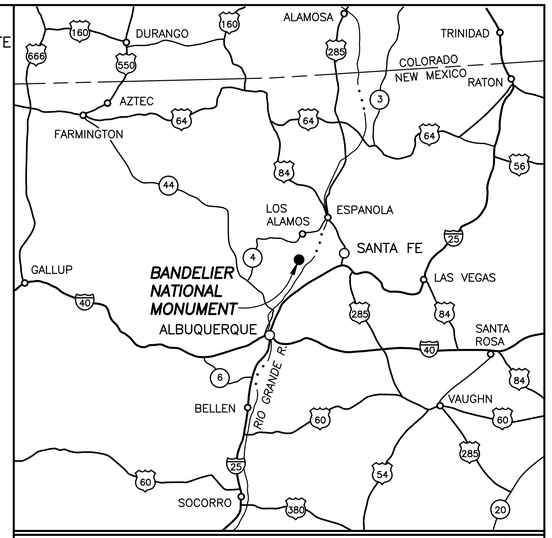
LOS ALAMOS
TO SANTA FE
502
EAST JEMEZ ROAD
PAJARITO ROAD
SANDOVAL COUNTY
LOS ALAMOS COUNTY
CERRO GRANDE
TO JEMEZ SPRINGS
4
TSANKAWI SECTION
SAN ILDEFONSO INDIAN RESERVATION
SANTA FE COUNTY
LOS ALAMOS COUNTY
WHITE ROCK
EL RITO DE LOS FRIJOLES
289
ST. PETERS DOME RD.
SANTA FE NATIONAL FOREST
LOS ALAMOS COUNTY
SANDOVAL COUNTY
LUMMIS CANYON
ALAMO CANYON
THIS PROJECT
V.C. & HQ.
RIO GRANDE RIVER
LOS ALAMOS COUNTY
SANTA FE COUNTY
BOUNDARY PEAK
ST. PETERS DOME
HONDO CANYON
MEDIO CANYON
SANDOVAL COUNTY
SANTE FE COUNTY



LEGEND

- NATIONAL MONUMENT BOUNDARY
- STATE LINE
- COUNTY LINE
- PAVED ROAD
- UNPAVED ROAD
- TRAIL
- STREAM
- V.C. VISITOR CENTER
- HQ. PARK HEADQUARTERS
- PICNIC AREA
- CAMPGROUND

MICAH E. JOHNSON NEW MEXICO 25223 PROFESSIONAL ENGINEER
Digitally signed by Micah E. Johnson
Date: 2025.04.14 15:50:09-06'00'

PMIS NO. BAND 266697

SCALE OF FEET
4,000 0 4,000 8,000
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SCALE OF KILOMETERS

BANDELIER NATIONAL MONUMENT

BASIC DATA:
REVISED & REDRAWN 8/93. UPDATED 10/98. SGS.

A/E FIRM	Mark	Sheet	REVISION	Initial
JACOBS GOVERNMENT SERVICES COMPANY ALBUQUERQUE, NM				

QUALITY DESIGN CERTIFICATION
- ☐ Prepared in Accordance with Design Development (Title I) _____ Drawing No.
- OR
- ☐ Variance from Design Development (Title I) Approved by Superintendent on _____ Date
- OR
- ☐ Construction Drawing Not Preceded by Design Development (Title I)

Project Manager _____ Date _____

CONSTRUCTION DRAWINGS

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
DENVER SERVICE CENTER

TITLE OF DRAWING
UNDERGROUND UTILITIES REHABILITATION
LOCATION WITHIN PARK
MONUMENT—WIDE
NAME OF PARK
BANDELIER NATIONAL MONUMENT
REGION COUNTY STATE
INTERMOUNTAIN SANDOVAL AND LOS ALAMOS NEW MEXICO

DRAWING NO. 315 / 182751
PKG. NO. 26 66 97
SHEET 1 OF 203

4/8/2025 11:07 AM FIGUEROAJ R24 00G001_D316769B.DWG BANDBASE

INDEX TO DRAWINGS

01-GENERAL

S. NO.	DWG. NUMBER	DESCRIPTION
1	00G001	COVER SHEET
2	00G002	INDEX TO DRAWINGS
3	00G003	GENERAL NOTES
4	00G004	OVERALL SITE PLAN
5	00G005	STRUCTURAL NOTES 1
6	00G006	STRUCTURAL NOTES 2
7	00G007	STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS 1
8	00G008	STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS 2
9	00G009	STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS 3
10	00G010	PROCESS MECHANICAL NOTES & LEGEND 1
11	00G011	PROCESS FLOW DIAGRAM
12	00G012	INSTRUMENTATION & CONTROL LEGEND SHEET 1 OF 2
13	00G013	INSTRUMENTATION & CONTROL LEGEND SHEET 2 OF 2
14	00G014	ELECTRICAL LEGEND 1
15	00G015	ELECTRICAL LEGEND 2
16	00G016	ELECTRICAL ABBREVIATIONS
17	00G017	PLUMBING SYMBOLS AND ABBREVIATIONS
18	00G018	MECHANICAL SYMBOLS AND ABBREVIATIONS

02-SITE UTILITIES

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20	02C002	CIVIL LEGEND AND NOTES
21	02C003	SITE DEMOLITION PLAN 1 OF 2
22	02C004	SITE DEMOLITION PLAN 2 OF 2
23	02C005	BL 'MESA' STA 0+00 TO 9+90 PLAN AND PROFILE
24	02C006	BL 'HIGHWAY 4' STA 0+00 TO 01+62 PLAN AND PROFILE
25	02C007	BL 'ABERT'S SQUIRREL LOOP' STA 0+00 TO 6+17 PLAN AND PROFILE
26	02C007A	BL 'ABERT'S SQUIRREL LOOP' STA 6+17 TO 14+50 PLAN AND PROFILE
27	02C007B	BL 'ABERT'S SQUIRREL LOOP' SANITARY SEWER PLAN AND PROFILE
28	02C008	BL 'BLACK BEAR LOOP 1' STA 0+00 TO 2+22 PLAN AND PROFILE
29	02C008A	BL 'BLACK BEAR LOOP 2' STA 0+00 TO 11+30 PLAN AND PROFILE
30	02C008B	BL 'BLACK BEAR LOOP' SANITARY SEWER PLAN AND PROFILE
31	02C009	BL 'CAMPGROUND ROAD' STA 0+00 TO 9+25 PLAN AND PROFILE
32	02C010	BL 'CAMPGROUND ROAD' STA 9+25 TO 19+28 PLAN AND PROFILE
33	02C011	BL 'COYOTE LOOP' STA 0+00 TO 6+50 PLAN AND PROFILE
34	02C011A	BL 'COYOTE LOOP' STA 6+50 TO 18+26 PLAN AND PROFILE
35	02C012	BL 'COOPERS HAWK ROAD' STA 0+00 TO 7+35 PLAN AND PROFILE
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37	02C013A	BL 'COOPERS HAWK ROAD' SANITARY SEWER PLAN AND PROFILE
38	02C014	BL 'SALTBRUSH COURT' STA 0+00 TO 10+37 PLAN AND PROFILE
39	02C014A	BL 'SALTBRUSH COURT' SANITARY SEWER PLAN
40	02C014B	BL 'SALTBRUSH COURT' SANITARY SEWER PLAN AND PROFILE
41	02C015	BL 'PAINTBRUSH COURT' STA 0+00 TO 8+48 PLAN AND PROFILE
42	02C015A	BL 'PAINTBRUSH COURT' SANITARY SEWER PLAN
43	02C016	BL 'ENTRANCE ROAD' STA 0+00 TO 8+75 PLAN AND PROFILE
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52	02C025	BL 'ENTRANCE ROAD' STA 76+50 TO 86+25 PLAN AND PROFILE
53	02C026	BL 'ENTRANCE ROAD' STA 86+25 TO 95+75 PLAN AND PROFILE
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55	02C028	BL 'ENTRANCE ROAD' STA 105+50 TO 115+25 PLAN AND PROFILE
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57	02C030	BL 'ENTRANCE ROAD' STA 125+25 TO 134+50 PLAN AND PROFILE
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59	02C032	BL 'ENTRANCE ROAD' STA 144+50 TO 154+25 PLAN AND PROFILE
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61	02C034	CANYON LOOP STA 159+54 TO 162+00 PLAN AND PROFILE
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81	02C205	CANYON SERVICE LATERALS SITE PLAN (5 OF 7)
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92	02C503	NATURAL GAS DETAILS (3 OF 7)
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103	02E105	PRIMARY DISTRIBUTION BLACK BEAR LOOP
104	02E106	PRIMARY DISTRIBUTION CAMPGROUND ROAD 1
105	02E107	PRIMARY DISTRIBUTION CAMPGROUND ROAD 2
106	02E108	PRIMARY DISTRIBUTION COYOTE LOOP
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109	02E112	PRIMARY DISTRIBUTION SALTBRUSH CT
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128	02E503	ELECTRICAL DETAILS
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161	04C509	CULVERT END SECTION DETAILS
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194	15SM303	ENTRANCE ROAD WATER TANK SECTION 3
195	15SM501	DETAILS
196	15SM502	DETAILS
197	15SM503	DETAILS
198	15SM504	DETAILS
199	15SM505	DETAILS
200	15SM506	DETAILS
201	15SM901	ENTRANCE ROAD WATER TANK ISOMETRIC
202	15E101	ENTRANCE ROAD WATER TANK TOP PLAN

30 -MESA TOP COMFORT STATION

203	30M101	MESA TOP COMFORT STATION PRESSURE BOOSTERS

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.06
16:18:14-06'00'
PROFESSIONAL ENGINEER

A/E FIRM	DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
JACOBS GOVERNMENT SERVICES COMPANY ALBUQUERQUE, NM	M. JOHNSON	00G002	GENERAL	315
	CADD J. FIGUEROA		INDEX TO DRAWINGS	182751
	TECH. REVIEW: D. HUANG			PMIS/PKG NO. 266697
	DATE: 04/11/2025		BANDELIER NATIONAL MONUMENT	SHEET 2 OF 203

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BASIC DATA:

SUMMARY OF WORK

THE WORK REQUIRED IN THE SCOPE AS DESCRIBED IN SPECIFICATION 01 27 00, DEFINITION OF CONTRACT LINE ITEMS, INCLUDES THE FOLLOWING AT BANDELIER NATIONAL MONUMENT DEVELOPED AREAS, AS DESCRIBED HEREIN BUT NOT LIMITED TO:

- GENERAL CONDITIONS. INCLUDE GENERAL REQUIREMENTS, MOBILIZATION/DEMOBILIZATION, EROSION AND SEDIMENT CONTROL, TRAFFIC CONTROL, SURFACE RESTORATION, AND PROTECTION AND PRESERVATION OF HISTORICAL BUILDINGS AND FEATURES AS REQUIRED TO COMPLETE THE WORK PER CONTRACT SPECIFICATIONS AND DRAWINGS.
- THE WORK IS TO BE COMPLETED WITHIN TWO NATIONAL REGISTRY OF HISTORIC PLACES DISTRICTS, THE CIVILIAN CONSERVATION CORPS (CCC) HISTORIC DISTRICT IN THE CANYON AREA, AND MISSION 66 HISTORIC DISTRICT IN THE MESA TOP AREA.
- REPLACE UTILITY SYSTEMS AT THE MAJOR DISTRIBUTION AND COLLECTION SYSTEMS TO ADDRESS DEFERRED MAINTENANCE AND CODE DEFICIENCIES ON 60 PLUS YEAR OLD SYSTEMS UTILIZING EXISTING UTILITY CORRIDORS AND ROAD SHOULDERS AND/OR UNDER ROADS TO MAINTAIN CODE REQUIRED SEPARATION HORIZONTALLY AND VERTICALLY (SEE DWG 02C002) WHILE MITIGATING IMPACT TO SENSITIVE NATURAL AND CULTURAL RESOURCE AREAS. UTILITIES INCLUDE UNDERGROUND POTABLE WATER, PRIMARY ELECTRICAL, FIBER–OPTIC, NATURAL GAS, AND SANITARY SEWER.
- THE MAIN PARK WATER SYSTEM CONSISTS OF:
  - REPLACING PRIMARY DISTRIBUTION WATERLINES, SERVICE LINES, FIRE HYDRANTS, PRESSURE REDUCING VALVES AND FLOW CONTROL VALVES, THROUGHOUT THE MESA HOUSING, JUNIPER CAMPGROUND, ENTRANCE ROAD AND CANYON AREAS.
  - REPLACEMENT OF VALVES AND DRAIN LINE AT THE EXISTING MAIN BLUE WATER TANK.
  - CONSTRUCTION OF ENTRANCE ROAD WATER TANK; 24,000 GALLON BELOW–GRADE.
  - CONSTRUCTION OF CANYON MECHANICAL BUILDING,
  - ABANDONING EXISTING CANYON UNDERGROUND CONCRETE WATER TANK,
  - REMOVING WATER MAIN HANGING FROM THE CANYON CLIFF,
  - PROVIDING HYDROPNEUMATIC TANKS WITH PUMPS AS WATER PRESSURE BOOSTERS AT COMFORT STATIONS,
- THE PRIMARY ELECTRICAL DISTRIBUTION SYSTEM CONSISTS OF:
  - REPLACING MESA TOP SINGLE–PHASE FEED WITH A NEW THREE–PHASE PRIMARY ELECTRICAL SERVICE,
  - FACILITATE FUTURE INTERCONNECTION TIE BETWEEN THE MESA TOP AND THE FRIJOLES CANYON DISTRIBUTION SYSTEMS, AND
  - REPLACING AGING ELECTRICAL FEEDERS, EQUIPMENT, AND CONDUCTORS FOR THE THREE MAIN AREAS AT MESA TOP, ENTRANCE ROAD, AND FRIJOLES CANYON.
- THE COMMUNICATIONS NETWORK CONSISTS OF:
  - EXTENDING EXISTING FIBER–OPTIC FROM THE FRIJOLES CANYON TO MESA TOP AREAS INCLUDING FOC.
  - CONNECTING THE EXISTING 35,000 GALLON ABOVE–GRADE MAIN BLUE WATER STORAGE TANK TO THE MESA TOP ABERT'S SQUIRREL LOOP COMFORT STATION VIA COPPER COMMUNICATIONS CABLE.
  - PROVIDING THE REMOTE MONITORING SYSTEM CELLULAR MODEMS AND ANTENNAS FOR A CLOUD BASED MONITORING SYSTEM AT ABERT'S SQUIRREL LOOP COMFORT STATION, CANYON MECHANICAL BUILDING, PRV VAULT, AND MAIN LIFT STATION.
- THE NATURAL GAS SYSTEM CONSISTS OF:
  - REPLACING EXISTING NATURAL GAS DISTRIBUTION LINES AND SERVICE LINES FOR MESA TOP (MESA HOUSING, FOC, AND FIRE TOWER) AND FRIJOLES CANYON AREAS (VISITOR CENTER AND OTHER BUILDINGS).
- THE WASTEWATER SYSTEM CONSISTS OF:
  - REPLACING EXISTING SEWER PIPES, MANHOLES, AND LATERALS AT MESA TOP, JUNIPER CAMPGROUND, AND FRIJOLES CANYON DEVELOPED AREAS WHERE SHOWN ON DRAWINGS.
  - PROVIDING A GRAVITY LATERAL CROSSING THE RITO DE LOS FRIJOLES STREAM SUSPENDED FROM THE PEDESTRIAN BRIDGE TO RE–ACTIVATE THE EXISTING COTTONWOOD (BLDG #1) COMFORT STATION.

CONTRACT LINE ITEMS CLIN

REFER TO SPECIFICATION 01 27 00 DEFINITION OF CONTRACT LINE ITEMS

CLIN 0001 MAIN PARK WATER SYSTEM (DWGS 02C003, 02C005, 02C007, 02C007A, 02C008A, 02C009, 02C010, 02C011A, 02C017 – 02C022, 02C024 – 02C037, 02C100, 02C101, 02E125, 02E126, 02E130, 02E136 & 30M101)

CLIN 0002 MESA HOUSING AND FIELD OPERATIONS CENTER (FOC) WATER MAINS AND SERVICE LINES (DWGS 02C012, 02C013, 02C014 & 02C015)

CLIN 0003 PRIMARY ELECTRICAL DISTRIBUTION (DWGS 02E101 – 02E115)

CLIN 0004 CELLULAR NETWORK (DWG 08Y601)

CLIN 0005 ROCK EXCAVATION (WHERE ENCOUNTERED)

CLIN 0006 ROADWAY (DWGS 04C404 – 04C406 & 04C107 – 04C109)

CLIN OPTION A PRIMARY ELECTRICAL INTER–CONNECTION BETWEEN FRIJOLES CANYON AND MESA TOP SYSTEMS (DWGS 02E115 – 02E122)

CLIN OPTION B FRIJOLES CANYON WATER AND NATURAL GAS MAIN LOOP (DWGS 02C037 – 02C043 & 02C201 – 02C203, 02C206 & 02C207)

CLIN OPTION C FRIJOLES CANYON WASTEWATER SYSTEM (DWGS 02C201 – 02C205, 02C050 & 02C051)

CLIN OPTION D FRIJOLES CANYON NATURAL GAS LATERALS (DWGS 02C201 – 02C203 & 02C206)

CLIN OPTION E FIBER–OPTIC CABLE FROM EXISTING FIBER HANDHOLE NEAR THE ENTRANCE ROAD (PAJARITO) MICROWAVE TOWER TO FOC AND ENTRANCE STATION (DWG 08Y601)

CLIN OPTION F FRIJOLES CANYON VISITOR CENTER FIBER PATHWAY (DWG 02E132 & 02E134)

CLIN OPTION G DEMOLITION OF UTILITY FEATURES (ALL DWGS CONTAINING ABANDONED, ABOVE GROUND FEATURE AND UNDERGROUND VALVES)

CLIN OPTION H DEMOLITION OF EXISTING CANYON UNDERGROUND CONCRETE WATER TANK AND EXPOSED SUSPENDED UTILITIES (DWGS 02C003 & 02C004)

CLIN OPTION I JUNIPER CAMPGROUND WATER MAINS AND SERVICE LINES (DWGS 02C007, 02C007A, 02C008, 02C008A, 02C010, 02C011 & 02C011A)

CLIN OPTION J MESA TOP WASTEWATER SYSTEM (DWGS 02C007B, 02C008B, 02C013A, 02C014A, 02C014B & 02C015A)

CLIN OPTION K AGOYO LANE ELECTRICAL SYSTEM (DWGS 02E130, 02E136 & 02E137)

CLIN OPTION L FIRE TOWER LANE WATER AND NATURAL GAS LINE REPLACEMENT (DWG 02C023)

CLIN OPTION M COTTONWOOD COMFORT STATION (BUILDING #1) UTILITY CONNECTIONS (DWGS 02C052, 02S101 & 02E134)

CLIN OPTION N NATURAL GAS SYSTEM (DWGS 02C005, 02C007, 02C009, 02C010, 02C012, 02C013, 02C014, 02C015, 02C017 – 02C040, 02C204 & 02C205)

PROTECTION, SALVAGE, DEMOLITION & RESTORATION:

1. ARCHAEOLOGICAL INVESTIGATION HAS BEEN PERFORMED WITHIN THE LIMITS OF DISTURBANCE (LOD) AS SHOWN IN THE DRAWINGS. IF PREVIOUSLY UNKNOWN ARTIFACTS OR HUMAN REMAINS, ARE DISCOVERED, STOP WORK IMMEDIATELY. PROCEED WITH CONSTRUCTION AS DIRECTED BY CONTRACTING OFFICER WITH NOTIFICATION GIVEN TO BANDELIER CULTURAL RESOURCES PARK MANAGER.
2. CONTRACTOR IS STRICTLY LIMITED TO THE LIMITS OF DISTURBANCE AS SHOWN ON THE DRAWINGS, AND PAVED AND GRAVELED AREAS UNLESS AUTHORIZED BY CONTRACTING OFFICER. LOD TYPICALLY EXTENDS 3 FT BEYOND EDGE OF PAVEMENT ON CAMPGROUND ROAD, SALTBRUSH COURT, PAINTBRUSH COURT, COOPERS HAWK ROAD AND THE JUNIPER CAMPGROUND LOOPS AND 5 FT BEYOND EDGE OF PAVEMENT ON ENTRANCE ROAD. INSTALL TEMPORARY CONSTRUCTION FENCING ON OPEN COUNTRY AREAS ALONG LOD BOUNDARIES. DO NOT INSTALL TEMPORARY CONSTRUCTION FENCING ALONG PUBLIC ACCESSED ROADS.
3. STAGING AREAS SHOWN ON DWG 00G004.
4. COORDINATE STAGING AREA LIMITS WITH CONTRACTING OFFICER.
5. NATURAL RESOURCE DISTURBANCE SHALL BE MINIMIZED TO GREATEST EXTENT POSSIBLE, INCLUDING REMOVAL OF TREES. ALL NECESSARY NATURAL RESOURCE DISTURBANCE SHALL BE PRE–APPROVED BY NPS STAFF PRIOR TO CONSTRUCTION AND MONITORED BY NPS STAFF DURING CONSTRUCTION.
6. UTILITY INSTALLATION WORK INCLUDES INCIDENTAL REMOVAL AND REPLACEMENT OF EXISTING INFRASTRUCTURE AND NATURAL FEATURES, INCLUDING, BUT NOT LIMITED TO, ROAD SIGNS, PAVEMENT, CURB, GUARDRAIL, RETAINING WALLS, SIDEWALKS, TRAILS, STORM DRAINS, DRAINAGE SWALES, GATES, LIGHT POLES, SURVEY BENCHMARKS. THE DRAWINGS INCLUDE EXISTING FEATURES AS LOCATED BY FIELD SURVEY, BUT MAY NOT INCLUDE ALL FEATURES. CONTRACTOR IS RESPONSIBLE TO PERFORM OWN SITE INVENTORY AND IS RESPONSIBLE FOR RESTORATION OF ALL SITE FEATURES AT NO ADDITIONAL COST TO THE GOVERNMENT. SEE SPECIFICATION 02 41 00 DEMOLITION AND ALSO COORDINATE WITH HISTORIC PRESERVATION REQUIREMENTS PER SPECIFICATION 01 35 91.
7. PROTECT HISTORIC BUILDING EXTERIOR WALLS (SEE DWGS 02C201 – 02C206), HISTORIC RETAINING WALLS (SEE DWGS 02C037 – 02C039, 02C201, 02C202), HISTORIC STONE CURBS AND GUTTERS (SEE DWGS 02C027 – 02C033) AND HISTORIC CULVERT HEADWALLS (SEE DWGS 02C027 – 02C033). REFER TO SPECIFICATION 01 35 91.
8. TEMPORARILY REMOVE DURING CONSTRUCTION AS NEEDED FLAGSTONE PATHWAYS (SEE DWGS 02C201 – 02C206) AND ROADWAY CURB AND GUTTER (SEE DWGS 02C027 – 02C033) AND RE–INSTALL FOLLOWING CONSTRUCTION PER NPS REQUIREMENTS. REFER TO SPECIFICATION 02 41 00 AND 01 35 91.
9. SEE DRAWING 02C002 FOR ADDITIONAL RELATED UTILITY CONSTRUCTION NOTES.
10. CONTRACTOR TO OBTAIN APPROVAL FROM CONTRACTING OFFICER BEFORE DEMOLISHING AND REMOVING EXISTING UTILITIES. NEW UTILITIES, STRUCTURES AND APPURTENANCES TO BE CONSTRUCTED, SUCCESSFULLY TESTED AND COMMISSIONED BEFORE DEMOLITION CONSTRUCTION MAY BEGIN.
11. STOCKPILE AND RESTORE TOP 12 INCHES OF TOPSOIL (IF PRESENT) DURING EXCAVATION OF OVERLAND TRENCHES.
12. COORDINATE WITH NPS STAFF WHEN SOIL PREPARATION IS COMPLETE (SEE SPECIFICATION 32 91 13, SOIL PREPARATION). ALL SEED TO BE GOVERNMENT FURNSHED. SEEDING WILL BE PERFORMED BY NPS STAFF.

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

MISS UTILITY
Two full business days prior to work call or 811.

TWO FULL BUSINESS DAYS PRIOR TO WORK CALL 811. SEE nm811.org

MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Michael E. Johnson
Date: 2025.04.08 15:20:16-06'00'
PROFESSIONAL ENGINEER

DESIGNED: J. FIGUEORA	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
CADD J. FIGUEORA	00G003	GENERAL	315 182751
TECH. REVIEW: M. JOHNSON		GENERAL NOTES	PMIS/PKG NO. 266697
DATE: 04/11/2025		BANDELIER NATIONAL MONUMENT	SHEET 3 OF 203

4/8/2025 12:31 PM FIGUEROAJ R24 00G003_D3167648.DWG XG-Border BAND

BASIC DATA:

SURVEY CONTROL MONUMENT

BENCHMARK #	NORTHING	EASTING	ELEVATION	DESCRIPTION
1213.00	1739437.96	1635701.14	6529.42	2" ALUMINUM CAP
2004.00	1737644.64	1635153.78	6075.16	3" BRASS CAP
NMSR4	1744417.41	1633879.80	6639.08	3" BRASS CAP

VERTICAL DATUM

NAVD 88 GEOID 18

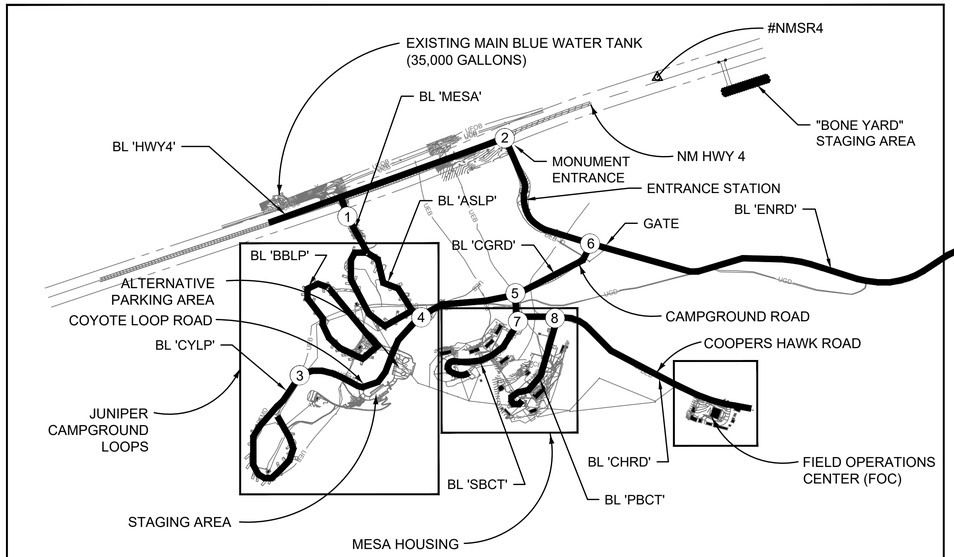
HORIZONTAL DATUM

NEW MEXICO STATE PLANE
CENTRAL 3002 NAD83, [2011]

SURVEY NOTES:

1. EXISTING TOPOGRAPHY, SURFACE FEATURES & UTILITIES SHOWN WERE FIELD SURVEYED BY JACOBS. ADDITIONAL INFORMATION IS SOURCED FROM GIS FILES AND AS–BUILT DRAWINGS PROVIDED BY NPS.
2. EXISTING TOPOGRAPHY, STRUCTURES, AND SITE FEATURES ARE SHOWN SCREENED AND/OR LIGHT–LINED. NEW UTILITIES AND STRUCTURES ARE SHOWN HEAVY–LINED.
3. THREE SURVEY BENCHMARKS ARE SHOWN IN THE SUMMARY TABLE AND THE MAP ON THIS SHEET. DATA CARDS MAY BE OBTAINED FROM CONTRACTING OFFICER. MAINTAIN, RELOCATE, OR REPLACE EXISTING SURVEY MONUMENTS, CONTROL POINTS, AND STAKES WHICH ARE DISTURBED OR DESTROYED. PERFORM THE WORK TO PRODUCE THE SAME LEVEL OF ACCURACY AS THE ORIGINAL MONUMENT(S) IN A TIMELY MANNER, AND AT THE CONTRACTOR'S EXPENSE.

MESA TOP

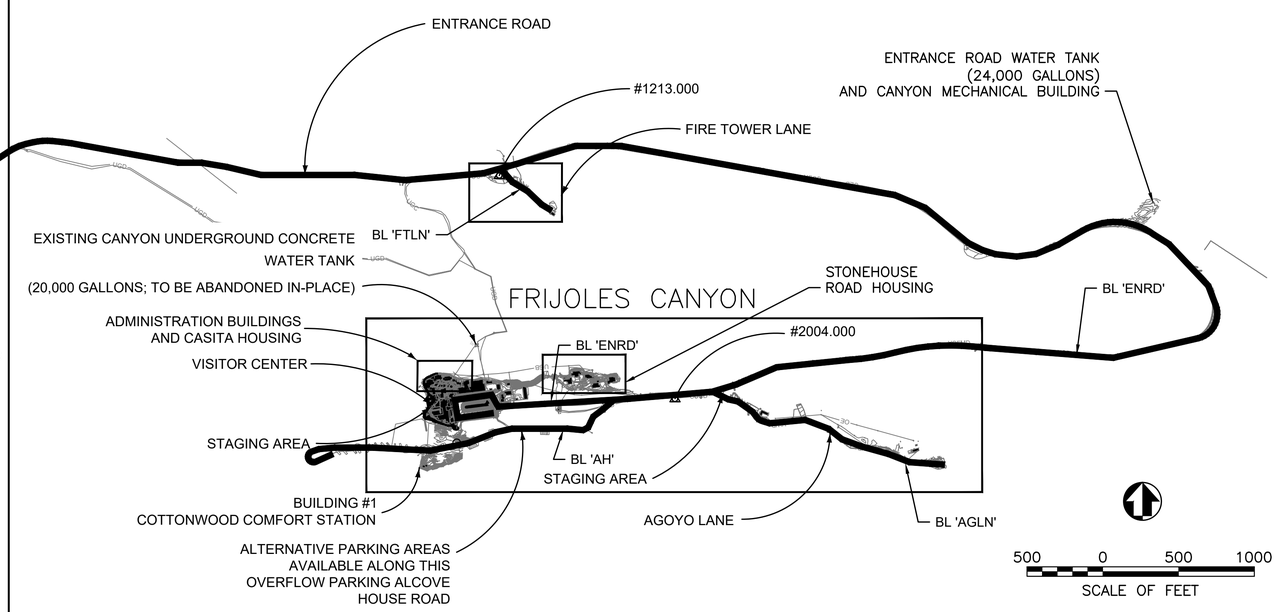


BASELINE INTERSECTIONS

1	'HWY4' & 'ASLP'
2	'HWY4' & 'ENRD'
3	'CYLP' & 'CGRD'
4	'CGRD' & 'ASLP'
5	'CGRD' & 'SBCT'
6	'CGRT' & 'ENRD'
7	'SBCT' & 'CHRD'
8	'CHRD' & 'PBCT'

BASELINE ABBREVIATIONS

'HWY4'	-	HIGHWAY 4
'ASLP'	-	ABERT'S SQUIRREL LOOP
'ENRD'	-	ENTRANCE ROAD
'CYLP'	-	COYOTE LOOP
'CGRD'	-	CAMPGROUND ROAD
'SBCT'	-	SALTBRUSH COURT
'CHRD'	-	COOPERS HAWK ROAD
'PBCT'	-	PAINTBRUSH CT
'FTLN'	-	FIRE TOWER LN
'AH'	-	ALCOVE HOUSE
'AGLN'	-	AGOYO LN



STAGING AREAS:

STAGING AREAS: PORTIONS OF "BONE YARD", CAMPGROUND PARKING AREA, AND GRAVEL ROAD BEHIND VISITORS CENTER.

ADDITIONAL STAGING AREAS MAY BE AVAILABLE AS NEEDED. COORDINATE REQUESTS WITH CONTRACTING OFFICER. SEE SPECIFICATION 01 11 00 SUMMARY OF WORK.

ALTERNATIVE PARKING AREAS:

ALTERNATIVE PARKING AREAS ARE IDENTIFIED ON THE OVERALL SITE PLAN ON THIS SHEET. CONTRACTOR TO COORDINATE CLOSELY WITH NPS BANDELIER STAFF REGARDING THE AVAILABILITY OF THESE PARKING AREAS AND THEIR TEMPORARY USAGE. USAGE OF NPS–PROVIDED SHUTTLE SERVICES MAY BE AVAILABLE DURING HIGH PUBLIC VISITATION. SEE SPECIFICATION 01 11 00 SUMMARY OF WORK.

CONSTRUCTION ACCESS ROUTES:

UNLESS PROHIBITED BY NPS AND/OR BANDELIER STAFF, CONSTRUCTION ACCESS ROUTES INCLUDE ALL PAVED ROADS THROUGHOUT MONUMENT, GRAVELED ACCESS BEHIND VISITOR CENTER, SOLENOID VALVE VAULT ACCESS ROAD FROM ENTRANCE ROAD, AGOYO LANE, AND CANYON LAGOON DRIVEWAY (FOR NEW ENTRANCE ROAD WATER TANK AND CANYON MECHANICAL BUILDING ONLY). ALL CONSTRUCTION ACTIVITIES AND EQUIPMENT MUST STAY WITHIN THE PRE–APPROVED LIMITS OF DISTURBANCE BOUNDARY AS SHOWN ON DRAWINGS. SEE SPECIFICATION 01 11 00 SUMMARY OF WORK.

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 15:22:13-06'00'
PROFESSIONAL ENGINEER

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
M. JOHNSON	00G004	GENERAL	315 / 182751
CADD: E. SHERIFI		OVERALL SITE PLAN	PMIS/PKG NO. 266697
TECH. REVIEW: H. LUSK		BANDELIER NATIONAL MONUMENT	SHEET 4 OF 203
DATE: 04/11/2025			

XG-Border_BAND
XC-BAND_2D-EG-Master
XC-ROADWAY
4/8/2025 11:22 AM FIGUEROAJ R24 00G004_D3167658.DWG

DESIGN CRITERIA:

1. 2021 NEW MEXICO BUILDING CODE, BASED ON THE 2021 INTERNATIONAL BUILDING CODE (IBC) AND ASCE 7-16, MINIMUM DESIGN LOADS AND ASSOCIATED CRITERIA FOR BUILDINGS AND STRUCTURES.

2. RISK CATEGORY IS IV

3. REFER TO THE DRAWINGS FOR ADDITIONAL AND SPECIFIC STRUCTURE LOADINGS AND RE□UIREMENTS.

4. DEAD LOADS: SELF WEIGHT

5. ROOF LOADS:
   SNOW LOADS
   - GROUND SNOW LOAD, Pg: 30 PSF
   - IMPORTANCE FACTOR, I: 1.15

   LIVE LOAD: 20 PSF

   COLLATERAL LOAD: 10 PSF

   DEFLECTION CRITERIA FOR CONTRACTOR DESIGNED ROOF FRAMING MEMBERS:
   - TOTAL LOAD: L/180
   - LIVE LOAD: L/240
   - SNOW LOAD: L/240

6. FLOOR LIVE LOADS:
   - PROCESS/ MECHANICAL ROOM: 200 PSF
   - WALKWAYS AND ELEVATED PLATFORMS: 100 PSF

7. WIND LOADS:
   - ASCE 7 METHOD: MWFRS DIRECTIONAL PROCEDURE
   - BASIC WIND SPEED (3-SECOND GUST): 115 MPH
   - EXPOSURE CATEGORY: C
   - IMPORTANCE FACTOR, I□: 1.0

8. SEISMIC LOADS:

   MAPPED SPECTRAL RESPONSE ACCELERATIONS
   - S_S: 0.507g
   - S_1: 0.166g

   DESIGN SPECTRAL RESPONSE ACCELERATIONS
   - S_{DS}: 0.439g
   - S_{D1}: 0.166g

   SITE CLASS: C
   SEISMIC DESIGN CATEGORY: D
   IMPORTANCE FACTOR, Ie: 1.50

   STRUCTURES HAVE BEEN ANALYZED USING THE E□UIVALENT LATERAL FORCE PROCEDURES OF ASCE
   HYDRODYNAMIC FORCES HAVE BEEN DETERMINED IN ACCORDANCE WITH ACI 350.3 AS MODIFIED BY ASCE 7-16.

9. HYDRAULIC LOADS: SEE PLANS FOR STRUCTURE SPECIFIC DESIGN FLUID ELEVATIONS. FLUID LOAD BASED ON FLUID DENSITY OF 63 PCF. HYDRAULIC PRESSURE FOR EACH STRUCTURE BASED ON MAXIMUM WATER SURFACE ELEVATION SHOWN ON HYDROPHILIC PROFILE.

10. SOIL DESIGN PARAMETERS:

    A. NET ALLOWABLE SOIL BEARING PRESSURES: 6000 PSF

    B. GROUND WATER: GROUND WATER WAS NOT ENCOUNTERED AT DEPTHS THAT WOULD AFFECT THE PROPOSED STRUCTURES IN THIS PROJECT.

    C. LATERAL EARTH PRESSURE:
    FOR GRANULAR FILL MEETING
    SPECIFICATION RE□UIREMENTS
    - AT REST: 59 PCF
    - DYNAMIC (SEISMIC): 89 PCF

    D. VERTICAL SURCHARGE: 2 FT OF SOIL WEIGHT

    E. COEFFICIENT OF FRICTION W/ 1.5 FOS: 0.35

    F. NATIVE SOIL UNIT WEIGHT 125 PCF

GENERAL INFORMATION:

1. FOR ABBREVIATIONS NOT LISTED, SEE ASME Y14.38 ABBREVIATIONS AND ACRONYMS: PUBLICATION AS DISTRIBUTED BY THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME).

2. STANDARD DETAILS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS OCCURRING THROUGHOUT THE PROJECT, WHETHER OR NOT THEY ARE INDIVIDUALLY CALLED OUT.

3. VERIFY FINAL OPENING DIMENSIONS IN WALLS, SLABS, AND DECKS WITH OTHER DISCIPLINE DRAWINGS PRIOR TO CONSTRUCTION OF THESE ELEMENTS.

4. FOR NUMBER, TYPE, SIZE, ARRANGEMENT, AND/OR LOCATION OF E□UIPMENT PADS, SEE OTHER DISCIPLINE DRAWINGS. COORDINATE WITH E□UIPMENT SUPPLIER PRIOR TO PLACING SLABS, WALLS AND FOUNDATIONS. COORDINATE PIPING OPENINGS WITH OTHER DISCIPLINE DRAWINGS.

5. DO NOT CUT OR MODIFY STRUCTURAL MEMBERS FOR PIPES, DUCTS, ETC, UNLESS SPECIFICALLY DETAILED OR APPROVED IN WRITING BY THE CONTRACTING OFFICER.

6. VISITS TO THE JOB SITE BY THE CONTRACTING OFFICER TO OBSERVE THE CONSTRUCTION DO NOT IN ANY WAY MEAN THAT CONTRACTING OFFICER IS GUARANTOR OF CONSTRUCTOR S WORK, NOR RESPONSIBLE FOR THE COMPREHENSIVE OR SPECIAL INSPECTIONS, COORDINATION, SUPERVISION, OR SAFETY AT THE JOB SITE.

7. INFORMATION (DETAILING, DIMENSIONS, CONFIGURATIONS, AND ELEVATIONS, ETC.) OF EXISTING CONSTRUCTION SHOWN REFLECTS AVAILABLE EXISTING DESIGN DOCUMENTS, AND DOES NOT NECESSARILY REPRESENT THE AS-CONSTRUCTED CONDITIONS. THE CONTRACTOR SHALL FIELD VERIFY DIMENSIONS, ELEVATIONS AND DETAILING OF THE EXISTING STRUCTURES PRIOR TO UNDERTAKING ANY WORK THAT IS AFFECTED BY THE EXISTING STRUCTURE. NOTIFY CONTRACTING OFFICER IF CONDITIONS VARY FROM THAT SHOWN PRIOR TO STARTING WORK.

INSPECTION AND TESTING:

1. SPECIAL INSPECTION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR INSPECTIONS RE□UIRED BY THE BUILDING OFFICIAL. THE CONTRACTOR SHALL SCHEDULE BOTH INSPECTIONS.

2. SPECIFIED CONCRETE AND OTHER MATERIAL TESTING RELATED TO SPECIAL INSPECTION DURING CONSTRUCTION WILL BE CONTRACTOR FURNISHED.

3. SPECIFIED LABORATORY TEST MIXES AND SIMILAR TEST RESULTS TO VERIFY MATERIAL □UALITY AND CONFORMANCE TO SPECIFICATIONS, AND SUBMITTED FOR REVIEW PRIOR TO ACCEPTANCE FOR USE ON THE PROJECT, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

4. SPECIAL INSPECTION, TESTING AND OBSERVATION (CONTRACTOR FURNISHED) IS RE□UIRED IN ACCORDANCE WITH IBC SECTIONS 110 AND 1704 AS INDICATED IN THE STATEMENT OF SPECIAL INSPECTIONS. REFER TO SPECIFICATIONS 01 40 00 - □UALITY RE□UIREMENTS AND 01 45 33 - SPECIAL INSPECTION, OBSERVATION AND TESTING.

FOUNDATIONS:

1. REFER TO GEOTECHNICAL REPORT BY SHANNON AND WILSON, PROJECT NO. 107523-001, NPS BANDELIER NATIONAL MONUMENT, UTILITY REHABILITATION, DATED FEBRUARY 17, 2022 AND GEOTECHNICAL REPORT BY SHANNON AND WILSON, PROJECT NO. 107523-002, NPS BANDELIER NATIONAL MONUMENT, UTILITY REHABILITATION, DATED SEPTEMBER 26, 2024.

2. EXCAVATIONS SHALL BE SHORED TO PREVENT SUBSIDENCE AND DAMAGE TO ADJACENT EXISTING STRUCTURES, ROADS, UTILITIES, ETC.

3. FOUNDATION SLABS, SLABS-ON-GRADE AND WALL AND COLUMN FOUNDATIONS SPECIFICALLY NOTED TO BE ON FILL SHALL BEAR ON A MINIMUM OF 12 INCHES OF COMPACTED STRUCTURAL FILL AFTER OVER EXCAVATION OF FILL TO ALLUVIUM.

4. FOUNDATION BEARING SURFACES SHALL BE OBSERVED BY THE GEOTECHNICAL ENGINEER OR □UALIFIED DESIGNEE PRIOR TO PLACEMENT OF FORMWORK OR REINFORCING STEEL. THE OBSERVATION SHALL VERIFY IF THE ACTUAL EXPOSED SUBGRADE IS AS ANTICIPATED BY THE SITE SPECIFIC BORINGS AND DATA REPORTS.

5. NO BACKFILL SHALL BE PLACED BEHIND WALLS UNTIL THE WALL'S CONCRETE HAS ATTAINED 100 PERCENT AND TOP SUPPORTING SLAB S CONCRETE HAS ATTAINED 80 PERCENT OF THEIR SPECIFIED 28 DAY COMPRESSIVE STRENGTH, OR UNTIL TOP-OF-WALL FRAMING SYSTEMS, INCLUDING STEEL DIAPHRAGMS, HAVE BEEN COMPLETED.

6. NO BACKFILL SHALL BE PLACED BEHIND CANTILEVERED, FREE TOP WALLS UNTIL THE CONCRETE HAS ATTAINED 100 PERCENT OF ITS SPECIFIED 28 DAY COMPRESSIVE STRENGTH.

7. USE OF EXPLOSIVES IS NOT PERMITTED.

FORMWORK, SHORING, AND BRACING:

1. STRUCTURES SHOWN ON THE DRAWINGS HAVE BEEN DESIGNED FOR STABILITY UNDER FINAL CONDITIONS ONLY. DESIGN SHOWN DOES NOT INCLUDE NECESSARY COMPONENTS OR E□UIPMENT FOR STABILITY OF THE STRUCTURES DURING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR WORK RELATING TO CONSTRUCTION ERECTION METHODS, BRACING, SHORING, RIGGING, GUYS, SCAFFOLDING, FORMWORK, AND OTHER WORK AIDS RE□UIRED TO SAFELY PERFORM THE WORK SHOWN.

2. TEMPORARY SHORING SHALL REMAIN IN PLACE UNTIL ELEVATED CONCRETE FLOOR OR SLABS HAVE REACHED 80 PERCENT OF THE 28 DAY COMPRESSIVE STRENGTH AS DETERMINED BY FIELD CYLINDER BREAKS.

CONCRETE REINFORCING:

1. REINFORCING STEEL:
   - TYPICAL: ASTM A615, GRADE 60
   - WELDED: ASTM A706, GRADE 60 (WELDING IS ONLY PERMITTED WITH WRITTEN PERMISSION FROM ENGINEER)

2. FABRICATION AND PLACEMENT OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH CRSI MSP-1 MANUAL OF STANDARD PRACTICE AND ACI 301 SPECIFICATIONS FOR STRUCTURAL CONCRETE .

3. MINIMUM REINFORCING FOR CONCRETE WALLS AND SLABS SHALL BE AS FOLLOWS:

THICKNESS	REINF EACH WAY		LOCATION
6	4	12	CENTERED
8	5	12	CENTERED
10	4	12	EACH FACE
12	5	12	EACH FACE

   PROVIDE LARGER SIZES AND MORE REINFORCING IN SECTIONS OF CONCRETE WHERE RE□UIRED BY THE DETAILS ON THE DRAWINGS OR BY THE SPECIFICATIONS.

4. CONCRETE COVER FOR REINFORCING, UNLESS SHOWN OTHERWISE, SHALL BE:
   - WHEN CAST AGAINST EARTH: 3
   - CONCRETE EXPOSED TO EARTH, LI□UID, WASHDOWN, OR WEATHER:
     - WALLS AND SLABS: 2
     - BEAM STIRRUPS AND COLUMN TIES: 2
     - BEAM AND COLUMN PRIMARY REINFORCING: 2 1/2"

5. REFER TO WALL CORNER AND WALL INTERSECTION REINFORCING DETAIL 0330-003 ON DRAWING 15SM504. WALL CORNER REINFORCING SIZES AND SPACINGS SHALL BE AS SHOWN ON THE DRAWINGS AND REFERENCED TO THIS DETAIL. TYPICAL HORIZONTAL WALL REINFORCING SHALL LAP WITH THE CORNER HORIZONTAL REINFORCING.

6. 90 DEGREE BENDS, UNLESS OTHERWISE SHOWN, SHALL BE ACI 318 STANDARD HOOKS.

7. WALL CORNER AND WALL INTERSECTION REINFORCEMENT BARS SHALL BE CONTINUOUS AROUND CORNERS AND THROUGH COLUMNS OR PILASTERS. REINFORCEMENT SHALL BE EXTENDED INTO CONNECTING WALLS AND LAPPED ON THE OPPOSITE FACE OF THE CONNECTING WALLS, AS INDICATED IN DETAIL 0330-003 ON DRAWING 15SM504.

8. WALL FOOTING CORNER AND INTERSECTION REINFORCEMENT BARS SHALL BE EXTENDED INTO CONNECTING FOOTINGS AND LAPPED ON THE OPPOSITE FACE OF THE CONNECTING FOOTING. OUTSIDE FACE WALL FOOTING REINFORCEMENT SHALL BE LAPPED WITH CORNER ARS. ALL WALL FOOTING REINFORCEMENT SHALL BE CONTINUOUS THROUGH COLUMNS OR PILASTERS FOOTINGS.

9. LAP VERTICAL WALL BARS WITH DOWELS FROM BASE SLABS AND EXTEND INTO TOP FACE OF FULL HEIGHT VERTICAL BARS WITH MATCHING DOWELS AT WALL ENDS, CORNERS AND INTERSECTIONS WITH SIZE TO MATCH TYPICAL VERTICAL REINFORCING STEEL SHOWN OR RE□UIRED BY NOTES ABOVE.

10. LOCATE ELEVATED SLAB AND BEAM TOP BAR SPLICES AT MIDSPAN AND BOTTOM BAR SPLICES AT SUPPORTS.

11. REINFORCING STEEL FOR FOOTINGS AND SLABS ON GRADE SHALL BE ADE□UATELY SUPPORTED ON BAR SUPPORTS WITH SPACERS TO KEEP REINFORCING ABOVE THE PREPARED GRADE. LIFTING REINFORCING OFF GRADE DURING CONCRETE PLACEMENT IS NOT PERMITTED.

12. REFER TO OPENING REINFORCING DETAIL 0330-001 ON DRAWING 15SM504.

13. REINFORCEMENT BENDS AND LAPS, UNLESS OTHERWISE NOTED, SHALL SATISFY THE FOLLOWING MINIMUM RE□UIREMENTS:

CONCRETE DESIGN STRENGTH ≥ 4,000 PSI MIN AT 28 DAYS[3] GRADE 60 REINFORCING STEEL										
BAR SIZE		#3	#4	#5	#6	#7	#8	#9	#10	#11
LAP SPLICE LENGTH										
SPACING = 3"	TOP BAR [2]	1'-4"	1'-8"	2'-1"	3'-0"	5'-2"	6'-8"	8'-6"	10'-10"	13'-4"
	OTHER BAR	1'-4"	1'-4"	1'-8"	2'-4"	4'-0"	5'-2"	6'-7"	8'-4"	10'-3"
SPACING = 4"	TOP BAR [2]	1'-4"	1'-8"	2'-0"	2'-5"	3'-10"	5'-0"	6'-5"	8'-1"	10'-0"
	OTHER BAR	1'-4"	1'-4"	1'-7"	1'-10"	3'-0"	3'-11"	4'-11"	6'-3"	7'-8"
SPACING ≥ 6"	TOP BAR [2]	1'-4"	1'-8"	2'-0"	2'-5"	3'-6"	4'-0"	5'-0"	6'-2"	7'-5"
	OTHER BAR	1'-4"	1'-4"	1'-7"	1'-10"	2'-9"	3'-1"	3'-10"	4'-9"	5'-8"
EMBEDMENT LENGTH										
SPACING = 3"	TOP BAR [2]	1'-0"	1'-3"	1'-8"	2'-4"	4'-0"	5'-2"	6'-7"	8'-4"	10'-3"
	OTHER BAR	1'-0"	1'-0"	1'-3"	1'-10"	3'-1"	4'-0"	5'-1"	6'-5"	7'-11"
SPACING = 4"	TOP BAR [2]	1'-0"	1'-3"	1'-7"	1'-10"	3'-0"	3'-11"	4'-11"	6'-3"	7'-8"
	OTHER BAR	1'-0"	1'-0"	1'-3"	1'-5"	2'-4"	3'-0"	3'-10"	4'-10"	5'-11"
SPACING ≥ 6"	TOP BAR [2]	1'-0"	1'-3"	1'-7"	1'-10"	2'-9"	3'-1"	3'-10"	4'-9"	5'-8"
	OTHER BAR	1'-0"	1'-0"	1'-3"	1'-5"	2'-1"	2'-5"	3'-0"	3'-8"	4'-5"

1. LAP LENGTHS ARE BASED ON MINIMUM CONCRETE COVER OF 2 . LONGER LENGTHS ARE RE UIRED FOR CONCRETE COVER LESS THAN 2 .

2. TOP BARS SHALL BE DEFINED AS ANY HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12 INCHES OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR IN ANY SINGLE POUR. HORIZONTAL WALL BARS ARE CONSIDERED TOP BARS.

3. WHERE 3000 PSI CONCRETE IS USED, INCREASE ABOVE LENGTHS BY 16 PERCENT. WHERE 3500 PSI CONCRETE IS USED, INCREASE ABOVE LENGTHS BY 7 PERCENT.

4. WHERE CONCRETE STRENGTH IS GREATER THAN 4000 PSI, USE THE ABOVE LENGTHS LISTED IN THE TABLE.

CAST IN PLACE CONCRETE:

1. 28-DAY COMPRESSIVE STRENGTHS:
   - TYPICAL, UNO: 4500 PSI
   - CONCRETE FILL: 3500 PSI
   - CURBS AND SIDEWALKS: 3500 PSI

   DUCT BANKS AND PIPE ENCASEMENTS
   NOT INTEGRAL WITH FOUNDATIONS: 3500 PSI

2. CONTINUOUS WATERSTOP AS SPECIFIED SHALL BE INSTALLED IN CONSTRUCTION JOINTS OF HYDRAULIC STRUCTURES, CHANNELS, AND BELOW GRADE STRUCTURES, EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE.

3. CONSTRUCTION JOINTS INDICATED ARE SUGGESTED LOCATIONS. CONTRACTOR MAY REVISE LOCATION OF JOINTS, SUBJECT TO SPECIFIED RE□UIREMENTS. LAYOUT SHOWING ALL CONSTRUCTION JOINT LOCATIONS SHALL BE SUBMITTED FOR REVIEW BY ENGINEER.

4. ROUGHEN AND CLEAN CONSTRUCTION JOINTS IN WALLS AND SLABS AS SPECIFIED PRIOR TO PLACING ADJACENT CONCRETE.

5. COORDINATE PLACEMENT OF OPENINGS, PIPE PENETRATIONS, CURBS, DOWELS, SLEEVES, CONDUITS, BOLTS AND INSERTS PRIOR TO PLACEMENT OF CONCRETE.

6. NO ALUMINUM CONDUIT OR PRODUCTS CONTAINING ALUMINUM OR ANY OTHER MATERIAL INJURIOUS TO THE CONCRETE SHALL BE EMBEDDED IN THE CONCRETE.

7. DO NOT PLACE CONDUIT PARALLEL TO BEAM OR COLUMN REINFORCEMENT UNLESS SPECIFICALLY INDICATED IN DRAWINGS.

8. PATCH FORM TIE HOLES IN ACCORDANCE WITH DETAILS 0310-051 AND/OR 0310-052.

Thomas Paige — Thomas Paige 2025.04.10 11:02:42 -06'00'

THOMAS E. PAIGE — NEW MEXICO — 17930 — PROFESSIONAL ENGINEER

DESIGNED: T. PAIGE	SUB SHEET NO.	TITLE OF SHEET: GENERAL	DRAWING NO. 315 / 182751
CADD: S. METCALF	00G005	STRUCTURAL NOTES 1	PMIS/PKG NO. 266697
TECH. REVIEW: C. WEBSTER		BANDELIER NATIONAL MONUMENT	SHEET 5 OF 203
DATE: 04/11/2025			

4/4/2025 10:45 AM SMETCALFR24 00G005_D3167658.DWG XG-Border_BAND

BASIC DATA:

WELDING:

1. WELDS SHALL CONFORM TO AMERICAN WELDING SOCIETY (AWS):
   - D1.1, STRUCTURAL WELDING CODE STEEL
   - D1.2, STRUCTURAL WELDING CODE ALUMINUM
   - D1.3, STRUCTURAL WELDING CODE SHEET STEEL
   - D1.4, STRUCTURAL WELDING CODE REINFORCING STEEL
   - D1.6, STRUCTURAL WELDING CODE STAINLESS STEEL
2. REPAIR WELDS FOUND DEFECTIVE IN ACCORDANCE WITH AWS D1.1 SECTION 5.26.
3. USE INTERMITTENT WELDS AT FIELD WELDS OF EMBED PLATES AND ANGLES TO AVOID SPALLING OR CRACKING OF THE EXISTING CONCRETE.
4. BUTT JOINT WELDS SHALL BE COMPLETE JOINT PENETRATION (CJP) UNLESS INDICATED OTHERWISE.

STRUCTURAL STEEL AND METAL FABRICATIONS:

1. STRUCTURAL STEEL SHALL CONFORM TO THE ASTM STANDARDS AS STATED IN THE SPECIFICATIONS.
2. ALUMINUM SHALL CONFORM TO THE ASTM STANDARDS AS STATED IN THE SPECIFICATIONS.
3. STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN CONFORMANCE WITH THE AISC MANUAL OF STEEL CONSTRUCTION, CURRENT EDITION, AND CURRENT OSHA STANDARDS.
4. FASTENERS SHALL BE HIGH STRENGTH BOLTS CONFORMING TO THE FOLLOWING ASTM STANDARDS EXCEPT 3.1. WHERE SPECIFICALLY INDICATED OTHERWISE:

UNLESS SHOWN OTHERWISE	A325-N
ANCHOR BOLTS (AB)	
STAINLESS STEEL	F593, AISI TYPE 316, CONDITION CW
STEEL OR GALVANIZED STEEL	F1554, GR 36 / A153
MACHINE BOLTS (MB)	
STEEL	A307
STAINLESS STEEL	F593, AISI TYPE 316, CONDITION CW
GALVANIZED STEEL	A307 / A153
ALUMINUM	F468, ALLOY 2024-T4

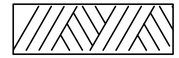
5. ITEMS TO BE EMBEDDED IN CONCRETE SHALL BE CLEAN AND FREE OF OIL, DIRT AND PAINT.
6. NO HOLES OTHER THAN THOSE SPECIFICALLY DETAILED SHALL BE ALLOWED THROUGH STRUCTURAL STEEL MEMBERS. NO CUTTING OR BURNING OF STRUCTURAL STEEL IS PERMITTED WITHOUT THE APPROVAL OF THE ENGINEER.

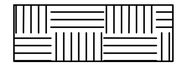
DEFERRED SUBMITTALS:

1. DEFERRED SUBMITTALS ARE THOSE PORTIONS OF THE DESIGN WHICH ARE NOT SUBMITTED AT THE TIME OF PERMIT APPLICATION AND WHICH ARE TO BE SUBMITTED TO THE PERMITTING AGENCY FOR ACCEPTANCE PRIOR TO INSTALLATION OF THAT PORTION OF THE WORK OR ARE REQUIRED TO BE SUBMITTED FOR REVIEW ONLY BY THE CONTRACTING OFFICER.
2. WHERE DEFERRED SUBMITTALS INCLUDE ADDITIONAL MATERIALS, INSTALLATION, ANCHORAGE, OR CERTIFICATION OF COMPONENTS THAT REQUIRE SPECIAL INSPECTION AND/OR STRUCTURAL OBSERVATION TO MEET CODE REQUIREMENTS, THE DEFERRED SUBMITTAL SHALL INCLUDE SPECIFIC LINE ITEMS TO BE ADDED TO THE APPROPRIATE TABLES IN THE PROJECT'S STATEMENT OF SPECIAL INSPECTIONS PLAN IF THEY ARE NOT ALREADY IDENTIFIED.
3. THE FOLLOWING IS A LIST OF DEFERRED SUBMITTALS PER CBC SECTION 107.3.4.1 THAT ARE EXPECTED TO CONTAIN STRUCTURAL CALCULATIONS OR SAFETY RELATED SYSTEM INFORMATION FOR REVIEW TO MEET BUILDING PERMITTING REQUIREMENTS FOR DESIGNED SYSTEMS. PRIOR TO INSTALLATION OF THE INDICATED STRUCTURAL ELEMENT, EQUIPMENT, DISTRIBUTION SYSTEM, OR COMPONENT OR ITS ANCHORAGE, THE CONTRACTOR SHALL SUBMIT THE REQUIRED CALCULATIONS AND SUPPORTING DATA AND DRAWINGS FOR REVIEW AND ACCEPTANCE BY THE CONTRACTING OFFICER. ADDITIONALLY, ACCEPTANCE INDICATED ON THE CONTRACTING OFFICER S COMMENT FORM, ALONG WITH THE COMPLETED, FINAL SUBMITTAL SHALL THEN BE SUBMITTED BY THE CONTRACTOR TO THE PERMITTING AGENCY AND APPROVED PRIOR TO INSTALLATION OF THESE ITEMS.

SPECIFICATION SECTION	CODE REQUIRED DEFERRED SUBMITTALS FOR REVIEW BY PERMITTING AGENCY
01 88 15	ANCHORAGE AND BRACING
03 40 00	PRECAST CONCRETE STRUCTURES
13 34 20	PRECAST CONCRETE BUILDINGS
40 05 15	PIPING SUPPORT SYSTEMS
OTHER	ANY EQUIPMENT OR COMPONENT IN WHICH A TECHNICAL SPECIFICATION REQUIRES SUBMITTAL OF EQUIPMENT OR ANCHORAGE SYSTEM CALCULATIONS

LEGEND:

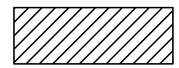

UNDISTURBED, EXISTING SOIL

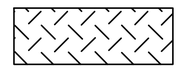

GRANULAR FILL OR BACKFILL,
STRUCTURAL FILL OR BACKFILL

DRAIN, DRAINAGE, UNDERDRAIN ROCK

SAND

CONCRETE FILL, CLSM BACKFILL


STEEL


CHECKERED PLATE

Thomas Paige
Thomas Paige 2025.04.10 11:04:27 -06'00'

THOMAS E. PAIGE NEW MEXICO 17930 PROFESSIONAL ENGINEER

DESIGNED: T PAIGE.	SUB SHEET NO.	TITLE OF SHEET GENERAL	DRAWING NO. 315 182751
CADD S.METCALF	00G006	GENERAL STRUCTURAL NOTES 2	PMIS/PKG NO. 266697
TECH. REVIEW: C. WEBSTER		BANDELIER NATIONAL MONUMENT	SHEET 6 OF 203
DATE: 04/11/2025			

4/4/2025 10:48 AM SMETCALFR24 00G006_D3167658.DWG XG-Border_BAND

BASIC DATA:

STATEMENT OF SPECIAL INSPECTIONS PLAN

GENERAL NOTES

1. THE STATEMENT OF SPECIAL INSPECTIONS PROVIDE PROJECT COMPLIANCE WITH THE PROVISIONS OF THE INTERNATIONAL BUILDING CODE (IBC) CHAPTER 17 FOR SPECIAL INSPECTION, AND STRUCTURAL OBSERVATION, AND TESTING.

2. STANDARD SPECIAL INSPECTION REQUIREMENTS FOR NONSTRUCTURAL COMPONENTS ARE CONTAINED IN TABLE 1.

3. STANDARD SPECIAL INSPECTION REQUIREMENTS FOR STRUCTURAL COMPONENTS, REGARDLESS OF WIND OR SEISMIC DESIGN CATEGORIES, ARE CONTAINED IN TABLE 2. STANDARD TESTING REQUIREMENTS FOR STRUCTURAL COMPONENTS ARE CONTAINED IN TABLE 3.

4. PROJECT SPECIFIC REQUIREMENTS FOR STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORIES C, D, E, OR F ARE CONTAINED IN TABLE 4. ADDITIONAL TESTING REQUIREMENTS FOR STRUCTURAL RESISTANCE ARE CONTAINED IN TABLE 6.

5. PROJECT SPECIFIC REQUIREMENTS FOR STRUCTURES SUBJECT TO NOMINAL DESIGN WIND SPEEDS IN EXCESS OF 110 MPH (ALLOWABLE STRESS DESIGN) ARE CONTAINED IN TABLE 5.

6. FOR ADDITIONAL REQUIREMENTS, REFER TO SPECIFICATION SECTION 01 45 33, SPECIAL INSPECTION, OBSERVATION AND TESTING. THESE INCLUDE:

   A. CONTRACTOR'S REQUIREMENTS TO PROVIDE ACCESS TO THE WORK FOR REQUIRED INSPECTIONS, AND TO PROVIDE NOTICE OF REQUIRED INSPECTIONS AND STRUCTURAL OBSERVATION.

   B. CONTRACTOR'S STATEMENT OF RESPONSIBILITY FOR WORK TO BE PERFORMED ON SYSTEMS DESIGNATED UNDER THE STATEMENT OF SPECIAL INSPECTIONS PLAN FOR WIND OR SEISMIC RESISTANCE.

   C. DEFINITIONS AND TERMINOLOGY USED IN THIS STATEMENT OF SPECIAL INSPECTIONS.

SPECIAL INSPECTION

1. SPECIAL INSPECTION WILL BE IN ACCORDANCE WITH IBC SECTIONS 1704 AND 1705 TOGETHER WITH LOCAL AMENDMENTS. REFER TO THE TABLES CONTAINED ON THESE GENERAL SHEETS FOR PROJECT SPECIFIC INSPECTION TYPES AND FREQUENCIES.

2. SPECIAL INSPECTIONS SHALL BE PROVIDED BY A CERTIFIED OR QUALIFIED INSPECTOR AND ASSOCIATED TESTING SHALL BE PERFORMED BY AN APPROVED ACCREDITED INDEPENDENT AGENCY. THE CONTRACTOR SHALL SECURE AND PAY FOR THE SERVICES OF THE AGENCY TO PERFORM ALL SPECIAL INSPECTION AND ASSOCIATED TESTS. INSPECTORS FOR EACH SYSTEM AND MATERIAL SHALL BE INTERNATIONAL CODE COUNCIL (ICC) CERTIFIED OR OTHERWISE APPROVED BY THE CONTRACTING OFFICER.

3. THE CONTRACTOR SHALL PROVIDE THE CONTRACTING OFFICER NOTICE OF UPCOMING INSPECTIONS A MINIMUM OF 48 HOURS PRIOR TO INSPECTION.

4. THE SPECIAL INSPECTOR SHALL OBSERVE THE INDICATED WORK FOR COMPLIANCE WITH THE APPROVED CONTRACT DOCUMENTS AND SUBMIT RECORDS OF INSPECTION. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTING OFFICER FOR CORRECTION.

5. SPECIAL INSPECTION AND ASSOCIATED TESTING REPORTS SHALL BE SUBMITTED TO CONTRACTING OFFICER AND THE BUILDING OFFICIAL WITHIN ONE WEEK OF INSPECTION OR WITHIN ONE WEEK OF TEST COMPLETION. INSPECTIONS FOR WHICH REPORTING WILL BE REQUIRED ARE NOTED IN THE TABLES CONTAINED ON THIS STATEMENT OF SPECIAL INSPECTIONS. PROVIDE COPIES OF ALL REPORTS TO CONTRACTING OFFICER.

6. AT THE CONCLUSION OF CONSTRUCTION, A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF PREVIOUSLY NOTED DISCREPANCIES SHALL BE SUBMITTED.

GEOTECHNICAL OBSERVATION

1. ALL FOUNDATION BEARING SURFACES SHALL BE INSPECTED BY GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF GRANULAR FILL AND REINFORCING STEEL. ADDITIONAL SPECIAL INSPECTION REQUIREMENTS ARE LISTED IN TABLE 1.

2. GEOTECHNICAL TESTING REQUIREMENTS ARE LISTED IN TABLE 3.

STRUCTURAL OBSERVATION

1. STRUCTURAL OBSERVATION WILL BE IN ACCORDANCE WITH IBC SECTION 1704.6. REFER TO PROJECT SPECIFIC NOTES ON SHEET.

2. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITIES FOR ANY REQUIRED SPECIAL INSPECTIONS.

3. STRUCTURAL OBSERVATION REPORTS, NOTING ANY DEFICIENCIES, WILL BE DELIVERED TO CONTRACTING OFFICER WITHIN ONE WEEK OF THE OBSERVATION. THE CONTRACTOR WILL BE NOTIFIED ON-SITE AND IN WRITING PROMPTLY UPON FINDING DEFICIENCIES.

4. AT THE CONCLUSION OF CONSTRUCTION, A WRITTEN STATEMENT WILL BE PROVIDED TO VERIFY THAT THE STRUCTURAL OBSERVATION SITE VISITS WERE MADE AND WHETHER THERE REMAIN ANY STRUCTURAL DEFICIENCIES THAT HAVE NOT BEEN RESOLVED.

5. STRUCTURAL OBSERVATION WILL INCLUDE VISUAL OBSERVATION OF THE STRUCTURAL SYSTEM AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM FOR EACH STRUCTURE CONTAINED IN THE WORK.

STRUCTURAL OBSERVATION TABLE

	SYSTEM FOR FACILITY AS APPLICABLE	STAGE	ITEMS	COMMENTS
1.	FOUNDATION OF STRUCTURE	PRIOR TO FIRST CONCRETE PLACEMENT OF FIRST SECTION WHEN ITEMS CAN STILL BE REVISED	REINFORCING STEEL, CONCRETE AND MASONRY WALL DOWELS, WATERSTOPS, EMBEDS, AND SIMILAR ITEMS	NOTE 1
2.	AT ADDITIONAL TIMES DURING CONSTRUCTION AT WHICH THE CONTRACTING OFFICER DEEM THE NEED FOR ADDITIONAL STRUCTURAL OBSERVATION			NOTE 1
3.	AT SUBSTANTIAL COMPLETION OF PRIMARY STRUCTURAL SYSTEM FOR DETERMINATION OF FINAL CONDITION OF STRUCTURE			NOTE 1

NOTES:
1. STRUCTURAL OBSERVER TO DISCUSS ITEMS AND SITE SPECIFIC CONDITIONS WITH SPECIAL INSPECTOR AND FIELD INSPECTION STAFF DURING OBSERVATION.

SPECIAL INSPECTIONS FOR WIND RESISTANCE

1. SPECIAL INSPECTIONS REQUIREMENTS FOR WIND RESISTANCE IN ACCORDANCE WITH IBC SECTION 1705.10 ARE NOT APPLICABLE TO THIS PROJECT.

SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE

1. SPECIAL INSPECTIONS REQUIREMENTS FOR SEISMIC RESISTANCE WILL BE IN ACCORDANCE WITH IBC SECTION 1705.12 TOGETHER WITH LOCAL AND STATE AMENDMENTS.

2. SPECIAL INSPECTIONS REQUIREMENTS FOR SEISMIC RESISTANCE SHALL APPLY TO THE SYSTEMS AND COMPONENTS LISTED IN TABLE 4.

3. MAIN SYSTEMS REQUIRED TO BE COVERED UNDER PROJECT SPECIAL INSPECTION REQUIREMENTS INCLUDE ALL STRUCTURES TOGETHER WITH THEIR CONNECTIONS. REFER TO SPECIFICATION 01 45 33, SPECIAL INSPECTION, OBSERVATION AND TESTING.

Thomas Paige
Thomas Paige
2025.04.10
11:04:51 -06'00'

THOMAS E. PAIGE
NEW MEXICO
17930
PROFESSIONAL ENGINEER

DESIGNED: T PAIGE	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
CADD S METCALF	00G007	GENERAL	315 / 182751
TECH. REVIEW: C. WEBSTER		STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS 1	PMIS/PKG NO. 266697
DATE: 04/11/2025		BANDELIER NATIONAL MONUMENT	SHEET 7 OF 203

4/4/2025 10:50 AM SMETCALFR24 00G007_D3167658.DWG -XG-Border_BAND

BASIC DATA:

TABLE 1
REQUIRED NON-STRUCTURAL SPECIAL INSPECTION
REFER TO SPECIFICATION SECTION 01 45 33

SYSTEM OR MATERIAL	2021 IBC CODE REFERENCE	REFERENCED STANDARD	PERIODIC SPECIAL INSPECTION (SEE NOTE 1)	CONTINUOUS SPECIAL INSPECTION	COMMENTS	TESTING FOR SPECIAL INSPECTION
GEOTECHNICAL						
1. SOILS:						
A. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	1705.6, 1803.5.8, 1803.5.9, 1804.5	SECTION 31 23 13, SUBGRADE PREPARATION	X		PROFESSIONAL OBSERVATION BY GEOTECHNICAL ENGINEER	
B. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	1705.6	SECTION 31 23 16, EXCAVATION	X		PROFESSIONAL OBSERVATION BY GEOTECHNICAL ENGINEER	
C. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	1705.6	SECTION 31 23 23, FILL AND BACKFILL	X			SEE TABLE 3 FOR GRADATION TEST REQUIREMENTS
D.VERIFY USE OF PROPER MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	1705.6, 1803.5.8	SECTION 31 23 23, FILL AND BACKFILL		X		SEE TABLE 3 FOR DENSITY TEST REQUIREMENTS
E. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	1705.6	SECTION 31 23 13, SUBGRADE PREPARATION	X		PROFESSIONAL OBSERVATION BY GEOTECHNICAL ENGINEER	SEE TABLE 3 FOR DENSITY TEST AND PROOF ROLLING REQUIREMENTS
STRUCTURAL						
SEE TABLE 2.						

NOTES:
1. PERIODIC INSPECTION IS DEFINED AS INSPECTION BY THE SPECIAL INSPECTOR OF ALL MATERIALS AND SYSTEMS, IN SOME CASES PERFORMED DURING THEIR PLACEMENT AND IN ALL CASES PERFORMED UPON COMPLETION OF THEIR PLACEMENT. THE COMPLETION INSPECTION SHALL BE PERFORMED SO THAT WORK CAN BE CORRECTED PRIOR TO OTHER RELATED WORK PROCEEDING AND COVERING INSPECTED WORK.

TABLE 2 (CONTINUED)
REQUIRED STRUCTURAL SPECIAL INSPECTION
REFER TO SPECIFICATION SECTION 01 45 33

SYSTEM	2021 IBC CODE REFERENCE	REFERENCED STANDARD	PERIODIC SPECIAL INSPECTION (SEE NOTE 1)	CONTINUOUS SPECIAL INSPECTION	COMMENTS	TESTING FOR SPECIAL INSPECTION
CONCRETE						
1. INSPECT REINFORCING STEEL AND PLACEMENT	1705.3	ACI 318: Ch. 20, 25.2, 25.3, 26.6.1-26.6.3	X			
2. INSPECT ANCHORS CAST IN CONCRETE	1705.3	ACI 318: 17.8.2	X			
3. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS						
A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	1705.3	ACI 318: 17.8.2.4, ICC-ES EVALUATION REPORTS		X		
B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 3A.	1705.3	ACI 318: 17.8.2, ICC-ES EVALUATION REPORTS	X			
4. VERIFY USE OF REQUIRED DESIGN MIX	1705.3, 1904.2, 1910.2, 1910.3	ACI 318: Ch. 4, 5.2-5.4	X			
5. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	1705.3	ASTM C 172, ASTM C 31, ACI 318: 26.12		X		SEE TABLE 3 FOR CONCRETE TEST REQUIREMENTS
6. INSPECT CONCRETE FOR PROPER APPLICATION TECHNIQUES	1705.3	ACI 318: 26.5.1.1, 26.5.2.1		X		
7. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	1705.3	ACI 318: 26.5.3.2, 26.5.4.2, 26.5.5.2	X			
8. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO REMOVAL OF SHORING AND FORMS FROM BEAMS AND STRUCTURAL SLABS	1705.3	ACI 318: 26.11.2.1	X			
9. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	1705.3	ACI 318: 26.11.1.2	X			
10. INSPECT WATERSTOPS FOR PROPER SHAPE, LOCATION, JOINT QUALITY, AND SURROUNDING CONCRETE PLACEMENT		ACI 318; 26.5.6.2	X			
11. VERIFY PROPER INSTALLATION OF MECHANICAL REINFORCING SPLICES AND CONNECTIONS	1705.1.1 ITEM 3, 1705.3	ICC-ES EVALUATION REPORTS	X			

NOTES:
1. PERIODIC INSPECTION IS DEFINED AS INSPECTION BY THE SPECIAL INSPECTOR OF ALL MATERIALS AND SYSTEMS, IN SOME CASES PERFORMED DURING THEIR PLACEMENT AND IN ALL CASES PERFORMED UPON COMPLETION OF THEIR PLACEMENT. THE COMPLETION INSPECTION SHALL BE PERFORMED SO THAT WORK CAN BE CORRECTED PRIOR TO OTHER RELATED WORK PROCEEDING AND COVERING INSPECTED WORK.

2. VISUAL INSPECTION IS THE RESPONSIBILITY OF THE CONTRACTOR'S WELDING INSPECTOR(S) AND IS NOT CONSIDERED SPECIAL INSPECTION. CONTRACTOR MUST PROVIDE A QUALIFIED WELDING INSPECTOR TO OVERSEE CONTRACTOR'S WELDING OPERATIONS, AS REQUIRED BY AWS D1.1, SECTIONS 8.1.2 & 8.6, AND REFERENCED WELDING CODES.

