

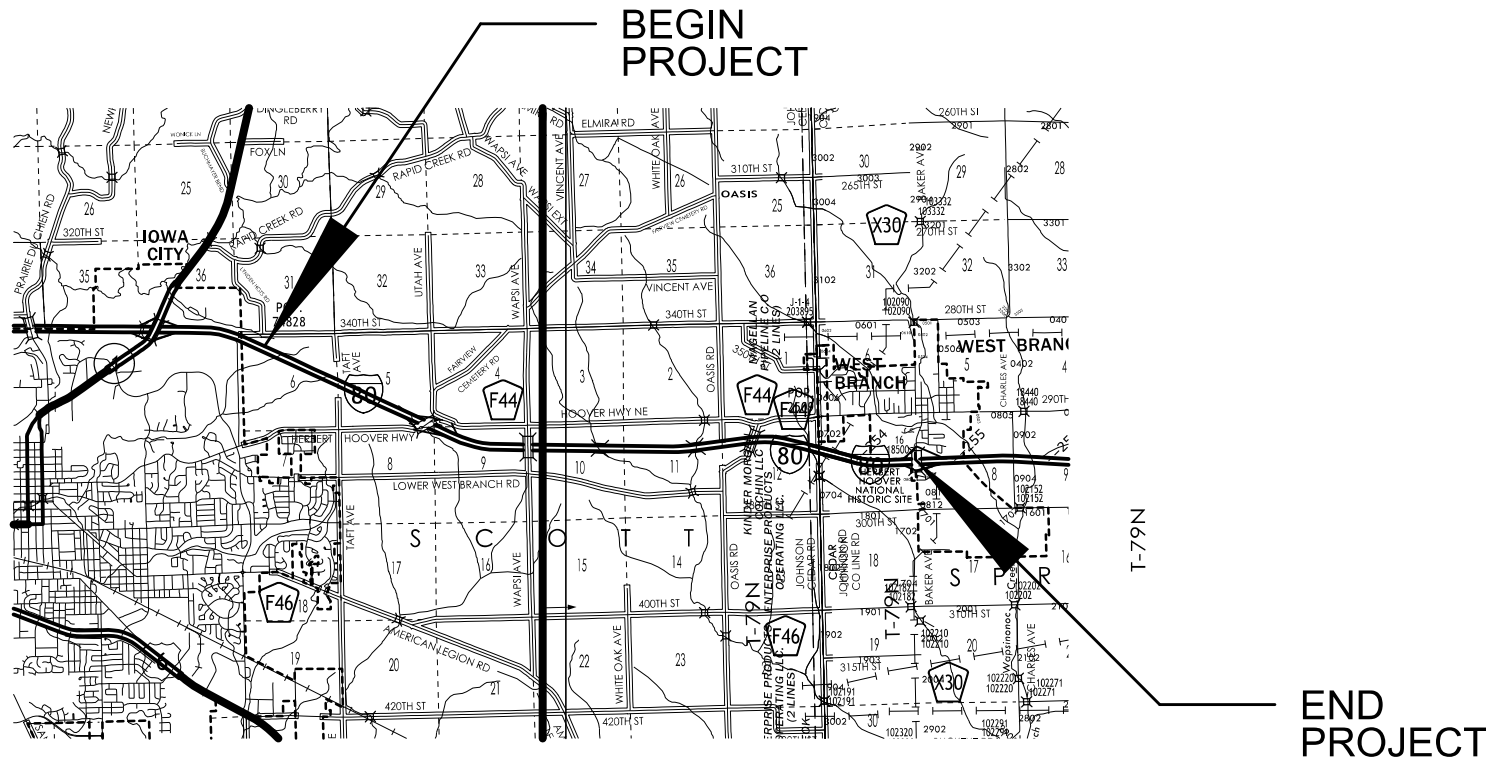


PLANS OF PROPOSED IMPROVEMENT ON THE
PRIMARY ROAD SYSTEM
Johnson COUNTY
Erosion Control
Approx 1.5 mi E of IA 1 to 0.5 mi E of Co Rd X30

SCALES: As Noted

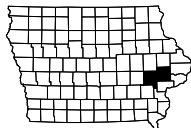
Refer to the Proposal Form for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.14 of the Specifications.



R-6W

R-5W



REVISIONS

TOTAL

59

PROJECT IDENTIFICATION NUMBER

16-52-080-020

PROJECT NUMBER

IMN-080-7(119)248--0E-52

R.O.W. PROJECT NUMBER

NHSN-218-4(46)--2R-52

INDEX OF SHEETS

No.	DESCRIPTION
A Sheets	Title Sheets
A.1	Title Sheet
J Sheets	Traffic Control and Staging Sheets
J.1 - 4	Traffic Control Plan
R Sheets	Erosion Control Sheets
RC.1 - 16	Est. Quantities, PPP, General Notes and Tabulations
RC.17	Seeding List
* RR.1	Erosion Control Legend and Symbol Information Sheet
* RR.2 - 37	Erosion Control Site Plan Sheet
	* Color Plan Sheets

INDEX OF SEALS

SHEET NO.	NAME	TYPE	BID QUANTITY SHEETS
A.1	Rachel Harris	Primary Signature Block	
J.1 - 4	Rachel Harris		
RC.1 - 17	Rachel Harris		X
RR.1 - 37	Rachel Harris		

LANDSCAPE DESIGN



I hereby certify that the portion of this technical submission described below was prepared by me or under my direct supervision and responsible charge. I am a duly licensed professional landscape architect under the laws of the state of Iowa.

Rachel Harris 07-06-2026
Signature Date
Rachel A. Harris
Printed or Typed Name

My license renewal date is June 30, 2028

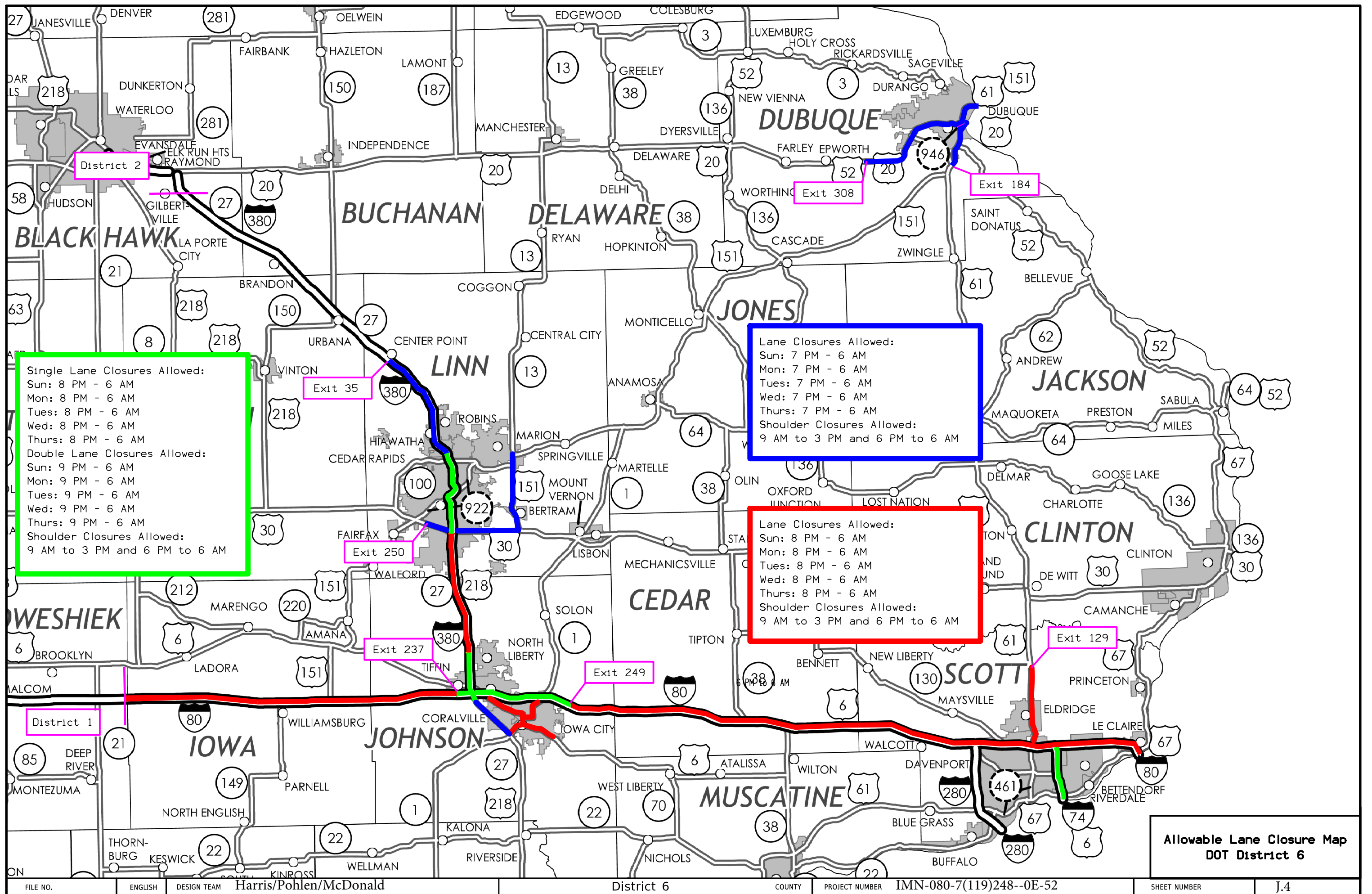
Pages or sheets covered by this seal: A.1; J.1 - 4; RC.1 - 17; RR.1 - 37

TRAFFIC CONTROL PLAN

- 1.Traffic on I80 and adjacent ramps shall be maintained at all times.
2. Shoulder closures on I-80 and adjacent ramps, and partial ramp closures (TC-416), will not be permitted from 6:00 AM Friday to 8:00 PM Sunday or from 6:00 AM to 8:00 PM Monday through Thursday. Within these limits, traffic control devices shall not be placed in the traveled way prior to 8:00 PM on Sunday or prior to 8:00 PM Monday through Thursday. All traffic control devices shall be removed from the traveled way prior to 6:00 AM each morning Monday through Friday. See Allowable Lane Closure Map DOT District 6.
- 3.The Owner reserves the right to modify these hours as necessary to accommodate unexpected traffic volumes.
- 4.There are no time restrictions for work beyond the outside of the interstate shoulder. Traffic control shall be in place for this work per TC-402.

Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No. or Structure ID or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
I-80	All	Johnson					None					

111_01 10/14/22	
COORDINATED OPERATIONS	
Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.	
Project	Type of Work
IM-NHS-080-7(154)251--03-52	RCB Culvert Extension - Twin Box
IM-NHS-080-7(155)255--03-16	RCB Culvert New - Single Box
IM-NHS-080-7(165)255--03-16	3133-RCB Culvert Extension - Triple
IM-080-7(167)249--13-52	RCB Culvert New - Single Box
IM-NHS-080-7(175)248--03-52	RCB Culvert Extension - Single Box



ESTIMATED PROJECT QUANTITIES AND REFERENCE NOTES

Roadside Items : Roadside Items

Item no.	Item Code	Item	Unit	Quantities	Estimate Reference Notes
				Estimated	
				Roadside Items	
1	2101-0850001	CLEARING AND GRUBBING	ACRE	0.2	Stage 2 Item Refer to Tab. 110_17.
2	2101-0850002	CLEARING AND GRUBBING	UNIT	33.5	Stage 2 Item Refer to Tab. 110_17.
3	2105-8425005	TOPSOIL, FURNISH AND SPREAD	CY	2,809.4	Stage 1 Item Refer to Tab. 103-10 for locations. When placed and compacted, Topsoil shall meet the height of the pavement edge, extend 10 feet unless otherwise specified and meet the existing foreslope grade. Verify locations with Engineer or IA DOT representative prior to placement. All areas of Topsoil placement shall be seeded with the following temporary seed mix with-in 7 calendar days, with permanent rural seeding to be done in the spring of 2027. The following seed mix will be used regardless of seeding date: Oat 62 lbs. per acre Grain rye 62 lbs. per acre Canada wildrye (Elymus canadensis) 7 lbs. PLS. per acre Refer to bid item 2601-2642100 STABILIZING CROP - SEEDING AND FERTILIZING for further information.
4	2121-7425020	GRANULAR SHOULDERS, TYPE B	TON	112.9	Stage 1 Item Fill material to be provided by the Contractor, which shall be considered incidental to this bid item. Verify locations with Engineer or IA DOT representative prior to placement. Locations: West Branch Interchange, Ramp A Left Shoulder, 11463.47+00 to 11467.00+00 West Branch Interchange, Ramp C Left Shoulder, 31455.76+00 to 31463.20+00
5	2125-2225050	RESHAPING DITCHES	STA	29	Stage 2 Item Refer to pages RR.2 -RR.37 for locations. Reshaping ditches according to Article 2125.03 of the Standard Specifications. Verify locations with the Engineer or IA DOT representative prior to reshaping.

Item no.	Item Code	Item	Unit	Quantities	Estimate Reference Notes
				Estimated	
				Roadside Items	
6	2507-3250005	ENGINEERING FABRIC	SY	14,347.3	Stage 2 Item Refer to Tab. 100-23 for locations. Refer to Standard Road Plan EC-301. Use material specified for embankment erosion control according to Article 4196.01, B, 3. of the Standard Specifications. Material will be measured in sq. yds. of actual area covered. Refer to details. The tabulation includes estimated locations for placement of "Engineering Fabric" to address erosion at culvert outlets. The bid quantity includes an additional 30% for other locations as needed. Verify additional locations with the Engineer prior to placement.
7	2507-6800061	REVETMENT, CLASS E	TON	4,126.2	Stage 2 Item Refer to Tab. 100-23 for locations. Refer to Standard Road Plan EC-301. The tabulation includes estimated locations for placement of "Revetment, Class E" to address erosion to be encountered during construction. The bid quantity includes an additional 30% for other locations as needed. Verify additional locations with the Engineer prior to placement. Estimated at 1.5 ton/cu yd. Class E revetment shall meet requirements of Article 4130 of the Standard Specifications.
8	2507-8029000	EROSION STONE	TON	6,541.3	Stage 2 Item Refer to Tab. 100-23 for locations. Refer to Standard Road Plan EC-301. The tabulation includes estimated locations for placement of "Erosion Stone" to address erosion to be encountered during construction. Verify specific locations with the Engineer prior to beginning placement. Bid item includes 30% additional quantity for other locations of erosion. Estimated at 1.6 ton/cu yd. Erosion Stone shall meet requirements of Article 4130 of the Standard Specifications.
9	2528-8445110	TRAFFIC CONTROL	LS	1	Refer to Traffic Control Plan on Sheet J.1 Refer to Standard Road Plans TC.1 and TC.402.
10	2533-4980005	MOBILIZATION	LS	1	

Item no.	Item Code	Item	Unit	Quantities	Estimate Reference Notes
				Estimated	
				Roadside Items	
11	2601-2633100	MOWING	ACRE	547.2	Stage 2 Item Estimate based on three mowings of all native grass areas per year for 2 years. Mowings shall take place when the vegetation is between 12 and 18 inches tall and mowed between four and eight inches in height. Areas inaccessible to field equipment shall be cut with appropriate hand equipment and kept current with the mowing of adjacent areas. Year 1: 273.6 ac. Year 2: 273.6 ac.
12	2601-2634100	MULCHING	ACRE	1	Stage 2 Item Mulching has been included for areas other than those designated Topsoil, Furnish and Spread, where temporary seeding was absent or prior vegetative growth is inadequate to prevent erosion. Perform mulching according to Article 2601.03, E, 2, of the Standard Specifications. Anchor mulch into the soil using mulch anchoring equipment with a minimum of two passes. Use mulch that is Certified Noxious Weed Seed Free Mulch as certified by the Iowa Crop Improvement Association or adjacent states Crop Improvement Association. Mulch Rate: 1 1/2 tons of dry cereal straw or native grass straw per acre.
13	2601-2634105	MULCHING, BONDED FIBER MATRIX	ACRE	5.3	Stage 1 Item Apply Bonded Fiber Matrix as the mulch for all areas designated as Topsoil, Furnish and Spread. Apply seed and fertilizer for the area to be covered before applying Bonded Fiber Matrix Mulch. Apply Bonded Fiber Matrix Mulch at a rate of a minimum of 3000 pounds per acre.

Item no.	Item Code	Item	Unit	Quantities	Estimate Reference Notes
				Estimated	
				Roadside Items	
14	2601-2636017	NATIVE GRASS SEEDING (INSTALL ONLY)	ACRE	92	Stage 2 Item Refer to pages RR.02 - RR.37 for seeding locations. Verify seeding locations with the Engineer or IA DOT representative prior to placement. Seeding will be done into standing stubble with no prior tillage. Seed all areas outside eight feet adjacent to outside shoulder along mainline, side roads, and infield areas at interchanges with "Native Grass Seeding" unless otherwise specified in the plans. Prepare seedbed, fertilize, and seed according to Article 2601.03, C, 5, of the Standard Specifications. The contracting authority will furnish seed. Refer to the RC sheets for seed mix information. Apply all forb seed through the native grass drill wildflower or small seed box. Do not mix and apply Forb seed with the native grass seed. Apply cover crop through the cool season or through cover crop seed box. Do not mix and apply cover crop seed with the native grass seed. Remove seed remaining in the drill at the end of each day. At the completion of all seeding, remove remaining seed from the drill by vacuum or other means and broadcast on the project.
15	2601-2636043	SEEDING AND FERTILIZING (RURAL)	ACRE	5.3	Stage 2 Item Seed and fertilize all areas 8 foot adjacent to the shoulder mainline, medians, and side according to Article 2601.03, C, 3, of the Standard Specifications. Seeding will be done in the spring of 2027. Permanent Rural mix can be seeded directly into stabilizing crop stubble.
16	2601-2638900	SLOPE RESHAPING	SQ	99.5	Stage 2 Item Seed reshaped slopes with Rural mix for areas within 8 feet of the pavement edge and Native mix for areas beyond 8 feet. Slope Reshaping Locations: WB 1402.25+00 to 1403.25+00 EB 1200.25+00 to 1200.75+00 EB 1274.00+00 to 1276.00+00 Wet Branch Ramp D 41576.00+00 to 41577.00+00 Verify locations with Engineer or IA DOT representative prior to reshaping.

Item no.	Item Code	Item	Unit	Quantities	Estimate Reference Notes
				Estimated	
				Roadside Items	
17	2601-2640350	SPECIAL DITCH CONTROL, WOOD EXCELSIOR MAT	SQ	347	Stage 2 Item Refer to Tab. 100-22 for locations. Refer to Standard Road Plan EC-101. Prepare seedbed according to Article 2601.03, B, 4 of the Standard Specifications. Install Special Ditch Control according to Article 2601.03, H, 2, of the Standard Specifications. Seed according to Article 2601.03, H, 2, of the Standard Specifications. Verify locations with Engineer or IA DOT representative prior to placement.
18	2601-2642100	STABILIZING CROP - SEEDING AND FERTILIZING	ACRE	5.3	Stage 1 Item Item is included for areas where topsoil is being furnished. Seeding and fertilizing will be done within 7 calendar days of topsoil being placed. Seedbed preparation, seeding, and fertilization will be done in accordance with 2601.03, C, 1, of the Standard Specifications unless otherwise noted. The following seed mix will be used regardless of seeding date: Oat 62 lbs. per acre Grain rye 62 lbs. per acre Canada wildrye (Elymus canadensis) 7 lbs. PLS. per acre
19	2601-2643110	WATERING FOR SOD, SPECIAL DITCH CONTROL, OR SLOPE PROTECTION	MGAL	78.4	Stage 2 Item Estimate for watering Special Ditch Control, Slope Protection Areas, Turf Reinforcement Mat, or Transition Mat is based on a total of four waterings at a rate of 50 gallons maximum per square, per watering. The first watering should be done no later than the day following placement of the materials with 3 additional watering at intervals of 5 to 8 calendar days. The amount of water used should be sufficient to saturate the seedbed to a depth of approximately 2 inches.
20	2601-2643300	MOBILIZATION FOR WATERING	EACH	3	
21	2601-2643413	TURF REINFORCEMENT MAT, TYPE 3	SQ	45	Stage 2 Item Refer to Tab 100-22 for locations. Refer to Standard Road Plan EC-104. Install Turf Reinforcement Mat, 3 in accordance with 2601.03, H, 3, of the Standard Specifications. Verify locations with Engineer or IA DOT representative prior to placement.

