WARREN Co.
UNKNOWN PVMNT-GRADE AND REPLACE
NHSX-092-5(51)--3H-91
LETTING DATE 03-18-2014

Iowa Department of Transportation

Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM
WARREN COUNTY
UNKNOWN PVMNT-GRADE AND REPLACE

Ia. 92 From Just West Of Co. Rd. R-57
East To Just East of South 'N' Street In Indianola

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.15 of the Specifications.

IOWA ONE CALL
1-800-292-8989
www.iowaonecall.com
811 Know what's below. Call before you dig.

REVISIONS

TOTAL 00
PROJECT IDENTIFICATION NUMBER
04-91-092-010-01
PROJECT NUMBER
NHSX-092-5(51)--3H-91
R.O.W. PROJECT NUMBER
STPN-092-5(50)--2J-91

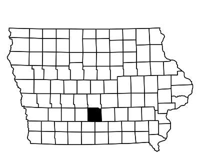
INDEX OF SHEETS

MILEAGE SUMMARY

105-1
09-27-94

Div.	Location	Lin. Ft.	Miles
1	RURAL: STA 255+00.00 to STA 390+50.00	13,550	2.566
	URBAN: STA 390+50.00 to STA 467+00.00	7,650	1.449
	Total Net Project Length	21,200	4.015

For Project Location Map
Refer to Sheet A.2



DESIGN DATA RURAL

2014	AADT	6500	V.P.D.
2034	AADT	11000	V.P.D.
2034	DHV	1130	V.P.H.
TRUCKS		8	%
Total Design ESALs		--	

DESIGN DATA URBAN

2014	AADT	9500	V.P.D.
2034	AADT	16000	V.P.D.
2034	DHV	1650	V.P.H.
TRUCKS		8	%
Total Design ESALs		--	

INDEX OF SEALS

SHEET NO.	NAME	TYPE
A.1	Jason M. Holst	Primary Signature Block
C.21	David R. Claman	Hydraulic Signature Block
CS.1	Robert L. Stanley	Geotechnical Signature
J.8	Zachary Abrams	Signing Design Signature

ROADWAY DESIGN

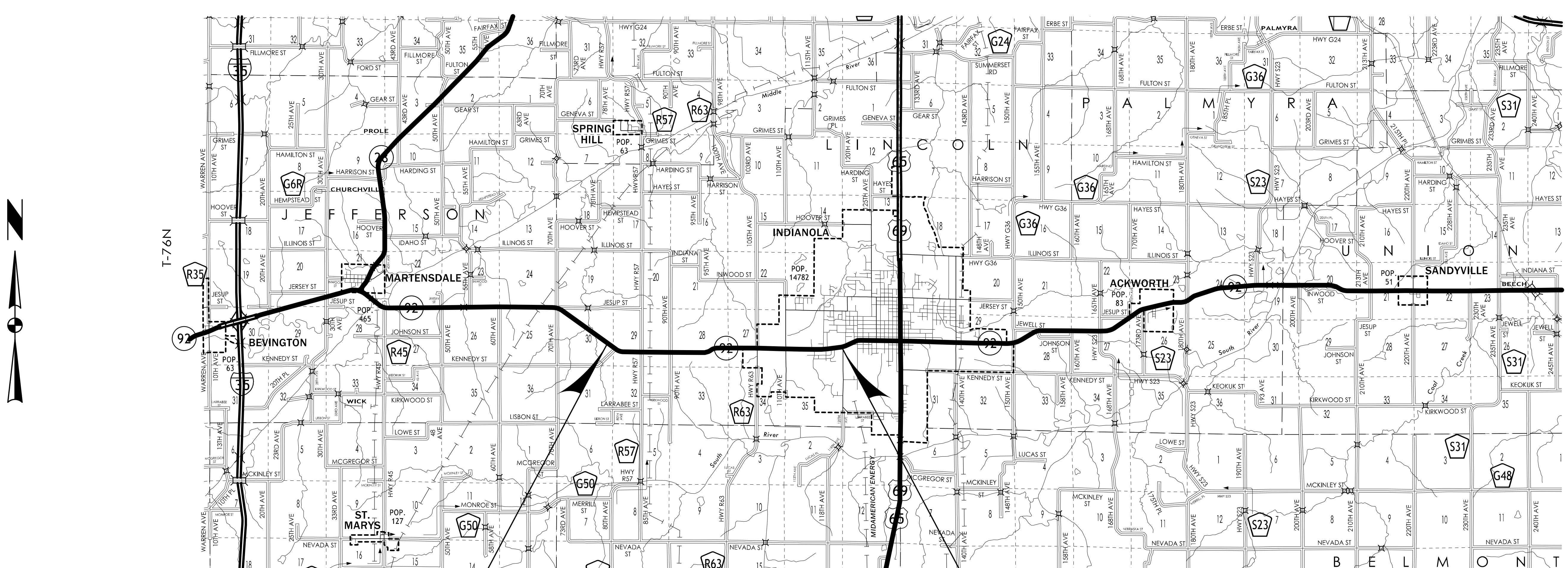
LICENSED PROFESSIONAL ENGINEER Jason M. Holst 16923 IOWA

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Signature Date
Jason M. Holst
Printed or Typed Name

My license renewal date is December 31, 2014

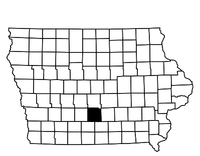
Pages or sheets covered by this seal: A.1-A.2; B.1-B.9; C.1-C.20; D.1-D.29; E.1-E.5; F.1-F.9; G.1-G.9; H.1-H.15; HE.1-HE.6; J.1-J.11; L.1-L.15; M.1-M.14; S.1-S.20; U.1-U.29; W.1-W.220; X.1-X.105



R-25W R-24W R-23W R-22W

STA. 255+00.00
BEGIN PROJECT
M.P. 125.94

STA. 467+00.00
END PROJECT
M.P. 129.95



LOCATION MAP SCALE
0 1 2 3
Miles

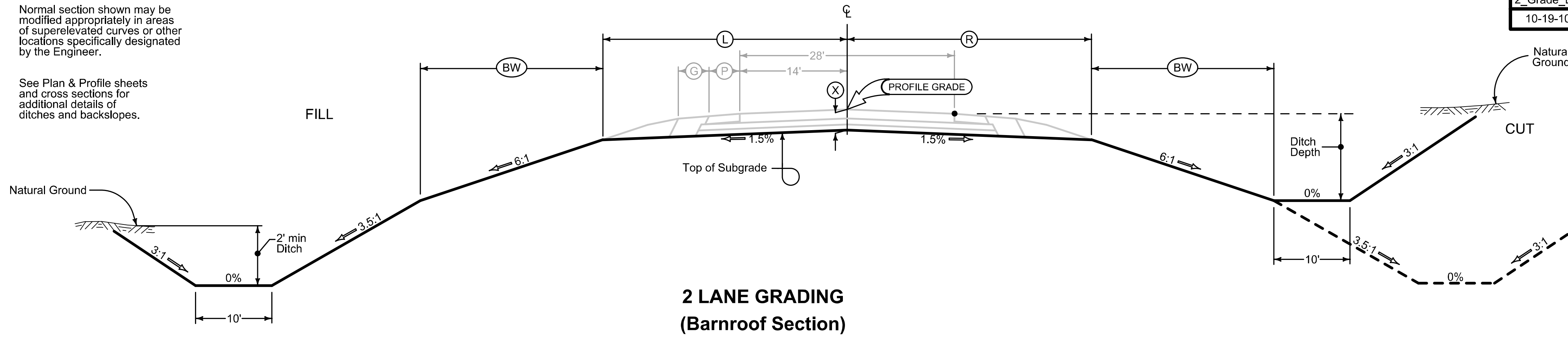
LOCATION MAP SHEET

ENGLISH	IOWA DOT	DESIGN TEAM J1a\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER	A.2

LOCATION			DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION		L Feet	R Feet	X Inches	BW Feet
IA 92	256+50.00	391+00.00	35.2	35.2	16	16.4

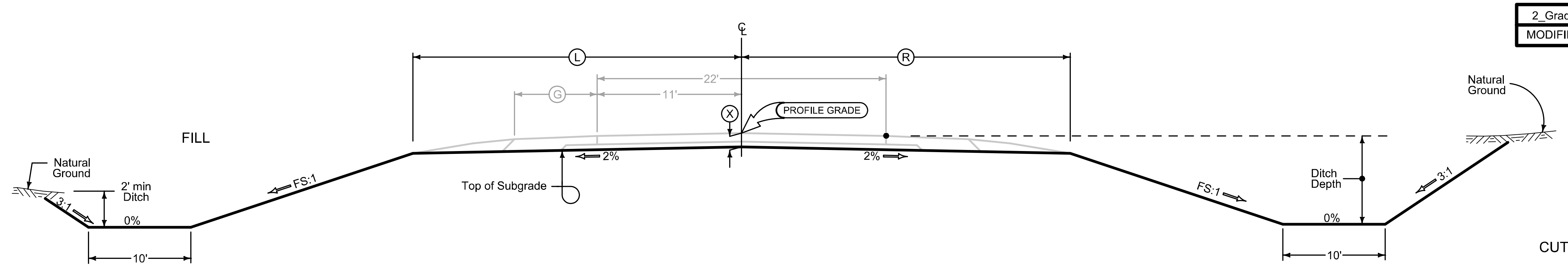
Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

See Plan & Profile sheets and cross sections for additional details of ditches and backslopes.



2 LANE GRADING
(Barnroof Section)

LOCATION			DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION		L Feet	R Feet	X Inches	FS
R-57	1280+60.00	1283+61.24	27.0	27.0	16	4
R-57	1383+96.17	1386+06.00	27.0	27.0	16	4
R-63	3389+30.00	3390+23.00	27	27	16	4
R-63	3392+23.00	3392+70.00	27	27	16	4



2 LANE GRADING

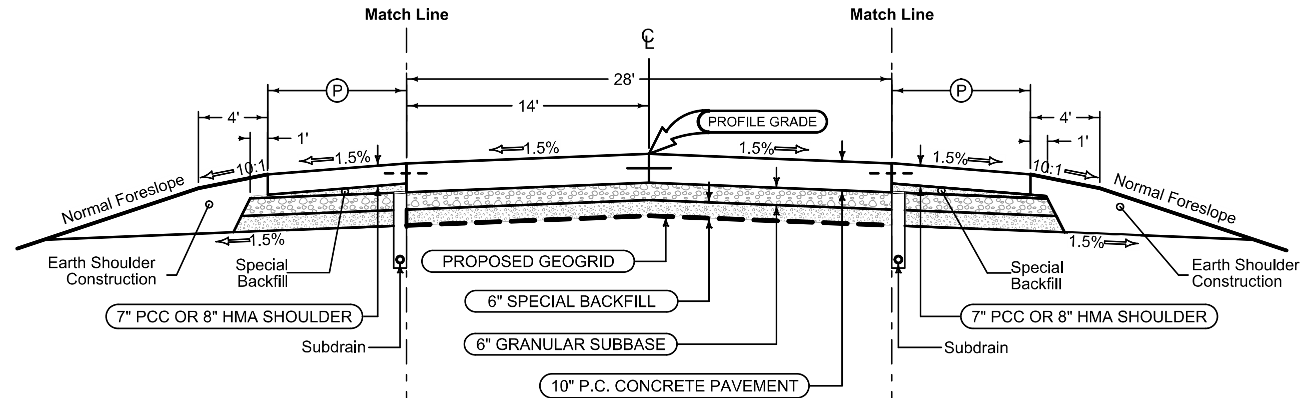
Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

See plan & profile sheets and cross sections for additional details of ditches and backslopes.

Paved Shoulder Alternates

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-3
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

2_P_ALT_ 10-19-10		
STATION TO STATION		(P) Feet
256+50.00	282+86.00	8
291+18.00	390+19.00	8



Paved Shoulder Alternates

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-3
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

2_P_ALT_ 10-19-10		
STATION TO STATION		(P) Feet
257+70.00	279+39.00	8
284+80.50	286+70.00	8

Mainline Jointing:
Transverse joints: CD at 20' spacing
Longitudinal joint: L-2

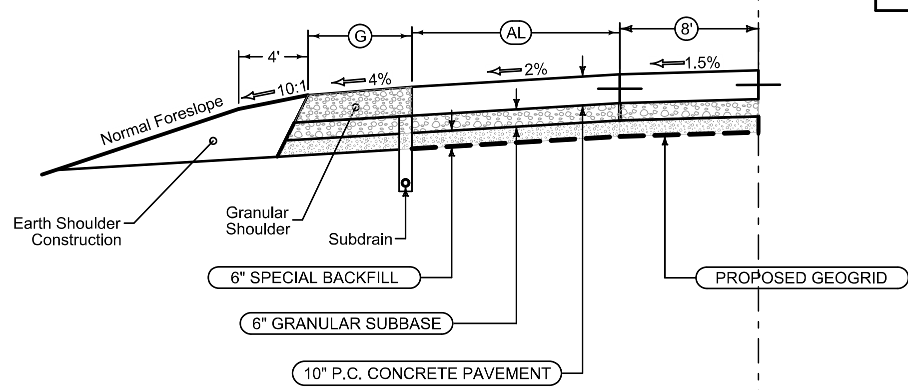
2P_ 10-19-10	
STATION TO STATION	
256+50.00	391+00.00

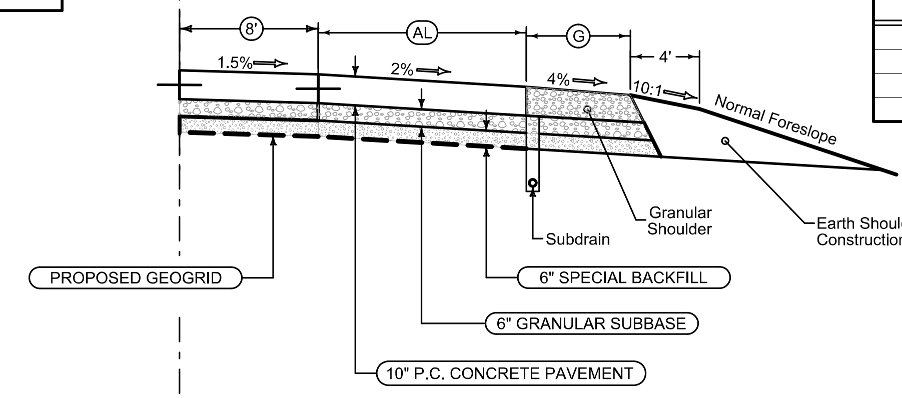
Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

Auxiliary Lane Granular Shoulder

2_AuxLane_PCC_ 10-19-10			2_AL_Shldr_G_ 10-19-10
STATION TO STATION		(AL) Feet	(G) Feet
284+48.00	289+38.00	10	6
289+38.00	292+08.00	0-10	6





Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

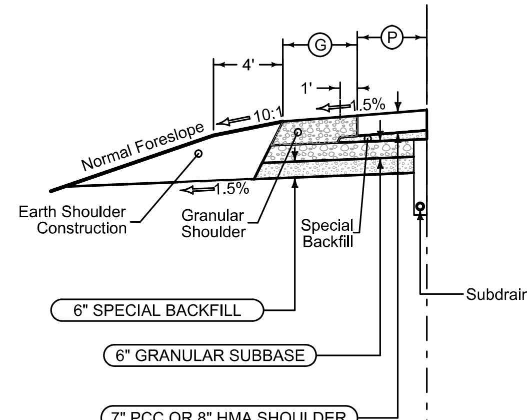
Auxiliary Lane Granular Shoulder

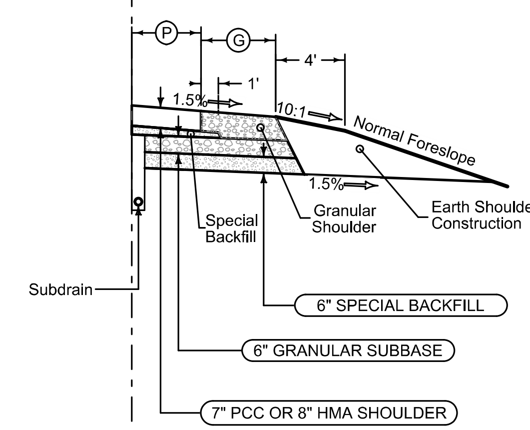
2_AuxLane_PCC_ 10-19-10			2_AL_Shldr_G_ 10-19-10
STATION TO STATION		(AL) Feet	(G) Feet
279+39.00	281+19.00	0-10	6
281+19.00	282+94.00	10	6
386+70.00	388+50.00	0-10	6
388+50.00	390+25.00	10	6

Paved Shoulder Alternates With Adjacent Granular Shoulder

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-3
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

2_P_ALT_ 10-19-10			
STATION TO STATION		(P) Feet	(G) Feet
256+50.00	257+70.00	4	2-4





Paved Shoulder Alternates With Adjacent Granular Shoulder

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-3
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

2_P_ALT_ 10-19-10			
STATION TO STATION		(P) Feet	(G) Feet
256+50.00	257+70.00	4	2-4

See Tab 100-24 for pavement quantities.

See Tab 112-9 for shoulder quantities.

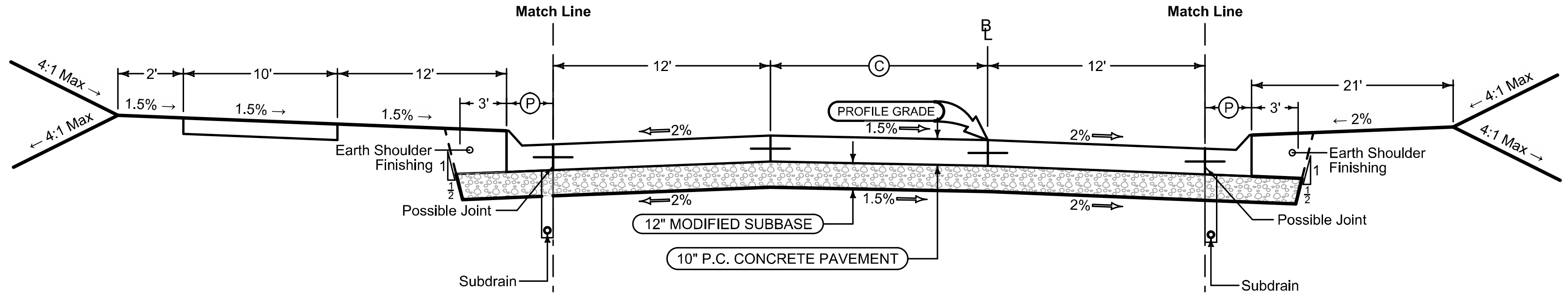
IOWA 92 - RURAL

Curbed Shoulder

Shoulder Jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2
Staged : KT-2
Transverse:C at 20' spacing

		2_Curb_ MODIFIED	
STATION TO STATION		(P) Feet	Curb Type See PV-102
391+00.00	443+18.01	3	6" Standard



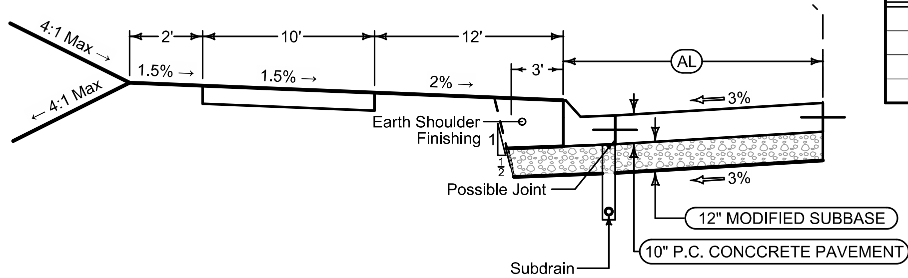
Mainline Jointing:
Transverse joints: CD at 20' spacing
Longitudinal joint: L-2

		2P_TWLTL_ 10-19-10
STATION TO STATION		(C) Feet
391+00.00	441+27.50	16
441+27.50	443+18.01	16-12

Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

			4_AuxLane_PCC_ MODIFIED
Direction of Travel	BEGIN STATION	END STATION	(AL) Feet
WEST	391+92.00	396+82.00	13



Curbed Shoulder

Shoulder Jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2
Staged : KT-2
Transverse:C at 20' spacing

		2_Curb_ MODIFIED	
STATION TO STATION		(P) Feet	Curb Type See PV-102
391+00.00	443+18.01	3	6" Standard

See Tab 100-24 for pavement quantities.

See Tab 112-9 for shoulder quantities.

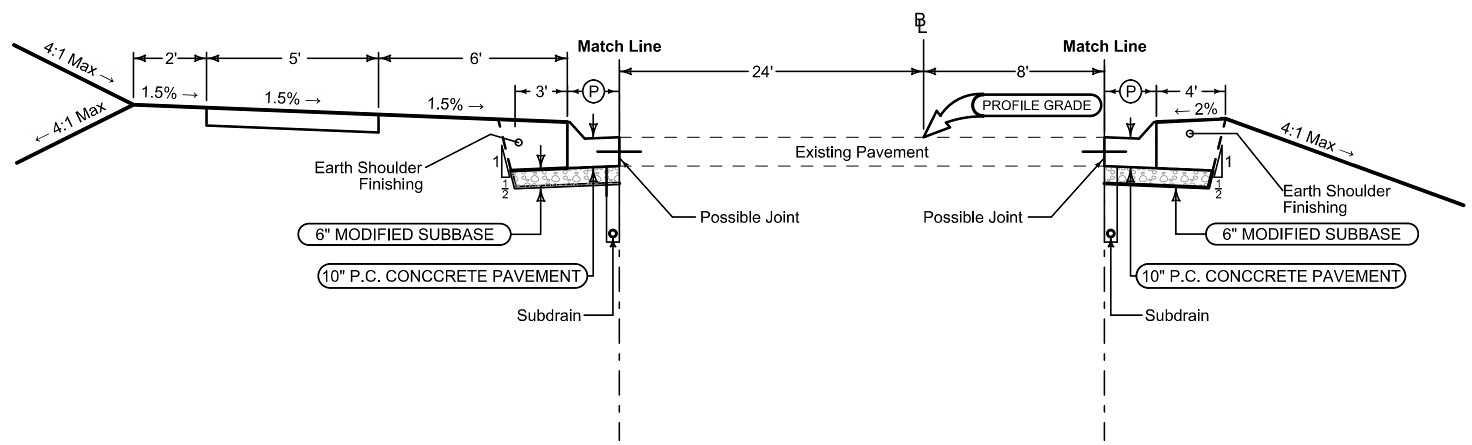
IOWA 92 - URBAN

Curbed Shoulder

Shoulder Jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2
Staged : KT-2
Transverse:C at 20' spacing

		2_Curb_ MODIFIED	
STATION TO STATION		(P) Feet	Curb Type See PV-102
443+18.01	464+92.00	2.5	6" Standard



Curbed Shoulder

Shoulder Jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2
Staged : KT-2
Transverse:C at 20' spacing

		2_Curb_ MODIFIED	
STATION TO STATION		(P) Feet	Curb Type See PV-102
443+18.01	464+92.00	2.5	6" Standard

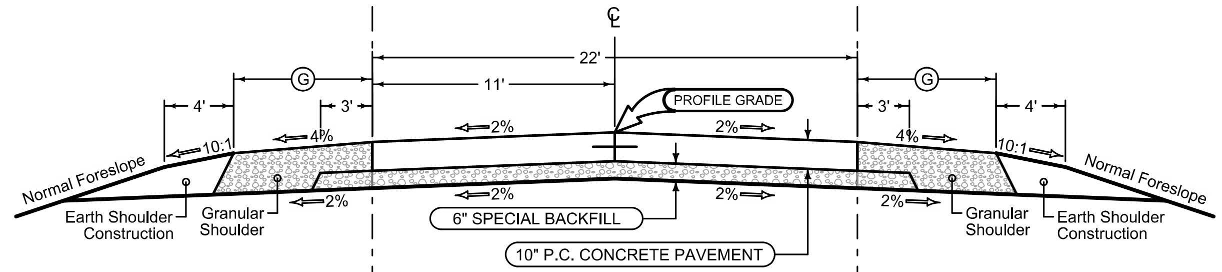
See Tab 100-24 for pavement quantities.

See Tab 112-9 for shoulder quantities.

IOWA 92 - URBAN WIDENING

Granular Shoulder

		2_G_ 10-19-10
STATION TO STATION		G Feet
1280+60.00	1282+80.74	6
1384+68.89	1386+06.00	6



Granular Shoulder

		2_G_ 10-19-10
STATION TO STATION		G Feet
1280+60.00	1282+87.71	6
1384+77.46	1386+06.00	6

Mainline Jointing:
Transverse joints: CD at 20' spacing
Longitudinal joint: L-2

	2P_ 10-19-10
STATION TO STATION	
1280+60.00	1283+61.24
1383+96.17	1386+06.00

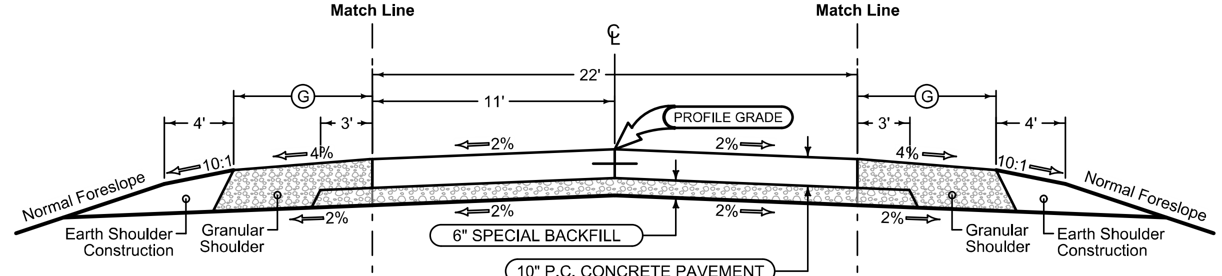
See Tab 100-24 for pavement quantities.

See Tab 112-9 for shoulder quantities.

R-57

Granular Shoulder

		2_G_ 10-19-10
STATION TO STATION		G Feet
3389+00.00	3390+91.42	6
3391+31.95	3393+05.00	6



Granular Shoulder

		2_G_ 10-19-10
STATION TO STATION		G Feet
3389+00.00	3390+91.42	6
3391+31.95	3393+05.00	6

Mainline Jointing:
Transverse joints: CD at 20' spacing
Longitudinal joint: L-2

	2P_ 10-19-10
STATION TO STATION	
3389+00.00	3390+91.42
3391+31.95	3393+05.00

See Tab 100-24 for pavement quantities.

See Tab 112-9 for shoulder quantities.

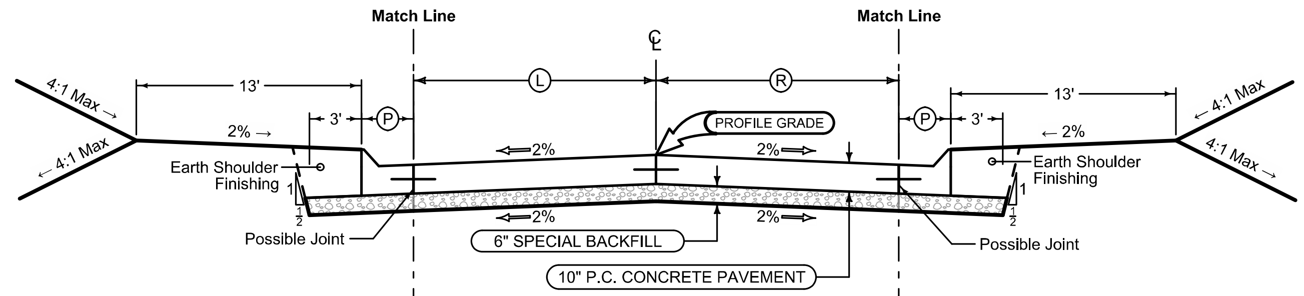
R-63

Curbed Shoulder

Shoulder Jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2
Staged : KT-2
Transverse:C at 20' spacing

2_Curb_ MODIFIED			
STATION TO STATION		P Feet	Curb Type See PV-102
4414+15.00	4417+25.32	1.5	6" Standard
4417+64.40	4422+60.00	1.5	6" Standard



Mainline Jointing:
Transverse joints: CD at 20' spacing
Longitudinal joint: L-2

2P_ 10-19-10			
STATION TO STATION		L Feet	R Feet
4414+15.00	4417+25.32	11	11
4417+64.40	4422+60.00	14	14

Curbed Shoulder

Shoulder Jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2
Staged : KT-2
Transverse:C at 20' spacing

2_Curb_ MODIFIED			
STATION TO STATION		P Feet	Curb Type See PV-102
4414+15.00	4417+25.32	1.5	6" Standard
4417+64.40	4422+60.00	1.5	6" Standard

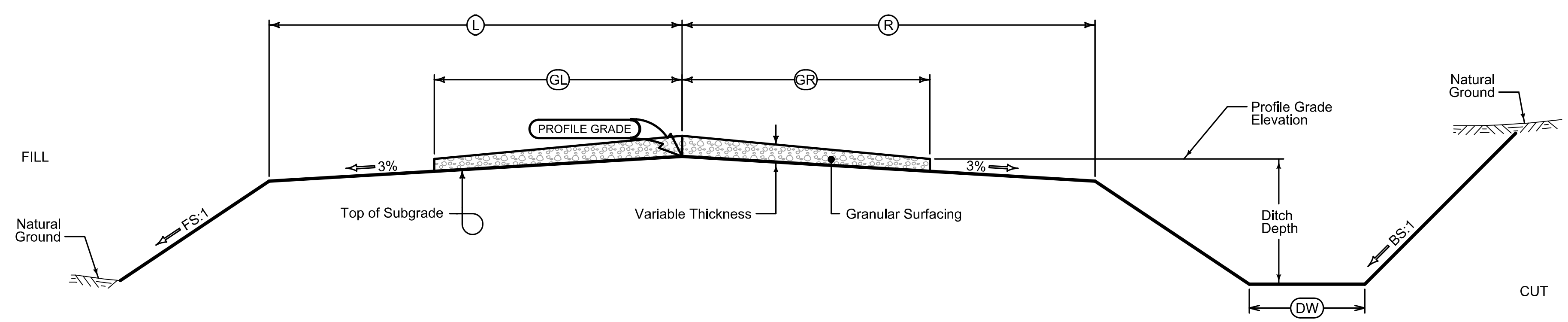
See Tab 100-24 for pavement quantities.

See Tab 112-9 for shoulder quantities.

110TH ST

2_GradeGran
Modified

LOCATION			DIMENSIONS						
ROAD IDENTIFICATION	STATION TO STATION		L Feet	R Feet	GL Feet	GR Feet	FS	BS	DW Feet
KENNEDY ST	1257+45.00	1258+68.00	15	15	12	12	3	3	5
90TH AVE	2305+85.00	2307+00.00	12-13	12-13	12	12	2.5	2.5	0
90TH AVE	2307+00.00	2308+00.00	13	13	12	12	3	3	0-5
90TH AVE	2308+00.00	2310+06.21	13	13	12	12	3	3	5
90TH AVE	2310+50.21	2313+85.00	13	13	12	12	3	3	5
Accessway 258	1259+09.00	1259+38.00	13	13-20	12	12	3	3	0
Accessway 258	1259+38.00	1259+90.00	13	20	12	12	3	3	0
Accessway 258	1259+90.00	1260+30.00	13	20-13	12	12	3	3	0
Accessway 258	1260+30.00	1261+20.00	13	13	12	12	3	3	0



Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

See plan & profile sheets and cross sections for additional details of ditches and backslopes.

Place Granular Surfacing as follows:
Grade-Pave design application rate is 2330 tons per mile.

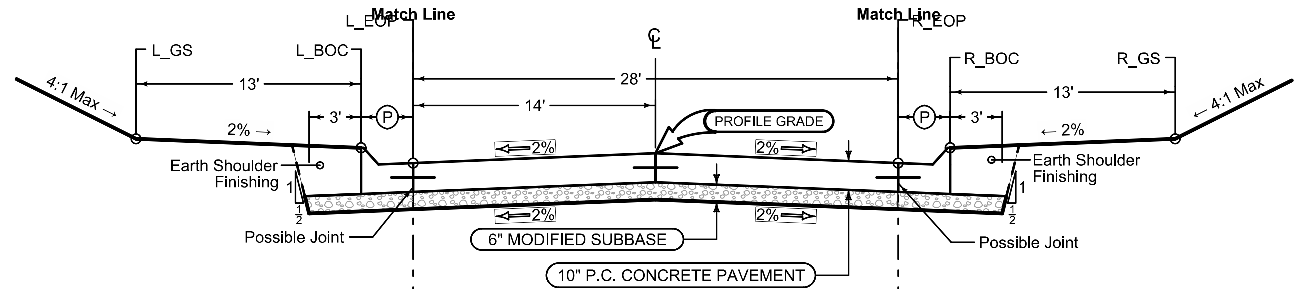
GRADING AND GRANULAR SURFACING

Curbed Shoulder

Shoulder Jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2
Staged : KT-2
Transverse:C at 20' spacing

2_Curb_ 04-19-11			
STATION TO STATION		P Feet	Curb Type See PV-102



Mainline Jointing:
Transverse joints: CD at 20' spacing
Longitudinal joint: L-2

2P_ 10-19-10	
STATION TO STATION	

Curbed Shoulder

Shoulder Jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

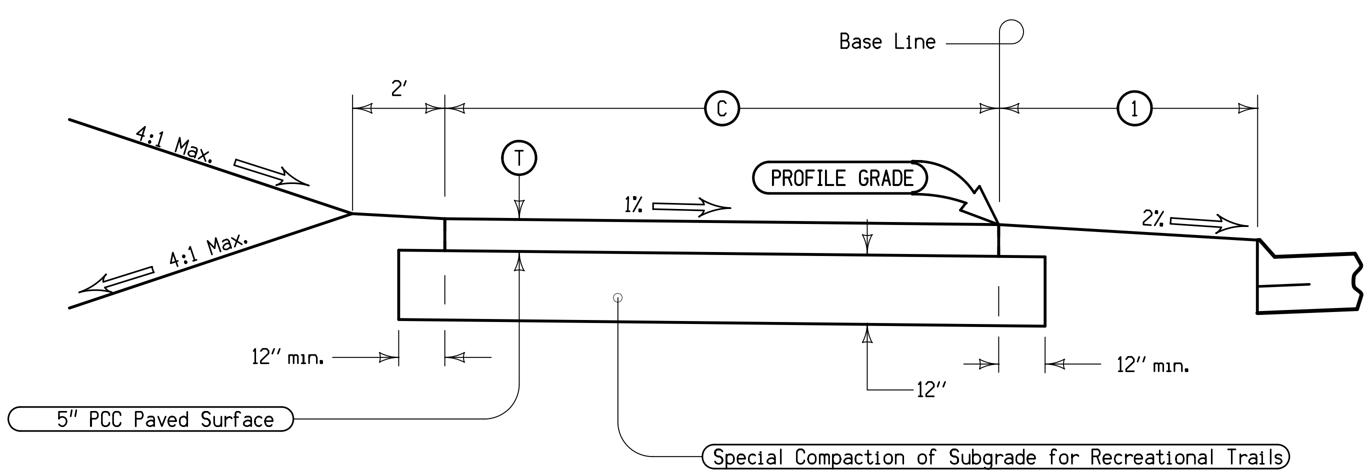
Single pour: L-2
Staged : KT-2
Transverse:C at 20' spacing

2_Curb_ 04-19-11			
STATION TO STATION		P Feet	Curb Type See PV-102

Refer to 'L' Sheets.
See Tab 100-24 for pavement quantities.
See Tab 112-9 for shoulder quantities.

SPRUCE ST. AND SOUTH 'P' STREET

7402 MODIFIED



Notes:

1 Refer to other detail typicals and cross sections for distance from edge of Recreational Trail to back of curb.

Contract bid items:

'Recreational Trail, Portland Cement Concrete,5 in.'
'Special Compaction of Subgrade for Recreational Trail'

STATION TO STATION		PAVEMENT TYPE	C Feet	
391+20.00	441+21.07	PCC	10	

TYPICAL CROSS SECTION RECREATIONAL TRAIL PAVED SURFACE

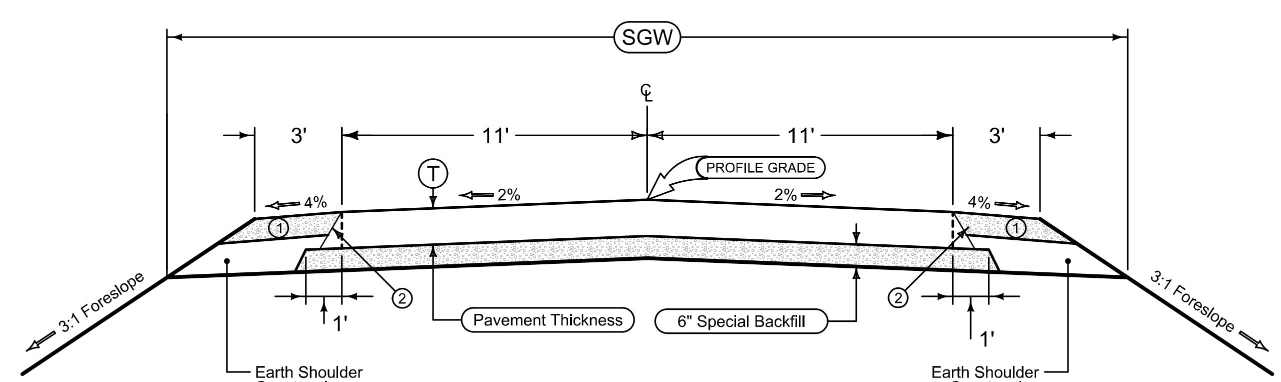
LOCATION			DIMENSIONS				6" Special Backfill	Granular Shoulder	Earth Shoulder Construction
			HMA		PCC				
ROAD IDENTIFICATION	STATION TO STATION		T Inches	SGW Feet	T Inches	SGW Feet	Tons/Station	Tons/Station	Station
R-57	11278+95.65	11289+34.97	XX	XX	7	34.5			
R-63	18387+79.00	18396+41.00	XX	XX	7	34.5			

Quantity calculations based on vertical pavement edges.

Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

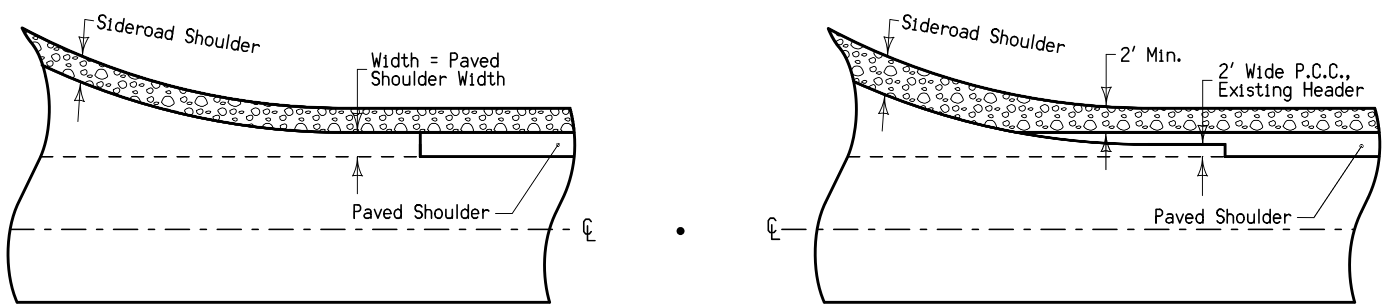
1 6" Granular Shoulder
2 Possible 1:1 slope

2_Detour 10-16-12



2 LANE DETOUR PAVING

7154B
10-20-09

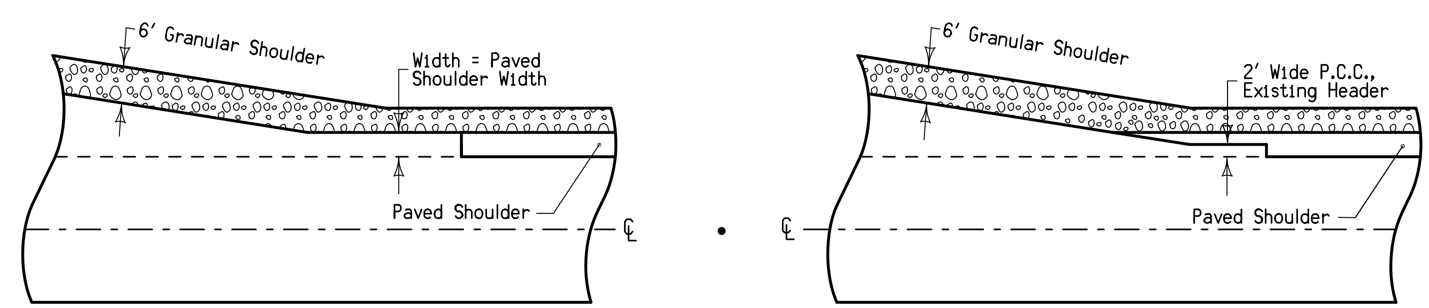


With Newly Constructed Returns

At UAC Returns

PAVED SHOULDER DETAIL AT RETURNS

7154A
10-20-09

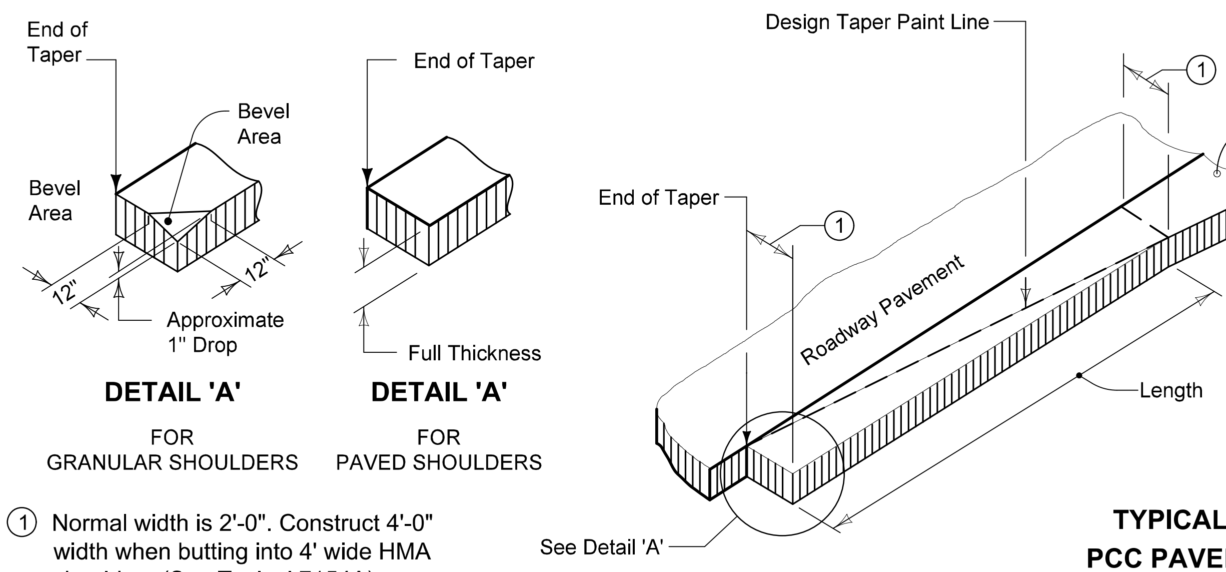


With Newly Constructed Turn Lanes

At UAC Turn Lanes

PAVED SHOULDER DETAIL AT TURN LANES

7101
10-19-10



DETAIL 'A'

FOR GRANULAR SHOULDERS

DETAIL 'A'

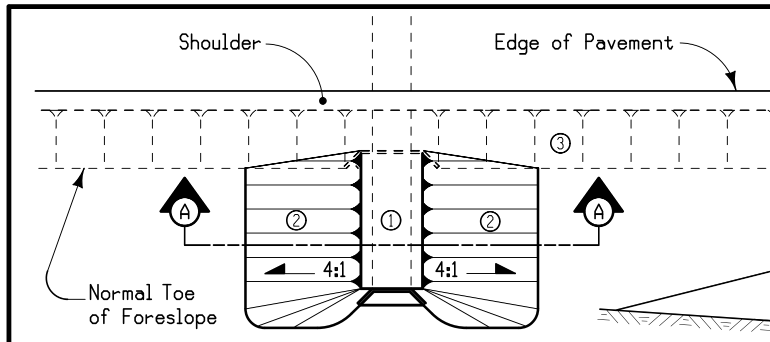
FOR PAVED SHOULDERS

Note:
Taper pavement to be paid for at the contract unit price for P.C. concrete pavement. Full header is included for payment.

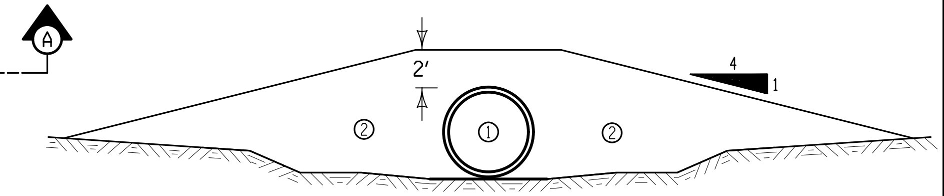
1 Normal width is 2'-0". Construct 4'-0" width when butting into 4' wide HMA shoulders (See Typical 7154A).

TYPICAL DETAILS OF PCC PAVEMENT HEADER

4309
Modified



PLAN



SECTION A-A

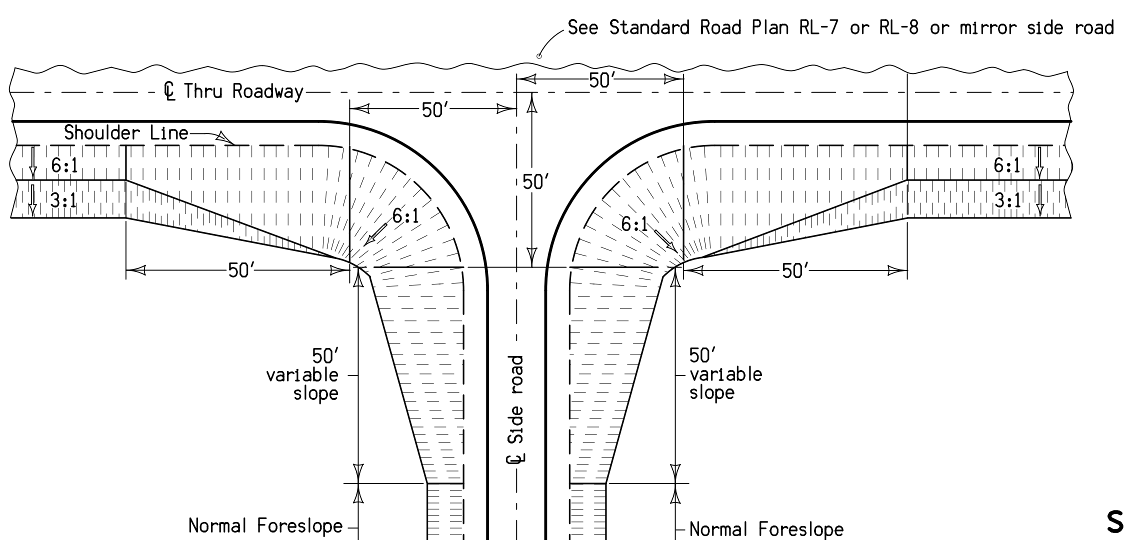
STATION	SIDE	Cu. Yds.
4414+30.0	Rt.	000

Notes:

1 Storm Sewer Outlet
2 Proposed Embankment
3 Adjacent Foreslope

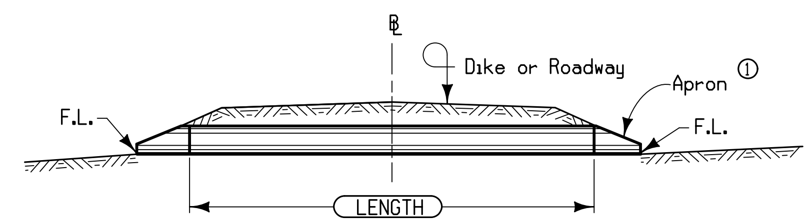
PLACEMENT OF EMBANKMENT AT STORM SEWER OUTLET ON 'Y' STREET RT. AT STA. 4414+30.0

2117
04-15-08

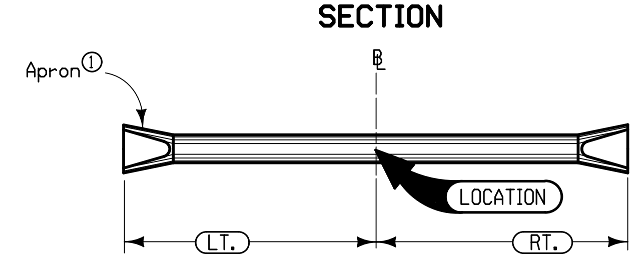


SIDE ROAD GRADING (BARNROOF)

1101
04-30-02



SECTION



PLAN

Notes:

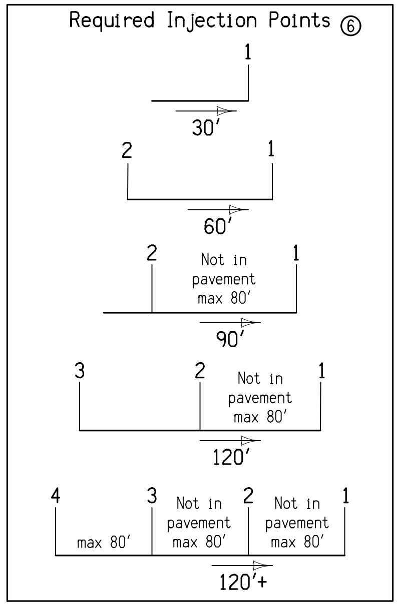
℄ shall be ℄ of roadway, dike, survey, or other; as detailed on plans.

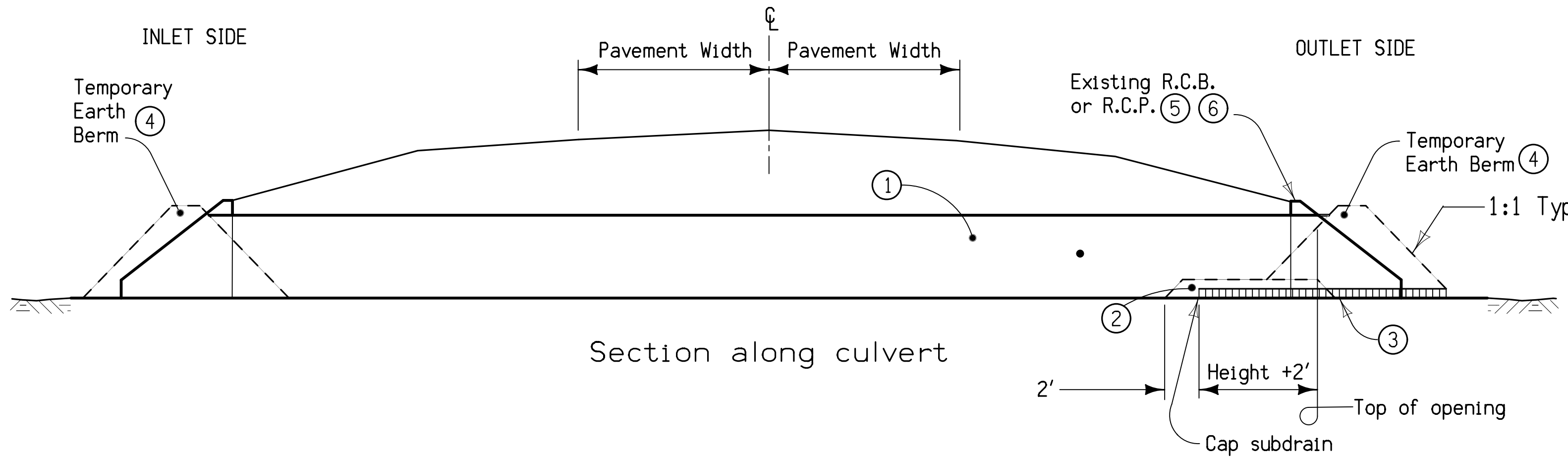
Skew angle is the angle which one end of the pipe is ahead (by stationing) of line perpendicular to the ℄ (example skew Rt. ahead 30°).

Refer to tabular listing and other plans for additional information.

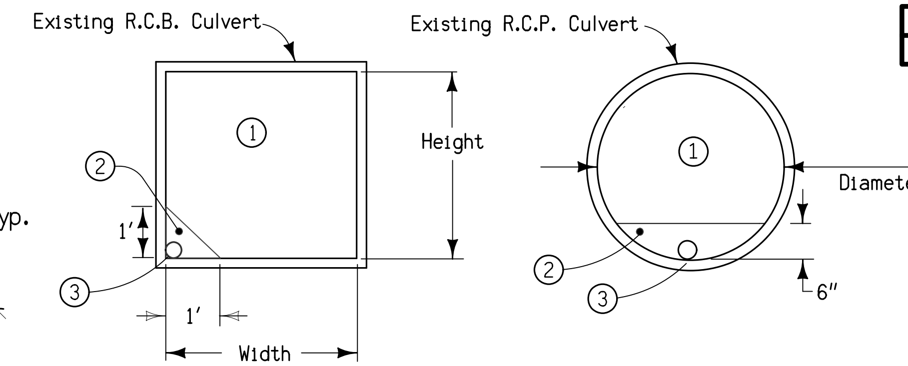
1 See Standard Road Plan RF-3 For Conc. or RF-5 for Metal.

PIPE CULVERT





Section along culvert



Section thru culvert

① Flowable Mortar.

② Granular Backfill.

③ 4" subdrain at flowline elevation of culvert shall be extended into the culvert a distance of 2' plus the height of the culvert. Granular Backfill covers subdrain and extends an additional 2'. Subdrain and granular backfill are incidental to flowable mortar.

④ Ends of culvert shall be plugged sufficiently to retain flowable mortar. Temporary earth berms are incidental to flowable mortar.

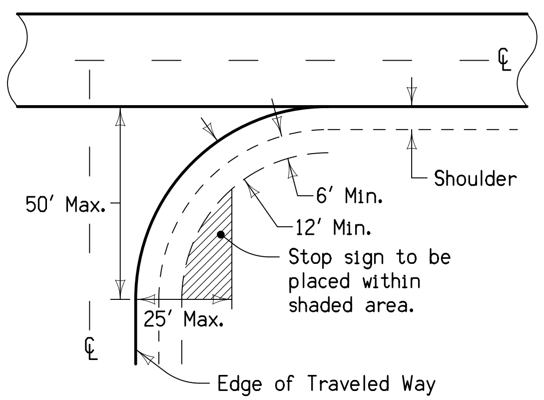
⑤ Removal of headwalls may be required.

⑥ Outlet shall be filled first. See injection point detail for additional information.

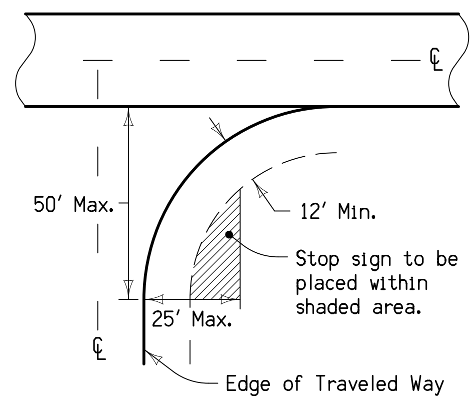
4315
04-15-08

DETAILS OF CULVERT ABANDONMENT WITH FLOWABLE MORTAR
(Rectangular structures less than 8' in either height or width. Circular structures less than 10' Dia.)

9503
07-15-97



CASE 'A'
WITH SHOULDER



CASE 'B'
WITHOUT SHOULDER

NOTES:

Stop signs should be confined to the shaded areas, but as close to the approach roadway as possible to provide the motorist with the best visual impact.

If possible, stop signs should be placed at the point where vehicles are to stop or as near as practical.

In rural areas, the lateral clearance should not be closer than 6' from the edge of a usable shoulder, or if none, 12' from edge of the traveled way.

In urban areas, stop signs should be placed a minimum of 6' from the near edge of the intersected street or a minimum of 4' in advance of the near edge of a marked crosswalk. Lateral clearance may be reduced to a minimum of 2' from the face of a curb.

Where the approach roadway consists of two lanes of traffic, a second stop sign should be placed where it is visible to traffic in the inner lane.

At channelized intersections, the additional stop sign may be placed on a channelized island or median.

STOP SIGN PLACEMENT

100-1D
10-18-05

PROJECT DESCRIPTION

This project involves the reconstruction of IA 92 from west of Kennedy Street to east of N Street in Indinaola. The project is divided into a rural and an urban section. The rural section extends from west of Kennedy Street, 2.5 miles to County Road R-63. The urban section extends from Co. Rd. R-63 to just east of N Street, a distance of approximately 1.5 miles. The rural section will provide a two-lane cross section with a 28' pavement and 8' paved shoulders. Eastbound and westbound right and left turn lanes will be provided at Co. Rd. R-57 and Co. Rd. R-63. In the urban area from Co. Rd. R-63 to just east of Spruce Street, a 3-lane roadway will be provided, which will consist of 40' back-to-back curbed roadway including a 16' wide continuous center turn lane. A 10' wide shared use path will be constructed on the north side of the roadway from Co. Rd. R-63 east to Spruce Street. A 5' wide sidewalk will be constructed on the north side of the roadway from Spruce Street east to South M Street. Curb and gutter widening will be dome from just east of Spruce Street east to just west of M Street where it meets the existing curb and gutter section.

The rural section of IA 92 west of Co. Rd. R-63 will be closed to traffic and detoured. Access to private properties will be maintained during construction.

Traffic on the urban section of IA 92 east of Co. Rd. R-63 will be maintained via staging. Traffic on Co. Rd. R-57, Co. Rd. R-63, and Y St. will be maintained during construction.

100-1A
07-15-97

ESTIMATED PROJECT QUANTITIES
(1 DIVISION PROJECT)

Item No.	Item Code	Item	Unit	Total	As Built Qty.
1	2101-0850001	CLEARING AND GRUBBING	ACRE	5.0	
2	2102-0425046	SELECTED BACKFILL	CY	38,972.0	
3	2102-0425070	SPECIAL BACKFILL	TON	23,197.3	
4	2102-2625001	EMBANKMENT-IN-PLACE, CONTRACTOR FURNISHED	CY	64,648.0	
5	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY	127,386.0	
6	2102-2712015	EXCAVATION, CLASS 12, BOULDERS OR ROCK FRAGMENTS	CY	200.0	
7	2102-4560000	LOCATING TILE LINES	STA	803.00	
8	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD	CY	61,535.0	
9	2107-0875100	COMPACTION WITH MOISTURE CONTROL	CY	153,818.0	
10	2107-3825025	GRANULAR MATERIAL FOR BLANKET AND SUBDRAIN	CY	290.0	
11	2111-8174100	GRANULAR SUBBASE	SY	48,191.4	
12	2113-0001100	SUBGRADE STABILIZATION MATERIAL, POLYMER GRID	SY	100,414.0	
13	2115-0100000	MODIFIED SUBBASE	CY	10,028.0	
14	2121-7425010	GRANULAR SHOULDERS, TYPE A	TON	2,225.0	
15	2123-7450000	SHOULDER CONSTRUCTION, EARTH	STA	321.00	
16	2123-7450020	SHOULDER FINISHING, EARTH	STA	160.00	
17	2213-7100400	RELOCATION OF MAIL BOXES	EACH	42	
18	2301-1033100	STANDARD OR SLIP FORM PORTLAND CEMENT CONCRETE PAVEMENT, CLASS C,	SY	86,957.9	
		CLASS 3 DURABILITY, 10 IN.			
19	2301-4875006	MEDIAN, P.C. CONCRETE, 6 IN.	SY	126.4	
20	2301-6911722	PORTLAND CEMENT CONCRETE PAVEMENT SAMPLES	LS	1.00	
21	2304-0100000	DETOUR PAVEMENT	SY	5,928.0	
22	2312-8260051	GRANULAR SURFACING ON ROAD, CLASS A CRUSHED STONE	TON	1,375.0	
23	2402-0425040	FLOODED BACKFILL	CY	1,575.0	
24	2402-2720100	EXCAVATION, CLASS 20, FOR ROADWAY PIPE CULVERT	CY	2,083.9	
25	2416-0100018	APRONS, CONCRETE, 18 IN. DIA.	EACH	9	
26	2416-0100024	APRONS, CONCRETE, 24 IN. DIA.	EACH	19	
27	2416-0100030	APRONS, CONCRETE, 30 IN. DIA.	EACH	6	
28	2416-0100036	APRONS, CONCRETE, 36 IN. DIA.	EACH	2	
29	2416-1180024	CULVERT, CONCRETE ROADWAY PIPE, 24 IN. DIA.	LF	1124	
30	2416-1180030	CULVERT, CONCRETE ROADWAY PIPE, 30 IN. DIA.	LF	304	
31	2416-1180036	CULVERT, CONCRETE ROADWAY PIPE, 36 IN. DIA.	LF	118	
32	2417-0225024	APRONS, METAL, 24 IN. DIA.	EACH	1	
33	2417-1060024	CULVERT, CORRUGATED METAL ROADWAY PIPE, 24 IN. DIA.	LF	64	
34	2422-0360018	APRONS, UNCLASSIFIED, 18 IN. DIA.	EACH	52	
35	2422-0360024	APRONS, UNCLASSIFIED, 24 IN. DIA.	EACH	2	
36	2422-0360036	APRONS, UNCLASSIFIED, 36 IN. DIA.	EACH	2	
37	2422-1722018	CULVERT, UNCLASSIFIED ENTRANCE PIPE, 18 IN. DIA.	LF	1488	
38	2422-1722024	CULVERT, UNCLASSIFIED ENTRANCE PIPE, 24 IN. DIA.	LF	87	
39	2422-1722036	CULVERT, UNCLASSIFIED ENTRANCE PIPE, 36 IN. DIA.	LF	86	
40	2435-0140200	MANHOLE, STORM SEWER, SW-402	EACH	1	
41	2435-0250500	INTAKE, SW-505	EACH	1	
42	2435-0250800	INTAKE, SW-508	EACH	73	
43	2435-0251000	INTAKE, SW-510	EACH	12	
44	2435-0251224	INTAKE, SW-512, 24 IN.	EACH	1	
45	2435-0251230	INTAKE, SW-512, 30 IN.	EACH	2	
46	2502-8212034	SUBDRAIN, LONGITUDINAL, (SHOULDER) 4 IN. DIA.	LF	44,168.0	
47	2502-8215110	SUBDRAIN, CORRUGATED METAL PIPE, 10 IN. DIA.	LF	122	
48	2502-8220193	SUBDRAIN OUTLET (RF-19C)	EACH	202	
49	2502-8220196	SUBDRAIN OUTLET, RF-19E	EACH	124	
50	2502-8220197	SUBDRAIN OUTLET (RF-19F)	EACH	1	
51	2503-0110018	STORM SEWER GRAVITY MAIN, TRENCHED, 18 IN.	LF	5,028.0	
52	2503-0110021	STORM SEWER GRAVITY MAIN, TRENCHED, 21 IN.	LF	1,132.0	
53	2503-0110024	STORM SEWER GRAVITY MAIN, TRENCHED, 24 IN.	LF	957.0	
54	2503-0110030	STORM SEWER GRAVITY MAIN, TRENCHED, 30 IN.	LF	306.0	
55	2503-0124218	STORM SEWER GRAVITY MAIN, TRENCHLESS, REINFORCED CONCRETE PIPE (RCP),	LF	37.0	
		2000D (CLASS III), 18 IN.			
56	2506-4984000	FLOWABLE MORTAR	CY	94.0	
57	2510-6745850	REMOVAL OF PAVEMENT	SY	64,699.6	

100-1A
07-15-97

ESTIMATED PROJECT QUANTITIES
(1 DIVISION PROJECT)

Item No.	Item Code	Item	Unit	Total	As Built Qty.
58	2510-6750600	REMOVAL OF INTAKES AND UTILITY ACCESSES	EACH	12	
59	2511-0302500	RECREATIONAL TRAIL, PORTLAND CEMENT CONCRETE, 5 IN.	SY	5,506.0	
60	2511-0310100	SPECIAL COMPACTION OF SUBGRADE FOR RECREATIONAL TRAIL	STA	50.00	
61	2511-6745900	REMOVAL OF SIDEWALK	SY	120.0	
62	2511-7526004	SIDEWALK, P.C. CONCRETE, 4 IN.	SY	1,231.0	
63	2511-7526006	SIDEWALK, P.C. CONCRETE, 6 IN.	SY	99.0	
64	2511-7526010	SIDEWALK, P.C. CONCRETE, 10 IN.	SY	156.0	
65	2511-7528101	DETECTABLE WARNINGS	SF	110	
66	2512-1725256	CURB AND GUTTER, P.C. CONCRETE, 2.5 FT.	LF	4,286.0	
67	2515-2475006	DRIVEWAY, P.C. CONCRETE, 6 IN.	SY	4,755.0	
68	2515-2475008	DRIVEWAY, P.C. CONCRETE, 8 IN.	SY	516.7	
69	2515-6745600	REMOVAL OF PAVED DRIVEWAY	SY	4,055.0	
70	2518-6910000	SAFETY CLOSURE	EACH	11	
71	2519-4200140	REMOVAL OF FENCE, FIELD	LF	17,618.0	
72	2520-3350010	FIELD LABORATORY	EACH	1	
73	2524-6765010	REMOVE AND REINSTALL SIGN AS PER PLAN	EACH	0	
74	2526-8285000	CONSTRUCTION SURVEY	LS	1.00	
75	2527-9263109	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	STA	814.33	
76	2527-9263137	PAINTED SYMBOLS AND LEGENDS, WATERBORNE OR SOLVENT-BASED	EACH	74	
77	2528-8445110	TRAFFIC CONTROL	LS	1.00	
78	2528-8445113	FLAGGERS	EACH	See Proposal	
79	2529-2242320	CT JOINT	EACH	16	
80	2529-5070110	PATCHES, FULL-DEPTH FINISH, BY AREA	SY	320.0	
81	2529-5070120	PATCHES, FULL-DEPTH FINISH, BY COUNT	EACH	8	
82	2529-8174010	SUBBASE (PATCHES)	SY	320.0	
83	2529-8202000	RUMBLE STRIP PANEL (IN FULL DEPTH PATCH)	EACH	8	
84	2533-4980005	MOBILIZATION	LS	1.00	
85	2548-0000200	MILLED SHOULDER RUMBLE STRIPS, PCC SURFACE	STA	249.5	
86	2548-0000320	MILLED CENTERLINE RUMBLE STRIPS, PCC SURFACE	STA	123.5	
87	2599-9999005	('EACH' ITEM) REMOVAL OF SILT BASINS	EACH	75	
88	2599-9999018	('SQUARE YARDS' ITEM) DRIVEWAY, P.C. CONCRETE, 10 IN.	SY	1,196.3	
89	2601-2634100	MULCHING	ACRE	0.0	
90	2601-2636015	NATIVE GRASS SEEDING	ACRE	0.0	
91	2601-2636043	SEEDING AND FERTILIZING (RURAL)	ACRE	45.0	
92	2601-2640350	SPECIAL DITCH CONTROL, WOOD EXCELSIOR MAT	SQ	0.0	
93	2601-2642100	STABILIZING CROP - SEEDING AND FERTILIZING	ACRE	0.0	
94	2601-2642120	STABILIZING CROP - SEEDING AND FERTILIZING (URBAN)	ACRE	0.0	
95	2601-2643110	WATERING FOR SOD, SPECIAL DITCH CONTROL, OR SLOPE PROTECTION	MGAL	0.00	
96	2601-2643300	MOBILIZATION FOR WATERING	EACH	0	
97	2602-0000020	SILT FENCE	LF	38,996.0	
98	2602-0000030	SILT FENCE FOR DITCH CHECKS	LF	7,725.0	
99	2602-0000050	SILT BASINS	EACH	150	
100	2602-0000101	MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK	LF	0.0	
101	2602-0000306	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 6 IN. DIA.	LF	6,300.0	
102	2602-0000312	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA.	LF	0.0	
103	2602-0000320	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 20 IN. DIA.	LF	0.0	
104	2602-0010010	MOBILIZATIONS, EROSION CONTROL	EACH	1	
105	2602-0010020	MOBILIZATIONS, EMERGENCY EROSION CONTROL	EACH	1	
		ALTERNATE AA OPTION 1-PCC			
106	2102-0425071	SPECIAL BACKFILL	CY	2,529.8	
107	2122-5190007	PAVED SHOULDER, P.C. CONCRETE, 7 IN.	SY	4,491.9	
		ALTERNATE AA OPTION 2-HMA			
108	2102-0425071	SPECIAL BACKFILL	CY	2,281.9	
109	2122-5500080	PAVED SHOULDER, HOT MIX ASPHALT MIXTURE, 8 IN.	SY	4,491.9	

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
1	2101-0850001	**CLEARING AND GRUBBING**
		Item includes the removal of some existing shrubs within construction need limits.
-	-	-
2	2102-0425046	**SELECTED BACKFILL**
		Quantity incomplete.
-	-	-
3	2102-0425070	**SPECIAL BACKFILL**
		Refer to Typicals in 'B' Sheets.
		Refer to Tab. 100-24 and 112-9 in 'C' Sheets.
		Item includes 23197.3 Tons for beneath pavements per Tab. 100-24.
-	-	-
4	2102-2625001	**EMBANKMENT-IN-PLACE, CONTRACTOR FURNISHED**
		Refer to Tab. 107-29 in 'T' sheets.
-	-	-
5	2102-2710070	**EXCAVATION, CLASS 10, ROADWAY AND BORROW**
		Refer to Tab. 107-29 in 'T' sheets.
		Overhaul will not be measured or paid for, but shall be considered incidental to
		roadway excavation on this project.
-	-	-
6	2102-2712015	EXCAVATION, CLASS 12, BOULDERS OR ROCK FRAGMENTS
		Refer to Tab. 103-7 on 'CS' Sheets.
		Dispose of excess material according to Article 1106.07 of the current
		specifications.
		Overhaul will not be measured or paid for, but shall be considered incidental to
		roadway excavation on this project.
-	-	-
7	2102-4560000	LOCATING TILE LINES
		Estimated at two times the project length.
-	-	-
8	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD
		Refer to Tab. 103-4 on 'C' Sheets for depths and locations.
		Excess topsoil shall be wasted uniformly on the foreslopes as directed by the Engineer.
-	-	-
9	2107-0875100	COMPACTION WITH MOISTURE CONTROL
		Cubic yards shown on the contract documents as determined by the template fill volume.
		Shrinkage will not be included in moisture control quantity.
		Refer to 'CS' Sheets for application.
-	-	-
10	2107-3825025	GRANULAR MATERIAL FOR BLANKET AND SUBDRAIN
		Refer to 'Q' Sheets for location details.
		Refer to Tab. 104-5C on 'CS' Sheets.
-	-	-
11	2111-8174100	GRANULAR SUBBASE
		Refer to Typical 'IOWA 92-RURAL' on the 'B' Sheets.
-	-	-
12	2113-0001100	SUBGRADE STABILIZATION MATERIAL, POLYMER GRID
		Geogrid shall be installed beneath Special Backfill to standard width and only to the edge of pavement in
		area of new subdrains.
		Refer to Tab. 104-9 on the 'CS' Sheets for subdrain locations.
		Refer to Typicals on 'B' Sheets for location details.
-	-	-
13	2115-0100000	MODIFIED SUBBASE
		Item is to be placed beneath 10" pavement per Typicals on 'B' Sheets.
-	-	-
14	2121-7425010	**GRANULAR SHOULDERS, TYPE A**
		Refer to Typicals in 'B' Sheets.
		Also refer to Tab. 112-9 on the 'C' Sheets.
-	-	-
15	2123-7450000	**SHOULDER CONSTRUCTION, EARTH**
		Includes ___ cu. yds. of earth shoulder fill material including 4 inches of topsoil (___ cu. yds.).
		Strip 8 inches of topsoil at the edge of the shoulder for use as 4 inches of topsoil.
		Class 13 waste may be used for earth shoulder fill below the 4 inches of topsoil.
-	-	-
16	2123-7450020	SHOULDER FINISHING, EARTH
		Refer to 'B' Sheets for locations.
		No payment for overhaul allowed for this material.
-	-	-
17	2213-7100400	**RELOCATION OF MAIL BOXES**
		Signs listed as remove and reinstall shall be reinstalled as per the Detail Sheet 560-2 in the 'U' Sheets.
		Refer to Tab. 'MAILBOX' on the 'C' Sheets for locations.
		Measurement: The Engineer will count the number of signs removed and reinstalled.

100-4A
10-29-02

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
		Basis of Payment: The Contractor will be paid the contract unit price for the number of signs
		removed and reinstalled.
		Price bid includes the following work: The Contractor shall carefully remove and stockpile bid items for
		later installation. Any damaged items as determined by the Engineer shall be replaced by the
		contractor at no cost to the State. The signs shall be cleaned as directed by the Engineer before
		installation.
		The Contractor shall restore any area disturbed by the removal operation to an acceptable condition.
-	-	-
18	2301-1033100	STANDARD OR SLIP FORM PORTLAND CEMENT CONCRETE PAVEMENT, CLASS C, CLASS 3 DURABILITY, 10 IN.
		Item is for 10" mainline and county road pavements per Typicals on the 'B' Sheets.
		Item includes 6" Sloped PCC Curb for Stop Island per Tab. 112-4 in the 'C' Sheets.
-	-	-
19	2301-4875006	**MEDIAN, P.C. CONCRETE, 6 IN.**
		Refer to Tab. 112-4 for additional information.
-	-	-
20	2301-6911722	PORTLAND CEMENT CONCRETE PAVEMENT SAMPLES
		- -
-	-	-
21	2304-0100000	DETOUR PAVEMENT
		Item is for temporary detour pavements as shown on the 'F' Sheets.
		Refer to Typical 2_Detour on the 'B' Sheets for additional information.
-	-	-
22	2312-8260051	GRANULAR SURFACING ON ROAD, CLASS A CRUSHED STONE
		Refer to Tab. 102-3 for locations and quantities.
		Item includes 1827 tons for entrances.
-	-	-
23	2402-0425040	FLOODED BACKFILL
		Refer to Tab. 104-3 for details.
-	-	-
24	2402-2720100	**EXCAVATION, CLASS 20, FOR ROADWAY PIPE CULVERT**
		Refer to Tab. 104-3 for details.
-	-	-
25	2416-0100018	APRONS, CONCRETE, 18 IN. DIA.
26	2416-0100024	APRONS, CONCRETE, 24 IN. DIA.
27	2416-0100030	**APRONS, CONCRETE, 30 IN. DIA.**
28	2416-0100036	APRONS, CONCRETE, 36 IN. DIA.
29	2416-1180024	CULVERT, CONCRETE ROADWAY PIPE, 24 IN. DIA.
30	2416-1180030	**CULVERT, CONCRETE ROADWAY PIPE, 30 IN. DIA.**
31	2416-1180036	CULVERT, CONCRETE ROADWAY PIPE, 36 IN. DIA.
		Refer to Tab. 104-3 or 104-5B for locations and details.
-	-	-
32	2417-0225024	**APRONS, METAL, 24 IN. DIA.**
		- -
-	-	-
33	2417-1060024	**CULVERT, CORRUGATED METAL ROADWAY PIPE, 24 IN. DIA.**
		- -
-	-	-
34	2422-0360018	APRONS, UNCLASSIFIED, 18 IN. DIA.
35	2422-0360024	APRONS, UNCLASSIFIED, 24 IN. DIA.
36	2422-0360036	**APRONS, UNCLASSIFIED, 36 IN. DIA.**
37	2422-1722018	CULVERT, UNCLASSIFIED ENTRANCE PIPE, 18 IN. DIA.
38	2422-1722024	CULVERT, UNCLASSIFIED ENTRANCE PIPE, 24 IN. DIA.
39	2422-1722036	**CULVERT, UNCLASSIFIED ENTRANCE PIPE, 36 IN. DIA.**
		Refer to Tab. 102-3 on the 'C' Sheets.
-	-	-
40	2435-0140200	**MANHOLE, STORM SEWER, SW-402**
41	2435-0250500	**INTAKE, SW-505**
42	2435-0250800	**INTAKE, SW-508**
43	2435-0251000	**INTAKE, SW-510**
44	2435-0251224	**INTAKE, SW-512, 24 IN.**
45	2435-0251230	**INTAKE, SW-512, 30 IN.**
		Refer to Tab. 104-5B on the 'M' Sheets for additional information.
-	-	-
46	2502-8212034	**SUBDRAIN, LONGITUDINAL, (SHOULDER) 4 IN. DIA.**
		Refer to Tab. 104-9 on 'CS' Sheets.
-	-	-
47	2502-8215110	**SUBDRAIN, CORRUGATED METAL PIPE, 10 IN. DIA.**
		Refer to Tab. 104-5T on the 'C' Sheets for additional information.
-	-	-
48	2502-8220193	SUBDRAIN OUTLET (RF-19C)
49	2502-8220196	**SUBDRAIN OUTLET, RF-19E**
		Refer to Tab. 104-9 on 'CS' Sheets.
-	-	-
50	2502-8220197	**SUBDRAIN OUTLET (RF-19F)**
		Refer to Tab. 104-5T on the 'C' Sheets.
-	-	-
51	2503-0110018	**STORM SEWER GRAVITY MAIN, TRENCHED, 18 IN.**

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
52	2503-0110021	STORM SEWER GRAVITY MAIN, TRENCHED, 21 IN.
53	2503-0110024	STORM SEWER GRAVITY MAIN, TRENCHED, 24 IN.
54	2503-0110030	STORM SEWER GRAVITY MAIN, TRENCHED, 30 IN.
55	2503-0124218	STORM SEWER GRAVITY MAIN, TRENCHLESS, REINFORCED CONCRETE PIPE (RCP), 2000D (CLASS III), 18 IN.
		Refer to Tab. 104-5B on the 'M' Sheets for additional information.
-	-	-
56	2506-4984000	FLOWABLE MORTAR
		Item is for fill and abandon culverts.
		Refer to Tab. 110-9 on 'C' Sheets and Typical 4315 on 'B' Sheets.
		Silt inside existing culverts need not be removed prior to placing flowable mortar.
		Also includes 23.8 CY per Tab. 104-3 on the 'C' Sheets.
-	-	-
57	2510-6745850	REMOVAL OF PAVEMENT
		Refer to Tabs.110-1 and 102-5 on the 'C' Sheets for the location and type of pavement.
		Item is to become the property of the Contractor.
-	-	-
58	2510-6750600	REMOVAL OF INTAKES AND UTILITY ACCESSES
		Refer to Tab. 110-15 on the 'C' Sheets.
-	-	-
59	2511-0302500	RECREATIONAL TRAIL, PORTLAND CEMENT CONCRETE, 5 IN.
60	2511-0310100	SPECIAL COMPACTION OF SUBGRADE FOR RECREATIONAL TRAIL
		Refer to Typical 7402 on the 'B' Sheets for details.
-	-	-
61	2511-6745900	REMOVAL OF SIDEWALK
		A. Refer to Tab. 110-5 on the 'C' Sheets.
		See traffic control plan for pedestrian staging or closings.
-	-	-
62	2511-7526004	SIDEWALK, P.C. CONCRETE, 4 IN.
63	2511-7526006	SIDEWALK, P.C. CONCRETE, 6 IN.
		Refer to tabulations on 'S' Sheets.
		See traffic control plan for pedestrian staging or closings.
-	-	-
64	2511-7526010	SIDEWALK, P.C. CONCRETE, 10 IN.
		Item is for sidewalk thru entrances Lt. at Sta. 419+80.63 and Sta. 423+11.51.
		Refer to 'S' Sheets for additional information.
-	-	-
65	2511-7528101	DETECTABLE WARNINGS
		Refer to tabulations on 'S' Sheets.
		See traffic control plan for pedestrian staging or closings.
-	-	-
66	2512-1725256	CURB AND GUTTER, P.C. CONCRETE, 2.5 FT.
		Refer to Typical 'IOWA 92-URBAN WIDENING' on 'B' Sheets.
-	-	-
67	2515-2475006	DRIVEWAY, P.C. CONCRETE, 6 IN.
		Refer to Tab. 102-3 on the 'C' Sheets.
-	-	-
68	2515-2475008	DRIVEWAY, P.C. CONCRETE, 8 IN.
		Item is for Accessway Rt. at Sta. 359+18.
		Requires 6" Special Backfill beneath driveway PCC pavement.
-	-	-
69	2515-6745600	REMOVAL OF PAVED DRIVEWAY
		A. Refer to Tab. 110-8 on the 'C' Sheets.
		B. Requires 0000 linear foot of full depth saw cut.
-	-	-
70	2518-6910000	SAFETY CLOSURE
		Refer to Tab. 108-13A on 'C' Sheets.
-	-	-
71	2519-4200140	REMOVAL OF FENCE, FIELD
		Item includes 16,858 LF of field fence and 760.0 LF of wood fence.
-	-	-
72	2520-3350010	FIELD LABORATORY
		- -
-	-	-
73	2524-6765010	REMOVE AND REINSTALL SIGN AS PER PLAN
		Need list from District!
-	-	-
74	2526-8285000	CONSTRUCTION SURVEY
		- -
-	-	-
75	2527-9263109	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED
		Refer to Tab. 108-22 for location details.
-	-	-
76	2527-9263137	PAINTED SYMBOLS AND LEGENDS, WATERBORNE OR SOLVENT-BASED
		Refer to Tab. 108-29 for location details.
-	-	-
77	2528-8445110	TRAFFIC CONTROL
		- -
-	-	-
78	2528-8445113	FLAGGERS
		- -

100-4A
10-29-02

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
-	-	-
79	2529-2242320	CT JOINT
80	2529-5070110	PATCHES, FULL-DEPTH FINISH, BY AREA
81	2529-5070120	PATCHES, FULL-DEPTH FINISH, BY COUNT
		Items are for Rumble Strip Panels in adjacent county roads. Refer Tabulations 112-7 and 102-6C
		for additional information.
-	-	-
82	2529-8174010	SUBBASE (PATCHES)
		Item is for 6" of Special Backfill beneath patches.
		Refer to Tab.102-6C for additional details.
-	-	-
83	2529-8202000	RUMBLE STRIP PANEL (IN FULL DEPTH PATCH)
		Items are for Rumble Strip Panels in adjacent county roads. Refer Tabulations 112-7 and 102-6C
		for additional information.
-	-	-
84	2533-4980005	MOBILIZATION
		- -
-	-	-
85	2548-0000200	MILLED SHOULDER RUMBLE STRIPS, PCC SURFACE
86	2548-0000320	MILLED CENTERLINE RUMBLE STRIPS, PCC SURFACE
		Refer to Tab. 112-10 on the 'C' Sheets.
-	-	-
87	2599-9999005	('EACH' ITEM) REMOVAL OF SILT BASINS
		Fill the silt basin with Class 10 material and a minimum of 4 inches of topsoil.
		Furnish Class 10 material according to Section 2107 of the Standard Specifications and compact
		the material by driving over the material a minimum of two times. Furnish and place topsoil according
		to Section 2105 of the Standard Specifications. Smooth the surface of the topsoil and leave in a finished
		condition so it will drain properly. This will be incidental to the bid item.
		Method of Measurement: The Engineer will count the number of silt basins removed.
		Basis of Payment: Payment will be the contract unit price for each silt basin removed.
		Payment is full compensation for providing, preparing, transporting, and placing the
		Class 10 material and topsoil. The Contractor has the option, at no additional cost to the
		Contracting Authority, of stripping and stockpiling the Class 10 material and topsoil from
		constructing silt basins for later use in silt basin removal. Overhaul will not be paid for this item.
-	-	-
88	2599-9999018	('SQUARE YARDS' ITEM) DRIVEWAY, P.C. CONCRETE, 10 IN.
		Item is for entrances Lt. at Sta. 419+80.63 (in front of sidewalk only) and Sta. 423+11.51.
		10" PCC Driveways will have 12" of modified subbase beneath them.
		Refer to Tab. 102-3 on 'C' Sheets for additional information.
-	-	-
89	2601-2634100	MULCHING
		- -
-	-	-
90	2601-2636015	NATIVE GRASS SEEDING
		- -
-	-	-
91	2601-2636043	SEEDING AND FERTILIZING (RURAL)
		- -
-	-	-
92	2601-2640350	SPECIAL DITCH CONTROL, WOOD EXCELSIOR MAT
		- -
-	-	-
93	2601-2642100	STABILIZING CROP - SEEDING AND FERTILIZING
		- -
-	-	-
94	2601-2642120	STABILIZING CROP - SEEDING AND FERTILIZING (URBAN)
		- -
-	-	-
95	2601-2643110	WATERING FOR SOD, SPECIAL DITCH CONTROL, OR SLOPE PROTECTION
		- -
-	-	-
96	2601-2643300	MOBILIZATION FOR WATERING
		- -
-	-	-
97	2602-0000020	SILT FENCE
		Refer to Tab. 100-17.
		The tabulation includes estimated locations for placement of "Silt Fence" to address
		erosion to be encountered during construction. Verify the specific locations with
		the Engineer prior to beginning placement. Bid itemincludes 25% additional quantity
		for field adjustments and replacements.
-	-	-
98	2602-0000030	SILT FENCE FOR DITCH CHECKS
		Refer to Tab. 100-18. The tabulation includes estimated locations for placement of “Silt
		Fence for Ditch Checks” to address erosion to be encountered during construction.
		Verify the specific locations with the Engineer prior to beginning placement. Bid item
		includes 50% additional quantity for field adjustments and replacements.
-	-	-

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
99	2602-0000050	SILT BASINS
		Refer to Tab. 100-14. The tabulation includes estimated locations for placement of “Silt
		Basins” to address erosion to be encountered during construction. Verify the specific
		locations with the Engineer prior to beginning placement. Bid item includes 100%
		additional quantity for field adjustments and maintenance.
-	-	-
100	2602-0000101	MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK
		This item is included for maintaining the new silt fence and silt fence ditch checks
		installed for the paving project and existing silt fence and silt fence for ditch checks
		installed as part of the grading project.
		Refer to Tabulations 100-17 and 100-18.
-	-	-
101	2602-0000306	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 6 IN. DIA.
		- -
-	-	-
102	2602-0000312	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA.
		Quantity includes 6300' for protection of 126 intakes calculated at an average of 50' per intake.
-	-	-
103	2602-0000320	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 20 IN. DIA.
		- -
-	-	-
104	2602-0010010	MOBILIZATIONS, EROSION CONTROL
		- -
-	-	-
105	2602-0010020	MOBILIZATIONS, EMERGENCY EROSION CONTROL
		- -
		- -
		- -
		ALTERNATE AA OPTION 1-PCC
106	2102-0425071	SPECIAL BACKFILL
107	2122-5190007	PAVED SHOULDER, P.C. CONCRETE, 7 IN.
		Refer to Tab. 112-9 on the 'C' Sheets for details.
		ALTERNATE AA OPTION 2-HMA
108	2102-0425071	SPECIAL BACKFILL
109	2122-5500080	PAVED SHOULDER, HOT MIX ASPHALT MIXTURE, 8 IN.
		Refer to Tab. 112-9 on the 'C' Sheets for details.

POLLUTION PREVENTION PLAN

This Base Pollution Prevention Plan (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 per plan revisions or by contract modification, 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 prime 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.

I. ROLES AND RESPONSIBILITES
- A. Designer:
  1. Prepares Base PPP included in the project plan.
  2. Prepares Notice of Intent (NOI) submitted to Iowa DNR.
  3. Signature authority on the Base PPP and NOI.
- B. Contractor/Subcontractor:
  1. Affected contractors/subcontractors are co-permittees with the IDOT and will sign a certification statement adhering to the requirements of the NPDES permit and this PPP plan. All co-permittees are legally required under the Clean Water Act and the Iowa Administrative Code to ensure compliance with the terms and conditions of this PPP.
  2. Submit a detailed schedule according to Article 2602 of the Specifications and any additional plan notes.
  3. Install and maintain appropriate controls.
  4. Supervise and implement good housekeeping practices.
  5. Conduct joint required inspections of the site with inspection staff.
  6. Signature authority on Co-Permittee Certification Statements and storm water inspection reports.
- C. RCE/Inspector:
  1. Update PPP whenever there is a change in design, construction, operation or maintenance, which has a significant effect on the discharge of pollutants from the project.
  2. Maintain an up-to-date list that identifies contractors and subcontractors as co-permittees.
  3. Make these plans available to the DNR upon their request.
  4. Conduct joint required inspections of the site with the contractor/subcontractor.
  5. Complete an inspection report after each inspection.
  6. Signature authority on storm water inspection reports and Notice of Discontinuation (NOD).

II. PROJECT SITE DESCRIPTION
- A. This Pollution Prevention Plan (PPP) is for the construction of highway 92 in Warren county.
- B. This PPP covers approximately 103 acres with an estimated 81 acres being disturbed. The portion of the PPP covered by this contract has 81 acres disturbed.

- C. The PPP is located in an area of one (1) soil association (Sharpsburg - Shelby - Adair). The estimated average SCS runoff curve number for this PPP after completion will be 69.0.
- D. Storm Water Site Map - Multiple sources of information comprise the base storm water site map including:
  1. Drainage patterns – Plan and Profile sheets and Situation plans.
  2. Proposed Slopes – Cross Sections.
  3. Areas of Soil Disturbance – construction limits shown on Plan and Profile sheets.
  4. Location of Structural Controls – Tabulations on C sheets.
  5. Locations of Non-structural Controls – Tabulations on C sheets.
  6. Locations of Stabilization Practices – generally within construction limits shown on Plan and Profile sheets.
  7. Surface Waters (including wetlands) – Plan and Profile sheets.
  8. Locations where storm water is discharged – Plan and Profile sheets.
- E. The base site map is amended by contract modifications and progress payments of completed erosion control work.
- F. Runoff from this work will flow into various ditches and tributaries to Middle River, and South River.

III. CONTROLS
- A. The contractor's work plan and sequence of operations specified in Article 2602.03 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. Section 2601 and 2602 of the Standard Specifications define requirements to implement erosion and sediment control measures. Actual quantities used may vary from the Base PPP and amendment of the plan will be documented via fieldbook entries or by contract modification. Additional erosion and sediment control items may be required as determined by the inspector and/or contractor during storm water monitoring 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.
  1. EROSION AND SEDIMENT CONTROLS
     - a. Stabilization Practices
       - 1) Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized.
       - 2) Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased.
       - 3) Temporary stabilizing seeding shall be completed as the disturbed areas are constructed. If construction activity is not planned to occur in a disturbed area for at least 21 days, the area shall be stabilized by temporary seeding or mulching within 14 days. Other stabilizing methods shall be used outside the seeding time period.
       - 4) Stabilization measures to be used for this project are located in the Estimated Project Quantities (100-1A) and Estimate Reference Information (100-4A) located on the C sheets of the plan. Additional items may be found in the Inspector's Daily Reports (IDR) or Contract Modifications.
     - 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.
       - 2) Structural items to be used for this project are located in the Estimated Project Quantities (100-1A) and Estimate Reference Information (100-4A) located on the C sheets of the plan, 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 sheets of the plan or are referenced in the Standard Road Plans Tabulation.
     - c. Storm Water Management
       - 1) Measures shall be installed during the construction process to control pollutants in storm water discharges that will

POLLUTION PREVENTION PLAN

occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

2. OTHER CONTROLS
   - a. 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.
     - 1) Vehicle Entrances and Exits - Construct and maintain entrances and exits to prevent tracking of sediments onto roadways.
     - 2) Material Delivery, Storage and Use - Implement practices to prevent discharge of construction materials during delivery, storage, and use.
     - 3) Stockpile Management - Install controls to reduce or eliminate pollution of storm water from stockpiles of soil and paving.
     - 4) Waste Disposal - Do not discharge any materials, including building materials, into waters of the state, except as authorized by a Section 404 permit.
     - 5) Spill Prevention and Control - Implement procedures to contain and clean-up spills and prevent material discharges to the storm drain system and waters of the state.
     - 6) Concrete Residuals and Washout Wastes - Designate temporary concrete washout facilities for rinsing out concrete trucks. Provide directions to truck drivers where designated washout facilities are located.
     - 7) Vehicle and Equipment Cleaning - Employ washing practices that prevent contamination of surface and ground water from wash water.
     - 8) Vehicle and Equipment Fueling and Maintenance - Perform on site fueling and maintenance in accordance with all environment laws such as proper storage of onside fuels and proper disposal of used engine oil or other fluids on site.
     - 9) Litter Management - Ensure employees properly dispose of litter.
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 at least once every seven calendar days. Storm water monitoring 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.
  4. Rainfall amount.
  5. Review 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. Identify corrective actions required to maintain or modify erosion and sediment control measures.
- B. Include storm water monitoring 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 and complete all actions within 3 calendar days of the inspection.

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 patio blocks, Class A stone, erosion stone or other appropriate materials.

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 - May include Plan Revisions or Contract Modifications for new items and fieldbook entries made by the inspector.
- C. IDR - Inspector's Daily Report – this contains the inspector's daily diary and 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.
- E. Signature Authority - Representative from Designer, Contractor/Subcontractor, or RCE/Inspector authorized to sign various storm water documents.

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STANDARD ROAD PLANS

The following Standard Road Plans apply to construction work on this project.

Number	Date	Title
EC-101	04-20-10	Wood Excelsior Mat for Ditch Protection
EC-102	04-20-10	Sod for Ditch Protection
EC-103	04-20-10	Wood Excelsior Mat for Slope Protection
EC-201	04-20-10	Silt Fence
EC-202	04-17-12	Floating Silt Curtain
EC-204	10-16-12	Perimeter and Slope Sediment Control Devices
EW-101	04-19-11	Embankment and Rebuilding Embankments
EW-102	10-15-13	Allowable Placement of Unsuitable Soil in Embankments
EW-110	10-15-13	Ditch Blocks and Dikes
EW-403	10-15-13	Temporary Erosion Control Measures
EW-501	10-15-13	Rural Entrance
MI-210	10-15-13	PCC Driveways and Alleys
MI-220	10-16-12	Detectable Warnings and Pedestrian Ramp
PM-110	04-16-13	Line Types
PM-111	10-16-12	Symbols and Legends
PM-120	10-15-13	Stop Lines and Islands
PM-210	10-18-11	Separation in Two-Lane Roadway
PM-520	04-19-11	Two-Lane Roadway with no Turn Lanes (Two-Way Stop Condition)
PM-521	04-19-11	Two-Lane Roadway with Right Turn Lanes
PM-522	10-16-12	Two-Lane Roadway with Left Turn Lanes
PM-550	04-19-11	Two-Lane Roadway with Two-Way Left Turn Lane
PV-10	04-19-11	Rumble Strip Panel for Intersection Approach
PV-11	04-20-10	Structural Rumble Strips
PV-12	04-17-12	Milled Shoulder Rumble Strips
PV-13	04-19-11	Milled Centerline Rumble Strips
PV-101	10-15-13	Joints
PV-102	04-16-13	PCC Curb Details
PV-103	04-19-11	Manhole Boxouts in PCC Pavement
PV-301	04-19-11	Superelevation Details Two Lane Roadway
RF-3	10-15-13	Concrete Aprons
RF-5	04-16-13	Metal Pipe Aprons and Beveled Ends
RF-13	10-18-11	Pipe Bends and Half Pipe
RF-14	04-16-13	Connected Pipe Joints
RF-19C	10-16-12	Subdrains (Longitudinal)
RF-19E	10-16-12	Outlets for Longitudinal, Transverse and Backslope Subdrains
RF-19F	10-16-12	Subdrain Outlets (Standard Subdrain, Pressure Release and Special)
RF-21	10-18-11	Culvert Pipe Tee Sections
RF-26	10-15-13	Pipe Apron Guard
RF-30B	10-19-10	Pipe Culvert (Cover and Camber)
RF-30C	04-16-13	Pipe Culvert (Installation Details)
RF-31	03-28-95	Depth of Cover Tables for Concrete Pipe
RF-32	10-19-10	Depth of Cover Tables for Corrugated Pipe
SI-101	04-21-09	Locations - Type 'A' Signs
SI-102	10-20-09	Locations - Type 'B' Signs
SI-131	10-18-11	Installation - Type 'A' Signs
SI-132	04-20-10	Installation - Type 'B' Signs
SI-881	10-15-13	Special Signs for Workzones
SW-101	04-21-09	Trench Bedding and Backfill Zones
SW-102	04-21-09	Rigid Gravity Pipe Trench Bedding
SW-105	10-20-09	Miscellaneous Pipe Bedding
SW-401	04-21-09	Circular Storm Sewer Manhole
SW-402	04-21-09	Rectangular Storm Sewer Manhole
SW-405	04-21-09	Tee-Section Storm Sewer Manhole
SW-505	10-16-12	Double Grate Intake
SW-508	10-20-09	Single Open-Throat Intake, Large Box
TC-1	04-16-13	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-252	04-17-12	Routes Closed to Traffic
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TC-273	04-20-10	Construction Site Entrance

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SUBSOIL TILLAGE

All borrow areas, stockpile areas, haul roads, and areas used for equipment on this project require subsoil tillage to an average depth of 16 to 20 inches prior to placement of topsoil and/or stabilizing crop seeding. Complete this tillage at 3 foot maximum centers and at right angles to the finished slope.

Use tillage equipment equipped with an arrowhead type shoe that will provide lateral displacement and limit the movement of the subsoil to the surface. Obtain the Engineer's approval for the equipment. This work is incidental to other work on the project.

Following the subsoil tillage, the area is to remain in a "loosened" condition. Additional compaction or the operation of heavy equipment, other than required for topsoil placement and shaping, will not be allowed on areas which have received subsoil tillage.

232-3A
10-16-12

EROSION CONTROL (RURAL SEEDING)

Following the completion of work in a disturbed area, place seed, fertilizer, and mulch on the disturbed area lying 10 feet adjacent to shoulder as follows:

SEEDING:
3 lbs. of Tall Fescue (Fawn) per 1000 sq. ft.

FERTILIZER:
17 lbs. of 13-13-13 (or equivalent) commercial fertilizer per 1000 sq. ft.

MULCH:
70 lbs. of dry cereal straw per 1000 sq. ft. For areas disturbed, but not seeded by September 30th, scarify to a 3 inch depth and mulch. Consolidate all mulch into the soil with a mulch stabilizer.

Use Certified Noxious Weed Seed Free Mulch as determined by the Iowa Crop Improvement Association or adjacent state's Crop Improvement Association.

Preparing the seedbed and furnishing and applying seed, fertilizer, and mulch is incidental to mobilization and will not be paid for separately.

290-01
Modified

SIDEWALK CONSTRAINTS

1. Widths:
   Widths listed in the S sheets are minimums.

2. Cross Slopes:
   Construct all sidewalks, curb ramps, and landings/turning spaces at a target cross slope of 1.5%. Cross slopes exceeding 2.0% will not be allowed, except for areas tying into existing pavement. In these areas, transition from existing pavement cross slope to a cross slope of less than 2.0% within one panel at a rate not to exceed 1.0% per foot.

3. Longitudinal Slopes:
   a. Sidewalk:
      i. Roadway slope exceeds 5.0%: Sidewalk longitudinal slope exceeding the roadway slope by more than 2.0% will not be allowed.
      ii. Roadway slope 5.0% or less: Sidewalk longitudinal slope exceeding 5.0% will not be allowed.
   b. Ramps:
      i. Ramps 15.0' in length or less: Longitudinal slope exceeding 8.0% will not be allowed.
      ii. Ramps greater than 15.0' in length: Construct with the longitudinal slope necessary to conform to the design.

4. Landing/Turning Spaces:
   Longitudinal slopes exceeding 2.0% will not be allowed.

232-3B
10-16-12

EROSION CONTROL (URBAN SEEDING)

Following the completion of work in a disturbed area, place seed, fertilizer, and mulch on the disturbed area as follows:

SEEDING MIXTURE: Seeding Rate: 4 lbs. per 1000 sq. ft.

Bluegrass, KY	70%
Fescue, Creeping Red	20%
Ryegrass, Perennial (Fineleaf) (Derby, Manhattan or equivalent)	10%

FERTILIZER:
17 lbs. of 13-13-13 (or equivalent) commercial fertilizer per 1000 sq. ft.

MULCH:
70 lbs. of dry cereal straw per 1000 sq. ft. For areas disturbed, but not seeded by September 30th, scarify to a 3 inch depth and mulch. Consolidate all mulch into the soil with a mulch stabilizer.

Use Certified Noxious Weed Seed Free Mulch as determined by the Iowa Crop Improvement Association or adjacent state's Crop Improvement Association.

Preparing the seedbed and furnishing and applying seed, fertilizer, and mulch is incidental to mobilization and will not be paid for separately.

232-3C
10-16-12

EROSION CONTROL (NATIVE GRASS SEEDING)

Construct this project according to the requirements of U.S. Army Corps of Engineers NWP 14-Linear Transportation Projects, Permit No. 2013-813.
A copy of this permit is available from the Iowa DOT Office of Contracts upon request. The U.S. Army Corps of Engineers reserves the right to visit the site without prior notice.

100-17
04-20-10

TABULATION OF SILT FENCES

Refer to EC-201

Location			Length	Remarks
Begin Station	End Station	Side	LF	
256+50.00	258+50.00	Both	440.0	
259+50.00	260+00.00	Rt	70.0	
259+50.00	261+50.00	Lt	220.0	
260+30.00	262+30.00	Rt	220.0	
262+25.00	264+25.00	Lt	220.0	
264+25.00	266+25.00	Both	440.0	
266+25.00	268+25.00	Rt	220.0	
267+00.00	269+00.00	Lt	220.0	
271+00.00	273+00.00	Both	440.0	
273+00.00	275+00.00	Rt	220.0	
273+25.00	275+25.00	Lt	220.0	
275+00.00	277+00.00	Rt	220.0	
277+00.00	279+00.00	Both	440.0	
279+00.00	281+00.00	Lt	220.0	
1280+60.00	1281+60.00	Both	240.0	Co. Rd. R-57
1385+00.00	1386+50.00	Both	340.0	Co. Rd. R-57
284+00.00	286+00.00	Rt	220.0	
286+50.00	288+50.00	Both	440.0	
288+50.00	290+50.00	Both	440.0	
293+00.00	295+00.00	Both	440.0	
297+50.00	299+50.00	Both	440.0	
299+50.00	301+50.00	Both	440.0	
301+50.00	302+75.00	Lt	145.0	
302+25.00	304+25.00	Rt	220.0	
303+25.00	305+25.00	Lt	220.0	
305+25.00	307+25.00	Both	440.0	
307+25.00	309+25.00	Both	440.0	
311+00.00	312+00.00	Rt	120.0	
311+00.00	313+00.00	Lt	220.0	
313+00.00	315+00.00	Both	440.0	
315+00.00	317+00.00	Lt	220.0	

241-5
10-18-11

SUBDRAINS

Construct foreslopes designated for reconstruction with subdrain trench materials according to Section 2127 of the Standard Specifications. If the vertical height of the slope is less than 15 feet and more than 4 feet wide, compacting may be achieved by working the material with shaping and/or hauling equipment tires.

Do not place trench materials containing HMA in areas subject to ponding. Dispose of all HMA and boulders according to Article 2102.03, C of the Standard Specifications.

252-1
10-16-12

TEMPORARY CROSSINGS AND DETOURS

Blading, shaping, and other work in preparation for maintaining temporary crossings or detours is incidental to other work.
Furnish and spread additional granular surfacing needed for temporary crossings or detours during construction at the contract price.

100-17
04-20-10

TABULATION OF SILT FENCES

Refer to EC-201

Location			Length	Remarks
Begin Station	End Station	Side	LF	
316+00.00	317+00.00	Rt	120.0	
317+00.00	319+00.00	Both	440.0	
319+00.00	321+00.00	Both	440.0	
321+00.00	323+00.00	Both	440.0	
324+75.00	326+75.00	Both	440.0	
326+75.00	328+75.00	Both	440.0	
328+75.00	330+75.00	Lt	220.0	
331+75.00	333+75.00	Lt	220.0	
333+75.00	335+75.00	Both	440.0	
335+75.00	337+75.00	Both	440.0	
337+75.00	339+75.00	Both	440.0	
343+00.00	345+00.00	Both	440.0	
345+00.00	347+00.00	Both	440.0	
347+00.00	349+00.00	Both	440.0	
349+00.00	350+75.00	Rt	195.0	
349+00.00	351+00.00	Lt	220.0	
354+00.00	356+00.00	Both	440.0	
356+00.00	358+00.00	Lt	220.0	
359+25.00	361+25.00	Rt	220.0	
362+00.00	363+00.00	Lt	120.0	
362+00.00	364+00.00	Rt	220.0	
366+00.00	368+00.00	Both	440.0	
368+00.00	370+00.00	Both	440.0	
370+00.00	372+00.00	Both	440.0	
372+00.00	374+00.00	Both	440.0	
374+00.00	375+00.00	Both	240.0	
376+00.00	378+00.00	Rt	220.0	
378+00.00	380+00.00	Both	440.0	
380+00.00	382+00.00	Both	440.0	
382+00.00	384+00.00	Both	440.0	
384+00.00	386+00.00	Both	440.0	
386+00.00	387+75.00	Lt	195.0	
386+00.00	388+00.00	Rt	220.0	
388+00.00	390+00.00	Both	440.0	
1257+45.00	1258+50.00	Both	250.0	Kennedy Street
1280+60.00	1282+60.00	Both	240.0	R-57
1384+75.00	1386+06.00	Both	302.0	R-57
2305+85.00	2307+85.00	Lt	220.0	90th Ave
2305+85.00	2307+60.00	Rt	195.0	90th Ave
2307+85.00	2309+85.00	Both	440.0	90th Ave
2311+00.00	2313+00.00	Lt	440.0	90th Ave
2311+00.00	2312+90.00	Rt	210.0	90th Ave
3388+60.00	3390+25.00	Rt	185.0	R-63
3389+00.00	3390+25.00	Lt	145.0	R-63
3392+00.00	3393+05.00	Both	255.0	R-63

262-5
10-18-05

UTILITIES (POINT 25 PROJECT)

This is a POINT 25 project and is subject to the provisions of IAC 761-115.25.

281-1
10-18-11

SECTION 404 PERMIT AND CONDITIONS

Construct this project according to the requirements of U.S. Army Corps of Engineers NWP 14-Linear Transportation Projects, Permit No. 2013-813.
A copy of this permit is available from the Iowa DOT Office of Contracts upon request. The U.S. Army Corps of Engineers reserves the right to visit the site without prior notice.

100-17
04-20-10

TABULATION OF SILT FENCES

Refer to EC-201

Location			Length	Remarks
Begin Station	End Station	Side	LF	
11278+00.00	11280+00.00	Rt	220.0	Detour R-57
11280+00.00	11282+00.00	Both	440.0	Detour R-57
11282+00.00	11284+00.00	Both	440.0	Detour R-57
11285+00.00	11287+00.00	Both	440.0	Detour R-57
11287+00.00	11288+60.00	Both	360.0	Detour R-57
18387+75.00	18389+75.00	Both	440.0	Detour R-63
18389+75.00	18391+75.00	Both	440.0	Detour R-63
18393+00.00	18395+00.00	Both	440.0	Detour R-63
18395+00.00	18396+50.00	Both	340.0	Detour R-63
14410+50.00	14412+50.00	Both	440.0	Detour Y St.-Stage I
14412+50.00	14414+50.00	Both	440.0	Detour Y St.-Stage I
14414+50.00	14416+50.00	Both	440.0	Detour Y St.-Stage I
14417+25.00	14419+25.00	Both	440.0	Detour Y St.-Stage 2
14419+25.00	14421+25.00	Both	440.0	Detour Y St.-Stage 2
14421+25.00	14423+25.00	Both	440.0	Detour Y St.-Stage 2
14423+25.00	14425+10.00	Both	410.0	Detour Y St.-Stage 2
24415+25.00	24417+25.00	Both	440.0	Detour Y St.-Stage IA
24417+25.00	24417+75.00	Both	120.0	Detour Y St.-Stage IA
	Totals =		31197.0	
	x 1.25		38996.0	

100-14
10-15-13

SILT BASINS

Refer to EW-403

Location Station	Side	Remarks
258+00.00	L	
257+50.00	R	
258+50.00	R	
259+50.00	R	
260+00.00	L	
265+00.00	R	
271+00.00	L	
271+25.00	R	
276+00.00	L	
277+50.00	L	
277+50.00	R	
278+00.00	L	
278+00.00	R	
291+40.00	L	
292+30.00	R	
292+50.00	L	
293+00.00	L	
297+50.00	L	
297+75.00	R	
304+90.00	R	
307+25.00	L	
307+50.00	R	
307+60.00	L	
308+20.00	R	
310+80.00	L	
314+50.00	R	
315+90.00	L	
316+20.00	L	
316+20.00	R	
316+70.00	R	
323+50.00	L	
329+60.00	L	
329+60.00	R	
330+00.00	L	
330+00.00	R	
332+50.00	R	
332+90.00	L	
333+00.00	R	
333+25.00	L	
334+75.00	R	
340+50.00	R	
340+60.00	R	
341+90.00	R	
341+90.00	R	
342+00.00	L	
342+50.00	L	
352+00.00	R	
357+90.00	L	
357+90.00	R	
358+25.00	L	
358+25.00	R	
359+80.00	L	
359+90.00	R	
366+00.00	L	
366+00.00	R	
372+00.00	R	
374+80.00	R	
375+00.00	L	
379+40.00	L	
379+70.00	L	
379+90.00	R	
380+00.00	L	
390+40.00	L	
390+60.00	L	
1280+70.00	L	
1280+70.00	R	
1282+30.00	L	
1282+30.00	R	
1386+00.00	L	
1386+50.00	R	
2306+40.00	R	
2308+20.00	R	
2313+40.00	R	
3388+70.00	R	
3389+10.00	L	

MAILBOX

TABULATION OF MAILBOX TURNOUTS

Location Station	Side	Remarks
Mainline 92		
262+00.00	Lt.	1
269+50.00	Lt.	2
271+40.00	Lt.	1
276+25.00	Lt.	6
281+90.00	Rt.	1
285+30.00	Lt.	1
291+60.00	Lt.	1
297+05.00	Lt.	1
305+30.00	Lt.	1
90th Ave.		
2313+25.00	Rt.	1
2308+00.00	Rt.	1
Mainline 92		
324+25.00	Lt.	1
341+10.00	Lt.	1
353+00.00	Lt.	2
356+75.00	Lt.	1
361+70.00	Lt.	1
363+90.00	Lt.	1
365+50.00	Lt.	2
375+40.00	Lt.	3
422+80.00	Lt.	1
423+75.00	Lt.	1
427+30.00	Lt.	1
431+75.00	Lt.	1
432+25.00	Lt.	1
433+90.00	Lt.	1
433+90.00	Rt.	1
437+80.00	Lt.	1
438+40.00	Lt.	1
442+80.00	Rt.	1
446+75.00	Lt.	1
448+40.00	Lt.	2
		Total = 42 Mailboxes

100-17R
MODIFIED

TABULATION OF FENCE REMOVAL

Location			Length	Remarks
Begin Station	End Station	Side	LF	
256+23.9, 133.4'Lt	258+34.1, 197'Lt		345.5	wire
256+49.4, 50.0'Lt	258+31.56, 50.3'Lt		182.2	wire
258+61.6, 199.0'Lt	261+46.0, 47.2'Lt		369.4	wire
260+45.7, 50.5'Lt	260+46.0, 145.0'Lt		94.6	wire
262+18.3, 45.3'Lt	266+52.2, 71.2'Lt		420.1	wire
266+70.5, 71.8'Lt	270+39.2, 67.0'Lt		366.7	wire
263+27.8, 95.0'Rt	267+38.2, 6.5'Rt		447.4	wire
265+28.8,28.8'Rt	265+45.3, 133.8'Rt		106.2	wire
265+44.4, 128.4'Rt	267+74.4, 133.0'Rt		266.1	wire
266+75.5, 108.7'Rt	268+71.0, 3.3'Rt		273.0	wire
267+25.2, 58.1'Rt	267+46.5, 104.6'Rt		54.0	wood
268+70.5, 100.6'Rt	269+35.8, 120.5'Rt		80.3	wire
270+51.8, 29.1'Rt	270+48.1, 202.7'Rt		181.8	wood
270+47.8, 225'Rt	270+48.1, 202.7'Rt		22.3	wire
270+51.8, 29.1'Rt	279+25.7, 35.0'Rt		874.0	wire
1280+46.4, 50.6'Lt	1281+66.1, 69.6'Lt		145.2	wire, Co. Rd. R-57
1385+84.1, 50.7'Rt	1389+96.5, 49.3'Rt		412.4	wire, Co. Rd. R-57
287+75.9, 115.0'Lt	290+86.1, 115.0'Lt		413.4	wire
292+27.8, 60.7'Lt	302+87.7, 72.0'Lt		1060.0	wire
305+46.9, 13.0'Rt	307+42.9, 25.8'Rt		199.0	wood
307+42.9, 25.8'Rt	310+00, 25.6'Rt		256.8	wire
2305+50.0, 36.72'Rt	2306+07.0, 55.0'Rt		77.3	wire, 90th Ave.
2305+50.0, 25.4'Lt	2310+03.0, 28.6'Lt		453.1	wire, 90th Ave.
314+17.1, 61.8'Lt	323+53.7, 76'Lt		937.8	wire
318+45.0, 25.0'Rt	323+56.1, 26.2'Rt		511.1	wire
323+56.1, 9.6'Rt	323+56.7, 110.0'Rt		100.4	wire
323+72.3, 86.5'Lt	339+52.6, 90.9'Lt		1613.3	wire
326+86.6, 110.3'Rt	327+71.6, 8.5'Rt		186.9	wire
327+86.9, 9.6'Rt	334+26.8, 8.7'Rt		639.9	wire
334+26.8, 8.7'Rt	334+28.9, 105.6'Rt		97.0	wire
334+26.8, 8.7'Rt	342+44.4, 52.2'Rt		826.3	wire
341+82.5, 41.4'Lt	350+97.6, 53.8'Lt		915.6	wire
342+44.4, 52.2'Rt	342+62.6, 110.3'Rt		68.7	wood
342+80, 114.3'Rt	343+08.8, 68.6'Rt		67.0	wood
343+08.8, 68.6'Rt	344+66.6, 128.2'Rt		178.1	wire
352+34.4, 87.0'Rt	355+10.1, 60.3'Rt		290.6	wire
354+56.5. 76.7'Lt	355+90.2, 16.4'Lt		196.0	wire
355+06.8, 90.0'Rt	355+10.1' 60.3' Rt		30.0	wood
356+81.1, 135.1'Rt	361+82.5, 58.2'Rt		560.1	wire
359+75.1, 103.6'Lt	359+78.4, 23.0'Lt		80.7	wood
361+83.6, 95.0'Rt	363+00, 56.0'Rt		151.7	wire
365+77.4, 95.0'Lt	375+07.4, 58.1'Lt		980.4	wire
373+62.0, 91.8'Lt	373+63.7, 66.9'Lt		25.0	wood
374+80.0, 91.3'Lt	374+80.7, 70.8'Lt		20.5	wood
375+06.9, 91.1'Lt	375+07.4, 58.1'Lt		33.1	wood
376+46.0, 100.0'Rt	377+70.0, 110.0'Rt		254.1	wire
377+65.1, 95.0'Lt	387+33.9, 71.8'Lt		1008.2	wire
377+67.2, 38.5'Rt	384+86.3, 1.2'Lt		743.8	wire
	Field Fence		16858.0	
	Wood		760.0	
	Total =		17618.0	

100-18
04-20-10

TABULATION OF SILT FENCES FOR DITCH CHECKS

Refer to EC-201

Location Station	Side	Length LF	Remarks
256+45.00	Lt	29.0	
256+90.00	Lt	29.0	
257+15.00	Lt	25.0	
257+40.00	Lt	25.0	
257+65.00	Lt	25.0	
257+90.00	Lt	25.0	
258+10.00	Lt	25.0	
258+50.00	Lt	25.0	
258+75.00	Lt	25.0	
259+00.00	Lt	25.0	
259+25.00	Lt	25.0	
259+50.00	Lt	25.0	
259+75.00	Lt	25.0	
260+25.00	Lt	25.0	
260+50.00	Lt	25.0	
260+75.00	Lt	29.0	
262+25.00	Lt	25.0	
263+50.00	Lt	29.0	
265+00.00	Lt	25.0	
266+50.00	Lt	25.0	
268+00.00	Lt	25.0	
269+50.00	Lt	25.0	
271+00.00	Lt	25.0	
272+50.00	Lt	25.0	
276+25.00	Lt	25.0	
276+50.00	Lt	25.0	
276+75.00	Lt	25.0	
277+00.00	Lt	25.0	
277+65.00	Lt	25.0	
278+00.00	Lt	25.0	
278+50.00	Lt	25.0	
278+90.00	Lt	25.0	
279+30.00	Lt	25.0	
279+70.00	Lt	25.0	
280+10.00	Lt	25.0	
280+85.00	Lt	25.0	
292+00.00	Lt	29.0	
293+30.00	Lt	25.0	
295+00.00	Lt	25.0	
295+75.00	Lt	29.0	
298+50.00	Lt	25.0	
300+00.00	Lt	25.0	
301+50.00	Lt	25.0	
305+25.00	Lt	25.0	
306+00.00	Lt	25.0	
306+75.00	Lt	25.0	
309+00.00	Lt	25.0	
310+50.00	Lt	25.0	
324+00.00	Lt	29.0	
324+75.00	Lt	25.0	
325+50.00	Lt	25.0	
326+90.00	Lt	25.0	
327+30.00	Lt	25.0	
327+70.00	Lt	25.0	
328+10.00	Lt	25.0	
328+50.00	Lt	25.0	
330+00.00	Lt	25.0	
331+40.00	Lt	25.0	
332+40.00	Lt	25.0	
333+50.00	Lt	25.0	
334+25.00	Lt	25.0	
335+20.00	Lt	25.0	
335+60.00	Lt	25.0	
336+50.00	Lt	29.0	
337+25.00	Lt	29.0	
338+10.00	Lt	29.0	
339+60.00	Lt	29.0	
389+00.00	Lt	25.0	

100-18
04-20-10

TABULATION OF SILT FENCES FOR DITCH CHECKS

Refer to EC-201

Location Station	Side	Length LF	Remarks
257+75.00	Rt	25.0	
258+75.00	Rt	25.0	
259+75.00	Rt	25.0	
261+25.00	Rt	25.0	
262+75.00	Rt	25.0	
270+00.00	Rt	25.0	
270+75.00	Rt	25.0	
271+80.00	Rt	25.0	
272+20.00	Rt	25.0	
272+60.00	Rt	25.0	
278+50.00	Rt	25.0	
283+25.00	Rt	29.0	
286+00.00	Rt	25.0	
286+40.00	Rt	25.0	
286+80.00	Rt	25.0	
290+25.00	Rt	25.0	
291+00.00	Rt	29.0	
291+25.00	Rt	29.0	
292+70.00	Rt	25.0	
293+10.00	Rt	25.0	
295+00.00	Rt	25.0	
295+75.00	Rt	25.0	
296+50.00	Rt	25.0	
297+25.00	Rt	25.0	
298+00.00	Rt	25.0	
298+75.00	Rt	25.0	
299+50.00	Rt	25.0	
300+25.00	Rt	25.0	
301+00.00	Rt	29.0	
301+50.00	Rt	29.0	
304+50.00	Rt	29.0	
305+75.00	Rt	25.0	
306+50.00	Rt	25.0	
307+25.00	Rt	25.0	
308+00.00	Rt	25.0	
311+00.00	Rt	25.0	
311+75.00	Rt	29.0	
315+25.00	Rt	25.0	
315+50.00	Rt	25.0	
315+75.00	Rt	25.0	
316+00.00	Rt	25.0	
316+25.00	Rt	25.0	
316+75.00	Rt	25.0	
318+00.00	Rt	25.0	
319+50.00	Rt	25.0	
323+90.00	Rt	25.0	
324+30.00	Rt	25.0	
324+70.00	Rt	25.0	
325+10.00	Rt	25.0	
325+50.00	Rt	25.0	
327+00.00	Rt	25.0	
327+75.00	Rt	25.0	
328+00.00	Rt	25.0	
328+25.00	Rt	25.0	
328+50.00	Rt	25.0	
328+75.00	Rt	25.0	
329+00.00	Rt	25.0	
330+35.00	Rt	25.0	
330+75.00	Rt	25.0	
331+40.00	Rt	25.0	
331+65.00	Rt	25.0	
331+90.00	Rt	25.0	
332+15.00	Rt	25.0	
332+40.00	Rt	25.0	
333+25.00	Rt	25.0	

100-18
04-20-10

TABULATION OF SILT FENCES FOR DITCH CHECKS

Refer to EC-201

Location Station	Side	Length LF	Remarks
333+50.00	Rt	25.0	
333+75.00	Rt	25.0	
334+00.00	Rt	25.0	
334+25.00	Rt	25.0	
334+50.00	Rt	25.0	
334+75.00	Rt	25.0	
335+05.00	Rt	25.0	
335+70.00	Rt	25.0	
336+10.00	Rt	25.0	
337+00.00	Rt	25.0	
337+75.00	Rt	25.0	
339+90.00	Rt	25.0	
340+30.00	Rt	25.0	
341+70.00	Rt	25.0	
342+10.00	Rt	25.0	
380+25.00	Rt	25.0	
381+00.00	Rt	25.0	
381+75.00	Rt	25.0	
382+50.00	Rt	25.0	
383+25.00	Rt	25.0	
1258+10.00	Lt	22.0	Kennedy St.
1258+25.00	Rt	32.0	Kennedy St.
1281+30.00	Lt	25.0	R-57
1282+05.00	Lt	25.0	R-57
1385+05.00	Lt	25.0	R-57
1385+45.00	Lt	25.0	R-57
1385+85.00	Lt	25.0	R-57
1281+00.00	Rt	25.0	R-57
1281+20.00	Rt	25.0	R-57
1281+60.00	Rt	25.0	R-57
1282+00.00	Rt	25.0	R-57
1282+40.00	Rt	25.0	R-57
2306+00.00	Both	18.0	90th Ave.
2306+75.00	Both	18.0	90th Ave.
2307+50.00	Both	18.0	90th Ave.
2308+25.00	Both	18.0	90th Ave.
2309+00.00	Both	18.0	90th Ave.
2310+90.00	Both	18.0	90th Ave.
2312+35.00	Both	18.0	90th Ave.
3389+25.00	Both	25.0	R-63
3392+15.00	Rt	22.0	R-63
3392+25.00	Rt	22.0	R-63
11279+25.00	Rt	22.0	Detour R-57
11280+00.00	Rt	22.0	Detour R-57
11280+80.00	Rt	22.0	Detour R-57
11280+90.00	Rt	22.0	Detour R-57
11281+30.00	Rt	22.0	Detour R-57
11281+70.00	Rt	22.0	Detour R-57
11282+10.00	Rt	22.0	Detour R-57
11282+50.00	Rt	22.0	Detour R-57
11282+90.00	Rt	22.0	Detour R-57
11283+30.00	Rt	22.0	Detour R-57
11285+55.00	Rt	22.0	Detour R-57
11285+95.00	Rt	22.0	Detour R-57
11286+35.00	Rt	22.0	Detour R-57
11286+75.00	Rt	22.0	Detour R-57
11287+15.00	Rt	22.0	Detour R-57
11287+55.00	Rt	22.0	Detour R-57
11288+50.00	Rt	22.0	Detour R-57
11289+25.00	Rt	22.0	Detour R-57
18389+25.00	Rt	22.0	Detour R-63
18390+14.00	Rt	22.0	Detour R-63
18390+54.00	Rt	22.0	Detour R-63
18390+94.00	Rt	22.0	Detour R-63
18391+34.00	Rt	22.0	Detour R-63
18391+74.00	Rt	22.0	Detour R-63

100-18
04-20-10

TABULATION OF SILT FENCES FOR DITCH CHECKS

Refer to EC-201

Location Station	Side	Length LF	Remarks
18392+14.00	Rt	22.0	Detour R-63
14412+55.00	Rt	17.0	Detour Y St. - Stage I
14413+30.00	Rt	17.0	Detour Y St. - Stage I
14413+90.00	Both	17.0	Detour Y St. - Stage I
14414+65.00	Both	17.0	Detour Y St. - Stage I
14415+40.00	Both	17.0	Detour Y St. - Stage I
14416+15.00	Both	17.0	Detour Y St. - Stage I
14416+90.00	Both	17.0	Detour Y St. - Stage I
24415+90.00	Rt	17.0	Detour Y St. - Stage IA
24416+05.00	Lt	17.0	Detour Y St. - Stage IA
14417+36.00	Rt	17.0	Detour Y St. - Stage 2
14417+76.00	Rt	17.0	Detour Y St. - Stage 2
14417+71.00	Lt	17.0	Detour Y St. - Stage 2
Total =		5150.0	
x 1.5		7725.0	

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	Warren COUNTY	PROJECT NUMBER NHSX-O92-5(51)--3H-91	SHEET NUMBER C.9

EXISTING PAVEMENT

No.	Location: County	Route	Dir. of Travel	Begin Milepost	End Milepost	Year	Type	Project Number	Surface: Type	Depth (IN)	Base: Type	Depth (IN)	Subbase: Type	Depth (IN)	Removal: Type	Depth (IN)	Coarse Aggregate: Source	Type	Durability Class	Reinforcement: Type	Remarks
1	Warren	Ia.92	EB & WB	120.85	129.91	1992		FN-92-5(31)--21-91	AAC	3					AAC	0.5	University	Gravel			AAC=Type A Asphalt Cement Concrete
2	"	"	"	"	"	1983		FN-92-5(20)--21-91	BSC												BSC=Bituminous Seal Coat
3	"	"	"	"	"	1952		P-1023W	BAC	1.5	TBB	1.5									BAC=Type B Asphalt Cement Concrete
4	"	"	"	"	"	1930		P-569	PC7	7	PC7						Earlham	Gravel	1		PC7=10"-7"-10" PCC Concrete Slab

FULL-DEPTH PATCHES

Refer to Standard Roads Plans RR-1, RR-2, RR-4, RR-18, and RR-26

Location: Count	Station or Milepost	Lane (L, R, or B)	Dimension: Length (FT)	Width (FT)	Patch Thickness (IN)	PCC Patches: With Dowels RR-4 (SY)	Without Dowels RR-2 (SY)	C R C RR-18 (SY)	HMA Patches (SY)	Composite HMA (TON)	Subbase Patches RR-26 (SY)	Subbase Patch w/ 'EF' Joint RR-1 (SY)	Patch Subdrain RR-1 or RR-26 (No.)	'CD' Joints (No.)	'CT' Joints (No.)	'EF' Joints RR-1 (No.)	Anchor Lugs Removal (No.)	Remarks

RUMBLE STRIP PANELS

Refer to Standard Road Plan PV-10.

Location: Road Ident.	Station	Side	Pavement: New	Existing	Remarks
Co. Rd. R-57	1283+73.24	Rt.		X	
South	1280+49.35	Rt.		X	
Co. Rd. R-57	1387+09.14	Lt.		X	
North	1390+09.16	Lt.		X	
Co. Rd. R-63	3384+74.87	Rt.		X	
South	3387+74.87	Rt.		X	
Co. Rd. R-63	3394+47.22	Lt.		X	
North	3397+47.22	Lt.		X	

CURBS AND ISLANDS

Refer to PV-20, PV-102, and 6000s Detail Series.

1 Bid Item

Point No.	Station	Offset	Island Interior Area 1 (SY)	Curb and Gutter: Curb Type	Gutter Width (FT)	Length 1 (LF)	Remarks
A	283+53.81	41.0' Lt.					
	1384+09.30	14.0' Lt.					
B	283+40.37	41.0' Lt.					
C	1384+19.19	15.0' Lt.	63.2	6" Sloped PCC		33.8	Refer to Modified PV-20 Detail in the 'U' Sheets
A	283+87.71	25.0' Rt.					
	1283+47.97	14.0' Rt.					
B	284+01.84	25.0' Rt.					
C	1283+37.33	15.0' Rt.	63.2	6" Sloped PCC		36.2	Refer to Modified PV-20 Detail in the 'U' Sheets
	Totals =		126.4			70.0	

LIST OF SUBDRAIN WORK

Refer to Standard Road Plans RF-3, RF-5, RF-14, RF-19A, RF-19B, RF-19C, RF-19E and RF-19F

* Not a bid item

Location: No.	Station to Station		Type of Installation	Pipe: Concrete C.M.P., C.M.P. Coated, or Plastic	Dia. (IN)	Length (LF)	Aprons: RF-3 (No.)	RF-5 (No.)	Outlets: RF-19E (No.)	RF-19F Type	RF-19F No.	Connected Pipe Joints (RF-14)* Type	Trench Drain (LF)	Granular Material Blanket (CY)	Porous Backfill* (CY)	Class "A" Crushed Stone* (CY)	Remarks
1	4414+34.00	4414+58.00	Case 'A'	C.M.P. Coated	10.0	122				A	1						
	34.0' Lt.	154.40' Lt.															

Add RF-19F to existing tile and outlet into west detour ditch while detour is in use.
Remove RF-19F rodent guard and extend CMP into ditch intake No. I-219 in 'Y' Street ditch when detour is removed.

112-10
04-19-11

MILLED RUMBLE STRIPS

See PV-12 and PV-13.

* Calculated at 18" width for Shoulder.

Location: Road Identification	Location: Station to Station		Length: PCC	Length: HMA	Type (Centerline, Rt or Lt Shoulder	Fog Seal* (Milled Rumble Strip) Shoulder	Effective Shoulder Width: PCC Paved	Effective Shoulder Width: HMA Paved	Effective Shoulder Width: Granular\ Earth	Remarks
			STA	STA		GAL	FT	FT	FT	
Iowa 92 Mainline	256+50.00	380+00.00	123.50		Centerline	0.0				
Iowa 92 Mainline	256+50.00	281+94.00	25.44		Left Shoulder	0.0				
Iowa 92 Mainline	291+50.00	389+14.00	97.64		Left Shoulder	0.0				
Iowa 92 Mainline	256+50.00	280+39.00	23.89		Right Shoulder	0.0				
Iowa 92 Mainline	284+40.00	387+00.00	102.60		Right Shoulder	0.0				
Total Centerline =			123.50							
Total Shoulder =			249.57							

110-1
04-16-13

REMOVAL OF PAVEMENT

Refer to Tabulation 102-5

* Not a Bid Item

Begin Station	End Station	Side	Pavement Type	Area	Saw Cut*	Remarks
				SY	LF	
256+50.00	282+00.00	EB & WB	HMA, PCC	6926.0	24.0	
282+00.00	385+00.00	EB & WB	HMA, PCC	28556.5		Includes returns and turning lane at Co.Rd. R-57
385+00.00	443+18.01	EB & WB	HMA, PCC	16303.8	24.0	Includes returns at Co.Rd. R-63 and Spruce St pavement
256+50.00	390+00.00	Lt & Rt	HMA	621.1		Driveway, sideroad fillets
1280+60.00	1283+81.10	NB & SB	HMA	786.2	22.0	Co.Rd. R-57 South
1384+00.43	1386+06.00	NB & SB	HMA	501.1	22.0	Co.Rd. R-57 North
3389+00.00	3391+35.75	NB & SB	HMA	672.5	22.0	Co.Rd. R-63 South
3391+60.00	3393+05.00	NB & SB	HMA	356.5	22.0	Co.Rd. R-63 North
4414+15.00	4417+73.13	NB & SB	PCC	1124.7	31.0	Y St. South, Pavement & Returns
4417+90.70	4422+60.00	NB & SB	PCC	1795.3	31.0	Y St. North, Pavement & Returns
443+18.01	465+01.01	Lt	HMA, PCC	453.8	2183.0	Pavement edge removal for widening
443+18.01	465+01.01	Rt	HMA, PCC	472.6	2183.0	Pavement edge removal for widening
451+43.04	452+39.03	Lt	PCC	58.4	60.0	S. Kenwood Blvd. returns
455+20.30	456+05.70	Lt	PCC	70.8	64.0	S. "P" St. returns
443+40.85	444+24.64	Rt	PCC	16.5	14.0	"R" St. returns
453+92.98	454+87.24	Rt	PCC	35.2	25.0	S. "P" St. returns
461+86.25	462+60.36	Rt	PCC	33.7	28.0	S. "N" St. returns
439+07.78	441+22.33	Lt	HMA	200.0		Mainline Detour Paving at East End Tie-In
441+45.03	445+00.00	Lt	HMA	598.6		Mainline Detour Paving at East End Tie-In
441+22.97	443+48.00	Rt	HMA	86.0		Mainline Detour Paving at East End Tie-In
11277+89.54	11283+98.25	NB & SB	HMA	1270.8		Co.Rd. R-57 Detour Pavement
11284+92.87	11289+34.28	NB & SB	HMA	1109.1		Co.Rd. R-57 Detour Pavement
18386+48.19	18392+53.72	NB & SB	HMA	1472.8		Co.Rd. R-63 Detour Pavement
18392+77.35	18397+71.90	NB & SB	HMA	1177.7		Co.Rd. R-63 Detour Pavement
	Totals =			64699.6		

110-2
04-16-13

REMOVAL OF EXISTING STRUCTURES

Location	Description	Remarks
358+05.35	2x2 RCB w/30" ext.	Including headwalls
379+69.09	2x2 RCB w/30" ext.	Including headwalls
390+78.55	2x2 RCB w/30" ext.	Including headwalls

110-5
08-01-08

SIDEWALK REMOVAL

Begin Station	End Station	Area	Remarks
		SY	
451+56.38 Lt		1.8	
452+26.29 Lt		7.9	
454+14.44 Rt		10.5	
454+66.22 Rt		9.8	
454+70.01 Lt		2.5	
455+37.86 Lt		11.0	
455+92.91 Lt		6.6	
	Total =	50.2	

110-8
08-01-08

REMOVAL OF CONCRETE DRIVES

Location: Station	Location: Side	Area SY	Remarks
324+07.61	Rt	113.9	
355+57.33	Rt	57.4	
398+16.98	Lt	196.1	
423+11.51	Lt	911.7	Removal as directed by Engineer
425+99.40	Lt	136.5	
427+53.90	Lt	108.7	
429+54.16	Lt	149.8	
430+78.41	Rt	339.5	
431+96.41	Lt	100.5	
433+46.06	Lt	35.7	
433+47.85	Rt	279.1	
440+48.56	Rt	125.7	
442+23.75	Rt	192.1	
446+48.51	Rt	181.9	
446+56.51	Lt	134.7	
447+68.44	Rt	173.8	
448+17.01	Lt	203.8	
448+54.51	Rt	168.4	
449+42.01	Lt	185.9	
458+76.10	Lt	85.6	
460+15.20	Lt	108.8	
461+34.29	Lt	65.8	
Total =		4055.0	

110-9
10-18-11

CULVERT ABANDONMENT

Refer to Details 4315 and 4316

* Not a bid item

Location Station	Description	Fill Material: Flowable Mortar (CY)	Fill Material: Granular Backfill* (TON)	4" Perforated Subdrain* (LF)	Remarks
277+57.37	2x2 RCB w/30" RCP ext.	9.4	0.2	4.0	Remove aprons and extensions
292+63.66	3x2 RCB w/36" ext.	12.2	0.2	4.0	Remove aprons and extensions
307+42.49	3x2 RCB w/36" ext.	13.0	0.2	4.0	Remove aprons and extensions
315+86.80	2x2 RCB w/30" ext.	8.8	0.2	4.0	Remove aprons and extensions
329+73.63	2x2 RCB w/30" ext.	9.0	0.2	4.0	Remove aprons and extensions
332+80.53	2x2 RCB w/30" ext.	9.0	0.2	4.0	Remove aprons and extensions
341+78.56	2x2 RCB w/30" ext.	8.8	0.2	4.0	Remove aprons and extensions
	Total =	70.2			

108-13A
08-01-08

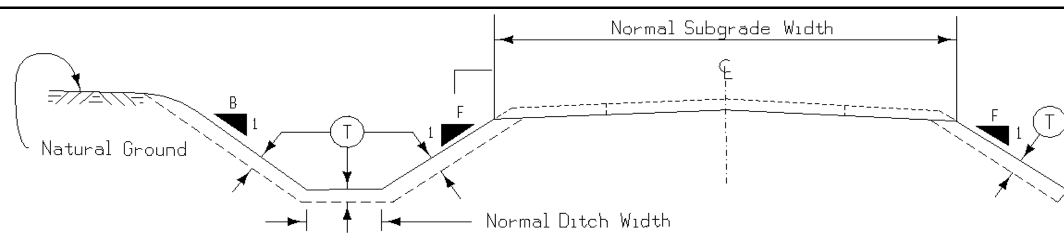
SAFETY CLOSURES

Refer to Section 2518 of the Standard Specifications

Station	Closure Type: Road Qty.	Closure Type: Hazard Qty.	Remarks
Ia.92			
256+00.00	1		
Kennedy St.			
1257+00.00	1		
Co. Rd. R-57			
1280+00.00	1		
1386+25.00	1		
Ia.92			
390+25.00	1		
90TH Ave.			
2305+50.00	1		
2314+00.00	1		
Co. Rd. R-63			
3388+50.00	1		
3393+50.00	1		
Y' Street			
4413+75.00	1		
4422+75.00	1		
Total =	11		

103-4
04-19-11

TABULATION OF SPREADING TOPSOIL

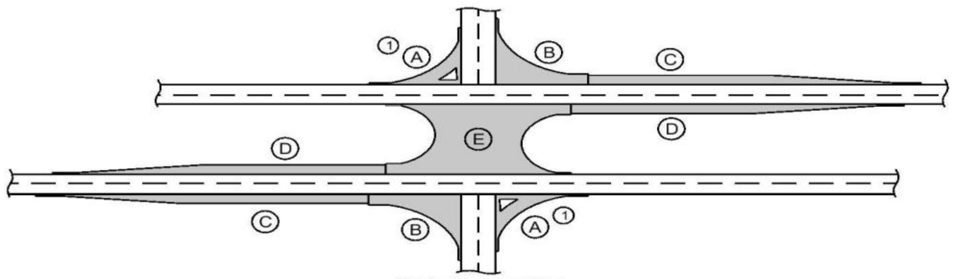


Perform this work according to Section 2105. Prior to placing topsoil on any cohesive soil, scarify the area to be covered to a minimum depth of 3 inches.

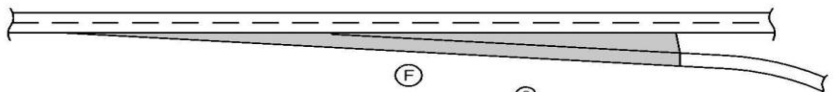
Appropriate adjustments have been made in the template quantities to reflect the placement of topsoil on foreslope, backslope and ditch bottom as detailed hereon.

Area No.	Quantity CY	Location Station	to Station	Side L. or R.	Slope B. or F.	T IN	Remarks	Topsoil Excavation Available From: Amount Reserved CY	Station	to Station	Remarks
1	42736.4	256+00.00	390+00.00	Both	Both	8.0	ML092:Rural	30556.0	256+00.00	390+00.00	ML092:Rural
2	10270.4	390+25.00	443+18.00	Both	Both	8.0	ML092: Urban STG1B and STG2B	8997.0	390+25.00	443+18.00	ML092: Urban STG1B and STG2B
3	1792.0	443+23.01	464+92.00	Both	Both	8.0	ML092: Widening	126.0	443+23.01	464+92.00	ML092: Widening
4	133.0	1257+10.00	1258+50.00	Both	Both	8.0	Kennedy	0.0	1257+10.00	1258+50.00	Kennedy
5	331.8	1280+60.00	1283+50.00	Both	Both	8.0	R57S	0.0	1280+60.00	1283+50.00	R57S
6	302.4	1384+25.00	1386+06.00	Both	Both	8.0	R57N	0.0	1384+25.00	1386+06.00	R57N
7	1282.4	2305+85.00	2313+85.00	Both	Both	8.0	90th		2305+85.00	2313+85.00	90th
8	92.4	3388+60.00	3390+75.00	Both	Both	8.0	R63S	0.0	3388+60.00	3390+75.00	R63S
9	100.8	3391+31.95	3393+05.00	Both	Both	8.0	R63N	0.0	3391+31.95	3393+05.00	R63N
10	477.4	4414+15.00	4417+25.32	Both	Both	8.0	YSTS	0.0	4414+15.00	4417+25.32	YSTS
11	1162.0	4417+64.40	4422+60.00	Both	Both	8.0	YSTN	0.0	4417+64.40	4422+60.00	YSTN
12	1734.6	11277+89.54	11290+40.39	Both	Both	8.0	DET R57	0.0	11277+89.54	11290+40.39	Detour R57
13	1118.6	18388+00.00	18396+25.00	Both	Both	8.0	DET R63	0.0	18388+00.00	18396+25.00	R63
TOTAL	61534.2						TOTAL	39679.0			

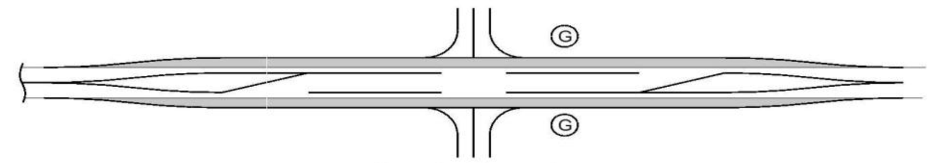
PCC PAVEMENT



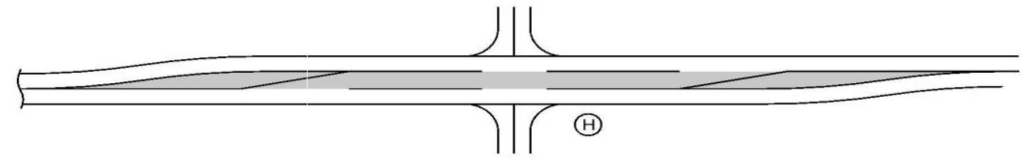
Typical Intersection



Ramp or Loop Taper 2



Channelized Intersection
Widen Existing Roadway

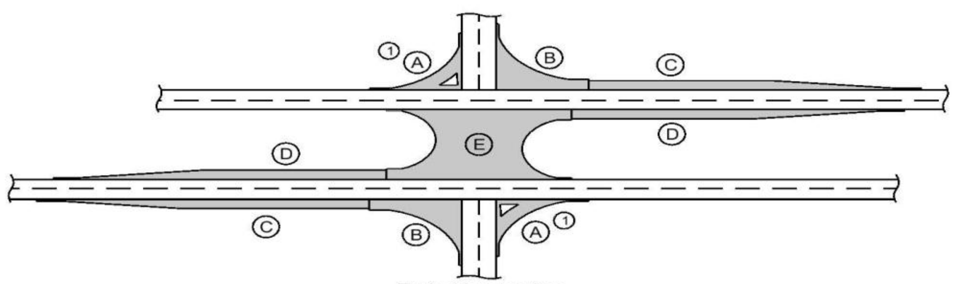


Channelized Intersection
Reconstructed Roadway

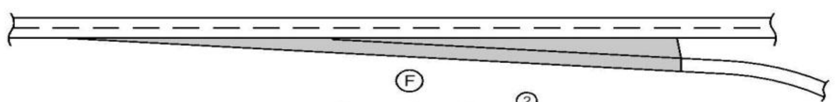
1. Does not include island area or curb. Refer to tabulation 112-4 for quantities.
2. Refer to PV-410, PV-411, PV-412, and PV-414.
3. Quantity includes Pavement Header.

Location				Mainline			Area 3								Total Area By Pavement Thickness		Special Backfill	Modified Subbase	Granular Subbase	Remarks
Road Identification	Direction of Travel	Station to Station		Width	Length	Area	A 2	B	C	D	E	F	G	H	SY					
				FT	FT	SY	SY	SY	SY	SY	SY	SY	SY	SY	10 IN	10½ IN	TONS	CY	SY	
Ia. 92	WB	256+50.00	271+47.79	14.0	1497.8	2329.9									2329.9		904.3		2912.4	
Ia. 92	EB	256+50.00	271+47.79	14.0	1497.8	2329.9									2329.9		904.3		2919.4	
Ia. 92	WB	271+47.79	301+54.21	14.0	3006.4	4676.7									4676.7		1815.2		5845.9	
Ia. 92	EB	271+47.79	301+54.21	14.0	3006.4	4676.7									4676.7		1815.2		5845.9	
Ia. 92	Both	271+47.79	301+54.21	Varies	3006.4									3786.7	3786.7		1192.8		3786.7	Center Turn Lane & Channelized Area
Ia. 92 - E.B. Turn Lane	EB	279+39.00	282+94.00	Varies	355.0				567.8						567.8		178.5		567.8	Rt. Turn Lane at Co. Rd. R-57
Ia. 92 - W.B. Turn Lane	WB	284+48.00	292+08.00	Varies	760.0				1306.7						1306.7		411.6		1306.7	Rt. Turn Lane at Co. Rd. R-57
Ia. 92	WB	301+54.21	378+78.79	14.0	7724.6	12016.0									12016.0		4663.8		15019.8	
Ia. 92	EB	301+54.21	378+78.79	14.0	7724.6	12016.0									12016.0		4663.8		15019.8	
Ia. 92	WB	378+78.79	391+00.00	14.0	1221.2	1899.7									1899.7		737.3		2374.6	
Ia. 92	EB	378+78.79	391+00.00	14.0	1221.2	1899.7									1899.7		737.3		2374.6	
Ia. 92	EB	378+78.79	391+00.00	Varies	1221.2									1392.1	1392.1		438.5		1397.8	Center Turn Lane & Channelized Area
Ia. 92	EB	386+70.00	390+25.00	Varies	355.0				567.9						567.9		178.9		567.9	Rt. Turn Lane at Co. Rd. R-63
Ia. 92	WB	391+92.00	398+19.88	Varies	627.9				614.3						614.3		193.5		614.3	Rt. Turn Lane at Co. Rd. R-63
Ia. 92	WB	391+00.00	441+09.29	15.0	5009.3	8348.8									8348.8			3385.9		
Ia. 92	EB	391+00.00	441+09.29	15.0	5009.3	8348.8									8348.8			3385.9		
Ia. 92	Both	391+00.00	441+27.50	16.0	5027.5	8937.8									8937.8			2979.3		Center Turn Lane
Ia. 92	WB	441+09.29	443+18.01	Varies	208.7	345.8									345.8			138.9		
Ia. 92	EB	441+09.29	443+18.01	Varies	208.7	306.0									306.0			124.1		
Ia. 92	Both	441+27.50	443+18.01	Varies	190.5	320.0									320.0			106.7		Center Turn Lane
Urban Widening																				
Ia. 92	EB	443+18.01	443+40.21	2.5	22.2	6.2									6.2		4.5			
"	EB	443+40.21	444+24.52	Varies	84.3	35.2									35.2		14.9			South R St. curb and returns
"	EB	444+24.52	453+91.57	2.5	967.1	268.6									268.6		194.6			
"	EB	453+91.57	454+86.45	Varies	94.9	55.7									55.7		23.9			South P St. curb and returns
"	EB	454+86.45	461+85.60	2.5	699.2	194.2									194.2		140.7			
"	EB	461+85.60	462+62.57	Varies	77.0	49.0									49.0		21.4			South N St. curb and returns
"	EB	462+62.57	464+92.00	2.5	229.4	63.7									63.7		46.2			
"	WB	443+18.01	451+46.61	2.5	828.6	230.2									230.2		166.8			
"	WB	451+46.61	452+38.91	Varies	92.3	72.5									72.5		32.1			South Kenwood Blvd. curb and returns
"	WB	452+38.91	455+21.32	2.5	282.4	78.4									78.4		56.8			
"	WB	455+21.32	456+11.24	Varies	89.9	91.1									91.1		32.3			South P St. curb and returns
"	WB	456+11.24	464+92.00	2.5	880.8	244.7									244.7		177.3			

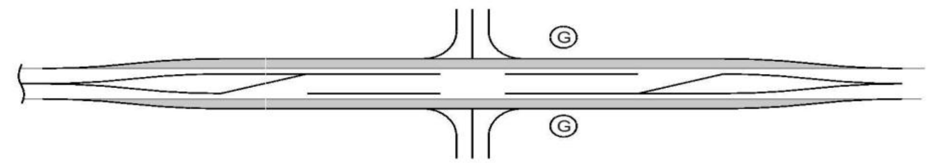
PCC PAVEMENT



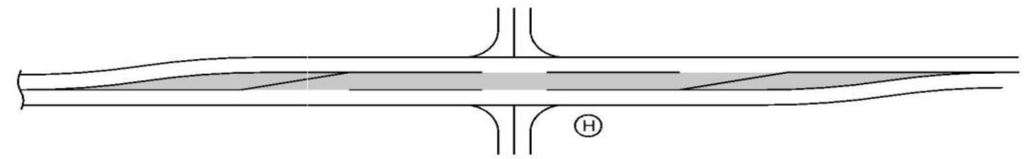
Typical Intersection



Ramp or Loop Taper 2



Channelized Intersection
Widen Existing Roadway



Channelized Intersection
Reconstructed Roadway

1. Does not include island area or curb. Refer to tabulation 112-4 for quantities.
2. Refer to PV-410, PV-411, PV-412, and PV-414.
3. Quantity includes Pavement Header.

Road Identification	Location: Direction of Travel	Location: Station to Station		Mainline: Width	Mainline: Length	Mainline: Area	Area 3: A 2	B	C	D	E	F	G	H	Total Area By Pavement Thickness: 10 IN	10½ IN	Special Backfill	Modified Subbase	Granular Subbase	Remarks
				FT	FT	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	TONS	CY	SY	
Co. Rd. R-57																				
R-57	NB & SB	1280+60.00	1283+59.24	22.0	299.2	731.5									731.5		293.3			Mainline
"	NB & SB	1383+98.17	1386+06.00	22.0	207.8	508.0									508.0		203.6			Mainline
"	NB	1383+98.17	1386+06.00	Varies	207.8			462.6							462.6		172.9			Return #1-NE Quad. Of Intersection
"	SB	1383+98.17	1385+36.60	Varies	138.4		398.8								398.8		151.7			Return #2-NW Quad. Of Intersection
"	SB	1281+54.45	1283+59.24	Varies	204.8			456.8							456.8		170.8			Return #3-SW Quad. Of Intersection
"	NB	1282+22.45	1283+59.24	Varies	136.8		402.0								402.0		152.6			Return #4-SE Quad. Of Intersection
Co. Rd. R-63																				
R-63	NB & SB	3388+60.00	3390+88.93	22.0	228.9	559.6									559.6		224.3			Mainline
"	NB & SB	3391+34.46	3393+05.00	22.0	170.5	416.9									416.9		167.1			Mainline
"	NB	3391+34.46	3393+02.01	Varies	167.5			364.3							364.3		137.2			Return #1-NE Quad. Of Intersection
"	SB	3391+34.46	3392+50.13	Varies	115.7		372.1								372.1		142.7			Return #2-NW Quad. Of Intersection
"	SB	3389+14.04	3390+88.93	Varies	174.9			442.6							442.6		162.7			Return #3-SW Quad. Of Intersection
"	NB	3389+77.13	3390+88.93	Varies	111.8		278.1								278.1		109.3			Return #4-SE Quad. Of Intersection
Y Street																				
Y Street	NB & SB	4414+15.00	4417+25.21	25.0	310.2	861.7									861.7		336.6			Mainline
"	NB & SB	4417+64.32	4422+60.00	31.0	495.7	1707.3									1707.3		641.9			Mainline
"	NB	4417+64.32	4419+15.98	Varies	151.7			232.6							232.6		97.7			Return #1-NE Quad. Of Intersection
"	SB	4417+64.32	4418+93.99	Varies	129.7		256.9								256.9		106.8			Return #2-NW Quad. Of Intersection
"	SB	4415+71.91	4417+25.21	Varies	153.3			201.7							201.7		85.8			Return #3-SW Quad. Of Intersection
"	NB	4416+01.51	4417+25.21	Varies	123.7		227.7								227.7		93.8			Return #4-SE Quad. Of Intersection
														Totals=	86957.9		23197.3	10120.7	60553.4	

SHOULDERS

(1) Lane(s) to which the shoulder is adjacent.
(2) Bid Item
(3) Applies only for Paved Shoulders constructed on project with existing granular shoulders.
(4) Does not include shrink.

Calculations assume a HMA unit weight (lbs/cf) of 145, a Special Backfill unit weight (lbs/cf) of 140, and a Granular Shoulder unit weight (lbs/cf) of 140.

Location					Quantities																			Remarks
Road Identification	Direction Of Traffic (1)	Station to Station		Side	(P) Width	(G) Width	(L) Length	Class 13 Excavation (3)	Hot Mix Asphalt		Binder	Paved Shoulder	Reinforced Paved Shoulder	Special Backfill				Modified Subbase	Granular Shoulder		Earth Shoulder Construction Alternates			
														HMA Alternate		PCC Alternate						HMA	PCC	
					FT	FT	FT	CY (2)	TON	TON/STA	TONS	SY (2)	SY (2)	TON (2)	TON/STA	TON (2)	TON/STA	CY (2)	TON (2)	TON/STA	STA (2)	CY (4)	CY (4)	
Ia 92	WB	256+50.00	257+70.00	Lt	4.0	2 to 4	120.0		23.2	19.4	1.4	53.3		51.0	42.5	56.3	46.9		15.0	12.5	1.2	47.3	47.3	
"	EB	256+50.00	257+70.00	Rt	4.0	2 to 4	120.0		23.2	19.4	1.4	53.3		51.0	42.5	56.3	46.9		15.0	12.5	1.2	47.3	48.0	
"	WB	257+70.00	281+93.58	Lt	8.0		2423.6		936.5	38.6	56.2	2154.3		1302.9	53.8	1448.8	59.8				24.2	1578.0	1585.2	
"	EB	257+70.00	279+39.00	Rt	8.0		2169.0		838.2	38.6	50.3	1928.0		1166.1	53.8	1296.6	59.8				21.7	1654.1	1660.5	
"	WB	282+00.68	282+79.35	Lt	0 to 6		78.7		11.4	14.5	0.7	26.2		10.2	13.0	12.3	15.6				0.8	17.6	17.6	
"	WB	282+79.35	283+22.95	Lt	6.0		43.6		12.6	29.0	0.8	29.1		16.3	37.5	18.3	41.9				0.4	17.6	17.6	portion of R-5
"	EB	279+59.00	280+39.00	Rt	0 to 6		80.0		11.6	14.5	0.7	26.7		10.4	13.0	12.5	15.6				0.8	43.5	44.0	
"	EB	280+39.00	283+15.78	Rt	6.0		276.8		80.3	29.0	4.8	184.5		103.7	37.5	115.9	41.9				2.8	142.8	145.4	portion of R-5
"	EB	284+18.63	284+73.04	Rt	6.0		54.4		15.8	29.0	0.9	36.3		20.4	37.5	22.8	41.9				0.5	29.0	29.2	
"	EB	284+73.04	285+36.35	RT	6.0	0.0	63.3		9.2	14.5	0.6	21.1		8.2	13.0	9.9	15.6				0.6	25.3	26.0	
"	WB	284+27.41	290+88.00	Lt	6.0		660.6		191.6	29.0	11.5	440.4		247.4	37.5	276.5	41.9				6.6	282.6	285.0	
"	WB	290+88.00	291+55.36	Lt	6 to 1.5		67.4		13.0	19.4	0.8	28.1		14.2	21.1	16.7	24.8				0.7	28.1	28.3	
"	EB	285+48.62	386+70.00	Rt	8.0		10121.4		3911.2	38.6	234.7	8996.8		5441.3	53.8	6050.6	59.8				101.2	4693.3	4704.6	
"	WB	292+08.00	389+14.00	Lt	8.0		9706.0		3750.6	38.6	225.0	8627.6		5217.9	53.8	5802.2	59.8				97.1	4497.1	4511.5	
"	EB	386+89.70	387+70.00	Rt	0 to 6		80.3		11.6	14.5	0.7	26.8		10.4	13.0	12.5	15.6				0.8	33.5	33.8	
"	EB	387+70.00	390+48.62	Rt	6.0		278.6		80.8	29.0	4.8	185.7		104.3	37.5	116.6	41.9				2.8	113.8	114.6	portion of R-6
"	WB	389+58.41	390+13.50	Lt	0 to 6		55.1		8.0	14.5	0.5	18.4		7.1	13.0	8.6	15.6				0.6	22.0	20.7	
"	WB	390+13.50	390+71.72	Lt	6.0		58.2		16.9	29.0	1.0	38.8		21.8	37.5	24.4	41.9				0.6	24.3	24.4	portion of R-6
Co. Rd. R-57																								
R-57	NB	1280+60.00	1283+25.78	Rt		6.0	265.8												125.6	47.3	2.7			
"	NB	1384+34.94	1386+06.00	Rt		6.0	171.1												80.8	47.3	1.7			
"	SB	1280+60.00	1283+22.61	Lt		6.0	262.6												124.1	47.3	2.6			
"	SB	1384+35.03	1386+06.00	Lt		6.0	171.0												80.8	47.3	1.7			
Co. Rd. R-63																								
R-63	NB	3388+60.00	3390+53.08	Rt		6.0	193.1												91.2	47.3	1.9			
"	NB	3391+77.07	3393+05.00	Rt		6.0	127.9												60.4	47.3	1.3			
"	SB	3388+60.00	3390+50.73	Lt		6.0	190.7												90.1	47.3	1.9			
"	SB	3391+83.39	3393+05.00	Lt		6.0	121.6												57.5	47.3	1.2			

PROPOSED SUBGRADE TREATMENT

(For Additional Details see Soils Survey Sheet No. to .)

No.	Location		Description					Type		Quantity		Polymer Grid	Available From		Remarks
	Begin Station	End Station	Side	Type	Depth	Width	Area	Material	Shrink %				Quantity	Location or Station to Station	
					FT	FT	SF			CY	TON	SY	CY		
1	+00.00	+00.00			2.5	32.0	0.0	MODIFIED SUBBASE (SEE ART. 4132)	10.00%	0.0	0.000				

ACCESS POINTS AND SAFETY RAMPS

Refer to Cross-Sections

Length of unclassified pipe calculated is based on using Reinforced Concrete Pipe.
(1) Refer to MI-210
(2) Refer to EW-501.
(3) Refer to EW-501 or EW-502.
*Predetermined for access point not constructed with this project.

Location		Type	Length of Opening (1)				(1) (2)	(2)	Pipe Culvert (3)					Aprons	Driveway Surface Area		Driveway Surfacing Material	Remarks
Station	Side	A, B, C, Safety Ramp, or Predetermined*	Case	1½" Dropped Curb	3" Dropped Curb	W	PR	SR	H	Size	Pipe Length	Lt.	Rt.		HMA	PCC		
			1 or 2	LF	LF	FT	FT	FT	FT	IN	LF	LF	LF	No.	SY	SY	TON	
270+56.00	Lt	Jt. C				30.0		15.0		18.0	76.0	47.0	41.2	2			29.400	ENT270
	99' LT	ENT269				14.0		15.0		18.0	46.0	34.4	23.8	2			163.000	ENT269 - Jt. w/ENT270
270+56.00	RT	Jt. C				30.0		15.0		18.0	133.9	63.6	82.5	2			70.000	
276+46.00	Lt	Jt. C				24.0		15.0		18.0	111.6	55.2	68.6	2			54.120	ENT275 & ENT276
291+80.00	Lt	C				20.0		15.0		18.0	62.0	34.2	40.0	2			22.800	
291+80.00	Rt	C				20.0		15.0		18.0	74.0	48.0	38.2	2			36.800	
297+08.00	Lt	C				30.0		15.0		18.0	60.0	37.9	34.3	2			21.080	
297+08.00	Rt	Jt. C				30.0		15.0		18.0	91.9	44.4	59.9	2			58.400	ENT298
	95' Rt	ENT297				12.0		-		18.0	18.0	12.4	17.8	2			24.000	ENT297 - Jt. w/ENT298
305+31.00	Rt	C				20.0		15.0		18.0	68.0	48.7	31.5	2			25.600	
315+00.00	Rt	C				24.0		15.0									140.000	
324+07.61	Lt	C				24.0		15.0		18.0	80.0	40.5	51.7	2			29.000	
324+07.61	Rt	C				24.0		20.0								155.9		6" PCC Driveway
334+27.00	Rt	C				24.0		15.0		18.0	82.0	42.4	51.8	2			37.760	
341+03.00	Lt	Jt. C				35.0		15.0									44.200	
341+03.00	Rt	C				24.0		15.0		36.0	86.0	50.1	48.1	2			203.160	
352+40.00	Lt	C				24.0		15.0									53.520	
352+40.00	Rt	C				24.0		15.0		18.0	50.0	32.7	29.5	2			19.680	
359+18.00	Lt	C				24.0		15.0		18.0	72.0	44.3	39.8	2		516.7		8" PCC Driveway
365+37.00	Lt	B				30.0		15.0		18.0	86.0	49.9	48.3	2			88.800	
365+37.00	Rt	C				24.0		15.0		18.0	80.0	43.4	48.8	2			47.870	
375+45.00	Lt	C				24.0		15.0		18.0	72.0	40.5	43.7	2			25.200	
375+45.00	Rt	C				24.0		15.0		18.0	105.9	61.6	56.5	2			39.200	
398+16.98	Lt	B				37.0	12.0									228.5		
407+00.00	**Lt**					**X**												
407+00.00	**Rt**					**X**												
419+80.63*	Lt	B	2	155.3		70.0										151.9	80.000	*4" Granular Surface at 140 pcf Back of sw
423+11.51**	**Lt**	**Jt. B**	**2**	**203.5**		**70.0**										**1044.4**		****10' PCC Pavement w/12" Modified Subbase**
425+99.40	Lt	B	1	42.0		24.0										162.1		
427+53.90	Lt	B	1	42.0		24.0										144.9		
429+54.16	Lt	B	1	50.0		32.0										181.6		
430+78.41	Rt	B	1	42.0		24.0										151.7		
431+96.41	LT	B	1	43.0		25.0										114.1		
433+46.06	Lt	B	1	44.5		26.5										78.3		
433+46.06	Rt	B	1	42.0		24.0										138.3		
438+08.06	Lt	B	1	42.0		24.0										71.7		

ACCESS POINTS AND SAFETY RAMPS

Refer to Cross-Sections

Length of unclassified pipe calculated is based on using Reinforced Concrete Pipe.
(1) Refer to MI-210
(2) Refer to EW-501.
(3) Refer to EW-501 or EW-502.
*Predetermined for access point not constructed with this project.

Location		Type	Length of Opening (1)				(1) (2)	(2)	Pipe Culvert (3)						Driveway Surface Area		Driveway Surfacing Material	Remarks
Station	Side	A, B, C, Safety Ramp, or Predetermined*	Case 1 or 2	1½" Dropped Curb LF	3" Dropped Curb LF	W FT	PR FT	SR FT	H FT	Size IN	Pipe Length LF	Lt. LF	Rt. LF	Aprons No.	HMA SY	PCC SY	TON	
440+48.56	Rt	B	1	42.4		24.0										70.8		
442+23.75	Rt	B	1	63.5		51.3										157.7		
446+48.51	**Rt**	**B**	**1**	**62.0**		**44.0**										**164.4**		
446+56.51	Lt	B	1	41.0		35.0										196.7		
447+68.44	Rt	B	1	63.0		33.0										115.0		
448+17.01	Lt	B	1	36.0		30.0										168.9		
448+54.51	Rt	B	1	51.0		33.0										115.0		
449+42.01	Lt	B	1	44.0		38.0										150.0		
448+76.10	Lt	B	1	38.0		24.0										72.4		Driveway width measured at back of walk
460+15.20	Lt	B	1	38.0		24.0										85.9		Driveway width measured at back of walk
461+34.29	Lt	B	1	38.0		24.0										66.2		Driveway width measured at back of walk
KENNEDY ST.																		
1257+10.00	Rt	C				20.0		15.0									83.200	ENT1257
ACCESS 258																		
1259+82.50	Lt	Jt. C				12.0				24.0	87.0	41.8	57.4	2			139.400	ENT258A
1259+82.50	Lt	Jt. C				10.0											63.800	ENT258B
1260+80.00	Lt	C				20.0		20.0									12.000	ENT258C
1261+20.00	CL	C				12.0											46.000	ENT258D
Co. Rd. R-57																		
1281+92.00	Lt	C				20.0		15.0		18.0	X	X	X	2			16.680	
1281+92.00	Rt	C				20.0		15.0		18.0	X	X	X	2			19.240	
1386+92.00	Rt	C				24.0		15.0		18.0	X	X	X	2			31.520	
90th AVE																		
2306+07.14	Rt	C				24.0		15.0		18.0	69.0	46.3	34.9	2			10.400	
2307+80.00	Rt	C								18.0	X	X	X	2			17.200	
2313+08.00	Rt	C				20.0		15.0		18.0	x	x	x	2			12.000	
Co. Rd. R-63																		
3388+79.00	Lt	C				24.0		15.0		18.0	50.0	36.2	26.0	2			16.480	
					Totals =					18"	1488.0							
										24"	87.0							
										36"	86.0							
										18" Ap	52.0							
										24" Ap	2.0							
										36" Ap	2.0							

PAVEMENT MARKING LINE TYPES

See PM-110

*BCY4 - Place on the same side of the roadway to match existing markings near the project.
**NPY4 - For estimating purposes only. No Passing Zone Lines will be located in the field.
***MNY4 - Factor of 1.00 as value includes number of 4-inch passes to cover median nose area.

BCY4: Broken Centerline (Yellow) @ 0.25
ELY4: Edge Line Left (Yellow) @ 1.00
CLW6: Crosswalk Line (White) @ 3.00
DCY4: Double Centerline (Yellow) @ 2.00
SLW4: Solid Lane Line (White) @ 1.00
NPY4: No Passing Zone Line (Yellow) @ 1.25
CHY8: Channelizing Line (Yellow) @ 2.00
BLW4: Broken Lane Line (White) @ 0.25
SPW6: Sloped Curb 6" (White) @ 3.40
ELW4: Edge Line Right (White) @ 1.00
SLW2: Stop Line (White) @ 6.00

Location								Length by Line Type (Unfactored)															
Road ID	Station to Station		Dir. of Travel	Marking Type	Side			BCY4*	DCY4	NPY4**	BLW4	ELW4	ELY4	SLW4	CHY8	SPW6	SLW2	CLW6					Remarks
					L	C	R	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	
ML 92	281+19.00	282+94.00	EB	Waterborne/Solvent Paint		X								1.75									
ML 92	281+19.00	282+94.00	EB	Waterborne/Solvent Paint		X								1.75									
ML 92	281+44.00	282+94.10	EB	Waterborne/Solvent Paint		X								1.50									
ML 92	284+48.00	289+38.00	WB	Waterborne/Solvent Paint		X								4.90									
ML 92	284+48.00	289+38.00	WB	Waterborne/Solvent Paint		X								4.90									
ML 92	284+48.00	285+98.00	WB	Waterborne/Solvent Paint		X								1.50									
ML 92	388+50.00	390+25.00	EB	Waterborne/Solvent Paint		X								1.75									
ML 92	388+75.00	390+25.00	EB	Waterborne/Solvent Paint		X								1.50									
ML 92	388+50.00	390+25.00	EB	Waterborne/Solvent Paint		X								1.75									
ML 92	391+79.93	396+69.88	WB	Waterborne/Solvent Paint		X								4.90									
ML 92	391+79.93	416+48.80	WB	Waterborne/Solvent Paint		X								24.69									
ML 92	391+79.93	393+29.11	WB	Waterborne/Solvent Paint		X								1.49									
ML 92	256+50.00	258+12.30	EB	Waterborne/Solvent Paint			X					1.62											
ML 92	256+50.00	258+45.63	WB	Waterborne/Solvent Paint			X					1.96											
ML 92	259+37.19	282+74.15	EB	Waterborne/Solvent Paint			X					23.37											
ML 92	259+30.97	282+80.60	WB	Waterborne/Solvent Paint			X					23.50											
ML 92	284+80.48	309+66.63	EB	Waterborne/Solvent Paint			X					24.86											
ML 92	284+96.44	309+65.39	WB	Waterborne/Solvent Paint			X					24.69											
ML 92	310+89.64	390+05.86	EB	Waterborne/Solvent Paint			X					79.16											
ML 92	310+92.58	389+14.00	WB	Waterborne/Solvent Paint			X					78.12											
ML 92	256+50.02	271+47.79	BOTH	Waterborne/Solvent Paint		X		14.98															
ML 92	301+54.21	378+79.00	BOTH	Waterborne/Solvent Paint		X		77.25															
ML 92	393+29.30	416+49.10	BOTH	Waterborne/Solvent Paint		X		46.40															
ML 92	418+14.39	441+09.70	BOTH	Waterborne/Solvent Paint		X		45.90															
ML 92	442+28.00	443+59.50	BOTH	Waterborne/Solvent Paint		X		2.64															
ML 92	444+04.80	451+71.70	BOTH	Waterborne/Solvent Paint		X		15.34															
ML 92	452+08.26	454+19.76	BOTH	Waterborne/Solvent Paint		X		4.24															
ML 92	454+73.40	455+56.76	BOTH	Waterborne/Solvent Paint		X		1.66															
ML 92	455+77.29	462+10.80	BOTH	Waterborne/Solvent Paint		X		12.68															
ML 92	462+37.36	465+01.02	BOTH	Waterborne/Solvent Paint		X		5.28															
ML 92	265+45.59	271+47.79	BOTH	Waterborne/Solvent Paint		X				6.02													
ML 92	301+54.21	307+54.21	BOTH	Waterborne/Solvent Paint		X				6.00													
ML 92	372+78.79	378+79.00	BOTH	Waterborne/Solvent Paint		X				6.00													
ML 92	393+29.30	416+49.10	BOTH	Waterborne/Solvent Paint		X				46.40													
ML 92	418+14.39	441+09.70	BOTH	Waterborne/Solvent Paint		X				45.90													
ML 92	442+28.00	443+59.50	BOTH	Waterborne/Solvent Paint		X				2.64													
ML 92	444+04.80	451+71.70	BOTH	Waterborne/Solvent Paint		X				15.34													
ML 92	452+08.26	454+19.76	BOTH	Waterborne/Solvent Paint		X				4.24													
ML 92	454+73.40	455+56.76	BOTH	Waterborne/Solvent Paint		X				1.66													
ML 92	455+77.29	462+10.80	BOTH	Waterborne/Solvent Paint		X				12.68													
ML 92	462+37.36	465+01.02	BOTH	Waterborne/Solvent Paint		X				5.28													
ML 92	391+79.93	393+29.93	BOTH	Waterborne/Solvent Paint		X			1.50														
ML 92	271+47.79	282+94.00	BOTH	Waterborne/Solvent Paint		X									27.21								
ML 92	284+48.00	301+54.00	BOTH	Waterborne/Solvent Paint		X									43.32								
ML 92	378+78.90	390+25.00	BOTH	Waterborne/Solvent Paint		X									22.99								
SR57N	1384+10.19	1384+19.97	NB	Waterborne/Solvent Paint		X										0.80							
SR57N	1384+10.00	1384+19.41	NB	Waterborne/Solvent Paint		X											0.50						
SR57N	1384+08.94	1384+88.15	BOTH	Waterborne/Solvent Paint			X					4.43											
SR57N	1384+10.17	1386+05.99	BOTH	Waterborne/Solvent Paint		X		1.96															
SR57N	1384+10.17	1386+05.99	BOTH	Waterborne/Solvent Paint		X				1.96													
SR57S	1283+36.54	1283+46.92	SB	Waterborne/Solvent Paint		X										0.86							
SR57S	1283+47.59	1283+47.83	SB	Waterborne/Solvent Paint		X											0.48						
SR57S	1282+79.99	1283+36.28	BOTH	Waterborne/Solvent Paint			X					6.25											
SR57S	1280+67.27	1283+47.21	BOTH	Waterborne/Solvent Paint		X		2.90															
SR57S	1280+67.27	1283+47.21		Waterborne/Solvent Paint		X				2.90													
SR63N	3391+47.22		NB	Waterborne/Solvent Paint		X											0.58						
SR63N	3391+50.00	3391+93.70	BOTH	Waterborne/Solvent Paint			X					3.85											
SR63N	3391+47.22	3393+05.00	BOTH	Waterborne/Solvent Paint		X		1.58															
SR63N	3391+47.22	3393+05.00	BOTH	Waterborne/Solvent Paint		X				1.58													
SR63N	3391+67.03		BOTH	Waterborne/Solvent Paint																			
SR63S	3390+64.80		SB	Waterborne/Solvent Paint		X											0.55						
SR63S	3390+26.10	3390+75.42	BOTH	Waterborne/Solvent Paint			X					4.99											
SR63S	3388+60.00	3390+74.87	BOTH	Waterborne/Solvent Paint		X		2.15															
SR63S	3388+60.00	3390+74.87	BOTH	Waterborne/Solvent Paint		X				2.15													
SR63S	3390+66.00																						
SRYSTN	4417+80.11	4422+60.14	BOTH	Waterborne/Solvent Paint		X		4.80															

PAVEMENT MARKING LINE TYPES

See PM-110

*BCY4 - Place on the same side of the roadway to match existing markings near the project.
***MNY4 - Factor of 1.00 as value includes number of 4-inch passes to cover median nose area.
**NPY4 - For estimating purposes only. No Passing Zone Lines will be located in the field.

BCY4: Broken Centerline (Yellow) @ 0.25
DCY4: Double Centerline (Yellow) @ 2.00
NPY4: No Passing Zone Line (Yellow) @ 1.25
BLW4: Broken Lane Line (White) @ 0.25
ELW4: Edge Line Right (White) @ 1.00
ELY4: Edge Line Left (Yellow) @ 1.00
SLW4: Solid Lane Line (White) @ 1.00
CHY8: Channelizing Line (Yellow) @ 2.00
SPW6: Sloped Curb 6" (White) @ 3.40
SLW2: Stop Line (White) @ 6.00
CLW6: Crosswalk Line (White) @ 3.00

Location								Length by Line Type (Unfactored)																
Road ID	Station to Station		Dir. of Travel	Marking Type	Side			BCY4*	DCY4	NPY4**	BLW4	ELW4	ELY4	SLW4	CHY8	SPW6	SLW2	CLW6					Remarks
					L	C	R	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	
SRYSTN	4417+80.11	4422+60.14	BOTH	Waterborne/Solvent Paint		X				4.80													
SRYSTN	4417+80.00	4417+88.22	BOTH	Waterborne/Solvent Paint		X											0.39						
SRYSTS	4417+04.47	4417+13.41	BOTH	Waterborne/Solvent Paint		X											0.52						
SRYSTS	4414+15.00	4417+13.31	BOTH	Waterborne/Solvent Paint		X		2.98															
SRYSTS	4414+15.00	4417+13.31	BOTH	Waterborne/Solvent Paint		X				2.98													
				Factored Total: Waterborne/Solvent Paint				60.69	3.00	210.66	-	276.80	-	52.38	187.04	5.64	18.12	-	-	-	-	-	
				Bid Quantity: Painted Pavement Markings, Waterborne or Solvent-Based							814.33												

PAVEMENT MARKING SYMBOLS AND LEGENDS

Refer to PM-111

Road Identification	Location: Station	Side	STAW	RTAW	LTAW	CSRW	CSLW	CSTW	CRLW	FERW	LLRW	RLRW	RRCW	BLSW	WCSW	WPSB	SCHOOL SCLW	XING XNGW	STOP STPW	AHEAD AHDW	ONLY ONLW	BIKE BIKW	LANE LANW	EXIT XITW	Remarks
ML 92	282+65.03																				1				
ML 92	281+90.07				1																				
ML 92	284+76.14																				1				
ML 92	285+51.14				1																				
ML 92	389+96.92																				1				
ML 92	389+21.36				1																				
ML 92	392+10.86																				1				
ML 92	392+85.95				1																				
ML 92	393+80.54				1																				
ML 92	393+54.59				1																				
ML 92	398+30.54				1																				
ML 92	398+04.59				1																				
ML 92	402+54.59				1																				
ML 92	402+80.54				1																				
ML 92	407+01.30				1																				
ML 92	407+27.26				1																				
ML 92	411+51.30				1																				
ML 92	411+77.26				1																				
ML 92	416+11.67				1																				
ML 92	416+37.62				1																				
ML 92	418+30.82				1																				
ML 92	418+56.77				1																				
ML 92	422+80.82				1																				
ML 92	423+06.77				1																				
ML 92	427+29.55				1																				
ML 92	427+55.51				1																				
ML 92	431+79.55				1																				
ML 92	432+05.51				1																				
ML 92	436+68.92				1																				
ML 92	436+42.96				1																				
ML 92	442+79.09				1																				
ML 92	443+05.04				1																				
ML 92	440+66.41				1																				
ML 92	440+92.18				1																				
ML 92	441+65.74				1																				
ML 92	441+91.51				1																				
ML 92	444+29.09				1																				
ML 92	444+55.04				1																				
ML 92	448+81.76				1																				
ML 92	449+07.75				1																				
ML 92	451+22.31				1																				
ML 92	451+48.28				1																				
ML 92	452+32.03				1																				

PAVEMENT MARKING SYMBOLS AND LEGENDS

Refer to PM-111

Road Identification	Location: Station	Location: Side	STAW	RTAW	LTAW	CSRW	CSLW	CSTW	CRLW	FERW	LLRW	RLRW	RRCW	BLSW	WCSW	WPSB	SCLW (SCHOOL)	XNGW (XING)	STPW (STOP)	AHDW (AHEAD)	ONLW (ONLY)	BIKW (BIKE)	LANW (LANE)	XITW (EXIT)	Remarks
ML 92	452+58.02				1																				
ML 92	453+82.34				1																				
ML 92	454+08.32				1																				
ML 92	454+97.23				1																				
ML 92	455+23.18				1																				
ML 92	455+96.66				1																				
ML 92	456+22.62				1																				
ML 92	460+36.69				1																				
ML 92	460+62.65				1																				
ML 92	461+65.41				1																				
ML 92	461+91.36				1																				
ML 92	462+52.10				1																				
ML 92	462+78.06				1																				
ML 92	386+62.72													1											
ML 92	388+49.83													1											
ML 92	286+99.84													1											
ML 92	292+22.54													1											
ML 92	279+20.12													1											
ML 92	281+90.05													1											
ML 92	282+65.33		1	1																					
ML 92	284+75.91		1	1																					
ML 92	389+97.59		1	1																					
ML 92	392+10.49		1	1																					

DRAINAGE STRUCTURE BY ROAD CONTRACTOR

Length of unclassified pipe calculated is based on using Reinforced Concrete Pipe.
* Not a bid item
(1) UNCL = Unclassified Pipe   CMP = Corrugated Metal Pipe   RCP = Reinforced Concrete Pipe   LCP = Arch or Elliptical Low Clearance Pipe   SARC = Steel Arch Pipe

Drainage Area (ACRE)	Location	Type	Size (IN)	Kind Of Pipe (1)	Length New Const. (LF)	Bedding Class	Design Cover (H) (FT)	Camber* (RF-30B) (FT)	Apron No. IN	Apron No. OUT	Apron Guard* (RF-26) No.	Elbow* (RF-13) No.	Diaphragm* (RF-7) No.	Tee Section* (RF-21) No.	"D" Section* (RF-13) No.	Reducer* No.	Adaptors* (RF-2) Type	Adaptors* (RF-2) No.	Connected Pipe Joint* (RF-14) Type	4" Perforated Subdrain* FT
4.4	277+75.00	1101	24	RCP	166	lass	10.1'		1	1										
21.0	292+75.00	1101	36	RCP	118	B	4.0'		1	1										
16.0	307+75.00	1101	30	RCP	146	B	8.8'		1	1										
3.0	2310+85.00	1101	24	RCP	54	B	1.8'		1	1										
6.0	315+86.80	1101	24	RCP	136	B	7.3'		1	1										
8.4	329+85.00	1101	24	RCP	136	B	8.4'		1	1										
17.0	332+95.00	1101	30	RCP	158	B	10.1'		1	1										
4.0	342+14.00	1101	24	RCP	136	B	7.6'		1	1										
5.0	358+05.00	1101	24	RCP	104	B	4.9'		1	1										
9.0	379+74.00	1101	24	RCP	120	B	6.2'		1	1										
7.0	391+07.00	1101	24	RCP	196	B	4.1'		1	1										
3.0	3392+20.00	1101	24	RCP	76	B	2.0'		1	1										

Location	Flow Line Elevations Lt.	Flow Line Elevations Rt.	Other	Other	Dimensions Lin. Ft. Total Lt.	Total Rt.	Extensions Lt.	Extensions Rt.	Skew Ahead Degrees Lt.	Skew Ahead Degrees Rt.	Dike Rt./Lt.	Dike Location Station	Dike Top Elevation	Dike Type	Class 20 CY	Flowable Mortar CY	Floodable* Backfill (A) CY	Porous* Backfill (B) CY	Flooded Backfill (A+B) CY	Remarks
277+75.00	956.16	965.80			111.6	66.4									290.1	0.0	205.9	13.5	219.4	
292+75.00	961.55	957.85			66.7	67.3									159.4	23.8	164.0	12.4	176.5	
307+75.00	968.21	964.34			73.1	85.2				20					174.6	0.0	188.7	13.0	201.7	
2310+85.00	970.16	970.96			32.3	33.9			6											90th Ave.
315+86.80	970.77	965.60			64.4	83.8				19					170.1	0.0	163.8	11.3	175.1	
329+85.00	953.31	944.65			58.2	87.8									166.0	0.0	155.4	11.0	166.4	
332+95.00	950.07	940.00			68.3	101.7			11						167.0	0.0	185.1	13.8	198.9	
342+14.00	969.19	963.86			61.7	86.4			9						666.7	0.0	156.6	11.2	167.7	
358+05.00	966.75	964.88			54.9	61.4									161.8	0.0	99.9	8.8	108.7	
379+74.00	967.25	962.58			58.3	73.8			6						128.3	0.0	150.7	9.9	160.7	
391+07.00	966.73	963.79			110.9	97.4				37										
3392+20.00	966.80	967.40			40.1	48.2														Co.Rd.R-63

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Signature Date

Printed or Typed Name
My license renewal date is December 31, 20

Pages or sheets covered by this seal:

104-5C
04-17-12

LIST OF SUBDRAIN WORK

Refer to Standard Road Plans RF-3, RF-5, RF-14, RF-19A, RF-19B, RF-19C, RF-19E and RF-19F

* Not a bid item

Location				Pipe			Aprons		Outlets				Granular Material			
No.	Station to Station		Type of Installation	Concrete C.M.P., C.M.P. Coated, or Plastic	Dia.	Length	RF-3	RF-5	RF-19E	RF-19F	Connected Pipe Joints (RF-14)*	Trench Drain	Blanket	Porous Backfill*	Class "A" Crushed Stone*	Remarks
1	307+40.42	307+99.32	Working Blanket										31.0			1.0 ft. Granular Working Blanket in drainageway
2	329+71.02	329+89.57	Working Blanket										28.0			1.0 ft. Granular Working Blanket in drainageway
3	332+71.85	332+94.04	Working Blanket										24.0			1.0 ft. Granular Working Blanket in drainageway
4	341+29.65	342+54.51	Working Blanket										93.0			1.0 ft. Granular Working Blanket in drainageway
5	379+47.27	380+14.69	Working Blanket										44.0			1.0 ft. Granular Working Blanket in drainageway
6	394+86.07	395+46.91	Working Blanket										40.0			1.0 ft. Granular Working Blanket in drainageway
7	436+38.29	436+57.06	Working Blanket										30.0			1.0 ft. Granular Working Blanket in drainageway
													290.0			Total

103-6
04-19-11

EMBANKMENT WITH MOISTURE CONTROL

Moisture content shall be within the limits of minus 2 and plus 2 percentage points of Optimum Moisture Content for maximum density within the area described and listed below.

Moisture Control is required for all Class 10 fill placed in all locations and depths. Stability berms placed outside the normal foreslope template and topsoil will not require Moisture Control.

Proposed Subgrade Treatment will consist of:
STA 256+50.00 to STA 390+00.00: 6" layer of Special Backfill over Geogrid, under Pavement Design's Granular Subbase drainage layer

STA 390+00.00 to STA 443+18.01: 12" Modified Subbase

STA 443+18.01 to STA 463+50.00: Special Backfill

Paved Sideroads: Special Backfill

107-31
04-19-11

PLOWING AND SHAPING

Refer to Standard Road Plan EW-101

Station to Station		D FT	Remarks
264+50	281+50	5.0	
297+50	303+00	5.0	
305+00	309+50	5.0	
315+00	323+00	5.0	
331+00	339+00	5.0	
371+50	384+75	5.0	
3390+25	3390+75	5.0	SR 63S

103-7
08-01-08

SHRINKAGE DATA

Material	%	Remarks
Topsoil	40%	
Class 10	30%	
Unsuitable	30%	
Boulder Estimate		200 CY

104-9
10-15-13

LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE

Refer to Soils Sheets

1 Refer to EW-203, EW-204, or EW-211.
*Not a bid item

Location						Longitudinal Subdrain (RF-19C)							Subdrain Outlet					
					Depth	Shoulder		Backslope		Bridge Berm 1			RF-19C, RF-19E, or RF-19F			Porous* Backfill	Class "A"* Crushed Stone	Remarks
Line No.	Road or Lane Ident.	Station to Station		Side	D IN	Size IN	Length FT	Size IN	Length FT	Size IN	Type	Length FT	Station	Size IN	Standard Road Plan and Type	CY	CY	
1	IA 92	256+50.00	260+00.00	RT	42.0	4.0	390.0						256+50.00	6.0	RF-19E	36.1		
													260+00.00	6.0	RF-19E		0.2	
2	IA 92	260+00.00	265+00.00	RT	42.0	4.0	540.0						260+00.00	6.0	RF-19E	50.0		
													265+00.00	6.0	RF-19E		0.2	
3	IA 92	265+00.00	270+00.00	RT	42.0	4.0	540.0						265+00.00	6.0	RF-19E	50.0		
													270+00.00	6.0	RF-19E		0.2	
4	IA 92	270+00.00	275+00.00	RT	42.0	4.0	540.0						270+00.00	6.0	RF-19E	50.0		
													275+00.00	6.0	RF-19E		0.2	
5	IA 92	275+00.00	279+39.00	RT	42.0	4.0	479.0						275+00.00	6.0	RF-19E	44.4		
													279+39.00	6.0	RF-19E		0.2	
6	IA 92	279+39.00	283+30.00	RT	42.0	4.0	451.0						279+39.00	6.0	RF-19E	41.8		
													283+30.00	6.0	RF-19E		0.2	OUTLET ALONG TURN RADIUS
7	IA 92	284+15.00	285+45.00	RT	42.0	4.0	190.0						284+15.00	6.0	RF-19E	17.6		OUTLET ALONG TURN RADIUS
													285+45.00	6.0	RF-19E		0.2	
8	IA 92	285+45.00	289+00.00	RT	42.0	4.0	395.0						285+45.00	6.0	RF-19E	36.6		
													289+00.00	6.0	RF-19E		0.2	
9	IA 92	289+00.00	292+00.00	RT	42.0	4.0	340.0						289+00.00	6.0	RF-19E	31.5		
													292+00.00	6.0	RF-19E		0.2	
10	IA 92	292+00.00	295+00.00	RT	42.0	4.0	340.0						292+00.00	6.0	RF-19E	31.5		
													295+00.00	6.0	RF-19E		0.2	
11	IA 92	295+00.00	300+00.00	RT	42.0	4.0	540.0						295+00.00	6.0	RF-19E	50.0		
													300+00.00	6.0	RF-19E		0.2	
12	IA 92	300+00.00	305+00.00	RT	42.0	4.0	540.0						300+00.00	6.0	RF-19E	50.0		
													305+00.00	6.0	RF-19E		0.2	
13	IA 92	305+00.00	311+25.00	RT	42.0	4.0	665.0						305+00.00	6.0	RF-19E	61.6		
													311+25.00	6.0	RF-19E		0.2	
14	IA 92	311+25.00	315+00.00	RT	42.0	4.0	415.0						311+25.00	6.0	RF-19E	38.4		
													315+00.00	6.0	RF-19E		0.2	

GEOTECHNICAL DESIGN

LICENSED PROFESSIONAL ENGINEER
Robert L. Stanley
08468
IOWA

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Robert Stanley 7-19-13
Signature Date

Robert L. Stanley
Printed or Typed Name
My license renewal date is December 31, 2014

Pages or sheets covered by this seal: CS.1-CS.5, Q.1-Q.32

LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE

Refer to Soils Sheets

(1) Refer to EW-203, EW-204, or EW-211.
*Not a bid item

Location					Longitudinal Subdrain (RF-19C)								Subdrain Outlet					
Line No.	Road or Lane Ident.	Station to Station		Side	Depth (D)	Shoulder Size	Shoulder Length	Backslope Size	Backslope Length	Bridge Berm (1) Size	Bridge Berm (1) Type	Bridge Berm (1) Length	RF-19C, RF-19E, or RF-19F Station	Size	Standard Road Plan and Type	Porous* Backfill	Class "A"* Crushed Stone	Remarks
					IN	IN	FT	IN	FT	IN		FT		IN		CY	CY	
15	IA 92	315+00.00	320+00.00	RT	42.0	4.0	540.0						315+00.00	6.0	RF-19E	50.0		
													320+00.00	6.0	RF-19E		0.2	
16	IA 92	320+00.00	325+00.00	RT	42.0	4.0	540.0						320+00.00	6.0	RF-19E	50.0		
													325+00.00	6.0	RF-19E		0.2	
17	IA 92	325+00.00	329+00.00	RT	42.0	4.0	440.0						325+00.00	6.0	RF-19E	40.7		
													329+00.00	6.0	RF-19E		0.2	
18	IA 92	329+00.00	331+75.00	RT	42.0	4.0	315.0						329+00.00	6.0	RF-19E	29.2		
													331+75.00	6.0	RF-19E		0.2	
19	IA 92	331+75.00	335+00.00	RT	42.0	4.0	365.0						331+75.00	6.0	RF-19E	33.8		
													335+00.00	6.0	RF-19E		0.2	
20	IA 92	335+00.00	340+00.00	RT	42.0	4.0	540.0						335+00.00	6.0	RF-19E	50.0		
													340+00.00	6.0	RF-19E		0.2	
21	IA 92	340+00.00	345+00.00	RT	42.0	4.0	540.0						340+00.00	6.0	RF-19E	50.0		
													345+00.00	6.0	RF-19E		0.2	
22	IA 92	345+00.00	350+50.00	RT	42.0	4.0	590.0						345+00.00	6.0	RF-19E	54.6		
													350+50.00	6.0	RF-19E		0.2	
23	IA 92	350+50.00	356+75.00	RT	42.0	4.0	665.0						350+50.00	6.0	RF-19E	61.6		
													356+75.00	6.0	RF-19E		0.2	
24	IA 92	356+75.00	361+00.00	RT	42.0	4.0	465.0						356+75.00	6.0	RF-19E	43.1		
													361+00.00	6.0	RF-19E		0.2	
25	IA 92	361+00.00	365+00.00	RT	42.0	4.0	440.0						361+00.00	6.0	RF-19E	40.7		
													365+00.00	6.0	RF-19E		0.2	
26	IA 92	365+00.00	370+00.00	RT	42.0	4.0	540.0						365+00.00	6.0	RF-19E	50.0		
													370+00.00	6.0	RF-19E		0.2	
27	IA 92	370+00.00	375+00.00	RT	42.0	4.0	540.0						370+00.00	6.0	RF-19E	50.0		
													375+00.00	6.0	RF-19E		0.2	
28	IA 92	375+00.00	380+00.00	RT	42.0	4.0	540.0						375+00.00	6.0	RF-19E	50.0		
													380+00.00	6.0	RF-19E		0.2	
29	IA 92	380+00.00	386+70.00	RT	42.0	4.0	710.0						380+00.00	6.0	RF-19E	65.7		
													386+70.00	6.0	RF-19E		0.2	
30	IA 92	386+70.00	390+55.00	RT	42.0	4.0	445.0						386+70.00	6.0	RF-19E	41.2		
													390+55.00	6.0	RF-19E		0.2	OUTLET ALONG TURN RADIUS
31	IA 92	391+33.00	392+75.00	RT	24.0	4.0	184.0						391+33.00	6.0	RF-19E	8.5		OUTLET ALONG TURN RADIUS
													392+75.00	6.0	RF-19C		0.1	INTAKE #2
32	IA 92	392+75.00	393+50.00	RT	24.0	4.0	79.0						392+75.00	6.0	RF-19C	3.7		INTAKE #2
													393+50.00	6.0	RF-19C		0.0	INTAKE #6
33	IA 92	393+50.00	393+90.00	RT	24.0	4.0	44.0						393+50.00	6.0	RF-19C	2.0		INTAKE #6
													393+90.00	6.0	RF-19C		0.0	INTAKE #10
34	IA 92	393+90.00	394+30.00	RT	24.0	4.0	44.0						393+90.00	6.0	RF-19C	2.0		INTAKE #10
													394+30.00	6.0	RF-19C		0.0	INTAKE #14
35	IA 92	394+30.00	395+40.00	RT	24.0	4.0	114.0						394+30.00	6.0	RF-19C	5.3		INTAKE #14
													395+40.00	6.0	RF-19C		0.0	INTAKE #164
36	IA 92	395+40.00	396+90.00	RT	24.0	4.0	154.0						395+40.00	6.0	RF-19C	7.1		INTAKE #164
													396+90.00	6.0	RF-19C		0.0	INTAKE #166
37	IA 92	396+90.00	399+50.00	RT	24.0	4.0	264.0						396+90.00	6.0	RF-19C	12.2		INTAKE #166
													399+50.00	6.0	RF-19C		0.0	INTAKE #174
38	IA 92	399+50.00	401+00.00	RT	24.0	4.0	154.0						399+50.00	6.0	RF-19C	7.1		INTAKE #174
													401+00.00	6.0	RF-19C		0.0	INTAKE #184
39	IA 92	401+00.00	404+10.00	RT	24.0	4.0	314.0						401+00.00	6.0	RF-19C	14.5		INTAKE #184
													404+10.00	6.0	RF-19C		0.0	INTAKE #206
40	IA 92	404+10.00	406+00.00	RT	24.0	4.0	194.0						404+10.00	6.0	RF-19C	9.0		INTAKE #206
													406+00.00	6.0	RF-19C		0.0	INTAKE #216
41	IA 92	406+00.00	407+80.00	RT	24.0	4.0	184.0						406+00.00	6.0	RF-19C	8.5		INTAKE #216
													407+80.00	6.0	RF-19C		0.0	INTAKE #220
42	IA 92	407+80.00	409+50.00	RT	24.0	4.0	174.0						407+80.00	6.0	RF-19C	8.1		INTAKE #220
													409+50.00	6.0	RF-19C		0.0	INTAKE #226
43	IA 92	409+50.00	411+25.00	RT	24.0	4.0	179.0						409+50.00	6.0	RF-19C	8.3		INTAKE #226
													411+25.00	6.0	RF-19C		0.0	INTAKE #236
44	IA 92	411+25.00	413+10.00	RT	24.0	4.0	189.0						411+25.00	6.0	RF-19C	8.8		INTAKE #236
													413+10.00	6.0	RF-19C		0.0	INTAKE #260
45	IA 92	413+10.00	414+15.00	RT	24.0	4.0	109.0						413+10.00	6.0	RF-19C	5.0		INTAKE #260
													414+15.00	6.0	RF-19C		0.0	INTAKE #270
46	IA 92	414+15.00	415+50.00	RT	24.0	4.0	139.0						414+15.00	6.0	RF-19C	6.4		INTAKE #270
													415+50.00	6.0	RF-19C		0.0	INTAKE #302
47	IA 92	415+50.00	416+25.00	RT	24.0	4.0	79.0						415+50.00	6.0	RF-19C	3.7		INTAKE #302
													416+25.00	6.0	RF-19C		0.0	INTAKE #304
48	IA 92	416+25.00	4416+07.00	RT	24.0	4.0	152.0						416+25.00	6.0	RF-19C	7.0		INTAKE #304
													4416+07.00	6.0	RF-19C		0.0	SIDEROAD INTAKE #11055
49	IA 92	4416+07.00	420+00.00	RT	24.0	4.0	292.0						4416+07.00	6.0	RF-19C	13.5		SIDEROAD INTAKE #11060
													420+00.00	6.0	RF-19C		0.0	INTAKE #328
50	IA 92	420+00.00	421+25.00	RT	24.0	4.0	129.0						420+00.00	6.0	RF-19C	6.0		INTAKE #328
													421+25.00	6.0	RF-19C		0.0	INTAKE #330
51	IA 92	421+25.00	422+50.00	RT	24.0	4.0	129.0						421+25.00	6.0	RF-19C	6.0		INTAKE #330
													422+50.00	6.0	RF-19C		0.0	INTAKE #334
52	IA 92	422+50.00	423+85.00	RT	24.0	4.0	139.0						422+50.00	6.0	RF-19C	6.4		INTAKE #334
													423+85.00	6.0	RF-19C		0.0	INTAKE #336
53	IA 92	423+85.00	425+30.00	RT	24.0	4.0	149.0						423+85.00	6.0	RF-19C	6.9		INTAKE #336

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LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE

Refer to Soils Sheets

1 Refer to EW-203, EW-204, or EW-211.
*Not a bid item

Location: Line No.	Location: Road or Lane Ident.	Location: Station to Station		Location: Side	Longitudinal Subdrain (RF-19C): Depth (D) IN	Shoulder: Size IN	Shoulder: Length FT	Backslope: Size IN	Backslope: Length FT	Bridge Berm 1: Size IN	Bridge Berm 1: Type	Bridge Berm 1: Length FT	Subdrain Outlet RF-19C, RF-19E, or RF-19F: Station	Size IN	Standard Road Plan and Type	Porous* Backfill CY	Class "A"* Crushed Stone CY	Remarks
													425+30.00	6.0	RF-19C		0.0	INTAKE #340
54	IA 92	425+30.00	426+35.00	RT	24.0	4.0	109.0						425+30.00	6.0	RF-19C	5.0		INTAKE #340
													426+35.00	6.0	RF-19C		0.0	INTAKE #346
55	IA 92	426+35.00	426+67.00	RT	24.0	4.0	36.0						426+35.00	6.0	RF-19C	1.7		INTAKE #346
													426+67.00	6.0	RF-19C		0.0	INTAKE #350
56	IA 92	426+67.00	426+99.00	RT	24.0	4.0	36.0						426+67.00	6.0	RF-19C	1.7		INTAKE #350
													426+99.00	6.0	RF-19C		0.0	INTAKE #354
57	IA 92	426+99.00	427+90.00	RT	24.0	4.0	95.0						426+99.00	6.0	RF-19C	4.4		INTAKE #354
													427+90.00	6.0	RF-19C		0.0	INTAKE #358
58	IA 92	427+90.00	429+87.00	RT	24.0	4.0	201.0						427+90.00	6.0	RF-19C	9.3		INTAKE #358
													429+87.00	6.0	RF-19C		0.0	INTAKE #360
59	IA 92	429+87.00	431+60.00	RT	24.0	4.0	177.0						429+87.00	6.0	RF-19C	8.2		INTAKE #360
													431+60.00	6.0	RF-19C		0.0	INTAKE #366
60	IA 92	431+60.00	434+80.00	RT	24.0	4.0	324.0						431+60.00	6.0	RF-19C	15.0		INTAKE #366
													434+80.00	6.0	RF-19C		0.0	INTAKE #440
61	IA 92	434+80.00	435+58.00	RT	24.0	4.0	82.0						434+80.00	6.0	RF-19C	3.8		INTAKE #440
													435+58.00	6.0	RF-19C		0.0	INTAKE #446
62	IA 92	435+58.00	436+00.00	RT	24.0	4.0	46.0						435+58.00	6.0	RF-19C	2.1		INTAKE #446
													436+00.00	6.0	RF-19C		0.0	INTAKE #450
63	IA 92	436+00.00	436+45.00	RT	24.0	4.0	49.0						436+00.00	6.0	RF-19C	2.3		INTAKE #450
													436+45.00	6.0	RF-19C		0.0	INTAKE #454
64	IA 92	436+45.00	437+75.00	RT	24.0	4.0	134.0						436+45.00	6.0	RF-19C	6.2		INTAKE #454
													437+75.00	6.0	RF-19C		0.0	INTAKE #456
65	IA 92	437+75.00	439+10.00	RT	24.0	4.0	139.0						437+75.00	6.0	RF-19C	6.4		INTAKE #456
													439+10.00	6.0	RF-19C		0.0	INTAKE #460
66	IA 92	439+10.00	440+80.00	RT	24.0	4.0	174.0						439+10.00	6.0	RF-19C	8.1		INTAKE #460
													440+80.00	6.0	RF-19C		0.0	INTAKE #493
67	IA 92	440+80.00	442+63.00	RT	24.0	4.0	187.0						440+80.00	6.0	RF-19C	8.7		INTAKE #493
													442+63.00	6.0	RF-19C		0.0	INTAKE #497
68	IA 92	442+63.00	444+30.00	RT	24.0	4.0	171.0						442+63.00	6.0	RF-19C	7.9		INTAKE #497
													444+30.00	6.0	RF-19C		0.0	INTAKE #92468
69	IA 92	444+30.00	445+30.00	RT	24.0	4.0	104.0						444+30.00	6.0	RF-19C	4.8		INTAKE #92468
													445+30.00	6.0	RF-19C		0.0	INTAKE #92472
70	IA 92	445+30.00	446+88.00	RT	24.0	4.0	162.0						445+30.00	6.0	RF-19C	7.5		INTAKE #92472
													446+88.00	6.0	RF-19C		0.0	INTAKE #92476
71	IA 92	446+88.00	448+17.00	RT	24.0	4.0	133.0						446+88.00	6.0	RF-19C	6.2		INTAKE #92476
													448+17.00	6.0	RF-19C		0.0	INTAKE #92480
72	IA 92	448+17.00	449+75.00	RT	24.0	4.0	162.0						448+17.00	6.0	RF-19C	7.5		INTAKE #92480
													449+75.00	6.0	RF-19C		0.0	INTAKE #92484
73	IA 92	449+75.00	450+80.00	RT	24.0	4.0	109.0						449+75.00	6.0	RF-19C	5.0		INTAKE #92484
													450+80.00	6.0	RF-19C		0.0	INTAKE #92488
74	IA 92	450+80.00	452+60.00	RT	24.0	4.0	184.0						450+80.00	6.0	RF-19C	8.5		INTAKE #92488
													452+60.00	6.0	RF-19C		0.0	INTAKE #92492
75	IA 92	452+60.00	453+90.00	RT	24.0	4.0	134.0						452+60.00	6.0	RF-19C	6.2		INTAKE #92492
													453+90.00	6.0	RF-19C		0.0	INTAKE #92602
76	IA 92	453+90.00	455+75.00	RT	24.0	4.0	189.0						453+90.00	6.0	RF-19C	8.8		INTAKE #92602
													455+75.00	6.0	RF-19C		0.0	INTAKE #92606
77	IA 92	455+75.00	456+75.00	RT	24.0	4.0	104.0						455+75.00	6.0	RF-19C	4.8		INTAKE #92606
													456+75.00	6.0	RF-19C		0.0	INTAKE #92610
78	IA 92	456+75.00	457+75.00	RT	24.0	4.0	104.0						456+75.00	6.0	RF-19C	4.8		INTAKE #92610
													457+75.00	6.0	RF-19C		0.0	INTAKE #92614
79	IA 92	457+75.00	458+75.00	RT	24.0	4.0	104.0						457+75.00	6.0	RF-19C	4.8		INTAKE #92614
													458+75.00	6.0	RF-19C		0.0	INTAKE #92618
80	IA 92	458+75.00	459+75.00	RT	24.0	4.0	104.0						458+75.00	6.0	RF-19C	4.8		INTAKE #92618
													459+75.00	6.0	RF-19C		0.0	INTAKE #92622
81	IA 92	459+75.00	460+65.00	RT	24.0	4.0	94.0						459+75.00	6.0	RF-19C	4.4		INTAKE #92622
													460+65.00	6.0	RF-19C		0.0	INTAKE #92626
82	IA 92	460+65.00	461+80.00	RT	24.0	4.0	119.0						460+65.00	6.0	RF-19C	5.5		INTAKE #92626
													461+80.00	6.0	RF-19C		0.0	INTAKE #92630
83	IA 92	461+80.00	463+25.00	RT	24.0	4.0	149.0						461+80.00	6.0	RF-19C	6.9		INTAKE #92630
													463+25.00	6.0	RF-19C		0.0	INTAKE #92634
84	IA 92	256+50.00	260+00.00	LT	42.0	4.0	390.0						256+50.00	6.0	RF-19E	36.1		
													260+00.00	6.0	RF-19E		0.2	
85	IA 92	260+00.00	265+00.00	LT	42.0	4.0	540.0						260+00.00	6.0	RF-19E	50.0		
													265+00.00	6.0	RF-19E		0.2	
86	IA 92	265+00.00	270+00.00	LT	42.0	4.0	540.0						265+00.00	6.0	RF-19E	50.0		
													270+00.00	6.0	RF-19E		0.2	
87	IA 92	270+00.00	275+00.00	LT	42.0	4.0	540.0						270+00.00	6.0	RF-19E	50.0		
													275+00.00	6.0	RF-19E		0.2	
88	IA 92	275+00.00	279+00.00	LT	42.0	4.0	440.0						275+00.00	6.0	RF-19E	40.7		
													279+00.00	6.0	RF-19E		0.2	
89	IA 92	279+00.00	281+91.00	LT	42.0	4.0	331.0						279+00.00	6.0	RF-19E	30.6		
													281+91.00	6.0	RF-19E		0.2	
90	IA 92	281+91.00	283+25.00	LT	42.0	4.0	194.0						281+91.00	6.0	RF-19E	18.0		
													283+25.00	6.0	RF-19E		0.2	OUTLET ALONG TURN RADIUS
91	IA 92	284+20.00	288+00.00	LT	42.0	4.0	440.0						284+20.00	6.0	RF-19E	40.7		OUTLET ALONG TURN RADIUS
													288+00.00	6.0	RF-19E		0.2	

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LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE

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*Not a bid item

Location						Longitudinal Subdrain (RF-19C)							Subdrain Outlet					
Line No.	Road or Lane Ident.	Station to Station		Side	Depth (D)	Shoulder		Backslope		Bridge Berm (1)			RF-19C, RF-19E, or RF-19F			Porous* Backfill	Class "A"* Crushed Stone	Remarks
						Size	Length	Size	Length	Size	Type	Length	Station	Size	Standard Road Plan and Type			
					IN	IN	FT	IN	FT	IN		FT		IN		CY	CY	
92	IA 92	288+00.00	292+08.00	LT	42.0	4.0	448.0						288+00.00	6.0	RF-19E	41.5		
													292+08.00	6.0	RF-19E		0.2	
93	IA 92	292+08.00	295+00.00	LT	42.0	4.0	332.0						292+08.00	6.0	RF-19E	30.7		
													295+00.00	6.0	RF-19E		0.2	
94	IA 92	295+00.00	300+00.00	LT	42.0	4.0	540.0						295+00.00	6.0	RF-19E	50.0		
													300+00.00	6.0	RF-19E		0.2	
95	IA 92	300+00.00	305+00.00	LT	42.0	4.0	540.0						300+00.00	6.0	RF-19E	50.0		
													305+00.00	6.0	RF-19E		0.2	
96	IA 92	305+00.00	311+25.00	LT	42.0	4.0	665.0						305+00.00	6.0	RF-19E	61.6		
													311+25.00	6.0	RF-19E		0.2	
97	IA 92	311+25.00	315+00.00	LT	42.0	4.0	415.0						311+25.00	6.0	RF-19E	38.4		
													315+00.00	6.0	RF-19E		0.2	
98	IA 92	315+00.00	320+00.00	LT	42.0	4.0	540.0						315+00.00	6.0	RF-19E	50.0		
													320+00.00	6.0	RF-19E		0.2	
99	IA 92	320+00.00	325+00.00	LT	42.0	4.0	540.0						320+00.00	6.0	RF-19E	50.0		
													325+00.00	6.0	RF-19E		0.2	
100	IA 92	325+00.00	329+00.00	LT	42.0	4.0	440.0						325+00.00	6.0	RF-19E	40.7		
													329+00.00	6.0	RF-19E		0.2	
101	IA 92	329+00.00	331+75.00	LT	42.0	4.0	315.0						329+00.00	6.0	RF-19E	29.2		
													331+75.00	6.0	RF-19E		0.2	
102	IA 92	331+75.00	335+00.00	LT	42.0	4.0	365.0						331+75.00	6.0	RF-19E	33.8		
													335+00.00	6.0	RF-19E		0.2	
103	IA 92	335+00.00	340+00.00	LT	42.0	4.0	540.0						335+00.00	6.0	RF-19E	50.0		
													340+00.00	6.0	RF-19E		0.2	
104	IA 92	340+00.00	345+00.00	LT	42.0	4.0	540.0						340+00.00	6.0	RF-19E	50.0		
													345+00.00	6.0	RF-19E		0.2	
105	IA 92	345+00.00	350+50.00	LT	42.0	4.0	590.0						345+00.00	6.0	RF-19E	54.6		
													350+50.00	6.0	RF-19E		0.2	
106	IA 92	350+50.00	356+75.00	LT	42.0	4.0	665.0						350+50.00	6.0	RF-19E	61.6		
													356+75.00	6.0	RF-19E		0.2	
107	IA 92	356+75.00	361+00.00	LT	42.0	4.0	465.0						356+75.00	6.0	RF-19E	43.1		
													361+00.00	6.0	RF-19E		0.2	
108	IA 92	361+00.00	365+00.00	LT	42.0	4.0	440.0						361+00.00	6.0	RF-19E	40.7		
													365+00.00	6.0	RF-19E		0.2	
109	IA 92	365+00.00	370+00.00	LT	42.0	4.0	540.0						365+00.00	6.0	RF-19E	50.0		
													370+00.00	6.0	RF-19E		0.2	
110	IA 92	370+00.00	375+00.00	LT	42.0	4.0	540.0						370+00.00	6.0	RF-19E	50.0		
													375+00.00	6.0	RF-19E		0.2	
111	IA 92	375+00.00	380+00.00	LT	42.0	4.0	540.0						375+00.00	6.0	RF-19E	50.0		
													380+00.00	6.0	RF-19E		0.2	
112	IA 92	380+00.00	385+00.00	LT	42.0	4.0	540.0						380+00.00	6.0	RF-19E	50.0		
													385+00.00	6.0	RF-19E		0.2	
113	IA 92	385+00.00	389+12.00	LT	42.0	4.0	452.0						385+00.00	6.0	RF-19E	41.9		
													389+12.00	6.0	RF-19E		0.2	
114	IA 92	389+12.00	390+68.00	LT	42.0	4.0	216.0						389+12.00	6.0	RF-19E	20.0		
													390+68.00	6.0	RF-19E		0.2	OUTLET ALONG TURN RADIUS
115	IA 92	391+32.00	393+50.00	LT	24.0	4.0	260.0						391+32.00	6.0	RF-19E	12.0		OUTLET ALONG TURN RADIUS
													393+50.00	6.0	RF-19C		0.1	INTAKE #5
116	IA 92	393+50.00	393+90.00	LT	24.0	4.0	44.0						393+50.00	6.0	RF-19C	2.0		INTAKE #5
													393+90.00	6.0	RF-19C		0.0	INTAKE #9
117	IA 92	393+90.00	394+30.00	LT	24.0	4.0	44.0						393+90.00	6.0	RF-19C	2.0		INTAKE #9
													394+30.00	6.0	RF-19C		0.0	INTAKE #13
118	IA 92	394+30.00	395+40.00	LT	24.0	4.0	114.0						394+30.00	6.0	RF-19C	5.3		INTAKE #13
													395+40.00	6.0	RF-19C		0.0	INTAKE #120
119	IA 92	395+40.00	396+40.00	LT	24.0	4.0	104.0						395+40.00	6.0	RF-19C	4.8		INTAKE #120
													396+40.00	6.0	RF-19C		0.0	INTAKE #163
120	IA 92	396+40.00	399+50.00	LT	24.0	4.0	314.0						396+40.00	6.0	RF-19C	14.5		INTAKE #163
													399+50.00	6.0	RF-19C		0.0	INTAKE #173
121	IA 92	399+50.00	404+10.00	LT	24.0	4.0	464.0						399+50.00	6.0	RF-19C	21.5		INTAKE #173
													404+10.00	6.0	RF-19C		0.0	INTAKE #205
122	IA 92	404+10.00	406+00.00	LT	24.0	4.0	194.0						404+10.00	6.0	RF-19C	9.0		INTAKE #205
													406+00.00	6.0	RF-19C		0.0	INTAKE #209
123	IA 92	406+00.00	407+80.00	LT	24.0	4.0	184.0						406+00.00	6.0	RF-19C	8.5		INTAKE #209
													407+80.00	6.0	RF-19C		0.0	INTAKE #219
124	IA 92	407+80.00	409+50.00	LT	24.0	4.0	174.0						407+80.00	6.0	RF-19C	8.1		INTAKE #219
													409+50.00	6.0	RF-19C		0.0	INTAKE #225
125	IA 92	409+50.00	411+25.00	LT	24.0	4.0	179.0						409+50.00	6.0	RF-19C	8.3		INTAKE #225
													411+25.00	6.0	RF-19C		0.0	INTAKE #229
126	IA 92	411+25.00	413+10.00	LT	24.0	4.0	189.0						411+25.00	6.0	RF-19C	8.8		INTAKE #229
													413+10.00	6.0	RF-19C		0.0	INTAKE #239
127	IA 92	413+10.00	414+15.00	LT	24.0	4.0	109.0						413+10.00	6.0	RF-19C	5.0		INTAKE #239
													414+15.00	6.0	RF-19C		0.0	INTAKE #249
128	IA 92	414+15.00	415+50.00	LT	24.0	4.0	139.0						414+15.00	6.0	RF-19C	6.4		INTAKE #249
													415+50.00	6.0	RF-19C		0.0	INTAKE #301
129	IA 92	415+50.00	416+25.00	LT	24.0	4.0	79.0						415+50.00	6.0	RF-19C	3.7		INTAKE #301
													416+25.00	6.0	RF-19C		0.0	INTAKE #303
130	IA 92	416+25.00	4418+45.00	LT	24.0	4.0	134.0						416+25.00	6.0	RF-19C	6.2		INTAKE 3303

LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE

Refer to Soils Sheets

① Refer to EW-203, EW-204, or EW-211.
*Not a bid item

Location						Longitudinal Subdrain (RF-19C)							Subdrain Outlet					
Line No.	Road or Lane Ident.	Station to Station		Side	Depth (D)	Shoulder		Backslope		Bridge Berm ①			RF-19C, RF-19E, or RF-19F			Porous* Backfill	Class "A"* Crushed Stone	Remarks
						Size	Length	Size	Length	Size	Type	Length	Station	Size	Standard Road Plan and Type			
					IN	IN	FT	IN	FT	IN		FT		IN		CY	CY	
													4418+45.00	6.0	RF-19C		0.0	SIDEROAD INTAKE #11035
131	IA 92	4418+45.00	420+00.00	LT	24.0	4.0	284.0						4418+45.00	6.0	RF-19C	13.1		SIDEROAD INTAKE #11040
													420+00.00	6.0	RF-19C		0.0	INTAKE #325
132	IA 92	420+00.00	421+25.00	LT	24.0	4.0	129.0						420+00.00	6.0	RF-19C	6.0		INTAKE #325
													421+25.00	6.0	RF-19C		0.0	INTAKE #329
133	IA 92	421+25.00	422+50.00	LT	24.0	4.0	129.0						421+25.00	6.0	RF-19C	6.0		INTAKE #329
													422+50.00	6.0	RF-19C		0.0	INTAKE #333
134	IA 92	422+50.00	423+85.00	LT	24.0	4.0	139.0						422+50.00	6.0	RF-19C	6.4		INTAKE #333
													423+85.00	6.0	RF-19C		0.0	INTAKE #337
135	IA 92	423+85.00	425+30.00	LT	24.0	4.0	149.0						423+85.00	6.0	RF-19C	6.9		INTAKE #337
													425+30.00	6.0	RF-19C		0.0	INTAKE #339
136	IA 92	425+30.00	426+35.00	LT	24.0	4.0	109.0						425+30.00	6.0	RF-19C	5.0		INTAKE #339
													426+35.00	6.0	RF-19C		0.0	INTAKE #345
137	IA 92	426+35.00	426+67.00	LT	24.0	4.0	36.0						426+35.00	6.0	RF-19C	1.7		INTAKE #345
													426+67.00	6.0	RF-19C		0.0	INTAKE #349
138	IA 92	426+67.00	426+99.00	LT	24.0	4.0	36.0						426+67.00	6.0	RF-19C	1.7		INTAKE #349
													426+99.00	6.0	RF-19C		0.0	INTAKE #353
139	IA 92	426+99.00	427+90.00	LT	24.0	4.0	95.0						426+99.00	6.0	RF-19C	4.4		INTAKE #353
													427+90.00	6.0	RF-19C		0.0	INTAKE #357
140	IA 92	427+90.00	429+87.00	LT	24.0	4.0	201.0						427+90.00	6.0	RF-19C	9.3		INTAKE #357
													429+87.00	6.0	RF-19C		0.0	INTAKE #359
141	IA 92	429+87.00	435+58.00	LT	24.0	4.0	575.0						429+87.00	6.0	RF-19C	26.6		INTAKE #359
													435+58.00	6.0	RF-19C		0.0	INTAKE #445
142	IA 92	435+58.00	436+00.00	LT	24.0	4.0	46.0						435+58.00	6.0	RF-19C	2.1		INTAKE #445
													436+00.00	6.0	RF-19C		0.0	INTAKE #449
143	IA 92	436+00.00	436+45.00	LT	24.0	4.0	49.0						436+00.00	6.0	RF-19C	2.3		INTAKE #449
													436+45.00	6.0	RF-19C		0.0	INTAKE #453
144	IA 92	436+45.00	437+75.00	LT	24.0	4.0	134.0						436+45.00	6.0	RF-19C	6.2		INTAKE #453
													437+75.00	6.0	RF-19C		0.0	INTAKE #457
145	IA 92	437+75.00	439+10.00	LT	24.0	4.0	139.0						437+75.00	6.0	RF-19C	6.4		INTAKE #457
													439+10.00	6.0	RF-19C		0.0	INTAKE #459
146	IA 92	439+10.00	440+80.00	LT	24.0	4.0	174.0						439+10.00	6.0	RF-19C	8.1		INTAKE #459
													440+80.00	6.0	RF-19C		0.0	INTAKE #495
147	IA 92	440+80.00	442+63.00	LT	24.0	4.0	187.0						440+80.00	6.0	RF-19C	8.7		INTAKE #495
													442+63.00	6.0	RF-19C		0.0	INTAKE #92461
148	IA 92	442+63.00	444+30.00	LT	24.0	4.0	171.0						442+63.00	6.0	RF-19C	7.9		INTAKE #92461
													444+30.00	6.0	RF-19C		0.0	INTAKE #92467
149	IA 92	444+30.00	445+30.00	LT	24.0	4.0	104.0						444+30.00	6.0	RF-19C	4.8		INTAKE #92467
													445+30.00	6.0	RF-19C		0.0	INTAKE #92471
150	IA 92	445+30.00	446+85.00	LT	24.0	4.0	159.0						445+30.00	6.0	RF-19C	7.4		INTAKE #92471
													446+85.00	6.0	RF-19C		0.0	INTAKE #92475
151	IA 92	446+85.00	448+45.00	LT	24.0	4.0	164.0						446+85.00	6.0	RF-19C	7.6		INTAKE #92475
													448+45.00	6.0	RF-19C		0.0	INTAKE #92479
152	IA 92	448+45.00	449+75.00	LT	24.0	4.0	134.0						448+45.00	6.0	RF-19C	6.2		INTAKE #92479
													449+75.00	6.0	RF-19C		0.0	INTAKE #92483
153	IA 92	449+75.00	450+65.00	LT	24.0	4.0	94.0						449+75.00	6.0	RF-19C	4.4		INTAKE #92483
													450+65.00	6.0	RF-19C		0.0	INTAKE #92487
154	IA 92	450+65.00	452+45.00	LT	24.0	4.0	184.0						450+65.00	6.0	RF-19C	8.5		INTAKE #92487
													452+45.00	6.0	RF-19C		0.0	INTAKE #92491
155	IA 92	452+45.00	454+15.00	LT	24.0	4.0	174.0						452+45.00	6.0	RF-19C	8.1		INTAKE #92491
													454+15.00	6.0	RF-19C		0.0	INTAKE #92601
156	IA 92	454+15.00	455+15.00	LT	24.0	4.0	104.0						454+15.00	6.0	RF-19C	4.8		INTAKE #92601
													455+15.00	6.0	RF-19C		0.0	INTAKE #92605
157	IA 92	455+15.00	456+80.00	LT	24.0	4.0	169.0						455+15.00	6.0	RF-19C	7.8		INTAKE #92605
													456+80.00	6.0	RF-19C		0.0	INTAKE #92609
158	IA 92	456+80.00	457+65.00	LT	24.0	4.0	89.0						456+80.00	6.0	RF-19C	4.1		INTAKE #92609
													457+65.00	6.0	RF-19C		0.0	INTAKE #92611
159	IA 92	457+65.00	458+50.00	LT	24.0	4.0	89.0						457+65.00	6.0	RF-19C	4.1		INTAKE #92611
													458+50.00	6.0	RF-19C		0.0	INTAKE #92613
160	IA 92	458+50.00	459+85.00	LT	24.0	4.0	139.0						458+50.00	6.0	RF-19C	6.4		INATKE #92613
													459+85.00	6.0	RF-19C		0.0	INTAKE #92617
161	IA 92	459+85.00	460+75.00	LT	24.0	4.0	94.0						459+85.00	6.0	RF-19C	4.4		INTAKE #92617
													460+75.00	6.0	RF-19C		0.0	INTAKE #92619
162	IA 92	460+75.00	461+80.00	LT	24.0	4.0	109.0						460+75.00	6.0	RF-19C	5.0		INTAKE #92619
													461+80.00	6.0	RF-19C		0.0	INTAKE #92621
163	IA 92	461+80.00	463+25.00	LT	24.0	4.0	149.0						461+80.00	6.0	RF-19C	6.9		INTAKE #92621
													463+25.00	6.0	RF-19C		0.0	INTAKE #92625
Totals							44168.0								326	3396.7	12.4	

NOTE: LONGITUDINAL SUBDRAINS 1 - 30 AND 84 - 114 ARE TYPE 7b WITH PCC OR TYPE 8b WITH HMA (ACC).
NOTE: LONGITUDINAL SUBDRAINS 31 - 83 AND 115 - 163 ARE TYPE 12.