Thomas Paige
Thomas Paige 2025.04.10 11:05:09 -06'00'

THOMAS E. PAIGE NEW MEXICO 17930 PROFESSIONAL ENGINEER

DESIGNED: T PAIGE	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO. 315 182751
CADD S METCALF	00G008	GENERAL	PMIS/PKG NO. 266697
TECH. REVIEW: C. WEBSTER		STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS 2	SHEET 8 OF 203
DATE: 04/11/2025		BANDELIER NATIONAL MONUMENT	

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BASIC DATA:

TABLE 3

TESTING FOR REQUIRED SPECIAL INSPECTION
REFER TO SPECIFICATION SECTION 01 45 33

MATERIAL	TYPE OR SCOPE	STANDARD	2021 IBC CODE REFERENCE	FREQUENCY	BY WHOM	COMMENTS
GEOTECHNICAL						
COMPACTED FILL	GRADATION	ASTM C117, C136	1705.6	SECTION 31 23 23, FILL AND BACKFILL	SPECIAL INSPECTOR	
COMPACTED FILL	COMPACTION	ASTM D6938, D1557	1705.6	SECTION 31 23 23, FILL AND BACKFILL	SPECIAL INSPECTOR	
COMPACTED FILL	DENSITY	ASTM D1557, D6938	1705.6	SECTION 31 23 23, FILL AND BACKFILL	SPECIAL INSPECTOR	
PREPARED SUBGRADE	DENSITY	ASTM D6938, D1557	1705.6	SECTION 31 23 13, SUBGRADE PREPARATION	SPECIAL INSPECTOR	
CONCRETE						
CONCRETE	STRENGTH	ASTM C39	1705.3	ONCE EACH DAY, BUT NOT LESS THAN ONE SAMPLE FOR EACH 150 CUBIC YARDS OR 5,000 SFT OF WALLS OR SLABS PLACED	SPECIAL INSPECTOR	
CONCRETE	SLUMP	ASTM C143, C94	1705.3	ONE SAMPLE PER STRENGTH TEST	SPECIAL INSPECTOR	
CONCRETE	AIR CONTENT	ASTM C231, C94	1705.3	ONE SAMPLE PER STRENGTH TEST	SPECIAL INSPECTOR	
CONCRETE	TEMPERATURE	ASTM C1064	1705.3	ONE SAMPLE PER STRENGTH TEST	SPECIAL INSPECTOR	

TABLE 4

REQUIRED SPECIAL INSPECTION FOR SEISMIC RESISTANCE FOR STRUCTURAL SYSTEMS
REFER TO TABLE 2 FOR STANDARD STRUCTURAL SPECIAL INSPECTION REQUIREMENTS
REFER TO SPECIFICATION SECTION 01 45 33

The Seismic Design Category (SDC) for this Project is D.

SYSTEM	INSPECTION REQUIRED FOR FOLLOWING SEISMIC DESIGN CATEGORIES	2021 IBC CODE REFERENCE	PERIODIC SPECIAL INSPECTION (SEE NOTE 1)	CONTINUOUS SPECIAL INSPECTION	COMMENTS	TESTING FOR SPECIAL INSPECTION
STRUCTURAL						
INSPECT AND VERIFY THAT THE DESIGNATED SEISMIC SYSTEM COMPONENTS ARE LABELED AND ANCHORAGE OR MOUNTING CONFORMS TO THE CERTIFICATE OF COMPLIANCE	"C" AND ABOVE	1705.11.4	X			

NOTES:
1. PERIODIC INSPECTION IS DEFINED AS INSPECTION BY THE SPECIAL INSPECTOR OF ALL MATERIALS AND SYSTEMS, IN SOME CASES PERFORMED DURING THEIR PLACEMENT AND IN ALL CASES PERFORMED UPON COMPLETION OF THEIR PLACEMENT. THE COMPLETION INSPECTION SHALL BE PERFORMED SO THAT WORK CAN BE CORRECTED PRIOR TO OTHER RELATED WORK PROCEEDING AND COVERING THE INSPECTED WORK.
2. TESTING OF SYSTEMS AND THEIR ANCHORAGE SHALL BE IN CONFORMANCE WITH 2022 CBC SECTION 1705.12.3.
3. CERTIFICATION OF SYSTEMS AND THEIR ANCHORAGE SHALL BE IN CONFORMANCE WITH 2022 CBC SECTION 1705.12.3.

TABLE 5

REQUIRED SPECIAL INSPECTION FOR WIND RESISTANCE FOR STRUCTURAL SYSTEMS
REFER TO SPECIFICATION SECTION 01 45 33

The Nominal Design Wind Speed (3-second-gust) for this Project is 105 mph.
The Wind Exposure is Category C.

TABLE IS NOT APPLICABLE TO PROJECT

TABLE 6

TESTING FOR SEISMIC RESISTANCE
REFER TO SPECIFICATION SECTION 01 45 33

MATERIAL	TYPE OR SCOPE	STANDARD	2021 IBC CODE REFERENCE	FREQUENCY	BY WHOM	COMMENTS
TABLE IS NOT APPLICABLE FOR THIS PROJECT						

Thomas Paige
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THOMAS E. PAIGE NEW MEXICO 17930 PROFESSIONAL ENGINEER

DESIGNED: T PAIGE	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
CADD S METCALF	00G009	GENERAL	315 182751
TECH. REVIEW: C. WEBSTER		STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS 3 BANDELIER NATIONAL MONUMENT	PMIS/PKG NO. 266697
DATE: 04/11/2025			SHEET 9 OF 203

4/4/2025 10:51 AM SMETCALFR24 00G009_03167658.DWG XG-Border_BAND

BASIC DATA:

PIPE AND FITTING SYMBOLS

DOUBLE LINE	SINGLE LINE	
		EXISTING PIPE
		NEW PIPE
		EXISTING PIPE TO BE ABANDONED
		EXISTING PIPE TO BE REMOVED
		WELDED JOINT
		GROOVED END JOINT
		FLANGED JOINT
		MECHANICAL JOINT & PROPRIETARY RESTRAINED JOINT
		BELL & SPIGOT JOINT (LEADED)
		HUB & SPIGOT JOINT (RUBBER GASKET)
		BALL JOINT
		ADAPTER SIDE GROOVED END ADAPTER FLANGE
		FLANGED COUPLING ADAPTER
		FLEXIBLE COUPLING
		METAL BELLOWS EXP JOINT
		ELASTOMER BELLOWS EXP JOINT
		ELBOW UP
		ELBOW DOWN
		TEE UP
		TEE DOWN
		LATERAL UP
		LATERAL DOWN
		CONCENTRIC REDUCER
		ECCENTRIC REDUCER

DOUBLE LINE	SINGLE LINE	
		REDUCING BUSHING
		UNION
		CAP
		ANCHOR
		ELBOW, 90 DEGREE
		CROSS
		TEE
		ELBOW, 45 DEGREE
		LATERAL

NOTES:

1. ONLY FLANGED END CONNECTIONS ARE SHOWN HERE FOR DOUBLE LINE FITTINGS.
2. SYMBOLS SHOWN HERE FOR SINGLE LINE FITTINGS ARE GENERIC ONLY.
3. EXISTING PIPE AND EQUIPMENT IS SHOWN LIGHT–LINED AND/OR SCREENED AND IS NOTED AS EXISTING. NEW PIPING AND EQUIPMENT IS SHOWN HEAVY–LINED.

VALVE SYMBOLS

SINGLE LINE	DOUBLE LINE
GATE	
BUTTERFLY	OR
GLOBE	OR
BALL	OR
NEEDLE	OR
SWING CHECK	OR
BALL CHECK	OR
Y–CHECK	
HOSE VALVE (HV– X) OR (V–X) X = NO. IN SPECS	
SAMPLE	
PRESSURE RELIEF	
AIR AND/OR VACUUM RELEASE	
REGULATED SIDE	
PRESSURE CONTROL (INTERNAL PILOT)	

VALVE DESIGNATIONS

MANUAL VALVES AND CHECK VALVES

V 500

VALVE DESIGNATION

VALVE TYPE, SEE SPECIFICATIONS

CONTROL VALVES

M

VALVE FUNCTION

FV 541–4–1

UNIT NUMBER

LOOP NUMBER

UNIT PROCESS NUMBER

NOTE:
SEE I&C LEGENDS FOR FURTHER DEFINITIONS AND ACTUATOR TYPES.

SELF–CONTAINED REGULATING VALVES

PRV–BM–1–2

UNIT NUMBER

LOOP NUMBER

UNIT PROCESS ID

VALVE TYPE AND FUNCTON. SEE I&C LEGENDS FOR FURTHER DEFINITIONS

ACTUATOR SYMBOLS

PNEUMATIC DIAPHRAGM

PNEUMATIC CYLINDER

ELECTRIC MOTOR

HYDRAULIC

MANUAL

SOLENOID

ELECTRO HYDRAULIC

MECHANICAL ABBREVIATIONS

WS	–	WELDED STEEL
CS	–	CARBON STEEL
DI	–	DUCTILE IRON
PVC	–	POLYVINYL CHLORIDE
MGC	–	MECHANICAL GROOVED COUPLING
PRV	–	PRESSURE REDUCING VALVE
TYP	–	TYPICAL
PMP	–	PUMP
LCP	–	LOCAL CONTROL PANEL

MECHANICAL LEGEND AND NOTES

GENERIC PIPING NOTES

1. SIZE OF FITTINGS SHOWN ON DRAWINGS SHALL CORRESPOND TO ADJACENT STRAIGHT RUN OF PIPE, UNLESS OTHERWISE INDICATED. TYPE OF JOINT AND FITTING MATERIAL SHALL BE THE SAME AS SHOWN FOR ADJACENT STRAIGHT RUN OF PIPE.
2. LOCATION AND NUMBER OF PIPE HANGERS AND PIPE SUPPORTS SHOWN IS ONLY APPROXIMATE. CONTRACTOR SHALL DESIGN SUPPORTS AS SPECIFIED.
3. ALL JOINTS SHALL BE WATERTIGHT. WALL PIPES SHALL BE USED WHEREVER PIPING PASSES FROM A STRUCTURE TO BACKFILL.
4. ALL FLEXIBLE CONNECTORS AND COUPLING ADAPTERS SHALL BE PROVIDED WITH THRUST PROTECTION AS SPECIFIED, UNLESS OTHERWISE NOTED. THRUST PROTECTION SHALL BE ADEQUATE FOR TEST PRESSURES SPECIFIED.
5. SYMBOLS, LEGENDS, AND PIPE USE IDENTIFICATIONS SHOWN SHALL BE FOLLOWED THROUGHOUT THE DRAWINGS, WHEREVER APPLICABLE. NOT ALL OF THE VARIOUS PIPING COMPONENTS ARE NECESSARILY USED IN THE PROJECT.
6. ALL BURIED PIPING SPECIFIED TO BE PRESSURE TESTED, EXCEPT FLANGED, WELDED, OR SCREWED PIPING, SHALL BE PROVIDED WITH THRUST PROTECTION AS SPECIFIED, UNLESS OTHERWISE NOTED.
7. NUMBER AND LOCATION OF UNIONS SHOWN ON DRAWINGS IS ONLY APPROXIMATE. PROVIDE ALL UNIONS NECESSARY TO FACILITATE CONVENIENT REMOVAL OF VALVES AND MECHANICAL EQUIPMENT.

PIPING DESIGNATION

EXAMPLE:

4" PVC – WTR

4" PVC WTR

SERVICE PIPE MATERIAL

PIPE DIAMETER

GENERAL NOTE:

1. THIS IS A STANDARD LEGEND SHEET. THEREFORE, NOT ALL OF THE INFORMATION SHOWN MAY BE USED ON THIS PROJECT.

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

BRYAN WAYNE PRICE NEW MEXICO 27845 PROFESSIONAL ENGINEER
04-09-2025

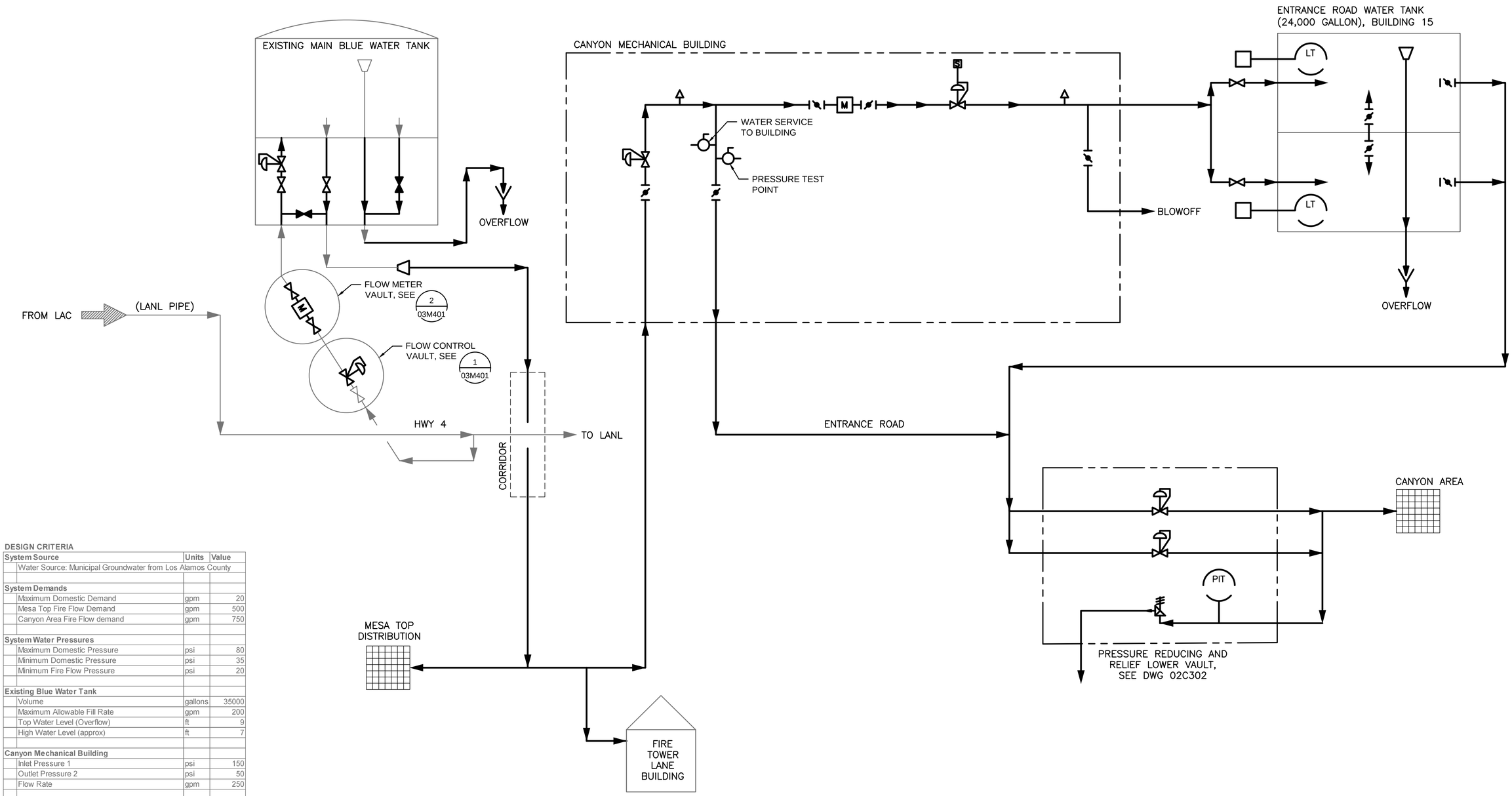
DESIGNED: J. FIGUEORA	SUB SHEET NO.	TITLE OF SHEET GENERAL	DRAWING NO. 315 182751
CADD J. FIGUEORA	00G010	PROCESS MECHANICAL NOTES AND LEGEND 1 BANDELIER NATIONAL MONUMENT	PMIS/PKG NO. 266697
TECH. REVIEW: J. MICAH			SHEET 10 OF 203
DATE: 04/11/2025			

4/4/2025 10:52 AM SMETCALFR24 00G010_D3167658.DWG XG:Border_BAND

BASIC DATA:

NOTES:

1. NOT ALL VALVES AND INSTRUMENTS ARE SHOWN FOR CLARITY.



DESIGN CRITERIA

System Source	Units	Value
Water Source: Municipal Groundwater from Los Alamos County		
System Demands		
Maximum Domestic Demand	gpm	20
Mesa Top Fire Flow Demand	gpm	500
Canyon Area Fire Flow demand	gpm	750
System Water Pressures		
Maximum Domestic Pressure	psi	80
Minimum Domestic Pressure	psi	35
Minimum Fire Flow Pressure	psi	20
Existing Blue Water Tank		
Volume	gallons	35000
Maximum Allowable Fill Rate	gpm	200
Top Water Level (Overflow)	ft	9
High Water Level (approx)	ft	7
Canyon Mechanical Building		
Inlet Pressure 1	psi	150
Outlet Pressure 2	psi	50
Flow Rate	gpm	250
Entrance Road Water Tank		
Volume	gallons	24000
Maximum Fill Rate	gpm	200
Top Water Level (Overflow)	ft	12
High Water Level	ft	10
Minimum Water Level	ft	1.6
Pressure Reducing Enclosure (Agoyo Lane)		
Inlet Pressure	psi	170
Outlet Pressure	psi	65
Ultimate Flow Rate	gpm	750

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

BRYOR WAYNE PRICE NEW MEXICO 27845 PROFESSIONAL ENGINEER
04-09-2025

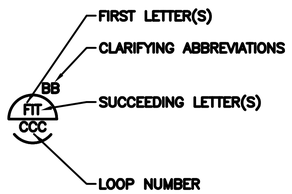
DESIGNED: J WICKS	SUB SHEET NO. 00G011	TITLE OF SHEET GENERAL	DRAWING NO. 315 182751
CADD J WILCOX		PROCESS FLOW DIAGRAM AND DESIGN CRITERIA	PMIS/PKG NO. 266697
TECH. REVIEW: B PRICE		BANDELIER NATIONAL MONUMENT	SHEET 11 OF 203
DATE: 04/11/2025			

4/8/2025 11:32 AM IKHAN1 R24005011_3167658.DWG XG-Bandlr_BAND

BASIC DATA:

INSTRUMENT IDENTIFICATION

EXAMPLE SYMBOLS



DIGITAL SYSTEM INTERFACES

- ▲ ANALOG INPUT
- ▼ ANALOG OUTPUT
- Δ_x DISCRETE INPUT
- ∇_x DISCRETE OUTPUT
- ◊ COMMUNICATION SIGNAL

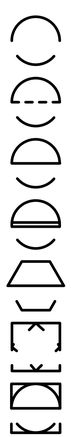
INSTRUMENT IDENTIFICATION LETTERS TABLE

	FIRST–LETTER		SUCCEEDING–LETTERS		
LETTER	PROCESS OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	READOUT OR PASSIVE FUNCTION	READOUT OR PASSIVE FUNCTION
A	ANALYSIS (*)		ALARM		
B	BURNER, COMBUSTION		USER'S CHOICE (*)	USER'S CHOICE (*)	USER'S CHOICE (*)
C	USER'S CHOICE (*)			CONTROL	
D	DENSITY (S.G.)	DIFFERENTIAL			
E	VOLTAGE		PRIMARY ELEMENT, SENSOR		
F	FLOW RATE	RATIO (FRACTION)			
G	USER'S CHOICE (*)		GLASS, GAUGE VIEWING DEVICE	GATE	
H	HAND (MANUAL)				HIGH
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW
M	MOTION	MOMENTARY			MIDDLE, INTERMEDIATE
N	TORQUE		USER'S CHOICE (*)	USER'S CHOICE (*)	USER'S CHOICE (*)
O	USER'S CHOICE (*)		ORIFICE, RESTRICTION		
P	PRESSURE, VACUUM		POINT (TEST) CONNECTION		
Q	QUANTITY	INTEGRATE, TOTALIZE			
R	RADIATION		RECORD OR PRINT		
S	SPEED, FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTI VARIABLE		MULTI FUNCTION	MULTI FUNCTION	MULTI FUNCTION
V	VIBRATION, MECHANICAL ANALYSIS			VALVE, DAMPER, LOUVER	
W	WEIGHT, FORCE		WELL		
X	USER'S CHOICE (*)	X AXIS	USER'S CHOICE (*)	USER'S CHOICE (*)	USER'S CHOICE (*)
Y	EVENT, STATE OR PRESENCE	Y AXIS		RELAY, COMPUTE, CONVERT	
Z	POSITION	Z AXIS		DRIVE, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT	

TABLE BASED ON THE INSTRUMENTATION, SYSTEMS, AND AUTOMATION SOCIETY (ISA) STANDARD.

(*) WHEN USED, EXPLANATION IS SHOWN ADJACENT TO INSTRUMENT SYMBOL.

GENERAL INSTRUMENT OR FUNCTIONAL SYMBOLS



- FIELD MOUNTED
- REAR–OF–PANEL MOUNTED (OPERATOR INACCESSIBLE)
- PANEL MOUNTED (OPERATOR ACCESSIBLE)
- MCC MOUNTED
- COMPUTER FUNCTION
- PLC FUNCTION
- SHARED DISPLAY, SHARED CONTROL

TRANSDUCERS

A	ANALOG	I	CURRENT
D	DIGITAL	P	PNEUMATIC
E	VOLTAGE	PF	PULSE FREQUENCY
F	FREQUENCY	PD	PULSE DURATION
H	HYDRAULIC	R	RESISTANCE

EXAMPLE

CURRENT TO PNEUMATIC TRANSDUCER (BACK OF PANEL, IN A FLOW LOOP)

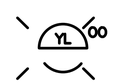
ACCESSORY DEVICES

A	ALARM
C	CONTROLLER
I	INDICATOR
R	RECORDER
S	SWITCH
T	TRANSMITTER
X	USER'S CHOICE

EXAMPLE

TRANSMITTER AS AN ACCESSORY TO A FLOW ELEMENT

SPECIAL CASES



ON AND OFF EVENT LIGHTS

ON–OFF HAND SWITCH, MAINTAINED CONTACT SWITCH (CONTROLLED DEVICE WILL RESTART ON RETURN OF POWER AFTER POWER FAILURE).

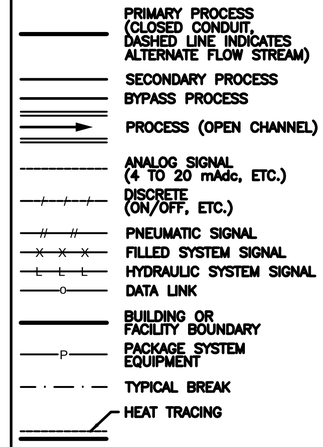
STOP–START HAND SWITCH MOMENTARY CONTACT SWITCHES (CONTROLLED DEVICE WILL NOT RESTART ON RETURN OF POWER AFTER POWER FAILURE).

TABLE BASED ON THE INSTRUMENTATION, SYSTEMS, AND AUTOMATION SOCIETY (ISA) STANDARD.

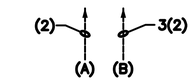
(+) WHEN USED, EXPLANATION IS SHOWN ADJACENT TO INSTRUMENT SYMBOL. SEE ABBREVIATIONS AND LETTER SYMBOLS.
(*) WHEN USED, DEFINE THE MEANING HERE FOR THE PROJECT.

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

LINE LEGEND



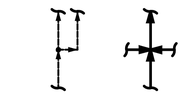
PARALLELING LINES



(A) TOTAL OF 2 SIGNALS

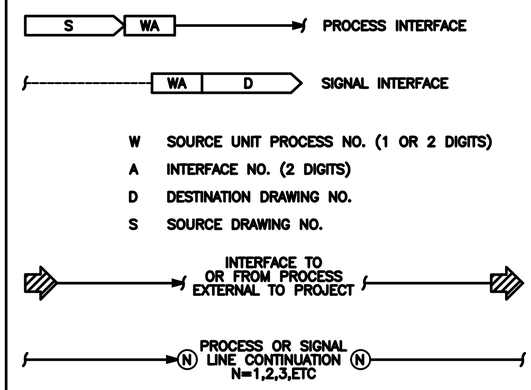
(B) 3 TYPICAL SETS OF 2 SIGNALS EACH. TOTAL OF 6 SIGNALS.

CONNECTING LINES



NON–CONNECTING LINES

INTERFACE SYMBOLS



W SOURCE UNIT PROCESS NO. (1 OR 2 DIGITS)
A INTERFACE NO. (2 DIGITS)
D DESTINATION DRAWING NO.
S SOURCE DRAWING NO.

ABBREVIATIONS & LETTER SYMBOLS

ARV	AIR–RELIEF VALVE
CAT6	ETHERNET CABLE
ET	ETHERNET
FE	FLOW SENSING ELEMENT
FIT	FLOW INDICATING TRANSMITTER
FO	FIBER–OPTIC CABLE
FPP	FIBER–OPTIC PATCH PANEL
GND	GRINDER
HMI	HUMAN MACHINE INTERFACE
HOA	HAND–OFF–AUTO
HP	HORSEPOWER
HW	HARDWIRE
LCP	LOCAL CONTROL PANEL
LE	LEVEL SENSING ELEMENT
LIT	LEVEL INDICATING TRANSMITTER
MSC	MANUFACTURED SUPPLIED CABLE
NIP	NETWORK INTERFACE PANEL
NTSW	NETWORK SWITCH
OIT	OPERATOR INTERFACE TERMINAL
PCV	PRESSURE CONTROL VALVE
PIT	PRESSURE INDICATING TRANSMITTER
PLC	PROGRAMMABLE LOGIC CONTROLLER
PMP	PUMP
PSI	POUNDS PER SQUARE INCH
PRV	PRESSURE REDUCING/RELIEF VALVE
RIO	REMOTE INPUT–OUTPUT
RM	REMOTE MONITORING SYSTEM
TNK	TANK
UPS	UNINTERRUPTIBLE POWER SUPPLY
VAC	VOLTS – ALTERNATING CURRENT
VDC	VOLTS – DIRECT CURRENT
XA	USER DEFINED ALARM
XS	USER DEFINED SWITCH
XY	USER DEFINED OUTPUT

EQUIPMENT TAG NUMBERS

XXX–CCC

XXX = EQUIPMENT/INSTRUMENT IDENTIFIERS
CCC = LOOP NUMBER

GENERAL NOTES

1. COMPONENTS AND PANELS SHOWN WITH A SINGLE ASTERISK (*) ARE TO BE PROVIDED AS PART OF A PACKAGE SYSTEM.
2. COMPONENTS AND PANELS SHOWN WITH A DOUBLE ASTERISK (**) ARE TO BE PROVIDED UNDER DIVISION 26, ELECTRICAL.

JONATHAN B. JAMES NEW MEXICO 18614 PROFESSIONAL ENGINEER
Digitally signed by Jonathan James
Date: 2025.04.11 12:18:20-06'00'

DESIGNED: A WILLIAMS	SUB SHEET NO.	TITLE OF SHEET GENERAL	DRAWING NO. 315 182751
CADD E KRISTEL	00G012	INSTRUMENTATION & CONTROLS LEGEND SHEET 1 BANDELIER NATIONAL MONUMENT	PMIS/PKG NO. 266697
TECH. REVIEW: D ATURALIYE			SHEET 12 OF 203
DATE: 04/11/2025			

3/25/2025 11:07 AM EKRISTEL 024 00G012 03167658.DWG XG:Border BAND

BASIC DATA:

VALVE SYMBOLS

- GATE
- KNIFE GATE
- BUTTERFLY
- GLOBE
- BALL
- VEE-BALL
- PLUG
- SEAT PORT ECCENTRIC PLUG
- DIAPHRAGM
- DUCKBILL CHECK VALVE
- PINCH
- NEEDLE
- SWING CHECK
- BALL CHECK
- BACKFLOW PREVENTER
- SAMPLE
- PRESSURE RELIEF
- AIR AND/OR VACUUM RELEASE
- REGULATED SIDE PRESSURE CONTROL

MULTI-PORT VALVE (GATE VALVE SHOWN. FOR OTHER VALVE TYPES, APPROPRIATE VALVE SYMBOL SHOWN.) SEAT PORTS ARE IMPLIED BY INDICATED FLOW PATTERN.

GATE SYMBOLS

- SLUICE
- BUTTERFLY

ACTUATOR SYMBOLS

- ELECTRIC MOTOR
- SOLENOID
- MANUAL

NOTE:
ON LOSS OF PRIMARY POWER (PNEUMATIC, ELECTRICAL, OR HYDRAULIC)

XX: FO FAIL OPEN
FC FAIL CLOSED
FLP FAIL TO LAST POSITION

PRIMARY ELEMENT SYMBOLS

- ORFICE PLATE
- ELECTROMAGNETIC FLOWMETER
- SUBMERSIBLE PRESSURE TRANSDUCER
- LEVEL (FLOAT)
- GENERIC

MISCELLANEOUS SYMBOLS

- VENT TO ATMOSPHERE
- AIR GAP
- BLIND FLANGE
- PIPE CAP
- REDUCER
- CELLULAR ANTENNA
- GOOSE NECK VENT

PUMP AND COMPRESSOR SYMBOLS

- CENTRIFUGAL PUMP (DRY PIT)
- GRINDER

FLOW STREAM IDENTIFICATION

OVF OVERFLOW
RS RAW SEWAGE
W POTABLE WATER

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

JONATHAN B. JAMES NEW MEXICO 18614 PROFESSIONAL ENGINEER
Digitally signed by Jonathan James
Date: 2025.04.11 12:18:20-06'00'

DESIGNED: A WILLIAMS	SUB SHEET NO.	TITLE OF SHEET GENERAL	DRAWING NO. 315 182751
CADD E KRISTEL	00G013	INSTRUMENTATION & CONTROLS LEGEND SHEET 2	PMIS/PKG NO. 266697
TECH. REVIEW: D ATURALIYE		BANDELIER NATIONAL MONUMENT	SHEET 13 OF 203
DATE: 04/11/2025			

3/25/2025 11:08 AM EKRISTEL R24 00G013 D3167658.DWG XG:Border BAND

BASIC DATA:

ONE-LINE DIAGRAM-1

SYMBOL	DESCRIPTION
	DRAWOUT AIR CIRCUIT BREAKER, LOW VOLTAGE
400	CIRCUIT BREAKER, THERMAL MAGNETIC TRIP SHOWN, 3 POLE, UNO
AS/AF or AT/AF	CIRCUIT BREAKER, STATIC TRIP UNIT, SENSOR AMP TRIP AND FRAME RATINGS SHOWN, 3 POLE, UNO
100/M	CIRCUIT BREAKER, MAGNETIC TRIP ONLY, TRIP RATING SHOWN, 3 POLE, UNO
400 400	CIRCUIT BREAKER WITH CURRENT LIMITING FUSES, TRIP AND FUSE RATING INDICATED, 3 POLE, UNO
400 225	FUSED SWITCH, SWITCH AND FUSE CURRENT RATING INDICATED, 3 POLE, UNO
100	SWITCH, CURRENT RATING INDICATED, 3 POLE, UNO
60 (3)	FUSE, CURRENT RATING AND QUANTITY INDICATED
1	MAGNETIC STARTER WITH OVERLOAD, NEMA SIZE INDICATED, FVNR UNO
AFD	ELECTRONIC STARTER/SPEED CONTROL RVSS = REDUCED VOLTAGE SOFT STARTER AFD = AC ADJUSTABLE FREQUENCY DRIVE DC = DC ADJUSTABLE SPEED DRIVE RVAT = REDUCED VOLTAGE AUTO TRANSFORMER TYPE RVRT = REDUCED VOLTAGE REACTOR TYPE
	CABLE OR BUS CONNECTION POINT
K	KEY INTERLOCK
	SURGE ARRESTER (GAP TYPE)
10	CAPACITOR – KVAR INDICATED, 3 PHASE
3	AC MOTOR, SQUIRREL CAGE INDUCTION – HORSEPOWER INDICATED
G 500/625	GENERATOR, KW/KVA RATING SHOWN
VS V 0–600V	ANALOG METER WITH SWITCH – SCALE RANGE SHOWN V = VOLTAGE KW = KILOWATTS A = AMPERAGE KVAR = KILOVARS PF = POWER FACTOR
DPM	DIGITAL POWER METER (MULTIFUNCTION)
	UTILITY REVENUE METER
	GROUND
15 KVA 480–120/240V 1 PH	TRANSFORMER, SIZE, VOLTAGE RATINGS, AND PHASE INDICATED
	SHIELDED ISOLATION TRANSFORMER
480–120V (3)	POTENTIAL TRANSFORMER, VOLTAGE RATING AND QUANTITY INDICATED
100:5 (3)	CURRENT TRANSFORMER, RATIO(100:5) AND QUANTITY INDICATED (3)
	CONNECTION POINT TO EQUIPMENT SPECIFIED IN OTHER DIVISIONS. RACEWAY, CONDUCTOR AND CONNECTION IN THIS DIVISION
SPD	SURGE PROTECTIVE DEVICE

ONE-LINE DIAGRAM-2

SYMBOL	DESCRIPTION
	DRAWOUT POWER CIRCUIT BREAKER, MEDIUM VOLTAGE
	NON DRAWOUT FUSED SWITCH, MEDIUM VOLTAGE
	DRAWOUT FUSED SWITCH AND CONTACTOR, MEDIUM VOLTAGE
	DRAWOUT FUSED SWITCH AND VACUUM CONTACTOR, MEDIUM VOLTAGE
	DRAWOUT VACUUM CONTACTOR, MEDIUM VOLTAGE
	MEDIUM VOLTAGE CABLE STRESS CONE TYPE TERMINATION, OPEN TERMINATOR OR ELBOW
	SWITCH – LOAD BREAK, GROUP OPERATED, MEDIUM VOLTAGE
	SWITCH W/ARCING HORNS, MEDIUM VOLTAGE
	DISCONNECTING FUSE – SOLID MATERIAL, MEDIUM VOLTAGE
	SWITCH – HOOK STICK OPERATED, SINGLE POLE, MEDIUM VOLTAGE
	FUSE – EXPULSION, HOOK STICK OPERATED, SINGLE POLE, MEDIUM VOLTAGE
	GROUND SWITCH, GANG OPERATED
	TERMINAL BLOCK LUG
Δ	DELTA CONNECTION
Y	WYE GROUNDED CONNECTION, SOLID GROUND
R or Z	WYE NEUTRAL GROUND RESISTOR OR IMPEDANCE CONNECTION
86	RELAY OR DEVICE, FUNCTION NUMBER AS INDICATED
50:5 (1)	CURRENT TRANSFORMER, ZERO SEQUENCE, RATIO AND QUANTITY INDICATED
800/1200:5 (3)	BUSHING CURRENT TRANSFORMER, MULTI-RATIO AND QUANTITY INDICATED
MO	MOTOR OPERATOR, BREAKER OR SWITCH
EUM	ENERGY MONITORING UNIT
MPR	MOTOR PROTECTION RELAY
F	FAULT DETECTOR

NOTES:

1. THESE ARE STANDARD LEGEND SHEETS. SOME SYMBOLS AND ABBREVIATIONS MAY APPEAR ON THE LEGEND AND NOT ON THE DRAWINGS.
2. FOR ADDITIONAL ABBREVIATIONS OF OTHER DIVISIONS (HVAC, MECHANICAL, AND STRUCTURAL/ARCHITECTURAL) SEE OTHER LEGENDS.

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

CONTROL DIAGRAM-1

SYMBOL	DESCRIPTION
	PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY OPEN
	PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY CLOSED
	PUSH BUTTON SWITCH, MAINTAINED CONTACTS WITH MECHANICAL INTERLOCK
	3 POSITION SELECTOR SWITCH MAINTAINED CONTACT
HAND OFF REMOTE	SELECTOR SWITCH – MAINTAINED CONTACT – CHART IDENTIFIES OPERATION WHEN NEEDED FOR CLARITY:

	POSITION		
CKT	HAND	OFF	REMOTE
1	X	O	O
2	O	O	X

X – CLOSED CONTACT
O – OPEN CONTACT

SYMBOL	DESCRIPTION
	TOGGLE SWITCH, ON-OFF TYPE
ON OFF	SELECTOR SWITCH, ON-OFF TYPE
	MUSHROOM HEAD PUSHBUTTON SWITCH
A	INDICATING LIGHT, PUSH-TO-TEST, LETTER INDICATES COLOR
A	INDICATING LIGHT – LETTER INDICATES COLOR A – AMBER G – GREEN S – STROBE B – BLUE R – RED C – CLEAR W – WHITE
ETM	ELAPSED TIME METER
M	MOTOR STARTER CONTACTOR COIL
CRX	CONTROL RELAY, X INDICATES NUMERICAL ORDER IN CIRCUIT
TDR X	TIME DELAY RELAY, X INDICATES NUMERICAL ORDER IN CIRCUIT
SV X	SOLENOID VALVE, X INDICATES NUMERICAL ORDER IN CIRCUIT
	CONTACT – NORMALLY OPEN
	CONTACT – NORMALLY CLOSED
	REMOTE DEVICE
	TIME DELAY RELAY CONTACT, NORMALLY OPEN, CLOSES WHEN ENERGIZED AND TIMED OUT
	TIME DELAY RELAY CONTACT, NORMALLY CLOSED, OPENS WHEN ENERGIZED AND TIMED OUT
	TIME DELAY RELAY CONTACT, CLOSES WHEN ENERGIZED, OPENS WHEN DE-ENERGIZED AND TIMED OUT
	TIME DELAY RELAY CONTACT, OPENS WHEN ENERGIZED, CLOSES WHEN DE-ENERGIZED AND TIMED OUT
	MOTOR SPACE HEATER
	TERMINAL BLOCK, REMOTE
	TERMINAL BLOCK, INTERNAL
	FUSED TERMINAL BLOCK
	FUSE, RATING INDICATED
CPT 120V	TRANSFORMER, CONTROL POWER
	THERMOCOUPLE

CONTROL DIAGRAM-2

SYMBOL	DESCRIPTION
	CAPACITOR
+ –	BATTERY
	LIMIT SWITCH, NORMALLY OPEN, CLOSES AT END OF TRAVEL
	LIMIT SWITCH, NORMALLY CLOSED, OPENS AT END OF TRAVEL
	TEMPERATURE SWITCH, OPENS ON TEMPERATURE RISE
	TEMPERATURE SWITCH, CLOSES ON TEMPERATURE RISE
	FLOAT SWITCH, NORMALLY OPEN, CLOSES ON DESCENDING LEVEL
	FLOAT SWITCH, NORMALLY OPEN, CLOSES ON RISING LEVEL
	PRESSURE SWITCH, NORMALLY CLOSED, OPENS ON RISING PRESSURE
	PRESSURE SWITCH, NORMALLY OPEN, CLOSES ON RISING PRESSURE
	FLOW SWITCH, CLOSES ON INCREASED FLOW
	FLOW SWITCH, OPENS ON INCREASED FLOW
NGR	NEUTRAL GROUND CURRENT LIMITING RESISTOR
RER	CALIBRATING RESISTOR
T GEN	TACHOMETER GENERATOR
GFS	GROUND FAULT SENSOR
	FLASHER
	SEALED CONTACT
	BUZZER
	POTENTIOMETER
	RESISTOR
	BLOWN FUSE INDICATOR
	COAXIAL CABLE
	MULTICONDUCTOR SHIELDED CABLE
	DUPLEX RECEPTACLE
L U	RELAY, WITH MECHANICAL LATCH
	FULLWAVE DIODE BRIDGE (AC TO DC)

JONATHAN B. JAMES
NEW MEXICO
18614
PROFESSIONAL ENGINEER
Digitally signed by Jonathan James
Date: 2025.04.11
12:18:21-06'00'

DESIGNED: I. JAMES	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
CADD I. KHAN	00G014	GENERAL	315 / 182751
TECH. REVIEW: J. LANDMAN		ELECTRICAL LEGEND 1	PMIS/PKG NO. 266697
DATE: 04/11/2025		BANDELIER NATIONAL MONUMENT	SHEET 14 OF 203

3/26/2025 10:06 AM ZHUNERS R24 00G014_03167658.DWG XG:Butler BAND

SYMBOL	DESCRIPTION

POWER SYSTEM PLAN–1

	CONNECTION POINT TO EQUIPMENT SPECIFIED. RACEWAY, CONDUCTOR,TERMINATION AND CONNECTION IN THIS DIVISION.
MCC-A	MAJOR ELECTRICAL COMPONENT OR DEVICE – NAME OR IDENTIFYING SYMBOL AS SHOWN.
	PANELBOARD – SURFACE MOUNTED
LPXXA	PANELBOARD LETTER OR NUMBER FACILITY NUMBER LP – LOW VOLTAGE PANEL DP – DISTRIBUTION PANEL
	PANELBOARD – FLUSH MOUNTED
	TERMINAL JUNCTION BOX
M	MOTOR, SQUIRREL CAGE INDUCTION
G	GENERATOR, VOLTAGE AND SIZE AS INDICATED.
LPXXA	HOME RUN – DESTINATION SHOWN
or G	EXPOSED CONDUIT AND CONDUCTORS*
or G	CONCEALED CONDUIT AND CONDUCTORS*

NOTE:
ALL UNMARKED CONDUIT RUNS CONSIST OF TWO NO. 12, ONE NO. 12 GROUND CONDUCTORS IN 3/4" CONDUIT. RUNS MARKED WITH CROSSHATCHES INDICATE NUMBER OF NO. 12 CONDUCTORS. CROSSHATCH WITH SUBSCRIPT "G" INDICATES GREEN GROUND WIRE.

G	CROSSHATCHES WITH BAR INDICATE NO.10 CONDUCTOR. SIZE CONDUIT ACCORDING TO SPECIFICATIONS AND APPLICABLE CODE.
[A1]	CONDUIT AND CONDUCTOR CALLOUT, SEE LEGEND.
	CONDUIT DOWN
	CONDUIT UP
	CONDUIT, STUBBED AND CAPPED
DB	DIRECT BURIED CONDUIT(S)
CE	CONCRETE ENCASED CONDUIT(S)
XXXX	DUCT BANK WHERE XXXX IS THE DUCT BANK IDENTIFIER.
	CONCEALED CONDUIT ROUTING AREA
	CONDUIT ROUTING AREA
	CABLE TRAY
T	TRANSFORMER
J or CS	GENERAL CONTROL OR WIRING DEVICE. LETTER SYMBOLS OR ABBREVIATIONS INDICATE TYPE OF DEVICE
CS	CONTROL STATION, SEE CONTROL DIAGRAMS FOR CONTROL DEVICE(S) REQUIRED.
30	NONFUSED DISCONNECT SWITCH, CURRENT RATING INDICATED, 3 POLE
60/40	FUSED DISCONNECT SWITCH, CURRENT RATING INDICATED (60/40, 60=SWITCH RATING / 40=FUSE RATING) 3 POLE
2	COMBINATION CIRCUIT BREAKER AND MAGNETIC STARTER, NEMA SIZE INDICATED
RV	RECREATIONAL VEHICLE PEDESTAL
LOD	LIMITS OF DISTRUBANCE BOUNDARY

SYMBOL	DESCRIPTION

POWER SYSTEM PLAN–2

100/40	BREAKER, SEPARATELY MOUNTED, CURRENT RATING INDICATED (100/40, 100 = FRAME SIZE; 40 = TRIP RATING) 3 POLE
C 2	CONTACTOR, MAGNETIC, NEMA SIZE INDICATED
L 30	LIGHTING CONTACTOR, CURRENT RATING INDICATED
2	STARTER, MAGNETIC NEMA SIZE INDICATED
XX 2	CONVENIENCE RECEPTACLE – DUPLEX UNLESS NOTED OTHERWISE WP– WEATHERPROOF C– CLOCK HANGER TL– TWIST LOCK CRE– CORROSION RESISTANT GFCI– GROUND FAULT CIRCUIT INTERRUPTER SUBSCRIPT NUMBER AT RECEPTACLE INDICATES PANEL CIRCUIT
	240V RECEPTACLE
	CONVENIENCE RECEPTACLE – QUADRUPLEX
	MULTI OUTLET ASSEMBLY
	DUPLEX CONVENIENCE RECEPTACLE – FLUSH IN FLOOR
	CONVENIENCE RECEPTACLE, PEDESTAL, DUPLEX SINGLE FACE UNLESS INDICATED OTHERWISE
L20R 20	RECEPTACLE, SPECIAL PURPOSE–NEMA CONFIGURATION AND AMPERAGE INDICATED
T	THERMOSTAT
	UTILITY REVENUE METERING FACILITY
EUH	ELECTRIC UNIT HEATER
AC	ELECTRIC AIR CONDITIONER (SELF CONTAINED UNIT)
	UTILITY POLE

LIGHTING SYSTEM PLAN

1 or 1 13	LUMINAIRE, SEE SCHEDULE PANEL CIRCUIT NO.
1 13	LUMINAIRE, SEE SCHEDULE PANEL CIRCUIT NO.
1 or	LUMINAIRE WITH INTERNAL BATTERY BACKUP, SEE SCHEDULE
1	STRIP LUMINAIRE, SEE SCHEDULE
4 or 4	LUMINAIRE AND POLE, SEE SCHEDULE
5 or 5 13	WALL MOUNTED LUMINAIRE, SEE SCHEDULE PANEL CIRCUIT NO.
1	FLOOD LIGHTS – AIM IN THE DIRECTION SHOWN
	STANDBY LIGHTING UNIT, SURFACE MOUNTED, SEE SCHEDULE
XX or	EXIT LIGHTS – FILLED SECTION INDICATES LIGHTED FACE, ARROW INDICATES EGRESS DIRECTIONAL INDICATORS, XX = FIXTURE NUMBER, SEE SCHEDULE
$ 3A or 2a	SMALL LETTER SUBSCRIPT AT SWITCH AND LUMINAIRE INDICATES SWITCHING. SUBSCRIPT NUMBER AT LUMINAIRE INDICATES CIRCUIT
$ 33	WALL SWITCH: 2– DOUBLE POLE P– PILOT LIGHT 3– THREE WAY K– KEY OPERATED 4– FOUR WAY D– DIMMER WP–WEATHERPROOF CRE–CORROSION RESISTANT EX– EXPLOSIONPROOF L– MOMENTARY 3–WAY M– MOTOR RATED MS– MANUAL STARTER WITH OVERLOADS
OS	OCCUPANCY SENSOR
LC	LIGHTING CONTACTOR
MD	MOTION DETECTOR
PC	PHOTOCELL

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

SYMBOL	DESCRIPTION

GROUND SYSTEM PLAN

	GROUND ROD
	GROUND ROD IN TEST WELL
	GROUND BUS
	PIGTAIL FOR CONNECTION TO EQUIPMENT CABINET OR FRAME
G	EQUIPMENT GROUND BUS
N	EQUIPMENT NEUTRAL BUS

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DESIGNED: J. JAMES	SUB SHEET NO.	TITLE OF SHEET GENERAL	DRAWING NO. 315 182751
CADD I. KHAN	00G015	ELECTRICAL LEGEND 2	PMIS/PKG NO. 266697
TECH. REVIEW: J. LANDMAN		BANDELIER NATIONAL MONUMENT	SHEET 15 OF 203
DATE: 04/11/2025			

3/26/2025 10:12 AM ACUGLIAT R24 00G015_D3167658.DWG XG-Border_BNVD

BASIC DATA:

ABBREVIATIONS–1

ABBREVIATION	DESCRIPTION
A	AMPERE, AUTOMATIC
AB SW	AIR–BREAK SWITCH
ABV	ABOVE
AC	ALTERNATING CURRENT
ACB	AIR–CIRCUIT BREAKER
ACSR	ALUMINUM CONDUCTOR STEEL–REINFORCED
ADJ	ADJUSTABLE
AF	AMPERE FRAME
AFD	ADJUSTABLE FREQUENCY DRIVE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHM	AMPERE–HOUR METER
AHU	AIR HANDLING UNIT
AL	ALUMINUM
AM	AMMETER
AMPL	AMPLIFIER
ANN	ANNUNCIATOR
ANT	ANTENNA
APPROX	APPROXIMATE
AS	AMMETER SWITCH, AMPERE SENSOR
ASC	AUXILIARY SWITCH NORMALLY CLOSED
ASO	AUXILIARY SWITCH NORMALLY OPEN
ASU	AIR SUPPLY UNIT
ATC	AUTOMATIC TRANSFER CONTROL
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AWG	AMERICAN WIRE GAGE
BAT	BATTERY
BC	BARE COPPER
BIL	BASIC IMPULSE LEVEL
BKR	BREAKER
BLDG	BUILDING
BOT	BOTTOM
C	CONDUIT, CONTACTOR, CONDUCTOR, CLOSE, CENTIGRADE
CB	CIRCUIT BREAKER
CC	CONTROL CABLE
CCS	CENTRAL CONTROL SYSTEM
CKT	CIRCUIT
CLC	CAMLOCK CABINET
CLF	CURRENT LIMITING FUSE
CLG	CEILING
COM	COMMUNICATIONS
CONN DIAG	CONNECTION DIAGRAM
CONT	CONTINUE
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CPU	CENTRAL PROCESSING UNIT
CR	CONTROL RELAY
CS	CONTROL STATION:C=CLOSE, T=TRIP
CT	CURRENT TRANSFORMER, CABLE TRAY
CU	COPPER
DB	DIRECT BURIED
DC	DIRECT CURRENT
DCS	DISTRIBUTED CONTROL SYSTEM
DIV	DIVISION
DN	DOWN
DP	DISTRIBUTION PANEL
DPDT	DOUBLE–POLE DOUBLE–THROW
DPST	DOUBLE–POLE SINGLE–THROW
DS	DISCONNECT SWITCH
E	EMPTY
EA	EACH
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
EG	ENGINE GENERATOR
EL	ELEVATION
ELEC	ELECTRIC
ELEM	ELEMENTARY
EMER	EMERGENCY
EMS	ENERGY MONITORING SYSTEM
EMT	ELECTRICAL METALLIC TUBING
EMU	ENERGY MONITORING UNIT
ENCL	ENCLOSURE
EO	ELECTRIC OPERATED, ELECTRIC OPERATOR
EP	EXPLOSION–PROOF
EQPT	EQUIPMENT
ETM	ELAPSED TIME METER
EUH	ELECTRIC UNIT HEATER
EXH	EXHAUST
EXST	EXISTING
F	FORWARD, FREQ
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FDR	FEEDER
FF	FINISHED FLOOR
FI	FLOW INDICATOR
FLEX	FLEXIBLE CONDUIT
FLR	FLOOR
FLUOR	FLUORESCENT
FPR	FEEDER PROTECTOR RELAY
FO	FIBER OPTIC
FOC	FACILITIES OPERATION CENTER
FP	FIELD PANEL
FREQ	FREQUENCY
FS	FLOAT SWITCH
FT	FLOW TRANSMITTER
FU	FUSE
FVNR	FULL VOLTAGE NON–REVERSING
FVR	FULL VOLTAGE REVERSING
FWD	FORWARD
G	GROUND
GALV	GALVANIZED
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFR	GROUND FAULT RELAY
GND	GROUND
GPR	GENERATOR PROTECTOR RELAY
GRS	GALVANIZED RIGID STEEL CONDUIT
H	HIGH SPEED
HGT	HEIGHT
HH	HANDHOLE
HID	HIGH INTENSITY DISCHARGE
HMI	HUMAN–MACHINE INTERFACE
HOA	HAND–OFF–AUTO
HOR	HAND–OFF–REMOTE
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HS	HAND SWITCH
HV	HIGH VOLTAGE
HVAC	HEATING, VENTILATING & AIR CONDITIONING
HZ	HERTZ
IAW	IN ACCORDANCE WITH
IC	INTERRUPTING CAPACITY
I & C	INSTRUMENTATION AND CONTROL
IMC	INTERMEDIATE METALLIC CONDUIT
INCAND	INCANDESCENT
INST	INSTANTANEOUS
INT	INTERRUPTING
ISR	INTRINSICALLY SAFE RELAY
J,JB	JUNCTION BOX
K	KEY INTERLOCK
KA	KILOAMPERES
KAIC	KILOAMPERES INTERRUPTING CAPACITY
KCM	THOUSAND CIRCULAR MILS
KV	KILOVOLTS
KVA	KILOVOLT AMPERES
KW	KILOWATTS
KWH	KILOWATT HOURS
KWHD	KILOWATT HOURS DEMAND
L	LIGHTING CONTACTOR, LOW SPEED, LOWER
LAC	LOS ALAMOS COUNTY
LANL	LOS ALAMOS NATIONAL LABORATORY
LC	LIGHTING CONTROLLER, LATCH COIL
LCP	LOCAL CONTROL PANEL
LE	LEVEL ELEMENT
LIT	LEVEL INDICATING TRANSMITTER
LOR	LOCAL–OFF–REMOTE
LP	LIGHTING PANEL
LPS	LOW PRESSURE SODIUM
LR	LOCAL/REMOTE
LS	LIMIT SWITCH, LEVEL SWITCH
LT	LEVEL TRANSMITTER, LOW–VOLTAGE TRANSFORMER
LT FLEX	LIQUID–TIGHT FLEX CONDUIT
M	MAGNETIC CONTACTOR COIL, MOTOR, MANUAL
MA	MILLIAMPERE
MAN	MANUAL
MAU	MAKE–UP AIR UNIT
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MDC	MOTORIZED DAMPER CONTROL
MECH	MECHANICAL
MFR	MANUFACTURER
MH	MANHOLE, METAL HALIDE, MOUNTING HEIGHT
MIN	MINIMUM
MO	MOTOR OPERATOR
MOP	MOTOR OPERATED POTENTIOMETER
MOV	METAL OXIDE VERISTOR, MOTOR OPERATED VALVE
MPR	MOTOR PROTECTION RELAY
MRCT	MULTI RATIO CURRENT TRANSFORMER
MS	MOTOR STARTER
MSC	MANUFACTURER SUPPLIED CABLE
MT	MOUNT
MTD	MOUNTED
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE
MVA	MEGA–VOLT AMPERES
N	NEUTRAL, NORMAL
NA	NON–AUTOMATIC
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NESC	NATIONAL ELECTRICAL SAFETY CODE
NEUT	NEUTRAL
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
NP	NAMEPLATE
NTS	NOT TO SCALE
O	OPEN
OCA	OPEN–CLOSE–AUTO
OCB	OIL CIRCUIT BREAKER
OCR	OVERCURRENT RELAY
OHM	OHMMETER
OL	OVERLOAD RELAY
OO	ON–OFF
OOA	ON–OFF–AUTO
OOR	ON–OFF–REMOTE
OS	OCCUPANCY SENSOR
PB	PULL BOX, PANELBOARD
PC	PHOTOCELL
PCC	POINT OF COMMON COUPLING
PCB	POWER CIRCUIT BREAKER
PF	POWER FACTOR
PH	PHASE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PMIS	PAD–MOUNTED INTERRUPTER SWITCH
PMMU	PAD–MOUNTED METERING UNIT
PMS	PAD–MOUNTED SWITCH
PNL	PANEL
POT	POTENTIOMETER
PP	POWER PACK
PS	PRESSURE SWITCH
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
PWR	POWER
R	RELAY,REVERSE,RUN,RAISE
RCPT	RECEPTACLE
REF	REFERENCE
REM	REMOTE
RGS	RIGID GALVANIZED STEEL CONDUIT
RIO	REMOTE INPUT/OUTPUT
RMS	ROOT MEAN SQUARE
RPM	REVOLUTIONS PER MINUTE
RTU	REMOTE TELEMETRY UNIT
RTD	RESISTANCE TEMPERATURE DETECTOR
RVNR	REDUCED VOLTAGE NON–REVERSING
RVR	REDUCED VOLTAGE REVERSING
SA	SURGE ARRESTER
SC	SPEED CONTROL
SCADA	SUPERVISORY CONTROL AND DATA ACQUITION SYSTEM
SCU	SPEED CONTROL UNIT
SF	SUPPLY FAN
SH	SPACE HEATER
S/N	SOLID NEUTRAL
SOL	SOLENOID
SP	SPARE
SPD	SPEED
SS	START STOP
SST	STAINLESS STEEL
ST	SHUNT TRIP
SUB	SUBSTATION
SV	SOLENOID VALVE
SVEC	SHENANDOAH VALLEY ELECTRIC COOPERATIVE
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SYMM	SYMMETRICAL
T	THERMOSTAT, TRANSFORMER
TB	TERMINAL BOARD, TEST BLOCK
TD	TEMPERATURE DETECTOR, TIME DELAY
TDC	TIME–DELAY CLOSING
TDO	TIME–DELAY OPENING
TDR	TIME DELAY RELAY
TEL	TELEPHONE
TEMP	TEMPERATURE
TJB	TERMINAL JUNCTION BOX
TSP	TWISTED SHIELDED PAIR
TST	TWISTED SHIELDED TRIAD
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TYP	TYPICAL
UC	UNLATCH COIL
UE	UNDERGROUND ELECTRIC
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SUPPLY
UVR	UNDER VOLTAGE RELAY
V	VOLTAGE, VOLTS
VCB	VACUUM CIRCUIT BREAKER
VFD	VARIABLE FREQUENCY DRIVE
VIB	VIBRATION
VM	VOLTMETER
VR	VOLTAGE REGULATOR
VS	VOLTMETER SWITCH
W	WATTS
WHD	WATT HOUR DEMAND METER
WM	WATTMETER
WP	WEATHERPROOF
XD	TRANSDUCER
XFMR	TRANSFORMER
XPDR	TRANSPONDER
Z	IMPEDANCE
ZS	POSITION SWITCH

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

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Digitally signed by Jonathan James
Date: 2025.04.11
12:18:23-06'00'

DESIGNED: J. JAMES	SUB SHEET NO.	TITLE OF SHEET: GENERAL	DRAWING NO. 315 182751
CADD: I. KHAN	00G016	ELECTRICAL ABBREVIATIONS	PMIS/PKG NO. 266697
TECH. REVIEW: J. LANDMAN		BANDELIER NATIONAL MONUMENT	SHEET 16 OF 203
DATE: 04/11/2025			

BASIC DATA:

3/26/2025 10:13 AM ACUGLAT R24 00G016_D3167658.DWG XG-Border_BAND

PLUMBING SYMBOLS

- EXISTING PIPE (SCREENED)
- NEW PIPE
- EXISTING PIPE TO BE ABANDONED
- EXISTING PIPE TO BE REMOVED
- ANCHOR
- CAP
- CLEAN OUT PLUG
- ELBOW, 90 DEGREE
- ELBOW UP
- ELBOW DOWN
- CROSS
- TEE
- TEE UP
- TEE DOWN
- ELBOW, 45 DEGREE
- LATERAL
- LATERAL UP
- LATERAL DOWN
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER
- UNION
- GROOVED END JOINT
- FLEXIBLE PIPE CONNECTION
- STEEL BELLOWS EPANSION JOINT
- STRAINER
- SIGHT GLASS
- PS — PRESSURE SWITCH
- PRESSURE GAUGE WITH COCK
- THERMOMETER
- HOSE RACK (TYPE AS INDICATED)
- EYEWASH
- S — SAFETY SHOWER
- S — SAFETY SHOWER/EYEWASH COMBINATION UNIT
- HOSE VALVE

Z" YCO–X
- Z = OUTLET SIZE IN INCHES
- Y = F – FLOOR CLEANOUT
- W – WALL CLEANOUT
- X = NO. IN SPECIFICATION

Z" HD–XY — HUB DRAIN
- Z = OUTLET SIZE IN INCHES
- X = NO. IN SPECIFICATION
- Y = T WITH TRAP
- X = P WITH PRIMED TRAP

Z" FD–XY — FLOOR DRAIN
- Z = OUTLET SIZE IN INCHES
- X = NO. IN SPECIFICATION
- Y = T WITH TRAP
- X = P WITH PRIMED TRAP

Z" RD–XY — ROOF DRAIN
- Z = OUTLET SIZE IN INCHES
- X = NO. IN SPECIFICATION

Z" OD–X — OVERFLOW ROOF DRAIN
- Z = OUTLET SIZE IN INCHES
- X = NO. IN SPECIFICATION

PLUMBING EQUIPMENT IDENTIFICATION

IDENTIFICATION	EQUIPMENT NAME
AAV	AIR ADMITTANCE VALVE
AD	AREA DRAIN
AC	AIR COMPRESSOR
ANT	ACID NEUTRALIZATION TANK
AR	AIR RECEIVER
BFP	BACK FLOW PREVENTER
BP	BOOSTER PUMP
CO	CLEANOUT
CP	CIRCULATION PUMP
DB	DOWNSPOUT BOOT
DCBP	DOUBLE CHECK BACKFLOW PREVENTER
DCO	DOUBLE CLEAN OUT
DN	DOWNSPOUT NOZZLE
DT	DILUTION TANK
DWT	DOMESTIC WATER STORAGE TANK
ET	EXPANSION TANK
ETP	ELECTRONIC TRAP PRIMER
FD	FLOOR DRAIN
IM	ICE MAKER
HX	HEAT EXCHANGER
NFWH	NON–FREEZE WALL HYDRANT
OD	OVERFLOW ROOF DRAIN
ON	OVERFLOW NOZZLE
OS	OIL/WATER SEPERATOR
P	PUMP
RD	ROOF DRAIN
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
ST	STORAGE TANK
SP	SUMP PUMP
TP	TRAP PRIMER ASSEMBLY
TW	TEPID WATER
TWT	TEMPERED WATER STORAGE TANK
WCO	WALL CLEANOUT
WH	WATER HEATER
WHA	WATER HAMMER ARRESTOR
VP	VACUUM PUMP

EXAMPLE CALLOUT:

70 – WH – 1

- 70 — FACILITY NUMBER OR UNIT PROCESS (IF USED ON PROJECT)
- WH — FIXTURE LEGEND
- 1 — NO. IN SPECIFICATIONS

VALVE SYMBOLS

SINGLE LINE		DOUBLE LINE
	GATE	
	BUTTERFLY	OR
	GLOBE	OR
	BALL	OR
	PLUG OR COCK	OR
	SWING CHECK	OR
	BALL CHECK	OR
	HOSE VALVE (HV–X) OR (V–X) X = NO. IN SPECS	
	PRESSURE RELIEF	
	AIR AND/OR VACCUM RELEASE	
	REGULATED SIDE	
	PRESSURE CONTROL (INTERNAL PILOT)	
	BALANCE VALVE (RHW)	
	BACKFLOW PREVENTER	
	PRESSURE REDUCING VALVE	

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

PIPING DESIGNATION

EXAMPLE:

DOUBLE LINE — SINGLE LINE — 12" RD (2020 SF)

12" RD (2020 SF)
- BASIS FOR DESIGN CALCULATION UNITS
- FLOW STREAM IDENTIFICATION
- PIPE DIAMETER

PIPE SERVICE IDENTIFICATION	DESCRIPTION	BASIS OF DESIGN CALCULATION UNITS
AW	ACID WASTE	DRAINAGE FIXTURE DFU
AV	ACID VENT	DRAINAGE FIXTURE UNIT DFU
CD	CONDENSATE DRAIN	DRAINAGE FIXTURE UNIT
D	DRAIN	DRAINAGE FIXTURE UNIT – DFU
HW	HOT WATER	FLOW IN GALLONS PER MINUTE GPM
HWR	HOT WATER RETURN	FLOW IN GALLONS PER MINUTE GPM
NPW	NON–POTABLE (RECLAIMED) WATER	FLOW IN GALLONS PER MINUTE GPM
PW	POTABLE WATER	FLOW IN GALLONS PER MINUTE GPM
RD	ROOF DRAIN	DRAINAGE AREA IN SQUARE FOOTAGE –SF
SS	SANITARY SEWER	DRAINAGE FIXTURE UNIT DFU
TW	TEPID WATER	FLOW IN GALLONS PER MINUTE GPM
TWR	TEPID WATER RETURN	FLOW IN GALLONS PER MINUTE GPM
V	SANITARY VENT	DRAINAGE FIXTURE UNIT – DFU

PLUMBING FIXTURE IDENTIFICATION

LEGEND:	FIXTURE
DF	DRINKING FOUNTAIN
EE	EMERGENCY EYEWASH
ES	EMERGENCY SAFETY SHOWER
EWC	ELECTRIC WATER COOLER
LAV	LAVATORY
LSK	LABORATORY SINK
LP	LABORATORY FAUCET OR COCK
MS	MOP SINK
SH	SHOWER
S	SINK
SSH	SAFETY SHOWER/EYEWASH COMBINATION
SSK	SERVICE SINK
UR	URINAL
WC	WATER CLOSET
WF	WASH FOUNTAIN
HV	HOSE VALVE OR HYDRANT
WS	AUTOMATIC WASHER
WH	WATER HEATER
YH	YARD HYDRANT

EXAMPLE CALLOUT: SSH – 1
- SSH — FIXTURE LEGEND
- 1 — NO. IN SPECIFICATIONS

VALVE DESIGNATION

MANUAL VALVES AND CHECK VALVES

EXAMPLE CALLOUT:

V 300
- V — VALVE DESIGNATION
- 300 — VALVE TYPE, SEE SPECIFICATIONS

GENERAL DRAWING NOTES

1. THIS IS A STANDARD LEGEND SHEET. SOME SYMBOLS AND ABBREVIATIONS ON THIS SHEET MAY NOT APPEAR ON THE PLANS.
2. FOR ADDITIONAL ABBREVIATIONS OF OTHER DIVISIONS, SEE OTHER LEGENDS SUCH AS GENERAL, HVAC, MECHANICAL, STRUCTURAL AND ARCHITECTURAL LEGENDS.
3. FOR ADDITIONAL FLOW STREAM IDENTIFICATIONS OF OTHER DIVISIONS SEE OTHER LEGENDS SUCH AS GENERAL, INSTRUMENTATION AND CONTROL, HVAC, MECHANICAL, STRUCTURAL AND ARCHITECTURAL LEGENDS.

GREGORY SCOTT HINTE — NEW MEXICO — 18049 — PROFESSIONAL ENGINEER

Gregory Scott Hinte
2025.04.08
14:20:53-05'00'

DESIGNED: S HINTE	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
CADD: M B STEWART	00G017	GENERAL	315 / 182751
TECH. REVIEW: P BAKER		PLUMBING SYMBOLS AND ABBREVIATIONS	PMIS/PKG NO. 266697
DATE: 04/11/2025		BANDELIER NATIONAL MONUMENT	SHEET 17 OF 203

4/8/2025 1:13 PM IKHAN1 R24 00G017_D3167658.DWG XG-Border BAND

BASIC DATA:

HEATING, VENTILATION, AND AIR CONDITIONING PIPE AND FITTING SYMBOLS

DOUBLE LINE	SINGLE LINE	
		EXISTING PIPE (SCREENED)
		NEW PIPE
		EXISTING PIPE TO BE ABANDONED
		EXISTING PIPE TO BE REMOVED
		WELDED JOINT
		GROOVED END JOINT
		FLANGED JOINT
		FLEXIBLE COUPLING
		GROOVED END GROOVED END ADAPTER FLANGE
		STEEL BELLOWS EXP JOINT
		ELBOW UP
		ELBOW DOWN
		TEE UP
		TEE DOWN
		LATERAL UP
		LATERAL DOWN
		CONCENTRIC REDUCER
		ECCENTRIC REDUCER
		UNION
		ANCHOR
		PIPE ALIGNMENT GUIDE
		FLEXIBLE (ELASTOMER PIPE CONNECTION

NOTES:

1. ONLY FLANGED FITTINGS ARE SHOWN FOR DOUBLE LINE PIPING. FITTINGS WITH OTHER END PATTERNS ARE SIMILAR.
2. EXISTING PIPING AND EQUIPMENT IS SHOWN LIGHT LINED AND/OR SCREENED AND NOTED AS EXISTING. NEW PIPING AND EQUIPMENT IS SHOWN HEAVY-LINED.

VALVE SYMBOLS

SINGLE LINE	DOUBLE LINE
GATE	
BUTTERFLY	OR
GLOBE	OR
BALL	OR
SEATING POINT	OR
ECCENTRIC PLUG	OR
PLUG OR COCK	OR
NEEDLE	OR
SWING CHECK	OR
BALL CHECK	

BALANCING FITTING

COMBINATION FLOWMETER AND BALANCING FITTING

COMBINATION FLOWMETER, BALANCING FITTING AND SHUT-OFF VALVE

PRESSURE RELIEF

AIR VENT (AUTO)

AIR VENT (MANUAL)

REGULATED SIDE PRESSURE CONTROL

MULTI-PORT VALVE (GLOBE SHOWN. FOR OTHER VALVE TYPES, APPROPRIATE VALVE SYMBOL SHOWN). ARROWS INDICATE FLOW PATTERN. SEATING PORTS ARE IMPLIED BY INDICATED FLOW PATTERN.

SOLENOID VALVE

TO TEMPERATURE SENSOR

TEMPERATURE SENSING VALVE

MISCELLANEOUS PIPING SYMBOLS

STEAM TRAP
X = NO. IN SPECS

FLOW SWITCH

FLOW METER
X = NO. SHOWN IN SPECS

PRESSURE SWITCH

STRAINER

GAUGE WITH COCK

THERMOMETER

GAUGE GLASS WITH COCKS

VALVE DESIGNATIONS

MANUAL VALVES AND CHECK VALVES

V400 — VALVE TYPE, SEE SPECIFICATIONS
— VALVE DESIGNATION

CONTROL VALVES

ACTUATOR SYMBOL
FLOW DIRECTION

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

HVAC EQUIPMENT IDENTIFICATION

ACC	AIR-COOLED CONDITIONER
ACCU	AIR-COOLED CONDENSING UNIT
ACU	AIR CONDITIONING UNIT
AHU	AIR HANDLING UNIT
AWC	ABSORPTION WATER CHILLER
BC	BOOSTER HEATING COIL
BD	BUTTERFLY DAMPER
CD	CEILING DIFFUSER
CG	CEILING GRILLE
CHWP	CHILLED WATER PUMP
CRP	CONDENSATE RETURN PUMP
CRU	CONDENSATE RETURN UNIT
CT	COOLING TOWER
CTP	COOLING TOWER PUMP
CUH	CABINET UNIT HEATER
CWP	CONDENSER WATER PUMP
DA	DEARATOR
DG	DOOR GRILLE
ECP	ENVIRONMENTAL CONTROL PANEL
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
EUH	ELECTRIC UNIT HEATER
FG	FLOOR GRILLE
FD	FIRE DAMPER
HRU	HEAT RECOVERY UNIT
HCG	HIGH-CAPACITY GRILLE
HCSG	HIGH-CAPACITY SUPPLY GRILLE
HP	HEAT PUMP
HU	HUMIDIFIER
HTR	HIGH THROW REGISTER
HWP	HEATING WATER PUMP
LX	HEAT EXCHANGER
LD	LINEAR DIFFUSER
MD	MOTORIZED DAMPER
ML	MOTORIZED LOUVER
OBD	OPPOSED BLADE DAMPER
PCG	PERFORATED CEILING GRILLE
PCD	PERFORATED CEILING DIFFUSER
PEF	PORTABLE EXHAUST FAN
RAC	ROOM AIR CONDITIONER
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION
SF	SUPPLY FAN
SD	SLOT DIFFUSER
TAC	TERMINAL AIR CONDITIONER
TCU	TERMINAL CONTROL UNIT
UH	UNIT HEATER
WC	WATER CHILLER
WCC	WATER-COOLED CONDENSER
WCCU	WATER-COOLED CONDENSING UNIT
WG	WALL GRILLE
WR	WALL REGISTER
WSG	WATER SUPPLY GRILLE
WSHP	WATER SOURCE HEAT PUMP
WSR	WALL SUPPLY REGISTER

NOTE:
ABBREVIATIONS ARE SHOWN ON GENERAL LEGENDS.

FLOW STREAM IDENTIFICATION

IDENTIFICATION	SERVICE
CO	CONDENSATE DRAIN
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION

HEATING, VENTILATION, AND AIR CONDITIONING SYMBOLS

WALL REGISTER OR GRILLE (SUPPLY)

CEILING DIFFUSER OR REGISTER (SUPPLY)

CEILING REGISTER OR GRILLE (RETURN AND EXHAUST)

WALL REGISTER OR GRILLE (RETURN AND EXHAUST)

TURNING VANES

45 DEGREE ENTRY

CONICAL TEE

BELLMOUTH

SD — SMOKE DAMPER

FD — FIRE DAMPER

MANUAL OPPOSED-BLADE DAMPER

MANUAL BUTTERFLY DAMPER

M — MOTORIZED DAMPER

SOUND ATTENUATED DUCT

FLEXIBLE CONNECTION

FLEXIBLE DUCTWORK

R — INCLINED RISE IN DUCT

D — INCLINED DROP IN DUCT

SUPPLY DUCT (SECTION)

INTAKE, RETURN, OR EXHAUST DUCT (SECTION)

T — ROOM TEMPERATURE SENSOR

P — ROOM PRESSURE SENSOR

H — ROOM HUMIDITY SENSOR

ECP — ENVIRONMENTAL CONTROL PANEL

(200) — 200 SCFM

M — MOTORIZED VALVE – 3 WAY

M — MOTORIZED VALVE – 2 WAY

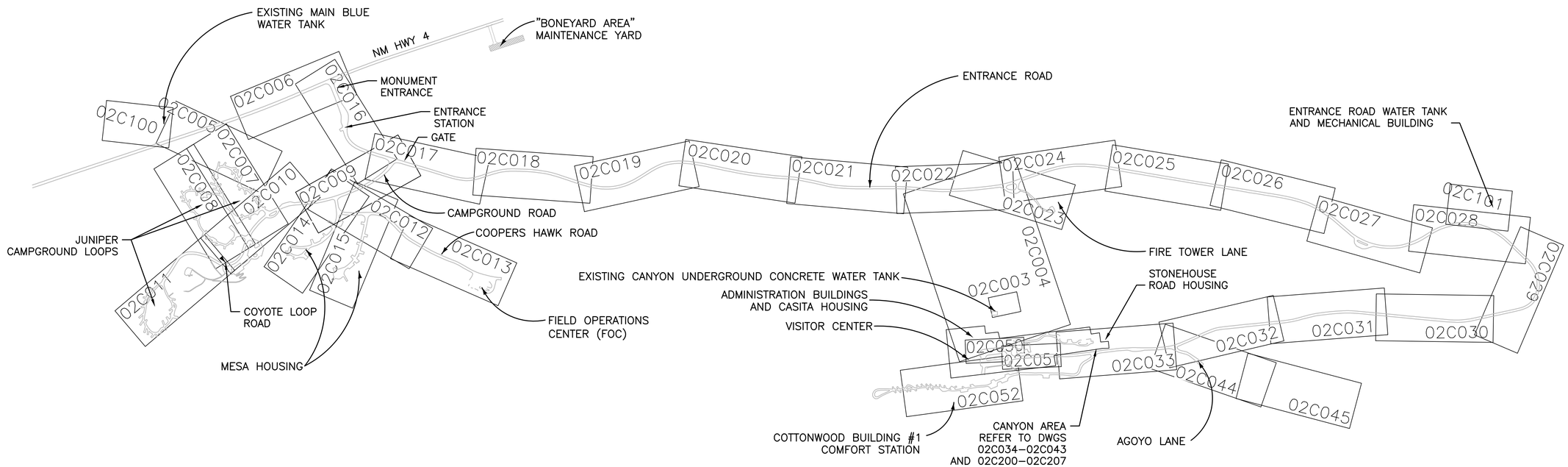
Gregory Scott Hinte
2025.04.08
14:19:44-05'00'

GREGORY SCOTT HINTE
NEW MEXICO
18049
PROFESSIONAL ENGINEER

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
S HINTE	00G018	GENERAL	315 / 182751
CADD: M B STEWART		MECHANICAL SYMBOLS AND ABBREVIATIONS	PMIS/PKG NO. 266697
TECH. REVIEW: P BAKER		BANDELIER NATIONAL MONUMENT	SHEET 18 OF 203
DATE: 04/11/2025			

4/8/2025 1:14 PM IKHAN1 R24 00G018 D3167658.DWG XS=Border BAND

BASIC DATA:



FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

500 0 500 1000
SCALE OF FEET

MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 10:24:27-06'00'
PROFESSIONAL ENGINEER

DESIGNED: M. JOHNSON	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO. 315
CADD J. FIGUEROA	02C001	CIVIL	182751
TECH. REVIEW: D. HUANG		PLAN AND PROFILE SHEET INDEX	PMIS/PKG NO. 266697
DATE: 04/11/2025		BANDELIER NATIONAL MONUMENT	SHEET 19 OF 203

XG-Border_BAND
XG-BAND_TPCD
XC-Master
XC-LAYOUT-SHEETS

3/31/2025 1:13 PM FIGUEROAJ R24 02C001 D3167658.DWG

LEGEND

EXISTING		NEW
	COMBINATION AIR RELIEF VALVE MANHOLE	A
W	WATER GATE VALVE	
	AIR RELIEF VALVE	
	PRESSURE REDUCING VALVE	
	WATERLINE REDUCER	
FH	FIRE HYDRANT	
	YARD HYDRANT	
W	WATER METER	W
T	TRANSFORMER	
E	ELECTRIC GEAR	
E	ELECTRIC MANHOLE	
LP	LIGHT POLE	
PP	POWER POLE	
ST	STORM MANHOLE	
SS	SANITARY MANHOLE	SS
	BENCHMARK LOCATION	
BH	BOREHOLE	
TH	POTHOLE	
	NATURAL GAS VALVE	
G	NATURAL GAS METER	G
	SIGN	
6540	CONTOUR LINE	6780
	BUILDINGS, WATER TANK	

EXIST FLAGSTONE PAVEMENT

EXIST ASPHALT PAVEMENT

EXIST BUILDING

LOD — LOD — LIMITS OF DISTURBANCE

BANDELIER NATIONAL MONUMENT BOUNDARY

SITE UTILITIES ABBREVIATIONS

BAND/	BANDELIER NATIONAL MONUMENT	LANL	LOS ALAMOS NATIONAL LABORATORY
BL	BASELINE	LF	LINEAR FEET
CARV	COMBINATION AIR RELEASE VALVE	LT	LEFT
CCC	CIVILIAN CONSERVATION CORPS	NC	NORMALLY CLOSED
CMP	CORRUGATED METAL PIPE	OHWM	ORDINARY HIGH WATER MARK
DIP	DUCTILE IRON PIPE	PROP	PROPOSED
DTL	DETAIL	PRV	PRESSURE REDUCING VALVE
EC	ELECTRIC CONDUIT	PVC	POLYVINYL CHLORIDE
EL/ELEV	ELEVATION	R D	REMOVE AND DISPOSE
EXIST	EXISTING	R R	REMOVE AND REPLACE
FC	FIBER CONDUIT	RT	RIGHT
FOC	FIELD OPERATIONS CENTER	S	SLOPE
FH	FIRE HYDRANT	SS	SANITARY SEWER
FM	FORCE MAIN	STA	STATION
FO	FIBER OPTIC	VCP	VITRIFIED CLAY PIPE
GV	GATE VALVE	WL	WATER LINE
INV	INVERT	YH	YARD HYDRANT
LAC	LOS ALAMOS COUNTY		

GENERAL SITE NOTES:

1. FIELD SURVEY LOCATED UNDERGROUND UTILITY LINES MARKED BY OTHERS, FOUND BY GEOPHYSICAL METHODS, AND ABOVE GROUND EVIDENCE. UNDERGROUND UTILITIES FROM RECORD DRAWINGS ARE ALSO SHOWN. THERE IS A RISK OF UNDETECTED UNDERGROUND UTILITIES.
2. THE CONTRACTOR SHALL VERIFY ALL LOCATIONS AND ELEVATIONS AND SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT UTILITY LINES WHETHER SHOWN OR NOT. THE UTILITY NOTIFICATION CENTER AND AFFECTED UTILITIES SHALL BE NOTIFIED IN ADVANCE A MINIMUM OF TWO FULL BUSINESS DAYS PRIOR TO CONSTRUCTION, NOT INCLUDING DAY OF CALL. UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE, AND THE POSITION OF UTILITIES SHOWN ARE NOT WARRANTED TO BE EXACT, NOR IS IT WARRANTED THAT ALL UNDERGROUND OR EXPOSED STRUCTURES ARE SHOWN. THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS OR POTHOLES IN ADVANCE OF THE PIPELINE CONSTRUCTION, UNLESS OTHERWISE DIRECTED, TO VERIFY UTILITY LOCATIONS AND AVOID CONFLICTS WITH THE DESIGN ALIGNMENT OR GRADE OF THE PIPELINE. THE CONTRACTOR SHALL RECORD THE LOCATION AND DEPTH OF ALL UNDERGROUND OR EXPOSED UTILITY INFORMATION AND INCLUDE THIS INFORMATION IN THE RECORD DRAWINGS.
3. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRAFFIC AND USAGE OF THE EXISTING ROADS ADJACENT TO THE PROJECT, INCLUDING ENTRANCE ROAD AND CAMPGROUND ROAD. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING SIGNAGE AND BARRIERS TO DIRECT PEDESTRIAN TRAFFIC. TRAFFIC CONTROL AND MAINTENANCE SHALL FOLLOW NEW MEXICO MUTCD. COORDINATE ALL WORK ASSOCIATED WITH LANE CLOSURES, TRAFFIC CONTROL, WATER SERVICE CROSSOVER WITH THE CONTRACTING OFFICER TO AVOID PEAK USE TIMES OF MONUMENT.
4. WATER MANAGEMENT/EROSION AND SEDIMENT CONTROL. CONTRACTOR SHALL ADHERE TO ALL GENERAL CONDITIONS AND SPECIAL CONDITIONS INCLUDED IN THE NPDES GENERAL PERMIT, PLANS AS APPROVED BY NEW MEXICO DEPARTMENT OF THE ENVIRONMENT, AND DIRECTIONS OF REGULATORY INSPECTORS.
5. PROJECT TESTING: ALL TESTING RE UIRED WILL BE CONDUCTED BY THE CONTRACTOR, AS SPECIFIED.
6. CONTRACTOR SHALL WORK IN A LAWFUL MANNER AND COMPLY WITH ALL PERMIT RE UIREMENTS AND APPLICABLE STANDARDS.
7. CONTRACTOR SHALL TEMPORARILY SUPPORT ALL EXISTING UTILITIES IN SERVICE THAT ARE IN CLOSE PROXIMITY OF WORK AND/OR CROSSING THE PROPOSED UTILITIES.