Item no.	Item Code	Item	Unit	Quantities	Estimate Reference Notes
				Estimated	
				Roadside Items	
22	2612-0000500	ROADSIDE SPRAYING	ACRE	184	Stage 2 Item General Herbicide applicators shall have a current pesticide applicators license through the State of Iowa with the proper endorsements for spraying in the right-of-way. Follow all label directions. All chemicals must be labeled for use in the right-of -way. All efforts should be made to reduce offsite drift of herbicides being used. Full Site Burn-Down After mowing of the entire project site, allow 3 weeks for regrowth and then make the first burn down application. Engineer or IA DOT representative will evaluate the kill from the first herbicide application to determine if a second application is warranted. If necessary, the second burn down application should be made no sooner than 10 days after the first application. Use glyphosate for both applications at a rate labeled for burndown with water conditioner, proper adjuvants, and drift control. If heavy broadleaf pressure is present, glufosinate may be added to the mix at a rate labeled for burndown with water conditioner, proper adjuvants, and drift control. "Burndown" spraying application 1: 92 acres "Burndown" spraying application 2: 92 acres

281_01
9/28/22

SECTION 404 PERMIT AND CONDITIONS

Construct this project according to the requirements of U.S. Army Corps of Engineers Nationwide #23, Permit No. 2019-1507. A copy of this permit is available from the Iowa DOT website (<http://www.envpermits.iowadot.gov/>). The U.S. Army Corps of Engineers reserves the right to visit the site without prior notice.

281_03
11/9/23

STORM WATER BEST MANAGEMENT PRACTICES

When the following best management practices are used, they are intended to account for disturbed areas where storage volume cannot be provided: Turf Reinforcement Mat - Type 3, Slope Protection, Special Ditch Control, Rock Ditch, Rock Flume, Rock Splash Basin, Rock Slope Protection and Seeding.

282_03
9/28/22

TEMPORARY STREAM CROSSING, CAUSEWAY, OR EQUIPMENT PAD

Standard Road Plan EW-401 is listed in Tabulation 105-4; however, it is included for information purposes only since it is an option. No quantities associated with constructing EW-401 are included in any bid items.

100_01D
8/15/22

PROJECT DESCRIPTION

This project will address any remaining erosion issues from recent projects that have taken place on I-80 in the area near the Herbert Hoover interchange to just past the West Branch interchange. This project will take place in two stages. Stage 1 will consist of fixing areas along the outside shoulder where erosion has caused a significant drop-off. Stage 1 is to be completed in the fall of 2026. Stage 2 will consist of fixing all other areas of erosion and seeding native grasses and wildflowers in areas that have not already been addressed. Stage two is to be completed in the fall of 2026 and into the spring and summer of 2027 as the weather allows.

111_25 4/21/26		
INDEX OF TABULATIONS		
Tabulation	Tabulation Title	Sheet No.
111_25	INDEX OF TABULATIONS	RC.9
105_04	STANDARD ROAD PLANS	RC.10
100_23	ROCK EROSION CONTROL	RC.11
100_22	ROLLED EROSION CONTROL	RC.12
103_10	TOPSOIL STRIPPING AND PLACEMENT	RC.13
110_17	CLEARING AND GRUBBING	RC.14
110_12	POLLUTION PREVENTION PLAN	RC.15 - RC.16

105_04 4/21/26 STANDARDS The following Standards apply to construction work on this project.		
Number	Date	Title
EC-101	04-19-16	Wood Excelsior Mat for Ditch Protection
EC-104	04-17-18	Turf Reinforced Mat (TRM)
EC-301	10-18-22	Rock Erosion Control (REC)
EC-502	04-21-15	Seeding in Rural Areas
EW-105	04-21-15	Reshaping Slopes and Ditches
TC-1	10-15-19	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-402	04-18-23	Work Within 15 ft of Traveled Way

100_23 8/15/22										
ROCK EROSION CONTROL										
Refer to EC-301 and Detail 570-8										
Road Identification	Station From	Station To	Side	Length (FT)	Width (FT)	Rock Erosion Control Type	Engineering Fabric (SY)	Class E Revetment (TON)	Erosion Stone (TON)	Remarks
F44 Ramp D	4188+24.00	4189+83.00	Left	163.00	10.0	Type 3 - Rock Flume	259.8		193.200	
I-80	1179+00.00	1179+60.00	Left	65.00	15.0	Type 2 - Rock Ditch	145.7		115.600	
I-80	1202+00.00		Right	20.00	17.0	Type 4 - Rock Splash Basin	56.0	37.800		
I-80	1216+00.00	1216+70.00	Left	80.00	10.0	Type 2 - Rock Ditch	130.7		94.900	
I-80	1227+77.00	1228+60.00	Right	108.00	5.0	Type 2 - Rock Ditch	112.0		64.000	
I-80	1245+87.00		Right	10.00	10.0	Type 4 - Rock Splash Basin	21.8		11.900	
I-80	1245+57.00	1246+87.00	Right	138.00	10.0	Type 2 - Rock Ditch	220.9		163.600	
I-80	1251+00.00	1252+00.00	Right	100.00	5.0	Type 2 - Rock Ditch	104.0		59.300	
I-80	1260+00.00	1267+00.00	Right	700.00	7.5	Type 2 - Rock Ditch	899.6		622.300	
I-80	1266+25.00	1266+45.00	Right	20.00	6.0	Type 2 - Rock Ditch	26.7		14.300	
I-80	1266+45.00	1266+55.00	Right	10.00	10.0	Type 4 - Rock Splash Basin	21.8		11.900	
I-80	1267+00.00	1268+77.00	Right	178.00	10.0	Type 2 - Rock Ditch	283.2	197.800		
I-80	1312+44.00	1313+44.00	Left	100.00	20.0	Type 2 - Rock Ditch	277.4	222.300		
I-80	1325+00.00	1340+00.00	Left	1490.00	12.0	Type 2 - Rock Ditch	2656.0	1986.700		
I-80	1337+50.00	1339+50.00	Right	200.00	10.0	Type 2 - Rock Ditch	317.4		237.100	
I-80	1342+66.00	1342+71.00	Left	20.00	5.0	Type 3 - Rock Flume	24.0		11.900	
I-80	1345+00.00	1347+65.00	Left	265.00	10.0	Type 2 - Rock Ditch	418.5		314.100	
I-80	1363+98.00	1364+03.00	Left	43.00	5.0	Type 3 - Rock Flume	47.0		25.500	
I-80	1371+23.00	1371+98.00	Left	80.00	7.0	Type 2 - Rock Ditch	102.7	62.300		
Lower West Branch Road	508+14.00	509+00.00	Left	106.00	10.0	Type 3 - Rock Flume	171.2		125.700	
Lower West Branch Road	508+52.00	509+17.00	Right	33.00	10.0	Type 3 - Rock Flume	57.6		39.200	
X30 Ramp C	31455+00.00	31459+58.00	Left	420.00	20.0	Type 2 - Rock Ditch	1130.7		995.600	
X30 Ramp A	11463+78.00	11464+64.00	Right	110.00	12.0	Type 2 - Rock Ditch	202.7		156.500	
X30 Ramp A	11465+44.00		Right	20.00	20.0	Type 4 - Rock Splash Basin	64.0		47.500	** See Note 2
X30 Ramp A	11463+27.00	11465+46.00	Left	230.00	10.0	Type 3 - Rock Flume	364.0		272.600	
X30 Ramp A	11472+00.00	11479+50.00	Left	745.00	10.0	Type 2 - Rock Ditch	1165.2		883.000	
I-80	1486+50.00	1490+17.00	Right	375.00	10.0	Type 2 - Rock Ditch	589.6		444.500	
Trail	86+60.00	87+12.00	Left	53.00	5.0	Type 5 - Rock Slope Protection	57.0		31.500	** See Note 3
Trail	86+60.00	86+93.00	Right	36.00	5.0	Type 5 - Rock Slope Protection	40.0		21.400	** See Note 3
Trail	91+04.00	91+74.00	Right	72.00	5.0	Type 5 - Rock Slope Protection	76.0		42.700	** See Note 3
Trail	91+21.00	91+74.00	Left	54.00	5.0	Type 5 - Rock Slope Protection	58.0		32.000	** See Note 3
I-80	1495+65.00	1496+15.00	Left	50.00	20.0	Type 2 - Rock Ditch	144.0	111.200		
I-80	1496+92.00	1497+42.00	Left	50.00	20.0	Type 2 - Rock Ditch	144.0	111.200		
I-80	1384+90.00		Left	100.00	10.0	Type 5 - Rock Slope Protection	161.8	111.200		**See Note 4
I-80	1418+00.00		Left	100.00	10.0	Type 5 - Rock Slope Protection	161.8	111.200		**See Note 4
I-80	1420+00.00		Left	100.00	10.0	Type 5 - Rock Slope Protection	161.8	111.200		**See Note 4
I-80	1442+92.00		Left	100.00	10.0	Type 5 - Rock Slope Protection	161.8	111.200		**See Note 4
							11036.4	3174.100	5031.800	

Note 1: To be completed as a part of Stage 2.
Note 2: Rock pad will surround the beehive drain inlet.
Note 3: Take proper precautions to protect decorative railing while placing revetment. Contractor will assume 100% liability for any damage caused by construction activities done to railing during the project.
Note 4: Revetment has been included for toe protection on previously completed slide repairs. Locations are not shown on site map. Review locations with Engineer or IA DOT representative prior to placement.

100_22
8/15/22

ROLLED EROSION CONTROL

Refer to EC-101, EC-103 and EC-104.

Road Identification	Station From	Station To	Side	Length (FT)	Width (FT)	TRM Type (EC-104)	TRM Quantity (Squares)	Slope Protection (EC-103) (Squares)	Special Ditch Control (EC-101) (Squares)	Remarks
I-80	1300+00.00	1301+00.00	Left	100.0	12.0				12.0	
I-80	1313+45.00	1318+10.00	Left	470.0	12.0				56.0	
I-80	1347+65.00	1355+00.00	Left	735.0	12.0				88.0	
I-80	1360+00.00	1368+00.00	Left	800.0	12.0				96.0	
I-80	1370+66.00	1371+22.00	Right	45.0	45.0	Type 3	20.0			
I-80	1371+34.00	1371+94.00	Right	40.0	49.0	Type 3	20.0			
I-80	1371+92.00	1372+20.00	Left	50.0	10.0	Type 3	5.0			
I-80	1372+00.00	1373+50.00	Right	150.0	12.0				18.0	
I-80	1390+00.00	1394+00.00	Left	400.0	12.0				48.0	
X30 Ramp A	11465+74.00	11467+82.00	Right	241.0	12.0				29.0	
							45.0	0	347.0	

Note 1: To be completed as a part of Stage 2.

103_10 4/30/25						
TOPSOIL STRIPPING AND PLACEMENT						
Road Identification	Dir. of Traffic	Station From	Station To	Topsoil Stripping Thickness (IN)	Topsoil Placement Thickness (IN)	Remarks
I-80	EB	1104+00.00	1119+00.00		4.0	10' Wide
I-80	EB	1251+00.00	1265+00.00		4.0	10' Wide
I-80	EB	1270+00.00	1370+61.00		4.0	10' Wide
I-80	EB	1372+00.00	1437+36.00		4.0	10' Wide
I-80	WB	1285+00.00	1230+00.00		4.0	10' Wide

110_17 1/27/25																						
CLEARING AND GRUBBING																						
Station From	Station To	Direction of Traffic	Work and Material Type	>3"-6"	>6"-9"	>9"-12"	>12"-15"	>15"-18"	>18"-24"	>24"-30"	>30"-36"	>36"-42"	>42"-48"	>48"-60"	>60"-72"	>72"	Other Materials Length (FT)	Other Materials Width (FT)	Estimated Units	Estimated Area (Acres)	Estimated Herbicide Application (EA)	Remarks
1126+50.00	1126+91.00	EB	Trees - Clearing																	0.100		**See Note 2
1228+58.00	1228+96.00	EB	Trees - Clearing																	0.100		**See Note 2
1232+68.00	1232+88.00	EB	Trees - Clearing																	0.100		**See Note 2
1243+82.00		WB	Trees - Clearing and Grubbing			5													33.5	0.000		

Note 1: To be completed as a part of Stage 2.
Note 2: Stumps are to be cut-stump treated with herbicide to prevent regrowth.

		110_12 1/13/23				110_12 1/13/23					
POLLUTION PREVENTION PLAN				POLLUTION PREVENTION PLAN							
This project is regulated by the requirements of the Iowa Department of Natural Resources (DNR) National Pollutant Discharge Elimination System (NPDES) General Permit No. 2 OR an Iowa Department of Natural Resources (DNR) National Pollutant Discharge Elimination System (NPDES) individual storm water permit. The Contractor shall carry out the terms and conditions of this permit and the Pollution Prevention Plan (PPP). This Base PPP includes information on Roles and Responsibilities, Project Site Description, Controls, Maintenance Procedures, Inspection Requirements, Non-Storm Water Controls, Potential Sources of Off Right-of-Way Pollution, and Definitions. This plan references other documents rather than repeating the information contained in the documents. A copy of this Base Pollution Prevention Plan, amended as needed during construction, will be readily available for review. All contractors shall conduct their operations in a manner that controls pollutants, minimizes erosion, and prevents sediments from entering waters of the state and leaving the highway right-of-way. The Contractor shall be responsible for compliance and implementation of the PPP for their entire contract. This responsibility shall be further shared with subcontractors whose work is a source of potential pollution as defined in this PPP.				D. Storm Water Site Map is located in the R sheets. Proposed slopes are shown in cross sections, details, or standard road plans. Supplemental information is located in the Tabulations in the C or CE sheets. E. The base storm water site map is amended by contract modifications and progress payments (fieldbook entries) of completed erosion control work. Also, due to project phasing, erosion and sediment controls shown on project plans may not be installed until needed, based on site conditions. For example, silt fence ditch checks will typically not be installed until the ditch has been installed. Installed locations may also be modified from tabulation locations by field staff. Installed locations will be documented by fieldbook entries and amended PPP site map. F. Runoff from this work will flow into the Cedar River.							
III. CONTROLS											
A. The Contractor’s ECIP specified in Article 2602.03 of the Standard Specifications for accomplishment of storm water controls should clearly describe the intended sequence of major activities, and for each activity define the control measure and the timing during the construction process that the measure will be implemented. B. Preserve vegetation in areas not needed for construction. C. Sections 2601 and 2602 of the Standard Specifications define requirements to implement erosion and sediment control measures. Actual quantities used and installed locations may vary from the Base PPP and amendment of the plan will be documented via fieldbook entries, amended PPP site map, or by contract modification. Additional erosion and sediment control items may be required as determined by the inspector and/or contractor during storm water site inspections. If the work involved is not applicable to any contract items, the work will be paid for according to Article 1109.03 paragraph B of the Standard Specifications. 1. EROSION AND SEDIMENT CONTROLS a. Stabilization Practices 1) Site plans will ensure that existing vegetation or natural buffers are preserved where attainable and disturbed portions of the site will be stabilized. 2) Initialize stabilization of disturbed areas immediately after clearing, grading, excavating, or other earth disturbing activities have: a) Permanently ceased on any portion of the site, or b) Temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days. 3) Staged permanent and/or temporary stabilizing seeding and mulching shall be completed as the disturbed areas are completed. Incomplete areas shall be stabilized according to paragraph III, C, 1, a, 2, b above. 4) Permanent and Temporary Stabilization practices to be used for this project are located in the storm water site map, Estimated Project Quantities (100-0A, 100-1A, or 100-1C), and Estimate Reference Information (100-4A) located in the C or R sheets. Typical drawings detailing construction of the practices to be used on this project are referenced in the Standard Road Plans Tabulation (105-4) in the C or R sheets. 5) Preservation of existing vegetation within right-of-way or easements will act as vegetative buffer strips. 6) Preservation of topsoil: Bid items to be used for this project are located in the Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the C or R sheets. Additional information may be found in the Tabulations in the C or T Tabulation sheets, or is referenced in Section 2105 of the Standard Specifications. b. Structural Practices 1) Structural practices will be implemented to divert flows from exposed soils and detain or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Additionally, structural practices may include: silt basins that provide 3600 cubic feet of storage per acre drained or equivalent sediment controls, outlet structures that withdraw water from surface when discharging basins, and controls to direct storm water to vegetated areas. 2) Structural practices to be used for this project are located in the storm water site map, Estimated Project Quantities (100-0A, 100-1A, or 100-1C), and Estimate Reference Information (100-4A) located in the C or R sheets, as well as all other item specific Tabulations. Typical drawings detailing construction of the devices to be used on this project can be found on the B or R sheets or are referenced in the Standard Road Plans Tabulation (105-4) located in the C or R sheets. c. Storm Water Management Measures shall be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. This may include velocity dissipation devices at discharge locations and along length of outfall channel as necessary to provide a non-erosion velocity flow from structure to water course. If included with this project, these items are located in the storm water site map and Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the C or R sheets, as well as all other item specific Tabulations. Typical drawings detailing construction of the practices to be used on this project are referenced in the Standard Road Plans Tabulation. The installation of these devices may be subject to Section 404 of the Clean Water Act. 2. OTHER CONTROLS Contractor disposal of unused construction materials and construction material wastes shall comply with applicable state and local waste disposal, sanitary sewer, or septic system regulations. In the event of a conflict with other governmental laws, rules and regulations, the more restrictive laws, rules or regulations shall apply. a. Vehicle Entrances and Exits - Construct and maintain entrances and exits to prevent tracking of sediments onto roadways. b. Material Delivery, Storage and Use - Implement practices to prevent discharge of construction materials during delivery, storage, and use. c. Stockpile Management - Install controls to reduce or eliminate pollution of storm water from stockpiles of soil and paving. d. Waste Disposal - Do not discharge any materials, including building materials, into waters of the state, except as authorized by a Section 404 permit. e. Spill Prevention and Control - Implement chemical spill and leak prevention and response procedures to contain and clean up spills and prevent material discharges to the storm drain system and waters of the state. f. Concrete Residuals and Washout Wastes - Waste shall not be discharged to a surface water and is not allowed to adversely affect a water of the state. Designate temporary concrete washout facilities for rinsing out concrete trucks. Provide directions to truck drivers where designated washout facilities are located. Designated washout areas should be located at least 50 feet away from storm drains, streams or other water bodies. Care should be taken to ensure these facilities do not overflow during storm events. g. Concrete Grooving/Grinding Slurry - Do not discharge slurry to a waterbody or storm drain. Slurry may be applied on foreslopes or removed from the project. h. Vehicle and Equipment Storage and Maintenance Areas - Perform on site fueling and maintenance in accordance with all environment laws such as proper storage of onsite fuels and proper disposal of used engine oil or other fluids on site.											
II. PROJECT SITE DESCRIPTION											
A. This Pollution Prevention Plan (PPP) is for the Final Erosion Control Plan in Johnson County. B. This PPP covers approximately 514.6 acres with an estimated 424.6 acres being disturbed. The portion of the PPP covered by this contract has 320.9 acres disturbed. C. The PPP is located in an area of Tama - Muscatine - Downs and Fayette soil associations. The estimated weighted average runoff coefficient number for this PPP after completion will be 0.37.											
FILE NO.	ENGLISH	DESIGN TEAM	Harris/Pohlen/McDonald		Johnson COUNTY	PROJECT NUMBER	IMN-080-7(119)248--0E-52		SHEET NUMBER	RC.15	

POLLUTION PREVENTION PLAN

Employ washing practices that prevent contamination of surface and ground water from wash water. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge.

i. Litter Management - Ensure employees properly dispose of litter. Minimize exposure of trash if exposure to precipitation or storm water would result in a discharge of pollutants.

j. Dewatering - Properly treat water to remove suspended sediment before it re-enters a waterbody or discharges off-site. Measures are also to be taken to prevent scour erosion at dewatering discharge point.

3. APPROVED STATE OR LOCAL PLANS

During the course of this construction, it is possible that situations will arise where unknown materials will be encountered. When such situations are encountered, they will be handled according to all federal, state, and local regulations in effect at the time.

