta:12+25
Scale: Vert.=10', Horiz.=20'

Keymap

Boundaries Unlimited Inc.
Civil Engineering Surveying & Beyond
923 Cooper Avenue
Suite 201
Glenwood Springs, CO 81601
tele: 970.945.5252
fax: 970.384.2833

Engineer or Surveyor Seal

NOT FOR CONSTRUCTION — Bid Set

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

Scale: 1" = 20'

811 Know what's below. Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Ptarmigan Lane Plan & Profile - Sta. 7+00 To 12+50

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
3.			
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PROJECT NO. 18034
FILE NAME: 18034-C-Civil3d.dwg
Designer: DJW
Drafter: BUI
Date: 11/13/19

Sheet C.7

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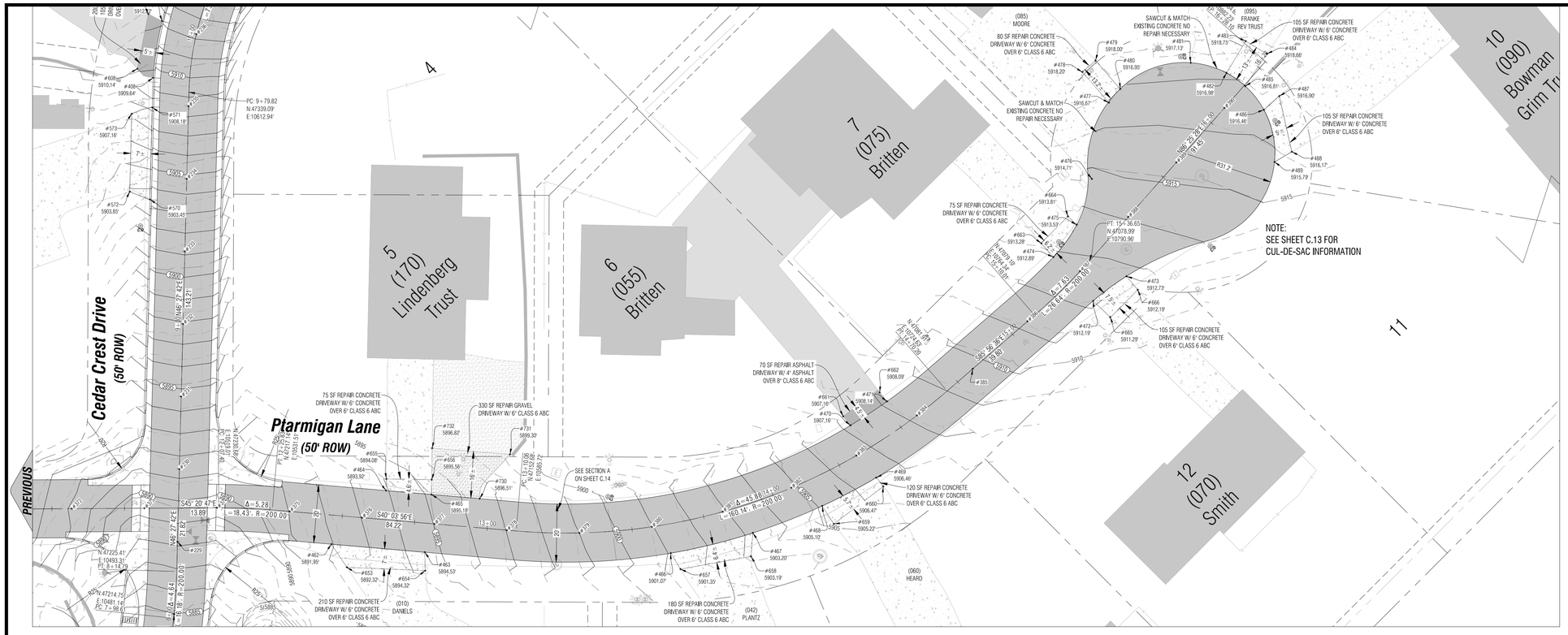

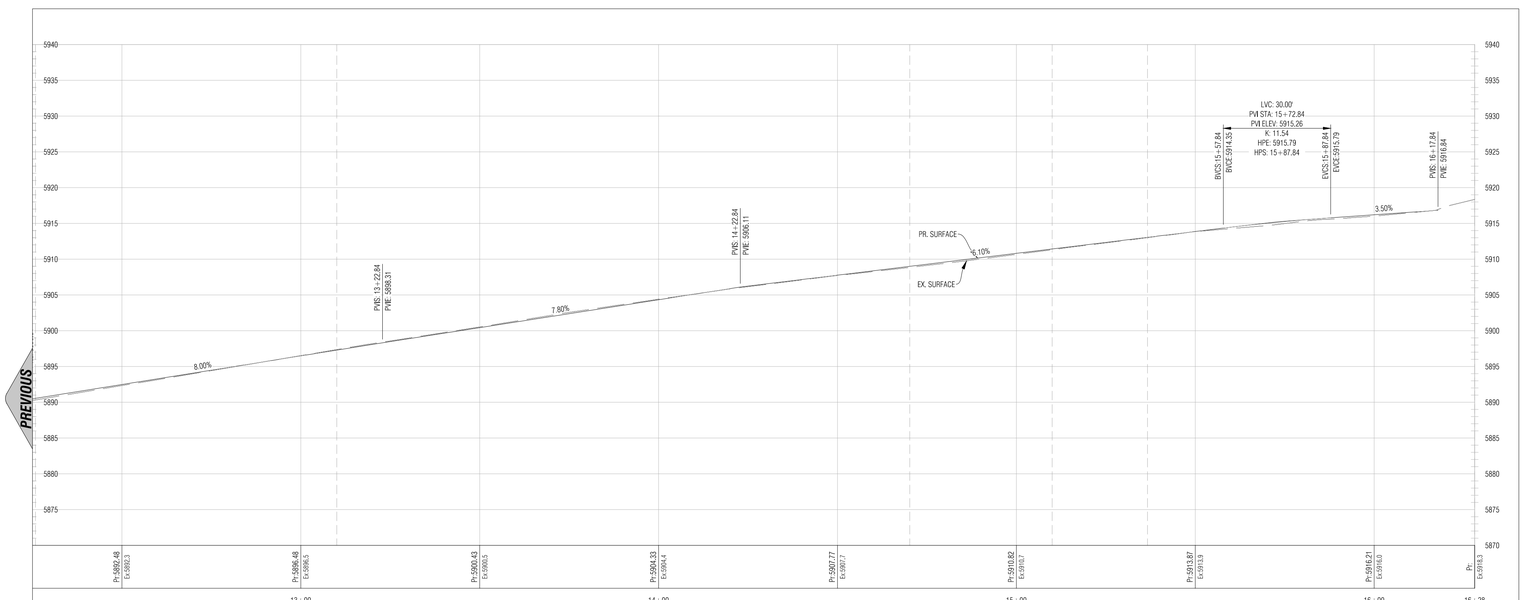

Profile: Ptarmigan Lane, Sta:12+25 to Sta:16+28
Scale: Vert.=10', Horiz.=20'

Keymap

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923 Cooper Avenue
Suite 201
Glenwood Springs, CO 81601
tele: 970.945.5252
fax: 970.384.2833

Engineer or Surveyor Seal

NOT FOR CONSTRUCTION
Bid Set

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

0 20' 40'
Scale: 1" = 20'

811
Know what's below.
Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Ptarmigan Lane Plan & Profile - Sta. 12+50 To End

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
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PROJECT NO.
18034
FILE NAME:
18034-c-civil3d.dwg
Designer:
KVW
Drafter:
BJJ
Date:
11/13/19

Sheet
C.8

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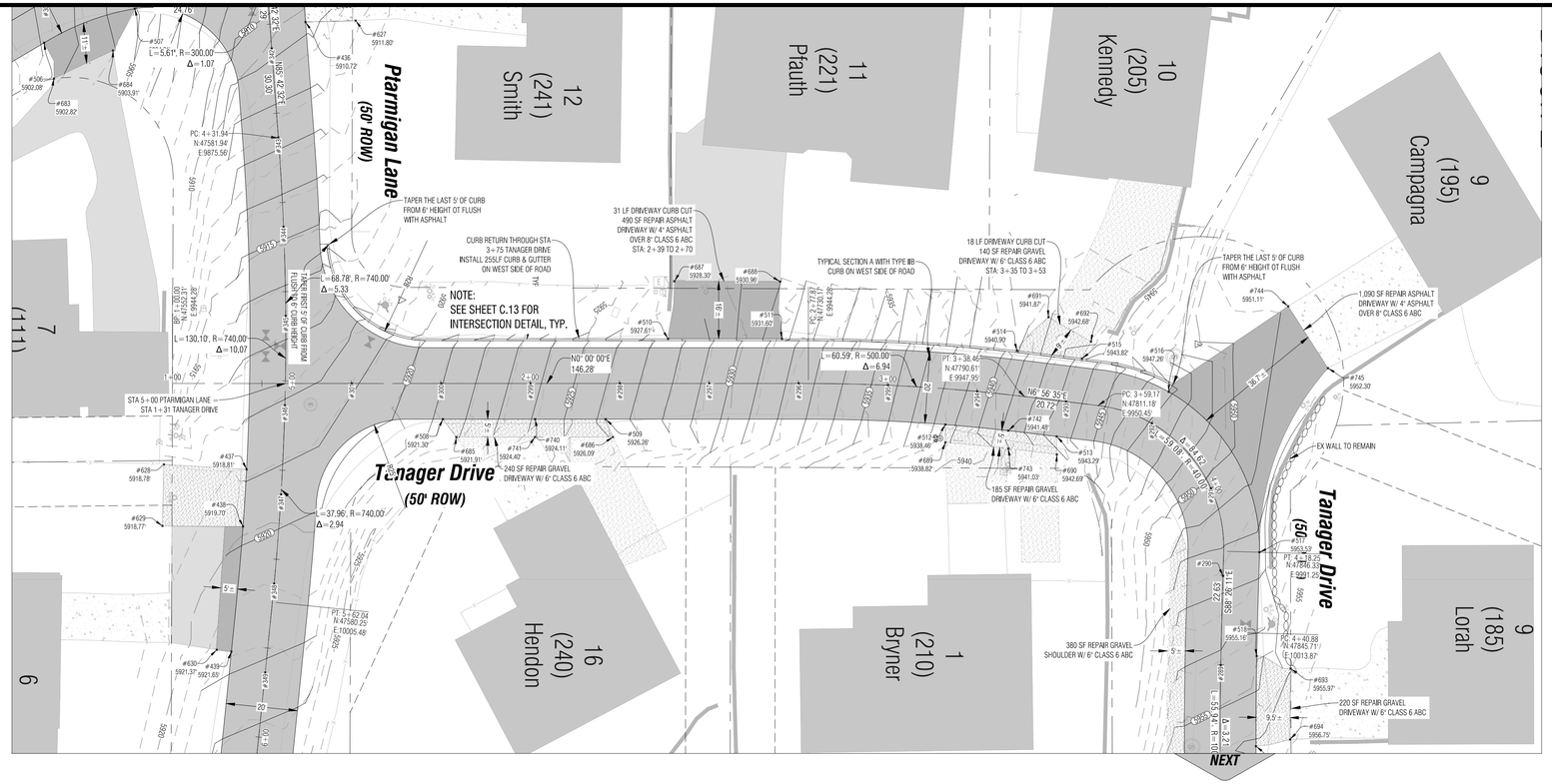

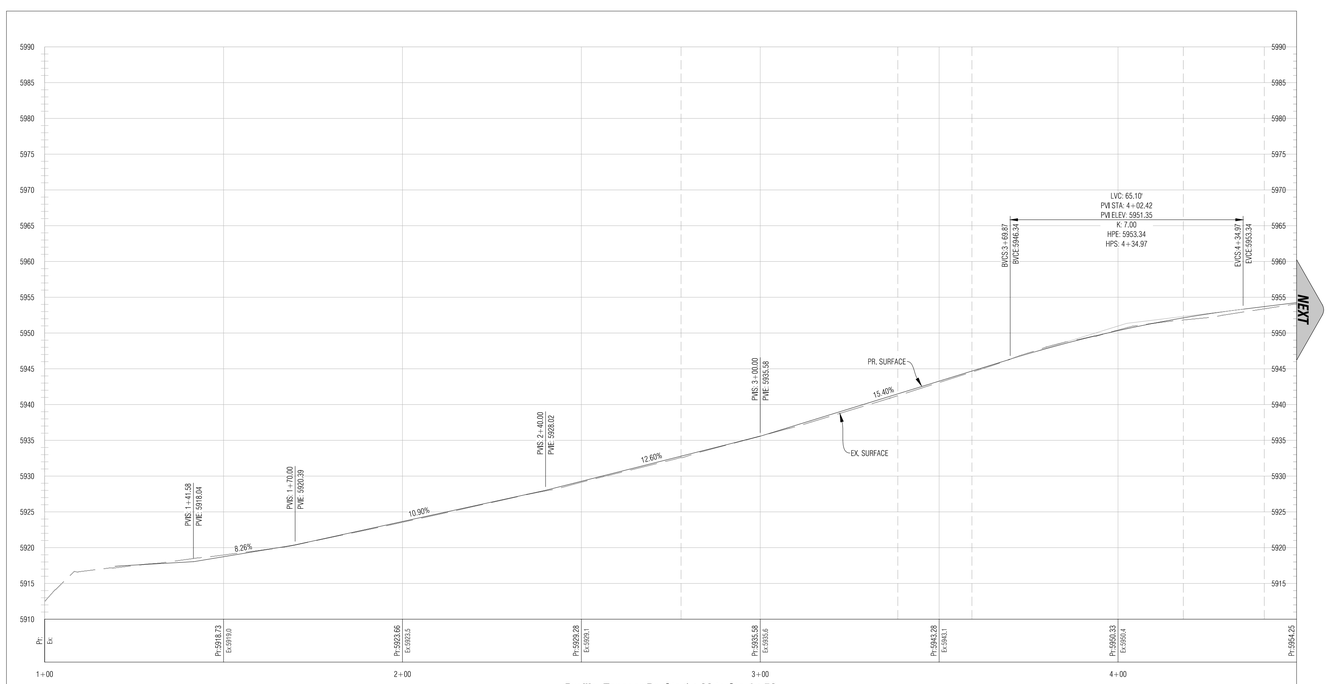

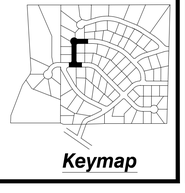

Boundaries Unlimited Inc.
Civil Engineering Surveying & Beyond
923 Cooper Avenue
Suite 201
Glenwood Springs, CO 81601
tele: 970.945.5252
fax: 970.384.2833

Engineer or Surveyor Seal

NOT FOR CONSTRUCTION
Bid Set

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH
0 20' 40'
Scale: 1" = 20'

811 Know what's below. Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Tanager Drive Road Plan & Profile - Sta. 1+00 To 3+50

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
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PROJECT NO. 18034
FILE NAME: 18034-c-civil3d.dwg
Designer: DJW
Drafter: BLR
Date: 11/13/19