SITE UTILITIES LEGEND AND NOTES

EXISTING UTILITIES		NEW UTILITIES
UG SUE LEVEL	NATURAL GAS	G
USD SUE LEVEL	STORM DRAINAGE	
USS SUE LEVEL	SANITARY SEWER	SS
USFM SUE LEVEL	SEWER FORCE MAIN	
UW SUE LEVEL	WATER	W
UE SUE LEVEL	ELECTRIC	
UC SUE LEVEL	COMMUNICATION	
UFO SUE LEVEL	FIBER OPTIC	
UG SUE LEVEL	GAS LINE TO ABANDON	
USS SUE LEVEL	SEWER LINE TO ABANDON	
UW SUE LEVEL	WATERLINE TO ABANDON	

1. EXISTING UTILITIES MAY HAVE A PREFIX OF U FOR UNDERGROUND OR O FOR OVERHEAD. THE LAST LETTER OF THE TEXT EMBEDDED IN THE LINETYPE DENOTES THE LEVEL OF SUBSURFACE UTILITY ENGINEER SUE) ACCURACY IN ACCORDANCE WITH STANDARD ASCE 38-02.
2. EXISTING UTILITY INFORMATION COLLECTED IN ACCORDANCE WITH ASCE 38-22 GUIDELINES. THE UALITY LEVEL AS DEFINED BY ASCE 38-22 ARE AS FOLLOWS:
3. UTILITY UALITY LEVEL A: PRECISE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES OBTAINED BY THE ACTUAL EXPOSURE FOR VERIFICATION OF PREVIOUSLY EXPOSED AND SURVEYED UTILITIES) AND SUBSE UENT MEASUREMENT OF SUB-SURFACE UTILITIES, USUALLY AT A SPECIFIC POINT. MINIMALLY INTRUSIVE EXCAVATION E UIPMENT IS TYPICALLY USED TO MINIMIZE THE POTENTIAL FOR UTILITY DAMAGE. A PRECISE HORIZONTAL AND VERTICAL LOCATION, AS WELL AS OTHER UTILITY ATTRIBUTES, IS SHOWN ON PLAN DOCUMENTS. ACCURACY IS TYPICALLY SET TO 15-MM VERTICAL AND TO APPLICABLE HORIZONTAL SURVEY AND MAPPING ACCURACY AS DEFINED OR EXPECTED BY THE PROJECT OWNER.
4. UTILITY UALITY LEVEL B: INFORMATION OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF SUBSURFACE UTILITIES. UALITY LEVEL B DATA SHOULD BE REPRODUCIBLE BY SURFACE GEOPHYSICS AT ANY POINT OF THEIR DEPICTION. THIS INFORMATION IS SURVEYED TO APPLICABLE TOLERANCES DEFINED BY THE PROJECT AND REDUCED ONTO PLAN DOCUMENTS.
5. UTILITY UALITY LEVEL C: INFORMATION OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE-GROUND UTILITY FEATURES AND BY USING PROFESSIONAL JUDGMENT IN CORRELATING THIS INFORMATION TO UALITY LEVEL D INFORMATION.
6. UTILITY UALITY LEVEL D: INFORMATION DERIVED FROM EXISTING RECORDS OR ORAL RECOLLECTIONS.

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

PROJECT SPECIFIC NOTES:

1. CONSTRUCTION MUST COMPLY WITH HISTORICAL PRESERVATION SEE DWG 00G003), NATURAL RESOURCE PROTECTION SEE DWG 00G003), SAFETY FOR MONUMENT VISITORS AND STAFF, AND COORDINATION ON NECESSARY DETOURS AND TEMPORARY SERVICE OUTAGES.
2. CONTRACTOR MAY PROPOSE VALUE ENGINEERED PROPOSITIONS FOR CONSIDERATION BY CONTRACTING OFFICER, INCLUDING ALIGNMENTS, CONSTRUCTION METHODS, AND SE UENCING. VALUE ENGINEERED PROPOSITIONS MUST COMPLY WITH CONSTRAINTS AND PERFORMANCE RE UIREMENTS DEFINED IN SPECIFICATIONS. WRITTEN APPROVAL FROM THE CONTRACTING OFFICER IS RE UIRED PRIOR TO CONSTRUCTING ANY VALUE ENGINEERED PROPOSITIONS. CERTAIN PROPOSITIONS MAY RE UIRE THE SIGNATURE AND SEAL OF A PROFESSIONAL ENGINEER OF RECORD.
3. SEE PAVEMENT DWGS 04C101 TO 04C514 FOR RESTORATION OF PAVEMENT AFTER THE UTILITY INSTALLATION.
4. COORDINATE WITH CONTRACTING OFFICER ON CLOSING CAMPGROUND SITES ALONG ABERT'S S UIRREL LOOP, BLACK BEAR LOOP, AND COYOTE LOOP AS NEEDED FOR CONSTRUCTION. SEE RECOMMENDED CONSTRUCTION SCHEDULE BELOW:

RECOMMENDED CAMPGROUND CONSTRUCTION SCHEDULE

MONTHS	ABERT'S SQUIRREL LOOP	BLACK BEAR LOOP	COYOTE LOOP
JAN–APRIL	CLOSED	CLOSED	OPEN
MAY–JUNE	OPEN	OPEN	OPEN
JULY–OCT	OPEN	OPEN	CLOSED
NOV–DEC	CLOSED	CLOSED	OPEN

5. ELECTRICAL AND FIBER CONDUIT ARE SHOWN ON THE CIVIL DRAWINGS AS PART OF THE COMMON TRENCH FOR REFERENCE ONLY. REFER TO ELECTRICAL PLANS FOR DETAILED DESIGN AND ALIGNMENT.
6. EXCEPT FOR PREAPPROVED TEMPORARY SHUTDOWNS, ALL EXISTING UTILITIES MUST REMAIN IN SERVICE DURING CONSTRUCTION UNTIL A SCHEDULED SWITCHOVER IS COORDINATED WITH THE CONTRACTING OFFICER. REFER TO SECTION 01 11 00 SUMMARY OF OF WORK. CAP AND ABANDON ALL EXISTING WATERLINES AND GAS LINES IN PLACE AFTER PROPOSED WATERLINES AND CONNECTIONS ARE IN SERVICES, UNLESS OTHERWISE NOTED ON DRAWINGS.
7. MAINTAIN AT LEAST 4-FT OF COVER FOR WATER MAINS AND 2-FT OF COVER FOR DRY UTILITIES. MAINTAIN AT LEAST 3-FT OF COVER FOR WATER SERVICE LINES.
8. MAINTAIN A MINIMUM OF 10-FT OF HORIZONTAL CLEARANCE BETWEEN SANITARY SEWER AND PROPOSED WATER MAINS. WHERE 10-FT CANNOT BE MAINTAINED, WATER MAIN TO BE INSTALLED IN SEPARATE TRENCH AND CLSM ENCASED PER DETAIL 5 OF 02C300.
9. WATER MAINS CROSSING SANITARY SEWERS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE BOTTOM OF THE WATER MAIN AND THE TOP OF THE SEWER. AT CROSSINGS, ONE FULL LENGTH OF WATER PIPE SHALL BE PLACED SO BOTH JOINTS ARE AS FAR FROM THE SEWER AS POSSIBLE. IN THE CASE THAT THE WATER MAIN MUST PASS BELOW THE SEWER PIPE, A MINIMUM OF 18 INCHES OF VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN THE TOP OF WATER MAIN AND BOTTOM OF SEWER AND THE WATER MAIN SHALL BE ENCASED IN CLSM PER DETAIL 2 OF 02C300 TO EXTEND 10 FEET ON EITHER SIDE OF SEWER PIPE UNLESS OTHERWISE SHOWN ON DRAWINGS. IN THE CASE THAT THE SEWER LINE IS NEW, CONSTRUCT SEWER PIPE OF MINIMUM 160 PSI WORKING PRESSURE RATED AWWA PIPE AND PRESSURE TESTED TO 50 PSI.
10. EXISTING GROUND SHOWN IN PROFILE IS AT ROAD CENTERLINE. PROFILE SHOWS PROPOSED WATERLINE WHERE COMMON TRENCH INCLUDE A WATERLINE. REFER TO TYPICAL TRENCH DETAIL 5 ON DWG 02C300 FOR LOCATION OF OTHER UTILITIES IN COMMON TRENCH IN REFERENCE TO WATERLINE. APPROXIMATE PROPOSED WATERLINE HORIZONTAL ALIGNMENT IS SHOWN IN PLAN VIEW. CONTRACTOR TO ADAPT VERTICAL AND HORIZONTAL ALIGNMENT IN THE FIELD AND INSTALL STANDARD BENDS OR PULL JOINTS PVC) AS NECESSARY.
11. ALL WATERLINE PIPE AND APPURTENANCES TO BE MECHANICALLY RESTRAINED. NO THRUST BLOCKS UNLESS OTHERWISE SHOWN ON DRAWINGS.
12. MAINTAIN SANITARY SEWER SERVICES AT ALL TIME TO RESIDENCES. PORTA POTTIES TO BE INSTALLED NEAR COMFORT STATIONS DURING SCHEDULED OUTAGES. COORDINATE WATER SERVICE OUTAGE WITH CONTRACTING OFFICER BY GIVING 72 HOURS NOTICE FOR DISTRIBUTION UTILITY OUTAGES AND 24 HOURS NOTES FOR SERVICE LINE OUTAGES.
13. PVIs IN WATERLINE PROFILES ARE SHOWN AS GUIDANCE ONLY. HIGH POINTS BETWEEN CARVs ARE NOT ALLOWED. FIELD ADJUST PVIs TO MINIMIZE BEND FITTINGS.
14. CONTRACTOR TO RELOCATE, LOWER OR RAISE EXISTING ELECTRICAL, TELECOM, FIBER OPTIC AND NATURAL GAS LINES AS NEEDED TO INSTALL THE NEW WATERLINES AT NO ADDITIONAL COST TO THE GOVERNMENT.
15. MAINTAIN MINIMUM OF 18 INCHES VERTICAL SEPARATION BETWEEN NEW DRY UTILITIES ELECTRICAL, FIBER, AND GAS) AND NEW WATERLINES WITH WATERLINE INSTALLED BENEATH DRY UTILITIES.
16. DEFLECT PVC PIPE ALIGNMENT AT LOCATIONS INDICATED IN PLANS. USE SOLID SLEEVE OR HIGH DEFLECTION STOP COUPLINGS FOR CHANGES IN ALIGNMENT UP TO 5 DEGREES. CONTRACTOR TO PLAN FOR MINOR DEFLECTION BETWEEN IDENTIFIED STANDARD DEGREE FITTINGS BY DEFLECTING PVC JOINTS. BELL- JOINTS MAY BE DEFLECTED TO 75 OF THE MANUFACTURER'S ALLOWABLE DEFLECTION ANGLE, IF ONE INCLUDED ON THE PRINT LINE OF THE PIPE. LONGITUDINAL BENDING OF PIPE IS NOT PERMITTED. CONTRACTOR TO DEFLECT WATERLINE IN ADVANCE OF CROSSINGS OF EXISTING UTILITIES TO REMAIN IN SERVICE THAT ARE NOT BEING RELOCATED, LOWERED OR RAISED.
17. ALL WATER, SANITARY SEWER AND NATURAL GAS UTILITIES ARE TO BE NEW MATERIALS. WATER TRANSMISSION AND DISTRIBUTION MAINS AND SERVICE LINES GREATER THAN 3-INCH DIAMETER ARE TO BE PVC MATERIAL YARD PIPING IS TO BE DUCTILE IRON MATERIAL. WATER SERVICE LINES 3-INCH AND SMALLER ARE TO BE HDPE MATERIAL. SANITARY SEWER COLLECTOR LINES AND SERVICE LATERALS ARE TO BE PVC MATERIAL. GAS LINES ARE TO BE MDPE MATERIAL.

MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 16:25:19-06'00'
PROFESSIONAL ENGINEER

DESIGNED: M. JOHNSON	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
CADD J. FIGUEROA	02C002	CIVIL	315 / 182751
TECH. REVIEW: D. HUANG		CIVIL LEGEND AND NOTES	PMIS/PKG NO. 266697
DATE: 04/11/2025		BANDELIER NATIONAL MONUMENT	SHEET 20 OF 203

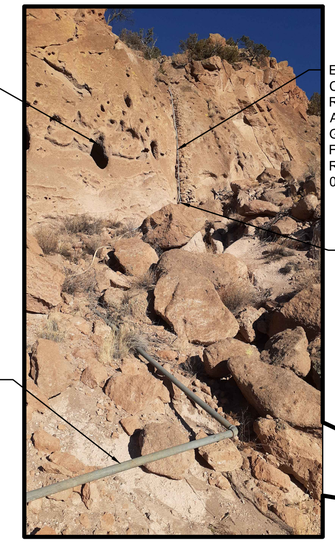
BANDBASE
XG-BAND_XG-Master
XG-Border_BAND
3/30/2025 10:13 AM FIGUEROAJ R24 02C002_D3167648.DWG

BASIC DATA:

CLIN 0001 - MAIN PARK WATER SYSTEM: ABANDON UNDERGROUND CONCRETE TANK. FOR DETAILS SEE SPECIFICATION 01 27 00.

CLIN OPTION H - DEMOLITION OF EXISTING CANYON UNDERGROUND CONCRETE WATER TANK AND EXPOSED SUSPENDED UTILITIES: INCLUDES DEMOLITION AS DESCRIBED ON THIS SHEET. FOR DETAILS SEE SPECIFICATION 01 27 00.

UNDERGROUND 20,000-GAL CONCRETE STORAGE TANK



EXPOSED UTILITY PIPING AT BASE OF CLIFF

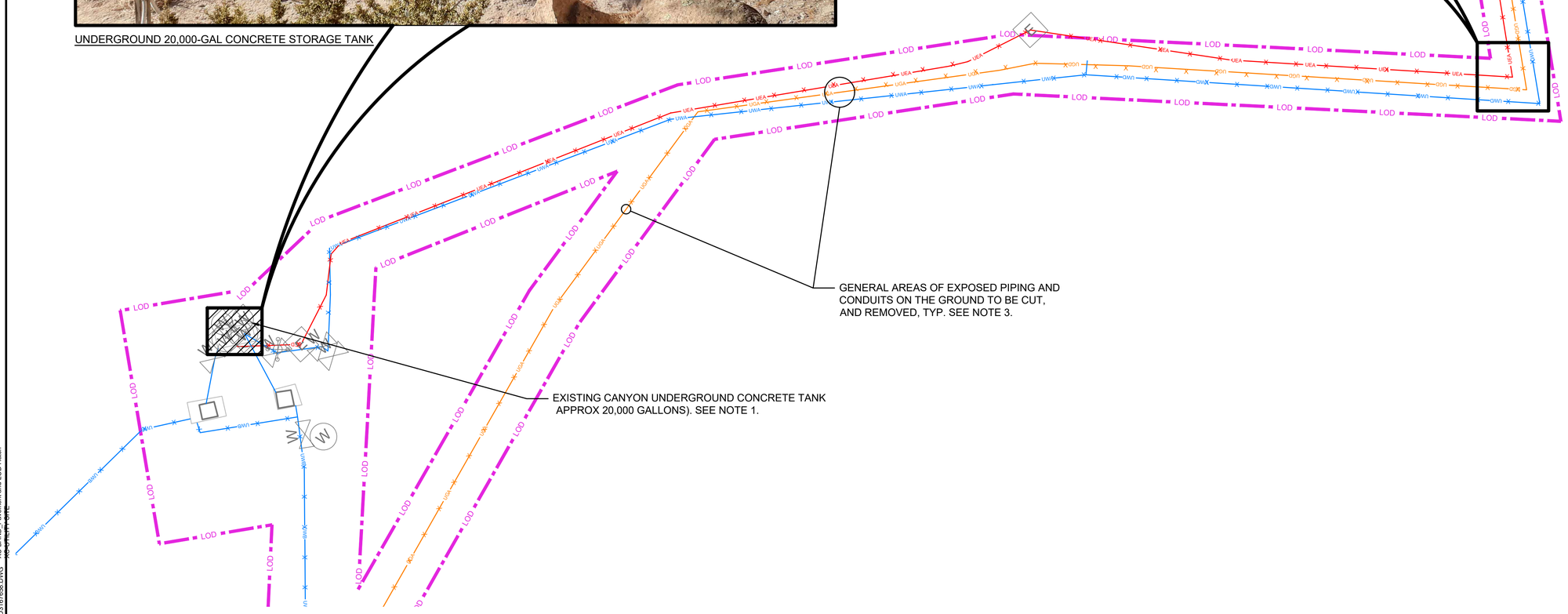
CAVATES TYP). SEE NOTE 4.

EXPOSED ELECTRICAL CONDUIT TO BE CUT AND REMOVED. DEMOLISH AND REMOVE WATER AND GAS LINES BEHIND ROCK FACADE. THEN DEMOLISH ROCK FACADE. SEE DWG 02C004 AND NOTE 1.

BASE OF CLIFF

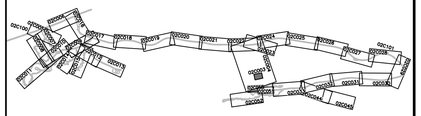
GENERAL AREA OF ROCK FACADE WITH HIDDEN AND EXPOSED UTILITIES TO BE CUT AND REMOVED, TYP. SEE NOTE 1.

EXPOSED 2-INCH WATER LINE AND GAS LINE NOT SHOWN) TO BE CUT AND REMOVED. TYP. SEE NOTE 3.



GENERAL AREAS OF EXPOSED PIPING AND CONDUITS ON THE GROUND TO BE CUT, AND REMOVED, TYP. SEE NOTE 3.

EXISTING CANYON UNDERGROUND CONCRETE TANK APPROX 20,000 GALLONS). SEE NOTE 1.



KEYPLAN

SHEET NOTES

NOTES:

1. CLIN 0001: ABANDONMENT OF EXISTING CONCRETE TANK AND ASSOCIATED PIPING SHALL OCCUR AFTER THE NEW WATER SYSTEM AND NATURAL GAS SYSTEM ARE ACTIVE AND WITH CONCURRENCE FROM CONTRACTING OFFICER. ABANDON TANK BY DRAINING ALL WATER AND GROUTING INLETS AND OUTLETS OF BURIED PIPING 2 FEET MIN.

   CLIN OPTION B: DEMOLISH AND REMOVE ABOVEGROUND E UIPMENT, PIPING, ACCESS HATCHES, ETC. DRILL 4-INCH DIAMETER HOLES IN TANK FLOOR SPACED 3-FEET APART FROM EACH OTHER. SAW CUT CONCRETE TANK ROOF AND DISPOSE CUT PIECES INTO TANK. FILL REMAINING EMPTY SPACE IN TANK WITH WITH NATIVE SOIL AND 3-INCH MAX CRUSHED ROCK FROM THE "BONEYARD" AREA VIA HELICOPTER. SEE DWG 00G004. PROVIDE NON-VEGEATIVE SURFACE RESTORATION BY HAND-GRADING TO EXISTING GRADE. DEMOLISH AND DISPOSE EXPOSED WATER AND NATURAL GAS PIPES, AND ELECTRICAL CONDUIT AGAINST THE CLIFF. AFTER ALL UTILITIES HAVE BEEN REMOVED, DEMOLISH THE ROCK FACADE.

   ALL DEMOLITION AND ABANDONMENT OF STRUCTURES SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL CODES AND RE UIREMENTS.

2. NO ACCESS ROAD IS PERMITTED TO BE CONSTRUCTED TO ACCESS THE CONCRETE TANK AND PIPING. ACCESS PERMITTED ON FOOT ONLY AND WITHIN LIMITS OF DISTURBANCE SEE DWG 02C004). VEHICULAR ACCESS NOT PERMITTED.

3. ALL EXPOSED GAS, WATER AND COMMUNICATIONS CONDUITS, PIPING AND OTHER APPURTENANCES BETWEEN BASE OF THE CLIFF AND THE BURIED CONCRETE TANK ARE TO BE CUT AND REMOVED MANUALLY. CONTRACTOR TO BE ACCOMPANIED BY NPS ARCHAEOLOGIST WHEN REMOVING EXPOSED PIPING OUTSIDE OF LIMITS OF DISTURBANCE.

4. ALL CAVATES AND NATIVE VEGETATION IS TO BE PROTECTED AND NOT DISTURBED.

10 0 10 20
SCALE OF FEET

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

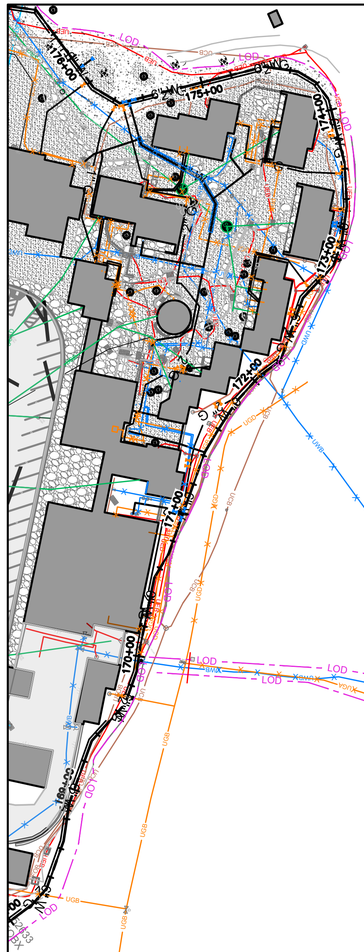
MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 16:26:08-06'00'
PROFESSIONAL ENGINEER

DESIGNED: M. JOHNSON	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
CADD J. FIGUEROA	02C003	DEMOLITION SITE DEMOLITON PLAN 1 OF 2	315 182751
TECH. REVIEW: D. HUANG			PMIS/PKG NO. 266697
DATE: 04/11/2025		BANDELIER NATIONAL MONUMENT	SHEET 21 OF 203

3/30/2025 10:17 AM FIGUEROA,J R24 02C003_D3167658.DWG
XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND_20-EC-Master
XC-BAND_Wx-X
XC-BAND_Pavement and LOD Hatch
XR-SHEET-SITE

BASIC DATA:

CLIN OPTION H - DEMOLITION OF EXISTING CANYON UNDERGROUND CONCRETE WATER TANK AND EXPOSED SUSPENDED UTILITIES: INCLUDES DEMOLITION AS DESCRIBED ON THIS SHEET. FOR DETAILS SEE SPECIFICATION 01 27 00.



ELECTRICAL CONDUIT
VIEW FROM AIR RELEASE VALVE
VAULT FACING DOWNHILL
TOWARDS CANYON PARKING LOT)

CUT AND REMOVE EXPOSED 2-INCH WATERLINE, 2-INCH GAS LINE AND 3/4-INCH ELECTRICAL CONDUIT BETWEEN BASE OF CLIFF, CONCRETE TANK AND RETAINING WALL BEHIND ADMINISTRATION BUILDINGS. CONTRACTOR TO BE ACCOMPANIED BY NPS ARCHAEOLOGIST WHEN REMOVING EXPOSED PIPING.

CUT AND REMOVE 3/4-INCH ELECTRICAL CONDUIT BETWEEN BASE OF CLIFF AND SOLENOID VALVE VAULT ONLY.

APPROX. LOCATION OF EXISTING GATE. COORDINATE VEHICLE ACCESS WITH CONTRACTING OFFICER.

KEYPLAN

ELEVATION GRADE

APPROXIMATE TOP OF CLIFF.

LIMITS OF DISTURBANCE

APPROXIMATE BASE OF CLIFF.

DEMOLISH AND REMOVE SOLENOID VALVE VAULT AND INTERIOR PIPING. RE-GRADE TO MATCH EXISTING GRADE.

ENTRANCE ROAD

NOTES:

1. APPROXIMATE ELEVATION GRADE SHOWN FOR REFERENCE ONLY.

SOLENOID VALVE VAULT EXTERIOR

SOLENOID VALVE VAULT INTERIOR

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

50 0 50 100
SCALE OF FEET

MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 15:26:51-06'00'
PROFESSIONAL ENGINEER

DESIGNED: D. HUANG	SUB SHEET NO.	TITLE OF SHEET CIVIL SITE DEMOLITION PLAN 2 OF 2	DRAWING NO. 315 182751
CADD J.FIGUEROA	02C004		PMIS/PKG NO. 266697
TECH. REVIEW: M. JOHNSON			SHEET 22 OF 203
DATE: 04/11/2025		BANDELIER NATIONAL MONUMENT	

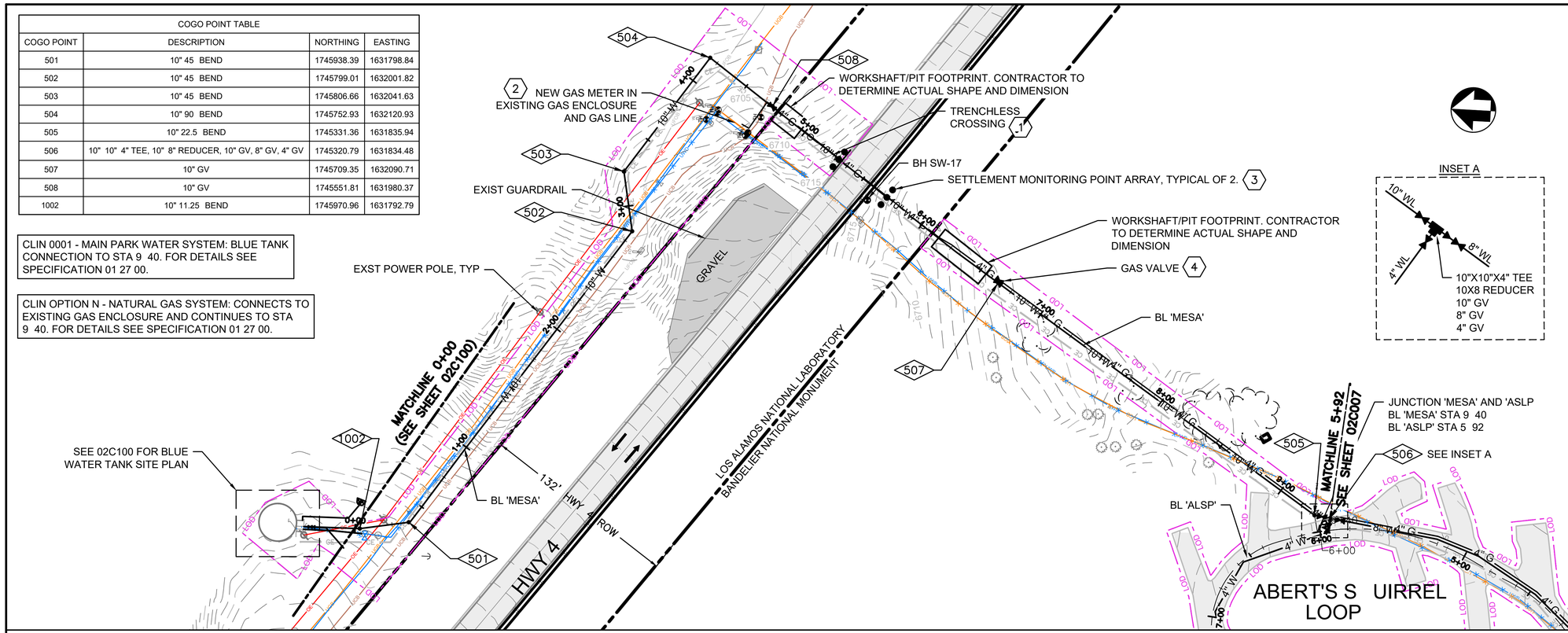
XG-Border BAND
XC-LAYOUT-SHEETS
XC-BAND-PROFILES
XC-BAND-DESIGNMaster
XC-LAYOUT-SHEETS - CANNYON AREA
XC-UTILITY SITE
XC-BAND-DWF
XC-BAND Pavement and LOD Hatch

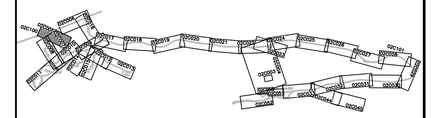
3/30/2025 10:39 AM FIGUEROAJ R24 02C004_D3167658.DWG

COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
501	10" 45 BEND	1745938.39	1631798.84
502	10" 45 BEND	1745799.01	1632001.82
503	10" 45 BEND	1745806.66	1632041.63
504	10" 90 BEND	1745752.93	1632120.93
505	10" 22.5 BEND	1745331.36	1631835.94
506	10" 10" 4" TEE, 10" 8" REDUCER, 10" GV, 8" GV, 4" GV	1745320.79	1631834.48
507	10" GV	1745709.35	1632090.71
508	10" GV	1745551.81	1631980.37
1002	10" 11.25 BEND	1745970.96	1631792.79

CLIN 0001 - MAIN PARK WATER SYSTEM: BLUE TANK CONNECTION TO STA 9 40. FOR DETAILS SEE SPECIFICATION 01 27 00.

CLIN OPTION N - NATURAL GAS SYSTEM: CONNECTS TO EXISTING GAS ENCLOSURE AND CONTINUES TO STA 9 40. FOR DETAILS SEE SPECIFICATION 01 27 00.

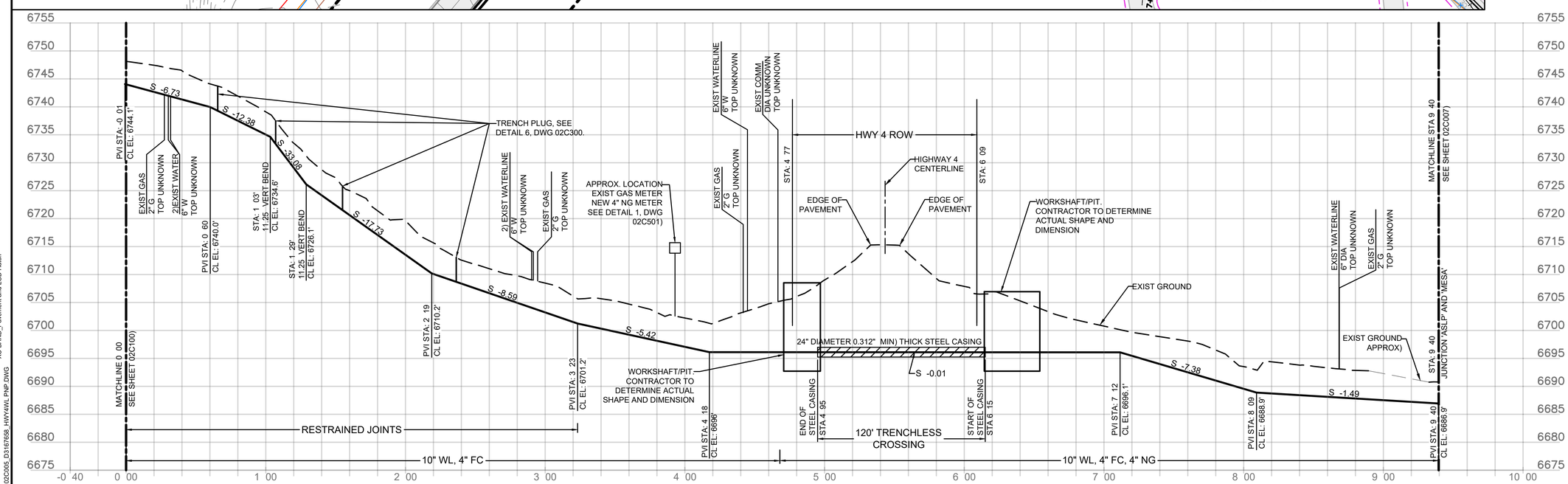




KEYPLAN

SHEET KEYNOTES

1. INSTALL UTILITIES IN 24" STEEL CASING VIA TRENCHLESS METHOD PER SPECIFICATION 31 40 00 AND 31 42 00, AND DETAIL 1, SHEET 02C300
2. NEW GAS METER INSTALLATION WITHIN ENCLOSURE BY LANL. COORDINATE WITH LANL TO CONNECT GAS LINE. INSTALL 4" GAS LINE AS SHOWN.
3. SURFACE SETTLEMENT MONITORING SM) POINT ARRAY SHALL BE CENTERED ON THE PIPE ALIGNMENT WITH ONE POINT DIRECTLY OVER THE CENTER LINE AND ONE POINT SPACED AT 5 FEET ON EACH SIDE OF THE CENTER LINE AS SPECIFIED IN SECTION 31 44 00.
4. INSTALL 4" GAS BALL VALVE PER DETAIL 2, SHEET 02C501.



HORIZONTAL: 40 0 40 80 — SCALE OF FEET — 1" = 40'

VERTICAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

ROBERT W. MARTIN NEW MEXICO 26748 Digitally signed by Robert W. Martin Date: 2025.04.10 17:06:05-05'00' PROFESSIONAL ENGINEER

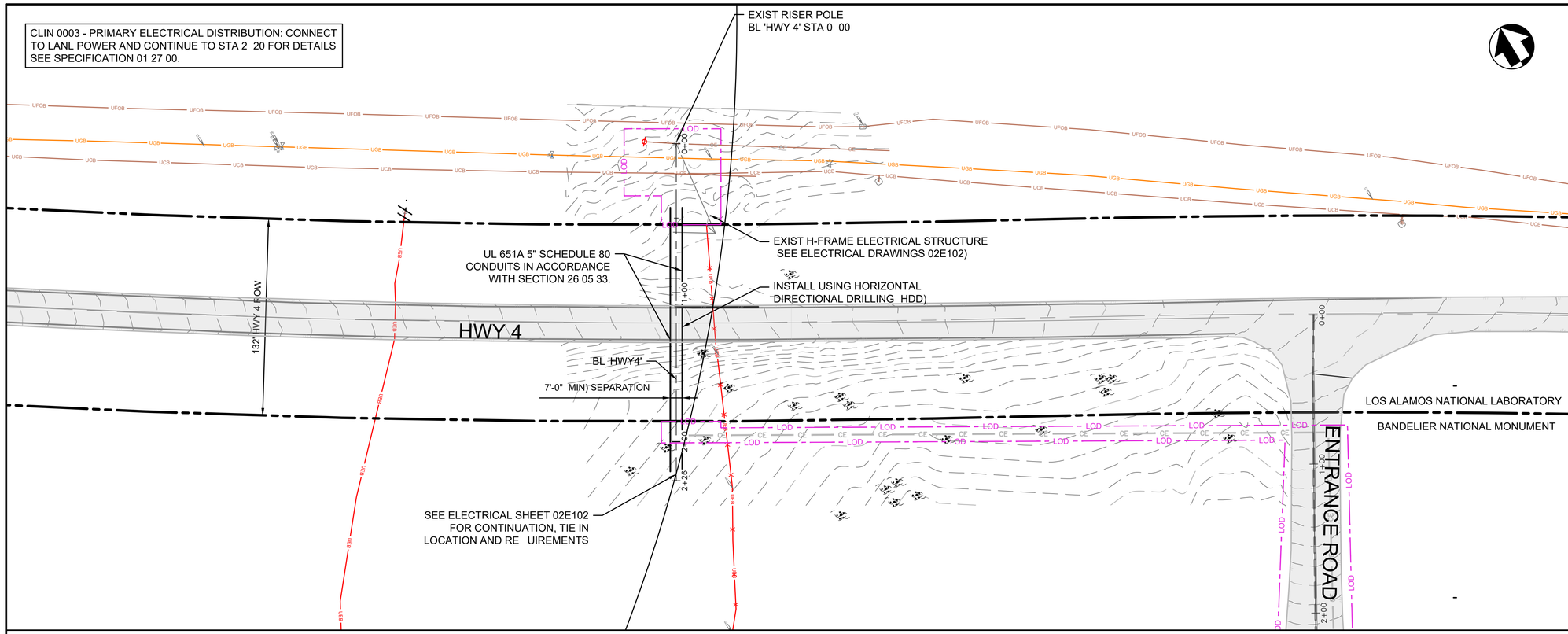
MICAH E. JOHNSON NEW MEXICO 25223 Digitally signed by Micah E. Johnson Date: 2025.04.10 16:14:32-06'00' PROFESSIONAL ENGINEER

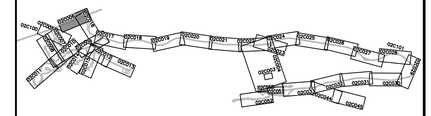
DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
M. COUTURE/R. MARTIN	02C005	CIVIL	315
CADD J. FIGUEROA		BL 'MESA' STA 0+00 TO 9+40 PLAN AND PROFILE	182751
TECH. REVIEW: M. JOHNSON		BANDELIER NATIONAL MONUMENT	PMIS/PKG NO. 266697
DATE: 04/11/2025			SHEET 23 OF 203

XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND_2D-EG-Master
XC-LAYOUT-SHEETS
XE-E ectr ca Pro osed and E sh Master
XC-ROADWAY
XC-BAND_Pavement and LOD Hatch

3/31/2025 1:18 PM FIGUEROAJ R24 02C005_D3167658_HWY4WL PNP.DWG

CLIN 0003 - PRIMARY ELECTRICAL DISTRIBUTION: CONNECT TO LANL POWER AND CONTINUE TO STA 2 20 FOR DETAILS SEE SPECIFICATION 01 27 00.

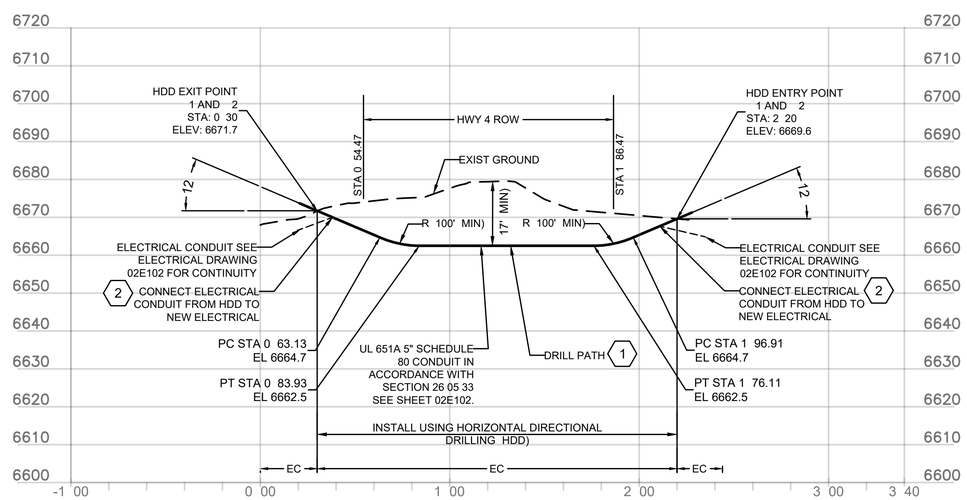




KEYPLAN

SHEET KEYNOTES

1. CONTRACTOR TO DETERMINE THE ACTUAL DRILL PATH IN ACCORDANCE WITH SPECIFICATION 33 05 23.13 AND RE UIREMENTS SHOWN ON THE DRAWINGS. SEE ELECTRICAL DRAWING SHEET 02E102 FOR TIE IN LOCATION AND RE UIREMENTS.
2. EXCAVATE TO CONNECT ELECTRICAL CONDUIT FROM HDD WITH 3 FT COVER TO ELECTRICAL SEE ELECTRICAL DRAWINGS). INSTALL FITTINGS AS NECESSARY. SEE ELECTRICAL DRAWINGS FOR DETAILS AND HORIZONTAL ALIGNMENT.



FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

HORIZONTAL: 40 0 40 80 1" = 40'
SCALE OF FEET

VERTICAL: 20 0 20 40 1" = 20'
SCALE OF FEET

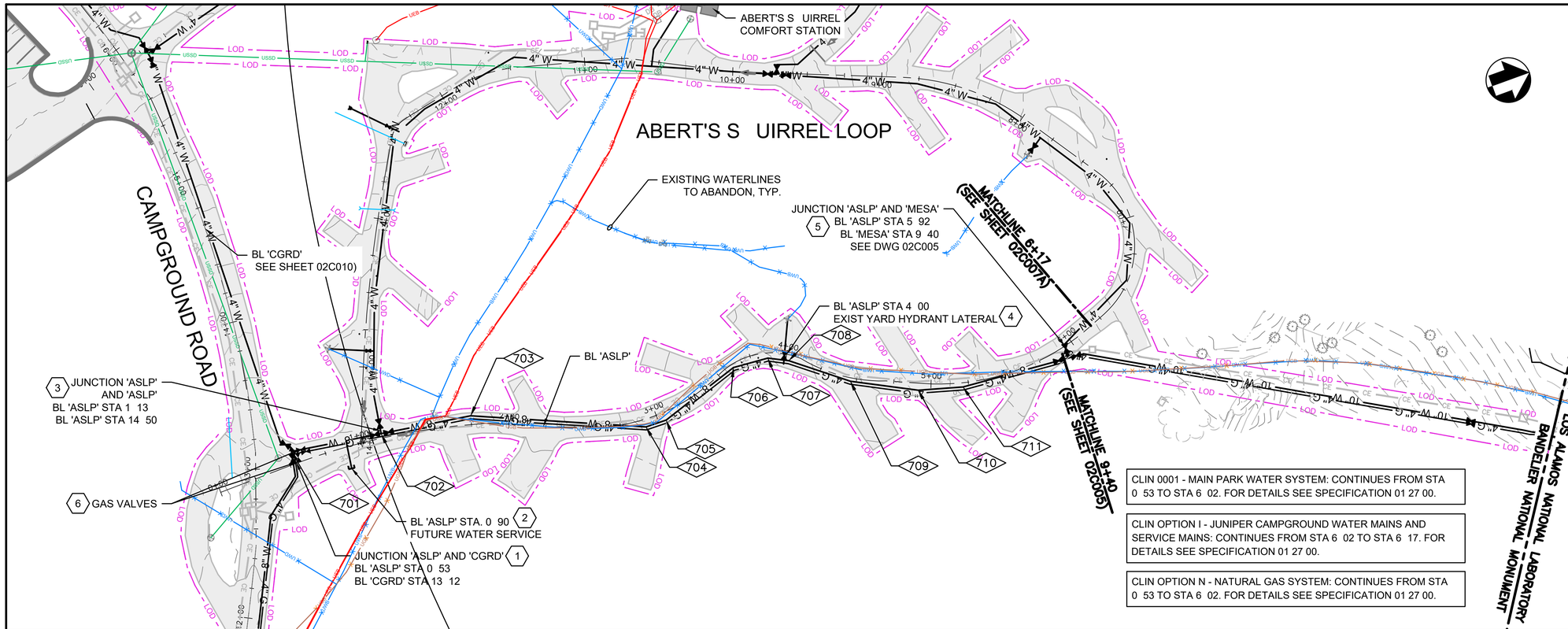
ROBERT W. MARTIN NEW MEXICO 26748 PROFESSIONAL ENGINEER
Digitally signed by Robert W. Martin
Date: 2025.04.10 17:10:13-05'00'

MICAH E. JOHNSON NEW MEXICO 25223 PROFESSIONAL ENGINEER
Digitally signed by Micah E. Johnson
Date: 2025.04.10 16:17:05-06'00'

DESIGNED: M.COUTURE/R.MARTIN	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
CADD J. FIGUEROA	02C006	CIVIL	315
TECH. REVIEW: D. HUANG		BL 'HIGHWAY 4' STA 0+00 TO 1+62 PLAN AND PROFILE	182751
DATE: 04/11/2025		BANDELIER NATIONAL MONUMENT	PMIS/PKG NO. 266697
			SHEET 24 OF 203

XG-Border_BAND
XC-LAYOUT_SHEETS
XC-BAND PROFILES
XC-BAND_2D-EG-Master
XC-BAND_2D-Proposed and E sin Master
XC-ROADWAY
XC-BAND_Pavement and LOD Hatch
XC-UTILITY SITE

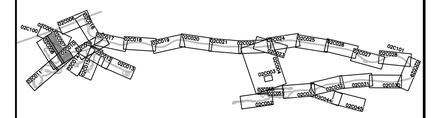
3/30/2025 10:58 AM FIGUEROAJ R24 02C006_D3167650_HWY4 PNP.DWG



CLIN 0001 - MAIN PARK WATER SYSTEM: CONTINUES FROM STA 0 53 TO STA 6 02. FOR DETAILS SEE SPECIFICATION 01 27 00.

CLIN OPTION I - JUNIPER CAMPGROUND WATER MAINS AND SERVICE MAINS: CONTINUES FROM STA 6 02 TO STA 6 17. FOR DETAILS SEE SPECIFICATION 01 27 00.

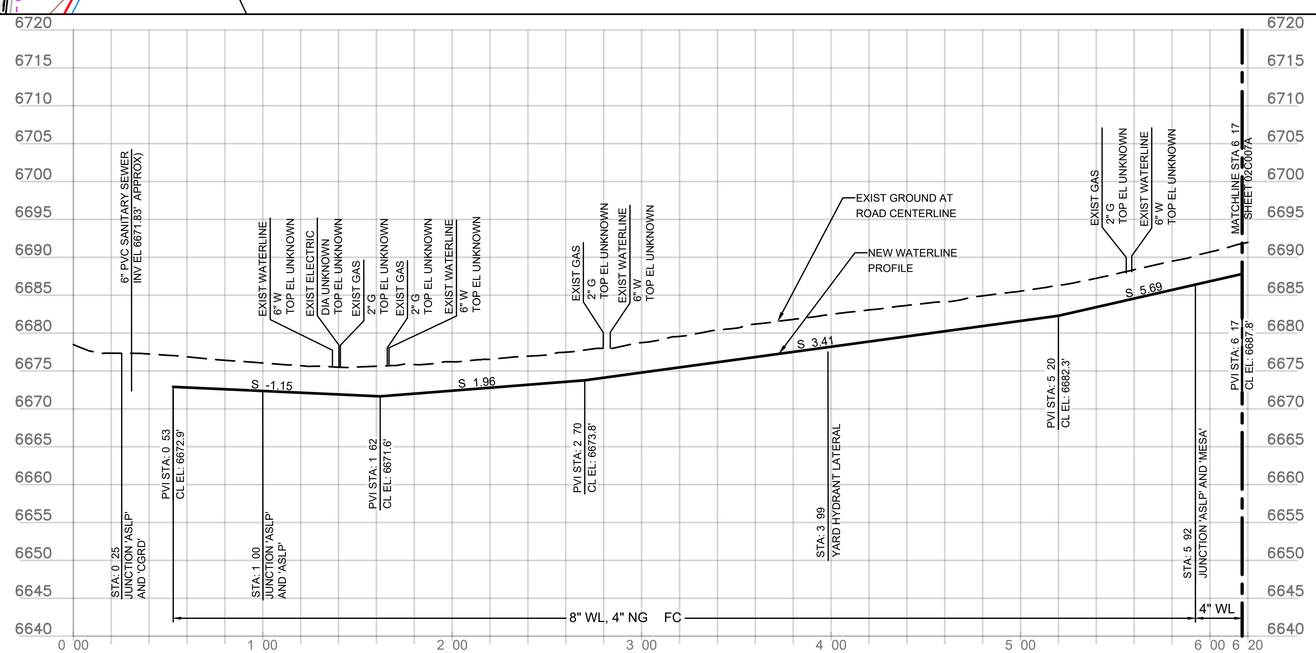
CLIN OPTION N - NATURAL GAS SYSTEM: CONTINUES FROM STA 0 53 TO STA 6 02. FOR DETAILS SEE SPECIFICATION 01 27 00.



KEYPLAN

SHEET KEYNOTES

1. CONNECT TO 'CGRD' WITH 8" 8" 4" TEE ON 'CGRD' LINE. INSTALL 4" GV AND 2) 8" GV AT TEE WITH VALVE BOXES PER DETAIL 1, SHEET 02C303.
2. INSTALL 3/4" DIAMETER SERVICE LINE WITH SADDLE AND CORP STOP IN CLOSED POSITION AND BOXES. INSTALL MARKER POST AT END OF SERVICE LINE.
3. CONNECT 'ASLP' TO 'ASLP' WITH 8"X8"X4 TEE. INSTALL 4" GATE VALVE AND 2) 8" GATE VALVE AT TEE WITH VALVE BOXES PER DETAIL 1, SHEET 02C303.
4. RECONNECT EXISTING YARD HYDRANT. SEE DETAIL 2, SHEET 02C301.
5. SEE INSET A ON SHEET 02C005 FOR VALVE CONSTRUCTION
6. 4" GAS BALL VALVE PER DETAIL 2, SHEET 02C501. INSTALL 4" 90 BEND ON GAS LINE GOING EAST.



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
701	8"x8"x4" TEE, 4" GV, AND 8" GV	1744817.81	1631685.11
702	8"x8"x4" TEE, 4" GV, AND (2) 8" GV	1744877.76	1631698.01
703	8" 22.5° BEND	1744937.61	1631710.89
704	8" 22.5° BEND	1745042.54	1631764.41
705	8" 22.5° BEND	1745056.78	1631765.57
706	8" 22.5° BEND	1745112.20	1631751.11
707	8" 22.5° BEND	1745135.84	1631754.49
708	8" 11.25° BEND	1745148.09	1631761.72
709	8" 11.25° BEND	1745180.56	1631790.75
710	8" 11.25° BEND	1745219.91	1631814.34
711	8" 11.25° BEND	1745248.36	1631824.25

HORIZONTAL: 40 0 40 80 — SCALE OF FEET — 1" = 40'

VERTICAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

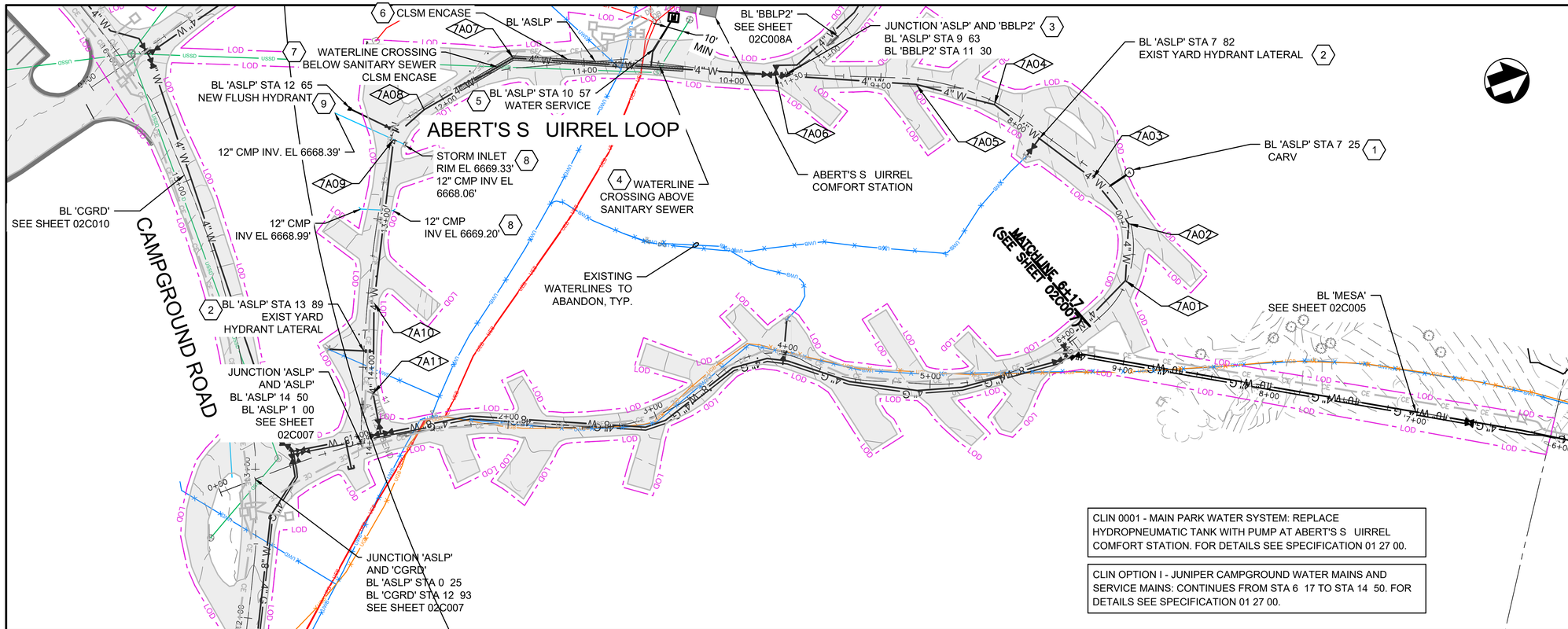
FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 15:32:52-06'00'
PROFESSIONAL ENGINEER

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
M. COUTURE	02C007	CIVIL BL 'ABERT'S SQUIRREL LOOP' STA 0+00 TO 6+17 PLAN AND PROFILE BANDELIER NATIONAL MONUMENT	315 182751
CADD: J. FIGUEROA			PMIS/PKG NO. 266697
TECH. REVIEW: D. HUANG			SHEET 25 OF 203
DATE: 04/11/2025			

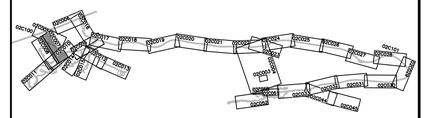
XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND PROFILES-Master
XC-UTILITY SITE
XC-ROADWAY
XC-EXISTING Pro. road prof E. alt. Master
XC-BAND_Perennial and LOD Hatch

3/30/2025 11:02 AM FIGUEROAJ R24 02C007_D3167658_ASLP PNP.DWG



CLIN 0001 - MAIN PARK WATER SYSTEM: REPLACE HYDROPNEUMATIC TANK WITH PUMP AT ABERT'S S UIRREL COMFORT STATION. FOR DETAILS SEE SPECIFICATION 01 27 00.

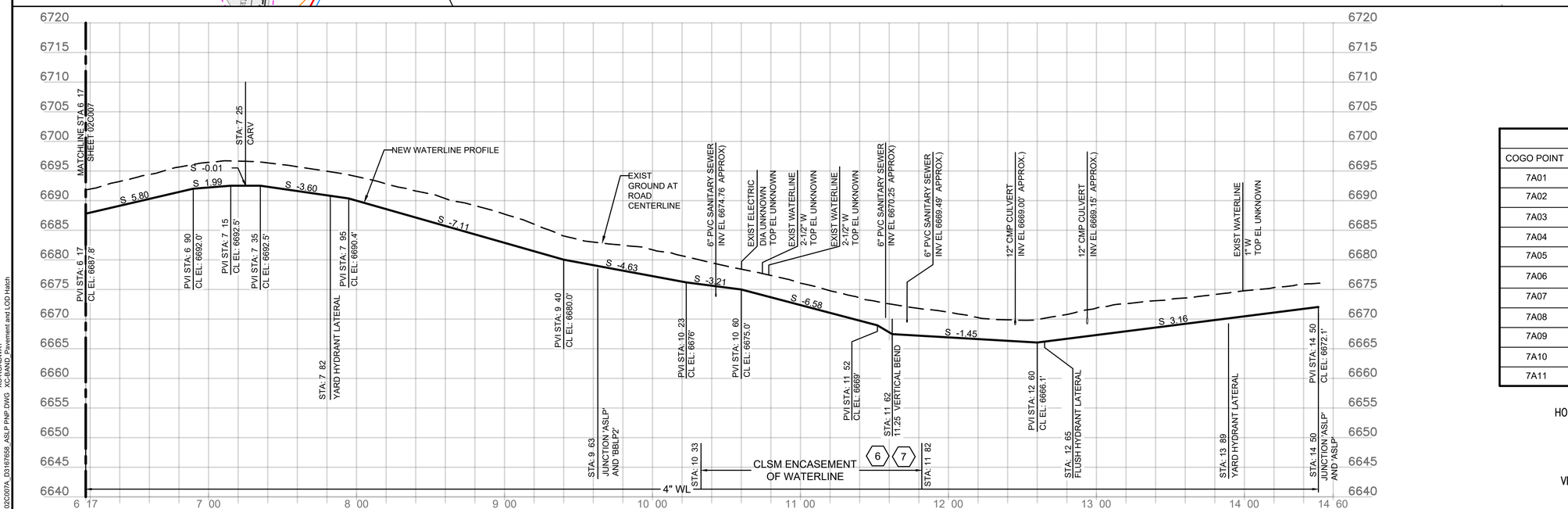
CLIN OPTION I - JUNIPER CAMPGROUND WATER MAINS AND SERVICE MAINS: CONTINUES FROM STA 6 17 TO STA 14 50. FOR DETAILS SEE SPECIFICATION 01 27 00.



KEYPLAN

SHEET KEYNOTES

1. INSTALL NEW 1" COMBINATION AIR RELEASE VALVE IN MANHOLE PER DETAIL 3, SHEET 02C303. ROUTE VENT PIPING TO SIDE OF THE ROAD. LOCATION TO BE DETERMINED IN THE FIELD WITH CONTRACTING OFFICER.
2. RECONNECT EXISTING YARD HYDRANT. SEE DETAIL 2, SHEET 02C301.
3. CONNECT 'ASLP' TO 'BBLP2' WITH 4" 4" TEE. INSTALL 3) 4" GATE VALVES AT TEE WITH VALVE BOXES PER DETAIL 1, SHEET 02C303.
4. INSTALL WATERLINE ABOVE SANITARY SEWER WITH 18" MINIMUM VERTICAL CLEARANCE BETWEEN BOTTOM OF WATERLINE AND TOP OF SEWER. WATERLINE CAN BE INSTALLED WITH 3-FT MINIMUM COVER AT THAT LOCATION TO ACHIEVE VERTICAL CLEARANCE WITH SEWER. NO JOINT IN THE WATERLINE SHALL BE INSTALLED AT THE CROSSING LOCATION.
5. INSTALL 1" DIAMETER SERVICE LINE. REMOVE EXISTING WATER METER AND INSTALL NEW WATER METER PER DETAIL 4, SHEET 02C301. RECONNECT TO EXISTING SERVICE.
6. NEW WATERLINE PARALLEL TO EXISTING SANITARY SEWER. WHERE 10-FT HORIZONTAL CLEARANCE FROM EDGE OF PIPE TO EDGE OF PIPE CANNOT BE MAINTAINED DUE TO OTHER UTILITIES, ENCASE WATERLINE IN CLSM PER DETAIL 5, SHEET 02C300.
7. INSTALL WATERLINE BELOW EXISTING SANITARY SEWER WITH 18" MINIMUM VERTICAL CLEARANCE BETWEEN BOTTOM OF SEWER AND TOP OF WATERLINE. ENCASE WATERLINE IN CLSM FOR 10' ON EACH SIDE OF CROSSING. NO JOINT IN THE WATERLINE SHALL BE INSTALLED BELOW CROSSING OF SEWER. INSTALL OTHER UTILITIES FC, NG, EC) ABOVE SANITARY SEWER WITH 2' MINIMUM COVER.
8. INSTALL WATERLINE BELOW EXISTING CMP CULVERT WITH 18" MINIMUM VERTICAL CLEARANCE. NO JOINT IN THE WATERLINE SHALL BE INSTALLED BELOW CMP.
9. INSTALL FLUSH HYDRANT EVEN WITH EXIST GRADE PER DETAIL 7, SHEET 02C303 AND DETAIL 4, SHEET 02C301.



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
7A01	4" 45 BEND	1745377.39	1631802.03
7A02	4" 45 BEND	1745394.58	1631767.80
7A03	4" 11.25 BEND	1745384.34	1631730.47
7A04	4" 22.5 BEND	1745343.65	1631658.73
7A05	4" 11.25 BEND	1745300.85	1631625.47
7A06	4" 4" TEE, 3) 4" GV	1745216.36	1631582.13
7A07	4" 45 BEND	1745059.59	1631501.72
7A08	4" 11.25 BEND	1744990.92	1631509.83
7A09	4" 45 BEND	1744964.07	1631520.05
7A10	4" 11.25 BEND	1744908.50	1631615.43
7A11	4" 11.25 BEND	1744883.77	1631671.14

HORIZONTAL: 40 0 40 80 — SCALE OF FEET — 1" = 40'

VERTICAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

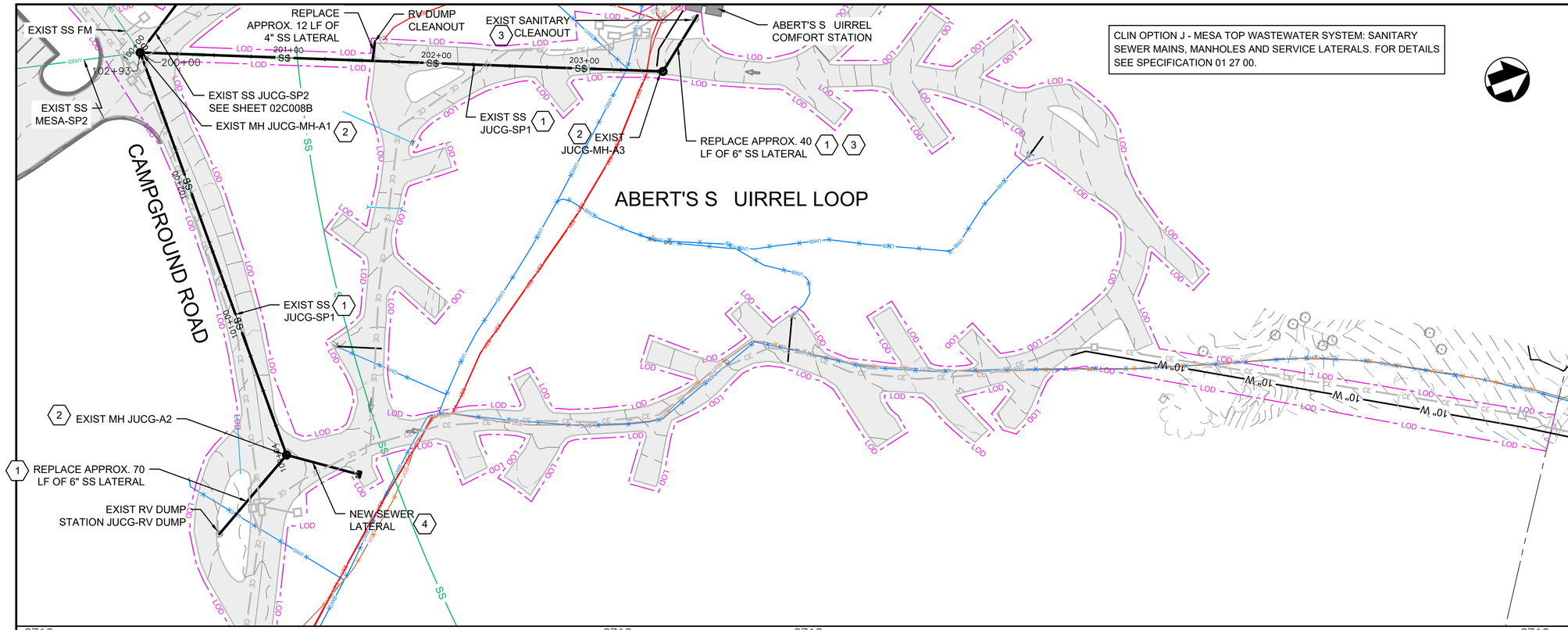
FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

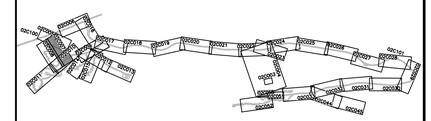
MICAH E. JOHNSON NEW MEXICO 25223 PROFESSIONAL ENGINEER
Digitally signed by Micah E. Johnson Date: 2025.04.08 15:33:55-06'00'

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
M. COUTURE	02C007A	CIVIL	315
CADD: J. FIGUEROA		BL 'ABERT'S SQUIRREL LOOP' STA 6+17 TO 14+50 PLAN AND PROFILE	182751
TECH. REVIEW: D. HUANG		BANDELIER NATIONAL MONUMENT	PMIS/PKG NO. 266697
DATE: 04/11/2025			SHEET 26 OF 203

3/30/2025 11:44 AM FIGUEROAJ R24 02C007A_D3167658_ASLP PNP.DWG XC-Border BAND XC-LAYOUT-SHEETS XC-BAND PROFILES XC-BAND 02SEL-Master XE-E ectr ca Pro osed and E st n Master XC-UTILITY SITE XC-ROADWAY XC-BAND_Pavement and LOD Hatch

CLIN OPTION J - MESA TOP WASTEWATER SYSTEM: SANITARY SEWER MAINS, MANHOLES AND SERVICE LATERALS. FOR DETAILS SEE SPECIFICATION 01 27 00.

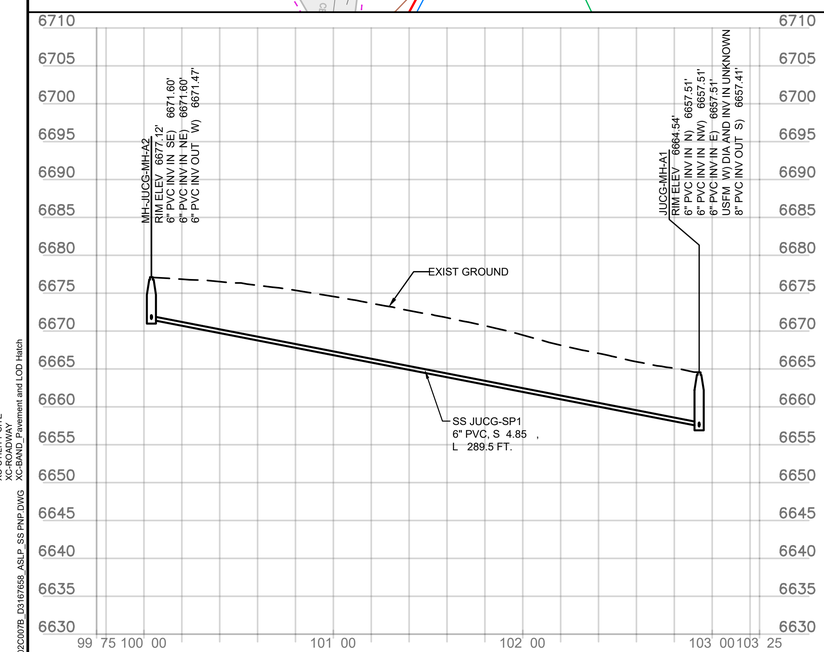


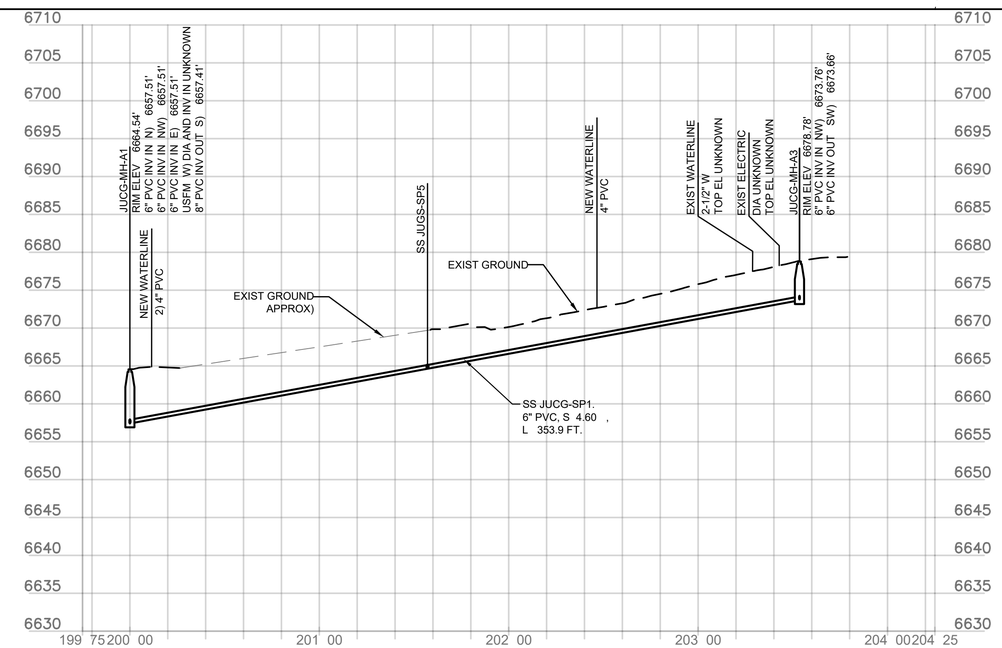


KEYPLAN

SHEET KEYNOTES

1. REMOVE AND REPLACE EXISTING SANITARY SEWER. INSTALL SANITARY SEWER WITH SAME ELEVATION, SLOPE AND ALIGNMENT AS EXISTING.
2. REMOVE AND REPLACE SANITARY SEWER MANHOLE PER DETAILS 2, 3 AND 6, SHEET 02C304. FIELD VERIFY EXISTING INVERT, DIAMETER, MATERIAL OF EXISTING CONNECTIONS PRIOR TO SUBMITTAL REVIEW AND ORDERING MATERIAL.
3. CONNECTION TO BLDG AND CLEANOUT TO BE FIELD LOCATED. REMOVE EXISTING CLEANOUT AND INSTALL NEW CLEANOUT PER DETAIL 5, SHEET 02C304. REPLACE LATERAL UP TO 5 FEET FROM BLDG OR TO CLEANOUT, WHICHEVER IS CLOSEST TO BLDG.
4. INSTALL NEW 4" SEWER CONNECTION FOR FUTURE SITE. INSTALL CAP AT END OF SERVICE.





HORIZONTAL: 40 0 40 80 — 1" = 40'
SCALE OF FEET

VERTICAL: 10 0 10 20 — 1" = 10'
SCALE OF FEET

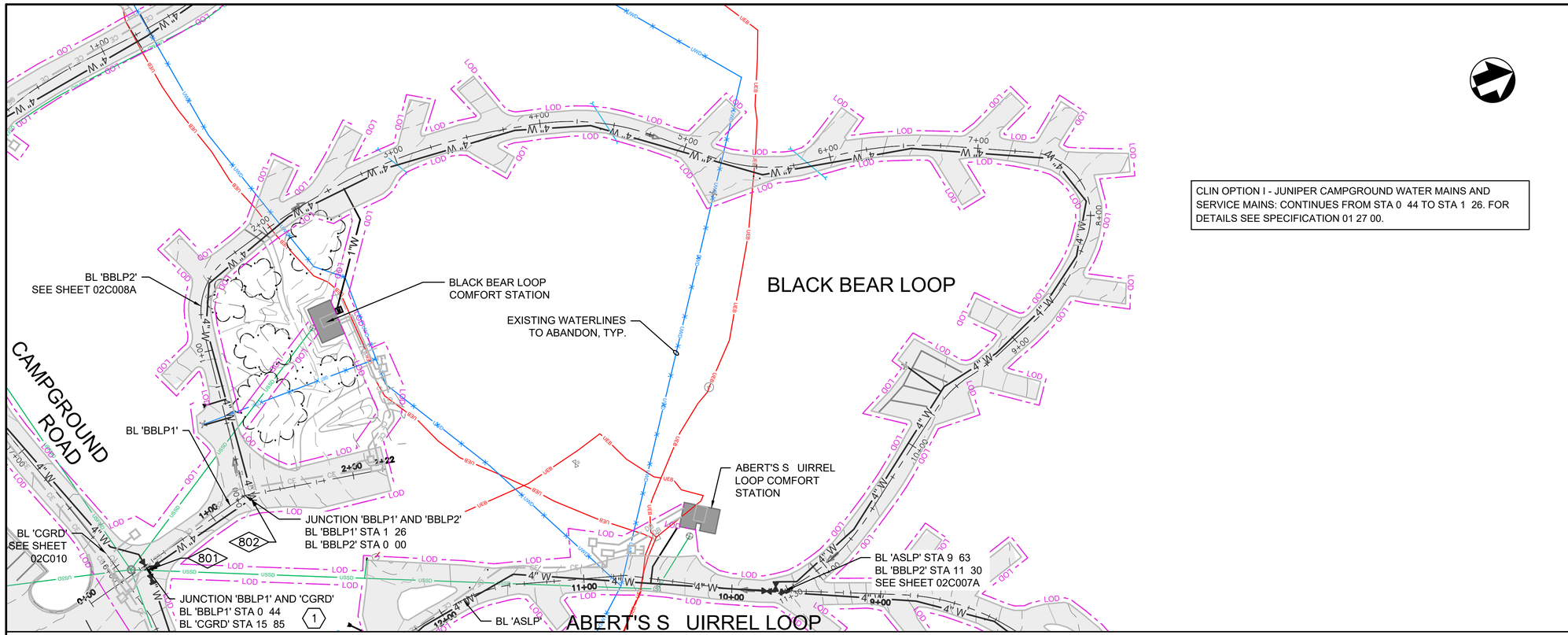
FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 15:46:03-06'00'
PROFESSIONAL ENGINEER

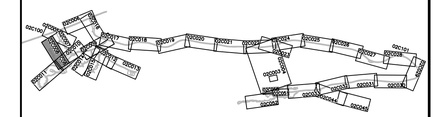
DESIGNED: M. COUTURE	SUB SHEET NO. 02C007B	TITLE OF SHEET CIVIL BL 'ABERT'S SQUIRREL LOOP' SANITARY SEWER PLAN AND PROFILE BANDELIER NATIONAL MONUMENT	DRAWING NO. 315 182751
CADD J. FIGUEROA			PMIS/PKG NO. 266697
TECH. REVIEW: D. HUANG			SHEET 27 OF 203
DATE: 04/11/2025			

XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND_PROFILES
XC-BAND_2D-CEL-Master
XE-Electrical Proposed and Existing Master
XC-UTILITY SITE
XC-ROADWAY
XC-BAND_Pavement and LOD Hatch

3/30/2025 11:26 AM FIGUEROAJ R24 02C007B_D3167658_ASLP_SS PNP.DWG



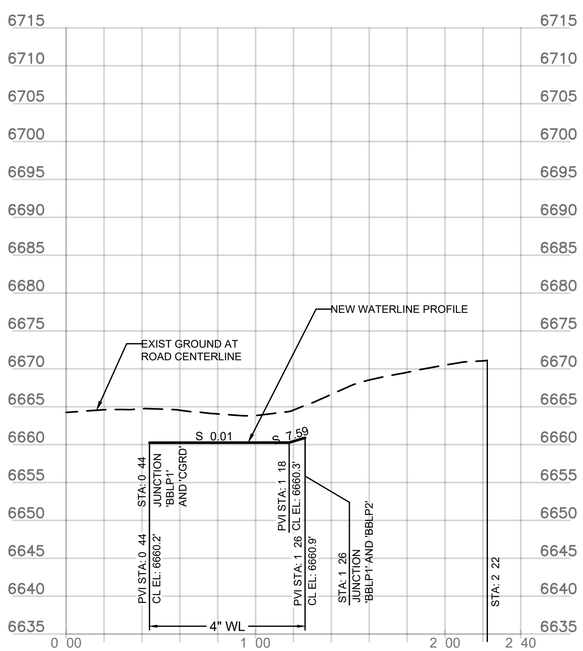
CLIN OPTION I - JUNIPER CAMPGROUND WATER MAINS AND SERVICE MAINS: CONTINUES FROM STA 0 44 TO STA 1 26. FOR DETAILS SEE SPECIFICATION 01 27 00.



