

BERGERON VILLAGE PHASE 1		Carter Engineering, LLC  Civil Engineering P. O. Box 784 Elko, Nevada 89803 775-397-2531	
TITLE SHEET & SPECIFICATIONS		ELKO, NEVADA	
DESIGN BY:	LLC	REV	DESCRIPTION
DRAWN BY:	LLC	1	12-8-22
CHECKED BY:	LLC	2	12-26-22
DATE:	11-8-23	4	3-14-23
JOB NO.:	17-2020		
DWG NO.:	2022-18		

SCALE

HORIZ: N/A

VERT: N/A

SHEET

C1

OF 16

SITE NOTES:

1.

ALL P.C.C. CURB, GUTTER, SIDEWALK, REINFORCED CONCRETE PAD AND CONCRETE RETAINING SHALL BE A MINIMUM OF 6 SACK OF CEMENT PER CUBIC YARD OF CONCRETE (4000 P.S.I.), 4.5% - 7.5% AIR, MAXIMUM SLUMP OF 4" AND WATER/CEMENT RATIO OF 0.45.
2.

ALL CONCRETE CURB & GUTTER SHALL HAVE WEAKENED PLANE JOINTS EVERY 10' AND SIDEWALK SHALL HAVE WEAKENED PLANE JOINTS EVERY 5'.
3.

EXPANSION JOINTS 1/2" WIDE SHALL BE LOCATED IN CURBS & GUTTERS AT EACH SIDE OF STRUCTURES. AT ENDS OF ALL CURB RETURNS, ABUTTING HARDENED IN-PLACE CURB & GUTTER AND EVERY 90'.
4.

EXPANSION JOINTS IN SIDEWALKS SHALL BE PLACED AT ALL TANGENT POINTS, CURB RETURNS AND AT EVERY 30 FEET.
5.

AGGREGATE BASE UNDER CONCRETE AND PAVEMENT SHALL CONFORM TO THE SPECIFICATIONS FOR TYPE 2, CLASS B AGGREGATE BASE AND COMPACTED TO A MINIMUM 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D 1557.
6.

SUBGRADE SHALL BE COMPACTED TO A RELATIVE COMPACTION OF NOT LESS THAN 90% FOR A MINIMUM DEPTH OF 6" IN ACCORDANCE WITH TEST PROCEDURES SET FORTH IN ASTM D 1557. SUBGRADE UNDER BITUMINOUS PAVEMENT SHALL BE COMPACTED TO A RELATIVE COMPACTION OF NOT LESS THAN 95% FOR A MINIMUM DEPTH OF 6" IN ACCORDANCE WITH TEST PROCEDURES SET FORTH IN ASTM D 1557.
7.

ALL PAVEMENT MARKING SHALL MEET STANDARD PLANS AND SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2016 EDITION, SECTIONS 214 AND 324.
8.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING 811 USA NORTH AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
9.

DIMENSIONS ARE TO TOP BACK OF CURB.
10.

IN THE DESIGNATED DEMOLITION AREAS THE EXISTING CONCRETE OR PAVEMENT AND AGGREGATE BASE SHALL BE REMOVED TO SUBGRADE FOR THE INSTALLATION OF THE PROPOSED IMPROVEMENTS.
11.

ALL DEMOLITION SHALL BE PER SECTION 300 AND 301 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2016 EDITION.
12.

DIMENSIONS, STREET MONUMENT PLACEMENT, LINE DISTANCES AND BEARINGS PER FINAL MAP. THOSE SHOWN HERE ARE FOR REFERENCE ONLY.
13.

SEE SHEET C13 AND C14 FOR DETAILS ON CURB AND GUTTER, SIDEWALK, PAVEMENT SECTION, GRAVEL SECTION, STREET MONUMENT, PAVEMENT SAWCUT & JOIN AND STREET SECTION.
14.

THE CONTRACTOR SHALL SAWCUT THE PAVEMENT FOR THE UTILITY MAIN CONNECTIONS TO THE AREA NEEDED TO PERFORM THESE CONNECTIONS SAFELY.

GRADING NOTES

1.

THE ESTIMATED EARTHWORK QUANTITIES ARE AS FOLLOWS:

UNCLASSIFIED EXCAVATION = 55,591 CY CUT
UNCLASSIFIED EXCAVATION TO PHASE 2 = 120.025
UNCLASSIFIED EMBANKMENT = 48,340 CY FILL

THE ABOVE QUANTITIES ARE BANK CUBIC YARDS WITH A 3-INCH GRUB. SHRINK OR SWELL HAS NOT BEEN CONSIDERED.
2.

ADD 5000 FEET TO SPOT ELEVATIONS.
3.

THE FINAL GRADING OF THE LOTS WILL BE DONE TO ELIMINATE CROSS LOT DRAINAGE.
4.

SLOPES 3:1 OR GREATER REQUIRE SLOPE STABILIZATION.
5.

SLOPES SHALL NOT EXCEED 2:1.
6.

THE EXISTING GROUND TOPOGRAPHY SHOWN ON THIS PLAN IS FROM A SURVEY PROVIDED BY HIGH DESERT ENGINEERING ON 3-17-22.

WATER NOTES:

1.

ALL WATER MAINS SHALL BE AWWA C900, DR 18 WATER PIPE.
2.

ALL WATER SERVICE LINES SHALL BE AWWA C-901, 1" IPS 200 PSI POLYETHYLENE.
3.

ALL WATER LINE FITTINGS SHALL BE DUCTILE IRON AWWA C-110 AND AWWA C-153.
4.

ALL WATER LINES SHALL BE PLACED WITH 42" OF MINIMUM COVER.
5.

SEE SHEET C15 FOR DETAIL ON THRUST BLOCKS, VALVE, FIRE HYDRANT, WATER METER, WATER SERVICE CONNECTION, TEMPORARY FLUSH ASSEMBLY AND TRENCH DETAILS.
6.

ALL METERS SHALL BE 1 INCH.
7.

ALL NEW FIRE HYDRANTS WILL BE EQUIPPED WITH STORZ FITTINGS.
8.

A MINIMUM OF 18" INCHES SEPARATION WILL BE ALLOWED BETWEEN WATER TAPS AS REQUIRED BY THE CITY OF ELKO UTILITIES DEPARTMENT.
9.

A MINIMUM OF 2 FOOT SEPARATION WILL BE ALLOWED BETWEEN WATER TAPS AND HYDRANT TAPS AS REQUIRED BY THE CITY OF ELKO UTILITIES DEPARTMENT.
10.

WATER AND SEWER LATERALS WILL BE PLACED IN SEPARATE TRENCHES AND LOCATED AT LEAST 48" APART MEASURE FROM OUTSIDE DIAMETERS PER NAC 445A.6716.
11.

HOT TAPS SHALL BE PERFORMED BY THE CITY OF ELKO UTILITIES DEPARTMENT. THE CONTRACTOR SHALL SUPPLY TRENCH AND MATERIALS FOR THE HOT TAP. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO COORDINATE THIS WORK WITH THE CITY OF ELKO.
12.

VERTICAL AND HORIZONTAL SEPARATION OF ALL WATER AND SEWER (SANITARY OR STORM) UTILITIES SHALL BE MAINTAINED PER **NAC SECTION 445A.6715 - SECTION 445A.6718** AND THE BUREAU OF SAFE DRINKING WATER (BSDW) GUIDANCE FOR AREAS REQUIRING MITIGATION FOR WATER AND SEWER SEPARATION, EDITION 1.0, UNLESS OTHERWISE APPROVED BY THE DESIGN ENGINEER OR BSDW.
13.

ANY OPENINGS IN UNFINISHED PIPING AND APPURTENANCES MUST BE SEALED WATERTIGHT AT THE END OF EACH WORKING DAY.
14.

ALL MATERIALS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH APPLICABLE AWWA STANDARDS.
15.

THE MAXIMUM JOINT DEFLECTION SHALL NOT EXCEED THE MANUFACTURES SPECIFICATIONS.
16.

ALL MATERIALS IN CONTACT WITH POTABLE WATER MUST BE NSF/ANSI 61 CERTIFIED AS LEAD FREE AND COMPATIBLE WITH DRINKING WATER.
17.

BEFORE BEING CERTIFIED BY AN ENGINEER ACCEPTED BY THE CITY OF ELKO, ANY NEW WATER SYSTEMS, EXTENSIONS, REPLACEMENTS IN EXISTING SYSTEMS AND VALVED SECTIONS SHALL BE DISINFECTED IN ACCORDANCE WITH **AWWA C-651 (DISINFECTING WATER MAINS)** AND BE PRESSURE TESTED IN ACCORDANCE WITH **NAC 445A.67145.7 (A) AND (B) AND AWWA C-605**. THE DISPOSAL OF HIGHLY CHLORINATED WATER MUST BE COORDINATED WITH NEVADA DEPARTMENT OF ENVIRONMENTAL PROTECTION, BUREAU OF WATER POLLUTION CONTROL. ADDITIONALLY, A WATER MAIN MUST NOT BE PLACED INTO SERVICE, AFTER ITS INITIAL CONSTRUCTION, UNTIL AN ANALYSIS OF THE WATER MAIN WHICH INDICATES THAT IT MEETS PRIMARY STANDARDS FOR CHLOROFORM BACTERIA HAS BEEN OBTAINED AND REPORTED TO THE BUREAU OF SAFE DRINKING WATER.

SANITARY SEWER NOTES:

1.

ALL SEWER LINES SHALL BE SDR-35 P.V.C.
2.

SEE SHEET C16 FOR DETAILS OF SANITARY SEWER MANHOLE, LATERAL CONNECTION AND TRENCH DETAIL FOR SEWER PIPE.
3.

IN NO CASE SHALL A LATERAL CONNECT TO THE SEWER MAIN DIRECTLY ON THE TOP OF THE PIPE.
4.

SEWER LATERALS TO BE 4" Ø AND SHALL HAVE A MINIMUM SLOPE OF 2% FOR 100-FEET.
5.

EXPOSE EXISTING SANITARY SEWER LINE AT CONNECTION POINT AND CALL PROJECT ENGINEER FOR ELEVATION VERIFICATION PRIOR TO THE INSTALLATION OF ANY SANITARY SEWER.
7.

THESE PLANS ARE IN COMPLIANCE WITH NAC 278.440 AND NAC 445A.65505 THOUGH NAC 445A.6731.

STORM DRAIN NOTES:

1.

ALL STORM DRAIN LINES SHALL BE ADS N-12 WT OR APPROVED EQUAL.
2.

ALL CURB INLETS SHALL BE TYPE R-4.
3.

SEE SHEET C16 FOR DETAILS FOR TRENCH, DROP INLET AND MANHOLES.
4.

VERTICAL AND HORIZONTAL SEPARATION OF ALL WATER AND SEWER (SANITARY OR STORM) UTILITIES SHALL BE MAINTAINED PER **NAC SECTION 445A.6715 - SECTION 445A.6718** AND THE BUREAU OF SAFE DRINKING WATER (BSDW) GUIDANCE FOR AREAS REQUIRING MITIGATION FOR WATER AND SEWER SEPARATION, EDITION 1.0, UNLESS OTHERWISE APPROVED BY THE DESIGN ENGINEER OR BSDW.
5.

THE ELEVATION IF THE EXISTING STORM DRAIN AT THE CONNECTION POINT IN JENNINGS WAY WILL BE EXPOSED AND VERIFIED PRIOR TO ANY STORM DRAIN CONSTRUCTION.

SPECIAL CROSSING NOTES:

1.

SPECIAL CONSTRUCTION FOR STORM DRAIN LATERAL CROSSING WATER MAIN SHALL BE PER **NAC 445A.67165 SEPARATION OF LINES - SEWER MAIN CROSSING WATER MAIN** AND **NDEP BUREAU OF SAFE DRINKING WATER PUBLICATION "GUIDANCE FOR AREAS REQUIRING MITIGATION FOR WATER AND SEWER SEPARATION"** EDITION 1.0, UPDATED JUNE 2016, BULLETIN 3.0 **VERTICAL CROSSING CONFLICT - WATER AND SEWER MITIGATION IN AREA OF SPECIAL CONSTRUCTION PAGE 9 OF 15**.
2.

THE PIPE JOINTS FOR WATER AND STORM DRAIN SHALL BE EQUAL DISTANCE FROM THE POINT OF CROSSING.
3.

THE WATER PIPE AND STORM DRAIN PIPE SHALL BE A MINIMUM OF 6" APART MEASURED FROM THE OUTSIDE OF THE PIPES.
4.

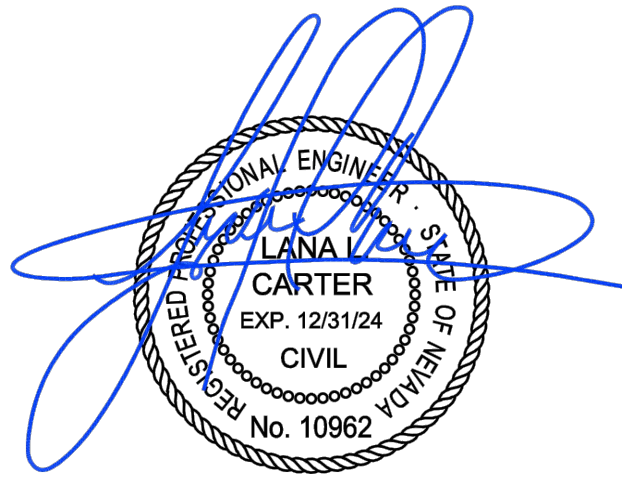
THE STORM DRAIN SHALL HAVE WATER TIGHT JOINTS MEETING D3212 AS SPECIFIED FOR THIS PROJECT.
5.

THE WATER LINE SHALL HAVE RESTRAINT JOINTS ON BOTH SIDES OF THE CROSSING AND ON ANY BENDS REQUIRED FOR THE CROSSING.
6.

SEE DETAIL WF, SHEET 14 FOR SPECIAL CROSSING DETAIL.

ABBREVIATIONS:

A.C. ASPHALTIC CONCRETE	GEO. GEOTHERMAL	RT. RIGHT
B.C. BEGIN CURVE	G.V. GATE VALVE	R-O-W RIGHT OF WAY
B.V.C. BEGIN VERTICAL CURVE	G.B. GRADE BREAK	LT. LEFT
C.F. HEIGHT OF CURB FACE	HORIZ. HORIZONTAL	L.F. LINEAR FEET
CL. CENTERLINE	IPS. IRON PIPE SIZE	M.H. MANHOLE
C.M.P. CORRUGATED METAL PIPE	INT. INTERSECTION	S.S. SANITARY SEWER
CONC. CONCRETE	I.E. INVERT ELEVATION	SSCO SANITARY SEWER CLEANOUT
C.P. CONCRETE PIPE	LT. LEFT	S.W. SIDEWALK
D.I. DROP INLET	L.F. LINEAR FEET	S. SLOPE
D.I.P. DUCTILE IRON PIPE	M.H. MANHOLE	SHT. SHEET
EL. ELEVATION	P.I. POINT OF INTERSECTION	STA. STATION
ELEV. ELEVATION	P.C. POINT OF CURVATURE	S.D. STORM DRAIN
E.V.C. END OF VERTICAL CURVE	P.T. POINT OF TANGENCY	T. TELEPHONE
EX. EXISTING	P.V.C. POINT OF VERTICAL CURVE	T.B.C. TOP BACK OF CURB
E.G. EXISTING GRADE	PVC. POLYVINYL CHLORIDE PIPE	T.C. TOP OF CONCRETE
F.F. FINISH FLOOR	PL. PROPERTY LINE	TYP. TYPICAL
F.G. FINISH GRADE	R. RADIAL	VERT. VERTICAL
F.H. FIRE HYDRANT	R. RADIUS	V.C. VERTICAL CURVE
F.L. FLOW LINE	REF. REFERENCE	V.P.I. VERTICAL POINT OF INTERSECTION
G. GAS	R.C.P. REINFORCED CONCRETE PIPE	W. WATER



11-8-23

DESIGN BY: LLC

DRAWN BY: LLC

CHECKED BY: LLC

DATE: 11-8-23

JOB NO: 17-2020

DWG NO: 2022-18

SCALE

HORIZ: N/A

VERT: N/A

SHEET

C2

OF 16

BERGERON VILLAGE

PHASE 1

NOTES AND ABBREVIATIONS

ELKO, NEVADA

Carter Engineering, LLC

Civil Engineering

P. O. Box 794

Elko, Nevada 89803

775-397-2531

DESCRIPTION

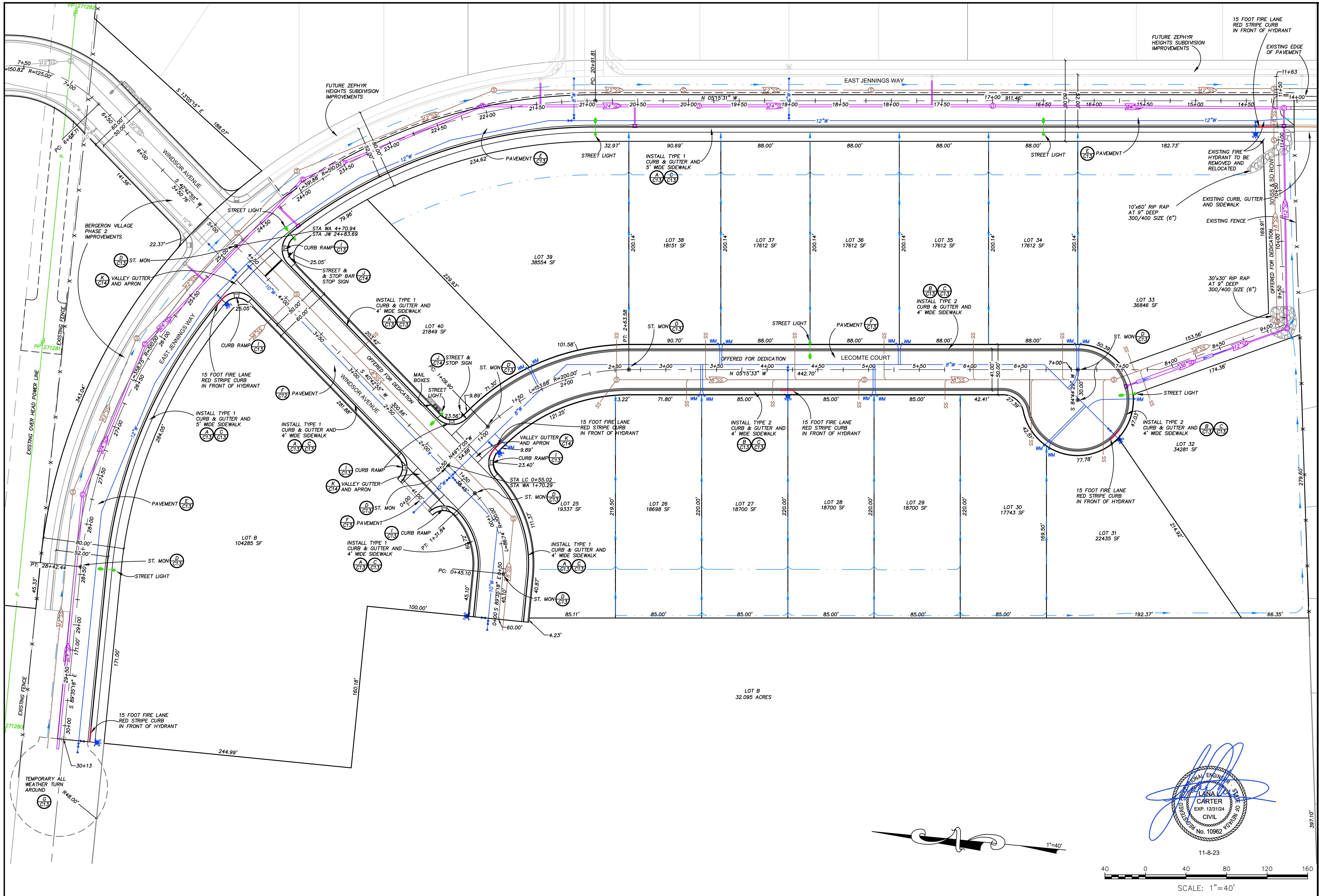
12-2-22 CITY OF ELKO RED LINE PLANS

12-8-22 CHANGES TO JENNINGS WAY FROM 36" TO 24"

12-28-22 UPDATE EARTHWORK QUANTITIES

12-29-22 NDEP PLAN CHECK LETTER DATED MARCH 8, 2023

3-14-23



REV	DATE	DESCRIPTION
1	12-8-22	12.3.22 CITY OF ELKO RED LINE PLANS
2	12-26-22	CHANGE SD SIZE IN JENNINGS WAY FROM 36" TO 24"

Carter Engineering, LLC
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Elko, Nevada 89803
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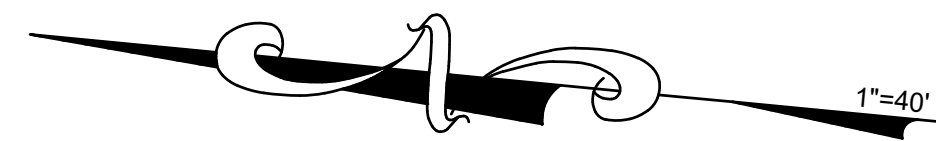


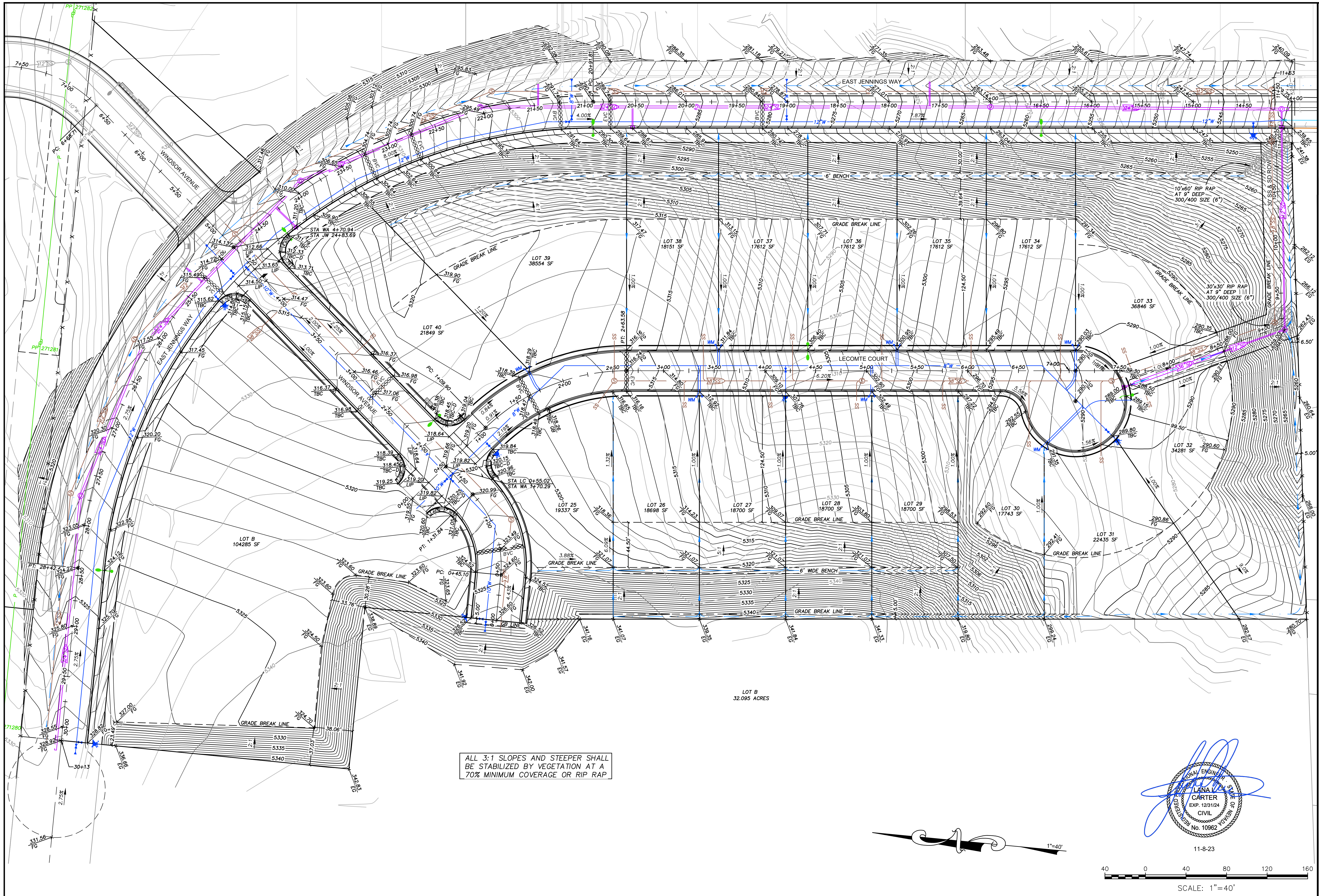
BERGERON VILLAGE PHASE 1 SITE PLAN
ELKO, NEVADA

