

MONUMENT AT POWDER MOUNTAIN

Civil Construction Drawings

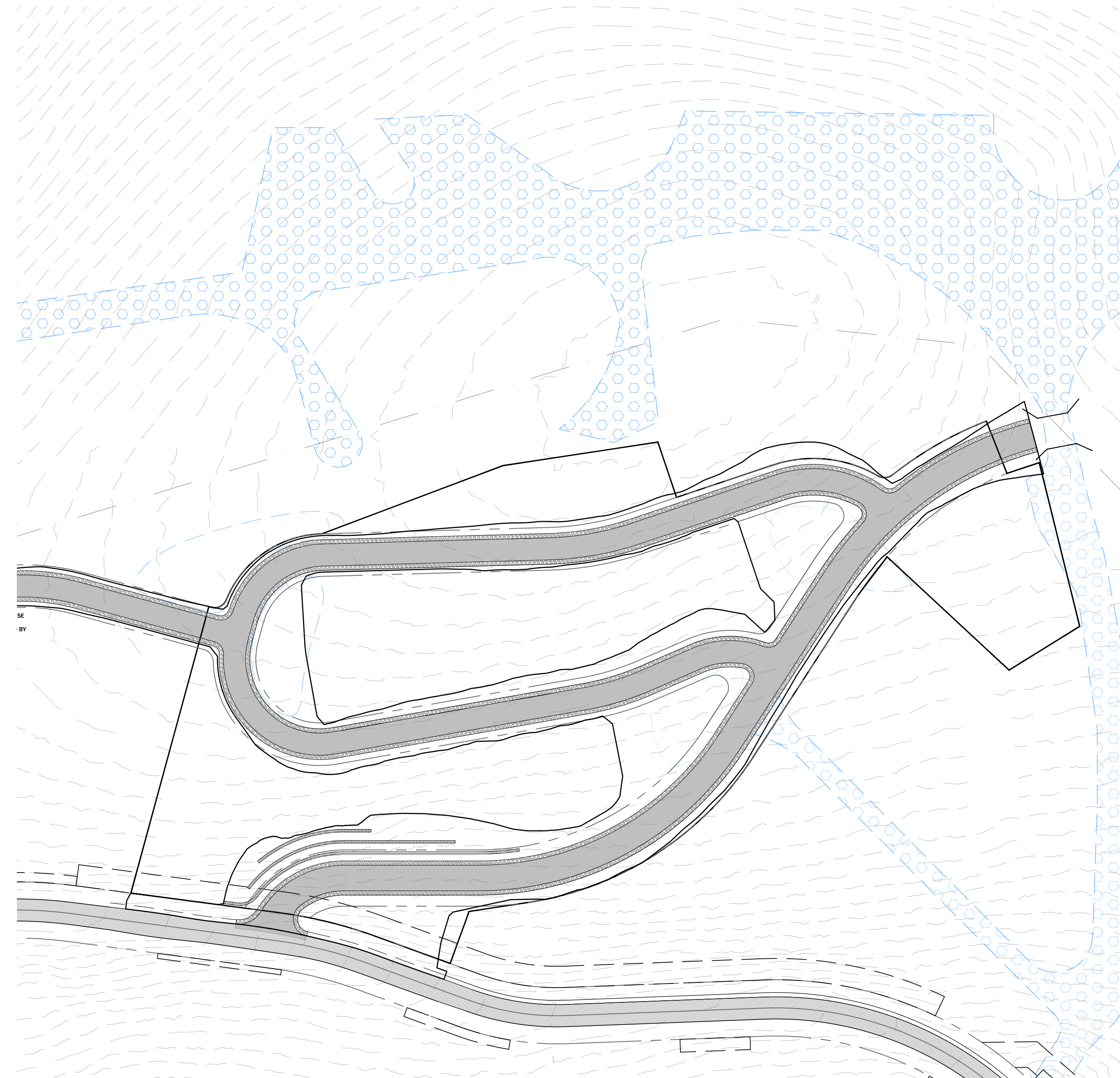
Approximately 8050 Summit Road
Eden, Utah

OWNER

OWNER Mike Brenny
PHONE: 801.808.9328
EMAIL: mike@thirdriverre.com

CIVIL ENGINEER

Fawkes Consultants
ADDRESS: 2701 N. Thanksgiving Way
Suite 100
Lehi, Utah 84043
CONTACT: Jordan "Guy" Williams, P.E.
PHONE: (213) 500-5936



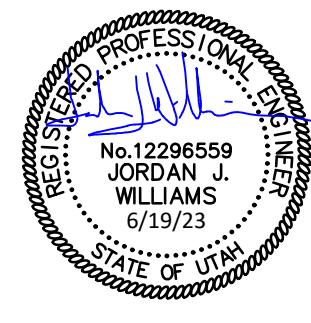
SHEET INDEX

Sheet Number	Sheet Title
CV	COVER SHEET
SM	SITE MAP
GN	GENERAL NOTES
C100	DEMOLITION PLAN
C200	SITE PLAN
C300	GRADING & DRAINAGE PLAN
C400	UTILITY PLAN
C500	PLAN & PROFILE
C501	PLAN & PROFILE
C502	PLAN & PROFILE
C503	PLAN & PROFILE
C800	DETAILS
C801	DETAILS
C802	DETAILS

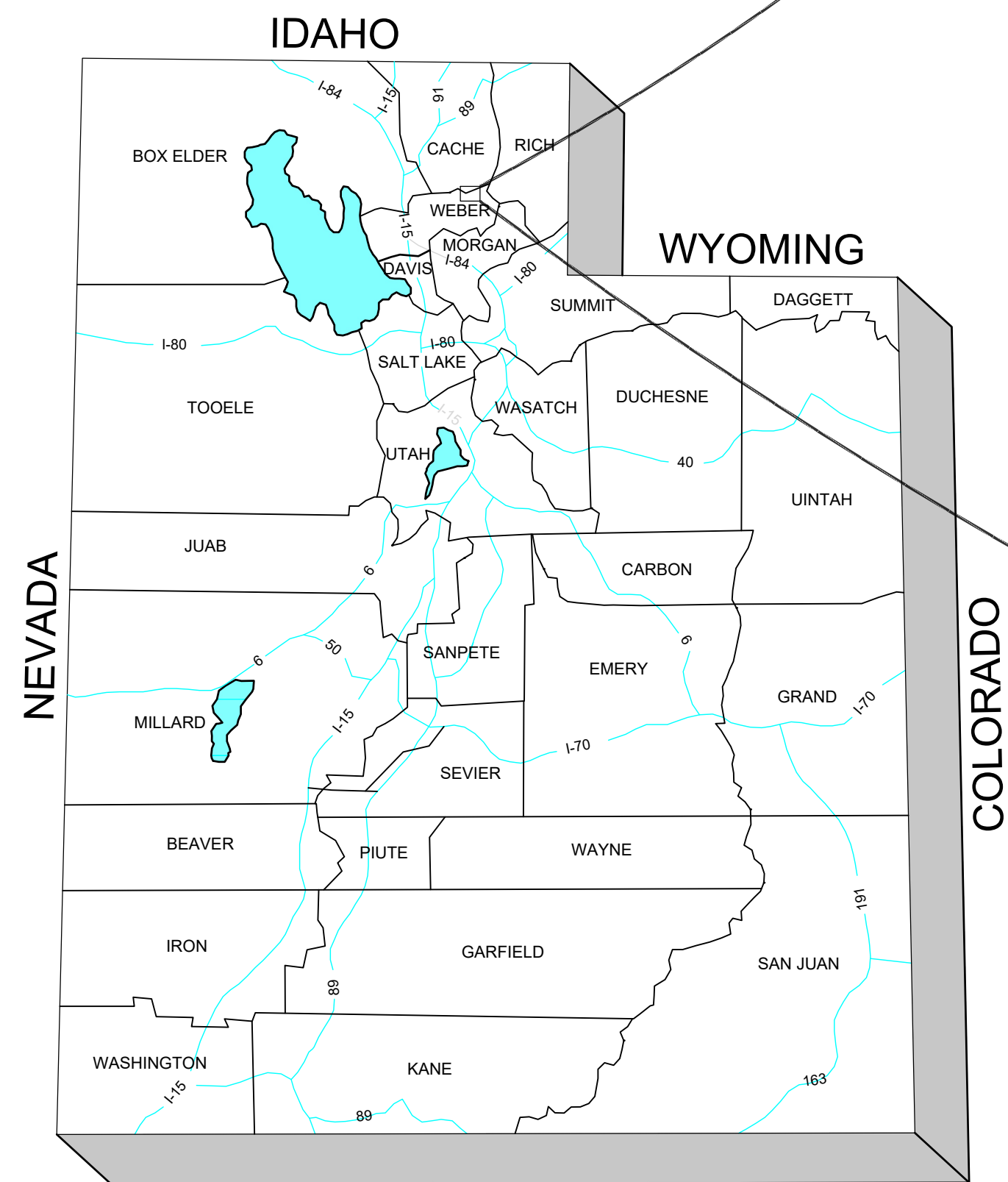
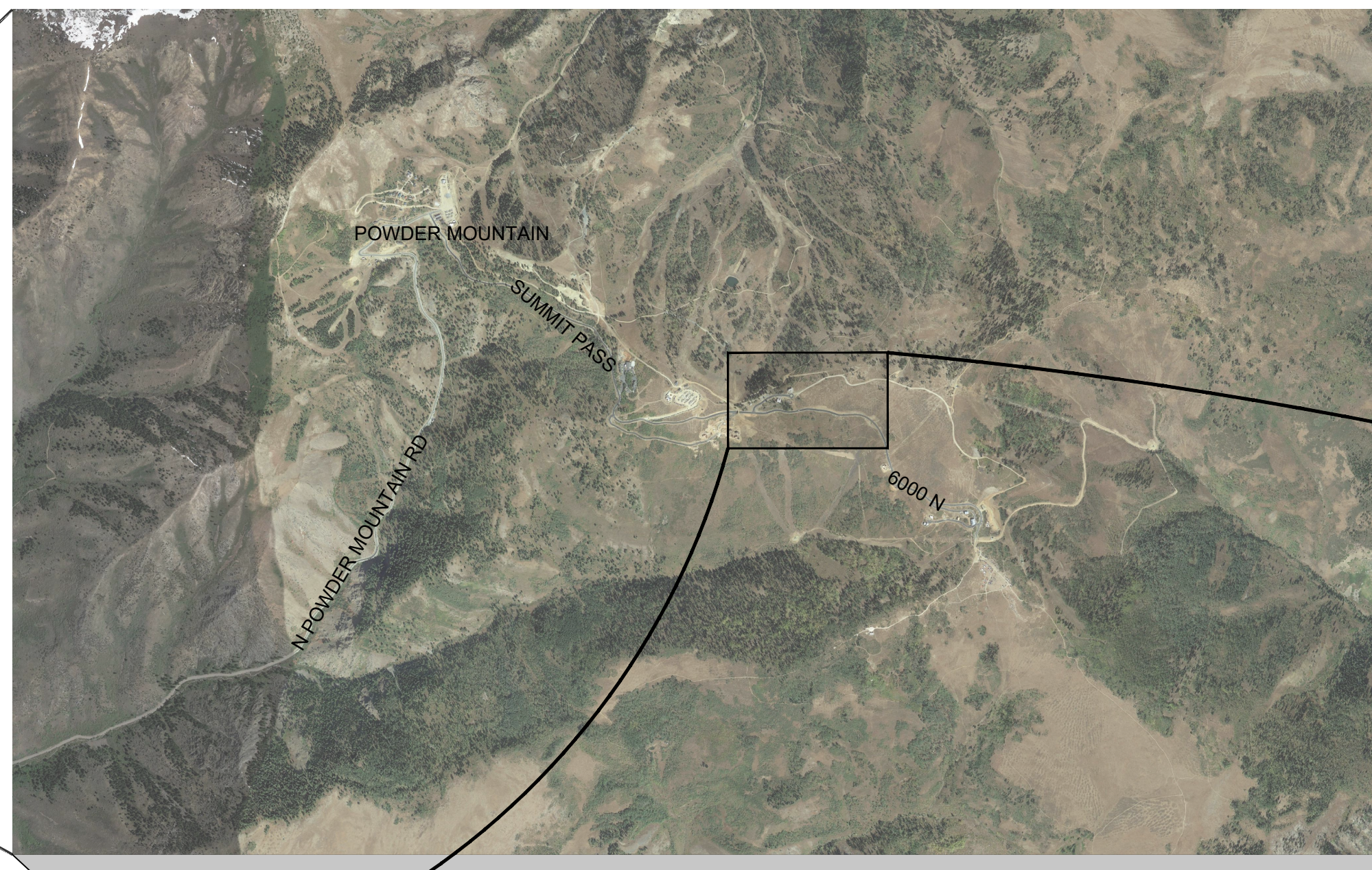
BID SET

DATE	PROJECT NO.	DATE
5/26/2023	23.001	
REVISION	DATE	
1		
2		
3		
4		
5		
6		

COVER SHEET
MONUMENT AT POWDER MOUNTAIN
Approx. 8050 Summit Pass Road, Eden, Utah



VICINITY MAP



STATE MAP



SITE MAP

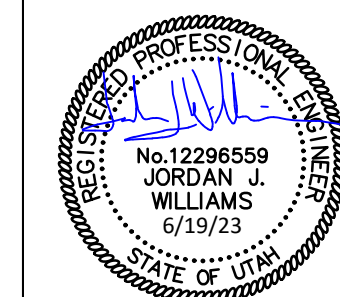
BID SET

DATE:	5/26/2023
PROJECT NO.:	23.001
REVISION	DATE
1	
2	
3	
4	
5	
6	

SITE MAP

MONUMENT AT POWDER MOUNTAIN

Approx. 8050 Summit Pass Road, Eden, Utah



SCALE:

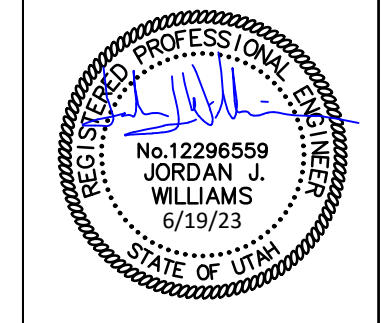
SM

DRAWN BY: CGW

BID SET

DATE:	5/26/2023
PROJECT NO.:	23.001
REVISION	DATE
1	
2	
3	
4	
5	
6	

DEMOLITION
MONUMENT AT POWDER MOUNTAIN
Approx. 8050 Summit Pass Road, Eden, Utah

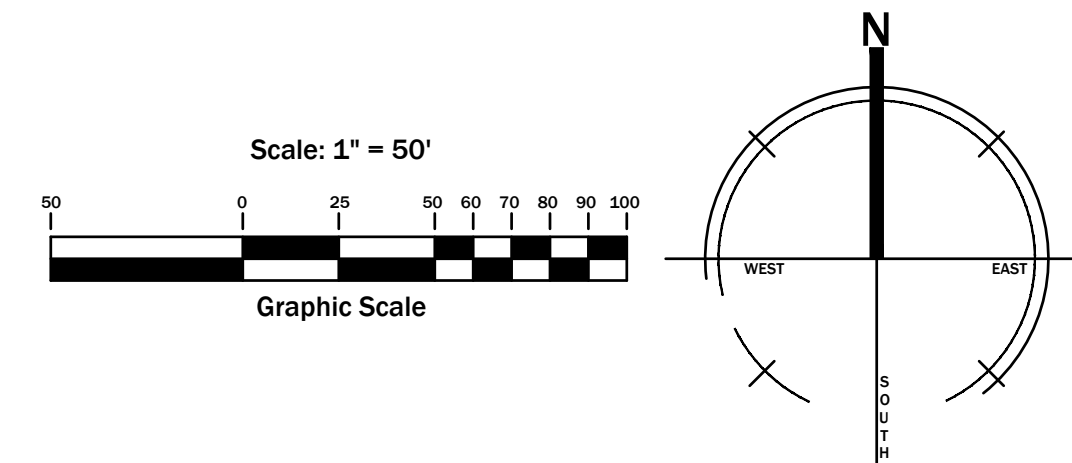


SCALE:

