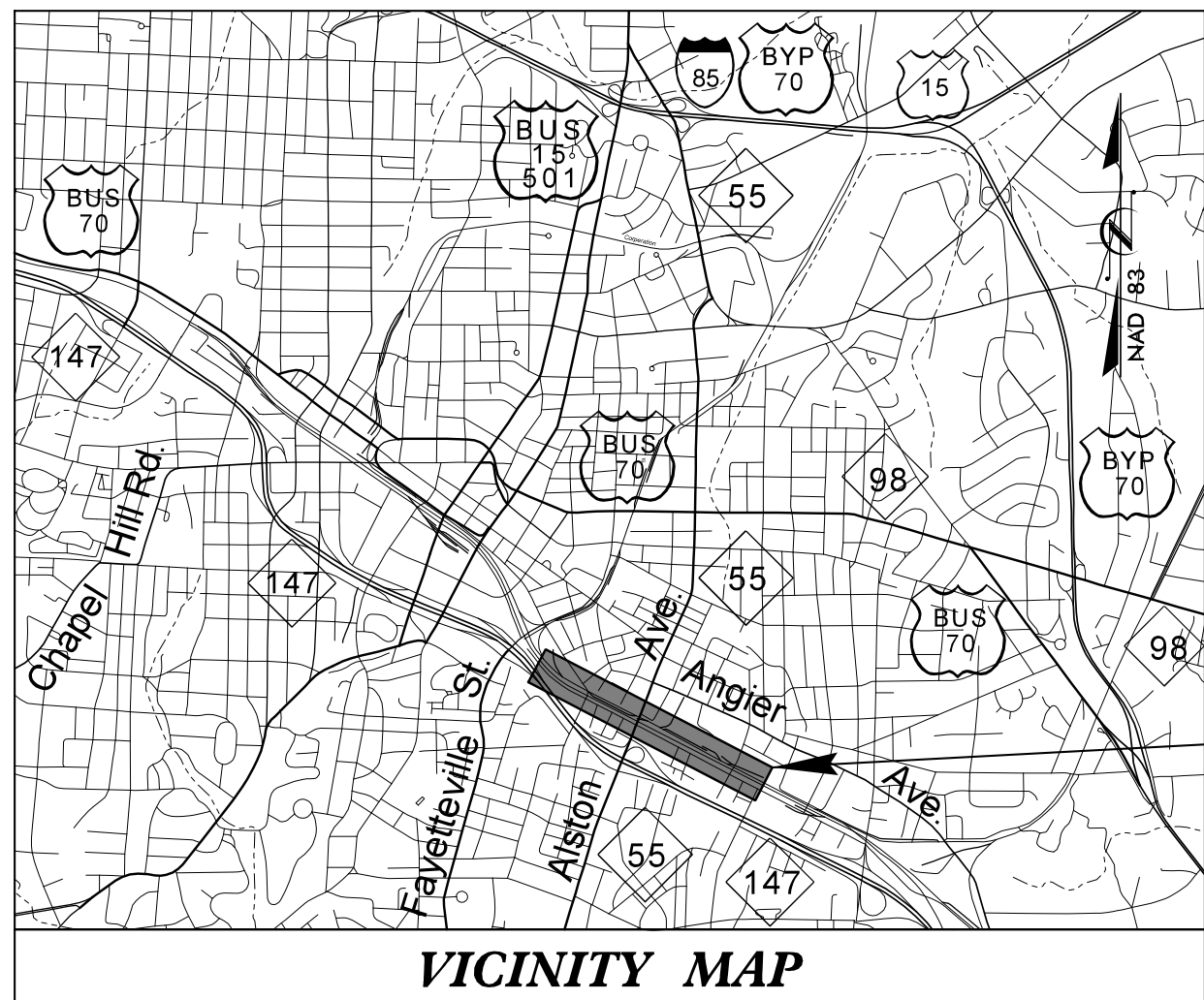


**This electronic collection of documents is provided  
for the convenience of the user  
and is Not a Certified Document –**

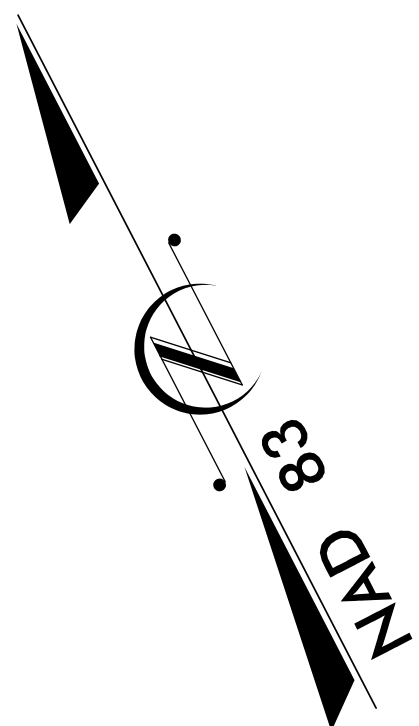
**The documents contained herein were originally issued  
and sealed by the individuals whose names and license  
numbers appear on each page, on the dates appearing  
with their signature on that page.**

**This file or an individual page  
shall not be considered a certified document.**

**TIP PROJECT: U-3308**



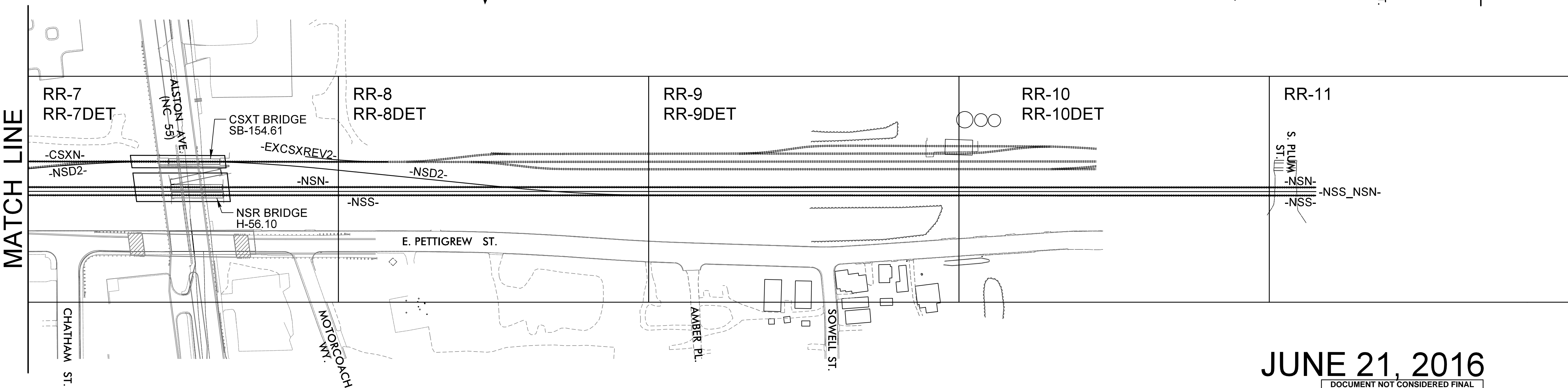
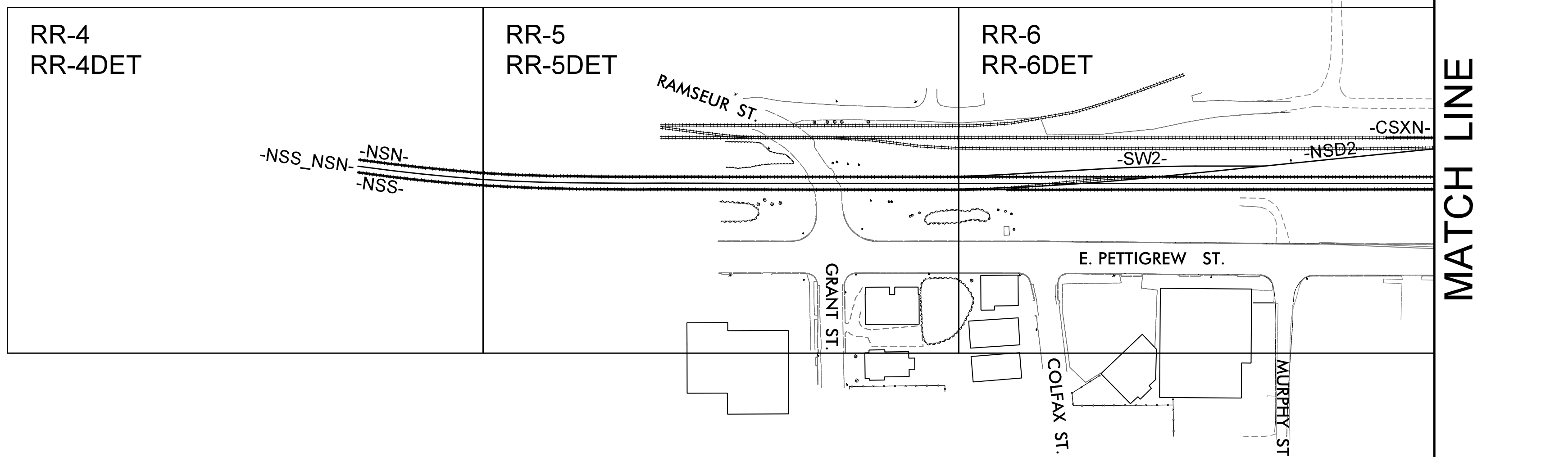
PROJECT LOCATION



# DURHAM COUNTY

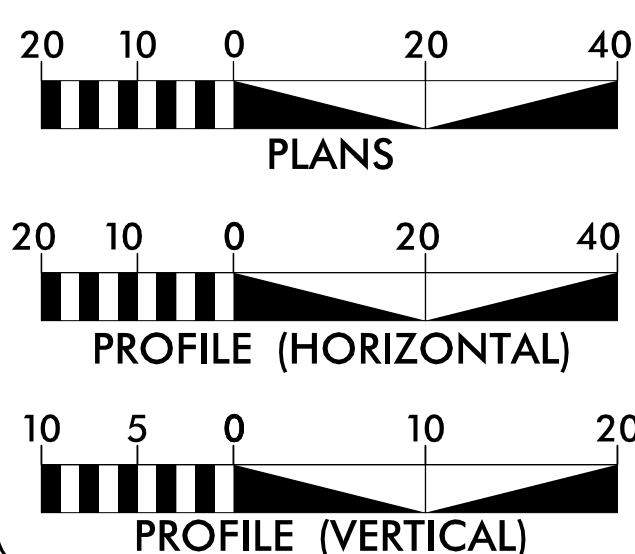
**TYPE OF WORK: Grading, Track, Drainage**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-3308	RR-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34915.1.1	STP-55 (20)	PE	



**CONTRACT:**

**GRAPHIC SCALES**



**RAILROAD GRADING AND TRACK PLANS FOR PROPOSED DETOUR AND FINAL ALIGNMENTS TO ENABLE REPLACEMENT OF NORFOLK SOUTHERN RAILWAY BRIDGE AT MP H-56.10 AND CSX TRANSPORTATION BRIDGE AT MP SB-154.61 FOR WIDENING OF ALSTON AVENUE (NC HWY 55)**

Prepared In the Office of:  
**STV Engineers, Inc.**  
 900 W Trade Street, Suite 715  
 Charlotte, NC 28202  
 NC License Number F-0991

**KEVIN G. BAILEY, P.E.**  
 PROJECT ENGINEER

**MARK A. JULIS, E.I.T.**  
 PROJECT DESIGN ENGINEER

**HYDRAULICS ENGINEER**



DocuSigned by:  
 Steven Christopher Noriega  
 SIGNATURE:

P.E.  
 4/20/2016

**TRACK DESIGN ENGINEER**



DocuSigned by:  
 Kevin G. Bailey  
 SIGNATURE:

P.E.  
 4/20/2016

**JUNE 21, 2016**

DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED



INDEX OF SHEETS

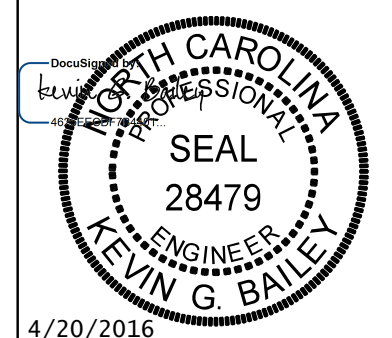
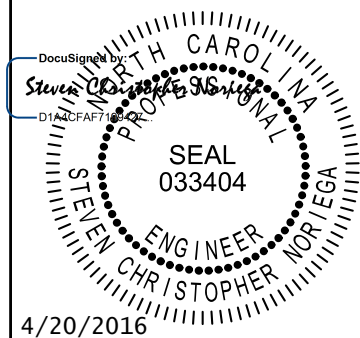
SHEET NO.	DESCRIPTION
RR-1	TITLE SHEET
RR-1A	GENERAL NOTES, INDEX OF SHEETS, TRACKWORK QUANTITIES, AND CONSTRUCTION SEQUENCE
RR-2DET	CONSTRUCTION SEQUENCE
RR-2	TYPICAL SECTIONS - DETOUR
RR-3 THRU RR-3B	TYPICAL SECTIONS - FINAL
RR-3C	ROUTE GEOMETRY - DETOUR AND FINAL
RR-4DET THRU RR-10DET	DRAINAGE SUMMARY
RR-4 THRU RR-11	TRACK PLANS - DETOUR
RR-12 THRU RR-26	TRACK PLANS - FINAL
RR-27 THRU RR-30	TRACK PROFILES - DETOUR AND FINAL
X-RR	JUNCTION BOX DETAILS
X-RRSUM	CROSS SECTIONS COVER SHEET
X-RR1DET THRU X-RR12DET	CROSS SECTION SUMMARY OF QUANTITIES
X-RR1 THRU X-RR12	CROSS SECTIONS - DETOUR
	CROSS SECTIONS - FINAL

GENERAL NOTES

- All construction methods and materials shall be in conformance with the following standards unless otherwise noted:
  - Construction within NCR Corridor: Norfolk Southern Standard Specifications for Materials and Construction, Issued April 2014
  - Construction within CSXT Right of Way: CSXT Specifications, Issued January 30, 2009

Copies of applicable referenced specifications must be obtained by the Contractor and maintained on job site at all times.
- Temporary drainage during construction shall be provided by the Contractor to relieve areas that may cause damage to roadways as directed by the local jurisdiction.
- Lineal foot measurements shown on the plans are horizontal measurements, not slope measurements.
- No geotechnical or geological information is shown on these plans.
- The utility locations shown on these plans are approximate. This plan does not guarantee the existence, non-existence, size, type, location alignment or depth of any or all underground utilities or other facilities. Utility owners shall be notified 72 hours in advance of any excavation in the proximity of their utilities. The Contractor shall be responsible for repairing at his expense any existing utilities damaged during construction.
- When materials which are unsuitable for subgrade, or other purposes, are found within the limits of construction, the Contractor shall be required to excavate such material below the grade shown on the plans, and the areas so excavated shall be backfilled with approved suitable materials. The extent of undercutting and backfilling shall be determined by the Project Engineer.
- Clearing and grubbing operations and disposal of all debris therefrom shall be performed by the Contractor.
- All waste material resulting from the project shall be removed from the site by the Contractor and disposed of in a legal disposal site approved by the Railroad.
- All excavation shall be unclassified. No separate payment will be made for rock excavation.
- The Contractor shall maintain all erosion control devices as per the approved erosion control plan.
- All manholes, catch basins, utility valves and meter pits shall be adjusted or rebuilt to grade as required.
- Subgrade soil for all concrete structures, regardless of the type or location, shall be firm, dense and thoroughly compacted and consolidated; shall be free from muck and mud; and shall be sufficiently stable to remain firm and intact under the feet of the workmen or machinery engaged in subgrade surfacing, laying reinforcing steel, and depositing concrete thereon. In all cases where subsoil is mucky or works into mud or muck during such operation, a seal course of either concrete or rock shall be placed below subgrade to provide a firm base for working and for placing the floor slab.
- The Contractor is responsible for keeping all public and private roadways adjacent to the project free of mud, dirt and debris from the construction.
- The Contractor is responsible for the preservation of all survey control monuments.
- All disturbed/graded areas that will be seeded shall receive surface roughening. Payment for this work shall be included in the unit bid price for Seeding and Mulching.
- Construction staging areas and vehicle maintenance areas shall be constructed by the Contractor in a manner to minimize the runoff of pollutants. No measurement or payment will be made for this work.
- All pipe and culvert structures shall be designed to carry Cooper's E-80 loading with diesel impact. RCP under CSXT owned track shall be ASTM C-76, Class V, with "O" ring joints. Corrugated metal pipe under CSXT owned track shall be steel, fiber bonded, and asphalt coated with minimum 24" wide connecting bands. The minimum recommended diameter of pipe under CSXT owned tracks is 24".
- The contractor shall only remove out of service track at locations detailed in the plans. Any active tracks that require removal shall be removed by Railroad forces. Contractor payment for track removal shall only include the actual number of track feet which is acceptably removed by the contractor, measured along the center line of the track prior to the track being removed. Ownership of salvaged material shall be in accordance with the project special provisions.

NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

PROJECT REFERENCE NO. U-3308	SHEET NO. RR-1A
RW SHEET NO.	
RAIL DESIGN ENGINEER 	HYDRAULICS ENGINEER 
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

GRADING AND TRACKWORK QUANTITIES					
Trackwork Item / Description	Performed By	Quantity			
		Units	Detour	Final	Total
Retire and Remove Exist. No. 10 Crossover	NS Forces	LS	1	-	1
Cut and Throw Exist. Live Track		TF	815	983	1,798
Line and Resurface Exist. Track		TF	143	1,394	1,537
Shift/Realign Exist. Track		TF	-	227	227
Construct 136RE Track		TF	1,088	2,433	3,521
Construct 136RE No. 10 Turnout		EA	1	-	1
Remove Exist. 136RE No. 10 Turnout		EA	-	1	1
Railroad Track to Be Removed		TF	2,433	376	2,809
Cut and Throw Exist. Live Track		TF	146	646	792
Construct 136RE Track		TF	-	48	48
Construct Bumping Post	CSXT Forces	EA	1	-	1
Railroad Track to Be Removed		TF	-	146	146
Remove Exist. Bumping Post		EA	-	1	1
Clearing and Grubbing		LS	1	-	1
Unclassified Excavation	Contractor	CY	2,882	5,873	8,755
Ballast		TN	3,500	-	3,500
Sub-Ballast		TN	2,012	2,510	4,522
Railroad Track to Be Removed		TF	1,144	48	1,192
<b>FOR DRAINAGE ITEMS SEE DRAINAGE SUMMARY TABLE ON SHEET RR-3C</b>					

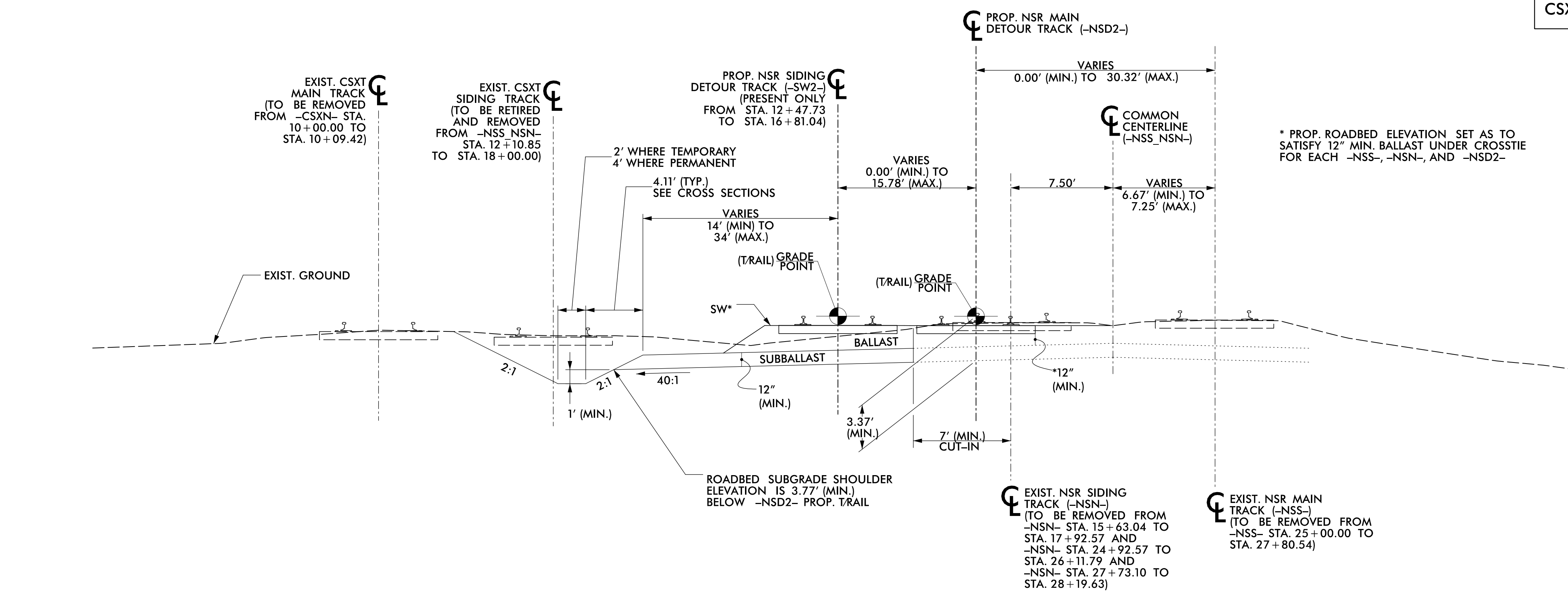
CONSTRUCTION SEQUENCE

- NCDOT Contractor to construct embankment east of Alston Avenue north of the CSXT mainline.
- CSXT Forces shall cut and throw mainline track (-CSXN-) from -CSXN- station 15+47.36 to station 16+93.26, and install bumping post at the end of the CSXT detour track (-EXCSXREV2-). Once this detour track is operational, the CSXT mainline west of -CSXN- station 15+47.36 will be out of service.
- NCDOT Contractor to remove the out of service CSXT mainline between -CSXN- station 10+00.00 and 15+47.36.
- NCDOT Contractor to complete grading and drainage along NSR Detour track including the CSXT bridge with temporary span over existing Alston Avenue.
- NS Forces to construct NSR Detour Track (-NSD2-) from -NSD2- station 14+92.33 to station 24+08.66.
- During an outage, NS forces to remove #10 crossover west of Alston Avenue and replace with track panels for -NSS- and -NSN-. -NSS- and -NSN- shall remain in service after this step.
- NSN- to be placed out of service west of -NSN- station 36+00.00.
- Once -NSN- is placed out of service, NS Forces to cut and throw -NSN- to -SW2- from -NSN- station 12+40.29 to station 13+95.00, and line track along -NSD2- from 12+28.00 to station 13+81.33. NS Forces to construct #10 RHTO along -NSD2- from station 13+81.33 to station 14+92.33. NS Forces to construct -SW2- from station 11+55.00 to station 13+22.75. NS Forces to shift -NSN- track from station 25+87.08 to station 27+34.03 to the -NSD2- alignment.
- NS Forces shall remove out of service -NSN- track from -NSN- station 15+63.04 to station 25+87.08 and from station 27+34.03 to station 28+19.63.
- During an outage, NS Forces shall cut and throw existing main track from -NSS- station 11+90.00 to station 14+18.00, and from -NSS- station 27+41.21 to station 30+26.20. After this cutover is completed the NS detour track and the connection to the siding track will be complete and ready for service.
- After train traffic has been relocated onto -NSD2- the existing -NSS- will be out of service between -NSS- station 14+18.00 and station 27+41.21, and NS Forces shall remove out of service -NSS- from -NSS- station 14+18.00 to station 27+41.21.
- While -NSS- and -NSN- are out of service contractor to complete grading and drainage along mainline and siding including the new NSR bridge.
- Upon completion of grading and drainage work, NS Forces shall construct track along -NSS- from -NSS- station 14+18.00 to station 27+41.21, and -NSN- from -NSN- station 15+63.04 to station 25+87.08.
- During an outage, NS forces shall cut and throw -NSD2- to -NSS- from -NSS- station 11+90.00 to station 14+18.00 and -NSS- Station 27+41.21 and 30+26.20. NS forces to line and surface -NSS- from 30+26.20 to 36+00.00. -NSS- to be in service upon the completion of this work. -NSD2- and SW2- will be out of service after the cut and throws have been completed.
- NS Forces to remove out of service -NSD2- from station 12+28.00 to station 13+81.33 and remove #10 RHTO from station 13+81.33 to station 14+92.33. NS Forces shall cut and throw -SW2- to -NSN- from -NSN- station 12+40.29 to station 15+63.04 and from station 25+87.08 to station 27+34.03. Prior to placing -NSN- back in service NS Forces shall construct track from -NSN- station 27+34.03 to station 28+19.63, and line and surface from -NSN- station 12+00.00 to station 12+40.29 and from -NSN- station 28+19.63 to 36+00.00.
- NSN- can now be placed back in service west of -NSN- station 36+00.00.
- NS Forces shall remove out of service -NSD2- from -NSD2- station 14+92.33 to station 16+04.89 and from station 22+98.79 to station 24+08.66.
- NCDOT Contractor to remove track from station 13+22.12 to station 13+69.69. Upon completion of the final CSXT bridge span over Alston Ave., during an outage CSXT forces shall remove the bumping post on the CSXT (-EXCSXREV2-) and remove track from -EXCSXREV2- station 20+71.96 to station 22+18.20. CSXT to construct track from station 13+22.19 to station 13+69.69. CSXT shall shift the remaining portion of -NSD2- to the -CSXN- alignment from -CSXN- station 10+00.00 to station 16+93.26. After completion of this the CSXT mainline can be placed in service.



8/17/99

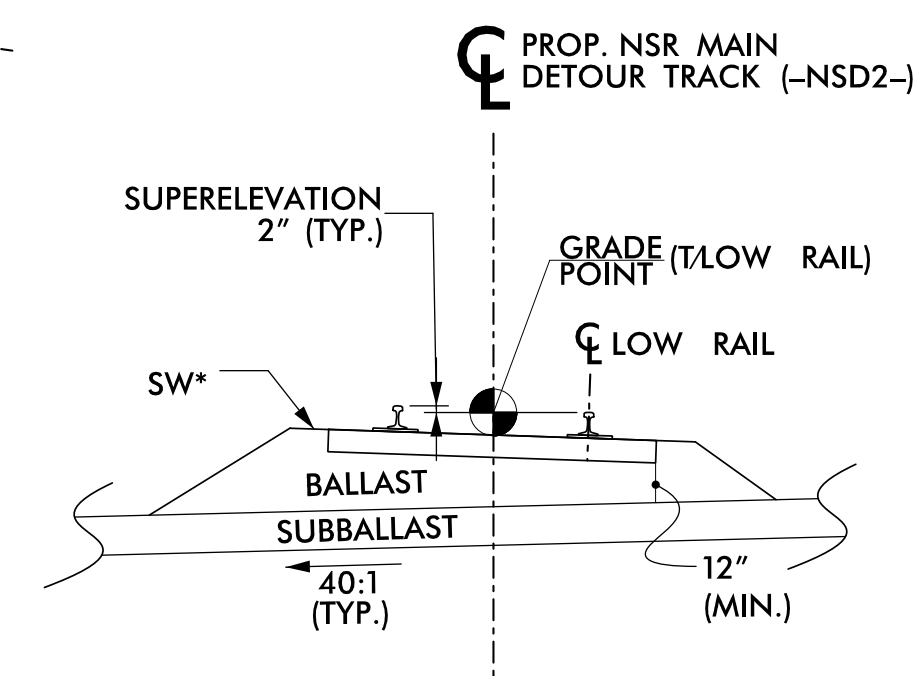
PROJECT REFERENCE NO. U-3308		SHEET NO. RR-2DET	
RW SHEET NO.			
RAIL DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



**SHOULDER WIDTH (SW)**

NS SW (INSIDE OF CURVE)	6"
NS SW (OUTSIDE OF CURVE)	12"
NS SW (TANGENT BOTH SIDES)	6"
CSXT SW	12"

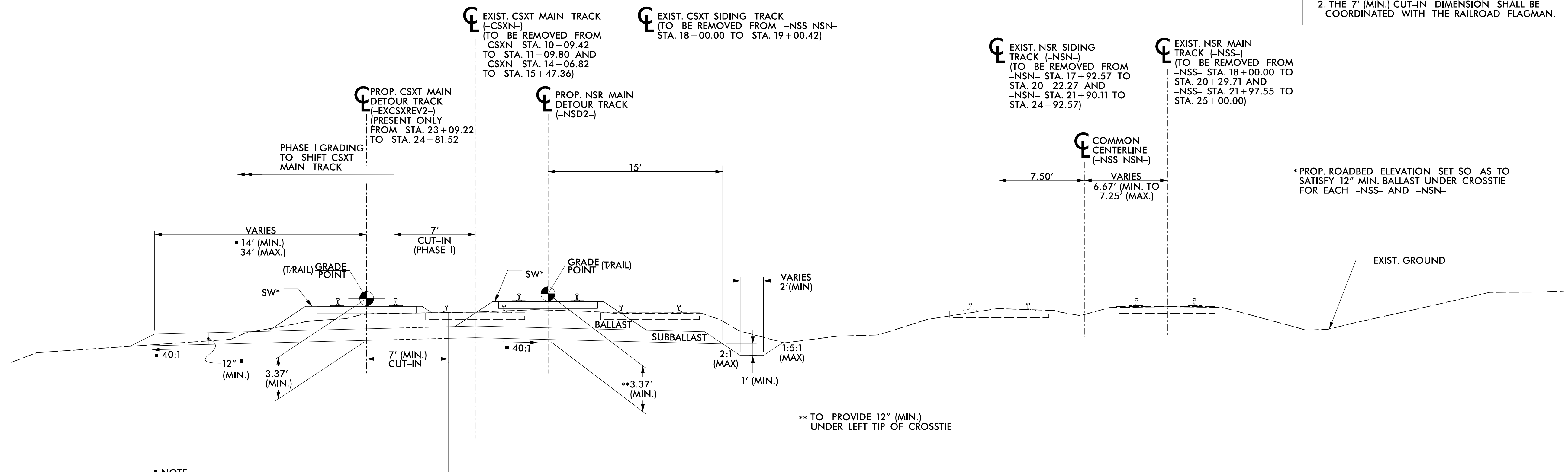
**TYPICAL SECTION RR-1DET**  
 -NSS\_NSN- STA. 11+90.00 TO STA. 18+00.00 (BK)  
 -NSS\_NSN- STA. 25+00.00(AH) TO STA. 30+26.00



**SUPERELEVATED TRACK DETAIL**  
 (SEE TYPICAL SECTIONS FOR ROADBED DETAILS)

**NOTE:**

- ALL PROP. TRACK CONSTRUCTION SHALL EMPLOY 136 RE CONTINUOUSLY WELDED RAIL (CWR)
- THE 7' (MIN.) CUT-IN DIMENSION SHALL BE COORDINATED WITH THE RAILROAD FLAGMAN.



**NOTE:**  
 NSR ROADBED STANDARD USED FOR CONSISTENCY SINCE SATISFIES CSXT ROADBED STANDARDS

**TYPICAL SECTION RR-2DET**  
 STA. 18+00.00(AH) TO BRIDGE ABUTMENT #1  
 BRIDGE ABUTMENT #2 TO STA. 25+00.00(BK)

I:\5\2016\1\FRO\2513251\station\track\NSR\NSR\_A\_u3308\_rdy\_ps\_RR-2A.dgn  
 1/5/2016 10:15:11 AM

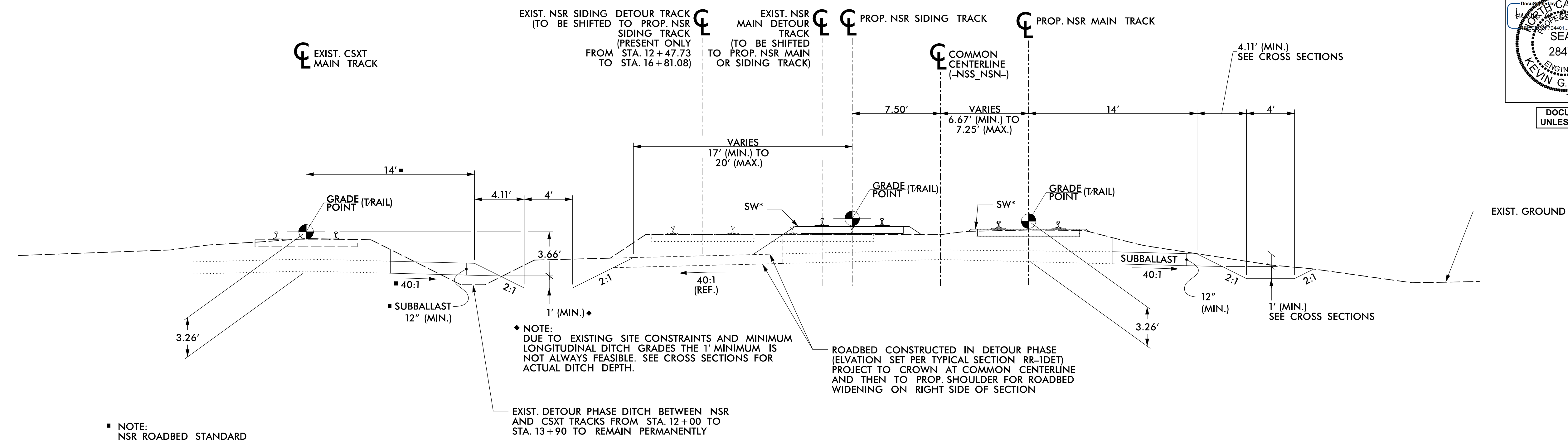


8/17/99

NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

PROJECT REFERENCE NO. U-3308	SHEET NO. RR-2
RW SHEET NO.	
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



NOTE:  
NSR ROADBED STANDARD  
USED FOR CONSISTENCY SINCE  
SATISFIES CSXT ROADBED STANDARDS

NOTE:  
DUE TO EXISTING SITE CONSTRAINTS AND MINIMUM  
LONGITUDINAL DITCH GRADES THE 1' MINIMUM IS  
NOT ALWAYS FEASIBLE. SEE CROSS SECTIONS FOR  
ACTUAL DITCH DEPTH.

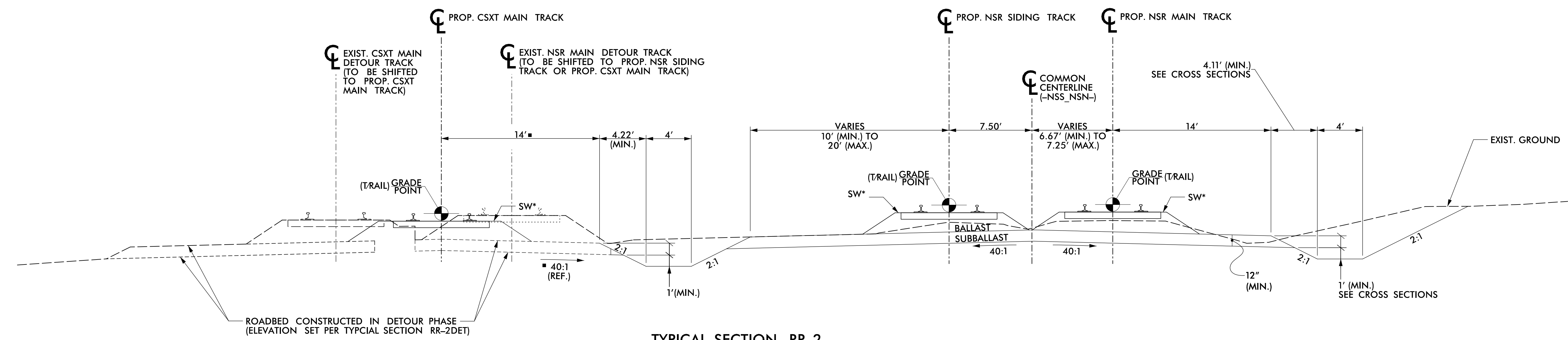
ROADBED CONSTRUCTED IN DETOUR PHASE  
(ELEVATION SET PER TYPICAL SECTION RR-IDET)  
PROJECT TO CROWN AT COMMON CENTERLINE  
AND THEN TO PROP. SHOULDER FOR ROADBED  
WIDENING ON RIGHT SIDE OF SECTION

**TYPICAL SECTION RR-1**  
-NSS\_NSN- STA. 11+90.00 TO STA. 18+00.00 (BK)  
-NSS\_NSN- STA. 25+00.00(AH) TO STA. 30+26.00

SHOULDER WIDTH (SW)

NS SW (INSIDE OF CURVE)	6"
NS SW (OUTSIDE OF CURVE)	12"
NS SW (TANGENT BOTH SIDES)	6"
CSXT SW	12"

NOTE:  
1. ALL PROP. TRACK CONSTRUCTION SHALL EMPLOY  
136 RE CONTINUOUSLY WELDED RAIL (CWR)

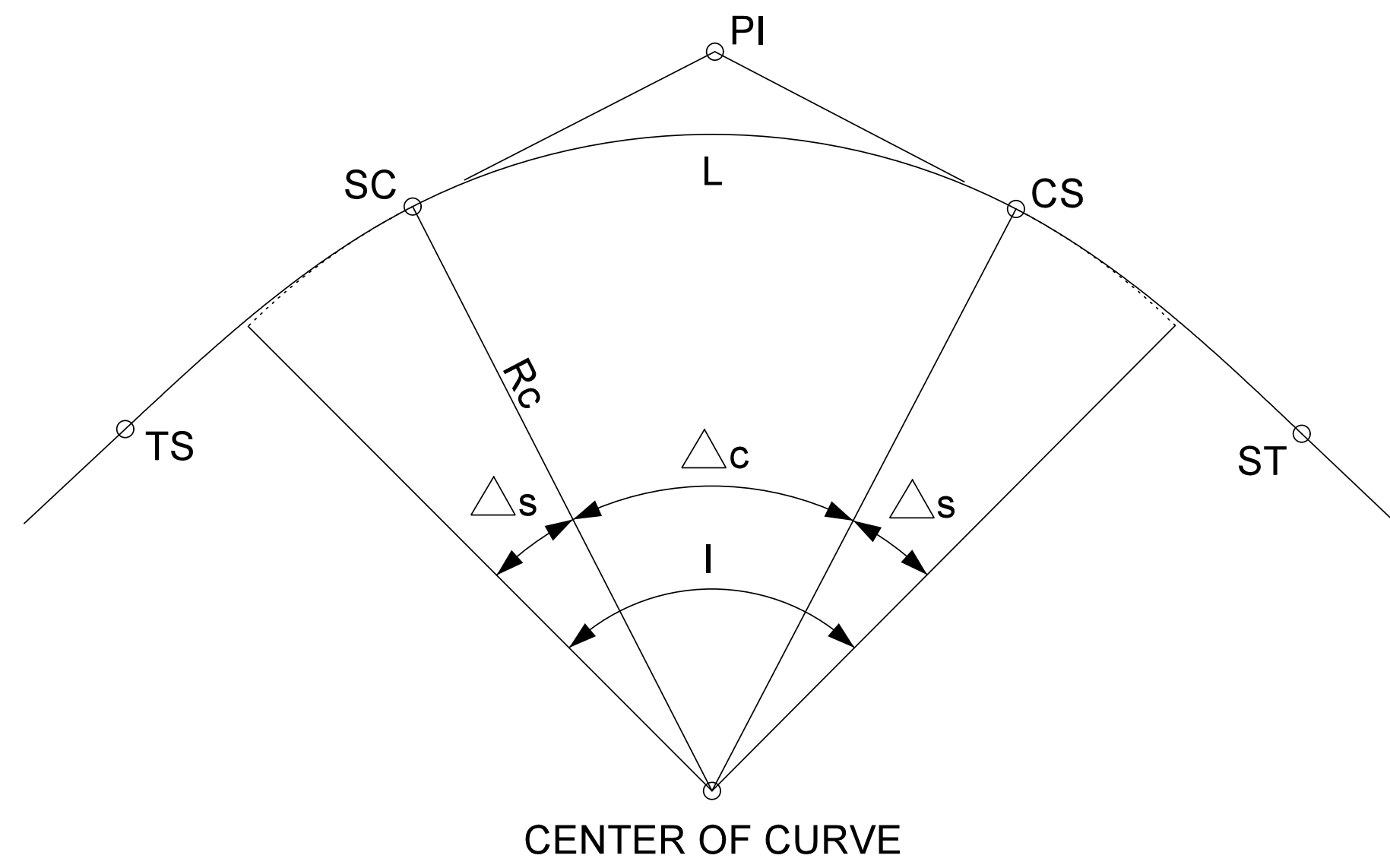


**TYPICAL SECTION RR-2**  
STA. 18+00.00(AH) TO BRIDGE ABUTMENT #1  
BRIDGE ABUTMENT #2 TO STA. 25+00.00(BK)

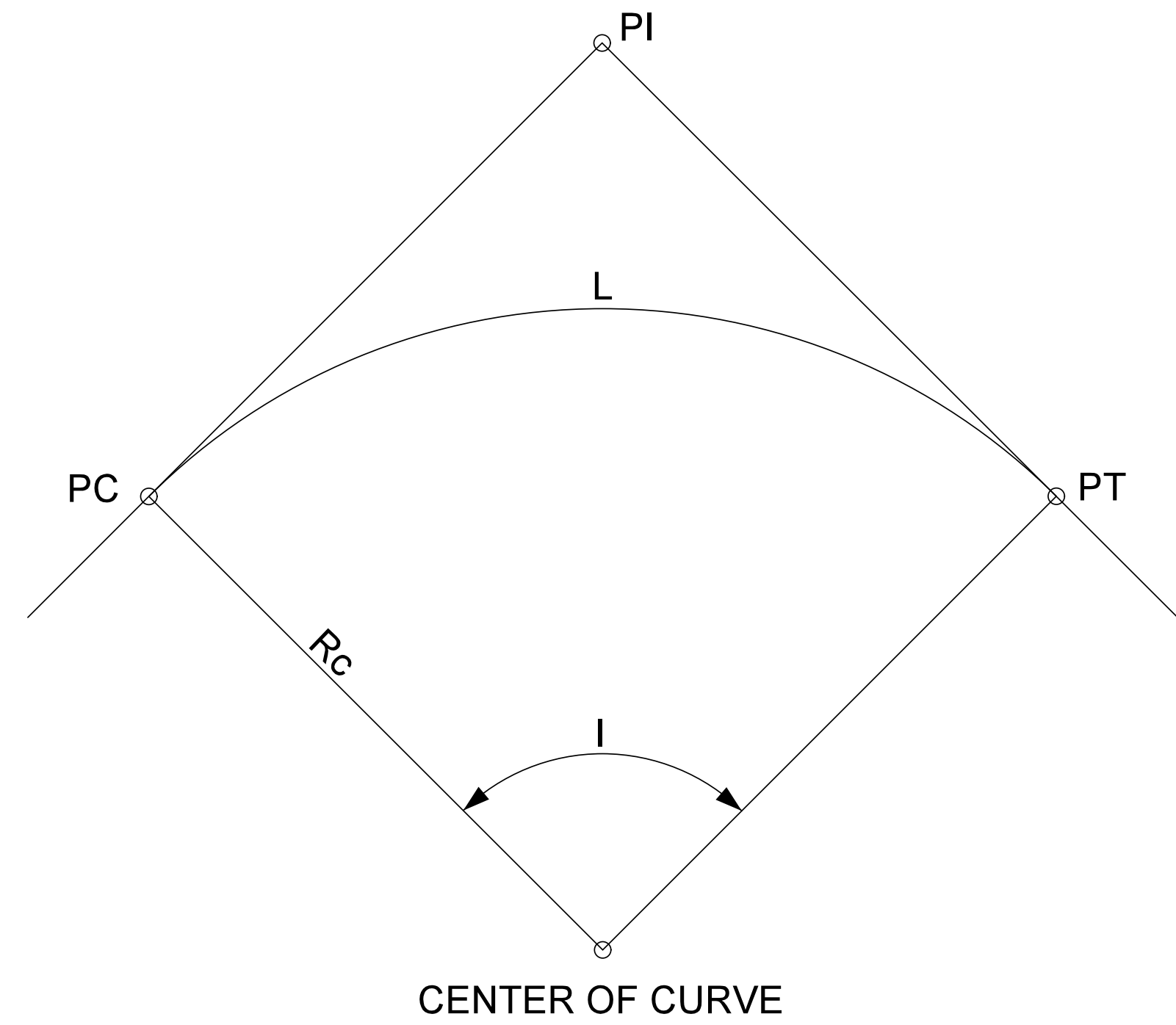
I:\5\2016\1\YFRO\2513251\station\track\NSR\A\_u3308\_r.dwg-ps\_RR-2.dgn  
10/15/16



PROJECT REFERENCE NO. <i>U-3308</i>		SHEET NO. <i>RR-3</i>	
RW SHEET NO.			
RAIL DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

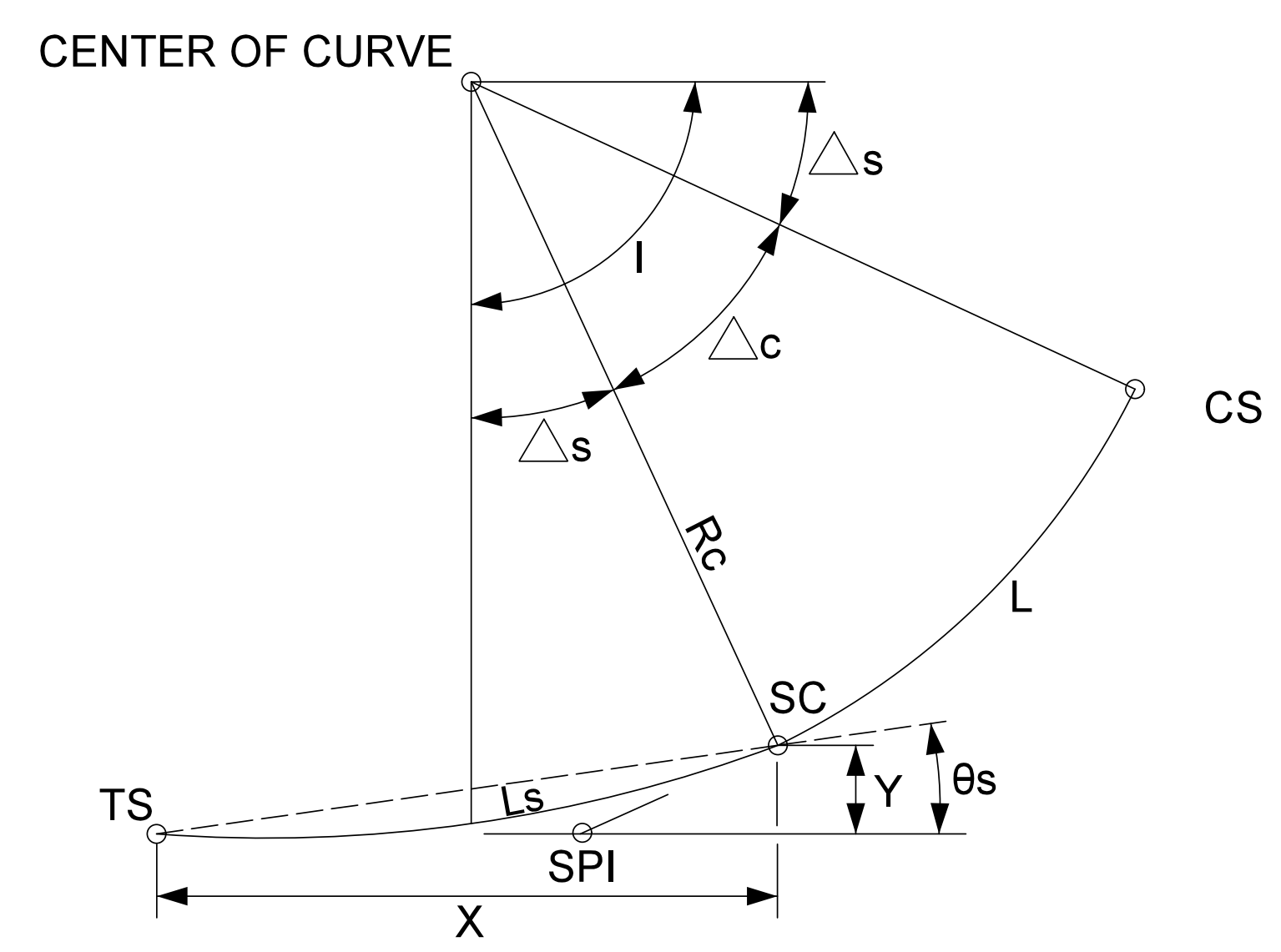


**FIGURE A**  
CIRCULAR CURVE WITH SPIRAL TRANSITION

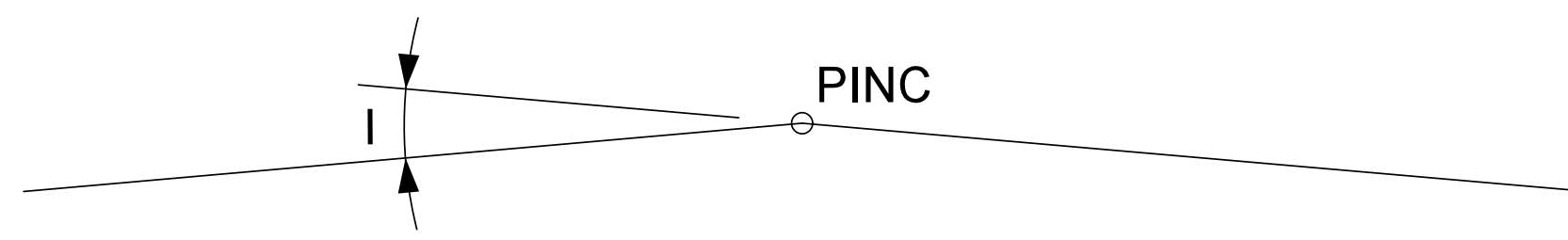


**FIGURE B**  
SIMPLE CIRCULAR CURVE

- △<sub>c</sub> CURVE ANGLE
- △<sub>s</sub> SPIRAL ANGLE
- θ<sub>s</sub> SPIRAL DEFLECTION
- CS CURVE TO SPIRAL
- D<sub>c</sub> DEGREE OF CURVATURE (CHORD DEFINITION)
- I TOTAL INTERSECTION ANGLE
- L LENGTH OF CURVE (CHORD DEFINITION)
- L<sub>s</sub> LENGTH OF SPIRAL
- PC POINT OF (CIRCULAR CURVATURE)
- PI POINT OF INTERSECTION (CURVE)
- PINC POINT OF INTERSECTION, NO CURVE
- PT POINT OF TANGENCY
- R<sub>c</sub> RADIUS OF CIRCULAR CURVE
- SC SPIRAL TO CURVE
- SPI POINT OF INTERSECTION (SPIRAL)
- ST SPIRAL TO TANGENT
- TS TANGENT TO SPIRAL
- X SPIRAL TANGENT LENGTH TO OFFSET
- Y SPIRAL TANGENT OFFSET



**FIGURE C**  
SPIRAL TRANSITION CURVE



**FIGURE D**  
DEFLECTION BETWEEN TANGENTS



NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

PROJECT REFERENCE NO. U-3308	SHEET NO. RR-3A
RW SHEET NO.	
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

TRACK GEOMETRY DATA																					
-NSS- = PROPOSED NSR MAIN TRACK = BEST-FIT ALIGNMENT OF SURVEYED EXISTING TRACK																					
FEATURE NAME	DESC.	STATION	NORTHING	EASTING	BEARING	DISTANCE	Rc (ft)	Dc	L (ft)	I	Δc	Δs	Θs	Ls (ft)	X (ft)	Y (ft)	V (MPH)	E (in)	Ea (in)	Eu (in)	
	POT	11+00.00	813,620.47	2,031,771.55	*** APPROXIMATE ST OF CURVE WEST OF GRANT ST ***																
					S 62° 40' 35.49" E	1,946.93															
	PINC	30+46.93	812,726.81	2,033,501.26						0° 01' 19.07" (RT)											
					S 62° 39' 16.42" E	692.38															
	PINC	37+39.31	812,408.76	2,034,116.27						0° 00' 47.81" (LT)											
					S 62° 40' 04.23" E	389.92															
	POT	41+29.23	812,229.73	2,034,462.66	*** END SURVEY ***																