DESIGN BY:	LLC
DRAWN BY:	LLC
CHECKED BY:	LLC
DATE:	11-8-23
JOB NO:	17-2020
DWG NO:	2022-18

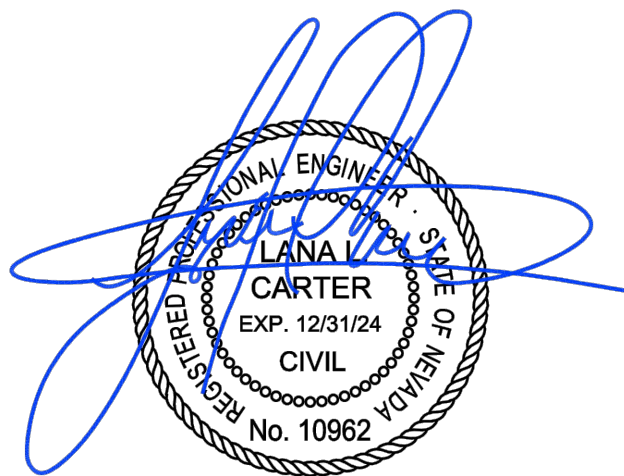
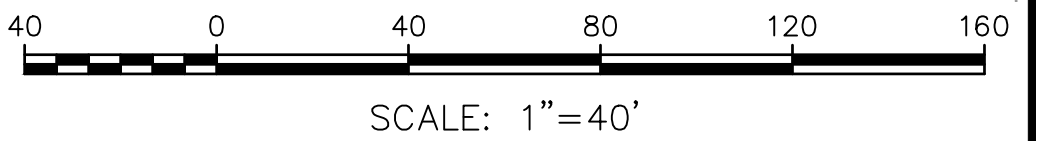
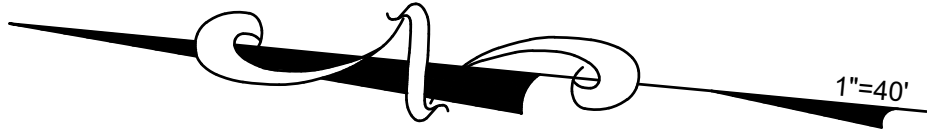
SCALE
HORIZ: 1"=40'
VERT: N/A

SHEET C3
OF 16





ALL 3:1 SLOPES AND STEEPER SHALL BE STABILIZED BY VEGETATION AT A 70% MINIMUM COVERAGE OR RIP RAP



BERGERON VILLAGE
PHASE 1
GRADING PLAN
ELKO, NEVADA

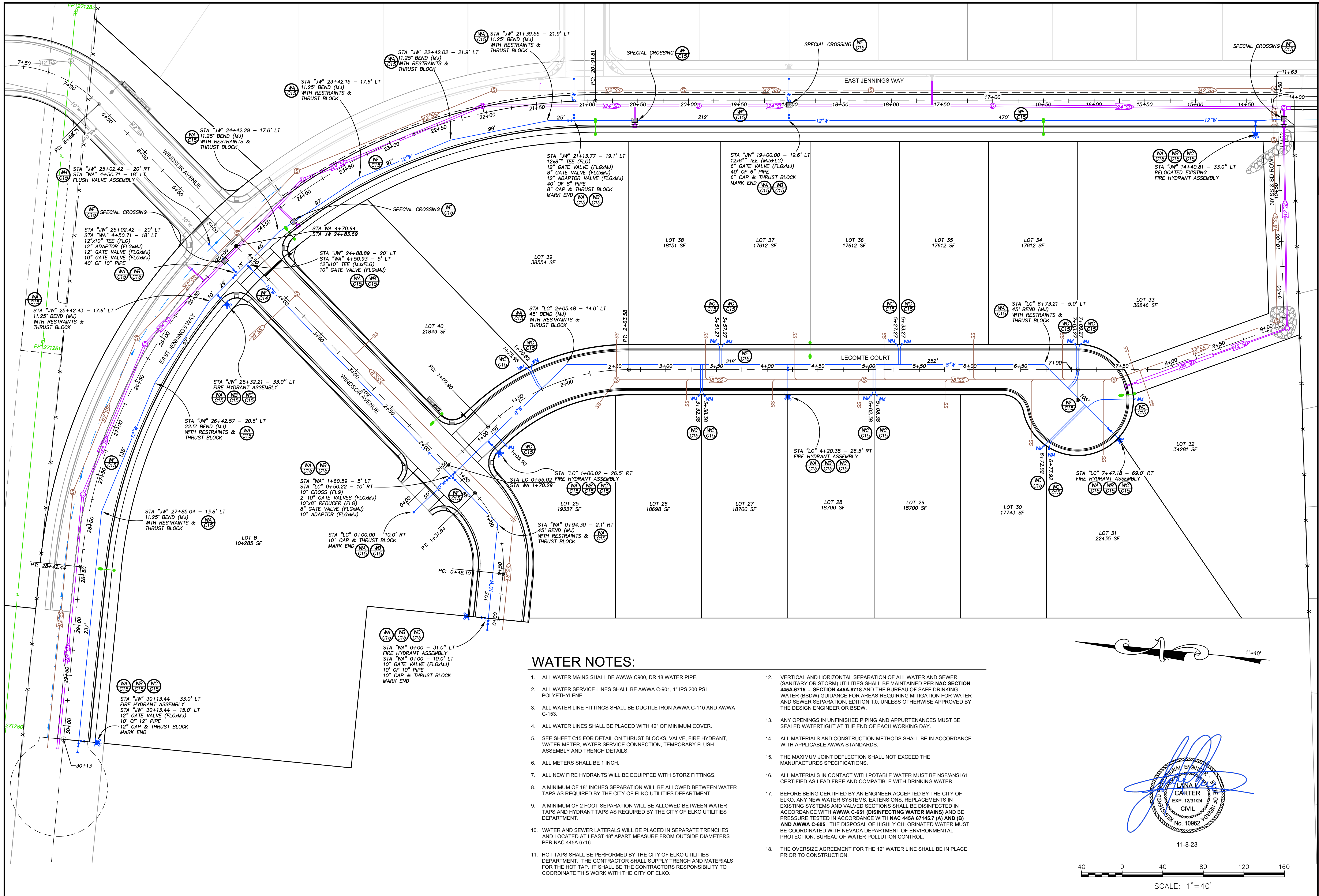
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DRAWN BY: LLC
CHECKED BY: LLC
DATE: 11-8-23
JOB NO: 17-2020
DWG NO: 2022-18

SCALE
HORIZ: 1"=40'
VERT: N/A

SHEET
C4
OF 16

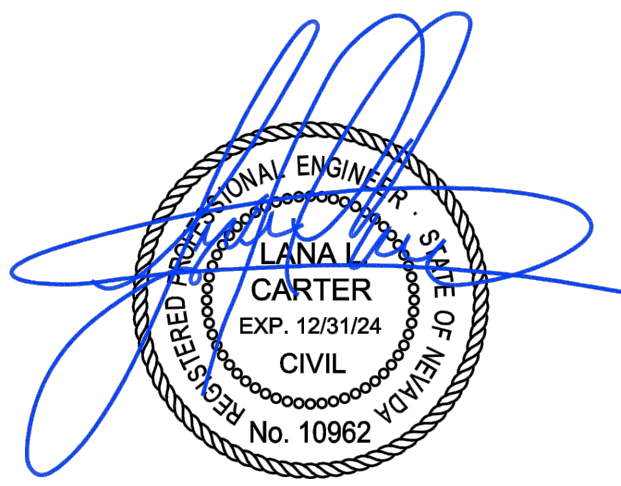
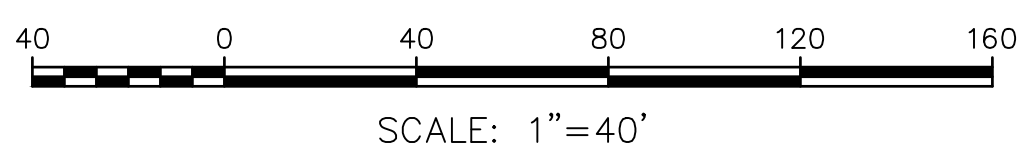
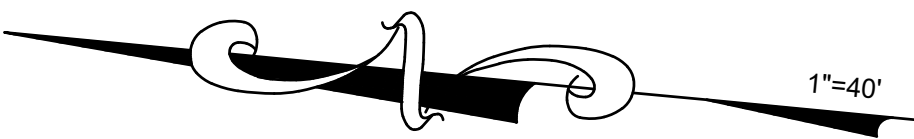
Carter Engineering, LLC
Civil Engineering
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775-397-2531

REV	DATE	DESCRIPTION
1	12-8-22	12.22 CITY OF ELKO RED LINE PLANS
2	12-28-22	CHANCE SIZE IN JENNINGS WAY FROM 36" TO 24"
5	7-7-23	WIDEN JENNINGS EXCAVATION FOR POWER INSTALLATION



WATER NOTES:

- ALL WATER MAINS SHALL BE AWWA C900, DR 18 WATER PIPE.
- ALL WATER SERVICE LINES SHALL BE AWWA C-901, 1" IPS 200 PSI POLYETHYLENE.
- ALL WATER LINE FITTINGS SHALL BE DUCTILE IRON AWWA C-110 AND AWWA C-153.
- ALL WATER LINES SHALL BE PLACED WITH 42" OF MINIMUM COVER.
- SEE SHEET C15 FOR DETAIL ON THRUST BLOCKS, VALVE, FIRE HYDRANT, WATER METER, WATER SERVICE CONNECTION, TEMPORARY FLUSH ASSEMBLY AND TRENCH DETAILS.
- ALL METERS SHALL BE 1 INCH.
- ALL NEW FIRE HYDRANTS WILL BE EQUIPPED WITH STORZ FITTINGS.
- A MINIMUM OF 18" INCHES SEPARATION WILL BE ALLOWED BETWEEN WATER TAPS AS REQUIRED BY THE CITY OF ELKO UTILITIES DEPARTMENT.
- A MINIMUM OF 2 FOOT SEPARATION WILL BE ALLOWED BETWEEN WATER TAPS AND HYDRANT TAPS AS REQUIRED BY THE CITY OF ELKO UTILITIES DEPARTMENT.
- WATER AND SEWER LATERALS WILL BE PLACED IN SEPARATE TRENCHES AND LOCATED AT LEAST 48" APART MEASURE FROM OUTSIDE DIAMETERS PER NAC 445A.6716.
- HOT TAPS SHALL BE PERFORMED BY THE CITY OF ELKO UTILITIES DEPARTMENT. THE CONTRACTOR SHALL SUPPLY TRENCH AND MATERIALS FOR THE HOT TAP. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO COORDINATE THIS WORK WITH THE CITY OF ELKO.
- VERTICAL AND HORIZONTAL SEPARATION OF ALL WATER AND SEWER (SANITARY OR STORM) UTILITIES SHALL BE MAINTAINED PER **NAC SECTION 445A.6715 - SECTION 445A.6718** AND THE BUREAU OF SAFE DRINKING WATER (BSDW) GUIDANCE FOR AREAS REQUIRING MITIGATION FOR WATER AND SEWER SEPARATION, EDITION 1.0, UNLESS OTHERWISE APPROVED BY THE DESIGN ENGINEER OR BSDW.
- ANY OPENINGS IN UNFINISHED PIPING AND APPURTENANCES MUST BE SEALED WATERTIGHT AT THE END OF EACH WORKING DAY.
- ALL MATERIALS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH APPLICABLE AWWA STANDARDS.
- THE MAXIMUM JOINT DEFLECTION SHALL NOT EXCEED THE MANUFACTURES SPECIFICATIONS.
- ALL MATERIALS IN CONTACT WITH POTABLE WATER MUST BE NSF/ANSI 61 CERTIFIED AS LEAD FREE AND COMPATIBLE WITH DRINKING WATER.
- BEFORE BEING CERTIFIED BY AN ENGINEER ACCEPTED BY THE CITY OF ELKO, ANY NEW WATER SYSTEMS, EXTENSIONS, REPLACEMENTS IN EXISTING SYSTEMS AND VALVED SECTIONS SHALL BE DISINFECTED IN ACCORDANCE WITH **AWWA C-651 (DISINFECTING WATER MAINS)** AND BE PRESSURE TESTED IN ACCORDANCE WITH **NAC 445A.67145.7 (A) AND (B) AND AWWA C-605**. THE DISPOSAL OF HIGHLY CHLORINATED WATER MUST BE COORDINATED WITH NEVADA DEPARTMENT OF ENVIRONMENTAL PROTECTION, BUREAU OF WATER POLLUTION CONTROL.
- THE OVERSIZE AGREEMENT FOR THE 12" WATER LINE SHALL BE IN PLACE PRIOR TO CONSTRUCTION.



DESIGN BY: LLC
DRAWN BY: LLC
CHECKED BY: LLC
DATE: 11-8-23
JOB NO: 17-2020
DWG NO: 2022-18

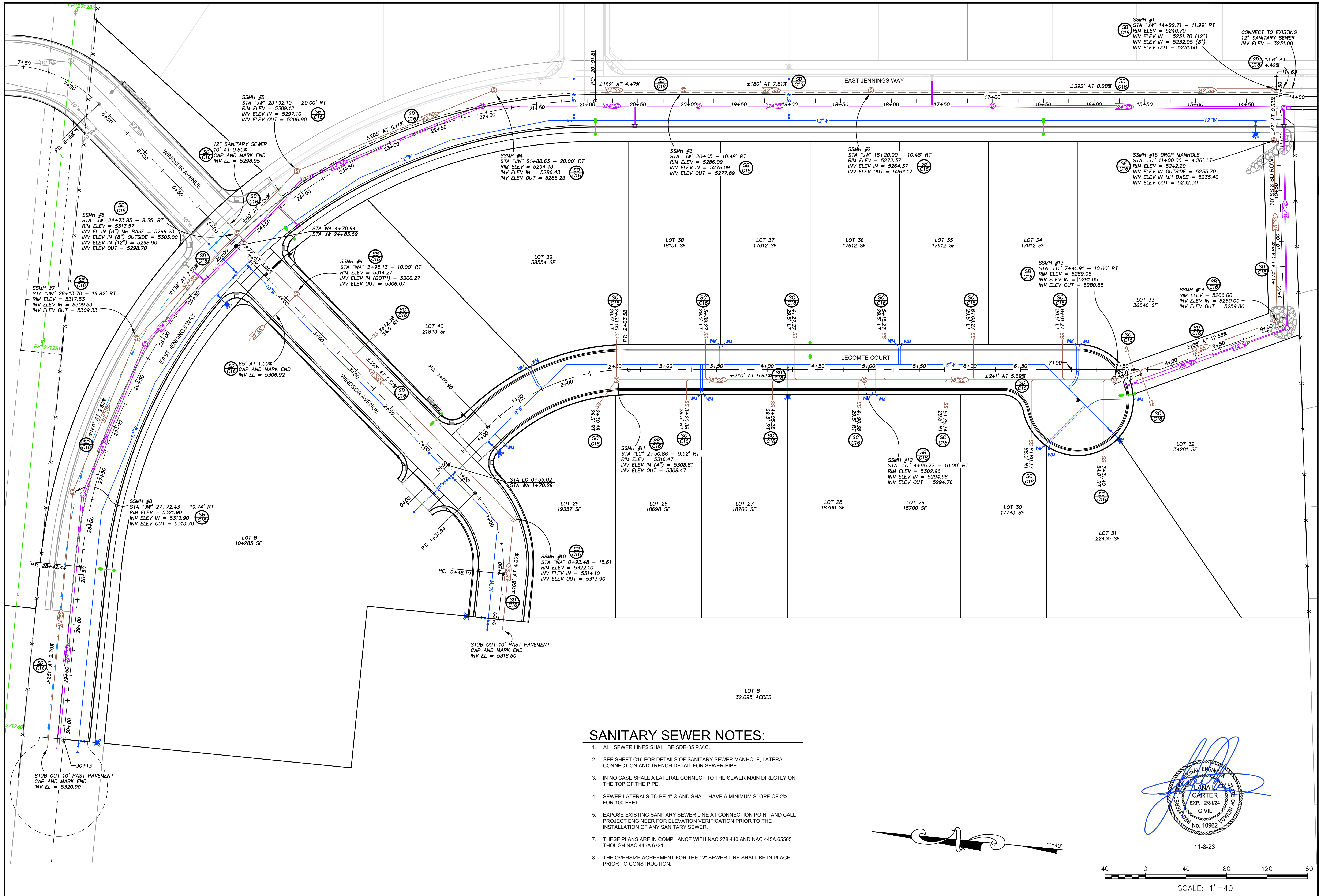
SCALE
HORIZ: 1"=40'
VERT: N/A

SHEET
C5
OF 16

BERGERON VILLAGE
PHASE 1
WATER PLAN
ELKO, NEVADA

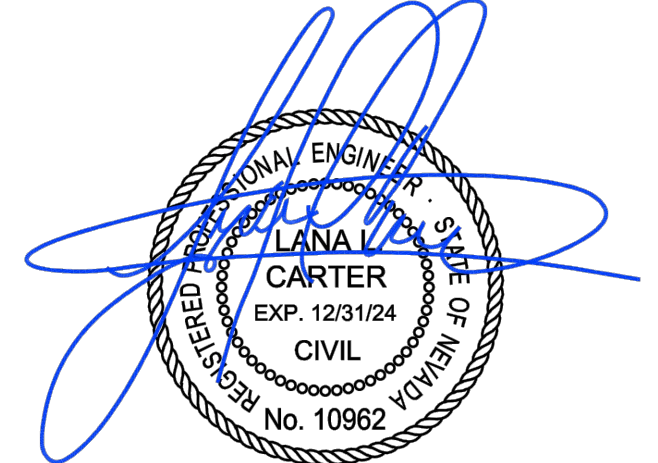
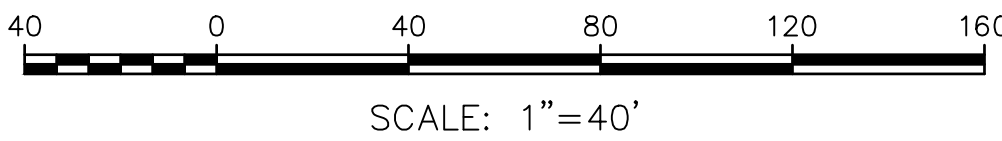
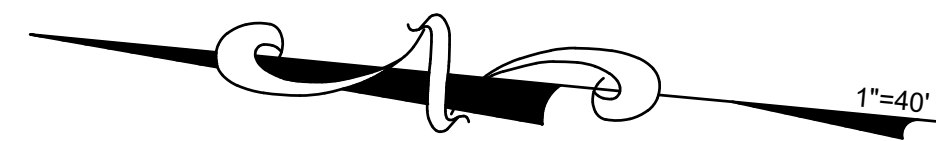
Carter Engineering, LLC
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P. O. Box 794
Elko, Nevada 89803
775-397-2531

REV	DATE	DESCRIPTION
1	12-8-22	12-22-22 CITY OF ELKO RED LINE PLANS
2	12-26-22	CHANGE SIZE IN JENNINGS WAY FROM 36" TO 24"
4	3-14-23	INDEP PLAN CHECK LETTER DATED MARCH 8, 2023



SANITARY SEWER NOTES:

1. ALL SEWER LINES SHALL BE SDR-35 P.V.C.
2. SEE SHEET C16 FOR DETAILS OF SANITARY SEWER MANHOLE, LATERAL CONNECTION AND TRENCH DETAIL FOR SEWER PIPE.
3. IN NO CASE SHALL A LATERAL CONNECT TO THE SEWER MAIN DIRECTLY ON THE TOP OF THE PIPE.
4. SEWER LATERALS TO BE 4" Ø AND SHALL HAVE A MINIMUM SLOPE OF 2% FOR 100-FEET.
5. EXPOSE EXISTING SANITARY SEWER LINE AT CONNECTION POINT AND CALL PROJECT ENGINEER FOR ELEVATION VERIFICATION PRIOR TO THE INSTALLATION OF ANY SANITARY SEWER.
7. THESE PLANS ARE IN COMPLIANCE WITH NAC 278.440 AND NAC 445A.65505 THOUGH NAC 445A.6731.
8. THE OVERSIZE AGREEMENT FOR THE 12" SEWER LINE SHALL BE IN PLACE PRIOR TO CONSTRUCTION.



DESIGN BY: LLC

DRAWN BY: LLC

CHECKED BY: LLC

DATE: 11-8-23

JOB NO: 17-2020

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SCALE

HORIZ: 1"=40'

VERT: N/A

SHEET

C6

OF 16

BERGERON VILLAGE

PHASE 1

SANITARY SEWER PLAN

ELKO, NEVADA

Carter Engineering, LLC

Civil Engineering

P. O. Box 794

Elko, Nevada 89803

775-397-2531

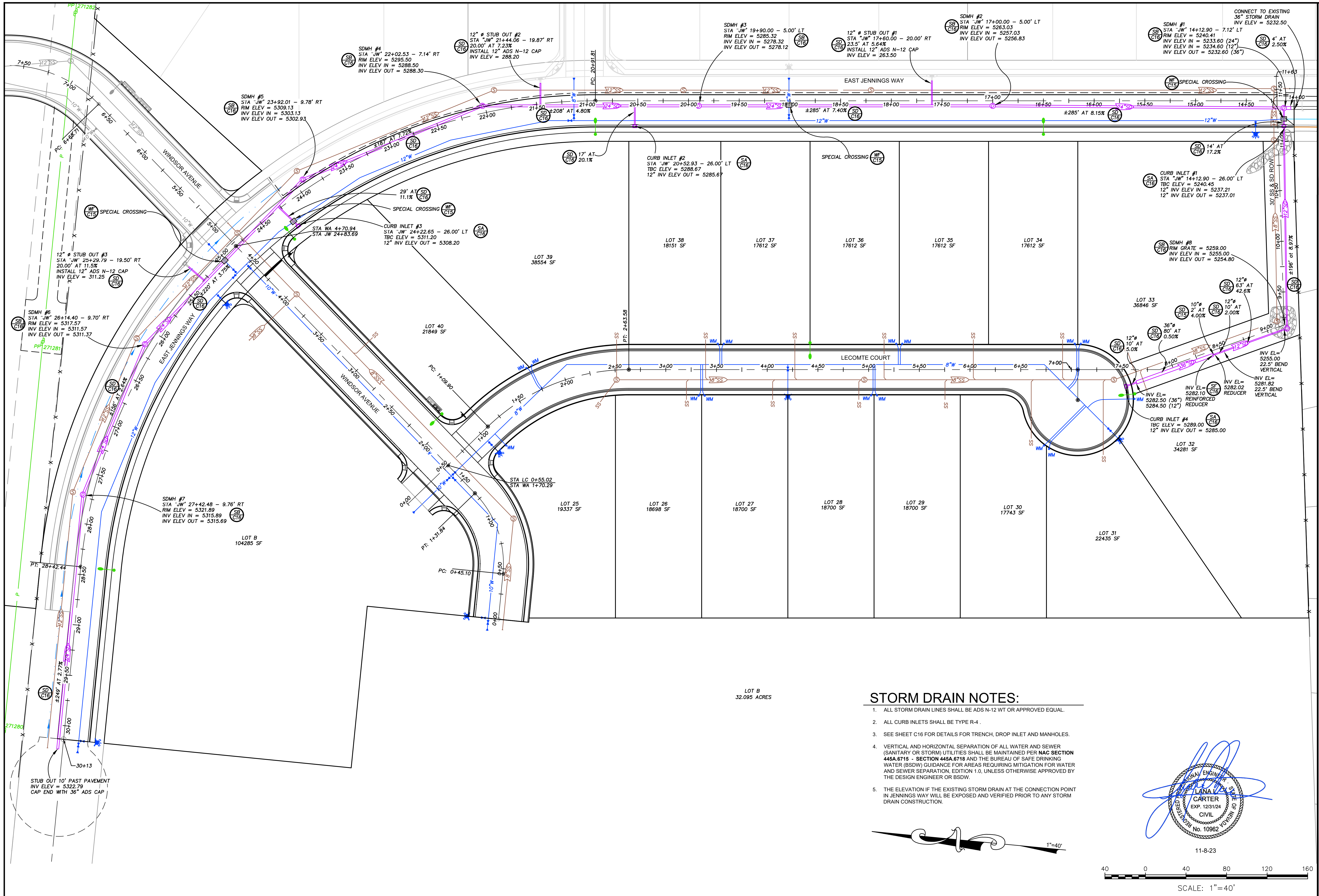
12.22 CITY OF ELKO RED LINE PLANS

CHANGE SIZE IN JENNINGS WAY FROM 36" TO 24"

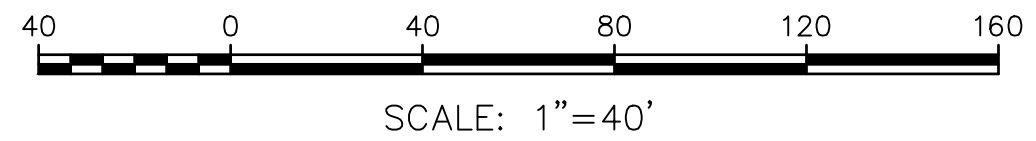
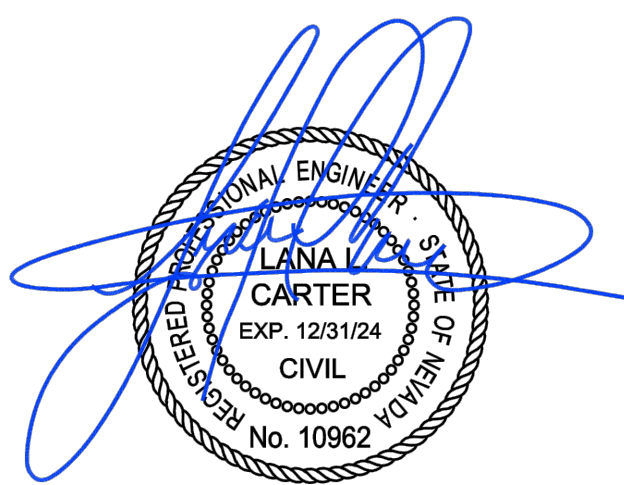
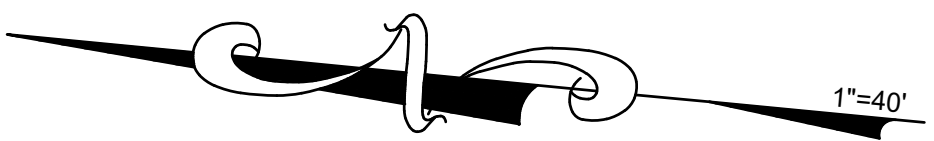
NDEP PLAN CHECK LETTER DATED MARCH 8, 2023

EXISTING CONNECTION, SSMH #1 & #15

REV	DATE	DESCRIPTION
1	12.8.22	
2	12.26.22	
4	3.14.23	
5	8.24.23	



- STORM DRAIN NOTES:**
1. ALL STORM DRAIN LINES SHALL BE ADS N-12 WT OR APPROVED EQUAL.
 2. ALL CURB INLETS SHALL BE TYPE R-4.
 3. SEE SHEET C16 FOR DETAILS FOR TRENCH, DROP INLET AND MANHOLES.
 4. VERTICAL AND HORIZONTAL SEPARATION OF ALL WATER AND SEWER (SANITARY OR STORM) UTILITIES SHALL BE MAINTAINED PER **NAC SECTION 445A.6715 - SECTION 445A.6718** AND THE BUREAU OF SAFE DRINKING WATER (BSDW) GUIDANCE FOR AREAS REQUIRING MITIGATION FOR WATER AND SEWER SEPARATION, EDITION 1.0, UNLESS OTHERWISE APPROVED BY THE DESIGN ENGINEER OR BSDW.
 5. THE ELEVATION IF THE EXISTING STORM DRAIN AT THE CONNECTION POINT IN JENNINGS WAY WILL BE EXPOSED AND VERIFIED PRIOR TO ANY STORM DRAIN CONSTRUCTION.