C1.00

DRAWN BY: CGW

4/14

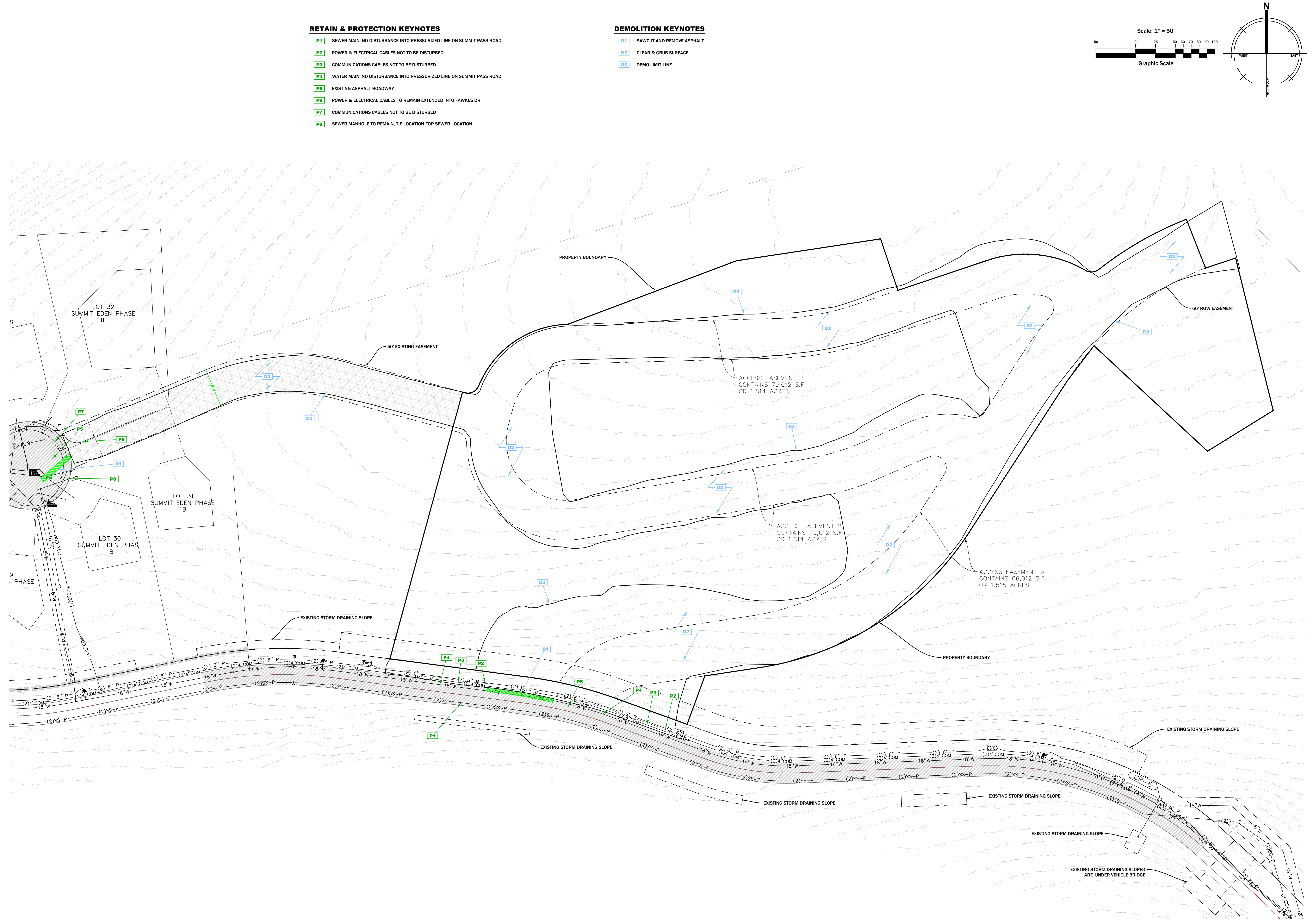


RETAIN & PROTECTION KEYNOTES

- P1** SEWER MAIN, NO DISTURBANCE INTO PRESSURIZED LINE ON SUMMIT PASS ROAD
- P2** POWER & ELECTRICAL CABLES NOT TO BE DISTURBED
- P3** COMMUNICATIONS CABLES NOT TO BE DISTURBED
- P4** WATER MAIN, NO DISTURBANCE INTO PRESSURIZED LINE ON SUMMIT PASS ROAD
- P5** EXISTING ASPHALT ROADWAY
- P6** POWER & ELECTRICAL CABLES TO REMAIN EXTENDED INTO FAWKES DR
- P7** COMMUNICATIONS CABLES NOT TO BE DISTURBED
- P8** SEWER MANHOLE TO REMAIN, TIE LOCATION FOR SEWER LOCATION

DEMOLITION KEYNOTES

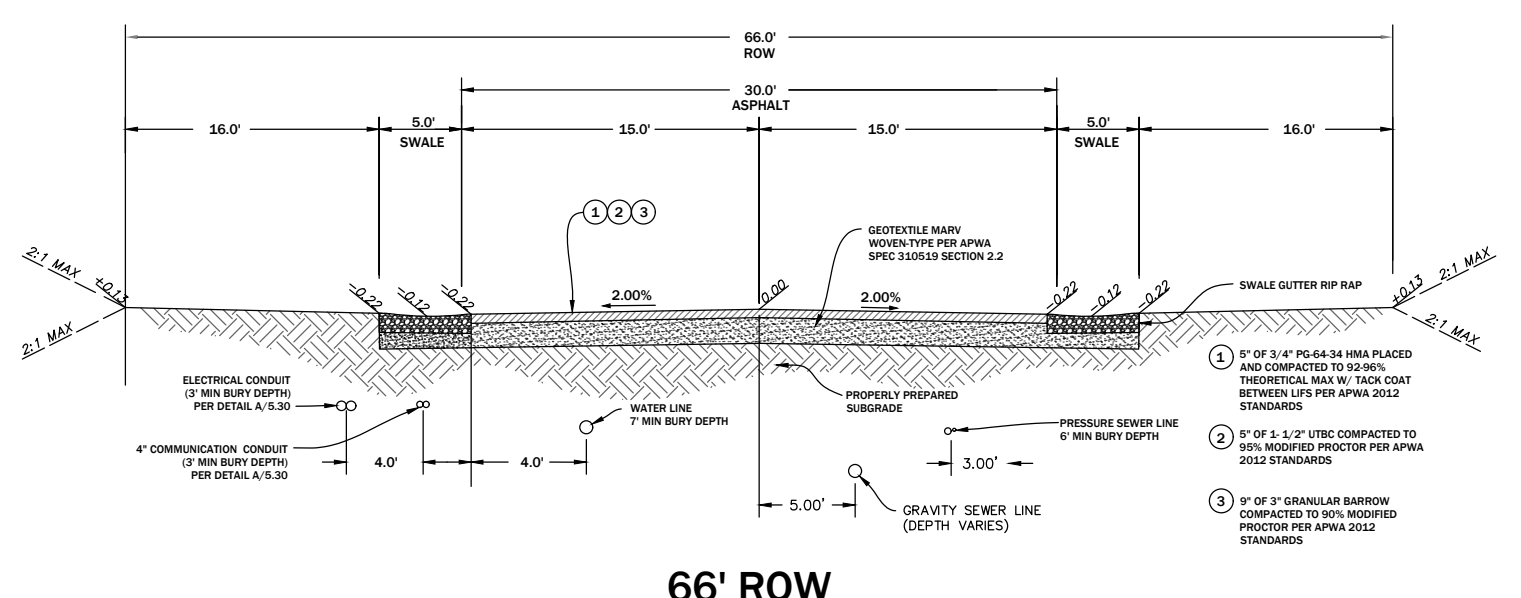
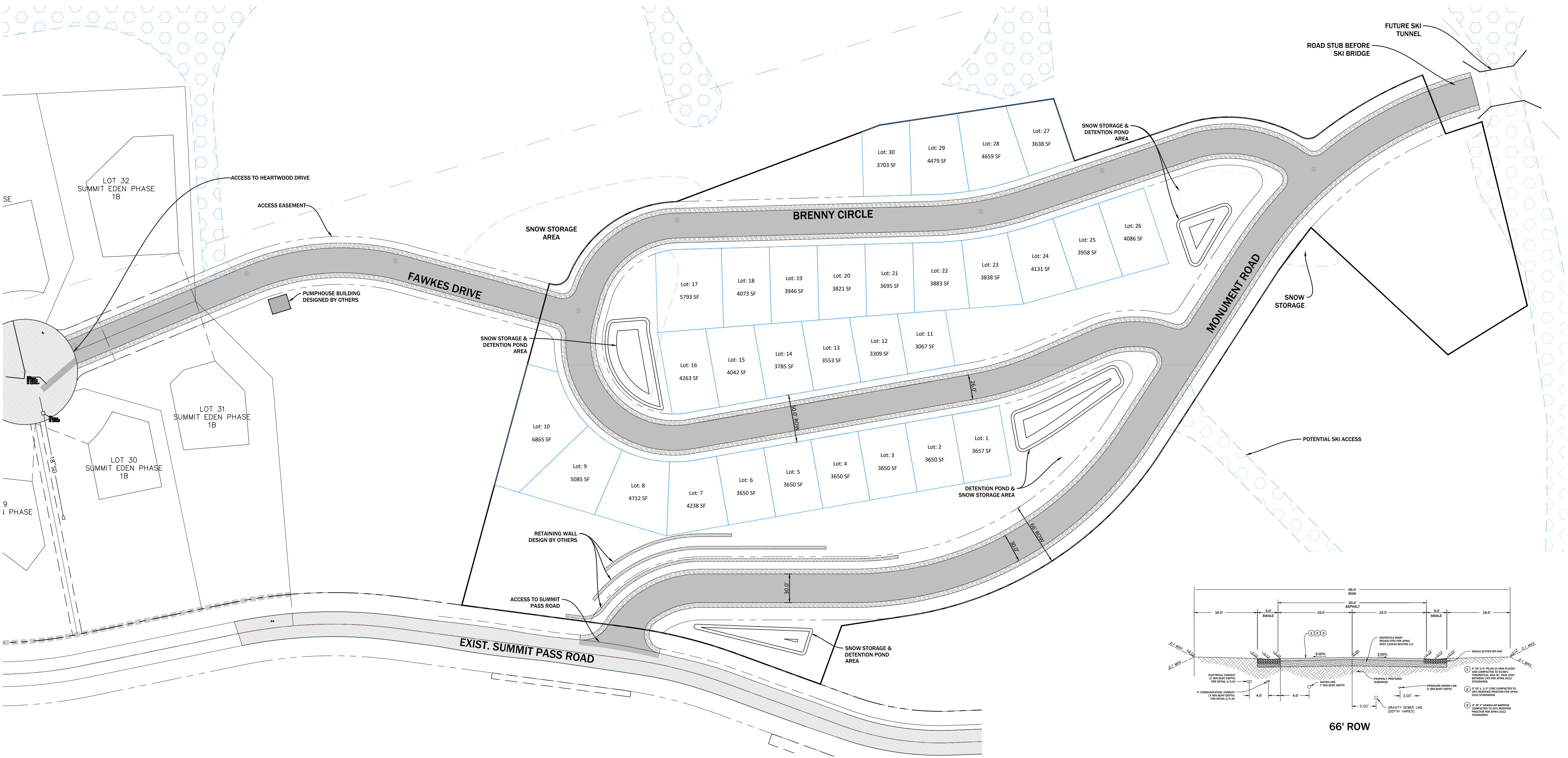
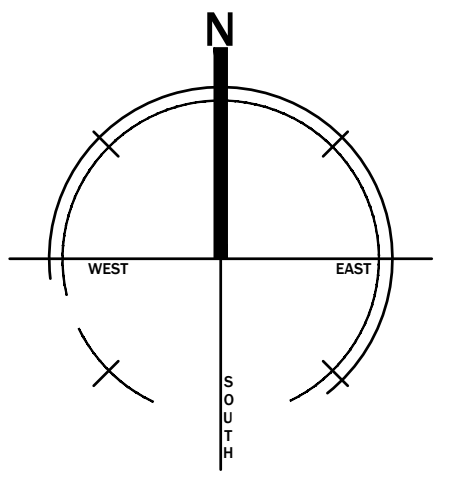
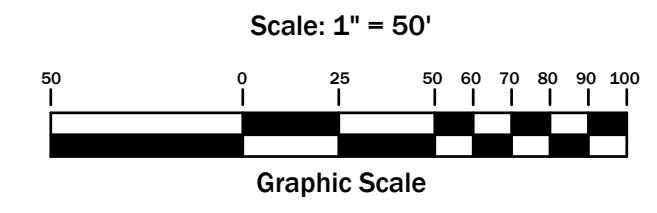
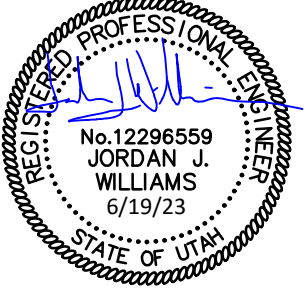
- D1** SAWCUT AND REMOVE ASPHALT
- D2** CLEAR & GRUB SURFACE
- D3** DEMO LIMIT LINE



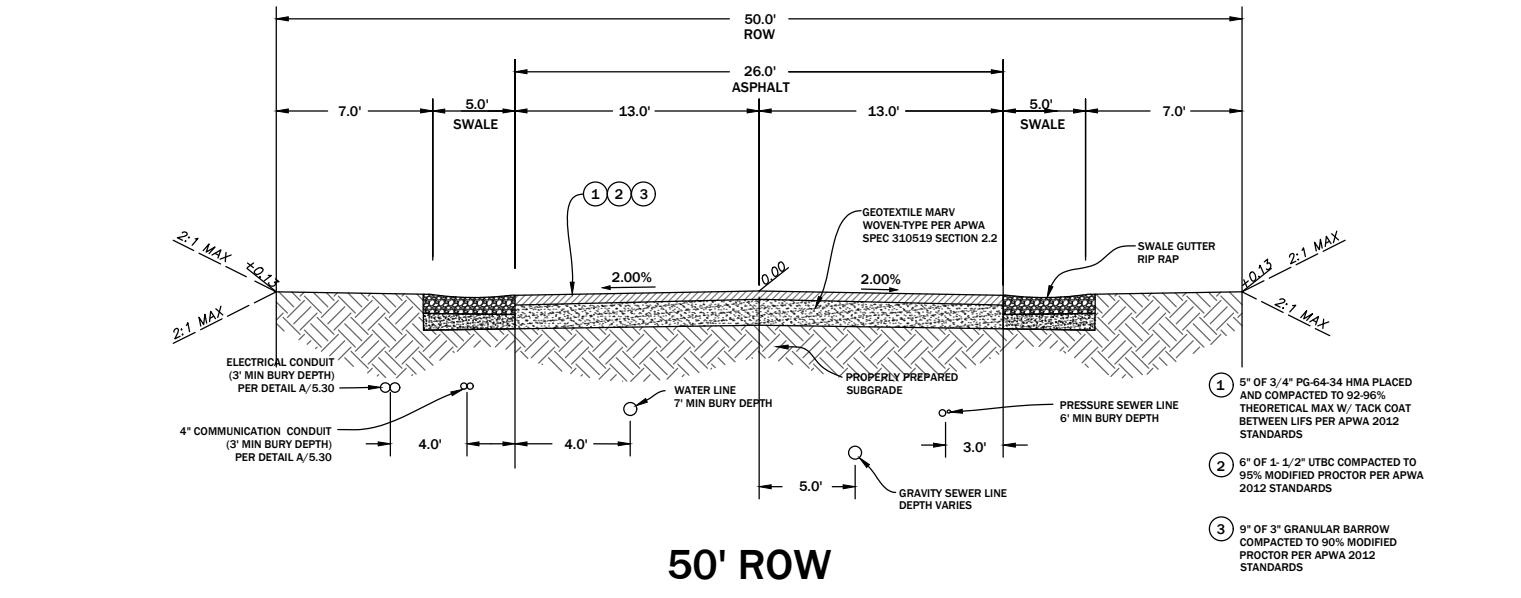
BID SET

DATE:	5/26/2023
PROJECT NO.:	23.001
REVISION	DATE
1	
2	
3	
4	
5	
6	

SITE
MONUMENT AT POWDER MOUNTAIN
Approx. 8050 Summit Pass Road, Eden, Utah



66' ROW

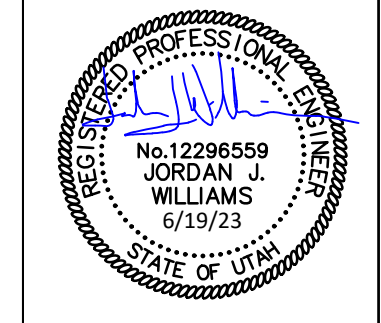


50' ROW

BID SET

DATE:	5/26/2023
PROJECT NO.:	23.001
REVISION	DATE
1	
2	
3	
4	
5	
6	

GRADING & DRAINAGE
MONUMENT AT POWDER MOUNTAIN
Approx. 8050 Summit Pass Road, Eden, Utah