TRACK GEOMETRY DATA																					
-NSD2- = PROPOSED NSR MAIN TRACK DETOUR TRACK																					
FEATURE NAME	DESC.	STATION	NORTHING	EASTING	BEARING	DISTANCE	Rc (ft)	Dc	L (ft)	I	Δc	Δs	Θs	Ls (ft)	X (ft)	Y (ft)	Vf Vp (MPH)	Ef Ep (in)	Ea (in)	Eu,f Eu,p (in)	
	POT	11+00.00	813,620.47	2,031,771.55	*** APPROXIMATE ST OF CURVE WEST OF GRANT ST ***																
					S 62° 40' 35.49" E	90.00															
					*** EQUATION: STA 11+90.00 (BK) = STA 10+00.00 (AH) ***																
4	TS	10+00.00	813,579.16	2,031,851.50																	
	SC	11+24.00	813,523.14	2,031,962.13																	
	PI	11+90.69	813,493.98	2,032,022.11			2,546.64	2° 15' 00.00"	133.33	5° 47' 23.35" (LT)	3° 00' 00.00" (LT)						50	3.94	2.00	1.94	
	CS	12+57.33	813,468.00	2,032,083.52													55	4.76		2.76	
	ST	13+81.33	813,421.56	2,032,198.49																	
					S 68° 27' 58.9" E	79.75															
1	PI/TO	14+61.08	813,392.29	2,032,272.68																	
NO. 10 RH	PS	14+92.33	813,380.81	2,032,301.74																	
					S 68° 27' 58.9" E	109.00															
	TS	16+01.33	813,340.81	2,032,403.14																	
	SC	17+25.33	813,294.36	2,032,518.11																	
5	PI	19+21.06	813,218.11	2,032,698.37			2,546.64	2° 15' 00.00"	390.66	11° 34' 46.74" (RT)	8° 47' 23.3885" (RT)						50	3.94	2.00	1.94	
	CS	21+15.99	813,115.21	2,032,864.86													55	4.76		2.76	
	ST	22+39.99	813,048.31	2,032,969.27																	
					S 56° 53' 12.10" E	220.00															
	TS	24+59.99	812,928.13	2,033,153.53																	
	SC	25+83.99	812,861.23	2,033,257.94																	
6	PI	26+50.68	812,826.17	2,033,314.67			2,546.64	2° 15' 00.00"	133.33	5° 47' 23.35" (LT)	3° 00' 00.00" (LT)						50	3.94	2.00	1.94	
	CS	27+17.33	812,794.13	2,033,373.15													55	4.76		2.76	
	ST	28+41.33	812,736.32	2,033,482.85																	
					*** EQUATION: STA 28+41.33 (BK) = 30+26.20 (AH) ***																
					S 62° 40' 35.49" E	20.73															
	POT	30+46.93	812,726.81	2,033,501.26	*** EXISTING ALIGNMENT ***																

SEE DWG. NO. RR-3 FOR ABBREVIATIONS AND NOMENCLATURE



NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

PROJECT REFERENCE NO. U-3308	SHEET NO. RR-3B
RW SHEET NO.	
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

TRACK GEOMETRY DATA																				
-NSN- = PROPOSED NSR SIDING TRACK = BEST-FIT ALIGNMENT OF SURVEYED EXISTING TRACK																				
FEATURE NAME	DESC.	STATION	NORTHING	EASTING	BEARING	DISTANCE	Rc (ft)	Dc	L (ft)	I	Δc	Δs	Θs	Ls (ft)	X (ft)	Y (ft)	Vf Vp (MPH)	Ef Ep (in)	Ea (in)	Eu,f Eu,p (in)
	POT	10+25.00	813,664.62	2,031,718.31																
					S 62° 39' 48.33" E	2,116.59														
	PINC	31+41.59	812,692.65	2,033,598.53						0°00' 02.57" (LT)										
					S 62° 39' 50.90" E	980.47														
	POT	41+22.06	812,242.41	2,034,469.51																
TRACK GEOMETRY DATA																				
-SW2- = PROPOSED NSR SIDING DETOUR TRACK																				
FEATURE NAME	DESC.	STATION	NORTHING	EASTING	BEARING	DISTANCE	Rc (ft)	Dc	L (ft)	I	Δc	Δs	Θs	Ls (ft)	X (ft)	Y (ft)	Vf Vp (MPH)	Ef Ep (in)	Ea (in)	Eu,f Eu,p (in)
	POT	10+25.00	813,664.62	2,031,718.31																
					S 62° 39' 48.33" E	215.29														
	PC	10+00.00	813,565.75	2,031,909.56	*** EQUATION: STA 12+40.29 (BK) = STA 10+00.0 (AH) ***															
14	PI	10+56.36	813,539.87	2,031,959.63			1,910.08	3° 00' 00.00"	112.68	3° 22' 49.38" (LT)	3° 22' 49.38" (LT)						10	0.21	0.00	0.21
																		N/A	N/A	N/A
	PT	11+12.68	813,516.99	2,032,011.14																
					S 66° 02' 37.71" E	100.00														
	PC	12+12.68	813,476.38	2,032,102.52																
13	PI	12+67.74	813,454.03	2,032,152.84			1,910.08	3° 00' 00.00"	110.07	3° 18' 07.76" (RT)	3° 18' 07.76" (RT)						10	0.21	0.00	0.21
																		N/A	N/A	N/A
	PT	13+22.75	813,428.81	2,032,201.78																
					S 62° 44' 29.9" E	79.75														
	P/TO	14+02.50	813,392.29	2,032,272.68	*** EQUATION: STA 14+02.50 (BK) = STA 14+61.08 (AH) ***															
					S 68° 27' 58.9" E	89.83														
NO. 10 RH	PS	14+92.33	813,380.81	2,032,301.74																

TRACK GEOMETRY DATA																				
-RCSXN- = PROPOSED CSX MAIN TRACK = BEST-FIT ALIGNMENT OF SURVEYED EXISTING TRACK																				
FEATURE NAME	DESC.	STATION	NORTHING	EASTING	BEARING	DISTANCE	Rc (ft)	Dc	L (ft)	I	Δc	Δs	Θs	Ls (ft)	X (ft)	Y (ft)	Vf Vp (MPH)	Ef Ep (in)	Ea (in)	Eu,f Eu,p (in)
	POT	06+50.00	813,517.40	2,032,101.74																
					S 62° 42' 33.26" E	350.00														
	PINC	10+00.00	813,356.92	2,032,412.78						0° 07'05.37" (RT)										
					S 62° 35' 27.89" E	692.30														
	PINC	16+92.30	813,038.23	2,033,027.36						0° 06'28.18" (LT)										
					S 62° 41' 56.07" E	127.69														
	POT	18+19.99	812,979.66	2,033,140.84																
TRACK GEOMETRY DATA																				
-EXCSXREV2- = PROPOSED CSX MAIN DETOUR TRACK																				
FEATURE NAME	DESC.	STATION	NORTHING	EASTING	BEARING	DISTANCE	Rc (ft)	Dc	L (ft)	I	Δc	Δs	Θs	Ls (ft)	X (ft)	Y (ft)	Vf Vp (MPH)	Ef Ep (in)	Ea (in)	Eu,f Eu,p (in)
	POT	20+71.96	813,113.20	2,032,902.97																
					S 55° 43' 43.46" E	9.00														
	PC	20+80.96	813,108.13	2,032,910.41																
EXCSXREV2	PI	21+49.69	813,069.43	2,032,967.20			1,146.28	5° 00' 00.00"	137.25	6° 51' 44.43" (LT)	6° 51' 44.43" (LT)						10	0.35	0.00	0.35
																		N/A	N/A	N/A
	PT	22+18.20	813,037.79	2,033,028.21	*** EQUATION: STA 22+18.20 (BK) = STA 16+92.30 (AH) ***															
					S 62° 35' 27.89" E	0.00														
	POT	16+92.30	813,038.23	2,033,027.36																

SEE DWG. NO. RR-3 FOR ABBREVIATIONS AND NOMENCLATURE

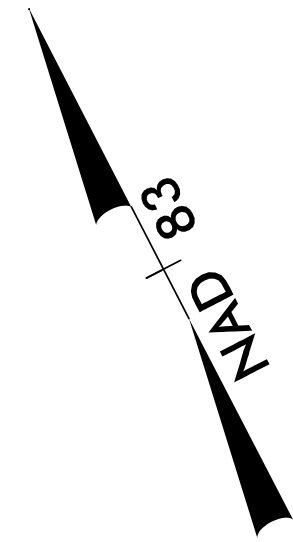




8/17/99

NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

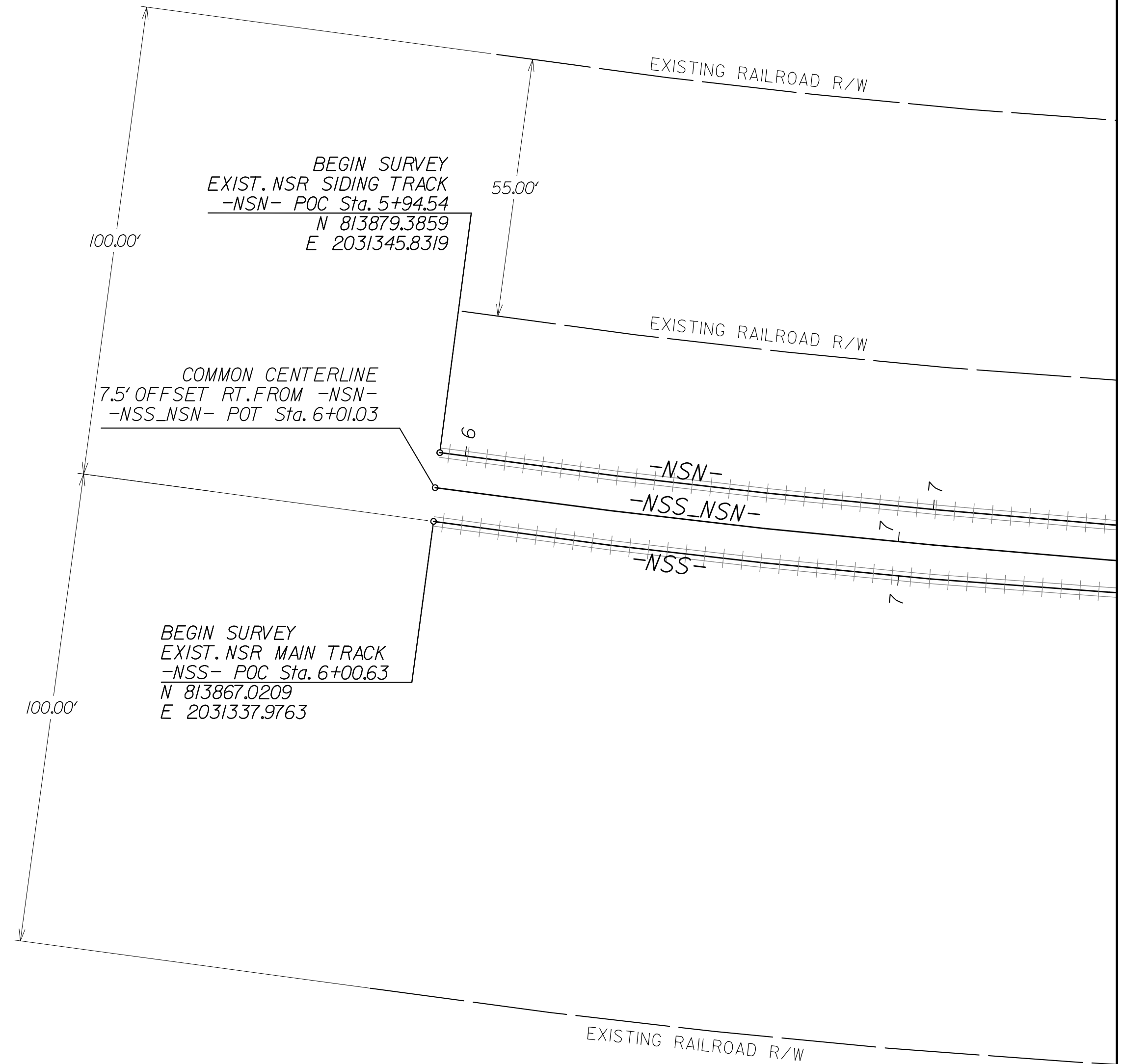
PROJECT REFERENCE NO. U-3308		SHEET NO. RR-4DET	
RAIL DESIGN ENGINEER KEVIN G. BAILEY SEAL 28479 11/11/2015		HYDRAULICS ENGINEER CHRISTOPHER K. KIRK SEAL 033404 11/11/2015	



# DETOUR TRACK PLANS

FOR -NSD2- PROFILE SEE SHEETS RR-22 THROUGH RR-24  
FOR -SW2- PROFILE SEE SHEETS RR-25 THROUGH RR-26

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



I:\Projects\2513251\station\track\RA\_u3308\_r.dwg ps.RR-4A.dgn  
11/11/2015

NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

PROJECT REFERENCE NO. U-3308	SHEET NO. RR-5DET
RW SHEET NO.	
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

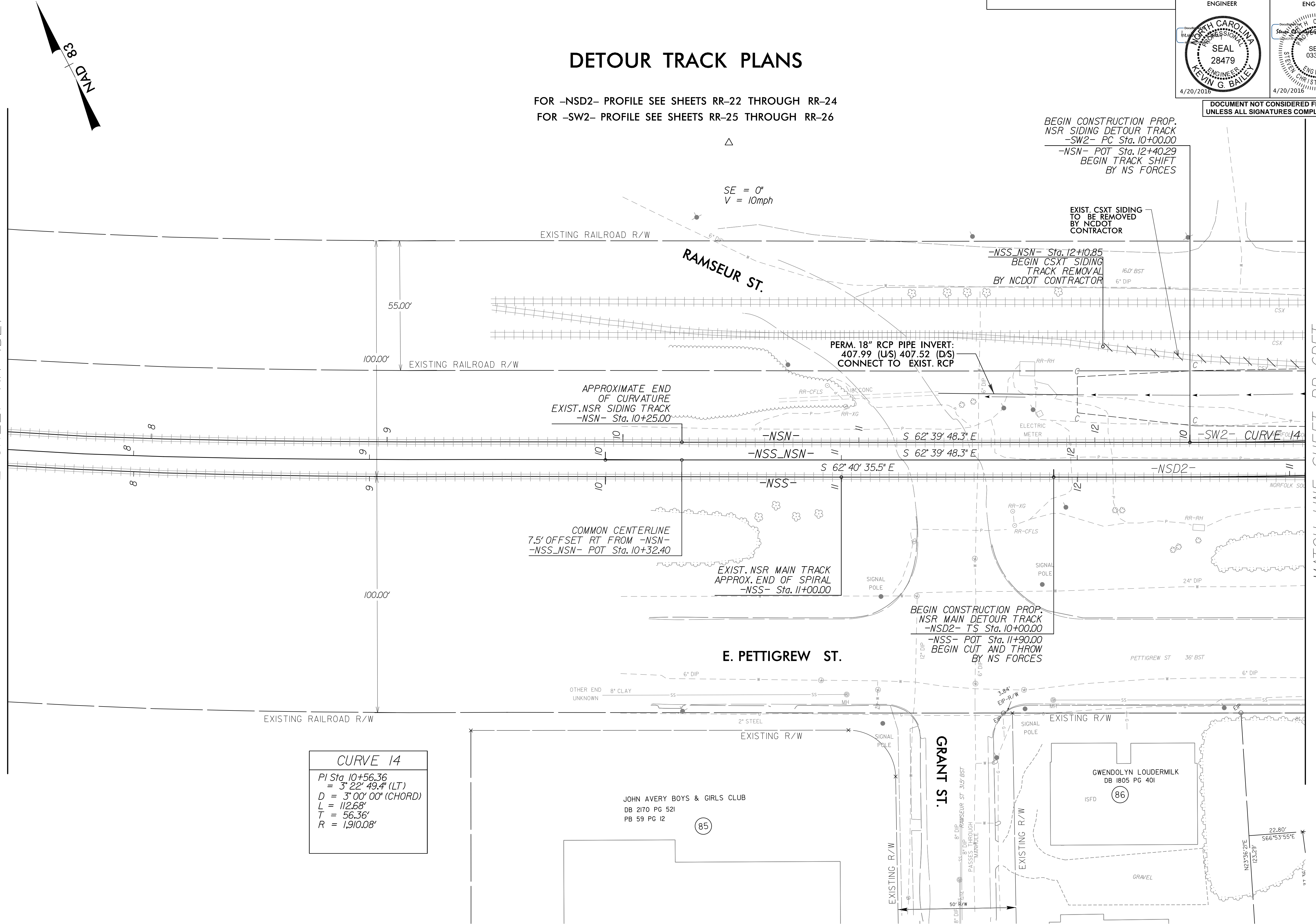
# DETOUR TRACK PLANS

FOR -NSD2- PROFILE SEE SHEETS RR-22 THROUGH RR-24  
FOR -SW2- PROFILE SEE SHEETS RR-25 THROUGH RR-26

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

MATCH LINE SHEET RR-4DET

MATCH LINE SHEET RR-6DET



**CURVE 14**  
 PI Sta. 10+56.36  
 = 3° 22' 49.4" (LT)  
 D = 3° 00' 00" (CHORD)  
 L = 112.68'  
 T = 56.36'  
 R = 1,910.08'

P:\16\2016\513251\station\track\RAA\_u3308\_r.dwg ps.RR-5A.dgn  
8/16/2016 10:51:32 AM  
tedmondson



8/17/99

NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

PROJECT REFERENCE NO. U-3308	SHEET NO. RR-6DET
RW SHEET NO.	
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

# DETOUR TRACK PLANS

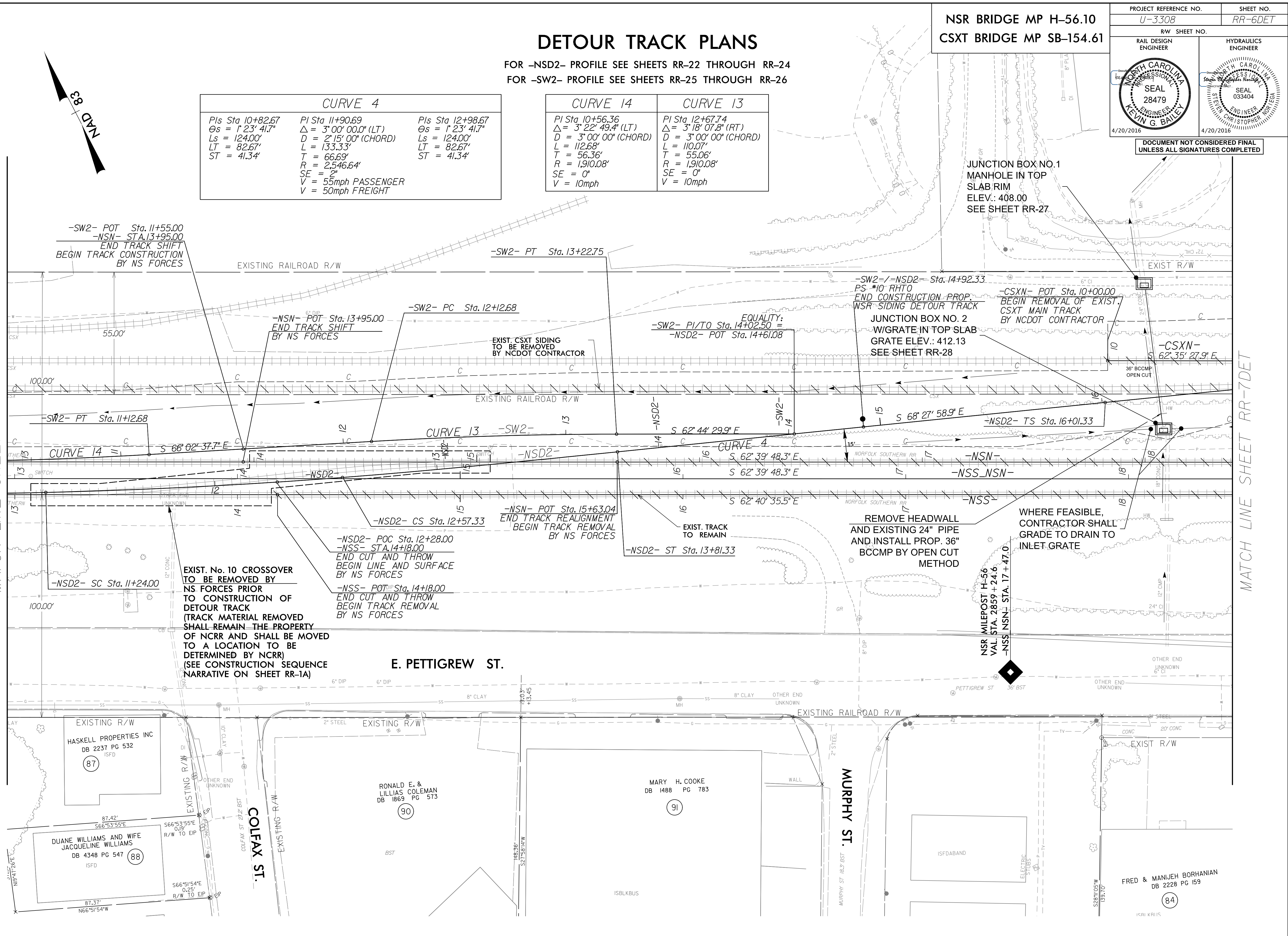
FOR -NSD2- PROFILE SEE SHEETS RR-22 THROUGH RR-24  
FOR -SW2- PROFILE SEE SHEETS RR-25 THROUGH RR-26

CURVE 4		
Pls Sta. 10+82.67	Pls Sta. 11+90.69	Pls Sta. 12+98.67
$\Theta_s = 1^{\circ}23'41.7''$	$\Delta = 3^{\circ}00'00.0''$ (LT)	$\Theta_s = 1^{\circ}23'41.7''$
Ls = 124.00'	D = 2^{\circ}15'00" (CHORD)	Ls = 124.00'
LT = 82.67'	L = 133.33'	LT = 82.67'
ST = 41.34'	T = 66.69'	ST = 41.34'
	R = 2,546.64'	
	SE = 2"	
	V = 55mph PASSENGER	
	V = 50mph FREIGHT	

CURVE 14	CURVE 13
Pls Sta. 10+56.36	Pls Sta. 12+67.74
$\Delta = 3^{\circ}22'49.4''$ (LT)	$\Delta = 3^{\circ}18'07.8''$ (RT)
D = 3^{\circ}00'00" (CHORD)	D = 3^{\circ}00'00" (CHORD)
L = 112.68'	L = 110.07'
T = 56.36'	T = 55.06'
R = 1,910.08'	R = 1,910.08'
SE = 0"	SE = 0"
V = 10mph	V = 10mph

MATCH LINE SHEET RR-5DET

MATCH LINE SHEET RR-7DET



-SW2- POT Sta. 11+55.00  
-NSN- STA. 13+95.00  
END TRACK SHIFT  
BEGIN TRACK CONSTRUCTION  
BY NS FORCES

-NSN- POT Sta. 13+95.00  
END TRACK SHIFT  
BY NS FORCES

-SW2- PT Sta. 13+22.75

-SW2- PC Sta. 12+12.68

EQUALITY:  
-SW2- PI/TO Sta. 14+02.50 =  
-NSD2- POT Sta. 14+61.08

JUNCTION BOX NO. 1  
MANHOLE IN TOP  
SLAB RIM  
ELEV.: 408.00  
SEE SHEET RR-27

-SW2- / -NSD2- Sta. 14+92.33  
PS \*10 RHTO  
END CONSTRUCTION PROP.  
NSR SIDING DETOUR TRACK  
JUNCTION BOX NO. 2  
W/GRATE IN TOP SLAB  
GRATE ELEV.: 412.13  
SEE SHEET RR-28

-CSXN- POT Sta. 10+00.00  
BEGIN REMOVAL OF EXIST.  
CSXT MAIN TRACK  
BY NCDOT CONTRACTOR

-CSXN-  
62°35'27.9" E

-SW2- PT Sta. 11+12.68

CURVE 14  
S 66°02'37.7" E

CURVE 13  
-SW2-  
S 62°44'29.9" E

CURVE 4  
S 62°39'48.3" E

-NSD2- TS Sta. 16+01.33

-NSD2- CS Sta. 12+57.33

-NSN- POT Sta. 15+63.04  
END TRACK REALIGNMENT  
BEGIN TRACK REMOVAL  
BY NS FORCES

EXIST. TRACK  
TO REMAIN  
-NSD2- ST Sta. 13+81.33

REMOVE HEADWALL  
AND EXISTING 24" PIPE  
AND INSTALL PROP. 36"  
BCCMP BY OPEN CUT  
METHOD

WHERE FEASIBLE,  
CONTRACTOR SHALL  
GRADE TO DRAIN TO  
INLET GRATE

-NSD2- SC Sta. 11+24.00

EXIST. No. 10 CROSSOVER  
TO BE REMOVED BY  
NS FORCES PRIOR  
TO CONSTRUCTION OF  
DETOUR TRACK  
(TRACK MATERIAL REMOVED  
SHALL REMAIN THE PROPERTY  
OF NCR AND SHALL BE MOVED  
TO A LOCATION TO BE  
DETERMINED BY NCR)  
(SEE CONSTRUCTION SEQUENCE  
NARRATIVE ON SHEET RR-1A)

-NSD2- POC Sta. 12+28.00  
-NSS- STA. 14+18.00  
END CUT AND THROW  
BEGIN LINE AND SURFACE  
BY NS FORCES

-NSS- POT Sta. 14+18.00  
END CUT AND THROW  
BEGIN TRACK REMOVAL  
BY NS FORCES

E. PETTIGREW ST.

EXISTING R/W  
HASKELL PROPERTIES INC  
DB 2237 PG 532  
ISFD (87)

DUANE WILLIAMS AND WIFE  
JACQUELINE WILLIAMS  
DB 4348 PG 547  
ISFD (88)

RONALD E. &  
LILLIAS COLEMAN  
DB 1869 PG 573  
(90)

MARY H. COOKE  
DB 1488 PG 783  
(91)

MURPHY ST.

ISFDABAND

FRED & MANJEH BORHANIAN  
DB 2228 PG 159  
(84)

P:\16\2016\513251\station\track\RAWA\_u3308\_r.dwg\_ps.RR-6A.dgn



PROJECT REFERENCE NO. U-3308		SHEET NO. RR-7DET	
RW SHEET NO.		HYDRAULICS ENGINEER	
RAIL DESIGN ENGINEER		SEAL 28479 ENGINEER KEVIN G. BAILEY	
4/20/2016		SEAL 033404 ENGINEER CHRISTOPHER STORPER	
4/20/2016		4/20/2016	

# DETOUR TRACK PLANS

FOR -NSD2- PROFILE SEE SHEETS RR-22 THROUGH RR-24  
FOR -EXCSX- PROFILE SEE SHEET RR-20

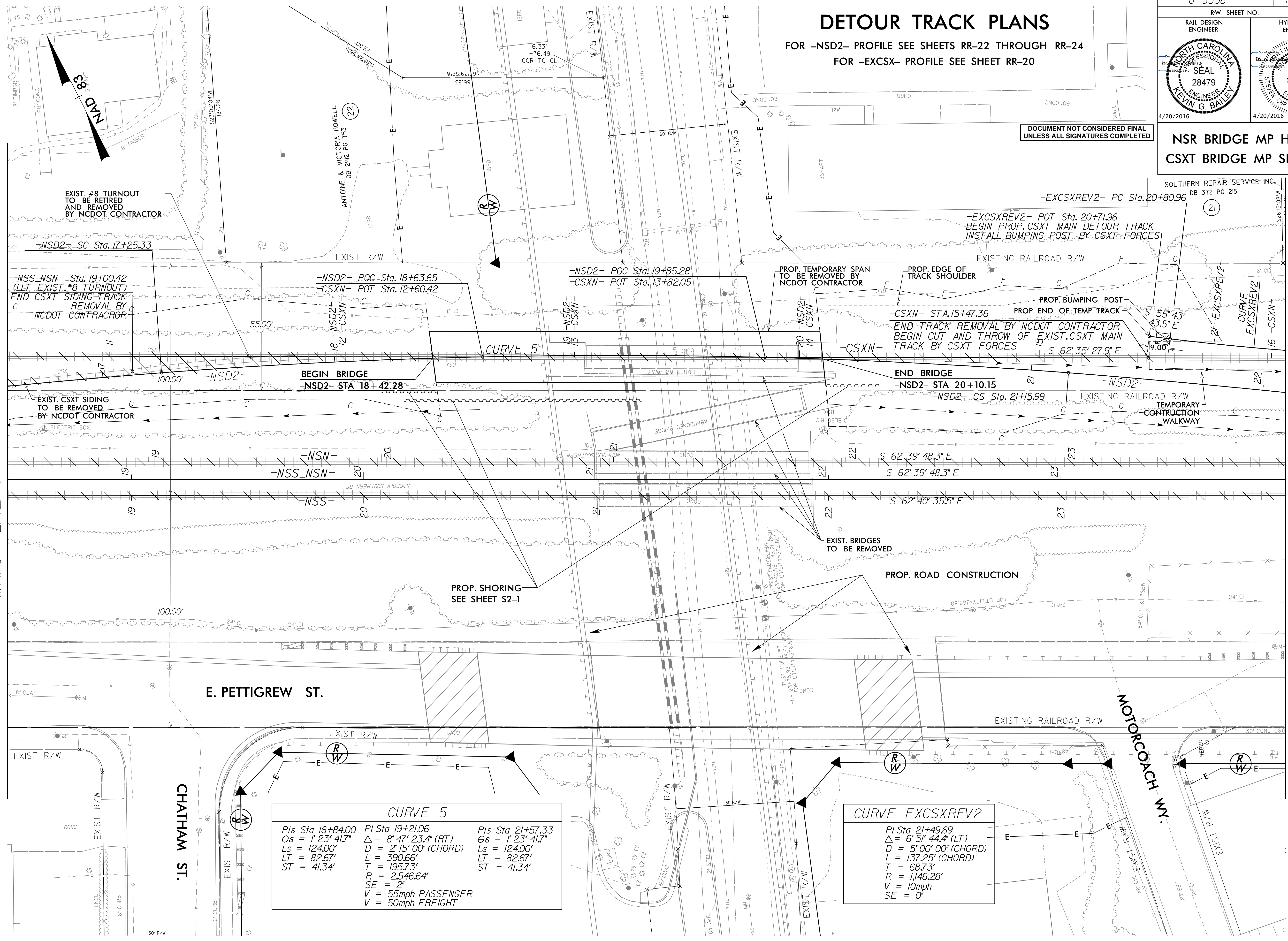
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

SOUTHERN REPAIR SERVICE INC.  
DB 372 PG 215

MATCH LINE SHEET RR-6DET

MATCH LINE SHEET RR-8DET



EXIST. #8 TURNOUT  
TO BE RETIRED  
AND REMOVED  
BY NCDOT CONTRACTOR

-NSS\_NSN- Sta. 19+00.42  
(LLT EXIST. #8 TURNOUT)  
END CSXT SIDING TRACK  
REMOVAL BY  
NCDOT CONTRACTOR

EXIST. CSXT SIDING  
TO BE REMOVED  
BY NCDOT CONTRACTOR

ELECTRIC BOX

ANTOINE & VICTORIA HOWELL  
DB 2912 PG T53

PROP. SHORING  
SEE SHEET S2-1

PROP. ROAD CONSTRUCTION

EXIST. BRIDGES  
TO BE REMOVED

EXISTING RAILROAD R/W  
TEMPORARY  
CONSTRUCTION  
WALKWAY

CURVE 5		
PIs Sta 16+84.00	PI Sta 19+21.06	PIs Sta 21+57.33
$\Theta_s = 1^\circ 23' 41.7''$	$\Delta = 8^\circ 47' 23.4''$ (RT)	$\Theta_s = 1^\circ 23' 41.7''$
$L_s = 124.00'$	$D = 2^\circ 15' 00''$ (CHORD)	$L_s = 124.00'$
$LT = 82.67'$	$L = 390.66'$	$LT = 82.67'$
$ST = 41.34'$	$T = 195.73'$	$ST = 41.34'$
	$R = 2,546.64'$	
	$SE = 2^\circ$	
	$V = 55\text{mph}$ PASSENGER	
	$V = 50\text{mph}$ FREIGHT	

CURVE EXCSXREV2	
PI Sta. 21+49.69	$\Delta = 6^\circ 51' 44.4''$ (LT)
$D = 5^\circ 00' 00''$ (CHORD)	$L = 137.25'$ (CHORD)
$T = 68.73'$	$R = 1,146.28'$
$V = 10\text{mph}$	$SE = 0^\circ$

CHATHAM ST.

E. PETTIGREW ST.

MOTORCOACH WY.



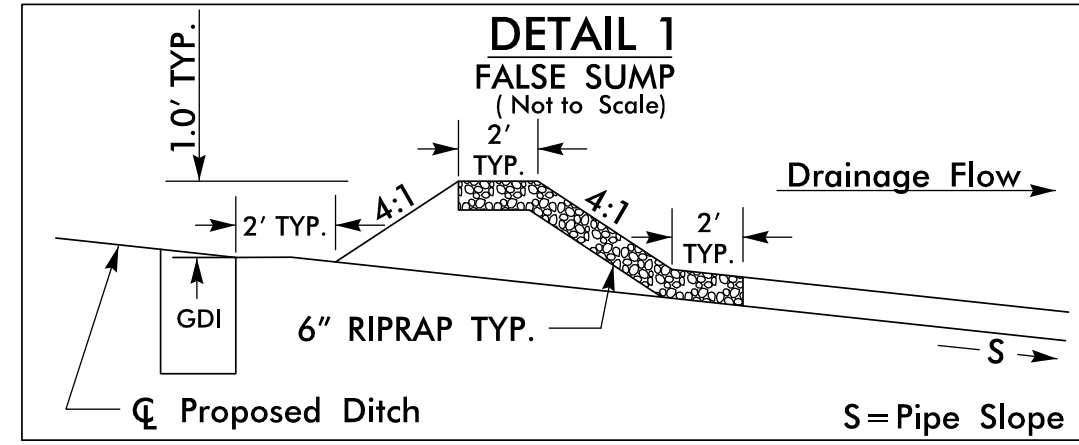
8/17/99

NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

PROJECT REFERENCE NO. U-3308	SHEET NO. RR-8DET
RW SHEET NO.	
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

# DETOUR TRACK PLANS

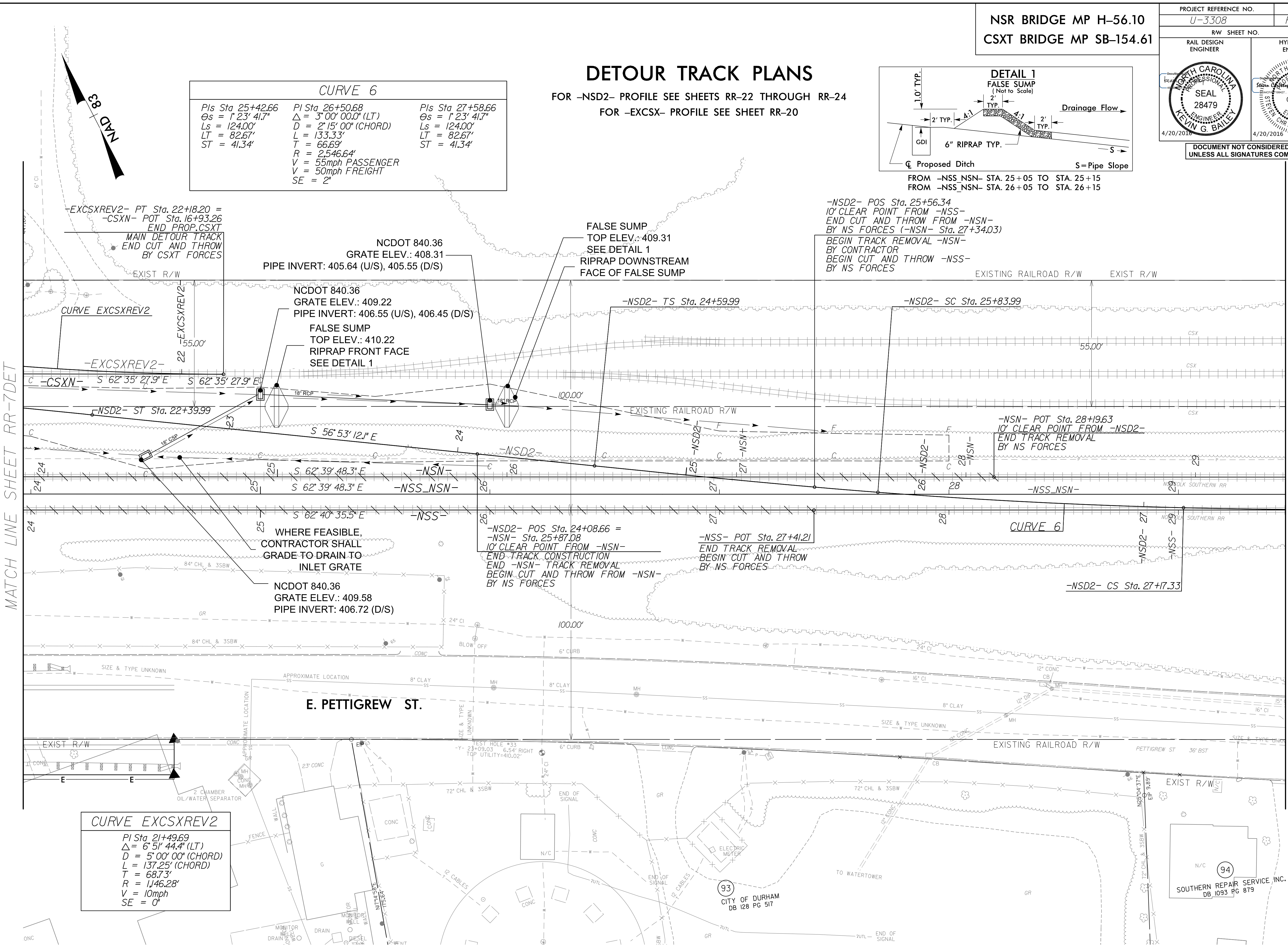
FOR -NSD2- PROFILE SEE SHEETS RR-22 THROUGH RR-24  
FOR -EXCSX- PROFILE SEE SHEET RR-20



CURVE 6		
PIs Sta. 25+42.66	PI Sta. 26+50.68	PIs Sta. 27+58.66
$\theta_s = 1^\circ 23' 41.7''$	$\Delta = 3^\circ 00' 00.0''$ (LT)	$\theta_s = 1^\circ 23' 41.7''$
$L_s = 124.00'$	$D = 2^\circ 15' 00''$ (CHORD)	$L_s = 124.00'$
$LT = 82.67'$	$L = 133.33'$	$LT = 82.67'$
$ST = 41.34'$	$T = 66.69'$	$ST = 41.34'$
	$R = 2,546.64'$	
	$V = 55\text{mph PASSENGER}$	
	$V = 50\text{mph FREIGHT}$	
	$SE = 2''$	

FROM -NSS\_NSN- STA. 25+05 TO STA. 25+15  
FROM -NSS\_NSN- STA. 26+05 TO STA. 26+15

-NSD2- POS Sta. 25+56.34  
10' CLEAR POINT FROM -NSS-  
END CUT AND THROW FROM -NSN-  
BY NS FORCES (-NSN- Sta. 27+34.03)  
BEGIN TRACK REMOVAL -NSN-  
BY CONTRACTOR  
BEGIN CUT AND THROW -NSS-  
BY NS FORCES



MATCH LINE SHEET RR-7DET

MATCH LINE SHEET RR-9DET

CURVE EXCSXREV2	
PI Sta. 21+49.69	
$\Delta = 6^\circ 51' 44.4''$ (LT)	
$D = 5^\circ 00' 00''$ (CHORD)	
$L = 137.25'$ (CHORD)	
$T = 68.73'$	
$R = 1,146.28'$	
$V = 10\text{mph}$	
$SE = 0''$	

E. PETTIGREW ST.

94  
SOUTHERN REPAIR SERVICE, INC.  
DB 1093 PG 879

93  
CITY OF DURHAM  
DB 128 PG 517

2/16/2016 5:32:51 \\station\track\RAWA\_u3308\_r.dwg ps.RR-8A.dgn



NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

PROJECT REFERENCE NO. U-3308	SHEET NO. RR-9DET
RW SHEET NO.	
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

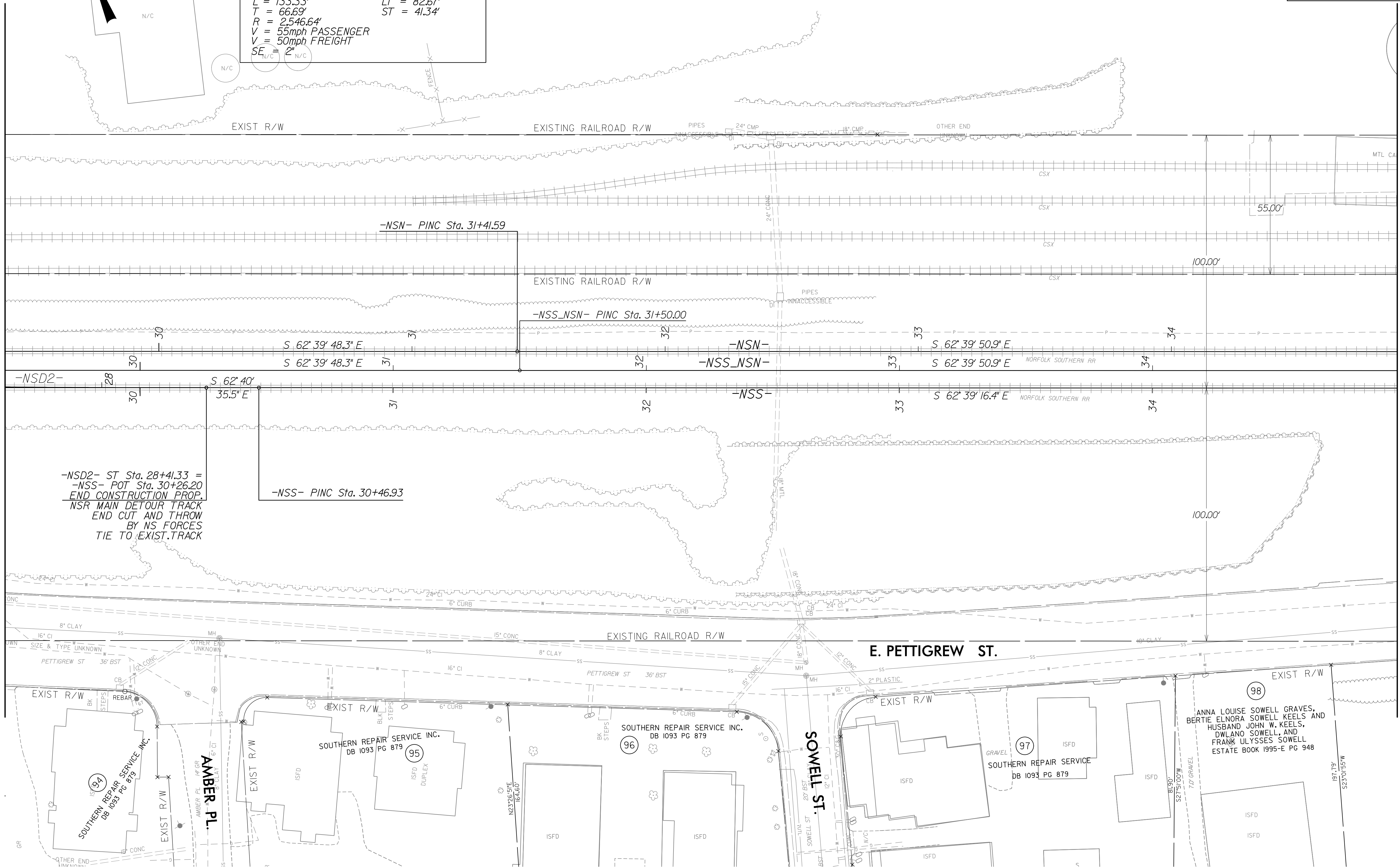
# DETOUR TRACK PLANS

FOR -NSD2- PROFILE SEE SHEETS RR-22 THROUGH RR-24

CURVE 6	
PI Sta. 26+50.68	PIs Sta. 27+58.66
$\Delta = 3^{\circ}00'00.0"$ (LT)	$\Theta_s = 1^{\circ}23'41.7"$
$D = 2^{\circ}15'00"$ (CHORD)	$L_s = 124.00'$
$L = 133.33'$	$LT = 82.67'$
$T = 66.69'$	$ST = 41.34'$
$R = 2546.64'$	
$V = 55\text{mph PASSENGER}$	
$V = 50\text{mph FREIGHT}$	
$SE_{N/C} = 2" N/C$	

MATCH LINE SHEET RR-8DET

MATCH LINE SHEET RR-10DET



-NSD2- ST Sta. 28+41.33 =  
-NSS- POT Sta. 30+26.20  
END CONSTRUCTION PROP.  
NSR MAIN DETOUR TRACK  
END CUT AND THROW  
BY NS FORCES  
TIE TO EXIST. TRACK

-NSS- PINC Sta. 30+46.93

-NSN- PINC Sta. 31+41.59

EXISTING RAILROAD R/W

-NSS-NSN- PINC Sta. 31+50.00

E. PETTIGREW ST.

SOWELL ST.