DESCRIPTION

12.22 CITY OF ELKO BED LINE PLANS
CHANGE SIZE IN JENNINGS WAY FROM 36" TO 24"
SHIFT SDMH H NORTH 3 FEET AND ADJUST FOR AS BUILT SD

REV

DATE

1 12-8-22

2 12-28-22

3 8-30-23

Carter Engineering, LLC

Civil Engineering

P. O. Box 794

Elko, Nevada 89803

775-397-2531

BERGERON VILLAGE

PHASE 1

STORM DRAIN PLAN

ELKO, NEVADA

DESIGN BY: LLC

DRAWN BY: LLC

CHECKED BY: LLC

DATE: 11-8-23

JOB NO: 17-2020

DWG NO: 2022-18

SCALE

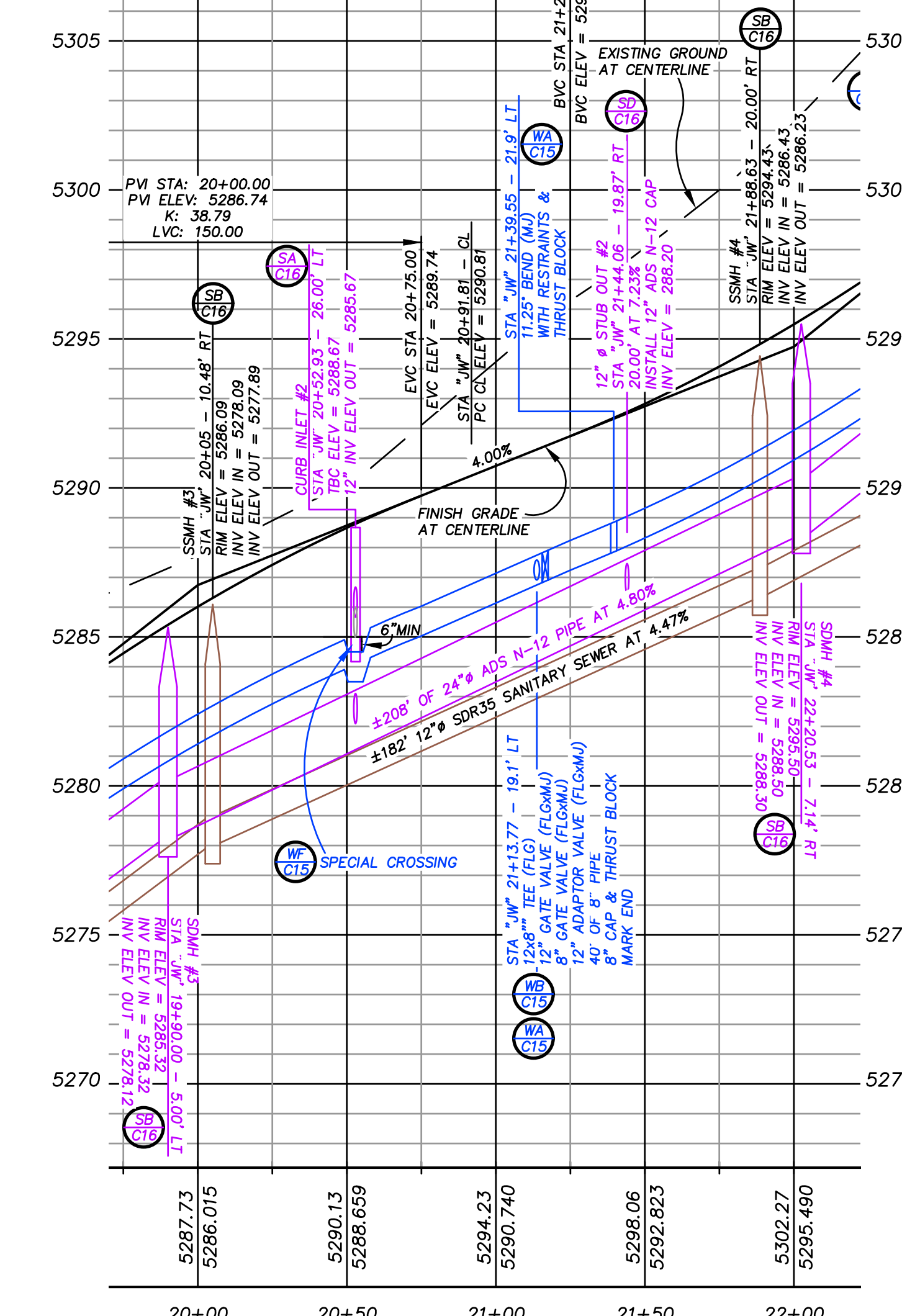
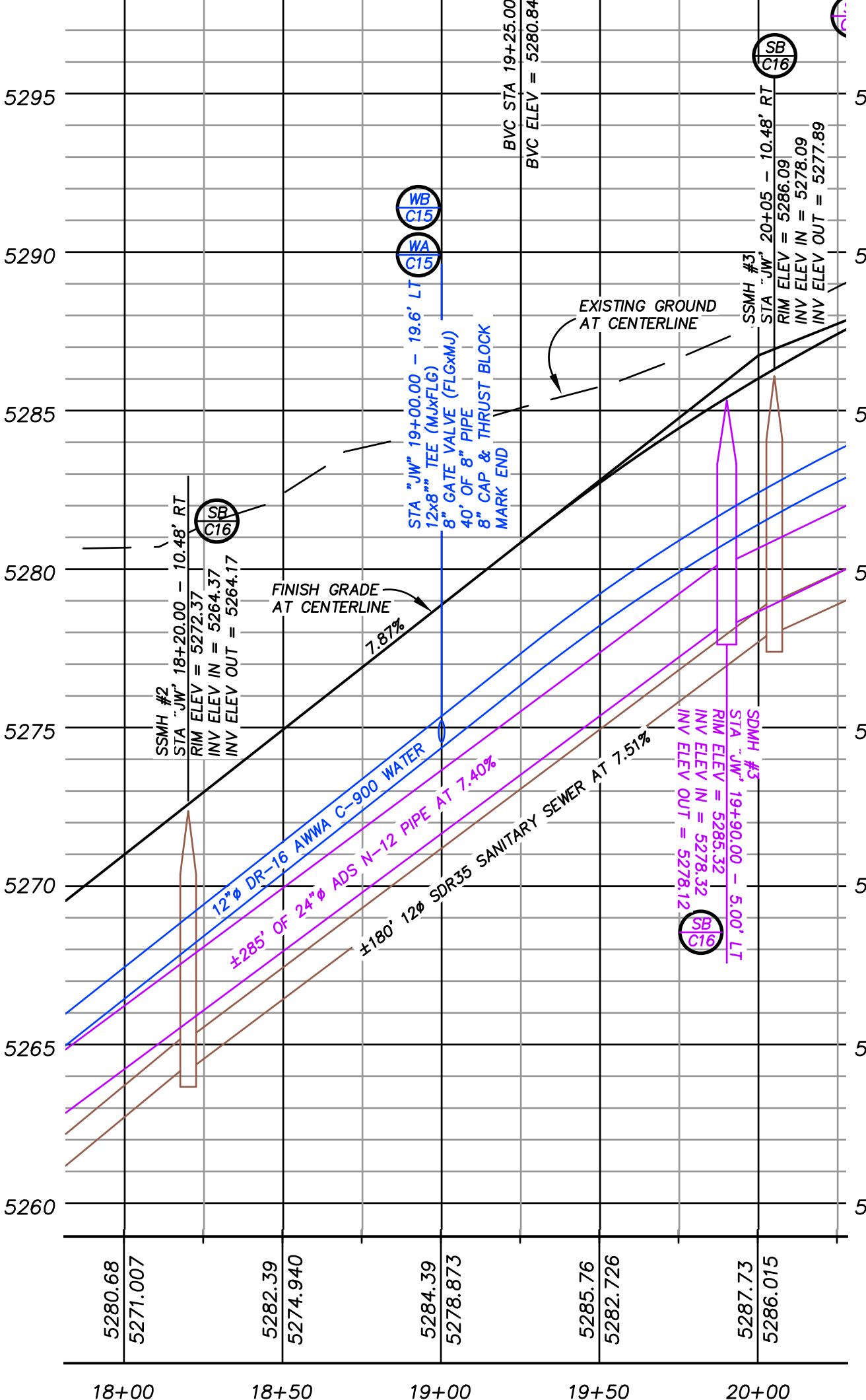
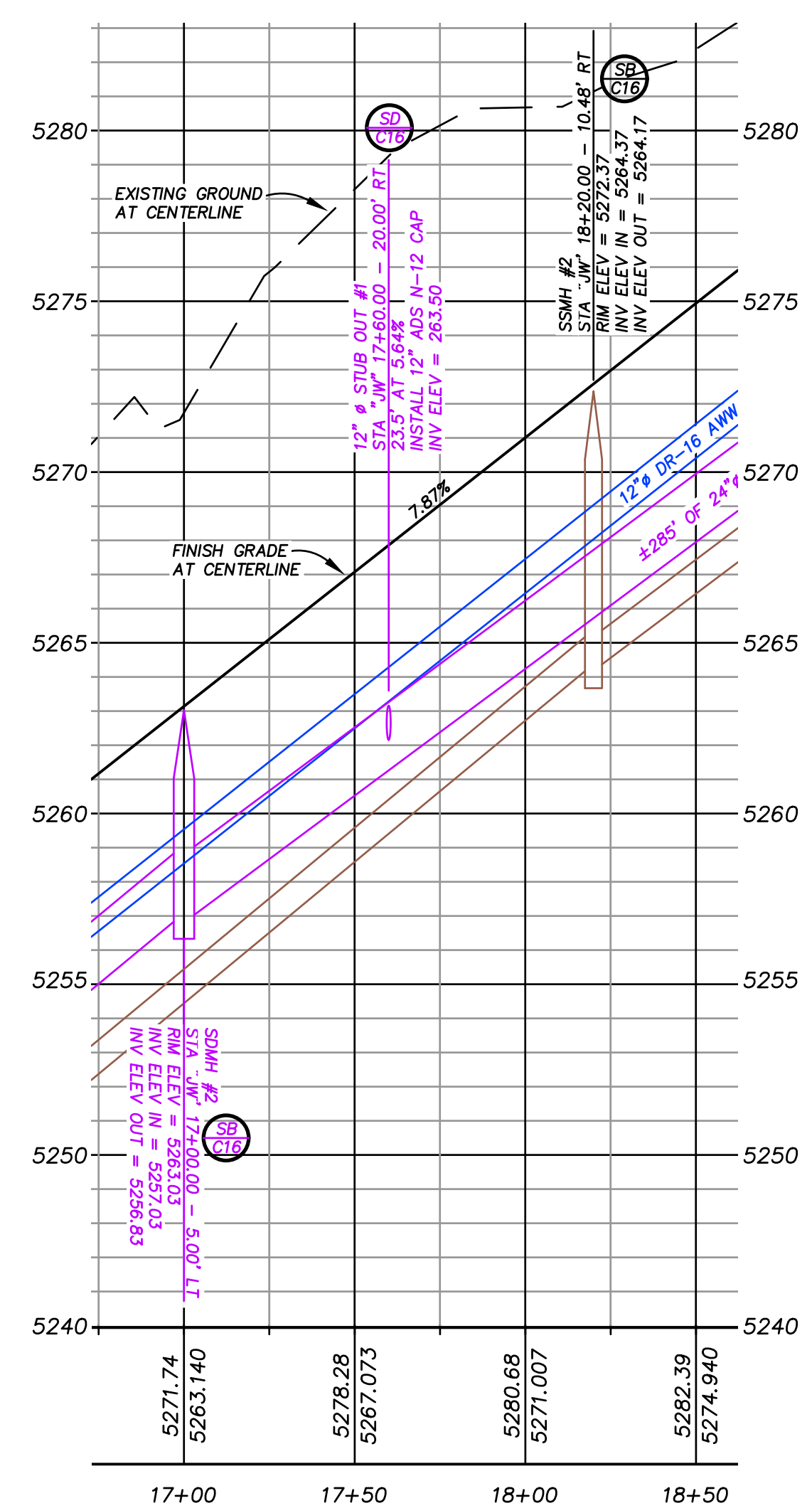
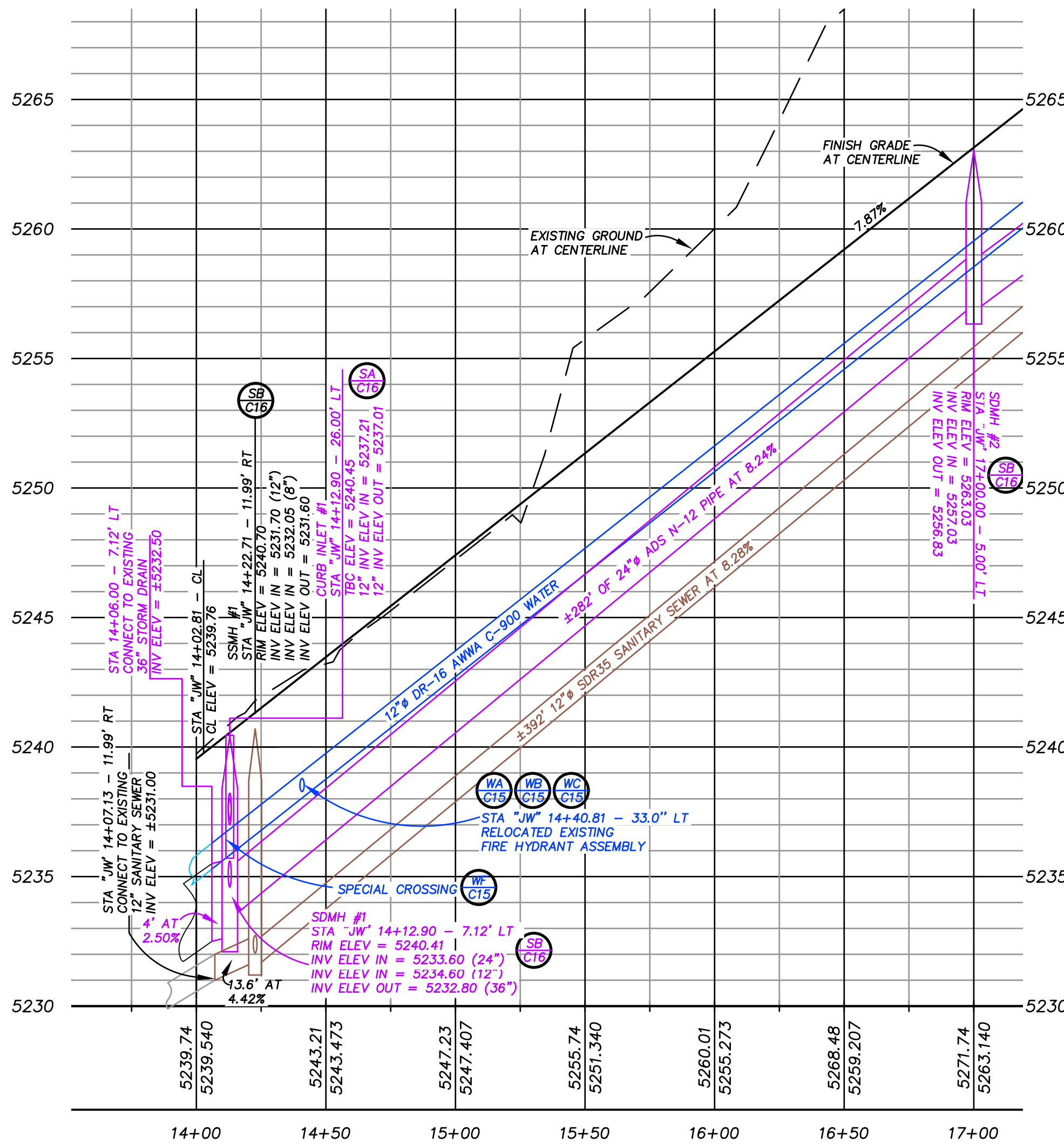
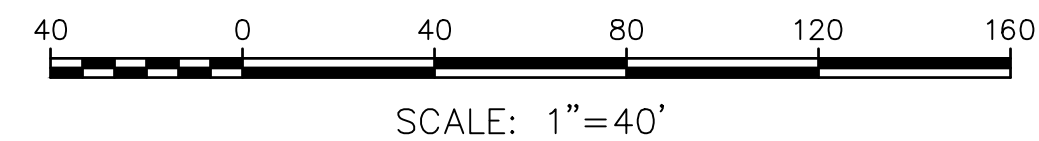
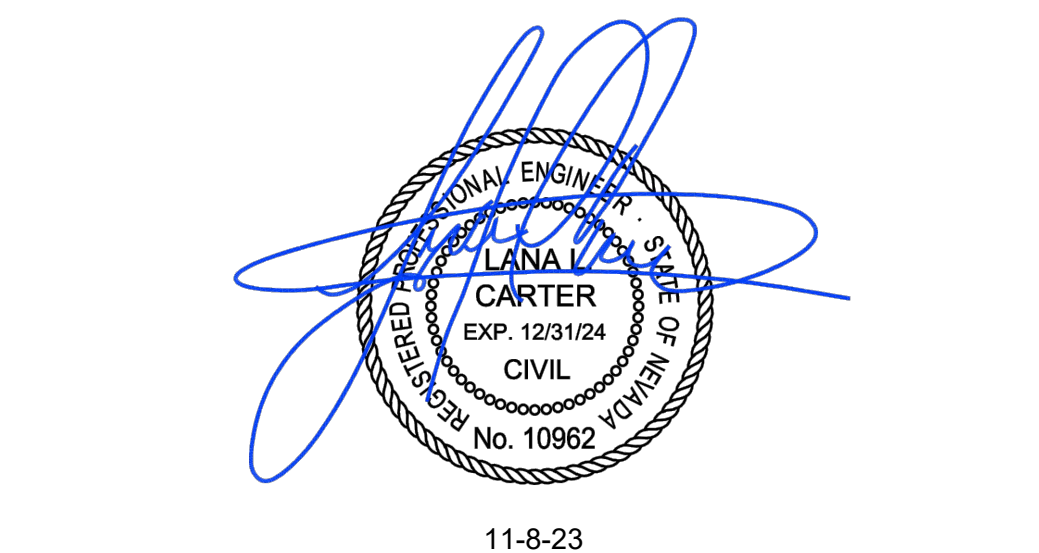
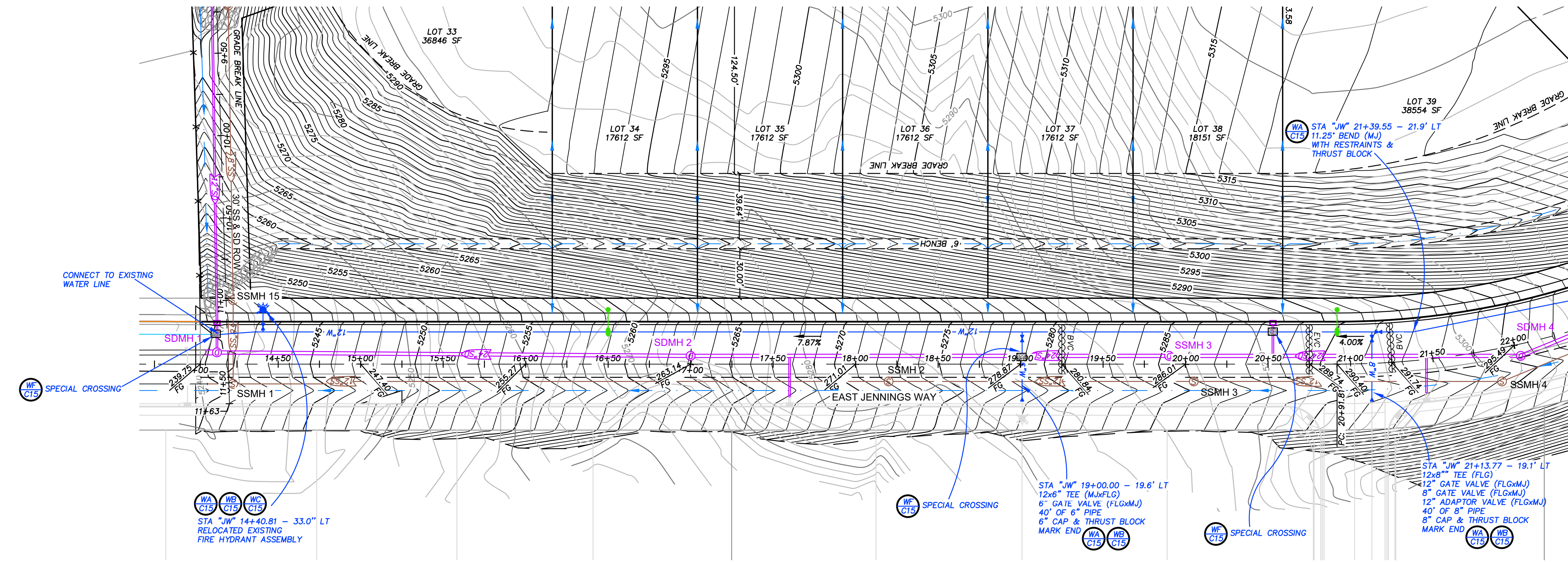
HORIZ: 1"=40'

VERT: N/A

SHEET

C7

OF 16



DESIGN BY: LLC
DRAWN BY: LLC
CHECKED BY: LLC
DATE: 11-8-23
JOB NO: 17-2020
DWG NO: 2022-18

BERGERON VILLAGE - PHASE 1
PLAN AND PROFILE
JENNINGS WAY 14+00 TO 22+00
ELKO, NEVADA

SCALE
HORIZ: 1"=40'
VERT: 1"=4'

SHEET
C8
OF 16

DATE: 11-8-23
REV: 1
2
3
4
5
6

DESCRIPTION
12.22 CITY OF ELKO RED LINE PLANS
CHANGE SIZE IN JENNINGS WAY FROM 36" TO 24"
EXPAND JENNINGS EXCAVATION FOR POWER INSTALLATION
REVISE PROF FOR WTR, SS & SD AS-BUILT AT CONNECT PTS

Carter Engineering, LLC
Civil Engineering
P. O. Box 794
Elko, Nevada 89803
775-397-2531