SURVEY SYMBOLS

TDC Tree Deciduous
PPA Power Pole Co. 1
FWD Wood Fence
LUM Luminaire
TEV Evergeen Tree
LP L.P. Tank
D Centerline Draw or Stream (Down)
RET Retaining Walls
SI Sign
SHR Shrub
SI Sign
EW Edge of Water
DIK Centerline of Dike or Dam
FLG Flag Poles
WM Wind Mill
FCL Chain Link and Security Fence
HDG Hedge Row
TV Satelite TV Dish
RT Radio Tower
INB Storm Sewer Beehive Intake
WV Water Valve
FHD Fire Hydrants
WEL Well
MH Utility Access (Manhole)
LUM Luminaire
MIS Miscellaneous
TPD Telephone Pedestal
EB Electrical Box
UB Utility Box
PR Electic Riser Pole
FW Wire Fence
GP Guard Post (Less Than 4 Posts)
IN Storm Sewer Intake
TLN Treeline
TVP TV Pedestal
SEP Septic Tank
OUT Tile Outlet
Tile — TIL Tile Line
UST Underground Tank
GV Gas Valve
DU Centerline Draw or Stream (Up)
BNK Stream Bank
BL Topo Breakline
RIP Rip-Rap

St.S. — STA Storm Sewer Line Co. 1
F03 — FOC Underground Fiber Optic Co. 3
F05 — FOE Underground Fiber Optic Co. 5
F02 — FOB Underground Fiber Optic Co. 2
San. — SAA Sanitary Sewer Line Co. 1
T1 — TLA Underground Telephone Line Co. 1
E1 — ELA Underground Electric Line Co. 1
G — GLA Underground Gas Line Co. 1
TV — TVA Underground TV Cable Co. 1
W — WLA Underground Water Line Co. 1
FO — FOA Underground Fiber Optic Co. 1
E2 — ELB Underground Electric Line Co. 2
San.2 — SAB Sanitary Sewer Line Co. 2
G2 — GLB Underground Gas Line Co. 2
F04 — FOD Underground Fiber Optic Co. 4
W2 — WLB Underground Water Line Co. 2

UTILITY LEGEND

FO — FOA Paetac Iowa Communications Network
F02 — FOB Lightcore (Digital Teleport)
F03 — FOC Iowa Network Service
F04 — FOD Indianola Municipal Utilities
F05 — FOE MCI
T1 — TLA Qwest
E1 — ELA Mid-American
E2 — ELB Indianola Municipal Utlities
TV — TVA Mediacom
W — WLA Indianola Municipal Utilities
W2 — WLB Warren Rural Water
San. — SAA City of Indianola
San.2 — SAB Private
G — GLA Mid-American
G2 — GLB Kinder Morgan
St.S. — STA City of Indianola
PPA Mid-American

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE 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
SHADING	**Design Color No.**	
Yellow	(4)	Highlight for Critical Notes or Features
Red	(3)	Delineates Restricted Areas
Lavender	(9)	Temporary Pavement Shading
Gray, Light	(48)	Proposed Pavement Shading
Gray, Med	(80)	Proposed Granular Shading
Gray, Dark	(112)	Proposed Grade and Pave Shading
Brown, Light	(236)	Grading Shading
Tan	(8)	Proposed Sidewalk Shading
Blue, Light	(230)	Proposed Sidewalk Landing Shading
Pink	(11)	Proposed Sidewalk Ramp Shading

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Ground Line Profile
Blue	(1)	Proposed Profile and Annotation
Magenta	(5)	Existing Utilities
Blue, Light	(230)	Proposed Ditch Grades, Left
Black	(0)	Proposed Ditch Grades, Median
Rust	(14)	Proposed Ditch Grades, Right

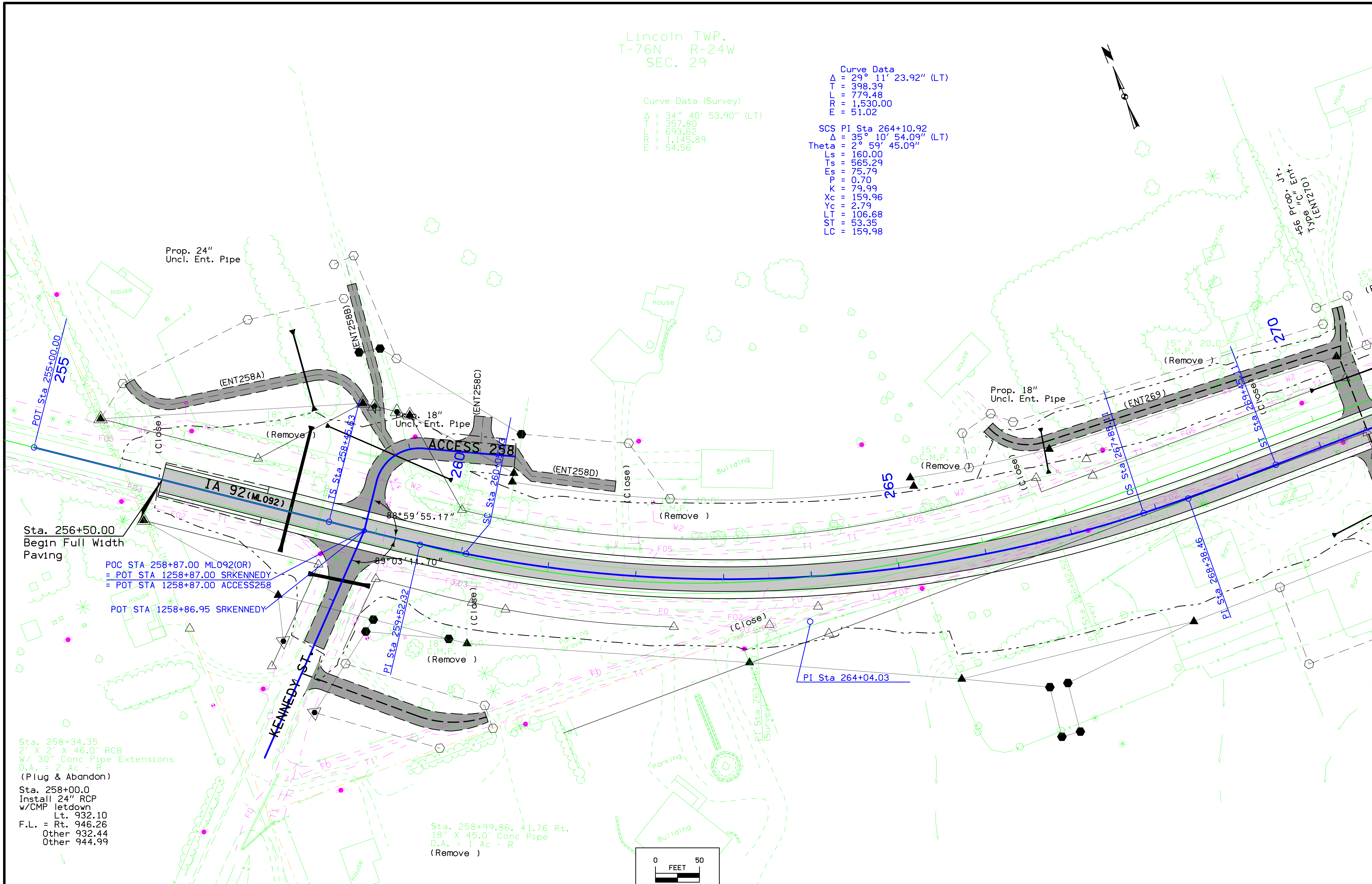
Reference Point
Station
Survey Line
Section Corner
Ground Line Intercept
Saw Cut
Guardrail
Clearing & Grubbing Area
Pavement Removal

RIGHT-OF-WAY LEGEND

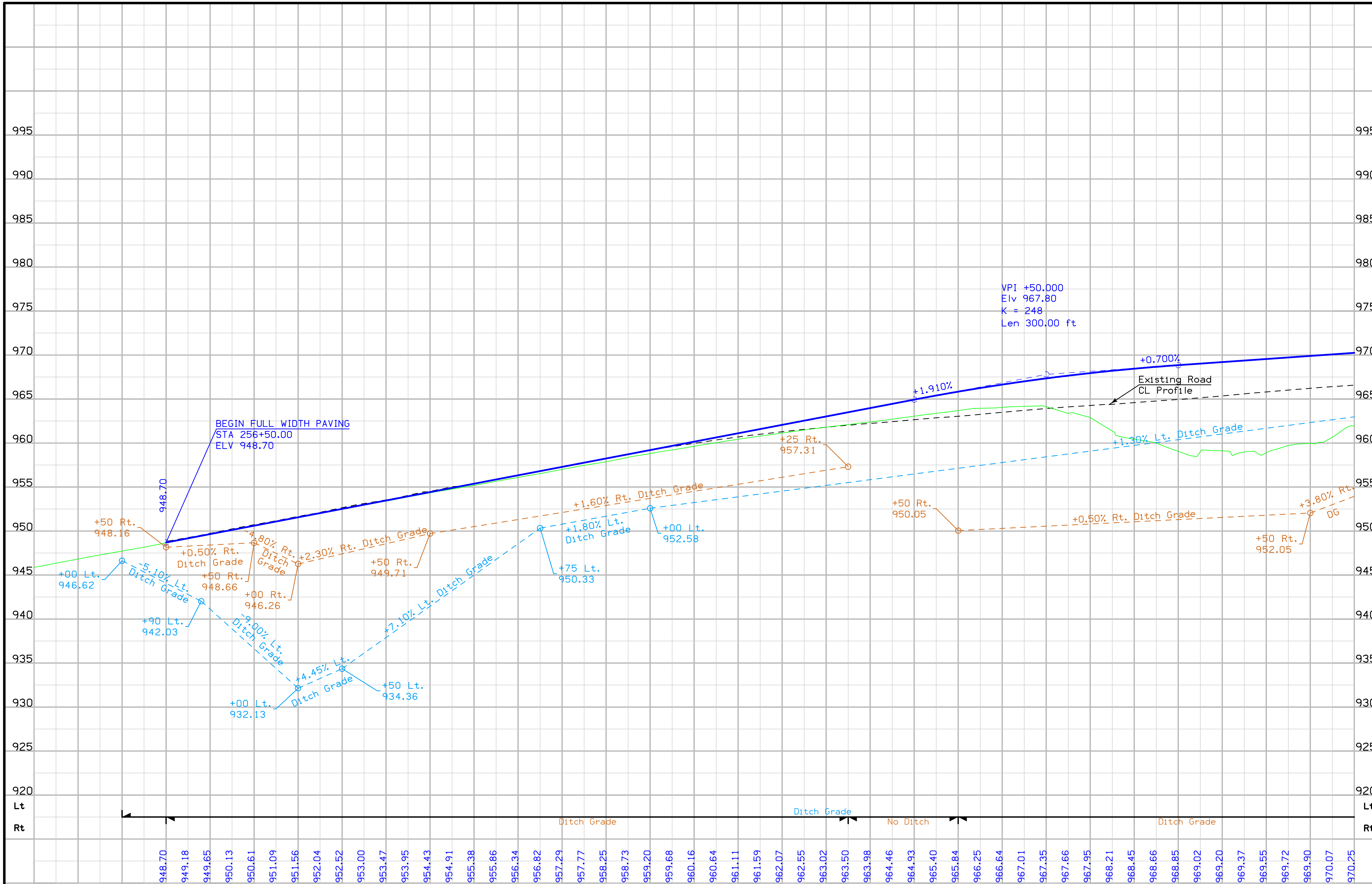
Proposed Right-of-Way
Existing and Proposed Right-of-Way
Easement and Existing Right-of-Way
Borrow
Easement (Temporary)
Easement
Excess
A/C Access Control

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES D, E, F, & K)



ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER D.2



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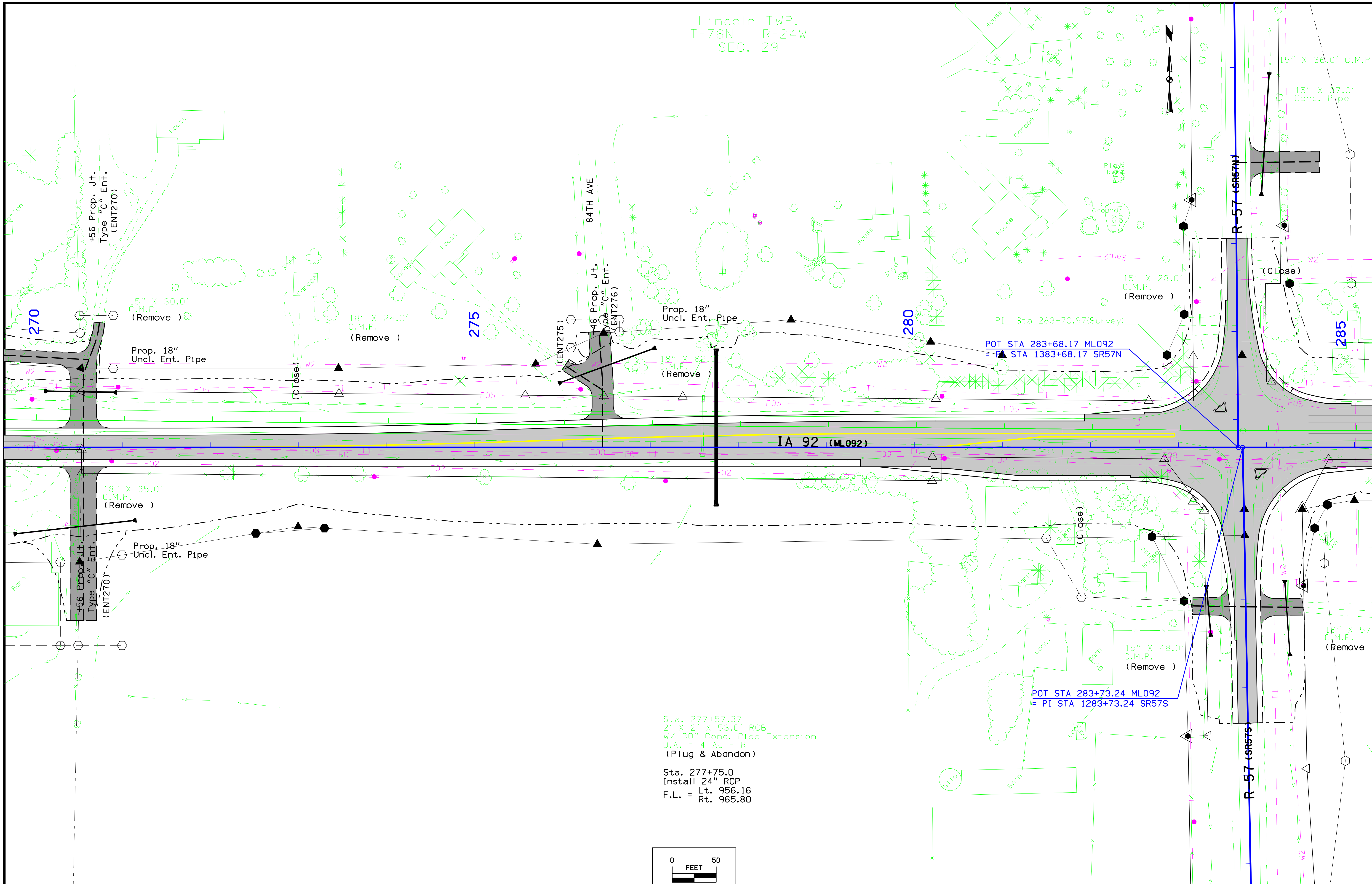

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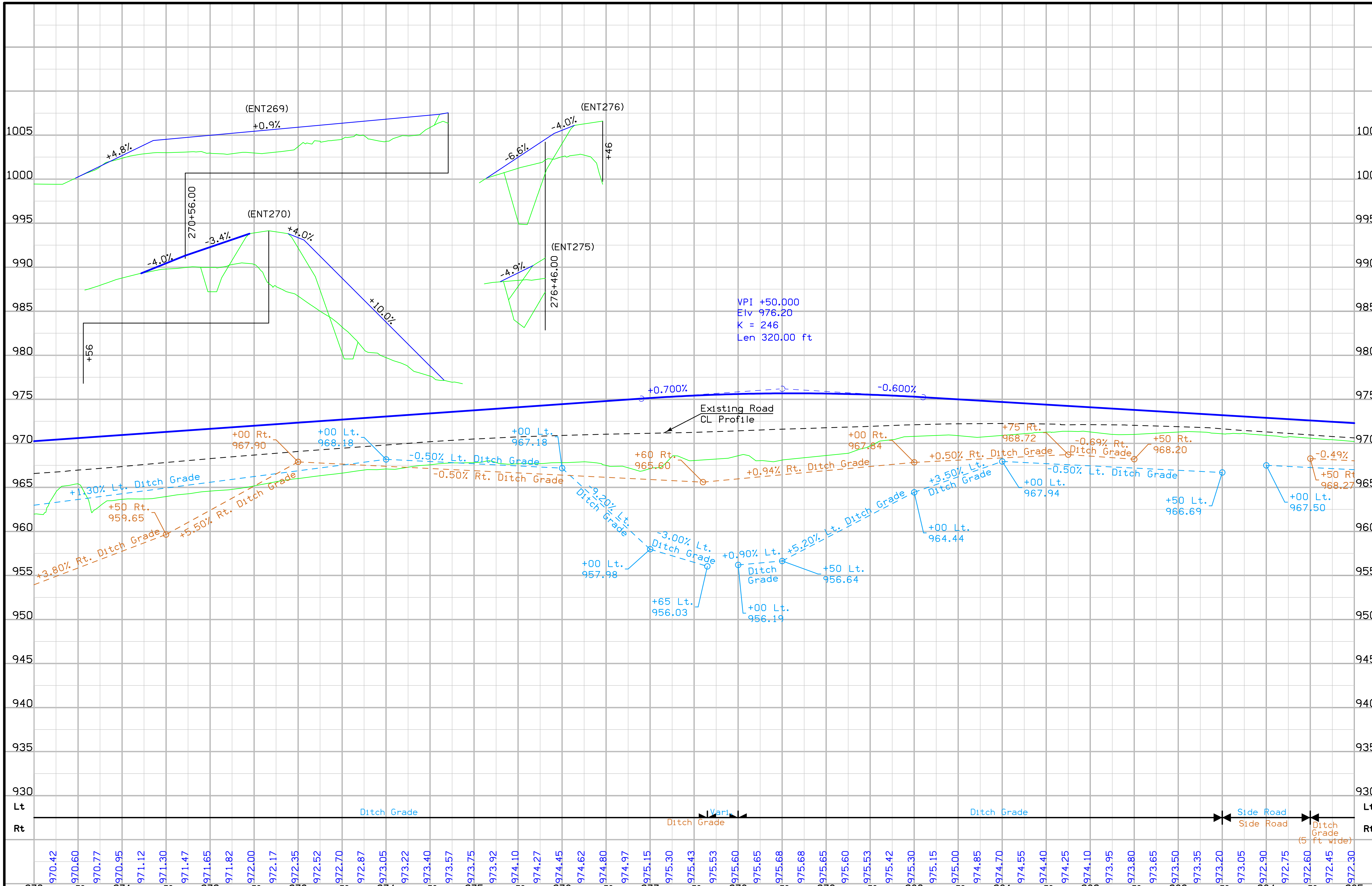

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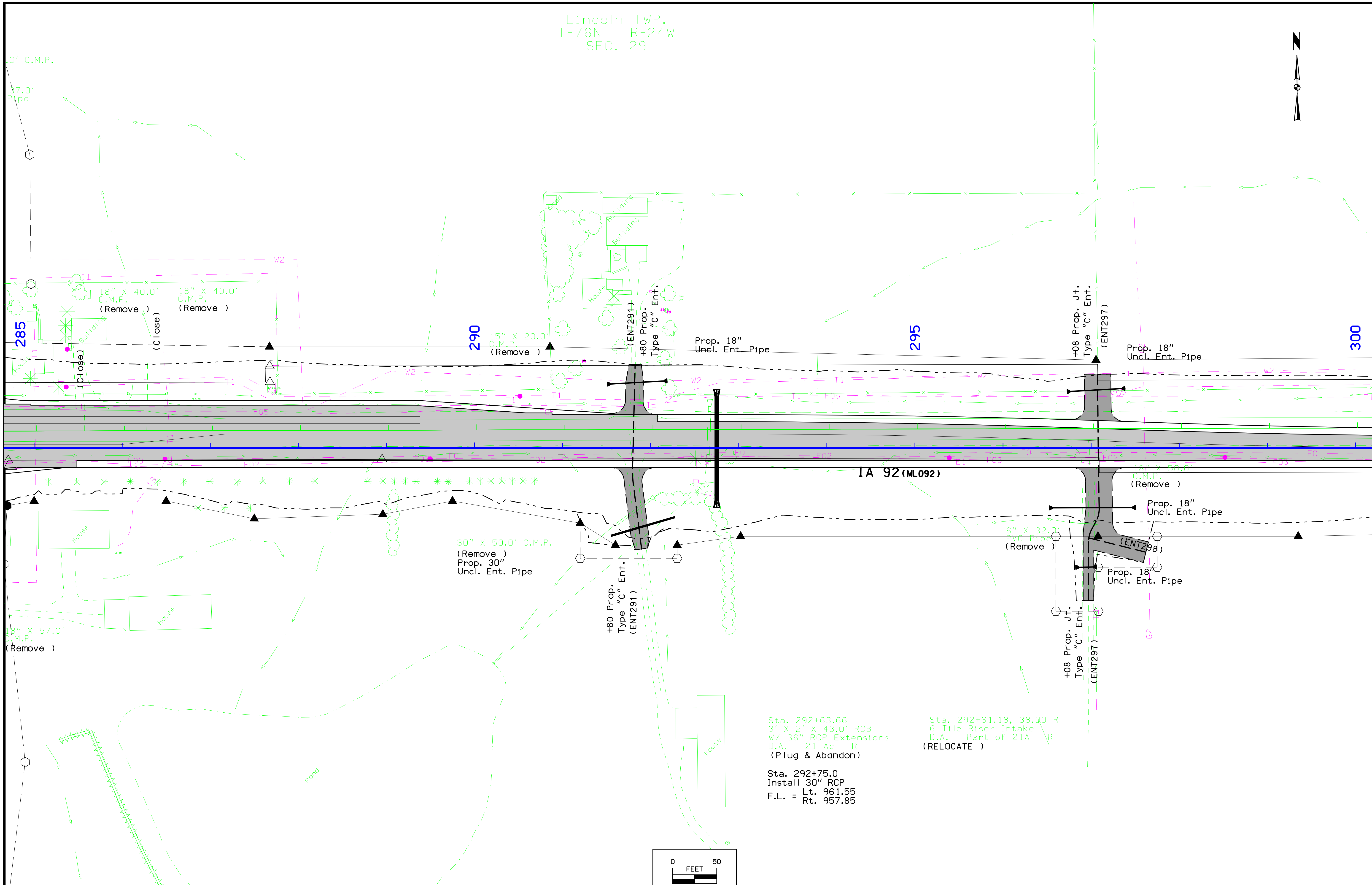

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER D.6

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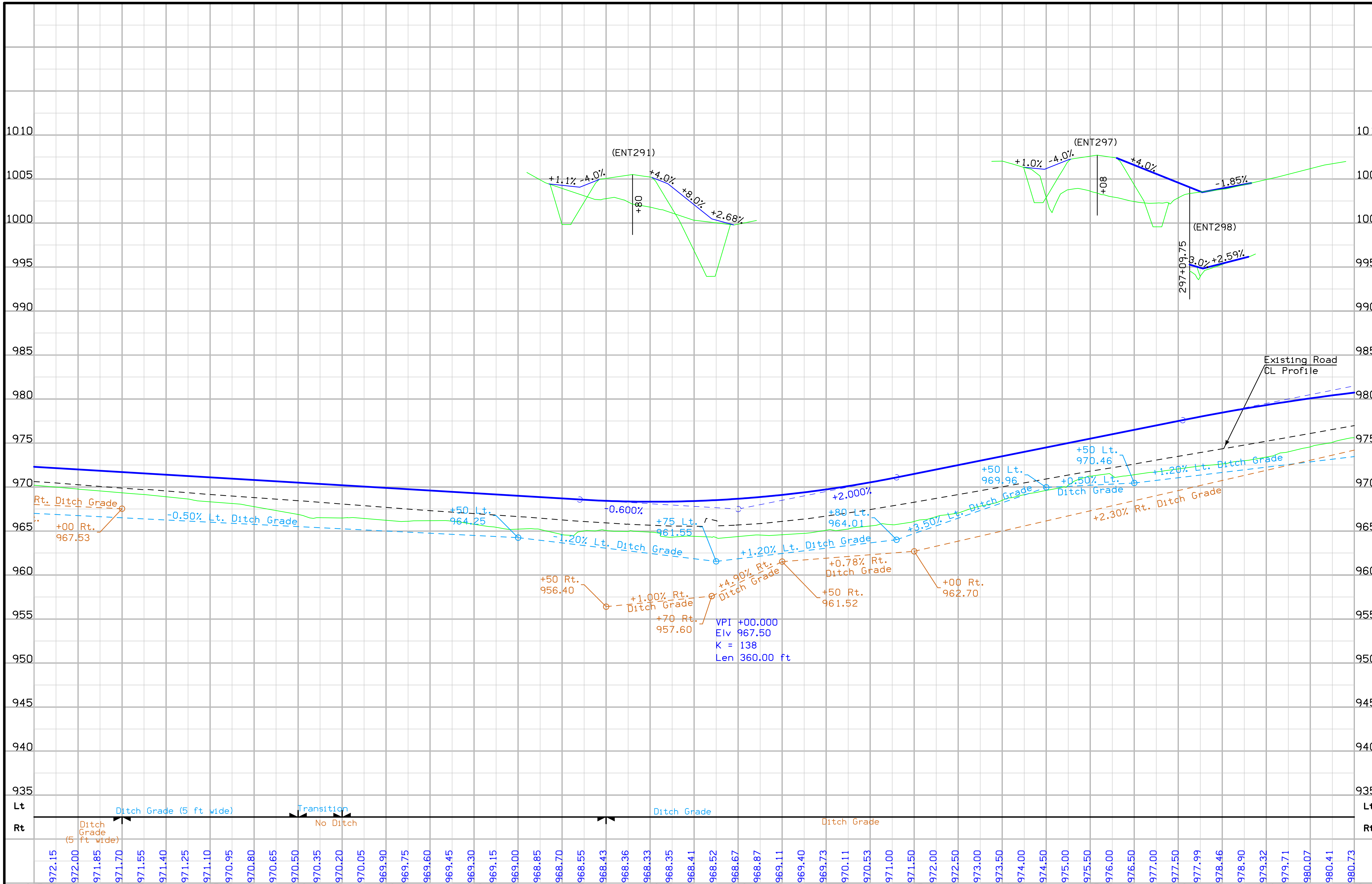

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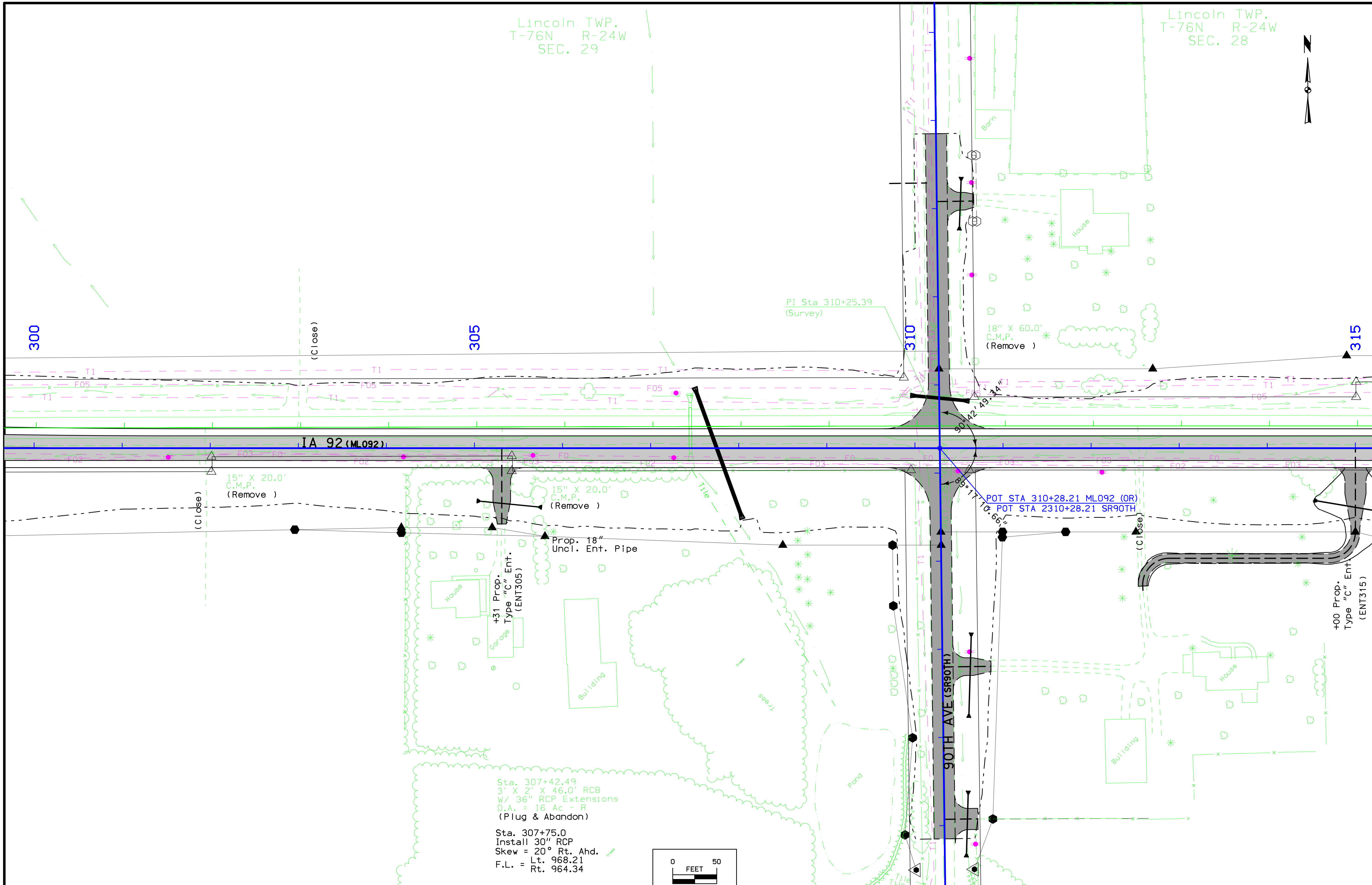

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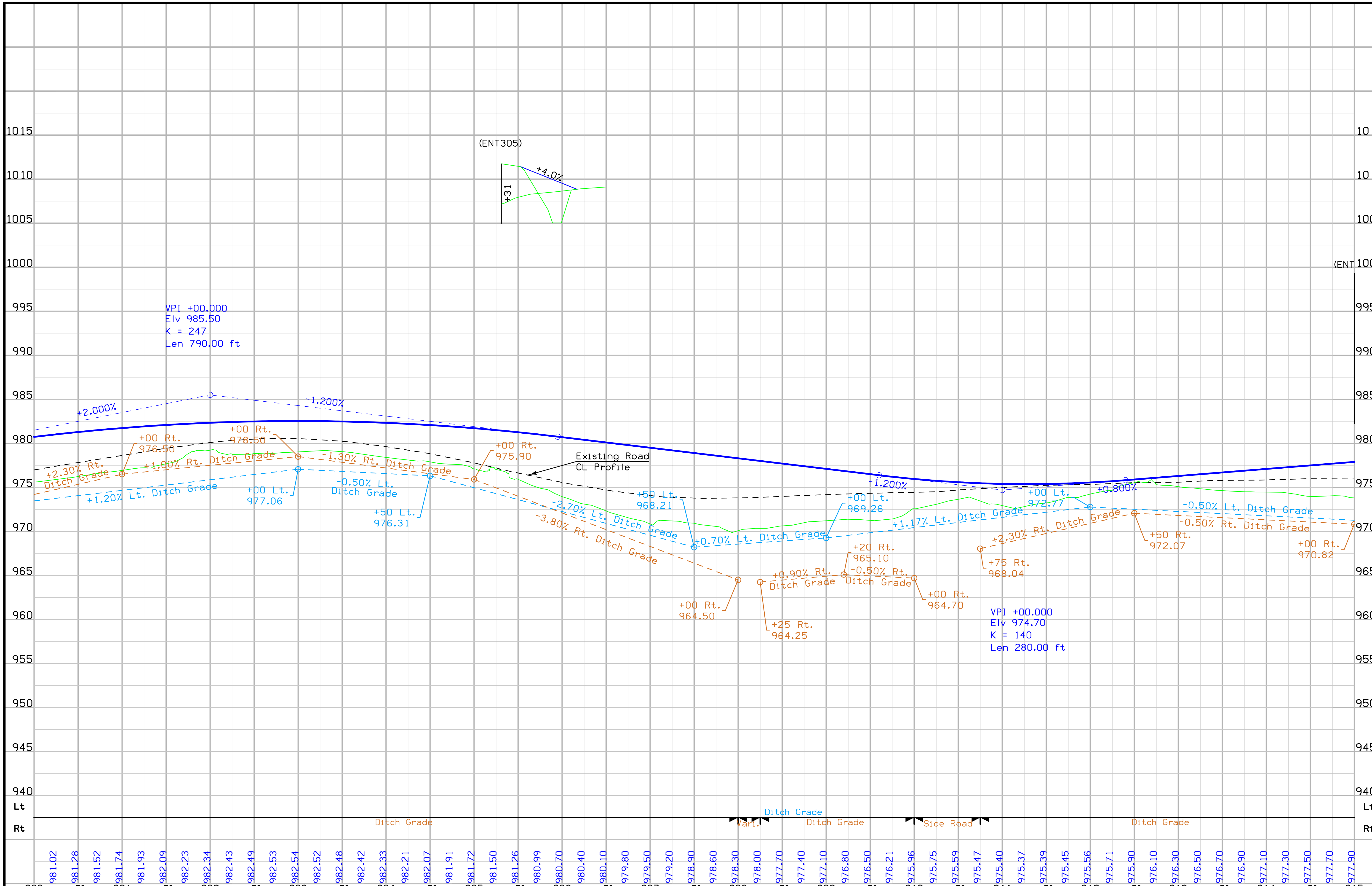

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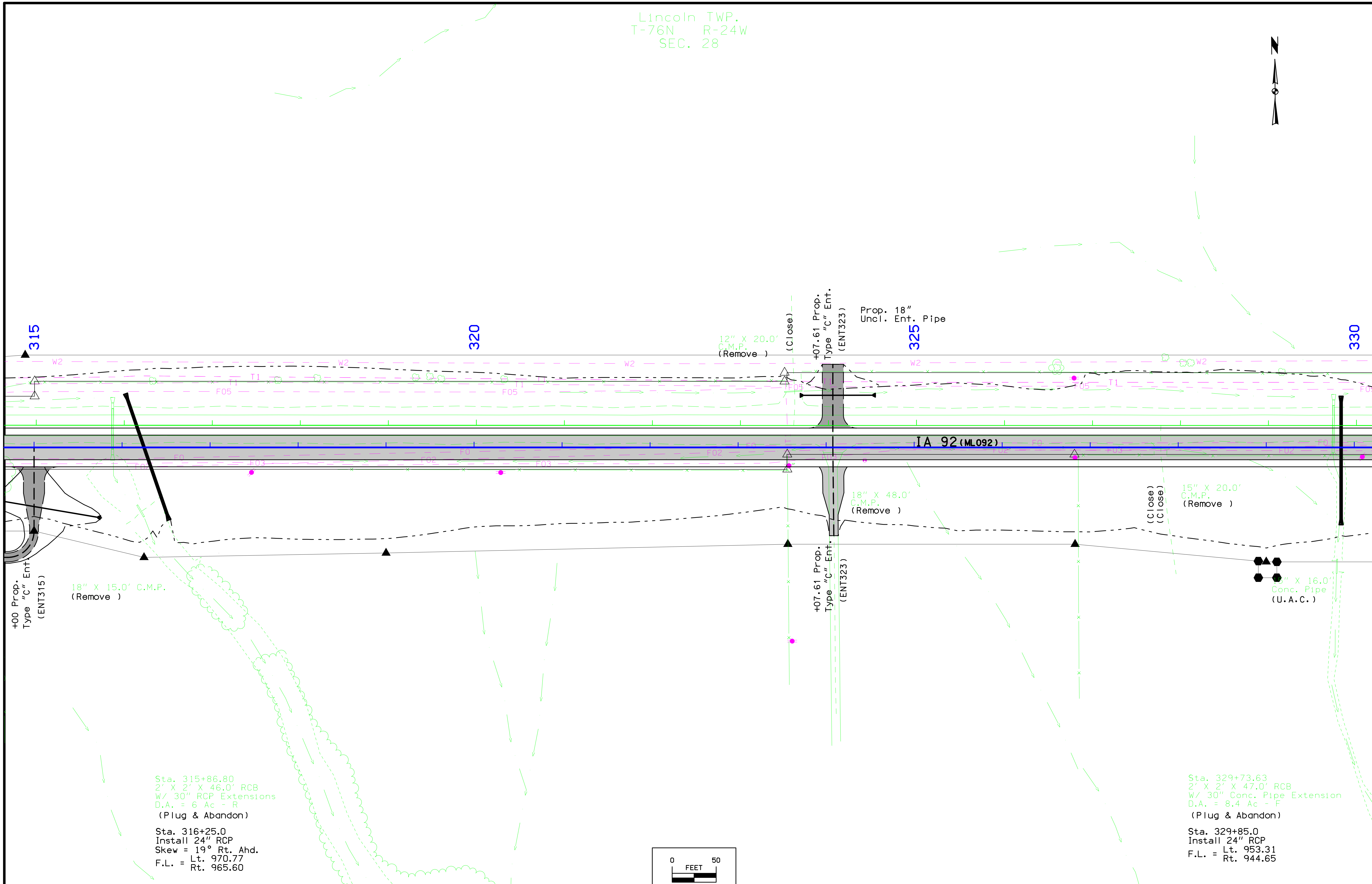

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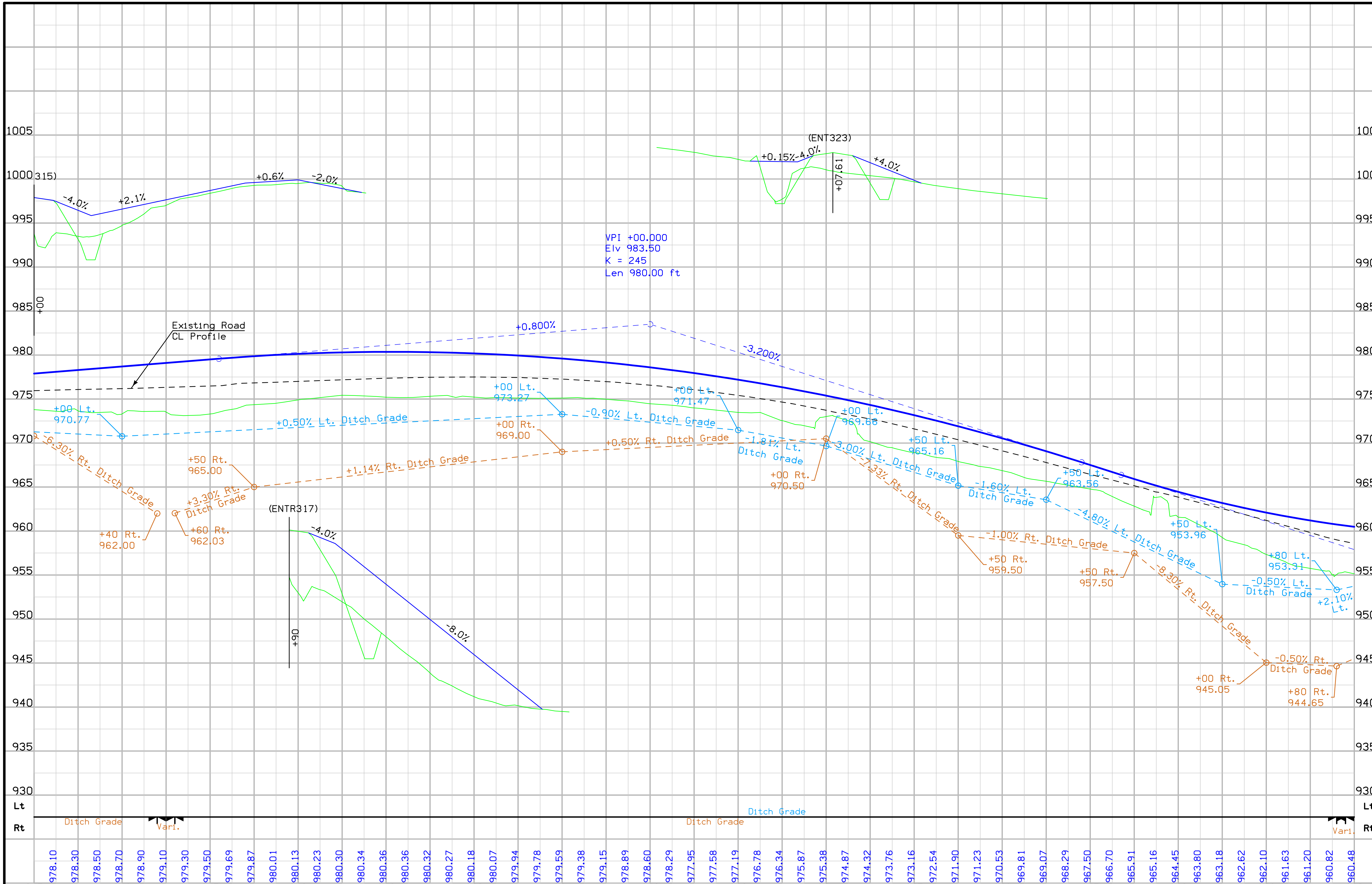

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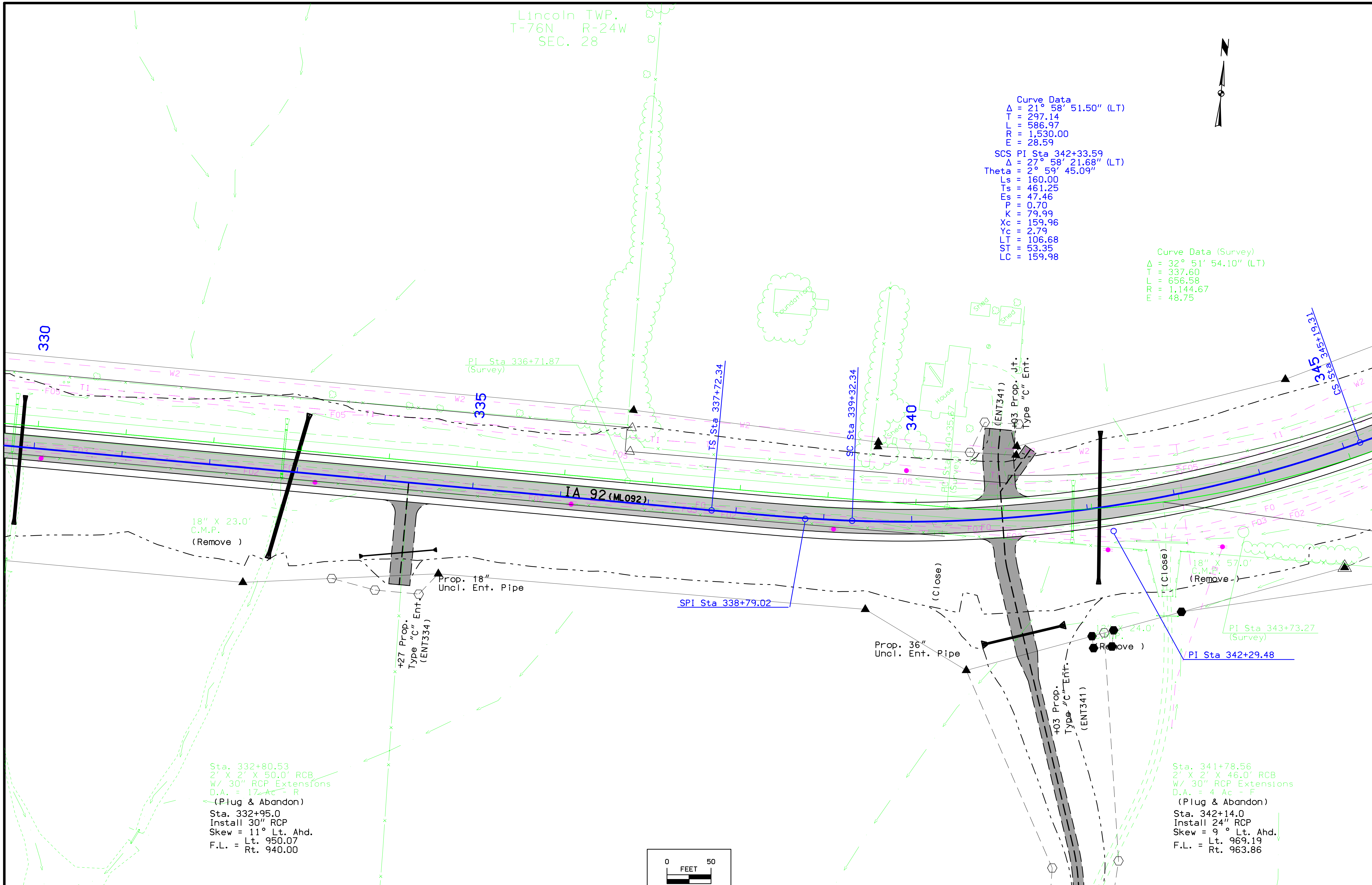

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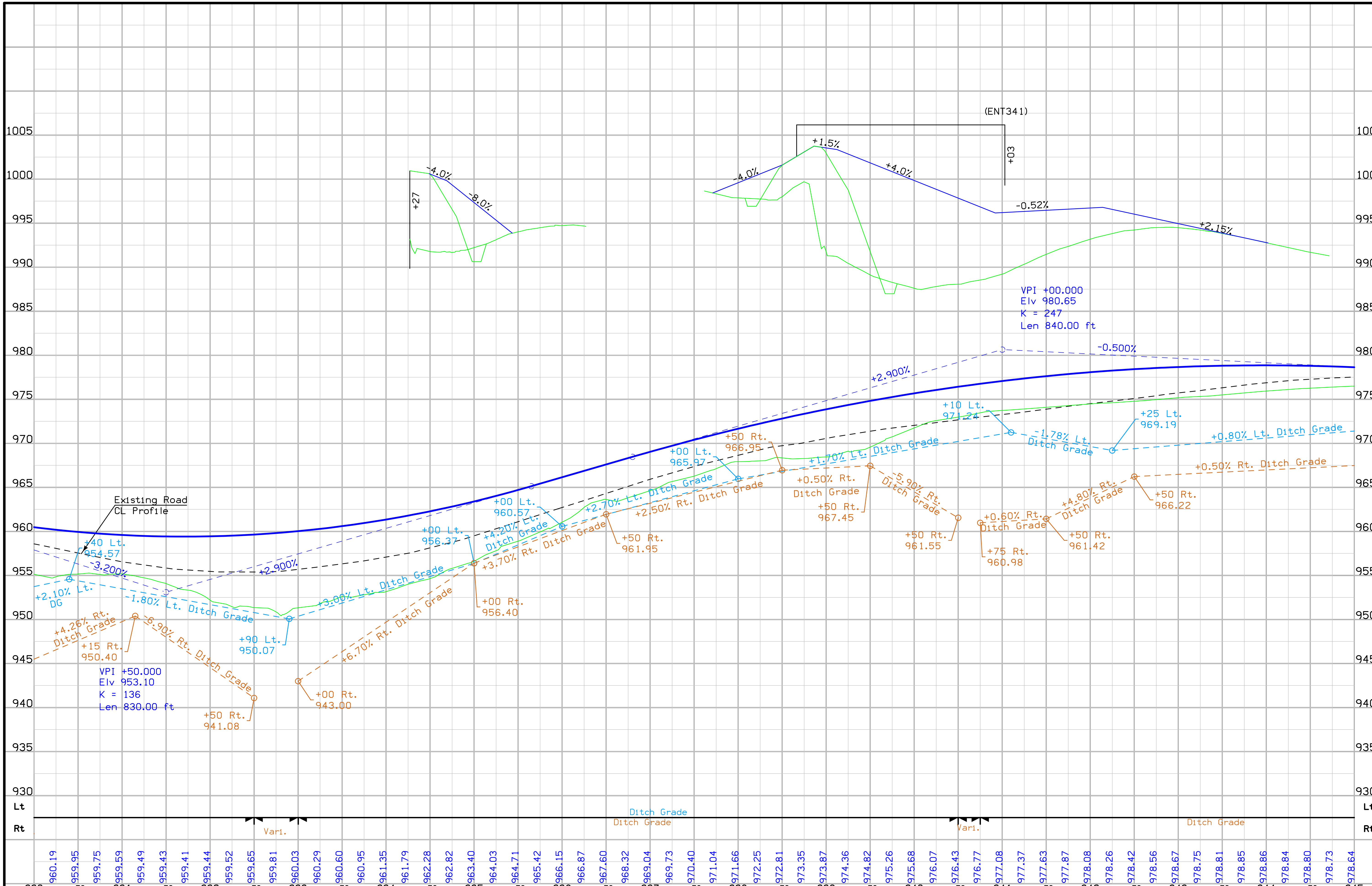

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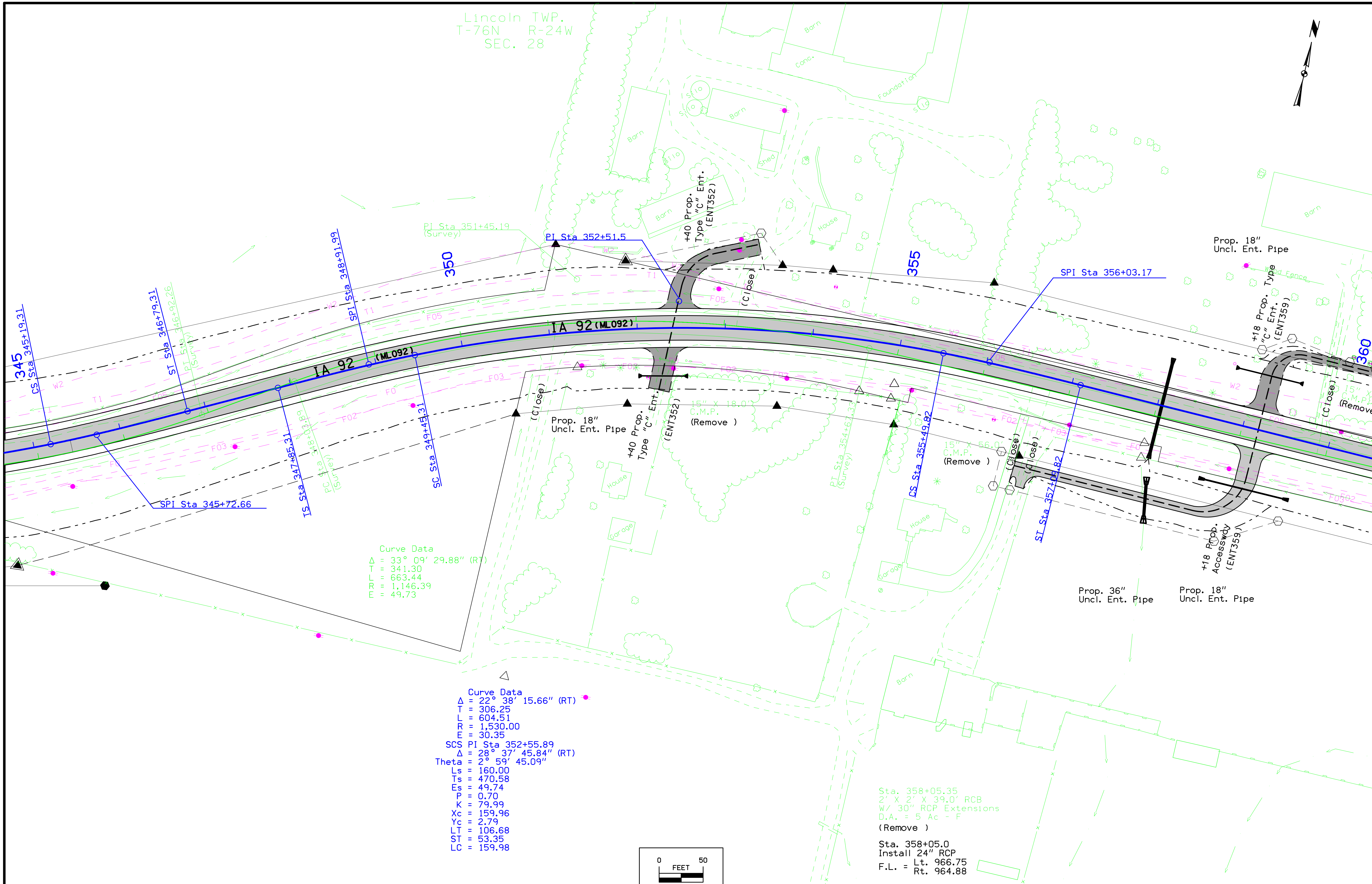

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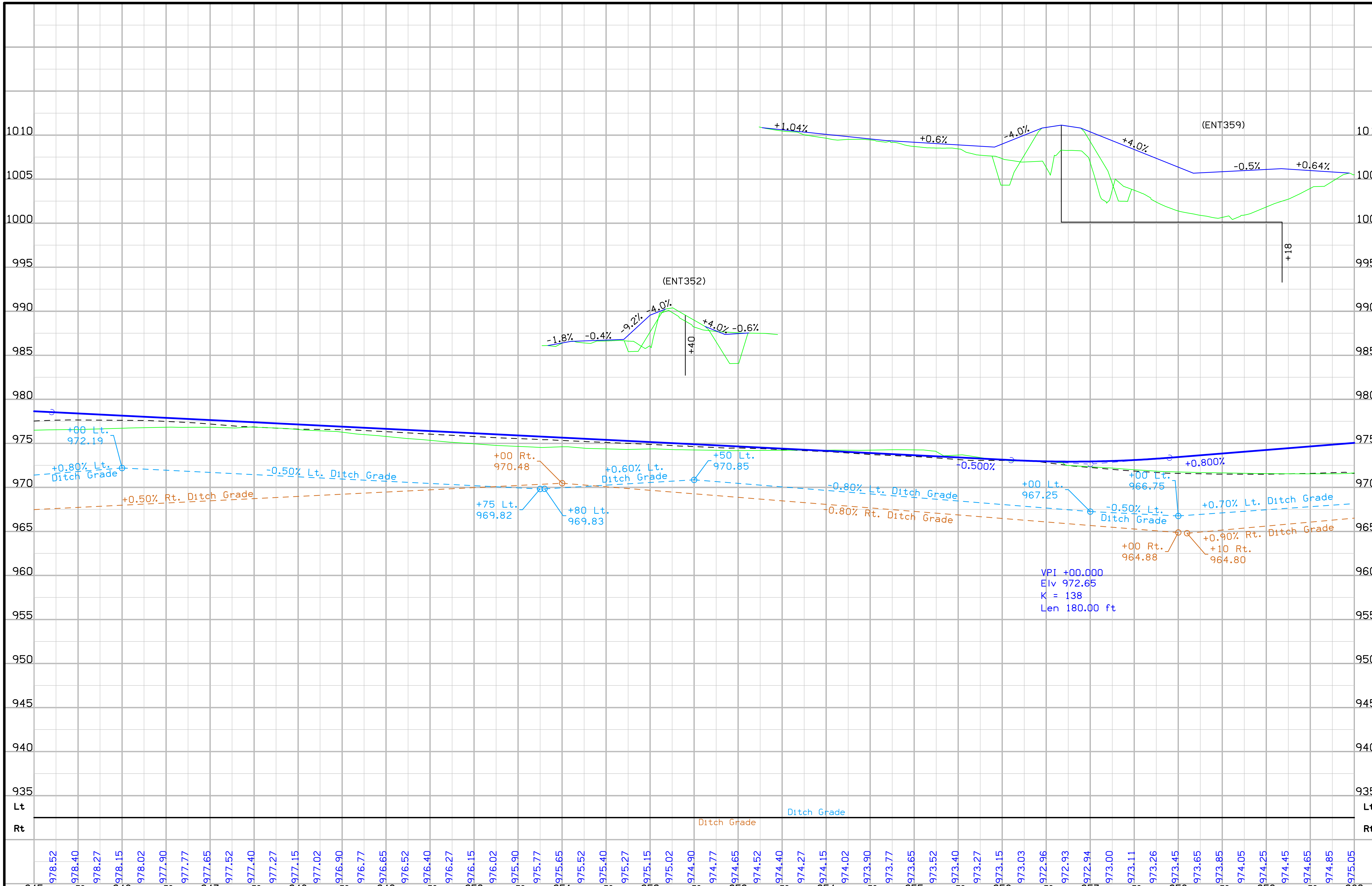

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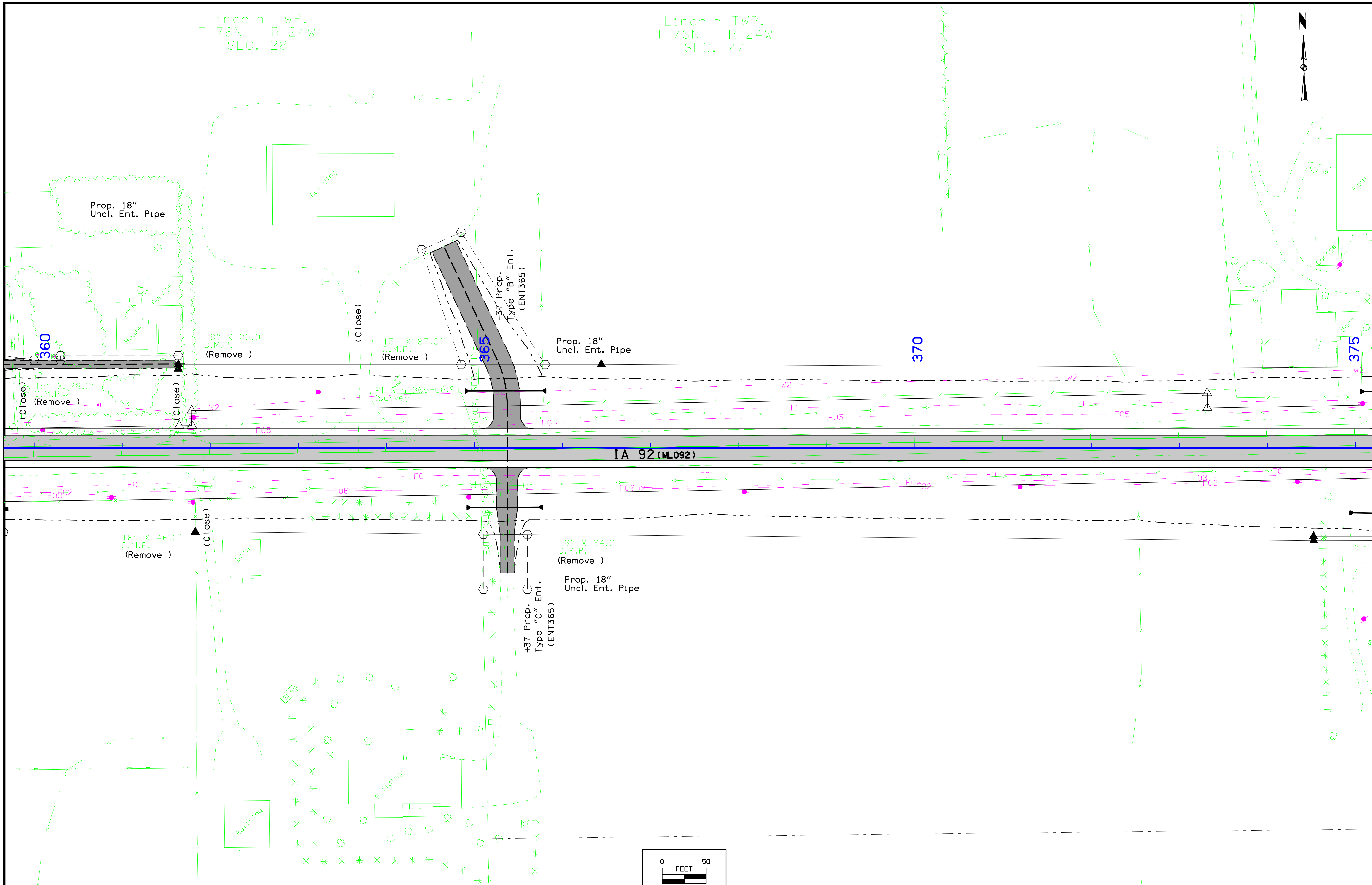

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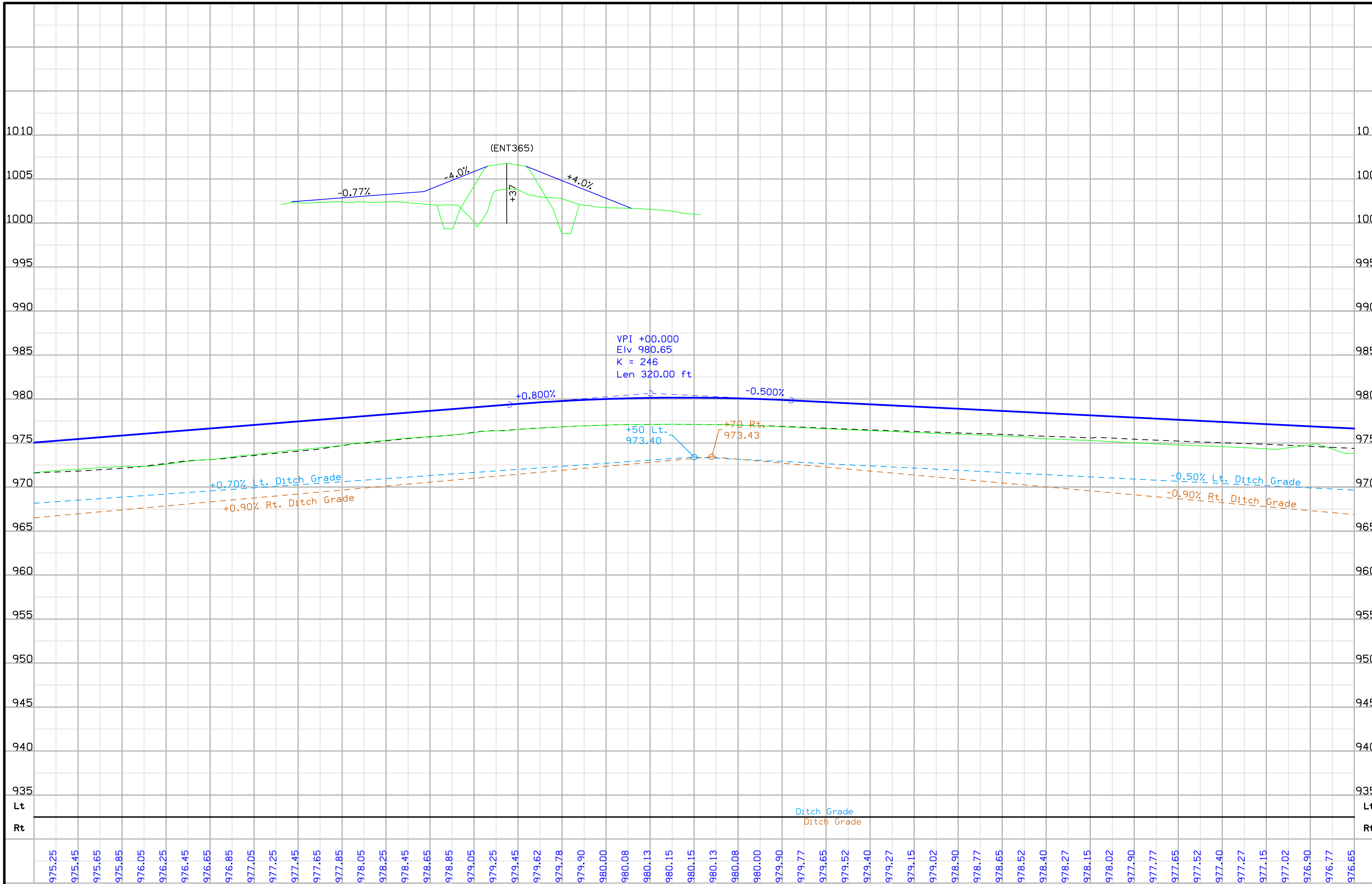

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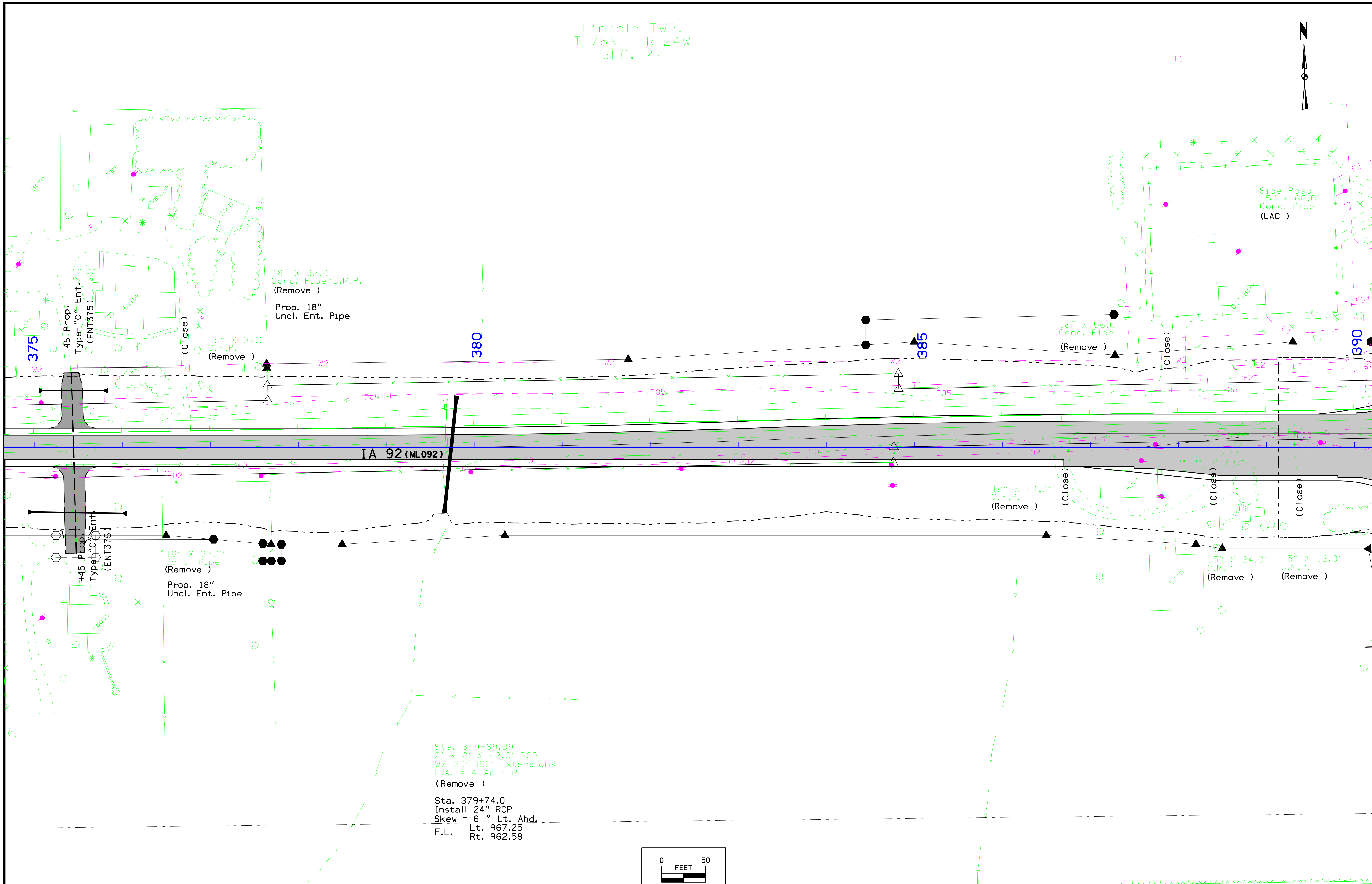

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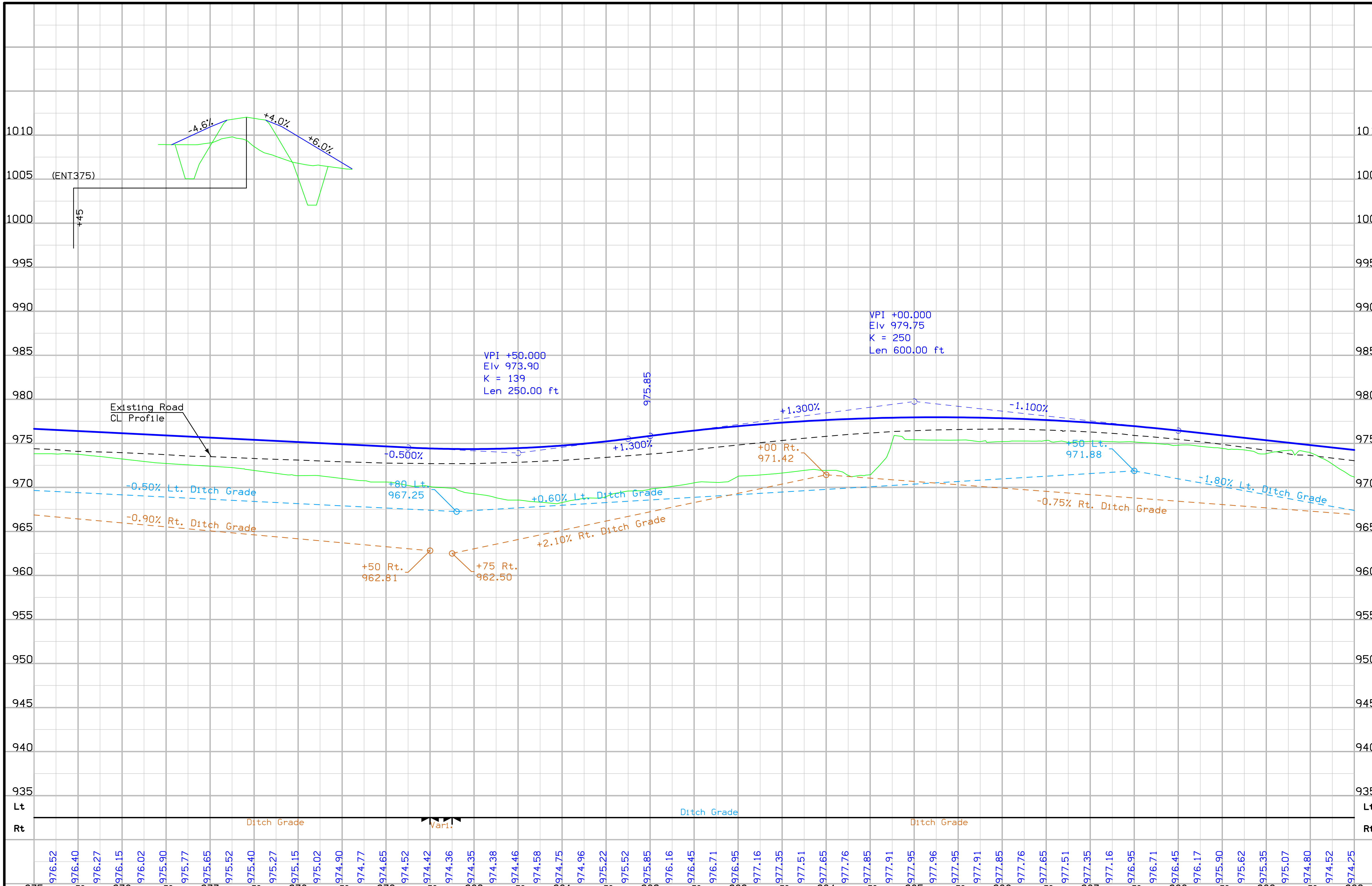

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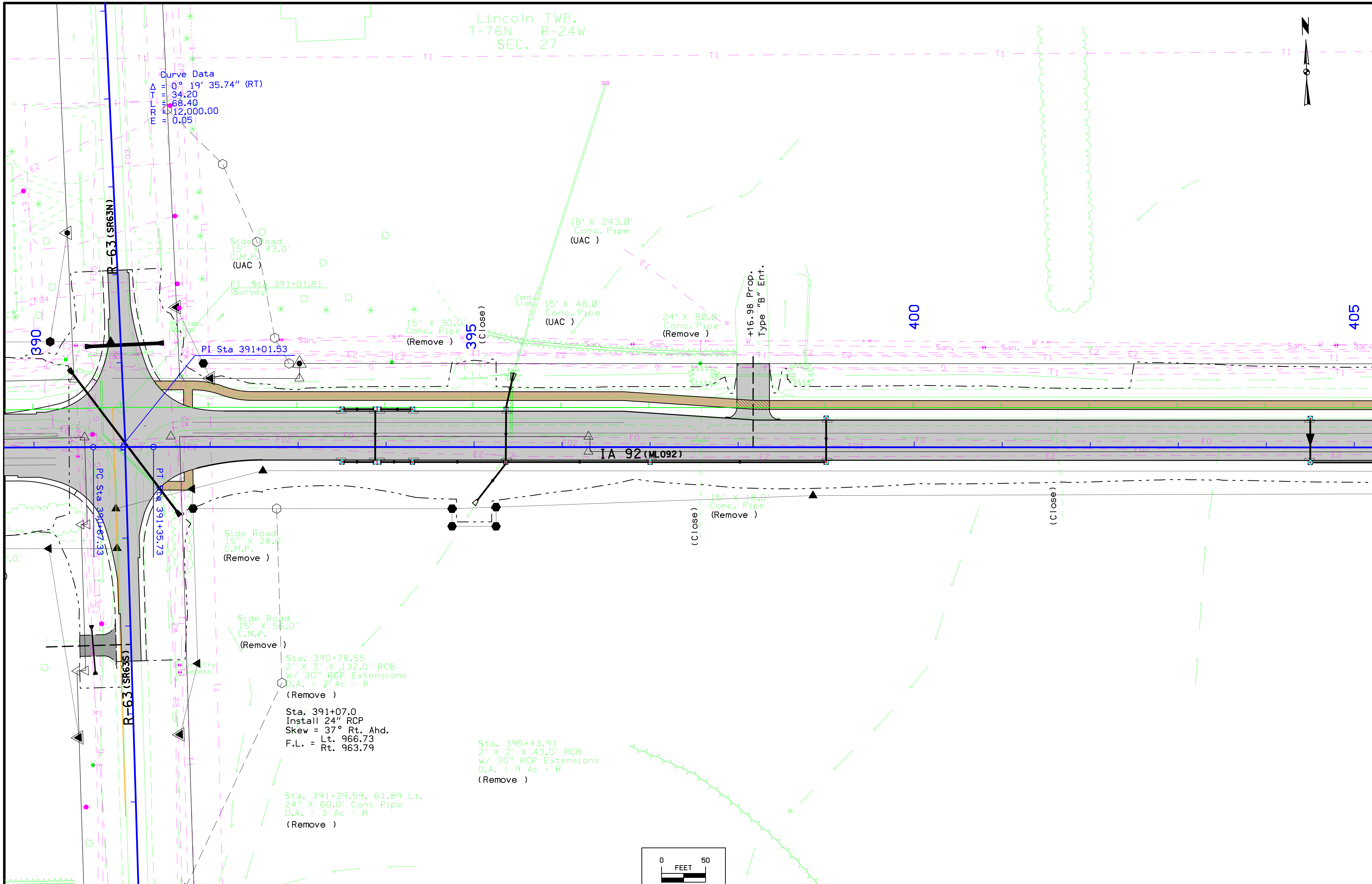

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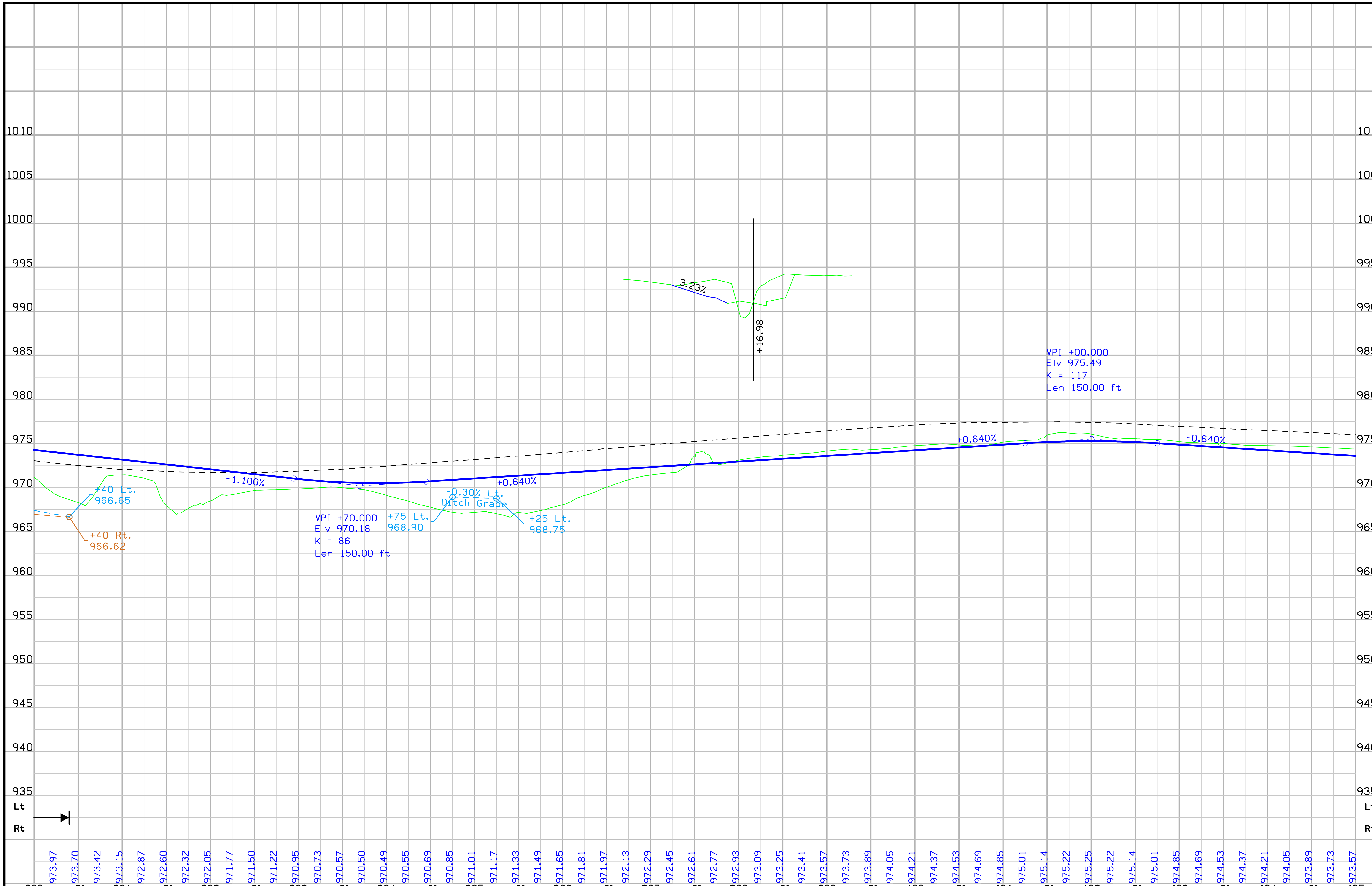

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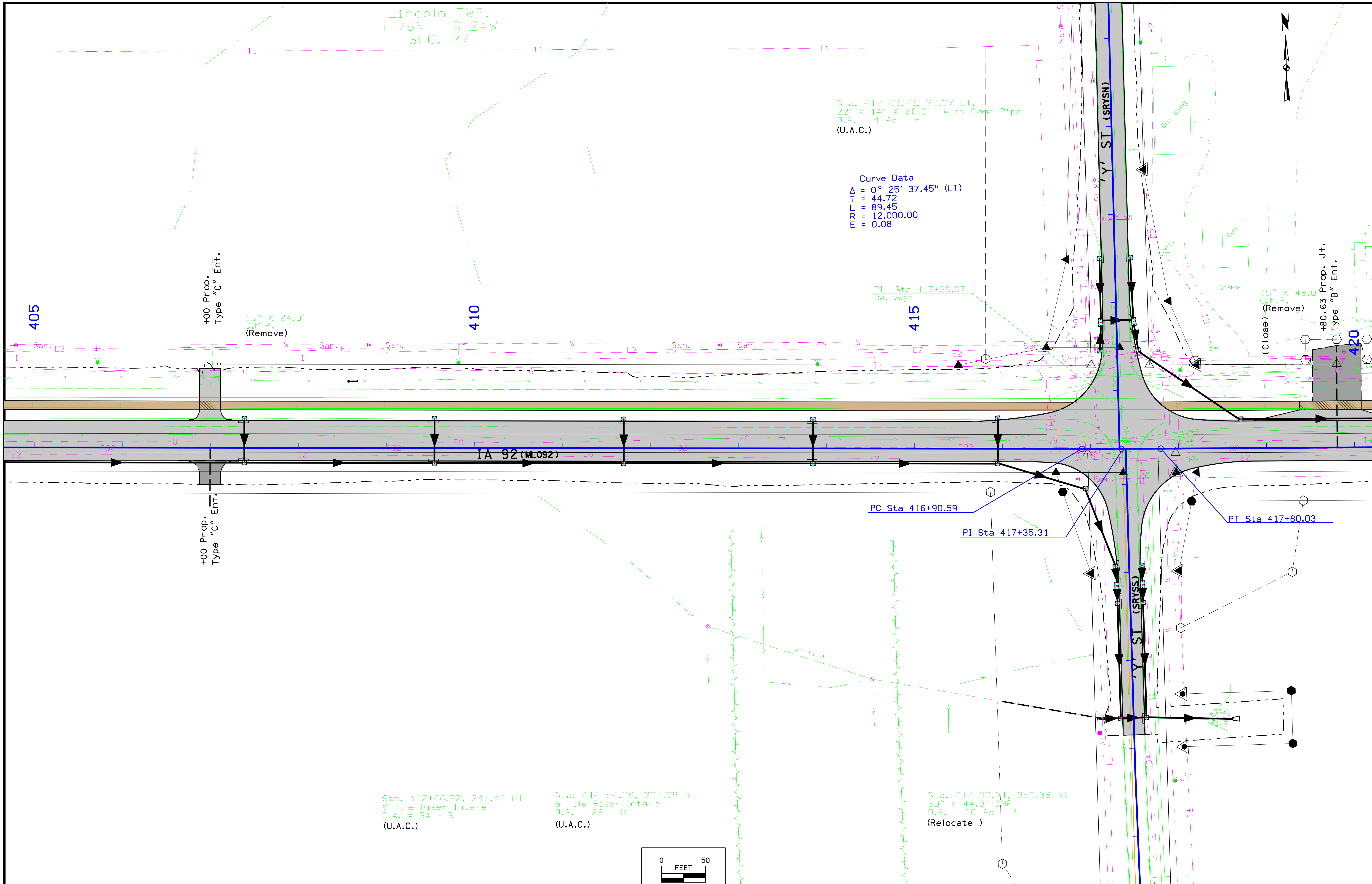

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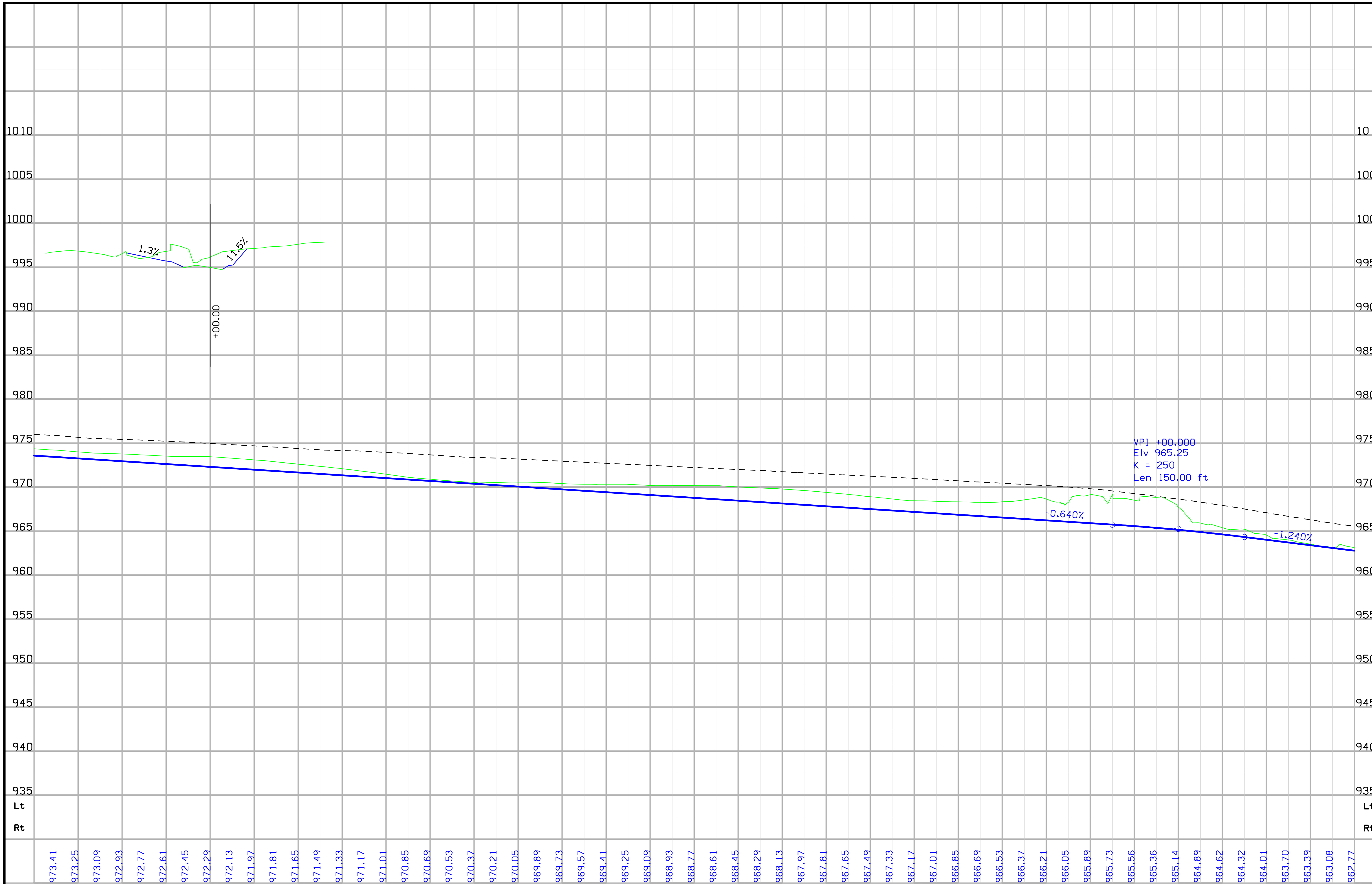

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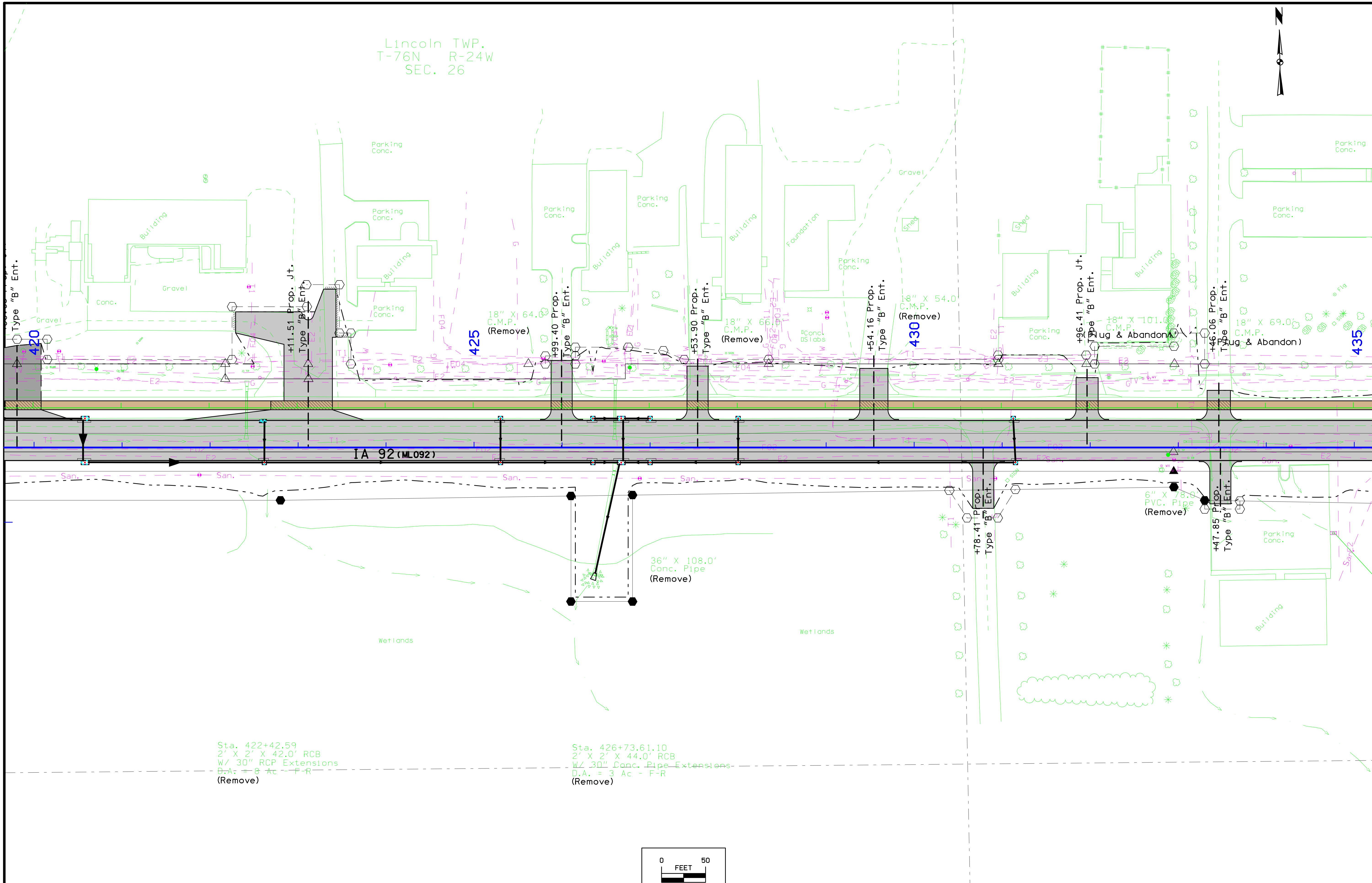

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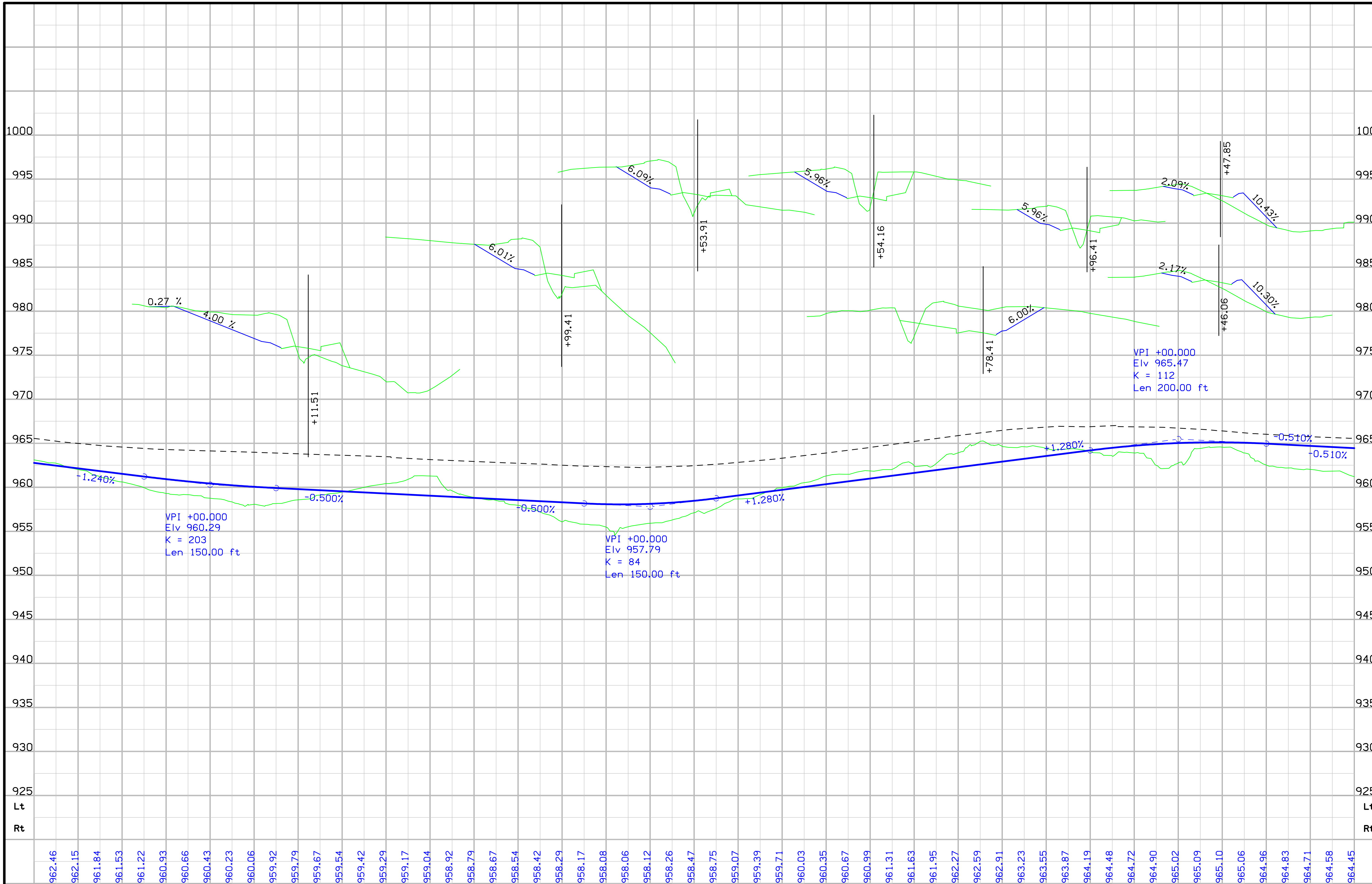

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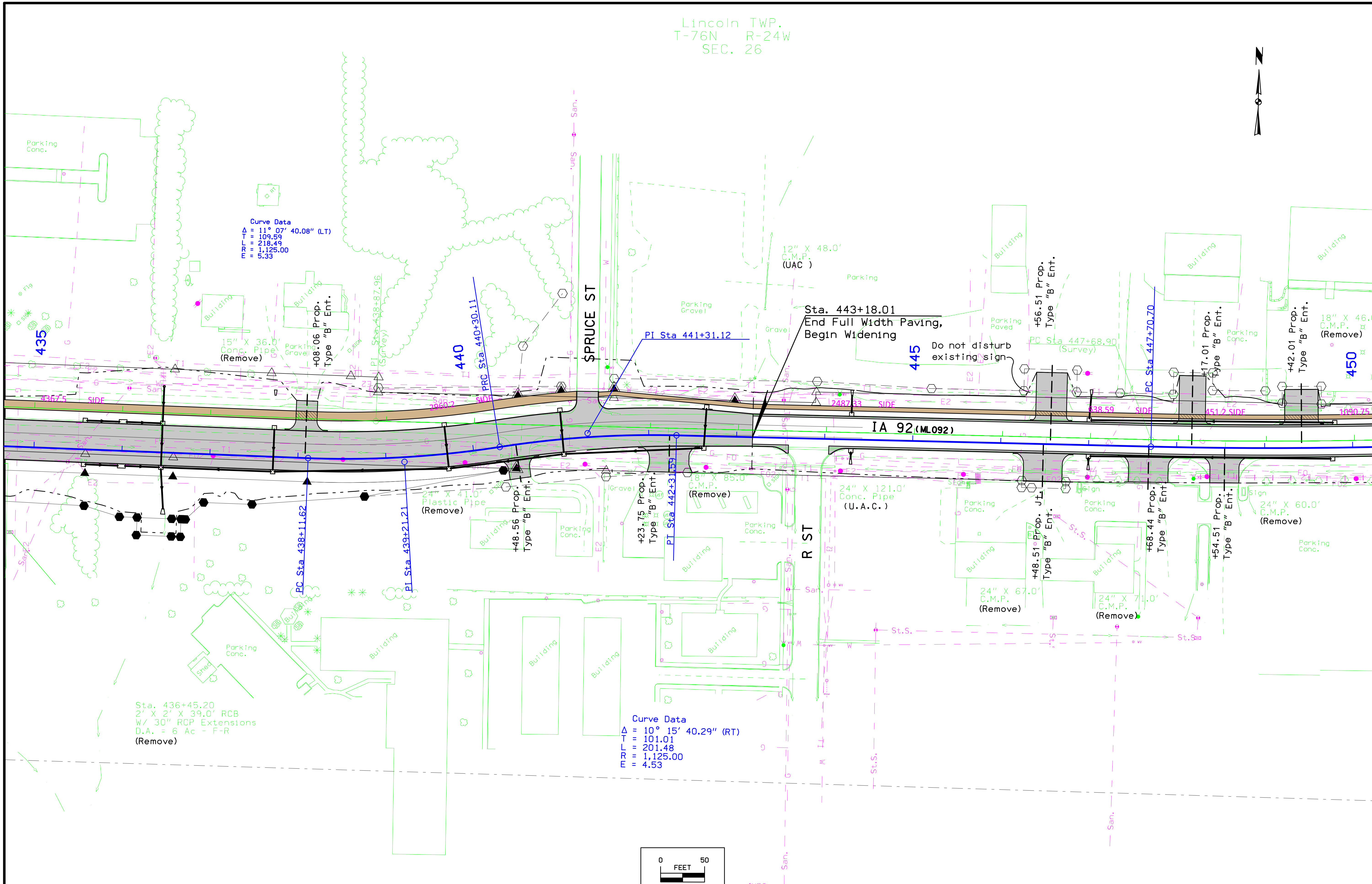

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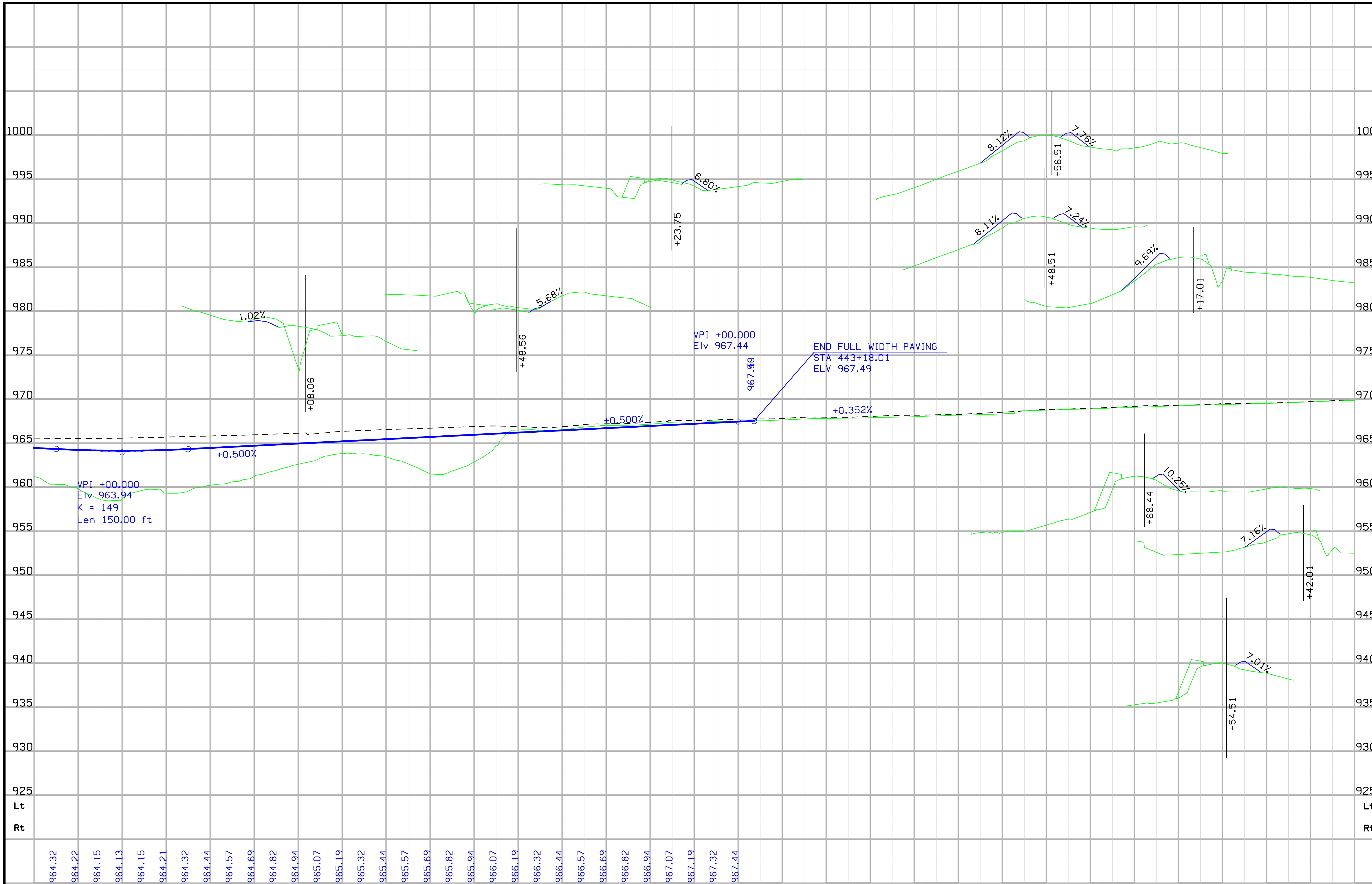

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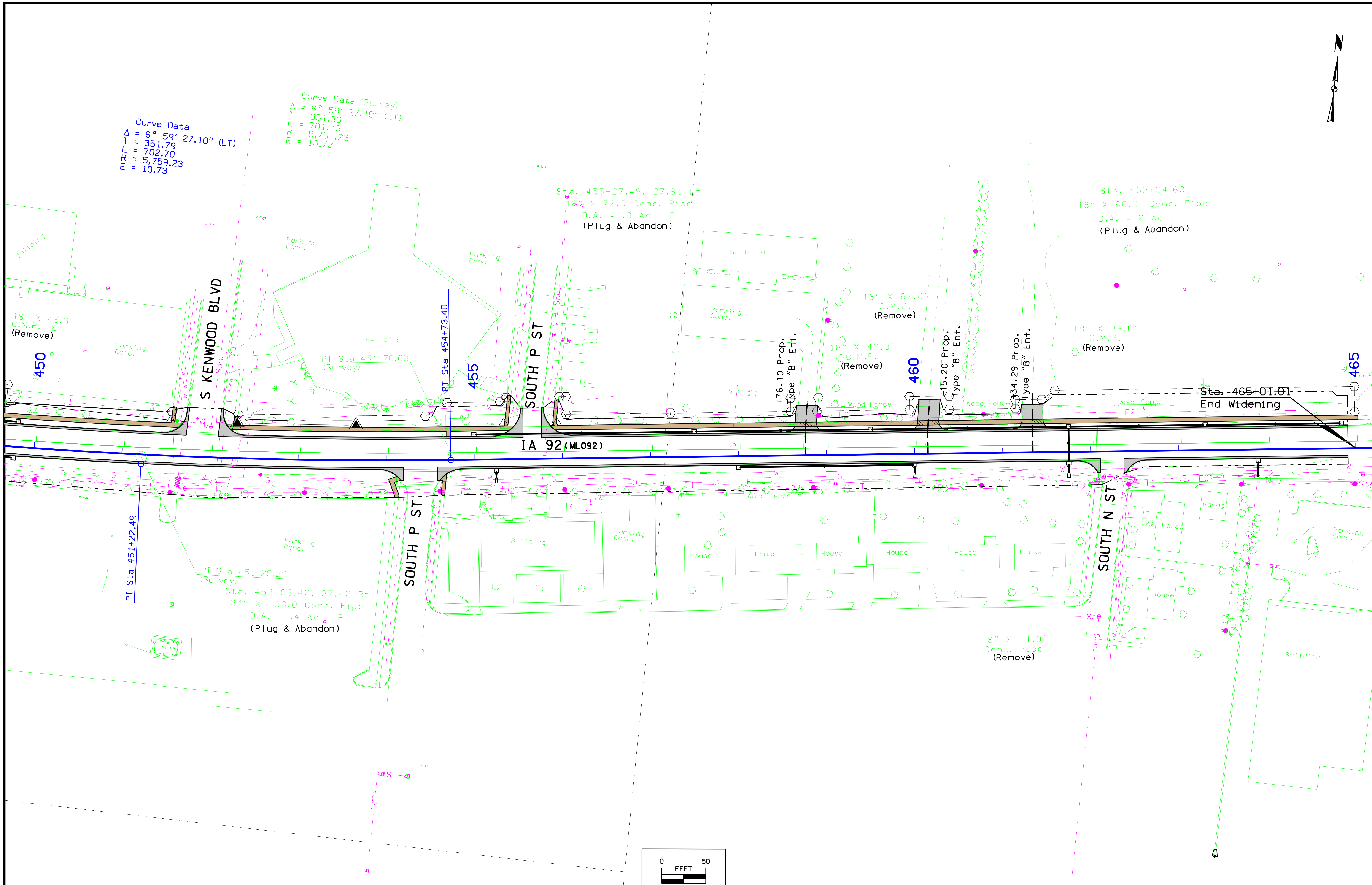

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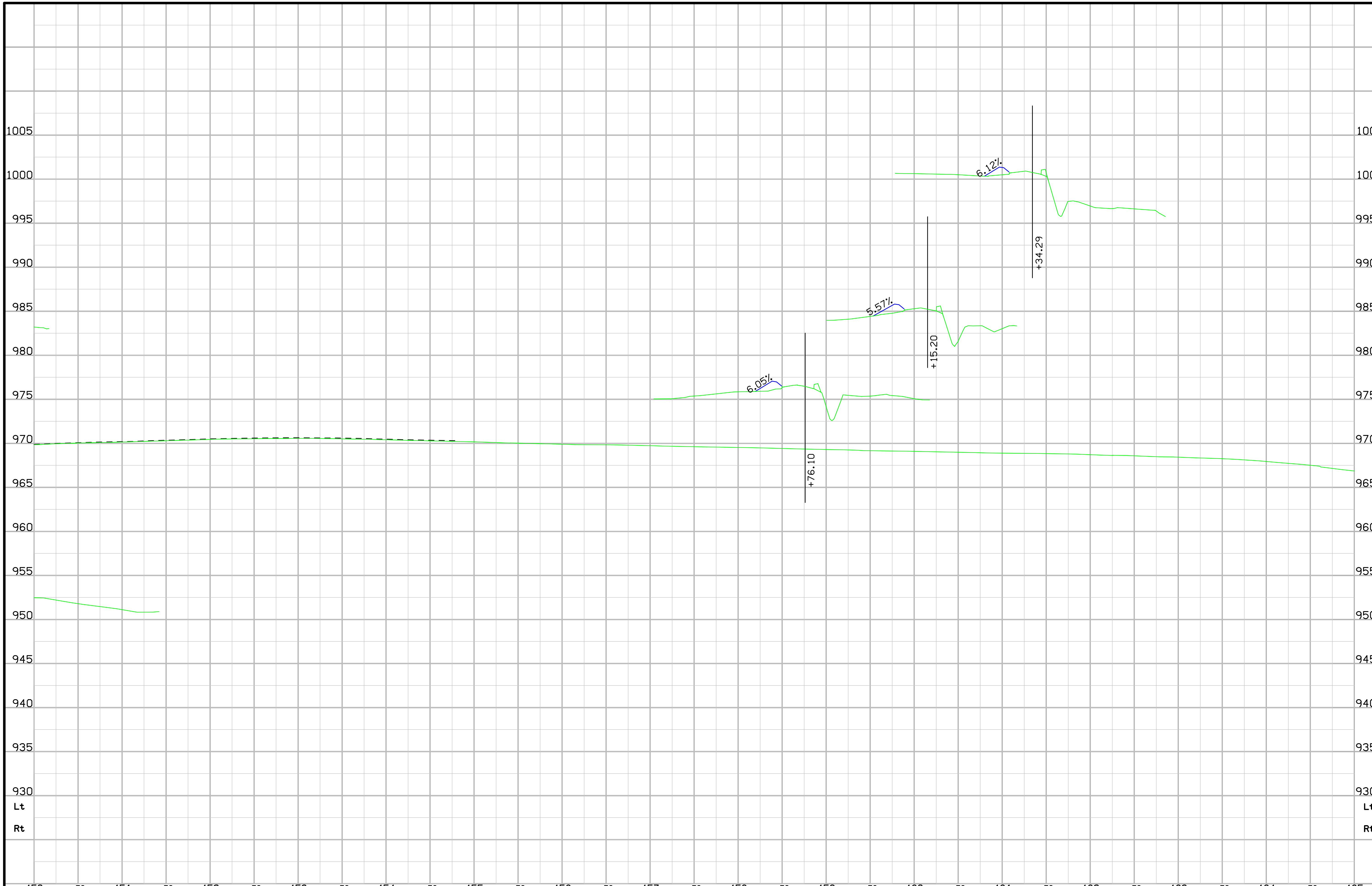

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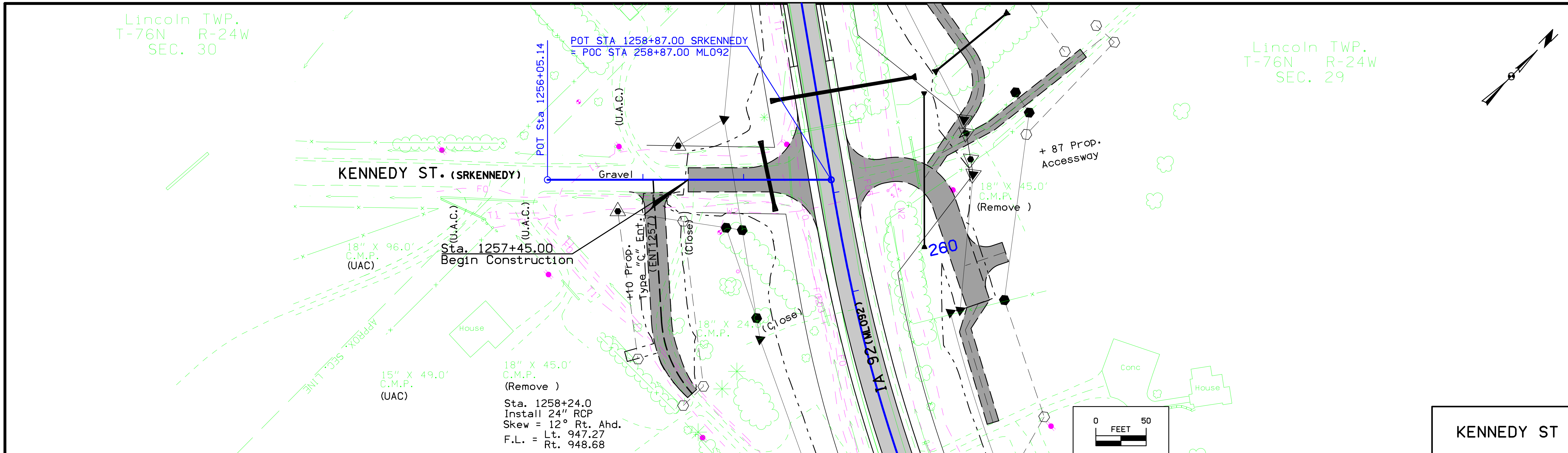

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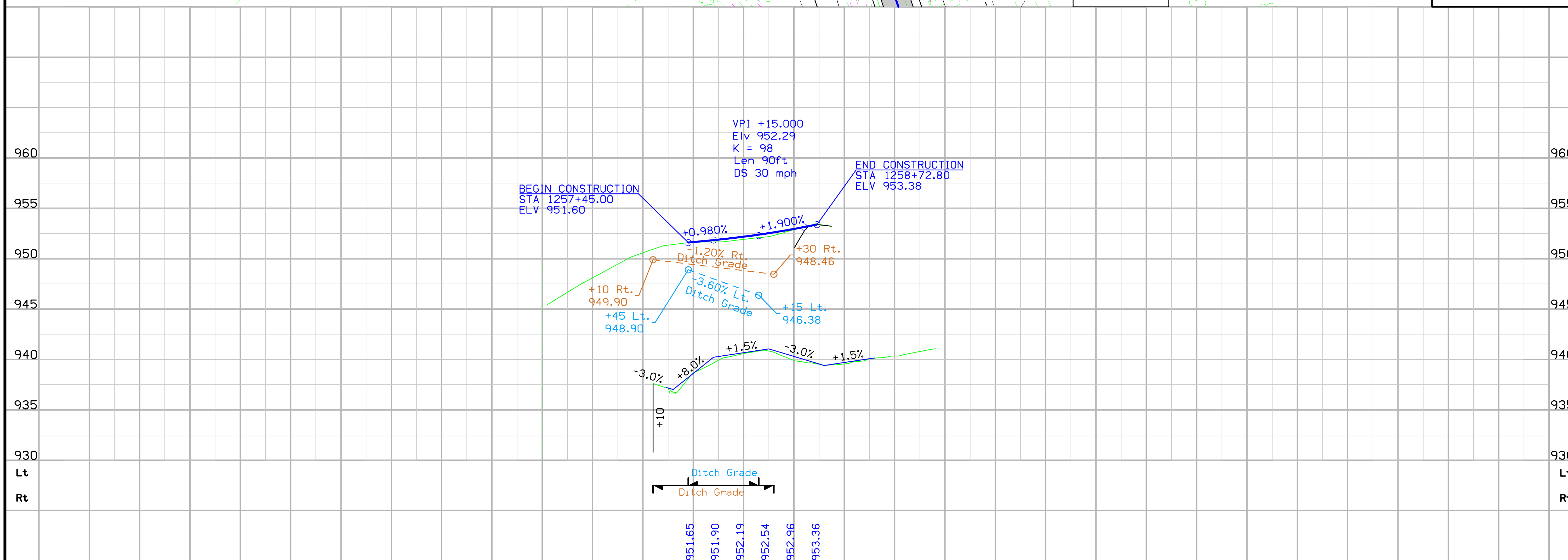

C | ENGLISH | IOWA DOT | DESIGN TEAM **Jia\Holst\Bennett** | **WARREN** COUNTY | PROJECT NUMBER **NHSX-092-5(51)--3H-91** | SHEET NUMBER **E.1**

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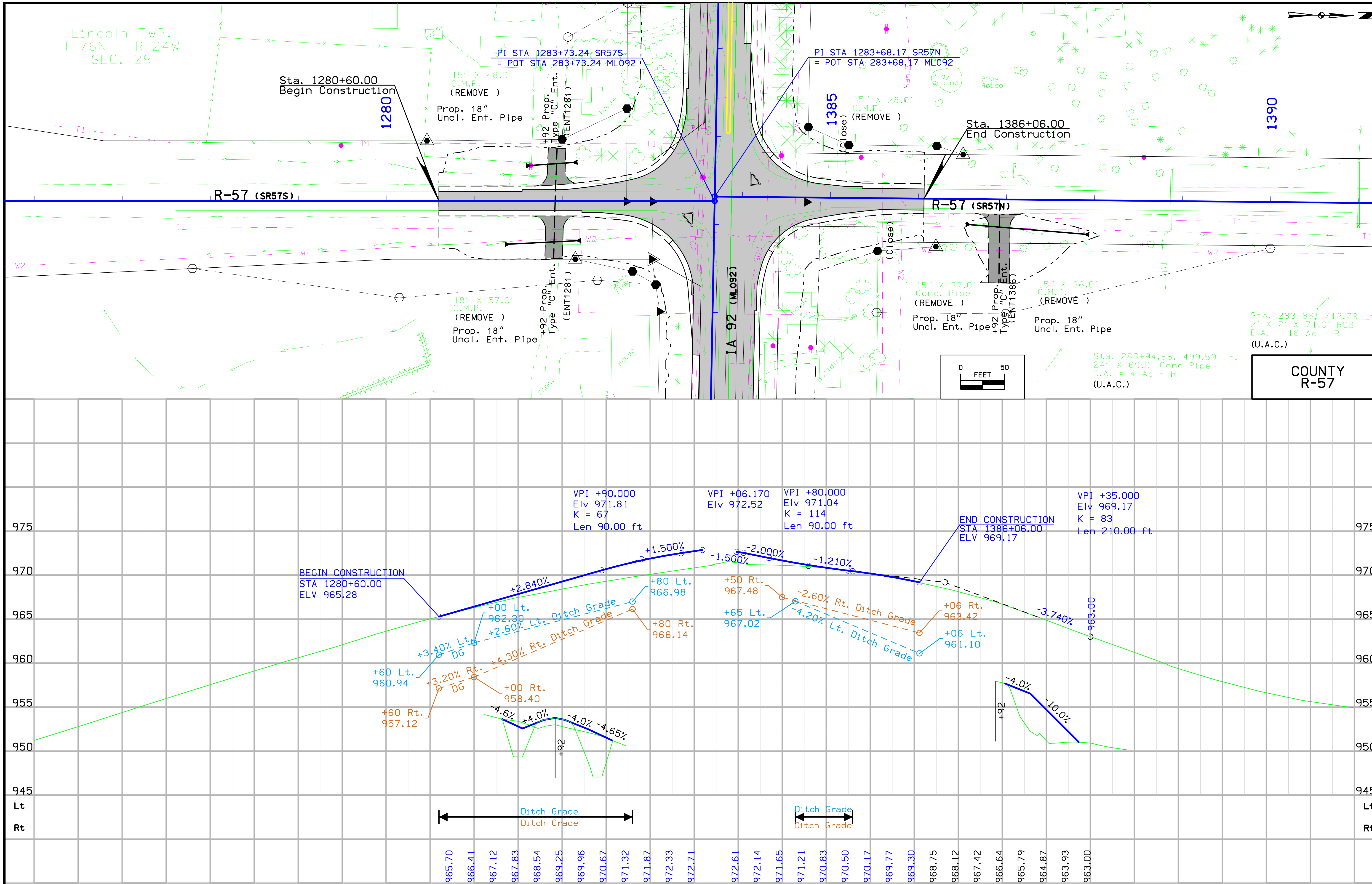

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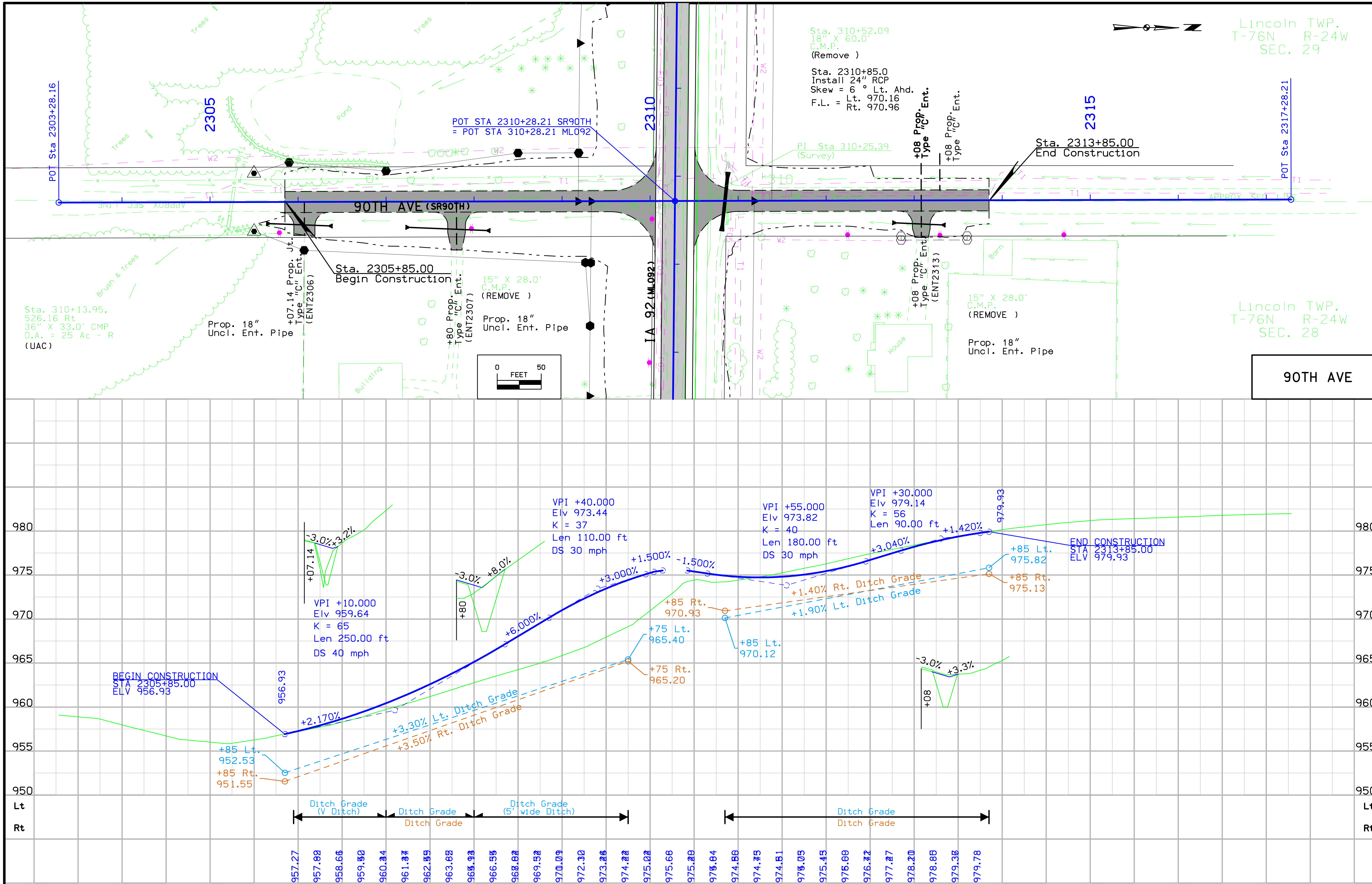

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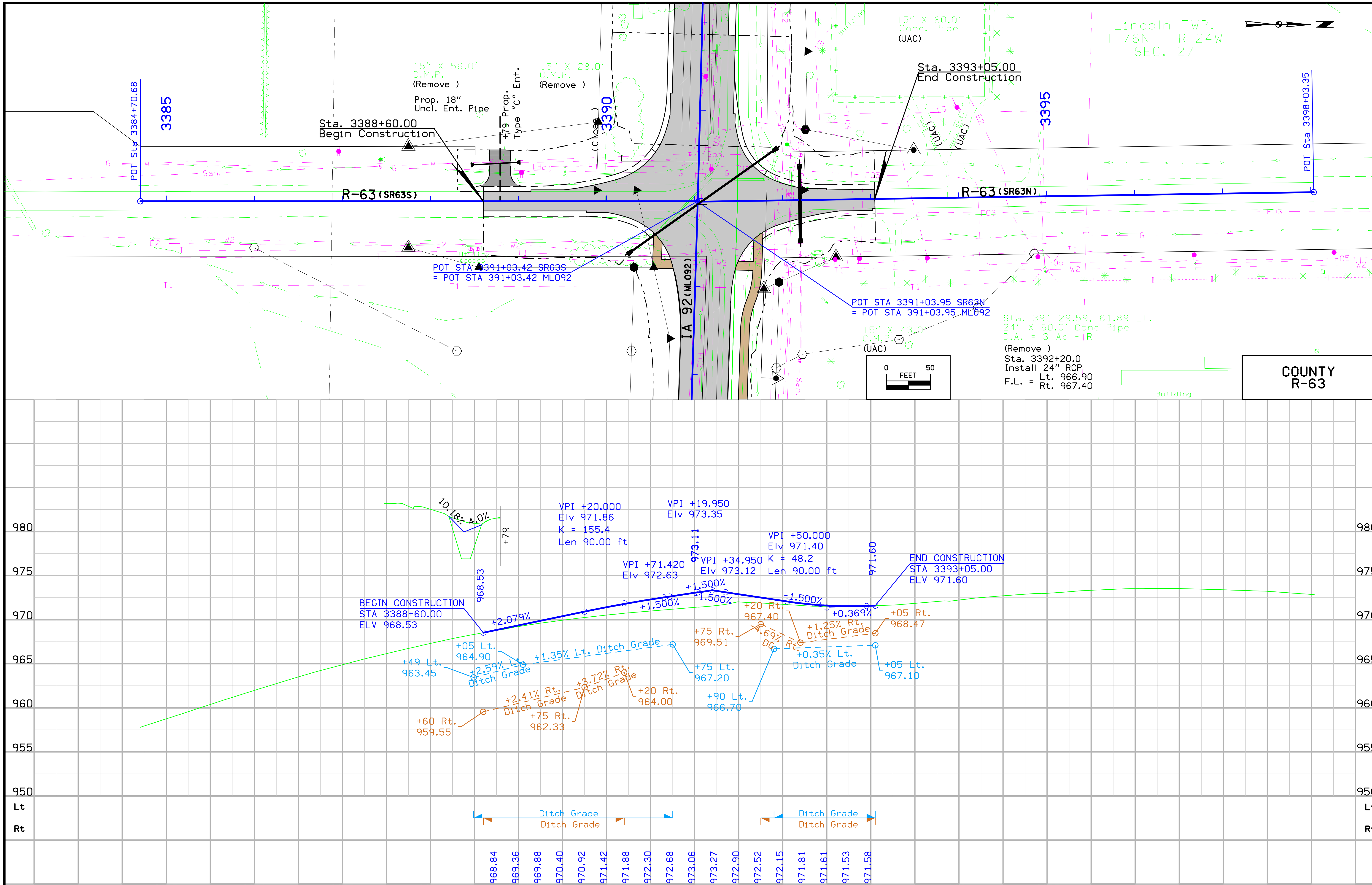

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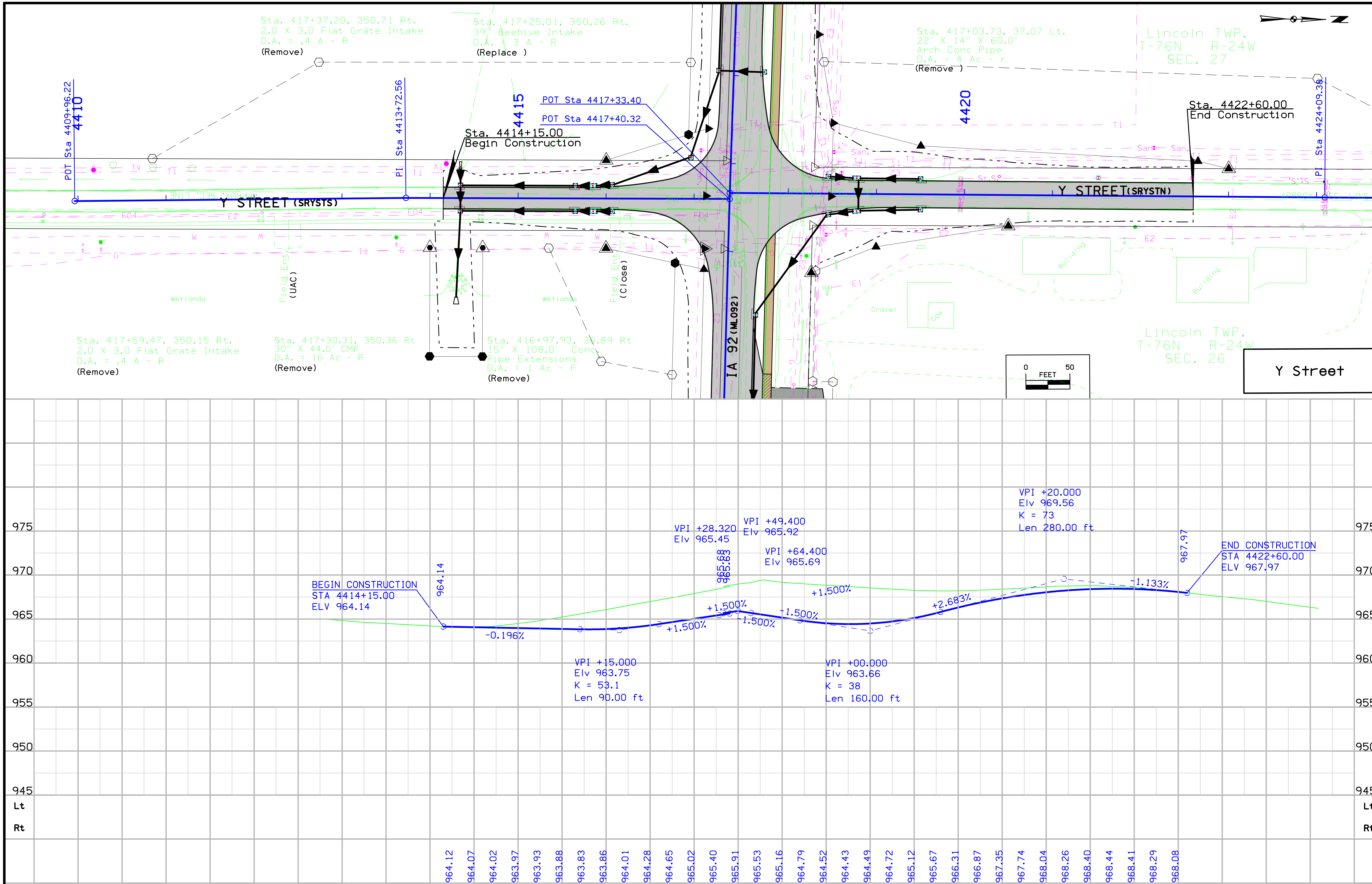

C | ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER E.5

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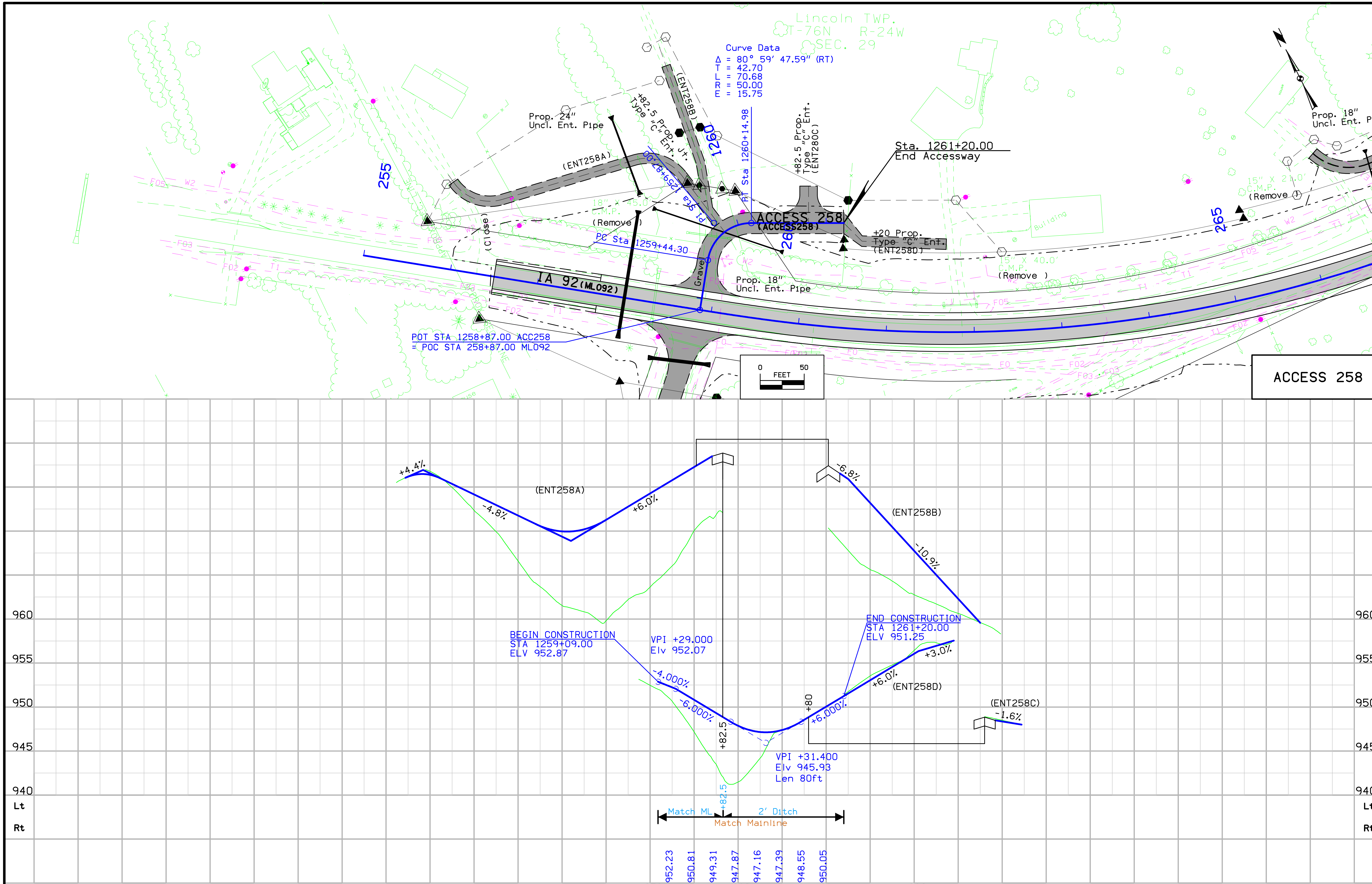

C ENGLISH IOWA DOT DESIGN TEAM **Jia\Holst\Bennett** **WARREN** COUNTY PROJECT NUMBER **NHSX-092-5(51)--3H-91** SHEET NUMBER **E.6**

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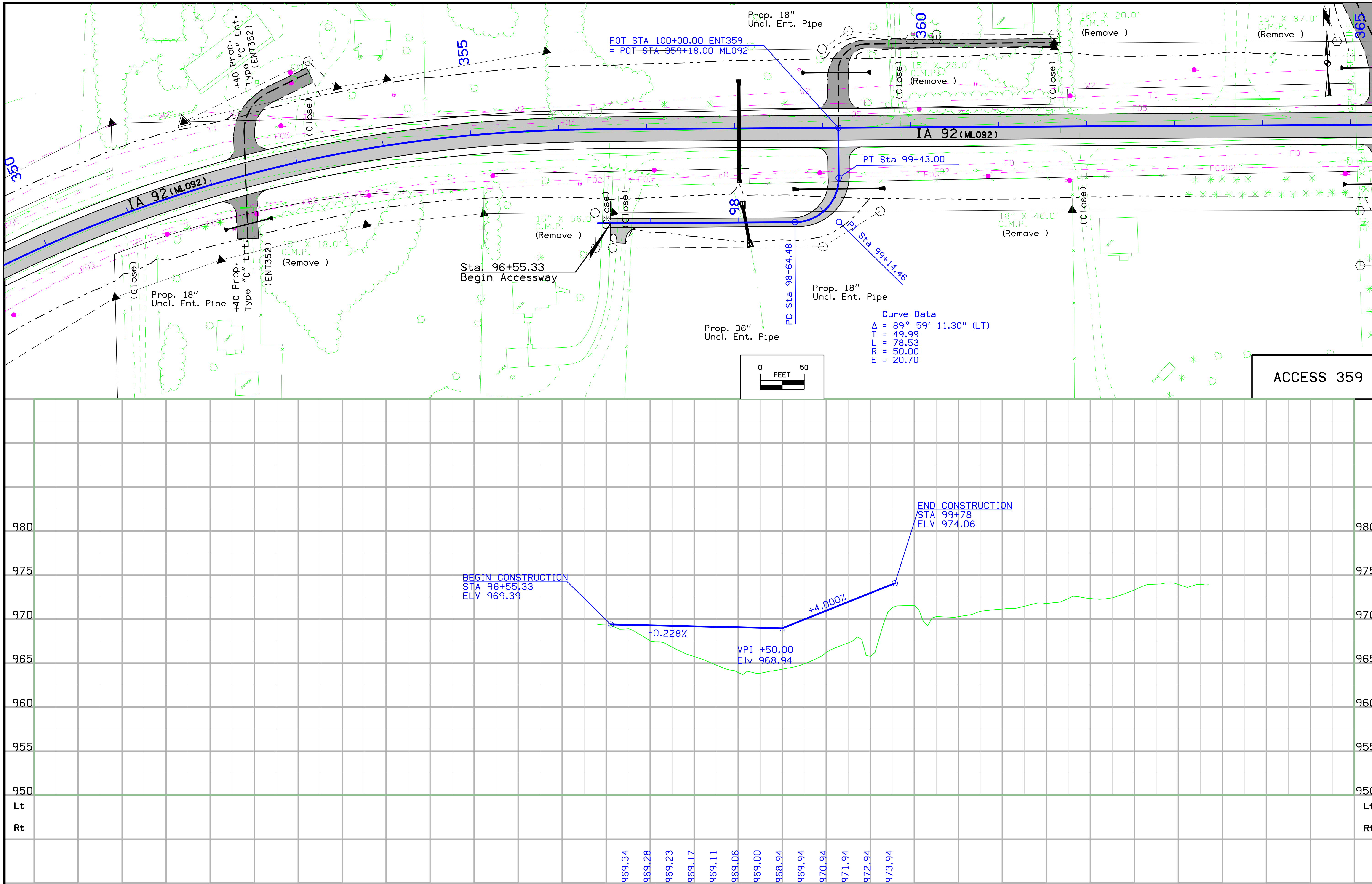

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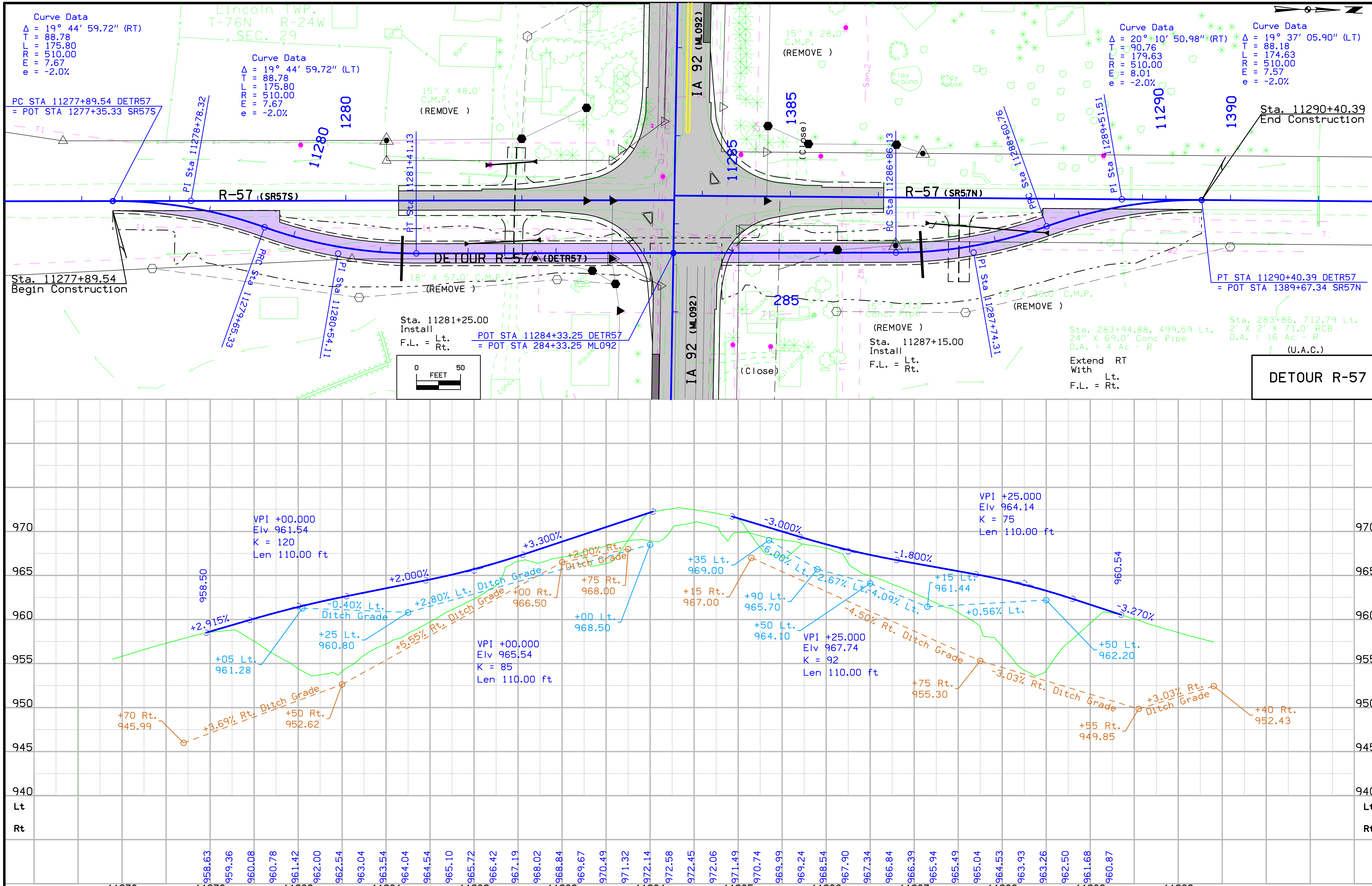

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER F.1

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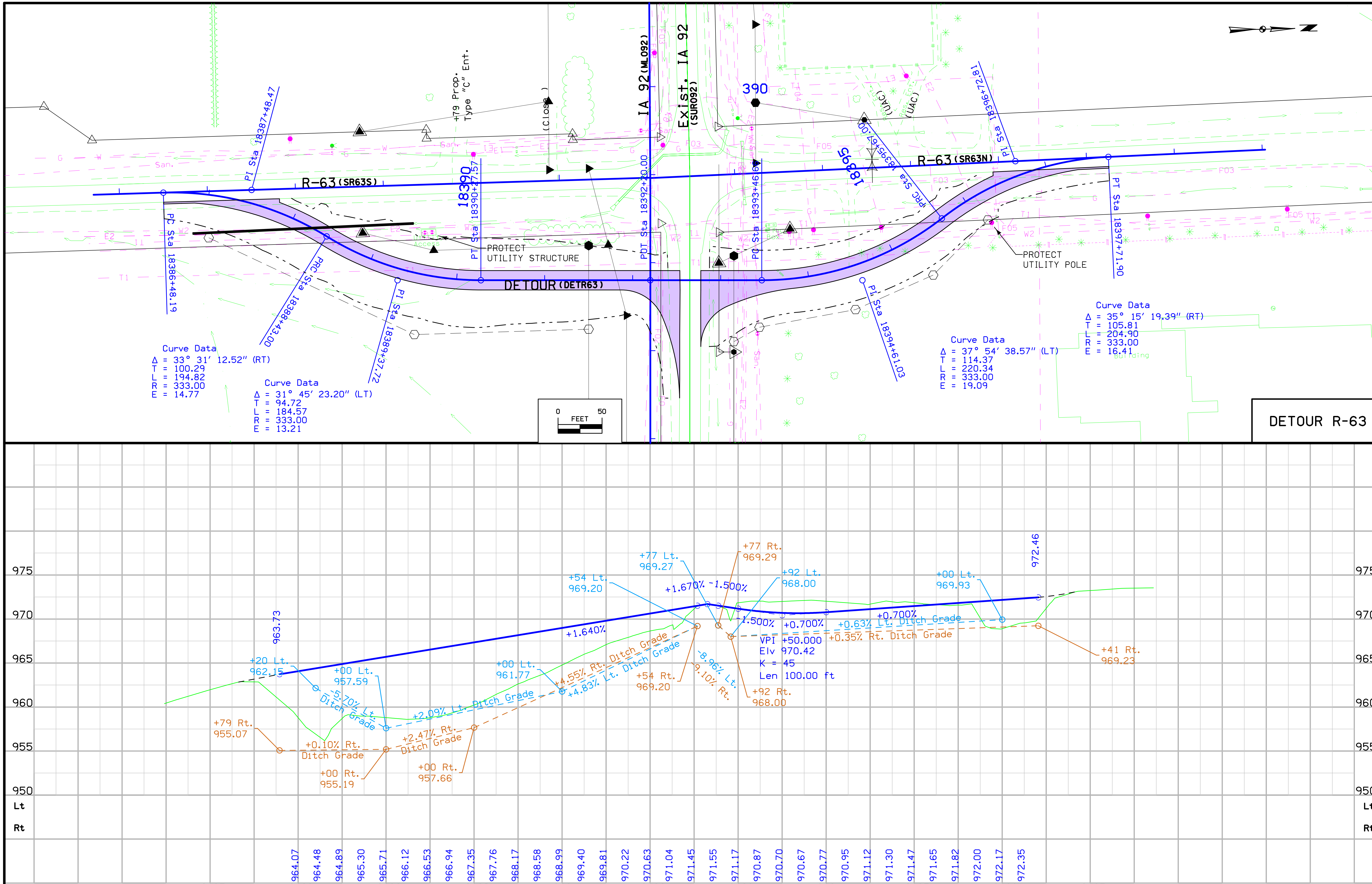

ENGLISH	IOWA DOT	DESIGN TEAM	Jia\Holst\Bennett	WARREN	COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER	F.2

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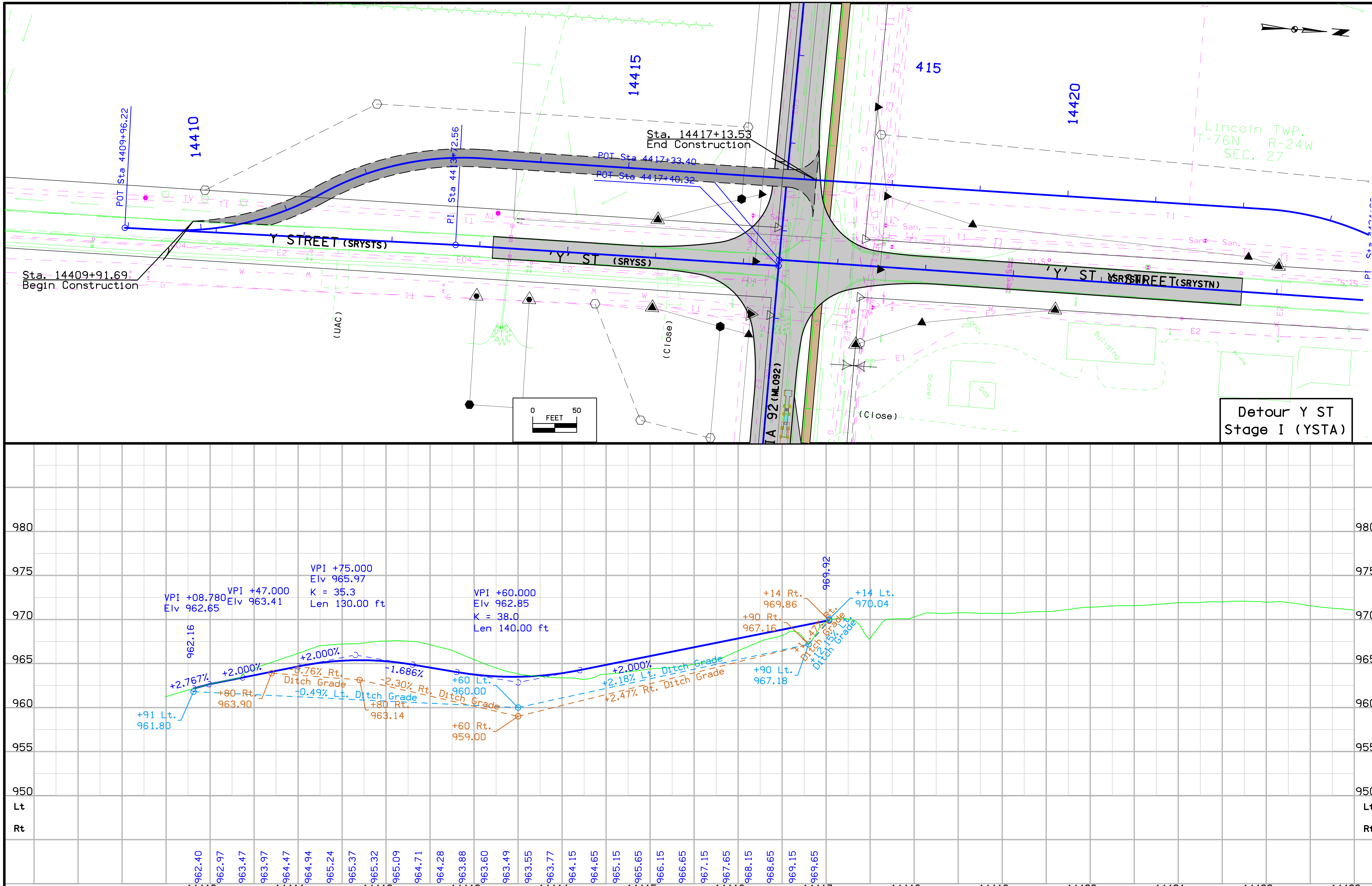

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER F.3

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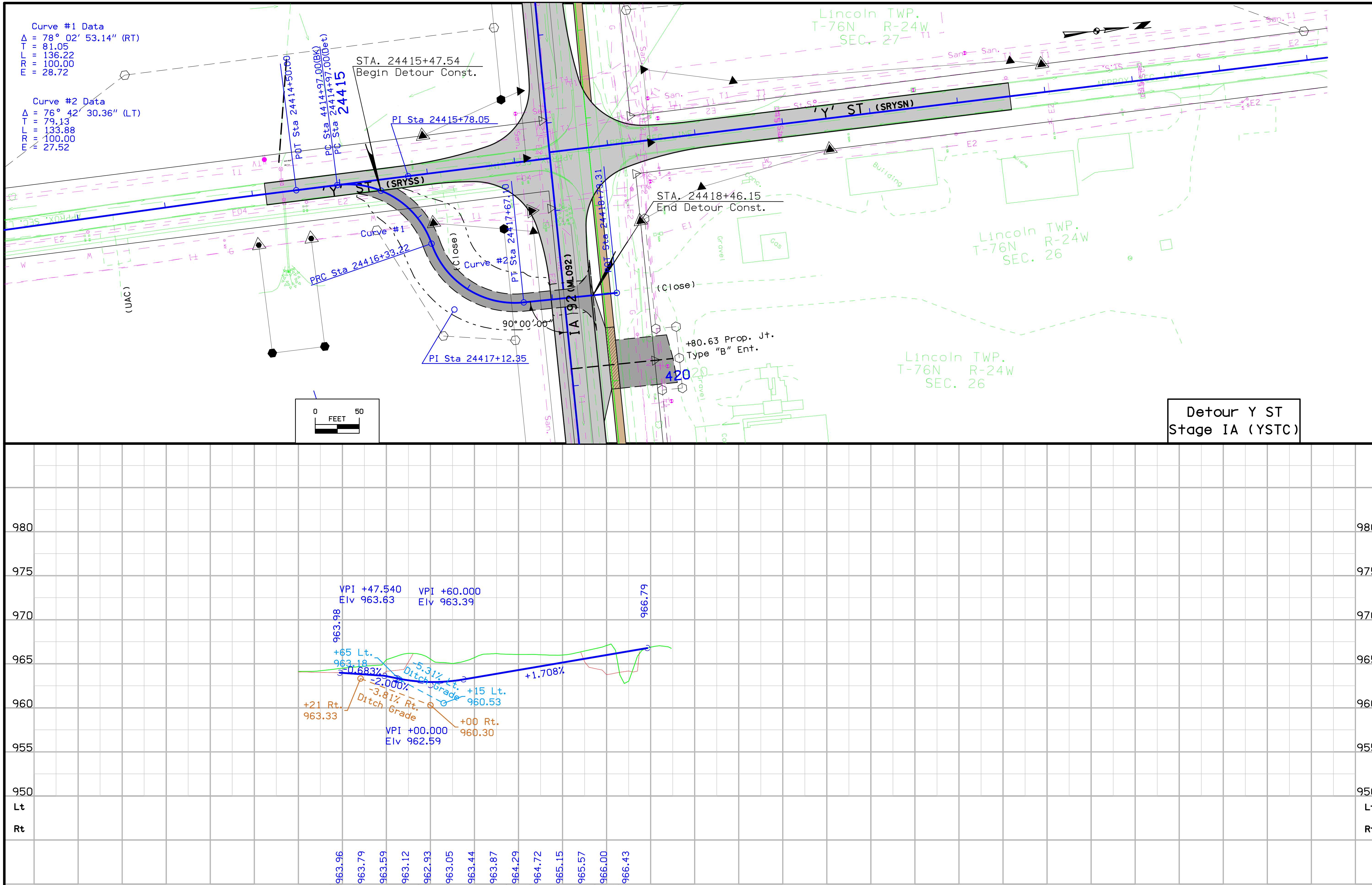

C ENGLISH | IOWA DOT | DESIGN TEAM **Jia\Holst\Bennett** | **WARREN** COUNTY | PROJECT NUMBER **NHSX-092-5(51)--3H-91** | SHEET NUMBER **F.4**

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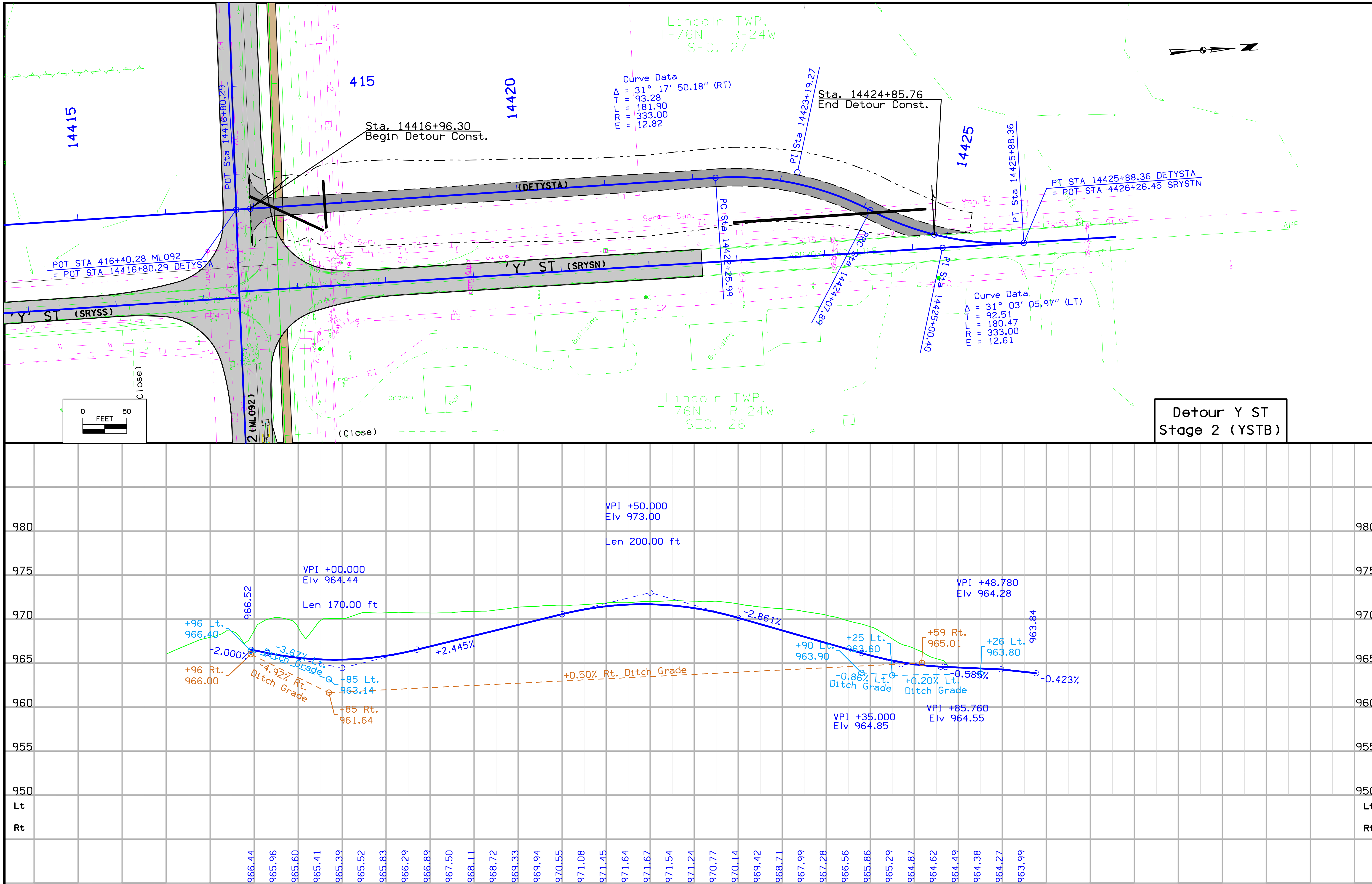

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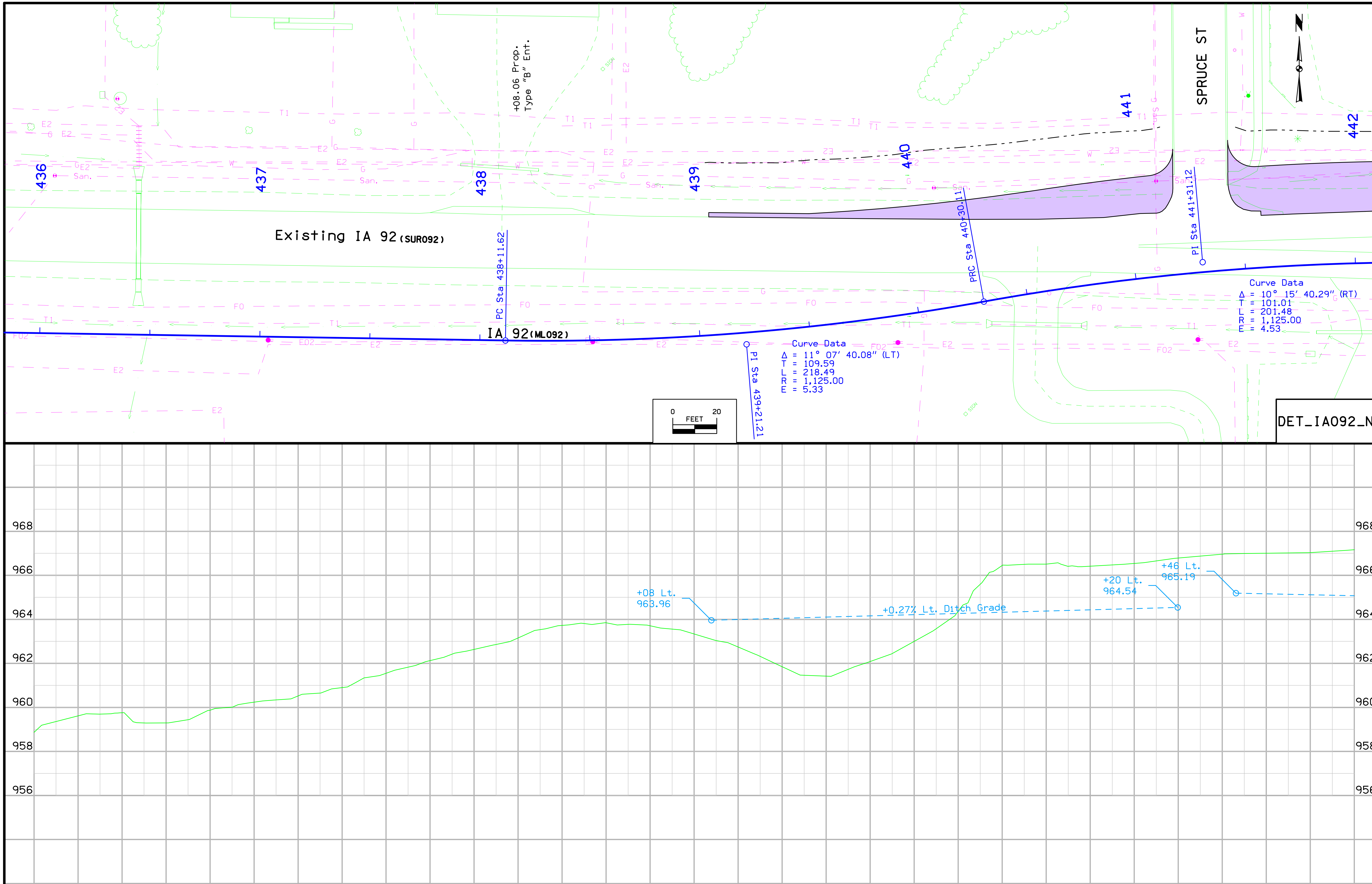

C | ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER F.6

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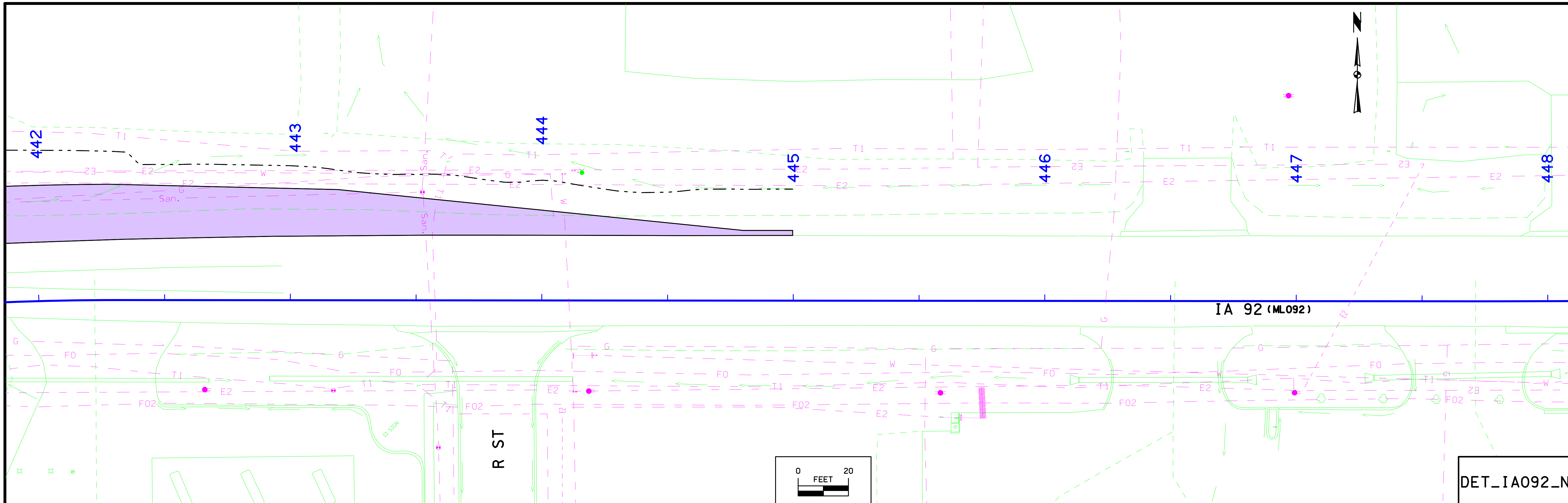

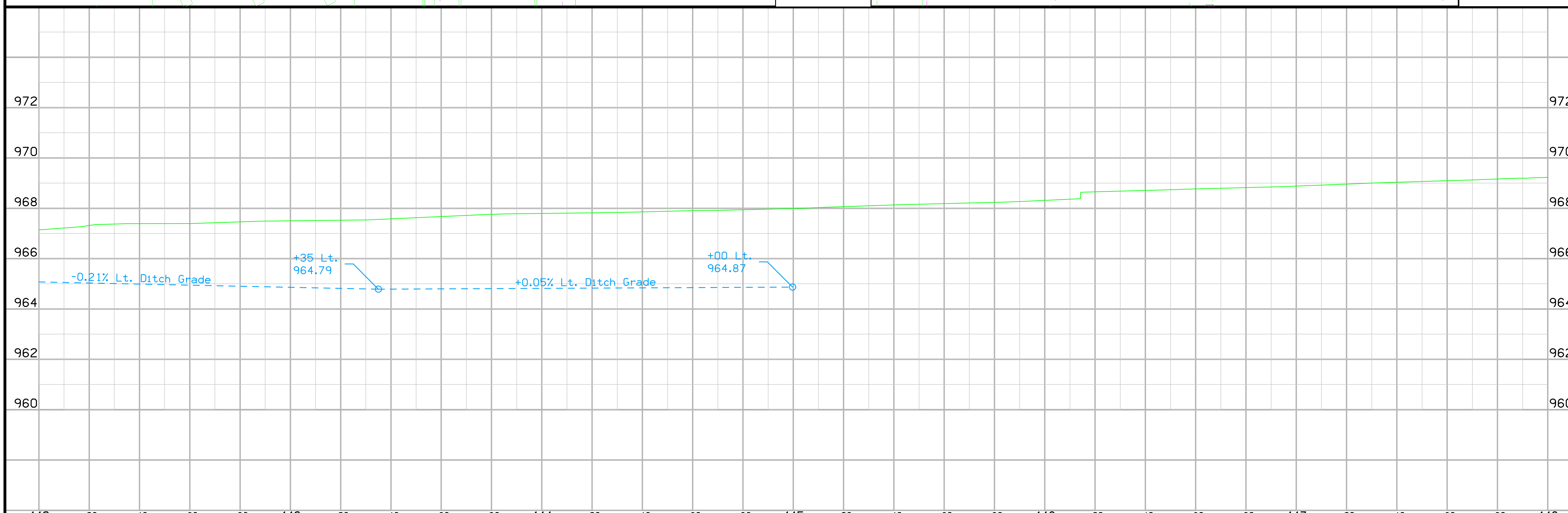

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER F.7

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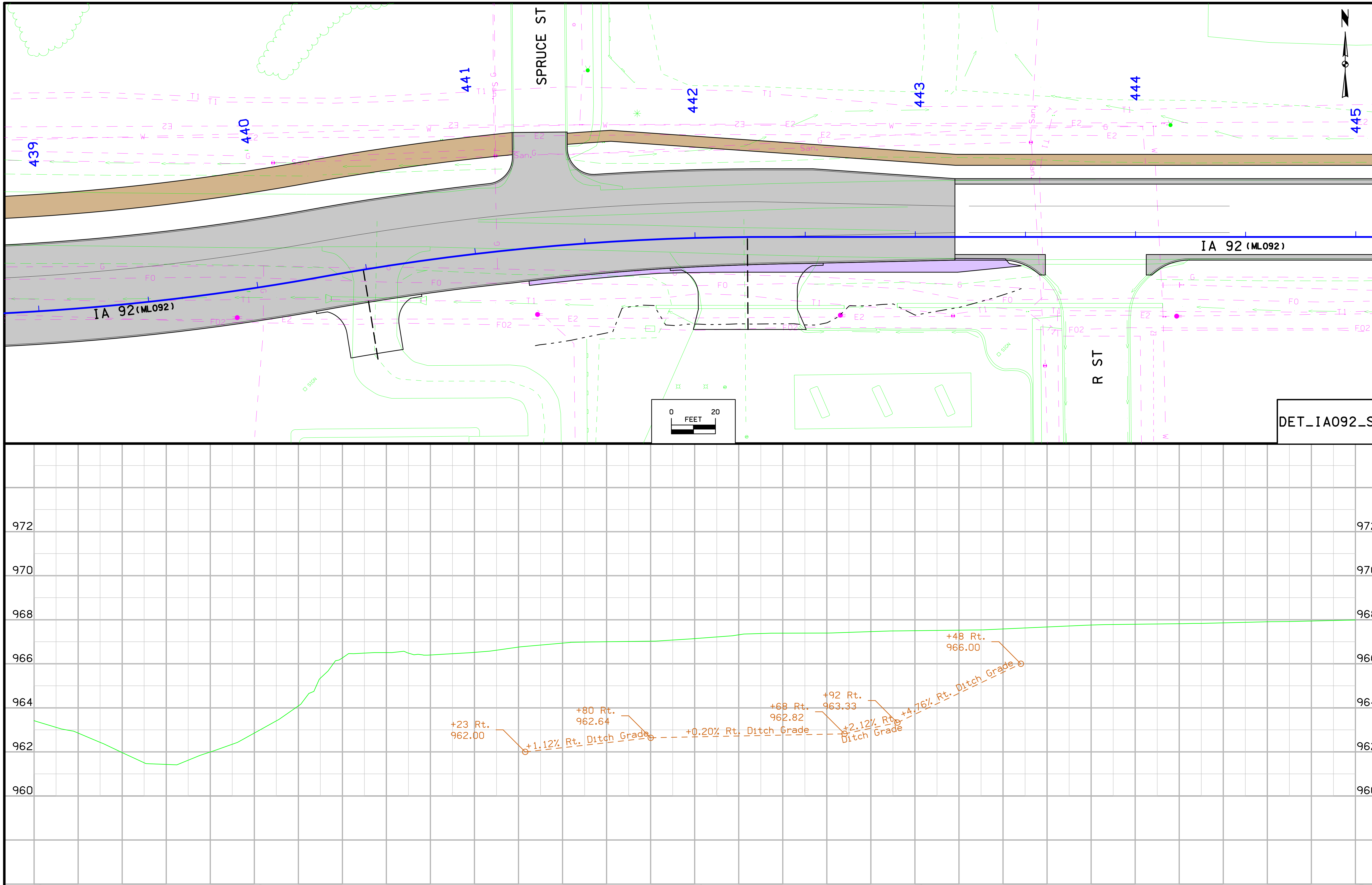
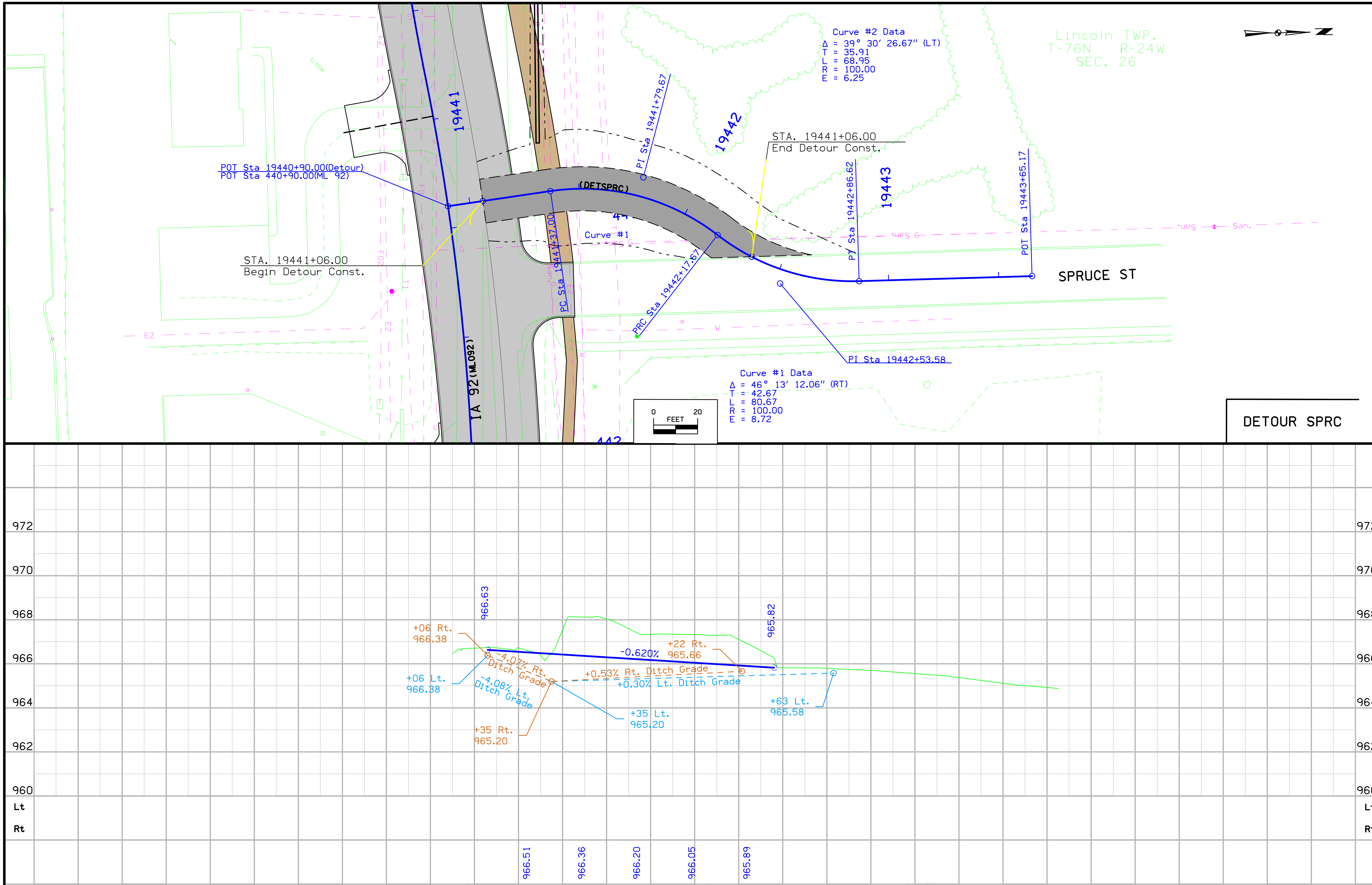


ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER	F.8



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER F.9

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Survey Information

Warren County
STP-092-5(46)—2C-91
IA 92 From Just W. of Co. Rd. R-57
To S. Kenwood Blvd. in Indianola
04-91-092-010-01
Sap-0482.2

General Information

Measurement units for this survey are US survey feet. This survey is for improvements on IA 2 in Warren County. This field survey was to obtain roadway and drainage features and break lines. The entire digital terrain model and topography in the corridor will be completed by supplemental aerial photography..

Vertical Control
This survey control is relative to NAVD88 Datum in accordance with 3rd. order vertical accuracy. NAVD88 height was transferred to the project at CP # 25 & CP # 35 using averaging redundant IARTN observations applying Geoid 2009. Iowa RTN reference stations are relative vertically to highly accurate National Geodetic Survey (NGS) Reference Stations that are used by NGS for reporting heights relative to NAVD88 datum. A 3-wire level loop was run from CP # 25 through the project benchmarks and ended at CP # 35. The loop error was allowable and the error was distributed proportionately among the project marks

Vertical equations are as follows:

Datum Benchmarks
CP # 25 this survey, elevation 958.76=
G025 Project # STP-092-5(46)--2C-91, elevation 958.86

CP # 35 this survey, elevation 967.18=
G035 Project # STP-092-5(46)--2C-91, elevation 967.14

Horizontal Control

The GPS Network along this project was collected by IDOT Preliminary Survey Crews. Information about that network can be found in the 0482gpspoints.rep file included with this survey in NAD83(1996) Datum.. Iowa State Plane Coordinates were transformed to project coordinates using the following information.

General Information for GPS Project : STP-092-5(46)--2C-91 SAP 482
State Plane Coordinate Zone 1402 (Iowa South Lambert)

Average Project Latitude = 41 21 46.06621
Resulting Radius = 6363322.382 (Meters)
Mean Project Elevation = 279.990 (Meters)
Sea Level Factor = 0.999956001
Average Project Scale Factor = 0.999953270
Combined Factor (Grid) = 0.999909273
1 / Grid = 1.000090735
Vertical Datum = NAVD 88 <> Horizontal Datum = NAD 83 (1996)

Local Project Plane Coordinate Conversion Equation:
a. Local Project Coord y = [(State Plane y - hold point y) 1/grid factor] + hold point y
b. Local Project Coord x = [(State Plane x - hold point x) 1/grid factor] + hold point x

Alignment Information

The horizontal alignment for this survey is a retrace of As-built Plans No. P-569 Survey stationing was equated to the plans at PI Sta. 263+46.7 and carried back and ahead with no equation throughout the survey.

Equations are as follows:

PI Sta. 263+46.7 This Survey
= PI Sta. 263+46.7 As-built Plans Project No. P-569

PI Sta. 283+70.97 This Survey
= PI Sta. 283+72.3 As-built Plans Project No. P-569

PI Sta. 310+25.39 This Survey
= PI Sta. 310+27.4 As-built Plans Project No. P-569

PI Sta. 336+71.87 This Survey
= PI Sta. 336+75.5 As-built Plans Project No. P-569

PI Sta. 343+73.27 This Survey
= PI Sta. 343+76.9 As-built Plans Project No. P-569

PI Sta. 351+45.19 This Survey
= PI Sta. 351+50.8 As-built Plans Project No. P-569

PI Sta. 365+06.91 This Survey
= PI Sta. 365+11.5 As-built Plans Project No. P-569

PI Sta. 391+01.81 This Survey
= PI Sta. 391+06.4 As-built Plans Project No. P-569

PI Sta. 417+36.67 This Survey
= PI Sta. 417+43.4 As-built Plans Project No. P-569

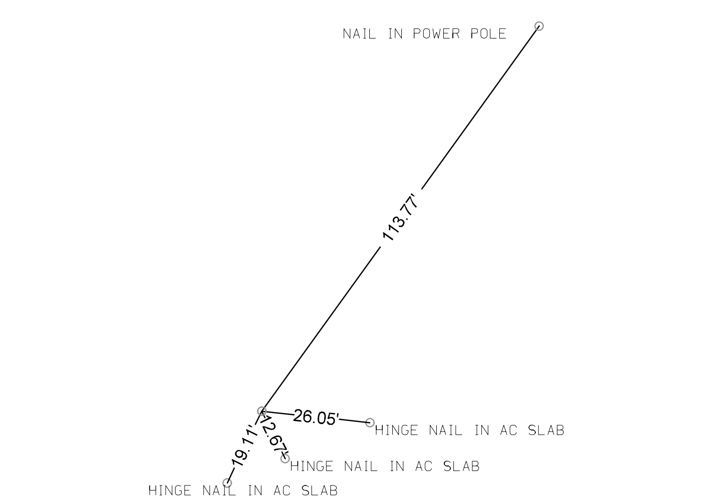
PI Sta. 438+87.96 This Survey
= PI Sta. 438+94.7 As-built Plans Project No. P-569

PI Sta. 451+20.2 This Survey
= PI Sta. 451+26.0 As-built Plans Project No. P-569

VERTICAL CONTROL

Point	North	East	Elevation	Station	Offset	Description
659	494848.786	1597094.294	932.179	246+17.65	45.909	SET\RR SPK E SIDE 1ST POWER POLE
660	494140.746	1598099.141	950.571	258+46.84	34.474	SET\RR SPK E SIDE POWER POLE
661	493843.985	1598916.852	962.955	267+16.92	26.062	SET\RR SPK N SIDE POWER POLE
662	493790.182	1599914.401	969.535	277+15.27	62.083	SET\RR SPK N SIDE POWER POLE
663	493809.495	1600544.970	971.893	283+45.39	31.540	SET\RR SPK N SIDE POWER POLE
664	493801.002	1601735.334	967.621	295+35.44	31.666	SET\RR SPK N SIDE POWER POLE
665	493793.570	1602616.804	980.958	304+16.94	33.113	SET\RR SPK N SIDE POWER POLE
666	493774.151	1603186.184	970.300	309+86.44	48.666	CONC MONUMENT
667	493761.377	1604526.042	975.070	323+26.48	49.186	CONC MONUMENT
668	493764.357	1605810.055	968.332	336+10.41	34.374	SET\RR SPK S SIDE POWER POLE
669	493952.361	1606901.909	974.072	347+14.74	48.102	SET\RR SPK W SIDE POWER POLE
670	494182.094	1608008.803	966.556	358+97.50	39.449	SET\RR SPK N SIDE POWER POLE
671	494163.385	1609230.603	974.025	371+19.20	53.216	SET\RR SPK S SIDE POWER POLE
672	494181.064	1610588.817	975.829	384+77.37	32.550	CUT X ON R.O.W. RAIL
673	494255.767	1611520.232	974.200	394+07.47	-51.566	CUT X NW BOLT 1ST FIRE HYDRANT
674	494225.721	1612685.096	976.154	405+72.72	-52.100	CUT X ON NW BOLT FIRE HYDRANT
675	494186.822	1613914.713	967.557	418+03.27	-44.989	CUT X ON NW BOLT FIRE HYDRANT
676	494060.801	1615399.101	965.440	432+89.77	53.111	CUT X ON NE BOLT FIRE HYDRANT
677	494169.002	1616259.880	969.058	441+49.41	-67.303	CUT X ON SW BOLT FIRE HYDRANT
678	494142.697	1617266.587	971.521	451+58.64	-31.568	CUT X ON S BOLT FIRE HYDRANT
679	494179.247	1618305.076	967.642	461+96.05	46.333	CUT X ON SE BOLT FIRE HYDRANT
680	494489.398	1619450.029	968.177	Off Chain	Off Chain	NE BOLT FIRE HYDRANT

CP STA OFF CHAIN
CP No. 10, Fd. Rebar
N=496175.910, E=1561565.170



CP STA OFF CHAIN
CP No. 12, Fd. Feno Monument
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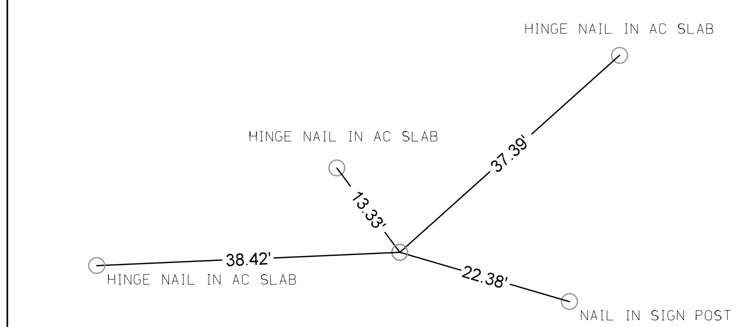

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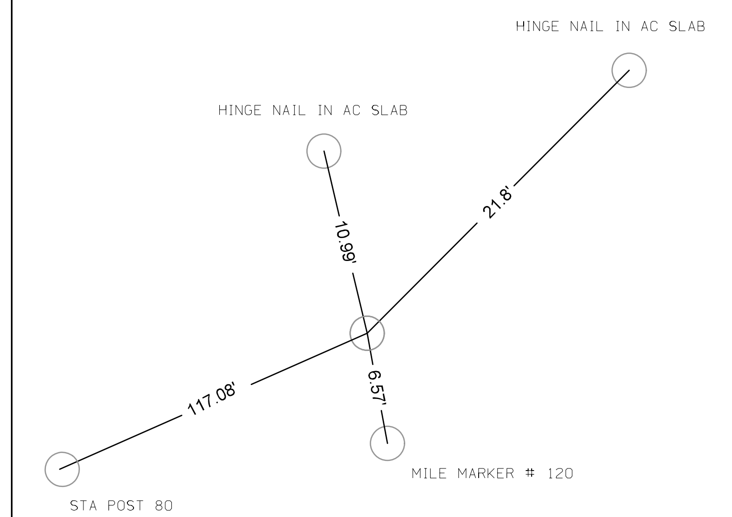

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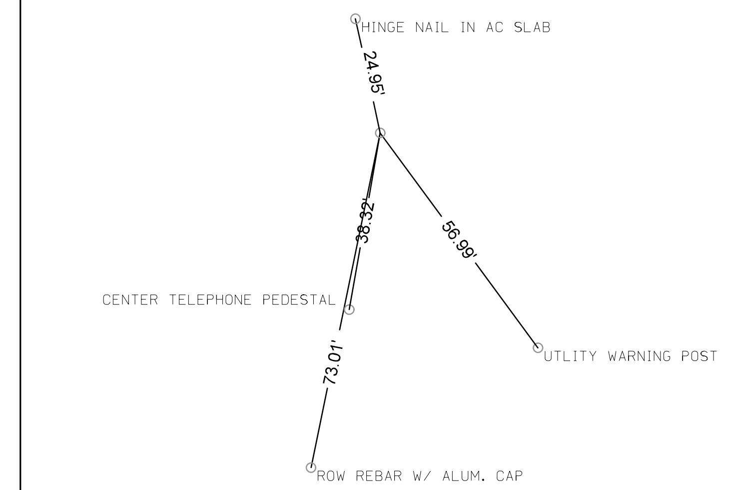

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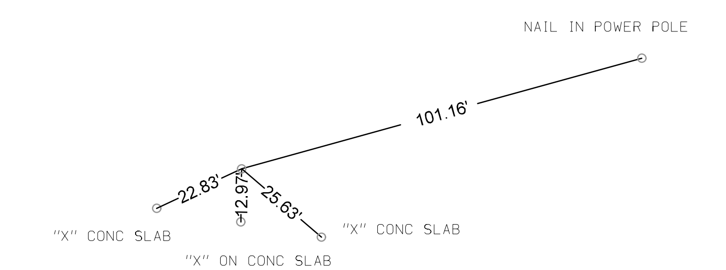

CP STA 23+47.79, 21.90 Lt.
CP No. 16, Fd. Rebar
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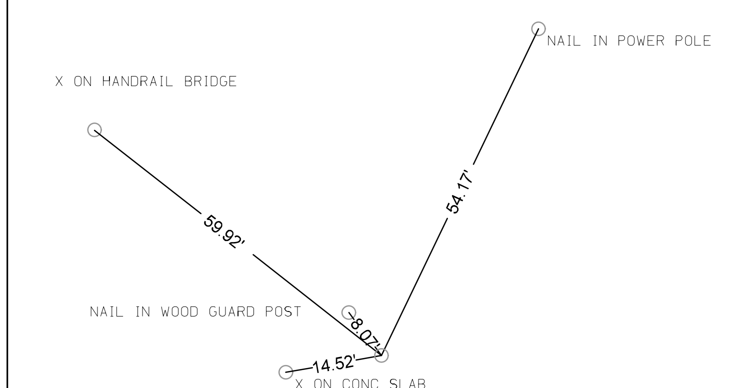

CP STA 36+16.39, 19.13 Rt.
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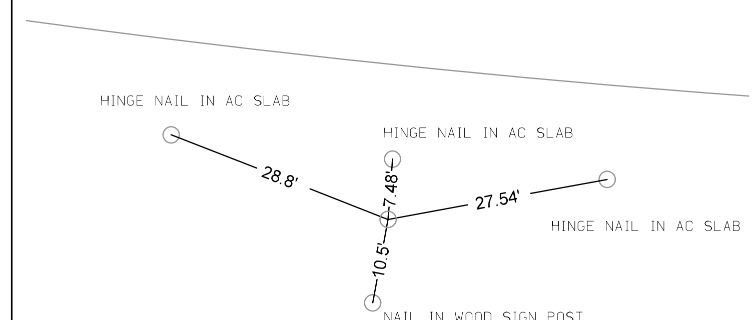

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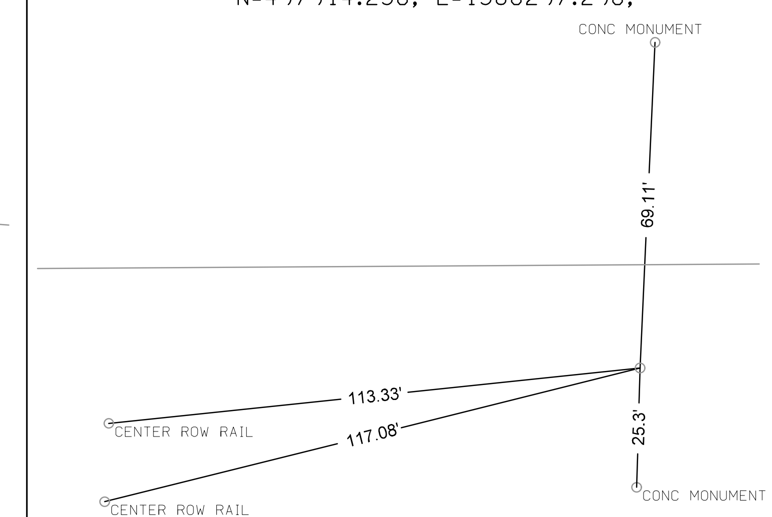

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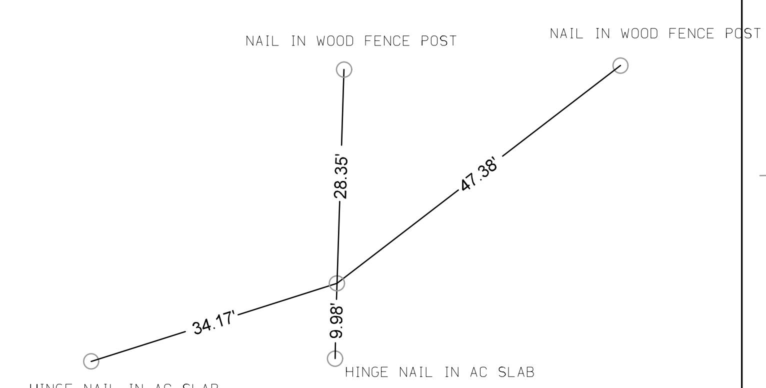

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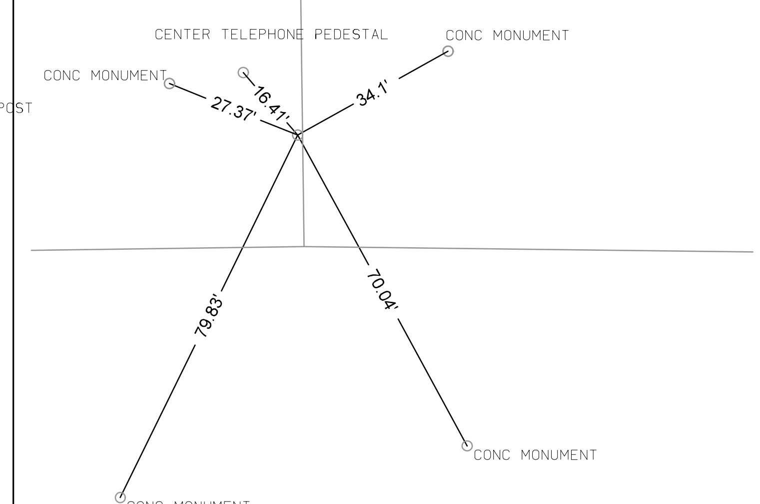

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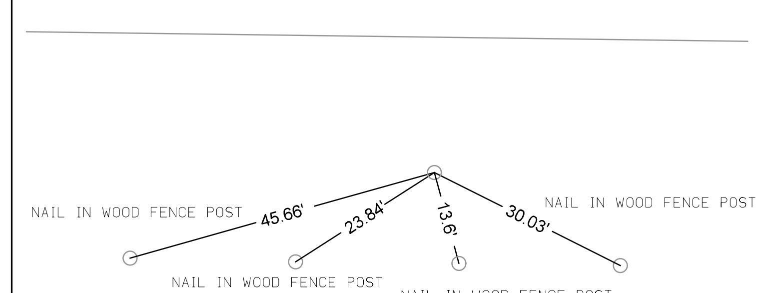

CP STA 192+66.29, 69.52 Lt.
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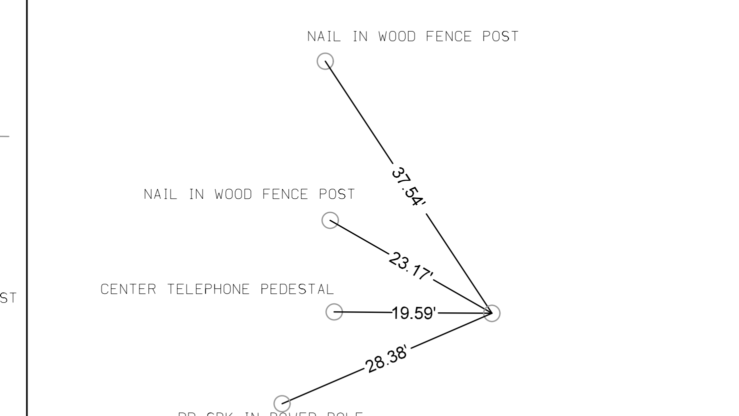

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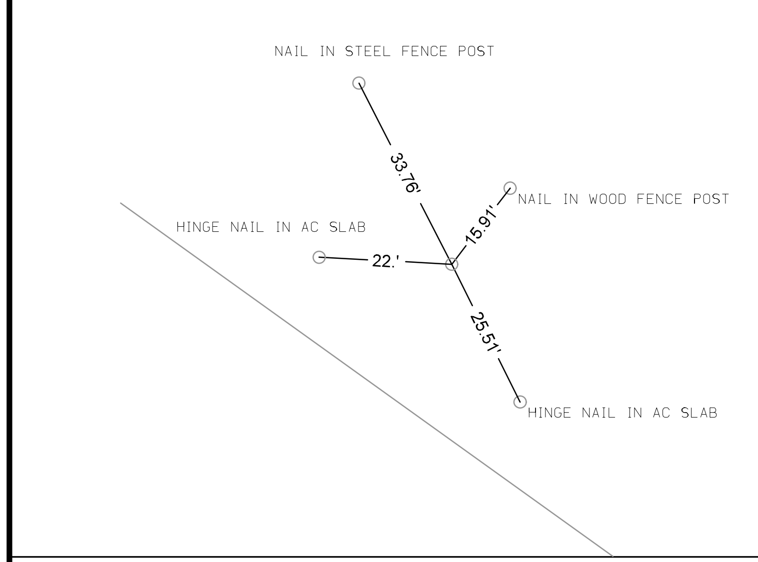

CP STA 212+27.42, 25.52 Lt.
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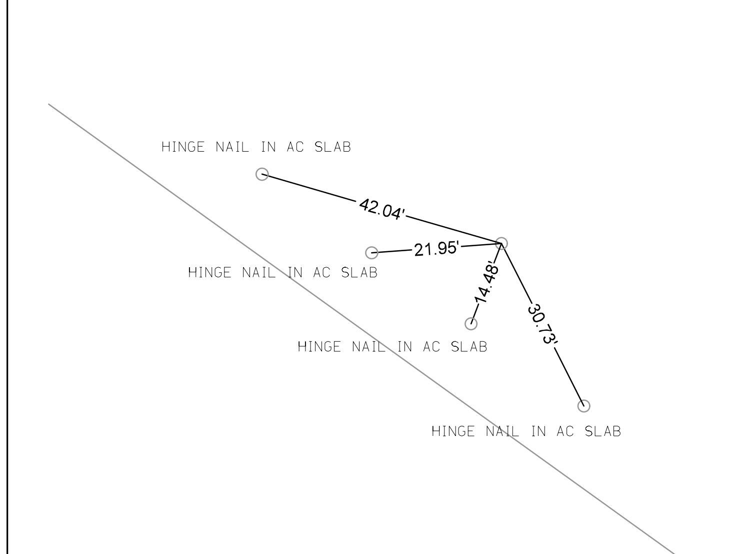

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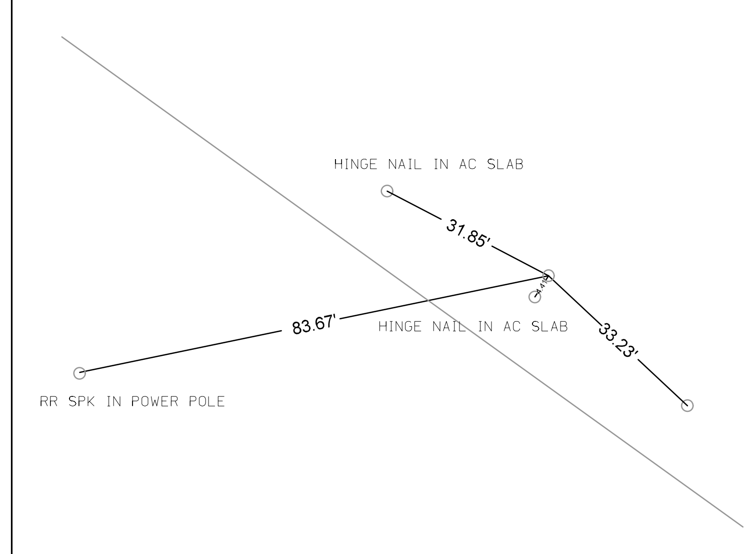

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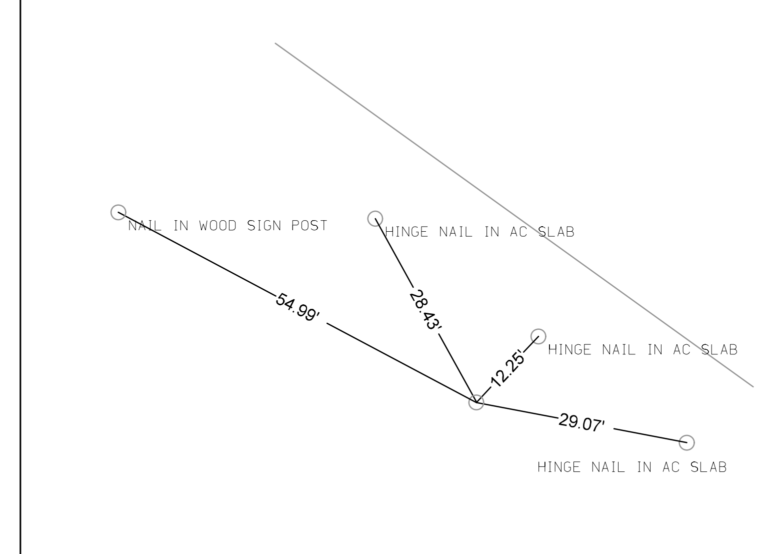

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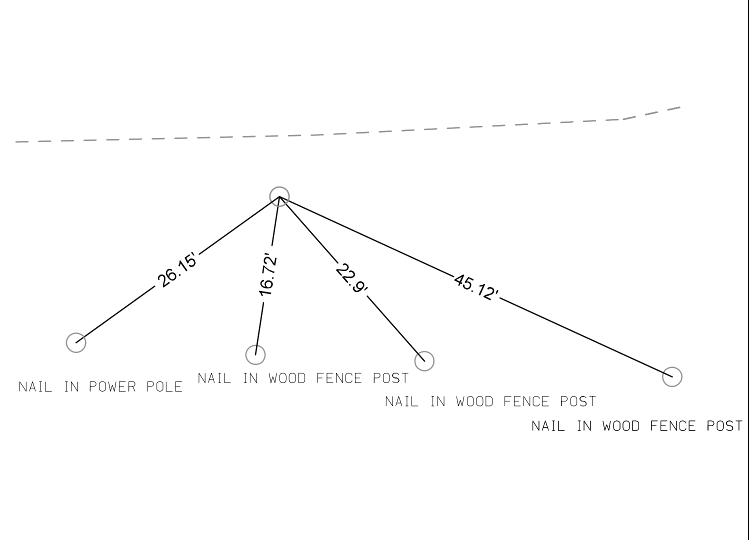

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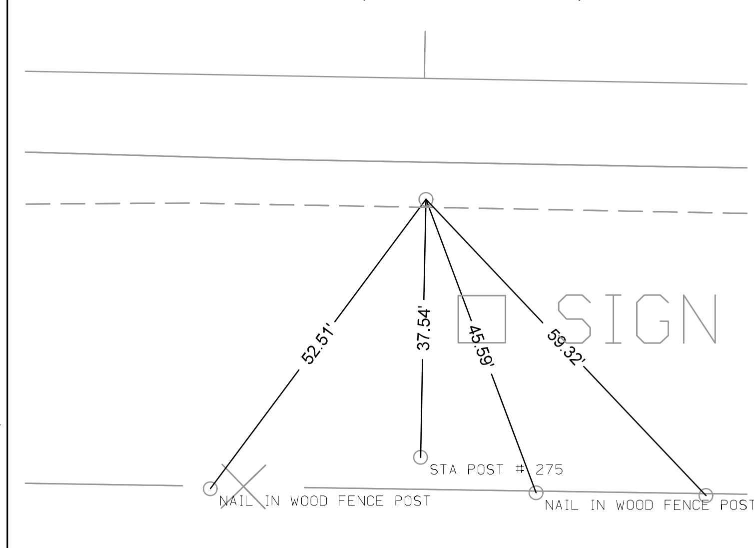

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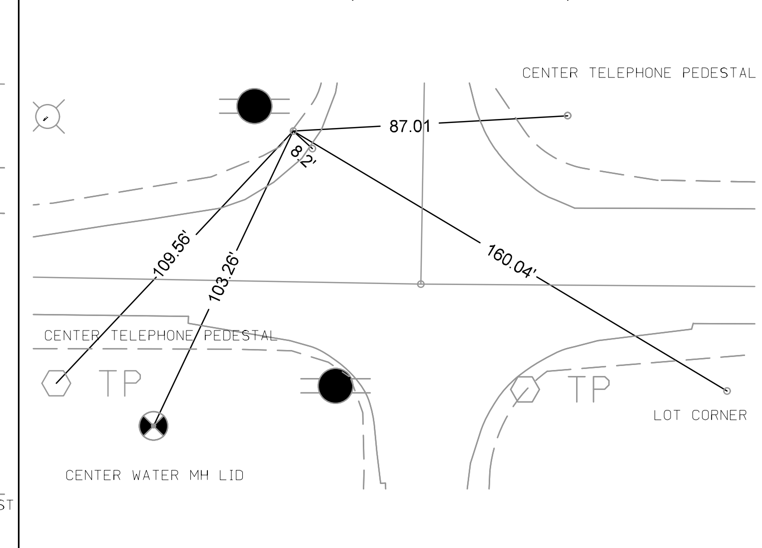

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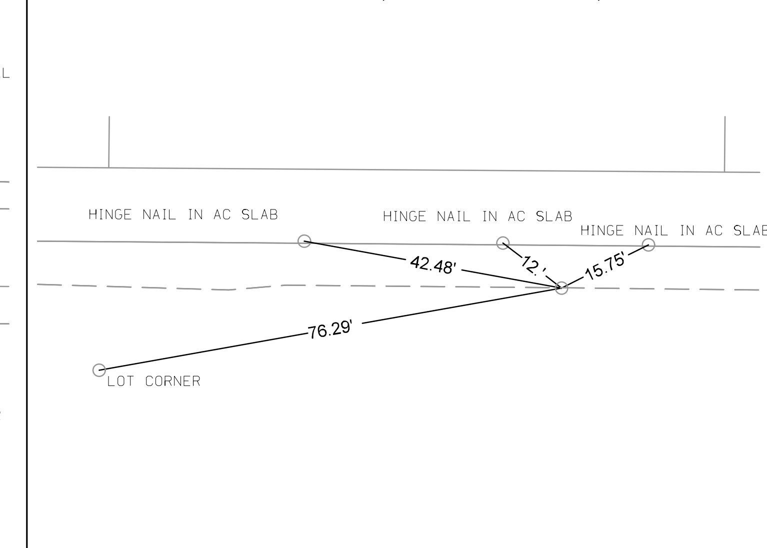

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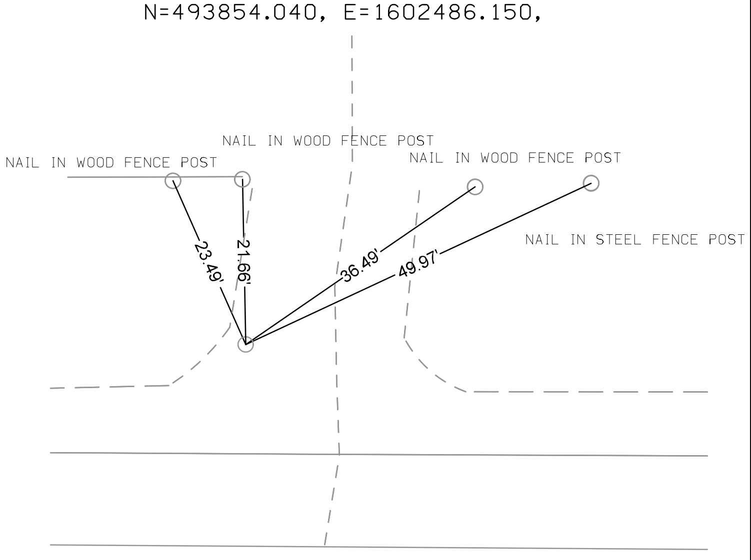

CP STA 310+51.04, 27.19 Rt.
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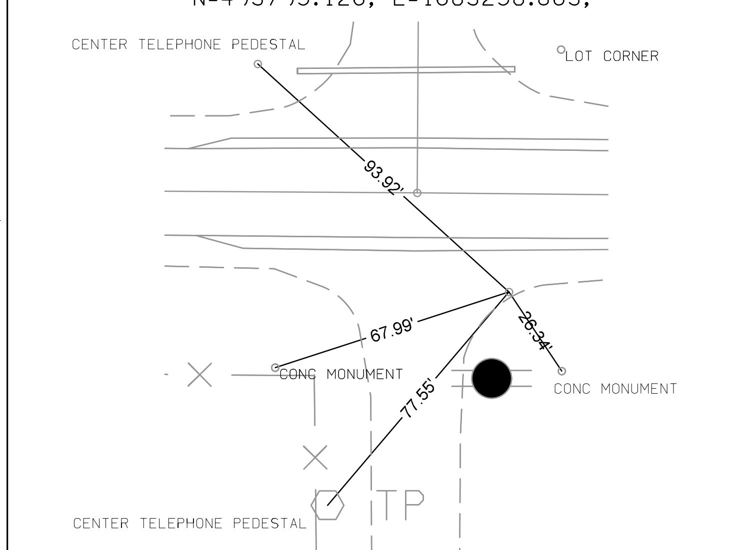

CP STA 323+51.93, 27.54 Lt.
CP No. 28, Fd. Rebar
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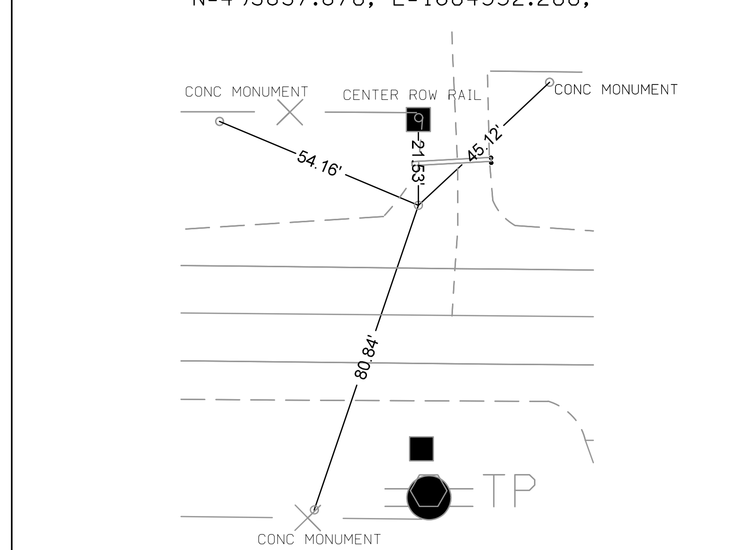

CP STA 331+33.48, 20.40 Lt.
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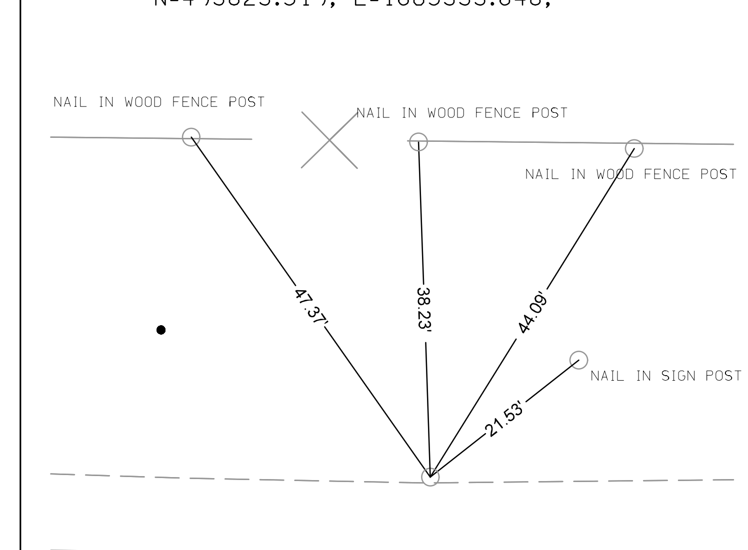

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER G.3

CP STA 342+98.08, 21.90 Rt.
CP No. 29, Fd. Rebar
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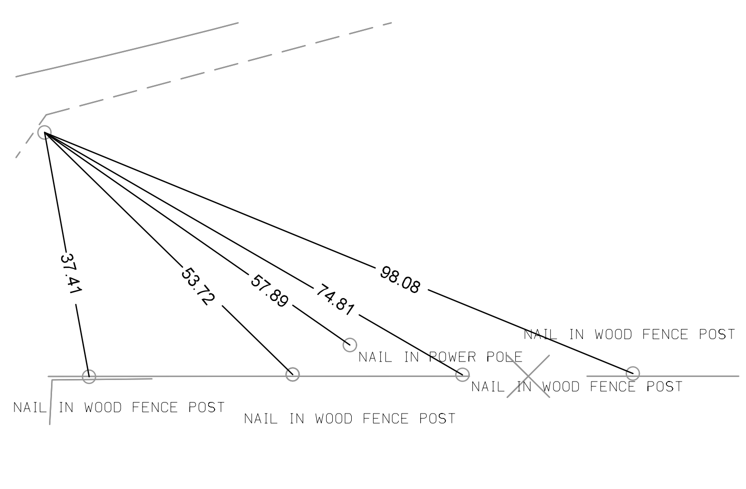

CP STA 350+95.08, 20.57 Lt.
CP No. 30, Fd. Rebar
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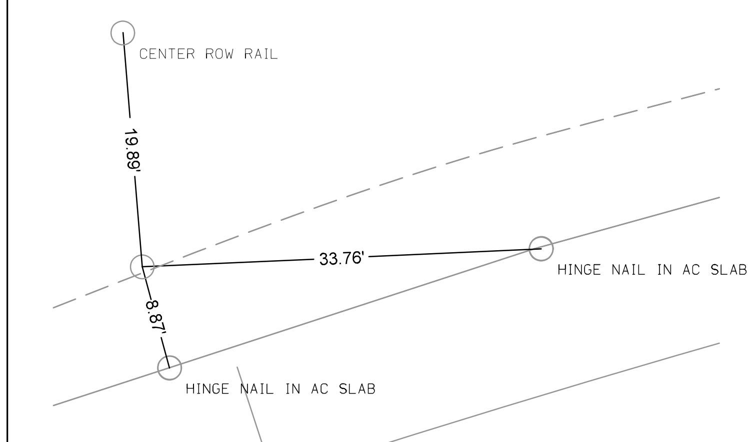

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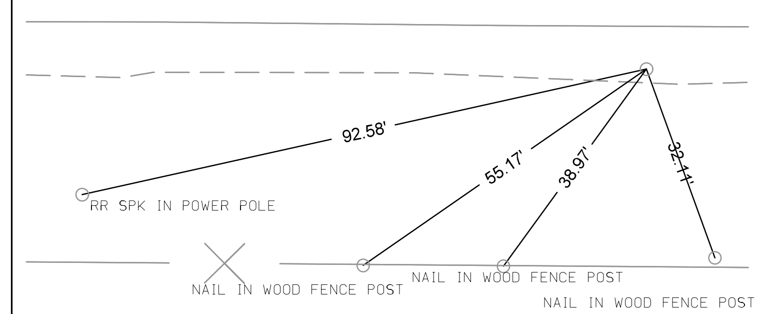

CP STA 368+07.83, 46.84 Lt.
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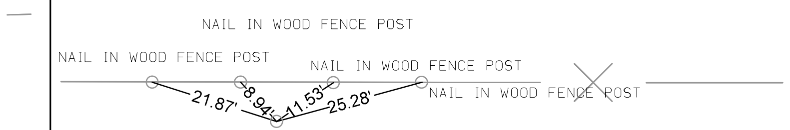

CP STA 377+81.08, 17.74 Lt.
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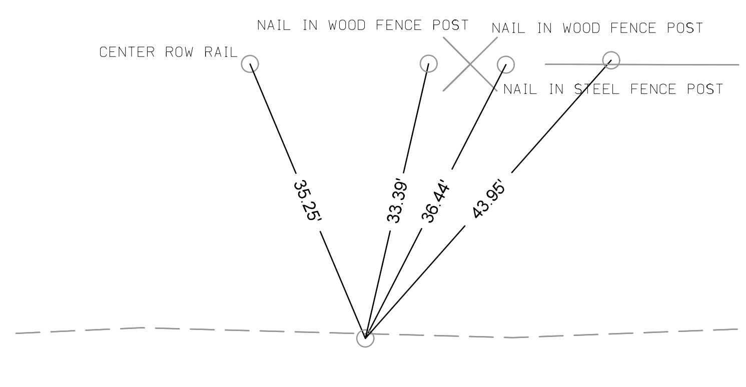

CP STA 386+82.38, 22.31 Rt.
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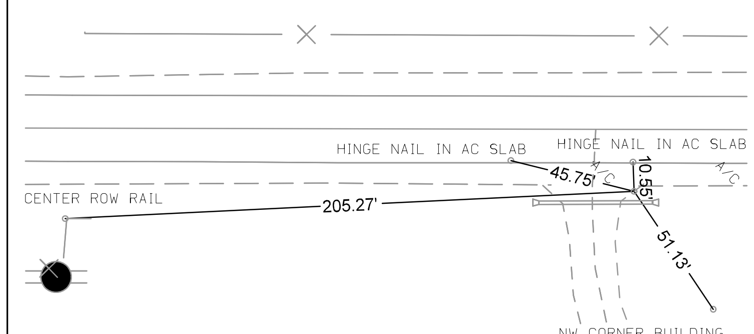

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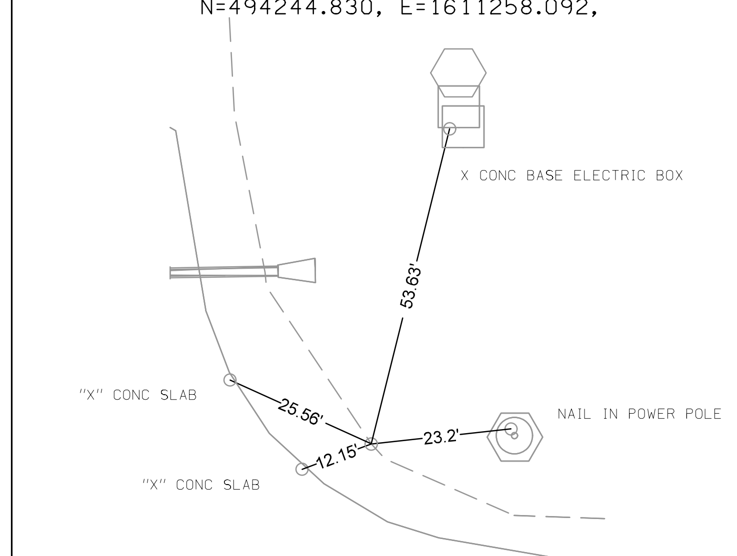

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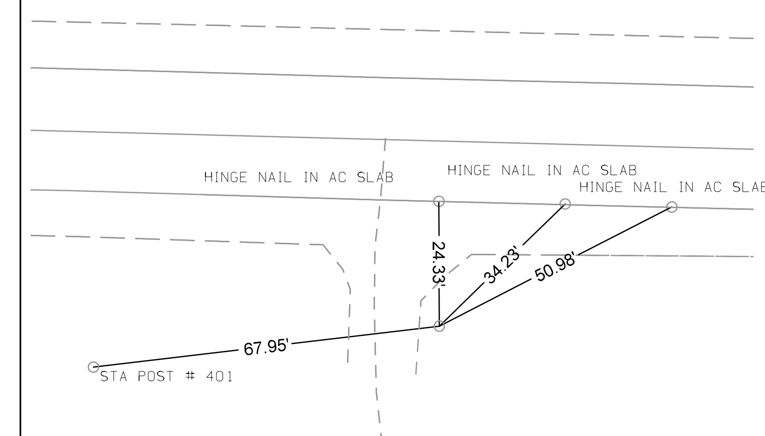

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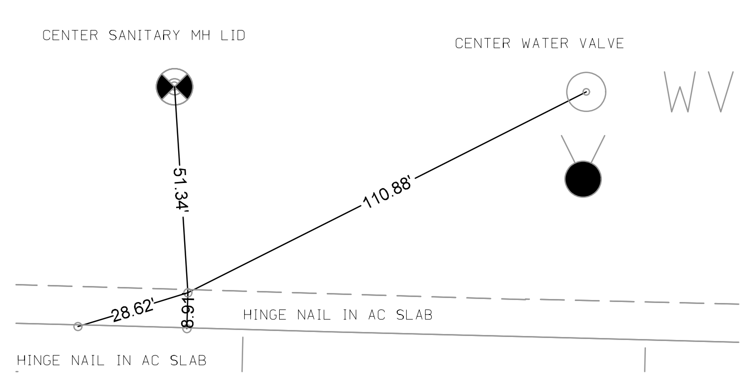

CP STA 417+02.74, 28.34 Rt.
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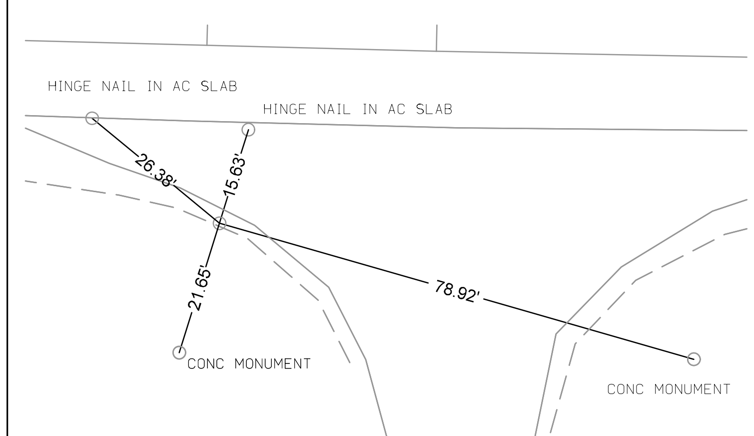

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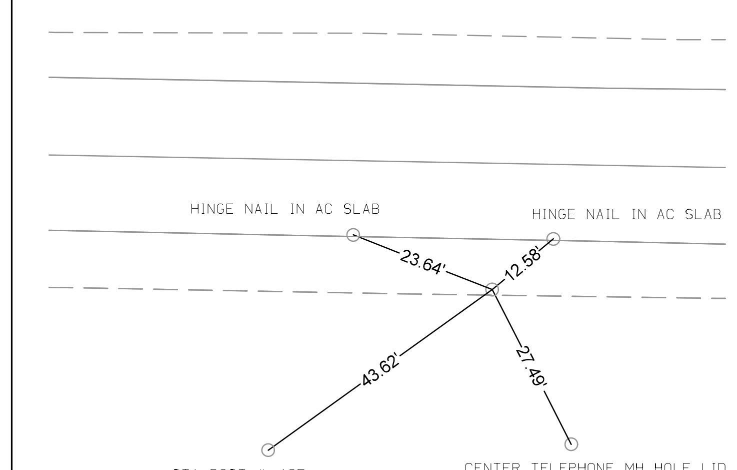

CP STA 433+23.93, 28.04 Rt.
CP No. 34, Fd. Rebar
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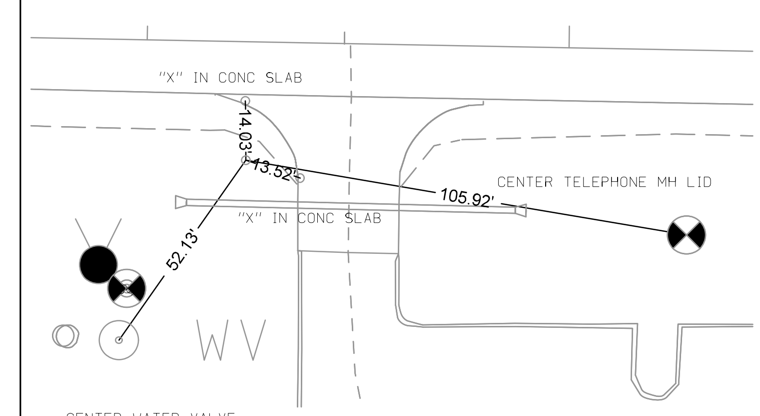

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER G.4

CP STA 441+70.77, 24.95, 24.95 Rt.
CP No. 336, Fd. Iron Pin
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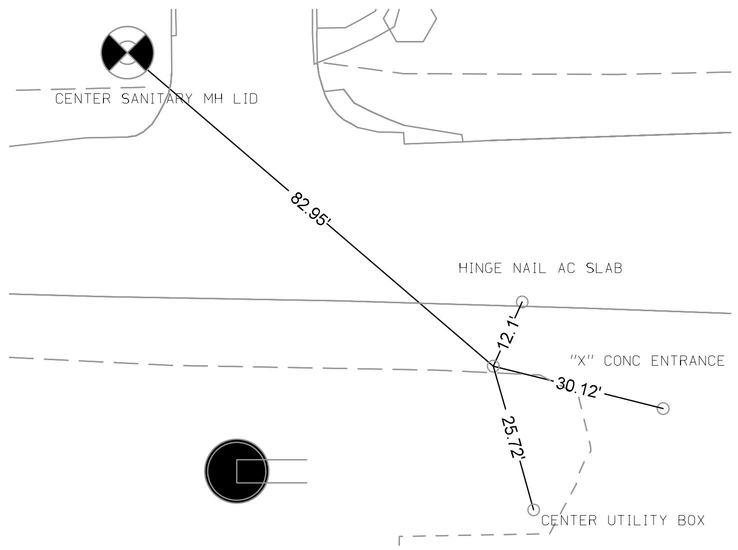

CP STA 449+71.11, 35.09 Rt.
CP No. 35, Fd. Feno Monument
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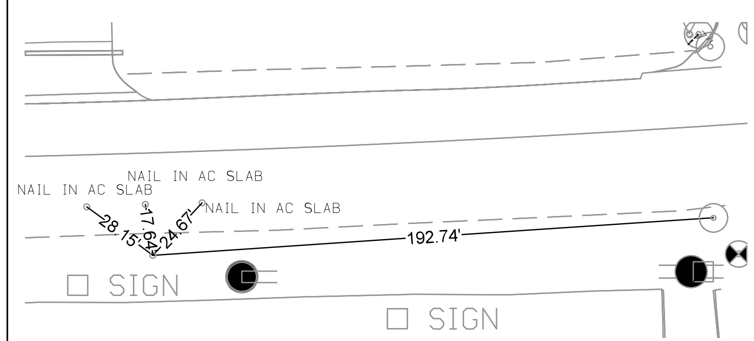

CP STA 455+71.13, 24.86 Rt.
CP No. 337, Fd. Iron Pin
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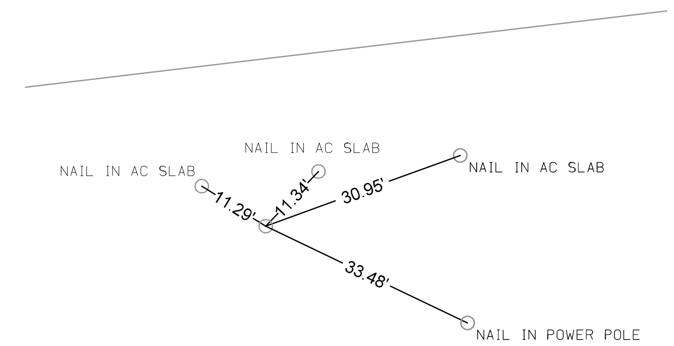

CP STA 462+35.77, 23.50 Lt.
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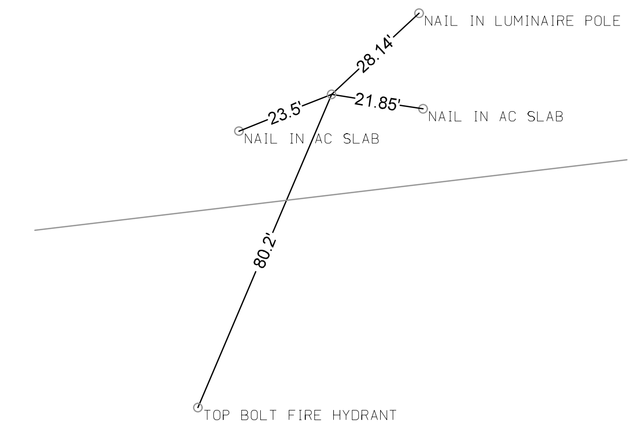
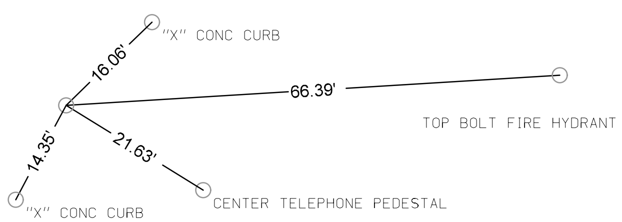


CP STA Off Chain
CP No. 339, Fd. Iron Pin



ALIGNMENT COORDINATES

101-16
10-20-09

Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
20001	ML092	255+00.00	494,371.15	1,597,837.61															
20006	ML092				258+45.63	494,169.44	1,598,118.28	260+05.63	494,078.36	1,598,249.80	264+10.92	493,839.55	1,598,577.33	267+85.11	493,838.66	1,598,982.67	269+45.11	493,834.41	1,599,142.60
20015	ML092				337+72.34	493,772.36	1,605,969.55	339+32.34	493,773.69	1,606,129.52	342+33.59	493,768.17	1,606,430.78	345+19.31	493,909.54	1,606,696.86	346+79.31	493,980.80	1,606,840.09
20022	ML092				347+85.31	494,029.67	1,606,934.15	349+45.31	494,100.94	1,607,077.39	352+55.89	494,246.61	1,607,351.75	355+49.82	494,237.44	1,607,662.25	357+09.82	494,236.94	1,607,822.23
20028	ML092							390+67.33	494,167.94	1,611,179.03	391+01.53	494,167.24	1,611,213.23	391+35.73	494,166.34	1,611,247.42			
20032	ML092							416+90.59	494,099.28	1,613,801.39	417+35.31	494,098.11	1,613,846.10	417+80.03	494,097.27	1,613,890.81			
20036	ML092							438+11.62	494,059.08	1,615,922.04	439+21.21	494,057.02	1,616,031.61	440+30.11	494,076.15	1,616,139.52			
20038	ML092							440+30.11	494,076.15	1,616,139.52	441+31.12	494,093.78	1,616,238.98	442+31.59	494,093.40	1,616,339.99			
20043	ML092							447+70.70	494,091.42	1,616,879.10	451+22.49	494,090.13	1,617,230.88	454+73.40	494,131.67	1,617,580.21			
20046	ML092	466+80.72	494,274.21	1,618,779.08															
31000	SRKENNEDY	1256+05.14	493,946.86	1,597,951.77															
31002	SRKENNEDY	1258+87.00	494,145.34	1,598,151.90															
30000	SR57S	1273+87.78	492,836.02	1,600,580.14															
30003	SR57S	1283+73.24	493,821.43	1,600,570.67															
30010	SR57N	1383+68.17	493,821.48	1,600,565.60															
30013	SR57N	1394+41.91	494,895.22	1,600,565.83															
40000	SR90TH	2303+28.16	493,097.25	1,603,227.88															
40002	SR90TH	2310+28.21	493,797.30	1,603,225.53															
40004	SR90TH	2317+28.21	494,497.30	1,603,223.17															
50000	SR63S	3384+70.68	493,534.41	1,611,217.98															
50001	SR63S	3391+03.42	494,167.15	1,611,215.11															
50010	SR63N	3391+03.95	494,167.14	1,611,215.64															
50011	SR63N	3398+03.35	494,866.40	1,611,201.59															
60011	SRYSTS	4412+74.33	493,632.11	1,613,854.33															
60012	SRYSTS	4413+22.77	493,680.54	1,613,853.53															
60013	SRYSTS	4413+72.56	493,730.32	1,613,852.79															
60015	SRYSTS	4417+40.32	494,098.08	1,613,851.11															
60000	SRYSTN	4417+33.40	494,098.23	1,613,844.19															
60001	SRYSTN	4424+09.38	494,774.21	1,613,843.99															

ALIGNMENT COORDINATES

101-16
10-20-09

Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
90000	ENT258	98+68.14	494,052.48	1,598,058.28															
90001		100+00.00	494,145.34	1,598,151.90															
90002								100+71.65	494,203.67	1,598,193.51	101+46.98	494,265.00	1,598,237.26	102+17.98	494,340.28	1,598,239.84			
90004		103+14.58	494,436.82	1,598,243.15															
90005	ENT259	100+00.00	494,381.81	1,597,968.42															
90005								101+20.00	494,358.92	1,598,086.21	101+76.66	494,348.11	1,598,141.83	102+30.43	494,309.73	1,598,183.52			
90007								104+30.43	494,174.26	1,598,330.65	104+62.64	494,152.44	1,598,354.35	104+94.30	494,139.17	1,598,383.70			
90009		105+70.41	494,107.81	1,598,453.04															
90014	ENT269	95+33.10	494,037.37	1,598,836.03															
90015								95+80.40	493,993.49	1,598,853.66	96+24.58	493,952.49	1,598,870.14	96+59.22	493,949.72	1,598,914.24			
90017		100+00.00	493,928.40	1,599,254.34															
90010	ENT270	97+80.00	493,613.42	1,599,251.48															
90011		100+00.00	493,833.41	1,599,253.48															
90011								101+06.87	493,940.27	1,599,254.45	101+71.34	494,004.74	1,599,255.04	102+31.60	494,056.73	1,599,293.16			
90013		102+59.60	494,079.31	1,599,309.72															
90025	ENT275	100+00.00	493,893.24	1,599,844.05															
90026		100+69.23	493,931.57	1,599,786.40															
90020	ENT276	100+00.00	493,828.04	1,599,843.46															
90021								100+70.21	493,898.25	1,599,844.10	100+74.35	493,902.39	1,599,844.13	100+78.48	493,906.52	1,599,843.89			
90023		101+40.15	493,968.08	1,599,840.20															
90030	ENT291	98+59.16	493,673.99	1,601,388.99															
90031								99+59.01	493,773.16	1,601,377.36	99+68.08	493,782.16	1,601,376.30	99+77.11	493,791.22	1,601,376.61			
90032		100+00.00	493,814.10	1,601,377.39															
90033		101+20.04	493,934.07	1,601,381.48															
90040	ENT297	97+18.87	493,529.41	1,601,891.83															
90041								97+48.87	493,559.41	1,601,892.10	97+70.37	493,580.92	1,601,892.30	97+91.72	493,601.89	1,601,897.06			
90042								98+11.72	493,621.39	1,601,901.49	98+34.91	493,644.01	1,601,906.62	98+57.89	493,667.20	1,601,906.45			
90043		100+00.00	493,809.30	1,601,905.37															
90044		101+20.00	493,929.31	1,601,905.46															
90047	ENT298	100+00.00	493,704.35	1,601,906.17															
90049		100+62.11	493,688.74	1,601,966.28															
90050	ENT305	98+80.00	493,681.83	1,602,727.25															
90051		100+00.00	493,801.82	1,602,728.34															
90066	ENT322	98+93.56	493,663.11	1,604,456.15															
90067		100+00.00	493,710.24	1,604,551.58															
90060	ENT323	96+84.92	493,484.75	1,604,605.53															
90061								97+64.92	493,564.74	1,604,606.26	97+98.08	493,597.90	1,604,606.56	98+28.46	493,623.33	1,604,585.28			
90063								98+48.46	493,638.66	1,604,572.44	98+81.62	493,664.09	1,604,551.16	99+12.00	493,697.25	1,604,551.46			
90064		100+00.00	493,785.24	1,604,552.26															
90065		102+00.00	493,985.23	1,604,554.08															
90070	ENT331	98+00.00	493,578.34	1,605,310.41															
90071		100+00.00	493,778.33	1,605,312.23															
90080	ENT341	94+00.70	493,209.61	1,606,415.14															
90081								95+27.63	493,336.37	1,606,421.62	95+73.99	493,382.68	1,606,423.99	96+19.31	493,426.75	1,606,409.60			
90083								99+40.16	493,731.74	1,606,310.00	99+49.84	493,740.94	1,606,306.99	99+59.47	493,750.50	1,606,305.50			
90084		100+00.00	493,790.55	1,606,299.26															
90085								100+61.11	493,850.92	1,606,289.84	100+71.04	493,860.74	1,606,288.31	100+80.93	493,870.67	1,606,288.41			
90087		101+10.51	493,900.25	1,606,288.72															
90090	ENT352	98+95.18	494,091.62	1,607,356.71															
90091		100+00.00	494,196.43	1,607,355.69															
90092								100+47.55	494,243.97	1,607,355.23	100+79.97	494,276.40	1,607,354.91	101+05.08	494,289.91	1,607,384.39			
90093		101+62.97	494,314.04	1,607,437.01															
90100	ENT359	96+73.79	494,137.73	1,607,780.69															
90101								98+71.48	494,133.71	1,607,978.33	99+21.46	494,132.70	1,608,028.31	99+50.00	494,182.68	1,608,029.34			
90102		100+00.00	494,232.66	1,608,030.37															
90103								100+90.00	494,322.64	1,608,032.22	101+80.00	494,412.62	1,608,034.07	102+31.37	494,410.77	1,608,124.05			
90105		103+43.37	494,408.47	1,608,236.02															

ALIGNMENT COORDINATES

101-16
10-20-09

Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
90115	ENT364	96+63.00	494,026.91	1,608,308.20															
90116		100+00.00	494,019.98	1,608,645.13															
90110	ENT365	97+80.00	493,999.99	1,608,644.72															
90111		100+00.00	494,219.94	1,608,649.24															
90111								100+49.55	494,269.48	1,608,650.25	100+76.37	494,296.30	1,608,650.81	101+02.33	494,320.80	1,608,639.89			
90113		102+56.34	494,461.47	1,608,577.18															
90120	ENT367	98+79.96	494,079.19	1,609,657.56															
90121		100+00.00	494,199.23	1,609,657.02															
90122		101+00.04	494,299.27	1,609,656.08															
31201	ENT1257 (KENNEDY)	100+00.00	494,020.70	1,598,026.23															
31203								101+39.30	493,927.84	1,598,130.06	101+82.50	493,899.04	1,598,162.26	102+22.23	493,897.37	1,598,205.43			
31204		102+80.29	493,895.13	1,598,263.44															
30201	ENT1281 (R-53)	99+19.94	493,642.43	1,600,492.39															
30202		100+00.00	493,640.20	1,600,572.41															
30203		100+80.02	493,638.97	1,600,652.43															
40201	ENT2307 (90TH)	100+00.00	493,549.09	1,603,226.36															
40202		101+00.00	493,549.43	1,603,326.36															
40205	ENT2313 (90TH)	100+00.00	494,077.09	1,603,224.59															
40206		101+00.00	494,077.43	1,603,324.58															

SPIRAL OR CIRCULAR CURVE DATA

101-17
04-19-11

Name	Location	Δ_{scs}	Horizontal Alignment Data													Remarks
			Spiral Data								Curve Data					
			θs	Ls	Ts	Es	Xc	Yc	L.T.	S.T.	Δ_c	T	L	R	E	
20006		35° 10′ 54.09″ LT	2° 59′ 45.09″	-160.00′	TS	53.35′	159.96′	2.79′	106.68′	53.35′	29° 11′ 23.92″ LT	398.39′	779.48′	1,530.00′	51.02′	
20015		27° 58′ 21.68″ LT	2° 59′ 45.09″	-160.00′	TS	53.35′	159.96′	2.79′	106.68′	53.35′	21° 58′ 51.50″ LT	297.14′	586.97′	1,530.00′	28.59′	
20022		28° 37′ 45.84″ RT	2° 59′ 45.09″	160.00′	TS	53.35′	159.96′	2.79′	106.68′	53.35′	22° 38′ 15.66″ RT	306.25′	604.51′	1,530.00′	30.35′	
20028											0° 19′ 35.74″ RT	34.20′	68.40′	12,000.00′	0.05′	
20032											0° 25′ 37.45″ LT	44.72′	89.45′	12,000.00′	0.08′	
20036											11° 07′ 40.08″ LT	109.59′	218.49′	1,125.00′	5.33′	
20038											10° 15′ 40.29″ RT	101.01′	201.48′	1,125.00′	4.53′	
20043											6° 59′ 27.10″ LT	351.79′	702.70′	5,759.23′	10.73′	
10001		19°	44′ 59.72″ RT 11°	14′ 04.08″	510.00′	88.78′	175.80	7.67								

ALIGNMENT COORDINATES

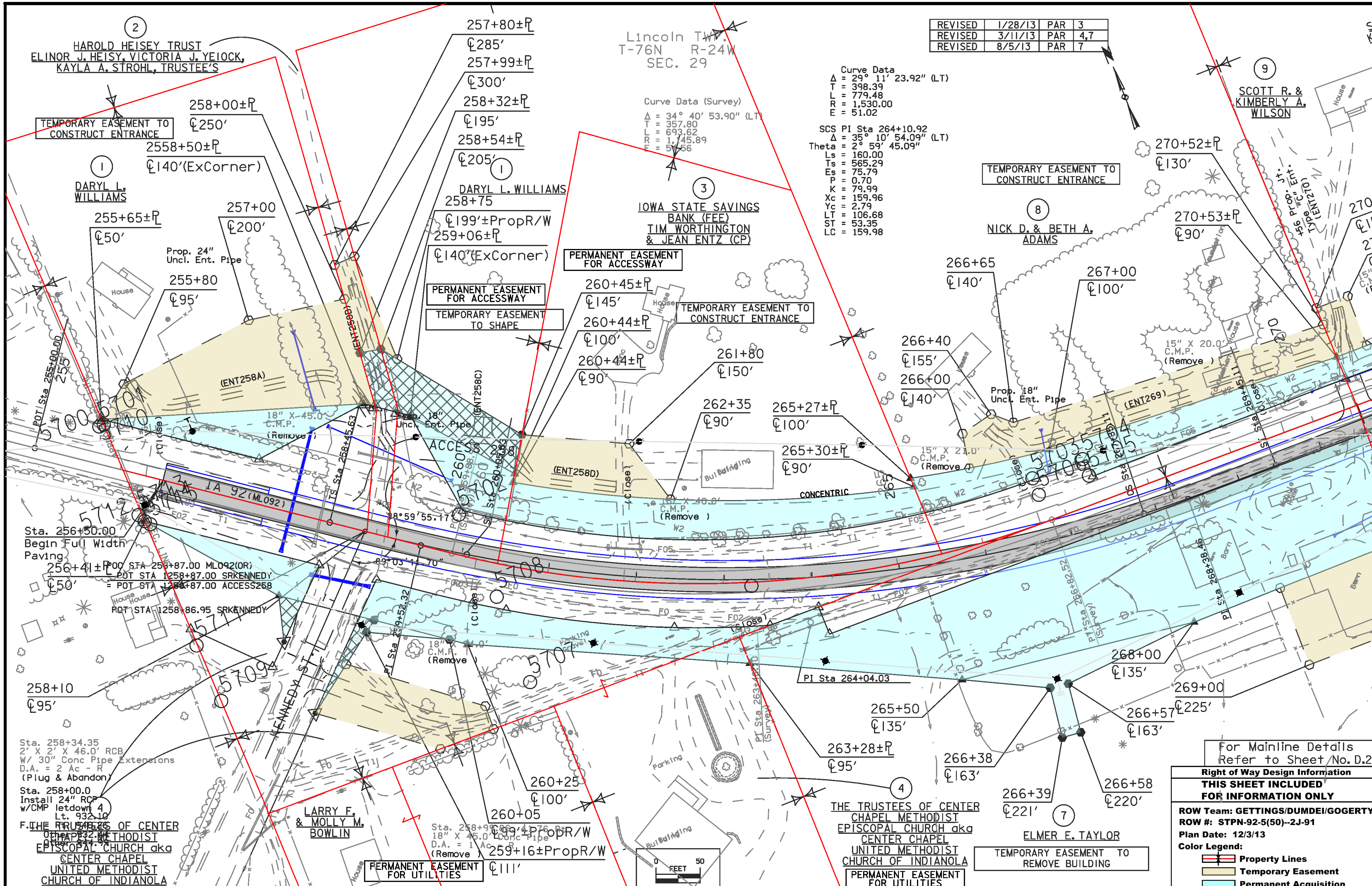
101-16
10-20-09

Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
SR57N_RET_1																			
30015								0+00.00	494,059.22	1,600,576.65									
30016					0+00.00	494,059.22	1,600,576.65	0+64.51	493,994.71	1,600,576.64	1+28.53	493,931.67	1,600,590.34						
30017					1+28.53	493,931.67	1,600,590.34	1+74.21	493,887.03	1,600,600.04	2+10.58	493,875.17	1,600,644.15						
30018					2+10.58	493,875.17	1,600,644.15	2+36.09	493,868.54	1,600,668.77	2+61.32	493,868.31	1,600,694.28						
SR57N_RET_2																			
30026					0+00.00	493,860.45	1,600,459.51	0+82.18	493,859.70	1,600,541.69	1+33.20	493,941.47	1,600,549.88						
30025								1+80.88	493,988.91	1,600,554.64									
SR57N_RET_3																			
30035								0+00.00	493,790.59	1,600,443.07									
30036					0+00.00	493,790.59	1,600,443.07	0+25.50	493,790.36	1,600,468.58	0+50.73	493,783.74	1,600,493.20						
30037					0+50.73	493,783.74	1,600,493.20	0+95.90	493,772.00	1,600,536.83	1+32.05	493,727.96	1,600,546.85						
30038					1+32.05	493,727.96	1,600,546.85	1+96.56	493,665.05	1,600,561.17	2+60.58	493,600.54	1,600,561.79						
SR57N_RET_4																			
30045								0+00.00	493,670.76	1,600,583.12									
30046					0+45.99	493,716.56	1,600,587.25	1+28.98	493,799.21	1,600,594.72	1+80.07	493,798.46	1,600,677.71						

SUPERELEVATION DATA

See PV-300 Series

Road Identification	Circular Curve or Spiral Curve Name	Radius	Superelevation Data			Standard Road Plan	Section A-A	Section B-B	Section C-C	Section D-D	Section E-E	Section F-F	Case A	Case B	Case C	Case S	Case T	Case U	Remarks
			e	L	x														
		FT	%	FT	FT														
IA 92	20006	1530	6.0	160	53	PV-301	257+92.63	258+45.63	258+98.63	260+05.63			260+05.63			259+52.30	259+52.30		
							269+98.11	269+45.11	268+92.11	267+85.11			267+85.11			268+38.44	268+38.44		
IA 92	20015	1530	6.0	160	53	PV-301	337+19.34	337+72.34	338+25.34	339+32.34			339+32.34			338+79.01	338+79.01		
							347+32.31	346+79.31	346+26.31	345+19.31			345+19.31			345+72.64	345+72.64		
IA 92	20022	1530	6.0	160	53	PV-301	347+32.31	347+85.31	348+38.31	349+45.31			349+45.31			348+91.98	348+91.98		
							357+62.82	357+09.82	356+56.82	355+49.82			355+49.82			356+03.15	356+03.15		

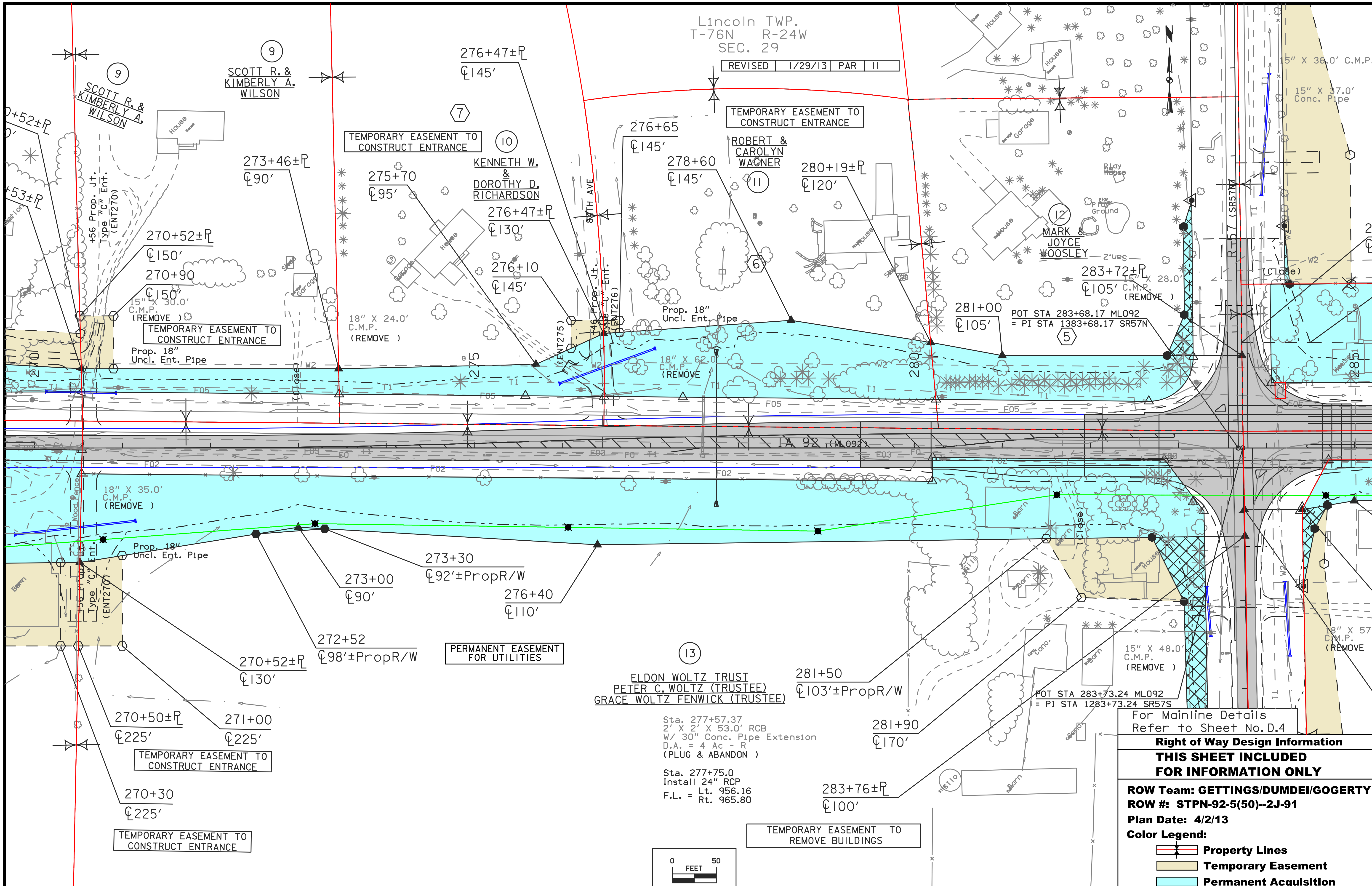


Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: GETTINGS/DUMDEI/GOGERTY
ROW #: STPN-92-5(50)--2J-91
Plan Date: 12/3/13
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

C	ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER H.1

4:09:35 PM 12/3/2013 smcclan pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9109201004\ROW\91092050H1.sht



For Mainline Details
Refer to Sheet No. D.4

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: GETTINGS/DUMDEI/GOGERTY
ROW #: STPN-92-5(50)--2J-91
Plan Date: 4/2/13
Color Legend:
- **Property Lines**
- **Temporary Easement**
- **Permanent Acquisition**

C | ENGLISH | IOWA DOT | DESIGN TEAM Schoenrock\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER H.2

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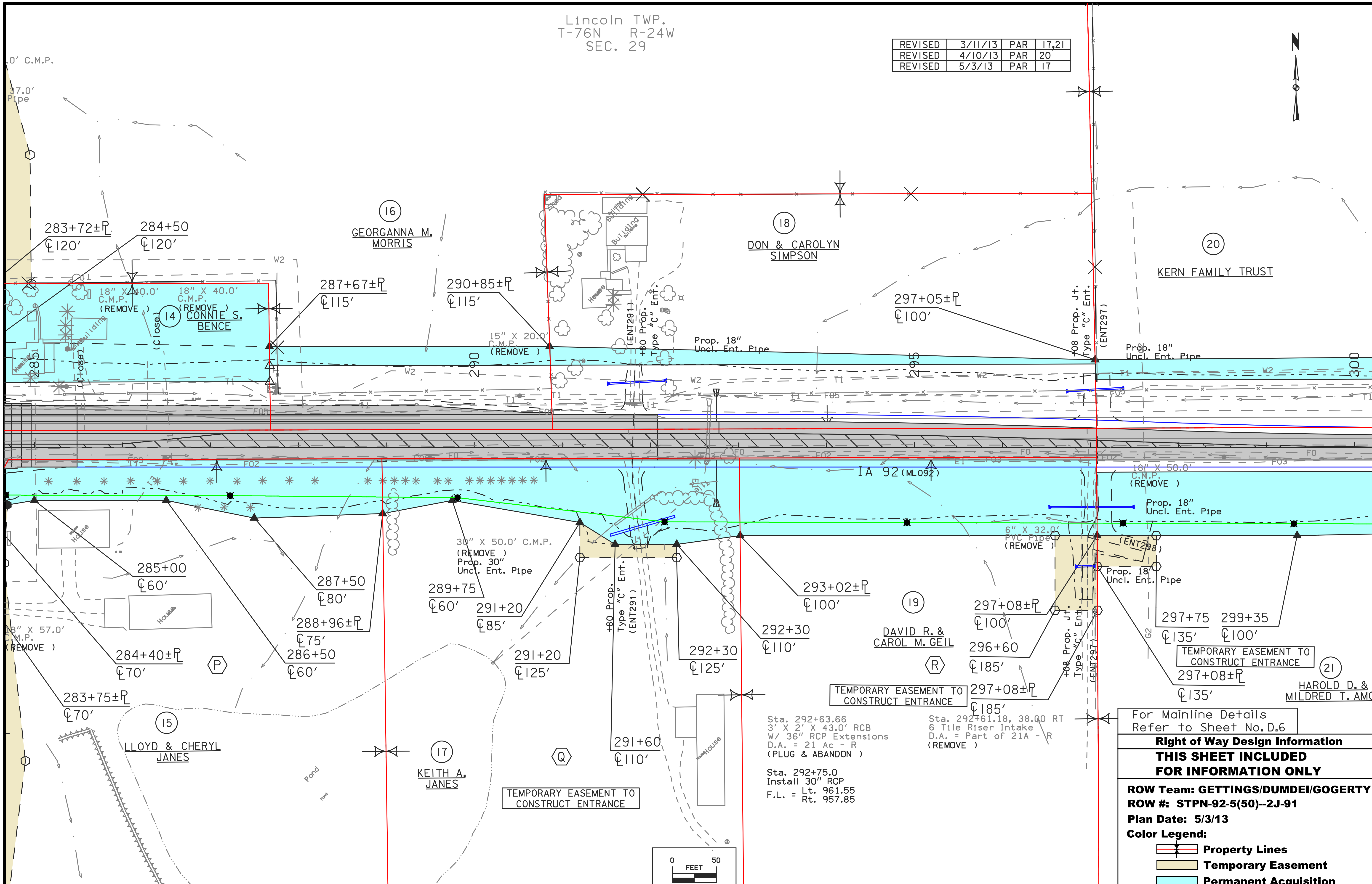


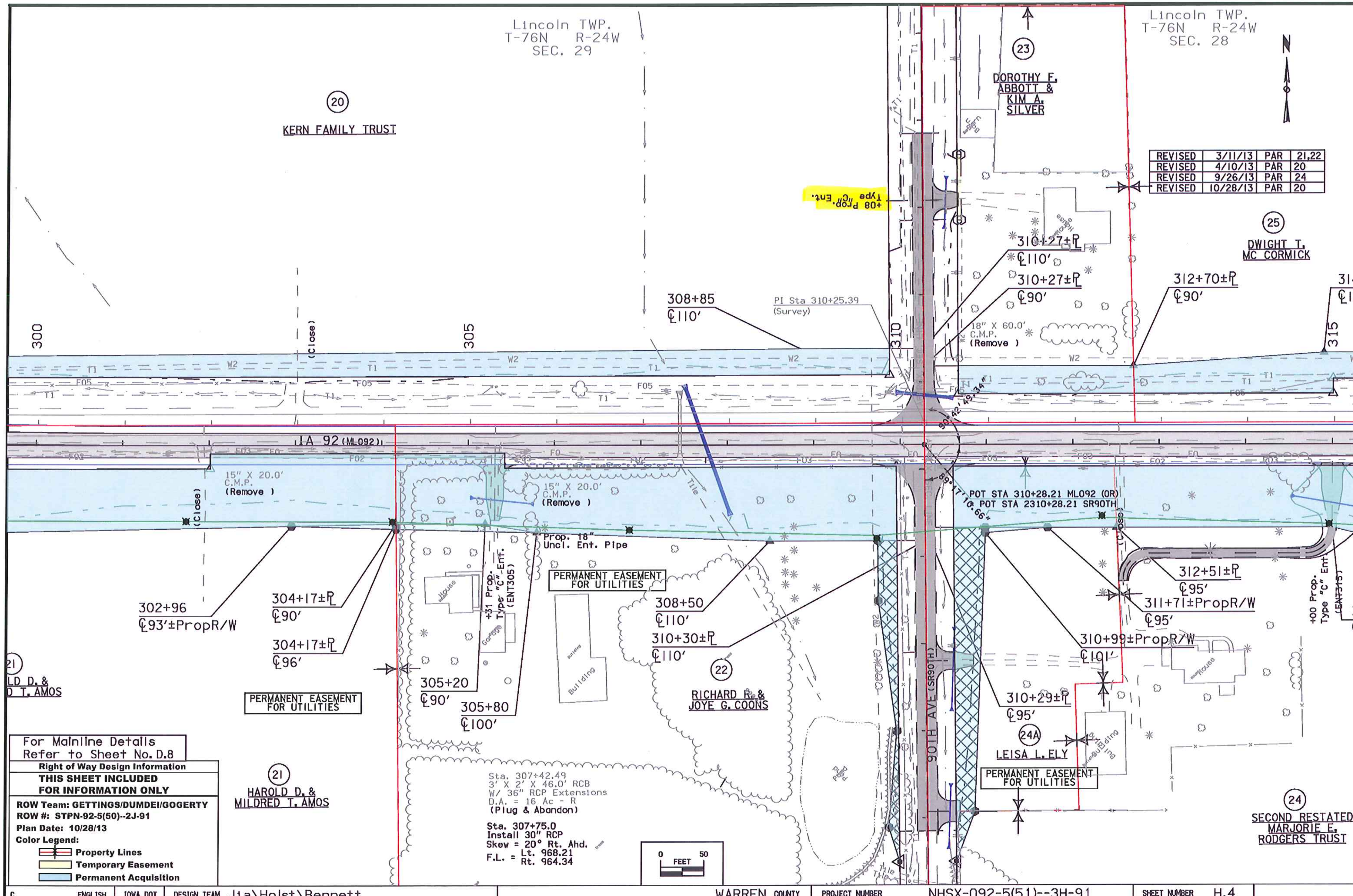
For Mainline Details
Refer to Sheet No. D.6

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: GETTINGS/DUMDEI/GOGERTY
ROW #: STPN-92-5(50)--2J-91
Plan Date: 5/3/13
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

C	ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER H.3



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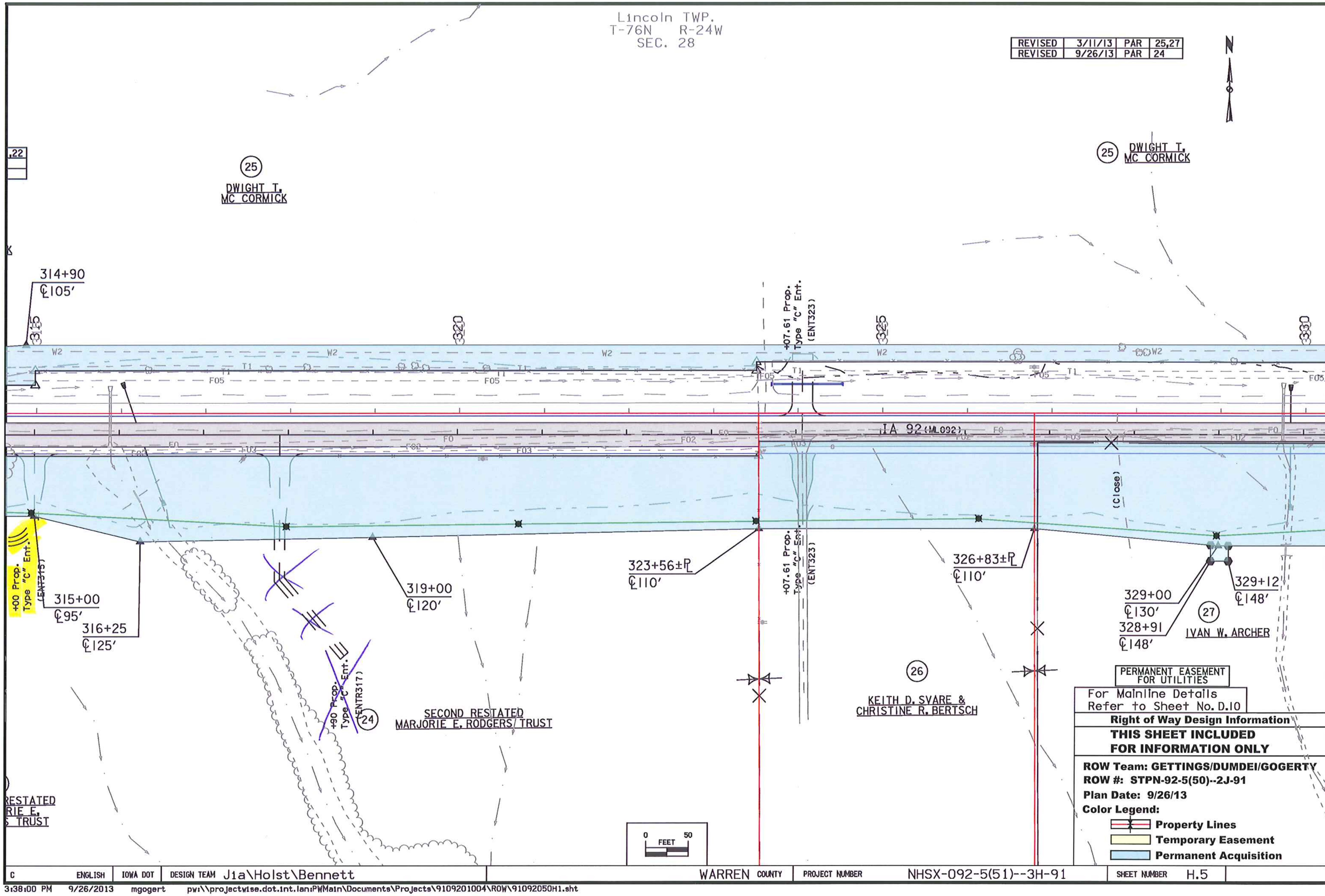
Lincoln TWP.
T-76N R-24W
SEC. 28
REVISED 3/11/13 PAR 25,27
REVISED 9/26/13 PAR 24
N
25
DWIGHT T. MC CORMICK
25
DWIGHT T. MC CORMICK
314+90
℄105'
+07.61 Prop. Type "C" Ent. (ENT323)
IA 92 (ML092)
(Close)
+00 Prop. Type "C" Ent. (ENT315)
315+00
℄95'
316+25
℄125'
319+00
℄120'
323+56±℄
℄110'
+07.61 Prop. Type "C" Ent. (ENT323)
326+83±℄
℄110'
329+00
℄130'
328+91
℄148'
329+12
℄148'
27
IVAN W. ARCHER
26
KEITH D. SVARE &
CHRISTINE R. BERTSCH
+90 Prop. Type "C" Ent. (ENTR317)
24
SECOND RESTATED
MARJORIE E. RODGERS TRUST
RESTATED
RIE E.
S TRUST
0 FEET 50
PERMANENT EASEMENT FOR UTILITIES
For Mainline Details
Refer to Sheet No. D.10
Right of Way Design Information
THIS SHEET INCLUDED
FOR INFORMATION ONLY
ROW Team: GETTINGS/DUMDEI/GOGERTY
ROW #: STPN-92-5(50)--2J-91
Plan Date: 9/26/13
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition
C ENGLISH IOWA DOT DESIGN TEAM Jia\Holst\Bennett
WARREN COUNTY PROJECT NUMBER NHSX-092-5(51)--3H-91 SHEET NUMBER H.5
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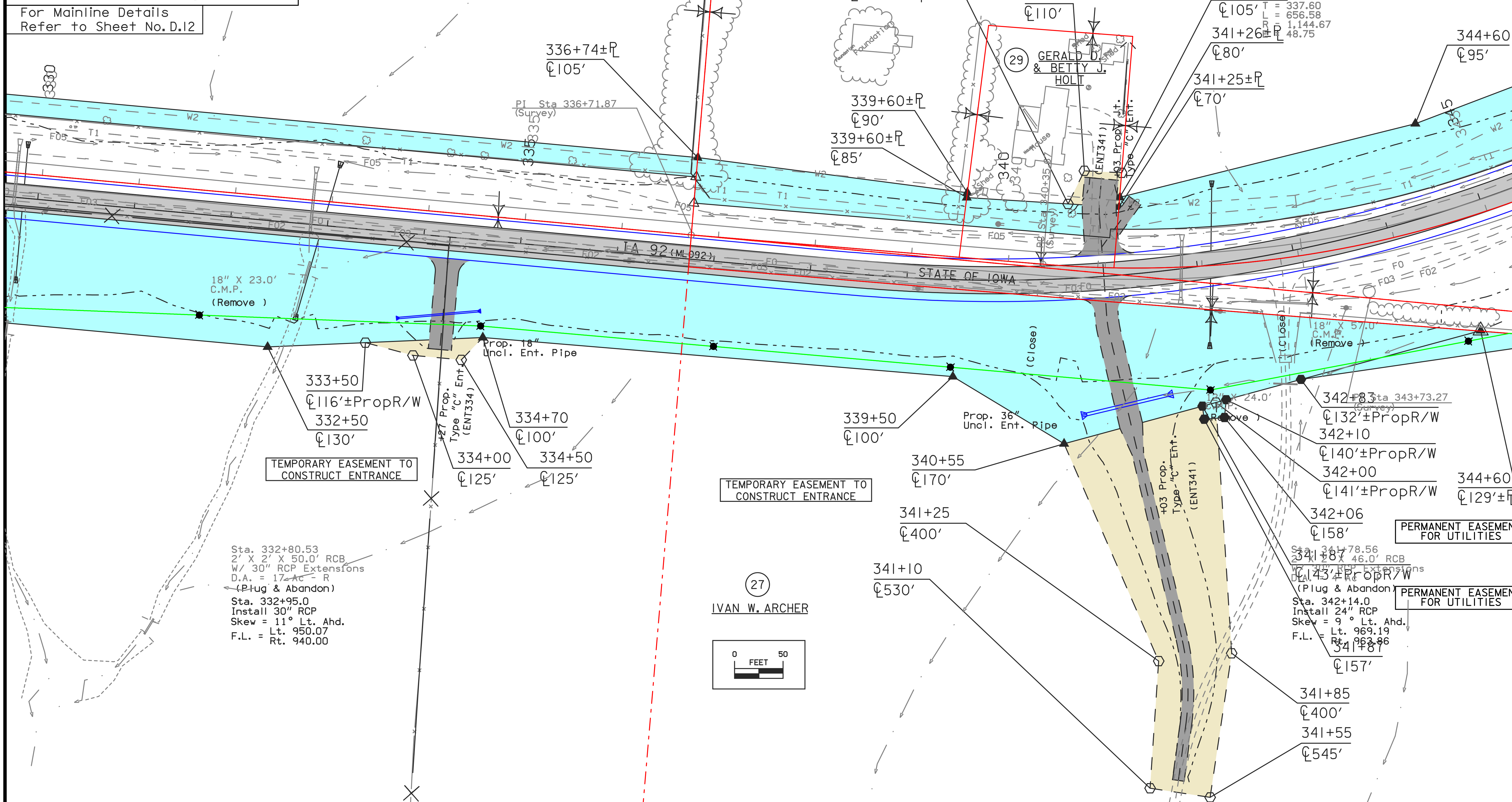
Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: GETTINGS/DUMDEI/GOGERTY
ROW #: STPN-92-5(50)--2J-91
Plan Date: 8/26/13
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

For Mainline Details Refer to Sheet No. D.12

REVISED	3/11/13	PAR	27
REVISED	5/3/13	PAR	27
REVISED	8/26/13	PAR	28



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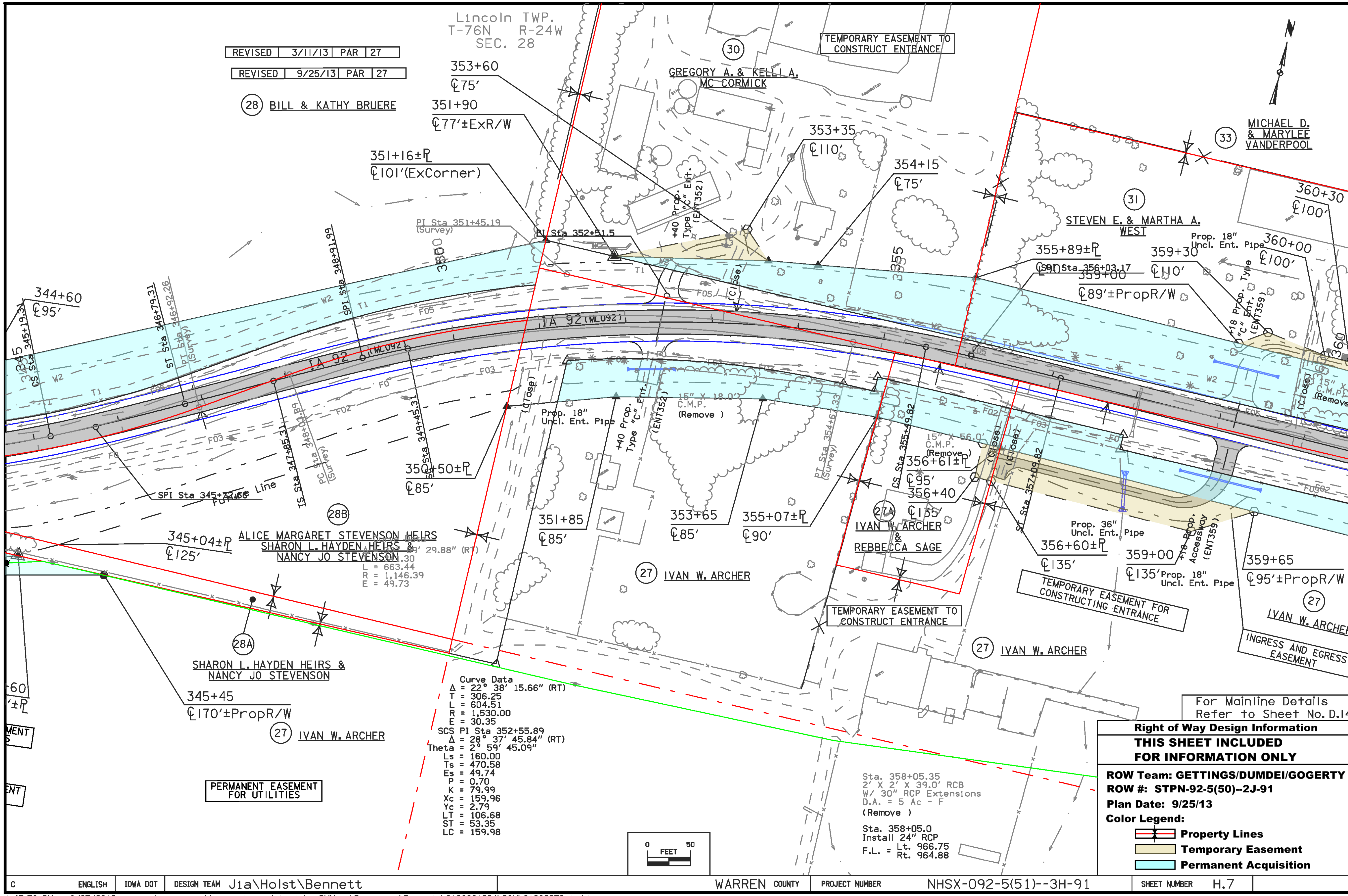

Lincoln TWP.
T-76N R-24W
SEC. 28
REVISED 3/11/13 PAR 27
REVISED 9/25/13 PAR 27
28 BILL & KATHY BRUERE
30 GREGORY A. & KELLI A. MC CORMICK
TEMPORARY EASEMENT TO CONSTRUCT ENTRANCE
33 MICHAEL D. & MARYLEE VANDERPOOL
31 STEVEN E. & MARTHA A. WEST
353+60 ℄75′
351+90 ℄77′±ExR/W
351+16±℞ ℄101′(ExCorner)
353+35 ℄110′
354+15 ℄75′
355+89±℞ ℄110′
359+30 ℄110′
359+00 ℄89′±PropR/W
360+30 ℄100′
360+00 ℄100′
344+60 ℄95′
PI Sta 351+45.19 (Survey)
PI Sta 352+51.5
SPI Sta 356+03.17
IA 92 (ML092)
Prop. 18″ Uncl. Ent. Pipe
+40 Prop. Type "C" Ent. (ENT352)
15″ X 18.0′ C.M.P. (Remove)
15″ X 56.0′ C.M.P. (Remove)
350+50±℞ ℄85′
351+85 ℄85′
353+65 ℄85′
355+07±℞ ℄90′
356+61±℞ ℄95′
356+40 ℄135′
356+60±℞ ℄135′
359+00 ℄135′
359+65 ℄95′±PropR/W
Prop. 36″ Uncl. Ent. Pipe
+18 Prop. Accessway (ENT359)
27A IVAN W. ARCHER & REBBECCA SAGE
28B ALICE MARGARET STEVENSON HEIRS SHARON L. HAYDEN HEIRS & NANCY JO STEVENSON
345+04±℞ ℄125′
SPI Sta 345+72.66
28A SHARON L. HAYDEN HEIRS & NANCY JO STEVENSON
345+45 ℄170′±PropR/W
27 IVAN W. ARCHER
PERMANENT EASEMENT FOR UTILITIES
TEMPORARY EASEMENT FOR CONSTRUCTING ENTRANCE
INGRESS AND EGRESS EASEMENT
Curve Data
Δ = 22° 38′ 15.66″ (RT)
T = 306.25
L = 604.51
R = 1,530.00
E = 30.35
SCS PI Sta 352+55.89
Δ = 28° 37′ 45.84″ (RT)
Theta = 2° 59′ 45.09″
Ls = 160.00
Ts = 470.58
Es = 49.74
P = 0.70
K = 79.99
Xc = 159.96
Yc = 2.79
LT = 106.68
ST = 53.35
LC = 159.98
Sta. 358+05.35 2′ X 2′ X 39.0′ RCB W/ 30″ RCP Extensions D.A. = 5 Ac - F (Remove)
Sta. 358+05.0 Install 24″ RCP F.L. = Lt. 966.75 Rt. 964.88
0 FEET 50
For Mainline Details Refer to Sheet No. D.14
Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY
ROW Team: GETTINGS/DUMDEI/GOGERTY
ROW #: STPN-92-5(50)--2J-91
Plan Date: 9/25/13
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition
C ENGLISH IOWA DOT DESIGN TEAM Jia\Holst\Bennett
WARREN COUNTY PROJECT NUMBER NHSX-092-5(51)--3H-91
SHEET NUMBER H.7
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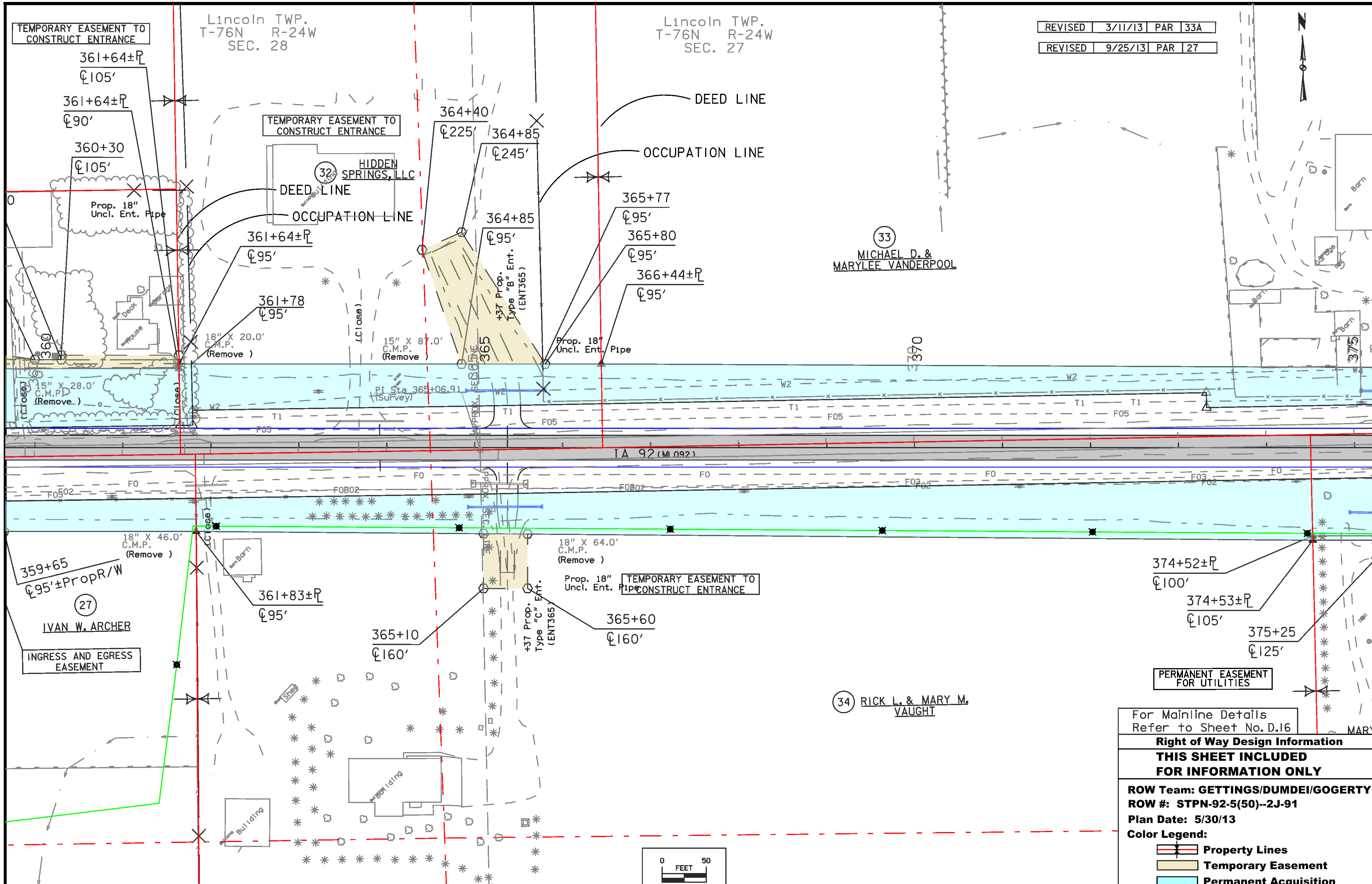

For Mainline Details Refer to Sheet No. D.16

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: GETTINGS/DUMDEI/GOGERTY
ROW #: STPN-92-5(50)--2J-91
Plan Date: 5/30/13
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

C	ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER H.8

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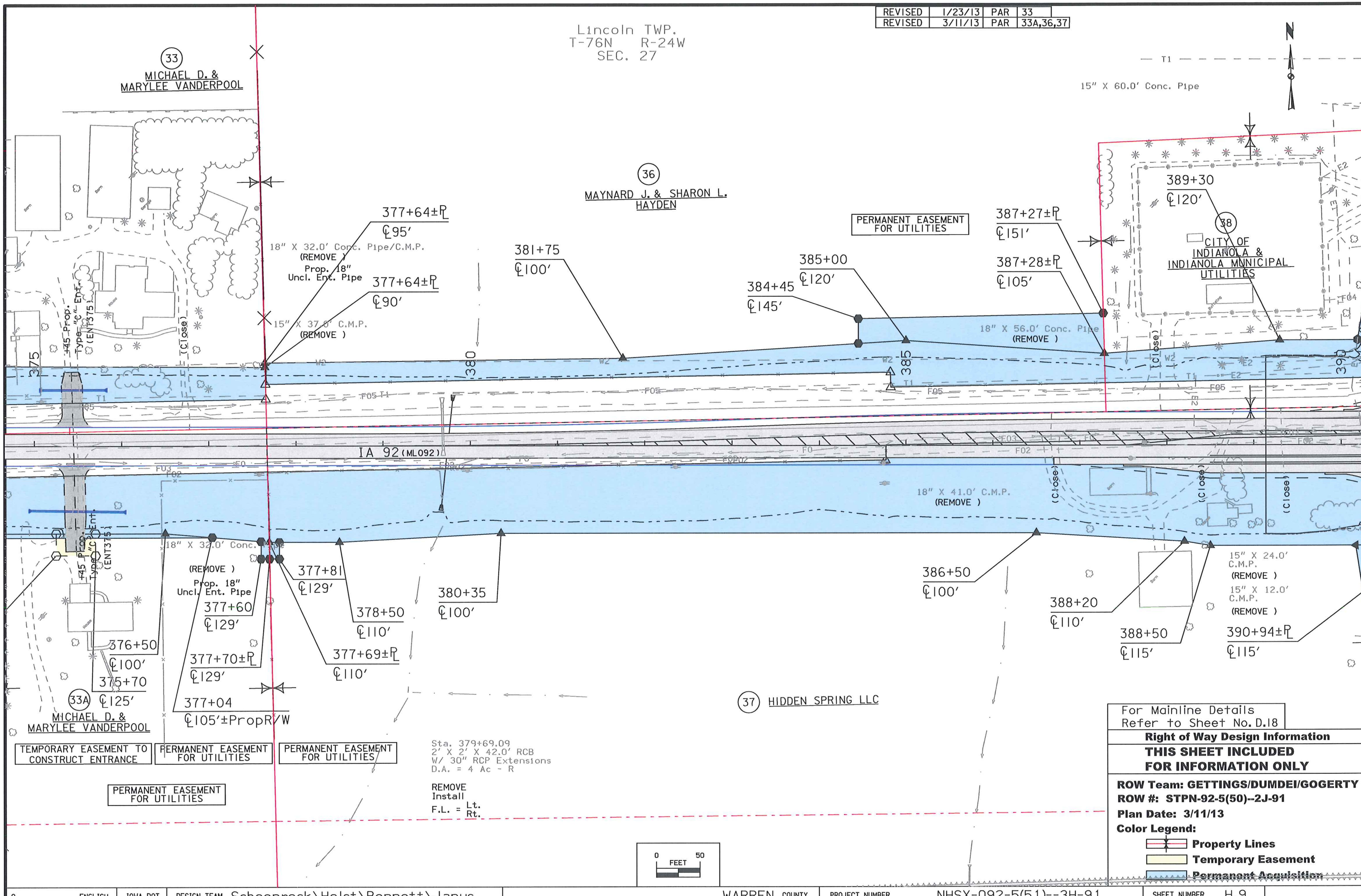