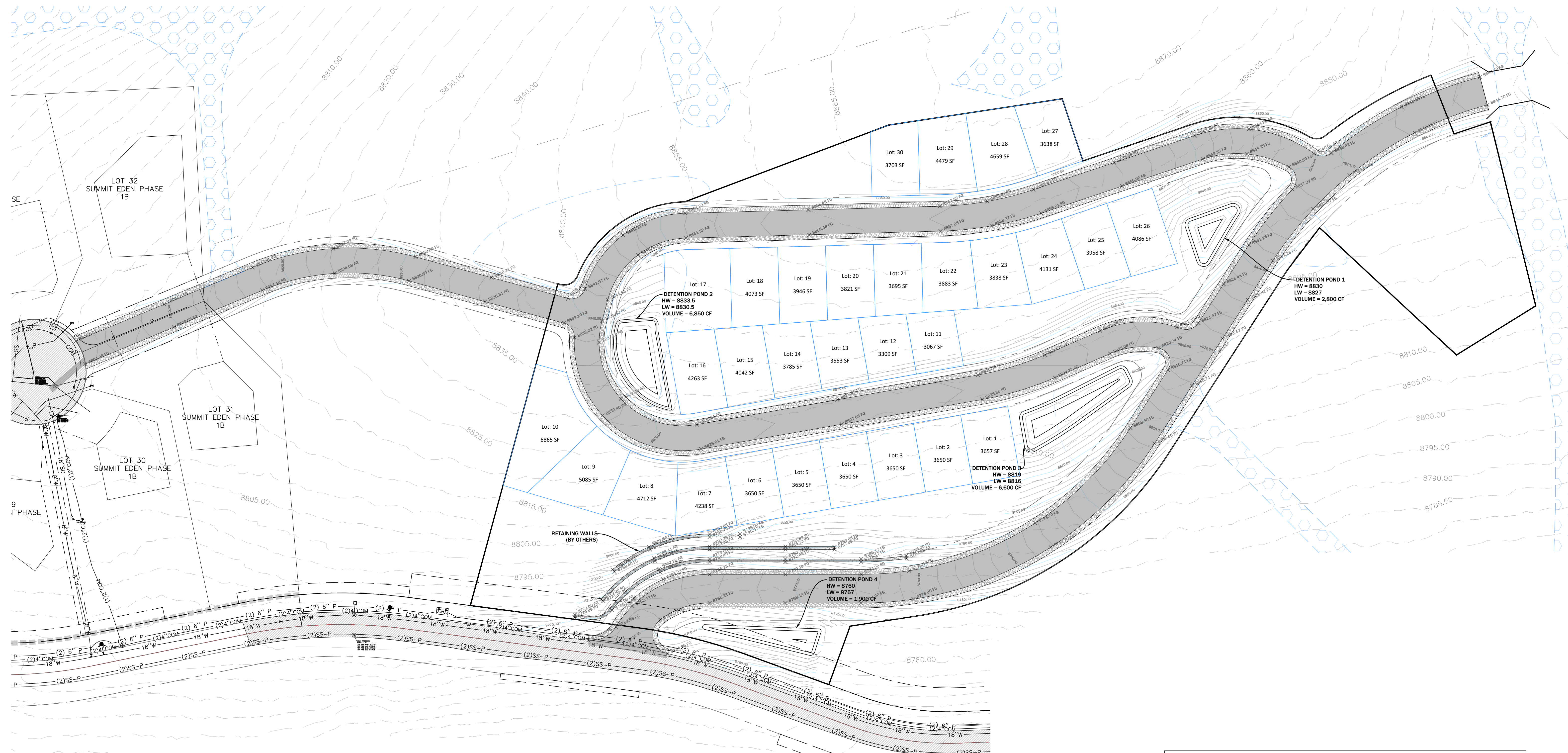
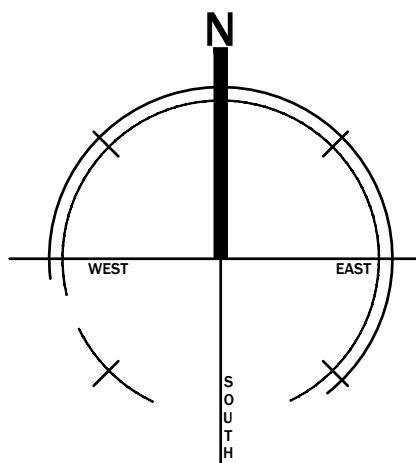
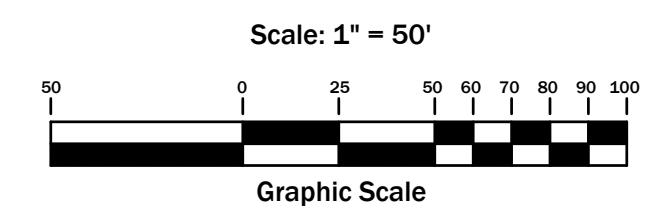


SCALE:

C3.00

DRAWN BY: CGW

6/14



Volume Summary							
Name	Type	Cut Factor	Fill Factor	2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
CUT-FILL	fill	1.000	1.000	234302.72	26001.96	4752.59	21249.37<Cut>
Totals							
				2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
Total				234302.72	26001.96	4752.59	21249.37<Cut>

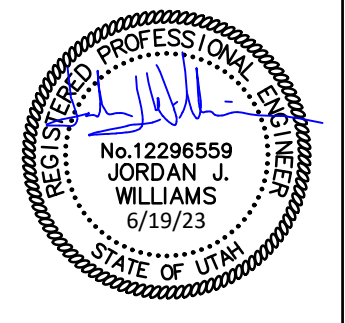
* Value adjusted by cut or fill factor other than 1.0

BID SET

DATE:	5/26/2023
PROJECT NO.:	23001
REVISION:	DATE
1	
2	
3	
4	
5	
6	

UTILITY

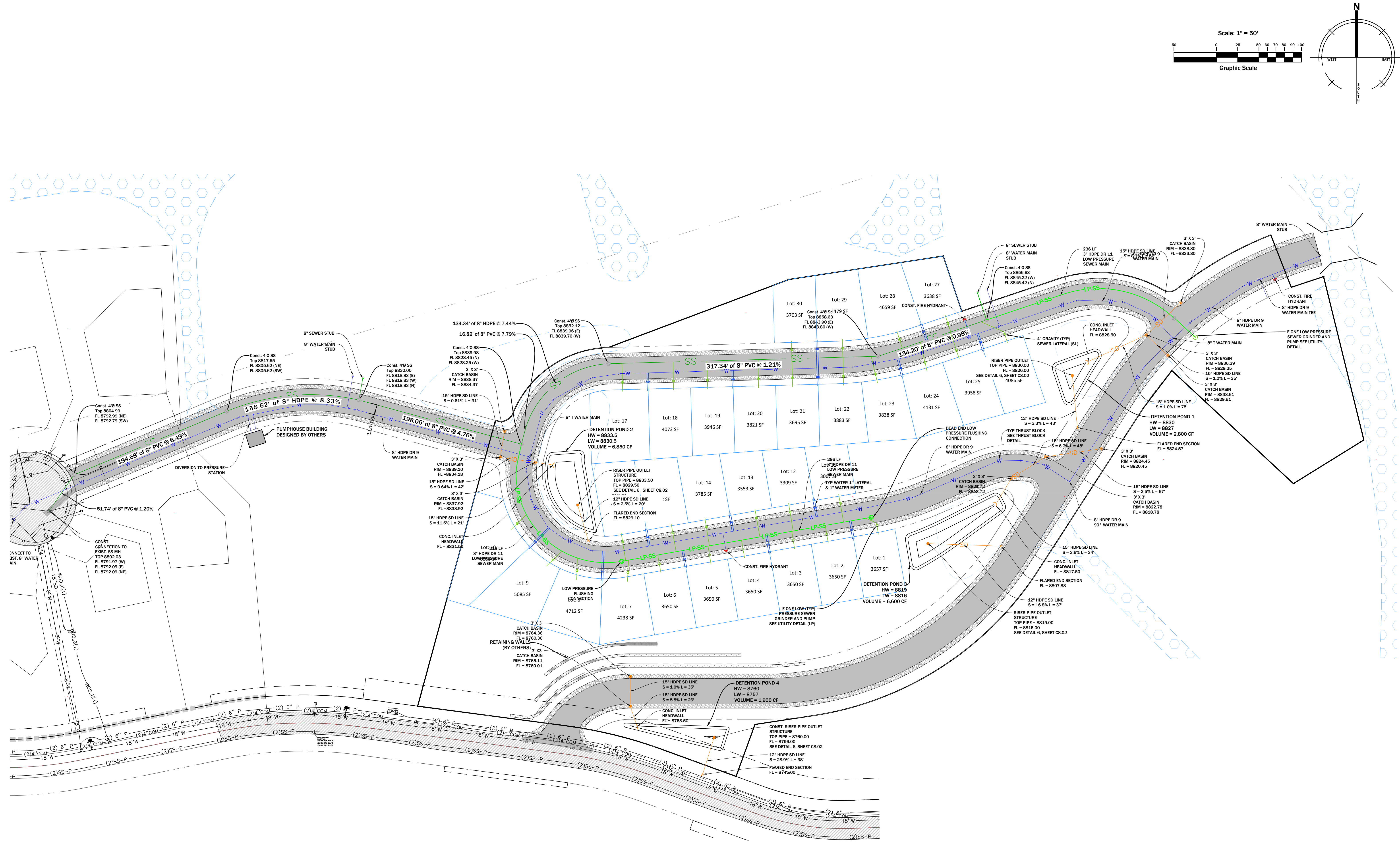
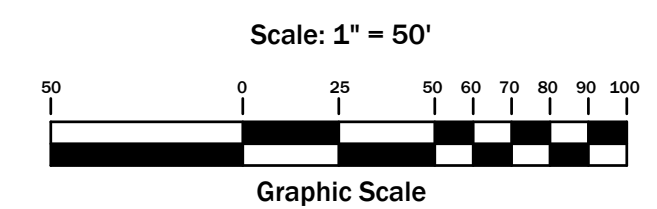
MONUMENT AT POWDER MOUNTAIN
Approx. 8050 Summit Pass Road, Eden, Utah

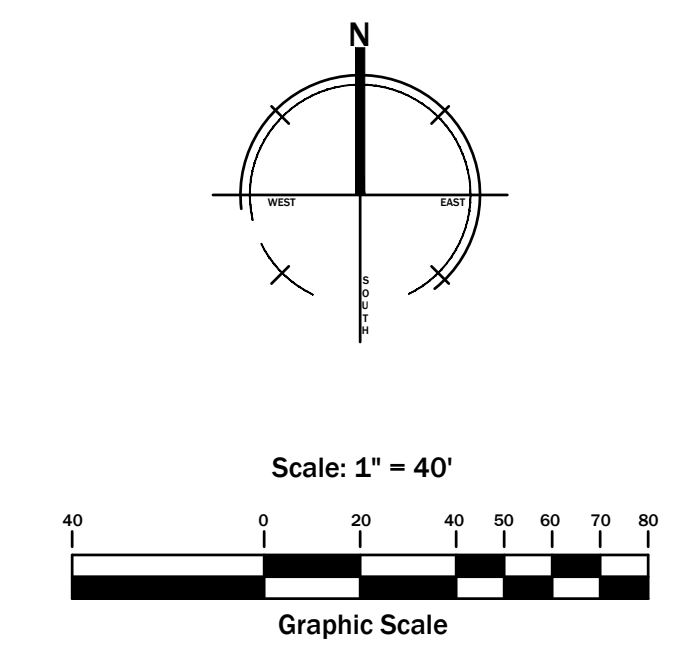
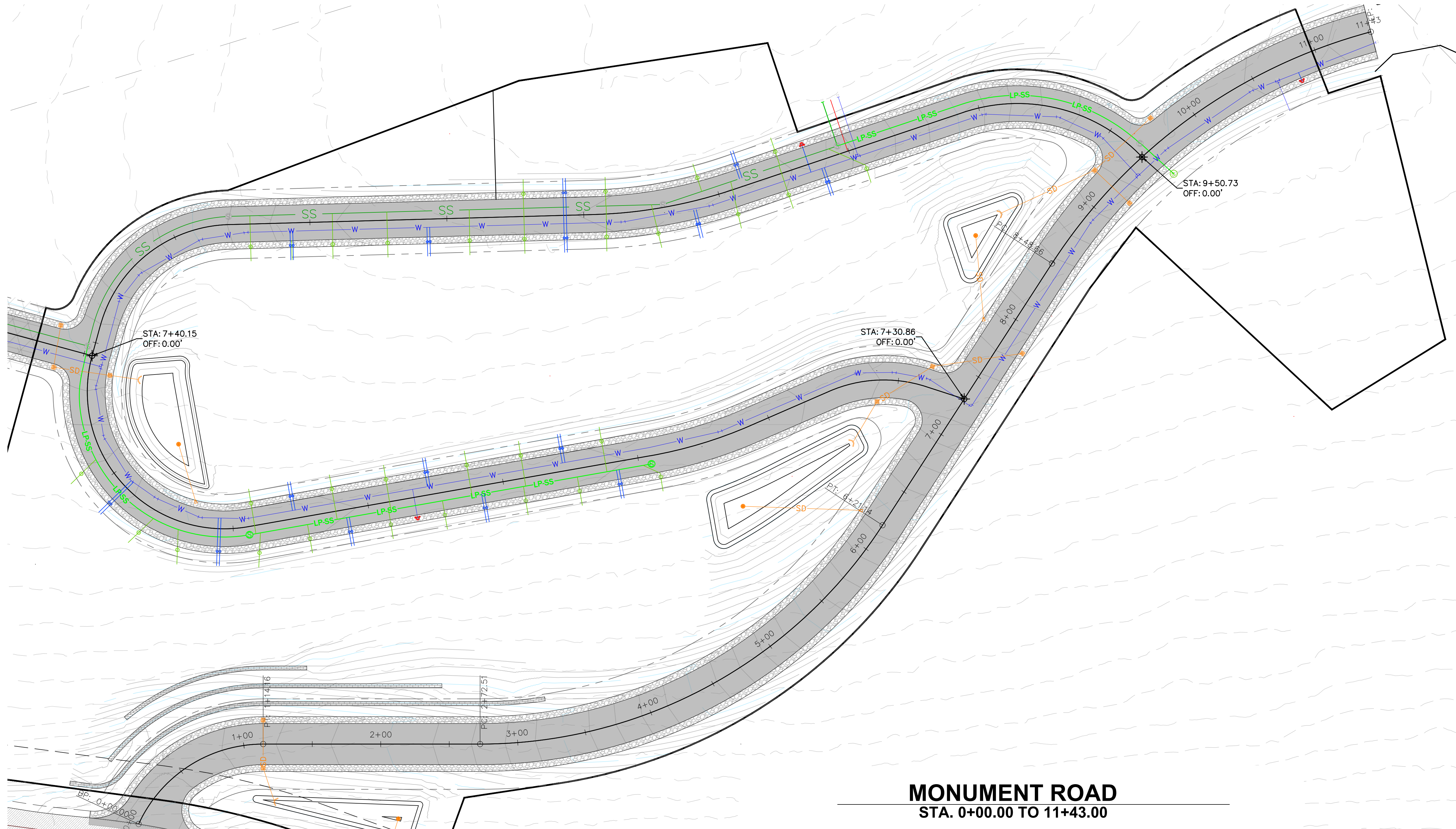


SCALE:

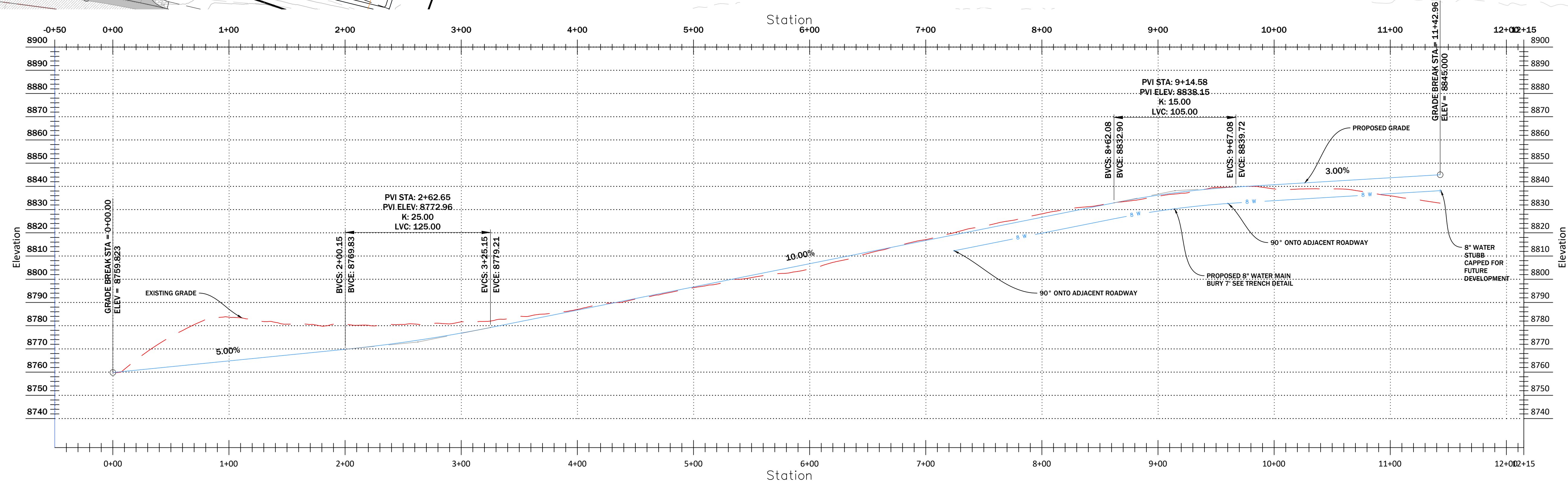
C4.00

DRAWN BY: CGW





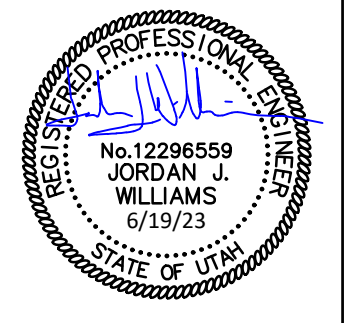
MONUMENT ROAD
STA. 0+00.00 TO 11+43.00



BID SET

REVISION	DATE
1	
2	
3	
4	
5	
6	

PLAN & PROFILE
MONUMENT AT POWDER MOUNTAIN
Approx. 8050 Summit Pass Road, Eden, Utah



SCALE:

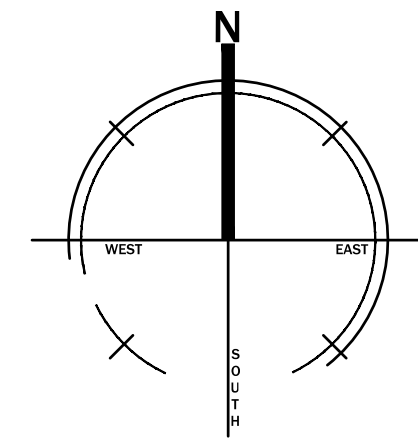
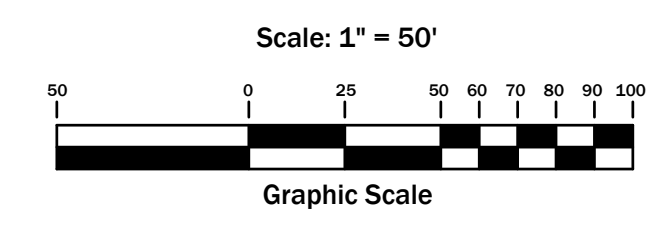
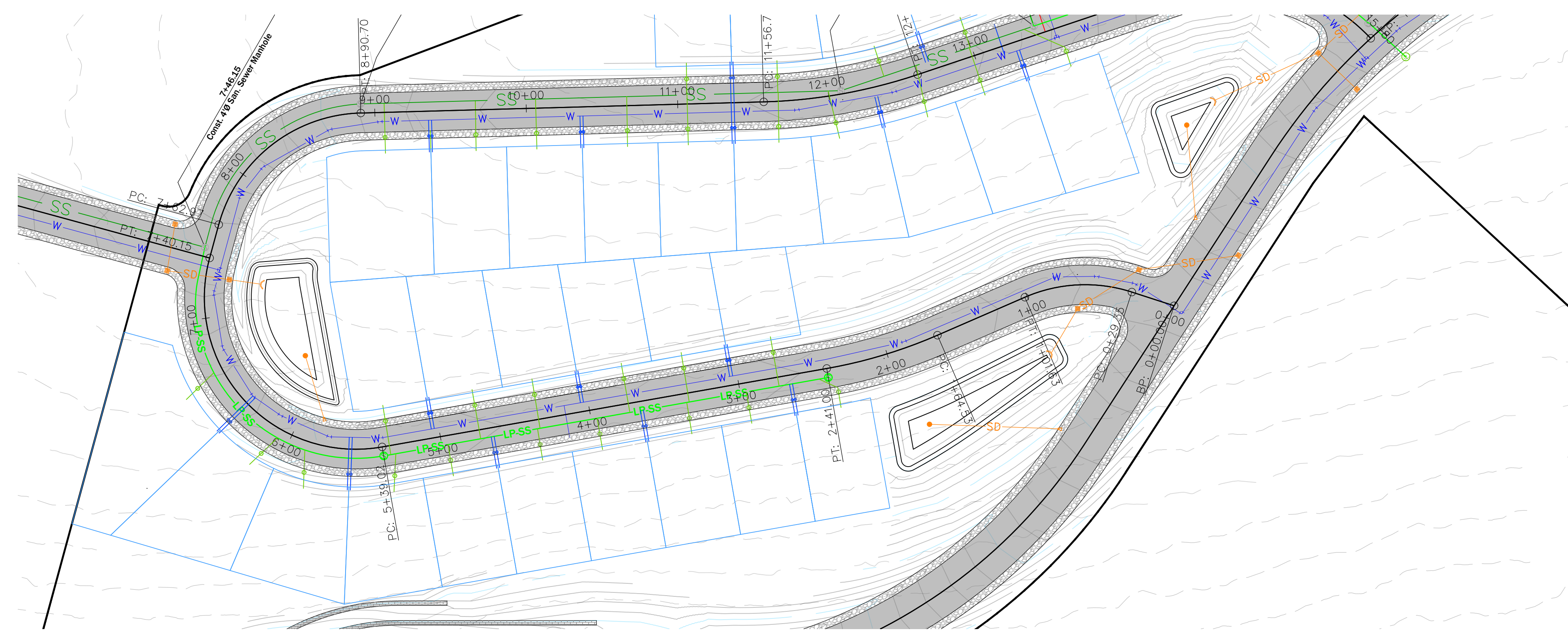
C5.00

DRAWN BY: CGW

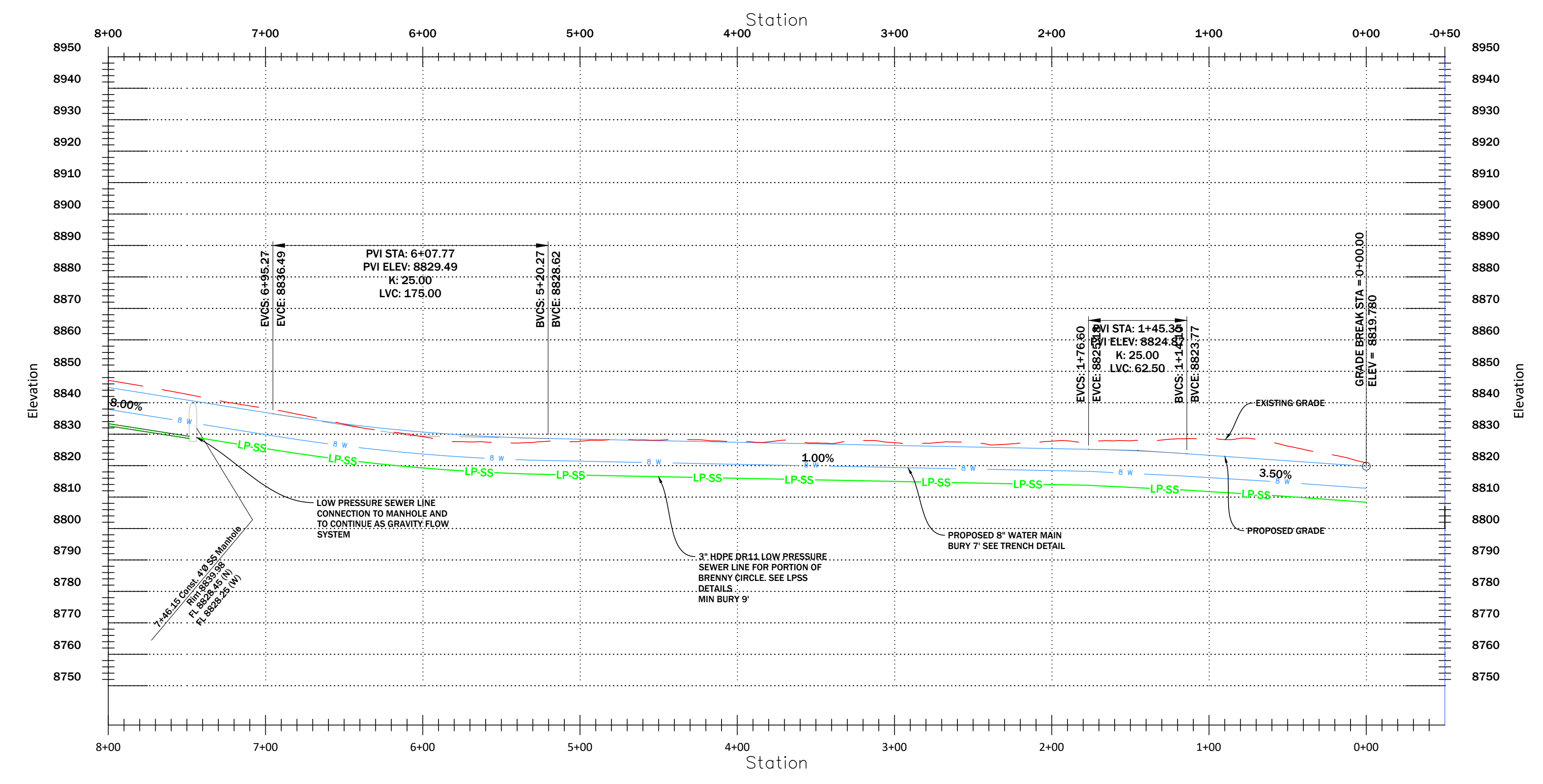
8/14

BID SET

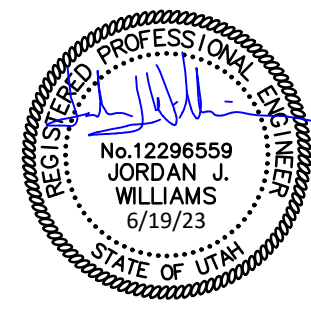
DATE:	5/26/2023
PROJECT NO.:	23.001
REVISION	DATE
1	
2	
3	
4	
5	
6	



BRENNY CIRCLE
STA. 0+00.00 TO 8+00.00



PLAN & PROFILE
MONUMENT AT POWDER MOUNTAIN
Approx. 8050 Summit Pass Road, Eden, Utah



SCALE:

C5.01

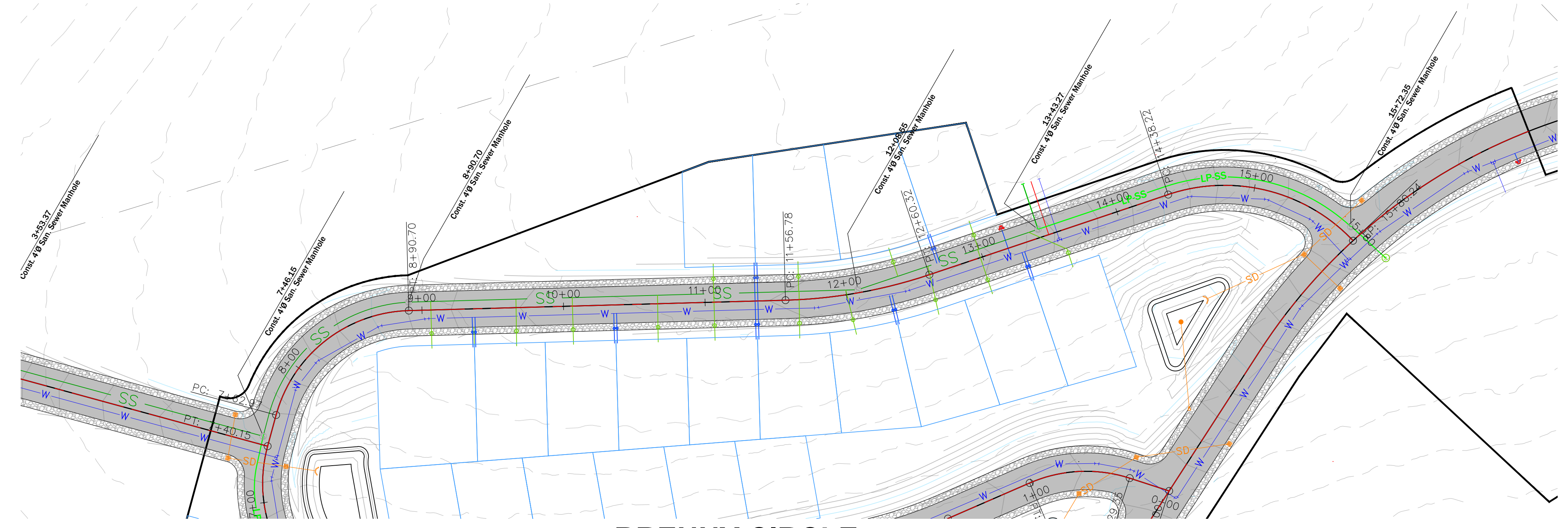
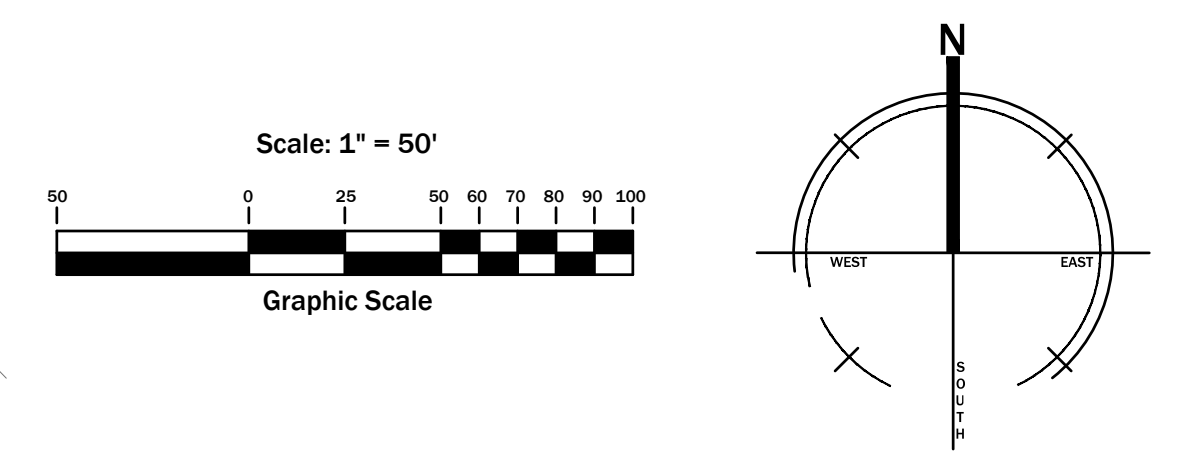
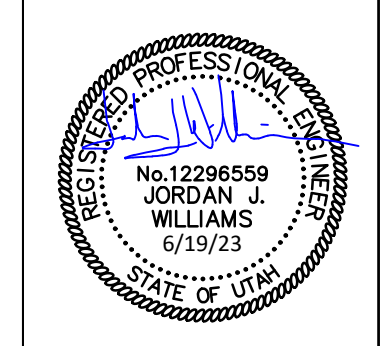
DRAWN BY: CGW