KEYPLAN

SHEET KEYNOTES

1. CONNECT 'BBLP1' TO 'CGRD' WITH 4" 4" TEE. INSTALL 3) 4" GATE VALVES TEE WITH VALVE BOXES PER DETAIL 1, SHEET 02C303.



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
801	4"X4" TEE, 3) 4" GV	1744835.49	1631402.08
802	4" 90 BEND AND 22.5 BEND	1744914.94	1631386.81

HORIZONTAL: 40 0 40 80 — SCALE OF FEET — 1" = 40'

VERTICAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

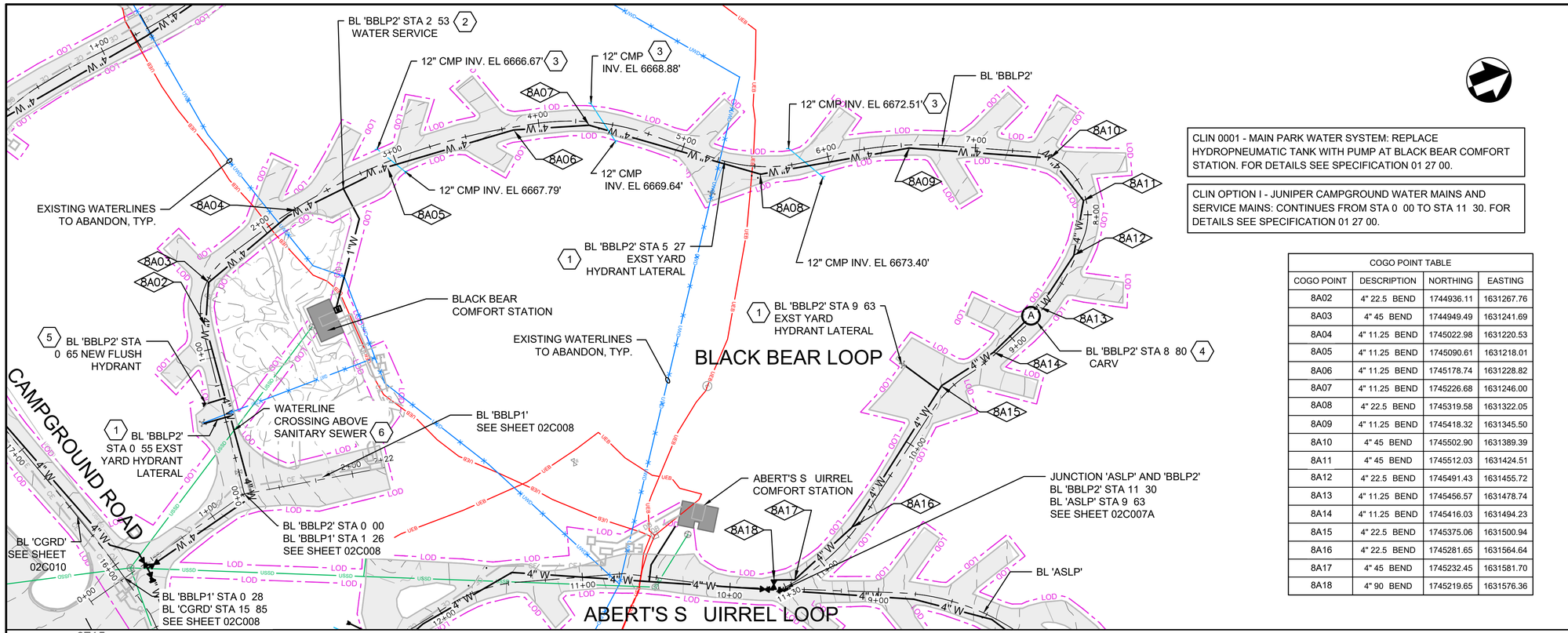
FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 15:46:49-06'00'
PROFESSIONAL ENGINEER

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
M. COUTURE	02C008	CIVIL	315
CADD J.FIGUEROA		BL 'BLACK BEAR LOOP 1' STA 0+00 TO 2+22 PLAN AND PROFILE	182751
TECH. REVIEW: D. HUANG		BANDELIER NATIONAL MONUMENT	PMIS/PKG NO. 266697
DATE: 04/11/2025			SHEET 28 OF 203

XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND_2D-ES-Master
XC-AHJ-BLDG
XC-UTILITY SITE
XC-ROADWAY
XC-Grid-Proposed and E 1 n Master
XC-BAND_Pavement and LOD Hatch

3/30/2025 11:28 AM FIGUEROAJ R24 02C008_D3167658_BBLP1 PNP.DWG

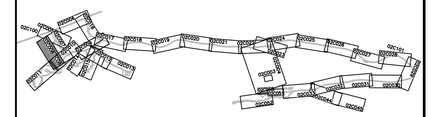


CLIN 0001 - MAIN PARK WATER SYSTEM: REPLACE HYDROPNEUMATIC TANK WITH PUMP AT BLACK BEAR COMFORT STATION. FOR DETAILS SEE SPECIFICATION 01 27 00.

CLIN OPTION I - JUNIPER CAMPGROUND WATER MAINS AND SERVICE MAINS: CONTINUES FROM STA 0 00 TO STA 11 30. FOR DETAILS SEE SPECIFICATION 01 27 00.

COGO POINT TABLE

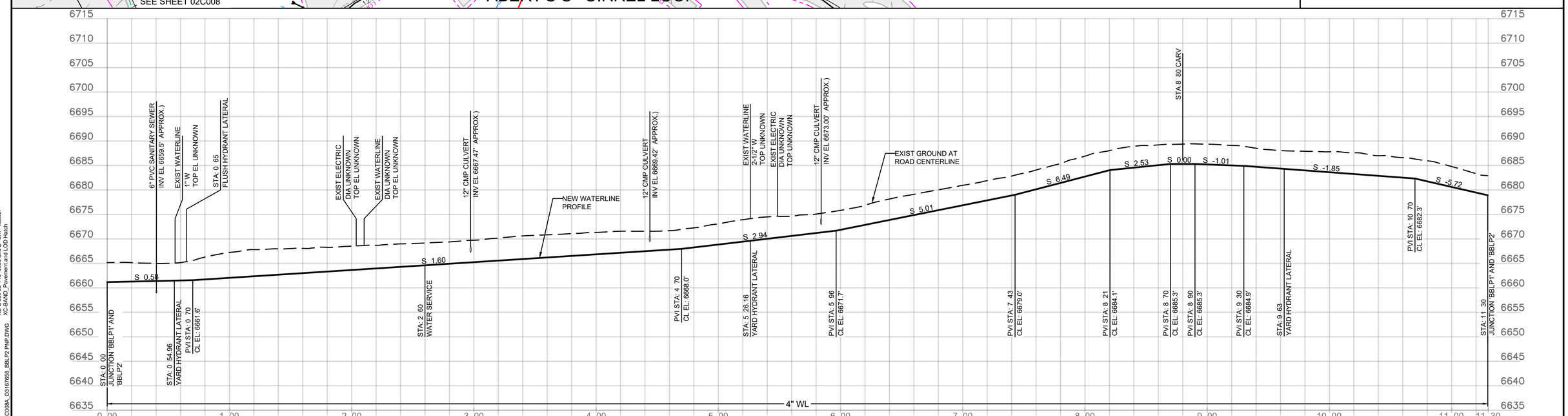
COGO POINT	DESCRIPTION	NORTHING	EASTING
8A02	4" 22.5 BEND	1744936.11	1631267.76
8A03	4" 45 BEND	1744949.49	1631241.69
8A04	4" 11.25 BEND	1745022.98	1631220.53
8A05	4" 11.25 BEND	1745090.61	1631218.01
8A06	4" 11.25 BEND	1745178.74	1631228.82
8A07	4" 11.25 BEND	1745226.68	1631246.00
8A08	4" 22.5 BEND	1745319.58	1631322.05
8A09	4" 11.25 BEND	1745418.32	1631345.50
8A10	4" 45 BEND	1745502.90	1631389.39
8A11	4" 45 BEND	1745512.03	1631424.51
8A12	4" 22.5 BEND	1745491.43	1631455.72
8A13	4" 11.25 BEND	1745456.57	1631478.74
8A14	4" 11.25 BEND	1745416.03	1631494.23
8A15	4" 22.5 BEND	1745375.06	1631500.94
8A16	4" 22.5 BEND	1745281.65	1631564.64
8A17	4" 45 BEND	1745232.45	1631581.70
8A18	4" 90 BEND	1745219.65	1631576.36



KEYPLAN

SHEET KEYNOTES

1. RECONNECT EXISTING YARD HYDRANT. SEE DETAIL 2, SHEET 02C301.
2. INSTALL 1" DIAMETER SERVICE LINE. REMOVE EXISTING WATER METER AND INSTALL NEW WATER METER PER DETAIL 4, SHEET 02C301. RECONNECT TO EXISTING SERVICE.
3. INSTALL WATERLINE BELOW EXISTING CMP CULVERT WITH 18" MINIMUM VERTICAL CLEARANCE. NO JOINT IN THE WATERLINE SHALL BE INSTALLED BELOW CMP.
4. INSTALL NEW 1" COMBINATION AIR RELEASE VALVE IN MANHOLE PER DETAIL 3, SHEET 02C303. ROUTE VENT PIPING TO SIDE OF THE ROAD. LOCATION TO BE DETERMINED IN THE FIELD WITH CONTRACTING OFFICER.
5. INSTALL FLUSH HYDRANT EVEN WITH EXIST GRADE PER DETAIL 7, SHEET 02C303 AND DETAIL 4, SHEET 02C301.
6. INSTALL WATERLINE ABOVE SANITARY SEWER WITH 18" MINIMUM VERTICAL CLEARANCE BETWEEN BOTTOM OF WATERLINE AND TOP OF SEWER. WATERLINE CAN BE INSTALLED WITH 3-FT MINIMUM COVER AT THAT LOCATION TO ACHIEVE VERTICAL CLEARANCE WITH SEWER.



XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND_DETAILS
XC-ALIGN BAND
XC-UTILITY SITE
XC-ROADWAY
XC-BAND_Pavement Pro osed and E sti Master
XC-BAND_Pavement and LOD Hatch

3/30/2025 11:32 AM FIGUEROAJ R24 02C008A_D3167658_BBLP2 PNP.DWG

HORIZONTAL: 40 0 40 80 — SCALE OF FEET — 1" = 40'

VERTICAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

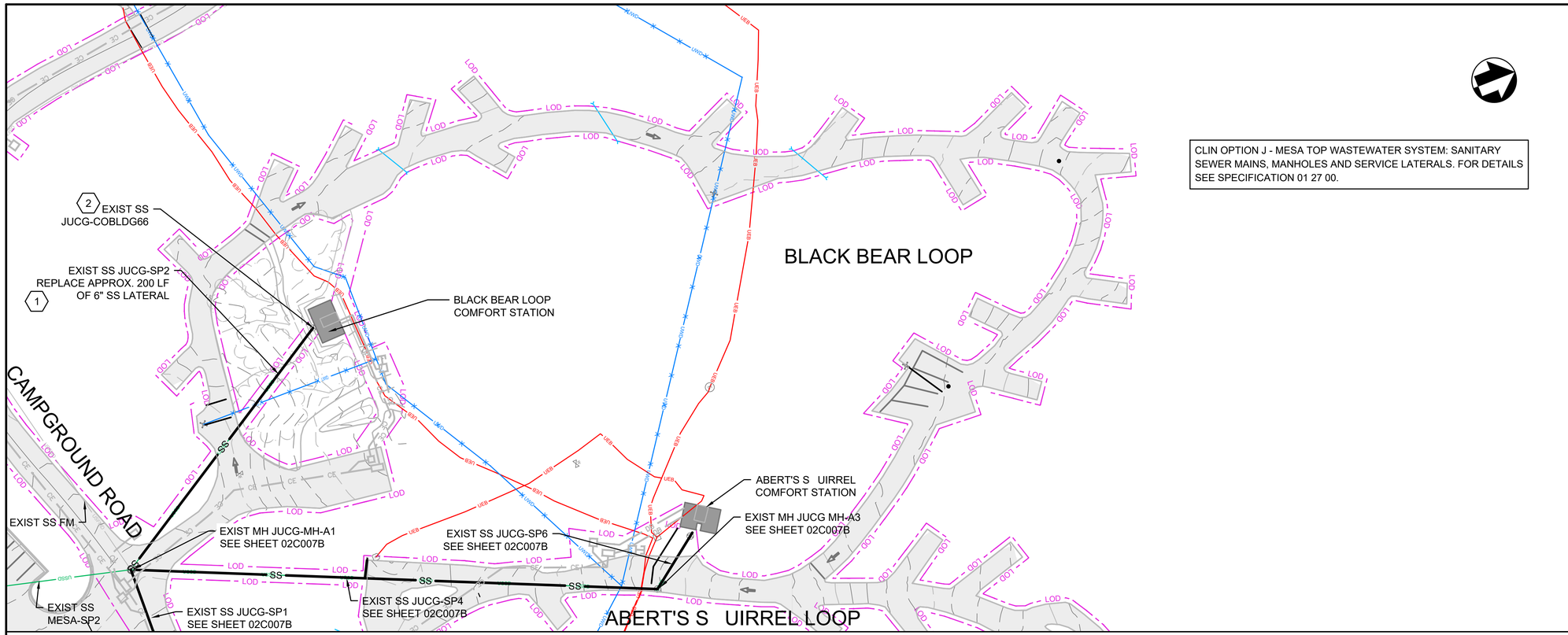
FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 15:47:35-06'00'
PROFESSIONAL ENGINEER

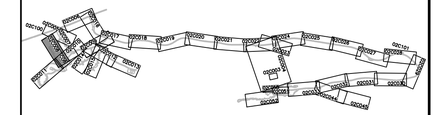
DESIGNED:	M.COUTURE
CADD	J. FIGUEROA
TECH. REVIEW:	D. HUANG
DATE:	04/11/2025
SUB SHEET NO.	02C008A

TITLE OF SHEET
CIVIL
BL 'BLACK BEAR LOOP 2'
STA 0+00 TO 11+30
PLAN AND PROFILE
BANDELIER NATIONAL MONUMENT

DRAWING NO. 315
182751
PMIS/PKG NO. 266697
SHEET 29 OF 203



CLIN OPTION J - MESA TOP WASTEWATER SYSTEM: SANITARY SEWER MAINS, MANHOLES AND SERVICE LATERALS. FOR DETAILS SEE SPECIFICATION 01 27 00.



KEYPLAN

SHEET KEYNOTES

1. REMOVE AND REPLACE EXISTING SANITARY SEWER. INSTALL SANITARY SEWER WITH SAME ELEVATION, SLOPE AND ALIGNMENT AS EXISTING.
2. CONNECTION TO BLDG AND CLEANOUT TO BE FIELD LOCATED. REMOVE EXISTING CLEANOUT AND INSTALL NEW CLEANOUT PER DETAIL 5, SHEET 02C304. REPLACE LATERAL UP TO 5 FEET FROM BLDG OR TO CLEANOUT, WHICHEVER IS CLOSEST TO BLDG.

PROFILE NOT PROVIDED

HORIZONTAL: 40 0 40 80 — SCALE OF FEET — 1" = 40'

VERTICAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

FULL SIZE DRAWINGS = 22"x34" BAR MEASURES 1" LONG 0" 1"

MICAH E. JOHNSON NEW MEXICO 25223 Digitally signed by Micah E. Johnson Date: 2025.04.08 15:48:21-06'00' PROFESSIONAL ENGINEER

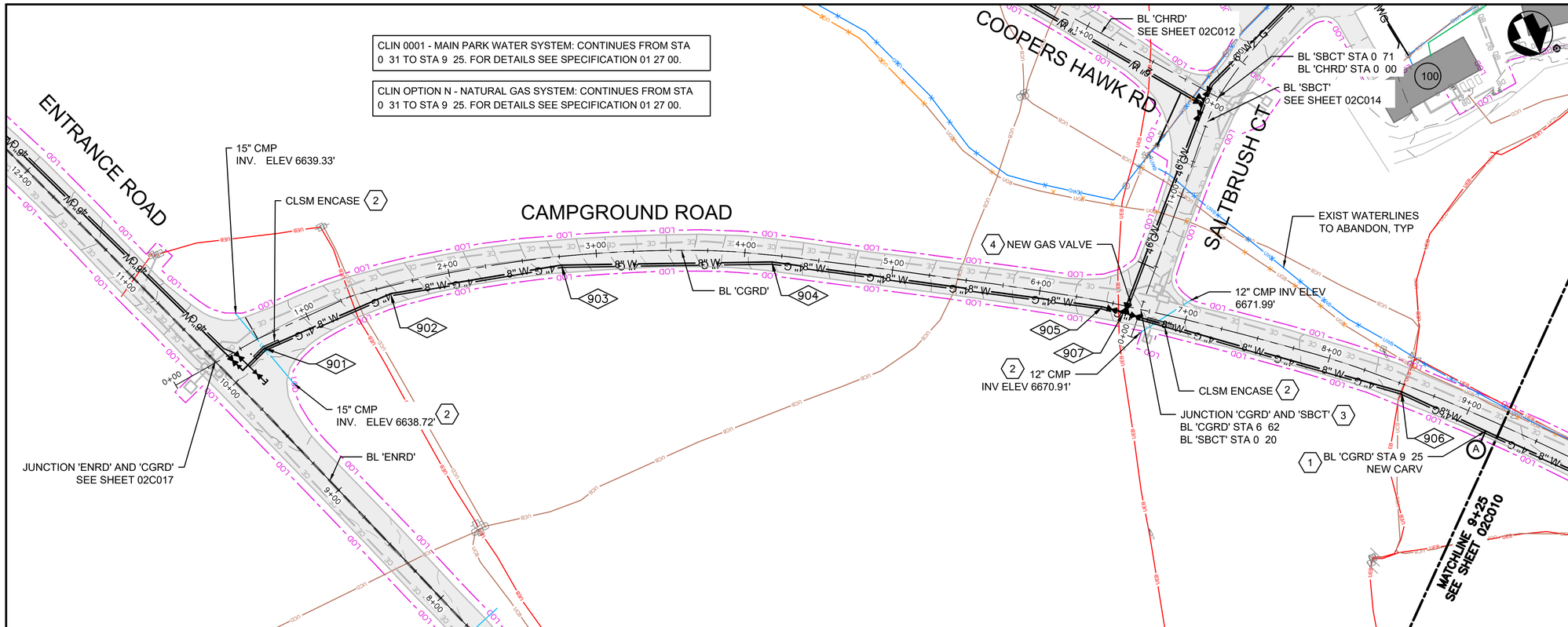
DESIGNED: M. COUTURE	SUB SHEET NO.	TITLE OF SHEET CIVIL BL 'BLACK BEAR LOOP' SANITARY SEWER PLAN AND PROFILE BANDELIER NATIONAL MONUMENT	DRAWING NO. 315 182751
CADD J. FIGUEROA	02C008B		PMIS/PKG NO. 266697
TECH. REVIEW: D. HUANG			SHEET 30 OF 203
DATE: 04/11/2025			

XC-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND_2D-EG-Master
XC-ALIGN-BAND
XC-UTILITY-SITE
XC-ROADWAY
XC-Edit Ca Pro cised and E 41 1 Master
XC-BAND_Pavement and LOD Hatch

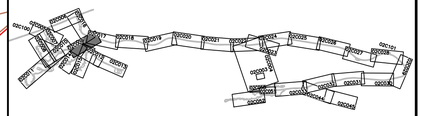
4/8/2025 11:25 AM FIGUEROAJ R24 02C008B_D3167658_BBLP_SS PNP.DWG

CLIN 0001 - MAIN PARK WATER SYSTEM: CONTINUES FROM STA 0 31 TO STA 9 25. FOR DETAILS SEE SPECIFICATION 01 27 00.

CLIN OPTION N - NATURAL GAS SYSTEM: CONTINUES FROM STA 0 31 TO STA 9 25. FOR DETAILS SEE SPECIFICATION 01 27 00.

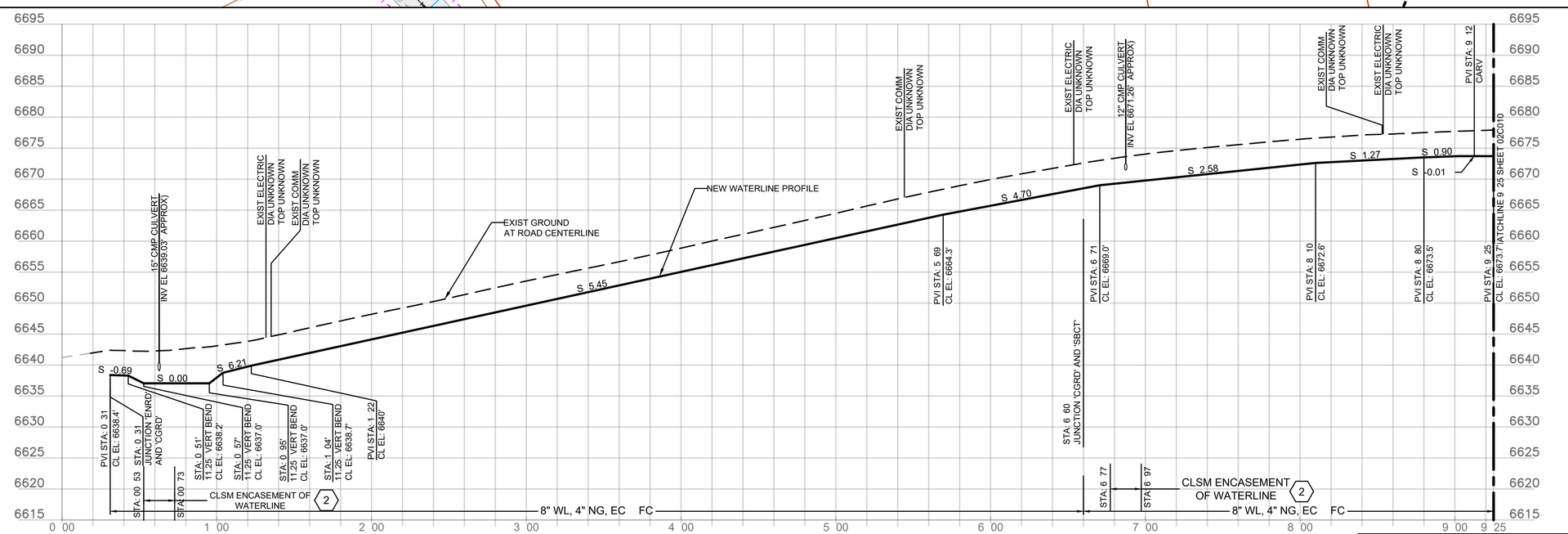


KEYPLAN



SHEET KEYNOTES

1. INSTALL NEW 1" COMBINATION AIR RELEASE VALVE IN MANHOLE PER DETAIL 3, SHEET 02C303. ROUT VENT PIPING TO SIDE OF THE ROAD. LOCATION TO BE DETERMINED IN THE FIELD
2. INSTALL WATERLINE BELOW EXISTING CMP CULVERT WITH 18" MINIMUM VERTICAL CLEARANCE. NO JOINT IN THE WATERLINE SHALL BE INSTALLED BELOW CMP.
3. CONNECT 'CGRD' AND 'SBCT' WITH 8" 8" 6" TEE. INSTALL 2) 8" GV AND 1) 6" GV AT TEE WITH VALVE BOXES PER DETAIL 1, SHEET 02C303
4. INSTALL 4" GAS BALL VALVE PER DETAIL 2, SHEET 02C501.



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
901	8" 22.5 BEND	1744147.11	1632698.26
902	8" 11.25 BEND	1744151.16	1632605.88
903	8" 11.25 BEND	1744184.20	1632494.24
904	8" 11.25 BEND	1744244.18	1632366.14
905	8" 11.25 BEND	1744368.63	1632179.50
906	8" 11.25 BEND	1744508.06	1632023.68
907	8" 8" 6" TEE, 2) 8" GV, 1) 6" GV	1744378.85	1632168.07

HORIZONTAL: 40 0 40 80 — SCALE OF FEET — 1" = 40'

VERTICAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

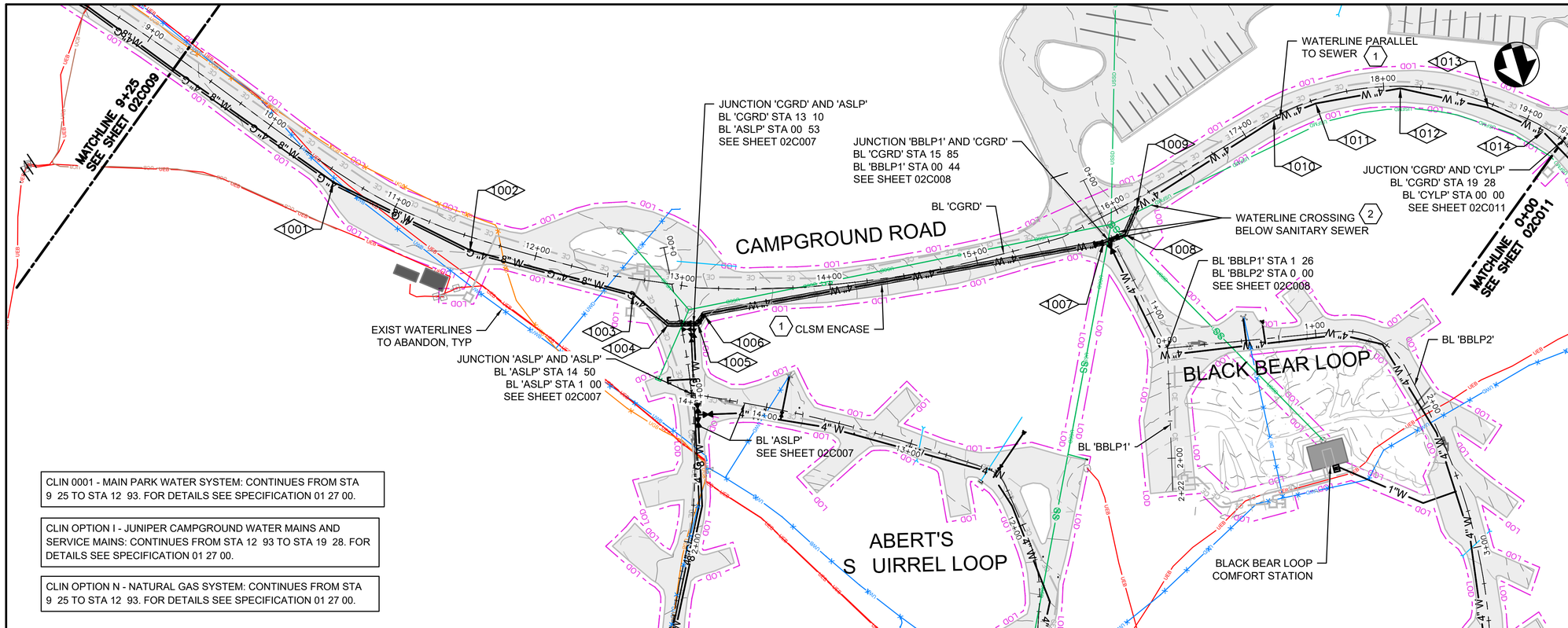
XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND_PROFILES-Master
XC-BAND_BAND
XE-Existing Proposed and Existing Master
XC-ROADWAY
XC-SITE UTILITY SITE
XC-BAND_Pavement and LOD Hatch

3/30/2025 11:41 AM FIGUEROAJ R24 02C009_D3167658_CGRD PNP.DWG

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 15:49:10-06'00'
PROFESSIONAL ENGINEER

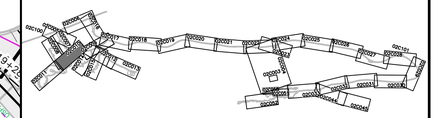
DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
M.COUTURE	02C009	CIVIL	315
CADD: J. FIGUEROA		BL 'CAMPGROUND LOOP' STA 0+00 TO 9+25 PLAN AND PROFILE	182751
TECH. REVIEW: D. HUANG		BANDELIER NATIONAL MONUMENT	PMIS/PKG NO. 266697
DATE: 04/11/2025			SHEET 31 OF 203



CLIN 0001 - MAIN PARK WATER SYSTEM: CONTINUES FROM STA 9 25 TO STA 12 93. FOR DETAILS SEE SPECIFICATION 01 27 00.

CLIN OPTION I - JUNIPER CAMPGROUND WATER MAINS AND SERVICE MAINS: CONTINUES FROM STA 12 93 TO STA 19 28. FOR DETAILS SEE SPECIFICATION 01 27 00.

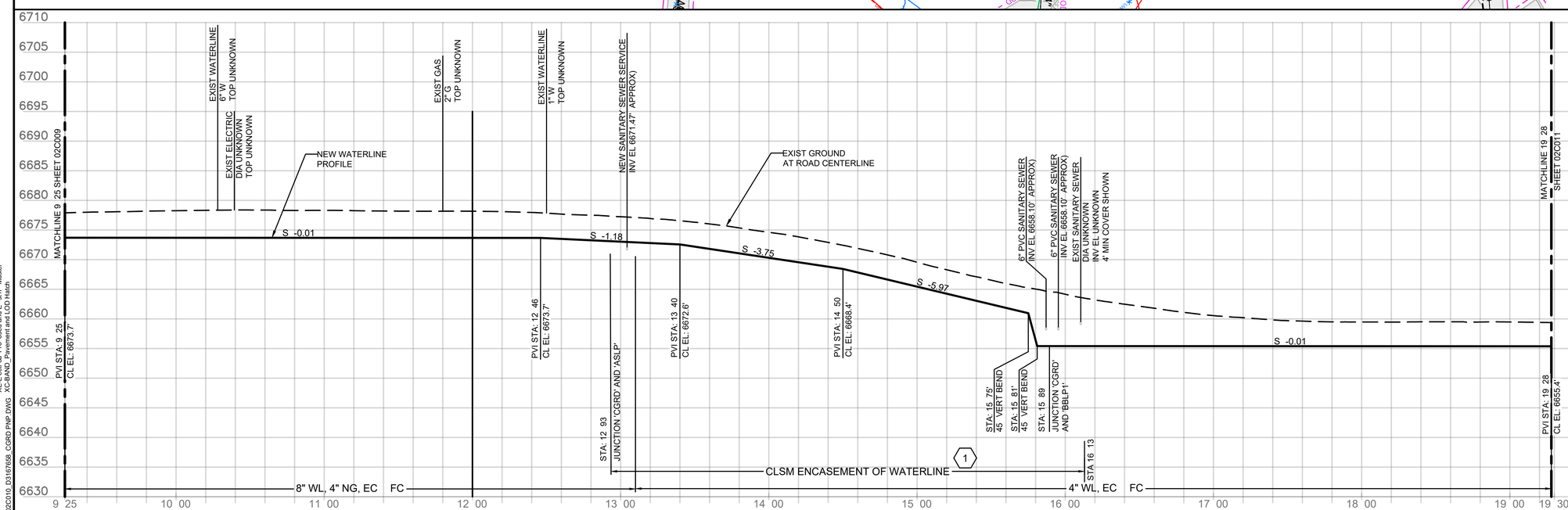
CLIN OPTION N - NATURAL GAS SYSTEM: CONTINUES FROM STA 9 25 TO STA 12 93. FOR DETAILS SEE SPECIFICATION 01 27 00.



KEYPLAN

SHEET KEYNOTES

1. NEW WATER PARALLEL TO EXISTING SANITARY SEWER. WHERE 10-FT HORIZONTAL CLEARANCE FROM EDGE OF PIPE TO EDGE OF PIPE CANNOT BE MAINTAINED DUE TO OTHER UTILITIES, ENCASE WATERLINE IN CLSM PER DETAIL 5, SHEET 02C300.
2. INSTALL NEW WATERLINE BELOW EXISTING SANITARY SEWER WITH 18" MINIMUM VERTICAL CLEARANCE BETWEEN BOTTOM OF SEWER AND TOP OF WATER. ENCASE WATERLINE IN CLSM FOR 10' ON EACH SIDE OF CROSSING. NO JOINT IN THE WATERLINE SHALL BE INSTALLED BELOW CROSSING OF SEWER. INSTALL OTHER UTILITIES FC, NG, EC) ABOVE SANITARY SEWER WITH 2' MINIMUM COVER.



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
1001	8" 11.25 BEND	1744664.01	1631894.65
1002	8" 11.25 BEND	1744731.74	1631817.66
1003	8" 22.5 BEND	1744788.01	1631719.21
1004	8" 45 BEND	1744813.55	1631701.52
1005	4" 45 BEND	1744818.54	1631682.68
1006	4" 45 BEND	1744813.39	1631676.60
1007	4" 11.25 BEND	1744835.85	1631405.23
1008	4" 45 BEND	1744834.11	1631389.94
1009	4" 45 BEND	1744818.60	1631377.61
1010	4" 11.25 BEND	1744785.19	1631273.35
1011	4" 11.25 BEND	1744781.78	1631243.54
1012	4" 22.5 BEND	1744786.54	1631186.09
1013	4" 11.25 BEND	1744814.27	1631132.21
1014	4" 22.5 BEND	1744839.16	1631100.90

HORIZONTAL: 40 0 40 80 — SCALE OF FEET — 1" = 40'

VERTICAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

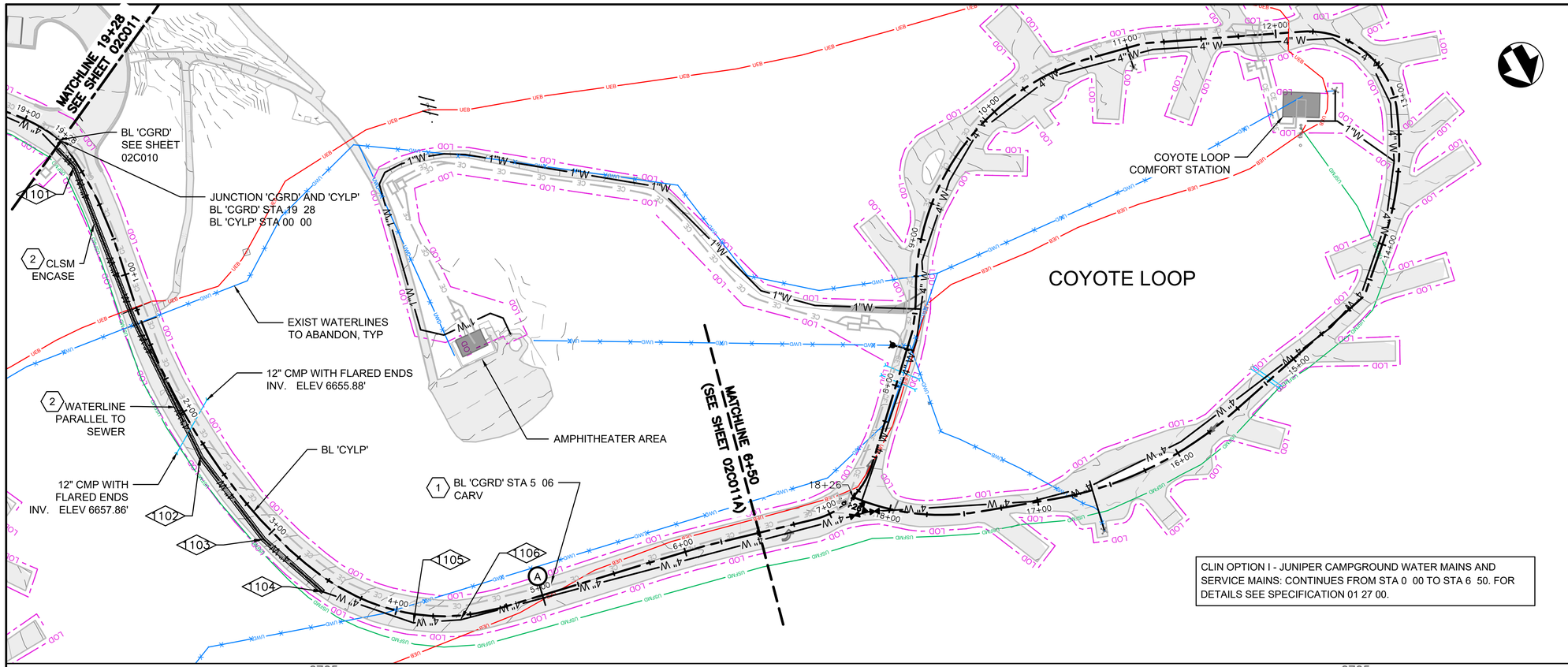
FULL SIZE DRAWINGS = 22"x34" BAR MEASURES 1" LONG 0" 1"

MICAH E. JOHNSON NEW MEXICO 25223 PROFESSIONAL ENGINEER
Digitally signed by Micah E. Johnson
Date: 2025.04.08 15:50:04-06'00'

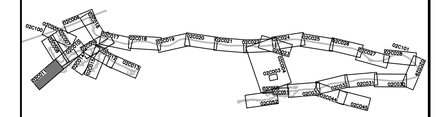
DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
M.COUTURE	02C010	CIVIL	315
CADD: J. FIGUEROA		BL 'CAMPGROUND LOOP' STA 9+25 TO 19+28 PLAN AND PROFILE	182751
TECH. REVIEW: D. HUANG		BANDELIER NATIONAL MONUMENT	PMIS/PKG NO. 266697
DATE: 04/11/2025			SHEET 32 OF 203

XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND_PROFILES-Master
XC-BAND_BAND
XC-UTILITY SITE
XC-ROADWAY
XC-EXISTING_Proposed and E sts Master
XC-BAND_Pavement and LOD Hatch

3/30/2025 3:16 PM FIGUEROAJ R24 02C010_D3167658_CGRD PNP.DWG



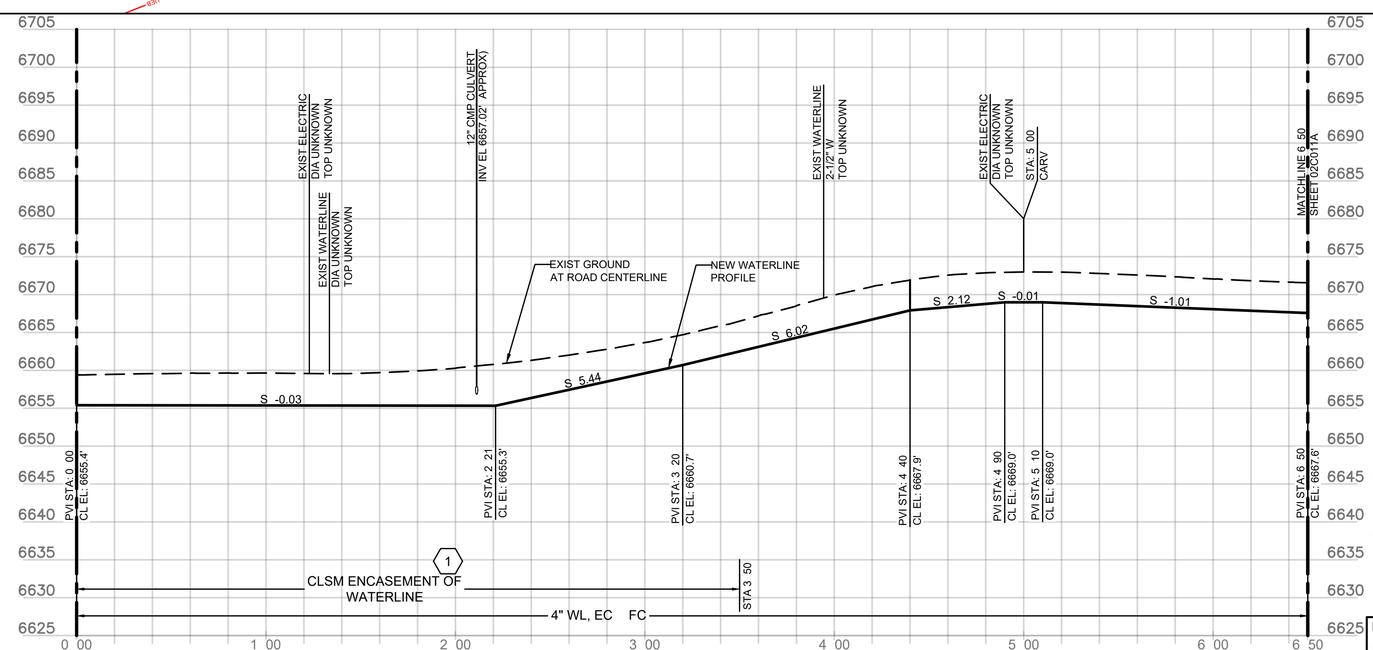
CLIN OPTION I - JUNIPER CAMPGROUND WATER MAINS AND SERVICE MAINS: CONTINUES FROM STA 0 00 TO STA 6 50. FOR DETAILS SEE SPECIFICATION 01 27 00.



KEYPLAN

SHEET KEYNOTES

1. INSTALL NEW 1" COMBINATION AIR RELEASE VALVE IN MANHOLE PER DETAIL 3, SHEET 02C303. ROUTE VENT PIPING TO SIDE OF THE ROAD. LOCATION TO BE DETERMINED IN THE FIELD WITH CONTRACTING OFFICER.
2. NEW WATER PARALLEL TO EXISTING SANITARY SEWER. WHERE 10-FT HORIZONTAL CLEARANCE FROM EDGE OF PIPE TO EDGE OF PIPE CANNOT BE MAINTAINED DUE TO OTHER UTILITIES, ENCASE WATERLINE IN CLSM PER DETAIL 5, SHEET 02C300.



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
1101	4" 22.5 BEND	1744867.11	1631085.40
1102	4" 11.25 BEND	1745077.09	1631052.94
1103	4" 11.25 BEND	1745140.99	1631026.48
1104	4" 22.5 BEND	1745185.06	1630997.03
1105	4" 22.5 BEND	1745220.62	1630943.81
1106	4" 11.25 BEND	1745226.78	1630912.82

MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 16:51:52-06'00'
PROFESSIONAL ENGINEER

HORIZONTAL: 40 0 40 80 — SCALE OF FEET — 1" = 40'

VERTICAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

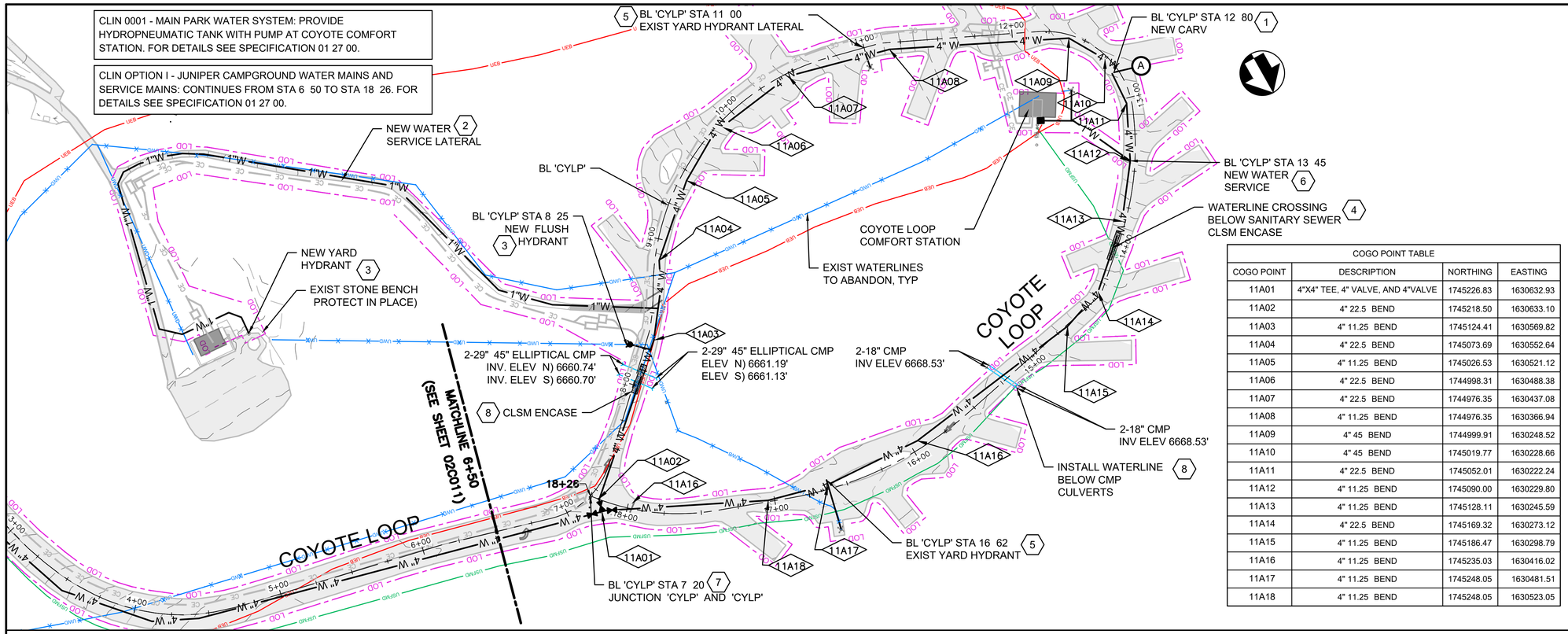
DESIGNED: M.COUTURE	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
CADD J. FIGUEROA	02C011	CIVIL BL 'COYOTE LOOP' STA 0+00 TO 6+50 PLAN AND PROFILE BANDELIER NATIONAL MONUMENT	315 182751
TECH. REVIEW: D. HUANG			PMIS/PKG NO. 266697
DATE: 04/11/2025			SHEET 33 OF 203

XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND_DATES-Master
XC-ALIGN_BAND
XC-UTILITY SITE
XC-ROADWAY
XC-Existing Pavement and E. alt. Master
XC-BAND_Pavement and LOD Hatch

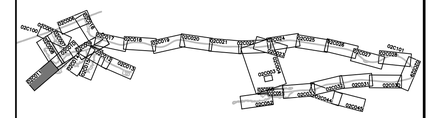
3/30/2025 11:51 AM FIGUEROAJ R24 02C011 D3167658_CYLP PNP.DWG

CLIN 0001 - MAIN PARK WATER SYSTEM: PROVIDE HYDROPNEUMATIC TANK WITH PUMP AT COYOTE COMFORT STATION. FOR DETAILS SEE SPECIFICATION 01 27 00.

CLIN OPTION I - JUNIPER CAMPGROUND WATER MAINS AND SERVICE MAINS: CONTINUES FROM STA 6 50 TO STA 18 26. FOR DETAILS SEE SPECIFICATION 01 27 00.



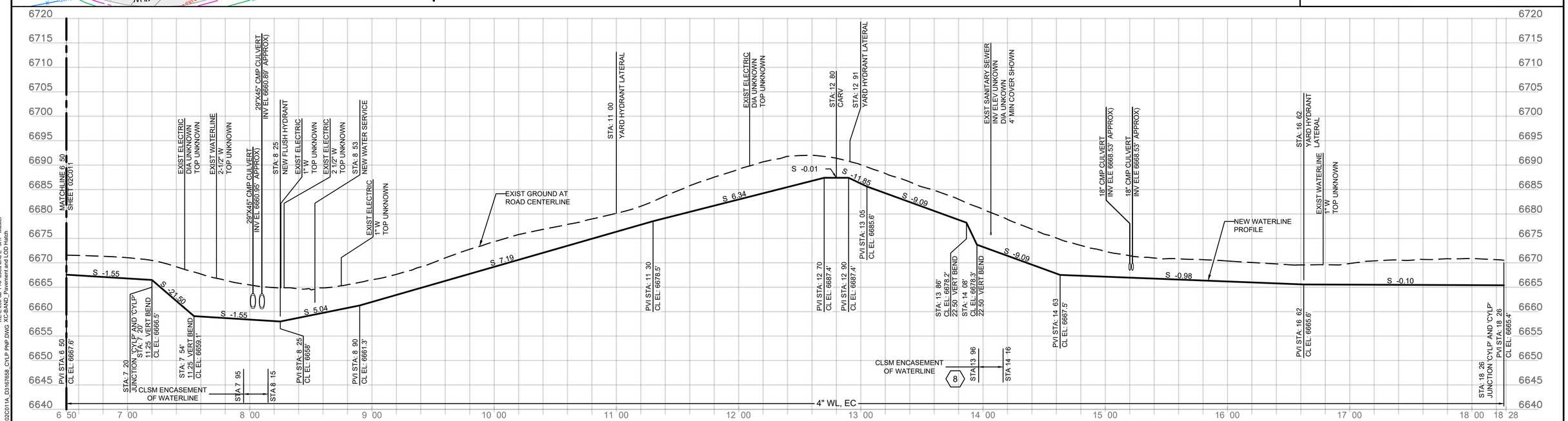
COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
11A01	4"X4" TEE, 4" VALVE, AND 4"VALVE	1745226.83	1630632.93
11A02	4" 22.5 BEND	1745218.50	1630633.10
11A03	4" 11.25 BEND	1745124.41	1630569.82
11A04	4" 22.5 BEND	1745073.69	1630552.64
11A05	4" 11.25 BEND	1745026.53	1630521.12
11A06	4" 22.5 BEND	1744998.31	1630488.38
11A07	4" 22.5 BEND	1744976.35	1630437.08
11A08	4" 11.25 BEND	1744976.35	1630366.94
11A09	4" 45 BEND	1744999.91	1630248.52
11A10	4" 45 BEND	1745019.77	1630228.66
11A11	4" 22.5 BEND	1745052.01	1630222.24
11A12	4" 11.25 BEND	1745090.00	1630229.80
11A13	4" 11.25 BEND	1745128.11	1630245.59
11A14	4" 22.5 BEND	1745169.32	1630273.12
11A15	4" 11.25 BEND	1745186.47	1630298.79
11A16	4" 11.25 BEND	1745235.03	1630416.02
11A17	4" 11.25 BEND	1745248.05	1630481.51
11A18	4" 11.25 BEND	1745248.05	1630523.05



KEYPLAN

SHEET KEYNOTES

1. INSTALL NEW 1" COMBINATION AIR RELEASE VALVE IN MANHOLE PER DETAIL 3, SHEET 02C303. ROUTE VENT PIPING TO SIDE OF THE ROAD. LOCATION TO BE DETERMINED IN THE FIELD WITH CONTRACTING OFFICER.
2. INSTALL 1" DIAMETER SERVICE LINE PER DETAIL 4, SHEET 02C301. RESTORE GRAVEL PATH PER EXISTING CONDITIONS.
3. INSTALL YARD HYDRANT PER DETAIL 1, SHEET 02C301. PROTECT EXIST STONE BENCH IN PLACE.
4. INSTALL NEW WATERLINE BELOW EXISTING SANITARY SEWER WITH 18" MINIMUM VERTICAL CLEARANCE BETWEEN BOTTOM OF SEWER AND TOP OF WATER. ENCASE WATERLINE IN CLSM FOR 10' ON EACH SIDE OF CROSSING. NO JOINT IN THE WATERLINE SHALL BE INSTALLED BELOW CROSSING OF SEWER. INSTALL OTHER UTILITIES FC, NG, EC) ABOVE SANITARY SEWER WITH 2' MINIMUM COVER.
5. RECONNECT EXISTING YARD HYDRANT. SEE DETAIL 2, SHEET 02C301.
6. INSTALL 1" DIAMETER SERVICE LINE. REMOVE EXISTING WATER METER AND INSTALL NEW WATER METER PER DETAIL 4, SHEET 02C301. RECONNECT TO EXISTING SERVICE.
7. CONNECT 'CYLP' TO 'CYLP' WITH 4" 4" TEE. INSTALL 3) 4" GV AT TEE WITH VALVE BOXES PER DETAIL 1, SHEET 02C303.
8. INSTALL WATERLINE BELOW EXISTING CMP WITH 18" MINIMUM VERTICAL CLEARANCE. ENCASE WATERLINE IN CLSM FOR 5' ON EACH SIDE OF CROSSING. NO JOINT IN THE WATERLINE SHALL BE INSTALLED BELOW CMP



HORIZONTAL: 40 0 40 80 — SCALE OF FEET — 1" = 40'

VERTICAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

FULL SIZE DRAWINGS = 22"x34" BAR MEASURES 1" LONG 0" 1"

MICAH E. JOHNSON NEW MEXICO 25223 PROFESSIONAL ENGINEER
Digitally signed by Micah E. Johnson
Date: 2025.04.08 15:52:38-06'00'

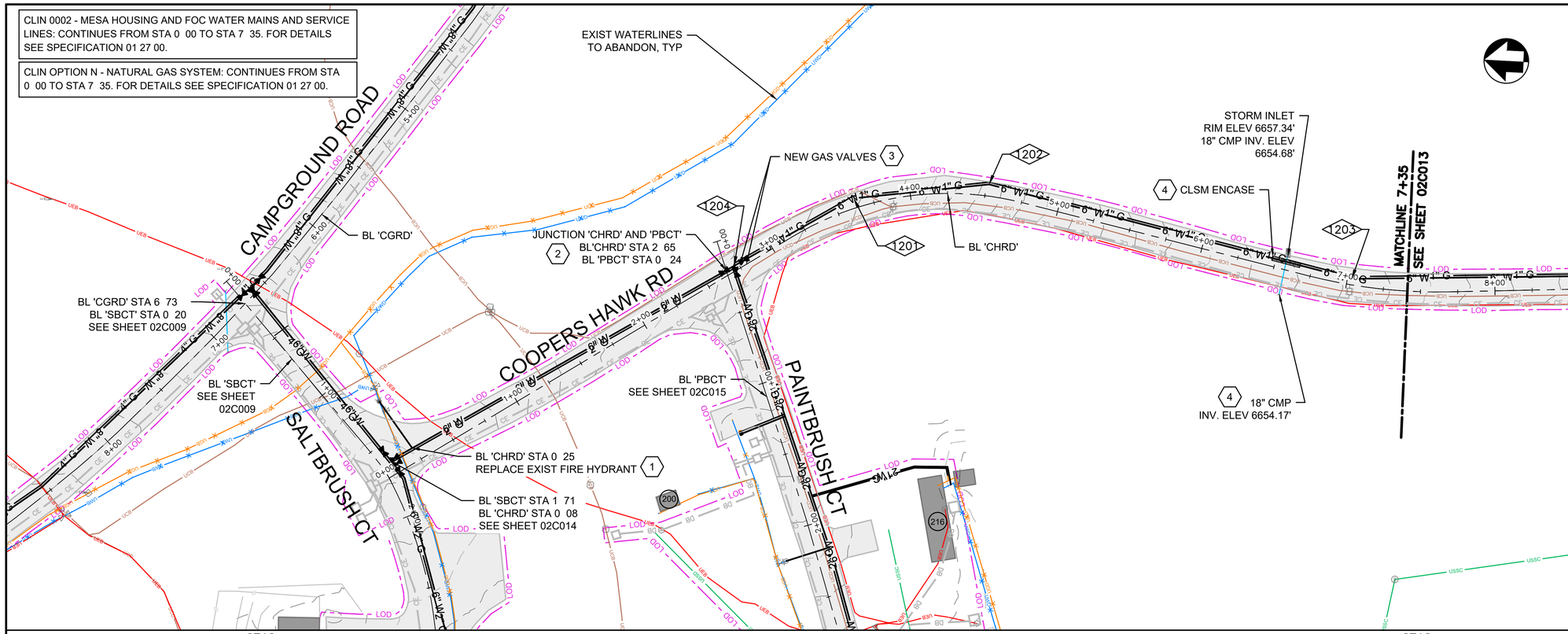
DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
M.COUTURE	02C011A	CIVIL BL 'COYOTE LOOP' STA 6+50 TO 18+26 PLAN AND PROFILE BANDELIER NATIONAL MONUMENT	315 182751
CADD: J. FIGUEROA			PMIS/PKG NO. 266697
TECH. REVIEW: D. HUANG			SHEET 34 OF 203
DATE: 04/11/2025			

XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND PROFILES-Master
XC-BAND_BAND
XC-ROADWAY
XC-UTILITY SITE
XC-EXISTING_Pavement and E. st.s. Master
XC-EXISTING_Pavement and LOD Hatch

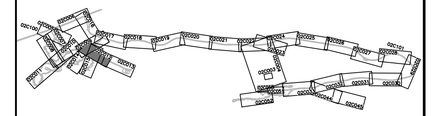
3/30/2025 12:01 PM FIGUEROAJ R24 02C011A_D3167658_CYLP PNP.DWG XC-BAND_Pavement and LOD Hatch

CLIN 0002 - MESA HOUSING AND FOC WATER MAINS AND SERVICE LINES: CONTINUES FROM STA 0 00 TO STA 7 35. FOR DETAILS SEE SPECIFICATION 01 27 00.

CLIN OPTION N - NATURAL GAS SYSTEM: CONTINUES FROM STA 0 00 TO STA 7 35. FOR DETAILS SEE SPECIFICATION 01 27 00.

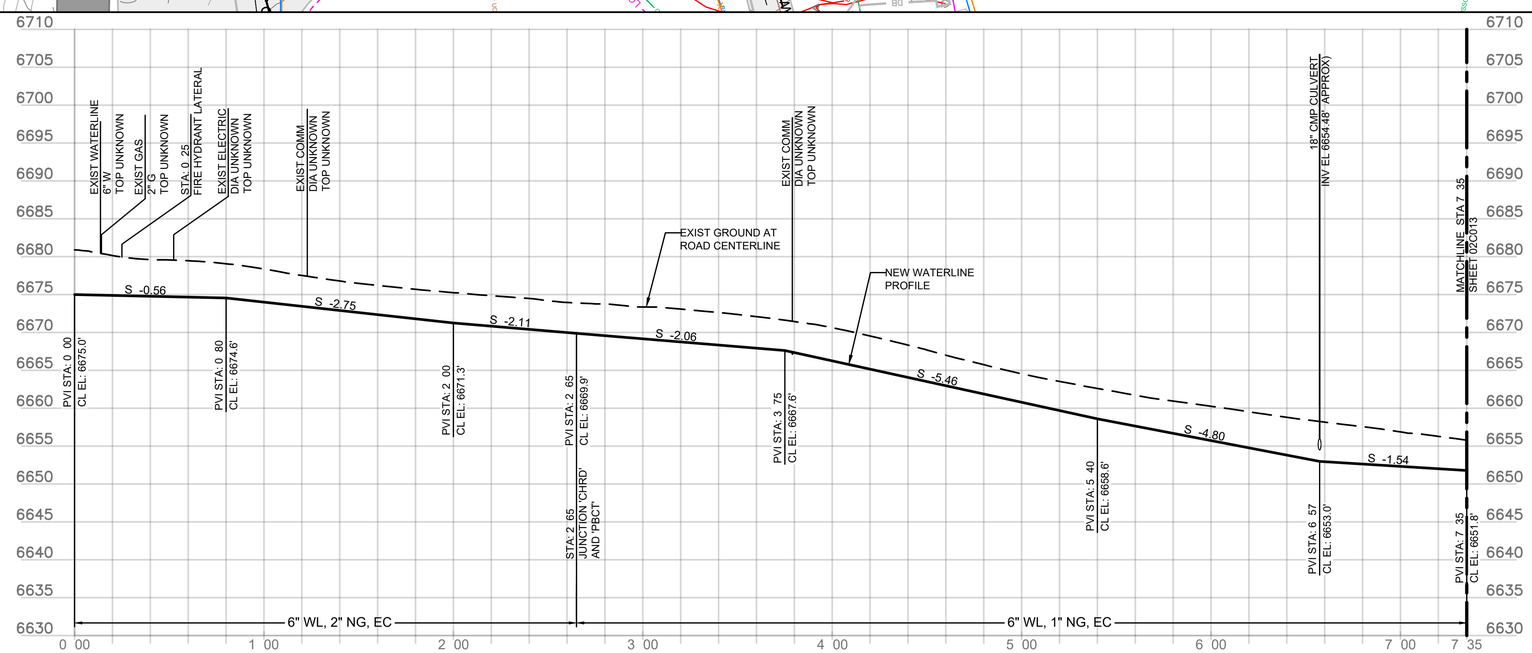


KEYPLAN



SHEET KEYNOTES

1. REMOVE EXIST FIRE HYDRANT AND INSTALL NEW FIRE HYDRANT PER DETAIL 3, SHEET 02C301.
2. CONNECT 'CHRD' TO 'PBCT' WITH 6" 6" TEE. INSTALL 3) 6" GV WITH VALVE BOXES PER DETAIL1, SHEET 02C303.
3. INSTALL 2" 2" TEE WITH 2" GAS VALVE PER DETAIL 2, SHEET 02C501. INSTALL 2" 1" REDUCER AT TEE WITH 1" BALL VALVE PER DETAIL 2, SHEET 02C501.
4. INSTALL WATERLINE BELOW EXISTING CMP CULVERT WITH 18" MINIMUM VERTICAL CLEARANCE. NO JOINT IN THE WATERLINE SHALL BE INSTALLED BELOW CMP.



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
1201	6" 22.5 BEND	1743979.75	1632259.12
1202	6" 22.5 BEND	1743889.86	1632275.45
1203	6" 11.2.5 BEND	1743642.13	1632231.15
1204	6" 6" TEE WITH 3) 6" GV	1744056.24	1632207.73

HORIZONTAL: 40 0 40 80 — SCALE OF FEET — 1" = 40'

VERTICAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 15:53:37-06'00'
PROFESSIONAL ENGINEER

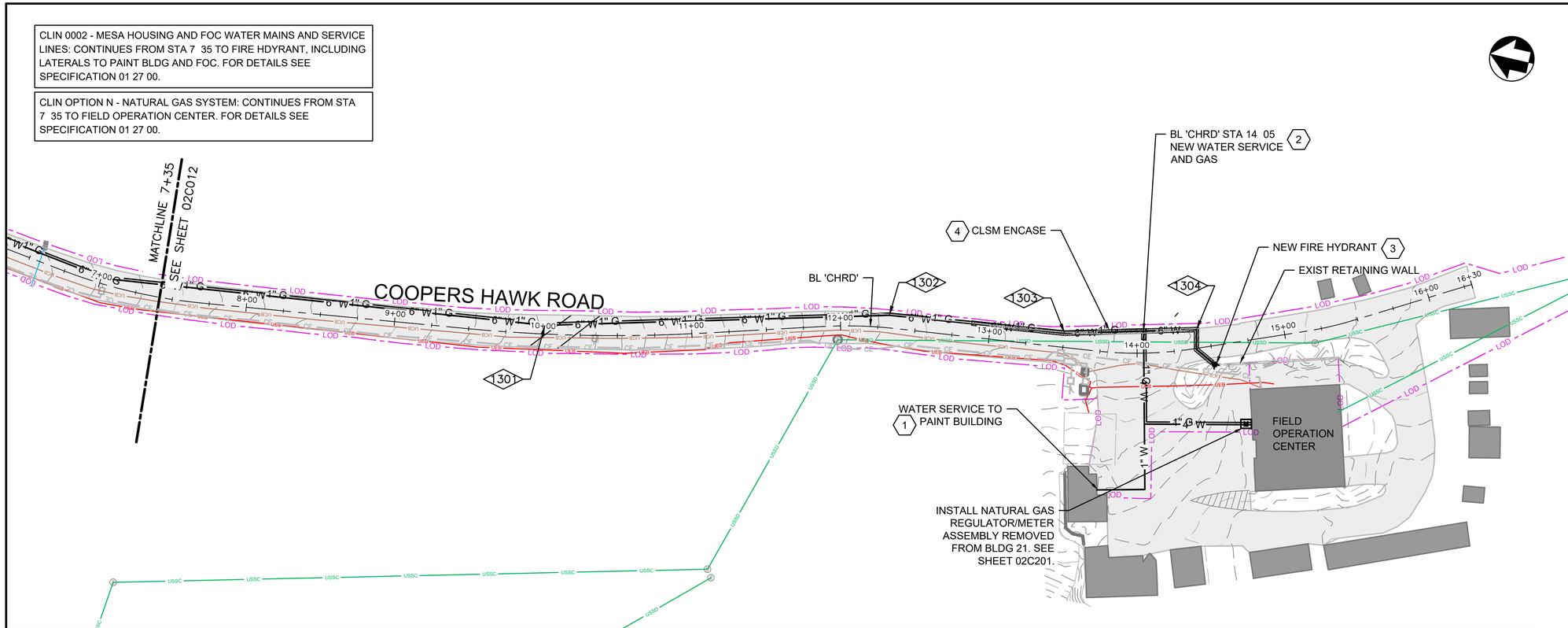
DESIGNED: M.COUTURE	SUB SHEET NO. 02C012	TITLE OF SHEET CIVIL BL 'COOPERS HAWK ROAD' STA 0+00 TO 7+35 PLAN AND PROFILE BANDELIER NATIONAL MONUMENT	DRAWING NO. 315 182751
CADD J. FIGUEROA			PMIS/PKG NO. 266697
TECH. REVIEW: D. HUANG			SHEET 35 OF 203
DATE: 04/11/2025			

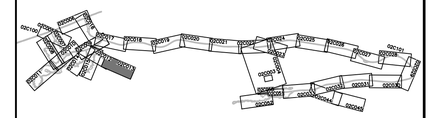
XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND_PROFILES-Master
XC-BAND_BAND
XC-UTILITY SITE
XC-ROADWAY
XC-EXISTING Pvmt and E. st.n. Master
XC-BAND_Pavement and LOD Hatch

3/31/2025 1:31 PM FIGUEROAJ R24 02C012_D3167658_CHRD PNP.DWG

CLIN 0002 - MESA HOUSING AND FOC WATER MAINS AND SERVICE LINES: CONTINUES FROM STA 7 35 TO FIRE HDYRANT, INCLUDING LATERALS TO PAINT BLDG AND FOC. FOR DETAILS SEE SPECIFICATION 01 27 00.

CLIN OPTION N - NATURAL GAS SYSTEM: CONTINUES FROM STA 7 35 TO FIELD OPERATION CENTER. FOR DETAILS SEE SPECIFICATION 01 27 00.

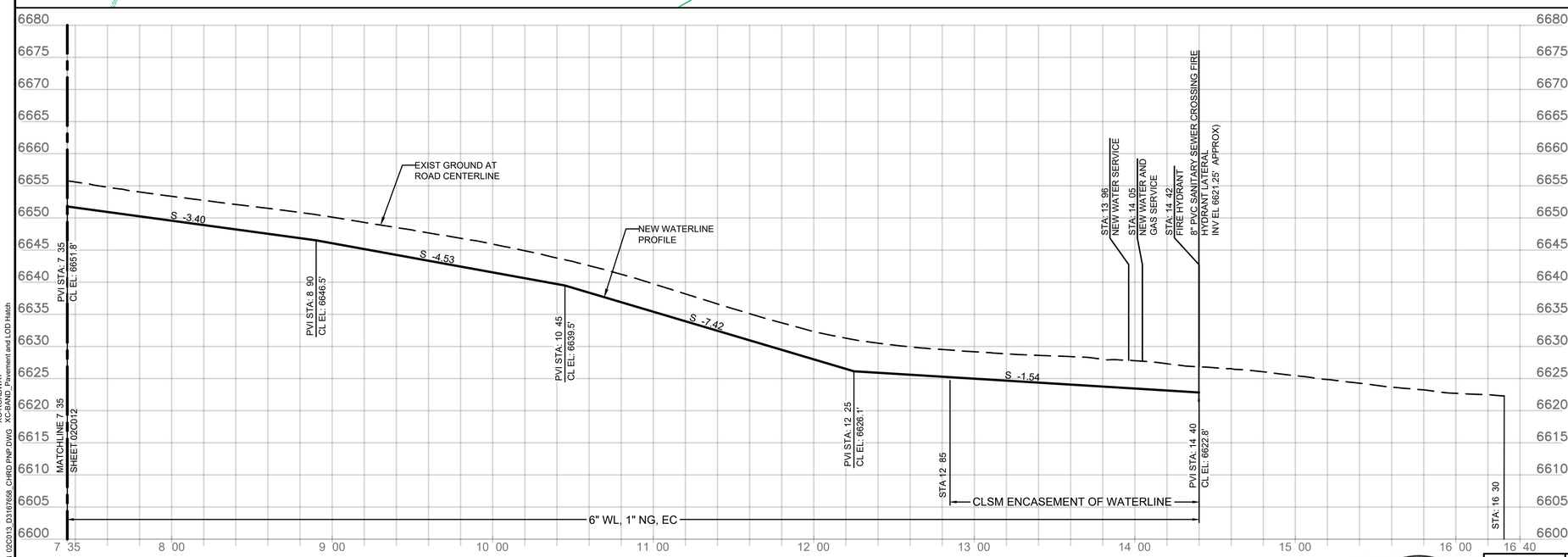




KEYPLAN

SHEET KEYNOTES

1. INSTALL 1" WATER SERVICE WITH TAPPING SADDLE, AND CURB STOP WITH BOX. INSTALL CURB STOP IN CLOSED POSITION. CAP WATER SERVICE END FOR FUTURE CONNECTION.
2. INSTALL 4" WATER SERVICE WITH NEW WATER METER, SEE DETAIL 6, SHEET 02C301. EXTEND 1" GAS LINE TO FOC BUILDING ALONG WATER SERVICE. INSTALL NEW PRESSURE REGULATOR/METER ASSEMBLY AT BUILDING, PER DETAIL 1, SHEET 02C501. ENCASE WATER SERVICE IN CLSM PER DETAIL 2, SHEET 02C300 FOR 10-FT EACH SIDE OF SEWER CROSSING.
3. INSTALL NEW FIRE HYDRANT PER DETAIL 3, SHEET 02C301. INSTALL FIRE HYDRANT LATERAL ABOVE EXISTING SEWER. ENCASE WATERLINE AT CROSSING IN CLSM PER DETAIL 5, SHEET 02C300.
4. NEW WATER PARALLEL TO EXISTING SANITARY SEWER. WHERE 10-FT HORIZONTAL CLEARANCE FROM EDGE OF PIPE TO EDGE OF PIPE CANNOT BE MAINTAINED DUE TO OTHER UTILITIES, ENCASE WATERLINE IN CLSM PER DETAIL 5, SHEET 02C300.



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
1301	6" 11.25 BEND	1743346.74	1632257.58
1302	6" 11.25 BEND	1743121.13	1632308.95
1303	6" 11.25 BEND	1743003.43	1632319.95
1304	6" 90 BEND	1742916.97	1632339.47

HORIZONTAL: 40 0 40 80 — 1" = 40'
SCALE OF FEET

VERTICAL: 10 0 10 20 — 1" = 10'
SCALE OF FEET

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 16:54:21-06'00'
PROFESSIONAL ENGINEER

DESIGNED:	M. COUTURE
CADD	J. FIGUEROA
TECH. REVIEW:	D. HUANG
DATE:	04/11/2025

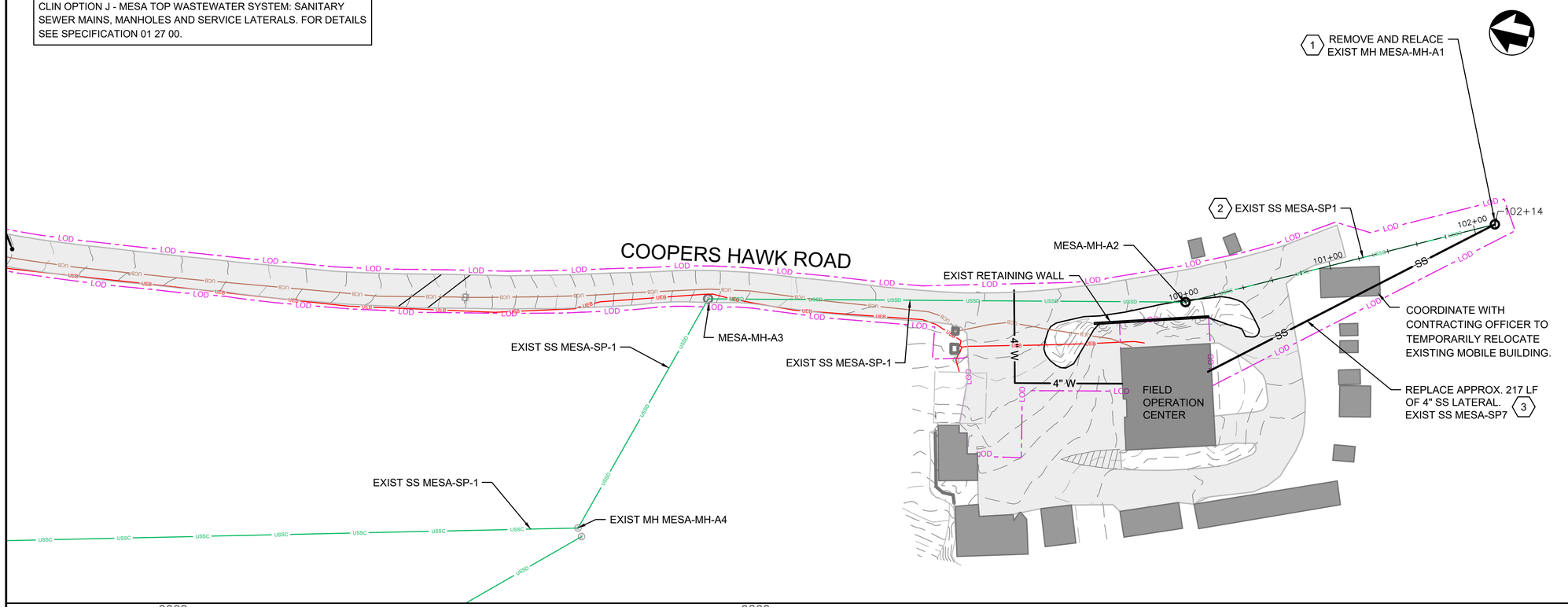
SUB SHEET NO. 02C013

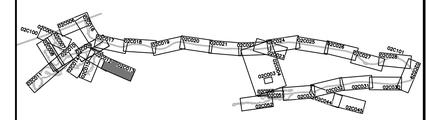
TITLE OF SHEET
CIVIL
BL 'COOPERS HAWK ROAD'
STA 7+35 TO 16+30
PLAN AND PROFILE
BANDELIER NATIONAL MONUMENT

DRAWING NO. 315 / 182751
PMIS/PKG NO. 266697
SHEET 36 OF 203

3/30/2025 12:27 PM FIGUEROAJ R24 02C013 D3167658 CHRD PNP.DWG XG-Border BAND XC-LAYOUT-SHEETS XC-BAND PROFILES XC-BAND PROFILES-Master XC-BAND BAND XE-E xcel ca Pro osed and E st n Master XC-UTILITY SITE XC-CONDITIONS XC-BAND Pavement and LOD Hatch

CLIN OPTION J - MESA TOP WASTEWATER SYSTEM: SANITARY SEWER MAINS, MANHOLES AND SERVICE LATERALS. FOR DETAILS SEE SPECIFICATION 01 27 00.