Sheet
C.9

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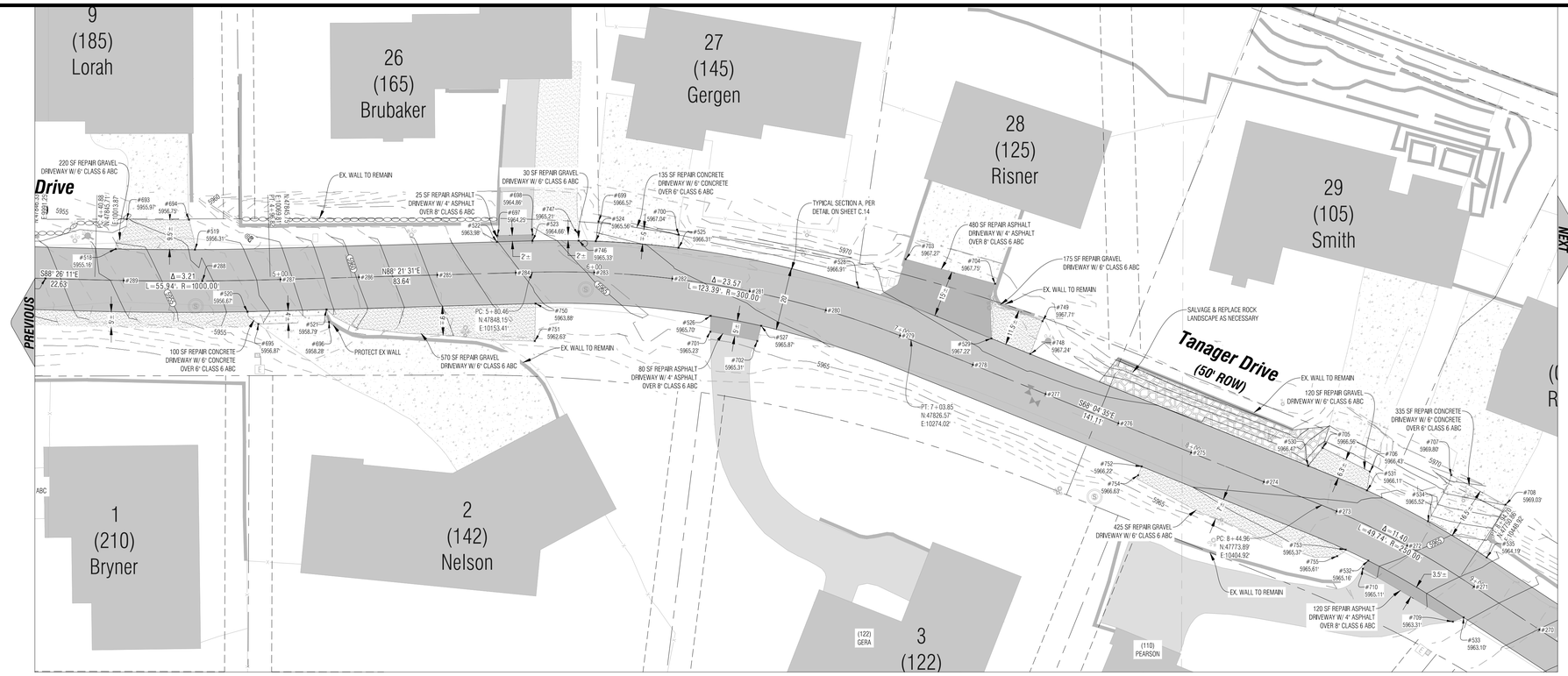

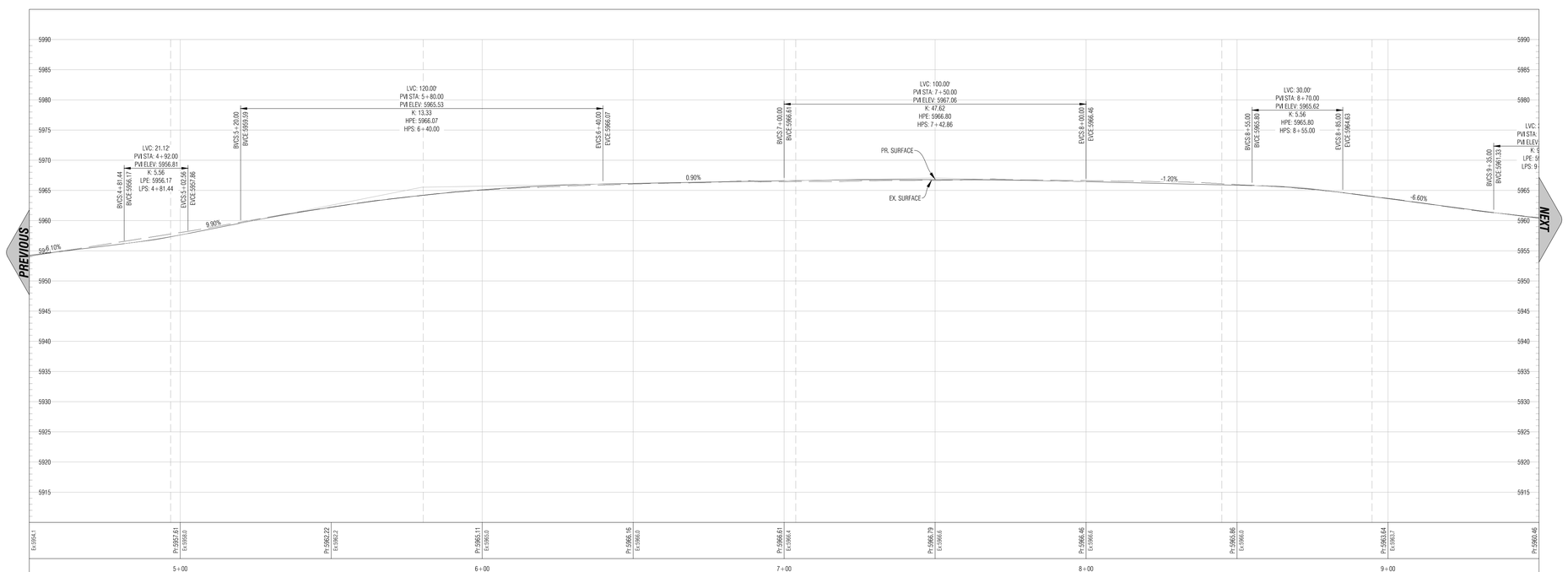

Profile: Tanager Dr, Sta:4+50 to Sta:9+50
Scale: Vert.=10', Horiz.=20'

Keymap

Boundaries Unlimited Inc.
Civil Engineering
Surveying
& Beyond
923 Cooper Avenue
Suite 201
Glenwood Springs, CO 81601
tele: 970.945.5252
fax: 970.384.2833

Engineer or Surveyor Seal

NOT FOR CONSTRUCTION
Bid Set

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

0 20' 40'
Scale: 1" = 20'

811
Know what's below.
Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Tanager Drive Road Plan & Profile - Sta. 3+50 To 9+50

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
3.			
4.			
5.			
6.			
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PROJECT NO.
18034
FILE NAME:
18034-C-Civil3D.dwg
Designer:
DJW
Drafter:
Bull
Date:
11/13/19

Sheet
C.10

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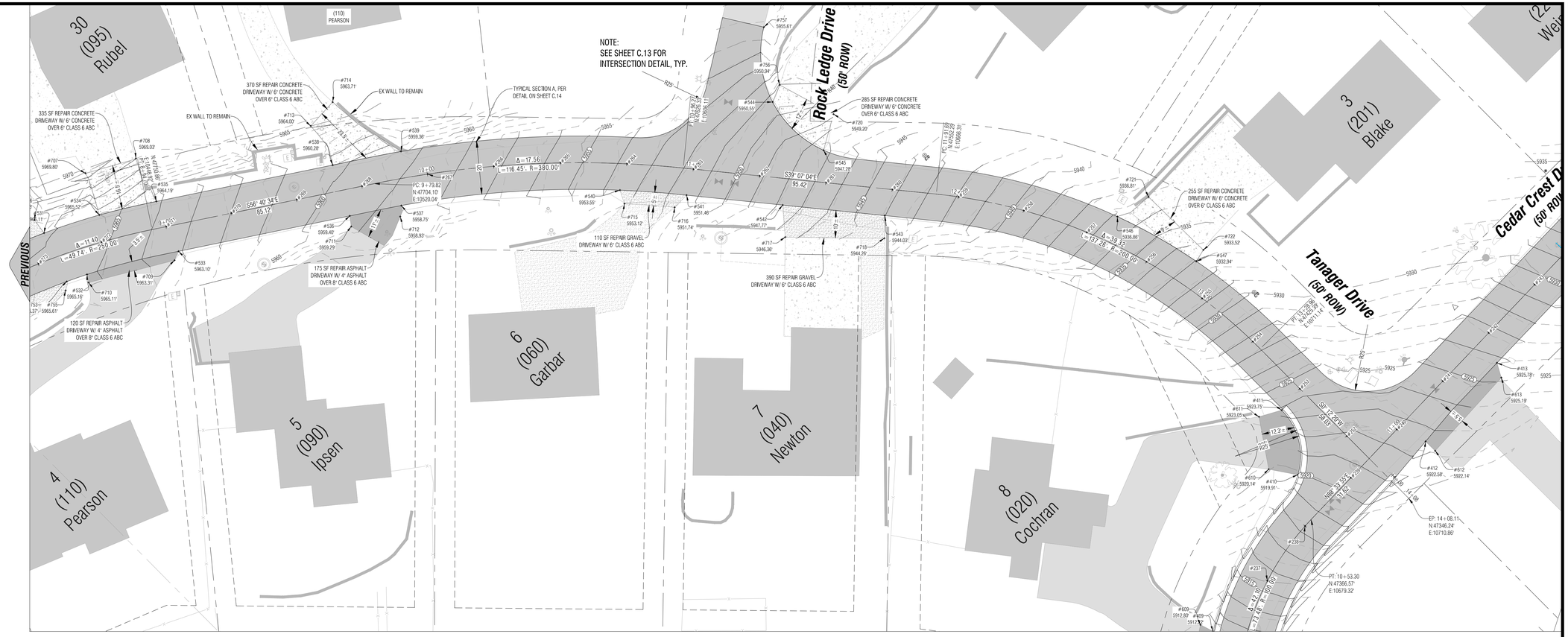

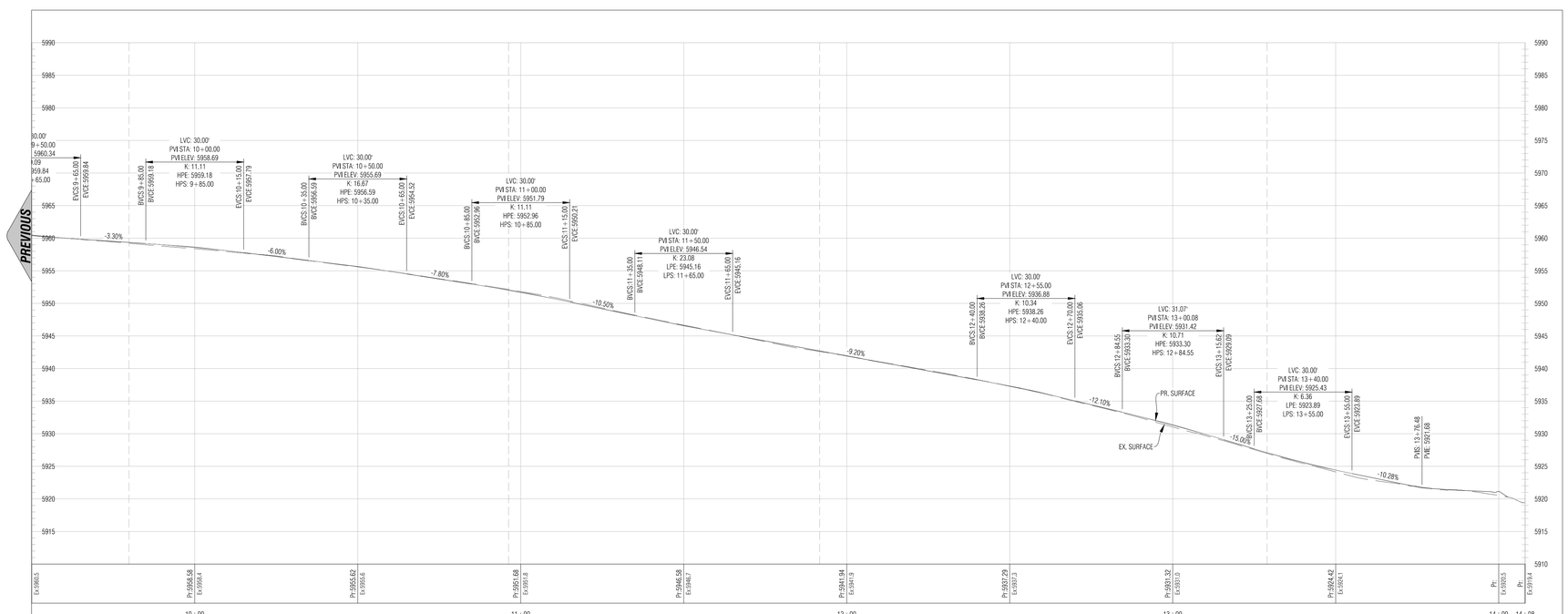

Profile: Tanager Dr, Sta:9+50 to Sta:14+08
Scale: Vert.=10', Horiz.=20'

Keymap

Boundaries Unlimited Inc.
Civil Engineering
Surveying
& Beyond
923 Cooper Avenue
Suite 201
Glenwood Springs, CO 81601
tele: 970.945.5252
fax: 970.384.2833

Engineer or Surveyor Seal

NOT FOR CONSTRUCTION
Bid Set

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

0 20' 40'
Scale: 1" = 20'

811
Know what's **below.**
Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Tanager Drive Road Plan & Profile - Sta. 9+50 To End
95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

PROJECT NO. 18034
FILE NAME: 18034-C-Civil3d.dwg
Designer: DJW
Drafter: BJJ
Date: 11/13/19

Sheet
C.11

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Point Table

Point #	Raw Description	Elevation	Northing	Easting
200	CL	5794.22'	46758.00	9986.00
201	CL	5796.00'	46781.66	9994.08
202	CL	5799.64'	46805.32	10002.16
203	CL	5803.11'	46828.97	10010.24
204	CL	5806.56'	46852.63	10018.33
205	CL	5810.01'	46875.85	10027.56
206	CL	5813.46'	46897.88	10039.35
207	CL	5816.91'	46918.42	10053.57
208	CL	5820.70'	46937.22	10070.03
209	CL	5824.57'	46954.04	10088.52
210	CL	5828.26'	46968.65	10108.79
211	CL	5831.91'	46980.86	10130.58
212	CL	5835.35'	46990.78	10153.52
213	CL	5838.51'	47000.30	10176.64
214	CL	5841.46'	47010.76	10199.34
215	CL	5844.41'	47022.16	10221.59
216	CL	5847.36'	47033.94	10243.63
217	CL	5850.31'	47048.04	10264.26
218	CL	5853.26'	47062.96	10284.31
219	CL	5856.21'	47077.89	10304.37
220	CL	5859.25'	47092.82	10324.42
221	CL	5862.39'	47107.75	10344.47
222	CL	5865.61'	47122.68	10364.53
223	CL	5868.84'	47137.61	10384.58
224	CL	5872.06'	47152.83	10404.41
225	CL	5875.29'	47168.53	10423.86
226	CL	5878.51'	47184.23	10443.32
227	CL	5881.74'	47199.93	10462.77
228	CL	5884.96'	47215.63	10482.22
229	CL	5888.19'	47232.45	10500.71
230	CL	5891.42'	47249.67	10518.84
231	CL	5894.66'	47266.89	10536.96
232	CL	5897.91'	47284.11	10555.08
233	CL	5901.16'	47301.33	10573.20
234	CL	5904.81'	47318.55	10591.33
235	CL	5908.54'	47335.77	10609.45
236	CL	5912.25'	47351.43	10628.87
237	CL	5915.54'	47361.89	10651.50
238	CL	5918.29'	47366.43	10676.02
239	CL	5920.53'	47367.11	10701.01
240	CL	5922.58'	47367.74	10726.01
241	CL	5924.63'	47368.37	10751.00
242	CL	5926.68'	47368.99	10775.99
243	CL	5929.38'	47369.62	10800.98
244	CL	5932.08'	47370.24	10825.97
245	CL	5934.78'	47370.87	10850.97
246	CL	5937.48'	47371.50	10875.96
247	CL	5940.50'	47372.12	10900.95
248	CL	5943.52'	47372.75	10925.94
249	CL	5946.54'	47373.37	10950.94
250	CL	5949.56'	47374.00	10975.93
251	CL	5951.68'	47374.44	10993.43
252	CL	5921.78'	47379.19	10710.97
253	CL	5924.37'	47404.19	10711.06
254	CL	5927.65'	47429.19	10711.12
255	CL	5931.40'	47454.10	10709.17
256	CL	5934.45'	47478.57	10704.14
257	CL	5937.35'	47502.22	10696.09
258	CL	5939.65'	47524.68	10685.16
259	CL	5941.95'	47545.61	10671.51
260	CL	5944.25'	47565.12	10655.88
261	CL	5946.55'	47584.52	10640.11