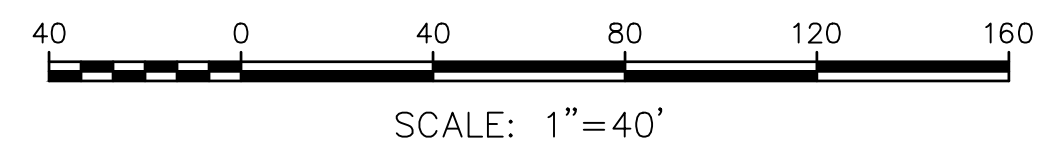
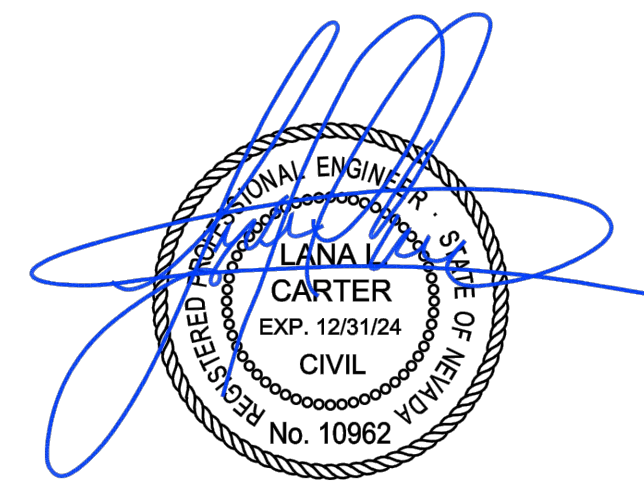
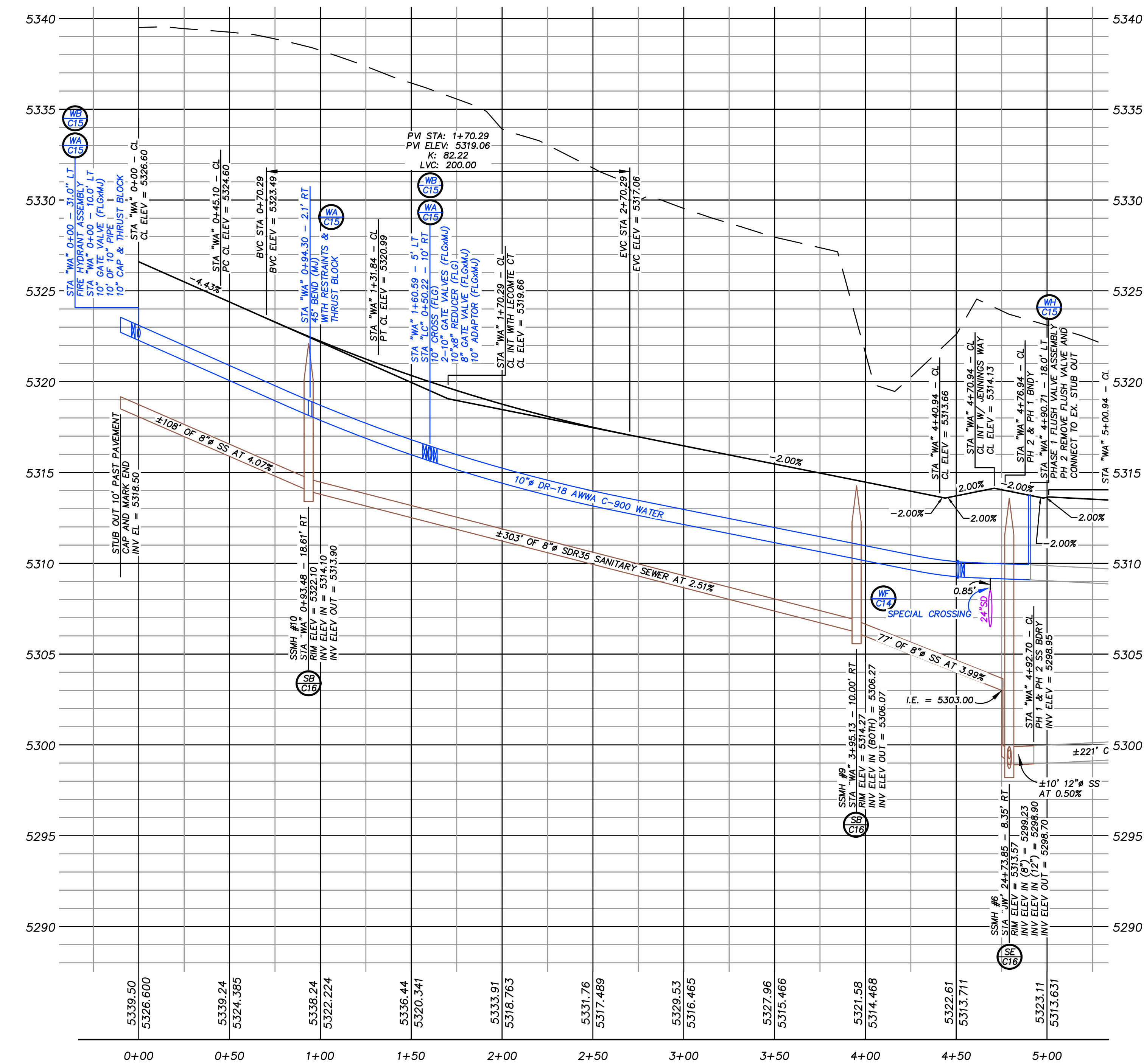
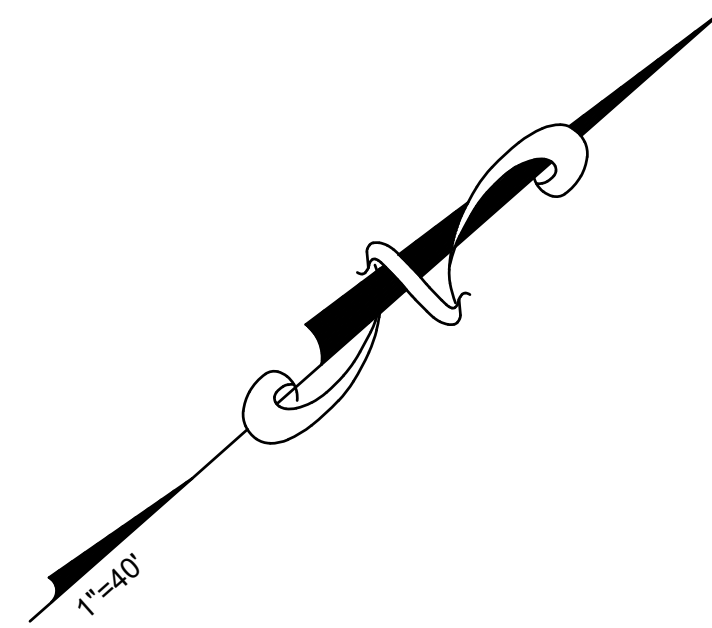
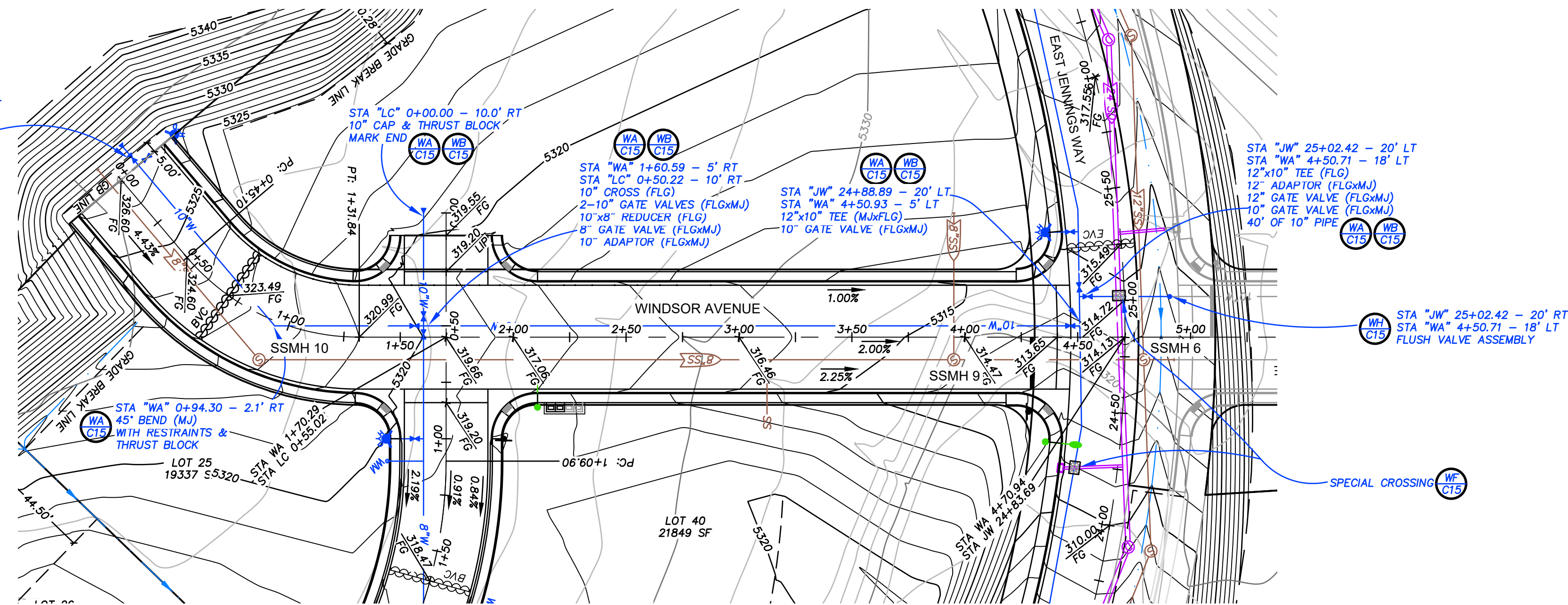
STA "JW" 22+42.02 - 21.9' LT
11.25° BEND (MJ)
WITH RESTRAINTS &
THRUST BLOCK

WA
CTB

WB
CTB

WC
CTB

STA "WA" 0+00 - 31.0' LT
FIRE HYDRANT ASSEMBLY
STA "WA" 0+00 - 10.0' LT
10" GATE VALVE (FLG&MJ)
10" OF 10" PIPE
10" CAP & THRUST BLOCK



REV	DATE	DESCRIPTION
1	12-8-22	12-22 CITY OF ELKO RED LINE PLANS
2	12-26-22	CHANGE SIZE IN JENNINGS WAY FROM 36\"/>
4	3-14-23	NDEP PLAN CHECK LETTER DATED MARCH 8, 2023

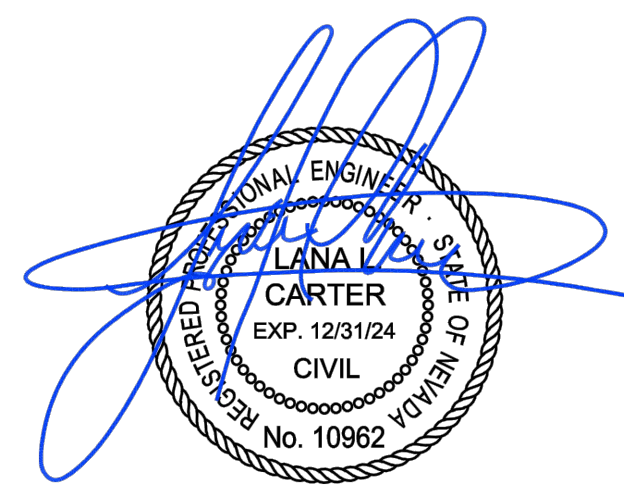
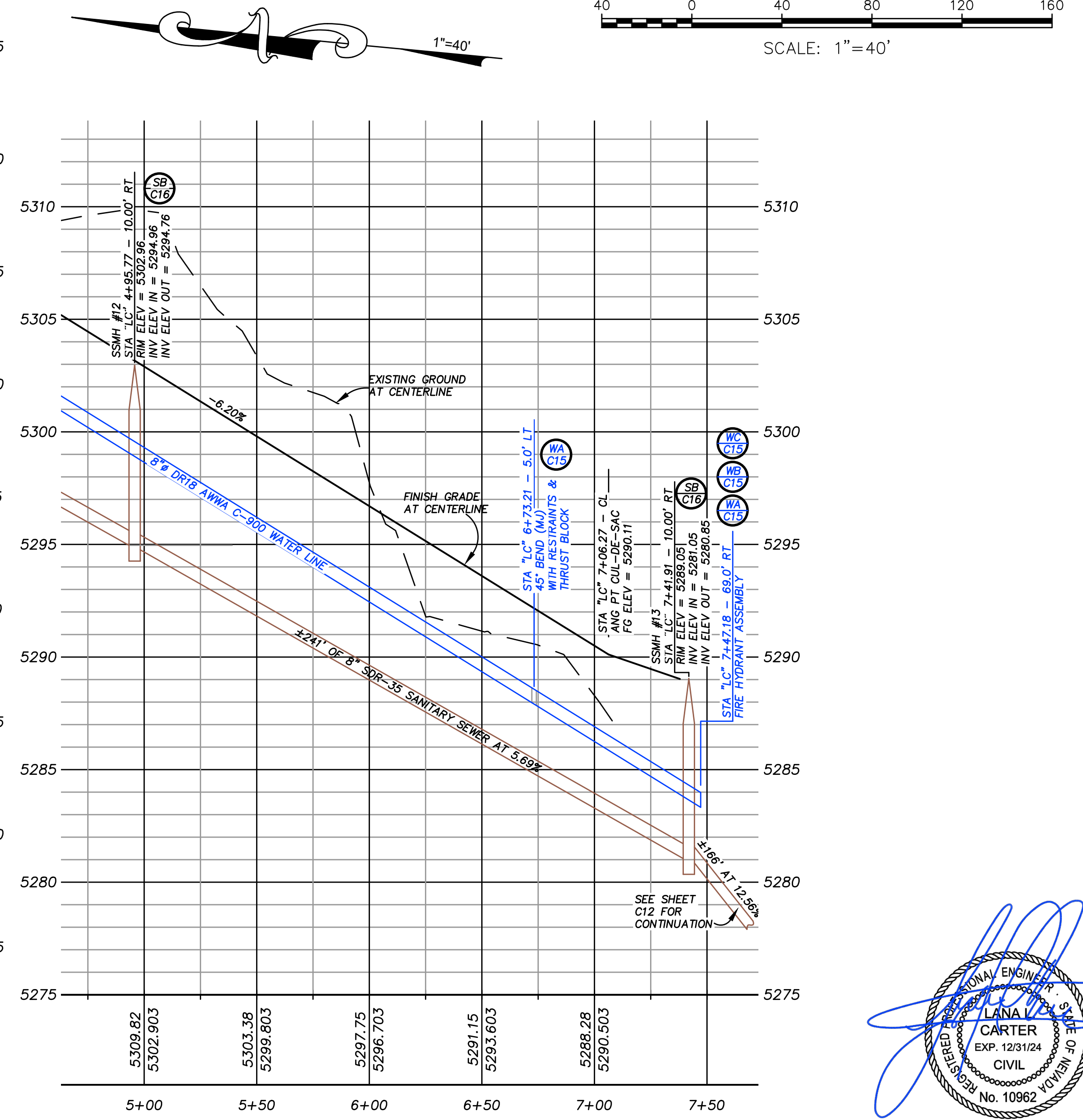
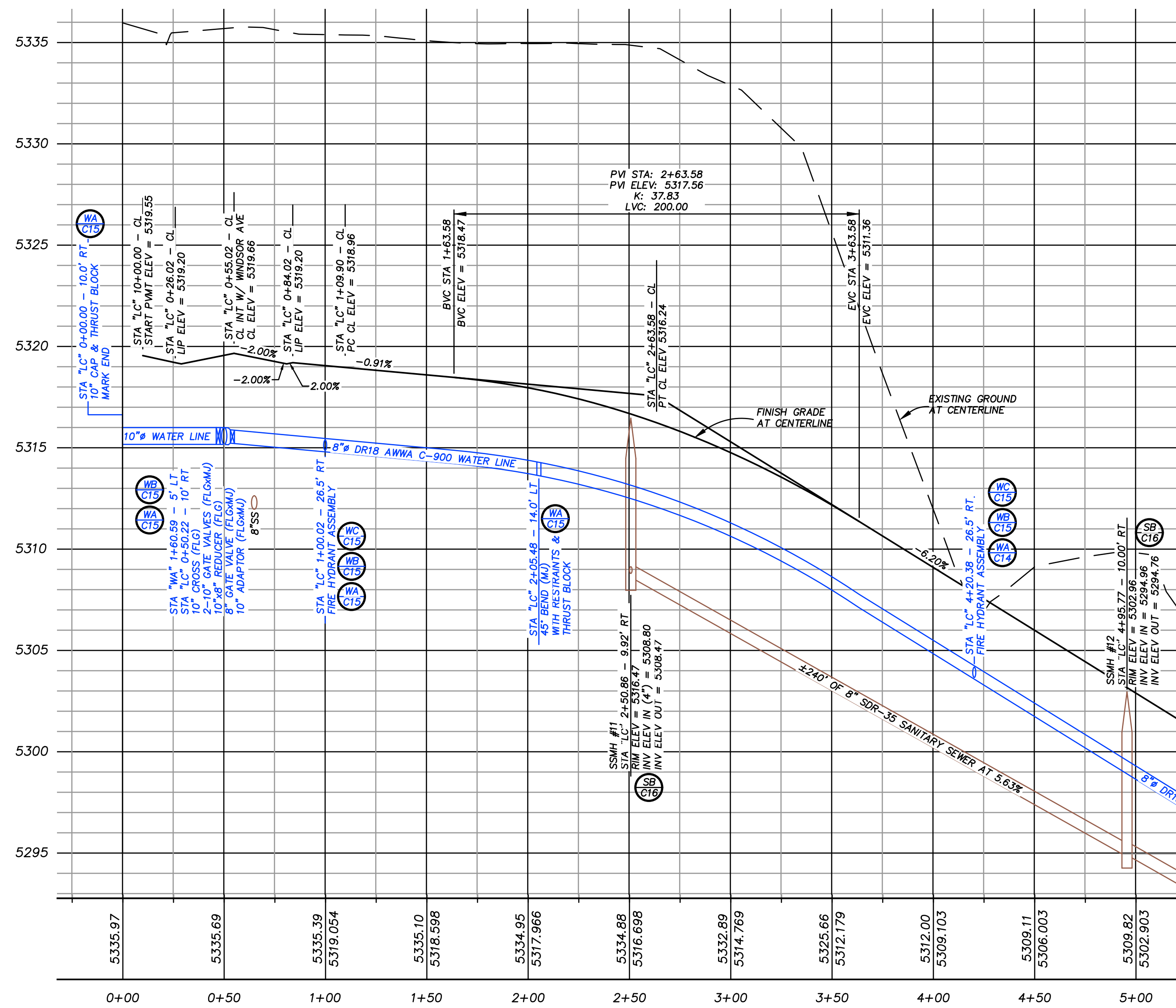
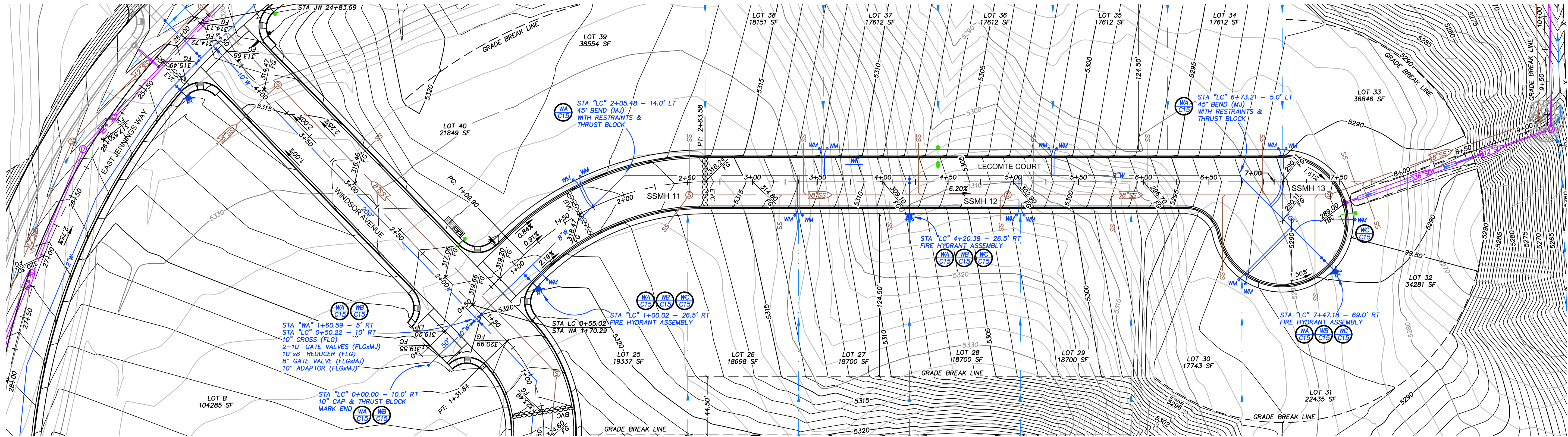
Carter Engineering, LLC
Civil Engineering
P. O. Box 794
Elko, Nevada 89803
775-397-2531

BERGERON VILLAGE - PHASE 1
PLAN AND PROFILE
WINDSOR AVE STA 0+00 TO 5+25
ELKO, NEVADA

DESIGN BY:	LLC
DRAWN BY:	LLC
CHECKED BY:	LLC
DATE:	11-8-23
JOB NO:	17-2020
DWG NO:	2022-18

SCALE
HORIZ: 1"=40'
VERT: 1"=4'

SHEET
C10
OF 16



REV	DATE	DESCRIPTION
1	12-8-22	12.22 CITY OF ELKO RED LINE PLANS
2	12-26-22	CHANCE SIZE IN JENNINGS WAY FROM 36" TO 24"
4	3-14-23	INDEP PLAN CHECK LETTER DATED MARCH 8, 2023