IV. MAINTENANCE PROCEDURES

The Contractor is required to maintain all temporary erosion and sediment control measures in proper working order, including cleaning, repairing, or replacing them throughout the contract period. This shall begin when the features have lost 50% of their capacity.

V. INSPECTION REQUIREMENTS

A. Inspections shall be made jointly by the Contractor and the Contracting Authority's inspector at least once every seven calendar days. Storm water site inspections will include:

1. Date of the inspection.

2. Summary of the scope of the inspection.

3. Name and qualifications of the personnel making the inspection.

5. Review of erosion and sediment control measures within disturbed areas for the effectiveness in preventing impacts to receiving waters.

6. Major observations related to the implementation of the PPP.

7. Identification of corrective actions required to maintain or modify erosion and sediment control measures.

B. Include storm water site inspection reports in the Amended PPP. Incorporate any additional erosion and sediment control measures determined as a result of the inspection. Immediately begin corrective actions on all deficiencies found within 3 calendar days of the inspection and complete within 7 calendar days following the inspection. If it is determined that making the corrections less than 72 hours after the inspection is impracticable, it should be documented why it is impracticable and indicate an estimated date by which the corrections will be made.

VI. NON-STORM WATER DISCHARGES

This includes subsurface drains (i.e. longitudinal and standard subdrains) and slope drains. The velocity of the discharge from these features may be controlled by the use of headwalls or blocks, Class A stone, erosion stone or other appropriate materials. This also includes uncontaminated groundwater from dewatering operations, which will be controlled as discussed in Section III of the PPP.

VII. POTENTIAL SOURCES OF OFF RIGHT-OF-WAY (ROW) POLLUTION

Silts, sediment, and other forms of pollution may be transported onto highway right-of-way (ROW) as a result of a storm event. Potential sources of pollution located outside highway ROW are beyond the control of this PPP. Pollution within highway ROW will be conveyed and controlled per this PPP.

VIII. DEFINITIONS

A. Base PPP - Initial Pollution Prevention Plan.

B. Amended PPP - Base PPP amended during construction. May include Plan Revisions or Contract Modifications for new items, storm water site inspection reports, fieldbook entries made by the inspector, amended PPP site map by the Contractor, ECIP, NOI, co-permittee certifications, and Subcontractor Request Forms. Items amending the PPP are stored electronically and are readily available upon request.

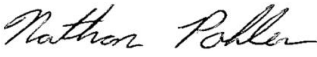
C. Fieldbook Entries - This contains the inspector's daily diary and bid item postings.

D. Controls - Methods, practices, or measures to minimize or prevent erosion, control sedimentation, control storm water, or minimize contaminants from other types of waste or materials. Also called Best Management Practices (BMPs).

E. Signature Authority - Representative authorized to sign various storm water documents.

CERTIFICATION STATEMENT

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.


Signature

Nathan J. Pohlen
Print Name

RATE PER ACRE	TOTAL ACRES/ MIX 92 ACRES	TOTAL LBS.	GRASS SPECIES
	TOTAL LBS. PER MIX		
3 lbs.	276.0	276.00	Big bluestem (Andropogon gerardii)
4 lbs.	368.0	368.00	Side-oats grama (Bouteloua curtipendula)
1 lb.	92.0	92.00	Blue grama (Bouteloua gracilis)
1 lb.	92.0	92.00	Canada wildrye (Elymus canadensis)
1 lb.	92.0	92.00	Virginia wildrye (Elymus virginicus)
4 lbs.	368.0	368.00	Little bluestem (Schizachyrium scoparium)
3 lbs.	276.0	276.00	Indiangrass (Sorghastrum nutans)
1 lb.	92.0	92.00	Rough dropseed (Sporobolus compositus (Poir.) Merr. var. compositus)

LISTING OF SEED MIXES
PROVIDED FOR
MIXING AND APPLICATION PURPOSES
SEED FURNISHED BY THE CONTRACTING AUTHORITY
RATES AND SPECIES SUBJECT TO CHANGE

RATE PER ACRE	TOTAL ACRES/ MIX 92 ACRES	TOTAL LBS.	WILDFLOWERS SPECIES
	TOTAL LBS. PER MIX		
1/4 oz.	1.44	1.44	Canada anemone (Anemone canadensis)
1/2 oz.	2.88	2.88	Pale indian plantain (Arnoglossum atriplicifolium)
1/2 oz.	2.88	2.88	White sage (Artemisia ludoviciana)
1 oz.	5.75	5.75	Swamp milkweed (Asclepias incarnata)
1 oz.	5.75	5.75	Common milkweed (Asclepias syriaca)
2 oz.	11.50	11.50	Butterfly weed (Asclepias tuberosa)
2 oz.	11.50	11.50	Canadian milkvetch (Astragalus canadensis)
1 oz.	5.75	5.75	White wild indigo (Baptisia alba (L.) Vent. var.macrophylla)
1/8 oz.	0.72	0.72	Blue wild indigo (Baptisia australis)
1/4 oz.	1.44	1.44	False boneset (Brickellia eupatorioides (L.) hinners)
8 oz.	46.00	46.00	Partridge pea (Chamaecrista fasciculata)
2 oz.	11.50	11.50	Purple prairie clover (Dalea purpurea)
2 oz.	11.50	11.50	Illinois bundle flower (Desmanthus illinoensis)
1 oz.	5.75	5.75	Showy tick trefoil (Desmodium canadense)
2 oz.	11.50	11.50	Pale purple coneflower (Echinacea pallida)
2 oz.	11.50	11.50	Rattlesnake master (Eryngium yuccifolium)
1/4 oz.	1.44	1.44	Tall boneset (Eupatorium altissimum)
1/2 oz.	2.88	2.88	Sneezeweed (Helenium autumnale)
1/2 oz.	2.88	2.88	Prairie sunflower (Helianthus pauciflorus)
1 oz.	5.75	5.75	Oxeye / False-sunflower (Heliopsis helianthoides)
1/8 oz.	0.72	0.72	Rough blazing star (Liatris aspera)
1/2 oz.	2.88	2.88	Prairie blazing star (Liatris pycnostachya)
1/2 oz.	2.88	2.88	Wild bergamot (Monarda fistulosa)
1/2 oz.	2.88	2.88	Stiff goldenrod (Oligoneuron rigidum)
1 oz.	5.75	5.75	Foxglove beardtongue (Penstemon digitalis)
1 oz.	5.75	5.75	Large flowered beardtongue (Penstemon grandiflorus)
1/4 oz.	1.44	1.44	Prairie cinquefoil (Potentilla arguta)
1/4 oz.	1.44	1.44	Virginia mountain mint (Pycnanthemum virginianum)
2 oz.	11.50	11.50	Gray-headed coneflower (Ratibida pinnata)
3 oz.	17.25	17.25	Black-eyed susan (Rudbeckia hirta)
1 oz.	5.75	5.75	Sweet coneflower (Rudbeckia subtomentosa)
2 oz.	11.50	11.50	Compass plant (Silphium laciniatum)
1/2 oz.	2.88	2.88	Showy goldenrod (Solidago speciosa)
1 oz.	5.75	5.75	Smooth blue aster (Symphyotrichum laeve)
1/2 oz.	2.88	2.88	New England aster (Symphyotrichum novae-angliae)
1/2 oz.	2.88	2.88	Prairie spiderwort (Tradescantia bracteata)
1/2 oz.	2.88	2.88	Ohio spiderwort (Tradescantia ohiensis)
1/2 oz.	2.88	2.88	Blue vervain (Verbena hastata)
1/2 oz.	2.88	2.88	Ironweed (Vernonia fasciculata)
1/8 oz.	0.72	0.72	Culver's root (Veronicastrum virginicum)
3 oz.	17.25	17.25	Golden alexanders (Zizia aurea)

LINE STYLE LEGEND OF LANDSCAPE SHEETS	
LINESTYLE	Design Element
-----	Living Snow Fence Single Row
-----	Living Snow Fence Double Row
-----	Mechanical Edge

CELL LEGEND OF LANDSCAPE SHEETS		
CELL	Design Element	Plant Diameter
	Clearing	
	Proposed Shrub	6 FT
	Proposed Understory Tree	12 FT
	Proposed Conifer Tree	18 FT
	Proposed Overstory Tree	30 FT

PATTERN LEGEND OF LANDSCAPE SHEETS	
	Brush Clearing
	Clearing & Grubbing
	Spray Area

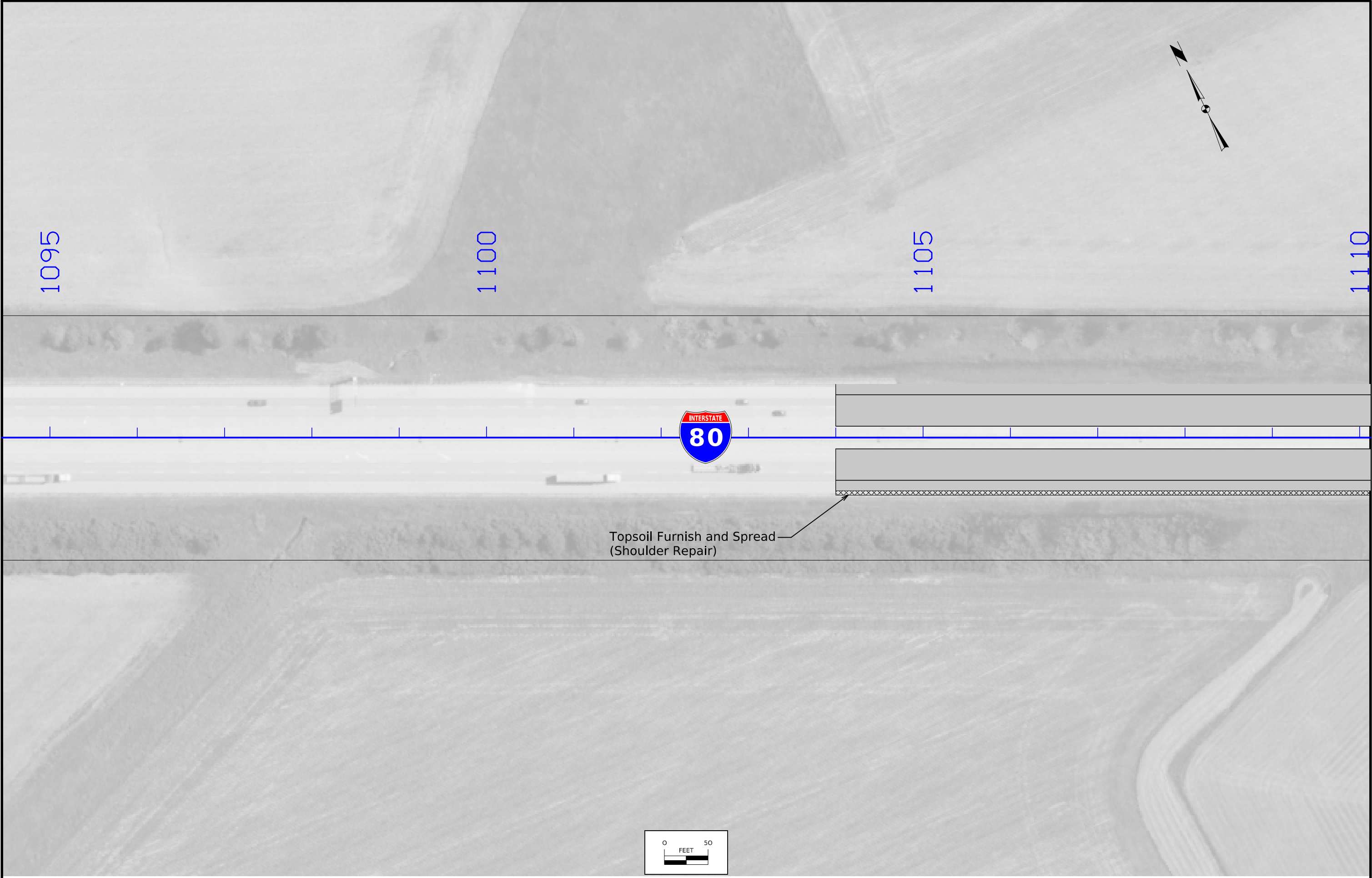
LINE STYLE LEGEND OF EROSION CONTROL SHEETS	
LINESTYLE	Design Element
	Silt Fence
	Perimeter and Slope Sediment Control Device (9")
	Perimeter and Slope Sediment Control Device (12")
	Perimeter and Slope Sediment Control Device (20")
	Open-Throat Curb Intake Sediment Filter
	Concentrated Flow
	Rock Check and Rock Check Dam
	Sheet Flow

CELL LEGEND OF EROSION CONTROL SHEETS	
CELL	Design Element
	Temporary Sediment Control basin
	Erosion Control for Circular Intake or Manhole Well
	Erosion Control for Rectangular Intake or Manhole Well
	Grate Intake Sediment Filter Bag
	Silt Basin
	Silt Fence Tail
	Stormwater Drainage Basin Discharge Point

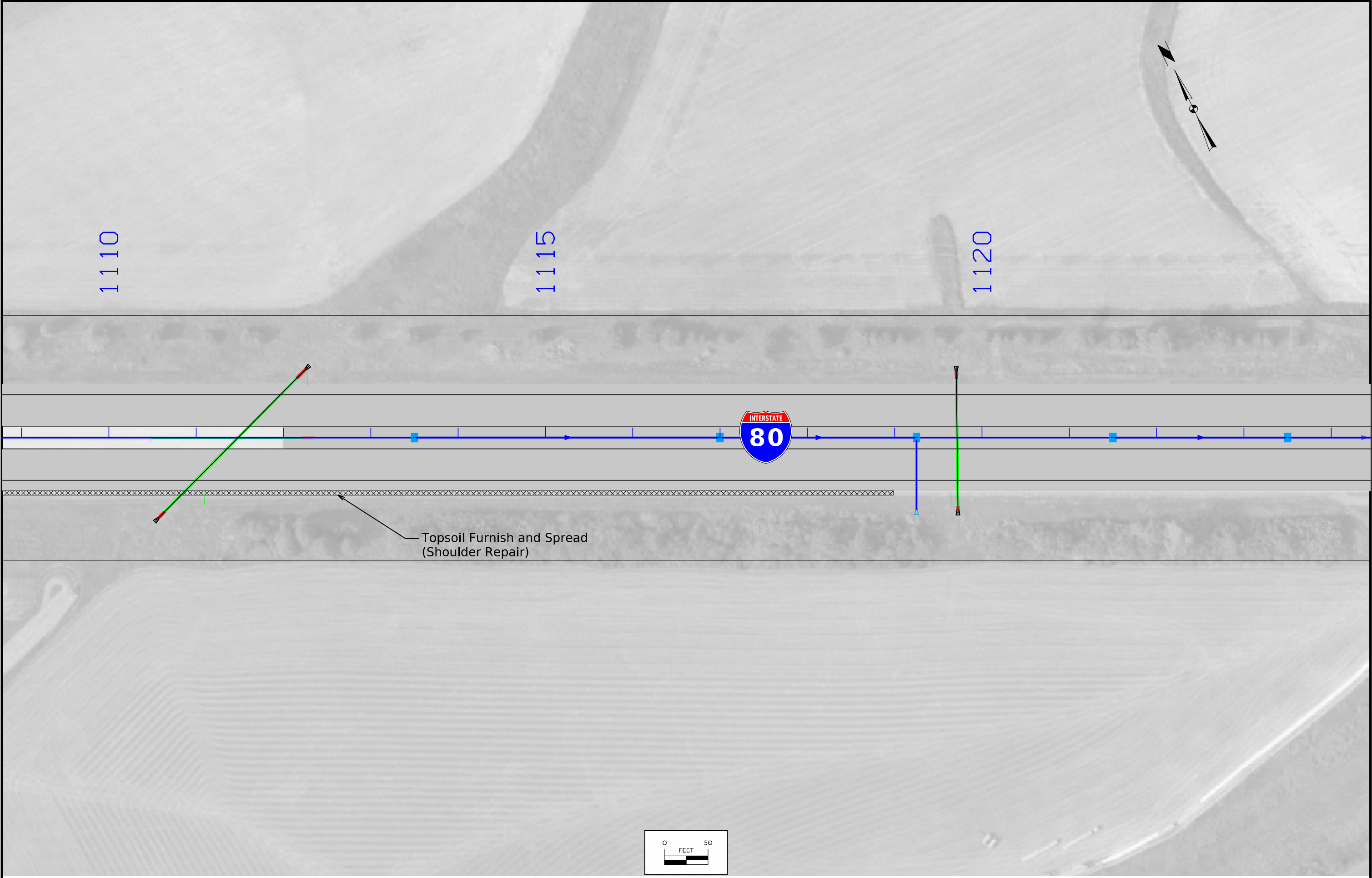
PLAN VIEW COLOR LEGEND OF EROSION CONTROL SHEETS		
LINEWORK	Design Color No.	
Green	(2)	 Existing Topographic Features and Labels
Blue	(1)	 Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)	 Existing Utilities
Black	(0)	 Permanent Erosion Control Features
Blaze Orange	(222)	 Temporary Erosion Control Features
SHADING	Design Color No.	Transparency
Citron	(234)	 Mulching, All Types 50%
Light Brown	(238)	 Special Ditch Control, Wood Excelsior Mat 0%
Grass Green	(233)	 8FT Mow Strip 50%
Red	(3)	 Delineates Restricted Areas 0%

PATTERN LEGEND OF EROSION CONTROL SHEETS	
	Seeding and Fertilizing
	Seeding and Fertilizing (Rural)
	Seeding and Fertilizing (Urban)
	Native Grass Seeding
	Salt Tolerant Seeding
	Wetland Grass Seeding
	Wildflower Seeding
	Sodding
	Turf Reinforcement Mat Type 1
	Turf Reinforcement Mat Type 2
	Turf Reinforcement Mat Type 3
	Turf Reinforcement Mat Type 4
	Slope Protection, Wood Excelsior Mat
	Transition Mat
	Rock Features, Permanent
	Rock Features, Temporary

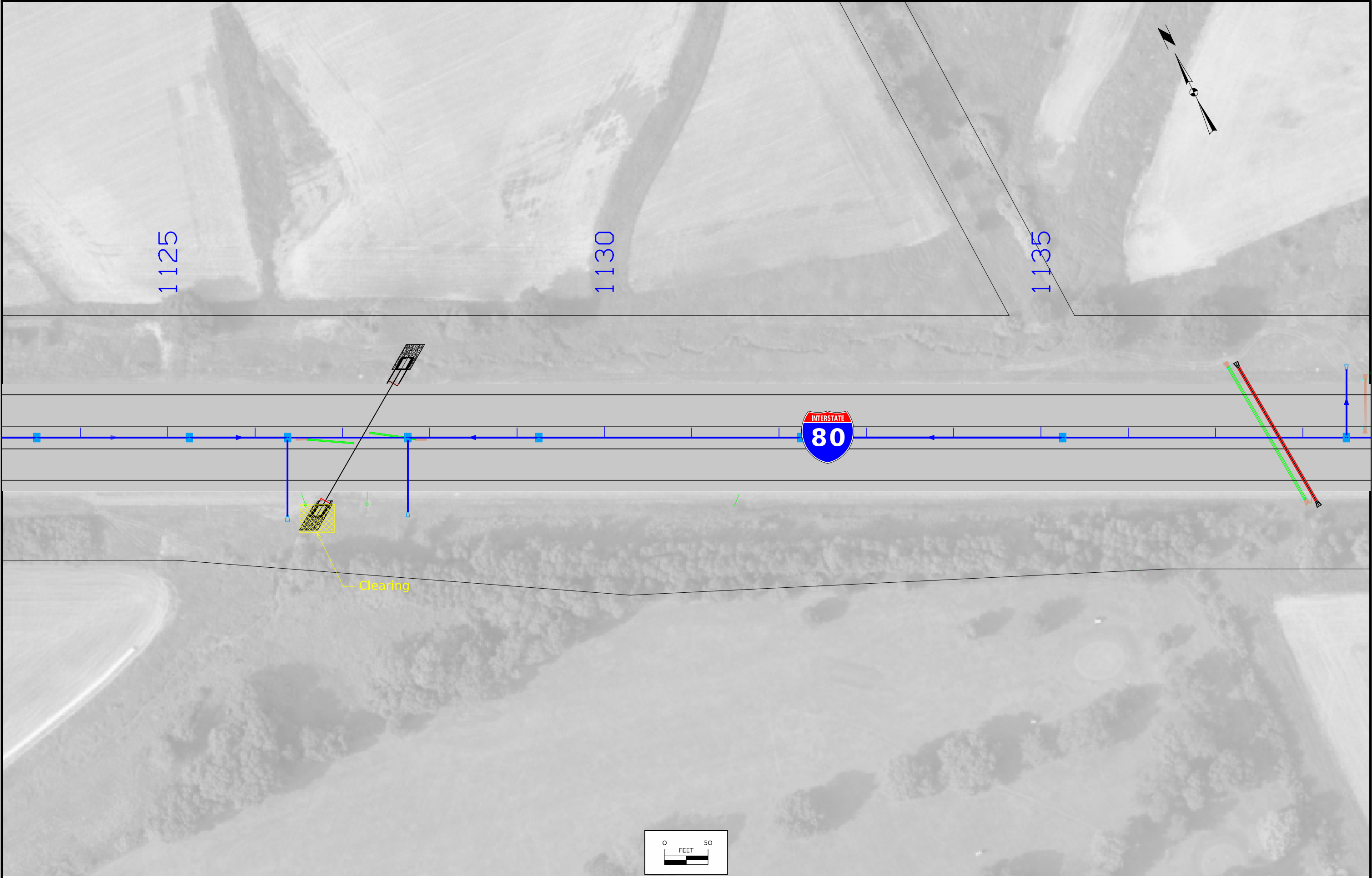
LEGEND AND SYMBOL
INFORMATION SHEET
(COVERS SHEET SERIES D & R)