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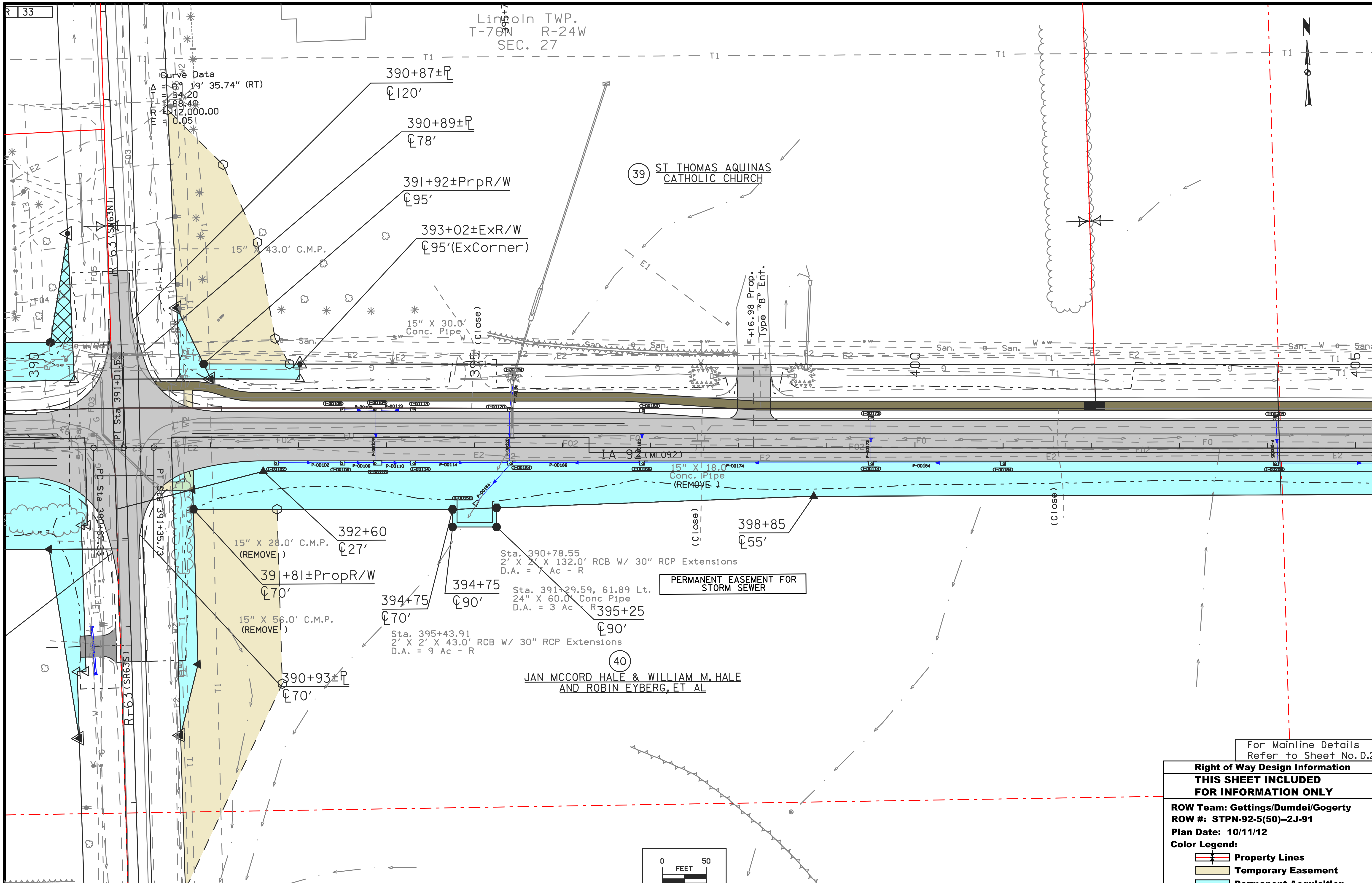

For Mainline Details
Refer to Sheet No. D.20

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Gettings/Dumdei/Gogerty
ROW #: STPN-92-5(50)--2J-91
Plan Date: 10/11/12
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

C	ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Holst\Bennett\Janus	WARREN COUNTY	PROJECT NUMBER STP-092-5(51)--2C-91	SHEET NUMBER H.10

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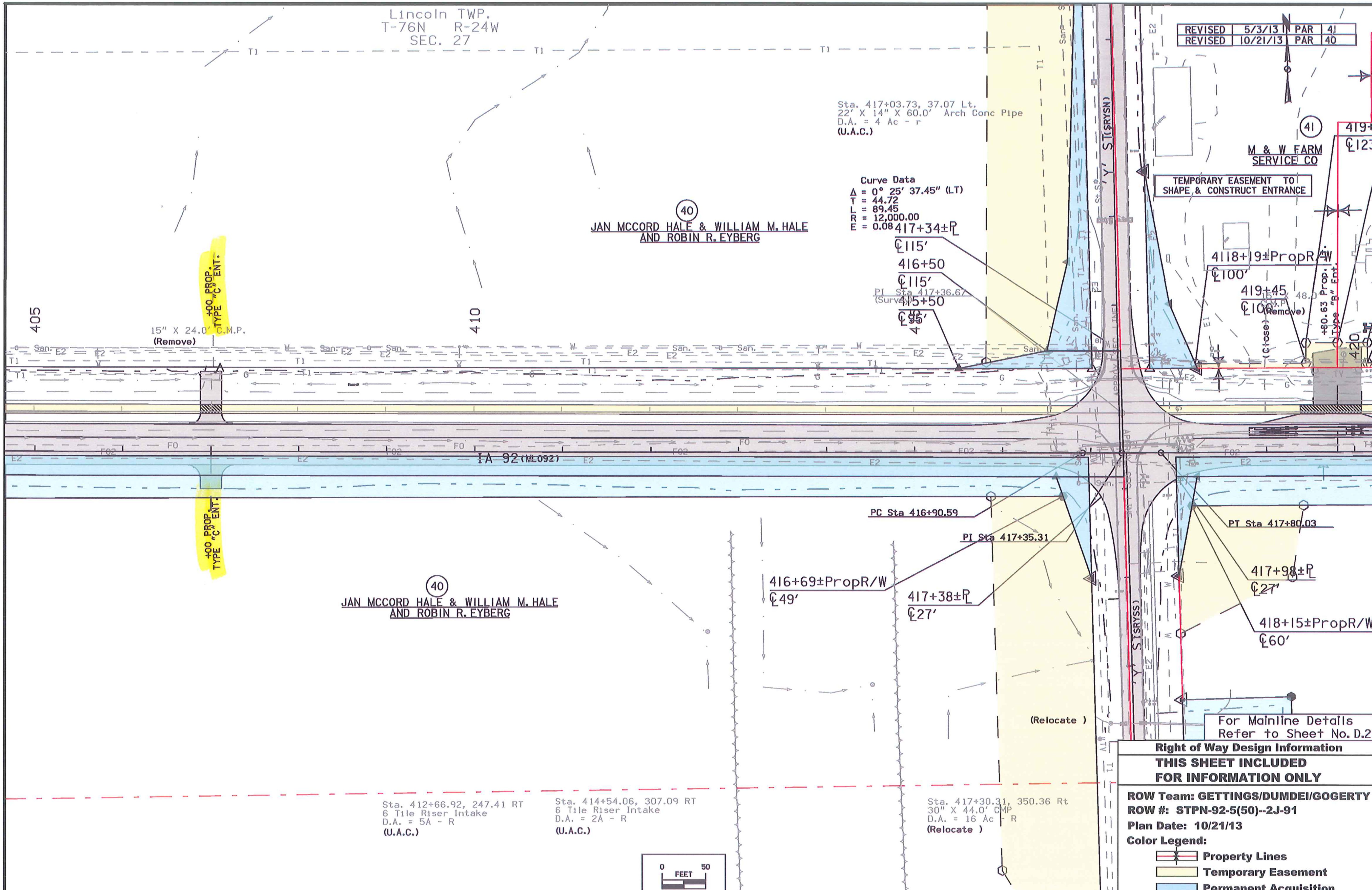


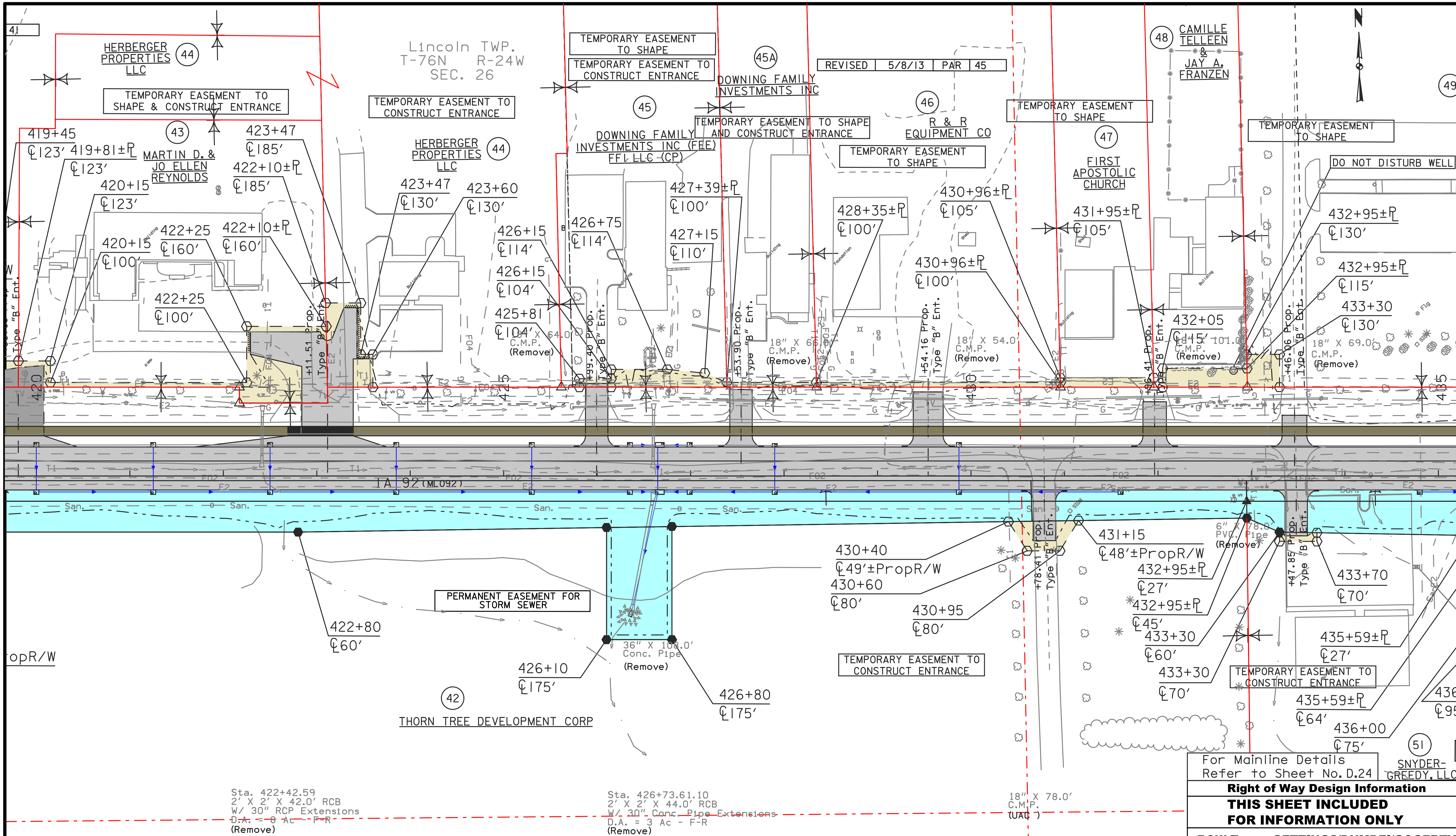
For Mainline Details
Refer to Sheet No. D.22

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: GETTINGS/DUMDEI/GOGERTY
ROW #: STPN-92-5(50)--2J-91
Plan Date: 10/21/13
Color Legend:
- Property Lines
- Temporary Easement
- Permanent Acquisition

C	ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER	H.11

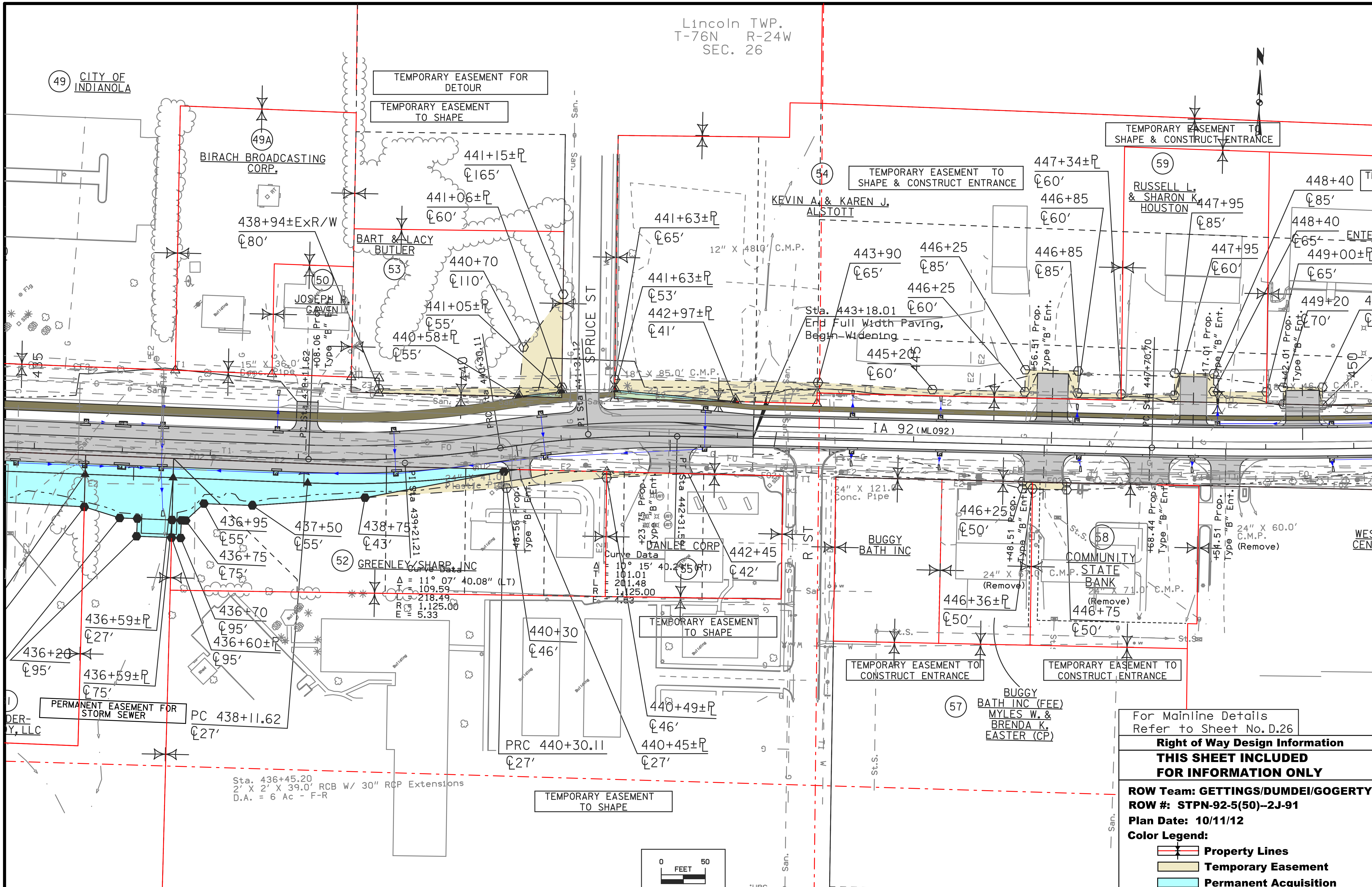


For Mainline Details Refer to Sheet No. D.24

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: GETTINGS/DUMDEI/GOGERTY
ROW #: STPN-92-5(50)--2J-91
Plan Date: 5/8/13
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition



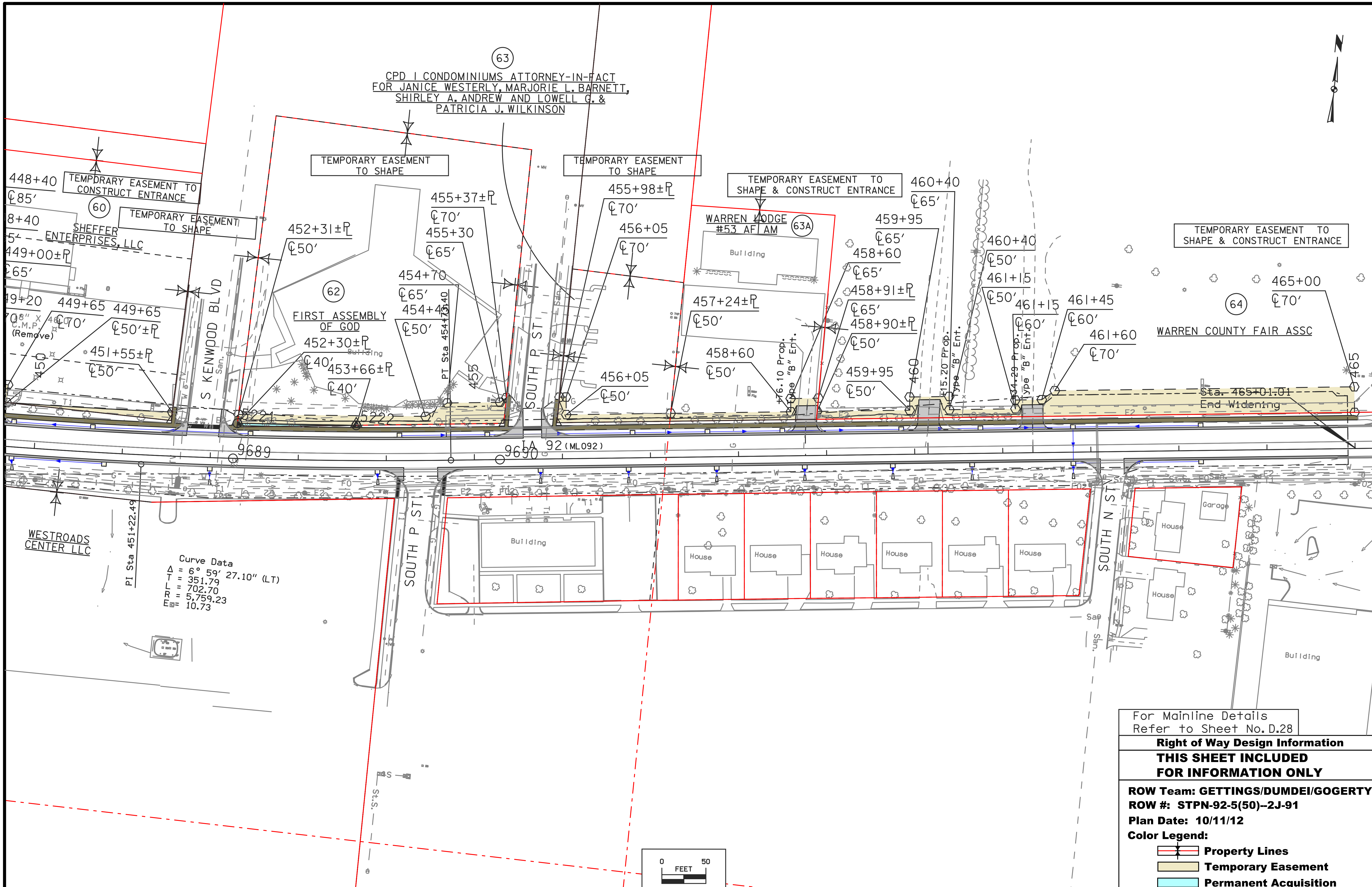
For Mainline Details
Refer to Sheet No. D.26

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: GETTINGS/DUMDEI/GOGERTY
ROW #: STPN-92-5(50)--2J-91
Plan Date: 10/11/12
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

C | ENGLISH | IOWA DOT | DESIGN TEAM Schoenrock\Holst\Bennett\Janus | WARREN COUNTY | PROJECT NUMBER STP-092-5(51)--2C-91 | SHEET NUMBER H.13

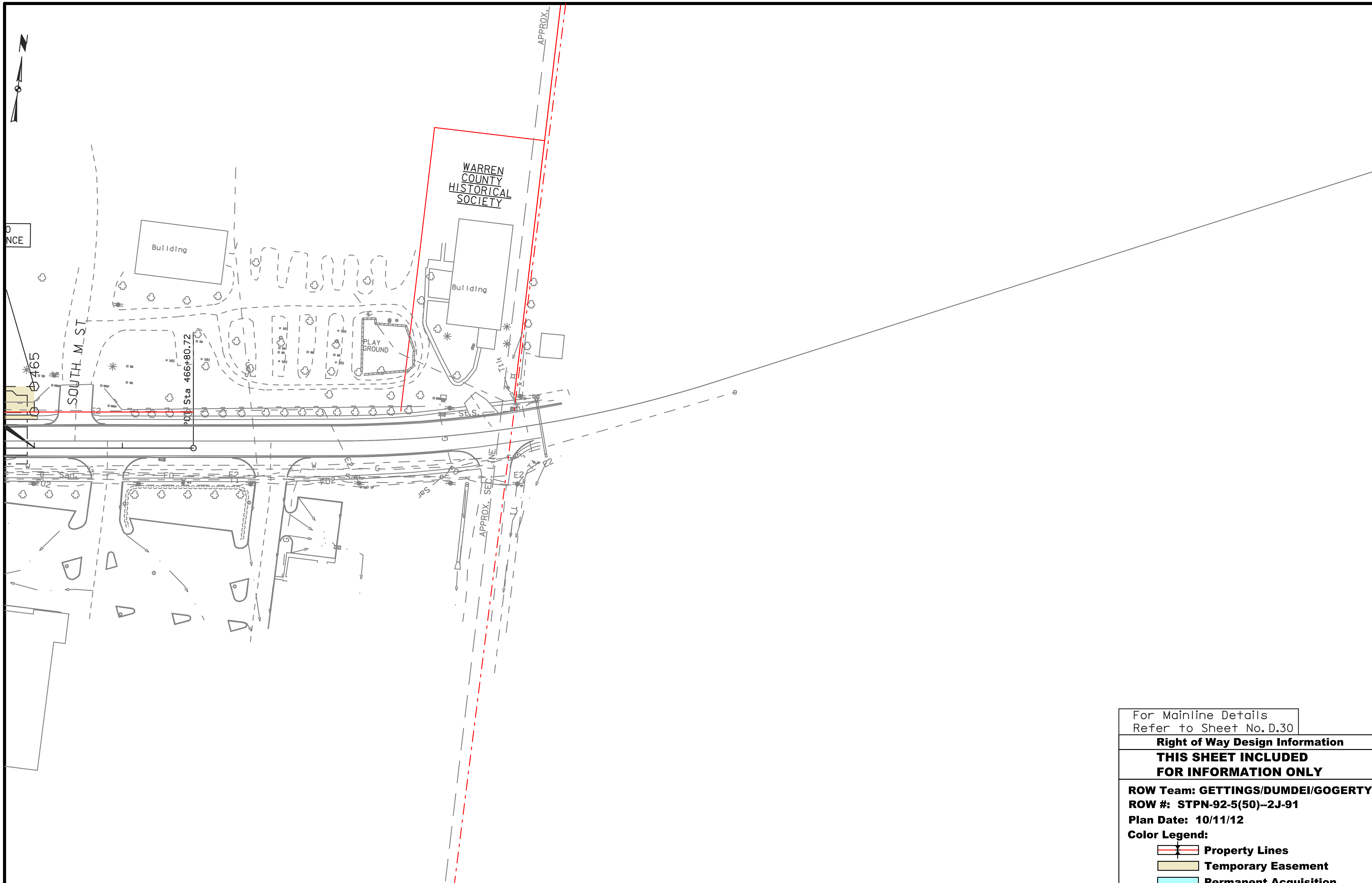


Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: GETTINGS/DUMDEI/GOGERTY
ROW #: STPN-92-5(50)--2J-91
Plan Date: 10/11/12
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

C	ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER H.14



For Mainline Details
Refer to Sheet No. D.30

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: GETTINGS/DUMDEI/GOGERTY
ROW #: STPN-92-5(50)--2J-91
Plan Date: 10/11/12
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

C | ENGLISH | IOWA DOT | DESIGN TEAM Schoenrock\Holst\Bennett\Janus | WARREN COUNTY | PROJECT NUMBER STP-092-5(51)--2C-91 | SHEET NUMBER H.15

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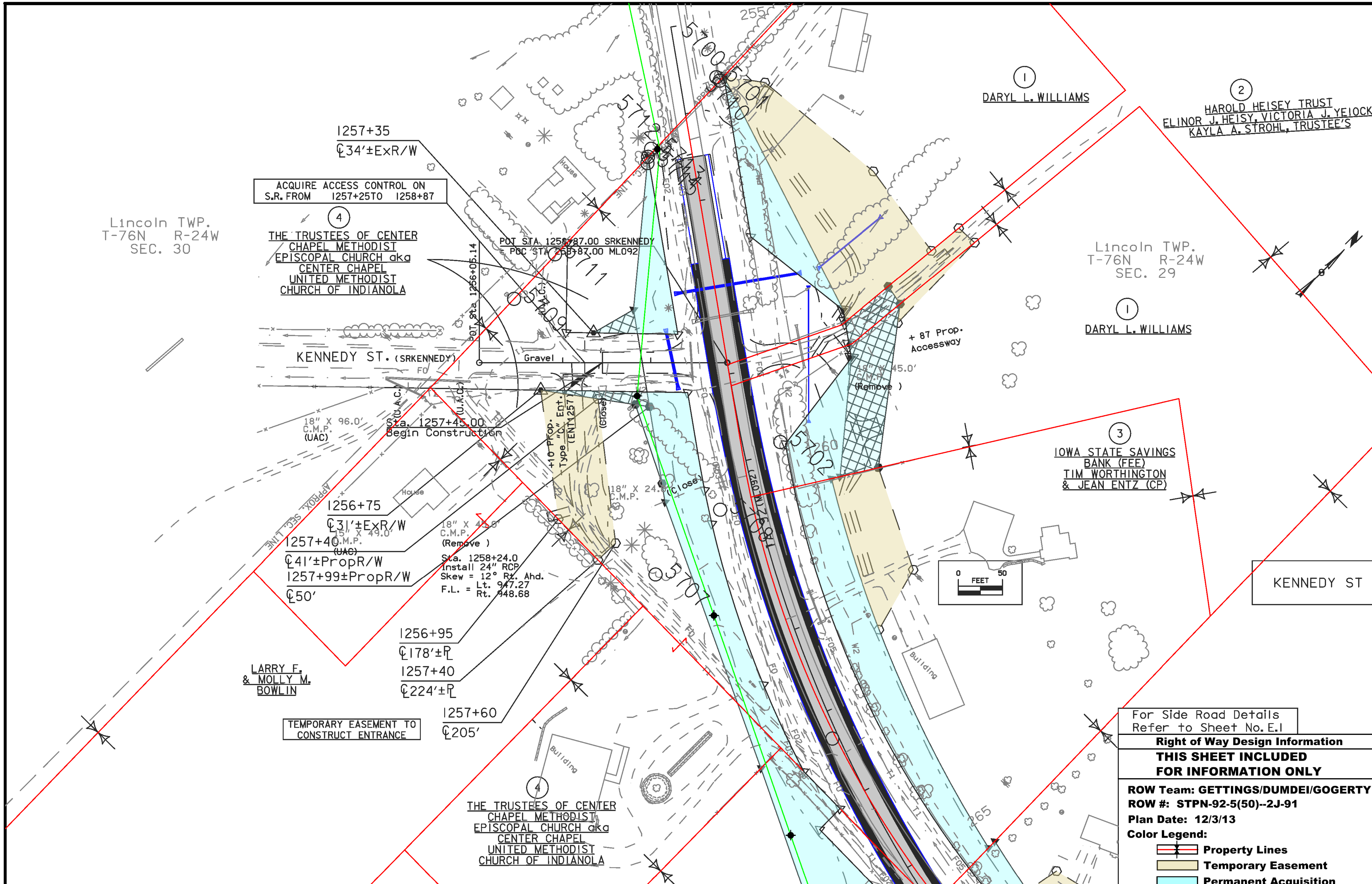

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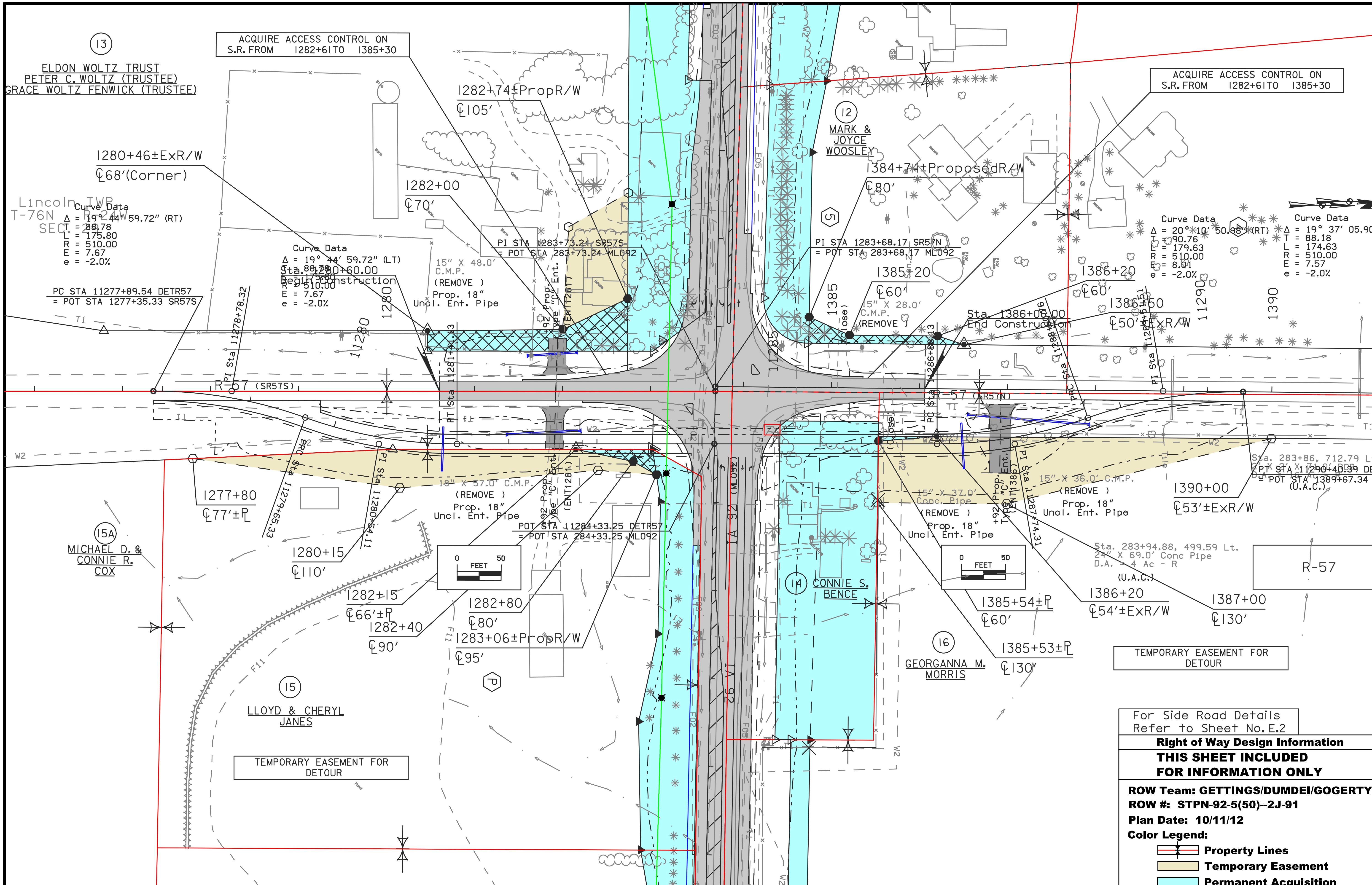

C	ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER HE.2

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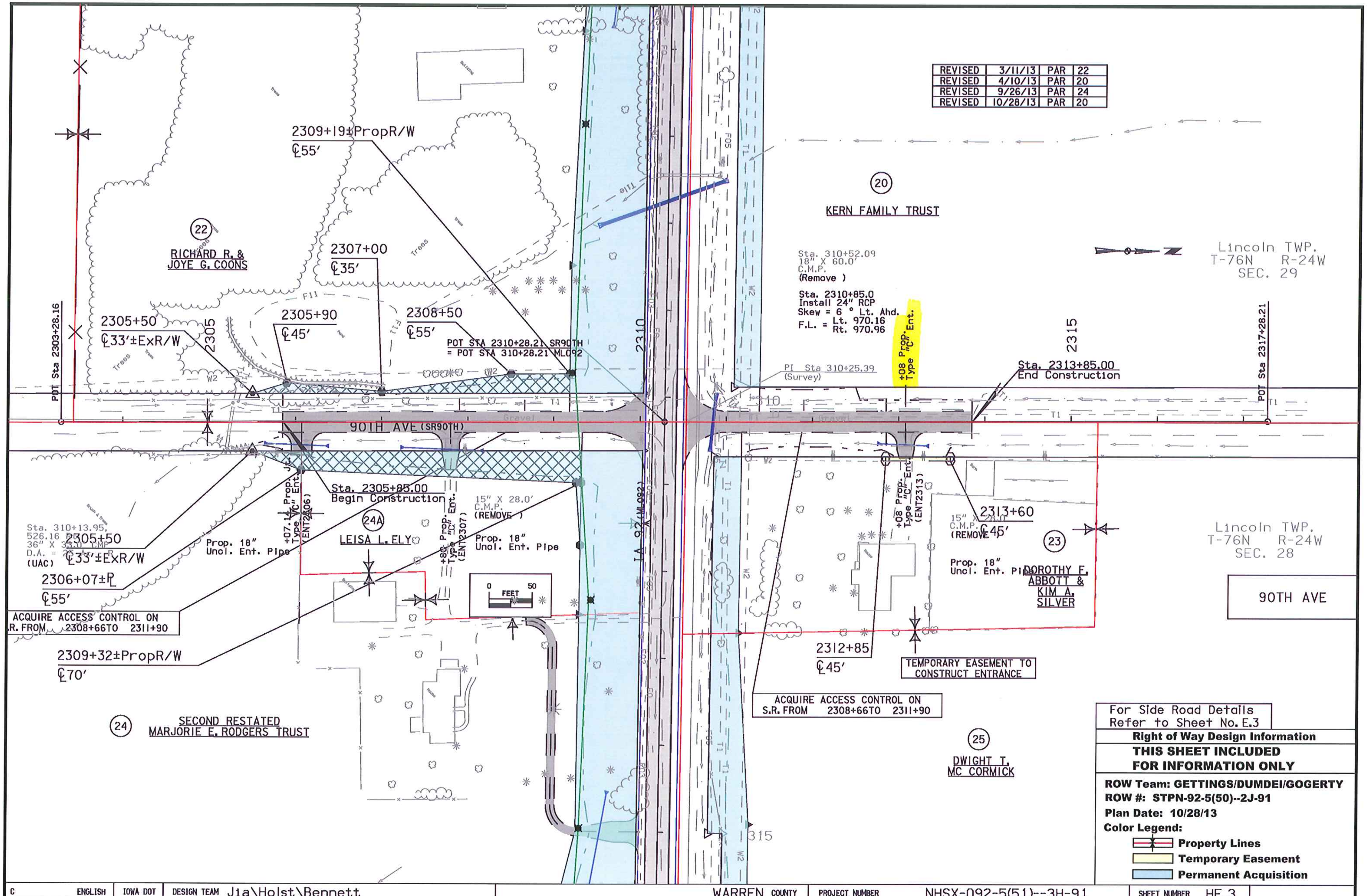

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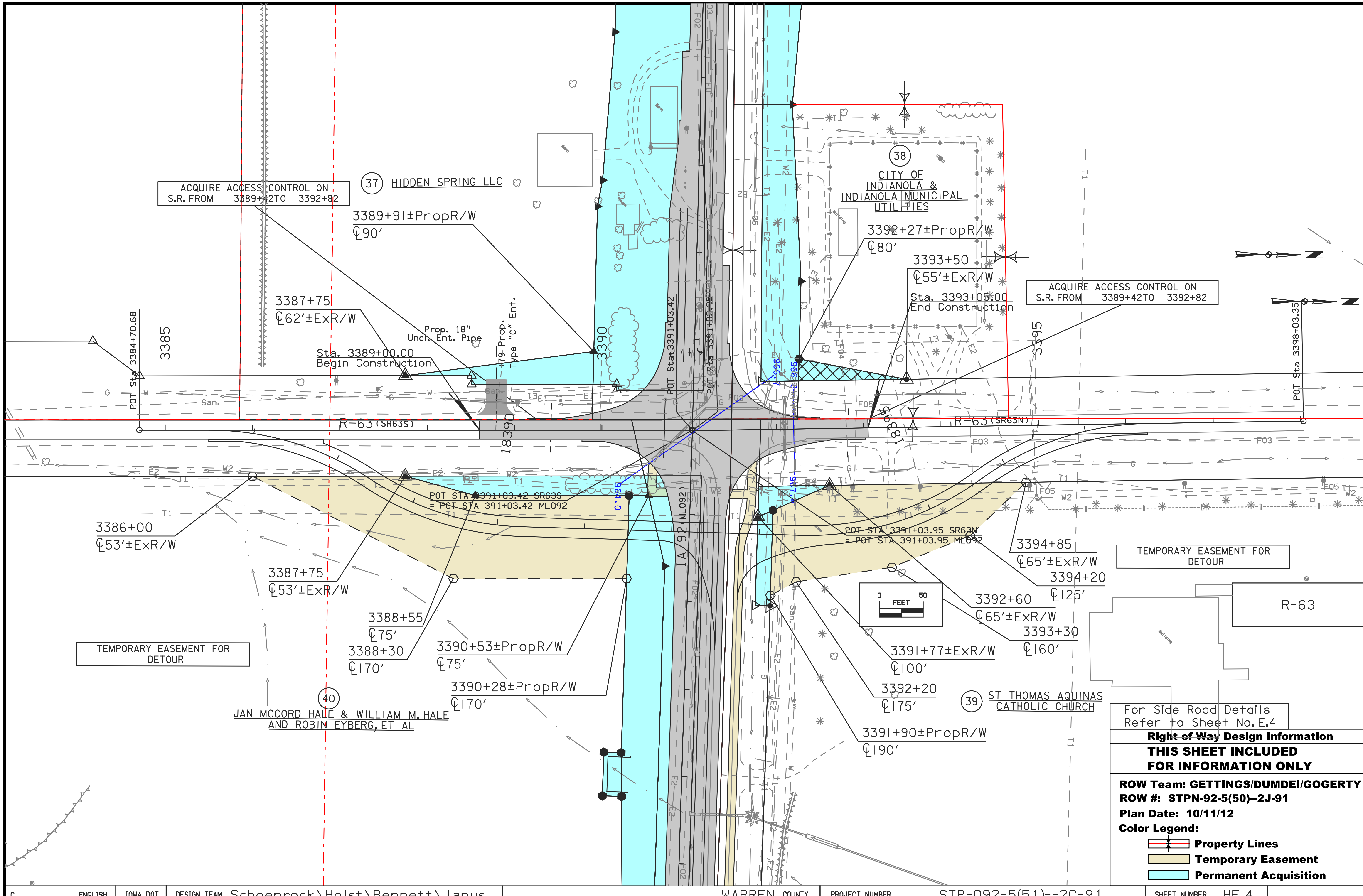

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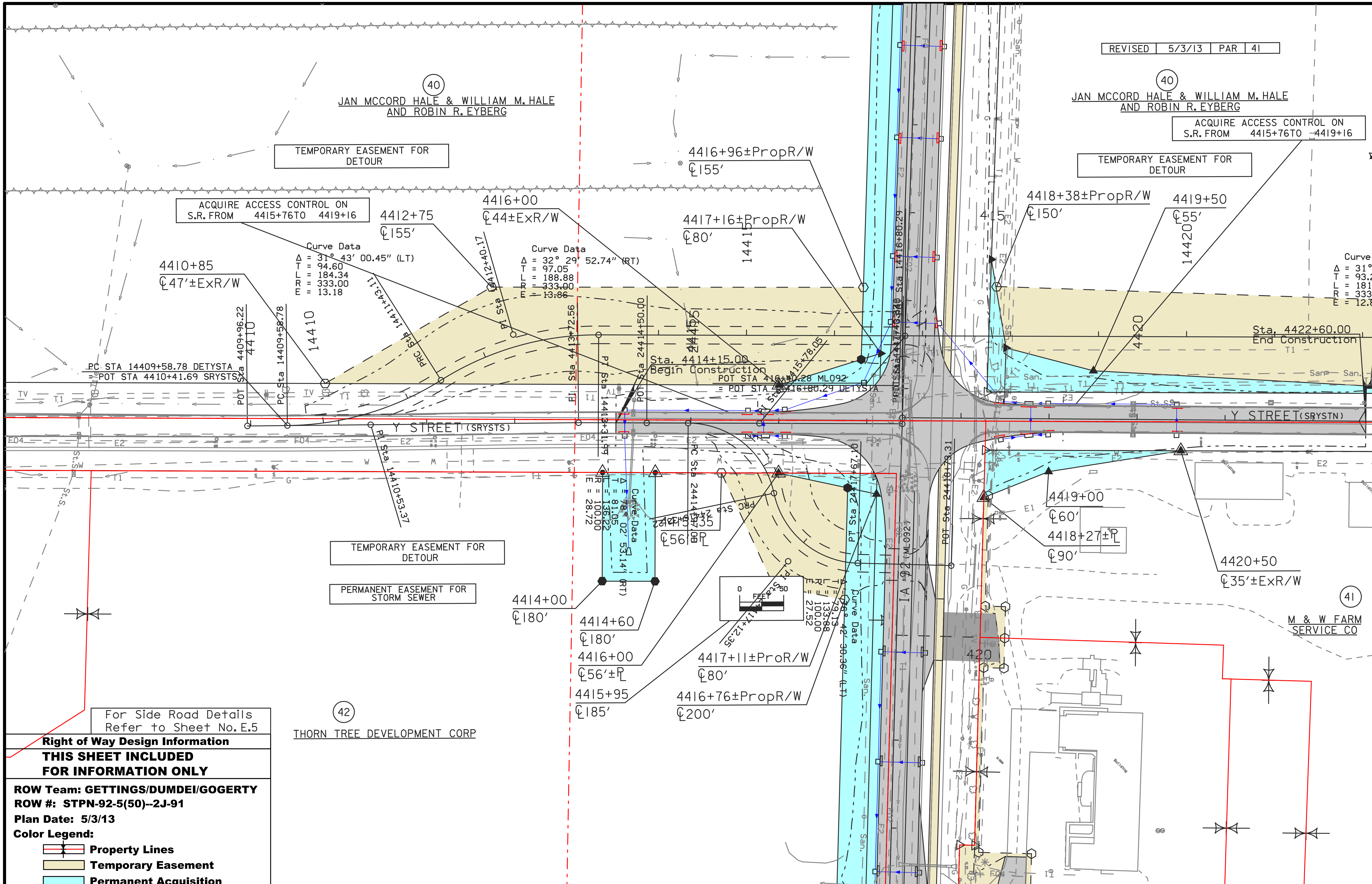

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: GETTINGS/DUMDEI/GOGERTY
ROW #: STPN-92-5(50)--2J-91
Plan Date: 5/3/13
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

C	ENGLISH	IOWA DOT	DESIGN TEAM	Schoenrock\Holst\Bennett	WARREN	COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER	HE.5

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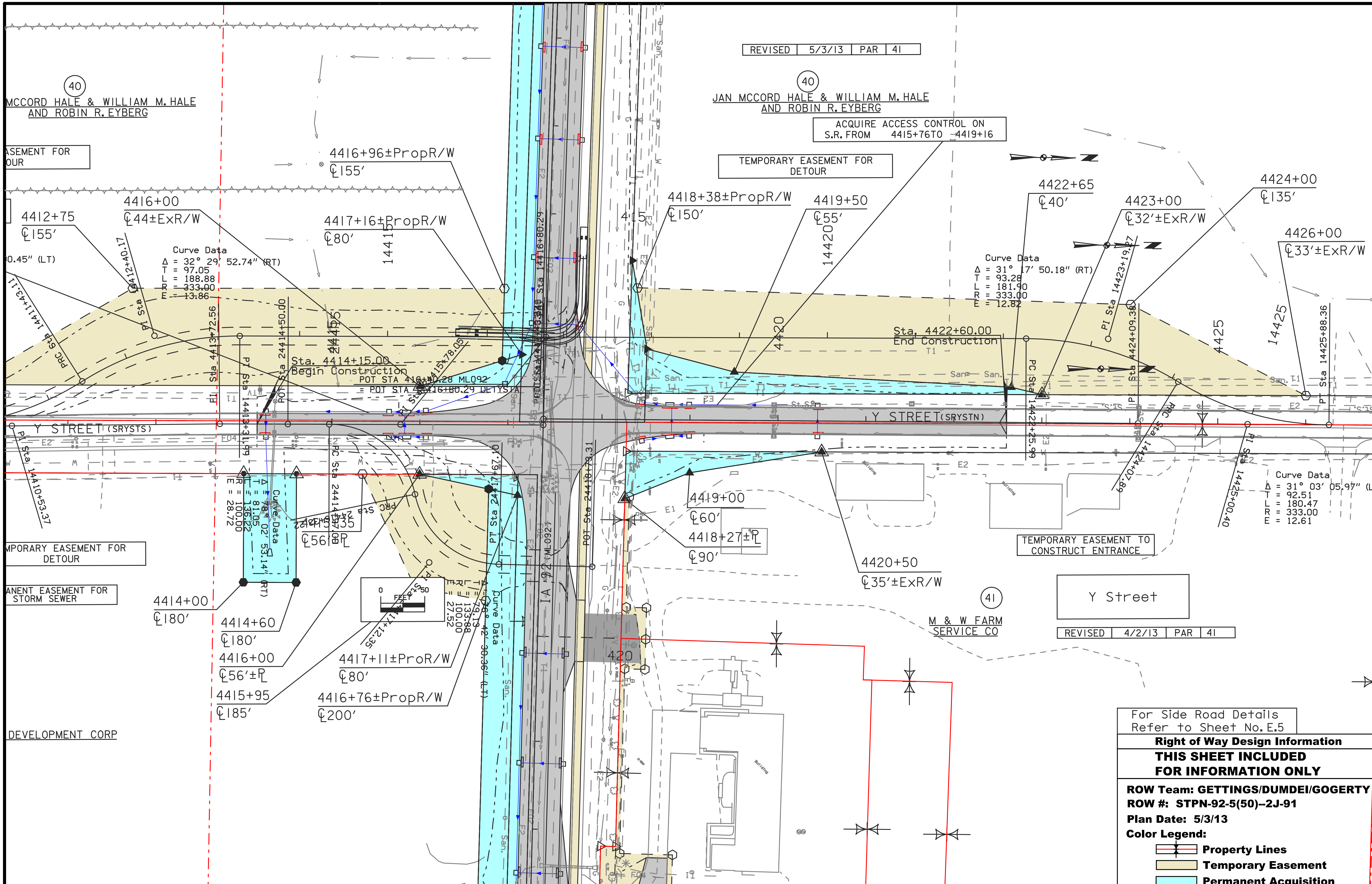

C | ENGLISH | IOWA DOT | DESIGN TEAM Schoenrock\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER HE.6

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CROSS SECTION VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

SHADING	Design Color No.	
Green, Light	(225)	Existing Pavement Shading
Gray, Light	(48)	Previously Constructed Pavement Shading
Gray, Med	(80)	Previously Constructed Granular Surface Shading
Blue, Light	(230)	Proposed Pavement Shading
Lavender	(9)	Temporary Pavement Shading
Brown, Med	(237)	Future Proposed Pavement Shading

CROSS SECTION VIEW PATTERN AND SYMBOL LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

- Pavement Removal
- Proposed Granular Subbase
- Proposed Special Backfill
- Temporary Barrier Rail
- Proposed Granular Shoulder
- Temporary Shoulder
- Existing Shoulder Strengthening
- Permanent Barrier Rail
- Channelizing Device

PLAN VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Topographic Features and Labels
Magenta	(5)	Pavement Marking Call Outs
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Yellow	(4)	Pavement Markings, Yellow
Off White	(254)	Pavement Markings, White
SHADING	**Design Color No.**	
Green, Light	(225)	Existing Pavement Shading
Gray, Light	(48)	Previously Constructed Pavement Shading
Gray, Med	(80)	Previously Constructed Granular Surface Shading
Blue, Light	(230)	Proposed Pavement Shading
Lavender	(9)	Temporary Pavement Shading
Brown, Light	(236)	Proposed Grading Limits Shading
Pink, Dark	(13)	Proposed MSE or CIP Wall Shading
Red	(3)	Proposed Bridge Shading and Sign Trusses
Black w/Gray, Light Fill	(0,48)	Previously Constructed Structure

PLAN VIEW PATTERN AND SYMBOL LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

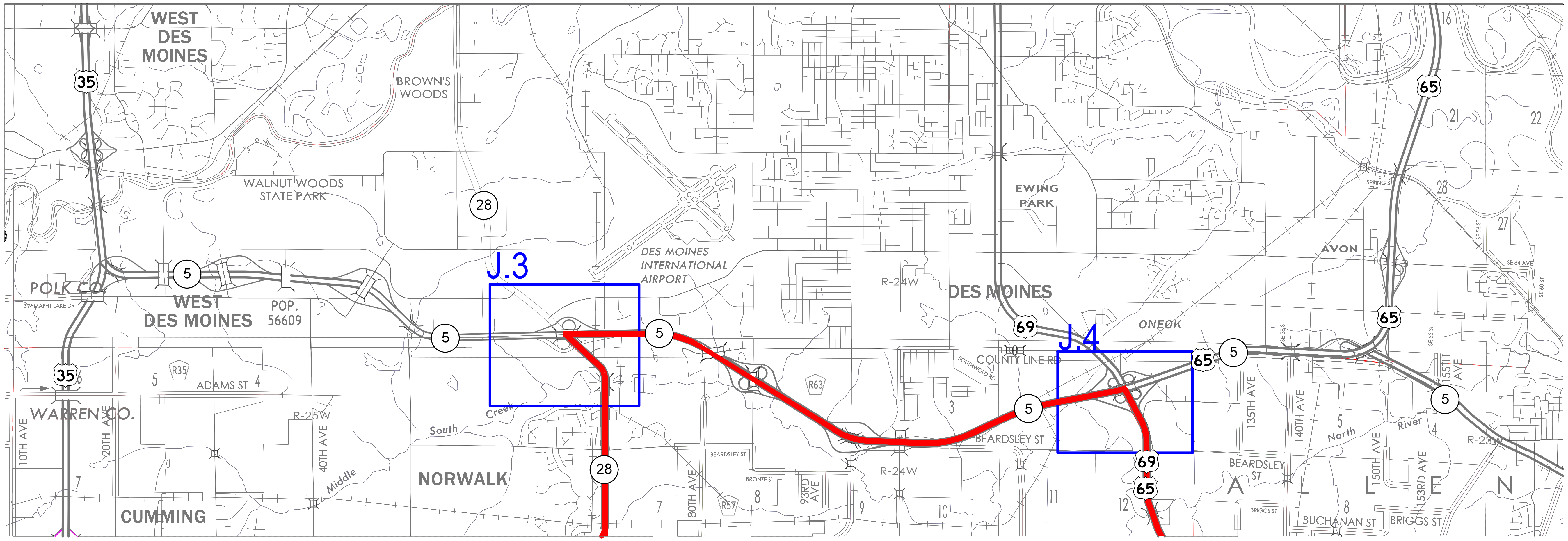
Channelizing Device	Crash Cushion
Drum	Traffic Signal
Temporary Lane Separator	Flagger
Tubular Marker	Temporary Floodlighting
Channelizer Marker	Traffic Sign
Concrete Barrier Marker	Type III Barricade
Delineator	Type A Warning Light
Temporary Barrier Rail	Direction of Traffic
Pavement Removal	Safety Closure

NOTE: Device spacing according to Standard Road Plans unless specifically dimensioned.

TRAFFIC CONTROL AND STAGING LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES J)

POLK COUNTY



WARREN COUNTY

SIGN/DEVICE	SIGN NO.	COLOR	SIZE InchxInch
92	M1-4	BLACK ON WHITE	24X24
EAST	M3-2	BLACK ON WHITE	24X12
WEST	M3-4	BLACK ON WHITE	24X12
DETOUR	M4-8	BLACK ON ORANGE	24X12
END DETOUR	M4-8a	BLACK ON ORANGE	24X18
↑	M6-3	BLACK ON WHITE	21X15
↱	M5-1R	BLACK ON WHITE	21X15

SIGN/DEVICE	SIGN NO.	COLOR	SIZE InchxInch
↰	M5-1L	BLACK ON WHITE	21X15
↗	M5-2	BLACK ON WHITE	21X15
→	M6-1R	BLACK ON WHITE	21X15
←	M6-1L	BLACK ON WHITE	21X15
ROAD CLOSED 2 MILES AHEAD LOCAL TRAFFIC ONLY	R11-3a	BLACK ON WHITE	60X30
ROAD CLOSED	R11-2	BLACK ON WHITE	48X30
ROAD CLOSED TO THRU TRAFFIC	R11-4	BLACK ON WHITE	60X30

N

Project

Proposed Detour

LOCATION MAP SCALE

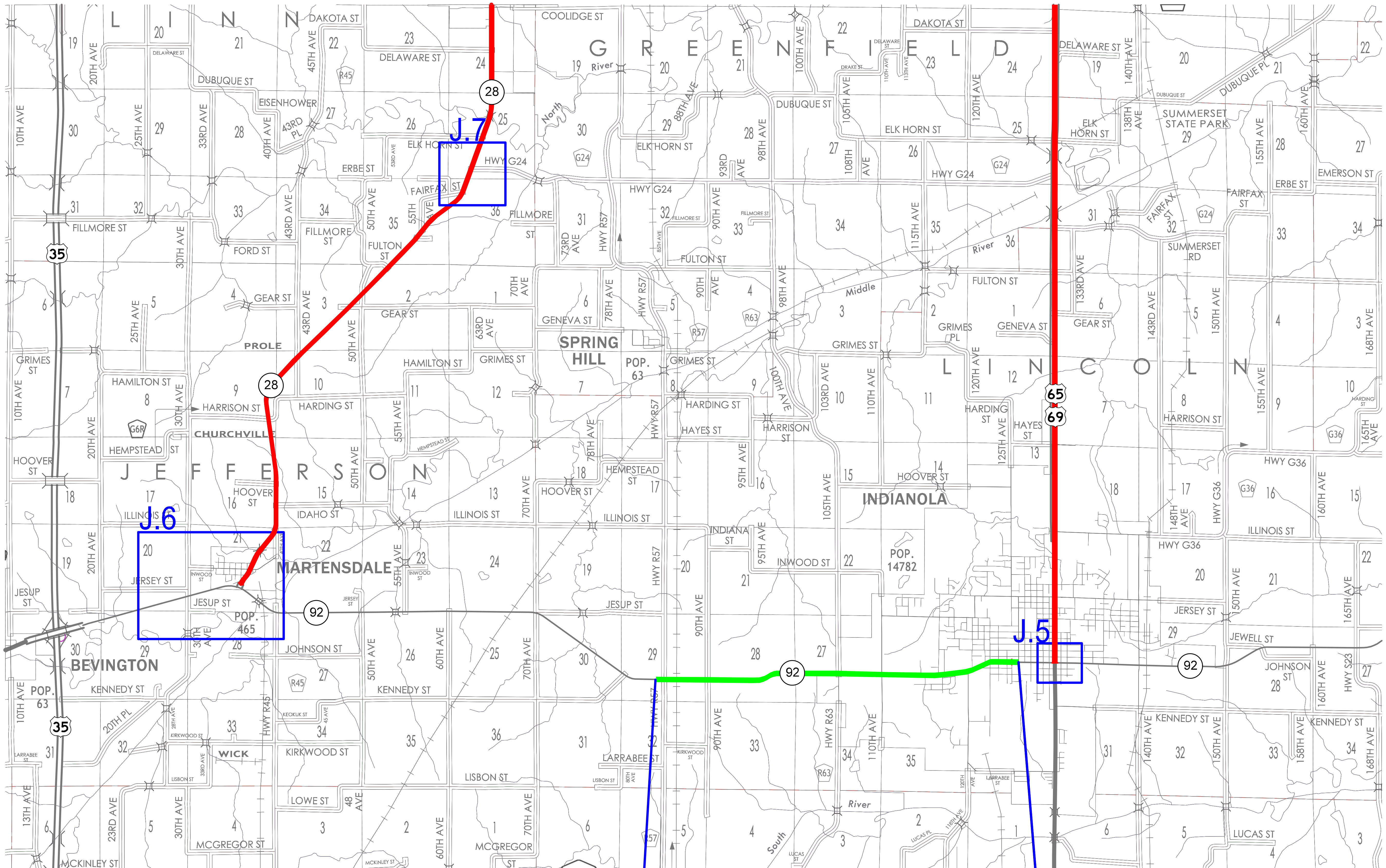
0 1 2 3

Miles

SIGN/DEVICE	SIGN NO.	COLOR	SIZE InchxInch
ROAD CLOSED AHEAD	W20-3	BLACK ON ORANGE	48X48
ROAD CLOSED 500 FT	W20-3	BLACK ON ORANGE	48X48
(barricade)	TYPE III		

DETOUR LAYOUT DETAILS
(Sheet 1 of 8)

WARREN COUNTY



DETOUR LAYOUT DETAILS
(Sheet 2 of 8)

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER J.5

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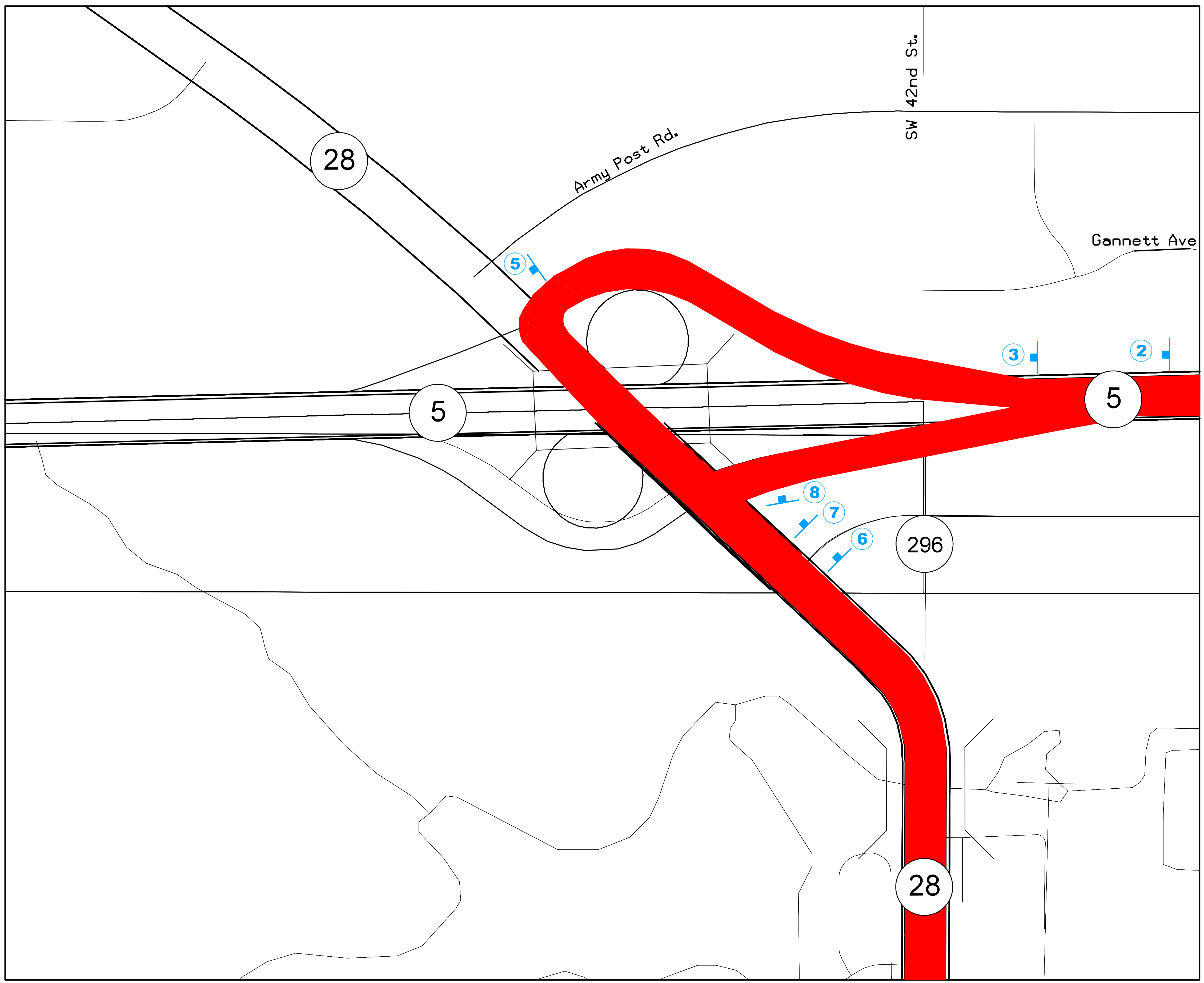

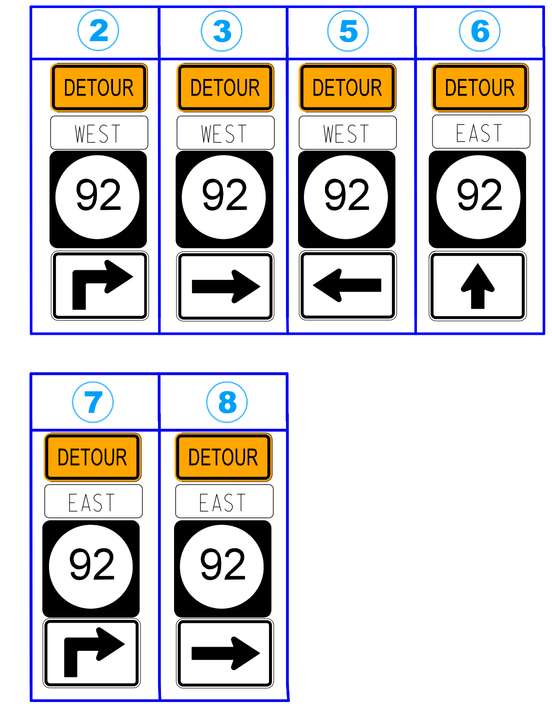

NOT TO SCALE

LEGEND	
Sign	
Detour Route	

N

DETOUR LAYOUT DETAILS
(Sheet 3 of 8)

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER J.6

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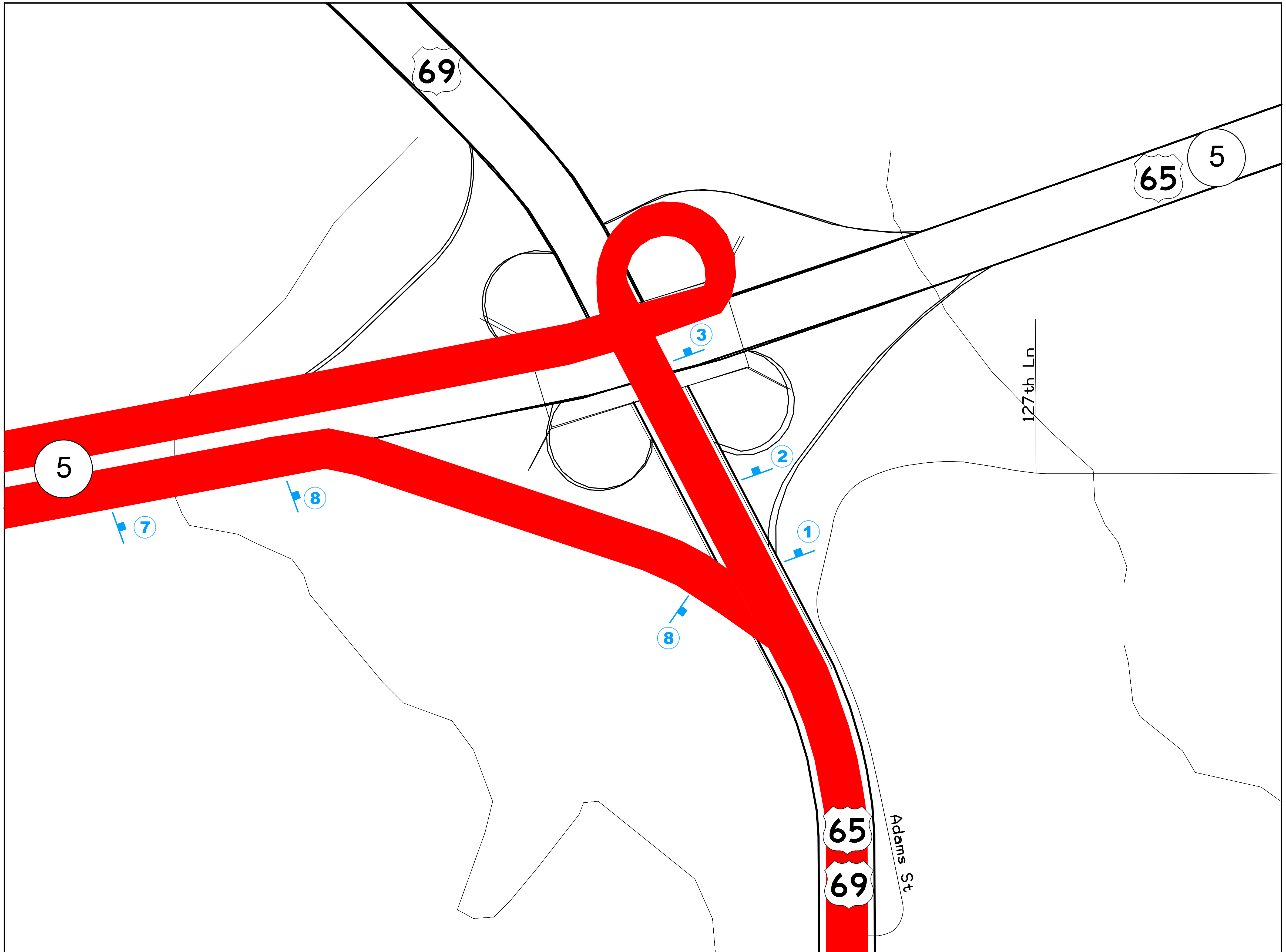


1	2	3
DETOUR WEST 92 ↑	DETOUR WEST 92 ↱	DETOUR WEST 92 →

7	8
DETOUR EAST 92 ↱	DETOUR EAST 92 →

NOT TO SCALE

LEGEND

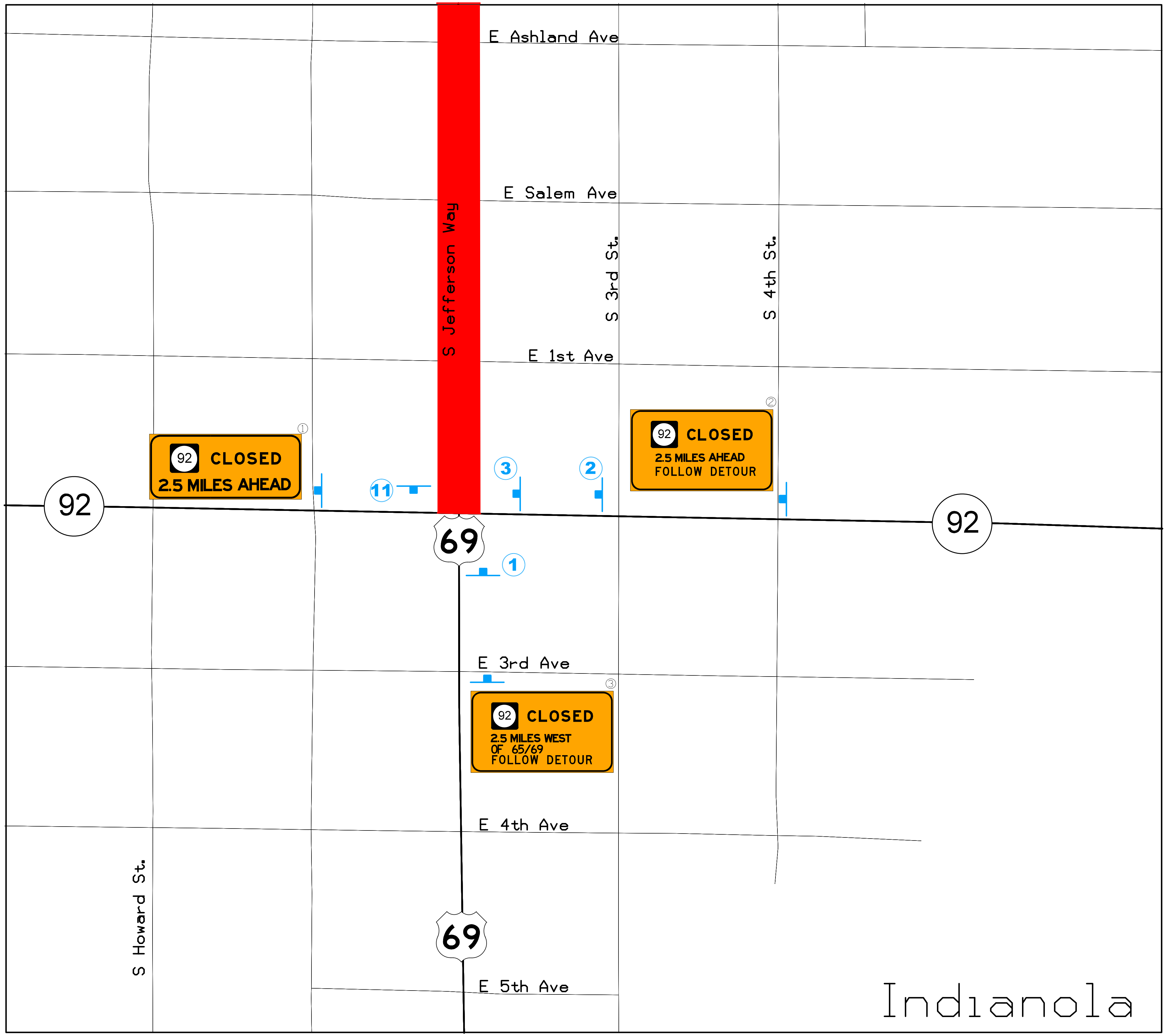
Sign

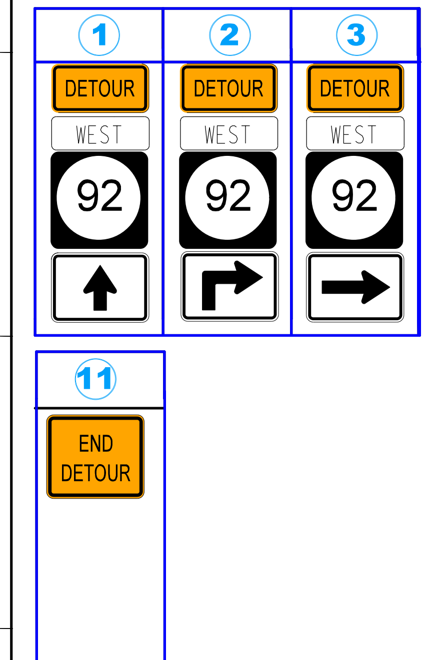
Detour Route

N

DETOUR LAYOUT DETAILS
(Sheet 4 of 8)

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER J.7



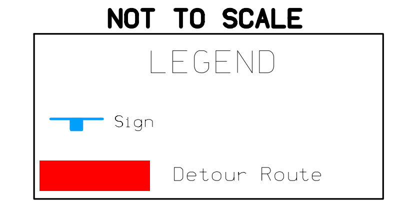


① See Detour Guide Sign #1 on Sheet J.8 for signing details.

② See Detour Guide Sign #2 on Sheet J.8 for signing details.

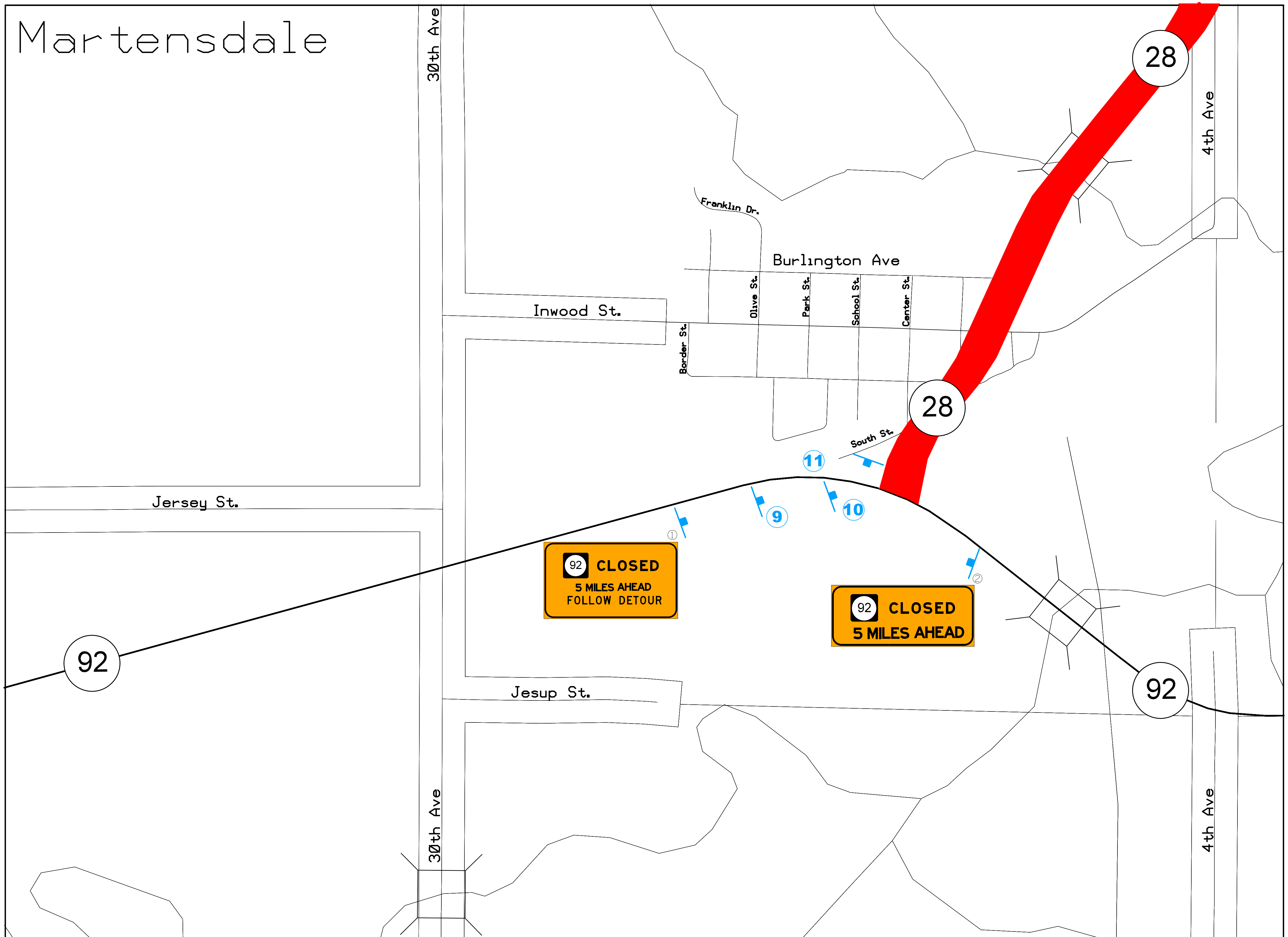
③ See Detour Guide Sign #3 on Sheet J.8 for signing details.

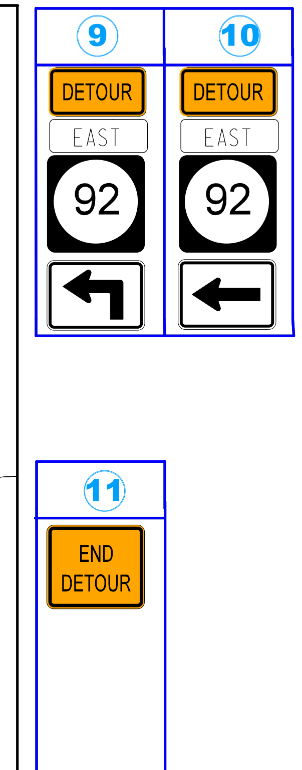
NOT TO SCALE



DETOUR LAYOUT DETAILS
(Sheet 5 of 8)

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER J.8

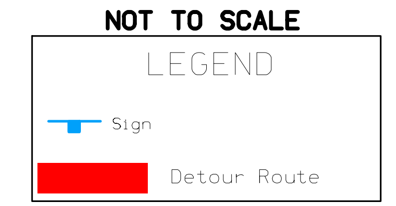




① See Detour Guide Sign #4 on Sheet J.8 for signing details.

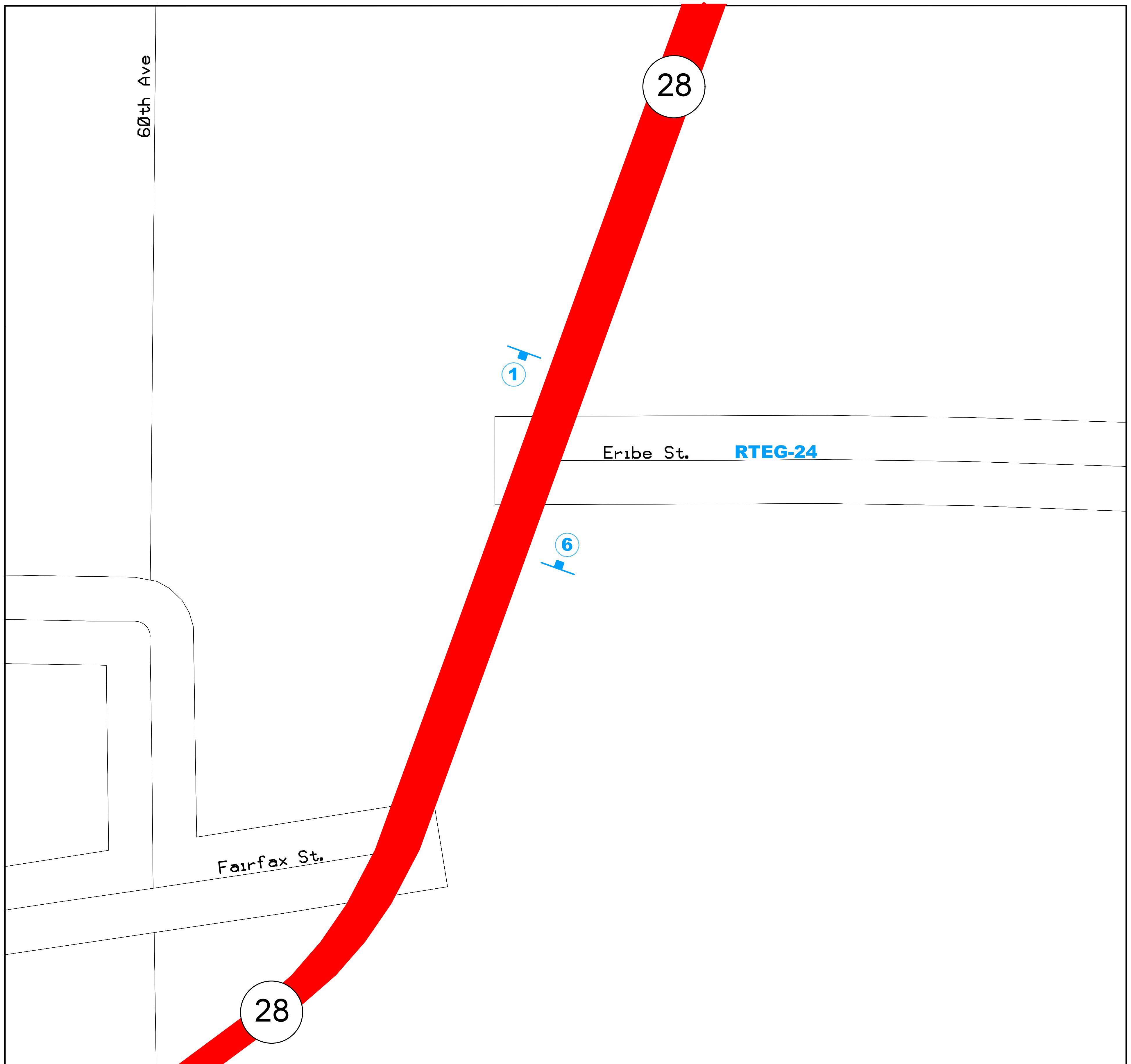
② See Detour Guide Sign #5 on Sheet J.8 for signing details.

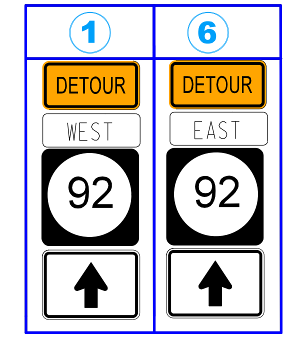
NOT TO SCALE



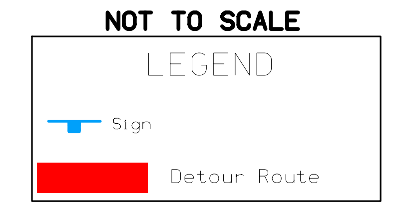
DETOUR LAYOUT DETAILS
(Sheet 6 of 8)

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER J.9





NOT TO SCALE

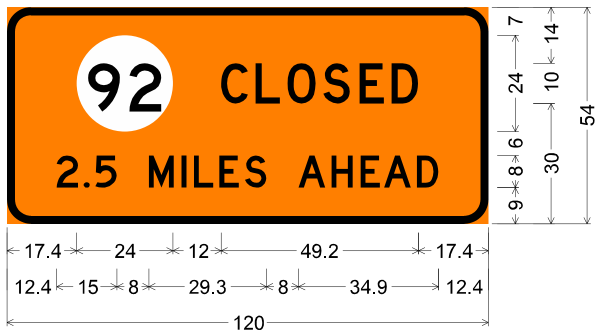


DETOUR LAYOUT DETAILS
(Sheet 7 of 8)

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER J.10

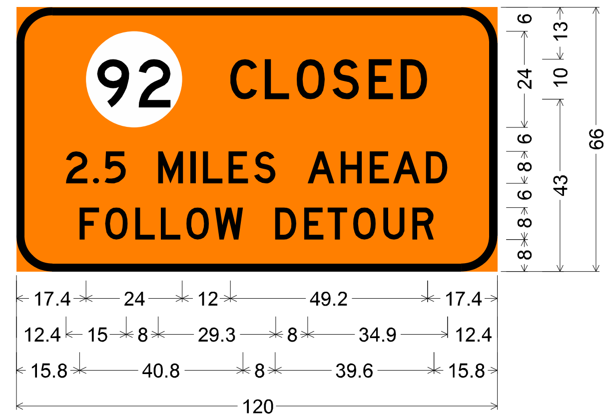
9:01:38 AM 11/5/2013 dmaach pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9109201004\Design\91092051J02.sht

GUIDE SIGN 1



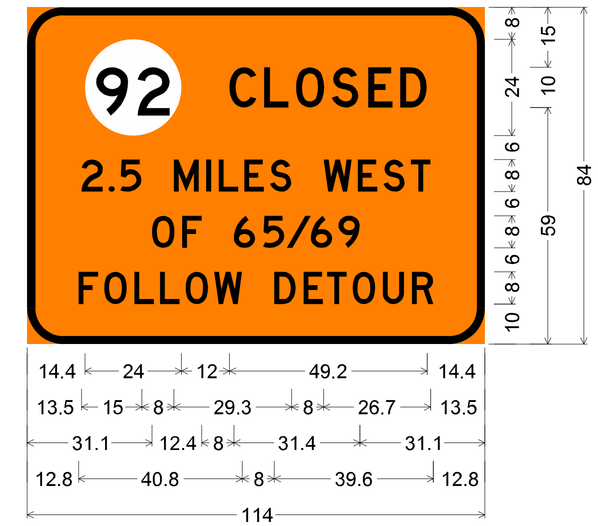
6.0" Radius, 2.0" Border, Black on Orange;
[CLOSED] D; [2.5 MILES AHEAD] D;

GUIDE SIGN 2



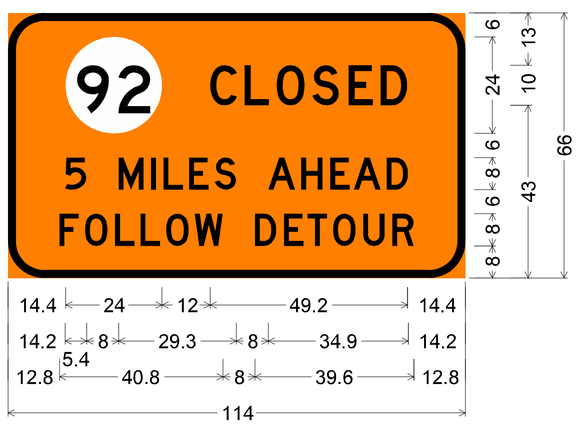
9.0" Radius, 2.0" Border, Black on Orange;
[CLOSED] D; [2.5 MILES AHEAD] D;
[FOLLOW DETOUR] D;

GUIDE SIGN 3



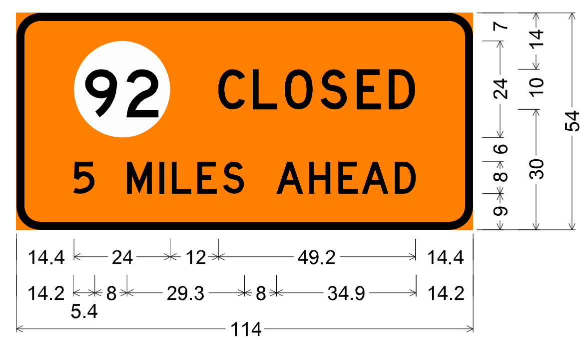
9.0" Radius, 2.0" Border, Black on Orange;
[CLOSED] D; [2.5 MILES WEST] D;
[OF 65/69] D; [FOLLOW DETOUR] D;

GUIDE SIGN 4



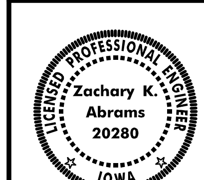
9.0" Radius, 2.0" Border, Black on Orange;
[CLOSED] D; [5 MILES AHEAD] D;
[FOLLOW DETOUR] D;

GUIDE SIGN 5



6.0" Radius, 2.0" Border, Black on Orange;
[CLOSED] D; [5 MILES AHEAD] D;

SIGNING DESIGN



I hereby certify that this plan was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

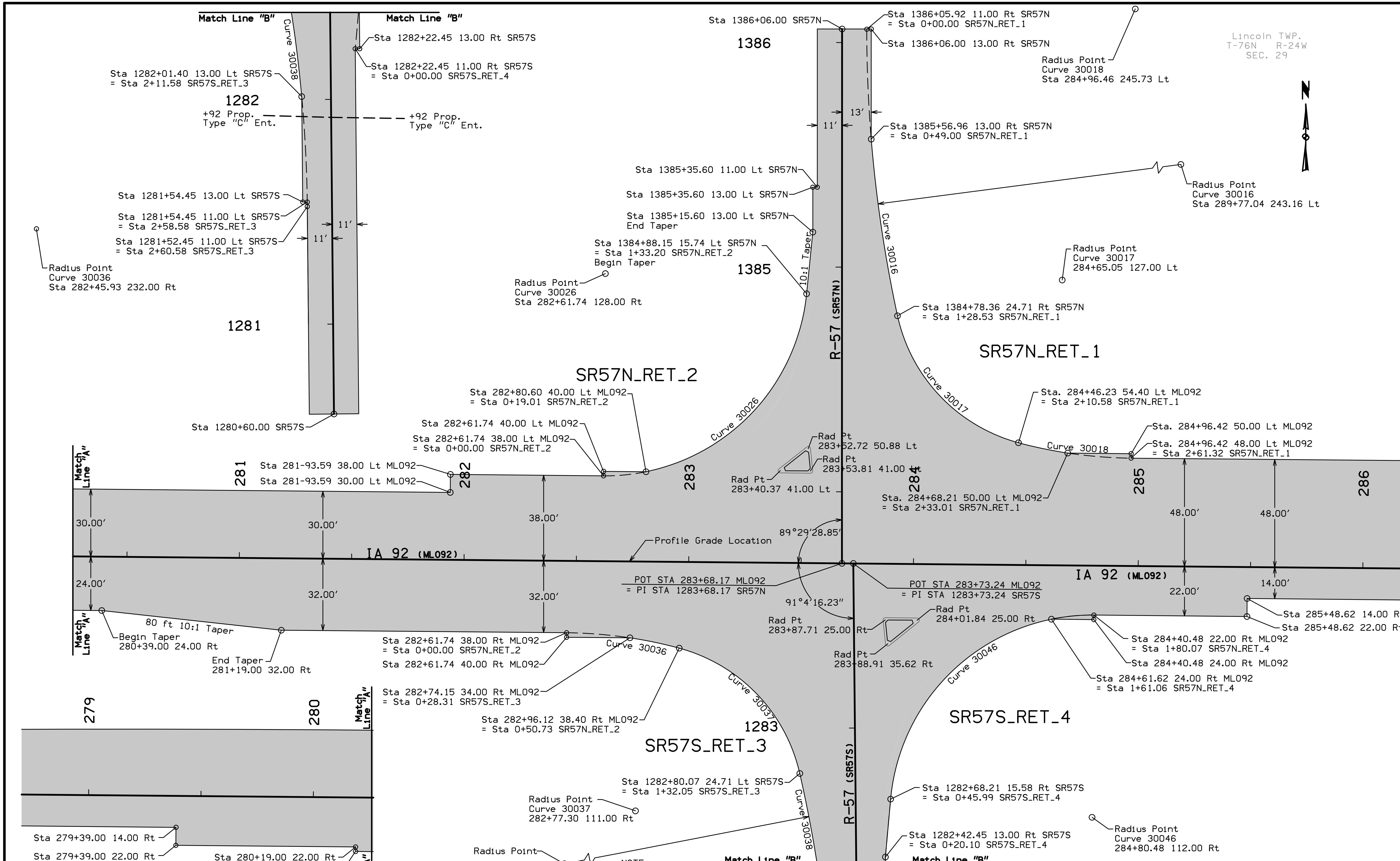
Signature: 9/17/2013 Date

Zachary Abrams
Printed or Typed Name

My license renewal date is December 31, 20 14

Pages or sheets covered by this seal: J.8

ENGLISH	IOWA DOT	DESIGN TEAM Abrams	Warren COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER J.8



NOTE:
Dimensions shown are to the back of curb.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plans for additional information.

Geometric Details Intersection of Ia. 92 and Co. Rd. R-57

C	ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER L.1

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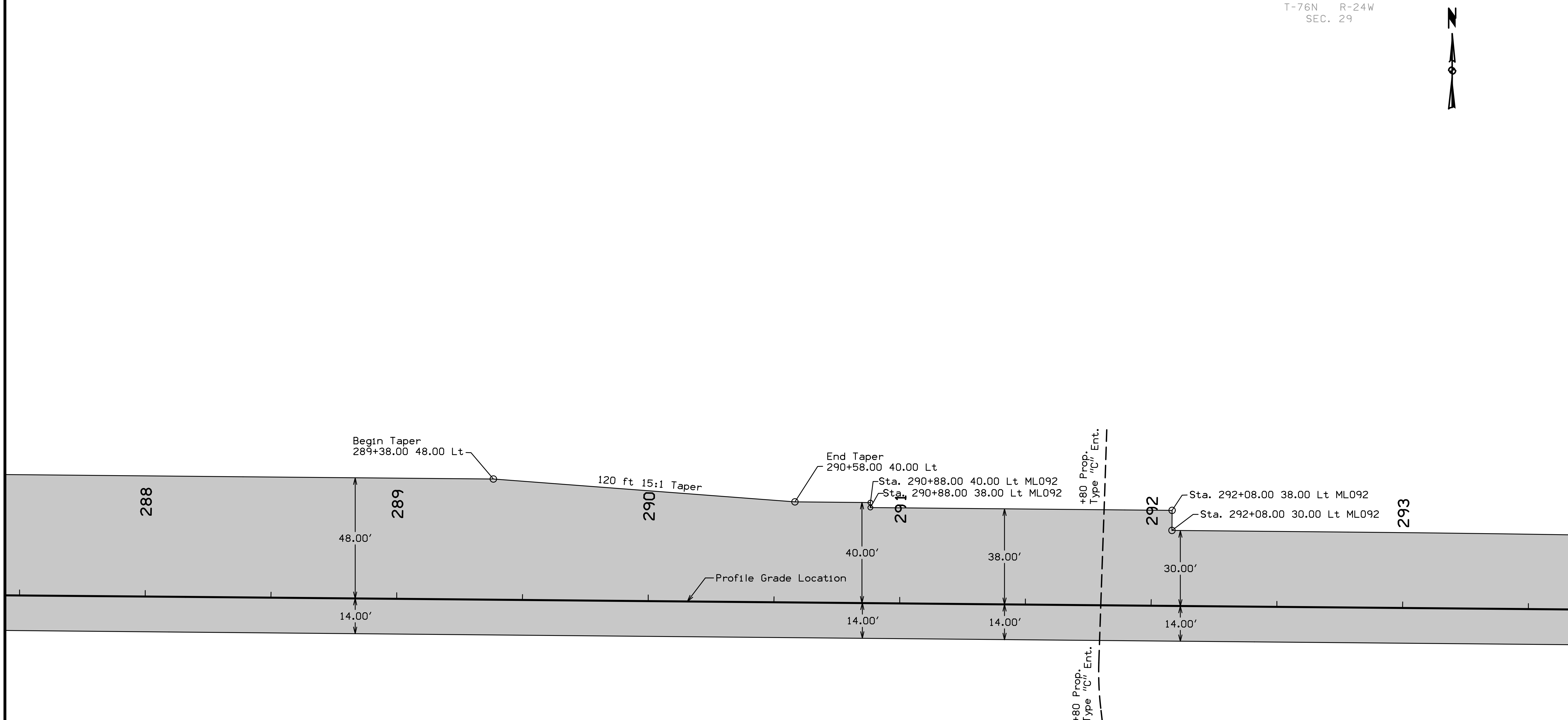
Lincoln TWP.
T-76N R-24W
SEC. 29

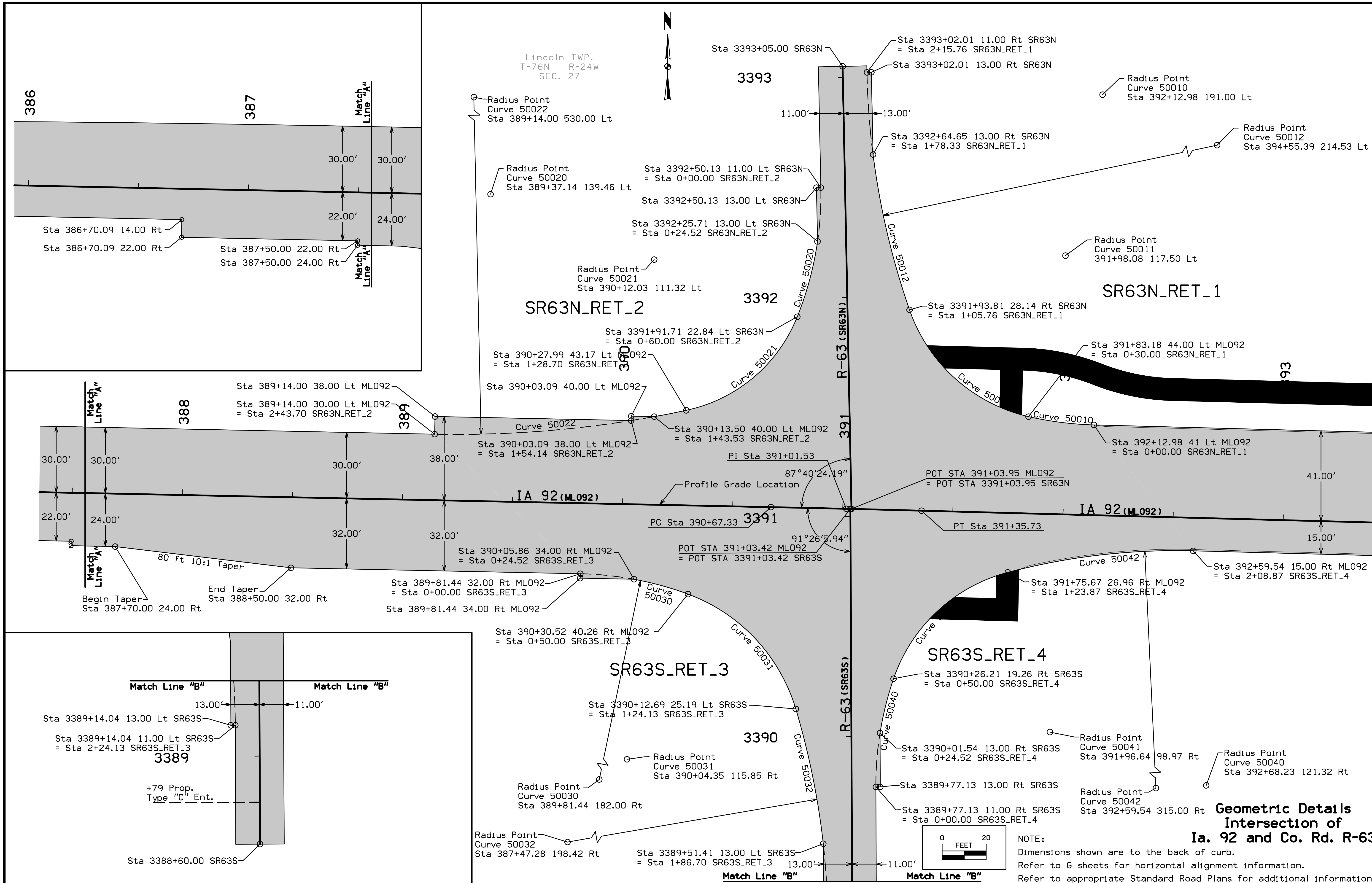


NOTE:
Dimensions shown are to the back of curb.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plans for additional information,

0 FEET 20

Geometric Details
Ia. 92

C ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER L.2



Geometric Details Intersection of Ia. 92 and Co. Rd. R-63

NOTE:
Dimensions shown are to the back of curb.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plans for additional information.

C ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER L.3

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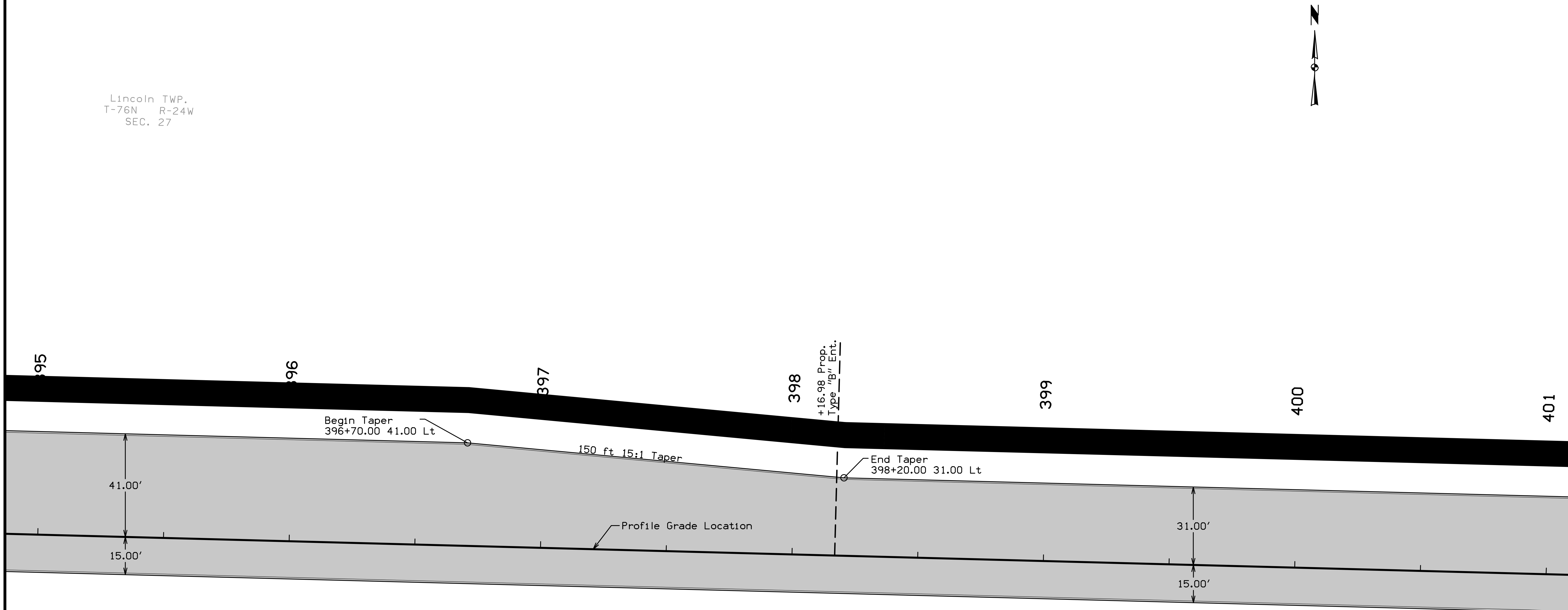
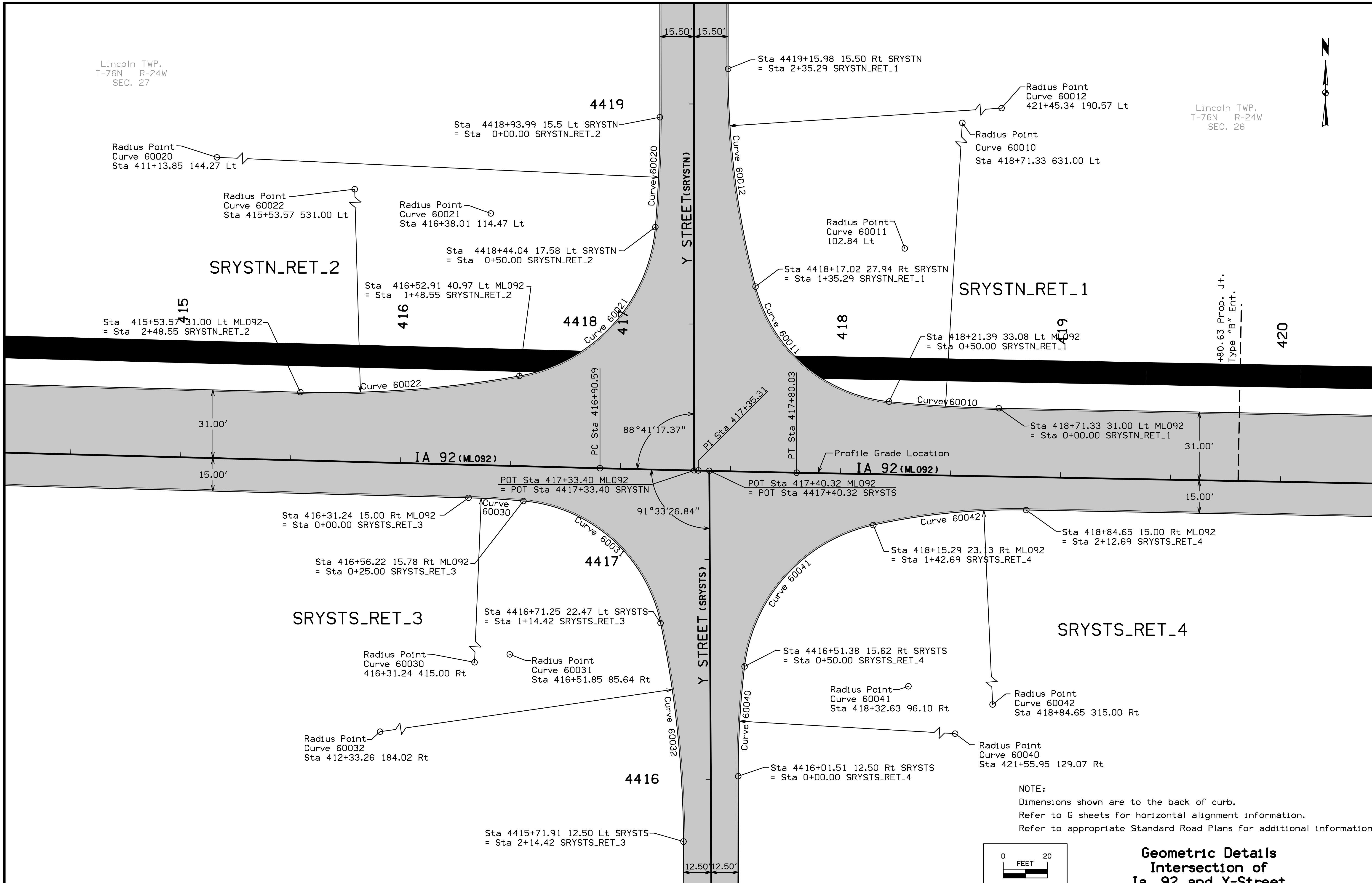


NOTE:
Dimensions shown are to the back of curb.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plans for additional information.

0 FEET 20

Geometric Details
Ia. 92



NOTE:
Dimensions shown are to the back of curb.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plans for additional information,

Geometric Details
Intersection of
Ia. 92 and Y-Street

C	ENGLISH	IOWA DOT	DESIGN TEAM **Jia\Holst\Bennett**	**WARREN** COUNTY	PROJECT NUMBER	**NHSX-092-5(51)--3H-91**	SHEET NUMBER	**L.5**

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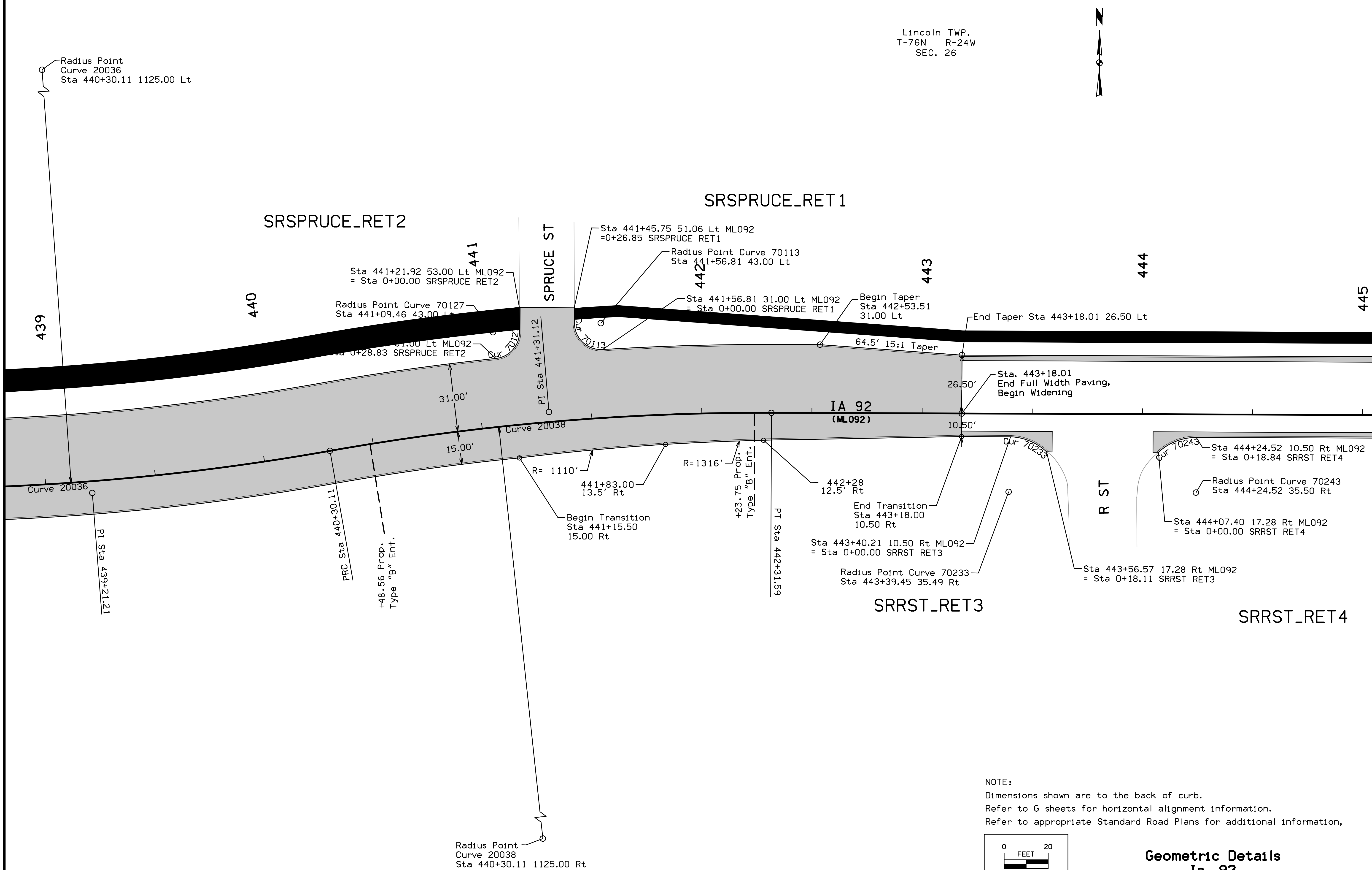
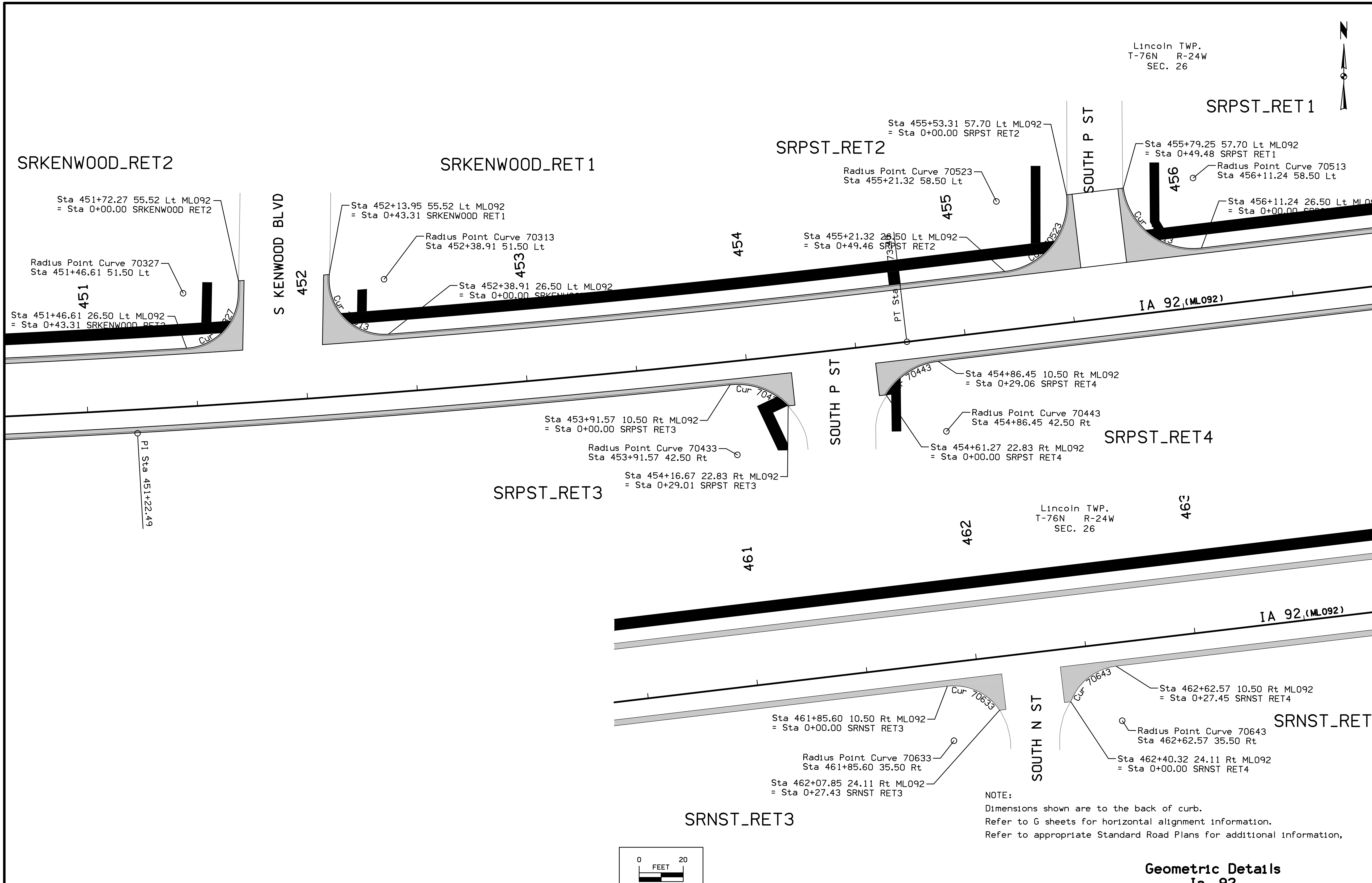


NOTE:
Dimensions shown are to the back of curb.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plans for additional information,

Geometric Details
Ia. 92

C	ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER L.6



NOTE:

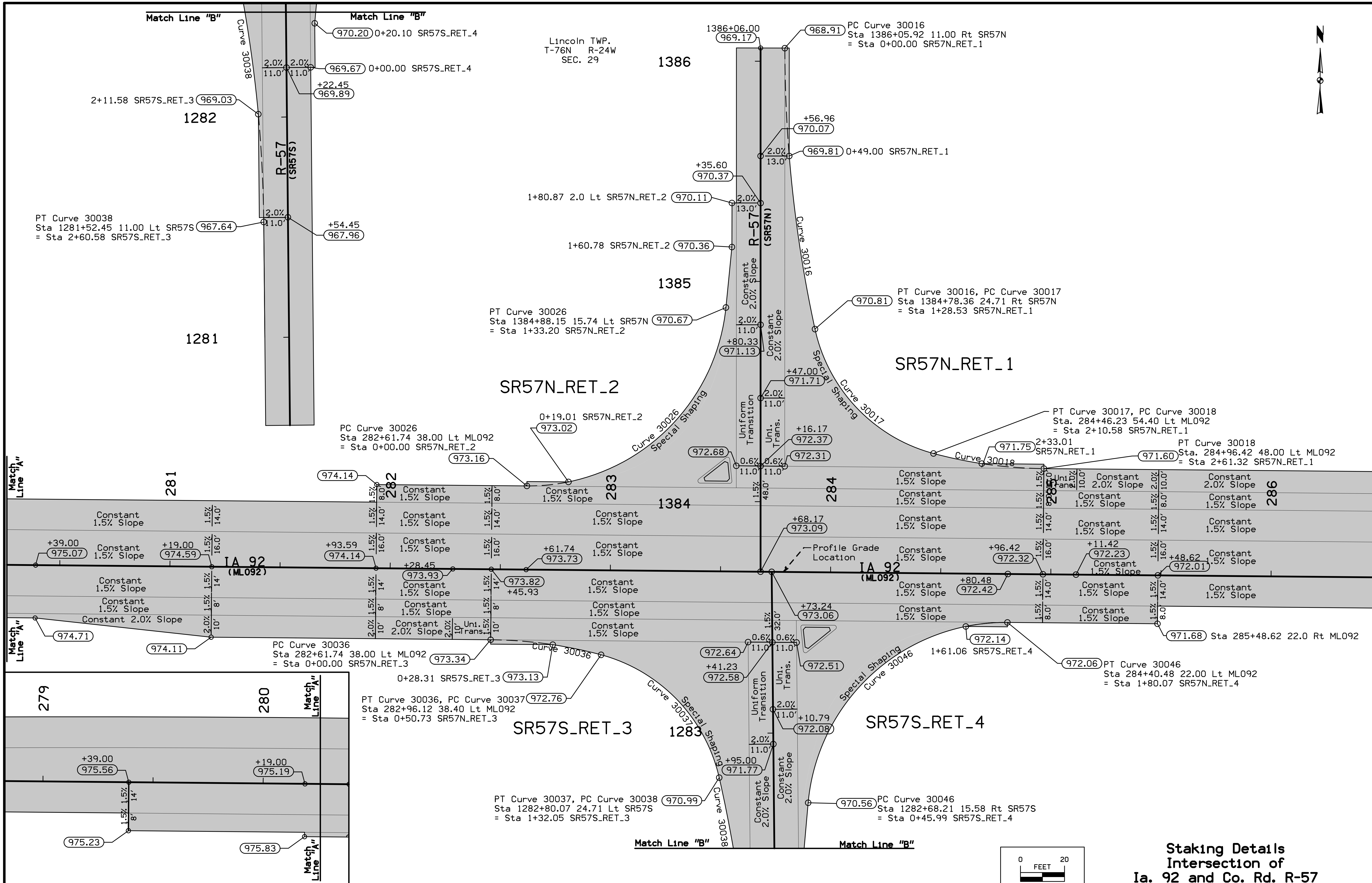
Dimensions shown are to the back of curb.

Refer to G sheets for horizontal alignment information.

Refer to appropriate Standard Road Plans for additional information,

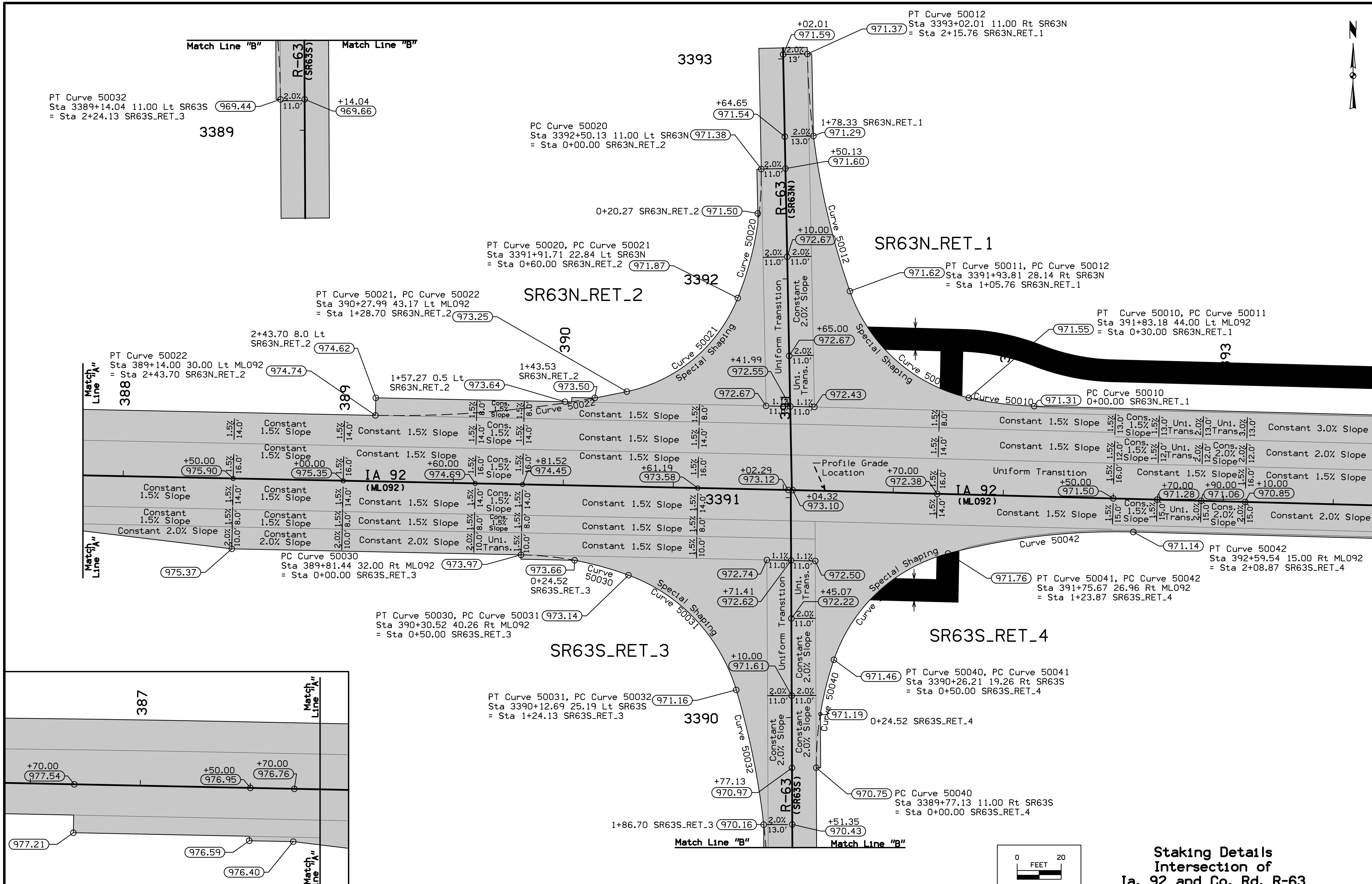
Geometric Details
Ia. 92

C	ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER L.6a



Staking Details
Intersection of
Ia. 92 and Co. Rd. R-57

C	ENGLISH	IOWA DOT	DESIGN TEAM J1a\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER	L.7



Staking Details
Intersection of
Ia. 92 and Co. Rd. R-63

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER L.8

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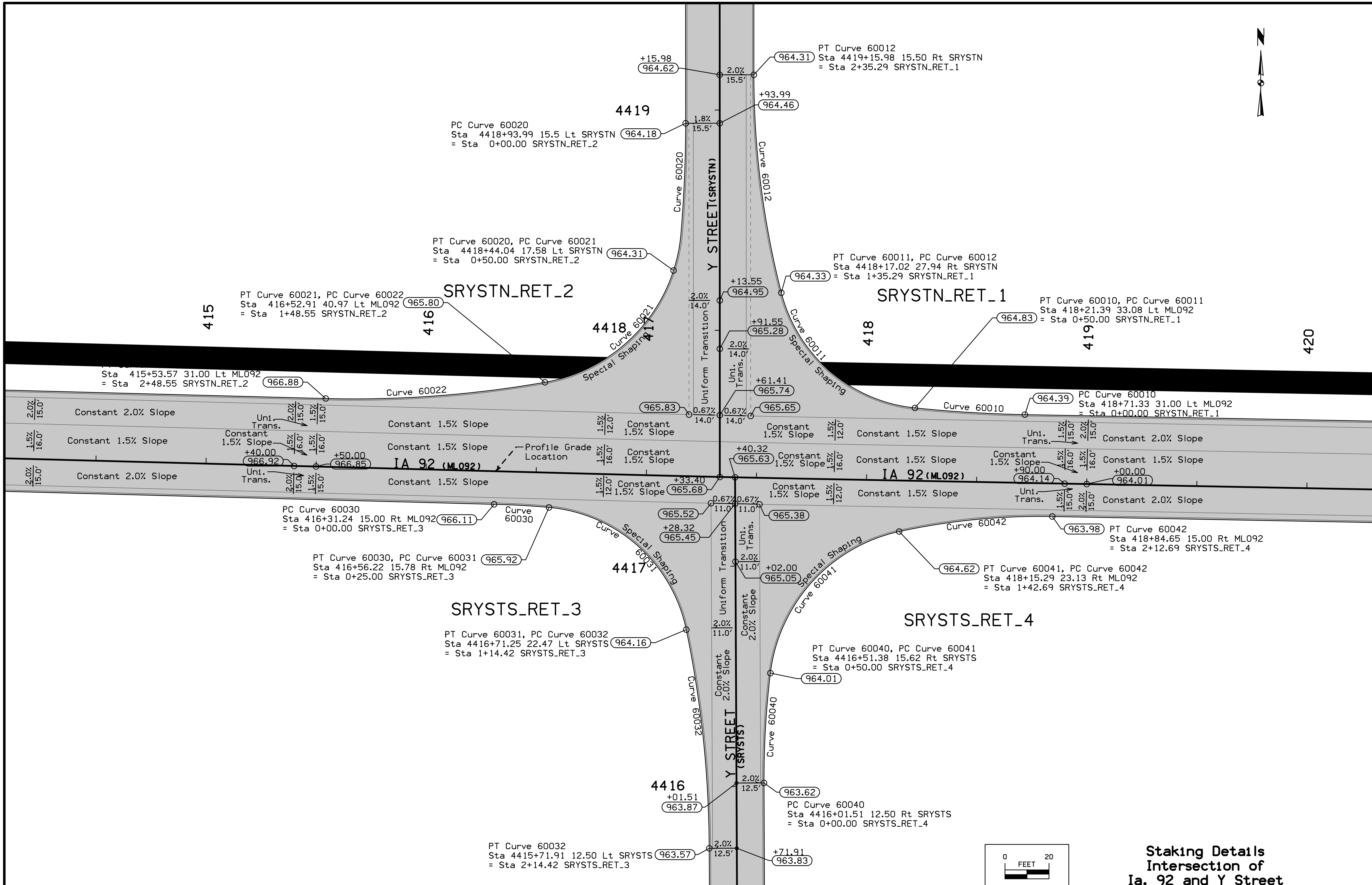

**Staking Details
Intersection of
Ia. 92 and Y Street**

ENGLISH	IOWA DOT	DESIGN TEAM J1a\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER L.9

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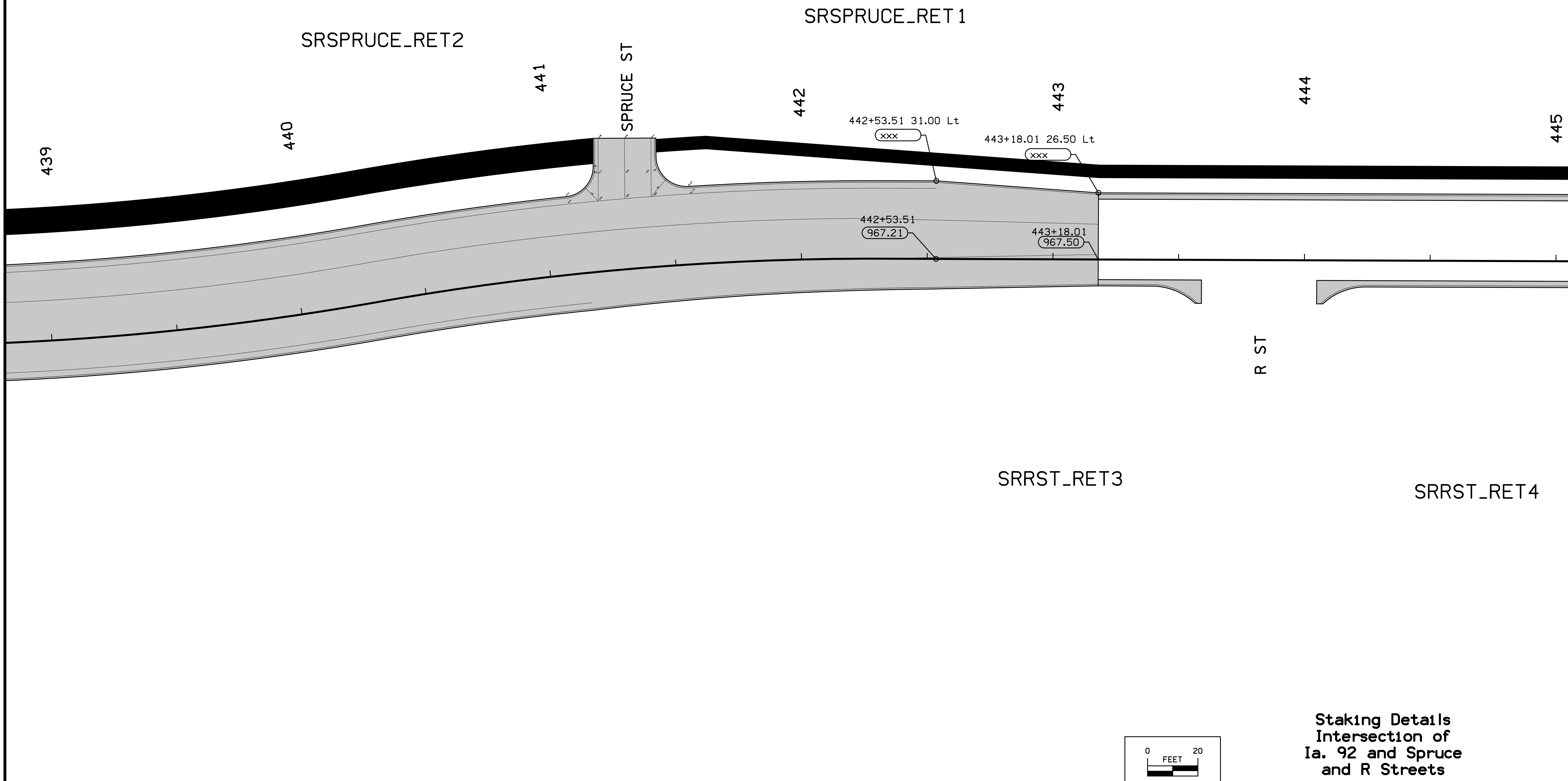
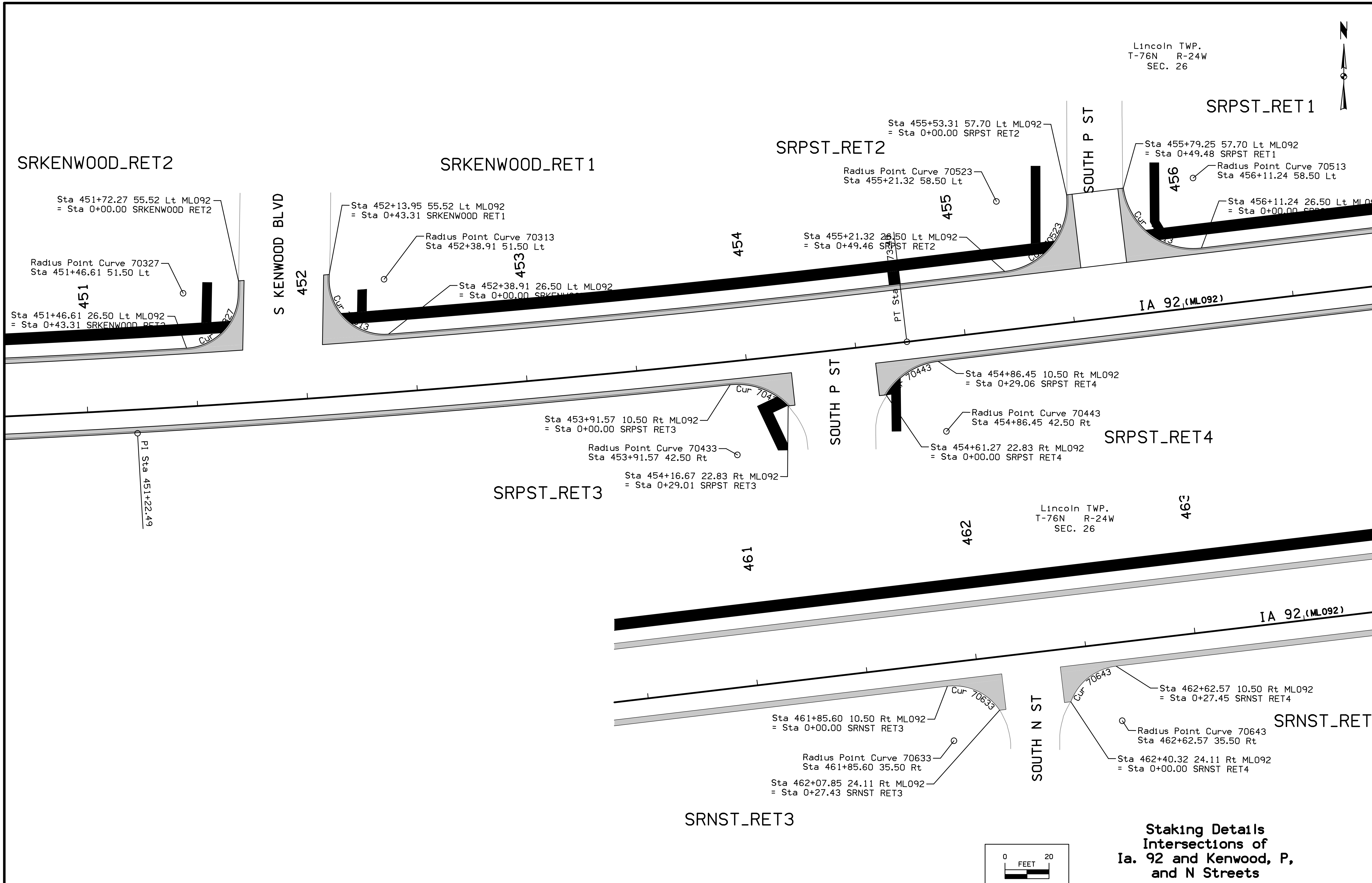


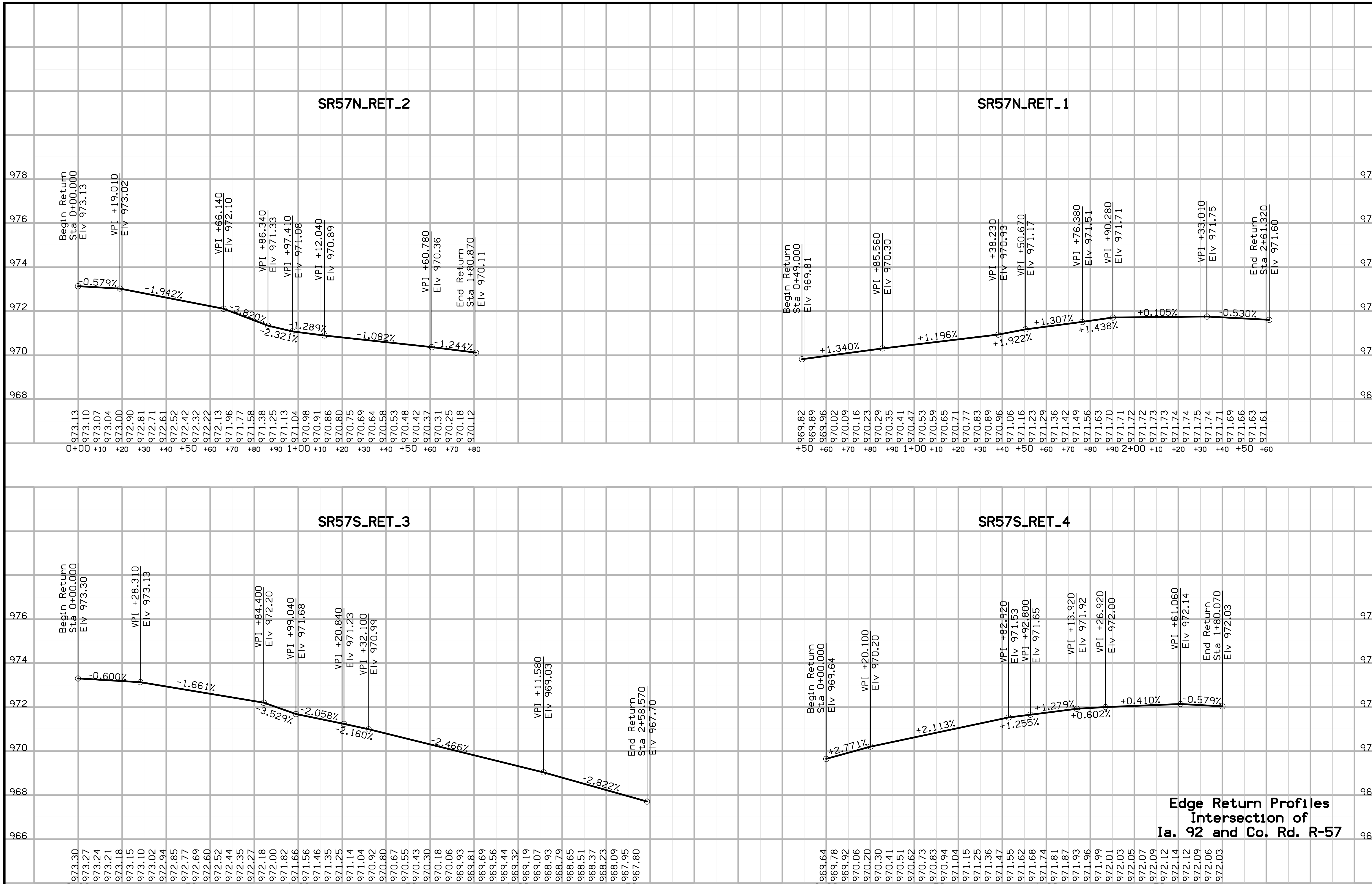
**Staking Details
Intersection of
Ia. 92 and Spruce
and R Streets**

C	ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER L.9a



Staking Details
Intersections of
Ia. 92 and Kenwood, P,
and N Streets

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER L.9b



C	ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER L.10

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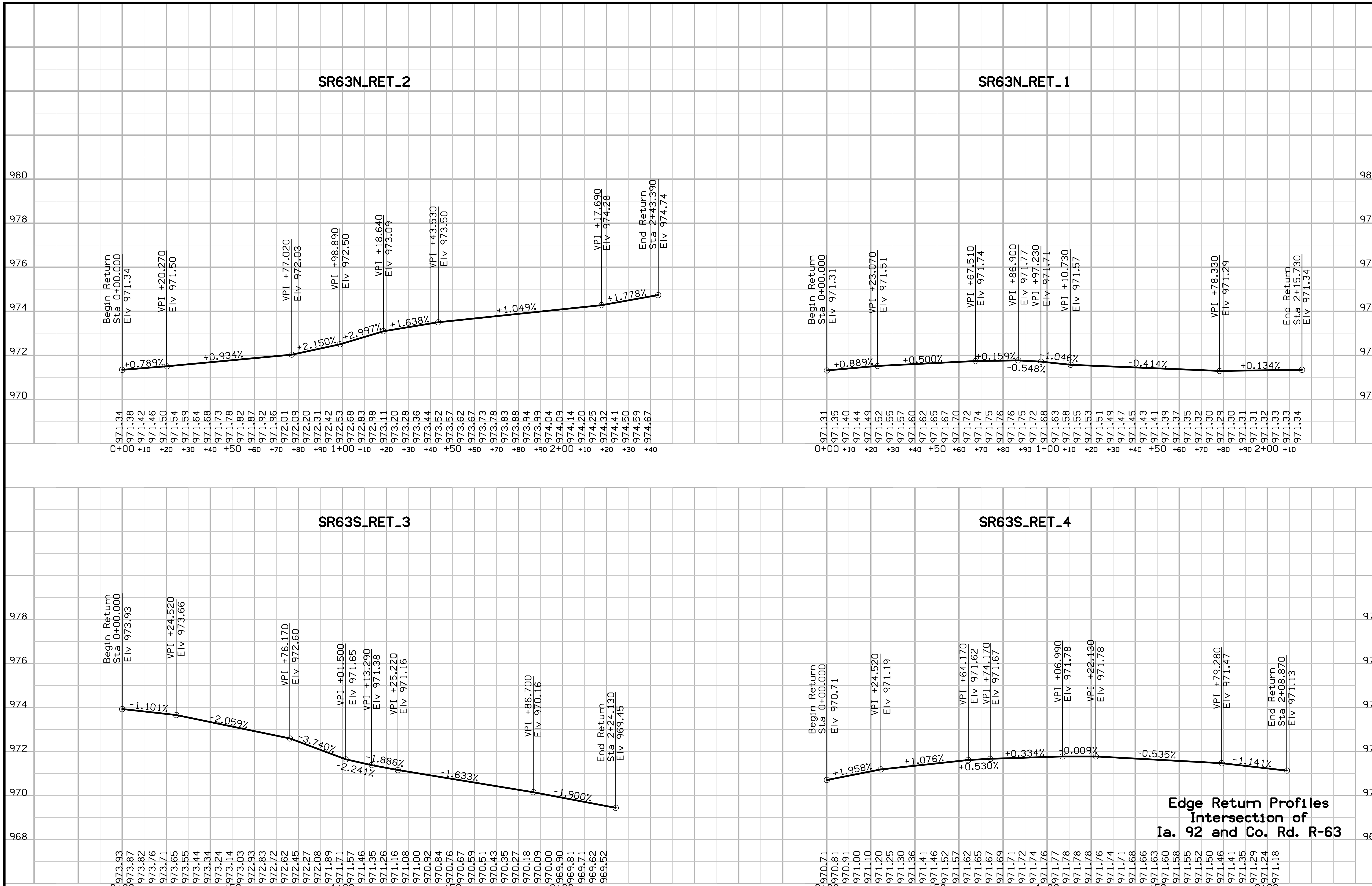
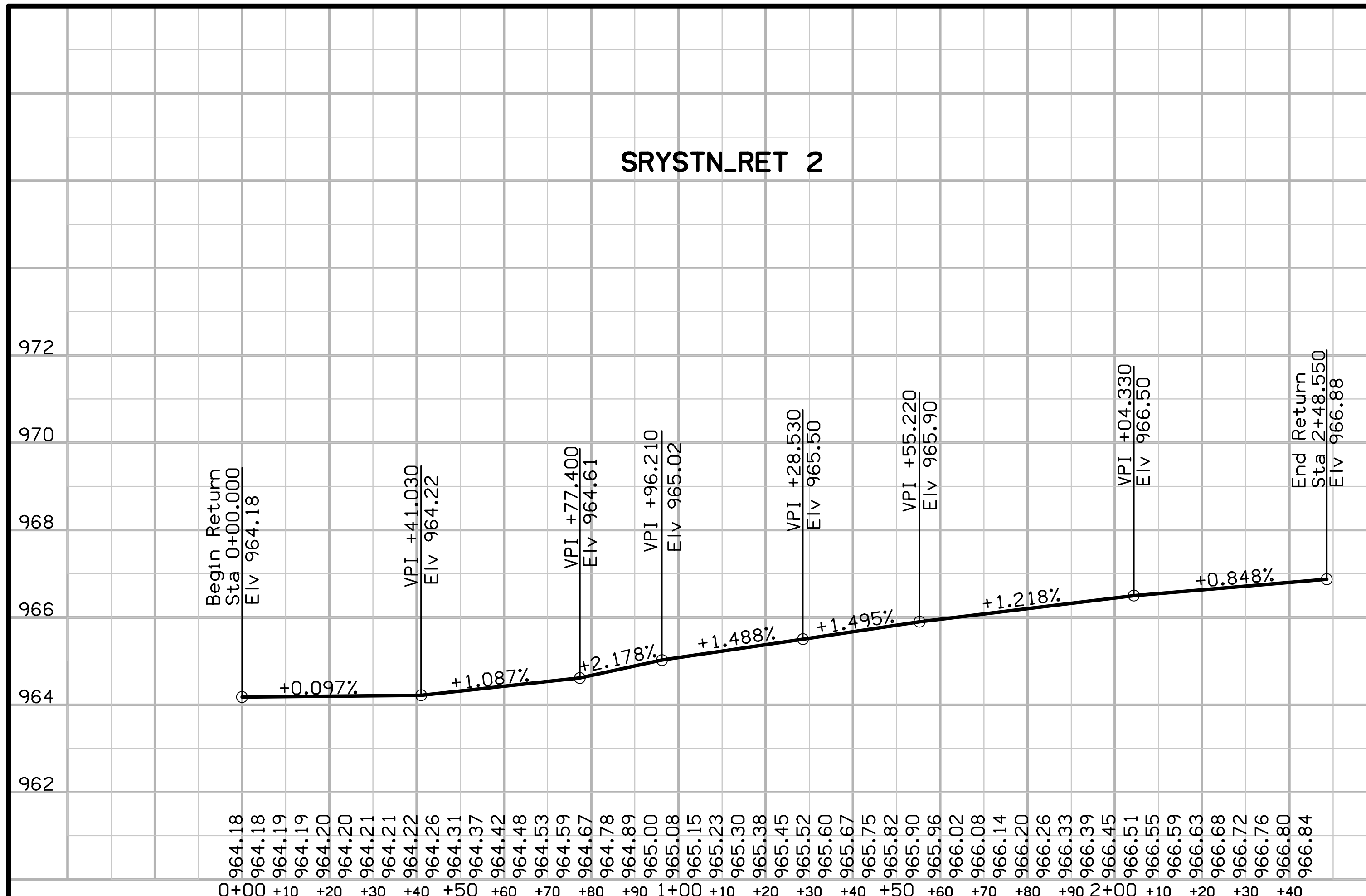
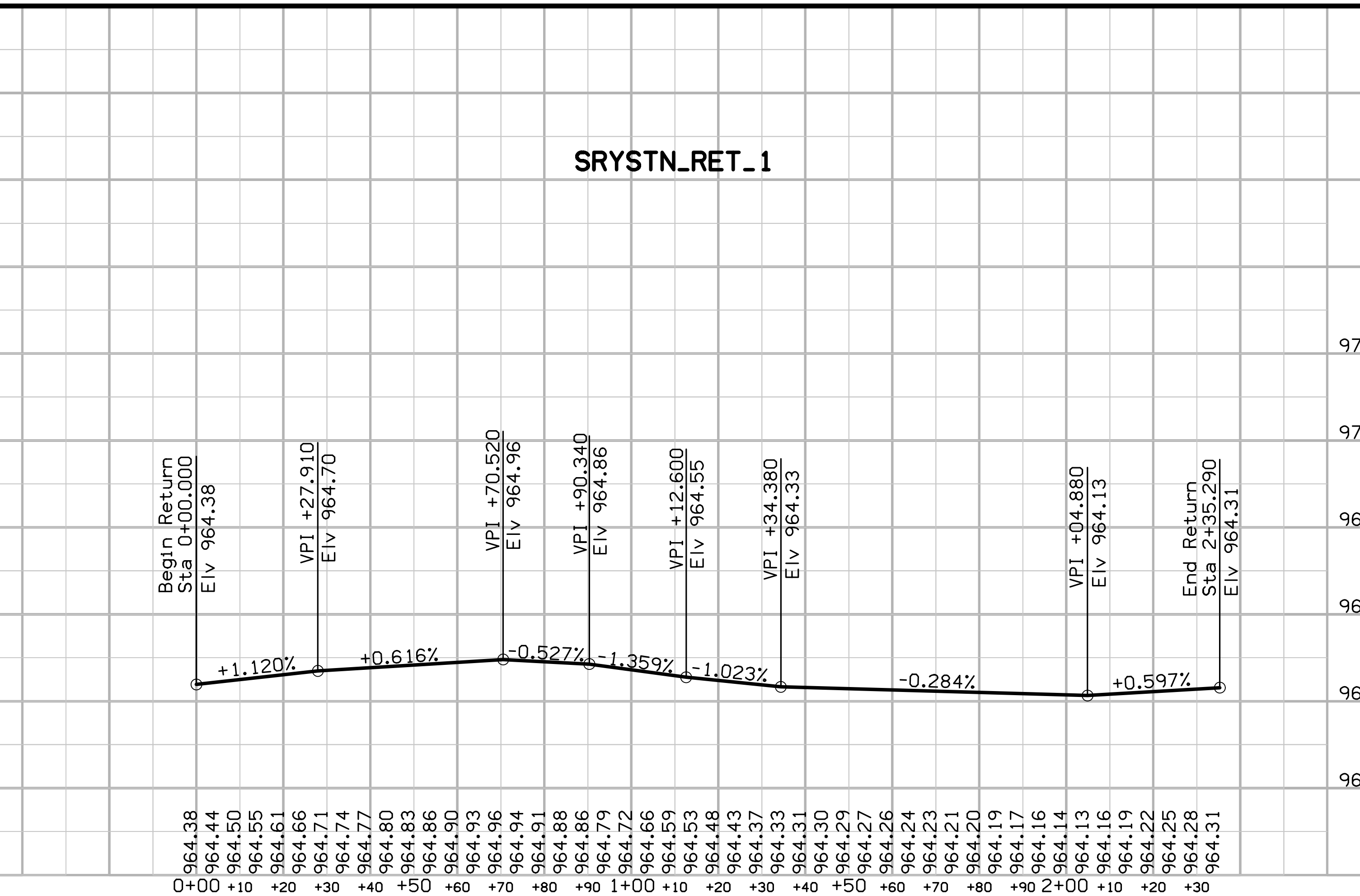
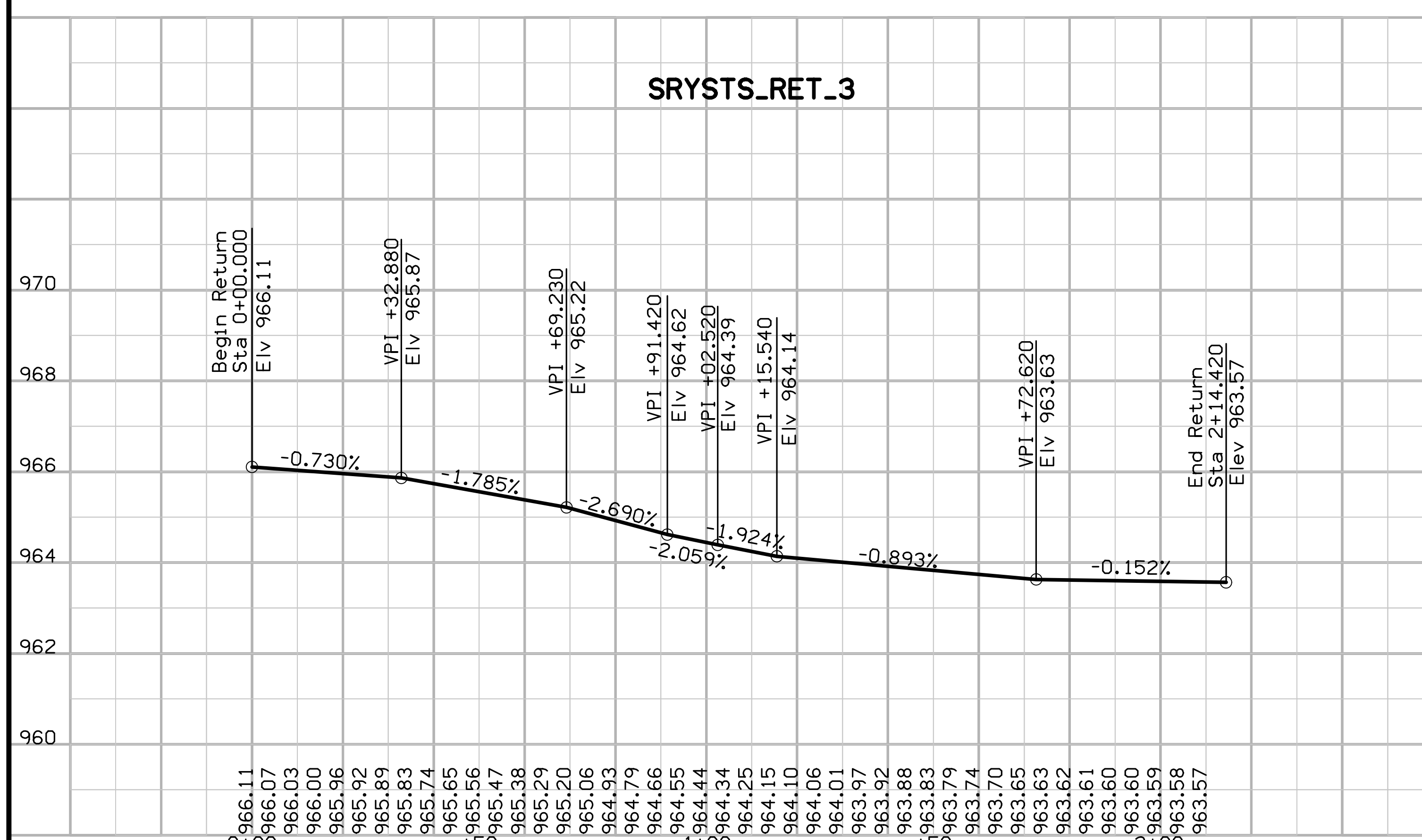


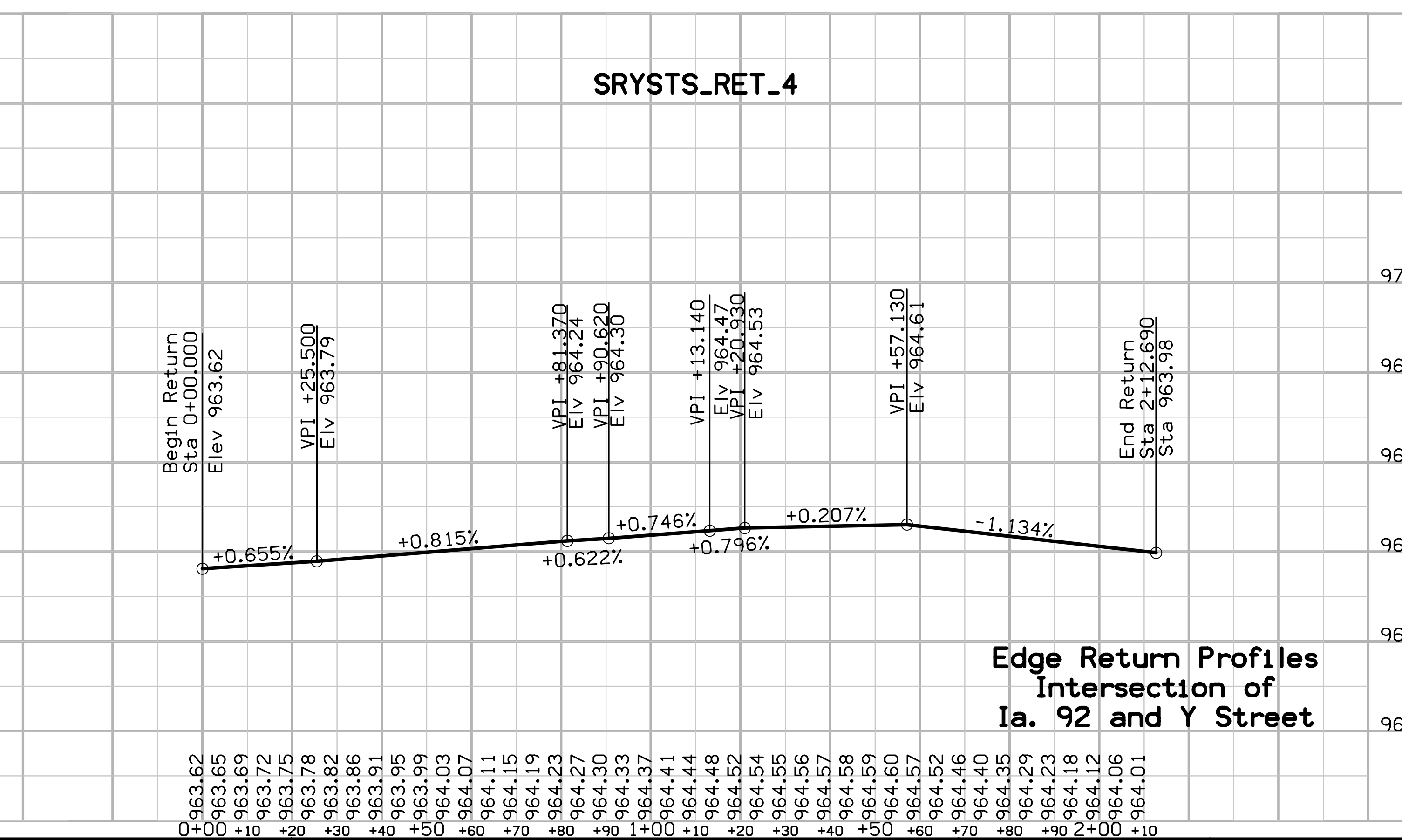
Edge Return Profiles
Intersection of
Ia. 92 and Co. Rd. R-63

C	ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER L.11



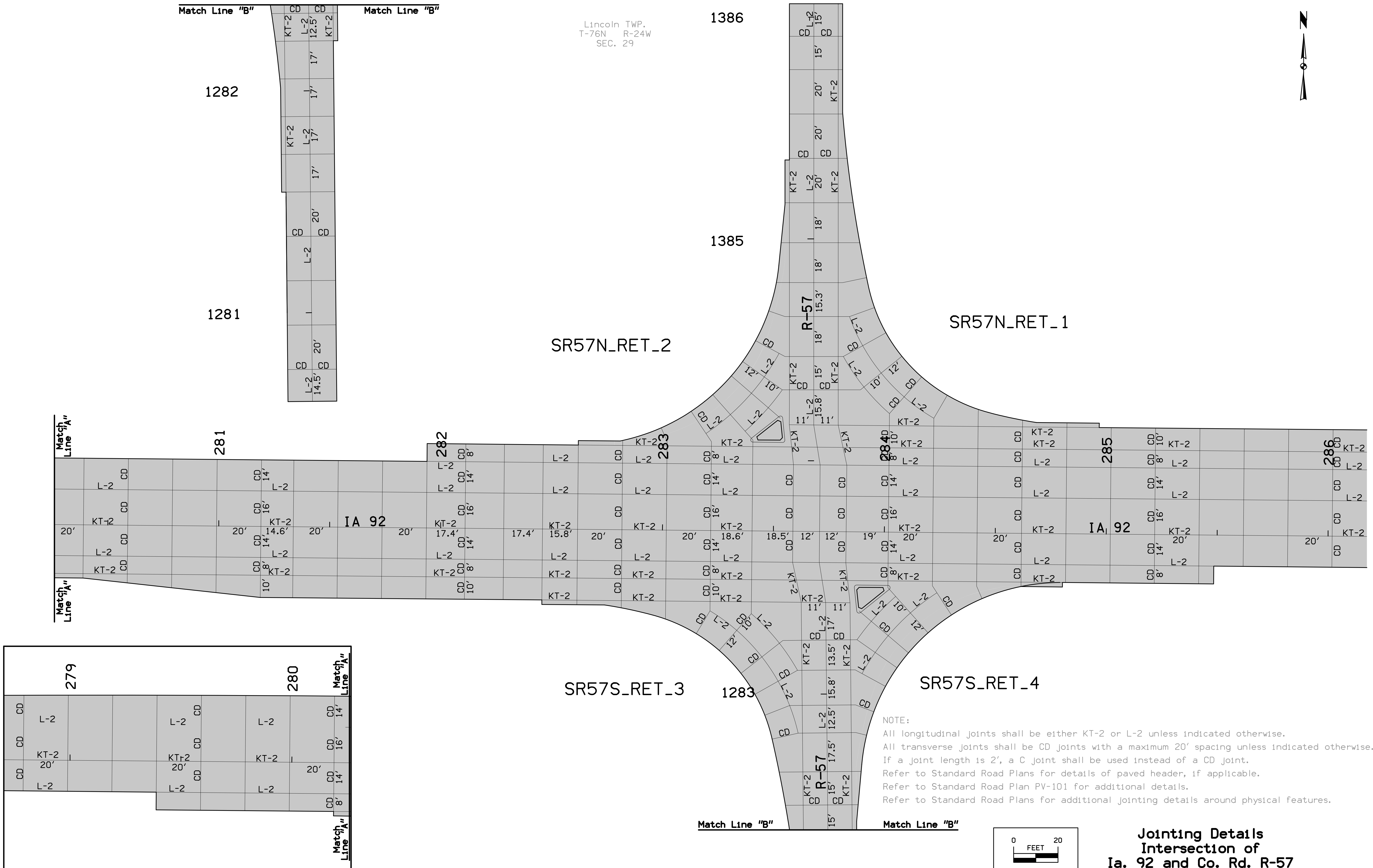






**Edge Return Profiles
Intersection of
Ia. 92 and Y Street**

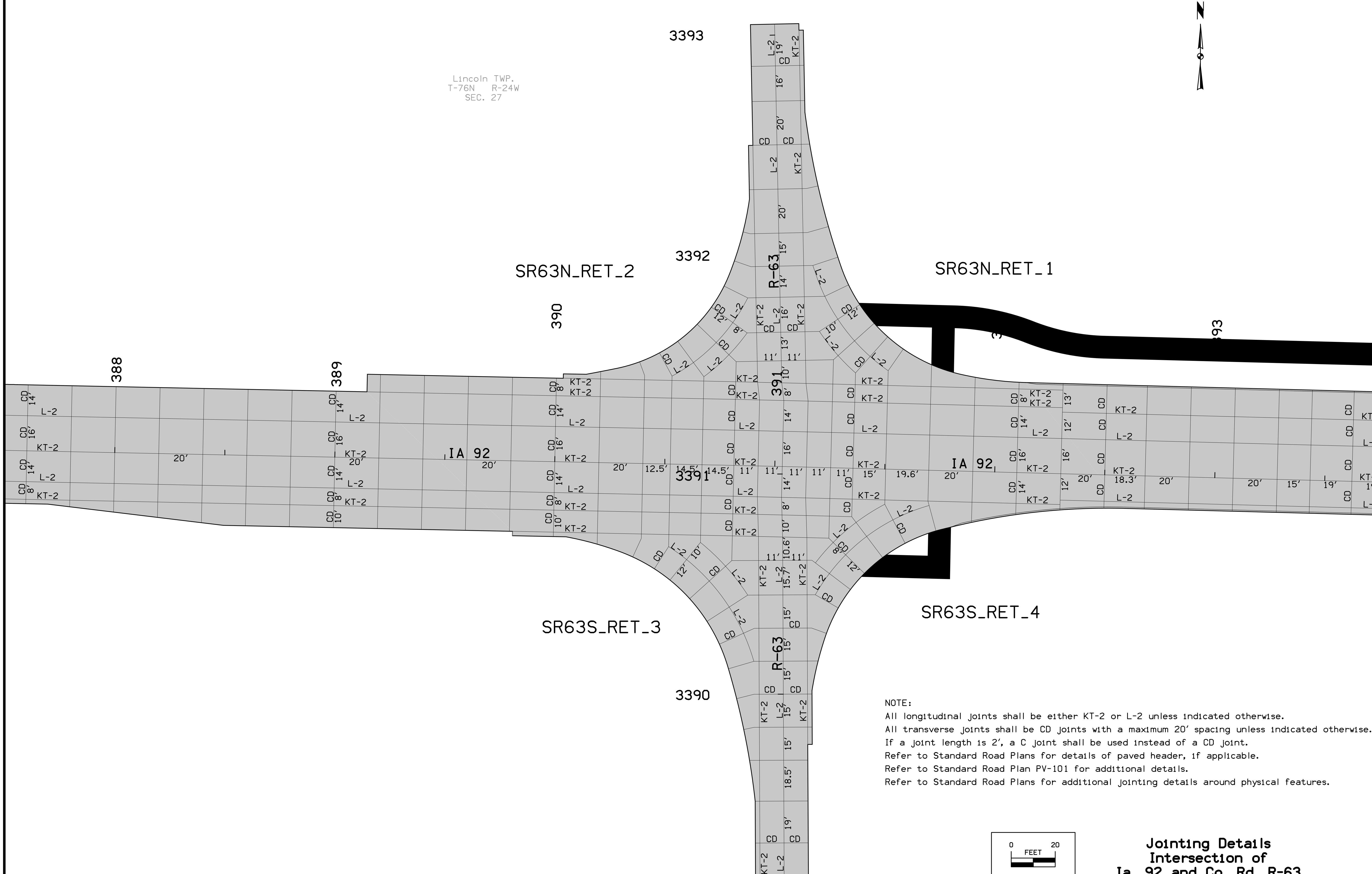
C	ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER L.12



NOTE:
All longitudinal joints shall be either KT-2 or L-2 unless indicated otherwise.
All transverse joints shall be CD joints with a maximum 20' spacing unless indicated otherwise.
If a joint length is 2', a C joint shall be used instead of a CD joint.
Refer to Standard Road Plans for details of paved header, if applicable.
Refer to Standard Road Plan PV-101 for additional details.
Refer to Standard Road Plans for additional jointing details around physical features.

Jointing Details
Intersection of
Ia. 92 and Co. Rd. R-57

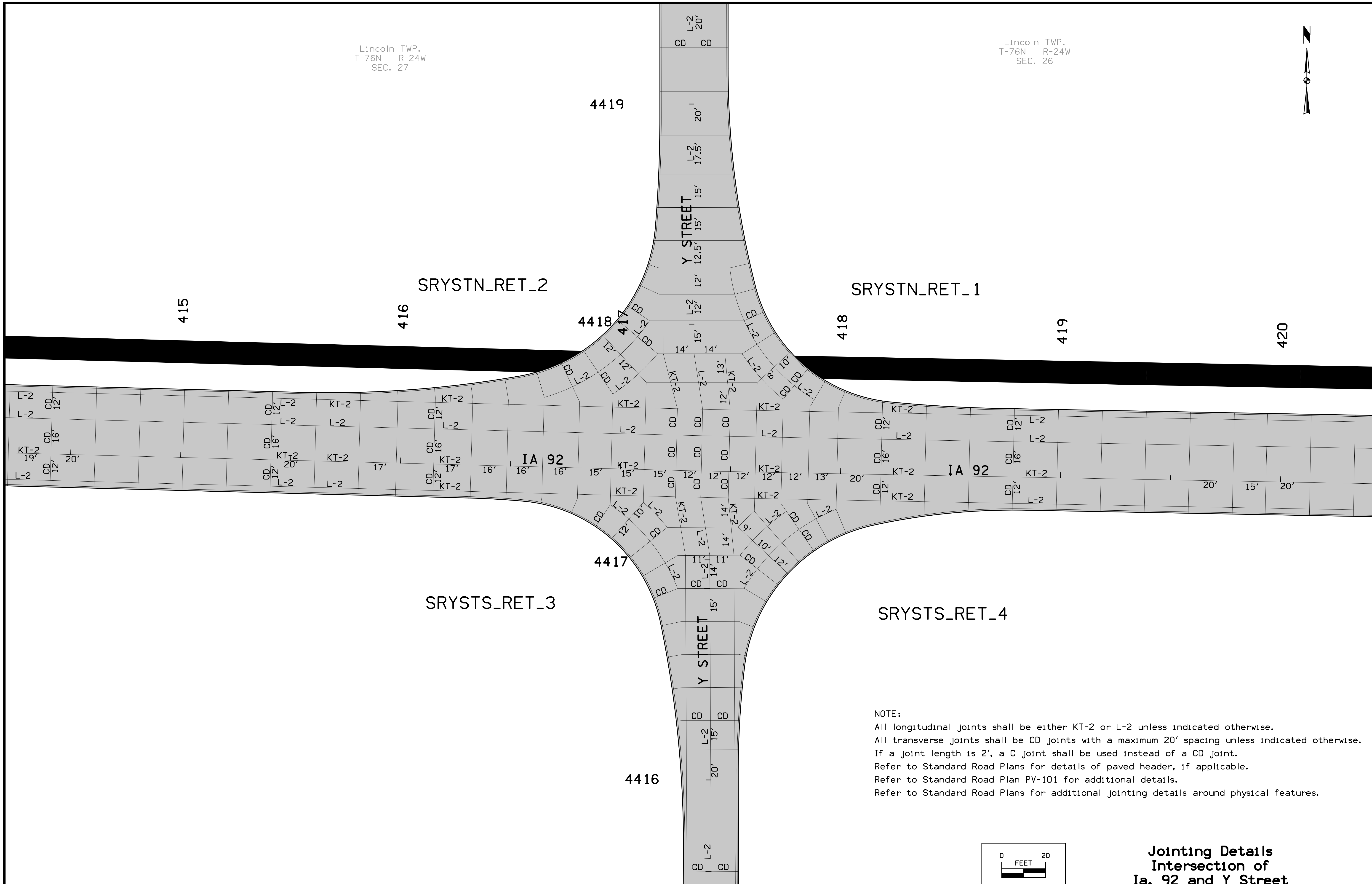
C	ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER L.13



NOTE:
All longitudinal joints shall be either KT-2 or L-2 unless indicated otherwise.
All transverse joints shall be CD joints with a maximum 20' spacing unless indicated otherwise.
If a joint length is 2', a C joint shall be used instead of a CD joint.
Refer to Standard Road Plans for details of paved header, if applicable.
Refer to Standard Road Plan PV-101 for additional details.
Refer to Standard Road Plans for additional jointing details around physical features.

Jointing Details
Intersection of
Ia. 92 and Co. Rd. R-63

C	ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER L.14



NOTE:
All longitudinal joints shall be either KT-2 or L-2 unless indicated otherwise.
All transverse joints shall be CD joints with a maximum 20' spacing unless indicated otherwise.
If a joint length is 2', a C joint shall be used instead of a CD joint.
Refer to Standard Road Plans for details of paved header, if applicable.
Refer to Standard Road Plan PV-101 for additional details.
Refer to Standard Road Plans for additional jointing details around physical features.

Jointing Details
Intersection of
Ia. 92 and Y Street

C	ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER L.15

1:11:51 PM 12/2/2013 wcamero pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9109201004\Design\91092051L01.sht

1 Diameter or equivalent diameter

* Bid Item
** For SW-545

STORM SEWER

INTAKES AND UTILITY ACCESSES

No.	Location Station and Offset	*Type or Standard Road Plan	Form Grade Elev.	Bottom Well Elev.	Extension Length** FT	Notes
I-100	399+00.00, -31	SW-508	973.27	968.68		
I-101	399+00.00, 15	SW-508	973.03	967.56		
I-102	397+00.00, 15	SW-508	971.75	966.11		
I-103	393+50.00, -41	SW-508	969.94	966.2		
I-104	393+50.00, 15	SW-508	970.03	966.18		
I-105	394+30.00, -41	SW-508	970.25	966.18		
I-106	393+89.83, -41	SW-510	970.15	965.25		
I-107	393+89.83, 15	SW-510	969.94	964.88		
I-108	394+30.00, 15	SW-508	970.04	964.64		
I-109	395+45.00, -85	SW-512 (30"	968.02	967.52		
I-110	395+36.30, -41	SW-508	970.91	966.02		
I-111	395+35.95, 15	SW-508	970.7	964.13		
I-125	4419+50.00, -15.5	SW-508	964.81	968.8		
I-200	404+50.00, -31	SW-508	973.83	968.15		
I-201	404+50.00, 15	SW-508	973.59	966.88		
I-202	407+39.00, -31	SW-508	971.98	966.23		
I-203	407+39.00, 15	SW-508	971.74	965.16		
I-204	409+55.00, -31	SW-508	970.6	964.51		
I-205	409+55.00, 15	SW-508	970.36	963.75		
I-206	411+70.00, -31	SW-508	969.22	963.1		
I-207	411+70.00, 15	SW-508	968.98	962.44		
I-208	413+85.00, -31	SW-508	967.85	961.59		
I-209	413+85.00, 15	SW-508	967.6	959.71		
I-210	415+95.00, -32.7	SW-508	966.52	959.18		
I-211	415+95.00, 15	SW-508	966.26	958.79		
I-212	416+94.85, 45.35	SW-402 (4' x 4')	965.61	960.1		
I-213	4416+07.00, 12.5	SW-508	963.64	959.68		
I-214	4415+85.31, 12.5	SW-510	963.58	959.27		
I-215	4415+65.00, 12.5	SW-508	963.6	958.33		
I-216	4416+06.96, -13.8	SW-508	963.62	958.16		
I-217	4415+84.85, -12.5	SW-510	963.58	958.09		
I-218	4415+65.00, -12.5	SW-508	1927.2	957.9		
I-219	4414+34.50, -34	SW-512 (30"	962.94	957.6		
I-220	4414+34.50, -12.5	SW-508	963.85	957.3		
I-221	4414+34.50, 12.5	SW-508	963.85	961.31		
I-230	4419+50.00, 15.5	SW-508	964.81	958.82		
I-231	4418+45.00, 22	SW-508	964.25	959.02		
I-232	4418+77.37, 17.5	SW-510	964.08	960.71		
I-233	4418+45.06, -17.5	SW-508	964.21	959.54		
I-234	4418+77.37, -15.75	SW-510	964.11	960.81		
I-235	4419+50.00, -15.5	SW-508	964.81	957.97		
I-299	418+71.33, -31	SW-508	964.07	956.95		
I-300	420+58.00, -31	SW-510	961.75	956.45		
I-301	420+58.00, 15	SW-510	961.51	955.06		
I-302	422+60.00, -31	SW-505	959.7	954.43		
I-303	422+61.70, 15	SW-508	959.45	953.5		
I-304	425+30.00, -31	SW-508	958.34	952.85		
I-305	425+30.00, 15	SW-508	958.1	953.8		
I-306	426+35.00, -31	SW-508	957.82	947.6		
I-307	426+35.00, 15	SW-508	957.58	957.97		
I-308	431+12.50, -31	SW-508	962.77	956.5		
I-309	431+15.00, 15	SW-508	962.56	954.21		
I-310	428+00.00, -31	SW-508	958.77	949.98		
I-311	428+00.00, 15	SW-508	958.53	954.1		
I-312	427+00.00, -31	SW-508	957.82	947.73		
I-313	427+00.00, 15	SW-508	957.82	953.2		
I-314	426+67.15, -31	SW-510	957.76	947.14		
I-315	426+67.15, 15	SW-510	957.52	960.4		
I-400	435+57.00, -31	SW-508	963.89	960.4		
I-401	435+57.00, 15	SW-508	963.59	959.92		
I-402	436+00.00, -31	SW-510	963.59	959.83		
I-403	436+00.00, 15	SW-510	963.59	959.94		
I-404	436+45.20, -75	SW-512 (24"	960.66	959.33		

PIPES

Design Length, Slope, and Flowlines are calculated from inside wall to inside wall along CL of pipe. An additional 3 ft length is added to each side of the Design Length to account for estimated length to center of structures.

Line Number	Intake/ Utility Access No. From	To	Class 'D'	Pipe Size 1 IN	Bid* Length FT	Design Length FT	Slope %	Flow Lines Inlet Elevation	Outlet Elevation	Other Elevation	Pipe Profile Sheet No.	Notes
P-100	I-100	I-101	2000	18	52	46.0	1.74	969.18	968.38			
P-101	I-101	I-102	2000	18	202	196.0	0.59	968.06	966.91			
P-102	I-102	I-111	2000	18	167	160.1	0.6	966.61	965.65			
P-103	I-103	I-106	2000	18	40	33.8	1.92	966.7	966.05			
P-104	I-104	I-107	2000	18	40	33.8	2.66	966.68	965.78			
P-105	I-105	I-106	2000	18	41	34.2	1.55	966.68	966.15			
P-106	I-106	I-107	2000	18	62	56.0	0.48	965.75	965.48			
P-107	I-107	I-108	2000	18	41	34.2	0.41	965.38	965.24			
P-108	I-108	I-111	2000	18	108	102.0	0.4	965.14	964.73			
P-109	I-109	I-110	2000	30	46	39.7	2.52	968.02	967.02			
P-110	I-110	I-111	2000	30	62	56.0	2.66	966.52	965.03			
P-111	I-111	O-112	2000	30	56	52.2	0.44	964.63	964.4			
P-200	I-200	I-201	2000	18	52	46.0	0.76	969.3	968.95			
P-201	I-201	I-203	2000	18	302	296.0	0.6	968.65	966.87			
P-202	I-202	I-203	2000	18	52	46.0	0.76	967.38	967.03			
P-203	I-203	I-205	2000	18	272	266.0	0.6	966.73	965.13			
P-204	I-204	I-205	2000	18	52	46.0	0.76	965.66	965.31			
P-205	I-205	I-207	2000	18	222	216.0	0.6	965.01	963.71			
P-206	I-206	I-207	2000	18	52	46.0	0.76	964.25	963.9			
P-207	I-207	I-209	2000	18	207	201.0	0.6	963.6	962.39			
P-208	I-208	I-209	2000	18	52	46.0	0.76	962.94	962.59			
P-209	I-209	I-211	2000	18	152	146.0	1.51	962.09	959.88			
P-210	I-210	I-211	2000	18	58	51.2	0.74	960.21	959.83			
P-211	I-211	I-212	2000	18	78	71.7	0.4	959.68	959.39			
P-212	I-212	I-216	2000	18	97	90.9	0.18	959.29	959.13			
P-213	I-213	I-214	2000	24	22	15.7	0.76	960.6	960.48			
P-214	I-214	I-215	2000	18	21	14.3	0.77	960.18	960.07			
P-215	I-215	I-221	2000	18	133	126.5	1.16	959.77	958.3			
P-216	I-216	I-217	2000	18	23	16.0	0.44	958.83	958.76			
P-217	I-217	I-218	2000	18	20	13.9	0.43	958.66	958.6			
P-218	I-218	I-220	2000	18	133	126.5	0.39	958.59	958.1			
P-219	I-219	I-220	2000	18	22	16.0	0.5	958.4	958.3			
P-220	I-220	I-221	2000	18	31	25.0	0.8	958.1	957.9			
P-221	I-221	O-222	2000	24	100	96.0	0.52	957.8	957.3			
P-230	I-230	I-232	2000	18	73	66.5	1.04	961.81	961.12			
P-231	I-231	I-299	2000	18	144	137.6	0.4	959.32	958.77			
P-232	I-232	I-231	2000	18	33	26.5	0.38	959.52	959.42			
P-233	I-233	I-234	2000	18	33	26.2	3.44	961.21	960.31			
P-234	I-234	I-232	2000	18	39	33.0	0.73	960.04	959.8			
P-235	I-235	I-234	2000	18	73	66.6	1.91	961.31	960.04			
P-299	I-299	I-300	2000	18	187	180.7	0.4	958.47	957.75			
P-300	I-300	I-301	2000	18	52	46.0	0.76	957.45	957.1			
P-301	I-301	I-303	2000	18	204	197.7	0.4	956.95	956.16			
P-302	I-302	I-303	2000	18	50	44.0	1.09	955.56	955.08			
P-303	I-303	I-305	2000	18	271	264.3	0.54	954.93	953.5			
P-304	I-304	I-305	2000	18	52	46.0	1.09	954	953.5			
P-305	I-305	I-307	2000	18	107	101.0	4.89	953.35	948.41			
P-306	I-306	I-314	2000	18	33	26.2	1.15	954.3	954			
P-307	I-307	I-315	2000	18	33	26.2	0.61	948.1	947.94			
P-308	I-308	I-309	2000	18	53	46.1	2.54	958.47	957.3			
P-309	I-309	I-311	2000	18	317	311.0	2	957	950.78			
P-310	I-310	I-311	2000	18	52	46.0	7.89	954.71	951.08			
P-311	I-311	I-313	2000	18	102	96.0	2	950.48	948.56			
P-312	I-312	I-314	2000	18	33	26.9	1.68	954.6	954.15			
P-313	I-313	I-315	2000	18	33	26.9	1.04	948.23	947.95			
P-314	I-314	I-315	2000	18	52	46.0	1.52	953.7	953			
P-315	I-315	O-316	2000	30	130	126.6	1	947.64	946.37			
P-400	I-400	I-402	2000	18	43	37.0	0.49	960.9	960.72			
P-401	I-401	I-403	2000	18	43	37.0	0.73	960.9	960.63			
P-402	I-402	I-405	2000	18	45	39.0	0.74	960.42	960.13			
P-403	I-403	I-413	2000	18	45	39.0	0.51	960.33	960.13			
P-404	I-404	I-405	2000	18	45	39.0	0.4	960.44	960.28			
							1					
							1					
							0.75					

104-5B
MODIFIED

STORM SEWER

* Bid Item
** For SW-545

INTAKES AND UTILITY ACCESSES

No.	Location Station and Offset	*Type or Standard Road Plan	Form Grade Elev.	Bottom Well Elev.	Extension Length** FT	Notes
I-404	436+45.20, -75	SW-512 (24	960.66	959.33		
I-405	436+45.00, -31	SW-508	963.9	962.4		
I-406	442+65.00, -31	SW-508	966.97	961.67		
I-407	442+62.95, 11.8	SW-508	966.72	961.59		
I-408	441+02.00, -31	SW-508	966.15	960.2		
I-409	441+02.00, 15	SW-508	965.91	960.93		
I-410	439+69.89, -31	SW-508	965.49	959.22		
I-411	439+70.00, 15	SW-508	964.76	957.44		
I-412	437+72.04, 14.93	SW-508	964.26	956.53		
I-413	436+45.00, 15	SW-508	963.66	961.24		
I-415	437+72.00, -31	SW-508	964.5	964.2		
I-500	444+30.00, -26.5	SW-508	967.78	963.65		
I-501	444+30.00, 10.5	SW-508	967.67	963.65		
I-502	447+00.00, -26.5	SW-508	968.68	964.66		
I-503	447+00.00, 10.5	SW-508	968.66	964.66		
I-504	449+80.00, -26.5	SW-508	969.51	966.56		
I-505	449+77.08, 10.5	SW-508	969.56	966.56		
I-506	455+00.00, -26.5	SW-508	970.08	967.08		
I-507	455+25.00, 10.5	SW-508	969.83	965.83		
I-508	457+50.00, -26.5	SW-508	969.53	966.43		
I-509	458+00.00, 10.5	SW-508	969.26	1E+08		
I-510	459+50.00, -26.5	SW-508	969.06	965.8		
I-511	460+00.00, 10.5	SW-508	968.87	1E+08		
I-512	461+75.00, -26.5	SW-508	968.68	964.54		
I-513	461+75.00, 10.5	SW-508	968.57	964.6		
I-514	464+85.00, -26.5	SW-508	967.1	966.36		
I-515	463+90.00, 10.5	SW-508	967.8	965.05		
I-516	463+30.10, -26.5	SW-508	968.2	965.95		
I-517	255+00.00, -56	RF-3 (18")	950.9	964.32		
O-112	395+00.00, 65	RF-3 (30")	964.41	964.4		
O-222	4414+30.00, 120.4	RF-3 (36")	957.39	953.89		
O-235	4424+08.34, -17.82	RF-21	966.52	957.89		
O-316	426+35.11, 150.17	RF-3 (36")	946.25	946.37		
O-414	436+49.00, 70	RF-3 (30")	956	956		
O-416	437+72.00, -76	RF-3 (18")	961.48	958.48		
O-500	444+30.00, -56	RF-3 (18")	964.32	964.32		
O-501	444+30.00, 28	RF-3 (18")	964.02	964		
O-502	447+00.00, -55	RF-3 (18")	965.61	965.6		
O-503	447+00.00, 28	RF-3 (18")	965.03	965		
O-507	455+25.00, 27	RF-3 (18")	966.63	966.3		
O-511	460+00.00, 27	RF-3 (18")	965.4	965.45		
O-513	461+75.00, 29	RF-3 (24")	964.38	964.54		
O-515	463+89.04, 30.45	RF-21	965.47	964.97		
I-219a	4414+34.50, -34	RF-3 (18")				FL. TO INTAKE 958.70
		Total:				
		RF-21	2			
		RF-3 (18")	9			
		RF-3 (24")	1			
		RF-3 (30")	2			
		RF-3 (36")	2			
		402 (4' x	1			
		SW-505	1			
		SW-508	73			
		SW-510	12			
		W-512 (24"	1			
		W-512 (30"	2			

PIPES

Design Length, Slope, and Flowlines are calculated from inside wall to inside wall along CL of pipe. An additional 6 ft length is added to Design Length to account for estimated length to center of structures.

Line Number	Intake/Utility Access No. From	To	Class 'D'	Pipe Diameter IN	Bid* Length FT	Design Length FT	Slope %	Flow Lines Inlet Elevation	Outlet Elevation	Other Elevation	Pipe Profile Sheet No.	Notes
P-405	I-405	I-413	2000	18	52	46.0	1	959.83	959.37			
P-406	I-406	I-407	2000	18	49	42.9	1	962.9	962.47			
P-407	I-407	I-409	2000	18	162	155.1	0.75	962.17	961			
P-408	I-408	I-409	2000	18	52	46.0	1	962.09	961.63			
P-409	I-409	I-411	2000	18	134	127.8	1	960.7	959.42			
P-410	I-410	I-411	2000	18	52	46.0	1	961.43	960.97			
P-411	I-411	I-412	2000	18	203	196.2	0.75	959.72	958.24			
P-412	I-412	I-413	2000	18	130	123.0	0.5	957.94	957.32			
P-413	I-413	O-414	2000	18	49	45.0	2.29	957.03	956			
P-415	I-415	I-412	2000	18	52	45.9	0.4	961.74	961.56			
P-500	I-500	O-500	2000	18	23	19.4	1.96	964.7	964.32			
P-501	I-501	O-501	2000	18	11	7.4	2.02	964.15	964			
P-502	I-502	O-502	2000	18	30	26.5	0.76	965.8	965.6			
P-503	I-503	O-503	2000	18	11	7.4	2.16	965.16	965			
P-504	I-504	I-502	2000	18	281	274.9	0.41	967.07	965.95			
P-505	I-505	I-503	2000	18	280	273.5	0.58	967.06	965.46			
P-506	I-506	I-508	2000	18	252	246.0	0.22	967.58	967.03			
P-507	I-507	O-507	2000	18	12	8.4		-1.5	-1.5			
P-508	I-508	I-510	2000	18	202	196.0	0.27	966.93	966.4			
P-509	I-509	I-511	2000	18	202	196.0	1.05	967.85	965.8			
P-510	I-510	I-512	2000	18	227	221.0	0.52	966.3	965.15			
P-511	I-511	O-511	2000	18	10	6.4	0.78	965.5	965.45			
P-512	I-512	I-513	2000	24	43	37.0	0.76	965.04	964.76			
P-513	I-513	O-513	2000	24	12	8.4	0.72	964.6	964.54			
P-514	I-514	I-516	2000	18	157	150.9	0.5	966.86	966.1			
P-515	I-515	O-515	2000	15	19	16.0	0.5	965.55	965.47			
P-516	I-516	I-512	2000	15	158	151.1	0.5	965.95	965.2			
			Total:									
			2000	15	180							
			2000	18	7685							
			2000	24	183							
			2000	30	300							

SURVEY SYMBOLS

TDC Tree Deciduous
PPA Power Pole Co. 1
FWD Wood Fence
LUM Luminaire
TEV Evergeen Tree
LP L.P. Tank
D Centerline Draw or Stream (Down)
RET Retaining Walls
SI Sign
SHR Shrub
SI Sign
EW Edge of Water
DIK Centerline of Dike or Dam
FLG Flag Poles
WM Wind Mill
FCL Chain Link and Security Fence
HDG Hedge Row
TV Satelite TV Dish
RT Radio Tower
INB Storm Sewer Beehive Intake
WV Water Valve
FHD Fire Hydrants
WEL Well
MH Utility Access (Manhole)
LUM Luminaire
MIS Miscellaneous
TPD Telephone Pedestal
EB Electrical Box
UB Utility Box
PR Electic Riser Pole
FW Wire Fence
GP Guard Post (Less Than 4 Posts)
IN Storm Sewer Intake
TLN Treeline
TVP TV Pedestal
SEP Septic Tank
OUT Tile Outlet
Tile — TIL Tile Line
UST Underground Tank
GV Gas Valve
DU Centerline Draw or Stream (Up)
BNK Stream Bank
BL Topo Breakline
RIP Rip-Rap

St.S. — STA Storm Sewer Line Co. 1
F03 — FOC Underground Fiber Optic Co. 3
F05 — FOE Underground Fiber Optic Co. 5
F02 — FOB Underground Fiber Optic Co. 2
San. — SAA Sanitary Sewer Line Co. 1
T1 — TLA Underground Telephone Line Co. 1
E1 — ELA Underground Electric Line Co. 1
G — GLA Underground Gas Line Co. 1
TVA Underground TV Cable Co. 1
W — WLA Underground Water Line Co. 1
F0 — FOA Underground Fiber Optic Co. 1
E2 — ELB Underground Electric Line Co. 2
San.2 — SAB Sanitary Sewer Line Co. 2
GLB Underground Gas Line Co. 2
F04 — FOD Underground Fiber Optic Co. 4
WLB Underground Water Line Co. 2

UTILITY LEGEND

F0 — FOA Paetac Iowa Communications Network
F02 — FOB Lightcore (Digital Teleport)
F03 — FOC Iowa Network Service
F04 — FOD Indianola Municipal Utilities
F05 — FOE MCI
T1 — TLA Qwest
E1 — ELA Mid-American
E2 — ELB Indianola Municipal Utlities
TVA Mediacom
W — WLA Indianola Municipal Utilities
WLB Warren Rural Water
San. — SAA City of Indianola
San.2 — SAB Private
G — GLA Mid-American
GLB Kinder Morgan
St.S. — STA City of Indianola
PPA Mid-American

PLAN VIEW COLOR LEGEND OF STORM SEWER SHEETS

LINEWORK	Design Color No.	
Gray, Dark	(112)	Existing Topographic Features, Utilities, and Labels
Black	(17)	Proposed Storm Sewer Details, Alignment, Stationing, Tic Marks, and Alignment Annotation
SHADING	Design Color No.	
Gray, Light	(48)	Proposed Pavement Shading

PROFILE VIEW COLOR LEGEND OF STORM SEWER SHEETS

LINEWORK	Design Color No.	
Gray, Dark	(112)	Existing Ground Line Profile and Existing Utilities Information
Black	(17)	Proposed Pipes and Intakes

PLAN VIEW LINE STYLE LEGEND OF STORM SEWER SHEETS

Plug and Abandon Existing Pipe or Structure
Removal of Existing Pipe or Structure
Previously Constructed Pipe or Structure
Direction of Pipe Flow

PROFILE VIEW LINE STYLE LEGEND OF STORM SEWER SHEETS

Existing Ground
Proposed Ground
Previously Constructed Pipe or Structure
Proposed Pipe or Structure

Reference Point
Station
Survey Line
Section Corner
Ground Line Intercept
Saw Cut
Guardrail
Clearing & Grubbing Area
Pavement Removal

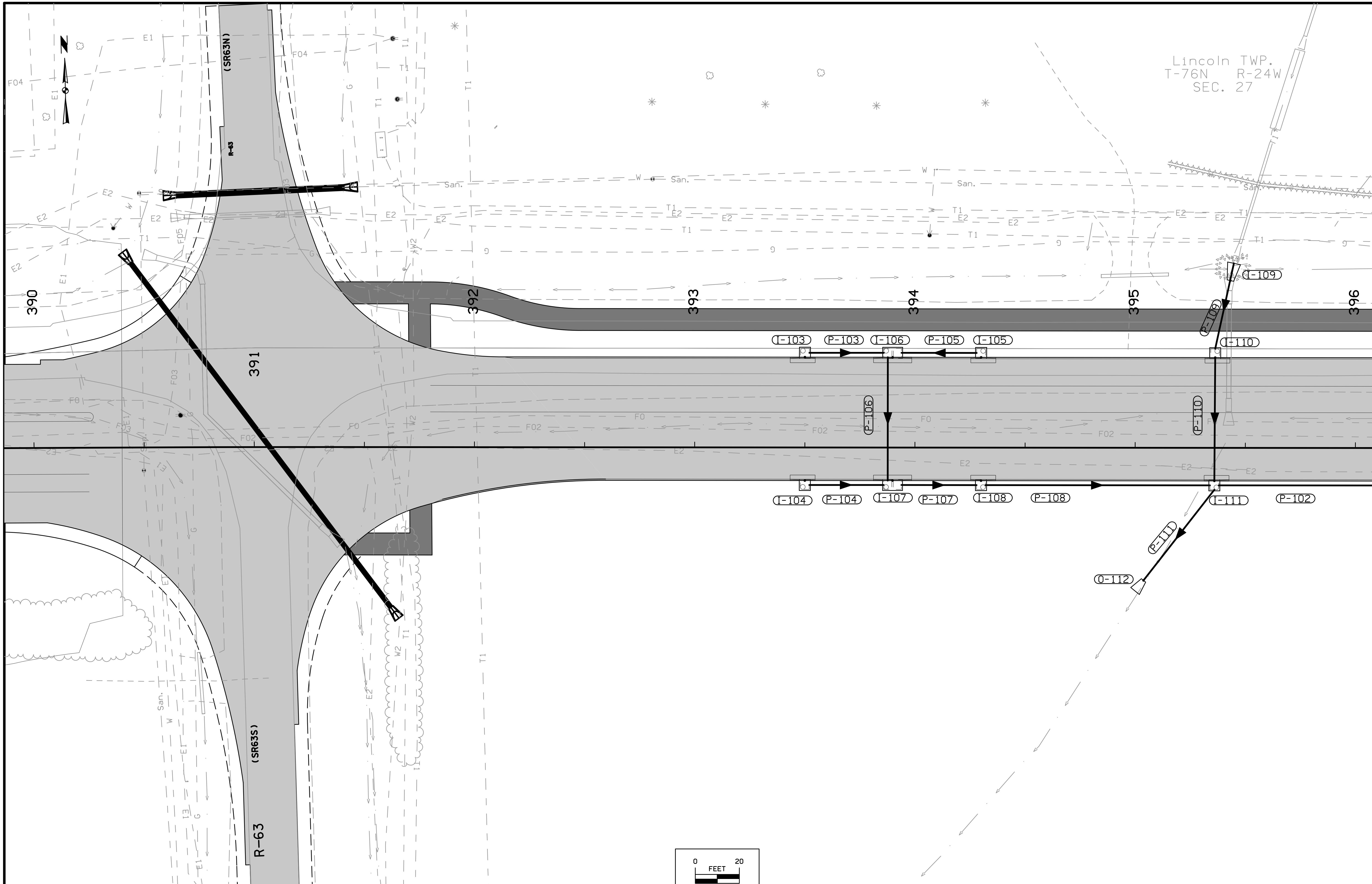
RIGHT-OF-WAY LEGEND

Proposed Right-of-Way
Existing and Proposed Right-of-Way
Easement and Existing Right-of-Way
Borrow
Easement (Temporary)
Easement
Excess
A/C Access Control

STORM SEWER LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES M)

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER M.3



ENGLISH	IOWA DOT	DESIGN TEAM	Jia\Holst\Bennett		WARREN	COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER M.4

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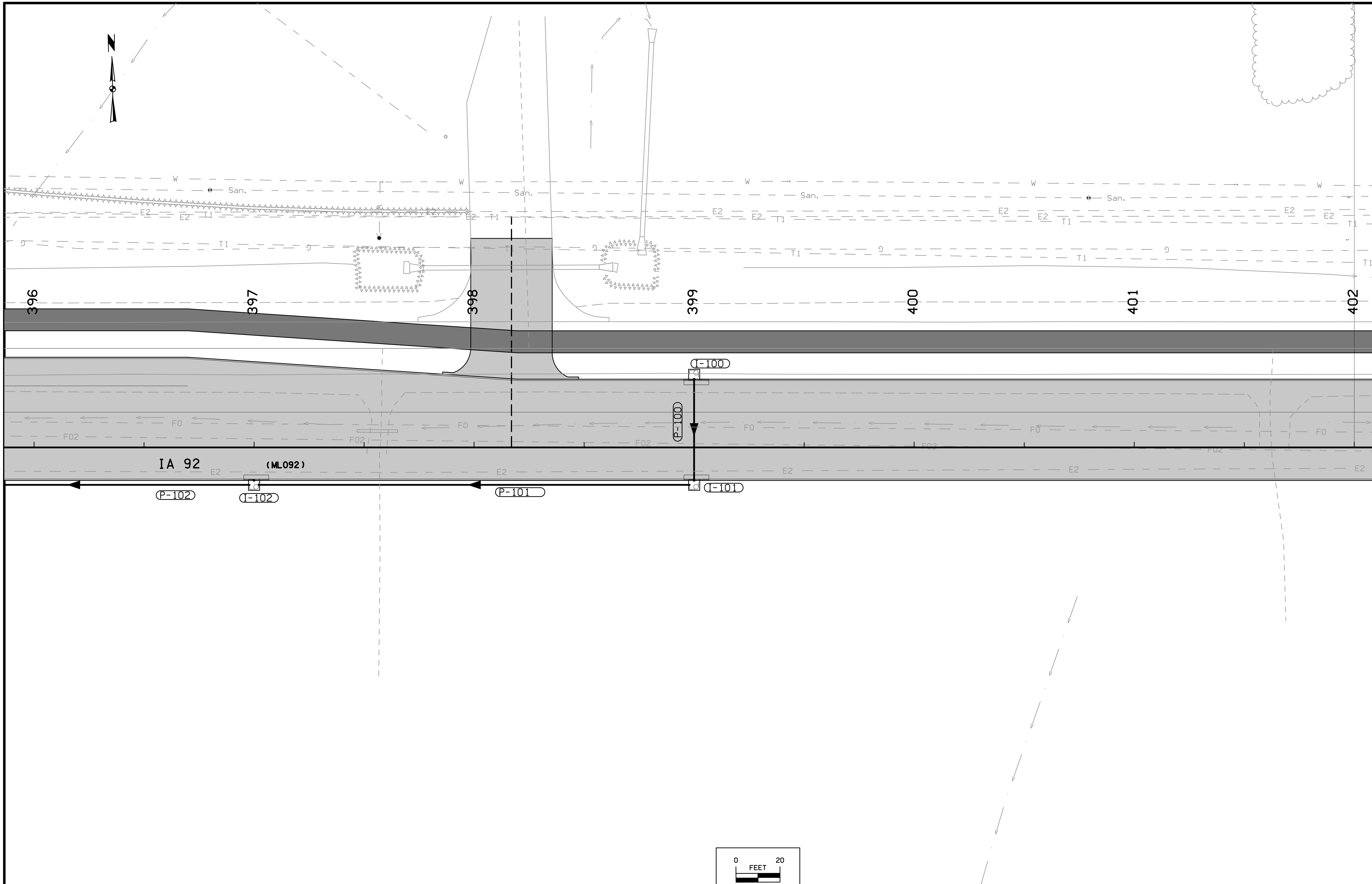

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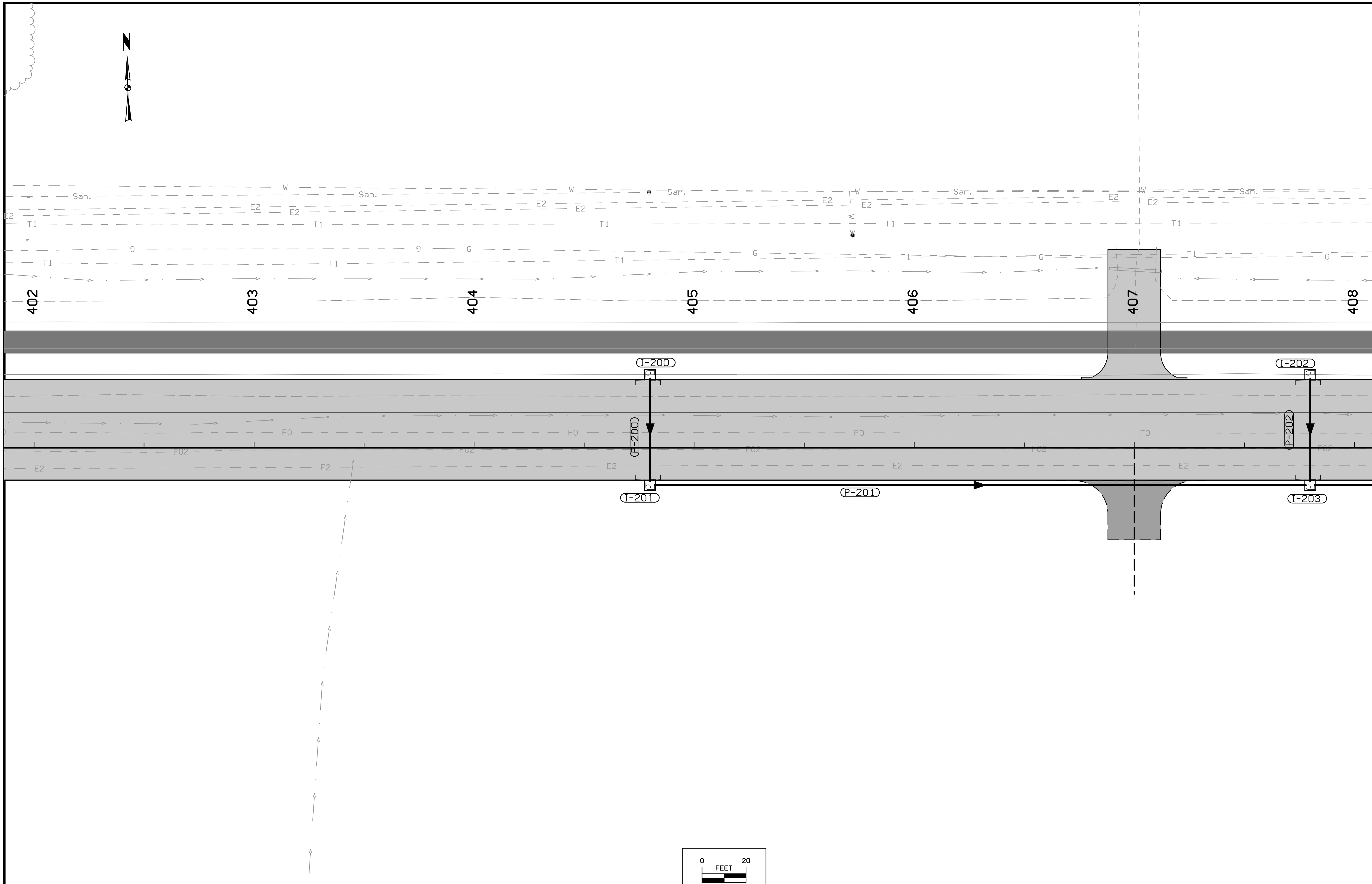

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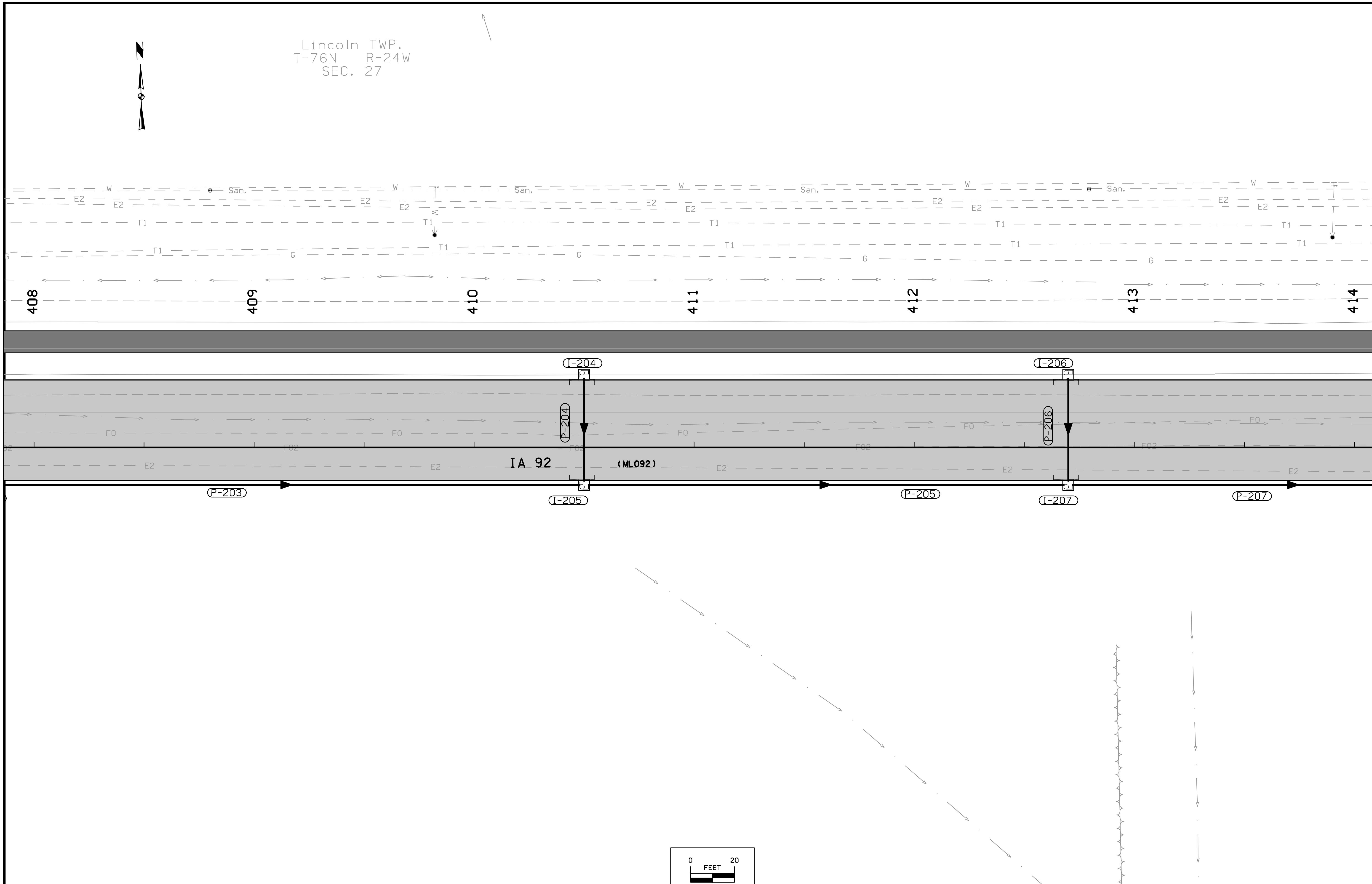

C | ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER M.7

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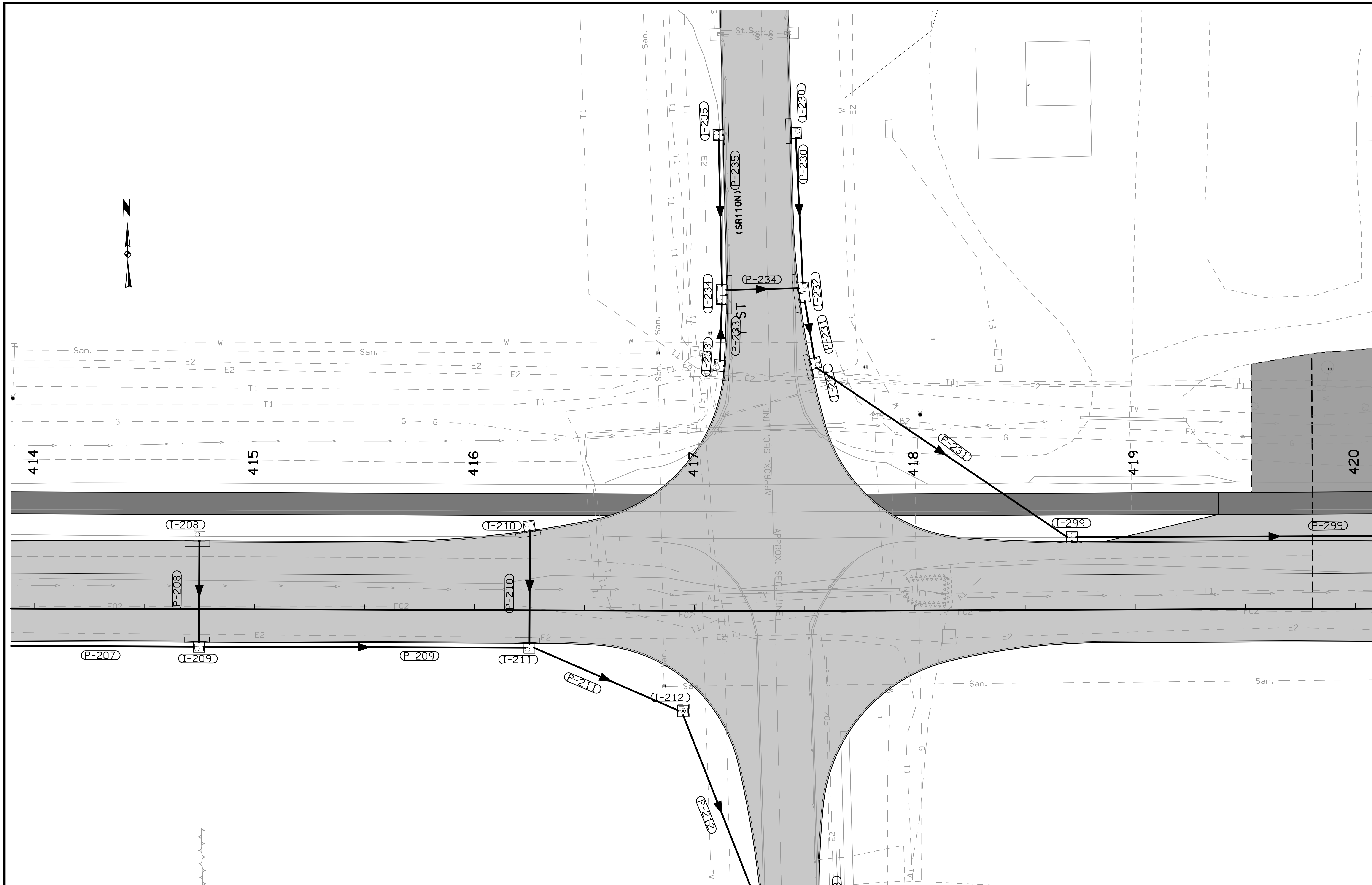
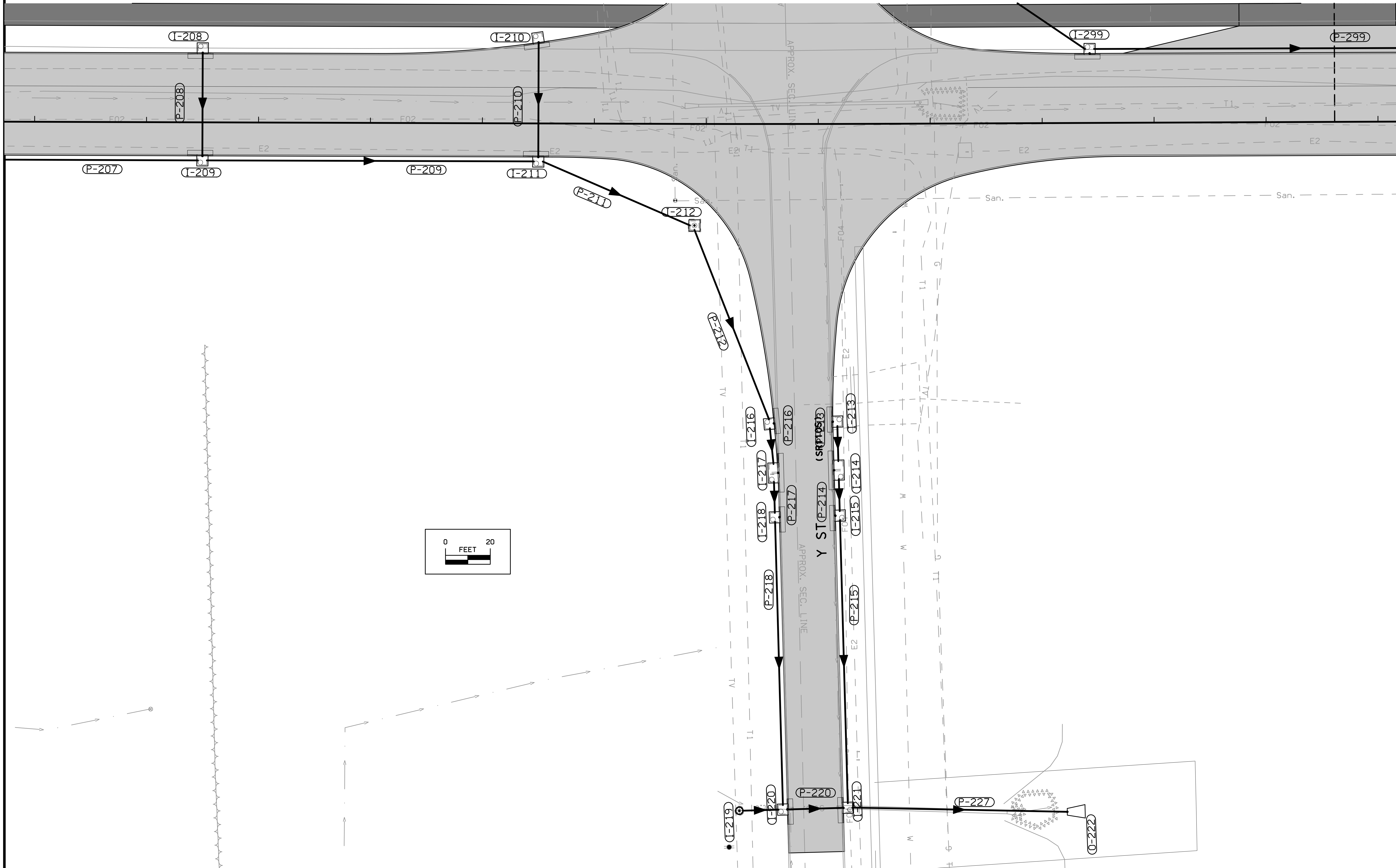


C	ENGLISH	IOWA DOT	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER	M.8



C | ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER M.9

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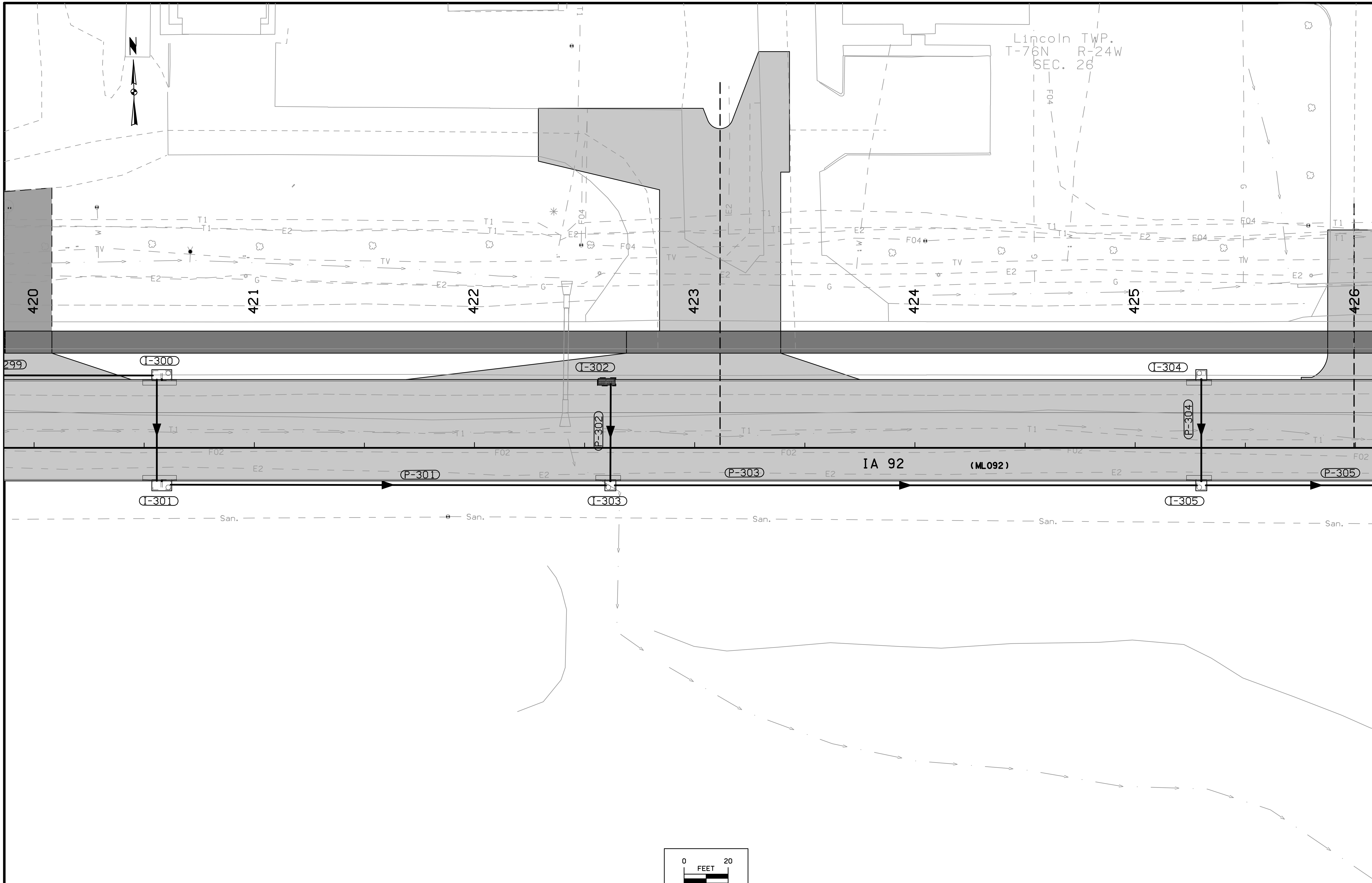
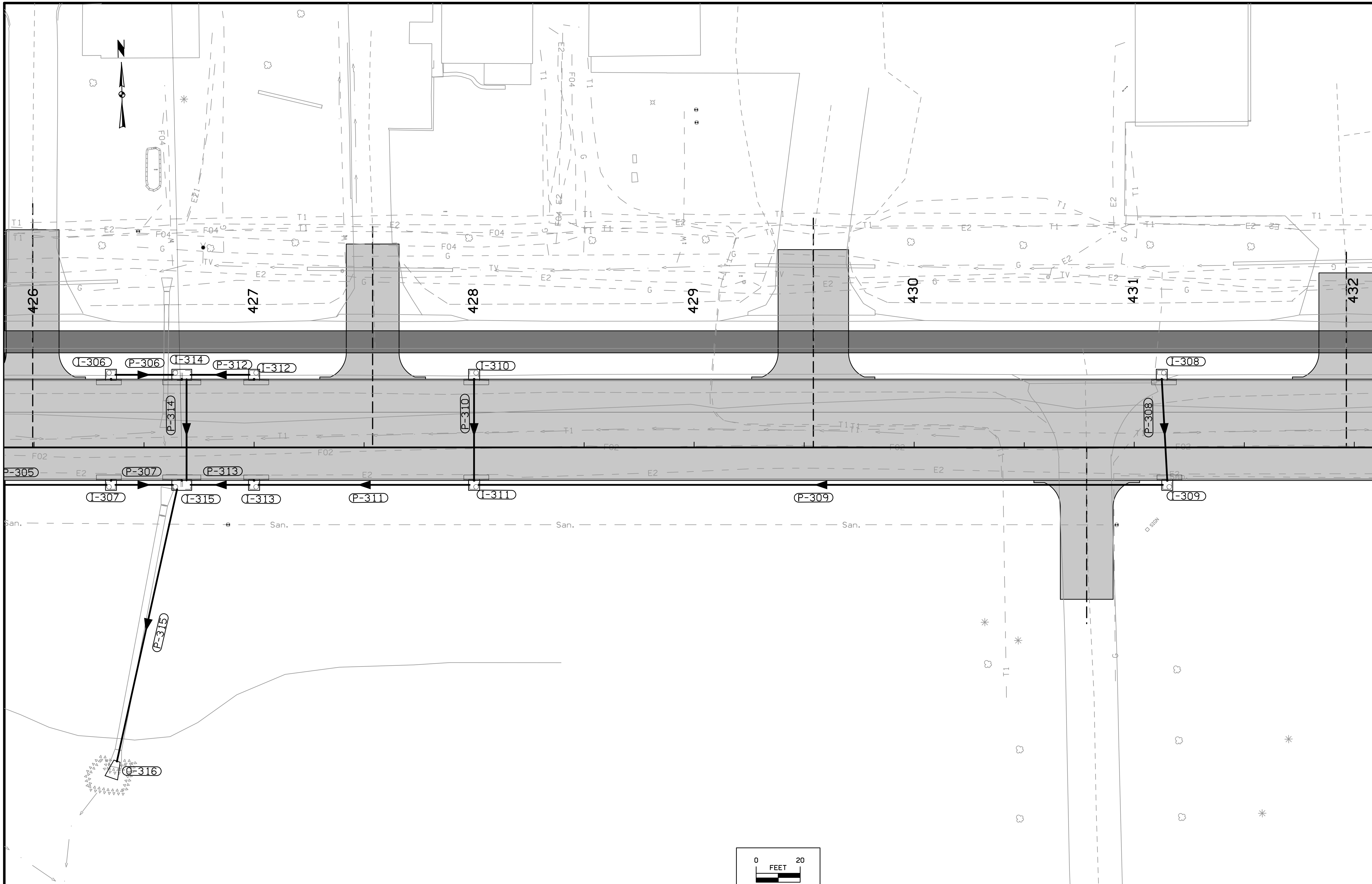
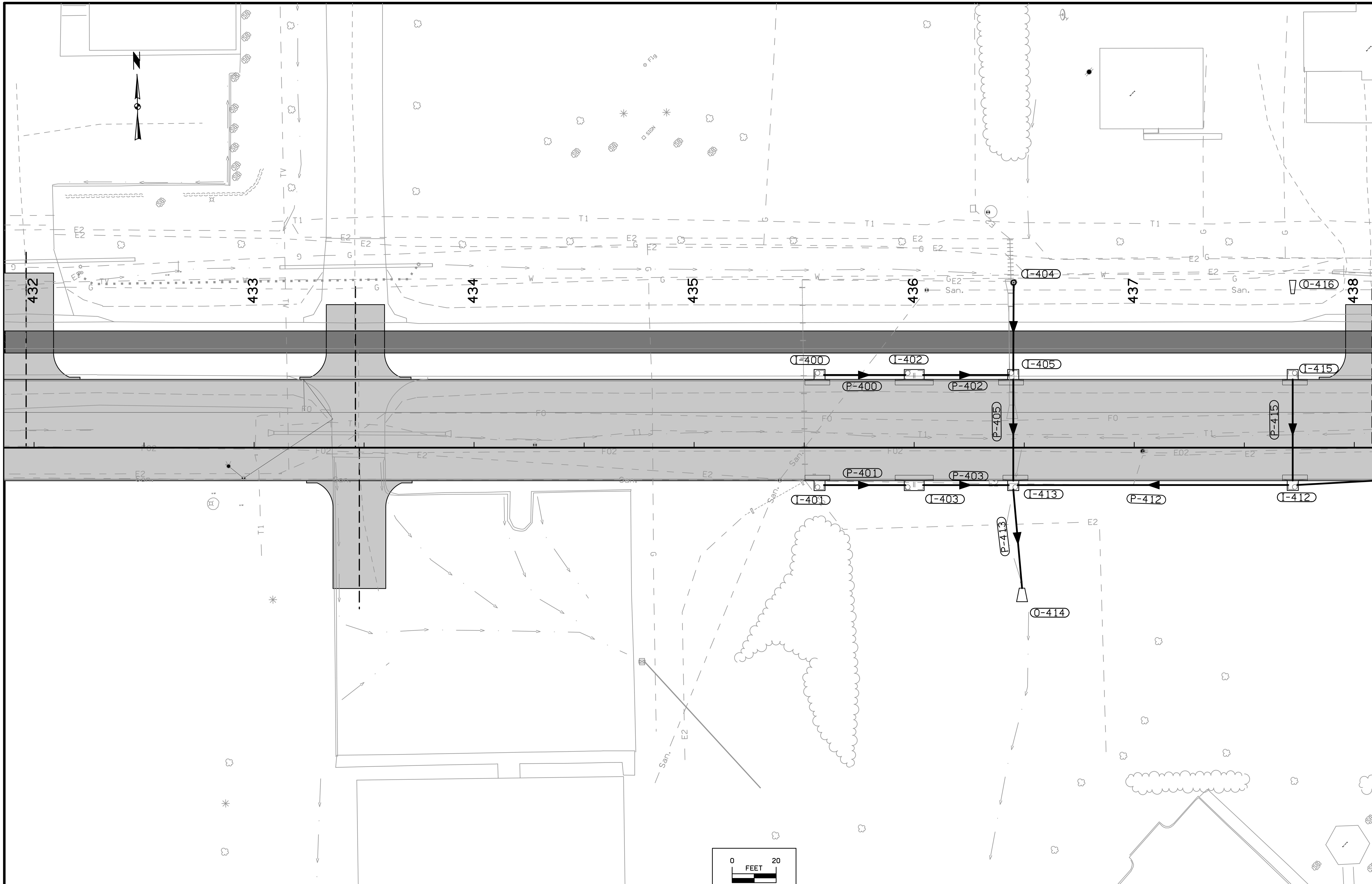

Lincoln TWP.
T-76N R-24W
SEC. 26
420
421
422
423
424
425
426
I-300
I-301
I-302
I-303
I-304
I-305
P-301
P-302
P-303
P-304
P-305
IA 92
(ML092)
San.
0 FEET 20



C	ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER	M.11



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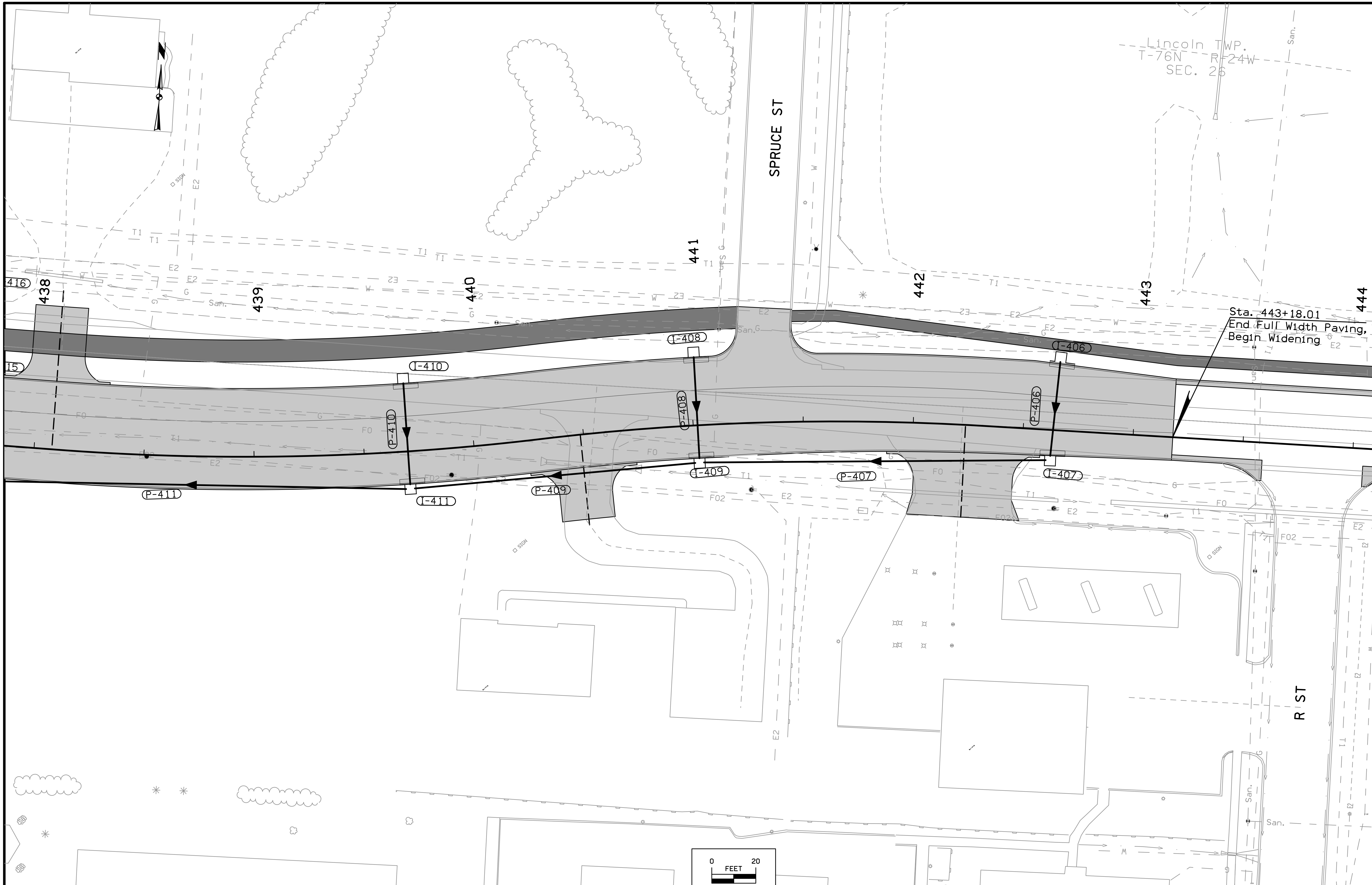
O-416
0 FEET 20



C | ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER M.13

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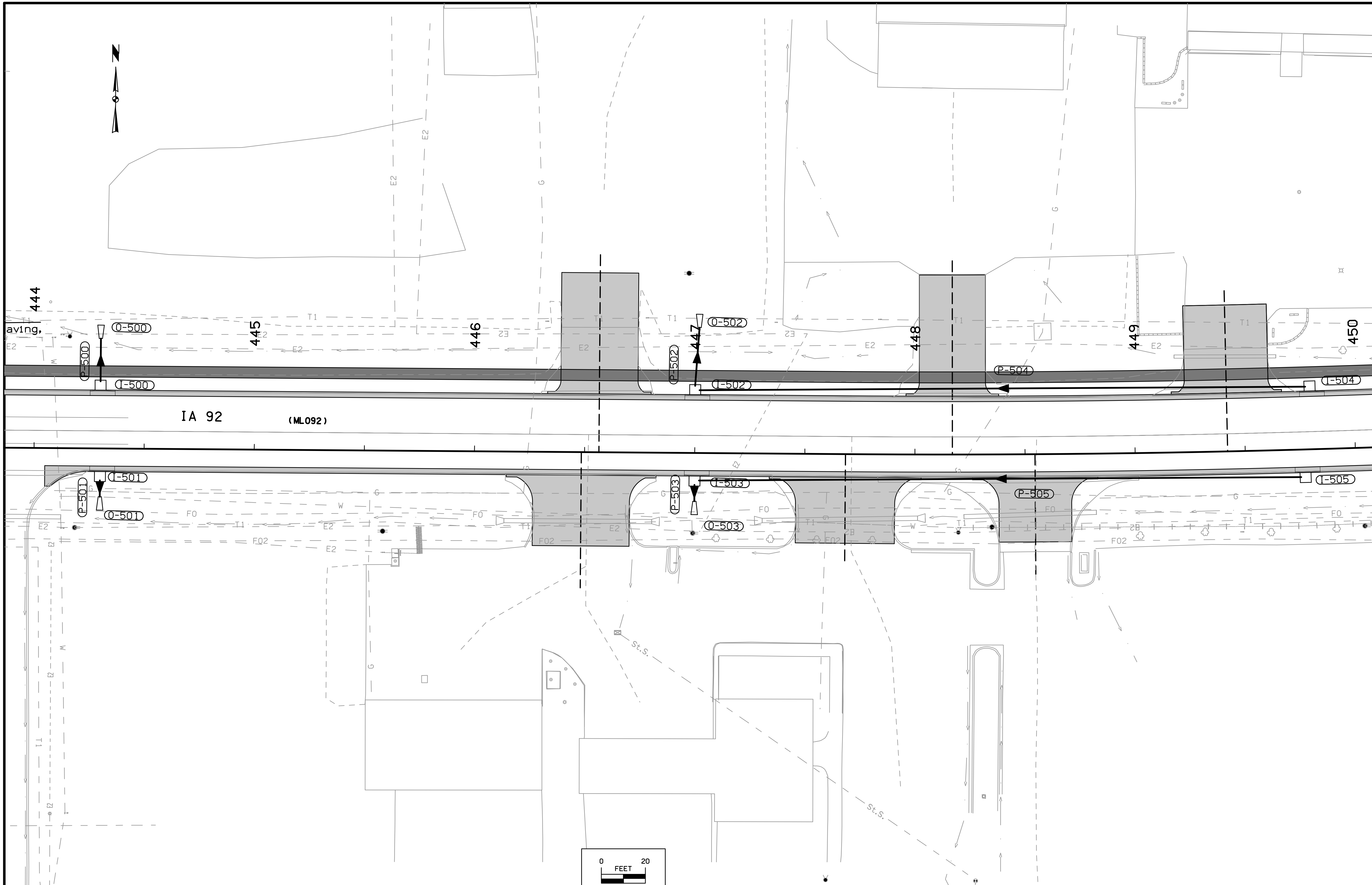

N
aving,
444
445
446
447
448
449
450
O-500
P-500
I-500
O-502
P-502
I-502
P-504
I-504
IA 92
(ML092)
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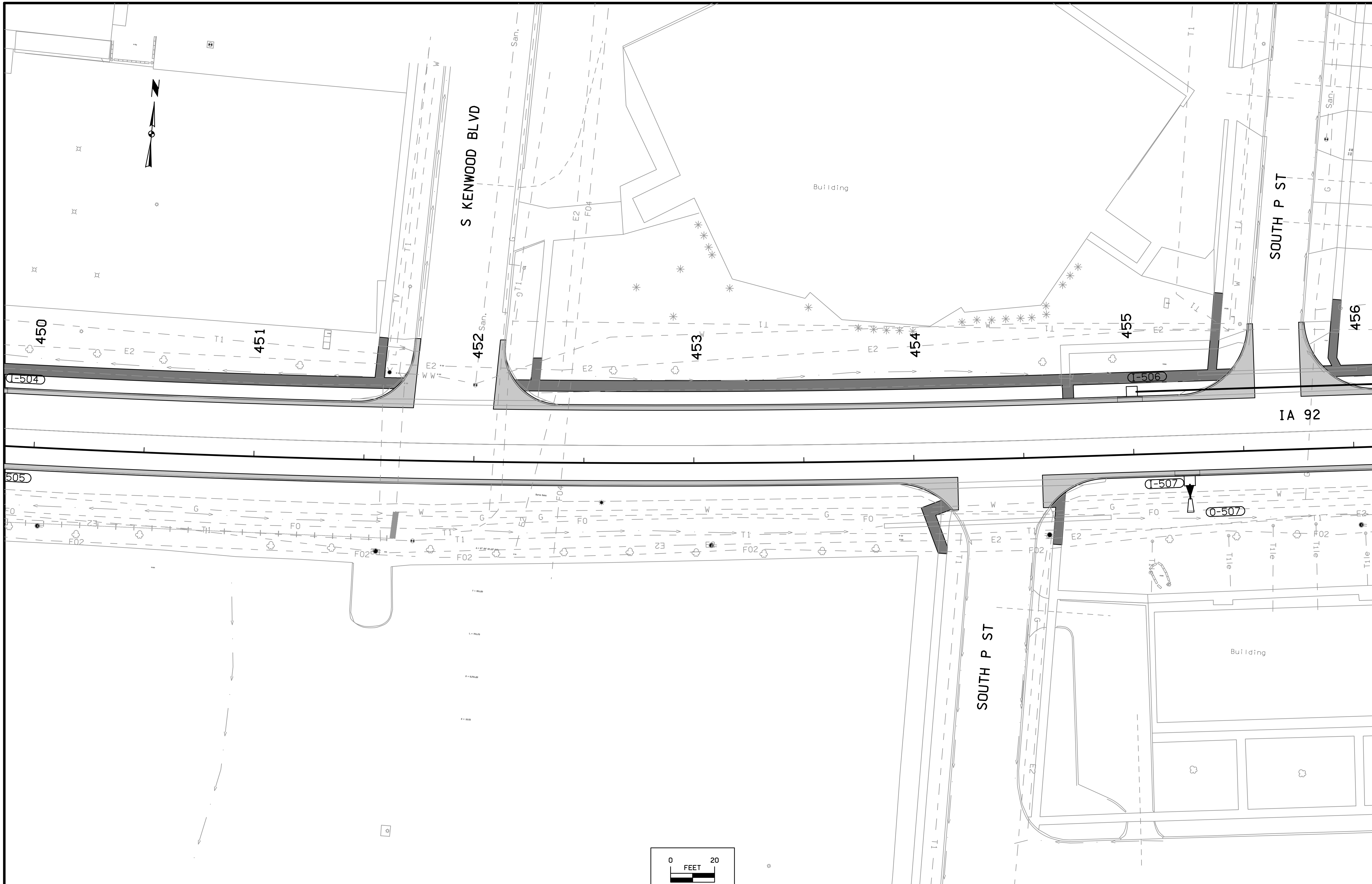
P-501
O-501
I-503
P-503
O-503
P-505
I-505
St.S.
0
FEET
20



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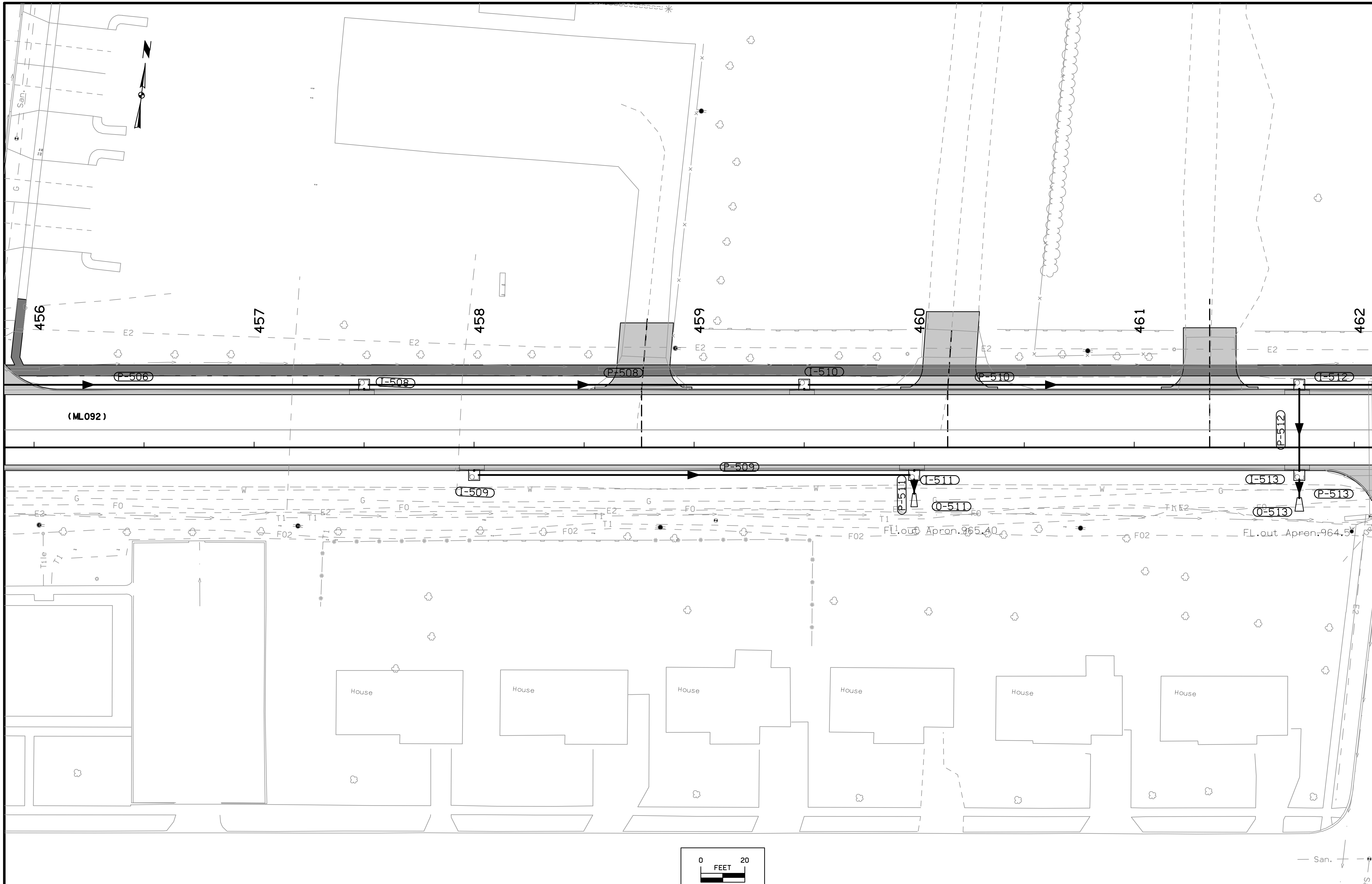

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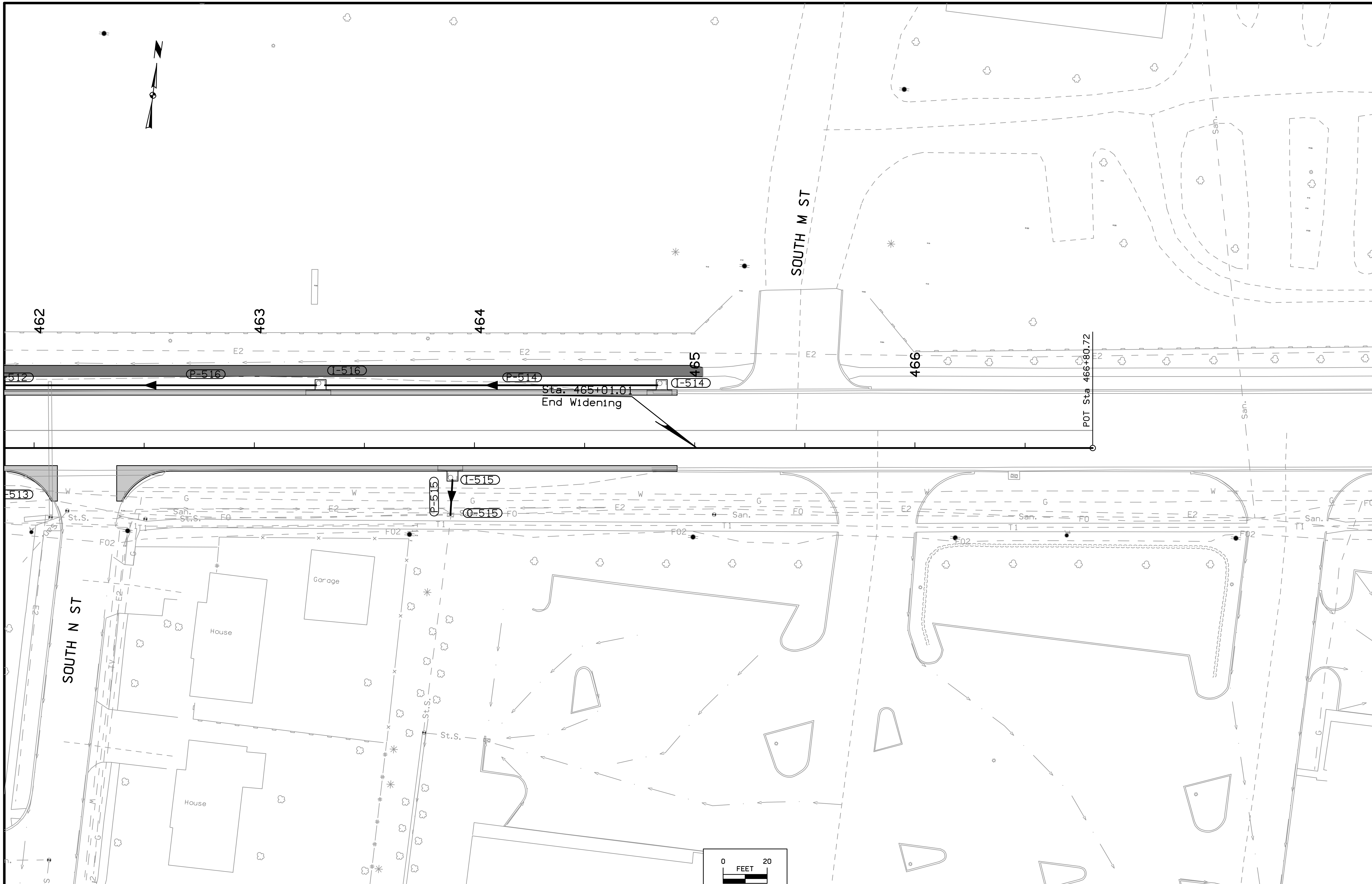
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463
464
465
466
SOUTH M ST
SOUTH N ST
Sta. 465+01.01
End Widening
POT Sta 466+80.72
P-516
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P-515
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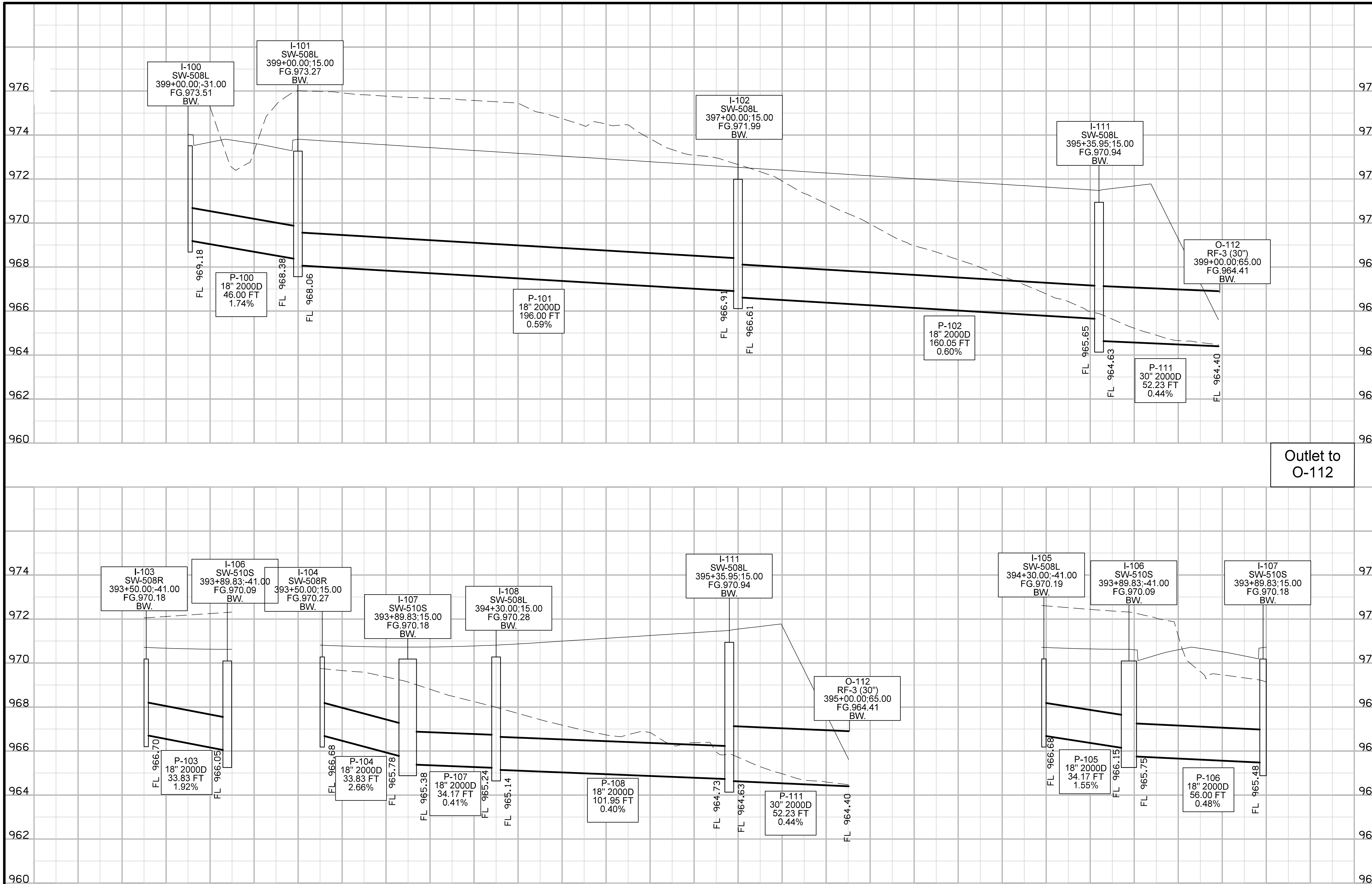
Garage
House
House
0 FEET 20



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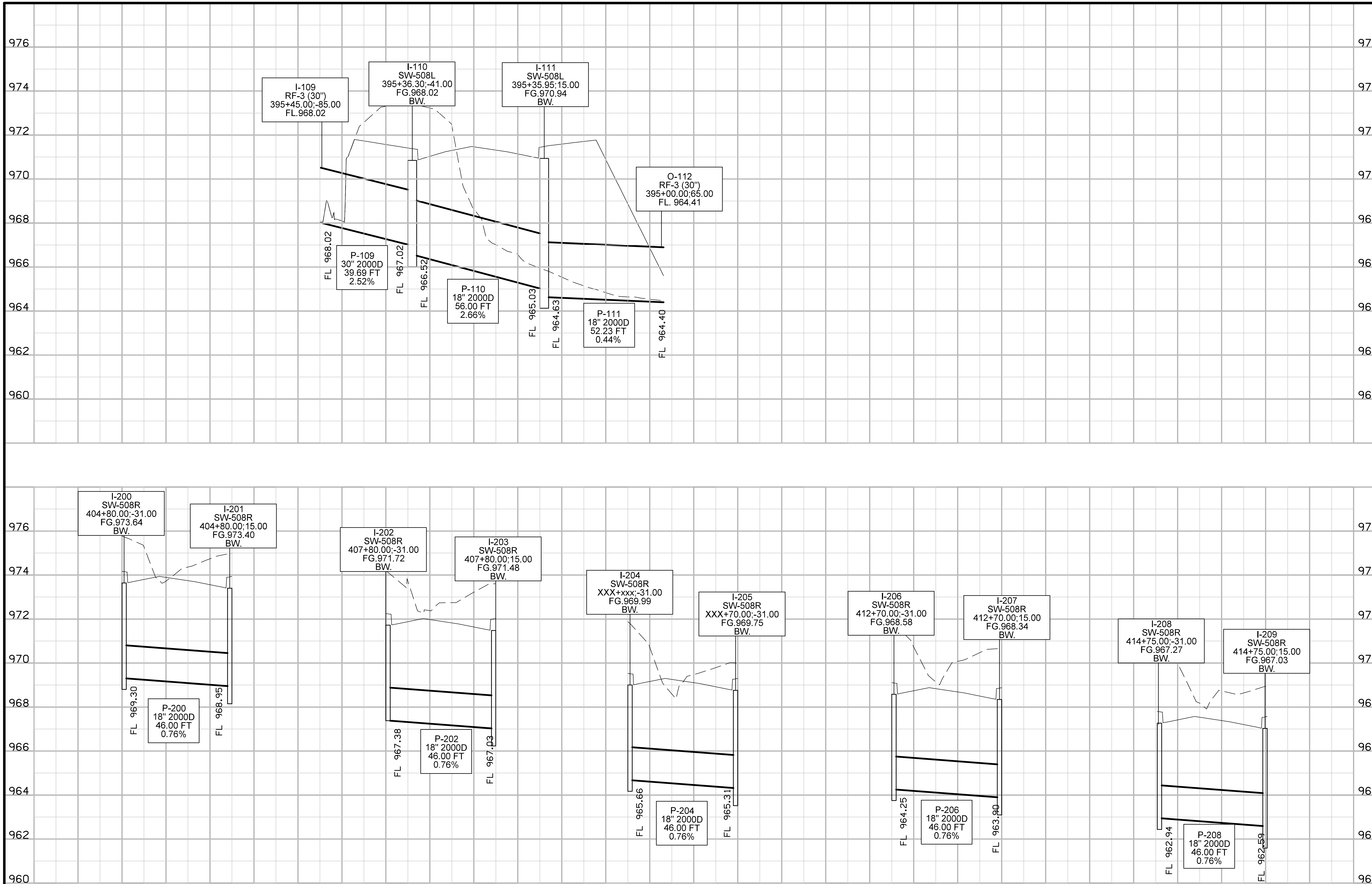