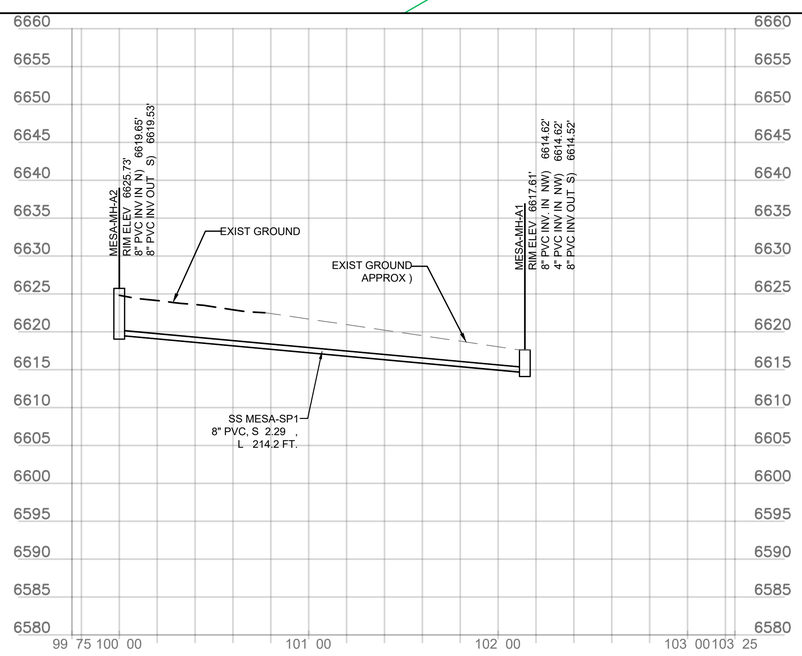




KEYPLAN

SHEET KEYNOTES

1. REMOVE AND REPLACE SANITARY SEWER MANHOLE PER DETAILS 2, 3 AND 6, SHEET 02C304. FIELD VERIFY EXISTING INVERT, DIAMETER, MATERIAL OF EXISTING CONNECTIONS PRIOR TO SUBMITTAL REVIEW AND ORDERING MATERIAL.
2. REMOVE AND REPLACE EXISTING SANITARY SEWER WITH ELEVATION, SLOPE AND ALIGNMENT AS SHOWN IN PROFILE.
3. CONNECTION TO BLDG AND CLEANOUT TO BE FIELD LOCATED. REMOVE EXISTING CLEANOUT AND INSTALL NEW CLEANOUT PER DETAIL 5, SHEET 02C304. REPLACE LATERAL UP TO 5 FEET FROM BLDG OR TO CLEANOUT, WHICHEVER IS CLOSEST TO BLDG. CONSTRUCT NEW SANITARY SEWER WITH SAME ELEVATION, SLOPE AND ALIGNMENT AS EXISTING.



HORIZONTAL: 40 0 40 80 — SCALE OF FEET — 1" = 40'

VERTICAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

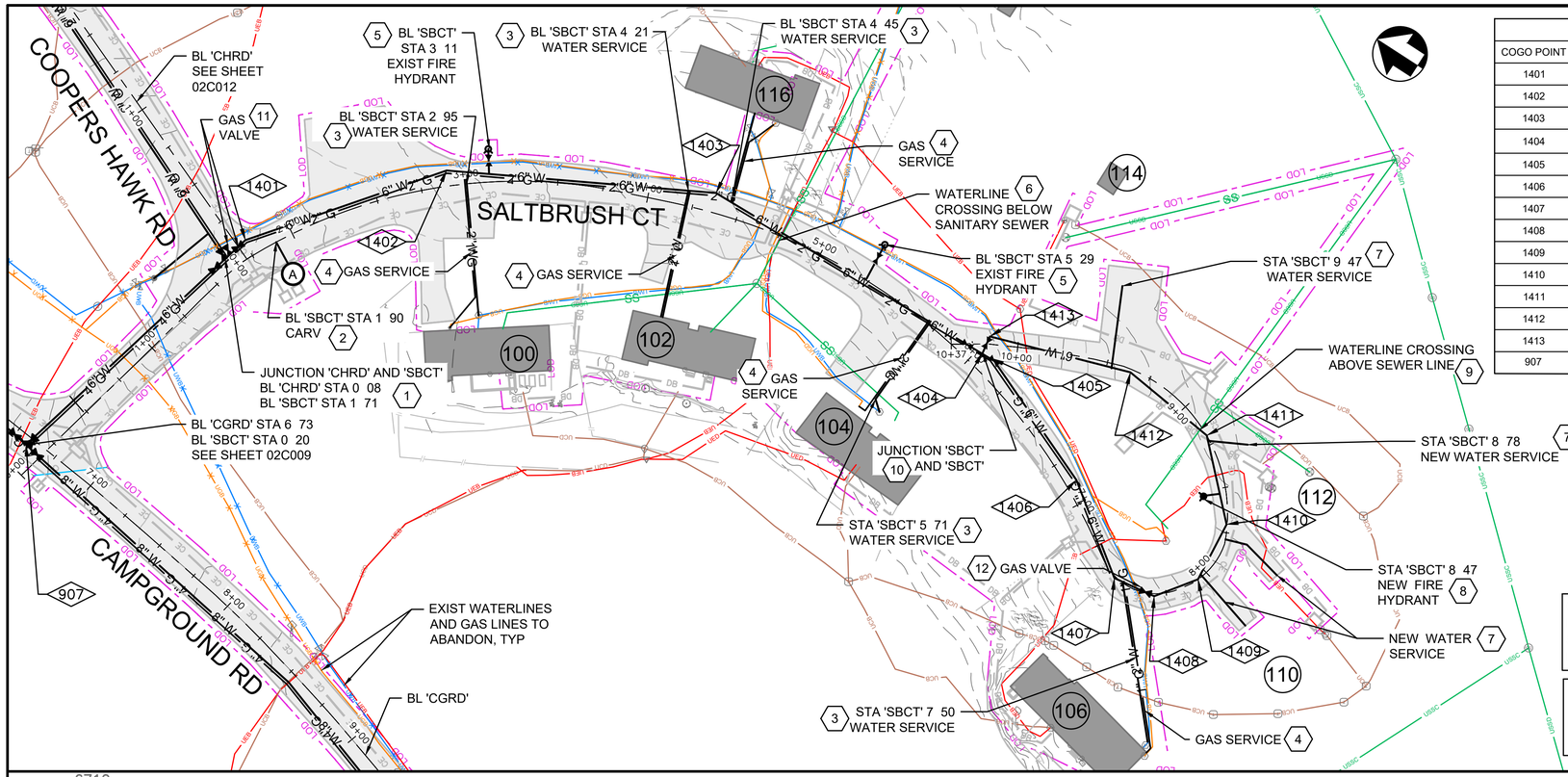
FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

MICAH E. JOHNSON NEW MEXICO 25223 PROFESSIONAL ENGINEER
Digitally signed by Micah E. Johnson Date: 2025.04.08 16:55:05-06'00'

DESIGNED: M. COUTURE	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
CADD J. FIGUEROA	02C013A	CIVIL	315
TECH. REVIEW: D. HUANG		BL 'COOPERS HAWK ROAD' SANITARY SEWER PLAN AND PROFILE	182751
DATE: 04/11/2025		BANDELIER NATIONAL MONUMENT	PMIS/PKG NO. 266697
			SHEET 37 OF 203

XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND_PROFILES
XC-BAND_STATS-Master
XC-ALIGN_BAND
XE-Existing Proposed and Master
XC-UTILITY_SITE
XC-POINT-NW
XC-BAND_Pavement and LOD Hatch

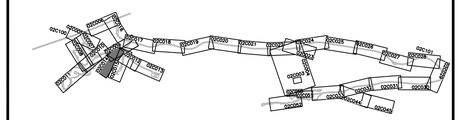
3/30/2025 3:20 PM FIGUEROAJ R24 02C013A_D3167658_CHRD_SS PNP.DWG



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
1401	6" 22.5 BEND	1744265.75	1632048.69
1402	6" 22.5 BEND	1744227.24	1631938.48
1403	6" 22.5 BEND	1744238.65	1631790.70
1404	6" 6" TEE, 3) GV	1744325.58	1631643.96
1405	6" 22.5 BEND	1744328.69	1631638.72
1406	6" 11.25 BEND	1744394.96	1631592.23
1407	6" 45 BEND	1744448.66	1631571.09
1408	6" 45 BEND	1744458.49	1631549.28
1409	6" 45 BEND	1744449.09	1631525.23
1410	6" 45 BEND	1744418.93	1631509.71
1411	6" 45 BEND	1744370.12	1631520.97
1412	6" 22.5 BEND	1744335.84	1631562.83
1413	6" 90 BEND	1744316.53	1631640.01
907	8" 8" 6" TEE, 2) 8" GV, 1) 6" GV	1744378.52	1632168.44

CLIN 0002 - MESA HOUSING AND FOC WATER MAINS AND SERVICE LINES: CONTINUES FROM STA 0 20 TO STA 10 37, INCLUDING LATERALS. FOR DETAILS SEE SPECIFICATION 01 27 00.

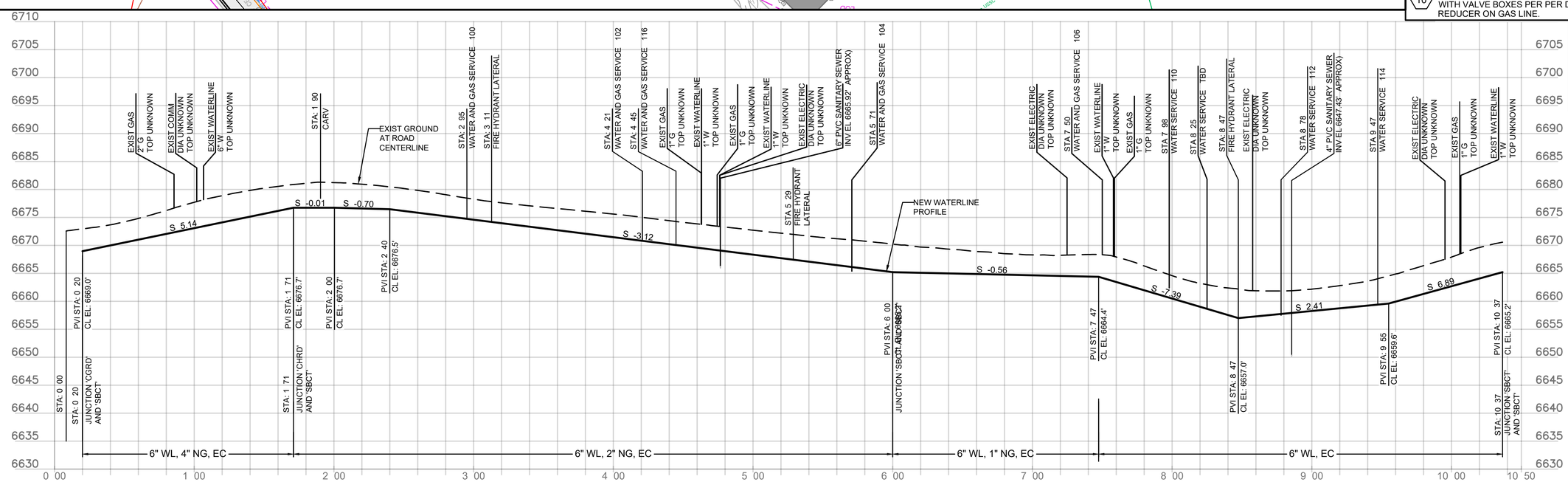
CLIN OPTION N - NATURAL GAS SYSTEM: CONTINUES FROM STA 0 20 TO STA 7 47, INCLUDING SERVICE LATERALS. FOR DETAILS SEE SPECIFICATION 01 27 00.



KEYPLAN

SHEET KEYNOTES

1. CONNECT 'CHRD' TO 'SBCT' WITH 6" 6" TEE. INSTALL 6" GATE VALVE WITH VALVE BOX PER PER DETAIL1, SHEET 02C303.
2. INSTALL NEW 1" COMBINATION AIR RELEASE VALVE IN MANHOLE PER DETAIL 3, SHEET 02C303. ROUTE VENT PIPING TO SIDE OF THE ROAD. LOCATION TO BE DETERMINED IN THE FIELD
3. REPLACE WATER SERVICE LINE PER DETAILS 6 AND 7, SHEET 02C301. RECONNECT TO EXISTING SERVICE.
4. INSTALL 1" GAS SERVICE. INSTALL NEW 1" BALL VALVE AT MAIN PER DETAIL 2, SHEET 02C501. INSTALL NEW ANODELESS RISER AND PLUG VALVE AT BUILDING. CONNECT TO EXISTING REGULATOR/METER ASSEMBLY.
5. REPLACE EXISTING FIRE HYDRANT PER DETAIL 3, SHEET 02C301.
6. NOT USED
7. INSTALL 2" WATER SERVICE WITH TAPPING SADDLE, CURB AND CORP STOP WITH BOXES PER DETAIL 6, SHEET 02C301. INSTALL CURB AND CORP STOP IN CLOSED POSITION. INSTALL MARKER POST AT END OF SERVICE LINE.
8. INSTALL NEW FIRE HYDRANT PER DETAIL 3, SHEET 02C301.
9. INSTALL NEW WATERLINE ABOVE SANITARY SEWER WITH 18" MINIMUM VERTICAL CLEARANCE BETWEEN BOTTOM OF WATERLINE AND TOP OF SEWER. WATERLINE CAN BE INSTALLED WITH 3-FT MINIMUM COVER AT THAT LOCATION TO ACHIEVE VERTICAL CLEARANCE WITH SEWER.
10. CONNECT 'SBCT' TO 'SBCT' WITH 6" 6" TEE. INSTALL 6" GATE VALVES WITH VALVE BOXES PER PER DETAIL1, SHEET 02C303. INSTALL 2" 1" REDUCER ON GAS LINE.
11. INSTALL 4" 2" TEE WITH 4" 2" REDUCER. INSTALL 2" GAS BALL VALVES PER DETAIL 2, SHEET 02C501.
12. INSTALL 1" GAS BALL VALVE PER DETAIL 2, SHEET 02C501 AND CAP LINE FOR FUTURE EXPANSION.



HORIZONTAL: 40 0 40 80 — SCALE OF FEET — 1" = 40'

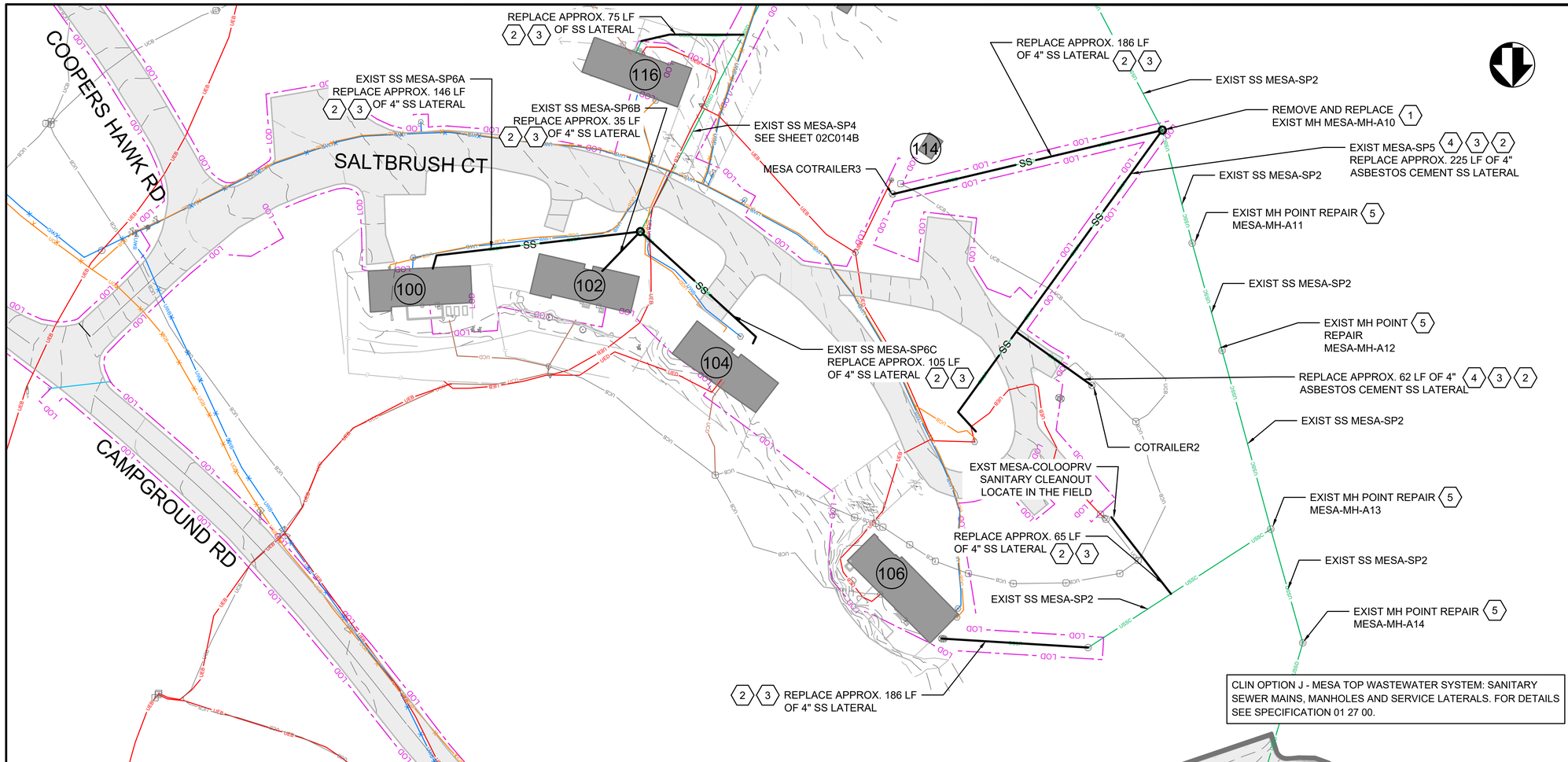
VERTICAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

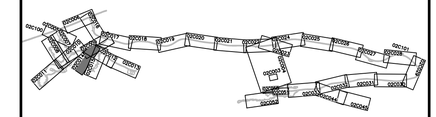
FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

MICAH E. JOHNSON NEW MEXICO 25223 PROFESSIONAL ENGINEER
Digitally signed by Micah E. Johnson Date: 2025.04.08 15:55:51-06'00'

DESIGNED: M. COUTURE	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO. 315 182751
CADD J. FIGUEROA	02C014	CIVIL BL 'SALTBRUSH COURT' STA 0+00 TO 10+37 PLAN AND PROFILE BANDELIER NATIONAL MONUMENT	PMIS/PKG NO. 266697
TECH. REVIEW: D. HUANG			SHEET 38 OF 203
DATE: 04/11/2025			

3/30/2025 1:44 PM FIGUEROAJ R24 02C014_D3167658_SBCT PNP.DWG XG-Border_BAND XC-LAYOUT-SHEETS XC-BAND PROFILES XC-BAND 2D-ALIGN-Master XC-ALIGN BAND XE-Existing Proposed and Existing Master XC-ROADWAY XC-UTILITY-SITE XC-BAND_Pavement and LOD Hatch





KEYPLAN

SHEET KEYNOTES

1. REMOVE AND REPLACE SANITARY SEWER MANHOLE PER DETAILS 2, 3 AND 6, SHEET 02C304. FIELD VERIFY EXISTING INVERT, DIAMETER, MATERIAL OF EXISTING CONNECTIONS PRIOR TO SUBMITTAL REVIEW AND ORDERING MATERIAL.
2. CONNECTION TO BLDG AND CLEANOUT TO BE FIELD LOCATED. REMOVE EXISTING CLEANOUT AND INSTALL NEW CLEANOUT PER DETAIL 5, SHEET 02C304. REPLACE LATERAL UP TO 5 FEET FROM BLDG OR TO CLEANOUT, WHICHEVER IS CLOSEST TO BLDG.
3. REMOVE AND REPLACE EXISTING SANITARY SEWER. INSTALL SANITARY SEWER WITH SAME ELEVATION, SLOPE AND ALIGNMENT AS EXISTING.
4. REMOVE AND REPLACE EXISTING ASBESTOS CEMENT SANITARY SEWER BY OPEN CUT. PIPE BURSTING IS NOT PERMITTED. INSTALL SANITARY SEWER WITH SAME ELEVATION, SLOPE AND ALIGNMENT.
5. MANHOLE POINT REPAIR. REPLACE CLAY SEWER PIPE UP TO 10 FEET DOWNSTREAM AND UPSTREAM, IF PRESENT, OF MANHOLE WITH PVC PIPE. CONNECT NEW PVC TO MANHOLE.

PROFILE NOT PROVIDED

40 0 40 80 1" = 40'
SCALE OF FEET

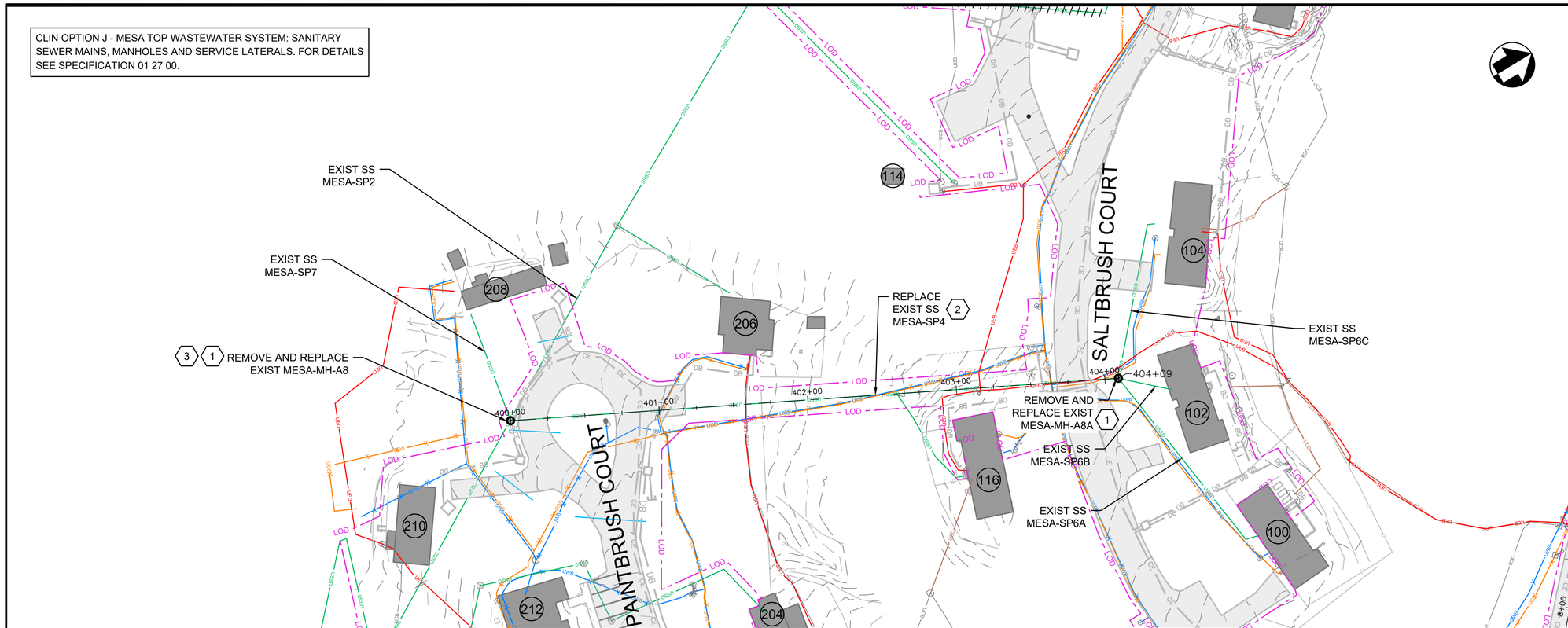
FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

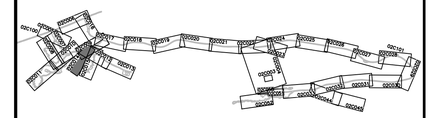
MICAH E. JOHNSON NEW MEXICO 25223 PROFESSIONAL ENGINEER
Digitally signed by Micah E. Johnson Date: 2025.04.08 15:56:43-06'00'

DESIGNED: M. COUTURE	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
CADD J. FIGUEROA	02C014A	CIVIL BL 'SALTBRUSH COURT' SANITARY SEWER PLAN BANDELIER NATIONAL MONUMENT	315 182751
TECH. REVIEW: D. HUANG			PMIS/PKG NO. 266697
DATE: 04/11/2025			SHEET 39 OF 203

4/8/2025 11:34 AM FIGUEROAJ R24 02C014A_D3167658_SBCT_SS PNP.DWG XG-Border BAND XG-LAYOUT-SHEETS XG-BAND PROFILES XC-BAND_2D-EG-Master XC-AERIAL-BAND XC-BAND-BAND XE-E xcr ea Pro osed and E st n Master XC-UTILITY SITE XC-ROADWAY XC-BAND_Pavement and LOD Hatch

CLIN OPTION J - MESA TOP WASTEWATER SYSTEM: SANITARY SEWER MAINS, MANHOLES AND SERVICE LATERALS. FOR DETAILS SEE SPECIFICATION 01 27 00.

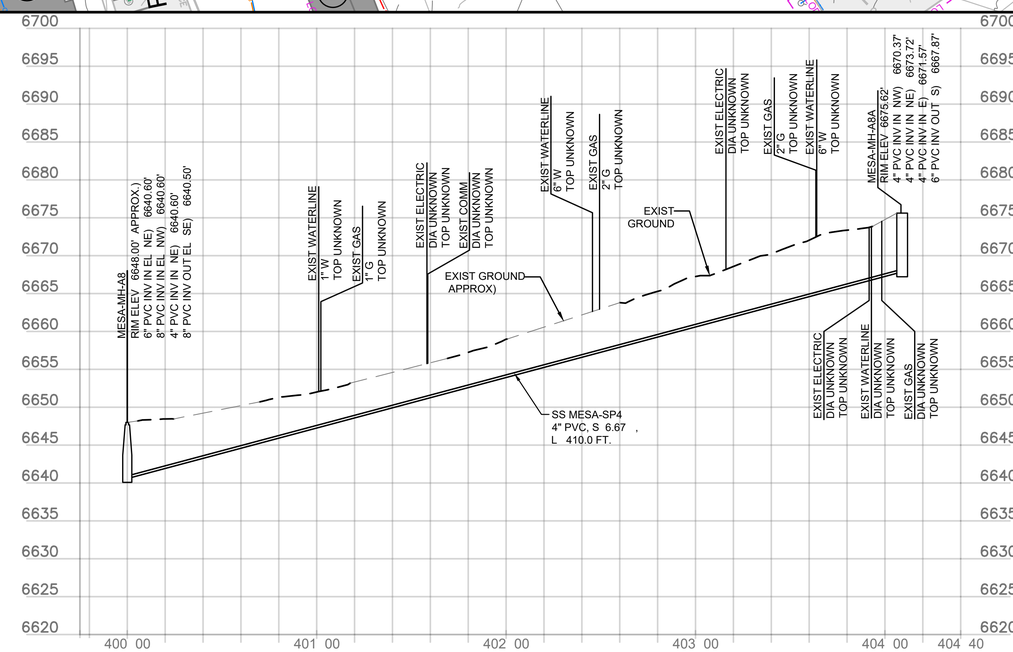




KEYPLAN

SHEET KEYNOTES

1. REMOVE AND REPLACE SANITARY SEWER MANHOLE PER DETAILS 2, 3, 4 DROP MANHOLE FOR MESA-MH-A8A) AND 6, SHEET 02C304. FIELD VERIFY EXISTING INVERT, DIAMETER, MATERIAL OF EXISTING CONNECTIONS PRIOR TO SUBMITTAL REVIEW AND ORDERING MATERIAL.
2. REMOVE AND REPLACE EXISTING SANITARY SEWER. INSTALL SANITARY SEWER WITH SAME ELEVATION, SLOPE AND ALIGNMENT AS EXISTING.
3. MESA-MH-A8 RIM AND INVERTS WERE NOT SURVEYED. FIELD VERIFY INVERTS SHOWN ON PROFILE. ADJUST AS NECESSARY TO PROVIDE POSITIVE SEWER FLOW THROUGH MANHOLE WITH 0.10 FT MIN. DROP WITHIN MANHOLE BASE BETWEEN INVERTS IN AND INVERT OUT.



HORIZONTAL: 40 0 40 80 — SCALE OF FEET — 1" = 40'

VERTICAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

FULL SIZE DRAWINGS = 22"x34" BAR MEASURES 1" LONG 0" 1"

MICAH E. JOHNSON NEW MEXICO 25223 PROFESSIONAL ENGINEER
Digitally signed by Micah E. Johnson
Date: 2025.04.08 15:57:26-06'00'

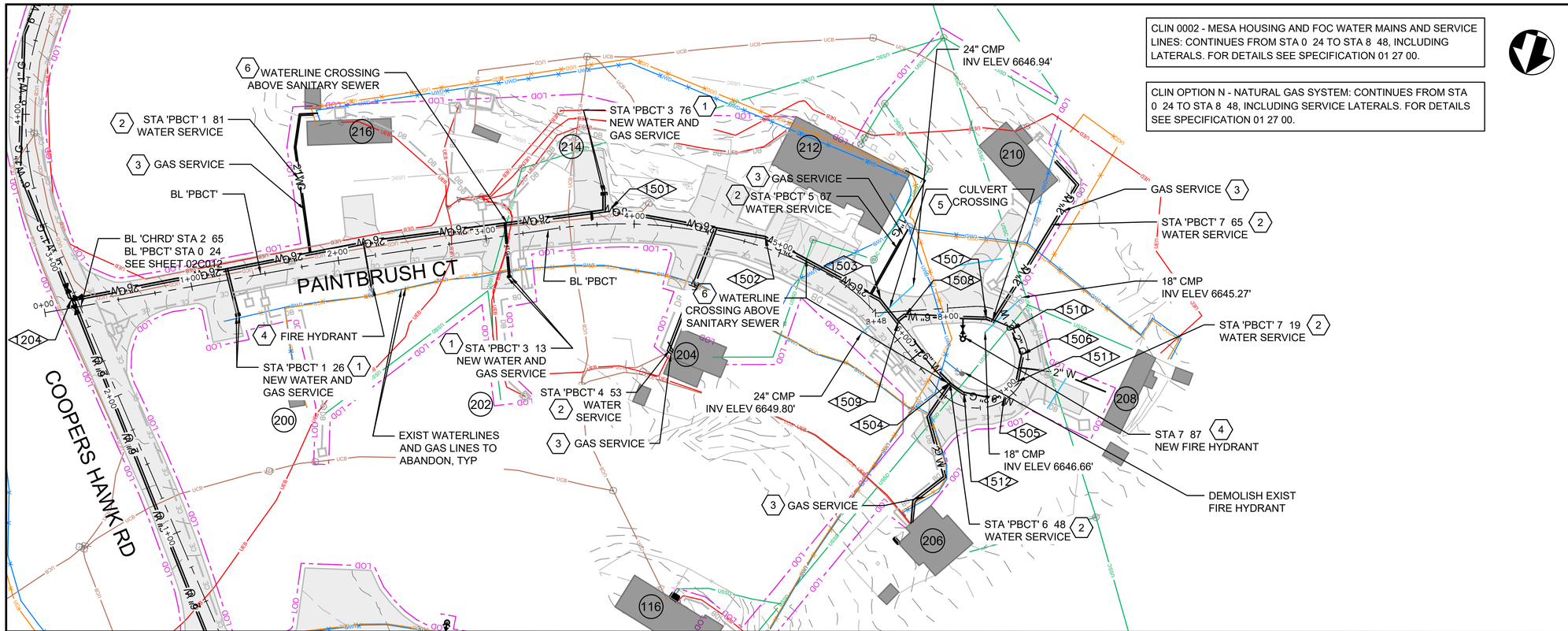
DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
M. COUTURE	02C014B	CIVIL BL 'SALTBRUSH COURT' SANITARY SEWER PLAN AND PROFILE BANDELIER NATIONAL MONUMENT	315 182751
CADD J. FIGUEROA			PMIS/PKG NO. 266697
TECH. REVIEW: D. HUANG			SHEET 40 OF 203
DATE: 04/11/2025			

XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND_PROFILES
XC-BAND_PROFILEMaster
XE-E ectr ca Pro osed and E st n Master
XC-UTILITY SITE
XC-ROADWAY
XC-BAND_Pavement and LOD Hatch

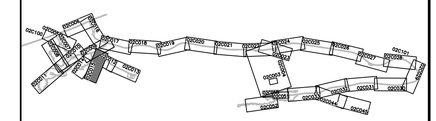
3/30/2025 3:25 PM FIGUEROAJ R24 02C014B_D3167658_SBCT_SS PNP.DWG

CLIN 0002 - MESA HOUSING AND FOC WATER MAINS AND SERVICE LINES: CONTINUES FROM STA 0 24 TO STA 8 48, INCLUDING LATERALS. FOR DETAILS SEE SPECIFICATION 01 27 00.

CLIN OPTION N - NATURAL GAS SYSTEM: CONTINUES FROM STA 0 24 TO STA 8 48, INCLUDING SERVICE LATERALS. FOR DETAILS SEE SPECIFICATION 01 27 00.

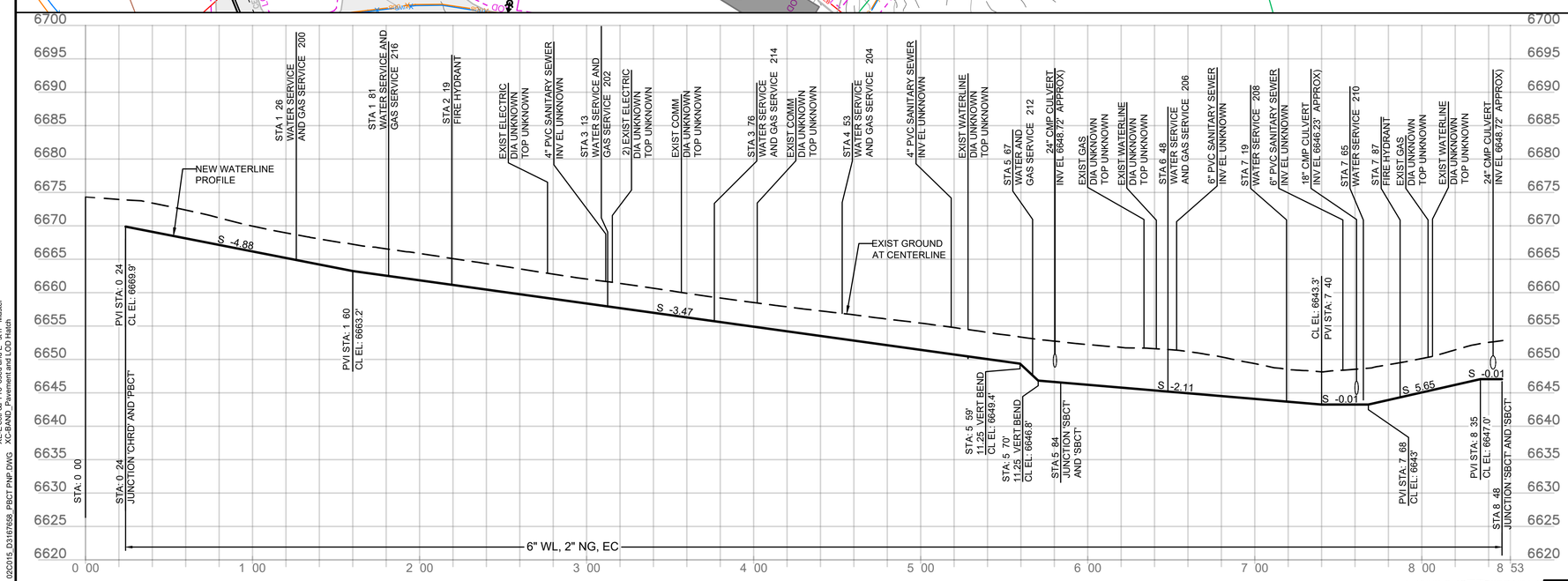


KEYPLAN



SHEET KEYNOTES

1. SERVICE FOR FUTURE RESIDENTIAL CONNECTION. INSTALL WATER SERVICE PER DETAIL 6, SHEET 02C301. INSTALL MARKER POST AT END OF SERVICE LINE. INSTALL 1" GAS SERVICE LINE AND CAP AT SAME LOCATION.
2. INSTALL WATER SERVICE LINE 4" FOR 212). PER DETAIL 6, SHEET 02C301.
3. INSTALL 1" GAS SERVICE. INSTALL NEW 1" BALL VALVE AT MAIN PER DETAIL 2, SHEET 02C501. INSTALL NEW ANODELESS RISER AND PLUG VALVE AT BUILDING. CONNECT TO EXISTING REGULATOR/METER ASSEMBLY.
4. REPLACE EXISTING FIRE HYDRANT PER DETAIL 3, SHEET 02C301.
5. INSTALL NEW WATERLINE BELOW CMP CULVERT WITH 18" MINIMUM VERTICAL CLEARANCE. NO JOINT IN THE WATERLINE SHALL BE INSTALLED BELOW CMP.
6. INSTALL NEW WATERLINE ABOVE SANITARY SEWER WITH 18" MINIMUM VERTICAL CLEARANCE BETWEEN BOTTOM OF WATERLINE AND TOP OF SEWER. WATERLINE CAN BE INSTALLED WITH 3-FT MINIMUM COVER AT THAT LOCATION TO ACHIEVE VERTICAL CLEARANCE WITH SEWER.



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
1501	6" 22.5 BEND	1743921.15	1631866.75
1502	6" 22.5 BEND	1743917.28	1631761.73
1503	6" 22.5 BEND	1743942.06	1631677.09
1504	6" 45 BEND	1743986.82	1631619.70
1505	6" 90 BEND	1743988.41	1631582.49
1506	6" 90 BEND	1743958.64	1631576.90
1507	6" 22.5 BEND	1743940.35	1631604.86
1508	6" 45 BEND	1743950.00	1631658.87
1509	6" 6" TEE	1743954.20	1631662.32
1510	6" 6" TEE	1743943.72	1631587.06
1511	6" 6" TEE	1743977.45	1631576.73
1512	6" 6" TEE	1743991.42	1631609.32
1204	6" 6" TEE	1744056.24	1632207.73

HORIZONTAL: 40 0 40 80 — SCALE OF FEET — 1" = 40'

VERTICAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

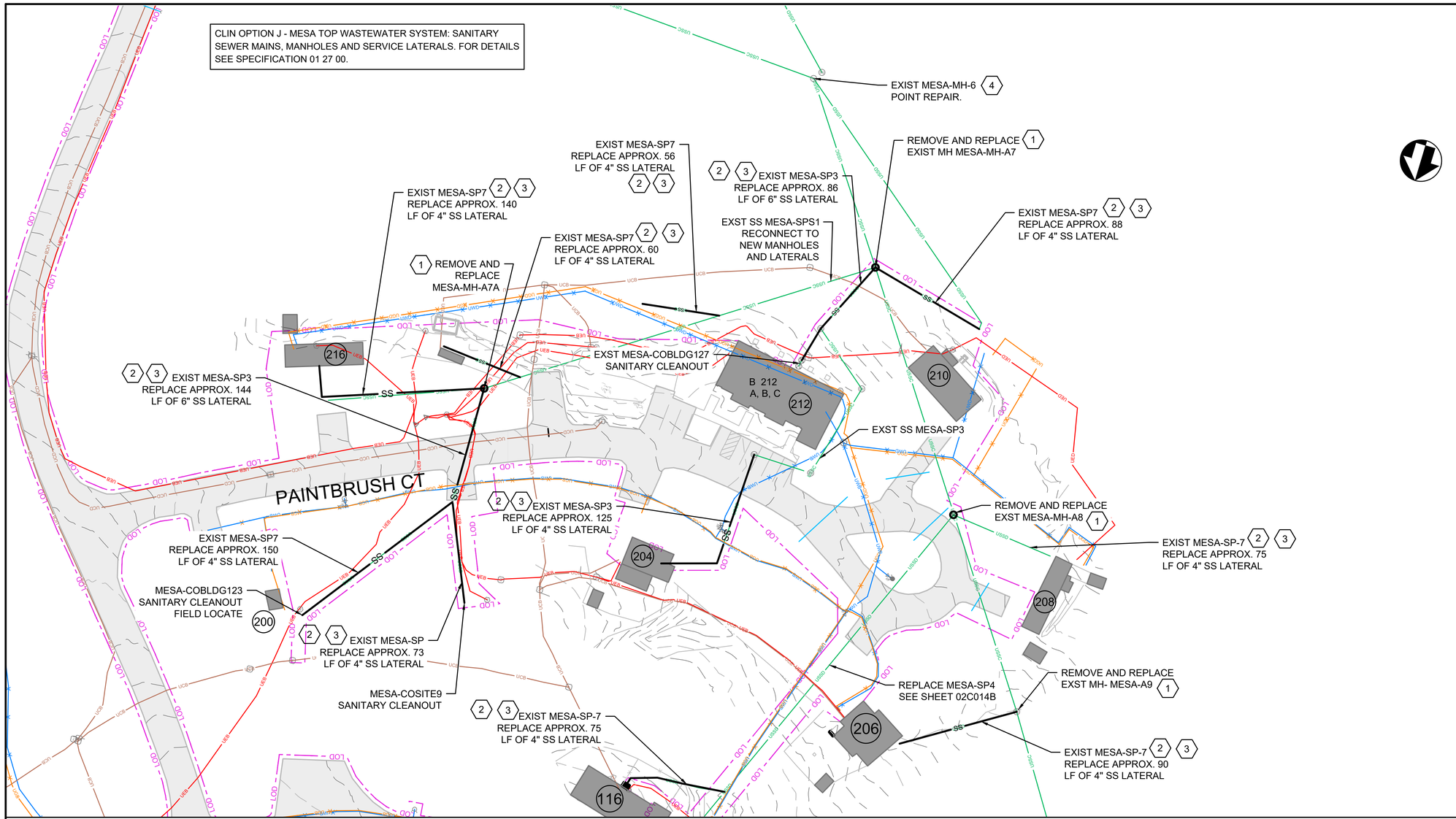
FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

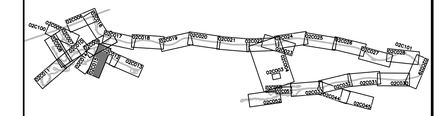
MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 15:58:13-06'00'
PROFESSIONAL ENGINEER

DESIGNED: M.COUTURE	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
CADD J. FIGUEROA	02C015	CIVIL BL 'PAINTBRUSH COURT' STA 0+00 TO 8+48 PLAN AND PROFILE BANDELIER NATIONAL MONUMENT	315 182751
TECH. REVIEW: D. HUANG			PMIS/PKG NO. 266697
DATE: 04/11/2025			SHEET 41 OF 203

3/30/2025 1:58 PM FIGUEROAJ R24 02C015_D3167658_PBCT PNP.DWG XG-Border_BAND XC-LAYOUT-SHEETS XC-BAND PROFILES XC-BAND 2D-TIES-Master XC-ALIGN_BAND XC-ROADWAY XC-UTILITY SITE XC-Earth_Proposed and E xt n Master XC-BAND_Pavement and LOD Hatch

CLIN OPTION J - MESA TOP WASTEWATER SYSTEM: SANITARY SEWER MAINS, MANHOLES AND SERVICE LATERALS. FOR DETAILS SEE SPECIFICATION 01 27 00.





KEYPLAN

SHEET KEYNOTES

1. REMOVE AND REPLACE SANITARY SEWER MANHOLE PER DETAILS 2, 3 AND 6, SHEET 02C304. FIELD VERIFY EXISTING INVERT, DIAMETER, MATERIAL OF EXISTING CONNECTIONS PRIOR TO SUBMITTAL REVIEW AND ORDERING MATERIAL.
2. CONNECTION TO BLDG AND CLEANOUT TO BE FIELD LOCATED. REMOVE EXISTING CLEANOUT AND INSTALL NEW CLEANOUT PER DETAIL 5, SHEET 02C304. REPLACE LATERAL UP TO 5 FEET FROM BLDG OR TO CLEANOUT, WHICHEVER IS CLOSEST TO BLDG.
3. REMOVE AND REPLACE EXISTING SANITARY SEWER. INSTALL SANITARY SEWER WITH SAME ELEVATION, SLOPE AND ALIGNMENT AS EXISTING.
4. MANHOLE POINT REPAIR. CLEAN, RE-WORK MANHOLE INVERTS TO ELIMINATE PONDING.

PROFILE NOT PROVIDED

HORIZONTAL: 40 0 40 80 1" = 40'
SCALE OF FEET

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

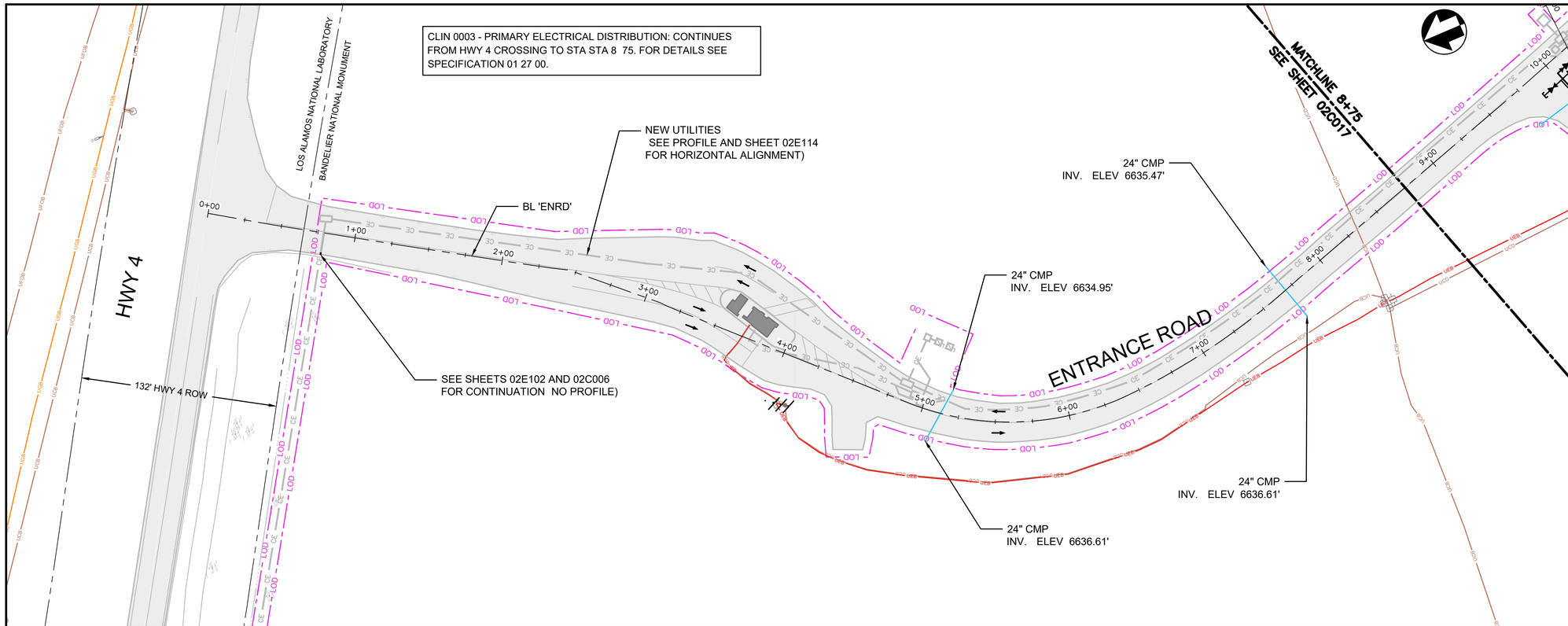
MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 15:59:45-06'00'
PROFESSIONAL ENGINEER

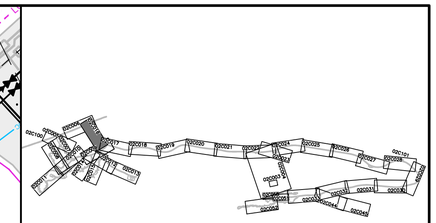
DESIGNED: M. COUTURE	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
CADD J. FIGUEROA	02C015A	CIVIL BL 'PAINTBRUSH COURT' SANITARY SEWER PLAN BANDELIER NATIONAL MONUMENT	315 182751
TECH. REVIEW: D. HUANG			PMIS/PKG NO. 266697
DATE: 04/11/2025			SHEET 42 OF 203

XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND_PROFILES
XC-BAND_PROFILES_Clubster
XC-ALIGN BAND
XC-UTILITY_SITE
XC-CONTROL_V
XC-BAND_Pavement and LOD Hatch

3/30/2025 2:02 PM FIGUEROAJ R24 02C015A_D3167658_PBCT PNP.DWG

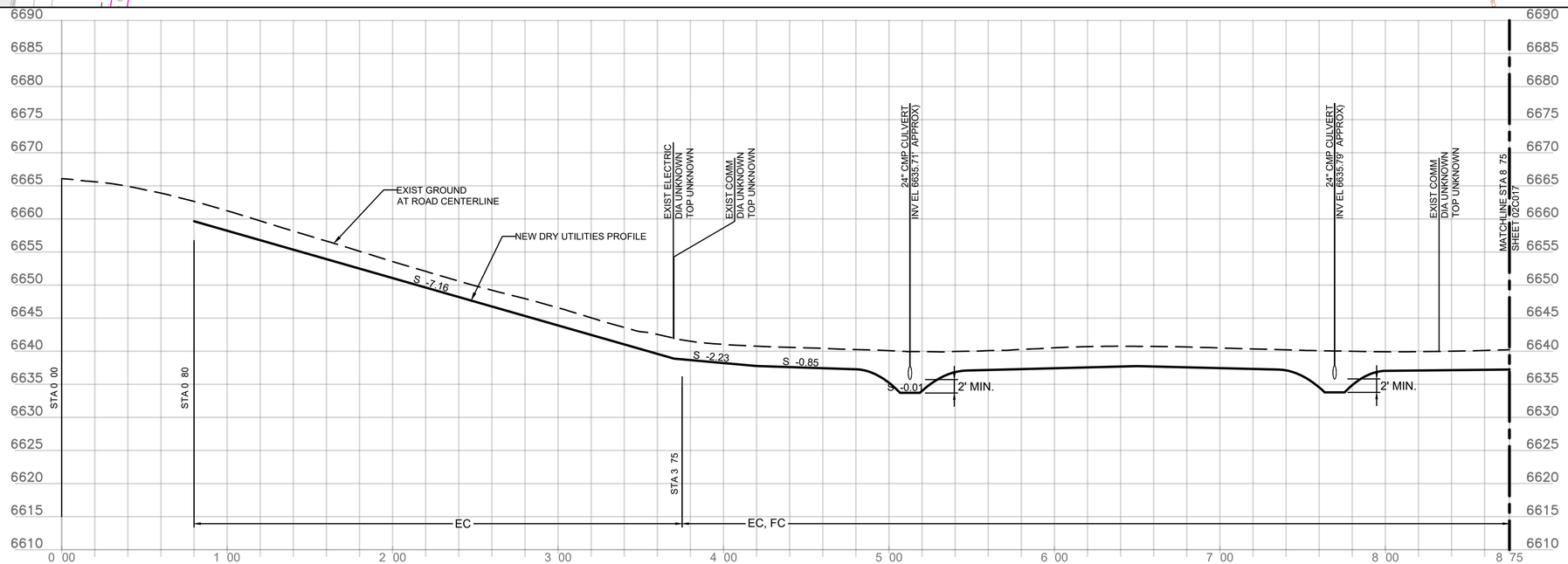
CLIN 0003 - PRIMARY ELECTRICAL DISTRIBUTION: CONTINUES FROM HWY 4 CROSSING TO STA STA 8 75. FOR DETAILS SEE SPECIFICATION 01 27 00.





KEYPLAN

SHEET KEYNOTES



HORIZONTAL: 40 0 40 80 — 1" = 40'
SCALE OF FEET

VERTICAL: 10 0 10 20 — 1" = 10'
SCALE OF FEET

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 15:00:35-06'00'
PROFESSIONAL ENGINEER

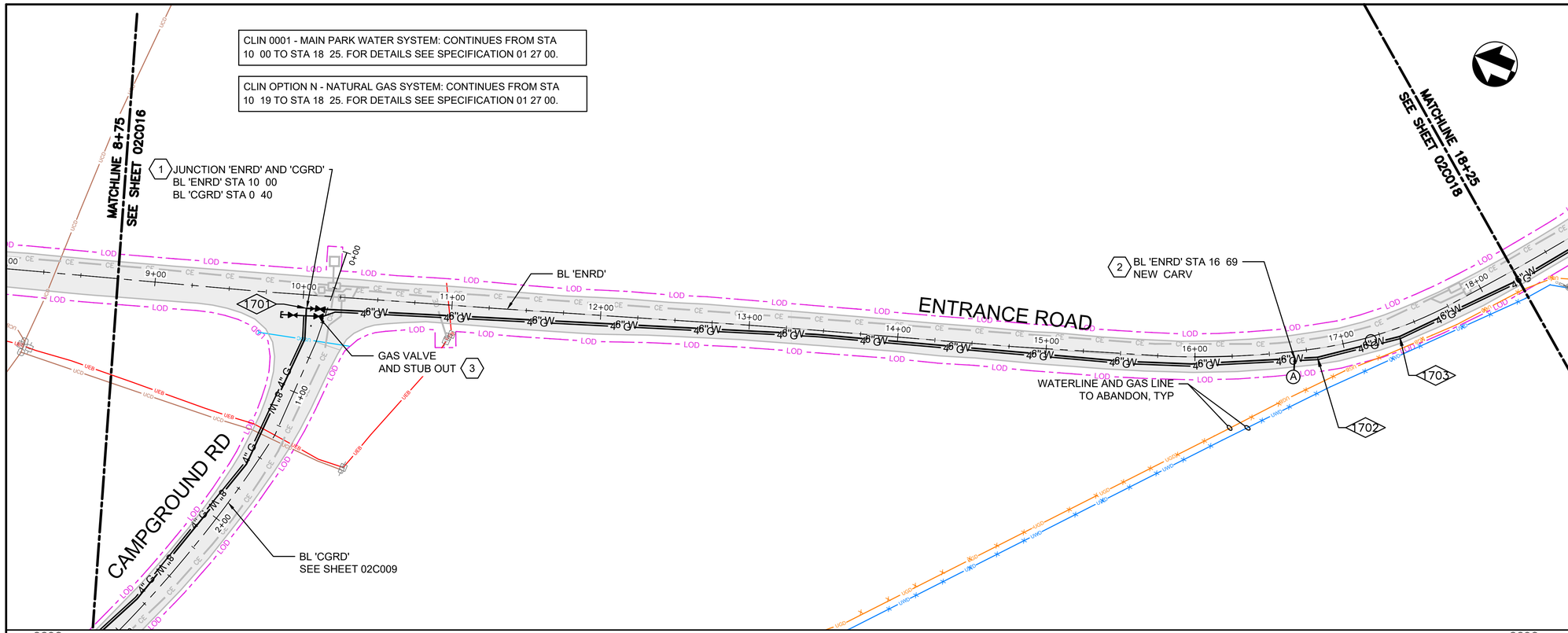
DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
M. COUTURE	02C016	CIVIL BL 'ENTRANCE ROAD' STA 0+00 TO 8+75 PLAN AND PROFILE BANDELIER NATIONAL MONUMENT	315 182751
CADD: J. FIGUEROA			PMIS/PKG NO. 266697
TECH. REVIEW: D. HUANG			SHEET
DATE: 04/11/2025			43 OF 203

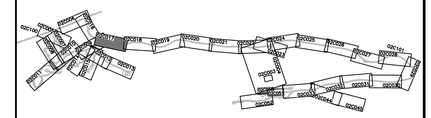
XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND_02E-Master
XC-ALIGN_BAND
XC-UTILITY SITE
XC-ROADWAY
XE-Ecorr_Proposed and E_st n_Master
XC-BAND_Pavement and LOD Hatch

3/30/2025 2:14 PM FIGUEROAJ R24 02C016_D3167658_ENRD PNP.DWG

CLIN 0001 - MAIN PARK WATER SYSTEM: CONTINUES FROM STA 10 00 TO STA 18 25. FOR DETAILS SEE SPECIFICATION 01 27 00.

CLIN OPTION N - NATURAL GAS SYSTEM: CONTINUES FROM STA 10 19 TO STA 18 25. FOR DETAILS SEE SPECIFICATION 01 27 00.

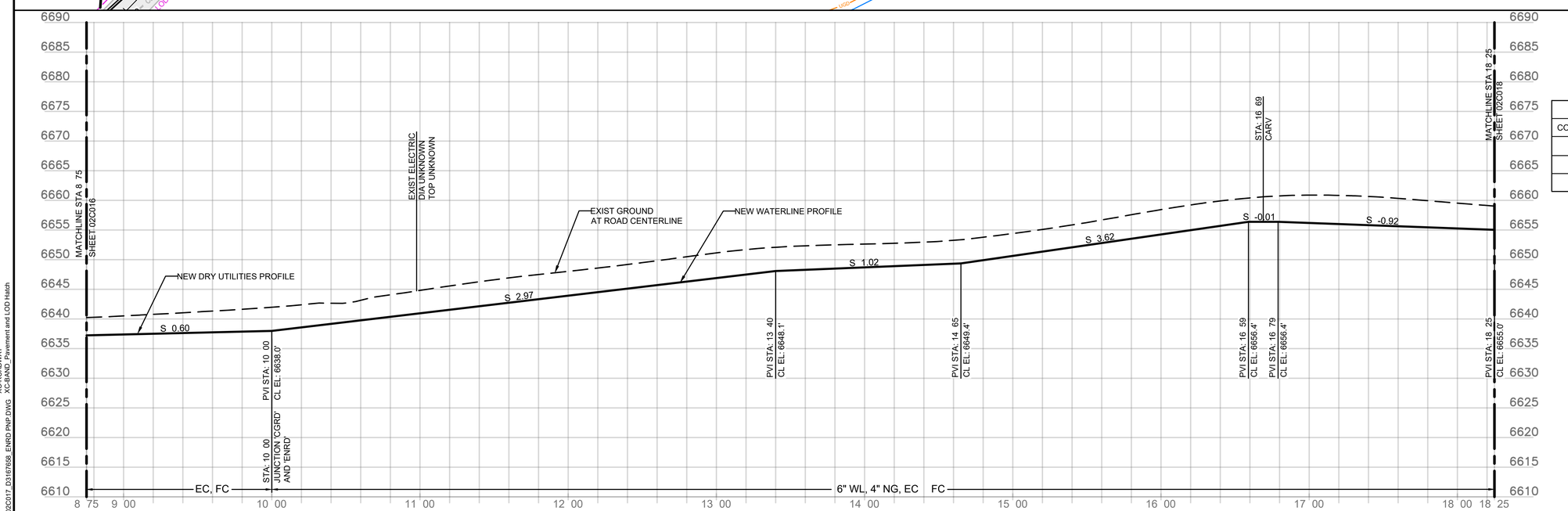




KEYPLAN

SHEET KEYNOTES

1. CONNECT 'CGRD' AND 'ENRD' WITH 8" 90 BEND WITH 8"X6" REDUCER. INSTALL 6" GATE VALVE WITH VALVE BOX PER DETAIL 1, SHEET 02C303.
2. INSTALL NEW AIR 1" COMBINATION RELEASE VALVE IN MANHOLE PER DETAIL 3, SHEET 02C303. ROUTE VENT PIPING TO SIDE OF THE ROAD. LOCATION TO BE DETERMINED IN THE FIELD WITH CONTRACTING OFFICER.
3. INSTALL 4" 4" TEE WITH BALL VALVE PER DETAIL 2, SHEET 02C501. INSTALL 4" 1" REDUCER WITH 1" BALL VALVE AT TEE WITH 1" GAS LINE STUB OUT WITH CAP.



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
1701	8" 90 BEND, 8" 6" REDUCER, 6" GV	1744153.80	1632717.98
1702	6" 11.25 BEND	1743514.53	1632947.88
1703	6" 11.25 BEND	1743468.89	1632982.00

HORIZONTAL: 40 0 40 80 1" = 40'
SCALE OF FEET

VERTICAL: 10 0 10 20 1" = 10'
SCALE OF FEET

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08
16:01:20-06'00'
PROFESSIONAL ENGINEER

DESIGNED:	M. COUTURE
CADD	J. FIGUEROA
TECH. REVIEW:	D. HUANG
DATE:	04/11/2025

SUB SHEET NO. 02C017

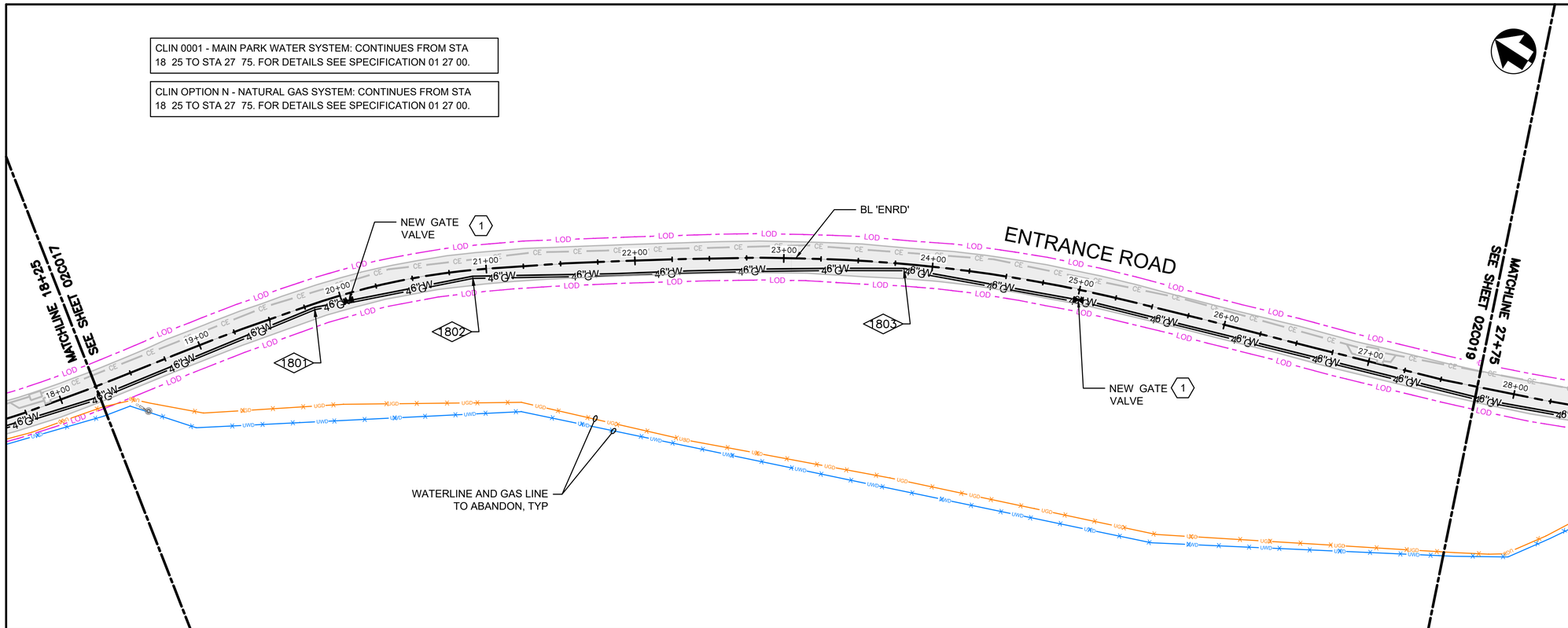
TITLE OF SHEET
CIVIL
BL 'ENTRANCE ROAD'
STA 8+75 TO 18+25
PLAN AND PROFILE
BANDELIER NATIONAL MONUMENT

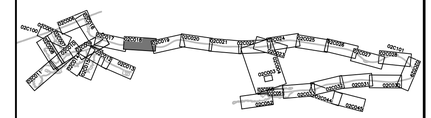
DRAWING NO. 315
182751
PMIS/PKG NO. 266697
SHEET 44 OF 203

3/30/2025 2:18 PM FIGUEROAJ R24 02C017 D3167658_ENRD PNP.DWG XC-BAND_Pavement and LOD Hatch
XC-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND PROFILES-Master
XC-ALIGN_BAND
XE-Existing Proposed and Existing Master
XC-UTILITY SITE
XC-ROADWAY

CLIN 0001 - MAIN PARK WATER SYSTEM: CONTINUES FROM STA 18 25 TO STA 27 75. FOR DETAILS SEE SPECIFICATION 01 27 00.

CLIN OPTION N - NATURAL GAS SYSTEM: CONTINUES FROM STA 18 25 TO STA 27 75. FOR DETAILS SEE SPECIFICATION 01 27 00.

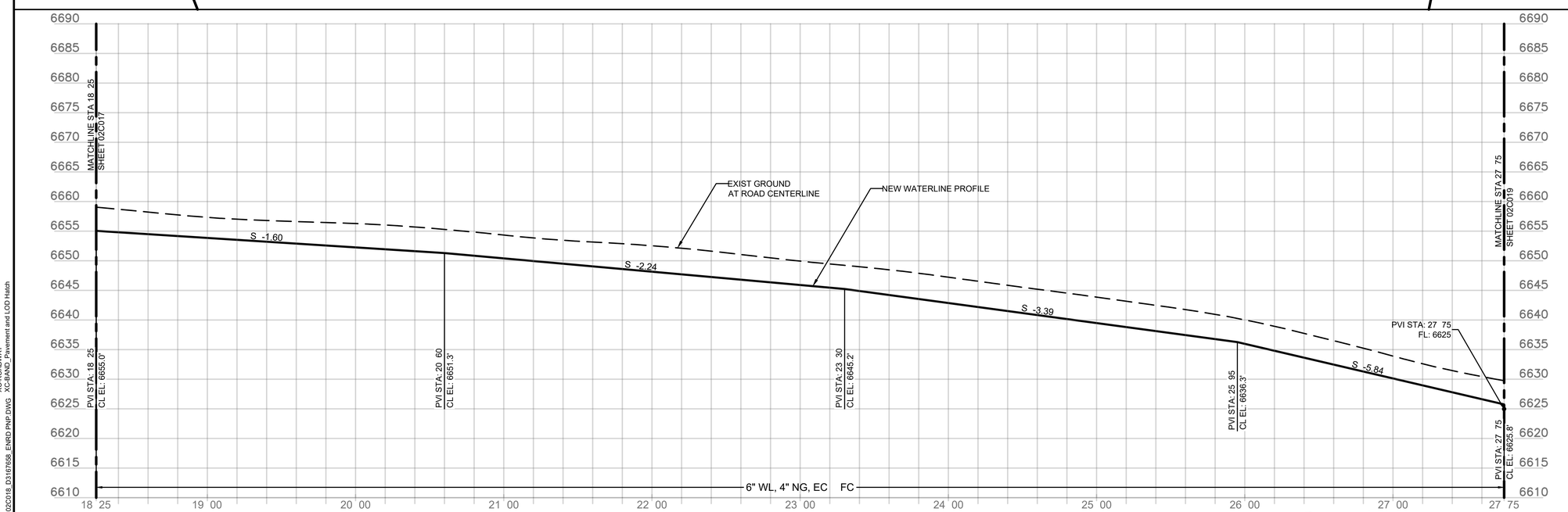




KEYPLAN

SHEET KEYNOTES

1. INSTALL 6" GV WITH VALVE BOX PER DETAIL 1, SHEET 02C303.



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
1801	6" 11.25 BEND	1743316.50	1633172.98
1802	6" 11.25 BEND	1743236.02	1633245.28
1803	6" 11.25 BEND	1742990.07	1633397.62

HORIZONTAL: 40 0 40 80 — SCALE OF FEET — 1" = 40'

VERTICAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

MICAH E. JOHNSON NEW MEXICO 25223 PROFESSIONAL ENGINEER
Digitally signed by Micah E. Johnson Date: 2025.04.08 15:02:49-06'00'

DESIGNED:	M. COUTURE
CADD	J. FIGUEROA
TECH. REVIEW:	M. JOHNSON
DATE:	04/11/2025
SUB SHEET NO.	02C018

TITLE OF SHEET
CIVIL
BL 'ENTRANCE ROAD' STA 18+25 TO 27+75 PLAN AND PROFILE
BANDELIER NATIONAL MONUMENT

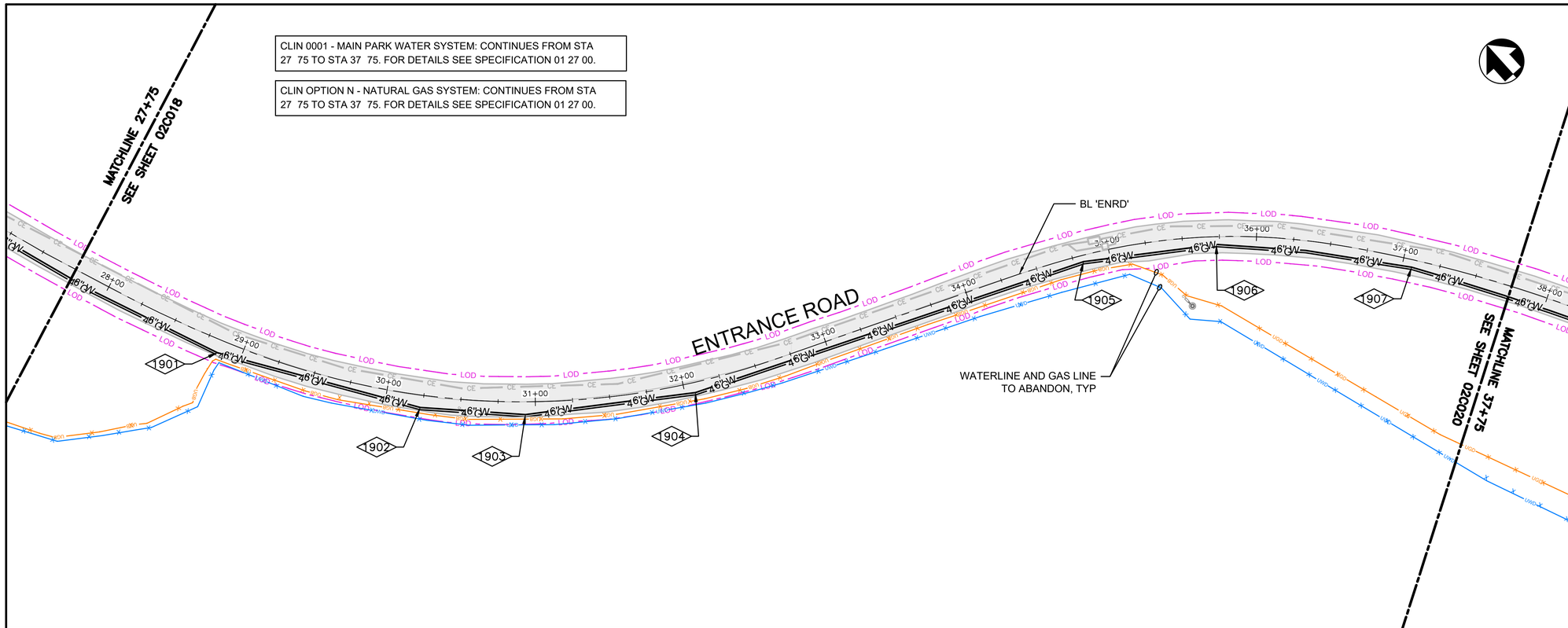
DRAWING NO. 315 182751
PMIS/PKG NO. 266697
SHEET 45 OF 203

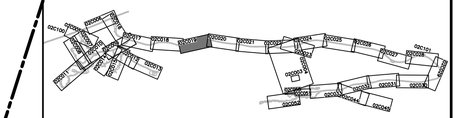
XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND PROFILES-Master
XC-BAND_BAND
XE-E xcel ca Pro osed and E st n Master
XC-UTILITY SITE
XC-BAND_Water Line
XC-BAND_Pavement and LOD Hatch

3/30/2025 2:21 PM FIGUEROAJ R24 02C018_D3167658_ENRD PNP.DWG

CLIN 0001 - MAIN PARK WATER SYSTEM: CONTINUES FROM STA 27 75 TO STA 37 75. FOR DETAILS SEE SPECIFICATION 01 27 00.

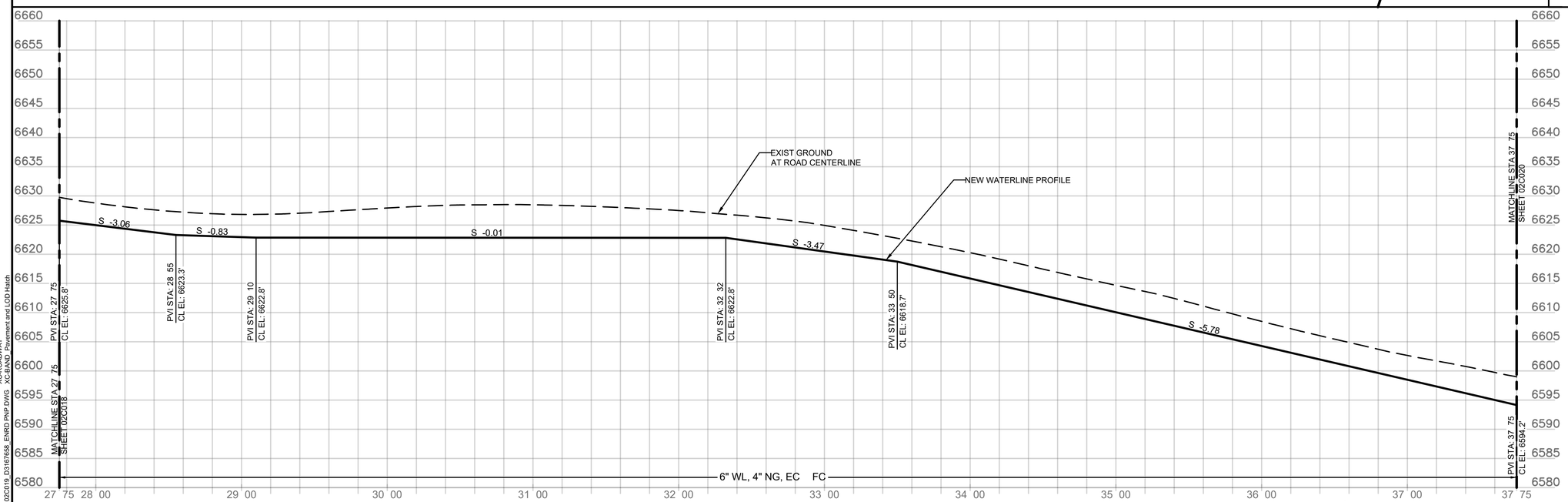
CLIN OPTION N - NATURAL GAS SYSTEM: CONTINUES FROM STA 27 75 TO STA 37 75. FOR DETAILS SEE SPECIFICATION 01 27 00.