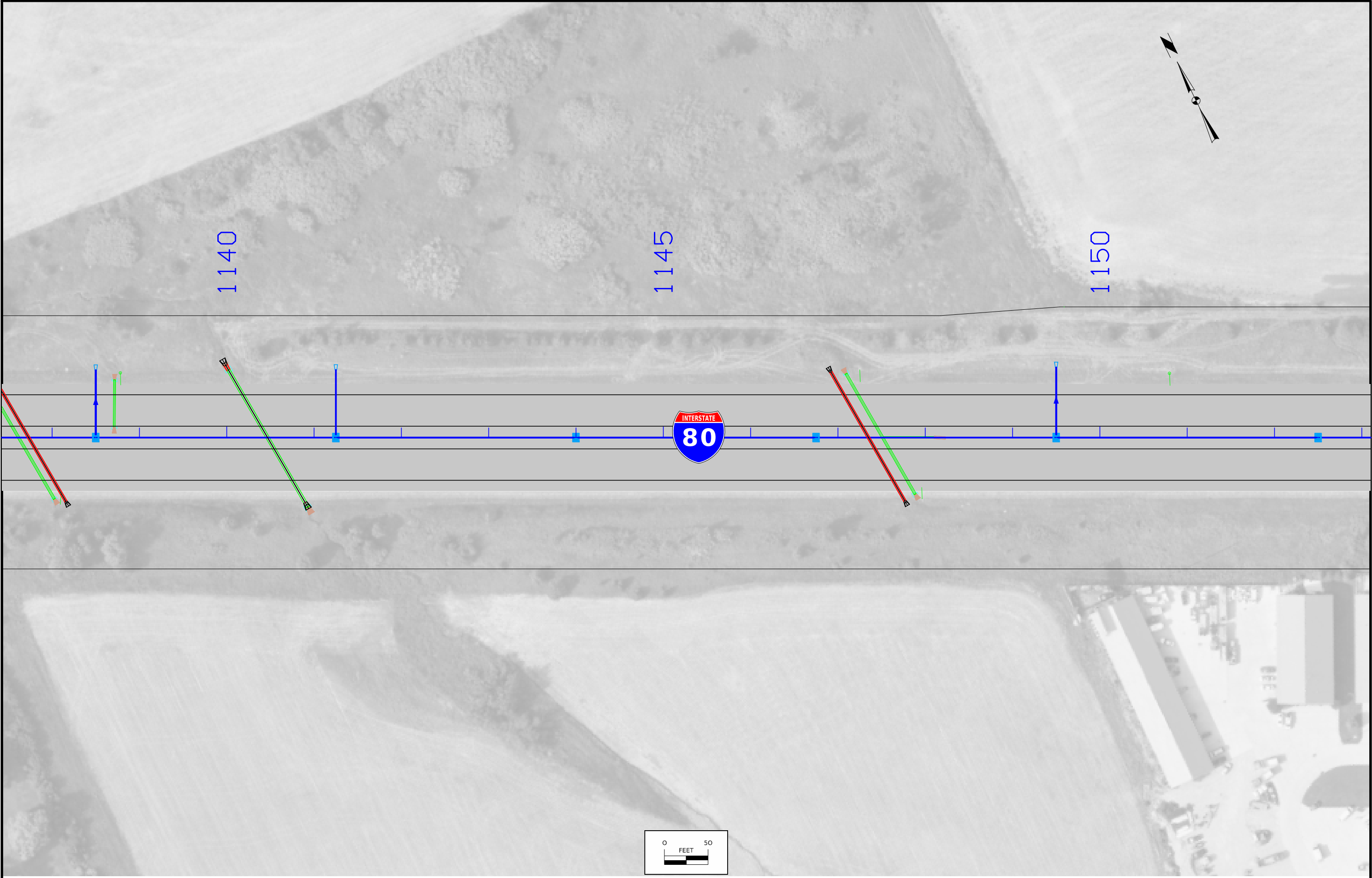
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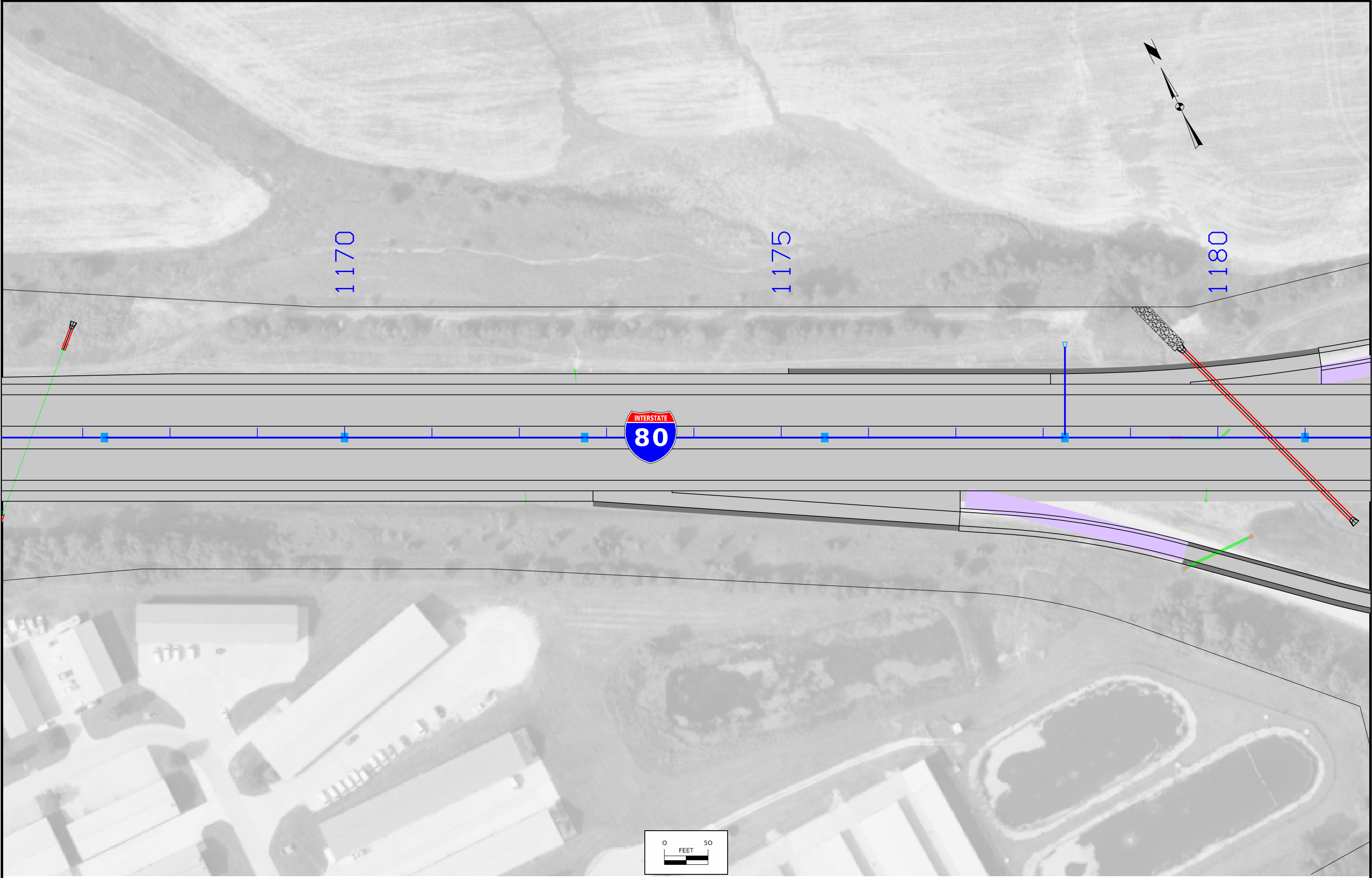


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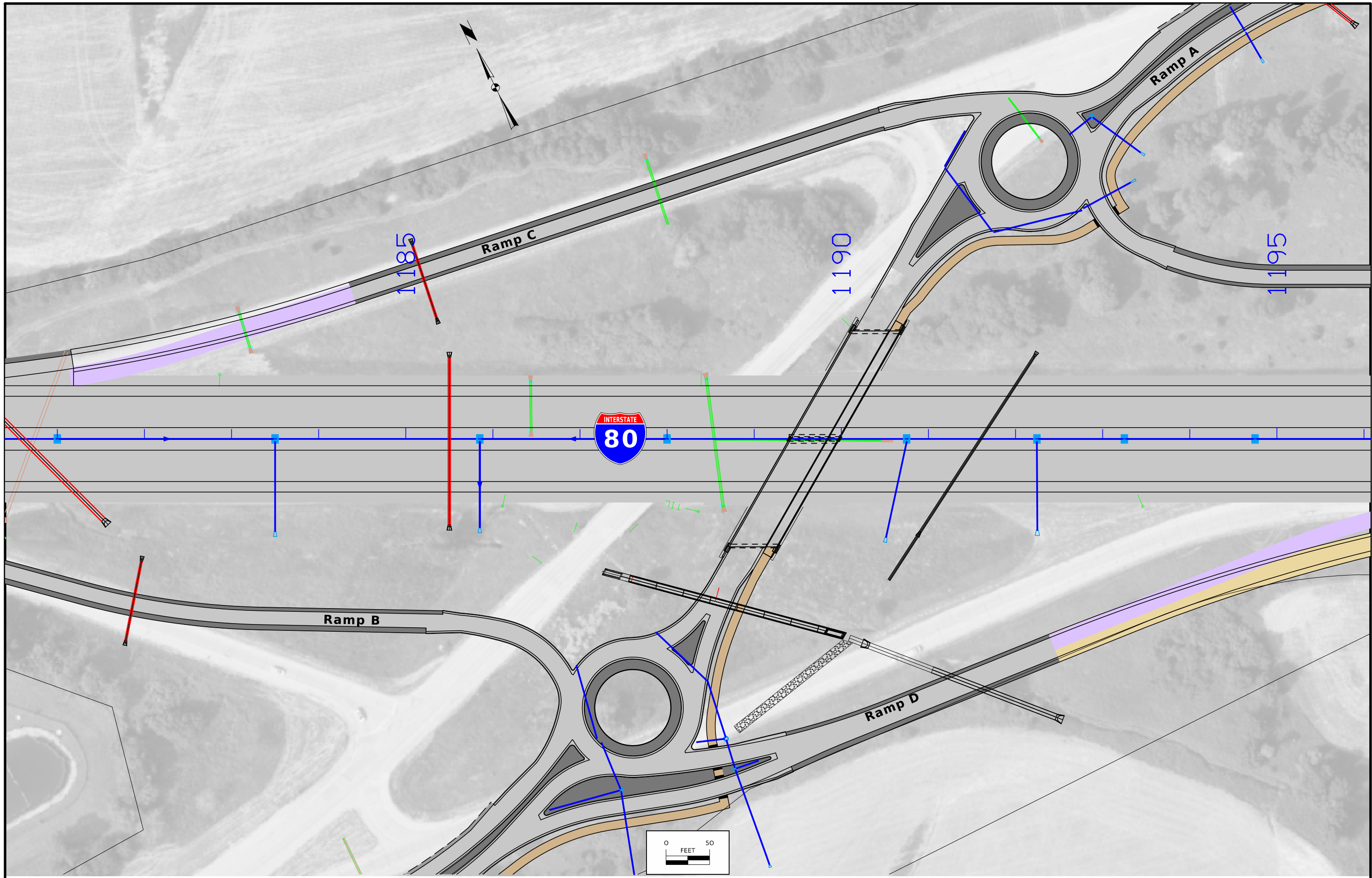


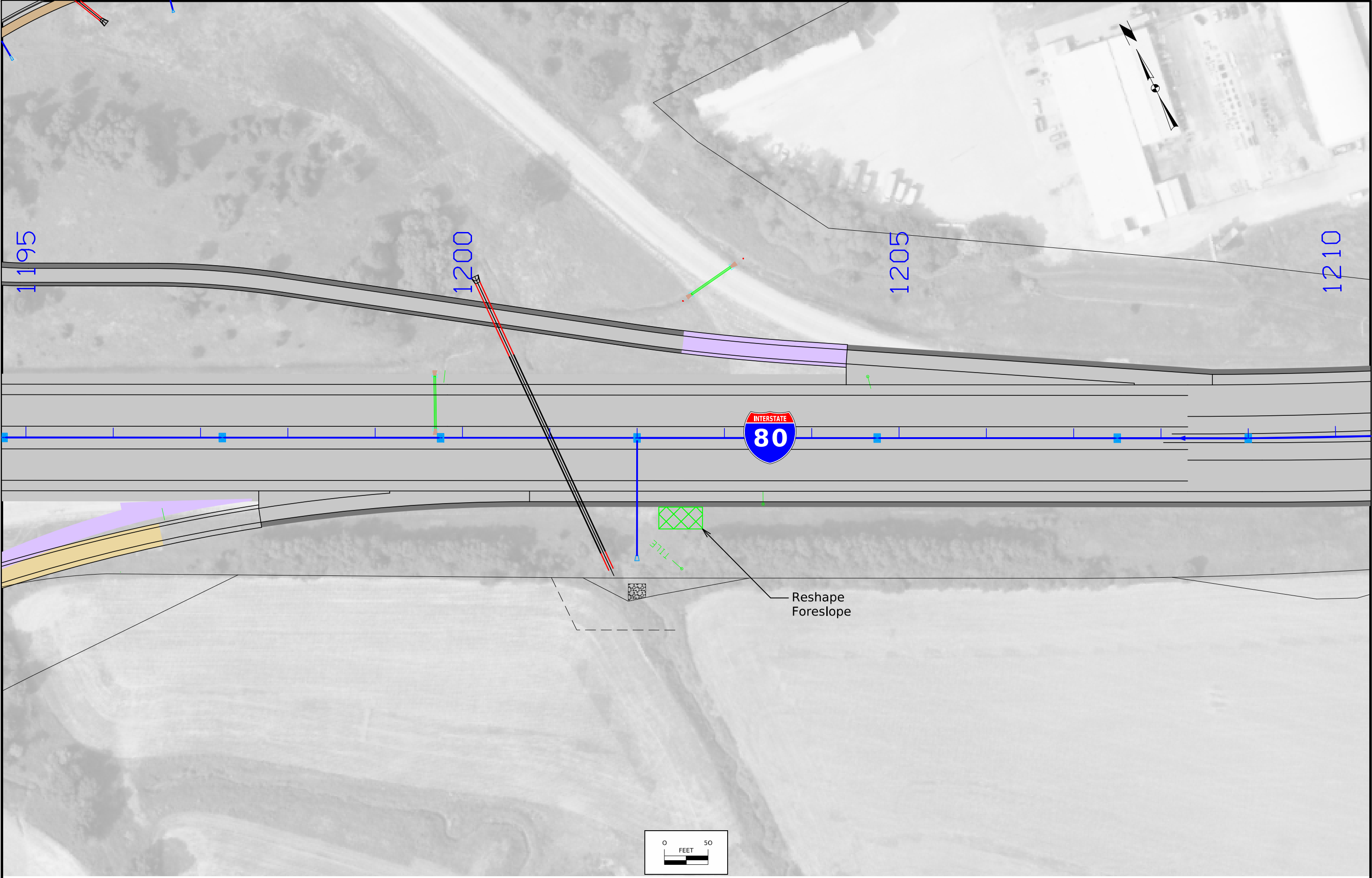
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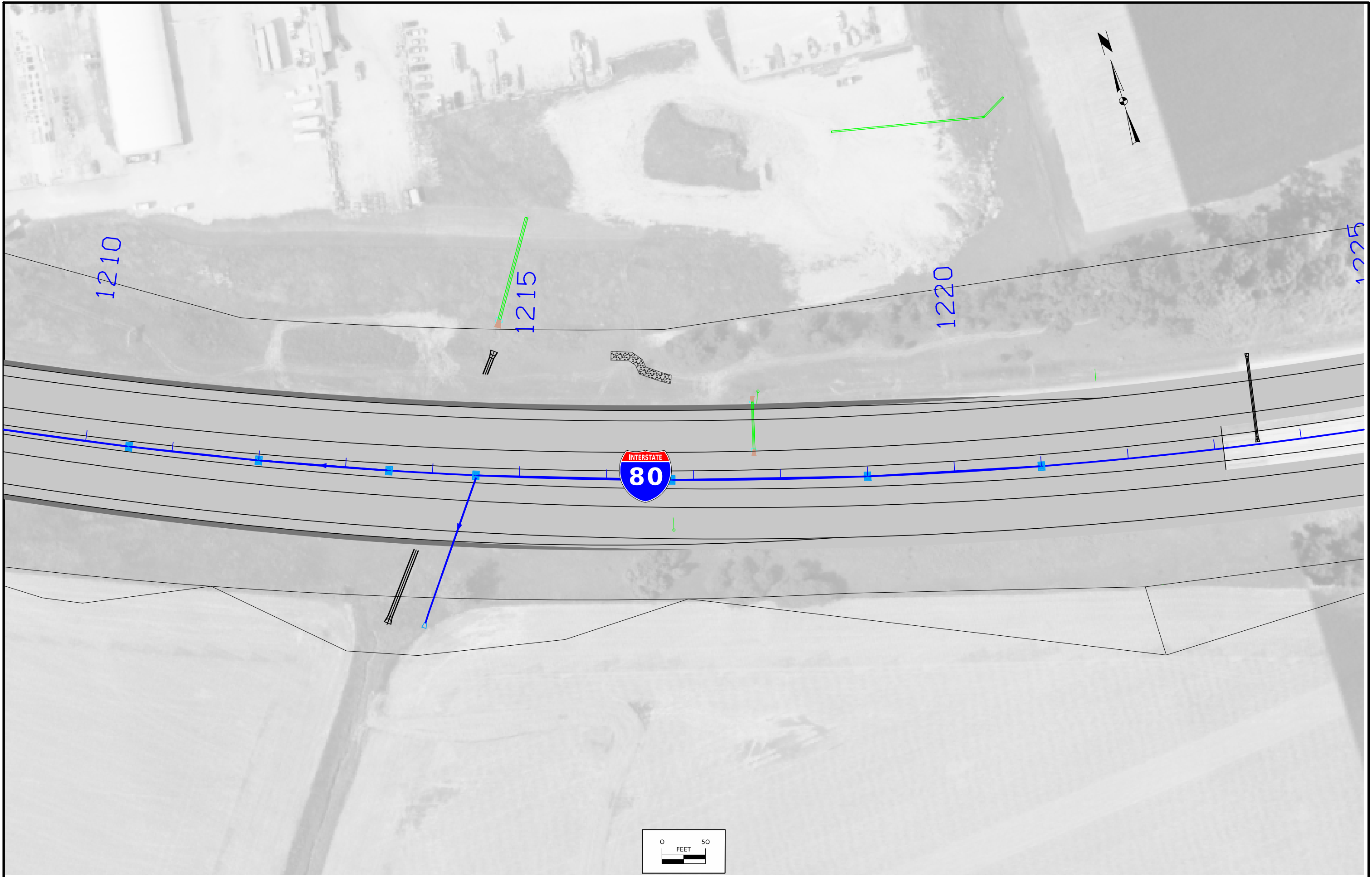