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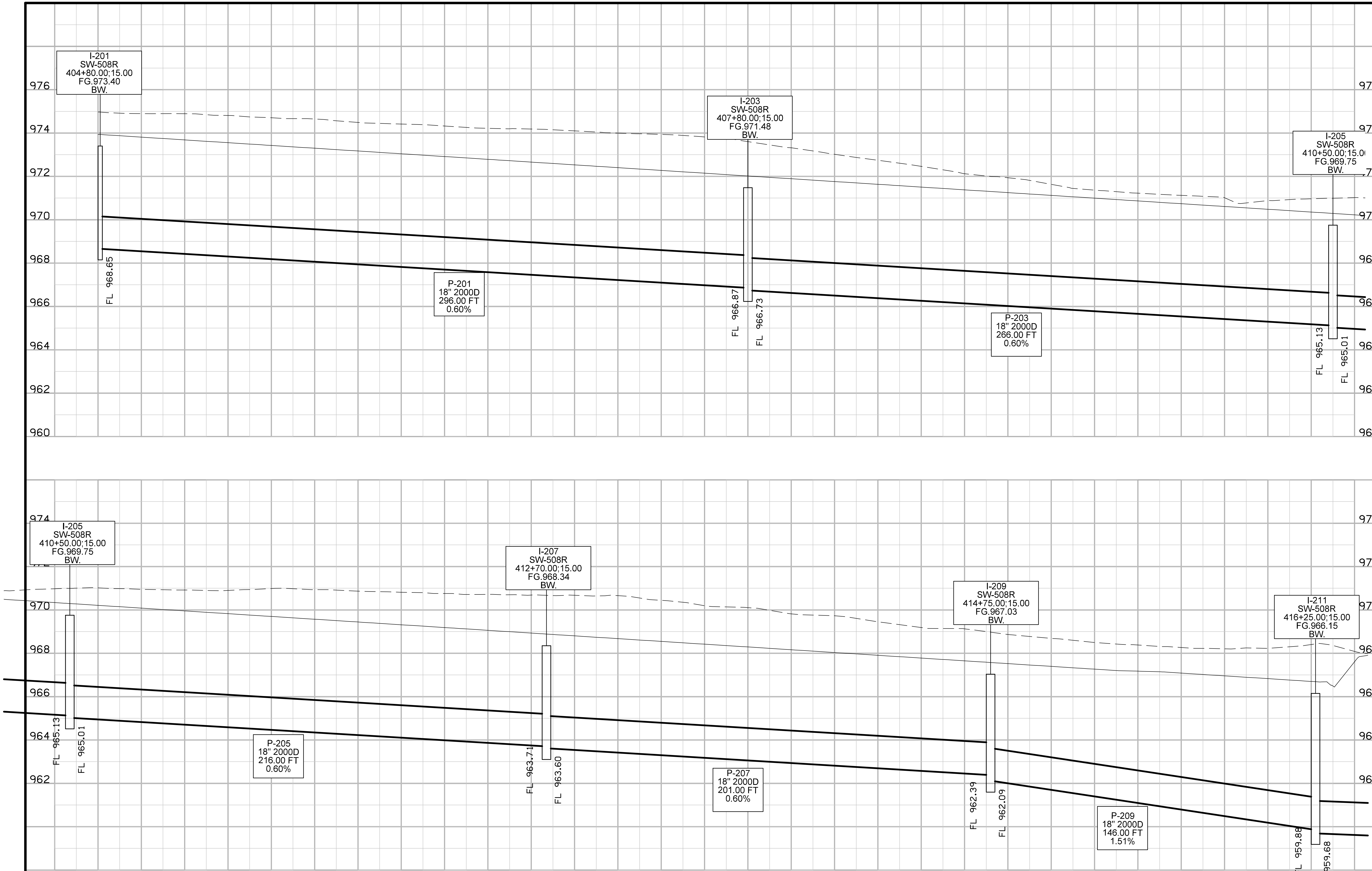

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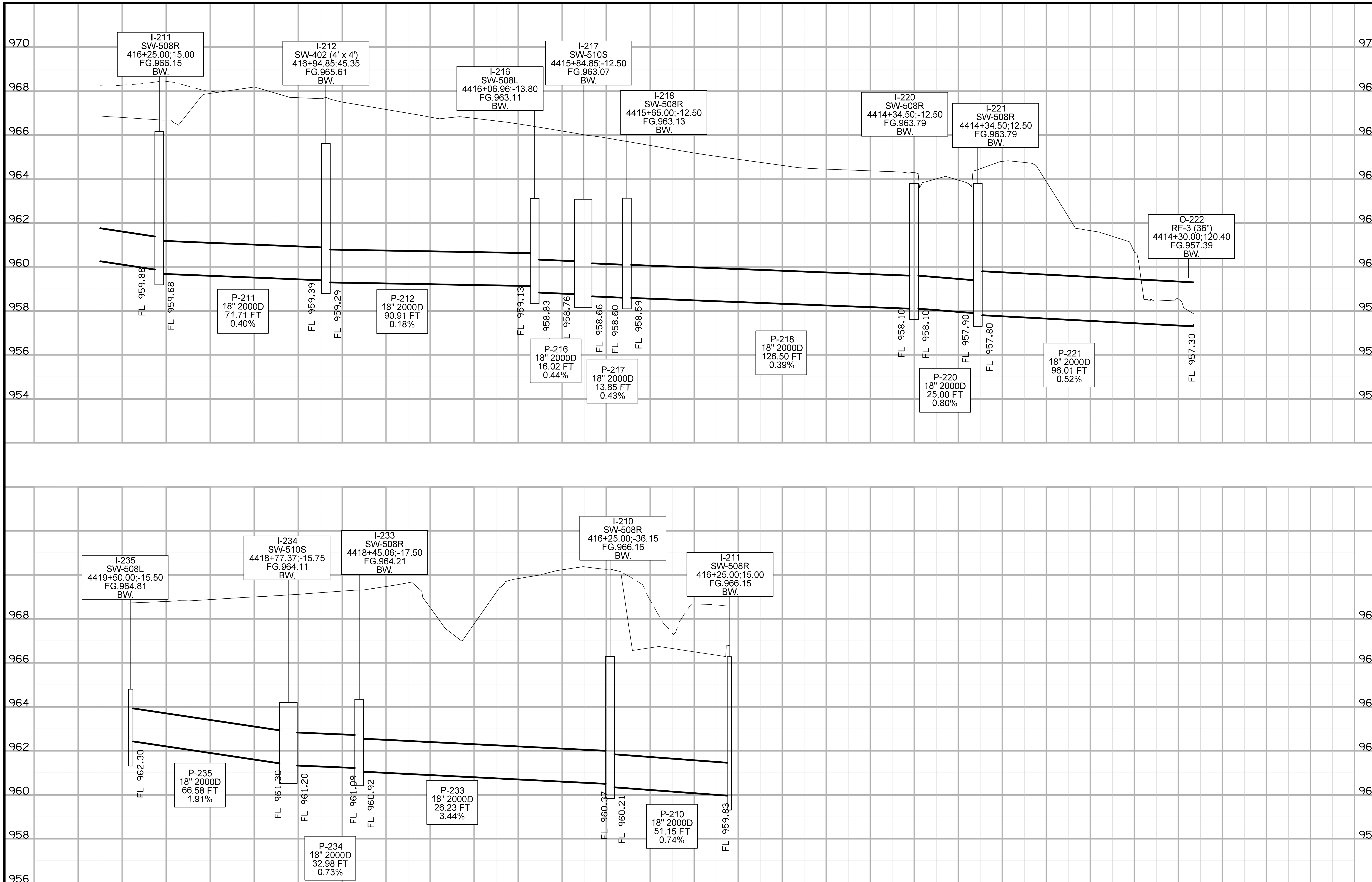

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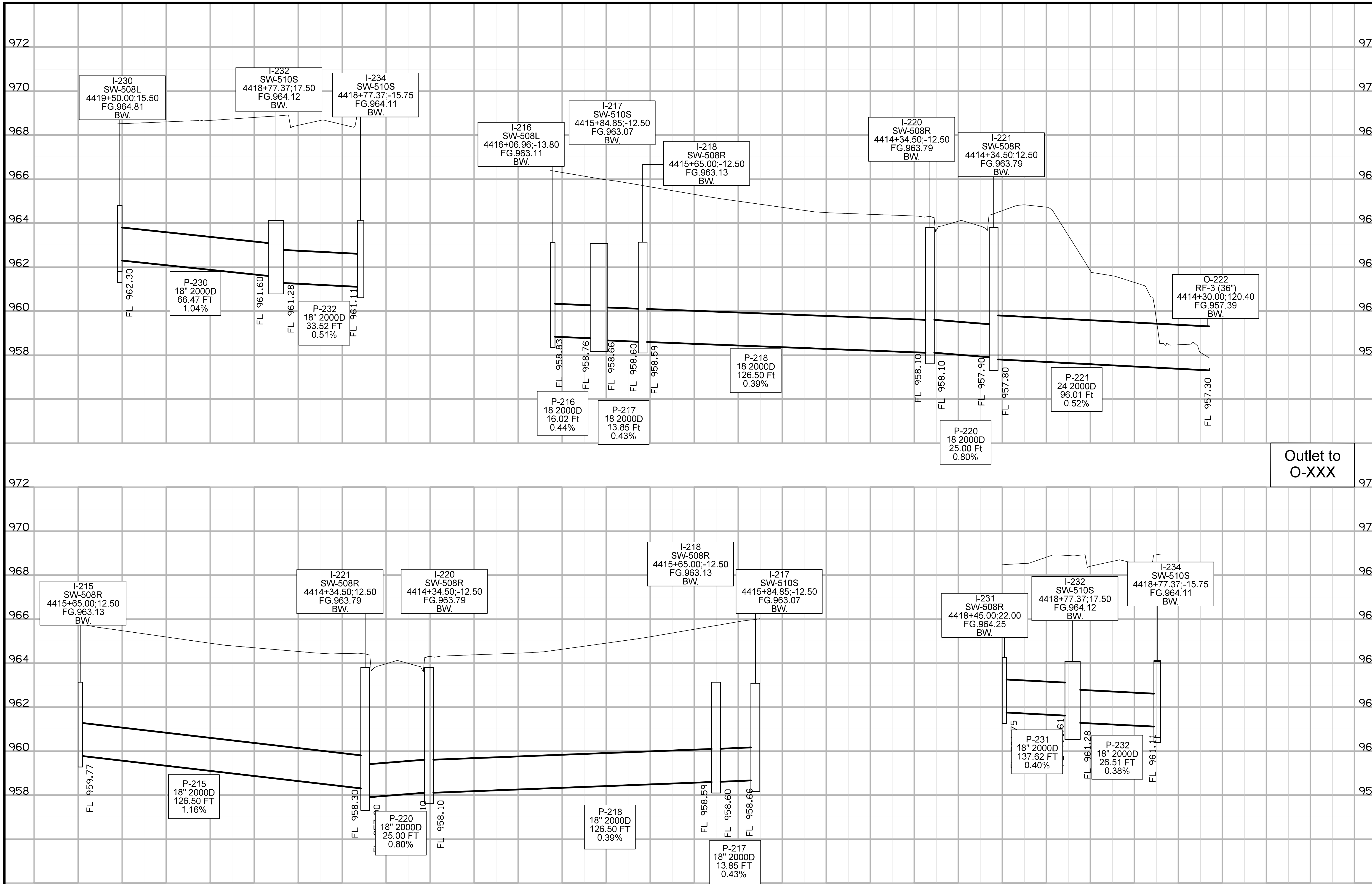

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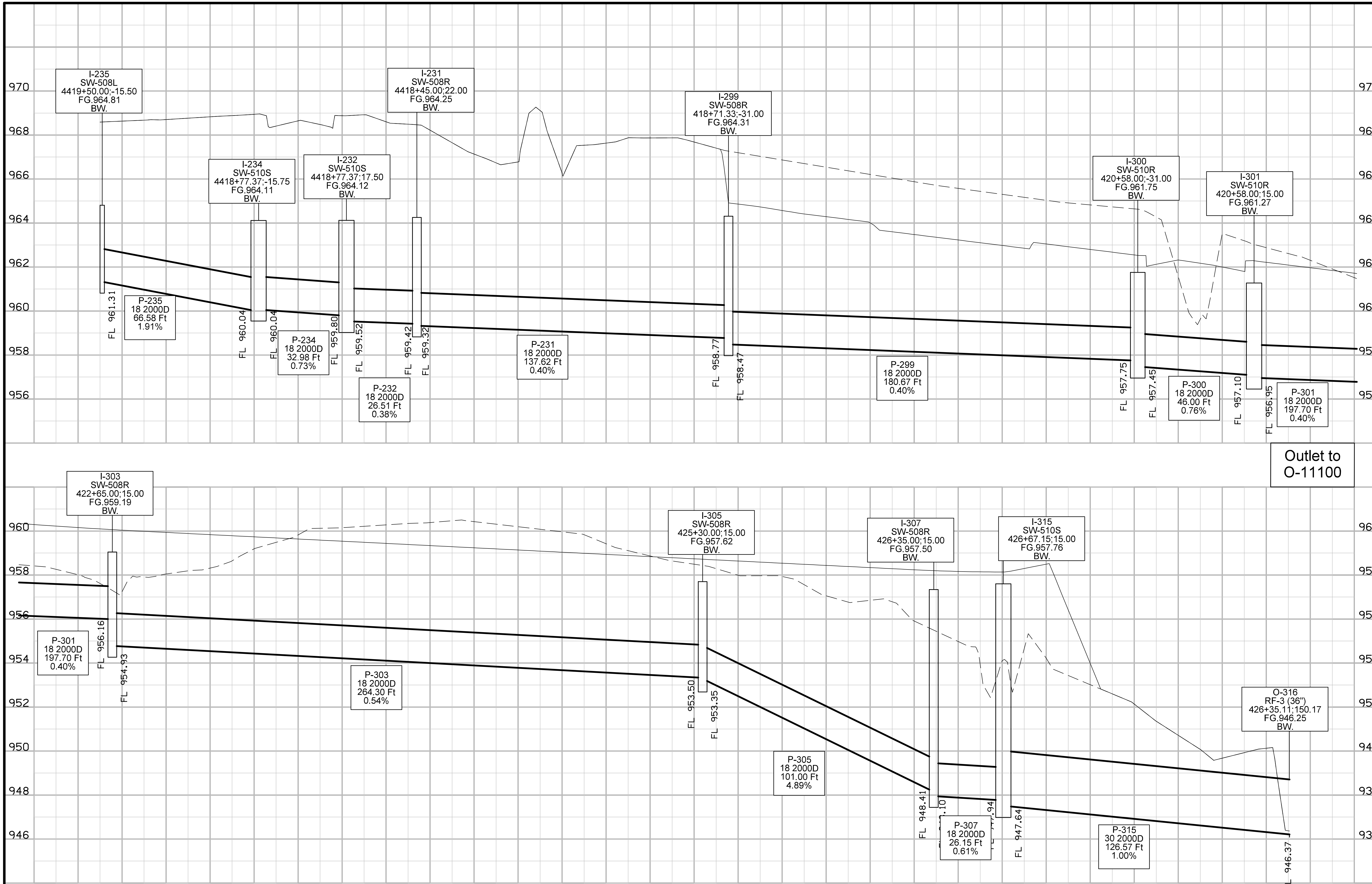

C	ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER M.23

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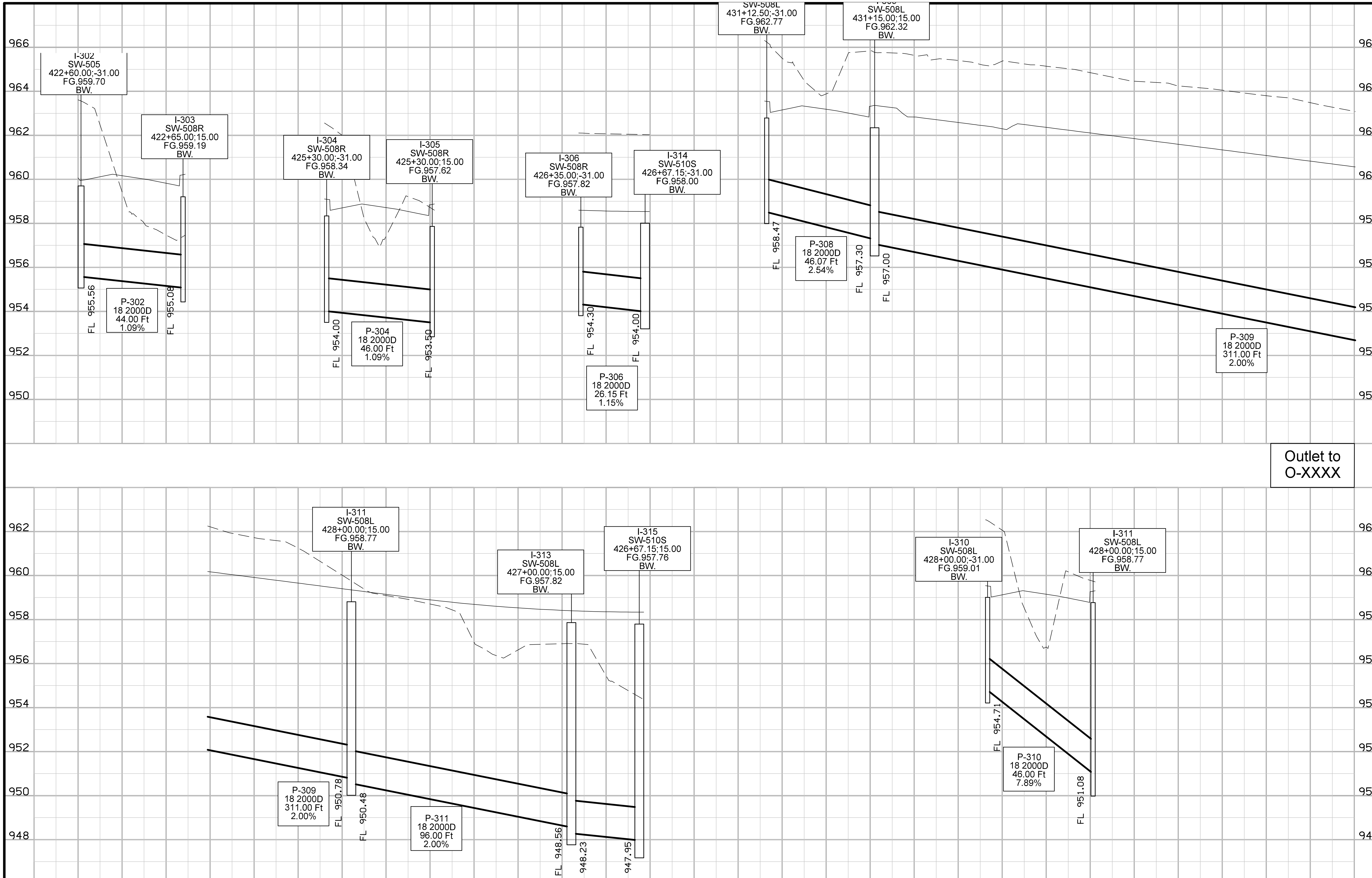
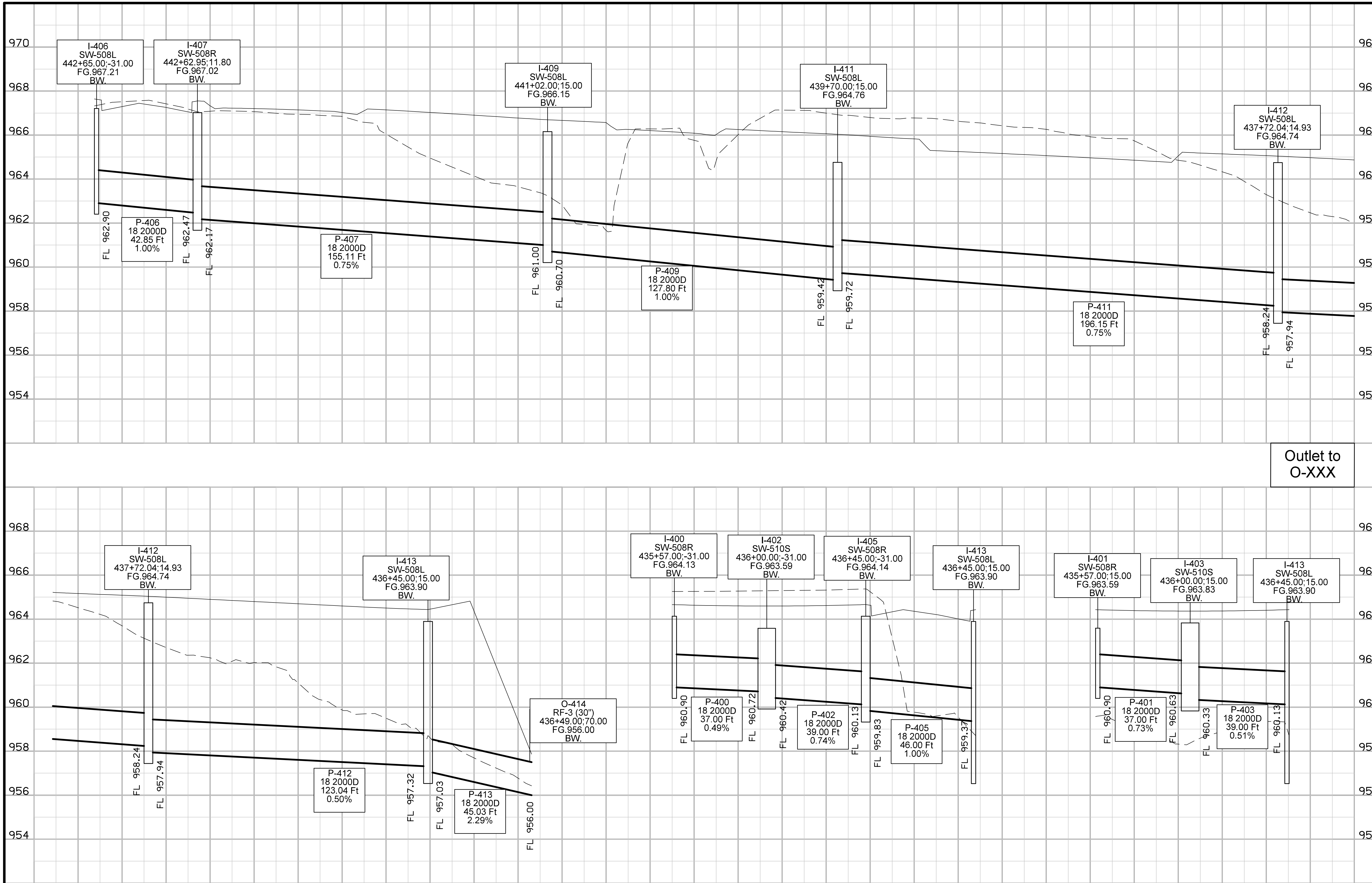

966
964
962
960
958
956
954
952
950
I-302
SW-505
422+60.00;-31.00
FG.959.70
BW.
I-303
SW-508R
422+65.00;15.00
FG.959.19
BW.
FL 955.56
FL 955.08
P-302
18 2000D
44.00 Ft
1.09%
I-304
SW-508R
425+30.00;-31.00
FG.958.34
BW.
I-305
SW-508R
425+30.00;15.00
FG.957.62
BW.
FL 954.00
FL 953.50
P-304
18 2000D
46.00 Ft
1.09%
I-306
SW-508R
426+35.00;-31.00
FG.957.82
BW.
I-314
SW-510S
426+67.15;-31.00
FG.958.00
BW.
FL 954.30
FL 954.00
P-306
18 2000D
26.15 Ft
1.15%
SW-508L
431+12.50;-31.00
FG.962.77
BW.
SW-508L
431+15.00;15.00
FG.962.32
BW.
FL 958.47
FL 957.30
FL 957.00
P-308
18 2000D
46.07 Ft
2.54%
P-309
18 2000D
311.00 Ft
2.00%
Outlet to
O-XXXX
962
960
958
956
954
952
950
948
I-311
SW-508L
428+00.00;15.00
FG.958.77
BW.
I-313
SW-508L
427+00.00;15.00
FG.957.82
BW.
I-315
SW-510S
426+67.15;15.00
FG.957.76
BW.
P-309
18 2000D
311.00 Ft
2.00%
FL 950.78
FL 950.48
P-311
18 2000D
96.00 Ft
2.00%
FL 948.56
948.23
947.95
I-310
SW-508L
428+00.00;-31.00
FG.959.01
BW.
I-311
SW-508L
428+00.00;15.00
FG.958.77
BW.
FL 954.71
P-310
18 2000D
46.00 Ft
7.89%
FL 951.08



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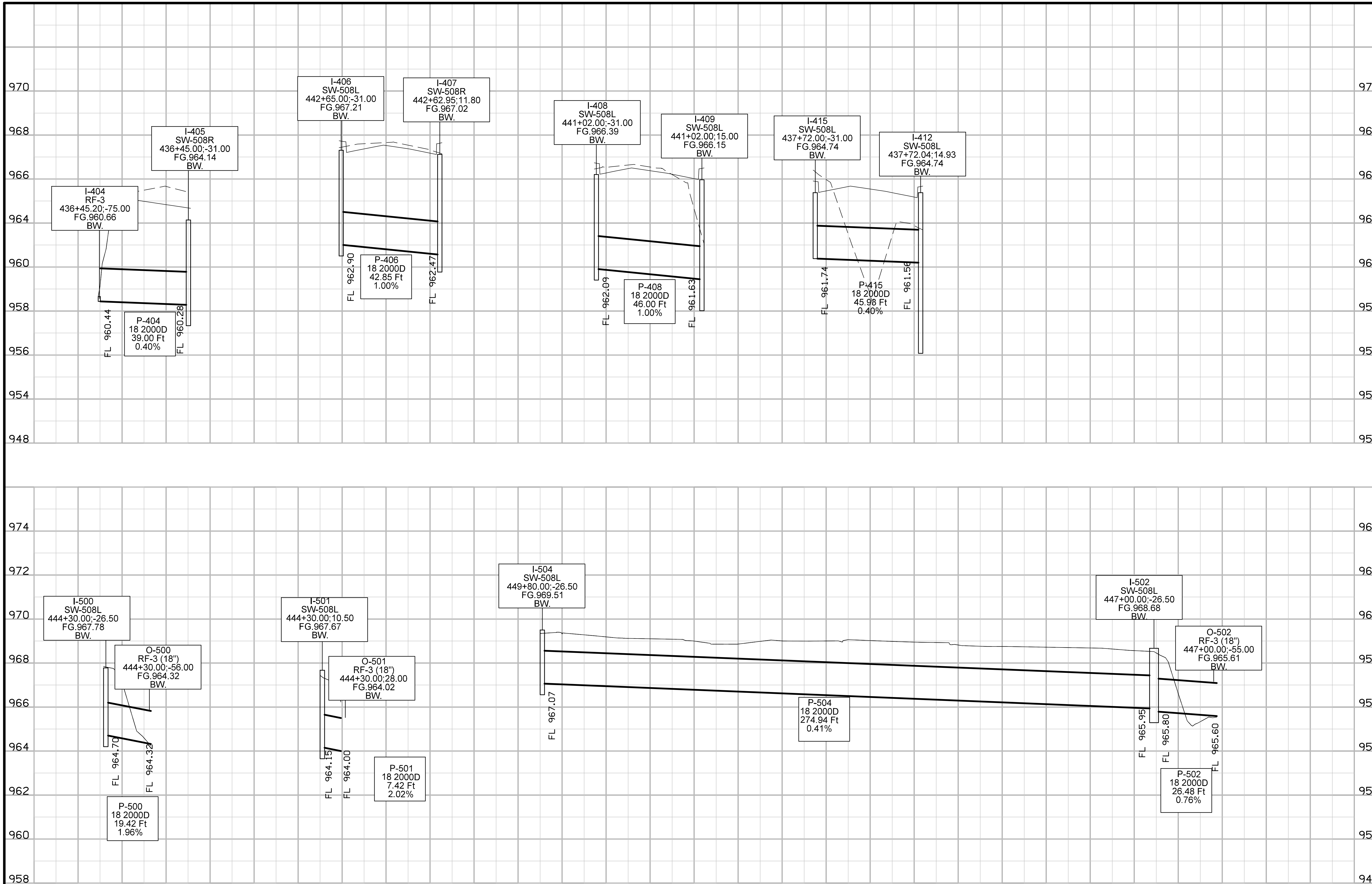

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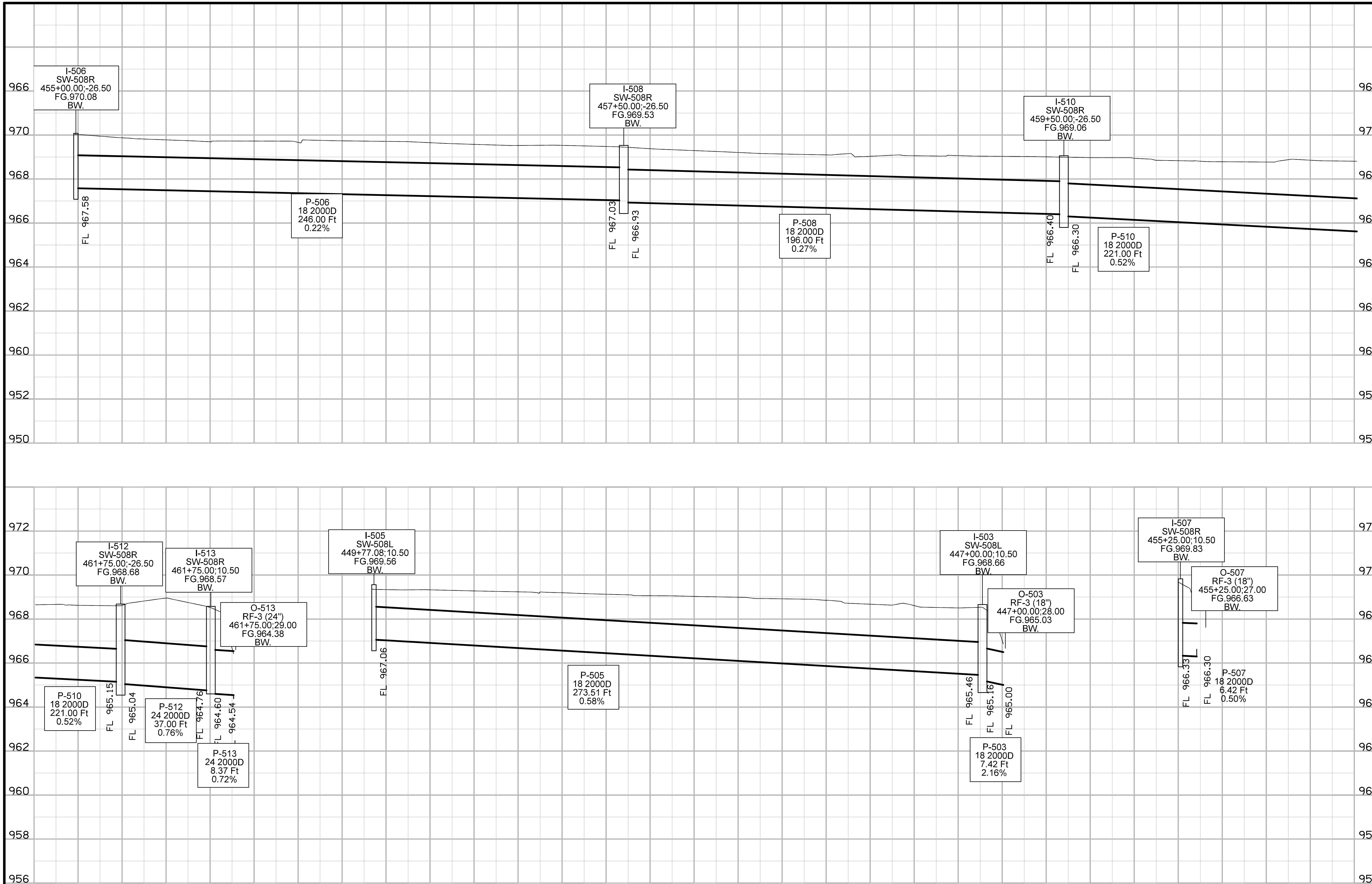

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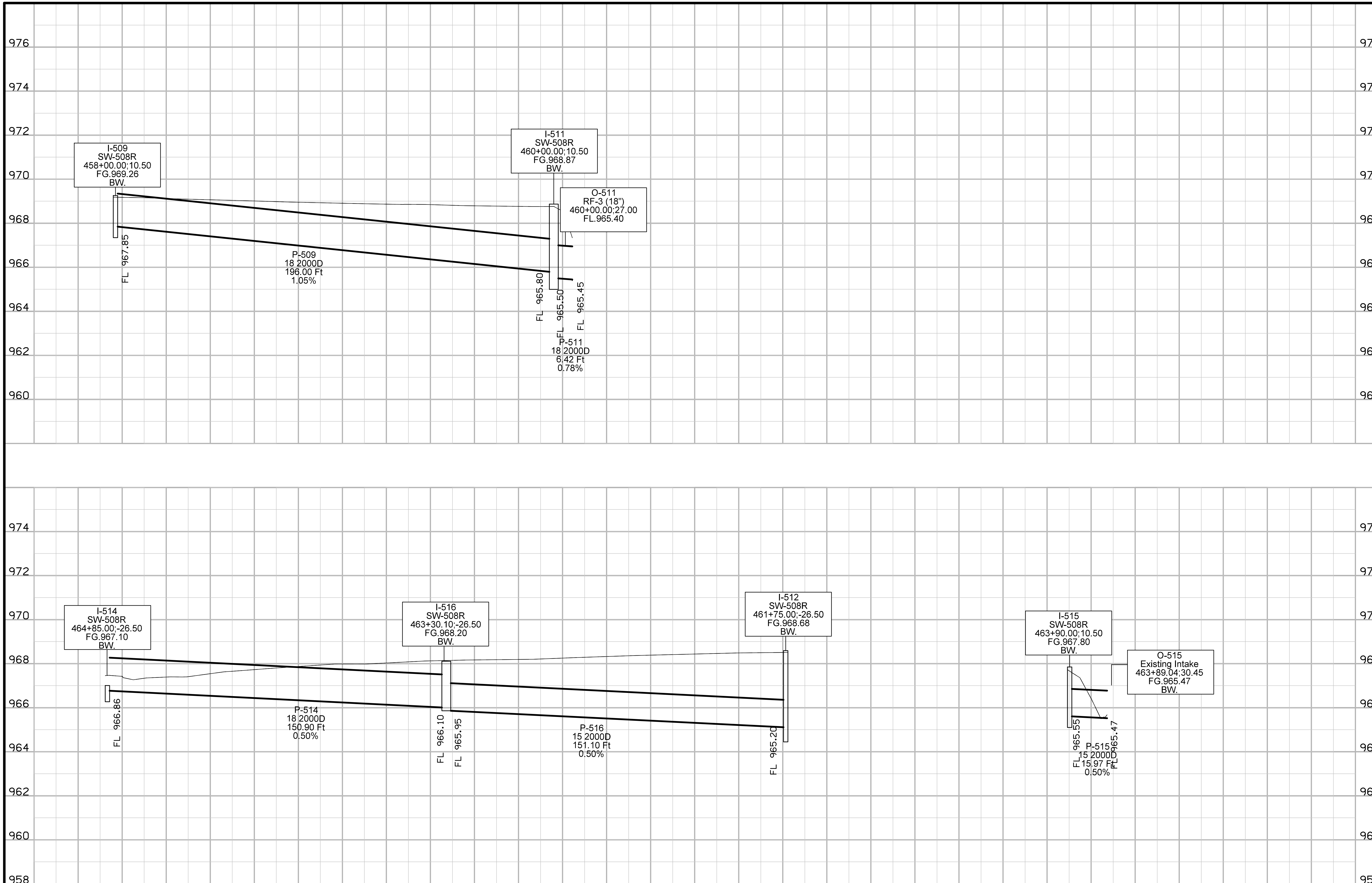


C	ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER M.28

1:39:28 PM 11/19/2013 dta pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9109201004\Design\91092051M02.sht

SURVEY SYMBOLS

UTILITY LEGEND

PLAN VIEW COLOR LEGEND OF SOILS SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Topographic Features and Labels
Purple (Halo)	(15)	Backslope Drains
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
SHADING	**Design Color No.**	
Brown, Light	(236)	Core Out

PROFILE VIEW COLOR LEGEND OF SOILS SHEETS

LINEWORK	Design Color No.	
Blue	(1)	Proposed Alignment, Stationing, and Alignment Annotation
Green	(2)	Existing Ground Line Profile
Green, Med	(227)	Class 10 Topsoil
Green, M.Light	(226)	Unsuitable A Topsoil
Green, Light	(225)	Unsuitable B Topsoil
Green, V.Light	(224)	Unsuitable C Topsoil
Orange	(6)	Loam
Brown, Dark	(238)	Class 10
Brown, Med	(237)	Sand
Red	(3)	Unsuitable A
Pink, Dark	(13)	Unsuitable B
Pink	(11)	Unsuitable C
Red	(3)	Shale
Red	(3)	Waste
Gray, Light	(48)	Broken and Weathered Rock
Gray, Med	(80)	Rock
Gray, V.Dark	(128)	Boulders

PATTERN AND SYMBOL LEGEND OF SOILS SHEETS

Soils Book No.________________

Date(s) Drilled________________

	Treatment	Unsuitable A Topsoil
Water	Sand Blanket	Unsuitable B Topsoil
Dry	Soil Remediation Area	Unsuitable C Topsoil
Sample	Select Soil	Unsuitable A
Plugged	Select Sand	Unsuitable B
Moisture	Shale	Unsuitable C
Shelby	Broken and Weathered Rock	Sandy Soil
Blow Count	Rock	Boulders
Dens. Core	Sandstone	

Reference Point

Station

Survey Line

Section Corner

Ground Line Intercept

Saw Cut

Guardrail

Clearing & Grubbing Area

Pavement Removal

RIGHT-OF-WAY LEGEND

Proposed Right-of-Way

Existing and Proposed Right-of-Way

Easement and Existing Right-of-Way

Borrow

Easement (Temporary)

Easement

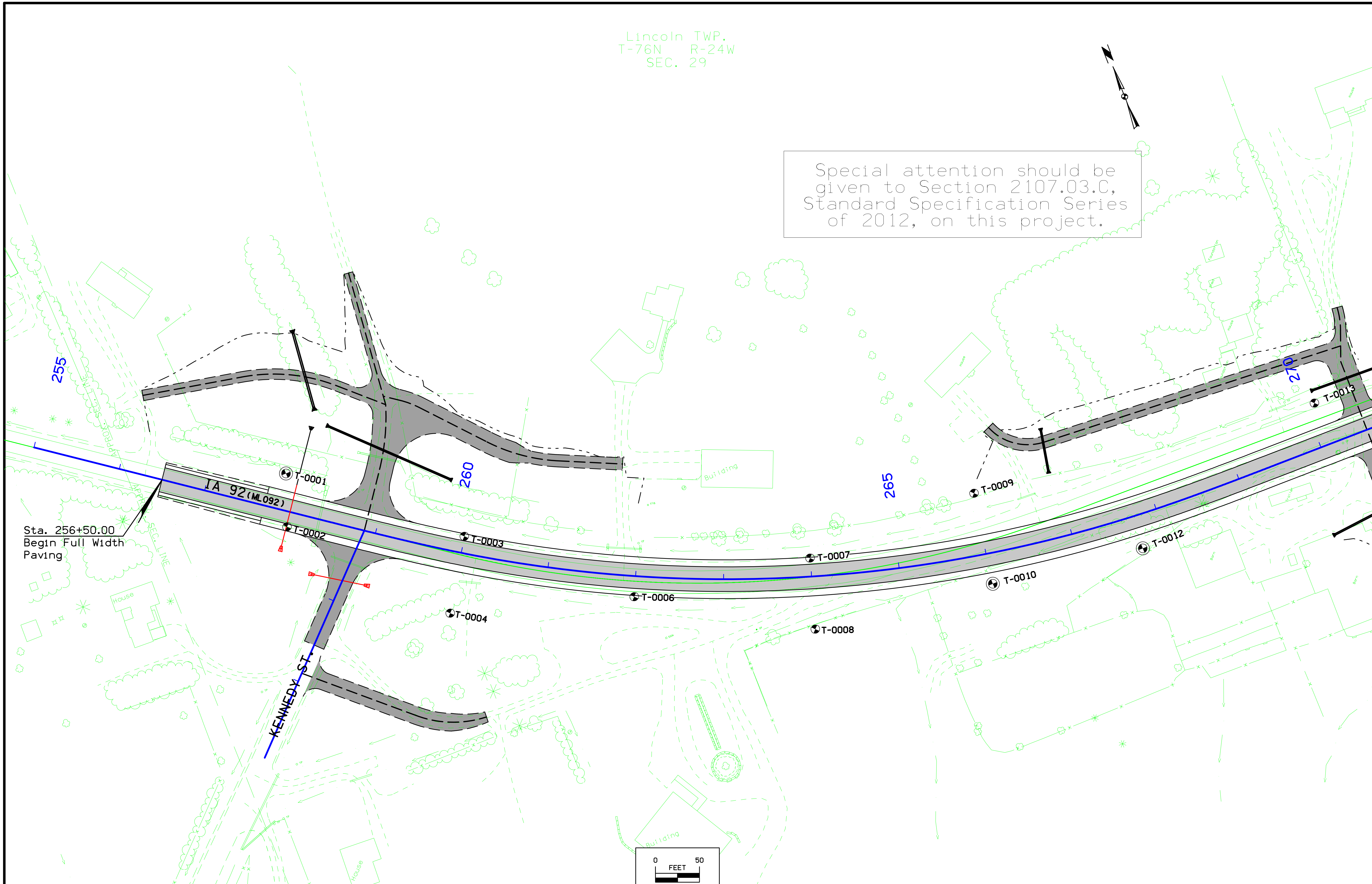
Excess

A/C Access Control

NOTE: Sounding and test boring data shown in the plans were accumulated for designing and estimating purposes. Their appearance on the plans does not constitute a guarantee that conditions other than those indicated will be encountered. Details and notes shown elsewhere shall be used for roadway and structure construction.

SOILS LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES Q & R)



ENGLISH	IOWA DOT	DESIGN TEAM Stanley\Knight	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER Q.2

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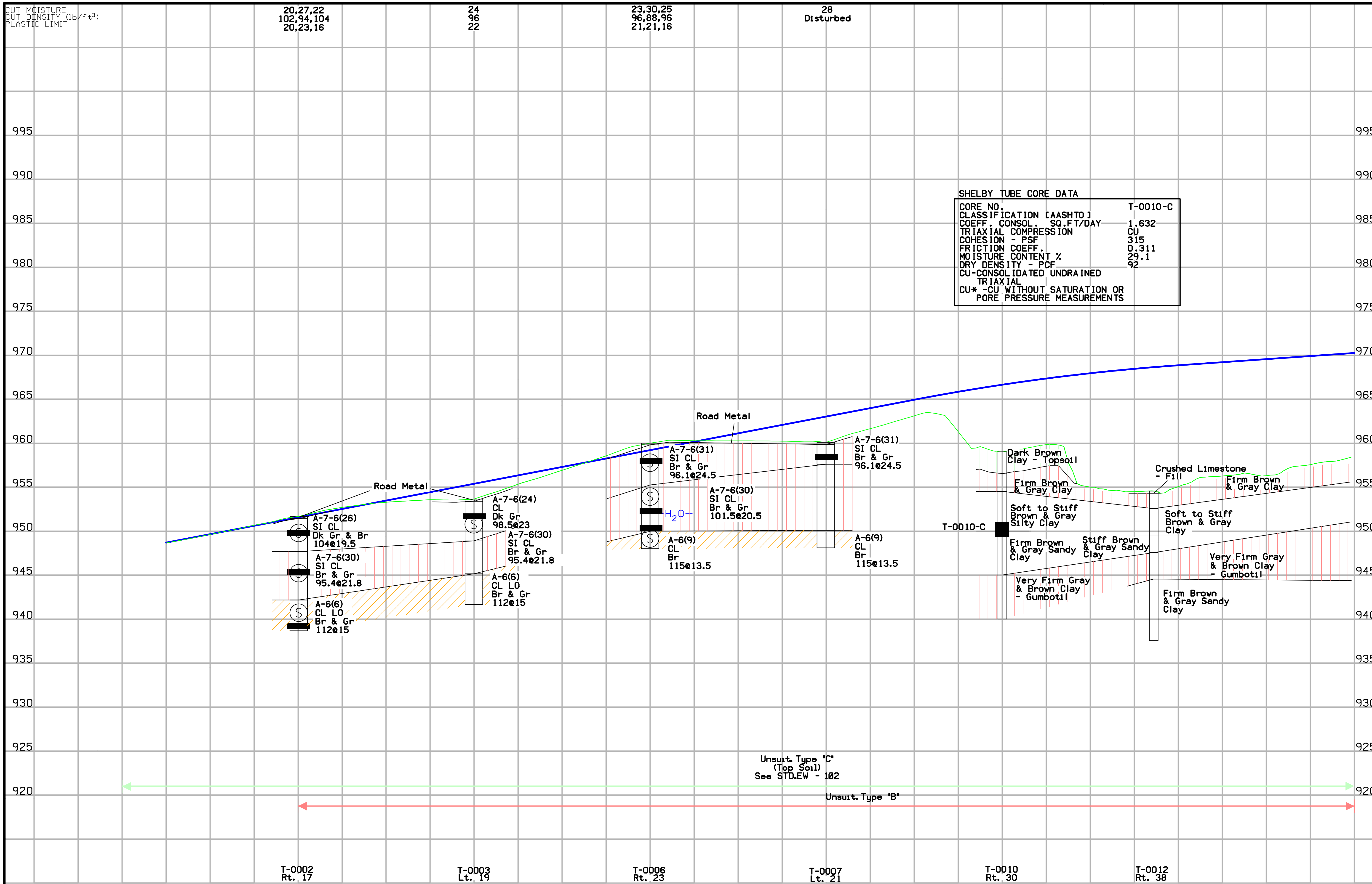

ENGLISH	IOWA DOT	DESIGN TEAM Stanley\Knight		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER Q.3

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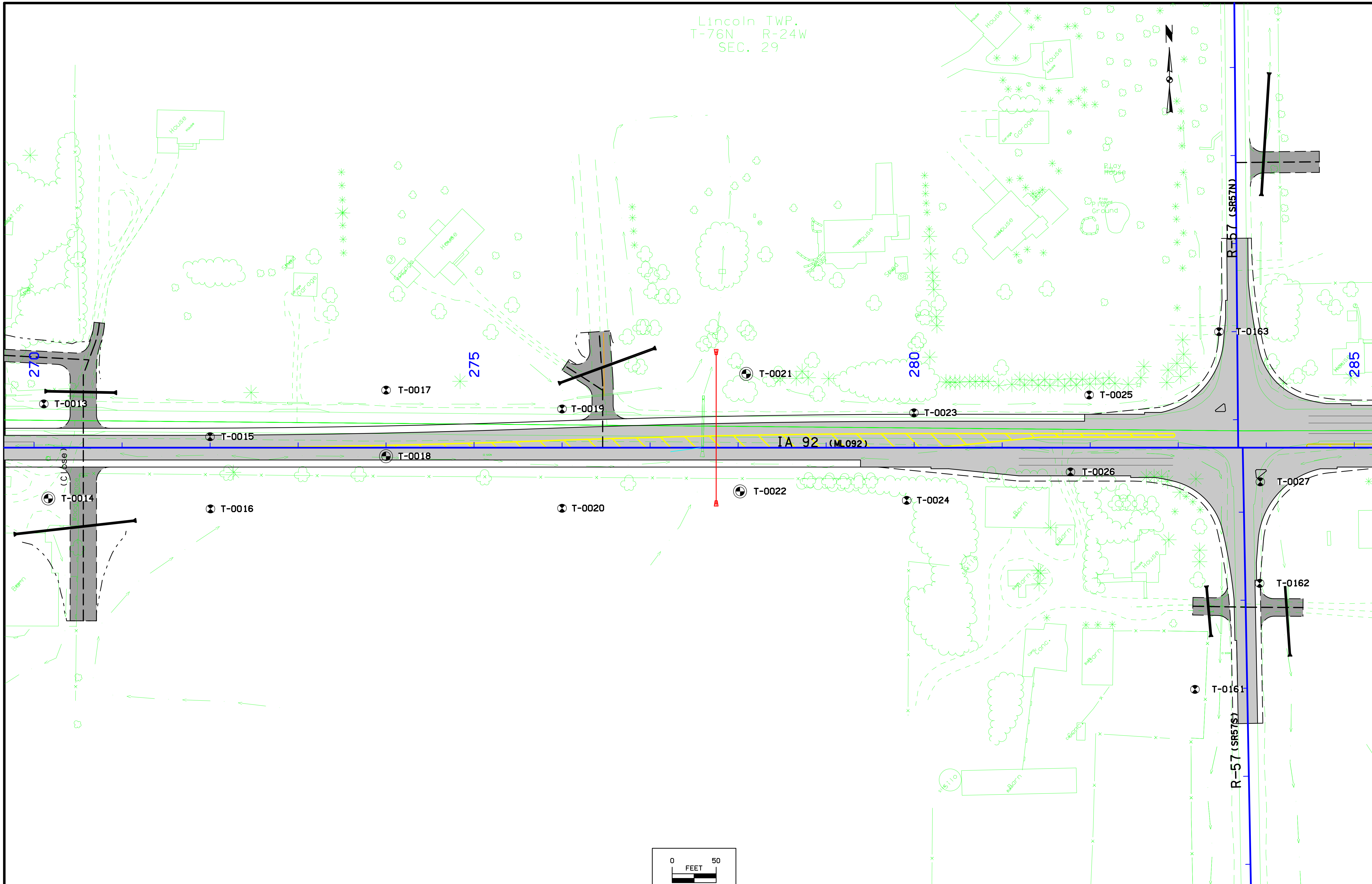

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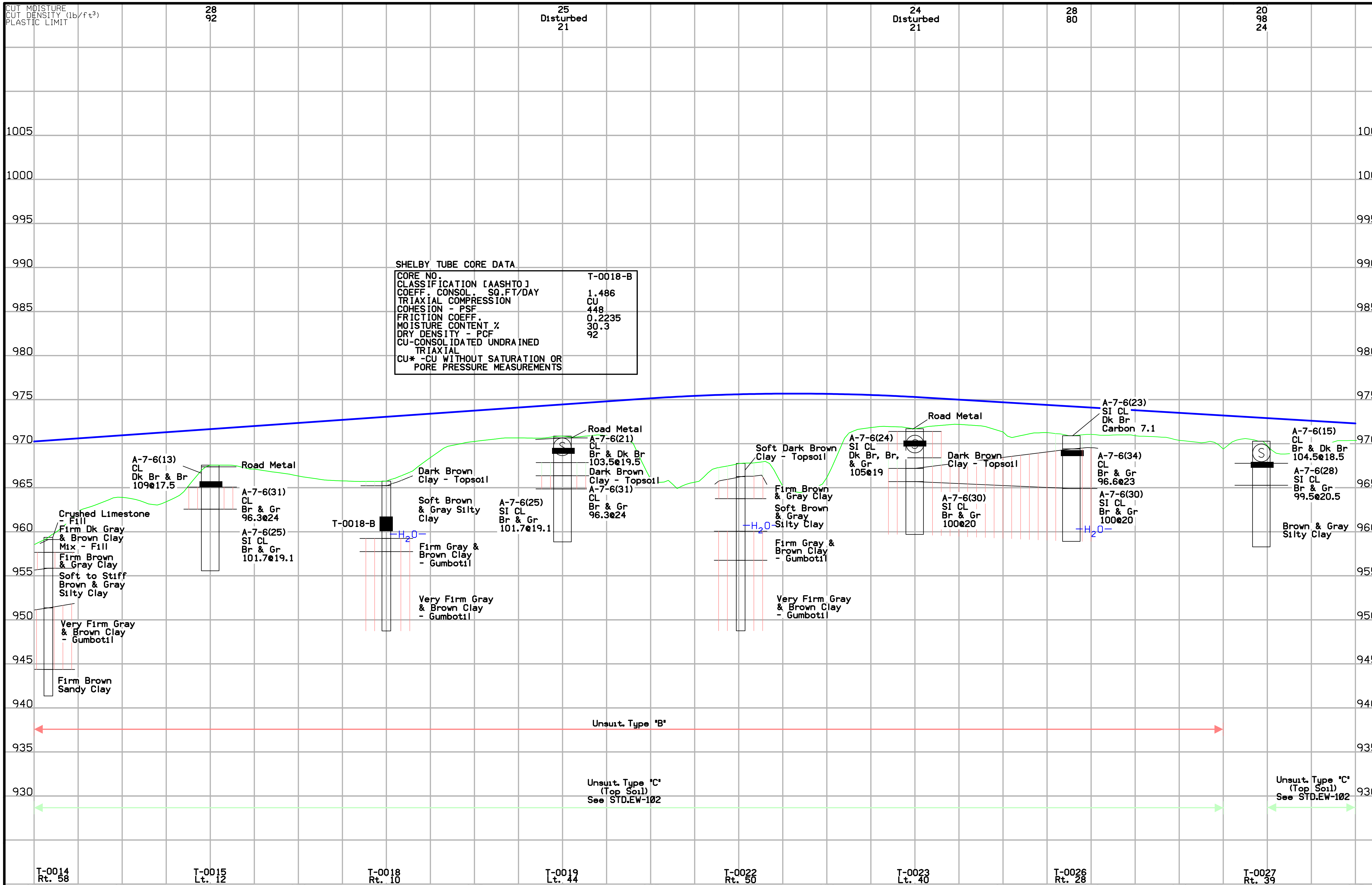
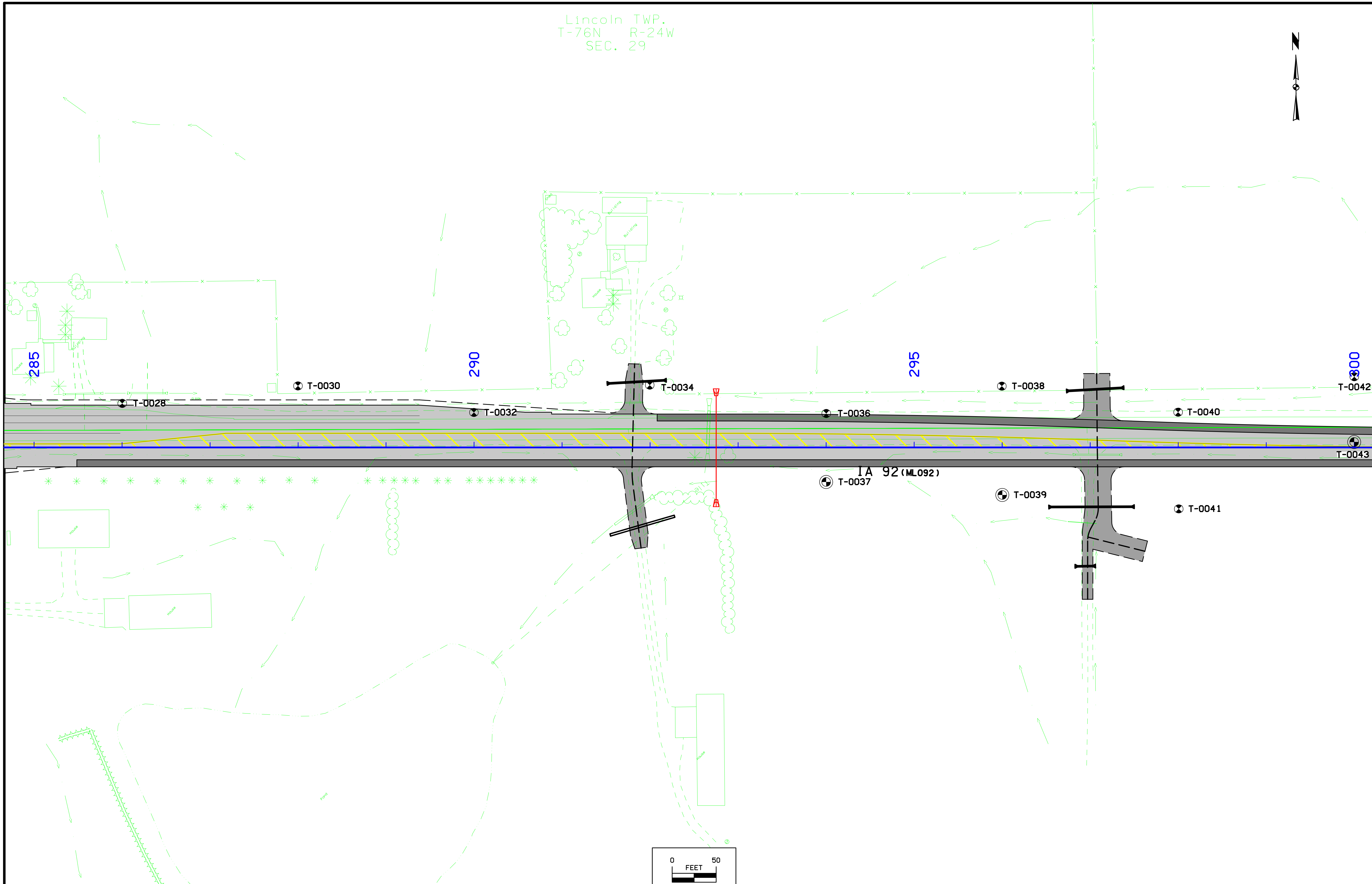


SHELBY TUBE CORE DATA

CORE NO.	T-0018-B
CLASSIFICATION [AASHTO]	
COEFF. CONSOL. SQ.FT/DAY	1.486
TRIAXIAL COMPRESSION	CU
COHESION - PSF	448
FRICTION COEFF.	0.2235
MOISTURE CONTENT %	30.3
DRY DENSITY - PCF	92
CU-CONSOLIDATED UNDRAINED TRIAXIAL	
CU* -CU WITHOUT SATURATION OR PORE PRESSURE MEASUREMENTS	

ENGLISH | IOWA DOT | DESIGN TEAM Stanley\Knight | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER Q.5



ENGLISH	IOWA DOT	DESIGN TEAM Stanley\Knight	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER Q.6

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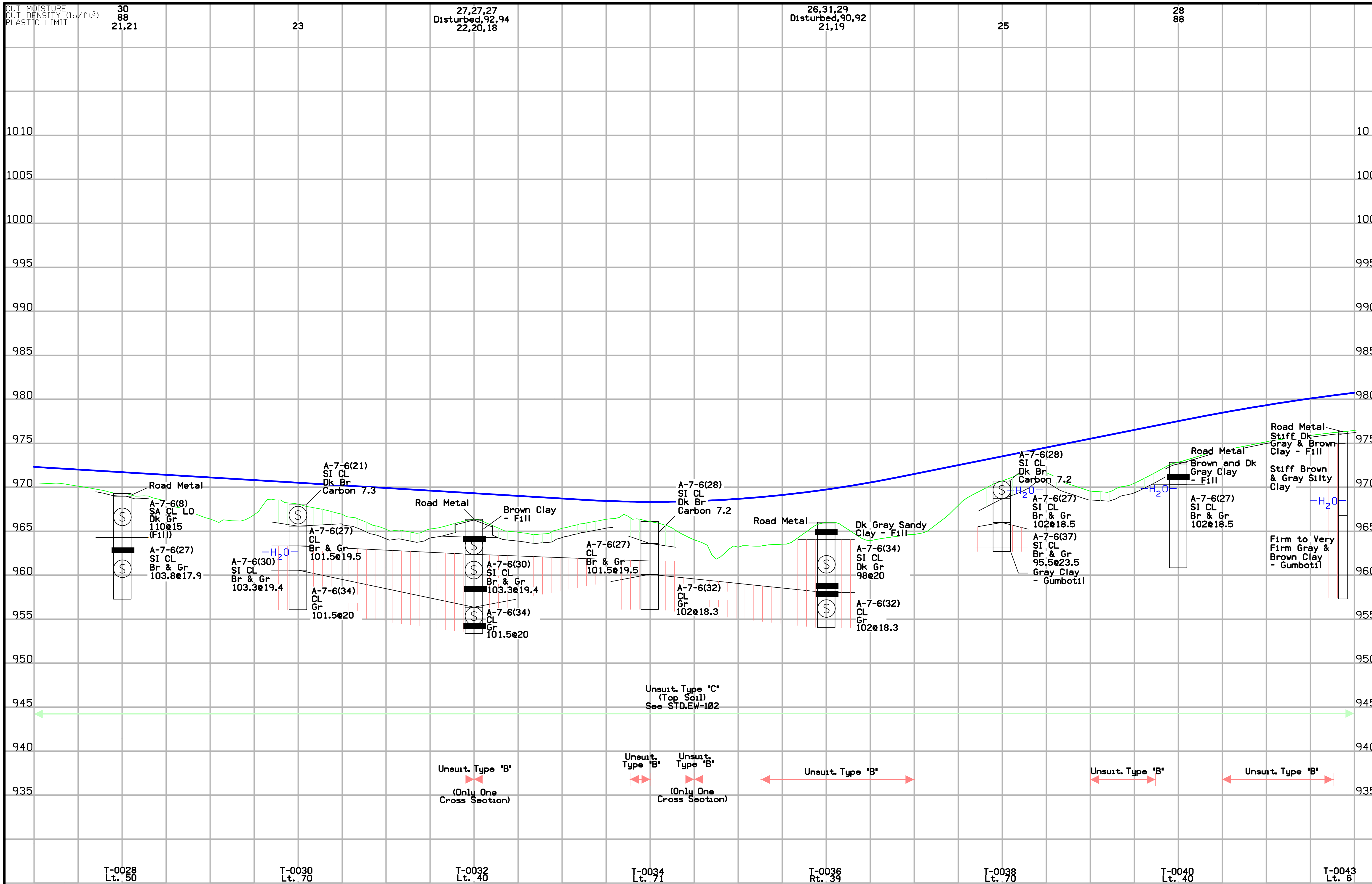

ENGLISH	IOWA DOT	DESIGN TEAM Stanley\Knight		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER Q.7

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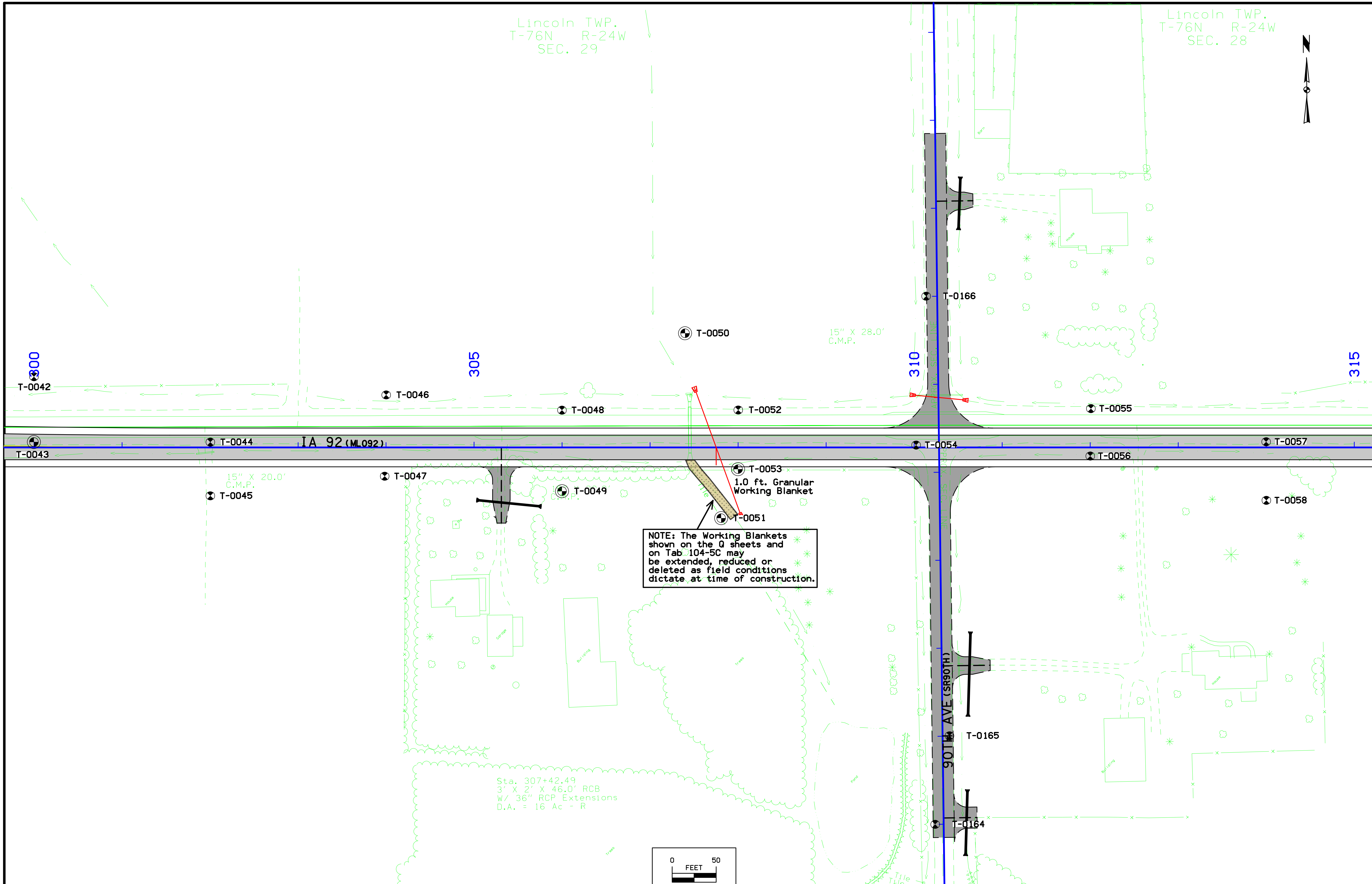
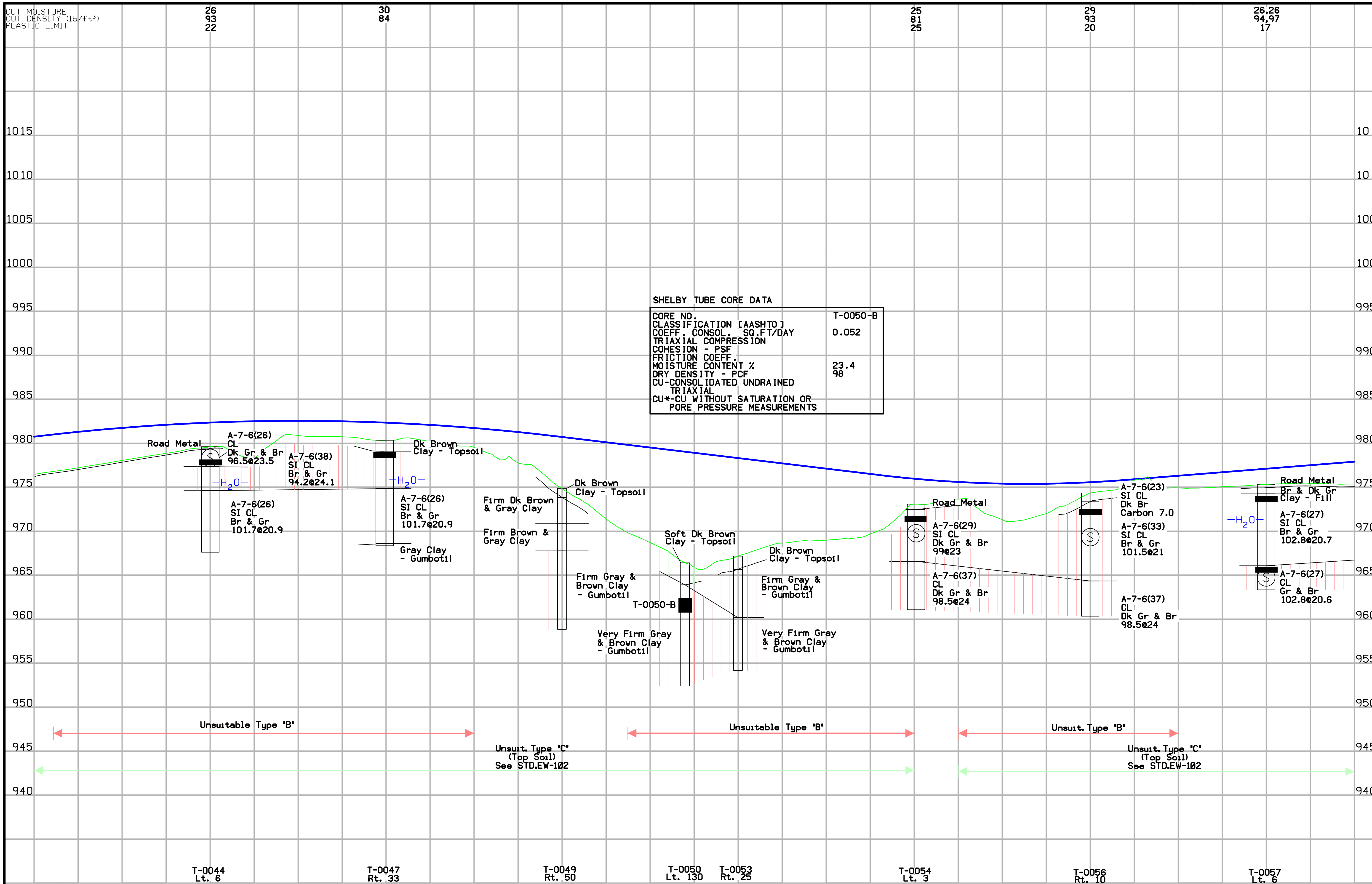


ENGLISH	IOWA DOT	DESIGN TEAM Stanley\Knight	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER Q.8



SHELBY TUBE CORE DATA

CORE NO.	T-0050-B
CLASSIFICATION [AASHTO]	
COEFF. CONSOL. SQ.FT/DAY	0.052
TRIAXIAL COMPRESSION	
COHESION - PSF	
FRICTION COEFF.	
MOISTURE CONTENT %	23.4
DRY DENSITY - PCF	98
CU-CONSOLIDATED UNDRAINED TRIAXIAL	
CU*-CU WITHOUT SATURATION OR PORE PRESSURE MEASUREMENTS	

ENGLISH | IOWA DOT | DESIGN TEAM Stanley\Knight | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER Q.9

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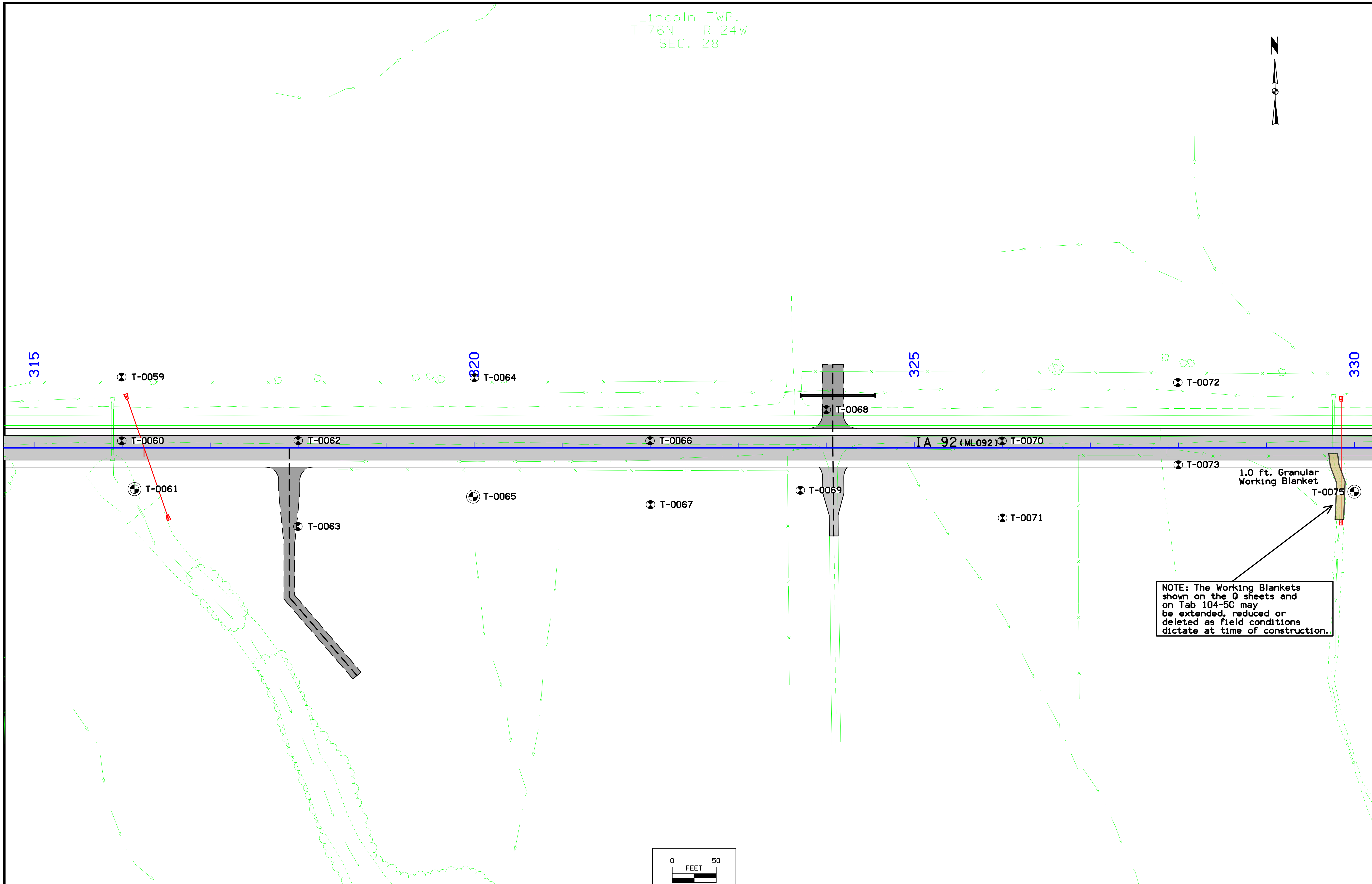
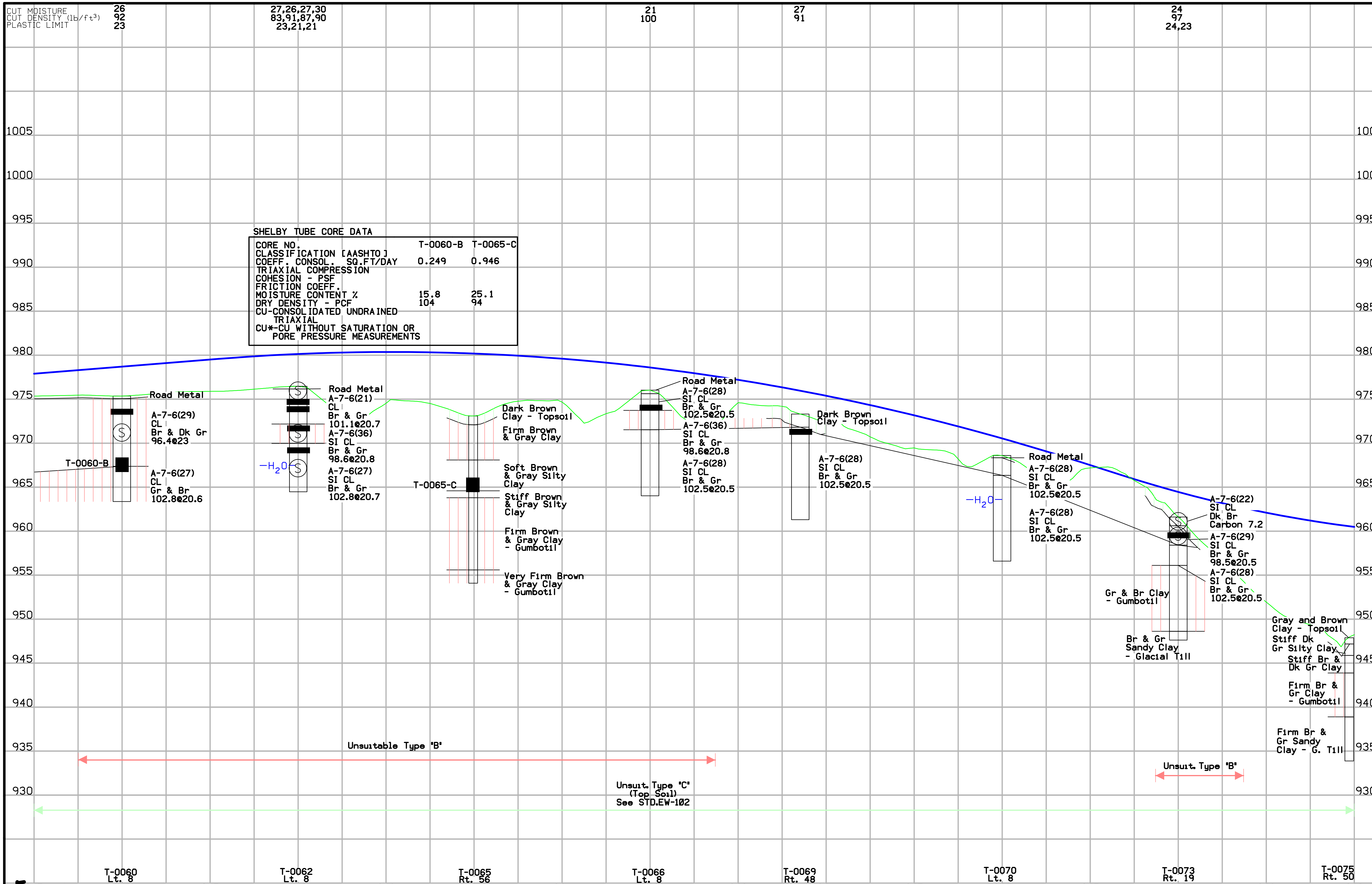

Lincoln TWP.
T-76N R-24W
SEC. 28
315
320
325
330
T-0059
T-0060
T-0061
T-0062
T-0063
T-0064
T-0065
T-0066
T-0067
T-0068
T-0069
T-0070
T-0071
T-0072
T-0073
T-0075
IA 92 (ML092)
1.0 ft. Granular
Working Blanket
NOTE: The Working Blankets shown on the Q sheets and on Tab 104-5C may be extended, reduced or deleted as field conditions dictate at time of construction.
0 FEET 50

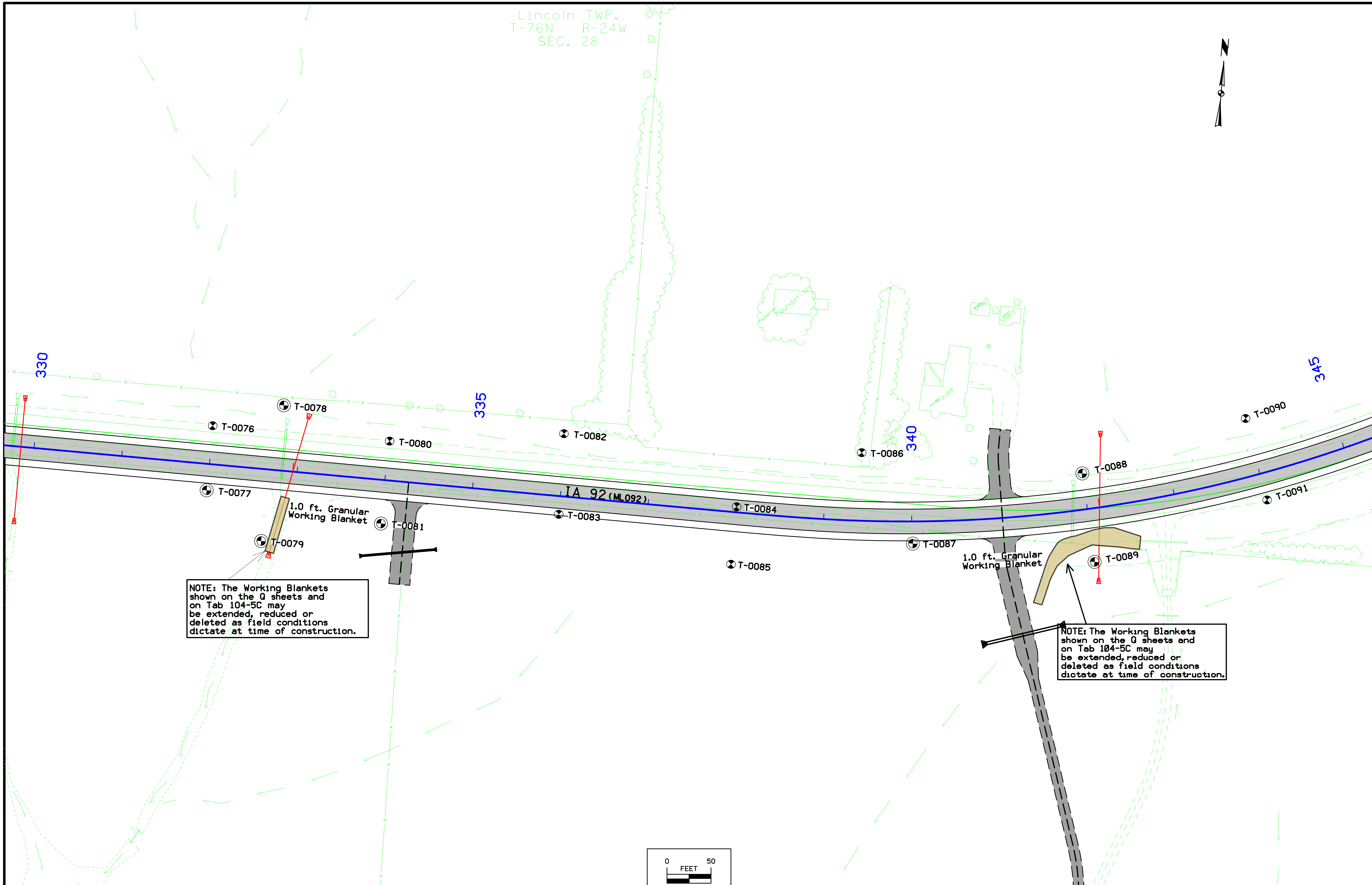


SHELBY TUBE CORE DATA

CORE NO.	T-0060-B	T-0065-C
CLASSIFICATION [AASHTO]		
COEFF. CONSOL. SQ.FT/DAY	0.249	0.946
TRIAXIAL COMPRESSION		
COHESION - PSF		
FRICTION COEFF.		
MOISTURE CONTENT %	15.8	25.1
DRY DENSITY - PCF	104	94
CU-CONSOLIDATED UNDRAINED TRIAXIAL		
CU*-CU WITHOUT SATURATION OR PORE PRESSURE MEASUREMENTS		

ENGLISH | IOWA DOT | DESIGN TEAM **Stanley\Knight** | **WARREN** COUNTY | PROJECT NUMBER **NHSX-092-5(51)--3H-91** | SHEET NUMBER **Q.11**

8:25:16 AM aknight pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9109201004\Soils\91092051Q.sht



ENGLISH	IOWA DOT	DESIGN TEAM Stanley\Knight	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER Q.12

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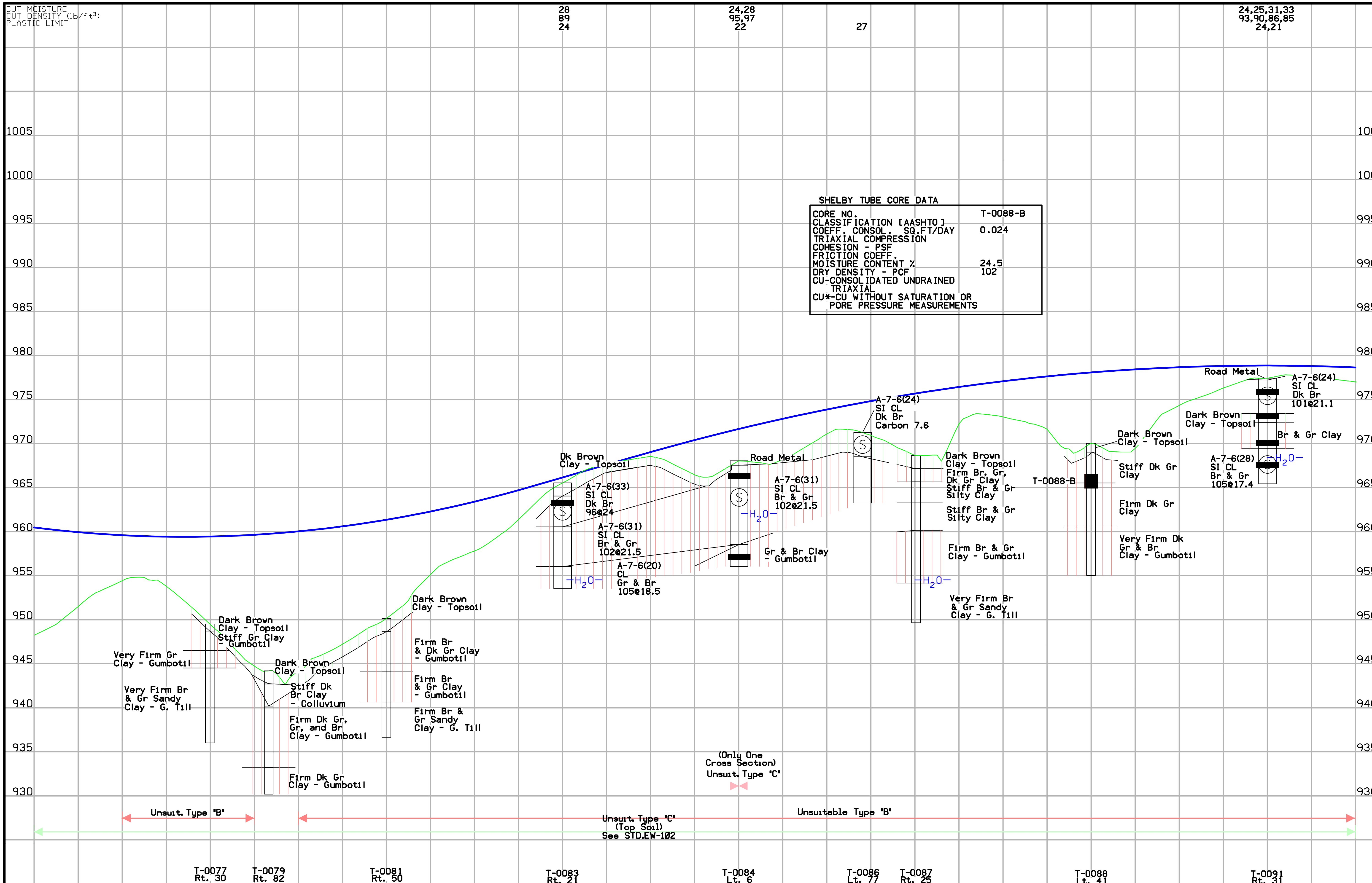

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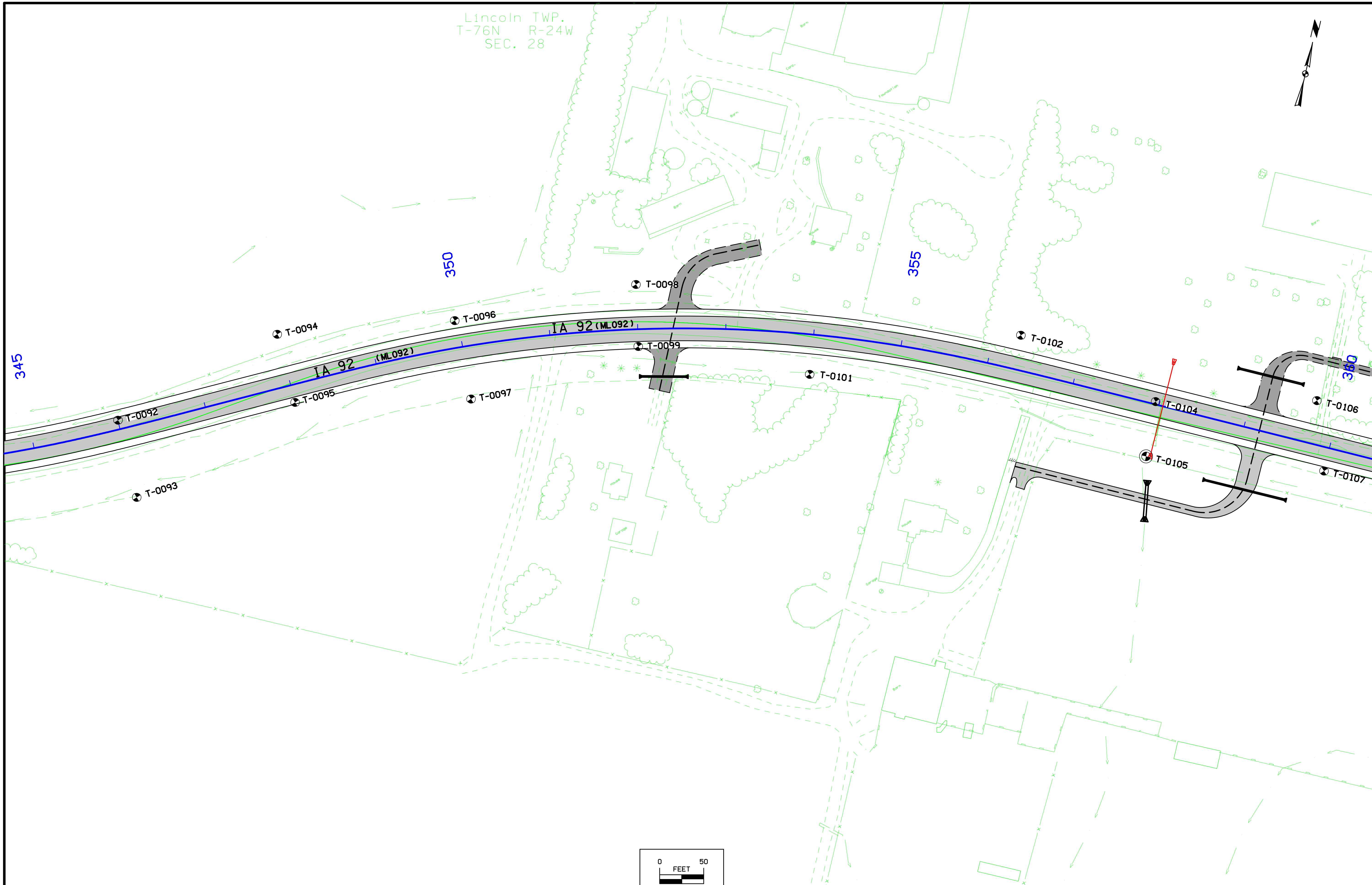
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SEC. 28
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350
355
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IA 92 (ML092)
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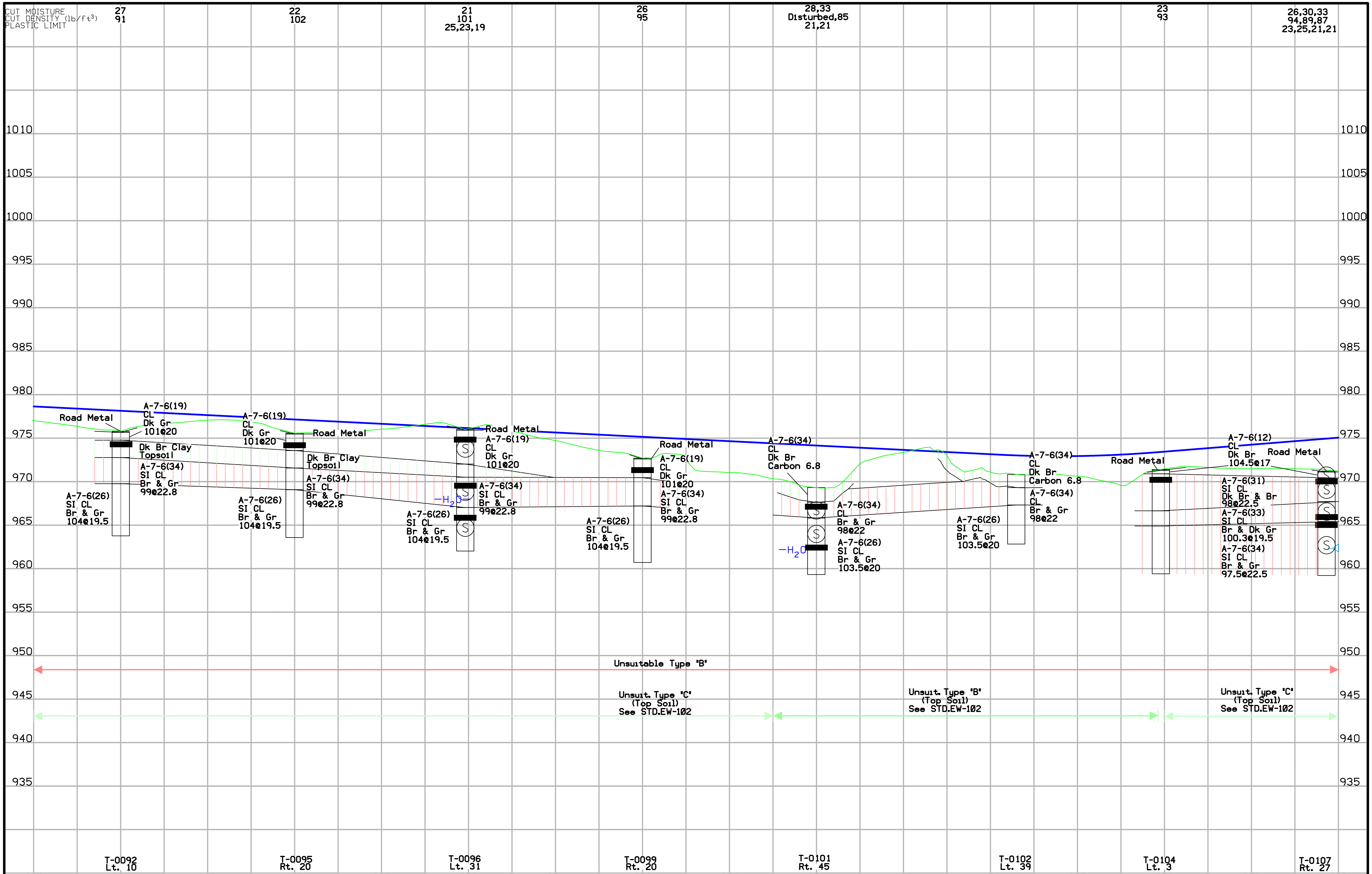

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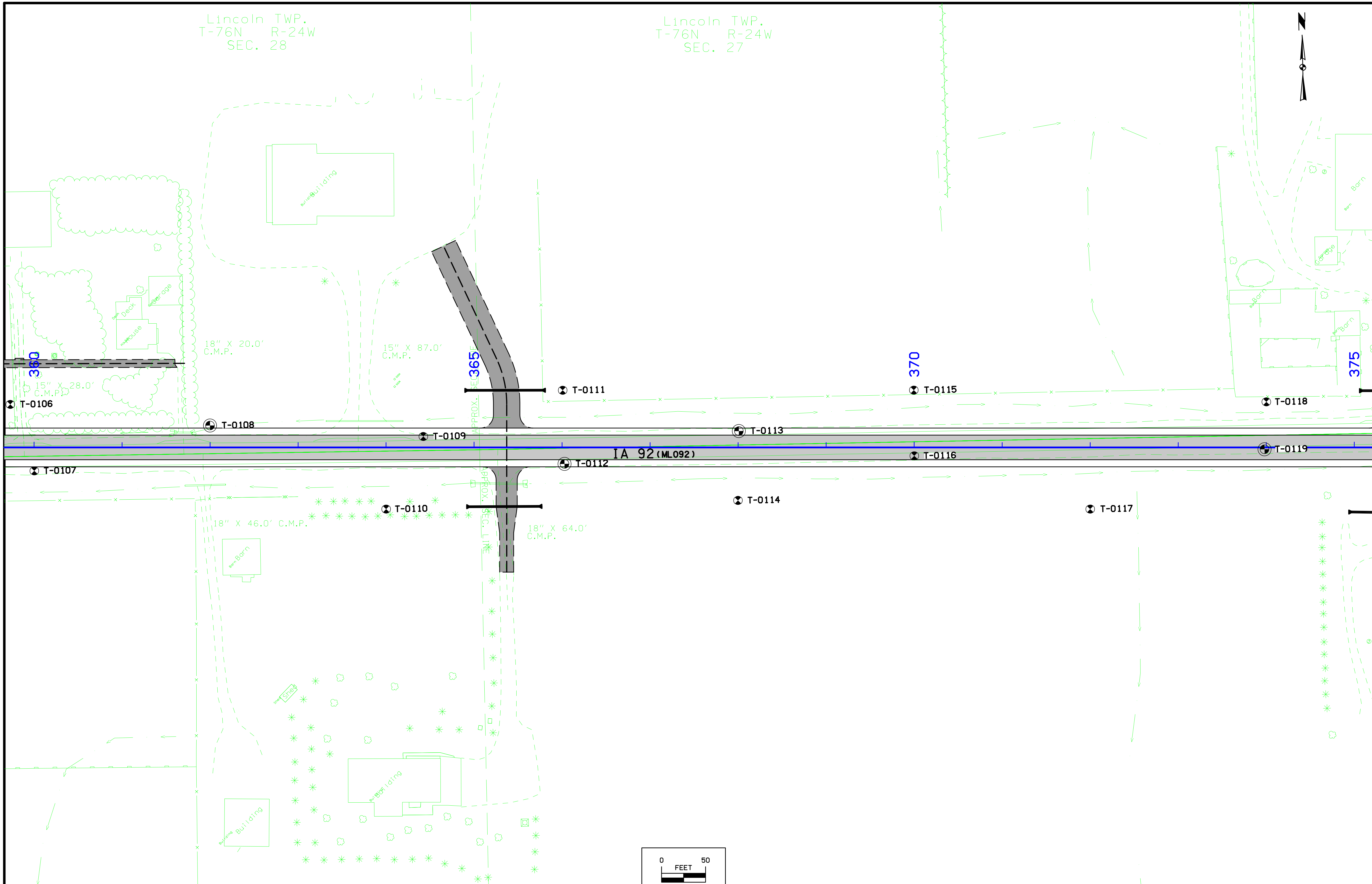

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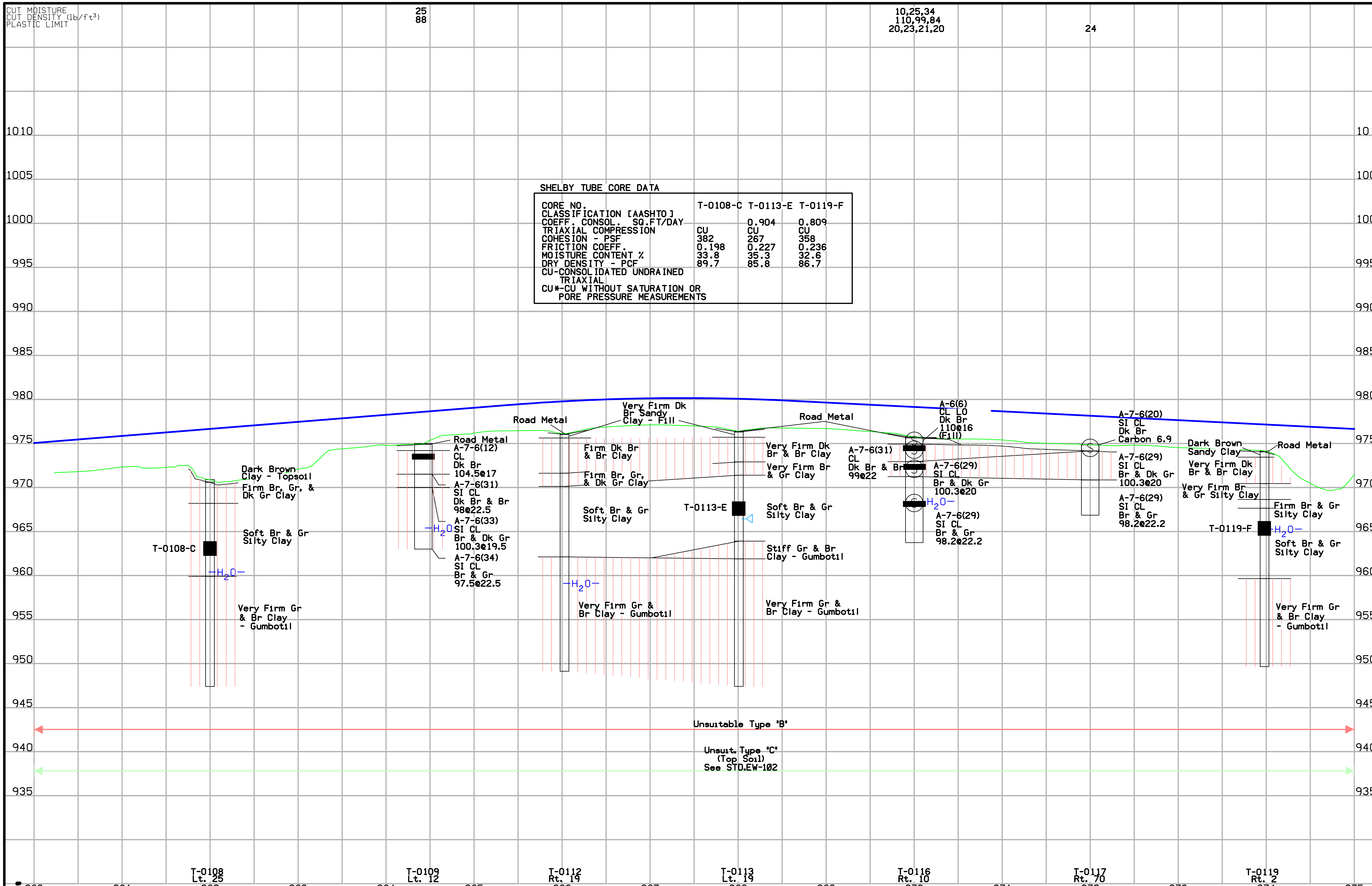

SHELBY TUBE CORE DATA

CORE NO.	T-0108-C	T-0113-E	T-0119-F
CLASSIFICATION [AASHTO]			
COEFF. CONSOL. SQ.FT/DAY		0.904	0.809
TRIAXIAL COMPRESSION	CU	CU	CU
COHESION - PSF	382	267	358
FRICTION COEFF.	0.198	0.227	0.236
MOISTURE CONTENT %	33.8	35.3	32.6
DRY DENSITY - PCF	89.7	85.8	86.7

CU-CONSOLIDATED UNDRAINED TRIAXIAL
CU*-CU WITHOUT SATURATION OR PORE PRESSURE MEASUREMENTS

ENGLISH	IOWA DOT	DESIGN TEAM Stanley\Knight	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER Q.17

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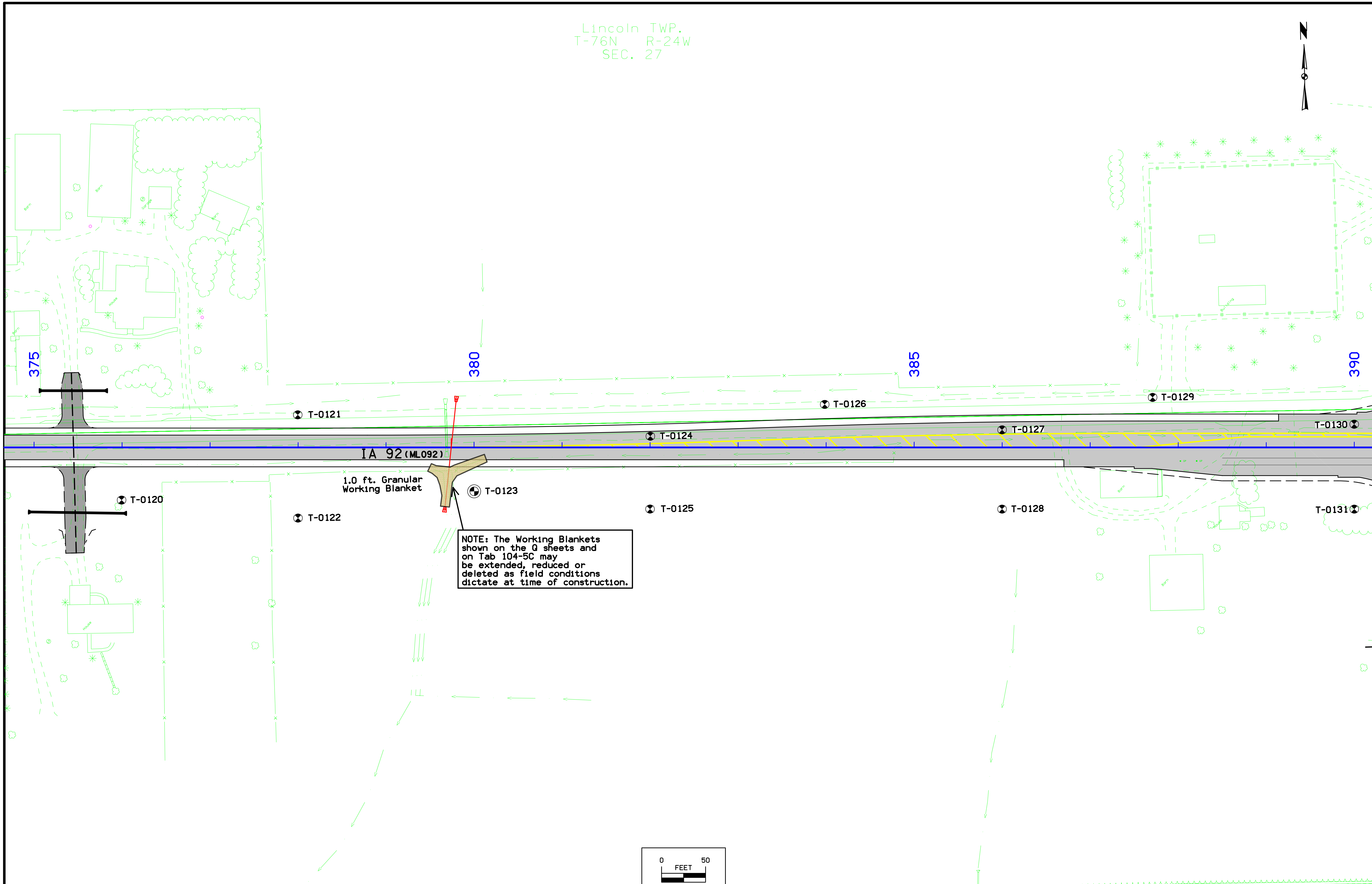

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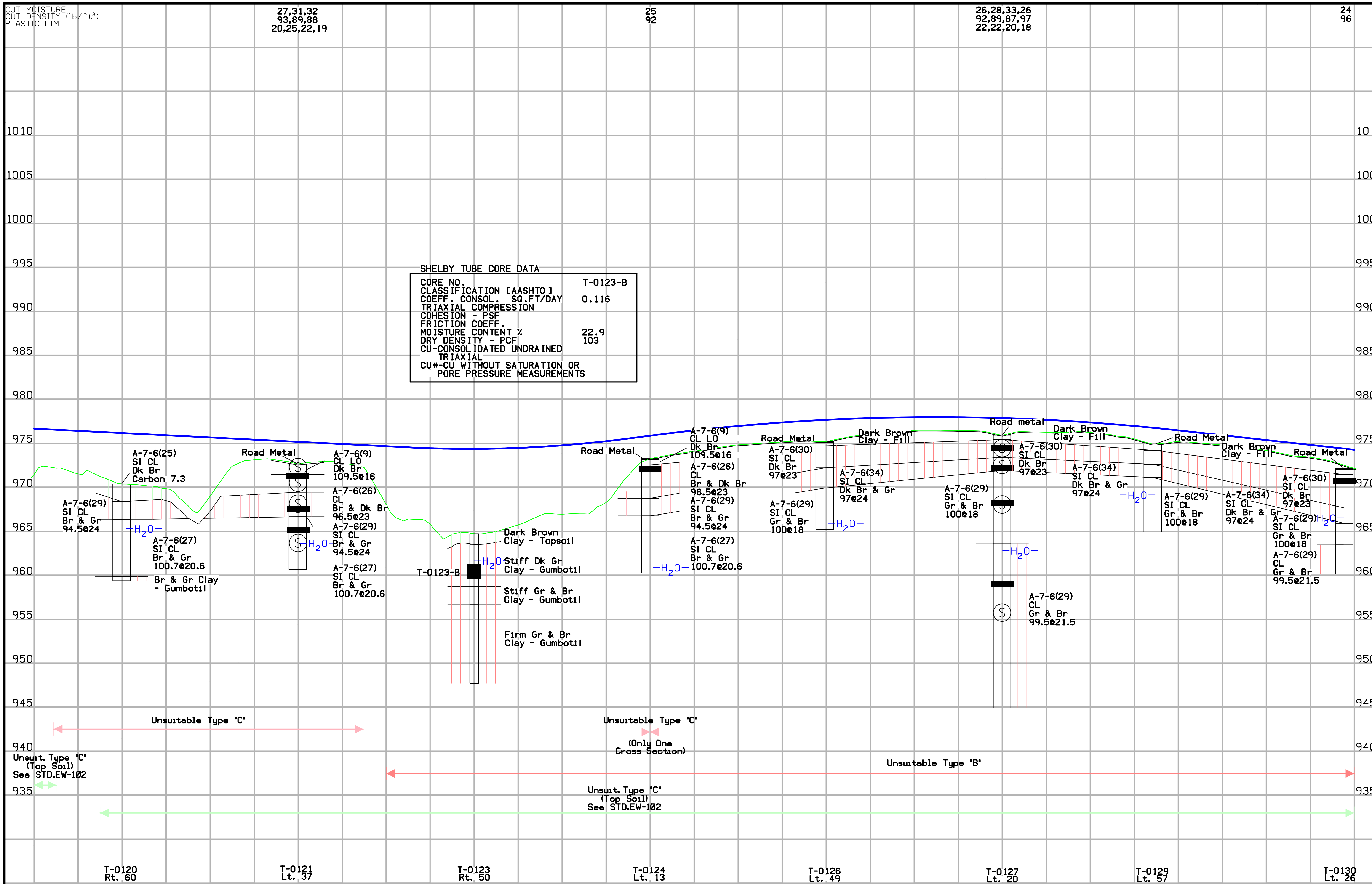

ENGLISH	IOWA DOT	DESIGN TEAM Stanley\Knight	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER Q.19

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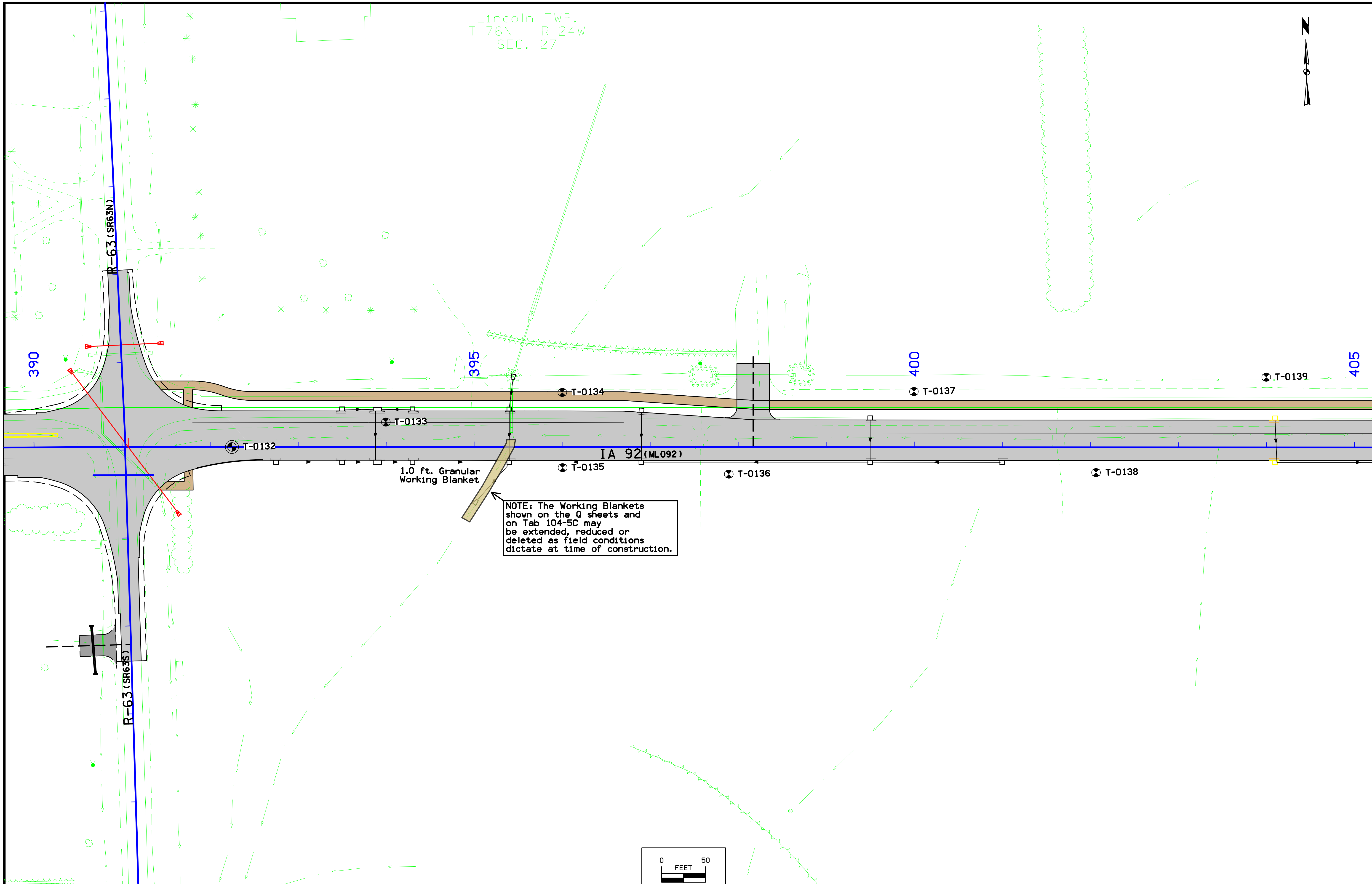

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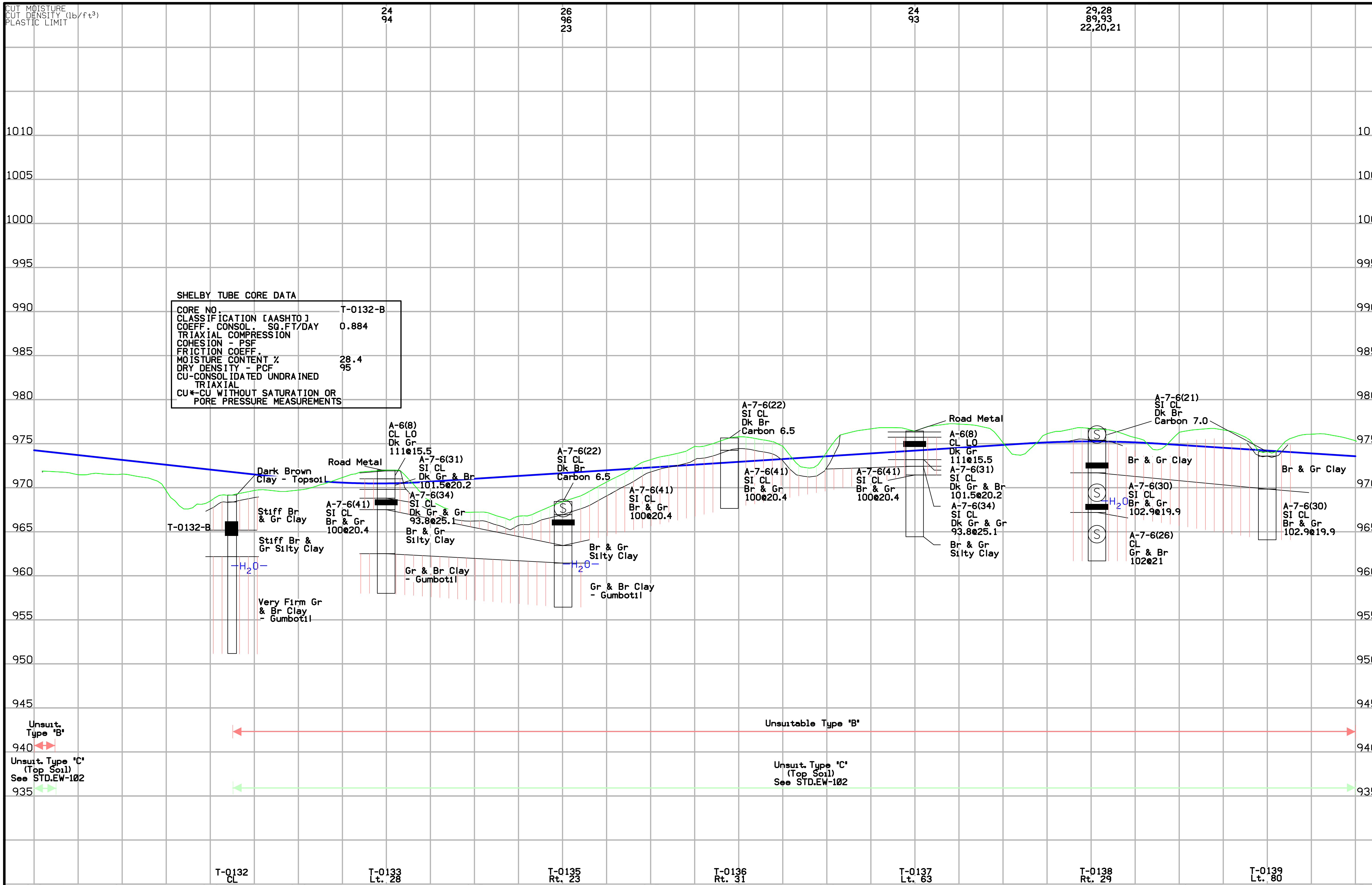

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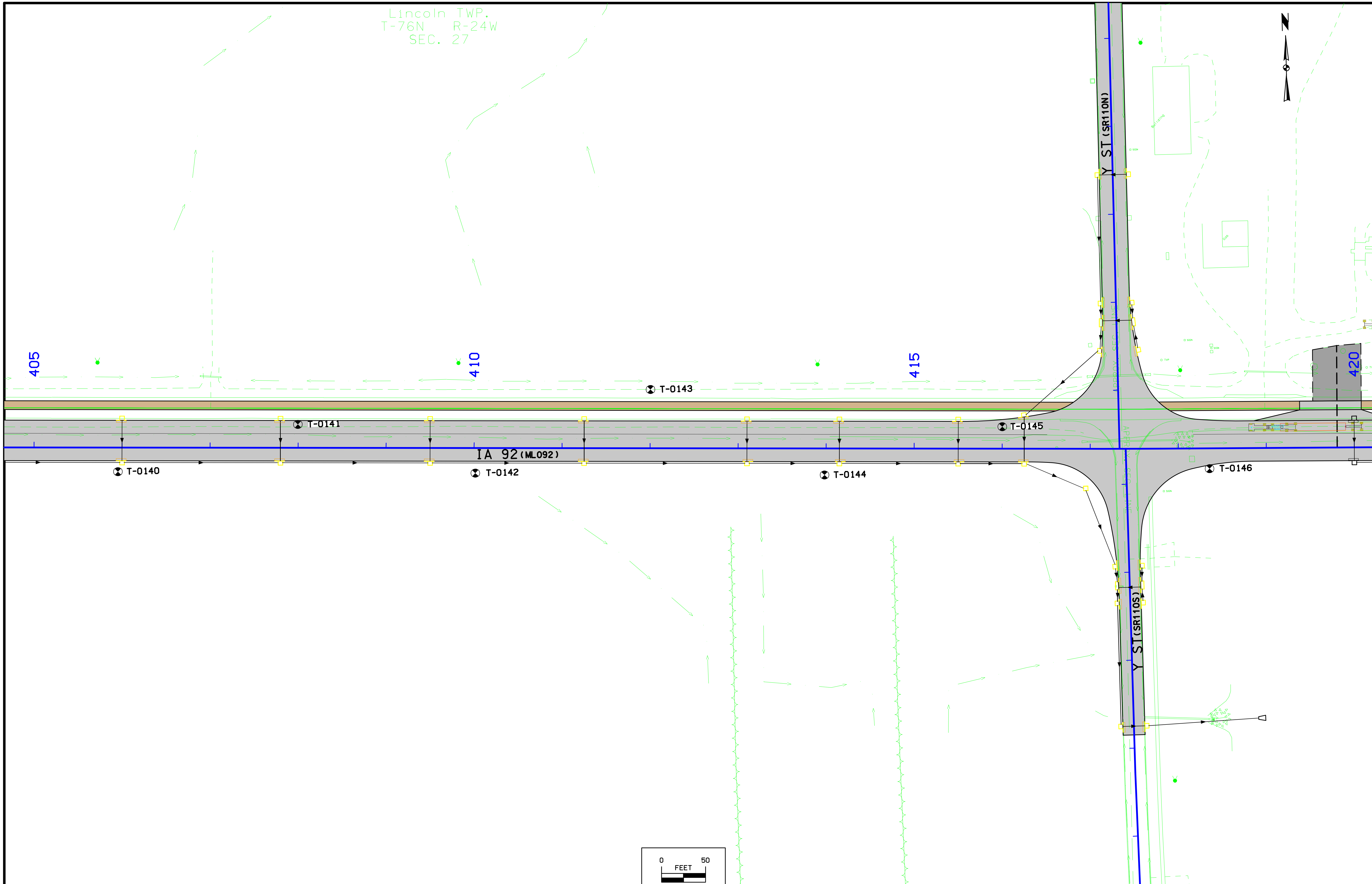

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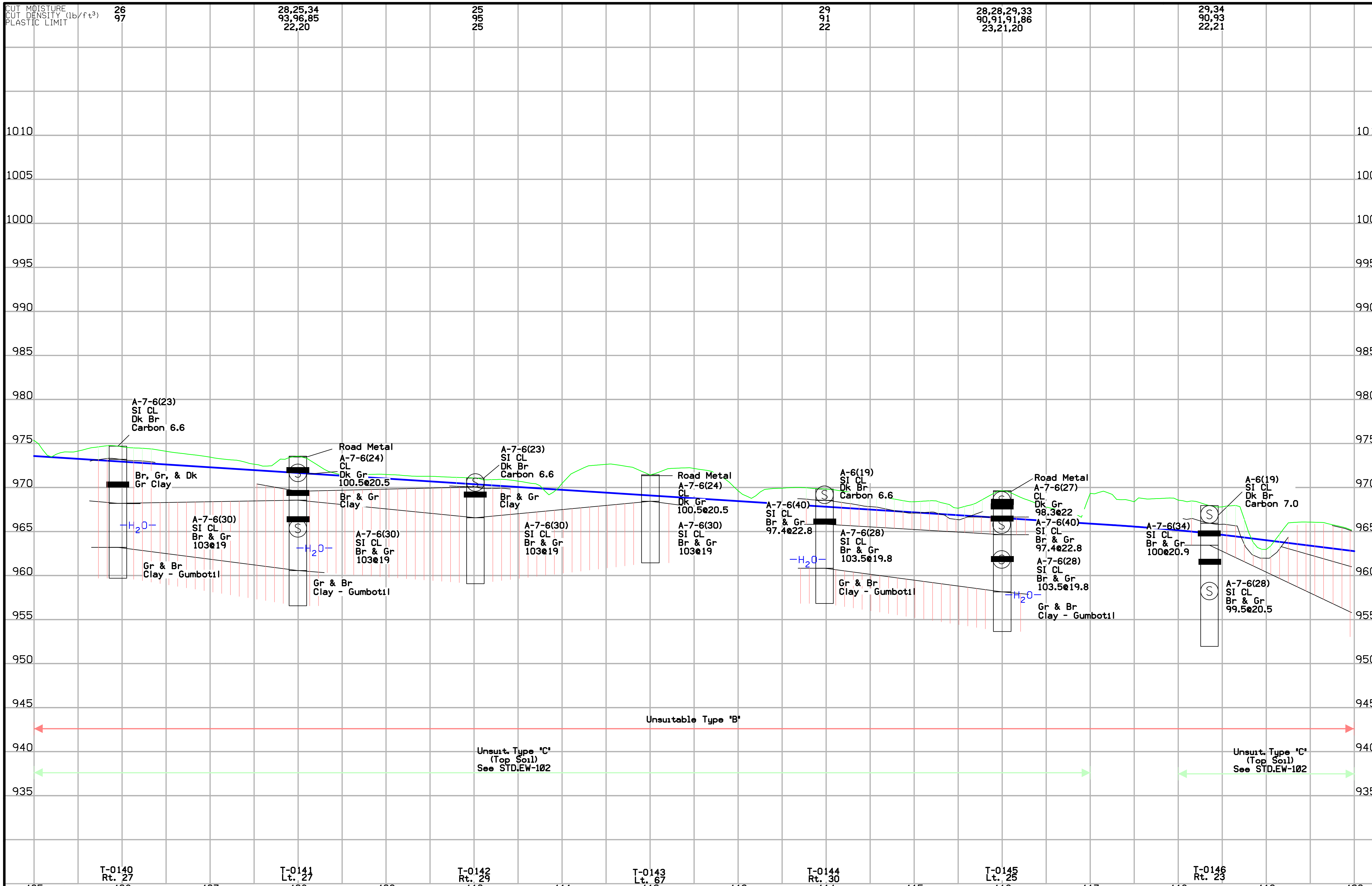

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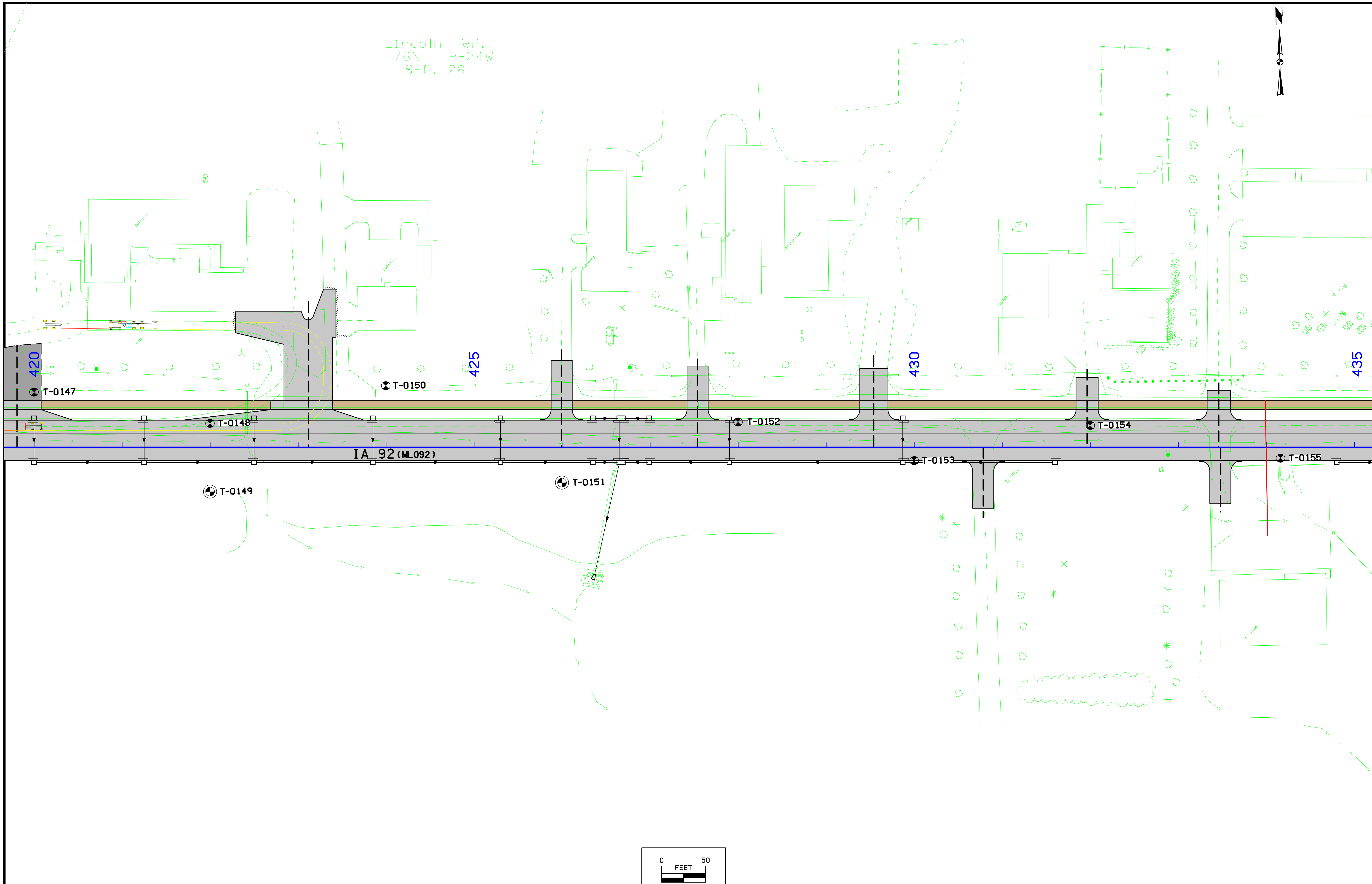

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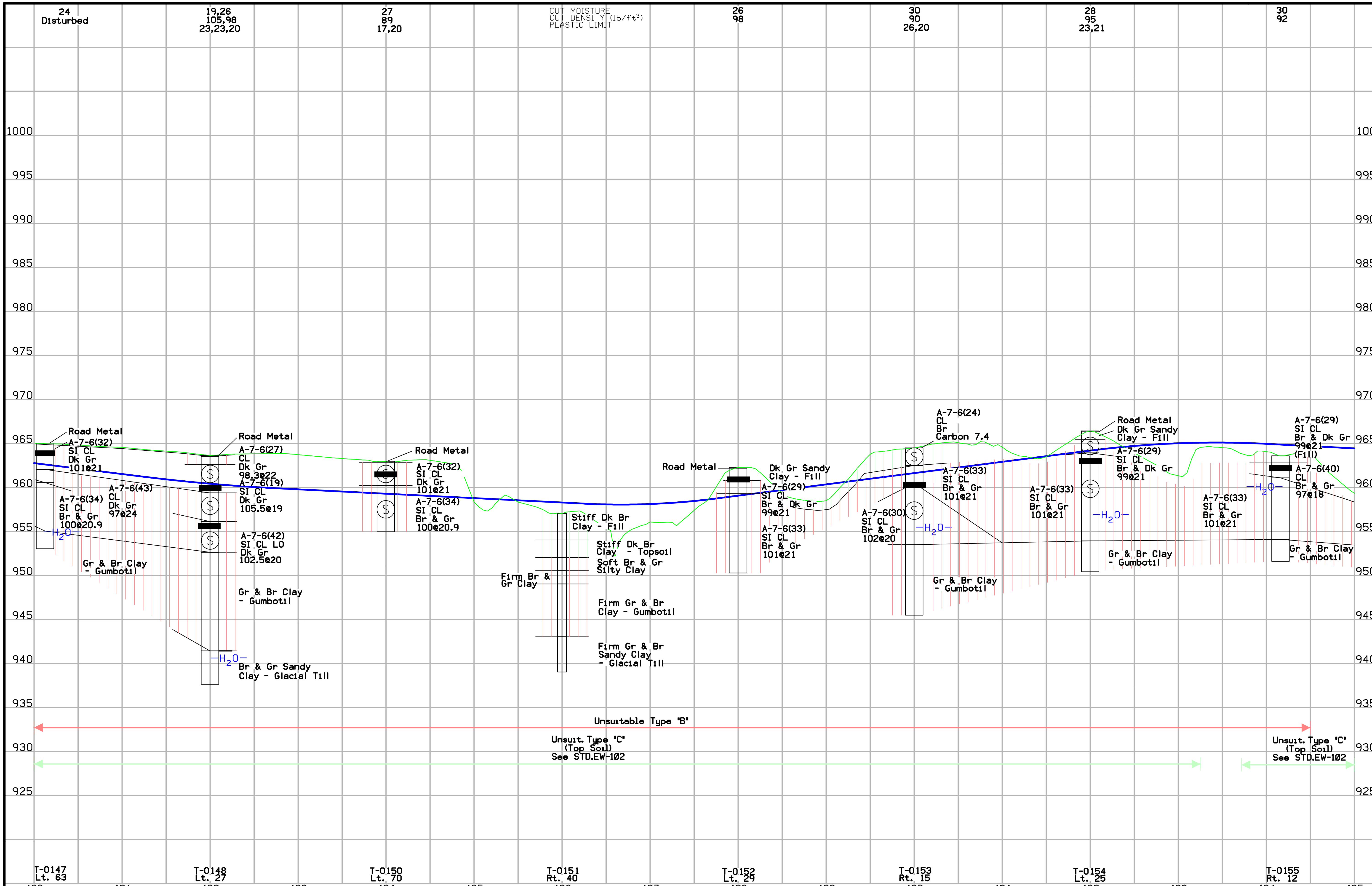

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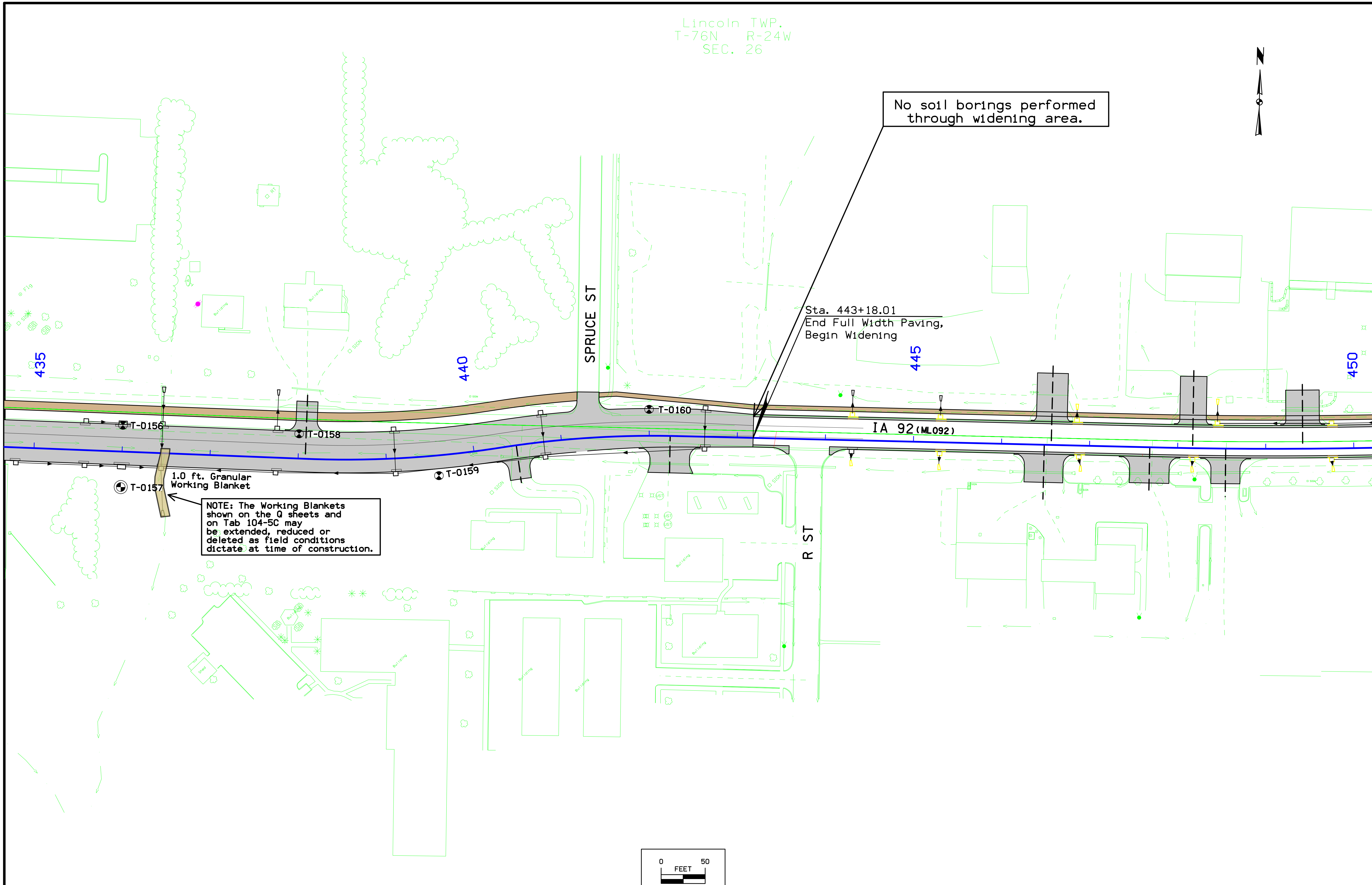

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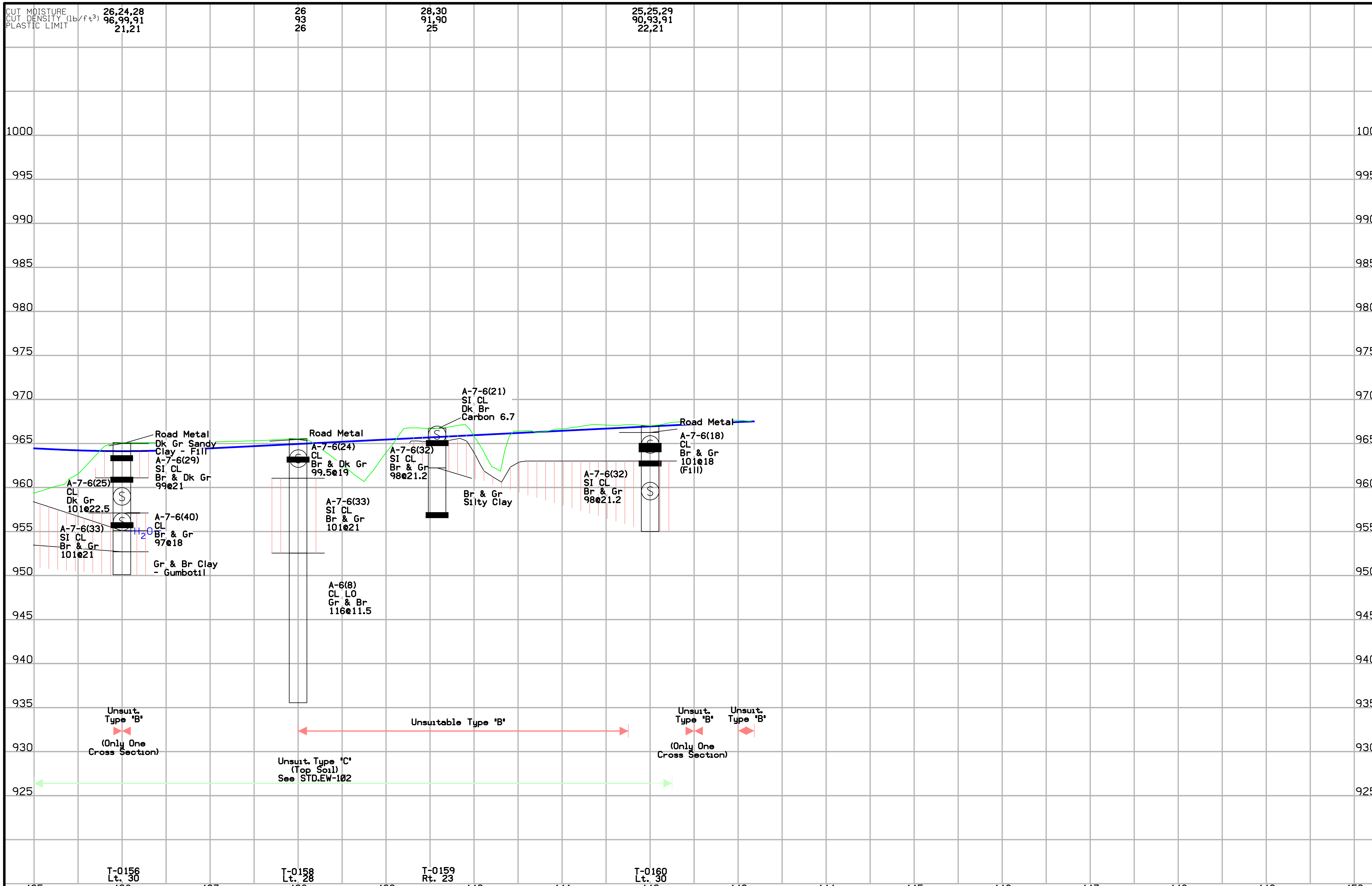

ENGLISH	IOWA DOT	DESIGN TEAM Stanley\Knight		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER Q.27

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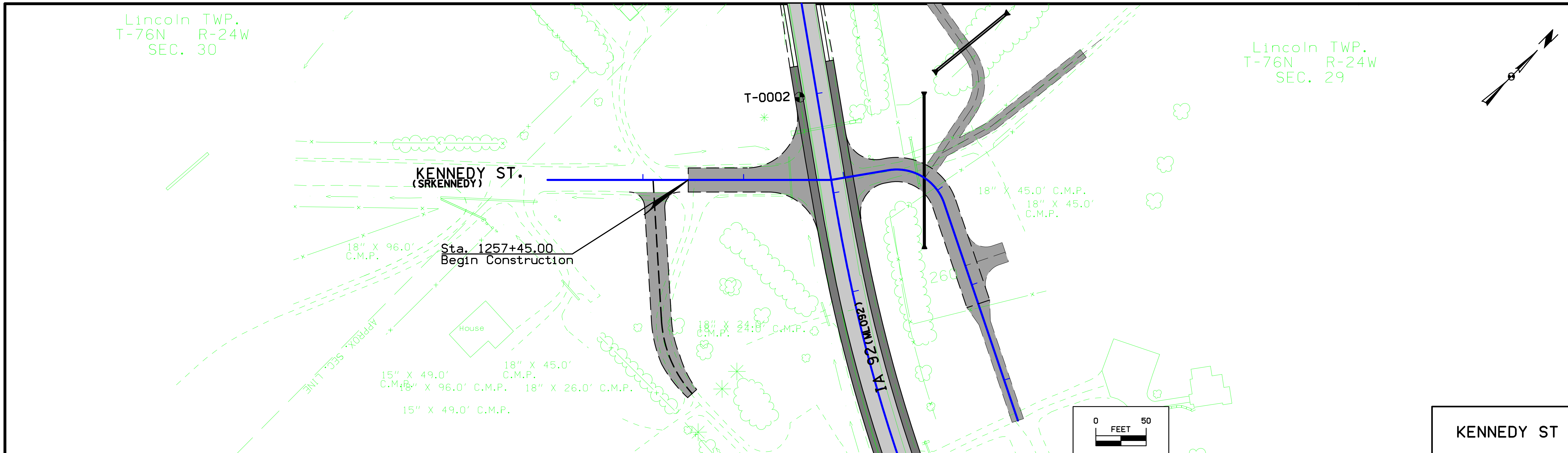
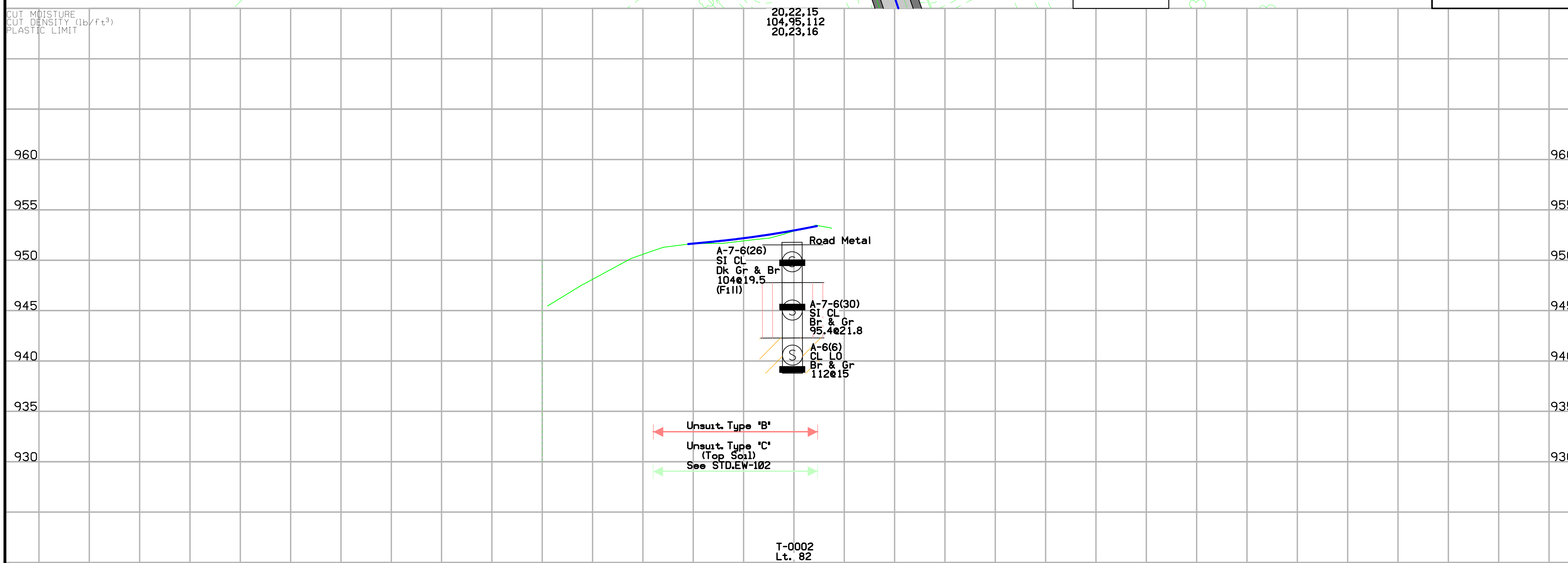


KENNEDY ST



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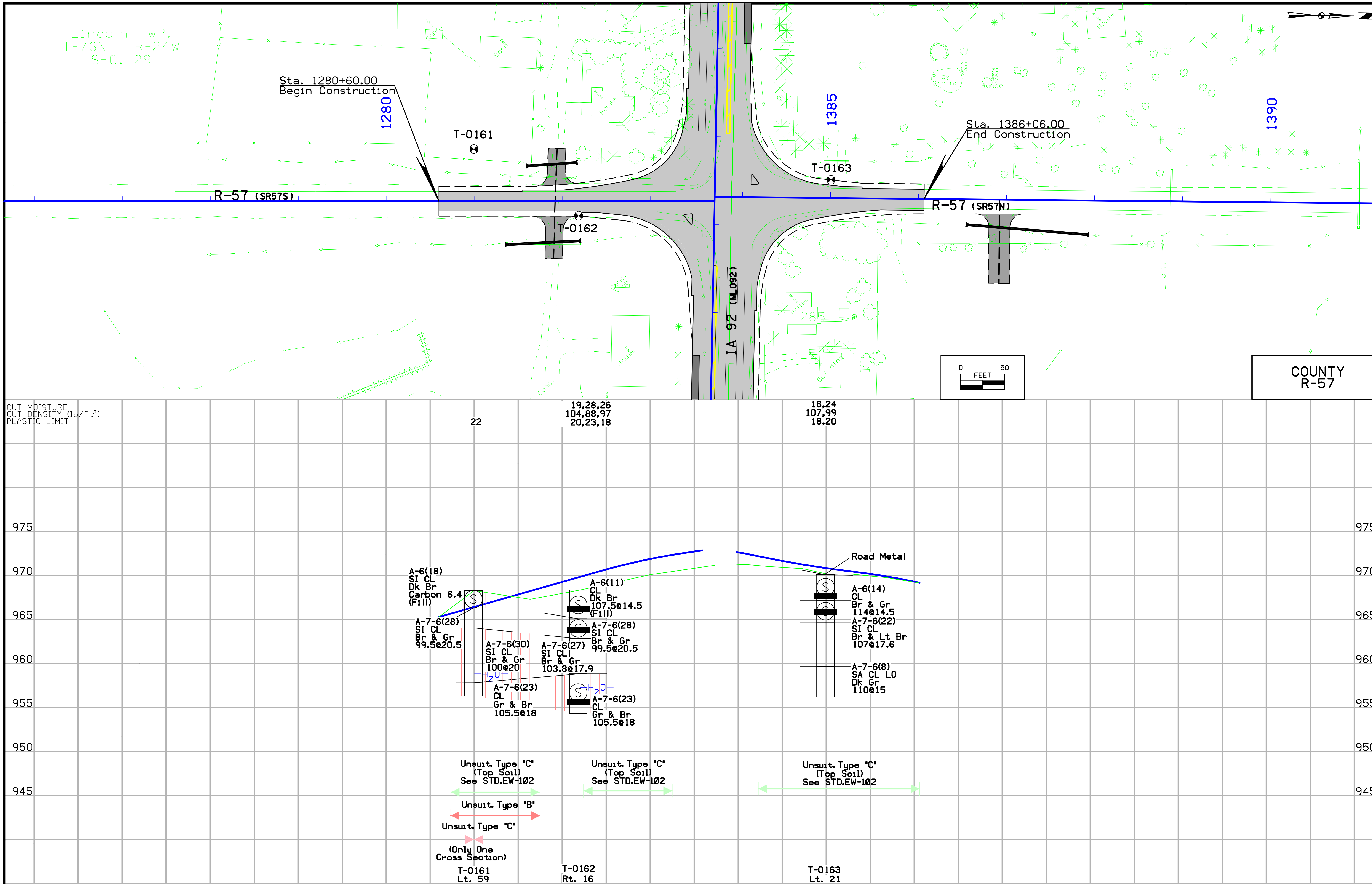

ENGLISH | IOWA DOT | DESIGN TEAM Stanley\Knight | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER Q.29

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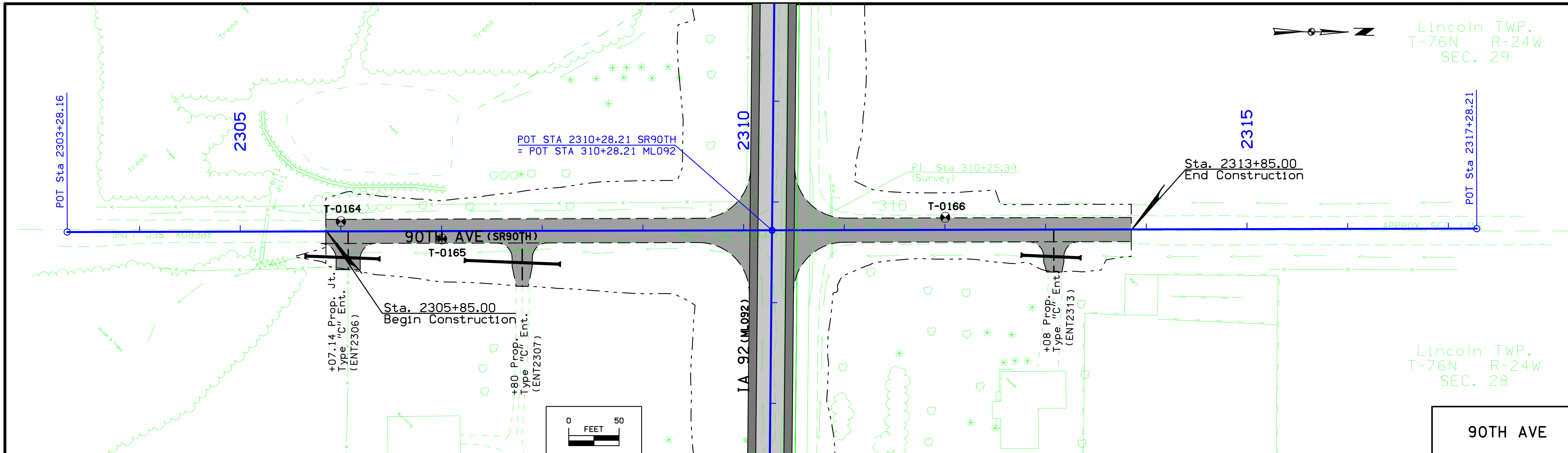

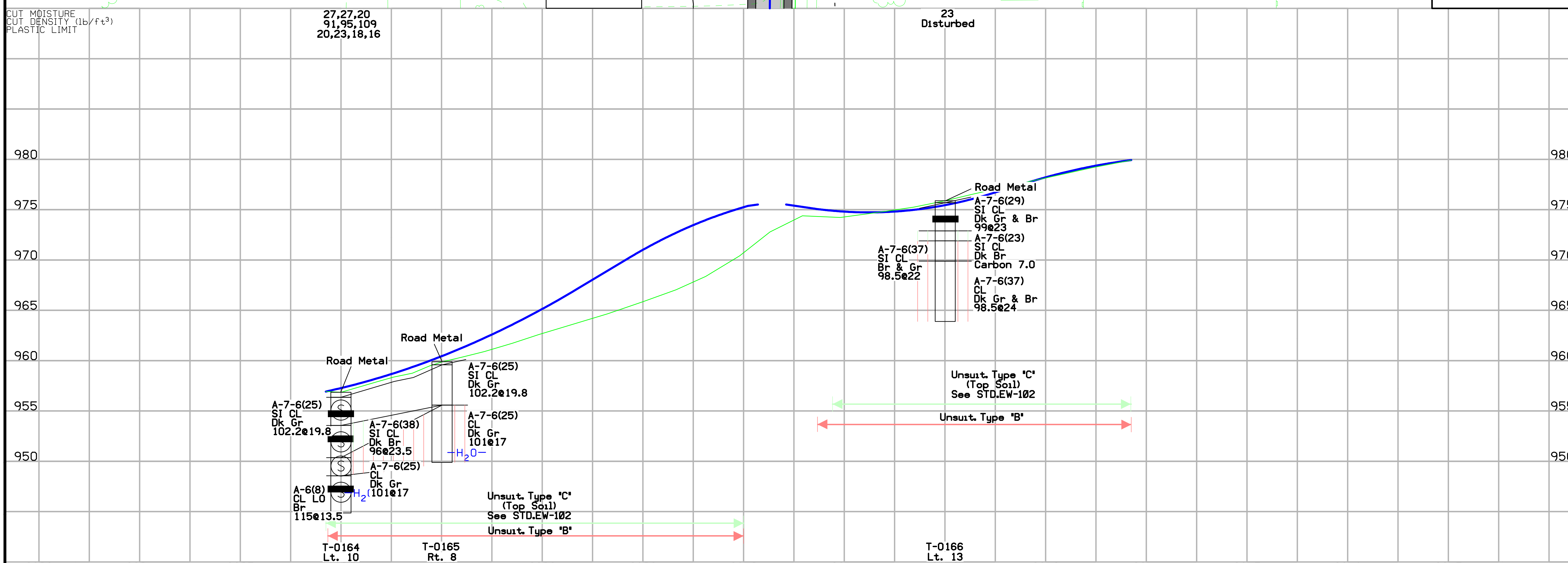

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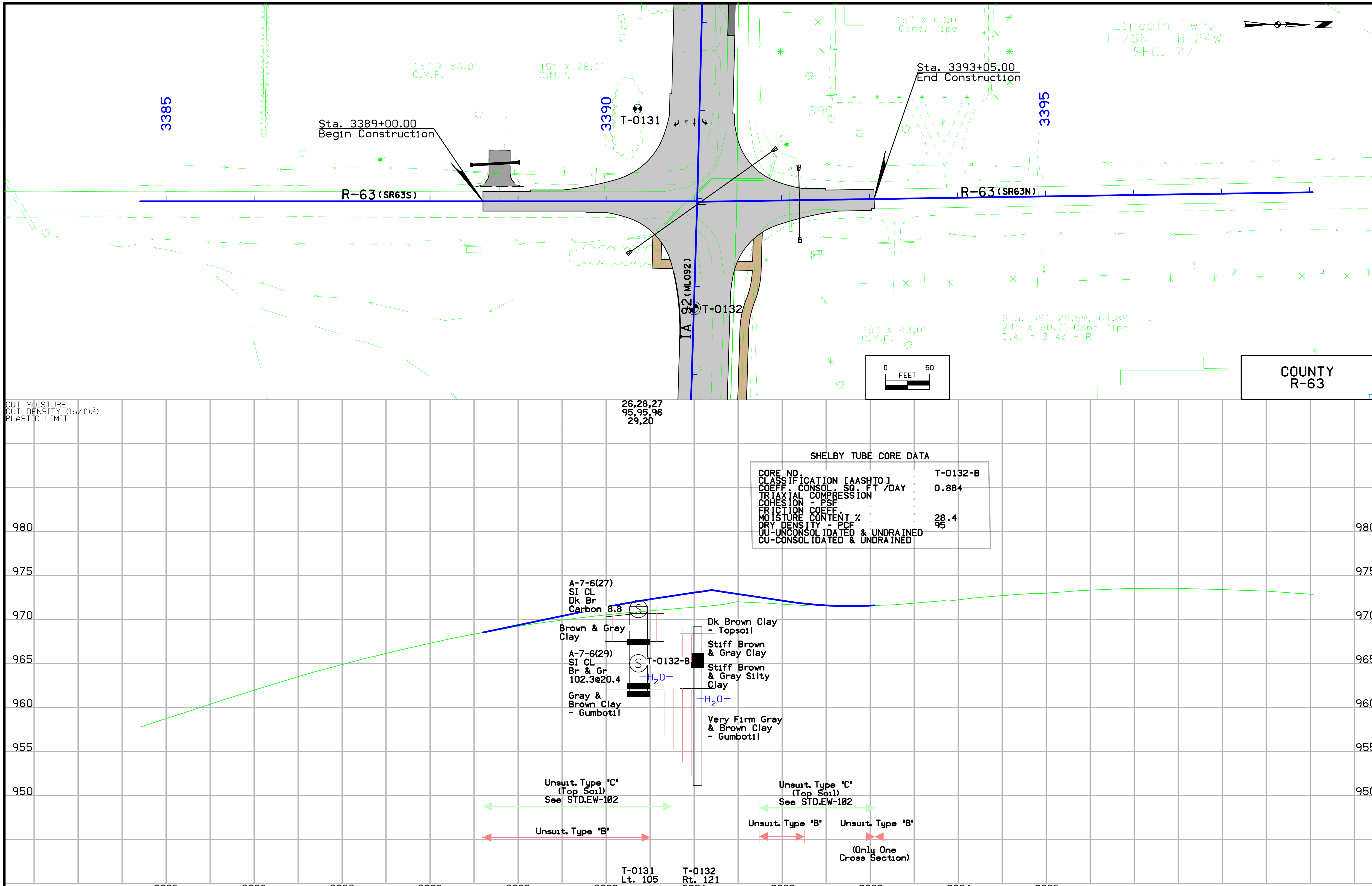

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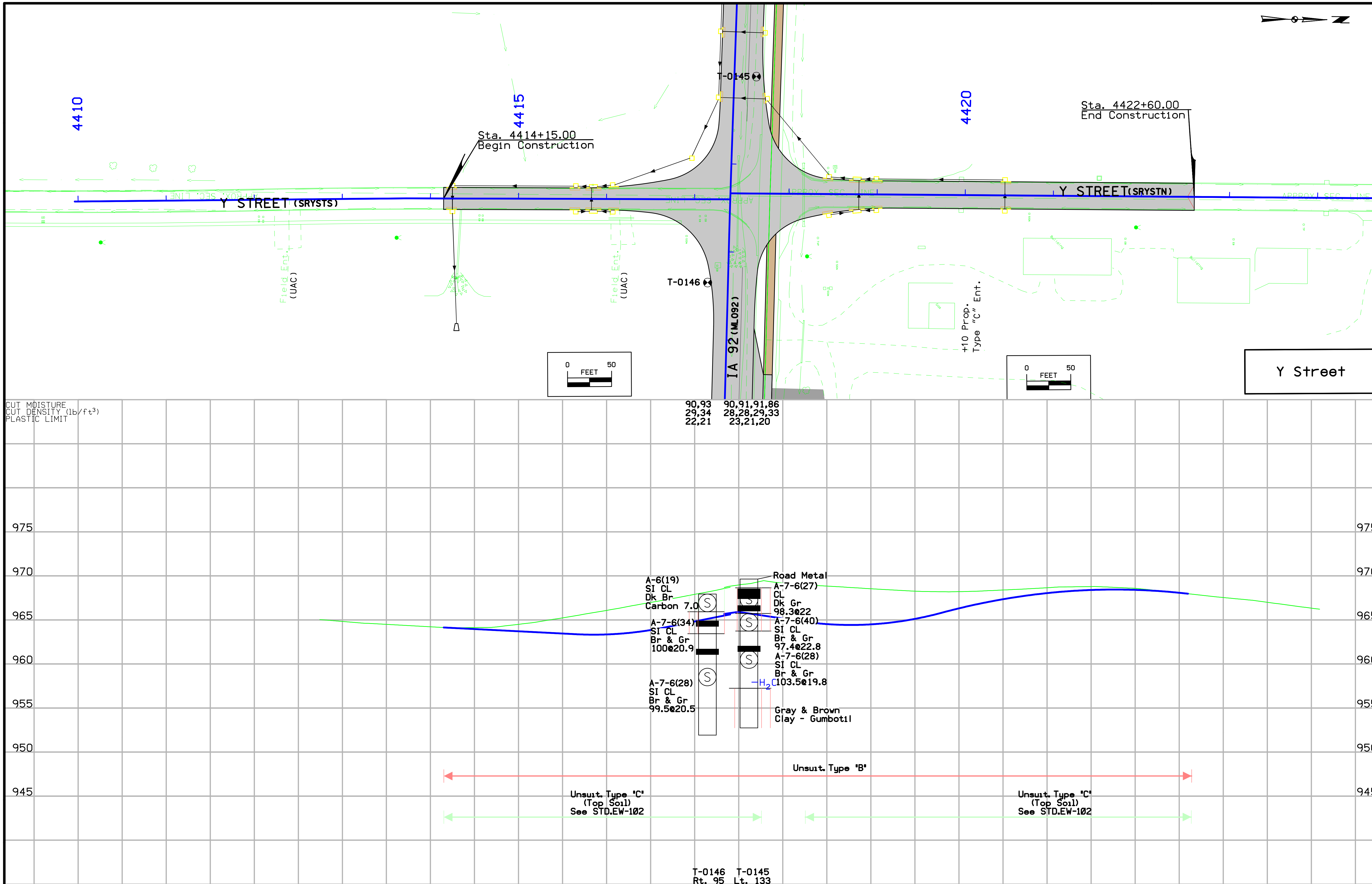


ENGLISH | IOWA DOT | DESIGN TEAM Stanley\Knight | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER Q.32

10:24:43 AM 9/5/2013 aknight pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9109201004\Soils\91092051E01_Q.sht

SURVEY SYMBOLS

TDC Tree Deciduous
PPA Power Pole Co. 1
FWD Wood Fence
LUM Luminaire
TEV Evergeen Tree
LP L.P. Tank
D Centerline Draw or Stream (Down)
RET Retaining Walls
SI Sign
SHR Shrub
SI Sign
EW Edge of Water
DIK Centerline of Dike or Dam
FLG Flag Poles
WM Wind Mill
FCL Chain Link and Security Fence
HDG Hedge Row
TV Satelite TV Dish
RT Radio Tower
INB Storm Sewer Beehive Intake
WV Water Valve
FHD Fire Hydrants
WEL Well
MH Utility Access (Manhole)
LUM Luminaire
MIS Miscellaneous
TPD Telephone Pedestal
EB Electrical Box
UB Utility Box
PR Electic Riser Pole
FW Wire Fence
GP Guard Post (Less Than 4 Posts)
IN Storm Sewer Intake
TLN Treeline
TVP TV Pedestal
SEP Septic Tank
OUT Tile Outlet
TIL Tile Line
UST Underground Tank
GV Gas Valve
DU Centerline Draw or Stream (Up)
BNK Stream Bank
BL Topo Breakline
RIP Rip-Rap

STA Storm Sewer Line Co. 1
FOC Underground Fiber Optic Co. 3
FOE Underground Fiber Optic Co. 5
FOB Underground Fiber Optic Co. 2
SAA Sanitary Sewer Line Co. 1
TLA Underground Telephone Line Co. 1
ELA Underground Electric Line Co. 1
GLA Underground Gas Line Co. 1
TVA Underground TV Cable Co. 1
WLA Underground Water Line Co. 1
FOA Underground Fiber Optic Co. 1
ELB Underground Electric Line Co. 2
SAB Sanitary Sewer Line Co. 2
GLB Underground Gas Line Co. 2
FOD Underground Fiber Optic Co. 4
WLB Underground Water Line Co. 2

UTILITY LEGEND

FOA Paetac Iowa Communications Network
FOB Lightcore (Digital Teleport)
FOC Iowa Network Service
FOD Indianola Municipal Utilities
FOE MCI
TLA Qwest
ELA Mid-American
ELB Indianola Municipal Utlities
TVA Mediacom
WLA Indianola Municipal Utilities
WLB Warren Rural Water
SAA City of Indianola
SAB Private
GLA Mid-American
GLB Kinder Morgan
STA City of Indianola
PPA Mid-American

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE 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

SHADING	Design Color No.	
Tan	(8)	Proposed Sidewalk Shading
Blue, Light	(230)	Proposed Sidewalk Landing Shading
Pink	(11)	Proposed Sidewalk Ramp Shading
Yellow	(4)	Highlight for Critical Notes or Features
Red	(3)	Delineates Restricted Areas
Lavender	(9)	Temporary Pavement Shading
Gray, Light	(48)	Proposed Pavement Shading
Gray, Med	(80)	Proposed Granular Shading
Gray, Dark	(112)	Proposed Grade and Pave Shading
Brown, Light	(236)	Grading Shading

Reference Point
Station
Survey Line
Section Corner
Ground Line Intercept
Saw Cut
Guardrail
Clearing & Grubbing Area
Pavement Removal

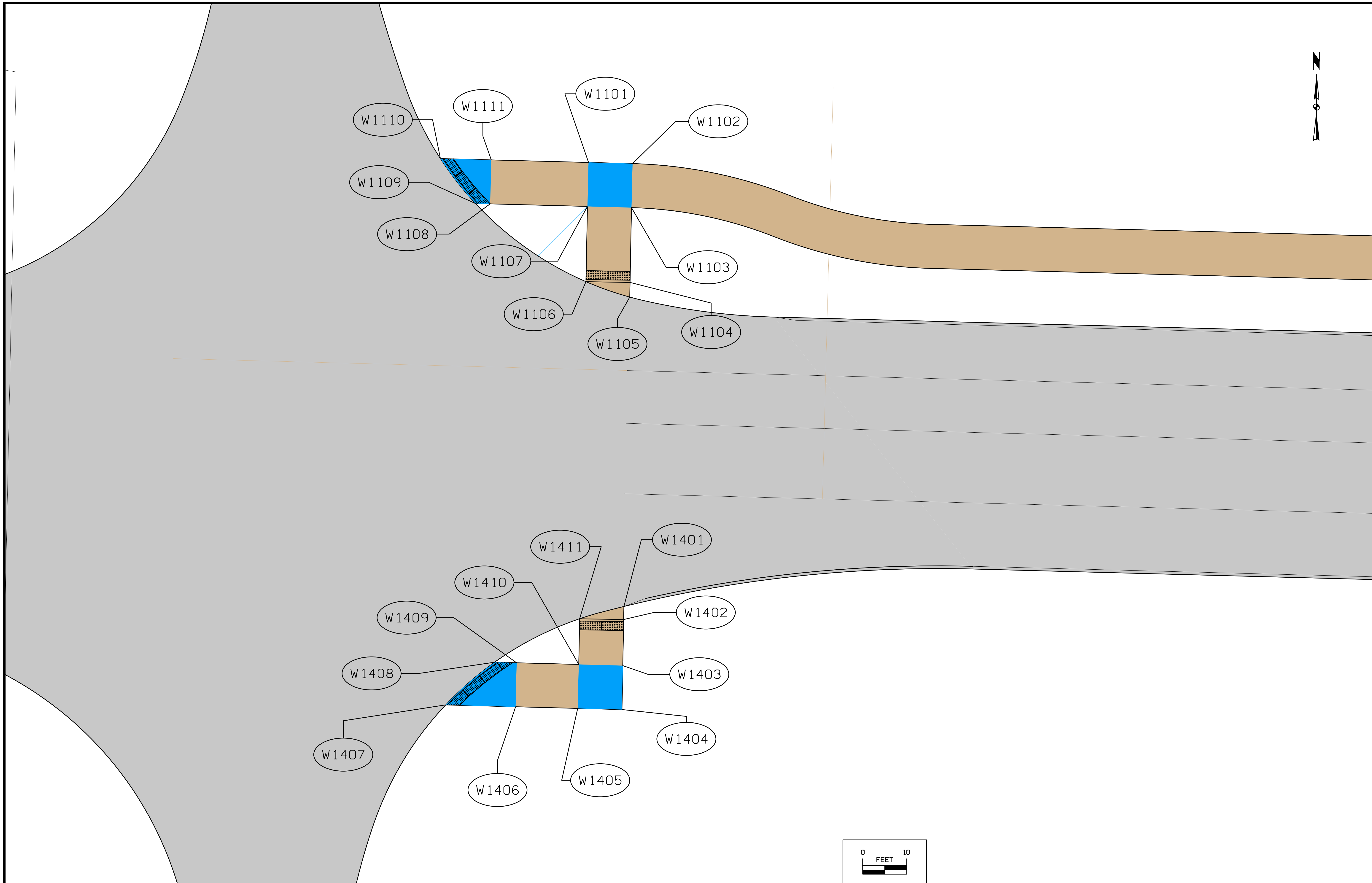
RIGHT-OF-WAY LEGEND

Proposed Right-of-Way
Existing and Proposed Right-of-Way
Easement and Existing Right-of-Way
Borrow
Easement (Temporary)
Easement
Excess
A/C Access Control

SIDEWALK LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES S)

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER S.1



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER S.2

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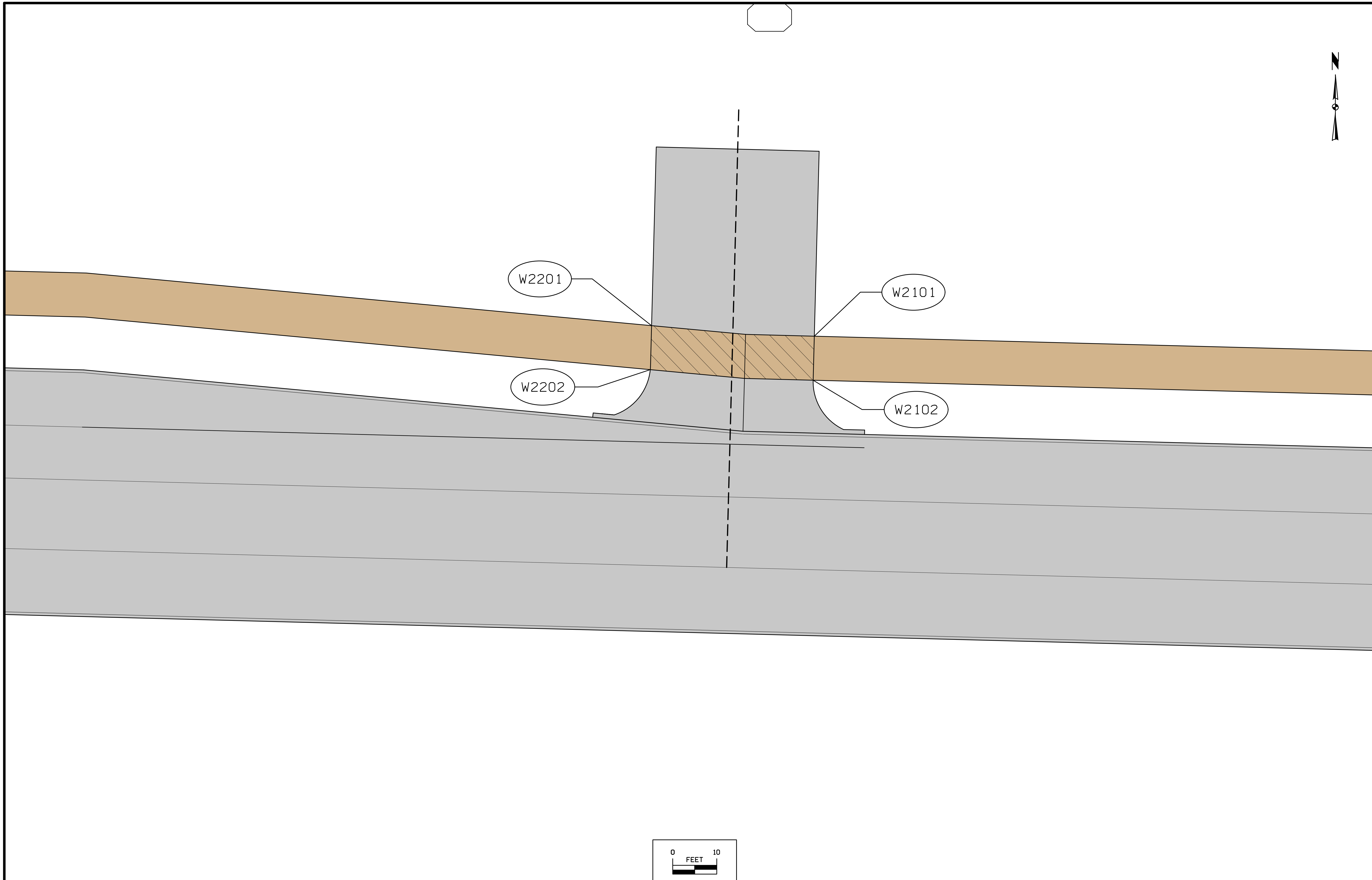

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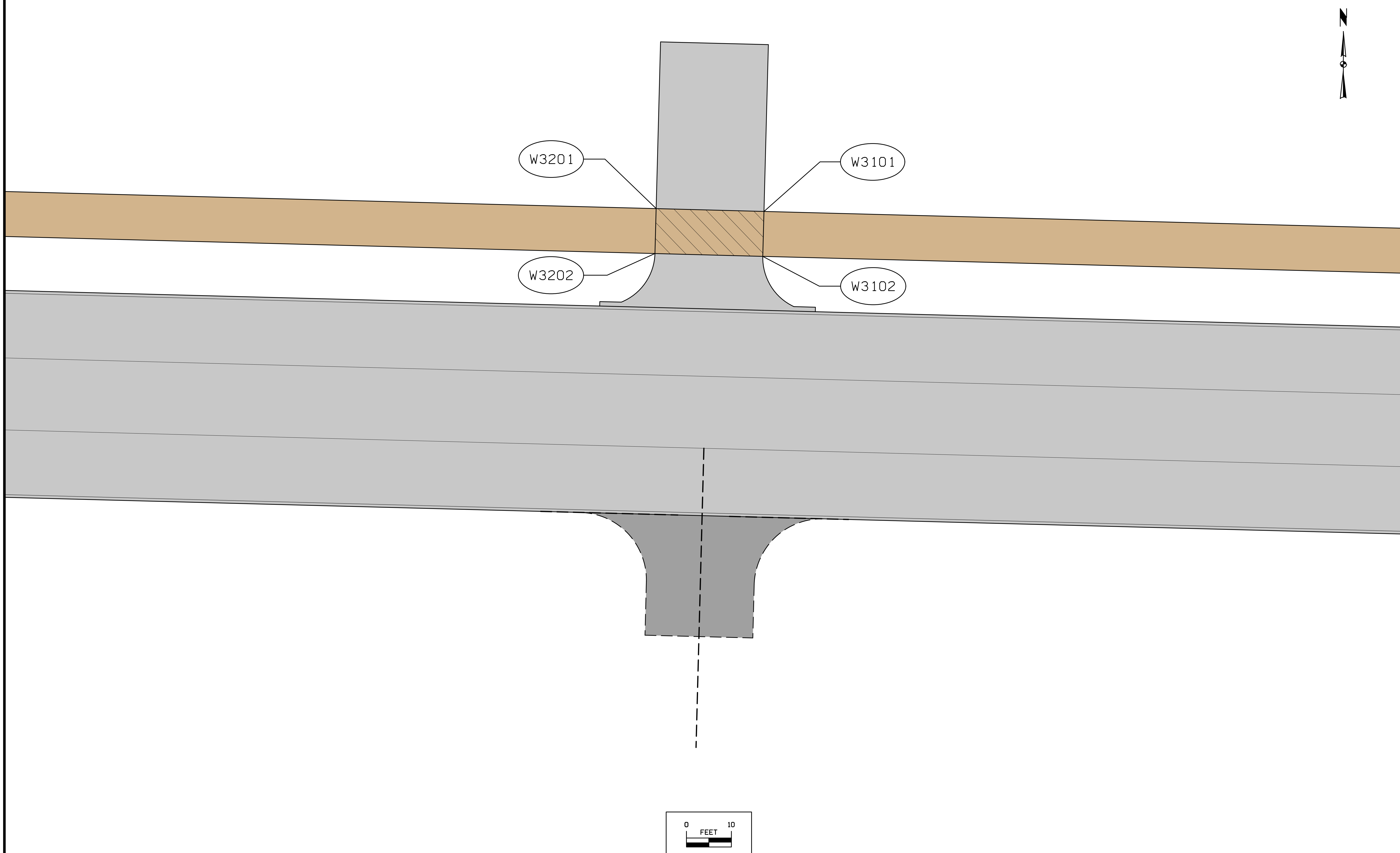
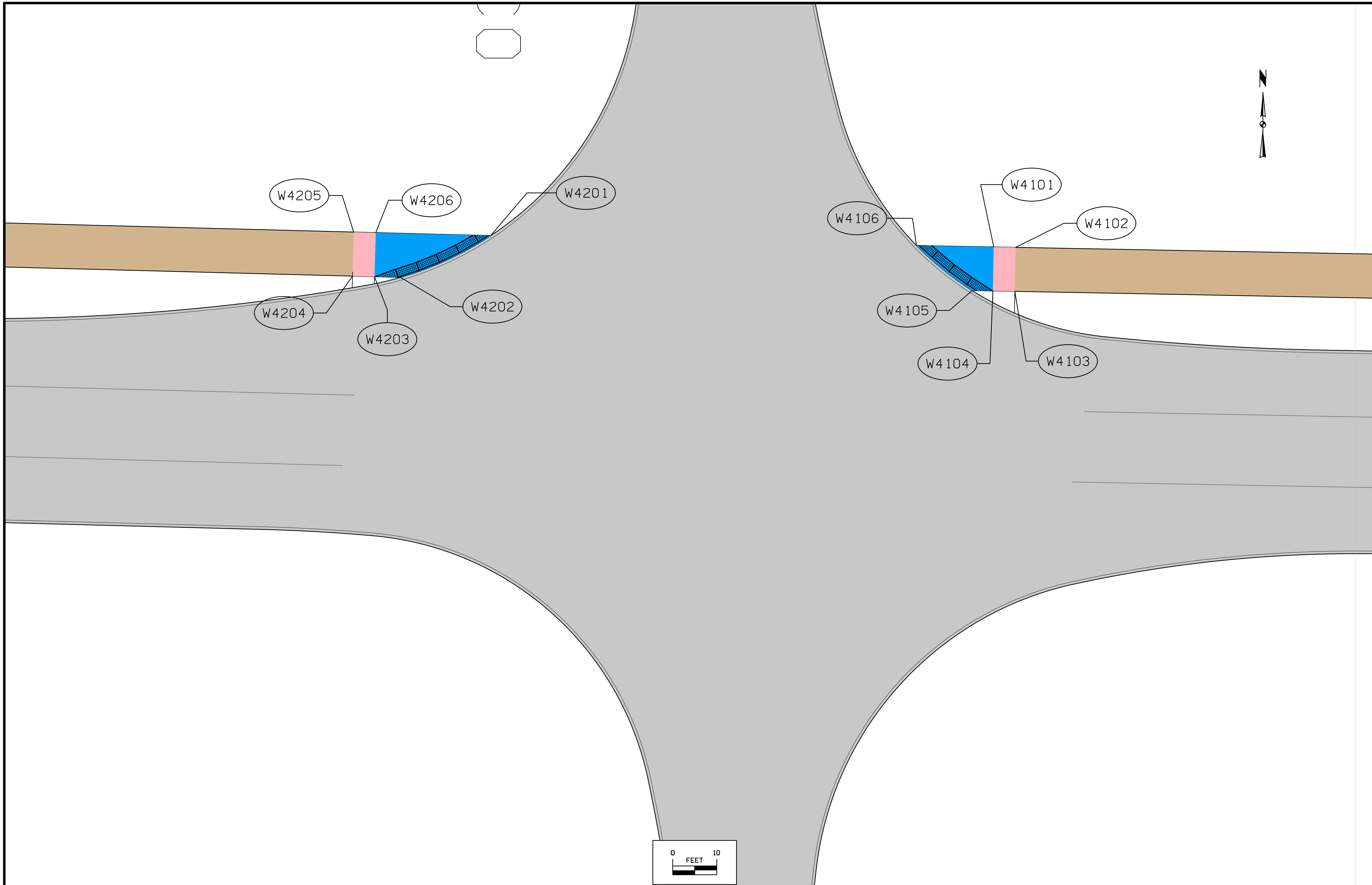


ENGLISH	IOWA DOT	DESIGN TEAM **Jia\Holst\Bennett**		**WARREN** COUNTY	PROJECT NUMBER **NHSX-092-5(51)--3H-91**	SHEET NUMBER **S.4**



ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER S.5

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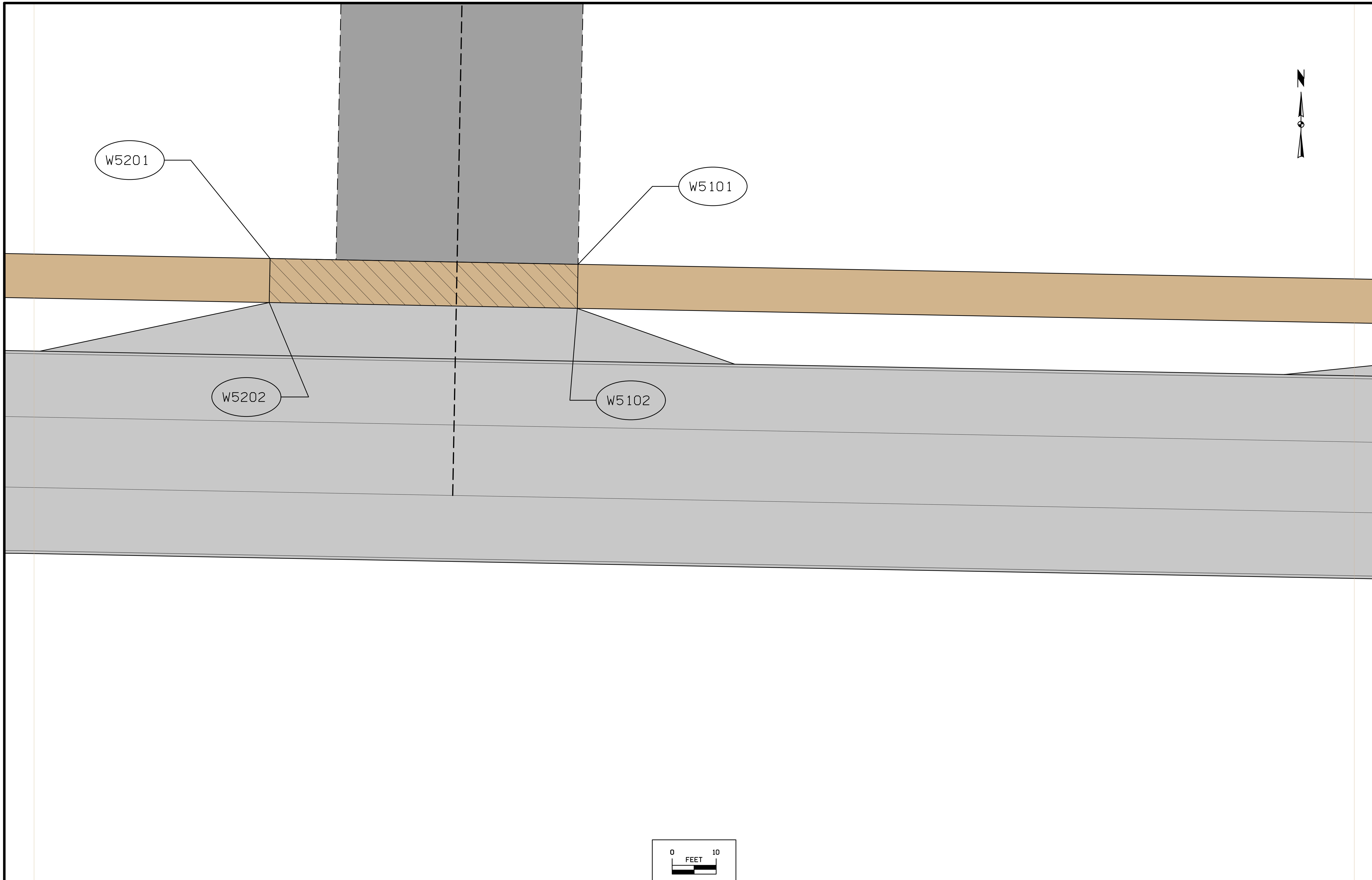

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER S.6

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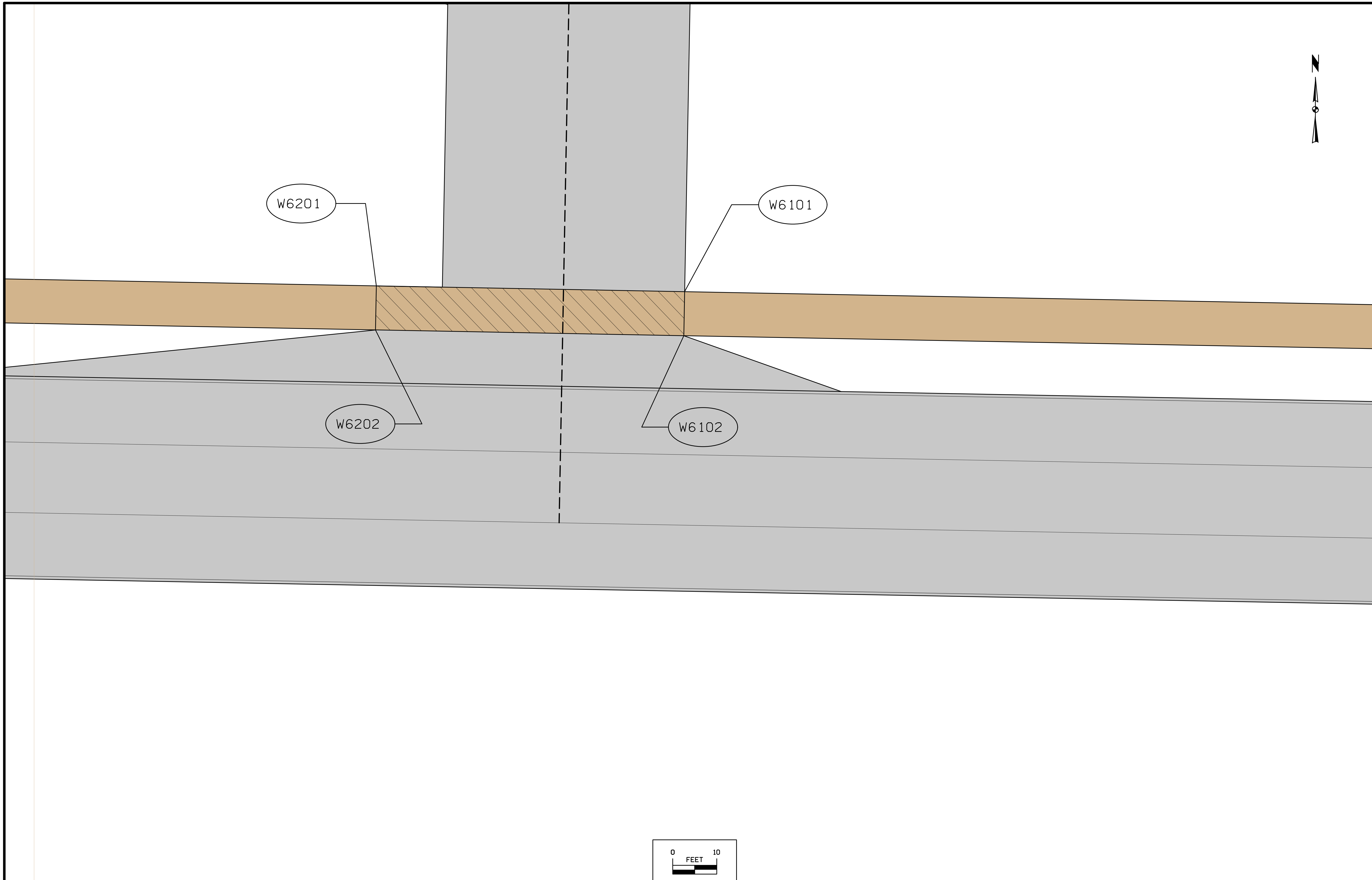
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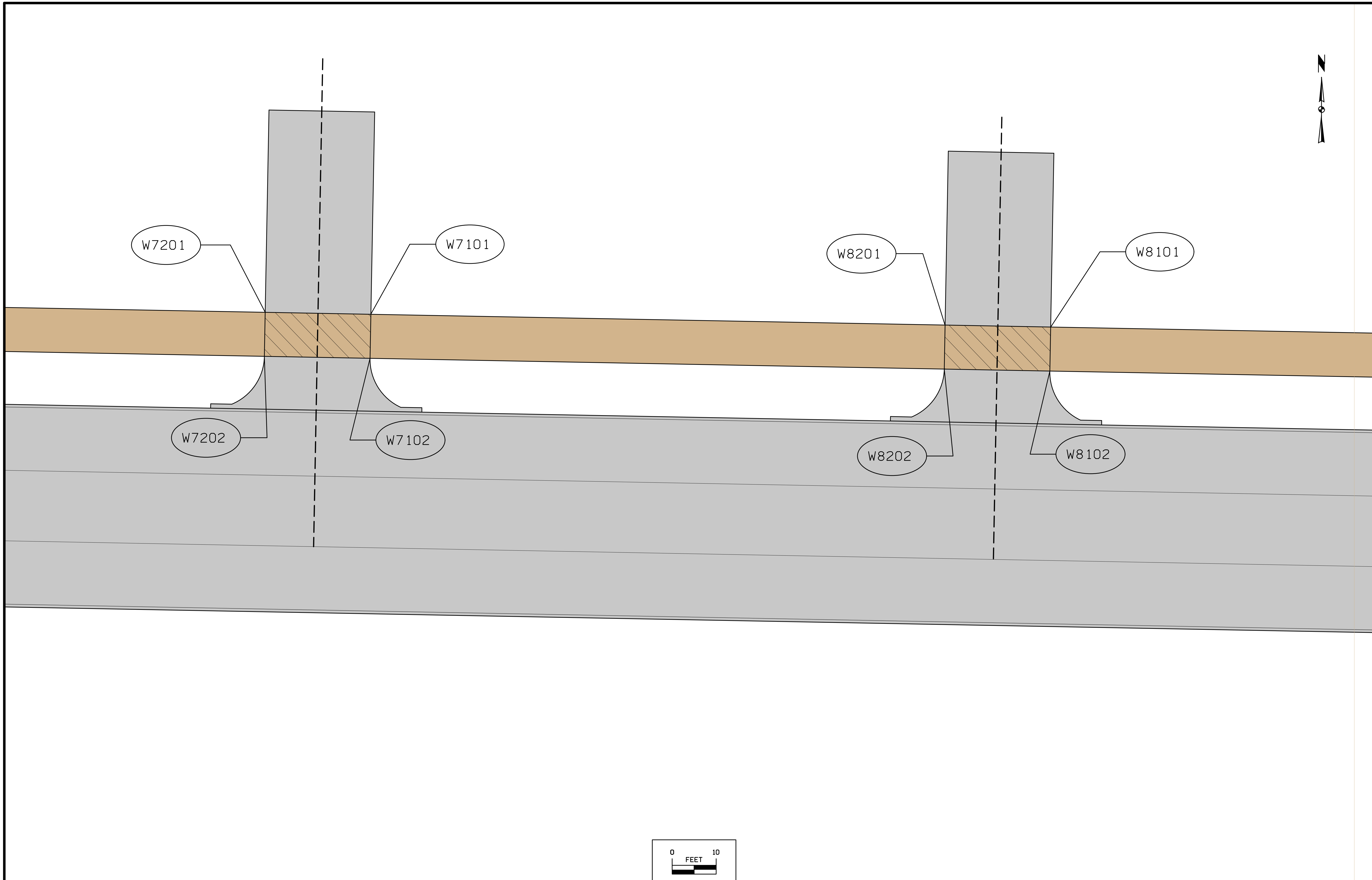

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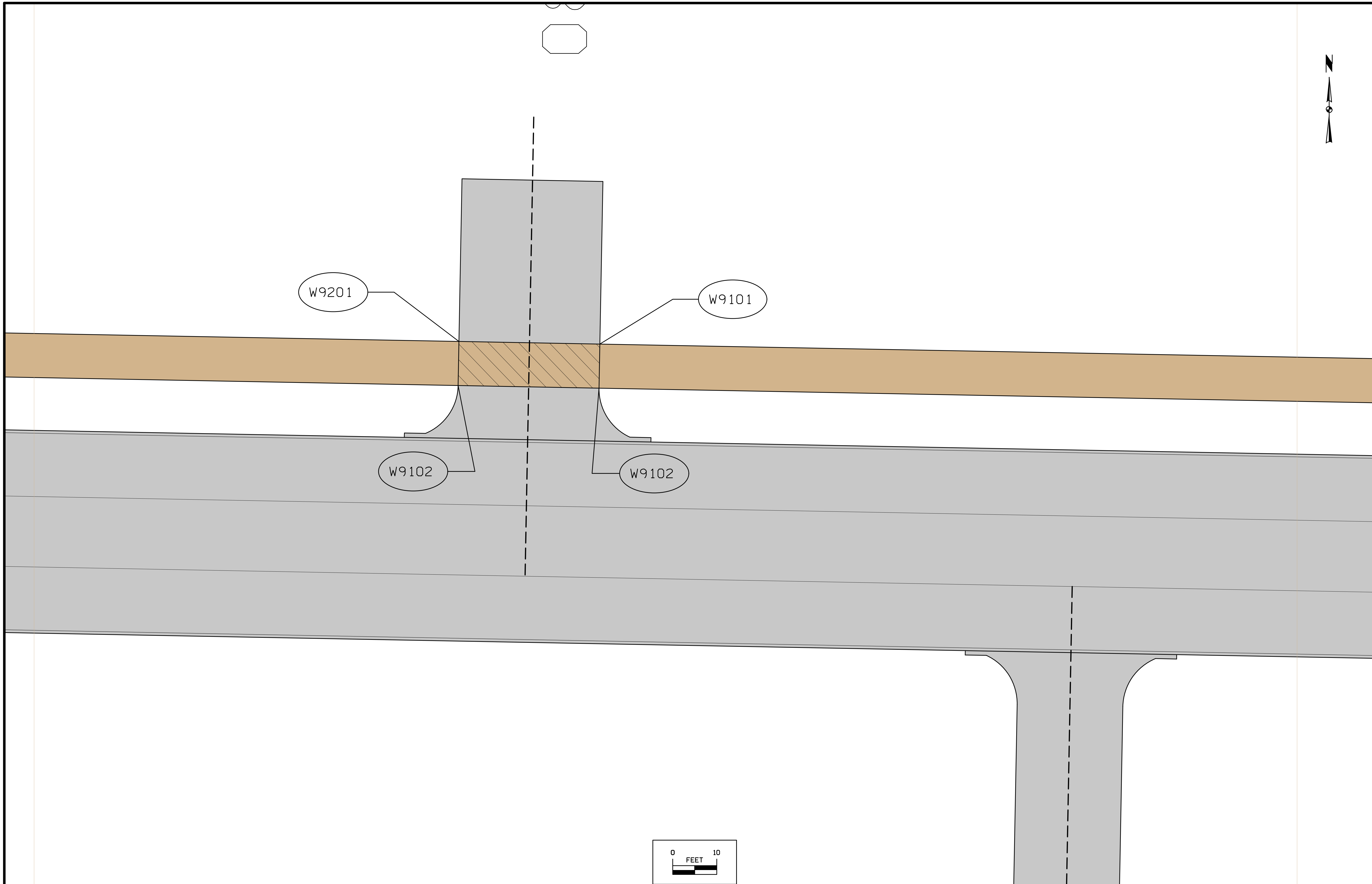
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W9101
W9102
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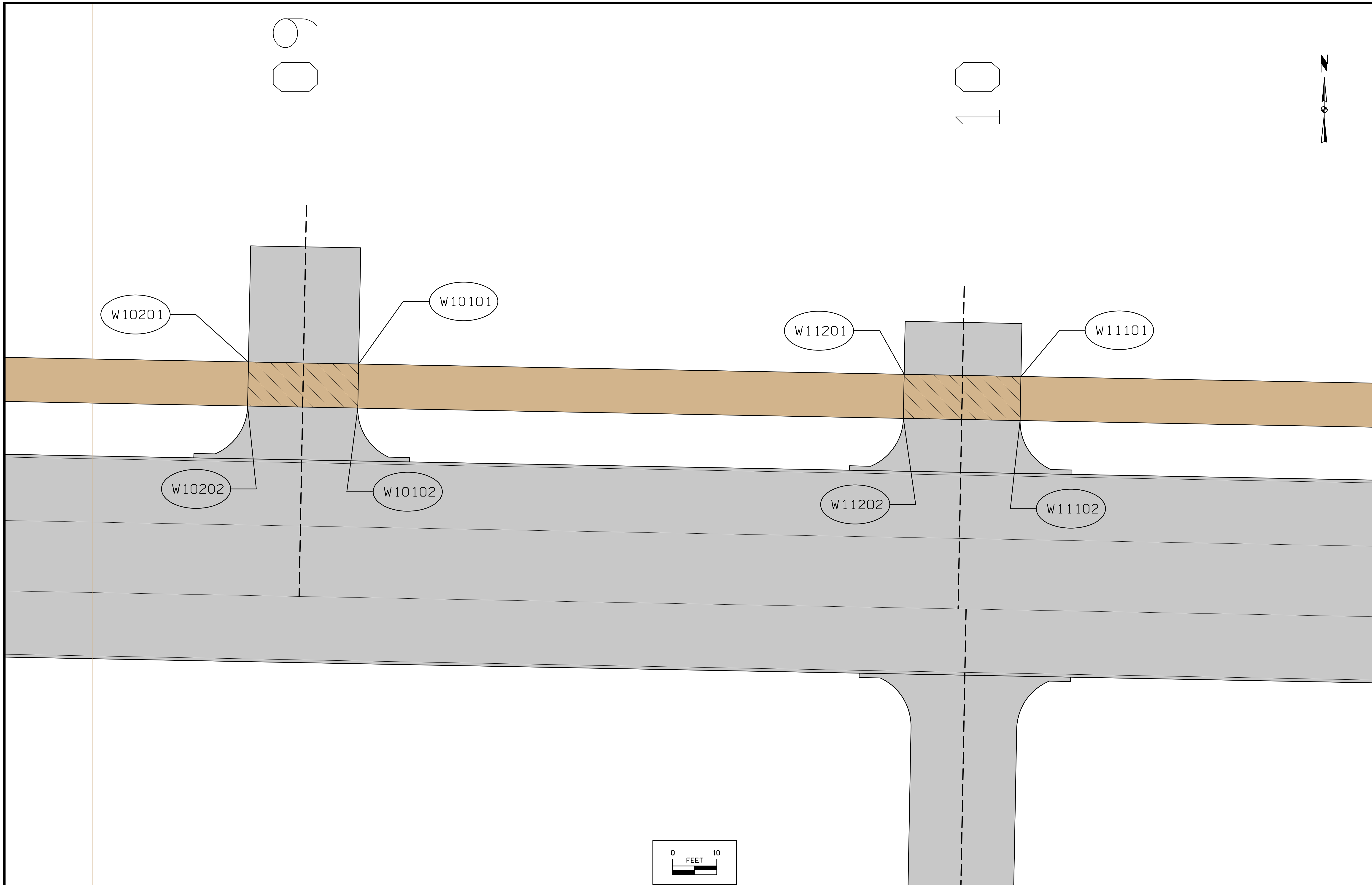
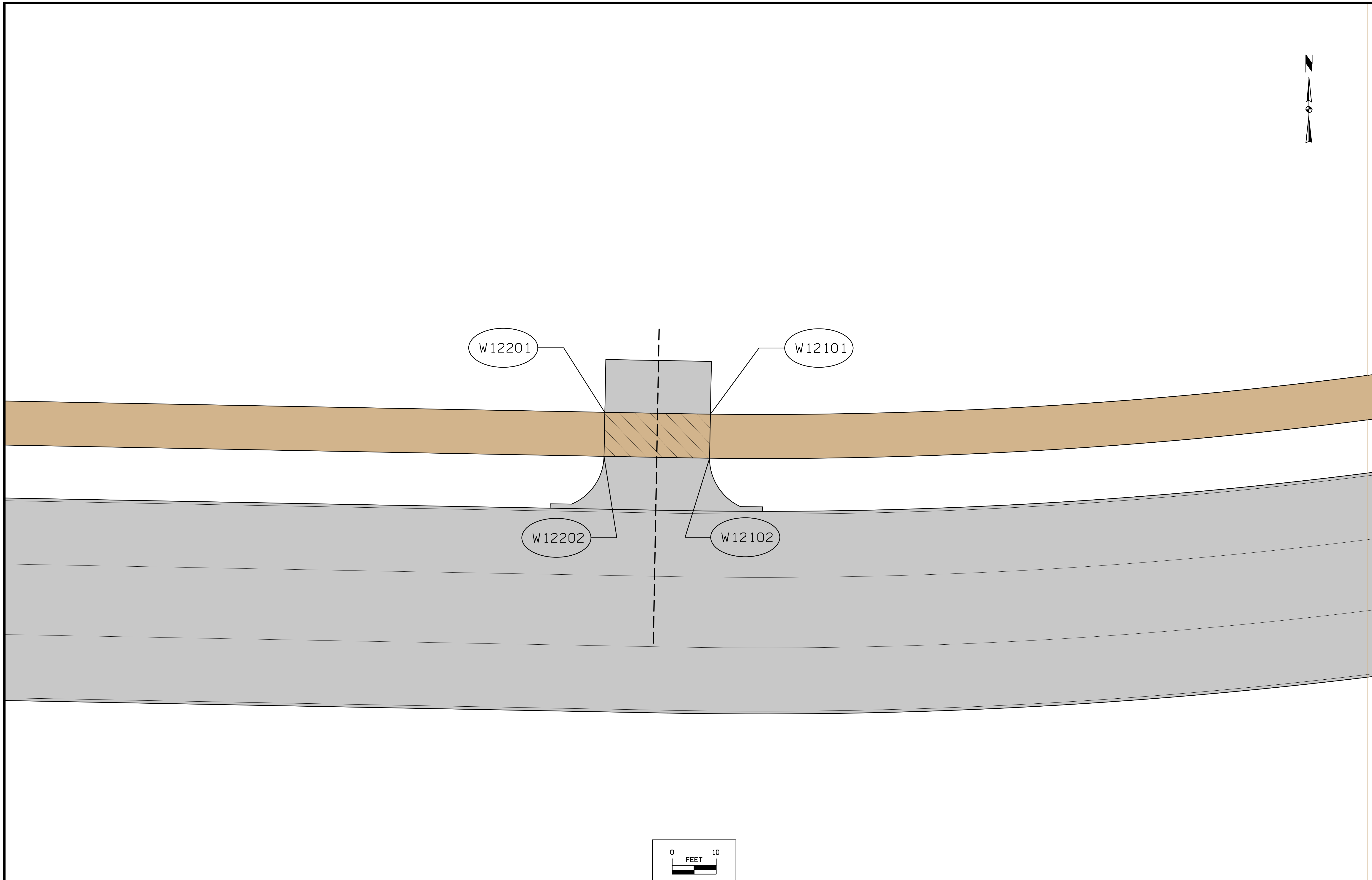
FEET

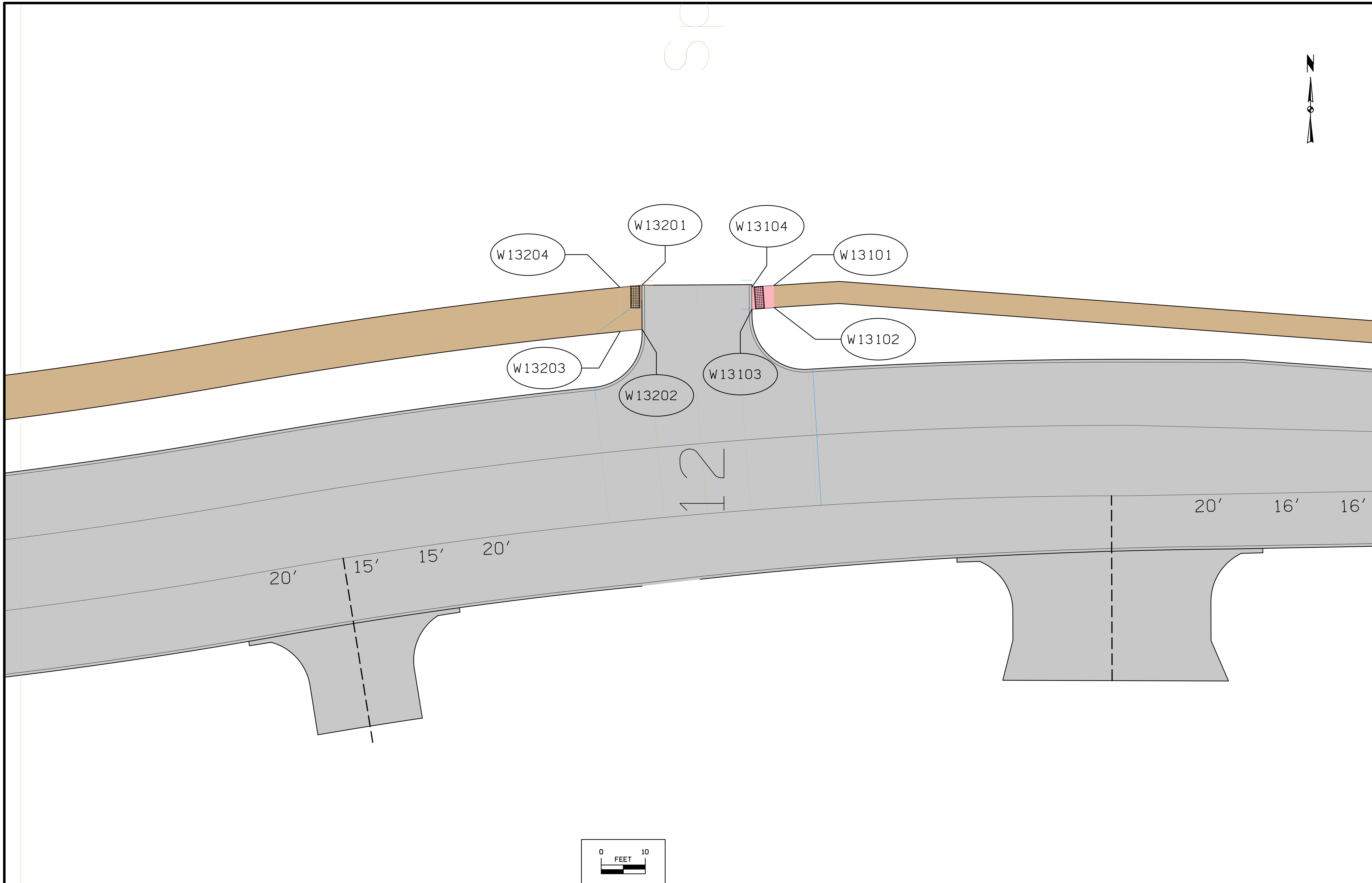


ENGLISH | IOWA DOT | DESIGN TEAM **Jia\Holst\Bennett** | **WARREN** COUNTY | PROJECT NUMBER **NHSX-092-5(51)--3H-91** | SHEET NUMBER **S.10**



ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER S.11

10:56:44 AM wcamero pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9109201004\Design\91092051S02.sht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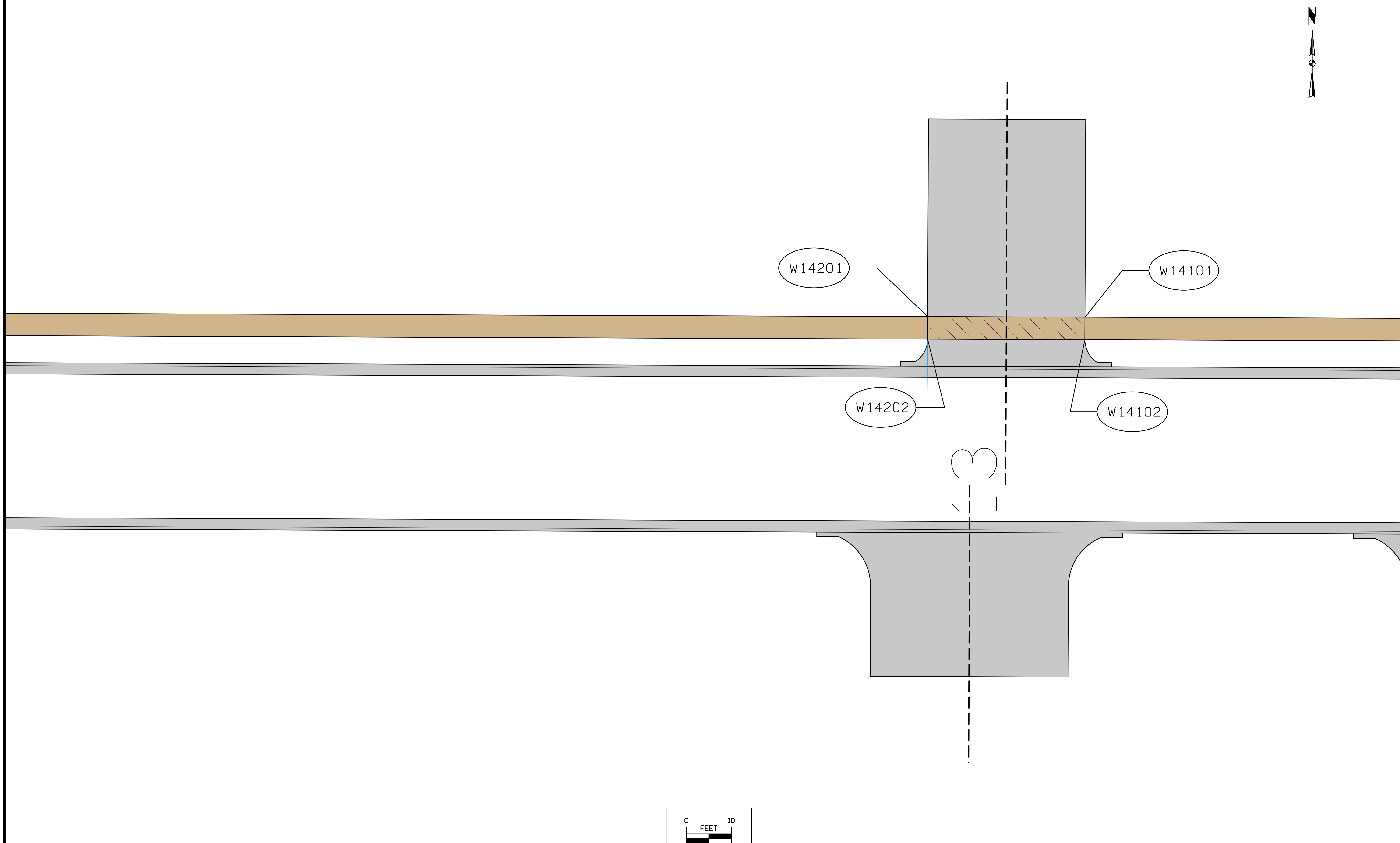
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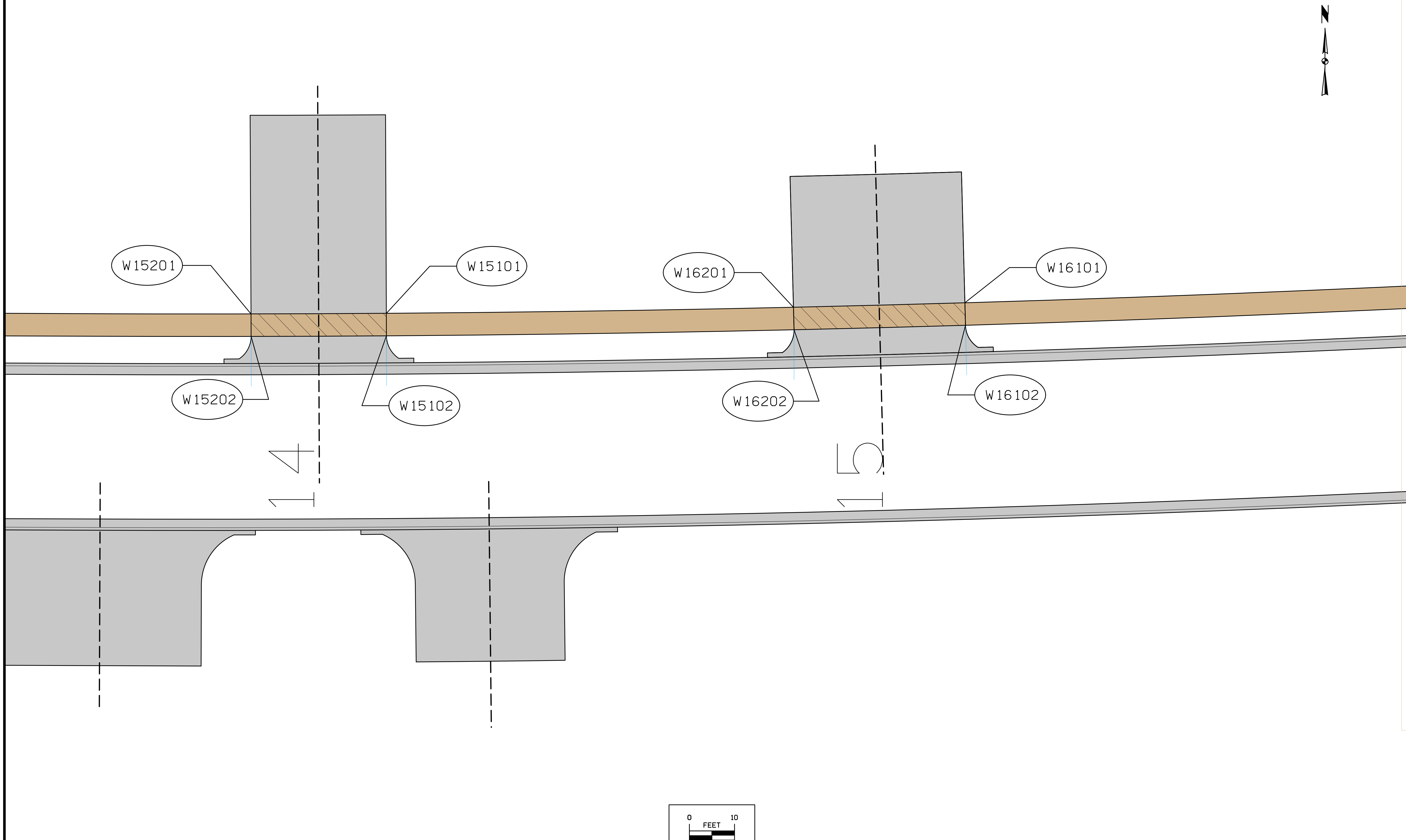
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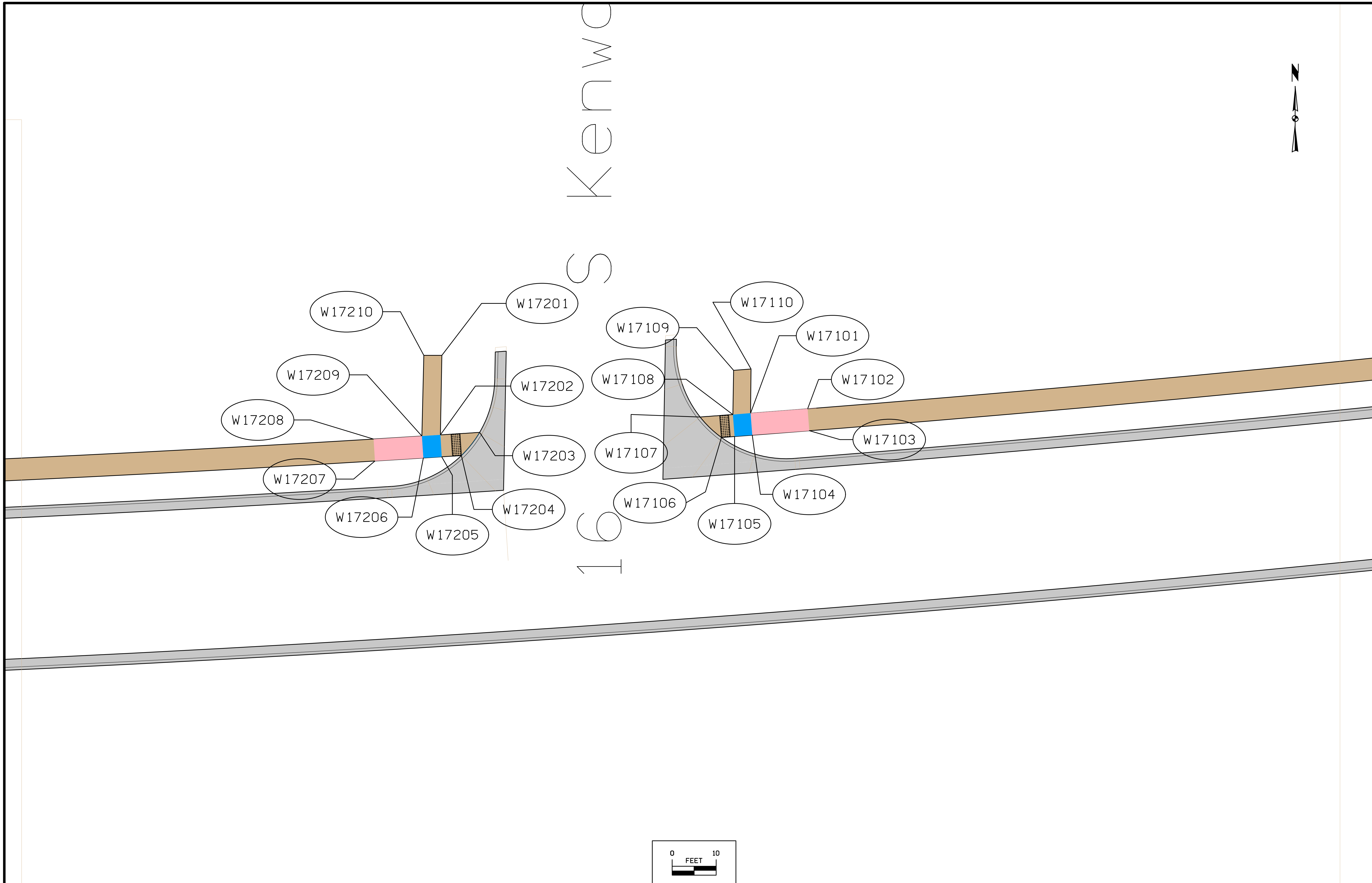
0 FEET 10



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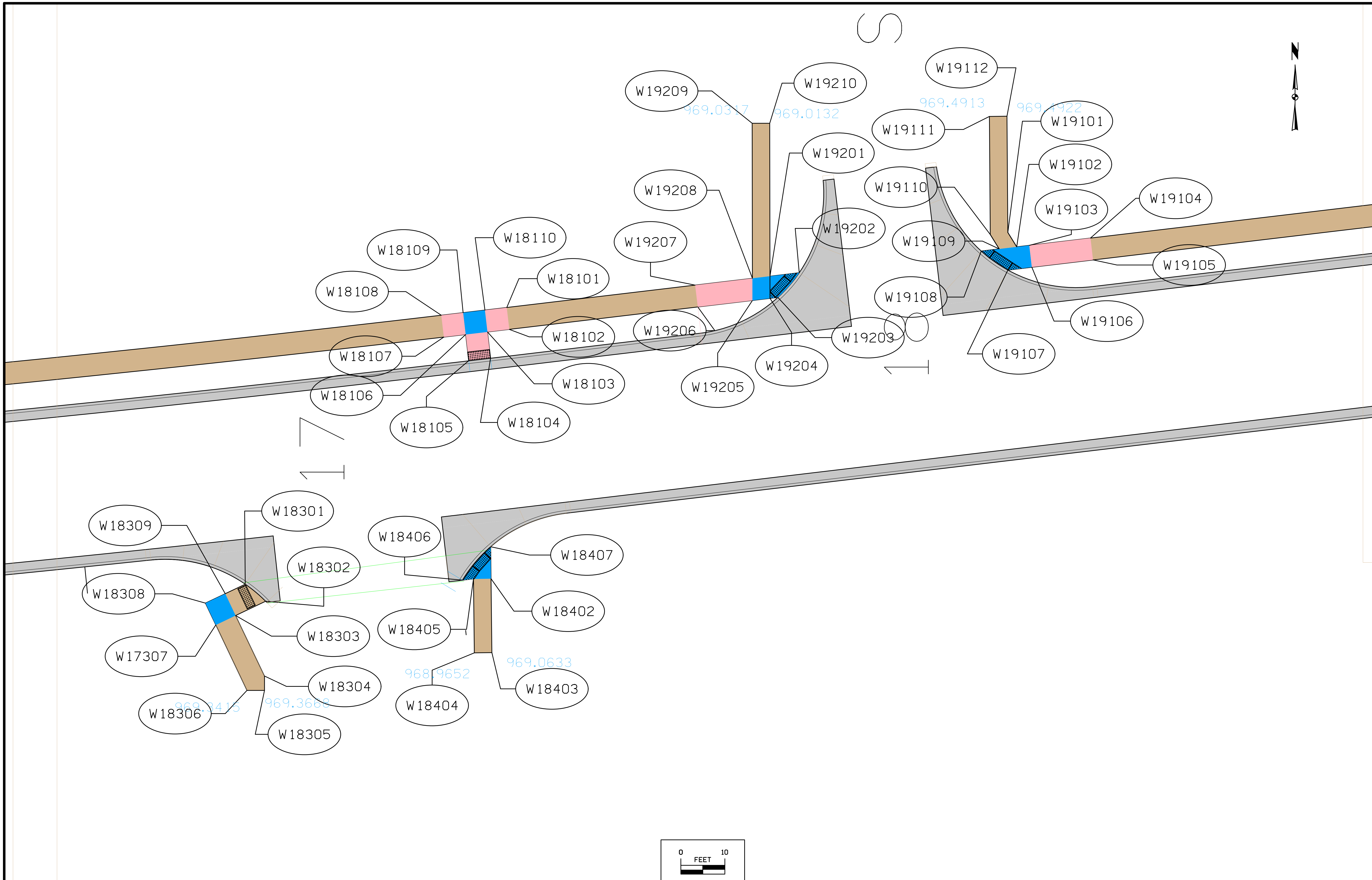

ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER S.16

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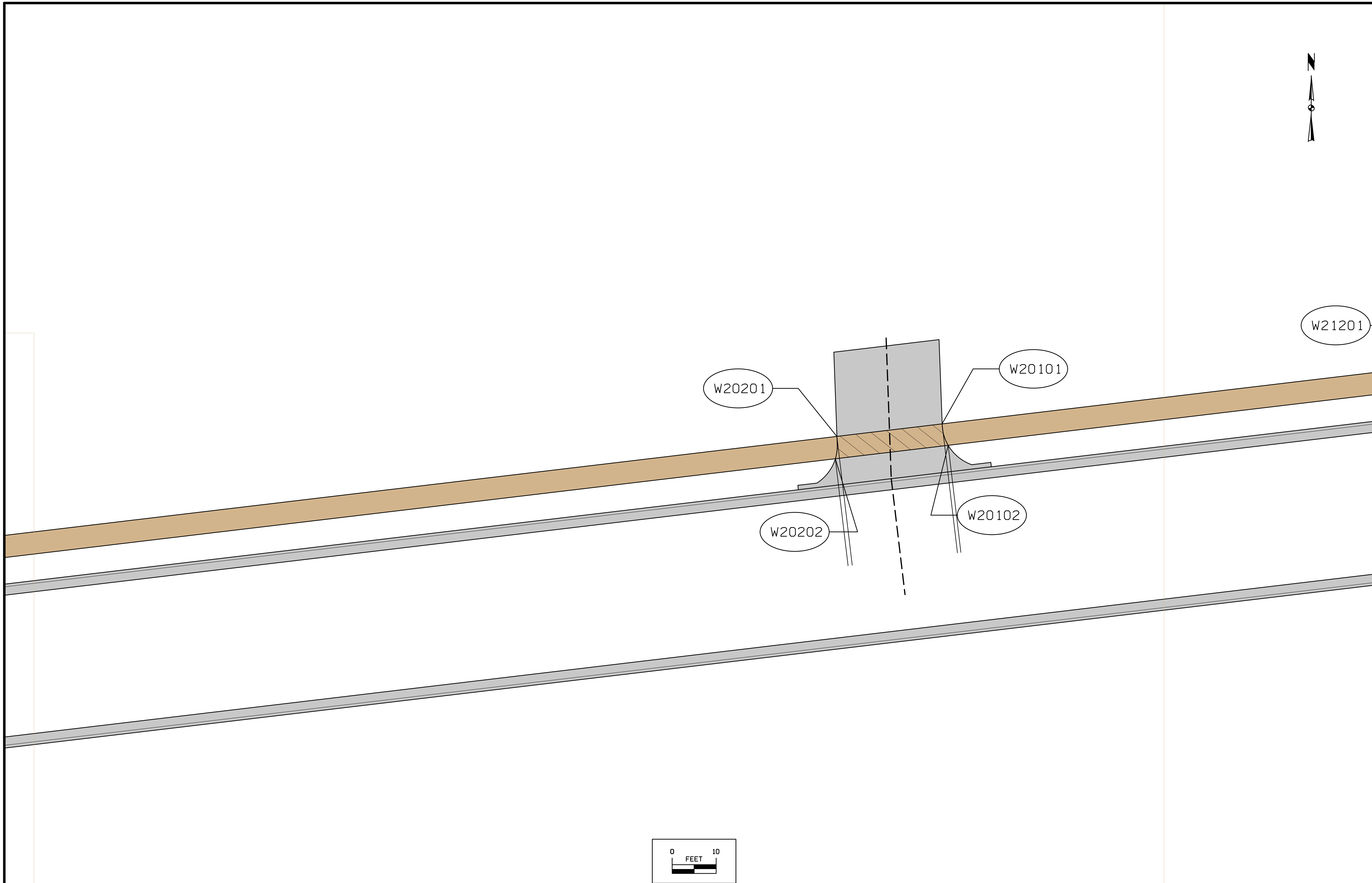

W21201
W20101
W20201
W20102
W20202
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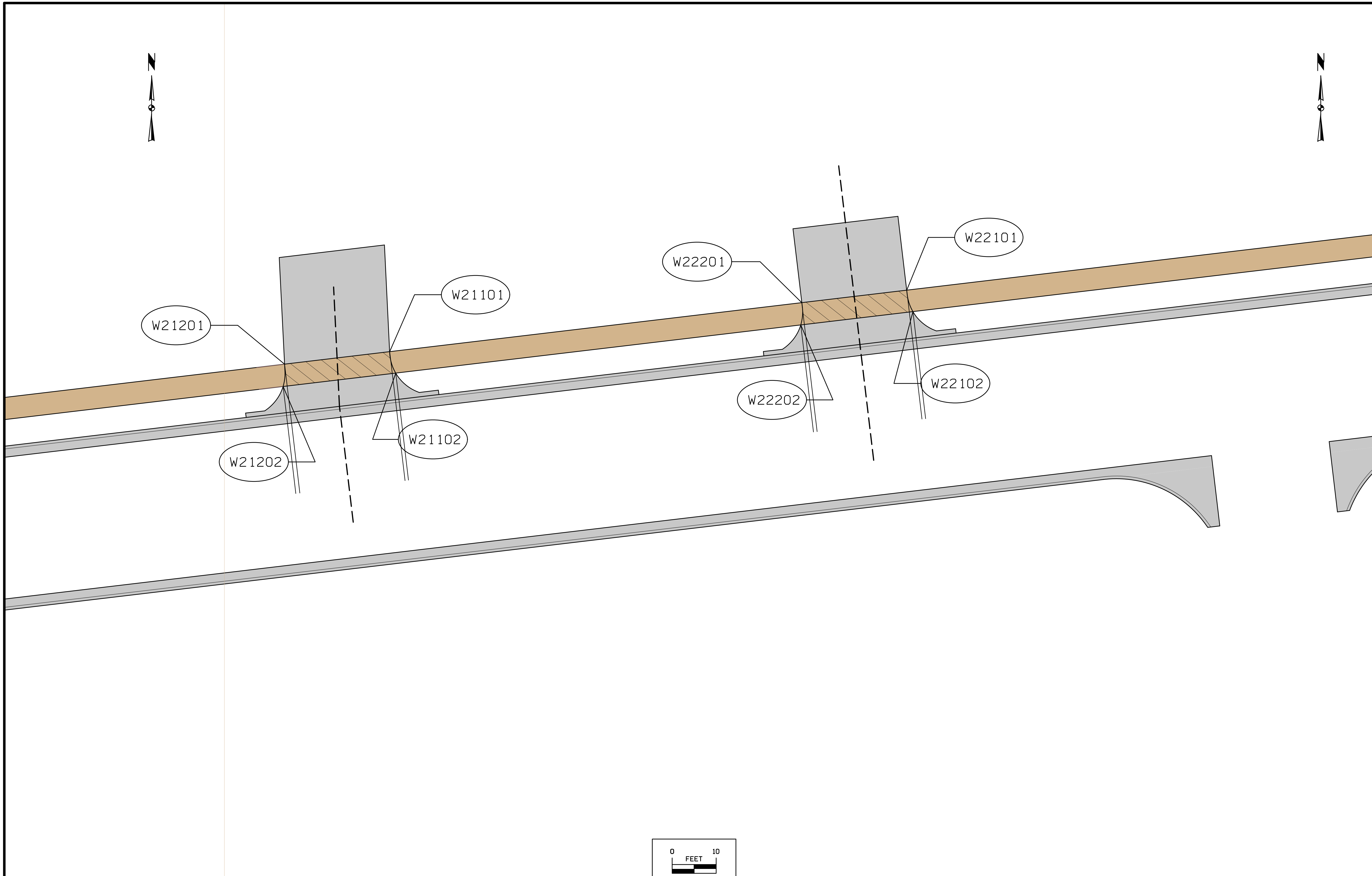
10
FEET



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER S.18

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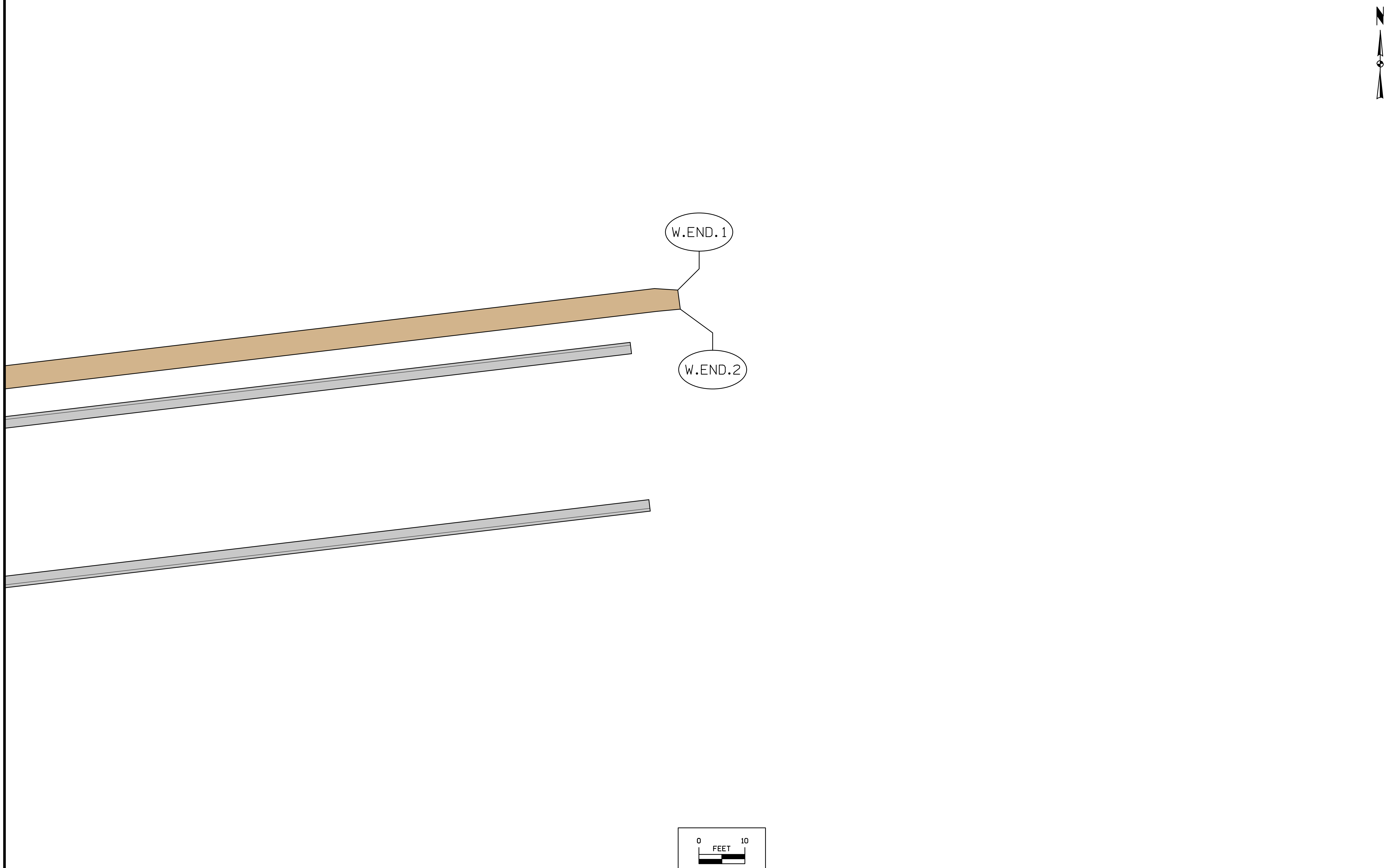
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W.END.1
W.END.2
0
FEET
10

SIDEWALK COMPLIANCE

See S Sheets

Designer Info

* Does not include curb
(1) Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.