SOUTHERN REPAIR SERVICE INC.  
DB 1093 PG 879

SOUTHERN REPAIR SERVICE INC.  
DB 1093 PG 879

SOUTHERN REPAIR SERVICE INC.  
DB 1093 PG 879

SOUTHERN REPAIR SERVICE  
DB 1093 PG 879

ANNA LOUISE SOWELL GRAVES,  
BERTIE ELNORA SOWELL KEELS AND  
HUSBAND JOHN W. KEELS,  
DWLANO SOWELL, AND  
FRANK ULYSSES SOWELL  
ESTATE BOOK 1995-E PG 948



NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

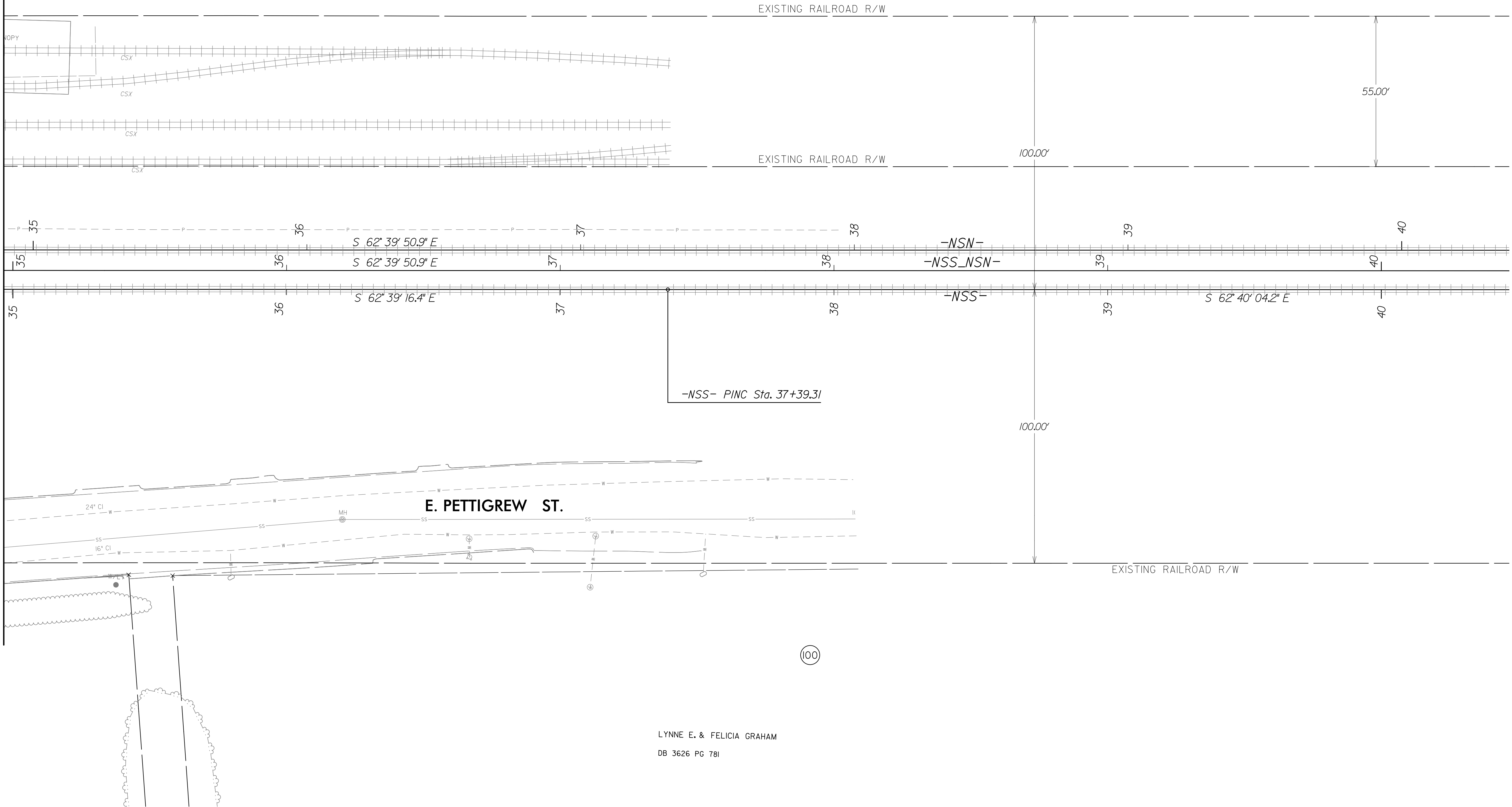
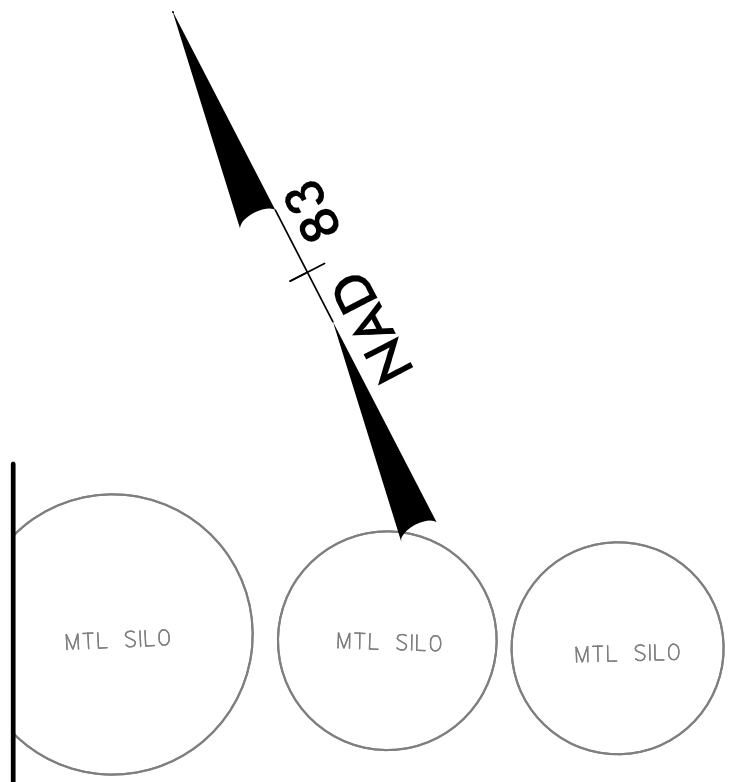
PROJECT REFERENCE NO. U-3308	SHEET NO. RR-10DET
RW SHEET NO.	
RAIL DESIGN ENGINEER SEAL 28479 ENGINEER KEVIN G. BAILEY 12/11/2015	HYDRAULICS ENGINEER SEAL 033404 ENGINEER CHRISTOPHER 12/11/2015

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

# DETOUR TRACK PLANS

FOR -NSD2- PROFILE SEE SHEETS RR-22 THROUGH RR-24

MATCH LINE SHEET RR-9DET

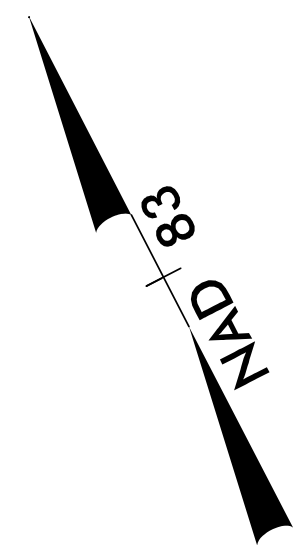


LYNNE E. & FELICIA GRAHAM  
DB 3626 PG 781

8/17/99

NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

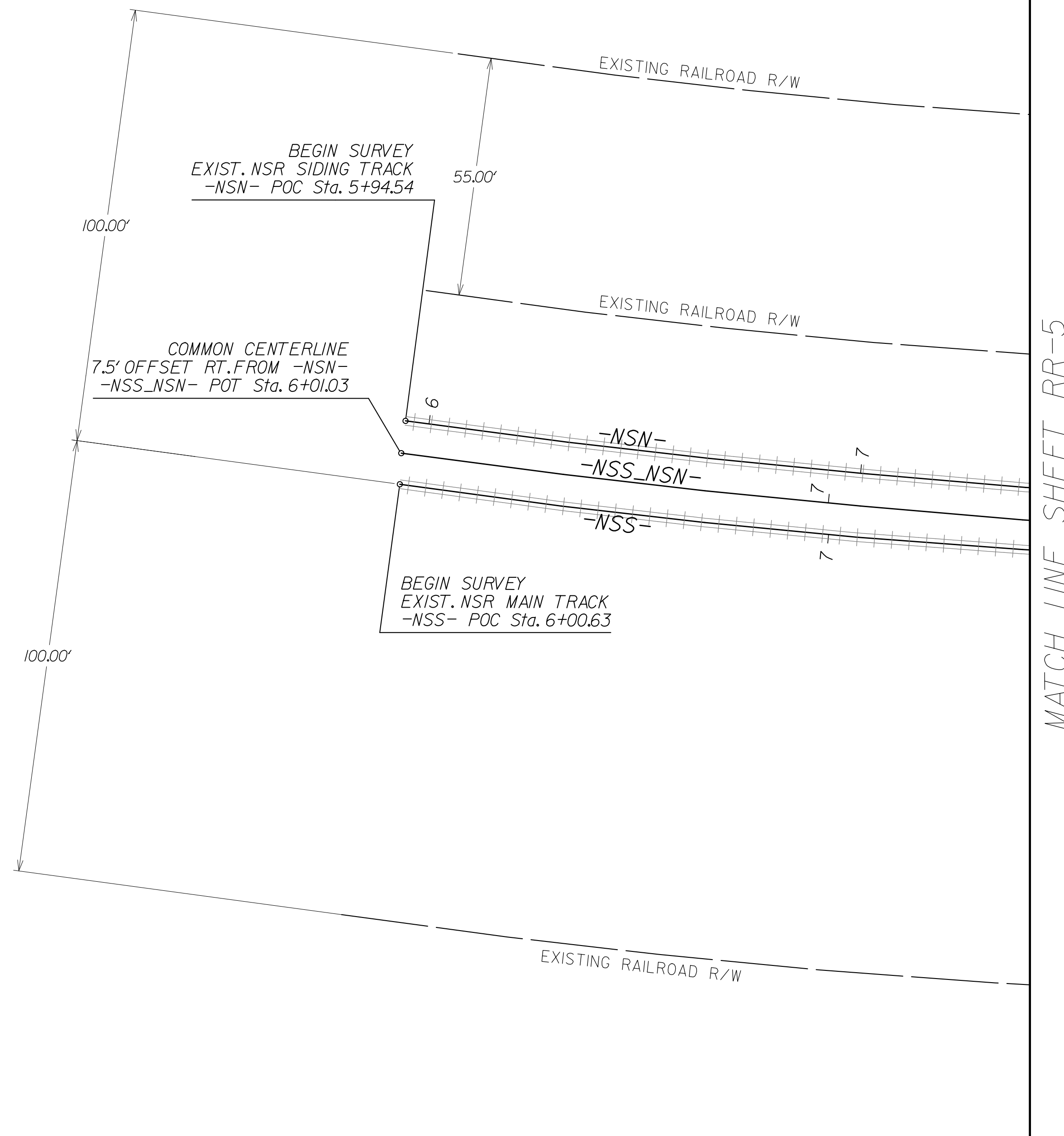
PROJECT REFERENCE NO. U-3308	SHEET NO. RR-4
RW SHEET NO.	
RAIL DESIGN ENGINEER SEAL 28479 KIM G. BAILEY 12/11/2015	HYDRAULICS ENGINEER SEAL 033404 CHRISTOPHER 12/11/2015



# FINAL TRACK PLANS

FOR -NSS- PROFILE SEE SHEETS RR-12 THROUGH RR-15  
FOR -NSN- PROFILE SEE SHEETS RR-16 THROUGH RR-19

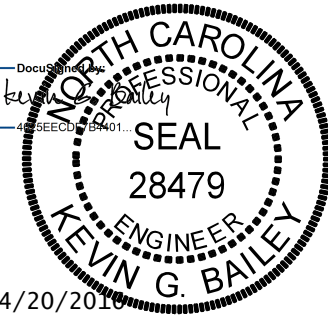
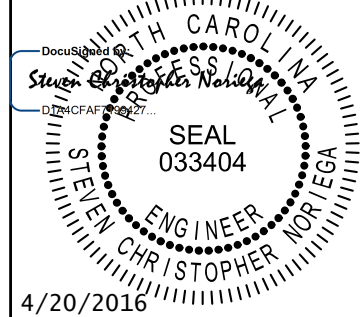
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



I:\Projects\2513251\station\track\RA\_u3308\_r.dwg ps.RR-4.dgn



NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

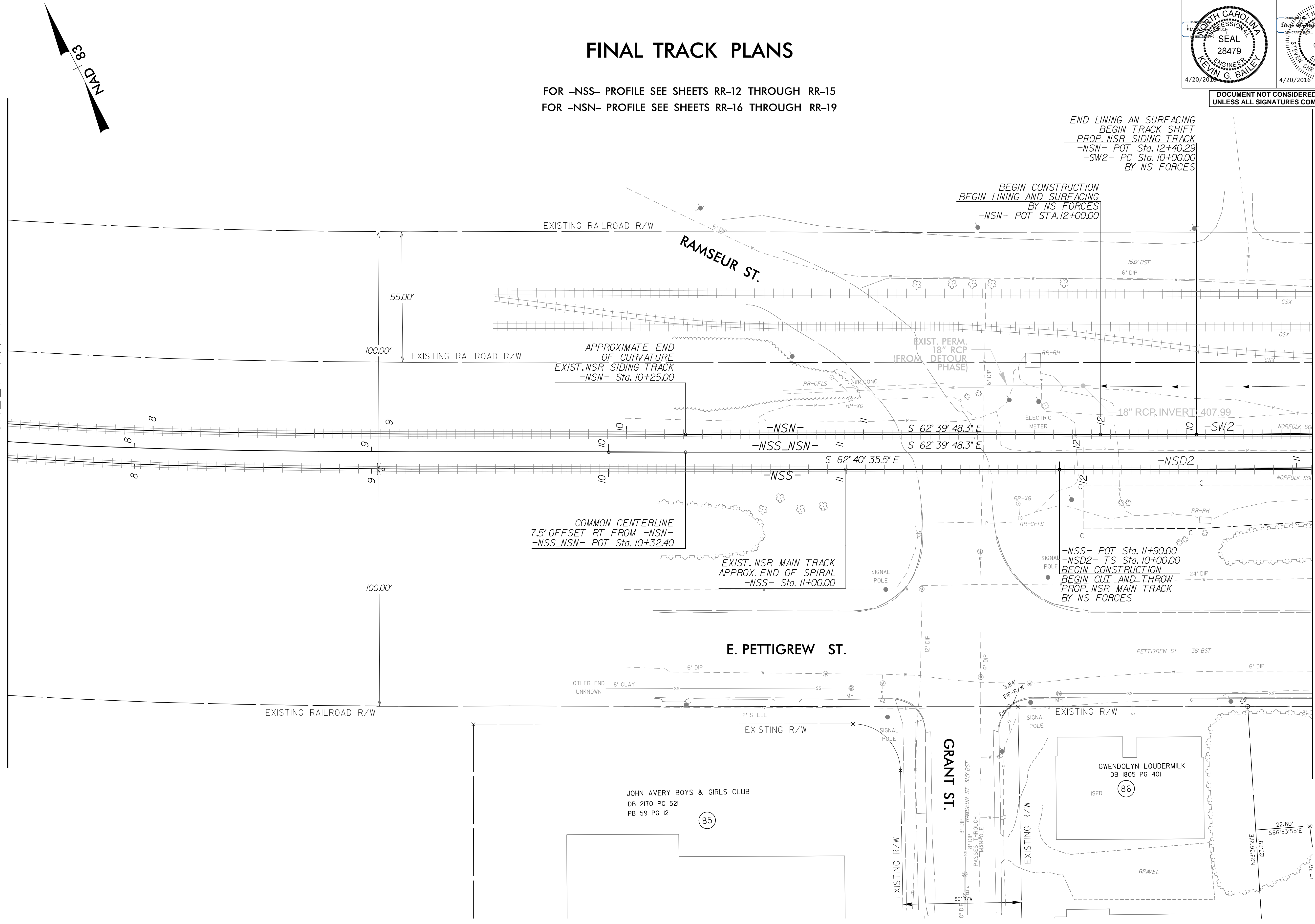
PROJECT REFERENCE NO. U-3308	SHEET NO. RR-5
RW SHEET NO.	
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

# FINAL TRACK PLANS

FOR -NSS- PROFILE SEE SHEETS RR-12 THROUGH RR-15  
FOR -NSN- PROFILE SEE SHEETS RR-16 THROUGH RR-19

MATCH LINE SHEET RR-4

MATCH LINE SHEET RR-6





NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

PROJECT REFERENCE NO. U-3308	SHEET NO. RR-6
RW SHEET NO.	
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

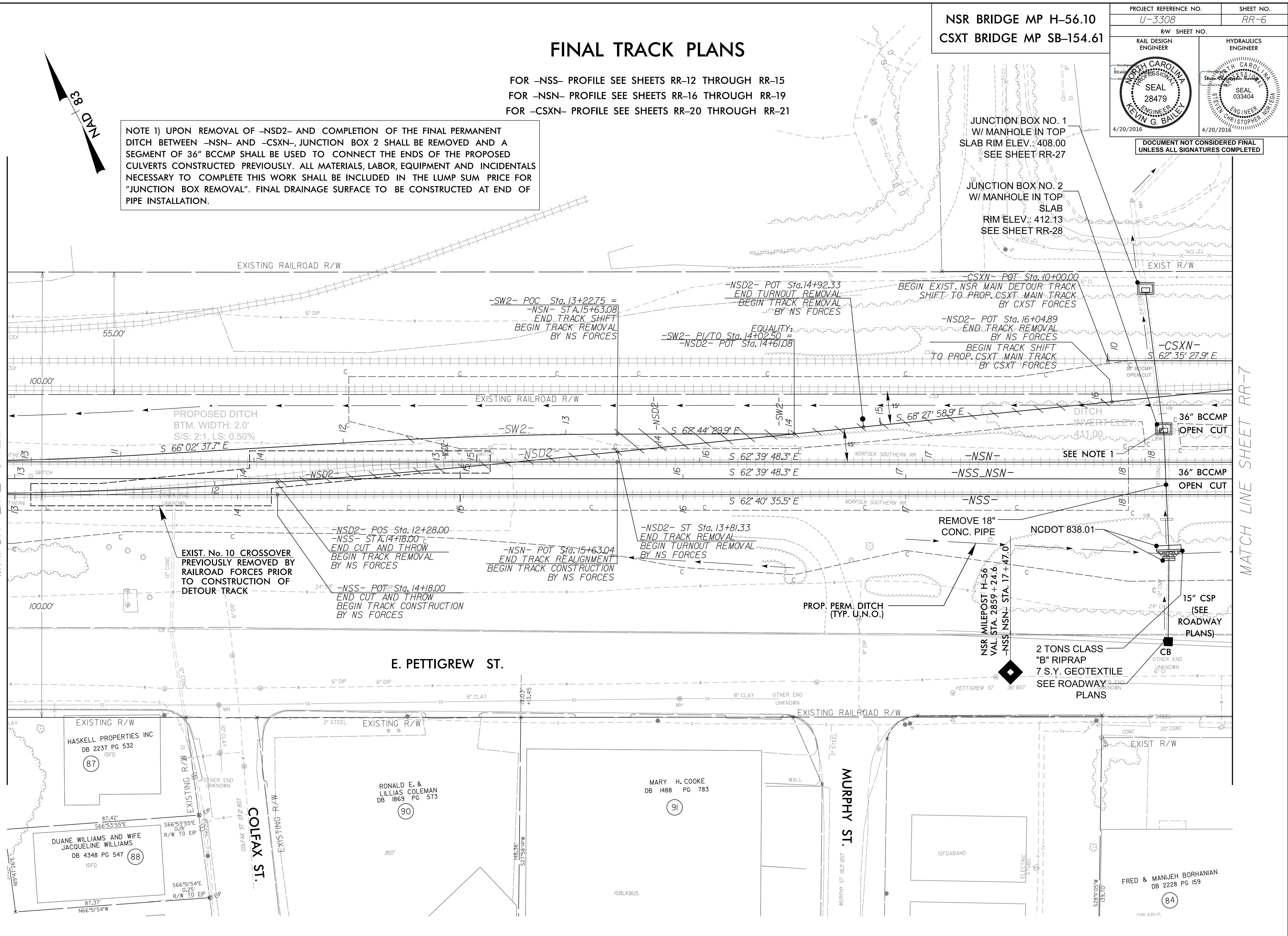
# FINAL TRACK PLANS

FOR -NSS- PROFILE SEE SHEETS RR-12 THROUGH RR-15  
FOR -NSN- PROFILE SEE SHEETS RR-16 THROUGH RR-19  
FOR -CSXN- PROFILE SEE SHEETS RR-20 THROUGH RR-21

NOTE 1) UPON REMOVAL OF -NSD2- AND COMPLETION OF THE FINAL PERMANENT DITCH BETWEEN -NSN- AND -CSXN-, JUNCTION BOX 2 SHALL BE REMOVED AND A SEGMENT OF 36" BCCMP SHALL BE USED TO CONNECT THE ENDS OF THE PROPOSED CULVERTS CONSTRUCTED PREVIOUSLY. ALL MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR "JUNCTION BOX REMOVAL". FINAL DRAINAGE SURFACE TO BE CONSTRUCTED AT END OF PIPE INSTALLATION.

MATCH LINE SHEET RR-5

MATCH LINE SHEET RR-7



E. PETTIGREW ST.

MURPHY ST.

COLFAX ST.

HASKELL PROPERTIES INC  
DB 2237 PG 532  
ISFD

DUANE WILLIAMS AND WIFE  
JACQUELINE WILLIAMS  
DB 4348 PG 547  
ISFD

RONALD E. &  
LILLIAS COLEMAN  
DB 1869 PG 573

MARY H. COOKE  
DB 1488 PG 783

FRED & MANJEH BORHANIAN  
DB 2228 PG 159



PROJECT REFERENCE NO. U-3308		SHEET NO. RR-7	
RW SHEET NO.		HYDRAULICS ENGINEER	
RAIL DESIGN ENGINEER		SEAL 033404	

# FINAL TRACK PLANS

FOR -NSS- PROFILE SEE SHEETS RR-12 THROUGH RR-15  
 FOR -NSN- PROFILE SEE SHEETS RR-16 THROUGH RR-19  
 FOR -CSXN- PROFILE SEE SHEETS RR-20 THROUGH RR-21

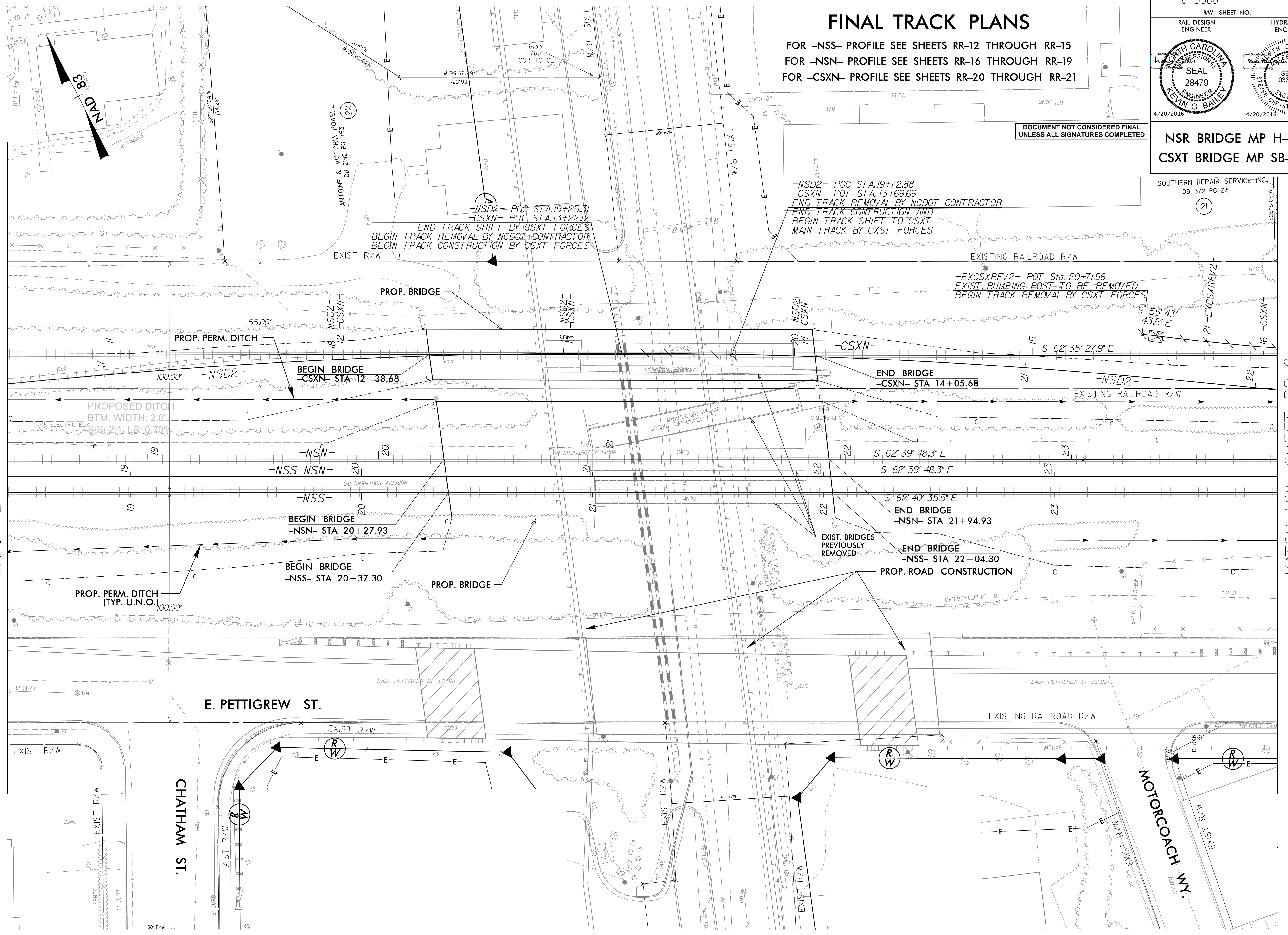
DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

NSR BRIDGE MP H-56.10  
 CSXT BRIDGE MP SB-154.61

SOUTHERN REPAIR SERVICE-INC.  
 DB 372 PG 215

MATCH LINE SHEET RR-6

MATCH LINE SHEET RR-8



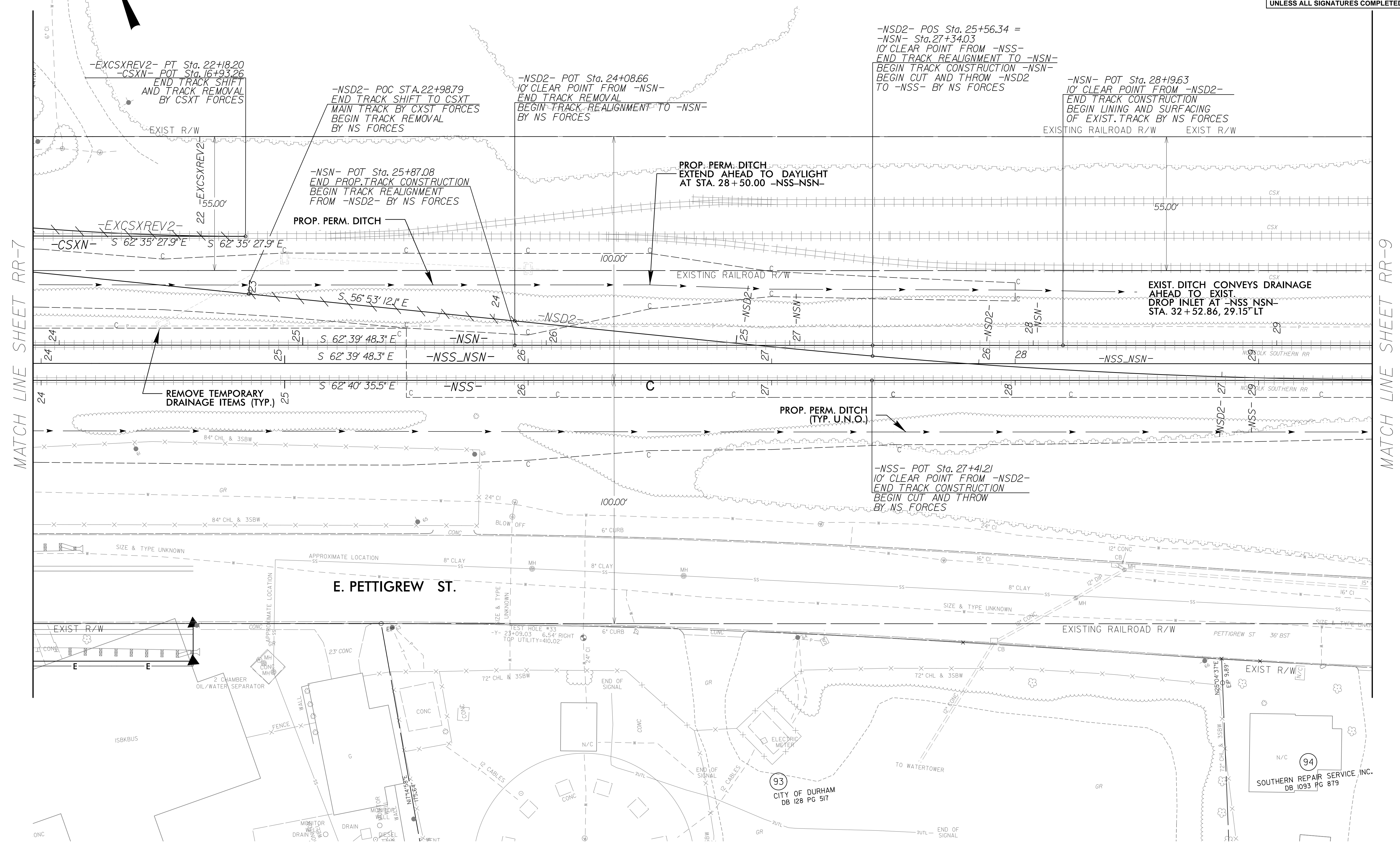


NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

PROJECT REFERENCE NO. U-3308		SHEET NO. RR-8	
RAIL DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

# FINAL TRACK PLANS

FOR -NSS- PROFILE SEE SHEETS RR-12 THROUGH RR-15  
 FOR -NSN- PROFILE SEE SHEETS RR-16 THROUGH RR-19  
 FOR -CSXN- PROFILE SEE SHEETS RR-20 THROUGH RR-21



94  
SOUTHERN REPAIR SERVICE, INC.  
DB 1093 PG 879



NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

PROJECT REFERENCE NO. U-3308	SHEET NO. RR-9
RW SHEET NO.	
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

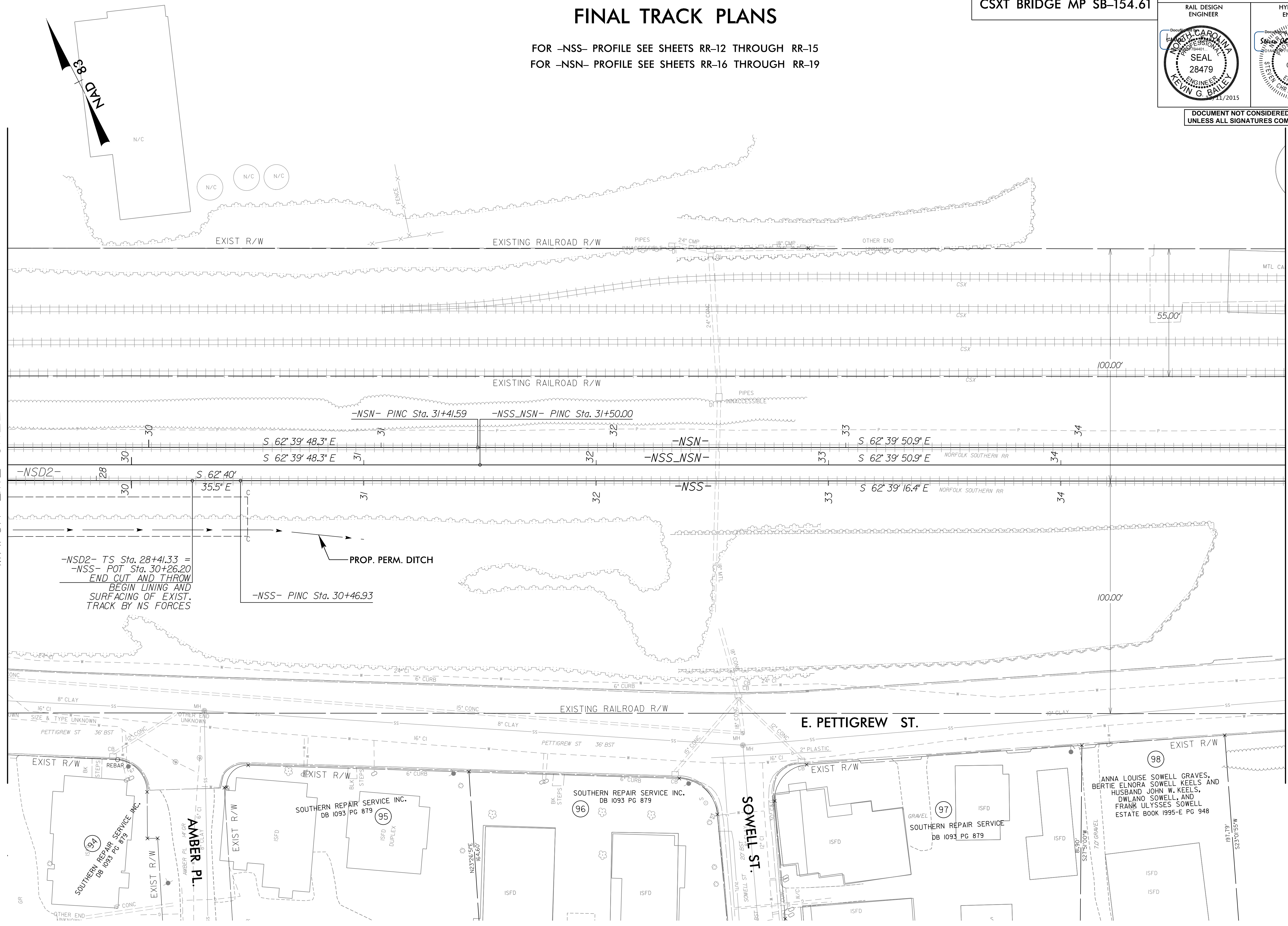
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

# FINAL TRACK PLANS

FOR -NSS- PROFILE SEE SHEETS RR-12 THROUGH RR-15  
FOR -NSN- PROFILE SEE SHEETS RR-16 THROUGH RR-19

MATCH LINE SHEET RR-8

MATCH LINE SHEET RR-10



-NSD2- TS Sta. 28+41.33 =  
-NSS- POT Sta. 30+26.20  
END CUT AND THROW  
BEGIN LINING AND  
SURFACING OF EXIST.  
TRACK BY NS FORCES

PROP. PERM. DITCH

-NSS- PINC Sta. 30+46.93

-NSN- PINC Sta. 31+41.59      -NSS-NSN- PINC Sta. 31+50.00

E. PETTIGREW ST.

SOWELL ST.

SOUTHERN REPAIR SERVICE INC.  
DB 1093 PG 879

SOUTHERN REPAIR SERVICE INC.  
DB 1093 PG 879

SOUTHERN REPAIR SERVICE INC.  
DB 1093 PG 879

SOUTHERN REPAIR SERVICE  
DB 1093 PG 879

ANNA LOUISE SOWELL GRAVES,  
BERTIE ELNORA SOWELL KEELS AND  
HUSBAND JOHN W. KEELS,  
DWLANO SOWELL, AND  
FRANK ULYSSES SOWELL  
ESTATE BOOK 1995-E PG 948

NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

PROJECT REFERENCE NO. U-3308	SHEET NO. RR-10
RW SHEET NO.	
RAIL DESIGN ENGINEER SEAL 28479 ENGINEER KEVIN G. BAILEY 11/11/2015	HYDRAULICS ENGINEER SEAL 033404 ENGINEER CHRISTOPHER 11/11/2015

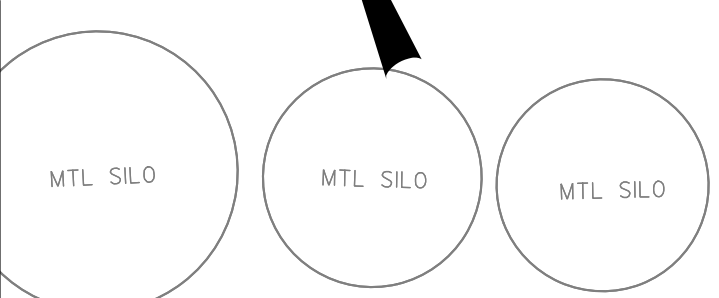
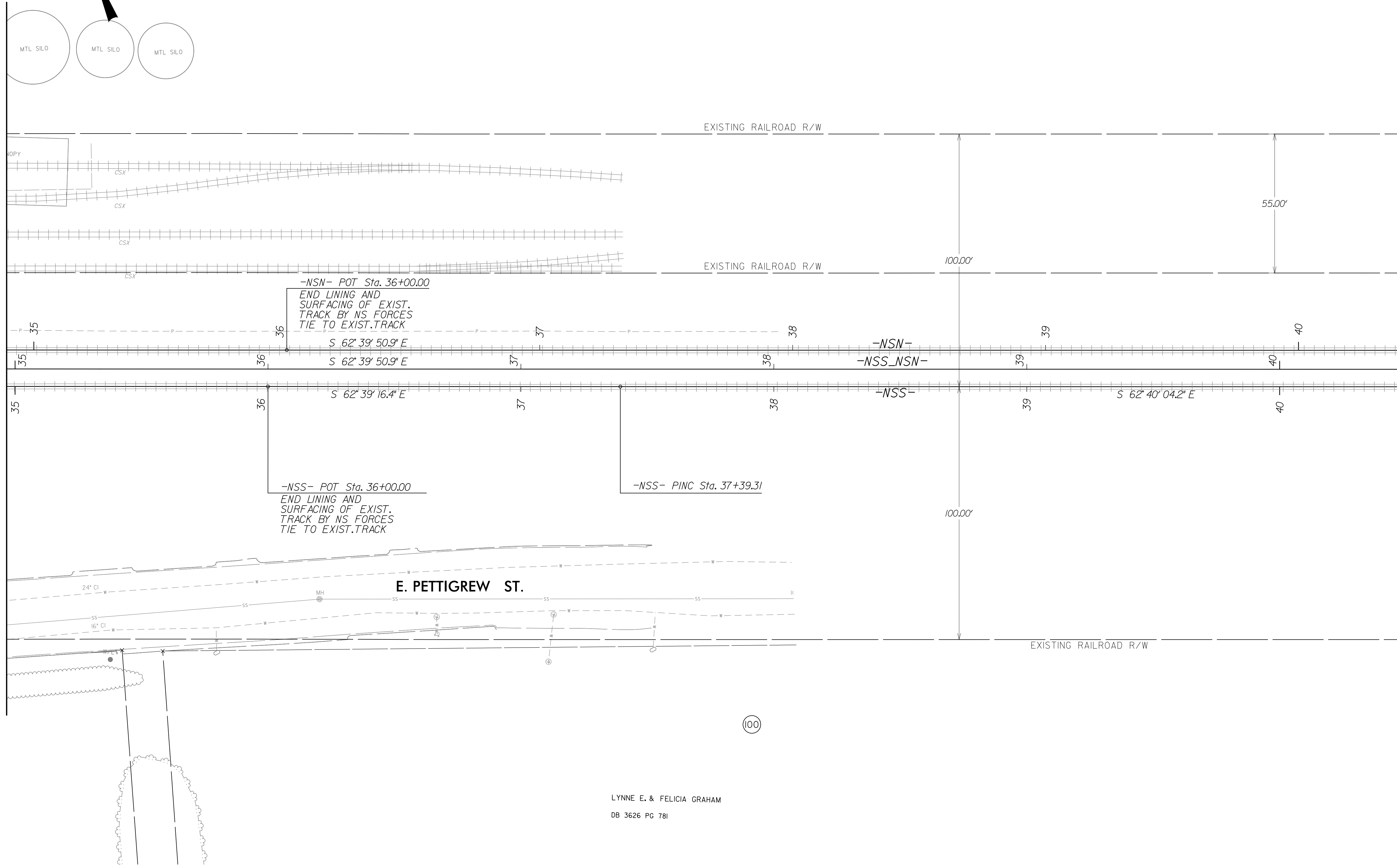
# FINAL TRACK PLANS

FOR -NSS- PROFILE SEE SHEETS RR-12 THROUGH RR-15  
FOR -NSN- PROFILE SEE SHEETS RR-16 THROUGH RR-19

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

MATCH LINE SHEET RR-9

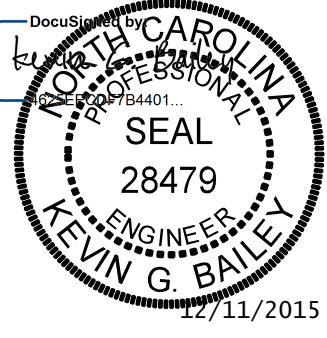
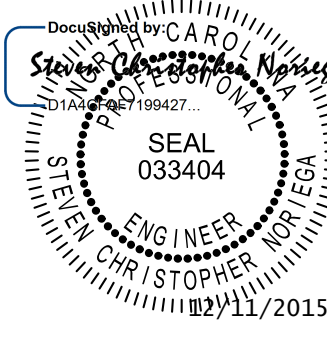
MATCH LINE SHEET RR-11





8/17/99

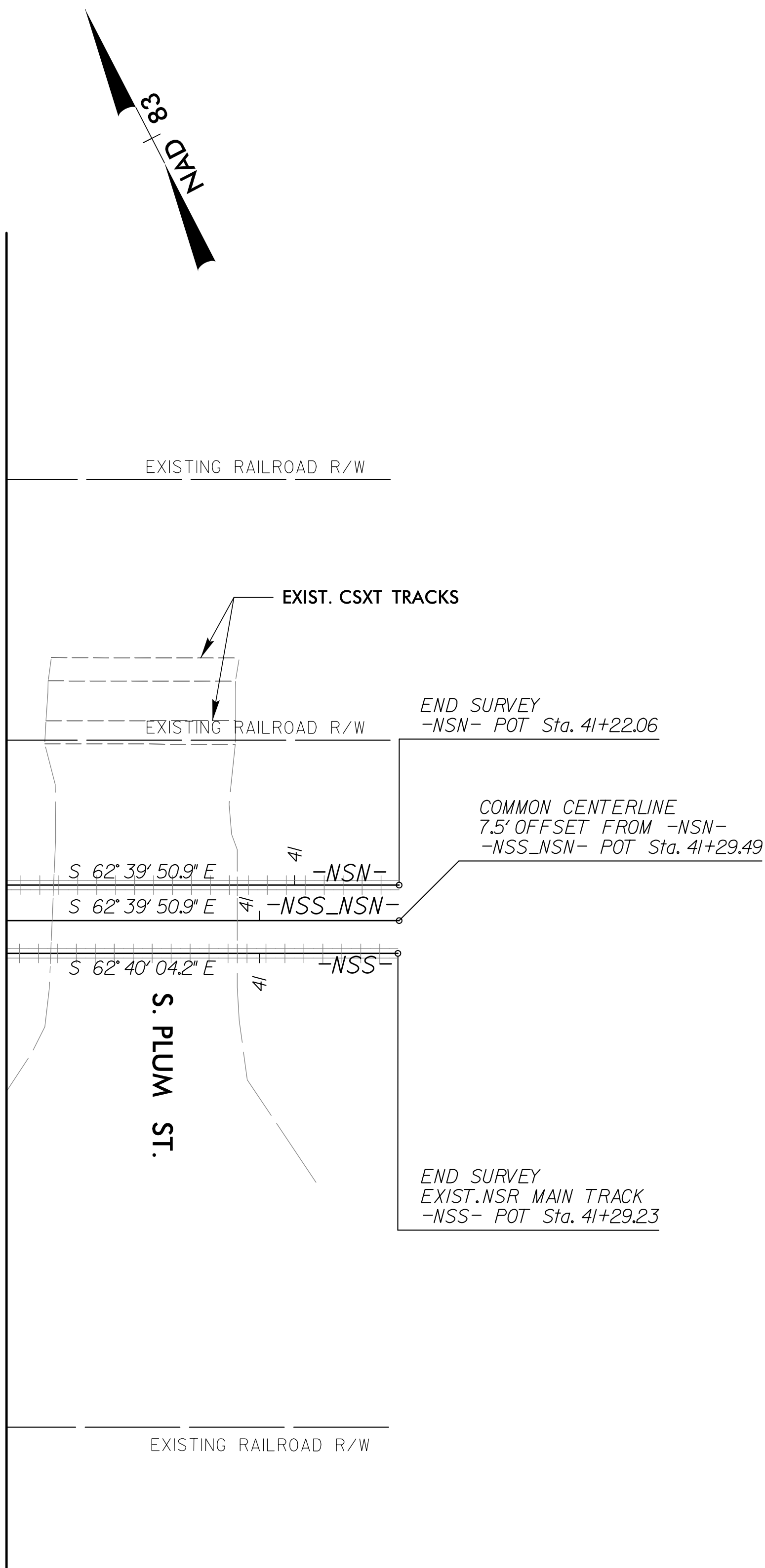
NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

PROJECT REFERENCE NO. U-3308	SHEET NO. RR-11
RW SHEET NO.	
RAIL DESIGN ENGINEER 	HYDRAULICS ENGINEER 

# FINAL TRACK PLANS

FOR -NSS- PROFILE SEE SHEETS RR-12 THROUGH RR-15  
FOR -NSN- PROFILE SEE SHEETS RR-16 THROUGH RR-19

MATCH LINE SHEET RR-10

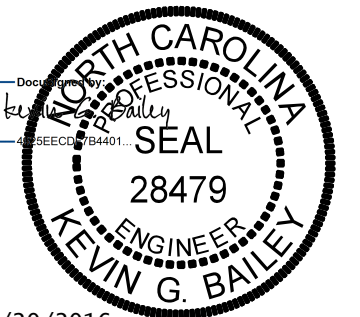
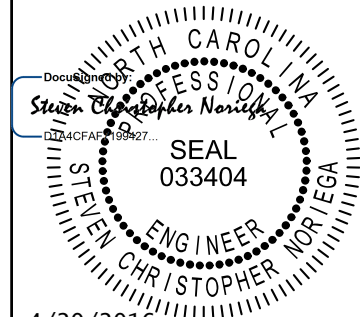


DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

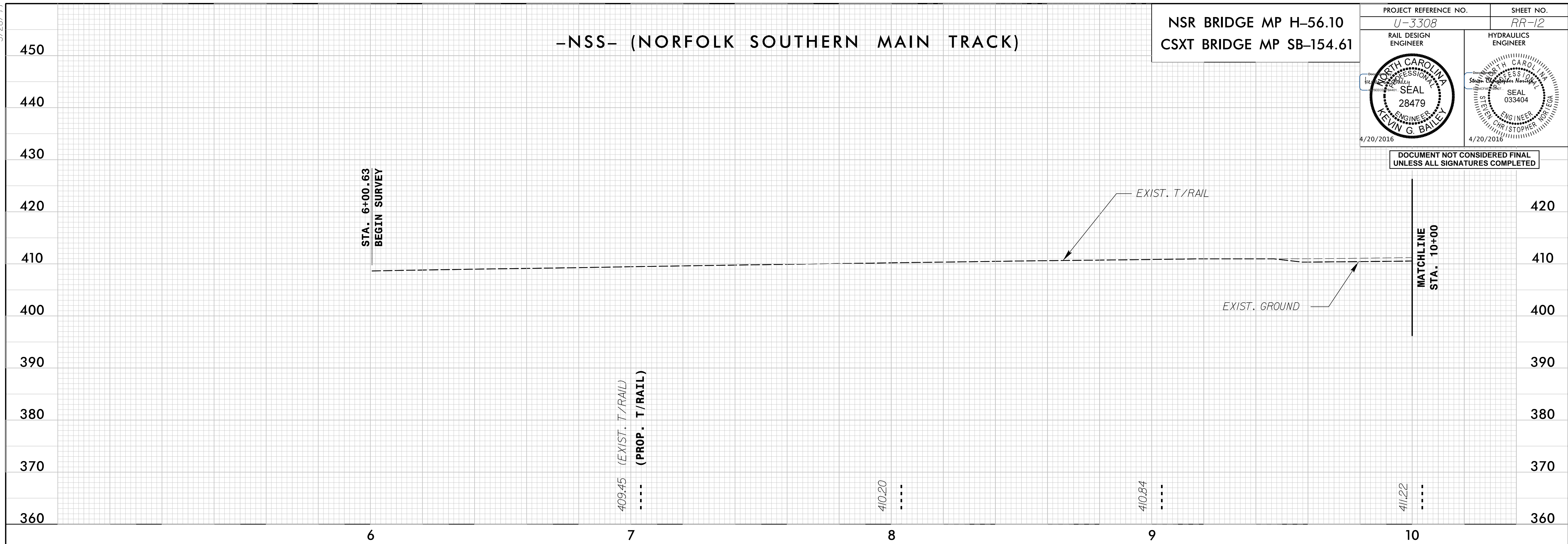
5/28/16

### -NSS- (NORFOLK SOUTHERN MAIN TRACK)

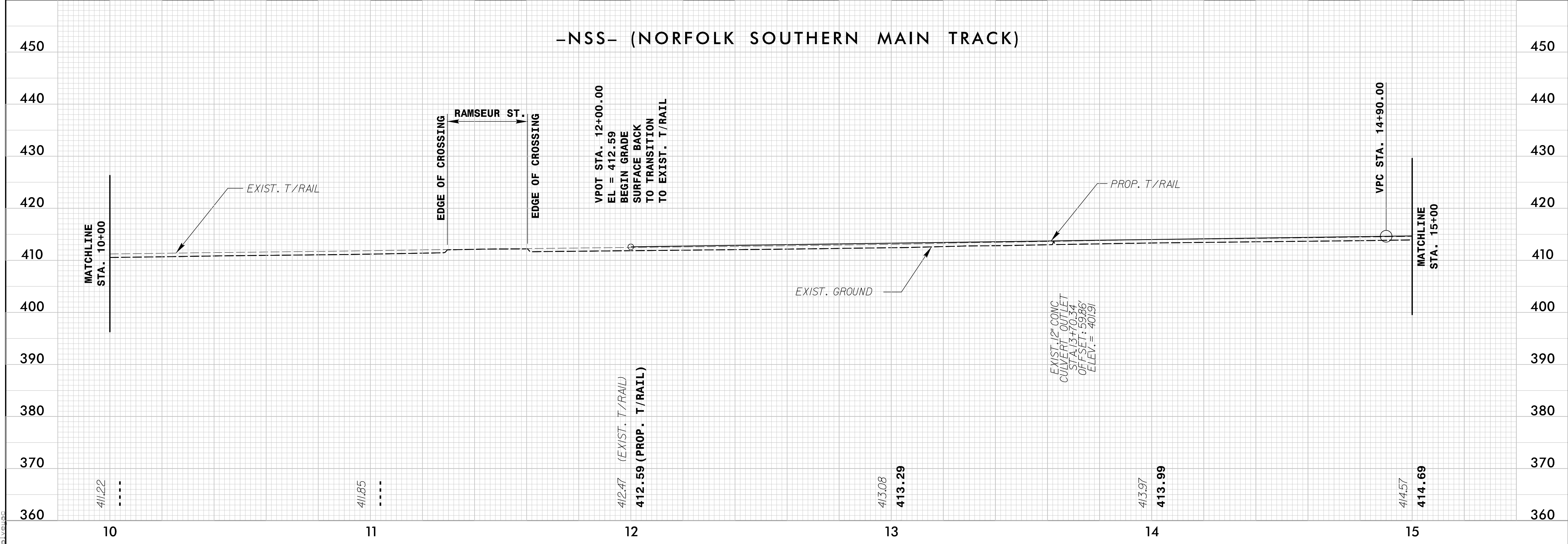
NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

PROJECT REFERENCE NO. U-3308	SHEET NO. RR-12
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER
	
4/20/2016	4/20/2016

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



### -NSS- (NORFOLK SOUTHERN MAIN TRACK)



4/19/2016 11:51:32 AM I:\station\track\RA\_u3308\_rdy.pfl\_sht.dgn



5/28/19

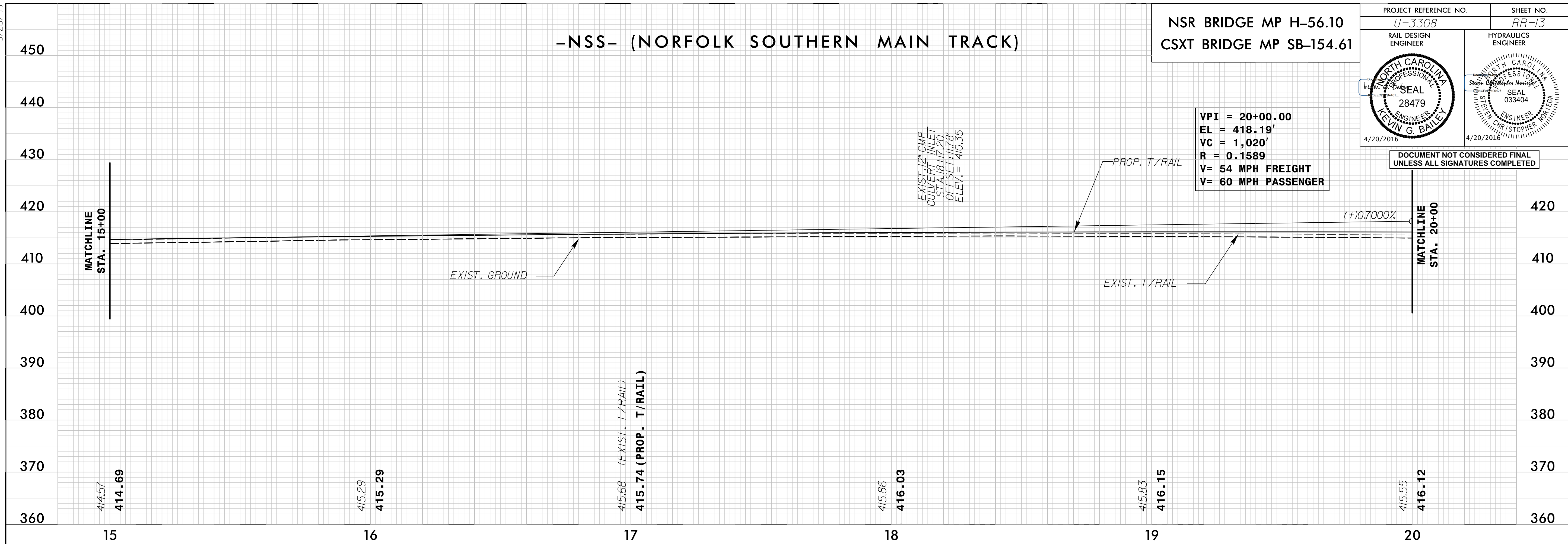
### -NSS- (NORFOLK SOUTHERN MAIN TRACK)

NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

PROJECT REFERENCE NO. U-3308	SHEET NO. RR-13
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

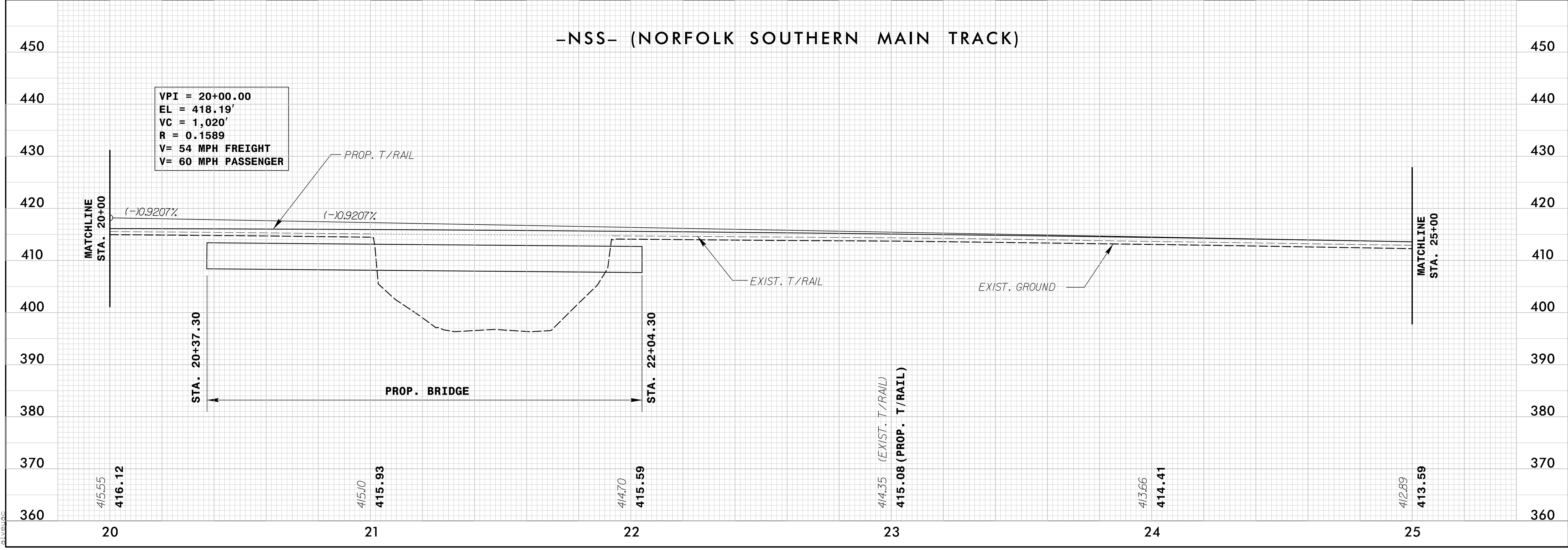
VPI = 20+00.00  
 EL = 418.19'  
 VC = 1,020'  
 R = 0.1589  
 V = 54 MPH FREIGHT  
 V = 60 MPH PASSENGER