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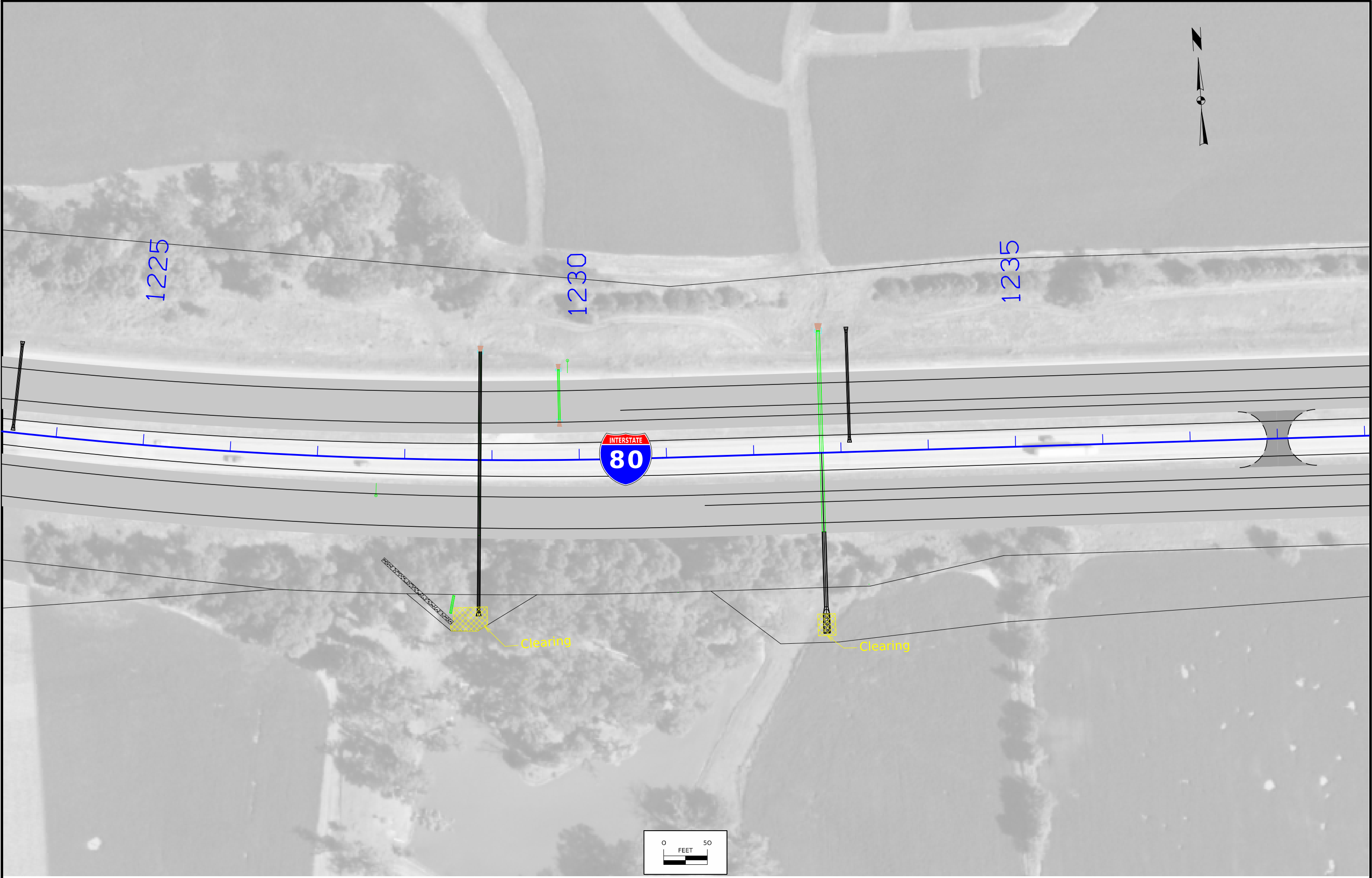




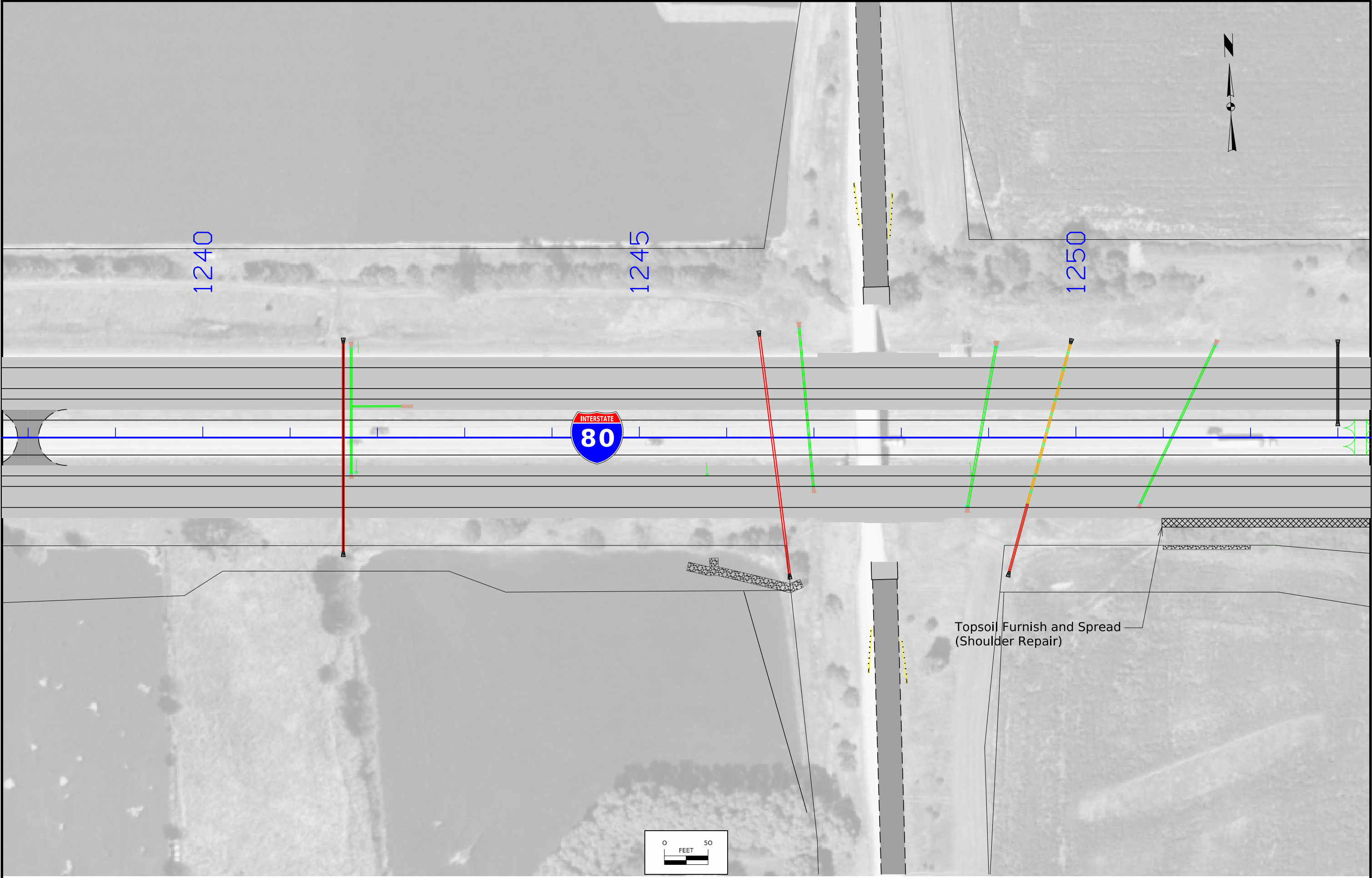
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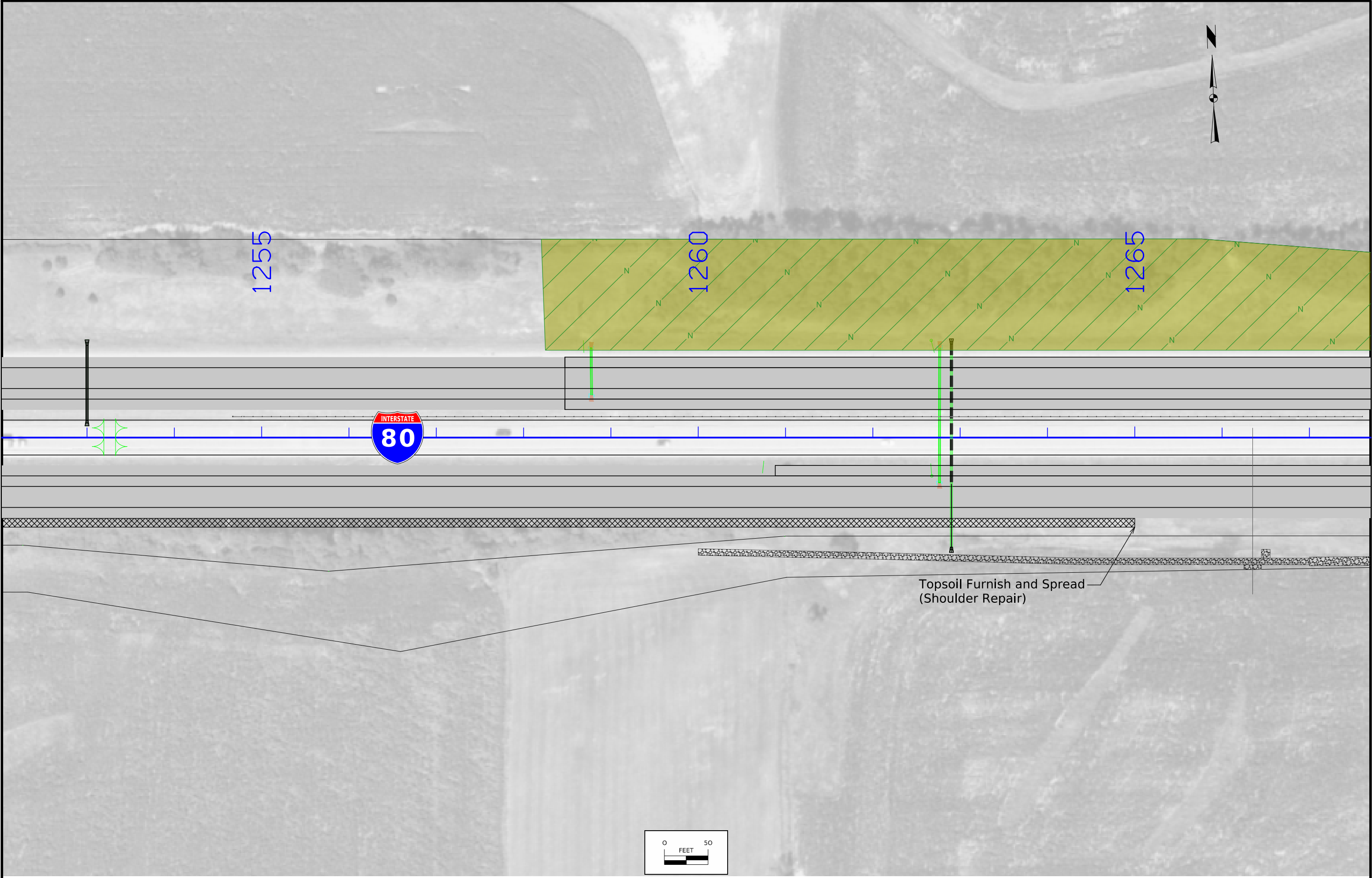


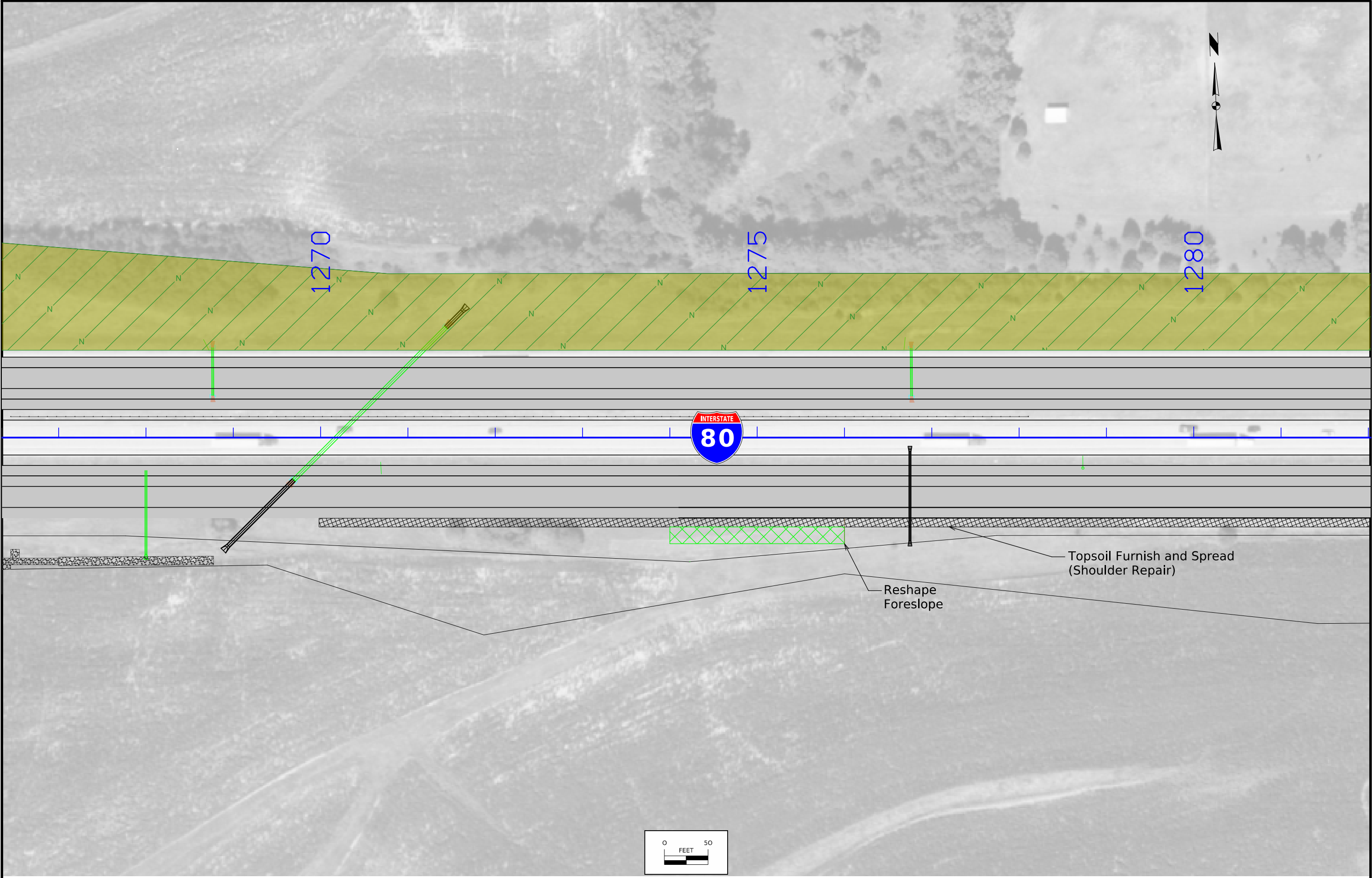
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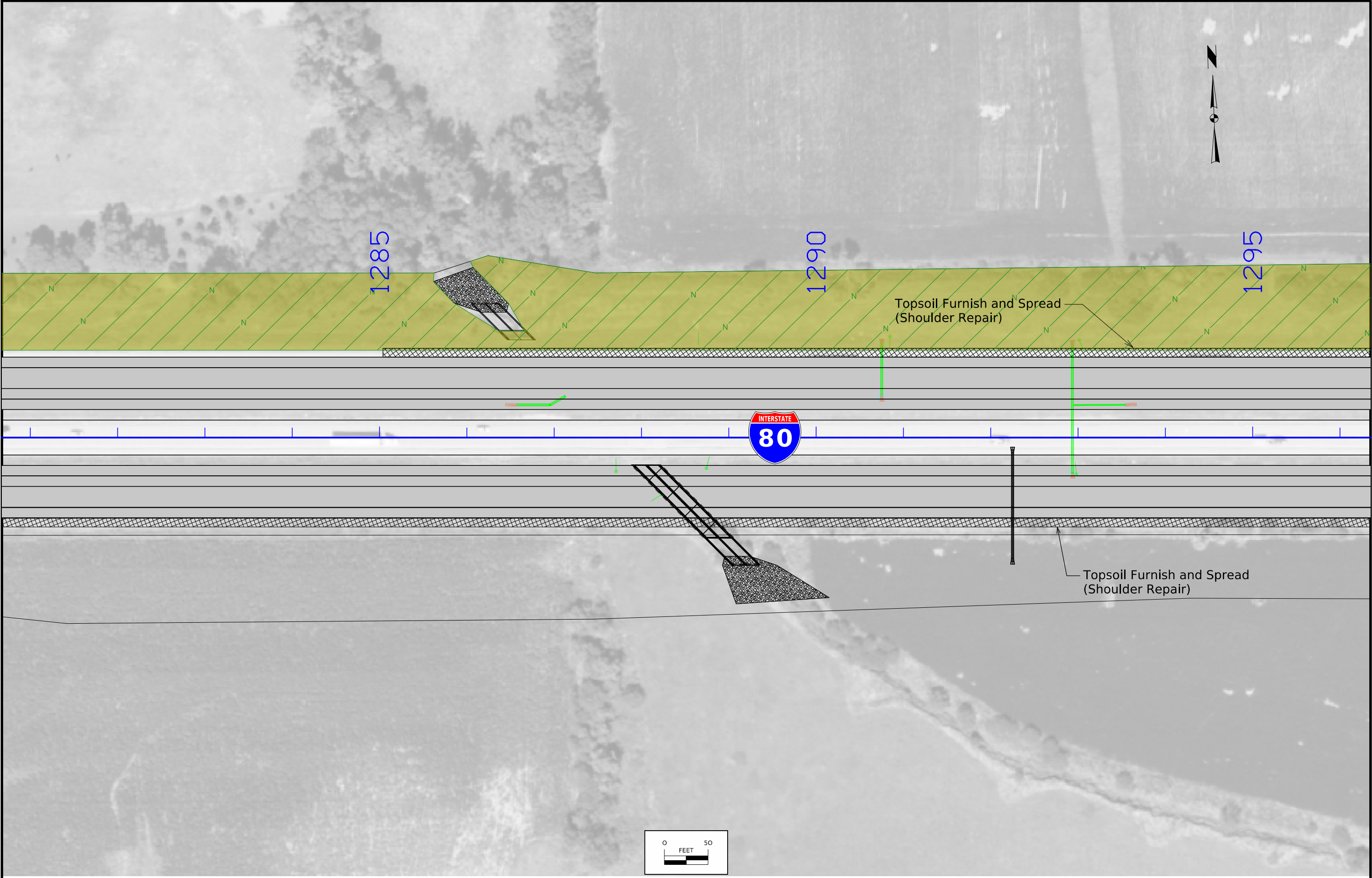