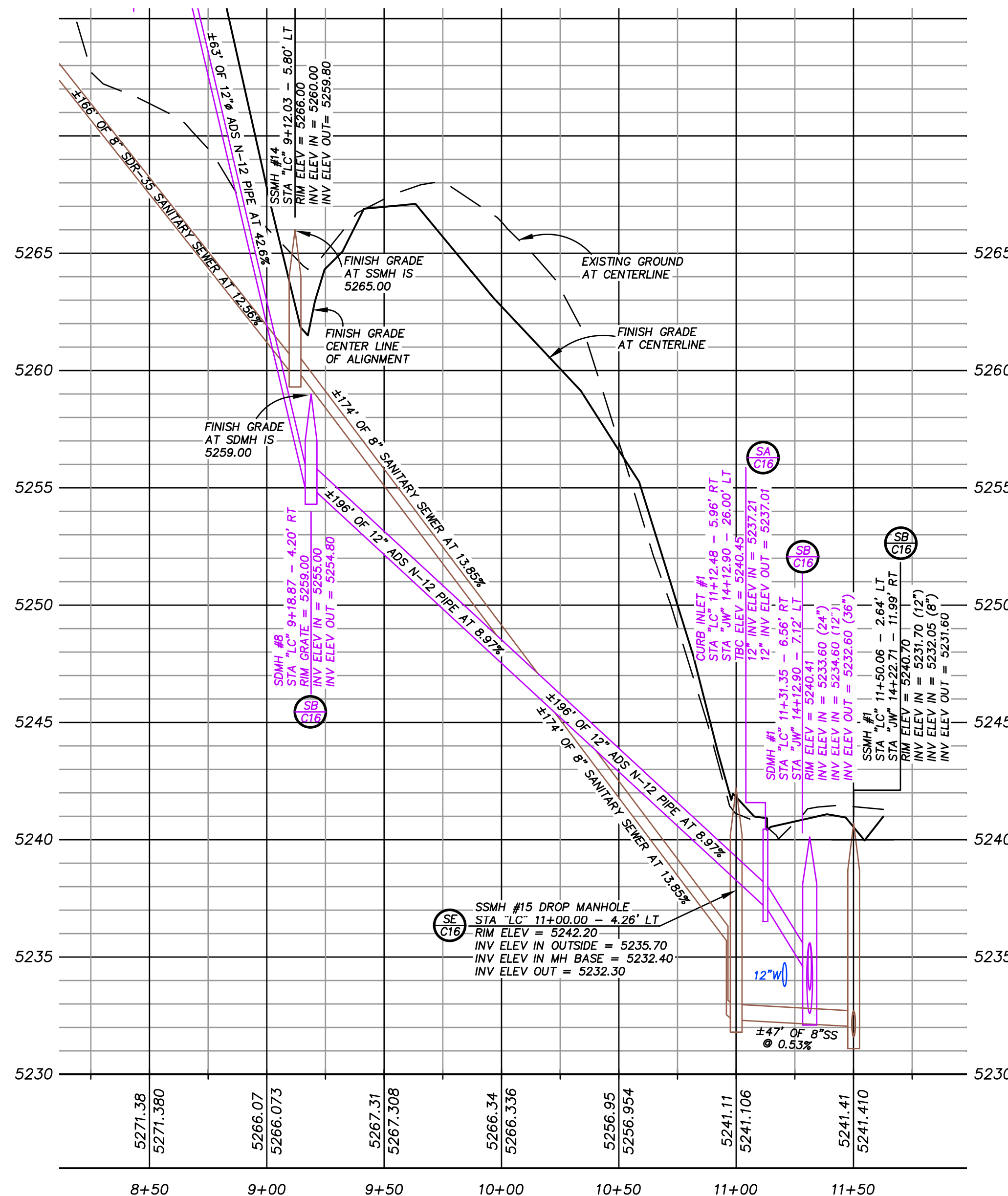
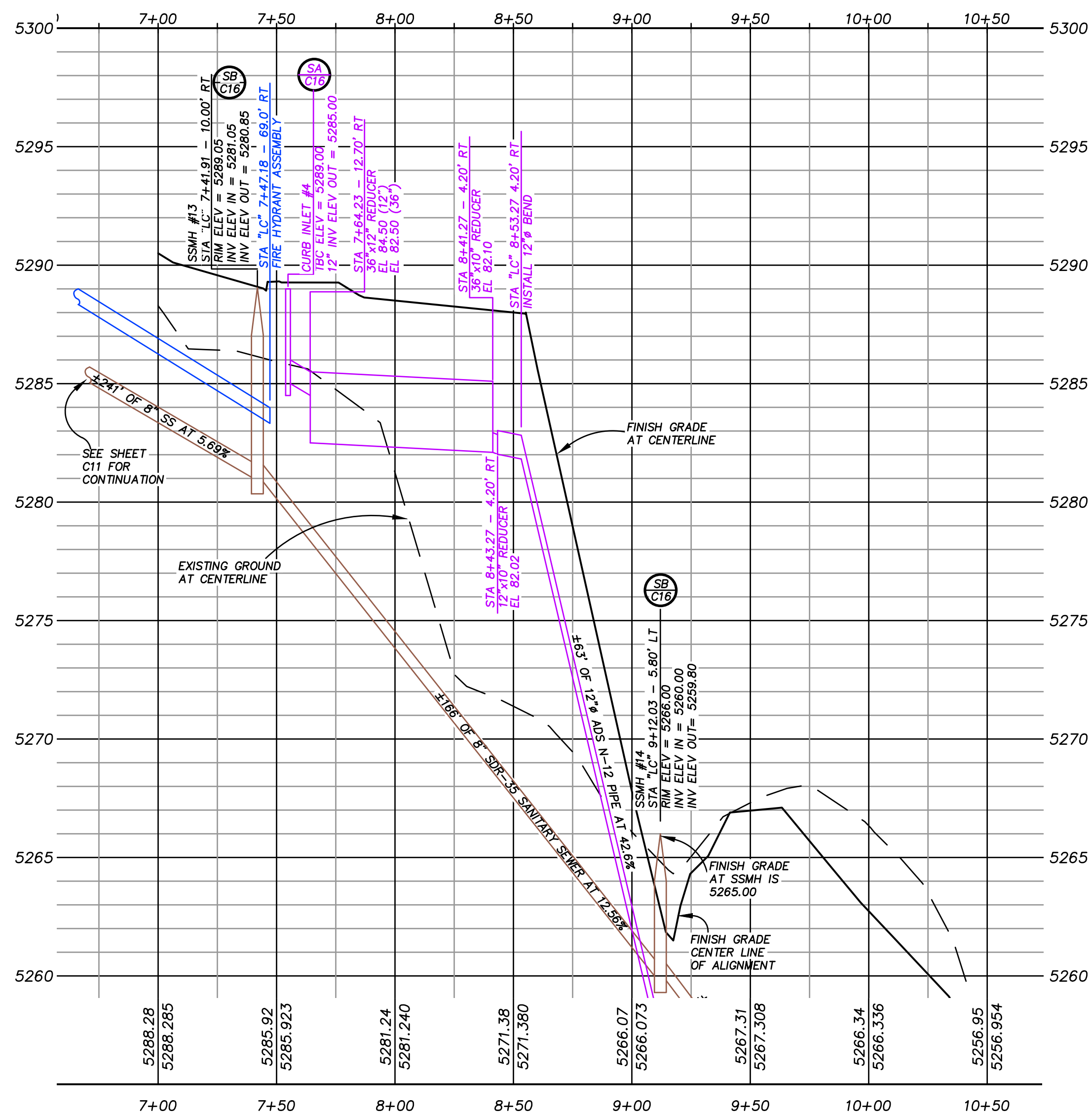
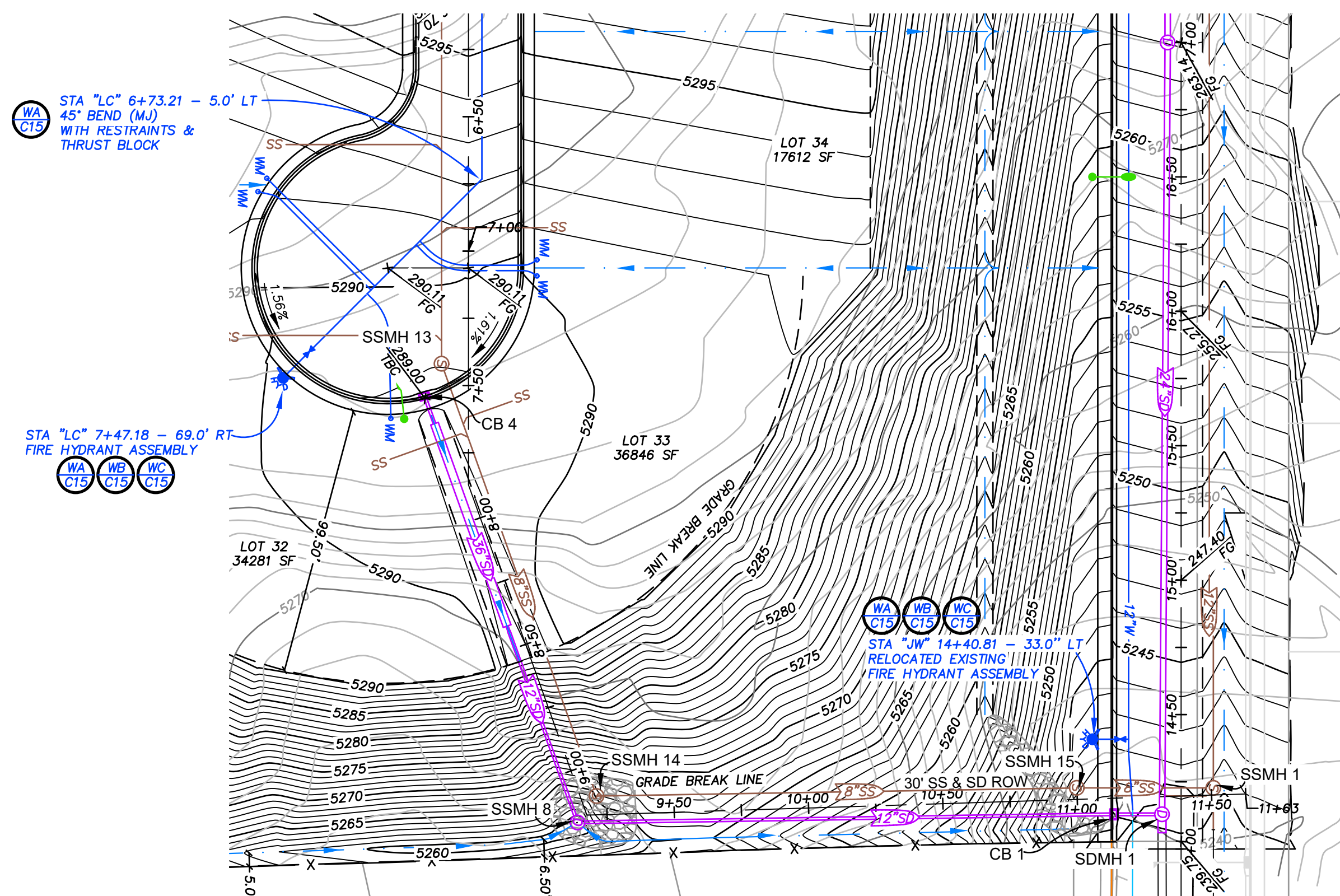
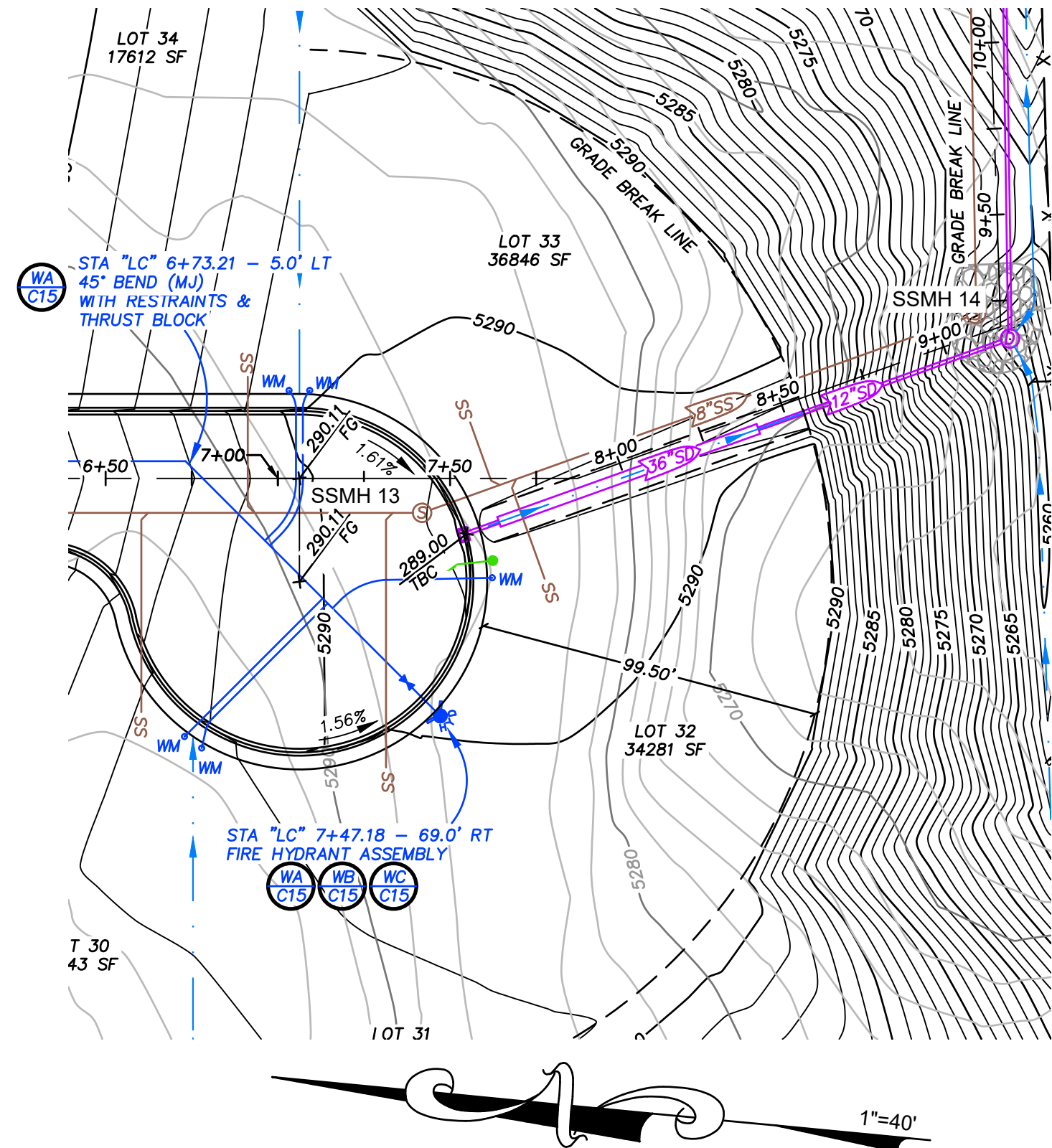
Carter Engineering, LLC
Civil Engineering
P. O. Box 794
Elko, Nevada 89803
775-397-2531

BERGERON VILLAGE PHASE 1
PLAN AND PROFILE
LECOMTE COURT STA 0+00-7+50
ELKO, NEVADA

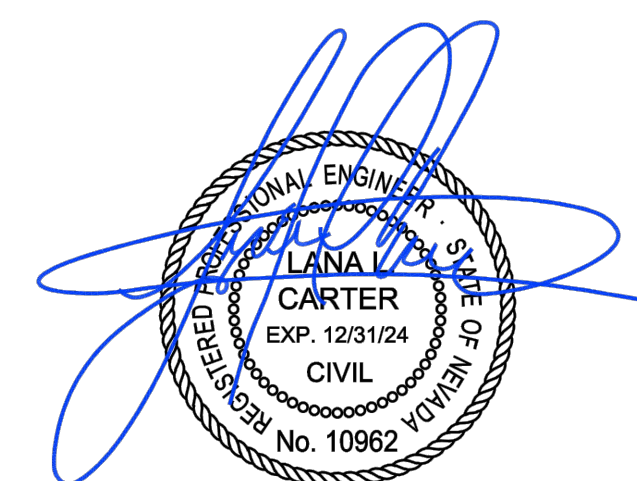
DESIGN BY:	LLC
DRAWN BY:	LLC
CHECKED BY:	LLC
DATE:	11-8-23
JOB NO:	17-2020
DWG NO:	2022-18

SCALE
HORIZ: 1"=40'
VERT: 1"=4'

SHEET
C11
OF 16



SCALE: 1"=40'



11-8-23

REV	DATE	DESCRIPTION
1	12-8-22	12-22 CITY OF ELKO RED LINE PLANS
2	12-28-22	CHANCE SIZE IN ELKINGS WAY FROM 36" TO 24"
3	3-1-23	UNDER PLAN CHECK LETTERED MARCH 18, 2023
5	4-11-23	UNDER PLAN CHECK EMAIL DATED APRIL 11, 2023

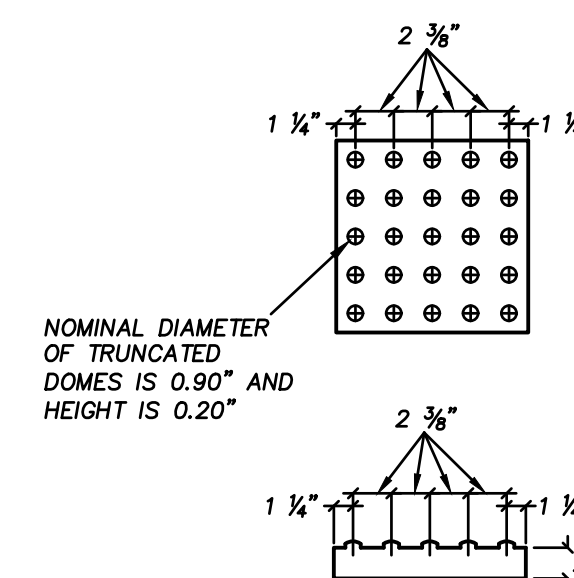
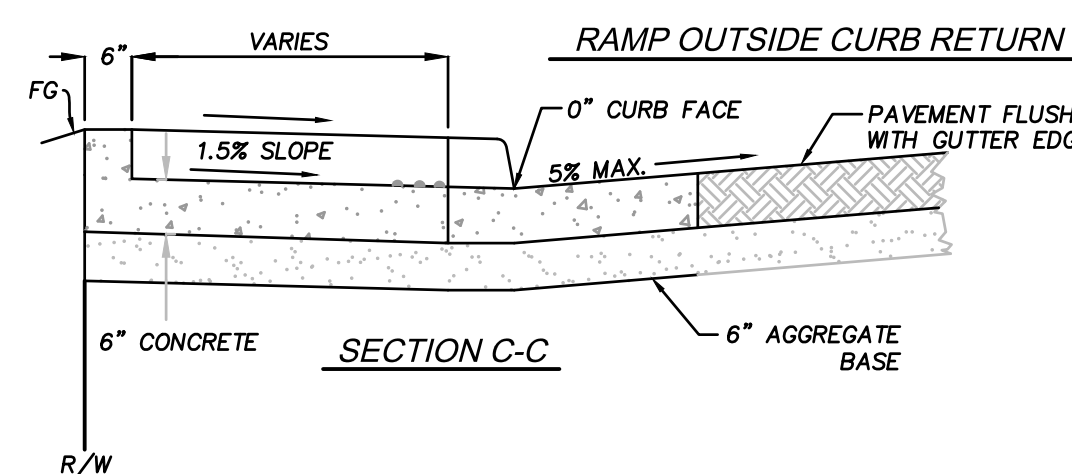
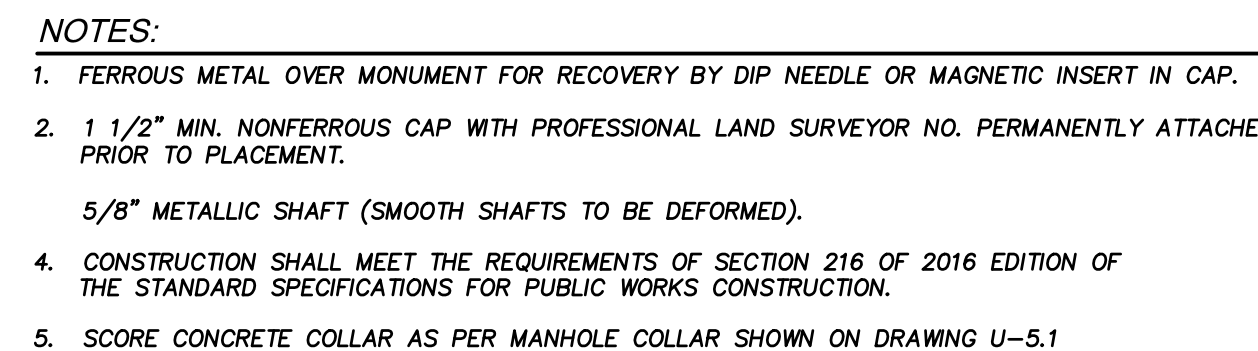
Carter Engineering, LLC
Civil Engineering
P. O. Box 794
Elko, Nevada 89803
775-397-2531

BERGERON VILLAGE PHASE 1
PLAN AND PROFILE
LECOMTE COURT STA 7+50 - 11+63
ELKO, NEVADA

DESIGN BY:	LLC
DRAWN BY:	LLC
CHECKED BY:	LLC
DATE:	11-8-23
JOB NO:	17-2020
DWG NO:	2022-18

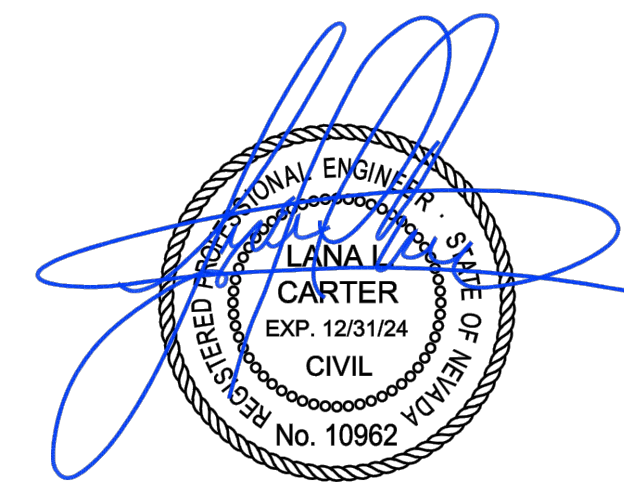
SCALE
HORIZ: 1"=40'
VERT: 1"=4'

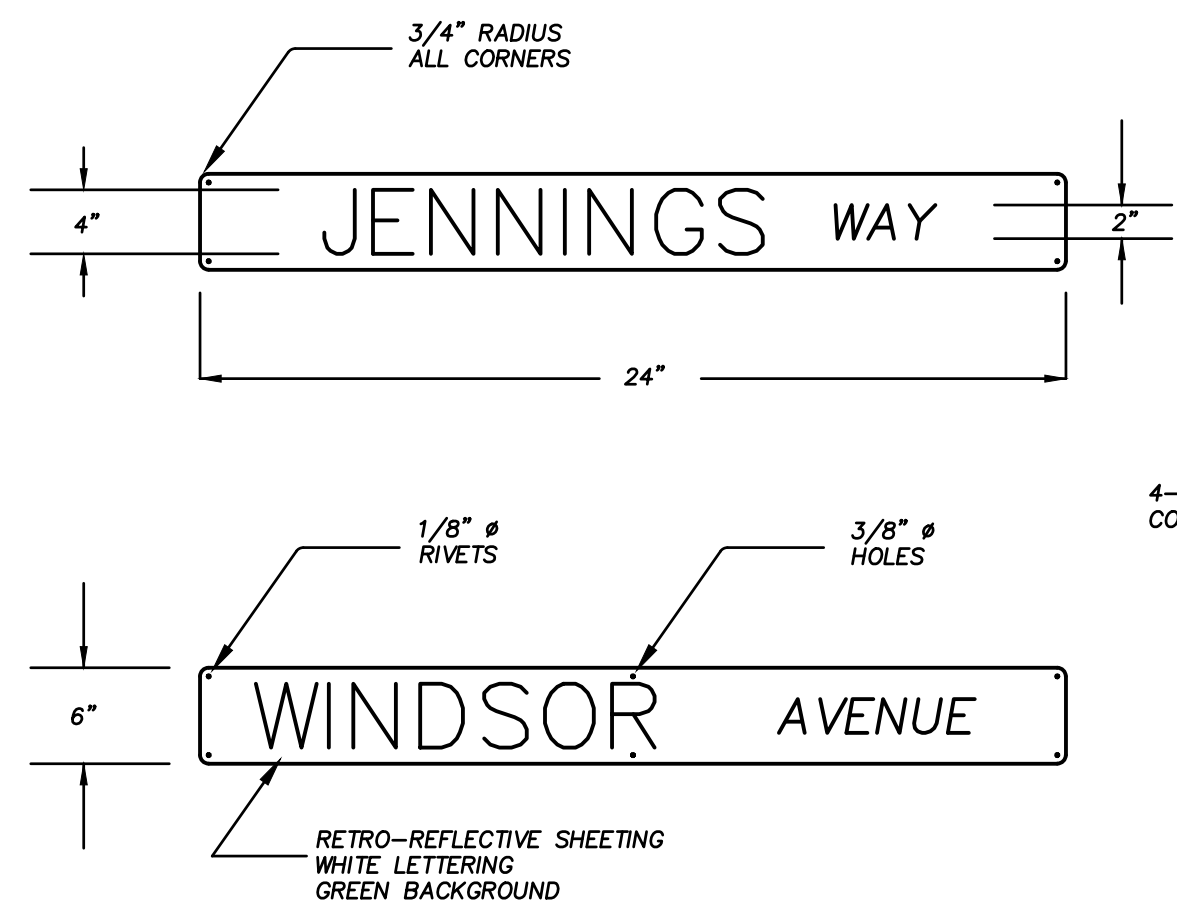
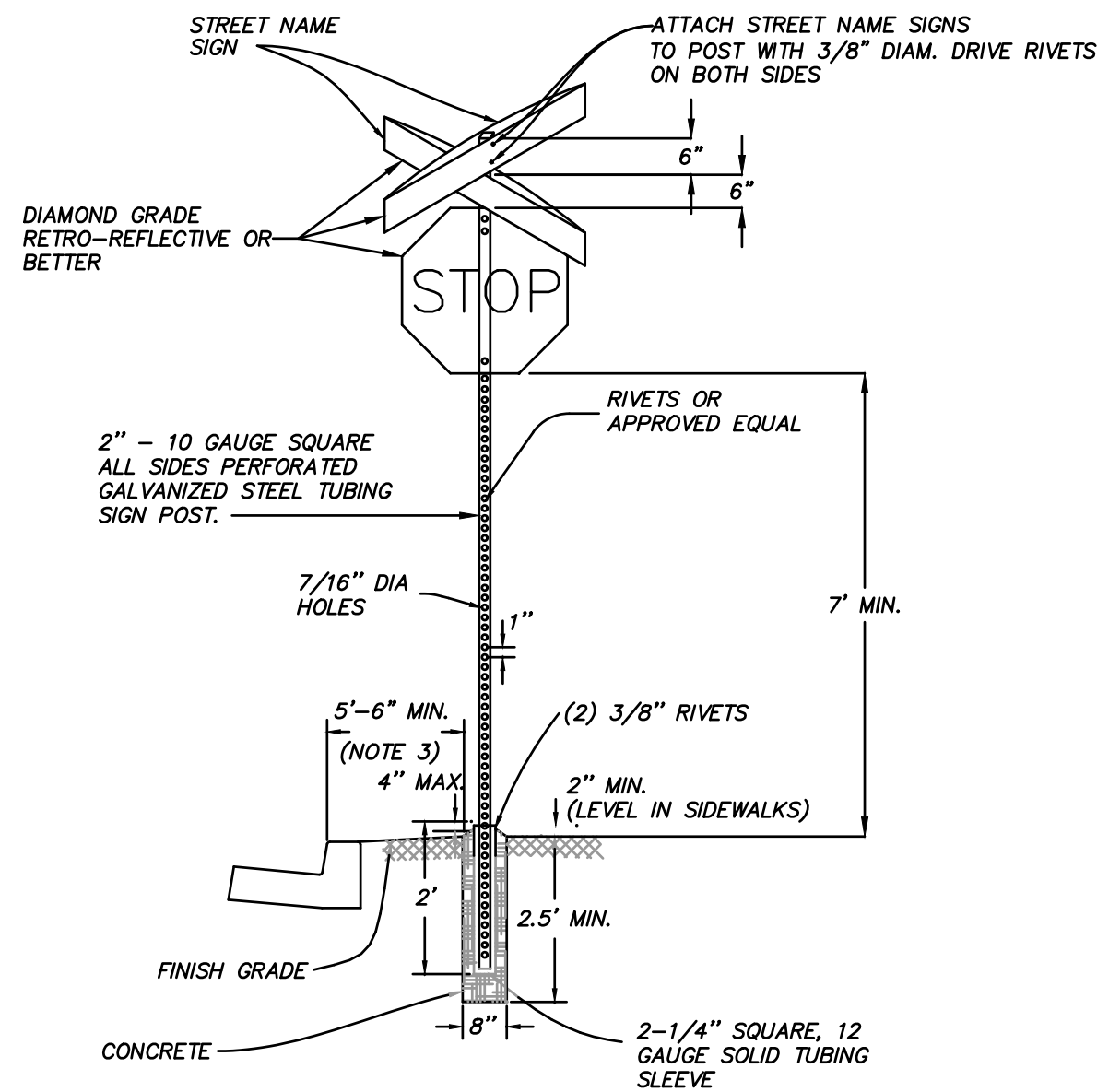
SHEET C12
OF 16



TRANSITION LENGTHS FOR 8.33% SLOPE		
GRADE % (B TO A)	"A" MIN. (FT.)	"B" MIN. (FT.)
> -4.00	4.5	15.0
-4 TO -3.01	4.5	12.0
-3 TO -2.01	5.0	9.5
-2 TO -1.01	5.5	8.0
-1 TO 1	7.0	7.0
1.01 TO 2	8.0	5.5
2.01 TO 3	9.5	5.0
3.01 TO 4	12.0	4.5
> 4.00	15.0	4.5

- ### CURB RAMP NOTES:
1. CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 200, 202 AND 312 OF THE 2016 EDITION OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
 2. AGGREGATE BASE MATERIAL SHALL MEET THE REQUIREMENTS OF SECTION 302 & 308 OF 2016 EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
 3. CURB RAMP WITHIN CURB RETURN SHALL BE LOCATED AT THE MIDPOINT OF CURB RETURN.
 4. RAMPS SHALL BE CONSTRUCTED WITH A ROUGH BROOM FINISH TRANSVERSE TO THE SLOPE OF THE RAMP.
 5. WHEN CONSTRUCTING A RAMP WHERE CURB & GUTTER EXIST, COMPLETELY REMOVE INTERFERING PORTIONS OF EXISTING CURB & GUTTER. LOCATION OF CURB RAMP SHALL BE APPROVED BY THE CITY OF ELKO PRIOR TO INSTALLATION.
 6. DETECTABLE WARNINGS SHALL BE YELLOW AND CONSIST OF RAISED TRUNCATED DOMES AND PLACED AT THE BOTTOM PORTION OF THE RAMP.
 7. CROSS SLOPE OF SIDEWALK AND RAMP SURFACES SHALL NOT EXCEED 2%.
 8. CURB RAMPS & DETECTABLE WARNINGS SHALL MEET THE REQUIREMENTS OF 28 CFR PART 36, ADA STANDARDS FOR ACCESSIBLE DESIGN.
 9. NO UP SLOP BE PERMITTED AT THE CURB RAMP SLOPE TO THE GUTTER PLAN.
 10. PLANTMIX BITUMINOUS SURFACE SHALL BE FLUSH WITH THE EDGE OF THE GUTTER PAN AT THE FACE OF THE CURB RAMP.