9/14

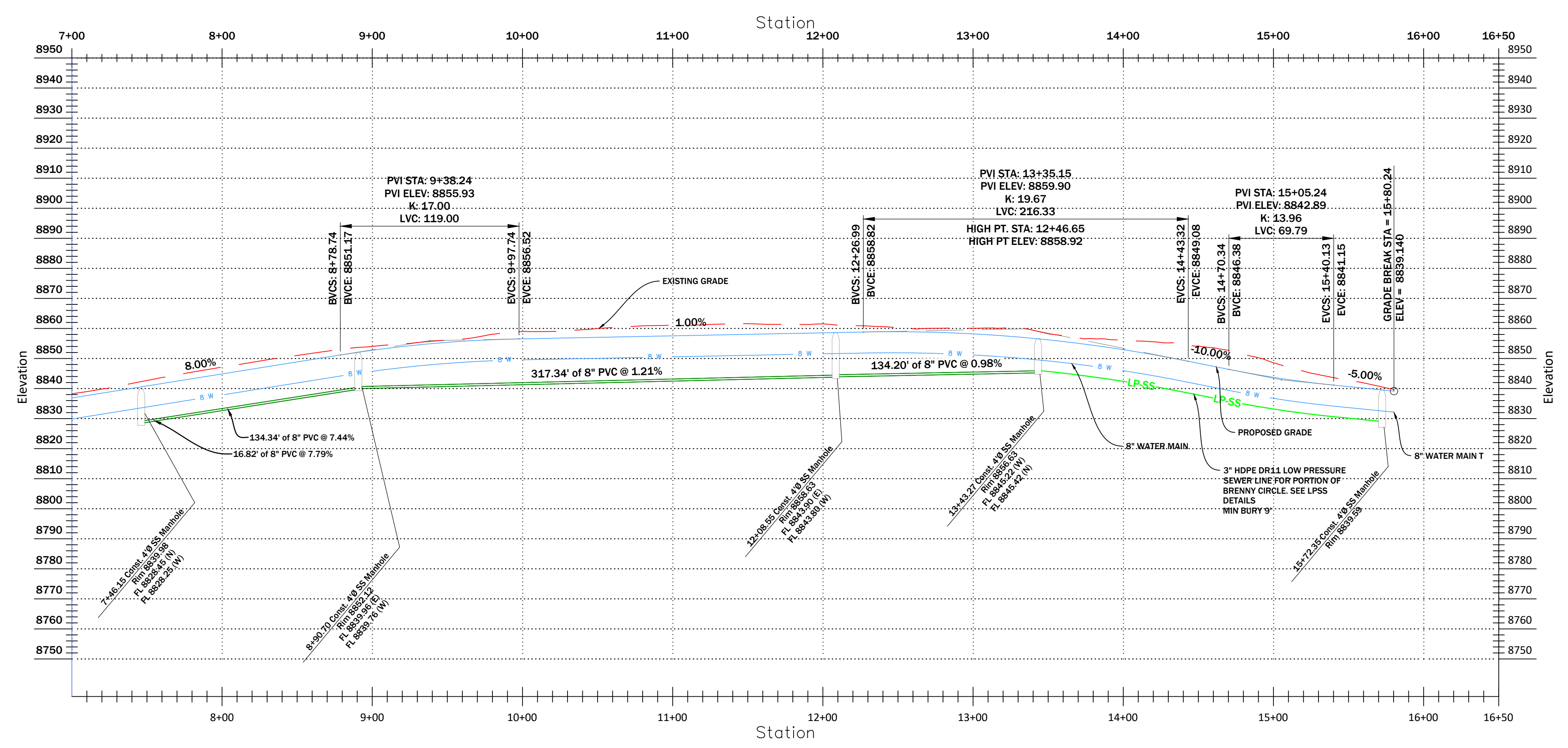
BID SET

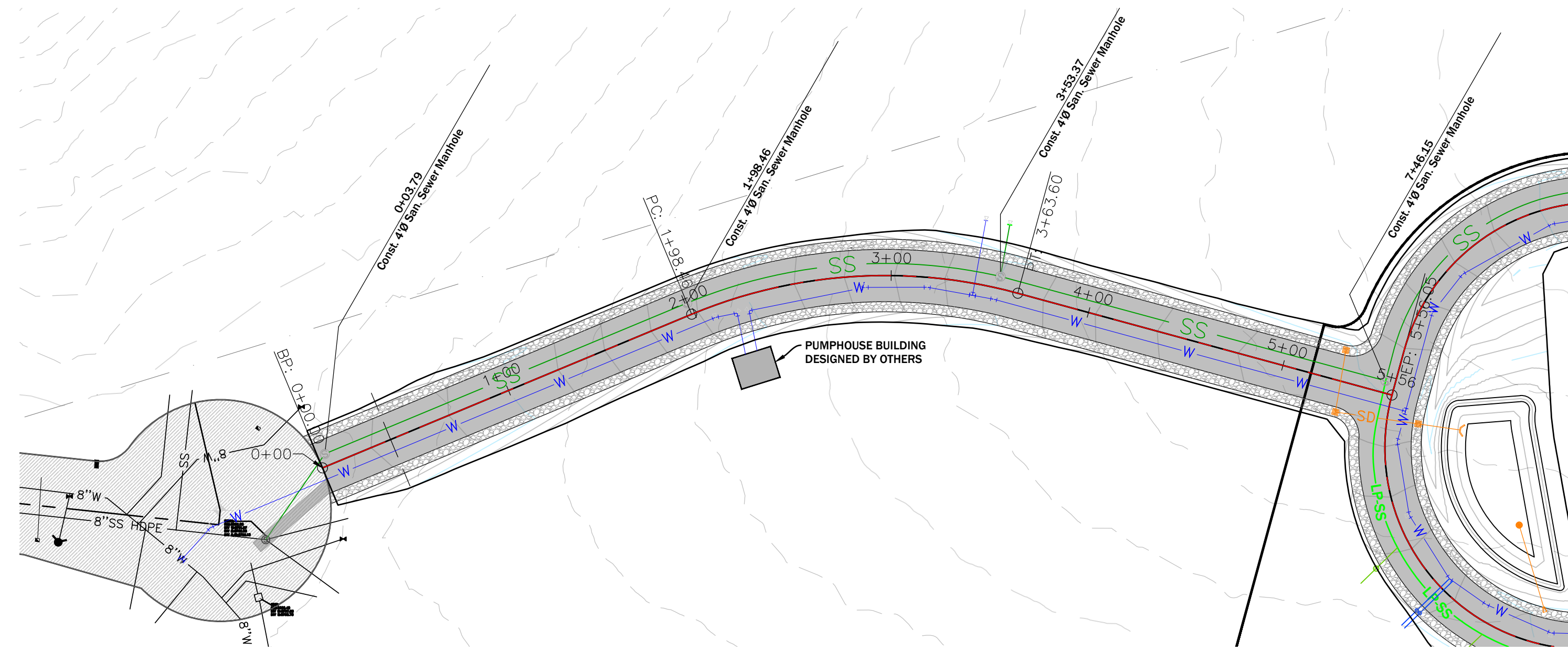
DATE:	5/26/2023
PROJECT NO.:	23.001
REVISION	DATE
1	
2	
3	
4	
5	
6	

PLAN & PROFILE
MONUMENT AT POWDER MOUNTAIN
Approx. 8050 Summit Pass Road, Eden, Utah

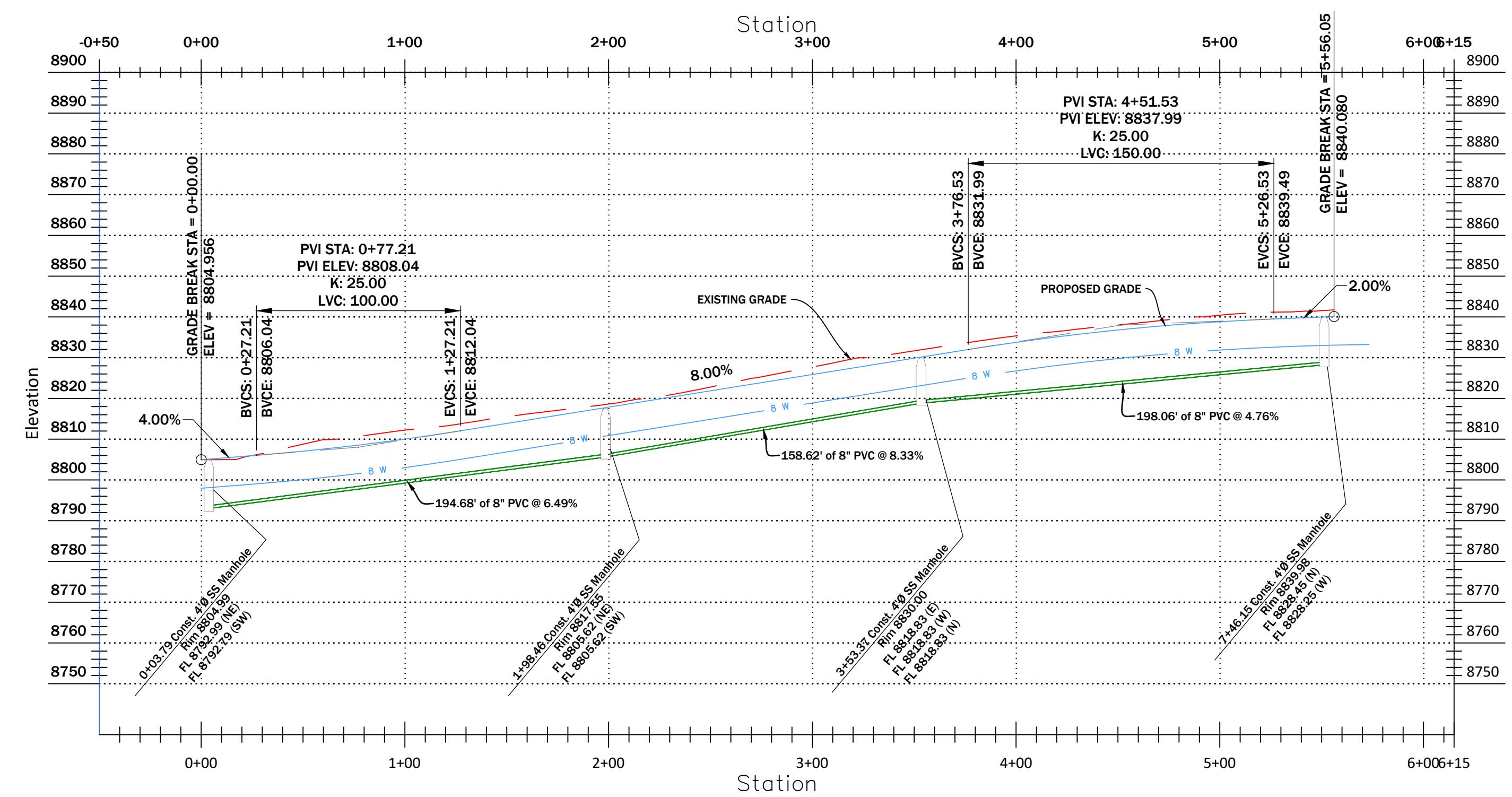


BRENNY CIRCLE
STA. 7+40.15 TO 15+80.24





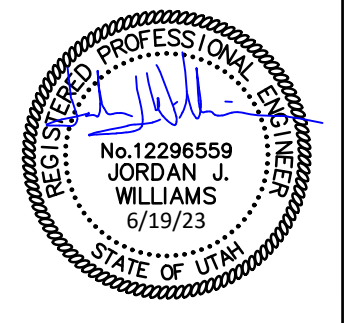
FAWKES DRIVE
STA. 0+00 TO 5+56



BID SET

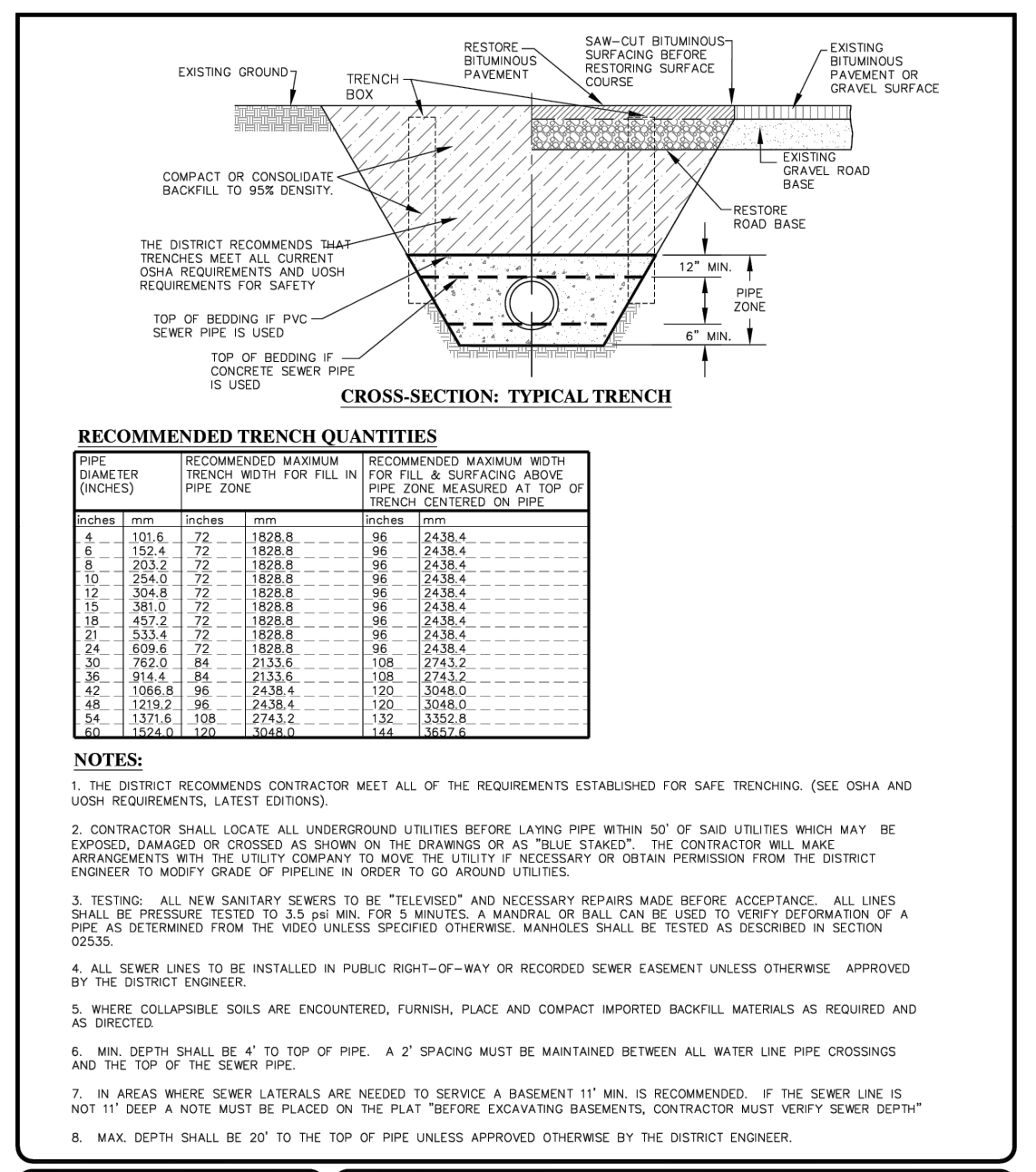
REVISION	DATE
1	
2	
3	
4	
5	
6	

PLAN & PROFILE
MONUMENT AT POWDER MOUNTAIN
Approx. 8050 Summit Pass Road, Eden, Utah