Point Table

Point #	Raw Description	Elevation	Northing	Easting
262	CL	5949.18'	47603.91	10624.34
263	CL	5951.81'	47623.31	10608.56
264	CL	5953.77'	47642.33	10592.34
265	CL	5955.72'	47660.25	10574.92
266	CL	5957.22'	47676.99	10556.36
267	CL	5958.37'	47692.47	10536.74
268	CL	5959.42'	47706.66	10516.15
269	CL	5960.45'	47720.39	10495.27
270	CL	5961.91'	47734.13	10474.38
271	CL	5963.68'	47747.86	10453.49
272	CL	5965.14'	47760.95	10432.19
273	CL	5965.96'	47771.89	10409.73
274	CL	5966.44'	47781.28	10386.56
275	CL	5966.62'	47790.61	10363.37
276	CL	5966.79'	47799.95	10340.17
277	CL	5966.64'	47809.28	10316.98
278	CL	5966.56'	47818.61	10293.79
279	CL	5966.45'	47827.93	10270.59
280	CL	5966.33'	47836.00	10246.94
281	CL	5966.05'	47842.07	10222.69
282	CL	5965.66'	47846.10	10198.03
283	CL	5965.04'	47848.06	10173.11
284	CL	5963.95'	47847.99	10148.12
285	CL	5962.28'	47847.28	10123.13
286	CL	5960.14'	47846.56	10098.14
287	CL	5957.70'	47845.85	10073.15
288	CL	5956.11'	47845.36	10048.15
289	CL	5954.98'	47845.50	10023.15
290	CL	5953.67'	47846.14	9998.16
291	CL	5951.24'	47842.79	9973.67
292	CL	5947.60'	47826.25	9955.46
293	CL	5943.60'	47802.23	9949.36
294	CL	5939.60'	47777.40	9946.52
295	CL	5935.60'	47752.46	9944.78
296	CL	5932.45'	47727.47	9944.28
297	CL	5929.30'	47702.47	9944.28
298	CL	5926.40'	47677.47	9944.28
299	CL	5923.67'	47652.47	9944.28
300	CL	5920.95'	47627.47	9944.28
301	CL	5918.76'	47602.47	9944.28
302	CL	5907.30'	47565.49	9828.44
303	CL	5904.66'	47540.55	9829.44
304	CL	5902.29'	47516.89	9837.22
305	CL	5900.29'	47495.29	9849.79
306	CL	5898.33'	47473.74	9862.47
307	CL	5896.43'	47452.20	9875.16
308	CL	5894.53'	47430.66	9887.85
309	CL	5892.63'	47409.12	9900.54
310	CL	5890.73'	47387.58	9913.22
311	CL	5888.83'	47366.04	9925.91
312	CL	5886.93'	47344.19	9938.07
313	CL	5885.10'	47322.48	9950.45
314	CL	5883.38'	47301.60	9964.19
315	CL	5881.65'	47281.72	9979.37
316	CL	5879.93'	47262.94	9995.89
317	CL	5878.19'	47245.35	10013.69
318	CL	5876.43'	47229.02	10032.68
319	CL	5874.85'	47214.04	10052.77
320	CL	5872.80'	47200.49	10073.88
321	CL	5870.71'	47188.41	10095.87
322	CL	5868.73'	47176.95	10118.09
323	CL	5866.93'	47165.58	10140.43

Point Table

Point #	Raw Description	Elevation	Northing	Easting
324	CL	5865.22'	47155.39	10163.40
325	CL	5863.48'	47146.08	10186.58
326	CL	5861.71'	47136.00	10209.40
327	CL	5859.94'	47125.06	10231.79
328	CL	5858.17'	47113.26	10253.75
329	CL	5856.44'	47100.02	10274.62
330	CL	5855.01'	47081.58	10291.31
331	CL	5882.32'	47449.27	9648.16
332	CL	5883.74'	47473.23	9655.30
333	CL	5885.79'	47497.19	9662.43
334	CL	5888.21'	47520.47	9671.36
335	CL	5890.87'	47540.06	9686.72
336	CL	5893.84'	47556.03	9705.95
337	CL	5896.89'	47569.82	9726.71
338	CL	5899.94'	47576.71	9750.63
339	CL	5902.98'	47577.51	9775.61
340	CL	5905.94'	47577.82	9800.60
341	CL	5908.57'	47578.31	9825.60
342	CL	5910.77'	47580.06	9850.54
343	CL	5912.74'	47581.93	9875.47
344	CL	5914.72'	47583.38	9900.42
345	CL	5916.54'	47583.99	9925.41
346	CL	5918.09'	47583.75	9950.41
347	CL	5919.56'	47582.67	9975.39
348	CL	5920.84'	47580.75	10000.31
349	CL	5922.22'	47578.25	10025.19
350	CL	5923.50'	47575.73	10050.06
351	CL	5924.24'	47573.21	10074.93
352	CL	5924.47'	47570.69	10099.81
353	CL	5924.47'	47568.18	10124.68
354	CL	5923.90'	47564.38	10149.36
355	CL	5923.12'	47555.77	10172.78
356	CL	5922.24'	47542.51	10193.92
357	CL	5921.13'	47526.01	10212.69
358	CL	5920.03'	47509.29	10231.28
359	CL	5918.59'	47492.54	10249.84
360	CL	5916.97'	47475.45	10268.08
361	CL	5915.64'	47458.28	10286.25
362	CL	5914.17'	47441.10	10304.42
363	CL	5912.68'	47423.93	10322.59
364	CL	5911.15'	47406.72	10340.72
365	CL	5909.63'	47389.20	10358.56
366	CL	5908.03'	47371.63	10376.34
367	CL	5906.07'	47354.06	10394.13
368	CL	5903.59'	47336.49	10411.91
369	CL	5900.84'	47318.92	10429.70
370	CL	5897.84'	47301.35	10447.48
371	CL	5894.84'	47283.78	10465.26
372	CL	5892.11'	47266.21	10483.05
373	CL	5889.38'	47248.64	10500.83
374	CL	5889.41'	47231.07	10518.62
375	CL	5891.03'	47212.54	10535.38
376	CL	5893.03'	47193.40	10551.47
377	CL	5895.03'	47174.27	10567.56
378	CL	5897.03'	47155.14	10583.65
379	CL	5899.01'	47136.80	10600.62
380	CL	5900.95'	47120.70	10619.73
381	CL	5902.91'	47107.12	10640.70
382	CL	5904.85'	47096.25	10663.19
383	CL	5906.65'	47088.27	10686.87
384	CL	5908.18'	47083.30	10711.35
385	CL	5909.65'	47081.09	10736.25

Point Table

Point #	Raw Description	Elevation	Northing	Easting
386	CL	5911.24'	47079.32	10761.19
387	CL	5912.71'	47078.74	10786.16
388	CL	5914.08'	47080.25	10811.12
389	CL	5915.38'	47081.81	10836.07
390	CL	5916.44'	47083.36	10861.02
400	EOD	5796.71'	46781.06	10007.09
401	EOD	5799.16'	46797.57	10012.74
402	EOD	5804.60'	46834.05	10025.19
403	EOD	5808.62'	46860.91	10034.69
404	EOD	5814.10'	46910.19	10032.05
405	EOD	5816.69'	46925.13	10043.09
406	EOD	5864.01'	47106.36	10363.54
407	EOD	5867.92'	47124.45	10387.84
408	EOD	5909.64'	47351.29	10607.77
409	EOD	5912.22'	47362.91	10623.68
410	EOD	5919.91'	47381.93	10687.71
411	EOD	5923.75'	47403.39	10700.56
412	EOD	5922.58'	47356.93	10730.45
413	EOD	5925.78'	47358.84	10770.20
414	EOD	5931.79'	47360.25	10826.16
415	EOD	5933.77'	47360.71	10844.89
416	EOD	5940.09'	47362.11	10900.17
417	EOD	5945.99'	47363.27	10947.13
418	EOD	5946.28'	47383.17	10942.56
419	EOD	5937.14'	47381.32	10868.71
420	MATCH	5882.94'	47461.81	9699.42
421	MATCH	5882.57'	47442.80	9695.54
422	MATCH	5881.70'	47436.29	9691.56
423	MATCH	5881.40'	47426.32	9679.65
424	MATCH	5881.20'	47422.53	9655.34
425	MATCH	5880.96'	47433.06	9623.17
426	MATCH	5881.25'	47442.46	9615.29
427	MATCH	5881.62'	47458.25	9609.12
428	EOD	5886.06'	47513.69	9649.02
429	EOD	5887.87'	47526.31	9663.18
430	EOD	5890.01'	47540.73	9673.44
431	EOD	5891.83'	47553.34	9686.90
432	EOD	5895.16'	47571.00	9708.84
433	EOD	5903.52'	47587.55	9778.13
434	EOD	5905.79'	47587.75	9794.57
435	EOD	5908.48'	47588.08	9819.24
436	EOD	5910.72'	47589.53	9843.11
437	EOD	5918.81'	47573.05	9968.33
438	EOD	5919.70'	47572.06	9984.31
439	EOD	5921.65'	47568.79	10019.34
440	EOD	5923.71'	47564.33	10063.40
441	EOD	5923.82'	47556.44	10138.65
442	EOD	5924.02'	47585.00	10057.88
443	EOD	5924.72'	47581.76	10089.81
444	EOD	5923.67'	47568.70	10168.32
445	EOD	5923.01'	47557.82	10189.56
446	EOD	5922.35'	47547.52	10203.62
447	EOD	5921.08'	47528.17	10225.24
448	EOD	5919.34'	47496.98	10230.01
449	EOD	5917.49'	47475.95	10252.99
450	EOD	5917.50'	47483.65	10273.96
451	EOD	5916.11'	47467.46	10291.09
452	EOD	5916.89'	47468.99	10260.36
453	EOD	5914.28'	47438.69	10292.42
454	EOD	5911.91'	47419.19	10342.18
455	EOD	5910.52'	47403.21	10358.56
456	EOD	5909.23'	47388.28	10373.72

Point Table

Point #	Raw Description	Elevation	Northing	Easting
457	EOD	5907.46'	47370.30	10391.90
458	EOD	5904.89'	47340.45	10393.68
459	EOD	5902.19'	47321.99	10412.36
460	EOD	5900.27'	47310.20	10424.29
461	EOD	5897.41'	47293.47	10441.23
462	EOD	5891.95'	47194.42	10537.55
463	EOD	5894.53'	47169.73	10558.32
464	EOD	5893.92'	47194.17	10563.89
465	EOD	5895.18'	47182.18	10573.98
466	EOD	5901.07'	47109.69	10617.91
467	EOD	5903.20'	47094.62	10642.82
468	EOD	5905.10'	47084.34	10666.25
469	EOD	5906.46'	47078.09	10686.26
470	EOD	5907.16'	47097.08	10692.74
471	EOD	5908.14'	47094.01	10707.46
472	EOD	5912.19'	47068.33	10782.07
473	EOD	5912.73'	47066.23	10796.17
474	EOD	5912.89'	47088.65	10783.11
475	EOD	5913.53'	47090.86	10796.63
476	MATCH EX CONCRETE	5914.71'	47098.34	10811.49
477	EOD	5916.67'	47112.75	10834.18
478	MATCH	5918.20'	47126.68	10835.16
479	MATCH	5918.00'	47126.28	10841.18
480	MATCH EX CONCRETE	5916.95'	47113.34	10840.26
481	MATCH EX CONCRETE	5917.13'	47102.57	10863.79
482	EOD	5916.98'	47091.36	10870.01
483	MATCH	5918.75'	47094.46	10882.43
484	MATCH	5918.66'	47086.24	10884.47
485	MATCH EX CONCRETE	5916.81'	47083.61	10871.37
486	MATCH EX CONCRETE	5916.46'	47073.33	10870.14
487	MATCH	5916.90'	47072.92	10877.21
488	MATCH	5916.17'	47056.31	10866.71
489	MATCH EX CONCRETE	5915.79'	47058.04	10860.03
490	EOD	5859.07'	47113.15	10233.02
491	EOD	5861.69'	47129.15	10200.36
492	EOD	5861.36'	47140.47	10223.28
493	EOD	5862.77'	47149.03	10204.94
494	EOD	5866.33'	47168.45	10157.75
495	EOD	5869.07'	47187.19	10120.14
496	EOD	5873.18'	47194.37	10064.65
497	EOD	5874.77'	47206.63	10045.92
498	EOD	5871.97'	47204.23	10087.42
499	EOD	5874.95'	47224.40	10055.41
500	EOD	5881.28'	47271.19	9975.12
501	EOD	5882.44'	47284.63	9964.30
502	EOD	5882.41'	47296.43	9980.45
503	EOD	5884.36'	47318.64	9964.68
504	EOD	5885.85'	47326.78	9936.28
505	EOD	5888.63'	47358.73	9918.60
506	EOD	5902.08'	47516.43	9848.93
507	EOD	5904.91'	47541.78	9839.37
508	EOD	5921.30'	47627.93	9954.28
509	EOD	5926.26'	47673.47	9954.28
510	EOD	5927.61'	47690.91	9931.78
511	EOD	5931.60'	47722.79	9931.78
512	EOD	5938.46'	47768.49	9955.78
513	EOD	5943.29'	47799.61	9959.12
514	EOD	5940.90'	47788.51	9935.11
515	EOD	5943.82'	47806.69	9937.31
516	EOD	5947.26'	47830.94	9946.62
517	EOD	5953.53'	47856.33	9991.52
518	EOD	5955.16'	47855.55	10020.57

Point Table

Point #	Raw Description	Elevation	Northing	Easting
519	EOD	5956.31'	47855.35	10045.80
520	EOD	5956.67'	47835.57	10062.55
521	EOD	5958.79'	47836.26	10087.73
522	EOD	5963.98'	47857.82	10142.05
523	EOD	5964.66'	47858.14	10153.37
524	EOD	5965.56'	47858.05	10173.55
525	EOD	5966.31'	47855.94	10199.92
526	EOD	5965.70'	47834.24	10210.17
527	EOD	5965.87'	47831.06	10226.27
528	EOD	5966.91'	47843.27	10257.27
529	EOD	5967.22'	47827.03	10299.66
530	EOD	5966.47'	47786.39	10400.64
531	EOD	5966.11'	47778.58	10419.35
532	EOD	5965.16'	47756.20	10419.76
533	EOD	5963.10'	47738.08	10450.16
534	EOD	5965.52'	47768.74	10438.82
535	EOD	5964.19'	47757.20	10457.53
536	EOD	5959.40'	47702.05	10504.96
537	EOD	5958.75'	47691.15	10521.37
538	EOD	5960.28'	47720.07	10513.95
539	EOD	5959.36'	47705.57	10535.66
540	EOD	5953.55'	47637.25	10583.43
541	EOD	5951.46'	47618.24	10599.80
542	EOD	5947.77'	47590.13	10622.65
543	EOD	5944.03'	47560.31	10646.91
544	EOD	5950.55'	47620.15	10647.32
545	EOD	5947.28'	47593.84	10648.04
546	EOD	5936.86'	47498.32	10708.34
547	EOD	5932.94'	47465.49	10717.42
560	EDGE OF ASPHALT	5921.27'	47525.35	10198.47
561	EDGE OF ASPHALT	5919.60'	47499.96	10226.70
562	MATCH	5920.66'	47521.43	10195.35
563	MATCH	5919.26'	47495.74	10223.91
570	EOD	5903.45'	47322.48	10577.31
571	EOD	5908.18'	47344.29	10600.27
572	MATCH	5903.85'	47329.29	10574.32
573	MATCH	5907.16'	47347.76	10593.75
600	MATCH	5798.15'	46781.16	10017.68
601	MATCH	5798.93'	46790.75	10020.89
602	MATCH	5805.91'	46837.68	10040.18
603	MATCH	5807.81'	46854.12	10045.95
604	MATCH	5814.13'	46918.40	10025.76
605	MATCH	5815.83'	46927.63	10032.31
606	MATCH	5865.05'	47100.01	10371.75
607	MATCH	5865.04'	47102.50	10386.73
608	MATCH	5910.14'	47357.32	10606.06
609	MATCH	5912.80'	47367.98	10622.06
610	MATCH	5920.14'	47391.15	10681.45
611	MATCH	5923.05'	47407.63	10692.78
612	MATCH	5922.14'	47351.91	10730.48
613	MATCH	5925.19'	47353.77	10767.43
614	MATCH	5931.41'	47352.80	10825.76
615	MATCH	5932.80'	47352.82	10845.67
616	MATCH	5937.60'	47389.32	10874.24
617	MATCH	5944.95'	47399.67	10936.04
618	MATCH	5941.26'	47342.96	10916.97
619	MATCH	5943.00'	47342.61	10944.16
620	MATCH	5887.32'	47519.15	9639.10
621	MATCH	5889.77'	47543.59	9663.17
622	MATCH	5894.55'	47570.23	9678.74
623	MATCH	5896.40'	47581.66	9693.42
624	MATCH	5904.03'	47592.53	9777.15