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



### -NSS- (NORFOLK SOUTHERN MAIN TRACK)

VPI = 20+00.00  
 EL = 418.19'  
 VC = 1,020'  
 R = 0.1589  
 V = 54 MPH FREIGHT  
 V = 60 MPH PASSENGER



4/19/2016 1:18:00 PM C:\Users\j3251\station\track\RAA\_u3308\_rdy.pfl\_sht.dgn

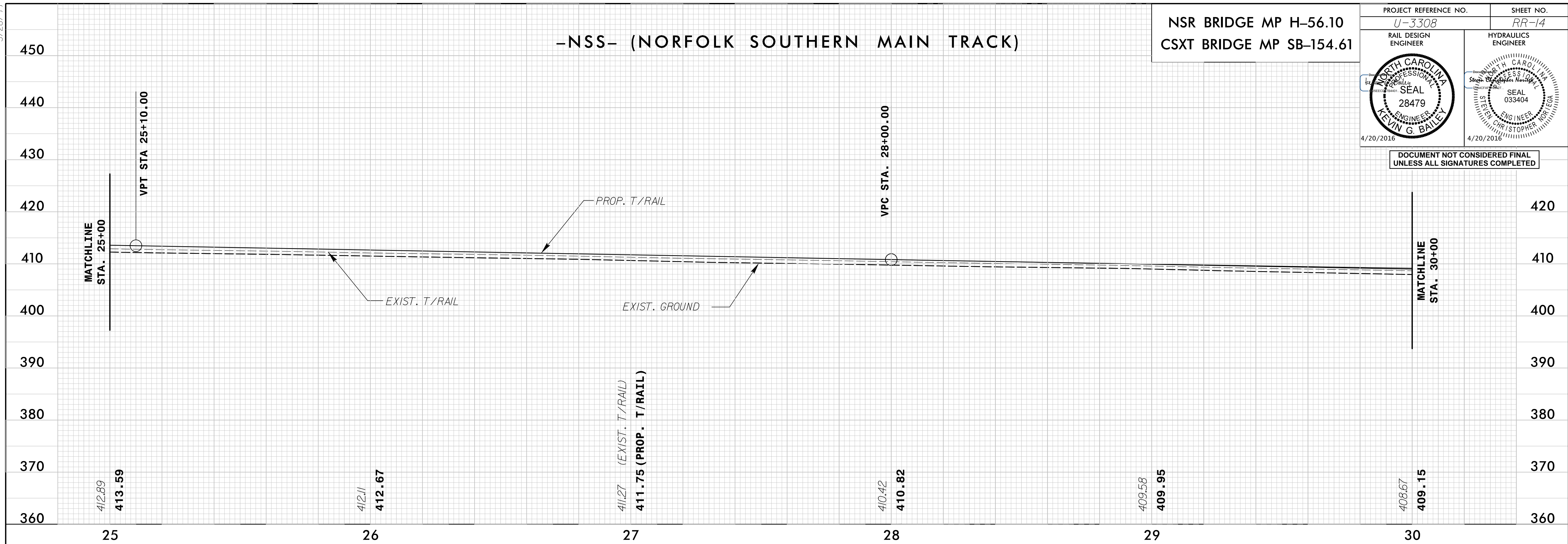
5/28/16

### -NSS- (NORFOLK SOUTHERN MAIN TRACK)

NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

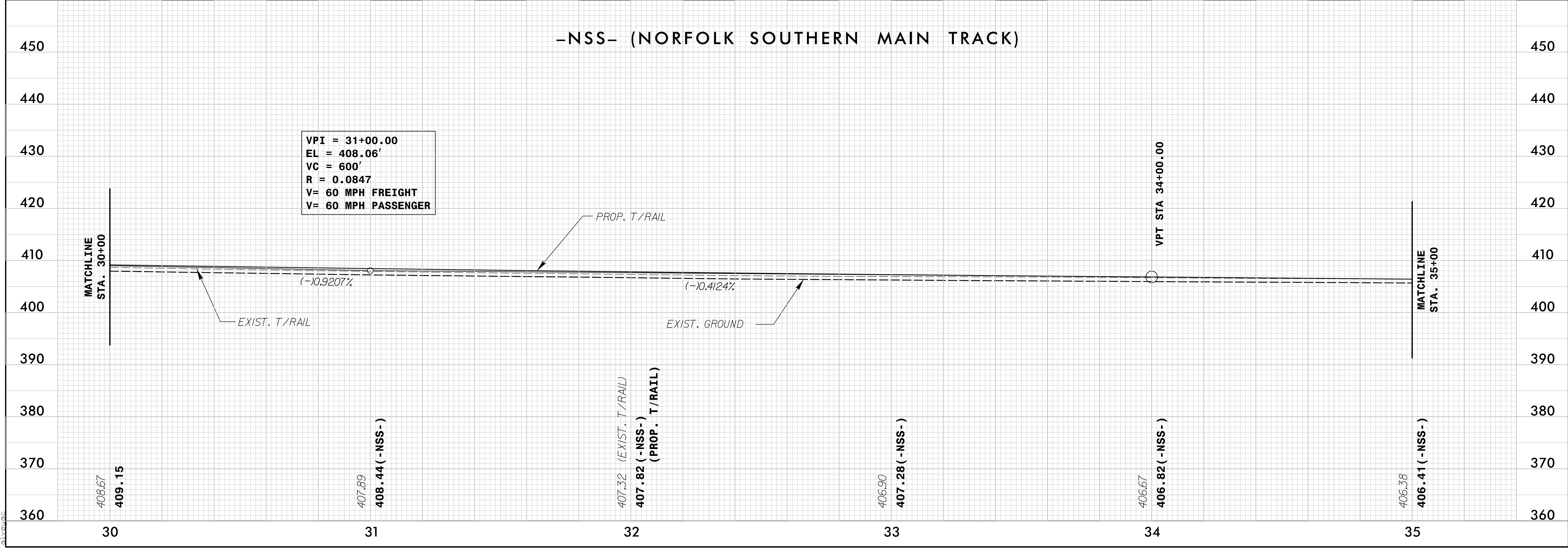
PROJECT REFERENCE NO. U-3308	SHEET NO. RR-14
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



### -NSS- (NORFOLK SOUTHERN MAIN TRACK)

VPI = 31+00.00  
 EL = 408.06'  
 VC = 600'  
 R = 0.0847  
 V = 60 MPH FREIGHT  
 V = 60 MPH PASSENGER

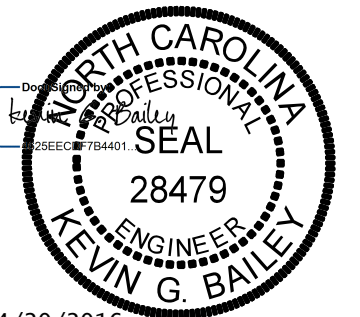
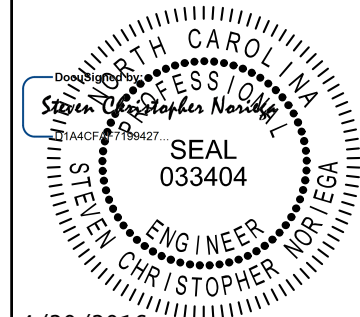


4/19/2016 1:18:00 PM C:\Users\jason\Documents\Track\RAA\_u3308\_rdy.pfl\_sht.dgn

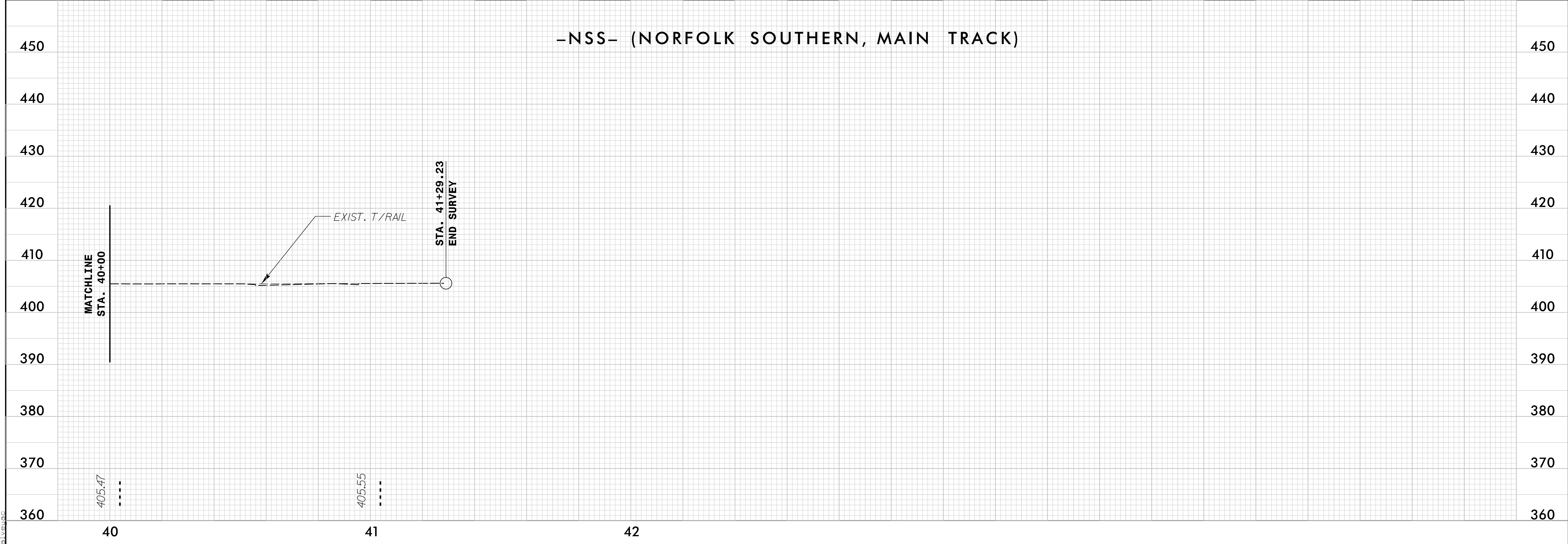
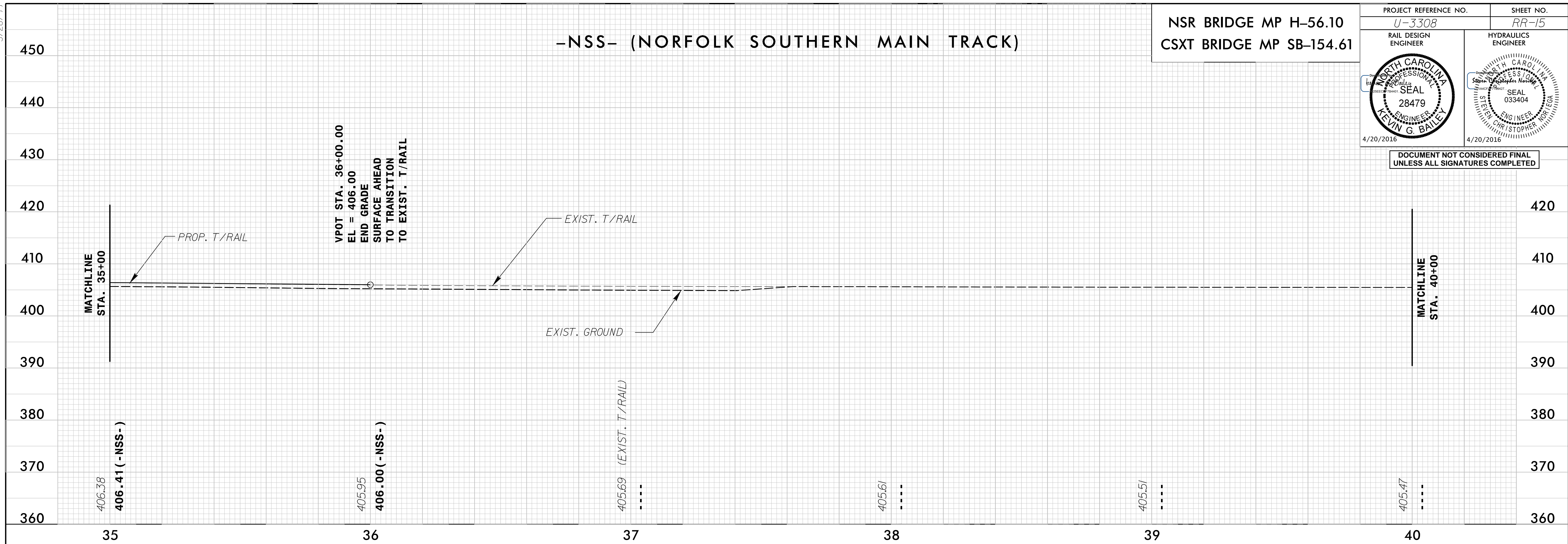


5/28/19

NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

PROJECT REFERENCE NO. U-3308	SHEET NO. RR-15
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER
	
4/20/2016	4/20/2016

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



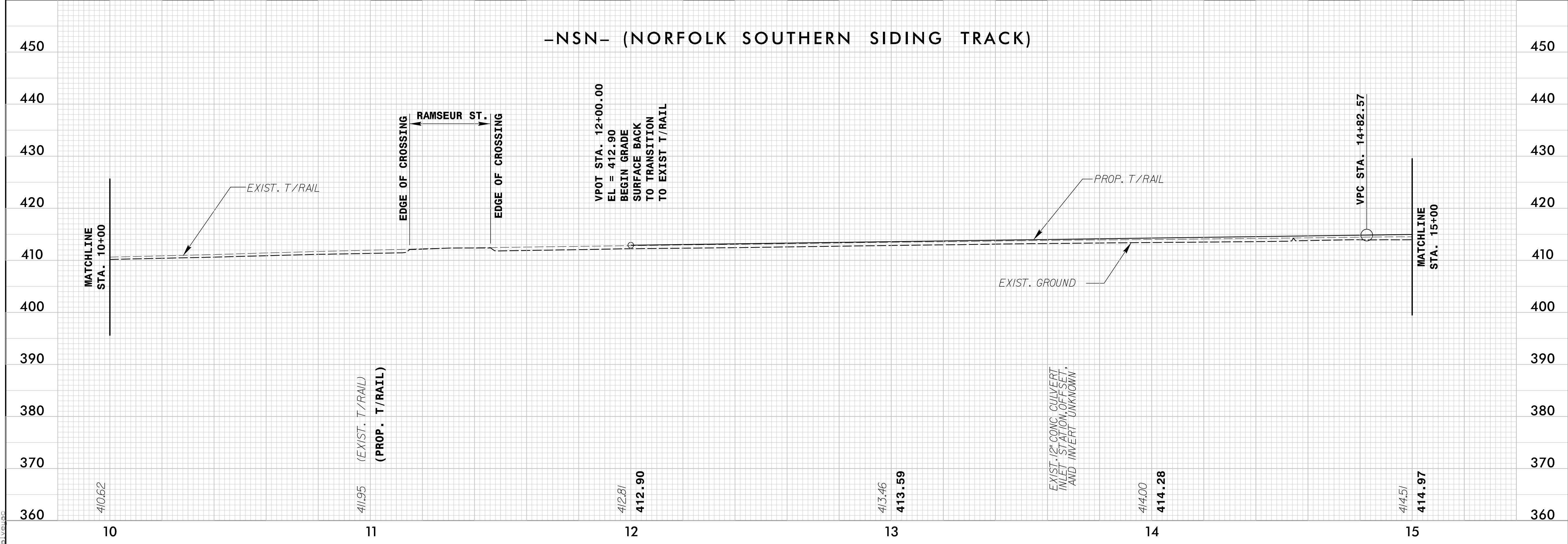
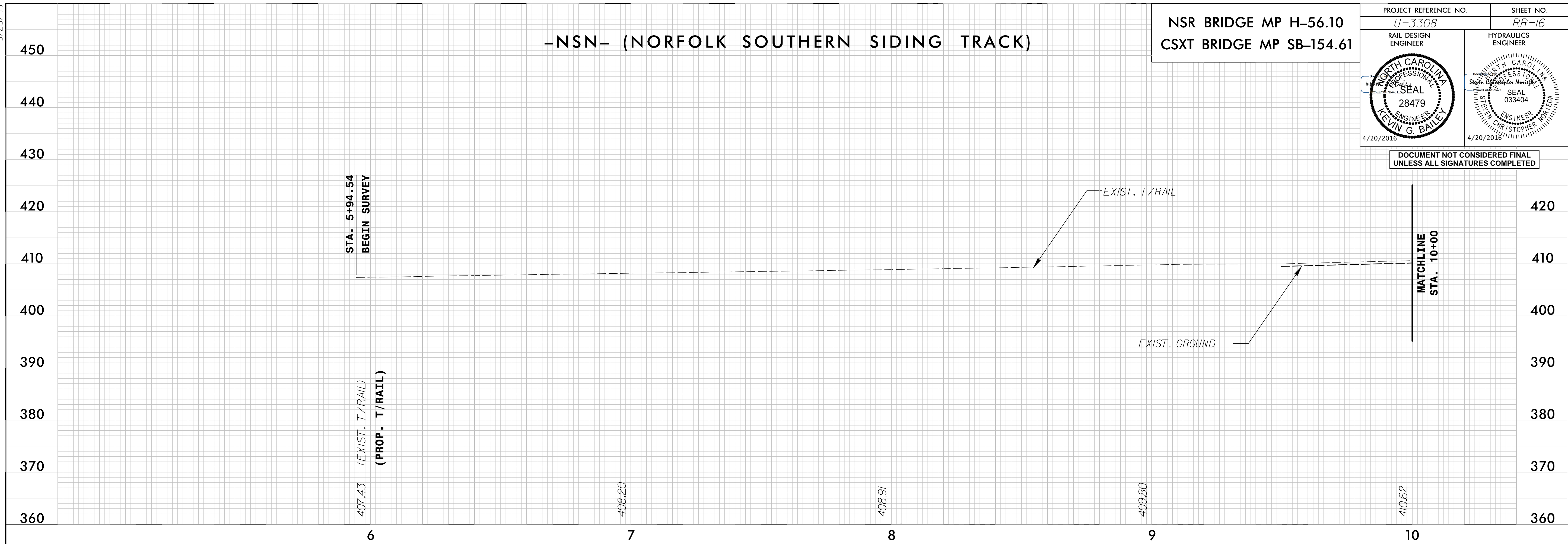
4/18/2016 11:51:32 AM \\station\track\RAA\_u3308\_rdy.pfl\_sht.dgn

5/28/99

NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

PROJECT REFERENCE NO. U-3308	SHEET NO. RR-16
RAIL DESIGN ENGINEER KEYVIN G. BAILEY SEAL 28479 4/20/2016	HYDRAULICS ENGINEER STEPHEN CHRISTOPHER SEAL 033404 4/20/2016

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



4/19/2016  
 I:\projects\2513251\station\track\RAA\_u3308\_rdy.pfl\_sht.dgn  
 2:16:06 PM  
 2/16/2016



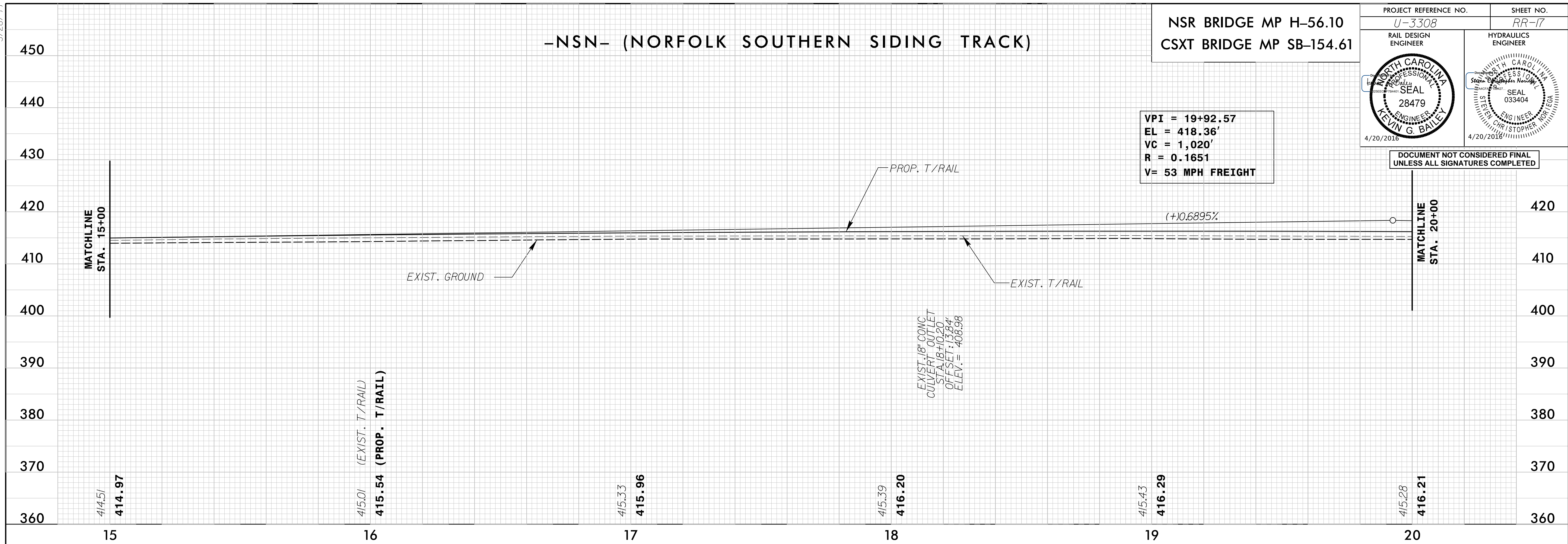
5/28/19

NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

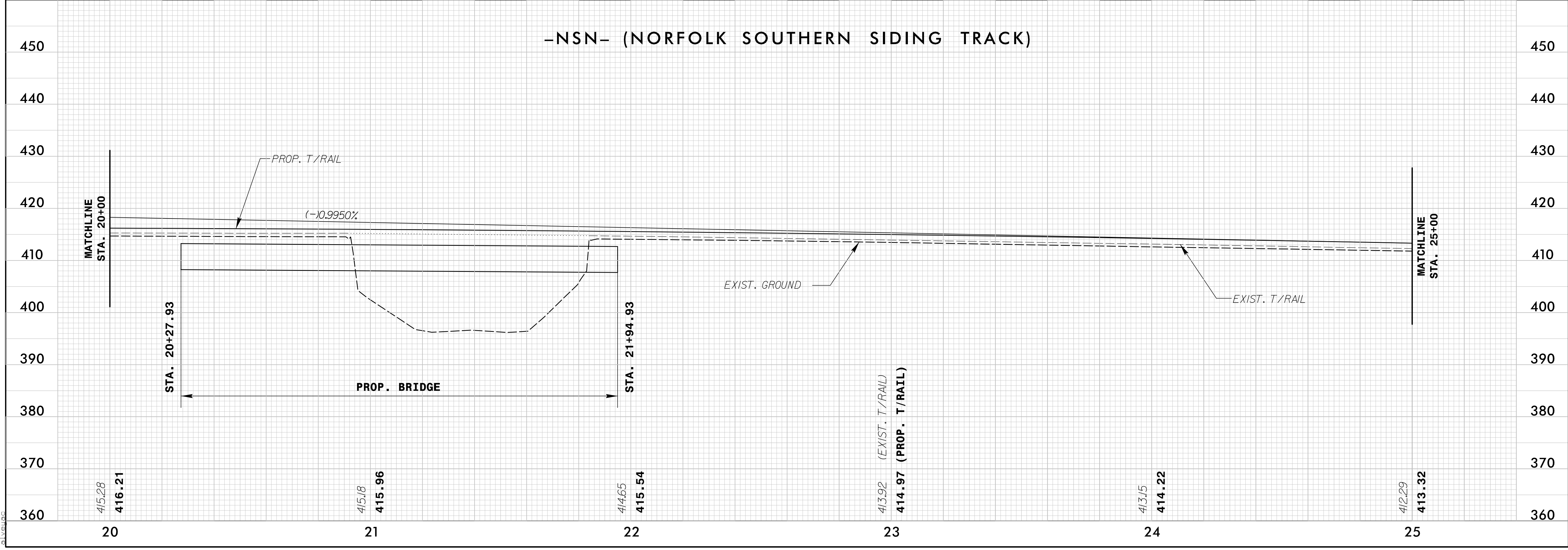
PROJECT REFERENCE NO. <i>U-3308</i>	SHEET NO. <i>RR-17</i>
RAIL DESIGN ENGINEER 	HYDRAULICS ENGINEER 

VPI = 19+92.57  
EL = 418.36'  
VC = 1,020'  
R = 0.1651  
V = 53 MPH FREIGHT

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



-NSN- (NORFOLK SOUTHERN SIDING TRACK)



4/18/2019 1:18:00 PM C:\Users\j3251\station\track\FWA\_u3308\_rdy.pfl\_sht.dgn

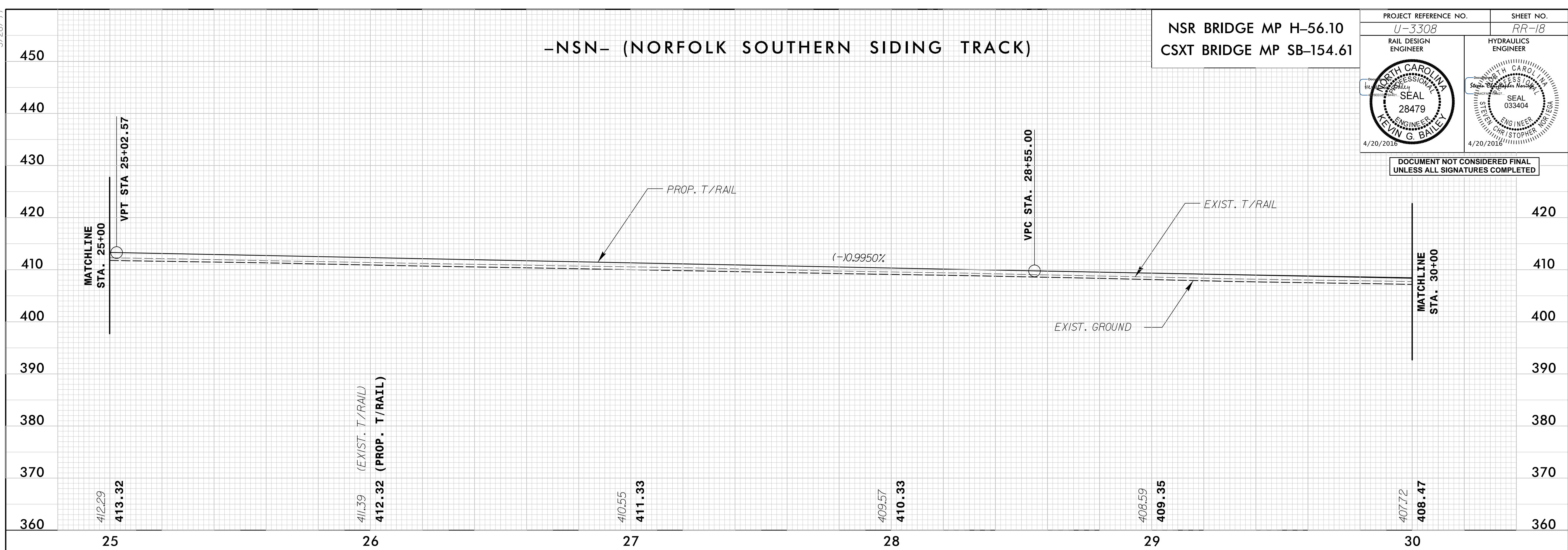
5/28/19

### -NSN- (NORFOLK SOUTHERN SIDING TRACK)

NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

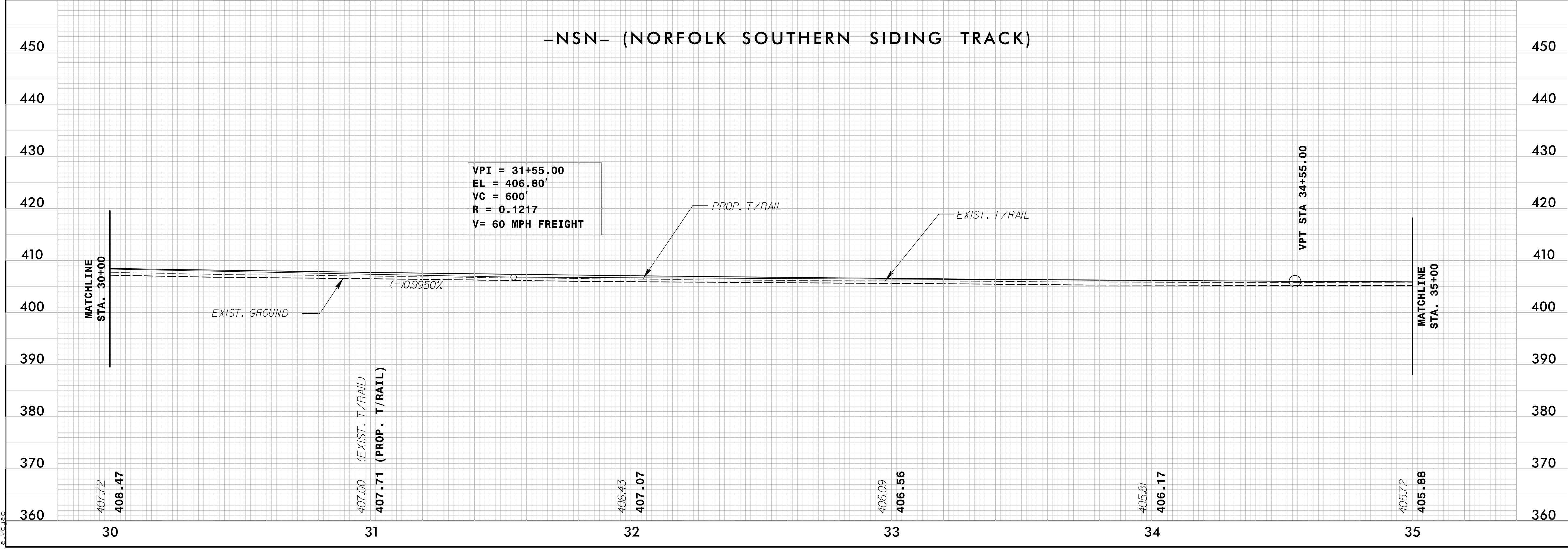
PROJECT REFERENCE NO. U-3308	SHEET NO. RR-18
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



### -NSN- (NORFOLK SOUTHERN SIDING TRACK)

VPI = 31+55.00  
 EL = 406.80'  
 VC = 600'  
 R = 0.1217  
 V = 60 MPH FREIGHT



4/19/2016 11:18:00 AM C:\Users\j2513251\station\track\FWA\_u3308\_rdy.pfl\_sht.dgn



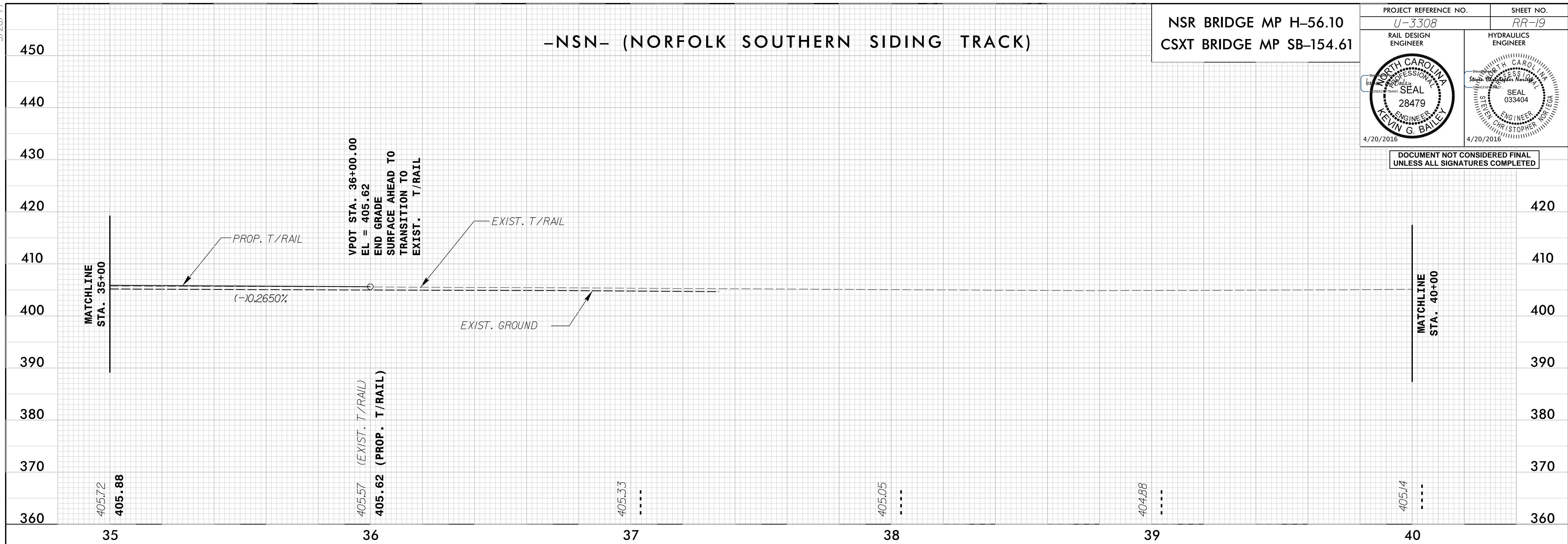
5/28/99

### -NSN- (NORFOLK SOUTHERN SIDING TRACK)

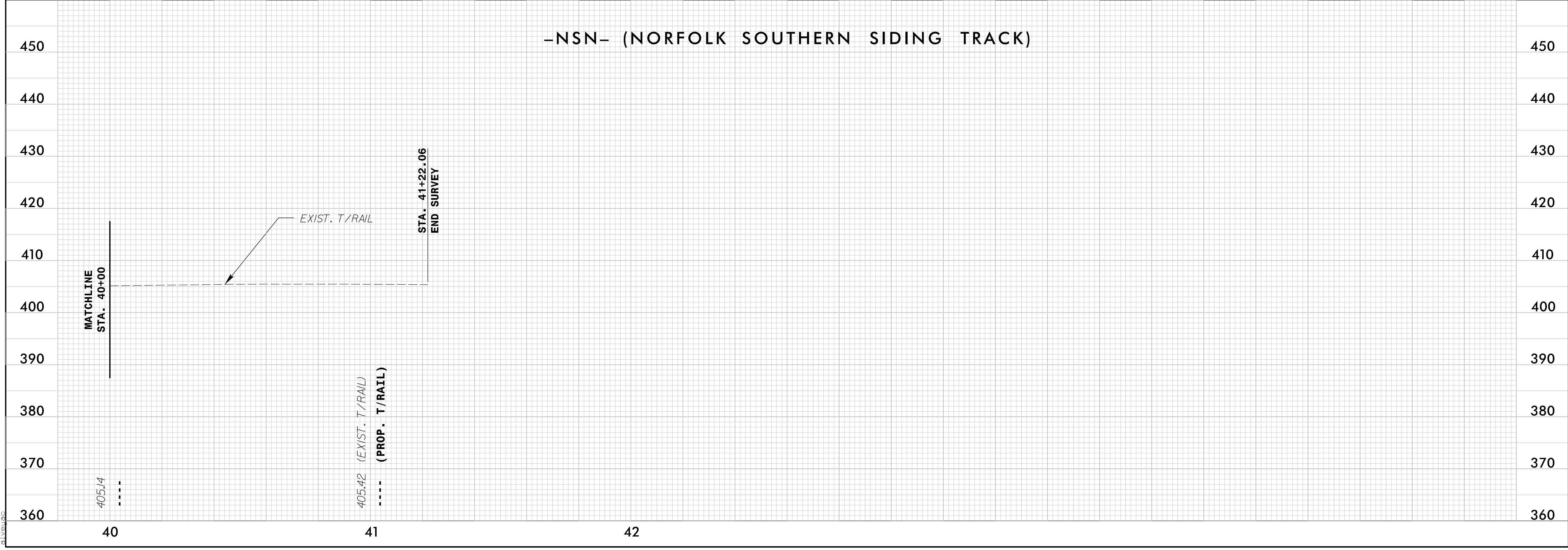
NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

PROJECT REFERENCE NO. U-3308	SHEET NO. RR-19
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



### -NSN- (NORFOLK SOUTHERN SIDING TRACK)



4/19/2016 11:18:00 AM C:\Users\j3251\station\track\RAA\_u3308\_rdy.pfl\_sht.dgn

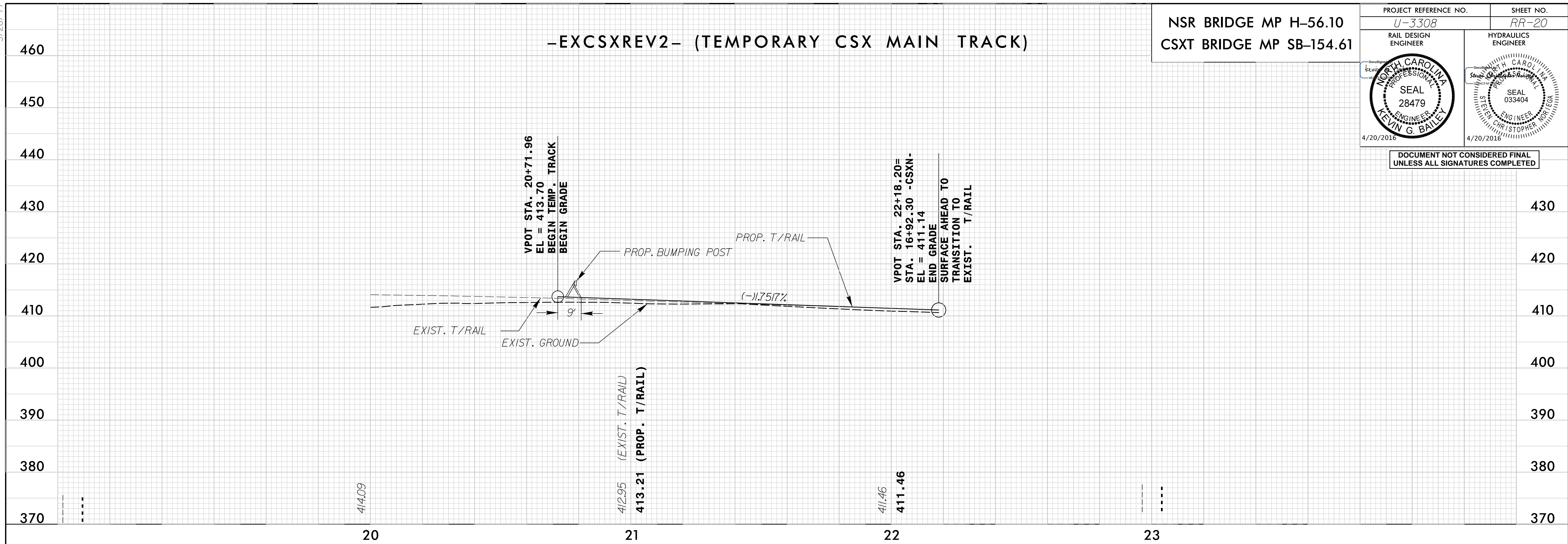
5/28/16

### -EXCSXREV2- (TEMPORARY CSX MAIN TRACK)

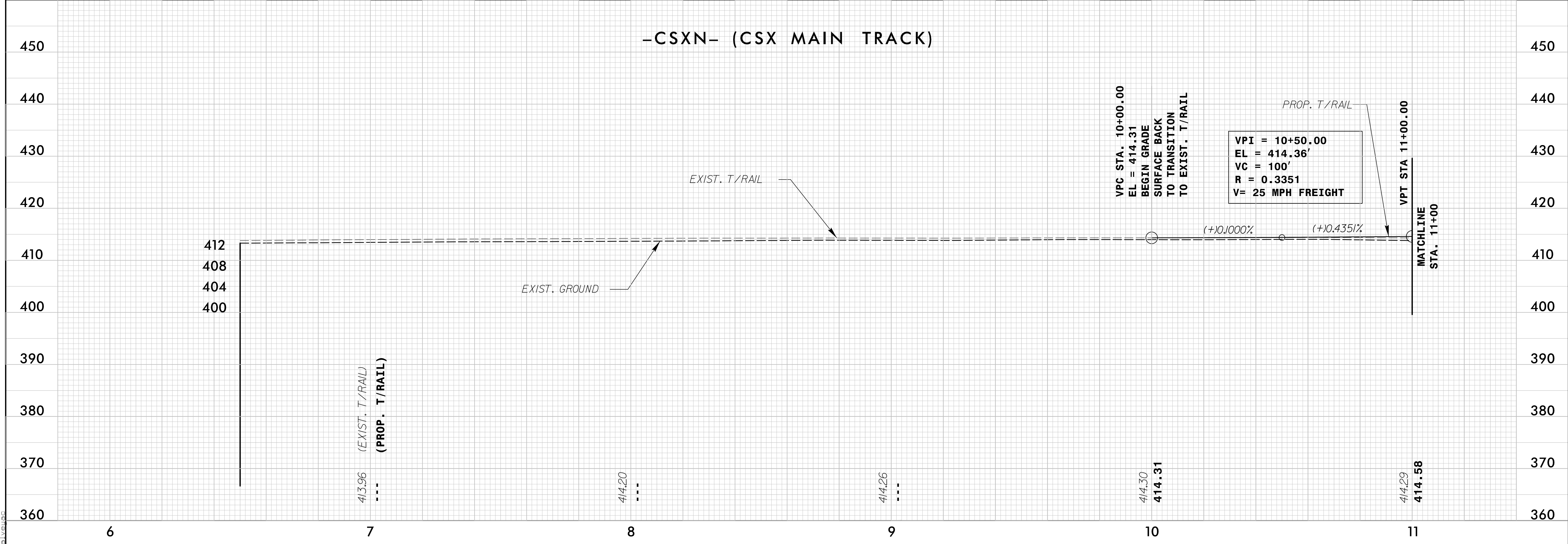
NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

PROJECT REFERENCE NO. U-3308	SHEET NO. RR-20
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



### -CSXN- (CSX MAIN TRACK)



4/19/2016 11:53:25 AM \\station\track\FWA\_u3308\_rdy.pfl\_sht.dgn

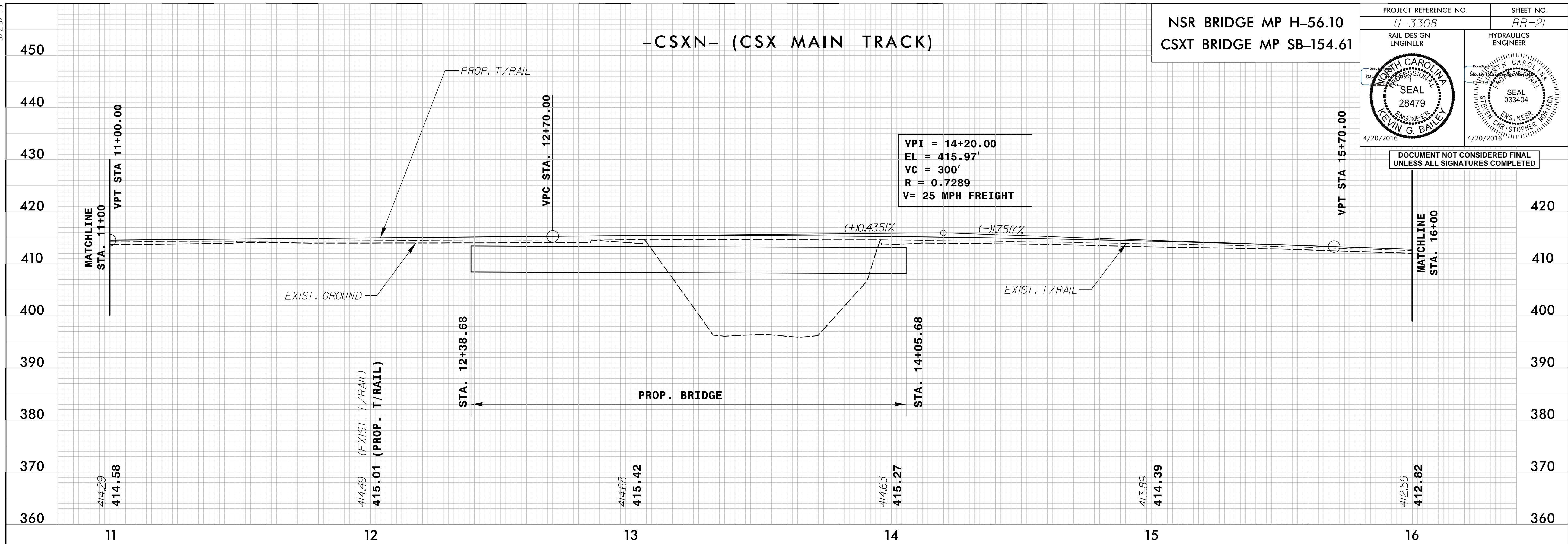


5/28/19

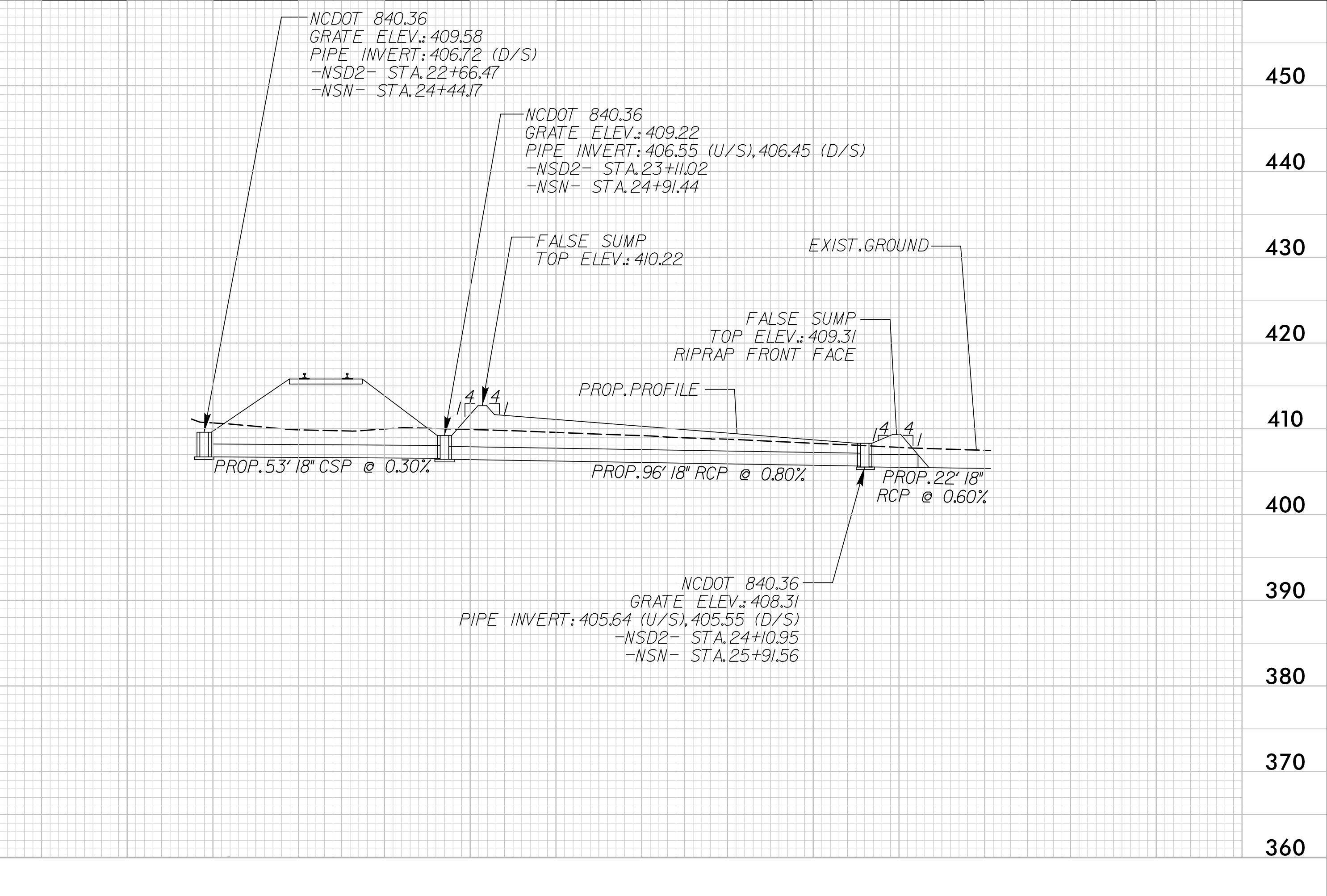
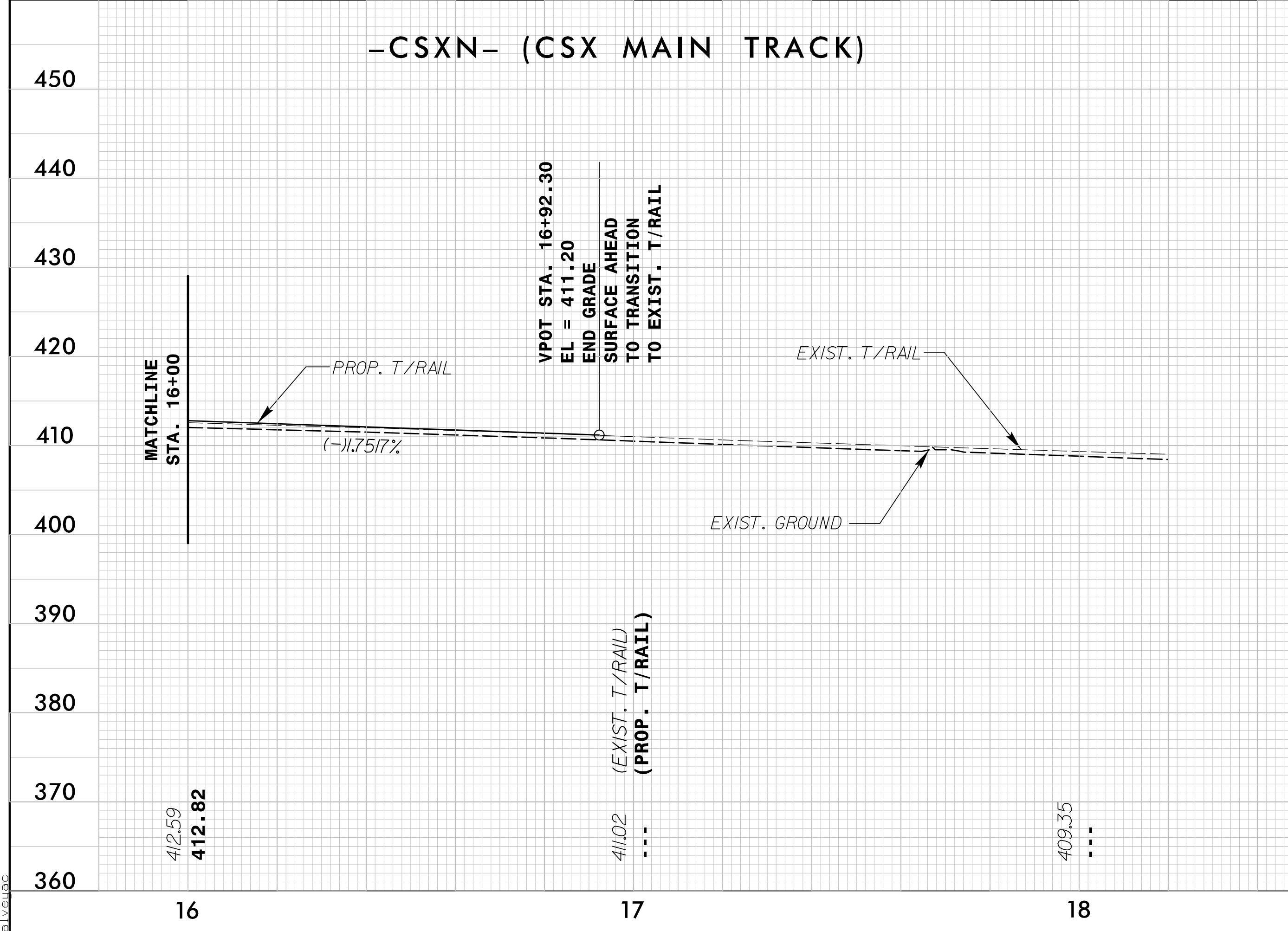
NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

PROJECT REFERENCE NO. U-3308	SHEET NO. RR-21
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



-CSXN- (CSX MAIN TRACK)



4/18/2016 11:58:00 AM C:\Users\jg513251\station\track\RW4\_u3308\_rdy.pfl\_sht.dgn