SCALE:
C5.03

DRAWN BY: CGW
11/14



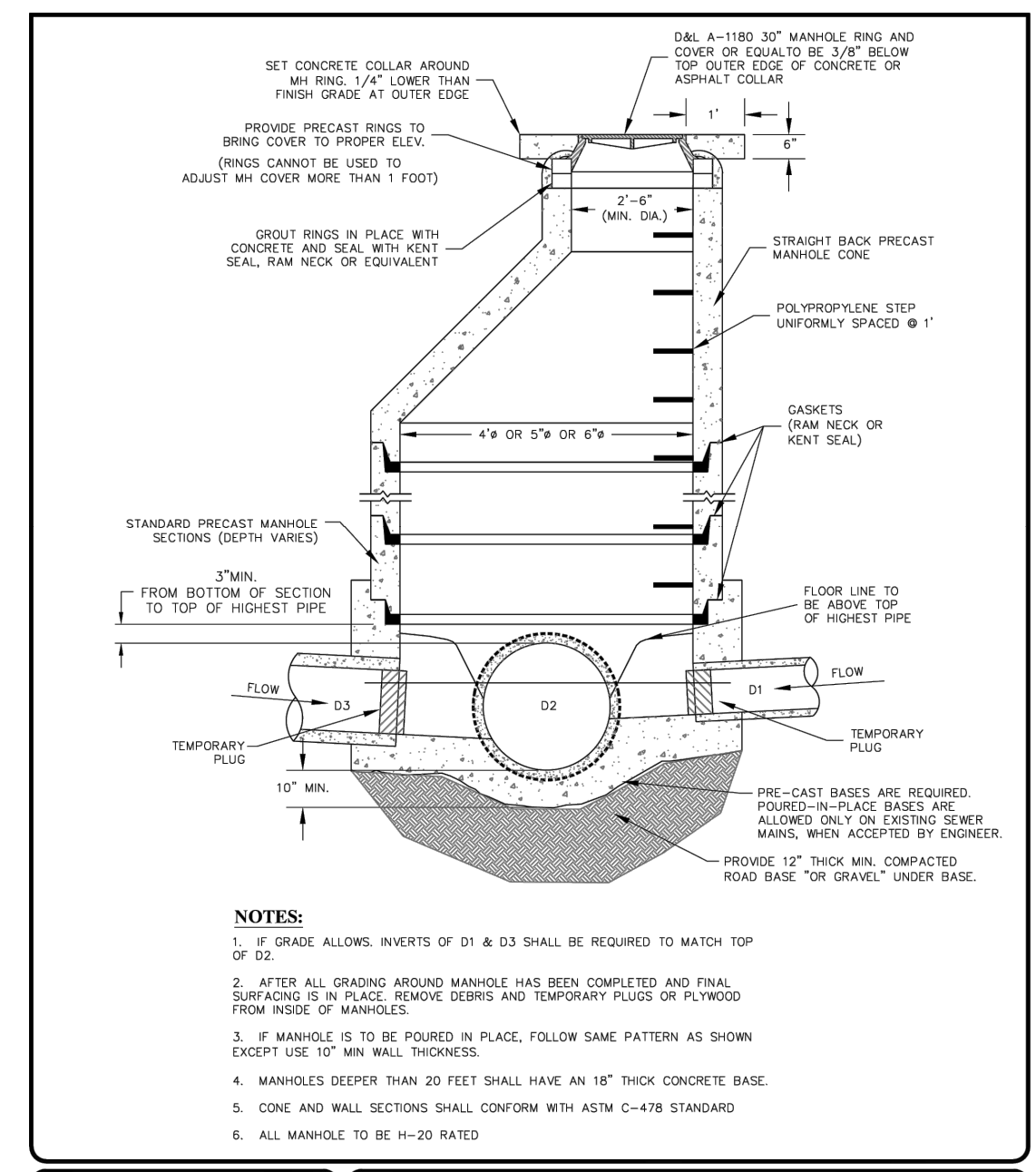
STANDARD SEWER TRENCH

APRIL 2023
DESIGNED BY: G
CHECKED BY: G
DATE: 04/26/23

G SON ENGINEERING
1000 SOUTH 1000 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: 801.488.1000 FAX: 801.488.1001

POWDER MOUNTAIN WATER AND SEWER IMPROVEMENT DISTRICT
1000 SOUTH 1000 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: 801.488.1000 FAX: 801.488.1001

1 SEWER TRENCH - PMW&S



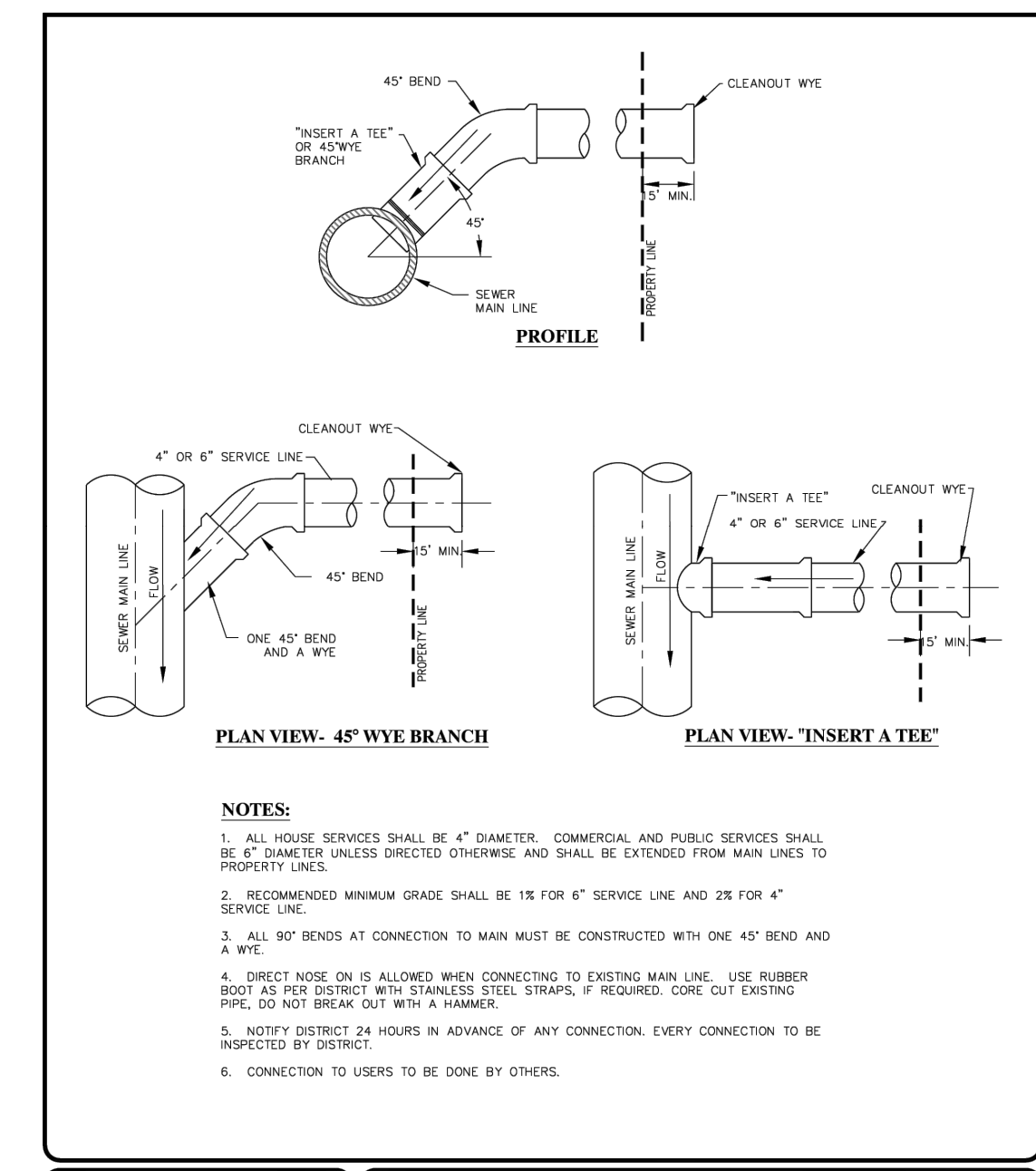
SANITARY SEWER MANHOLE

APRIL 2023
DESIGNED BY: G
CHECKED BY: G
DATE: 04/26/23

G SON ENGINEERING
1000 SOUTH 1000 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: 801.488.1000 FAX: 801.488.1001

POWDER MOUNTAIN WATER AND SEWER IMPROVEMENT DISTRICT
1000 SOUTH 1000 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: 801.488.1000 FAX: 801.488.1001

2 SEWER MANHOLE - PMW&S



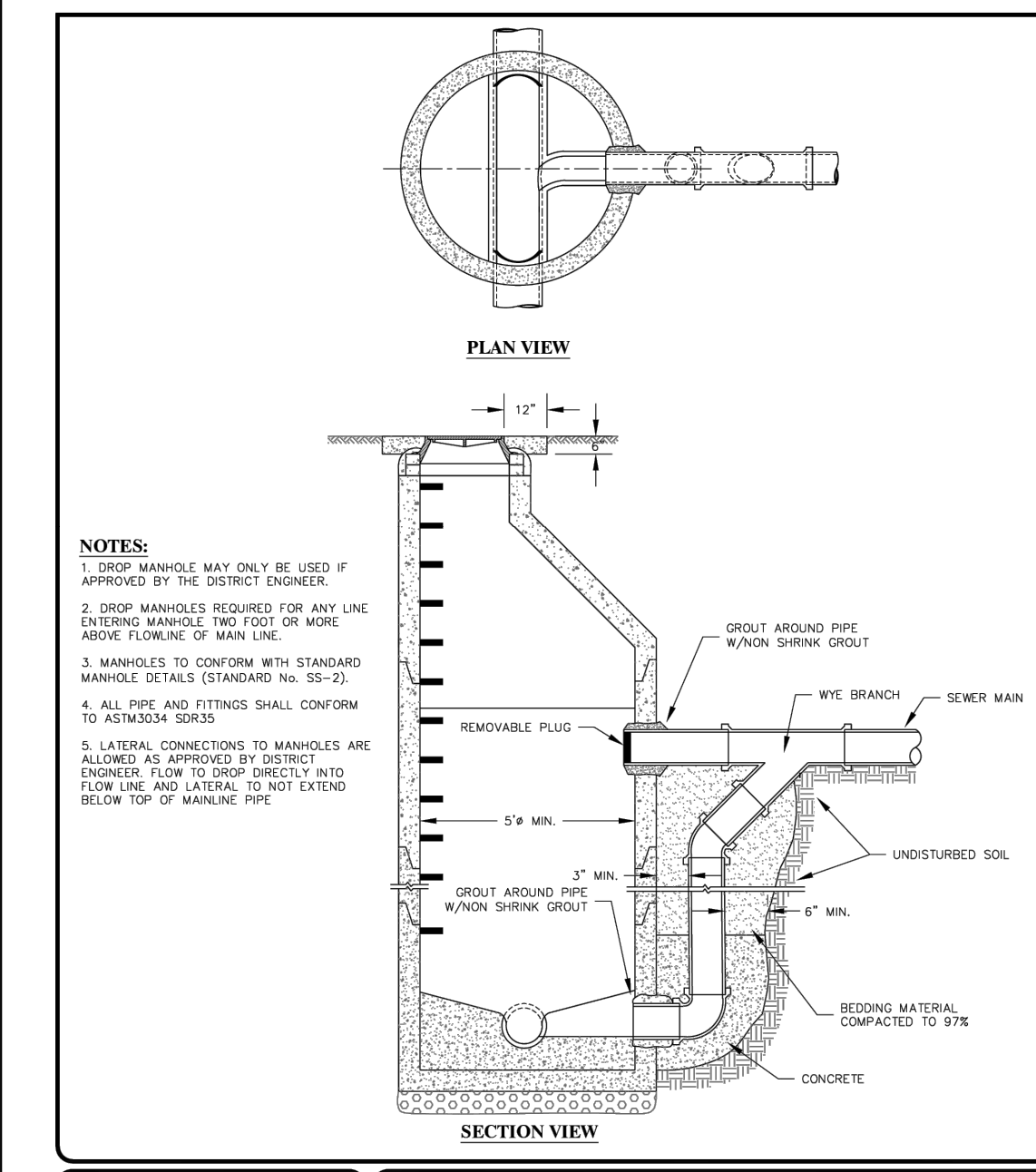
SEWER SERVICE CONNECTION

APRIL 2023
DESIGNED BY: G
CHECKED BY: G
DATE: 04/26/23

G SON ENGINEERING
1000 SOUTH 1000 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: 801.488.1000 FAX: 801.488.1001

POWDER MOUNTAIN WATER AND SEWER IMPROVEMENT DISTRICT
1000 SOUTH 1000 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: 801.488.1000 FAX: 801.488.1001

3 SEWER CONNECTION - PMW&S



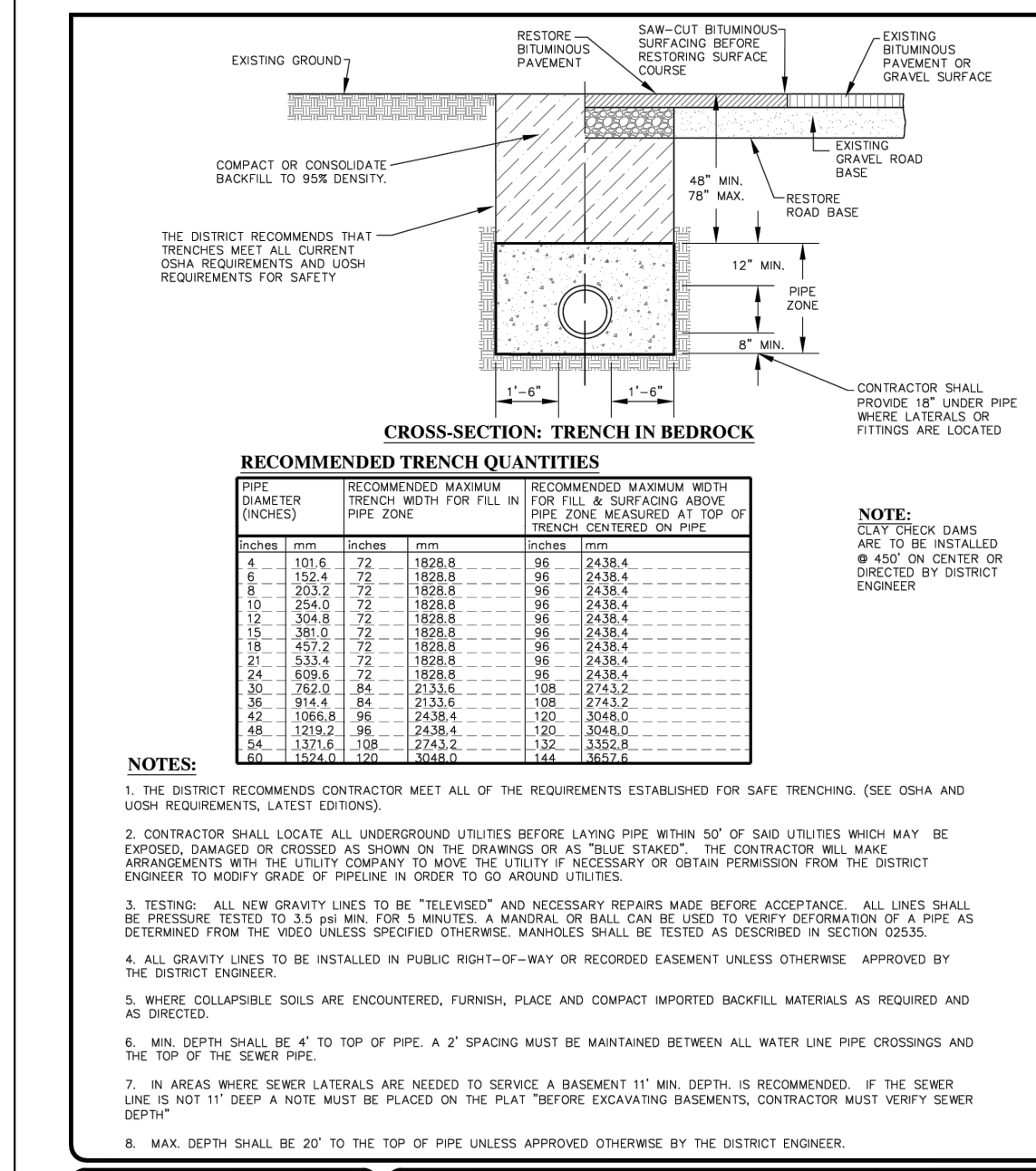
OUTSIDE DROP MANHOLE

APRIL 2023
DESIGNED BY: G
CHECKED BY: G
DATE: 04/26/23

G SON ENGINEERING
1000 SOUTH 1000 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: 801.488.1000 FAX: 801.488.1001