Point Table

Point #	Raw Description	Elevation	Northing	Easting
625	MATCH	5905.72'	47592.72	9792.52
626	MATCH	5910.52'	47602.10	9819.52
627	MATCH	5911.80'	47603.54	9842.73
628	MATCH	5918.78'	47549.91	9966.92
629	MATCH	5918.77'	47549.50	9984.14
630	MATCH	5921.37'	47564.70	10018.83
631	MATCH	5923.62'	47550.00	10083.80
632	MATCH	5923.04'	47547.67	10137.70
633	MATCH	5925.53'	47593.37	10059.73
634	MATCH	5926.10'	47590.33	10089.74
635	MATCH	5925.04'	47573.38	10170.03
636	MATCH	5924.58'	47565.91	10192.46
637	MATCH	5925.00'	47562.29	10211.60
638	MATCH	5925.35'	47552.91	10233.66
639	MATCH	5918.07'	47479.59	10224.37
640	MATCH	5917.46'	47471.08	10250.87
641	MATCH	5916.27'	47459.66	10259.39
642	MATCH	5914.33'	47434.38	10286.62
643	MATCH	5918.21'	47488.74	10282.96
644	MATCH	5917.20'	47476.12	10295.40
645	MATCH	5911.42'	47421.51	10346.97
646	MATCH	5910.39'	47406.63	10362.26
647	MATCH	5909.57'	47391.30	10377.78
648	MATCH	5908.09'	47373.79	10395.50
649	MATCH	5904.61'	47337.11	10389.95
650	MATCH	5902.31'	47319.06	10408.21
651	MATCH	5900.28'	47306.91	10420.51
652	MATCH	5897.57'	47291.17	10436.44
653	MATCH	5892.32'	47185.04	10535.69
654	MATCH	5894.32'	47165.14	10553.95
655	MATCH	5894.08'	47196.92	10566.81
656	MATCH	5895.56'	47185.73	10577.64
657	MATCH	5901.35'	47103.44	10616.39
658	MATCH	5903.19'	47089.34	10636.66
659	MATCH	5905.22'	47077.11	10664.72
660	MATCH	5906.47'	47074.21	10685.86
661	MATCH	5907.16'	47101.04	10693.18
662	MATCH	5908.09'	47098.00	10707.88
663	MATCH	5913.28'	47094.94	10783.47
664	MATCH	5913.81'	47095.03	10796.52
665	MATCH	5911.29'	47060.28	10782.28
666	MATCH	5912.19'	47060.20	10795.64
667	MATCH	5859.39'	47105.57	10211.94
668	MATCH	5860.34'	47124.39	10198.81
669	MATCH	5863.72'	47145.98	10227.45
670	MATCH	5864.69'	47158.18	10219.61
671	MATCH	5866.98'	47175.86	10153.82
672	MATCH	5868.69'	47188.07	10129.24
673	MATCH	5872.27'	47209.43	10090.42
674	MATCH	5877.02'	47232.37	10061.39
675	MATCH	5873.55'	47200.52	10042.00
676	MATCH	5872.82'	47189.37	10034.89
677	MATCH	5879.10'	47262.61	9957.73
678	MATCH	5879.12'	47271.55	9951.44
679	MATCH	5885.16'	47310.14	9985.13
680	MATCH	5885.42'	47320.42	9969.28
681	MATCH	5886.54'	47361.39	9884.47
682	MATCH	5886.64'	47369.01	9891.26
683	MATCH	5902.82'	47519.15	9858.95
684	MATCH	5903.91'	47535.69	9851.07
685	MATCH	5921.91'	47631.68	9959.28
686	MATCH	5926.09'	47675.50	9959.28

Point Table

Point #	Raw Description	Elevation	Northing	Easting
687	MATCH	5928.30'	47692.69	9915.68
688	MATCH	5930.96'	47722.23	9915.75
689	MATCH	5938.82'	47768.48	9960.80
690	MATCH	5942.69'	47799.67	9964.16
691	MATCH	5941.87'	47797.33	9925.72
692	MATCH	5942.68'	47809.22	9932.58
693	MATCH	5955.97'	47865.05	10024.09
694	MATCH	5956.75'	47864.87	10043.91
695	MATCH	5956.87'	47831.64	10065.99
696	MATCH	5958.28'	47832.28	10088.53
697	MATCH	5964.25'	47859.83	10142.21
698	MATCH	5964.86'	47860.15	10153.43
699	MATCH	5966.57'	47864.30	10174.44
700	MATCH	5967.04'	47860.12	10199.99
701	MATCH	5965.23'	47829.19	10210.06
702	MATCH	5965.31'	47826.21	10225.04
703	MATCH	5967.27'	47852.32	10272.30
704	MATCH	5967.75'	47844.48	10300.82
705	MATCH	5966.56'	47792.12	10405.22
706	MATCH	5966.43'	47784.59	10420.28
707	MATCH	5969.80'	47783.45	10446.19
708	MATCH	5969.03'	47774.05	10463.52
709	MATCH	5963.31'	47736.74	10446.73
710	MATCH	5965.11'	47753.63	10418.03
711	MATCH	5959.29'	47698.86	10502.53
712	MATCH	5958.93'	47688.50	10518.16
713	MATCH	5964.00'	47736.28	10518.47
714	MATCH	5963.71'	47736.79	10530.62
715	MATCH	5953.12'	47632.45	10581.05
716	MATCH	5951.74'	47618.18	10593.40
717	MATCH	5946.36'	47580.95	10614.83
718	MATCH	5944.26'	47554.37	10640.80
720	MATCH	5949.20'	47600.77	10660.25
721	MATCH	5936.81'	47495.24	10721.83
722	MATCH	5933.52'	47466.67	10722.28
730	EOD	5896.51'	47169.42	10584.71
731	MATCH	5899.30'	47172.81	10602.85
732	MATCH	5896.82'	47193.28	10585.42
740	EOD	5924.11'	47653.74	9954.28
741	MATCH	5924.40'	47653.70	9959.28
742	EOD	5941.48'	47786.08	9957.48
743	MATCH	5941.03'	47786.08	9962.51
744	MATCH	5951.11'	47864.36	9922.68
745	MATCH	5952.30'	47875.48	9939.99
746	EOD	5965.33'	47858.21	10168.10
747	MATCH	5965.21'	47860.21	10168.01
748	EOD	5967.24'	47822.11	10312.08
749	MATCH	5967.71'	47832.55	10315.94
750	EOD	5963.88'	47838.17	10154.36
751	MATCH	5962.63'	47826.20	10154.12
752	EOD	5966.22'	47786.21	10347.52
753	EOD	5965.37'	47759.69	10412.55
754	MATCH	5966.63'	47783.42	10346.42
755	MATCH	5965.61'	47757.63	10409.85
756	MATCH EX. CONCRETE	5950.94'	47622.79	10653.71
757	EOA	5955.61'	47642.32	10664.87
760	EOD	5873.23'	47211.48	10075.00
761	MATCH	5875.30'	47222.60	10074.44
770	MATCH	5808.03'	46934.40	9983.79
771	MATCH	5807.94'	46918.08	9983.22

Boundaries Unlimited Inc.
Civil Engineering
Surveying
& Beyond
923 Cooper Avenue
Suite 201
Glenwood Springs, CO 81601
tele: 970.945.5252
fax: 970.384.2833

Engineer or Surveyor Seal

NOT FOR Bid Set CONSTRUCTION

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

811
Know what's below. Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Point Table

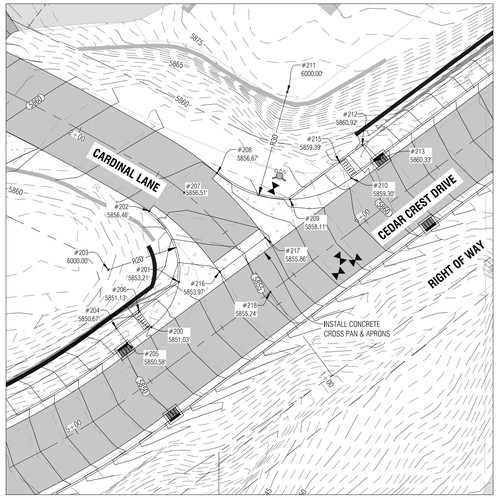
95% Progress Set - Not For Construction

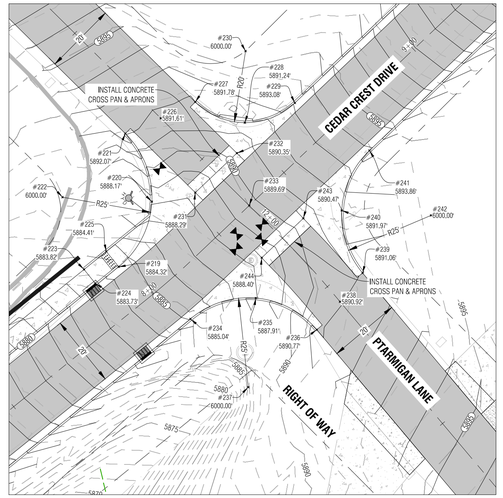
No.	Date	Revision	By
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

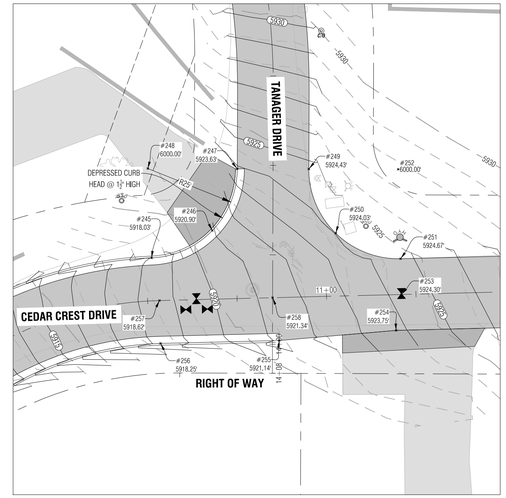
PROJECT NO.
18034
FILE NAME:
18034-c-civil3d.dwg
Designer:
DJW
Drafter:
BUI
Date:
11/13/19

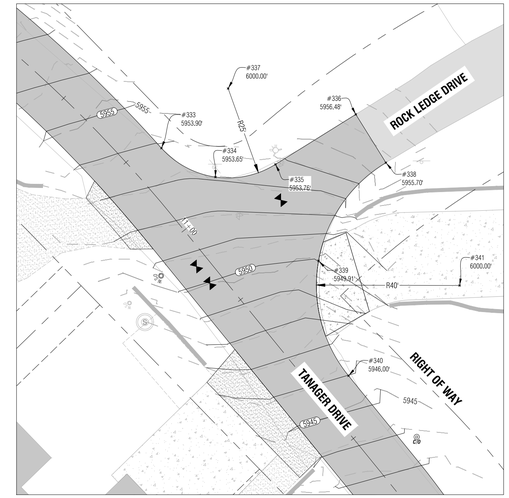
Sheet
C.12

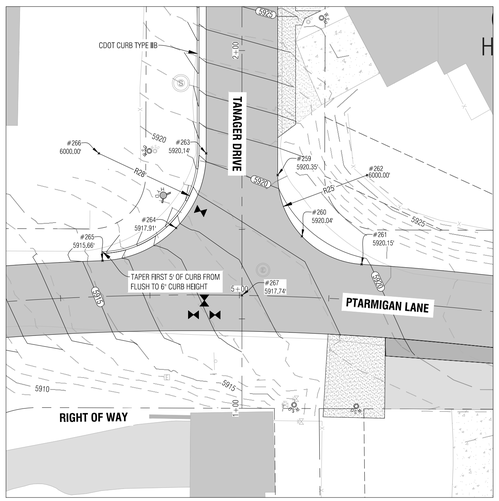
N:\PROJECTS\2018\18034-GWS-Cedar Crest\dwg\18034-C-Civil3D.dwg 11/13/2019 12:03 PM

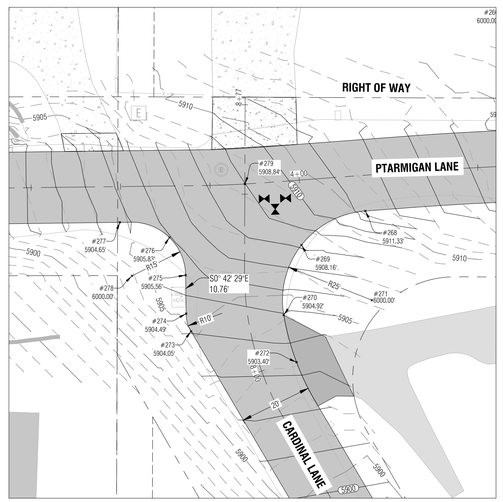


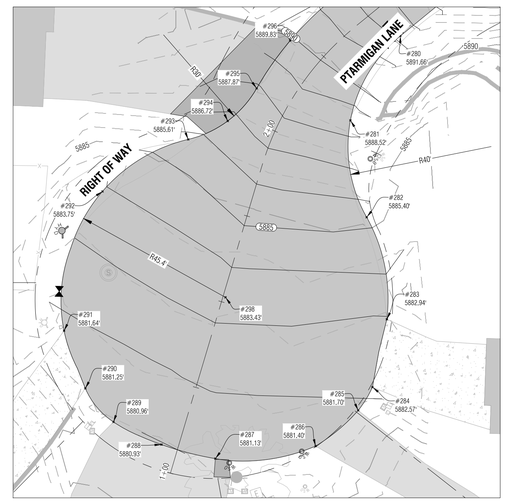


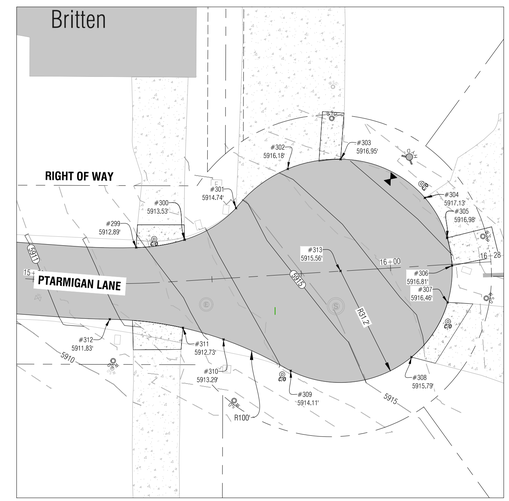












Point Table				
Point #	Desc.	Elev.	North	East
200	CURB FL	5851.03'	47063.13	10264.44
201	CURB FL	5853.21'	47075.77	10272.20
202	CURB FL	5856.46'	47095.58	10263.94
203	20' RP (FL)	6000.00'	47079.17	10252.49
204	EDGE OF CONCRETE	5850.67'	47062.76	10254.74
205	EDGE OF CONCRETE	5850.58'	47058.75	10257.72
206	EDGE OF CONCRETE	5851.13'	47067.54	10261.15
207	ROAD CENTERLINE	5856.51'	47100.73	10273.74
208	CURB FL	5856.67'	47106.18	10282.83
209	CURB FL	5858.11'	47098.86	10303.22
210	CURB FL	5859.30'	47104.78	10320.39
211	30' RP (FL)	6000.00'	47128.85	10302.48
212	EDGE OF CONCRETE	5860.92'	47113.97	10323.53
213	EDGE OF CONCRETE	5860.33'	47109.56	10326.81
215	EDGE OF CONCRETE	5859.39'	47109.19	10317.11