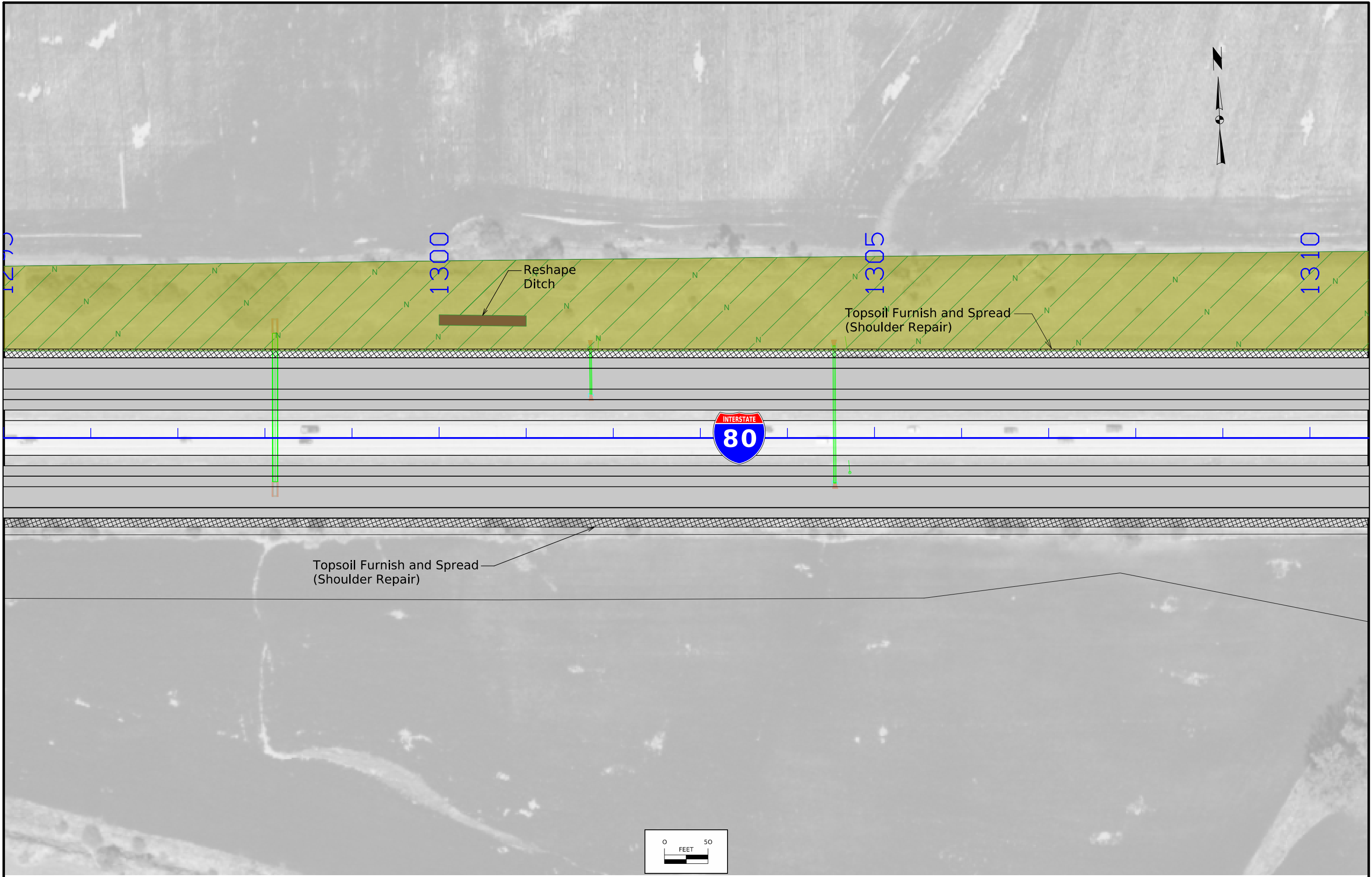
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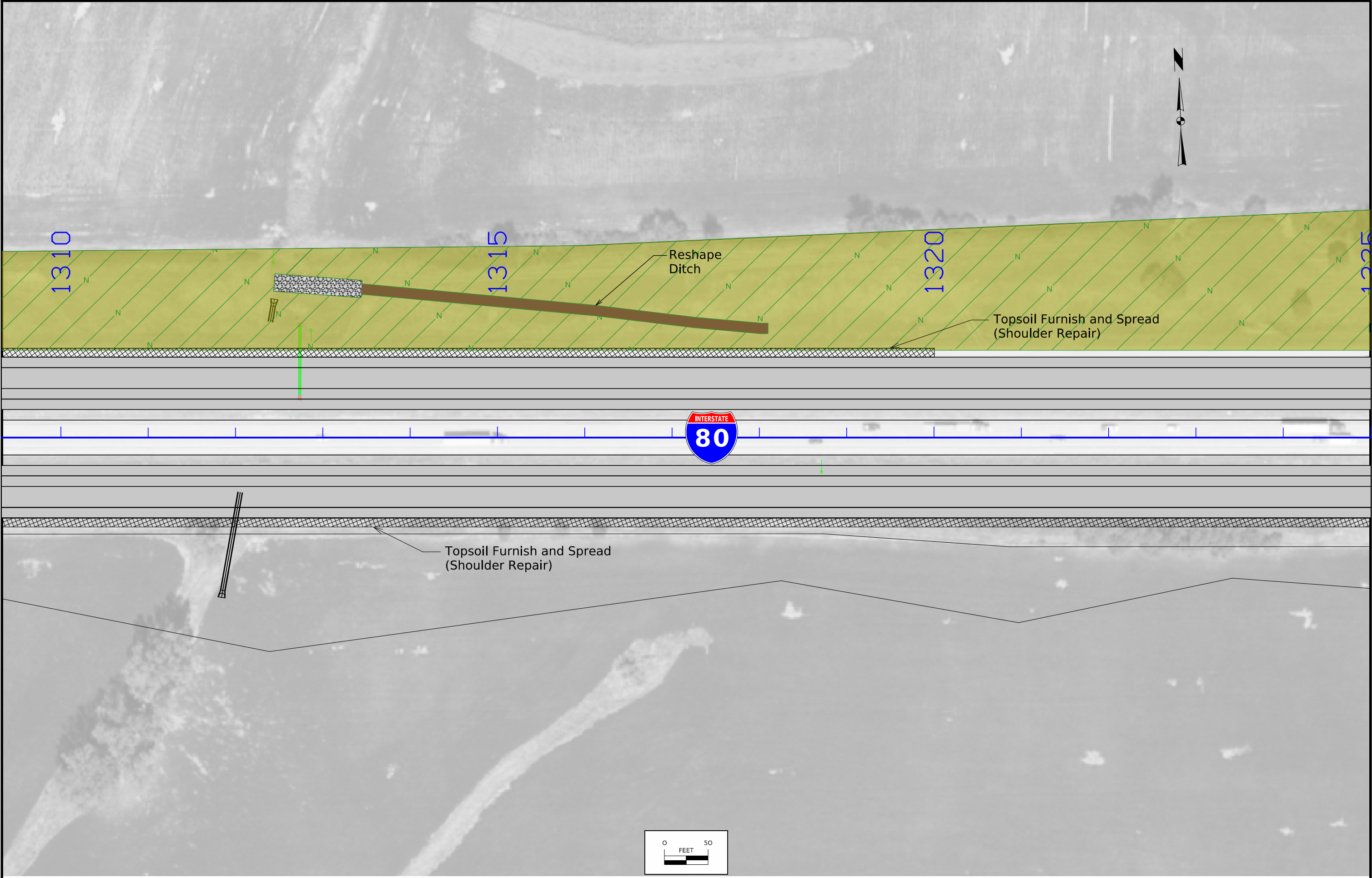