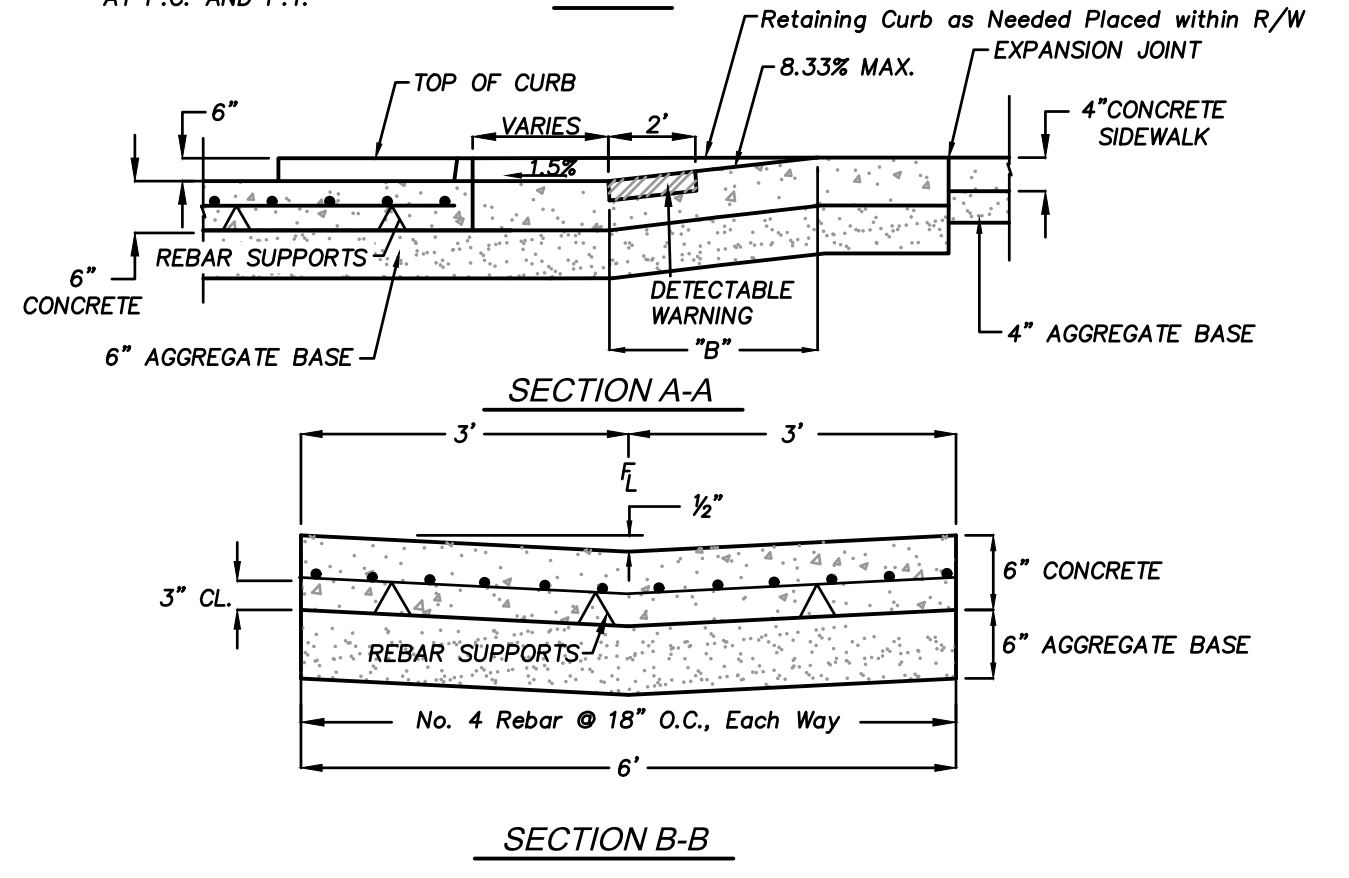
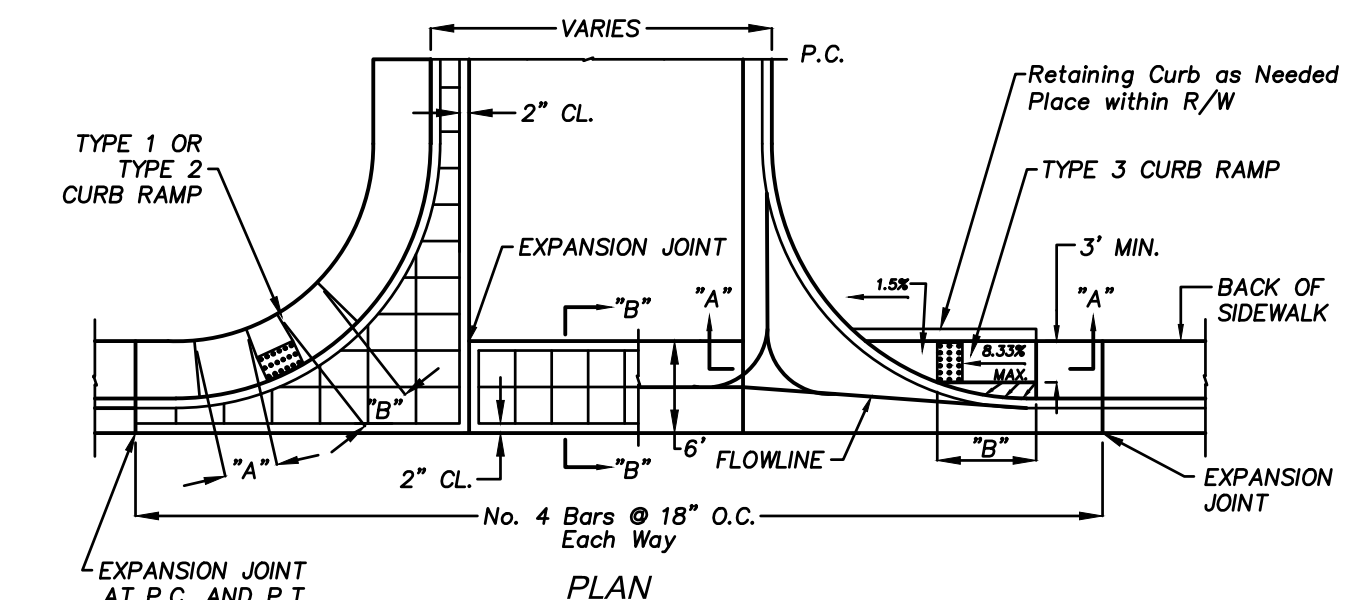


- NOTES:
1. SIGNS SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AND THE LATEST EDITION OF THE M.U.T.C.D.
 2. SIGN PANELS SHALL BE MOUNTED ON SIGN BLANK EXTRUDED ALUMINUM NO. 6061-T6, WITH A MINIMUM THICKNESS OF 0.080".
 3. MATERIALS TO BE USED FOR SIGNING SHALL BE DIAMOND GRADE RETRO-REFLECTIVE SHEETING OR BETTER.

STREET NAME SIGN

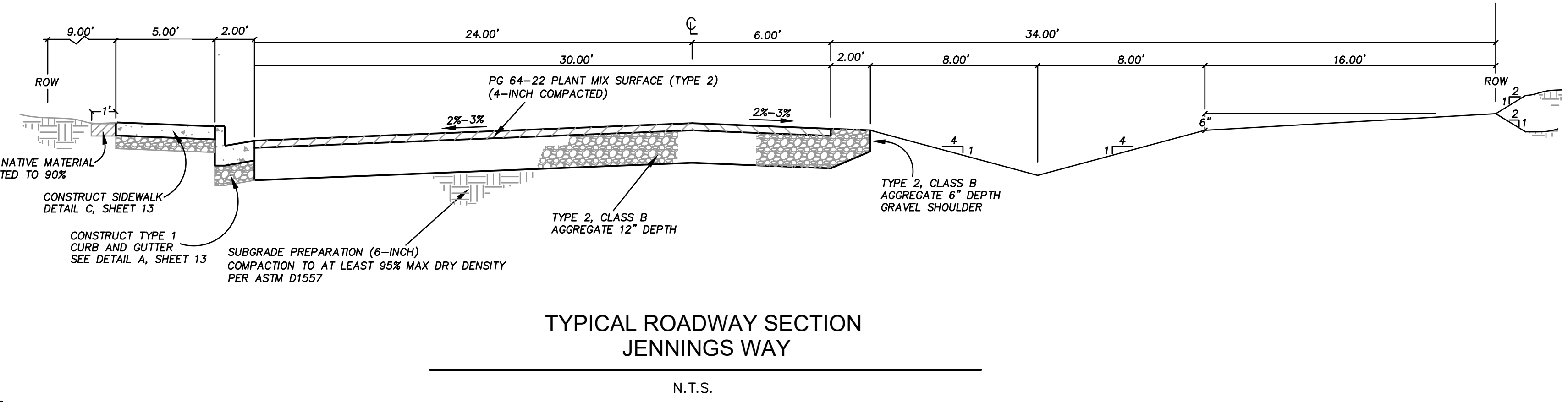
TYPE 2 STREET SIGN

STREET AND STOP SIGN



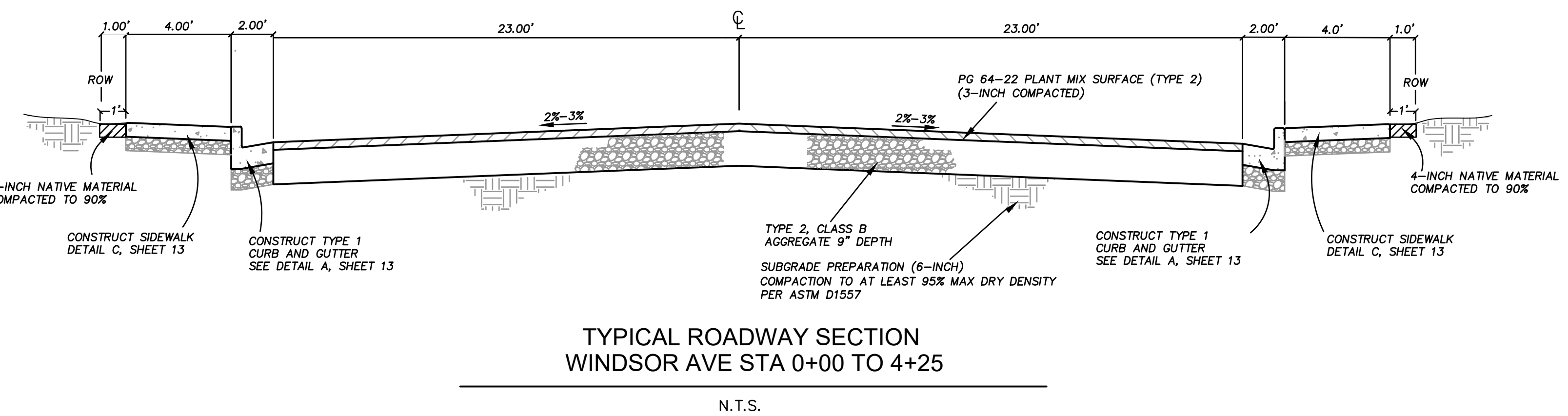
P.C.C. VALLEY GUTTER WITH APRON

N.T.S.



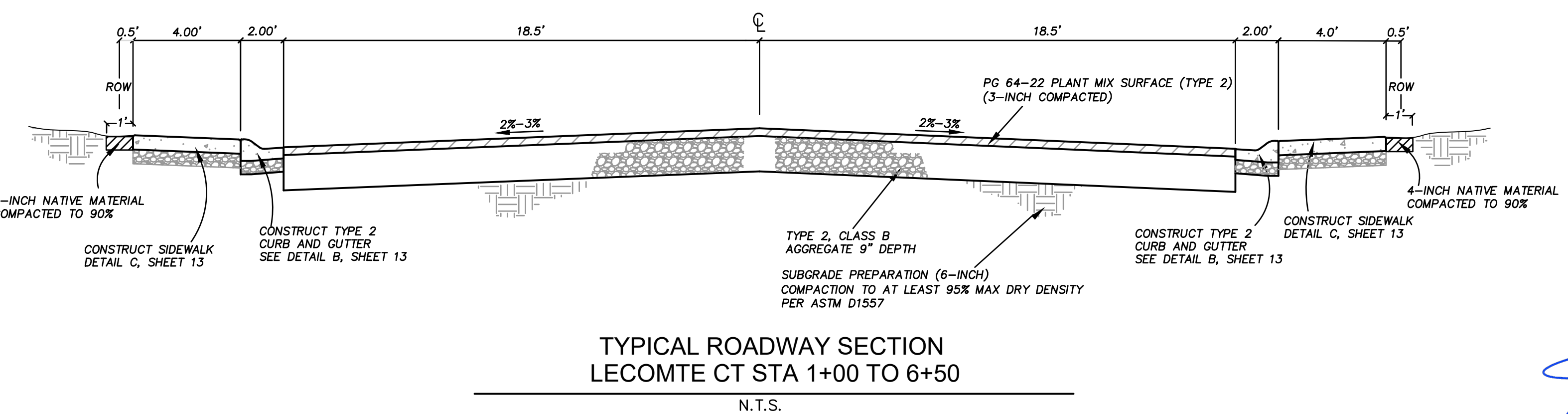
TYPICAL ROADWAY SECTION
JENNINGS WAY

N.T.S.



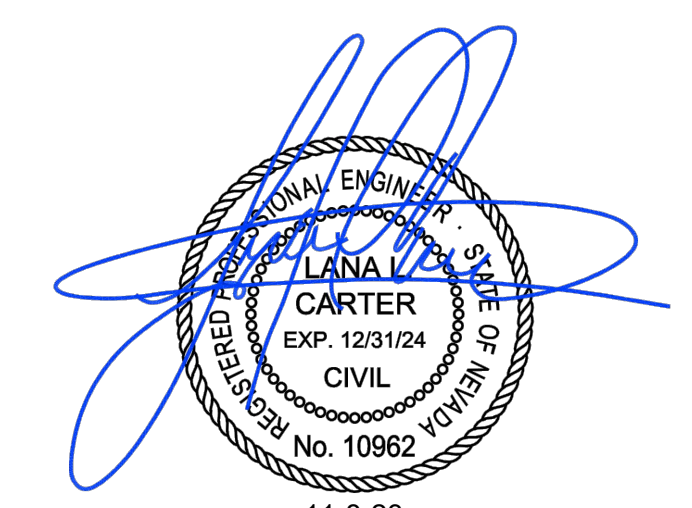
TYPICAL ROADWAY SECTION
WINDSOR AVE STA 0+00 TO 4+25

N.T.S.



TYPICAL ROADWAY SECTION
LECOMTE CT STA 1+00 TO 6+50

N.T.S.



DESIGN BY: LLC		DRAWN BY: LLC		CHECKED BY: LLC		DATE: 11-8-23		JOB NO: 17-2020		DWG NO: 2022-18	
SCALE		HORIZ: N/A		VERT: N/A		SHEET		C14		OF 16	

Carter Engineering, LLC
Civil Engineering
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Elko, Nevada 89803
775-397-2531

BERGERON VILLAGE
PHASE 1
IMPROVEMENT DETAILS
ELKO, NEVADA

REV	DATE	DESCRIPTION
1	12-8-22	12.2.22 CITY OF ELKO RED LINE PLANS
2	12-26-22	CHANGE SIGN SIZE IN JENNINGS WAY FROM 24" TO 34"
2	7-7-23	WIDEN JENNINGS EXCAVATION FOR POWER INSTALLATION

Type of Fitting	90° Bend	45° Bend	11-1/4" or 22-1/2" Bend	Tee or Dead End
Typical Installation				

THRUST BLOCK BEARING AREA (SQ. FT.)

Type of Fitting	90° Bend	45° Bend	11-1/4" or 22-1/2" Bend	Tee or Dead End	Tee with Plug	Cross with Plug
Pipe	2	1	1	2	2	2
	4	4	2	4	4	4
	7	4	2	5	7	7
	12	6	3	8	12	12
	16	10	5	12	16	16
18	45	25	13	32	45	45

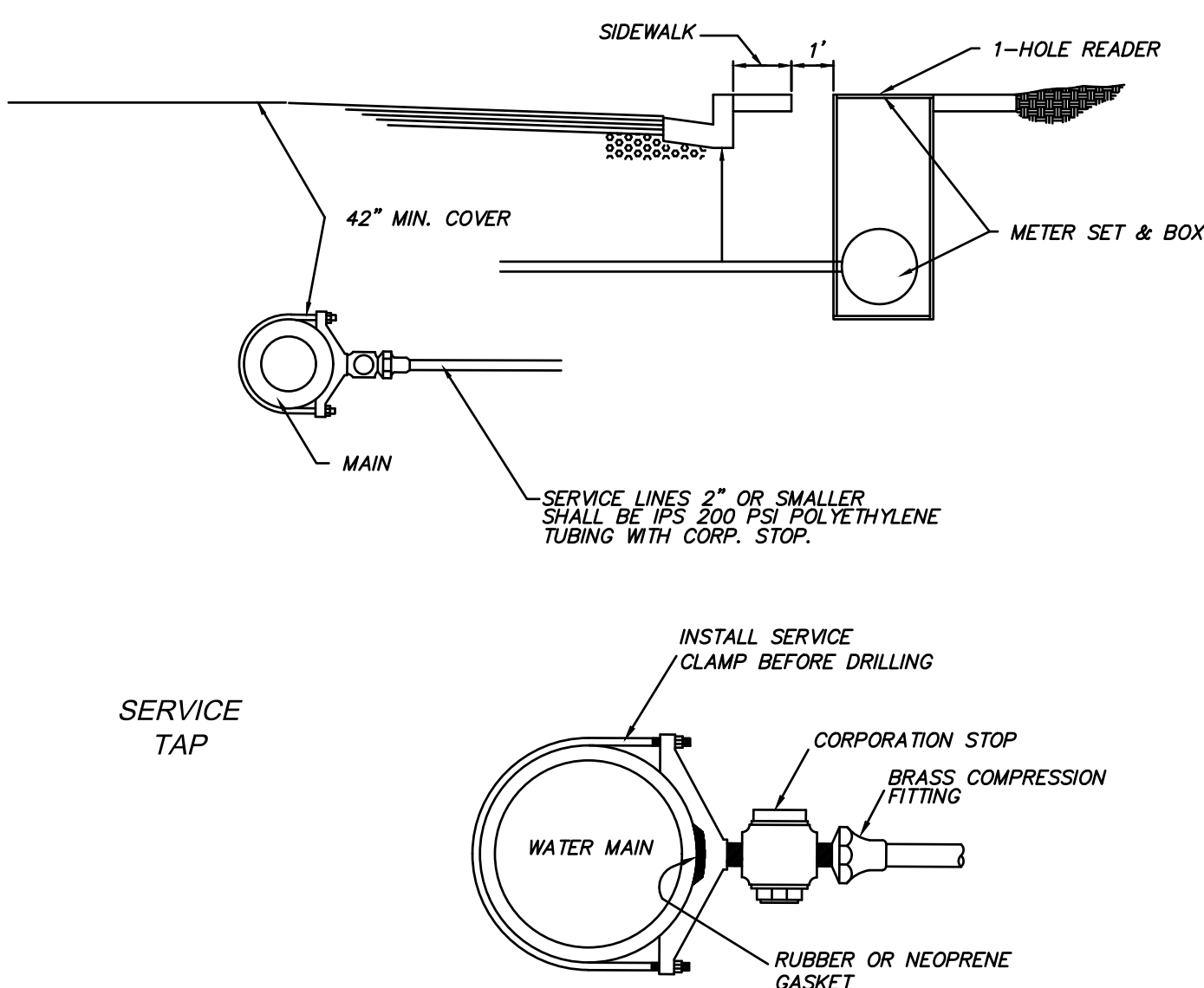
Type of Fitting	Cross with Plug	Tee with Plug
Typical Installation		

NOTES:

- Thrust blocks to be constructed of Class "C" concrete.
- Areas given are for class 150 pipe at test pressure of 150 p.s.i., with 2000 p.s.f. bearing capacity. Installations using different pipe, test pressures, and/or soil types should adjust areas accordingly, subject to approval of the Engineer.
- Thrust blocks to be poured against undisturbed soil.
- Joints and face of plugs to be kept clear of concrete.

STANDARD THRUST BLOCKS

N.T.S.