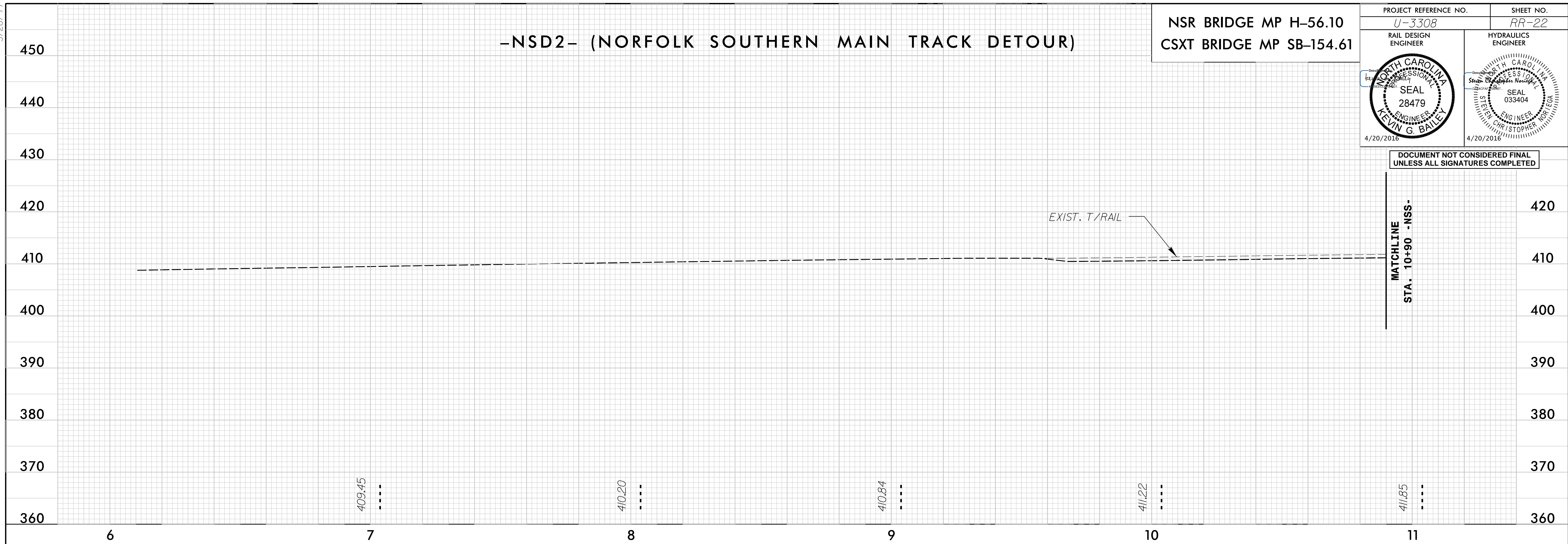
5/28/16

# -NSD2- (NORFOLK SOUTHERN MAIN TRACK DETOUR)

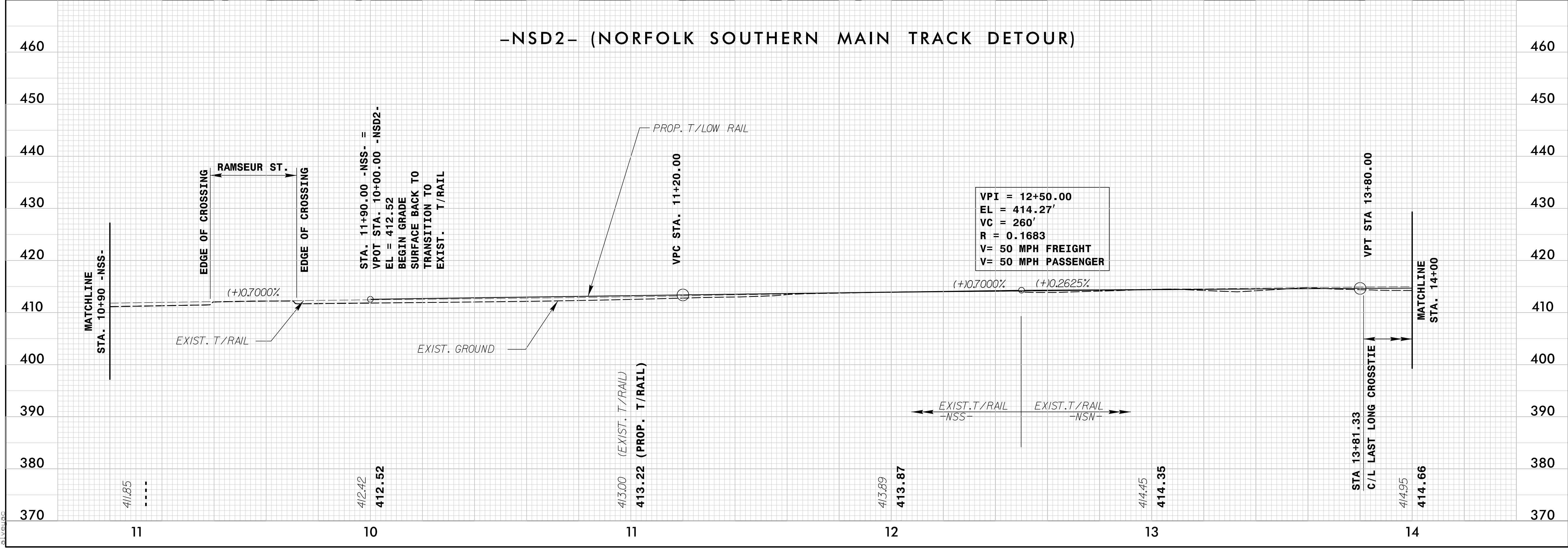
NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

PROJECT REFERENCE NO. U-3308	SHEET NO. RR-22
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



# -NSD2- (NORFOLK SOUTHERN MAIN TRACK DETOUR)



4/19/2016 1:18:00 PM C:\Users\jason\Documents\Track\RAA\_u3308\_rdy.pfl\_sht.dgn



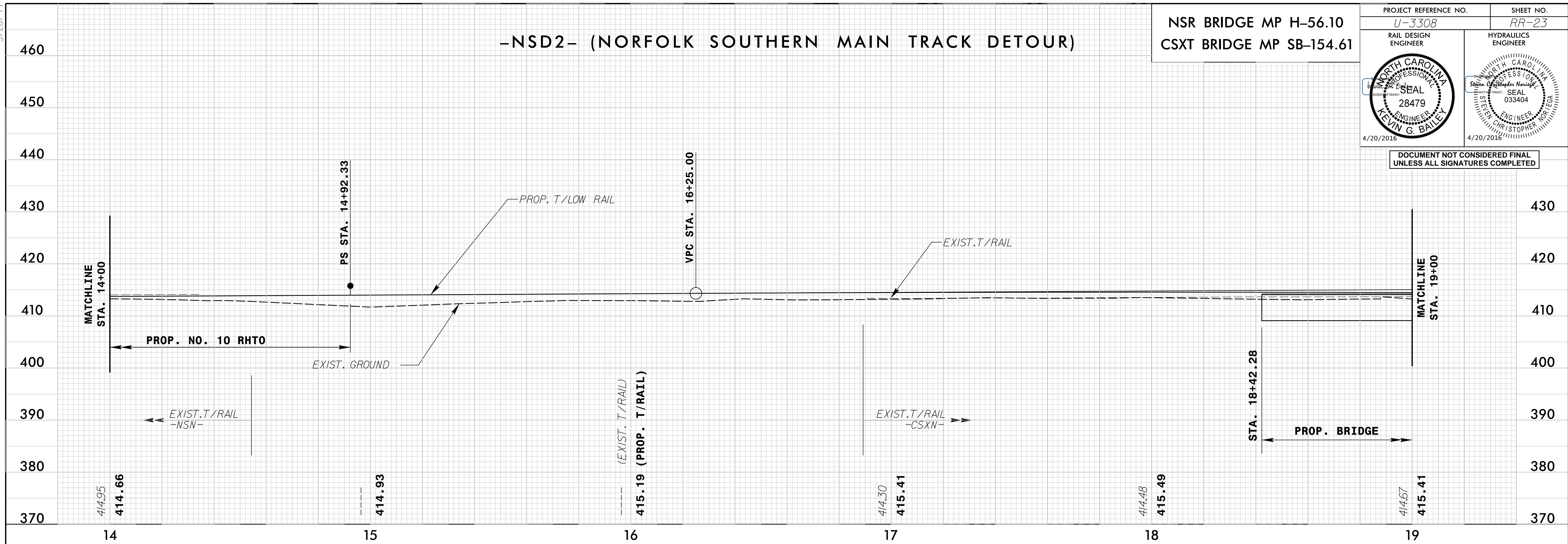
5/28/19

### -NSD2- (NORFOLK SOUTHERN MAIN TRACK DETOUR)

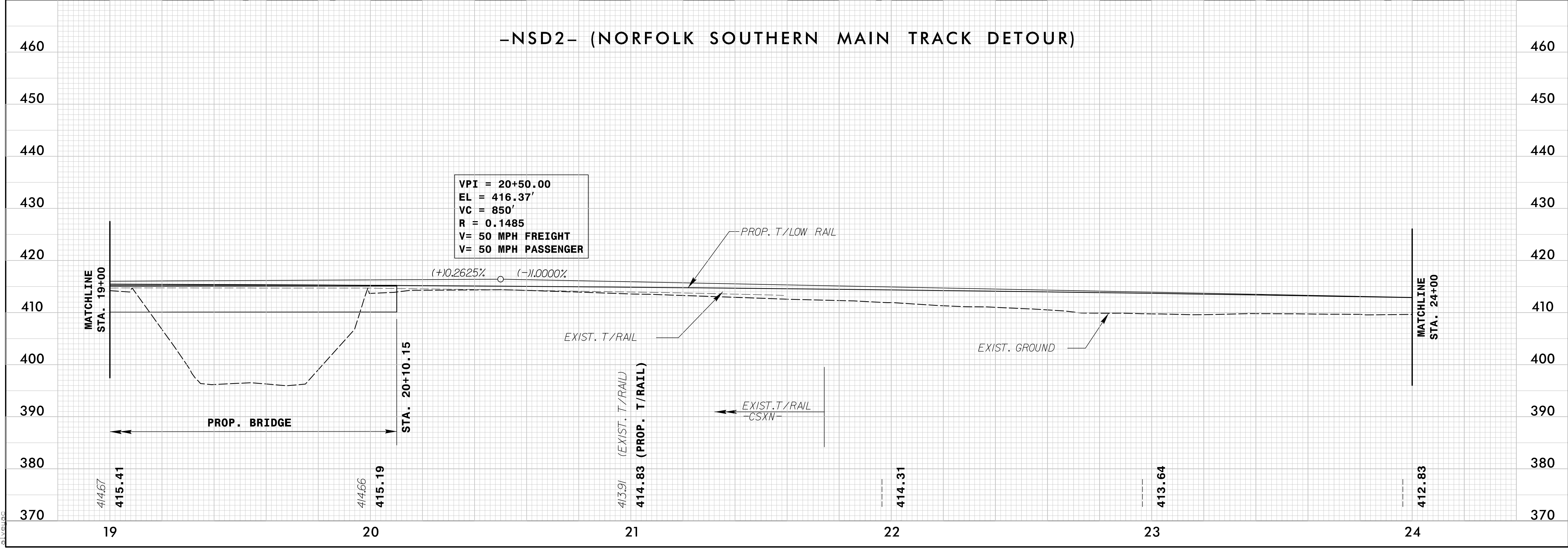
NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

PROJECT REFERENCE NO. U-3308	SHEET NO. RR-23
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



### -NSD2- (NORFOLK SOUTHERN MAIN TRACK DETOUR)



4/19/2016 1:18:00 PM C:\Users\jason\OneDrive\Documents\Track\NSD2\NSD2.dgn

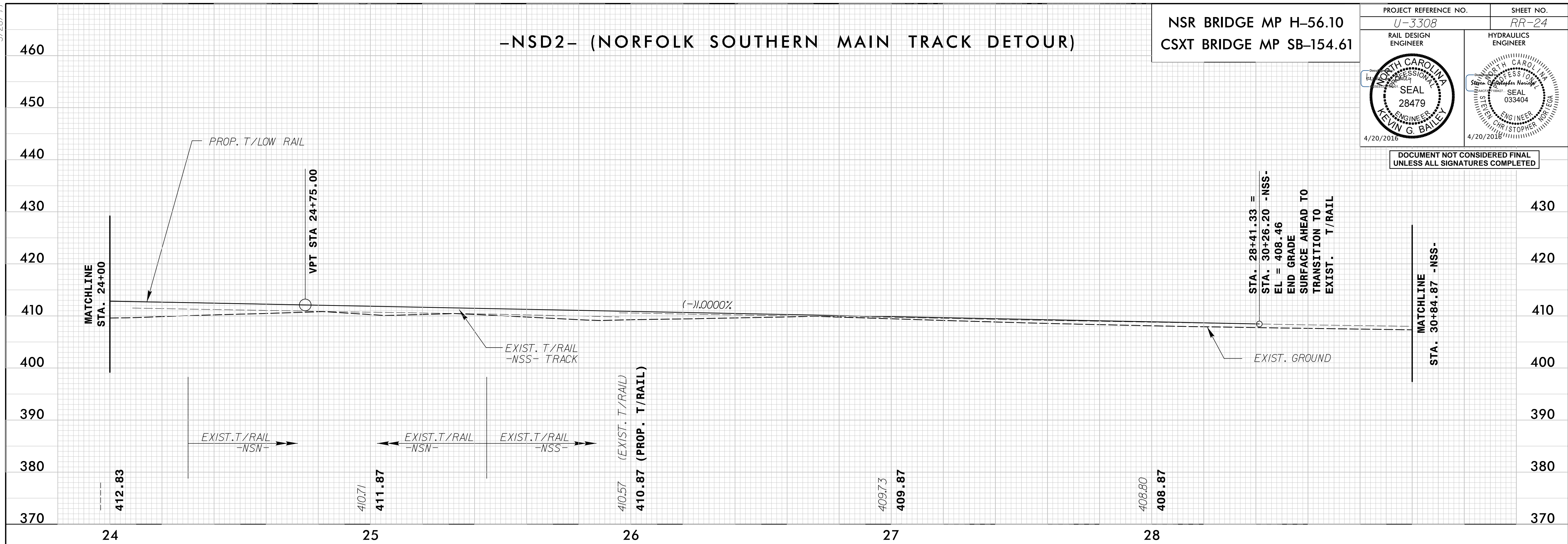
5/28/99

### -NSD2- (NORFOLK SOUTHERN MAIN TRACK DETOUR)

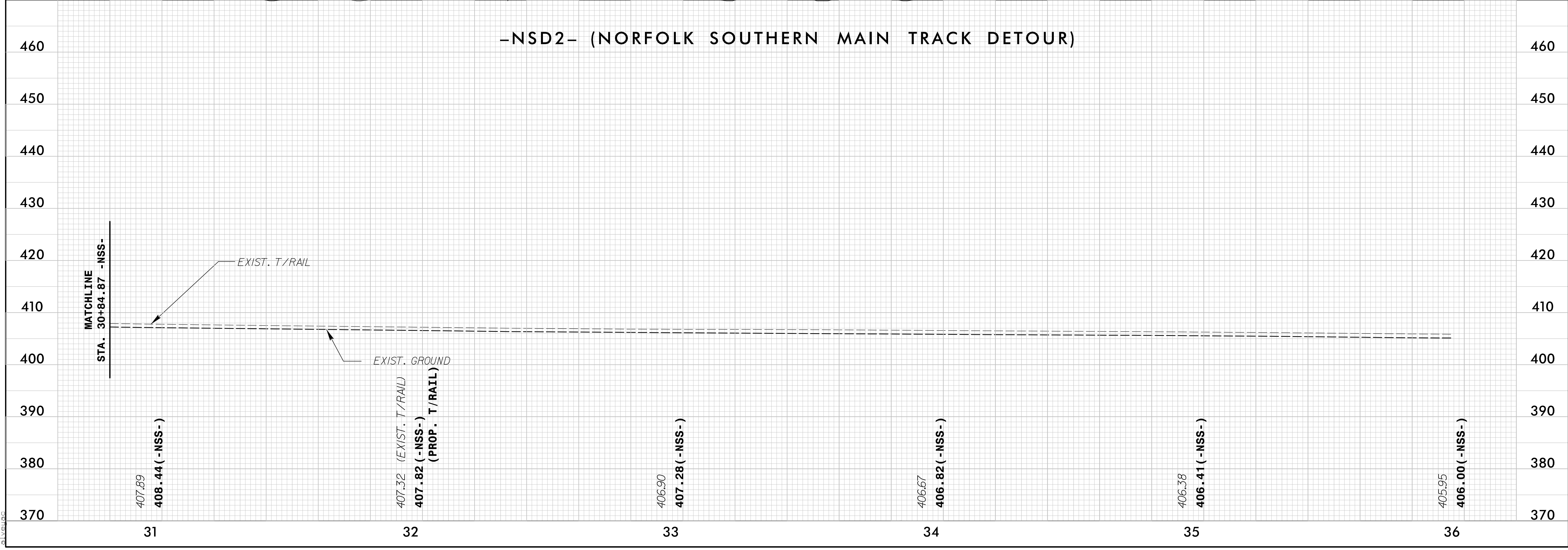
NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

PROJECT REFERENCE NO. U-3308	SHEET NO. RR-24
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



### -NSD2- (NORFOLK SOUTHERN MAIN TRACK DETOUR)



4/19/2016 1:18:00 PM C:\Users\j2513251\station\track\RAA\_u3308\_rdy.pfl\_sht.dgn



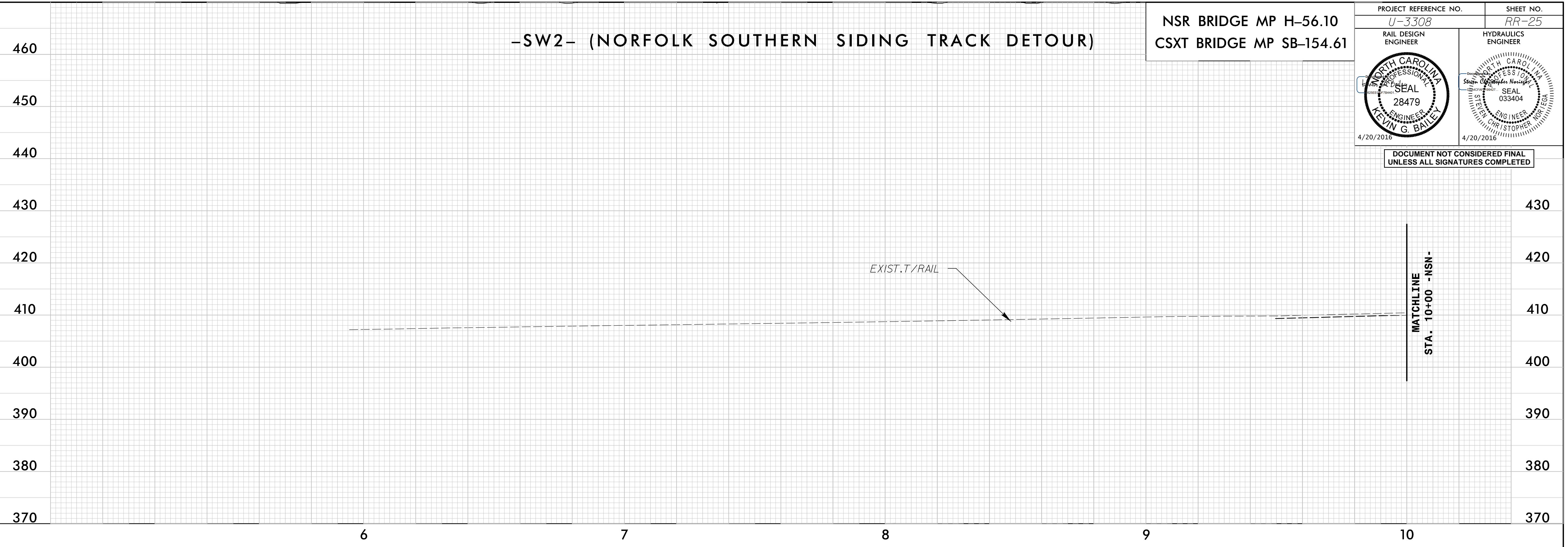
5/28/99

### -SW2- (NORFOLK SOUTHERN SIDING TRACK DETOUR)

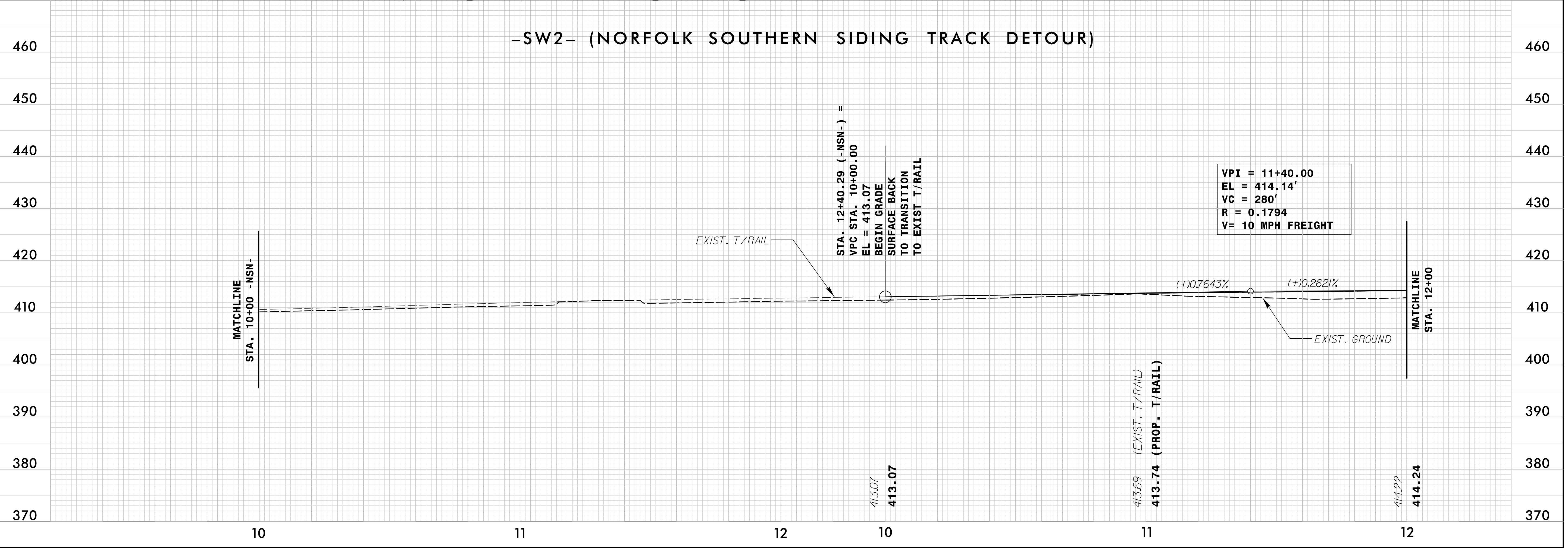
NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

PROJECT REFERENCE NO. <i>U-3308</i>	SHEET NO. <i>RR-25</i>
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



### -SW2- (NORFOLK SOUTHERN SIDING TRACK DETOUR)



4/19/2016 1:18:00 PM C:\Users\j2513251\station\track\RAA\_u3308\_rdy.pfl\_sht.dgn

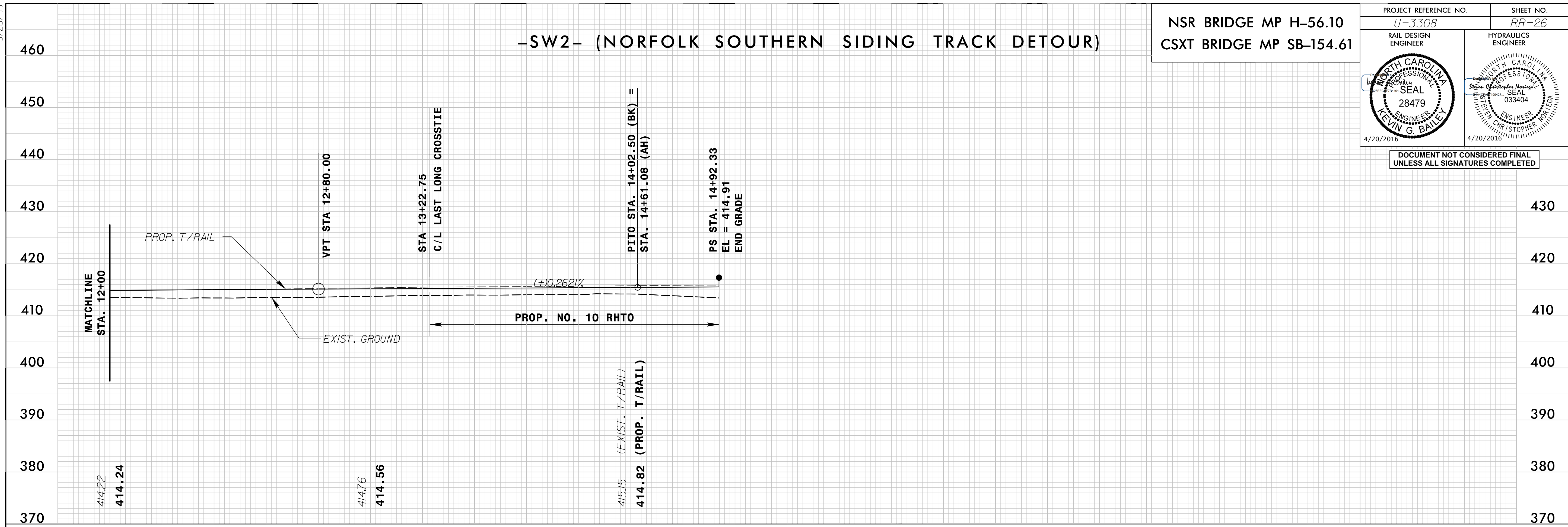
5/28/16

# -SW2- (NORFOLK SOUTHERN SIDING TRACK DETOUR)

NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

PROJECT REFERENCE NO. U-3308	SHEET NO. RR-26
RAIL DESIGN ENGINEER KEYVN G. BAILEY 4/20/2016	HYDRAULICS ENGINEER CHRISTOPHER H. HARRIS 4/20/2016

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

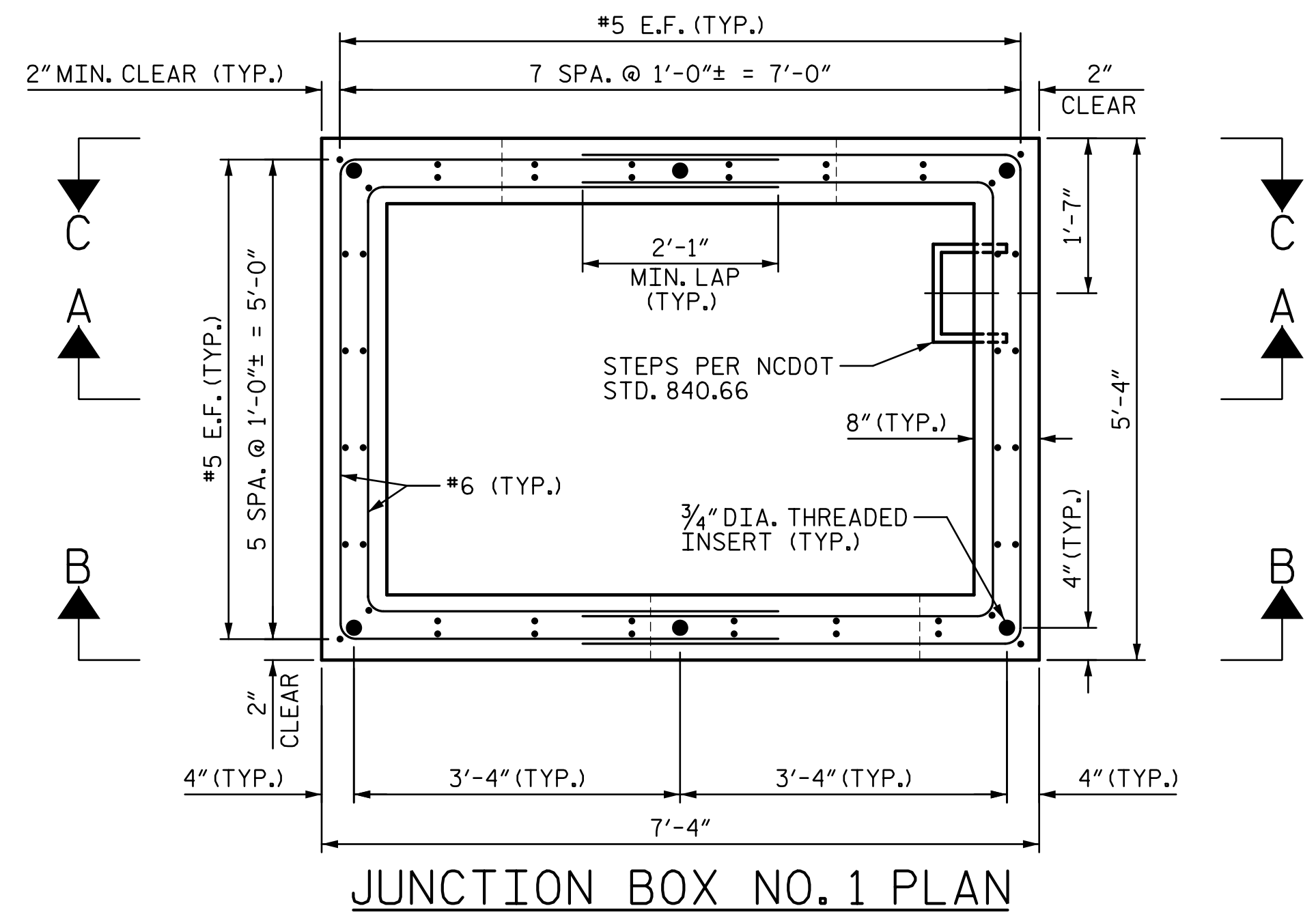


THIS SECTION INTENTIONALLY LEFT BLANK

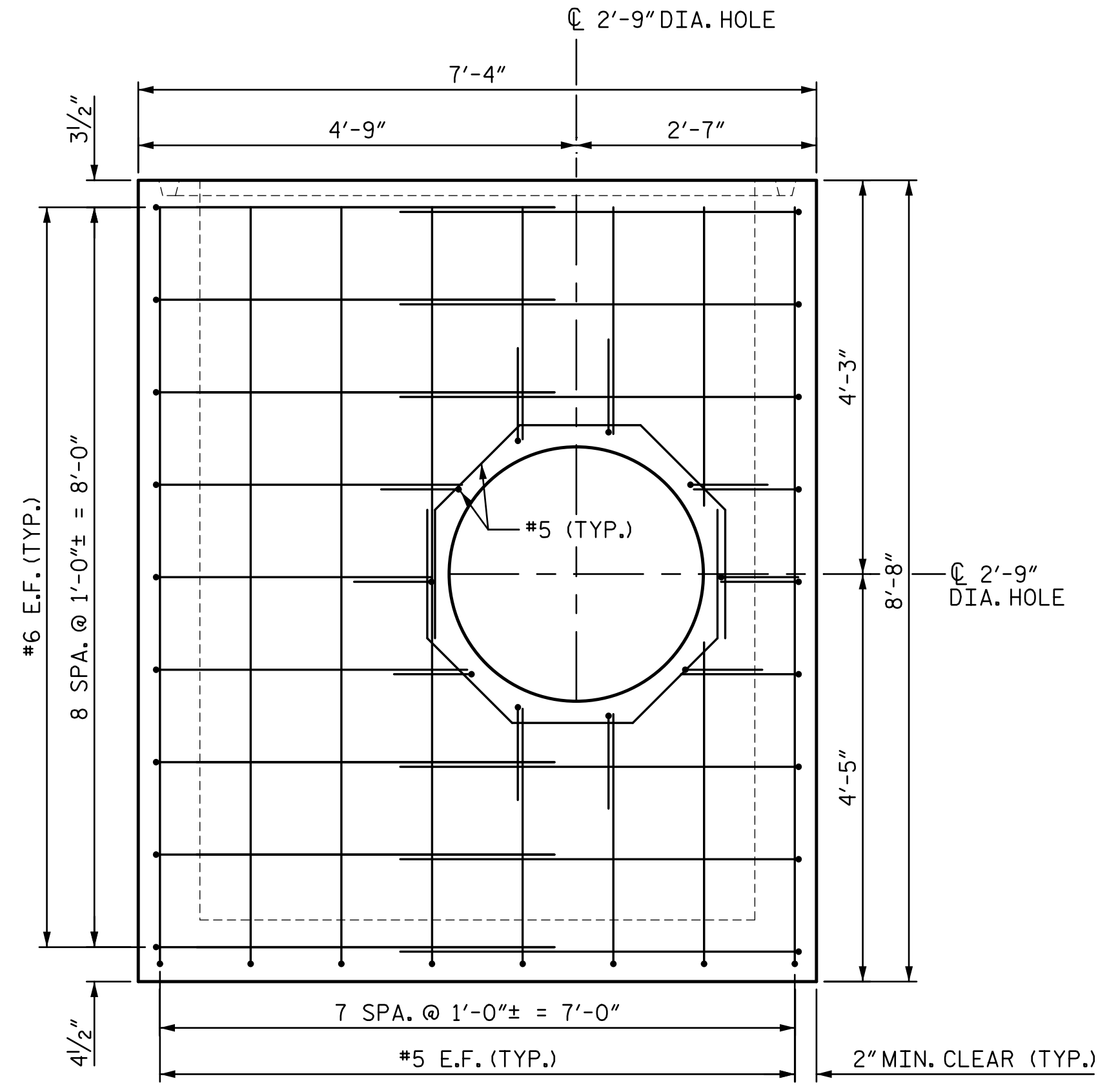
4/19/2016 1:18:00 PM C:\Users\jg3251\station\track\RAA\_u3308\_rdy.pfl\_sht.dgn



DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



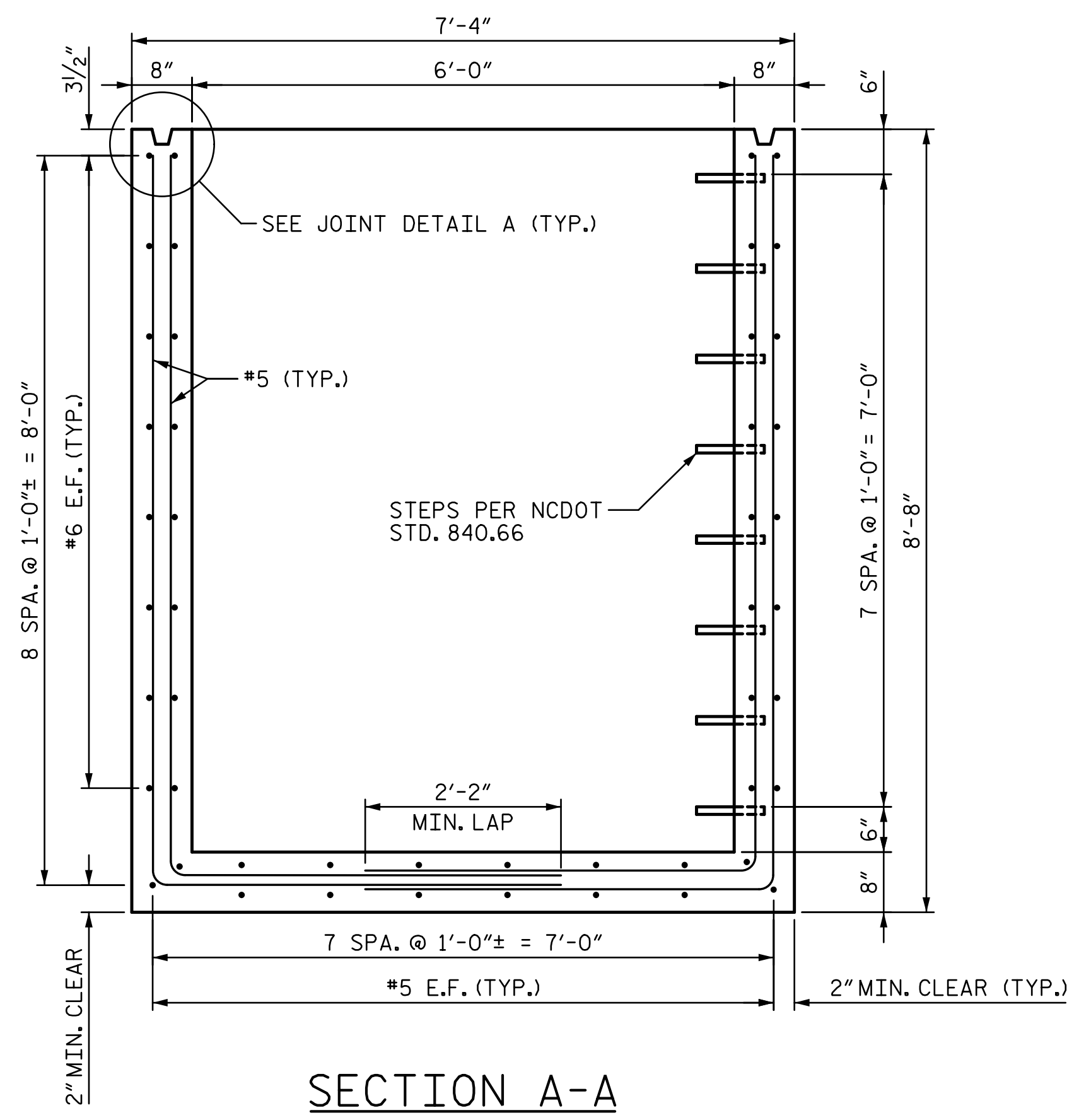
JUNCTION BOX NO. 1 PLAN



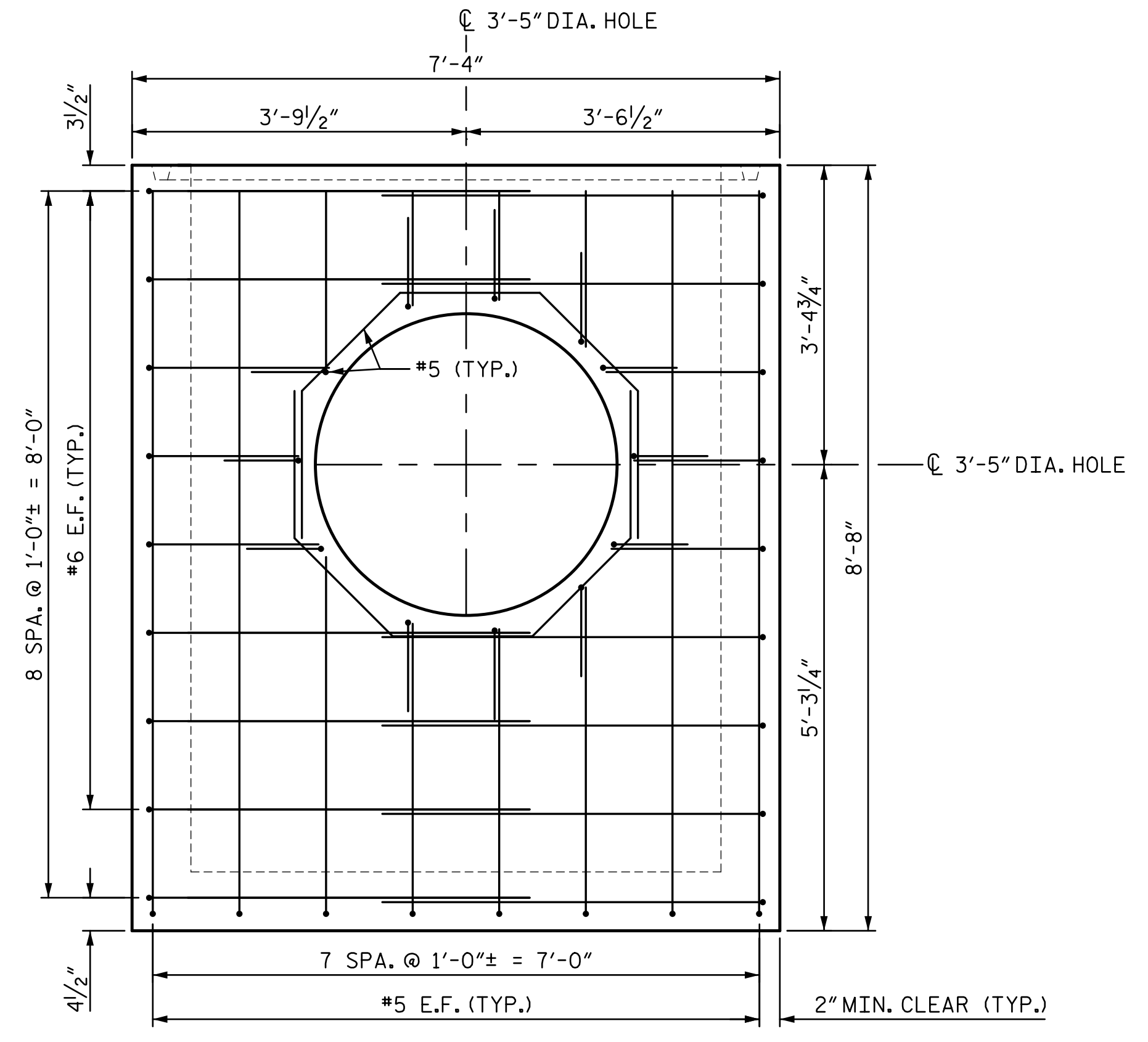
SECTION B-B

NOTES:

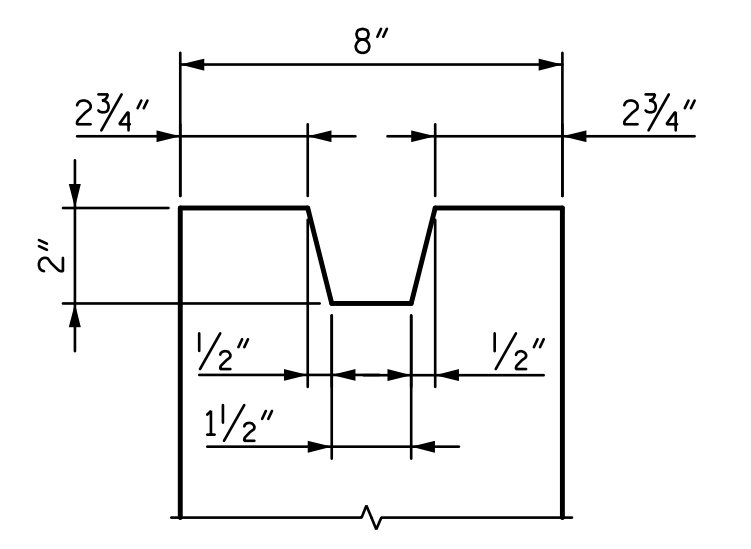
1. E.F. = EACH FACE
2. FOR PERMANENT MANHOLE LID, SEE SHEET RR-29.
3. PRECAST ALL ELEMENTS TO MEET ASTM C913.
4. SEAL JOINTS WITH AN APPROVED SEALANT (SEE SECTION 840 OF NCDOT STANDARD SPECIFICATIONS).
5. ALL REINFORCING STEEL SHALL BE GRADE 60 AND MEET ASTM A615.
6. ALL FASTENERS, INCLUDING 3/4" DIA. THREADED ROD AND HARDWARE, SHALL BE A-36 MATERIAL AND GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
7. USE 5,000 PSI CONCRETE.
8. USE DAYTON SUPERIOR F57 NC THREADED INSERTS FOR 3/4" DIA. THREADED FASTENERS OR EQUIVALENT.
9. MINIMALLY ADJUST REINFORCING STEEL TO PROVIDE ADEQUATE MINIMUM CLEAR COVER TO INSTALLED STEPS, OR INSTALLED THREADED INSERTS.
10. FOR JUNCTION BOX NO. 1, SEE JUNCTION BOXES SPECIAL PROVISION.



SECTION A-A

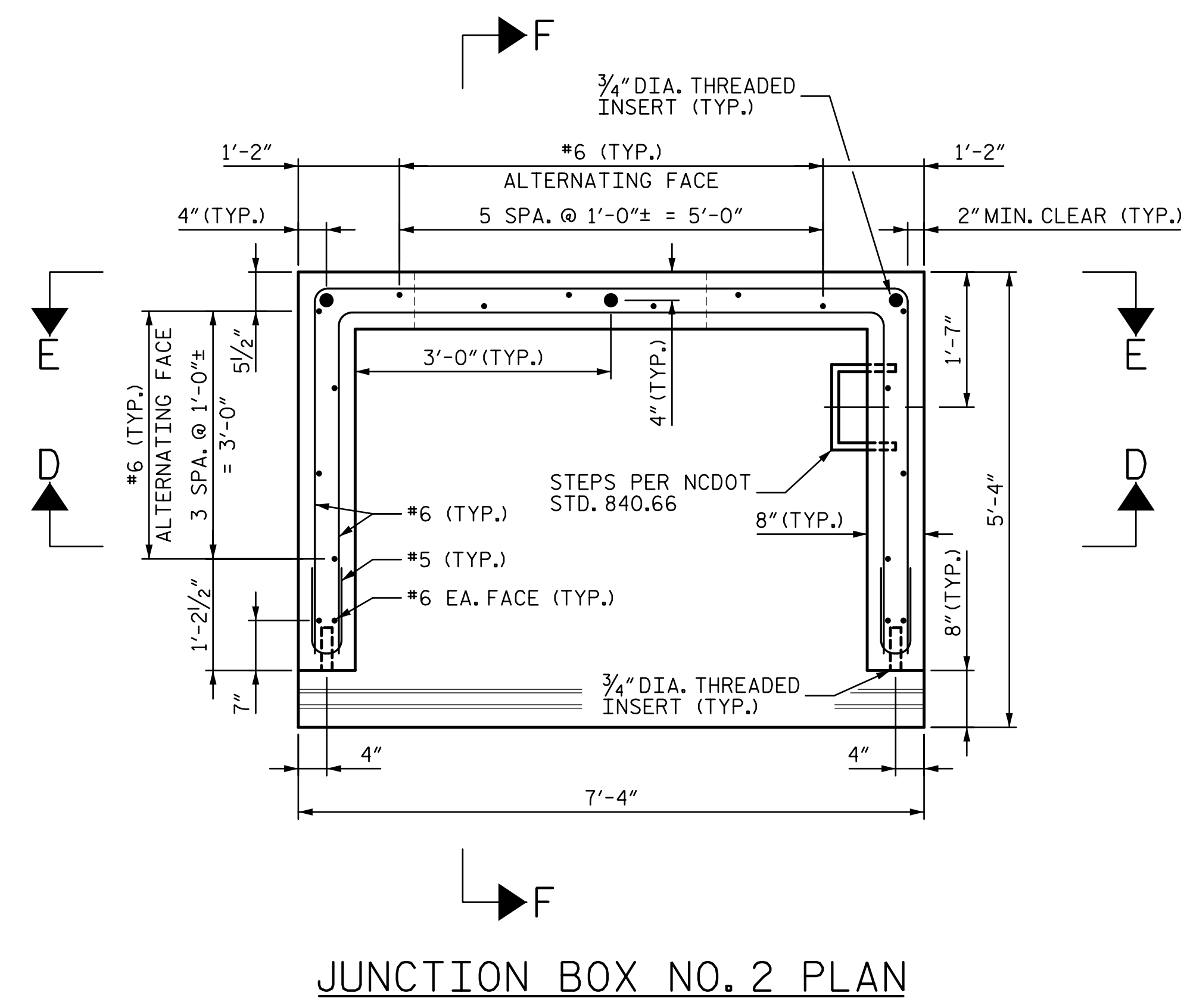


SECTION C-C

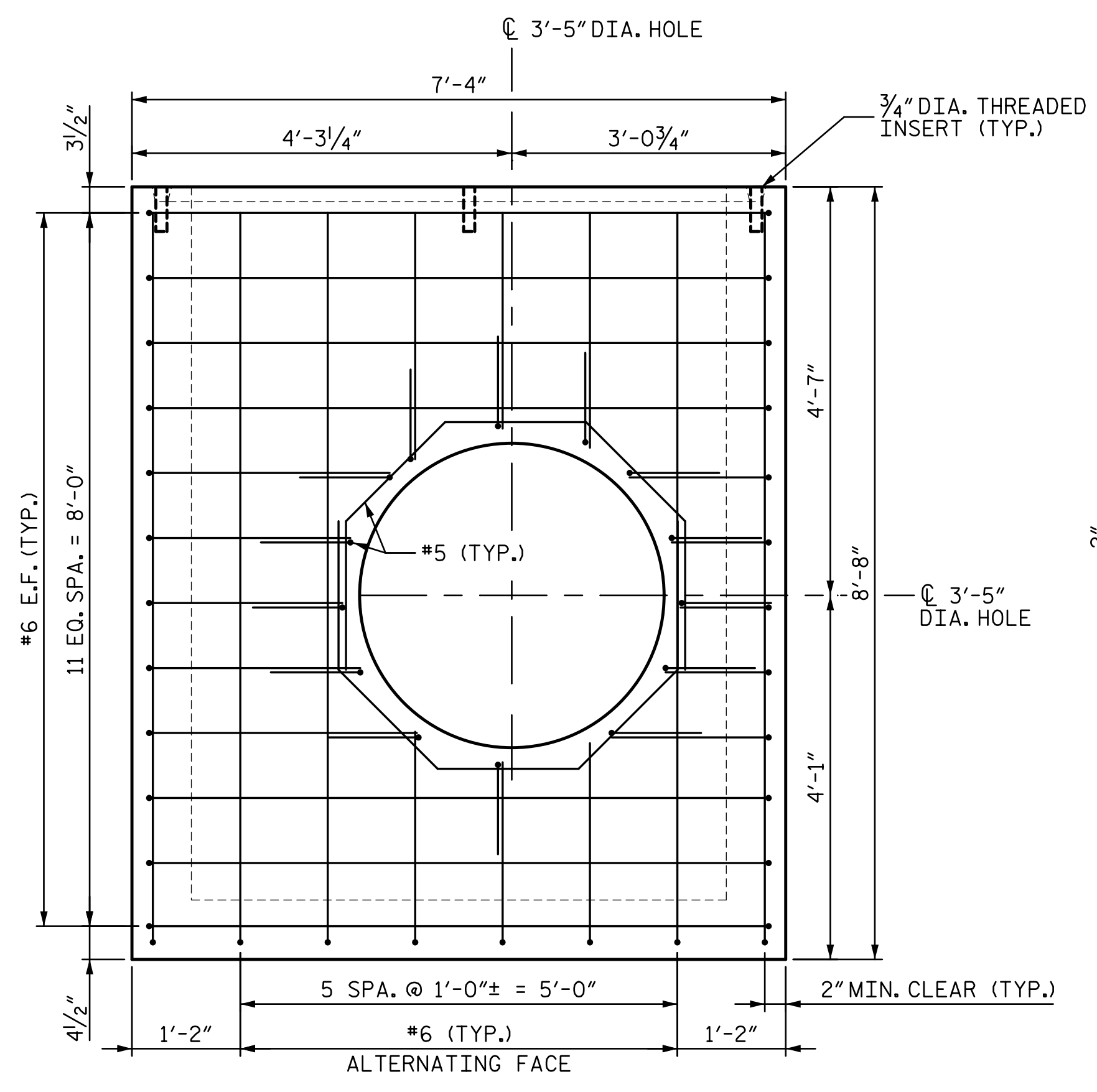


JOINT DETAIL A

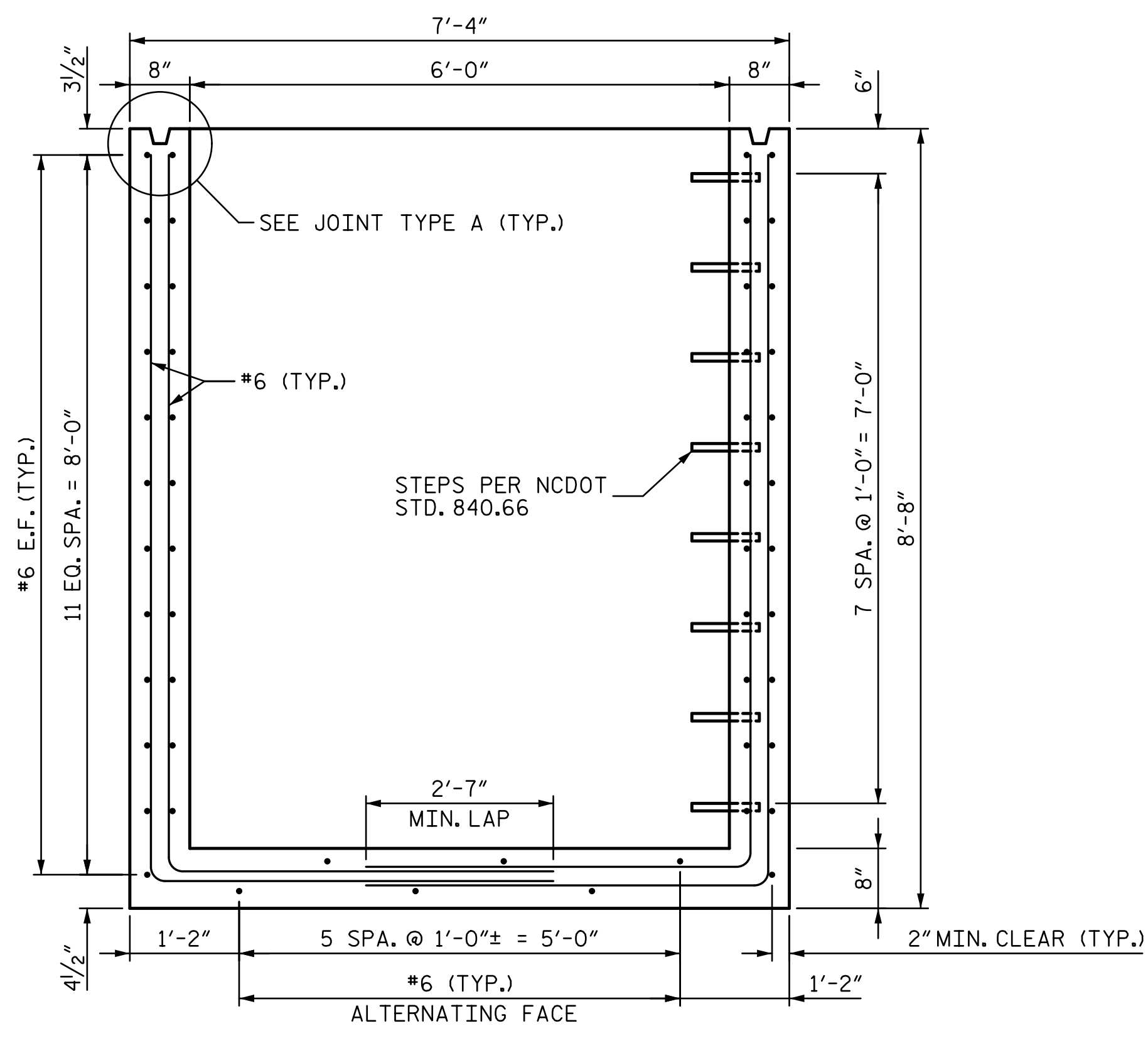
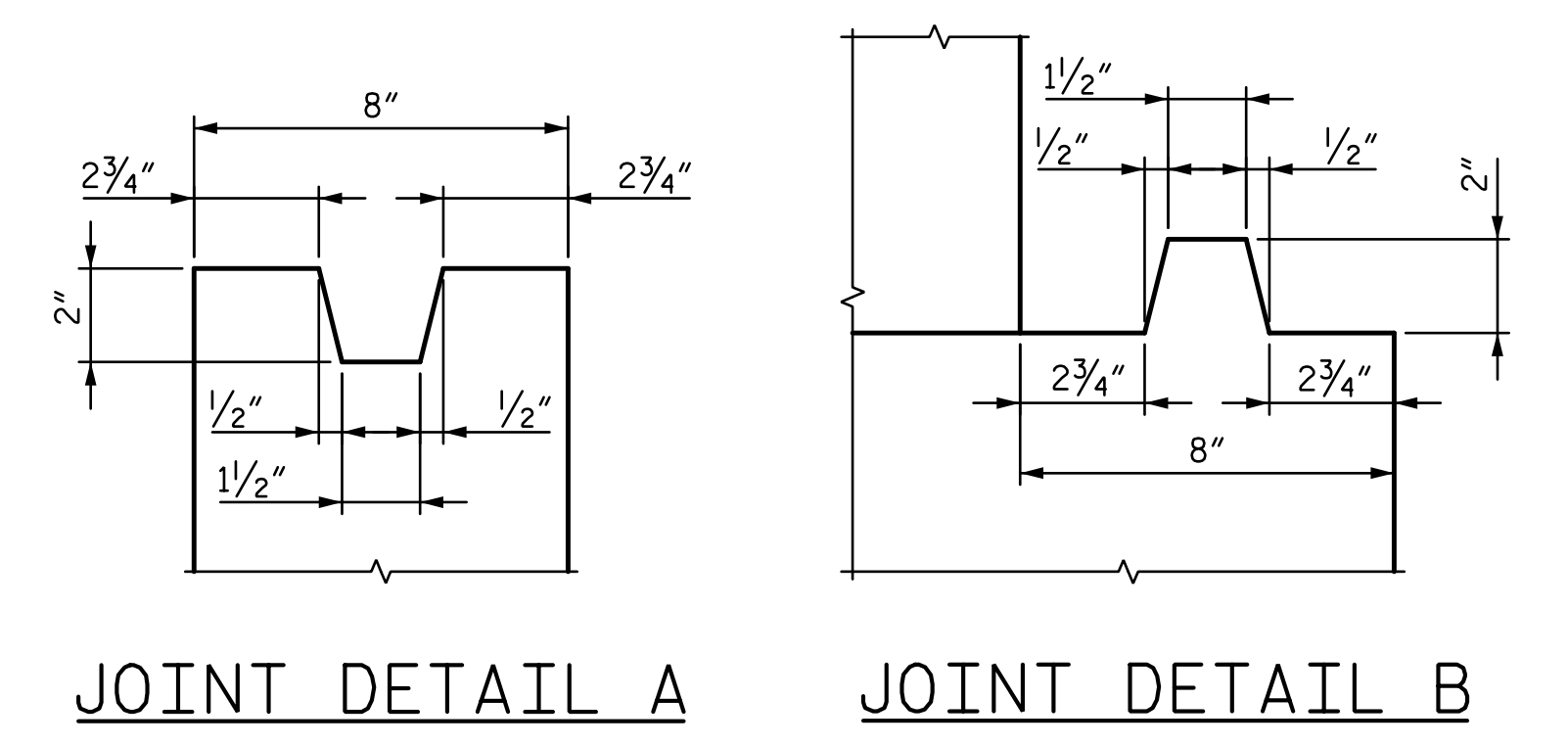
9/15/2015 7:27:51AM i:\PROJ\2513251\station\struct\Junction Box\RR-27\_Junction\_Box\_1.dgn chf\khmb