KEYPLAN

SHEET KEYNOTES



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
1901	6" 11.25° BEND	1742512.76	1633558.21
1902	6" 11.25° BEND	1742393.10	1633632.76
1903	6" 11.25° BEND	1742341.54	1633681.20
1904	6" 11.25° BEND	1742274.66	1633774.83
1905	6" 11.25° BEND	1742161.55	1634025.49
1906	6" 11.25° BEND	1742109.24	1634098.73
1907	6" 11.25° BEND	1742008.78	1634184.29

HORIZONTAL: 40 0 40 80 SCALE OF FEET 1" = 40'

VERTICAL: 10 0 10 20 SCALE OF FEET 1" = 10'

FULL SIZE DRAWINGS = 22"x34" BAR MEASURES 1" LONG 0" 1"

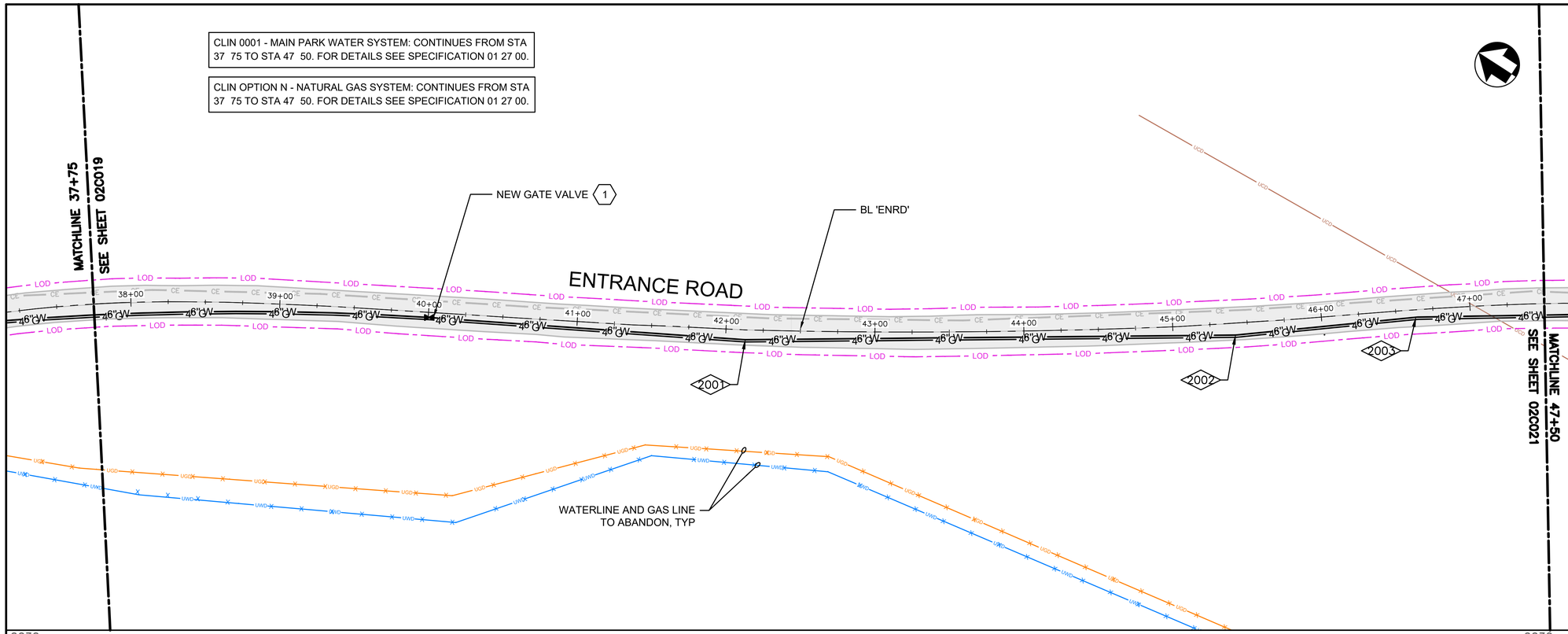
MICAH E. JOHNSON NEW MEXICO 25223 PROFESSIONAL ENGINEER
Digitally signed by Micah E. Johnson
Date: 2025.04.08 16:03:39-06'00'

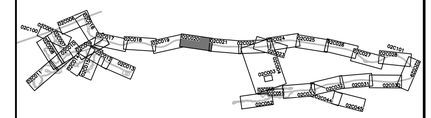
DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
M.COUTURE	02C019	CIVIL BL 'ENTRANCE ROAD' STA 27+75 TO 37+75 PLAN AND PROFILE BANDELIER NATIONAL MONUMENT	315 182751
CADD: J. FIGUEROA			PMIS/PKG NO. 266697
TECH. REVIEW: D. HUANG			SHEET 46 OF 203
DATE: 04/11/2025			

3/30/2025 2:24 PM FIGUEROAJ R24 02C019_D3167659_ENRD PNP.DWG XC-BAND_Pavement and LOD Hatch
XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND_2D-EG-Master
XC-E-Utility-Hydrants
XE-E xist ca Pro osed and E st n Master
XC-UTILITY SITE
XC-ROADWAY

CLIN 0001 - MAIN PARK WATER SYSTEM: CONTINUES FROM STA 37 75 TO STA 47 50. FOR DETAILS SEE SPECIFICATION 01 27 00.

CLIN OPTION N - NATURAL GAS SYSTEM: CONTINUES FROM STA 37 75 TO STA 47 50. FOR DETAILS SEE SPECIFICATION 01 27 00.

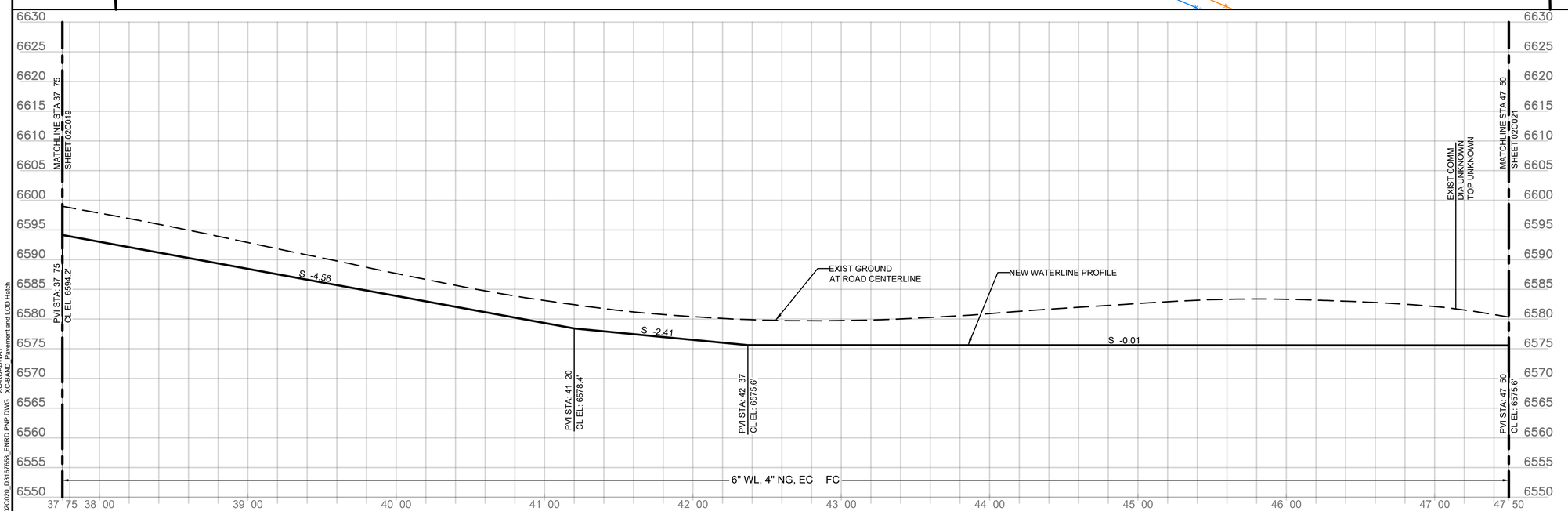




KEYPLAN

SHEET KEYNOTES

1. INSTALL 6" GV WITH VALVE BOX PER DETAIL 1, SHEET 02C303.



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
2001	6" 11.25 BEND	1741550.88	1634397.17
2002	6" 11.25 BEND	1741257.24	1634545.89
2003	6" 11.25 BEND	1741153.93	1634610.32

HORIZONTAL: 40 0 40 80 — SCALE OF FEET — 1" = 40'

VERTICAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 16:04:45-06'00'
PROFESSIONAL ENGINEER

DESIGNED:	M. COUTURE
CADD	J. FIGUEROA
TECH. REVIEW:	D. HUANG
DATE:	04/11/2025
SUB SHEET NO.	02C020

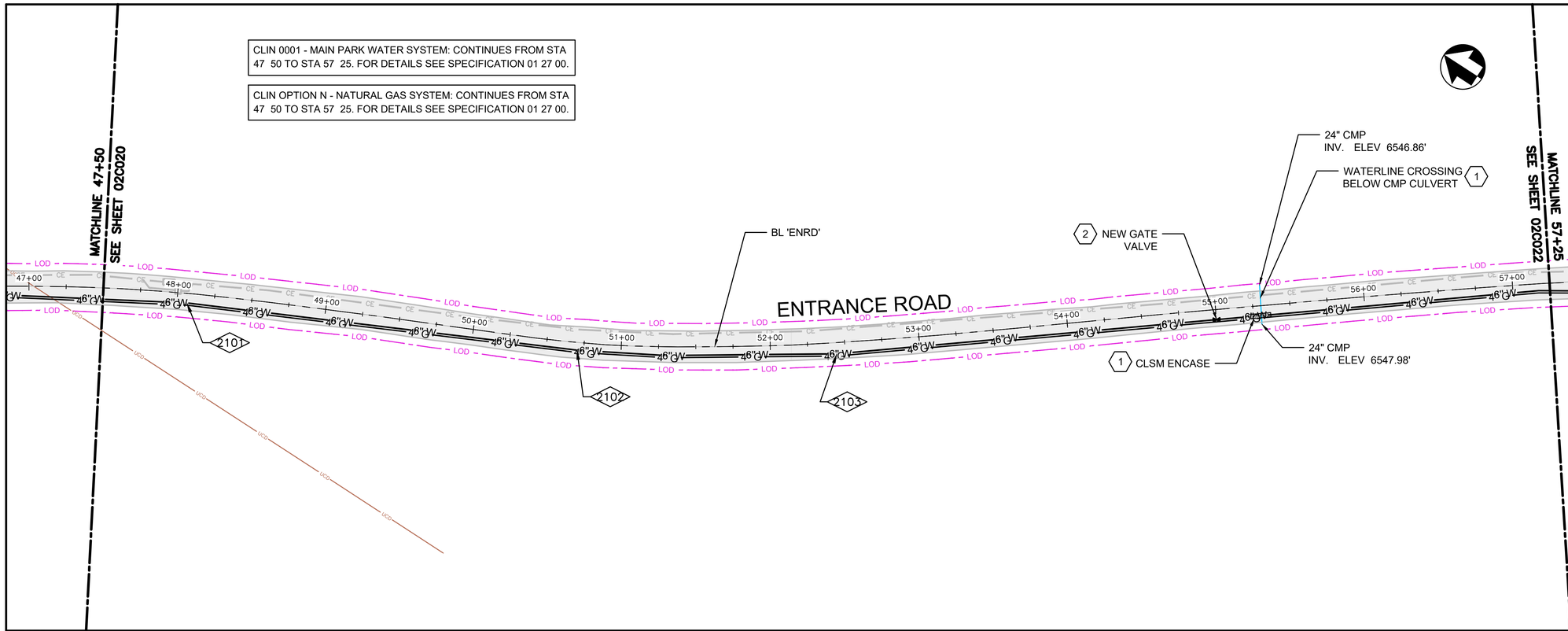
TITLE OF SHEET
CIVIL
BL 'ENTRANCE ROAD' STA 37+75 TO 47+50 PLAN AND PROFILE
BANDELIER NATIONAL MONUMENT

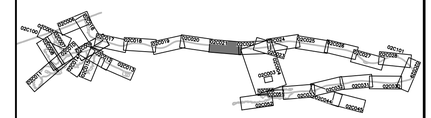
DRAWING NO.	315 / 182751
PMIS/PKG NO.	266697
SHEET	47 OF 203

3/30/2025 2:34 PM FIGUEROAJ R24 02C020_D3167658_ENRD PNP.DWG
XC-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND_2D-EG-Master
XC-UTILITY-NEW
XE-Existing Proposed and Existing Master
XC-UTILITY SITE
XC-ROADWAY
XC-BAND_Pavement and LOD Hatch

CLIN 0001 - MAIN PARK WATER SYSTEM: CONTINUES FROM STA 47 50 TO STA 57 25. FOR DETAILS SEE SPECIFICATION 01 27 00.

CLIN OPTION N - NATURAL GAS SYSTEM: CONTINUES FROM STA 47 50 TO STA 57 25. FOR DETAILS SEE SPECIFICATION 01 27 00.

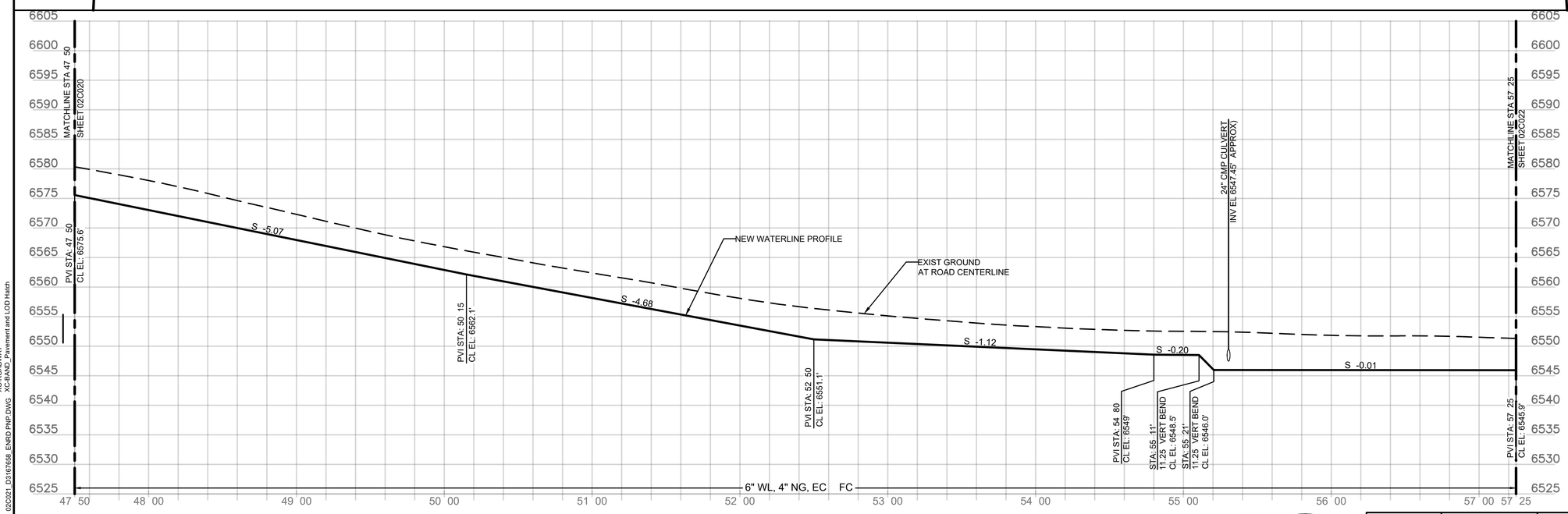




KEYPLAN

SHEET KEYNOTES

1. INSTALL WATERLINE BELOW EXISTING CMP CULVERT WITH 18" MINIMUM VERTICAL CLEARANCE. NO JOINT IN THE WATERLINE SHALL BE INSTALLED BELOW CMP. INSTALL OTHER UTILITIES FC, NG, EC) ABOVE CMP CULVERT WITH 2' MINIMUM COVER. SUPPORT CMP.
2. INSTALL 6" GV WITH VALVE BOX PER DETAIL 1, SHEET 02C303.



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
2101	6" 11.25 BEND	1741027.12	1634675.77
2102	6" 11.25 BEND	1740784.06	1634778.39
2103	6" 11.25 BEND	1740631.41	1634862.92

HORIZONTAL: 40 0 40 80 — SCALE OF FEET — 1" = 40'

VERTICAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 14:07:38-06'00'
PROFESSIONAL ENGINEER

DESIGNED: M. COUTURE	SUB SHEET NO.	TITLE OF SHEET
CADD: J. FIGUEROA	02C021	CIVIL
TECH. REVIEW: D. HUANG		BL 'ENTRANCE ROAD' STA 47+50 TO 57+25 PLAN AND PROFILE
DATE: 04/11/2025		BANDELIER NATIONAL MONUMENT

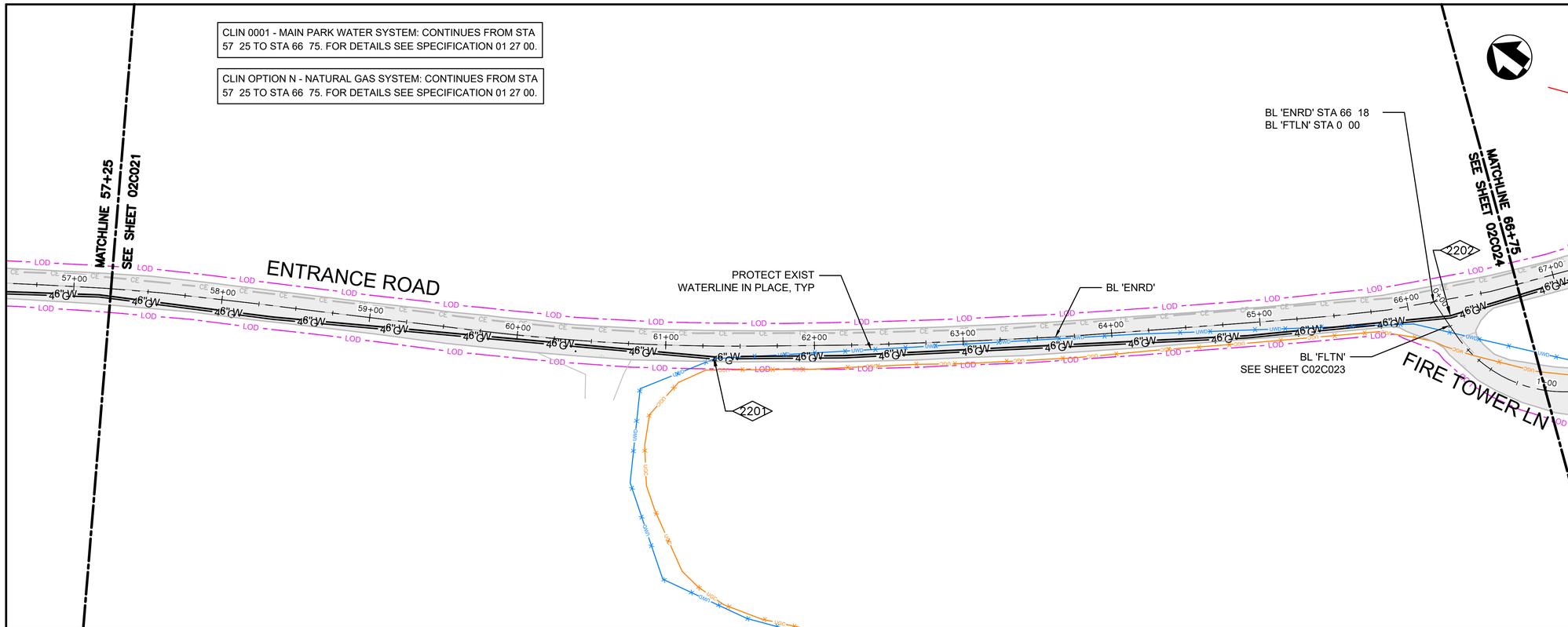
DRAWING NO. 315 / 182751
PMIS/PKG NO. 266697
SHEET 48 OF 203

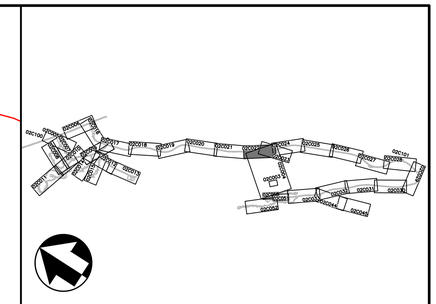
XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-LAYOUT-2D-TS
XC-ALIGN_BAND-Master
XE-Existing Proposed and Easements Master
XC-UTILITY SITE
XC-BAND-Water_Pipe
XC-BAND_Pavement and LOD Hatch

3/30/2025 3:41 PM FIGUEROAJ R24 02C021 D3167658_ENRD PNP.DWG

CLIN 0001 - MAIN PARK WATER SYSTEM: CONTINUES FROM STA 57 25 TO STA 66 75. FOR DETAILS SEE SPECIFICATION 01 27 00.

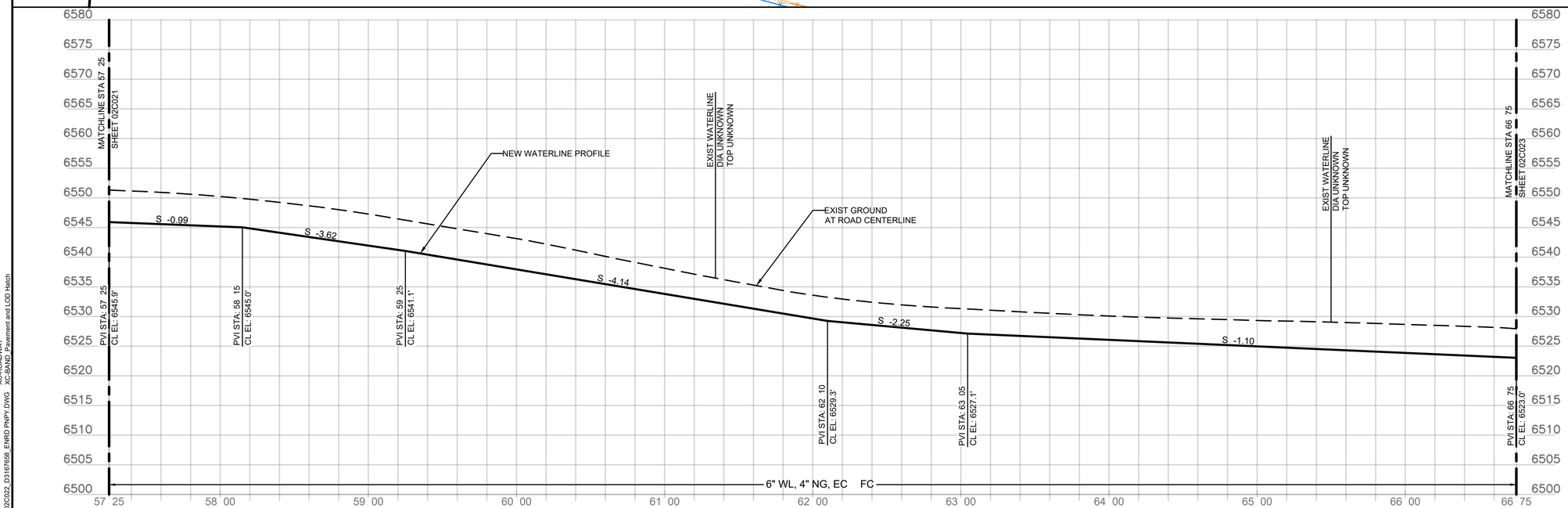
CLIN OPTION N - NATURAL GAS SYSTEM: CONTINUES FROM STA 57 25 TO STA 66 75. FOR DETAILS SEE SPECIFICATION 01 27 00.





KEYPLAN

SHEET KEYNOTES



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
2203	6" 11.25 BEND	1739888.09	1635347.97
2206	6" 11.25 BEND	1739508.09	1635667.07

HORIZONTAL: 40 0 40 80 — SCALE OF FEET — 1" = 40'

VERTICAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

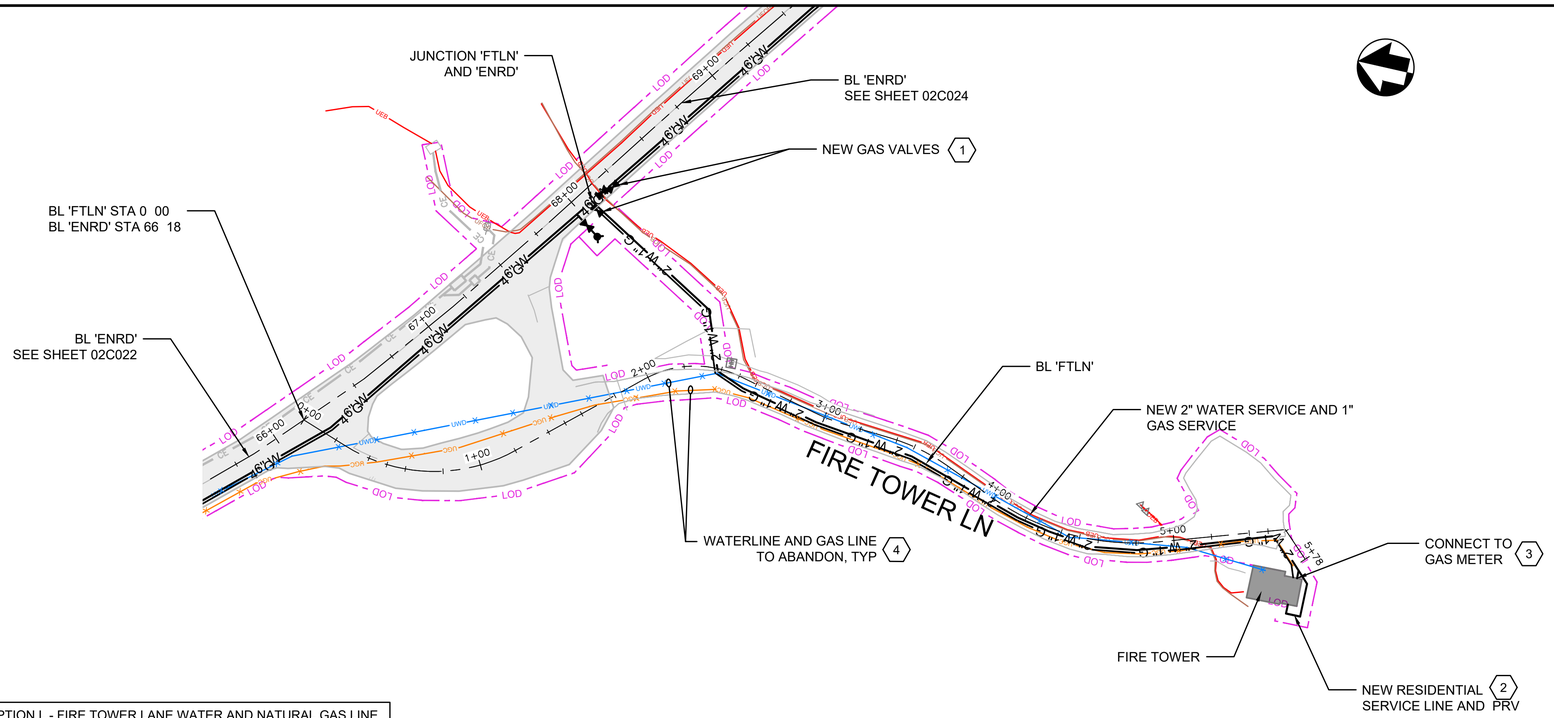
FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 10:16:15-06'00'
PROFESSIONAL ENGINEER

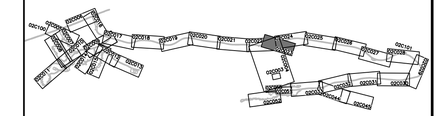
DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
M. COUTURE	02C022	CIVIL	315
CADD J. FIGUEROA		BL 'ENTRANCE ROAD' STA 57+25 TO 66+75 PLAN AND PROFILE	182751
TECH. REVIEW: D. HUANG		BANDELIER NATIONAL MONUMENT	PMIS/PKG NO. 266697
DATE: 04/11/2025			SHEET 49 OF 203

XC-Border BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND_2D-EG-Master
XC-AUTO-BASE-BAND
XE-Existing Proposed and Existing Master
XC-UTILITY SITE
XC-ROADWAY
XC-BAND_Pavement and LOD Hatch

3/30/2025 3:42 PM FIGUEROAJ R24 02C022_D3167658_ENRD PNPY.DWG



CLIN OPTION L - FIRE TOWER LANE WATER AND NATURAL GAS LINE REPLACEMENT: WATER AND GAS LATERALS EXTENDING FROM ENTRANCE ROAD TEE TO FIRE TOWER. FOR DETAILS SEE SPECIFICATION 01 27 00.



KEYPLAN

SHEET KEYNOTES

1. INSTALL 4" 1" TEE. INSTALL 1" BALL VALVE AND 4" BALL VALVE PER DETAIL 2, SHEET 02C501.
2. INSTALL NEW 2" DIA WATER SERVICE LINE TO FIRE TOWER RESIDENCE PER DETAIL 6, SHEET 02C301. INSTALL NEW RESIDENTIAL PRV AT HOUSE SERVICE.
3. INSTALL ANODELESS RISER AND PLUG VALVE. CONNECT TO EXISTING REGULATOR/METER ASSEMBLY.
4. BUILDING AT FIRE TOWER LANE IS CURRENTLY UNOCCUPIED. EXISTING WATERLINE AND GAS LINE ON FIRE TOWER LANE CAN BE DISCONNECTED AND REMOVED TO INSTALL NEW UTILITIES. COORDINATE SHUT DOWN OF EXISTING UTILITIES WITH CONTRACTING OFFICER.

PROFILE NOT PROVIDED

HORIZONTAL: 40 0 40 80 1" = 40'
SCALE OF FEET

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

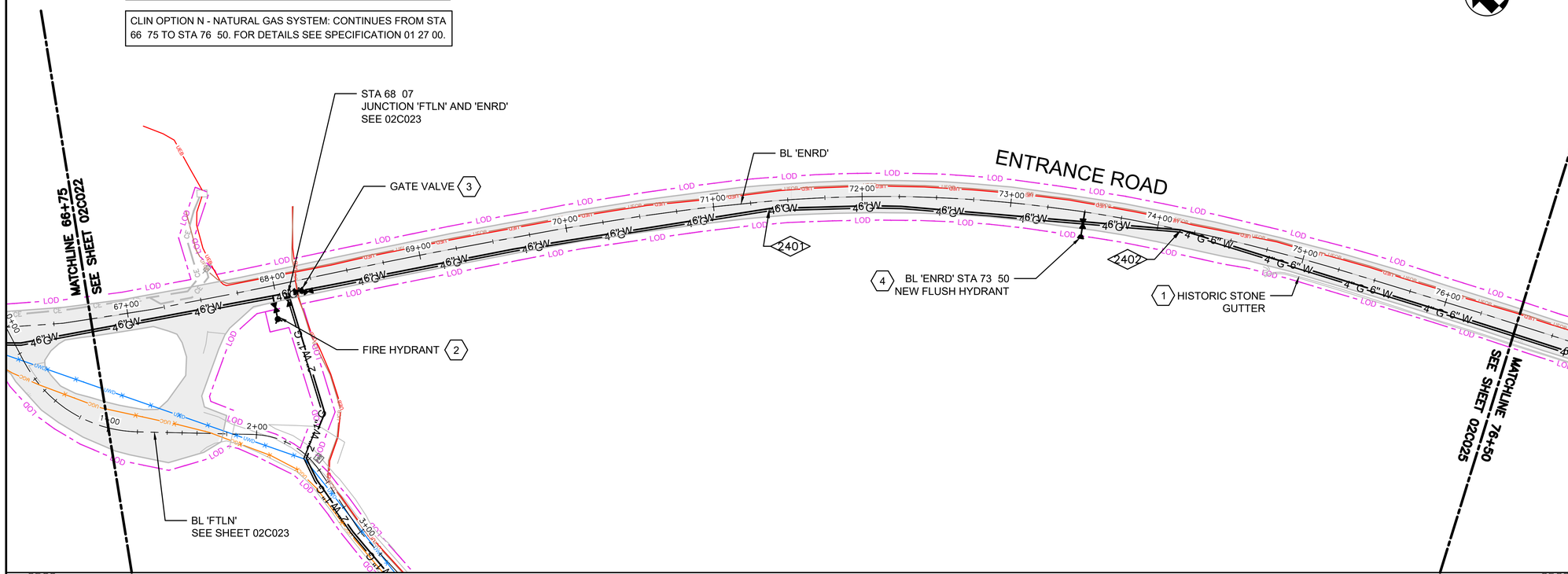
MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.06 15:17:03-06'00'
PROFESSIONAL ENGINEER

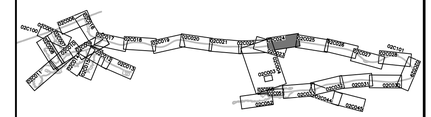
DESIGNED: M. COUTURE	SUB SHEET NO.	TITLE OF SHEET CIVIL BL 'FIRE TOWER LANE' PLAN	DRAWING NO. 315
CADD J. FIGUEROA	02C023		182751
TECH. REVIEW: M. JOHNSON			PMIS/PKG NO. 266697
DATE: 04/11/2025		BANDELIER NATIONAL MONUMENT	SHEET 50 OF 203

3/30/2025 3:46 PM FIGUEROAJ R24 02C023_D3167658_FTLN PNP.DWG
XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND PROFILES-Master
XC-ALIGN_BAND
XC-ALIGN_BAND-Master
XE-Existing Proposed and Existing Master
XC-UTILITY SITE
XC-CONTOURS-WHITE
XC-BAND_Pavement and LOD Hatch

CLIN 0001 - MAIN PARK WATER SYSTEM: CONTINUES FROM STA 66 75 TO STA 76 50. FOR DETAILS SEE SPECIFICATION 01 27 00.

CLIN OPTION N - NATURAL GAS SYSTEM: CONTINUES FROM STA 66 75 TO STA 76 50. FOR DETAILS SEE SPECIFICATION 01 27 00.



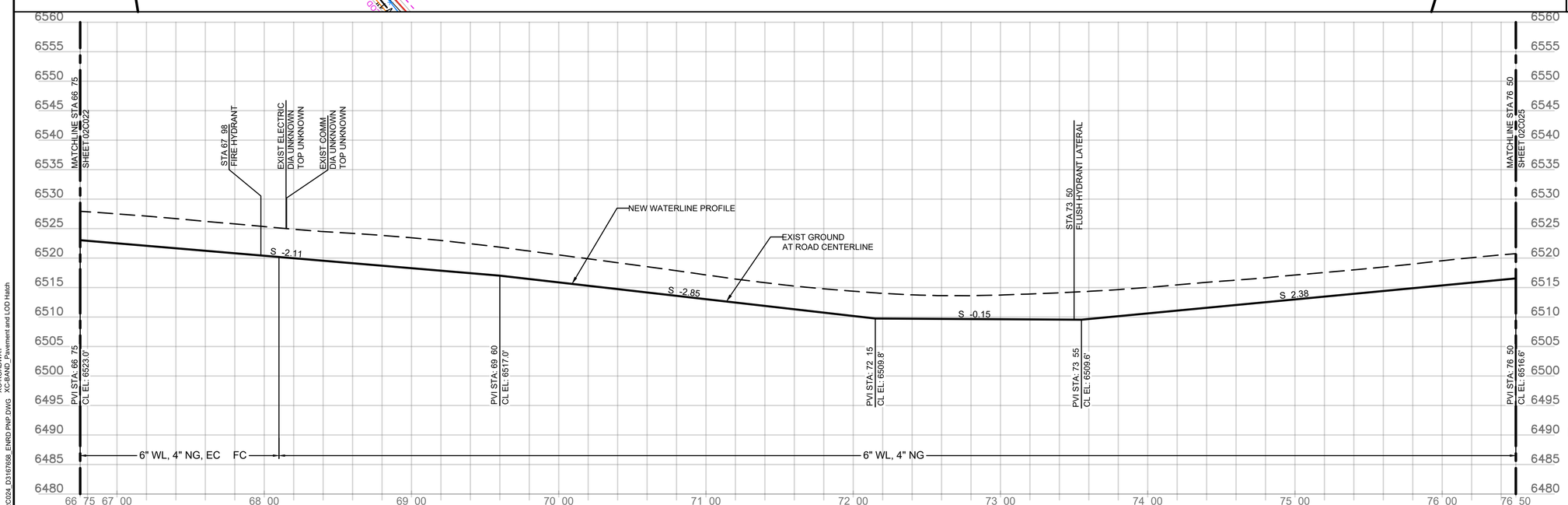


KEYPLAN

SHEET KEYNOTES

1. PROTECT HISTORIC STONE GUTTER IN PLACE. SEE NOTES ON SHEET 00G003 AND SPECIFICATION SECTION 01 35 91.
2. INSTALL NEW FIRE HYDRANT PER DETAIL 3, SHEET 02C301.
3. INSTALL 6" GV WITH VALVE BOX PER DETAIL 1, SHEET 02C303.
4. INSTALL FLUSH HYDRANT EVEN WITH EXIST GRADE PER DETAIL 7, SHEET 02C303 AND DETAIL 4, SHEET 02C301.

COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
2401	6" 11.25 BEND	1739202.56	1636076.27
2402	6" 11.25 BEND	1738990.91	1636254.42



HORIZONTAL: 40 0 40 80 — 1" = 40'
SCALE OF FEET

VERTICAL: 10 0 10 20 — 1" = 10'
SCALE OF FEET

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 16:17:56-06'00'
PROFESSIONAL ENGINEER

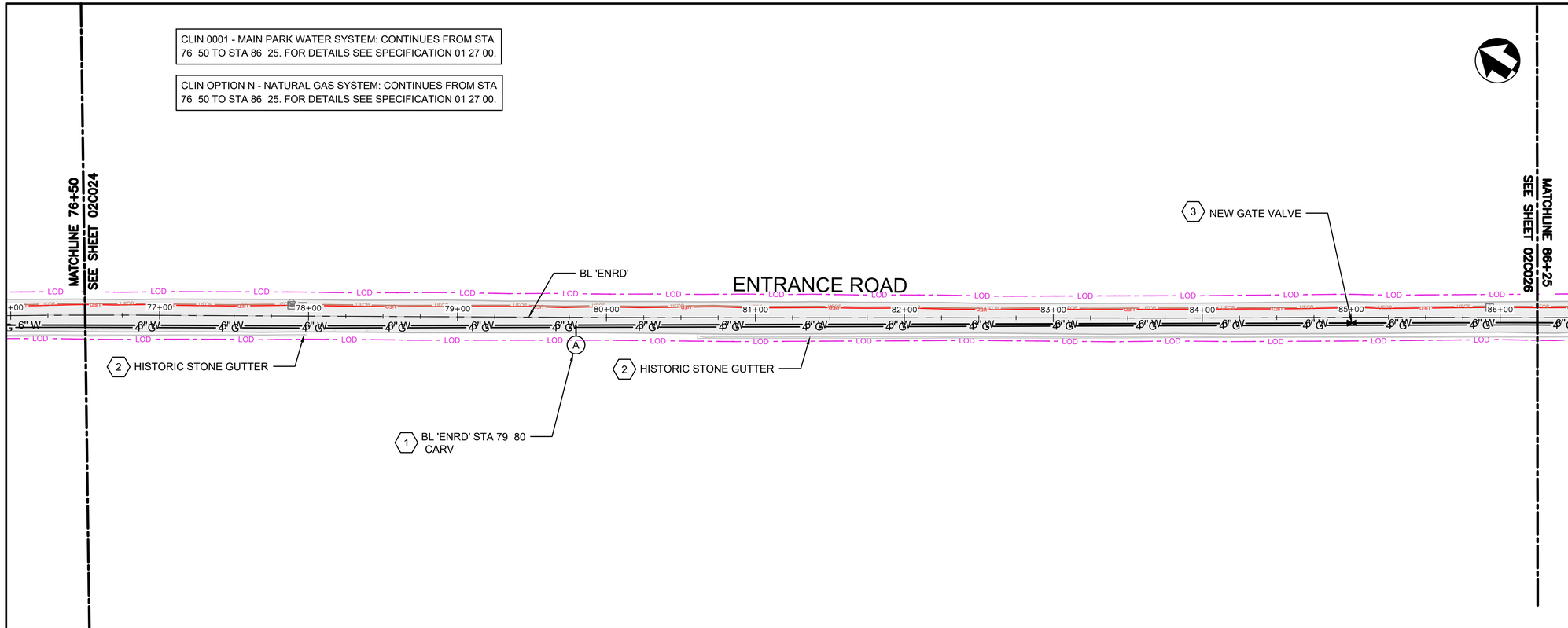
DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
M. COUTURE	02C024	CIVIL BL 'ENTRANCE ROAD' STA 66+75 TO 76+50 PLAN AND PROFILE BANDELIER NATIONAL MONUMENT	315 182751
CADD: J. FIGUEROA			PMIS/PKG NO. 266697
TECH. REVIEW: D. HUANG			SHEET 51 OF 203
DATE: 04/11/2025			

XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND_PROFILES
XC-BAND_2025-Master
XC-ALIGN_BAND-Master
XE-Existing Proposed and Existing Master
XC-UTILITY SITE
XC-BAND_Pavement and LOD Hatch

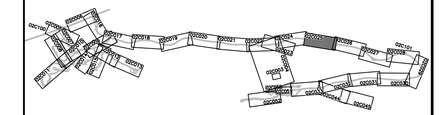
3/30/2025 5:40 PM FIGUEROAJ B24 02C024_D3167658_ENRD PNP.DWG XC-BAND_Pavement and LOD Hatch

CLIN 0001 - MAIN PARK WATER SYSTEM: CONTINUES FROM STA 76 50 TO STA 86 25. FOR DETAILS SEE SPECIFICATION 01 27 00.

CLIN OPTION N - NATURAL GAS SYSTEM: CONTINUES FROM STA 76 50 TO STA 86 25. FOR DETAILS SEE SPECIFICATION 01 27 00.

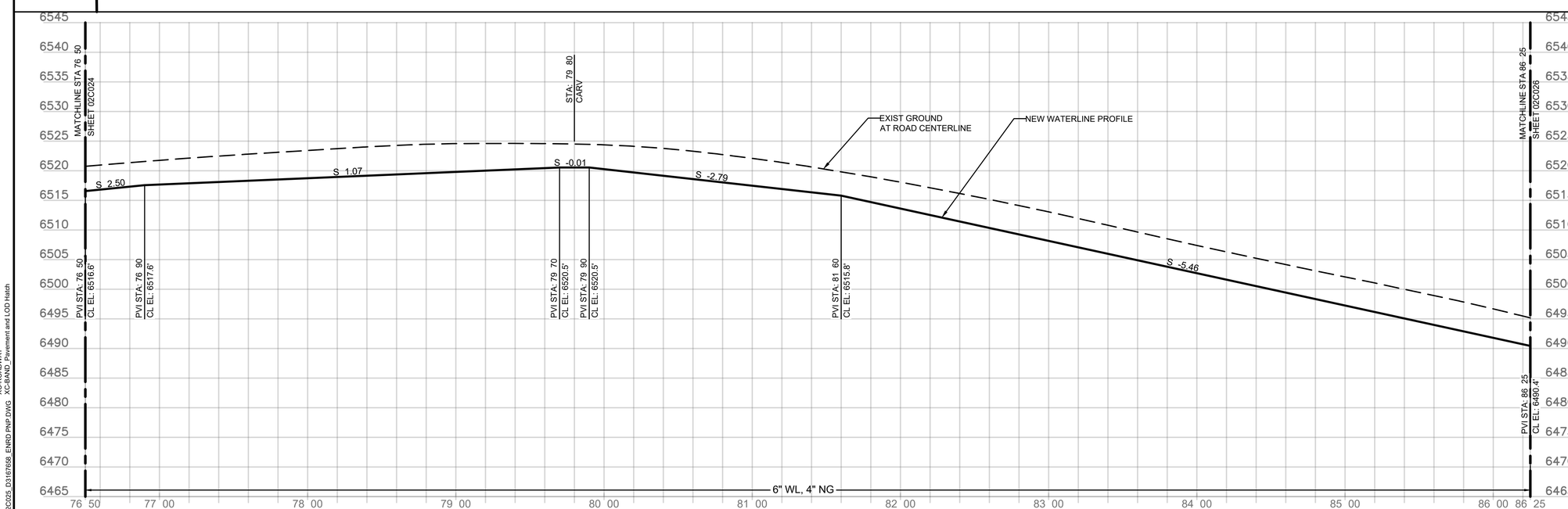


KEYPLAN



SHEET KEYNOTES

1. INSTALL NEW 1" COMBINATION AIR RELEASE VALVE IN MANHOLE PER DETAIL 3, SHEET 02C303. ROUTE VENT PIPING TO SIDE OF THE ROAD. LOCATION TO BE DETERMINED IN THE FIELD WITH CONTRACTING OFFICER.
2. PROTECT HISTORIC STONE GUTTER IN PLACE. SEE NOTES ON SHEET 00G003 AND SPECIFICATION SECTION 01 35 91.
3. INSTALL 6" GV WITH VALVE BOX PER DETAIL 1, SHEET 02C303.



HORIZONTAL: 40 0 40 80 — SCALE OF FEET — 1" = 40'

VERTICAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 16:19:00-06'00'
PROFESSIONAL ENGINEER

DESIGNED: M. COUTURE	SUB SHEET NO.	TITLE OF SHEET
CADD: J. FIGUEROA	02C025	CIVIL
TECH. REVIEW: D. HUANG		BL 'ENTRANCE ROAD' STA 76+50 TO 86+25 PLAN AND PROFILE
DATE: 04/11/2025		BANDELIER NATIONAL MONUMENT

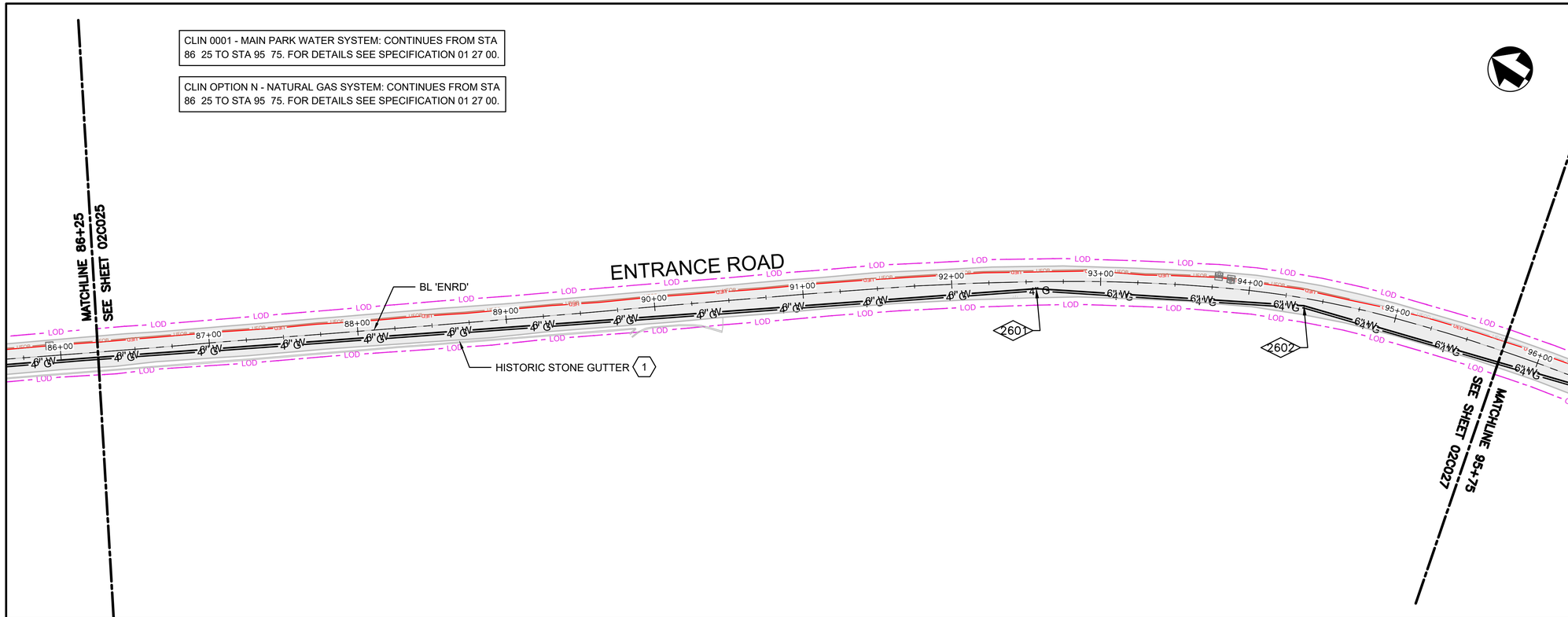
DRAWING NO. 315 / 182751
PMIS/PKG NO. 266697
SHEET 52 OF 203

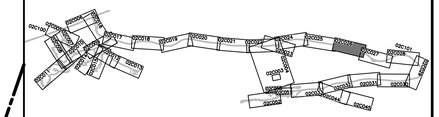
XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND_2025-G-Master
XC-AUG BAND
XE-Existing Proposed and Existing Master
XC-UTILITY SITE
XC-DRIVEWAY
XC-BAND_Pavement and LOD Hatch

3/30/2025 5:48 PM FIGUEROAJ R24 02C025 D3167658_ENRD PNP.DWG

CLIN 0001 - MAIN PARK WATER SYSTEM: CONTINUES FROM STA 86 25 TO STA 95 75. FOR DETAILS SEE SPECIFICATION 01 27 00.

CLIN OPTION N - NATURAL GAS SYSTEM: CONTINUES FROM STA 86 25 TO STA 95 75. FOR DETAILS SEE SPECIFICATION 01 27 00.

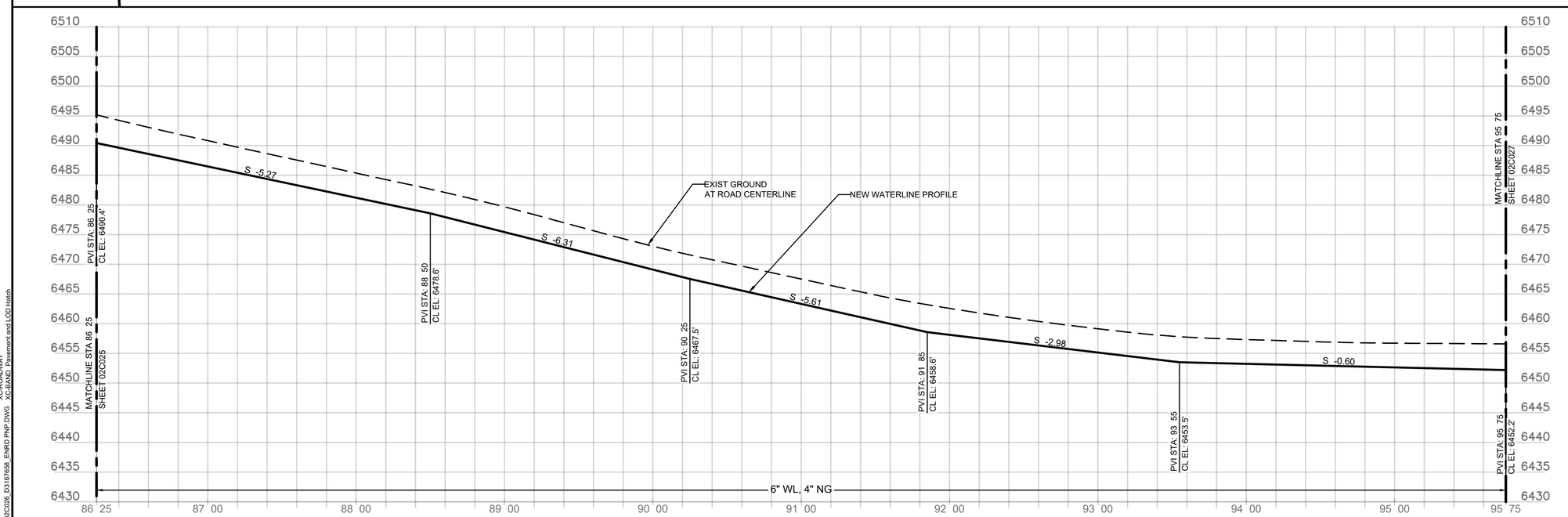




KEYPLAN

SHEET KEYNOTES

1. PROTECT HISTORIC STONE GUTTER IN PLACE. SEE NOTES ON SHEET 00G003 AND SPECIFICATION SECTION 01 35 91.



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
2601	6" 11.25 BEND	1737328.00	1637042.88
2602	6" 11.25 BEND	1737156.08	1637096.28

HORIZONTAL: 40 0 40 80 — 1" = 40'
SCALE OF FEET

VERTICAL: 10 0 10 20 — 1" = 10'
SCALE OF FEET

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 16:20:03-06'00'
PROFESSIONAL ENGINEER

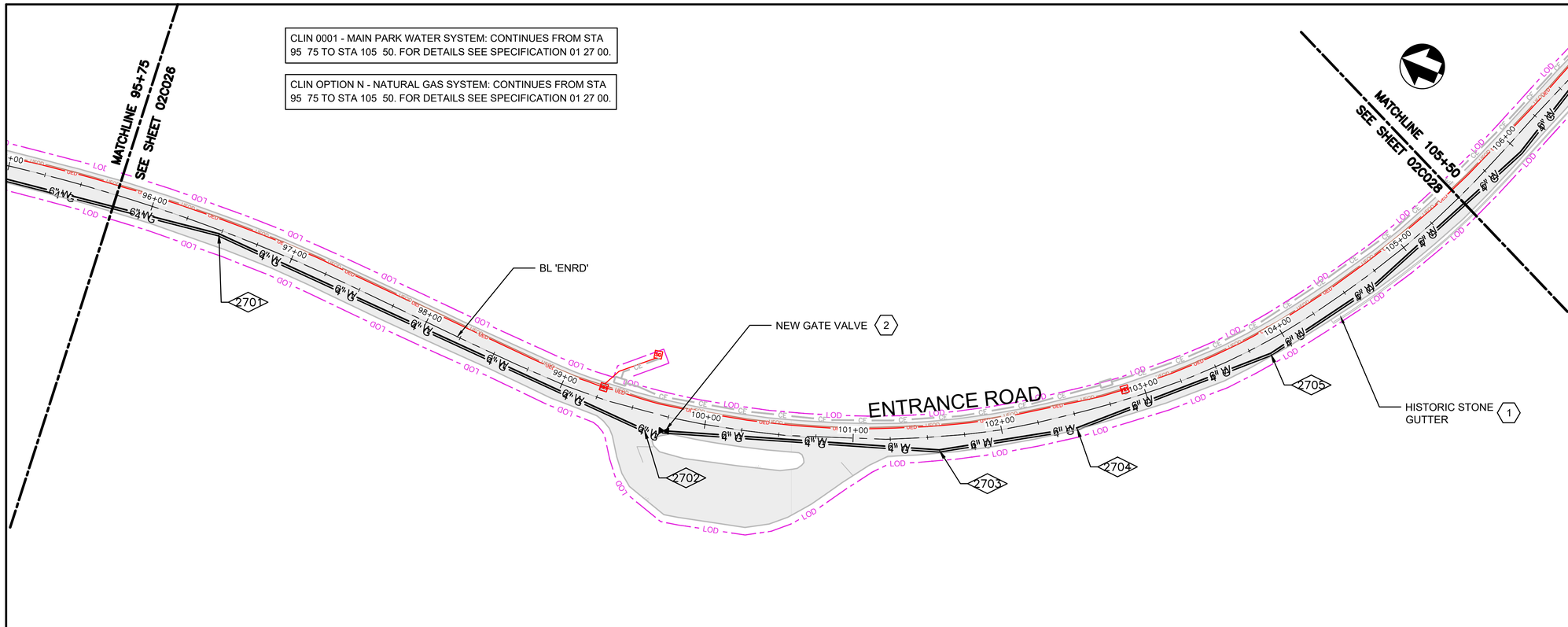
DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
M. COUTURE	02C026	CIVIL BL 'ENTRANCE ROAD' STA 86+25 TO 95+75 PLAN AND PROFILE BANDELIER NATIONAL MONUMENT	315 182751
CADD J. FIGUEROA			PMIS/PKG NO. 266697
TECH. REVIEW: D. HUANG			SHEET 53 OF 203
DATE: 04/11/2025			

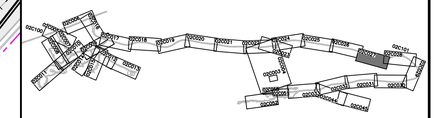
XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND PROFILE-Meter
XE-Existing Proposed and E ist n Master
XC-UTILITY SITE
XC-ROADWAY
XC-BAND Pavement and LOD Hatch

3/31/2025 1:46 PM FIGUEROAJ R24 02C026 D3167658_ENRD.PNP.DWG

CLIN 0001 - MAIN PARK WATER SYSTEM: CONTINUES FROM STA 95 75 TO STA 105 50. FOR DETAILS SEE SPECIFICATION 01 27 00.

CLIN OPTION N - NATURAL GAS SYSTEM: CONTINUES FROM STA 95 75 TO STA 105 50. FOR DETAILS SEE SPECIFICATION 01 27 00.

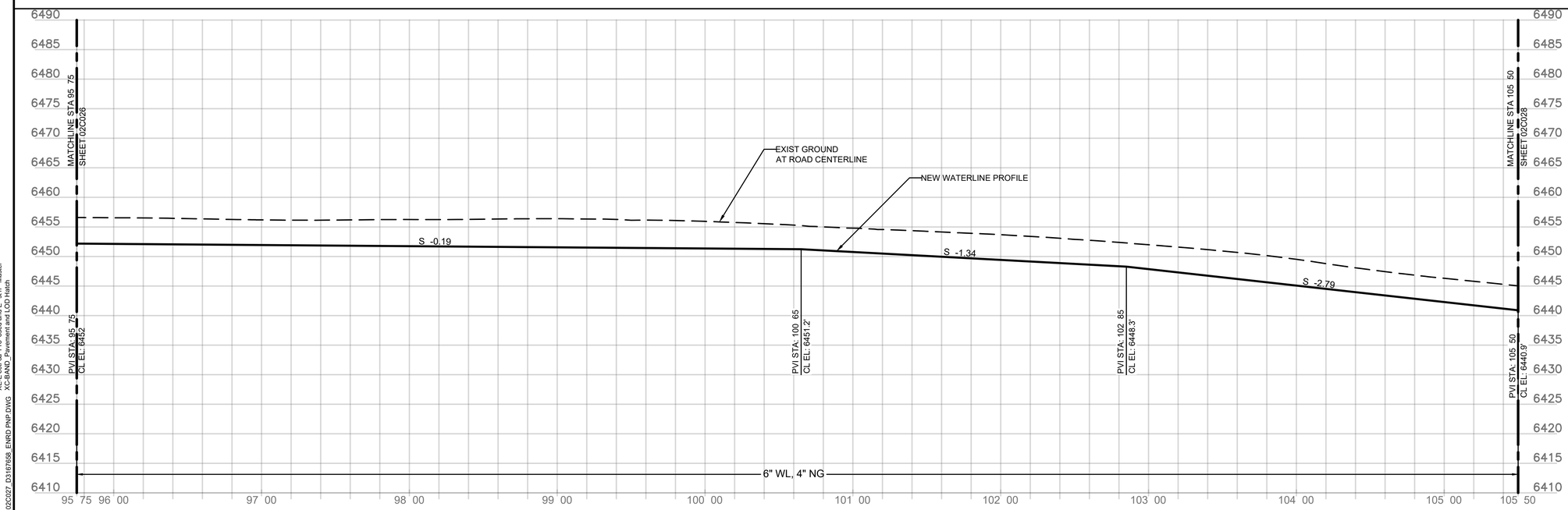




KEYPLAN

SHEET KEYNOTES

1. PROTECT HISTORIC STONE GUTTER IN PLACE. SEE NOTES ON SHEET 00G003 AND SPECIFICATION SECTION 01 35 91.
2. INSTALL 6" GV WITH VALVE BOX PER DETAIL 1, SHEET 02C303.



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
2701	6" 11.25 BEND	1736947.65	1637113.46
2702	6" 22.5 BEND	1736634.71	1637082.88
2703	6" 11.25 BEND	1736443.24	1637134.74
2704	6" 11.25 BEND	1736360.67	1637179.00
2705	6" 11.25 BEND	1736254.11	1637268.80

HORIZONTAL: 40 0 40 80 — 1" = 40'
SCALE OF FEET

VERTICAL: 10 0 10 20 — 1" = 10'
SCALE OF FEET

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

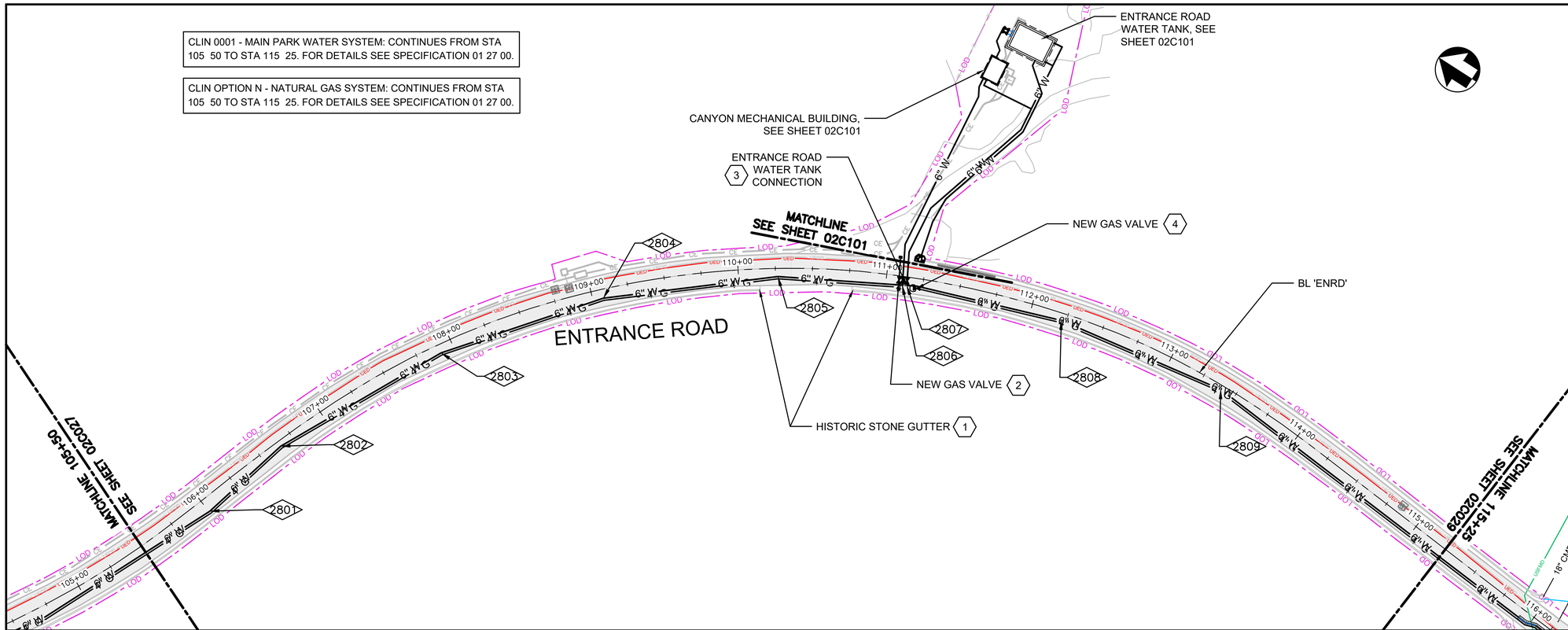
MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 16:42:57-06'00'
PROFESSIONAL ENGINEER

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
M. COUTURE	02C027	CIVIL BL 'ENTRANCE ROAD' STA 95+75 TO 105+50 PLAN AND PROFILE BANDELIER NATIONAL MONUMENT	315 182751
CADD: J. FIGUEROA			PMIS/PKG NO. 266697
TECH. REVIEW: D. HUANG			SHEET 54 OF 203
DATE: 04/11/2025			

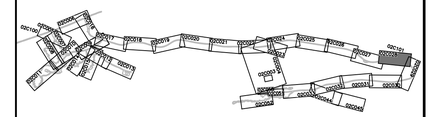
3/30/2025 6:23 PM FIGUEROAJ R24 02C027_D3167658_ENRD PNP.DWG XG-Border_BAND XC-LAYOUT-SHEETS XC-BAND PROFILES XC-BAND_2D-ALIGNS XC-ALIGN_BAND XC-UTILITY SITE XC-ROADWAY XC-Existing Pavement and E ...at n Master XC-BAND_Pavement and LOD Hatch

CLIN 0001 - MAIN PARK WATER SYSTEM: CONTINUES FROM STA 105 50 TO STA 115 25. FOR DETAILS SEE SPECIFICATION 01 27 00.

CLIN OPTION N - NATURAL GAS SYSTEM: CONTINUES FROM STA 105 50 TO STA 115 25. FOR DETAILS SEE SPECIFICATION 01 27 00.

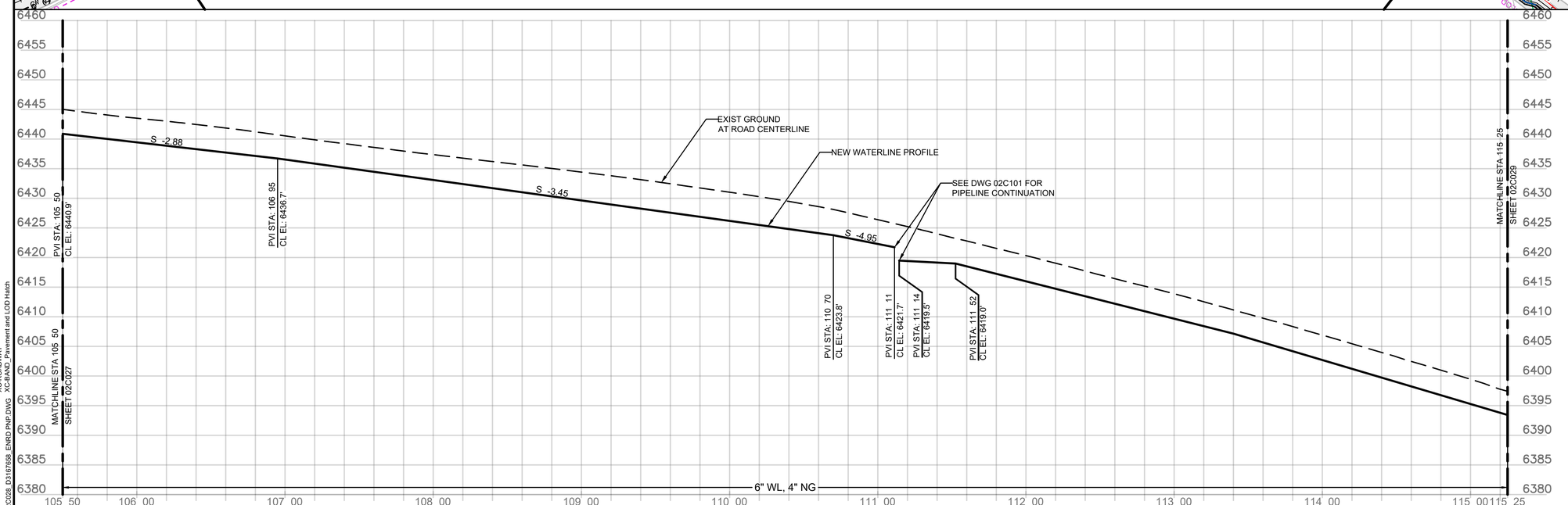


KEYPLAN



SHEET KEYNOTES

1. PROTECT HISTORIC STONE GUTTER IN PLACE. SEE NOTES ON SHEET 00G003 AND SPECIFICATION SECTION 01 35 91.
2. INSTALL 4" 1" TEE ON GAS LINE WITH 1" BALL VALVE PER DETAIL 2, SHEET 02C501. EXTEND 1" GAS LATERAL 2 FEET BEYOND EAST EDGE OF PAVEMENT AND CAP.
3. INSTALL 2-90 BENDS WITH 6" GV ON PUMP STATION INLET LINE WITH VALVE BOXES PER DETAIL 1, SHEET 02C303.



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EA
2801	6" 11.25 BEND	1736139.90	1637
2802	6" 11.25 BEND	1736118.95	1637
2803	6" 11.25 BEND	1736054.51	1637
2804	6" 11.25 BEND	1735976.46	1637
2805	6" 11.25 BEND	1735880.55	1637
2806	6" 90 BEND AND 6" GV	1735804.48	1637
2807	6" 90 BEND AND 6" GV	1735801.75	1637
2808	6" 11.25 BEND	1735699.45	1637
2809	6" 11.25 BEND	1735583.30	1637

HORIZONTAL: 40 0 40 80 — 1" = 40'
SCALE OF FEET

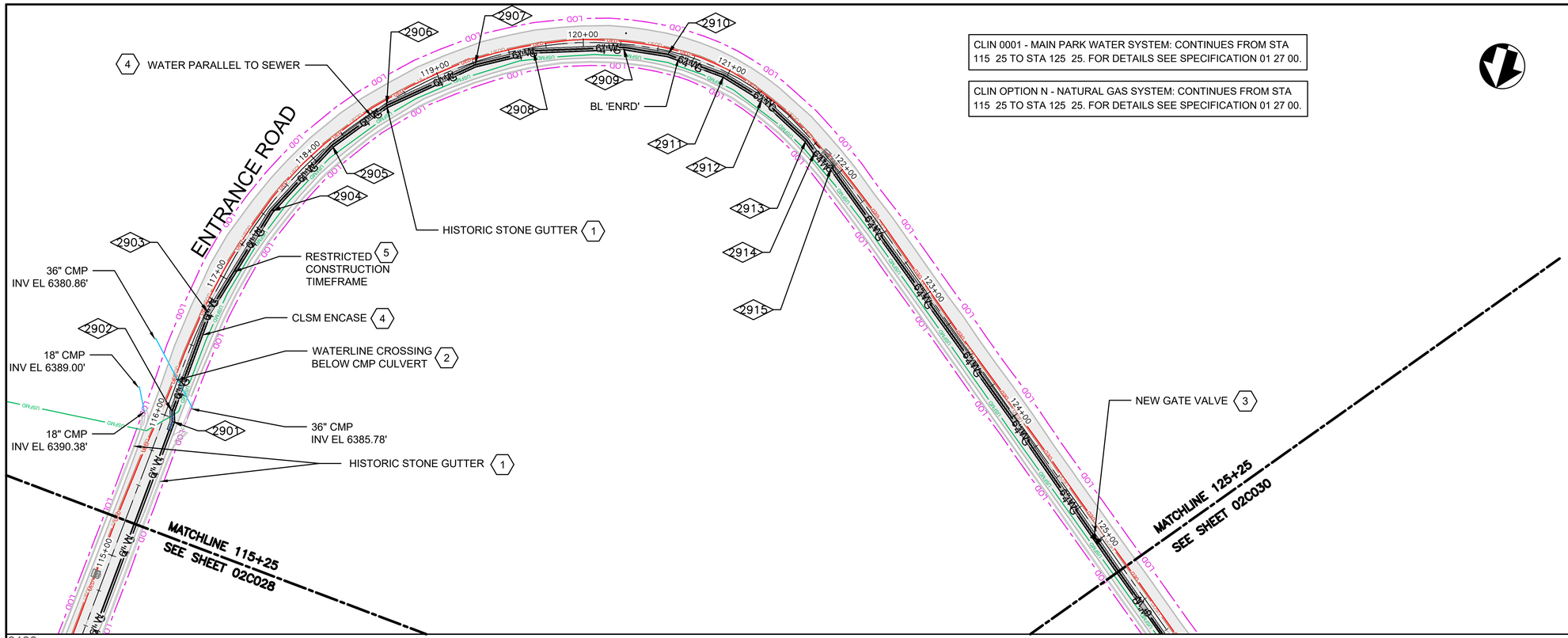
VERTICAL: 10 0 10 20 — 1" = 10'
SCALE OF FEET

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 10:49:44-06'00'
PROFESSIONAL ENGINEER

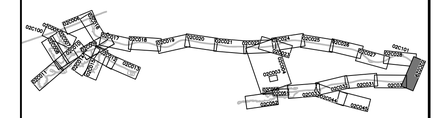
DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
M JOHNSON	02C028	CIVIL BL 'ENTRANCE ROAD' STA 105+50 TO 115+25 PLAN AND PROFILE BANDELIER NATIONAL MONUMENT	315 182751
CADD: J. FIGUEROA			PMIS/PKG NO. 266697
TECH. REVIEW: D. HUANG			SHEET 55 OF 203
DATE: 04/11/2025			

3/30/2025 6:37 PM FIGUEROAJ B24 02C028_D3167658_ENRD.PNP.DWG XC-BAND_Pavement and LOD Hatch
XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND_02C25-Master
XC-ALIGN_BAND
XE-Electric Proposed and Existing Master
XC-UTILITY SITE
XC-ROADWAY



CLIN 0001 - MAIN PARK WATER SYSTEM: CONTINUES FROM STA 115 25 TO STA 125 25. FOR DETAILS SEE SPECIFICATION 01 27 00.

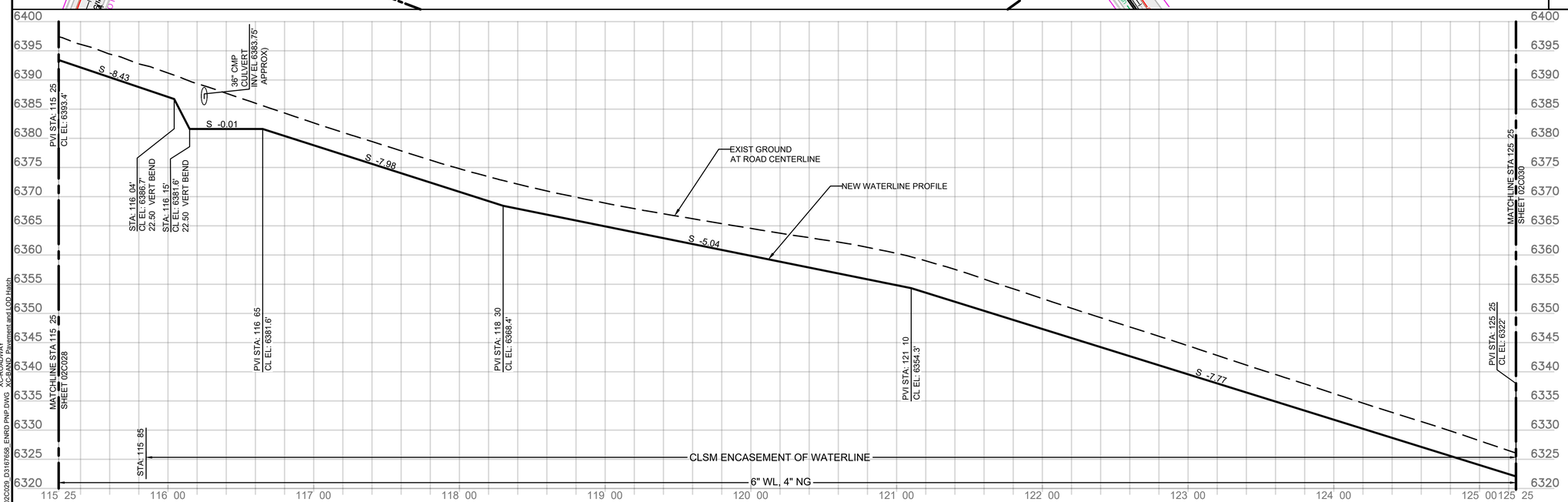
CLIN OPTION N - NATURAL GAS SYSTEM: CONTINUES FROM STA 115 25 TO STA 125 25. FOR DETAILS SEE SPECIFICATION 01 27 00.



KEYPLAN

SHEET KEYNOTES

1. PROTECT HISTORIC STONE GUTTER IN PLACE. SEE NOTES ON SHEET 00G003 AND SPECIFICATION SECTION 01 35 91.
2. INSTALL WATERLINE BELOW EXISTING CMP CULVERT WITH 18" MINIMUM VERTICAL CLEARANCE. NO JOINT IN THE WATERLINE SHALL BE INSTALLED BELOW CROSSING OF CMP. INSTALL OTHER UTILITIES FC, NG, EC) ABOVE CMP CULVERT WITH 2' MINIMUM COVER. SUPPORT EXISTING CMP.
3. INSTALL 6" GV WITH VALVE BOX PER DETAIL 1, SHEET 02C303.
4. NEW WATERLINE PARALLEL TO EXISTING FORCE MAIN SEWER. WHERE 10-FT HORIZONTAL SEPARATION CANNOT BE MAINTAINED FROM EDGE OF PIPE DUE TO OTHER UTILITIES, ENCASE WATERLINE IN CLSM PER DETAIL 5, SHEET 02C300.
5. NO CONSTRUCTION MAY OCCUR FROM STA 115 25 TO STA 123 00 BETWEEN APRIL TO JULY DUE TO ACTIVE PERIGRINE FALCON NEST IN THAT AREA.