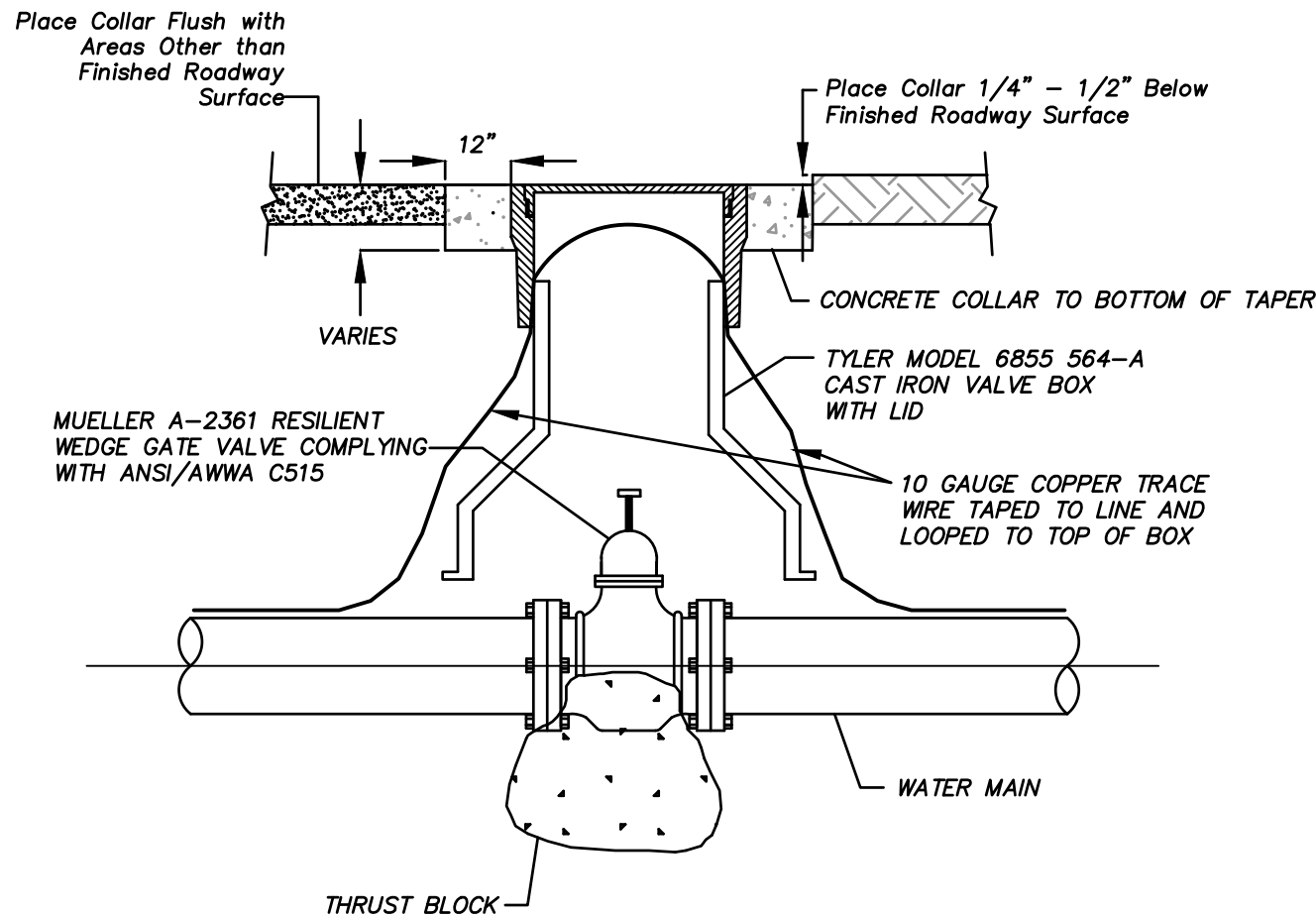


NOTES:

- CORPORATION STOP, CURB STOP, (GATE VALVE 4" OR LARGER) AND SERVICE LINE TO BE SAME SIZE.
- SERVICE CLAMPS SHALL BE DOUBLE STRAP FOR ALL SERVICE TAP SIZES, EXCEPT WHERE SIZE OF TAP EXCEEDS MANUFACTURER'S RECOMMENDED LIMIT FOR SIZE OF MAIN.
- TAPS SHALL BE STAGGERED AND PLACED A MINIMUM OF 12" APART FOR DUCTILE IRON PIPE. TAPS SHALL BE STAGGERED AND PLACED A MINIMUM OF 18" APART FOR C900. NO TAPS SHALL BE CLOSER THAN 2 FEET FROM THE ENDS OF PIPE.
- ALL JOINT FITTINGS SHALL BE OF BRASS COMPRESSION TYPE.

WATER SERVICE CONNECTION

N.T.S.

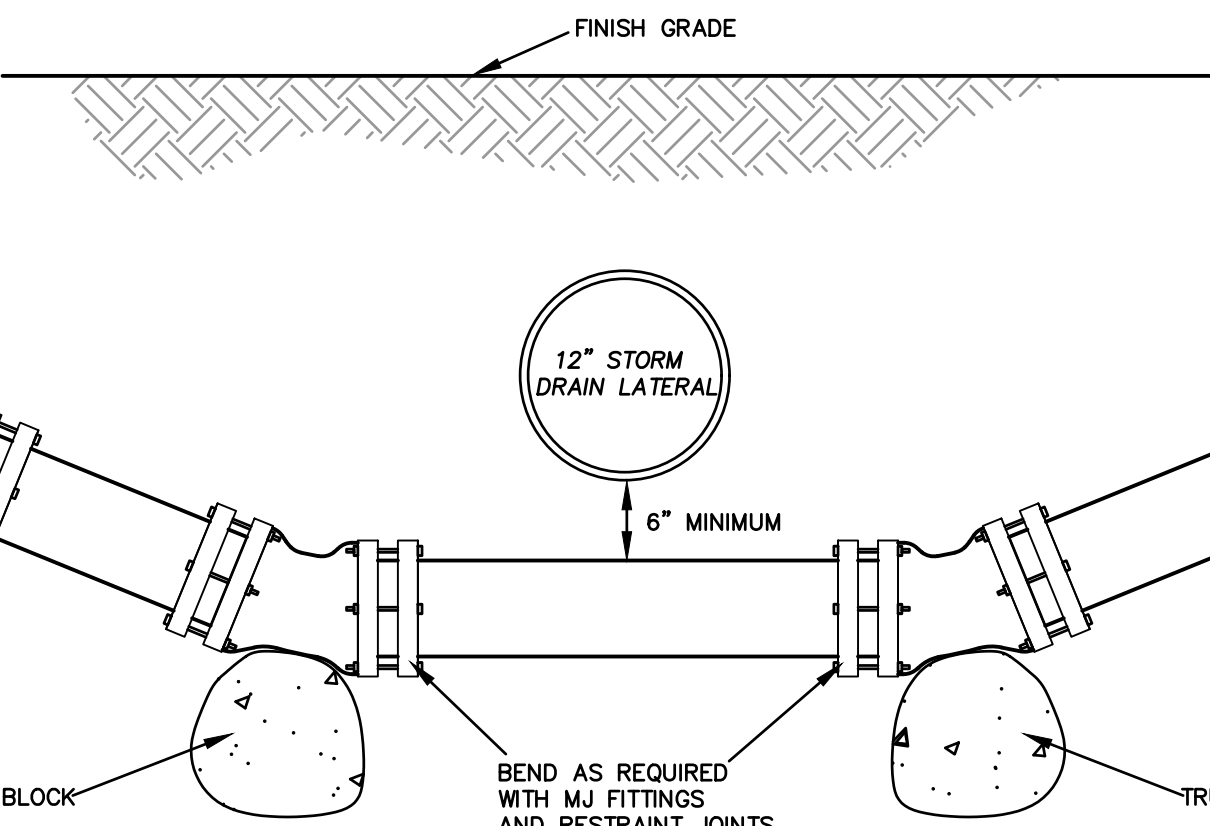


NOTES:

- CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 337.10 OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, UNLESS OTHERWISE SPECIFIED.
- VALVE COLLAR SHALL BE SET 1/4" TO 1/2" BELOW FINISHED CONCRETE OR BITUMINOUS SURFACE. VALVE COLLARS IN ALL OTHER AREAS SHALL BE SET FLUSH WITH FINISHED GRADE, UNLESS OTHERWISE SPECIFIED.
- CONCRETE COLLAR REQUIRED WHEN VALVE IS NOT LOCATED IN CONCRETE OR BITUMINOUS SURFACE.

VALVE AND BOX

N.T.S.



FIRE HYDRANT ASSEMBLY

N.T.S.

BENDS REQUIRED ONLY IF NEEDED FOR MINIMUM CLEARANCE

SPECIAL CROSSING NOTES:

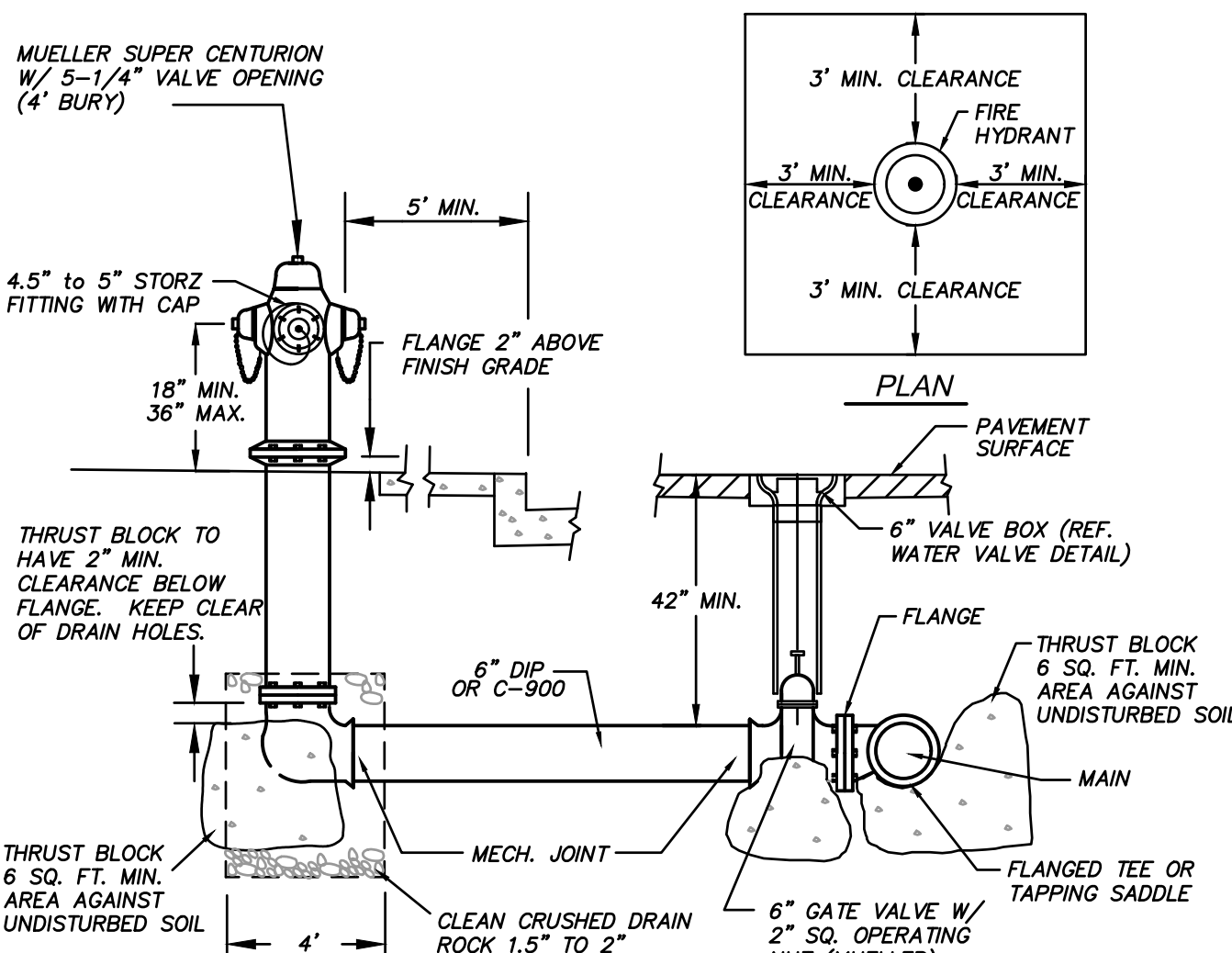
- SPECIAL CONSTRUCTION FOR STORM DRAIN LATERAL CROSSING WATER MAIN SHALL BE PER NAC 445A.67165 SEPARATION OF LINES - SEWER MAIN CROSSING WATER MAIN AND NDEP BUREAU OF SAFE DRINKING WATER PUBLICATION "GUIDANCE FOR AREAS REQUIRING MITIGATION FOR WATER AND SEWER SEPARATION" EDITION 1.0, UPDATED JUNE 2018, BULLETIN 3.0 VERTICAL CROSSING CONFLICT - WATER AND SEWER MITIGATION IN AREA OF SPECIAL CONSTRUCTION PAGE 9 OF 15.
- THE PIPE JOINTS FOR WATER AND STORM DRAIN SHALL BE EQUAL DISTANCE FROM THE POINT OF CROSSING.
- THE WATER PIPE AND STORM DRAIN PIPE SHALL BE A MINIMUM OF 6" APART MEASURED FROM THE OUTSIDE OF THE PIPES.
- THE STORM DRAIN SHALL HAVE WATER TIGHT JOINS MEETING D3212 AS SPECIFIED FOR THIS PROJECT.
- THE WATER LINE SHALL HAVE RESTRAINT JOINTS ON BOTH SIDES OF THE CROSSING AND ON ANY BENDS REQUIRED FOR THE CROSSING.

SPECIAL CROSGING

N.T.S.

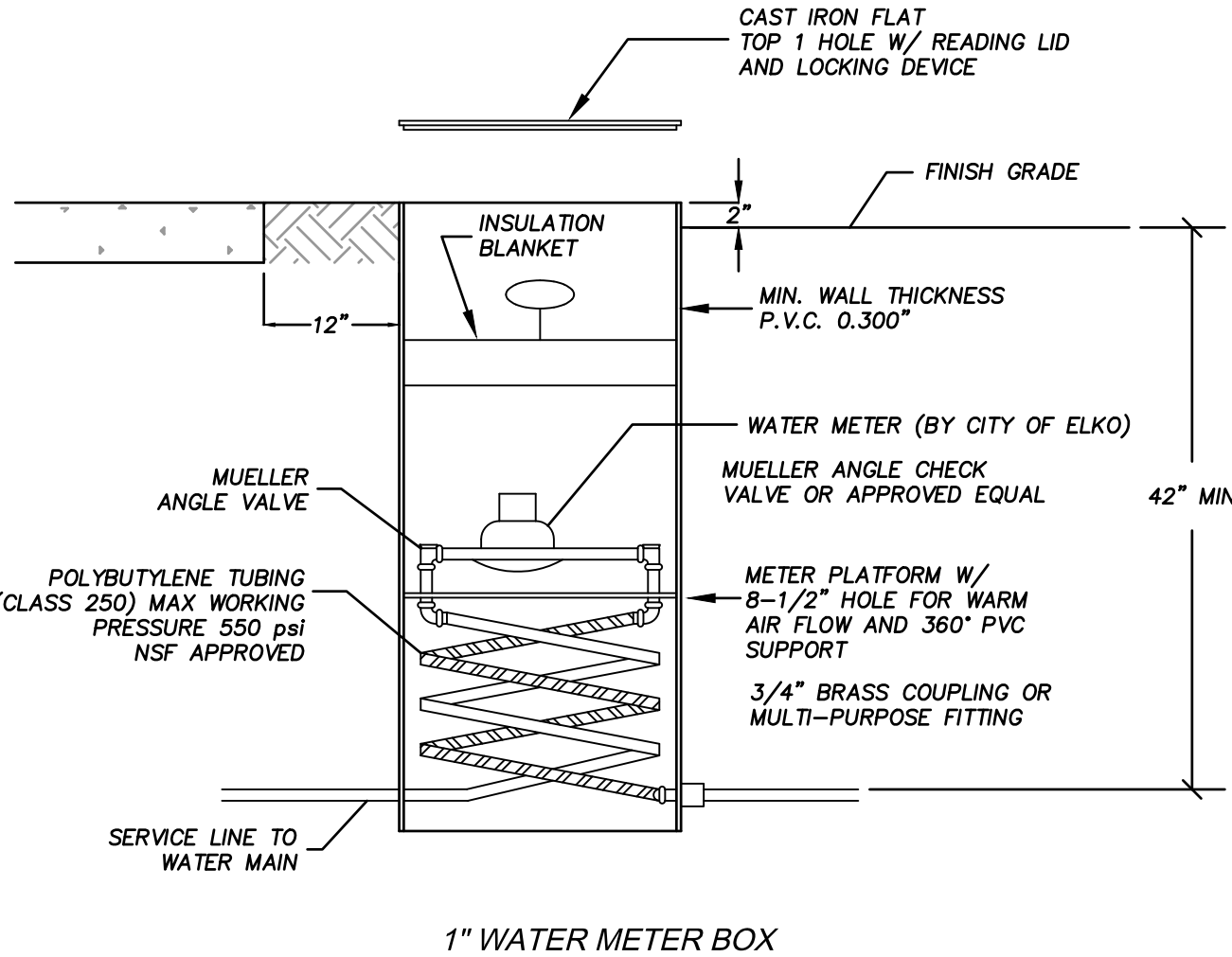
TRENCH DETAIL

N.T.S. FOR WATER, SEWER AND STORM DRAIN



NOTES:

- HYDRANTS SHALL BE ENAMELED RED.
- ALL HYDRANTS SHALL HAVE (2) 2.5" PUMPER OUTLETS (MALE THREAD WITH CAP & CHAIN) AND (1) 4.5" STEAMER PUMPER OUTLET WITH 4.5" - 5" STORZ MALE CONNECT WITH CAP & CHAIN. ALL THREADS SHALL BE SPECIFIED FOR AMERICAN NATIONAL HOSE COUPLING.
- OPERATING NUT SHALL BE 1.5" PENTAGON.
- INSPECTION BY A CITY OF ELKO FIRE OR PUBLIC WORKS REPRESENTATIVE IS REQUIRED PRIOR TO BACKFILLING.
- FOR FINAL ACCEPTANCE, A FLOW, FLUSH, & HYDROSTATIC TEST SHALL BE WITNESSED BY CITY OF ELKO FIRE DEPT./UTILITY DIRECTOR OR PUBLIC WORKS REPRESENTATIVE, PER FORM 13-97, "MATERIALS & TEST CERTIFICATE FOR UNDERGROUND PIPING".
- ALL HYDRANT SHALL INCLUDE APPROVED TRAFFIC PROTECTION, 3' MINIMUM CLEARANCES, AND POSITIVE DRAINAGE AWAY FROM THE HYDRANT.

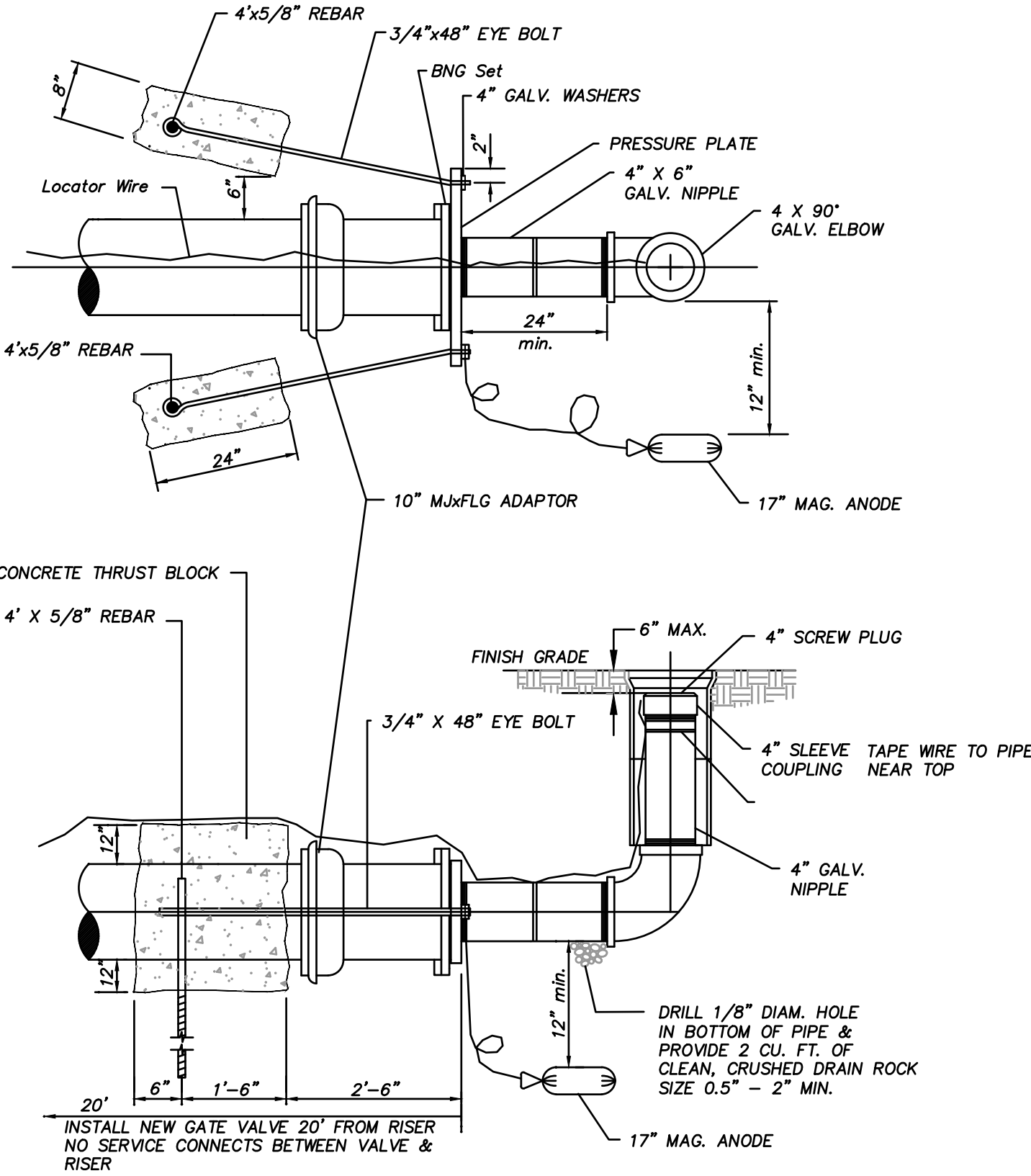


NOTES:

- 4" WATER METER BOX SHALL BE MUELLER / McCULLOUGH THERMA-COIL METER BOX.
- NO MORE THAN ONE EXTENSION ALLOWED.
- LOCATE WATER METER 1 FT. BEHIND BACK OF SIDEWALK.

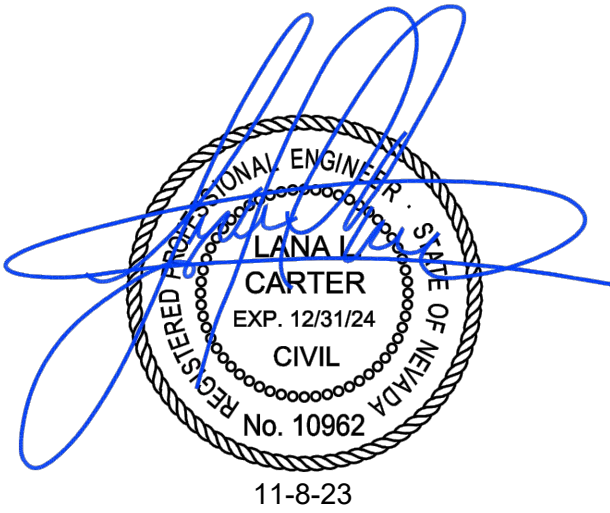
WATER METER

N.T.S.



TEMPORARY FLUSH ASSEMBLY

N.T.S.