This Data Entry Sheet fills Tab 113-10 effective Modified

Point	Station	Offset	Elevation	Point to Point		Sidewalk Designation	Distance* FT	Δ Elevation FT	Slope %	Legally Acceptable Range Pos. or Neg.	Difference between Designed Slope and Maximum Legally Acceptable Range	Acceptable Constructed Range Pos. or Neg.	Does Designer need to obtain design approval from Method's Engineer?	Staking Required on this Quadrant? (1)	Measured Slope %	Initials	Remarks
W1101			972.42	W1101	W1102	Landing/Turning Space	10.00	-0.03	-0.3%	0.1% to 2.0%	1.7%	0.1% to 2.0%					
W1102			972.39	W1102	W1103	Landing/Turning Space	10.00	-0.15	-1.5%	0.1% to 2.0%	0.5%	0.1% to 2.0%					
W1103			972.24	W1103	W1107	Landing/Turning Space	10.00	0.03	0.3%	0.1% to 2.0%	1.7%	0.1% to 2.0%					
W1104			971.65	W1107	W1101	Landing/Turning Space	10.00	0.15	1.5%	0.1% to 2.0%	0.5%	0.1% to 2.0%					
W1105	391+80.08	44.69	971.60	W1110	W1111	Landing/Turning Space	13.00	0.17	1.3%	0.1% to 2.0%	0.7%	0.1% to 2.0%					
W1106	918+70.06	47.93	971.59	W1111	W1108	Landing/Turning Space	10.00	-0.08	-0.8%	0.1% to 2.0%	1.2%	0.1% to 2.0%					
W1107			972.27	W1108	W1109	Landing/Turning Space	5.03	-0.07	-1.4%	0.1% to 2.0%	0.6%	0.1% to 2.0%					
W1108			971.62	W1111	W1101	Sidewalk Running Slope	20.65	0.72	3.5%	0.5% to 5.0%	1.5%	0.5% to 5.0%					
W1109			971.55	W1108	W1107	Sidewalk Running Slope	20.39	0.65	3.2%	0.5% to 5.0%	1.8%	0.5% to 5.0%					
W1110			971.53	W1106	W1107	Sidewalk Running Slope	17.08	0.68	4.0%	0.5% to 5.0%	1.0%	0.5% to 5.0%					
W1111			971.70	W1105	W1104	Sidewalk Running Slope	3.31	0.05	1.4%	0.5% to 5.0%	3.6%	0.5% to 5.0%					
				W1104	W1103	Sidewalk Running Slope	17.00	0.59	3.5%	0.5% to 5.0%	1.5%	0.5% to 5.0%					
				W1106	W1104	Sidewalk Cross Slope	10.00	0.06	0.6%	0.5% to 2.0%	1.4%	0.5% to 2.0%					
				W1110	W1109	Crosswalk Cross Slope - Yield Condition	12.95	0.02	0.1%	0.0% to 2.0%	1.9%	0.0% to 2.0%					
W1401	391+80.61	25.57	970.96	W1410	W1403	Landing/Turning Space	10.00	-0.10	-1.0%	0.5% to 2.0%	1.0%	0.5% to 2.0%					
W1402			971.00	W1403	W1404	Landing/Turning Space	10.00	0.15	1.5%	0.1% to 2.0%	0.5%	0.1% to 2.0%					
W1403			971.25	W1404	W1405	Landing/Turning Space	10.00	0.10	1.0%	0.1% to 2.0%	1.0%	0.1% to 2.0%					
W1404			971.40	W1405	W1410	Landing/Turning Space	10.00	-0.15	-1.5%	0.1% to 2.0%	0.5%	0.1% to 2.0%					
W1405			971.50	W1408	W1409	Landing/Turning Space	5.00	0.07	1.4%	0.1% to 2.0%	0.6%	0.1% to 2.0%					
W1406			971.10	W1409	W1406	Landing/Turning Space	10.00	0.12	1.2%	0.1% to 2.0%	0.8%	0.1% to 2.0%					
W1407			970.88	W1406	W1407	Landing/Turning Space	15.89	-0.22	-1.4%	0.1% to 2.0%	0.6%	0.1% to 2.0%					
W1408			970.91	W1409	W1410	Sidewalk Running Slope	12.84	0.37	2.9%	0.5% to 5.0%	2.1%	0.5% to 5.0%					
W1409			970.98	W1406	W1405	Sidewalk Running Slope	12.84	0.40	3.1%	0.5% to 5.0%	1.9%	0.5% to 5.0%					
W1410			971.35	W1411	W1410	Sidewalk Running Slope	10.37	0.41	3.9%	0.5% to 5.0%	1.1%	0.5% to 5.0%					
W1411	391+70.63	28.63	970.94	W1401	W1402	Sidewalk Running Slope	2.98	0.04	1.3%	0.5% to 5.0%	3.7%	0.5% to 5.0%					
				W1402	W1403	Sidewalk Running Slope	10.45	0.25	2.4%	0.5% to 5.0%	2.6%	0.5% to 5.0%					
				W1411	W1402	Sidewalk Cross Slope	10.00	0.06	0.6%	0.5% to 2.0%	1.4%	0.5% to 2.0%					
W2101			973.99	W2201	W2202	Sidewalk Cross Slope	10.00	-0.15	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%					
W2102			973.84	W2101	W2102	Sidewalk Cross Slope	10.00	-0.15	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%					
W2201			973.72	W2201	W2101	Sidewalk Running Slope	37.05	0.27	0.7%	0.5% to 5.0%	4.3%	0.5% to 5.0%					
W2202			973.57	W2202	W2102	Sidewalk Running Slope	37.08	0.27	0.7%	0.5% to 5.0%	4.3%	0.5% to 5.0%					
W3101			973.27	W3201	W3202	Sidewalk Cross Slope	10.00	-0.15	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%					
W3102			973.12	W3101	W3102	Sidewalk Cross Slope	10.00	-0.15	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%					
W3201			973.20	W3201	W3101	Sidewalk Running Slope	24.00	0.07	0.3%	0.5% to 5.0%	4.7%	0.5% to 5.0%					
W3202			973.05	W3202	W3102	Sidewalk Running Slope	24.00	0.07	0.3%	0.5% to 5.0%	4.7%	0.5% to 5.0%					
W4201	416+80.98	53.00	965.38	W4206	W4201	Landing/Turning Space	29.13	-0.45	-1.5%	0.1% to 2.0%	0.5%	0.1% to 2.0%					
W4202	416+60.74	43.00	965.73	W4203	W4202	Landing/Turning Space	5.90	-0.08	-1.4%	0.1% to 2.0%	0.6%	0.1% to 2.0%					
W4203			965.81	W4206	W4203	Landing/Turning Space	10.00	-0.02	-0.2%	0.1% to 2.0%	1.8%	0.1% to 2.0%					
W4204			965.90	W4205	W4206	Ramp Running Slope	5.00	-0.22	-4.4%	0.5% to 8.3%	3.9%	0.5% to 8.3%					
W4205			966.05	W4204	W4203	Ramp Running Slope	5.00	-0.09	-1.8%	0.5% to 8.3%	6.5%	0.5% to 8.3%					
W4206			965.83	W4205	W4204	Sidewalk Cross Slope	10.00	-0.15	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%					
W4101			964.95	W4106	W4101	Landing/Turning Space	19.54	0.23	1.2%	0.1% to 2.0%	0.8%	0.1% to 2.0%					
W4102			965.20	W4101	W4104	Landing/Turning Space	10.00	-0.04	-0.4%	0.1% to 2.0%	1.6%	0.1% to 2.0%					
W4103			965.05	W4104	W4105	Landing/Turning Space	6.71	-0.02	-0.3%	0.1% to 2.0%	1.7%	0.1% to 2.0%					
W4104			964.91	W4101	W4102	Ramp Running Slope	5.00	0.25	5.0%	0.5% to 8.3%	3.3%	0.5% to 8.3%					
W4105	417+90.89	53.00	964.89	W4104	W4103	Ramp Running Slope	5.00	0.14	2.8%	0.5% to 8.3%	5.5%	0.5% to 8.3%					
W4106	417+78.05	43.00	964.72	W4102	W4103	Sidewalk Cross Slope	10.00	-0.15	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%					
W5101	420+08.13	53.00	963.44	W5101	W5102	Sidewalk Cross Slope	10.00	-0.15	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%					
W5102	420+08.13	43.00	963.29	W5201	W5202	Sidewalk Cross Slope	10.00	-0.15	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%					
W5202	419+38.13	43.00	964.16	W5102	W5202	Sidewalk Running Slope	70.00	0.87	1.2%	0.5% to 5.0%	3.8%	0.5% to 5.0%					
W5201	419+38.13	54.00	964.31	W5201	W5101	Sidewalk Running Slope	70.00	-0.87	-1.2%	0.5% to 5.0%	3.8%	0.5% to 5.0%					
W6101	423+39.01	53.00	960.37	W6101	W6102	Sidewalk Cross Slope	10.00	-0.15	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%					
W6102	423+39.01	43.00	960.22	W6201	W6202	Sidewalk Cross Slope	10.00	-0.15	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%					
W6202	422+69.01	43.00	960.57	W6102	W6202	Sidewalk Running Slope	70.00	0.35	0.5%	0.5% to 5.0%	4.5%	0.5% to 5.0%					
W6201	422+69.01	53.00	960.72	W6201	W6101	Sidewalk Running Slope	70.00	-0.35	-0.5%	0.5% to 5.0%	4.5%	0.5% to 5.0%					
W7101	426+11.40	53.00	959.06	W7101	W7102	Sidewalk Cross Slope	10.00	-0.15	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%					
W7102	426+11.40	43.00	958.91	W7201	W7202	Sidewalk Cross Slope	10.00	-0.15	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%					
W7202	425+87.40	43.00	959.03	W7102	W7202	Sidewalk Running Slope	24.00	0.12	0.5%	0.5% to 5.0%	4.5%	0.5% to 5.0%					
W7201	425+87.40	53.00	959.18	W7201	W7101	Sidewalk Running Slope	24.00	-0.12	-0.5%	0.5% to 5.0%	4.5%	0.5% to 5.0%					
W8101	427+65.90	53.00	959.47	W8101	W8102	Sidewalk Cross Slope	10.00	-0.15	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%					
W8102	427+65.90	43.00	959.32	W8201	W8202	Sidewalk Cross Slope	10.00	-0.15	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%					
W8202	427+41.90	43.00	959.07	W8102	W8202	Sidewalk Running Slope	24.00	-0.25	-1.0%	0.5% to 5.0%	4.0%	0.5% to 5.0%					
W8201	427+41.90	53.00	959.22	W8201	W8101	Sidewalk Running Slope	24.00	0.25	1.0%	0.5% to 5.0%	4.0%	0.5% to 5.0%					
W9101	429+70.16	53.00	962.02	W9101	W9102	Sidewalk Cross Slope	10.00	-0.15	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%					
W9102	429+70.16	43.00	961.87	W9201	W9202	Sidewalk Cross Slope	10.00	-0.15	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%					
W9202	429+38.16	43.00	961.46	W9102	W9202	Sidewalk Running Slope	32.00	-0.41	-1.3%	0.5% to 5.0%	3.7%	0.5% to 5.0%					
W9201	429+38.16	53.00	961.61	W9201	W9101	Sidewalk Running Slope	32.00	0.41	1.3%	0.5% to 5.0%	3.7%	0.5% to 5.0%					
W10101	432+08.91	53.00	965.07	W10101	W10102	Sidewalk Cross Slope	10.00	-0.15	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%					
W10102	432+08.91	43.00	964.92	W10201	W10202	Sidewalk Cross Slope	10.00	-0.15	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%					
W10202	431+83.91	43.00	964.61	W10102	W10202	Sidewalk Running Slope	25.00	-0.31	-1.2%	0.5% to 5.0%	3.8%	0.5% to 5.0%					
W10201	431+83.91	53.00	964.76	W10201	W10101	Sidewalk Running Slope	25.00	0.31	1.2%	0.5% to 5.0%	3.8%	0.5% to 5.0%					
W11101	433+59.31	53.00	965.86	W11101	W11102	Sidewalk Cross Slope	10.00	-0.15	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%					
W11102	433+59.31	43.00	965.71	W11201	W11202	Sidewalk Cross Slope	10.00	-0.15	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%					
W11202	433+32.81	43.00	965.72	W11102	W11202	Sidewalk Running Slope	26.50	0.01	0.0%	0.5% to 5.0%	5.0%	0.5% to 5.0%					
W11201	433+32.81	53.00	965.87	W11201	W11101	Sidewalk Running Slope	26.50	-0.01	0.0%	0.5% to 5.0%	5.0%	0.5% to 5.0%					
W12101	438+20.43	53.00	965.81	W12101	W12102	Sidewalk Cross Slope	10.00	-0.15	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%					
W12102	438+20.43	43.00	965.66	W12201	W12202	Sidewalk Cross Slope	10.00	-0.15	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%					
W12202	437+96.06	43.00	965.54	W12102	W12202	Sidewalk Running Slope	24.00	-0.12	-0.5%	0.5% to 5.0%	4.5%	0.5% to 5.0%					
W12201	437+96.06	53.00	965.69	W12201	W12101	Sidewalk Running Slope	24.00	0.12	0.5%	0.5% to 5.0%	4.5%	0.5% to 5.0%					
W13101						Sidewalk Cross Slope	5.00	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A			
W13102						Sidewalk Cross Slope	10.00	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A			
W13103						Sidewalk Running Slope											
W13104						Sidewalk Running Slope	25.00	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A			
						Ramp Cross Slope	10.00	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A			
W13201						Ramp Cross Slope	5.00	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A			
W13202						Ramp Running Slope											
W13203						Ramp Running Slope											
W13204						Ramp Running Slope											
						Ramp Running Slope											
												0.00%					
W14101	446+74.01	37.50	969.25	W14101	W14102	Sidewalk Cross Slope	5.00	-0.08	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%					
W14102	446+74.01	32.50	969.17	W14201	W14202	Sidewalk Cross Slope	5.00	-0.08	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%					
W14202	446+39.01	32.50	969.06	W14102	W14202	Sidewalk Running Slope	35.00	-0.11	-0.3%	0.5% to 5.0%	4.7%	0.5% to 5.0%					
W14201	446+39.01	37.50	969.14	W14201	W14101	Sidewalk Running Slope	35.00	0.11	0.3%	0.5% to 5.0%	4.7%	0.5% to 5.0%					
W15101	448+32.10	37.50	969.79	W15101	W15102	Sidewalk Cross Slope	5.00	-0.07	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%					
W15102	448+32.10	32.50	969.71	W15201	W15202	Sidewalk Cross Slope	5.00	-0.08	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%					
W15202	448+01.92	32.50	969.65	W15102	W15202	Sidewalk Running Slope	30.00	-0.06	-0.2%	0.5% to 5.0%	4.8%	0.5% to 5.0%					
W15201	448+01.92	37.50	969.73	W15201	W15101	Sidewalk Running Slope	30.00	0.06	0.2%	0.5% to 5.0%	4.8%	0.5% to 5.0%					
W16101	449+61.13	37.50	970.19	W16101	W16102	Sidewalk Cross Slope	5.00	-0.07	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%					
W16102	449+61.13	32.50	970.11	W16201	W16202	Sidewalk Cross Slope	5.00	-0.08	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%					
W16202	449+22.89	32.50	969.99	W16102	W16202	Sidewalk Running Slope	38.00	-0.12	-0.3%	0.5% to 5.0%	4.7%	0.5% to 5.0%					
W16201	449+22.89	37.50	970.07	W16201	W16101	Sidewalk Running Slope	38.00	0.12	0.3%	0.5% to 5.0%	4.7%	0.5% to 5.0%					
W17101			970.06	W17108	W17101	Landing/Turning Space	4.00	0.06	1.5%	0.1% to 2.0%	0.5%	0.1% to 2.0%					
W17102			971.01	W17101	W17104	Landing/Turning Space	5.00	0.05	1.0%	0.1% to 2.0%	1.0%	0.1% to 2.0%					
W17103			970.94	W17105	W17104	Landing/Turning Space	4.00	0.06	1.5%	0.1% to 2.0%	0.5%	0.1% to 2.0%					
W17104			970.11	W17108	W17105	Landing/Turning Space	5.00	0.05	1.0%	0.1% to 2.0%	1.0%	0.1% to 2.0%					
W17105			970.05	W17107	W17108	Sidewalk Running Slope	7.47	0.29	3.9%	0.5% to 5.0%	1.1%	0.5% to 5.0%					
W17106			970.01	W17106	W17105	Sidewalk Running Slope	2.99	0.04	1.3%	0.5% to 5.0%	3.7%	0.5% to 5.0%					

FOR INFORMATION ONLY:
VALUES USED TO DETERMINE DESIGNED SLOPES

Point	Station	Offset	Elevation
W1101			972.42
W1102			972.39
W1103			972.24
W1104			971.65
W1105	391+80.08	44.69	971.60
W1106	918+70.06	47.93	971.59
W1107			972.27
W1108			971.62
W1109			971.55
W1110			971.53
W1111			971.70
W1401	391+80.61	25.57	970.96
W1402			971.00
W1403			971.25
W1404			971.40
W1405			971.50
W1406			971.10
W1407			970.88
W1408			970.91
W1409			970.98
W1410			971.35
W1411	391+70.63	28.63	970.94
W2101			973.99
W2102			973.84
W2201			973.72
W2202			973.57
W3101			973.27
W3102			973.12
W3201			973.20
W3202			973.05
W4201	416+80.98	53.00	965.38
W4202	416+60.74	43.00	965.73
W4203			965.81
W4204			965.90
W4205			966.05
W4206			965.83
W4101			964.95
W4102			965.20
W4103			965.05
W4104			964.91
W4105	417+90.89	53.00	964.89
W4106	417+78.05	43.00	964.72
W5101	420+08.13	53.00	963.44
W5102	420+08.13	43.00	963.29
W5202	419+38.13	43.00	964.16
W5201	419+38.13	54.00	964.31
W6101	423+39.01	53.00	960.37
W6102	423+39.01	43.00	960.22
W6202	422+69.01	43.00	960.57
W6201	422+69.01	53.00	960.72
W7101	426+11.40	53.00	959.06
W7102	426+11.40	43.00	958.91
W7202	425+87.40	43.00	959.03
W7201	425+87.40	53.00	959.18
W8101	427+65.90	53.00	959.47
W8102	427+65.90	43.00	959.32
W8202	427+41.90	43.00	959.07
W8201	427+41.90	53.00	959.22
W9101	429+70.16	53.00	962.02
W9102	429+70.16	43.00	961.87
W9202	429+38.16	43.00	961.46
W9201	429+38.16	53.00	961.61
W10101	432+08.91	53.00	965.07
W10102	432+08.91	43.00	964.92
W10202	431+83.91	43.00	964.61
W10201	431+83.91	53.00	964.76
W11101	433+59.31	53.00	965.86
W11102	433+59.31	43.00	965.71
W11202	433+32.81	43.00	965.72
W11201	433+32.81	53.00	965.87
W12101	438+20.43	53.00	965.81
W12102	438+20.43	43.00	965.66
W12202	437+96.06	43.00	965.54
W12201	437+96.06	53.00	965.69
W13101			
W13102			
W13103			
W13104			
W13201			
W13202			
W13203			
W13204			
W14101	446+74.01	37.50	969.25
W14102	446+74.01	32.50	969.17
W14202	446+39.01	32.50	969.06
W14201	446+39.01	37.50	969.14
W15101	448+32.10	37.50	969.79
W15102	448+32.10	32.50	969.71
W15202	448+01.92	32.50	969.65
W15201	448+01.92	37.50	969.73
W16101	449+61.13	37.50	970.19
W16102	449+61.13	32.50	970.11
W16202	449+22.89	32.50	969.99
W16201	449+22.89	37.50	970.07
W17101			970.06
W17102			971.01
W17103			970.94
W17104			970.11
W17105			970.05
W17106			970.01

W17107			969.71	W17107	W17106	Crosswalk Cross Slope - Yield Condition	6.71	0.30	4.5%	0.0% to 2.0%	-2.5%	0.0% to 5.5%	Yes		Not inside scope of project to fix (ROW limits)
W17108			970.00	W17101	W17102	Ramp Running Slope	13.00	0.95	7.3%	0.5% to 8.3%	1.0%	0.5% to 8.3%			
W17109			970.06	W17104	W17103	Ramp Running Slope	13.00	0.83	6.3%	0.5% to 8.3%	2.0%	0.5% to 8.3%			
W17110			970.00	W17102	W17103	Sidewalk Cross Slope	5.00	-0.08	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%			
				W17108	W17109	Sidewalk Running Slope	10.04	0.06	0.6%	0.5% to 5.0%	4.4%	0.5% to 5.0%			
				W17101	W17110	Sidewalk Running Slope	10.04	-0.06	-0.6%	0.5% to 5.0%	4.4%	0.5% to 5.0%			
				W17109	W17110	Match Existing Cross Slope	3.98	-0.06	-1.6%	Match Existing	FALSE	Match Existing			
W17201			970.16	W17209	W17202	Landing/Turning Space	4.21	-0.06	-1.5%	0.1% to 2.0%	0.5%	0.1% to 2.0%			
W17202			969.97	W17206	W17205	Landing/Turning Space	4.21	-0.06	-1.5%	0.1% to 2.0%	0.5%	0.1% to 2.0%			
W17203			969.61	W17209	W17206	Landing/Turning Space	5.00	-0.02	-0.4%	0.1% to 2.0%	1.6%	0.1% to 2.0%			
W17204			969.84	W17202	W17205	Landing/Turning Space	5.00	-0.02	-0.4%	0.1% to 2.0%	1.6%	0.1% to 2.0%			
W17205			969.95	W17202	W17203	Sidewalk Running Slope	8.93	-0.36	-4.0%	0.5% to 5.0%	1.0%	0.5% to 5.0%			
W17206			970.02	W17205	W17204	Sidewalk Running Slope	4.46	-0.11	-2.5%	0.5% to 5.0%	2.5%	0.5% to 5.0%			
W17207			970.72	W17204	W17203	Crosswalk Cross Slope - Yield Condition	6.71	-0.23	-3.4%	0.0% to 2.0%	-1.4%	0.0% to 4.4%	Yes		
W17208			970.80	W17208	W17209	Ramp Running Slope	11.00	-0.76	-6.9%	0.5% to 8.3%	1.4%	0.5% to 8.3%			
W17209			970.04	W17207	W17206	Ramp Running Slope	11.00	-0.71	-6.4%	0.5% to 8.3%	1.9%	0.5% to 8.3%			
W17210			970.20	W17208	W17207	Sidewalk Cross Slope	5.00	-0.08	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%			
				W17201	W17202	Sidewalk Running Slope	18.07	-0.19	-1.1%	0.5% to 5.0%	3.9%	0.5% to 5.0%			
				W17210	W17209	Sidewalk Running Slope	18.34	-0.16	-0.9%	0.5% to 5.0%	4.1%	0.5% to 5.0%			
				W17210	W17201	Match Existing Cross Slope	5.00	-0.04	-0.7%	Match Existing	FALSE	Match Existing			
W18301				W18308	W18309	Landing/Turning Space	5.00	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	
W18302				W18307	W18303	Landing/Turning Space	5.00	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	
W18303				W18308	W18307	Landing/Turning Space	5.50	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	
W18304				W18309	W18303	Landing/Turning Space	5.50	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	
W18305			969.37	W18309	W18301	Sidewalk Running Slope	5.03	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	
W18306			969.34	W18303	W18302	Sidewalk Running Slope	7.55	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	
W18307				W18301	W18302	Crosswalk Cross Slope - Yield Condition	6.05	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	
W18308				W18307	W18306	Sidewalk Running Slope	16.47	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	
W18309				W18303	W18304	Sidewalk Running Slope	15.23	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	
				W18304	W18305	Sidewalk Running Slope	3.40	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	
				W18306	W18305	Match Existing Cross Slope	4.00	0.03	0.6%	Match Existing	FALSE	Match Existing			
W18401				W18406	W18405	Landing/Turning Space	2.51	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	
W18402				W18405	W18402	Landing/Turning Space	4.00	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	
W18403			969.06	W18407	W18402	Landing/Turning Space	7.27	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	
W18404			968.97	W18406	W18407	Crosswalk Cross Slope - Yield Condition	9.94	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	
W18405				W18405	W18404	Sidewalk Running Slope	16.79	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	
W18406				W18402	W18403	Sidewalk Running Slope	16.79	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	
W18407				W18404	W18403	Match Existing Cross Slope	4.00	0.10	2.5%	Match Existing	FALSE	Match Existing			
W18101			970.82	W18109	W18110	Landing/Turning Space	5.00	-0.01	-0.2%	0.1% to 2.0%	1.8%	0.1% to 2.0%			
W18102			970.74	W18106	W18103	Landing/Turning Space	5.00	-0.01	-0.2%	0.1% to 2.0%	1.8%	0.1% to 2.0%			
W18103			970.47	W18109	W18106	Landing/Turning Space	5.00	-0.07	-1.5%	0.1% to 2.0%	0.5%	0.1% to 2.0%			
W18104			970.13	W18110	W18103	Landing/Turning Space	5.00	-0.07	-1.5%	0.1% to 2.0%	0.5%	0.1% to 2.0%			
W18105			970.14	W18106	W18105	Ramp Running Slope	6.00	-0.34	-5.7%	0.5% to 8.3%	2.6%	0.5% to 8.3%			
W18106			970.48	W18103	W18104	Ramp Running Slope	6.00	-0.34	-5.7%	0.5% to 8.3%	2.6%	0.5% to 8.3%			
W18107			970.76	W18104	W18104	Crosswalk Cross Slope - No Yield Condition	5.00	0.00	0.0%	0.0% to 5.0%	5.0%	0.0% to 5.0%			
W18108			970.84	W18108	W18109	Ramp Running Slope	5.00	-0.28	-5.7%	0.5% to 8.3%	2.6%	0.5% to 8.3%			
W18109			970.56	W18107	W18106	Ramp Running Slope	5.00	-0.28	-5.7%	0.5% to 8.3%	2.6%	0.5% to 8.3%			
W18110			970.55	W18108	W18107	Sidewalk Cross Slope	5.00	-0.08	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%			
				W18110	W18101	Ramp Running Slope	5.00	0.27	5.4%	0.5% to 8.3%	2.9%	0.5% to 8.3%			
				W18103	W18102	Ramp Running Slope	5.00	0.27	5.4%	0.5% to 8.3%	2.9%	0.5% to 8.3%			
				W18101	W18102	Sidewalk Cross Slope	5.00	-0.08	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%			
W19101			969.51	W19108	W19109	Landing/Turning Space	4.11	0.06	1.5%	0.1% to 2.0%	0.5%	0.1% to 2.0%			
W19102			969.50	W19109	W19102	Landing/Turning Space	4.01	0.06	1.5%	0.1% to 2.0%	0.5%	0.1% to 2.0%			
W19103			969.55	W19102	W19103	Landing/Turning Space	2.88	0.04	1.5%	0.1% to 2.0%	0.5%	0.1% to 2.0%			
W19104			970.53	W19107	W19106	Landing/Turning Space	5.50	0.03	0.5%	0.1% to 2.0%	1.5%	0.1% to 2.0%			
W19105			970.46	W19103	W19106	Landing/Turning Space	5.00	0.08	1.5%	0.1% to 2.0%	0.5%	0.1% to 2.0%			
W19106			969.62	W19108	W19107	Crosswalk Cross Slope - Yield Condition	7.43	0.21	2.8%	0.0% to 2.0%	-0.8%	0.0% to 3.8%	Yes		
W19107			969.59	W19103	W19104	Ramp Running Slope	14.00	0.99	7.0%	0.5% to 8.3%	1.3%	0.5% to 8.3%			
W19108			969.38	W19106	W19105	Ramp Running Slope	14.00	0.84	6.0%	0.5% to 8.3%	2.3%	0.5% to 8.3%			
W19109			969.44	W19104	W19105	Sidewalk Cross Slope	5.00	-0.08	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%			
W19110			969.45	W19111	W19110	Sidewalk Running Slope	26.82	-0.04	-0.2%	0.5% to 5.0%	4.8%	0.5% to 5.0%			
W19111			969.49	W19112	W19101	Sidewalk Running Slope	26.38	0.02	0.1%	0.5% to 5.0%	4.9%	0.5% to 5.0%			
W19112			969.49	W19110	W19109	Sidewalk Running Slope	3.86	-0.01	-0.3%	0.5% to 5.0%	4.7%	0.5% to 5.0%			
				W19101	W19102	Sidewalk Running Slope	3.85	-0.01	-0.2%	0.5% to 5.0%	4.8%	0.5% to 5.0%			
				W19111	W19112	Match Existing Cross Slope	4.00	0.00	0.0%	Match Existing	FALSE	Match Existing			
				W19110	W19101	Sidewalk Cross Slope	4.03	0.06	1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%			
W19201			969.76	W19208	W19201	Landing/Turning Space	4.03	-0.06	-1.5%	0.1% to 2.0%	0.5%	0.1% to 2.0%			
W19202			969.49	W19205	W19204	Landing/Turning Space	4.04	-0.04	-1.0%	0.1% to 2.0%	1.0%	0.1% to 2.0%			
W19203			969.75	W19208	W19205	Landing/Turning Space	5.04	-0.01	-0.2%	0.1% to 2.0%	1.8%	0.1% to 2.0%			
W19204			969.77	W19201	W19204	Landing/Turning Space	5.04	0.01	0.2%	0.1% to 2.0%	1.8%	0.1% to 2.0%			
W19205			969.81	W19201	W19202	Sidewalk Running Slope	6.68	-0.27	-4.0%	0.5% to 5.0%	1.0%	0.5% to 5.0%			
W19206			970.66	W19204	W19203	Sidewalk Running Slope	1.80	-0.02	-1.1%	0.5% to 5.0%	3.9%	0.5% to 5.0%			
W19207			970.73	W19202	W19203	Crosswalk Cross Slope - Yield Condition	7.40	0.26	3.5%	0.0% to 2.0%	-1.5%	0.0% to 4.5%	Yes		
W19208			969.82	W19207	W19208	Ramp Running Slope	13.09	-0.91	-7.0%	0.5% to 8.3%	1.3%	0.5% to 8.3%			
W19209			969.03	W19206	W19205	Ramp Running Slope	12.50	-0.85	-6.8%	0.5% to 8.3%	1.5%	0.5% to 8.3%			
W19210			969.01	W19207	W19206	Sidewalk Cross Slope	5.00	-0.08	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%			
				W19209	W19208	Sidewalk Running Slope	35.21	0.79	2.2%	0.5% to 5.0%	2.8%	0.5% to 5.0%			
				W19210	W19201	Sidewalk Running Slope	34.74	0.75	2.1%	0.5% to 5.0%	2.9%	0.5% to 5.0%			
				W19209	W19210	Match Existing Cross Slope	4.00	-0.02	-0.5%	Match Existing	FALSE	Match Existing			
W.END.1			967.59	W.END.1	W.END.2	Match Existing Cross Slope	4.21	0.02	0.5%	Match Existing	#REF!	#REF!	#REF!	#REF!	
W.END.2			967.61								#REF!	#REF!	#REF!	#REF!	
W20101	458+89.04	37.50	969.88	W20101	W20102	Sidewalk Cross Slope	5.00	-0.08	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%			
W20102	458+89.83	32.50	969.81	W20201	W20202	Sidewalk Cross Slope	5.00	-0.07	-1.4%	0.5% to 2.0%	0.6%	0.5% to 2.0%			
W20202	458+65.01	32.50	969.91	W20102	W20202	Sidewalk Running Slope	25.82	0.11	0.4%	0.5% to 5.0%	4.6%	0.5% to 5.0%			
W20201	458+64.96	37.50	969.98	W20201	W20101	Sidewalk Running Slope	24.08	-0.10	-0.4%	0.5% to 5.0%	4.6%	0.5% to 5.0%			
W21101	460+27.99	37.50	969.63	W21101	W21102	Sidewalk Cross Slope	5.00	-0.07	-1.4%	0.5% to 2.0%	0.6%	0.5% to 2.0%			
W21102	460+28.77	32.50	969.56	W21201	W21202	Sidewalk Cross Slope	5.00	-0.07	-1.4%	0.5% to 2.0%	0.6%	0.5% to 2.0%			
W21202	460+03.00	32.50	969.60	W21102	W21202	Sidewalk Running Slope	35.77	0.04	0.1%	0.5% to 5.0%	4.9%	0.5% to 5.0%			
W21201	460+03.93	37.50	969.67	W21201	W21101	Sidewalk Running Slope	24.06	-0.04	-0.2%	0.5% to 5.0%	4.8%	0.5% to 5.0%			
W22101	461+46.29	37.50	969.45	W22101	W22102	Sidewalk Cross Slope	5.00	-0.08	-1.5%	0.5% to 2.0%	0.5%	0.5% to 2.0%			
W22102	461+47.12	32.50	969.37	W22201	W22202	Sidewalk Cross Slope	5.00	-0.08	-1.6%	0.5% to 2.0%	0.4%	0.5% to 2.0%	Yes	Yes	
W22202	461+21.45	32.50	969.42	W22102	W22202	Sidewalk Running Slope	25.60	0.05	0.2%	0.5% to 5.0%	4.8%	0.5% to 5.0%			
W22201	461+22.29	37.50	969.50	W22201	W22101		24.00	-0.05	-0.2%	#N/A	#N/A	#N/A	#N/A	#N/A	

W17107			969.71
W17108			970.00
W17109			970.06
W17110			970.00
W17201			970.16
W17202			969.97
W17203			969.61
W17204			969.84
W17205			969.95
W17206			970.02
W17207			970.72
W17208			970.80
W17209			970.04
W17210			970.20
W18301			
W18302			
W18303			
W18304			
W18305			969.37
W18306			969.34
W18307			
W18308			
W18309			
W18401			
W18402			
W18403			969.06
W18404			968.97
W18405			
W18406			
W18407			
W18101			970.82
W18102			970.74
W18103			970.47
W18104			970.13
W18105			970.14
W18106			970.48
W18107			970.76
W18108			970.84
W18109			970.56
W18110			970.55
W19101			969.51
W19102			969.50
W19103			969.55
W19104			970.53
W19105			970.46
W19106			969.62
W19107			969.59
W19108			969.38
W19109			969.44
W19110			969.45
W19111			969.49
W19112			969.49
W19201			969.76
W19202			969.49
W19203			969.75
W19204			969.77
W19205			969.81
W19206			970.66
W19207			970.73
W19208			969.82
W19209			969.03
W19210			969.01
W.END.1			967.59
W.END.2			967.61
W20101	458+89.04	37.50	969.88
W20102	458+89.83	32.50	969.81
W20202	458+65.01	32.50	969.91
W20201	458+64.96	37.50	969.98
W21101	460+27.99	37.50	969.63
W21102	460+28.77	32.50	969.56
W21202	460+03.00	32.50	969.60
W21201	460+03.93	37.50	969.67
W22101	461+46.29	37.50	969.45
W22102	461+47.12	32.50	969.37
W22202	461+21.45	32.50	969.42
W22201	461+22.29	37.50	969.50

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Road Plans EW-101 and EW-102.

STATION	TOTAL CUT	TOPSOIL TYPE B SAVED -C	TOPSOIL TYPE C SAVED -C	UNSUIT TYPE B CUT	UNSUIT TYPE C CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK	APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
256+00.00	36		15			21	21					
256+25.00	96		34			62	62					
256+50.00	151		49			102	102					
256+75.00	164		58			106	106	1	1	1		
257+00.00	132		53			79	79	16	21	21		
257+25.00	116		51			65	65	65	85	85		
257+50.00	124		54			70	70	137	178	178		
257+75.00	100		47			53	53	129	168	168		
257+92.00	55		24	11		20	31	68	88	88		
258+00.00	131		46	41		44	85	247	321	321		
258+25.00	31		10	6		15	21	94	122	122		
258+34.00	68		21	19		28	47	121	157	157		
258+50.00	203		55	18		130	148	65	85	85		
258+75.00	142		37	34		71	105					
258+87.00	140		38	62		40	102					
259+00.00	171		49	67		55	122	48	62	62		
259+25.00	153		46	68		39	107	100	130	130		
259+50.00	226		68	102		56	158	84	109	109		
259+75.00	297		72	165		60	225	41	53	53		
260+00.00	362		84	235		43	278	12	16	16		
260+25.00	374		99	234		41	275	2	3	3		
260+50.00	346		98	208		40	248					
260+75.00	344		96	208		40	248					
261+00.00	371		97	235		39	274					
261+25.00	367		96	234		37	271	1	1	1		
261+50.00	354		98	219		37	256	1	1	1		
261+75.00	356		102	234		20	254					
262+00.00	373		98	269		6	275					
262+25.00	401		92	290		19	309	1	1	1		
262+50.00	393		90	285		18	303	2	3	3		
262+75.00	366		88	270		8	278	4	5	5		
263+00.00	352		89	256		7	263	5	7	7		
263+25.00	342		87	247		8	255	9	12	12		
263+50.00	321		83	231		7	238	14	18	18		
263+75.00	275		80	190		5	195	18	23	23		
264+00.00	222		65	154		3	157	38	49	49		
264+25.00	185		46	138		1	139	83	108	108		
264+50.00	164		39	124		1	125	138	179	179		
264+75.00	148		37	111			111	202	263	263		
265+00.00	135		35	99		1	100	260	338	338		
265+25.00	155		46	108		1	109	296	385	385		
265+50.00	168		56	112			112	327	425	425		
265+75.00	152		64	88			88	358	465	465		
266+00.00	147		63	84			84	396	515	515		
266+25.00	145		53	92			92	433	563	563		
266+50.00	133		55	78			78	506	658	658		
266+75.00	113		52	60		1	61	606	788	788		
267+00.00	99		48	49		2	51	688	894	894		
267+25.00	90		46	41		3	44	734	954	954		
267+50.00	91		36	47		8	55	755	982	982		
267+75.00	112		38	66		8	74	749	974	974		
268+00.00	149		53	89		7	96	725	943	943		
268+25.00	157		54	94		9	103	721	937	937		
268+50.00	143		54	82		7	89	718	933	933		
268+75.00	116		50	59		7	66	715	930	930		
269+00.00	89		45	33		11	44	691	898	898		
269+25.00	89		45	26		18	44	639	831	831		
269+50.00	103		46	37		20	57	592	770	770		
269+75.00	98		44	40		14	54	542	705	705		
270+00.00	94		38	28		28	56	454	590	590		
270+25.00	129		33	58		38	96	354	460	460		
270+50.00	40		7	21		12	33	76	99	99		
270+56.00	115		32	57		26	83	258	335	335		
270+75.00	122		52	64		6	70	352	458	458		
271+00.00	124		50	68		6	74	340	442	442		
271+25.00												

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Road Plans EW-101 and EW-102.

STATION	TOTAL CUT	TOPSOIL TYPE B SAVED -C	TOPSOIL TYPE C SAVED -C	UNSUIT TYPE B CUT	UNSUIT TYPE C CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
271+25.00	135		52	77		6	83	318	413	413			
271+50.00	147		54	88		5	93	289	376	376			
271+75.00	154		46	103		5	108	260	338	338			
272+00.00	157		48	104		5	109	233	303	303			
272+25.00	164		59	99		6	105	214	278	278			
272+50.00	164		61	96		7	103	205	267	267			
272+75.00	151		59	86		6	92	201	261	261			
273+00.00	157		59	92		6	98	196	255	255			
273+25.00	180		63	112		5	117	191	248	248			
273+50.00	194		65	126		3	129	188	244	244			
273+75.00	200		71	127		2	129	186	242	242			
274+00.00	209		73	126		10	136	186	242	242			
274+25.00	230		72	143		15	158	187	243	243			
274+50.00	251		76	169		6	175	191	248	248			
274+75.00	261		77	182		2	184	199	259	259			
275+00.00	261		77	183		1	184	210	273	273			
275+25.00	249		75	174			174	226	294	294			
275+50.00	224		71	153			153	243	316	316			
275+75.00	192		73	118		1	119	268	348	348			
276+00.00	217		77	134		6	140	292	380	380			
276+25.00	244		67	152		25	177	265	345	345			
276+46.00	52		14	30		8	38	54	70	70			
276+50.00	242		71	137		34	171	392	510	510			
276+75.00	138		55	76		7	83	530	689	689			
277+00.00	102		46	51		5	56	649	844	844			
277+25.00	76		39	34		3	37	730	949	949			
277+50.00	30		15	14		1	15	324	421	421			
277+60.00	42		19	22		1	23	495	644	644			
277+75.00	71		39	32			32	811	1054	1054			
278+00.00	94		50	44			44	784	1019	1019			
278+25.00	117		50	67			67	722	939	939			
278+50.00	144		55	88		1	89	647	841	841			
278+75.00	177		62	115			115	563	732	732			
279+00.00	200		67	133			133	481	625	625			
279+25.00	219		66	143		10	153	413	537	537			
279+50.00	228		64	145		19	164	348	452	452			
279+75.00	225		76	135		14	149	272	354	354			
280+00.00	222		79	133		10	143	195	254	254			
280+25.00	216		68	135		13	148	155	202	202			
280+50.00	195		63	117		15	132	146	190	190			
280+75.00	164		57	93		14	107	130	169	169			
281+00.00	146		54	82		10	92	112	146	146			
281+25.00	141		53	78		10	88	100	130	130			
281+50.00	126		58	56		12	68	97	126	126			
281+75.00	110		56	38		16	54	100	130	130			
282+00.00	109		47	46		16	62	98	127	127			
282+25.00	70		32	30		8	38	68	88	88			
282+50.00	14		9	4		1	5	46	60	60			
282+75.00								51	66	66			
283+00.00								54	70	70			
283+25.00								56	73	73			
283+50.00								36	47	47			
283+75.00								30	39	39			
284+00.00								43	56	56			
284+25.00								42	55	55			
284+50.00								41	53	53			
284+75.00	48		19			29	29	55	72	72			
285+00.00	89		37			52	52	77	100	100			
285+25.00	75		35			40	40	76	99	99			
285+50.00	64		33			31	31	68	88	88			
285+75.00	64		33			31	31	71	92	92			
286+00.00	59		32			27	27	71	92	92			
286+25.00	54		29			25	25	77	100	100			
286+50.00	60		29			31	31	100	130	130			
286+75.00	68		30			38	38	131	170	170			
287+00.00													

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Road Plans EW-101 and EW-102.

STATION	TOTAL CUT	TOPSOIL TYPE B SAVED -C	TOPSOIL TYPE C SAVED -C	UNSUIT TYPE B CUT	UNSUIT TYPE C CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
287+00.00													
287+25.00	76		31			45	45	173	225	225			
287+50.00	81		31			50	50	217	282	282			
287+75.00	93		36			57	57	247	321	321			
288+00.00	89		41			48	48	279	363	363			
288+25.00	65		35			30	30	310	403	403			
288+50.00	50		27			23	23	316	411	411			
288+75.00	42		24			18	18	305	397	397			
289+00.00	36		23			13	13	277	360	360			
289+25.00	35		23			12	12	231	300	300			
289+50.00	40		25			15	15	186	242	242			
289+75.00	52		28			24	24	151	196	196			
290+00.00	72		33			39	39	128	166	166			
290+25.00	103		37			66	66	136	177	177			
290+50.00	139		39			100	100	175	228	228			
290+75.00	169		40			129	129	228	296	296			
291+00.00	182		42			140	140	281	365	365			
291+25.00	178		43			135	135	318	413	413			
291+50.00	175		47			128	128	289	376	376			
291+75.00	256		72	17		167	184	179	233	233			
291+80.00	68		18	8		42	50	22	29	29			
292+00.00	241		71	36		134	170	133	173	173			
292+25.00	204		69	23		112	135	289	376	376			
292+50.00	145		55	2		88	90	356	463	463			
292+66.00	95		36	1		58	59	239	311	311			
292+75.00	54		20			34	34	132	172	172			
292+80.00	29		11			18	18	69	90	90			
293+00.00	104		42			62	62	279	363	363			
293+25.00	106		48	13		45	58	350	455	455			
293+50.00	78		41	23		14	37	344	447	447			
293+75.00	67		38	18		11	29	336	437	437			
294+00.00	71		41	17		13	30	330	429	429			
294+25.00	74		41	15		18	33	332	432	432			
294+50.00	73		39	13		21	34	335	436	436			
294+75.00	79		40	17		22	39	335	436	436			
295+00.00	81		41	20		20	40	336	437	437			
295+25.00	74		39	9		26	35	330	429	429			
295+50.00	77		39	1		37	38	314	408	408			
295+75.00	87		40	1		46	47	294	382	382			
296+00.00	87		53			34	34	274	356	356			
296+25.00	80		50			30	30	268	348	348			
296+50.00	65		34			31	31	274	356	356			
296+75.00	64		34			30	30	282	367	367			
297+00.00	112		29	20		63	83	244	317	317			
297+08.00	48		10	11		27	38	67	87	87			
297+25.00	102		32	14		56	70	145	189	189			
297+50.00	150		54	14		82	96	226	294	294			
297+75.00	142		52	11		79	90	250	325	325			
298+00.00	130		56	4		70	74	264	343	343			
298+25.00	123		55	1		67	68	273	355	355			
298+50.00	129		49	8		72	80	277	360	360			
298+75.00	136		50	16		70	86	277	360	360			
299+00.00	145		52	13		80	93	272	354	354			
299+25.00	155		54	14		87	101	260	338	338			
299+50.00	162		56	20		86	106	248	322	322			
299+75.00	162		56	11		95	106	235	306	306			
300+00.00	150		58			92	92	220	286	286			
300+25.00	129		55	2		72	74	205	267	267			
300+50.00	107		46	4		57	61	192	250	250			
300+75.00	87		43	2		42	44	183	238	238			
301+00.00	76		42	16		18	34	174	226	226			
301+25.00	78		43	32		3	35	162	211	211			
301+50.00	85		46	35		4	39	143	186	186			
301+75.00	93		50	39		4	43	111	144	144			
302+00.00	102		68	29		5	34	73	95	95			
302+25.00	115		72	35		8	43	52	68	68			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Road Plans EW-101 and EW-102.

STATION	TOTAL CUT	TOPSOIL TYPE B SAVED -C	TOPSOIL TYPE C SAVED -C	UNSUIT TYPE B CUT	UNSUIT TYPE C CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
302+25.00													
302+50.00	124		62	55		7	62	46	60	60			
302+75.00	127		64	55		8	63	41	53	53			
303+00.00	139		63	64		12	76	42	55	55			
303+25.00	137		63	62		12	74	43	56	56			
303+50.00	130		66	55		9	64	42	55	55			
303+75.00	136		66	62		8	70	47	61	61			
304+00.00	157		63	66		28	94	78	101	101			
304+25.00	168		65	78		25	103	88	114	114			
304+50.00	151		63	86		2	88	78	101	101			
304+75.00	148		59	88		1	89	94	122	122			
305+00.00	159		59	100			100	112	146	146			
305+25.00	157		58	53		46	99	139	181	181			
305+31.00	36		14			22	22	40	52	52			
305+50.00	118		43			75	75	141	183	183			
305+75.00	163		57			106	106	228	296	296			
306+00.00	149		53			96	96	304	395	395			
306+25.00	116		46			70	70	386	502	502			
306+50.00	97		42			55	55	458	595	595			
306+75.00	86		40	20		26	46	527	685	685			
307+00.00	79		40	39			39	583	758	758			
307+25.00	79		40	39			39	624	811	811			
307+45.00	64		32	32			32	548	712	712			
307+50.00	16		8	8			8	144	187	187			
307+60.00	33		15	18			18	281	365	365			
307+75.00	52		23	28		1	29	415	540	540			
308+00.00	86		37	49			49	667	867	867			
308+25.00	100		40	60			60	600	780	780			
308+50.00	135		48	87			87	510	663	663			
308+75.00	167		53	113		1	114	435	566	566			
309+00.00	183		55	126		2	128	388	504	504			
309+25.00	182		55	123		4	127	352	458	458			
309+50.00	164		55	104		5	109	323	420	420			
309+75.00	96		38	55		3	58	295	384	384			
310+00.00	43		21	20		2	22	272	354	354			
310+25.00	76		10	28		38	66	182	237	237			
310+50.00	73		9	25		39	64	132	172	172			
310+75.00	42		18	11		13	24	133	173	173			
311+00.00	94		30	25		39	64	82	107	107			
311+25.00	177		51	65		61	126	44	57	57			
311+50.00	248		63	121		64	185	21	27	27			
311+75.00	314		71	179		64	243	9	12	12			
312+00.00	367		75	227		65	292	2	3	3			
312+25.00	413		82	260		71	331						
312+50.00	418		88	248		82	330						
312+75.00	447		96	253		98	351						
313+00.00	532		103	301		128	429						
313+25.00	581		104	162		315	477						
313+50.00	604		104			500	500	3	4	4			
313+75.00	594		105			489	489	7	9	9			
314+00.00	545		125			420	420	13	17	17			
314+25.00	482		122			360	360	21	27	27			
314+50.00	400		95			305	305	35	46	46			
314+75.00	299		83			216	216	54	70	70			
315+00.00	203		67			136	136	91	118	118			
315+25.00	152		59			93	93	152	198	198			
315+50.00	148		58	41		49	90	228	296	296			
315+75.00	189		59	88		42	130	369	480	480			
315+89.00	108		33	52		23	75	280	364	364			
316+00.00	72		29	40		3	43	238	309	309			
316+25.00	156		64	85		7	92	517	672	672			
316+50.00	131		47	75		9	84	474	616	616			
316+75.00	154		53	94		7	101	455	592	592			
317+00.00	187		66	116		5	121	431	560	560			
317+25.00	188		66	117		5	122	393	511	511			
317+50.00	195		68	122		5	127	349	454	454			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Road Plans EW-101 and EW-102.

STATION	TOTAL CUT	TOPSOIL TYPE B SAVED -C	TOPSOIL TYPE C SAVED -C	UNSUIT TYPE B CUT	UNSUIT TYPE C CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK	APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
317+50.00	212		72	136		4	140	308	400	400		
317+75.00	242		77	156		9	165	280	364	364		
318+00.00	269		81	172		16	188	260	338	338		
318+25.00	283		82	181		20	201	246	320	320		
318+50.00	293		83	186		24	210	233	303	303		
318+75.00	294		84	180		30	210	226	294	294		
319+00.00	279		81	138		60	198	223	290	290		
319+25.00	249		76	117		56	173	222	289	289		
319+50.00	213		71	120		22	142	228	296	296		
319+75.00	180		72	95		13	108	231	300	300		
320+00.00	169		72	89		8	97	220	286	286		
320+25.00	178		70	97		11	108	200	260	260		
320+50.00	183		70	100		13	113	185	241	241		
320+75.00	181		68	102		11	113	172	224	224		
321+00.00	191		69	108		14	122	157	204	204		
321+25.00	207		72	108		27	135	143	186	186		
321+50.00	211		73	102		36	138	132	172	172		
321+75.00	215		80	95		40	135	125	163	163		
322+00.00	218		80	101		37	138	116	151	151		
322+25.00	218		75	117		26	143	108	140	140		
322+50.00	215		75	112		28	140	100	130	130		
322+75.00	208		73	51		84	135	91	118	118		
323+00.00	205		71			134	134	75	98	98		
323+25.00	214		75			139	139	49	64	64		
323+50.00	189		39			150	150	31	40	40		
323+75.00	124		9			115	115	26	34	34		
324+00.00	26		3			23	23	5	7	7		
324+07.61	62		7			55	55	15	20	20		
324+25.00	108		35			73	73	48	62	62		
324+50.00	112		49			63	63	74	96	96		
324+75.00	110		48			62	62	92	120	120		
325+00.00	117		51			66	66	100	130	130		
325+25.00	144		57			87	87	95	124	124		
325+50.00	170		60			110	110	79	103	103		
325+75.00	191		59			132	132	51	66	66		
326+00.00	228		69			159	159	25	33	33		
326+25.00	281		90			191	191	14	18	18		
326+50.00	348		103			245	245	10	13	13		
326+75.00	412		113			299	299	6	8	8		
327+00.00	447		120			327	327	4	5	5		
327+25.00	443		119			324	324	5	7	7		
327+50.00	437		116	28		293	321	3	4	4		
327+75.00	416		108	67		241	308	12	16	16		
328+00.00	364		94	81		189	270	61	79	79		
328+25.00	332		86	90		156	246	139	181	181		
328+50.00	303		83	65		155	220	230	299	299		
328+75.00	259		77	17		165	182	327	425	425		
329+00.00	206		69			137	137	411	534	534		
329+25.00	165		60			105	105	461	599	599		
329+50.00	60		22			38	38	192	250	250		
329+60.00	71		30			41	41	315	410	410		
329+75.00	4		2			2	2	23	30	30		
329+76.00	52		25			27	27	305	397	397		
329+90.00	38		17			21	21	201	261	261		
330+00.00	87		40			47	47	441	573	573		
330+25.00	89		41			48	48	337	438	438		
330+50.00	111		46			65	65	235	306	306		
330+75.00	125		51	33		41	74	174	226	226		
331+00.00	73		31	38		4	42	89	116	116		
331+15.00	51		22	28		1	29	59	77	77		
331+25.00	142		55	85		2	87	181	235	235		
331+50.00	138		51	86		1	87	269	350	350		
331+75.00	116		43	70		3	73	407	529	529		
332+00.00	82		37	42		3	45	574	746	746		
332+25.00	54		34	20			20	751	976	976		
332+50.00												

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Road Plans EW-101 and EW-102.

STATION	TOTAL CUT	TOPSOIL TYPE B SAVED -C	TOPSOIL TYPE C SAVED -C	UNSUIT TYPE B CUT	UNSUIT TYPE C CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
332+50.00	25		15	5		5	10	525	683	683			
332+65.00	14		7			7	7	380	494	494			
332+75.00	12		6			6	6	329	428	428			
332+83.00	33		19	8		6	14	658	855	855			
333+00.00	53		34	18		1	19	813	1057	1057			
333+25.00	39		30	9			9	723	940	940			
333+50.00	34		28	6			6	651	846	846			
333+75.00	36		28	8			8	579	753	753			
334+00.00	45		31	14			14	500	650	650			
334+25.00	68		38	30			30	403	524	524			
334+50.00	81		41	40			40	322	419	419			
334+75.00	76		39	37			37	275	358	358			
335+00.00	88		42	46			46	231	300	300			
335+25.00	123		51	72			72	173	225	225			
335+50.00	166		62	103		1	104	121	157	157			
335+75.00	221		95	125		1	126	94	122	122			
336+00.00	270		107	162		1	163	84	109	109			
336+25.00	310		97	212		1	213	78	101	101			
336+50.00	353		103	248		2	250	75	98	98			
336+75.00	392		107	282		3	285	73	95	95			
337+00.00	402		107	291		4	295	71	92	92			
337+25.00	387		106	276		5	281	69	90	90			
337+50.00	361		104	253		4	257	67	87	87			
337+75.00	323		105	169	45	4	218	64	83	83			
338+00.00	286		97	139	45	5	189	64	83	83			
338+25.00	256		80	170		6	176	64	83	83			
338+50.00	231		70	155		6	161	72	94	94			
338+75.00	212		65	140		7	147	90	117	117			
339+00.00	184		61	117		6	123	115	150	150			
339+25.00	144		66	74		4	78	156	203	203			
339+50.00	107		60	45		2	47	218	283	283			
339+75.00	91		50	41			41	287	373	373			
340+00.00	87		47	39		1	40	356	463	463			
340+25.00	82		41	41			41	423	550	550			
340+50.00	72		39	33			33	482	627	627			
340+75.00	60		28	25		7	32	525	683	683			
341+00.00	7		2	3		2	5	65	85	85			
341+03.00	43		21	15		7	22	489	636	636			
341+25.00	46		31	15			15	591	768	768			
341+50.00	46		30	16			16	601	781	781			
341+75.00	15		10	5			5	190	247	247			
341+83.00	33		23	10			10	382	497	497			
342+00.00	59		36	22		1	23	503	654	654			
342+25.00	117		46	71			71	436	567	567			
342+50.00	229		35	111		83	194	314	408	408			
342+75.00	255		37	136		82	218	248	322	322			
343+00.00	209		56	153			153	291	378	378			
343+25.00	213		56	136		21	157	307	399	399			
343+50.00	219		58	110		51	161	262	341	341			
343+75.00	203		55	90		58	148	213	277	277			
344+00.00	175		60	76		39	115	166	216	216			
344+25.00	157		63	76		18	94	122	159	159			
344+50.00	163		62	91		10	101	87	113	113			
344+75.00	177		71	91		15	106	63	82	82			
345+00.00	189		78	78		33	111	48	62	62			
345+25.00	193		79	71		43	114	38	49	49			
345+50.00	187		75	78		34	112	30	39	39			
345+75.00	181		67	77		37	114	25	33	33			
346+00.00	183		67	73		43	116	25	33	33			
346+25.00	193		74	91		28	119	24	31	31			
346+50.00	196		75	95		26	121	22	29	29			
346+75.00	191		74	84		33	117	23	30	30			
347+00.00	187		73	88		26	114	26	34	34			
347+25.00	191		71	94		26	120	30	39	39			
347+50.00	189		68	91		30	121	32	42	42			
347+75.00													

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Road Plans EW-101 and EW-102.

STATION	TOTAL CUT	TOPSOIL TYPE B SAVED -C	TOPSOIL TYPE C SAVED -C	UNSUIT TYPE B CUT	UNSUIT TYPE C CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
347+75.00	179		59	83		37	120	31	40	40			
348+00.00	170		55	80		35	115	32	42	42			
348+25.00	159		57	75		27	102	37	48	48			
348+50.00	147		55	65		27	92	42	55	55			
348+75.00	136		54	56		26	82	41	53	53			
349+00.00	122		52	49		21	70	38	49	49			
349+25.00	108		48	42		18	60	36	47	47			
349+50.00	99		45	37		17	54	36	47	47			
349+75.00	99		40	40		19	59	33	43	43			
350+00.00	108		42	47		19	66	27	35	35			
350+25.00	119		50	50		19	69	22	29	29			
350+50.00	115		54	42		19	61	17	22	22			
350+75.00	125		40	39		46	85	10	13	13			
351+00.00	145		41	53		51	104	8	10	10			
351+25.00	150		57	67		26	93	9	12	12			
351+50.00	151		55	68		28	96	9	12	12			
351+75.00	147		59	57		31	88	7	9	9			
352+00.00	167		58	66		43	109	6	8	8			
352+25.00	113		21	45		47	92	4	5	5			
352+40.00	69		15	27		27	54	3	4	4			
352+50.00	150		55	60		35	95	7	9	9			
352+75.00	161		62	63		36	99	4	5	5			
353+00.00	184		52	73		59	132						
353+25.00	176	31	18	68		59	127	1	1	1			
353+50.00	159	59		61		39	100	11	14	14			
353+75.00	163	58		64		41	105	21	27	27			
354+00.00	169	58		66		45	111	23	30	30			
354+25.00	171	57		65		49	114	24	31	31			
354+50.00	173	57		65		51	116	26	34	34			
354+75.00	188	60		71		57	128	27	35	35			
355+00.00	213	65		89		59	148	25	33	33			
355+25.00	226	65		96		65	161	25	33	33			
355+50.00	235	66		97		72	169	22	29	29			
355+75.00	238	69		99		70	169	19	25	25			
356+00.00	234	74		85		75	160	13	17	17			
356+25.00	240	74		87		79	166	8	10	10			
356+50.00	256	52		108		96	204	4	5	5			
356+75.00	230	53		105		72	177	8	10	10			
357+00.00	170	63		83		24	107	20	26	26			
357+25.00	131	52		70		9	79	33	43	43			
357+50.00	111	49		60		2	62	53	69	69			
357+75.00	61	28		32		1	33	45	59	59			
357+90.00	38	9	8	20		1	21	36	47	47			
358+00.00	17		7	9		1	10	21	27	27			
358+05.00	35		16	19			19	45	59	59			
358+15.00	38		18	19		1	20	45	59	59			
358+25.00	93		45	48			48	130	169	169			
358+50.00	92		45	47			47	154	200	200			
358+75.00	100		46	54			54	171	222	222			
359+00.00	81		35	46			46	130	169	169			
359+18.00	33		14	19			19	52	68	68			
359+25.00	121		50	71			71	190	247	247			
359+50.00	134		56	78			78	196	255	255			
359+75.00	146		58	88			88	194	252	252			
360+00.00	151		55	95		1	96	199	259	259			
360+25.00	156		56	100			100	211	274	274			
360+50.00	164		57	106		1	107	216	281	281			
360+75.00	177		60	117			117	219	285	285			
361+00.00	183		61	122			122	219	285	285			
361+25.00	180		61	119			119	214	278	278			
361+50.00	185		43	123		19	142	184	239	239			
361+75.00	179		43	116		20	136	166	216	216			
362+00.00	150		57	93			93	201	261	261			
362+25.00	129		52	77			77	234	304	304			
362+50.00	124		51	73			73	237	308	308			
362+75.00													

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Road Plans EW-101 and EW-102.

STATION	TOTAL CUT	TOPSOIL TYPE B SAVED -C	TOPSOIL TYPE C SAVED -C	UNSUIT TYPE B CUT	UNSUIT TYPE C CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
362+75.00	122		51	71			71	234	304	304			
363+00.00	128		52	75		1	76	226	294	294			
363+25.00	163		58	94		11	105	197	256	256			
363+50.00	198		43	113		42	155	172	224	224			
363+75.00	189		45	112		32	144	170	221	221			
364+00.00	161		61	99		1	100	196	255	255			
364+25.00	144		55	89			89	227	295	295			
364+50.00	135		53	82			82	230	299	299			
364+75.00	131		52	79			79	215	280	280			
365+00.00	151		39	93		19	112	184	239	239			
365+25.00	81		12	51		18	69	80	104	104			
365+37.00	85		22	54		9	63	91	118	118			
365+50.00	159		58	101			101	202	263	263			
365+75.00	164		63	98		3	101	228	296	296			
366+00.00	158		61	93		4	97	233	303	303			
366+25.00	149		55	94			94	233	303	303			
366+50.00	147		55	92			92	234	304	304			
366+75.00	155		54	86		15	101	248	322	322			
367+00.00	144		52	77		15	92	246	320	320			
367+25.00	117		49	68			68	229	298	298			
367+50.00	112		48	64			64	231	300	300			
367+75.00	120		52	68			68	234	304	304			
368+00.00	129		53	76			76	237	308	308			
368+25.00	135		52	83			83	238	309	309			
368+50.00	136		52	84			84	238	309	309			
368+75.00	136		52	84			84	240	312	312			
369+00.00	134		52	82			82	242	315	315			
369+25.00	132		51	81			81	242	315	315			
369+50.00	131		51	80			80	242	315	315			
369+75.00	129		62	67			67	242	315	315			
370+00.00	129		62	67			67	242	315	315			
370+25.00	126		50	76			76	240	312	312			
370+50.00	124		49	75			75	238	309	309			
370+75.00	121		49	72			72	238	309	309			
371+00.00	118		48	70			70	237	308	308			
371+25.00	115		47	68			68	235	306	306			
371+50.00	113		47	66			66	233	303	303			
371+75.00	113		43	70			70	232	302	302			
372+00.00	113		43	70			70	232	302	302			
372+25.00	104		44	60			60	228	296	296			
372+50.00	112		46	66			66	218	283	283			
372+75.00	132		50	81		1	82	209	272	272			
373+00.00	149		54	90		5	95	203	264	264			
373+25.00	166		59	99		8	107	198	257	257			
373+50.00	186		64	112		10	122	194	252	252			
373+75.00	206		72	119		15	134	191	248	248			
374+00.00	218		74	136		8	144	184	239	239			
374+25.00	226		70	156			156	173	225	225			
374+50.00	228		70	157		1	158	160	208	208			
374+75.00	230		71	158		1	159	155	202	202			
375+00.00	239		72	80	74	13	167	150	195	195			
375+25.00	198		29		117	52	169	95	124	124			
375+45.00	50				30	20	50	19	25	25			
375+50.00	236		34		140	62	202	131	170	170			
375+75.00	211		70		120	21	141	176	229	229			
376+00.00	190		67		116	7	123	195	254	254			
376+25.00	170		59		111		111	212	276	276			
376+50.00	164		39		103	22	125	221	287	287			
376+75.00	139		34		83	22	105	236	307	307			
377+00.00	110		46		64		64	254	330	330			
377+25.00	127		49		74	4	78	250	325	325			
377+50.00	169		57		106	6	112	232	302	302			
377+75.00	195		59		127	9	136	211	274	274			
378+00.00	202		60		127	15	142	193	251	251			
378+25.00	203		63		128	12	140	190	247	247			
378+50.00													

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Road Plans EW-101 and EW-102.

STATION	TOTAL CUT	TOPSOIL TYPE B SAVED -C	TOPSOIL TYPE C SAVED -C	UNSUIT TYPE B CUT	UNSUIT TYPE C CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
378+50.00	179		58		107	14	121	205	267	267			
378+75.00	136		52	27	44	13	84	234	304	304			
379+00.00	103		48	46		9	55	274	356	356			
379+25.00	84		43	31		10	41	317	412	412			
379+50.00	15		7	5		3	8	69	90	90			
379+55.00	38		17	14		7	21	189	246	246			
379+68.00	22		11	8		3	11	101	131	131			
379+75.00	18		9	6		3	9	69	90	90			
379+80.00	66		35	21		10	31	265	345	345			
380+00.00	75		42	22		11	33	327	425	425			
380+25.00	79		44	24		11	35	326	424	424			
380+50.00	85		46	28		11	39	311	404	404			
380+75.00	94		48	36		10	46	290	377	377			
381+00.00	105		50	46		9	55	263	342	342			
381+25.00	116		51	55		10	65	237	308	308			
381+50.00	128		53	67		8	75	213	277	277			
381+75.00	73		28	41		4	45	104	135	135			
381+88.00	71		26	41	1	3	45	94	122	122			
382+00.00	153		55	90	2	6	98	191	248	248			
382+25.00	160		57	96		7	103	181	235	235			
382+50.00	172		60	106		6	112	172	224	224			
382+75.00	177		61	109		7	116	165	215	215			
383+00.00	177		62	110		5	115	158	205	205			
383+25.00	177		62	108		7	115	154	200	200			
383+50.00	171		61	101		9	110	148	192	192			
383+75.00	162		59	90		13	103	141	183	183			
384+00.00	172		61	96		15	111	131	170	170			
384+25.00	206		68	122		16	138	116	151	151			
384+50.00	263		78	164		21	185	75	98	98			
384+75.00	297		83	187		27	214	47	61	61			
385+00.00	294		82	185		27	212	51	66	66			
385+25.00	286		81	183		22	205	48	62	62			
385+50.00	268		78	161		29	190	53	69	69			
385+75.00	261		79	147		35	182	57	74	74			
386+00.00	265		80	163		22	185	49	64	64			
386+25.00	265		76	171		18	189	36	47	47			
386+50.00	259		74	162		23	185	35	46	46			
386+75.00	262		75	155		32	187	33	43	43			
387+00.00	285		77	168		40	208	28	36	36			
387+25.00	280		76	173		31	204	20	26	26			
387+50.00	293		76	189		28	217	11	14	14			
387+75.00	248		51	159		38	197	9	12	12			
387+93.00	101		18	63		20	83	3	4	4			
388+00.00	373		76	235		62	297	9	12	12			
388+25.00	394		63	249		82	331	7	9	9			
388+50.00	415		88	263		64	327	3	4	4			
388+75.00	432		131	280		21	301	6	8	8			
389+00.00	362		116	230		16	246	22	29	29			
389+25.00	281		104	167		10	177	37	48	48			
389+50.00	262		91	147		24	171	48	62	62			
389+75.00	125		39	67		19	86	69	90	90			
390+00.00													
Stage 1B													
390+25.00	2					2	2	135	176	176			
390+50.00	1					1	1	115	150	150			
390+75.00								55	72	72			
391+00.00	2					2	2	4	5	5			
391+07.00	6					6	6	3	4	4			
391+25.00	4					4	4	35	46	46			
391+50.00	4					4	4	67	87	87			
391+75.00								60	78	78			
392+00.00								35	46	46			
392+25.00								12	16	16			
392+50.00	6		6					18	23	23			
392+75.00	19		19					28	36	36			
393+00.00													

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Road Plans EW-101 and EW-102.

STATION	TOTAL CUT	TOPSOIL TYPE B SAVED -C	TOPSOIL TYPE C SAVED -C	UNSUIT TYPE B CUT	UNSUIT TYPE C CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
393+00.00	34		32	2			2	20	26	26			
393+25.00	45		37	8			8	16	21	21			
393+50.00	45		37	8			8	19	25	25			
393+75.00	32		30	2			2	32	42	42			
394+00.00	14		13			1	1	57	74	74			
394+25.00	3		3					100	130	130			
394+50.00	2		2					147	191	191			
394+75.00	2		2					176	229	229			
395+00.00	1		1					206	268	268			
395+25.00								154	200	200			
395+39.78								27	35	35			
395+42.38								63	82	82			
395+50.00	2		2					176	229	229			
395+75.00	1		1					139	181	181			
396+00.00	1		1					102	133	133			
396+25.00	4		4					61	79	79			
396+50.00	16		14	2			2	26	34	34			
396+75.00	42		32	10			10	14	18	18			
397+00.00	68		44	24			24	13	17	17			
397+25.00	113		53	60			60	8	10	10			
397+50.00	135		56	79			79	3	4	4			
397+75.00	134		55	79			79	3	4	4			
398+00.00	102		39	63			63	2	3	3			
398+16.98	50		18	32			32	1	1	1			
398+25.00	158		58	100			100	3	4	4			
398+50.00	160		60	100			100	3	4	4			
398+75.00	160		61	99			99	3	4	4			
399+00.00	158		62	96			96	3	4	4			
399+25.00	152		61	90		1	91	3	4	4			
399+50.00	143		61	82			82	3	4	4			
399+75.00	135		59	75		1	76	3	4	4			
400+00.00	127		58	68		1	69	3	4	4			
400+25.00	119		57	62			62	3	4	4			
400+50.00	113		55	58			58	3	4	4			
400+75.00	110		54	56			56	3	4	4			
401+00.00	110		54	56			56	3	4	4			
401+25.00	118		56	62			62	3	4	4			
401+50.00	132		58	74			74	3	4	4			
401+75.00	128		65	62		1	63	3	4	4			
402+00.00	112		65	47			47	3	4	4			
402+25.00	103		56	47			47	3	4	4			
402+50.00	99		55	44			44	3	4	4			
402+75.00	98		55	43			43	3	4	4			
403+00.00	98		54	43		1	44	3	4	4			
403+25.00	100		55	45			45	3	4	4			
403+50.00	104		55	48		1	49	3	4	4			
403+75.00	107		56	51			51	3	4	4			
404+00.00	110		56	54			54	3	4	4			
404+25.00	115		57	58			58	3	4	4			
404+50.00	120		57	63			63	3	4	4			
404+75.00	126		57	68		1	69	3	4	4			
405+00.00	131		58	73			73	3	4	4			
405+25.00	133		58	75			75	3	4	4			
405+50.00	135		58	76		1	77	3	4	4			
405+75.00	137		64	73			73	3	4	4			
406+00.00	140		64	76			76	3	4	4			
406+25.00	142		59	83			83	3	4	4			
406+50.00	145		59	86			86	3	4	4			
406+75.00	147		59	88			88	2	3	3			
407+00.00	150		59	91			91	2	3	3			
407+25.00	156		60	96			96	3	4	4			
407+50.00	156		60	96			96	3	4	4			
407+75.00	149		59	87		3	90	3	4	4			
408+00.00	139		58	78		3	81	3	4	4			
408+25.00	129		58	70		1	71	3	4	4			
408+50.00													

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Road Plans EW-101 and EW-102.

STATION	TOTAL CUT	TOPSOIL TYPE B SAVED -C	TOPSOIL TYPE C SAVED -C	UNSUIT TYPE B CUT	UNSUIT TYPE C CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
408+50.00													
408+75.00	119		57	60		2	62	3	4	4			
409+00.00	109		56	51		2	53	3	4	4			
409+25.00	99		55	42		2	44	3	4	4			
409+50.00	90		53	34		3	37	3	4	4			
409+75.00	87		52	32		3	35	3	4	4			
410+00.00	89		53	33		3	36	3	4	4			
410+25.00	93		53	37		3	40	3	4	4			
410+50.00	99		54	42		3	45	3	4	4			
410+75.00	104		54	49		1	50	3	4	4			
411+00.00	109		55	54			54	3	4	4			
411+25.00	117		56	60		1	61	3	4	4			
411+50.00	126		57	68		1	69	3	4	4			
411+75.00	135		58	76		1	77	3	4	4			
412+00.00	142		58	82		2	84	3	4	4			
412+25.00	148		58	86		4	90	3	4	4			
412+50.00	154		58	93		3	96	3	4	4			
412+75.00	163		59	101		3	104	3	4	4			
413+00.00	172		61	109		2	111	3	4	4			
413+25.00	174		61	110		3	113	3	4	4			
413+50.00	170		61	106		3	109	3	4	4			
413+75.00	167		60	103		4	107	3	4	4			
414+00.00	165		62	99		4	103	3	4	4			
414+25.00	162		62	92		8	100	3	4	4			
414+50.00	157		59	91		7	98	3	4	4			
414+75.00	154		59	90		5	95	3	4	4			
415+00.00	151		59	87		5	92	3	4	4			
415+25.00	149		58	87		4	91	3	4	4			
415+50.00	148		58	88		2	90	3	4	4			
415+75.00	148		57	88		3	91	3	4	4			
416+00.00	152		56	90		6	96	3	4	4			
416+25.00	164		57	101		6	107	3	4	4			
416+50.00	145		45	96		4	100	1	1	1			
416+75.00	117		31	79		7	86						
417+00.00	140		30	104		6	110						
417+25.00	153		14	128		11	139						
417+50.00	133			116		17	133						
417+75.00	145			118		27	145						
418+00.00	144		15	108		21	129						
418+25.00	113		31	66		16	82						
418+50.00	98		33	40		25	65						
418+75.00	90		33	39		18	57						
419+00.00	127		46	68		13	81	1	1	1			
419+25.00	165		58	99		8	107	3	4	4			
419+50.00	155		56	96		3	99	3	4	4			
419+75.00	140		52	84		4	88	3	4	4			
419+80.63	29		6	9		14	23	1	1	1			
420+00.00	93		18	26		49	75	4	5	5			
420+25.00	105		46	58		1	59	6	8	8			
420+50.00	91		44	45		2	47	7	9	9			
420+75.00	79		42	35		2	37	9	12	12			
421+00.00	63		35	27		1	28	10	13	13			
421+25.00	48		28	17		3	20	15	20	20			
421+50.00	41		27	10		4	14	21	27	27			
421+75.00	41		28	8		5	13	23	30	30			
422+00.00	36		25	4		7	11	29	38	38			
422+25.00	31		21	4		6	10	37	48	48			
422+41.02	19		7	1		11	12	29	38	38			
422+50.00	10		3	1		6	7	20	26	26			
422+75.00	32		18	3		11	14	54	70	70			
423+00.00	40		27			13	13	42	55	55			
423+11.51	22		15			7	7	15	20	20			
423+25.00	31		19	4		8	12	13	17	17			
423+50.00	79		41	31		7	38	11	14	14			
423+75.00	101		47	47		7	54	4	5	5			
424+00.00	117		52	59		6	65	3	4	4			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Road Plans EW-101 and EW-102.

STATION	TOTAL CUT	TOPSOIL TYPE B SAVED -C	TOPSOIL TYPE C SAVED -C	UNSUIT TYPE B CUT	UNSUIT TYPE C CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
424+00.00													
424+25.00	135		54	80		1	81	3	4	4			
424+50.00	156		54	102			102	3	4	4			
424+75.00	138		51	86		1	87	3	4	4			
425+00.00	94		46	48			48	4	5	5			
425+25.00	75		39	36			36	10	13	13			
425+50.00	62		35	27			27	16	21	21			
425+75.00	49		31	15		3	18	18	23	23			
425+99.41	34		25	5		4	9	22	29	29			
426+00.00	1		1					1	1	1			
426+25.00	22		17			5	5	29	38	38			
426+50.00	21		13	2		6	8	59	77	77			
426+59.60	8		5	2		1	3	49	64	64			
426+75.00	13		8	2		3	5	68	88	88			
427+00.00	25		17	3		5	8	34	44	44			
427+25.00	24		17	2		5	7	16	21	21			
427+50.00	32		24	6		2	8	11	14	14			
427+53.91	7		5	2			2	1	1	1			
427+75.00	46		29	13		4	17	4	5	5			
428+00.00	68		39	28		1	29	5	7	7			
428+25.00	94		45	48		1	49	5	7	7			
428+50.00	118		49	68		1	69	4	5	5			
428+75.00	132		51	81			81	4	5	5			
429+00.00	149		53	96			96	3	4	4			
429+25.00	162		56	106			106	3	4	4			
429+50.00	168		58	110			110	3	4	4			
429+54.16	29		10	19			19						
429+75.00	141		49	92			92	2	3	3			
430+00.00	171		71	99		1	100	3	4	4			
430+25.00	179		73	105		1	106	3	4	4			
430+50.00	202		64	136		2	138	3	4	4			
430+75.00	234		32	150		52	202	2	3	3			
430+78.41	34			22		12	34						
431+00.00	187		18	131		38	169	1	1	1			
431+25.00	181		50	126		5	131	2	3	3			
431+50.00	163		60	102		1	103	3	4	4			
431+75.00	140		57	82		1	83	3	4	4			
431+96.41	103		45	58			58	2	3	3			
432+00.00	16		7	8		1	9						
432+25.00	94		47	46		1	47	5	7	7			
432+50.00	73		41	30		2	32	8	10	10			
432+75.00	43		28	15			15	15	20	20			
433+00.00	22		17	5			5	21	27	27			
433+25.00	38		28	10			10	17	22	22			
433+46.06	40		16	11		13	24	20	26	26			
433+47.86	3			1		2	3	3	4	4			
433+50.00	4			1		3	4	3	4	4			
433+75.00	36		13	7		16	23	52	68	68			
434+00.00	21		19	1		1	2	90	117	117			
434+25.00	13		7	6			6	115	150	150			
434+50.00	10		4	5		1	6	121	157	157			
434+75.00	7		6			1	1	129	168	168			
435+00.00	3		3					114	148	148			
435+25.00	1		1					113	147	147			
435+50.00	1		1					164	213	213			
435+75.00	1		1					223	290	290			
436+00.00	1		1					275	358	358			
436+25.00	1		1					278	361	361			
436+44.70	1		1					211	274	274			
436+50.00								59	77	77			
436+75.00	1		1					250	325	325			
437+00.00	2		2					159	207	207			
437+25.00	1		1					89	116	116			
437+50.00	1		1					90	117	117			
437+75.00	5		5					82	107	107			
438+00.00	16		13	3			3	58	75	75			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Road Plans EW-101 and EW-102.

STATION	TOTAL CUT	TOPSOIL TYPE B SAVED -C	TOPSOIL TYPE C SAVED -C	UNSUIT TYPE B CUT	UNSUIT TYPE C CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
438+00.00	8		5	3			3	14	18	18			
438+08.06	20		12	8			8	24	31	31			
438+25.00	46		25	21			21	27	35	35			
438+50.00	60		32	28			28	26	34	34			
438+75.00	64		35	29			29	25	33	33			
439+00.00	67		36	29		2	31	24	31	31			
439+25.00	66		38	23		5	28	24	31	31			
439+50.00	62		35	22		5	27	24	31	31			
439+75.00	63		30	27		6	33	26	34	34			
440+00.00	57		24	26		7	33	30	39	39			
440+25.00	54		8	24		22	46	26	34	34			
440+48.56	4			2		2	4	1	1	1			
440+50.00	55		4	15		36	51	44	57	57			
440+75.00	44		7			37	37	70	91	91			
441+00.00	46		5	6		35	41	65	85	85			
441+25.00	49		3	6		40	46	55	72	72			
441+50.00	50		2	6		42	48	56	73	73			
441+75.00	46		1	6		39	45	31	40	40			
442+00.00	43					43	43	10	13	13			
442+25.00	43			1		42	43	9	12	12			
442+50.00	41			1		40	41	20	26	26			
442+75.00	40		1	1		38	39	22	29	29			
443+00.00	28		1	6		21	27	4	5	5			
443+18.00													
Stage 2B													
391+75.00	9					9	9	1	1	1			
392+00.00	17					17	17	9	12	12			
392+25.00	28		1	6		21	27	14	18	18			
392+50.00	37		3	17		17	34	9	12	12			
392+75.00	49		3	28		18	46	4	5	5			
393+00.00	65		2	41		22	63	3	4	4			
393+25.00	79		2	53		24	77	3	4	4			
393+50.00	90		3	61		26	87	3	4	4			
393+75.00	99		5	66		28	94	3	4	4			
394+00.00	104		6	73		25	98	3	4	4			
394+25.00	106		6	76		24	100	3	4	4			
394+50.00	121		18	76		27	103	3	4	4			
394+75.00	160		30	98		32	130	3	4	4			
395+00.00	161		32	93		36	129	3	4	4			
395+25.00	71		11	39		21	60	2	3	3			
395+39.78	11		1	6		4	10						
395+42.38	32		2	18		12	30	1	1	1			
395+50.00	107		7	60		40	100	3	4	4			
395+75.00	109		8	64		37	101	3	4	4			
396+00.00	113		8	73		32	105	3	4	4			
396+25.00	117		7	82		28	110	3	4	4			
396+50.00	120		7	85		28	113	3	4	4			
396+75.00	120		7	86		27	113	3	4	4			
397+00.00	118		6	86		26	112	3	4	4			
397+25.00	115		5	84		26	110	3	4	4			
397+50.00	115		7	84		24	108	3	4	4			
397+75.00	124		17	84		23	107	2	3	3			
398+00.00	87		16	56		15	71	1	1	1			
398+16.98	41		8	25		8	33	1	1	1			
398+25.00	126		25	82		19	101	2	3	3			
398+50.00	117		15	80		22	102	2	3	3			
398+75.00	108		6	75		27	102	3	4	4			
399+00.00	109		6	74		29	103	2	3	3			
399+25.00	110		6	73		31	104	3	4	4			
399+50.00	110		5	69		36	105	2	3	3			
399+75.00	111		5	71		35	106	3	4	4			
400+00.00	109		6	76		27	103	3	4	4			
400+25.00	106		5	76		25	101	2	3	3			
400+50.00	102		5	73		24	97	3	4	4			
400+75.00	98		5	68		25	93	2	3	3			
401+00.00													

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Road Plans EW-101 and EW-102.

STATION	TOTAL CUT	TOPSOIL TYPE B SAVED -C	TOPSOIL TYPE C SAVED -C	UNSUIT TYPE B CUT	UNSUIT TYPE C CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
401+00.00	91		4	62		25	87	3	4	4			
401+25.00	85		3	56		26	82	3	4	4			
401+50.00	80		2	52		26	78	3	4	4			
401+75.00	77		2	45		30	75	3	4	4			
402+00.00	75		2	43		30	73	3	4	4			
402+25.00	75		3	48		24	72	15	20	20			
402+50.00	76		4	50		22	72	26	34	34			
402+75.00	77		4	52		21	73	22	29	29			
403+00.00	79		4	54		21	75	17	22	22			
403+25.00	81		4	53		24	77	13	17	17			
403+50.00	83		5	49		29	78	10	13	13			
403+75.00	85		5	53		27	80	9	12	12			
404+00.00	88		5	56		27	83	9	12	12			
404+25.00	90		6	54		30	84	8	10	10			
404+50.00	91		6	57		28	85	8	10	10			
404+75.00	93		6	62		25	87	7	9	9			
405+00.00	94		6	60		28	88	7	9	9			
405+25.00	94		5	58		31	89	8	10	10			
405+50.00	94		5	62		27	89	8	10	10			
405+75.00	96		6	67		23	90	7	9	9			
406+00.00	99		6	71		22	93	6	8	8			
406+25.00	101		6	71		24	95	5	7	7			
406+50.00	102		6	73		23	96	4	5	5			
406+75.00	98		8	67		23	90	3	4	4			
407+00.00	100		9	69		22	91	3	4	4			
407+25.00	106		6	75		25	100	5	7	7			
407+50.00	106		7	74		25	99	5	7	7			
407+75.00	105		7	38		60	98	5	7	7			
408+00.00	104		6	10		88	98	4	5	5			
408+25.00	103		6	17		80	97	4	5	5			
408+50.00	104		7	14		83	97	5	7	7			
408+75.00	109		7	13		89	102	7	9	9			
409+00.00	113		7	11		95	106	8	10	10			
409+25.00	114		8	10		96	106	8	10	10			
409+50.00	115		9	8		98	106	8	10	10			
409+75.00	115		8	11		96	107	6	8	8			
410+00.00	118		8	13		97	110	5	7	7			
410+25.00	121		8	12		101	113	4	5	5			
410+50.00	123		9	21		93	114	3	4	4			
410+75.00	125		9	25		91	116	3	4	4			
411+00.00	127		9	48		70	118	3	4	4			
411+25.00	129		9	46		74	120	3	4	4			
411+50.00	132		10	25		97	122	3	4	4			
411+75.00	134		11	24		99	123	3	4	4			
412+00.00	136		11	17		108	125	2	3	3			
412+25.00	138		12	23		103	126	3	4	4			
412+50.00	141		13	25		103	128	2	3	3			
412+75.00	146		15	25		106	131	3	4	4			
413+00.00	150		16	28		106	134	3	4	4			
413+25.00	150		17	28		105	133	3	4	4			
413+50.00	150		18	26		106	132	2	3	3			
413+75.00	155		21	45		89	134	3	4	4			
414+00.00	163		22	50		91	141	2	3	3			
414+25.00	169		20	48		101	149	3	4	4			
414+50.00	173		20	52		101	153	2	3	3			
414+75.00	176		22	54		100	154	3	4	4			
415+00.00	178		22	62		94	156	3	4	4			
415+25.00	206		22	75		109	184	3	4	4			
415+75.00	27			13		14	27						
416+00.00	27			14		13	27						
416+25.00	27			17		10	27						
416+50.00	28			19		9	28						
416+75.00	28			21		7	28						
417+00.00	27			23		4	27						
417+25.00	25			22		3	25						
417+50.00													

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Road Plans EW-101 and EW-102.

STATION	TOTAL CUT	TOPSOIL TYPE B SAVED -C	TOPSOIL TYPE C SAVED -C	UNSUIT TYPE B CUT	UNSUIT TYPE C CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK	APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
417+50.00												
417+75.00	27			22		5	27					
418+00.00	27			22		5	27					
418+25.00	27			16		11	27					
418+50.00	27			8		19	27					
418+75.00	63			19		44	63	1	1	1		
419+00.00	124			69		55	124	2	3	3		
419+25.00	140		9	69		62	131	2	3	3		
419+75.00	242		28	36		178	214	28	36	36		
419+80.63	24		2	2		20	22	6	8	8		
420+00.00	83		8	37		38	75	21	27	27		
420+25.00	104		8	47		49	96	18	23	23		
420+50.00	100		4	12		84	96	11	14	14		
420+75.00	103		4	13		86	99	11	14	14		
421+00.00	113		6	16		91	107	10	13	13		
421+25.00	123		8	11		104	115	9	12	12		
421+50.00	130		8	11		111	122	8	10	10		
421+75.00	134		8	15		111	126	8	10	10		
422+00.00	130		9	20		101	121	10	13	13		
422+25.00	129		9	22		98	120	14	18	18		
422+41.02	91		3	5		83	88	8	10	10		
422+50.00	48			6		42	48	2	3	3		
422+75.00	113			21		92	113	2	3	3		
423+00.00	182			6		176	182	2	3	3		
423+11.51	114		10	12		92	104	1	1	1		
423+25.00	145		12	16		117	133	1	1	1		
423+50.00	214			45		169	214	2	3	3		
424+00.00	309		5	231		73	304	4	5	5		
424+25.00	173		8	141		24	165	3	4	4		
424+50.00	171		11	129		31	160	2	3	3		
424+75.00	170		11	131		28	159	3	4	4		
425+00.00	169		11	123		35	158	3	4	4		
425+25.00	167		10	116		41	157	3	4	4		
425+50.00	159		5	102		52	154	3	4	4		
425+99.41	325		1	108		216	324	4	5	5		
426+00.00	4					4	4					
426+25.00	161		2	19		140	159	2	3	3		
426+50.00	159		6	32		121	153	19	25	25		
426+59.60	66		4	8		54	62	16	21	21		
426+75.00	104		6	10		88	98	26	34	34		
427+00.00	167		10	13		144	157	35	46	46		
427+50.00	322		11	59		252	311	34	44	44		
427+53.91	24			4		20	24					
428+00.00	283		10	97		176	273	15	20	20		
428+25.00	149		10	59		80	139	15	20	20		
428+50.00	146		11	22		113	135	17	22	22		
428+75.00	144		11	36		97	133	17	22	22		
429+00.00	144		11	36		97	133	13	17	17		
429+50.00	276		14	99		163	262	12	16	16		
429+54.16	22			12		10	22					
429+75.00	103		2	42		59	101	2	3	3		
430+00.00	129		6	37		86	123	9	12	12		
430+25.00	144		10	51		83	134	18	23	23		
430+50.00	145		11	60		74	134	18	23	23		
430+75.00	140		10	57		73	130	18	23	23		
430+78.41	19		1	8		10	18	2	3	3		
431+00.00	118		9	54		55	109	17	22	22		
431+25.00	140		13	59		68	127	21	27	27		
431+50.00	142		16	51		75	126	12	16	16		
431+75.00	145		10	61		74	135	3	4	4		
431+96.41	104		1	44		59	103	2	3	3		
432+00.00	14			6		8	14					
432+25.00	111		18	36		57	93	2	3	3		
432+50.00	106		21	8		77	85	22	29	29		
432+75.00	76		8	3		65	68	55	72	72		
433+00.00	64		6	1		57	58	67	87	87		

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Road Plans EW-101 and EW-102.

STATION	TOTAL CUT	TOPSOIL TYPE B SAVED -C	TOPSOIL TYPE C SAVED -C	UNSUIT TYPE B CUT	UNSUIT TYPE C CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK	APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
433+00.00	70		3	11		56	67	35	46	46		
433+25.00	47			18		29	47	2	3	3		
433+46.06	2			2			2					
433+47.86	3			2		1	3					
433+50.00	32		1	17		14	31	3	4	4		
433+75.00	31		3	6		22	28	4	5	5		
434+00.00	28		4			24	24	3	4	4		
434+25.00	27		4			23	23	3	4	4		
434+50.00	27		3			24	24	2	3	3		
434+75.00	28		3			25	25	3	4	4		
435+00.00	31		4			27	27	3	4	4		
435+25.00	35		4			31	31	3	4	4		
435+50.00	39		4			35	35	3	4	4		
435+75.00	42		4	9		29	38	3	4	4		
436+00.00	44		5	9		30	39	3	4	4		
436+25.00	35		4			31	31	2	3	3		
436+44.70	9		1			8	8	1	1	1		
436+50.00	43		4			39	39	3	4	4		
436+75.00	40		4			36	36	3	4	4		
437+00.00	38		5			33	33	3	4	4		
437+25.00	36		5			31	31	3	4	4		
437+50.00	35		5			30	30	3	4	4		
437+75.00	36		4			32	32	2	3	3		
438+00.00	12		1			11	11	1	1	1		
438+08.06	26		3			23	23	3	4	4		
438+25.00	39		5	4		30	34	14	18	18		
438+50.00	37		5	4		28	32	17	22	22		
438+75.00	36		3	1		32	33	15	20	20		
439+00.00	34		1			33	33	18	23	23		
439+25.00	32		1	5		26	31	20	26	26		
439+50.00	29			15		14	29	20	26	26		
439+75.00	32		4	20		8	28	21	27	27		
440+00.00	36		8	20		8	28	22	29	29		
440+25.00	29		3	14		12	26	21	27	27		
440+48.56	2			1		1	2	1	1	1		
440+50.00	26			6		20	26	24	31	31		
440+75.00	25			2		23	25	25	33	33		
441+00.00	17			3		14	17	14	18	18		
441+25.00	11			2		9	11	1	1	1		
441+50.00	19			3		16	19	6	8	8		
441+75.00	28		8	2		18	20	10	13	13		
442+00.00	28		8			20	20	5	7	7		
442+23.76	1					1	1					
442+25.00	30		2			28	28	3	4	4		
442+50.00	29		2			27	27	3	4	4		
442+75.00	27		1			26	26	3	4	4		
443+00.00	18		1	8		9	17	2	3	3		
443+18.00												
Widening												
443+23.01	2					2	2	1	1	1		
443+25.00	18		2			16	16	6	8	8		
443+50.00	14		2			12	12	6	8	8		
443+75.00	13		1			12	12	11	14	14		
444+00.00	16		1			15	15	20	26	26		
444+25.00	19		1			18	18	27	35	35		
444+50.00	19		1			18	18	32	42	42		
444+75.00	18		1			17	17	36	47	47		
445+00.00	18		1			17	17	32	42	42		
445+25.00	18		1			17	17	27	35	35		
445+50.00	18		1			17	17	28	36	36		
445+75.00	18		1			17	17	29	38	38		
446+00.00	18		1			17	17	32	42	42		
446+25.00	16					16	16	34	44	44		
446+48.51	1					1	1	2	3	3		
446+50.00	4					4	4	10	13	13		
446+56.51												

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Road Plans EW-101 and EW-102.

STATION	TOTAL CUT	TOPSOIL TYPE B SAVED -C	TOPSOIL TYPE C SAVED -C	UNSUIT TYPE B CUT	UNSUIT TYPE C CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK	APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
446+56.51	11					11	11	23	30	30		
446+75.00	15					15	15	45	59	59		
447+00.00	18		1			17	17	70	91	91		
447+25.00	17		1			16	16	64	83	83		
447+50.00	12		1			11	11	39	51	51		
447+68.44	4					4	4	13	17	17		
447+75.00	15		1			14	14	34	44	44		
448+00.00	11					11	11	20	26	26		
448+17.01	6					6	6	10	13	13		
448+25.00	19					19	19	34	44	44		
448+50.00	3					3	3	8	10	10		
448+54.51	13		1			12	12	39	51	51		
448+75.00	15		1			14	14	42	55	55		
449+00.00	16					16	16	32	42	42		
449+25.00	11					11	11	19	25	25		
449+42.01	5					5	5	9	12	12		
449+50.00	17					17	17	26	34	34		
449+75.00	18		1			17	17	24	31	31		
450+00.00	18		1			17	17	21	27	27		
450+25.00	19		1			18	18	18	23	23		
450+50.00	20		2			18	18	15	20	20		
450+75.00	21		4			17	17	12	16	16		
451+00.00	22		4			18	18	10	13	13		
451+25.00	17		2			15	15	6	8	8		
451+50.00	11					11	11	3	4	4		
451+75.00	11					11	11	3	4	4		
452+00.00	11					11	11	3	4	4		
452+25.00	15					15	15	6	8	8		
452+50.00	19		1			18	18	9	12	12		
452+75.00	18		1			17	17	10	13	13		
453+00.00	18		1			17	17	11	14	14		
453+25.00	18		1			17	17	12	16	16		
453+50.00	18		1			17	17	13	17	17		
453+75.00	14					14	14	12	16	16		
454+00.00	11					11	11	11	14	14		
454+25.00	11		1			10	10	12	16	16		
454+50.00	11		1			10	10	11	14	14		
454+75.00	15		1			14	14	13	17	17		
455+00.00	15					15	15	10	13	13		
455+25.00	11					11	11	3	4	4		
455+50.00	11					11	11	3	4	4		
455+75.00	11					11	11	3	4	4		
456+00.00	15					15	15	10	13	13		
456+25.00	18		1			17	17	18	23	23		
456+50.00	18		1			17	17	18	23	23		
456+75.00	19		1			18	18	17	22	22		
457+00.00	19		1			18	18	16	21	21		
457+25.00	19		1			18	18	15	20	20		
457+50.00	19		1			18	18	14	18	18		
457+75.00	19		1			18	18	14	18	18		
458+00.00	18		1			17	17	15	20	20		
458+25.00	18		1			17	17	15	20	20		
458+50.00	17					17	17	16	21	21		
458+75.00	1					1	1	1	1	1		
458+76.10	17					17	17	14	18	18		
459+00.00	19		1			18	18	12	16	16		
459+25.00	19		1			18	18	14	18	18		
459+50.00	19		1			18	18	15	20	20		
459+75.00	17		1			16	16	14	18	18		
460+00.00	10					10	10	9	12	12		
460+15.20	7					7	7	7	9	9		
460+25.00	18		1			17	17	15	20	20		
460+50.00	19		1			18	18	12	16	16		
460+75.00	19		1			18	18	15	20	20		
461+00.00	19		1			18	18	12	16	16		
461+25.00												

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Road Plans EW-101 and EW-102.

STATION	TOTAL CUT	TOPSOIL TYPE B SAVED -C	TOPSOIL TYPE C SAVED -C	UNSUIT TYPE B CUT	UNSUIT TYPE C CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
461+25.00	7					7	7	3	4	4			
461+34.29	12					12	12	5	7	7			
461+50.00	21		3			18	18	16	21	21			
461+75.00	20		5			15	15	25	33	33			
462+00.00	17		5			12	12	23	30	30			
462+25.00	16		5			11	11	20	26	26			
462+50.00	19		5			14	14	19	25	25			
462+75.00	22		4			18	18	19	25	25			
463+00.00	22		3			19	19	21	27	27			
463+25.00	22		4			18	18	23	30	30			
463+50.00	23		5			18	18	22	29	29			
463+75.00	23		5			18	18	20	26	26			
464+00.00	23		5			18	18	20	26	26			
464+25.00	24		5			19	19	18	23	23			
464+50.00	25		7			18	18	14	18	18			
464+75.00	19		5			14	14	6	8	8			
464+92.00													
Kennedy													
1257+10.00	7					7	7						
1257+25.00	25					25	25						
1257+45.00	10					10	10						
1257+50.00	56					56	56	2	3	3			
1257+75.00	55					55	55	4	5	5			
1258+00.00	43					43	43	11	14	14			
1258+25.00													
1258+25.10	4					4	4	4	5	5			
1258+27.00	27					27	27	62	81	81			
1258+50.00													
R57													
1280+60.00	53					53	53						
1280+75.00	126					126	126	5	7	7			
1281+00.00	151					151	151	13	17	17			
1281+25.00	157					157	157	12	16	16			
1281+50.00	150					150	150	3	4	4			
1281+75.00	107					107	107						
1281+92.00	50					50	50						
1282+00.00	99					99	99	3	4	4			
1282+25.00	28					28	28	8	10	10			
1282+50.00								14	18	18			
1282+75.00								18	23	23			
1283+00.00								23	30	30			
1283+25.00								31	40	40			
1283+50.00													
1384+25.00	86					86	86	42	55	55			
1384+50.00	151					151	151	21	27	27			
1384+75.00	155					155	155	8	10	10			
1385+00.00	47					47	47	2	3	3			
1385+07.00	106					106	106	6	8	8			
1385+25.00	25					25	25	2	3	3			
1385+30.00	92					92	92	12	16	16			
1385+50.00	102					102	102	16	21	21			
1385+72.00	15					15	15	2	3	3			
1385+75.00	95					95	95	19	25	25			
1386+00.00	16					16	16	6	8	8			
1386+06.00													
90th St													
2305+85.00	21					21	21	4	5	5			
2306+00.00	13					13	13	2	3	3			
2306+07.14	41					41	41	7	9	9			
2306+25.00	71					71	71	12	16	16			
2306+50.00	81					81	81	15	20	20			
2306+75.00													

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Road Plans EW-101 and EW-102.

STATION	TOTAL CUT	TOPSOIL TYPE B SAVED -C	TOPSOIL TYPE C SAVED -C	UNSUIT TYPE B CUT	UNSUIT TYPE C CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
2306+75.00	91					91	91	19	25	25			
2307+00.00	99					99	99	27	35	35			
2307+25.00	112					112	112	39	51	51			
2307+50.00	132					132	132	50	65	65			
2307+75.00	31					31	31	11	14	14			
2307+80.00	125					125	125	59	77	77			
2308+00.00	148					148	148	105	137	137			
2308+25.00	155					155	155	138	179	179			
2308+50.00	166					166	166	171	222	222			
2308+75.00	167					167	167	205	267	267			
2309+00.00	160					160	160	236	307	307			
2309+25.00	173					173	173	263	342	342			
2309+50.00	96					96	96	196	255	255			
2309+75.00								105	137	137			
2310+00.00								168	218	218			
2310+75.00	9					9	9	8	10	10			
2310+85.00	3					3	3	2	3	3			
2310+88.00	13					13	13	5	7	7			
2311+00.00	69					69	69	4	5	5			
2311+25.00	78					78	78						
2311+50.00	71					71	71						
2311+75.00	73					73	73						
2312+00.00	72					72	72						
2312+25.00	60					60	60						
2312+50.00	44					44	44						
2312+75.00	62					62	62						
2313+00.00	27					27	27						
2313+08.00	7					7	7						
2313+10.00	35					35	35	1	1	1			
2313+25.00	29					29	29	2	3	3			
2313+50.00	17					17	17	2	3	3			
2313+75.00	4					4	4	1	1	1			
2313+85.00													
R63													
3388+60.00	91					91	91	13	17	17			
3388+75.00	26					26	26	4	5	5			
3388+79.00	121					121	121	24	31	31			
3389+00.00	105					105	105	40	52	52			
3389+25.00	94					94	94	52	68	68			
3389+50.00	86					86	86	63	82	82			
3389+75.00	74					74	74	72	94	94			
3390+00.00	52					52	52	124	161	161			
3390+25.00	21					21	21	296	385	385			
3390+50.00	5					5	5	273	355	355			
3390+75.00													
3391+31.95	58					58	58	11	14	14			
3391+50.00	143					143	143	11	14	14			
3391+75.00	116					116	116	27	35	35			
3392+00.00	87					87	87	25	33	33			
3392+20.00	20					20	20	5	7	7			
3392+25.00	78					78	78	16	21	21			
3392+50.00	64					64	64	7	9	9			
3392+75.00	70					70	70	3	4	4			
3393+00.00	16					16	16						
3393+05.00													
Y St													
4414+15.00	14					14	14	4	5	5			
4414+25.00	35					35	35	9	12	12			
4414+50.00	42					42	42	5	7	7			
4414+75.00	56					56	56	5	7	7			
4415+00.00	75					75	75	5	7	7			
4415+25.00	99					99	99	5	7	7			
4415+50.00													

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Road Plans EW-101 and EW-102.

STATION	TOTAL CUT	TOPSOIL TYPE B SAVED -C	TOPSOIL TYPE C SAVED -C	UNSUIT TYPE B CUT	UNSUIT TYPE C CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
4415+50.00	126					126	126	5	7	7			
4415+75.00	154					154	154	5	7	7			
4416+00.00	181					181	181	5	7	7			
4416+25.00	219					219	219	5	7	7			
4416+50.00	291					291	291	5	7	7			
4416+75.00	518					518	518	8	10	10			
4417+00.00	864					864	864	28	36	36			
4417+25.00	13					13	13	1	1	1			
4417+25.32													
4417+64.40	429					429	429	18	23	23			
4417+75.00	980					980	980	42	55	55			
4418+00.00	659					659	659	84	109	109			
4418+25.00	478					478	478	56	73	73			
4418+50.00	467					467	467	4	5	5			
4418+75.00	402					402	402	4	5	5			
4419+00.00	334					334	334	5	7	7			
4419+25.00	290					290	290	5	7	7			
4419+50.00	244					244	244	5	7	7			
4419+75.00	192					192	192	5	7	7			
4420+00.00	150					150	150	5	7	7			
4420+25.00	123					123	123	5	7	7			
4420+50.00	100					100	100	5	7	7			
4420+75.00	84					84	84	5	7	7			
4421+00.00	73					73	73	5	7	7			
4421+25.00	66					66	66	5	7	7			
4421+50.00	60					60	60	5	7	7			
4421+75.00	55					55	55	5	7	7			
4422+00.00	52					52	52	5	7	7			
4422+25.00	50					50	50	5	7	7			
4422+50.00	20					20	20	2	3	3			
4422+60.00													
R57 Detour													
11277+89.54	11					11	11						
11278+00.00	25					25	25						
11278+25.00	19					19	19						
11278+50.00	30					30	30	2	3	3			
11278+75.00	53					53	53	19	25	25			
11279+00.00	67					67	67	55	72	72			
11279+25.00	41					41	41	49	64	64			
11279+38.27	37					37	37	57	74	74			
11279+50.00	73					73	73	162	211	211			
11279+75.00	59					59	59	207	269	269			
11280+00.00	47					47	47	229	298	298			
11280+25.00	43					43	43	232	302	302			
11280+50.00	44					44	44	225	293	293			
11280+75.00	46					46	46	211	274	274			
11281+00.00	52					52	52	188	244	244			
11281+25.00	67					67	67	160	208	208			
11281+50.00	82					82	82	130	169	169			
11281+75.00	90					90	90	106	138	138			
11282+00.00	106					106	106	79	103	103			
11282+25.00	134					134	134	31	40	40			
11282+50.00	126					126	126	6	8	8			
11282+75.00	95					95	95	27	35	35			
11283+00.00	77					77	77	46	60	60			
11283+25.00	55					55	55	48	62	62			
11283+50.00	51					51	51	44	57	57			
11283+75.00	59					59	59	52	68	68			
11284+00.00	30					30	30	33	43	43			
11284+25.00								3	4	4			
11284+50.00								2	3	3			
11284+75.00	41					41	41	9	12	12			
11285+00.00	73					73	73	9	12	12			
11285+25.00													

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Road Plans EW-101 and EW-102.

STATION	TOTAL CUT	TOPSOIL TYPE B SAVED -C	TOPSOIL TYPE C SAVED -C	UNSUIT TYPE B CUT	UNSUIT TYPE C CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
11285+25.00	98					98	98	1	1	1			
11285+50.00	147					147	147	1	1	1			
11285+75.00	169					169	169						
11286+00.00	151					151	151	4	5	5			
11286+25.00	116					116	116	22	29	29			
11286+50.00	111					111	111	42	55	55			
11286+75.00	118					118	118	56	73	73			
11287+00.00	71					71	71	44	57	57			
11287+15.00	45					45	45	36	47	47			
11287+25.00	101					101	101	111	144	144			
11287+50.00	80					80	80	163	212	212			
11287+75.00	54					54	54	239	311	311			
11288+00.00	38					38	38	285	371	371			
11288+25.00	36					36	36	273	355	355			
11288+50.00	43					43	43	225	293	293			
11288+75.00	36					36	36	117	152	152			
11288+91.65	20					20	20	49	64	64			
11289+00.00	62					62	62	114	148	148			
11289+25.00	74					74	74	77	100	100			
11289+50.00	34					34	34	25	33	33			
11289+60.00	45					45	45	26	34	34			
11289+75.00	59					59	59	14	18	18			
11290+00.00	42					42	42	1	1	1			
11290+25.00	15					15	15						
11290+40.39													
R63 Detour													
18388+00.00	29					29	29	171	222	222			
18388+25.00	19					19	19	217	282	282			
18388+50.00	7					7	7	236	307	307			
18388+75.00	17					17	17	244	317	317			
18389+00.00	30					30	30	258	335	335			
18389+25.00	26					26	26	274	356	356			
18389+50.00	30					30	30	272	354	354			
18389+75.00	50					50	50	247	321	321			
18390+00.00	73					73	73	208	270	270			
18390+25.00	81					81	81	167	217	217			
18390+50.00	81					81	81	135	176	176			
18390+75.00	88					88	88	104	135	135			
18391+00.00	95					95	95	70	91	91			
18391+25.00	92					92	92	40	52	52			
18391+50.00	82					82	82	22	29	29			
18391+75.00	67					67	67	11	14	14			
18392+00.00	51					51	51	4	5	5			
18392+25.00	131					131	131	1	1	1			
18392+50.00	110					110	110						
18392+75.00	154					154	154						
18393+00.00	297					297	297						
18393+25.00	262					262	262						
18393+50.00	231					231	231						
18393+75.00	218					218	218						
18394+00.00	204					204	204						
18394+25.00	186					186	186						
18394+50.00	177					177	177						
18394+75.00	164					164	164						
18395+00.00	144					144	144						
18395+25.00	119					119	119	1	1	1			
18395+50.00	85					85	85	12	16	16			
18395+75.00	53					53	53	27	35	35			
18396+00.00	31					31	31	29	38	38			
18396+25.00													
Y St Detour A													
14410+00.00	21					21	21						
14410+25.00	46					46	46						
14410+50.00													

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

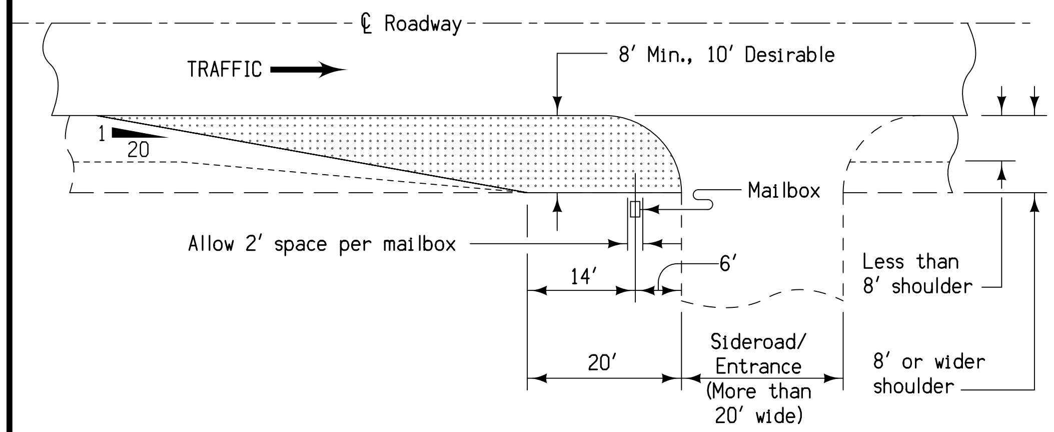
Refer to Standard Road Plans EW-101 and EW-102.

STATION	TOTAL CUT	TOPSOIL TYPE B SAVED -C	TOPSOIL TYPE C SAVED -C	UNSUIT TYPE B CUT	UNSUIT TYPE C CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
14410+50.00													
14410+75.00	77					77	77						
14411+00.00	111					111	111						
14411+25.00	145					145	145						
14411+50.00	178					178	178						
14411+75.00	208					208	208						
14412+00.00	244					244	244						
14412+25.00	287					287	287						
14412+50.00	316					316	316						
14412+75.00	315					315	315						
14413+00.00	282					282	282						
14413+25.00	233					233	233						
14413+50.00	192					192	192						
14413+75.00	153					153	153						
14414+00.00	106					106	106	2	3	3			
14414+25.00	69					69	69	11	14	14			
14414+50.00	49					49	49	20	26	26			
14414+75.00	40					40	40	24	31	31			
14415+00.00	34					34	34	29	38	38			
14415+25.00	28					28	28	36	47	47			
14415+50.00	22					22	22	43	56	56			
14415+75.00	18					18	18	45	59	59			
14416+00.00	15					15	15	42	55	55			
14416+25.00	18					18	18	31	40	40			
14416+50.00	30					30	30	18	23	23			
14416+75.00	34					34	34	12	16	16			
14417+00.00	19					19	19	18	23	23			
14417+13.53	2					2	2	7	9	9			
Y St Detour B													
14416+96.30													
14417+00.00	22					22	22						
14417+25.00	196					196	196						
14417+50.00	237					237	237						
14417+75.00	316					316	316						
14418+00.00	412					412	412						
14418+25.00	451					451	451						
14418+50.00	458					458	458						
14418+75.00	442					442	442						
14419+00.00	418					418	418						
14419+25.00	388					388	388						
14419+50.00	367					367	367						
14419+75.00	354					354	354						
14420+00.00	340					340	340						
14420+25.00	323					323	323						
14420+50.00	300					300	300						
14420+75.00	273					273	273						
14421+00.00	254					254	254						
14421+25.00	245					245	245						
14421+50.00	240					240	240						
14421+75.00	242					242	242						
14422+00.00	253					253	253						
14422+25.00	267					267	267						
14422+50.00	270					270	270						
14422+75.00	268					268	268						
14423+00.00	267					267	267						
14423+25.00	266					266	266						
14423+50.00	260					260	260						
14423+75.00	240					240	240						
14424+00.00	211					211	211						
14424+25.00	169					169	169						
14424+50.00	121					121	121						
14424+75.00	74					74	74						
14425+00.00	35					35	35						
14425+25.00	16					16	16						
14425+25.51													

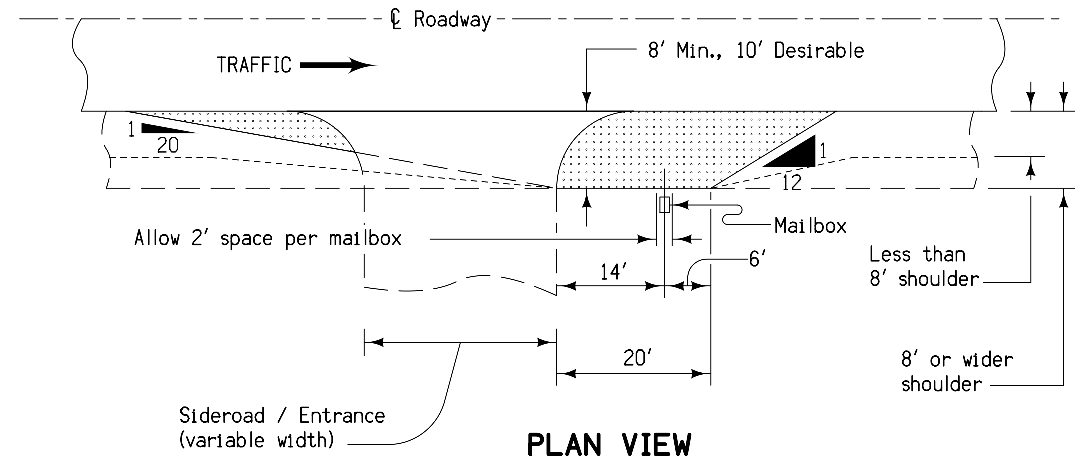
TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Road Plans EW-101 and EW-102.

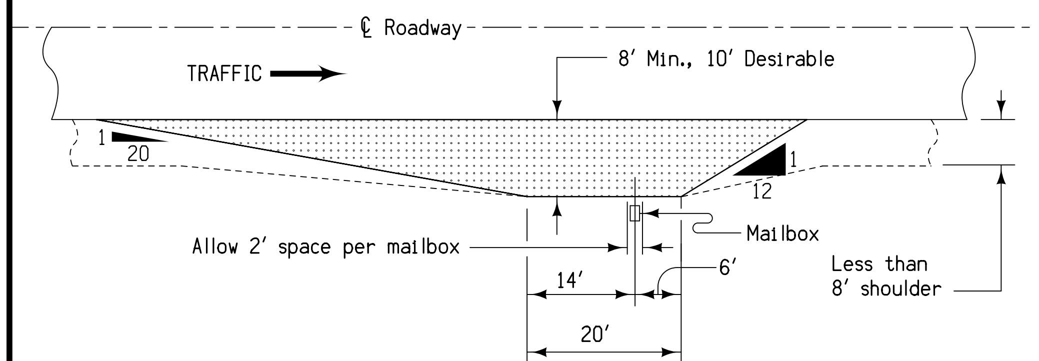
STATION	TOTAL CUT	TOPSOIL TYPE B SAVED -C	TOPSOIL TYPE C SAVED -C	UNSUIT TYPE B CUT	UNSUIT TYPE C CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
14425+25.51													
Y St Detour C													
24415+20.63	1					1	1						
24415+25.00	17					17	17						
24415+47.54	3					3	3						
24415+50.00	72					72	72						
24415+75.00	145					145	145						
24416+00.00	185					185	185						
24416+25.00	192					192	192						
24416+50.00	191					191	191						
24416+75.00	172					172	172						
24417+00.00	143					143	143						
24417+25.00	116					116	116						
24417+50.00	70					70	70	3	4	4			
24417+75.00	19					19	19	33	43	43			
24418+00.00								60	78	78			
24418+25.00								25	33	33			
24418+46.15													
ML Detour NE													
439+25.00	18					18	18						
439+50.00	21					21	21						
439+75.00	28					28	28						
440+00.00	35					35	35						
440+25.00	44					44	44						
440+48.56	3					3	3						
440+50.00	60					60	60						
440+75.00	68					68	68						
441+00.00	122					122	122						
441+50.00	44					44	44						
441+75.00	29					29	29						
442+00.00	17					17	17	2	3	3			
442+23.76	1					1	1						
442+25.00	13					13	13	6	8	8			
442+50.00	12					12	12	8	10	10			
442+75.00	12					12	12	7	9	9			
443+00.00	9					9	9	3	4	4			
443+18.00	3					3	3	1	1	1			
443+23.01	1					1	1						
443+25.00	12					12	12	3	4	4			
443+50.00	11					11	11	4	5	5			
443+75.00	11					11	11	5	7	7			
444+00.00	10					10	10	4	5	5			
444+25.00	11					11	11	1	1	1			
444+50.00	15					15	15						
444+75.00													
Spruce Detour													
19441+25.00	56					56	56						
19441+50.00	80					80	80						
19441+75.00	60					60	60						
19442+00.00	46					46	46						
19442+25.00													



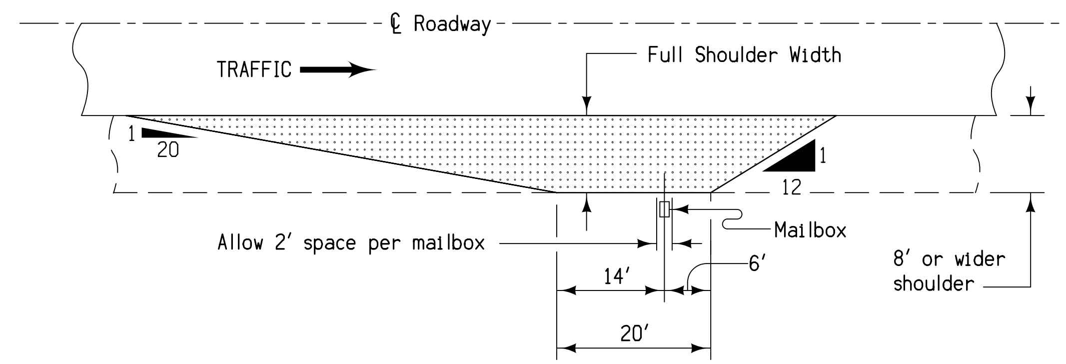
PLAN VIEW
Approach Side of Entrance



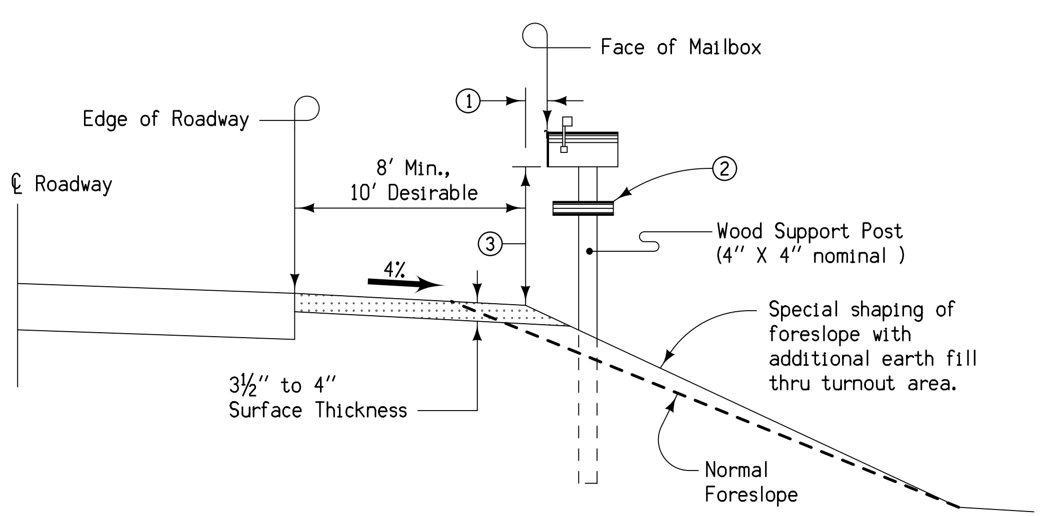
PLAN VIEW
Trailing Side of Entrance



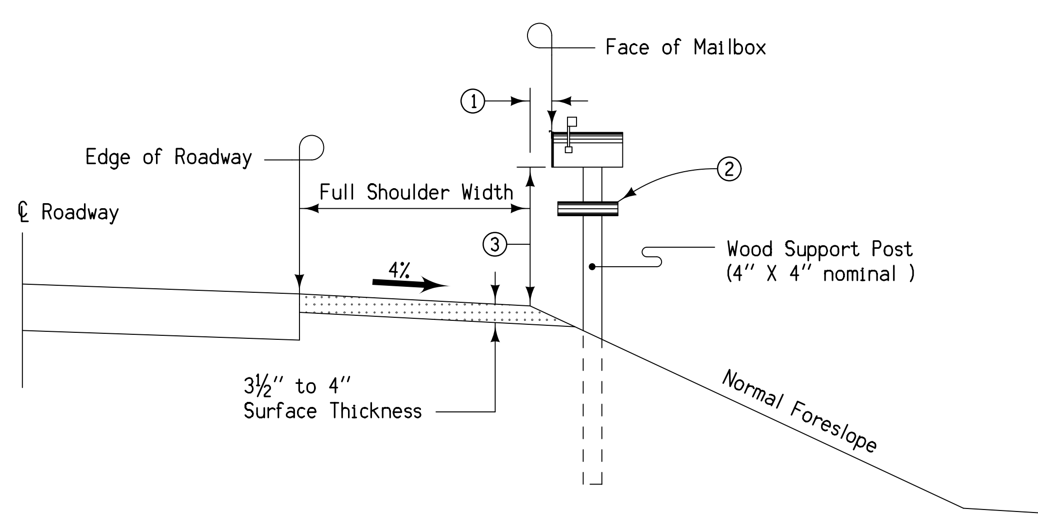
PLAN VIEW
Shoulder Width Less than 8′



PLAN VIEW
Shoulder Width 8′ or More



TYPICAL SECTION
Shoulder Width Less than 8′



TYPICAL SECTION
Shoulder Width 8′ or More

GENERAL NOTES:

Refer to "Policies and Procedures Manual", Policy 610.09, Mailboxes and Newspaper Receptacles on Primary Roads.

Mailbox turnouts shall be full shoulder width with a minimum width of 8 feet. On shoulders less than 8 feet, build fillet to obtain a minimum width of 8 feet.

For multiple mailbox installations in one turnout, the taper dimensions will remain the same. The dimensions from centerline of mailbox located at either end will remain the same and 2 feet will be allowed for each mailbox in the installation.

When the mailbox owner's driveway is on the right hand side of the road, as the mail carrier travels, the box would preferably be placed near the driveway as shown on this sheet. With these types of placement, the driveway will serve as part of the mailbox turnout.

Requests, by the property owner, for the location of mailbox turnouts other than at driveways shall be approved by the Engineer in charge of construction and the U.S. Postal Authorities.

Mailbox(s) shall be installed with the face (door) no closer to the roadway than the shoulder line. Support post shall be in the foreslope with the inside edge at least one (1) foot outward from the shoulder line.

SURFACING QUANTITY

Surfacing of mailbox turnouts is based on a 5 inch design depth (loose volume) which will, under normal conditions, compact to 3.5″ to 4″ actual depth. A width of 8 feet will require approximately 18.3 cubic yards and 10 foot width will require approximately 27.8 cubic yards of surfacing. Quantities are given for a single mailbox installation 276 to 340 feet in length. Where multiple installations or installations at driveways are encountered, quantities will vary as directed by the Engineer.

Payment for construction of mailbox turnouts will be as specified elsewhere in the contract documents.

1. 8″ to 12″ preferred, 0″ minimum.
2. Metal tube / box for delivery of local advertisements, newspapers etc.
3. Mounting height per U.S. Postal Regulations (42″to 48″ above mail stop surface).

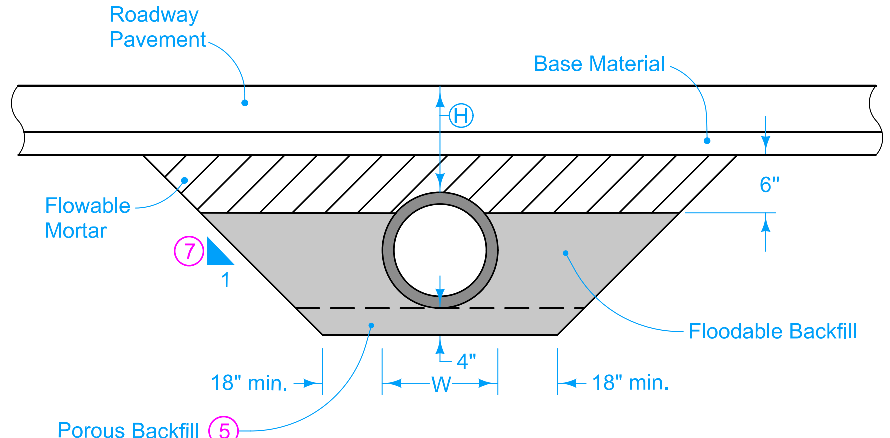
Iowa Department of Transportation
Project Development Division

DETAIL SHEET 560-2

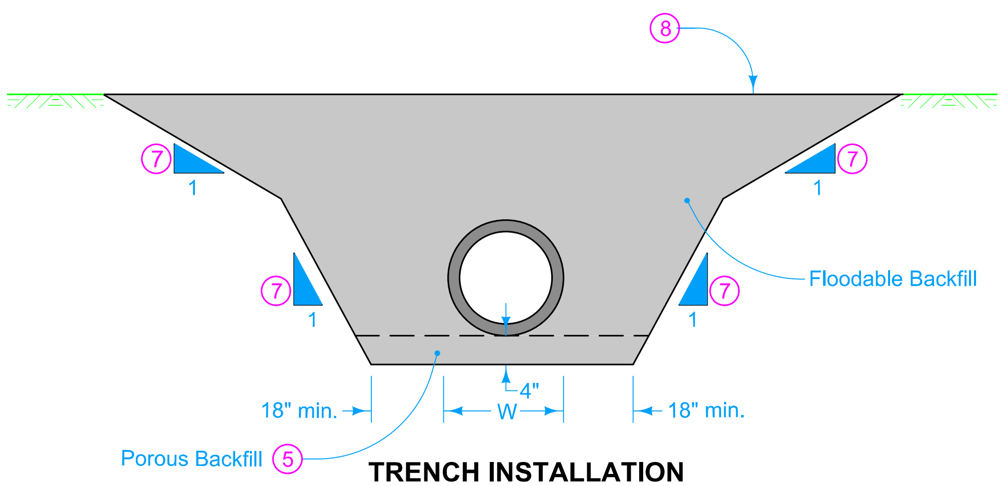
REVISION: Place in CADD	REVISION NO.	REVISION DATE
	1	03-28-95

DETAILS OF MAILBOX TURNOUTS (GRANULAR SURFACED)

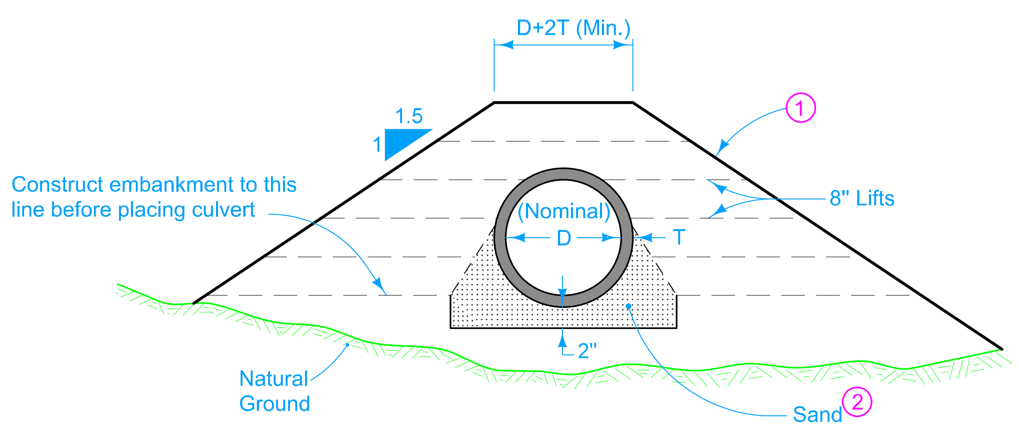
ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER U.1



TRENCH INSTALLATION
H ≤ 4'



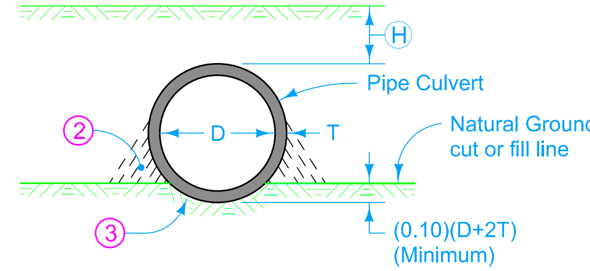
TRENCH INSTALLATION
H > 4'



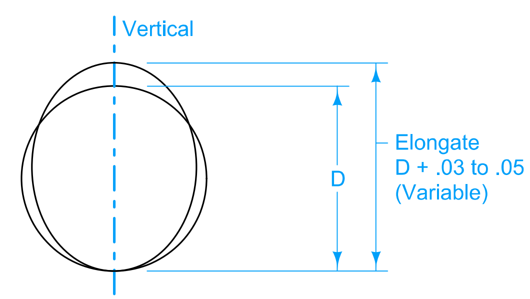
FILL INSTALLATION
(FOR RIGID PIPES ONLY)

CLASS 'B' BEDDING & BACKFILL 4

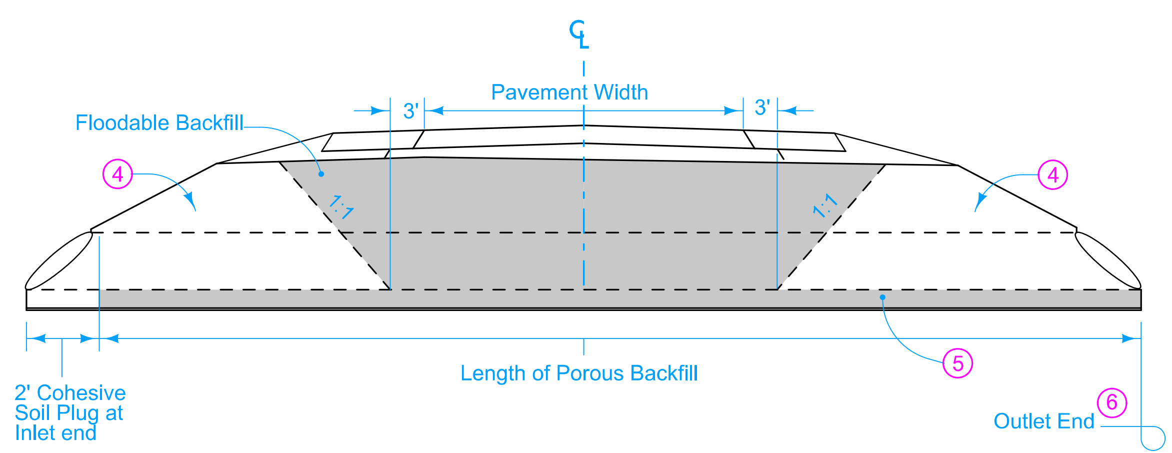
Denotes pay limits for flooded backfill



CLASS 'C' BEDDING & BACKFILL



ELONGATED PIPE



TYPICAL SECTION - SOIL PLUG

Where a corrugated metal pipe culvert requiring elongation is to be installed, such elongation shall be accomplished by means approved by the Engineer. Elongation may be developed either as part of shop fabrication or field installation.

Minimum and maximum allowable cover (H) for pipe culverts shall be as shown on the appropriate Standard Road Plans for the particular kind of culvert, as follows:

RF-31 Depth of Cover Tables for Concrete Pipe
RF-32 Depth of Cover Tables for Corrugated Pipe

(1) The backfill adjacent to and above the pipe culvert may be placed in conjunction with normal embankment construction. The embankment within the limits shown shall be thoroughly tamped.

(2) Extra care shall be taken to ensure complete and satisfactory tamping of backfill material in the area immediately adjacent to the lower portion of pipe.

(3) The excavation below groundline shall be carefully made with a template or shaped by other means and checked with a template conforming to the actual dimension and shape of the pipe.

(4) For culverts backfilled by flooding, place a cohesive soil plug at the inlet, outlet, and, when necessary, sides, prior to flooding.

(5) 4-inch Porous Backfill bedding. 2-inch Floodable Backfill bedding may be used under unsealed rigid pipe.

(6) Extend Porous Backfill through the outlet end soil plug when used for bedding.

(7) Quantity calculations are based upon a 1:1 slope and minimum trench dimension. Actual slope of trench may vary based upon Contractor's operations.

(8) Ground Line at time of pipe installation. When existing ground exceeds 5 feet depth over pipe, backfill and compaction by flooding is not required more than 5 feet above the pipe.

Possible Contract Items:
- Flowable Mortar
- Flooded Backfill
- Excavation, Class 20

Possible Tabulations:
- 104-3
- 104-4

INTERIM
STANDARD ROAD PLAN

REVISION	
13	12-17-13

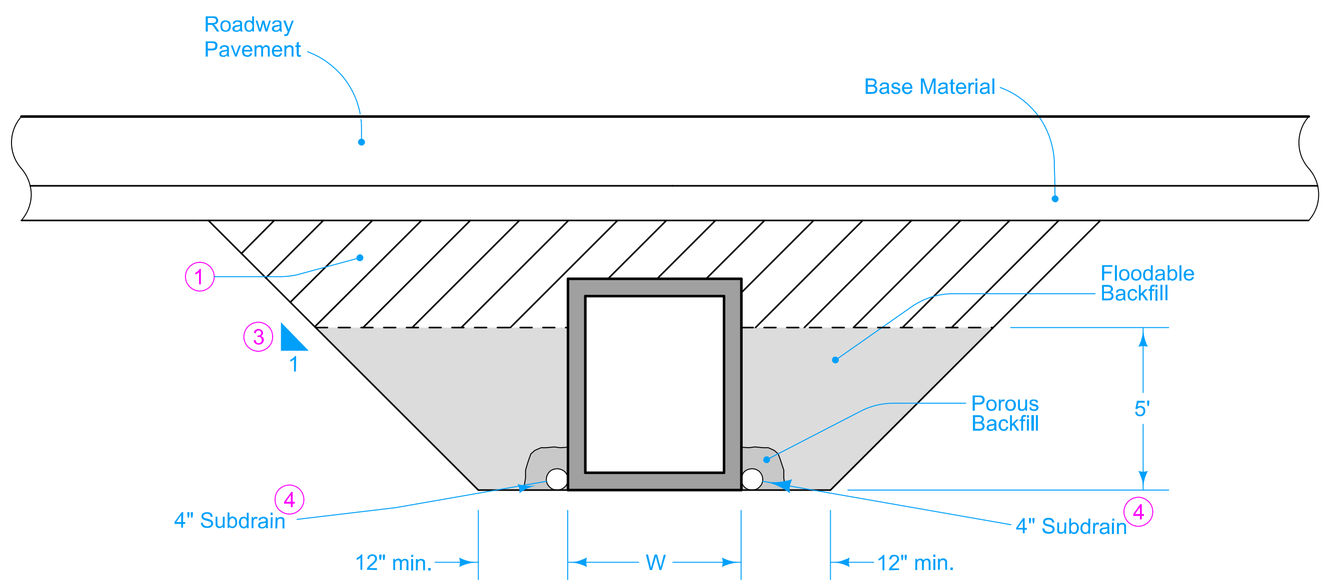
RF-30A

SHEET 1 of 1

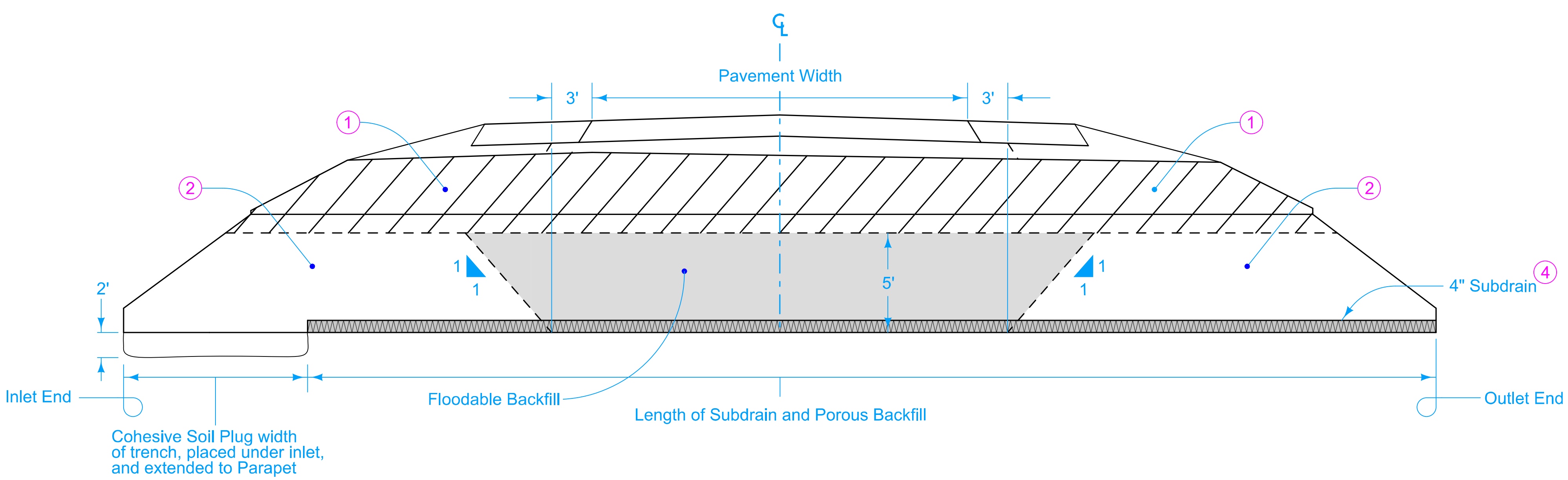
REVISIONS: Deleted Box Culvert now covered by RF-30D and changed title.

Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

PIPE CULVERT
(BEDDING AND BACKFILL)



RCB INSTALLATION



TYPICAL SECTION - COHESIVE SOIL PLUG

1. Excavated material meeting the requirements of the Standard Specifications. Compact using moisture control. The Contractor has the option to use Floodable Backfill. No additional compensation will be provided if the Contractor elects to use Floodable Backfill in lieu of suitable soil.
2. Prior to flooding, place a cohesive soil plug to the height of the floodable backfill at the inlet, outlet and sides of the culvert.
3. Quantity calculations are based upon a 1:1 slope and minimum trench dimension. Actual slope of trench may vary based upon Contractor's operations.
4. Place at flowline elevation of culvert starting at parapet for inlet and outletting at end of outlet headwall wings. Cover with a minimum of 4 inches of Porous Backfill.

Possible Contract Items:
- Flooded Backfill
- Excavation, Class 20
- Compaction with Moisture Control (Structures)

Possible Tabulations:
- 103-6
- 104-3
- 104-4

Denotes pay limits for flooded backfill

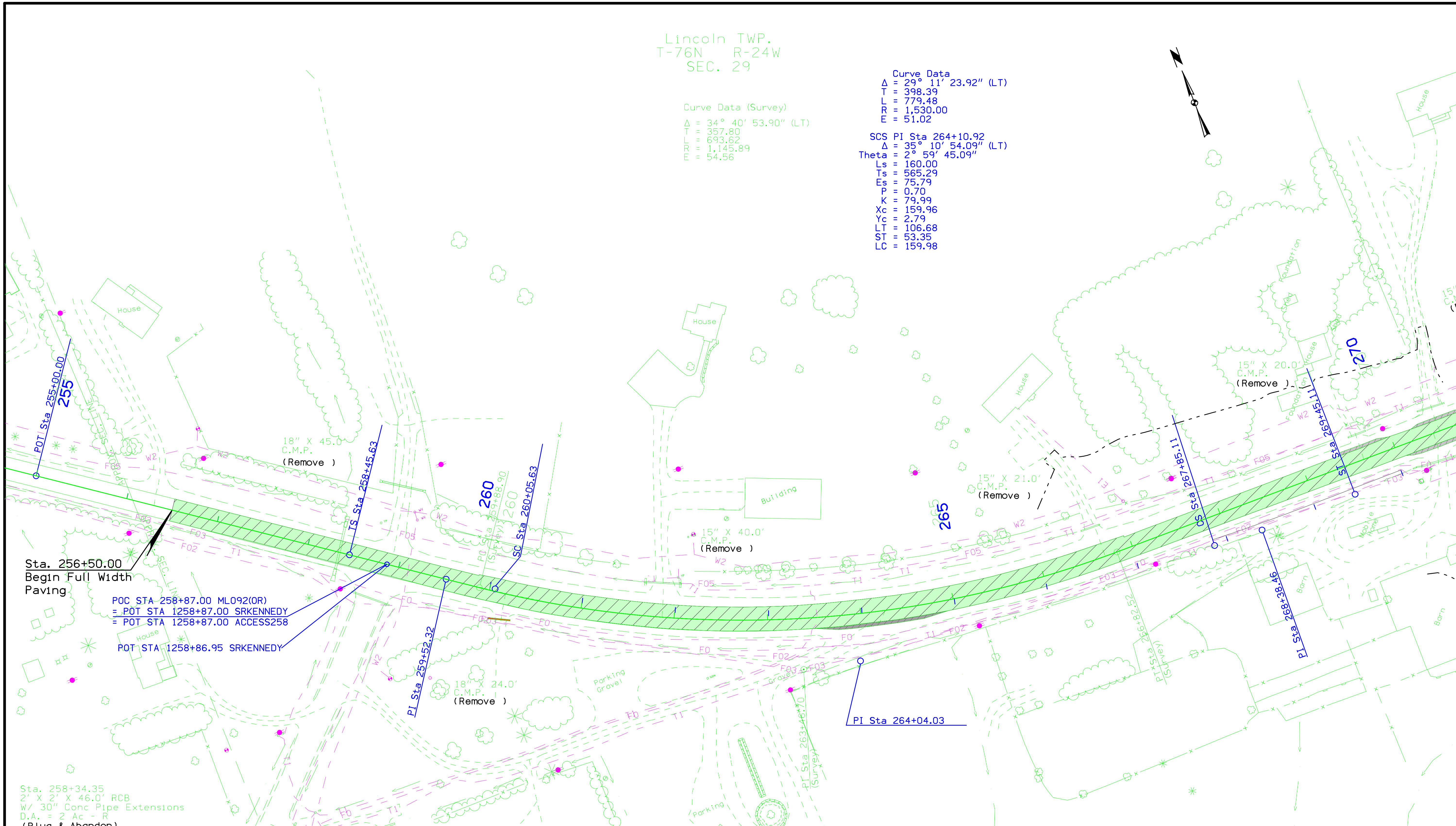
INTERIM STANDARD ROAD PLAN	REVISION: New 12-17-13 — RF-30D — SHEET 1 of 1

REVISIONS: New.

Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

BOX CULVERT (BACKFILL)

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER U.3



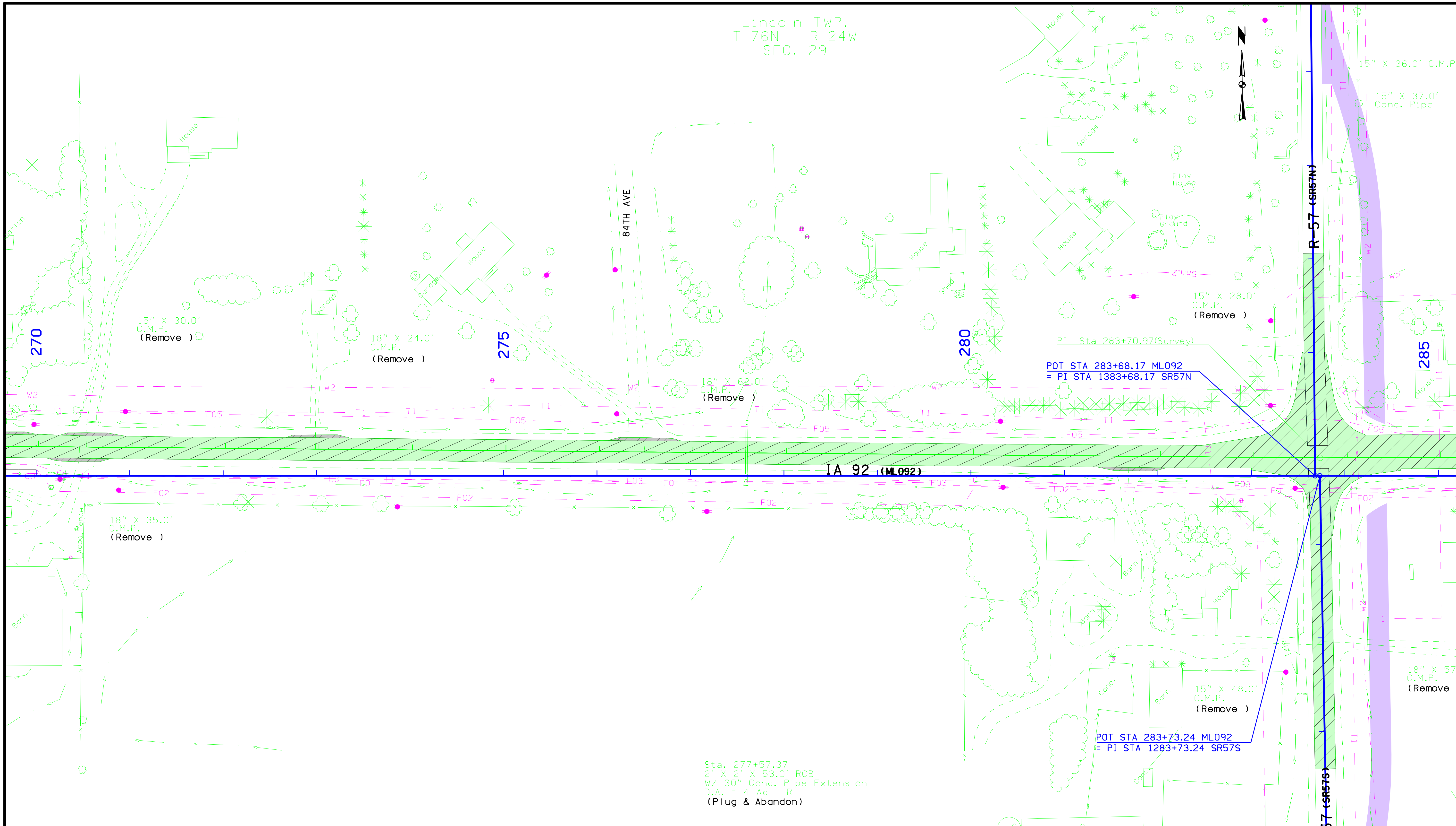
- PCC Pavement Removal
- HMA Fillets
- Paved Entrance Removal
- Sidewalk Removal
- Detour Pavement Removal

NOTE:
Removal Detail Sheets are for general removal details only
Refer also to Tabulations and Staging Detail Sheets elsewhere in these plans.

0 FEET 50

Removal Details Sheet 1 of 17

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER U.4



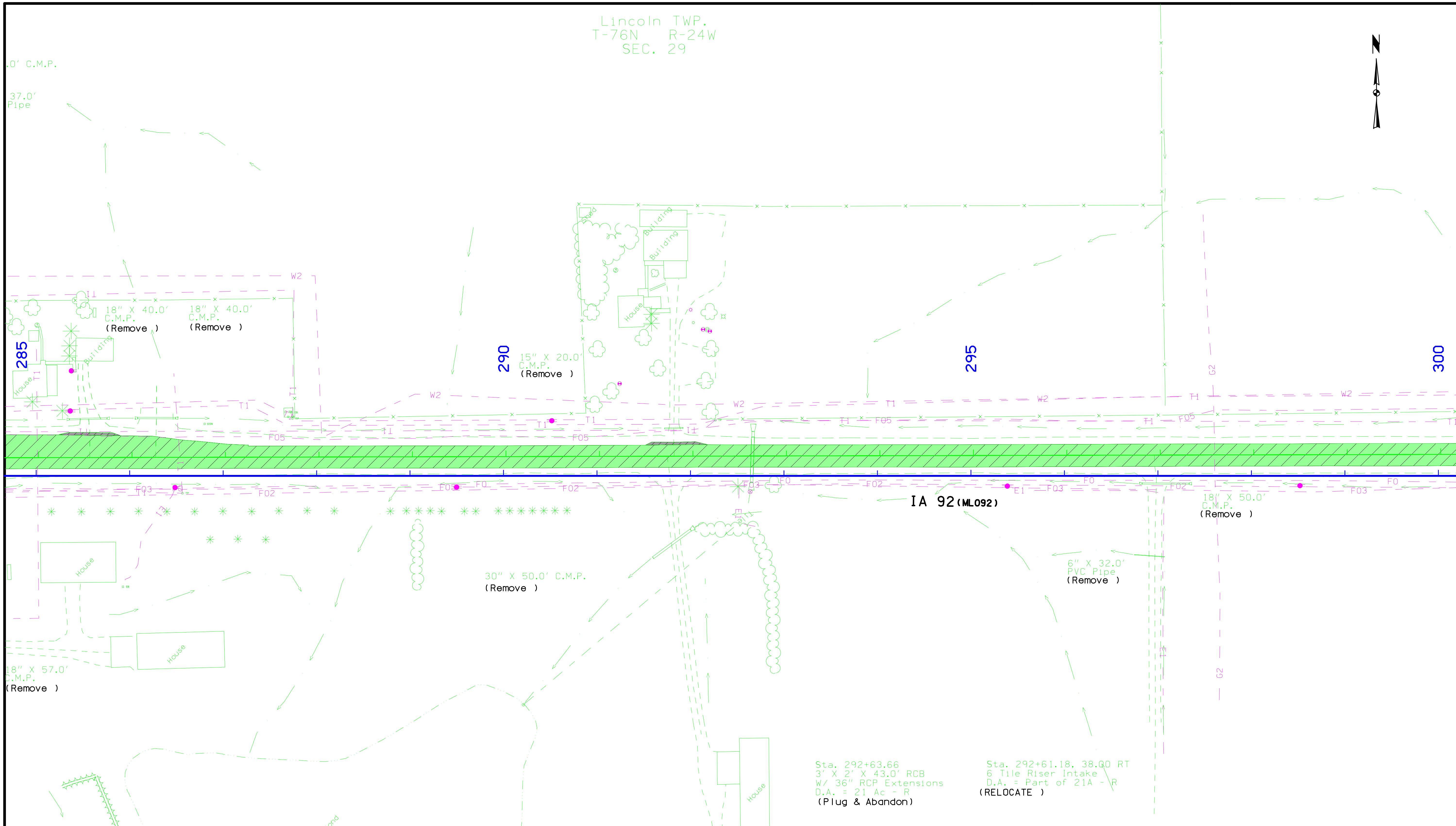
PCC Pavement Removal
HMA Fillets
Paved Entrance Removal
Sidewalk Removal
Detour Pavement Removal

NOTE:
Removal Detail Sheets are for general removal details only
Refer also to Tabulations and Staging Detail Sheets elsewhere in these plans.

0 FEET 50

Removal Details
Sheet
2 of 17

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER U.5



PCC Pavement Removal
HMA Fillets
Paved Entrance Removal
Sidewalk Removal
Detour Pavement Removal

NOTE:
Removal Detail Sheets are for general removal details only
Refer also to Tabulations and Staging Detail Sheets elsewhere in these plans.

Removal Details Sheet
3 of 17

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER U.6

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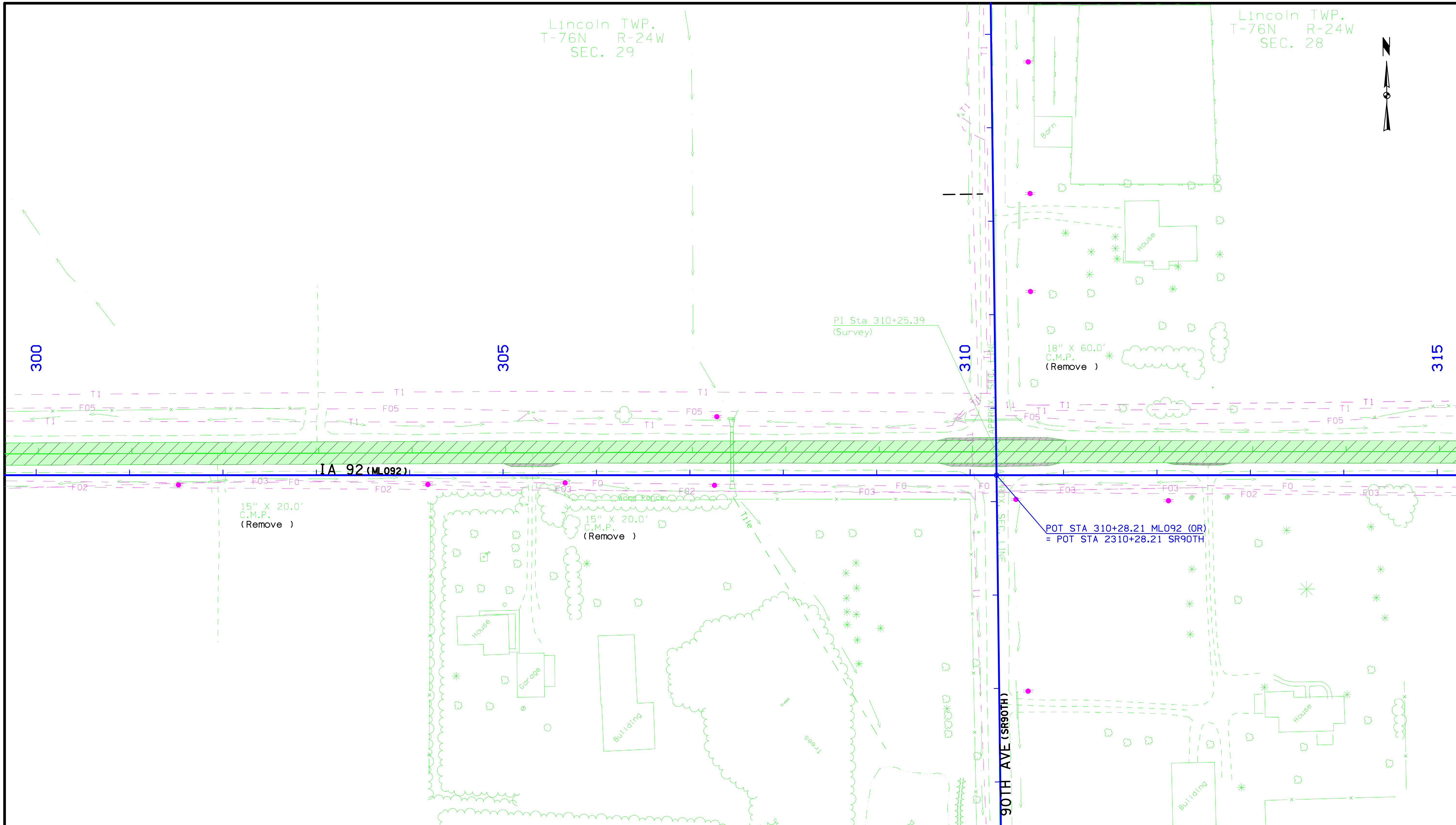
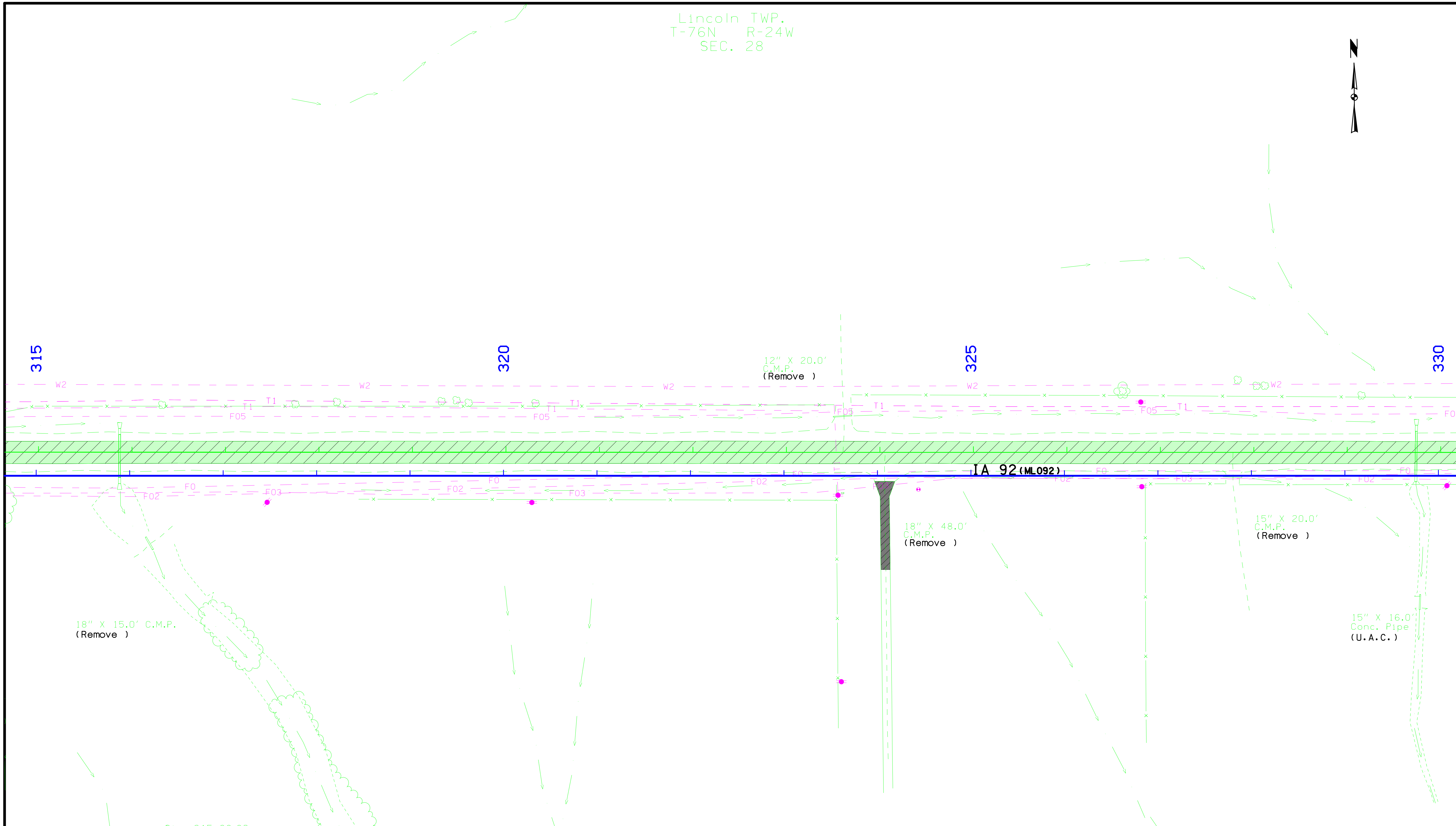


- PCC Pavement Removal
- HMA Fillets
- Paved Entrance Removal
- Sidewalk Removal
- Detour Pavement Removal

NOTE:
Removal Detail Sheets are for general removal details only
Refer also to Tabulations and Staging Detail Sheets elsewhere in these plans.

Removal Details Sheet
4 of 17

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER U.7



- PCC Pavement Removal
- HMA Fillets
- Paved Entrance Removal
- Sidewalk Removal
- Detour Pavement Removal

NOTE:
Removal Detail Sheets are for general removal details only
Refer also to Tabulations and Staging Detail Sheets elsewhere in these plans.

0 FEET 50

Removal Details Sheet
5 of 17

ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER U.8

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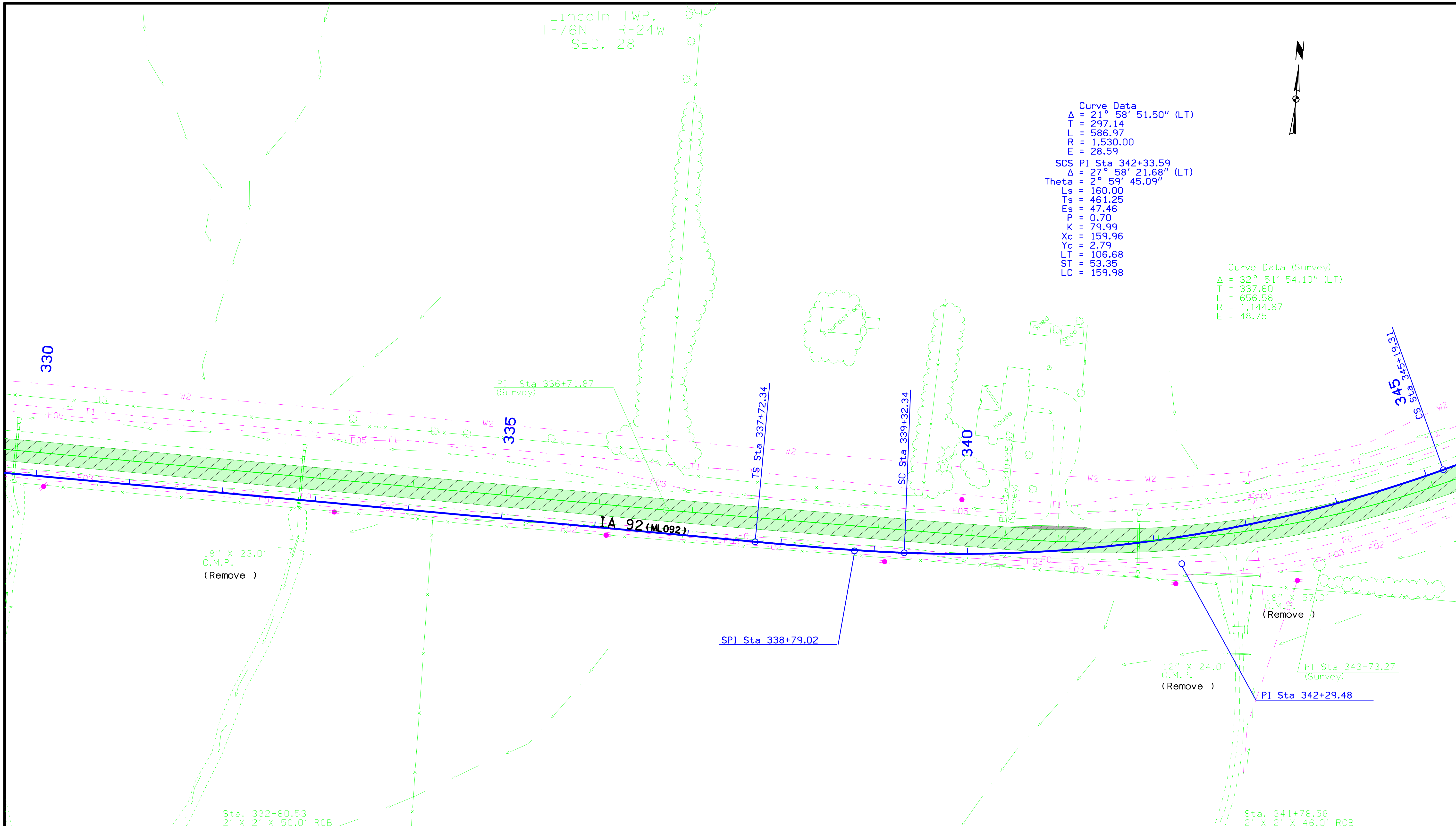

PCC Pavement Removal
HMA Fillets
Paved Entrance Removal
Sidewalk Removal
Detour Pavement Removal

NOTE:
Removal Detail Sheets are for general removal details only
Refer also to Tabulations and Staging Detail Sheets elsewhere in these plans.

Removal Details Sheet
6 of 17

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER U.9

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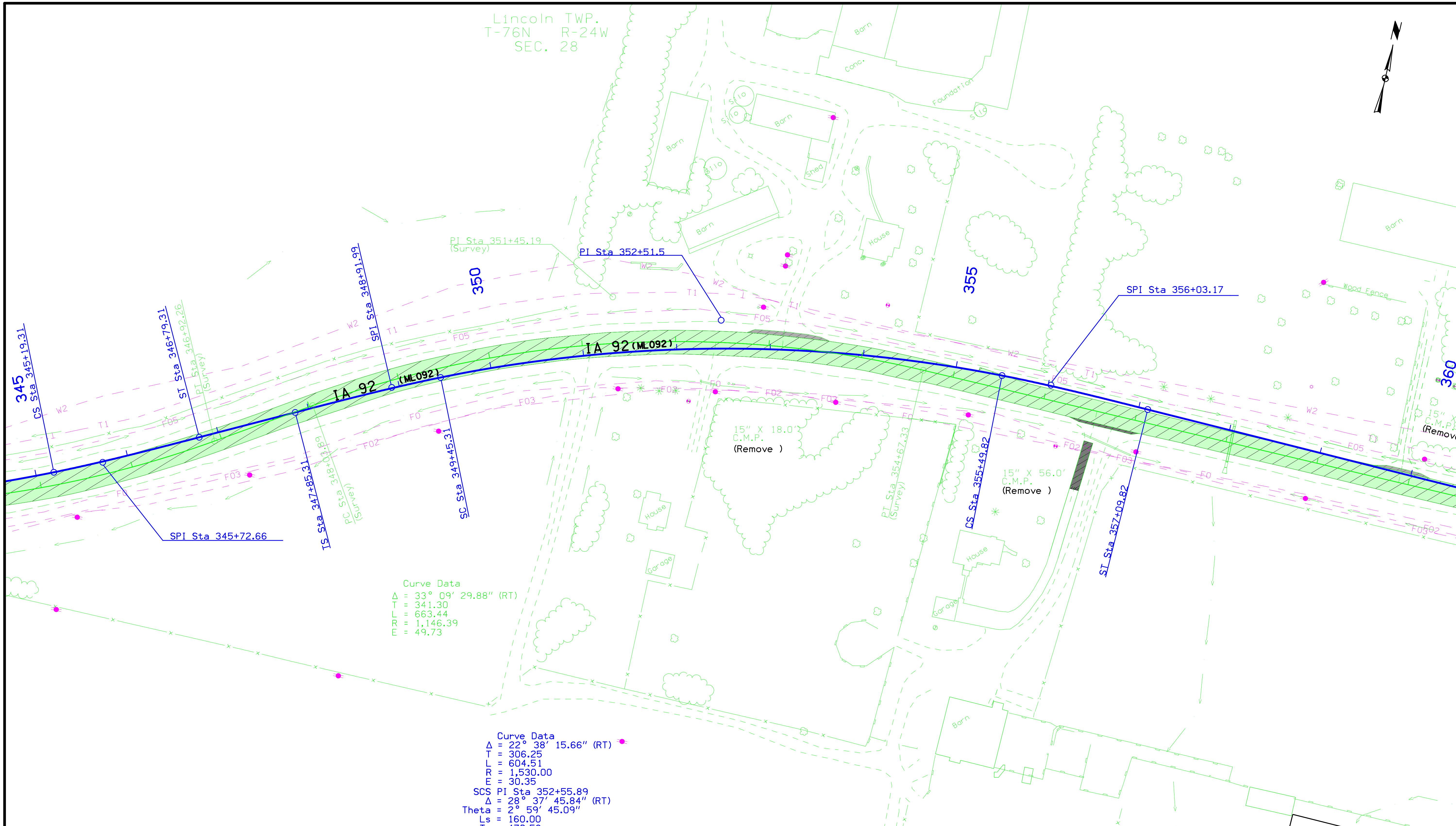

PCC Pavement Removal
HMA Fillets
Paved Entrance Removal
Sidewalk Removal
Detour Pavement Removal

NOTE:
Removal Detail Sheets are for general removal details only
Refer also to Tabulations and Staging Detail Sheets elsewhere in these plans.

Removal Details Sheet 7 of 17

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER U.10

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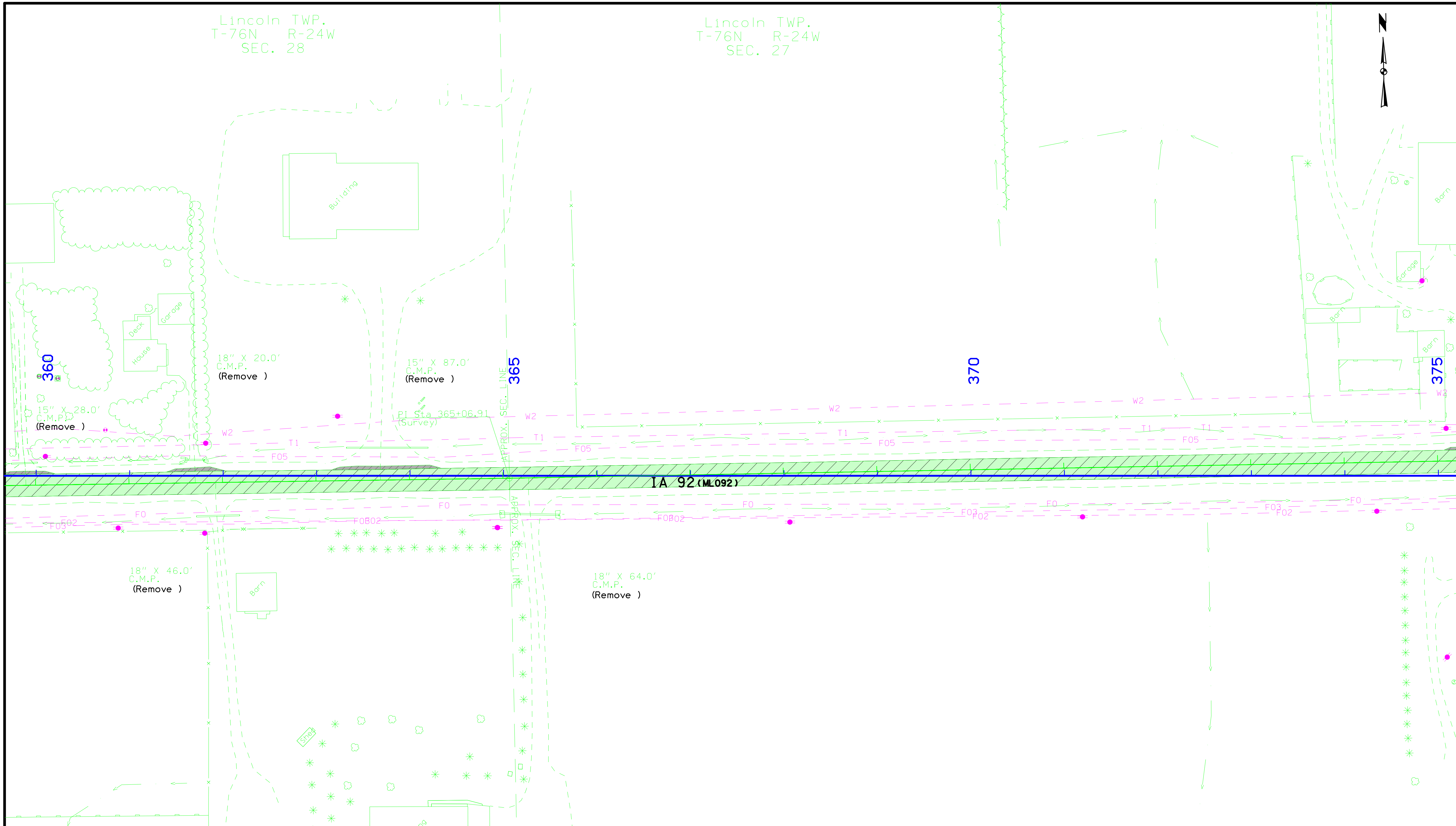

PCC Pavement Removal	
HMA Fillets	
Paved Entrance Removal	
Sidewalk Removal	
Detour Pavement Removal	

NOTE:
Removal Detail Sheets are for general removal details only
Refer also to Tabulations and Staging Detail Sheets elsewhere in these plans.

0 FEET 50

Removal Details Sheet
8 of 17

ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER U.11

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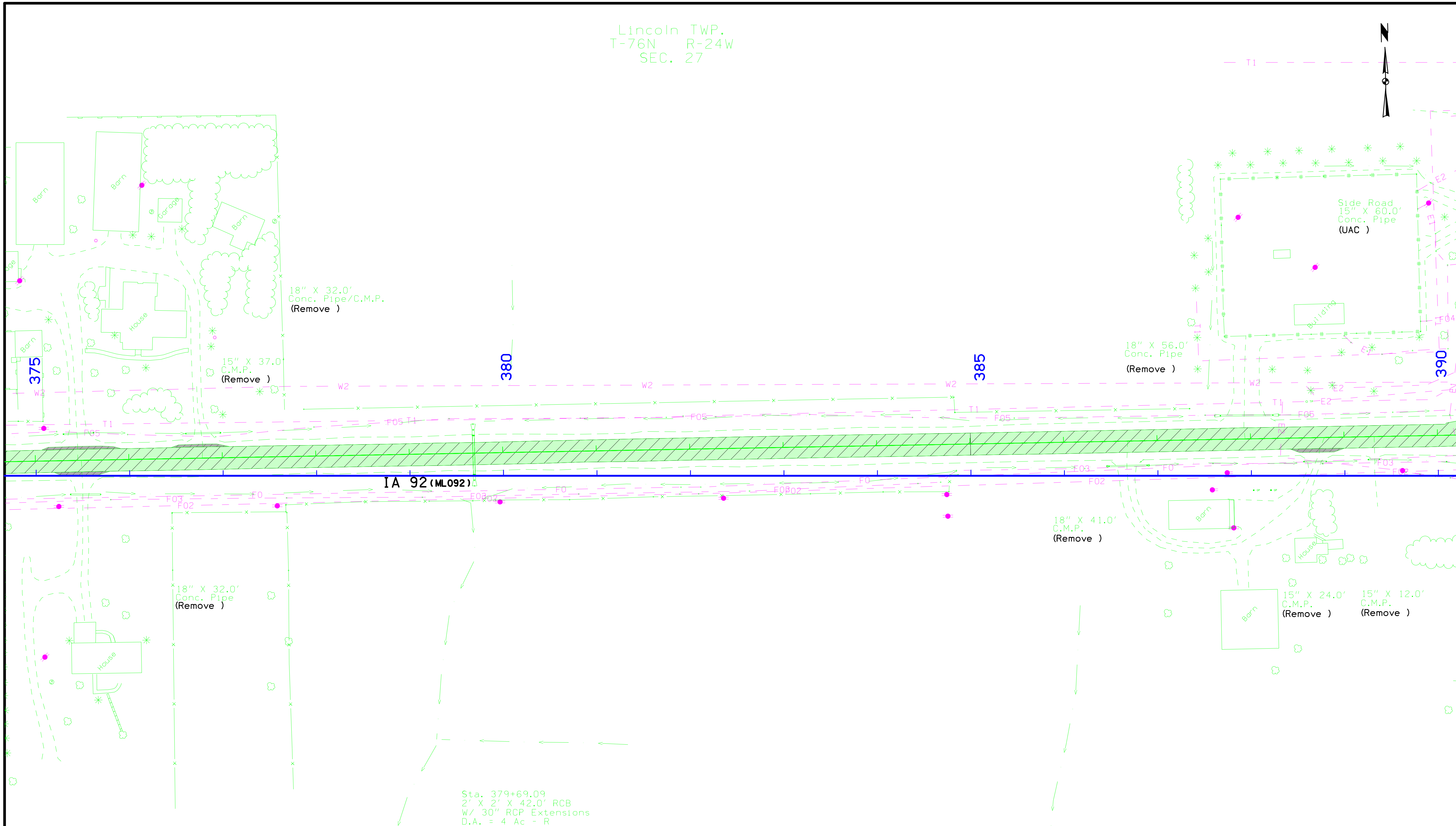
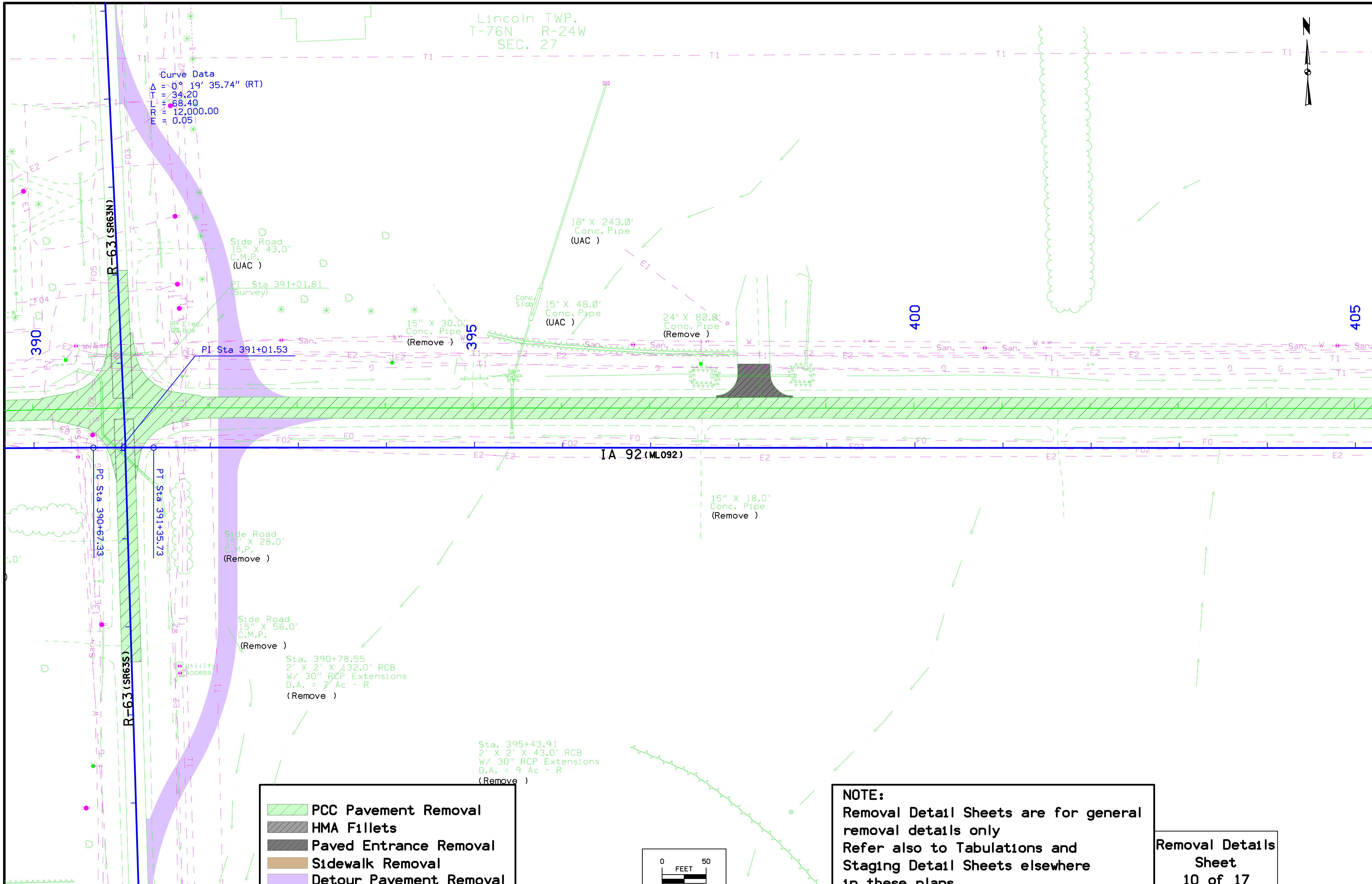


Legend
PCC Pavement Removal
HMA Fillets
Paved Entrance Removal
Sidewalk Removal
Detour Pavement Removal

NOTE:
Removal Detail Sheets are for general removal details only
Refer also to Tabulations and Staging Detail Sheets elsewhere in these plans.

Removal Details Sheet
9 of 17



NOTE:
Removal Detail Sheets are for general removal details only
Refer also to Tabulations and Staging Detail Sheets elsewhere in these plans.

Removal Details Sheet
10 of 17

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER U.13

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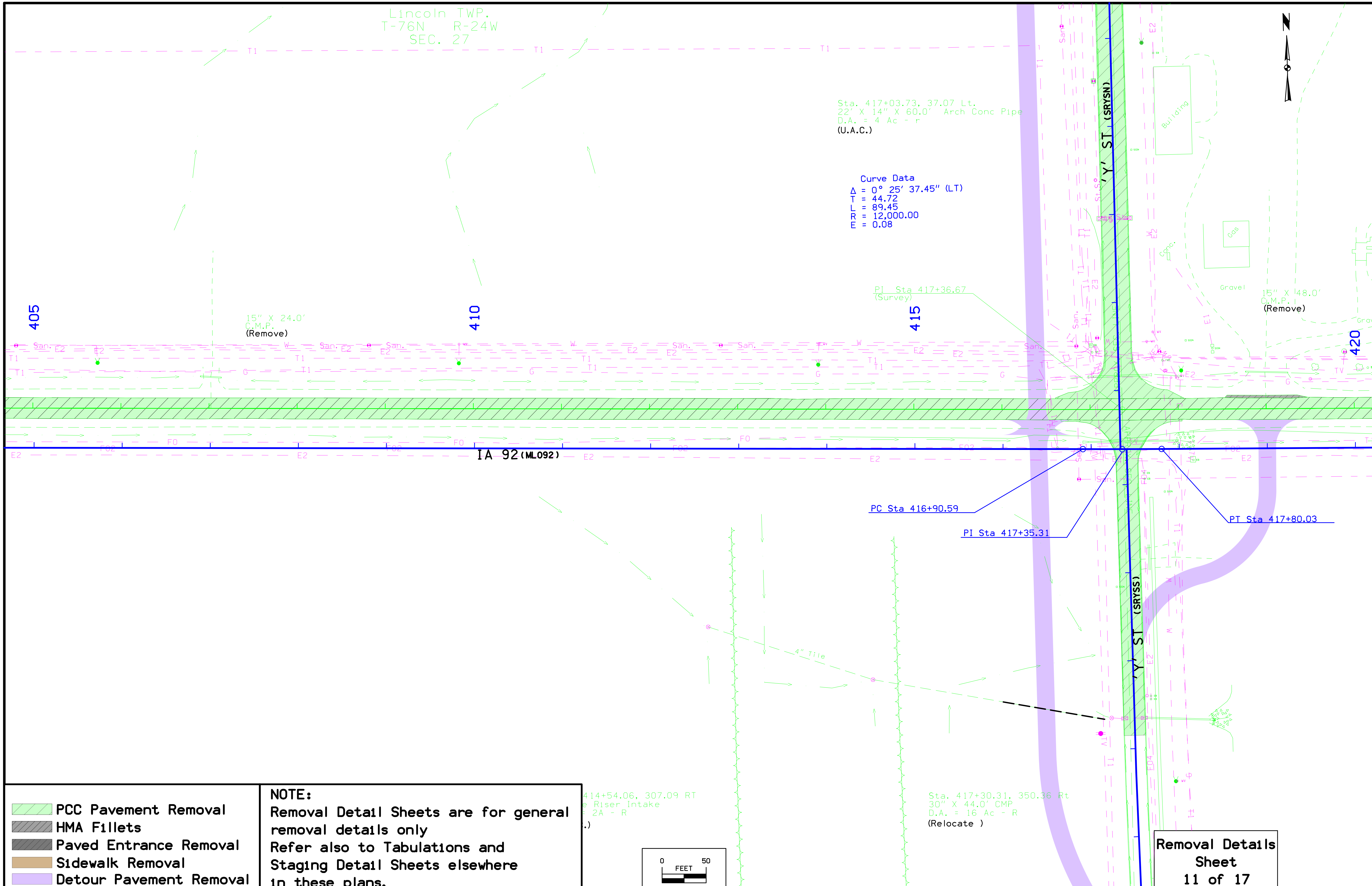
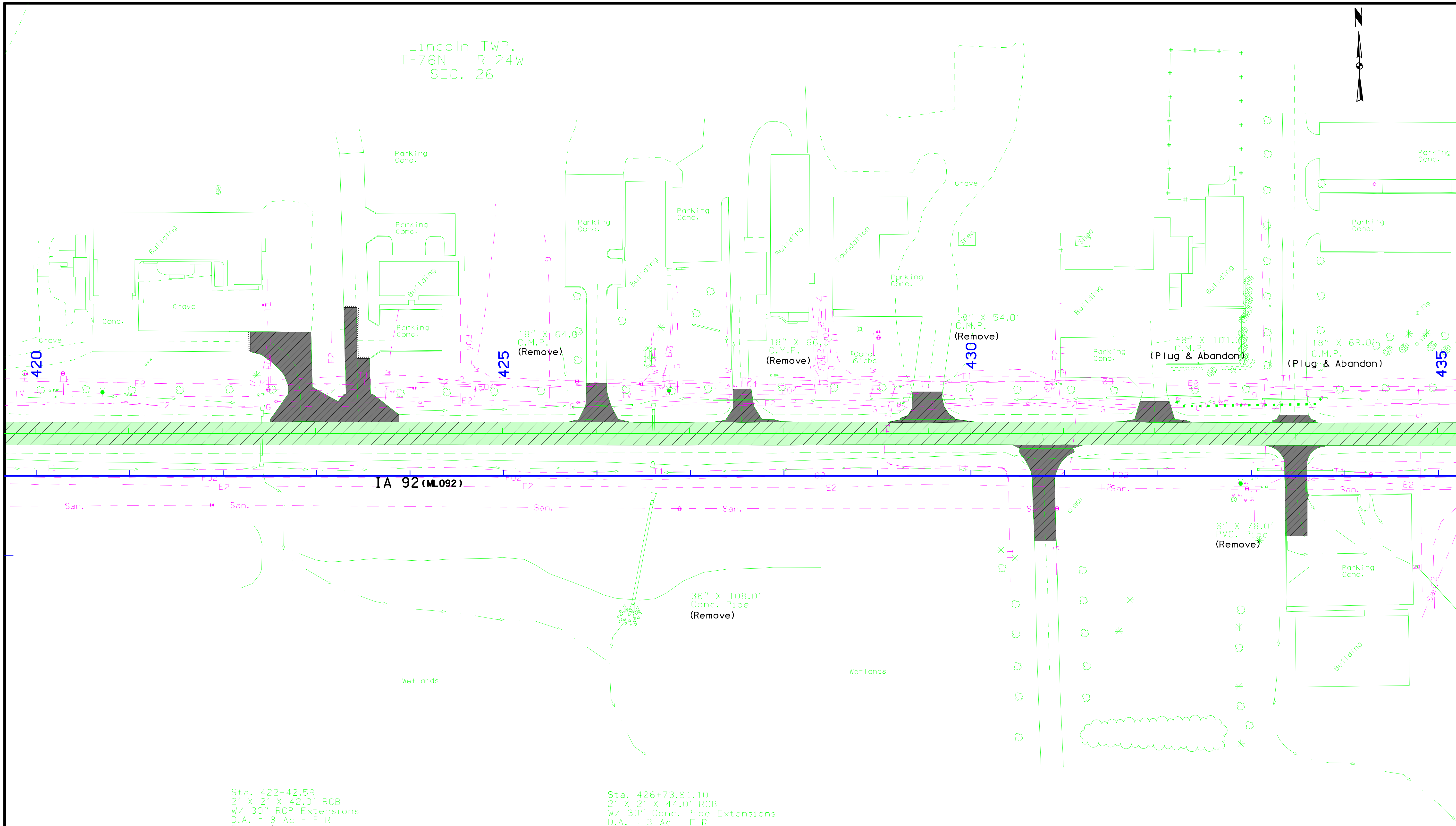


PCC Pavement Removal
HMA Fillets
Paved Entrance Removal
Sidewalk Removal
Detour Pavement Removal

NOTE:
Removal Detail Sheets are for general removal details only
Refer also to Tabulations and Staging Detail Sheets elsewhere in these plans.

Removal Details
Sheet
11 of 17



PCC Pavement Removal
HMA Fillets
Paved Entrance Removal
Sidewalk Removal
Detour Pavement Removal

NOTE:
Removal Detail Sheets are for general removal details only
Refer also to Tabulations and Staging Detail Sheets elsewhere in these plans.

0 FEET 50

Removal Details Sheet
12 of 17

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER U.15

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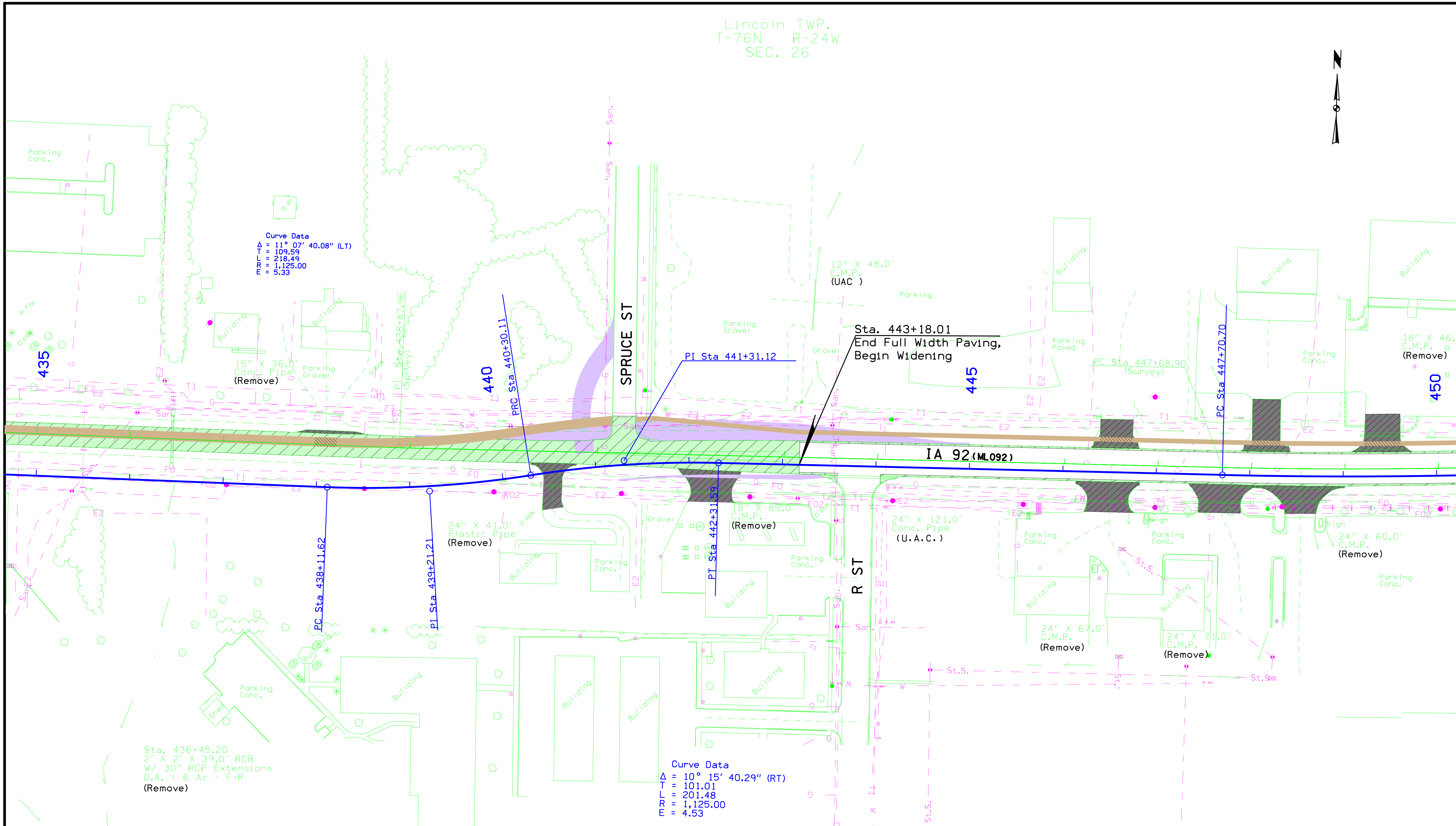

- PCC Pavement Removal
- HMA Fillets
- Paved Entrance Removal
- Sidewalk Removal
- Detour Pavement Removal

NOTE:
Removal Detail Sheets are for general removal details only
Refer also to Tabulations and Staging Detail Sheets elsewhere in these plans.

Removal Details Sheet
13 of 17

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER U.16

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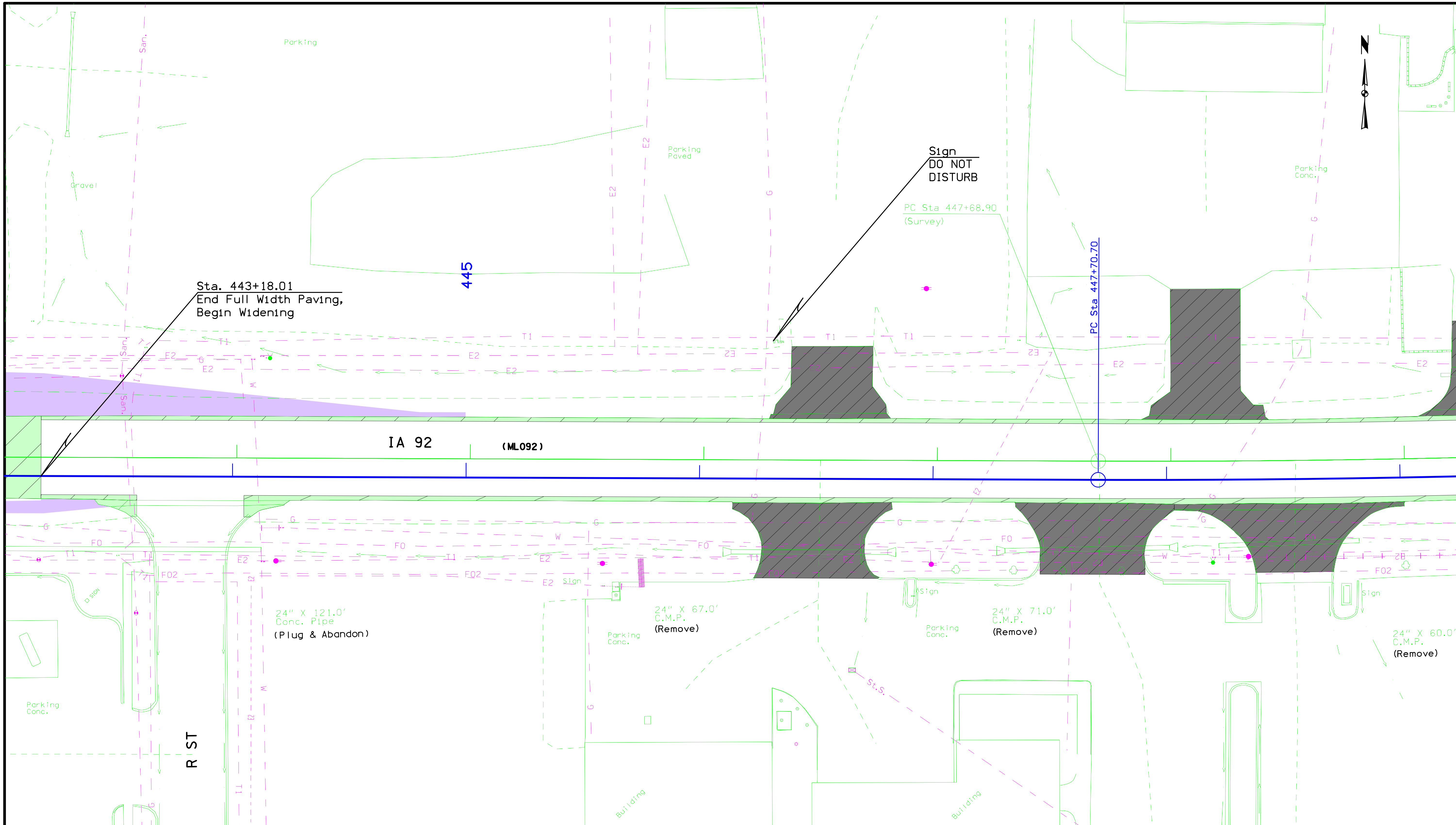

PCC Pavement Removal
HMA Fillets
Paved Entrance Removal
Sidewalk Removal
Detour Pavement Removal

NOTE:
Removal Detail Sheets are for general removal details only
Refer also to Tabulations and Staging Detail Sheets elsewhere in these plans.

0 FEET 20

Removal Details
Sheet
14 of 17

ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER U.17

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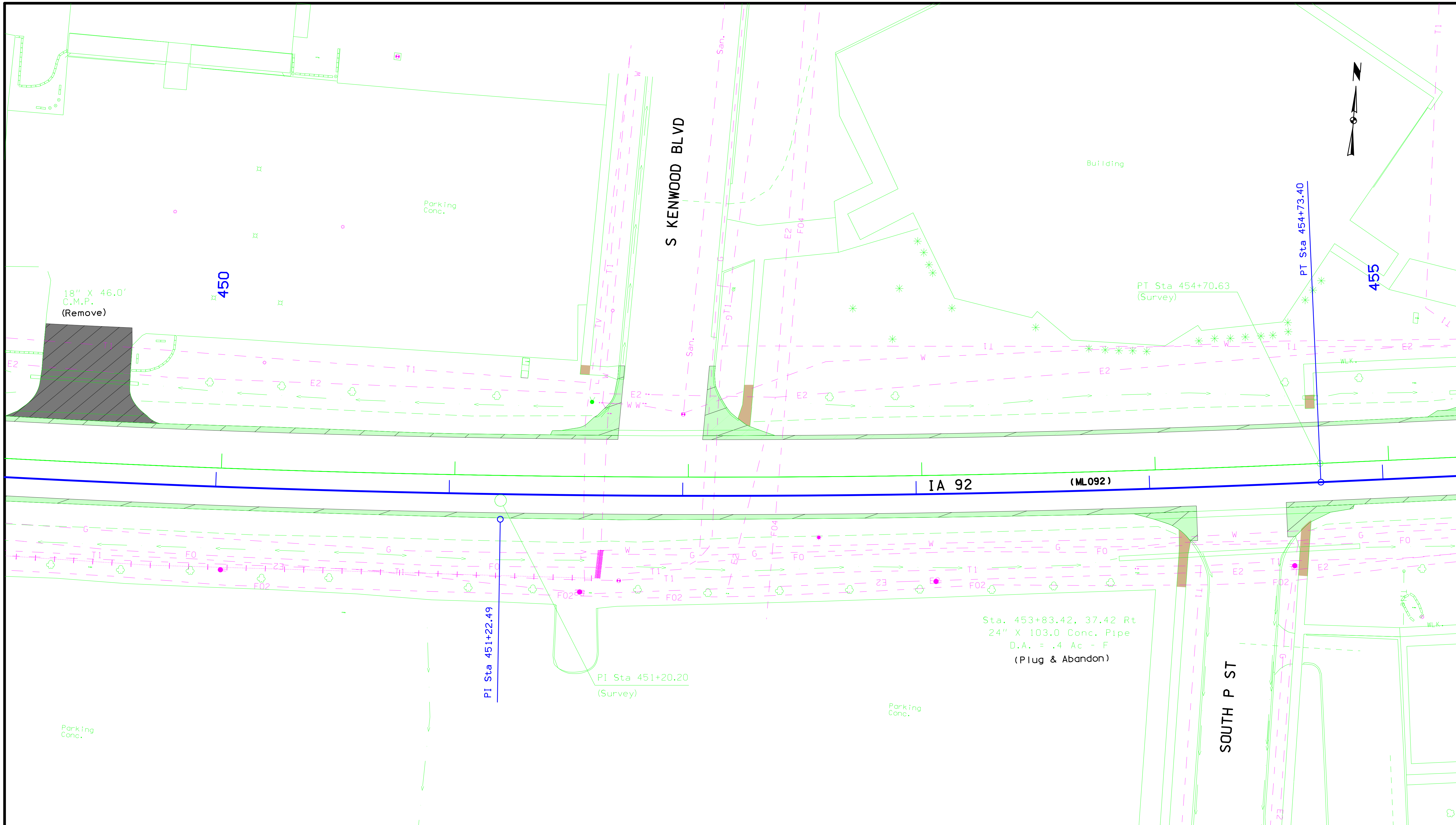
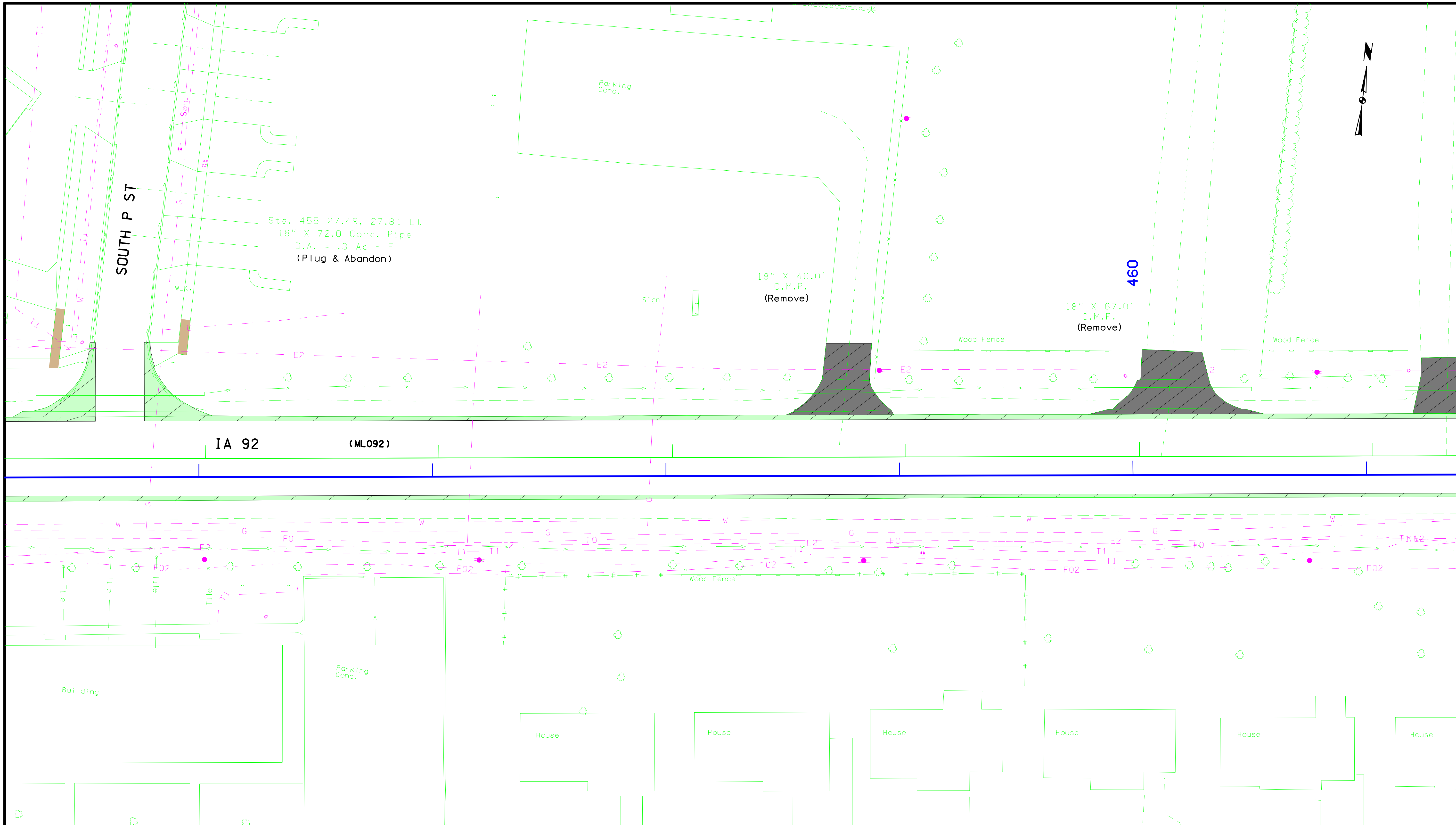


PCC Pavement Removal
HMA Fillets
Paved Entrance Removal
Sidewalk Removal
Detour Pavement Removal

NOTE:
Removal Detail Sheets are for general removal details only
Refer also to Tabulations and Staging Detail Sheets elsewhere in these plans.

Removal Details Sheet
15 of 17

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER U.18



PCC Pavement Removal
HMA Fillets
Paved Entrance Removal
Sidewalk Removal
Detour Pavement Removal

NOTE:
Removal Detail Sheets are for general removal details only
Refer also to Tabulations and Staging Detail Sheets elsewhere in these plans.

Removal Details Sheet
16 of 17

ENGLISH	IOWA DOT	DESIGN TEAM	Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER	U.19

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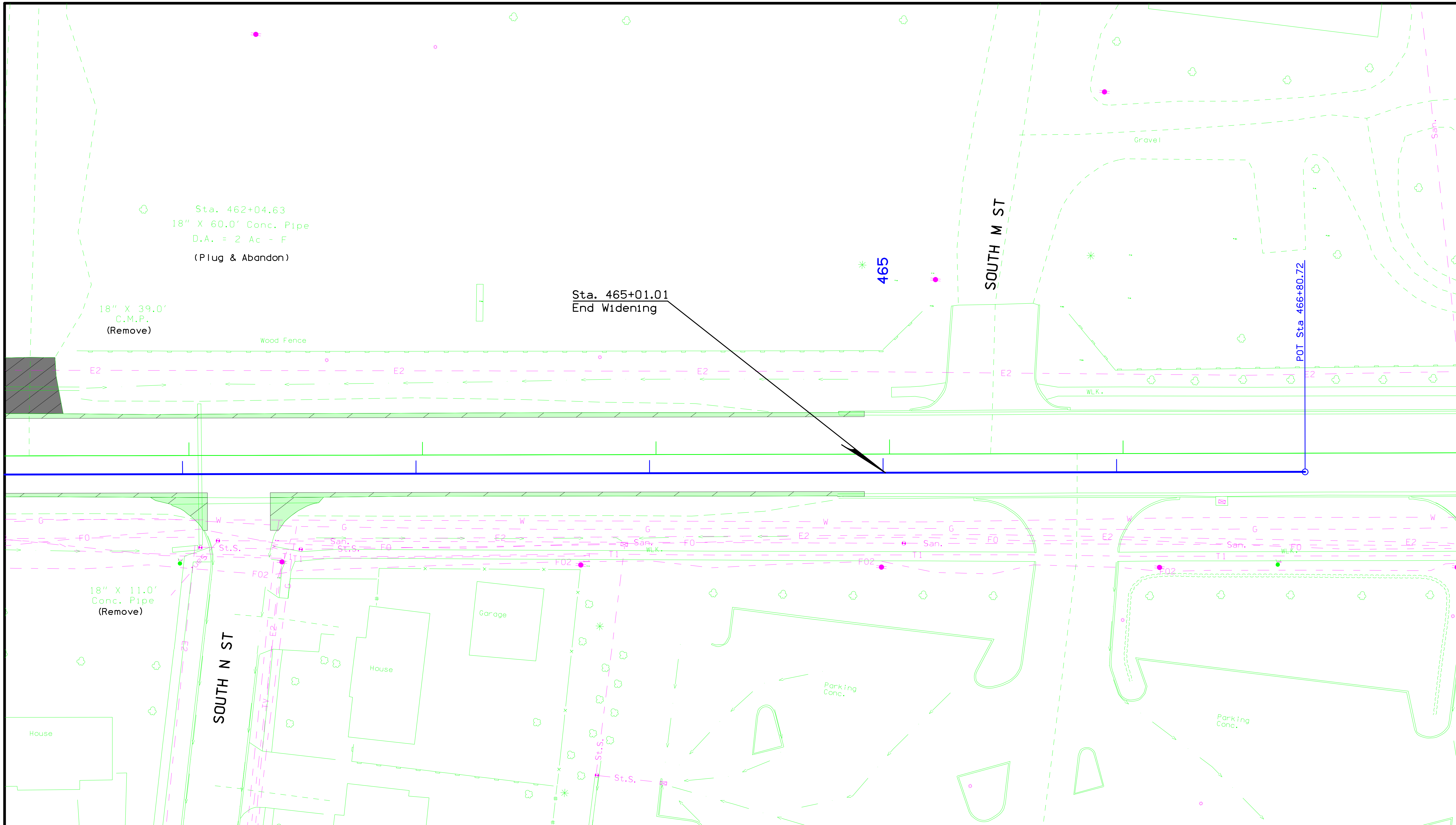

- PCC Pavement Removal
- HMA Fillets
- Paved Entrance Removal
- Sidewalk Removal
- Detour Pavement Removal

NOTE:
Removal Detail Sheets are for general removal details only
Refer also to Tabulations and Staging Detail Sheets elsewhere in these plans.

0 FEET 20

Removal Details Sheet
17 of 17

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER U.20

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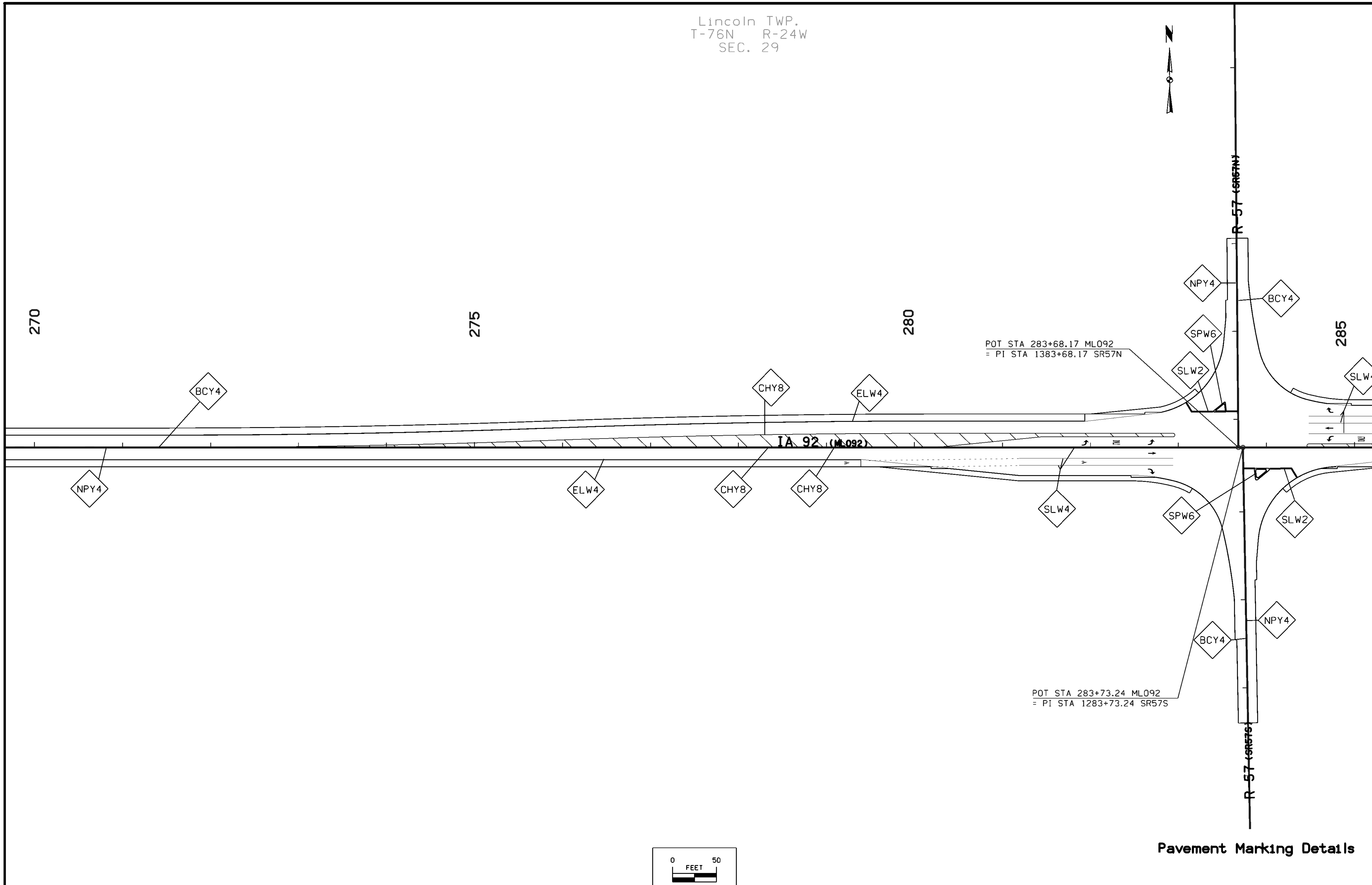

Pavement Marking Details

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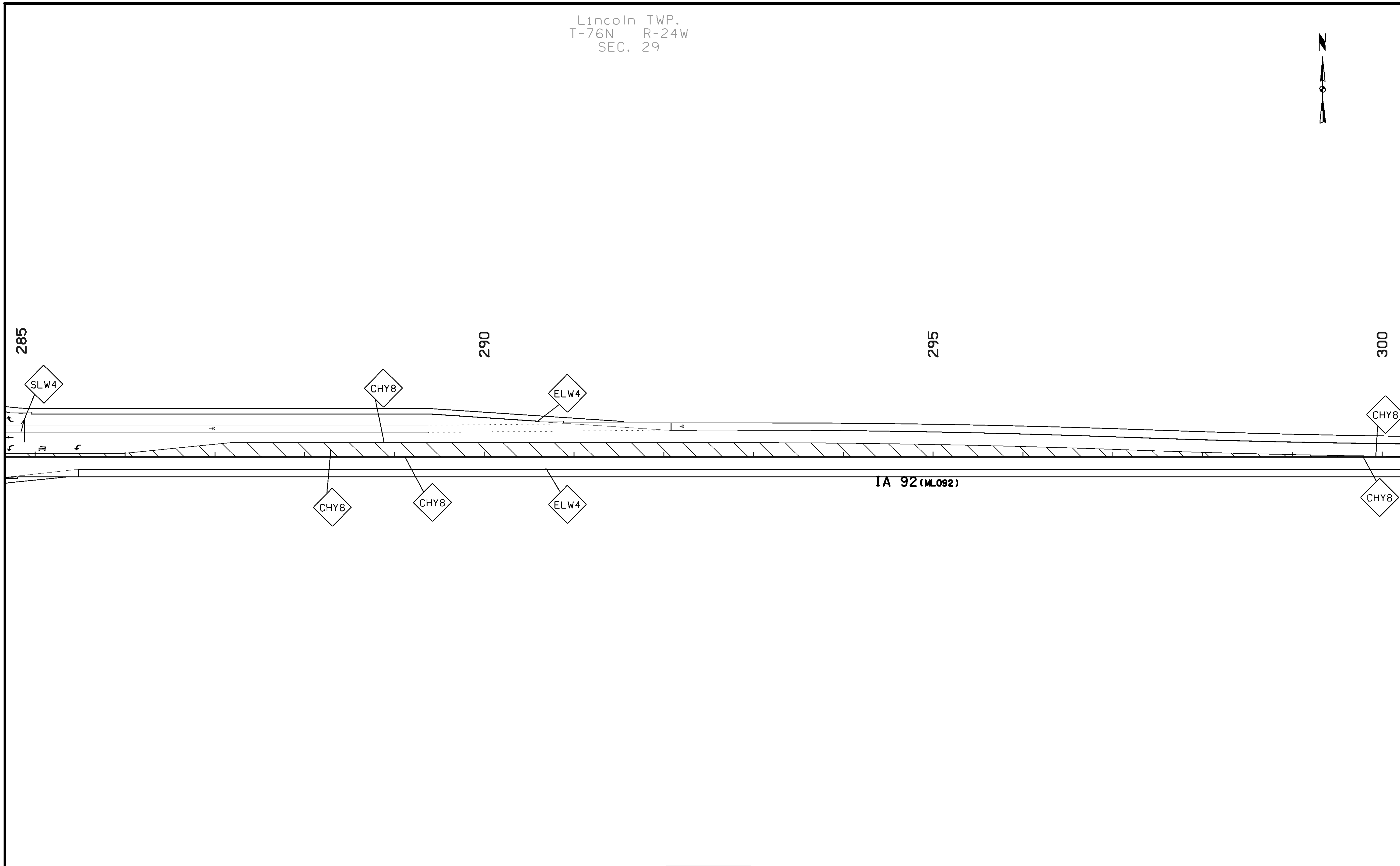
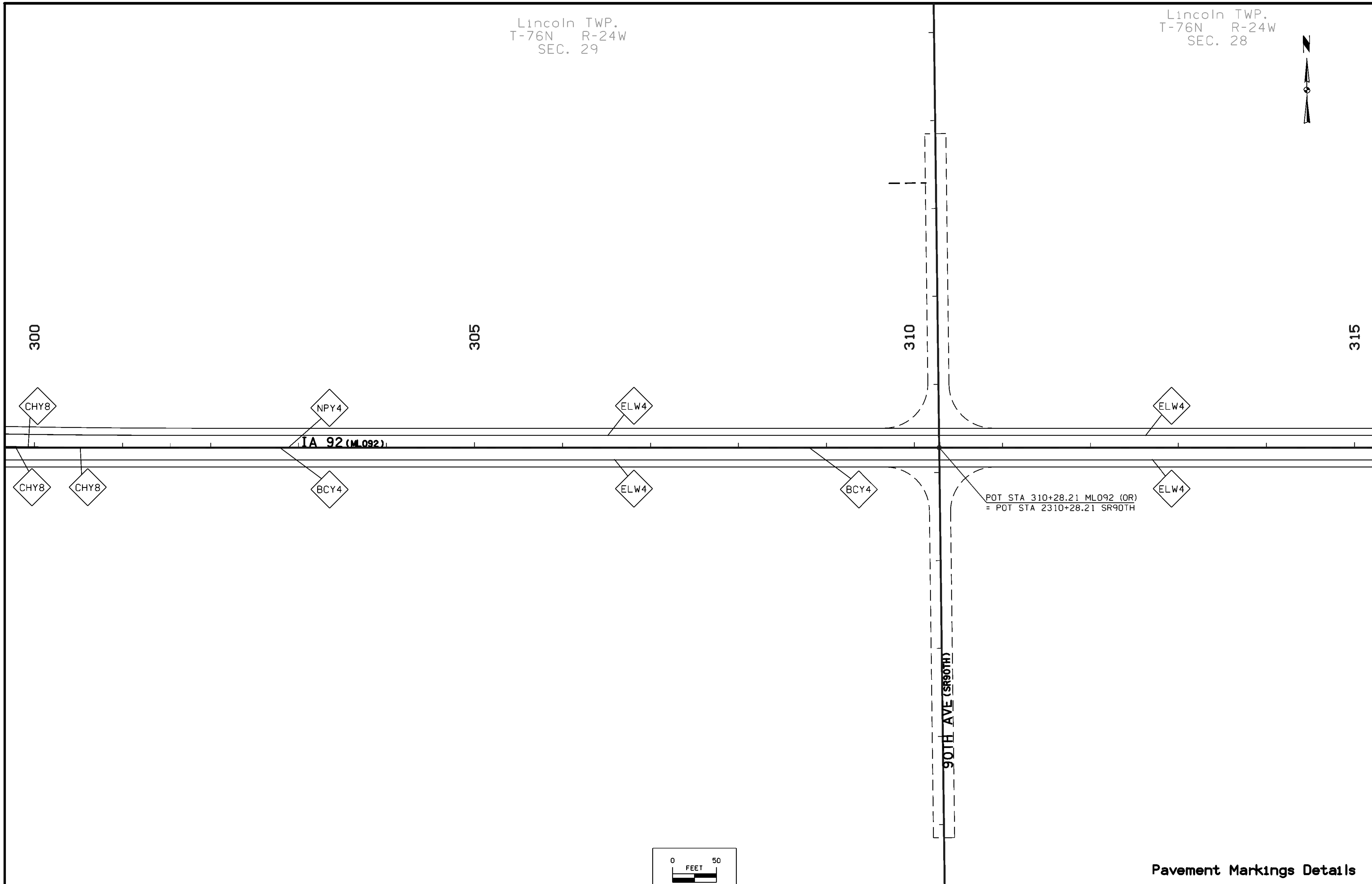


Pavement Marking Details

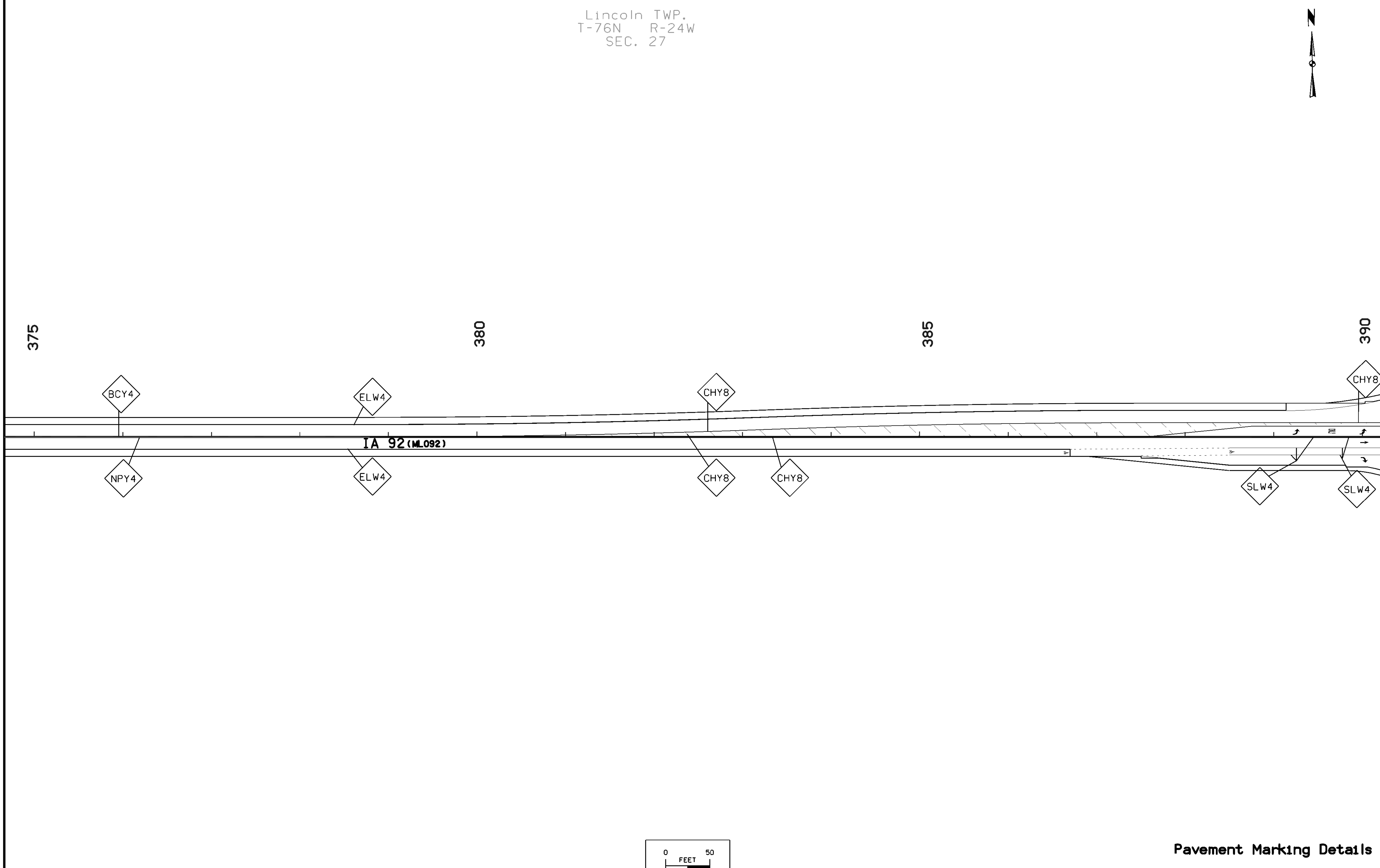
ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER U.22



Pavement Markings Details

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER U.23

Lincoln TWP.
T-76N R-24W
SEC. 27



Pavement Marking Details

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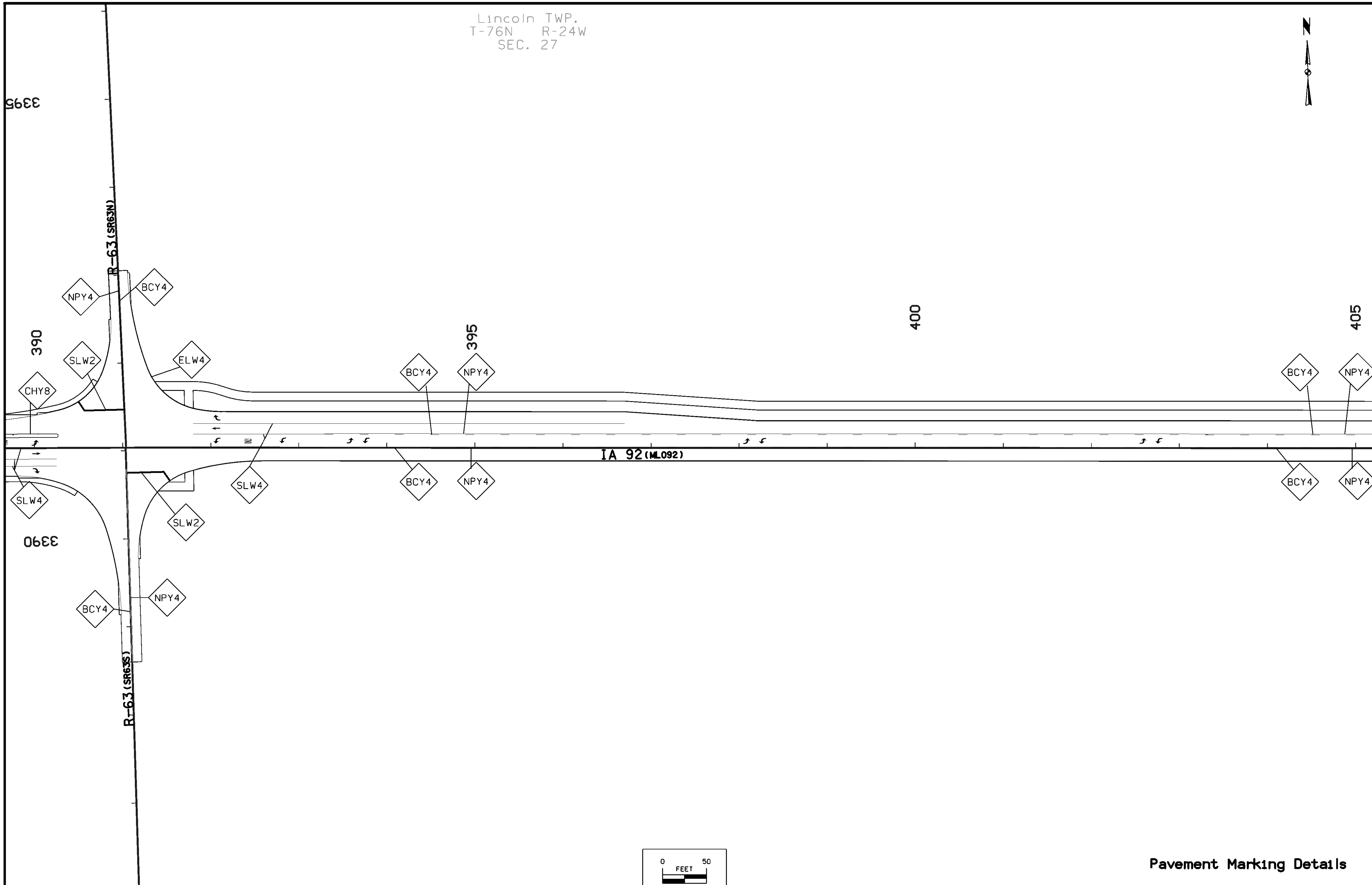
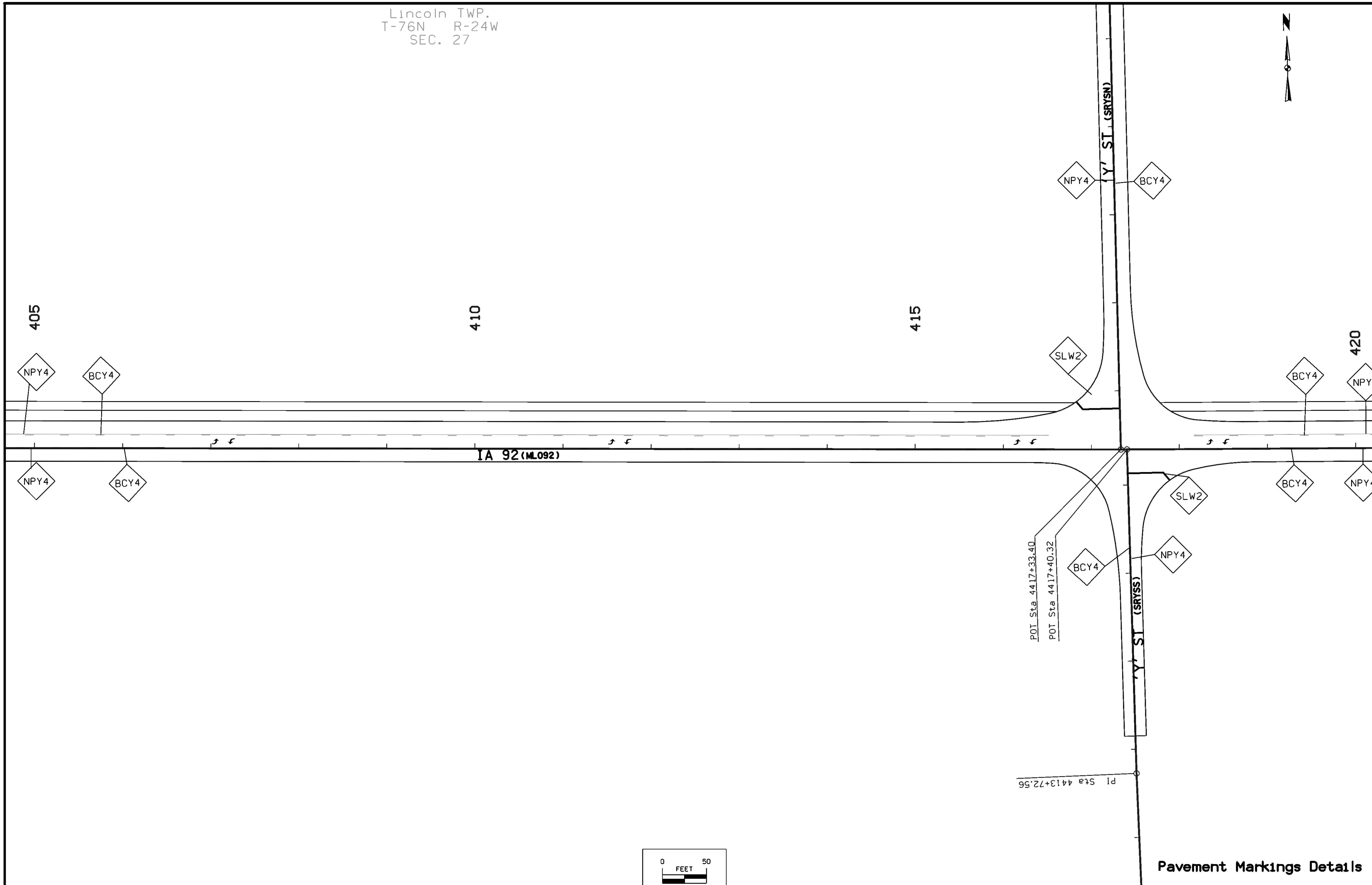


Pavement Marking Details



Pavement Markings Details

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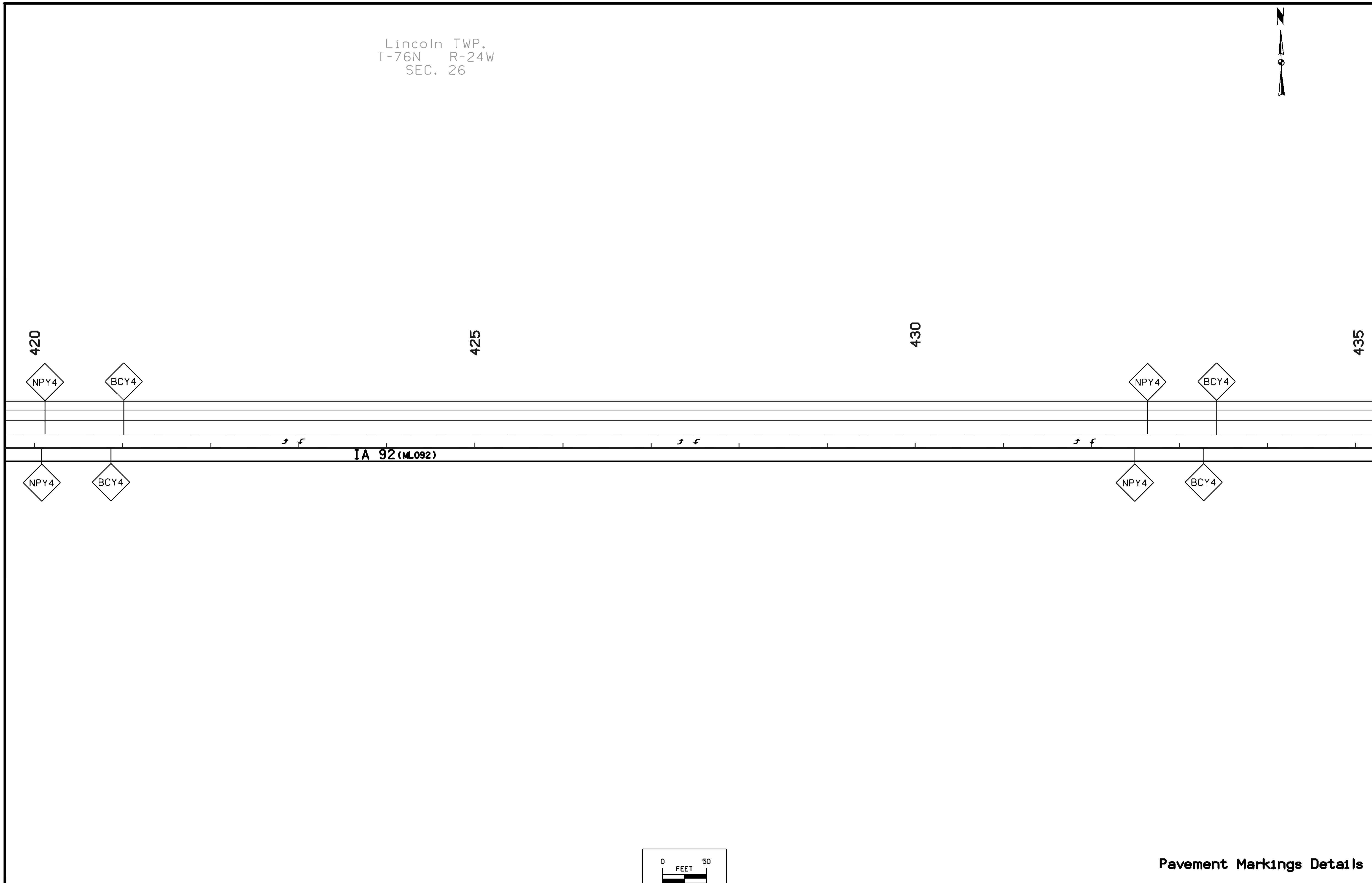
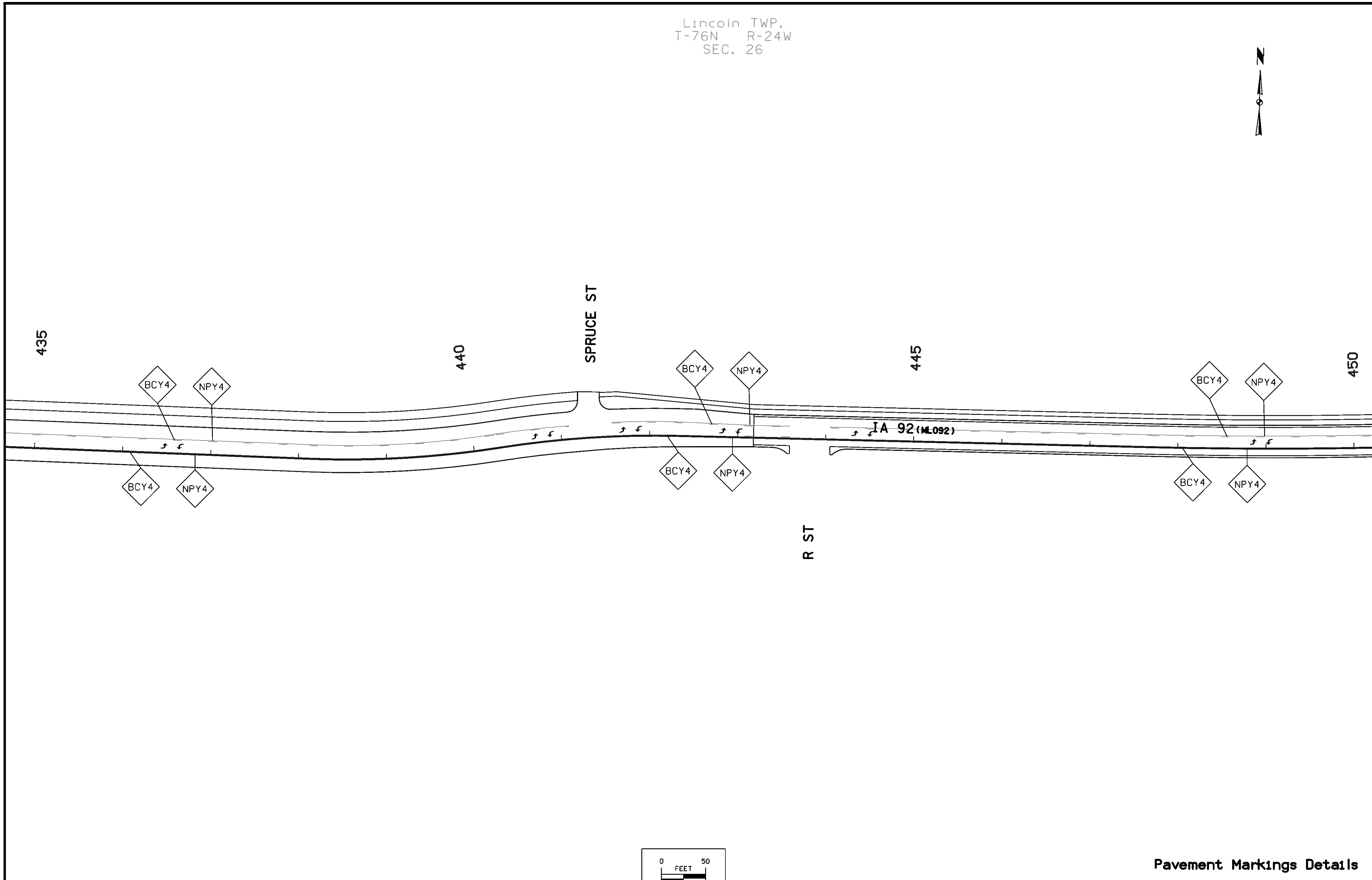


Pavement Markings Details

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER U.27



Pavement Markings Details

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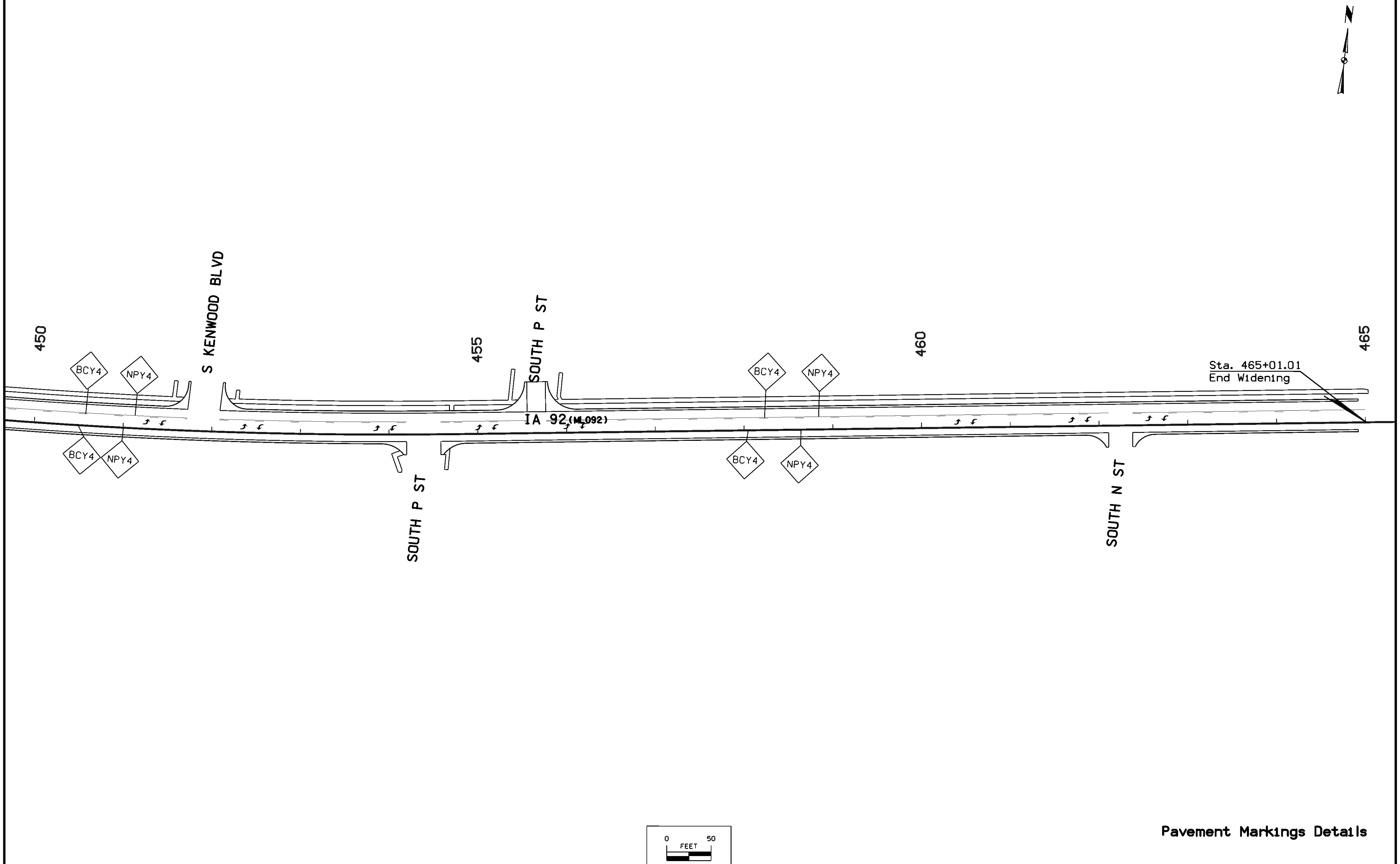

Pavement Markings Details

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER U.29

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LEGEND OF CROSS SECTION SHEETS (ROAD)

— — — — — —	Existing Ground Line
————	Proposed Template
————	Proposed Topsoil Placement
- - — - — - - —	Additional Topsoil Removal
————	Subrade Treatment
- - - - - - - - -	Granular Shoulder
————	Pavement
— — — — — —	Existing Pipe\RCB
————	Proposed Pipe\RCB
————	Proposed Dike
————	All Elements Associated with Proposed Entrances

LEGEND OF CROSS SECTION SHEETS (SOILS)

———TS———	Topsoil (Class 10)
———TS A———	Topsoil (Type A Disposal)
———TS B———	Topsoil (Type B Disposal)
———TS C———	Topsoil (Type C Disposal)
———CL 10———	Class 10 Materials
———SEL LO———	Select Loams And Clay-Loams
———SEL SA———	Select Sand
———UNS A———	Unsuitable Type A Disposal
———UNS B———	Unsuitable Type B Disposal
———UNS C———	Unsuitable Type C Disposal
———SHALE———	Shale
———WASTE———	Waste
———B&W LS———	Broken and Weathered Rock
———ROCK———	Solid Rock
——— BLDRS ———	Boulders

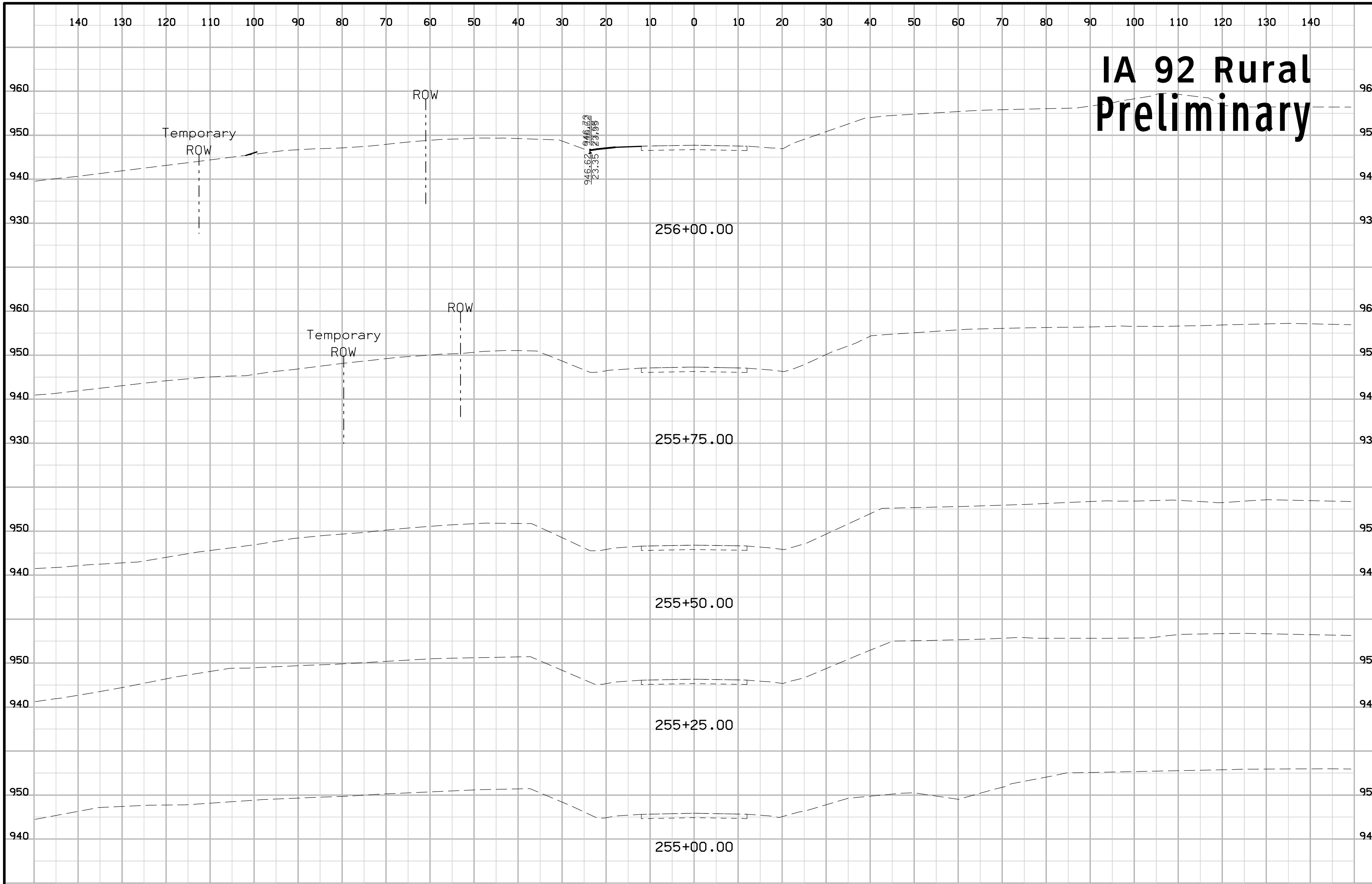
Note: All layer lines and descriptions identify layers above the line.

Note: Vertical or near vertical lines connecting soil layers at edges of cross sections are only for the purpose of calculating template quantities and do not depict soil stratification.