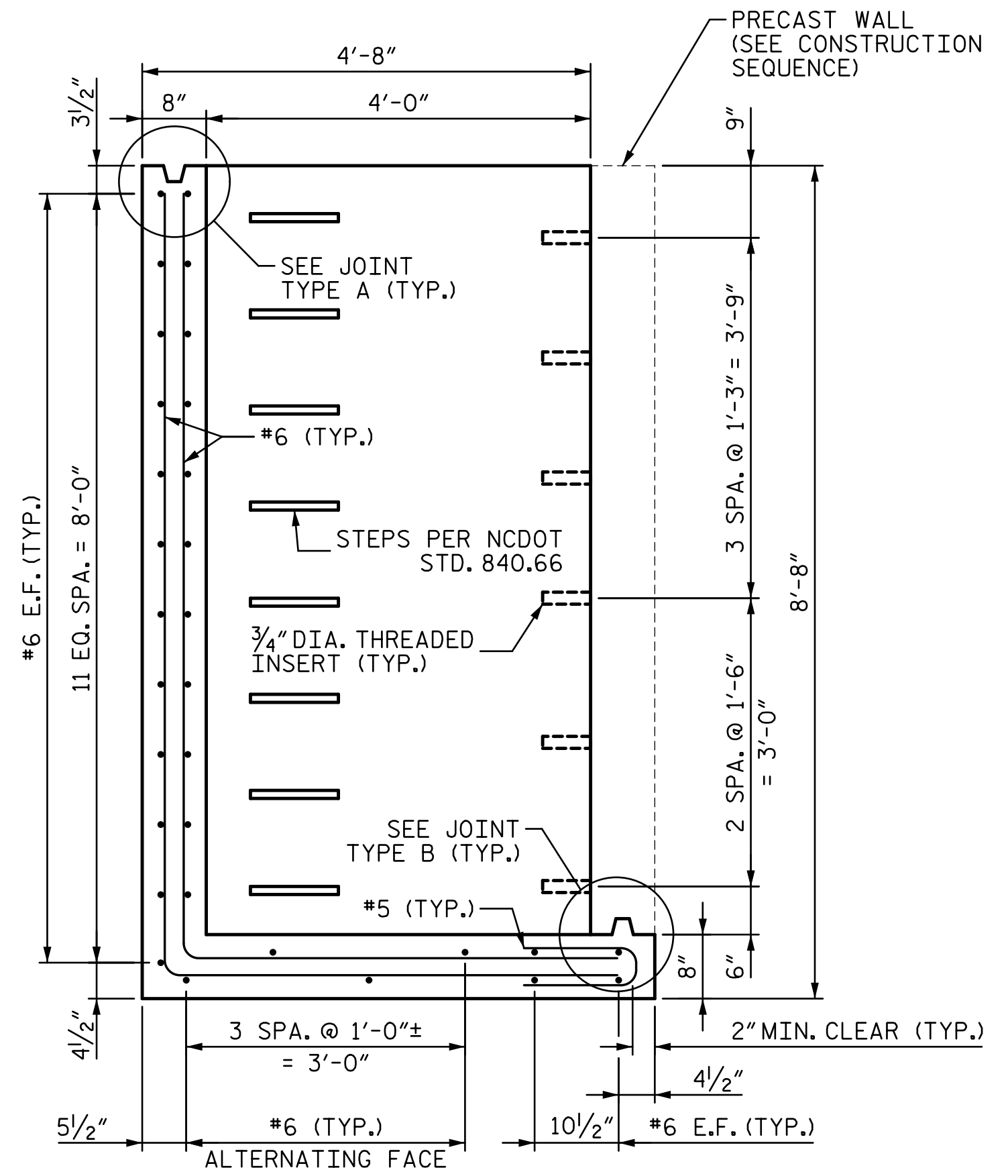
JUNCTION BOX NO. 2 PLAN



SECTION E-E



SECTION D-D



SECTION F-F

NOTES:

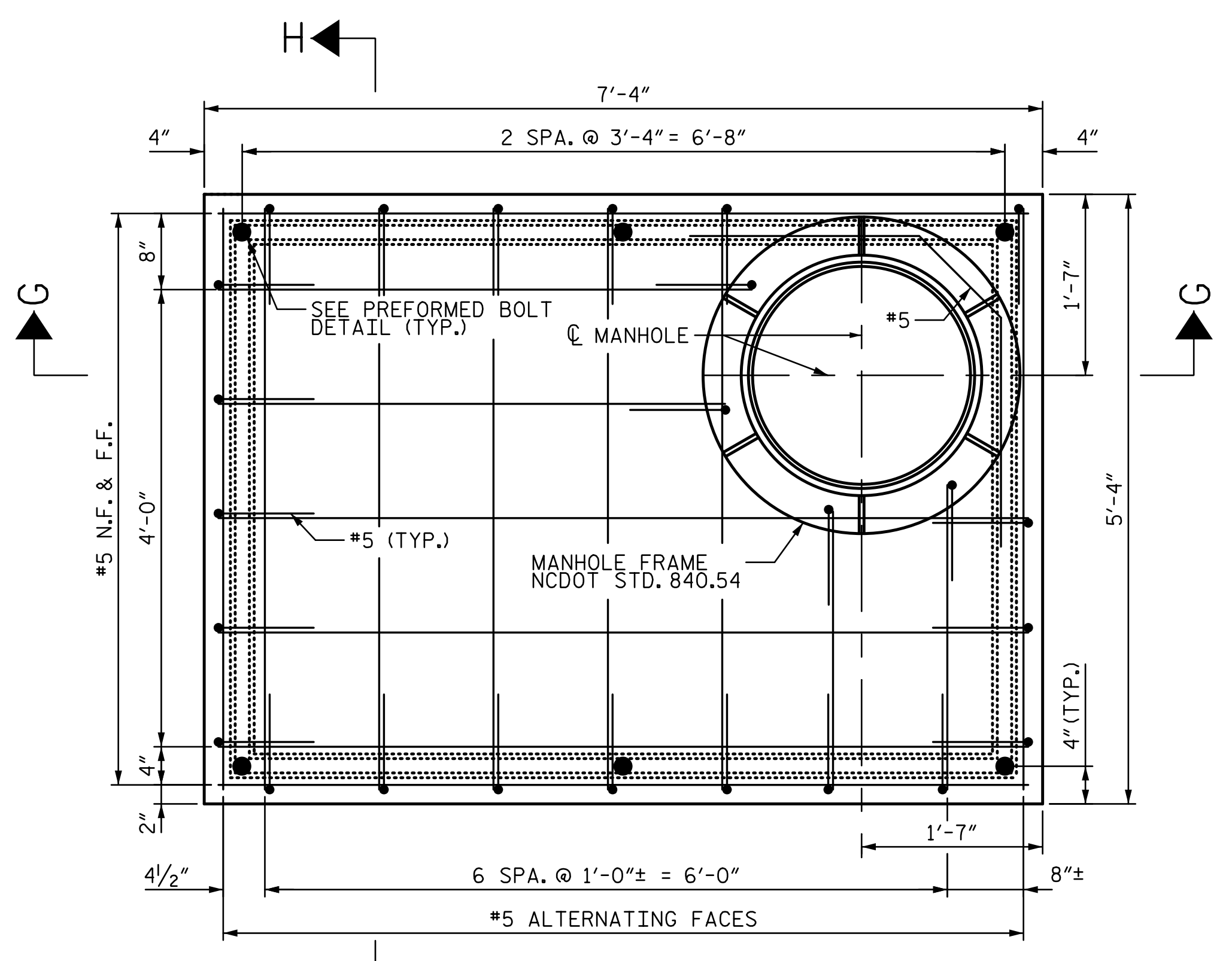
- FOR TEMPORARY GRATE LID AND PERMANENT MANHOLE LID, SEE SHEET RR-29.
- FOR TEMPORARY STEEL PLATE WALL AND PERMANENT PRECAST WALL, SEE SHEET RR-30.
- PRECAST ALL ELEMENTS TO MEET ASTM C913.
- SEAL JOINTS WITH AN APPROVED SEALANT (SEE SECTION 840 OF NCDOT STANDARD SPECIFICATIONS).
- ALL REINFORCING STEEL SHALL BE GRADE 60 AND MEET ASTM A615.
- ALL FASTENERS, INCLUDING 3/4" DIA. THREADED ROD AND HARDWARE, SHALL BE A-36 MATERIAL AND GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
- USE 5000 PSI CONCRETE.
- USE DAYTON SUPERIOR F57 NC THREADED INSERTS FOR 3/4" DIA. THREADED FASTENERS OR EQUIVALENT.
- MINIMALLY ADJUST REINFORCING STEEL TO PROVIDE ADEQUATE MINIMUM CLEAR COVER, INSTALL STEPS, OR INSTALL THREADED INSERTS.
- FOR JUNCTION BOX NO. 2, SEE JUNCTION BOXES SPECIAL PROVISION.

CONSTRUCTION SEQUENCE:

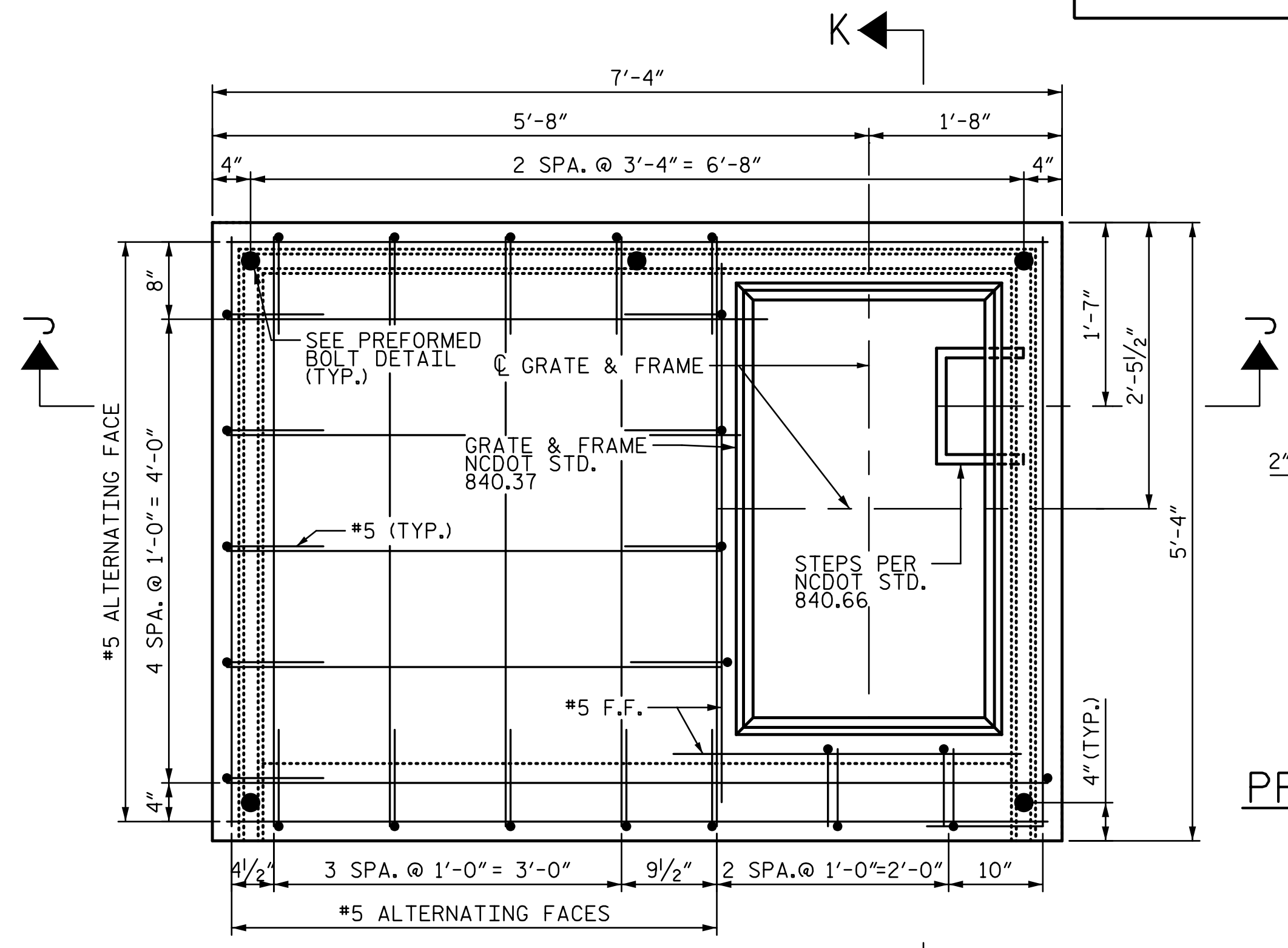
- INSTALL JUNCTION BOX PRIOR TO CONSTRUCTION OF DETOUR TRACK (-NSD2-).
- INSTALL TEMPORARY STEEL PLATE WALL AND SECURE USING 3/4" DIA. THREADED ROD AND HARDWARE.
- INSTALL TEMPORARY GRATE LID AND SECURE USING 3/4" DIA. THREADED ROD AND HARDWARE.
- AFTER COMPLETION OF DETOUR (-NSD2-) AND REMOVAL OF EXISTING NSR TRACKS, REMOVE TEMPORARY GRATE LID AND TEMPORARY STEEL PLATE WALL.
- INSTALL PRECAST WALL AND SECURE USING 3/4" DIA. THREADED ROD AND HARDWARE. GROUT HOLE BLOCKOUTS.
- INSTALL MANHOLE LID AND SECURE USING 3/4" DIA. THREADED ROD AND HARDWARE. GROUT AND SEAL HOLE BLOCKOUTS. INSTALL NEENAH R-7516 BALLAST SCREEN WITH NEENAH R-2504, TYPE D GRATE, OR EQUIVALENT.
- REMOVE JUNCTION BOX NO. 2 AFTER COMPLETION OF NSR TRACKS, REMOVAL OF DETOUR (-NSD2-) TRACK, COMPLETION OF CSXT TRACKS, AND COMPLETION OF DITCH GRADING ALONG CSXT TRACK. BACKFILL AND GRADE PER TRACK PLANS.

9/15/2015 7:27:37 AM I:\PROJ\251325\station\struct\junction\_Box\RR-28\_Junction\_Box\_2.dgn chf\khmb

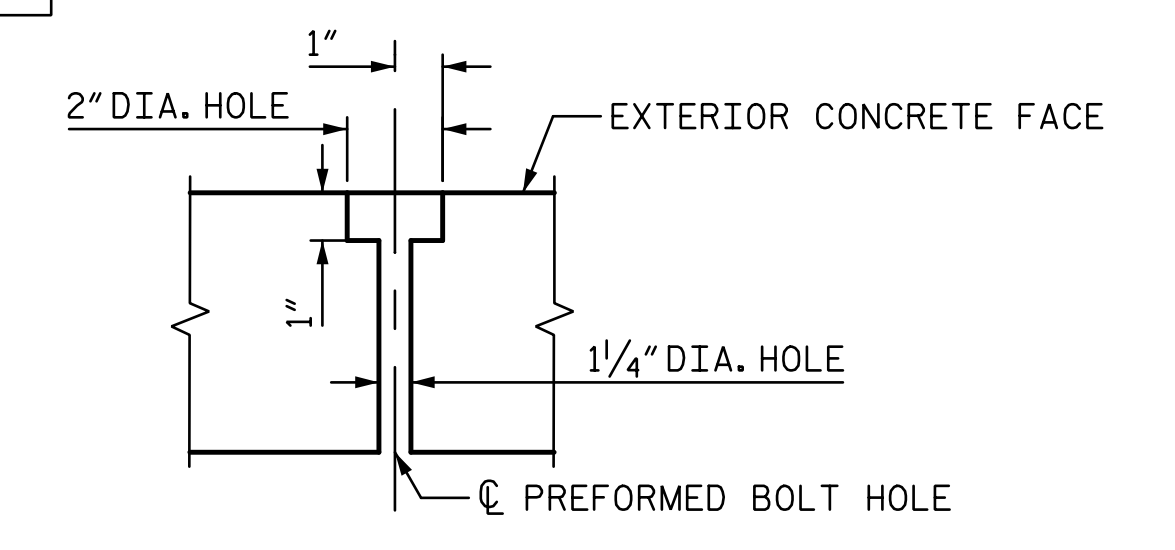




**MANHOLE LID - PLAN**  
(QUANTITY 2)

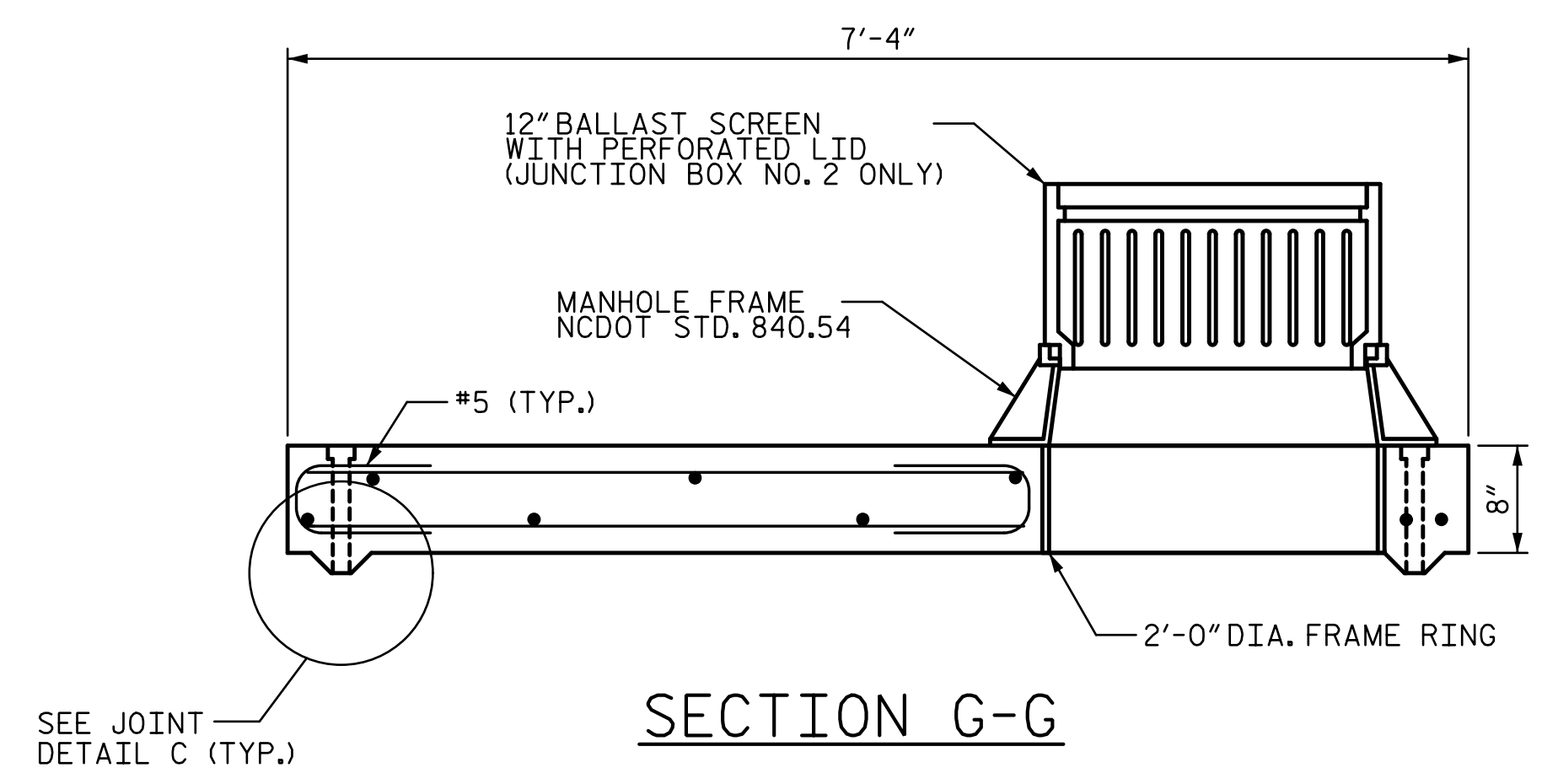


**TEMPORARY GRATE LID - PLAN**  
(QUANTITY 1)

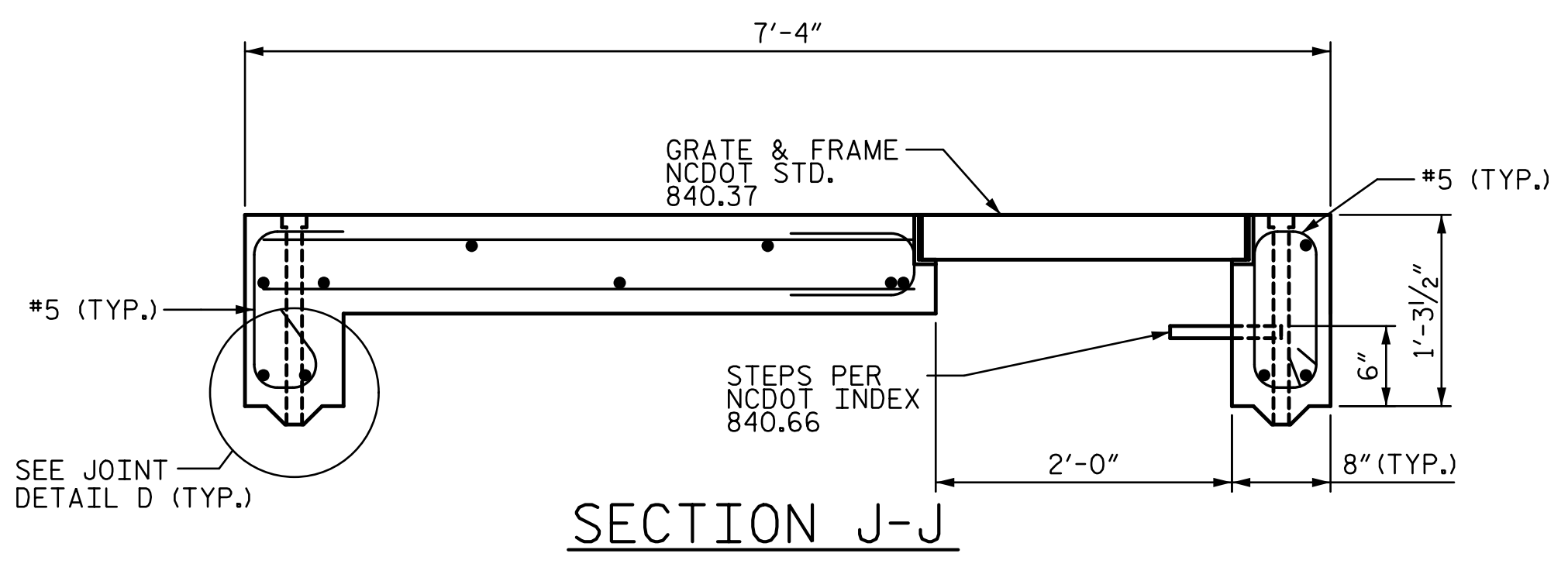


**PREFORMED BOLT DETAIL**

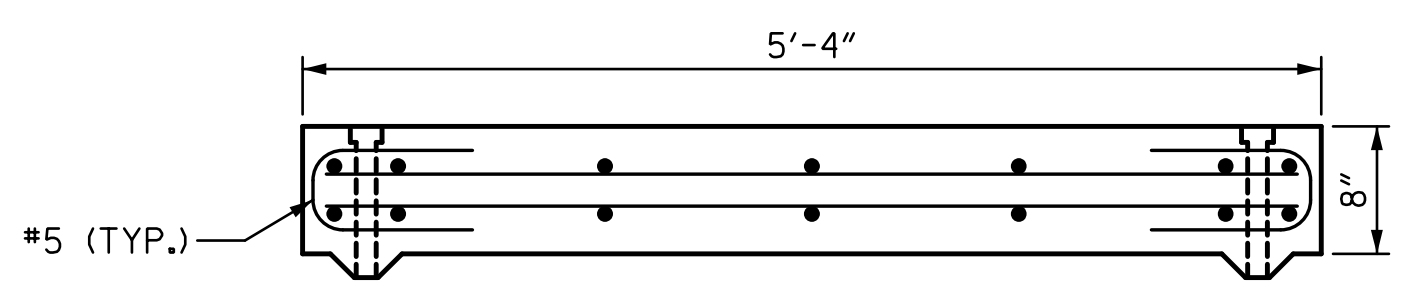
**NOTES:**  
1. CLEAR COVER SHALL BE 1/2" TYPICAL.



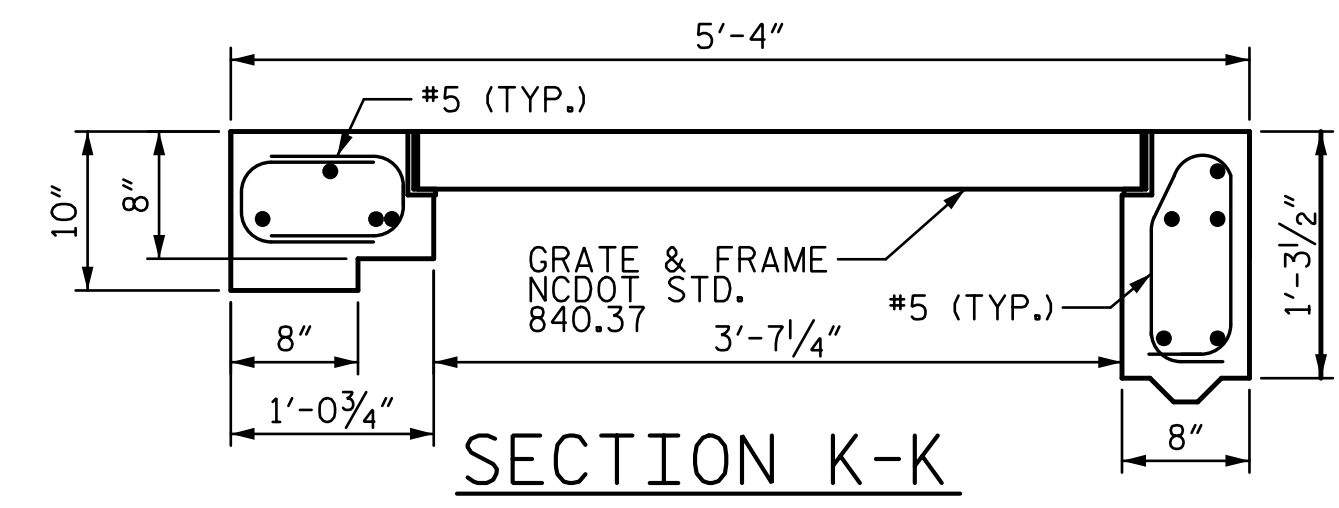
**SECTION G-G**



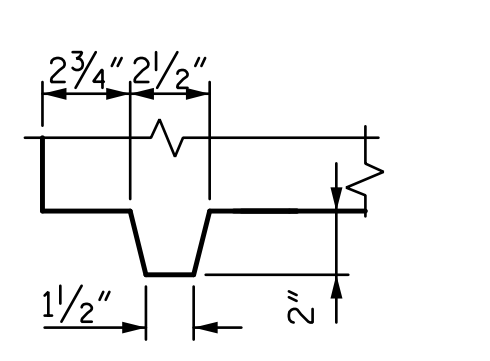
**SECTION J-J**



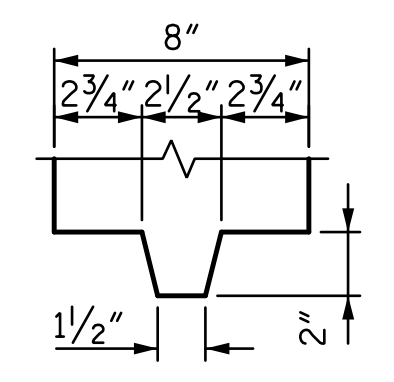
**SECTION H-H**



**SECTION K-K**



**JOINT DETAIL C**



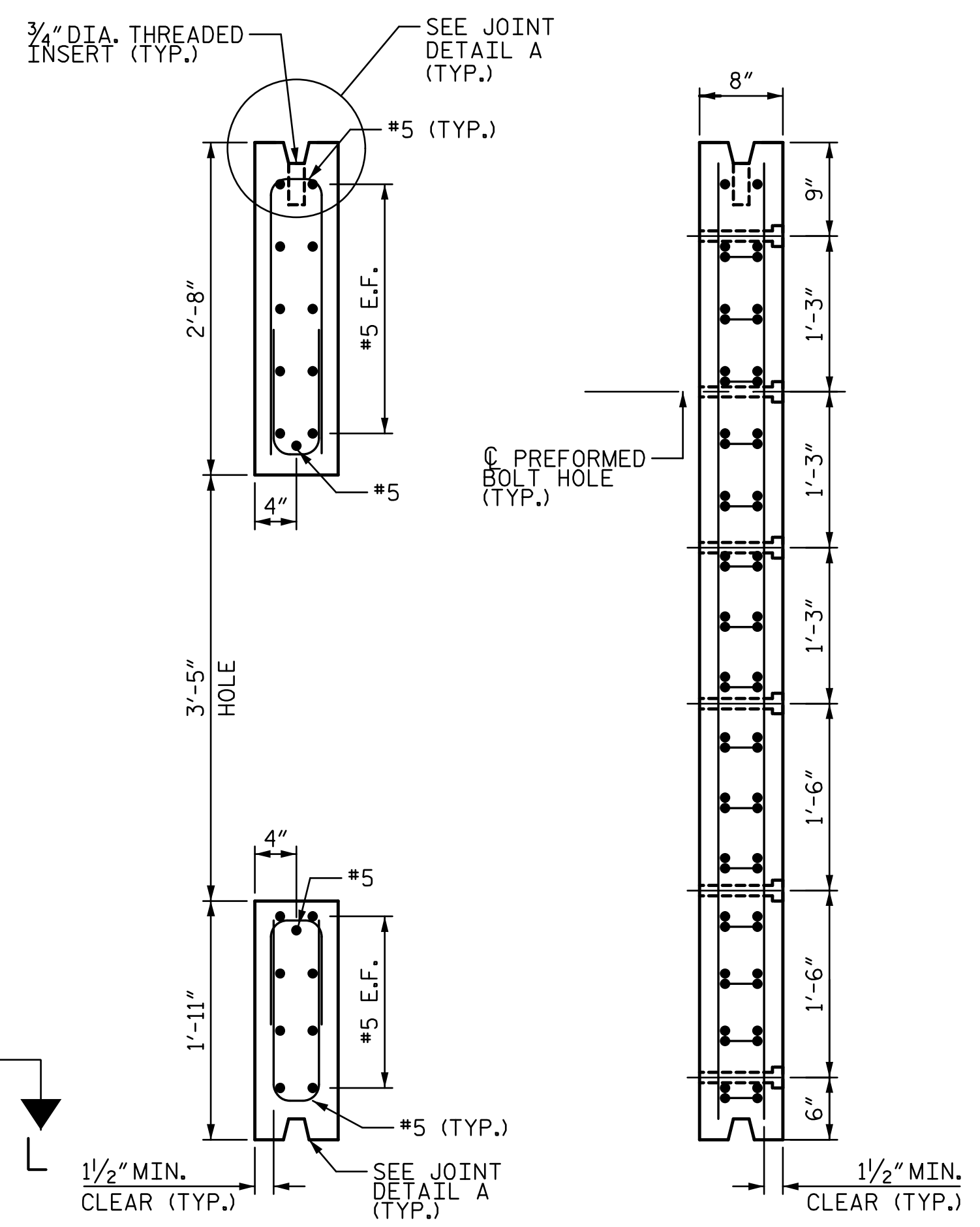
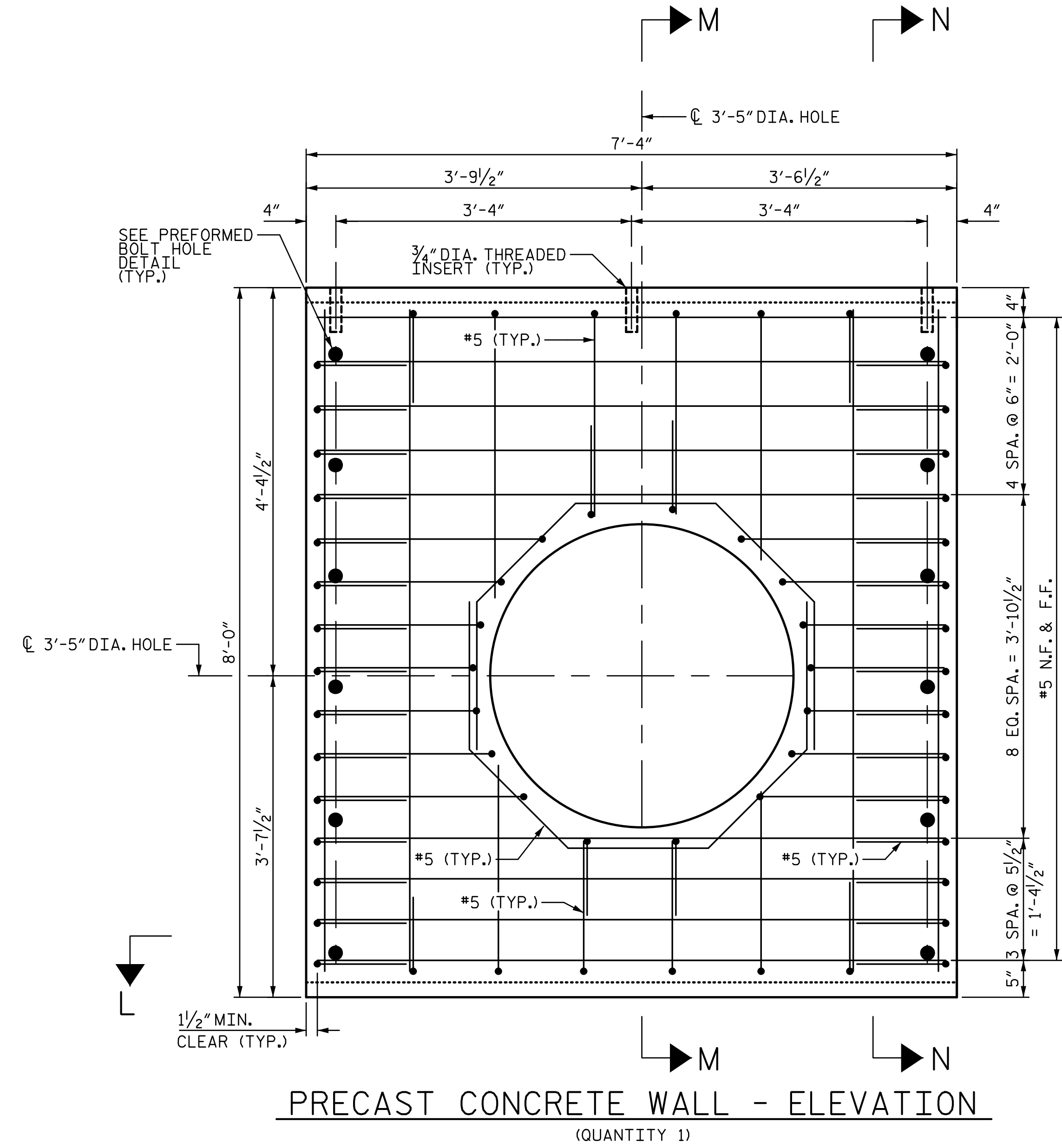
**JOINT DETAIL D**

i:\PROJ\251325\Illustration\struct\Junction Box\RR-29 Junction Box Lids.dgn  
7:27:20 AM  
9/15/2015  
chi+hkmb

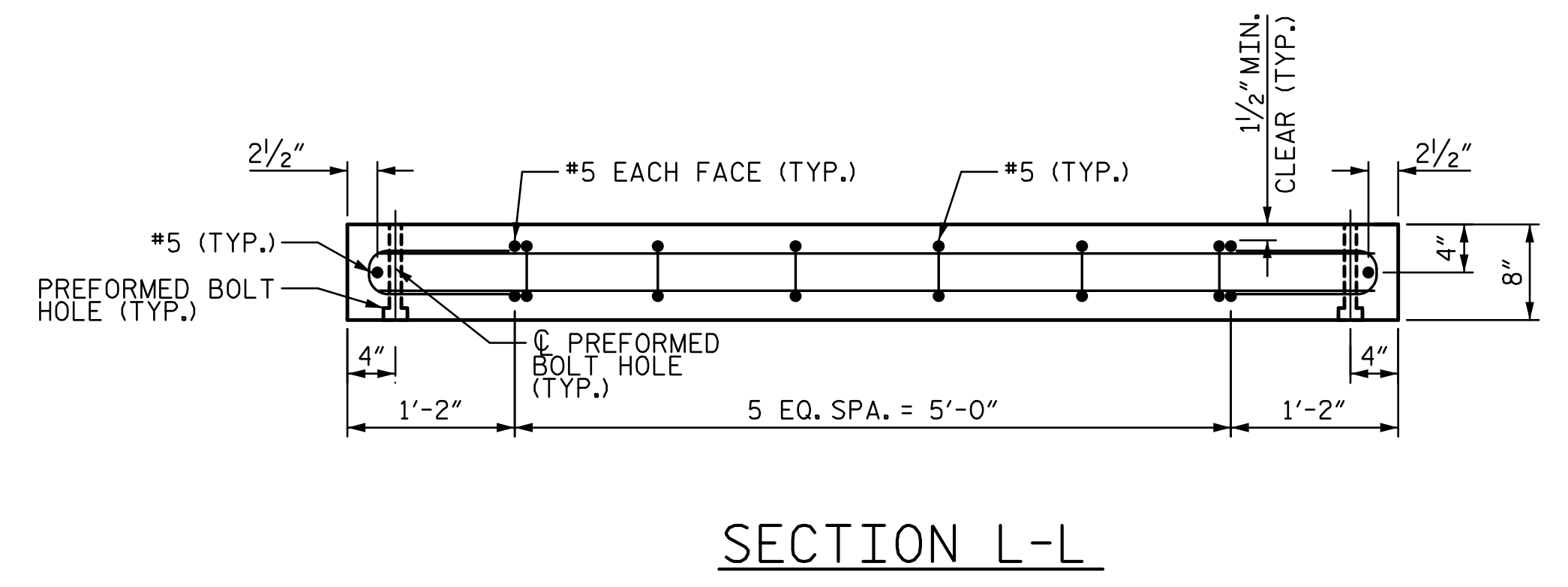
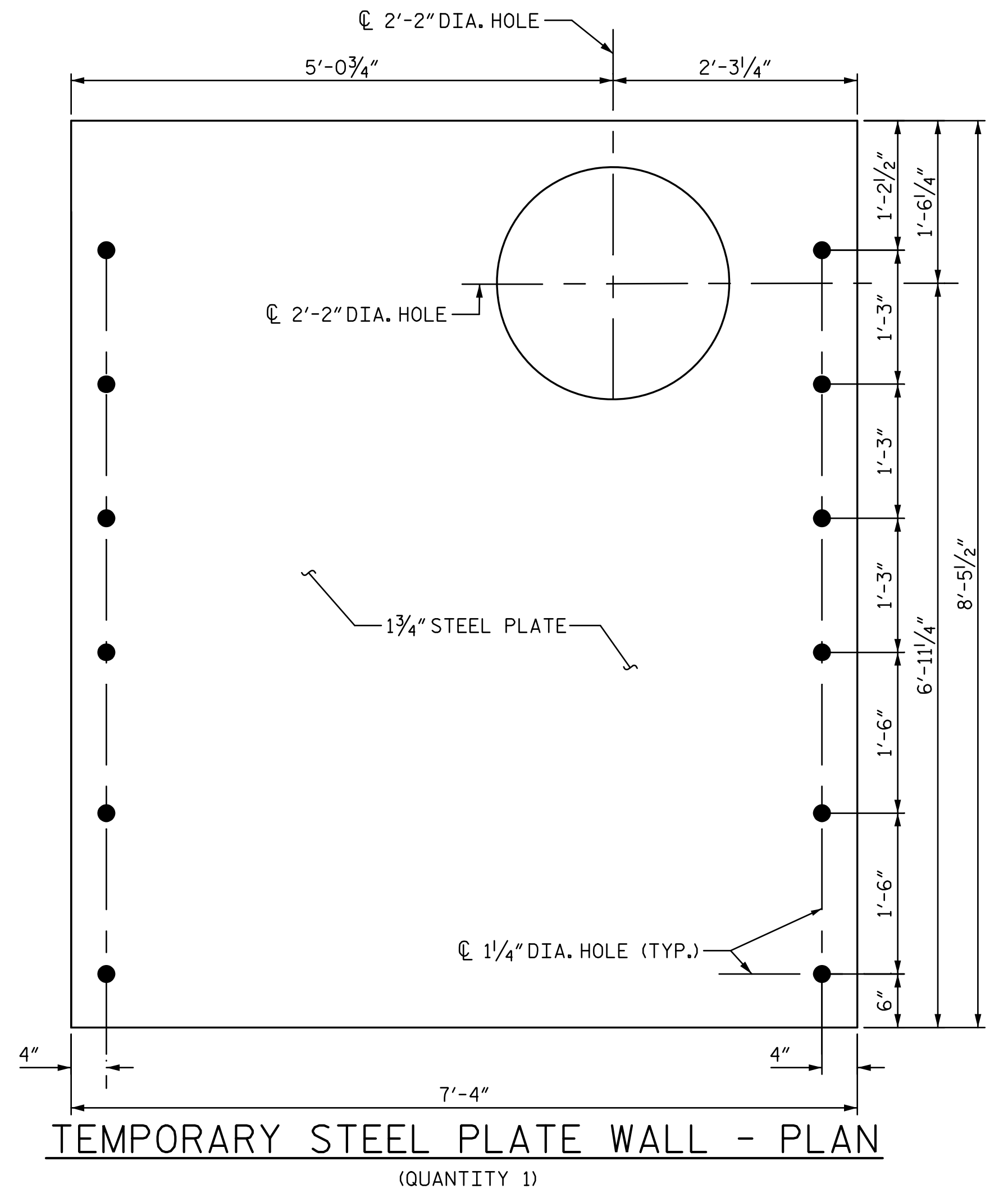
NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

PROJECT REFERENCE NO. <b>U-3308</b>	SHEET NO. <b>RR-30</b>
R/W SHEET NO.	
STRUCTURES ENGINEER	

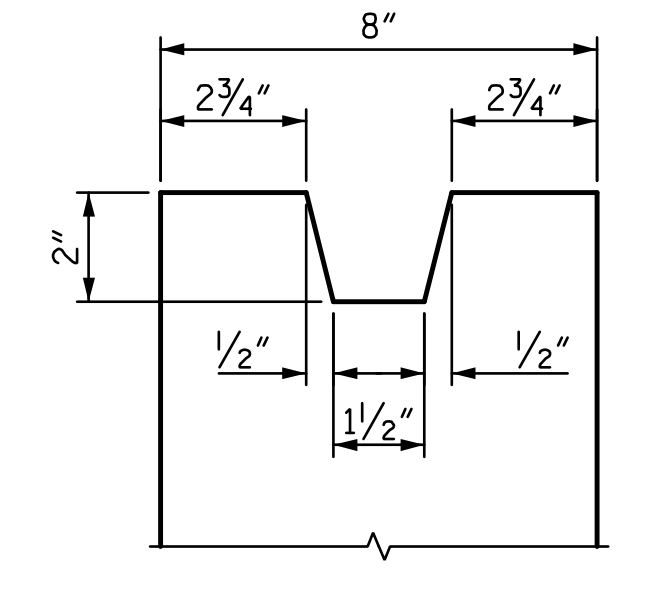
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



SECTION M-M SECTION N-N



SECTION L-L



JOINT DETAIL A

NOTES:

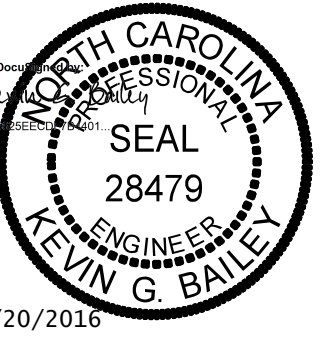
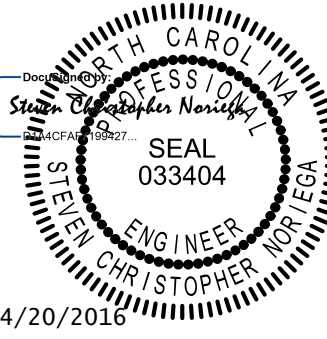
1. PRECAST ALL ELEMENTS TO MEET ASTM C913.
2. ALL REINFORCING STEEL SHALL BE GRADE 60 AND MEET ASTM A615.
3. USE 5,000 PSI CONCRETE.
4. USE 3/4" DIA. DAYTON SUPERIOR F57 NC THREADED INSERTS OR EQUIVALENT.
5. ALL FASTENERS SHALL BE GALVANIZED 3/4" DIA. THREADED ROD AND GALVANIZED HARDWARE.
6. MINIMALLY ADJUST REINFORCING STEEL TO PROVIDE ADEQUATE MINIMUM CLEAR COVER, PLACE STEPS, OR INSTALL THREADED INSERTS.
7. FOR JUNCTION BOX NO. 2, SEE SHEET RR-28.
8. FOR PREFORMED BOLT HOLE DETAIL, SEE SHEET RR-29.