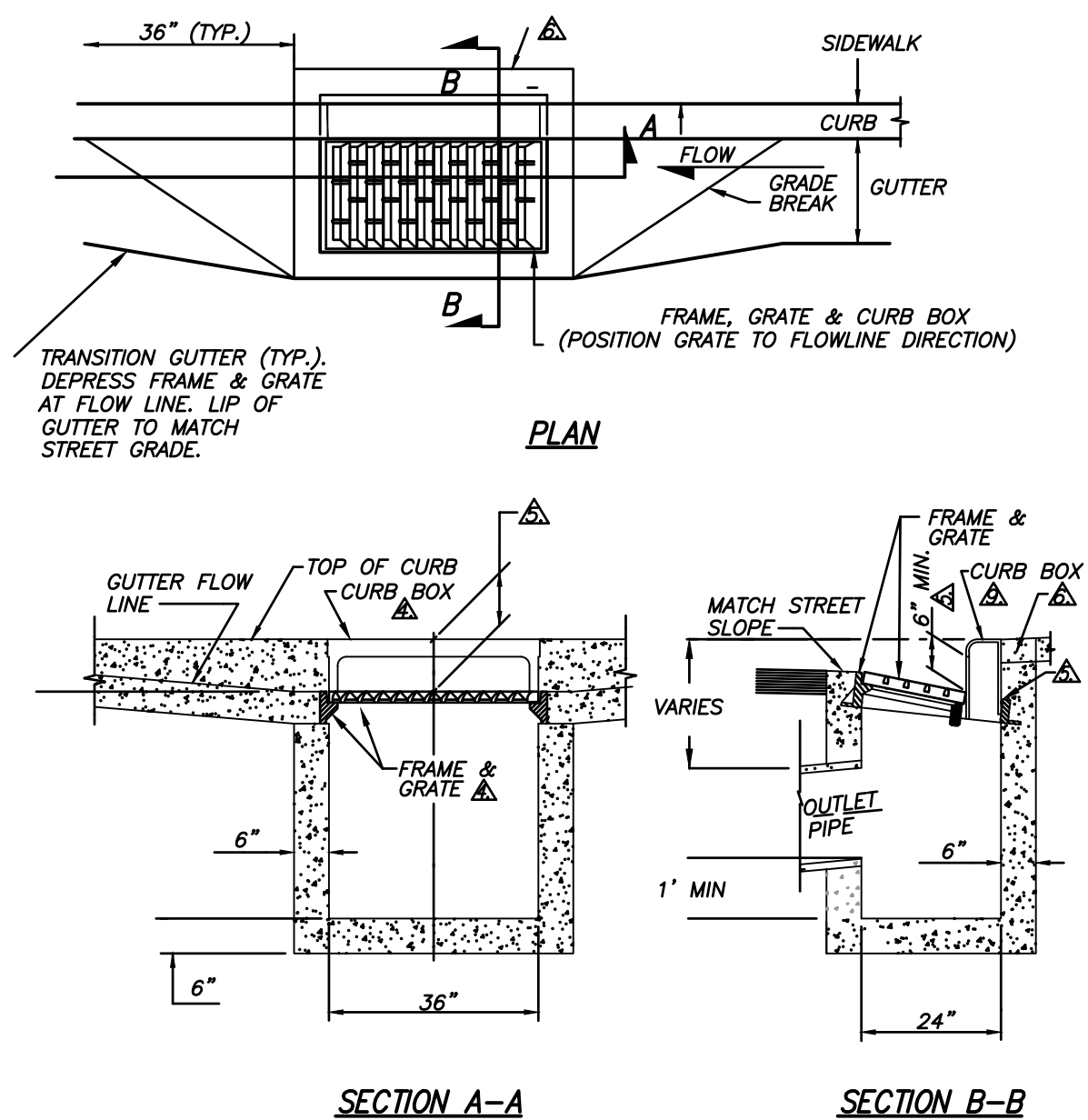
Carter Engineering, LLC
Civil Engineering
P. O. Box 794
Elko, Nevada 89803
775-397-2531

BERGERON VILLAGE
PHASE 1
WATER DETAILS
ELKO, NEVADA

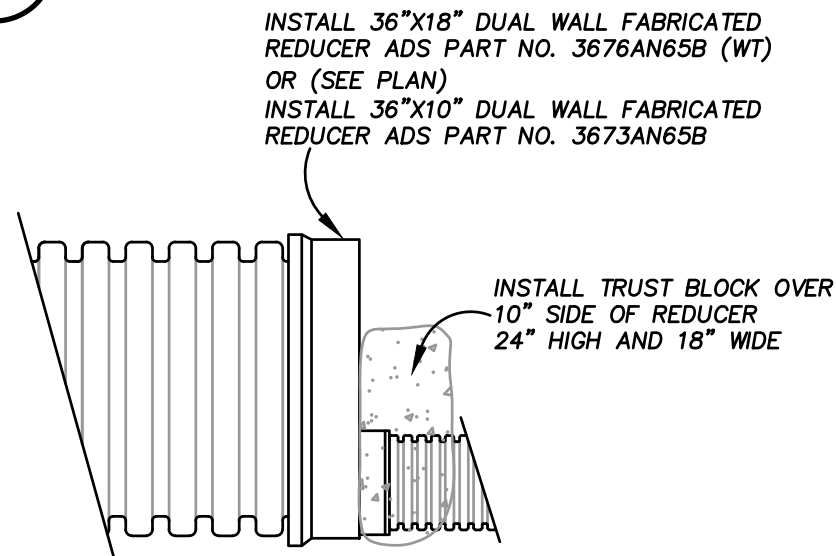
DESIGN BY:	LLC	CHECKED BY:	LLC
DATE:	11-8-23	JOB NO:	17-2020
DWG NO:	2022-18		

SCALE	
HORIZ:	N/A
VERT:	N/A

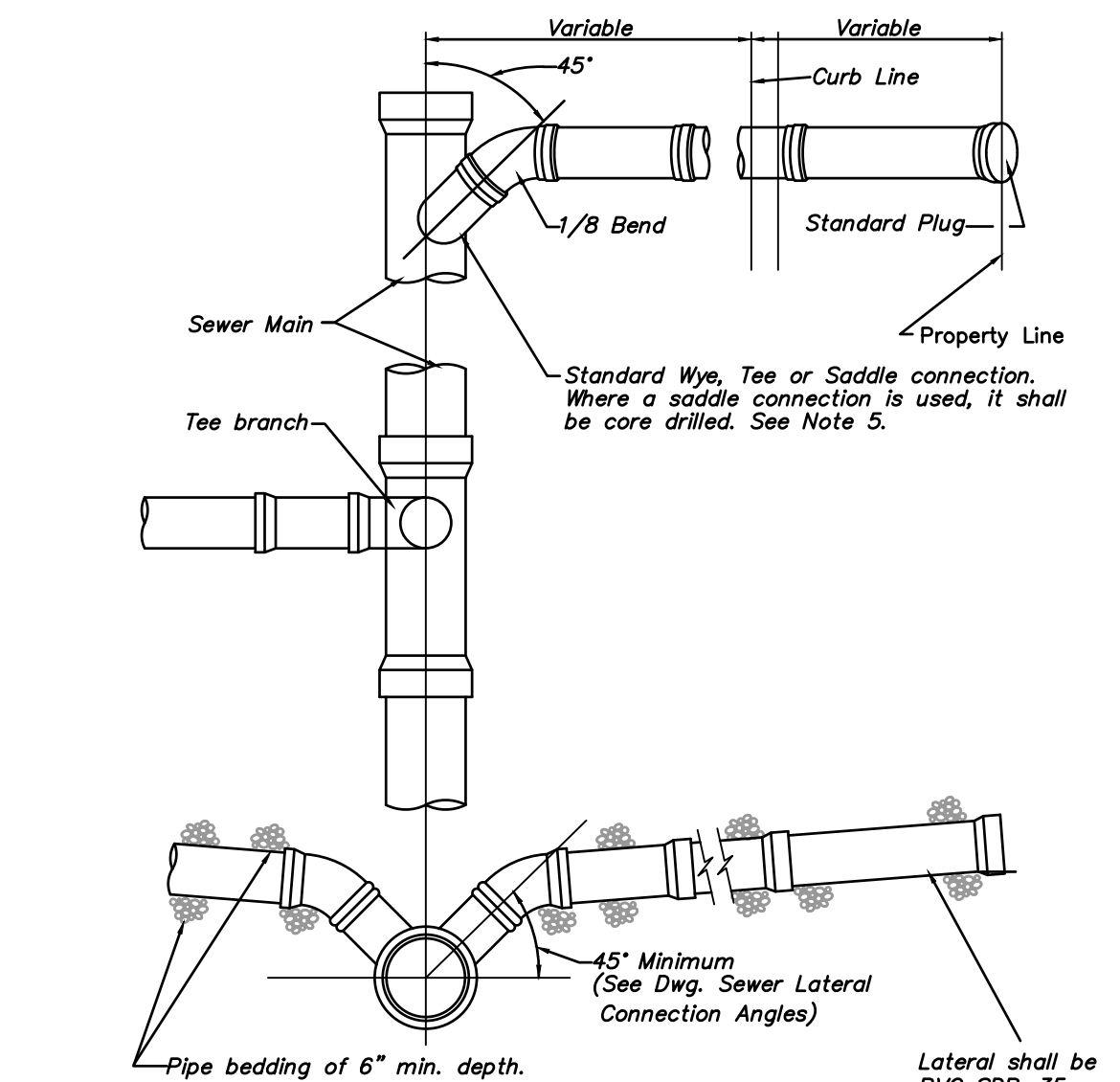
SHEET
C15
OF 16



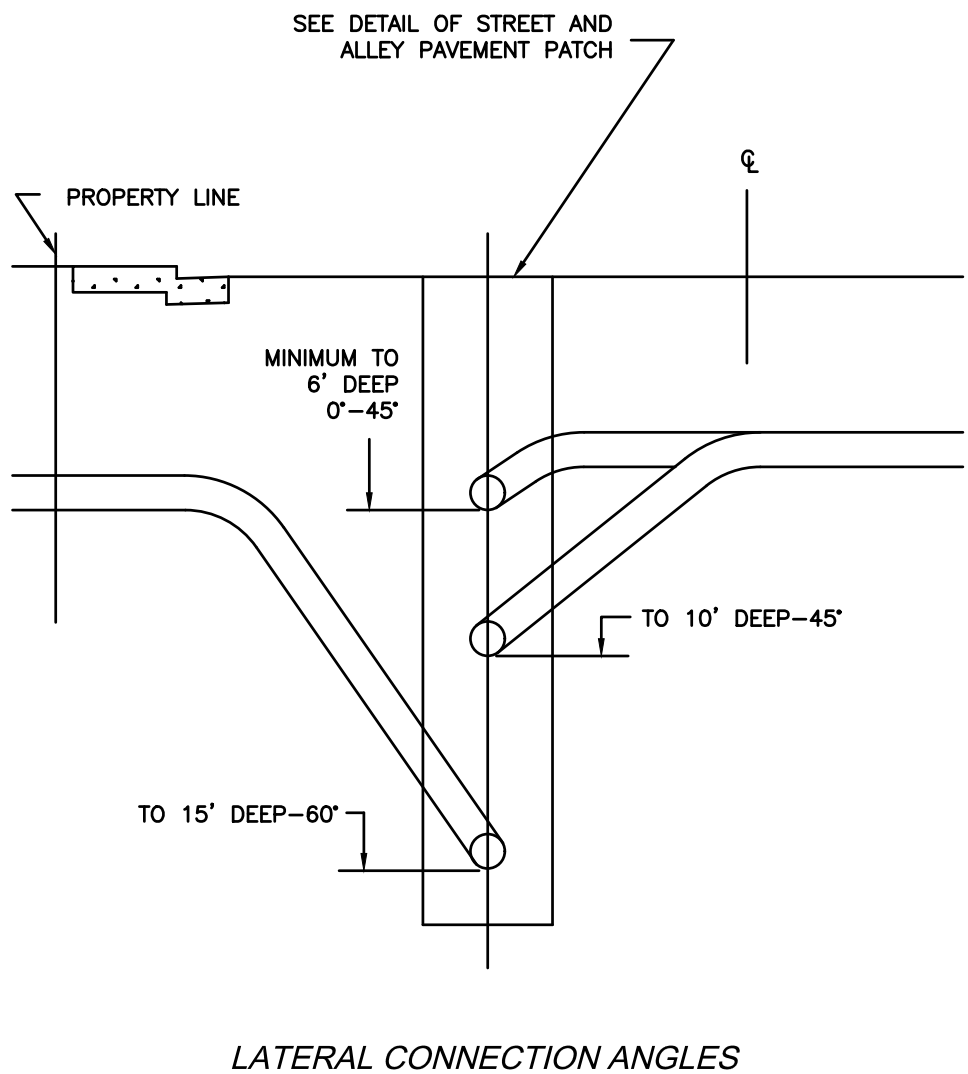
TYPE 4-R CURB BASIN
N.T.S.



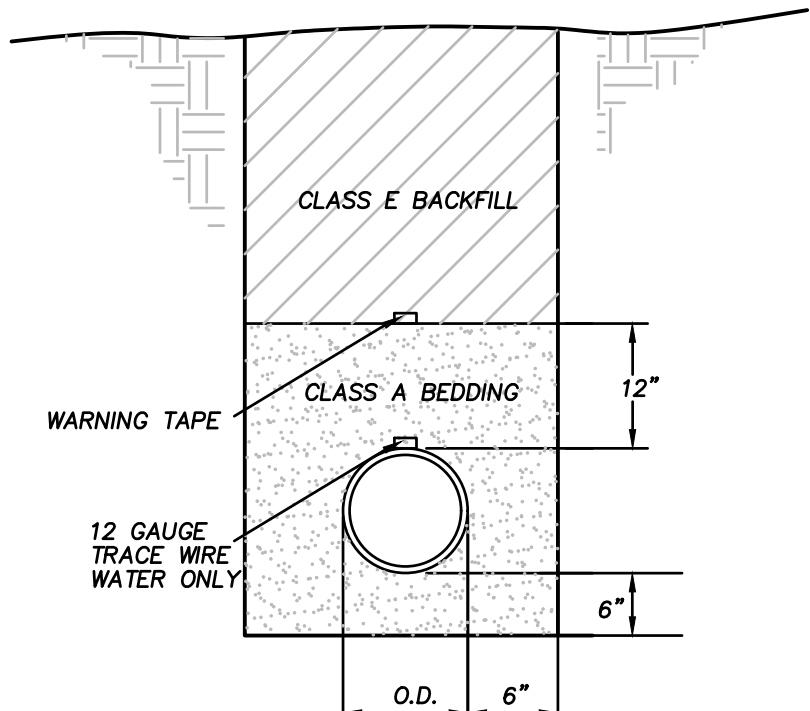
STORM DRAIN REDUCER
N.T.S.



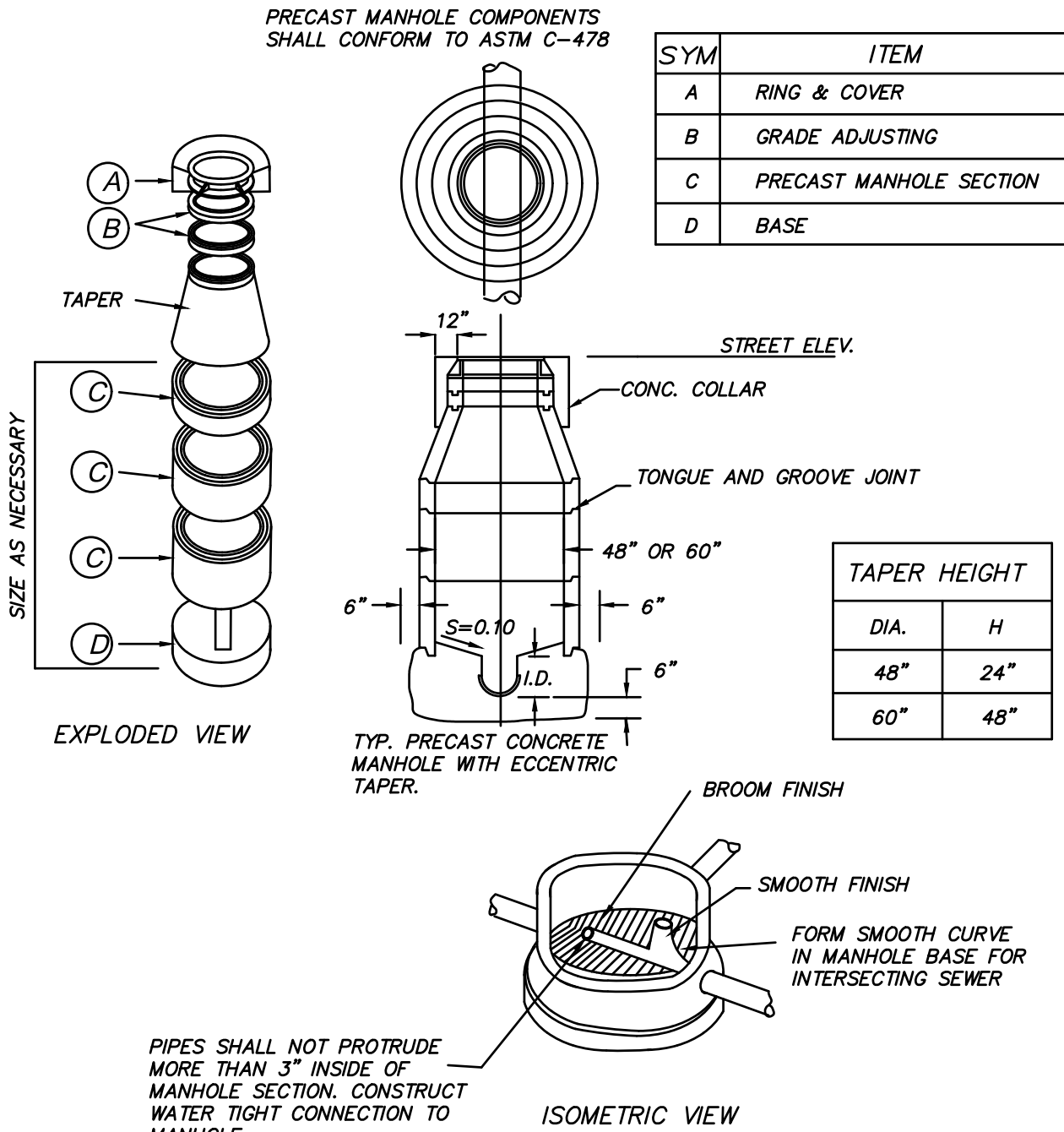
SEWER LATERAL CONNECTION
N.T.S.



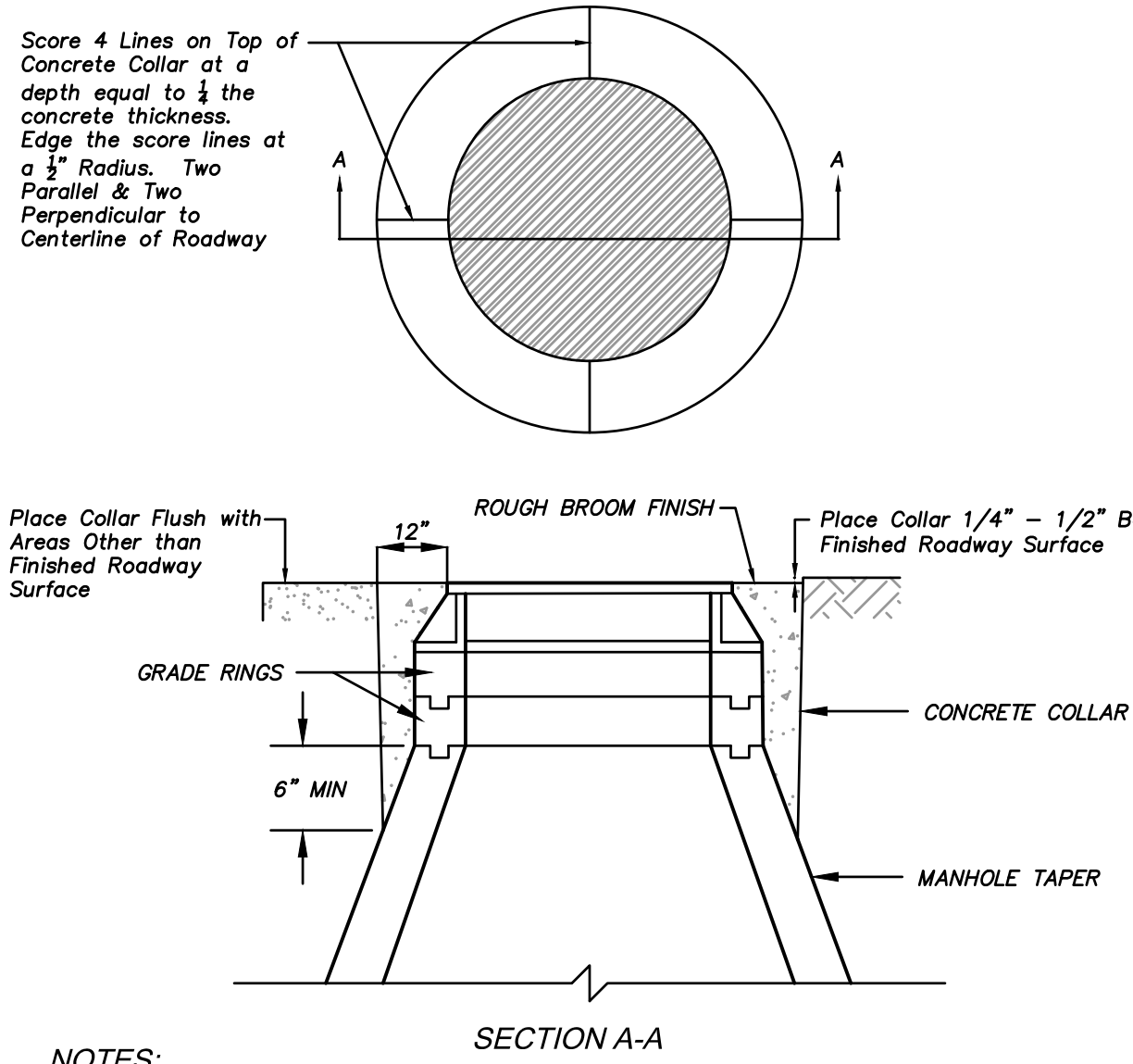
LATERAL CONNECTION ANGLES



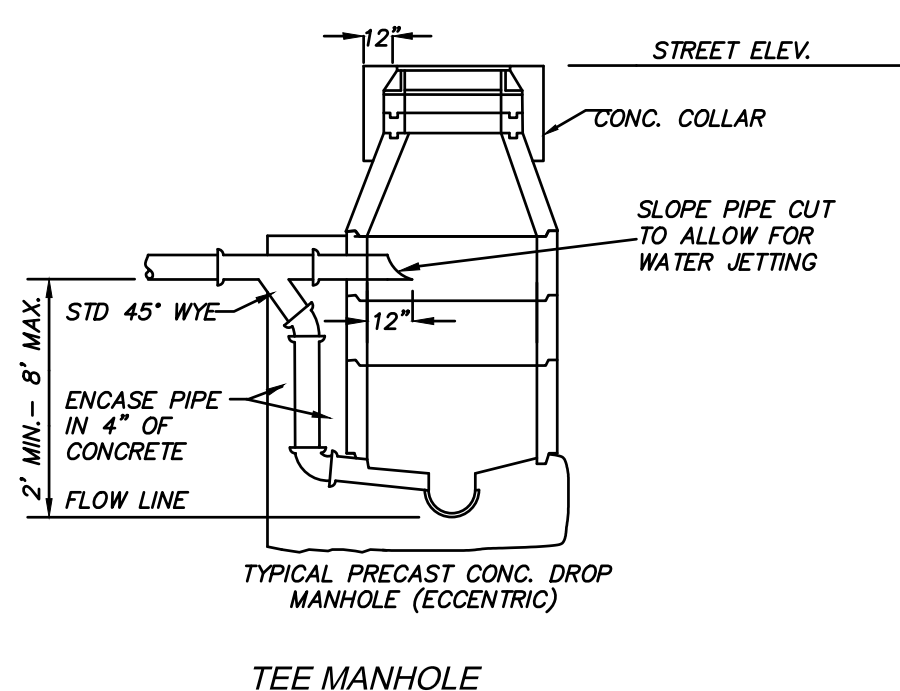
TRENCH DETAIL
N.T.S. FOR WATER, SEWER AND STORM DRAIN



TYPE 1 MANHOLE
N.T.S. FOR SANITARY SEWER AND STORM DRAIN



TYPE 1 MANHOLE
N.T.S. FOR SANITARY SEWER AND STORM DRAIN



TYPE 3 MANHOLE
N.T.S. FOR SANITARY SEWER SSMH #6 ONLY

MANHOLES - GENERAL NOTES:

1. ALL MANHOLES SHALL MEET THE REQUIREMENTS OF SECTION 204 OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
2. MANHOLE COVERS SHALL BE IDENTIFIED AS STORM DRAIN, WATER OR SEWER CLEARLY DISPLAYED ON THE COVER.
3. ALL TRENCHES AND EXCAVATIONS SHALL CONFORM WITH THE LATEST EDITION OF THE O.S.H.A. REQUIREMENTS.
4. PRECAST MANHOLE SECTIONS, OTHER THAN GRADE RINGS, SHALL BE JOINED WITH FLEXIBLE PLASTIC GASKET MATERIAL SUCH AS "RAM-NEK" OR EQUAL AS PER MANUFACTURER'S RECOMMENDATIONS.
5. TYPE & SIZE OF MANHOLE TO BE CONSTRUCTED IN A PARTICULAR LOCATION SHALL BE DETERMINED BY THE PIPE SIZE, ALIGNMENT AND GRADE AS FOLLOWS:
 - TYPE 1A & 1B
 - 48 inch SIZE
 - A. ALL CASES FOR PIPE 18 inch AND SMALLER.
 - B. 24 inch AND SMALLER PIPE ON TANGENT LINE & GRADE.
 - 60 inch SIZE
 - A. 27 inch THROUGH 36 inch PIPE ON TANGENT LINE AND GRADE.
 - B. 21 inch THROUGH 27 inch PIPE AT ANGLE POINTS AND CHANGES IN GRADE OR PIPE SIZE.
 - 6. EXCAVATABLE SLURRY BACKFILL MAY BE USED AS STRUCTURAL BACKFILL FOR MANHOLES AND MUST MEET THE REQUIREMENTS OF SECTIONS 305.16 & 337.08 OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
 - 7. THE TOTAL HEIGHT OF MANHOLE GRADE RINGS SHALL NOT EXCEED 12 INCHES.
 - 8. MANHOLE ACCESS DIAMETER SHALL BE 24 inch MINIMUM.



Carter Engineering, LLC
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Elko, Nevada 89803
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BERGERON VILLAGE
PHASE 1
SEWER & STORM DRAIN DETAILS
ELKO, NEVADA

DESIGN BY: LLC
DRAWN BY: LLC
CHECKED BY: LLC
DATE: 11-8-23
JOB NO: 17-2020
DWG NO: 2022-18

SCALE
HORIZ: N/A
VERT: N/A

SHEET
C16
OF 16

REV	DATE	DESCRIPTION
1	12-8-23	12-23-23 CITY OF ELKO RED LINE PLANS
2	12-26-22	CHANGE SD SIZE IN JENNINGS WAY FROM 36" TO 24"