POWDER MOUNTAIN WATER AND SEWER IMPROVEMENT DISTRICT
1000 SOUTH 1000 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: 801.488.1000 FAX: 801.488.1001

4 SEWER DROP MANHOLE - PMW&S



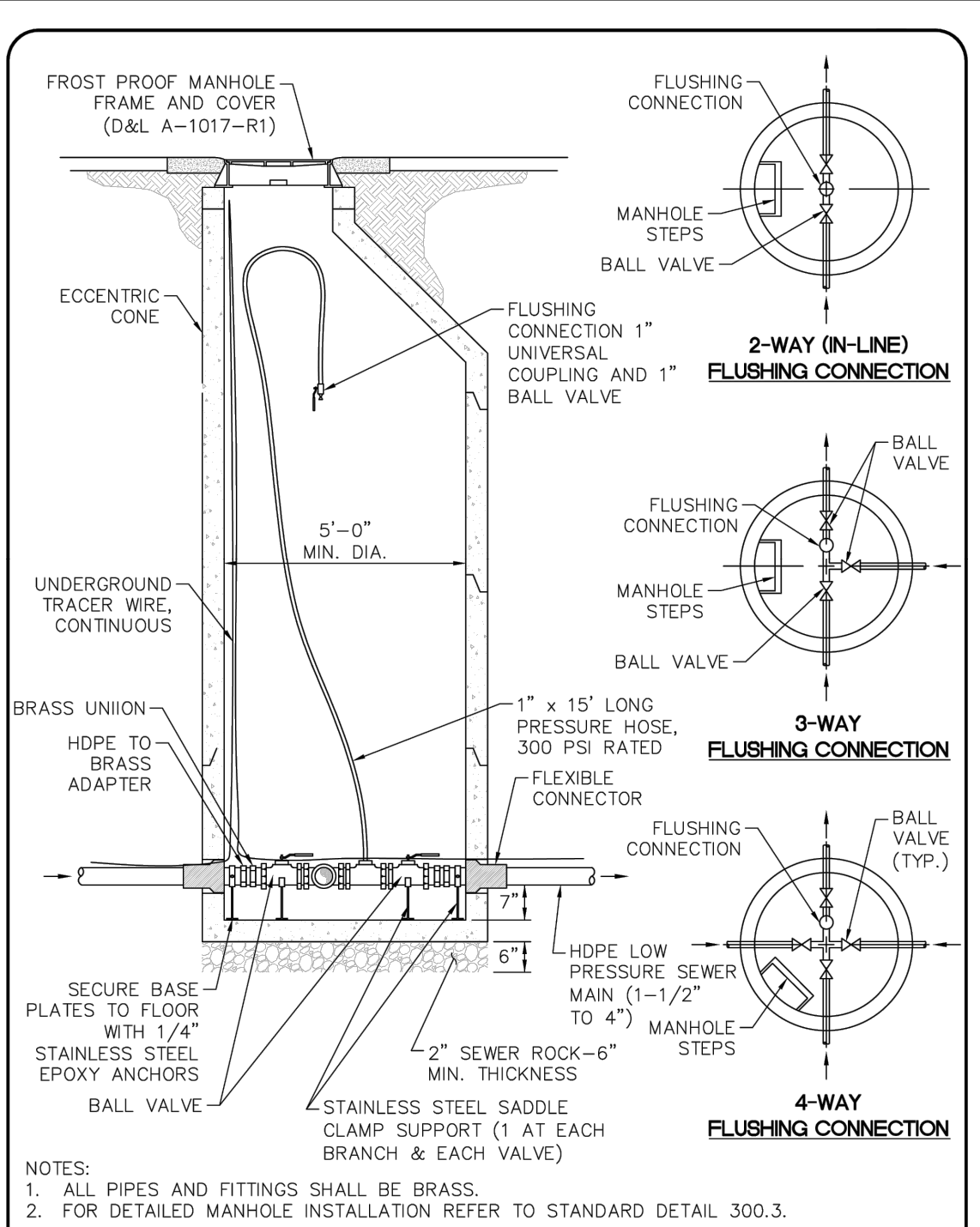
SEWER TRENCH IN BEDROCK

APRIL 2023
DESIGNED BY: G
CHECKED BY: G
DATE: 04/26/23

G SON ENGINEERING
1000 SOUTH 1000 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: 801.488.1000 FAX: 801.488.1001

POWDER MOUNTAIN WATER AND SEWER IMPROVEMENT DISTRICT
1000 SOUTH 1000 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: 801.488.1000 FAX: 801.488.1001

5 SEWER TRENCH - PMW&S



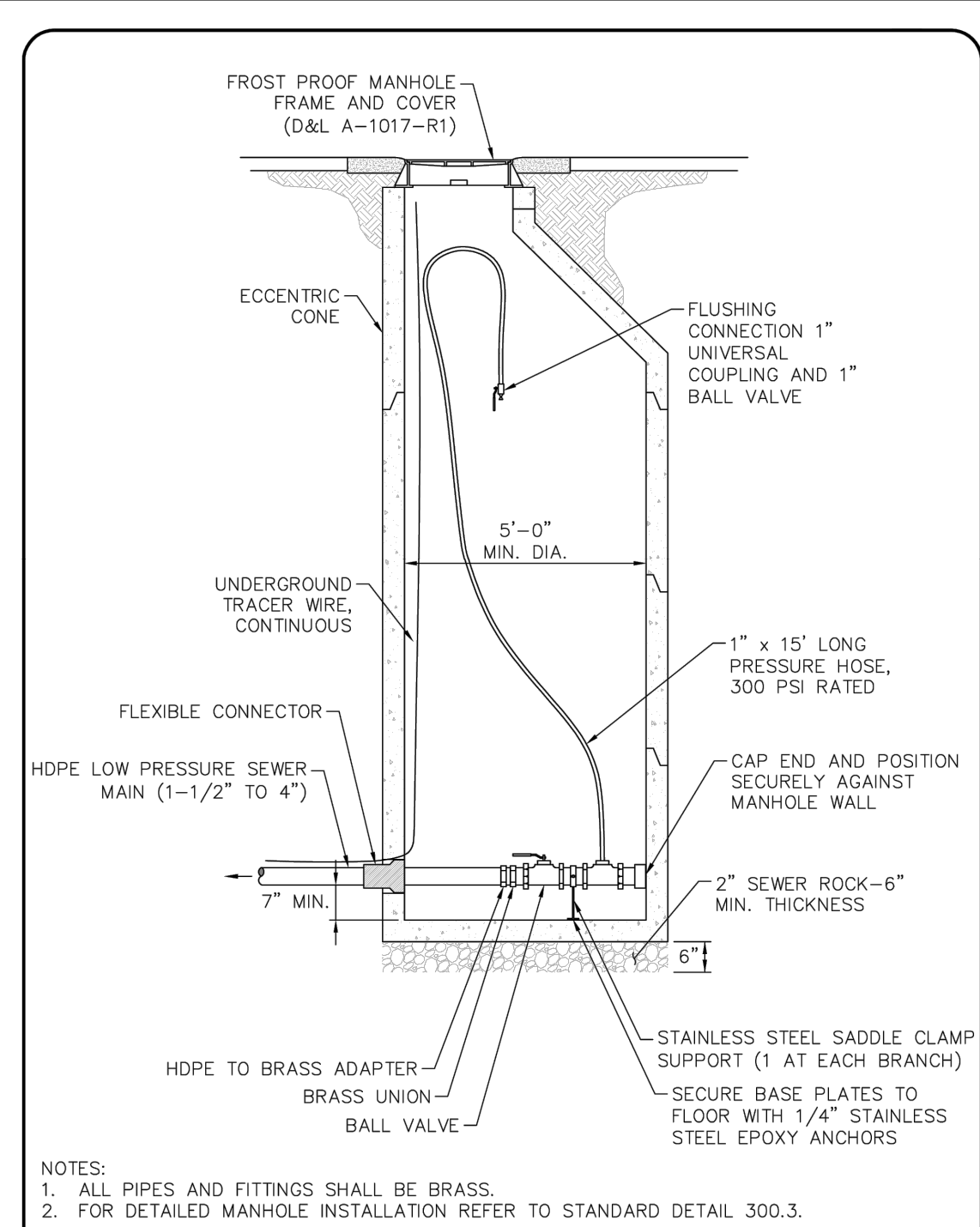
LOW PRESSURE FLUSHING CONNECTION

APRIL 2023
DESIGNED BY: G
CHECKED BY: G
DATE: 04/26/23

G SON ENGINEERING
1000 SOUTH 1000 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: 801.488.1000 FAX: 801.488.1001

POWDER MOUNTAIN WATER AND SEWER IMPROVEMENT DISTRICT
1000 SOUTH 1000 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: 801.488.1000 FAX: 801.488.1001

6 LOW PRESSURE FLUSHING CONNECTION



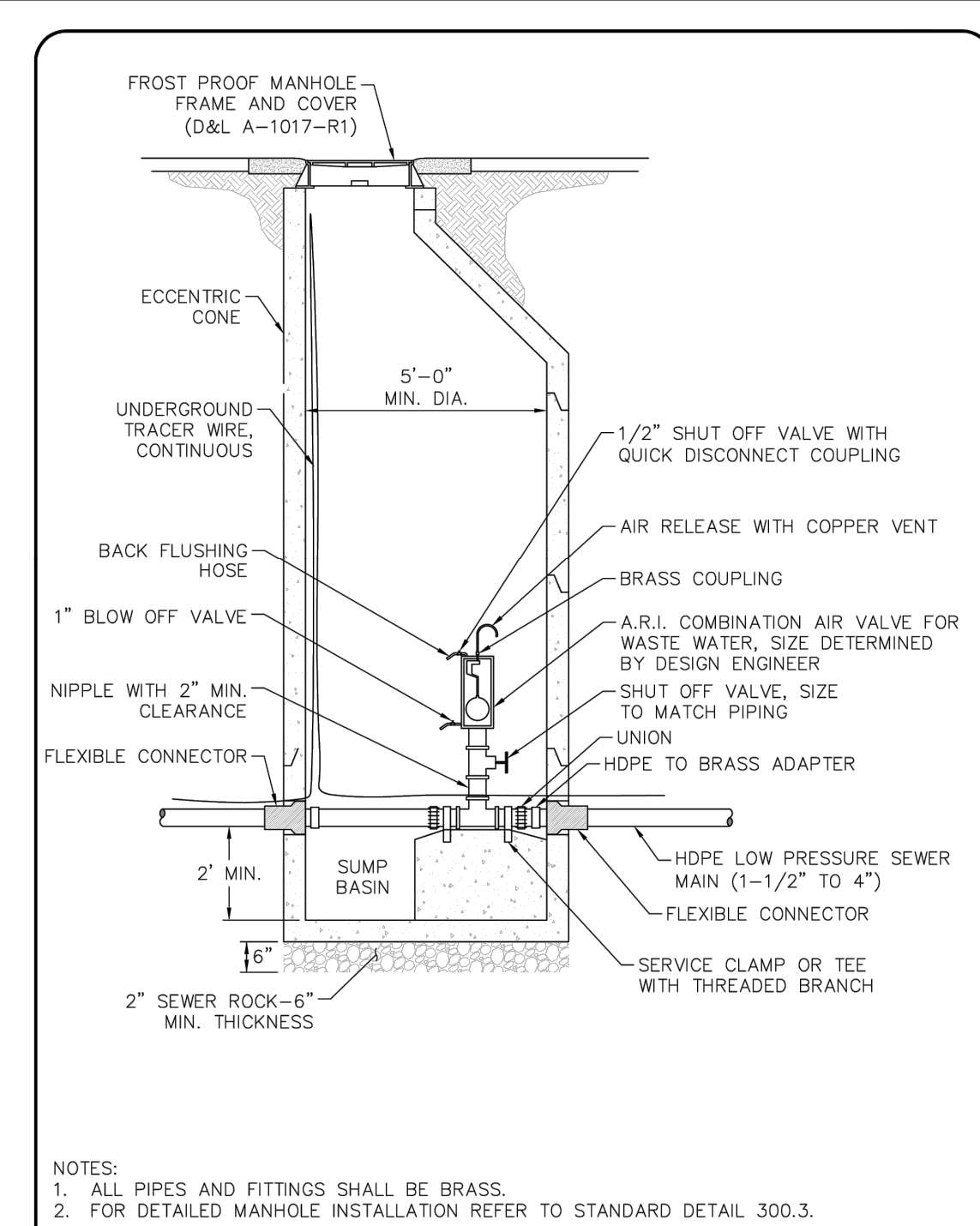
DEAD END LOW PRESSURE FLUSHING CONNECTION

APRIL 2023
DESIGNED BY: G
CHECKED BY: G
DATE: 04/26/23

G SON ENGINEERING
1000 SOUTH 1000 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: 801.488.1000 FAX: 801.488.1001

POWDER MOUNTAIN WATER AND SEWER IMPROVEMENT DISTRICT
1000 SOUTH 1000 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: 801.488.1000 FAX: 801.488.1001

7 DEAD END LOW PRESSURE FLUSHING CONNECTION



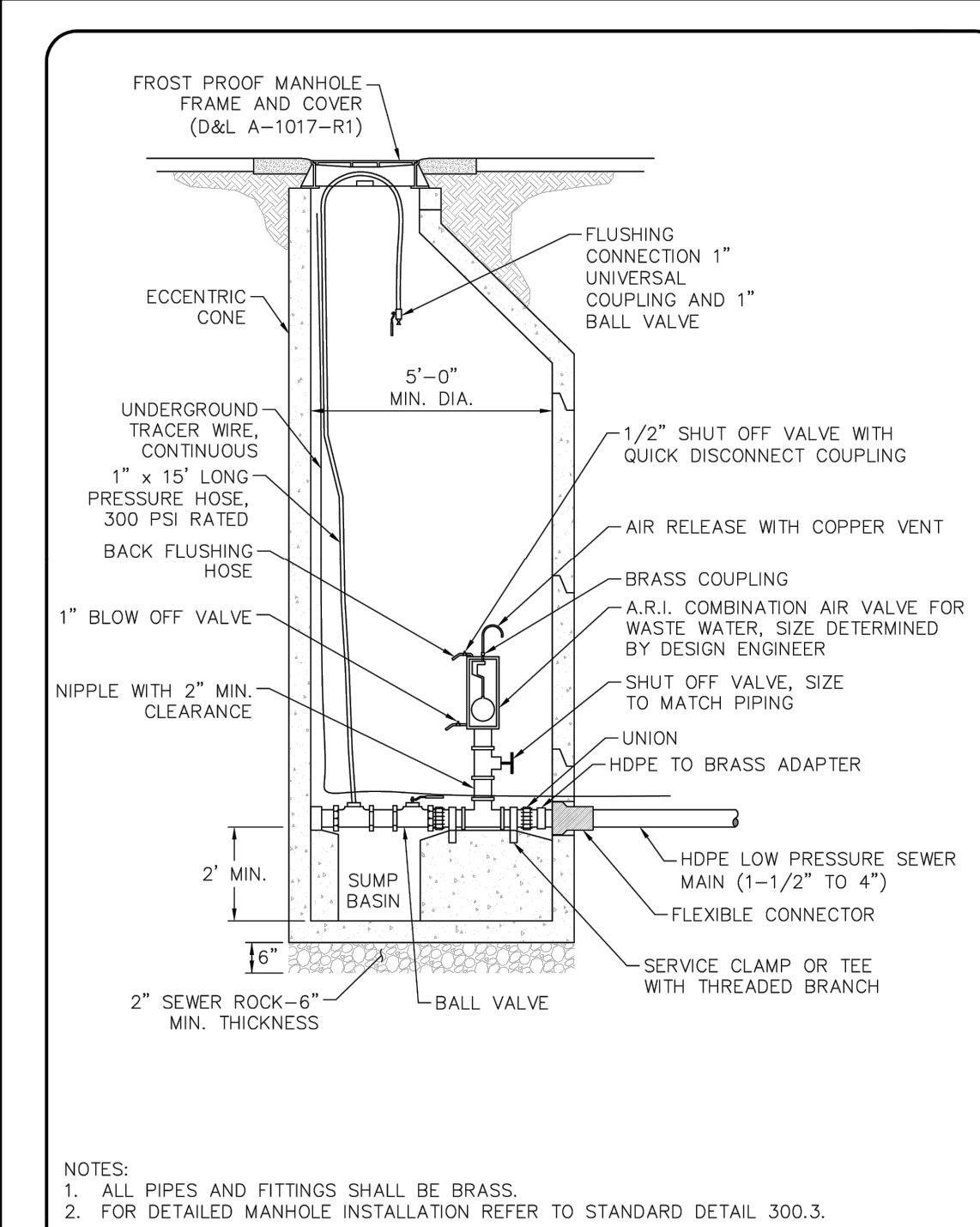
LOW PRESSURE COMBINATION AIR VALVE

APRIL 2023
DESIGNED BY: G
CHECKED BY: G
DATE: 04/26/23

G SON ENGINEERING
1000 SOUTH 1000 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: 801.488.1000 FAX: 801.488.1001