N:\PROJ\2513251\station\struct\junction\_Box\RR-30\_precast\_walland\_steelplate\_wall.dgn 2:11:34 PM 9/17/2015 ChitKhMB



8/17/99

NSR BRIDGE MP H-56.10  
CSXT BRIDGE MP SB-154.61

PROJECT REFERENCE NO. <i>U-3308</i>	SHEET NO. <i>X-RR</i>
R/W SHEET NO.	
RAIL DESIGN ENGINEER 	HYDRAULICS ENGINEER 

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

# TIP PROJECT: U-3308

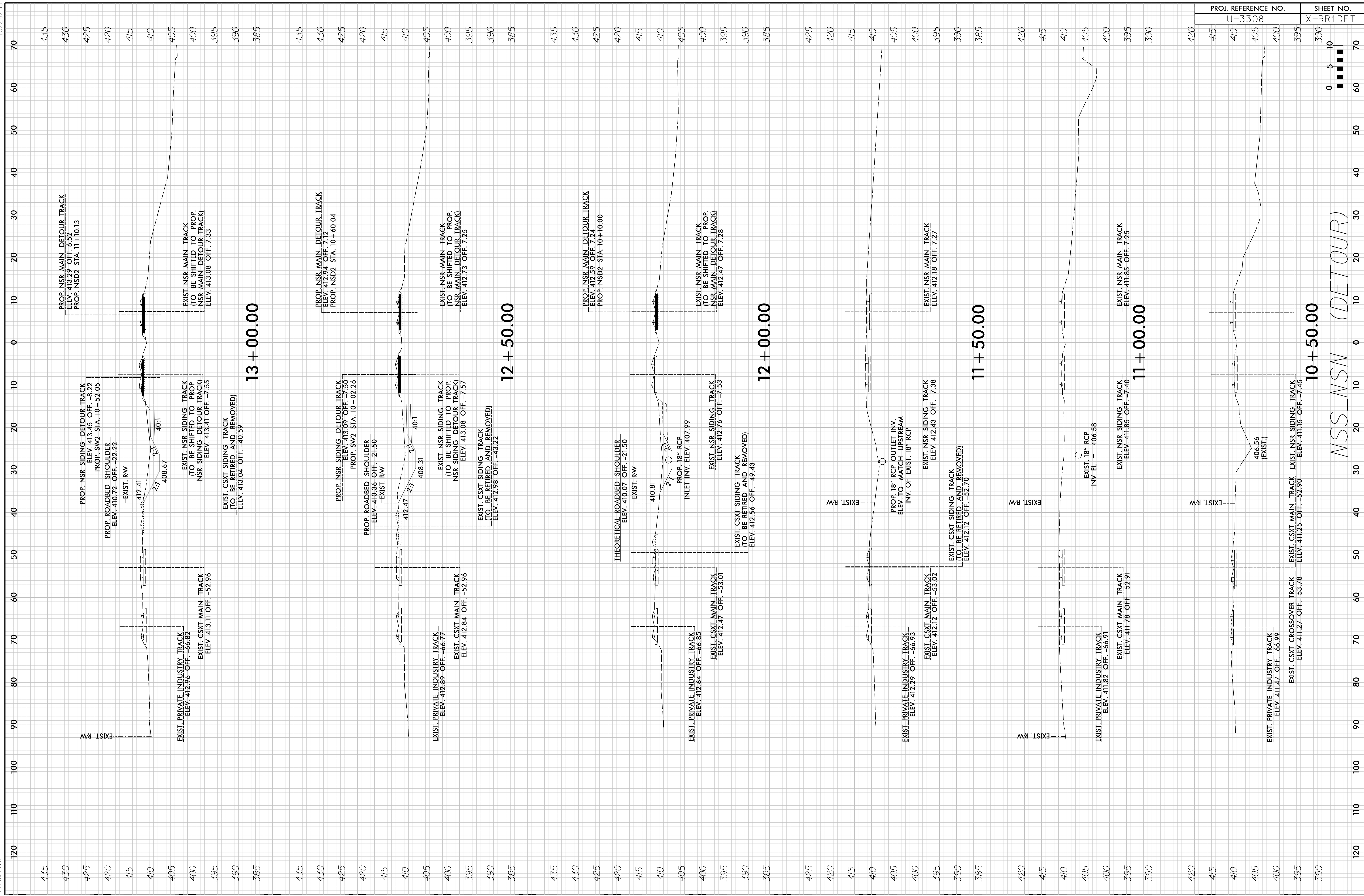
## DURHAM COUNTY TYPE OF WORK: GRADING, TRACK, DRAINAGE

### INDEX OF CROSS SECTION SHEETS

<u>TITLE</u>	<u>STATION</u>	<u>SHEET NO.</u>
DETOUR CROSS SECTIONS.....	10+50 TO 37+00 (-NSS_NSN-).....	X-RR1DET THROUGH X-RR12DET
FINAL CROSS SECTIONS.....	10+50 TO 37+00 (-NSS_NSN-).....	X-RR1 THROUGH X-RR12

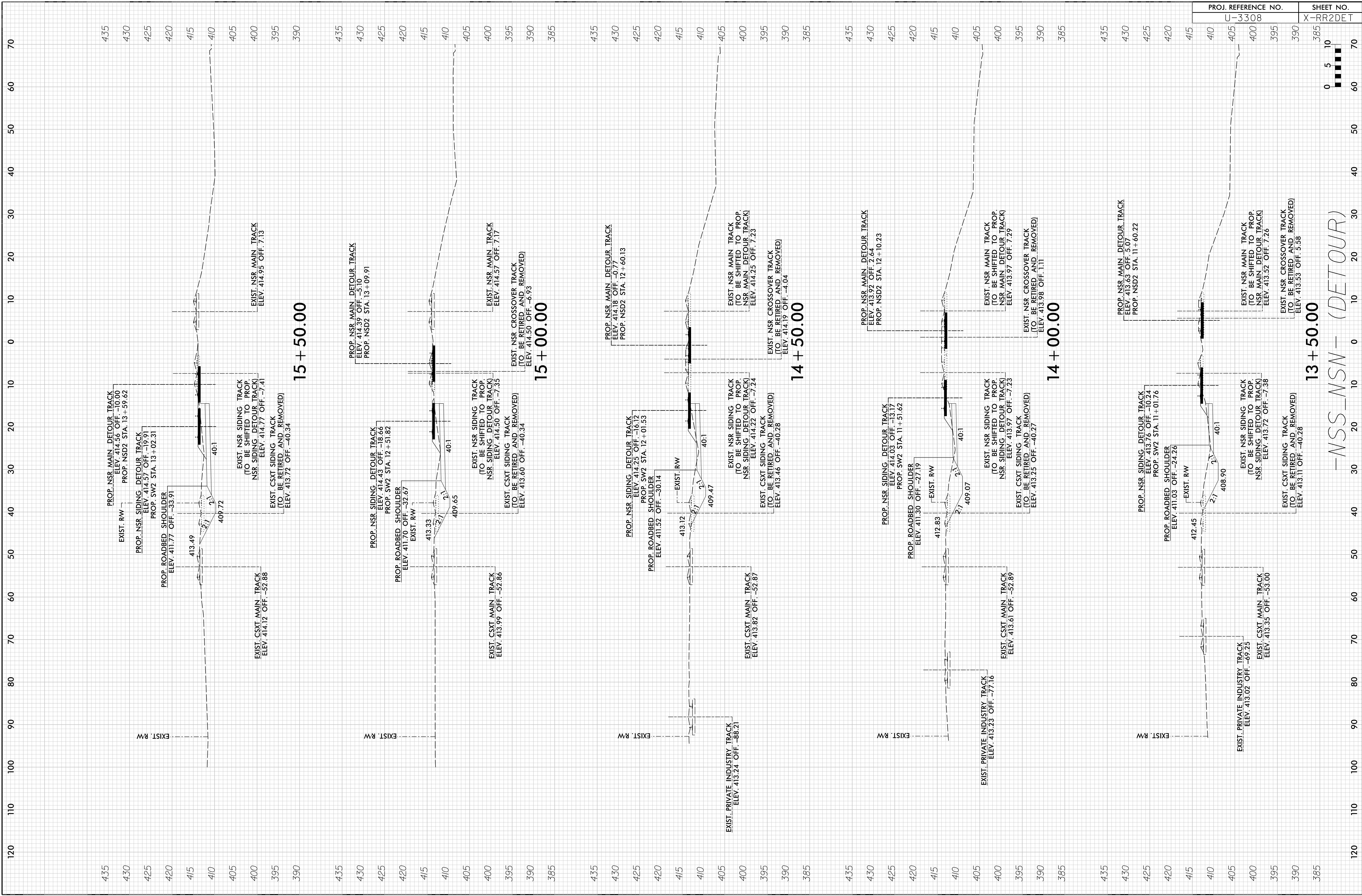






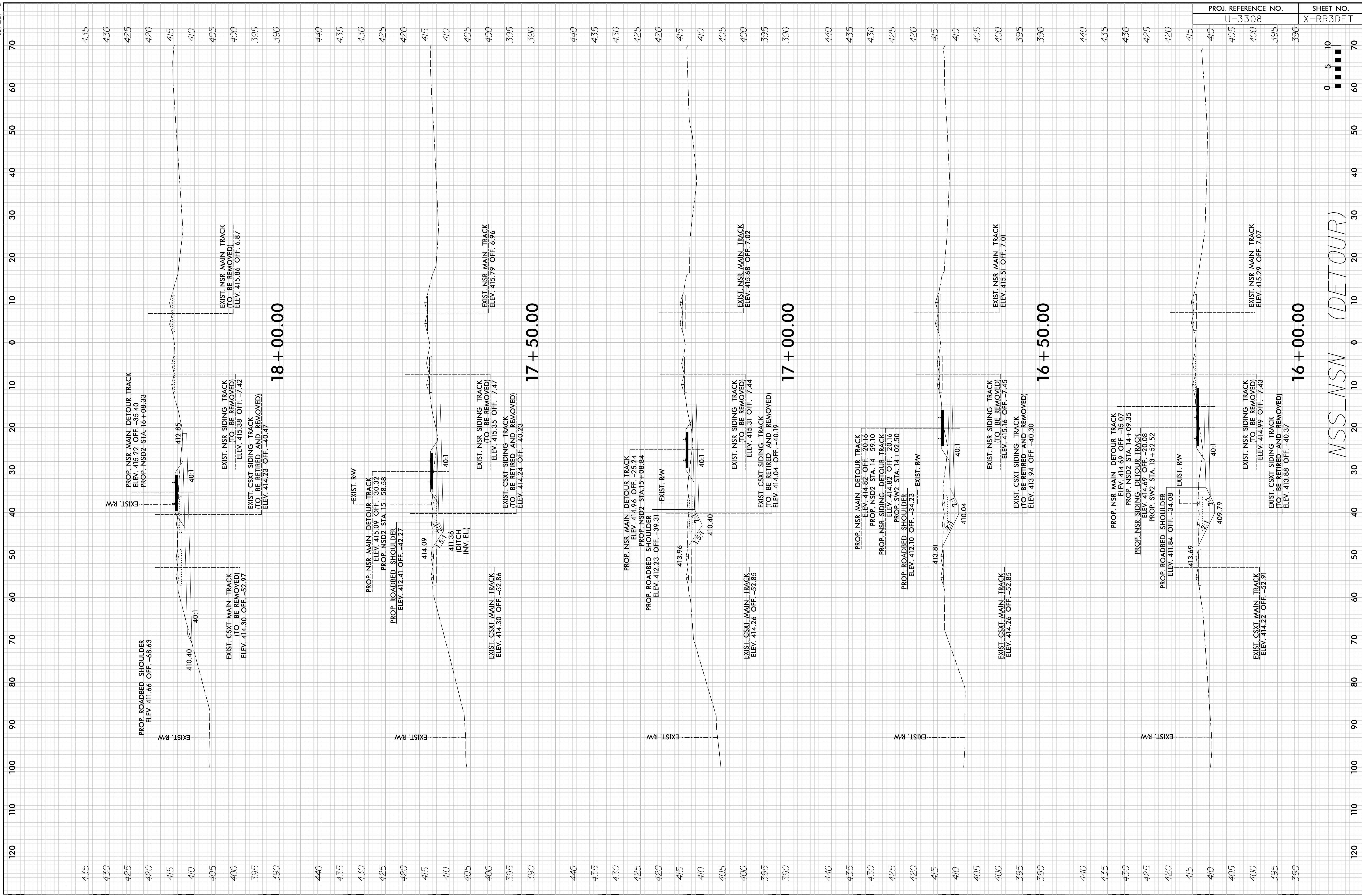
PROJ. REFERENCE NO.	SHEET NO.
U-3308	X-RR1DET

-NSS\_NSN- (DETOUR)



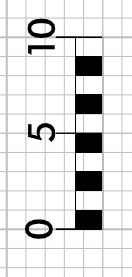
PROJ. REFERENCE NO.	SHEET NO.
U-3308	X-PR2DET

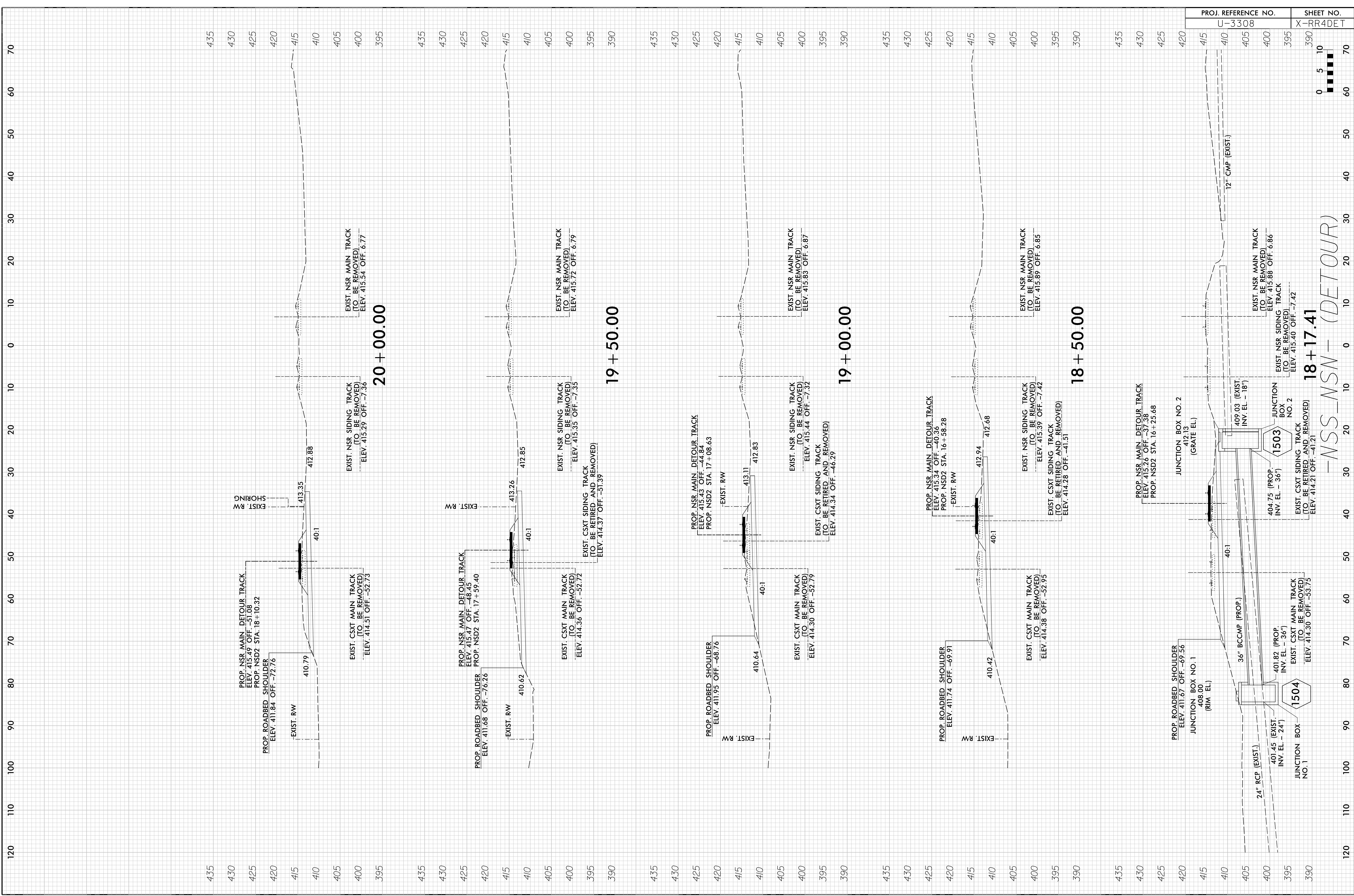




-NSS-NSN- (DETOUR)

PROJ. REFERENCE NO.	SHEET NO.
U-3308	X-RR3DET





20 + 00.00

19 + 50.00

19 + 00.00

18 + 50.00

18 + 17.41

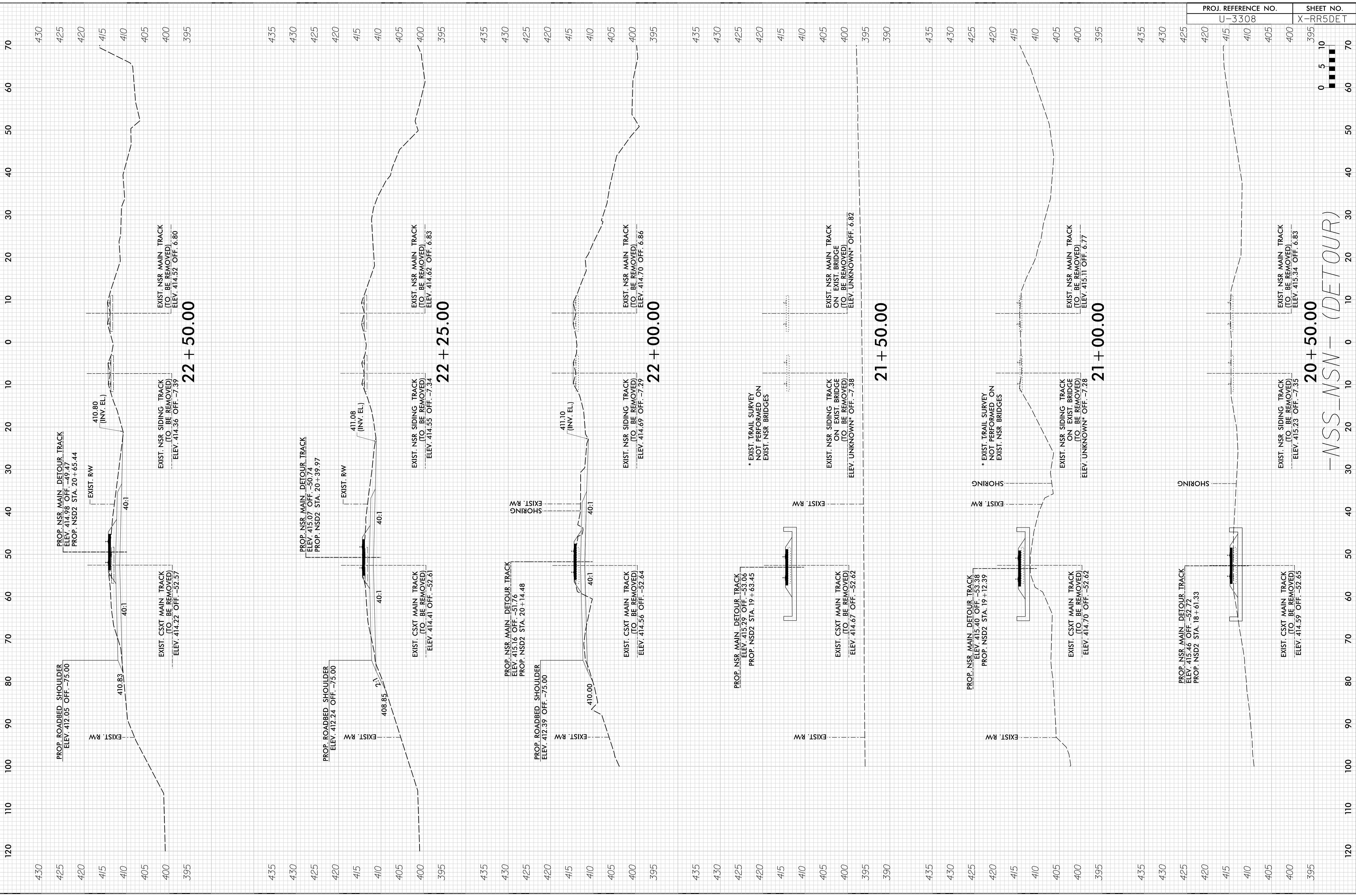
-NSS-NSN- (DETOUR)

PROJ. REFERENCE NO.	SHEET NO.
U-3308	X-RR4DET



9/8/2015 10:26:05 AM  
I:\PROJECTS\513251\usstation\track\RA\_u3308\_rdlj\_xp\l\_nss-msn\_DETOUR.dgn

10/26/98



430  
425  
420  
415  
410  
405  
400  
395

PROJ. ROADBED SHOULDER  
ELEV. 412.05 OFF. -75.00

EXIST. RW

PROJ. NSR MAIN DETOUR TRACK  
ELEV. 414.98 OFF. -49.47  
PROP. NSD2 STA. 20 + 65.44

EXIST. RW

410.80 (INV. EL.)

EXIST. NSR MAIN TRACK  
(TO BE REMOVED)  
ELEV. 414.52 OFF. 6.80

EXIST. NSR SIDING TRACK  
(TO BE REMOVED)  
ELEV. 414.36 OFF. -7.39

22 + 50.00

EXIST. CSXT MAIN TRACK  
(TO BE REMOVED)  
ELEV. 414.22 OFF. -52.57

40:1

40:1

40:1

435  
430  
425  
420  
415  
410  
405  
400  
395

PROJ. ROADBED SHOULDER  
ELEV. 412.24 OFF. -75.00

EXIST. RW

PROJ. NSR MAIN DETOUR TRACK  
ELEV. 415.07 OFF. -50.74  
PROP. NSD2 STA. 20 + 39.97

EXIST. RW

411.08 (INV. EL.)

EXIST. NSR MAIN TRACK  
(TO BE REMOVED)  
ELEV. 414.62 OFF. 6.83

EXIST. NSR SIDING TRACK  
(TO BE REMOVED)  
ELEV. 414.55 OFF. -7.34

22 + 25.00

EXIST. CSXT MAIN TRACK  
(TO BE REMOVED)  
ELEV. 414.41 OFF. -52.61

40:1

40:1

40:1

435  
430  
425  
420  
415  
410  
405  
400  
395

PROJ. ROADBED SHOULDER  
ELEV. 412.39 OFF. -75.00

EXIST. RW

PROJ. NSR MAIN DETOUR TRACK  
ELEV. 415.16 OFF. -51.76  
PROP. NSD2 STA. 20 + 14.48

SHORING

EXIST. RW

411.10 (INV. EL.)

EXIST. NSR MAIN TRACK  
(TO BE REMOVED)  
ELEV. 414.70 OFF. 6.86

EXIST. NSR SIDING TRACK  
(TO BE REMOVED)  
ELEV. 414.69 OFF. -7.29

22 + 00.00

EXIST. CSXT MAIN TRACK  
(TO BE REMOVED)  
ELEV. 414.56 OFF. -52.64

40:1

40:1

435  
430  
425  
420  
415  
410  
405  
400  
395  
390

PROJ. NSR MAIN DETOUR TRACK  
ELEV. 415.29 OFF. -53.06  
PROP. NSD2 STA. 19 + 63.45

EXIST. RW

\* EXIST. TRAIL SURVEY NOT PERFORMED ON EXIST. NSR BRIDGES

EXIST. NSR MAIN TRACK  
(TO BE REMOVED)  
ELEV. 414.67 OFF. -52.62

EXIST. NSR SIDING TRACK ON EXIST. BRIDGE  
(TO BE REMOVED)  
ELEV. UNKNOWN\* OFF. -7.38

EXIST. NSR MAIN TRACK ON EXIST. BRIDGE  
(TO BE REMOVED)  
ELEV. UNKNOWN\* OFF. 6.82

21 + 50.00

435  
430  
425  
420  
415  
410  
405  
400  
395

PROJ. NSR MAIN DETOUR TRACK  
ELEV. 415.40 OFF. -53.38  
PROP. NSD2 STA. 19 + 12.39

EXIST. RW

SHORING

\* EXIST. TRAIL SURVEY NOT PERFORMED ON EXIST. NSR BRIDGES

EXIST. NSR MAIN TRACK  
(TO BE REMOVED)  
ELEV. 414.70 OFF. -52.62

EXIST. NSR SIDING TRACK ON EXIST. BRIDGE  
(TO BE REMOVED)  
ELEV. UNKNOWN\* OFF. -7.28

EXIST. NSR MAIN TRACK ON EXIST. BRIDGE  
(TO BE REMOVED)  
ELEV. 415.11 OFF. 6.77

21 + 00.00

435  
430  
425  
420  
415  
410  
405  
400  
395

PROJ. NSR MAIN DETOUR TRACK  
ELEV. 415.46 OFF. -52.72  
PROP. NSD2 STA. 18 + 61.33

EXIST. RW

SHORING

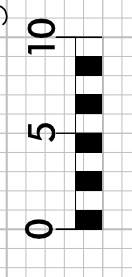
EXIST. NSR MAIN TRACK  
(TO BE REMOVED)  
ELEV. 414.59 OFF. -52.65

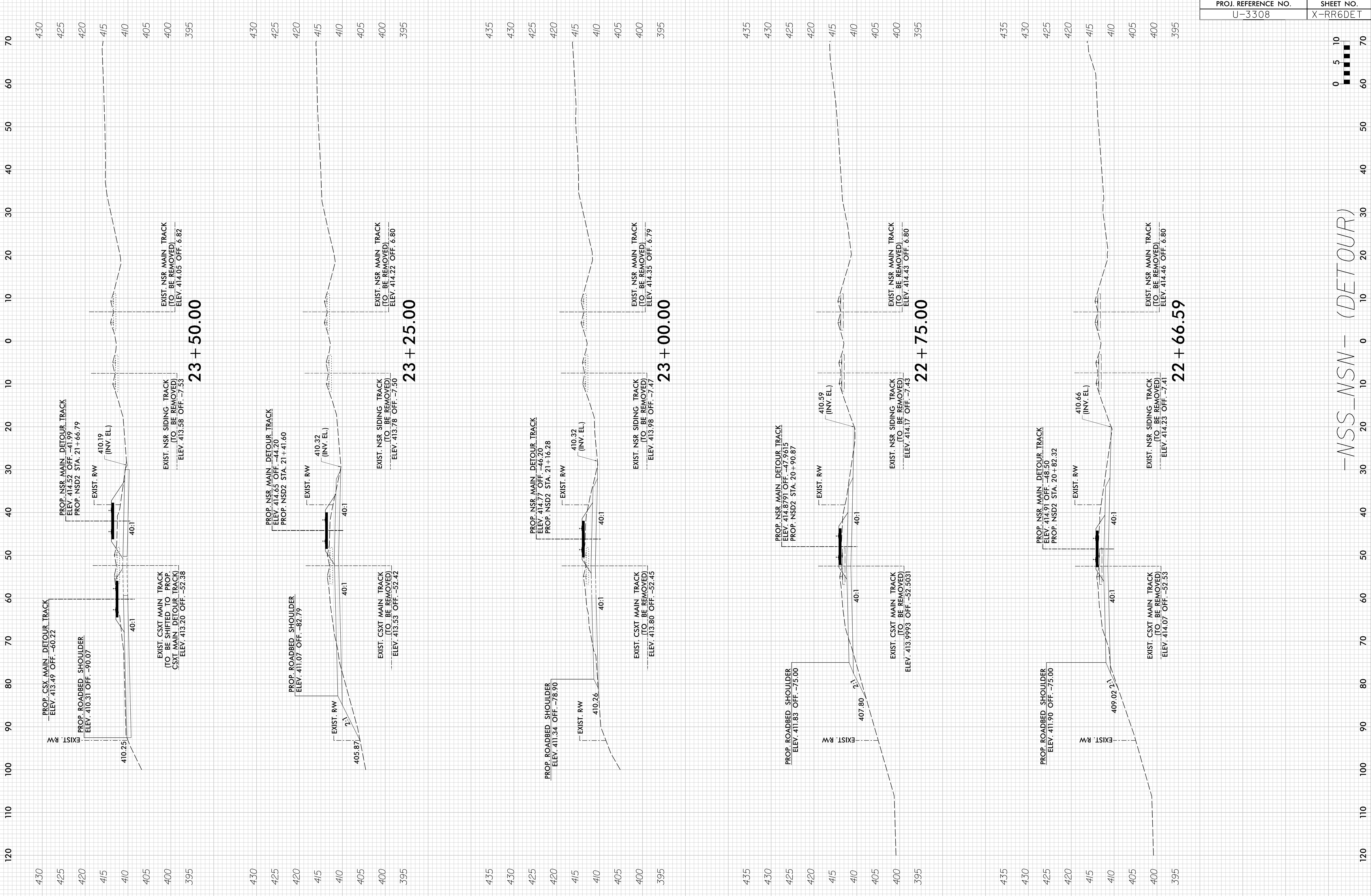
EXIST. NSR SIDING TRACK  
(TO BE REMOVED)  
ELEV. 415.23 OFF. -7.35

EXIST. NSR MAIN TRACK  
(TO BE REMOVED)  
ELEV. 415.34 OFF. 6.83

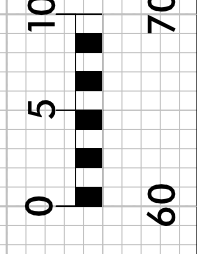
20 + 50.00

-NSS\_NSN- (DETOUR)





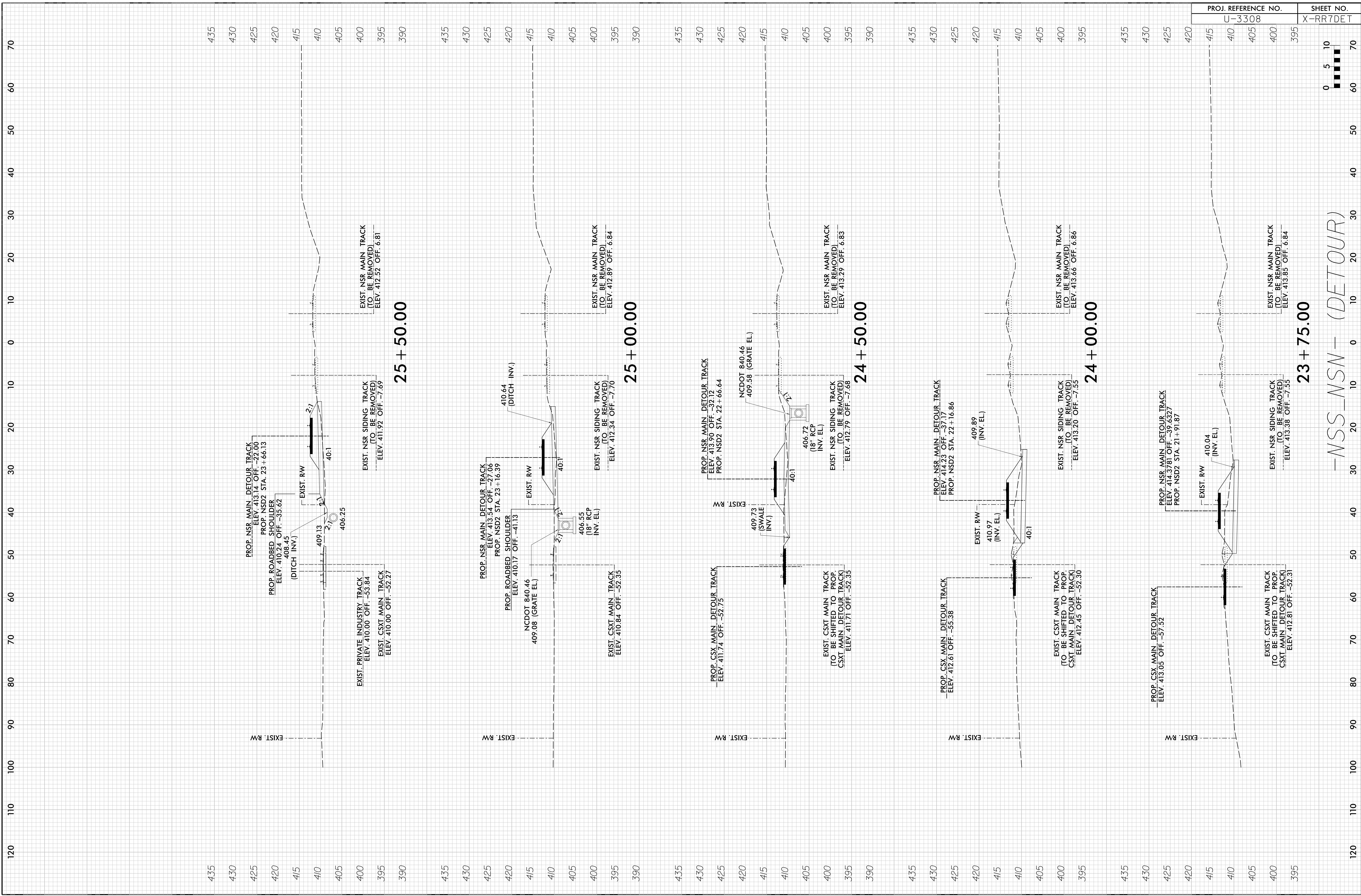
PROJ. REFERENCE NO.	SHEET NO.
U-3308	X-RR6DET



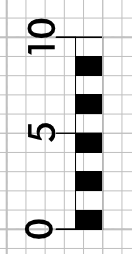
-NSS-NSN- (DETOUR)

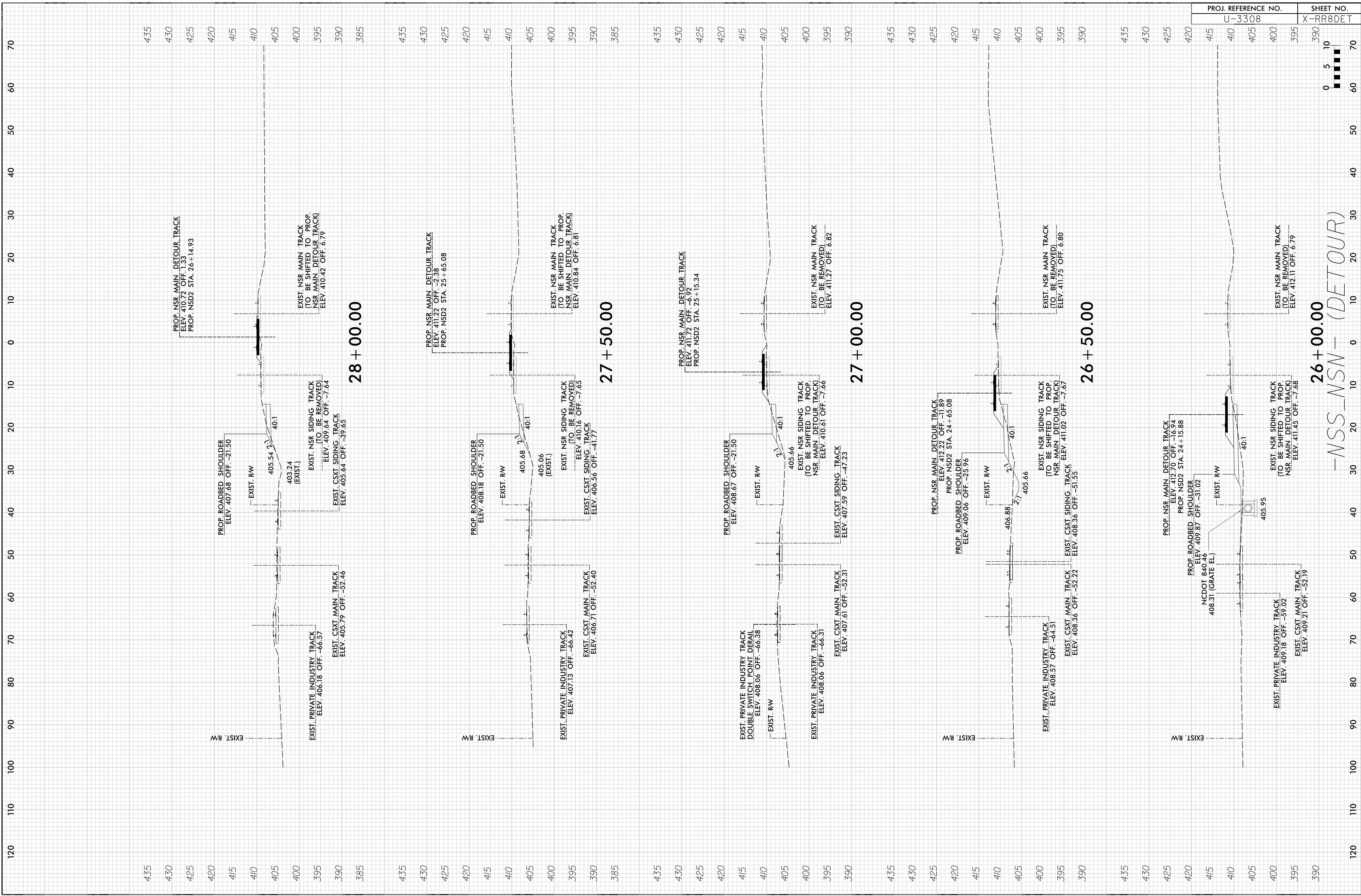


PROJ. REFERENCE NO.	SHEET NO.
U-3308	X-RR7DET

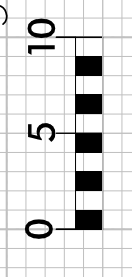


-NSS-NSN- (DETOUR)



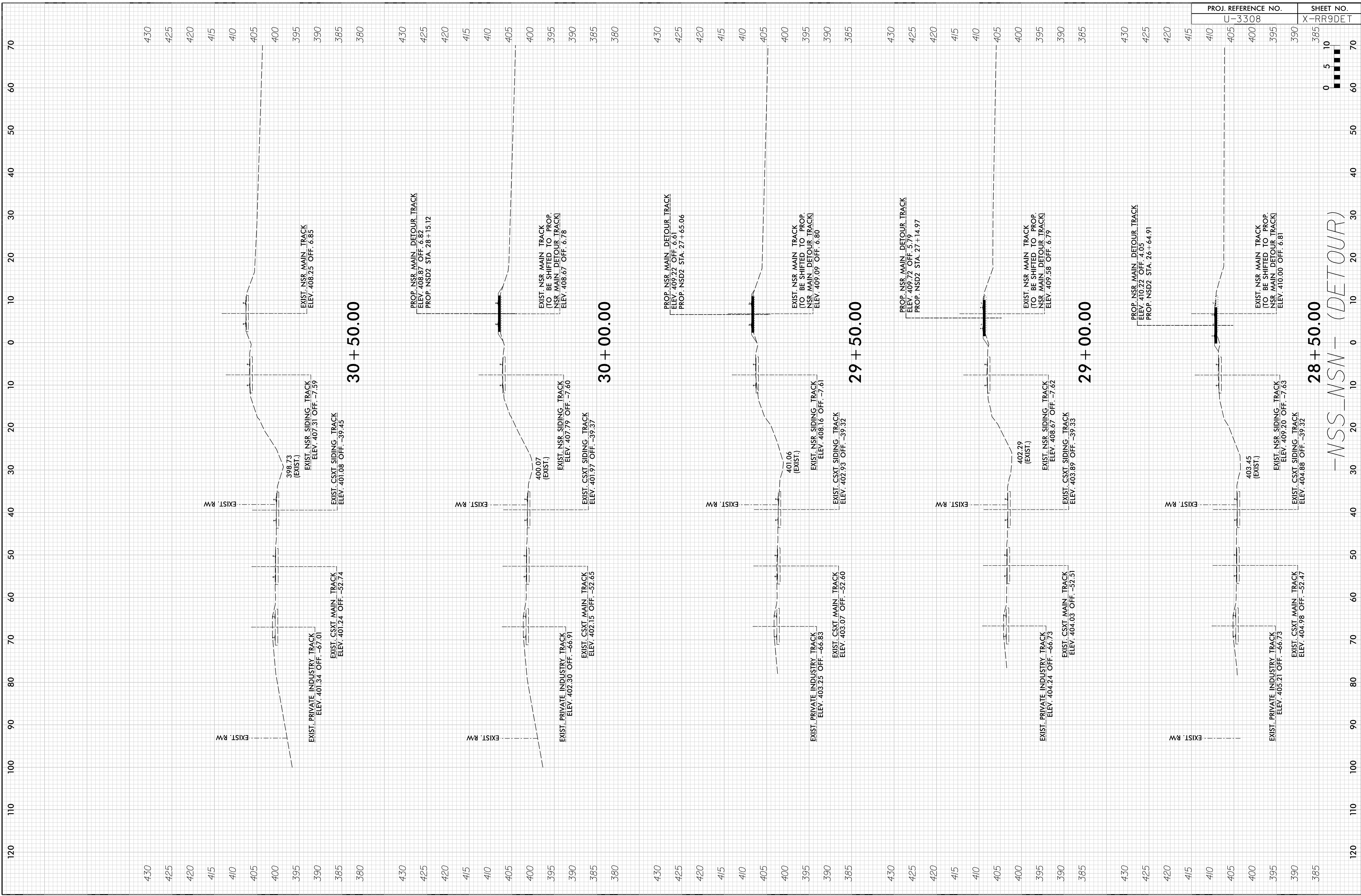


PROJ. REFERENCE NO.	SHEET NO.
U-3308	X-RR8DET



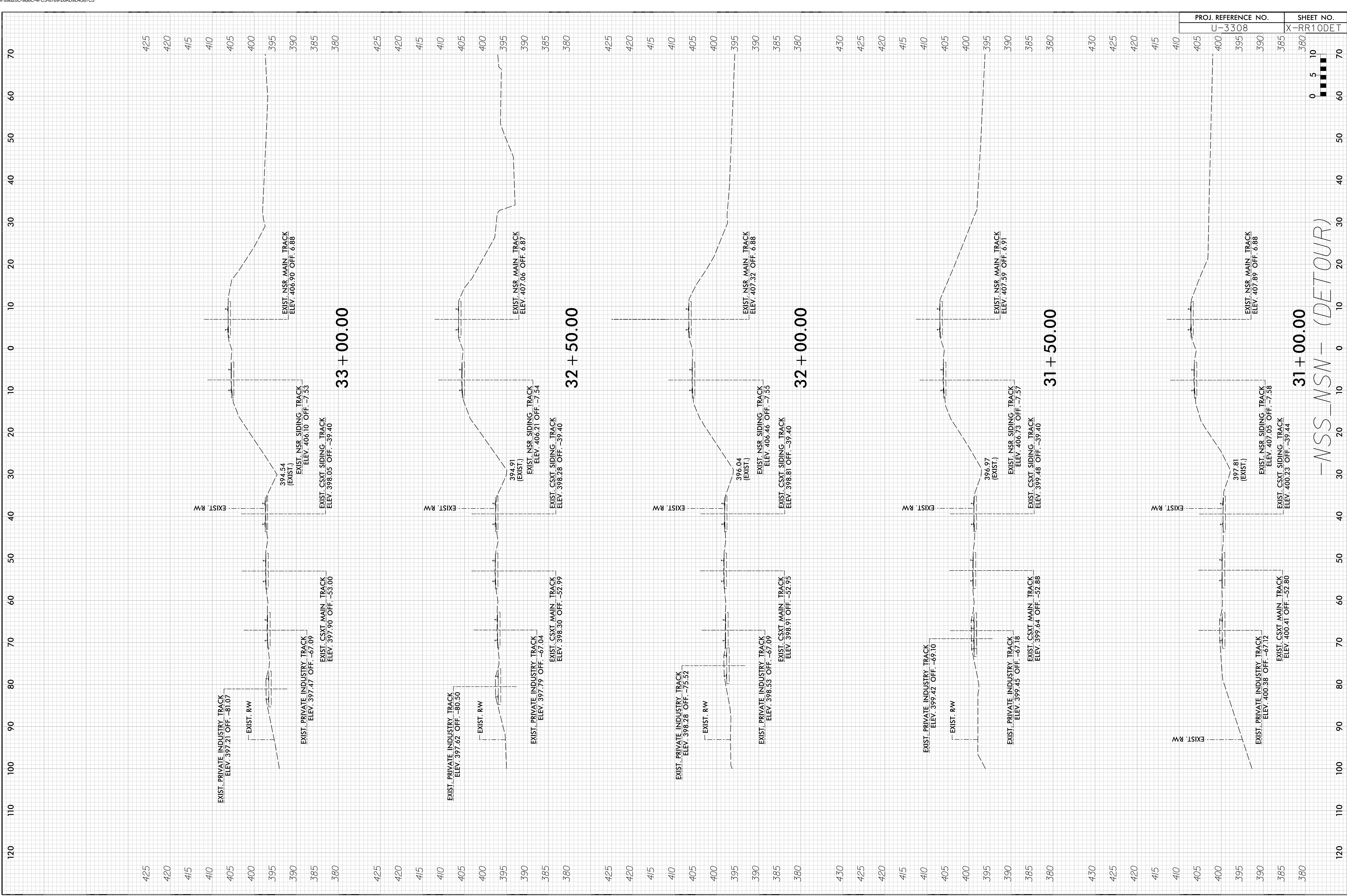
26 + 00.00  
-NSS-NSN- (DETOUR)





PROJ. REFERENCE NO.	SHEET NO.
U-3308	X-RR9DET

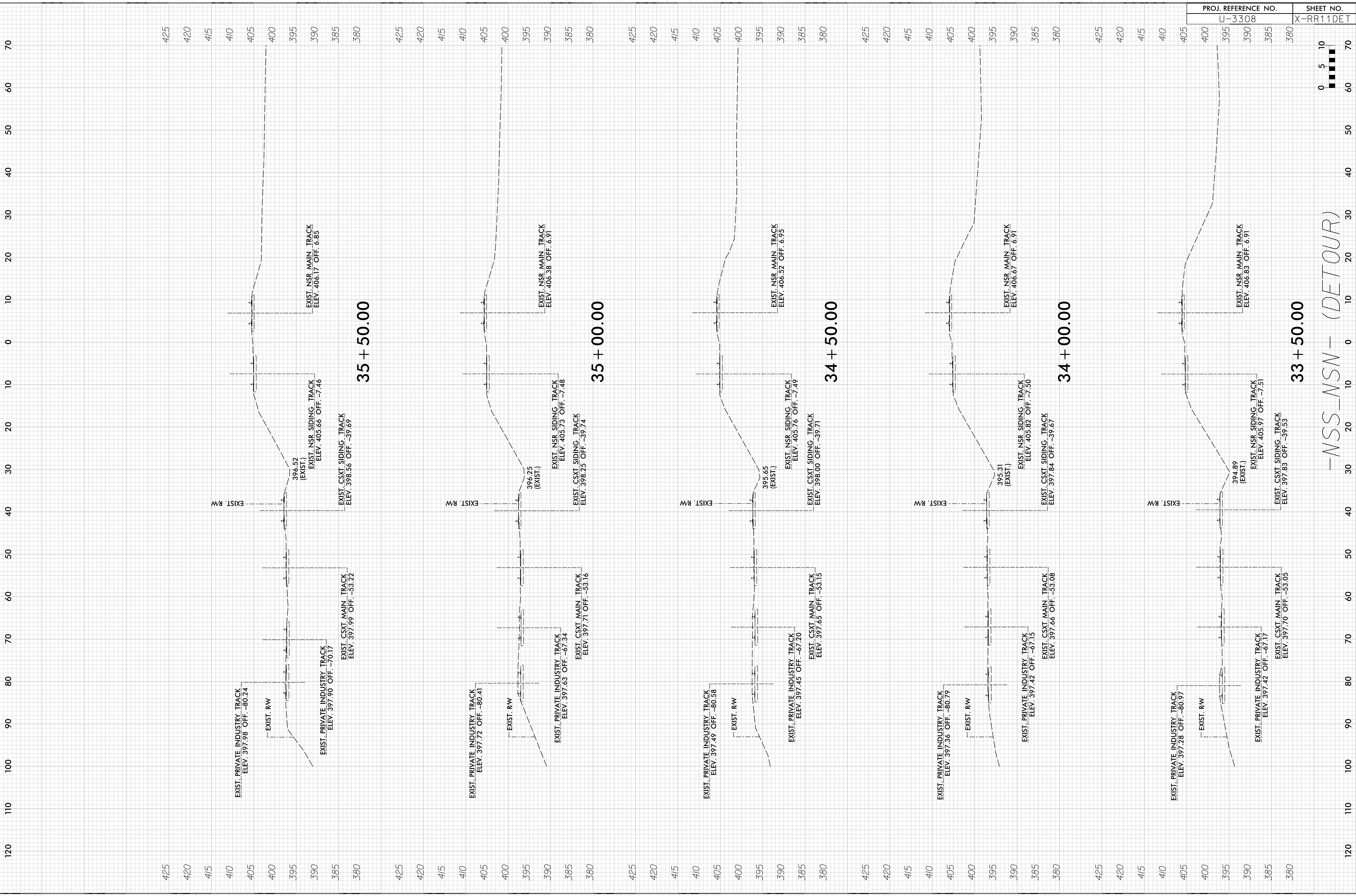
28+50.00  
 -NSS-NSN- (DETOUR)



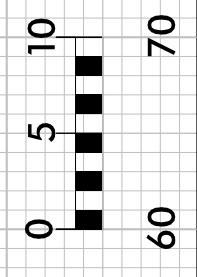


9/18/2015 10:26:05 AM  
I:\PROJECTS\513251\usstation\track\RA\_u3308\_rdlj\_xp\l\_nss-nsn\_DETOUR.dgn  
Pattern

10/26/98

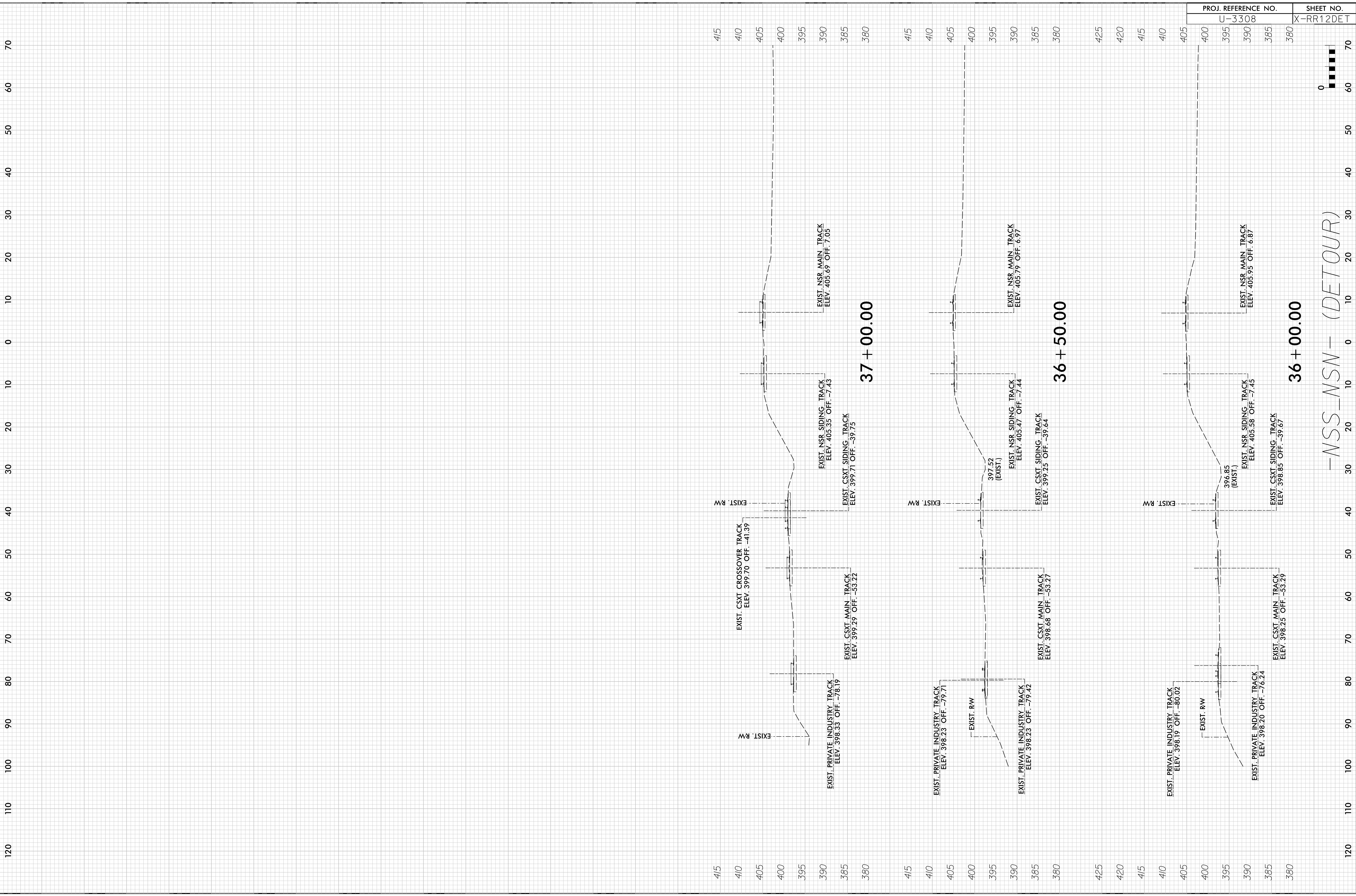


PROJ. REFERENCE NO.	SHEET NO.
U-3308	X-RR11DET

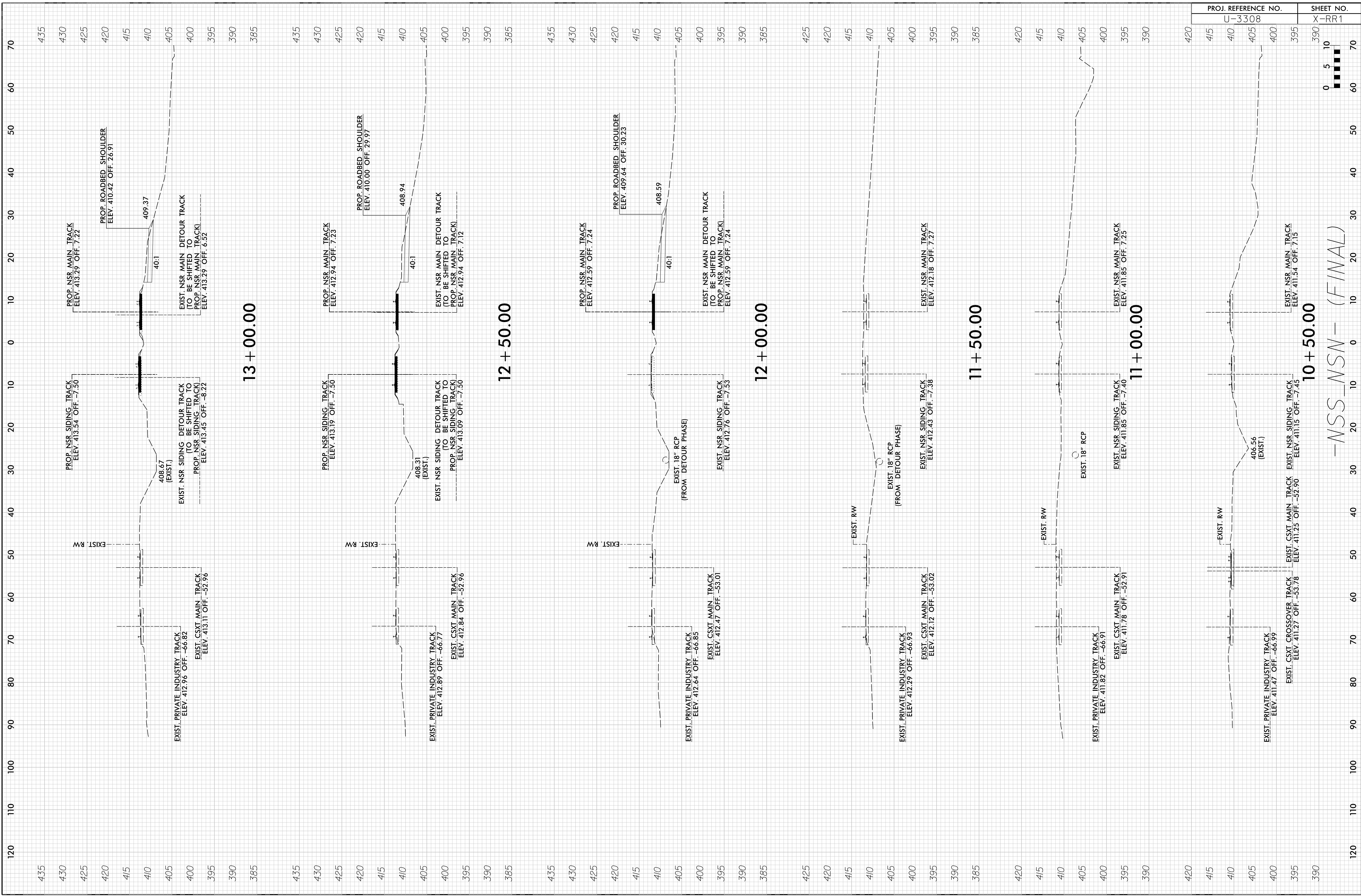


-NSS-NSN- (DETOUR)