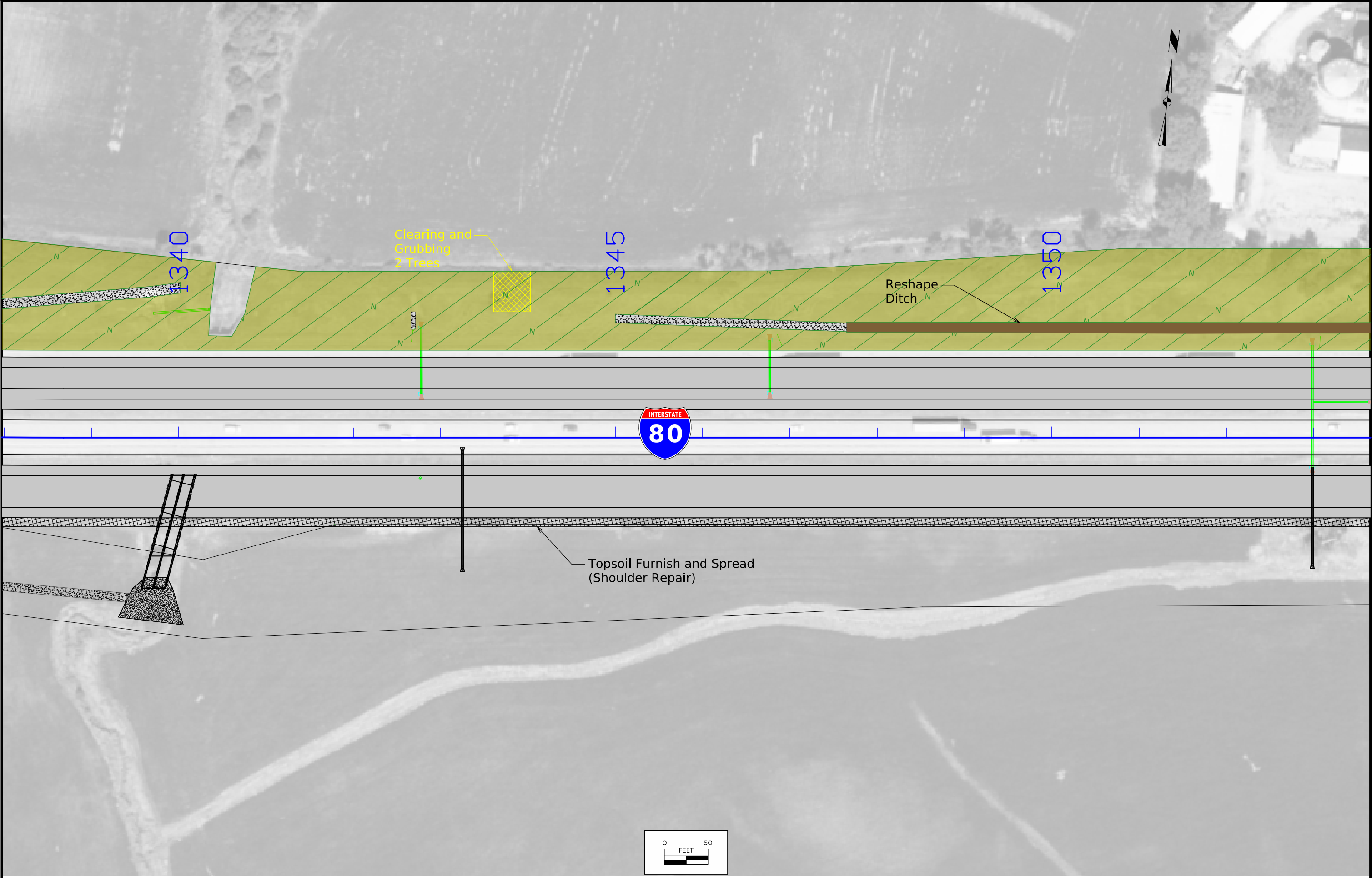




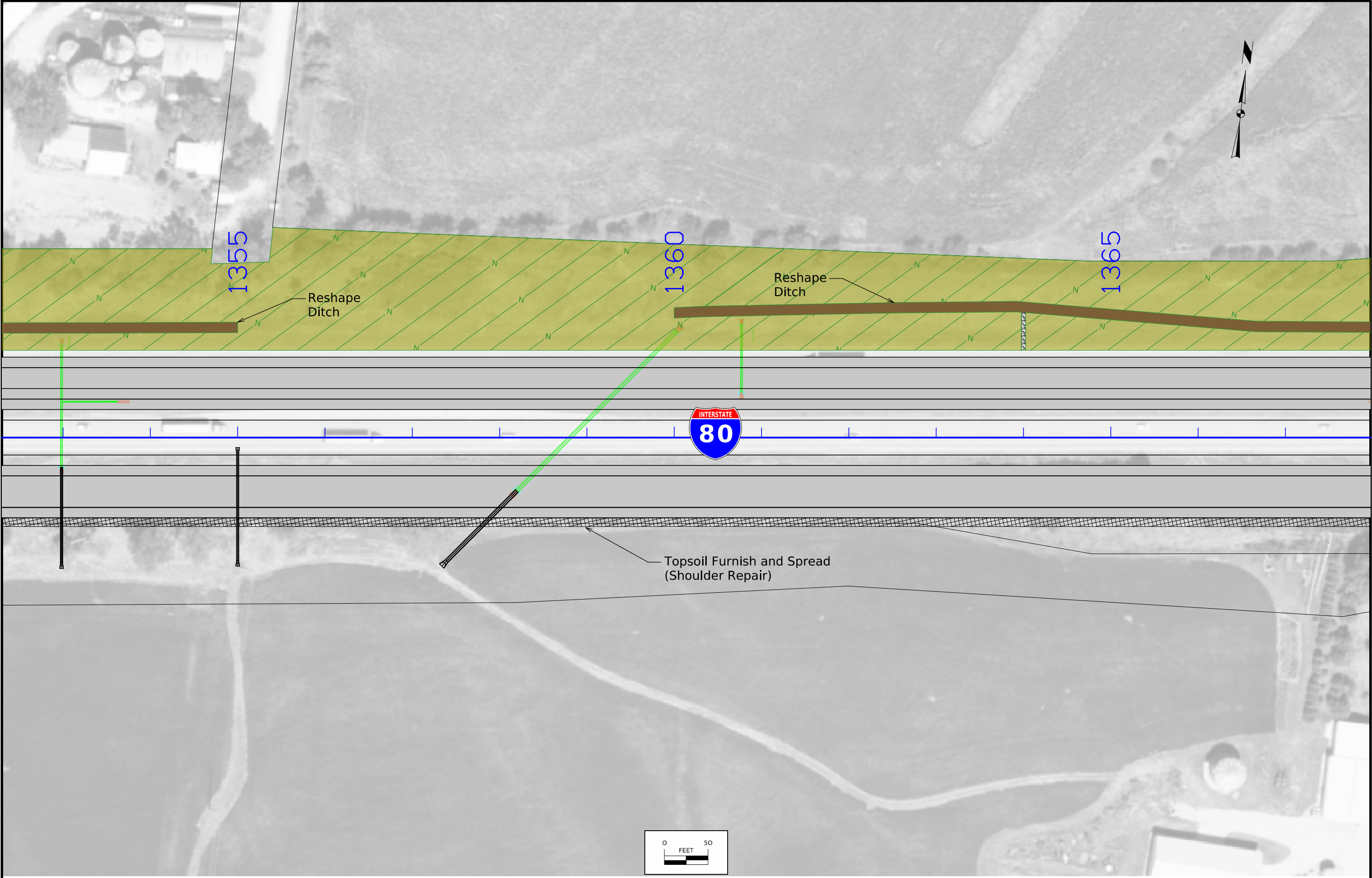




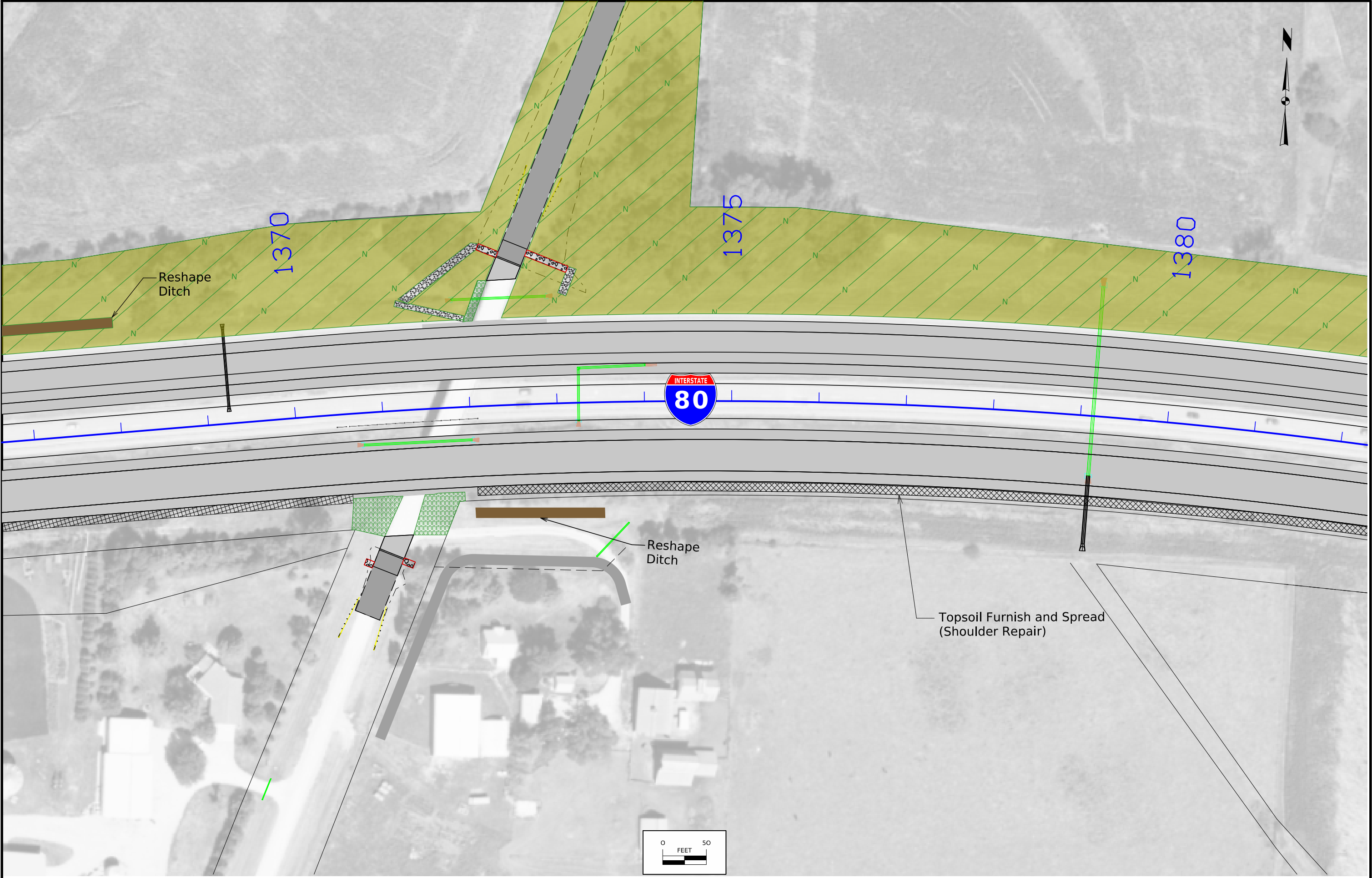


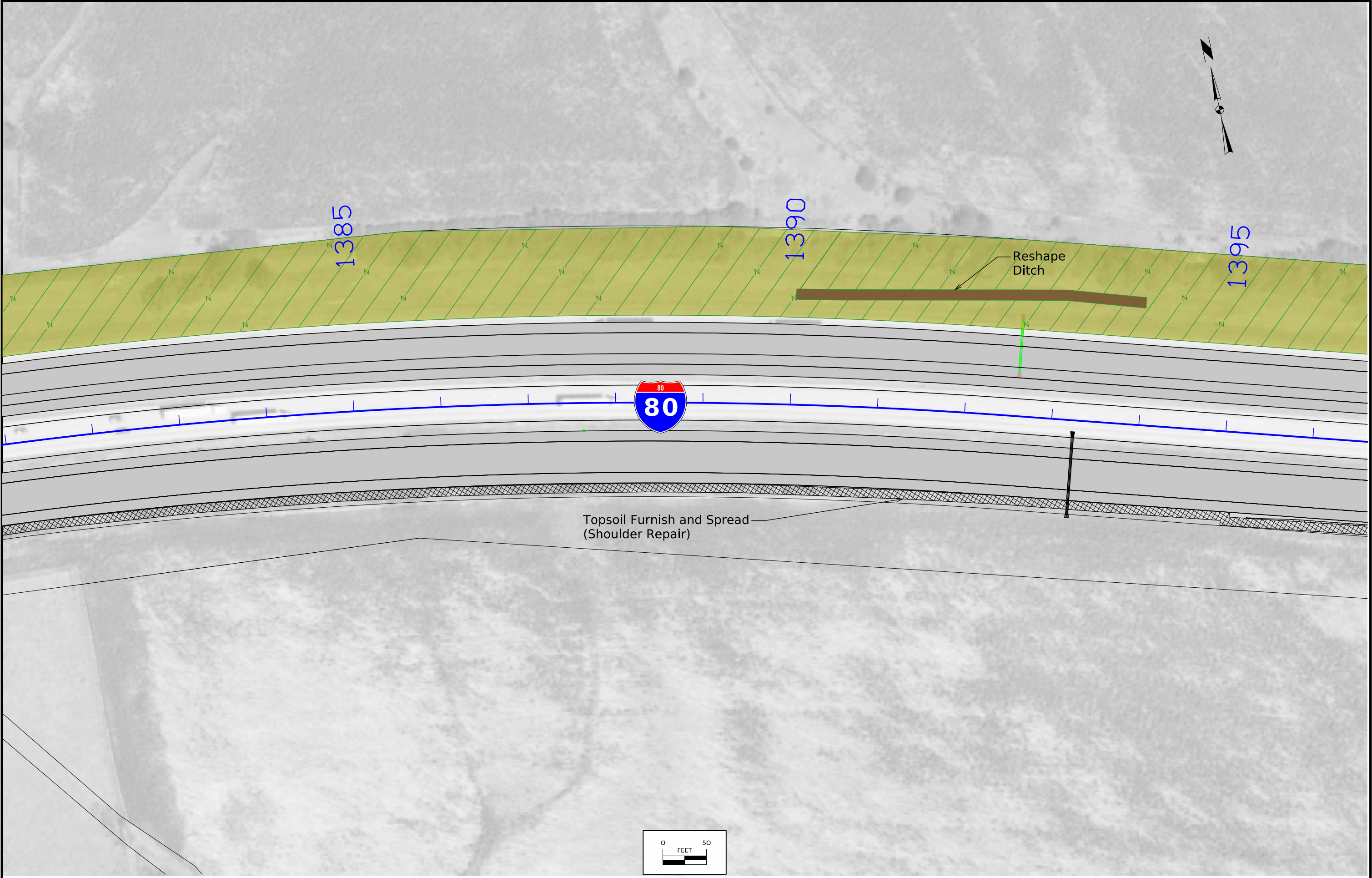


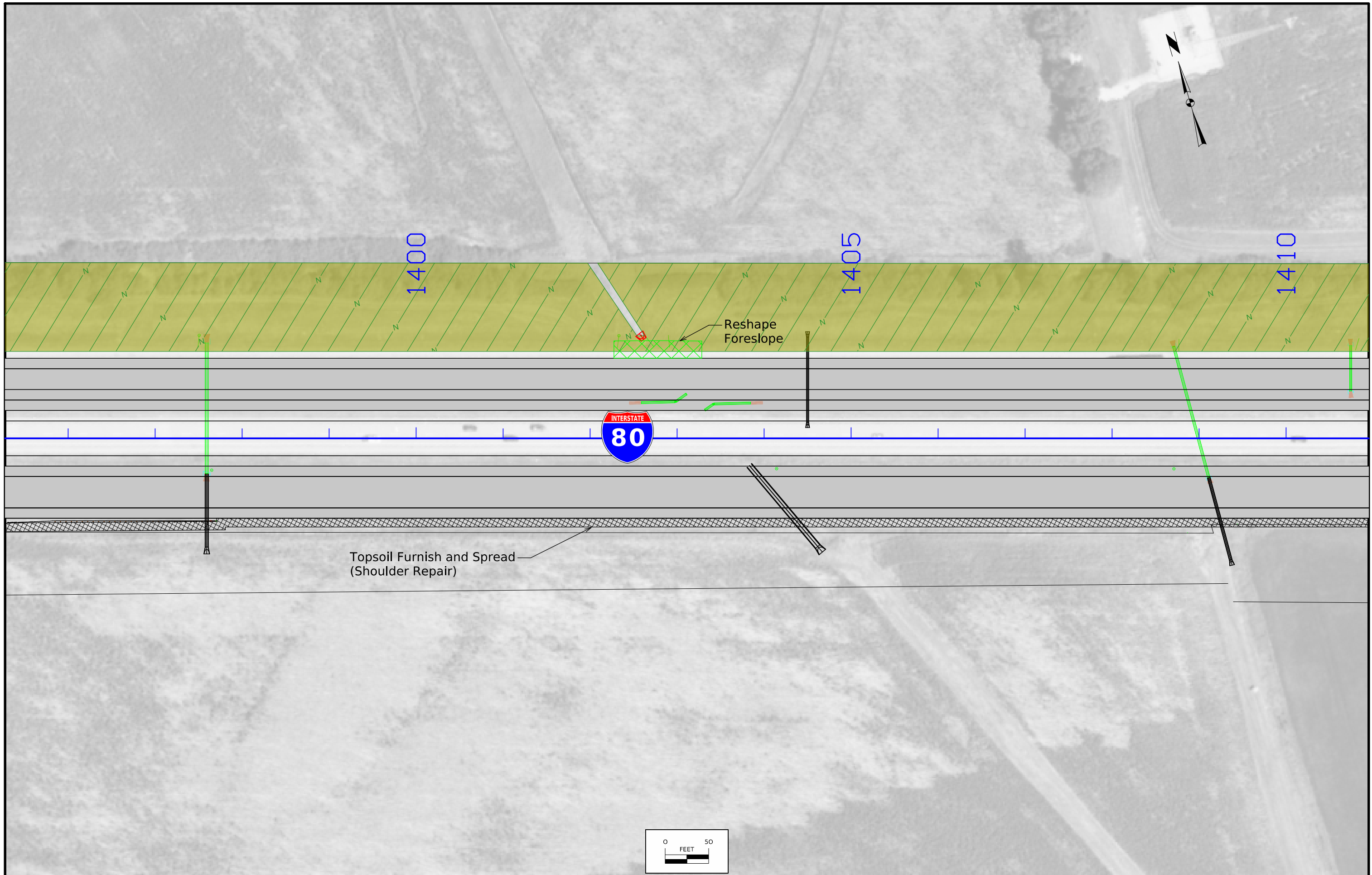
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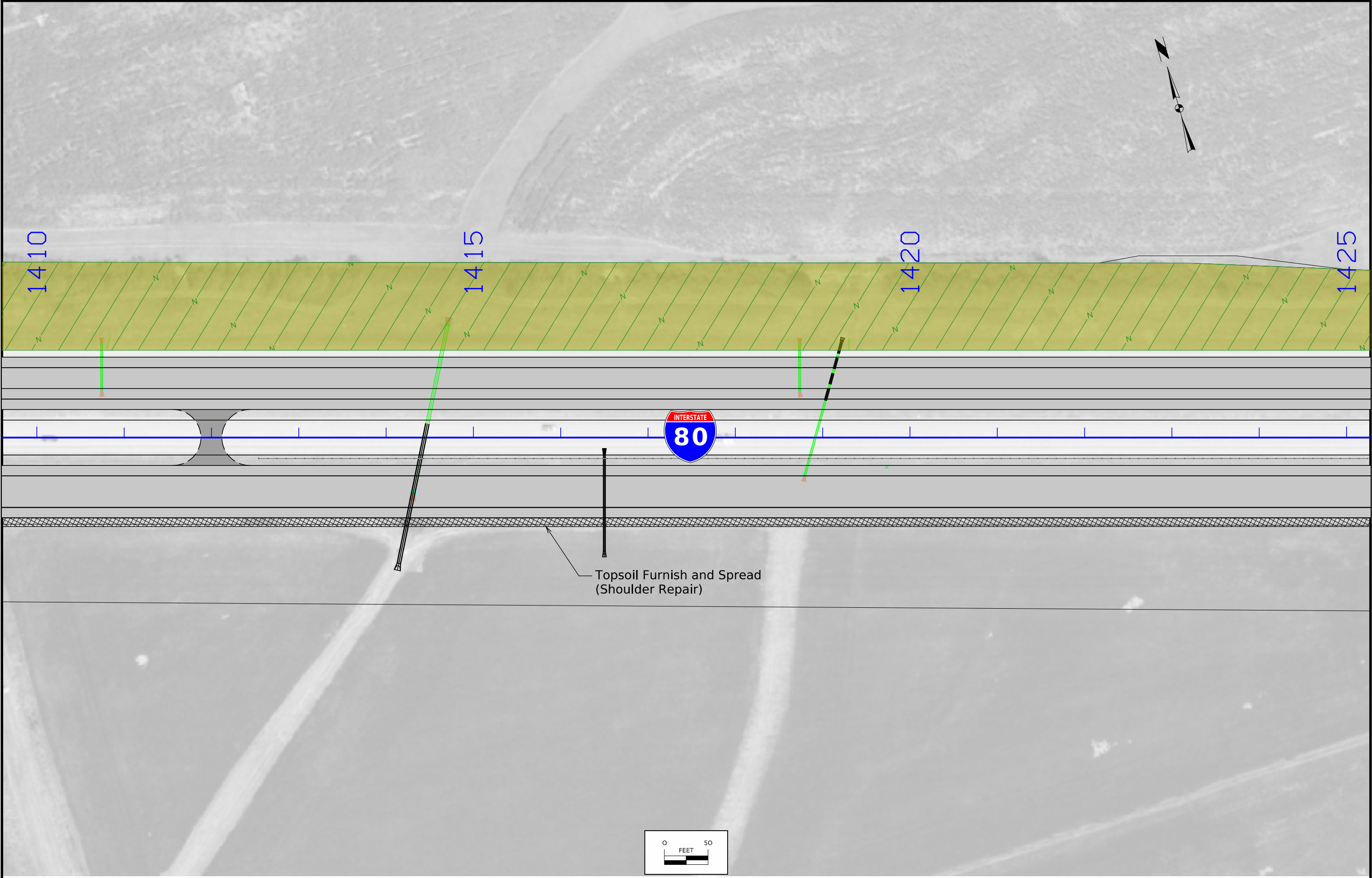


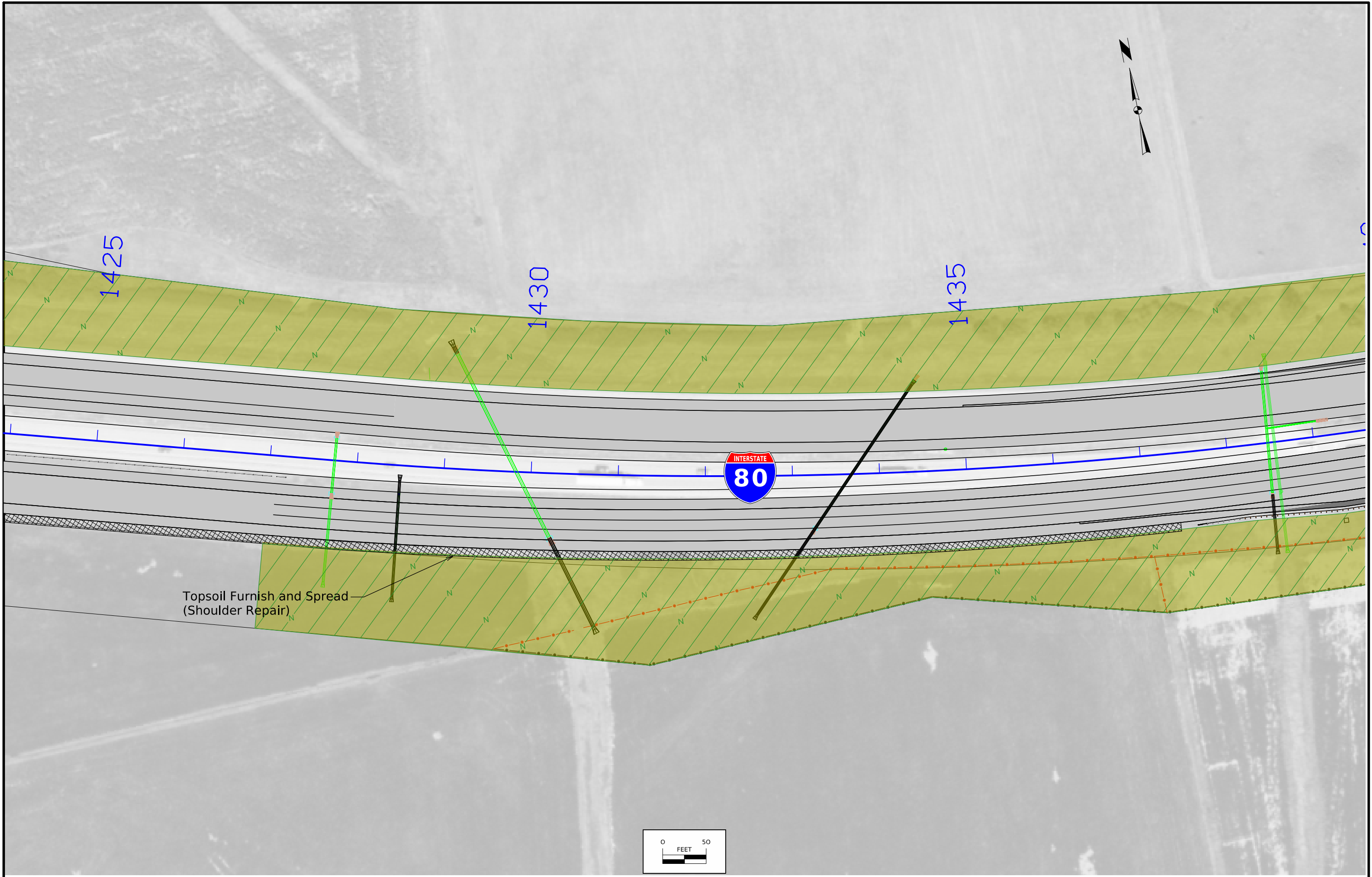
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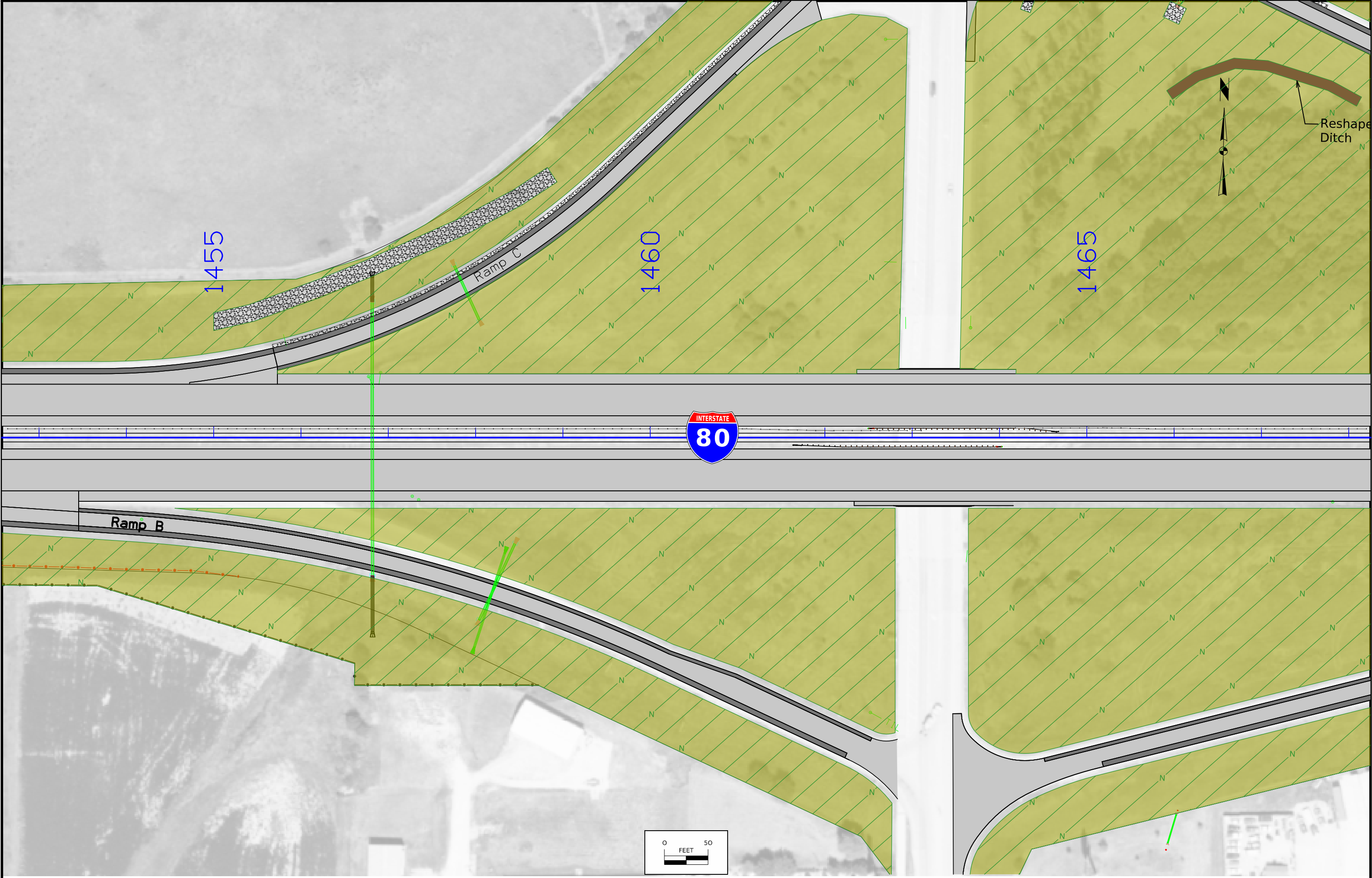