CROSS SECTION LEGEND AND SYMBOL INFORMATION SHEET

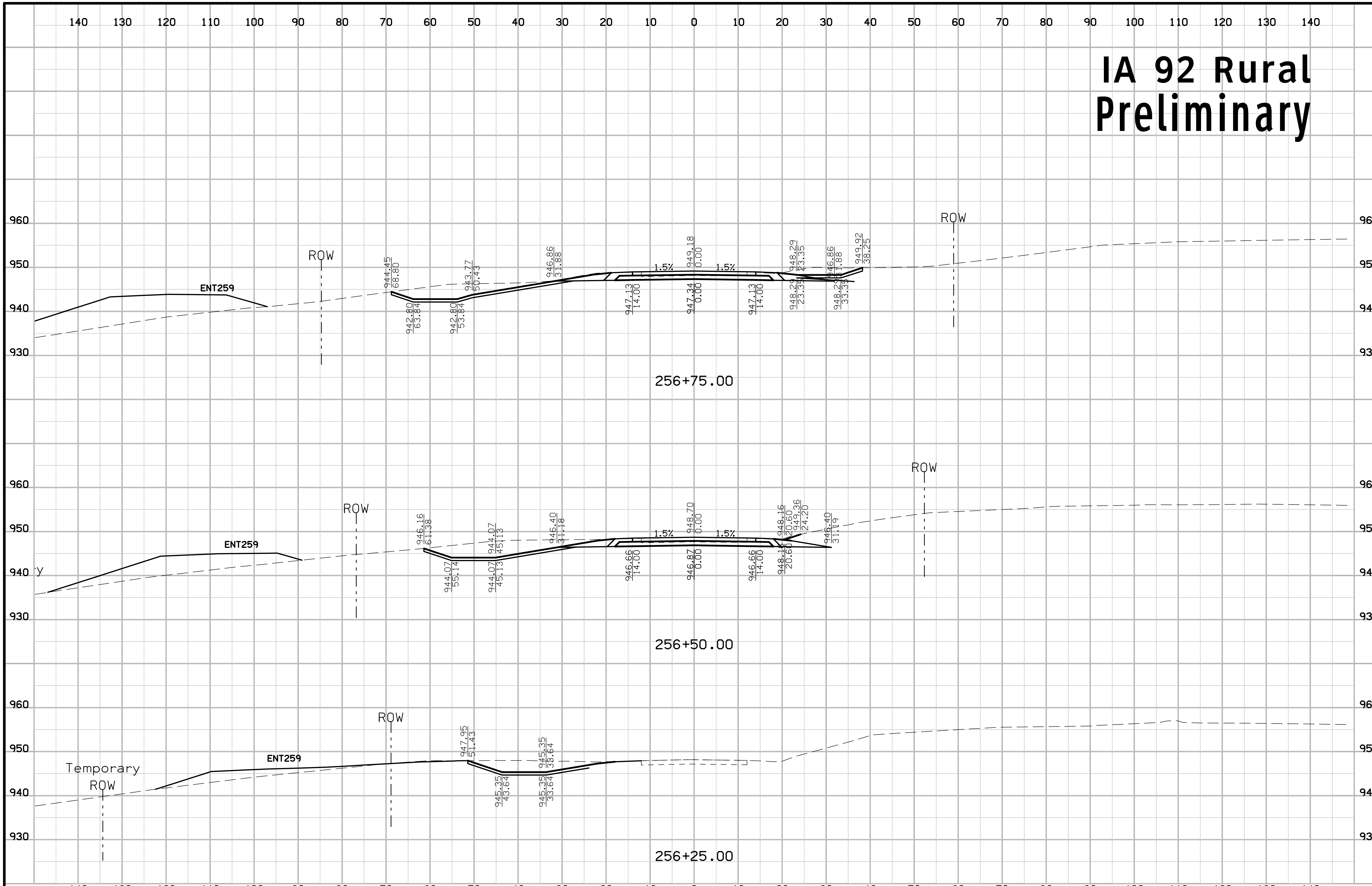
(COVERS SHEET SERIES W, X, Y, & Z)

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.1



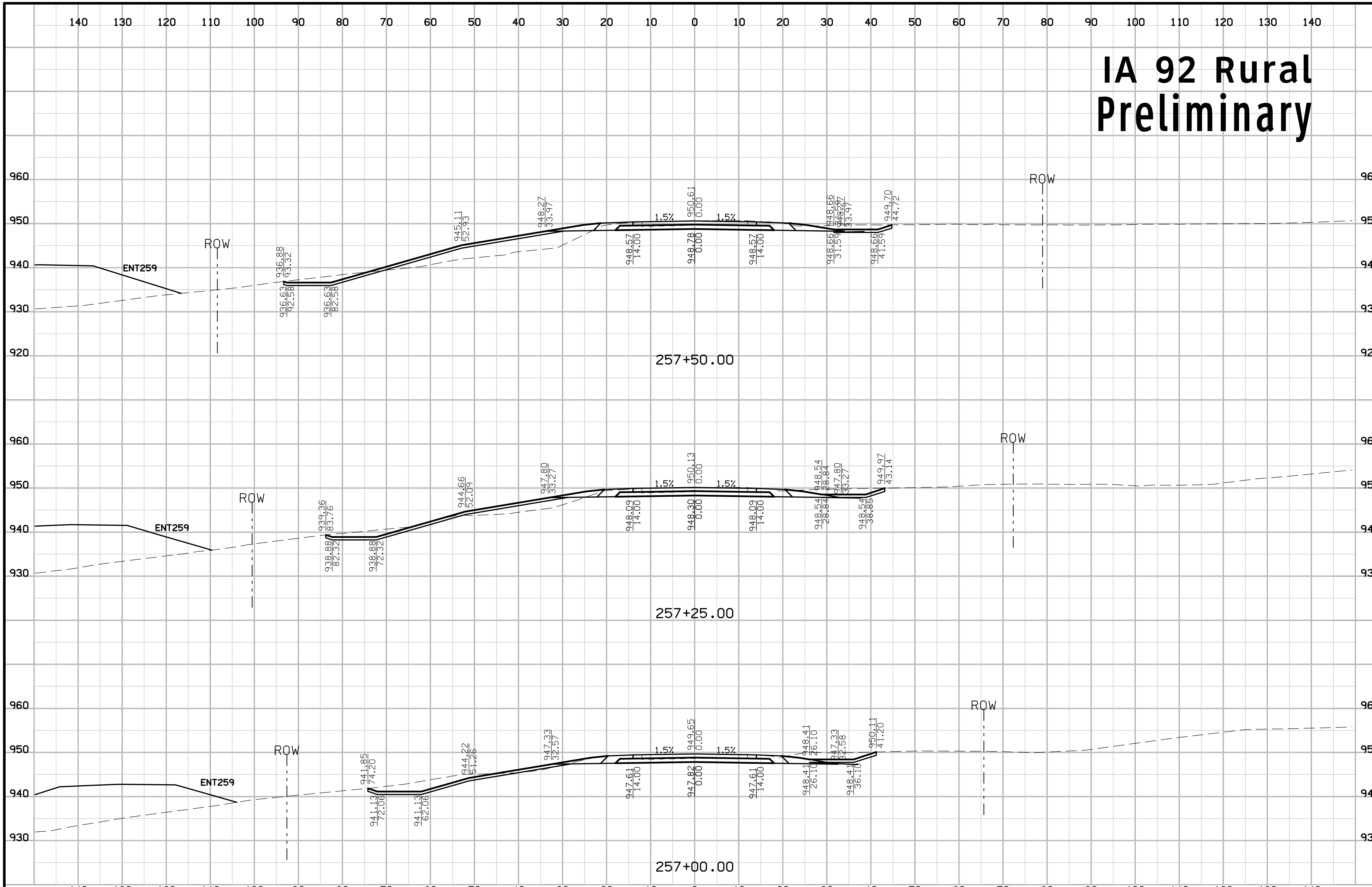
ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.2

IA 92 Rural
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER	W.3

IA 92 Rural
Preliminary



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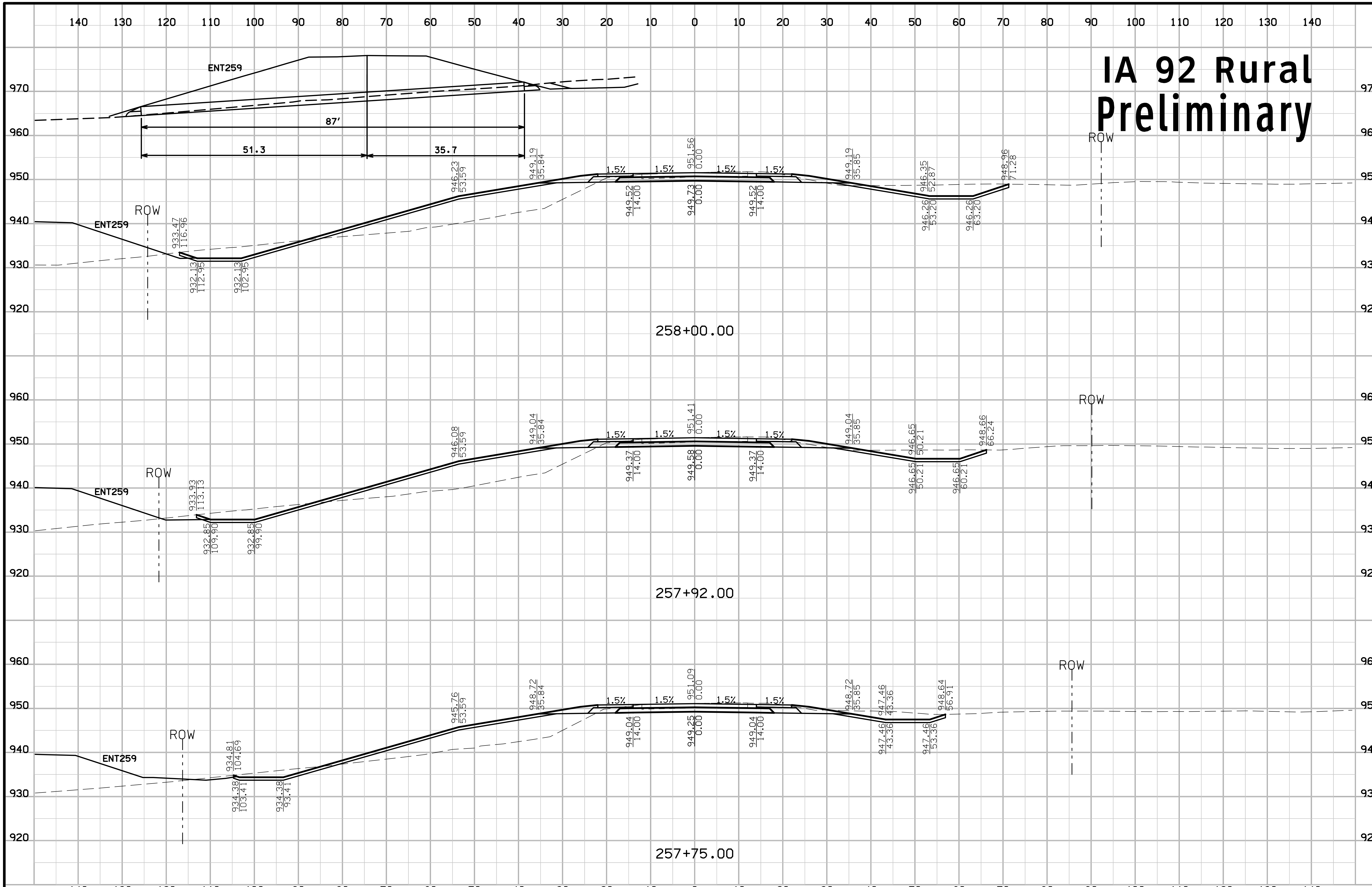

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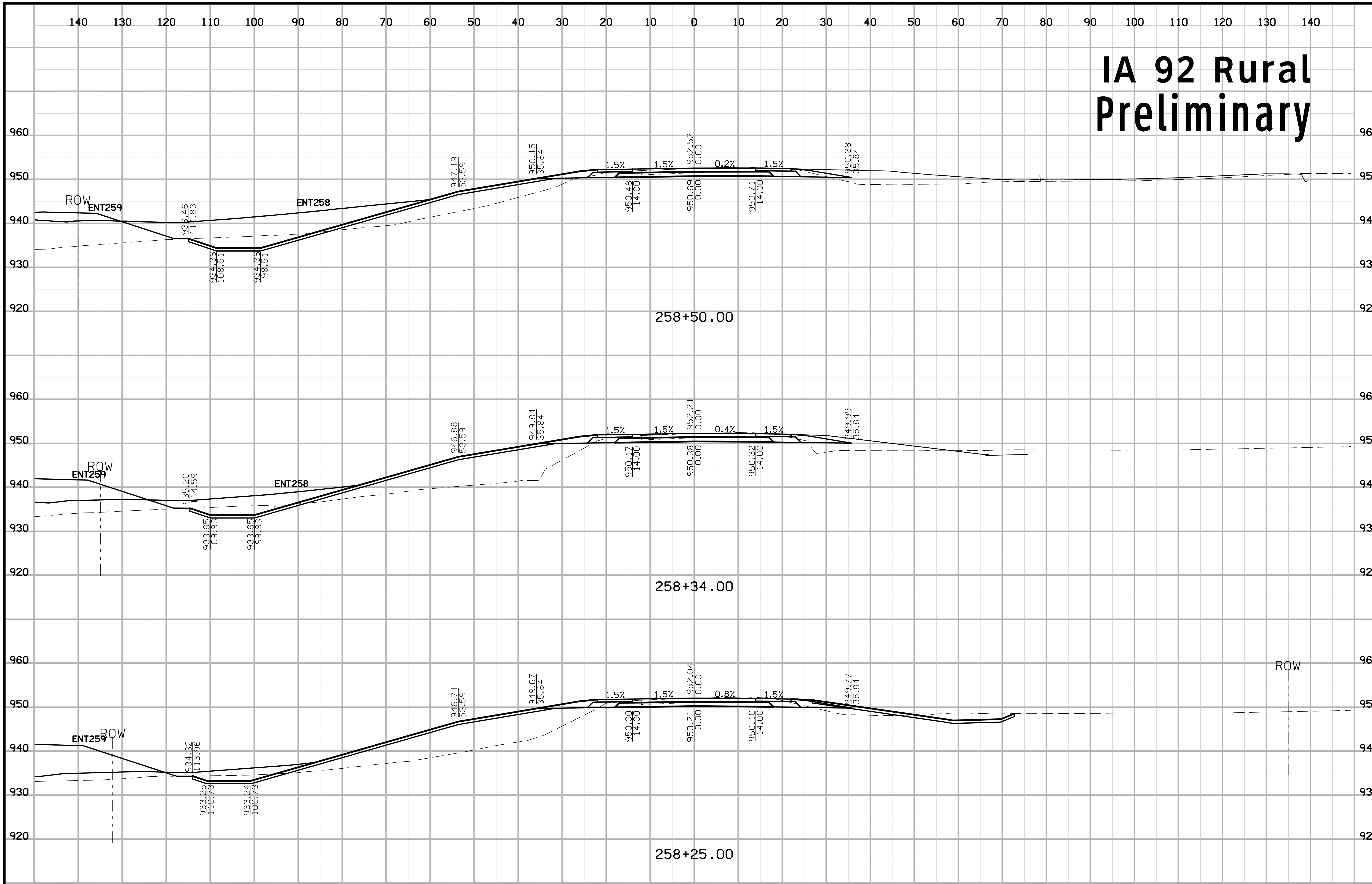
IA 92 Rural
Preliminary
ROW
ENT259
ENT258
258+50.00
258+34.00
258+25.00
1.5%
0.2%
0.4%
0.8%
952.52 / 0.00
950.15 / 35.84
947.19 / 53.59
950.38 / 35.84
950.48 / 14.00
950.69 / 0.00
950.71 / 14.00
936.46 / 114.83
934.36 / 108.51
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949.67 / 35.84
946.71 / 53.59
949.77 / 35.84
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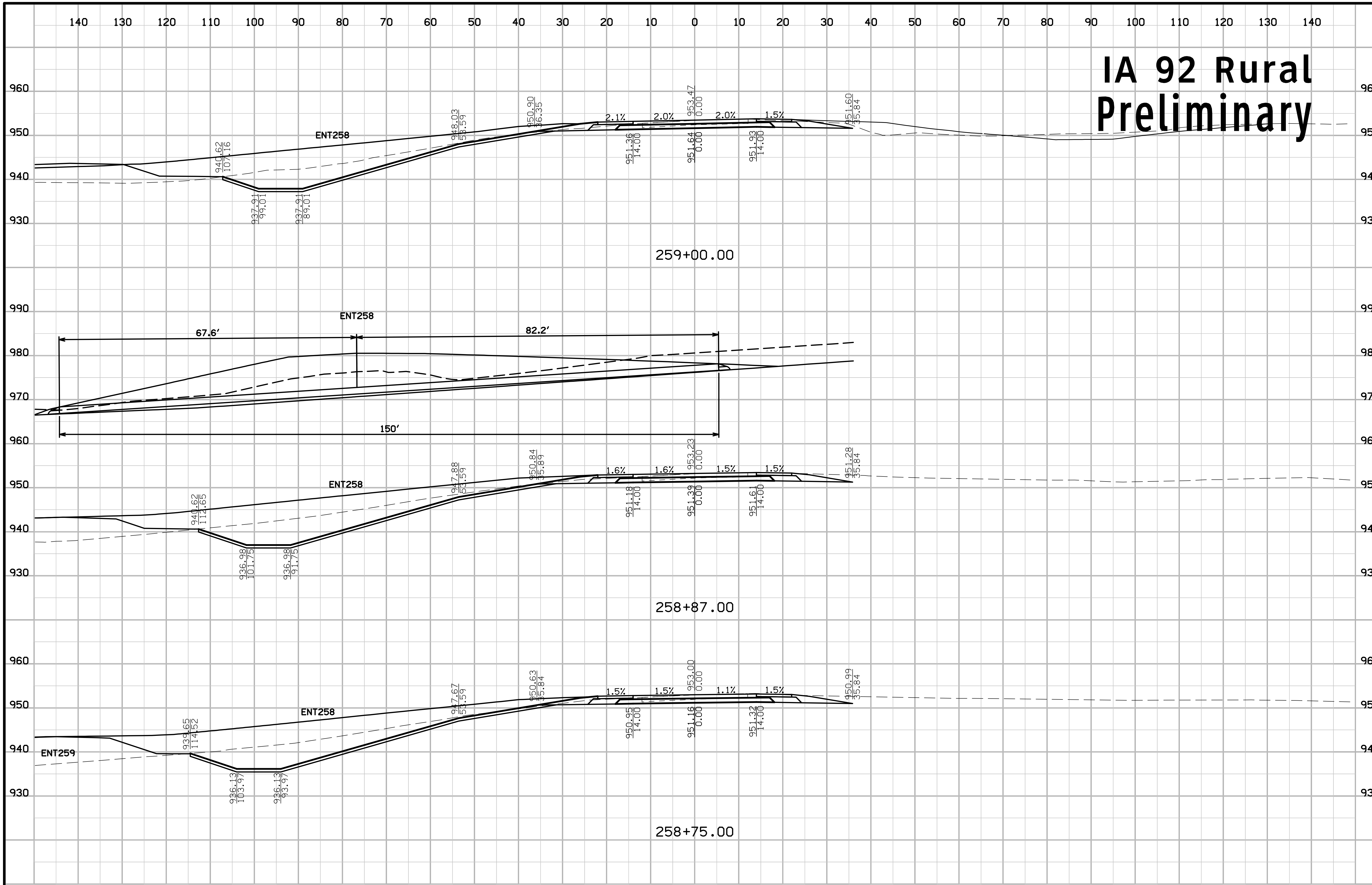

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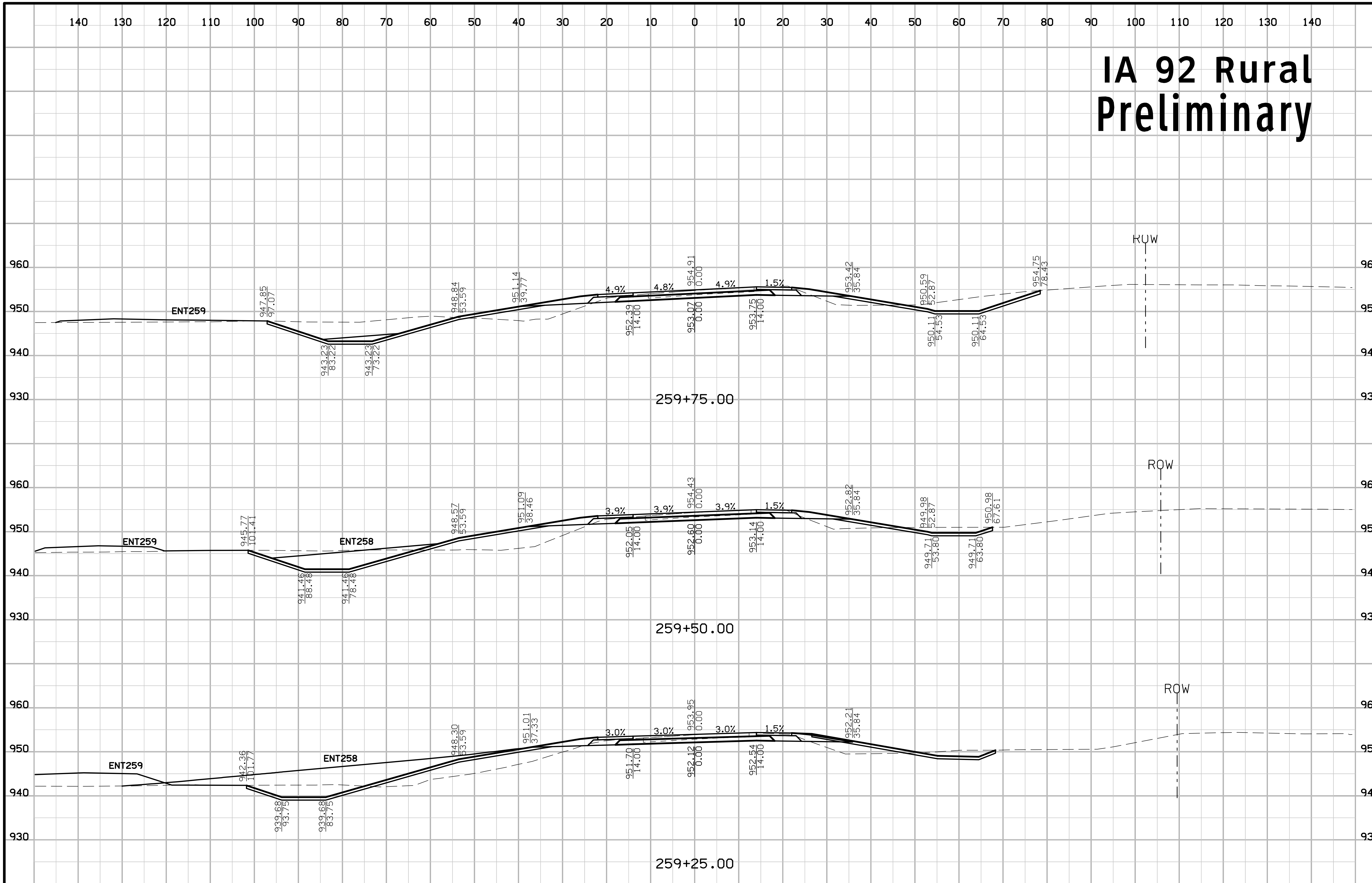

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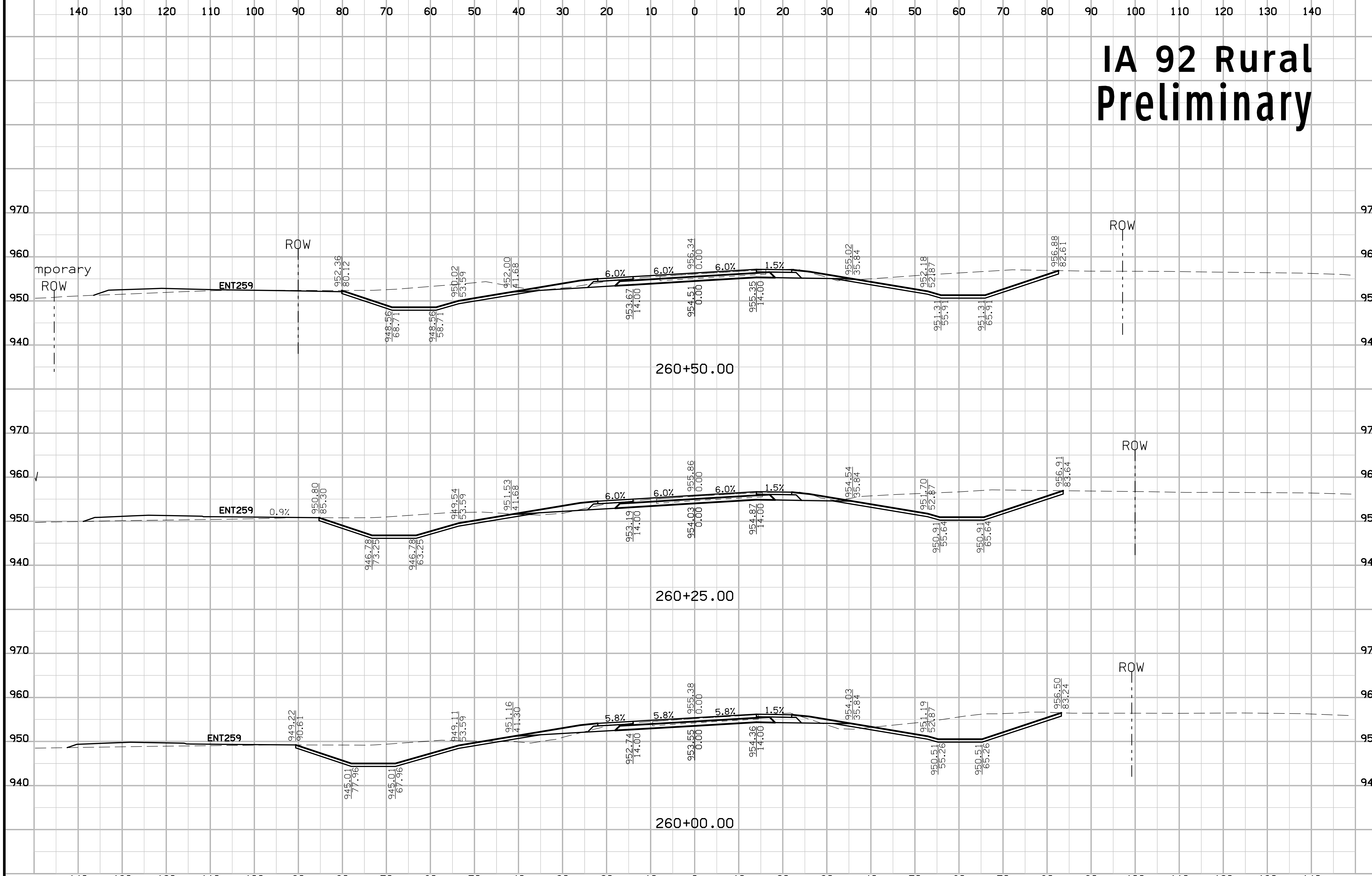
IA 92 Rural
Preliminary



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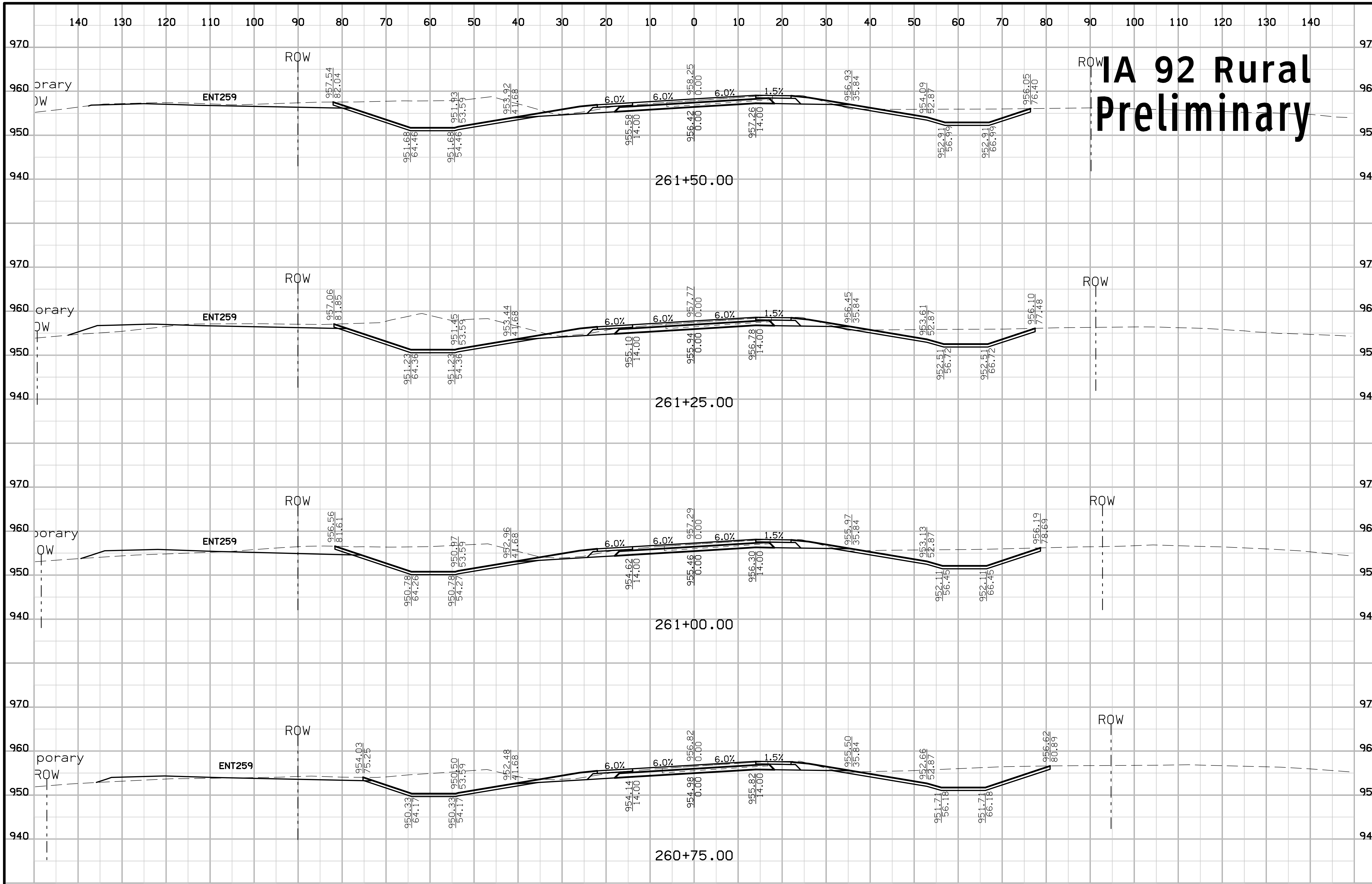

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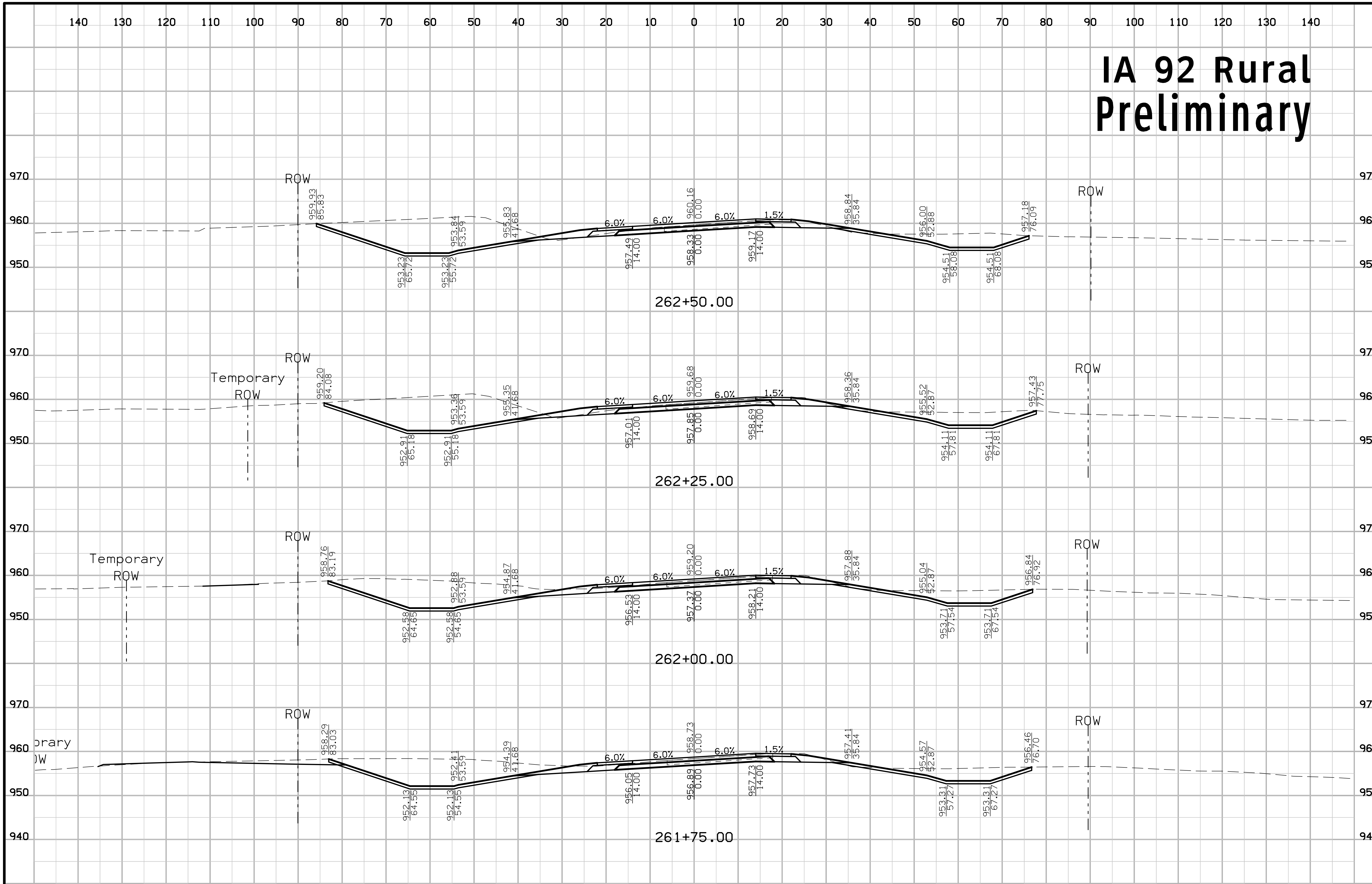

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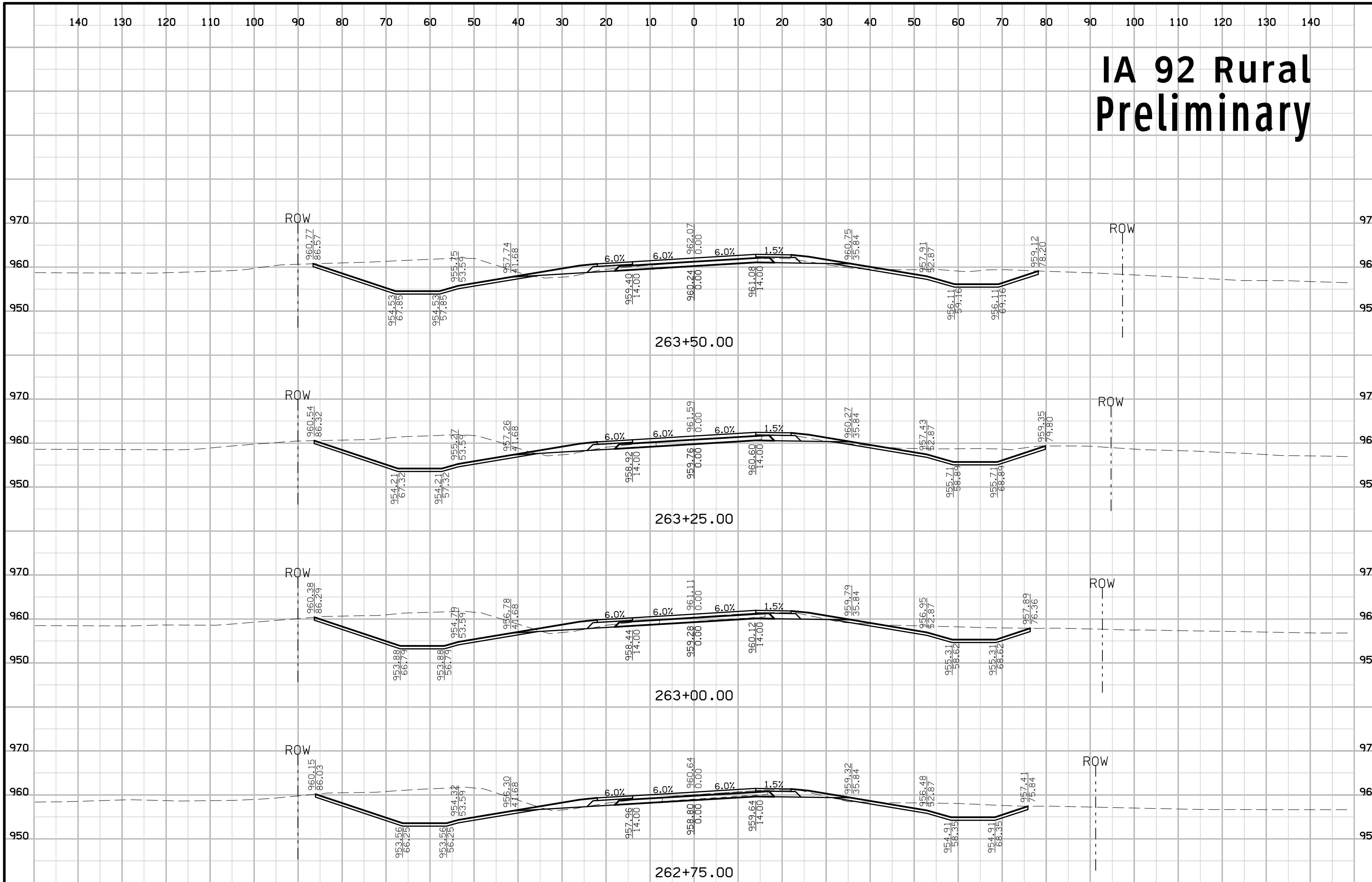

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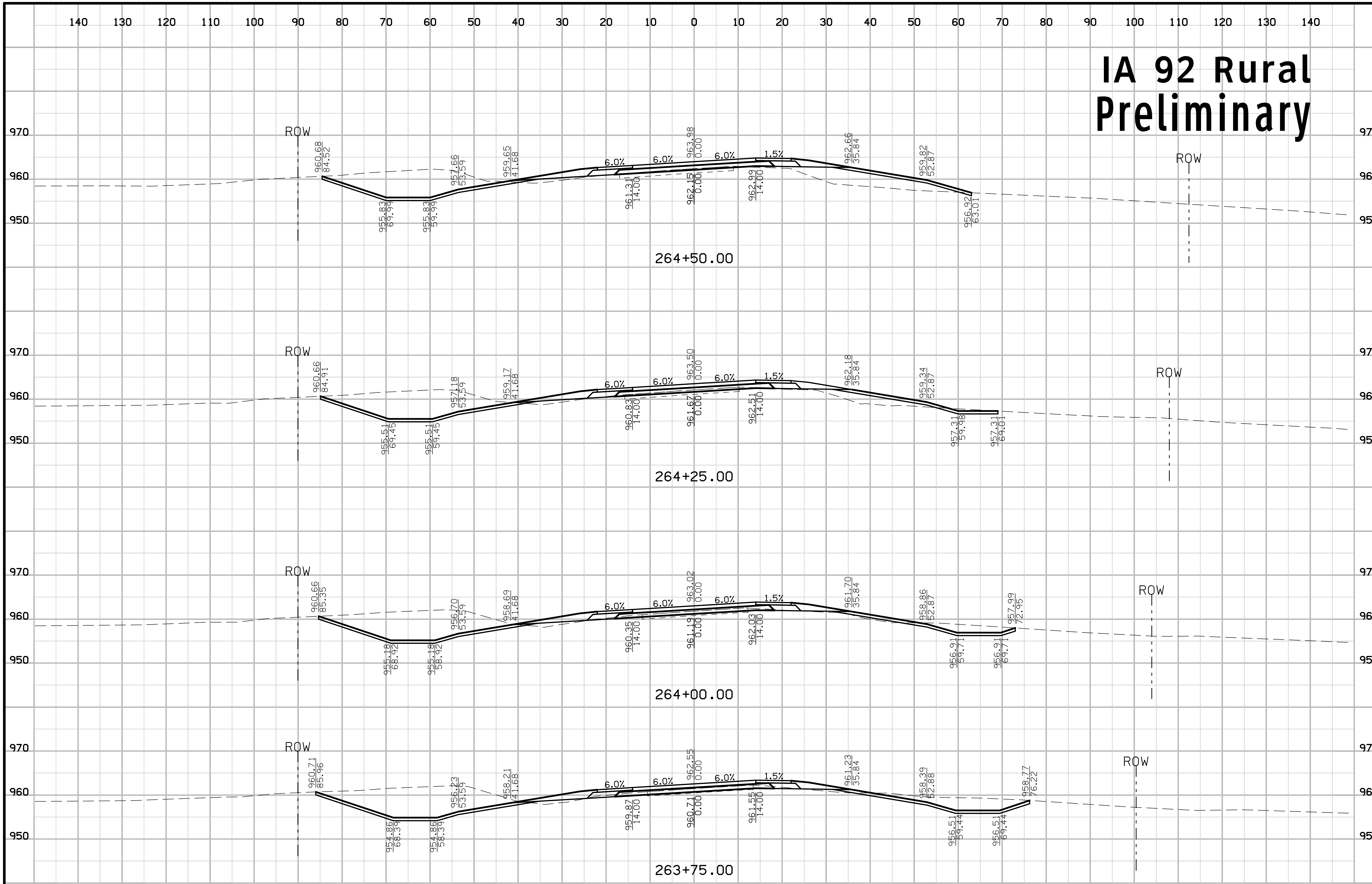
IA 92 Rural Preliminary



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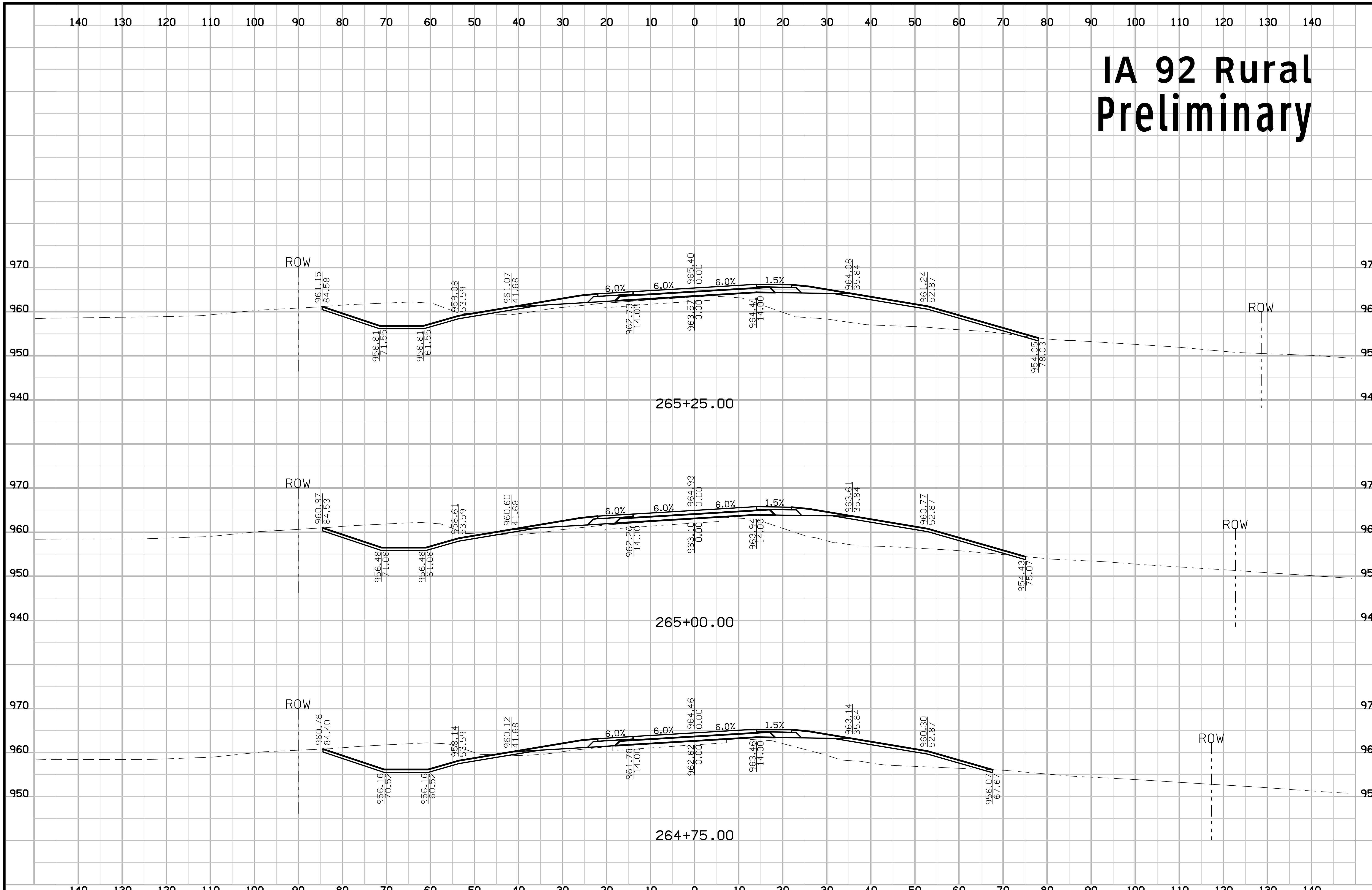
IA 92 Rural
Preliminary



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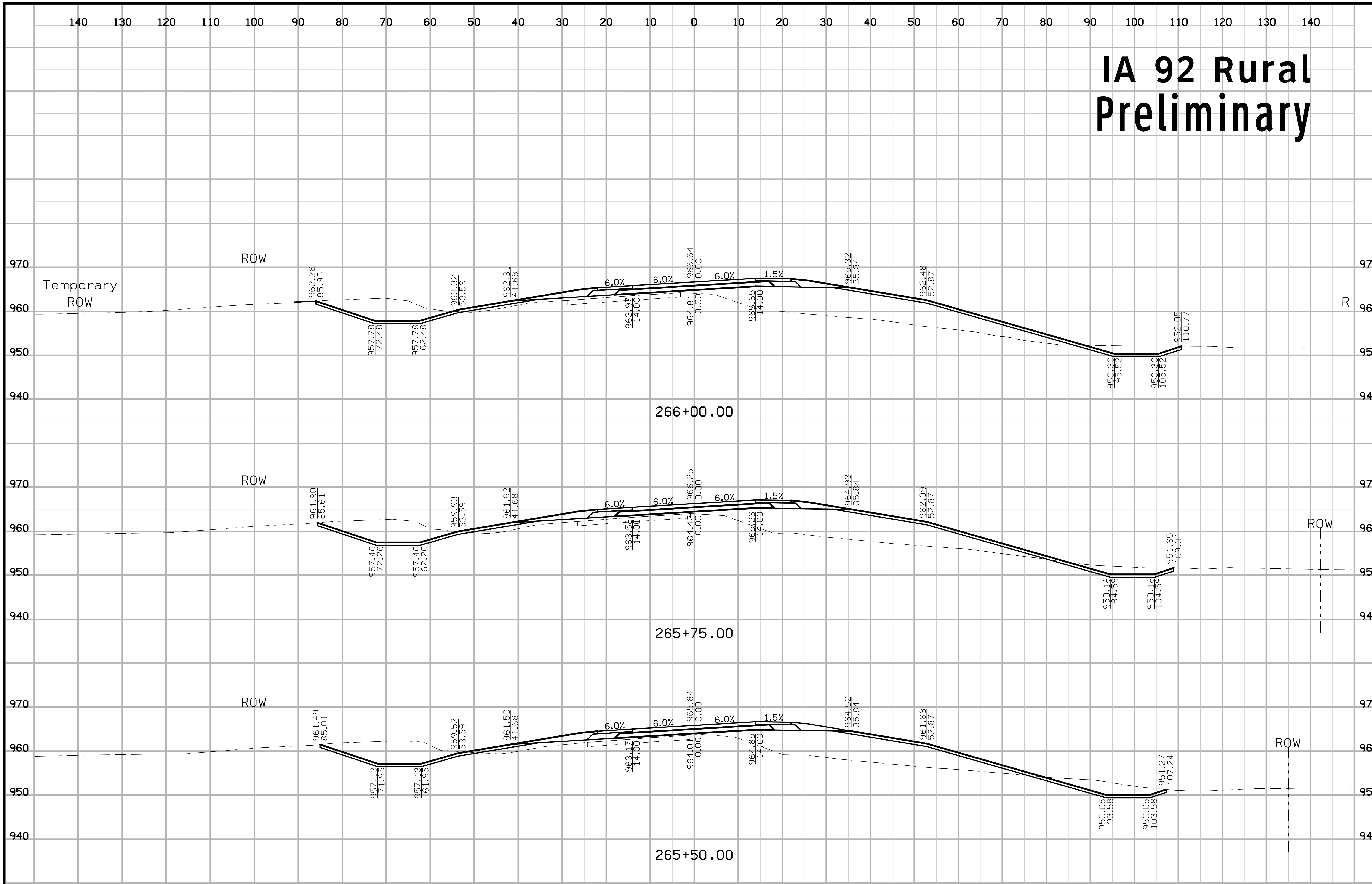
IA 92 Rural Preliminary



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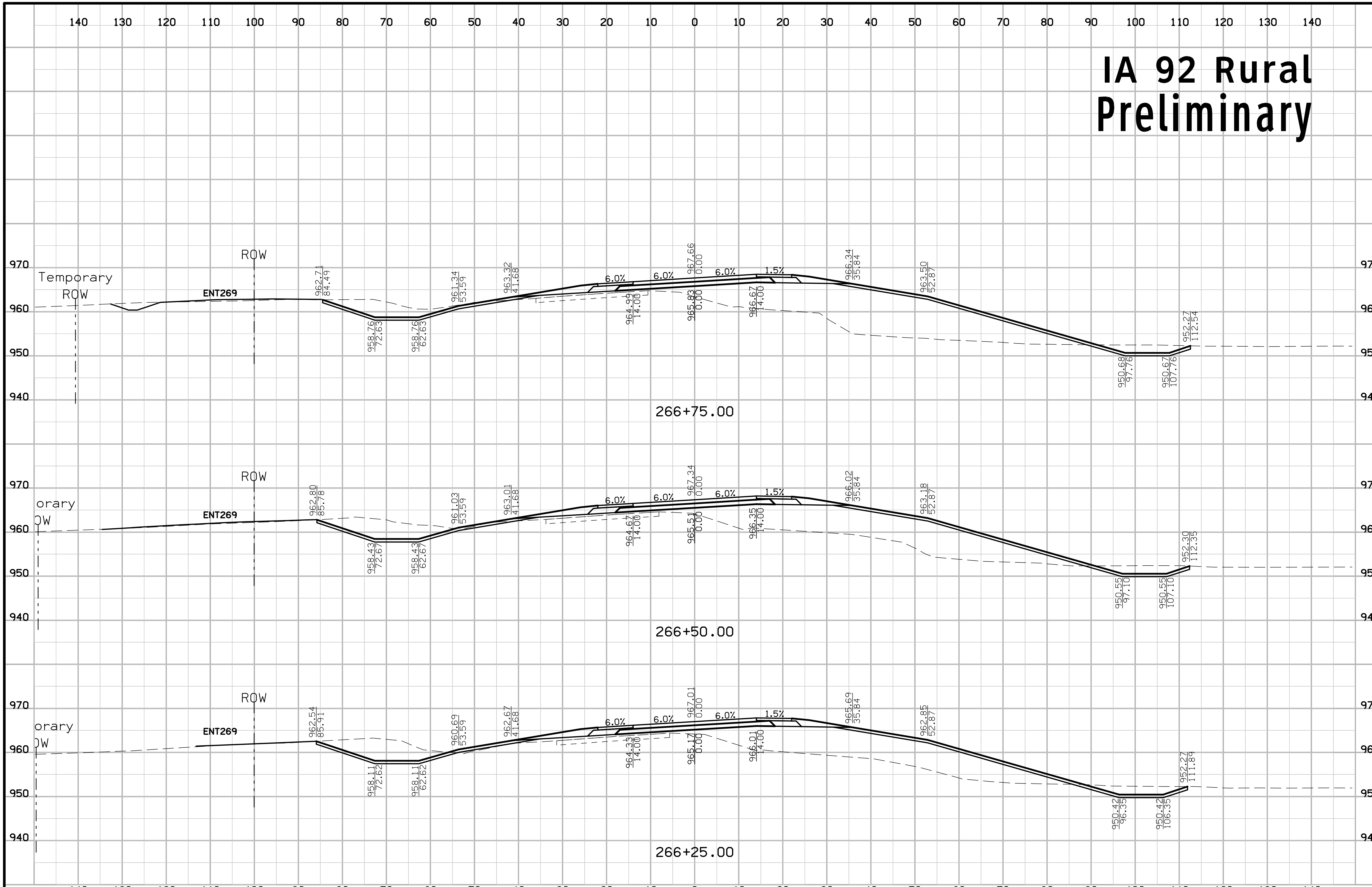
IA 92 Rural
Preliminary



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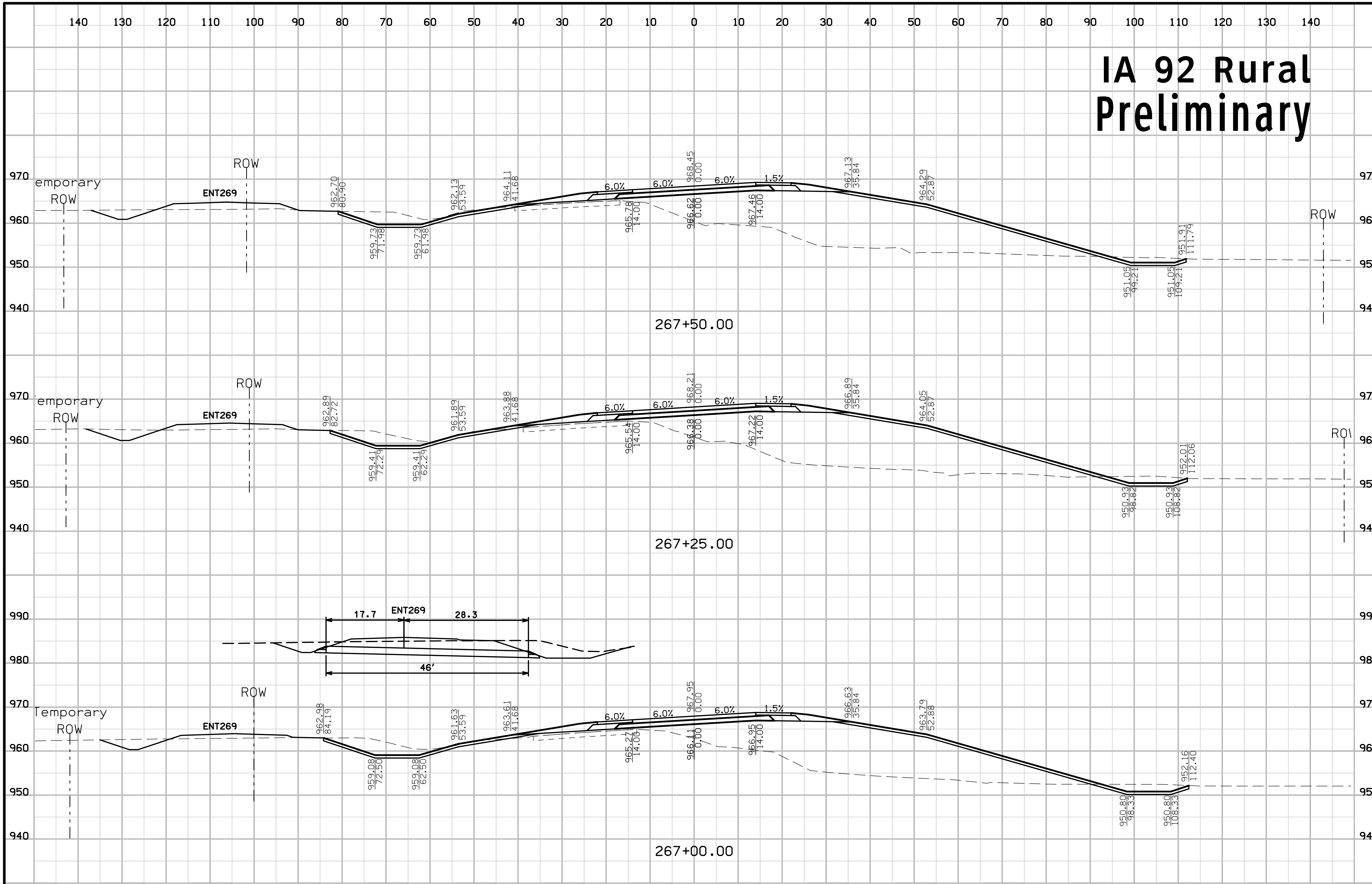

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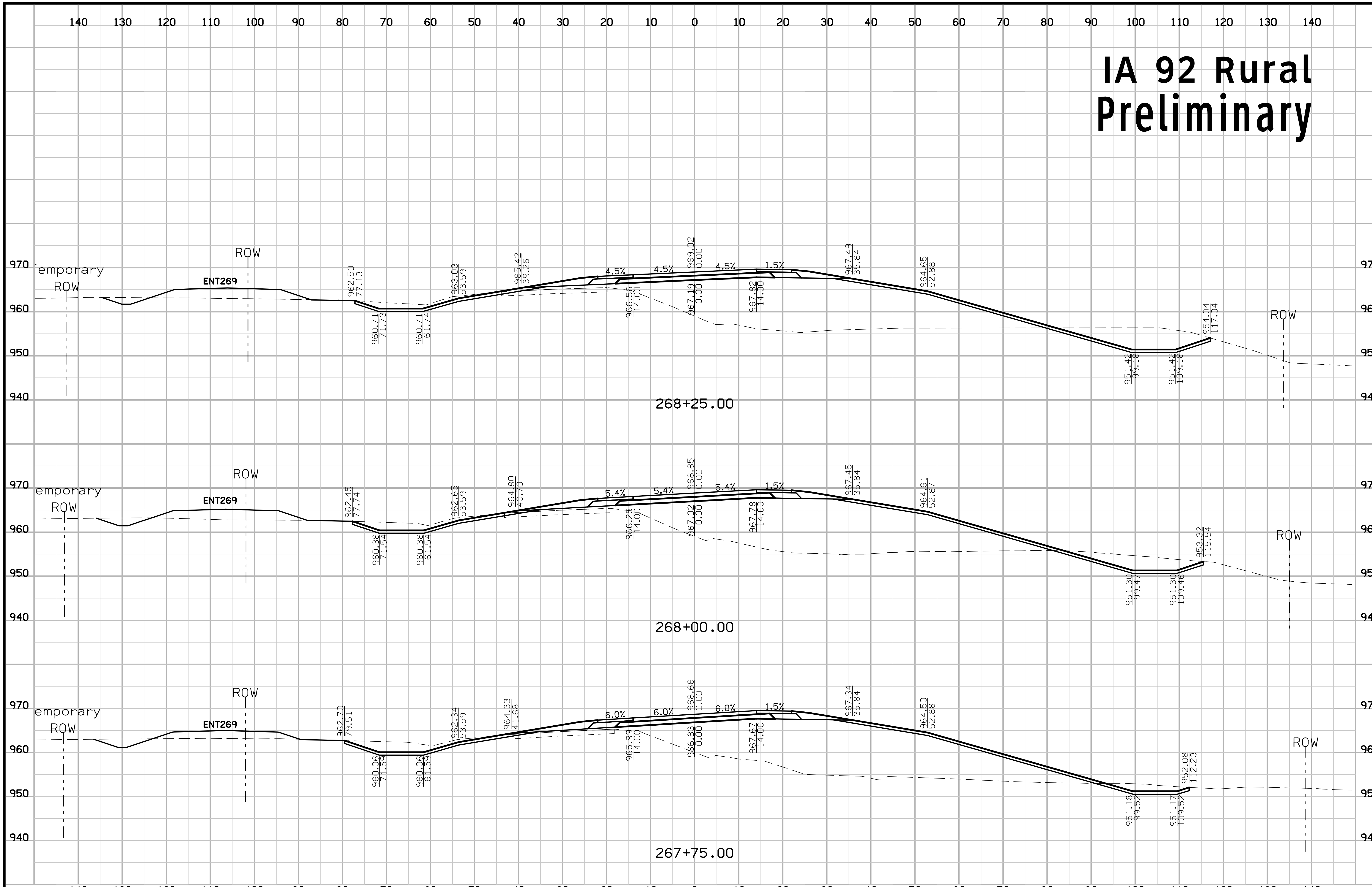
IA 92 Rural
Preliminary



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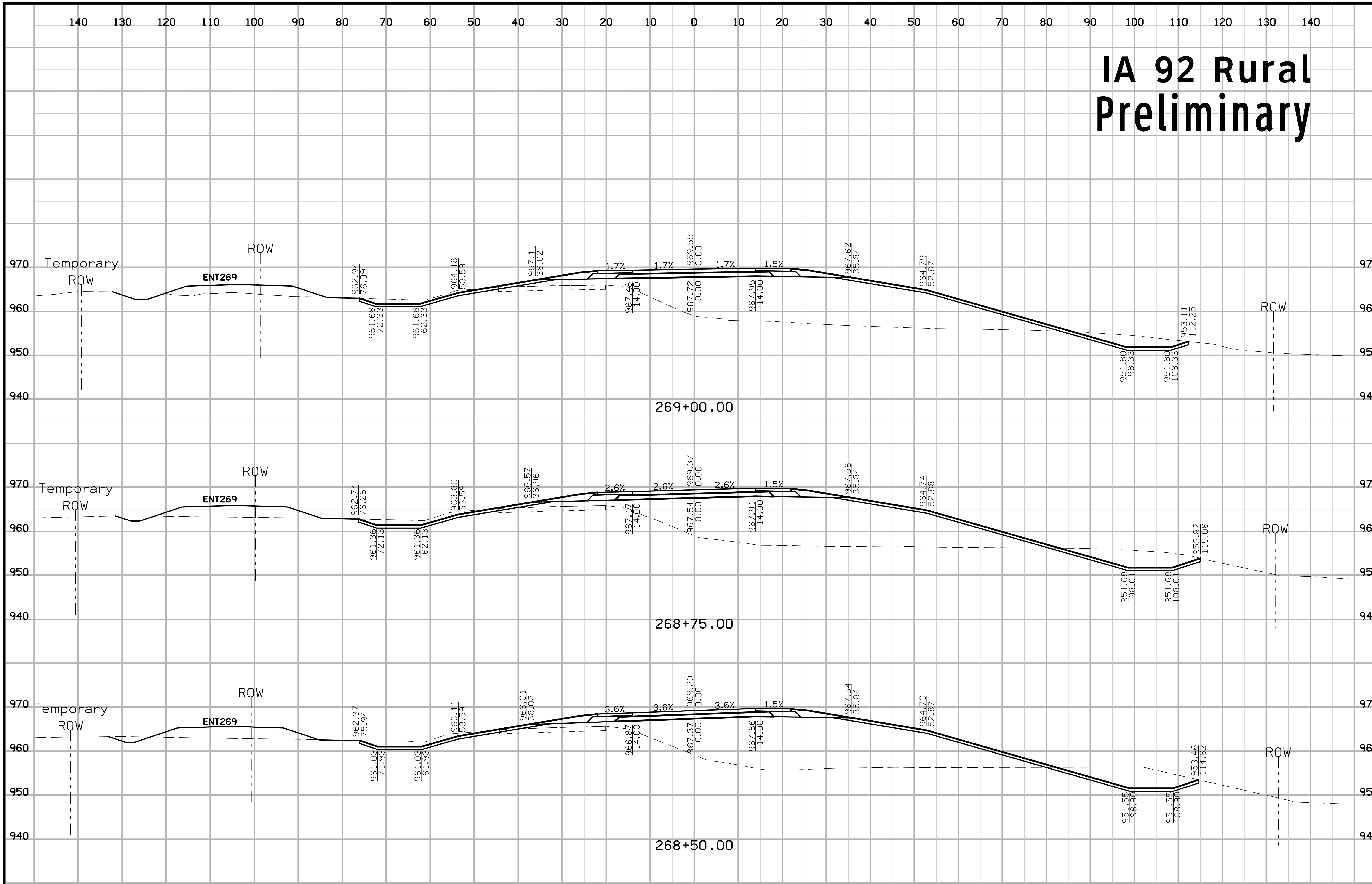
IA 92 Rural Preliminary



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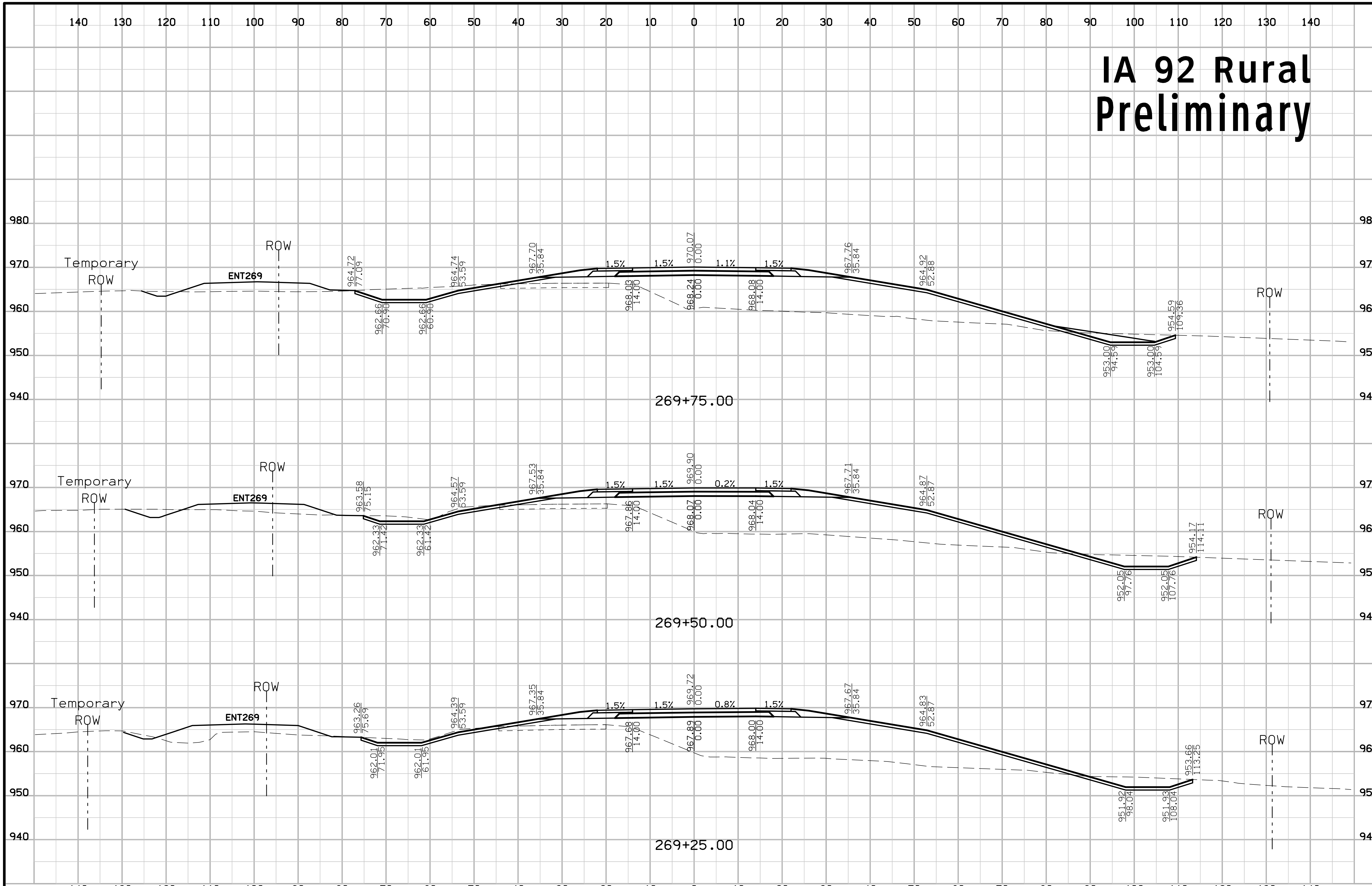
IA 92 Rural
Preliminary



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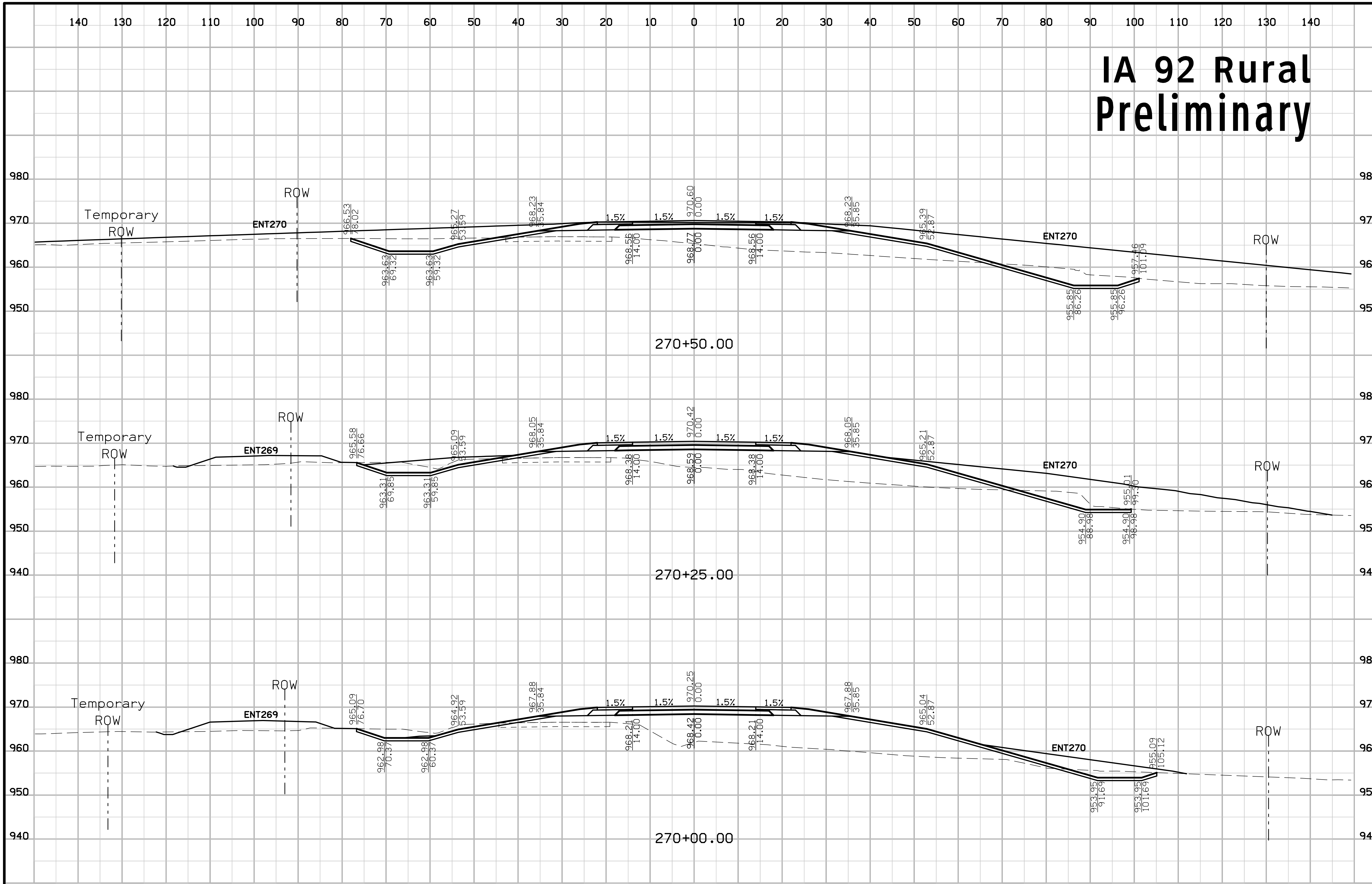
IA 92 Rural Preliminary



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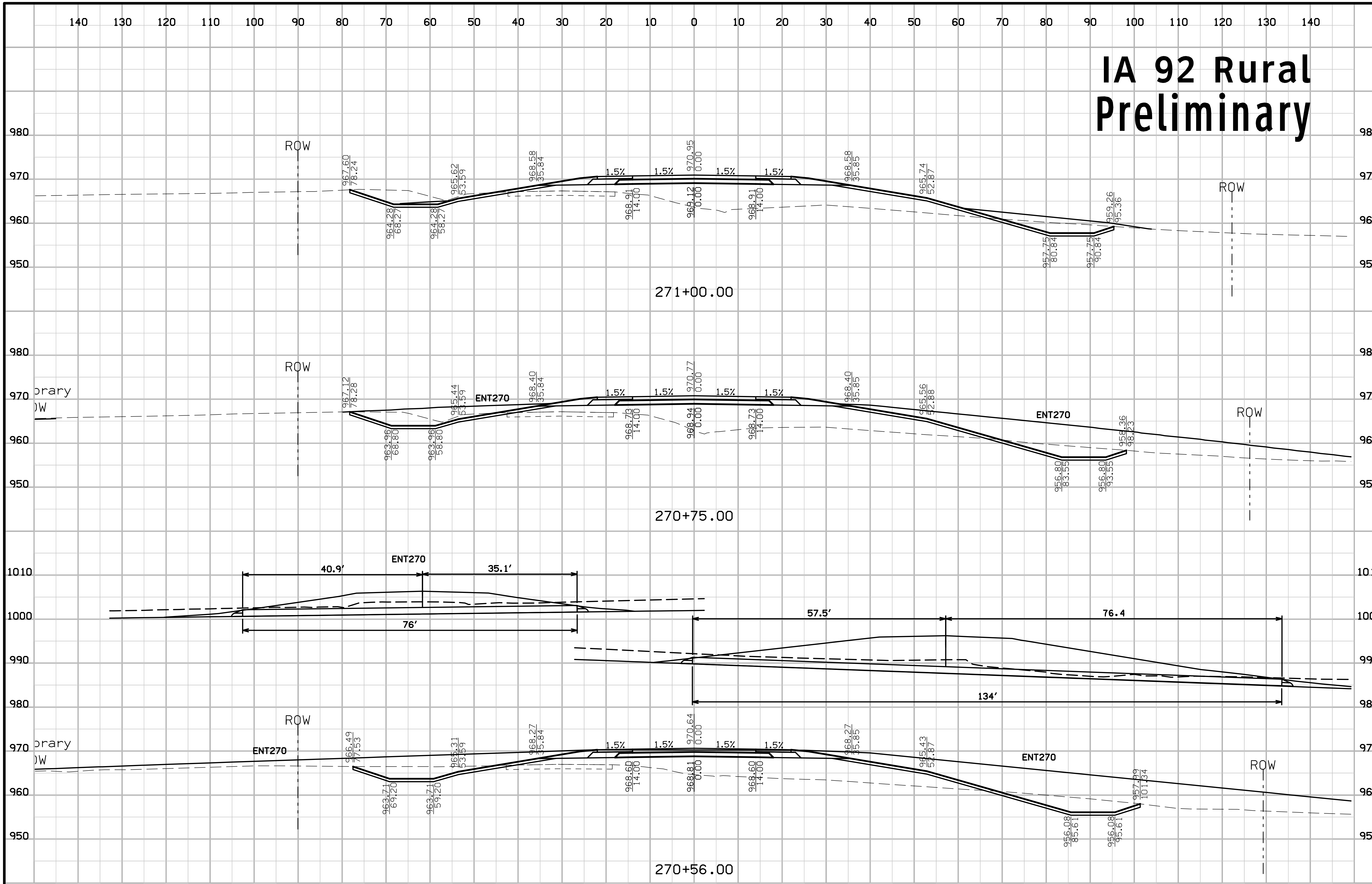

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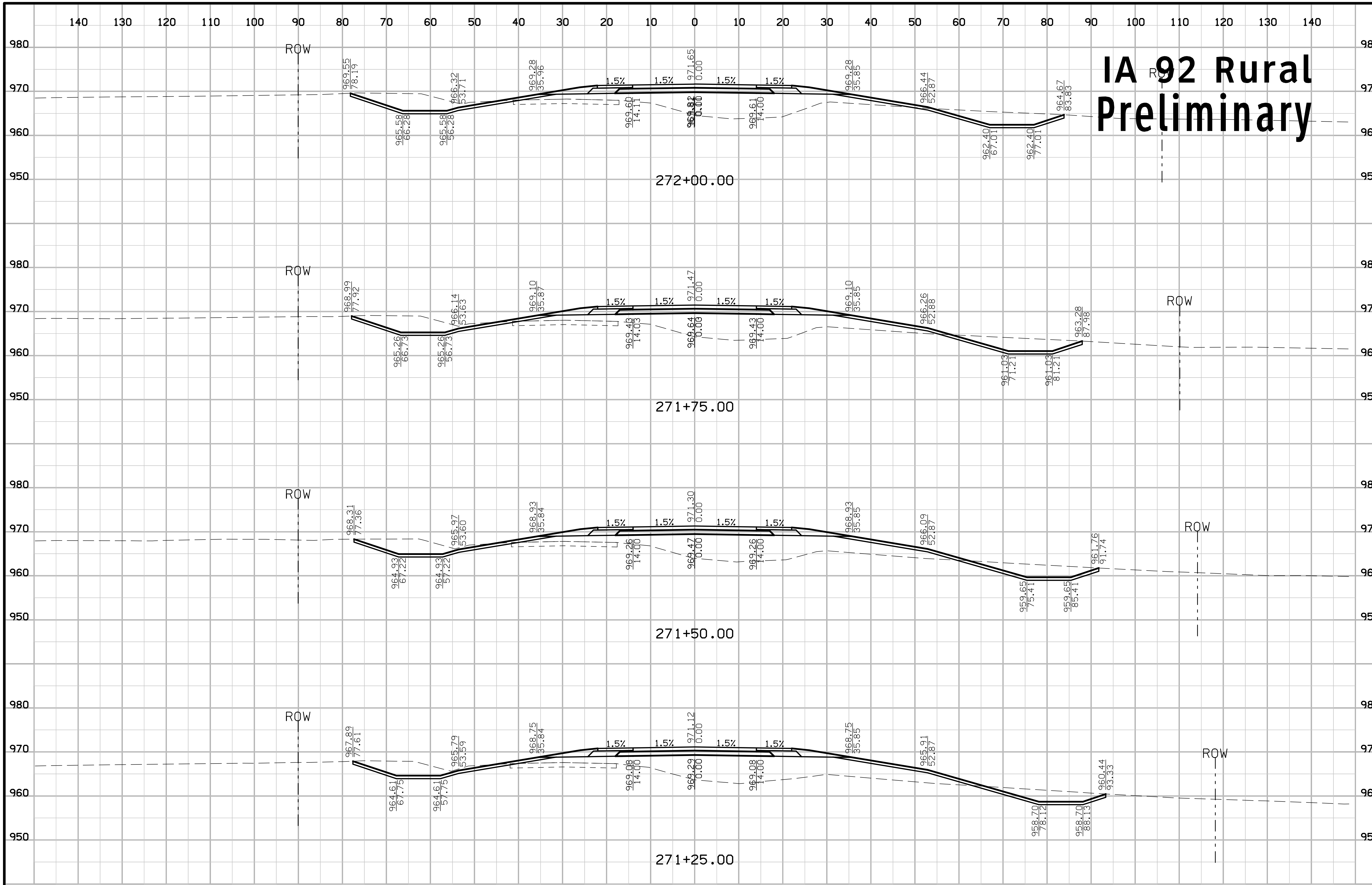

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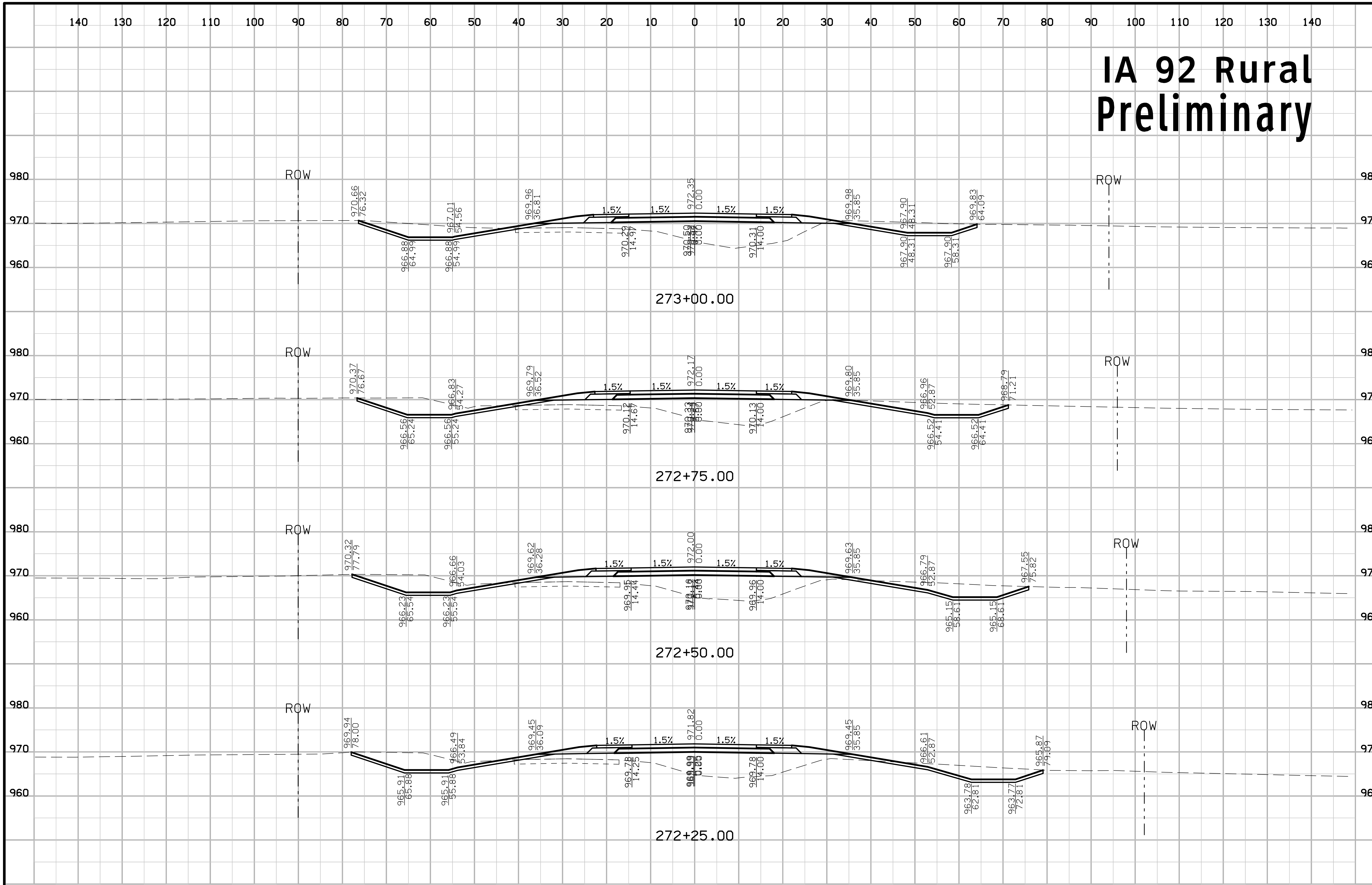

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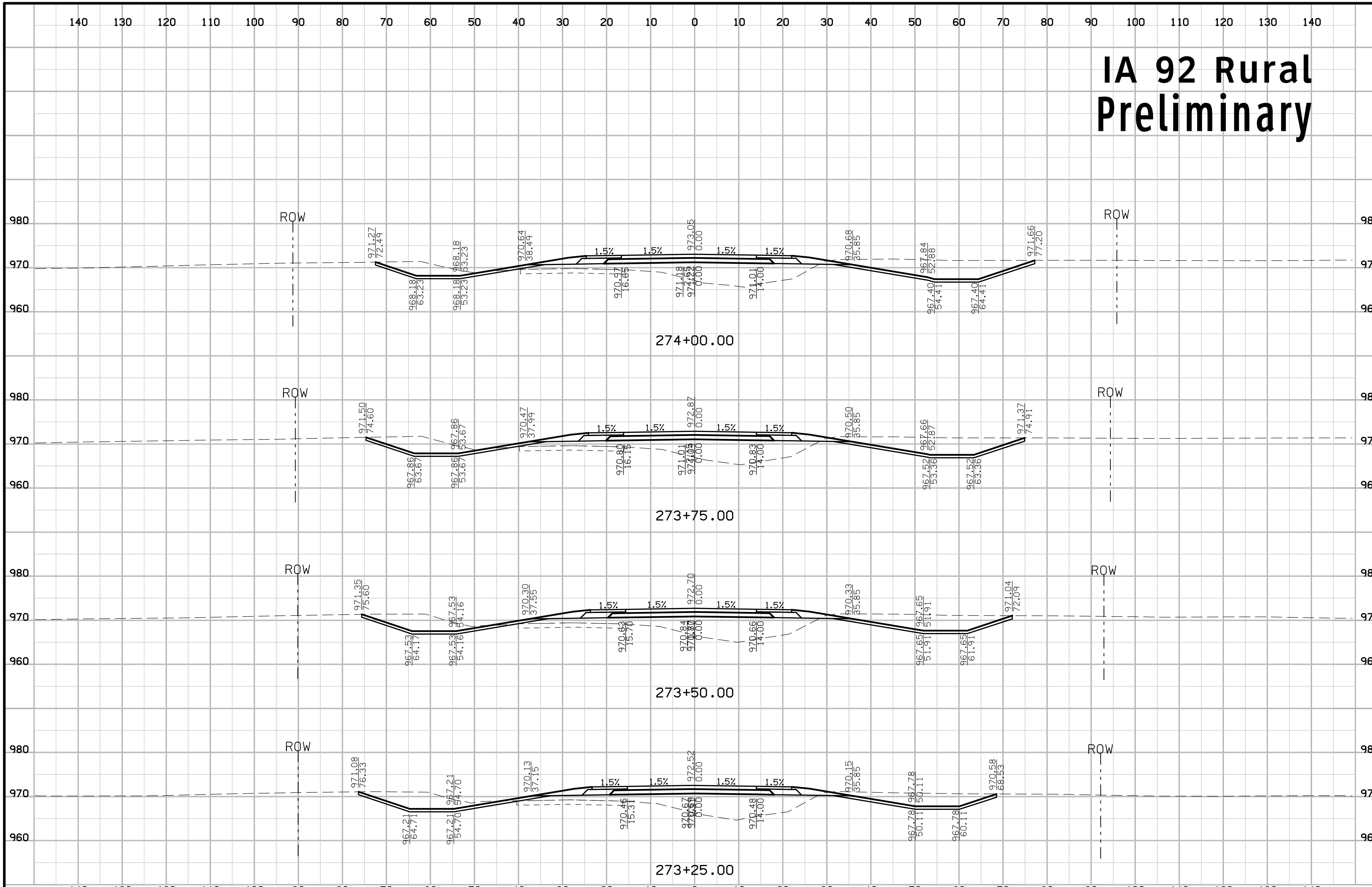
IA 92 Rural
Preliminary



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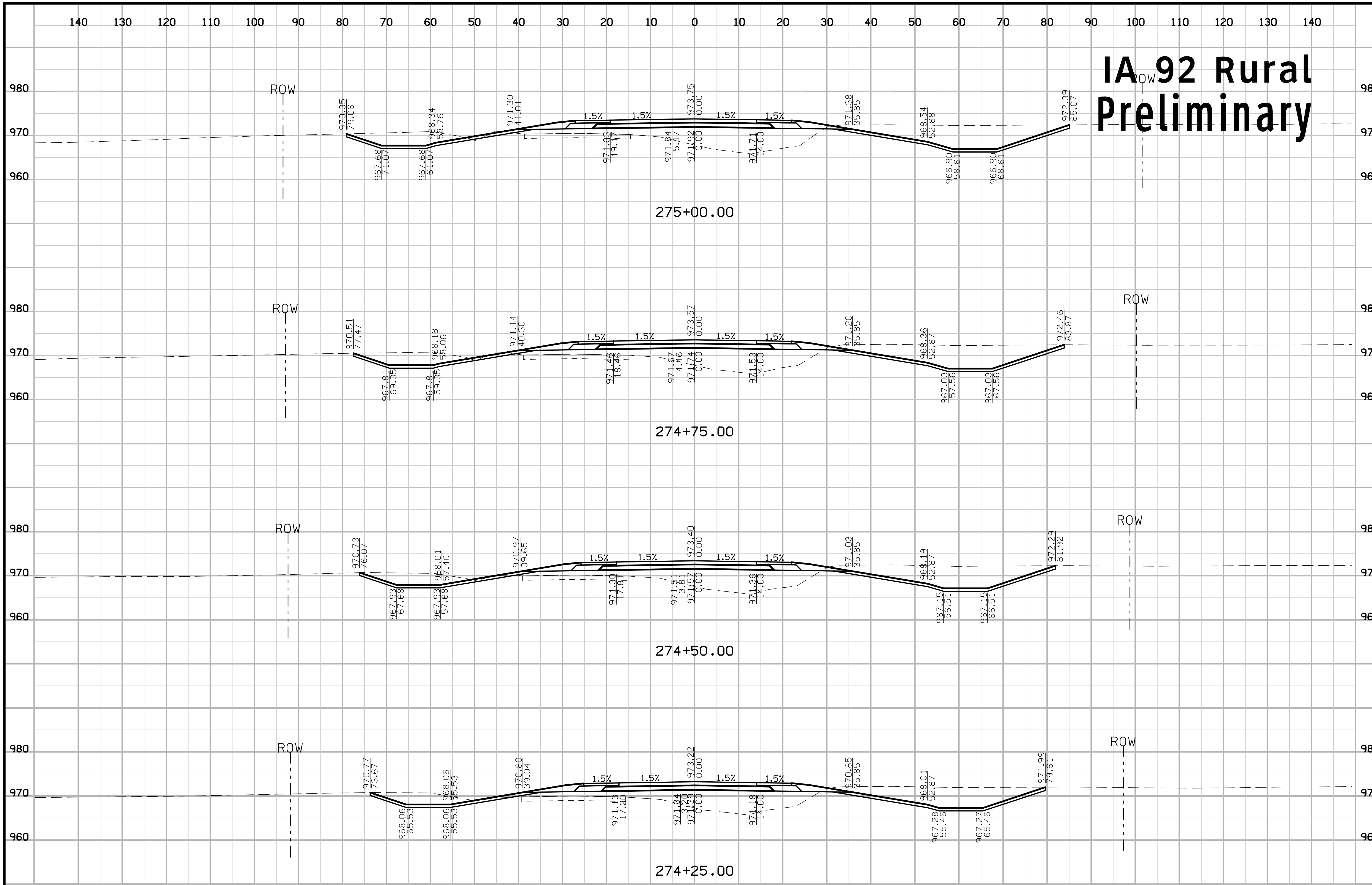

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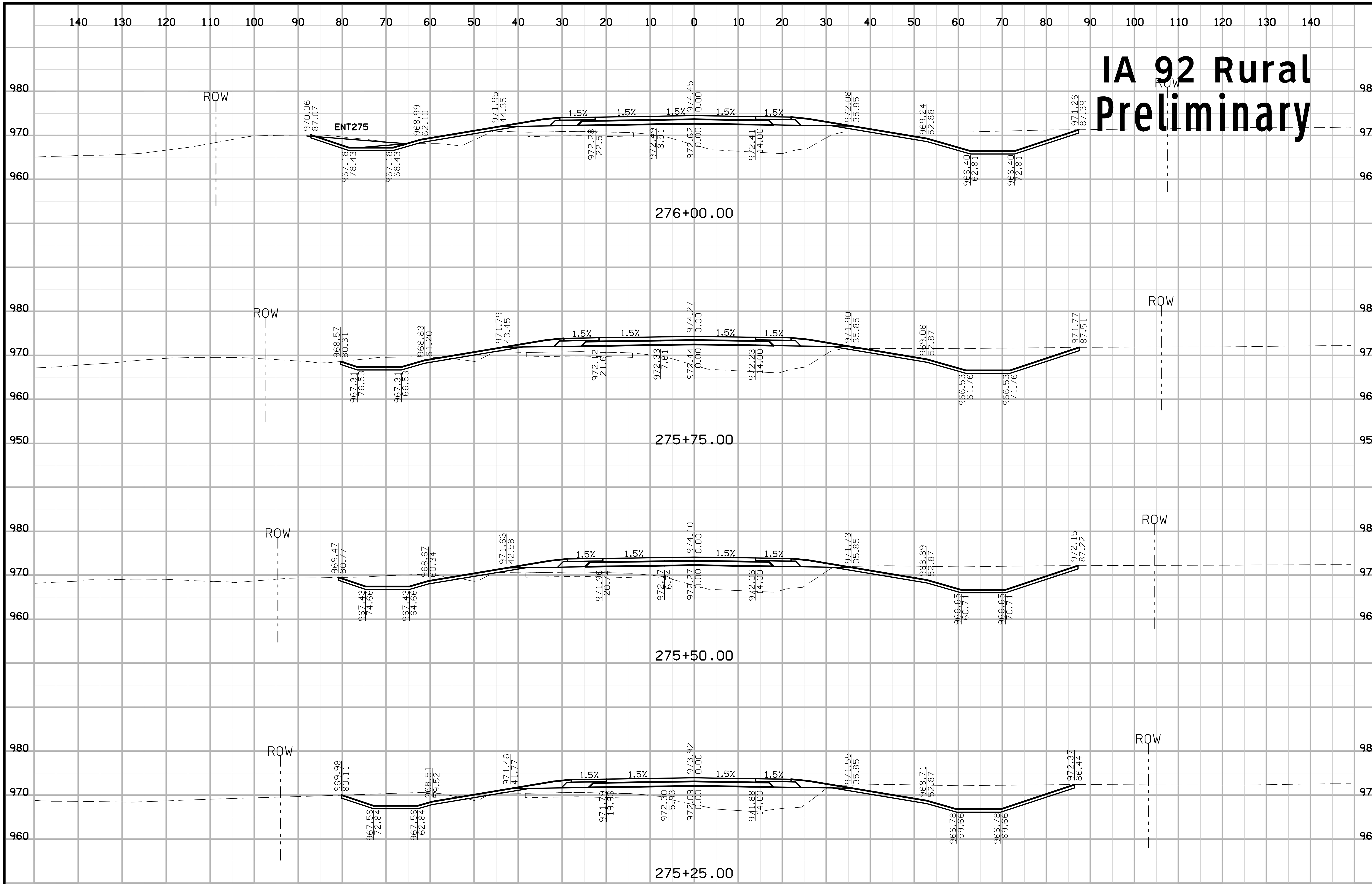

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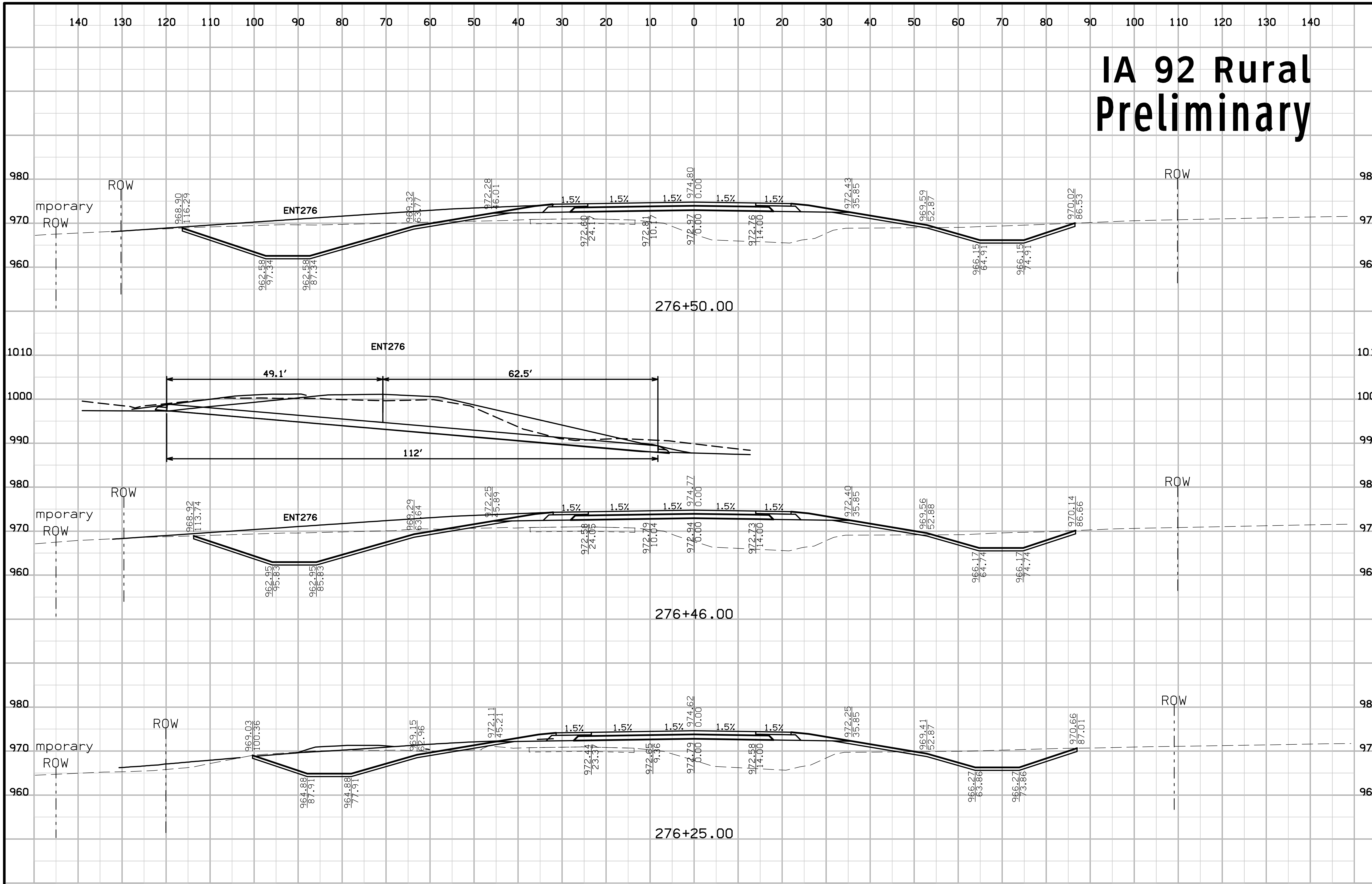

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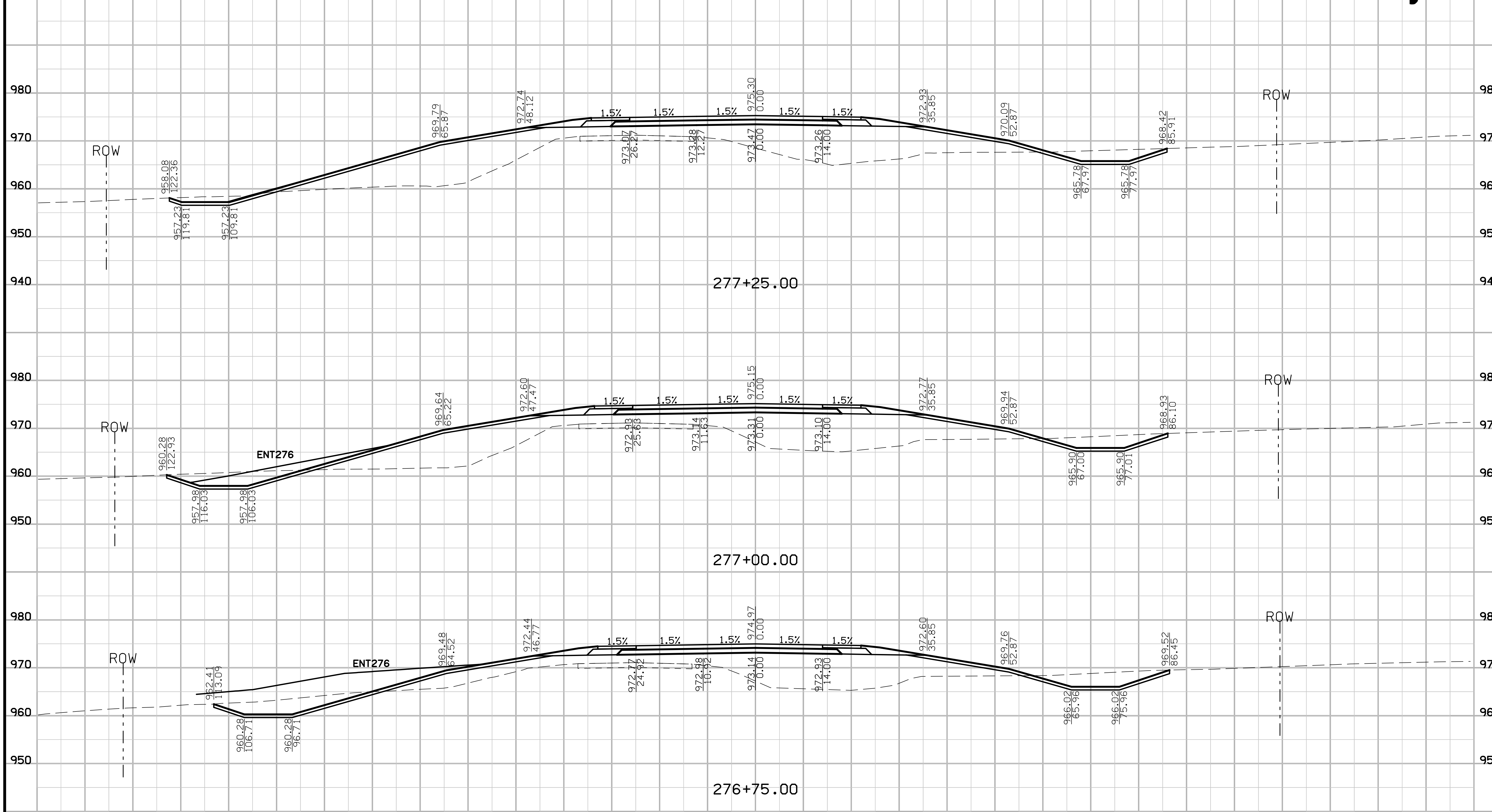
IA 92 Rural
Preliminary



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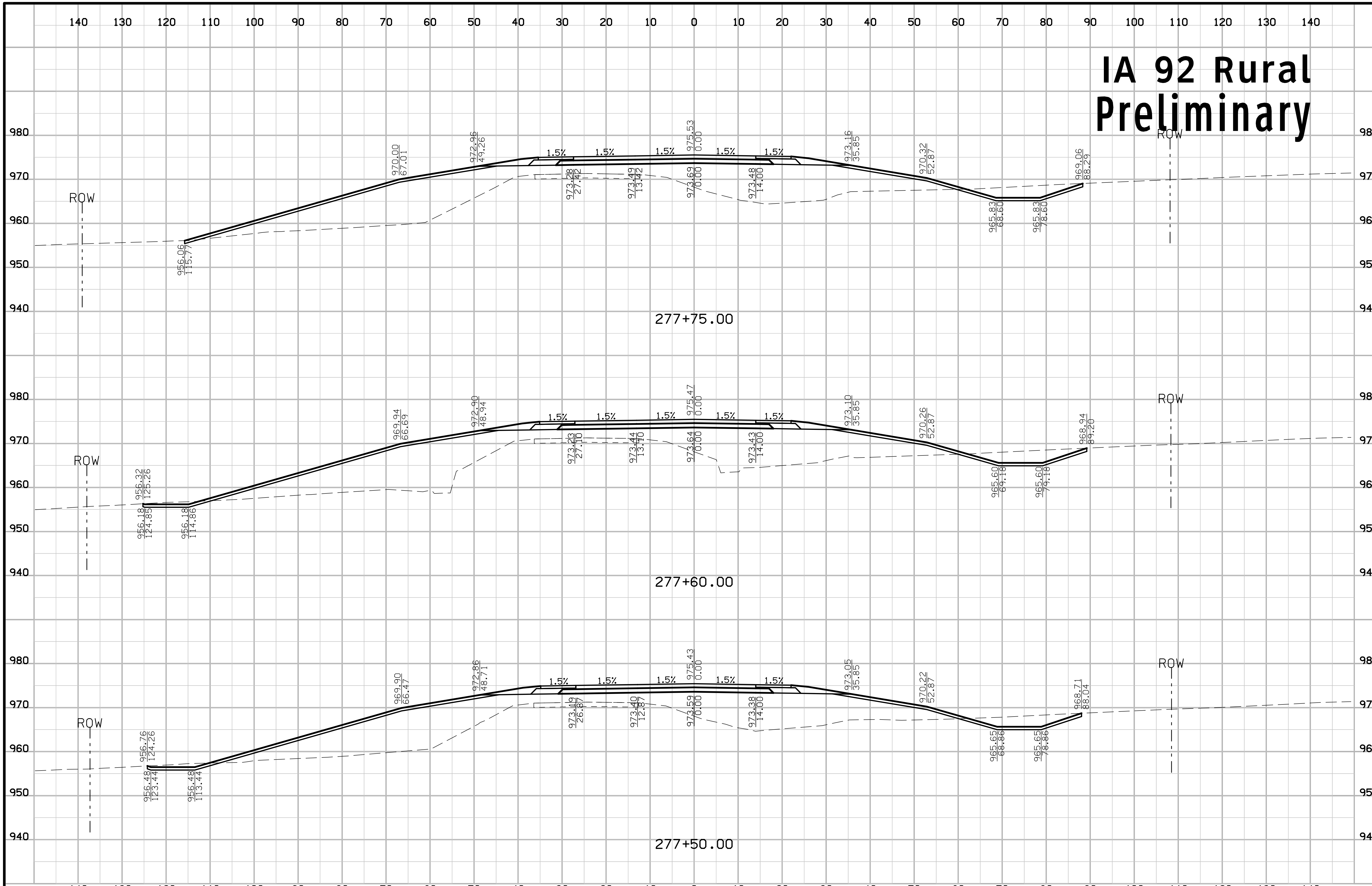
IA 92 Rural Preliminary



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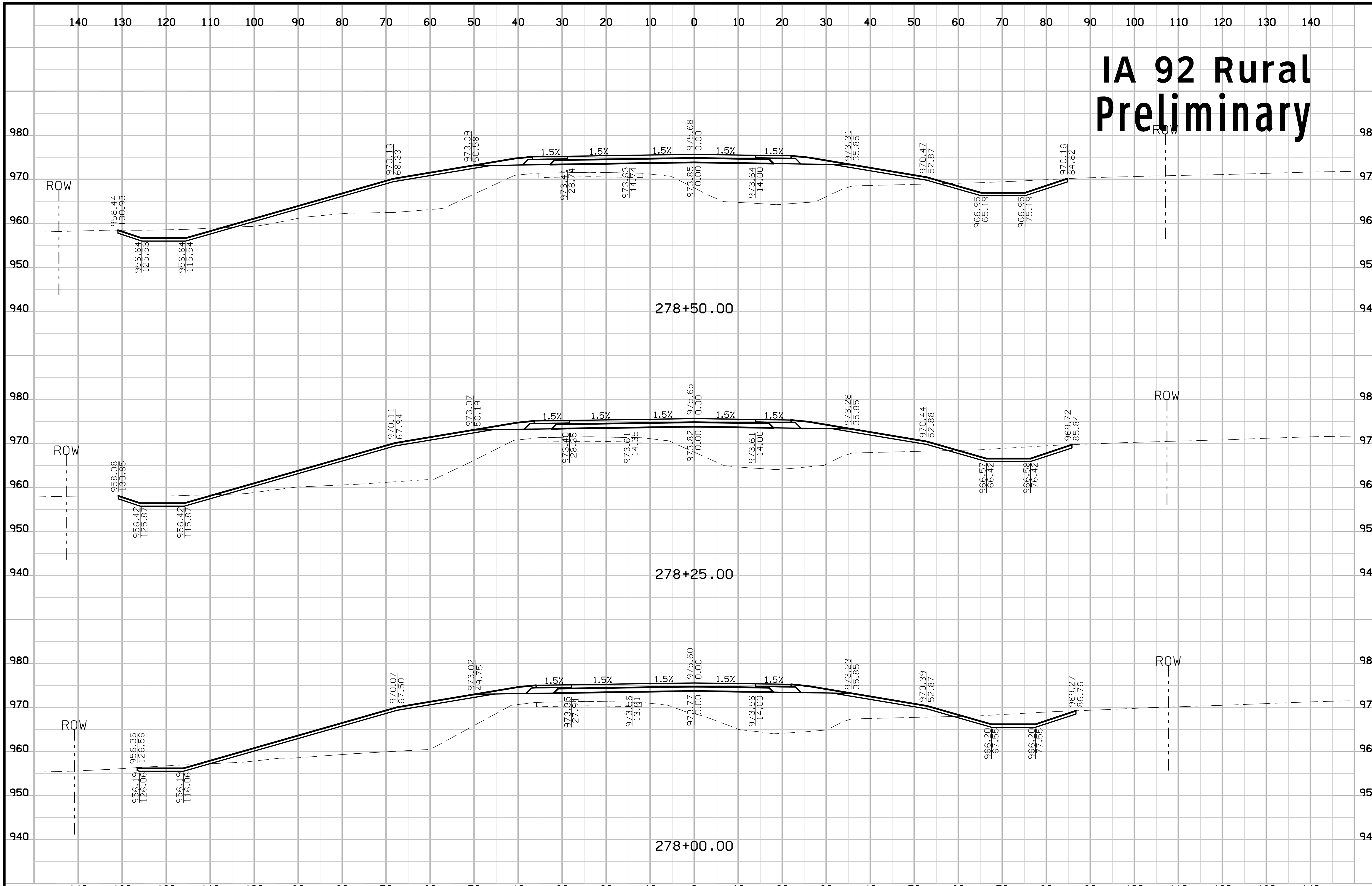
IA 92 Rural Preliminary



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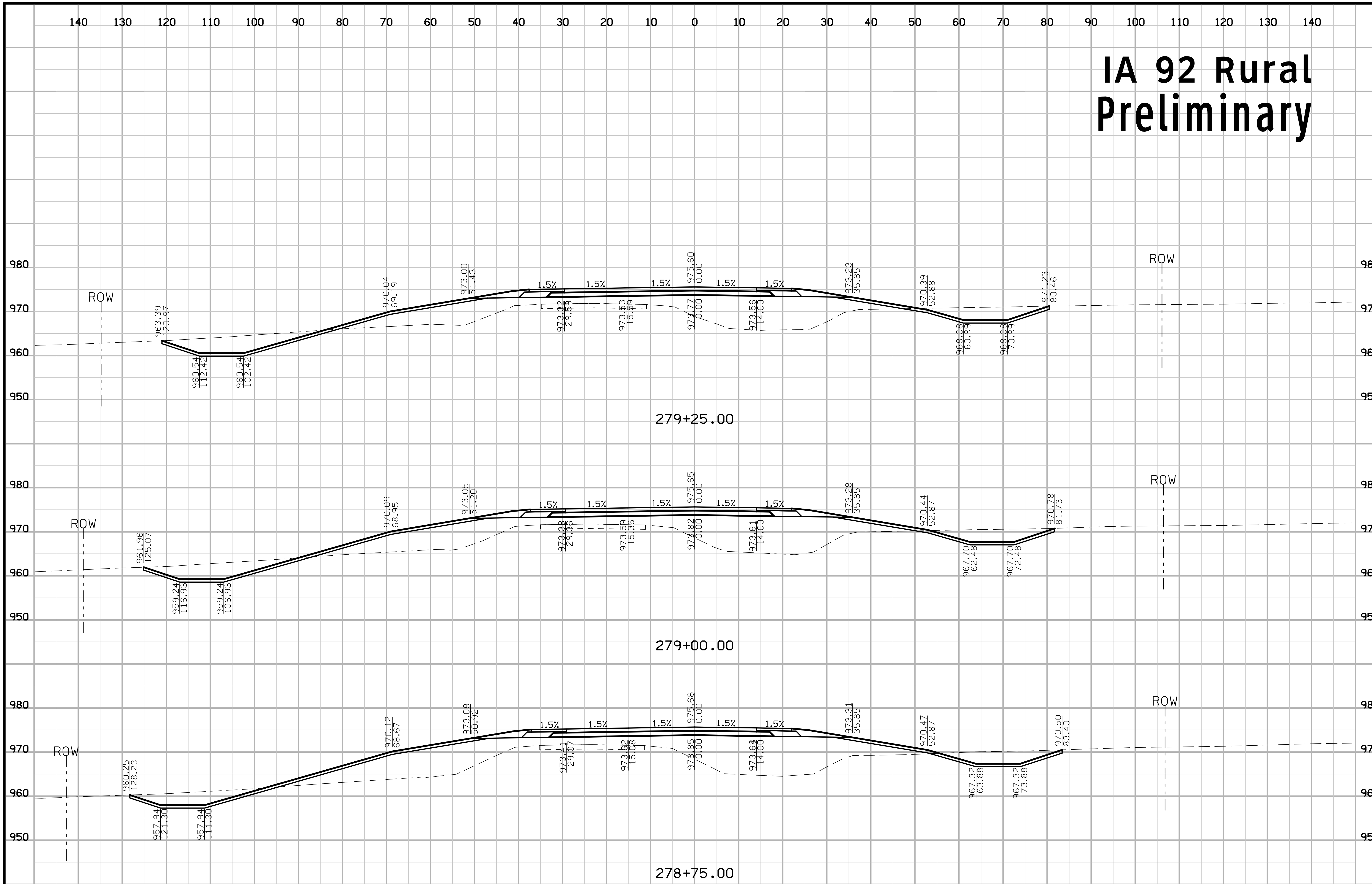
IA 92 Rural
Preliminary



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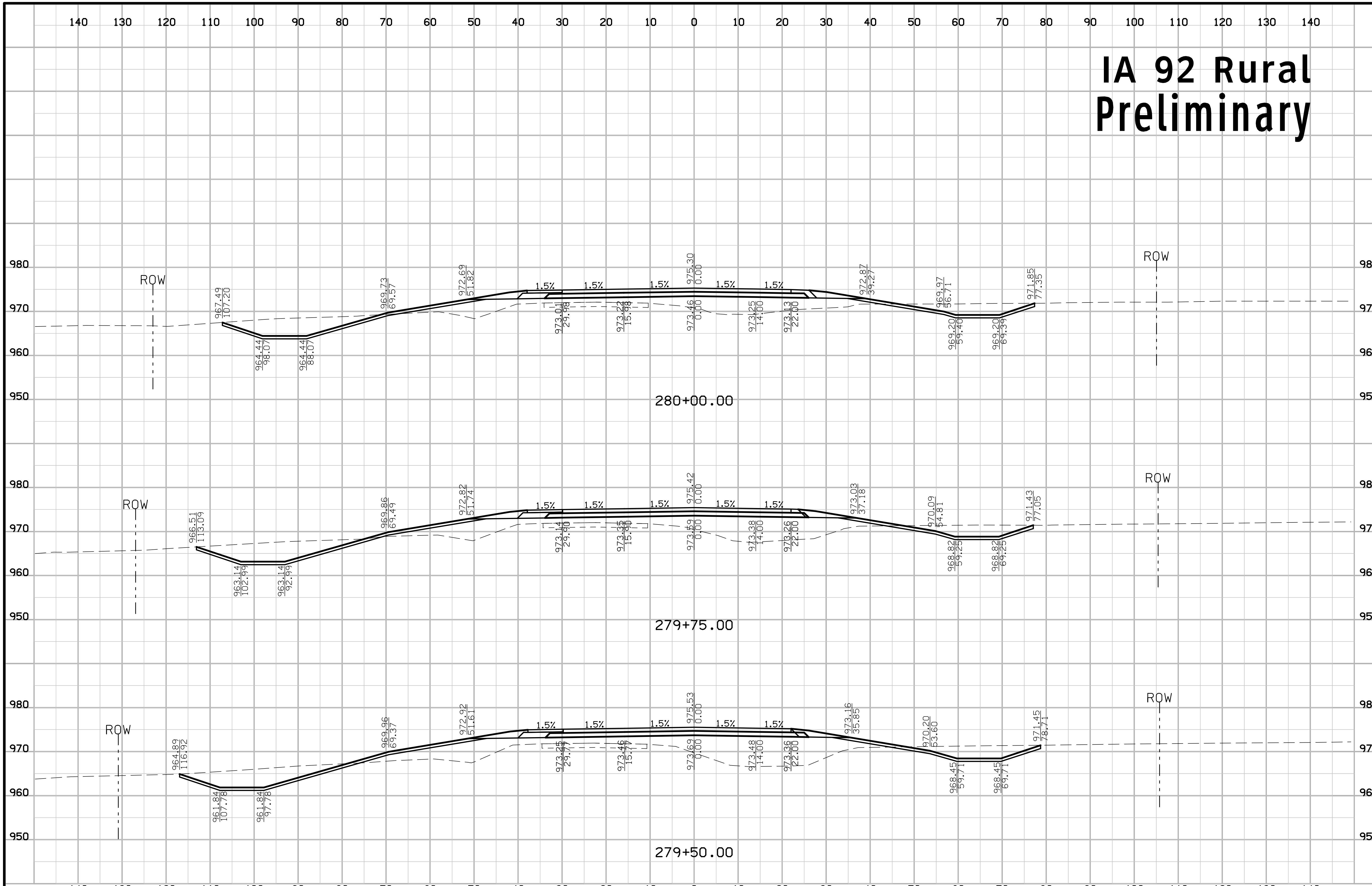

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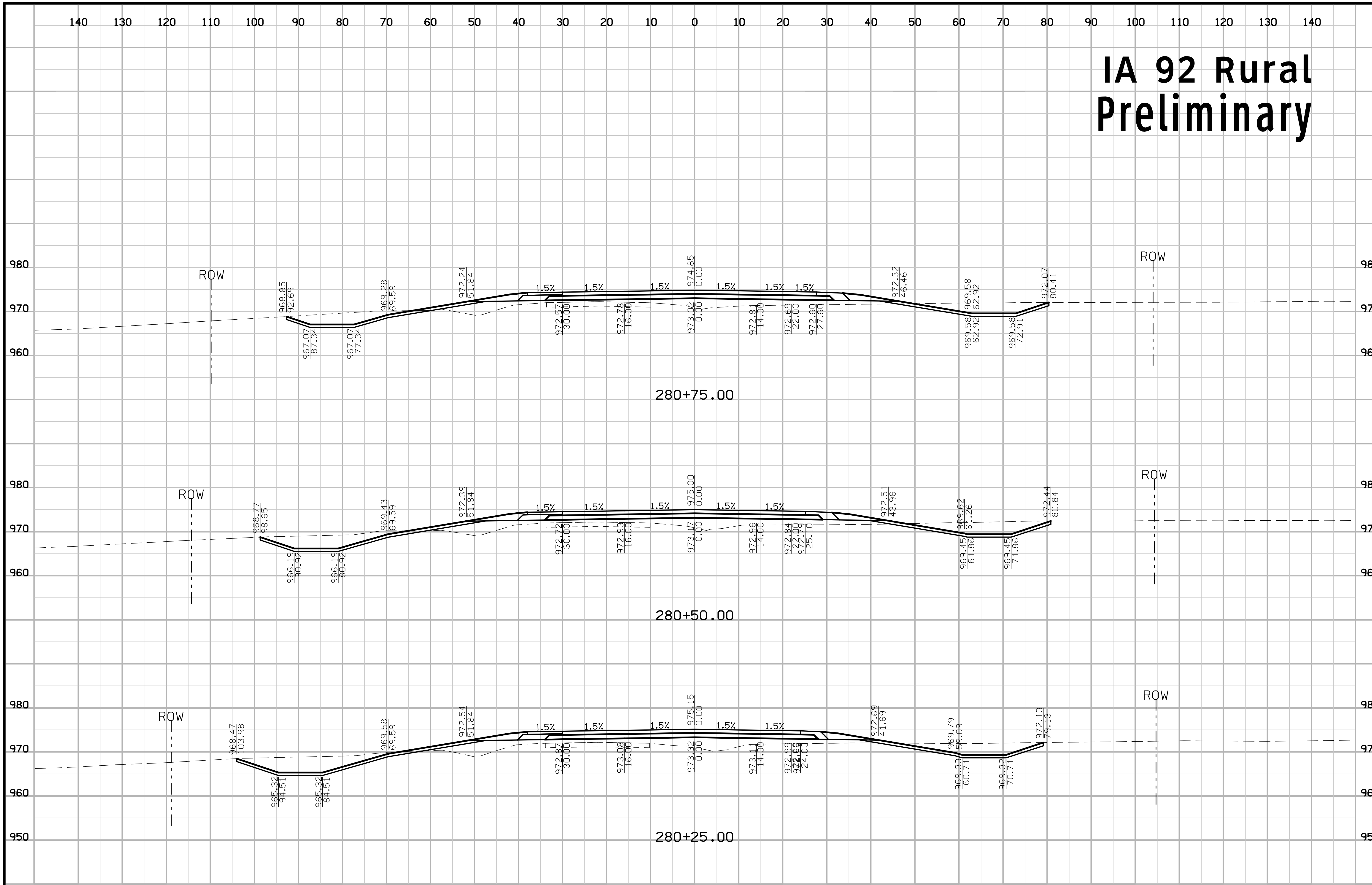

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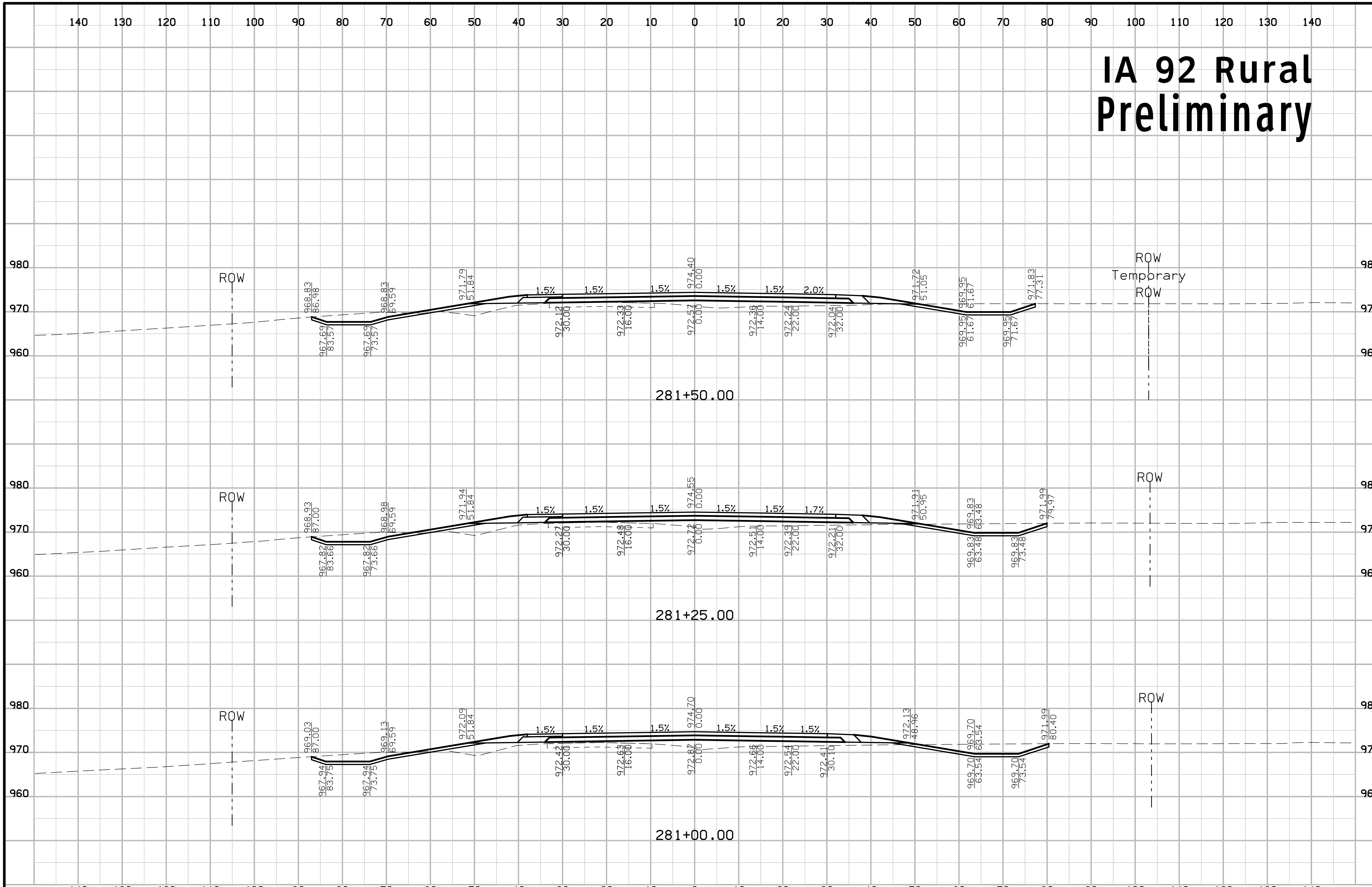
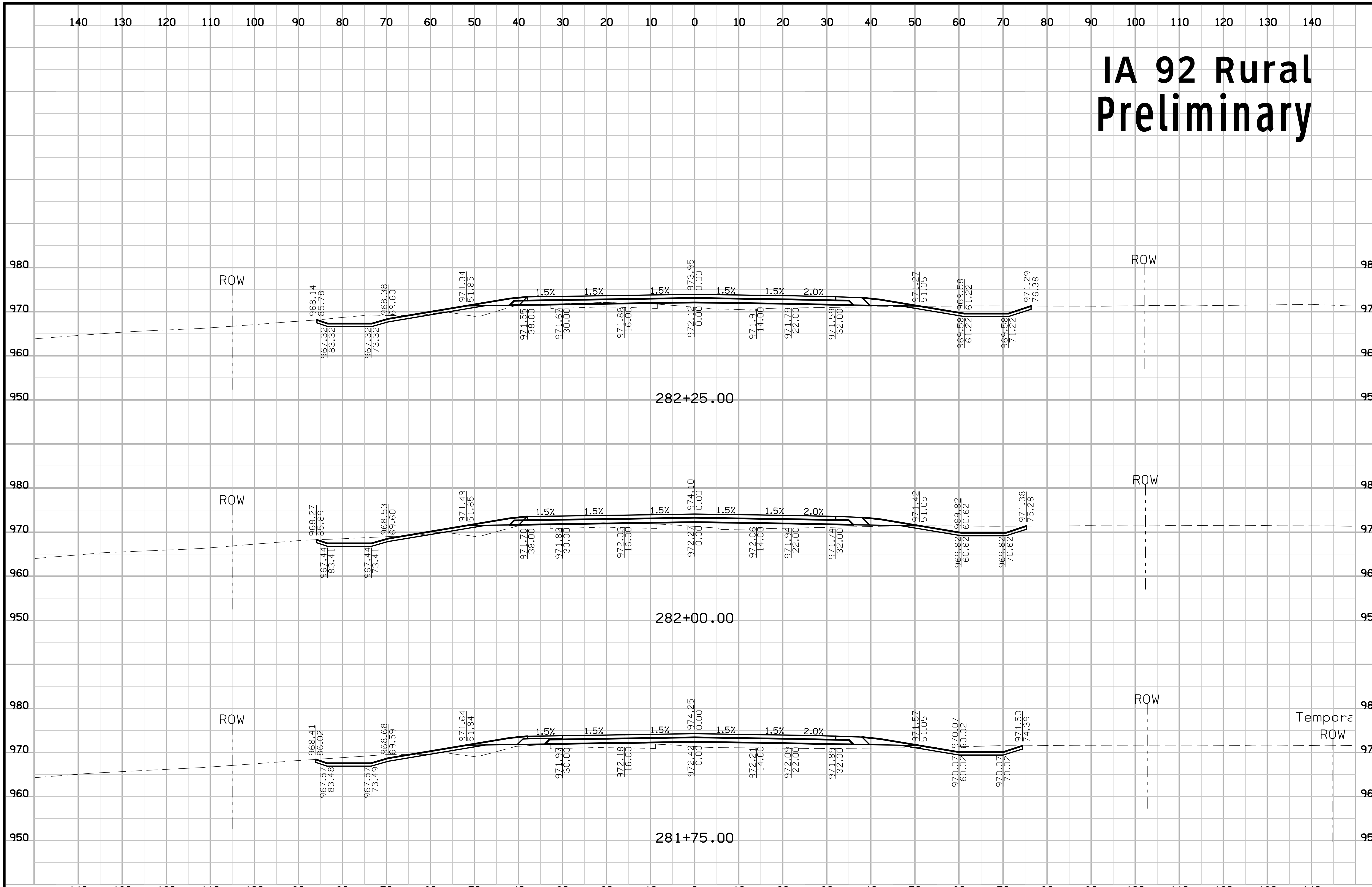
IA 92 Rural
Preliminary





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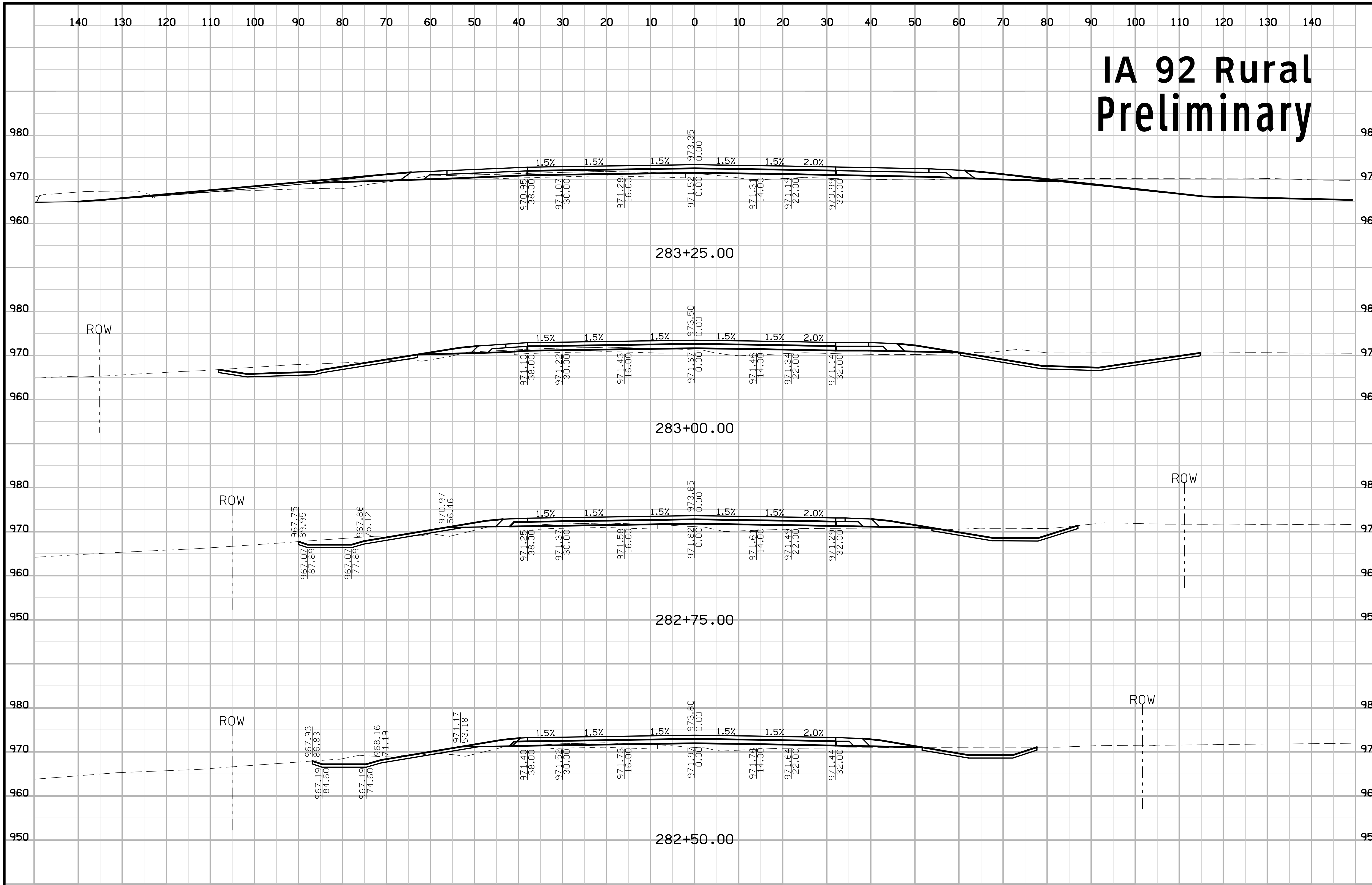

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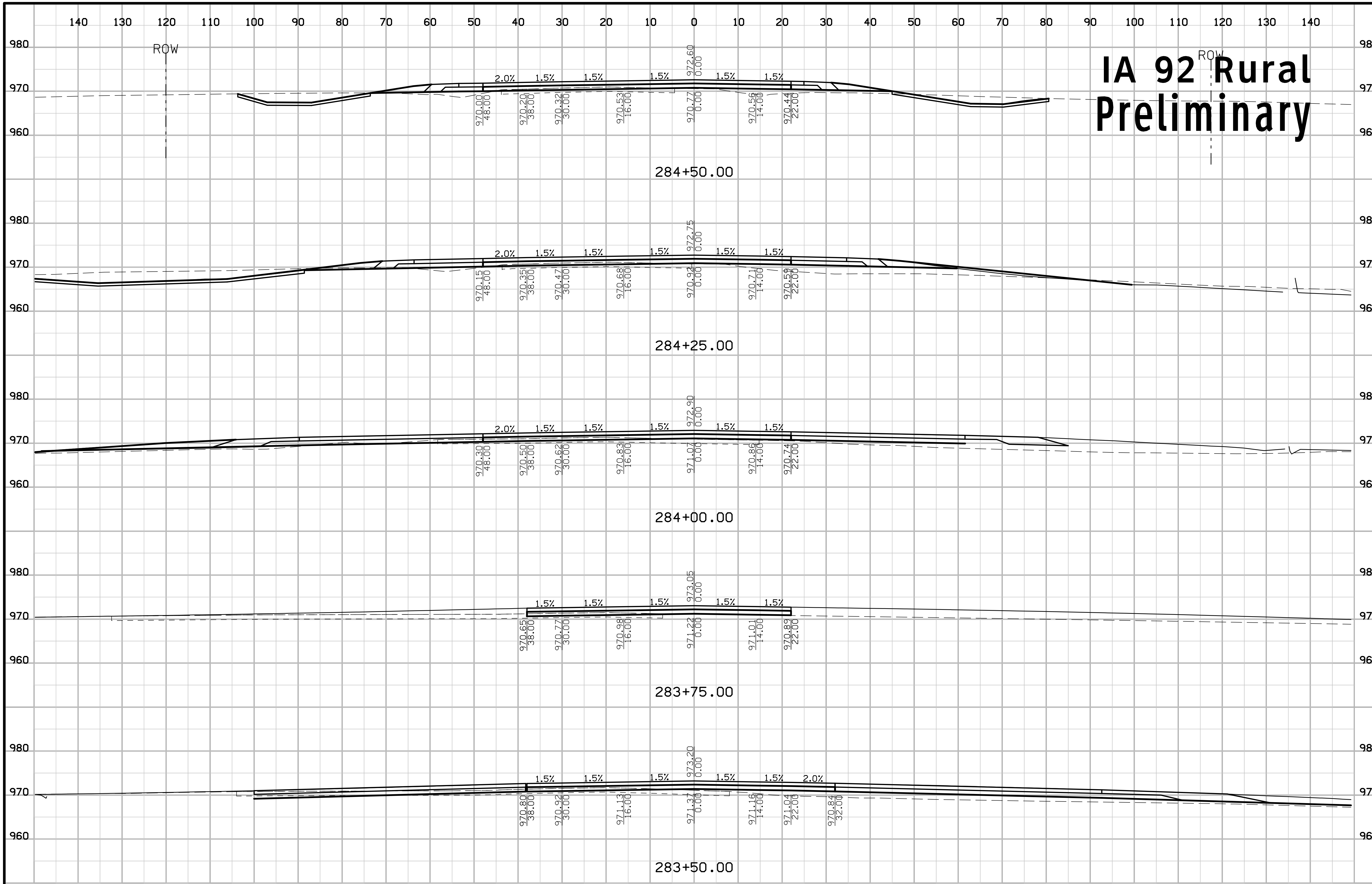
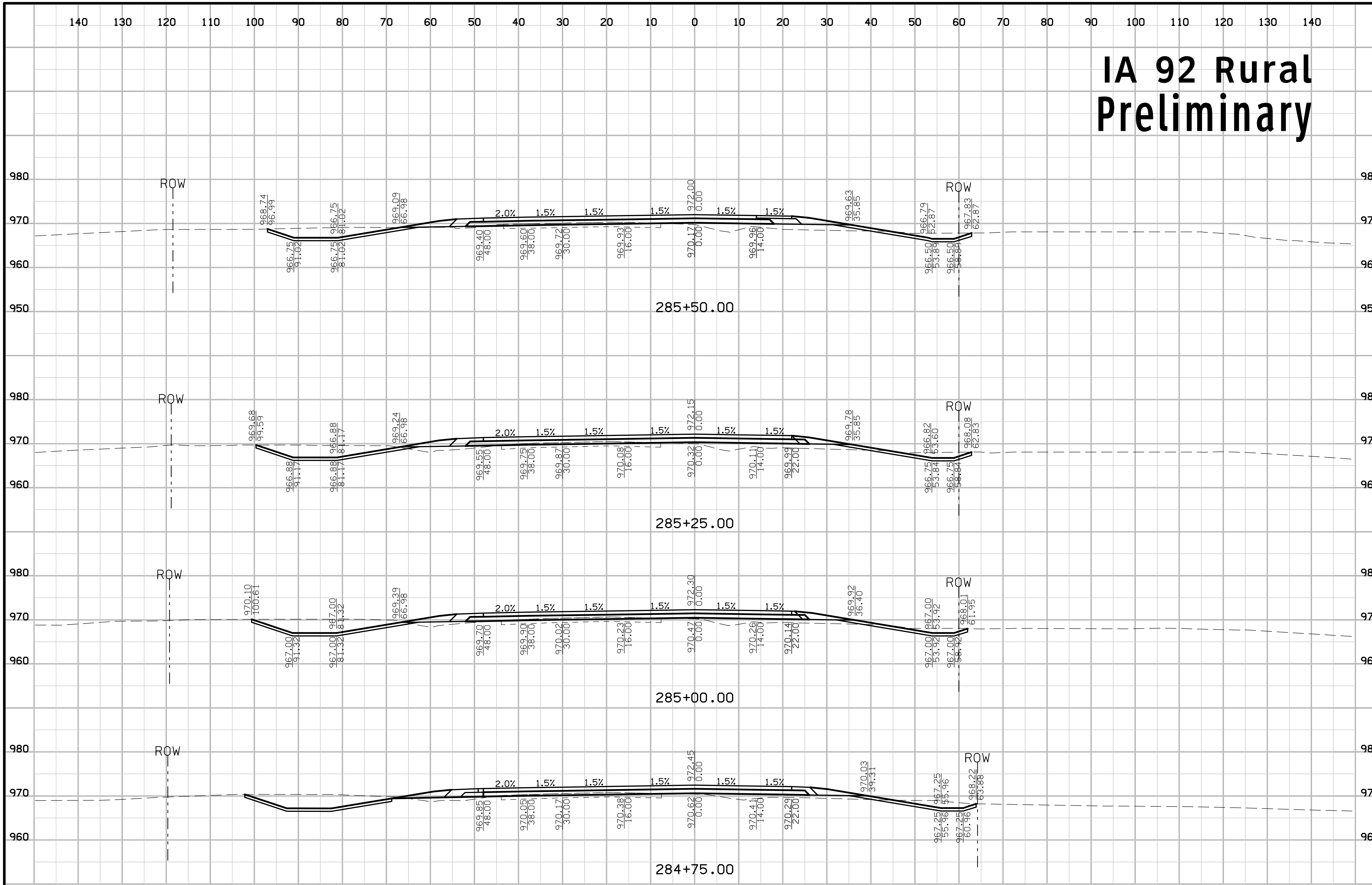


ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.38

IA 92 Rural
Preliminary



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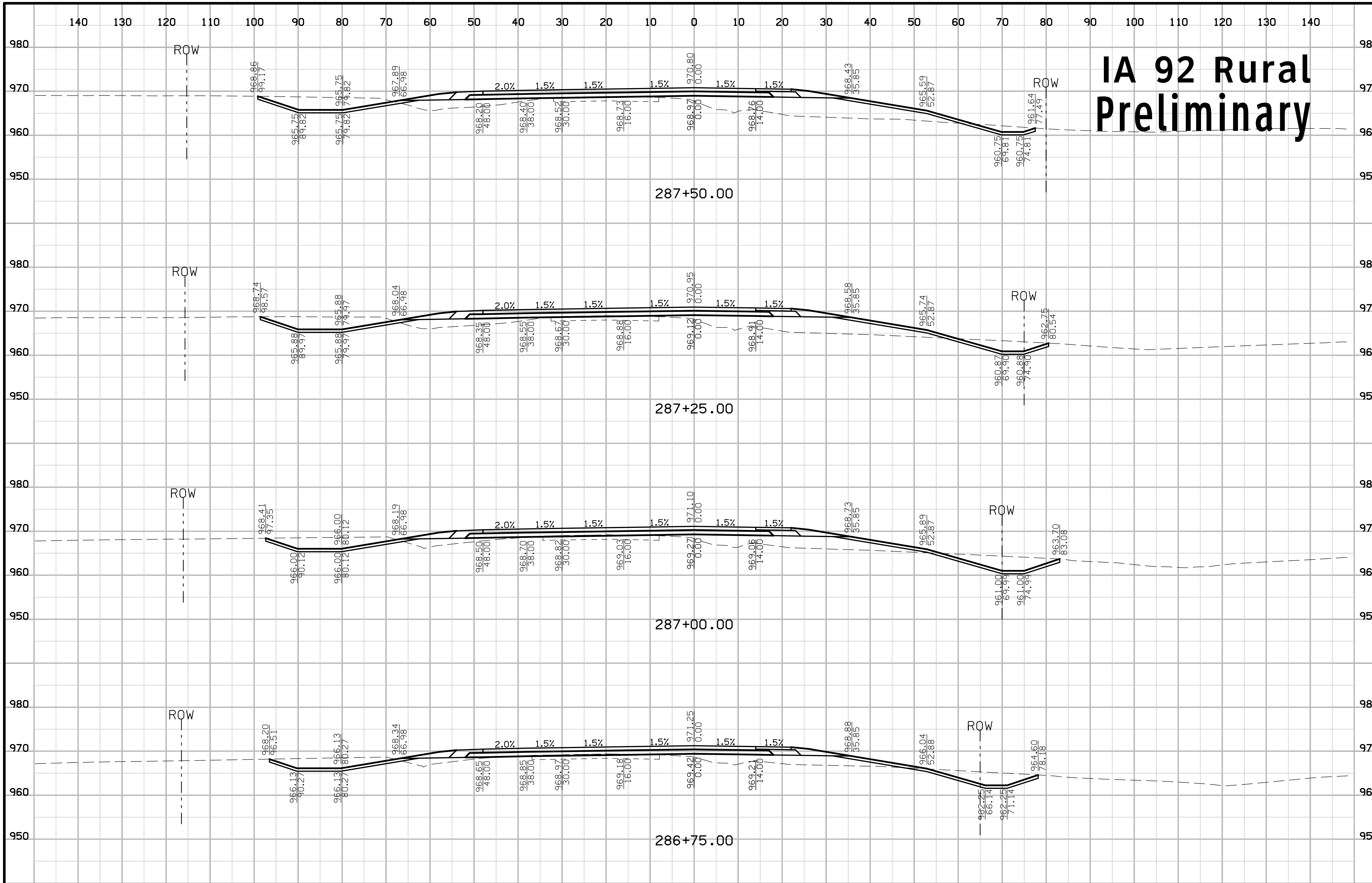

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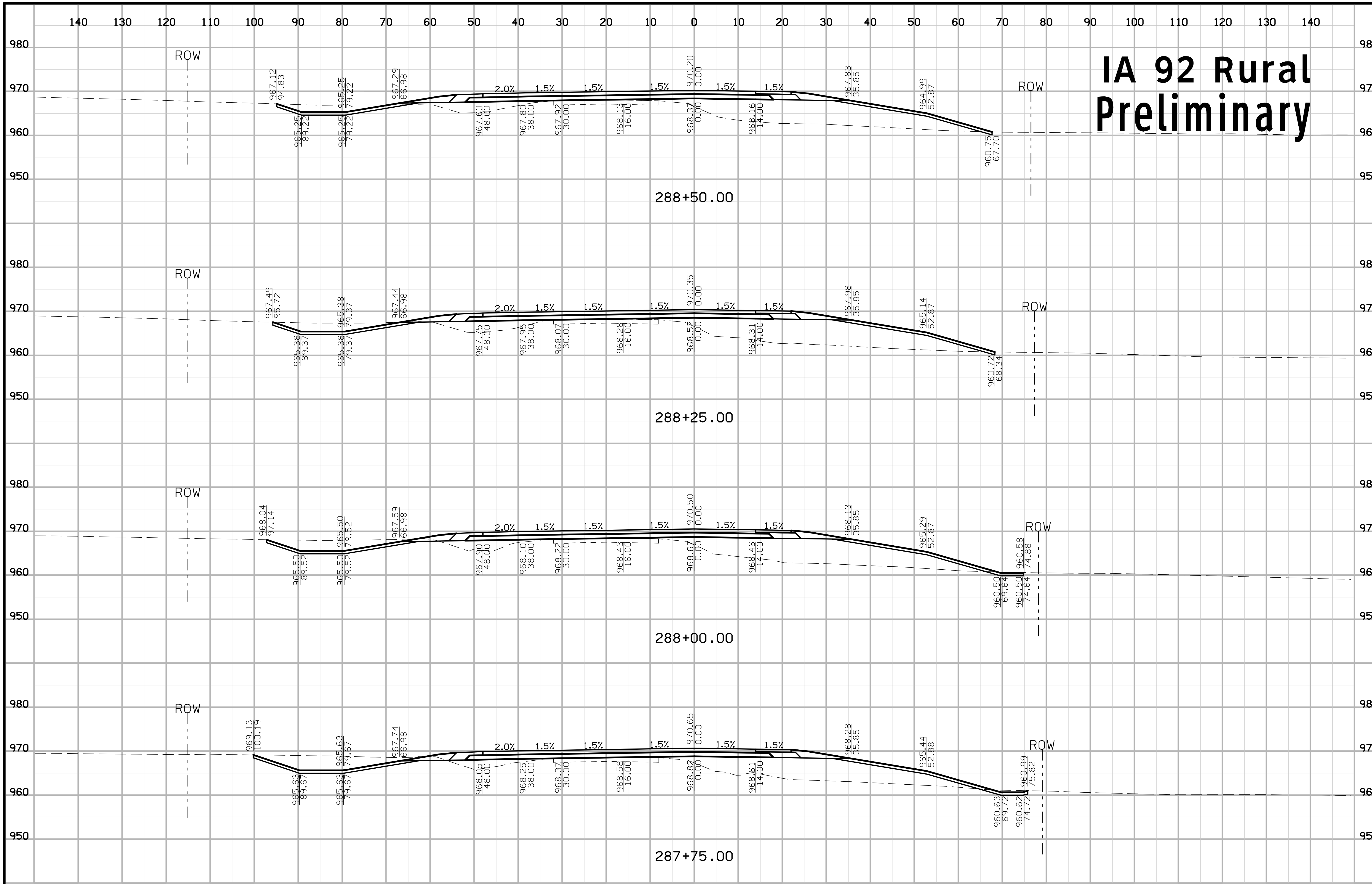

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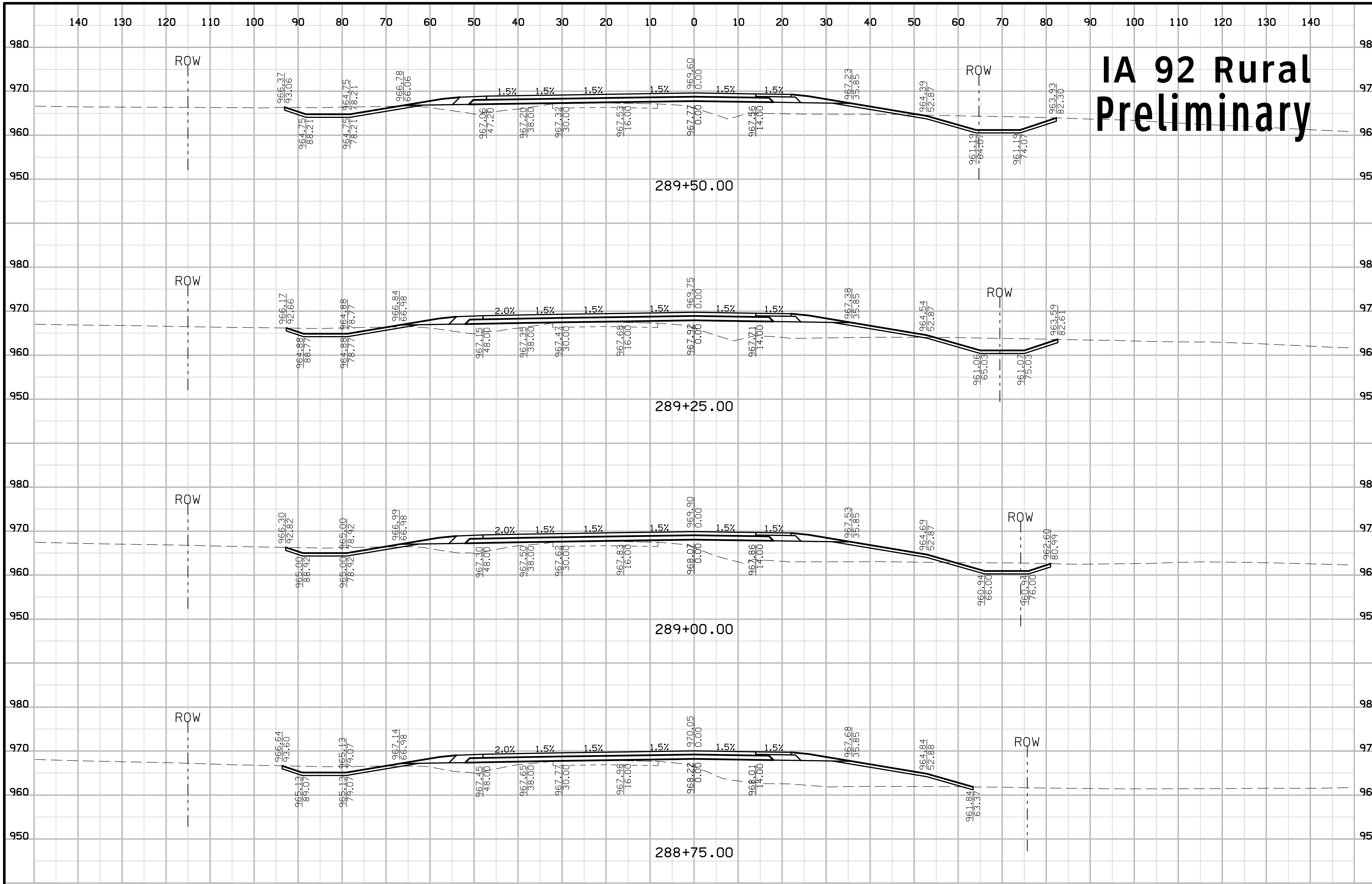

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.43

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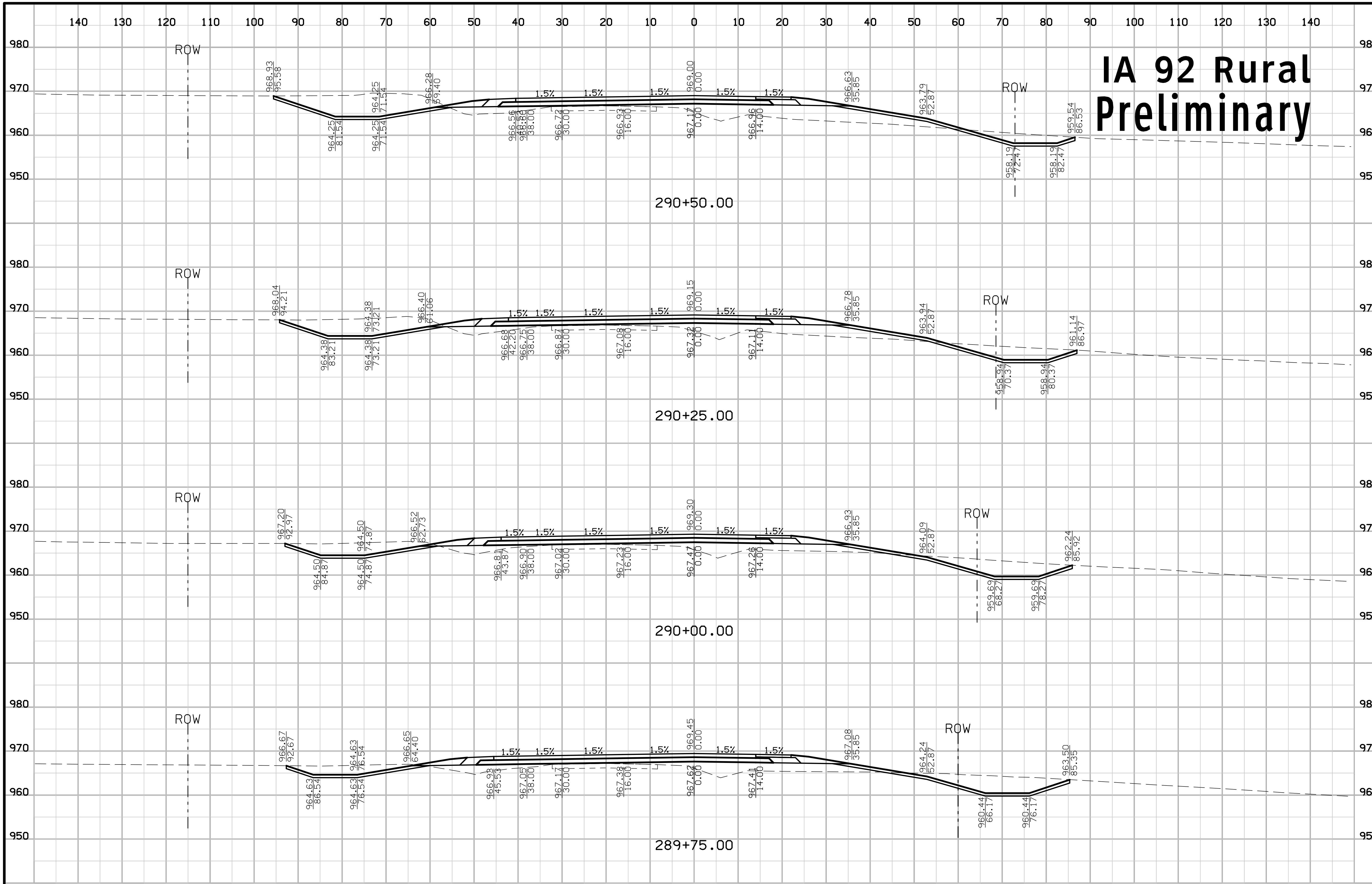
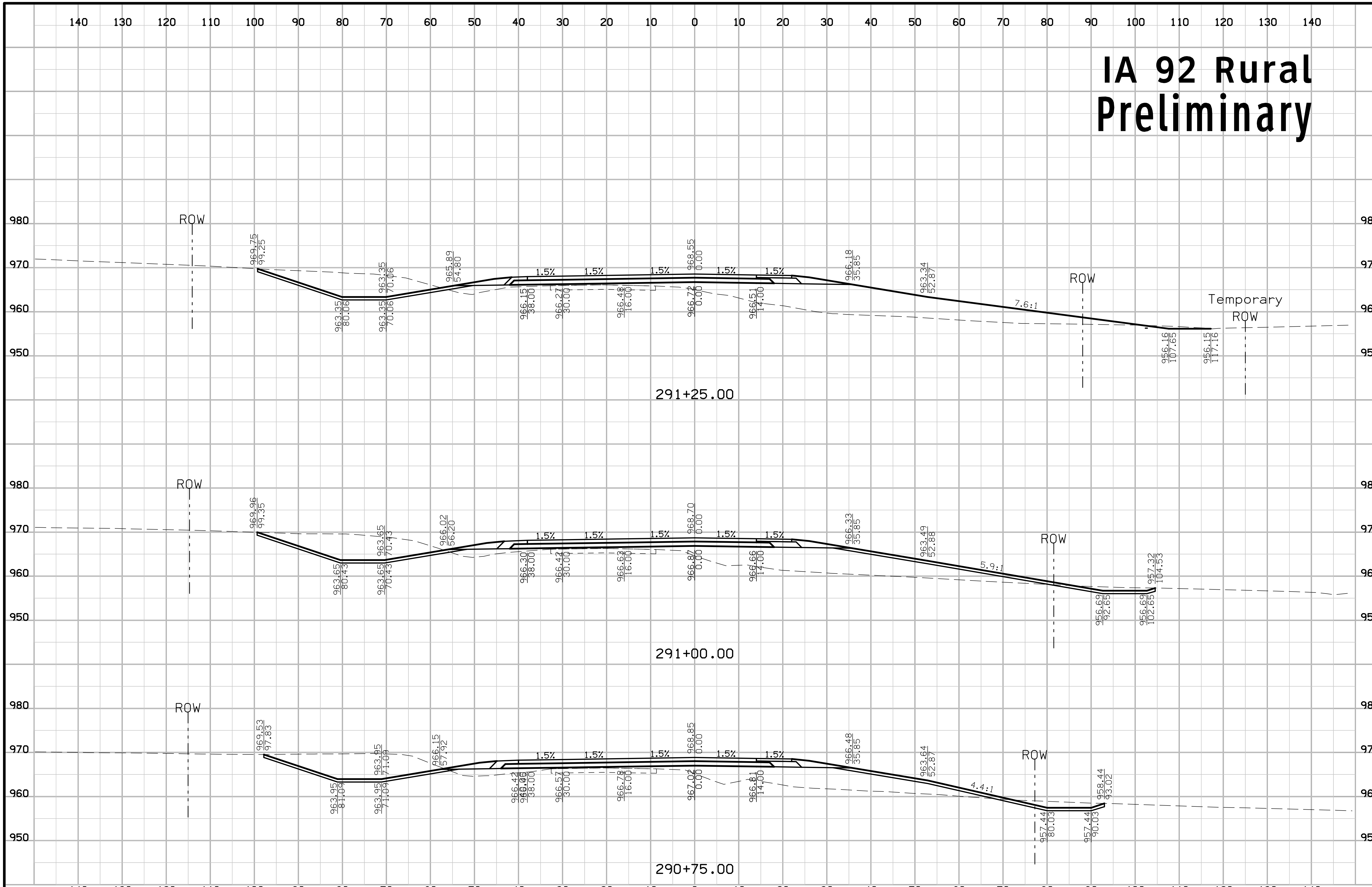


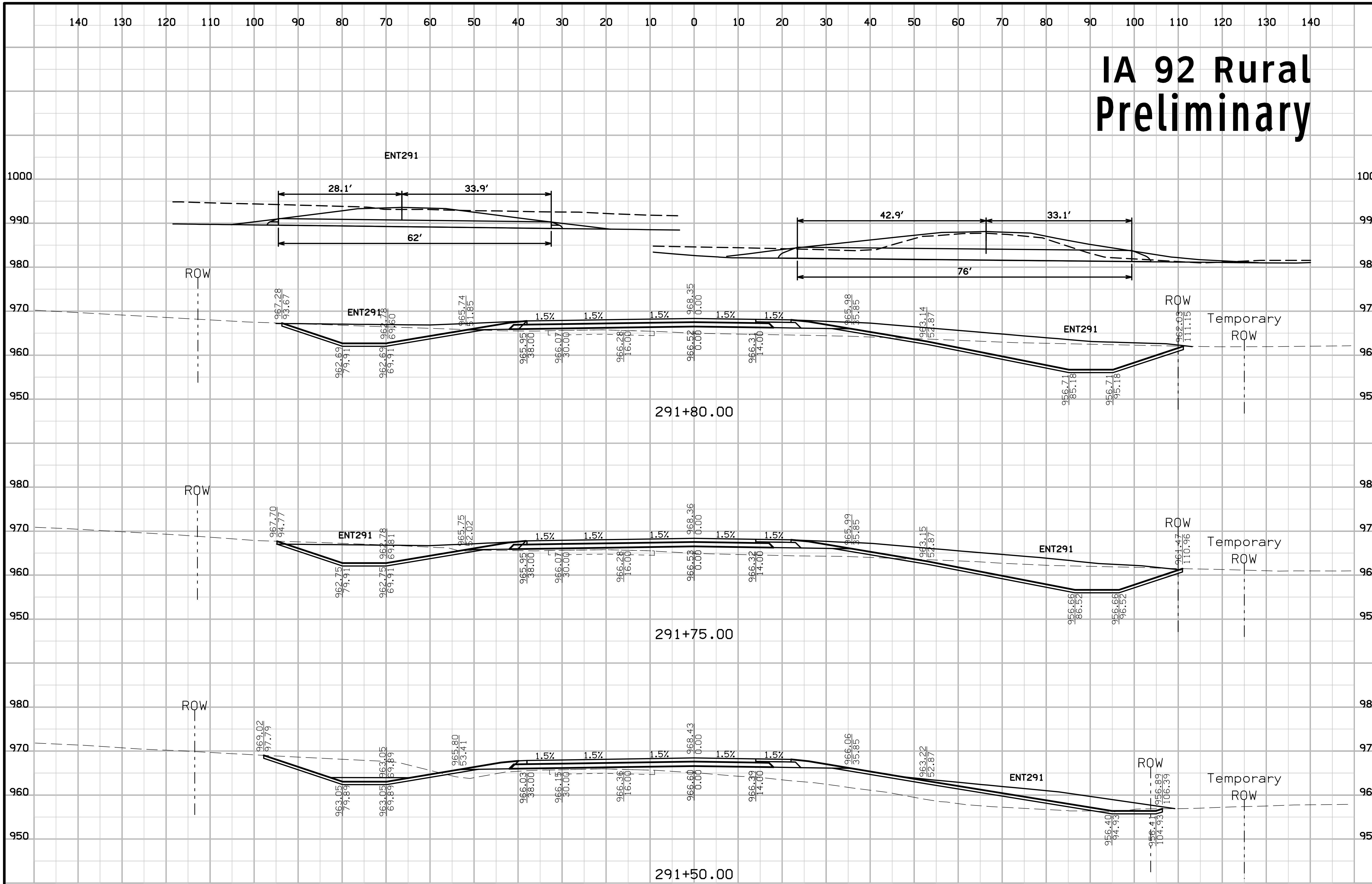
ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.44

IA 92 Rural Preliminary



ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.45

IA 92 Rural Preliminary



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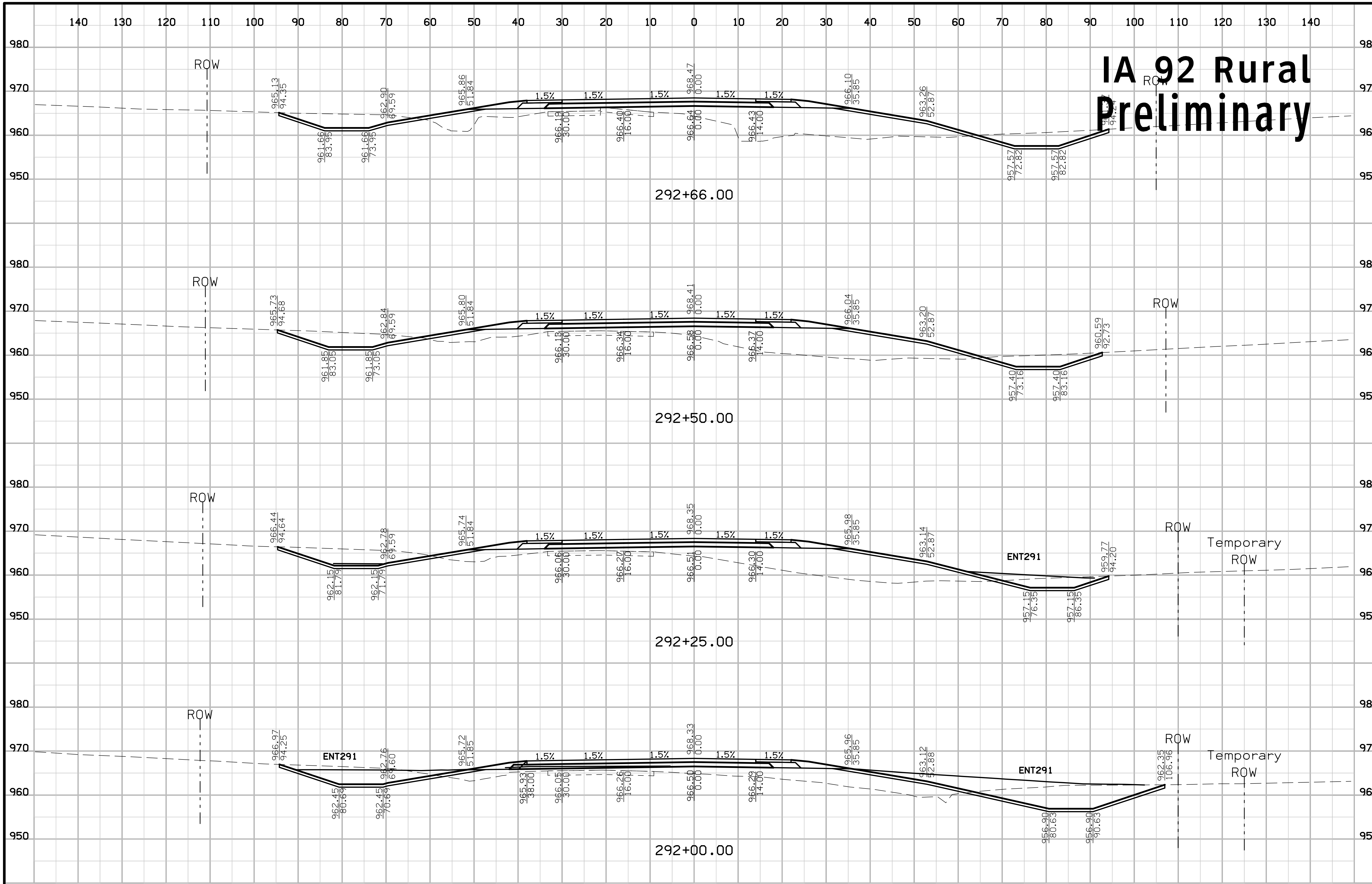

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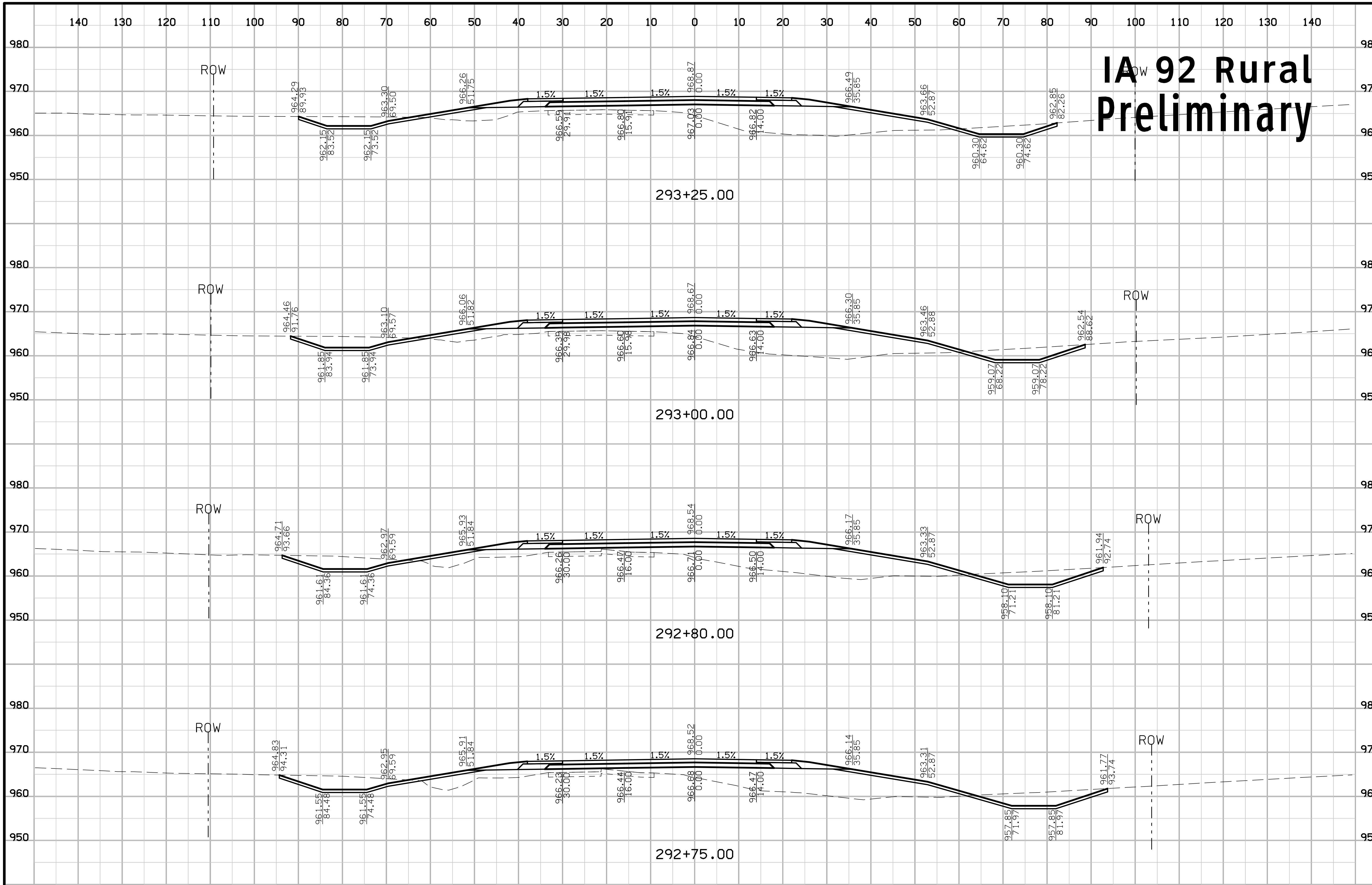

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.48

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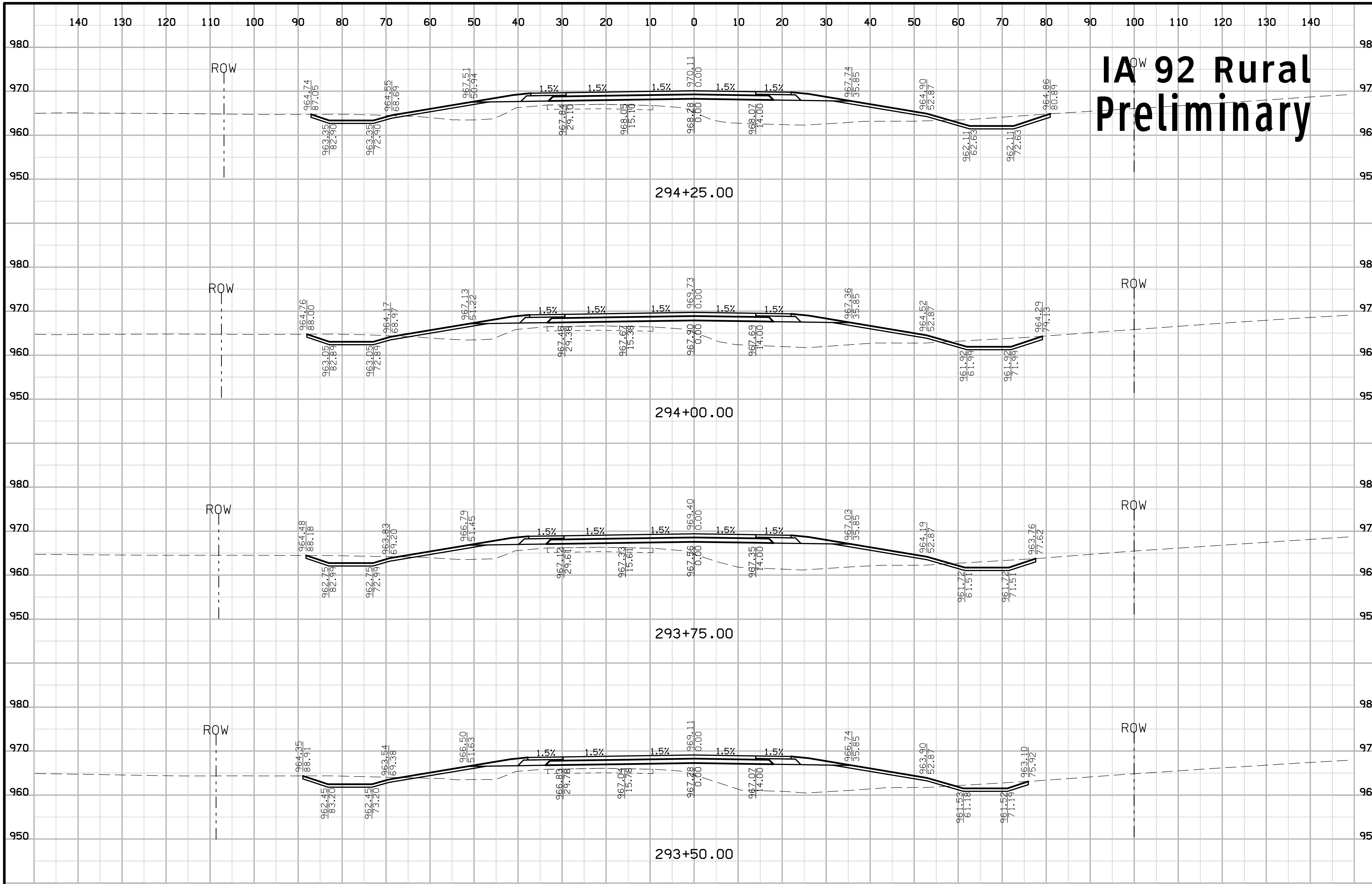

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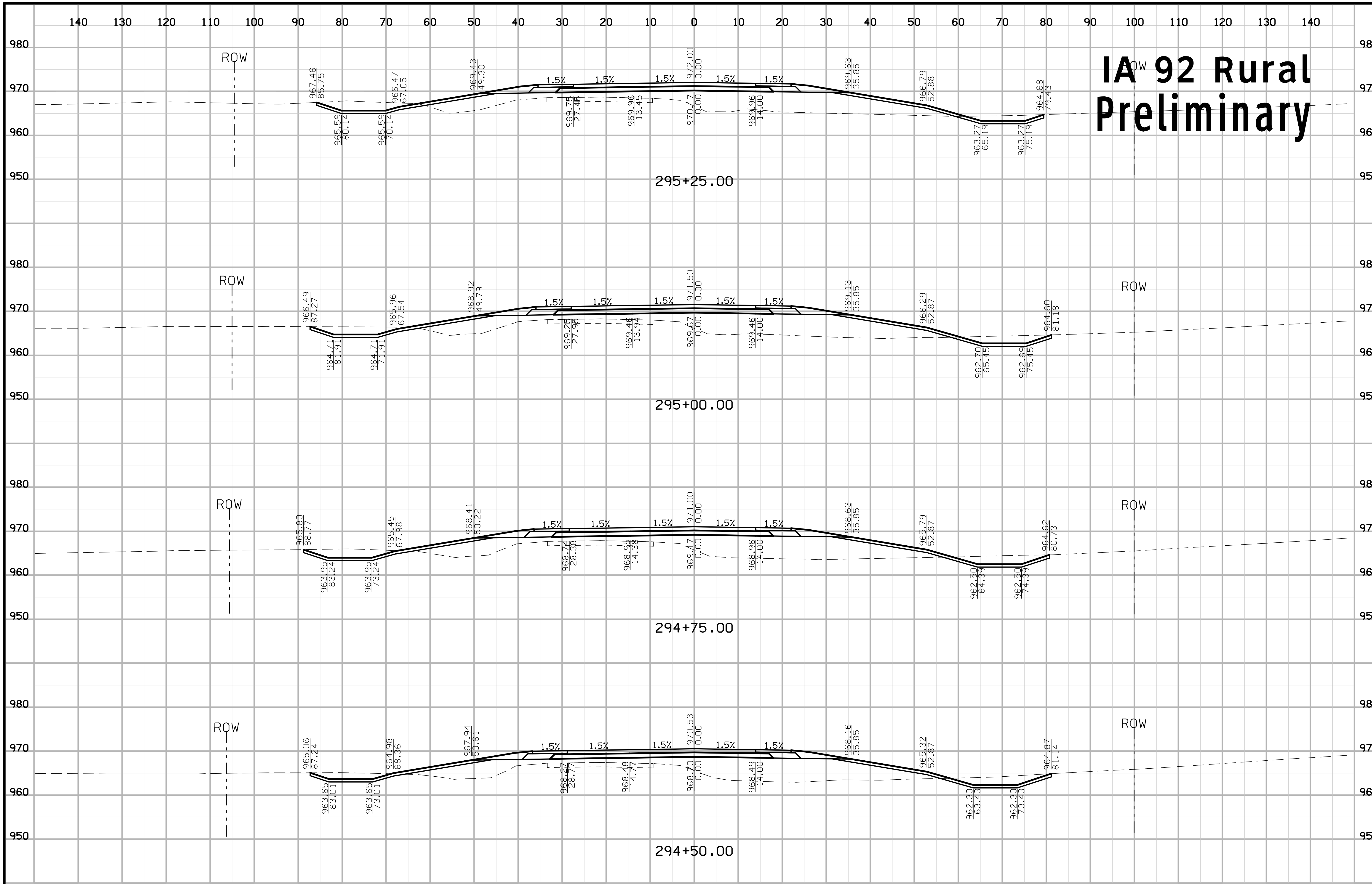
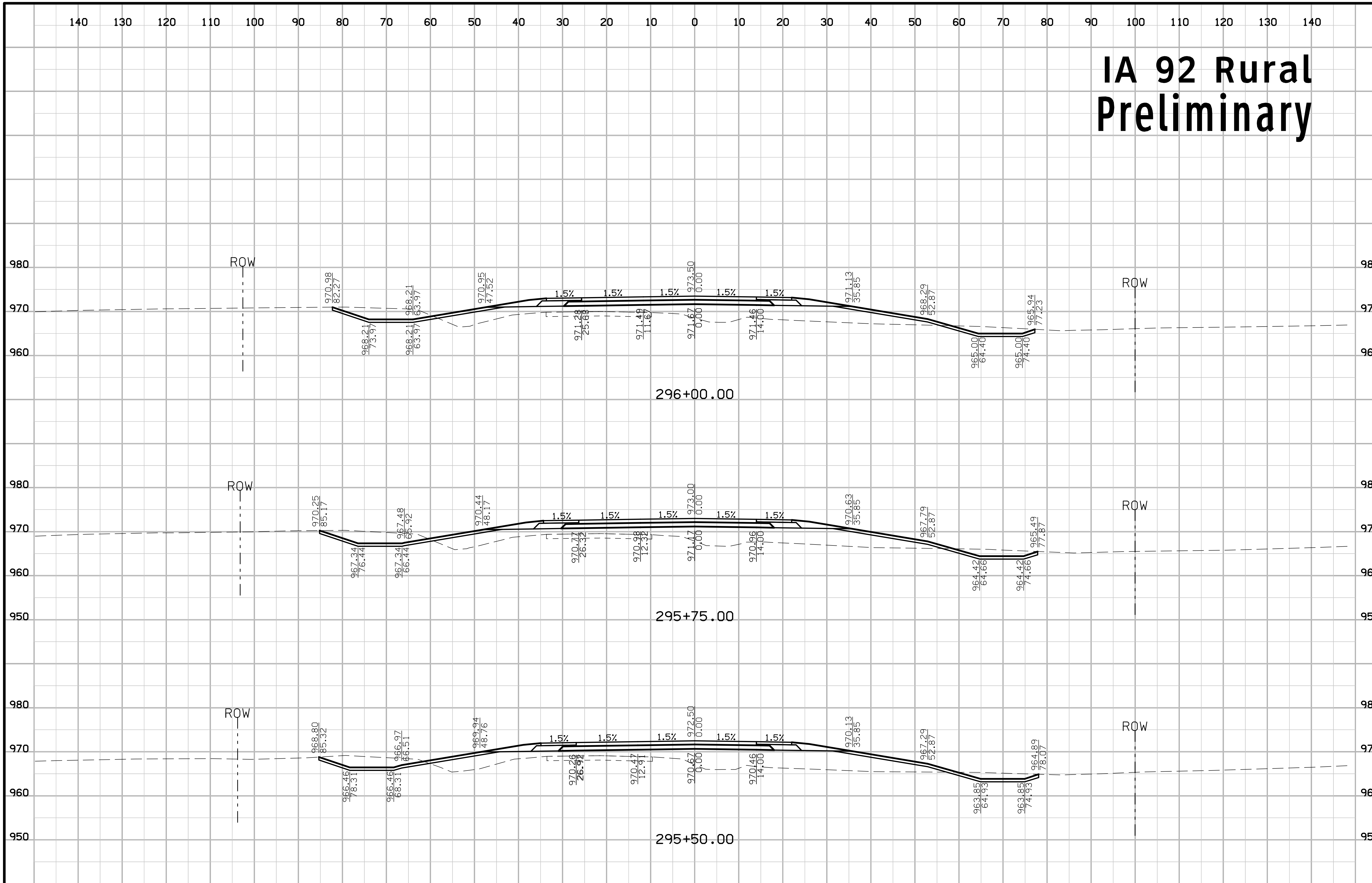


ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER	W.50

IA 92 Rural
Preliminary



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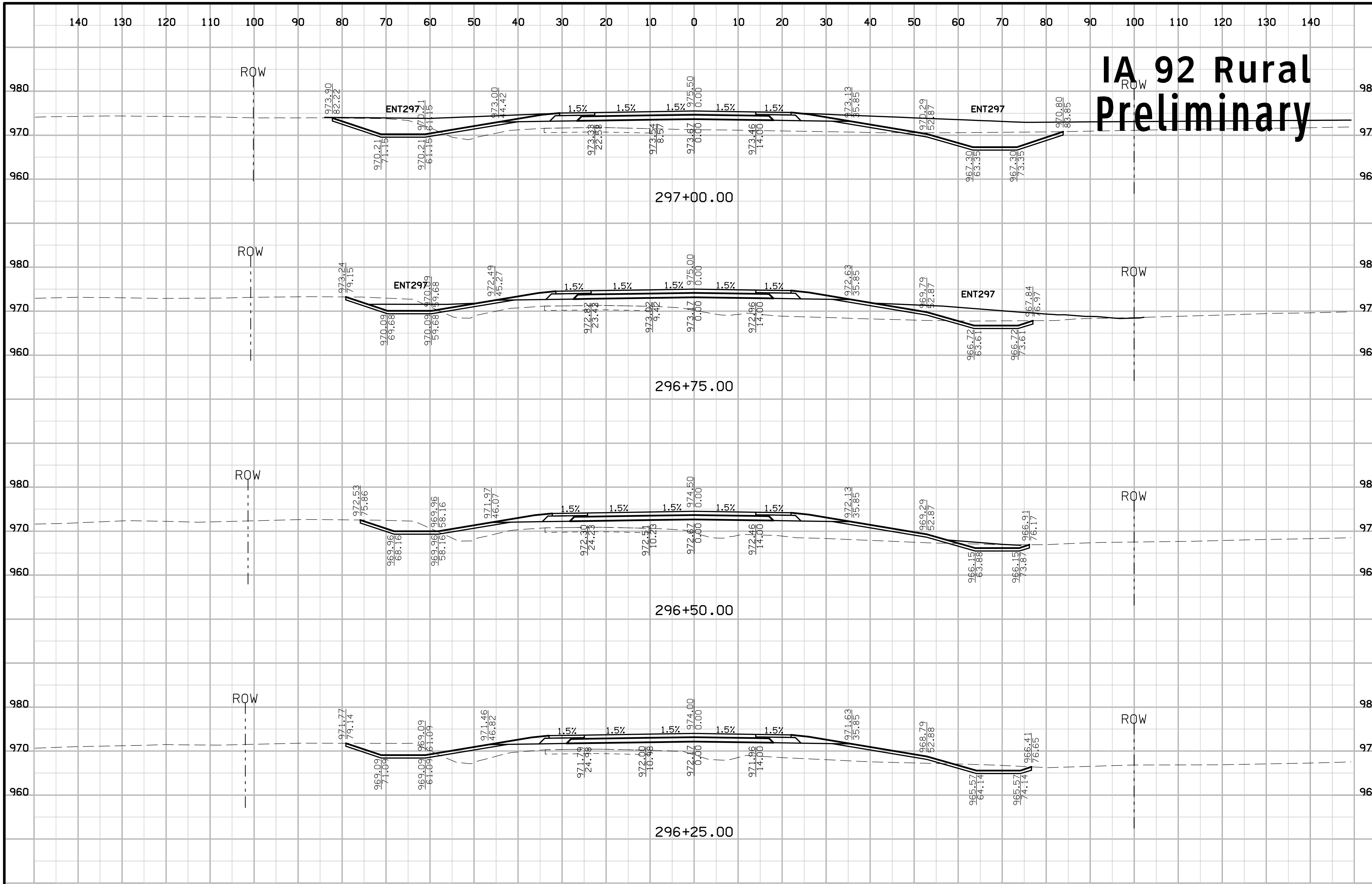

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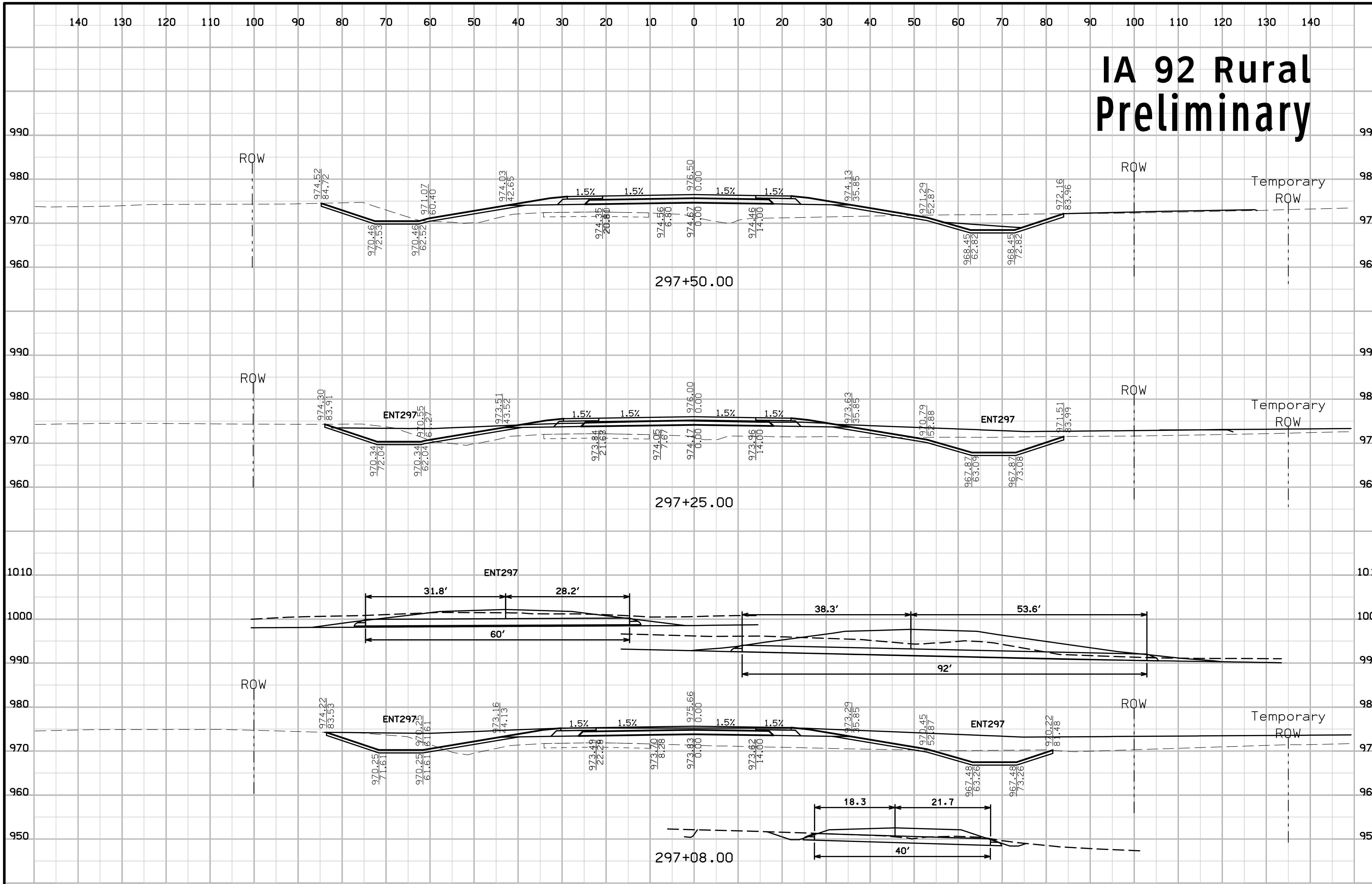

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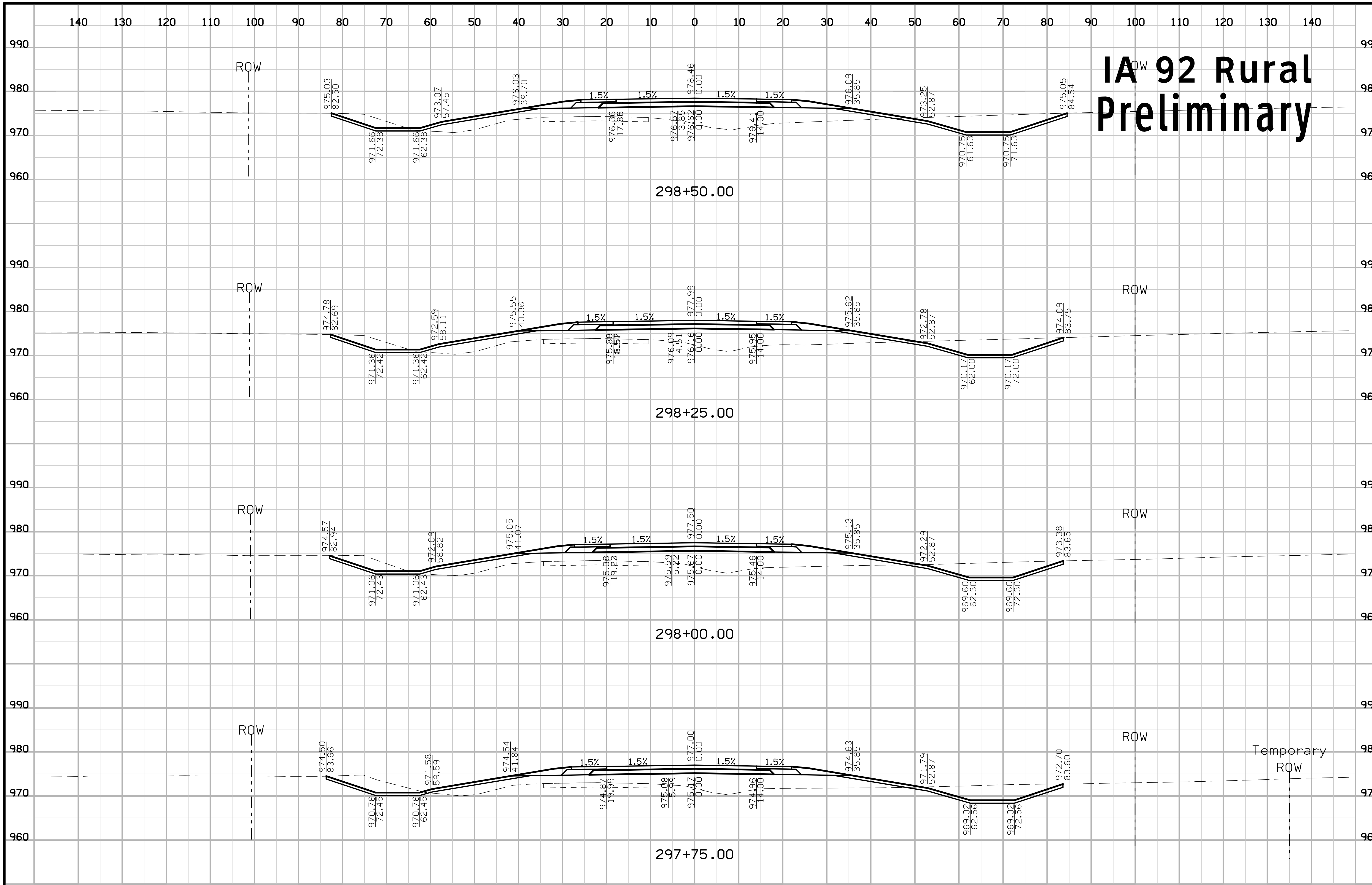

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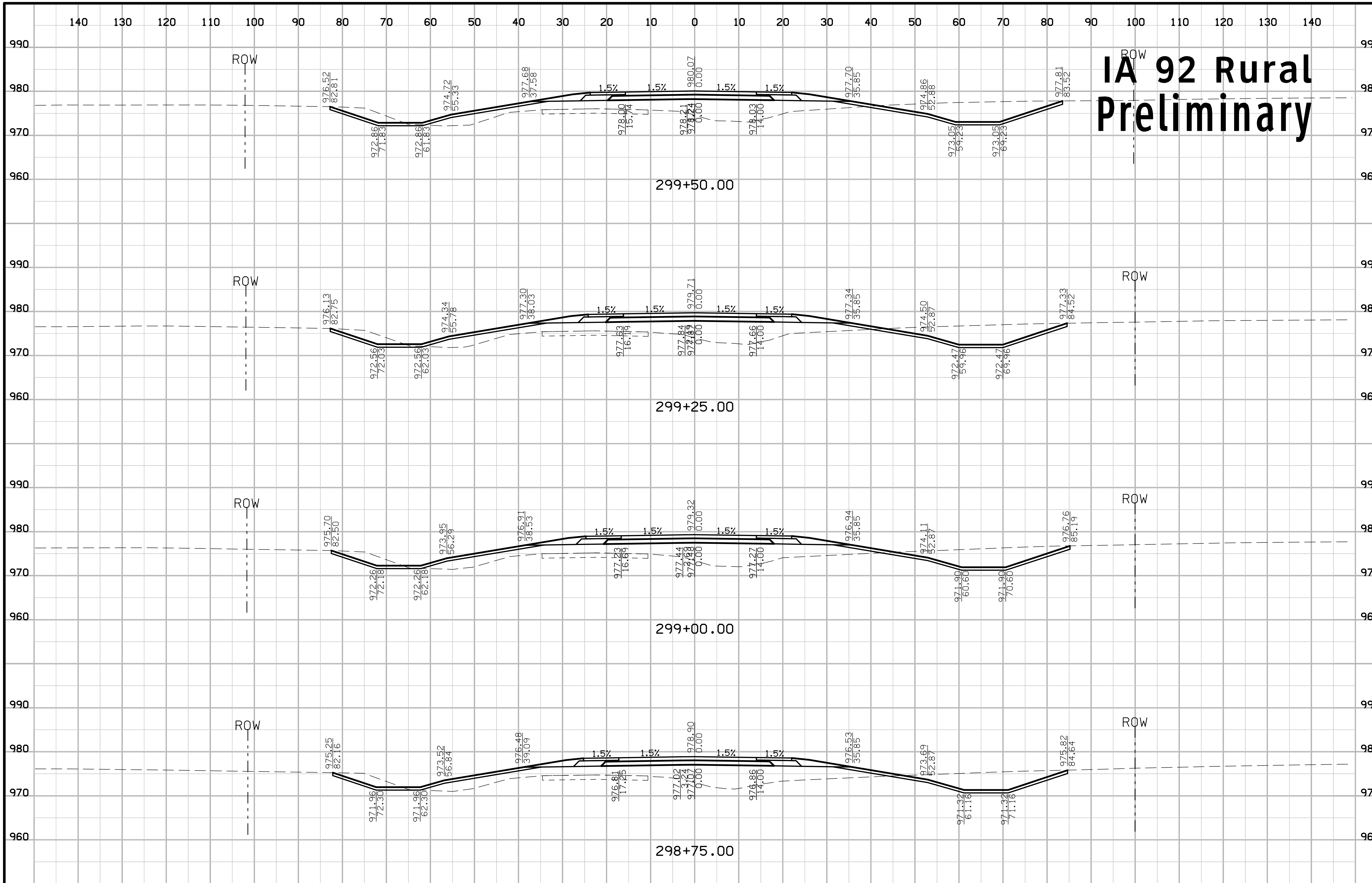

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.55

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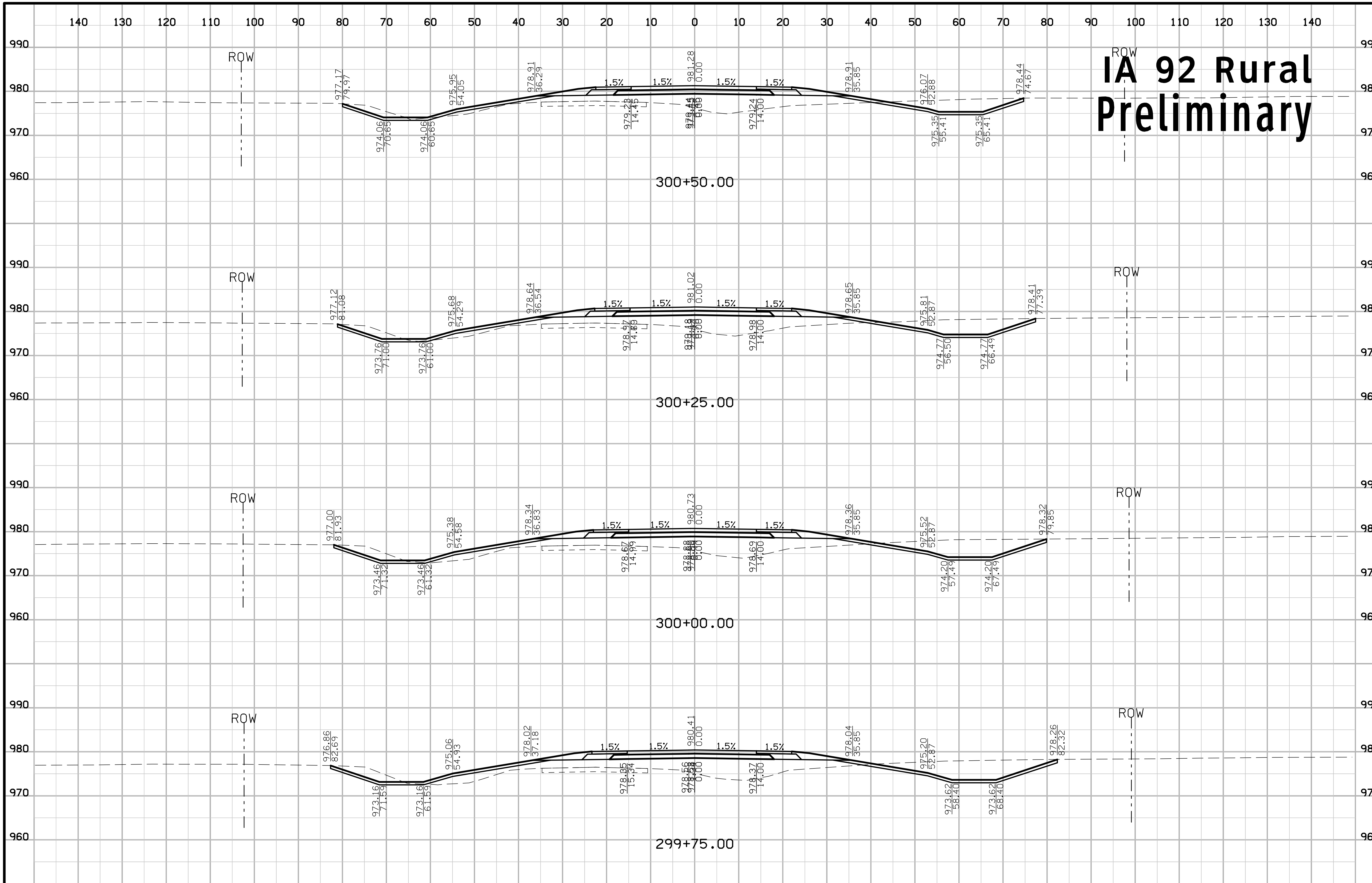

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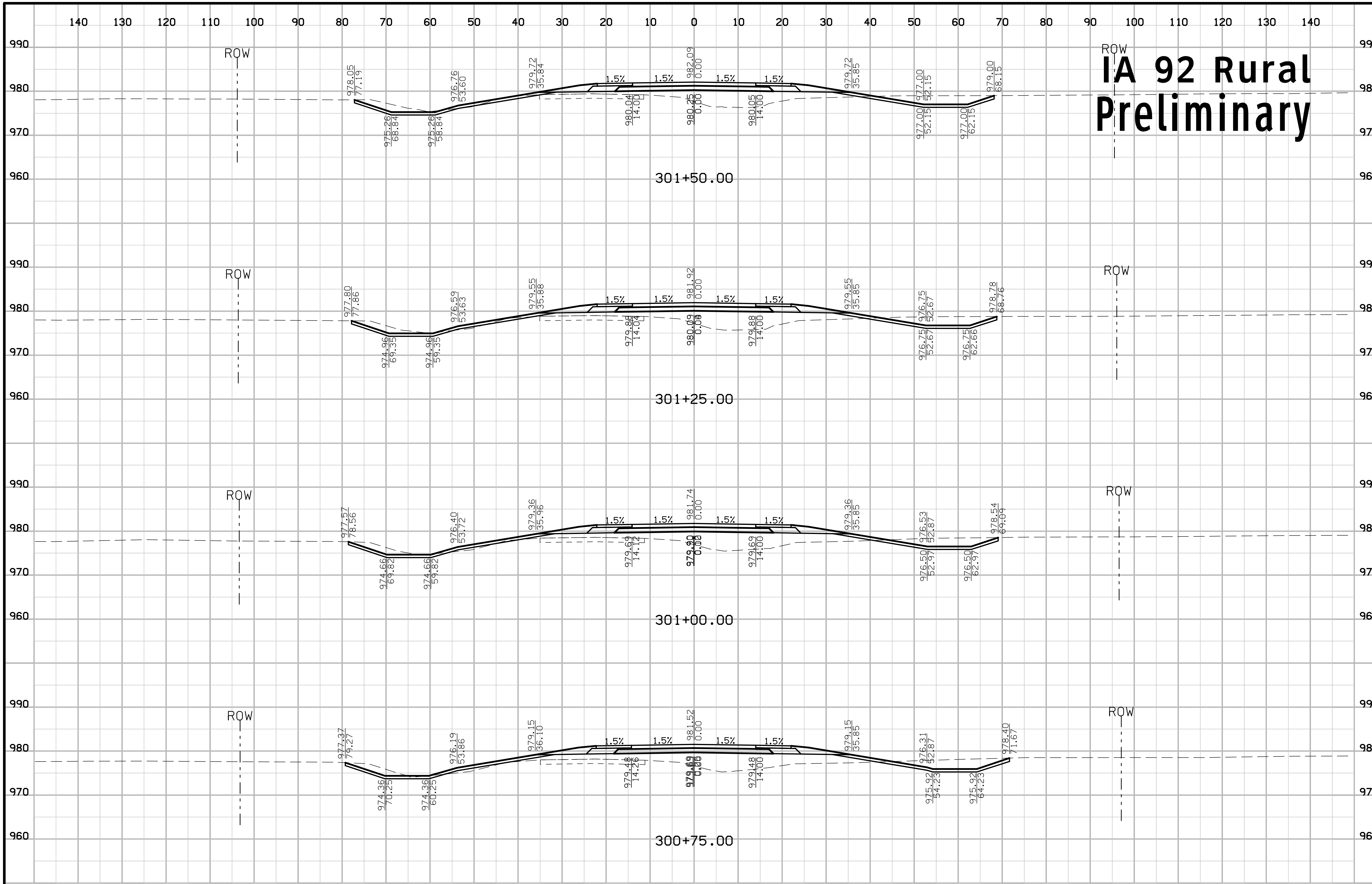
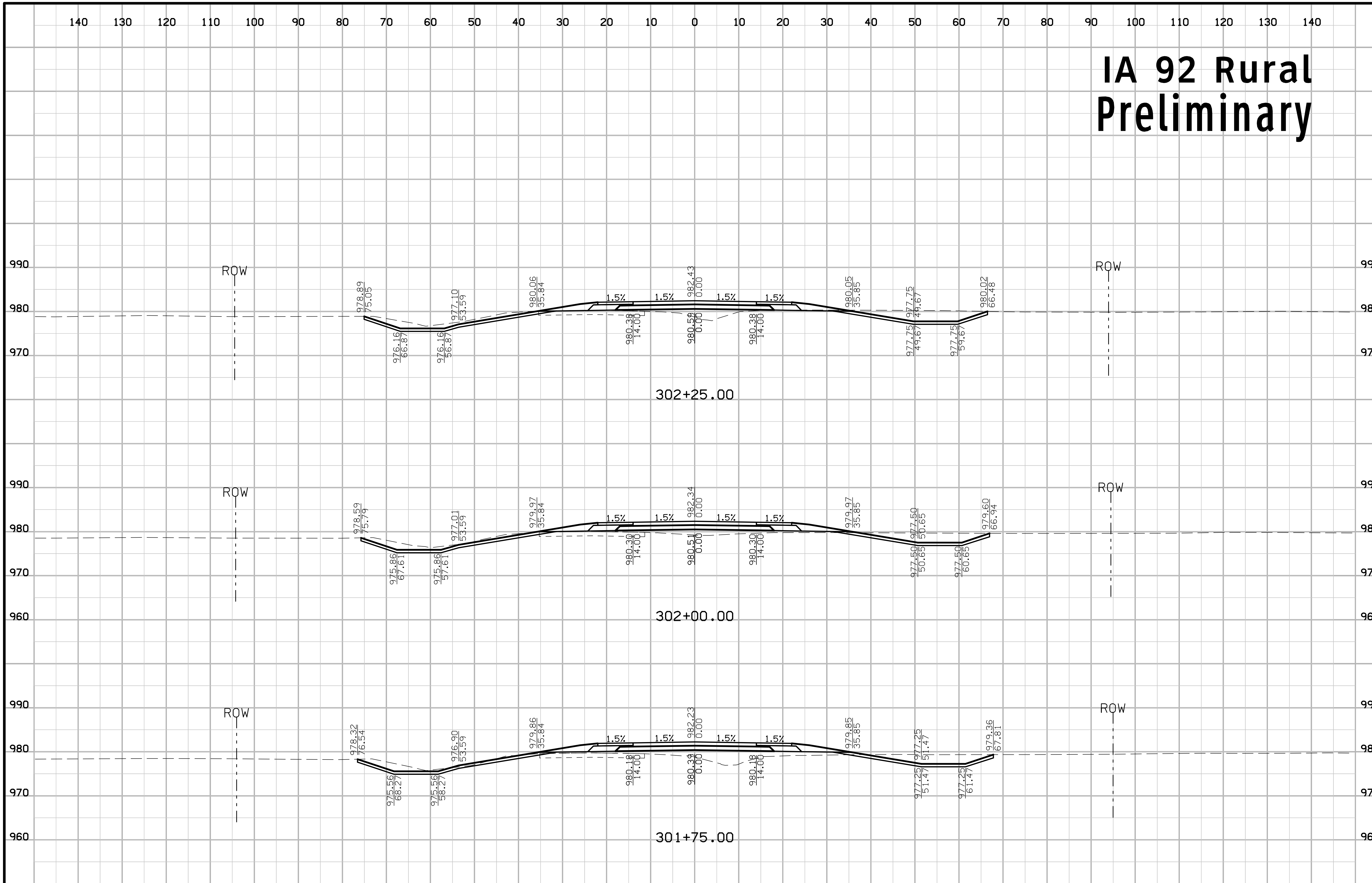


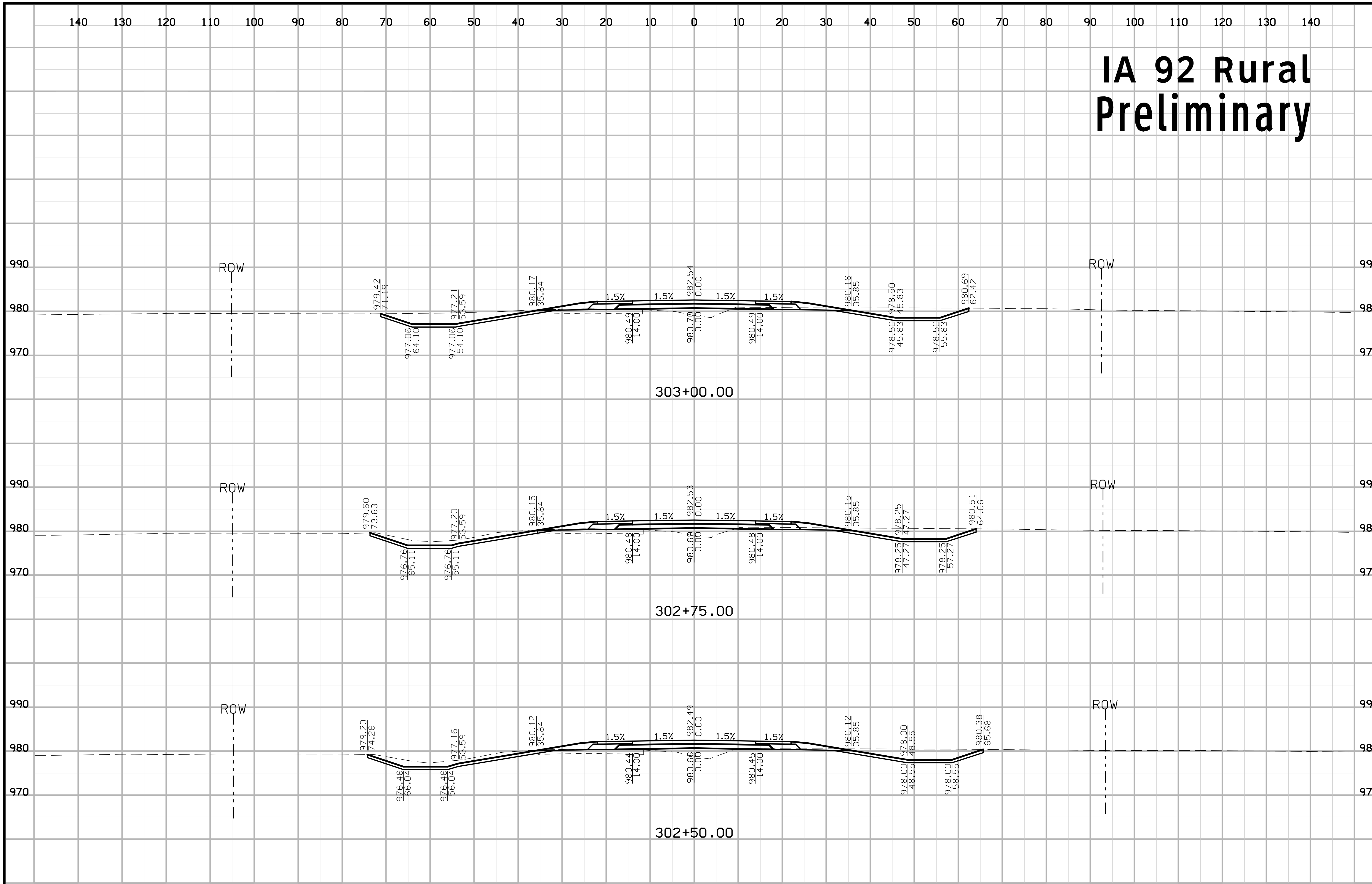
ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.57	

IA 92 Rural Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.58

IA 92 Rural
Preliminary



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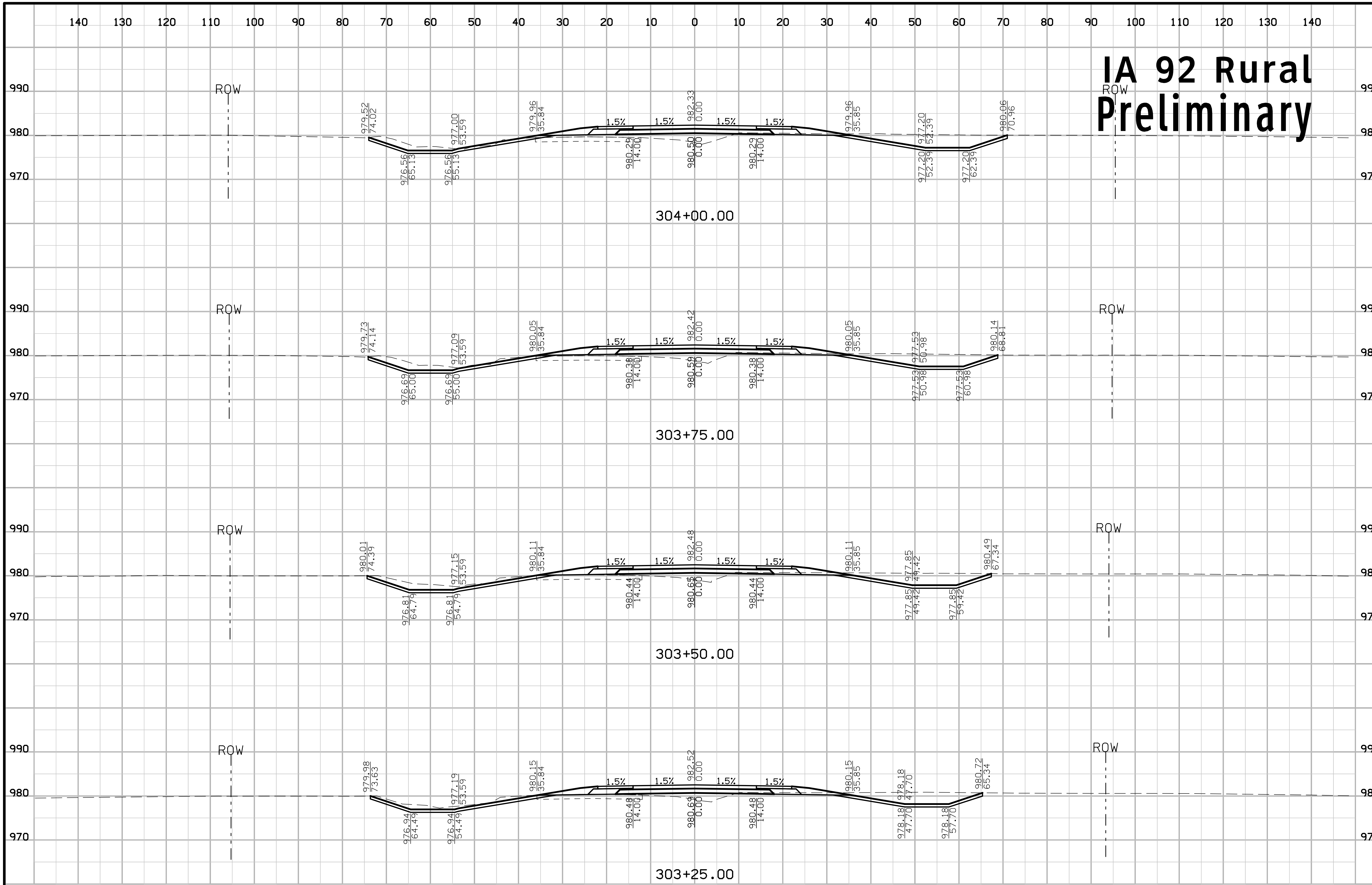
IA 92 Rural Preliminary



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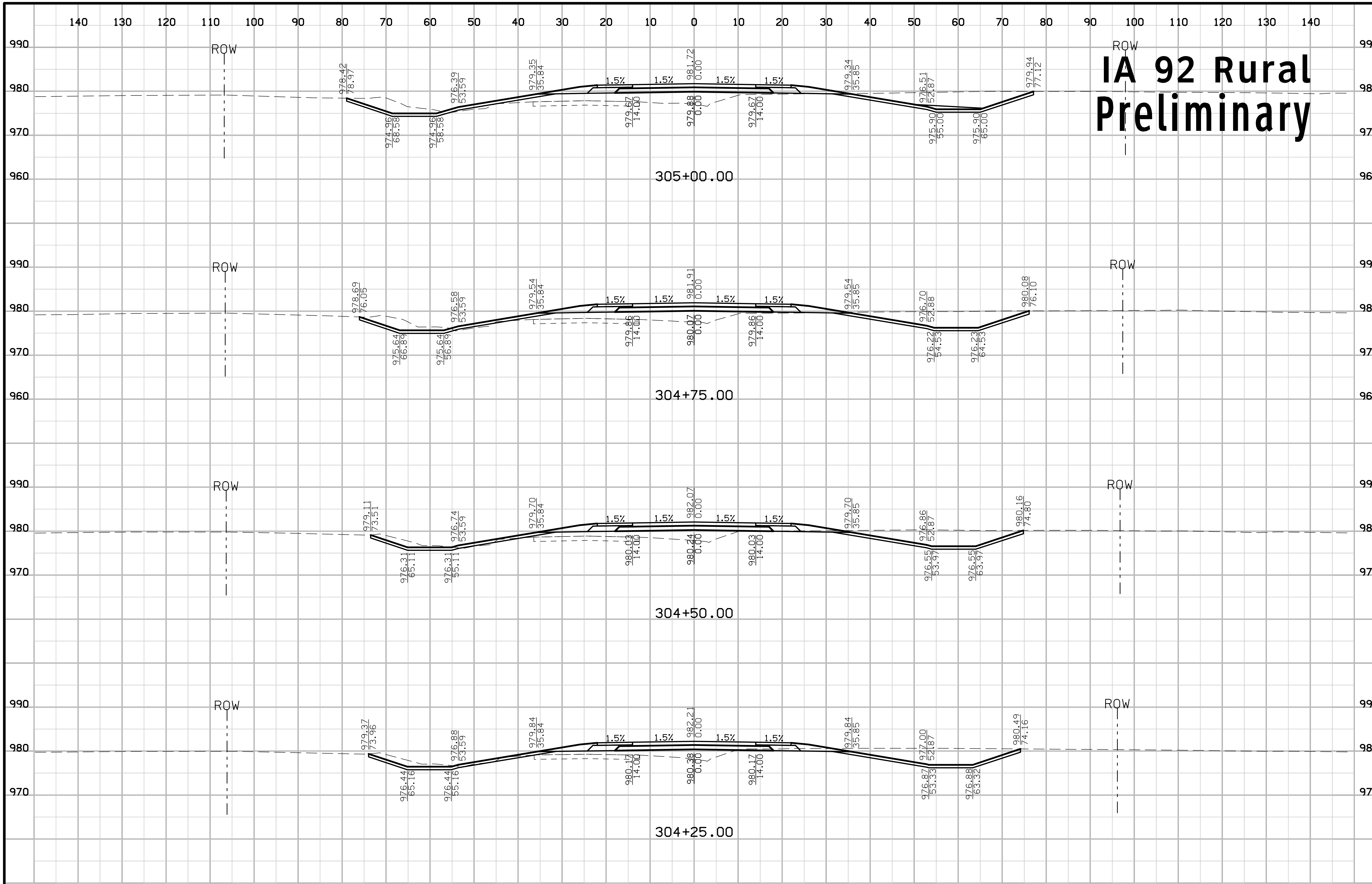

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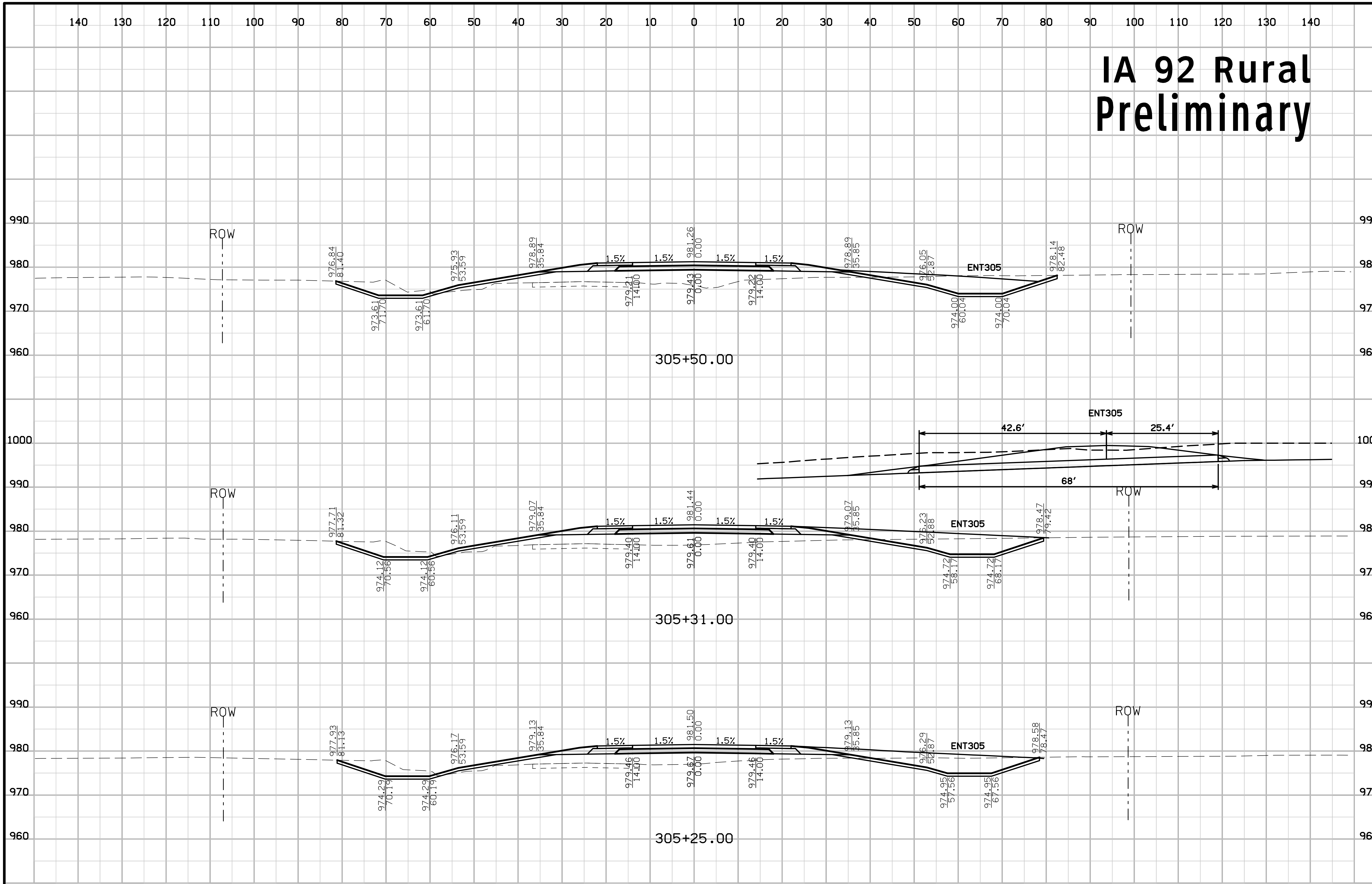

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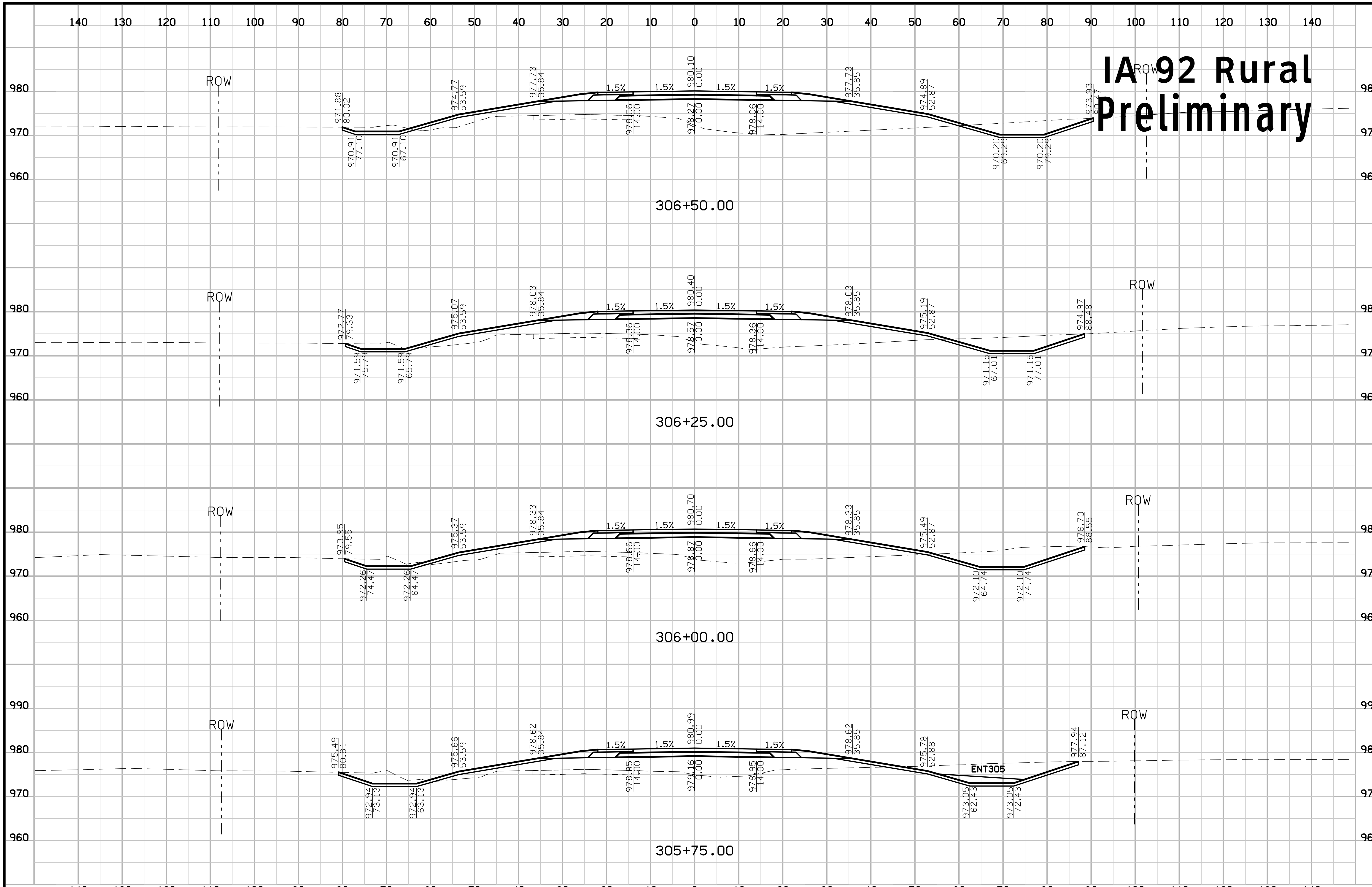

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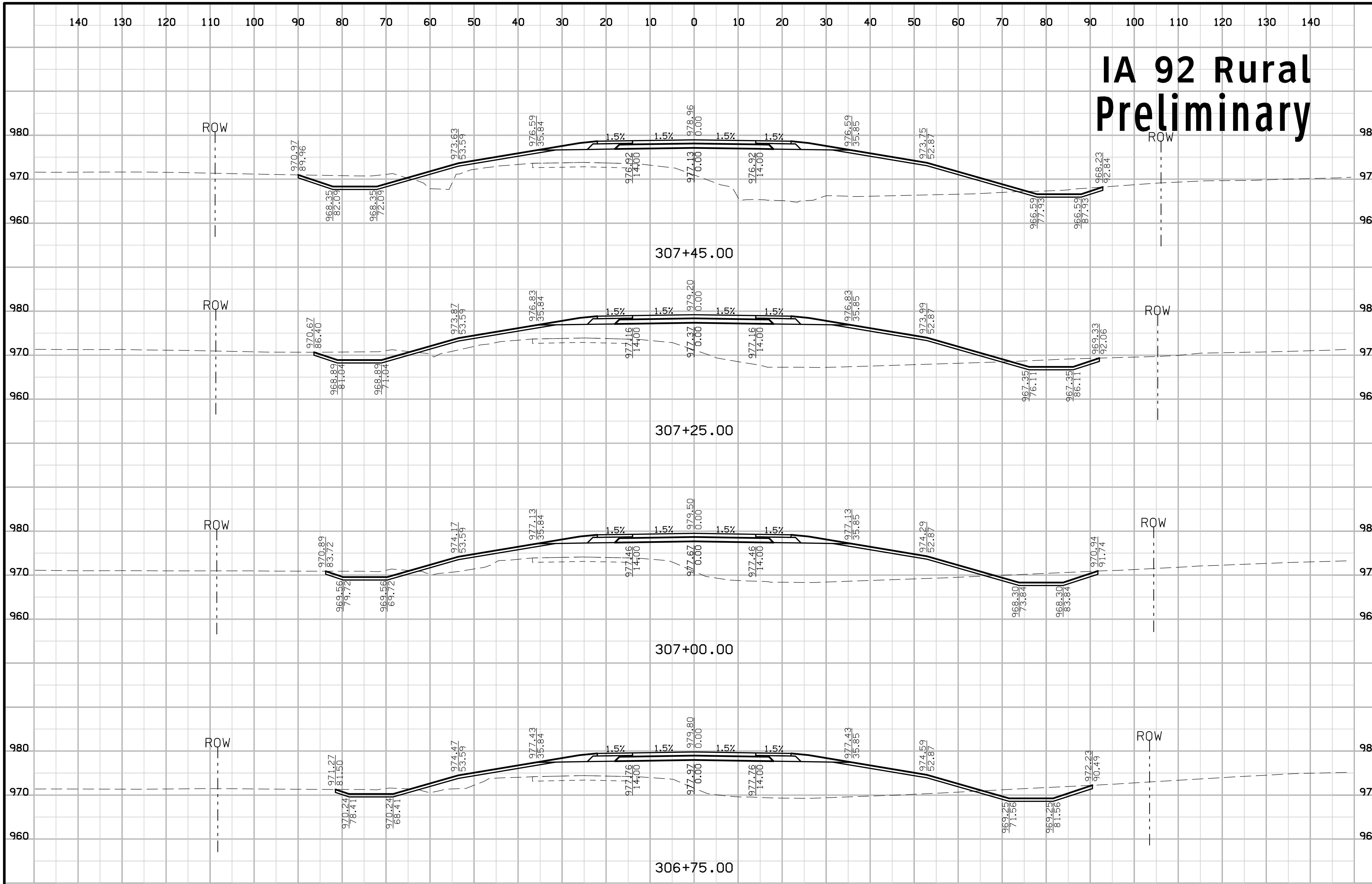

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.64

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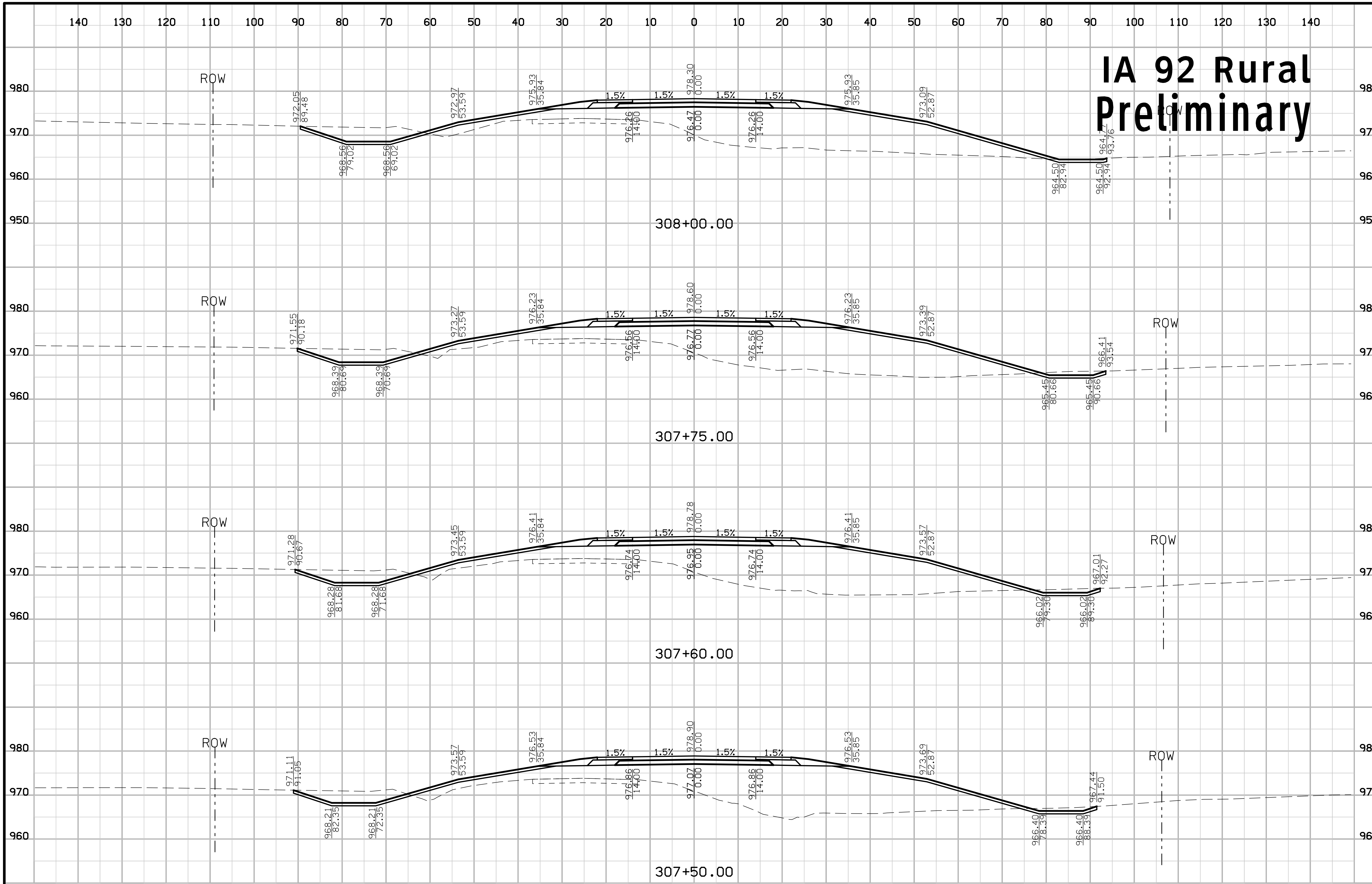

ENGLISH | IOWA DOT | DESIGN TEAM **Jia\Holst\Bennett** | **WARREN** COUNTY | PROJECT NUMBER **NHSX-092-5(51)--3H-91** | SHEET NUMBER **W.65**

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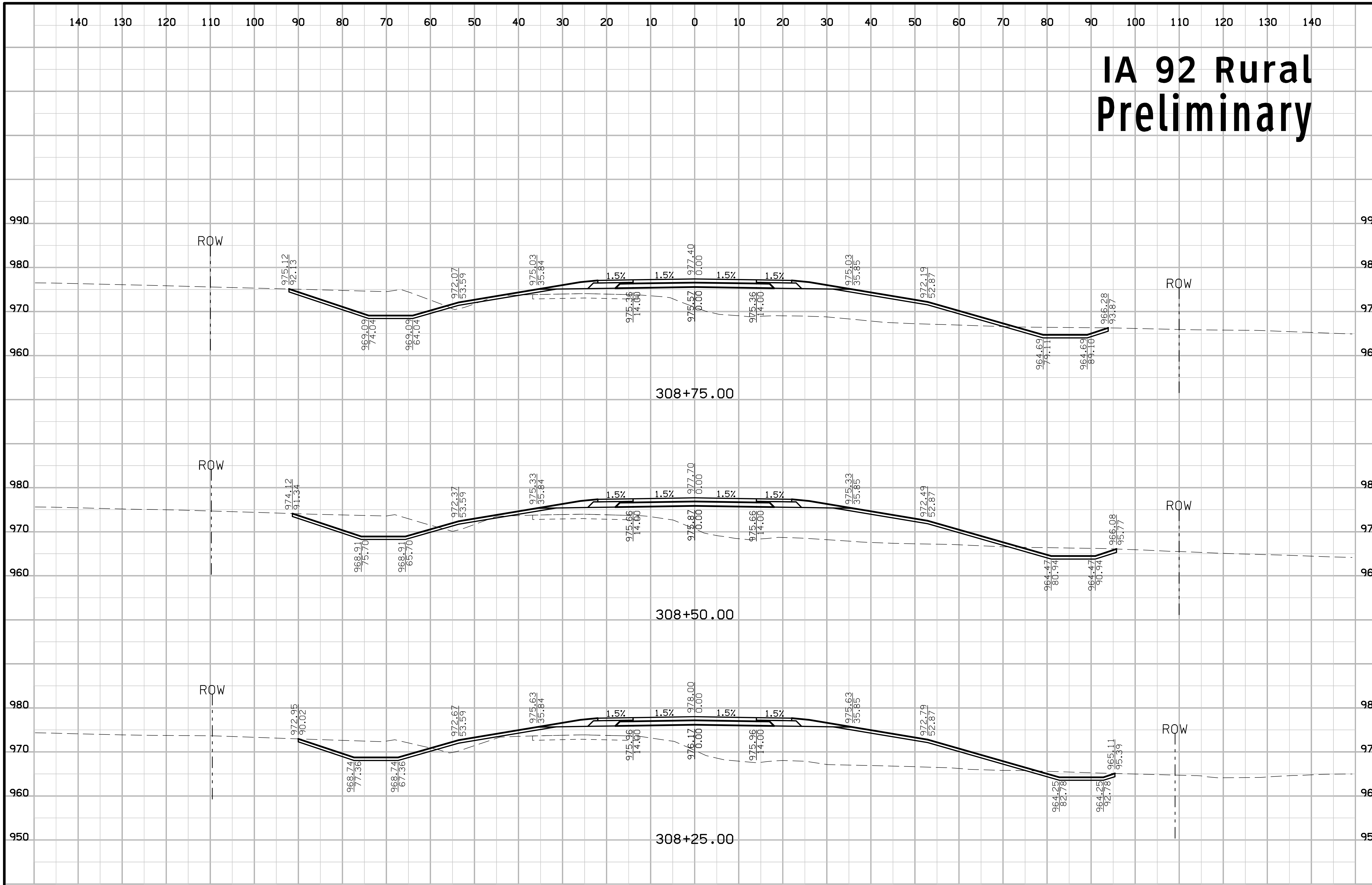
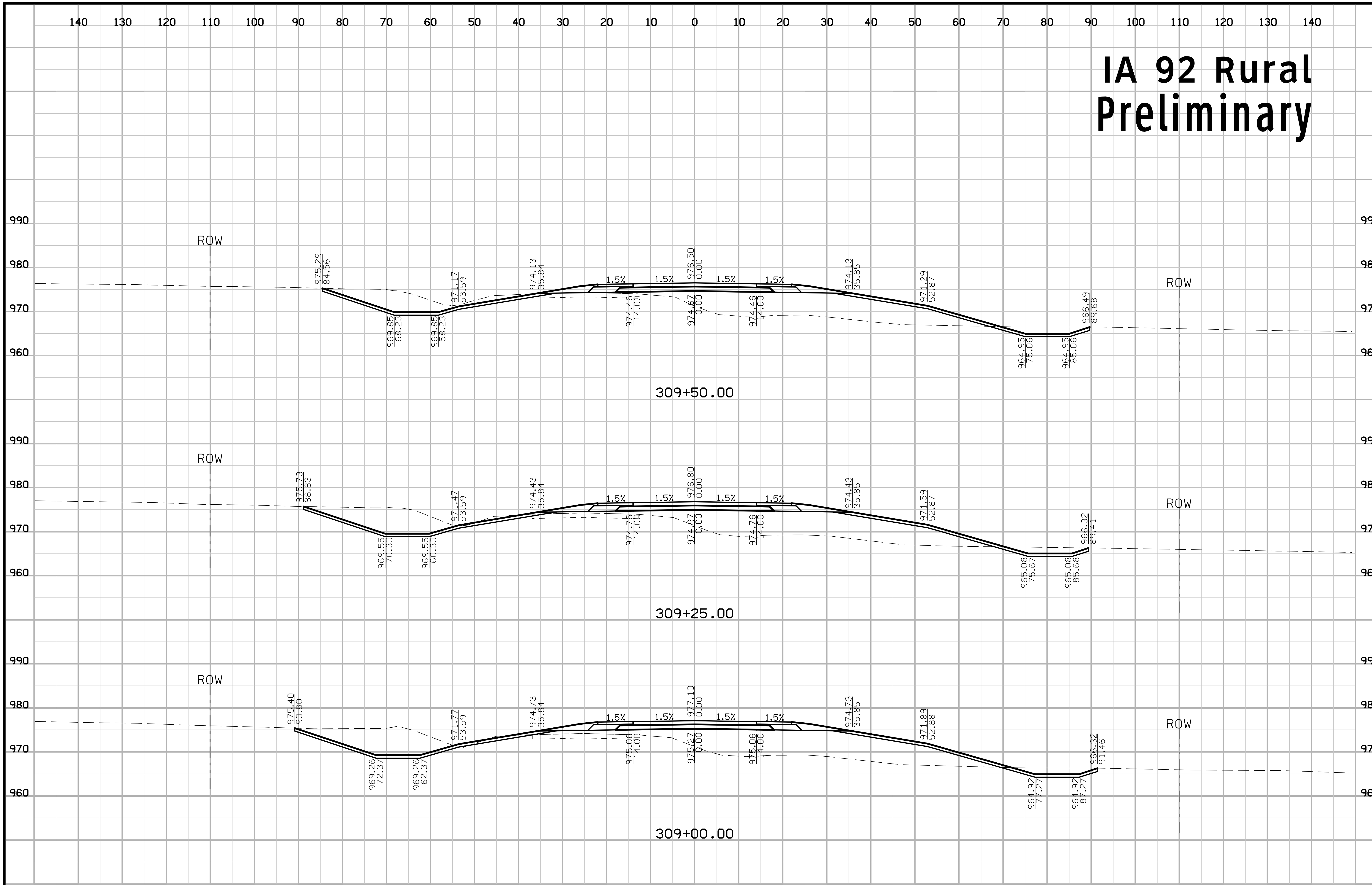
IA 92 Rural
Preliminary



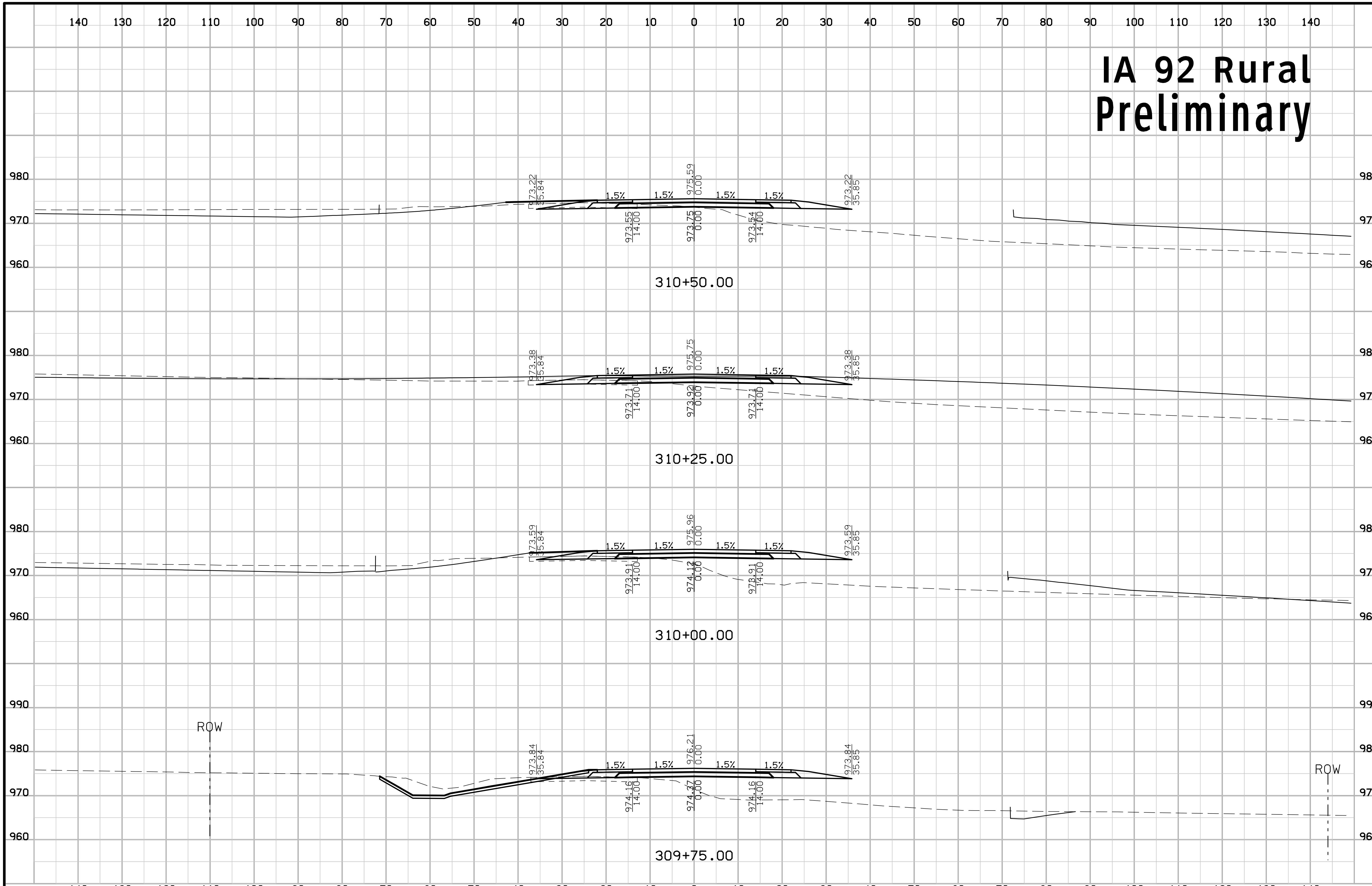
ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.66

IA 92 Rural
Preliminary

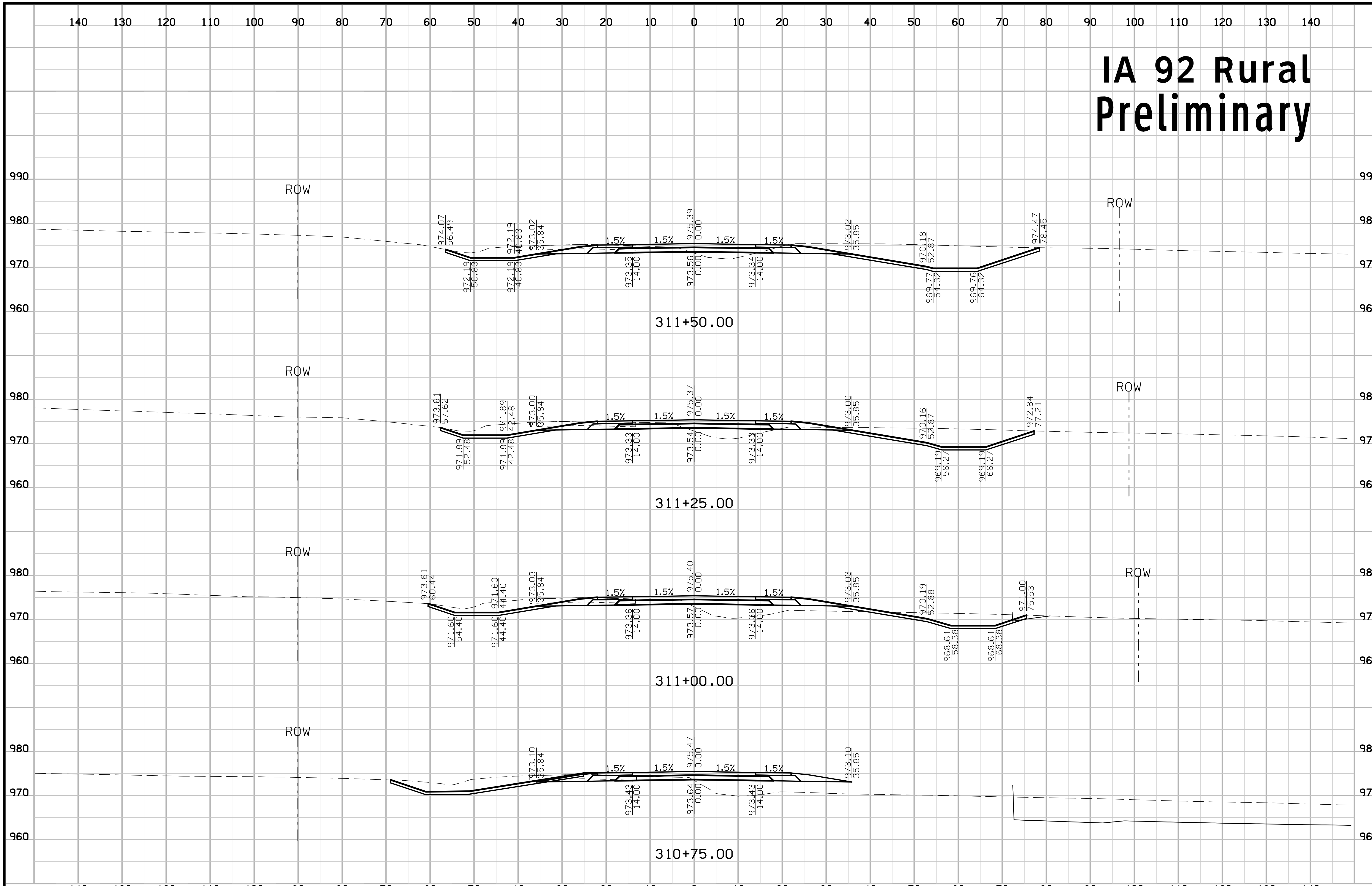


ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.67

IA 92 Rural Preliminary



ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.68



ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.69

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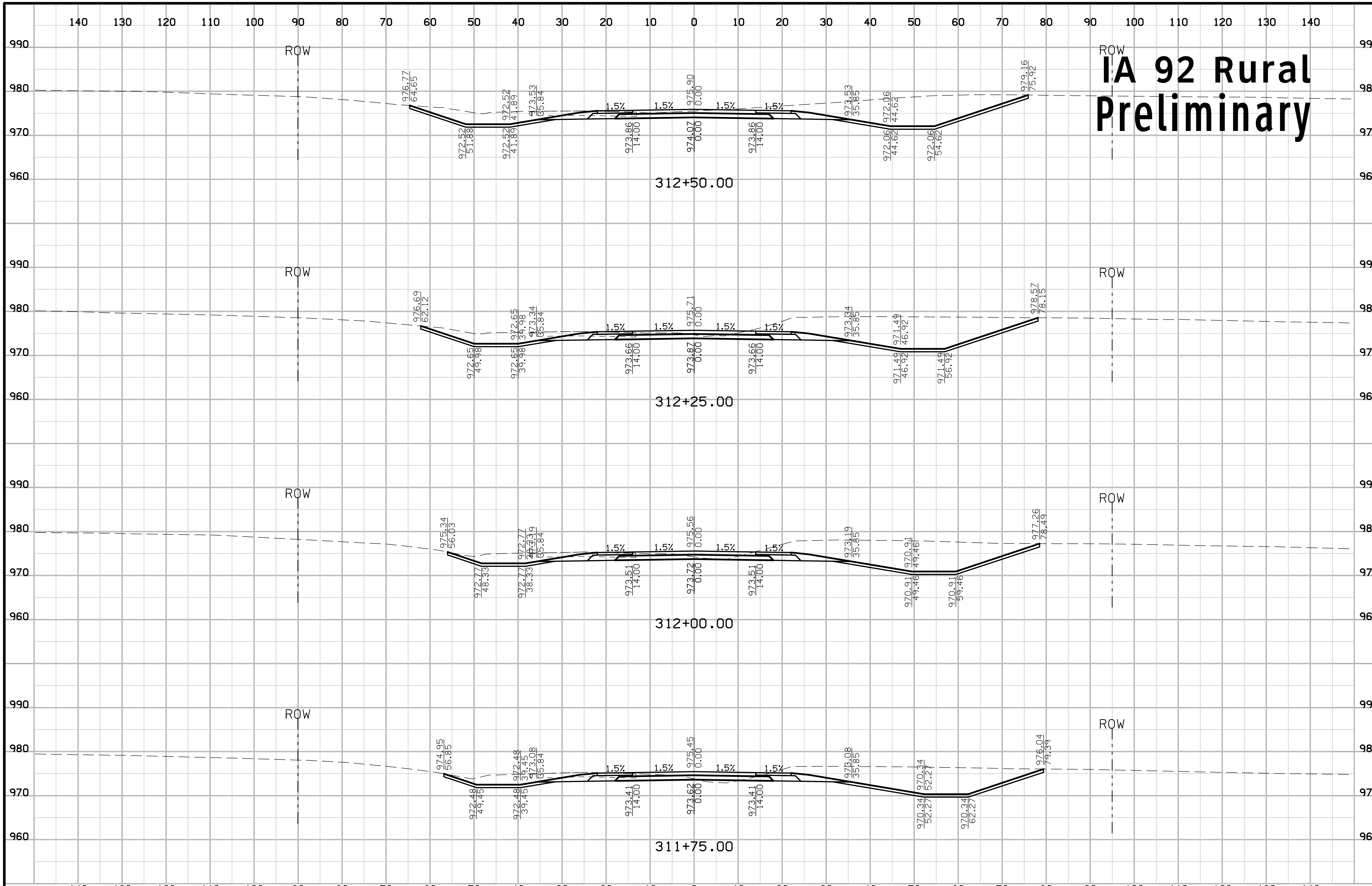
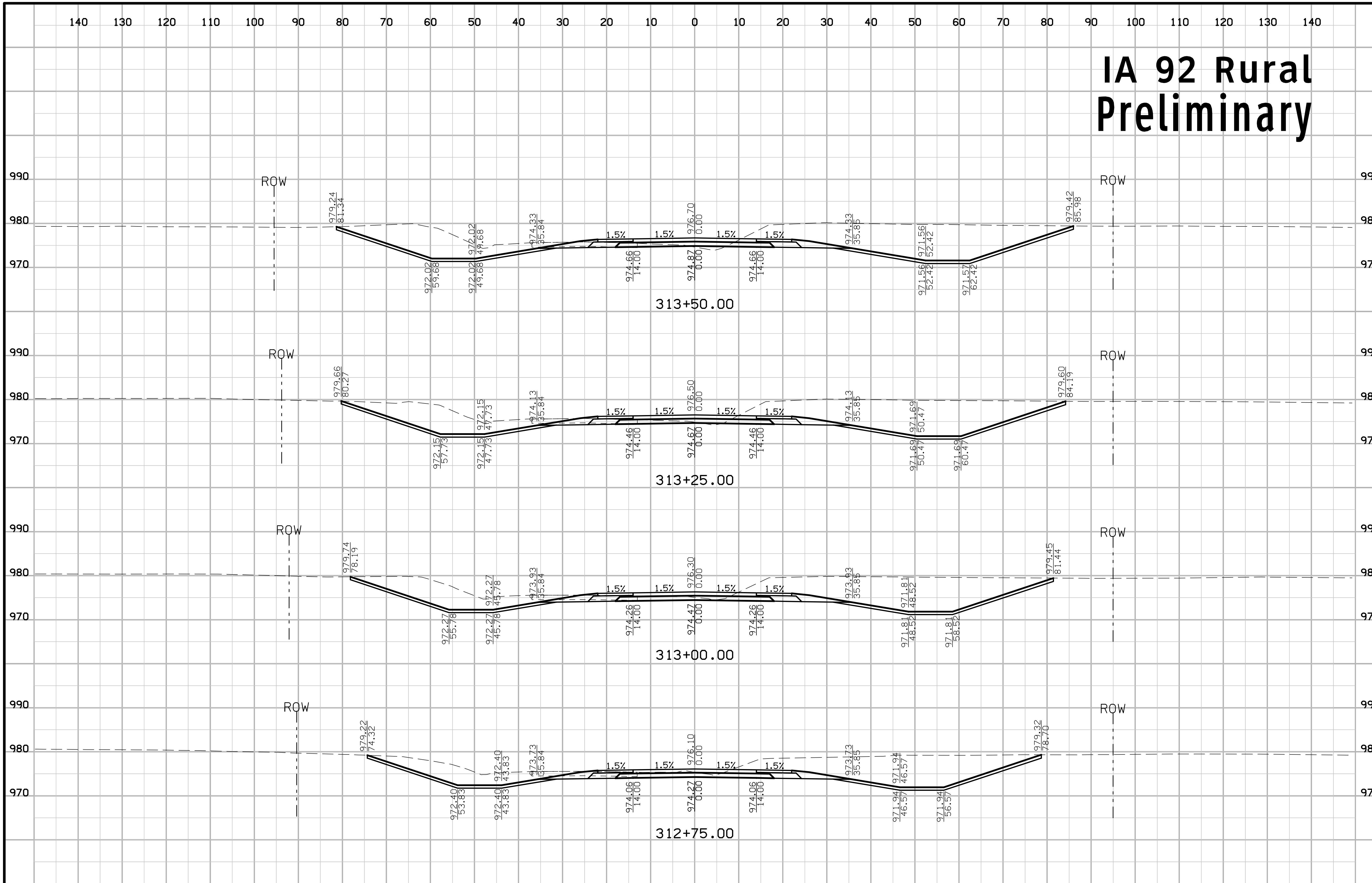


ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.70

IA 92 Rural Preliminary



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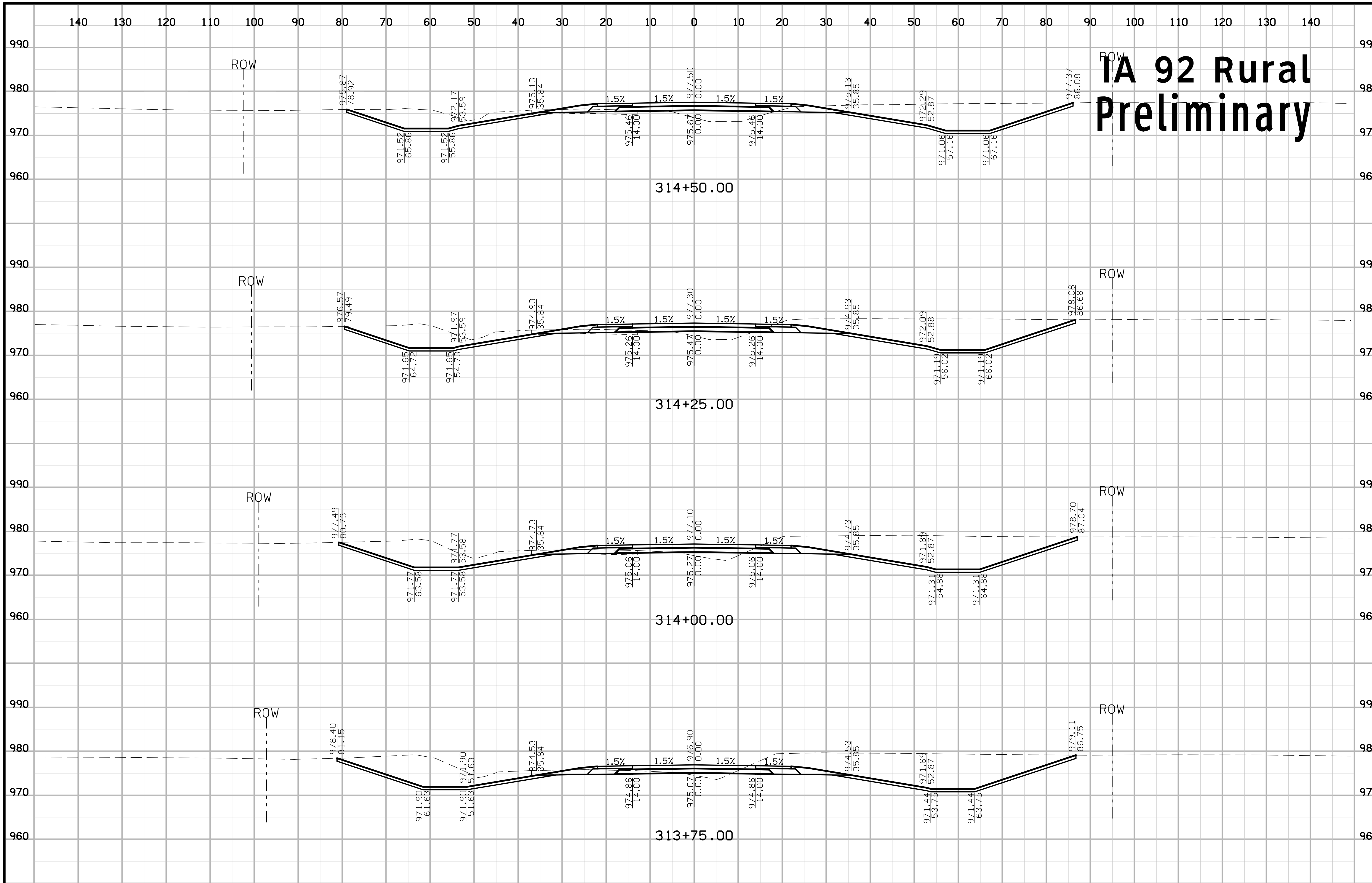

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.72

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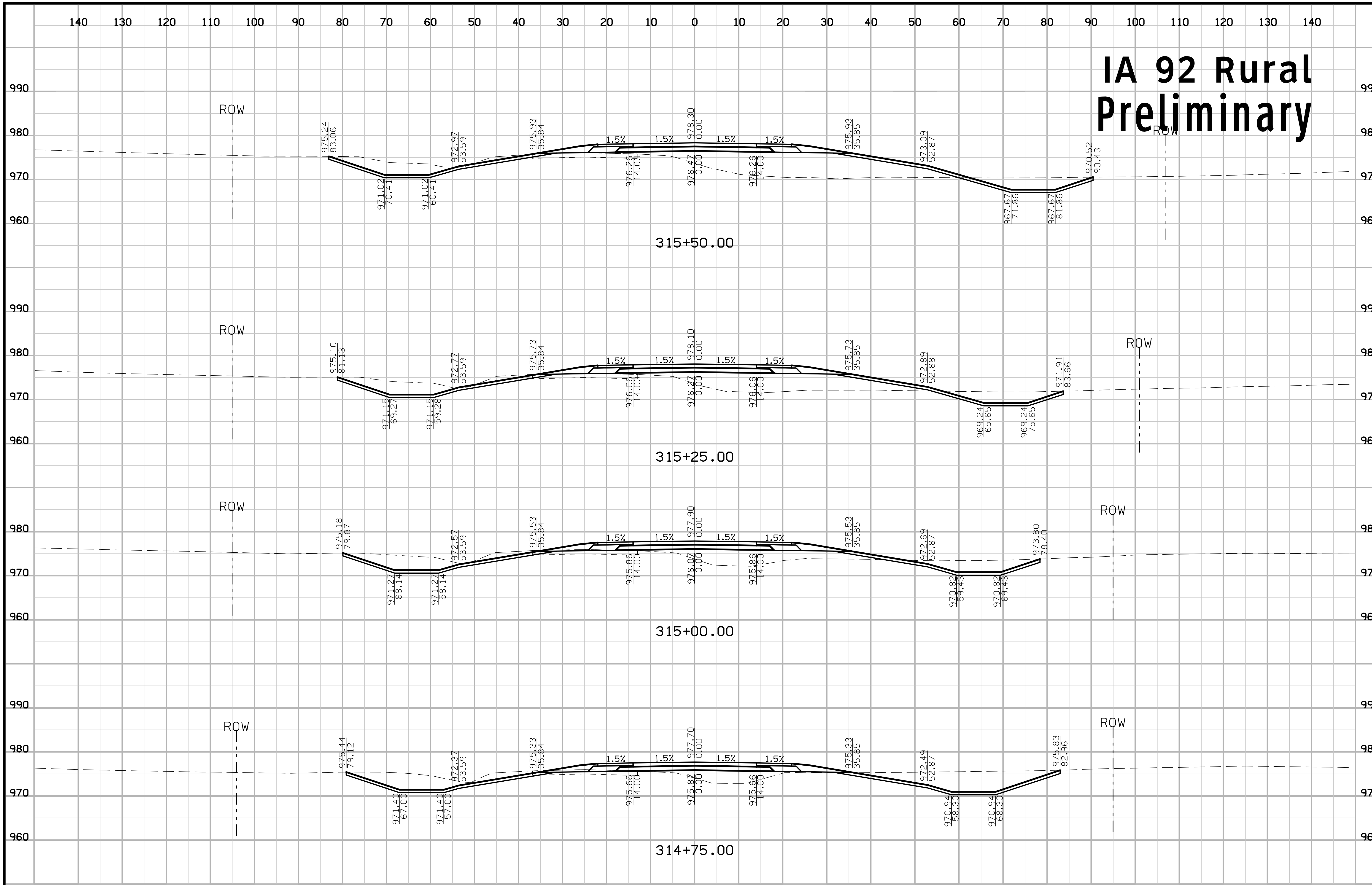
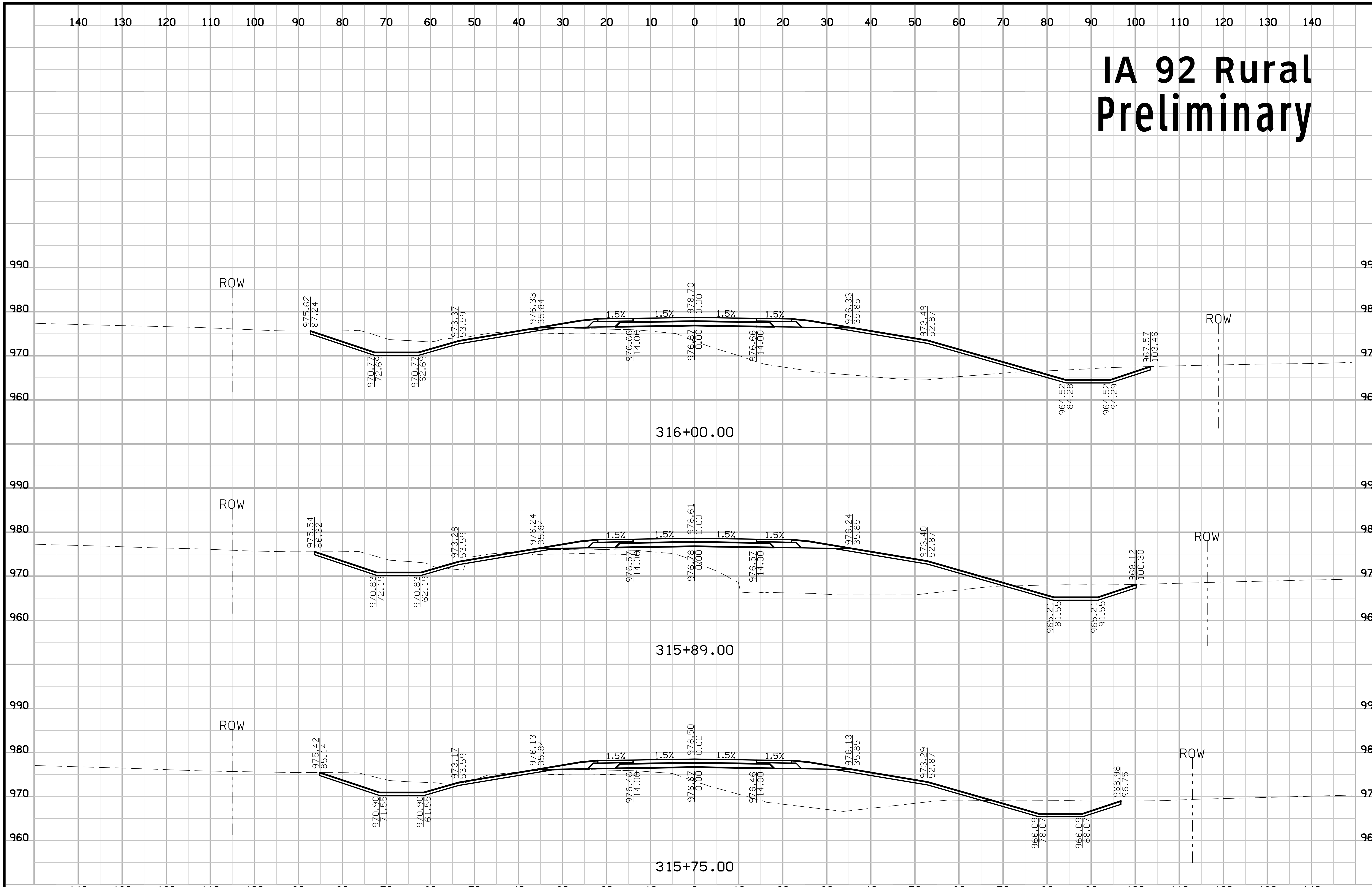