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
2901	6" 22.5 BEND	1735328.60	1637809.07
2902	6" 22.5 BEND	1735322.11	1637810.67
2903	6" 11.25 BEND	1735252.89	1637800.20
2904	6" 11.25 BEND	1735177.92	1637773.13
2905	6" 11.25 BEND	1735126.54	1637742.14
2906	6" 11.25 BEND	1735093.29	1637711.82
2907	6" 11.25 BEND	1735054.72	1637659.50
2908	6" 11.25 BEND	1735037.72	1637623.30
2909	6" 11.25 BEND	1735023.31	1637565.05
2910	6" 11.25 BEND	1735021.92	1637535.08
2911	6" 11.25 BEND	1735027.90	1637495.53
2912	6" 11.25 BEND	1735038.09	1637467.32
2913	6" 11.25 BEND	1735065.62	1637425.76
2914	6" 11.25 BEND	1735058.86	1637433.13
2915	6" 11.25 BEND	1735073.41	1637412.95

HORIZONTAL: 40 0 40 80 — 1" = 40'
SCALE OF FEET

VERTICAL: 10 0 10 20 — 1" = 10'
SCALE OF FEET

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

MICAH E. JOHNSON NEW MEXICO 25223 PROFESSIONAL ENGINEER
Digitally signed by Micah E. Johnson Date: 2025.04.08 16:50:34-06'00'

DESIGNED:	M. COUTURE
CADD	J. FIGUEROA
TECH. REVIEW:	D. HUANG
DATE:	04/11/2025
SUB SHEET NO.	02C029

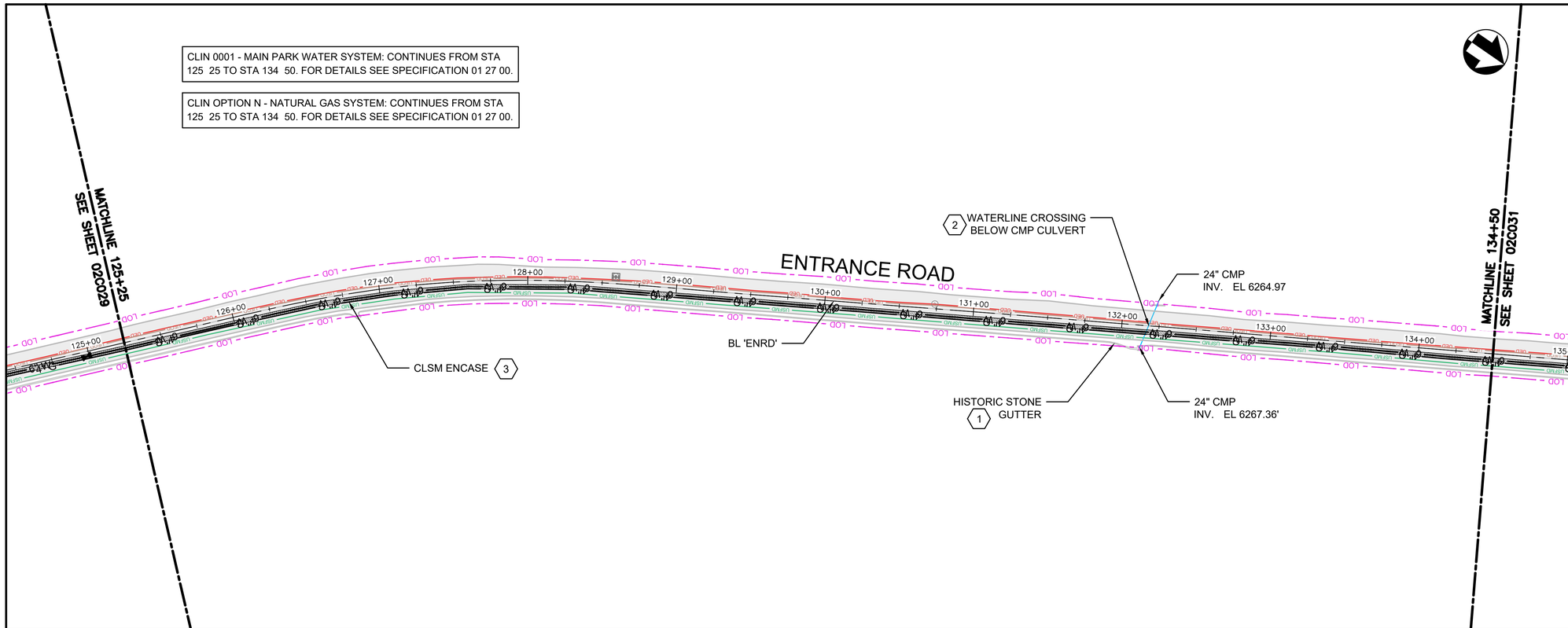
TITLE OF SHEET
CIVIL
BL 'ENTRANCE ROAD' STA 115+25 TO 125+25 PLAN AND PROFILE
BANDELIER NATIONAL MONUMENT

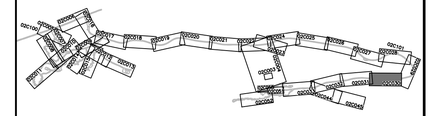
DRAWING NO. 315
182751
PMIS/PKG NO. 266697
SHEET 56 OF 203

3/30/2025 6:29 PM FIGUEROAJ R24 02C029 D3167658_ENRD PNP.DWG XC-BAND PROFILES XC-BAND_2D-EG-Master XC-BAND_2D-EG-Master XC-BAND_2D-EG-Master XC-ALIGN BAND XE-E ecir ca Pro oaed and E st n Master XC-UTILITY SITE XC-UTILITY SITE_3D XC-UTILITY SITE BAND APE e tens ons XC-ROADWAY XC-2D-Pavement and LOD Hatch

CLIN 0001 - MAIN PARK WATER SYSTEM: CONTINUES FROM STA 125 25 TO STA 134 50. FOR DETAILS SEE SPECIFICATION 01 27 00.

CLIN OPTION N - NATURAL GAS SYSTEM: CONTINUES FROM STA 125 25 TO STA 134 50. FOR DETAILS SEE SPECIFICATION 01 27 00.

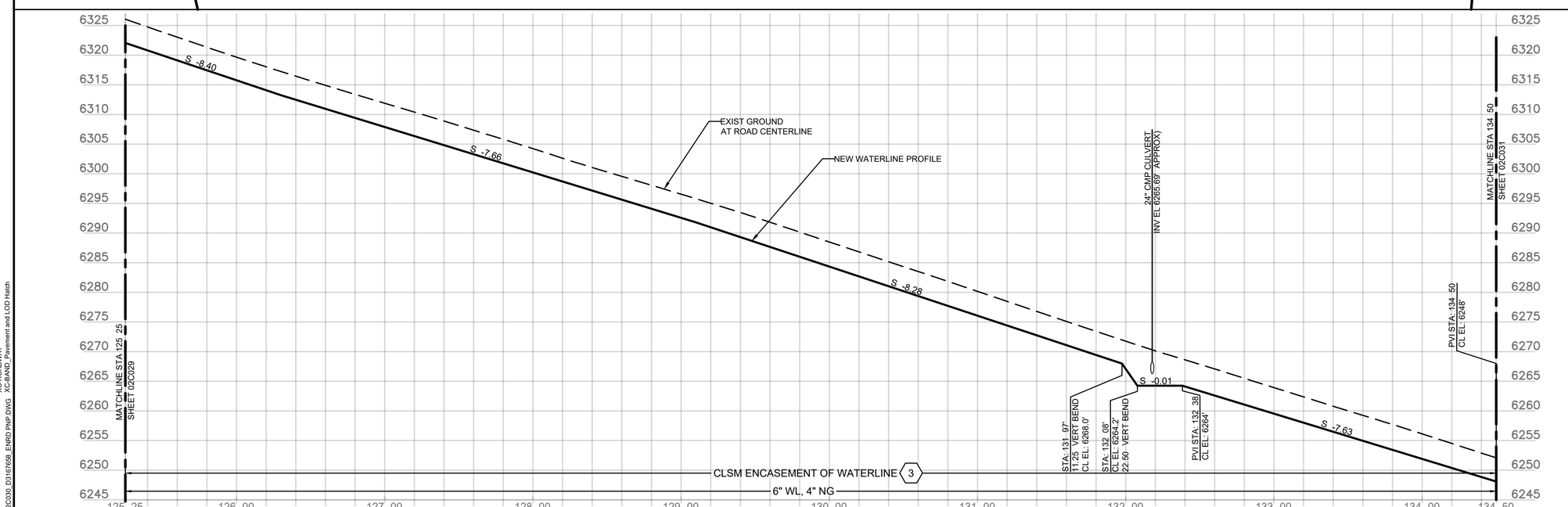




KEYPLAN

SHEET KEYNOTES

1. PROTECT HISTORIC STONE GUTTER IN PLACE. SEE NOTES ON SHEET 00G003 AND SPECIFICATION SECTION 01 35 91.
2. INSTALL WATERLINE BELOW EXISTING CMP CULVERT WITH 18" MINIMUM VERTICAL CLEARANCE. NO JOINT IN THE WATERLINE SHALL BE INSTALLED BELOW CROSSING OF CMP. INSTALL OTHER UTILITIES FC, NG, EC) ABOVE CMP CULVERT WITH 2' MINIMUM COVER. SUPPORT EXISTING STORM CMP.
3. NEW WATERLINE PARALLEL TO EXISTING FORCE MAIN SEWER. WHERE 10-FT HORIZONTAL SEPARATION FROM EDGE OF PIPE CANNOT BE MATAINED DUE TO OTHER UTILITIES, ENCASE WATERLINE IN CLSM PER DETAIL 5, SHEET 02C300.



HORIZONTAL: 40 0 40 80 — 1" = 40' SCALE OF FEET

VERTICAL: 10 0 10 20 — 1" = 10' SCALE OF FEET

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 16:51:19-06'00'
PROFESSIONAL ENGINEER

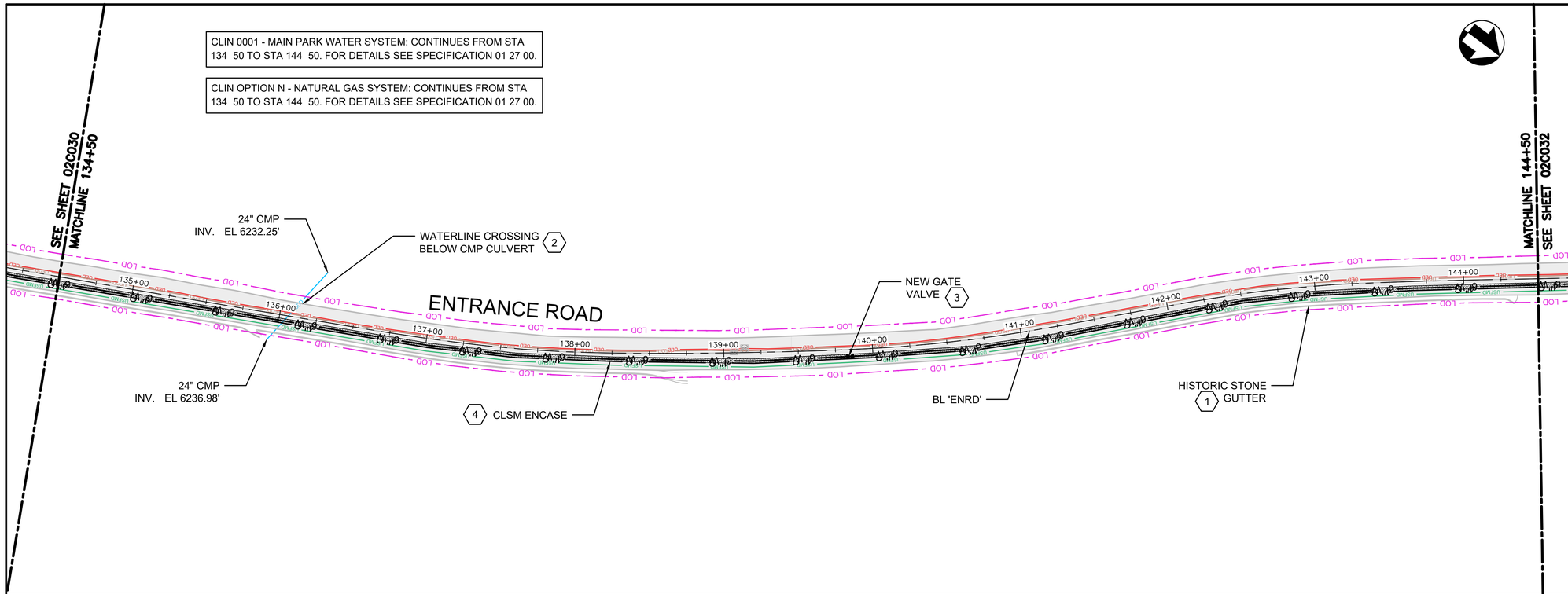
DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
M.COUTURE	02C030	CIVIL BL 'ENTRANCE ROAD' STA 125+25 TO 134+50 PLAN AND PROFILE BANDELIER NATIONAL MONUMENT	315 182751
CADD: J. FIGUEROA			PMIS/PKG NO. 266697
TECH. REVIEW: D. HUANG			SHEET 57 OF 203
DATE: 04/11/2025			

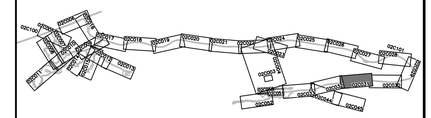
XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND PROFILES-Master
XC-BAND_BAND
XE-E.xctr ca Pro osed and E st n Master
XC-UTILITY SITE
XC-CDW-Water Line
XC-BAND_Pavement and LOD Hatch

3/30/2025 6:47 PM FIGUEROAJ R24 02C030_D3167658_ENRD PNP.DWG

CLIN 0001 - MAIN PARK WATER SYSTEM: CONTINUES FROM STA 134 50 TO STA 144 50. FOR DETAILS SEE SPECIFICATION 01 27 00.

CLIN OPTION N - NATURAL GAS SYSTEM: CONTINUES FROM STA 134 50 TO STA 144 50. FOR DETAILS SEE SPECIFICATION 01 27 00.

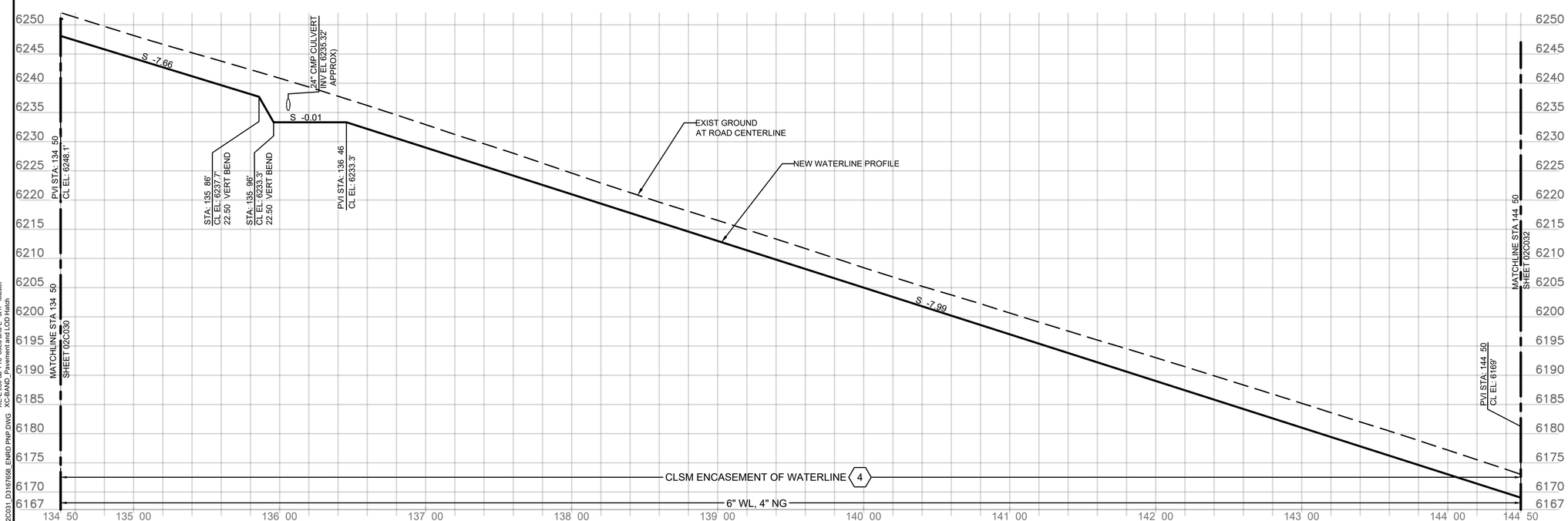




KEYPLAN

SHEET KEYNOTES

1. PROTECT HISTORIC STONE GUTTER IN PLACE. SEE NOTES ON SHEET 00G003 AND SPECIFICATION SECTION 01 35 91.
2. INSTALL WATERLINE BELOW EXISTING CMP CULVERT WITH 18" MINIMUM VERTICAL CLEARANCE. NO JOINT IN THE WATERLINE SHALL BE INSTALLED BELOW CROSSING OF CMP. INSTALL OTHER UTILITIES FC, NG, EC) ABOVE CMP CULVERT WITH 2' MINIMUM COVER. SUPPORT EXISTING CMP.
3. INSTALL 6" GV WITH VALVE BOX PER DETAIL 1, SHEET 02C303.
4. NEW WATERLINE PARALLEL TO EXISTING FORCE MAIN SEWER. WHERE 10-FT HORIZONTAL SEPARATION CANNOT BE MAINTAINED FROM EDGE OF PIPE DUE TO OTHER UTILITIES, ENCASE WATERLINE IN CLSM PER DETAIL 5, SHEET 02C300.



HORIZONTAL: 40 0 40 80 — SCALE OF FEET — 1" = 40'

VERTICAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 16:52:14-06'00'
PROFESSIONAL ENGINEER

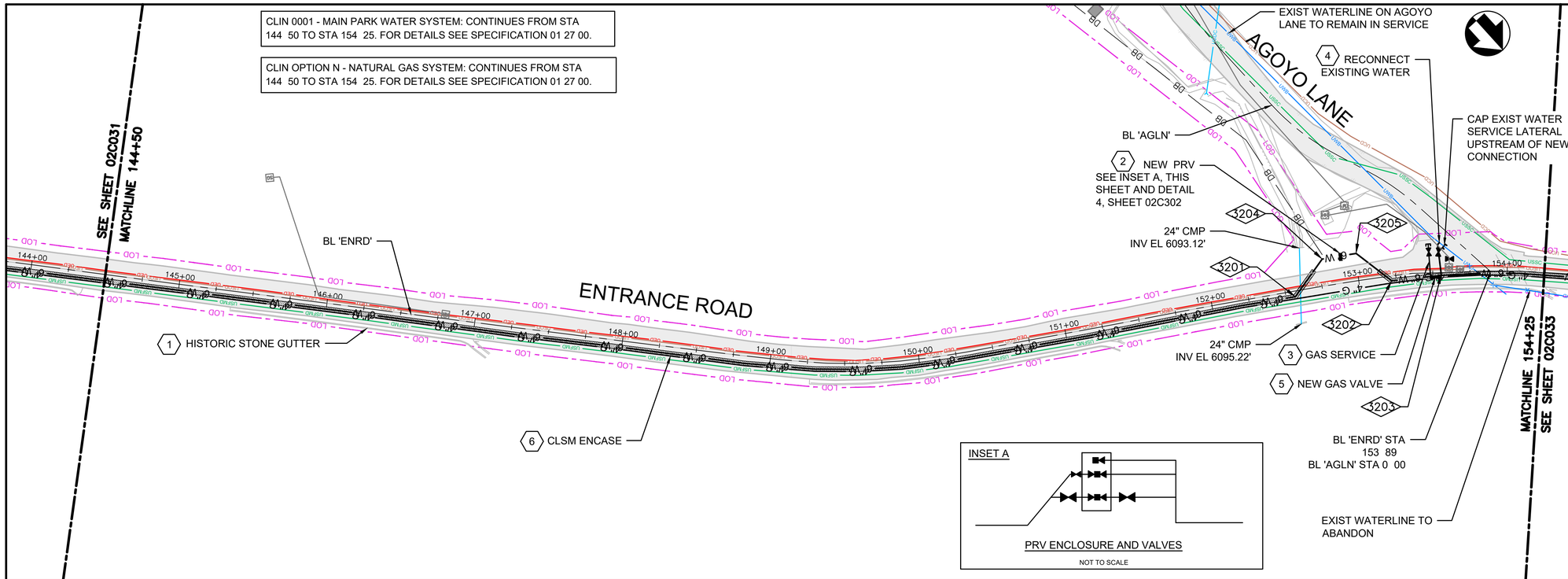
DESIGNED: M.COUTURE	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
CADD J. FIGUEROA	02C031	CIVIL	315
TECH. REVIEW: M JOHNSON		BL 'ENTRANCE ROAD' STA 134+50 TO 144+50 PLAN AND PROFILE	182751
DATE: 04/11/2025		BANDELIER NATIONAL MONUMENT	PMIS/PKG NO. 266697
			SHEET 58 OF 203

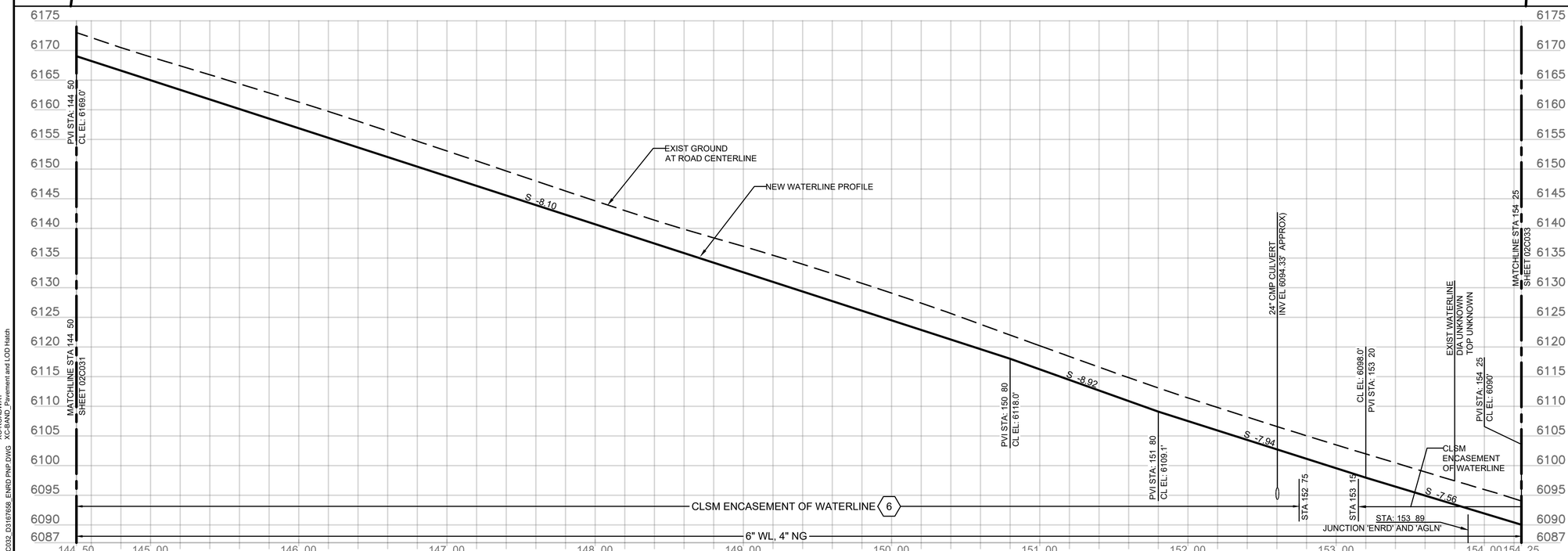
XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND PROFILES-Master
XC-BAND_02EG
XC-ALIGN_BAND
XC-UTILITY SITE
XC-ROADWAY
XC-EG-Proposed and E. st'n. Master
XC-BAND_Pavement and LOD Hatch

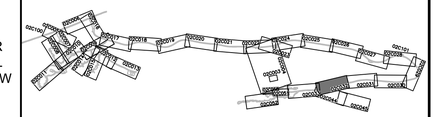
3/31/2025 1:57 PM FIGUEROAJ R24 02C031_D3167658_ENRD.PNP.DWG

CLIN 0001 - MAIN PARK WATER SYSTEM: CONTINUES FROM STA 144 50 TO STA 154 25. FOR DETAILS SEE SPECIFICATION 01 27 00.

CLIN OPTION N - NATURAL GAS SYSTEM: CONTINUES FROM STA 144 50 TO STA 154 25. FOR DETAILS SEE SPECIFICATION 01 27 00.







KEYPLAN

SHEET KEYNOTES

1. PROTECT HISTORIC STONE GUTTER IN PLACE. SEE NOTES ON SHEET 00G003 AND SPECIFICATION SECTION 01 35 91.
2. INSTALL ABOVE GROUND PRV AND GATE VALVES WITH BOX ENCLOSURE PER DETAIL 4, SHEET 02C302. INSTALL BOLLARDS PER DETAIL 4, SHEET 02C300.
3. INSTALL 4" 1" TEE WITH 1" GAS BALL VALVE PER DETAIL 2, SHEET 02C501.
4. POTHOLE EXISTING WATERLINE ON AGOYO LANE TO CONFIRM LOCATION AND DIAMETER PRIOR TO WORK. AFTER SUCCESSFUL TESTING OF NEW WATER MAIN, CONNECT EXISTING WATERLINE FROM AGOYO LANE WITH TEE, GV SAME SIZE AS EXIST WATER SERVICE LATERAL ON AGOYO LANE WITH VALVE BOXES PER DETAIL 1, SHEET 02C303. COORDINATE SHUTDOWN OF SERVICE LATERAL ON AGOYO LANE WITH CONTRACTING OFFICER.
5. INSTALL 4" BALL VALVE PER DETAIL 2, SHEET 02C501.
6. NEW WATERLINE PARALLEL TO EXISTING FORCE MAIN SEWER. WHERE 10-FT HORIZONTAL SEPARATION CANNOT BE MAINTAINED FROM EDGE OF PIPE DUE TO OTHER UTILITIES, ENCASE WATERLINE IN CLSM PER DETAIL 5, SHEET 02C300.

COGO POINT TABLE

COGO POINT TABLE	DESCRIPTION	NORTHING	EASTING
3201	6" 45 BEND	1737377.90	1635450.42
3202	6" 45 BEND	1737413.30	1635395.24
3203	TEE GV SEE KEYNOTE 4 FOR SIZE	1737432.86	1635368.00
3204	6" 45 BEND	1737371.22	1635420.12
3205	6" 45 BEND	1737383.65	1635400.67

HORIZONTAL: 40 0 40 80 — SCALE OF FEET — 1" = 40'

VERTICAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND_PROFILES
XC-AGLN_BAND
XE-E ectr ca Pro oseD and E ati n Master
XC-UTILITY SITE
XC-BAND_Water
XC-BAND_Pavement and LOD Hatch

3/30/2025 6:54 PM FIGUEROA,J R24 02C032_D3167658_ENRD PNP.DWG

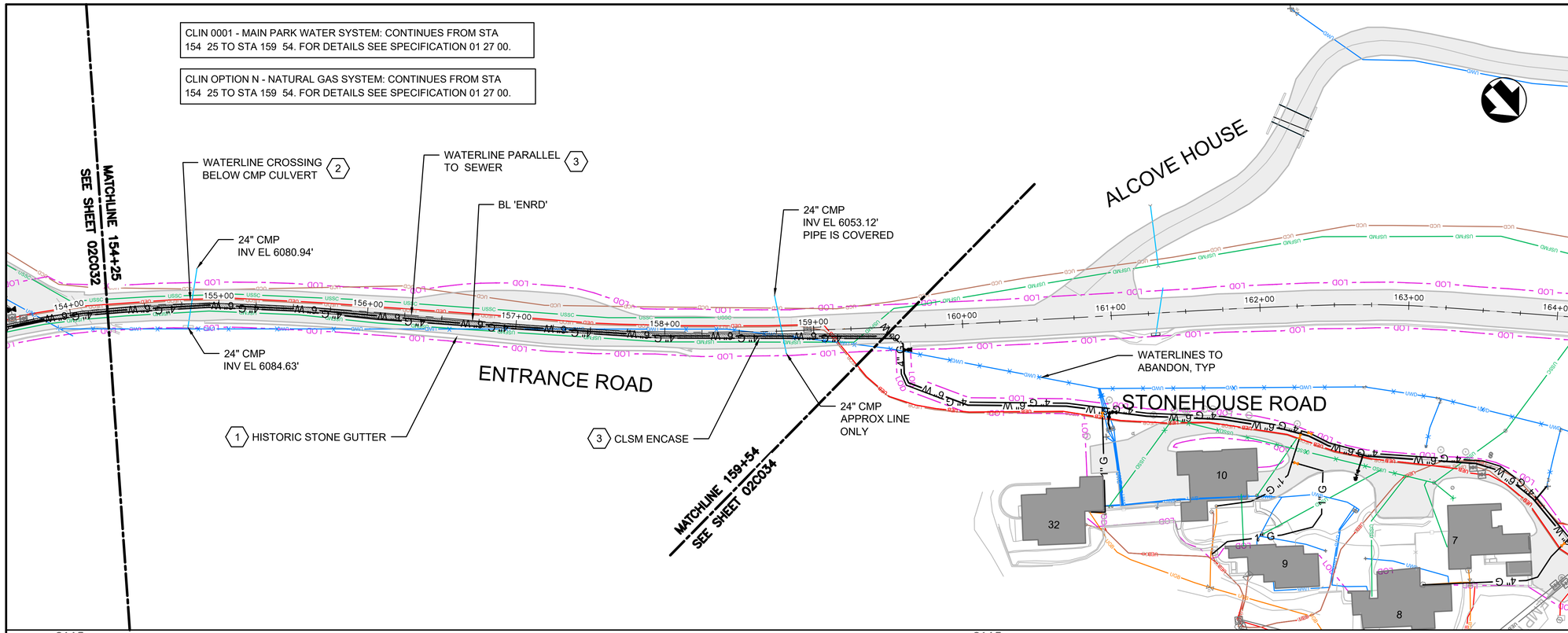
FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 16:52:57-06'00'
PROFESSIONAL ENGINEER

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
M. COUTURE	02C032	CIVIL BL 'ENTRANCE ROAD' STA 144+50 TO 154+25 PLAN AND PROFILE BANDELIER NATIONAL MONUMENT	315 182751
CADD J. FIGUEROA			PMIS/PKG NO. 266697
TECH. REVIEW: D. HUANG			SHEET 59 OF 203
DATE: 04/11/2025			

CLIN 0001 - MAIN PARK WATER SYSTEM: CONTINUES FROM STA 154 25 TO STA 159 54. FOR DETAILS SEE SPECIFICATION 01 27 00.

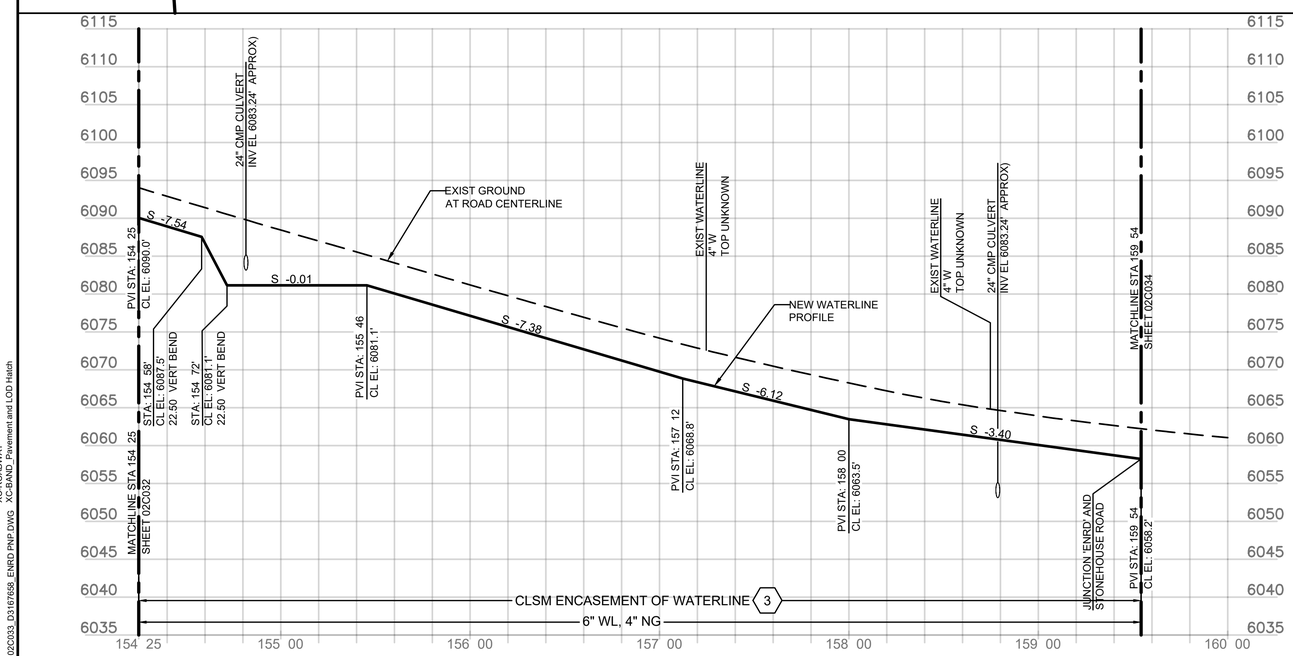
CLIN OPTION N - NATURAL GAS SYSTEM: CONTINUES FROM STA 154 25 TO STA 159 54. FOR DETAILS SEE SPECIFICATION 01 27 00.



KEYPLAN

SHEET KEYNOTES

1. PROTECT HISTORIC STONE GUTTER IN PLACE. SEE NOTES ON SHEET 00G003 AND SPECIFICATION SECTION 01 35 91.
2. INSTALL WATERLINE BELOW EXISTING CMP CULVERT WITH 18" MINIMUM VERTICAL CLEARANCE. NO JOINT IN THE WATERLINE SHALL BE INSTALLED BELOW CROSSING OF CMP. INSTALL OTHER UTILITIES FC, NG, EC) ABOVE CMP CULVERT WITH 2' MINIMUM COVER. SUPPORT EXISTING CMP.
3. NEW WATERLINE PARALLEL TO EXISTING FORCE MAIN SEWER. WHERE 10-FT HORIZONTAL SEPARATION CANNOT BE MAINTAINED FROM EDGE OF PIPE DUE TO OTHER UTILITIES, ENCASE WATERLINE IN CLSM PER DETAIL 5, SHEET 02C300.



HORIZONTAL: 40 0 40 80 — SCALE OF FEET — 1" = 40'

VERTICAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

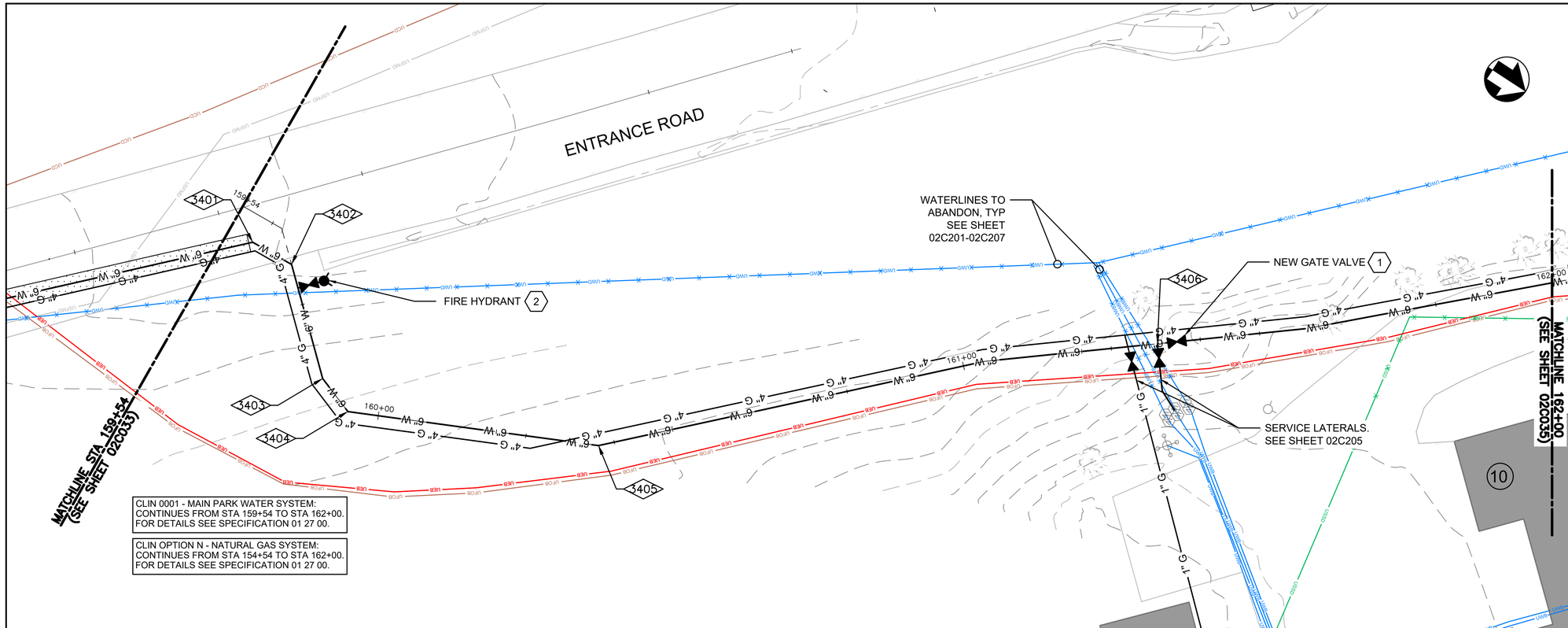
FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

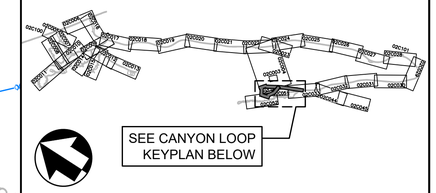
MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 15:53:36-06'00'
PROFESSIONAL ENGINEER

DESIGNED: M.COUTURE	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
CADD J. FIGUEROA	02C033	CIVIL	315
TECH. REVIEW: D. HUANG		BL 'ENTRANCE ROAD' STA 154+25 TO 159+54 PLAN AND PROFILE	182751
DATE: 04/11/2025		BANDELIER NATIONAL MONUMENT	PMIS/PKG NO. 266697
			SHEET 60 OF 203

XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND_PROFILES-Master
XC-ALIGN_BAND
XE-Existing Pro osed and E st n Master
XC-UTILITY SITE
XC-CONTOURS
XC-BAND_Pavement and LOD Hatch

3/30/2025 7:00 PM FIGUEROAJ R24 02C033_D3167658_ENRD PNP.DWG



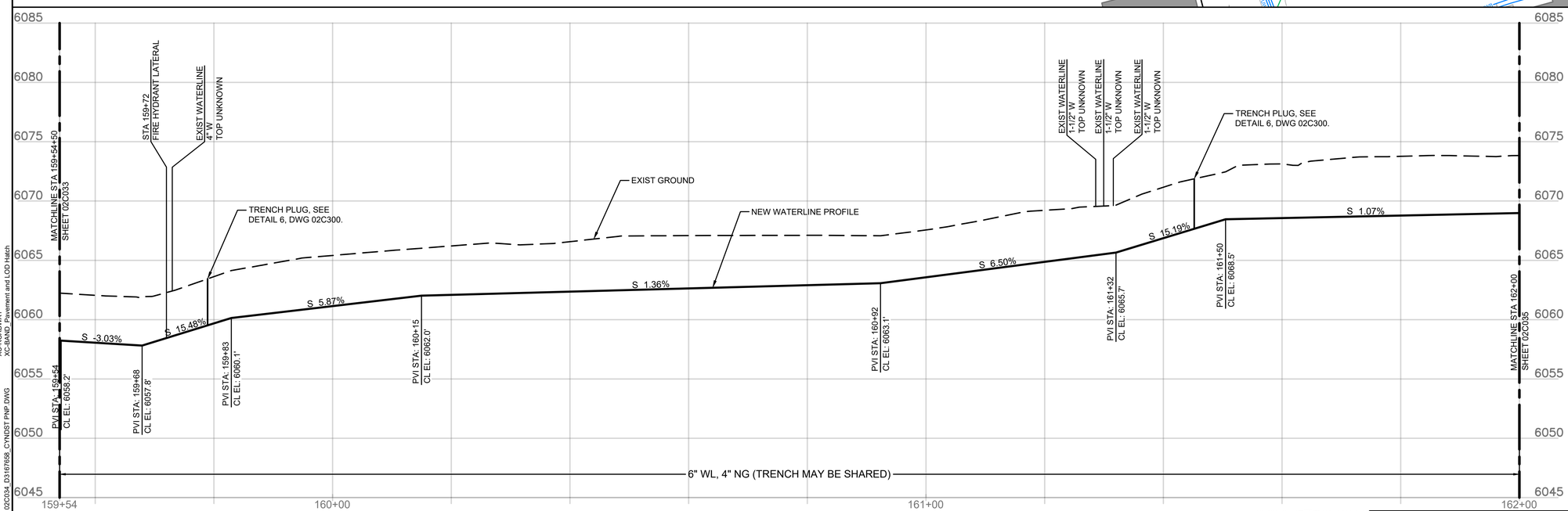


KEYPLAN

CANYON LOOP KEYPLAN

SHEET KEYNOTES

1. INSTALL 6" GV WITH VALVE BOX PER DETAIL 1, SHEET 02C303.
2. INSTALL NEW FIRE HYDRANT PER DETAIL 3, SHEET 02C301.



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
3401	6" 45° BEND	1737898.78	1634995.02
3402	6" 45° BEND	1737906.28	1634995.46
3403	6" 22.5° BEND	1737919.46	1635010.29
3404	6" 45° BEND	1737925.70	1635013.38
3405	6" 22.5° BEND	1737965.94	1634999.81
3406	6"x6"x4" TEE, 6" GV, 4" GV	1738042.42	1634942.87

HORIZONTAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

VERTICAL: 5 0 5 10 — SCALE OF FEET — 1" = 5'

FULL SIZE DRAWINGS = 22"x34" BAR MEASURES 1" LONG 0" 1"

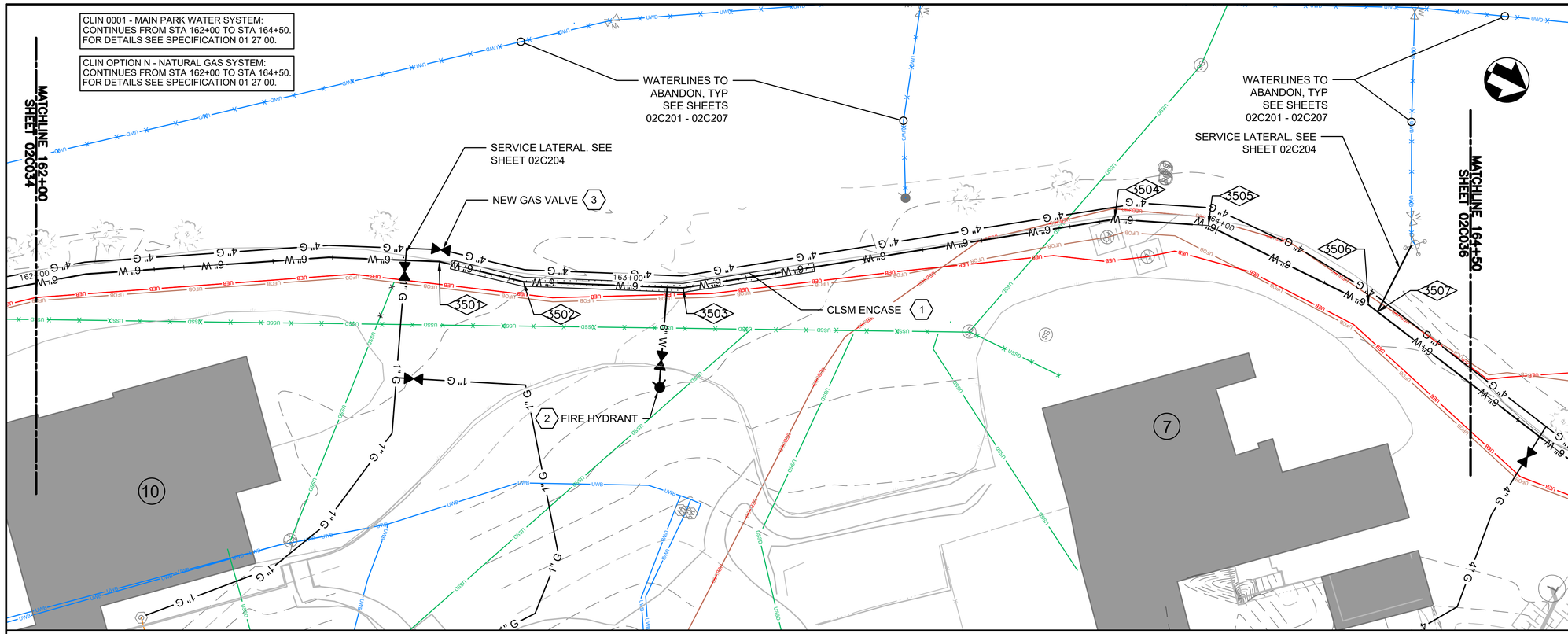
MICAH E. JOHNSON NEW MEXICO 25223 PROFESSIONAL ENGINEER
Digitally signed by Micah E. Johnson Date: 2025.04.08 16:54:17-06'00'

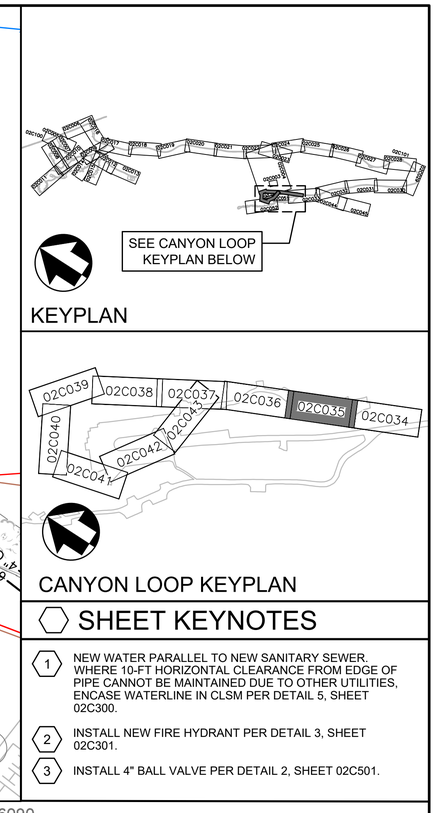
DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
M. JOHNSON	02C034	CIVIL	315
CADD: J. FIGUEROA		CANYON LOOP	182751
TECH. REVIEW: D. HUANG		STA 159+54 TO 162+00	PMIS/PKG NO. 266697
DATE: 04/11/2025		PLAN AND PROFILE	SHEET 61 OF 203
		BANDELIER NATIONAL MONUMENT	

3/30/2025 7:08 PM FIGUEROAJ R24 02C034 D3167658_CYNDST PNP.DWG
XG-Border BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND_2D-EG-Master
XC-ALIGNMENT-BAND
XE-Electrical Proposed and Existing Master
XC-UTILITY SITE
XC-ROADWAY
XC-BAND_Pavement and LOD Hatch

CLIN 0001 - MAIN PARK WATER SYSTEM:
CONTINUES FROM STA 162+00 TO STA 164+50.
FOR DETAILS SEE SPECIFICATION 01 27 00.

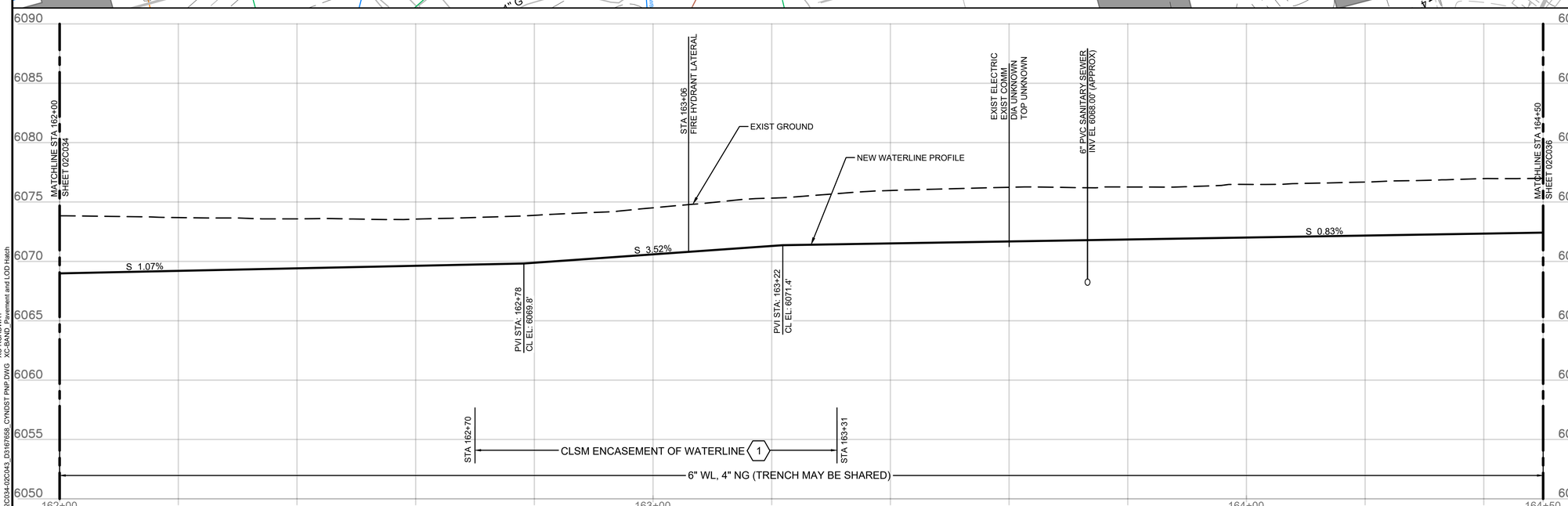
CLIN OPTION N - NATURAL GAS SYSTEM:
CONTINUES FROM STA 162+00 TO STA 164+50.
FOR DETAILS SEE SPECIFICATION 01 27 00.





SHEET KEYNOTES

1. NEW WATER PARALLEL TO NEW SANITARY SEWER. WHERE 10-FT HORIZONTAL CLEARANCE FROM EDGE OF PIPE CANNOT BE MAINTAINED DUE TO OTHER UTILITIES, ENCASE WATERLINE IN CLSM PER DETAIL 5, SHEET 02C300.
2. INSTALL NEW FIRE HYDRANT PER DETAIL 3, SHEET 02C301.
3. INSTALL 4" BALL VALVE PER DETAIL 2, SHEET 02C501.



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
3501	6" 11.25° BEND	1738156.37	1634870.92
3502	6" 11.25° BEND	1738170.52	1634867.68
3503	6" 11.25° BEND	1738194.99	1634856.72
3504	6" 11.25° BEND	1738254.80	1634814.24
3505	6" 22.50° BEND	1738269.38	1634808.20
3506	6" 11.25° BEND	1738299.39	1634808.20
3507	6"X6" TEE	1738301.23	1634808.57

HORIZONTAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

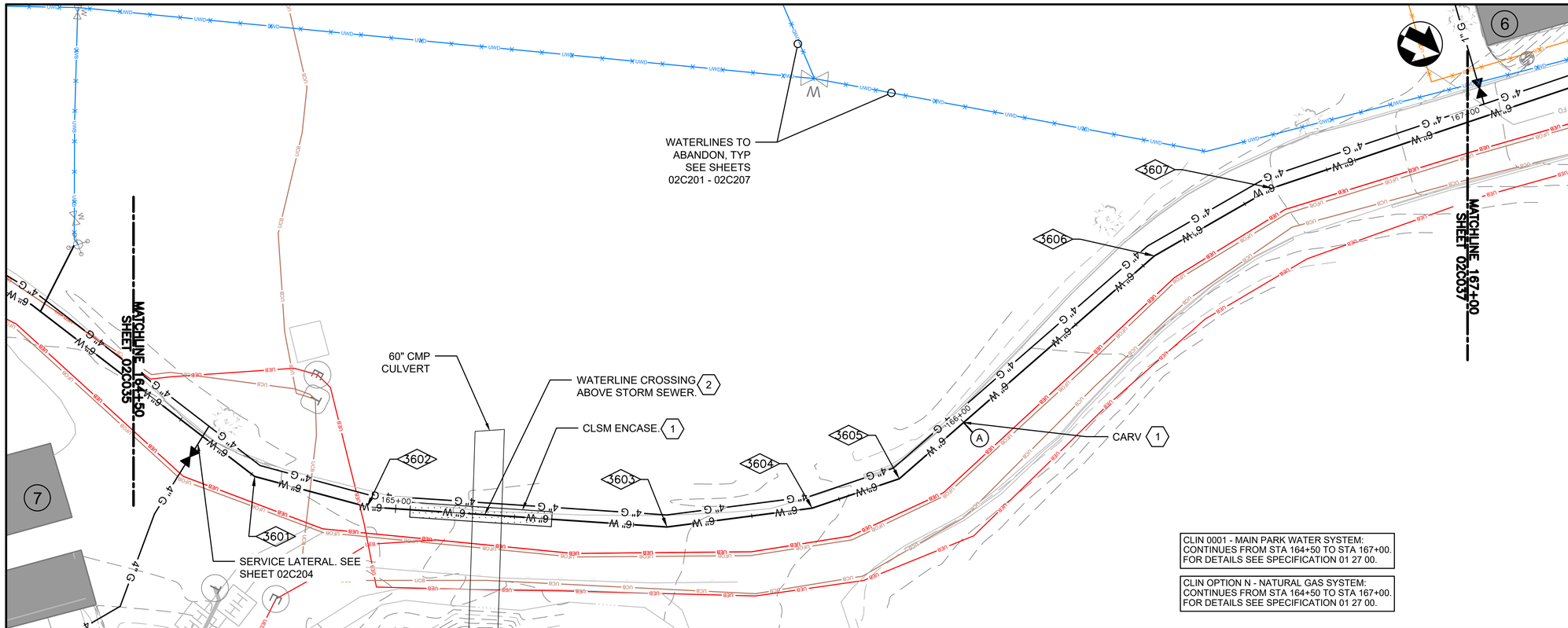
VERTICAL: 5 0 5 10 — SCALE OF FEET — 1" = 5'

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 15:54:57-06'00'
PROFESSIONAL ENGINEER

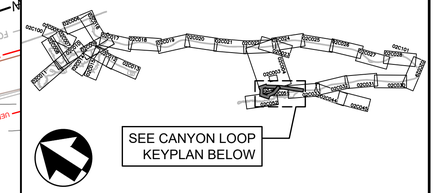
DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
M. JOHNSON	02C035	CIVIL	315
CADD: J. FIGUEROA		CANYON LOOP	182751
TECH. REVIEW: D. HUANG		STA 162+00 TO 164+50	PMIS/PKG NO. 266697
DATE: 04/11/2025		PLAN AND PROFILE	SHEET 62 OF 203
		BANDELIER NATIONAL MONUMENT	

3/30/2025 7:10 PM FIGUEROAJ R24 02C034-02C043_03187658_CYNDST PNP.DWG
XC-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND_2D-EG-Master
XC-ALIGNMENT-BAND
XE-Electrical Proposed and Existing Master
XC-UTILITY SITE
XC-ROADWAY
XC-BAND_Pavement and LOD Hatch

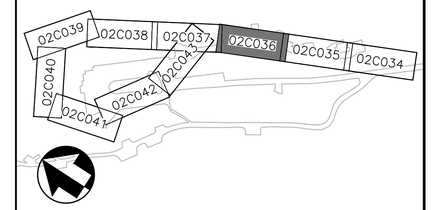


CLIN 0001 - MAIN PARK WATER SYSTEM: CONTINUES FROM STA 164+50 TO STA 167+00. FOR DETAILS SEE SPECIFICATION 01 27 00.

CLIN OPTION N - NATURAL GAS SYSTEM: CONTINUES FROM STA 164+50 TO STA 167+00. FOR DETAILS SEE SPECIFICATION 01 27 00.



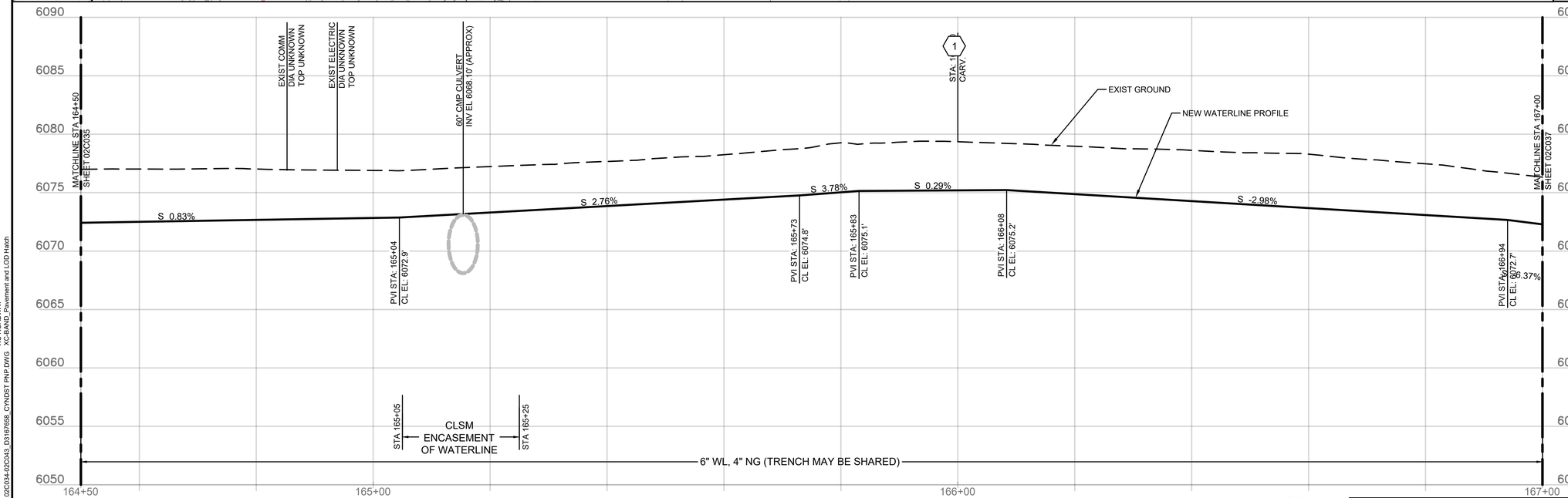
KEYPLAN



CANYON LOOP KEYPLAN

SHEET KEYNOTES

1. INSTALL NEW 1" COMBINATION AIR RELEASE VACUUM (CARV) VALVE IN MANHOLE PER DETAIL 3, SHEET 02C303. ROUTE VENT PIPING TO SIDE OF THE ROAD. LOCATION TO BE DETERMINED IN THE FIELD WITH CONTRACTING OFFICER.
2. INSTALL NEW WATERLINE ABOVE EXISTING CMP CULVERT WITH MINIMUM 3' OF COVER. ENCASE WATERLINE IN CLSM FOR 10' ON EACH SIDE OF CROSSING. INSTALL GAS LINE ABOVE CMP CULVERT WITH 2' MINIMUM COVER. TEST PIT COVER OVER EXISTING CMP.



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
3601	6" 22.50° BEND	1738345.74	1634817.42
3602	6" 11.25° BEND	1738364.92	1634813.60
3603	6" 11.25° BEND	1738411.52	1634794.30
3604	6" 11.25° BEND	1738431.95	1634780.65
3605	6" 22.50° BEND	1738442.86	1634769.74
3606	6" 11.25° BEND	1738464.62	1634717.21
3607	6" 11.25° BEND	1738477.30	1634698.23

HORIZONTAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

VERTICAL: 5 0 5 10 — SCALE OF FEET — 1" = 5'

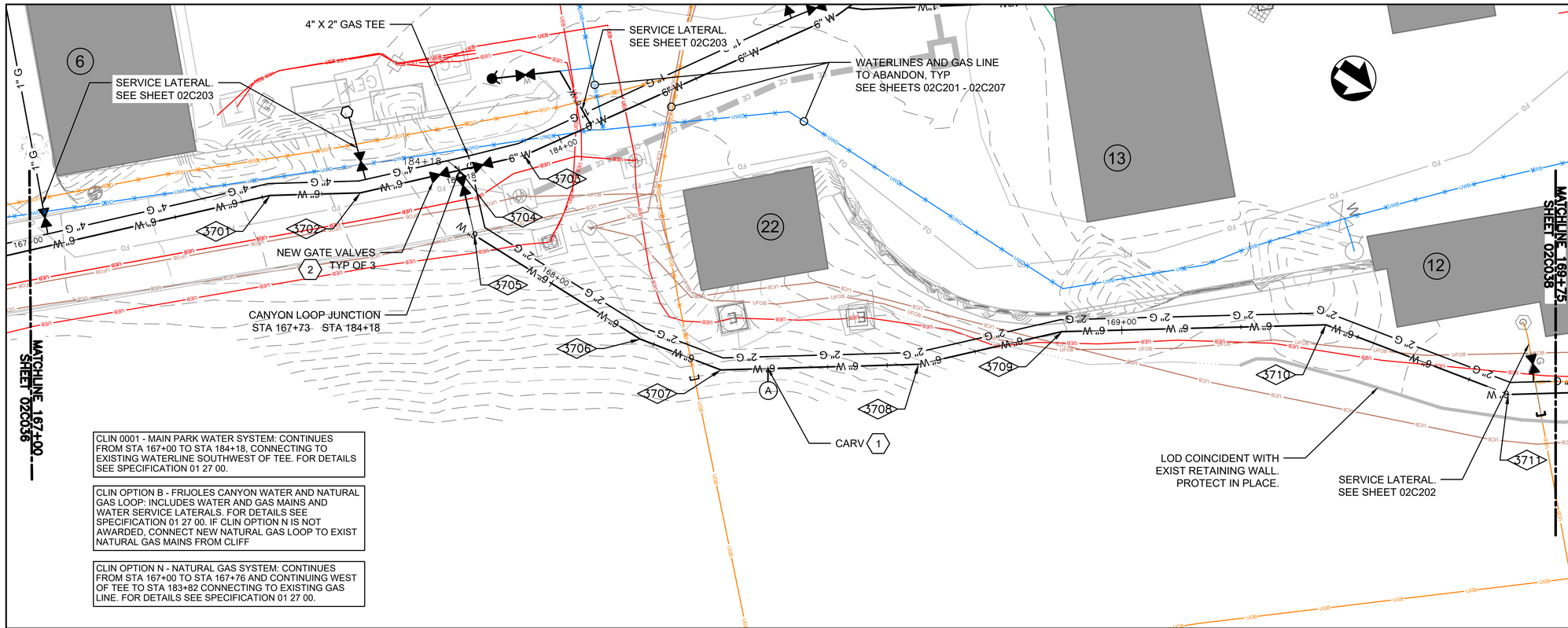
FULL SIZE DRAWINGS = 22"x34" BAR MEASURES 1" LONG

MICAH E. JOHNSON NEW MEXICO 25223 PROFESSIONAL ENGINEER
Digitally signed by Micah E. Johnson Date: 2025.04.08 16:55:38-06'00'

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
M. JOHNSON	02C036	CIVIL CANYON LOOP STA 164+50 TO 167+00 PLAN AND PROFILE BANDELIER NATIONAL MONUMENT	315 182751
CADD: J. FIGUEROA			PMIS/PKG NO. 266697
TECH. REVIEW: D. HUANG			SHEET 63 OF 203
DATE: 04/11/2025			

XG:Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND_2D-EG-Master
XC-BAND_2D-NEW
XE-Electrical Proposed and Existing Master
XC-UTILITY SITE
XC-2D-DRIVE
XC-BAND_Pavement and LOD Hatch

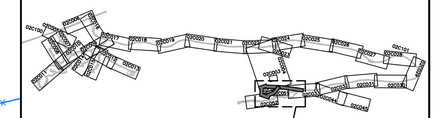
3/30/2025 7:12 PM FIGUEROAJ R24 02C034-02C043_D3167658_CYNDST PNP.DWG



CLIN 0001 - MAIN PARK WATER SYSTEM: CONTINUES FROM STA 167+00 TO STA 184+18, CONNECTING TO EXISTING WATERLINE SOUTHWEST OF TEE. FOR DETAILS SEE SPECIFICATION 01 27 00.

CLIN OPTION B - FRIJOLES CANYON WATER AND NATURAL GAS LOOP: INCLUDES WATER AND GAS MAINS AND WATER SERVICE LATERALS. FOR DETAILS SEE SPECIFICATION 01 27 00. IF CLIN OPTION N IS NOT AWARDED, CONNECT NEW NATURAL GAS LOOP TO EXIST NATURAL GAS MAINS FROM CLIFF

CLIN OPTION N - NATURAL GAS SYSTEM: CONTINUES FROM STA 167+00 TO STA 167+76 AND CONTINUING WEST OF TEE TO STA 183+82 CONNECTING TO EXISTING GAS LINE. FOR DETAILS SEE SPECIFICATION 01 27 00.

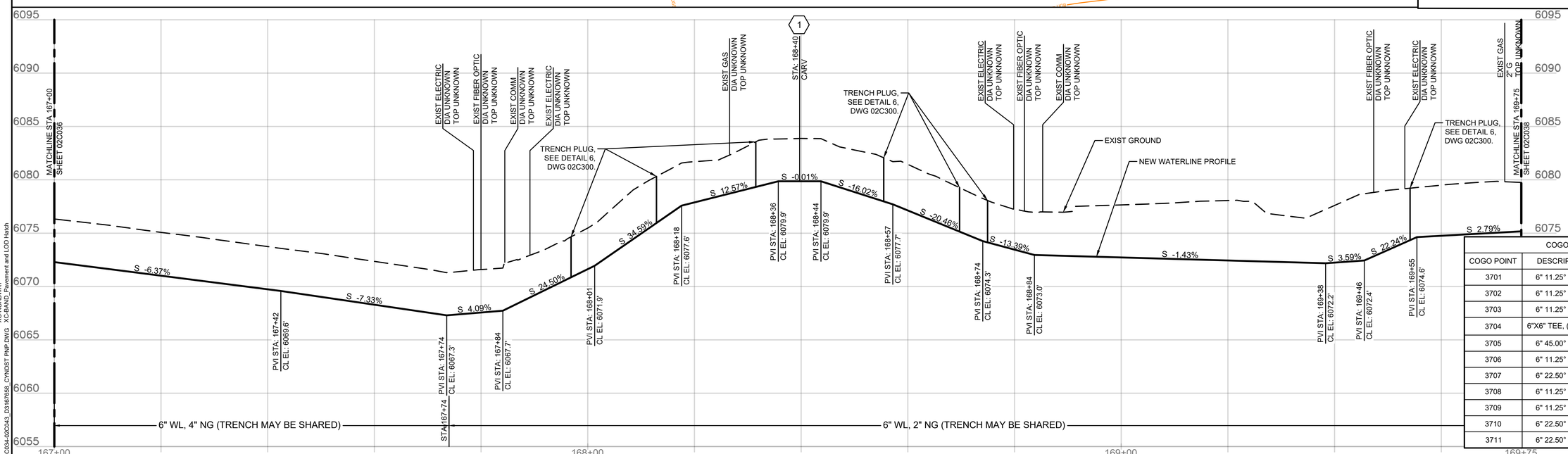


KEYPLAN

CANYON LOOP KEYPLAN

SHEET KEYNOTES

1. INSTALL NEW 1" COMBINATION AIR RELEASE VACUUM (CARV) VALVE IN MANHOLE PER DETAIL 3, SHEET 02C303. ROUTE VENT PIPING TO SIDE OF THE ROAD. FINAL LOCATION TO BE DETERMINED IN THE FIELD WITH CONTRACTING OFFICER.
2. INSTALL 6" GV WITH VALVE BOX PER DETAIL 1, SHEET 02C303.



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
3701	6" 11.25° BEND	1738531.03	1634644.50
3702	6" 11.25° BEND	1738543.63	1634636.08
3703	6" 11.25° BEND	1738563.58	1634616.12
3704	6"X6" TEE, (3) 6" GV	1738555.70	1634624.01
3705	6" 45.00° BEND	1738563.58	1634631.89
3706	6" 11.25° BEND	1738596.48	1634631.89
3707	6" 22.50° BEND	1738610.69	1634629.07
3708	6" 11.25° BEND	1738638.29	1634610.62
3709	6" 11.25° BEND	1738655.79	1634593.15
3710	6" 22.50° BEND	1738692.64	1634568.66
3711	6" 22.50° BEND	1738724.81	1634562.26

HORIZONTAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

VERTICAL: 5 0 5 10 — SCALE OF FEET — 1" = 5'

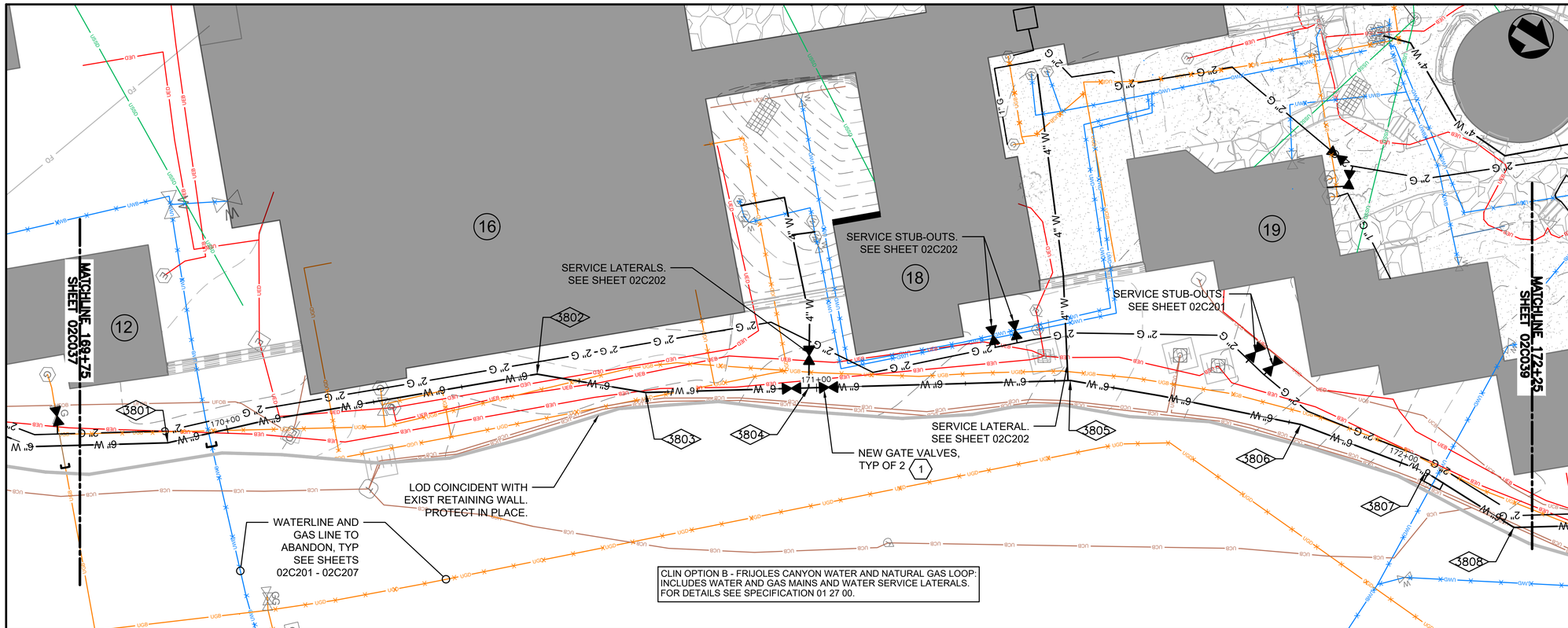
FULL SIZE DRAWINGS = 22"x34" BAR MEASURES 1" LONG

MICAH E. JOHNSON NEW MEXICO 25223 PROFESSIONAL ENGINEER
Digitally signed by Micah E. Johnson Date: 2025.04.08 16:56:18-06'00'

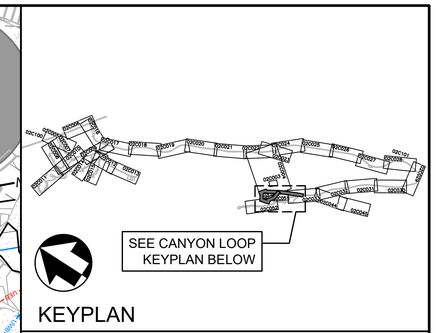
DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
M. JOHNSON	02C037	CIVIL	315
CADD: J. FIGUEROA		CANYON LOOP	182751
TECH. REVIEW: D. HUANG		STA 167+00 TO 169+75	PMIS/PKG NO. 266697
DATE: 04/11/2025		PLAN AND PROFILE	SHEET 64 OF 203
		BANDELIER NATIONAL MONUMENT	

XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND_2D-EG-Master
XC-BAND_Alt-Alignment
XE-Electrical Proposed and Existing Master
XC-UTILITY SITE
XC-BAND_Alt-Alignment
XC-BAND_Pavement and LOD Hatch

3/30/2025 7:14 PM FIGUEROAJ R24 02C034-02C043_D3167658_CYNDST PNP.DWG

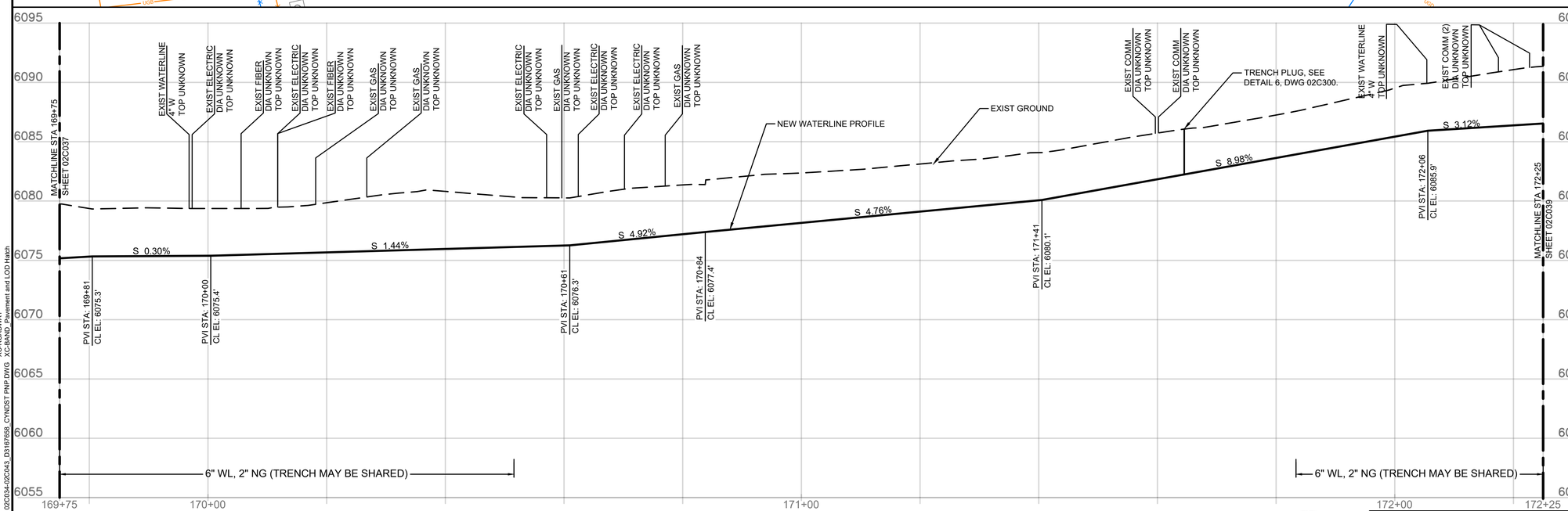


CLIN OPTION B - FRIJOLES CANYON WATER AND NATURAL GAS LOOP:
INCLUDES WATER AND GAS MAINS AND WATER SERVICE LATERALS.
FOR DETAILS SEE SPECIFICATION 01 27 00.