POWDER MOUNTAIN WATER AND SEWER IMPROVEMENT DISTRICT
1000 SOUTH 1000 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: 801.488.1000 FAX: 801.488.1001

8 LOW PRESSURE COMBINATION AIR VALVE



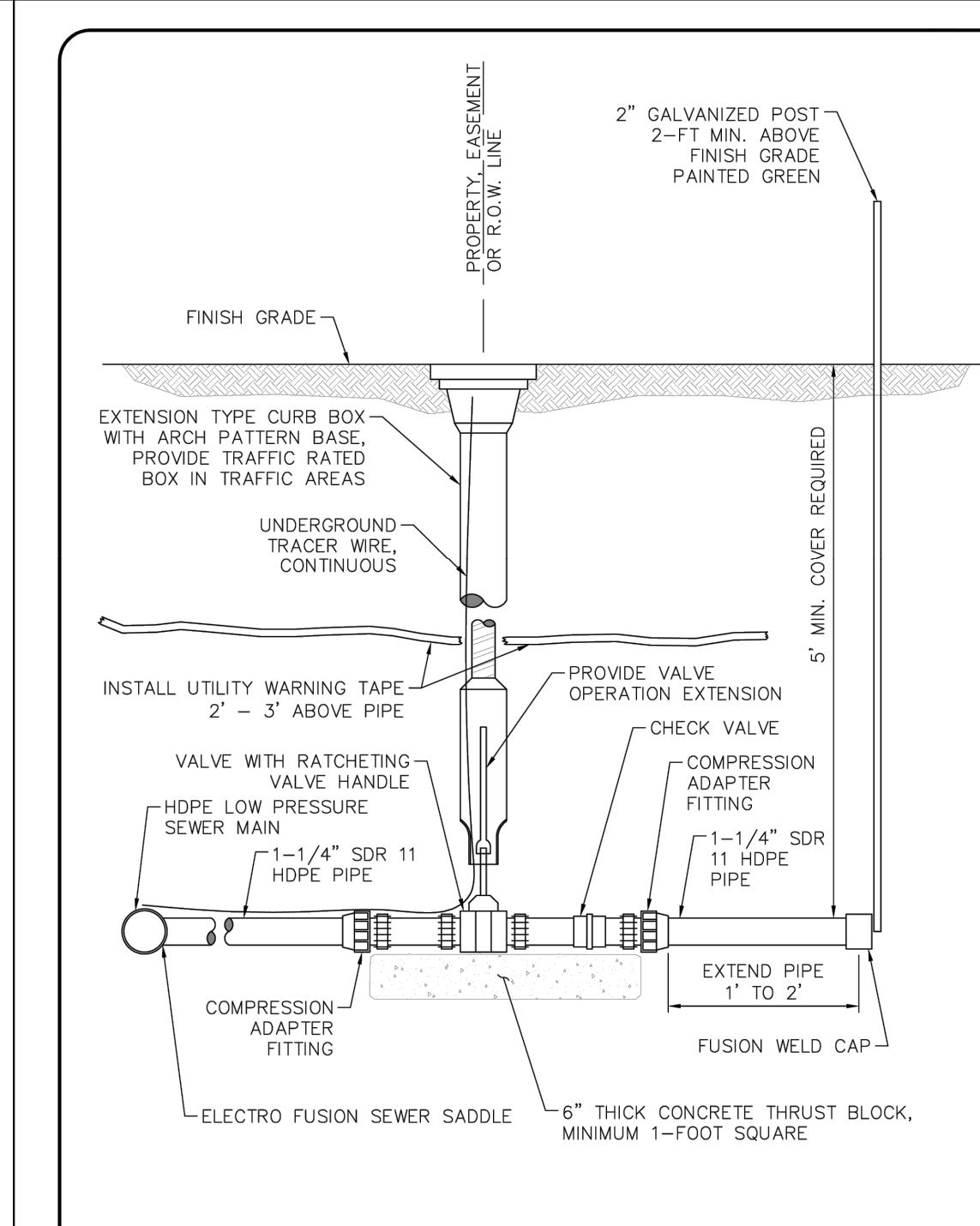
LOW PRESSURE DEAD END CAV/FLUSHING

APRIL 2023
DESIGNED BY: G
CHECKED BY: G
DATE: 04/26/23

G SON ENGINEERING
1000 SOUTH 1000 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: 801.488.1000 FAX: 801.488.1001

POWDER MOUNTAIN WATER AND SEWER IMPROVEMENT DISTRICT
1000 SOUTH 1000 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: 801.488.1000 FAX: 801.488.1001

9 LOW PRESSURE DEAD END CAV/FLUSHING



LOW PRESSURE PRIVATE LATERAL STUB

APRIL 2023
DESIGNED BY: G
CHECKED BY: G
DATE: 04/26/23

G SON ENGINEERING
1000 SOUTH 1000 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: 801.488.1000 FAX: 801.488.1001

POWDER MOUNTAIN WATER AND SEWER IMPROVEMENT DISTRICT
1000 SOUTH 1000 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: 801.488.1000 FAX: 801.488.1001

10 LOW PRESSURE PRIVATE LATERAL STUB

BID SET

DATE:	5/26/2023
PROJECT NO.:	23001
REVISION	DATE
1	
2	
3	
4	
5	
6	

CROSS-SECTION TYPICAL TRENCH

SAFE BEARING LOADS

SOIL TYPE	SAFE BEARING LOAD (PSF)
SAND	3000
SAND & GRAVEL (CEMENTED WITH CLAY)	5000

SAFE BEARING LOAD FORMULA

THRUST ON FITTINGS

PIPE SIZE	150 PSI	180 PSI	200 PSI	250 PSI
4"	36	57	26.1	14.7
6"	85.8	95	30.4	25.3
8"	102.4	102	30.4	43.7
12"	103	294	117.2	56.4
14"	180.8	265	141.0	71.5
16"	237.8	328.3	162.8	82.7
18"	328	423	207	106.5

WATERLINE TRENCH DETAIL

APRIL 2023
GILSON ENGINEERING
DESIGN, ENGINEERING & SURVEYING
1000 SOUTH 400 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: (801) 571-8444 FAX: (801) 571-8448

UNIMPROVED TERRAIN TRENCH SECTION

IMPROVED TERRAIN TRENCH SECTION

CLASS A PIPE BEDDING

PIPE DIAMETER	MINIMUM WIDTH	MAXIMUM WIDTH
4"	1' 0"	2' 0"
6"	1' 6"	2' 6"
8"	2' 0"	3' 0"
12"	2' 6"	3' 6"
14"	3' 0"	4' 0"
16"	3' 6"	4' 6"
18"	4' 0"	5' 0"

CLASS B PIPE BEDDING

PIPE BEDDING SPECIFICATIONS

APRIL 2023
GILSON ENGINEERING
DESIGN, ENGINEERING & SURVEYING
1000 SOUTH 400 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: (801) 571-8444 FAX: (801) 571-8448

SECTION VIEW

PLAN VIEW

FIRE HYDRANT CONNECTION

APRIL 2023
GILSON ENGINEERING
DESIGN, ENGINEERING & SURVEYING
1000 SOUTH 400 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: (801) 571-8444 FAX: (801) 571-8448

WATER LOOP

APRIL 2023
GILSON ENGINEERING
DESIGN, ENGINEERING & SURVEYING
1000 SOUTH 400 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: (801) 571-8444 FAX: (801) 571-8448

TYPICAL METER PIT DETAIL

APRIL 2023
GILSON ENGINEERING
DESIGN, ENGINEERING & SURVEYING
1000 SOUTH 400 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: (801) 571-8444 FAX: (801) 571-8448

1 WATERLINE TRENCH - PMW&S

2 PIPE BEDDING - PMW&S

3 FIRE HYDRANT - PMW&S

4 WATER LOOP - PMW&S

5 METER PIT - PMW&S

METER VAULT 2 INCH

APRIL 2023
GILSON ENGINEERING
DESIGN, ENGINEERING & SURVEYING
1000 SOUTH 400 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: (801) 571-8444 FAX: (801) 571-8448

BACKFLOW PREVENTER 3" LINES AND ABOVE 1 OF 2

APRIL 2023
GILSON ENGINEERING
DESIGN, ENGINEERING & SURVEYING
1000 SOUTH 400 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: (801) 571-8444 FAX: (801) 571-8448

BACKFLOW PREVENTER 3" LINES AND ABOVE 2 OF 2

APRIL 2023
GILSON ENGINEERING
DESIGN, ENGINEERING & SURVEYING
1000 SOUTH 400 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: (801) 571-8444 FAX: (801) 571-8448

SERVICE BACKFLOW PREVENTER 1" TO 2 1/2" LINES 1 OF 2

APRIL 2023
GILSON ENGINEERING
DESIGN, ENGINEERING & SURVEYING
1000 SOUTH 400 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: (801) 571-8444 FAX: (801) 571-8448

SERVICE BACKFLOW PREVENTER 1" TO 2 1/2" LINES 2 OF 2

APRIL 2023
GILSON ENGINEERING
DESIGN, ENGINEERING & SURVEYING
1000 SOUTH 400 WEST, SUITE 100, SALT LAKE CITY, UT 84143
PHONE: (801) 571-8444 FAX: (801) 571-8448

6 2" WATER METER - PMW&S

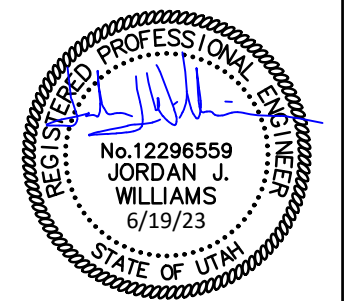
7 BACKFLOW PREVENTER - PMW&S

8 BACKFLOW PREVENTER - PMW&S

9 BACKFLOW PREVENTER - PMW&S

10 BACKFLOW PREVENTER - PMW&S

DETAILS
MONUMENT AT POWDER MOUNTAIN
Approx. 8050 Summit Pass Road, Eden, Utah



8" PRESSURE REDUCING VALVE STATION
1 OF 2

NOTE:
ALL EXPOSED METAL PARTS SHALL BE GALVANIZED

#	QTY	DESCRIPTION
1	2	8" FLDG. COUPLING
2	2	8" FLDG. CL. 30.0" W/ WALL FLANGE (SEE DETAIL)
3	2	8" FLDG. CL. 30.0" W/ HANDWHEEL
4	2	8" FLDG. CL. 30.0" W/ HANDWHEEL
5	1	8" FLDG. COUPLING VALVE
6	1	8" FLDG. COUPLING VALVE
7	1	8" FLDG. CL. 30.0" W/ HANDWHEEL (SEE DETAIL)
8	2	8" FLDG. CL. 30.0" W/ HANDWHEEL
9	2	8" FLDG. CL. 30.0" W/ HANDWHEEL
10	2	8" FLDG. CL. 30.0" W/ HANDWHEEL
11	2	8" FLDG. CL. 30.0" W/ HANDWHEEL
12	1	8" FLDG. COUPLING VALVE
13	1	8" FLDG. COUPLING VALVE
14	1	8" FLDG. CL. 30.0" W/ HANDWHEEL (SEE DETAIL)
15	1	8" FLDG. CL. 30.0" W/ HANDWHEEL
16	1	8" FLDG. CL. 30.0" W/ HANDWHEEL
17	1	8" FLDG. CL. 30.0" W/ HANDWHEEL
18	2	8" FLDG. CL. 30.0" W/ HANDWHEEL

DETAIL: ITEM 14

AIR VACUUM RELIEF VALVE

NOTE:
INSTALL AIR-VACUUM RELIEF VALVES WHERE REQUIRED AND AS SPECIFIED.

TYPICAL SMALL DIAMETER WATER SERVICE LINE DETAIL

NOTE:
1. PLACEMENT OF CURB STOP SHALL BE A MAXIMUM OF 5 FEET OUTSIDE THE PROPERTY LINE INSIDE STREET RIGHT OF WAY.
2. PROPERTY OWNER'S RESPONSIBILITY FOR LEAK REPAIR SHALL BE UP TO AND INCLUDING THE SERVICE PIPE WHICH THREADS ONTO THE WATER METER. PROPERTY OWNER'S RESPONSIBILITY FOR REPAIRS OTHER THAN LEAKS EXTENDS TO THE CORPORATION STOP.
3. DISTRICT'S RESPONSIBILITY SHALL BE THE WATER MAIN, THE CORPORATION STOP, CURB STOP, WATER METER, AND WHERE NEEDED, THE DOUBLE STRAP TAPPING SADDLE. THE DISTRICT WILL ONLY REPAIR LEAKS OCCURRING BETWEEN THE CORPORATION STOP AND THE WATER METER.
4. SEE STANDARD DETAIL WT-1 AND WT-2 FOR WATER TRENCH REQUIREMENTS.
5. NO LATERAL ARE TO BE INSTALLED WITHIN 5' OF BEDROCK.
6. 12" THICK CLAY CUTOFF AT EACH END OF WATER SERVICE INSULATION FROM IMPERVIOUS GEOTEXTILE TO BOTTOM OF TRENCH.
7. INSULATED SERVICE PIPE: SERVICE LINE ENCASED IN 8" SEAMLESS HDPE WITH CLOSED-CELL CROSS-LINKED POLYETHYLENE FOAM AND HEAT TAPE.
8. 6" MINIMUM COVER REQUIRED OVER PIPE. COVER REQUIREMENT MAY BE REDUCED PER RECOMMENDATION BY APPROVED GEOTECHNICAL REPORT. IN NO CASE SHALL MINIMUM COVER OVER PIPE BE LESS THAN 7'-0". GEOTECHNICAL REPORT SHALL SPECIFICALLY ADDRESS FROST DEPTH AND PIPE FREEZING POTENTIAL.

DETECTOR CHECK VALVE

NOTE:
1. INSPECTION: VALVE AND SERVICE LINE SHALL BE INSPECTED BY DISTRICT PRIOR TO BACKFILLING.
2. BACKFILL: INSTALL BACKFILL IN 6" LIFTS NOT EXCEEDING 8" AFTER COMPACTING EACH LIFT TO AN AVERAGE DRY DENSITY OF 95% WITH NO DENSITY TEST RESULTS LESS THAN 90%.
3. ALL EXPOSED METAL PARTS SHALL BE GALVANIZED.
4. FURNISH AND INSTALL CHROMIUM/ALUMINUM BLOW HEATER LHM-10-05-83-22-41-1 (OR EQUAL).
5. FURNISH AND INSTALL WALL MOUNT VAPOR PROOF LUMINARE W/ JUNCTION BOX GLOBE & GUARD AND INSTALL ELECTRICAL BOX W/ COVER PLATE.

① 8" PRESSURE REDUCING VALVE - PMW&S

② 8" PRESSURE REDUCING VALVE - PMW&S

③ AIR VACUUM RELIEF VALVE - PMW&S

④ WATER LATERAL - PMW&S

⑤ WATER LATERAL - PMW&S

EMERGENCY SPILLWAY-TOP VIEW

SECTION A-A

DETENTION POND OUTLET & SPILLWAY
NTS

RISER PIPE
NTS

Notes:
1. Drill four (4) 1/2" diameter holes, 3 inches from bottom of riser pipe and insert two (2) #4 bars in an "X" configuration. Length of bars = 24-16 inches.
2. Embed riser 12 inches into concrete base.

3X3 CONTROL BOX

NOTE: Pipes shall be placed as shown on plans.

⑦ 3X3 CONTROL BOX

⑥ RISER PIPE DETENTION OUTFLOW