Point Table				
Point #	Desc.	Elev.	North	East
216	CROSS PAN FL	5853.97'	47078.60	10283.55
217	CROSS PAN FL	5855.86'	47088.15	10296.38
218	ROAD INTERSECTION	5855.24'	47072.95	10297.73
219	CURB FL	5884.32'	47223.33	10472.66
220	CURB FL	5888.17'	47241.53	10481.93
221	CURB FL	5892.07'	47260.57	10474.53
222	25' RP (FL)	6000.00'	47242.78	10456.96
223	EDGE OF CONCRETE	5883.82'	47222.58	10462.98
224	EDGE OF CONCRETE	5883.73'	47218.69	10466.12
225	EDGE OF CONCRETE	5884.41'	47227.61	10469.21
226	ROAD CENTERLINE	5891.61'	47264.85	10484.42
227	CURB FL	5891.78'	47269.39	10494.05
228	CURB FL	5891.24'	47263.62	10507.92
229	CURB FL	5893.08'	47269.12	10521.89
230	20' RP (FL)	6000.00'	47283.62	10508.11

Point Table				
Point #	Desc.	Elev.	North	East
231	CROSS PAN FL	5888.29'	47244.07	10494.07
232	CROSS PAN FL	5890.35'	47255.10	10505.68
233	ROAD INTERSECTION	5889.69'	47240.44	10509.13
234	CURB FL	5885.04'	47208.74	10492.70
235	CURB FL	5887.91'	47214.59	10510.98
236	CURB FL	5890.77'	47205.75	10528.02
237	25' RP (FL)	6000.00'	47189.68	10508.87
238	ROAD CENTERLINE	5890.92'	47213.56	10534.52
239	CURB FL	5891.06'	47221.60	10540.82
240	CURB FL	5891.97'	47239.09	10534.99
241	CURB FL	5893.86'	47255.82	10542.73
242	25' RP (FL)	6000.00'	47237.70	10559.95
243	CROSS PAN FL	5890.47'	47236.87	10524.24
244	CROSS PAN FL	5888.40'	47225.85	10512.64
245	CURB FL	5918.03'	47378.50	10677.11

Point Table				
Point #	Desc.	Elev.	North	East
246	CURB FL	5920.90'	47386.15	10694.08
247	CURB FL	5923.63'	47403.39	10701.06
248	25' RP (FL)	6000.00'	47403.48	10676.06
249	EDGE OF ASPHALT	5924.43'	47403.34	10721.06
250	EDGE OF ASPHALT	5924.03'	47385.39	10728.57
251	EDGE OF ASPHALT	5924.67'	47378.26	10746.69
252	25' RP (FL)	6000.00'	47403.25	10746.06
253	ROAD CENTERLINE	5924.30'	47368.26	10746.94
254	EDGE OF ASPHALT	5923.75'	47358.22	10745.45
255	CURB FL	5921.14'	47355.41	10712.79
256	CURB FL	5918.25'	47354.57	10679.62
257	ROAD CENTERLINE	5918.62'	47366.57	10679.32
258	ROAD INTERSECTION	5921.34'	47367.36	10710.93
259	EDGE OF ASPHALT	5920.35'	47617.50	9954.28
260	EDGE OF ASPHALT	5920.04'	47600.38	9961.06

Point Table				
Point #	Desc.	Elev.	North	East
261	EDGE OF ASPHALT	5920.15'	47592.55	9977.72
262	25' RP (EOA)	6000.00'	47617.50	9979.28
263	EDGE OF ASPHALT	5920.14'	47623.55	9934.28
264	EDGE OF ASPHALT	5917.91'	47602.71	9925.85
265	EDGE OF ASPHALT	5915.66'	47593.57	9905.31
266	28' RP (FL)	6000.00'	47623.55	9904.28
267	ROAD INTERSECTION	5917.74'	47583.89	9944.28
268	EDGE OF ASPHALT	5911.33'	47570.90	9862.15
269	EDGE OF ASPHALT	5908.16'	47561.40	9844.34
270	EDGE OF ASPHALT	5904.92'	47541.84	9839.36
271	25' RP (EOA)	6000.00'	47545.97	9864.02
272	EDGE OF ASPHALT	5903.40'	47528.64	9842.92
273	PC	5904.05'	47537.25	9813.46
274	PT	5904.49'	47542.21	9812.08
275	EDGE OF ASPHALT	5905.56'	47552.96	9811.95

Point Table				
Point #	Desc.	Elev.	North	East
276	EDGE OF ASPHALT	5905.83'	47563.51	9807.42
277	EDGE OF ASPHALT	5904.65'	47567.74	9793.59
278	15' RP (EOA)	6000.00'	47552.78	9796.95
279	ROAD INTERSECTION	5908.84'	47578.46	9828.49
280	EDGE OF ASPHALT	5891.66'	47540.96	9703.35
281	EDGE OF ASPHALT	5888.52'	47517.34	9689.38
282	EDGE OF ASPHALT	5885.40'	47490.28	9693.92
283	EDGE OF ASPHALT	5882.94'	47461.76	9699.55
284	EDGE OF ASPHALT	5882.57'	47442.80	9695.54
285	EDGE OF ASPHALT	5881.70'	47436.29	9691.56
286	EDGE OF ASPHALT	5881.40'	47426.32	9679.65
287	EDGE OF ASPHALT	5881.13'	47422.82	9651.63
288	EDGE OF ASPHALT	5880.93'	47426.74	9636.58
289	EDGE OF ASPHALT	5880.96'	47433.06	9623.17
290	EDGE OF ASPHALT	5881.25'	47442.46	9615.29

Point Table				
Point #	Desc.	Elev.	North	East
291	EDGE OF ASPHALT	5881.64'	47457.55	9609.35
292	EDGE OF ASPHALT	5883.75'	47497.50	9620.09
293	EDGE OF ASPHALT	5885.61'	47512.04	9644.05
294	EDGE OF ASPHALT	5886.72'	47517.19	9655.09
295	EDGE OF ASPHALT	5887.87'	47526.31	9663.18
296	EDGE OF ASPHALT	5889.83'	47539.66	9672.55
297	EDGE OF ASPHALT	5891.40'	47551.11	9684.18
298	45.4' RP (EOA)	5883.43'	47467.89	9654.46
299	EDGE OF ASPHALT	5912.89'	47088.65	10783.11
300	EDGE OF ASPHALT	5913.53'	47090.86	10796.63
301	EDGE OF ASPHALT	5914.74'	47099.67	10811.00
302	EDGE OF ASPHALT	5916.18'	47110.63	10825.47
303	EDGE OF ASPHALT	5916.95'	47113.34	10840.22
304	EDGE OF ASPHALT	5917.13'	47102.57	10863.79
305	EDGE OF ASPHALT	5916.98'	47091.38	10870.01

Point Table				
Point #	Desc.	Elev.	North	East
306	EDGE OF ASPHALT	5916.81'	47083.61	10871.37
307	EDGE OF ASPHALT	5916.46'	47073.33	10870.14
308	EDGE OF ASPHALT	5915.79'	47058.04	10860.03
309	EDGE OF ASPHALT	5914.11'	47054.22	10826.28
310	EDGE OF ASPHALT	5913.29'	47062.99	10807.51
311	EDGE OF ASPHALT	5912.73'	47066.23	10796.17
312	EDGE PF ASPHALT	5911.83'	47068.62	10775.73
313	31.2' RP (EOA)	5915.56'	47082.14	10840.21
333	EDGE OF ASPHALT	5953.90'	47646.42	10602.12
334	EDGE OF ASPHALT	5953.65'	47638.33	10617.22
335	EDGE OF ASPHALT	5953.76'	47641.86	10633.98
336	EDGE OF ASPHALT	5956.48'	47655.85	10656.44
337	25' RP (EOA)	6000.00'	47663.08	10620.76
338	EDGE OF ASPHALT	5955.70'	47642.32	10664.87
339	EDGE OF ASPHALT	5949.91'	47614.94	10646.05

Boundaries Unlimited Inc.
Civil Engineering
Surveying
& Beyond
923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE)
Required Project: **See Notes**
If "Yes", SUE Certification by:
Firm: **N/A**
Job #: **Precision Hyrovac**
Date: **Nov. 2018**

Engineer or Surveyor Seal

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH
0 20' 40'
Scale: 1" = 20'

811
Know what's **below.**
Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Intersection Curb Profiles

95% Progress Set - Not For Construction

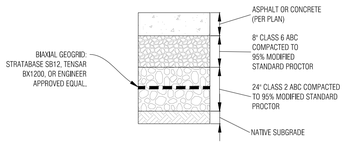
No.	Date	Revision	By
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

PROJECT NO. **18034**
Designer: **DJW**
Drafter: **BUI**
Date: **11/13/19**

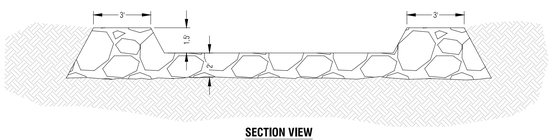
Sheet **C.13**

File Name: **18034-c-base.dwg**

N:\PROJECTS\2018\18034-GWS-Cedar Crest\dwg\18034-C-Base.dwg 11/13/2019 12:04 PM



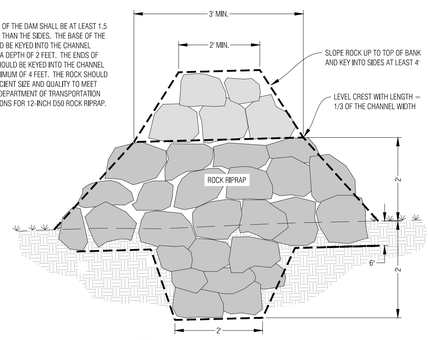
Unsuitable Material
Scale: N.T.S.



SECTION VIEW

NOTE:

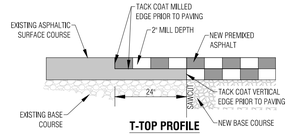
1. THE CENTER OF THE DAM SHALL BE AT LEAST ±.5 FEET LOWER THAN THE SIDES. THE BASE OF THE DAM SHOULD BE KEYED INTO THE CHANNEL BOTTOM TO A DEPTH OF 2 FEET. THE ENDS OF THE DAM SHOULD BE KEYED INTO THE CHANNEL SIDES A MINIMUM OF 4 FEET. THE ROCK SHOULD BE OF SUFFICIENT SIZE AND QUALITY TO MEET COLORADO DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR 12-INCH D50 ROCK RIPRAP.



Rock Check Dam
Scale: N.T.S.

NOTES:

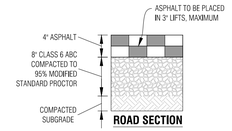
1. THE LONGITUDINAL PAVEMENT SEAM CREATED BETWEEN THE EXISTING ASPHALT AND THE NEW ASPHALT SHALL NOT BE LOCATED IN THE WHEEL PATH.
2. AT THE LOCATIONS WHERE NEW ASPHALT IS TO ABUT EXISTING ASPHALT, SAW CUT THE EXISTING PAVEMENT 24-INCHES BACK FROM THE EXISTING EDGE AND REMOVE PAVEMENT. FROM THE SAW CUT LINE, MILL EXISTING PAVEMENT BACK 24-INCHES TO A DEPTH OF 2-INCHES. TACK EXPOSED VERTICAL ASPHALT EDGE PRIOR TO PAVING. THE SAW CUTTING WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE REMOVAL OF THE ASPHALT ITEM.
3. TEMPORARY REPAIR TO BE PLACED THE SAME DAY AS COMPLETION OF BACKFILL. CONTRACTOR WILL MAINTAIN THE TEMPORARY REPAIR UNTIL THE PERMANENT REPAIR HAS BEEN COMPLETED.



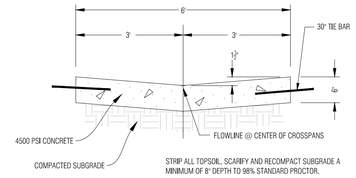
Pavement Replacement
Scale: N.T.S.

NOTES:

1. SECTION IS BASED ON RECOMMENDATIONS PROVIDED BY CTL THOMPSON, INC.
2. ASPHALT SHALL BE HMA SX75 PG 58-28. THE MIX DESIGN MUST BE SUBMITTED TO THE CITY FOR APPROVAL AT LEAST 30 DAYS BEFORE THE ANTICIPATED INSTALLATION DATE.
3. ASPHALT TO BE PLACED IN 3" LIFTS, MAXIMUM, AND COMPACTED TO A DENSITY OF 95% OPTIMUM DENSITY.

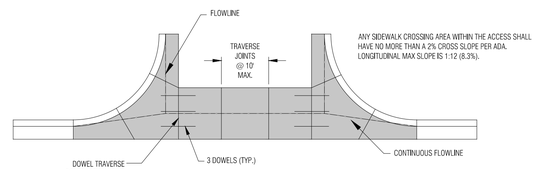


Pavement Section
Scale: N.T.S.



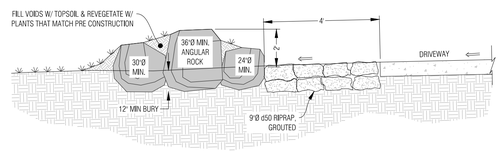
SECTION VIEW

NOTE: ALL WORK TO MEET CDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE SECTION 412 AND 602



PLAN VIEW

Cross Pan
Scale: N.T.S.

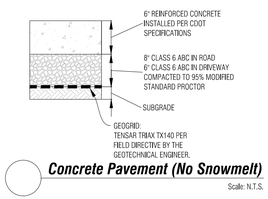


SECTION VIEW

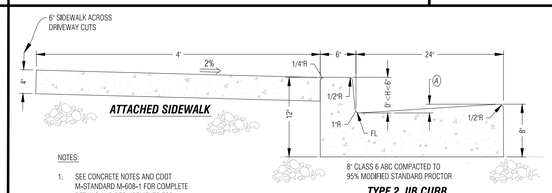
Deflection Berm
Scale: N.T.S.

NOTE:

1. THIS SECTION AND MATERIALS SHALL BE CONSTRUCTED IN CONFORMANCE WITH RECOMMENDATIONS PROVIDED BY CTL THOMPSON, INC.
2. SEE CONCRETE NOTES AND CDOT M-STANDARD M-412 FOR COMPLETE DETAILS AND REQUIREMENTS FOR CONCRETE PAVEMENT & JOINTS.



Concrete Pavement (No Snowmelt)
Scale: N.T.S.



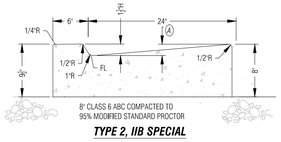
ATTACHED SIDEWALK

NOTES:

1. SEE CONCRETE NOTES AND CDOT M-STANDARD M-608-1 FOR COMPLETE DETAILS AND REQUIREMENTS FOR CURB, GUTTER AND SIDEWALKS.

(A) GUTTER CROSS SLOPES SHALL BE 1/2 INCH PER FOOT WHEN DRAINING AWAY FROM THE CURB, AND 1 INCH PER FOOT WHEN DRAINING TO THE CURB

Curb & Gutter W/ Attached Sidewalk
Scale: N.T.S.

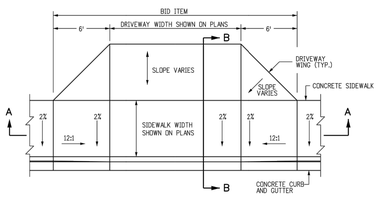


NOTES:

1. SEE CONCRETE NOTES AND CDOT M-STANDARD M-608-1 FOR COMPLETE DETAILS AND REQUIREMENTS FOR CURB, GUTTER AND SIDEWALKS.

(A) GUTTER CROSS SLOPES SHALL BE 1/2 INCH PER FOOT WHEN DRAINING AWAY FROM THE CURB, AND 1 INCH PER FOOT WHEN DRAINING TO THE CURB

Depressed Curb & Gutter
Scale: N.T.S.

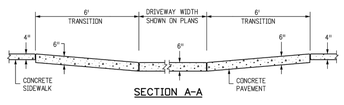


CONCRETE DRIVEWAY ENTRANCE TYPE 3

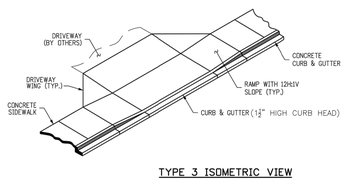
NOTES

1. DRAINAGE STRUCTURES, TRAFFIC SIGNAL EQUIPMENT, JUNCTION BOXES, AND OTHER OBSTRUCTIONS SHOULD NOT BE PLACED IN FRONT OF THE DRIVEWAY RAMP ACCESS AREAS.
2. FOR THE CURB AND GUTTER SHOWN, SEE PLANS FOR CURB TYPE.
3. RAMP SLOPES SHALL BE 12:1 OR FLATTER.