PROJ. REFERENCE NO.	SHEET NO.
U-3308	X-RR12DET

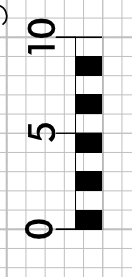


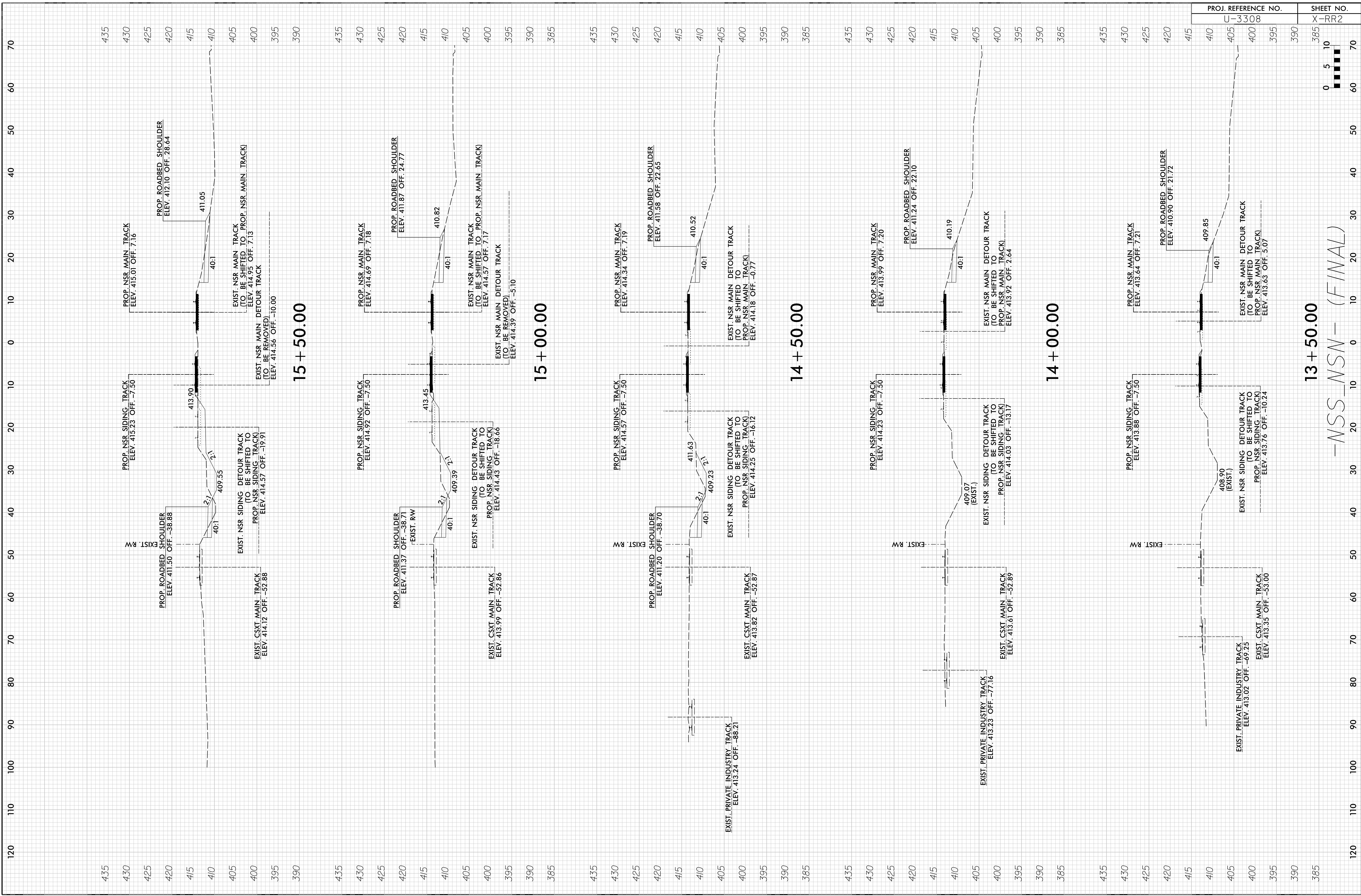




PROJ. REFERENCE NO.	U-3308
SHEET NO.	X-RR1

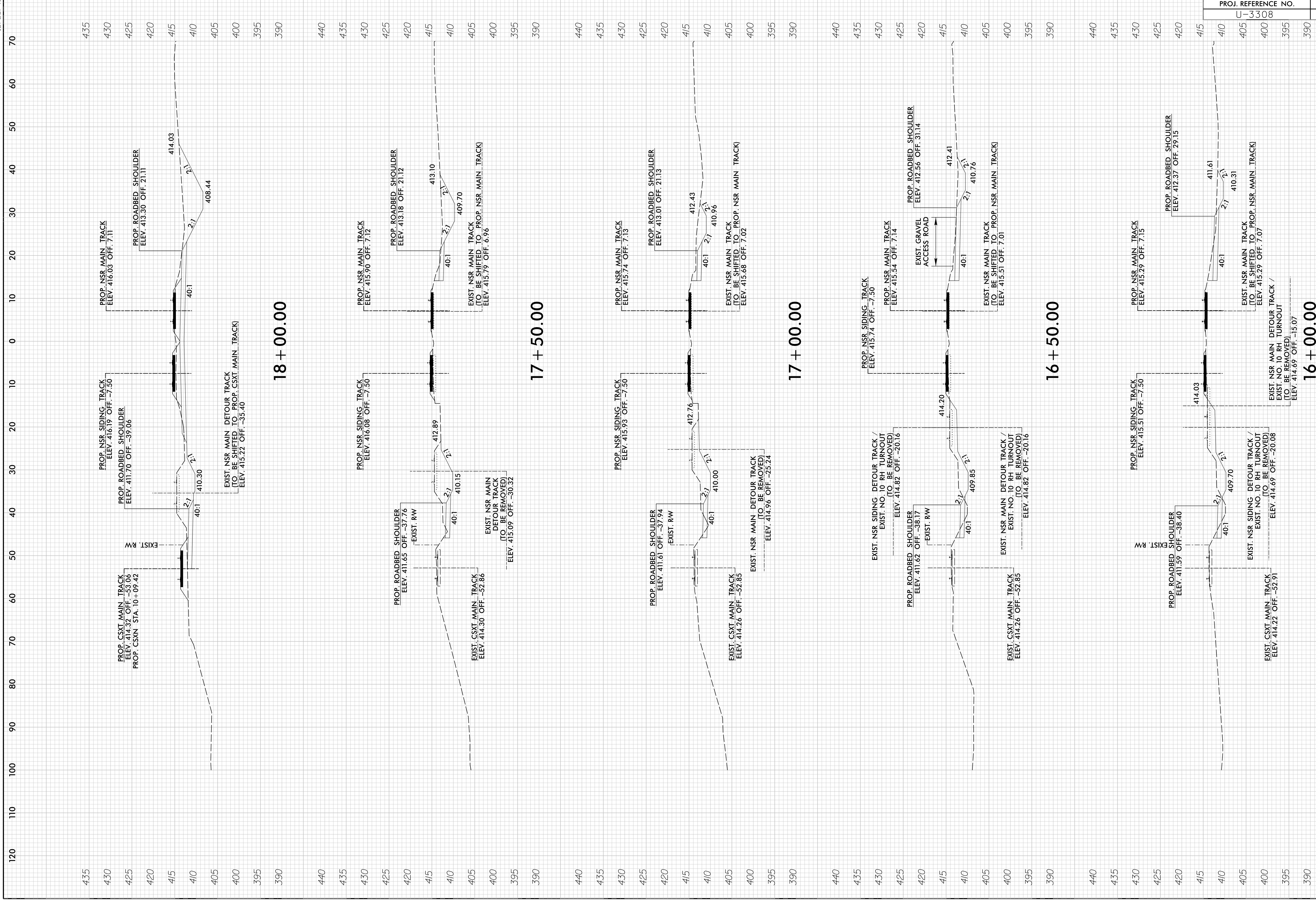
-NSS-NSN- (FINAL)



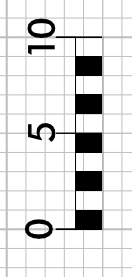


-NSS-NSN- (FINAL)

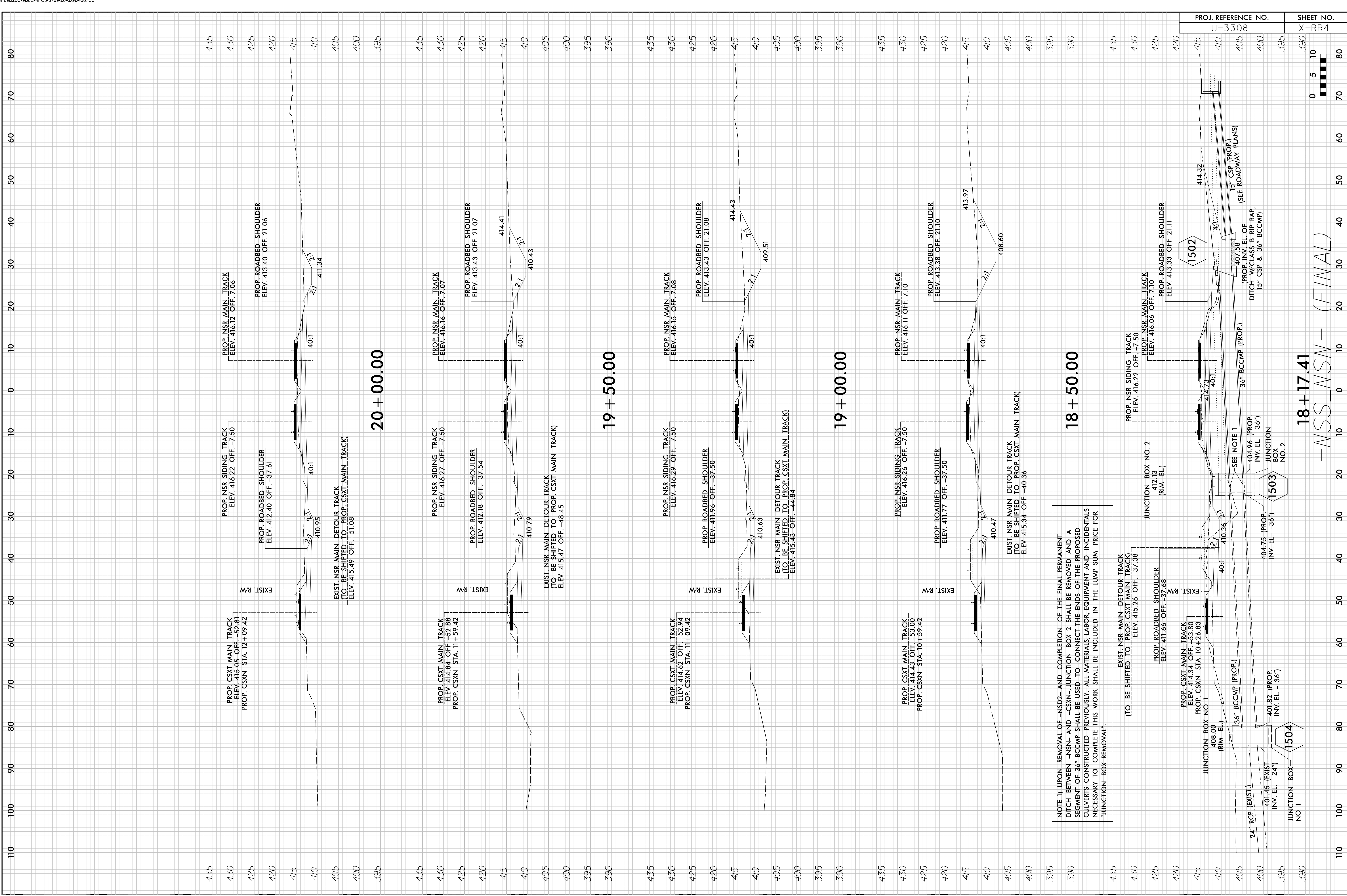




PROJ. REFERENCE NO.	SHEET NO.
U-3308	X-RR3



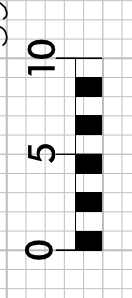
-NSS-NSN- (FINAL)



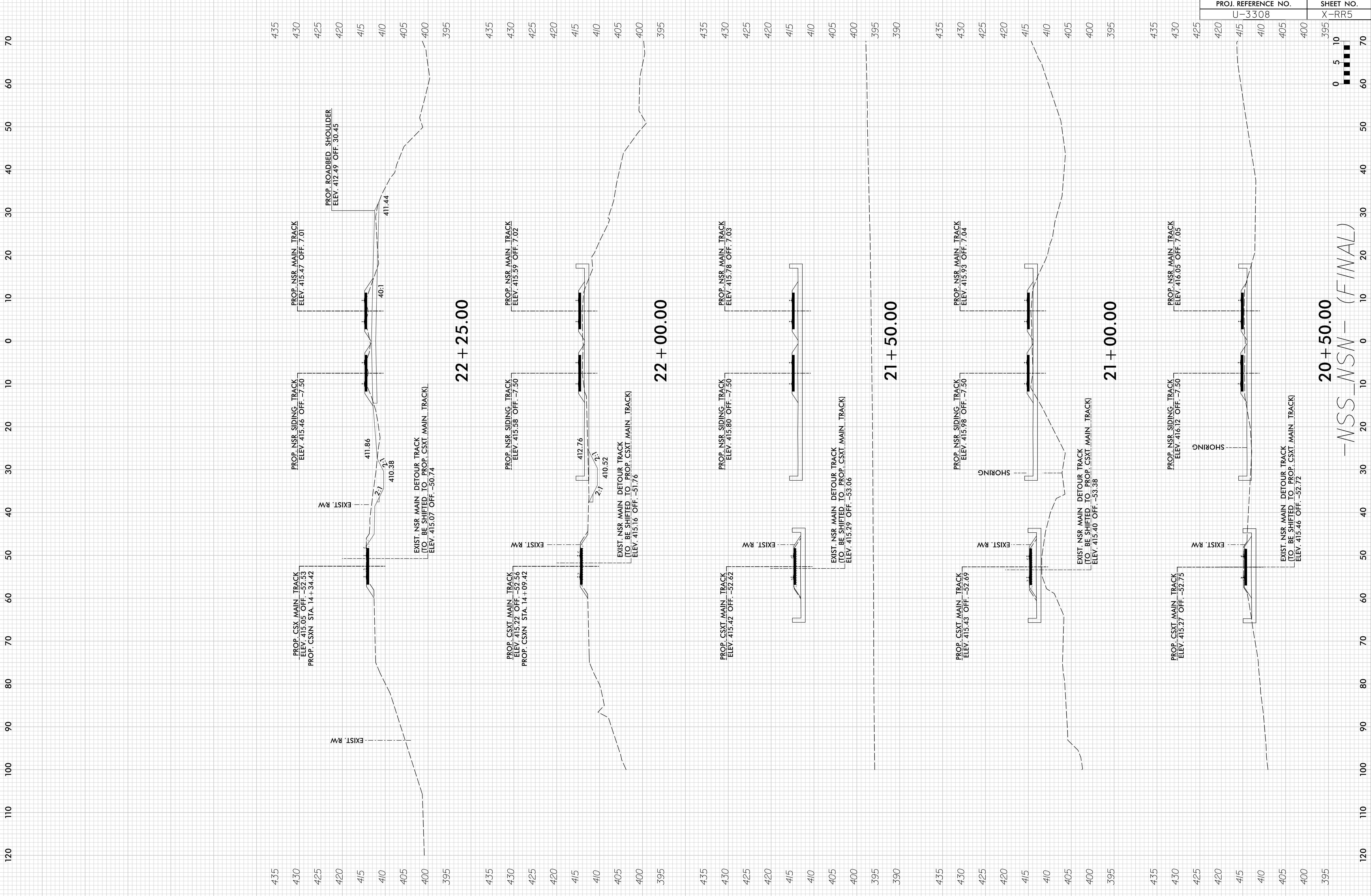
NOTE 1) UPON REMOVAL OF -NSD2- AND COMPLETION OF THE FINAL PERMANENT DITCH BETWEEN -NSN- AND -CSXN-, JUNCTION BOX 2 SHALL BE REMOVED AND A SEGMENT OF 36" BCCAMP SHALL BE USED TO CONNECT THE ENDS OF THE PROPOSED CULVERTS CONSTRUCTED PREVIOUSLY. ALL MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR "JUNCTION BOX REMOVAL".

PROJ. REFERENCE NO.	SHEET NO.
U-3308	X-RR4

18+17.41  
-NSS-NSN- (FINAL)

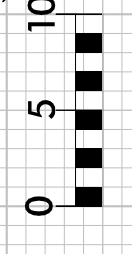


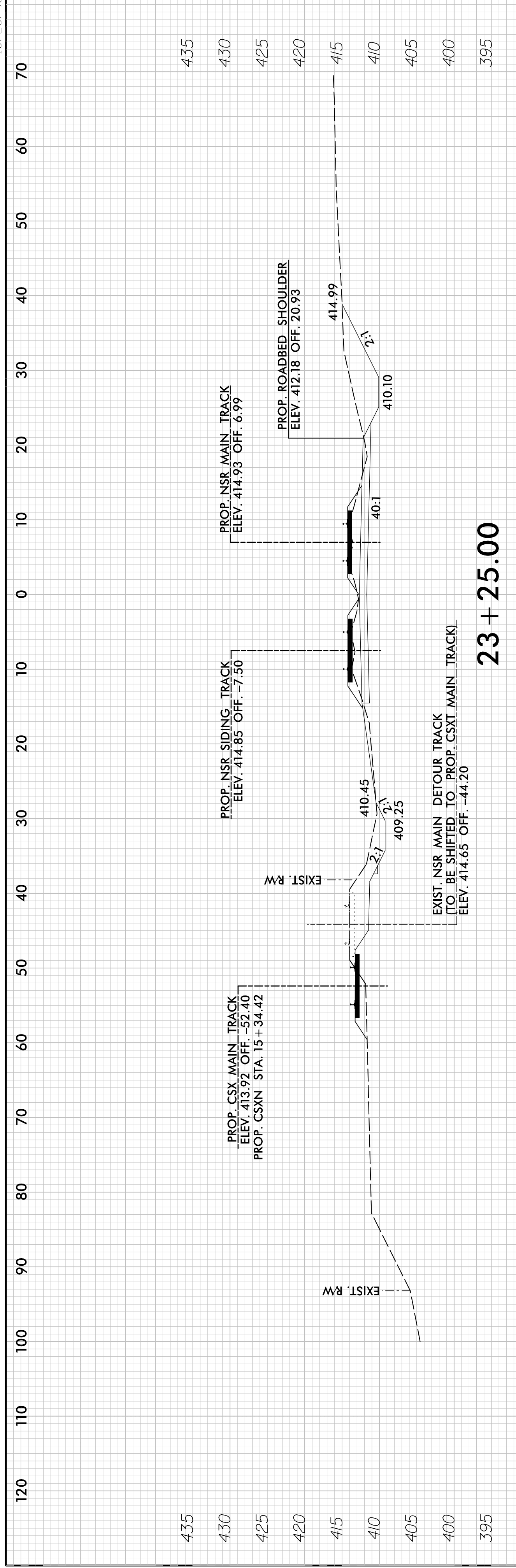




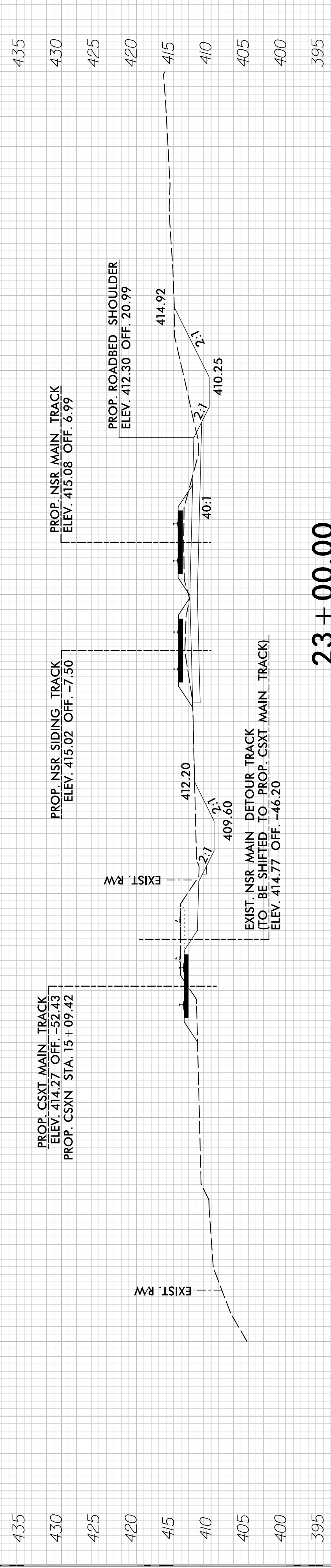
PROJ. REFERENCE NO.	SHEET NO.
U-3308	X-RR5

-NSS-NSN- (FINAL)

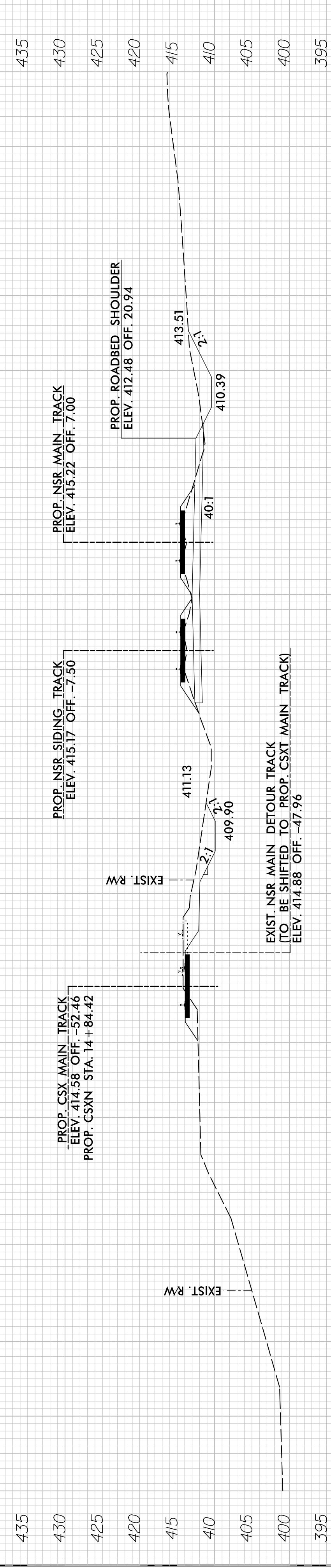




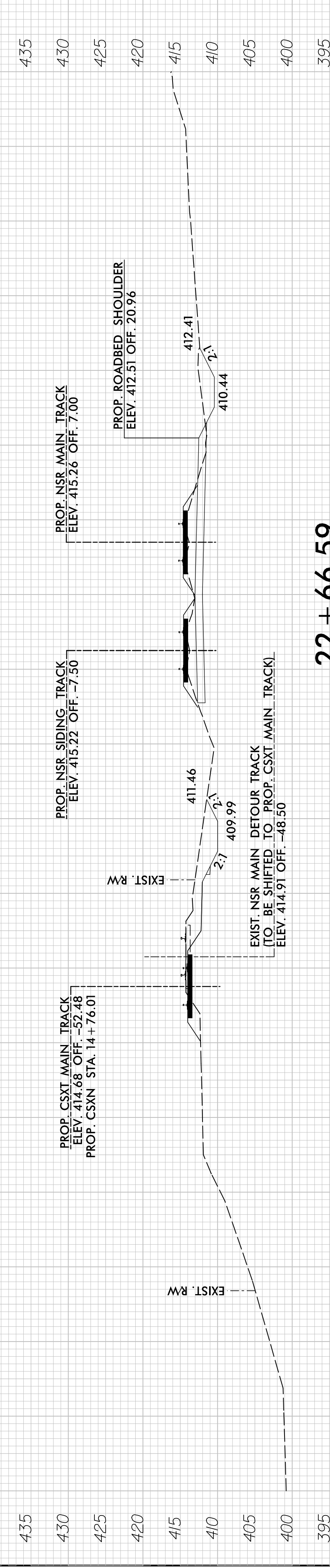
**23 + 25.00**



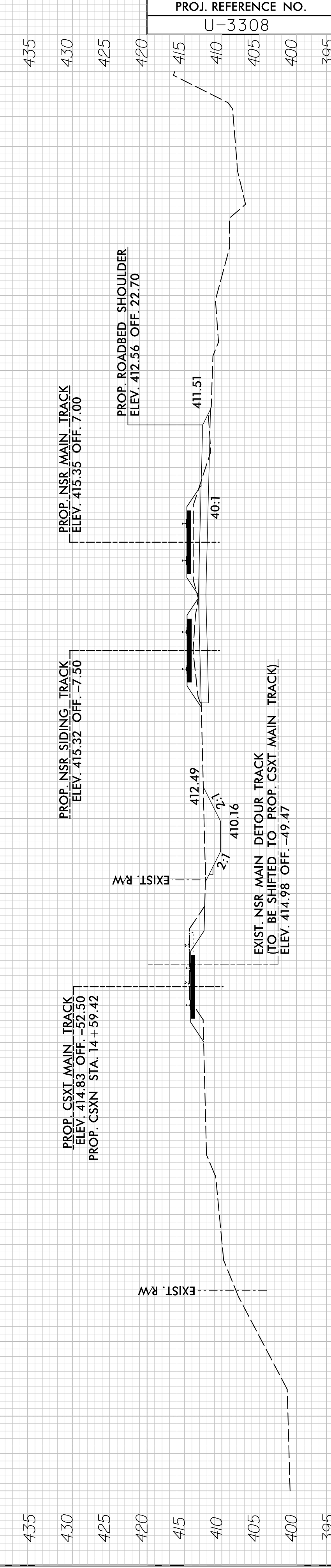
**23 + 00.00**



**22 + 75.00**

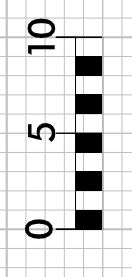


**22 + 66.59**



**22 + 50.00**

PROJ. REFERENCE NO.	SHEET NO.
U-3308	X-RR6

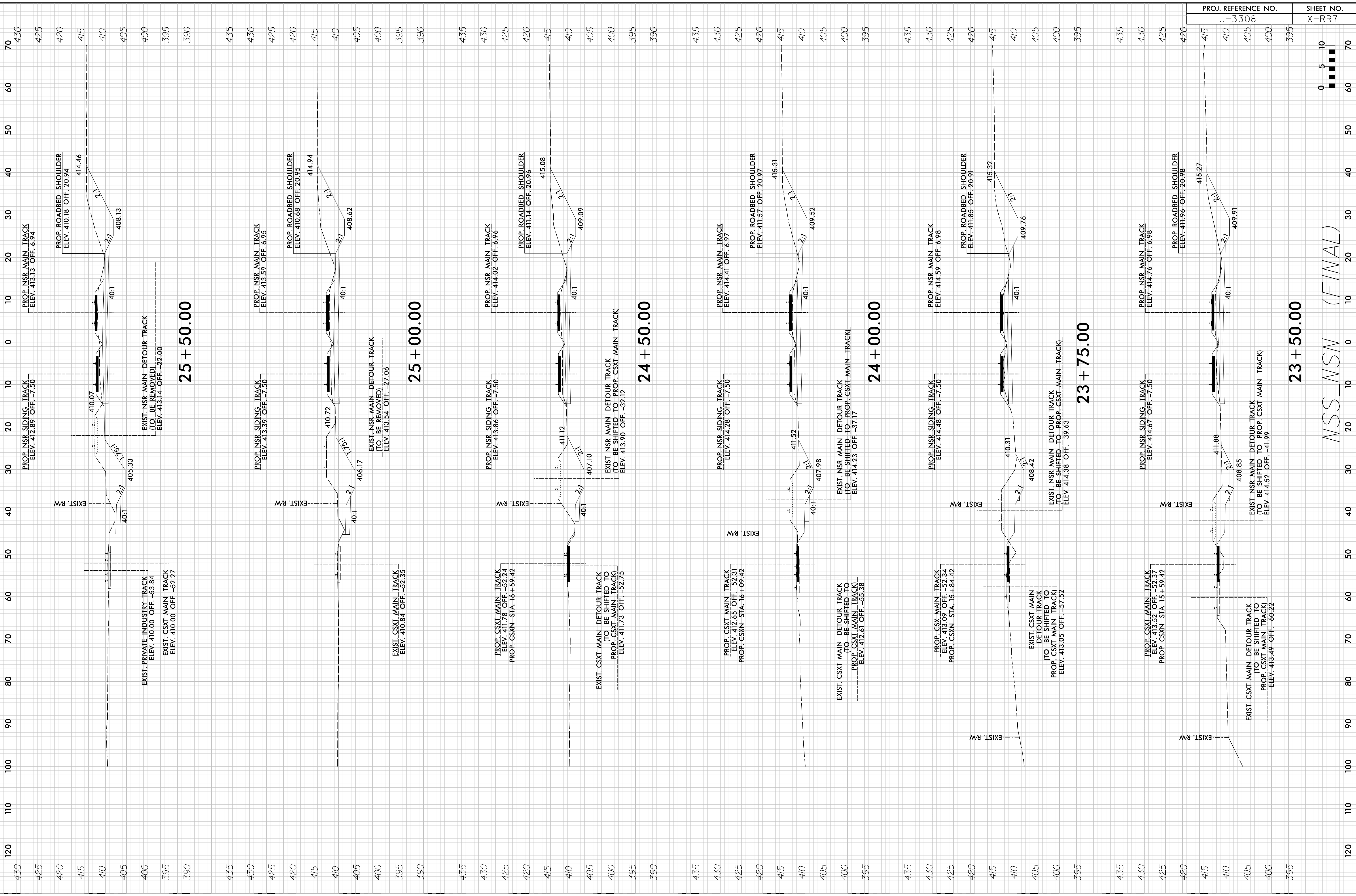


-NSS-NSN- (FINAL)

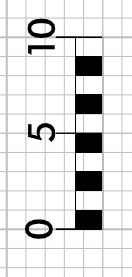


9/16/2015 10:26:05 AM I:\PROJECTS\513251\usdot\ton\track\RA\_u03308\_rdu\xp\_l\_nss-nsn\_FINAL.dgn

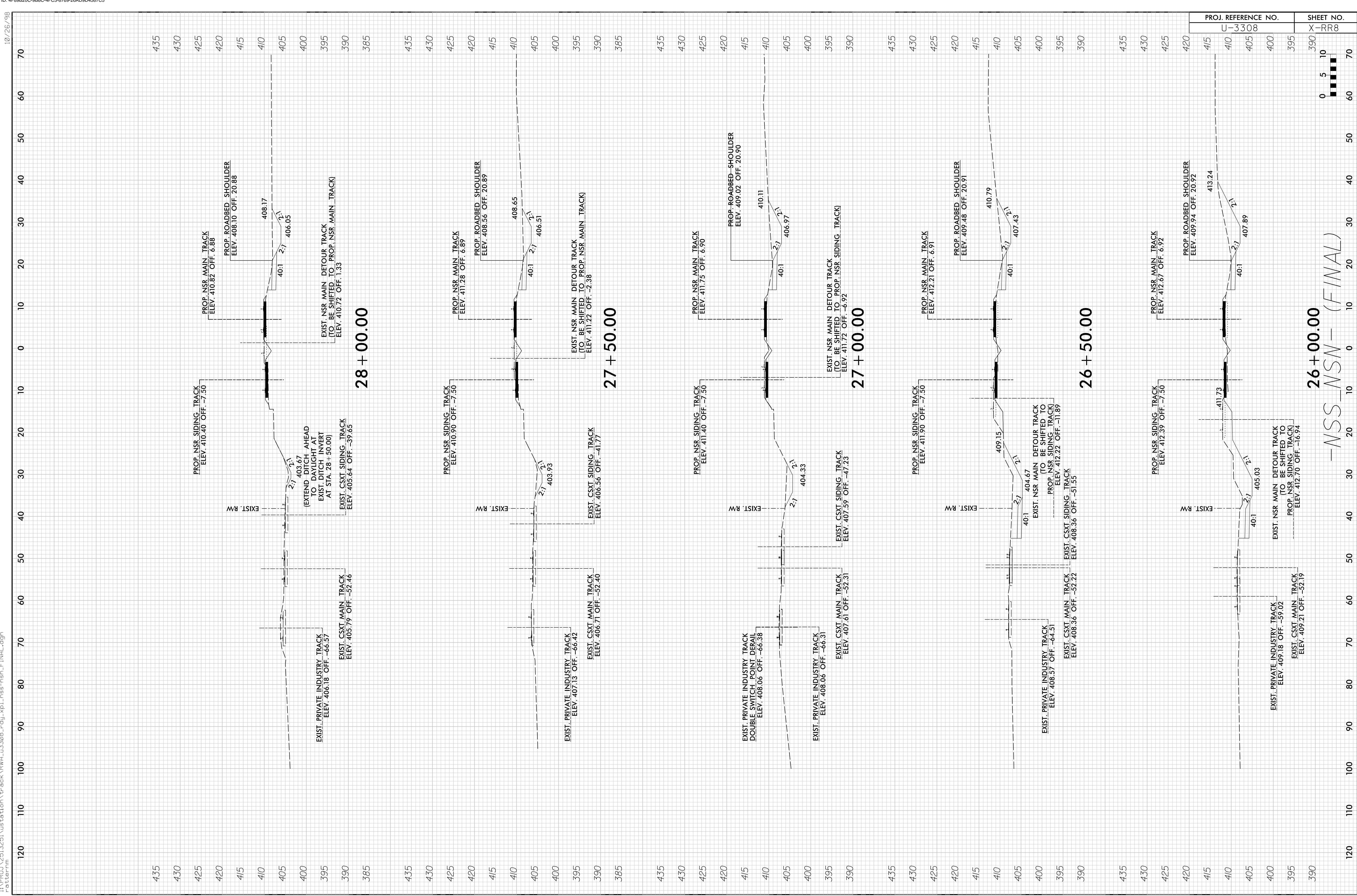
10/26/08



PROJ. REFERENCE NO.	SHEET NO.
U-3308	X-RR7

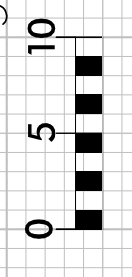


-NSS-NSN- (FINAL)

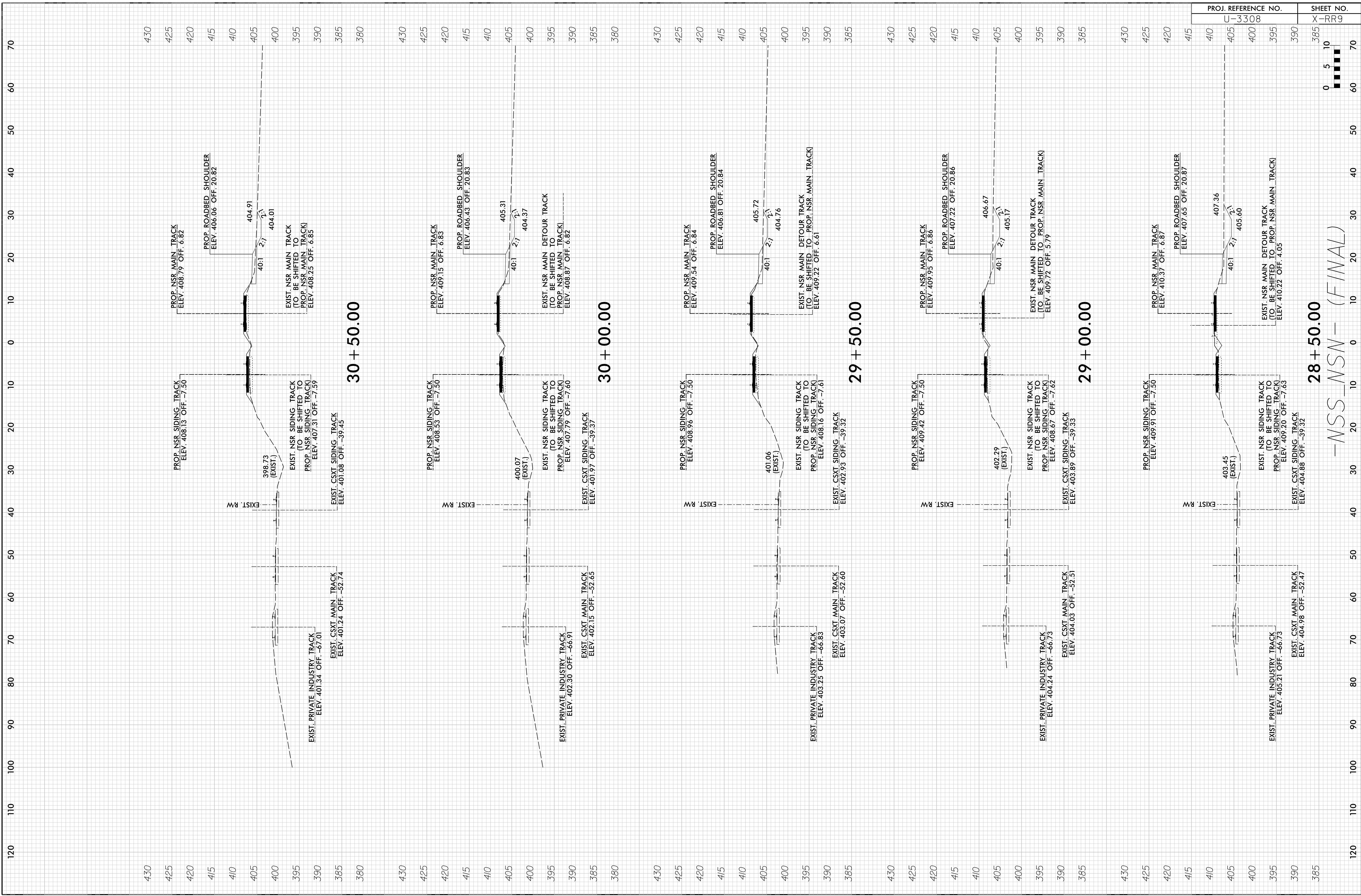


-NSS-NSN- (FINAL)

PROJ. REFERENCE NO.	SHEET NO.
U-3308	X-RR8

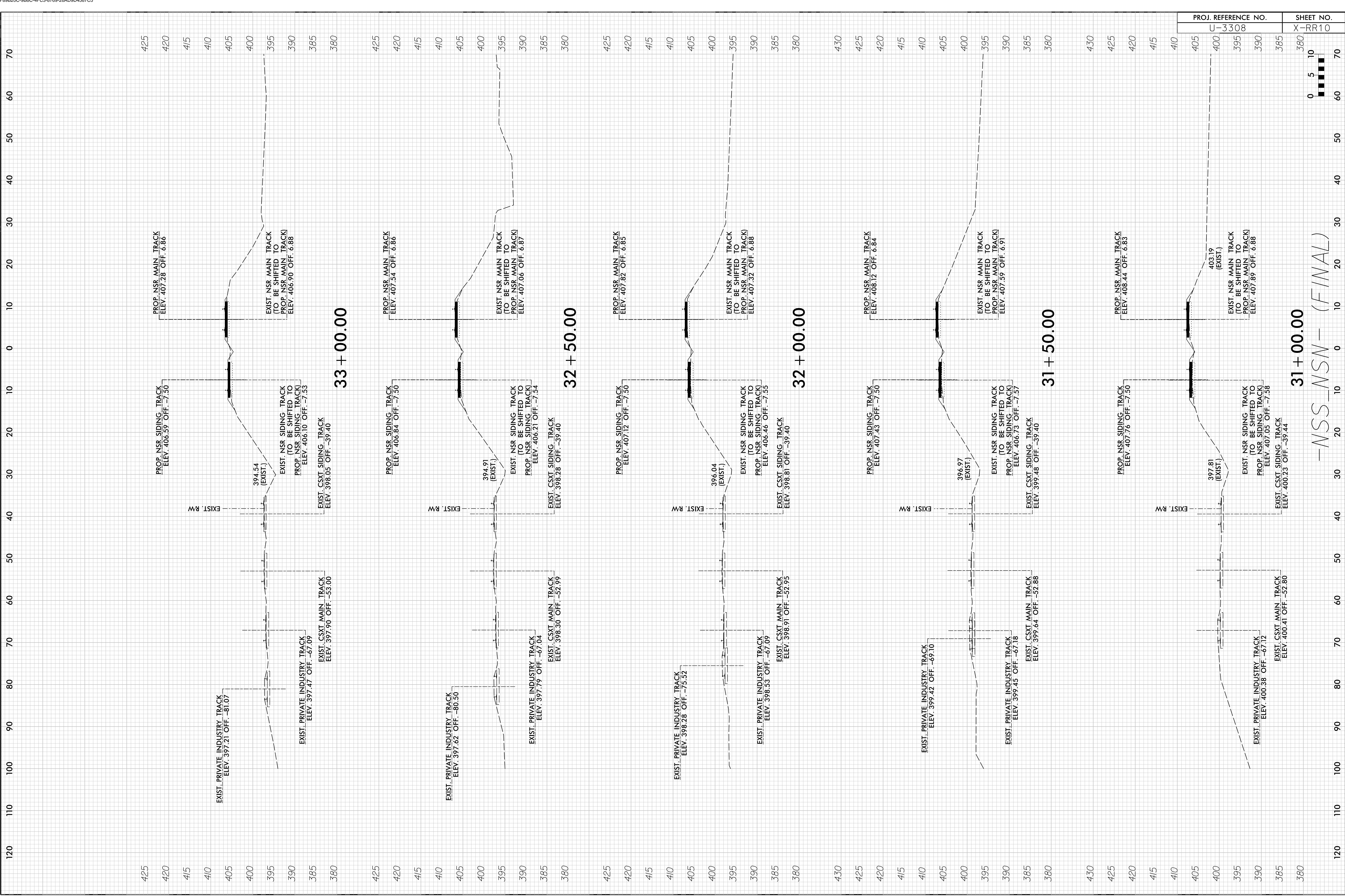






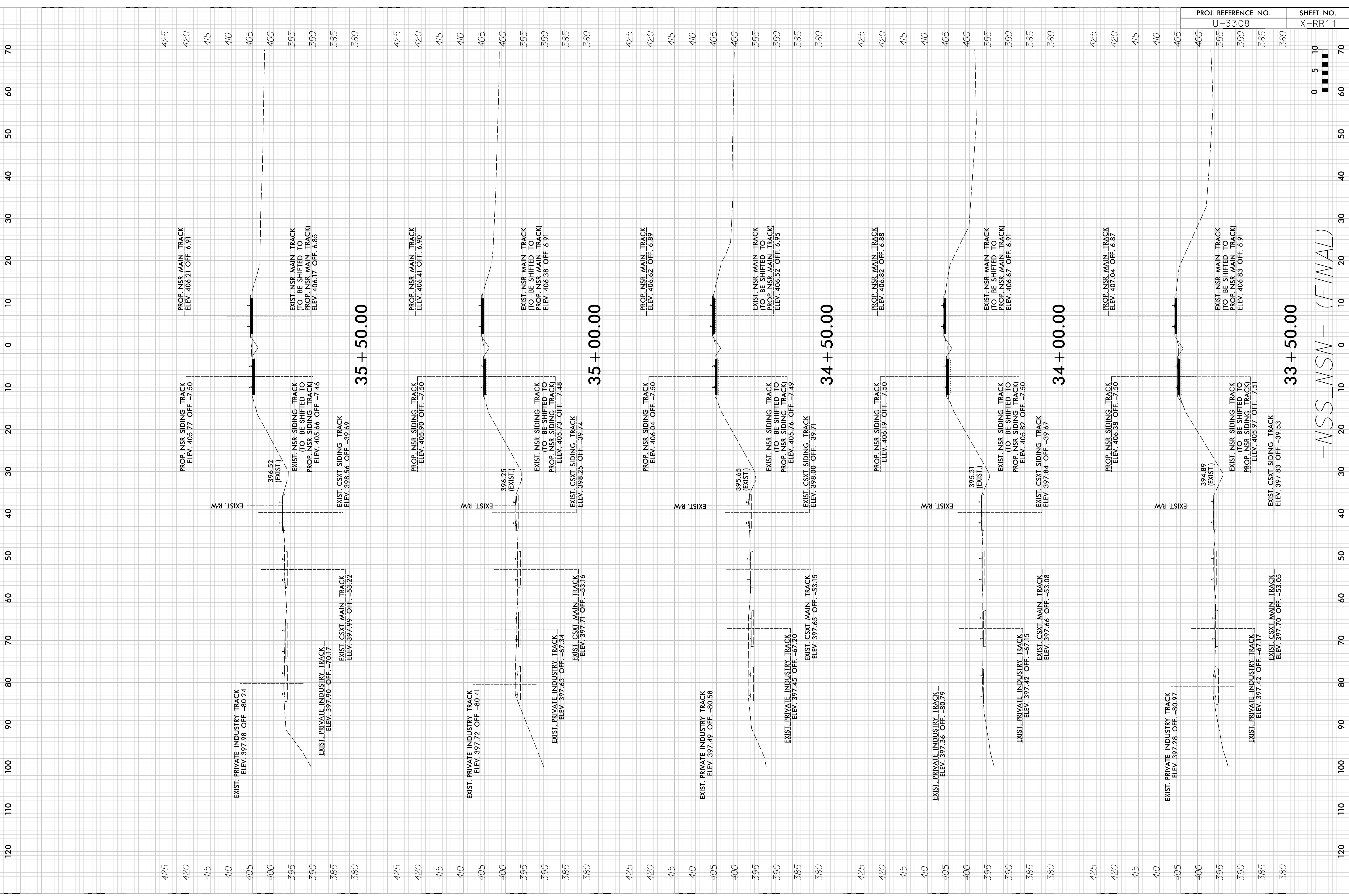
-NSS-NSN- (FINAL)

PROJ. REFERENCE NO.	SHEET NO.
U-3308	X-RR9



PROJ. REFERENCE NO.	SHEET NO.
U-3308	X-RR10

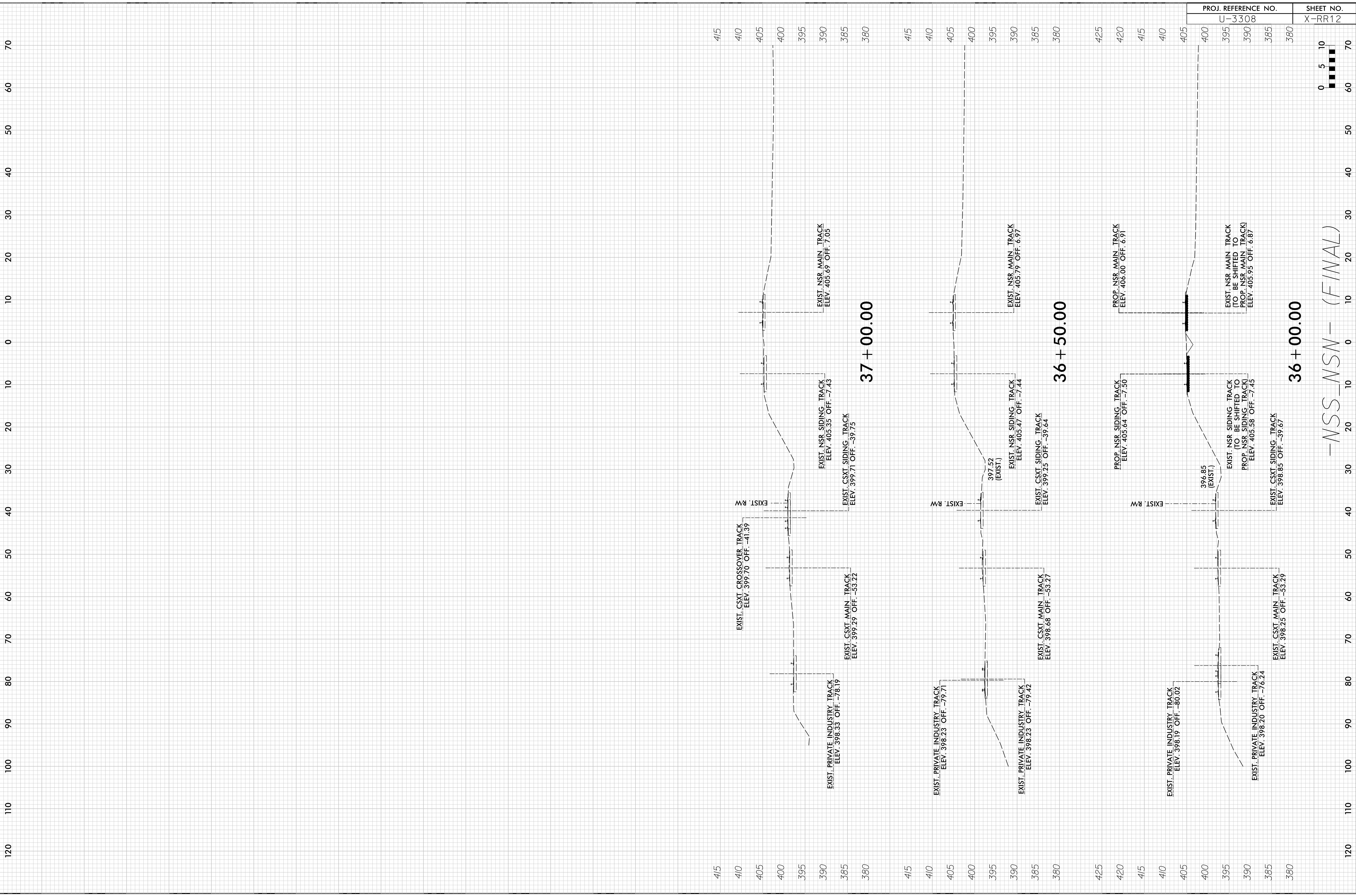
-NSS-NSN- (FINAL)



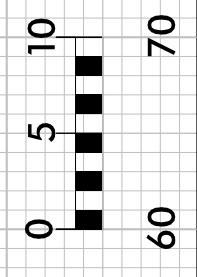
PROJ. REFERENCE NO.	SHEET NO.
U-3308	X-RR11

-NSS-NSN- (FINAL)





PROJ. REFERENCE NO.	SHEET NO.
U-3308	X-RR12



-NSS-NSN- (FINAL)