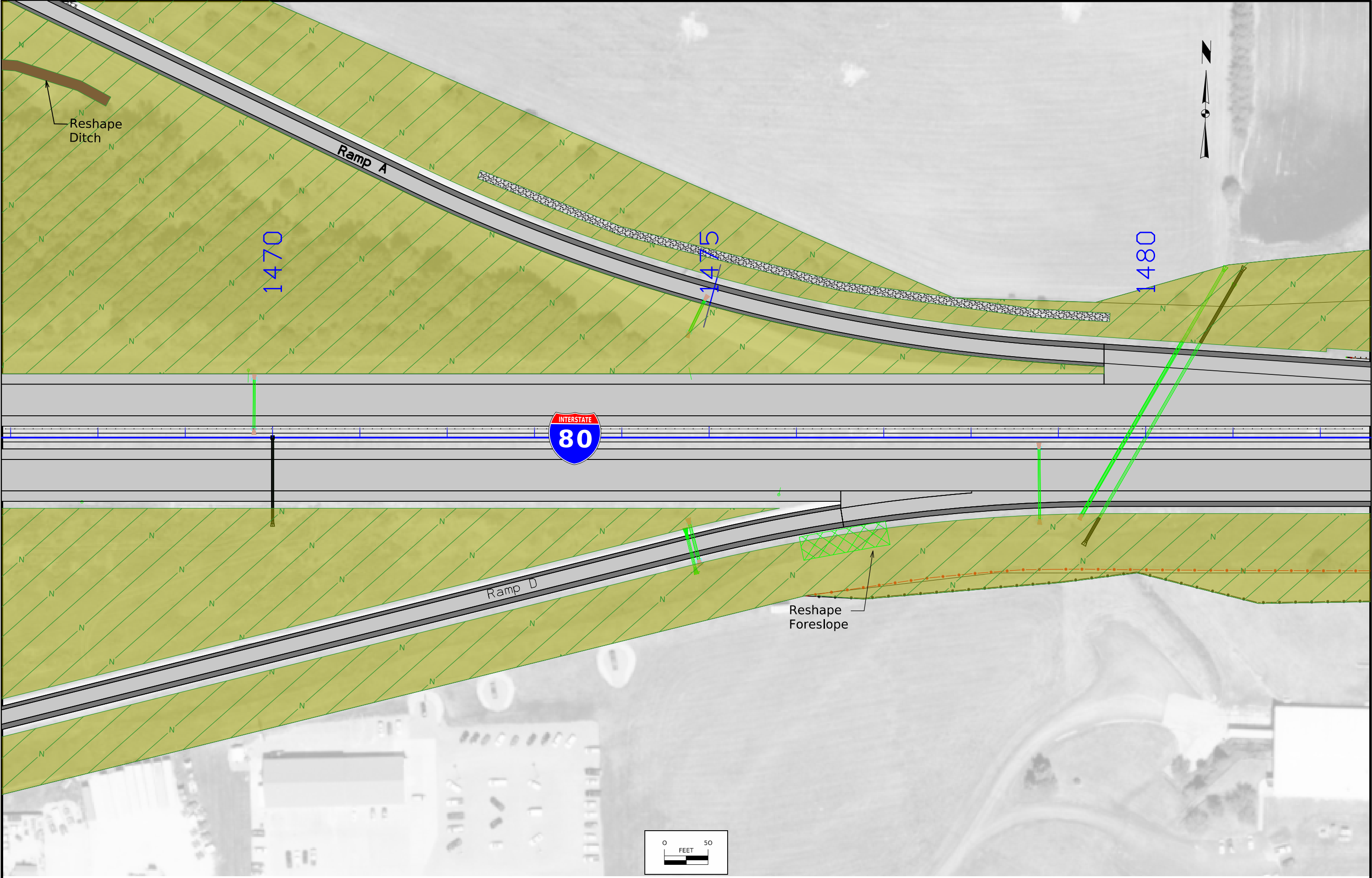


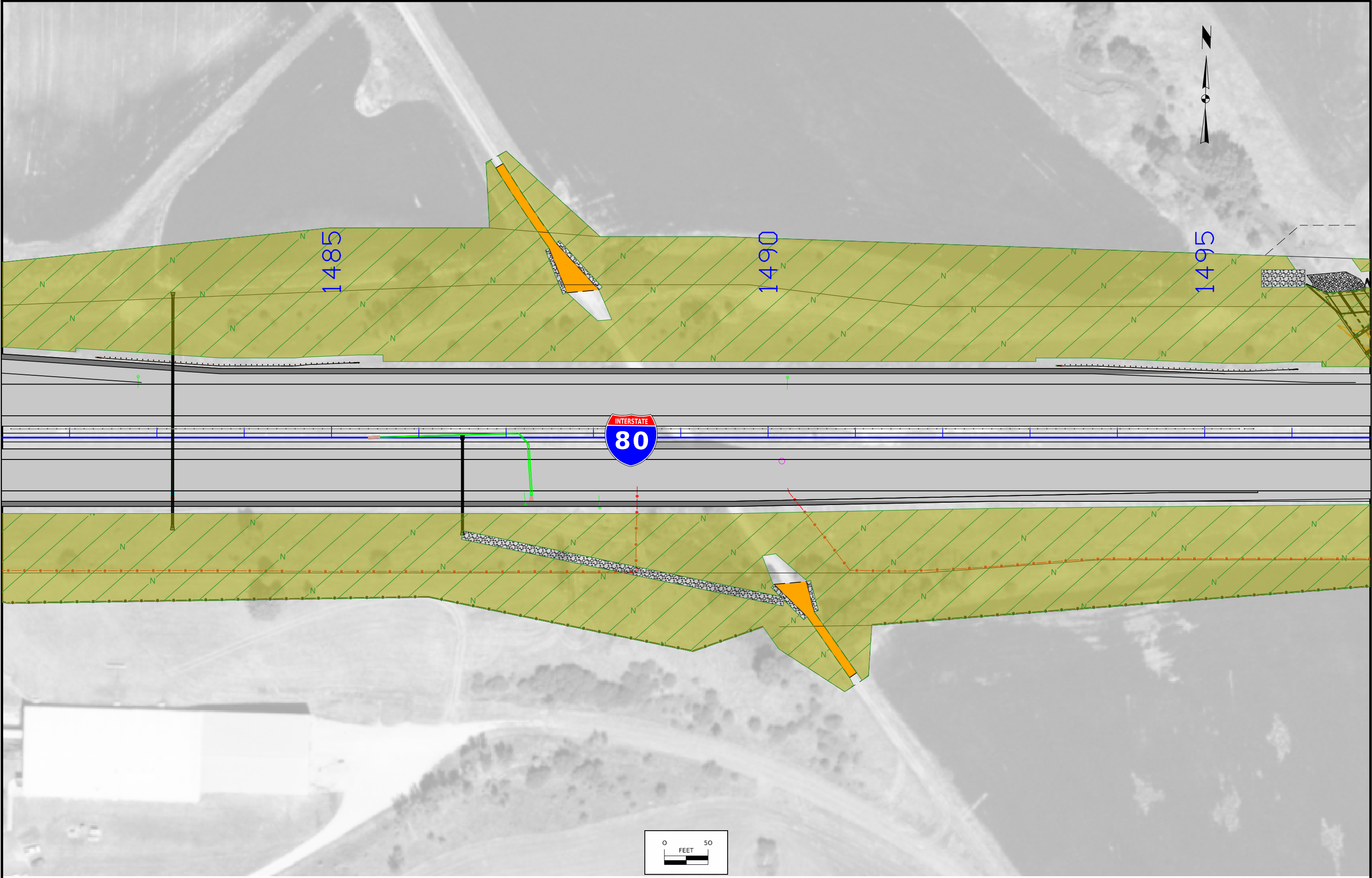








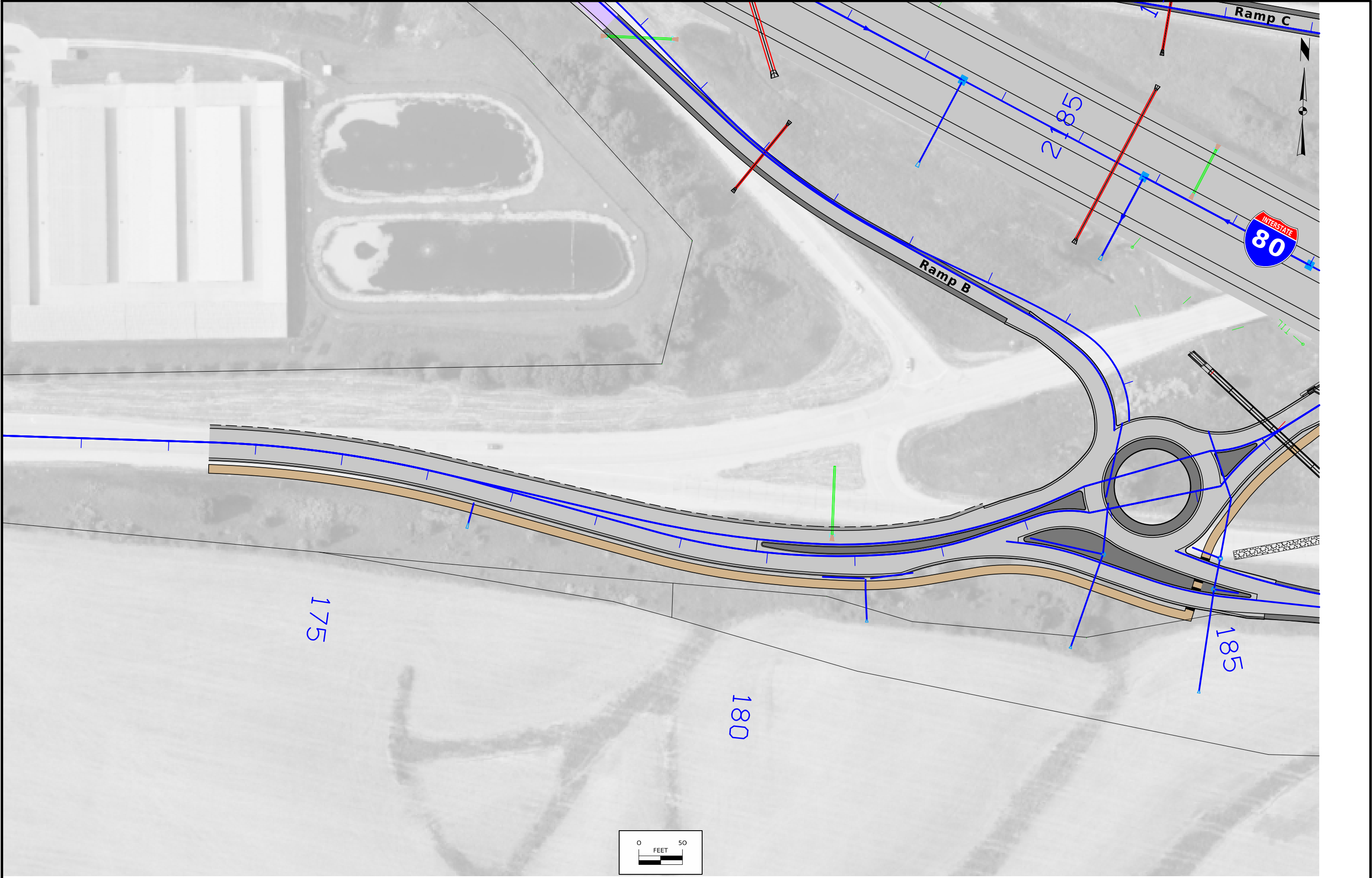


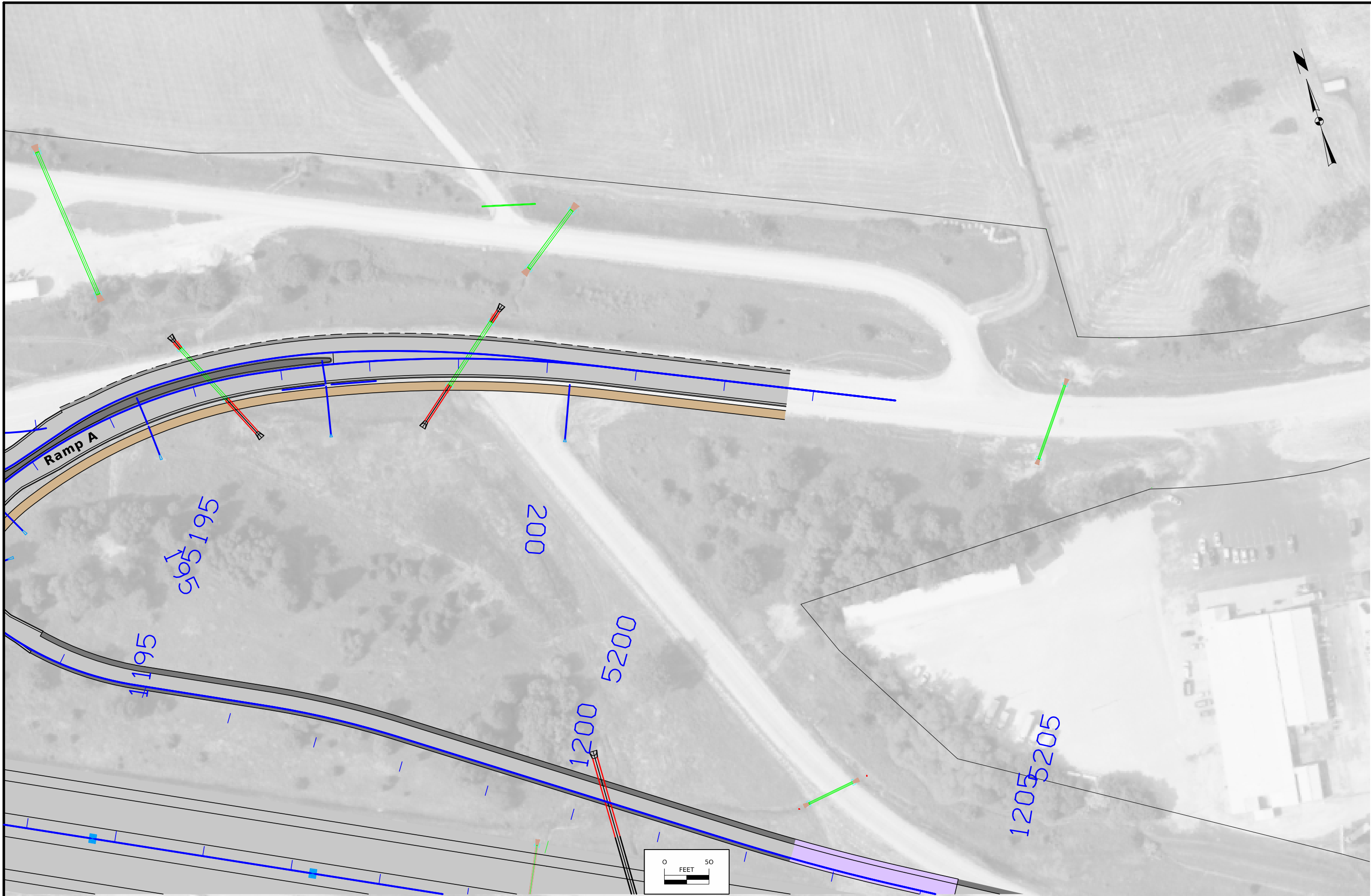


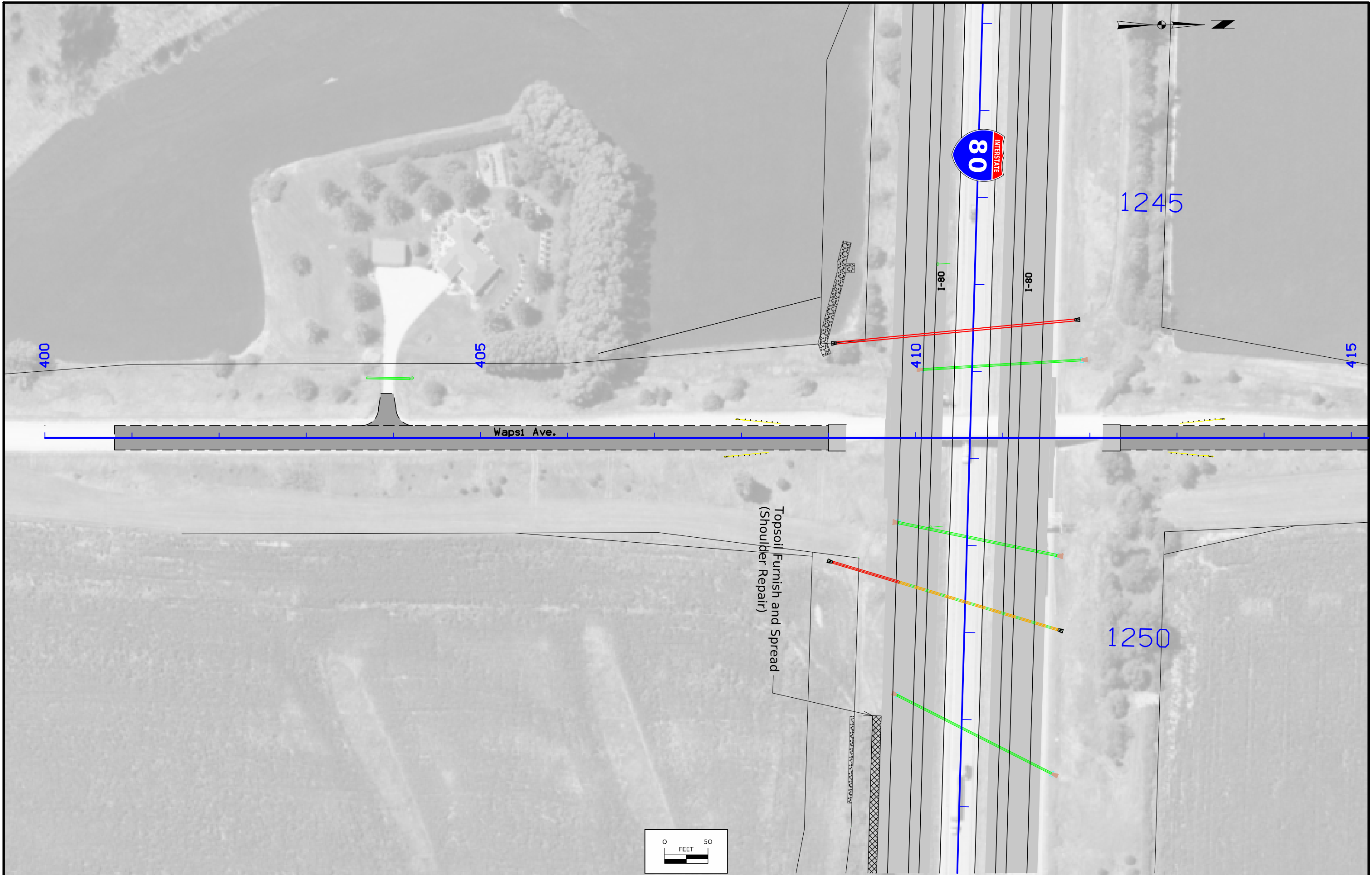
FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Johnson COUNTY	PROJECT NUMBER IMN-080-7(119)248--0E-52	SHEET NUMBER RR.29
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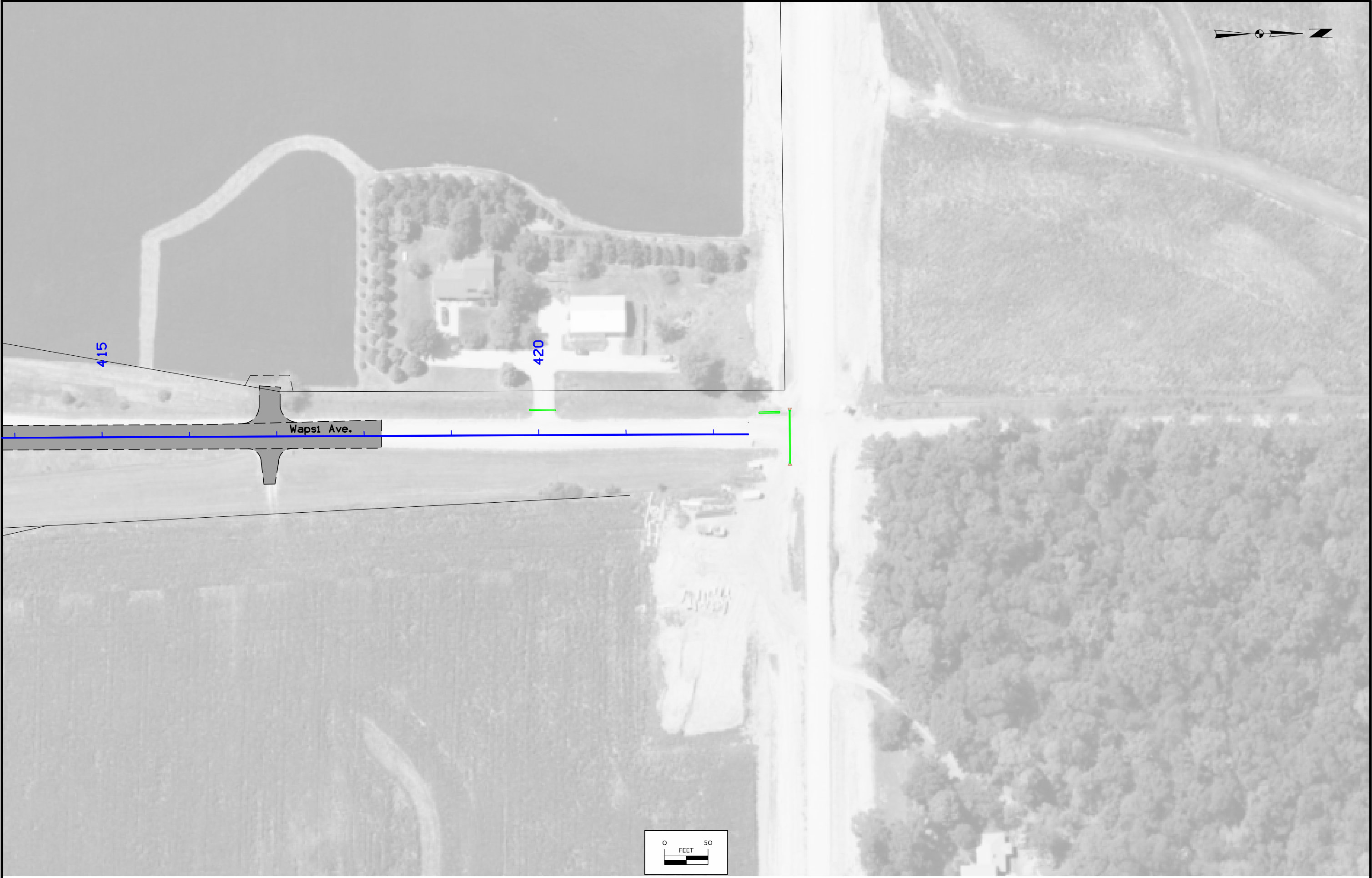
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FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Johnson COUNTY	PROJECT NUMBER IMN-080-7(119)248--0E-52	SHEET NUMBER RR.34
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