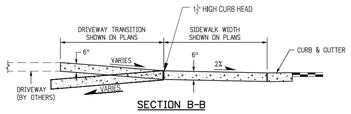
CONCRETE PAVEMENT PAY AREA



SECTION A-A



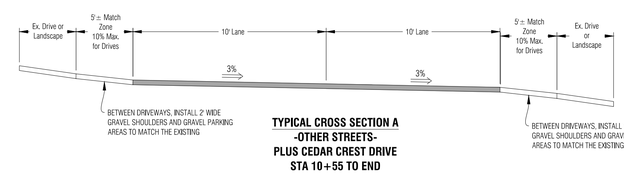
TYPE 3 ISOMETRIC VIEW



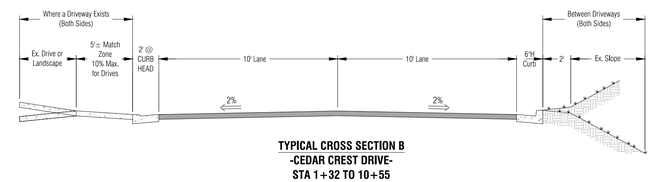
SECTION B-B

UPHILL SIDE OF THE STREET

DOWNHILL SIDE OF THE STREET



TYPICAL CROSS SECTION A
-OTHER STREETS-
PLUS CEDAR CREST DRIVE
STA 10+55 TO END



TYPICAL CROSS SECTION B
-CEDAR CREST DRIVE-
STA 1+32 TO 10+55

Road Sections
Scale: N.T.S.

Computer File Information	
Creation Date: 07/04/12	Initials: DLM
Last Modification Date: 07/24/12	Initials: LTA
Full Path: www.coloradodot.info/business/designsupport	
Drawing File Name: 609010404.dgn	
CAD Ver.: MicroStation V8 Scale: Not to Scale	Units: English

Sheet Revisions	
Date:	Comments

Colorado Department of Transportation
4201 East Arkansas Avenue
CDOT HQ, 4th Floor
Denver, CO 80222
Phone: 303-757-9021 FAX: 303-757-9868
Division of Project Support DLM/LTA

CURB, GUTTERS, AND SIDEWALKS

Issued By: Project Development Branch on July 4, 2012

STANDARD PLAN NO.
M-609-1
Sheet No. 4 of 4

Boundaries Unlimited Inc.
Civil Engineering Surveying & Beyond
923 Cooper Avenue
Suite 201
Glenwood Springs, CO 81601
tele: 970.945.5252
fax: 970.384.2833

Engineer or Surveyor Seal

NOT FOR CONSTRUCTION
Bid Set

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

811
Know what's below.
Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Civil Details

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

PROJECT NO. 18034
FILE NAME: 18034-6-CivilBd.dwg
Designer: DJW
Drafter: BUI
Date: 11/13/19

Sheet
C.14

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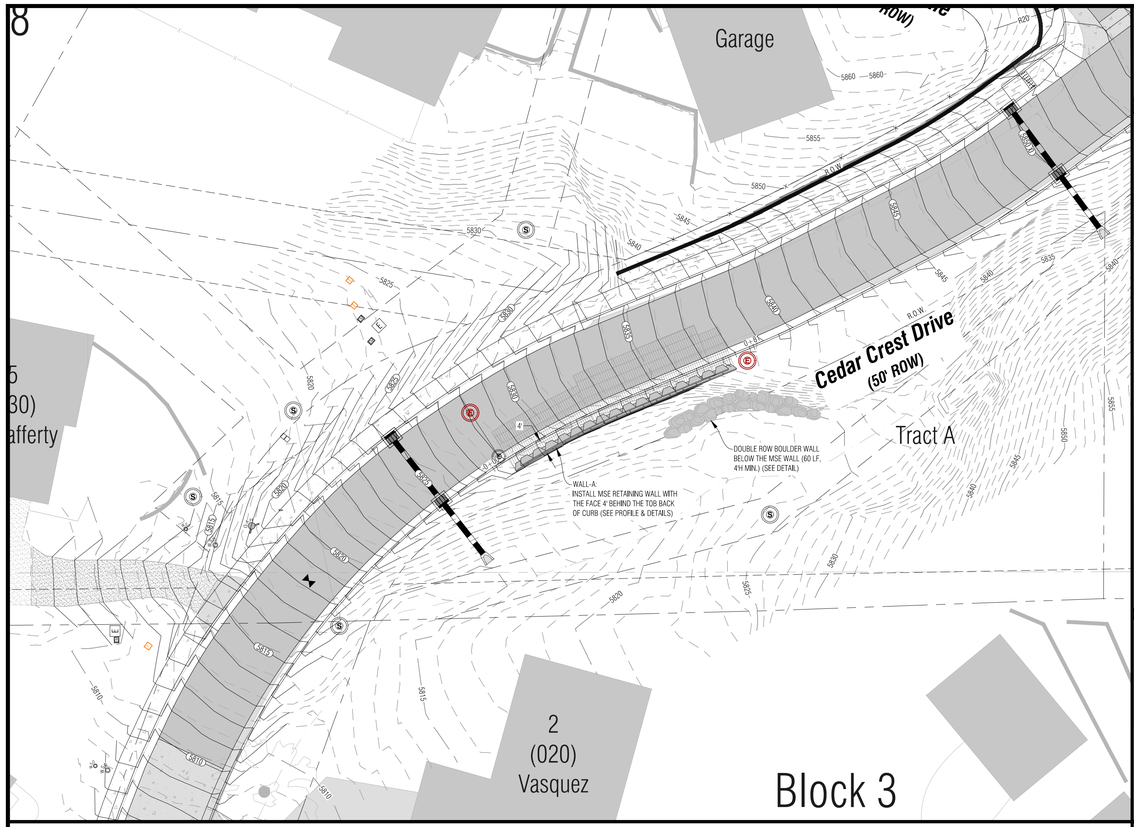
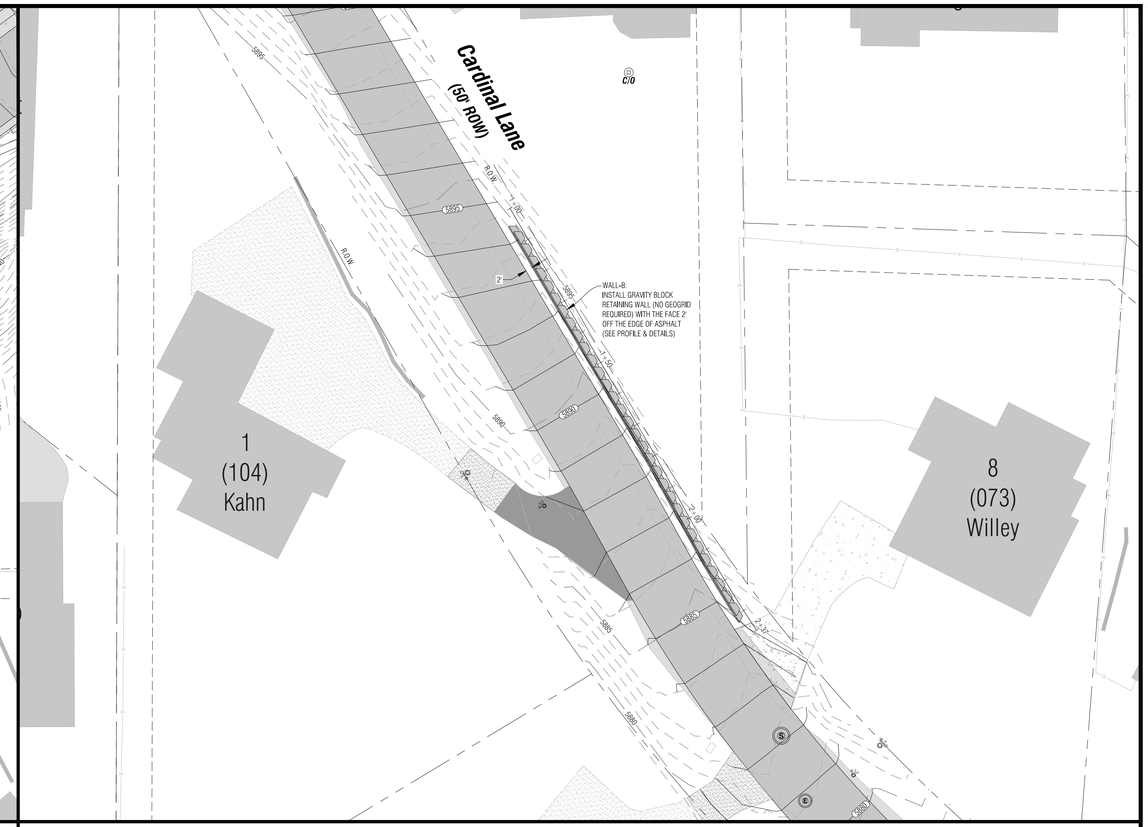
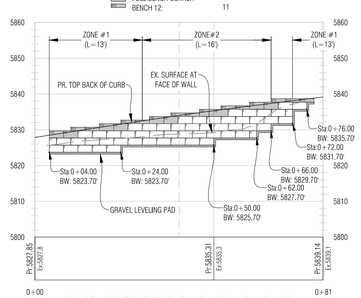




MSE BLOCK QUANTITIES

BLOCK TYPE	QUANTITIES
FULL	52
HALF	3
FULL BENCH	5
FULL BENCH CORNER	5
BENCH 12:	11



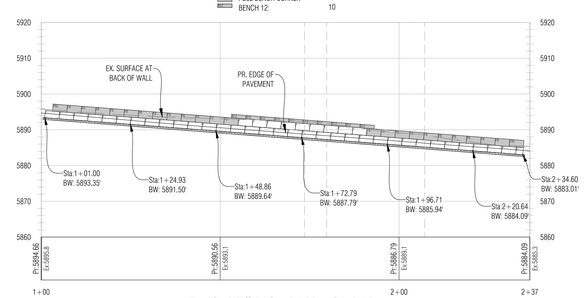
Profile: Wall A (MSE), Sta:0+00 to Sta:0+81
Scale: Vert.=20', Horiz.=20'

NOTES:

1. RETAINING WALL BLOCKS SHALL BE STONETERRA WALL SYSTEM OR ENGINEER APPROVED EQUAL.
2. SEE NEXT SHEET FOR DETAILS.

MSE BLOCK QUANTITIES

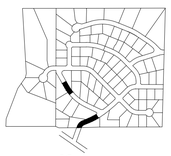
BLOCK TYPE	QUANTITIES
FULL	42
HALF	1
FULL BENCH	22
FULL BENCH CORNER	2
BENCH 12:	10



Profile: Wall-B, Sta:1+00 to Sta:2+37
Scale: Vert.=20', Horiz.=20'

NOTES:

1. RETAINING WALL BLOCKS SHALL BE STONETERRA WALL SYSTEM OR ENGINEER APPROVED EQUAL.
2. SEE NEXT SHEET FOR DETAILS.



Keymap

Boundaries Unlimited Inc.
Civil Engineering
Surveying
& Beyond
923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE) Required Project: ***See Notes***
If "Yes", SUE Certification by:
Firm: ***N/A***
Job # ***Precision Hyrovac***
Date: ***Nov. 2018***

Engineer or Surveyor Seal

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH
0 20' 40'
Scale: 1" = 20'

Know what's **below.**
Call before you dig.

GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Retaining Walls A & B (Block & MSE)

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

PROJECT NO. ***18034***
Designer: ***DJW***
Drafter: ***BUI***
Date: ***11/13/19***

Sheet
C.15

File Name: ***18034-c-wall.dwg***

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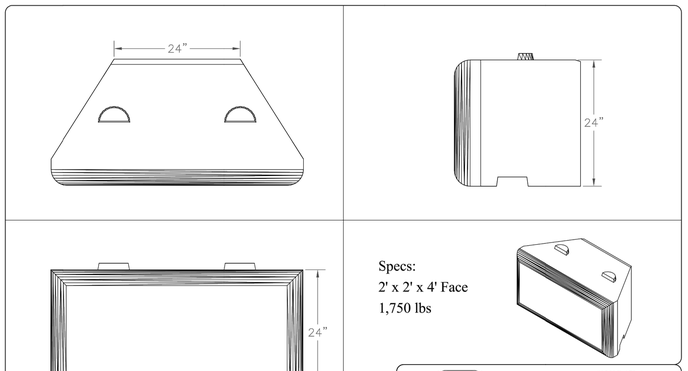
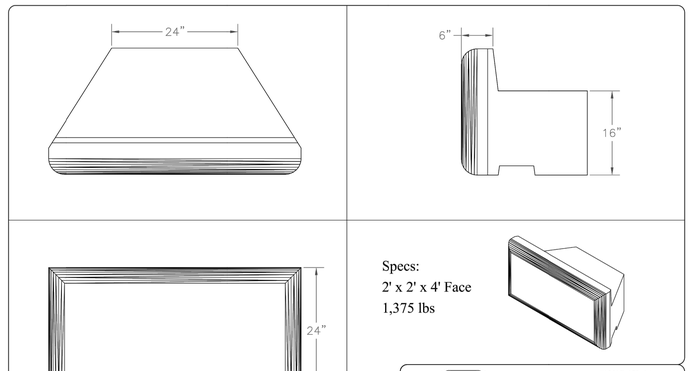


Specs:
2' x 2' x 4' Face
1,750 lbs

STONETERRA™ WALL SYSTEM
815 N.E. 172nd Ave.
VANCOUVER, WA 98684
800-377-3877 PH
360-694-0281 FAX

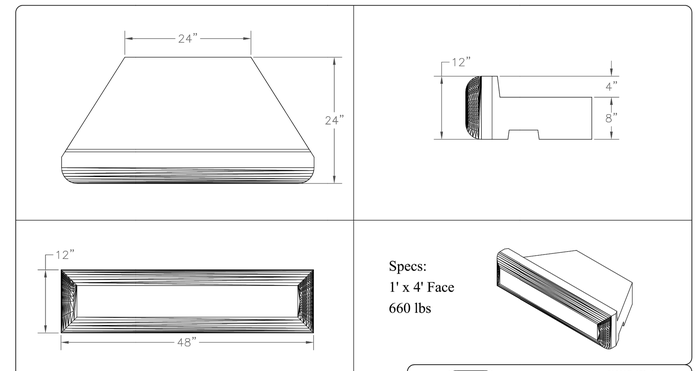
TITLE: Stoneterra -Full Block	DRAWN BY: MLS	DATE: 4/8 SCALE: NTS	SHEET #: ST-100



Specs:
2' x 2' x 4' Face
1,375 lbs

STONETERRA™ WALL SYSTEM
815 N.E. 172nd Ave.
VANCOUVER, WA 98684
800-377-3877 PH
360-694-0281 FAX

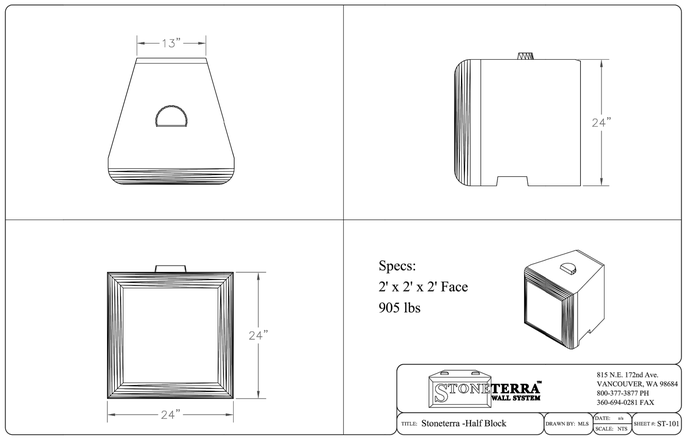
TITLE: Stoneterra -Full Bench	DRAWN BY: MLS	DATE: 4/8 SCALE: NTS	SHEET #: ST-103



Specs:
1' x 4' Face
660 lbs

STONETERRA™ WALL SYSTEM
815 N.E. 172nd Ave.
VANCOUVER, WA 98684
800-377-3877 PH
360-694-0281 FAX

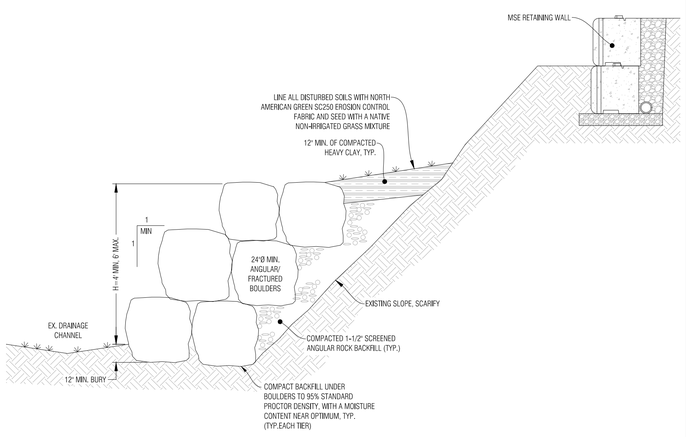
TITLE: Stoneterra - 12" Bench Block	DRAWN BY: MLS	DATE: 4/8 SCALE: NTS	SHEET #: ST-107



Specs:
2' x 2' x 2' Face
905 lbs

STONETERRA™ WALL SYSTEM
815 N.E. 172nd Ave.
VANCOUVER, WA 98684
800-377-3877 PH
360-694-0281 FAX

TITLE: Stoneterra -Half Block	DRAWN BY: MLS	DATE: 4/8 SCALE: NTS	SHEET #: ST-101



Double Row Boulder Wall

Scale: N.T.S.