SHEET KEYNOTES

1. INSTALL 6" GV WITH VALVE BOX PER DETAIL 1, SHEET 02C303.



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
3801	6" 11.25° BEND	1738743.68	1634549.65
3802	6" 22.50° BEND	1738790.04	1634506.91
3803	6" 11.25° BEND	1738807.11	1634499.84
3804	6"x4" TEE, (2) 6" GV, (1) 4" GV	1738829.88	1634484.64
3805	6" 11.25° BEND	1738866.40	1634460.22
3806	6" 11.25° BEND	1738903.10	1634445.90
3807	6" 11.25° BEND	1738925.09	1634441.53
3808	6" 22.50° BEND 6" 11.25° BEND	1738942.57	1634441.53

XG-Border BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND_2D-EG-Master
XC-BAND-Alignments
XE-Electrical Proposed and Existing Master
XC-UTILITY SITE
XC-ROADWAY
XC-BAND_Pavement and LOD Hatch

3/30/2025 7:17 PM FIGUEROAJ R24 02C034-02C043_D3167658_CYNDST PNP.DWG

HORIZONTAL: 10 0 10 20 SCALE OF FEET 1" = 10'

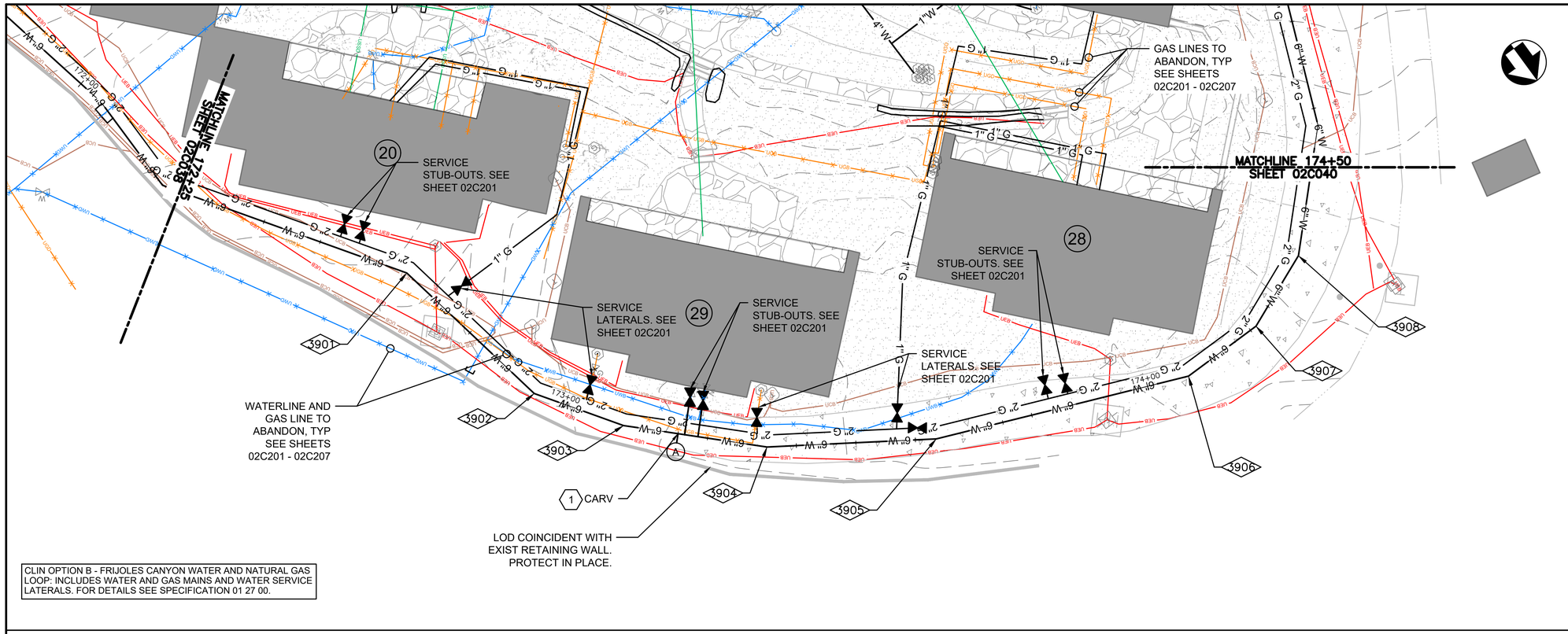
VERTICAL: 5 0 5 10 SCALE OF FEET 1" = 5'

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

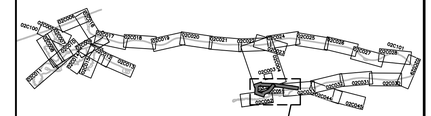
MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 15:57:06-06'00'
PROFESSIONAL ENGINEER

DESIGNED: M. JOHNSON	SUB SHEET NO.	TITLE OF SHEET
CADD J. FIGUEROA	02C038	CIVIL
TECH. REVIEW: D. HUANG		CANYON LOOP STA 169+75 TO 172+25 PLAN AND PROFILE
DATE: 04/11/2025		BANDELIER NATIONAL MONUMENT

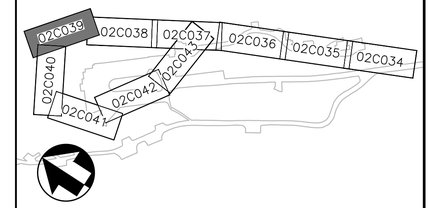
DRAWING NO. 315 / 182751
PMIS/PKG NO. 266697
SHEET 65 OF 203



CLIN OPTION B - FRIJOLES CANYON WATER AND NATURAL GAS LOOP: INCLUDES WATER AND GAS MAINS AND WATER SERVICE LATERALS. FOR DETAILS SEE SPECIFICATION 01 27 00.



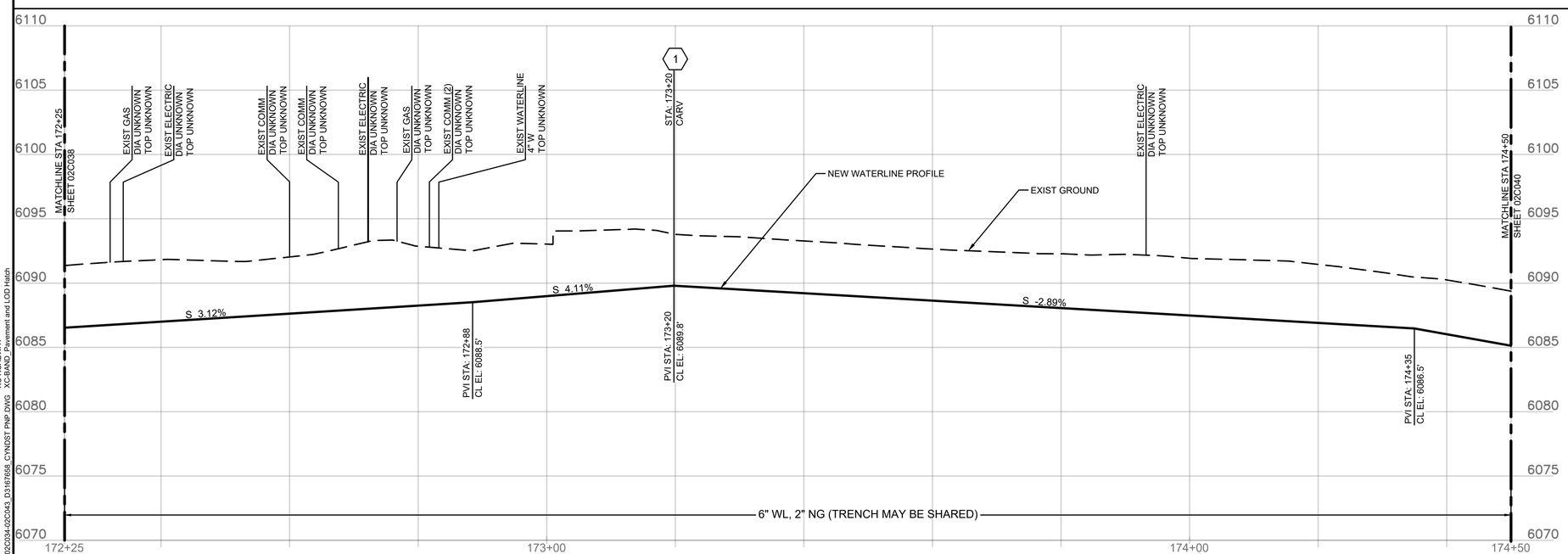
KEYPLAN



CANYON LOOP KEYPLAN

SHEET KEYNOTES

1. INSTALL NEW 1" COMBINATION AIR RELEASE VACUUM VALVE IN MANHOLE PER DETAIL 3, SHEET 02C303. ROUTE VENT PIPING TO SIDE OF THE ROAD. FINAL LOCATION TO BE DETERMINED IN THE FIELD WITH CONTRACTING OFFICER.



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
3901	6" 22.50° BEND	1738978.76	1634417.35
3902	6" 22.50° BEND	1739007.71	1634412.20
3903	6" 11.25° BEND	1739020.95	1634403.36
3904	6" 11.25° BEND	1739038.15	1634386.15
3905	6" 11.25° BEND	1739053.94	1634362.53
3906	6" 22.50° BEND	1739070.61	1634322.26
3907	6" 22.50° BEND	1739070.61	1634308.18
3908	6" 22.50° BEND	1739065.33	1634295.44

HORIZONTAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

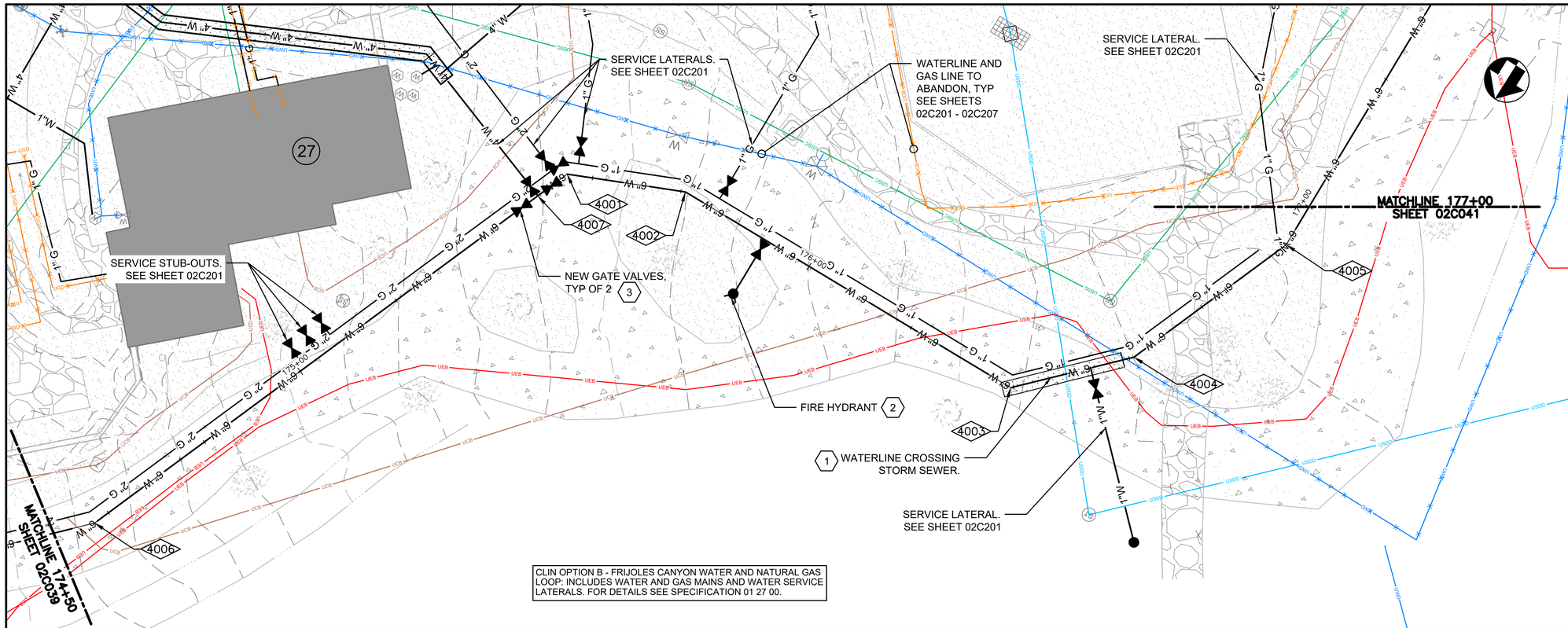
VERTICAL: 5 0 5 10 — SCALE OF FEET — 1" = 5'

FULL SIZE DRAWINGS = 22"x34" BAR MEASURES 1" LONG

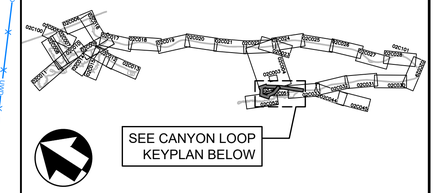
MICAH E. JOHNSON NEW MEXICO 25223 PROFESSIONAL ENGINEER
Digitally signed by Micah E. Johnson Date: 2025.04.08 16:57:47-06'00'

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
M. JOHNSON	02C039	CIVIL	315
CADD: J. FIGUEROA		CANYON LOOP	182751
TECH. REVIEW: D. HUANG		STA 172+25 TO 174+50	PMIS/PKG NO. 266697
DATE: 04/11/2025		PLAN AND PROFILE	SHEET 66 OF 203
		BANDELIER NATIONAL MONUMENT	

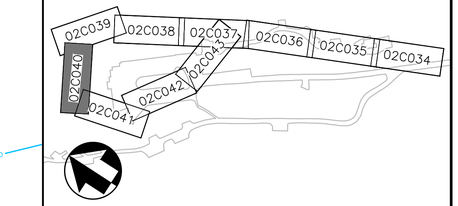
3/30/2025 7:40 PM FIGUEROAJ R24 02C034-02C043_D3167658_CYNDST PNP.DWG
XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND_2D-EG-Master
XC-EARTHWORK-BAND
XE-Electrical Proposed and Existing Master
XC-UTILITY SITE
XC-PROPOSED-WT
XC-BAND_Pavement and LOD Hatch



CLIN OPTION B - FRIJOLES CANYON WATER AND NATURAL GAS LOOP: INCLUDES WATER AND GAS MAINS AND WATER SERVICE LATERALS. FOR DETAILS SEE SPECIFICATION 01 27 00.



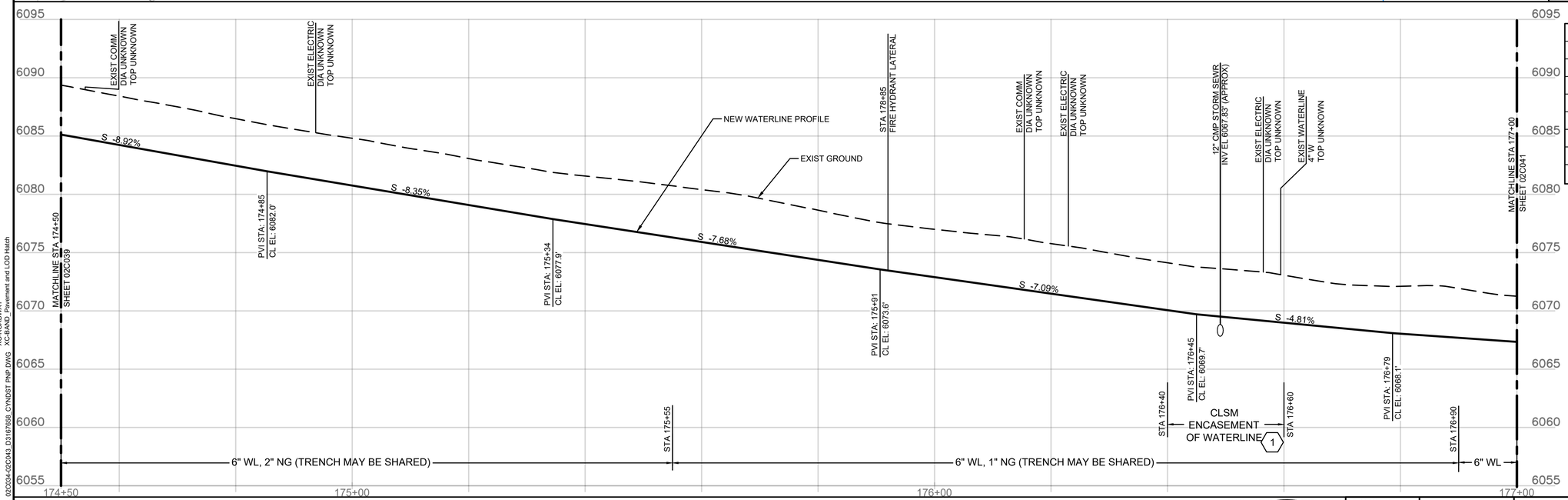
KEYPLAN



CANYON LOOP KEYPLAN

SHEET KEYNOTES

1. INSTALL NEW WATERLINE ABOVE EXISTING STORM SEWER WITH MINIMUM 3.0' OF COVER AND 12" MINIMUM CLEARANCE. ENCASE WATERLINE IN CLSM FOR 10' ON EACH SIDE OF CROSSING OF SEWER. INSTALL GAS LINE ABOVE STORM SEWER WITH 2' MINIMUM COVER.
2. INSTALL NEW FIRE HYDRANT PER DETAIL 3, SHEET 02C301.
3. INSTALL 6" GV WITH VALVE BOX PER DETAIL 1, SHEET 02C303.



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
4001	6" 45° BEND	1738958.59	1634242.05
4002	6" 22.50° BEND	1738950.91	1634223.50
4003	6" 45° BEND	1738950.91	1634159.78
4004	6" 22.50° BEND	1738935.84	1634144.71
4005	6" 22.50° BEND	1738906.47	1634132.55
4006	6" 22.50° BEND	1739049.68	1634279.78
4007	6"X4" TEE, (2) 6" GV, (1) 4" GV	1738964.24	1634244.38

HORIZONTAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

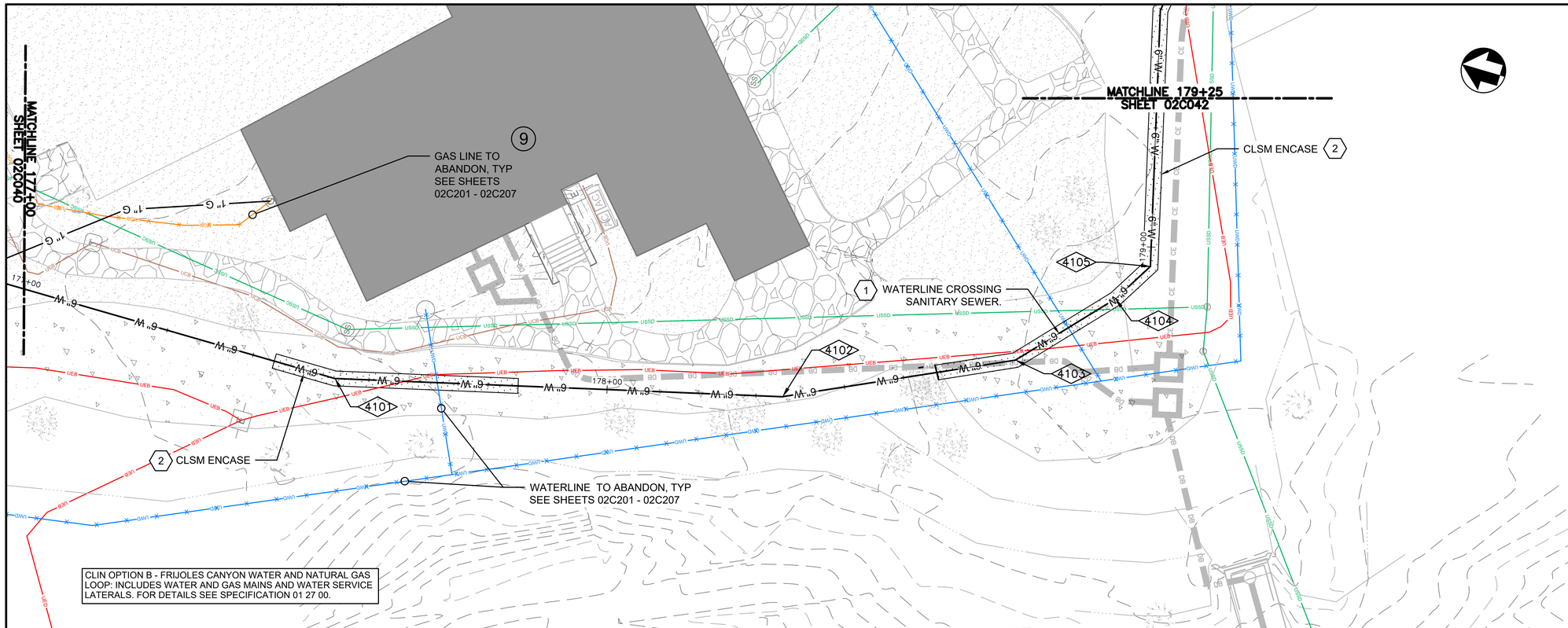
VERTICAL: 5 0 5 10 — SCALE OF FEET — 1" = 5'

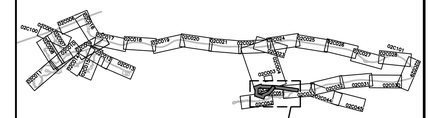
FULL SIZE DRAWINGS = 22"x34" BAR MEASURES 1" LONG — 0" 1"

MICAH E. JOHNSON NEW MEXICO 25223 PROFESSIONAL ENGINEER
Digitally signed by Micah E. Johnson Date: 2025.04.08 16:58:25-06'00'

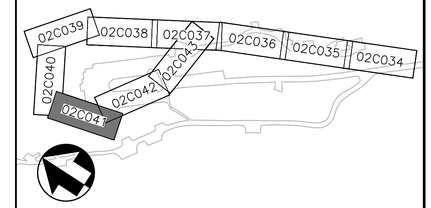
DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
M. JOHNSON	02C040	CIVIL	315
CADD: J. FIGUEROA		CANYON LOOP	182751
TECH. REVIEW: D. HUANG		STA 174+50 TO 177+00	PMIS/PKG NO. 266697
DATE: 04/11/2025		PLAN AND PROFILE	SHEET 67 OF 203
		BANDELIER NATIONAL MONUMENT	

3/30/2025 7:41 PM FIGUEROAJ R24 02C034-02C043_D3167658_CYNDST PNP.DWG
XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND PROFILES-Master
XC-ALIGN_BAND
XE-Electrical Proposed and Existing Master
XC-UTILITY SITE
XC-CONTROL-NEW
XC-BAND_Pavement and LOD Hatch





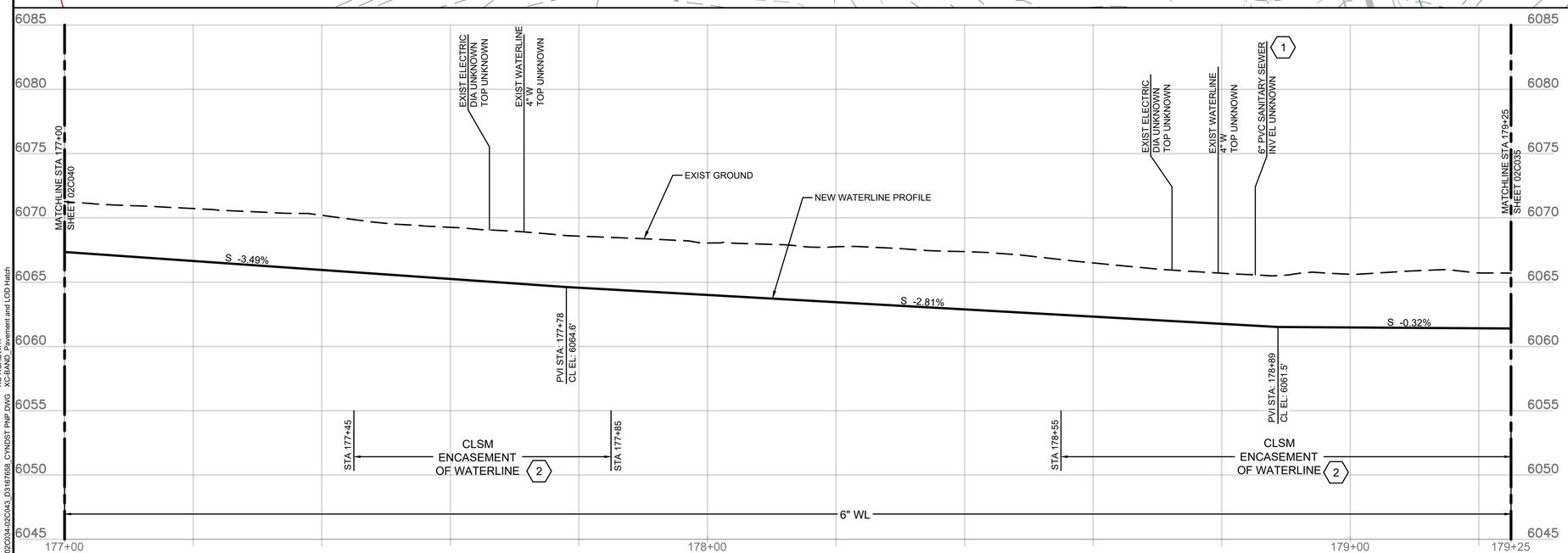
KEYPLAN



CANYON LOOP KEYPLAN

SHEET KEYNOTES

1. INSTALL NEW WATERLINE ABOVE EXISTING SANITARY SEWER WITH MINIMUM 3.0' OF COVER, IF POSSIBLE. OTHERWISE INSTALL WATERLINE BELOW EXISTING SANITARY SEWER WITH 18" MINIMUM VERTICAL CLEARANCE. ENCASE WATERLINE IN CLSM FOR 10' ON EACH SIDE OF CROSSING OF SEWER. SUPPORT EXISTING SANITARY SEWER.
2. NEW WATERLINE PARALLEL TO NEW SANITARY SEWER. WHERE 10-FT HORIZONTAL SEPARATION FROM EDGE OF PIPE CANNOT BE MAINTAINED DUE TO OTHER UTILITIES, ENCASE WATERLINE IN CLSM PER DETAIL 5, SHEET 02C300.



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
4101	6" 11.25° BEND	1738844.76	1634132.56
4102	6" 11.25° BEND	1738771.77	1634150.41
4103	6" 22.50° BEND	1738735.89	1634167.13
4104	6" 11.25° BEND	1738722.59	1634181.69
4105	6" 45° BEND	1738718.46	1634188.52

HORIZONTAL: 10 0 10 20 SCALE OF FEET 1" = 10'

VERTICAL: 5 0 5 10 SCALE OF FEET 1" = 5'

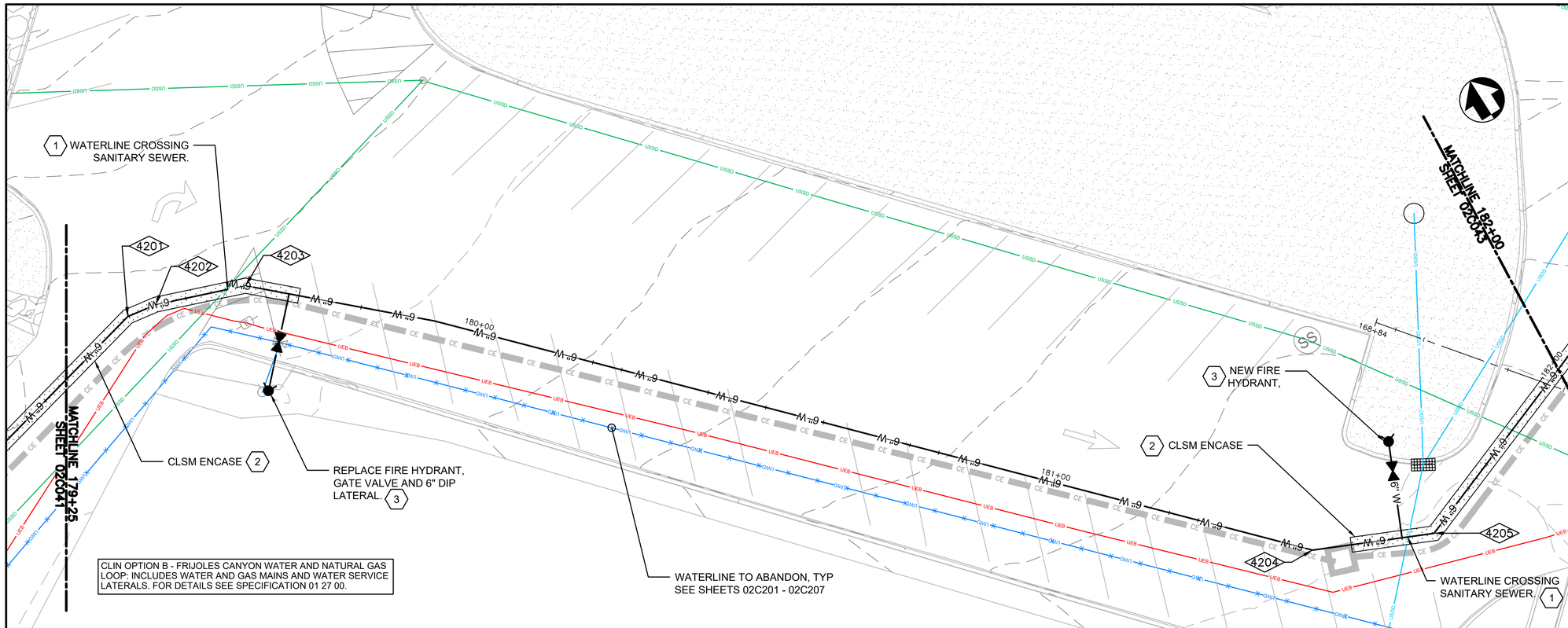
FULL SIZE DRAWINGS = 22"x34" BAR MEASURES 1" LONG 0" 1"

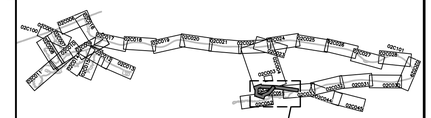
MICAH E. JOHNSON NEW MEXICO 25223 PROFESSIONAL ENGINEER
Digitally signed by Micah E. Johnson
Date: 2025.04.08 16:59:03-06'00'

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
M. JOHNSON	02C041	CIVIL CANYON LOOP STA 177+00 TO 179+25 PLAN AND PROFILE BANDELIER NATIONAL MONUMENT	315 182751
CADD: J. FIGUEROA			PMIS/PKG NO. 266697
TECH. REVIEW: D. HUANG			SHEET 68 OF 203
DATE: 04/11/2025			

XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND_2D-EG-Master
XC-BAND_PROPOSED
XE-Electrical Proposed and Existing Master
XC-UTILITY SITE
XC-TOPO_DAY
XC-BAND_Pavement and LOD Hatch

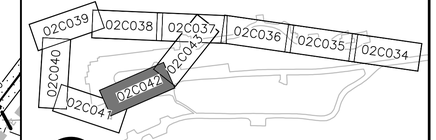
3/30/2025 7:43 PM FIGUEROAJ R24 02C034-02C043_D3167658_CYNDST PNP.DWG





SEE CANYON LOOP KEYPLAN BELOW

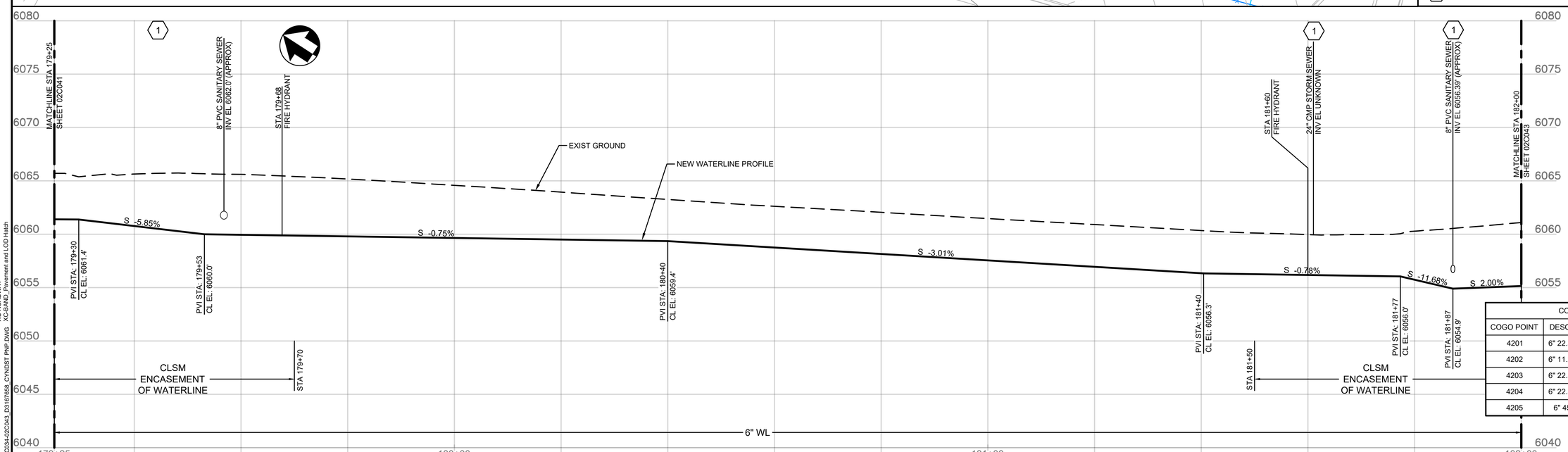
KEYPLAN



CANYON LOOP KEYPLAN

SHEET KEYNOTES

1. INSTALL WATERLINE BELOW EXISTING SANITARY SEWER WITH 18" MINIMUM VERTICAL CLEARANCE BETWEEN BOTTOM OF SEWER AND TOP OF WATERLINE. ENCASE WATERLINE IN CLSM FOR 10' ON EACH SIDE OF CROSSING. NO JOINT IN THE WATERLINE SHALL BE INSTALLED BELOW CROSSING OF SEWER.
2. NEW WATERLINE PARALLEL TO EXISTING/NEW SANITARY SEWER OR STORM SEWER. WHERE 10-FT HORIZONTAL SEPARATION FROM EDGE OF PIPE CANNOT BE MAINTAINED DUE TO OTHER UTILITIES, ENCASE WATERLINE IN CLSM PER DETAIL 5, SHEET 02C300.
3. INSTALL NEW FIRE HYDRANT PER DETAIL 3, SHEET 02C301.



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
4201	6" 22.50° BEND	1738728.76	1634230.29
4202	6" 11.25° BEND	1738727.99	1634235.34
4203	6" 22.50° BEND	1738722.75	1634249.83
4204	6" 22.50° BEND	1738590.60	1634378.60
4205	6" 45° BEND	1738582.24	1634397.41

HORIZONTAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

VERTICAL: 5 0 5 10 — SCALE OF FEET — 1" = 5'

FULL SIZE DRAWINGS = 22"x34" BAR MEASURES 1" LONG (0" – 1")

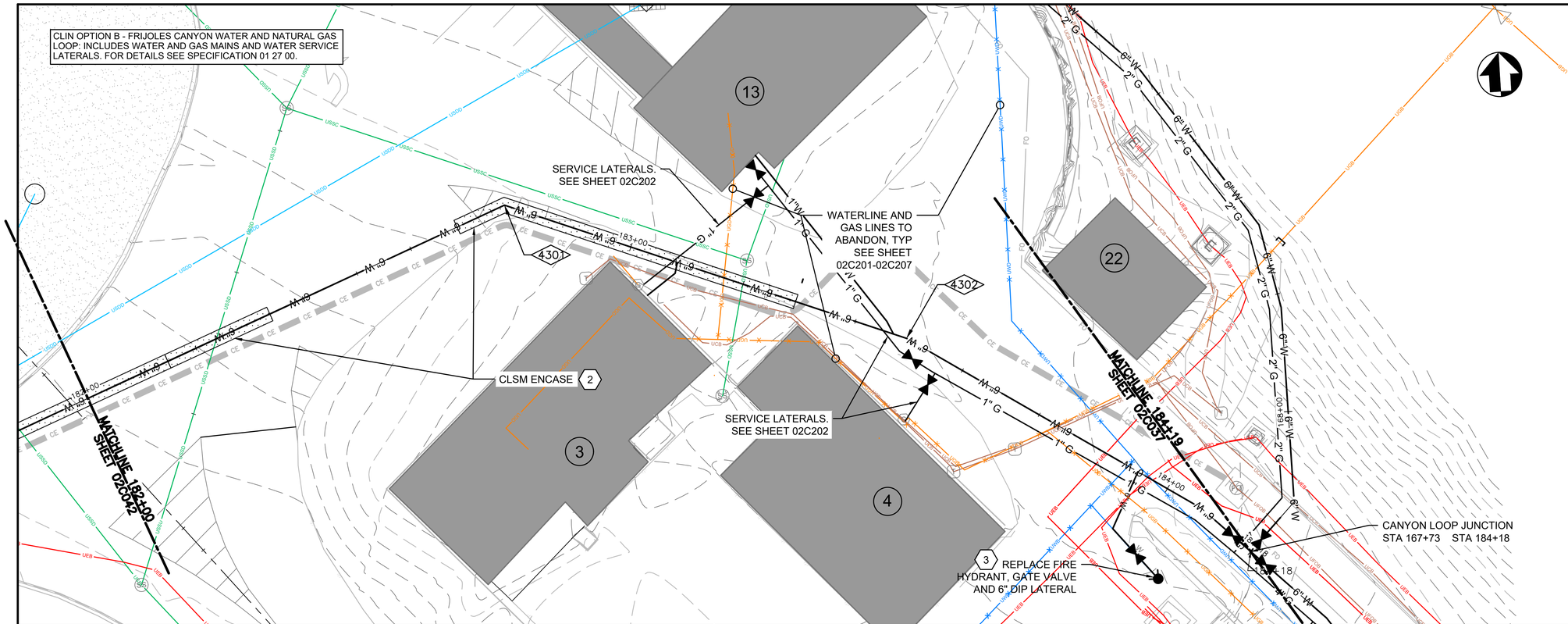
MICAH E. JOHNSON NEW MEXICO 25223 PROFESSIONAL ENGINEER
Digitally signed by Micah E. Johnson Date: 2025.04.08 16:59:42-06'00'

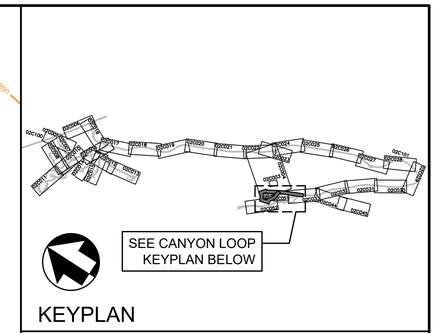
DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
M. JOHNSON	02C042	CIVIL	315
CADD: J. FIGUEROA		CANYON LOOP	182751
TECH. REVIEW: D. HUANG		STA 179+25 TO 182+00	PMIS/PKG NO. 266697
DATE: 04/11/2025		PLAN AND PROFILE	SHEET 69 OF 203
		BANDELIER NATIONAL MONUMENT	

XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND_PROFILES-Master
XC-BAND_GRID
XE-Electrical Proposed and Existing Master
XC-UTILITY SITE
XC-FOUNDWORK
XC-BAND_Pavement and LOD Hatch

3/30/2025 7:45 PM FIGUEROAJ R24 02C034-02C043_D3167658_CYNDST PNP.DWG

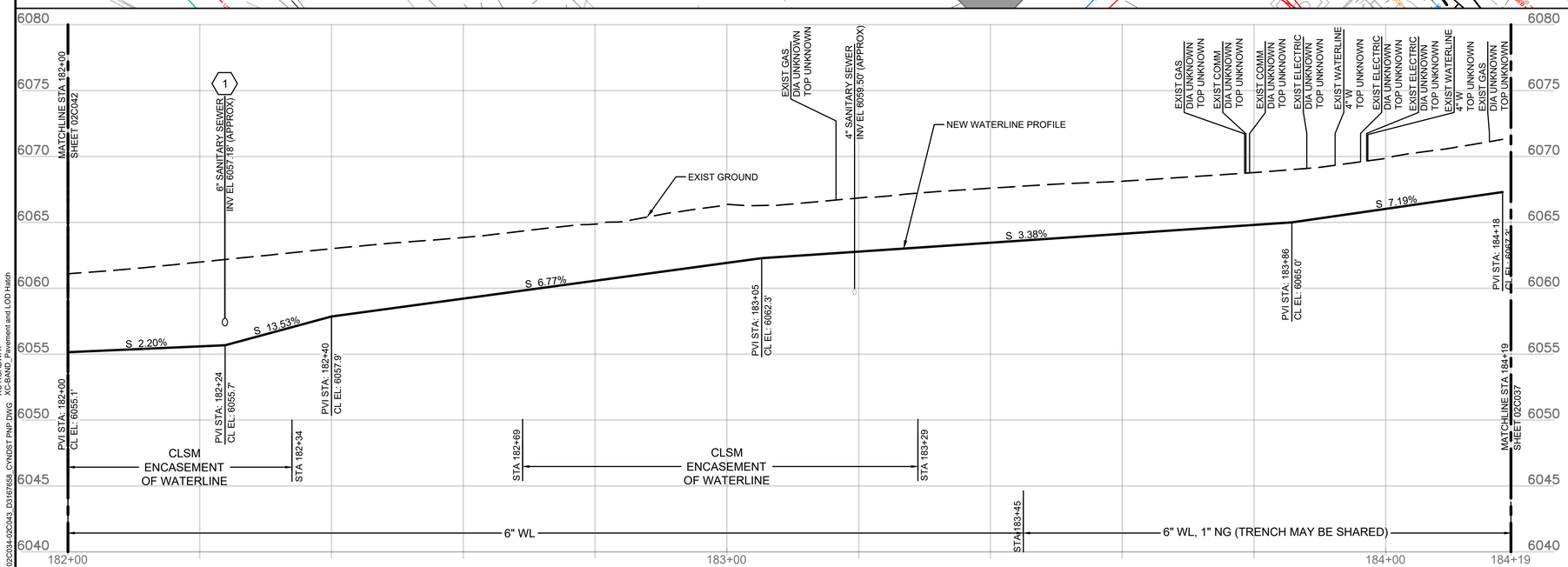
CLIN OPTION B - FRIJOLES CANYON WATER AND NATURAL GAS LOOP: INCLUDES WATER AND GAS MAINS AND WATER SERVICE LATERALS. FOR DETAILS SEE SPECIFICATION 01 27 00.





SHEET KEYNOTES

1. INSTALL WATERLINE BELOW EXISTING SANITARY SEWER WITH 18" MINIMUM VERTICAL CLEARANCE BETWEEN BOTTOM OF SEWER AND TOP OF WATERLINE. ENCASE WATERLINE IN CLSM FOR 10' ON EACH SIDE OF CROSSING. NO JOINT IN THE WATERLINE SHALL BE INSTALLED BELOW CROSSING OF SEWER.
2. NEW WATERLINE PARALLEL TO EXISTING/NEW SANITARY SEWER OR STORM SEWER. WHERE 10-FT HORIZONTAL SEPARATION FROM EDGE OF PIPE CANNOT BE MAINTAINED DUE TO OTHER UTILITIES, ENCASE WATERLINE IN CLSM PER DETAIL 5, SHEET 02C300.
3. INSTALL NEW FIRE HYDRANT PER DETAIL 3, SHEET 02C301.



COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
4301	6" 45° BEND	1738622.49	1634501.99
4302	6" 11.25° BEND	1738595.51	1634568.35

HORIZONTAL: 10 0 10 20 — SCALE OF FEET — 1" = 10'

VERTICAL: 5 0 5 10 — SCALE OF FEET — 1" = 5'

FULL SIZE DRAWINGS = 22"x34" BAR MEASURES 1" LONG

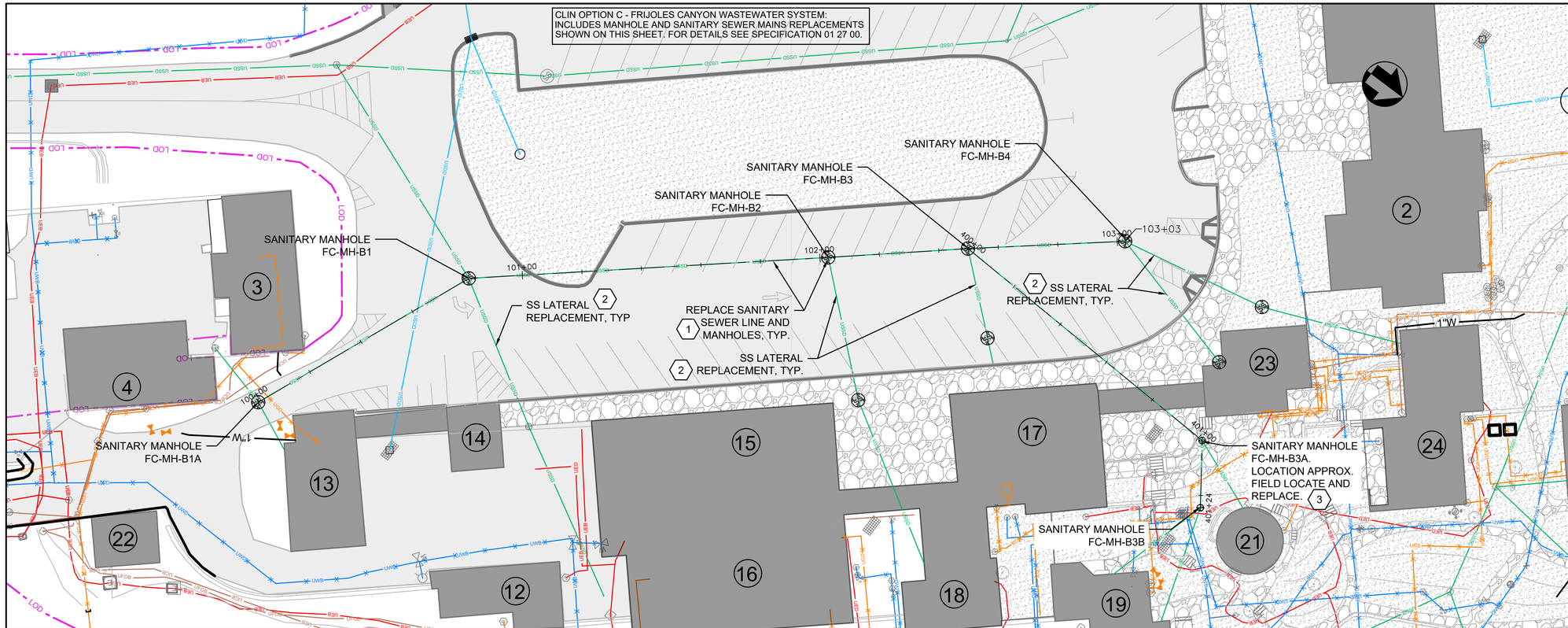
MICAH E. JOHNSON NEW MEXICO 25223 PROFESSIONAL ENGINEER
Digitally signed by Micah E. Johnson Date: 2025.04.08 12:00:20-06'00'

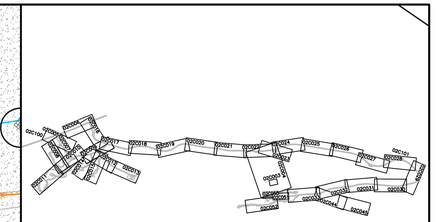
DESIGNED: M. JOHNSON	SUB SHEET NO. 02C043	TITLE OF SHEET CIVIL CANYON LOOP STA 182+00 TO 184+19 PLAN AND PROFILE BANDELIER NATIONAL MONUMENT	DRAWING NO. 315 182751
CADD J. FIGUEROA			PMIS/PKG NO. 266697
TECH. REVIEW: D. HUANG			SHEET 70 OF 203
DATE: 04/11/2025			

XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND_02C-Master
XC-ALIGN_BAND
XE-Electrical Proposed and Existing Master
XC-UTILITY SITE
XC-CONTOURS
XC-BAND_Pavement and LOD Hatch

3/30/2025 8:04 PM FIGUEROAJ R24 02C034-02C043_03187658_CYNDST PNP.DWG

CLIN OPTION C - FRIJOLES CANYON WASTEWATER SYSTEM: INCLUDES MANHOLE AND SANITARY SEWER MAINS REPLACEMENTS SHOWN ON THIS SHEET. FOR DETAILS SEE SPECIFICATION 01 27 00.

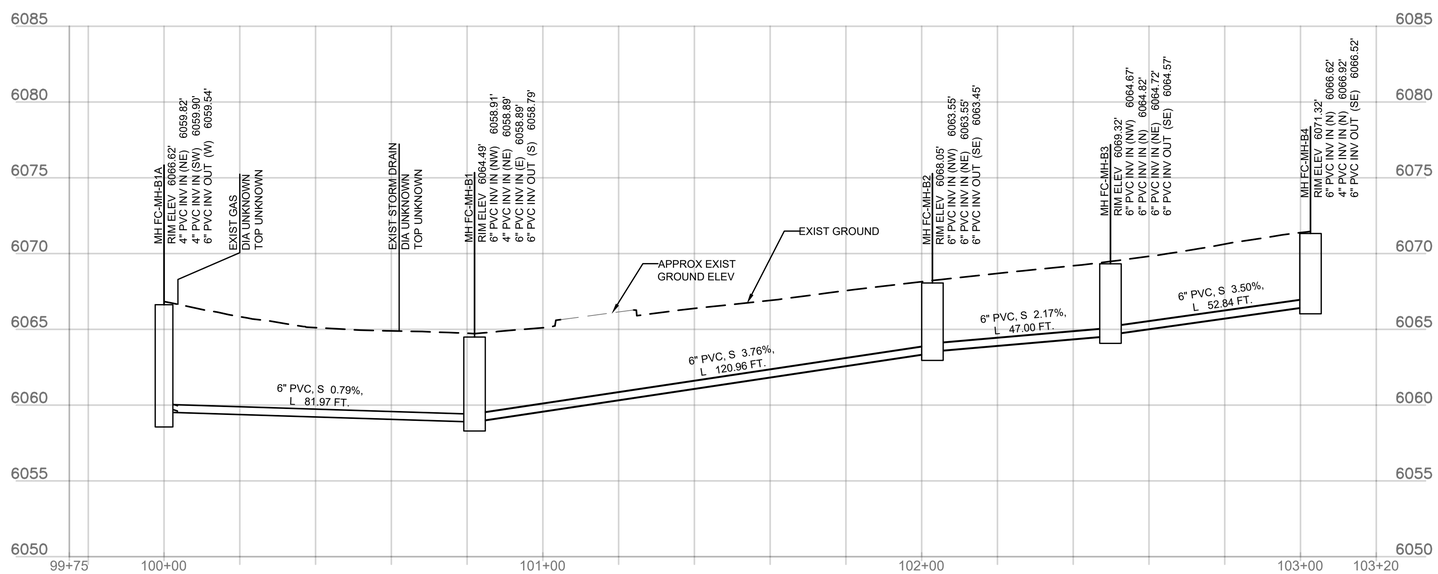


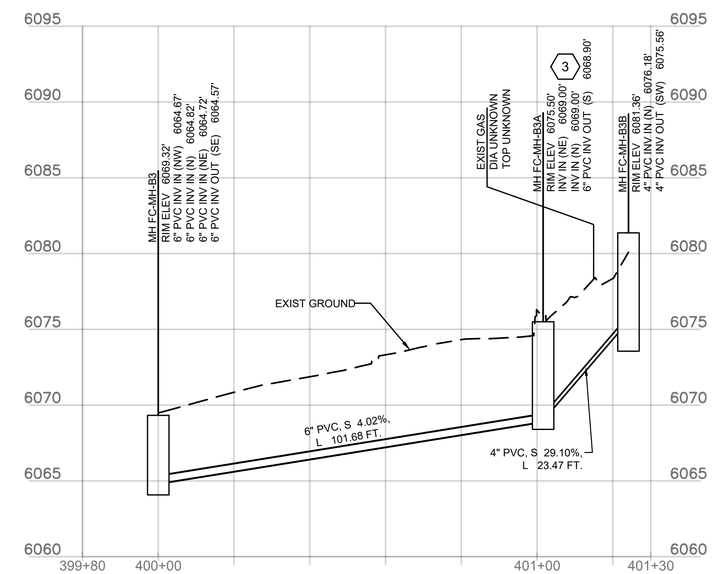


KEYPLAN

SHEET KEYNOTES

1. REMOVE AND REPLACE SS MANHOLES FC-MH-B1A, FC-MH-B1, FC-MH-B2, FC-MH-B3, FC-MH-B4, FC-MH-B3A AND FC-MH-B3B. REMOVE AND REPLACE SS GRAVITY PIPELINES BETWEEN THESE MANHOLES WITH PVC PIPELINES. CONSTRUCT MANHOLES PER RIM AND INVERT ELEVATIONS SHOWN ON PROFILE VIEW.
2. SEE SHEETS 02C200 - 02C207 FOR SS LATERAL REPLACEMENTS.
3. EXISTING INVERTS OF MANHOLE FC-MH-B3A UNKNOWN. FIELD ADJUST PROVIDED INVERTS IN PROFILE IF NECESSARY.





HORIZONTAL: 20 0 20 40 — SCALE OF FEET — 1" = 20'

VERTICAL: 5 0 5 10 — SCALE OF FEET — 1" = 5'

FULL SIZE DRAWINGS = 22"x34"
BAR MEASURES 1" LONG

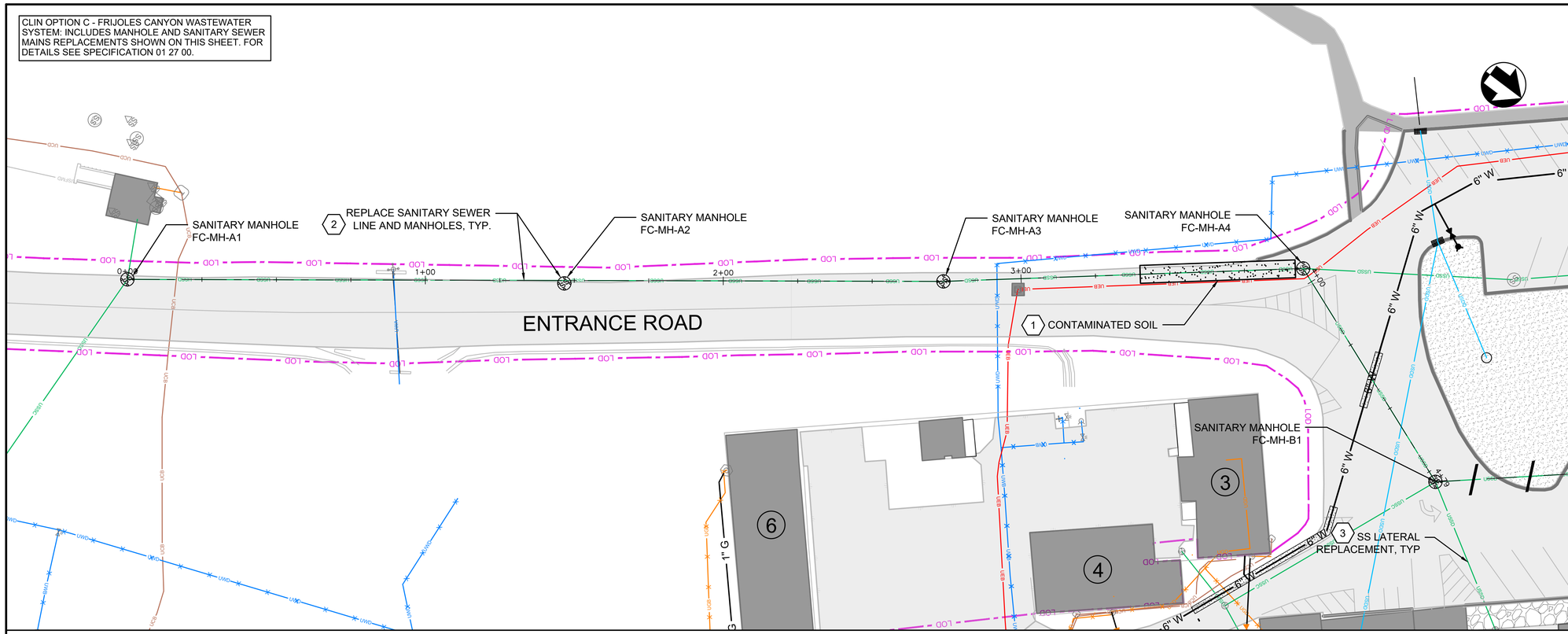
MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 17:01:03-06'00'
PROFESSIONAL ENGINEER

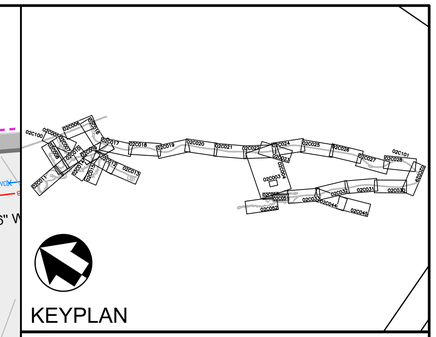
DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
M JOHNSON	02C050	CIVIL CANYON PARKING LOT SEWER PLAN AND PROFILE BANDELIER NATIONAL MONUMENT	315 182751
CADD: J. FIGUEROA			PMIS/PKG NO. 266697
TECH. REVIEW: D. HUANG			SHEET 71 OF 203
DATE: 04/11/2025			

XG-Border_BAND
XC-LAYOUT-SHEETS
XC-ALIGN_PROFILE
XC-BAND_2D-EG-Master
XC-ALIGN BAND
XC-Existing Pavement and Existing Master
XC-UTILITY SITE_SD
XC-UTILITY SITE
XC-ROADWAY
XG-BAND_Pavement and LOD Hatch

2/12/2025 8:36 PM FIGUEROAJ R24 02C050_D3167658_ENRD_SS PNP.DWG

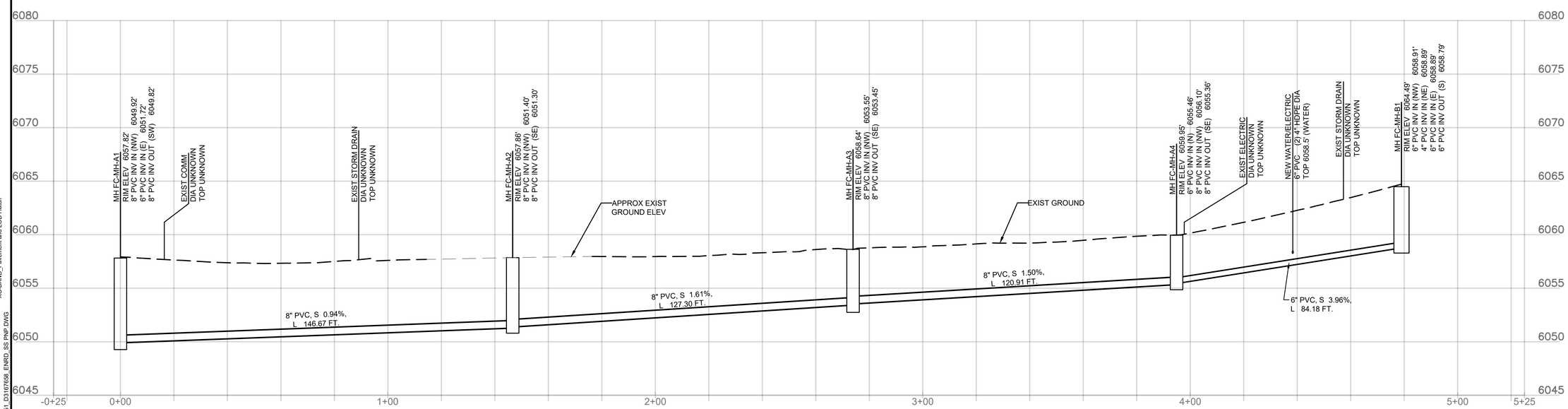
CLIN OPTION C - FRIJOLES CANYON WASTEWATER SYSTEM: INCLUDES MANHOLE AND SANITARY SEWER MAINS REPLACEMENTS SHOWN ON THIS SHEET. FOR DETAILS SEE SPECIFICATION 01 27 00.





SHEET KEYNOTES

1. THE TOP 3 FT OF EXCAVATED SOIL BETWEEN STA 3+40 AND STA 3+92 IS CONTAMINATED WITH ELEVATED LEVELS OF DDT. HANDLE IN ACCORDANCE WITH SPECIFICATION 02 61 00, REMOVAL AND DISPOSAL OF CONTAMINATED SOIL.
2. REMOVE AND REPLACE SS MANHOLES FC-MH-A1, FC-MH-A2, FC-MH-A3, FC-MH-A4 AND FC-MH-B1. REMOVE AND REPLACE SS GRAVITY PIPELINES BETWEEN THESE MANHOLES. CONSTRUCT MANHOLES PER RIM AND INVERT ELEVATIONS SHOWN ON PROFILE VIEW.
3. SEE SHEETS 02C200 - 02C207 FOR SS LATERAL REPLACEMENTS.



HORIZONTAL: 20 0 20 40 — SCALE OF FEET — 1" = 20'

VERTICAL: 5 0 5 10 — SCALE OF FEET — 1" = 5'

FULL SIZE DRAWINGS = 22"x34" BAR MEASURES 1" LONG

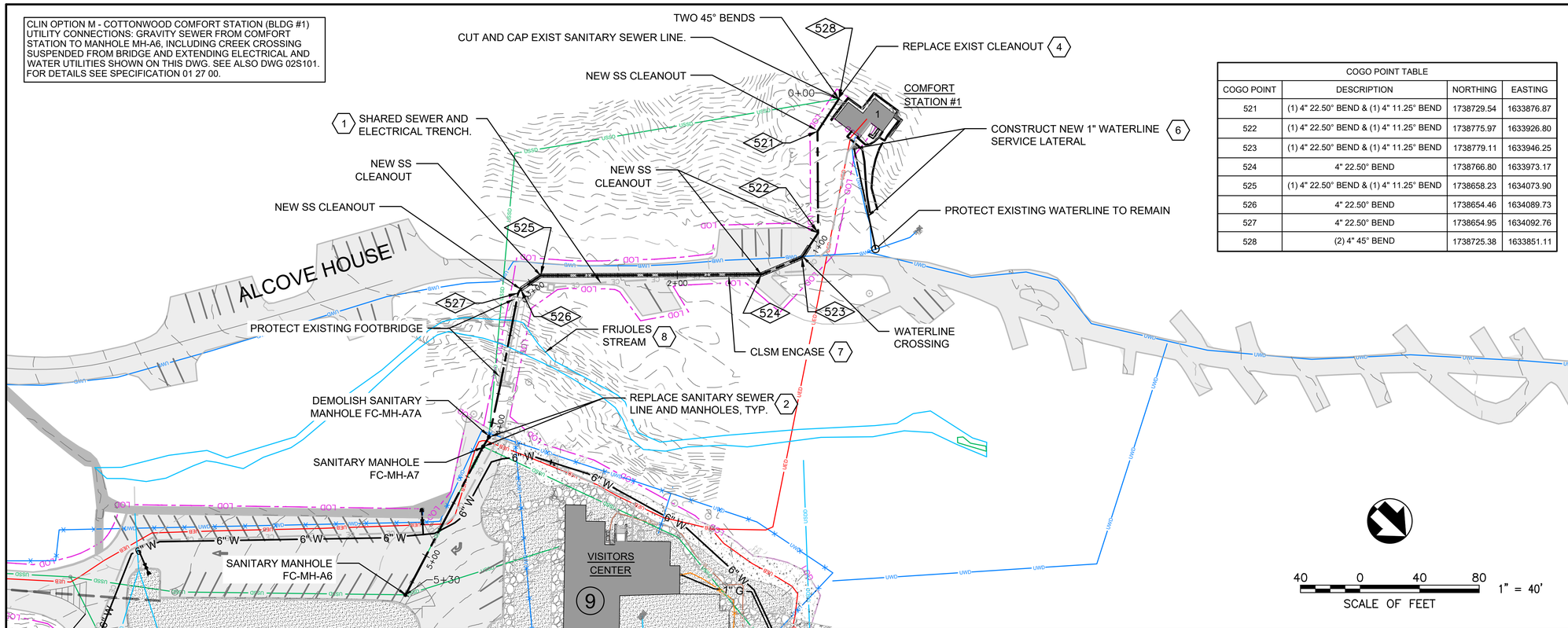
MICAH E. JOHNSON NEW MEXICO 25223 PROFESSIONAL ENGINEER
Digitally signed by Micah E. Johnson Date: 2025.04.08 17:01:39-06'00'

DESIGNED: M JOHNSON	SUB SHEET NO.	TITLE OF SHEET CIVIL	DRAWING NO. 315
CADD J. FIGUEROA	02C051	CANYON ENTRANCE ROAD PLAN AND PROFILE BANDELIER NATIONAL MONUMENT	182751
TECH. REVIEW: D. HUANG			PMIS/PKG NO. 266697
DATE: 04/11/2025			SHEET 72 OF 203

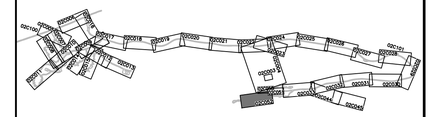
XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND_PROFILE
XC-UTILITY SITE
XC-ROADWAY
XC-BAND_Pavement and LOD Hatch

3/30/2025 8:39 PM FIGUEROAJ R24 02C051 D3167658_ENRD_SS PNP.DWG

CLIN OPTION M - COTTONWOOD COMFORT STATION (BLDG #1) UTILITY CONNECTIONS: GRAVITY SEWER FROM COMFORT STATION TO MANHOLE MH-A6, INCLUDING CREEK CROSSING SUSPENDED FROM BRIDGE AND EXTENDING ELECTRICAL AND WATER UTILITIES SHOWN ON THIS DWG. SEE ALSO DWG 02S101. FOR DETAILS SEE SPECIFICATION 01 27 00.



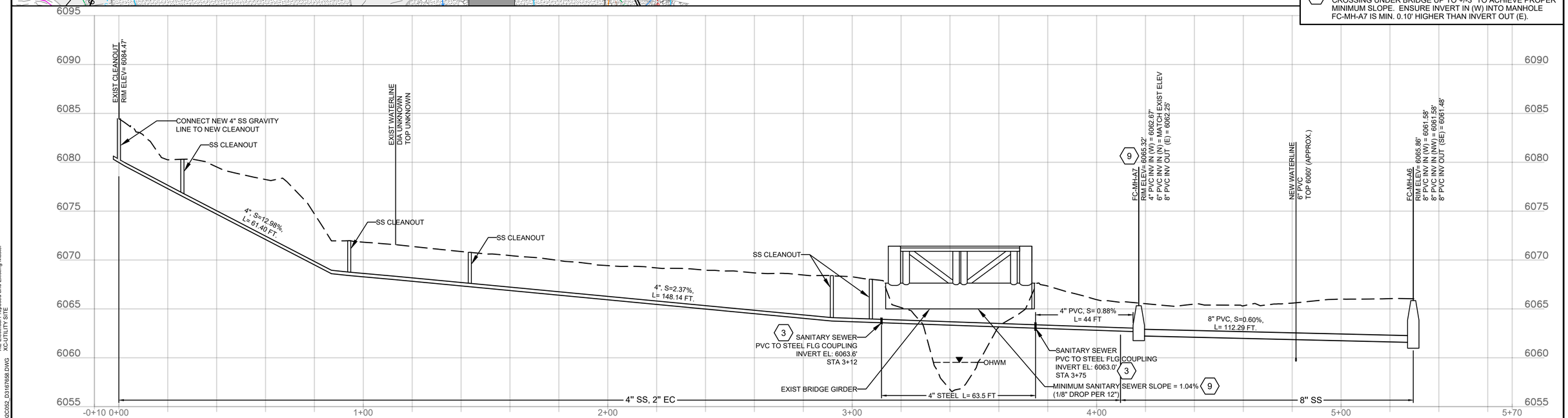
COGO POINT TABLE			
COGO POINT	DESCRIPTION	NORTHING	EASTING
521	(1) 4" 22.50° BEND & (1) 4" 11.25° BEND	1738729.54	1633876.87
522	(1) 4" 22.50° BEND & (1) 4" 11.25° BEND	1738775.97	1633926.80
523	(1) 4" 22.50° BEND & (1) 4" 11.25° BEND	1738779.11	1633946.25
524	4" 22.50° BEND	1738766.80	1633973.17
525	(1) 4" 22.50° BEND & (1) 4" 11.25° BEND	1738658.23	1634073.90
526	4" 22.50° BEND	1738654.46	1634089.73
527	4" 22.50° BEND	1738654.95	1634092.76
528	(2) 4" 45° BEND	1738725.38	1633851.11



KEYPLAN

SHEET KEYNOTES

1. SHARED UTILITY TRENCH CONTAINS SANITARY SEWER AND ELECTRICAL CONDUIT. SEE DRAWING 02E134 FOR ELECTRICAL
2. DEMOLISH SS MANHOLE FC-MH-A7A. REMOVE AND REPLACE SS MANHOLES FC-MH-A7. REMOVE AND REPLACE SS GRAVITY PIPELINES BETWEEN MANHOLES FC-MH-A6 AND FC-MH-A7. CONSTRUCT MANHOLES PER RIM AND INVERT ELEVATIONS SHOWN ON PROFILE VIEW.
3. TRANSITION SEWER LINE MATERIAL BETWEEN PVC AND STEEL PIPE 2 FT MIN. FROM BRIDGE ABUTMENT.
4. FIELD VERIFY EXIST CLEANOUT DIAMETER. IF GREATER THAN 4-INCH, INSTALL ECCENTRIC REDUCER TO NEW 4-INCH DIAMETER UPSTREAM OF NEW CLEANOUT.
5. SEE SHEETS 02C200 - 02C207 FOR SS LATERAL REPLACEMENTS.
6. CONSTRUCT NEW 1" WATERLINE SERVICE LATERAL PER DETAIL 4, SHEET 02C301 FROM EXISTING DISTRIBUTION LINE TO COMFORT STATION #1 VAULT (CURRENTLY OUT OF SERVICE). DEMOLISH EXIST FIRE HYDRANT AND VALVE.
7. NEW SEWER LATERAL PARALLEL TO EXISTING WATERLINE. ENCASE SEWER LATERAL IN CLSM PER DETAIL 5, SHEET 02C300.
8. PROTECT FRIJOLES STREAM IN PLACE. NO EQUIPMENT PERMITTED WITHIN STREAM BANKS.
9. CONTRACTOR MAY RAISE OR LOWER AERIAL SEWER LINE CROSSING UNDER BRIDGE UP TO +/-3" TO ACHIEVE PROPER MINIMUM SLOPE. ENSURE INVERT IN (W) INTO MANHOLE FC-MH-A7 IS MIN. 0.10' HIGHER THAN INVERT OUT (E).



HORIZONTAL: 20 0 20 40 — SCALE OF FEET — 1" = 20'

VERTICAL 5 0 5 10 — SCALE OF FEET — 1" = 5'

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

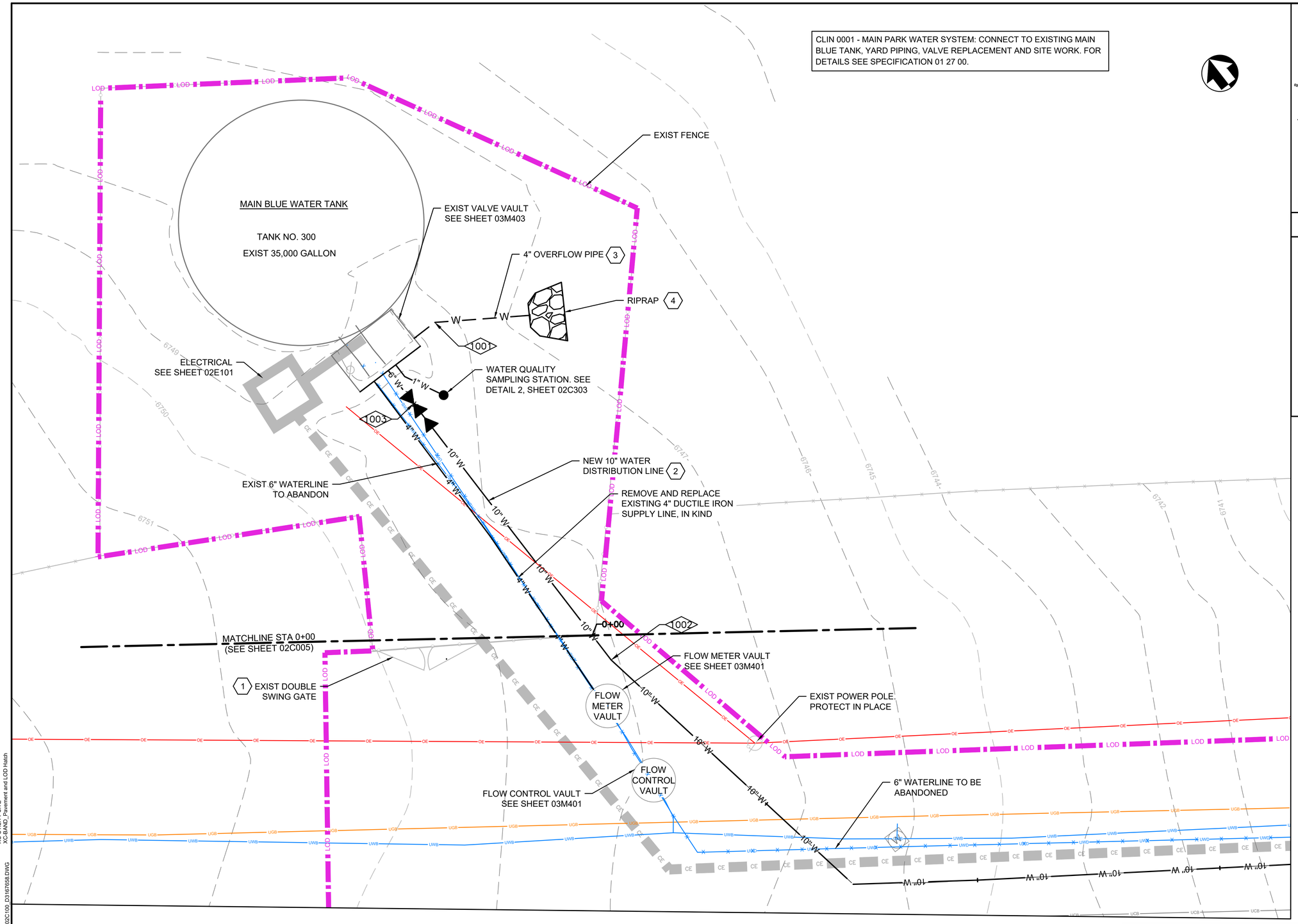
MICAH E. JOHNSON NEW MEXICO 25223 PROFESSIONAL ENGINEER
Digitally signed by Micah E. Johnson
Date: 2025.04.08 12:02:21-06'00'

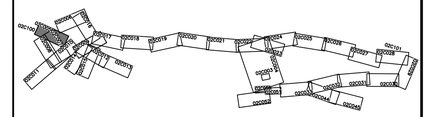
DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
M JOHNSON	02C052	CIVIL	315
CADD: J FIGUEROA		COTTONWOOD (BLDG 1) COMFORT STATION SEWER PLAN AND PROFILE	182751
TECH. REVIEW: D. HUANG		BANDELIER NATIONAL MONUMENT	PMIS/PKG NO. 266697
DATE: 04/11/2025			SHEET 73 OF 203

XG-Border_BAND
XC-LAYOUT-SHEETS
XC-BAND PROFILES
XC-BAND_TOPO-Master
XC-BAND_Vehicle-Master
XC-ROADWAY
XC-BAND_Pavement and LOD Hatch
XC-Existing Proposed and Existing Master
XC-UTILITY SITE

3/30/2025 8:43 PM FIGUEROAJ R24 02C052_D3167658.DWG

CLIN 0001 - MAIN PARK WATER SYSTEM: CONNECT TO EXISTING MAIN BLUE TANK, YARD PIPING, VALVE REPLACEMENT AND SITE WORK. FOR DETAILS SEE SPECIFICATION 01 27 00.





KEYPLAN

SHEET KEYNOTES

1. COORDINATE SITE ACCESS WITH NPS AND LANL. REMOVE AND REPLACE EXISTING FENCE AND GATE IF DAMAGED DURING CONSTRUCTION. SECURE SITE AT ALL TIMES.
2. INSTALL NEW 10" WATER DISTRIBUTION LINE AS SHOWN, AFTER SUCCESSFUL TESTING AND DISINFECTION OF NEW WATERLINE, CONNECT TO EXISTING MAIN BLUE WATER TANK VAULT. SEE DWGS 03M401 - 03M403. INSTALL 10"x6" ECCENTRIC REDUCER AND 6" GATE VALVE WITH VALVE BOX PER DETAIL 1, SHEET 02C303. INSTALL 6" DUCTILE IRON PIPE FROM VALVE TO VALVE VAULT. DRAIN EXISTING PIPE AS NEEDED. COORDINATE SHUTDOWN OF TANK FOR CONNECTION WITH NPS AND CONTRACTING OFFICER.
3. INSTALL 4" DUCTILE IRON OVERFLOW PIPE AS SHOWN, +/- 13 LF. CONNECT TO EXISTING VALVE VAULT, SEE SHEET 03M403.
4. INSTALL RIPRAP PER DETAIL 1, SHEET 02C302. INSTALL DUCKBILL VALVE AT OUTLET.

COGO POINT TABLE

COGO POINT	DESCRIPTION	NORTHING	EASTING
1001	4" 45° BEND	1746009.71	1631798.96
1002	10" 11.25° BEND	1745970.96	1631792.79
1003	6" GV, 10"X6" ECC. REDUCER	1746004.30	1631792.23

10 0 5 10
SCALE OF FEET

XG-Border, BAND
XC-LAYOUT-SHEETS
XC-BAND_PROFILES
XC-BAND_02C-Master
XE-Electrical Proposed and Existing Master
XC-ROADWAY
XC-LAYOUT-SITE
XC-BAND_2-Pavement and LOD Hatch

3/30/2025 8:35 PM FIGUEROAJ R24 02C100 D3167658.DWG

FULL SIZE DRAWINGS = 22"x34" 0" 1"
BAR MEASURES 1" LONG

MICAH E. JOHNSON
NEW MEXICO
25223
Digitally signed by Micah E. Johnson
Date: 2025.04.08 17:03:04-06'00'
PROFESSIONAL ENGINEER

DESIGNED: M. COUTURE	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO. 315
CADD J. FIGUEROA	02C100	CIVIL EXISTING MAIN BLUE WATER TANK SITE PLAN	182751
TECH. REVIEW: D. HUANG		BANDELIER NATIONAL MONUMENT	PMIS/PKG NO. 266697
DATE: 04/11/2025			SHEET 74 OF 203