MSE WALL DESIGN NOTES:

MSE WALL DESIGN PARAMETERS

1. THE MSE WALL WAS DESIGNED IN GENERAL ACCORDANCE WITH PROCEDURES CONTAINED IN THE FHWA "MECHANICALLY STABILIZED EARTH WALLS AND REINFORCED SOIL SLOPES, DESIGN & CONSTRUCTION GUIDELINES", FHWA-NHI-00-043.

2. THE FOLLOWING VALUES HAVE BEEN ASSUMED FOR SOIL/ROCK DESIGN PARAMETERS:

	(DEG.)	(c)	(PCF)
REINFORCED SOIL	30	N/A	125
FOUNDATION SOIL	26	N/A	110
RETAINED SOIL	26	N/A	110

AN EXPERIENCED GEOTECHNICAL ENGINEER SHOULD VERIFY THE ABOVE DESIGN PARAMETERS DURING CONSTRUCTION.

3. GROUNDWATER WAS NOT CONSIDERED TO BE PRESENT FOR THIS DESIGN. CONTACT THE ENGINEER IMMEDIATELY IF GROUNDWATER OR EXCESSIVELY MOIST SOILS ARE ENCOUNTERED DURING CONSTRUCTION.

4. FACTORS OF SAFETY:
   - STATIC
     - SLIDING = 1.5
     - OVERTURNING = 2.0
     - GRAVITY OT., FOUNDATION = 1.5
     - GRAVITY OT., BLOCK/BLOCK = 1.5
     - BEARING, GRAVITY = 3.0
     - BEARING, MSE = 3.0
   - LOCAL STABILITY
     - SHEAR = 1.5
     - BENDING = 1.5
   - REINFORCING
     - UNCERTAINTIES = 1.5
     - PULLOUT = 1.5
   - CONNECTION
     - PEAK CONNECTION = 1.5
     - TENSILE OVERSTRESS = 1.5

GENERAL REQUIREMENTS AND NOTES

1. WALL GEOMETRY USED IN DESIGN WAS BASED ON AERIAL TOPOGRAPHY PROVIDED BY THE CITY OF GLENWOOD SPRINGS.
2. THIS DESIGN IS VALID ONLY FOR THE CEDAR CREST SUBDIVISION IMPROVEMENTS PROJECT WALL(S) SPECIFICALLY INCLUDED IN THIS PLAN SET.
3. THE ENGINEER IS NOT RESPONSIBLE FOR MAINTAINING SLOPE STABILITY DURING EXCAVATION AND MSE WALL CONSTRUCTION.
4. THE CONTRACTOR IS RESPONSIBLE FOR FIELD LOCATING ALL NEARBY UTILITIES, CONSTRUCTING AND MAINTAINING A SAFE TEMPORARY SLOPE, AND TEMPORARY EXCAVATION SUPPORT IF NEEDED. CONFLICTING UTILITIES MAY REQUIRE REDESIGN AT ENGINEER'S DISCRETION.
5. ENGINEER IS NOT RESPONSIBLE FOR CONSTRUCTION SITE SAFETY, QUALITY CONTROL, QUALITY ASSURANCE, CHANGED CONDITIONS OR PROBLEMS RESULTING FROM IMPROPER CONSTRUCTION TECHNIQUES.
6. ENGINEER IS NOT RESPONSIBLE FOR MSE WALL LAYOUT.

MSE WALL CONSTRUCTION NOTES:

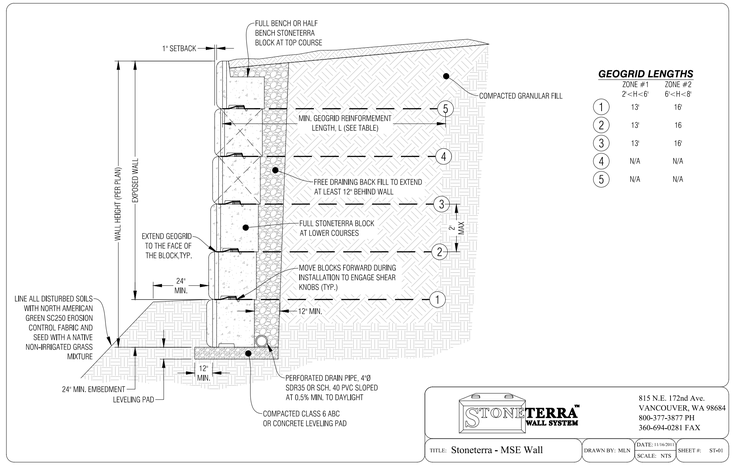
1. FACING BLOCKS SHALL BE STONETERRA PRECAST CONCRETE BLOCKS WITH A MINIMUM BLOCK STRENGTH OF 3,000 PSI. INTEGRAL COLOR CAN BE USED PER AT OWNER'S REQUEST.
2. QUALIFICATIONS: THE CONTRACTOR AND THE SITE SUPERVISOR SHALL HAVE SUCCESSFUL COMPLETED SEVERAL PROJECTS INCLUDING THE INSTALLATION OF STONETERRA WALL SYSTEMS. THE CONTRACTOR SHALL CARRY ADEQUATE INSURANCE AND BOND.
3. EXCAVATION:
   - 3.1. PRIOR TO THE BEGINNING OF EXCAVATION, A STONETERRA SUPPLIERS REPRESENTATIVE EXPERIENCED IN STONETERRA WALL CONSTRUCTION SHALL BE AVAILABLE TO ASSIST THE CONTRACTOR REGARDING WALL FOUNDATION EXCAVATION. SPECIFICALLY THE PREPARATION OF FOUNDATION SUBGRADE INCLUDING OTHER EXCAVATION PROCEDURES RELATED TO SUBGRADE PREPARATION, PLACEMENT OF BLOCKS, AND INSTALLATION OF THE DRAINAGE ENVELOPE BEHIND THE WALL.
   - 3.2. THE CONTRACTOR SHALL PROVIDE ADEQUATE EXCAVATION SUPPORT DURING CONSTRUCTION IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL SAFETY REGULATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE SITE SAFETY DURING EXCAVATION AND OTHER CONSTRUCTION ACTIVITIES.
   - 3.3. THE SUBGRADE SHALL BE EXCAVATED TO MEET DESIGN REQUIREMENTS SHOWN ON GRADING PLANS. EXCAVATIONS SHALL BE MADE VERTICALLY TO THE PLAN ELEVATION AND HORIZONTALLY TO THE DESIGNED GEOGRID LENGTHS SO THAT OVER-EXCAVATION IS MINIMIZED. WIDTH OF EXCAVATION SHOULD ALLOW FOR WALL BASE AND DRAINPIPE.
   - 3.4. START EXCAVATION AT THE LOWEST WALL LEVEL. IF THE WALL STEPS UP IN ONE BLOCK HEIGHT, THE BASE BLOCK SHOULD BE INSTALLED AT THE LOWEST LEVEL IN ORDER TO ESTABLISH GRADE AND FACE LOCATION OF THE SECOND LEVEL.
   - 3.5. OVEREXCAVATED OR FILLED AREAS SHALL BE WELL COMPACTED, OBSERVED, TESTED, AND APPROVED BY A QUALIFIED GEOTECHNICAL ENGINEER.
   - 3.6. A QUALIFIED GEOTECHNICAL ENGINEER SHALL EVALUATE AND APPROVE EXCAVATED MATERIALS THAT ARE USED AS BACKFILL IN THE REINFORCEMENT ZONE. ALL BACKFILL MATERIALS SHALL BE PROTECTED FROM THE WEATHER.
4. FOUNDATION PREPARATION:
   - 4.1. THE FOUNDATION TRENCH SHALL BE EXCAVATED TO THE DIMENSIONS INDICATED ON THE CONSTRUCTION DRAWINGS.
   - 4.2. A QUALIFIED GEOTECHNICAL ENGINEER SHALL INSPECT AND APPROVE THE REINFORCED ZONE AND LEVELING PAD FOUNDATION SOIL SUBGRADE IN ORDER TO ENSURE ADEQUATE BEARING CAPACITY. SUBGRADE SOIL AREAS NOT MEETING REQUIRED BEARING STRENGTH SHALL BE MARKED IN THE FIELD AND THE CONTRACTOR SHALL REMOVE AND REPLACE THESE AREAS WITH APPROVED FILL MATERIALS.
   - 4.3. FOUNDATION SUBGRADE SOILS AND ANY BACKFILL MATERIALS SHALL BE COMPACTED TO A MINIMUM OF 95% OF STANDARD PROCTOR DRY DENSITY IN ACCORDANCE WITH ASTM D698 BEFORE PLACING THE LEVELING PAD.
5. LEVELING PAD INSTALLATION:
   - 5.1. THE LEVELING PAD SHALL CONSIST OF A MINIMUM OF 6 INCH THICK LAYER OF ¾-4INCH MINUS WELL-GRADED AGGREGATE COMPACTED TO 95% OF ASTM D 1557 MODIFIED PROCTOR DENSITY, UNLESS SPECIFIED OTHERWISE BY THE DESIGN ENGINEER.
   - 5.2. A STONETERRA SUPPLIERS REPRESENTATIVE EXPERIENCED IN STONETERRA WALL CONSTRUCTION SHALL ASSIST THE CONTRACTOR REGARDING LEVELING PAD PREPARATION. THE WALL DESIGNER MAY BE REQUIRED TO INSPECT AND APPROVE THE LEVELING PAD PRIOR TO THE PLACEMENT OF BLOCKS.
   - 5.3. THE COST OF THE SUPPLIER REPRESENTATIVE AND WALL DESIGNER INSPECTION SHALL BE INCLUDED IN THE INSTALLERS BID.
   - 5.4. AS A MINIMUM, START AT THE LOWEST WALL LEVEL, LOCATE THE FRONT FACE OF THE WALL. RUN A STRING ABOUT 1 INCH IN FRONT AND 2 INCHES ABOVE THE BASE. USE 2X6 OR 2X8 AND STEEL STAKES TO MAKE A FORM FOR ACHIEVING DESIGN BATTER. SET THE FRONT BOARD IN LINE WITH THE STRING AT BASE ELEVATION OF THE WALL. LOCATE AND PLACE THE BACKBOARD AT A DISTANCE EQUAL TO THE BASE WIDTH OF THE WALL. SET ELEVATION OF BACKBOARD SO THAT DESIGN BATTER CAN BE ACHIEVED, WITHOUT MOVING THE STRING LINE. START LEAP- FROGGING THE BOARDS IN LINE WITH THE STRING AND MOVE FORWARD ALONG THE LENGTH OF THE WALL. IT IS BEST TO PREPARE THE ENTIRE LEVELING PAD BEFORE INSTALLING THE BLOCKS.
6. UNIT/BLOCK INSTALLATION:
   - 6.1. A SMALL EXCAVATOR OR BACKHOE IS THE IDEAL EQUIPMENT FOR BLOCK INSTALLATION. A WIRE RIGGING WITH SWIVEL HOOKS, OSHA APPROVED AND RATED FOR WEIGHT OF THE BLOCKS CAN BE ATTACHED TO THE BUCKET AND USED FOR LIFTING, MOVING, AND PLACING THE BLOCKS.
   - 6.2. THE CONTRACTOR SHALL CAREFULLY PLACE THE FIRST COURSE OF STONETERRA UNITS ONLY AFTER THE LEVELING PAD HAS BEEN APPROVED.
   - 6.3. BLOCK PLACEMENT SHOULD START AT THE LOWEST ELEVATION.
   - 6.4. THE STONETERRA UNITS SHALL BE FREE OF ALL PROTRUSIONS AND DEBRIS BEFORE INSTALLING THE NEXT COURSE OF UNITS AND/OR PLACING THE GEOGRID MATERIALS.
   - 6.5. AT THE COMPLETION OF THE PLACEMENT OF EACH COURSE, A STRING LINE SHALL BE PULLED TO CONFIRM THAT THE WALLS GEOMETRY IS BEING MAINTAINED.
   - 6.6. TOLERANCE: WALL BATTER TOLERANCE OF ± 1/8 IN. PER FT. MAXIMUM SHALL BE ALLOWED.
7. DRAINAGE FILL, UNIT FILL, AND DRAINAGE PIPE PLACEMENT:
   - 7.1. THE STONETERRA UNITS DO NOT REQUIRE CORE FILL SINCE THERE ARE NO VOIDS.
   - 7.2. DRAINAGE FILL MATERIALS SHALL CONSIST OF FREE DRAINING, ALL-WEATHER, COARSE-GRAINED MATERIAL WHICH IS PLACED BEHIND THE STONETERRA UNITS AS SPECIFIED ON THE PLANS. THE DRAINAGE FILL GRADATION SHALL BE AS FOLLOWS AS DETERMINED BY THE ASTM D 422 TEST PROCEDURE:

SIEVE	PERCENT PASSING
1"	75–100
3/4"	50–75
NO.4	0-60
NO. 40	0-50
NO. 200	0–5

   - 7.1. THE DRAINAGE COLLECTION PIPE (MINIMUM 4-INCH DIAMETER) SHALL BE PLACED IMMEDIATELY BEHIND THE WALL AT THE BOTTOM OF THE WALL WITH A MINIMUM OF 1.5% GRADIENT TO MAINTAIN A POSITIVE GRAVITY FLOW INTO A SUITABLE RECEPTACLE UNLESS SPECIFIED OTHERWISE BY THE DESIGNER.
8. REINFORCED BACKFILL PLACEMENT:
   - 8.1. REINFORCEMENT BACKFILL MATERIALS SHALL CONSIST OF GRANULAR MATERIALS (GP, GW, SW, SP, SM) MEETING THE FOLLOWING GRADATION AS DETERMINED BY ASTM D 422 TEST PROCEDURE:

SIEVE	PERCENT PASSING
1"	100
3/4"	75–100
NO.4	20–100
NO. 40	0-60
NO. 200	0–35

   - 8.2. THE PLASTICITY INDEX OF MATERIALS PASSING THE NO. 200 SIEVE SHALL BE LESS THAN 20.
   - 8.3. WHEN TESTED IN ACCORDANCE WITH AASHTO T89 AND T90, RESPECTIVELY, MATERIALS SHALL BE SUBSTANTIALLY FREE OF ORGANICS AND DEBRIS.
   - 8.4. THE REINFORCED BACKFILL MATERIAL SHALL BE PLACED IN MAXIMUM LIFTS OF 6 INCHES IFOR HEAVY COMPACTION EQUIPMENT AND IN LIFTS NO THICKER THAN 4 INCHES FOR HAND-OPERATED COMPACTION EQUIPMENT. MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% STANDARD PROCTOR DRY DENSITY IN ACCORDANCE WITH ASTM D698.
   - 8.5. ONLY HAND-OPERATED COMPACTION EQUIPMENT SHALL BE USED WITHIN 5 FEET OF THE BACK FACE OF THE STONETERRA UNITS.
   - 8.6. SOIL DENSITY TESTING SHALL NOT BE PERFORMED WITHIN 5 FEET OF THE TAIL OF THE STONETERRA SEGMENTAL UNITS.
   - 8.7. THE BACKFILL SHALL BE SMOOTH AND LEVEL SO THAT THE GEOGRID CAN BE PLACED TIGHT AND IN A HORIZONTAL PLANE, AT LEAST 6 INCHES OF MATERIAL SHALL BE PLACED OVER THE GEOGRID PRIOR TO OPERATING THE TRACKED EQUIPMENT. SWIFT TURNING AND HIGH SPEED OF HEAVY EQUIPMENT SHALL BE MINIMIZED TO AVOID FILL DISPLACEMENT AND DAMAGE TO GEOGRIDS. A MAXIMUM SPEED OF 10MPH SHALL BE USED FOR ALL HEAVY VEHICLES.
   - 8.8. THE EXCAVATED TRENCH AREA IN FRONT OF THE TOE OF THE WALL SHALL BE FILLED AND COMPACTED AS THE WALL IS BEING CONSTRUCTED.
   - 8.9. THE FILL AREAS SHALL BE GRADED OR PROTECTED SO THAT ANY SURFACE WATER RUN-OFF IS DIRECTED AWAY FROM THE WALL FACE.
9. GEOGRID REINFORCEMENT:
   - 9.1. GEOGRID REINFORCEMENT SHALL BE STRAGRID SG350 OR MIRAFI 5XT (TULT > 4,500 LB/FT) OR EQUIVALENT AS SHOWN IN DRAWING.
   - 9.2. GEOGRIDS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AT THE DESIGN ELEVATIONS AND ORIENTATIONS AS SHOWN ON THE PLANS. THE DESIGNER SHALL INSPECT ON-SITE GEOGRID MATERIALS AND APPROVE IT FOR INSTALLATION.
   - 9.3. ADEQUATE TENSION SHALL BE APPLIED TO GEOGRIDS AND THEN STAKED ON A WELL-PREPARED HORIZONTAL FILL SUBGRADE APPROVED BY A QUALIFIED GEOTECHNICAL ENGINEER FOR ADEQUATE COMPACTION. THE TENSION SHALL BE MAINTAINED UNTIL AT LEAST 6 INCHES OF FILL IS PLACED OVER THE GEOGRID.
   - 9.4. THE GEOGRIDS SHALL BE ORIENTED SO THAT THE DESIGN STRENGTH DIRECTION IS PERPENDICULAR TO THE VERTICAL PLANE CONSISTING OF THE WALL FACE. GEOGRIDS SHALL NOT BE OVERLAPPED IN THE DESIGN DIRECTION. OVERLAPPING IN THE LATERAL DIRECTION SHALL BE IN ACCORDANCE WITH THE PLANS.
   - 9.5. TRACK VEHICLES SHALL NOT BE OPERATED DIRECTLY ON THE GEOSYNTHETICS. A MINIMUM OF 6 INCHES OF BACKFILL IS REQUIRED TO OPERATE TRACK VEHICLES OVER REINFORCEMENTS AND TURNING SHALL BE MINIMIZED TO AVOID DISPLACING THE GEOSYNTHETICS. RUBBER-TIRED VEHICLES MAY DRIVE SLOWLY DIRECTLY ON THE REINFORCEMENTS IF NECESSARY.
   - 9.6. DAMAGED GEOGRIDS SHALL NOT BE USED UNLESS APPROVED BY THE DESIGNER.
   - 9.7. EXCESS GEOSYNTHETIC REINFORCEMENT MAY BE TRIMMED FROM THE BLOCK FACE.

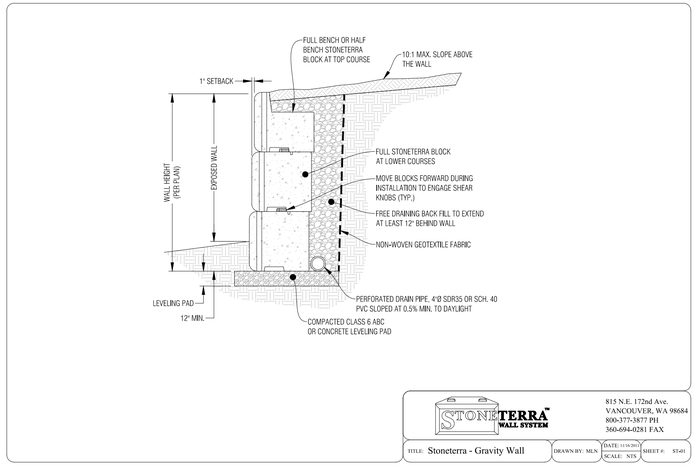


GEOGRID LENGTHS

	ZONE #1 2'<H<6'	ZONE #2 6'<H<8'
1	13'	16'
2	13'	16
3	13'	16'
4	N/A	N/A
5	N/A	N/A

STONETERRA™ WALL SYSTEM
815 N.E. 172nd Ave.
VANCOUVER, WA 98684
800-377-3877 PH
360-694-0281 FAX

TITLE: Stoneterra - MSE Wall	DRAWN BY: MLN	DATE: 11/16/2015 SCALE: NTS	SHEET #: ST-02



STONETERRA™ WALL SYSTEM
815 N.E. 172nd Ave.
VANCOUVER, WA 98684
800-377-3877 PH
360-694-0281 FAX

TITLE: Stoneterra - Gravity Wall	DRAWN BY: MLN	DATE: 11/16/2015 SCALE: NTS	SHEET #: ST-03

Mechanically Stabilized Earth (MSE) & Gravity Block Walls

Scale: N.T.S.

Boundaries Unlimited Inc.
Civil Engineering
Surveying
& Beyond
923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE)
Required Project: **See Notes**
If "Yes", SUE Certification by:
Firm: **N/A**
Job # **Precision Hyrovac**
Date: **Nov. 2018**

Engineer or Surveyor Seal

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH
0 20' 40'
Scale: 1" = 20'

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GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Retaining Wall Details (Block & MSE)

95% Progress Set - Not For Construction

No.	Date	Revision	By
1			
2			
3			
4			
5			
6			
7			
8			
9			

PROJECT NO. **18034**
Designer: **DJW**
Drafter: **BUI**
Date: **11/13/19**

Sheet **C.16**

File Name: **18034-c-wall.dwg**

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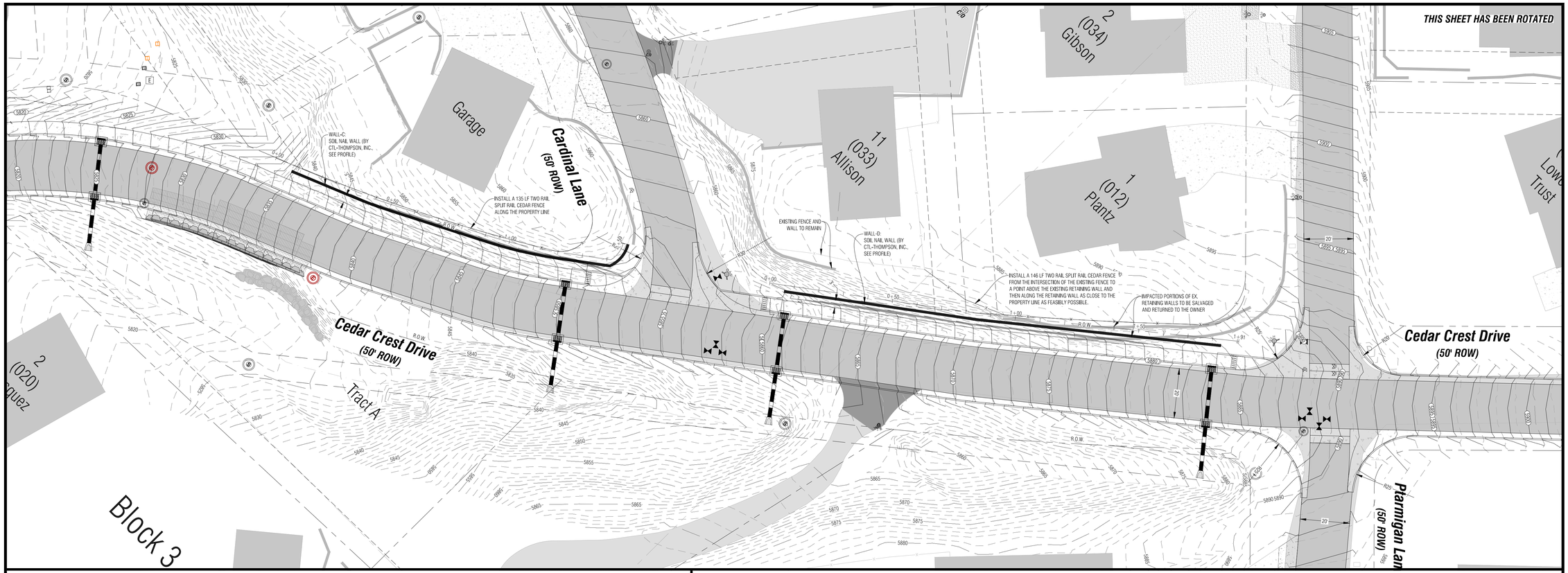
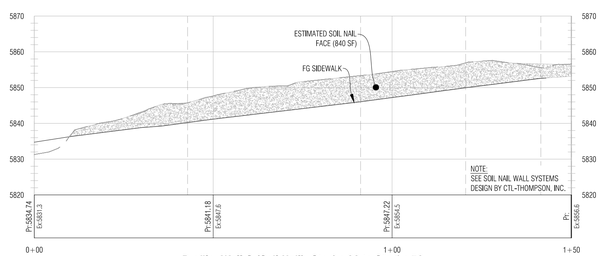
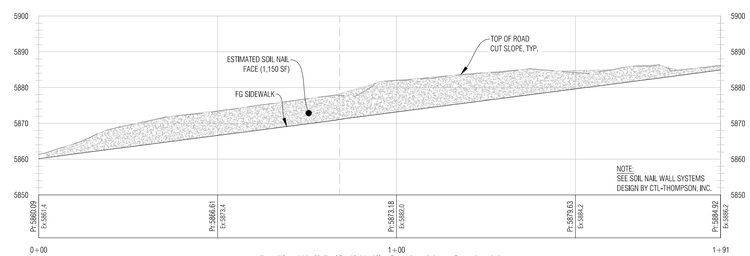




Profile: Wall C (Soil Nail), Sta:0+00 to Sta:1+50
Scale: Vert.=20', Horiz.=20'



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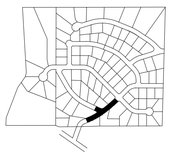

Keymap

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923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE)
Required Project: ***See Notes***
If "Yes", SUE Certification by:
Firm: ***N/A***
Job #: ***Precision Hyrovac***
Date: ***Nov. 2018***

Engineer or Surveyor Seal

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH
0 20' 40'
Scale: 1" = 20'

811
Know what's **below.**
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GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Retaining Walls C & D (Soil Nail)

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

PROJECT NO.
18034
Designer:
DJW
Drafter:
BUI
Date:
11/13/19

Sheet
C.17

File Name: ***18034-c-wall.dwg***

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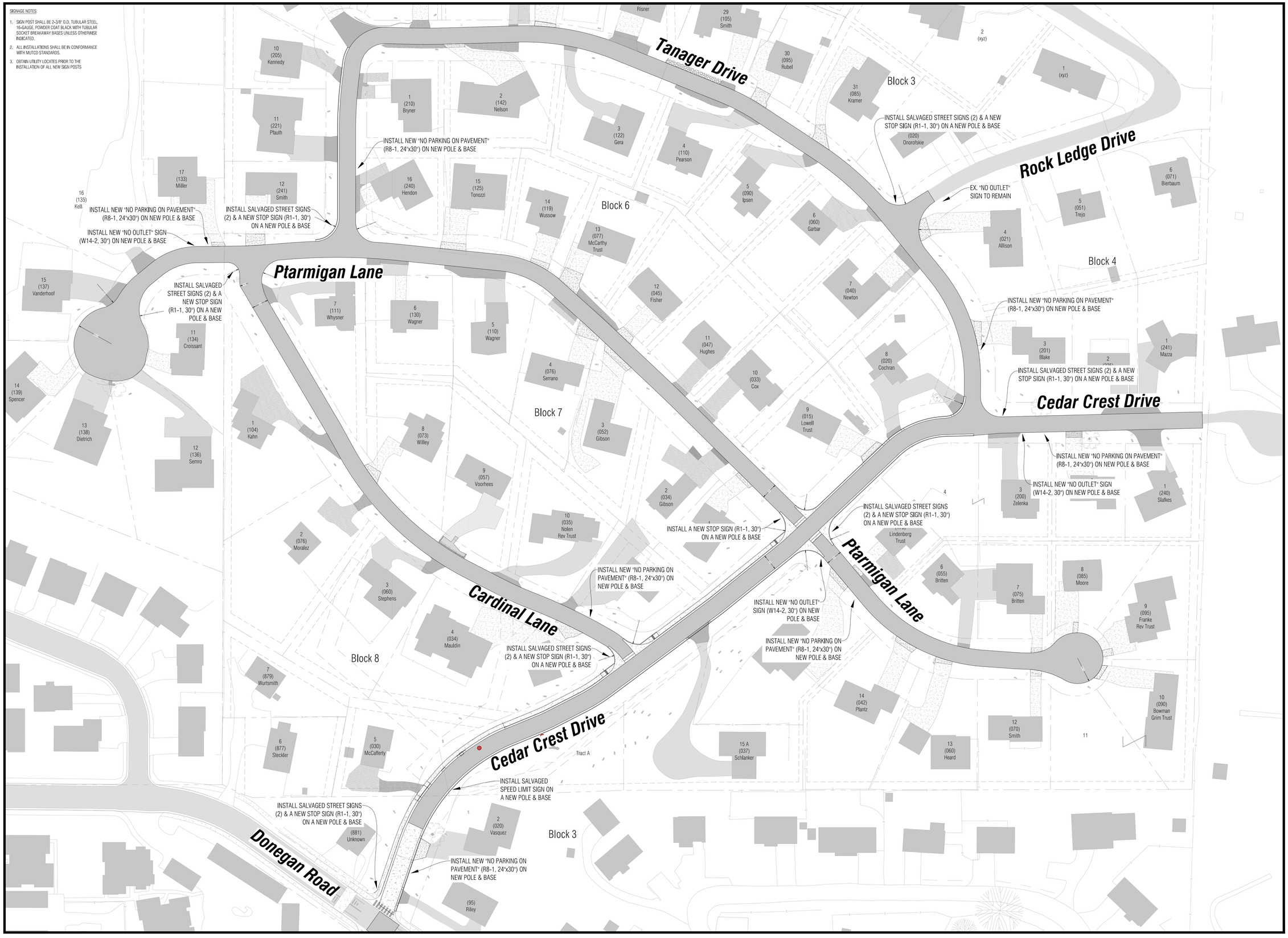
SIGNAGE NOTES:

1. SIGN POST SHALL BE 2-3/8" O.D. TUBULAR STEEL, 16-GAUGE, POWDER COAT BLACK WITH TUBULAR SOCKET BREAKAWAY BASES UNLESS OTHERWISE INDICATED.
2. ALL INSTALLATIONS SHALL BE IN CONFORMANCE WITH MUTCD STANDARDS.
3. OBTAIN UTILITY LOCATES PRIOR TO THE INSTALLATION OF ALL NEW SIGN POSTS



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Firm: **N/A**
Job #: **Precision Hyrovac**
Date: **Nov. 2018**

Engineer or Surveyor Seal

Client Information:
CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

NORTH

0 50' 100'
Scale: 1" = 50'

811
Know what's below.
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GLENWOOD SPRINGS, COLORADO

Cedar Crest Improvements

Signage Plan

95% Progress Set - Not For Construction

No.	Date	Revision	By
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

PROJECT NO. **18034**
Designer: **DJW**
Drafter: **BUI**
Date: **11/13/19**

Sheet **C.18**

File Name: **18034-c-sign.dwg**

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