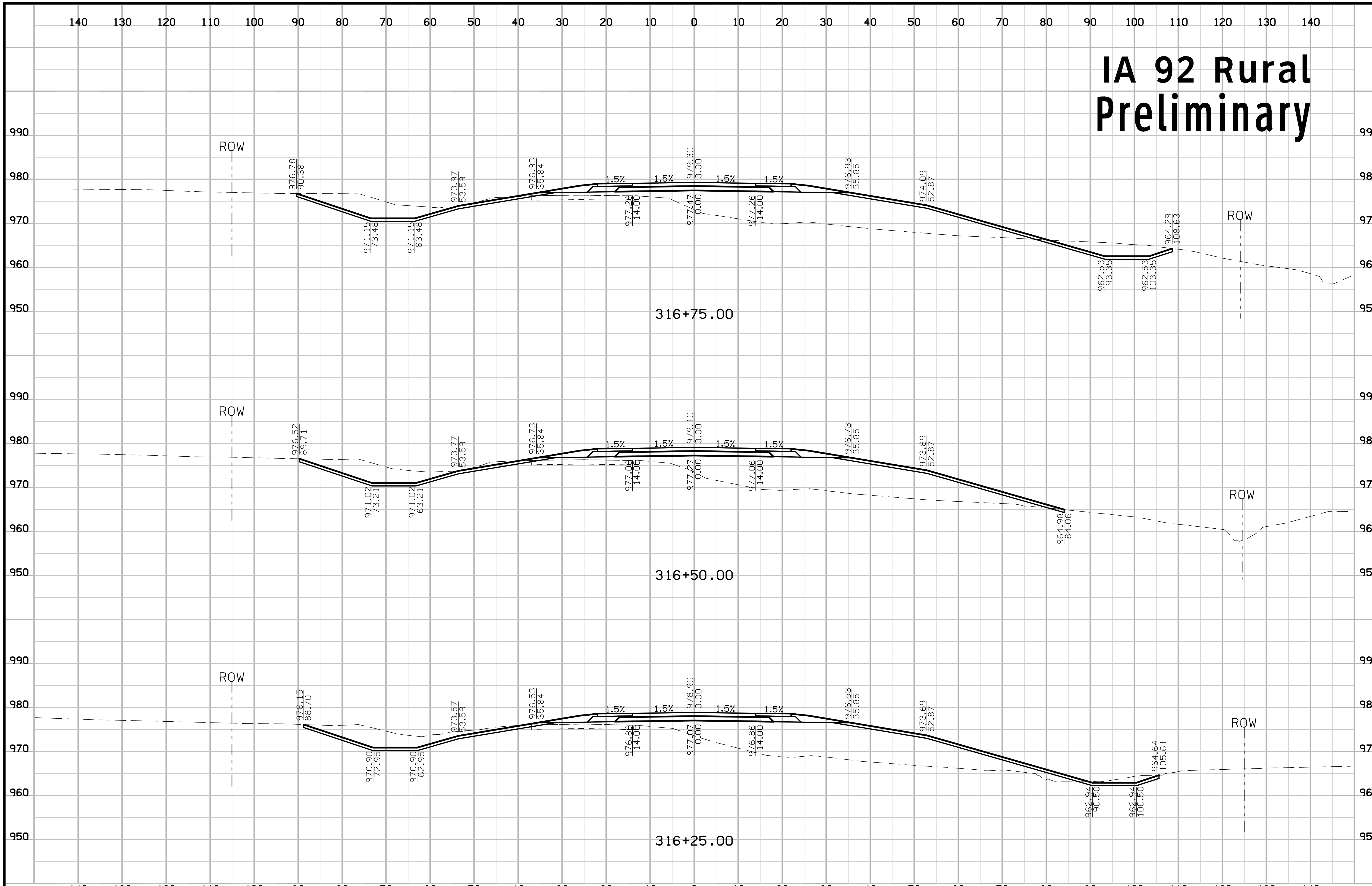
ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER	W.73

IA 92 Rural
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER	W.74

IA 92 Rural
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER	W.75

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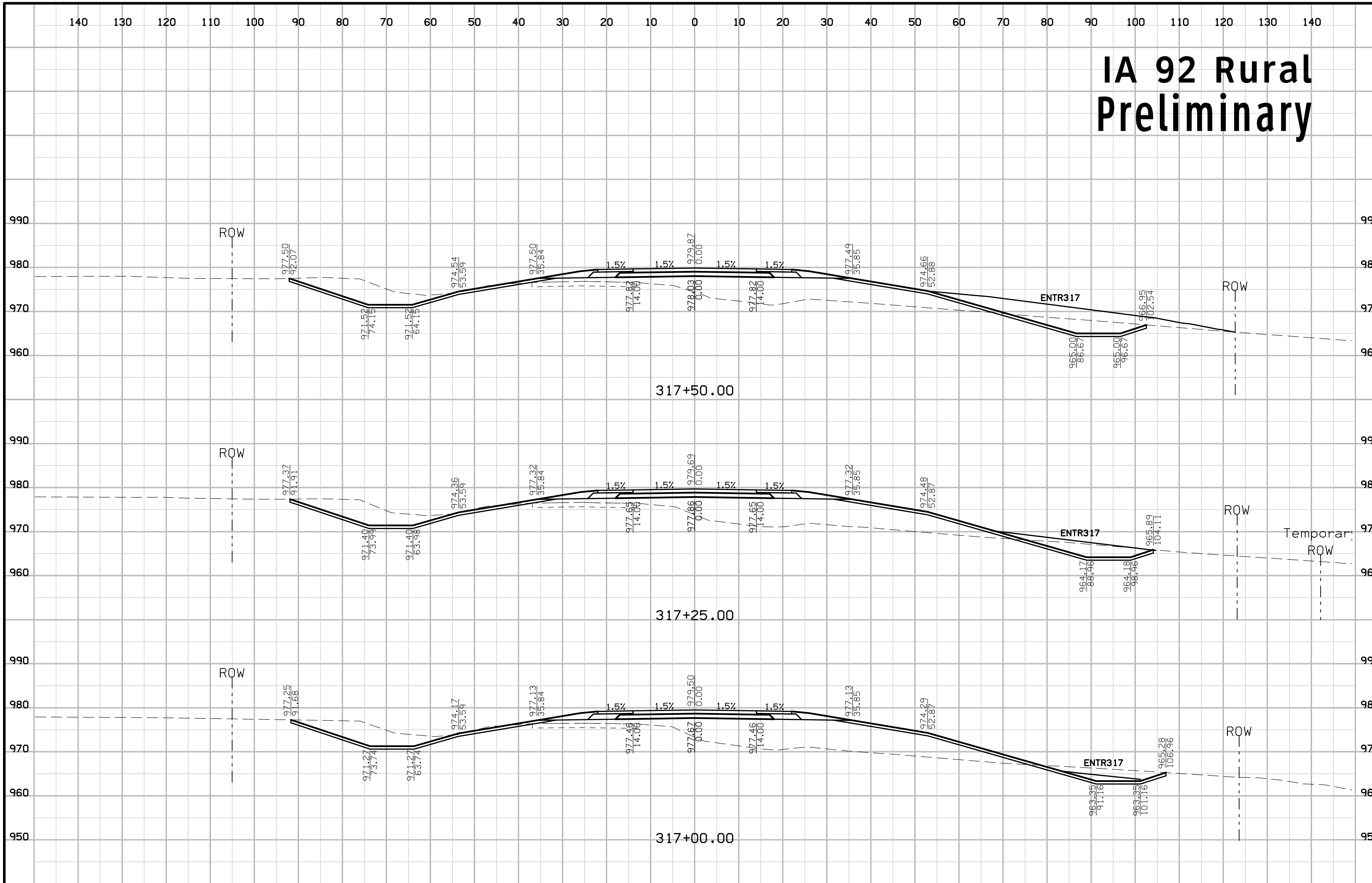
IA 92 Rural Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.76

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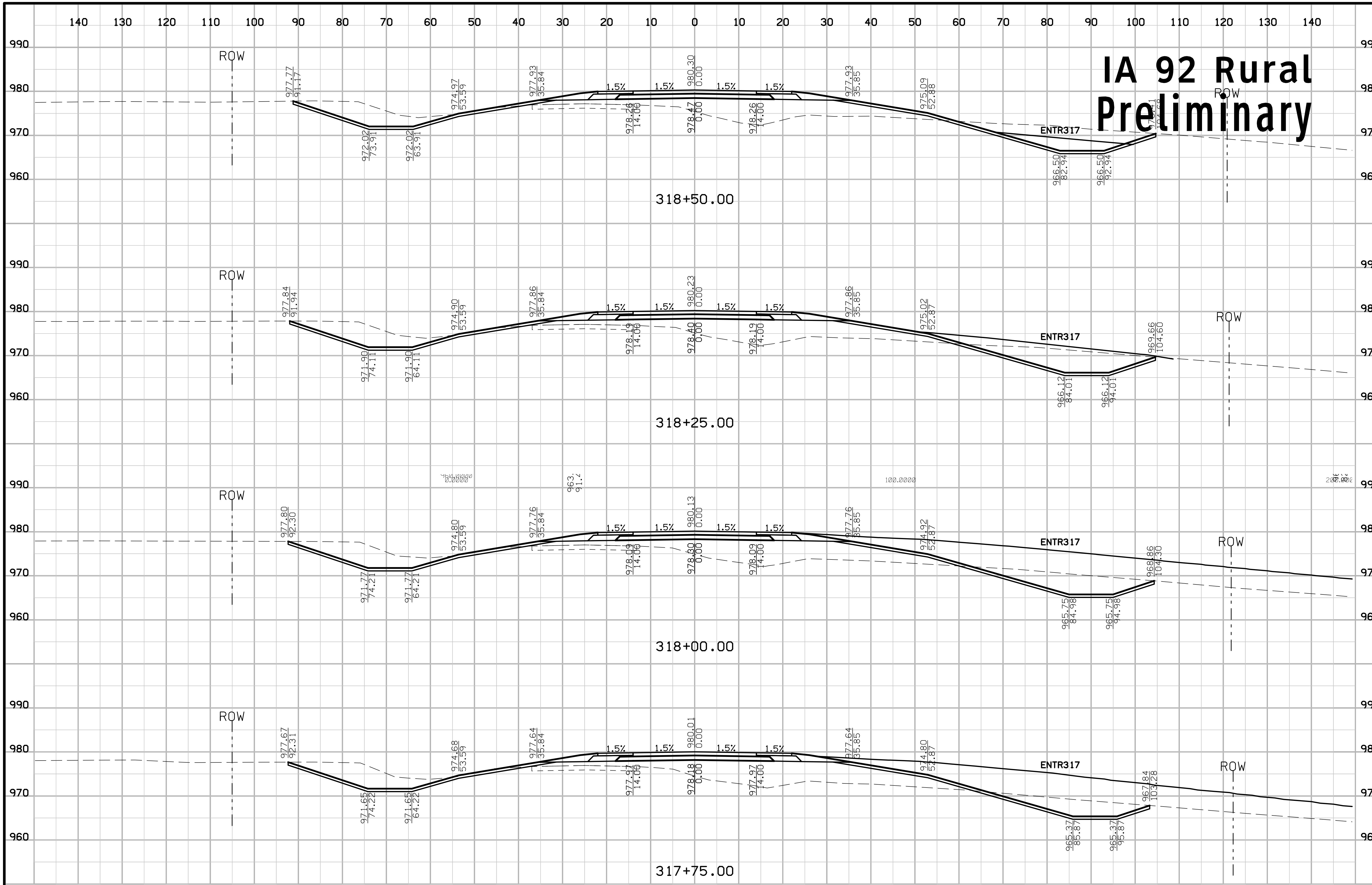

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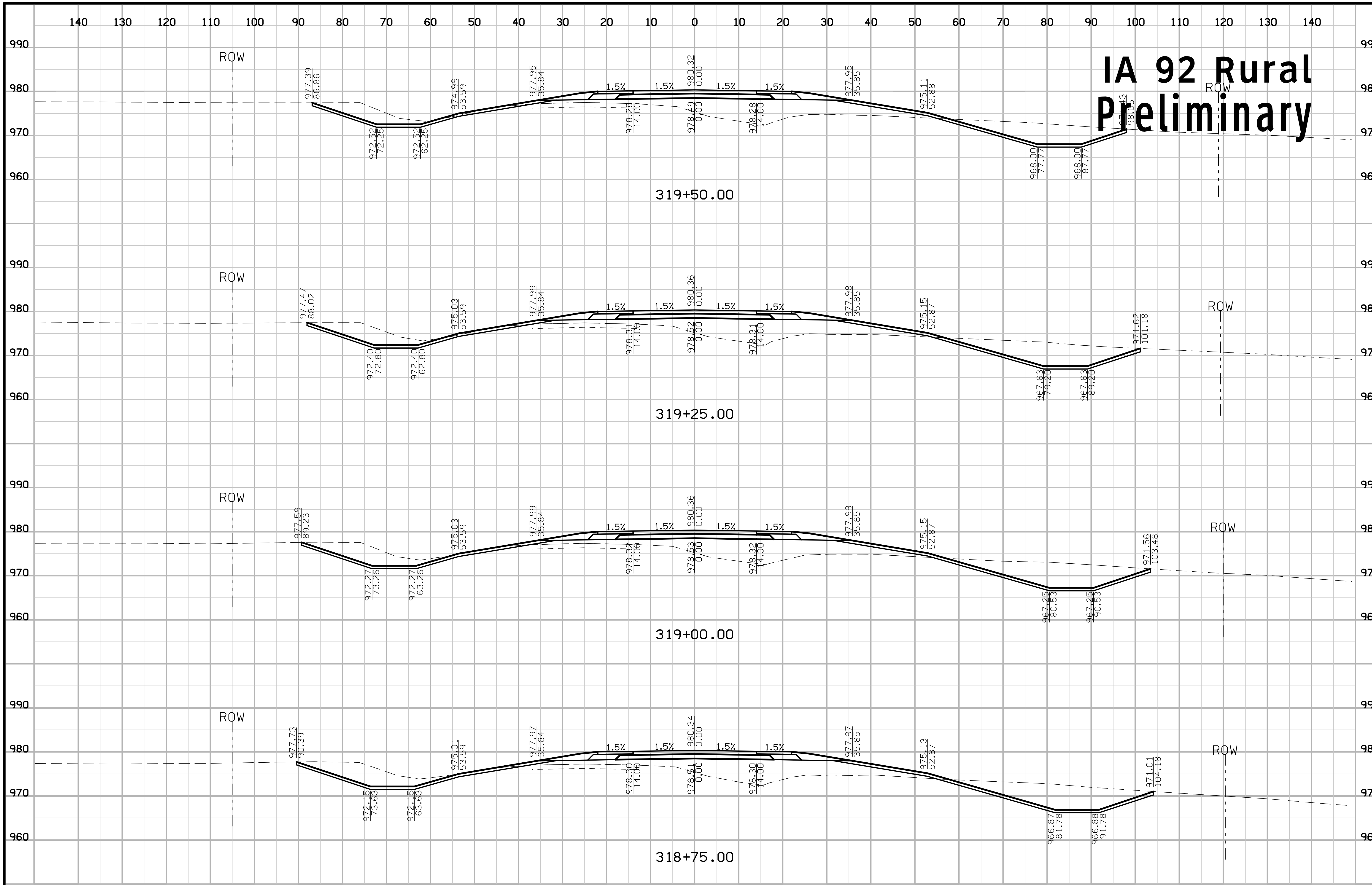

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.78

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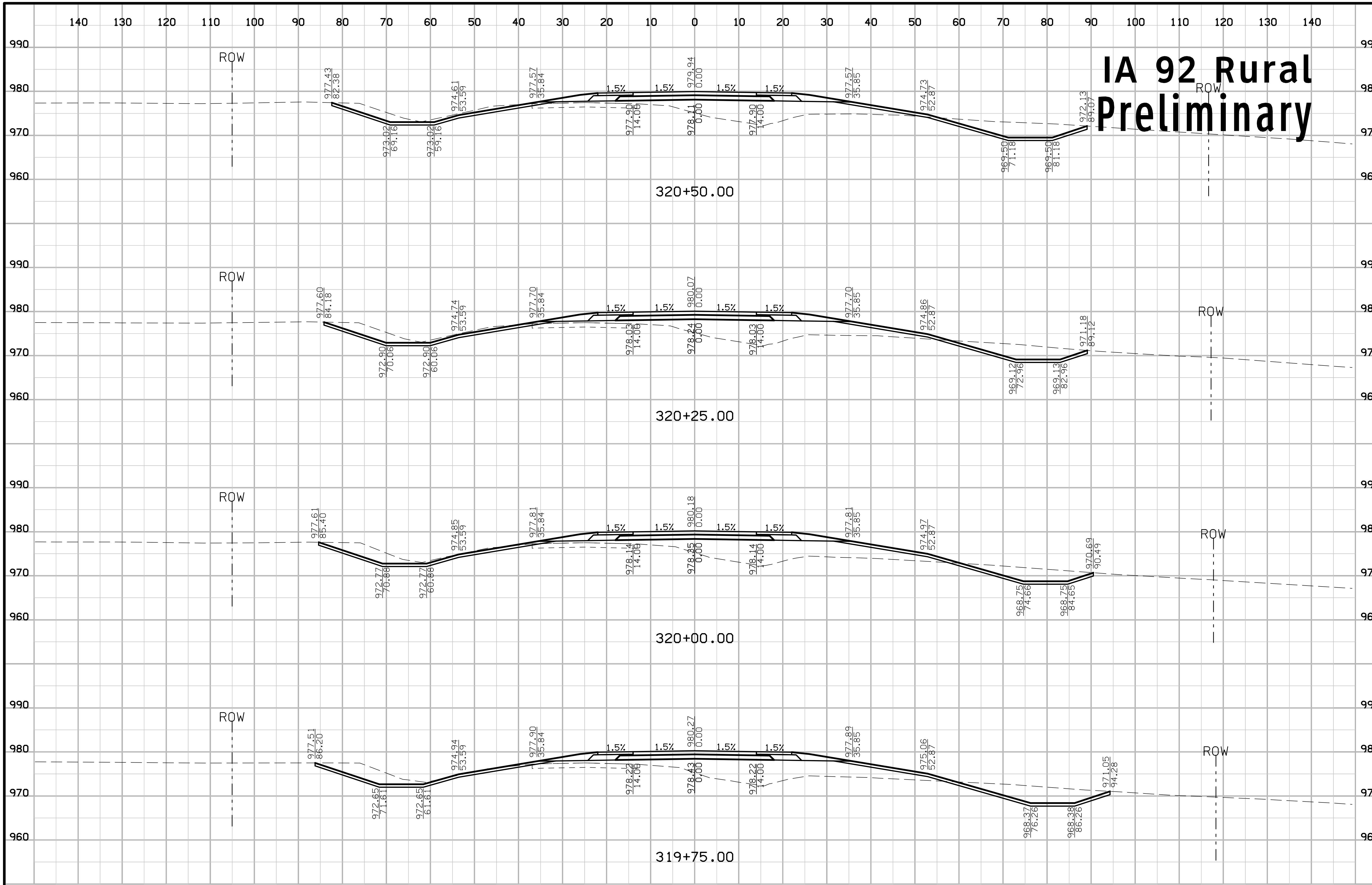

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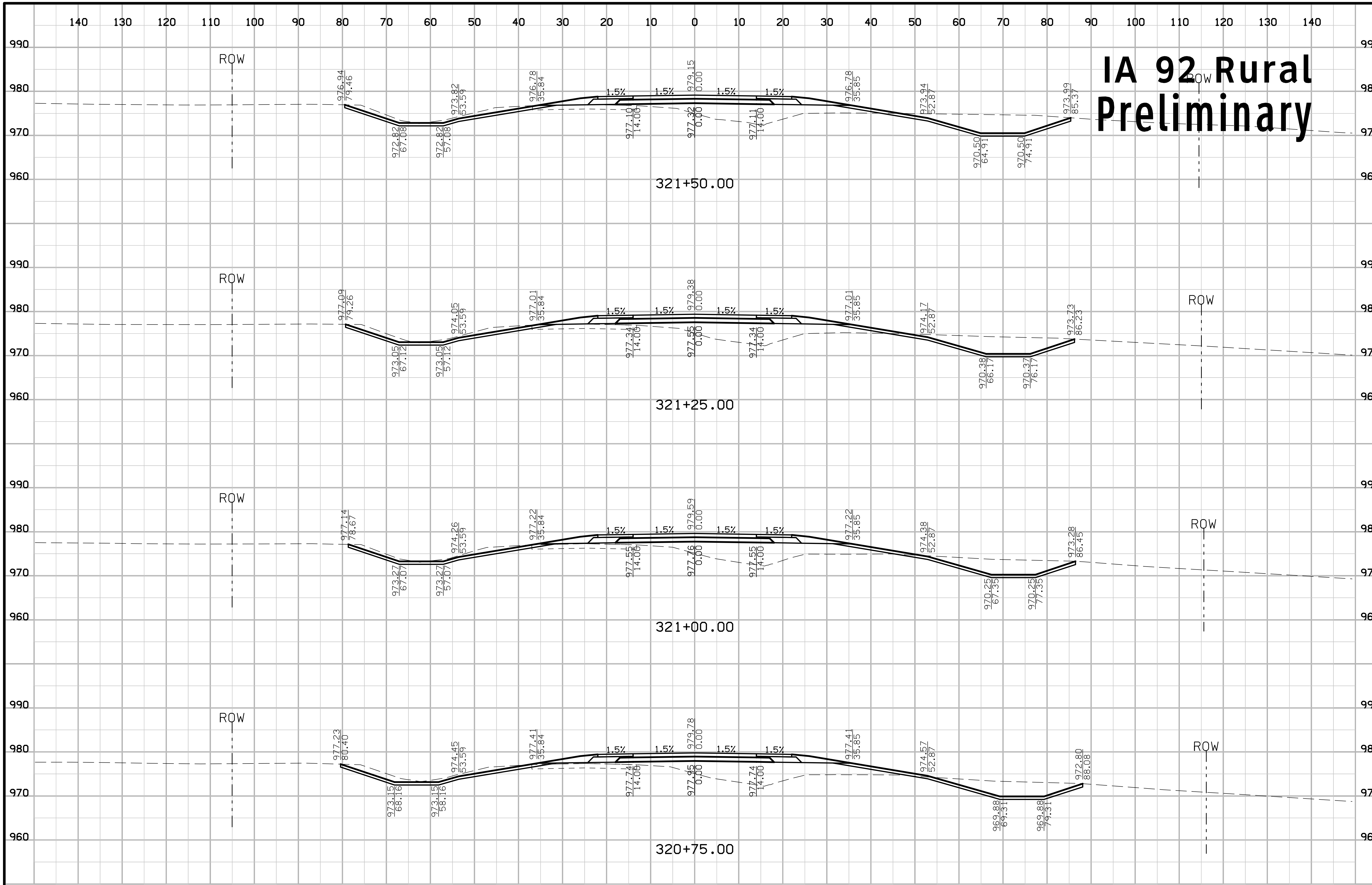

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.80

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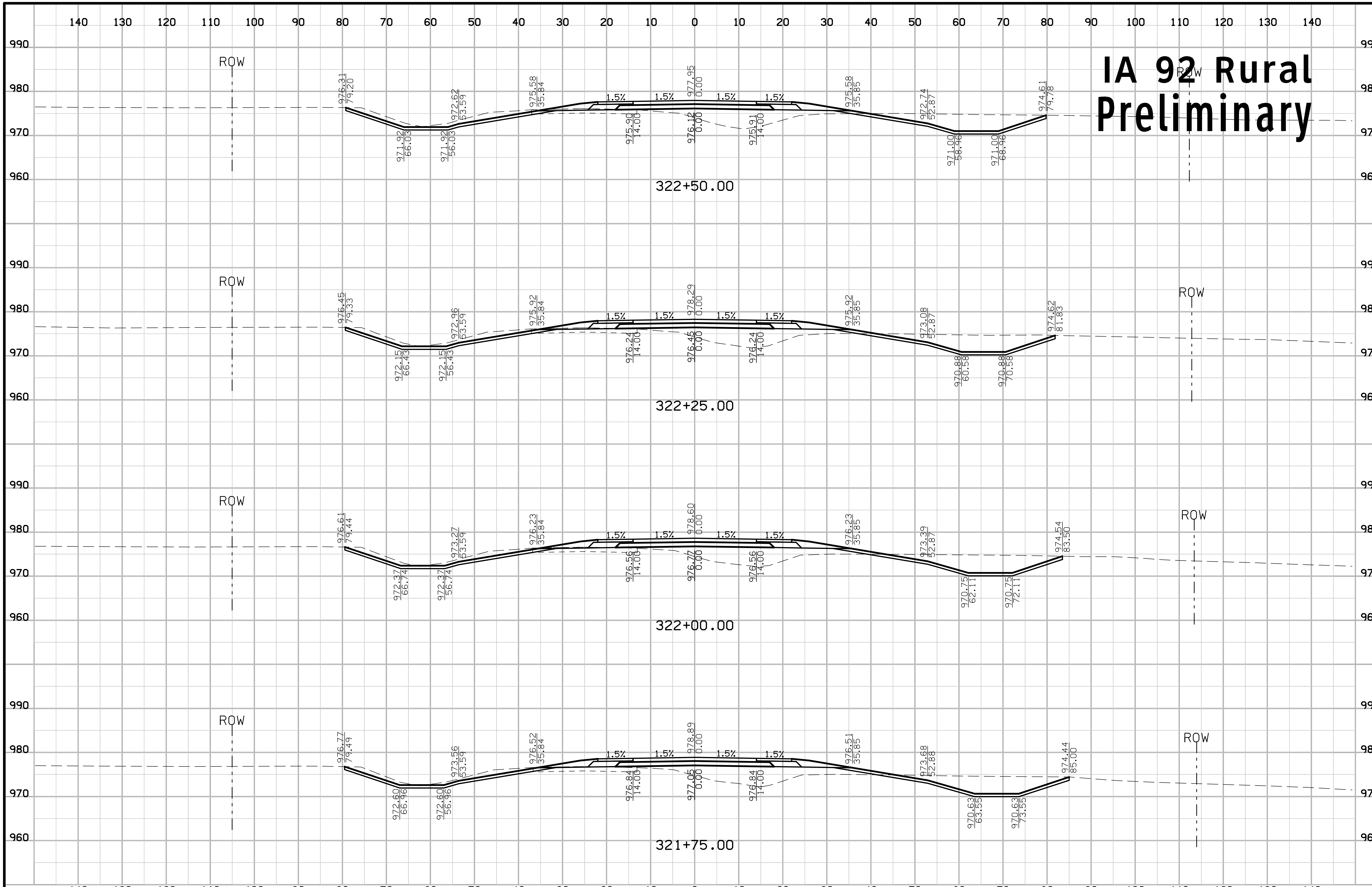

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.81

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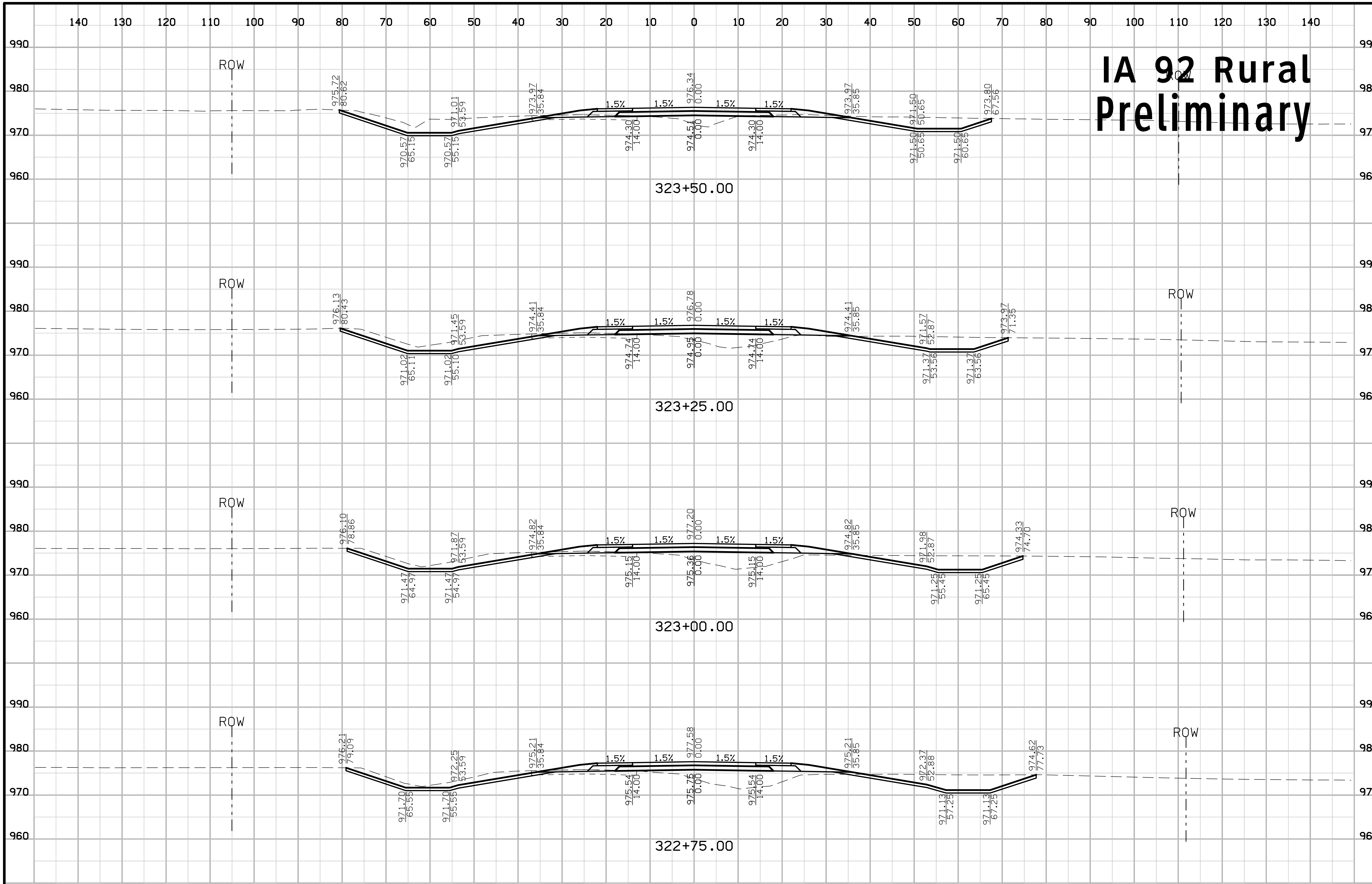
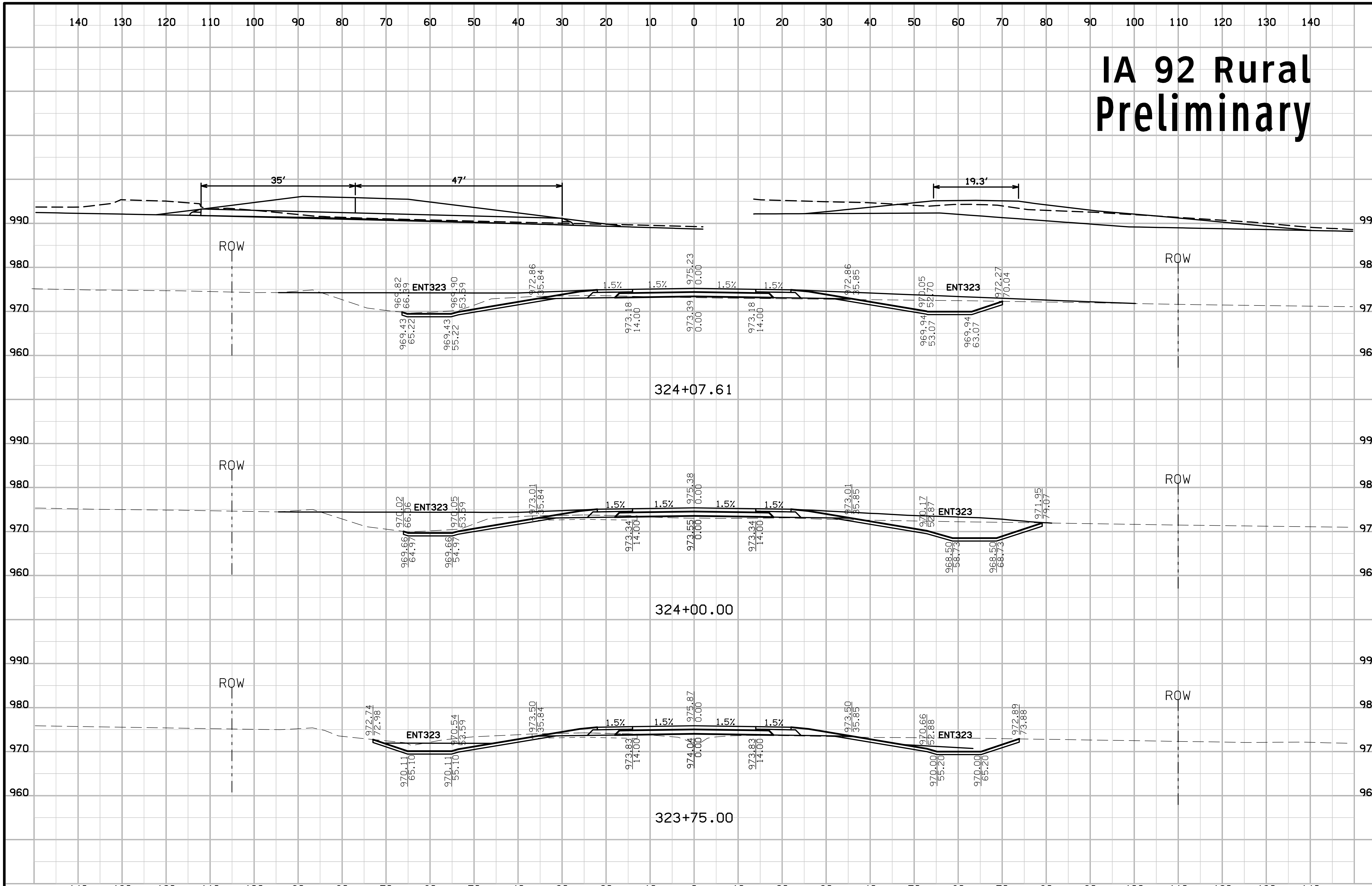


ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.82



ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.83

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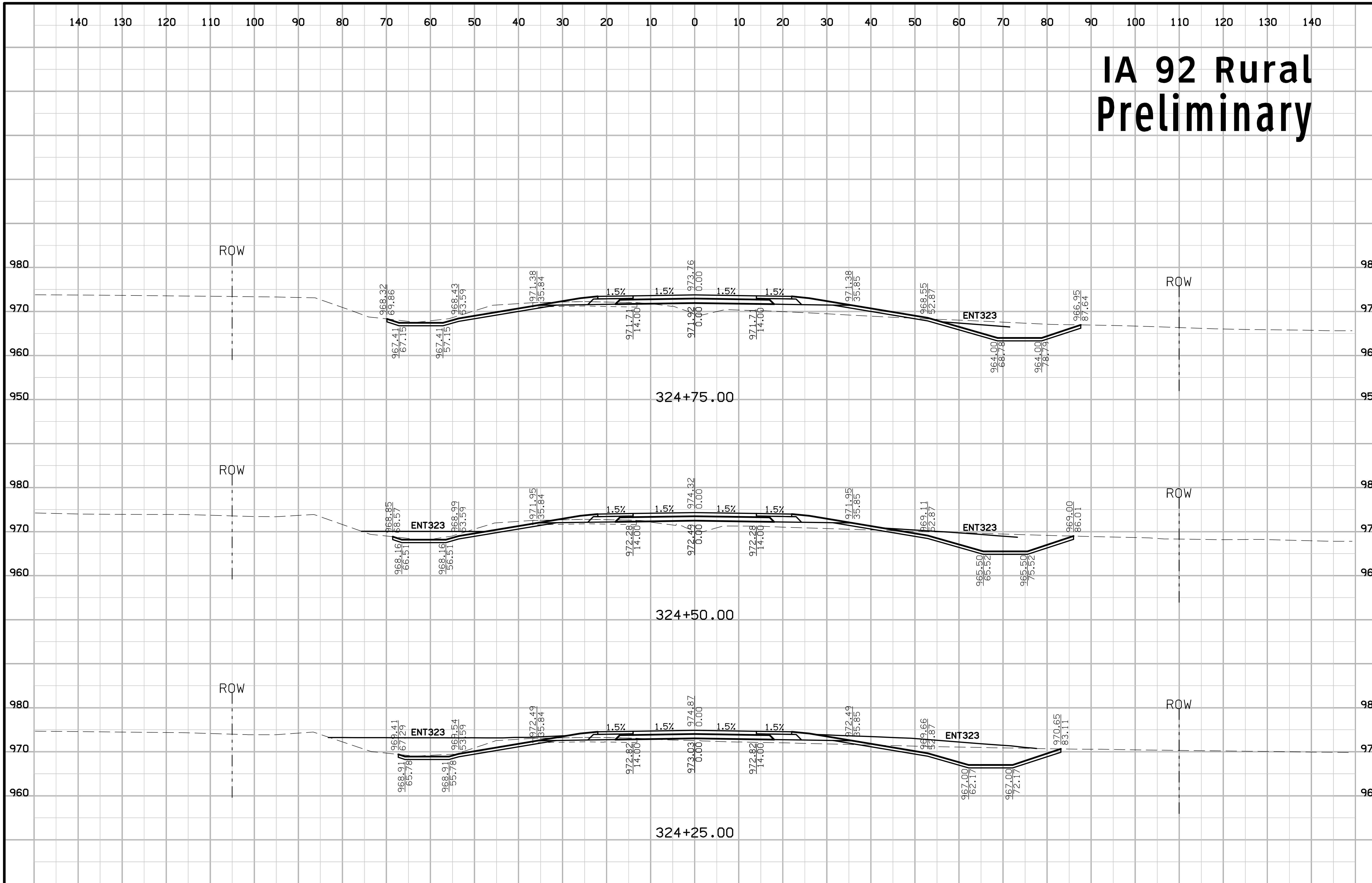
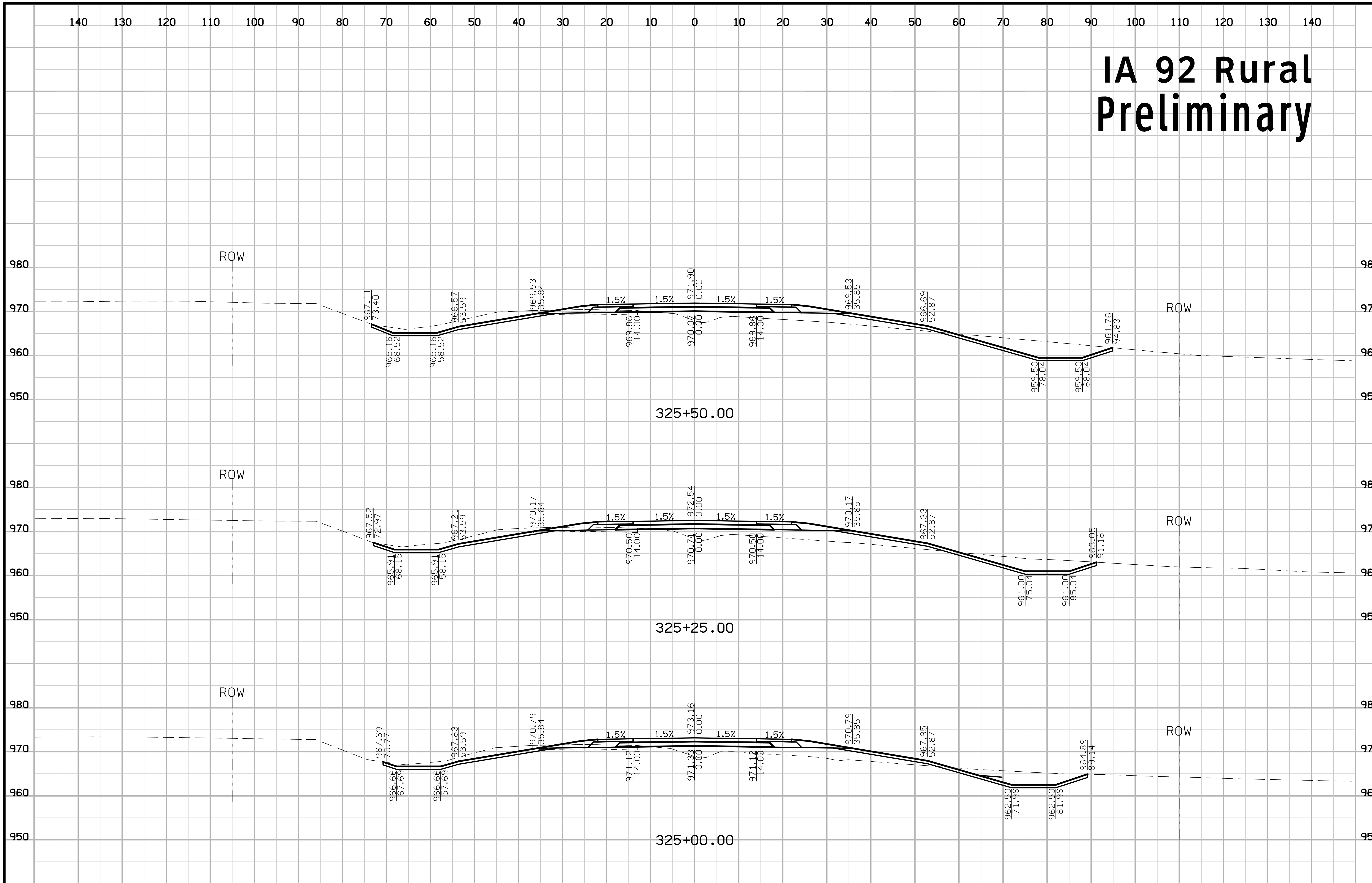
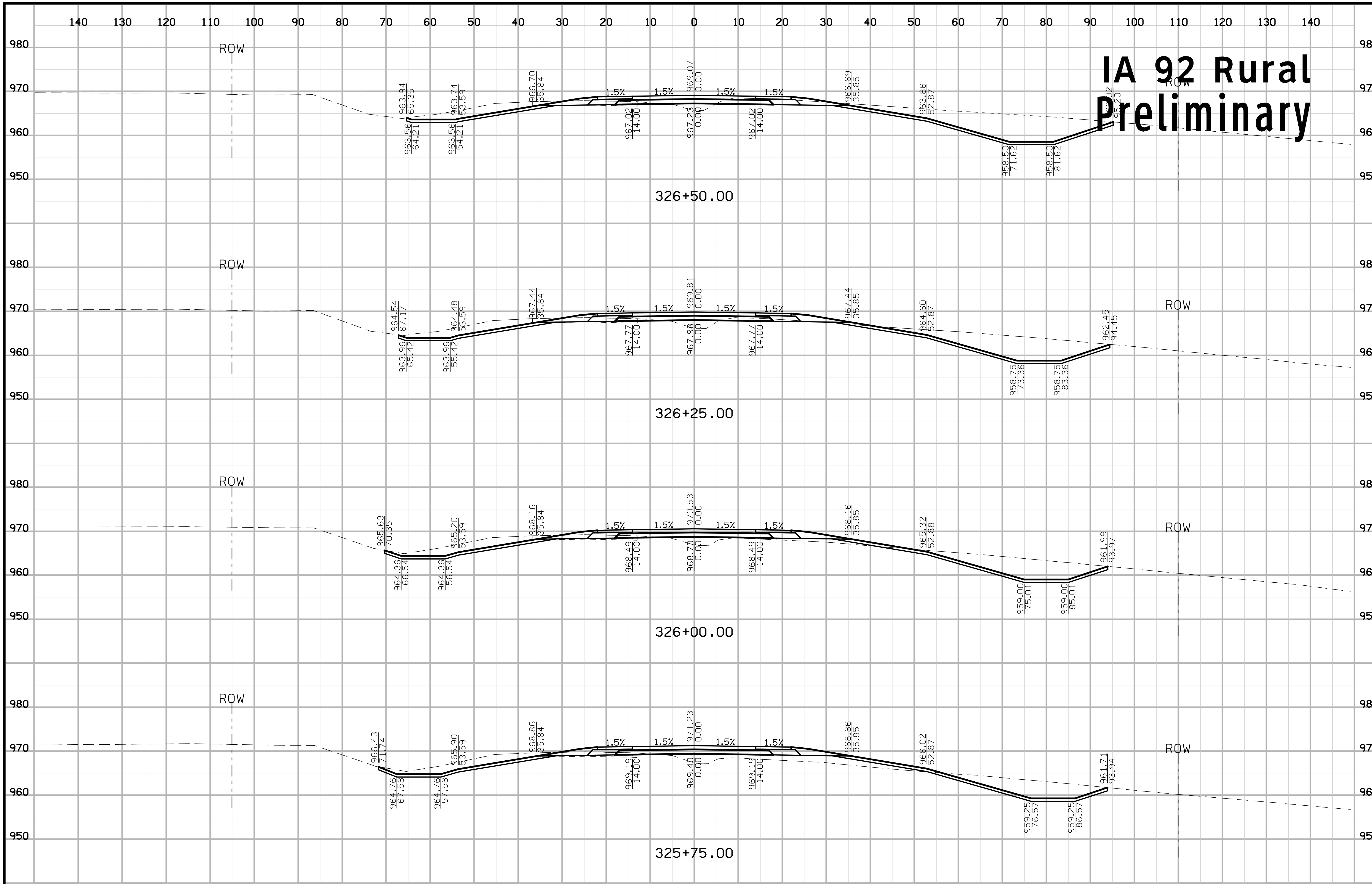
IA 92 Rural
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER	W.84

IA 92 Rural Preliminary





ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER	W.86

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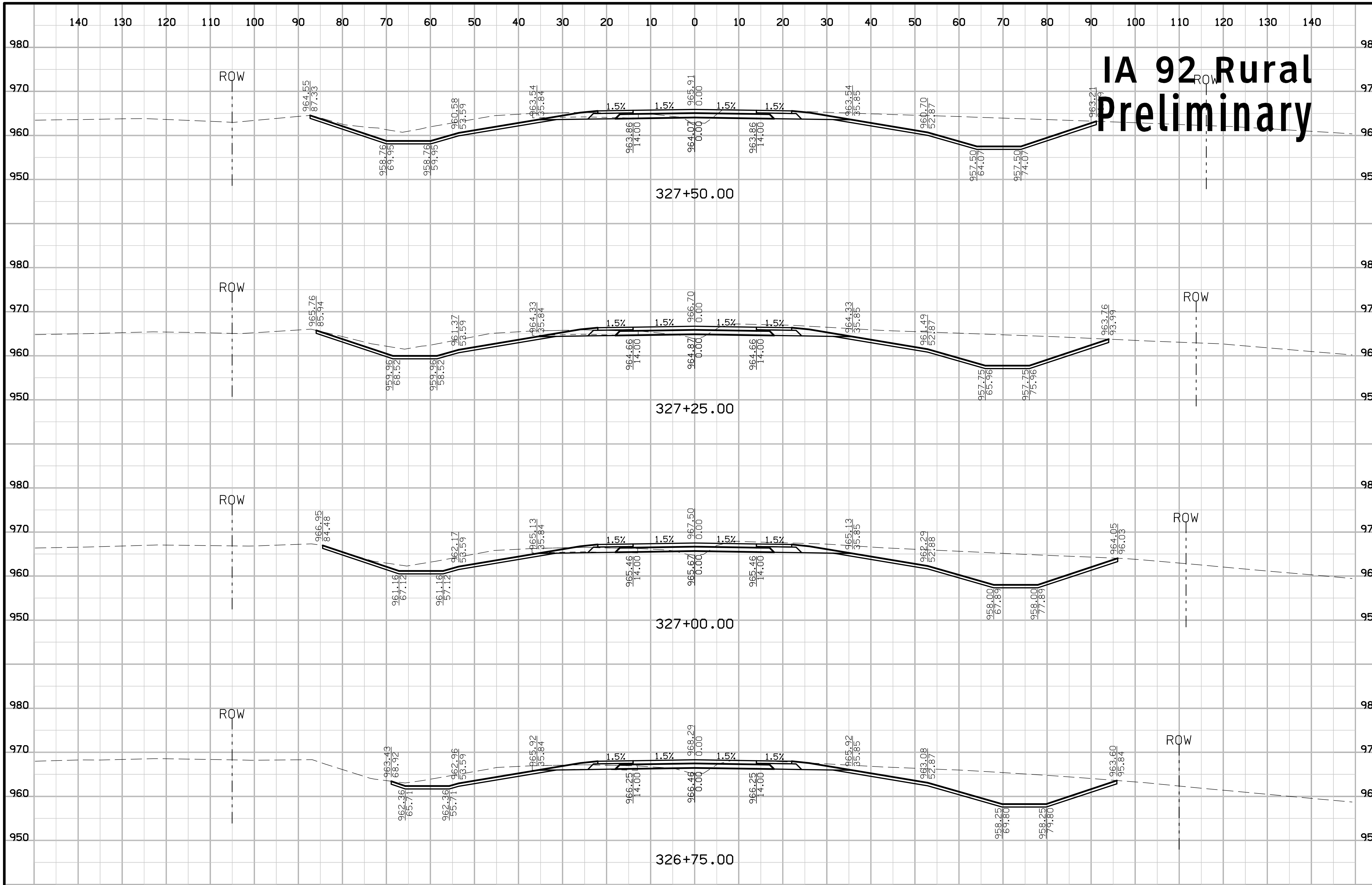

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER	W.87

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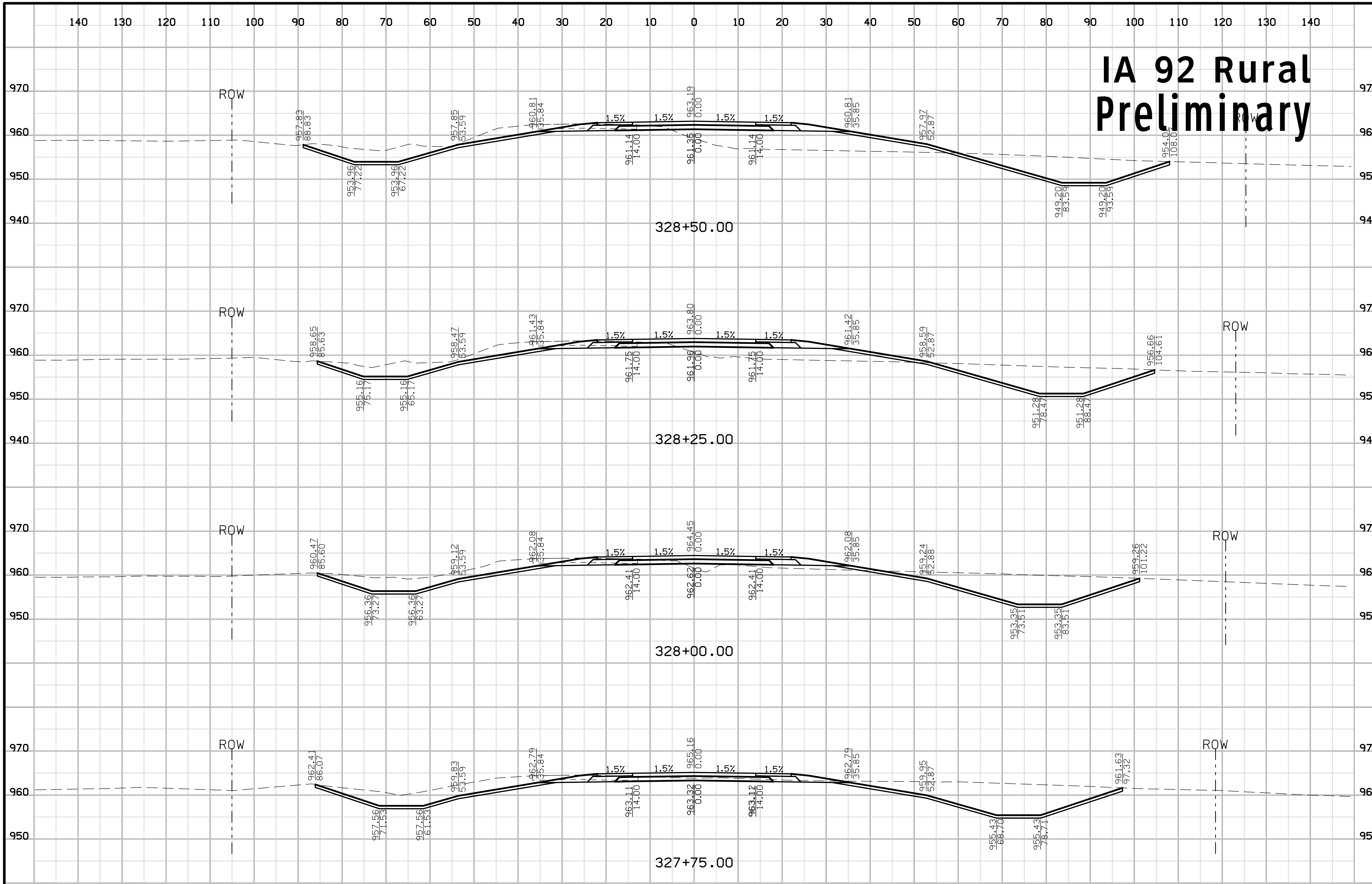

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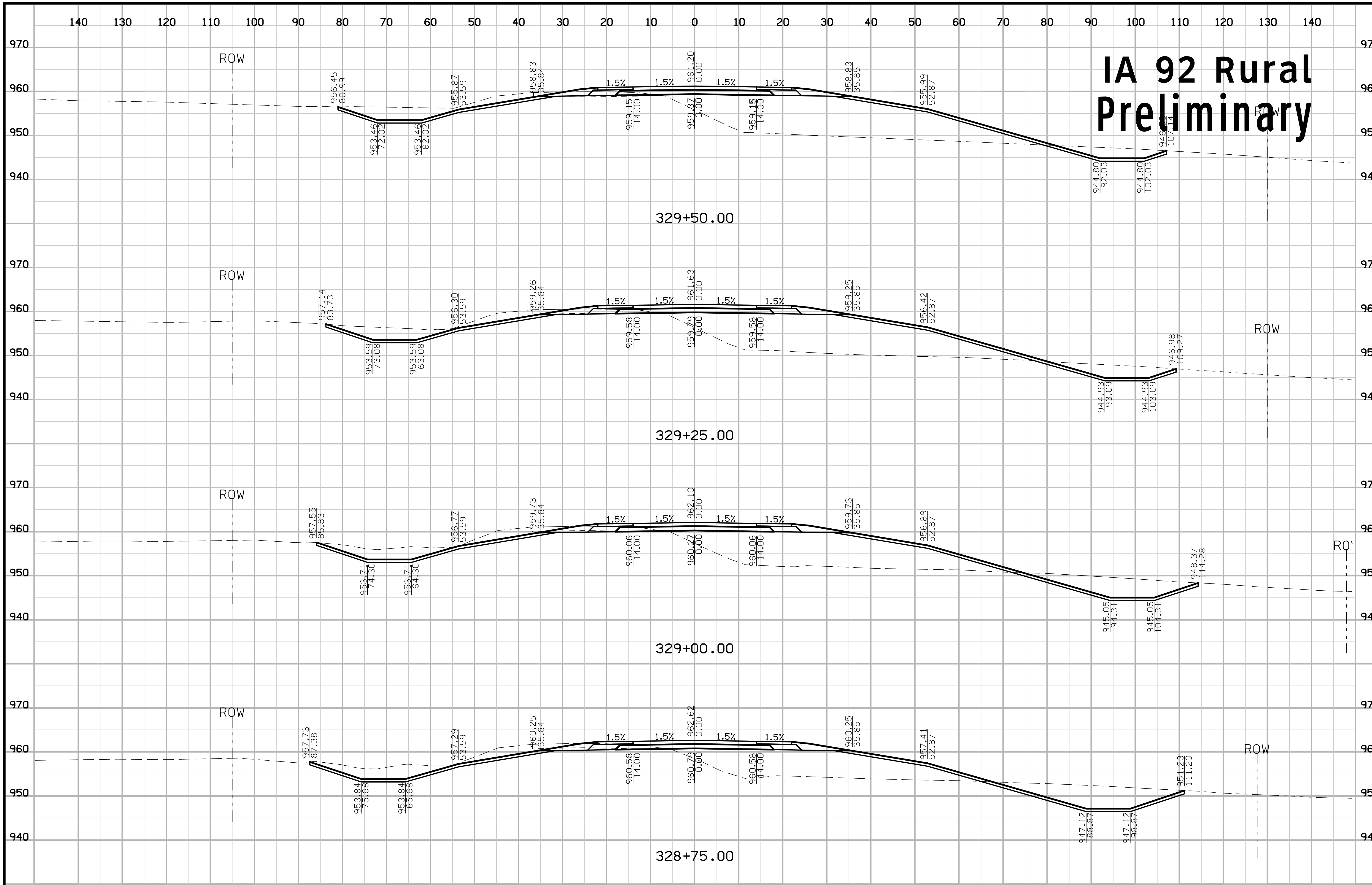
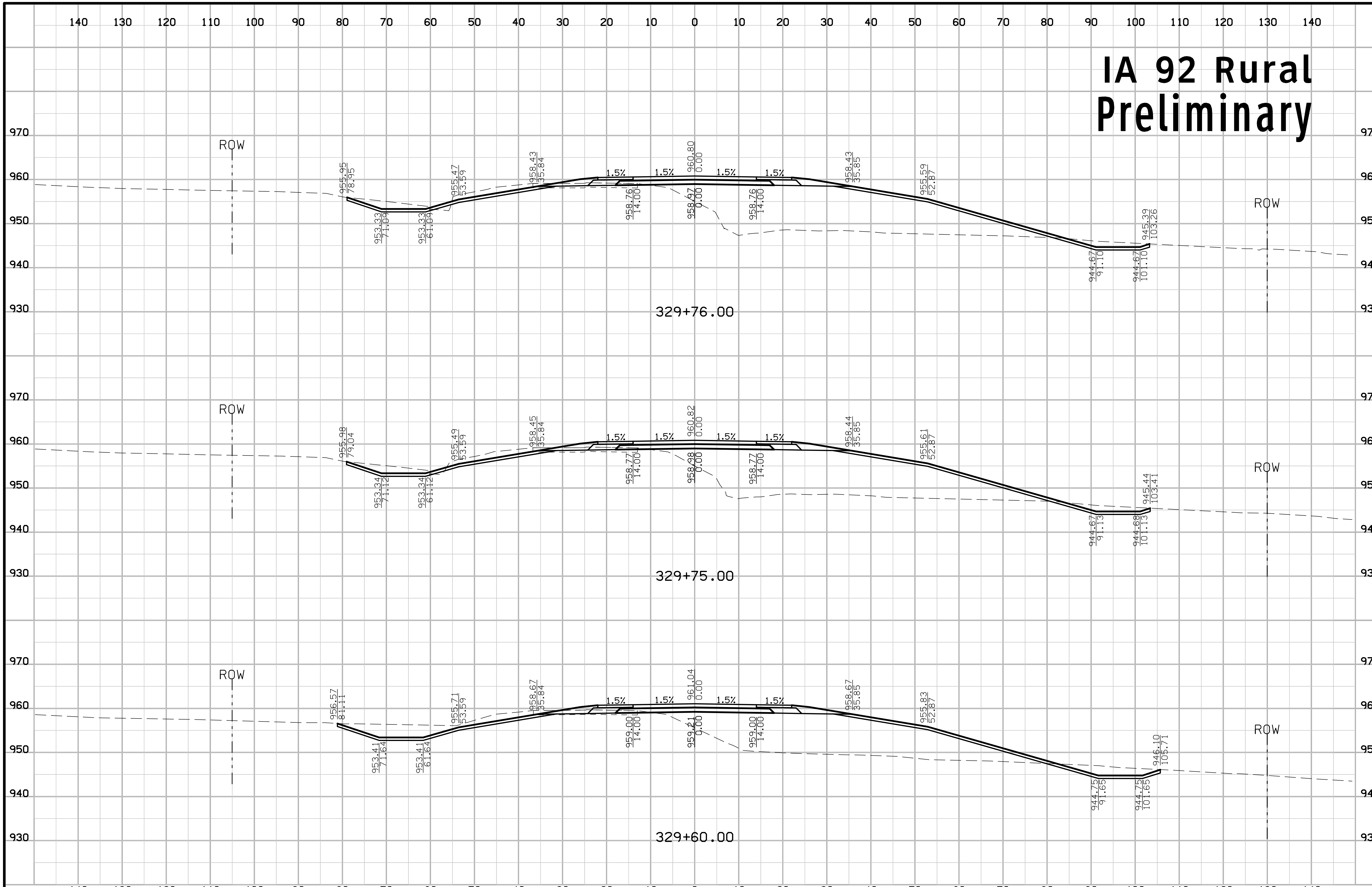


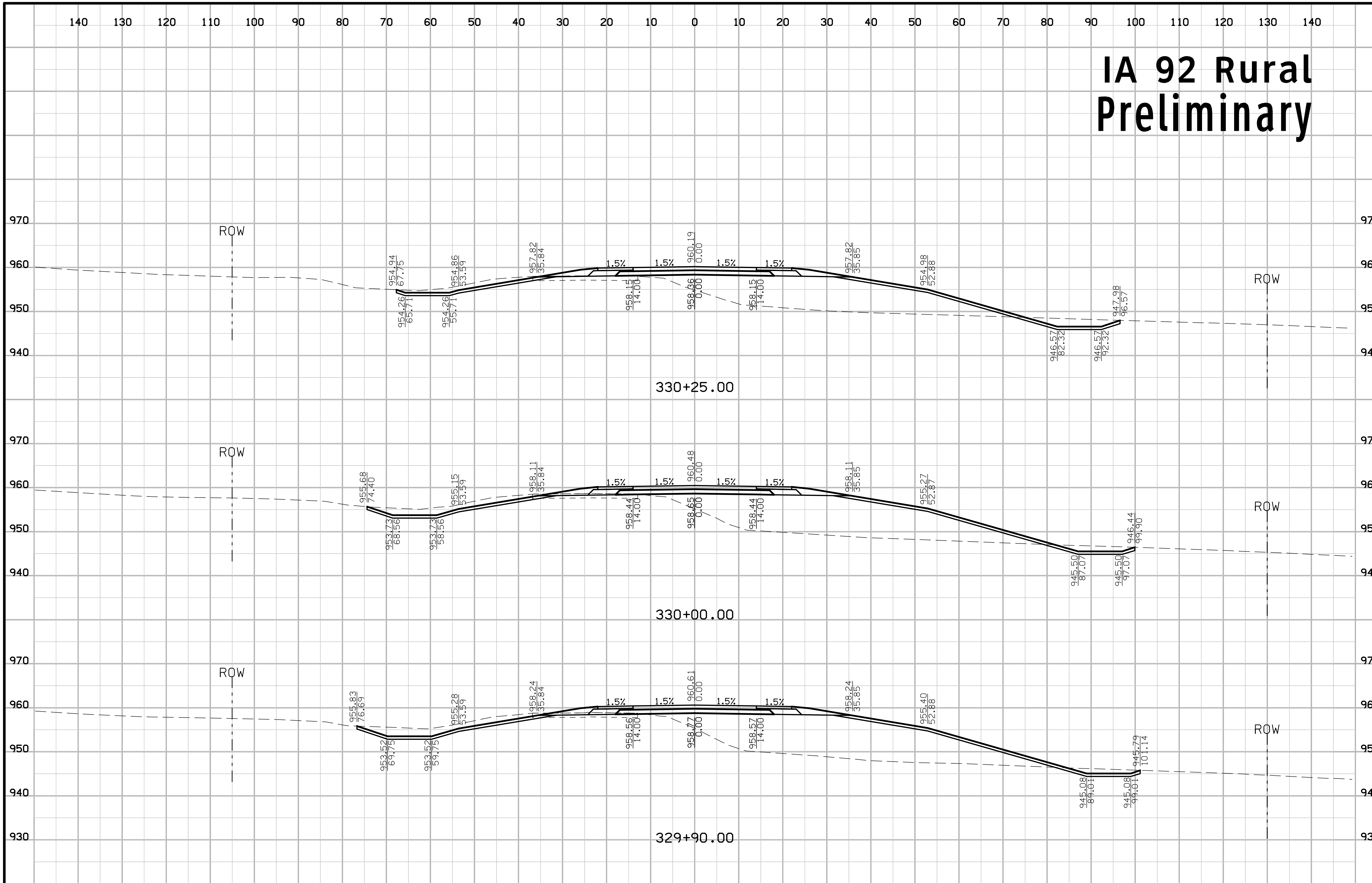
ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER	W.89

IA 92 Rural Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.90

IA 92 Rural Preliminary



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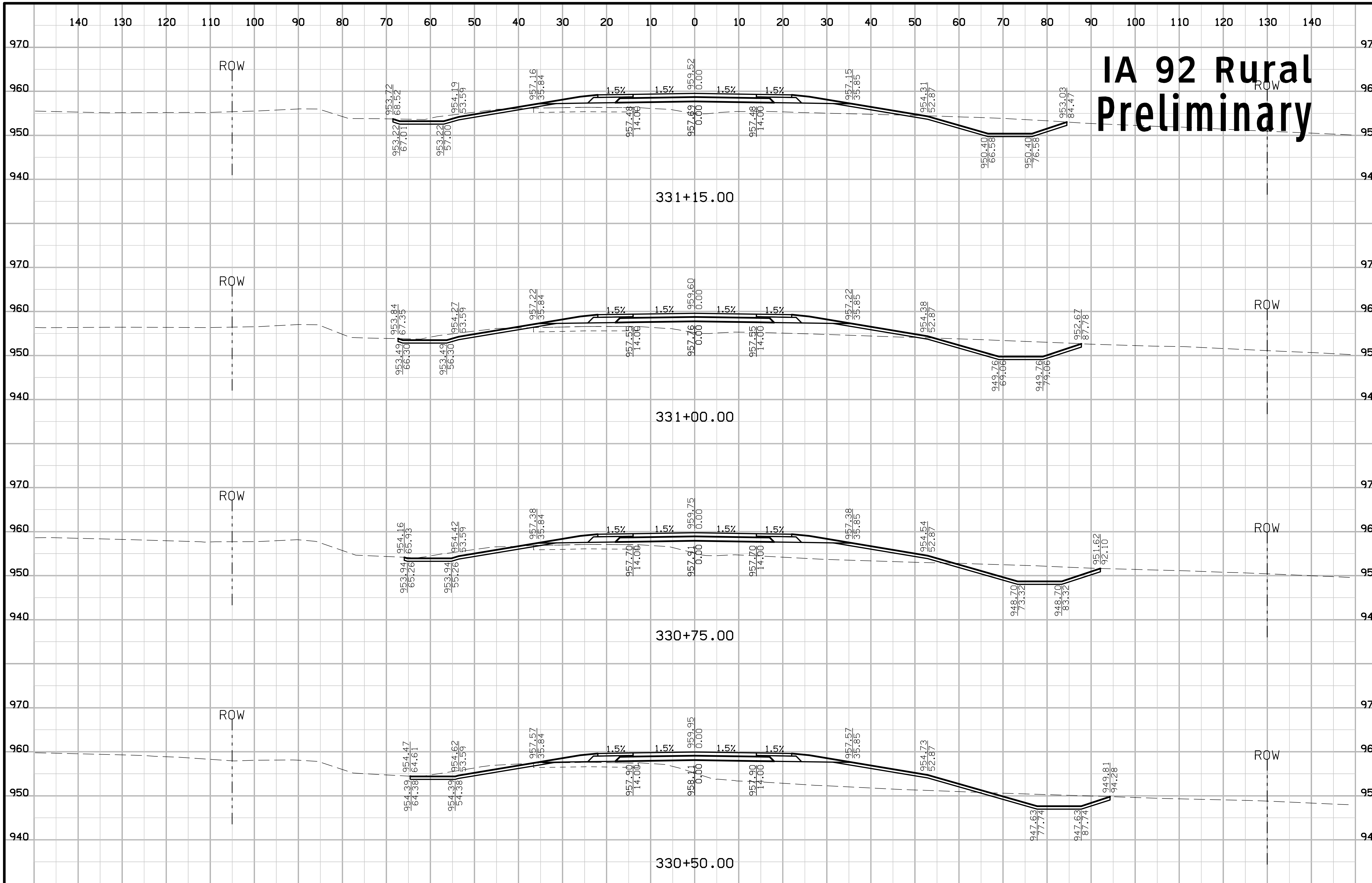

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.92

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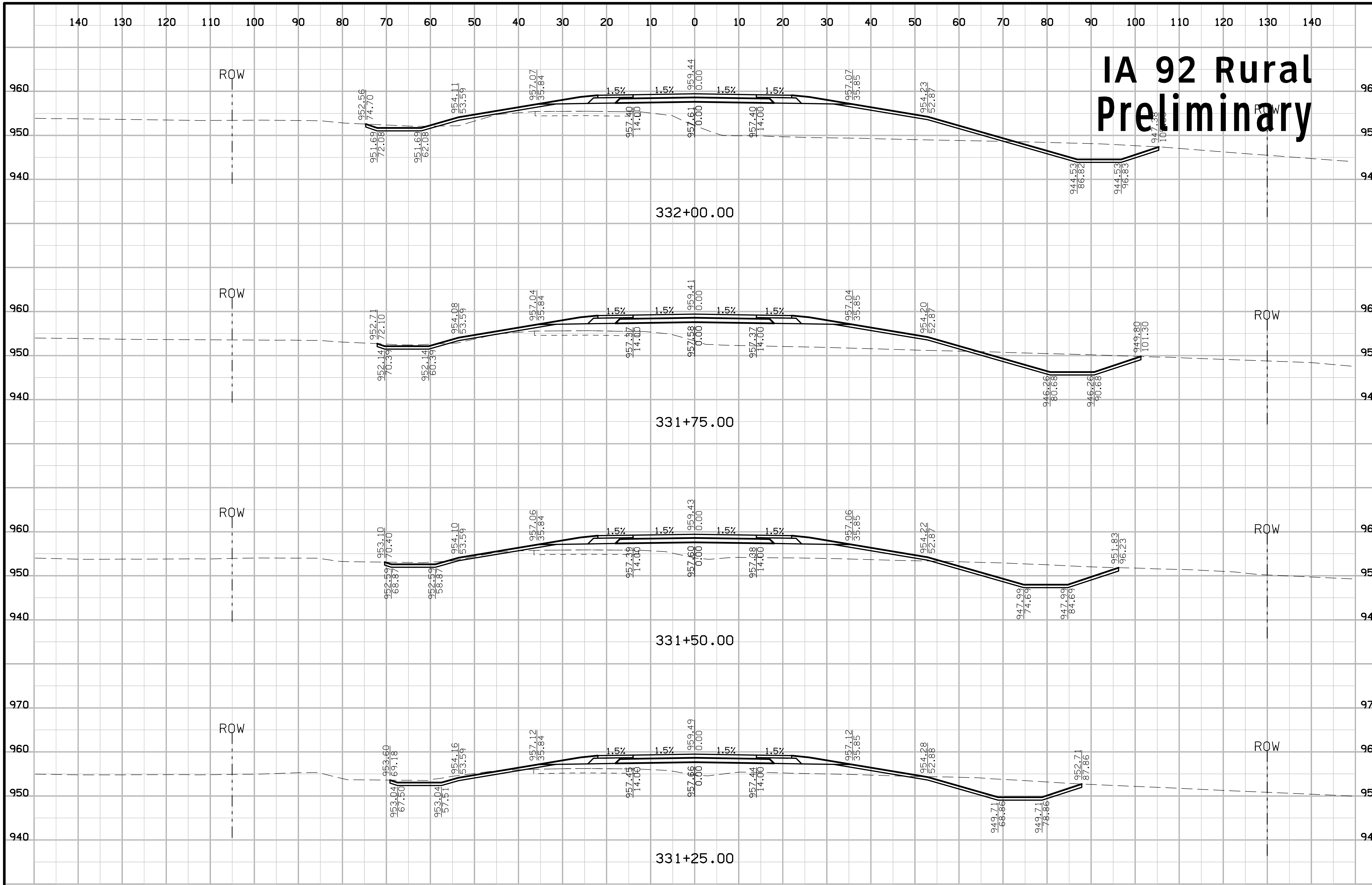

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.93

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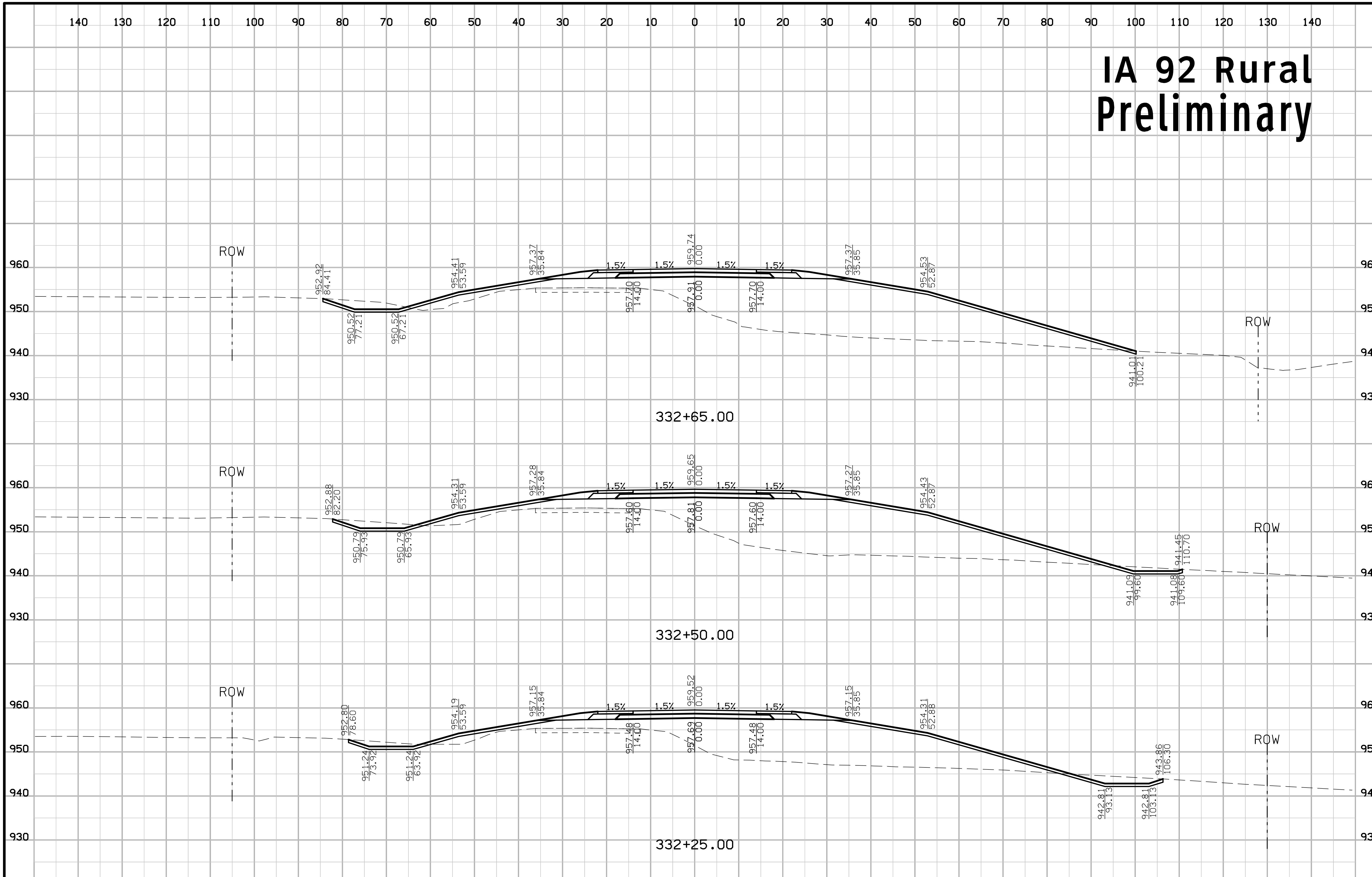
IA 92 Rural Preliminary



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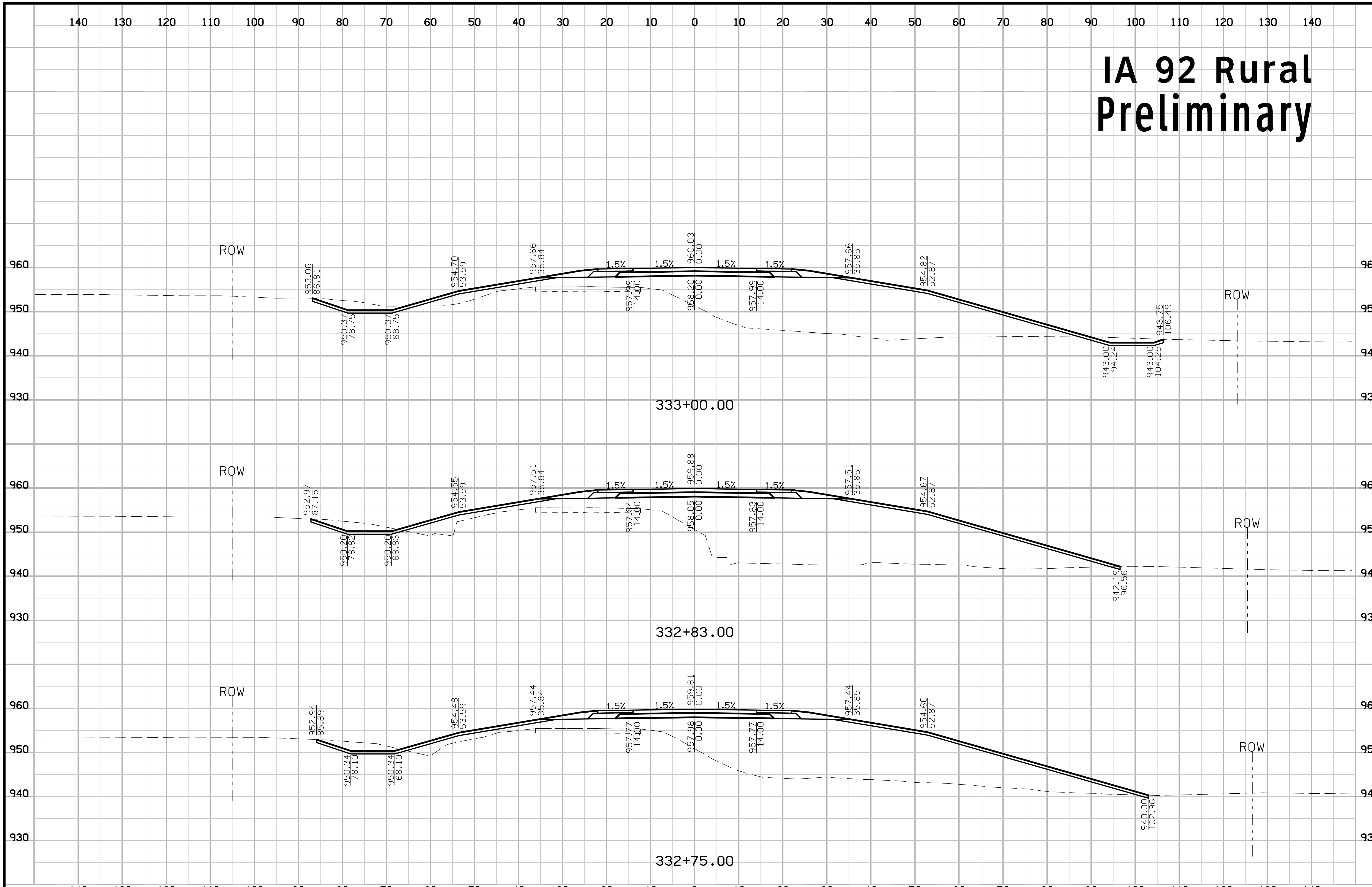

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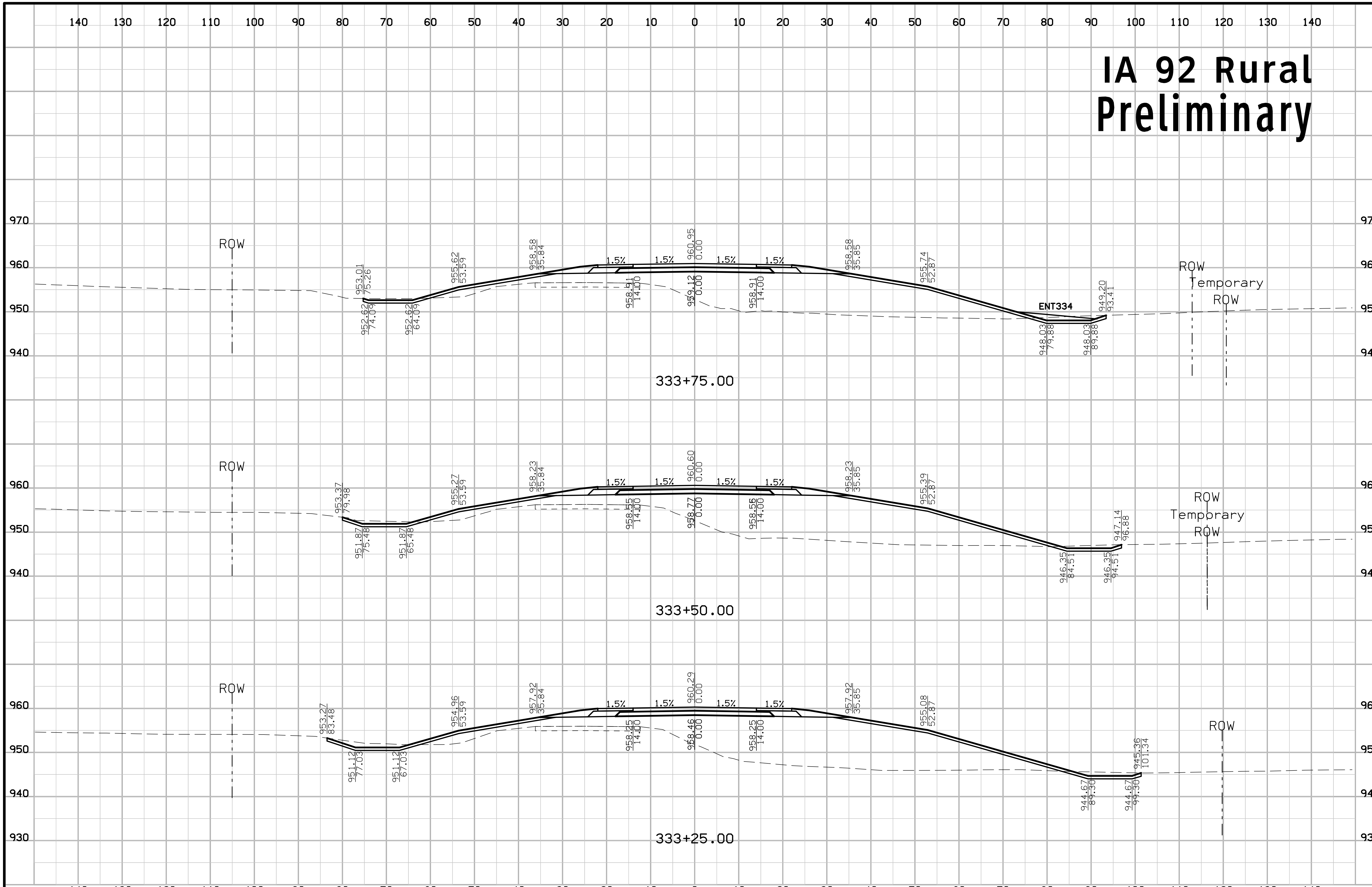
IA 92 Rural
Preliminary



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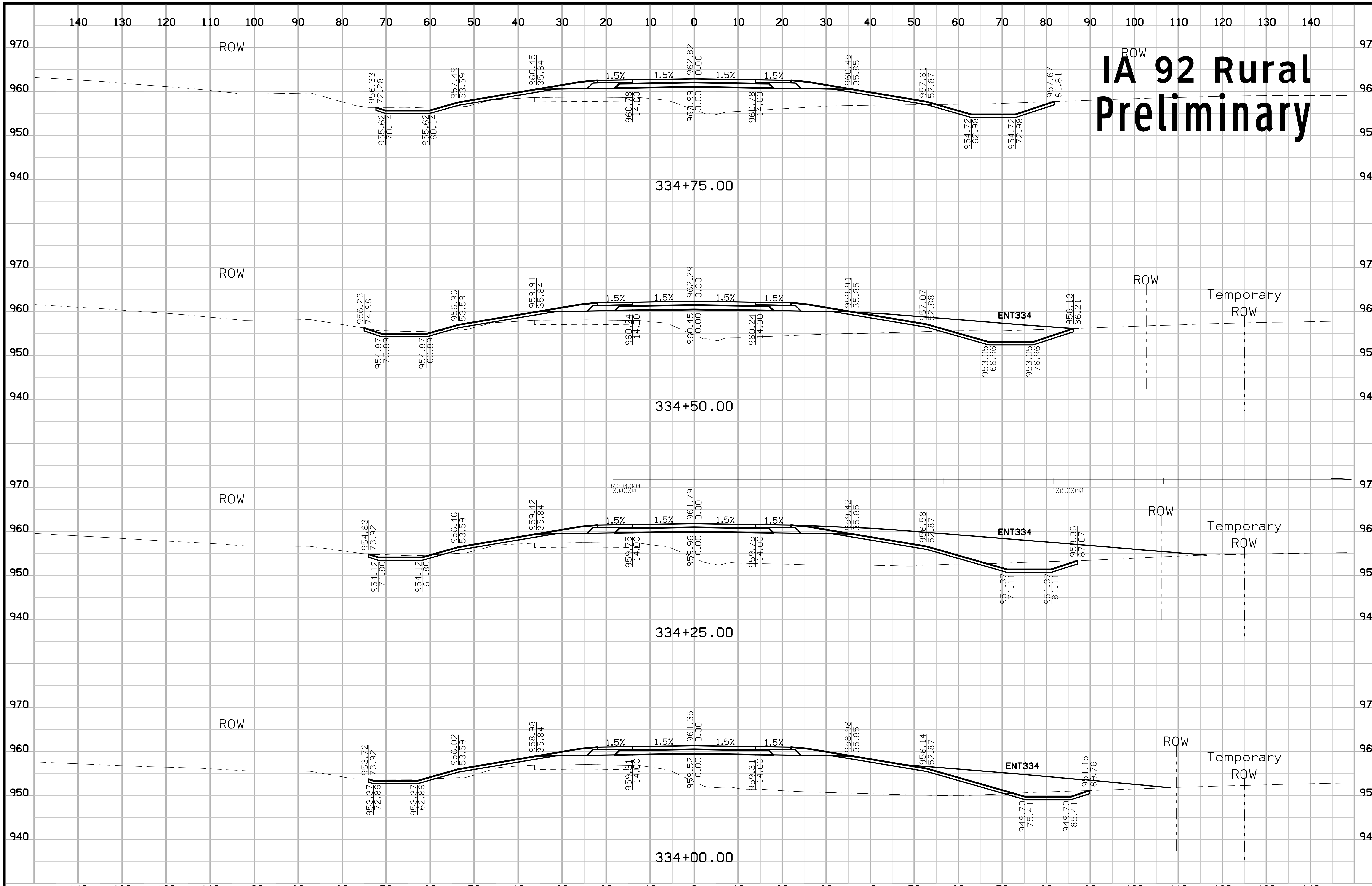

ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.97

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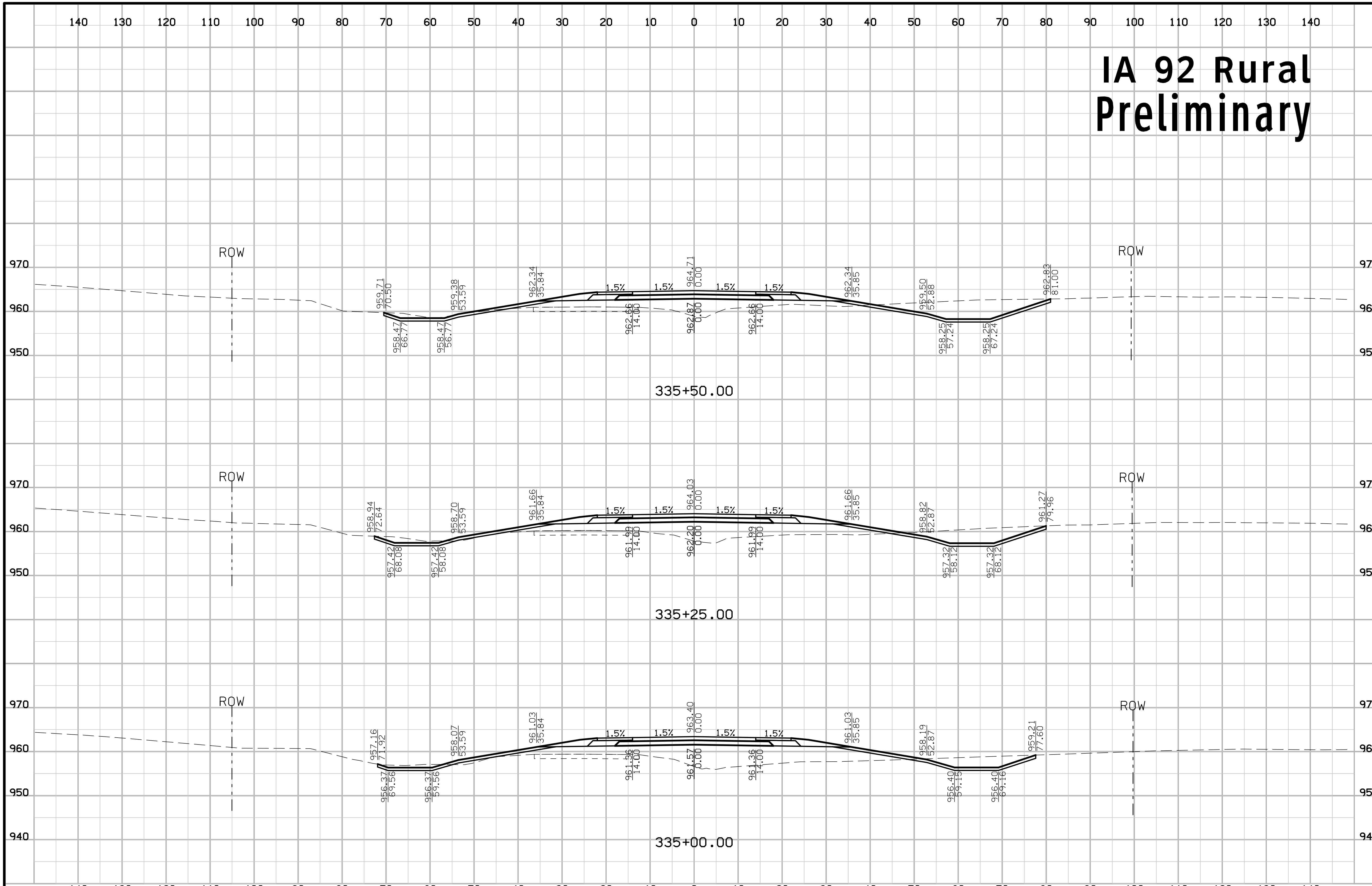
IA 92 Rural
Preliminary



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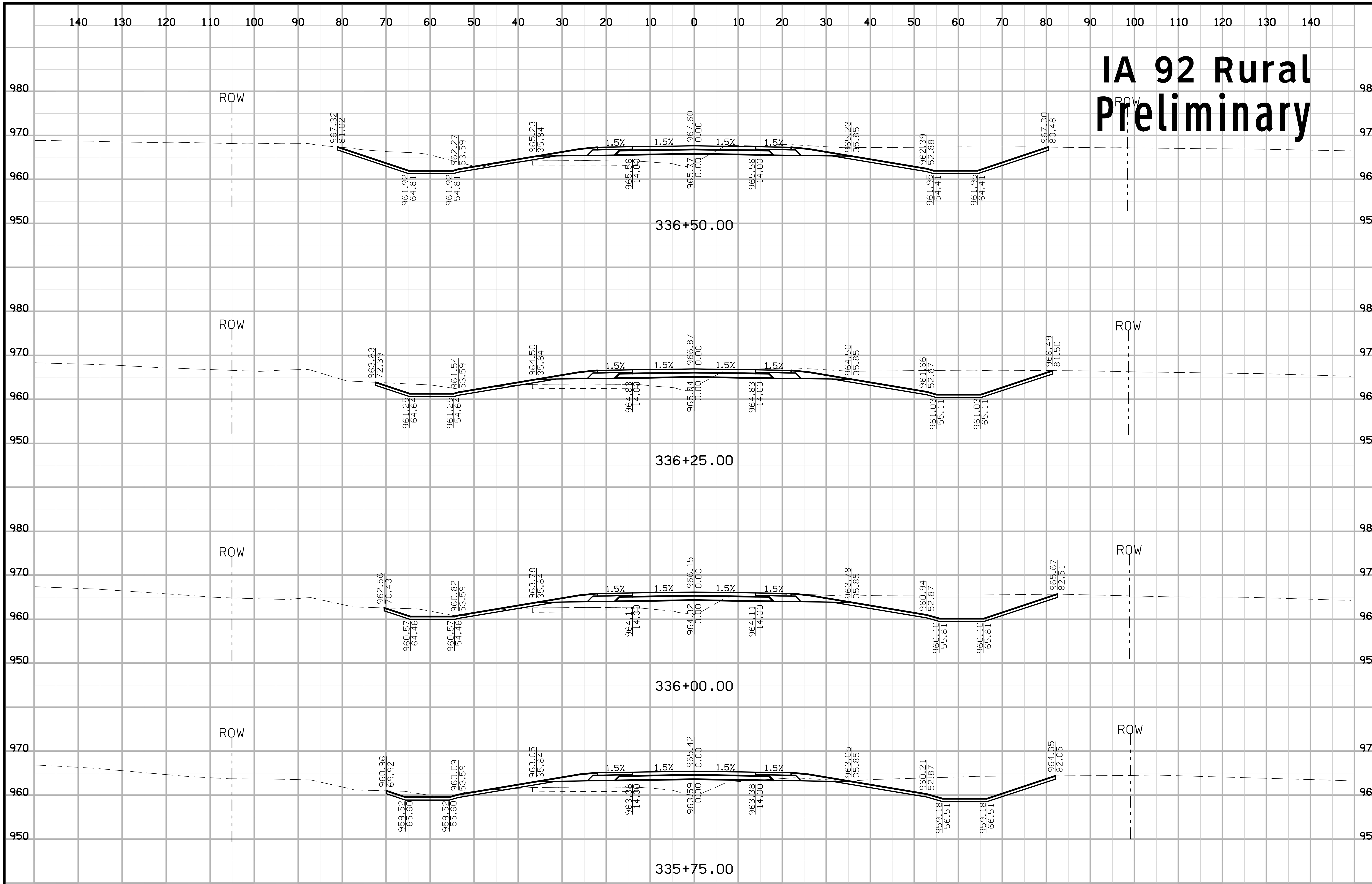
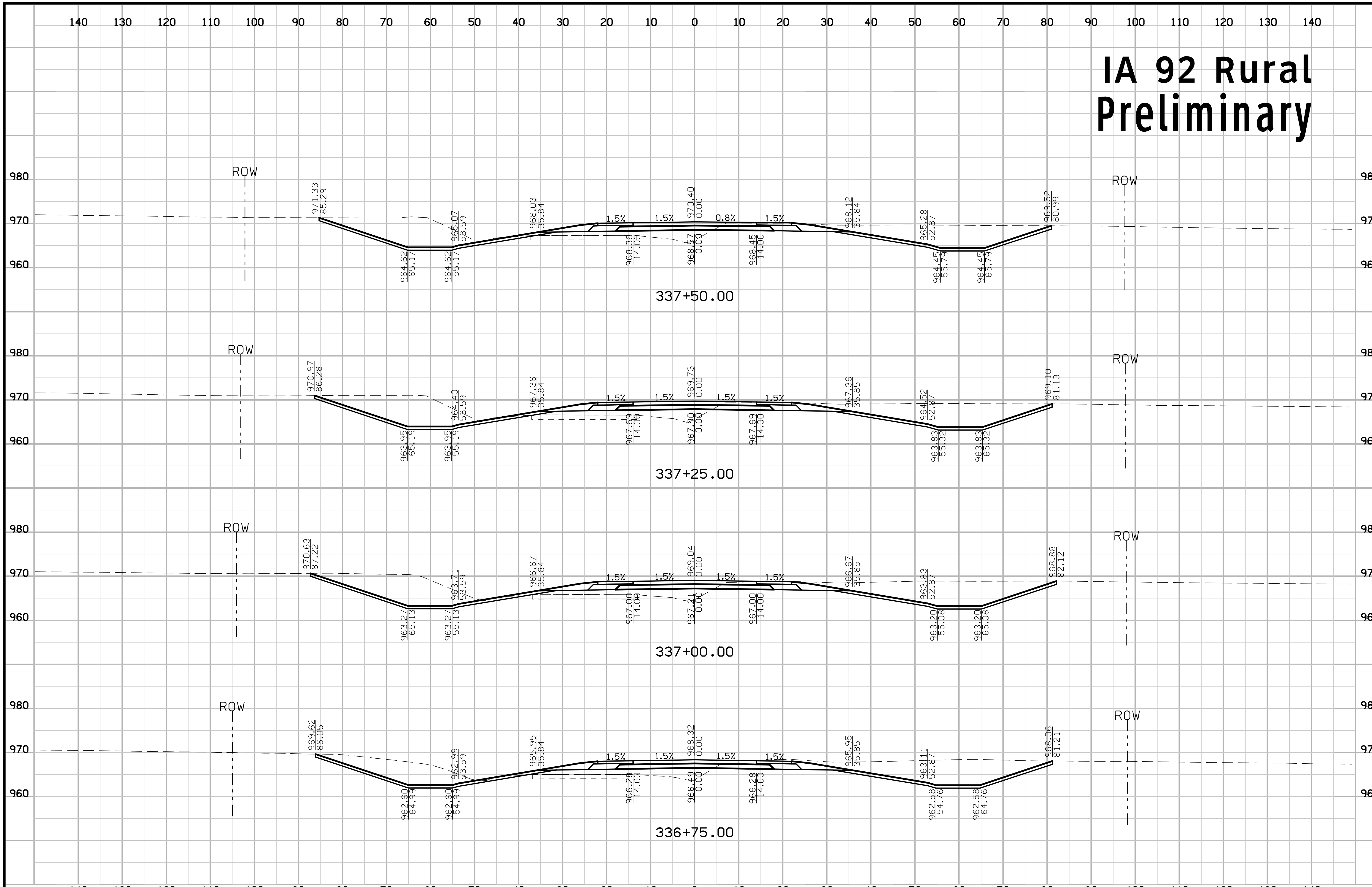


ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.99

IA 92 Rural
Preliminary



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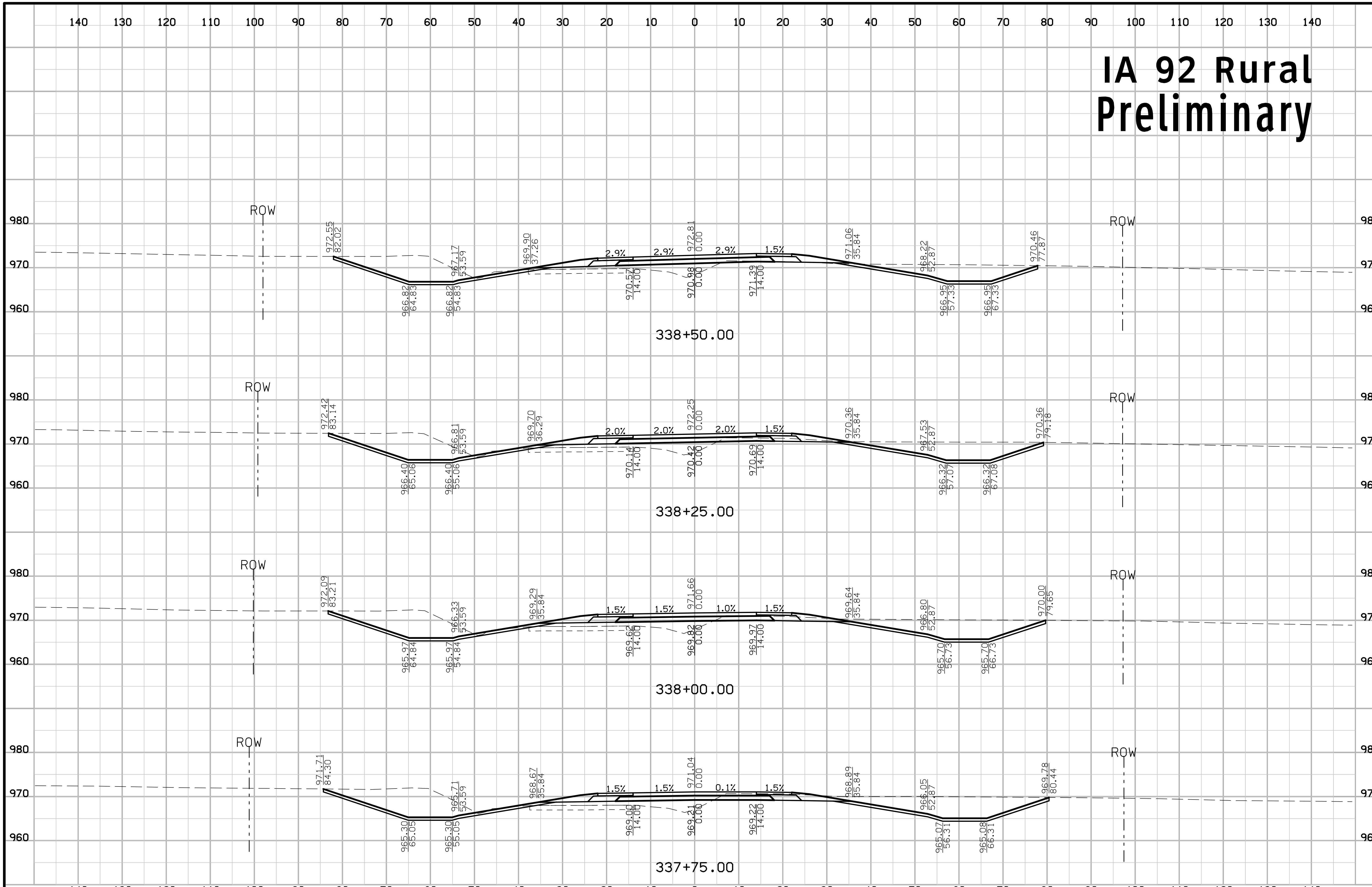
IA 92 Rural
Preliminary



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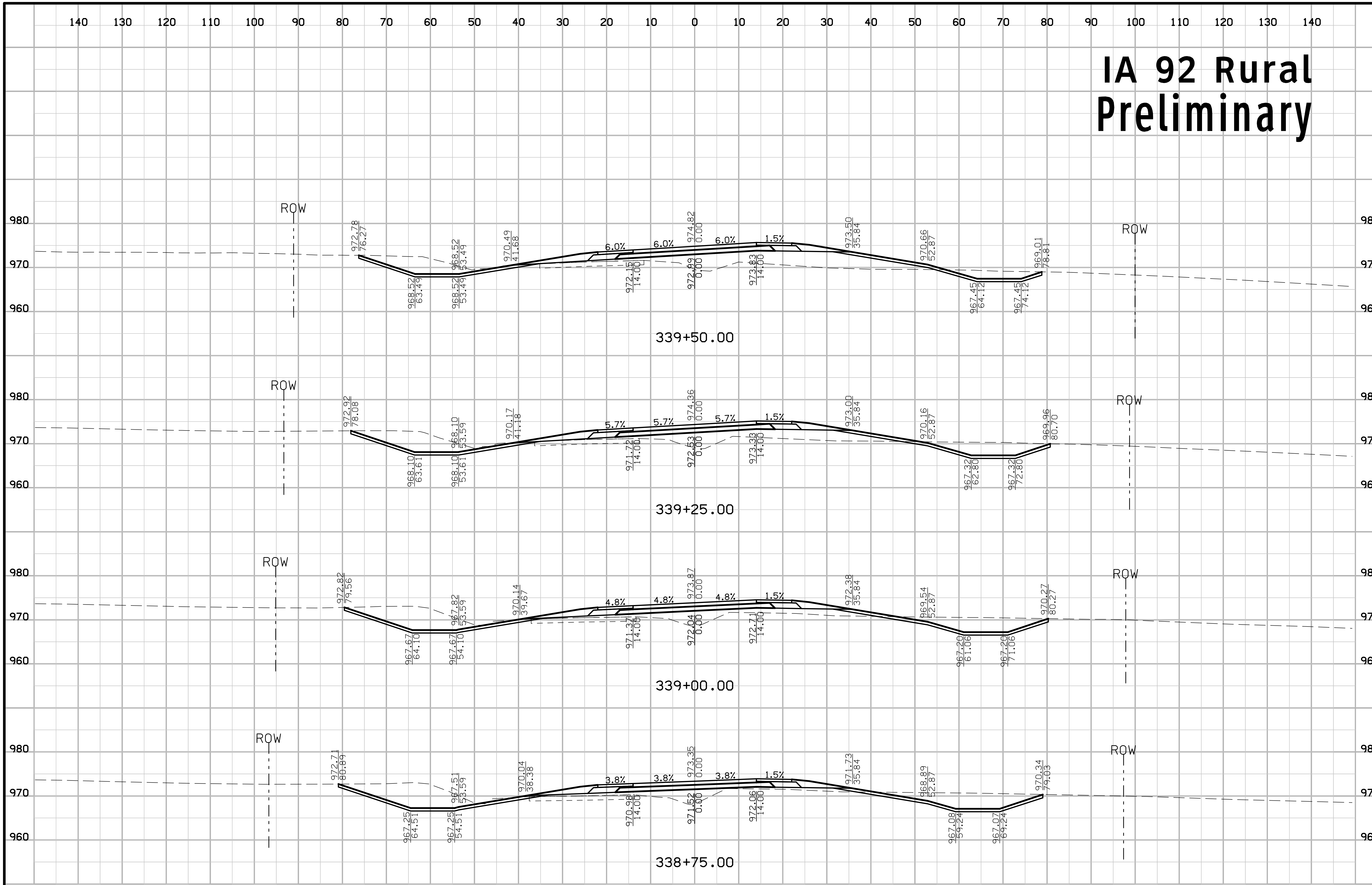
IA 92 Rural
Preliminary



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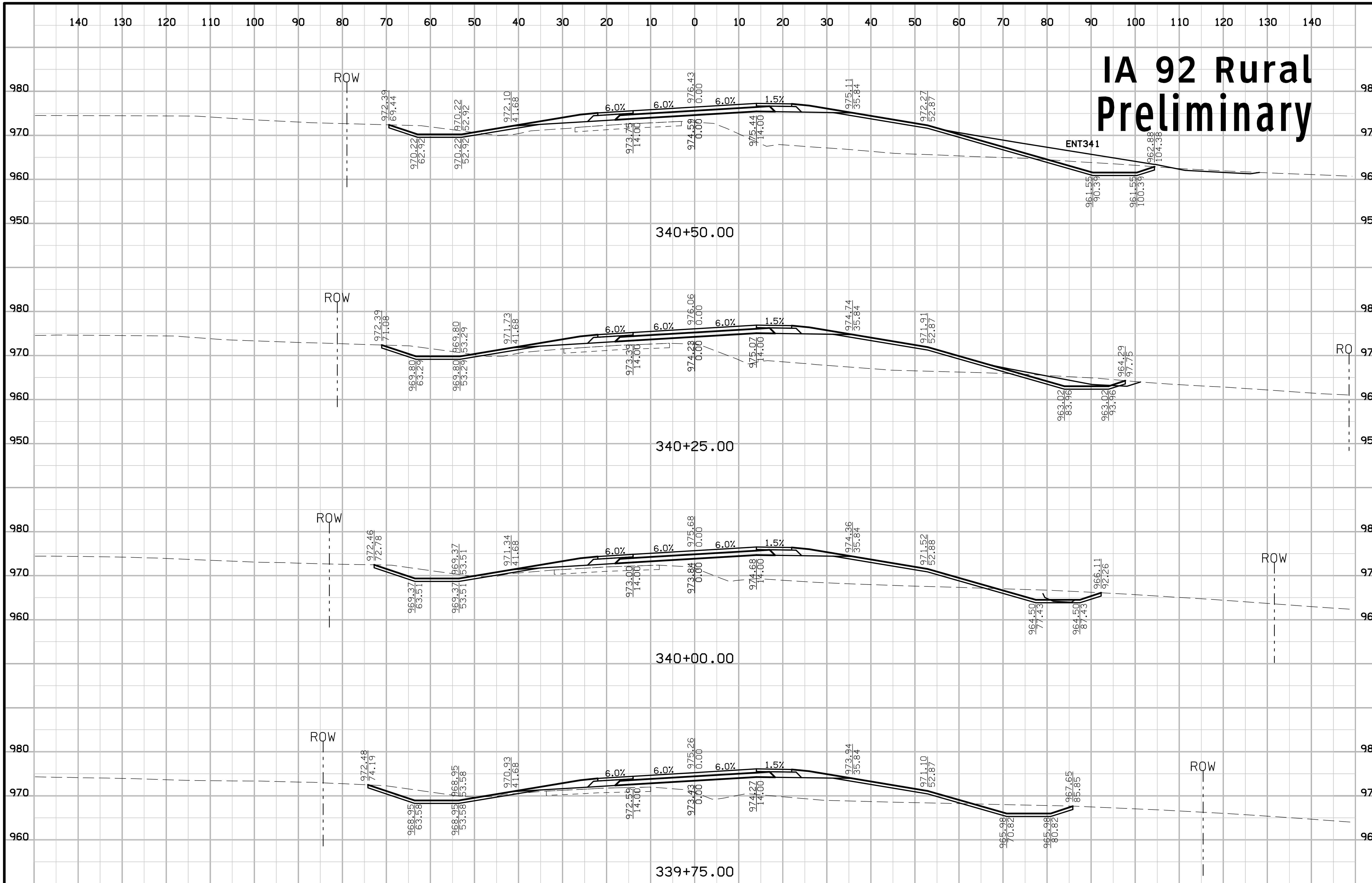

ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.103

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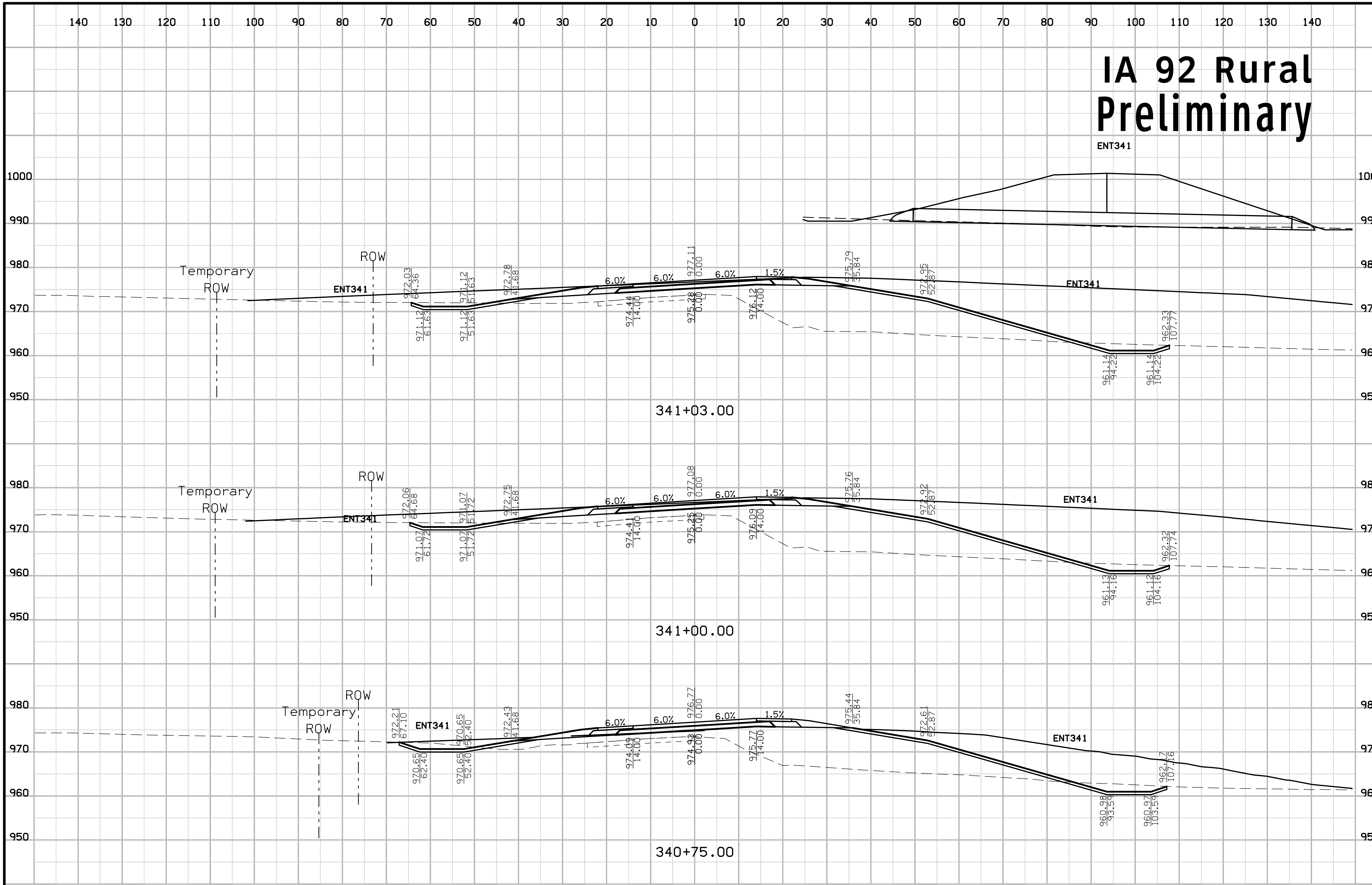

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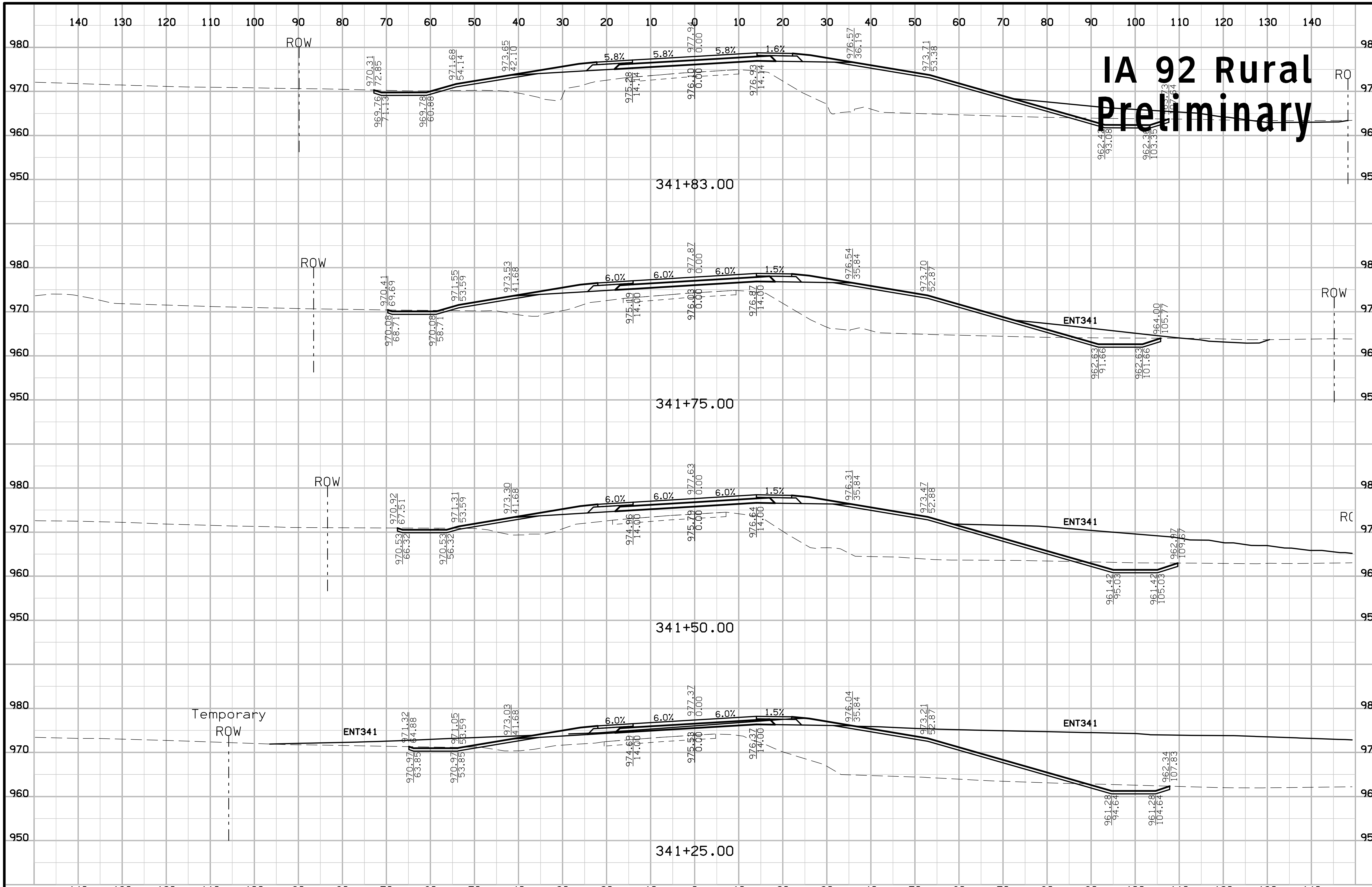
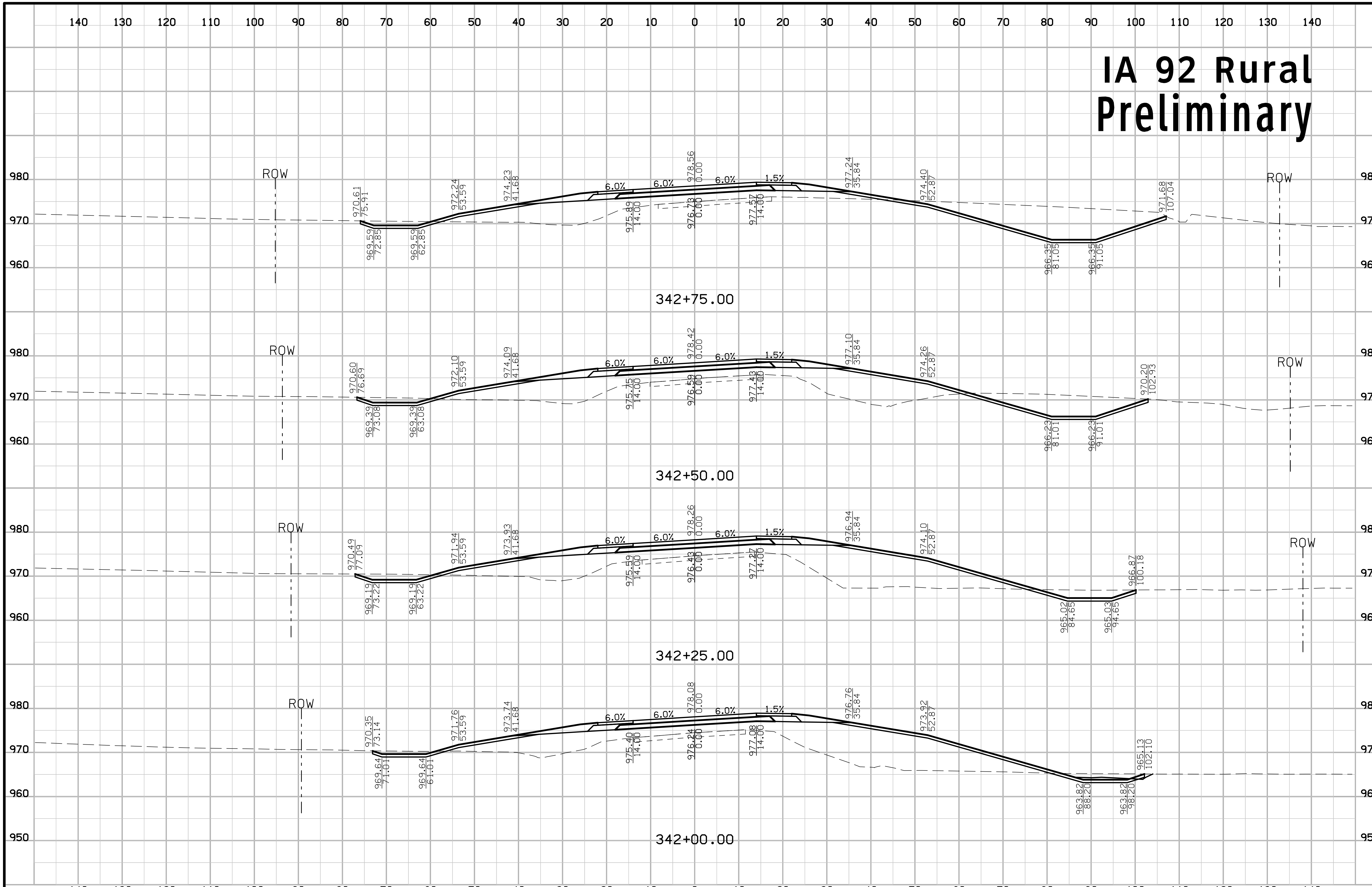


ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.105

IA 92 Rural
Preliminary



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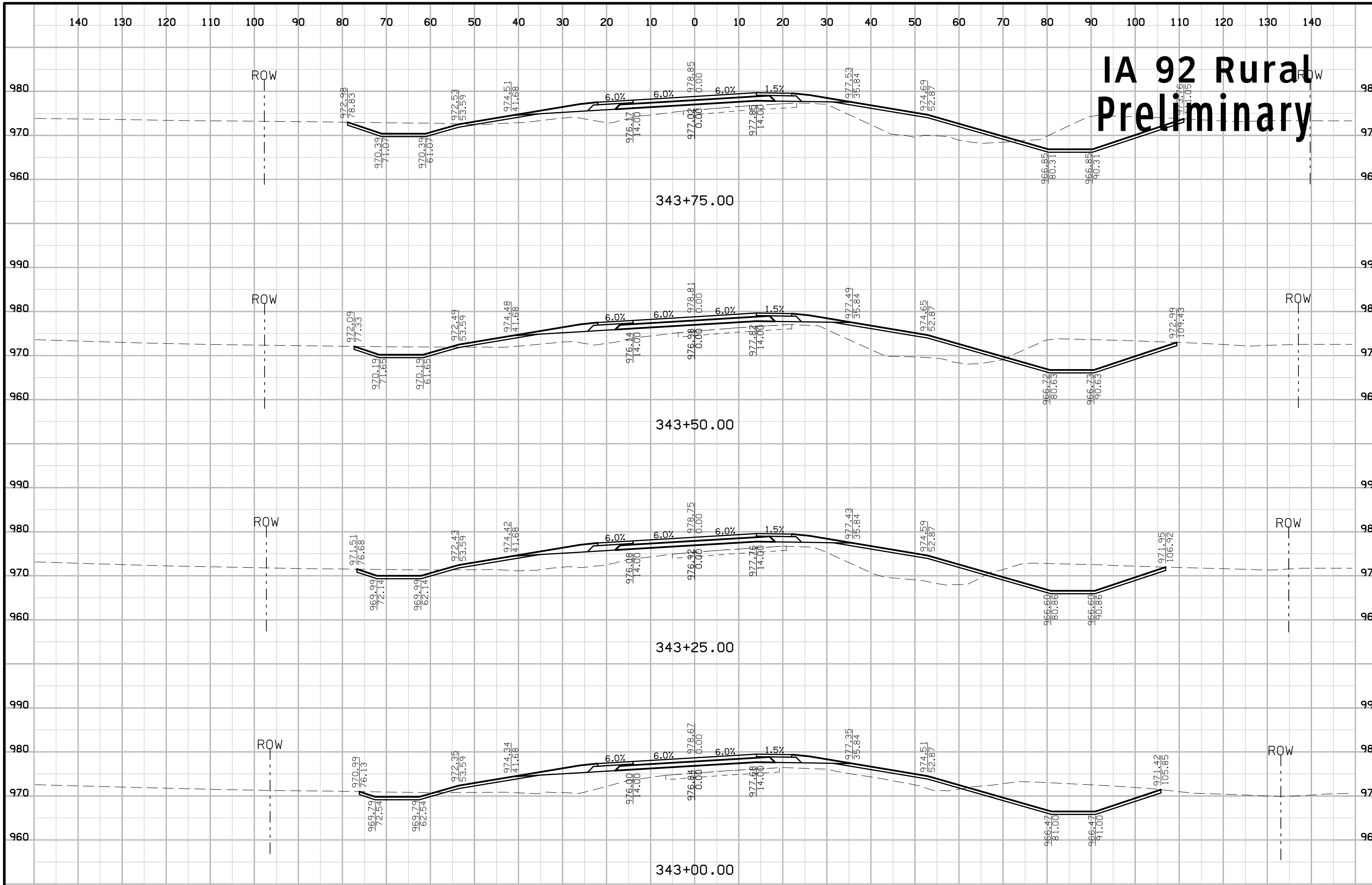

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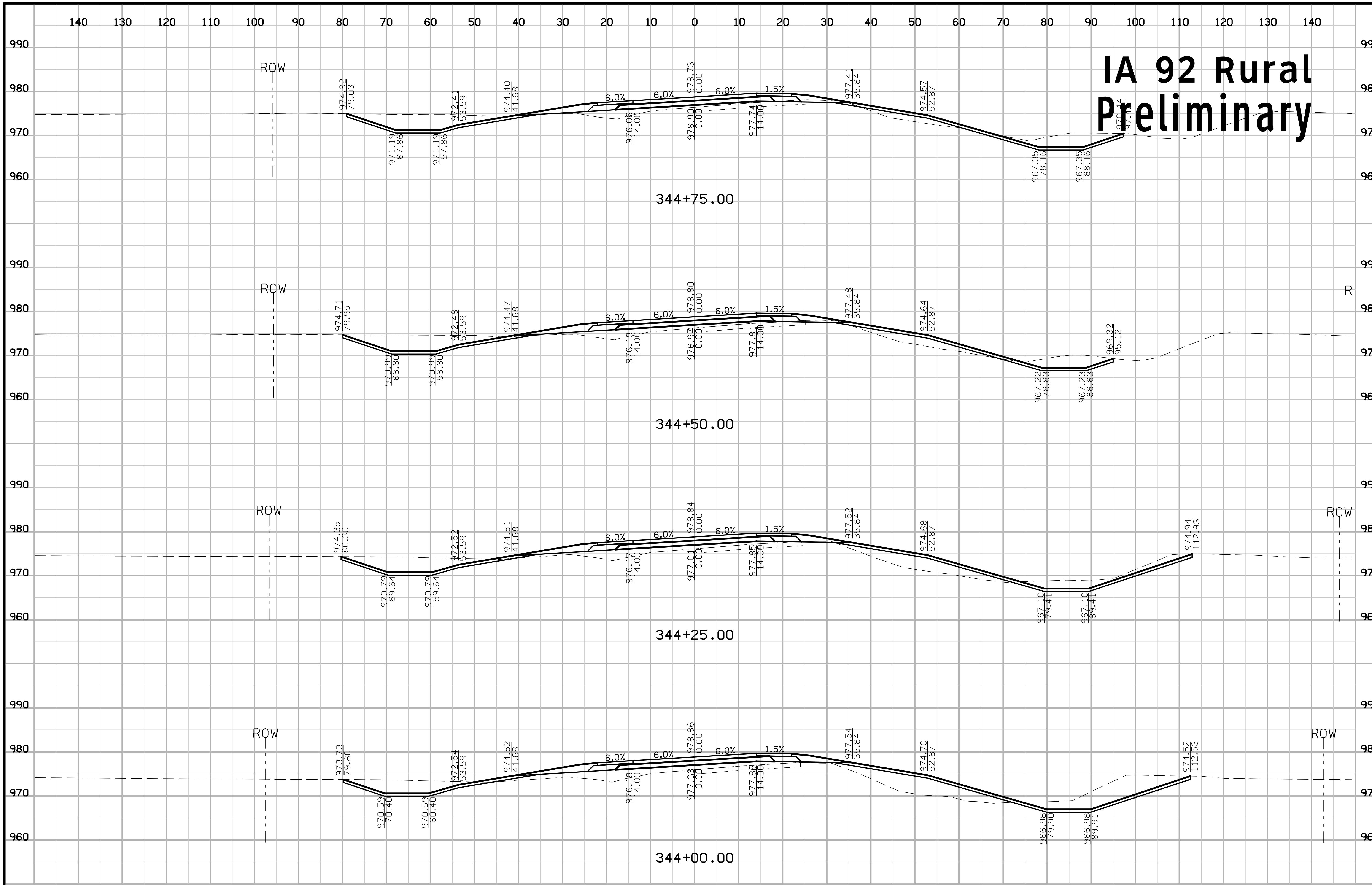

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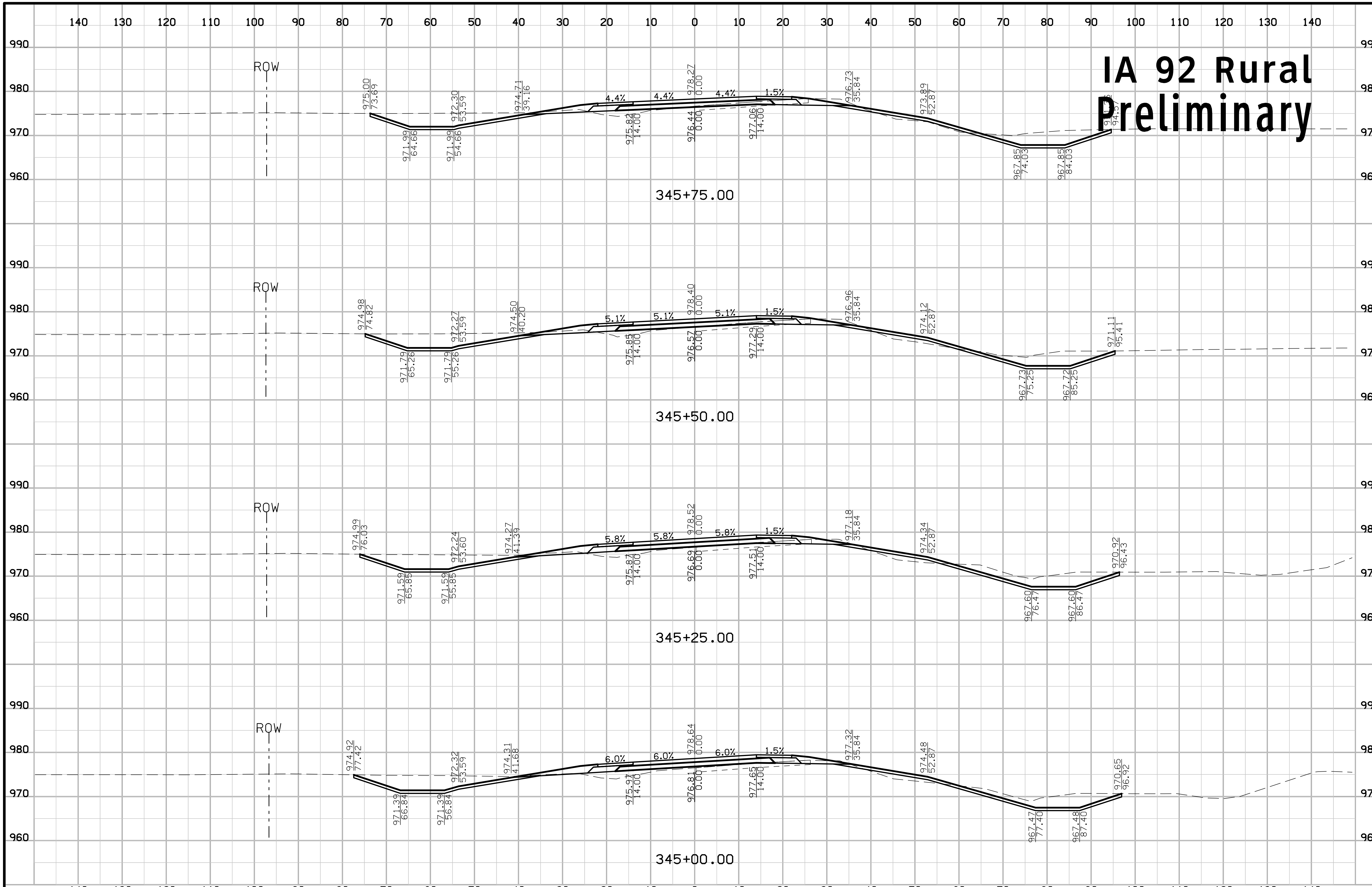
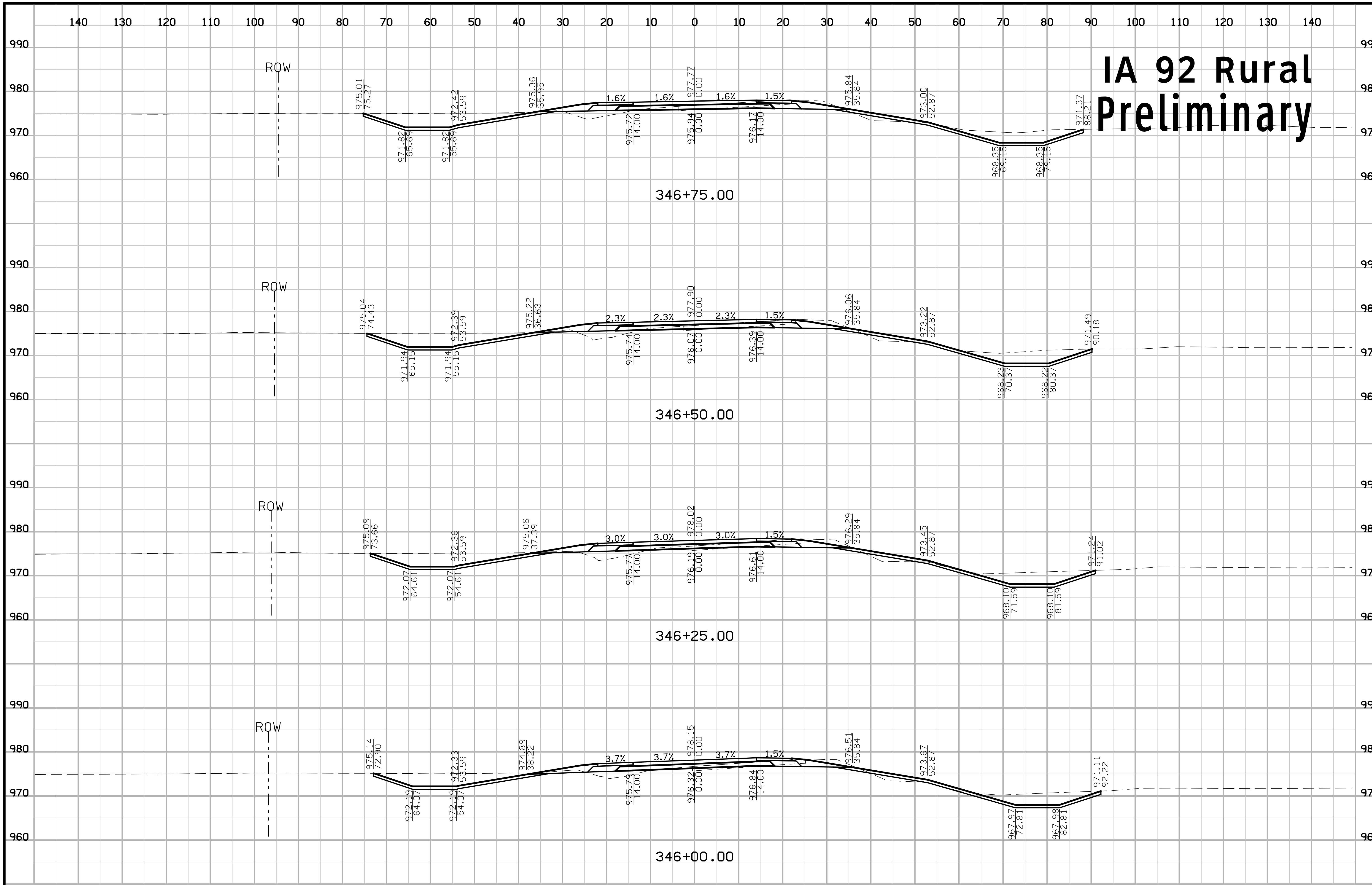


ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.109



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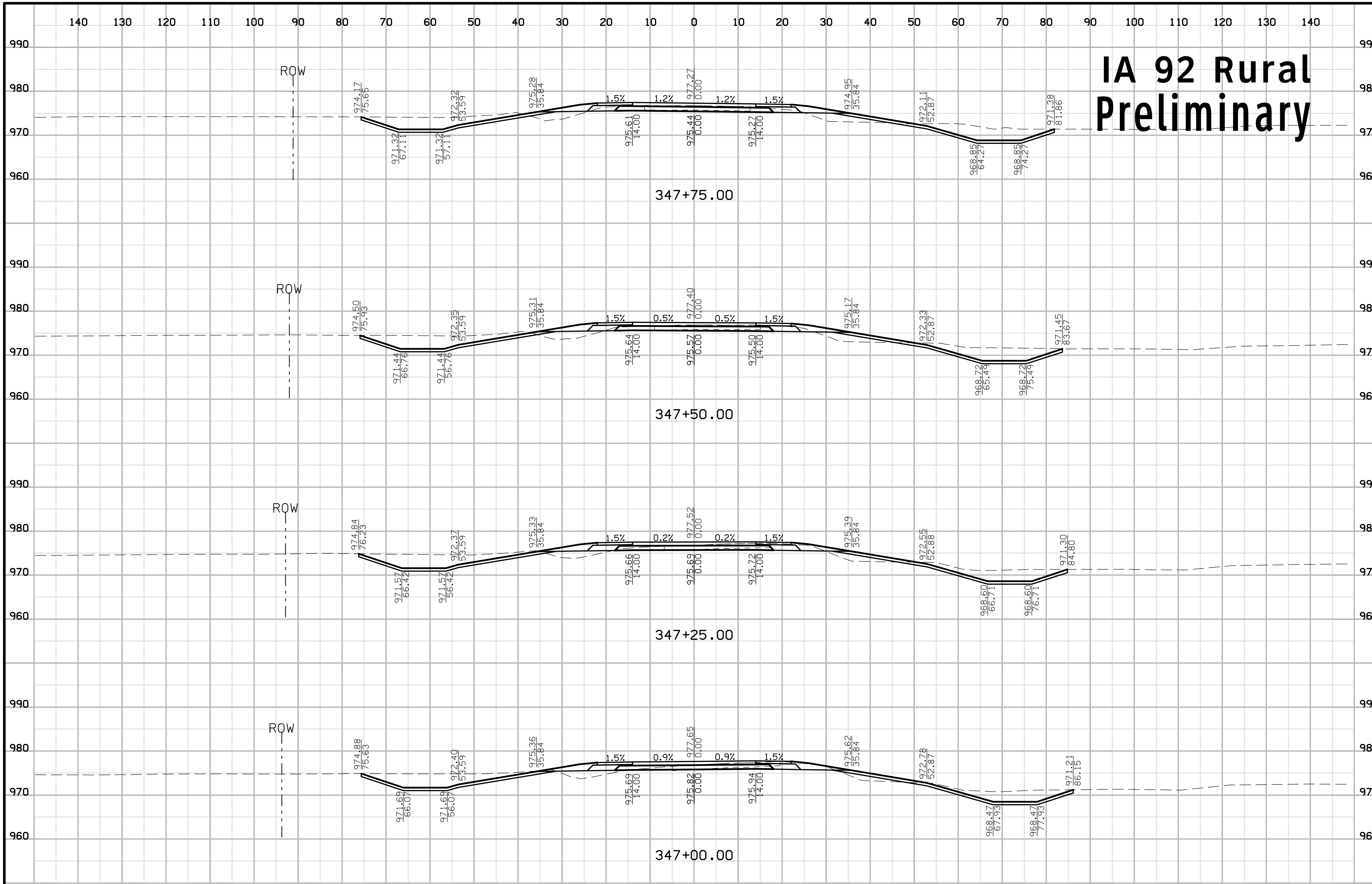
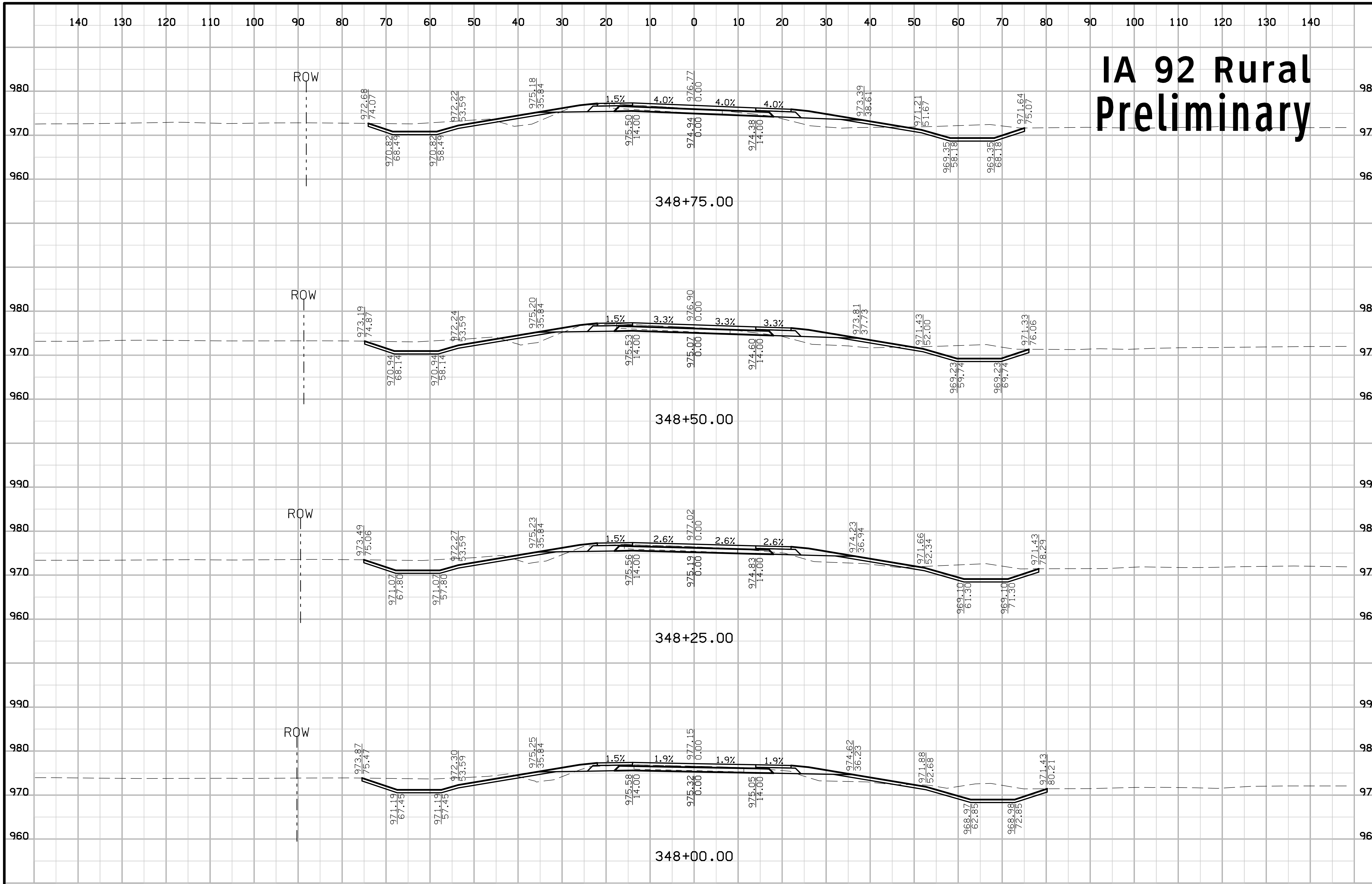


ENGLISH	IOWA DOT	DESIGN TEAM **Jia\Holst\Bennett**	**WARREN** COUNTY	PROJECT NUMBER	**NHSX-092-5(51)--3H-91**	SHEET NUMBER **W.111**

IA 92 Rural
Preliminary



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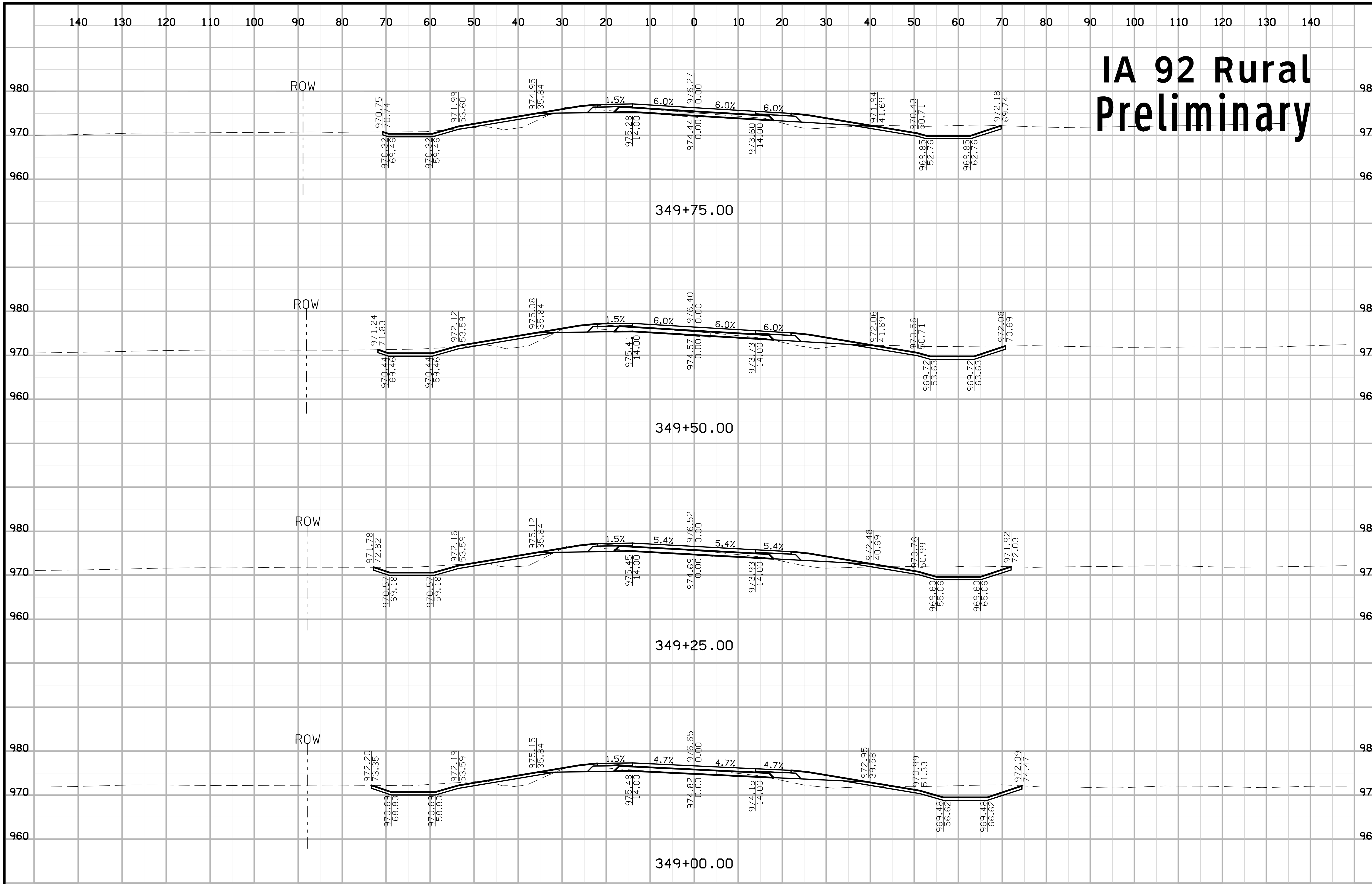

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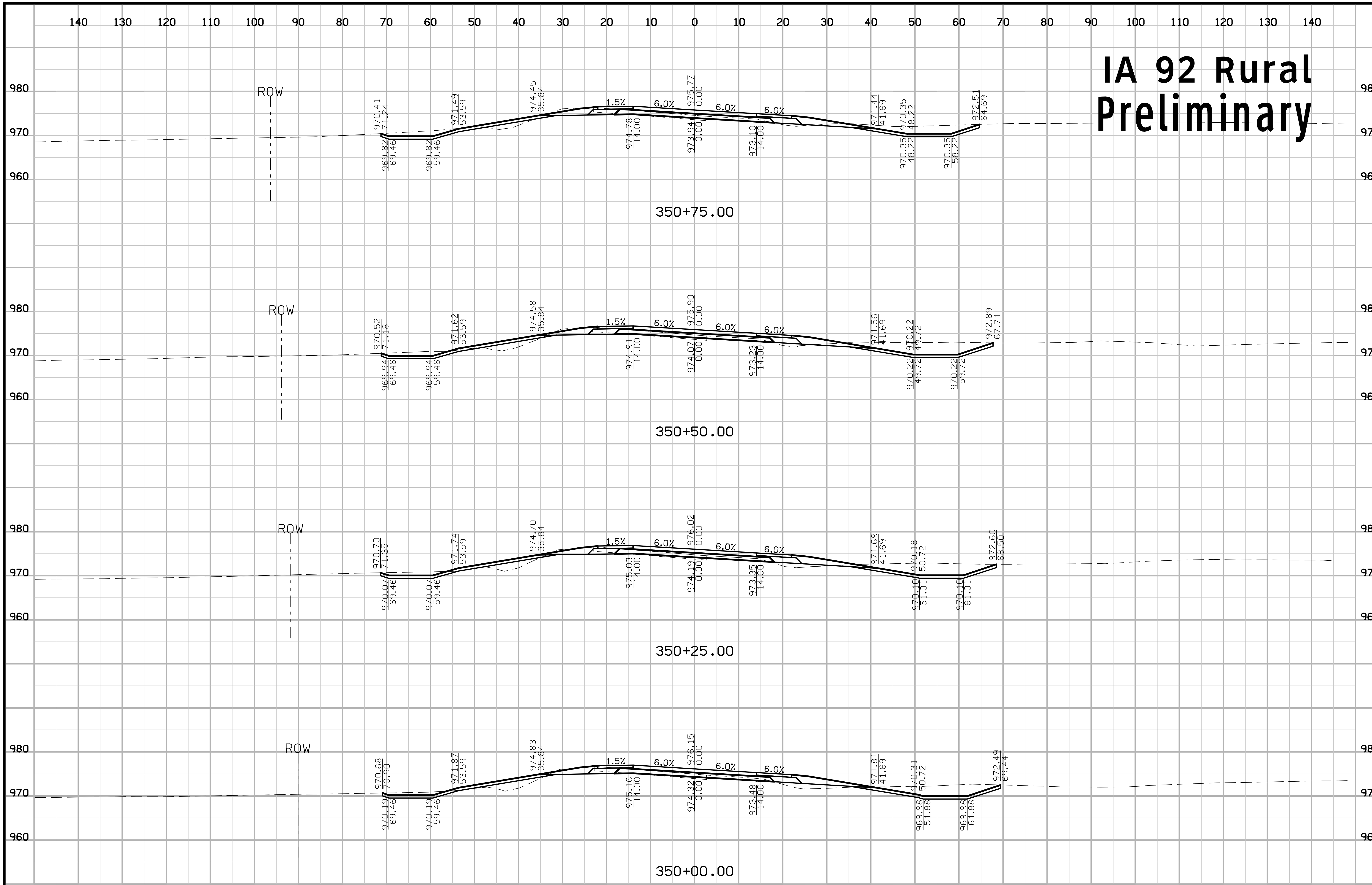

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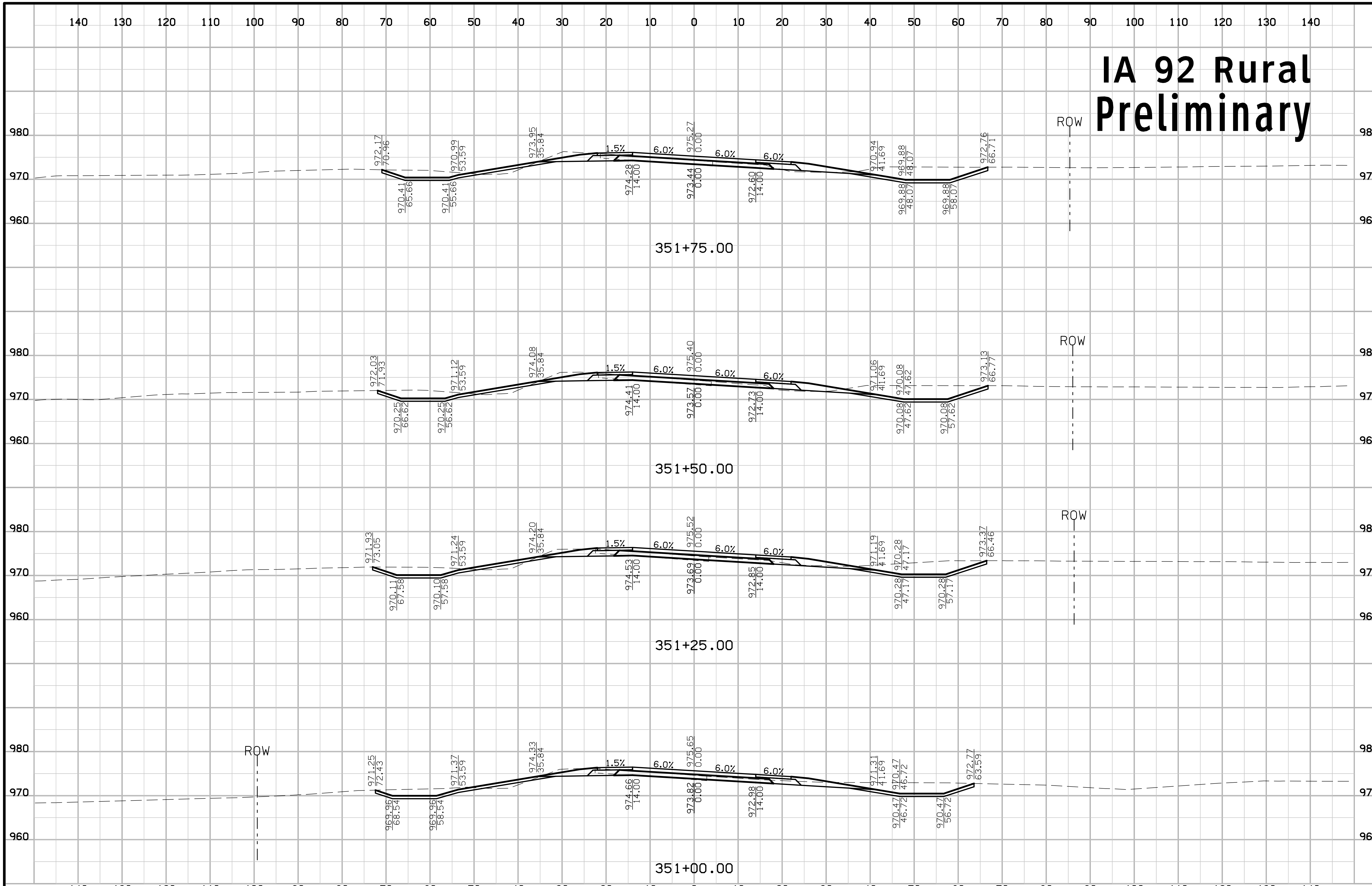

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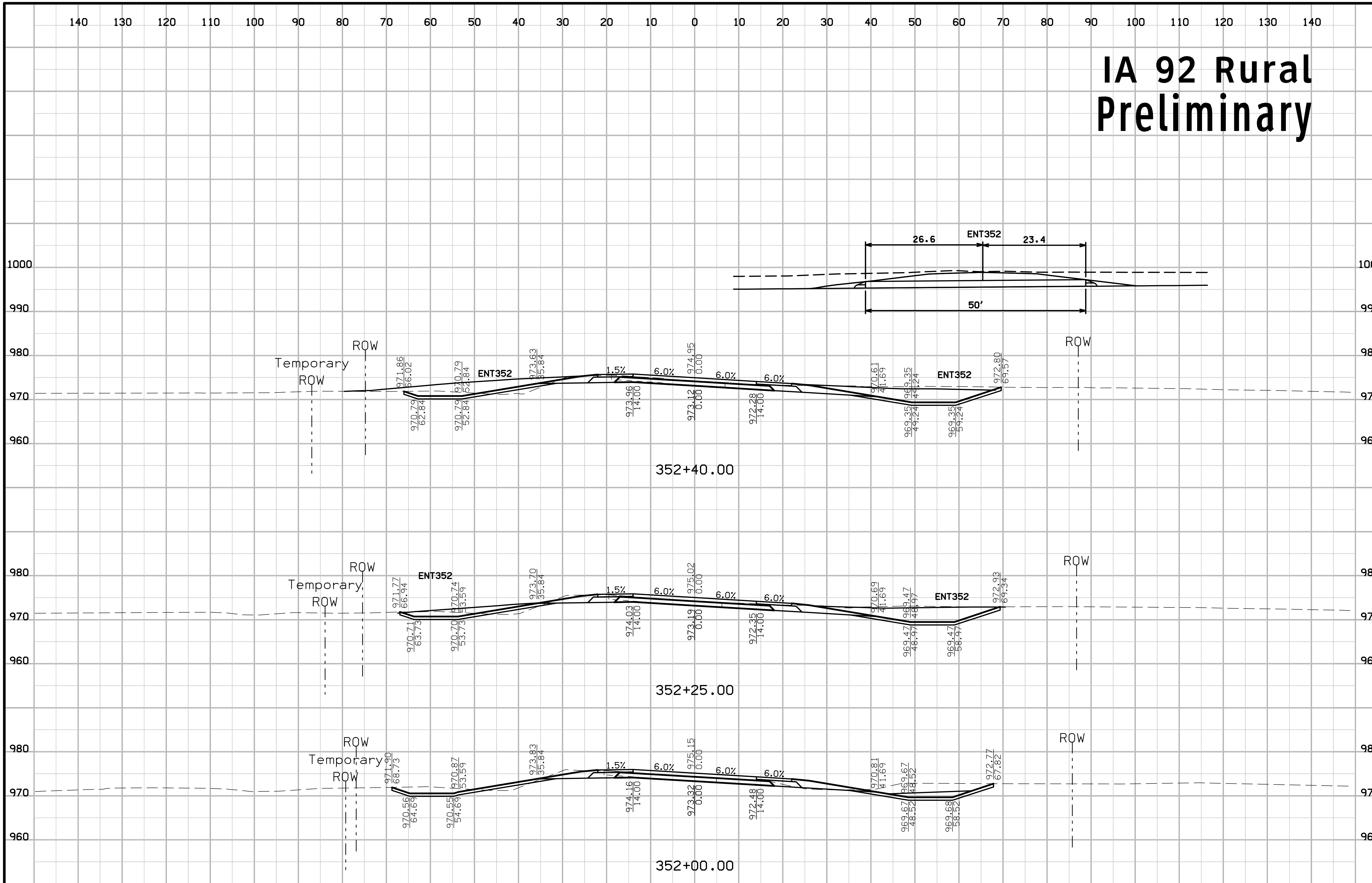
IA 92 Rural Preliminary



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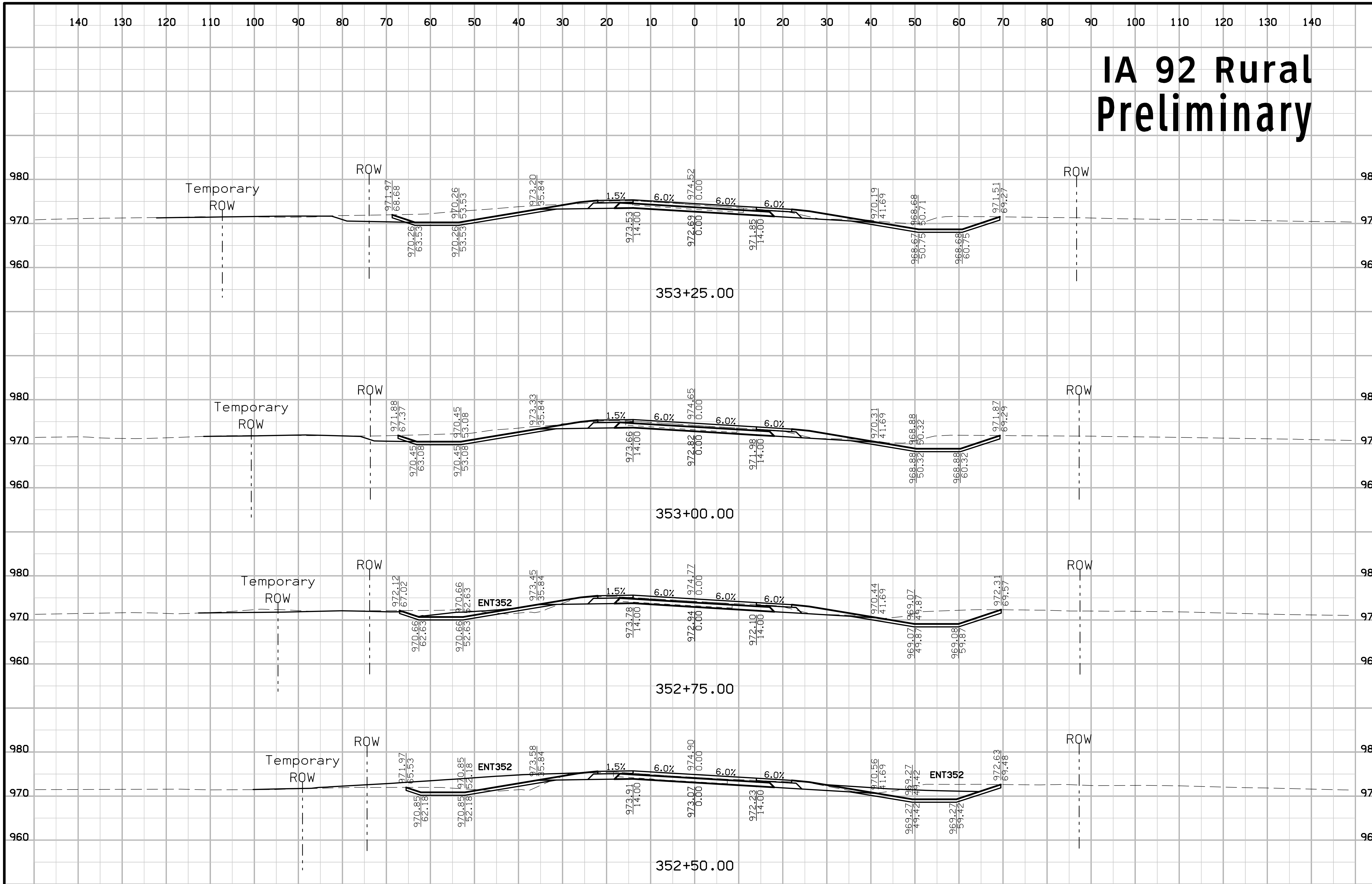
IA 92 Rural
Preliminary



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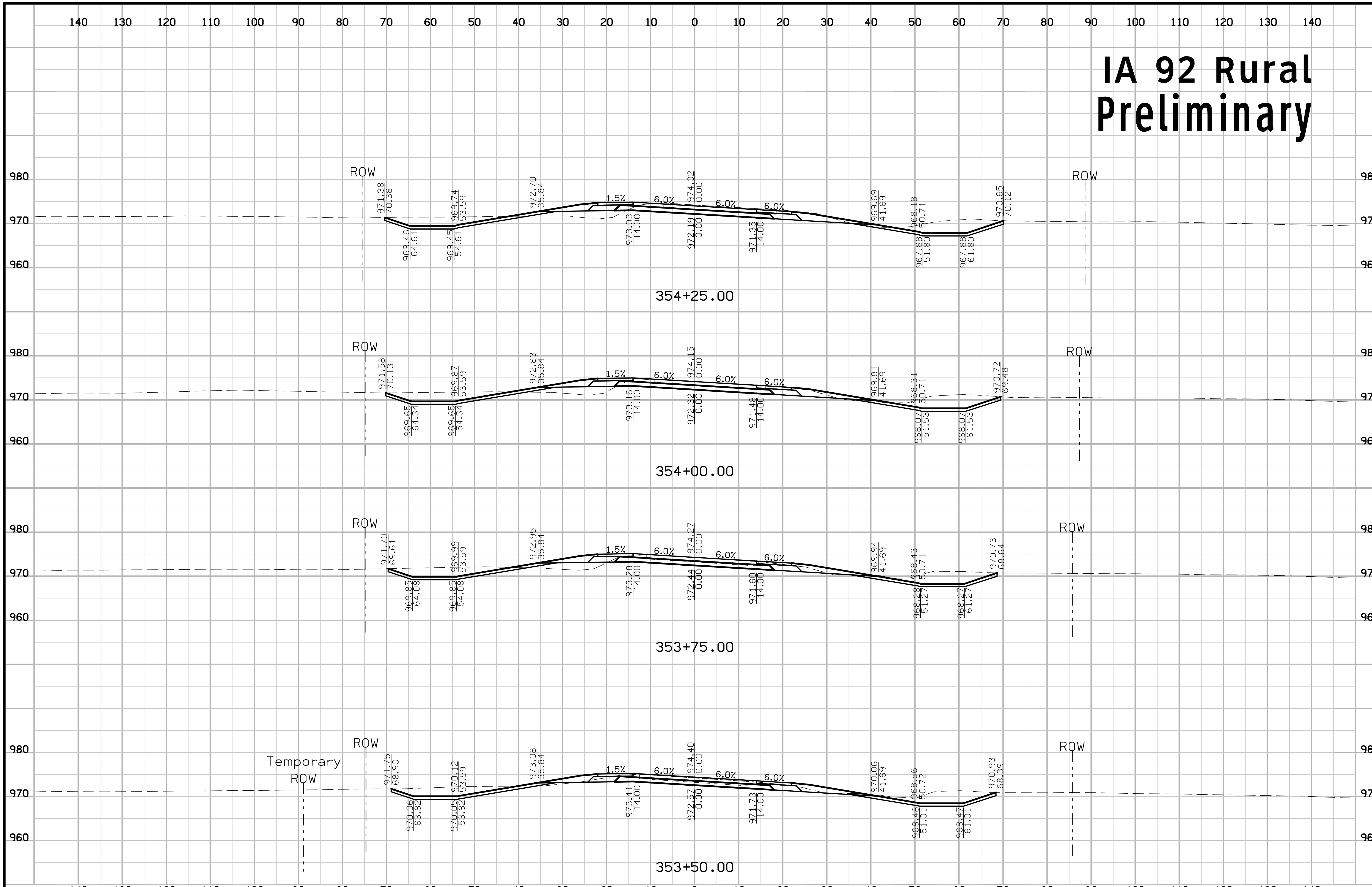
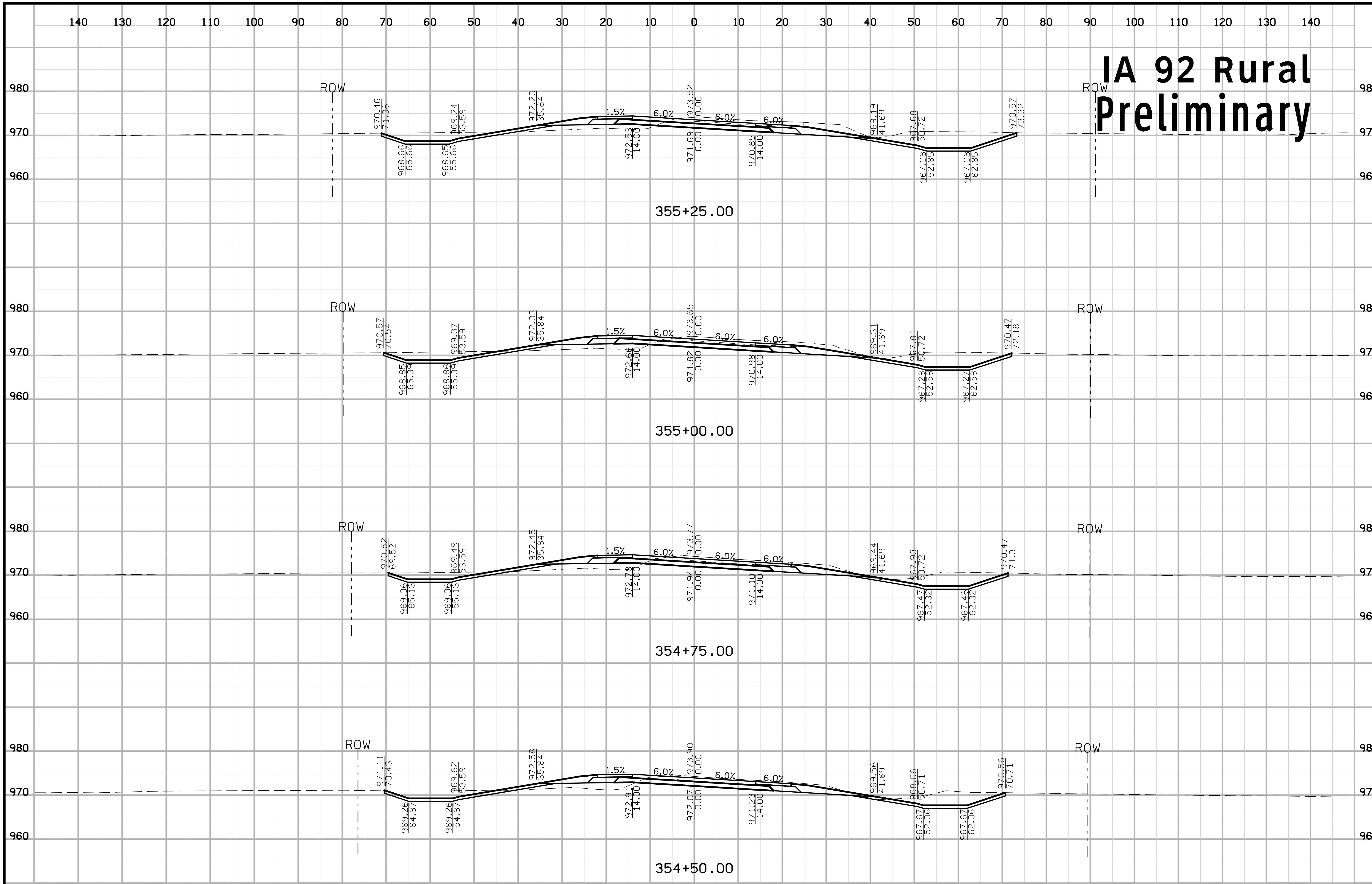
IA 92 Rural Preliminary





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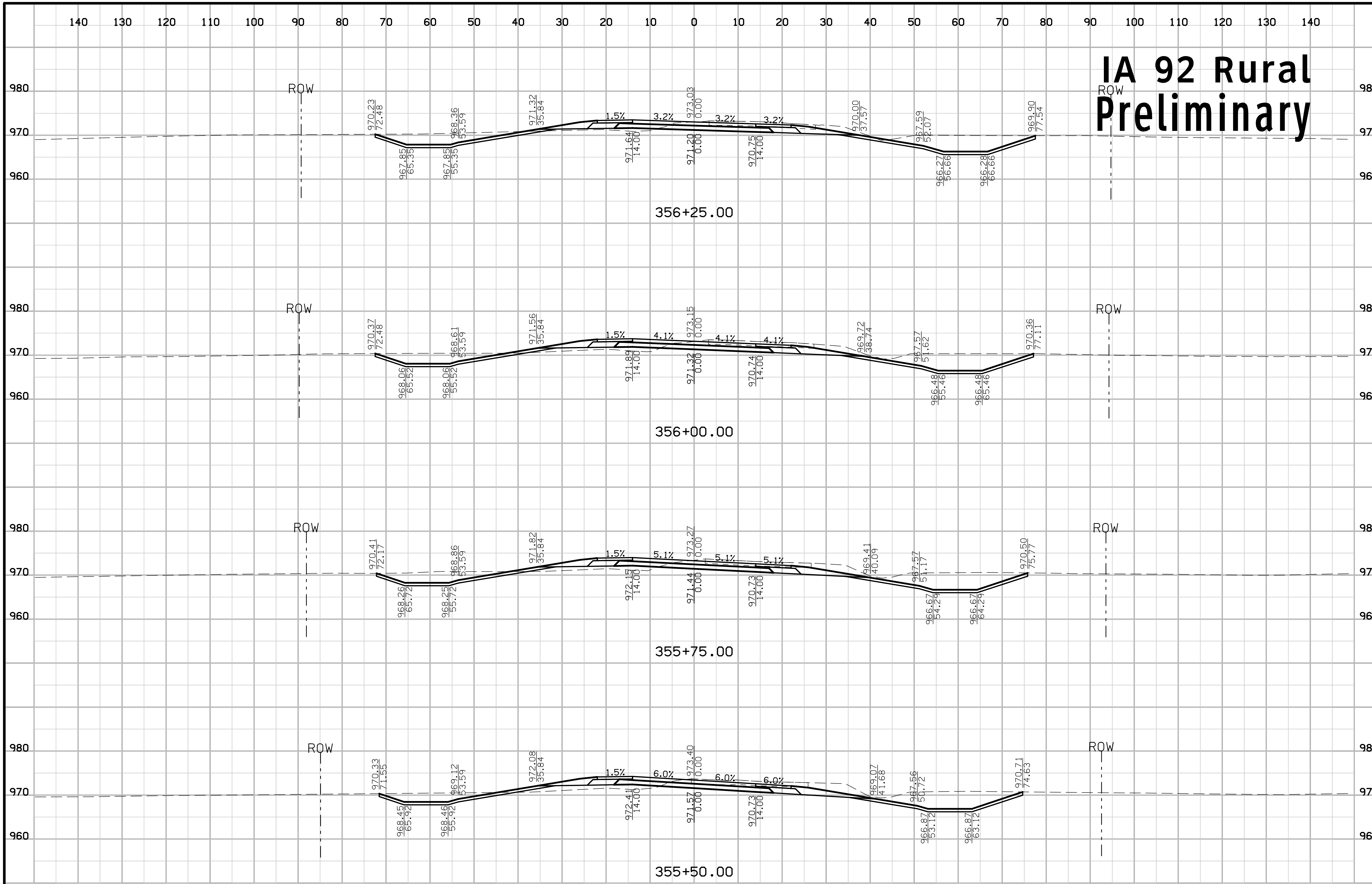

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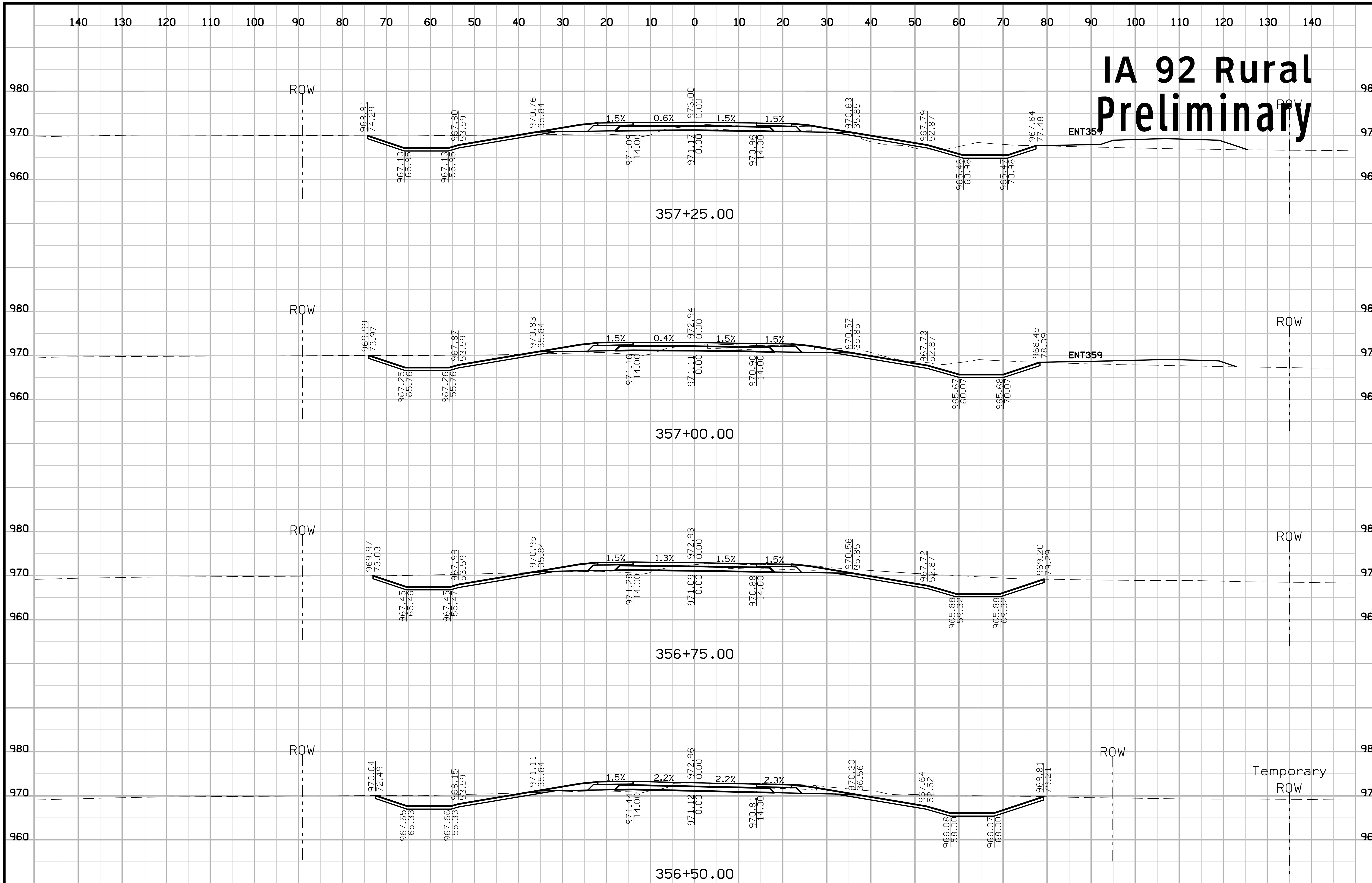

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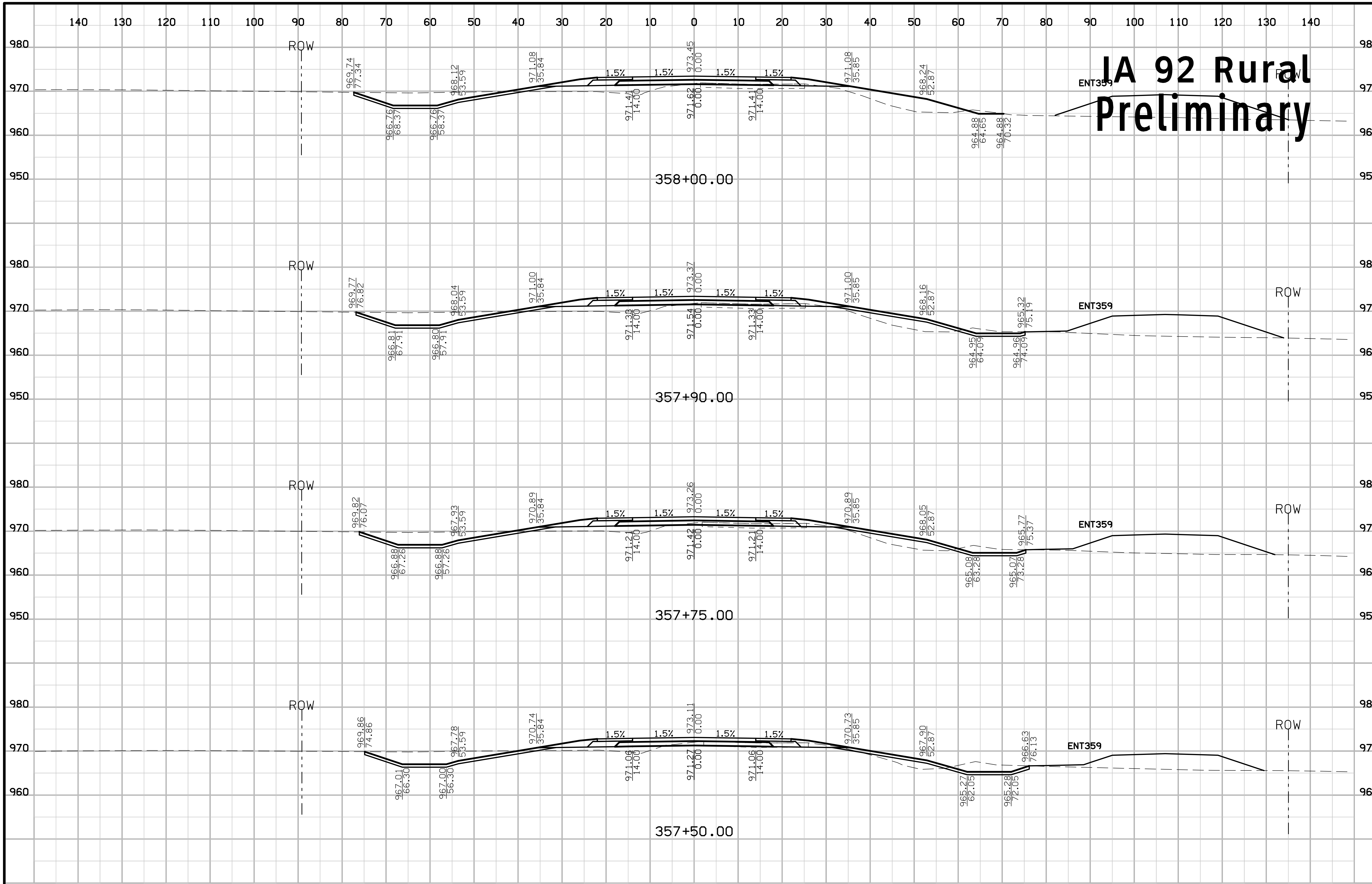

ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.122

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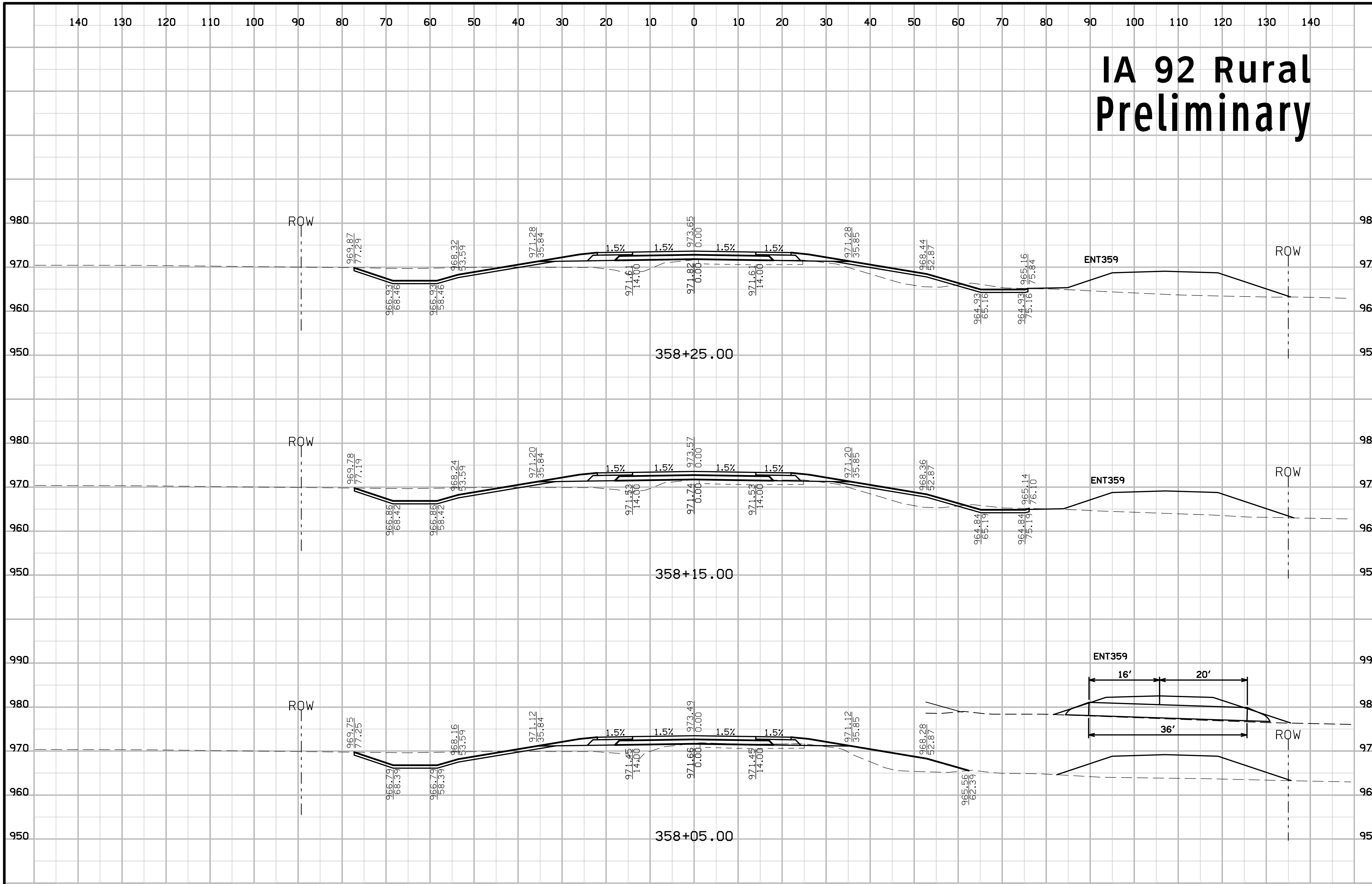
IA 92 Rural
Preliminary



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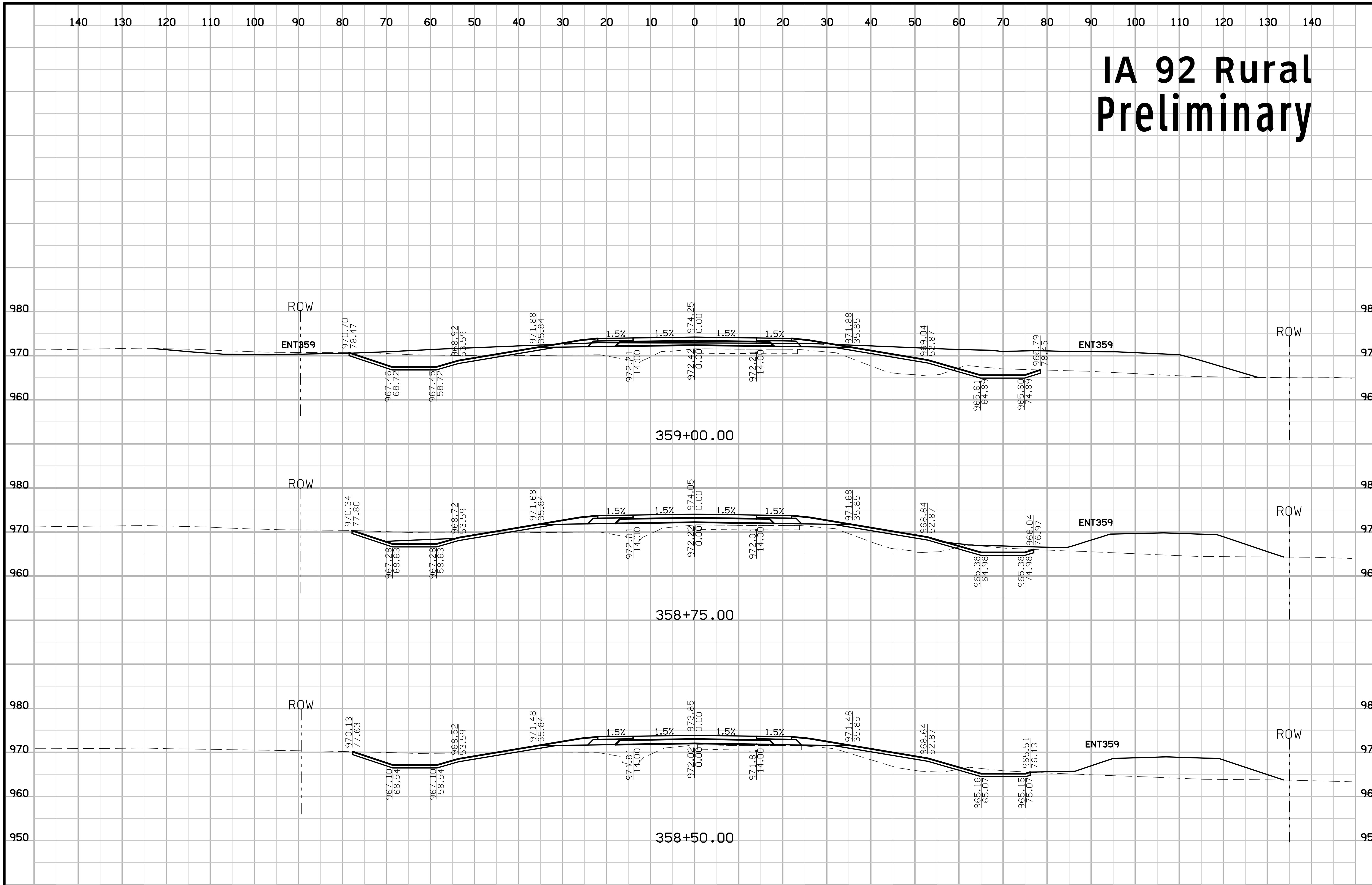
IA 92 Rural Preliminary



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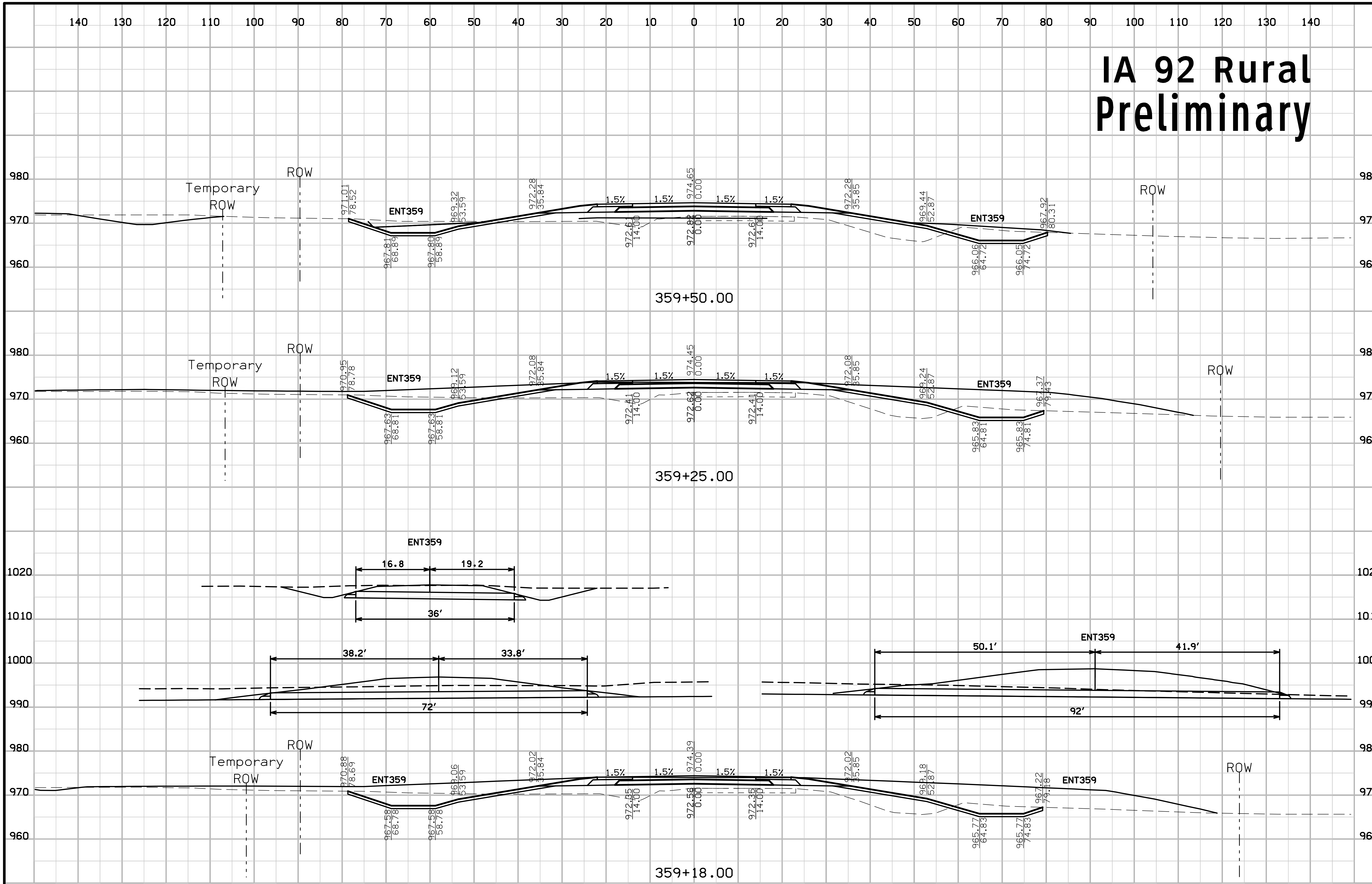
IA 92 Rural
Preliminary



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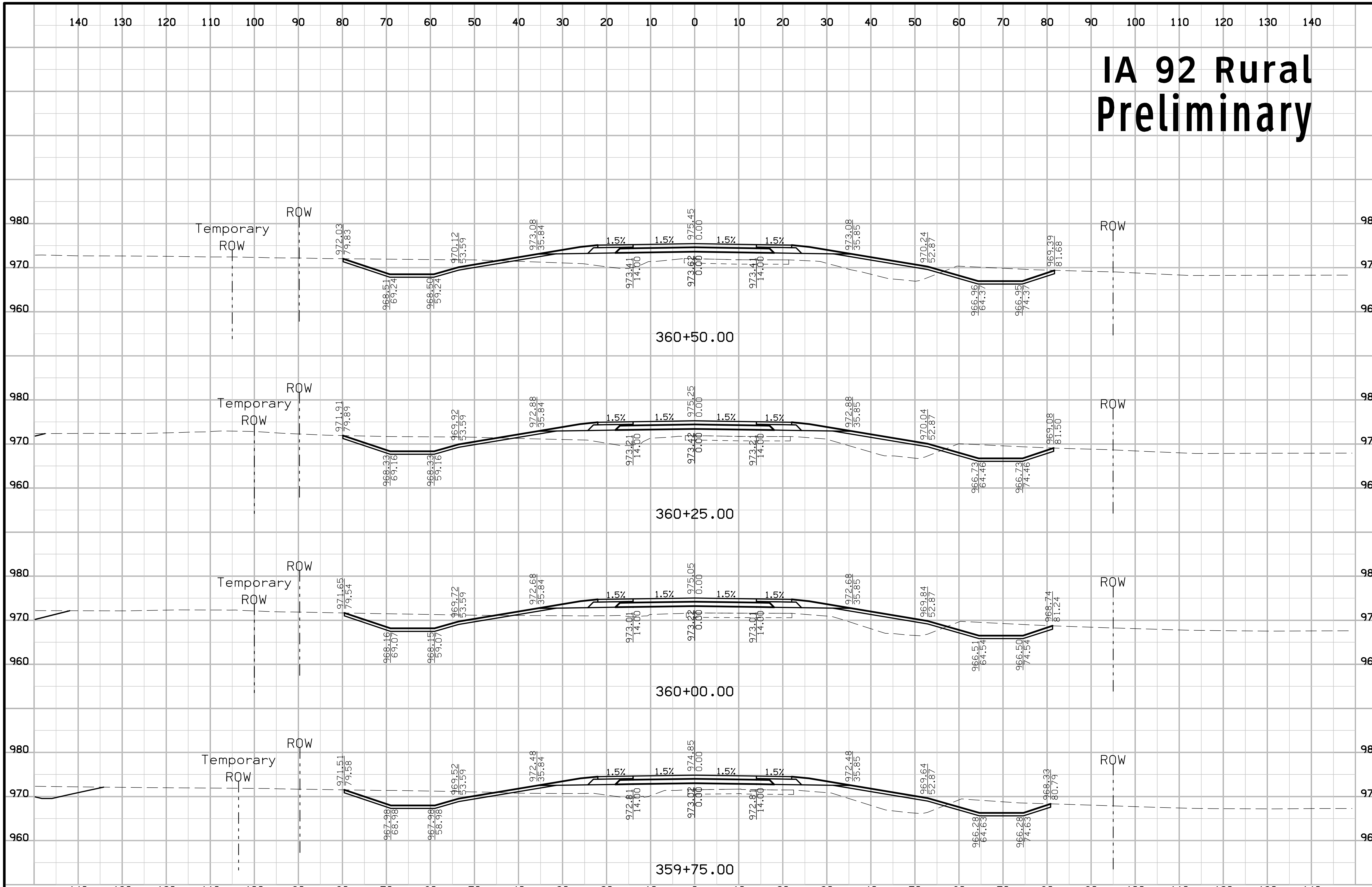
IA 92 Rural Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.126

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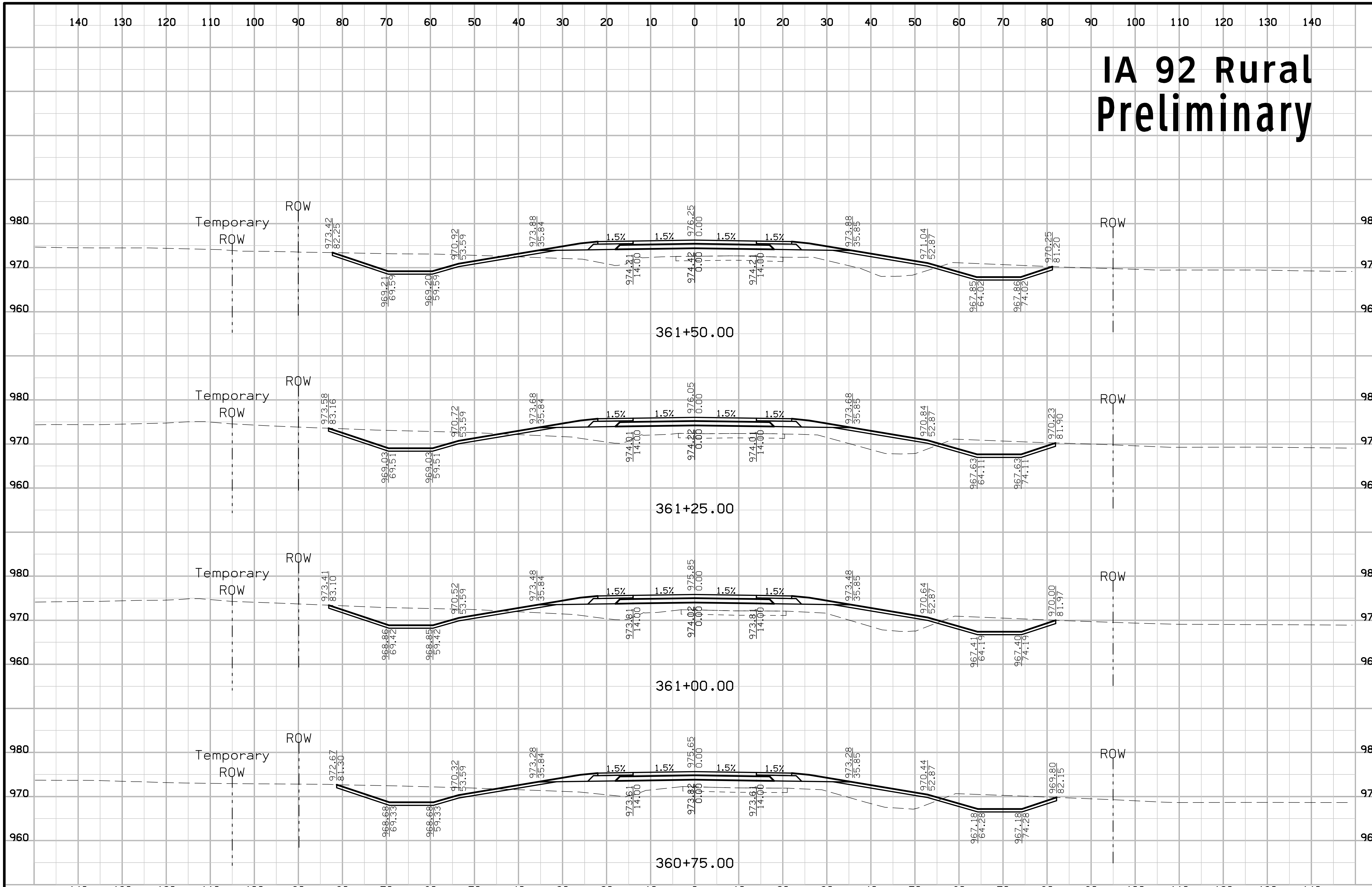
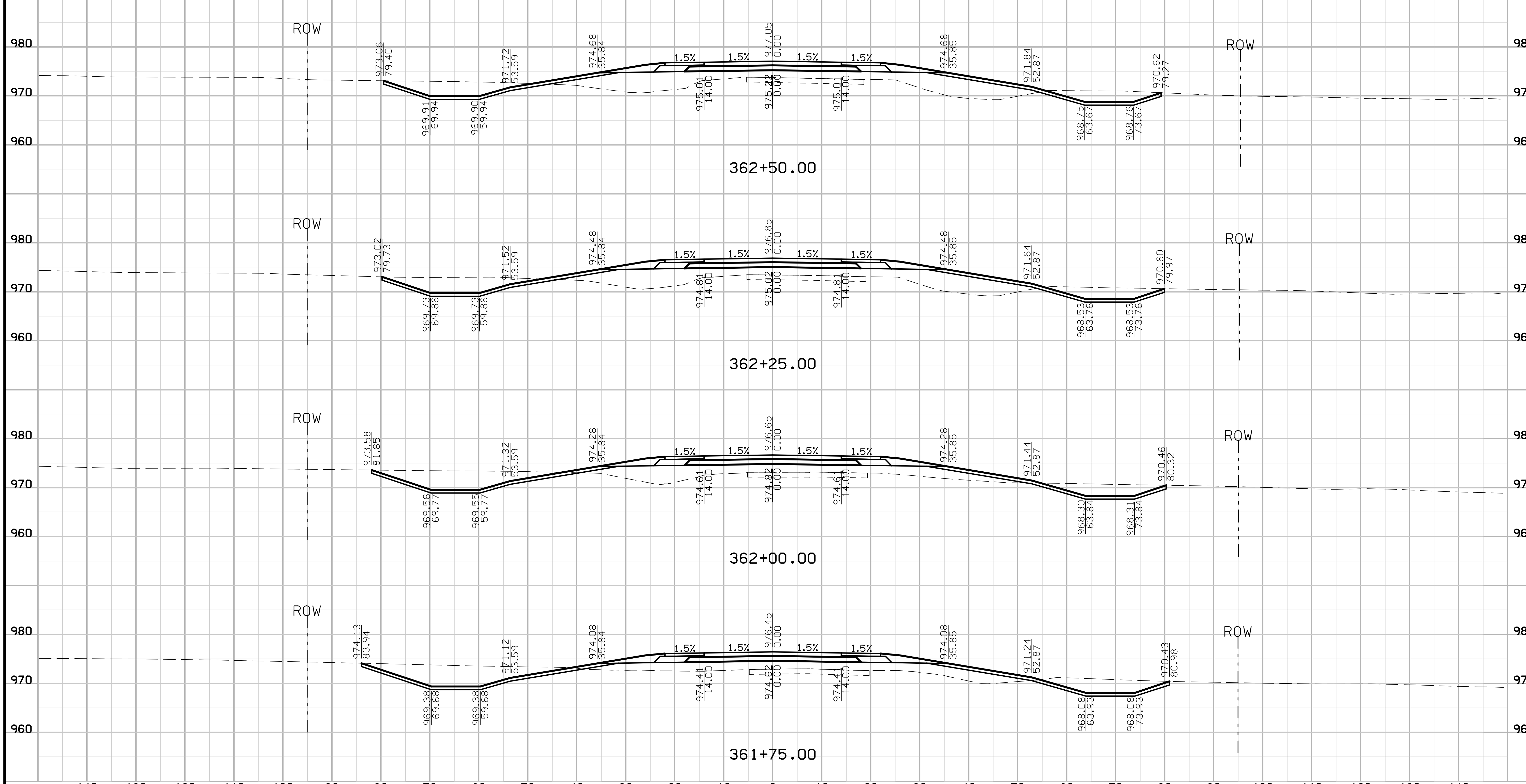
IA 92 Rural
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.127

IA 92 Rural
Preliminary



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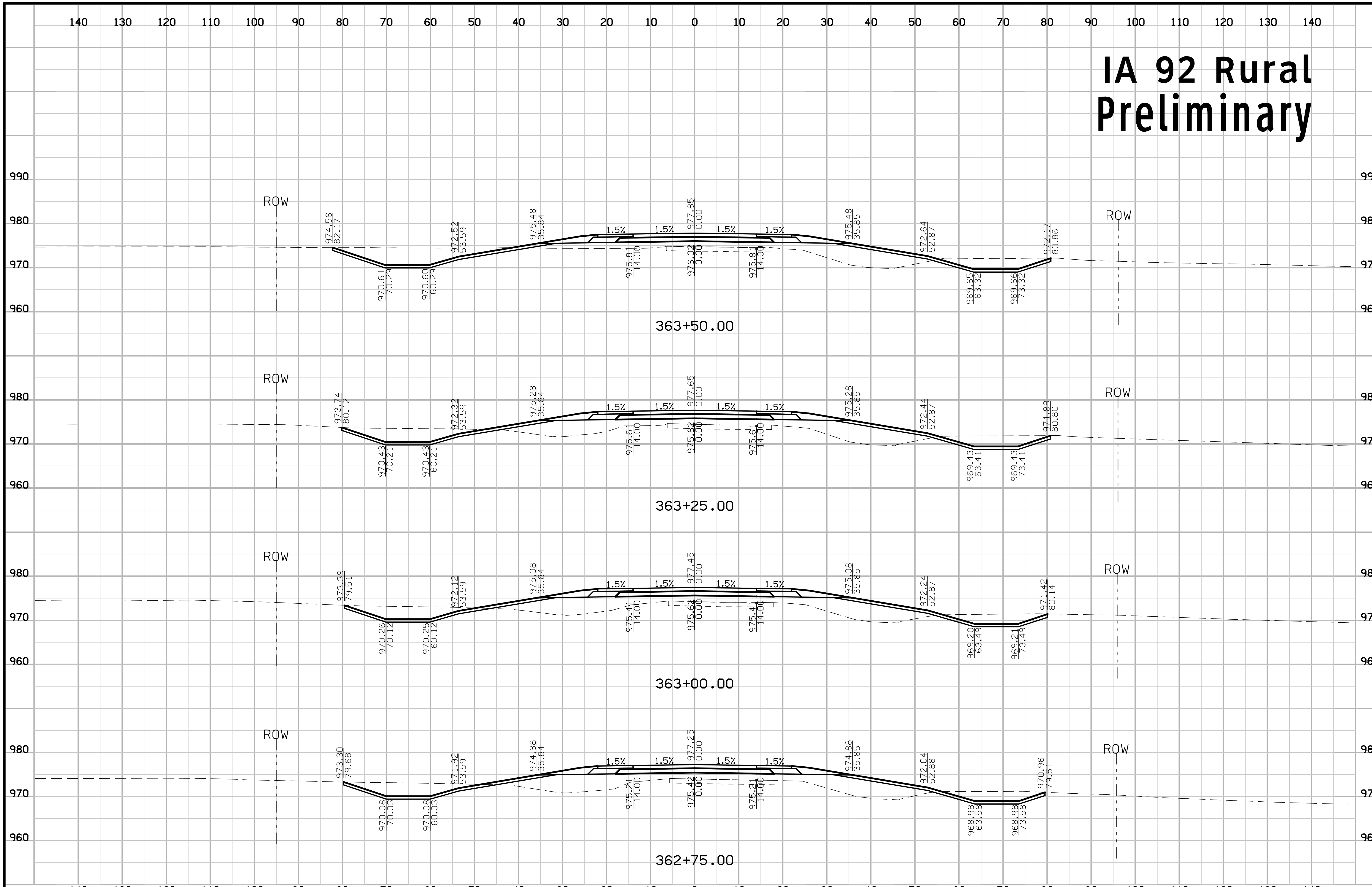

ENGLISH | IOWA DOT | DESIGN TEAM J1a\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.129

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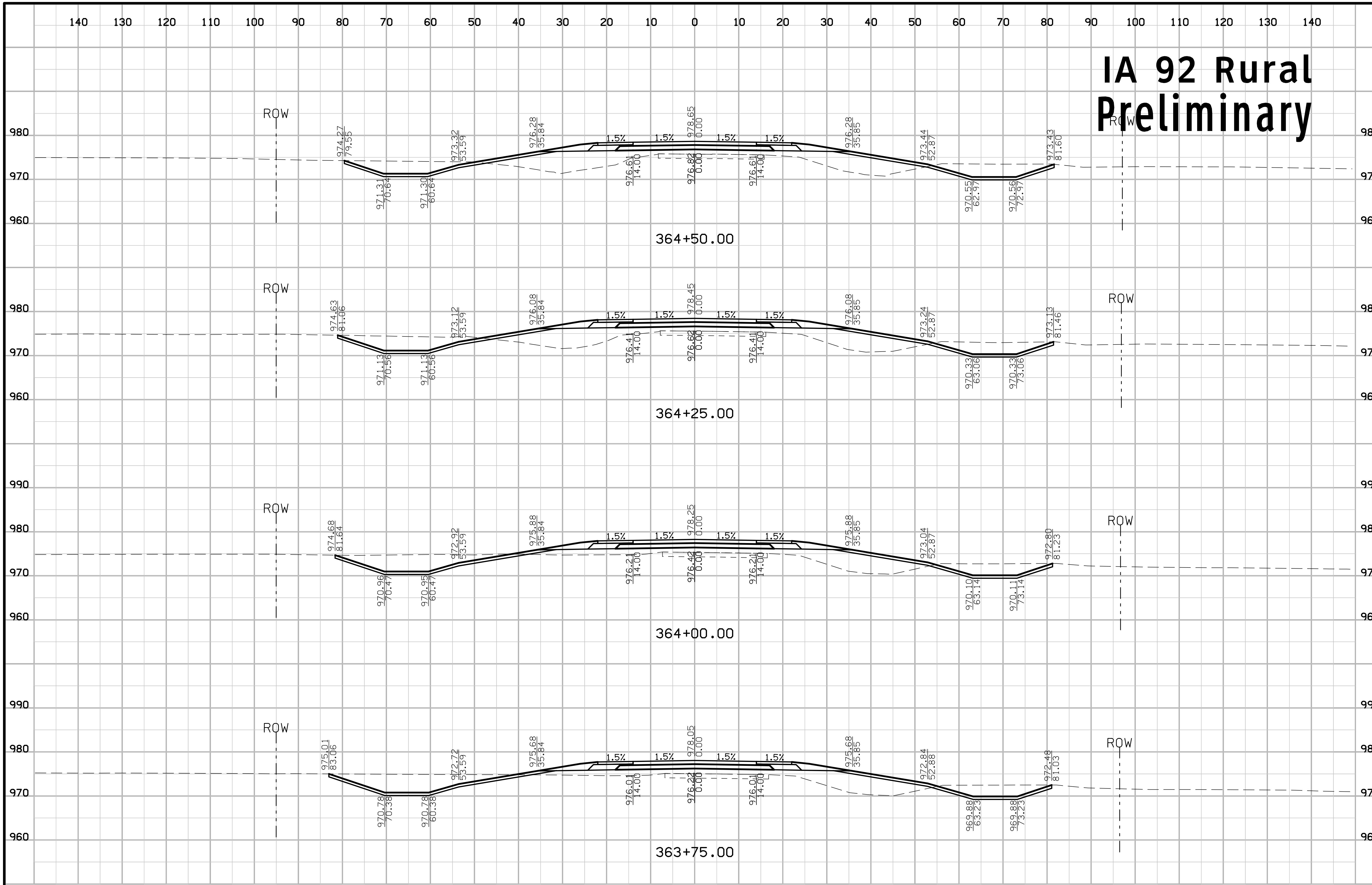

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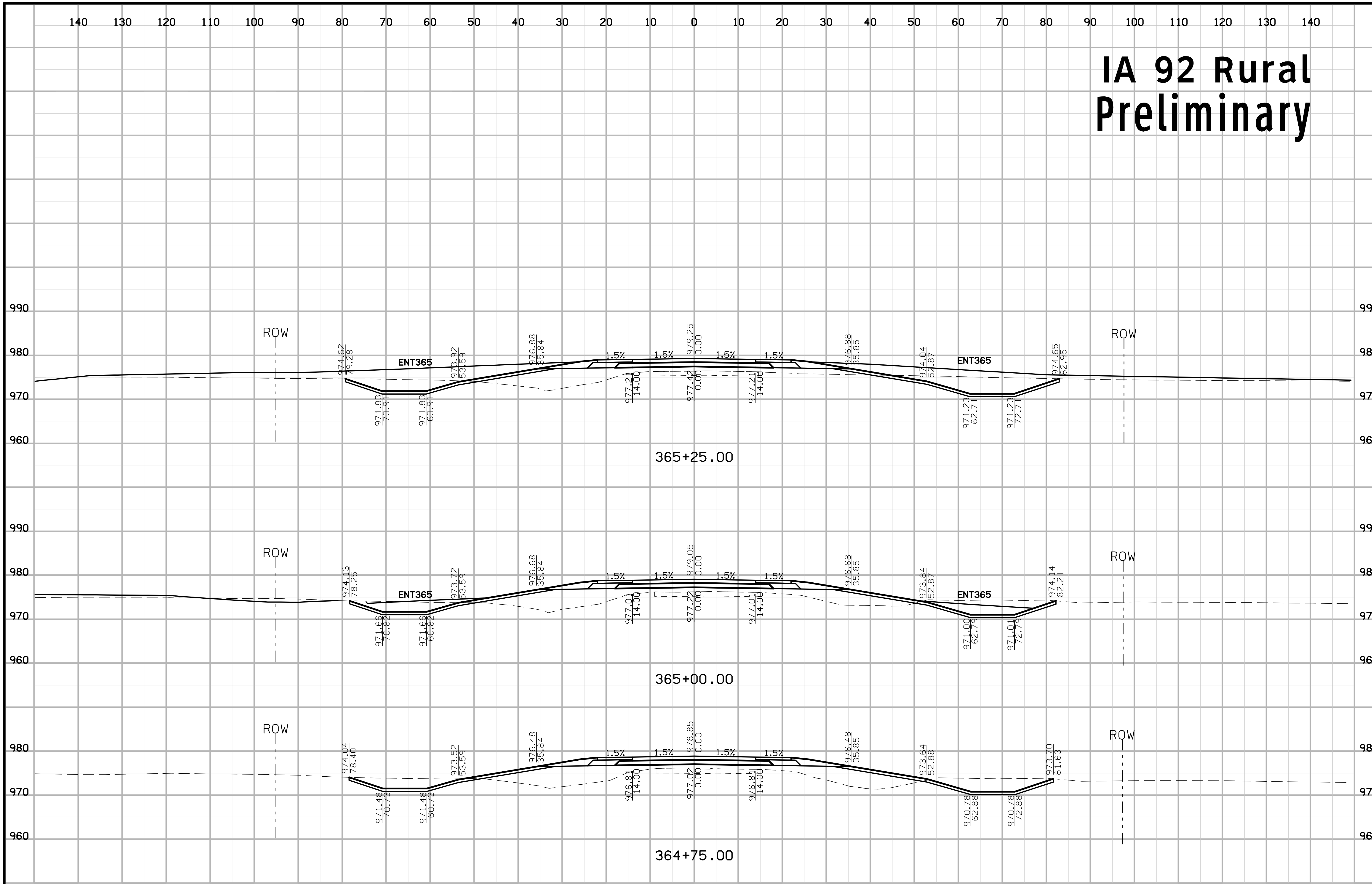
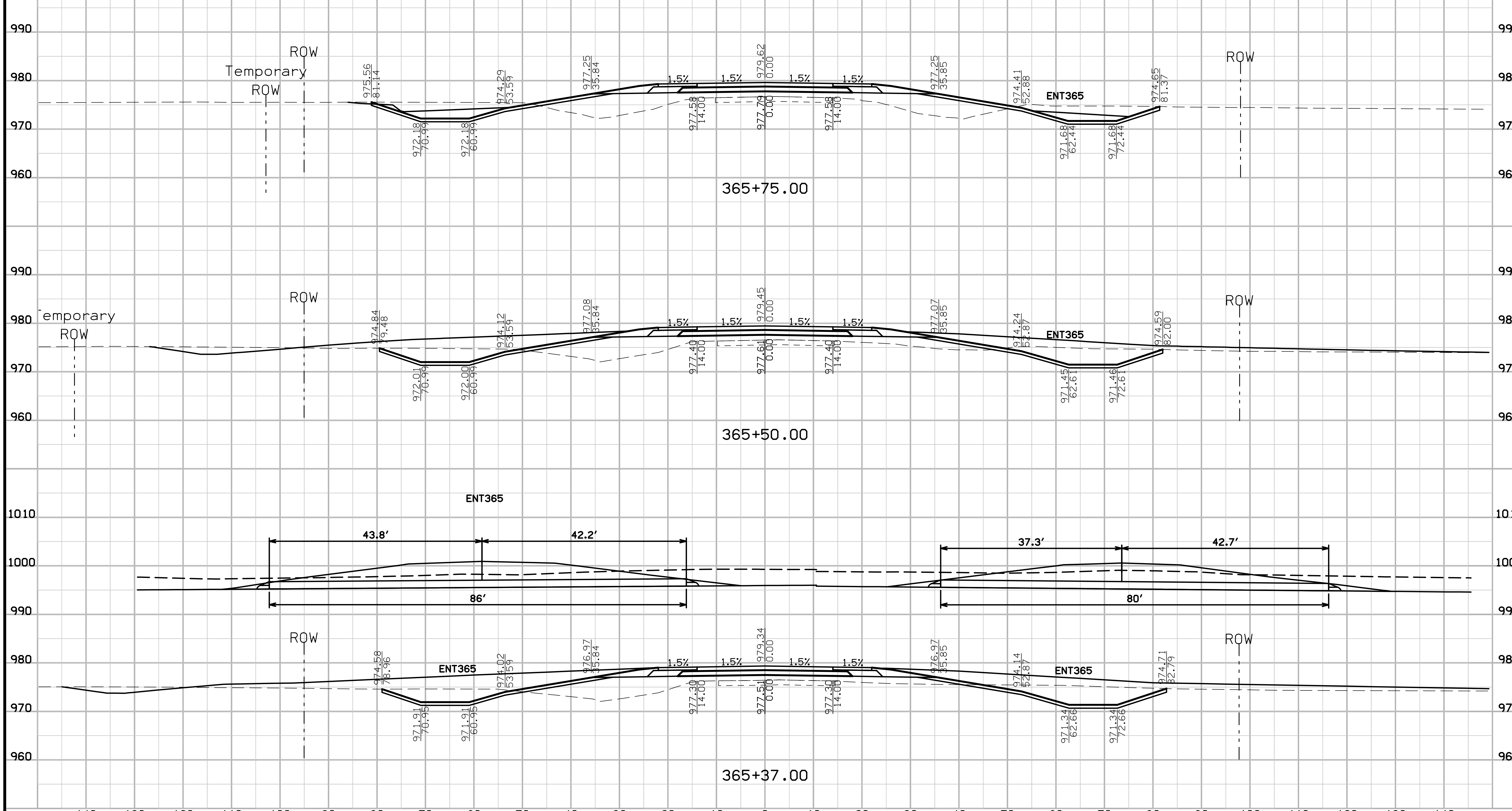
IA 92 Rural Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.131

IA 92 Rural
Preliminary



ENGLISH | IOWA DOT | DESIGN TEAM J1a\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.132

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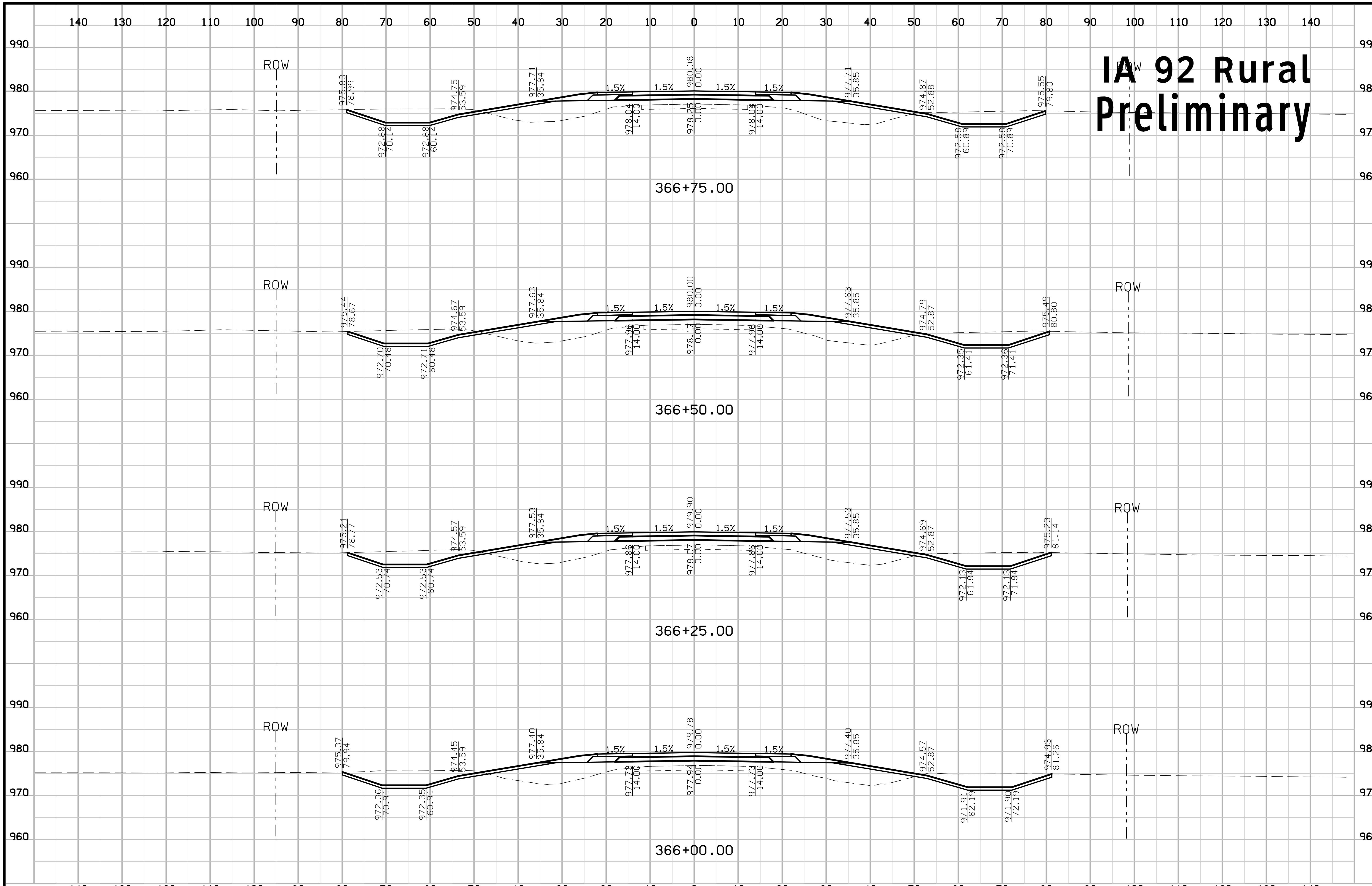

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.133

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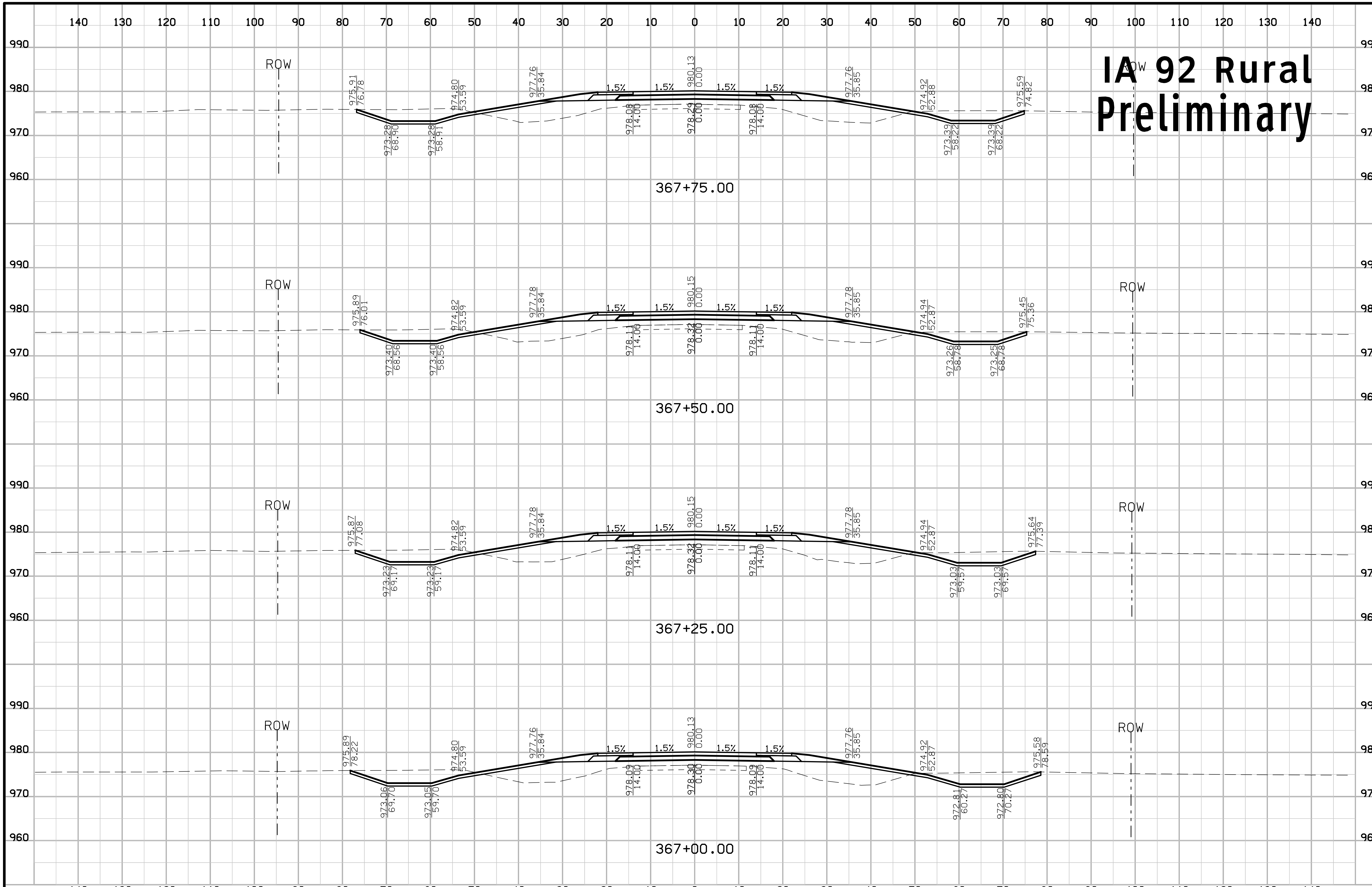

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.134

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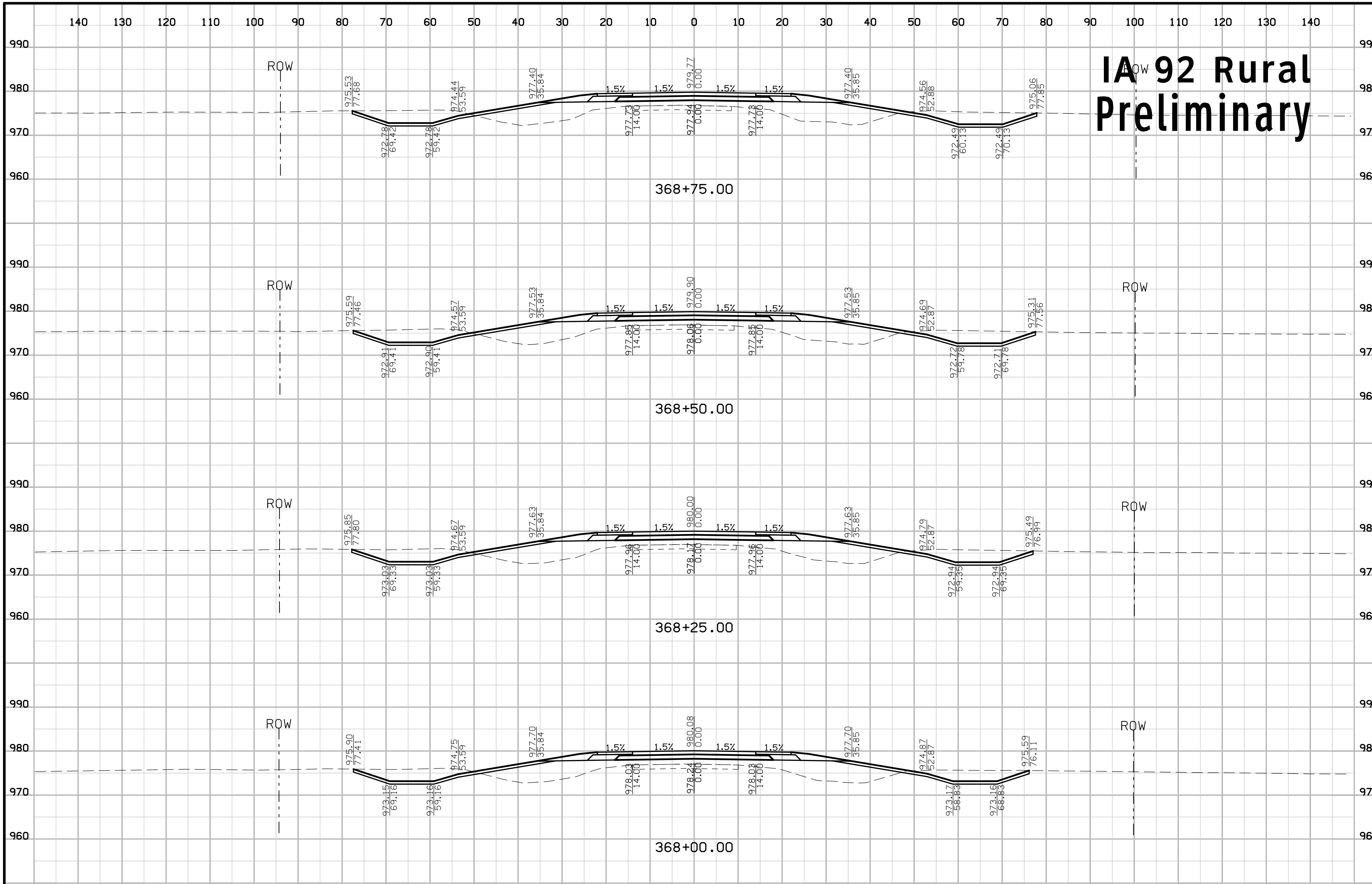

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.135

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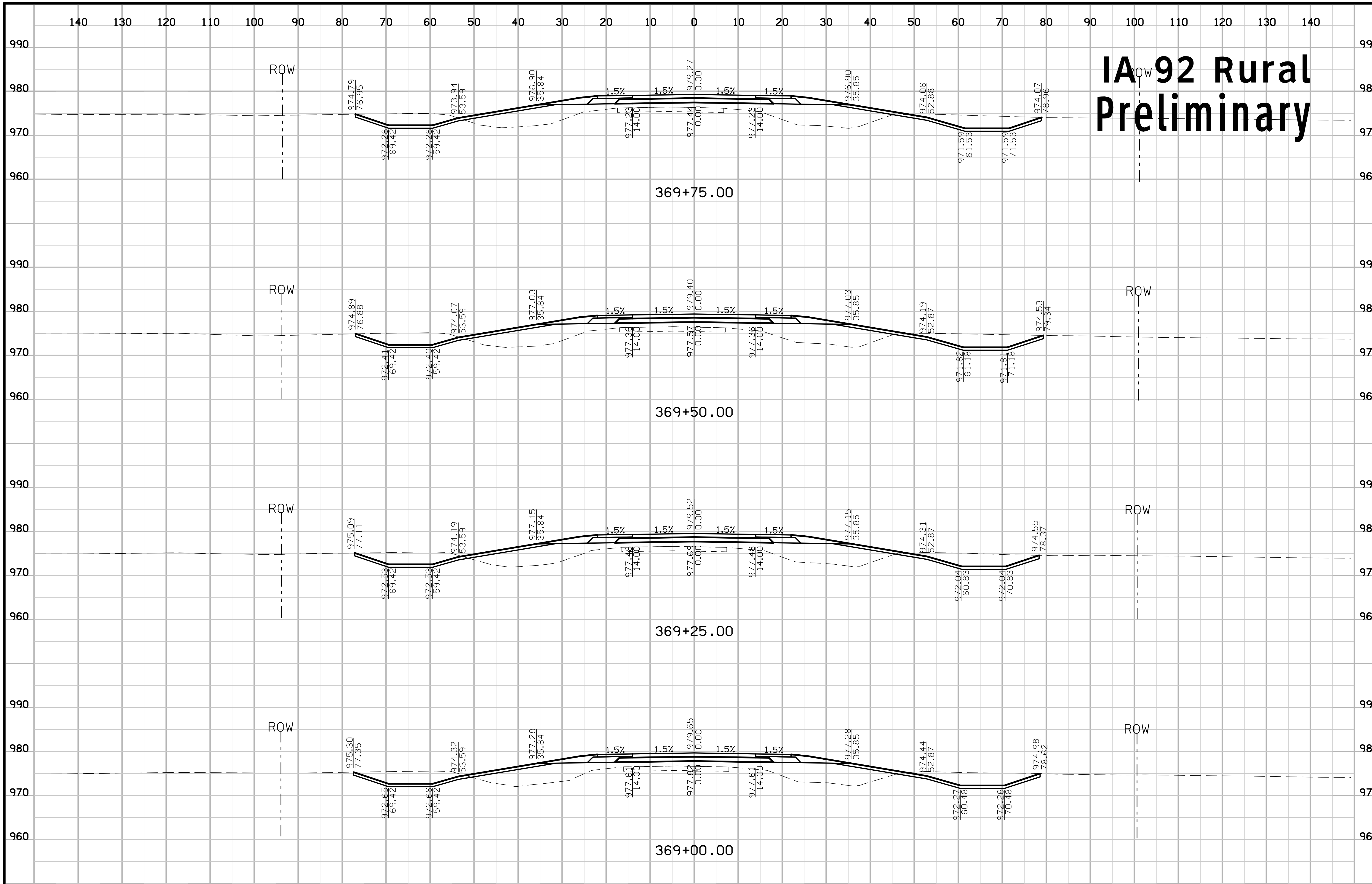

ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.136

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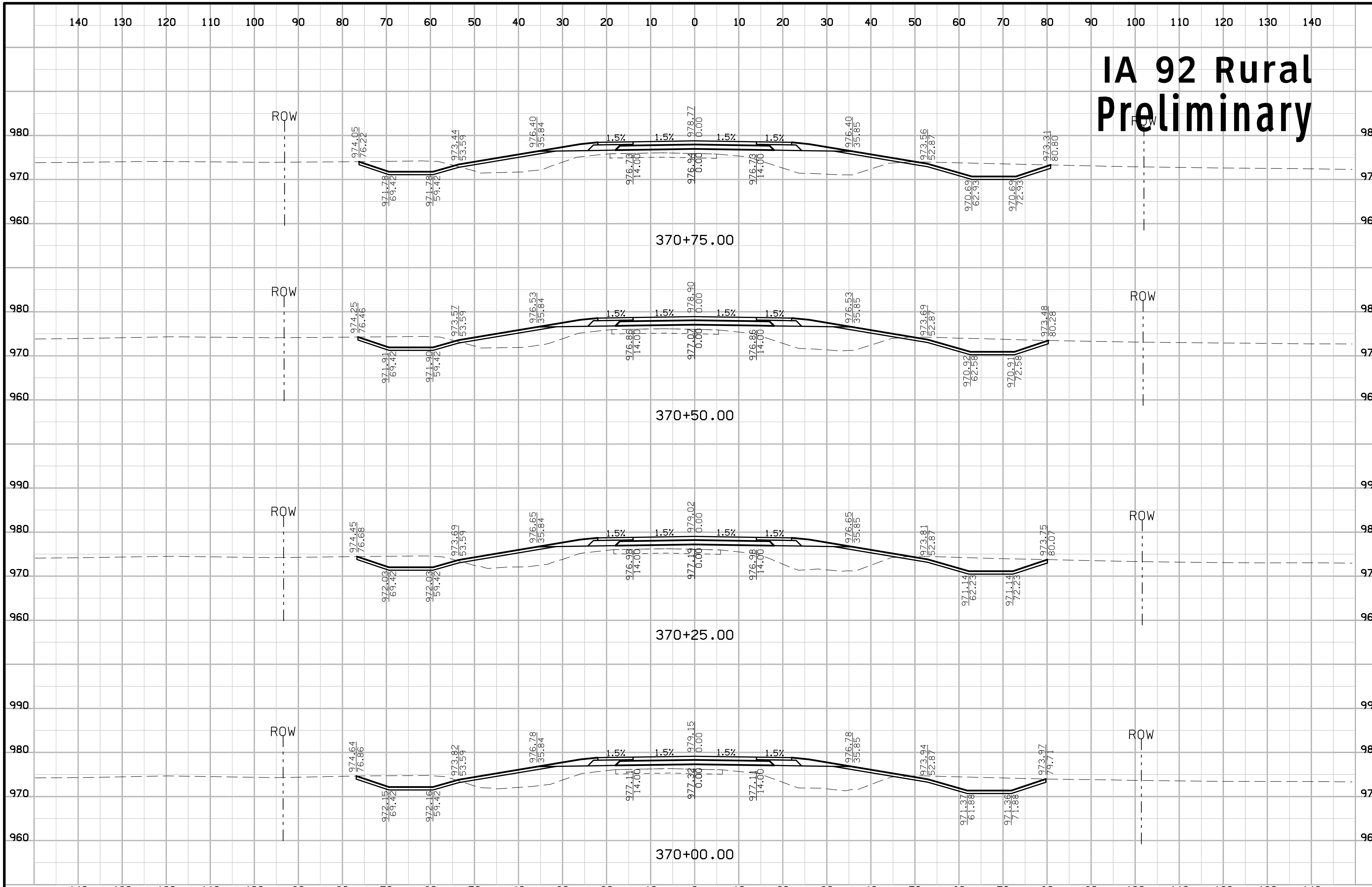
IA 92 Rural Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.137

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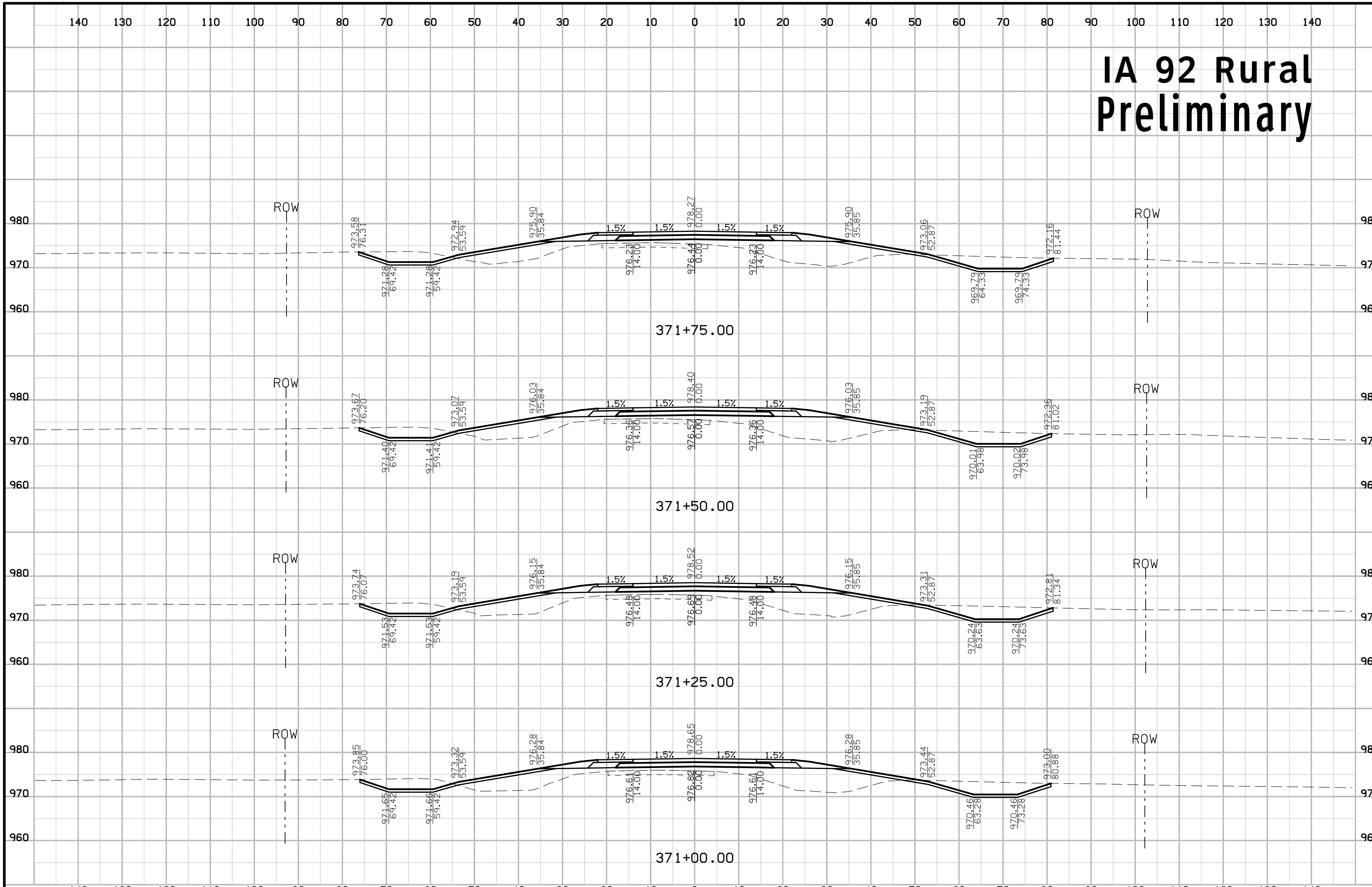
IA 92 Rural
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM **Jia\Holst\Bennett**		**WARREN** COUNTY	PROJECT NUMBER	**NHSX-092-5(51)--3H-91**	SHEET NUMBER **W.138**

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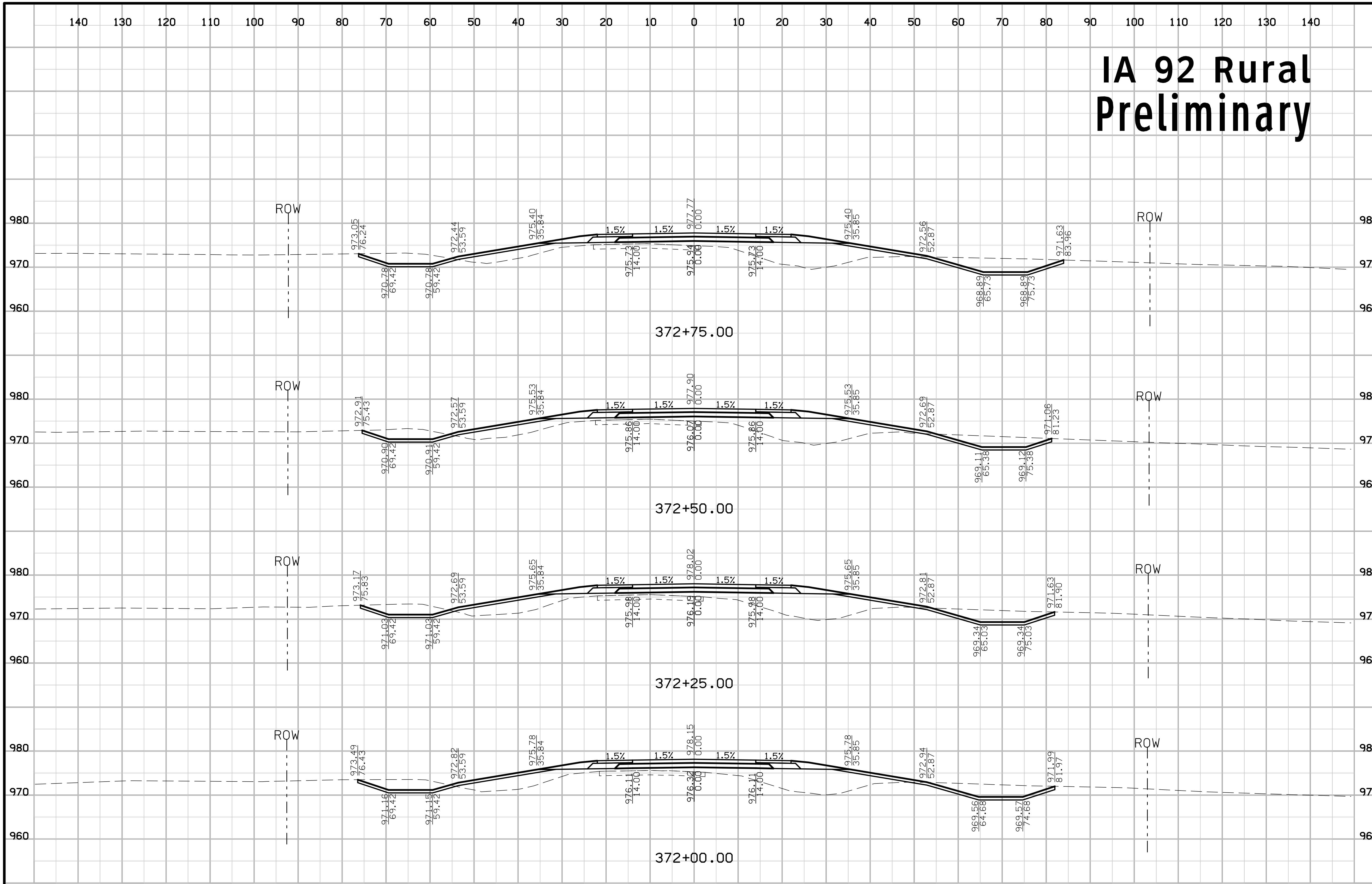
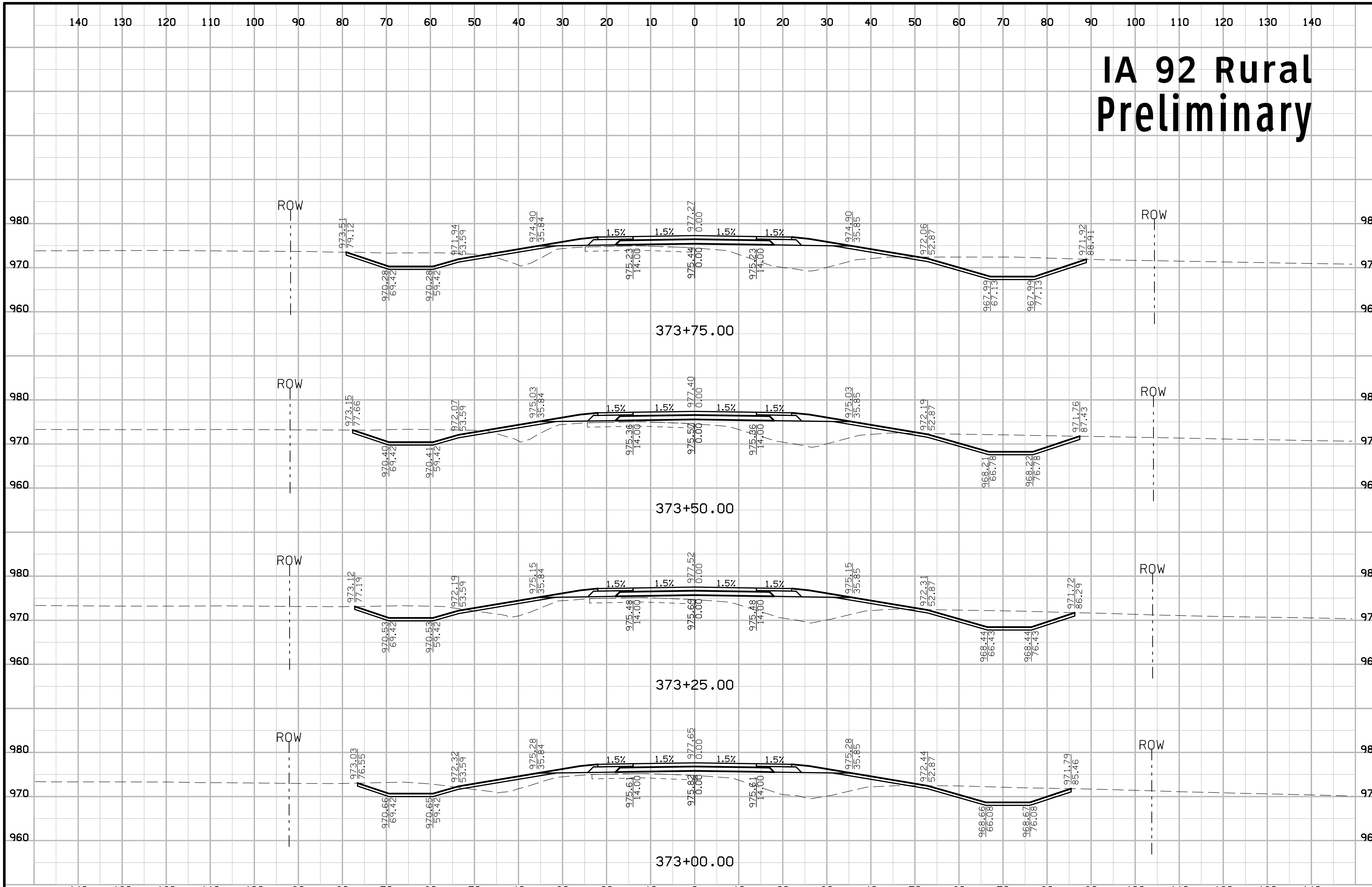


ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.139

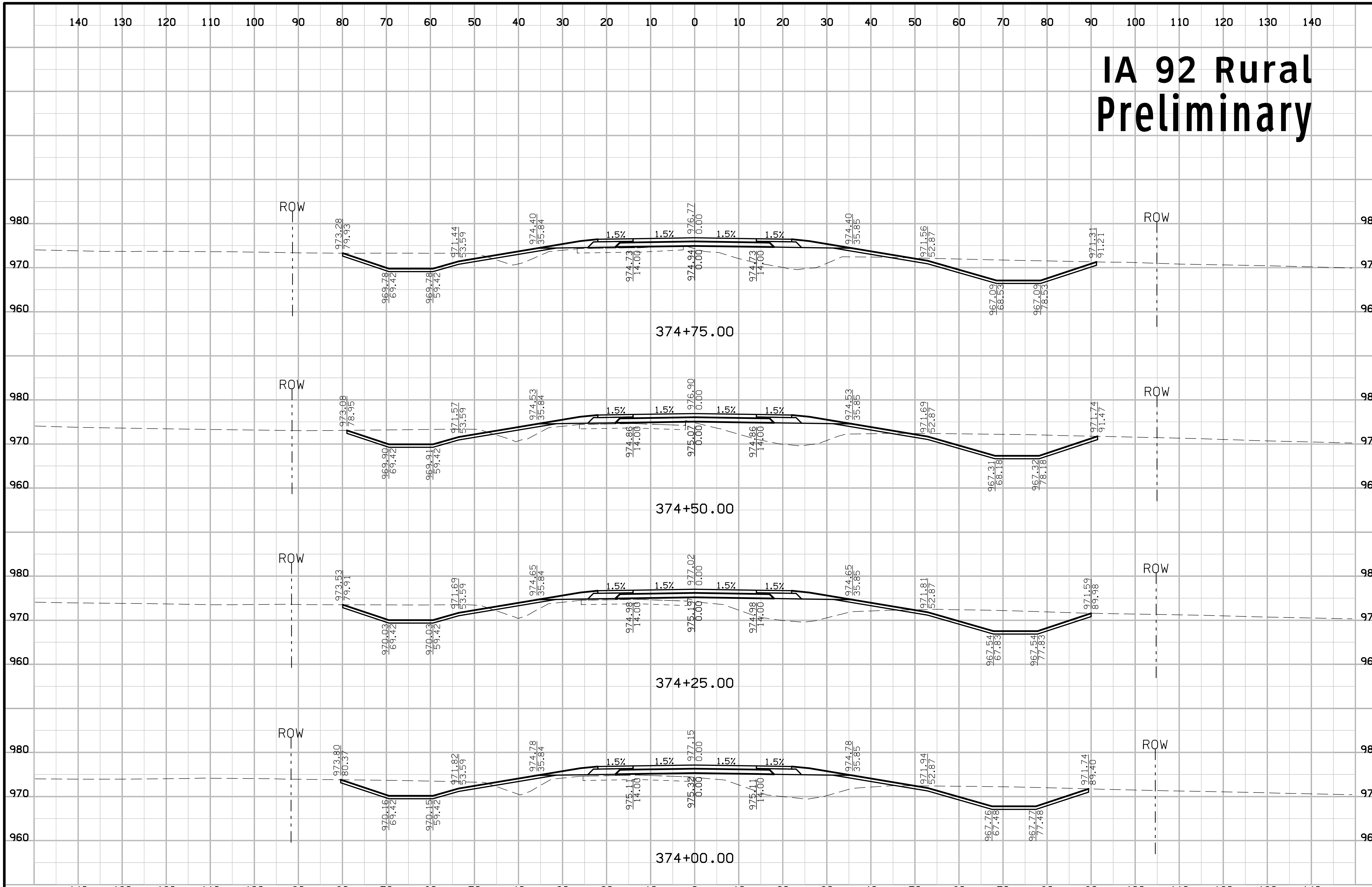
2:38:03 PM 7/25/2013 wcamero pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9109201004\Design\91092051W102.sht

IA 92 Rural
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.140

IA 92 Rural Preliminary



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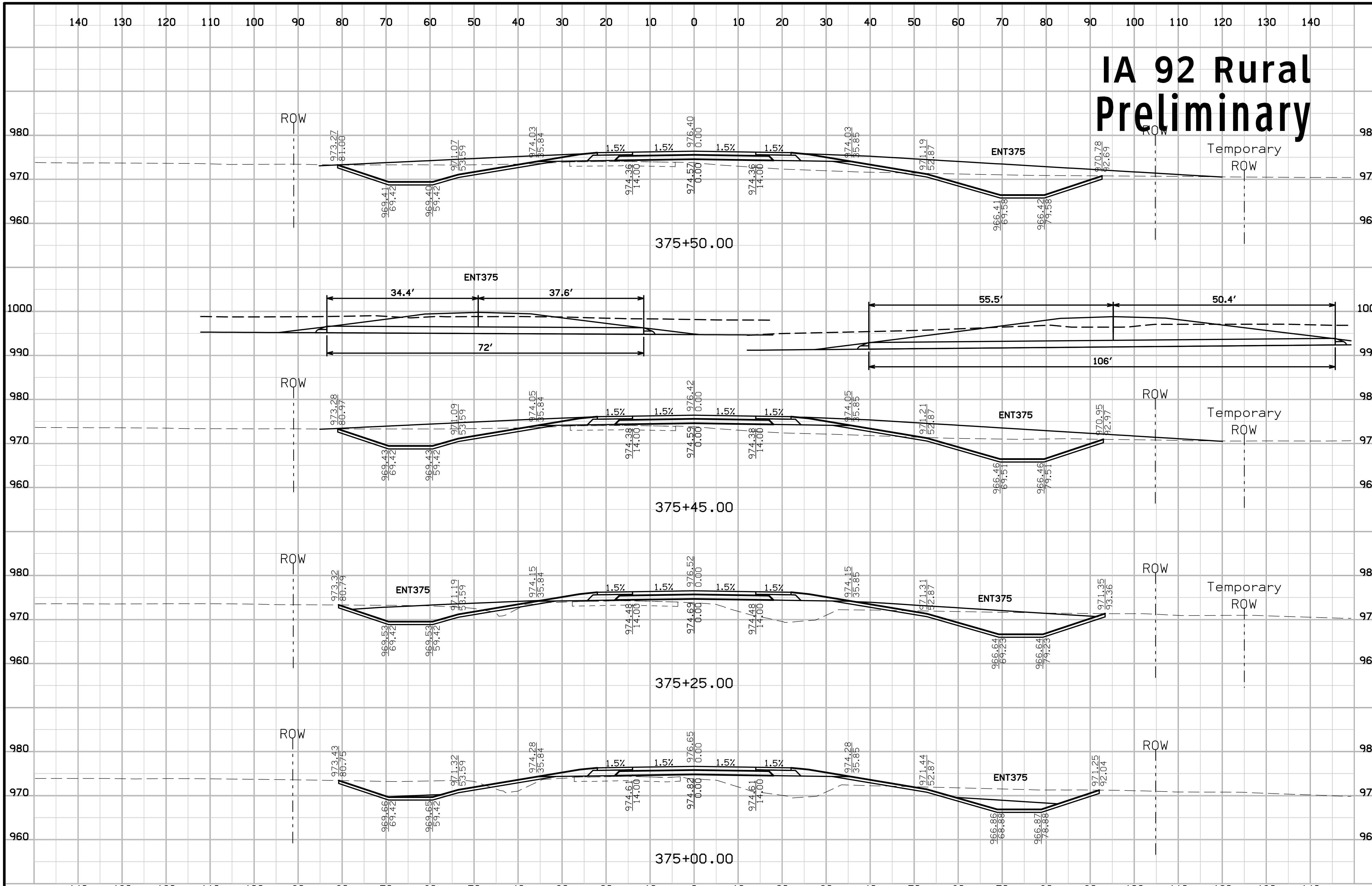
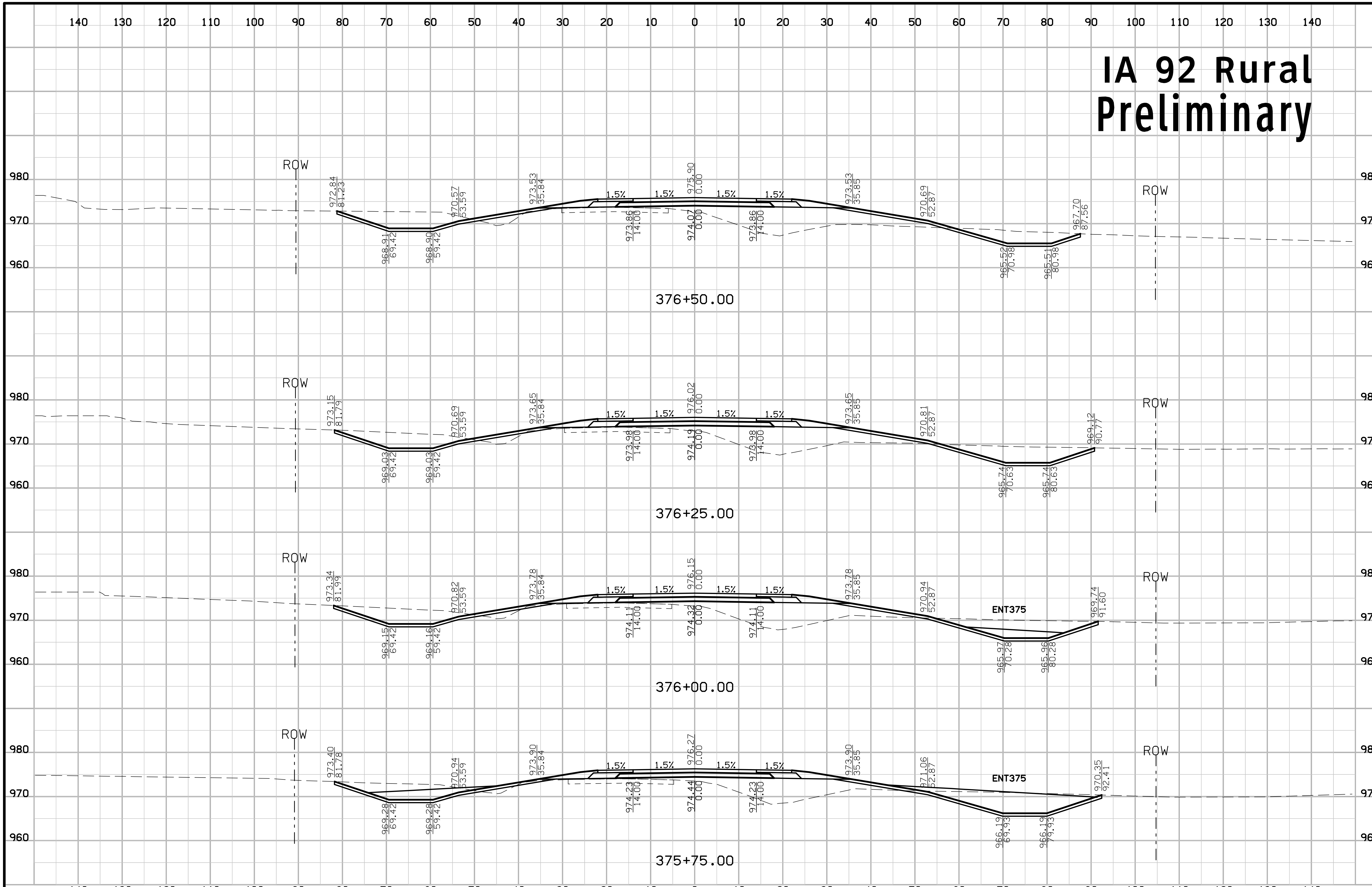


ENGLISH	IOWA DOT	DESIGN TEAM J1a\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.142

IA 92 Rural Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM J1a\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.143

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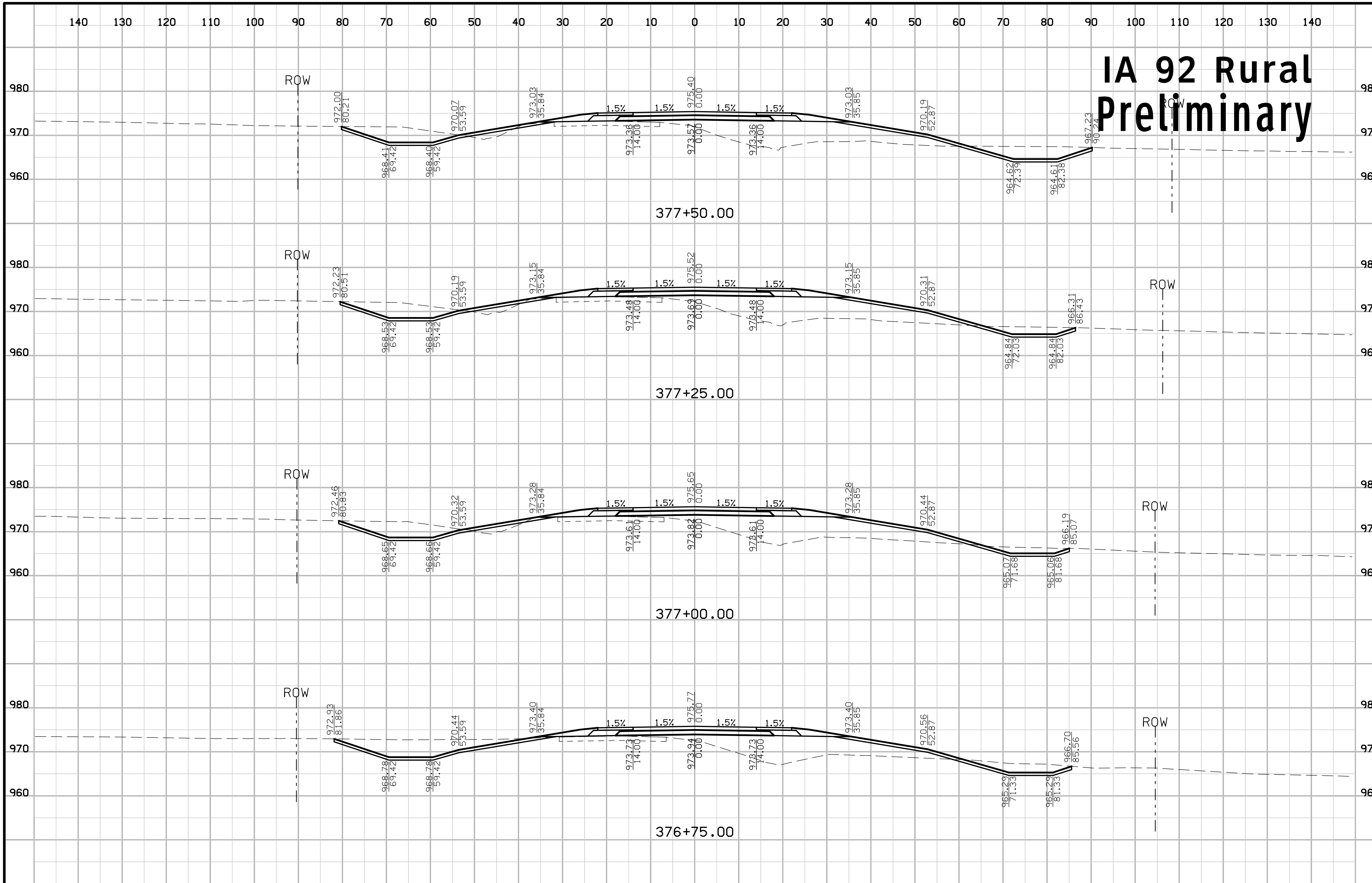

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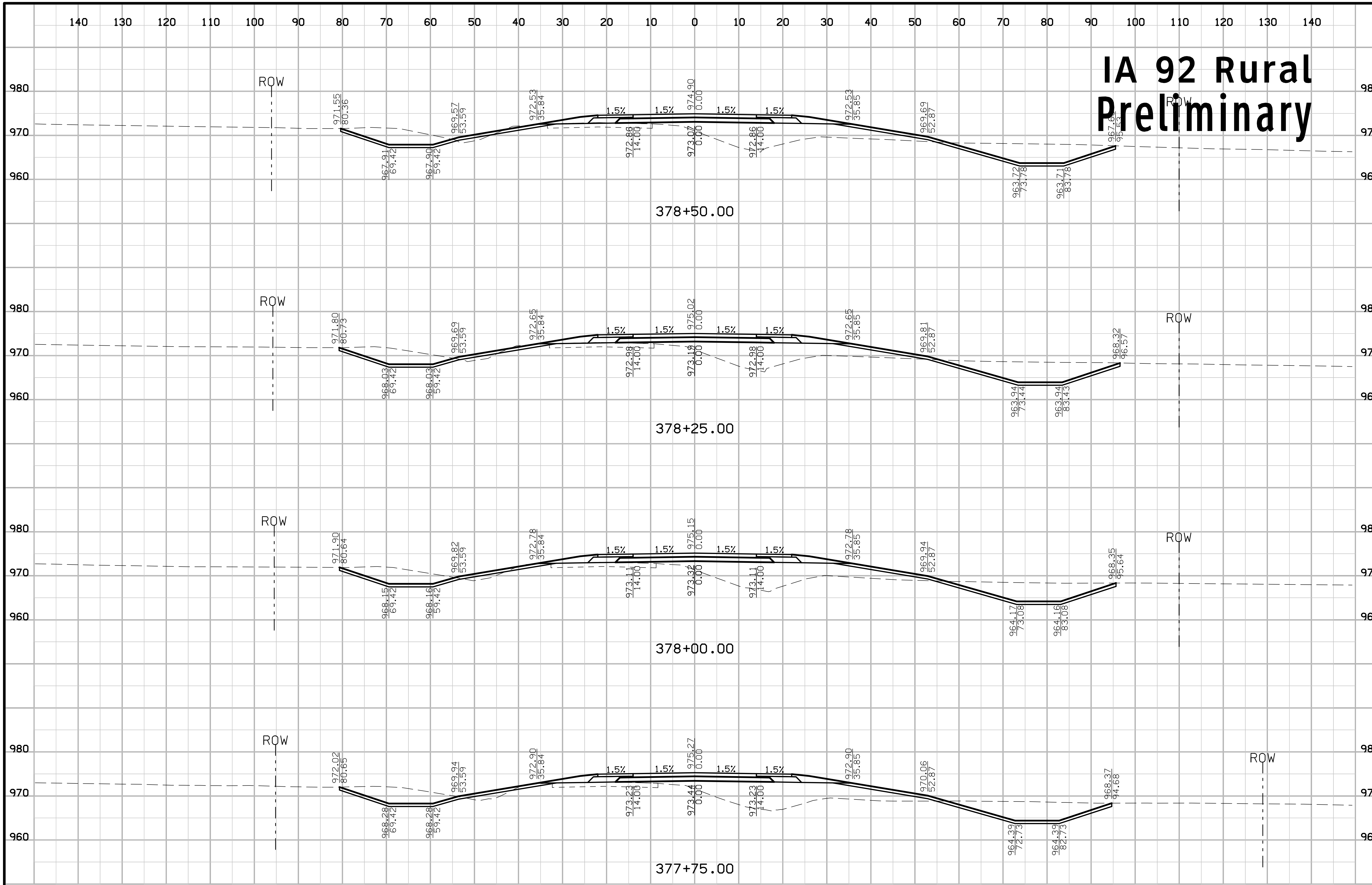
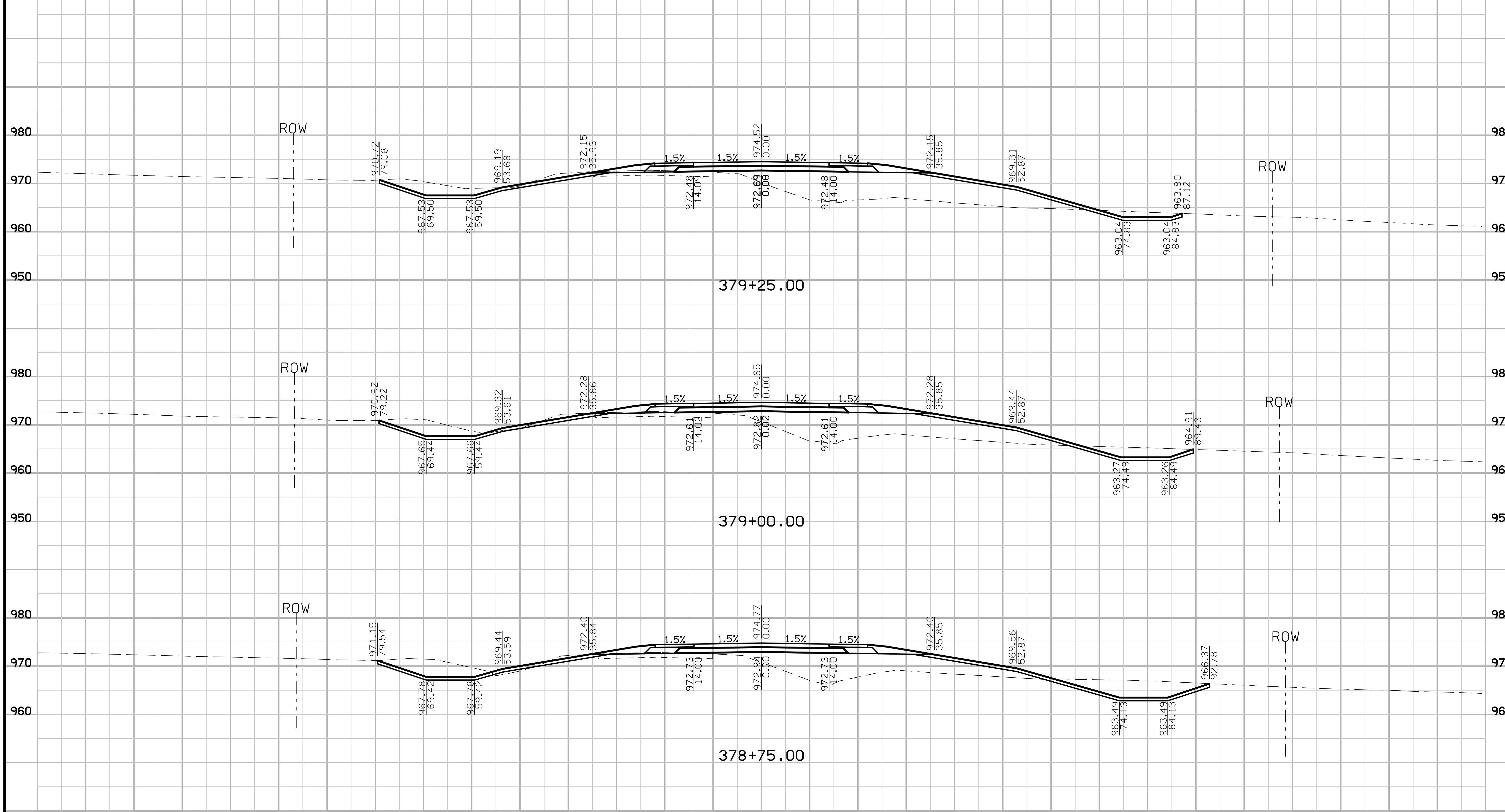


ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.145

2:38:08 PM 7/25/2013 wcamero pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9109201004\Design\91092051W102.sht

IA 92 Rural
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.146

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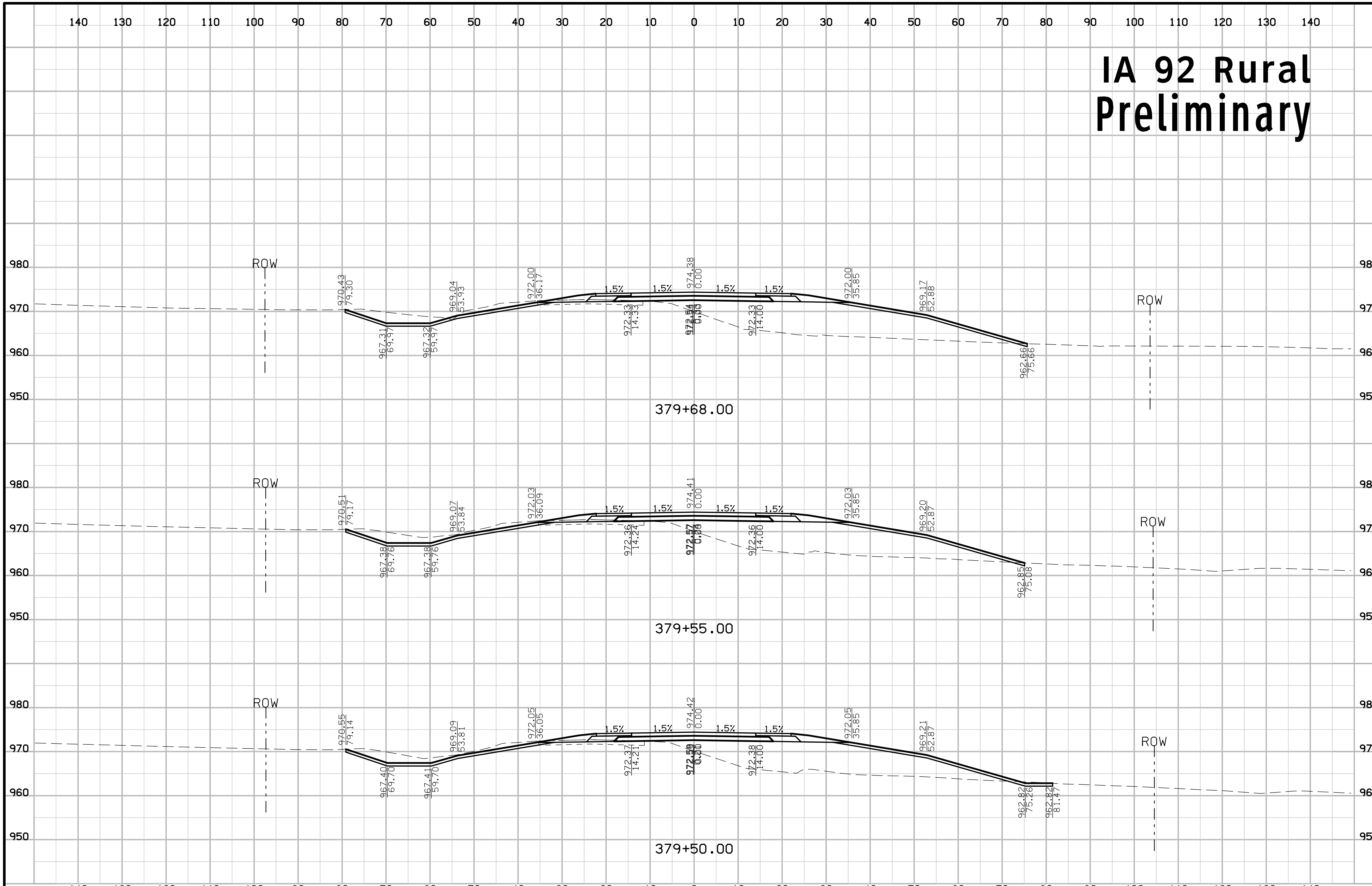

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.147

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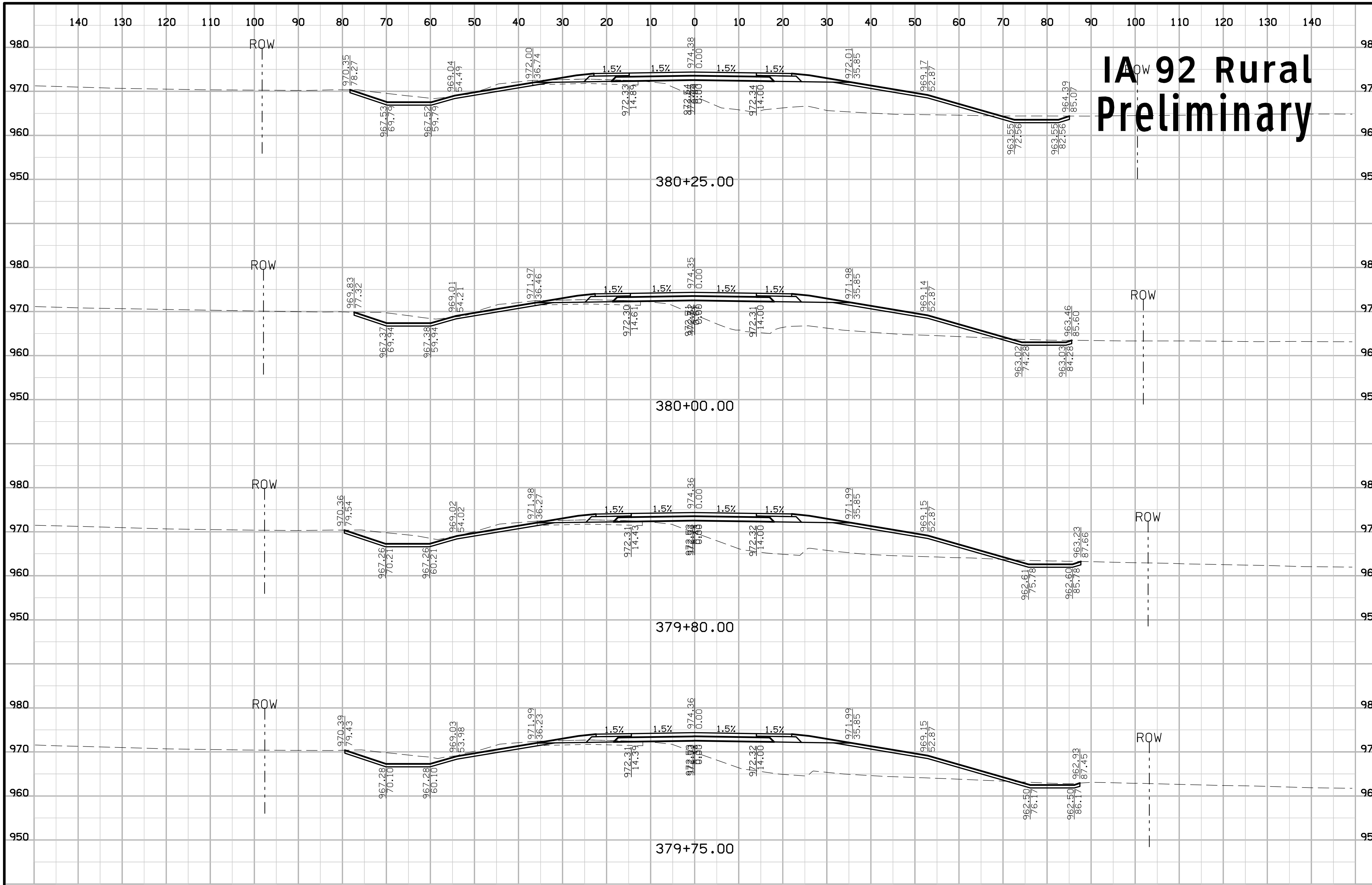

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.148

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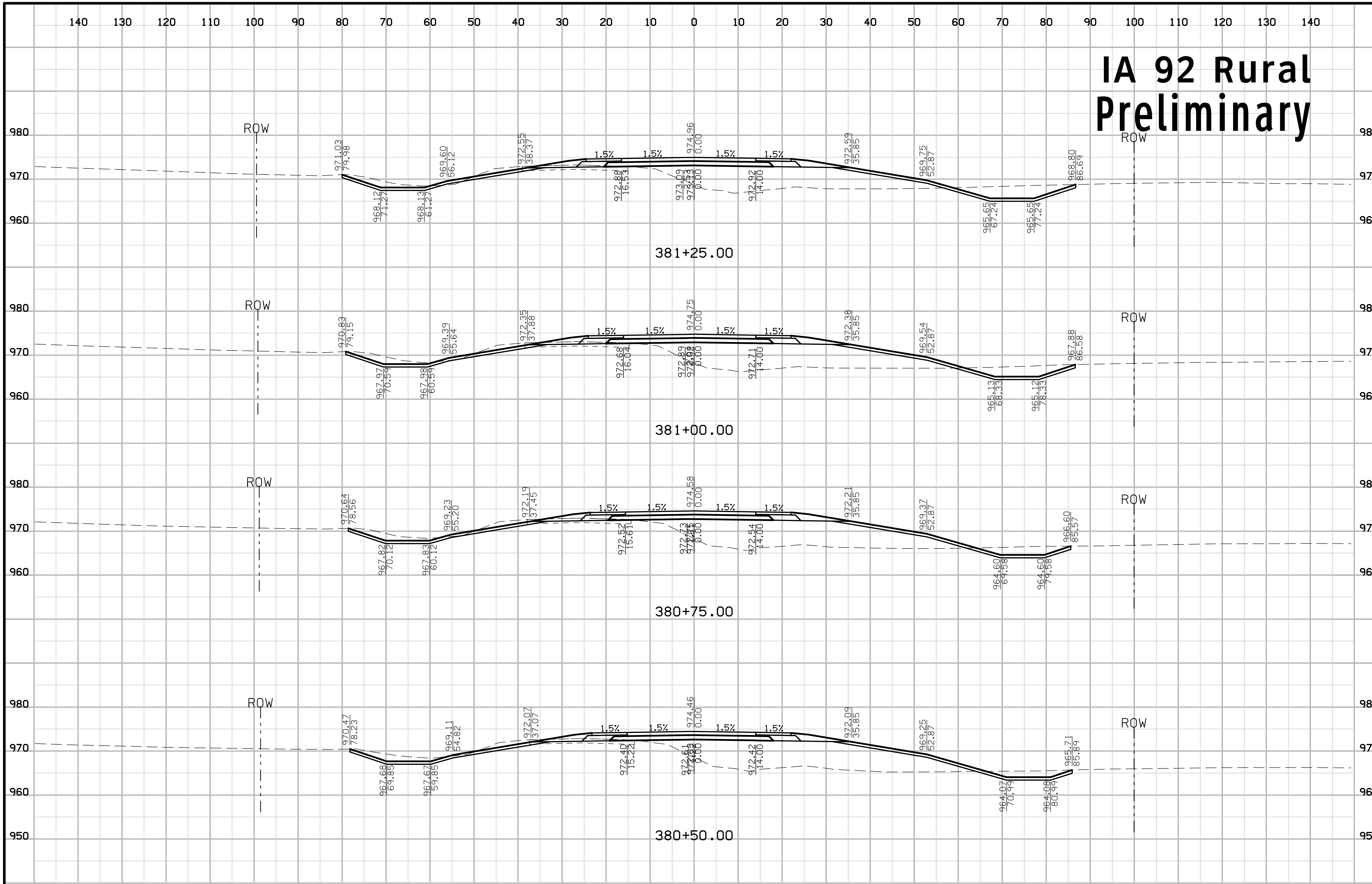
IA 92 Rural
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.149

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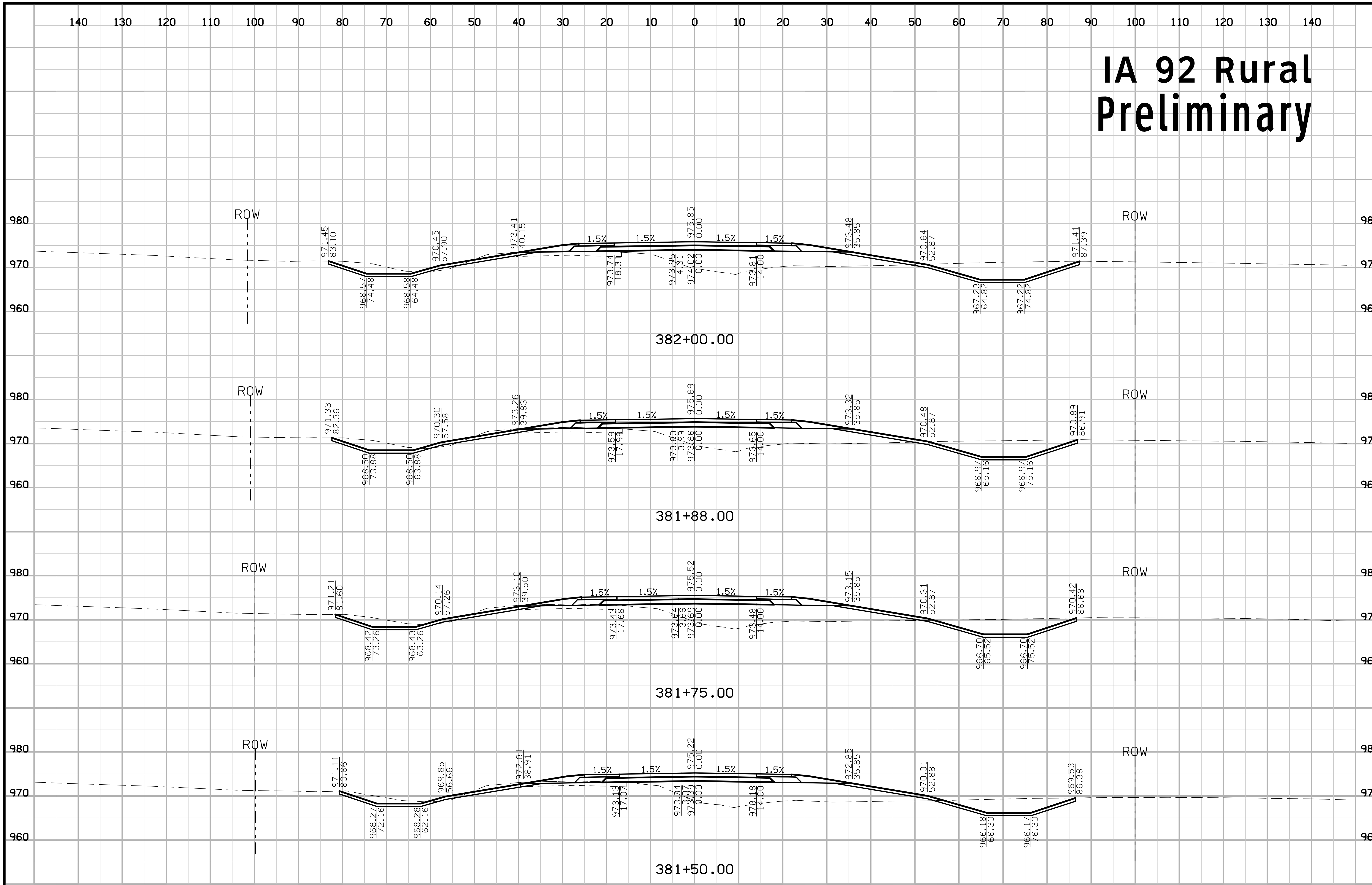

ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.150

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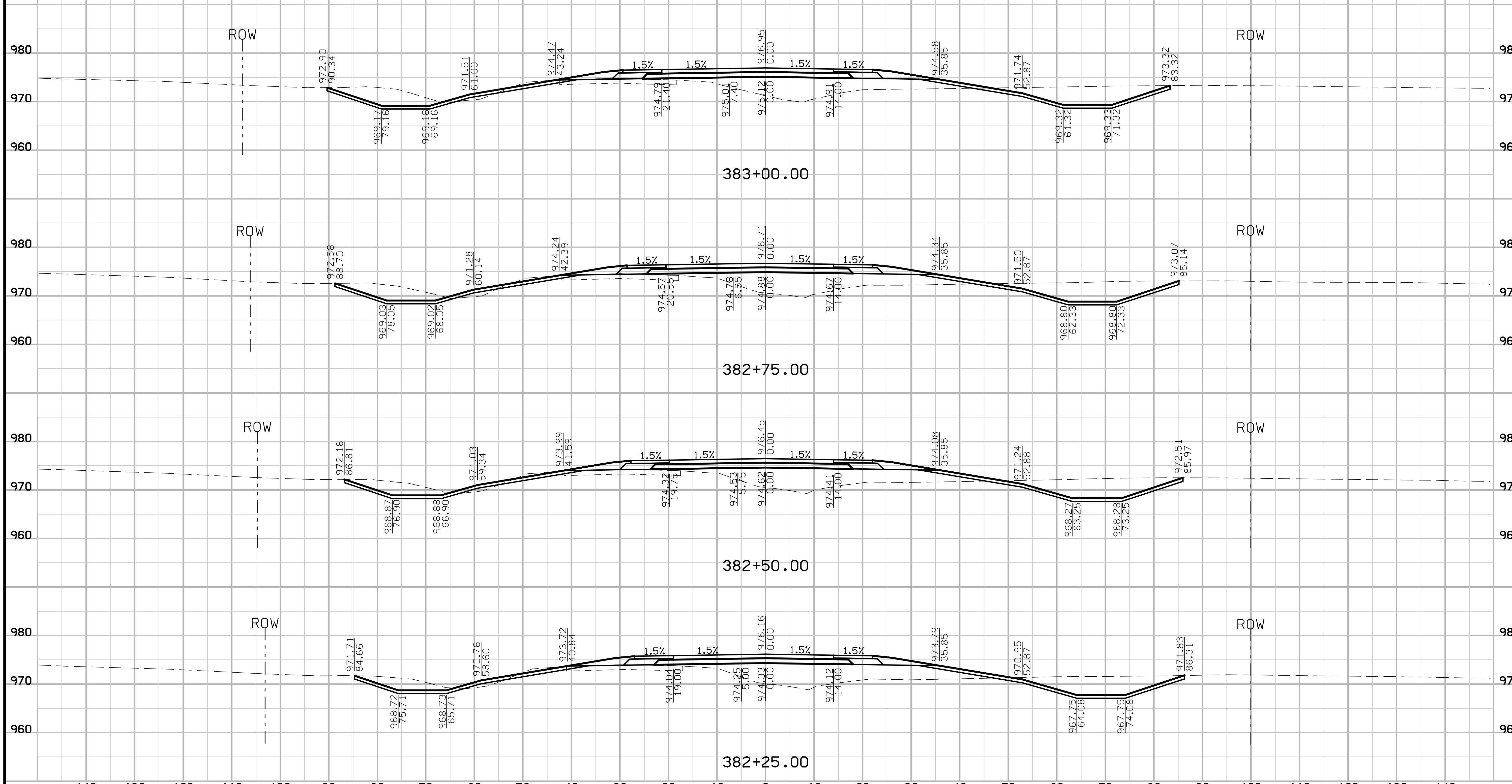
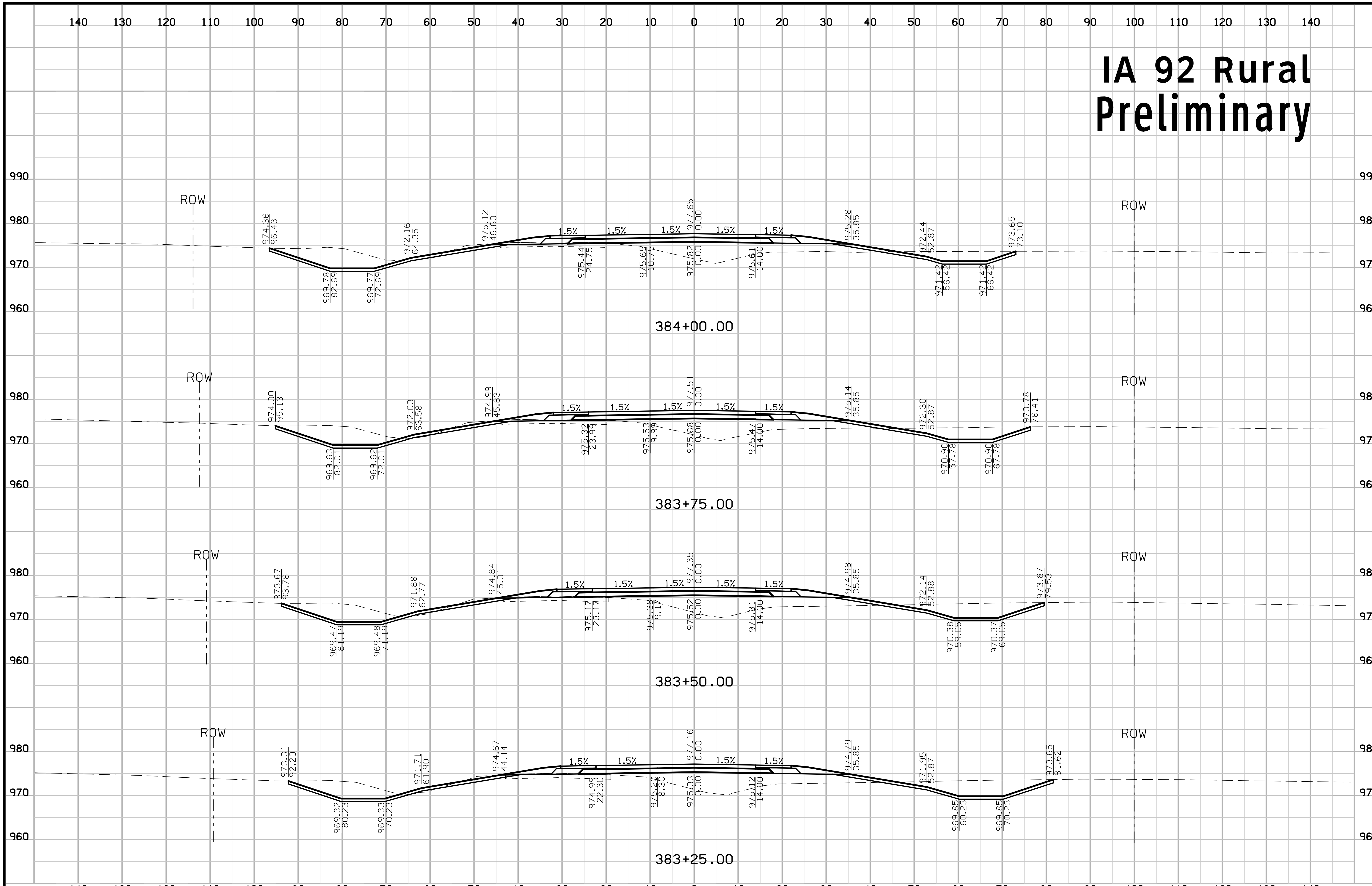
IA 92 Rural
Preliminary



IA 92 Rural
Preliminary



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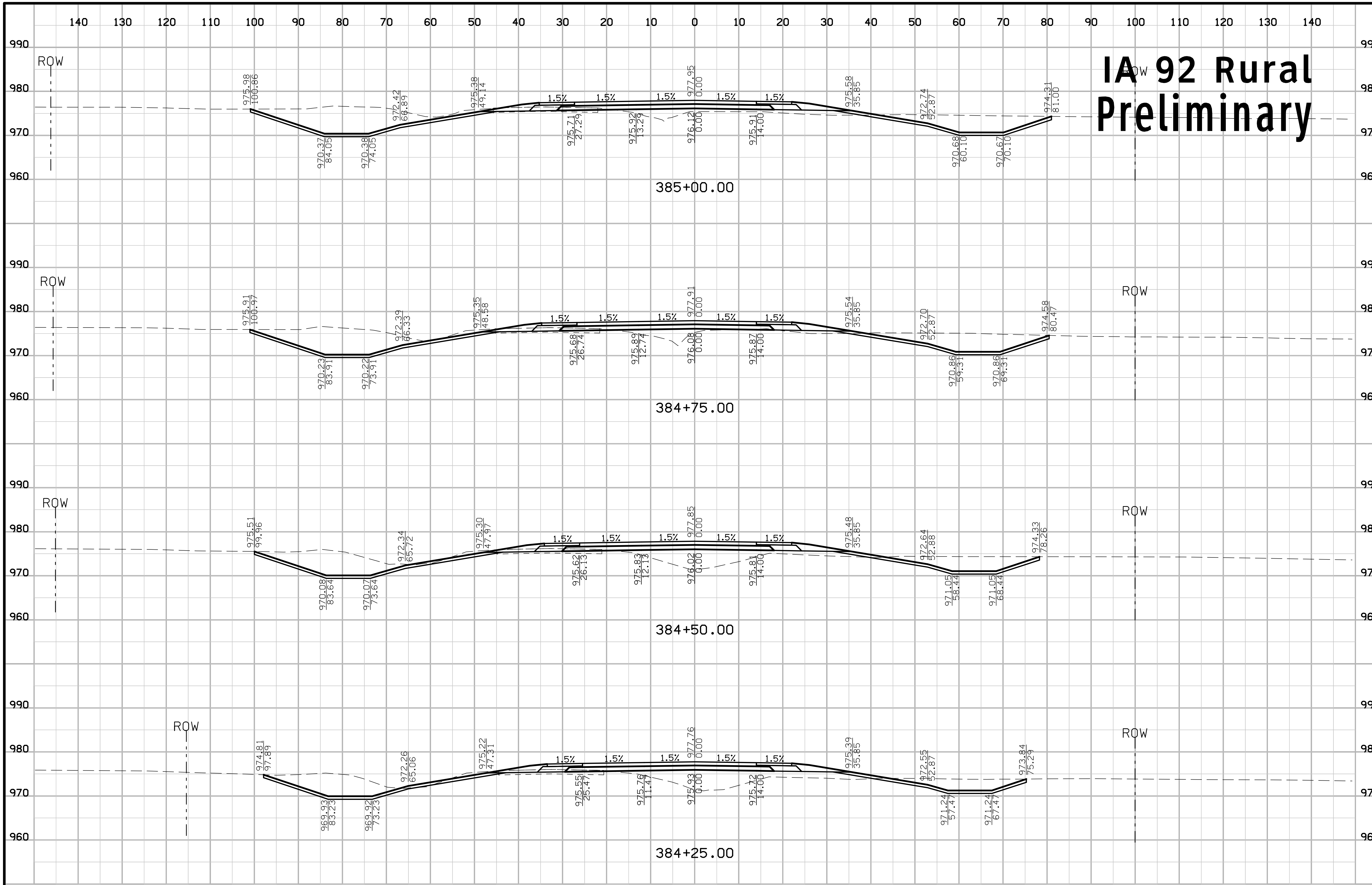
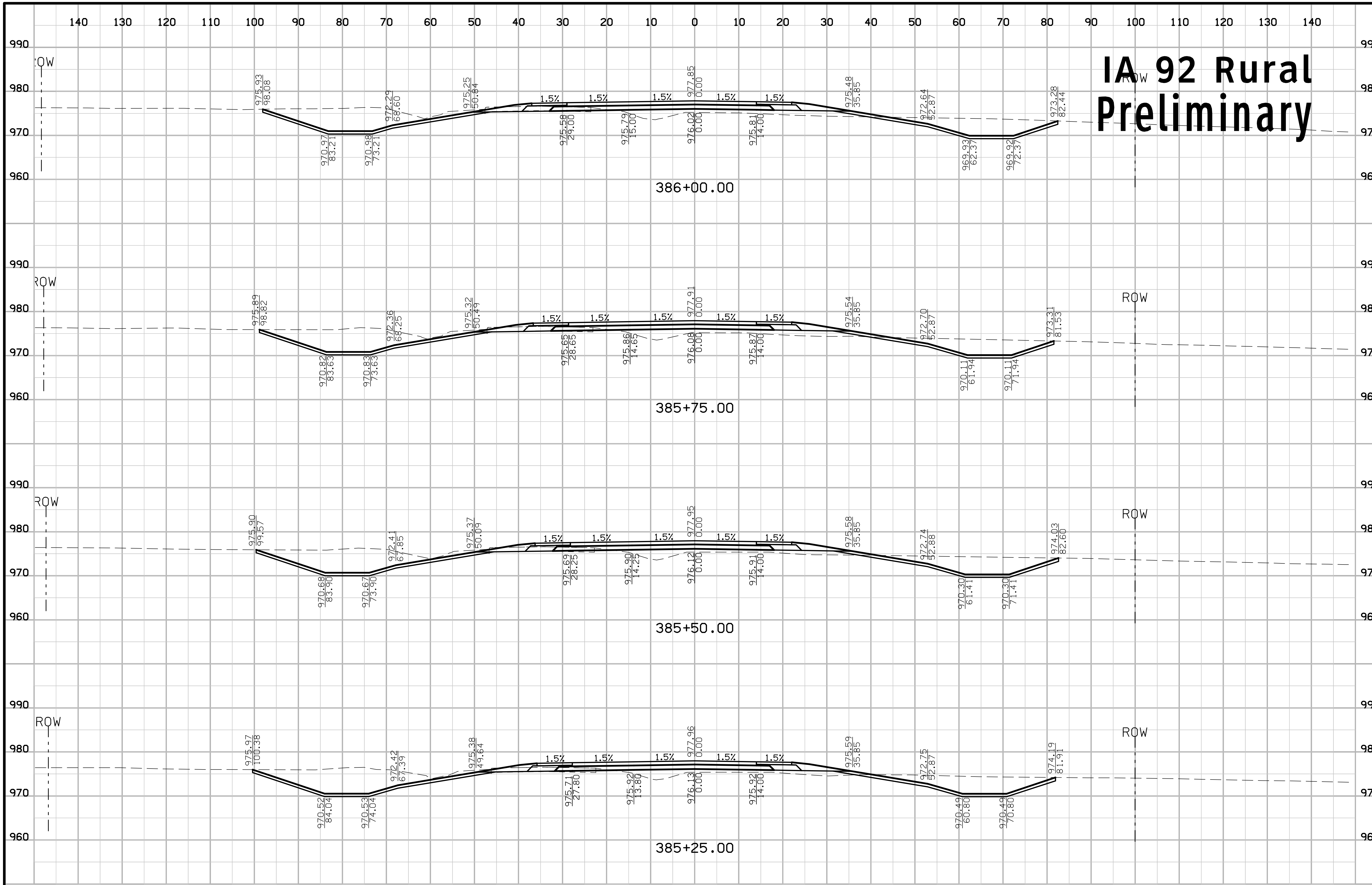


ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.153



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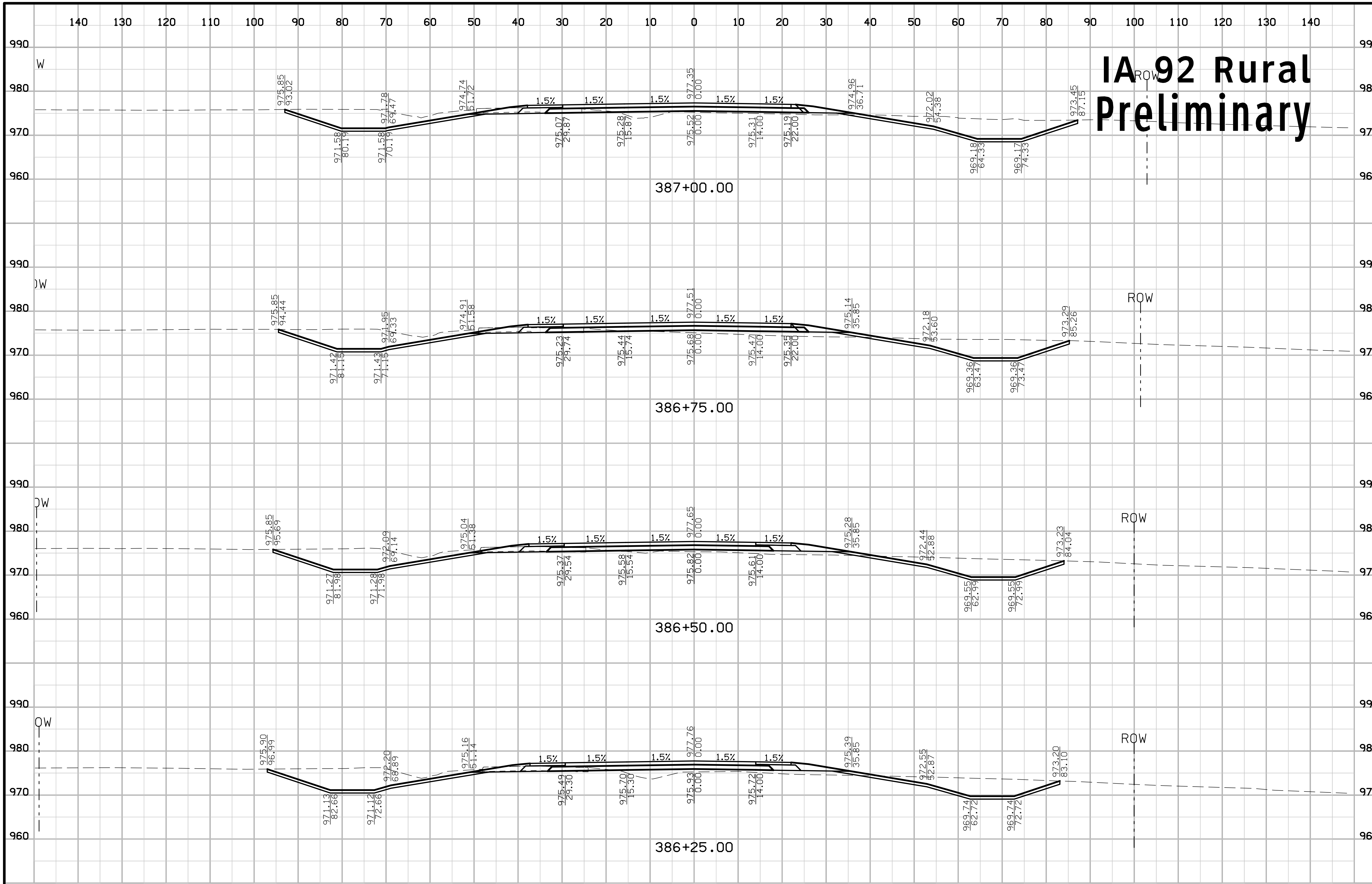

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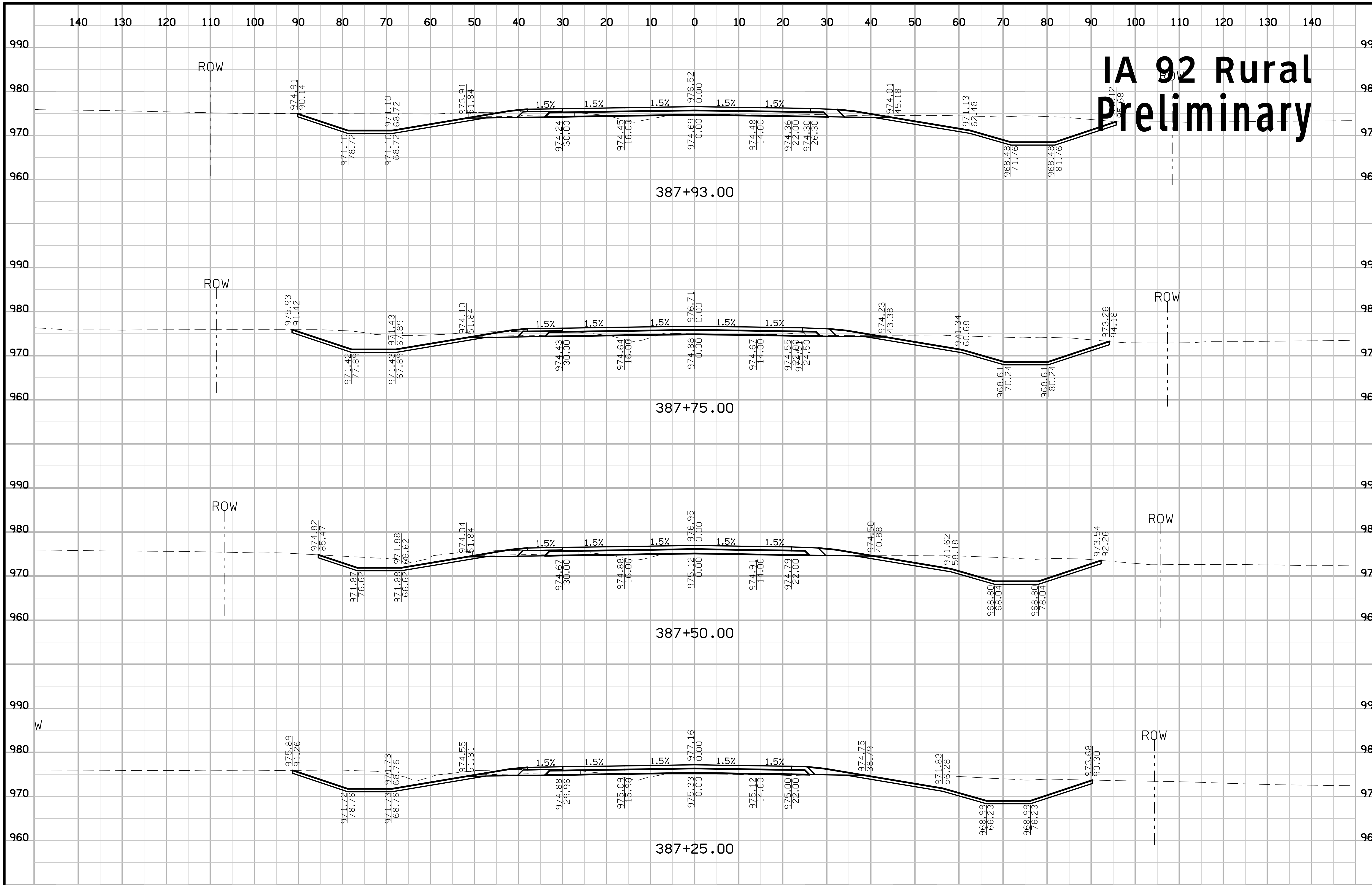

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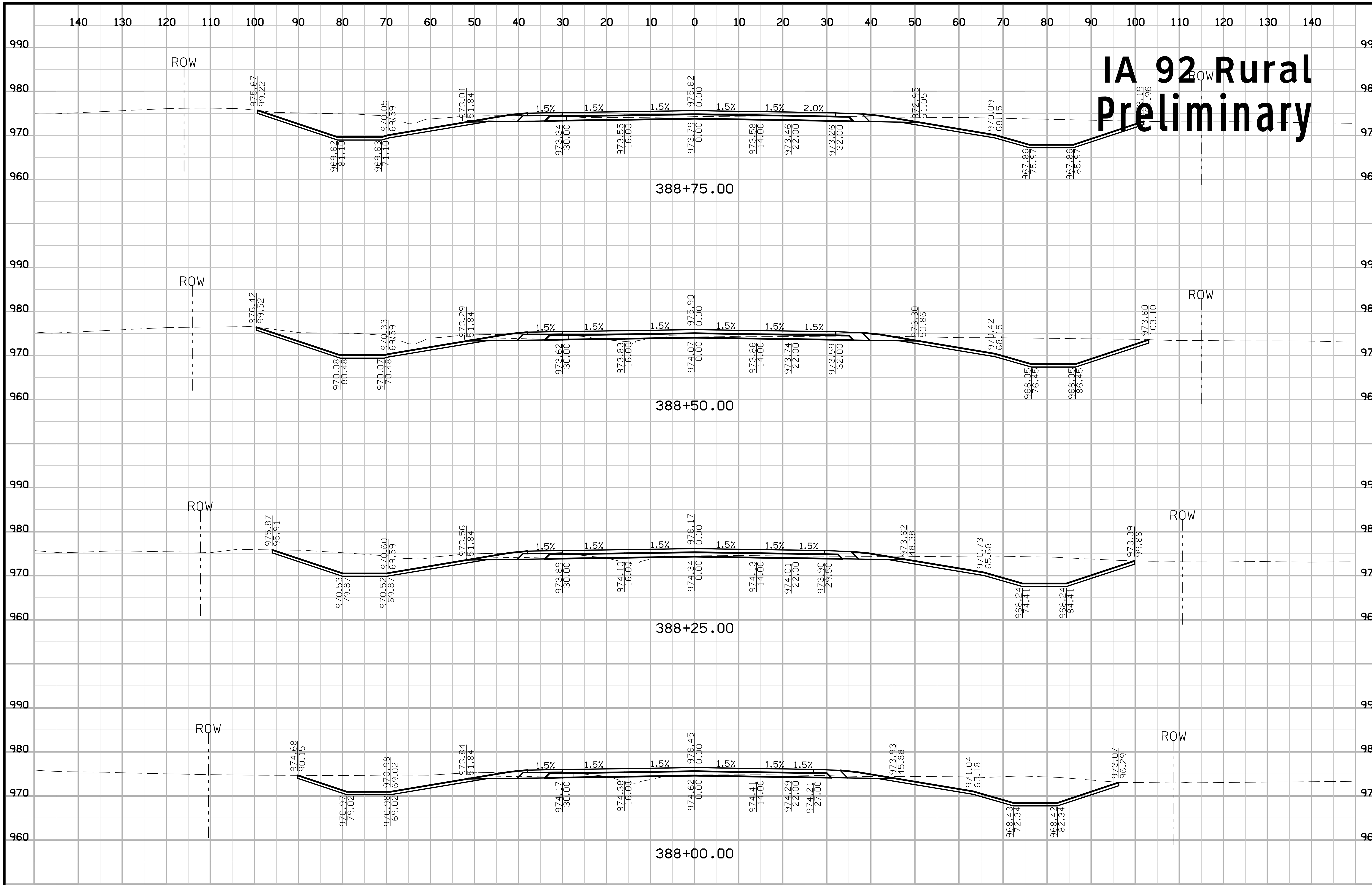
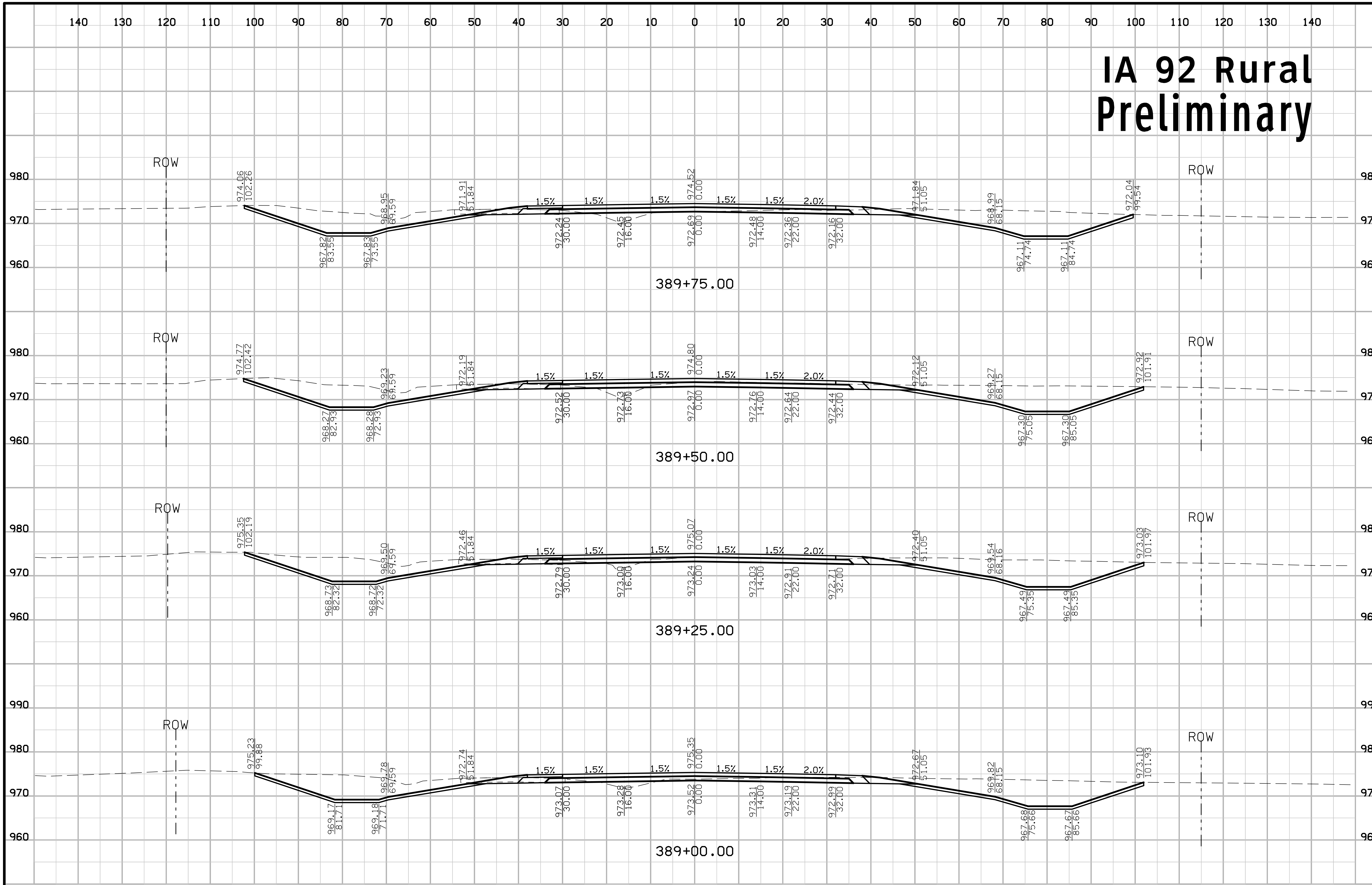
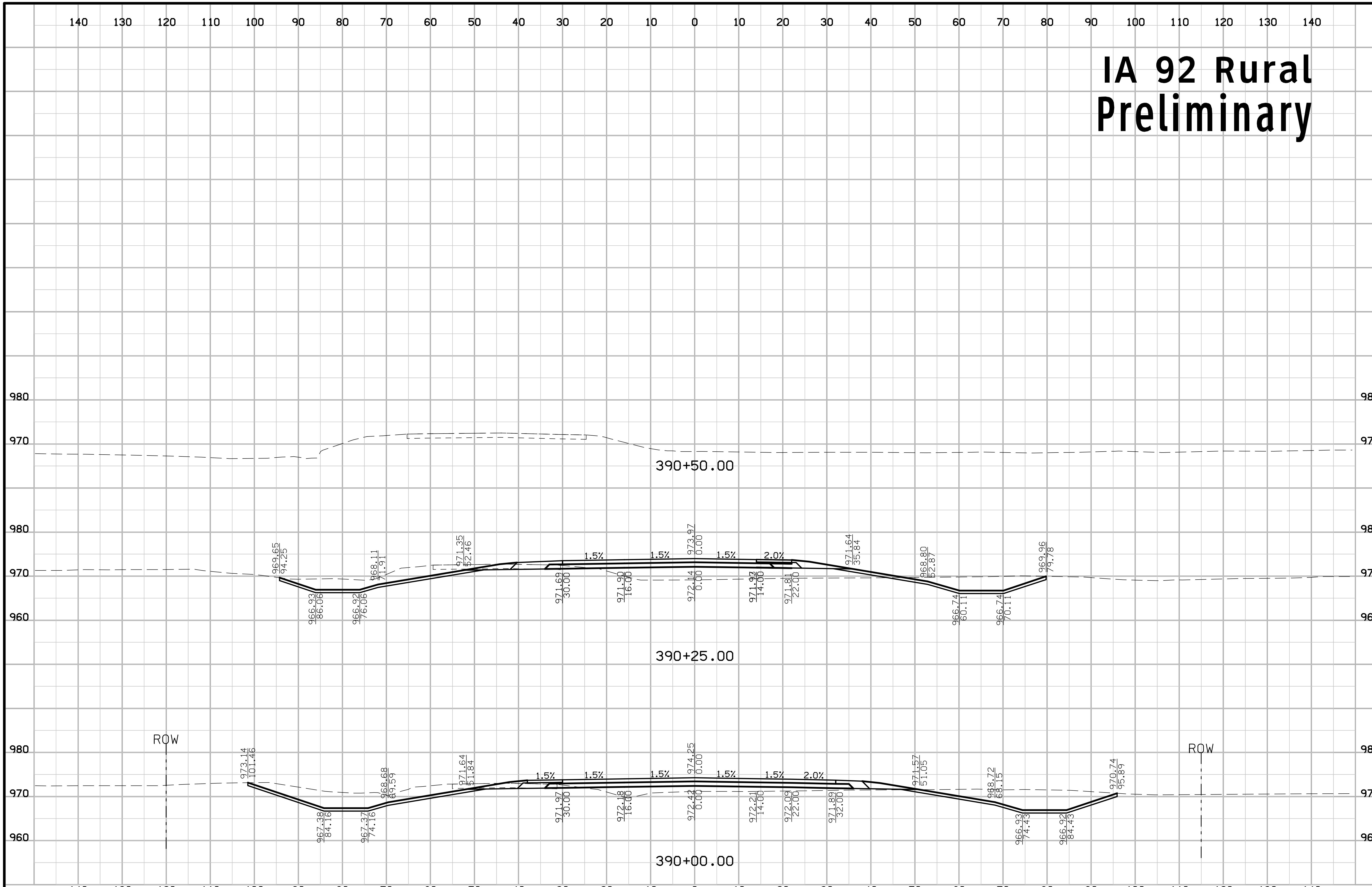


ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.157

IA 92 Rural
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM J1a\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.158



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.159

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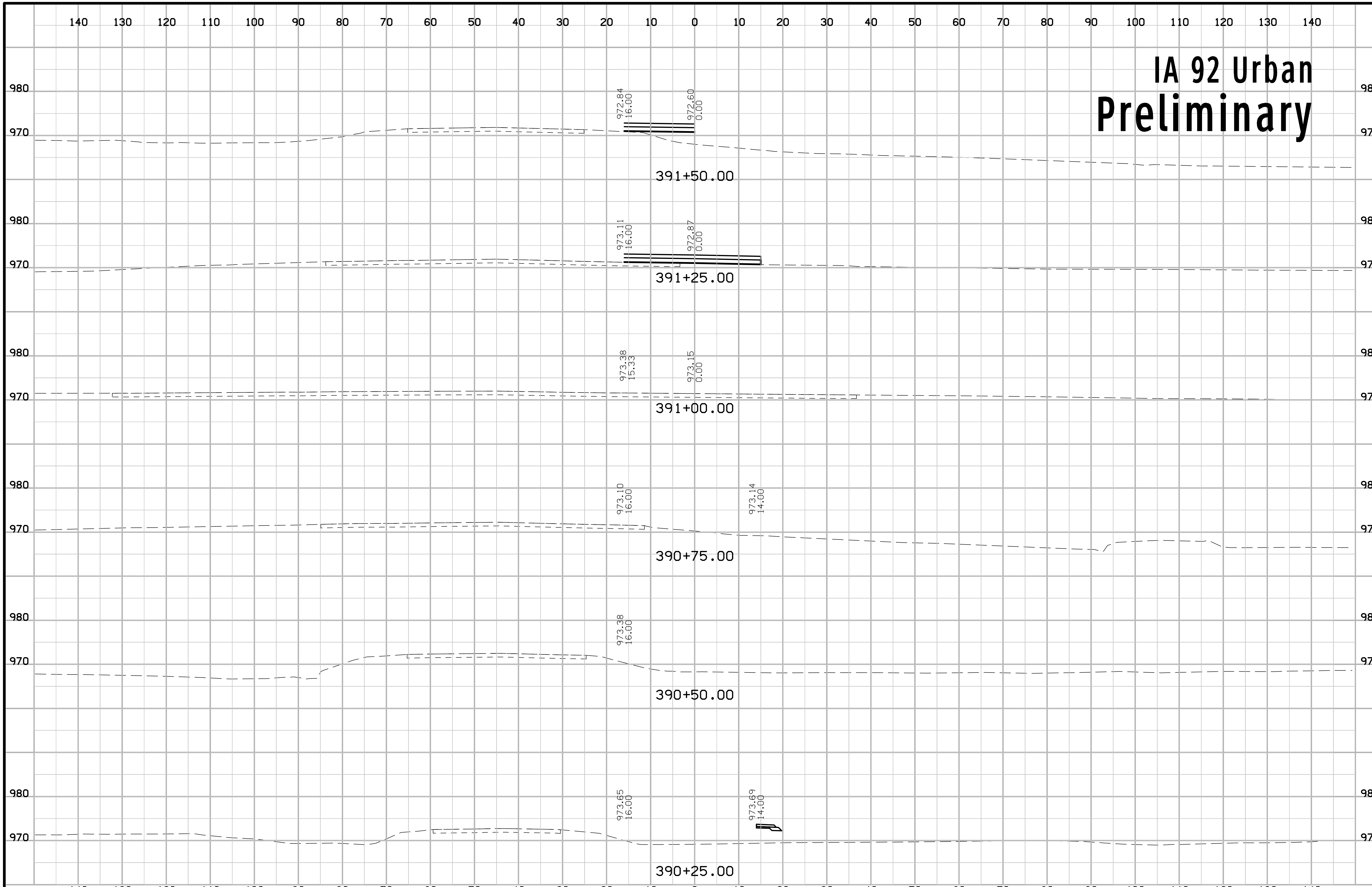

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.160

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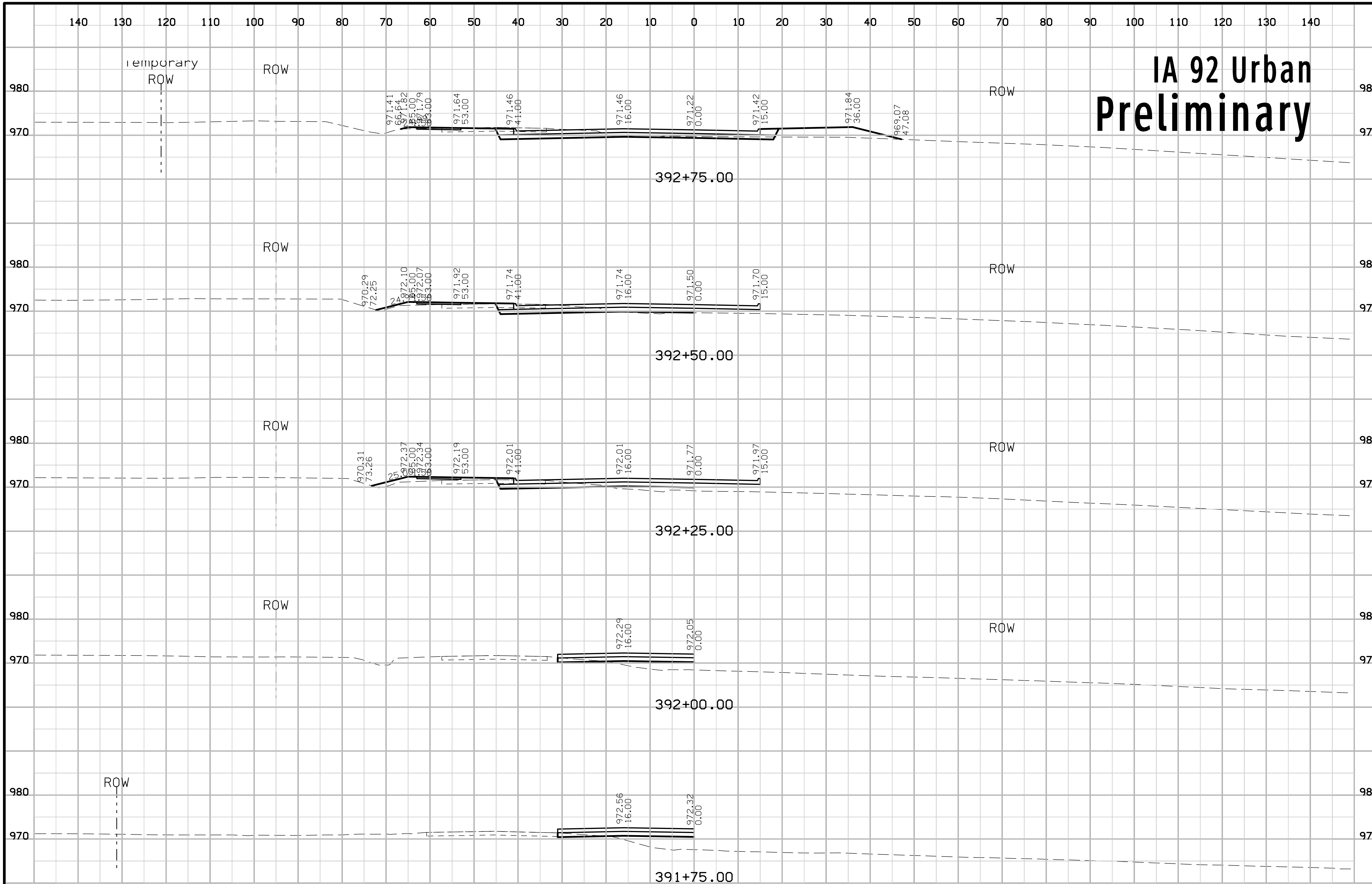

ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.161

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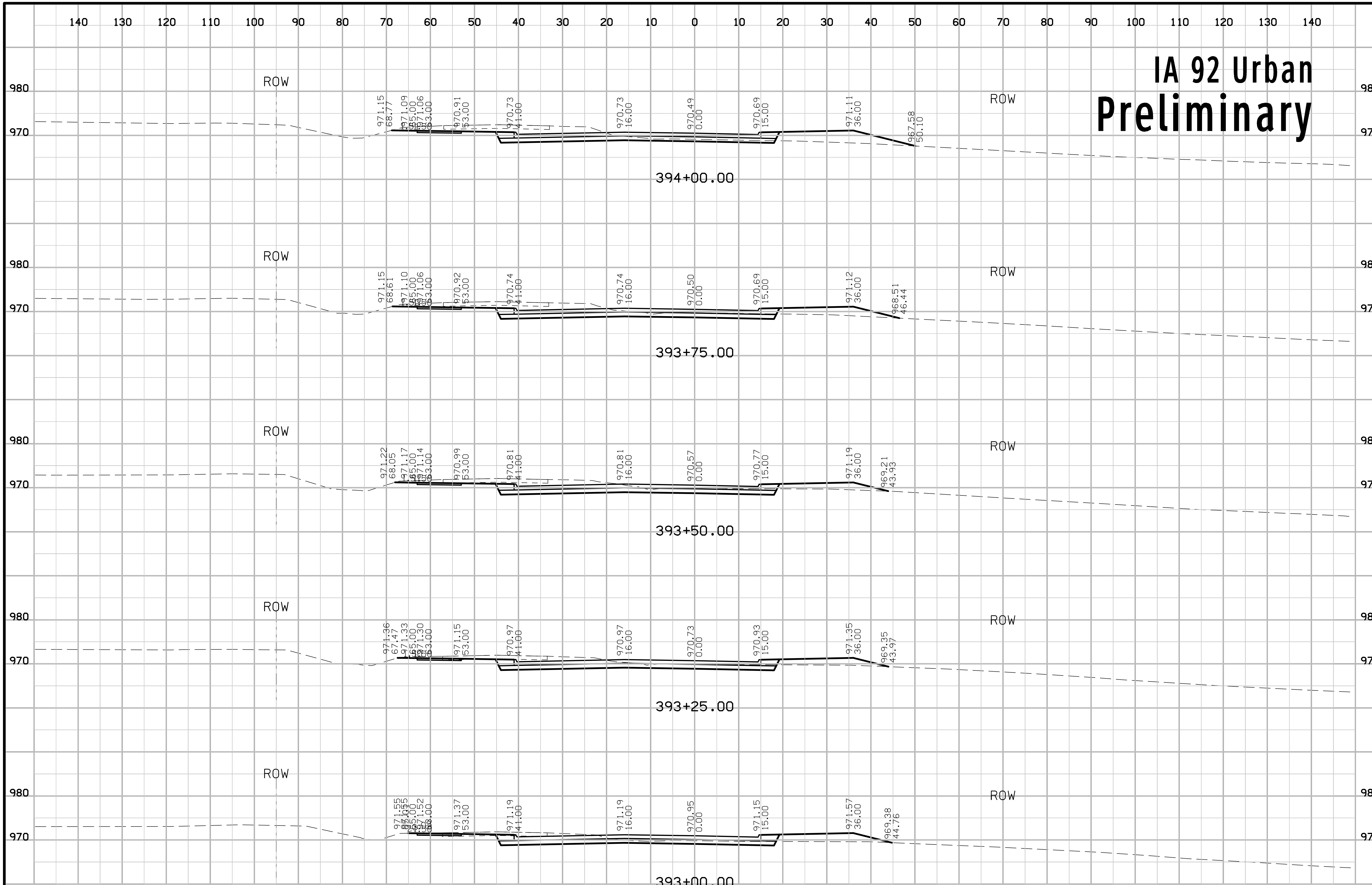
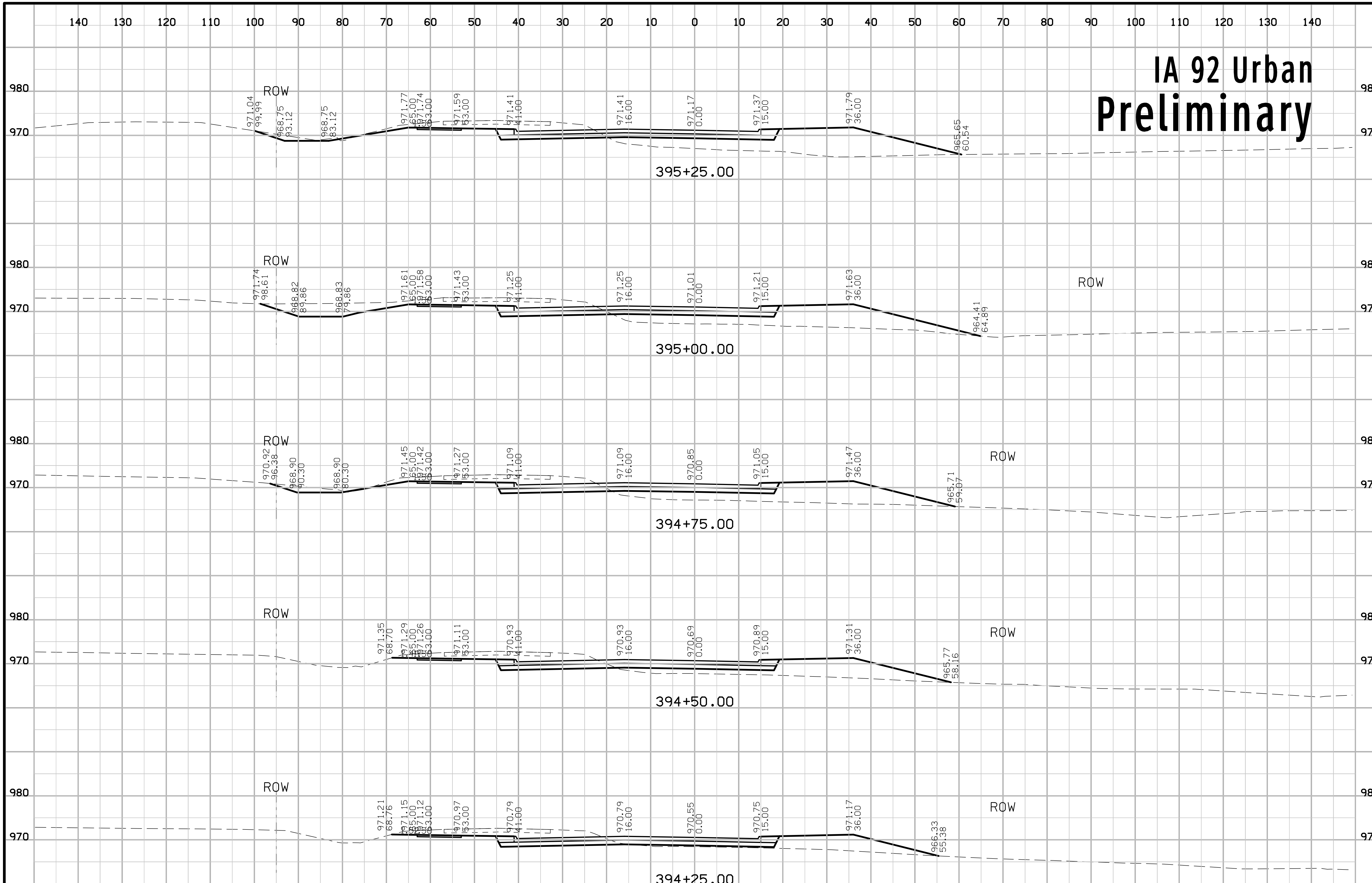


ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.162

10:15:56 AM 7/29/2013 wcamero pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9109201004\Design\91092051W160.sht

IA 92 Urban
Preliminary



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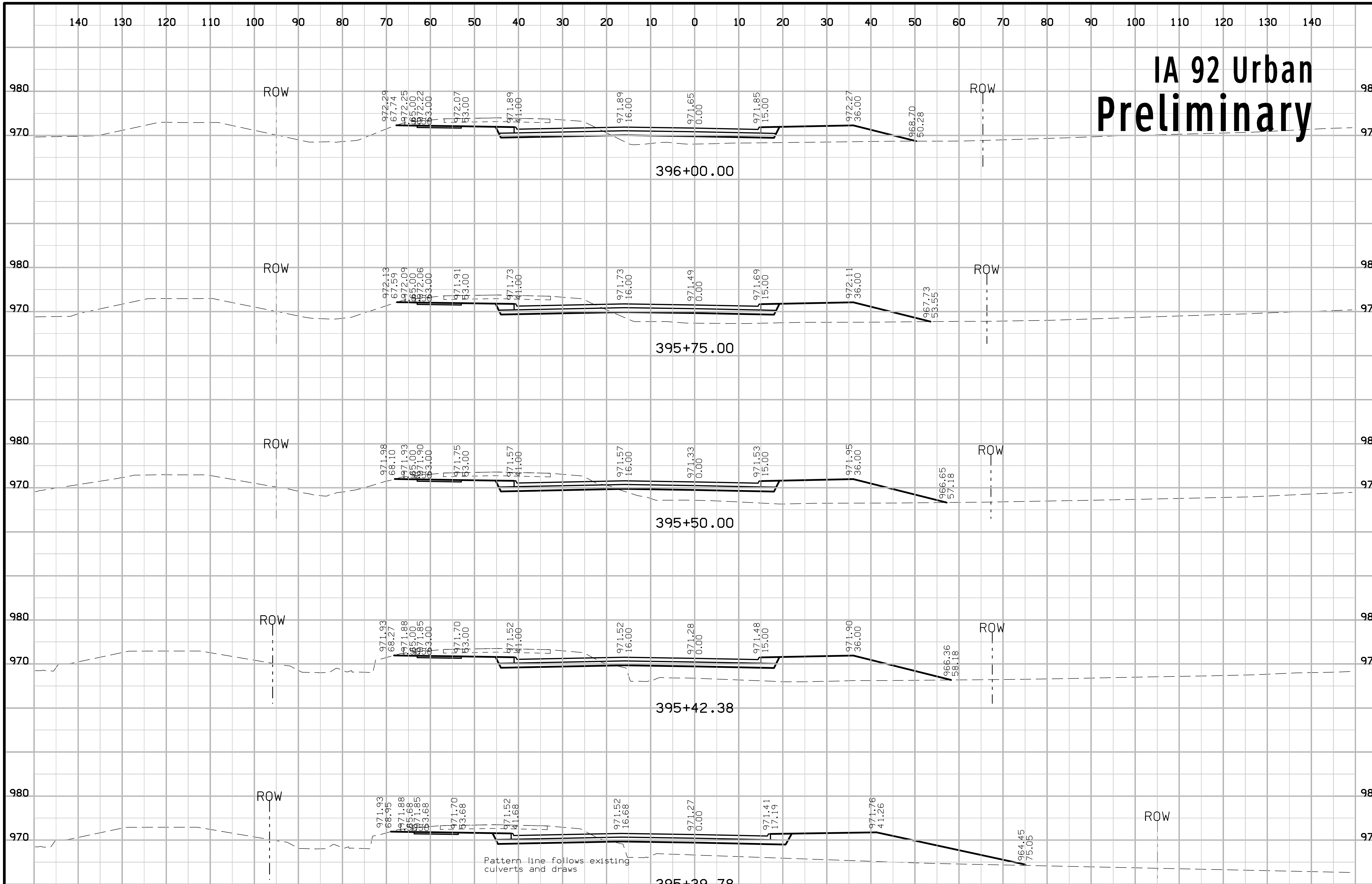
10:15:57 AM 7/29/2013 wcamero pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9109201004\Design\91092051W160.sht



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.164

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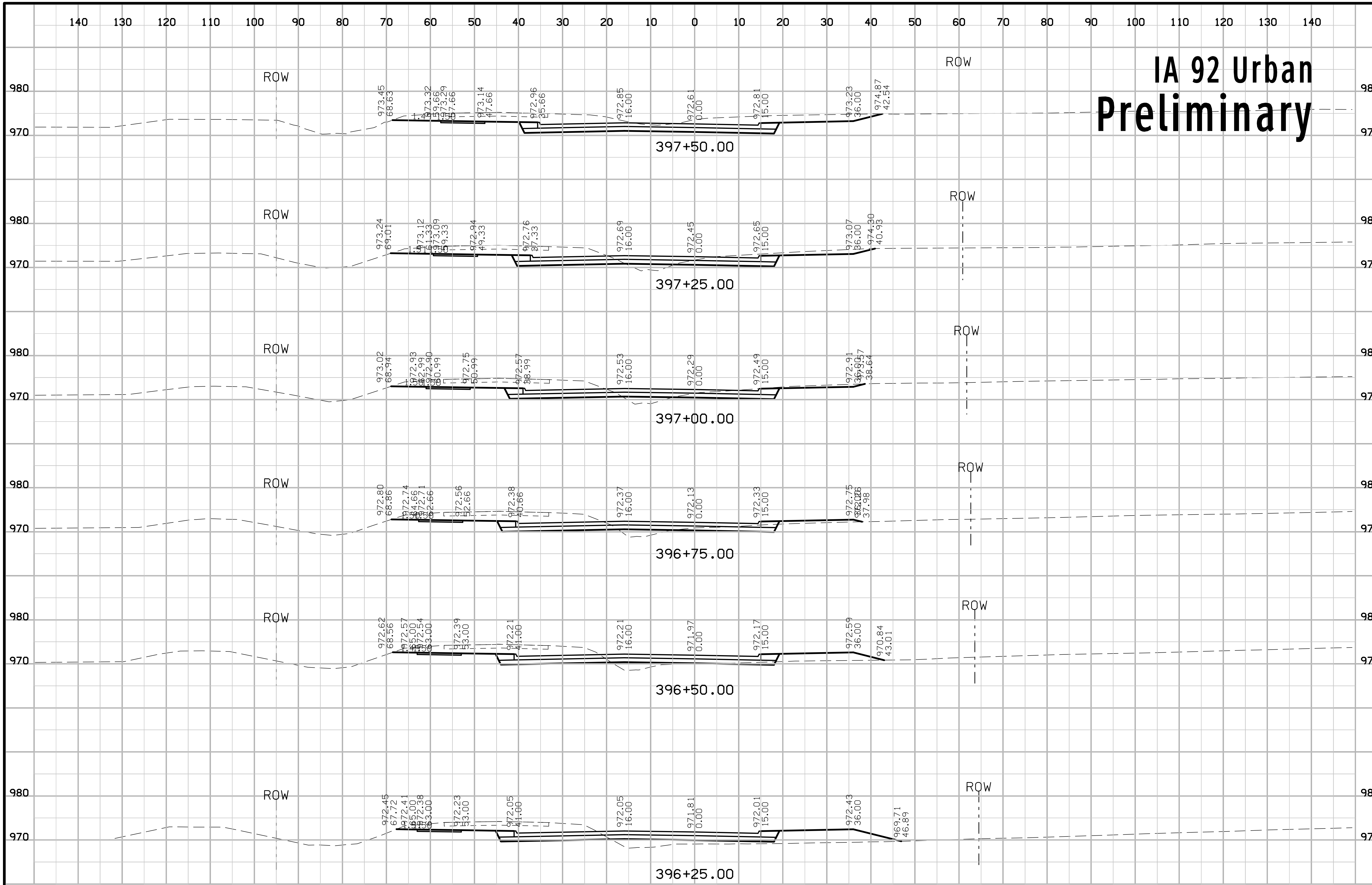
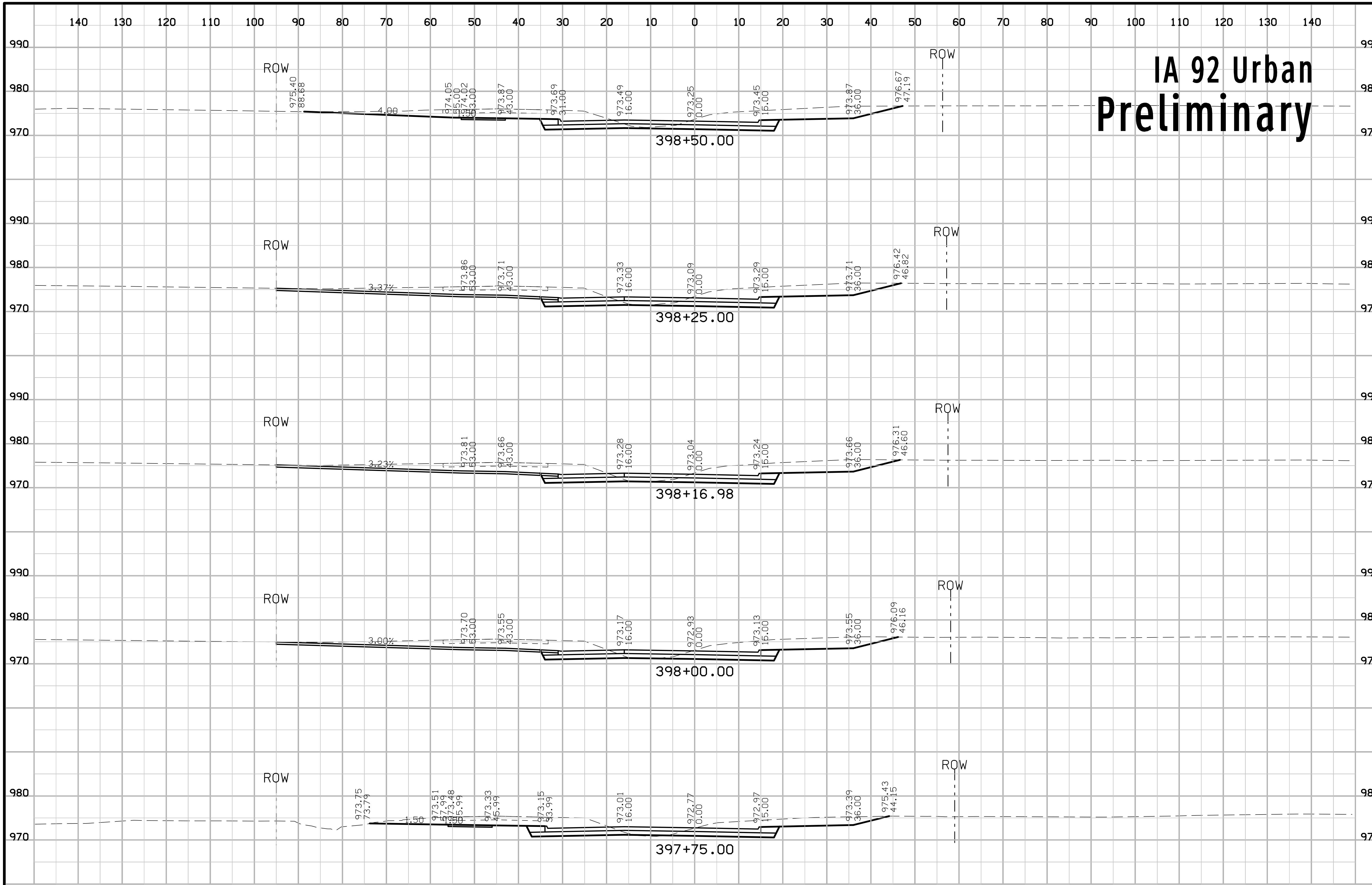


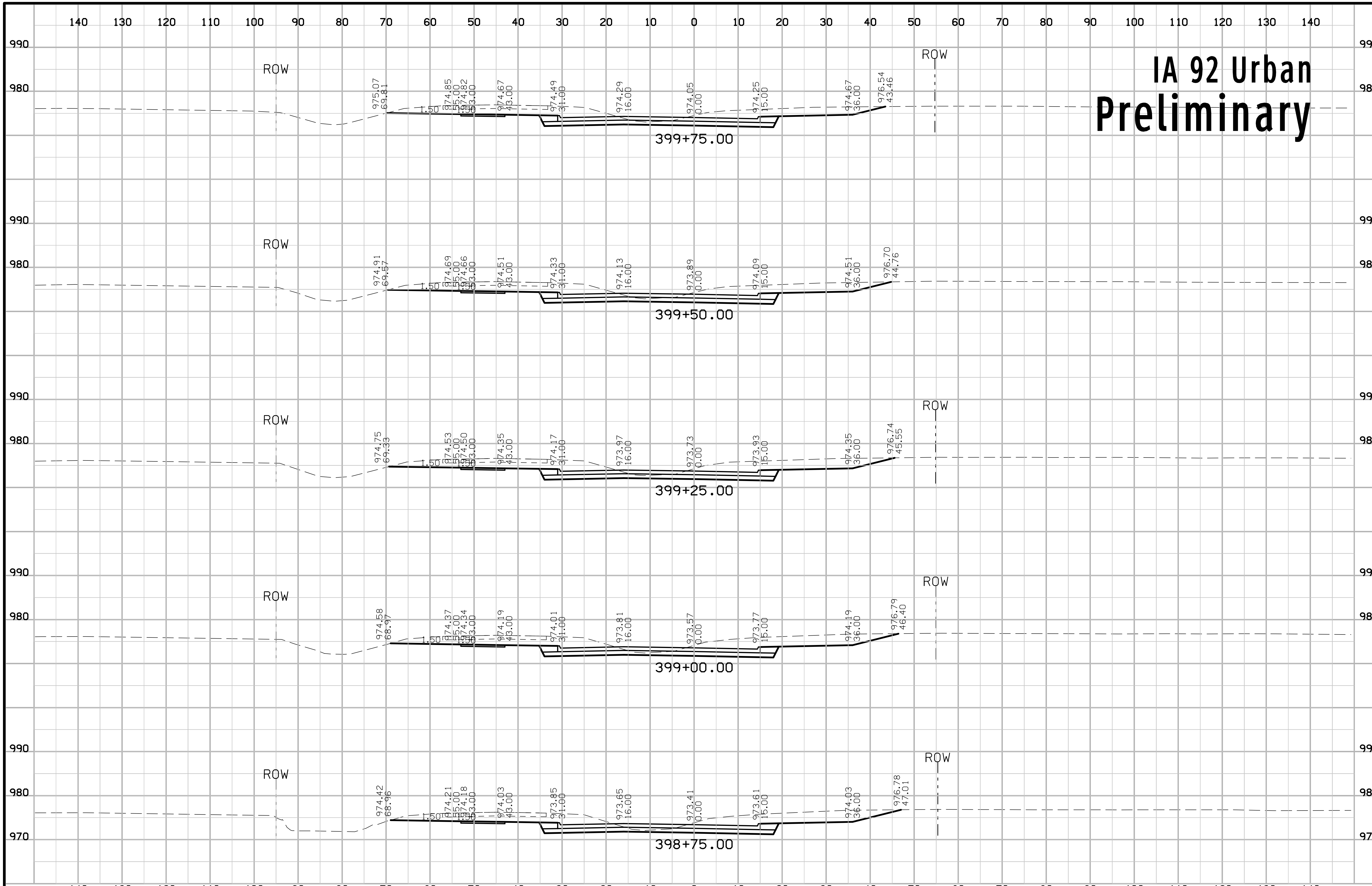
ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.165

10:15:59 AM 7/29/2013 wcamero pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9109201004\Design\91092051W160.sht

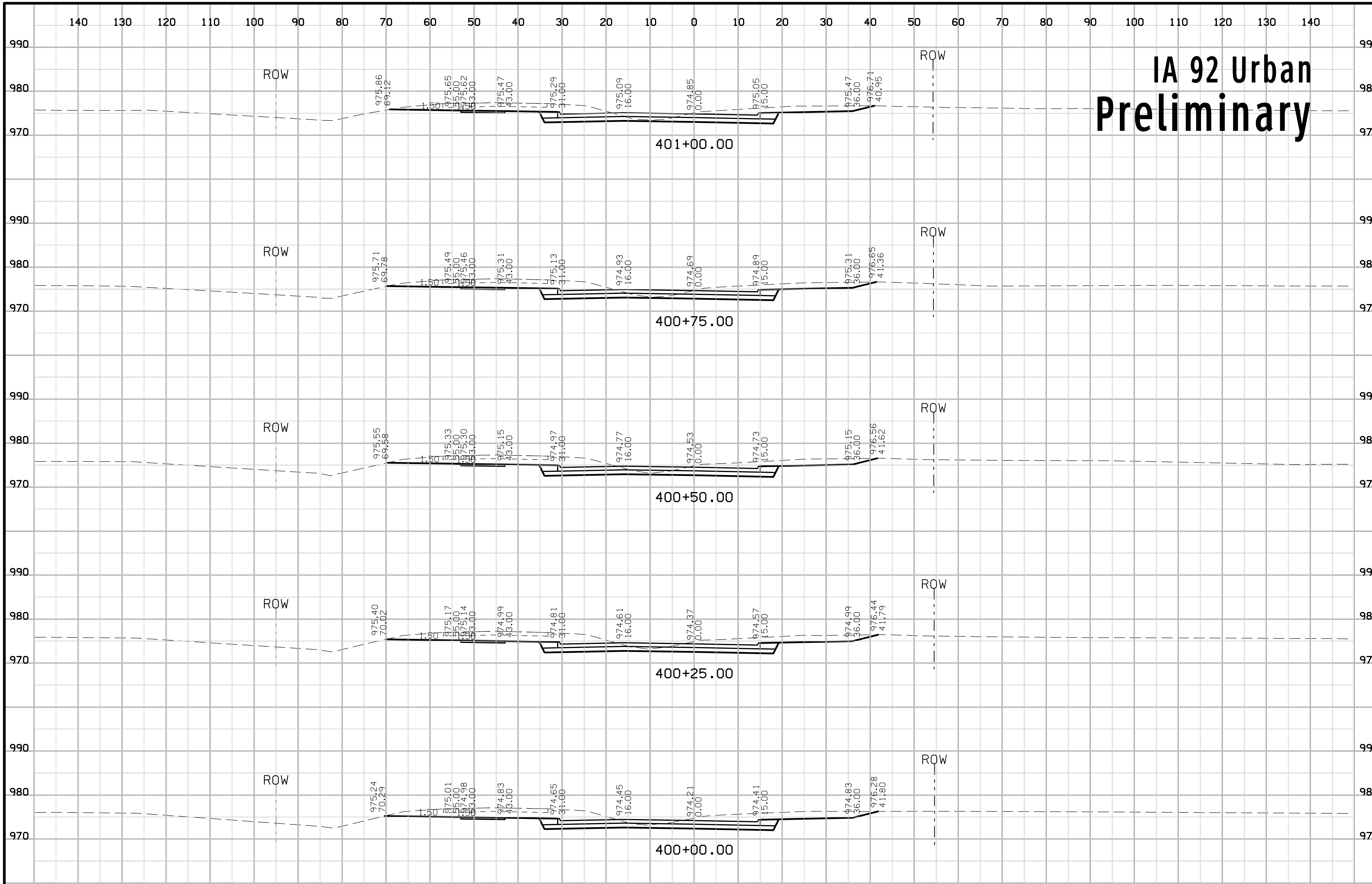


ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.166

10:16:00 AM 7/29/2013 wcamero pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9109201004\Design\91092051W160.sht



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.167



ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.168

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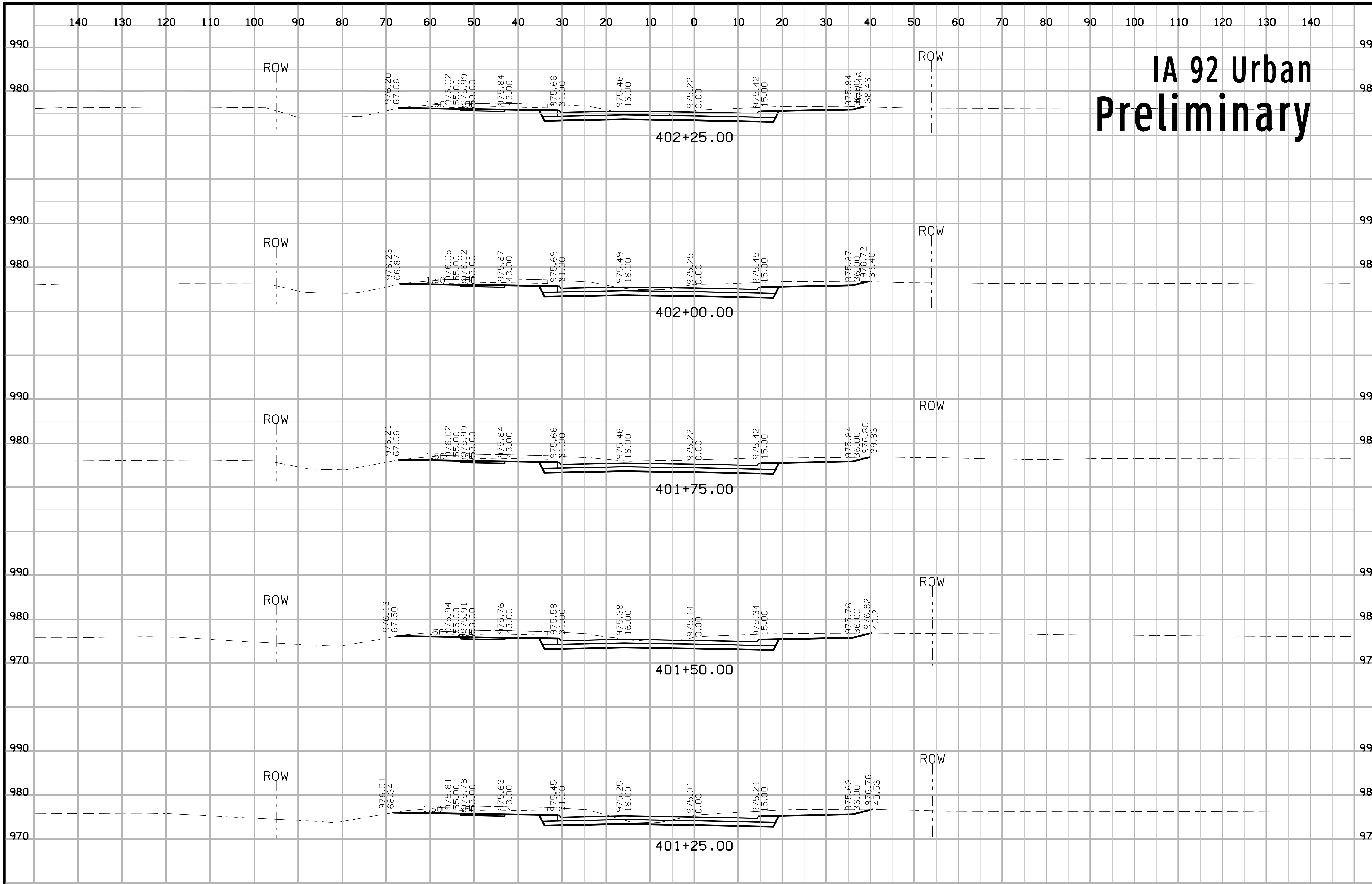

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.169

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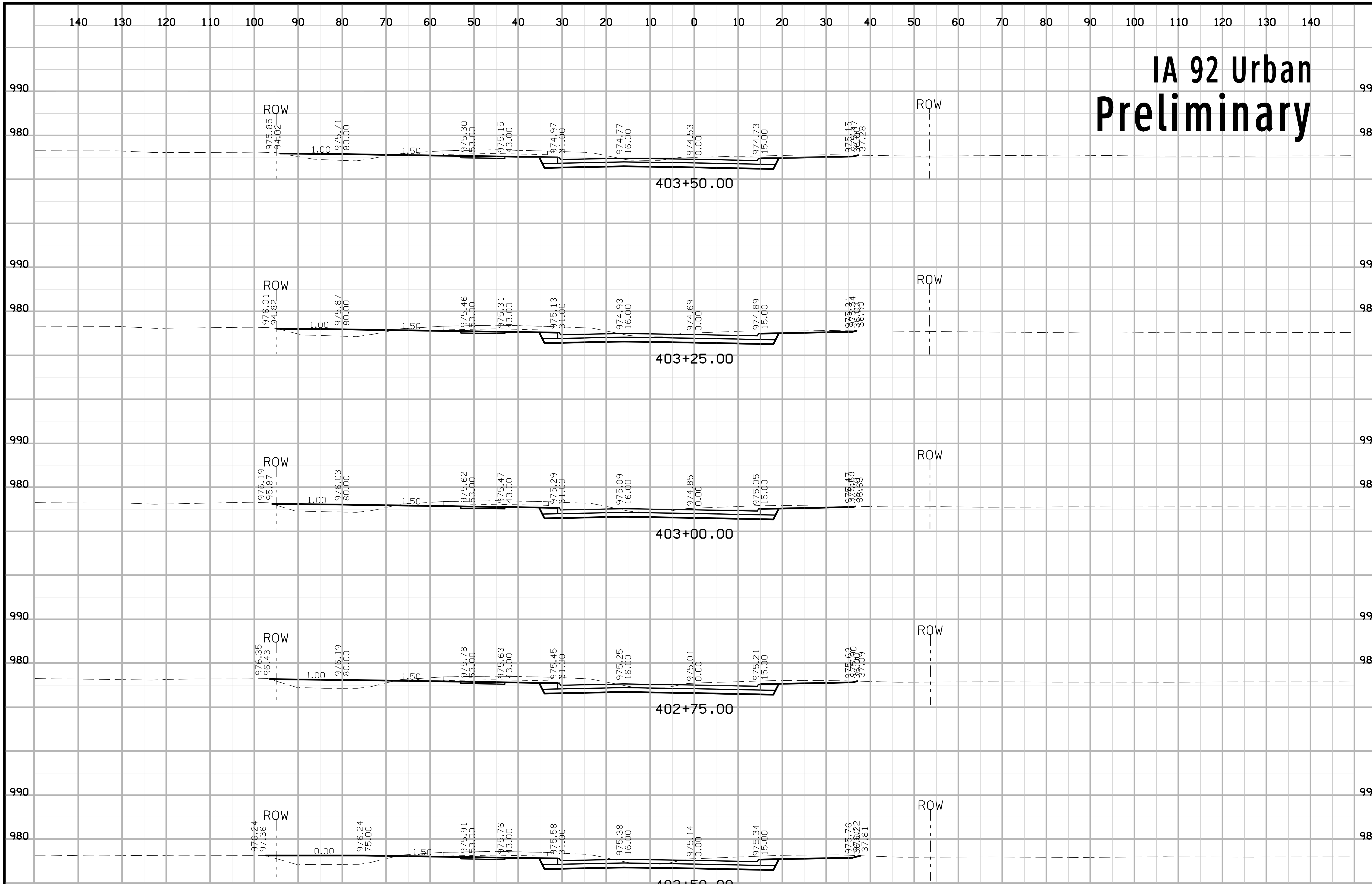

ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.170

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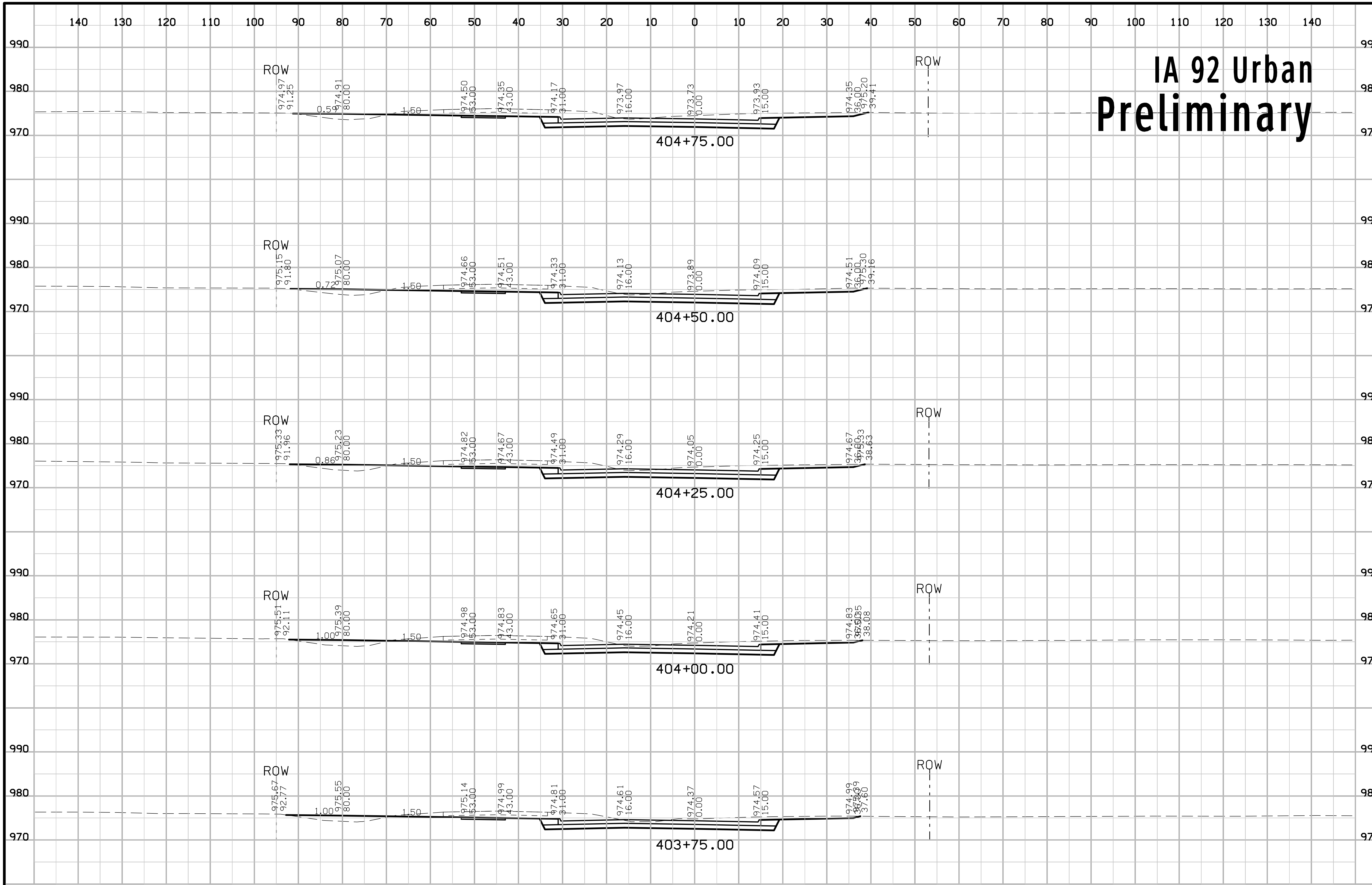
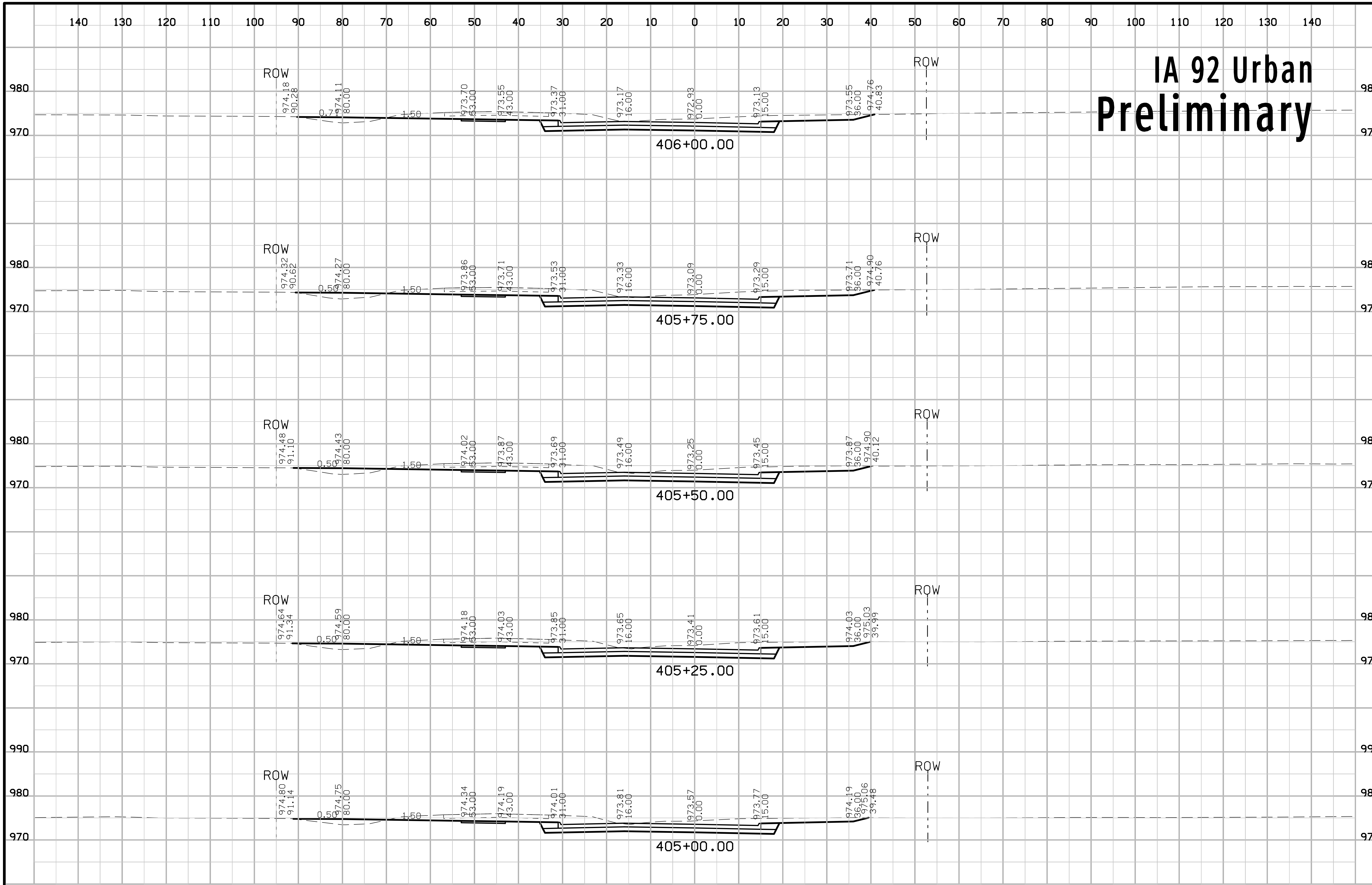
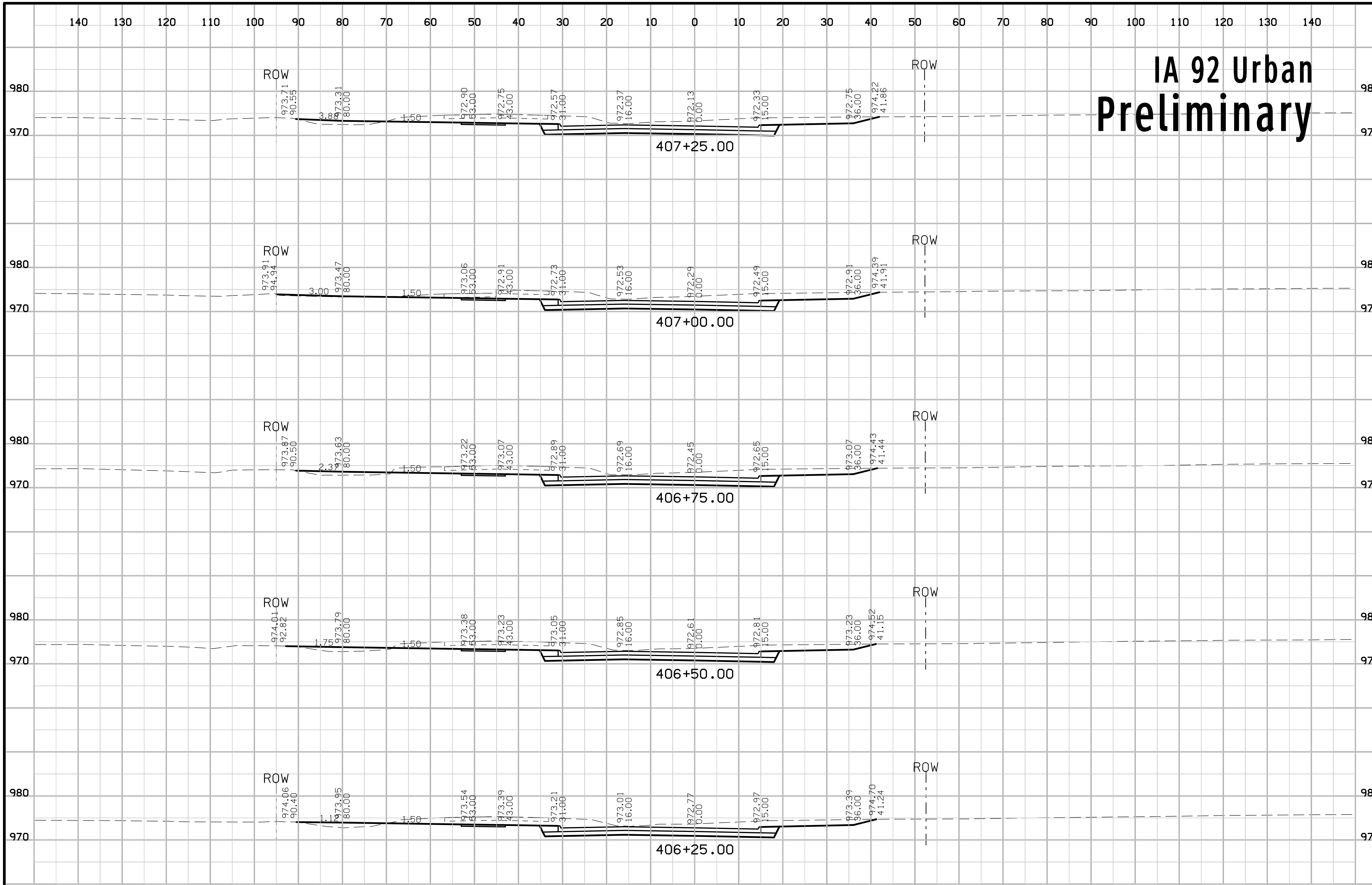


ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.171



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.172



ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.173

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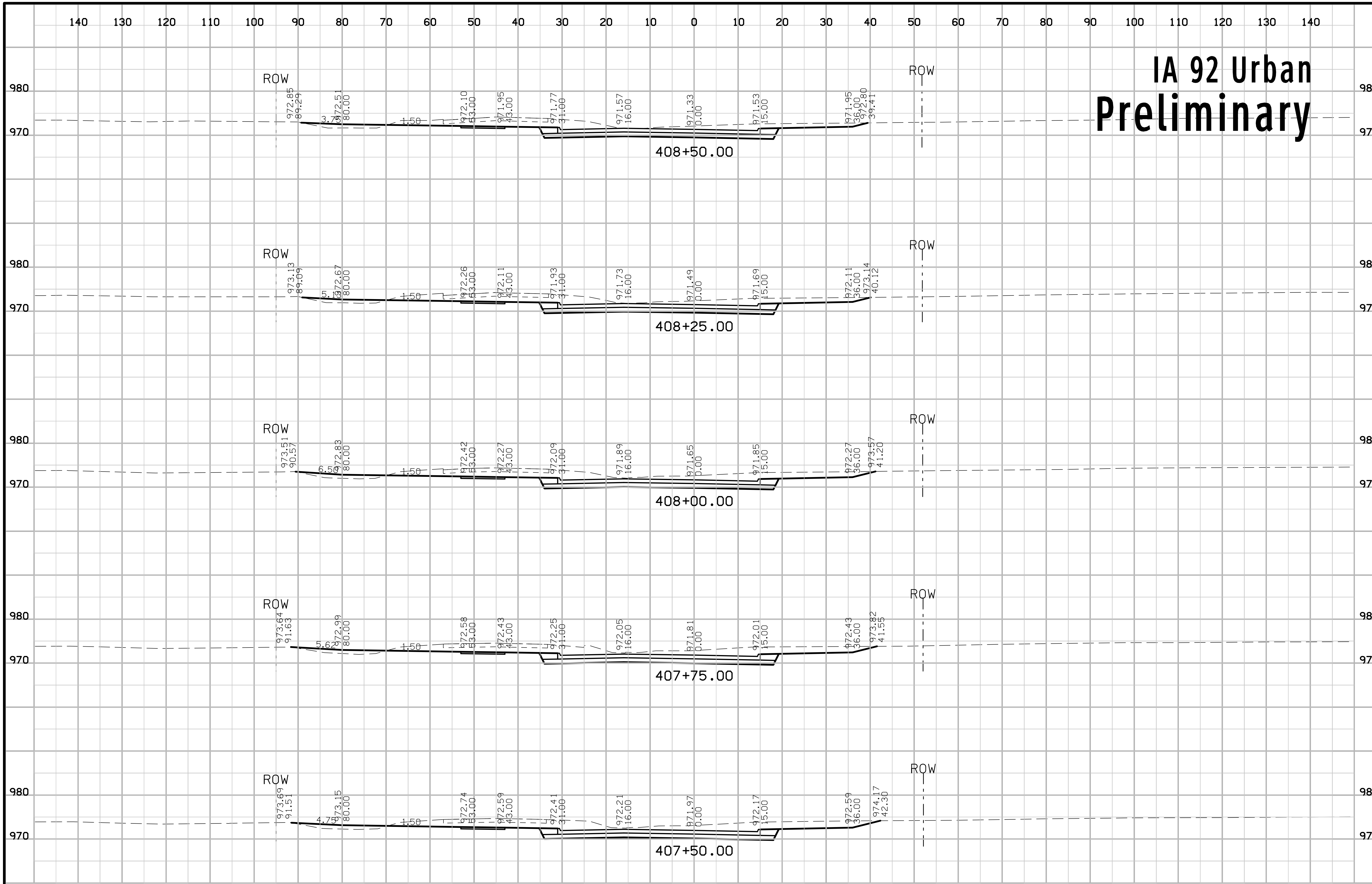
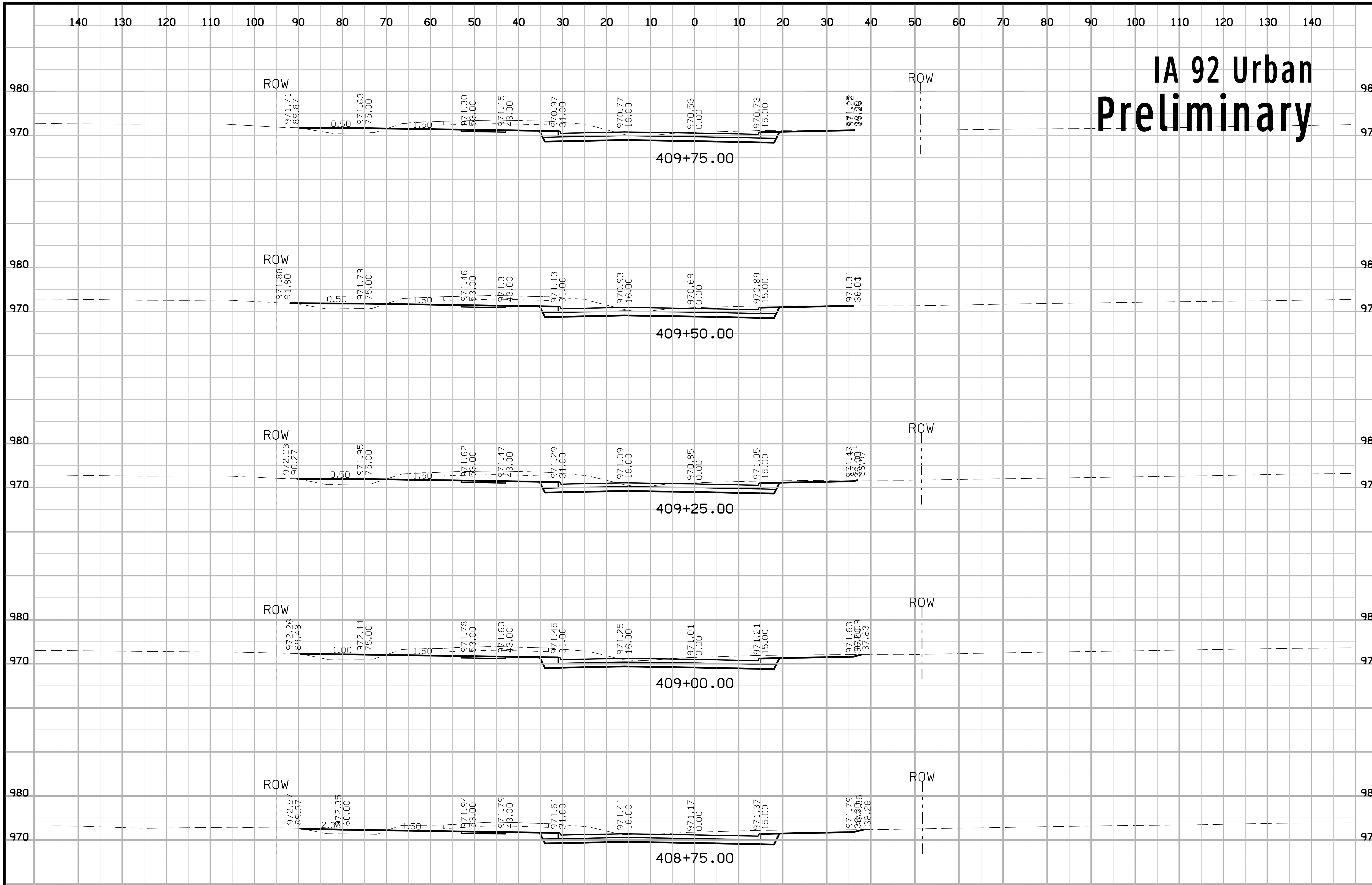


ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.174



ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.175

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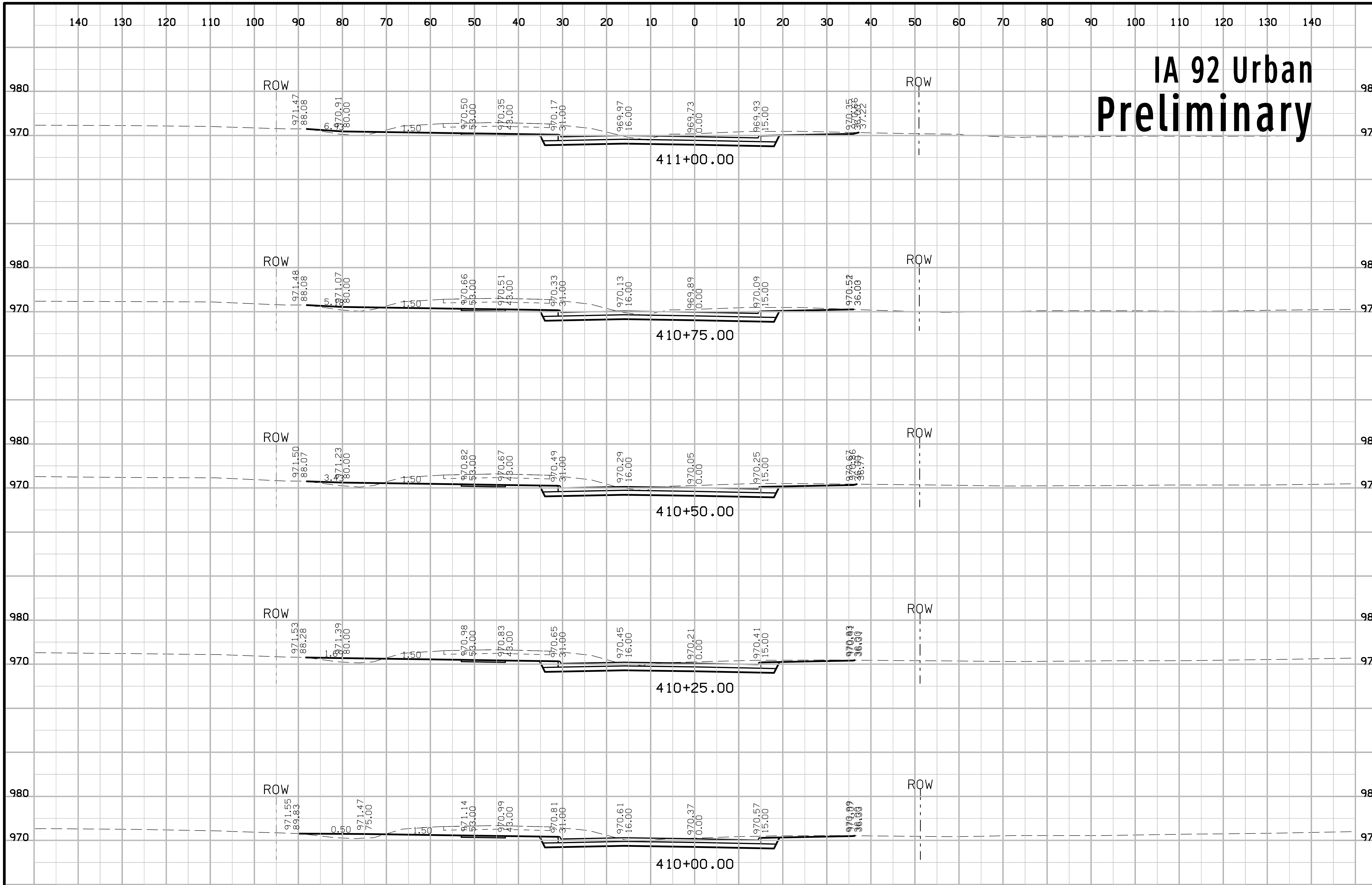
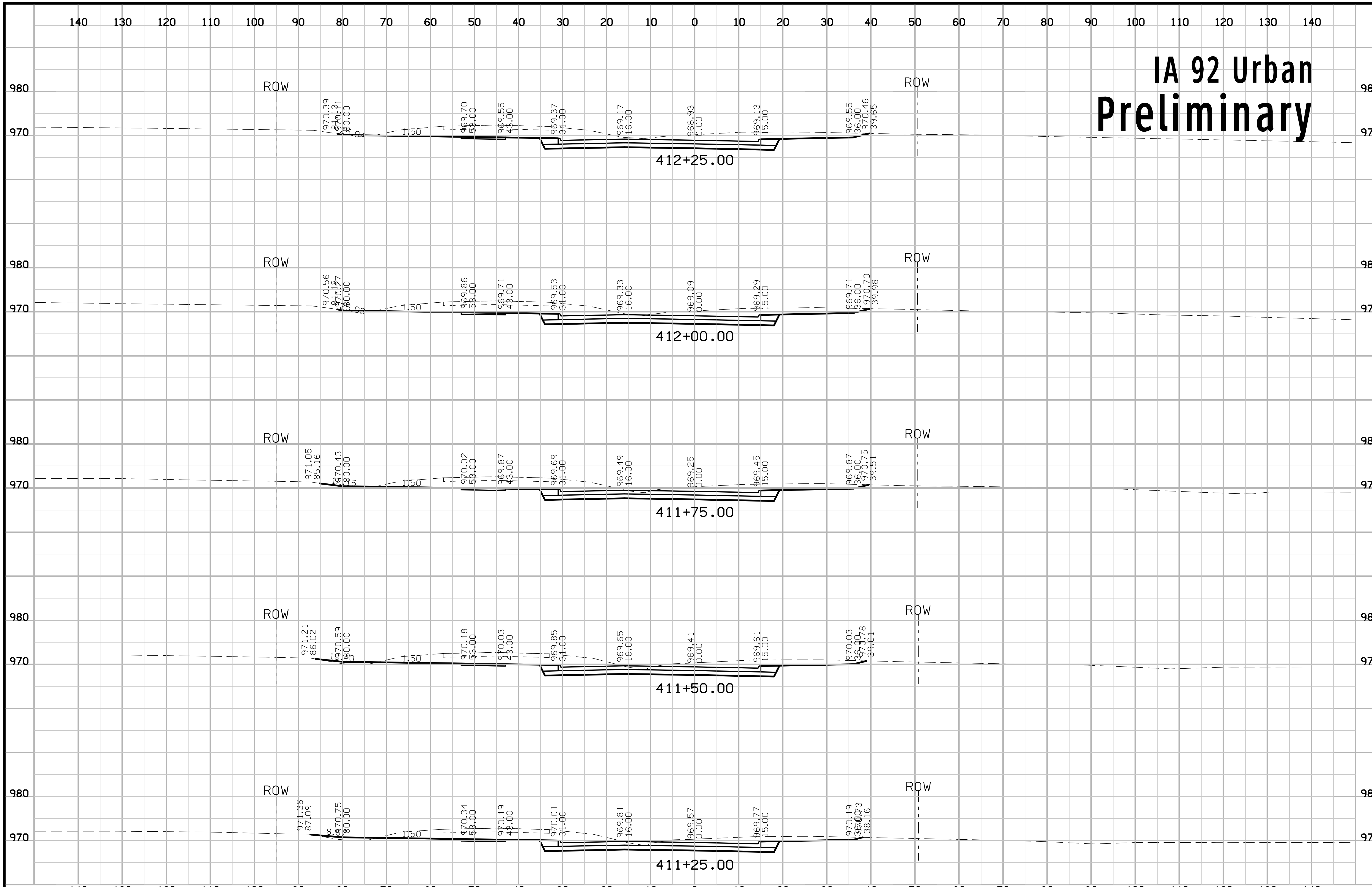
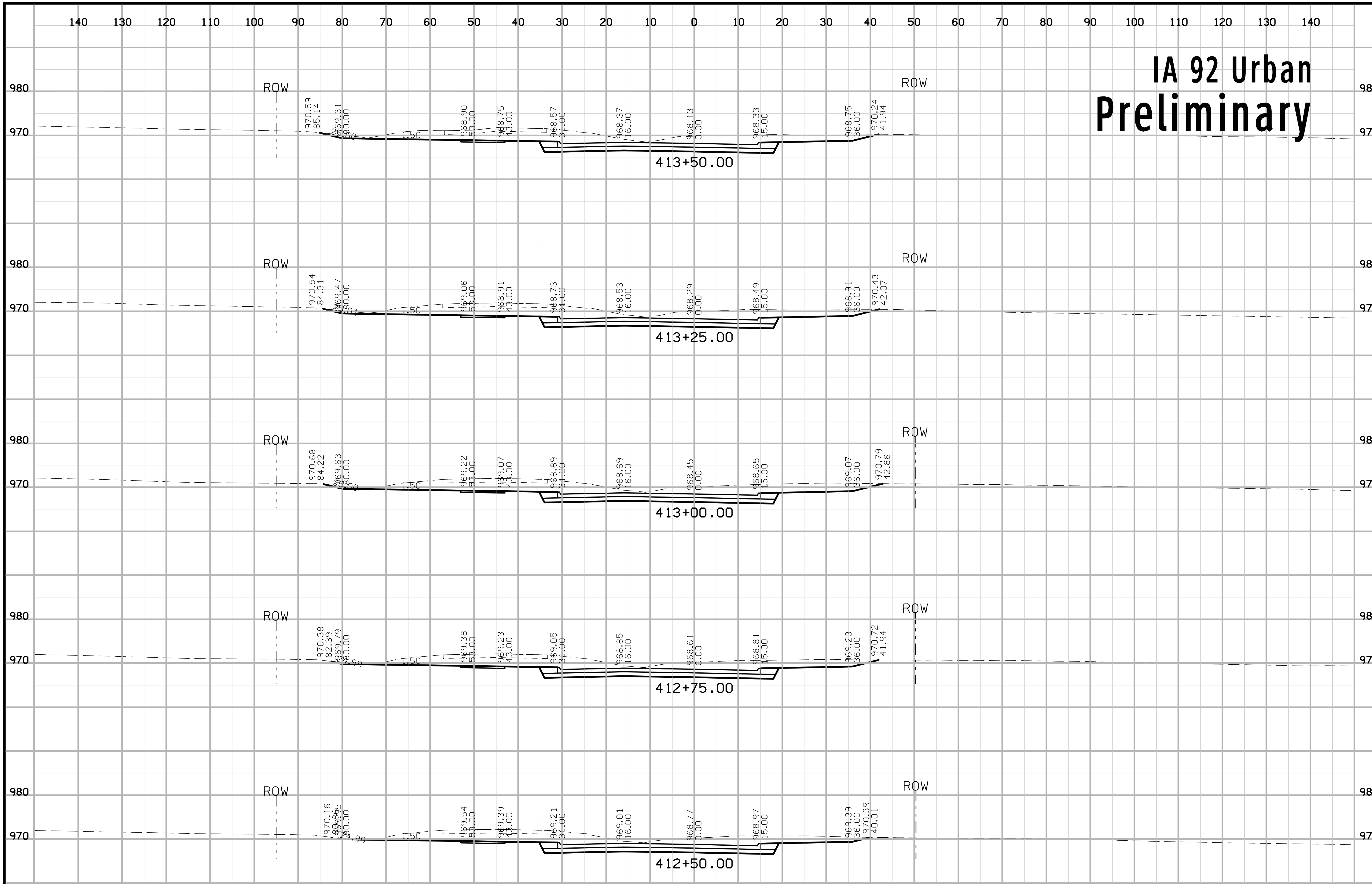


ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.176

10:16:08 AM 7/29/2013 wcamero pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9109201004\Design\91092051W160.sht



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.177



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.178

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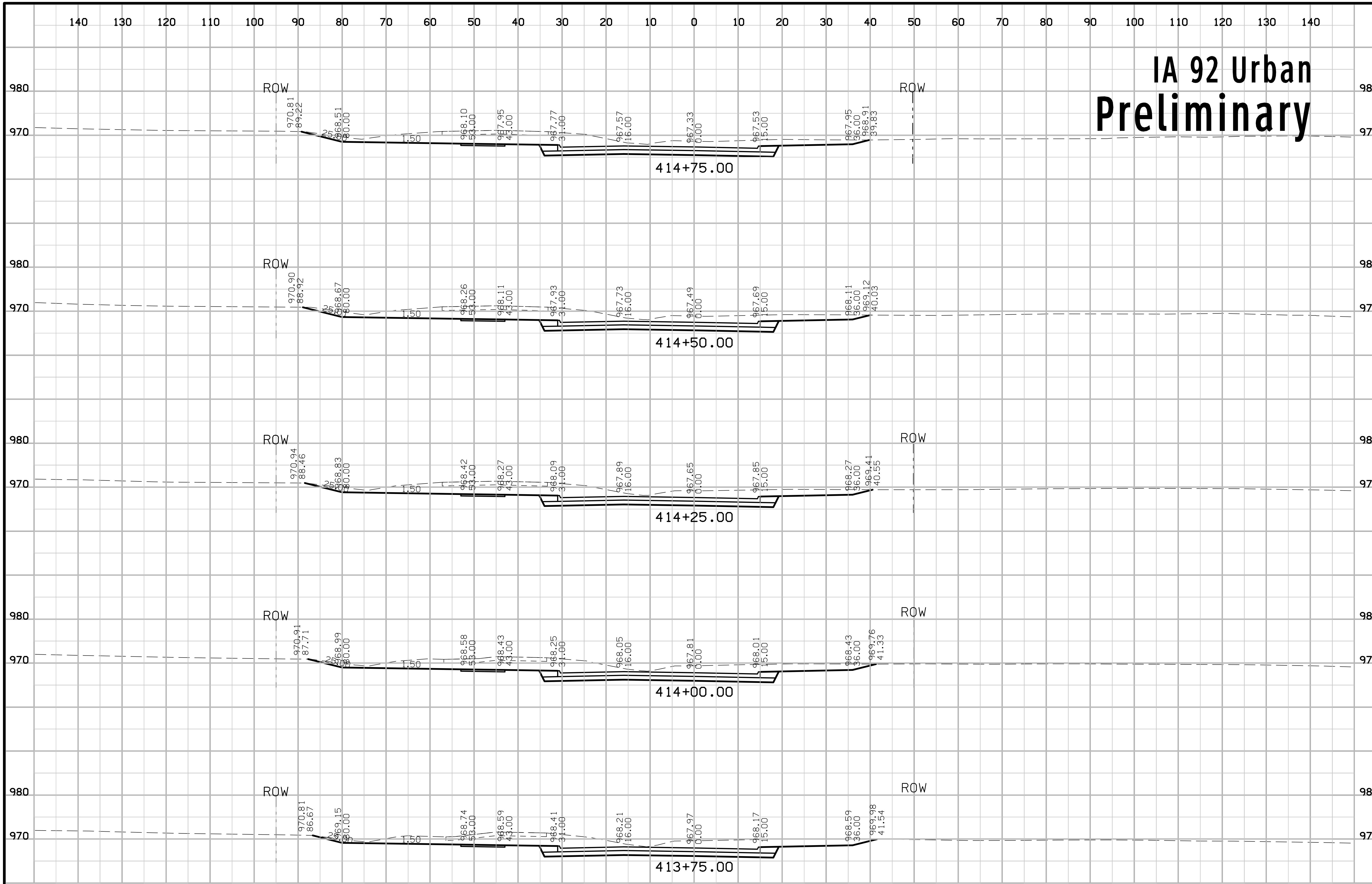

ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.179

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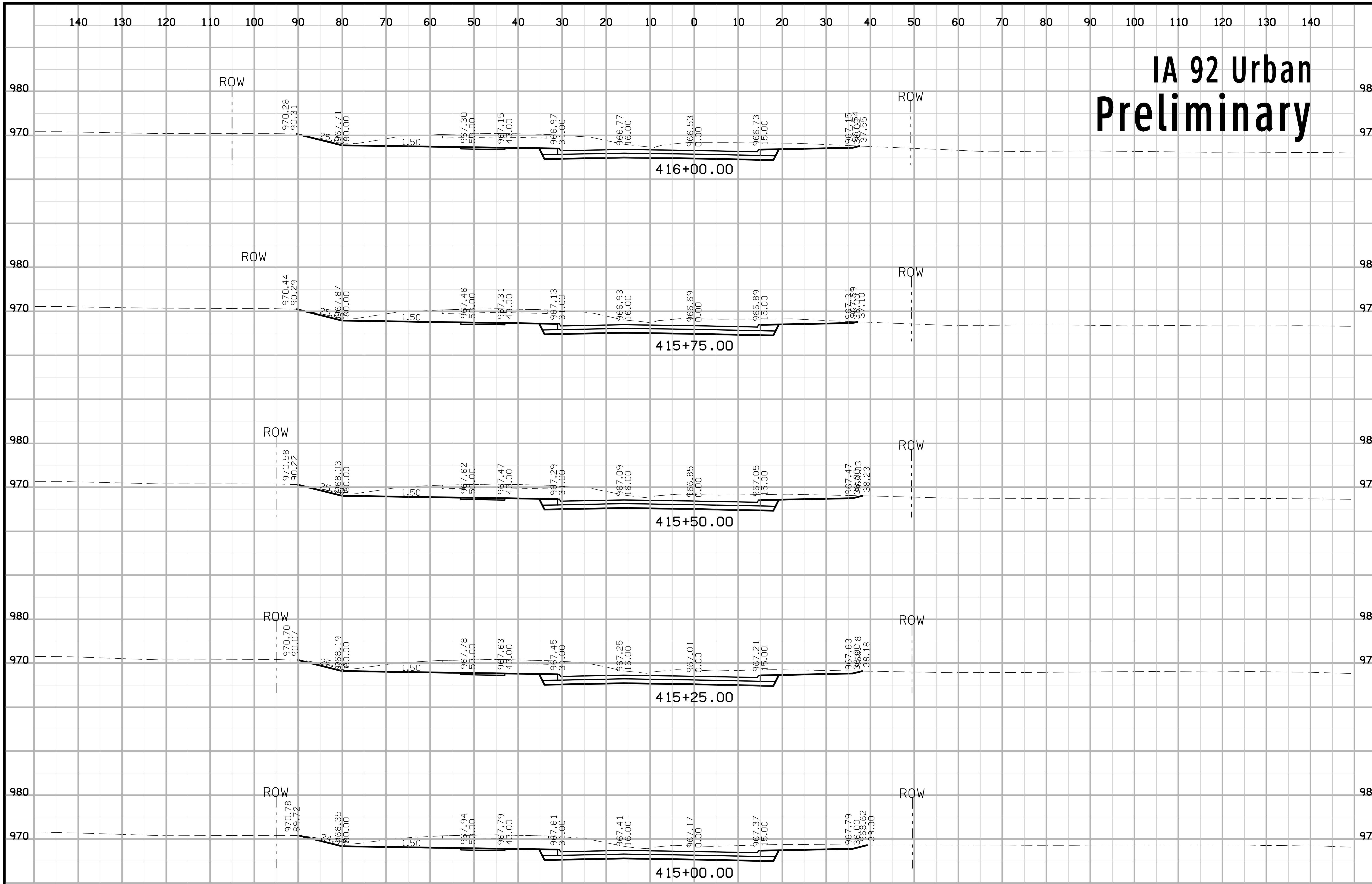

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.180

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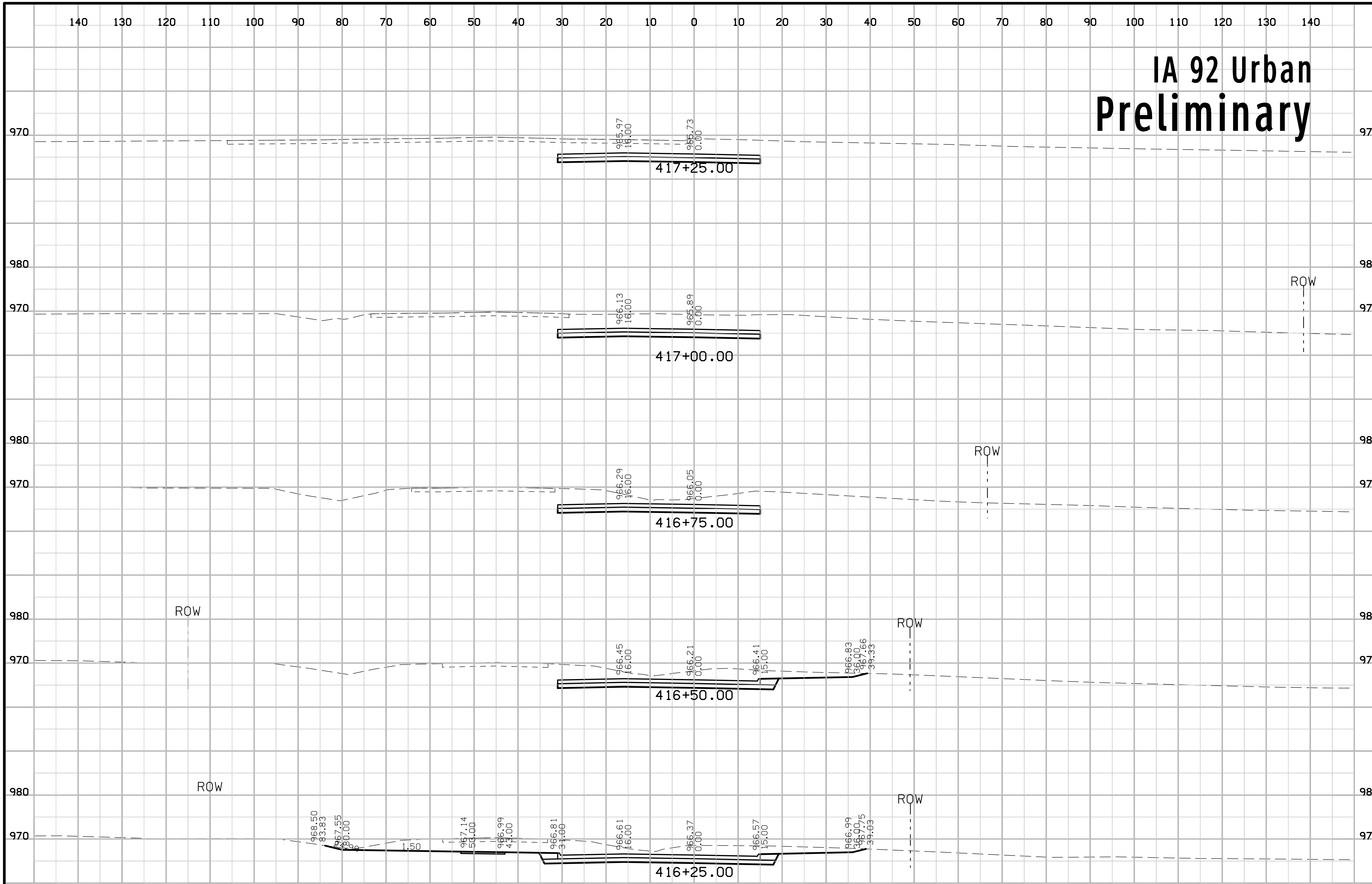

ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.181

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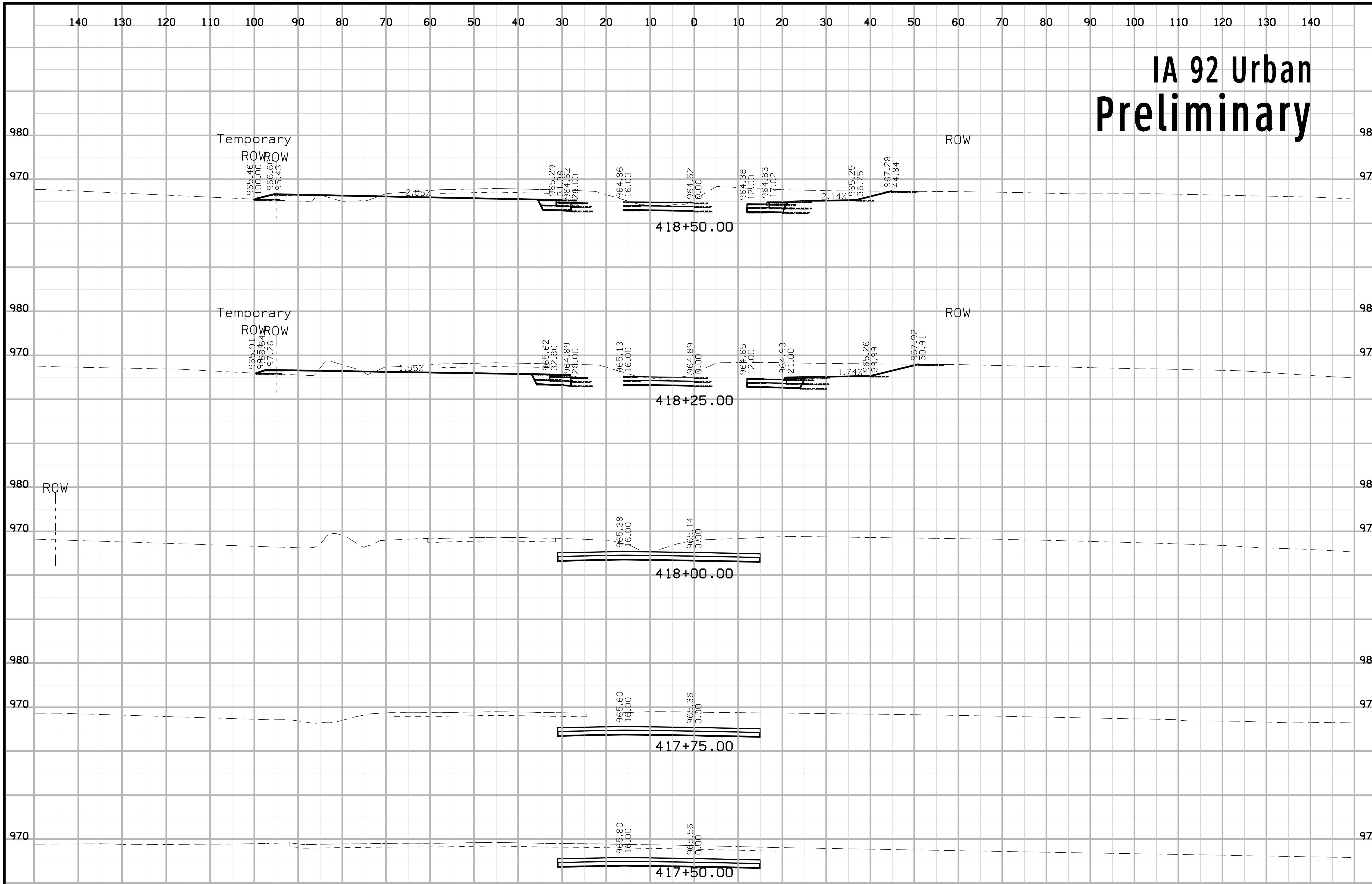

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.182

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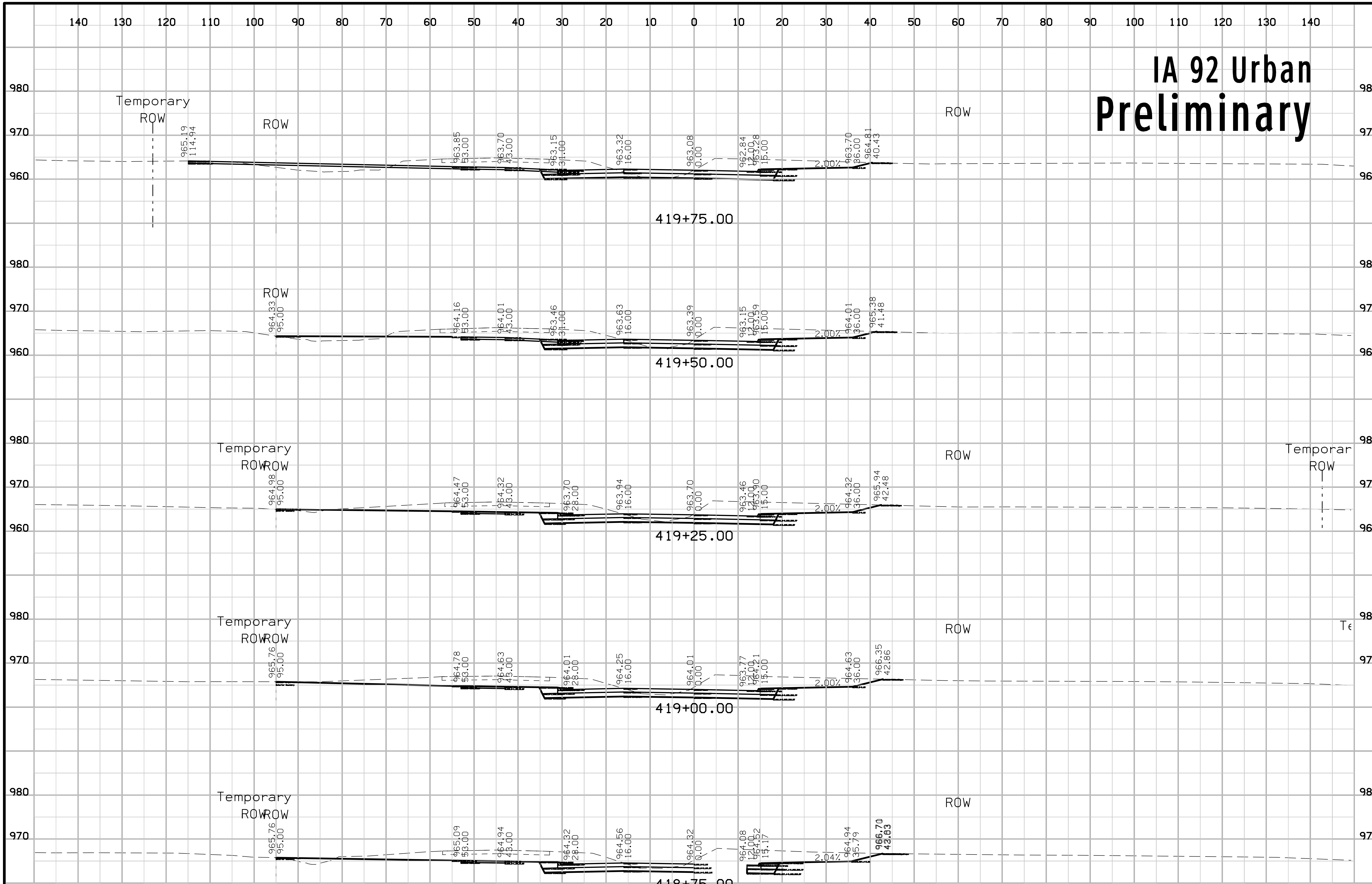

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.183

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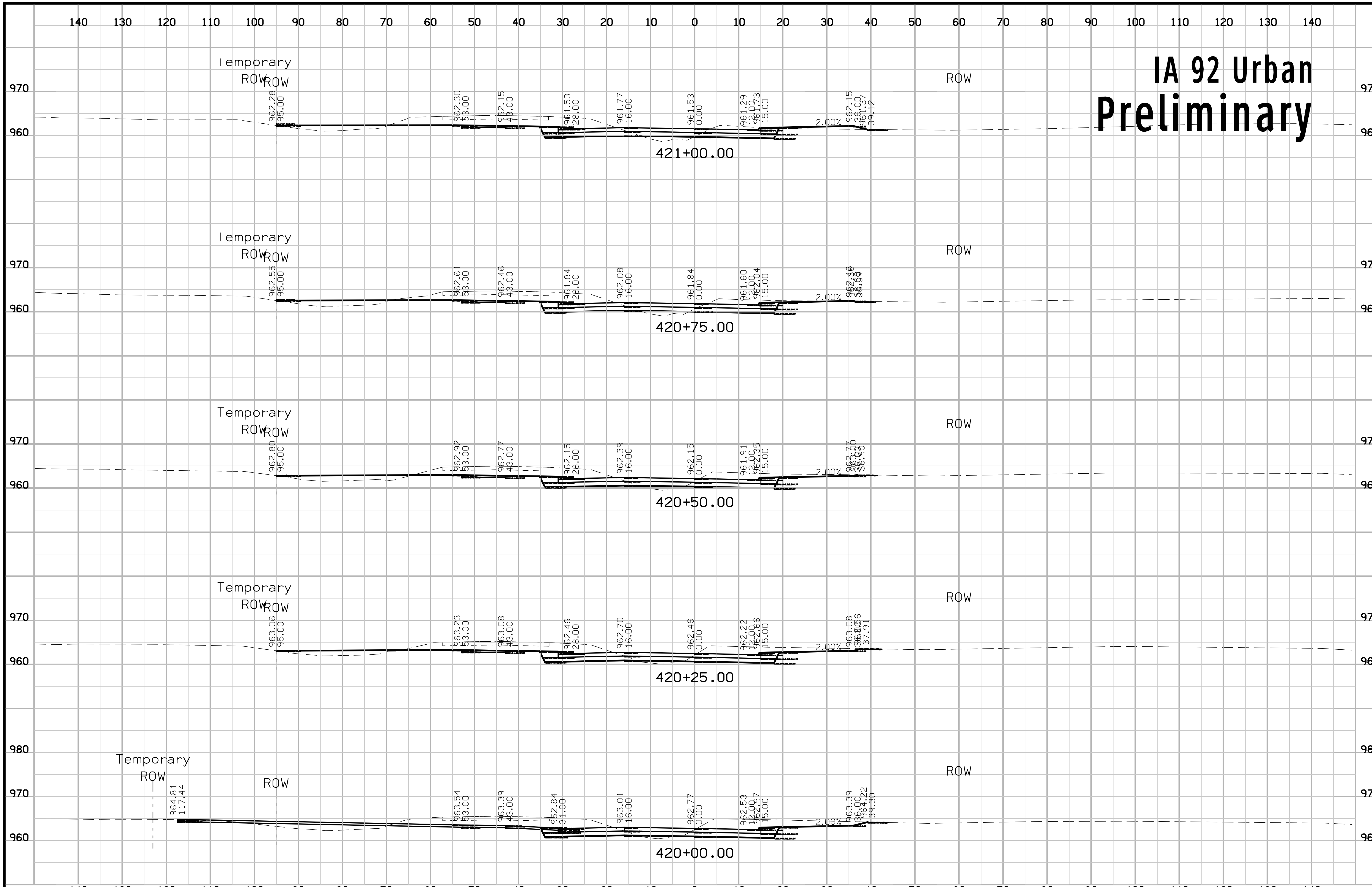

ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.184

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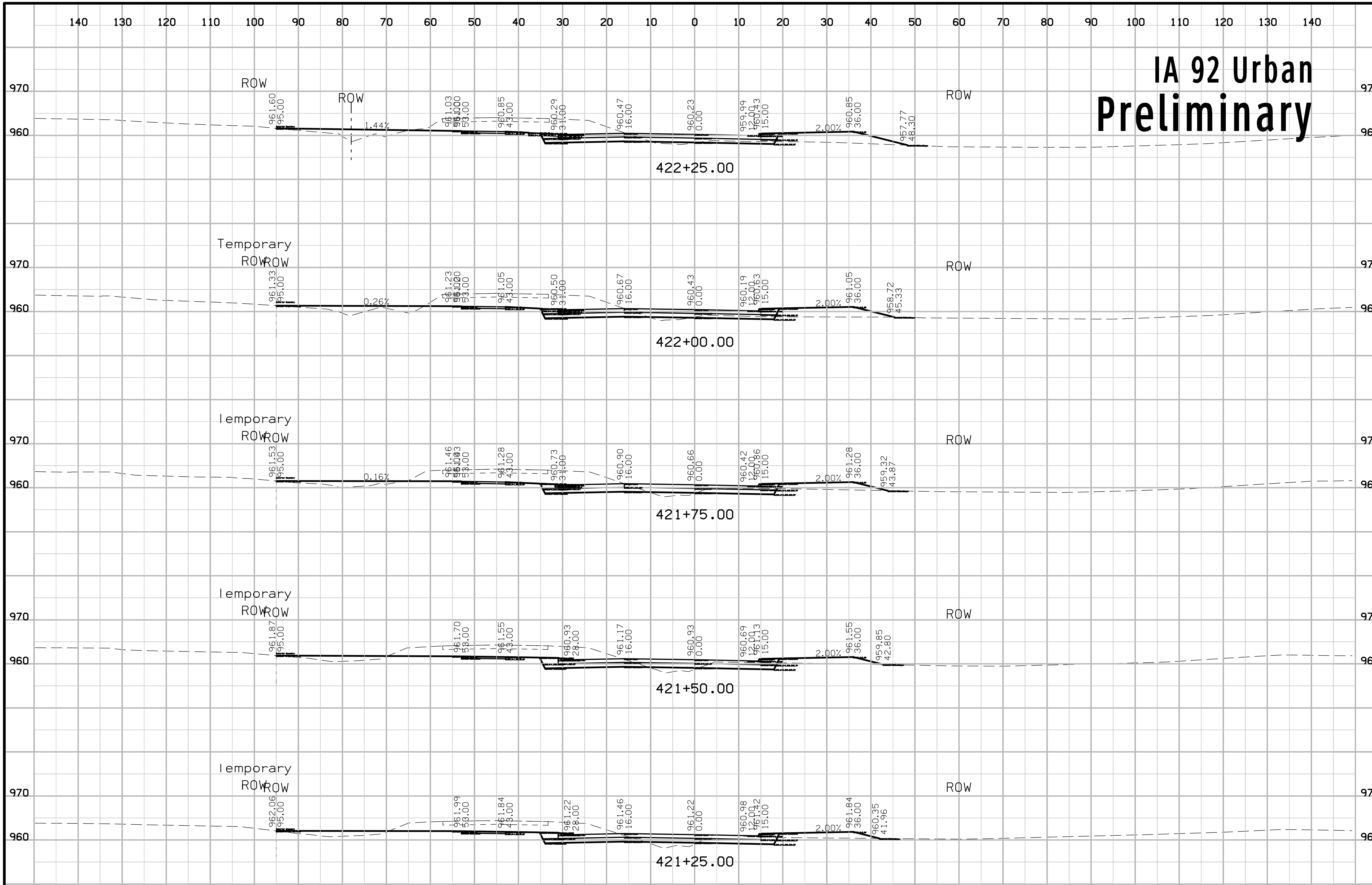

ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.185

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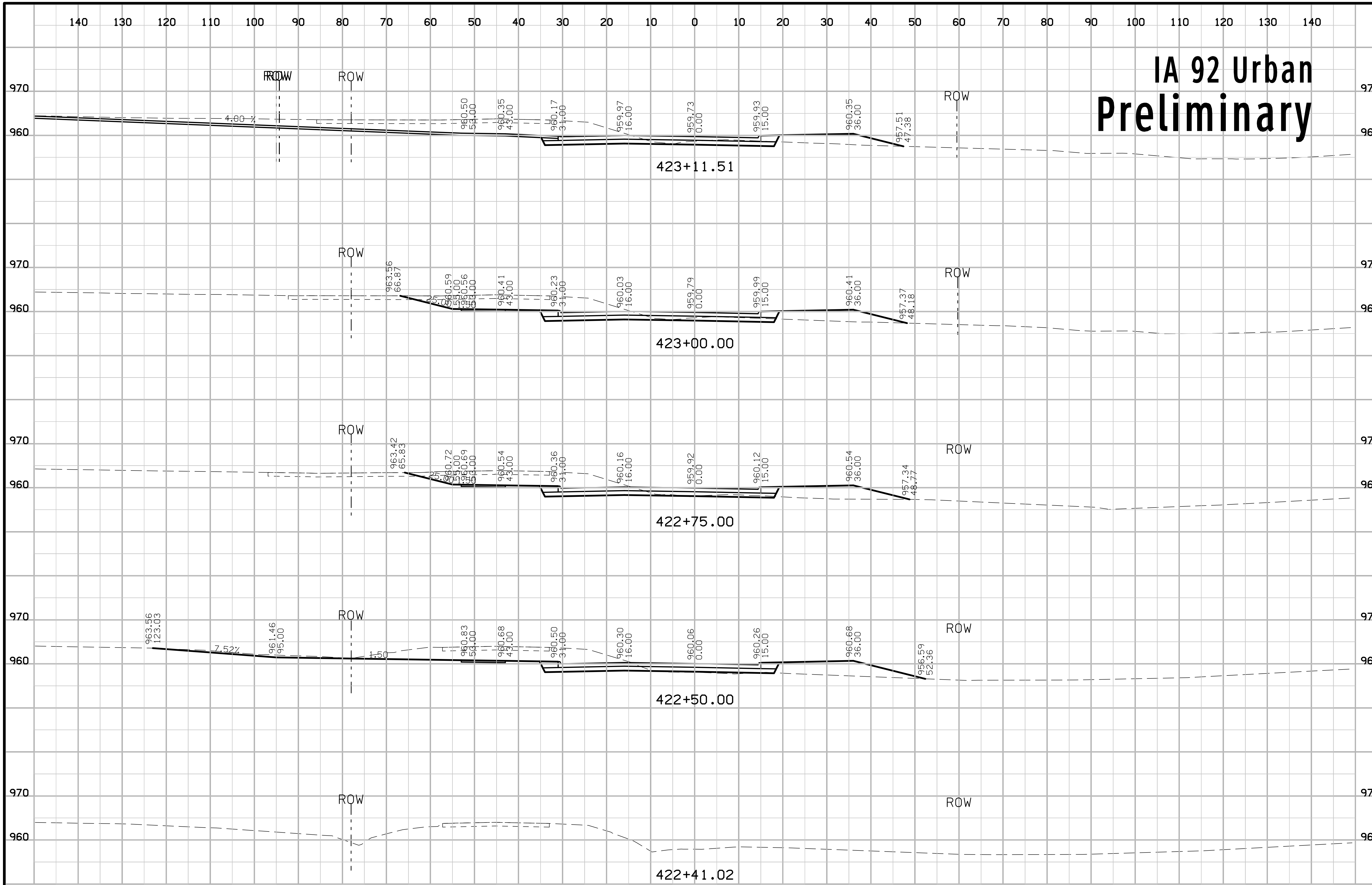

ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.186

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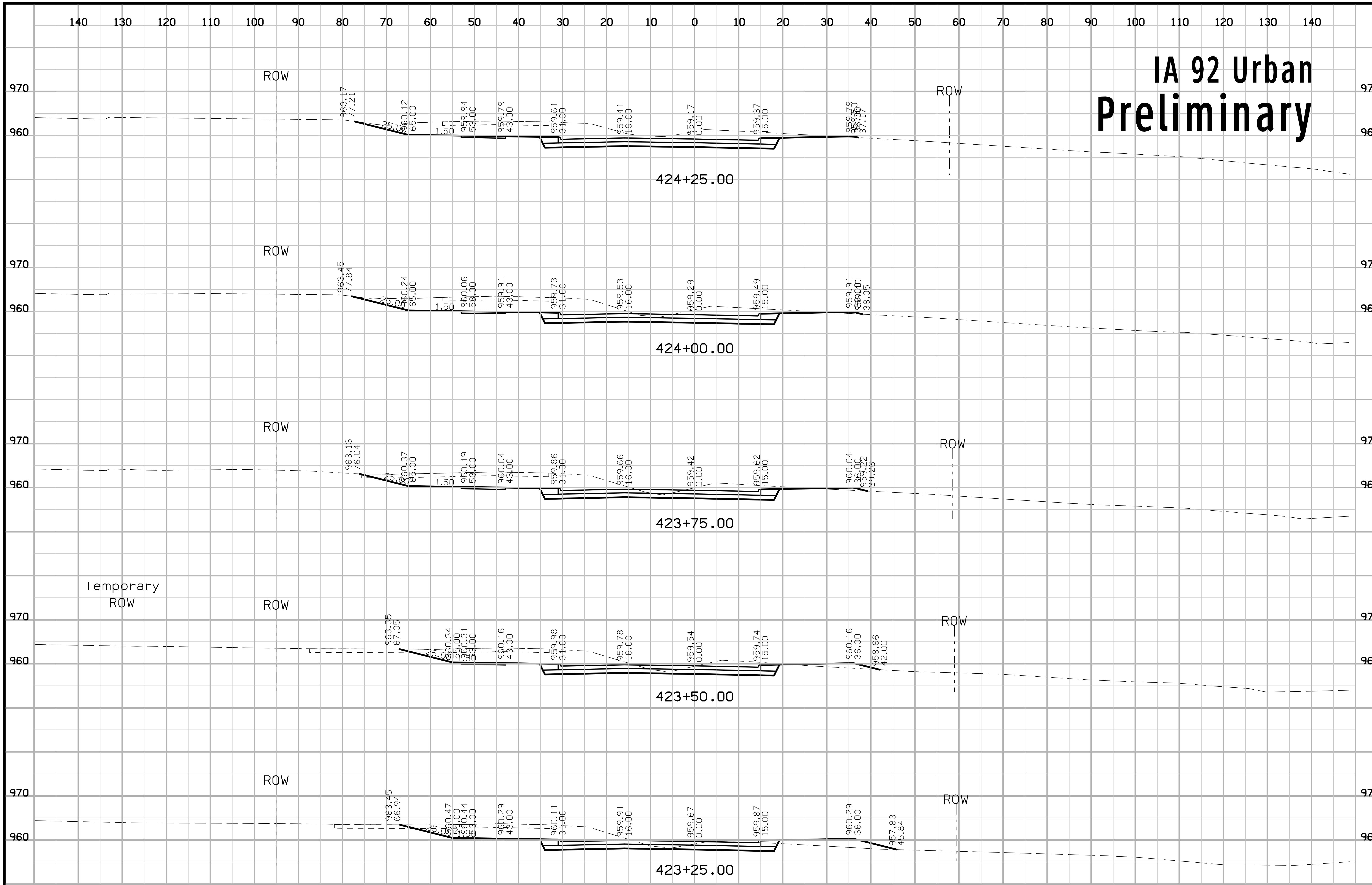

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.187

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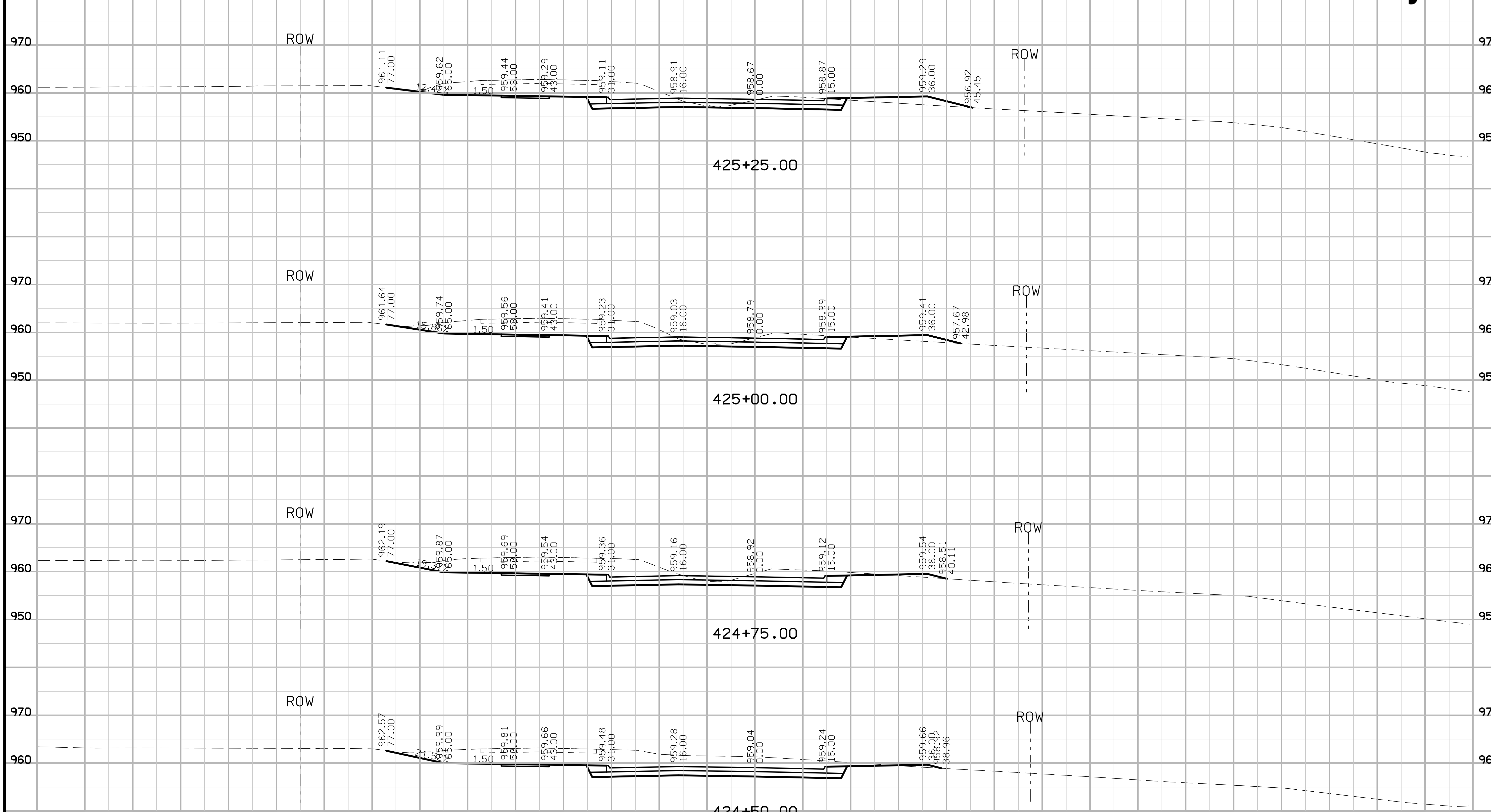
IA 92 Urban
Preliminary



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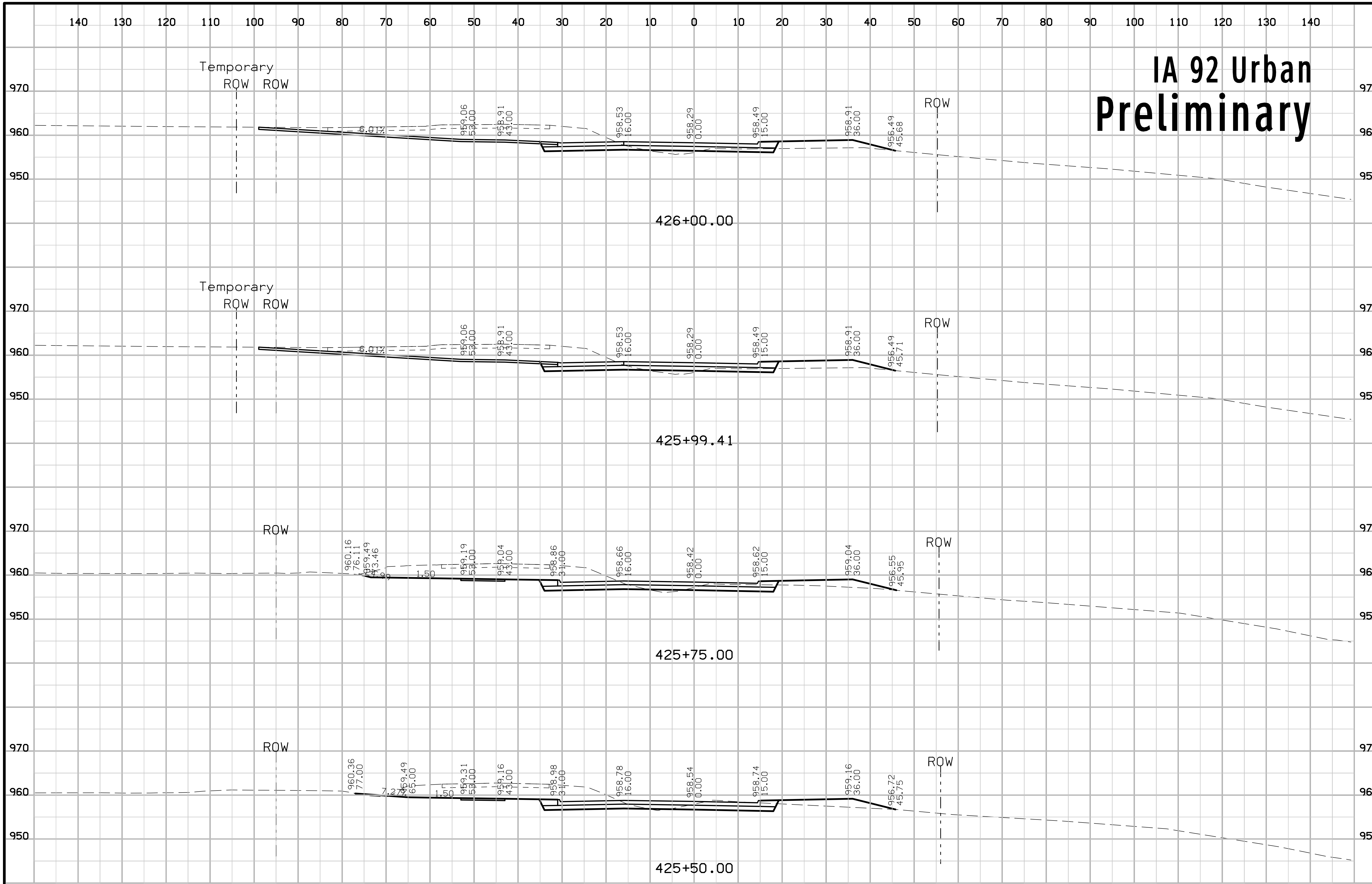

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.189

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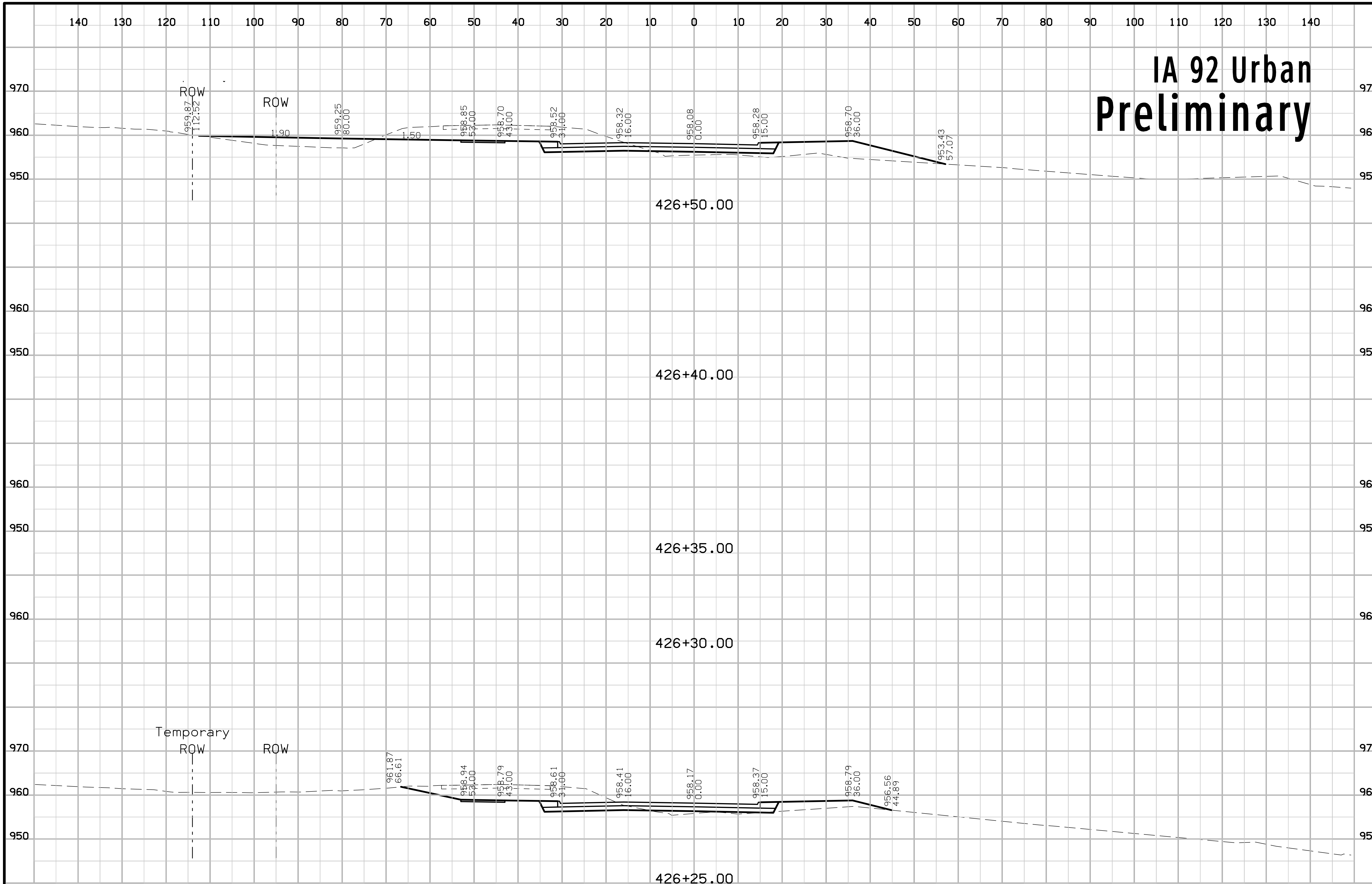

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.190

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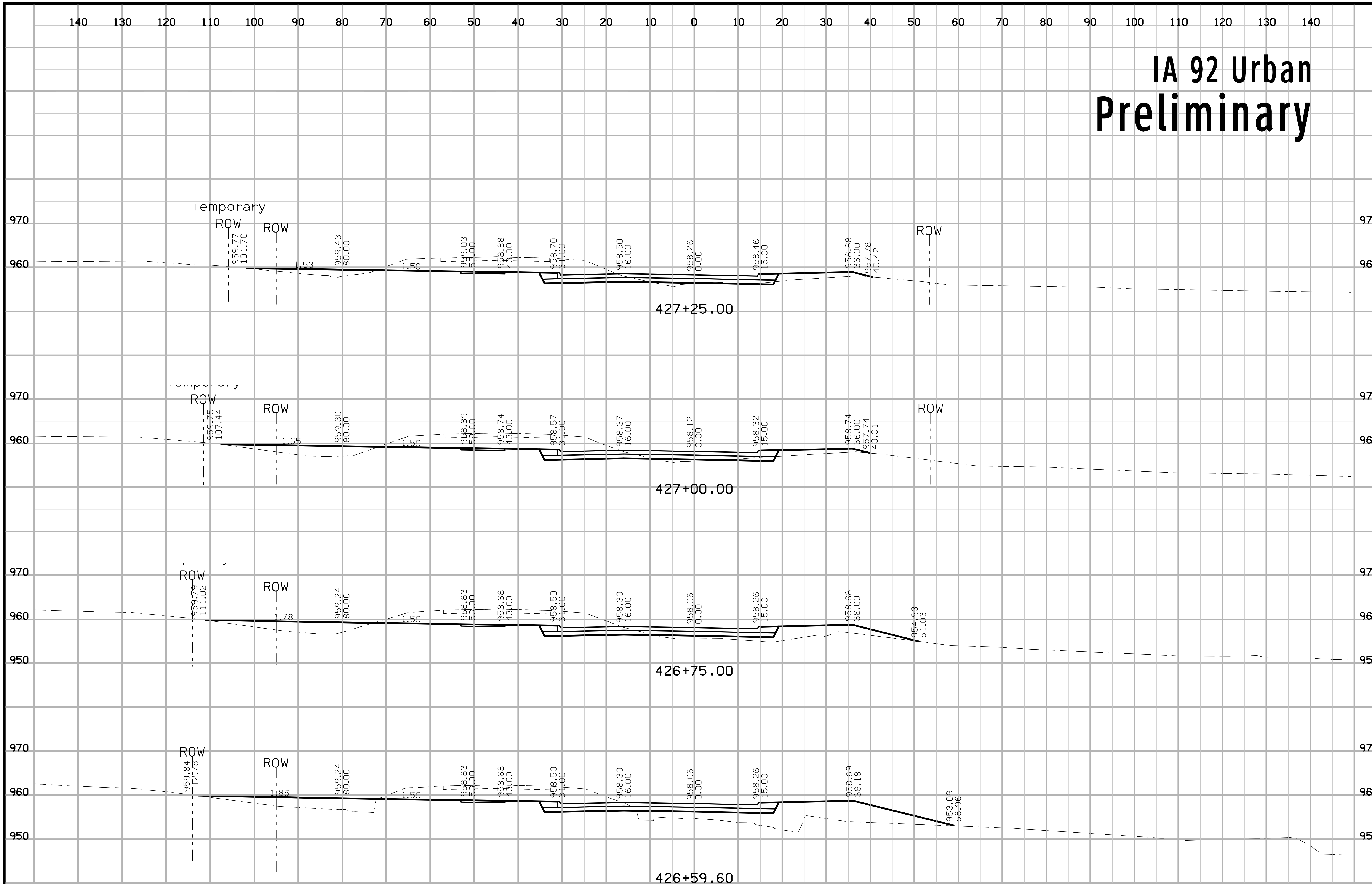
IA 92 Urban
Preliminary



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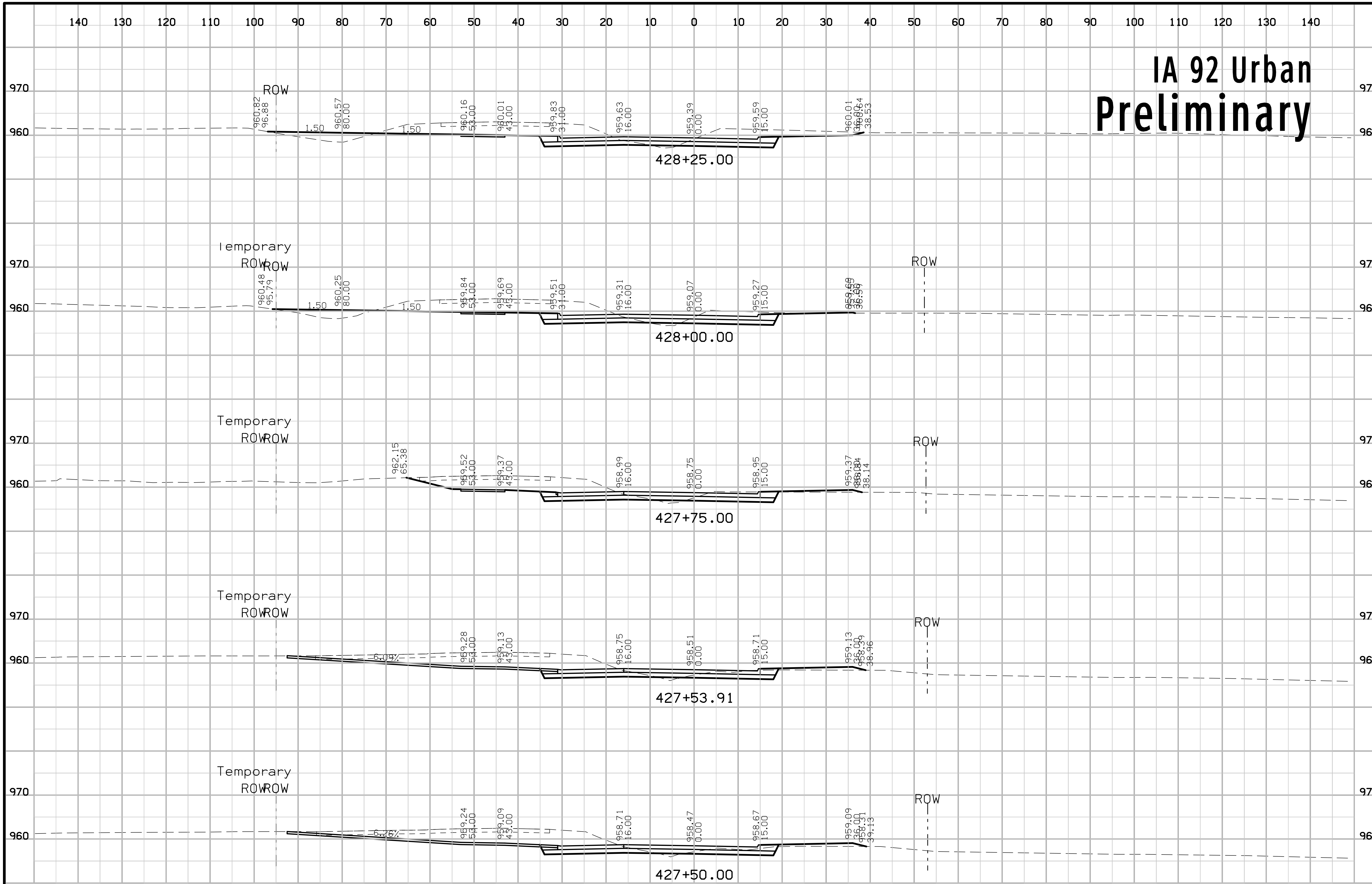

ENGLISH	IOWA DOT	DESIGN TEAM J1a\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.192

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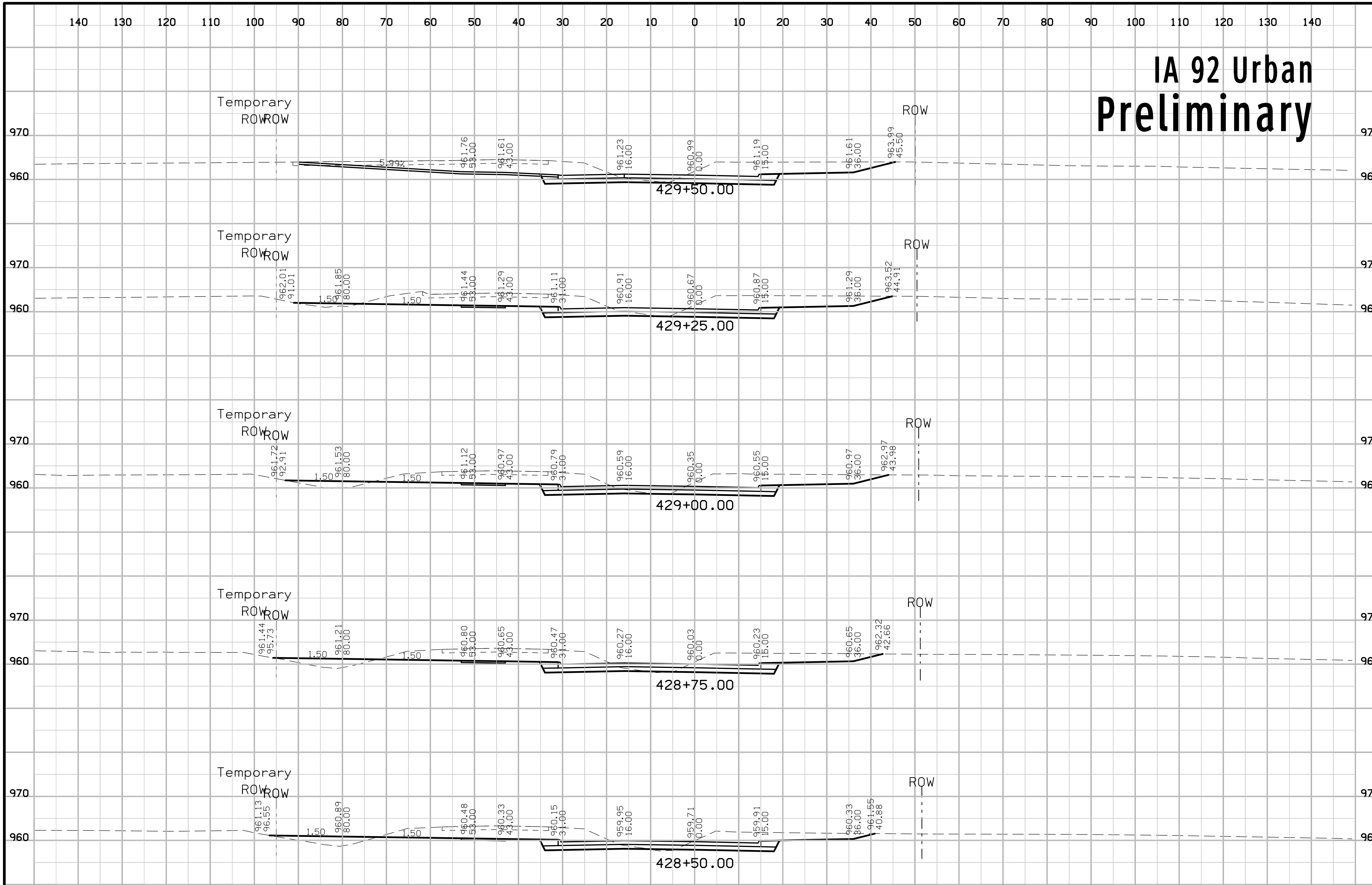

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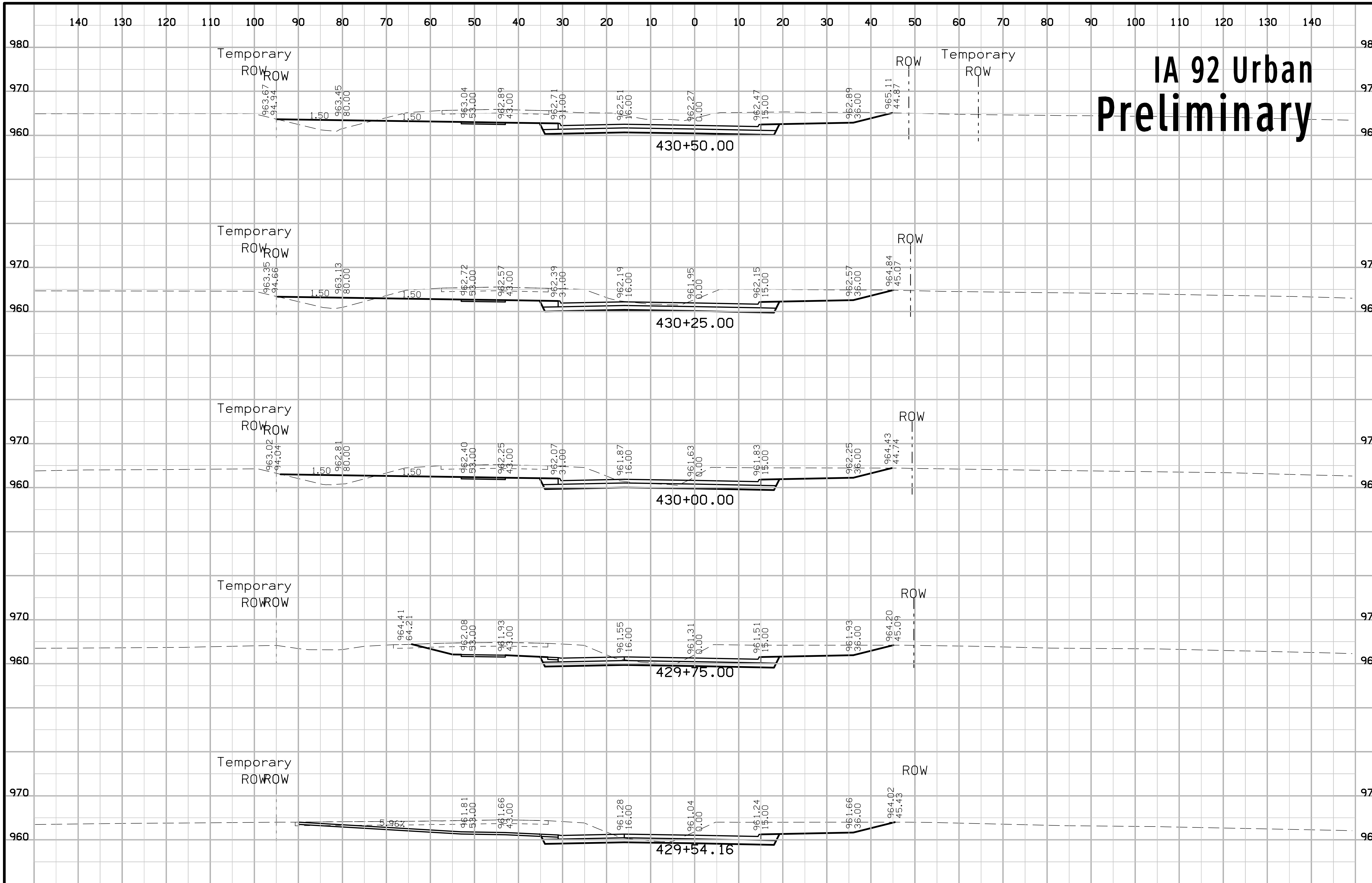
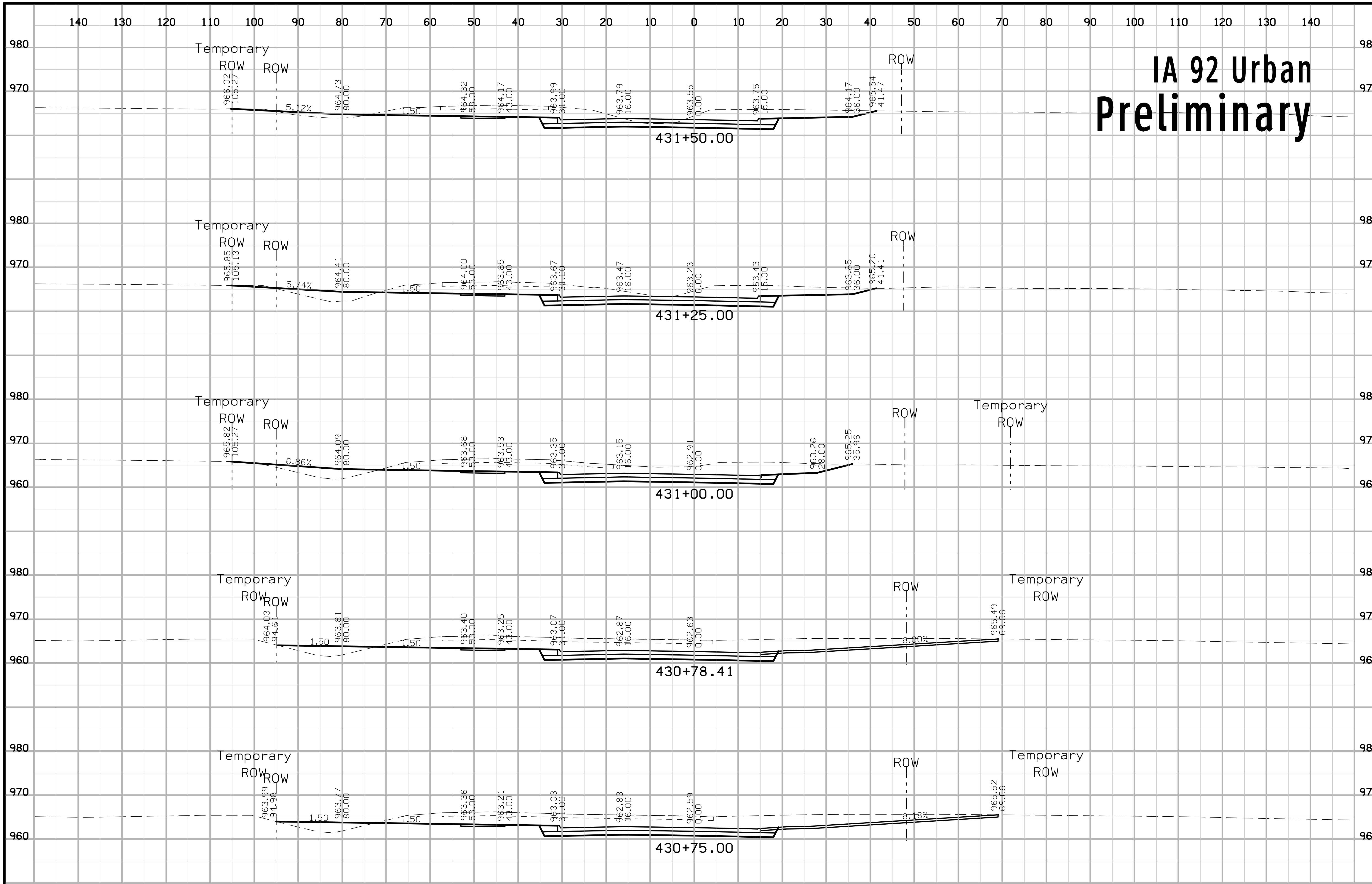


ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.194



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.195

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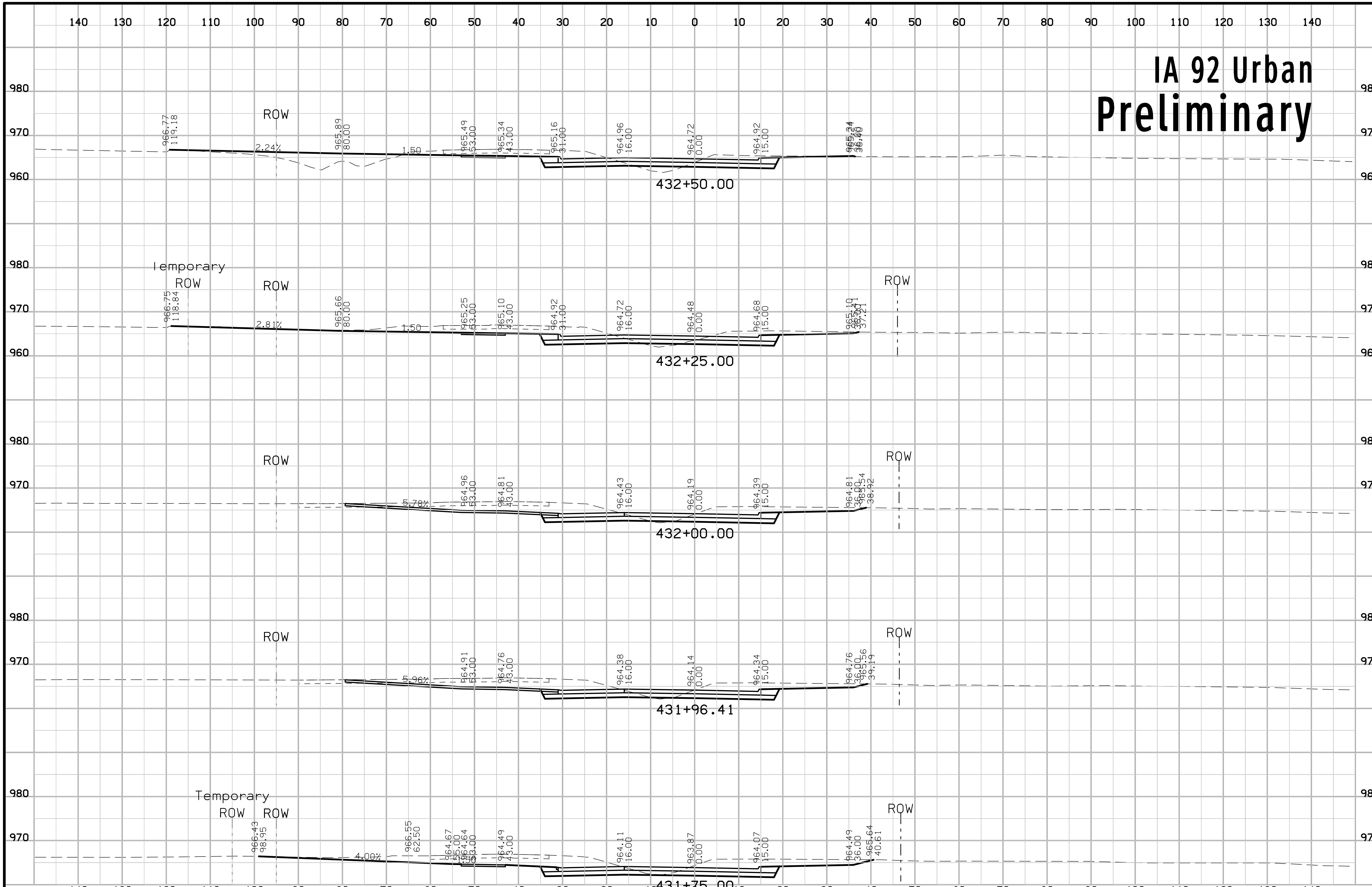
IA 92 Urban
Preliminary



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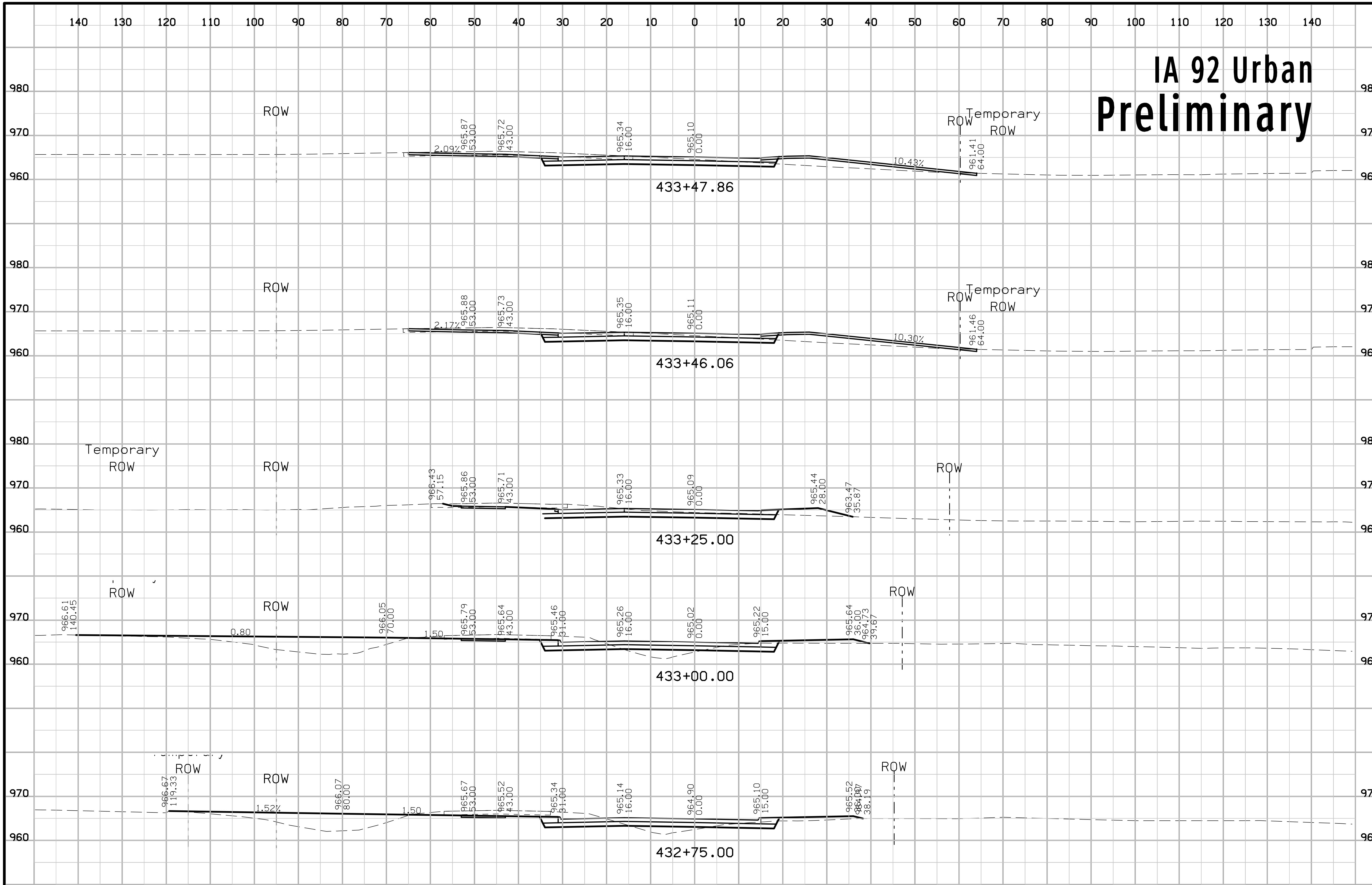

ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.197

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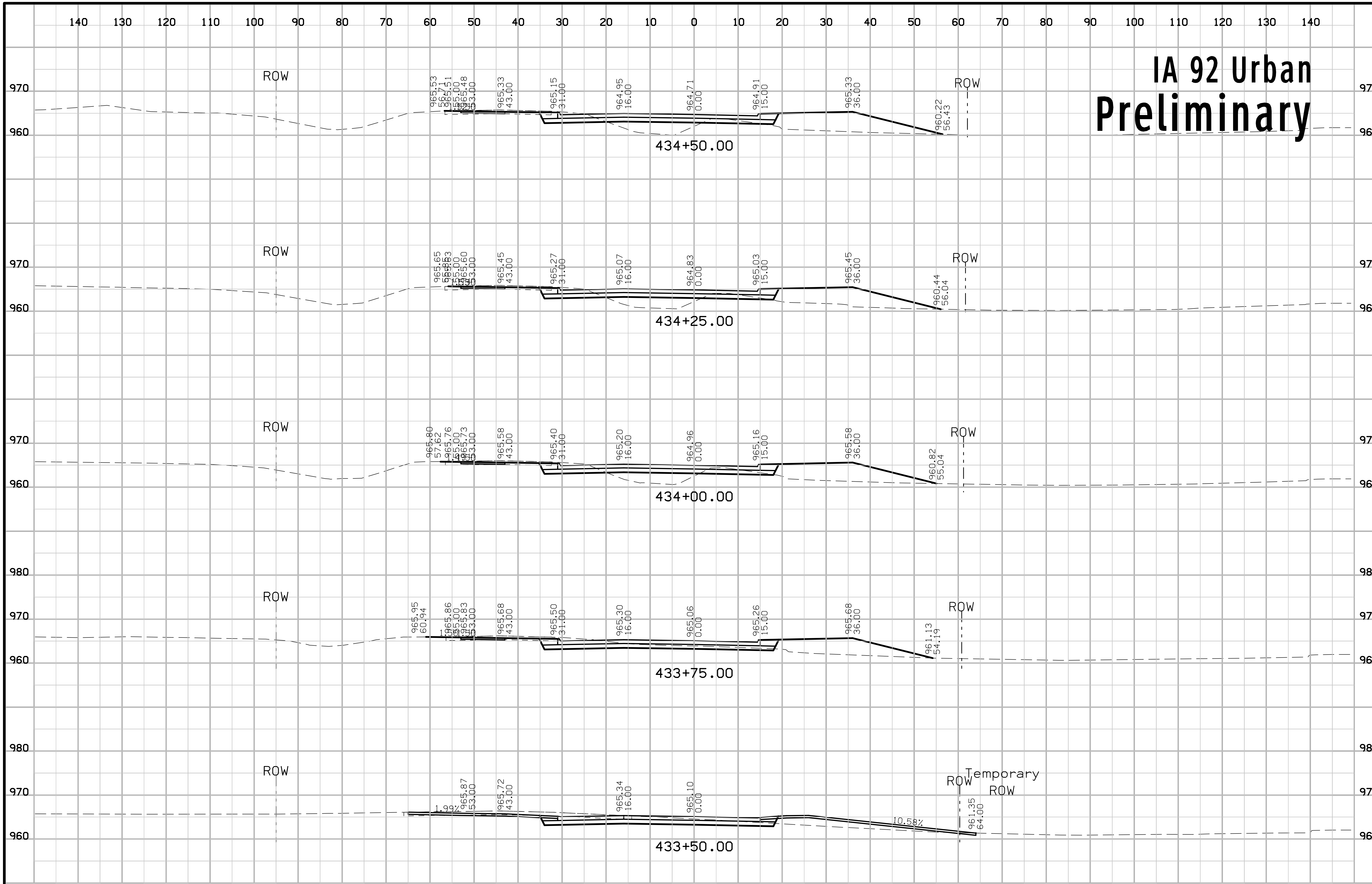
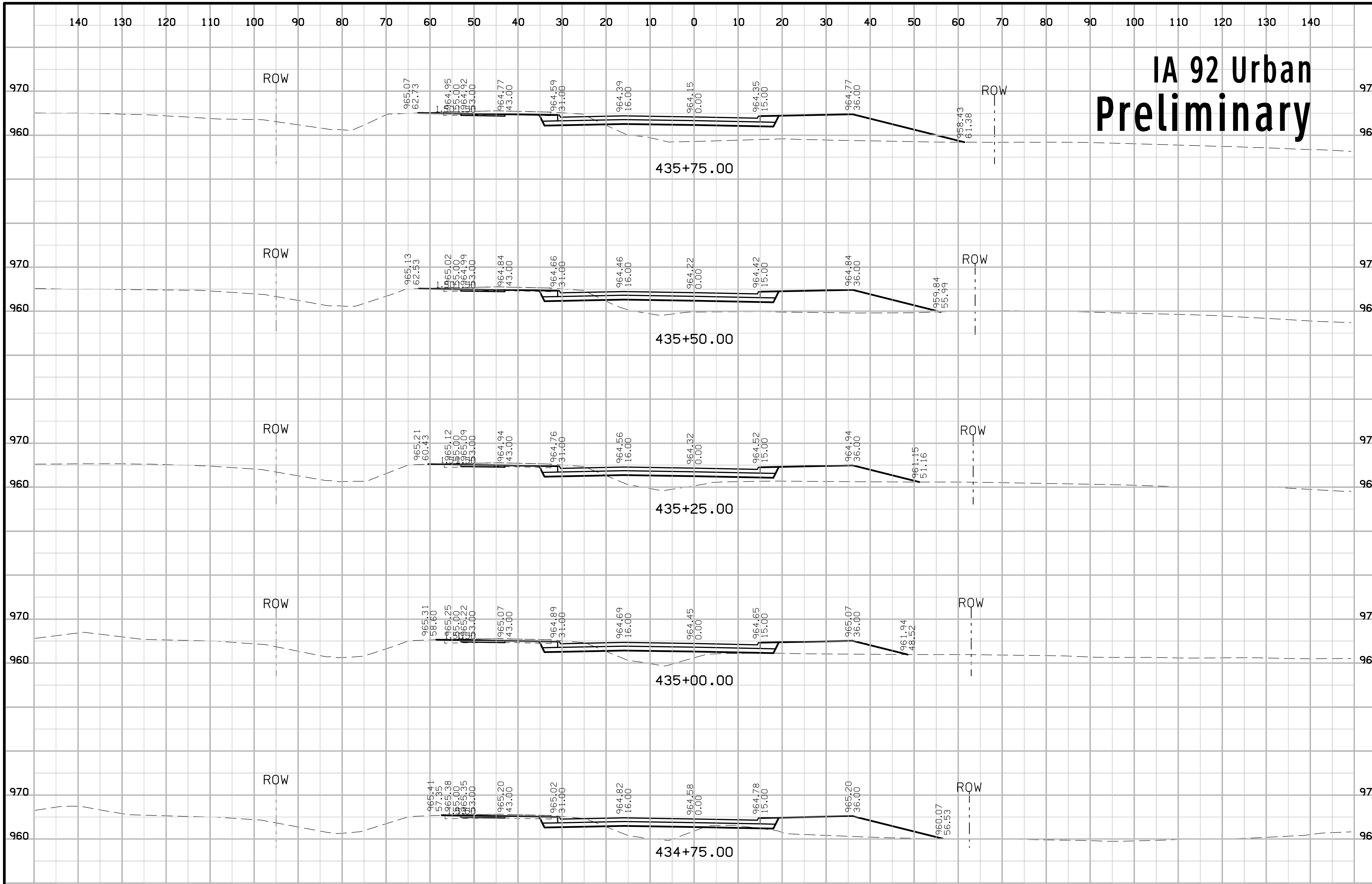
IA 92 Urban
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.198

IA 92 Urban
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.199

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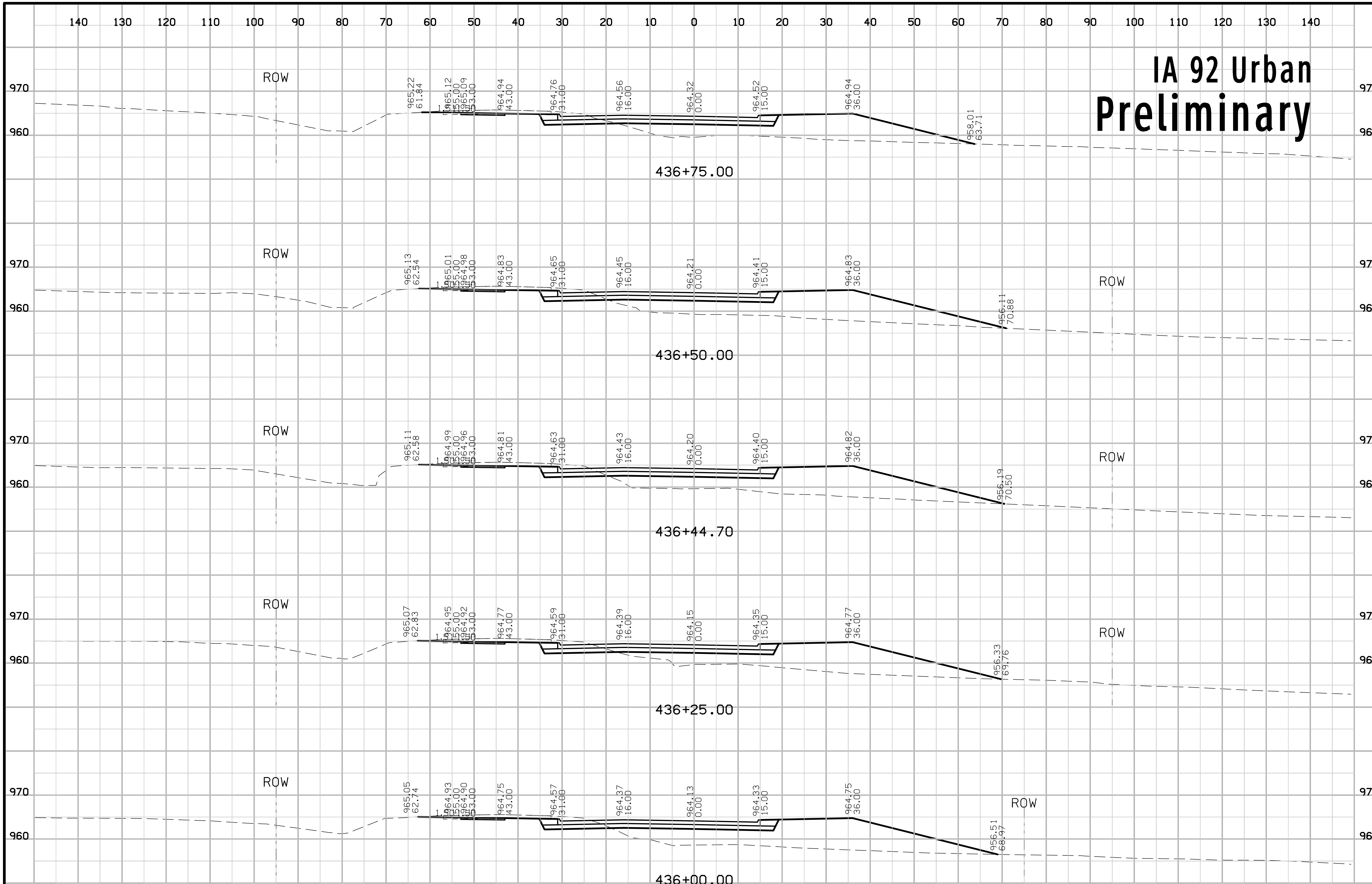

ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.200

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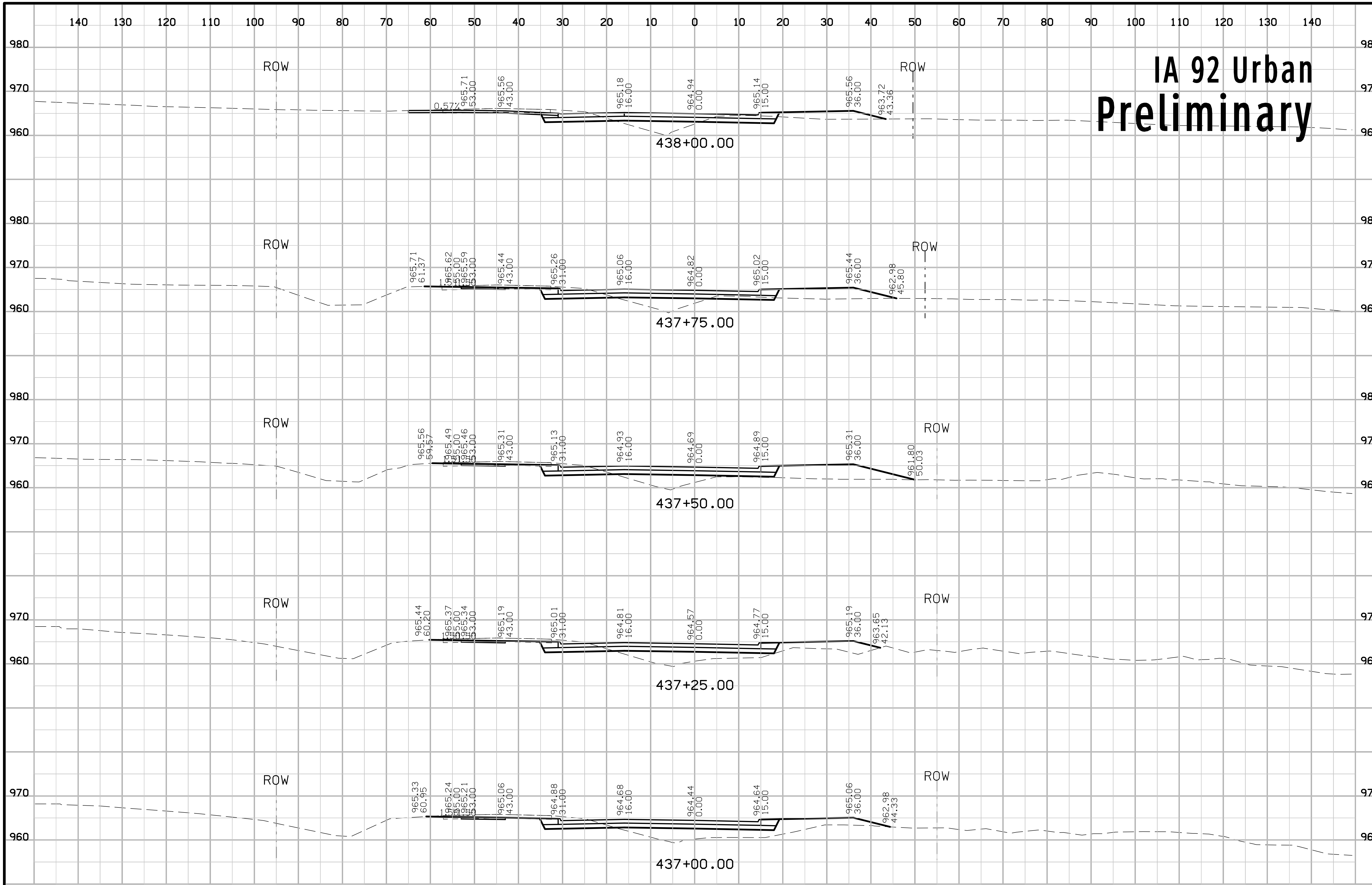

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.201		

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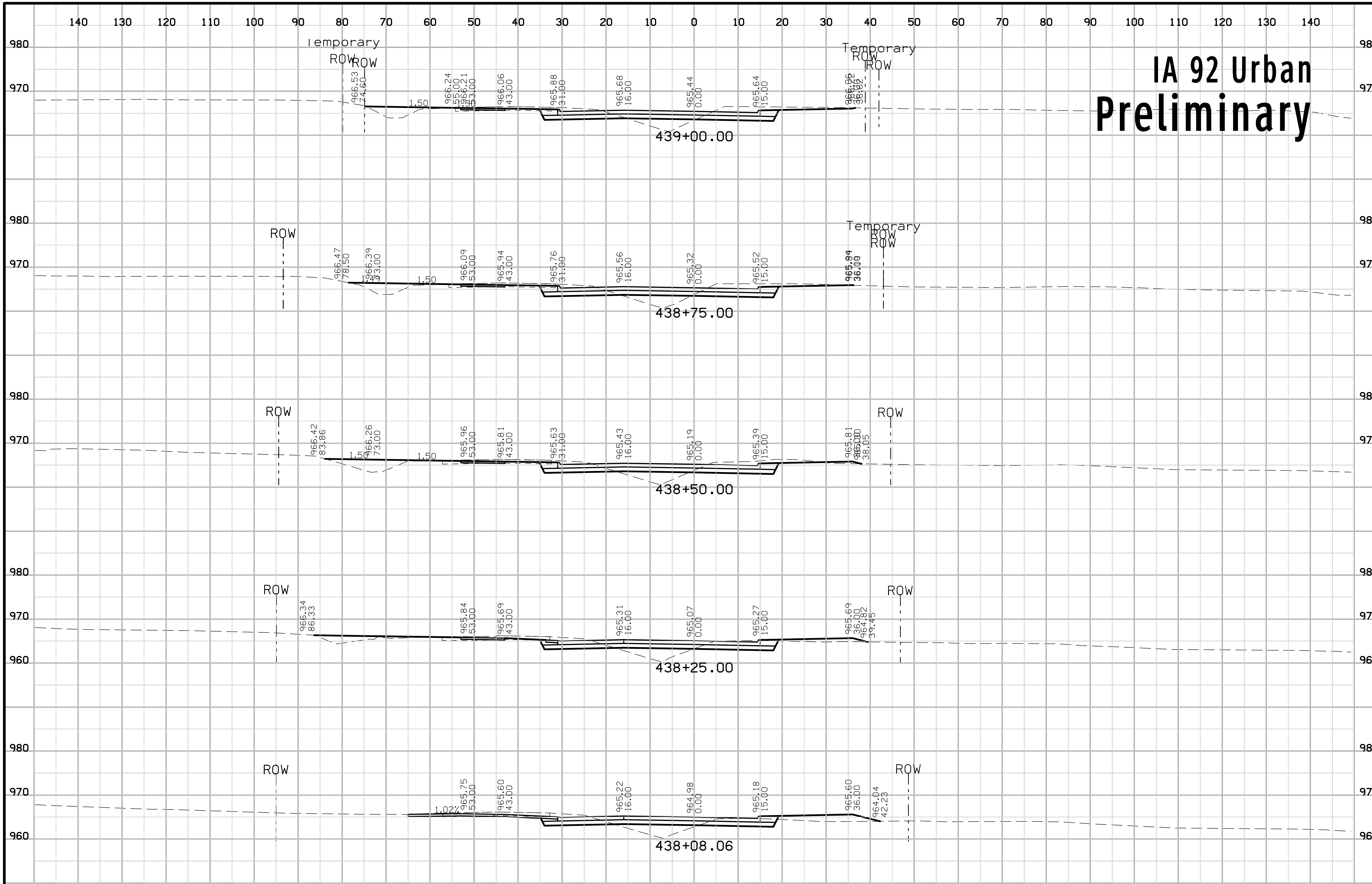
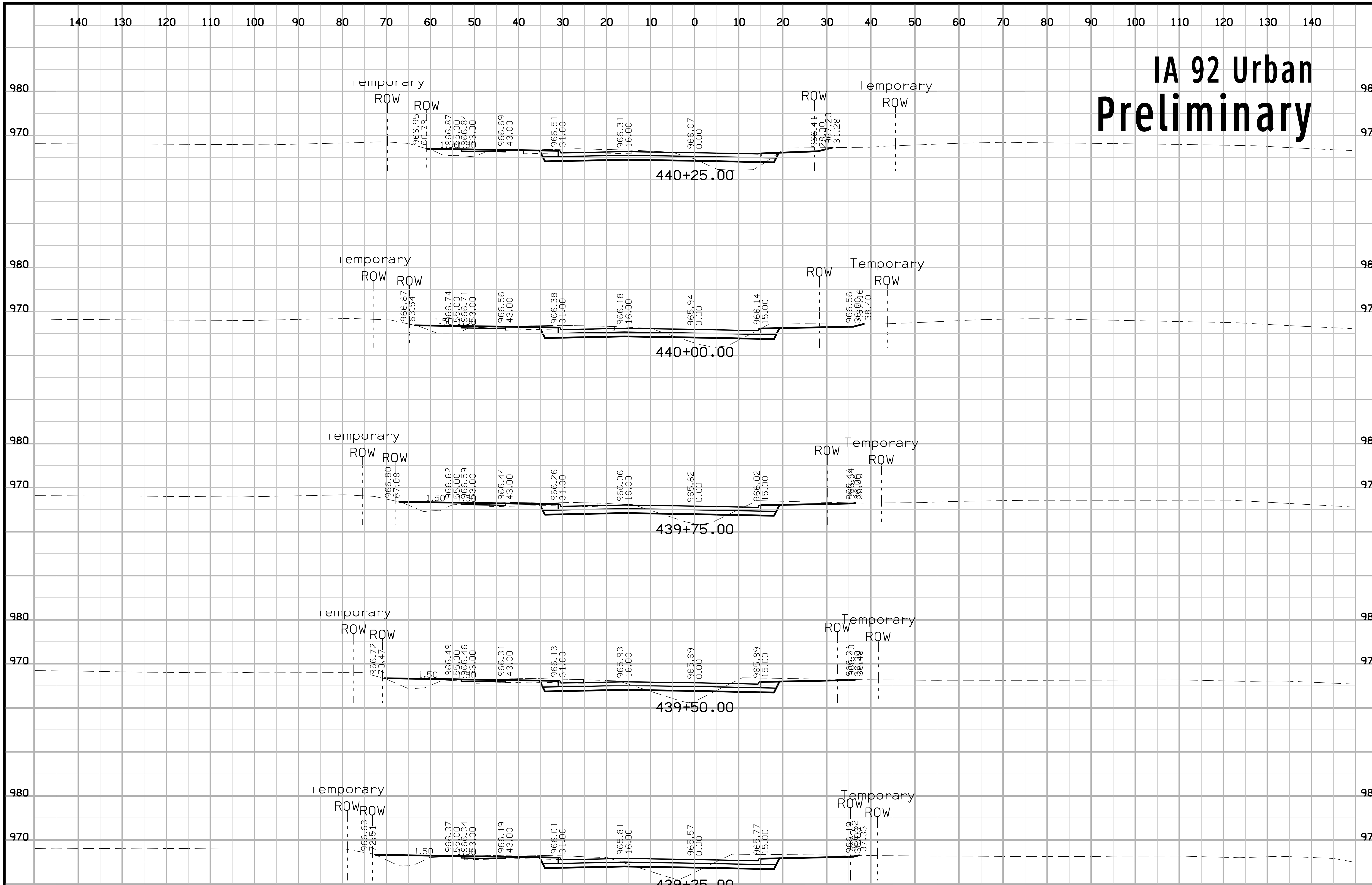


ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.202



ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.203

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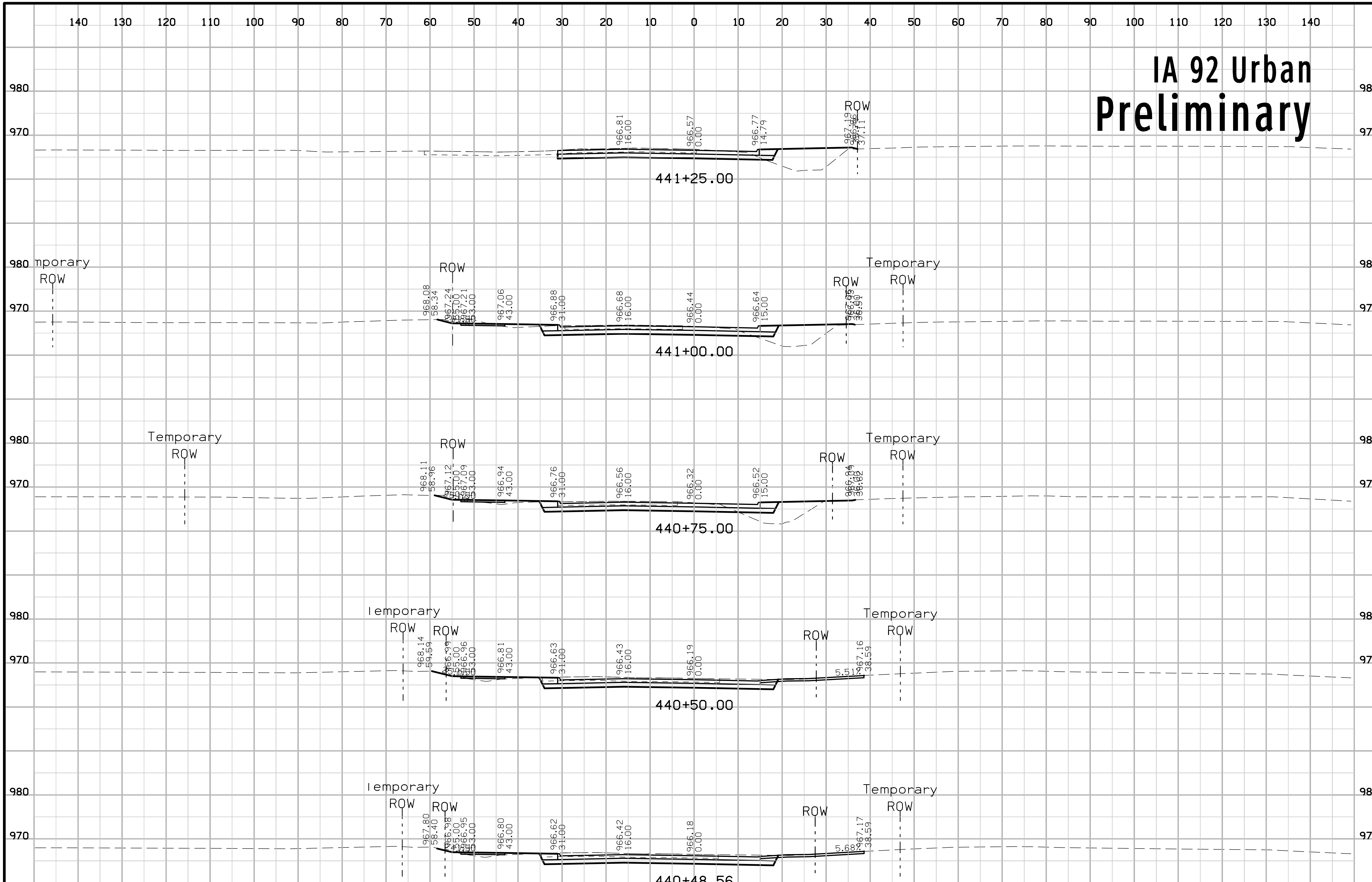
IA 92 Urban
Preliminary



ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.204

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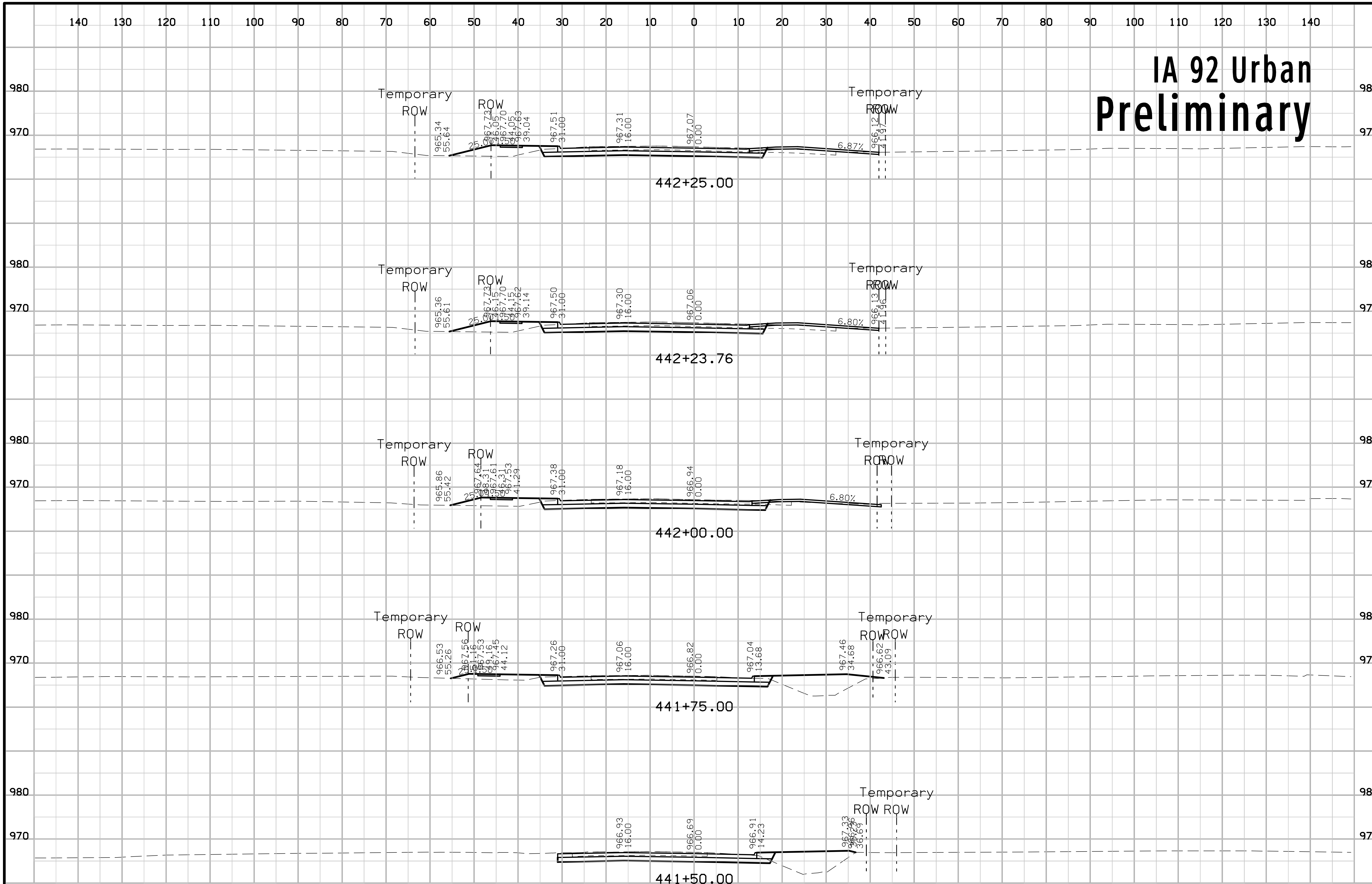

ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.205

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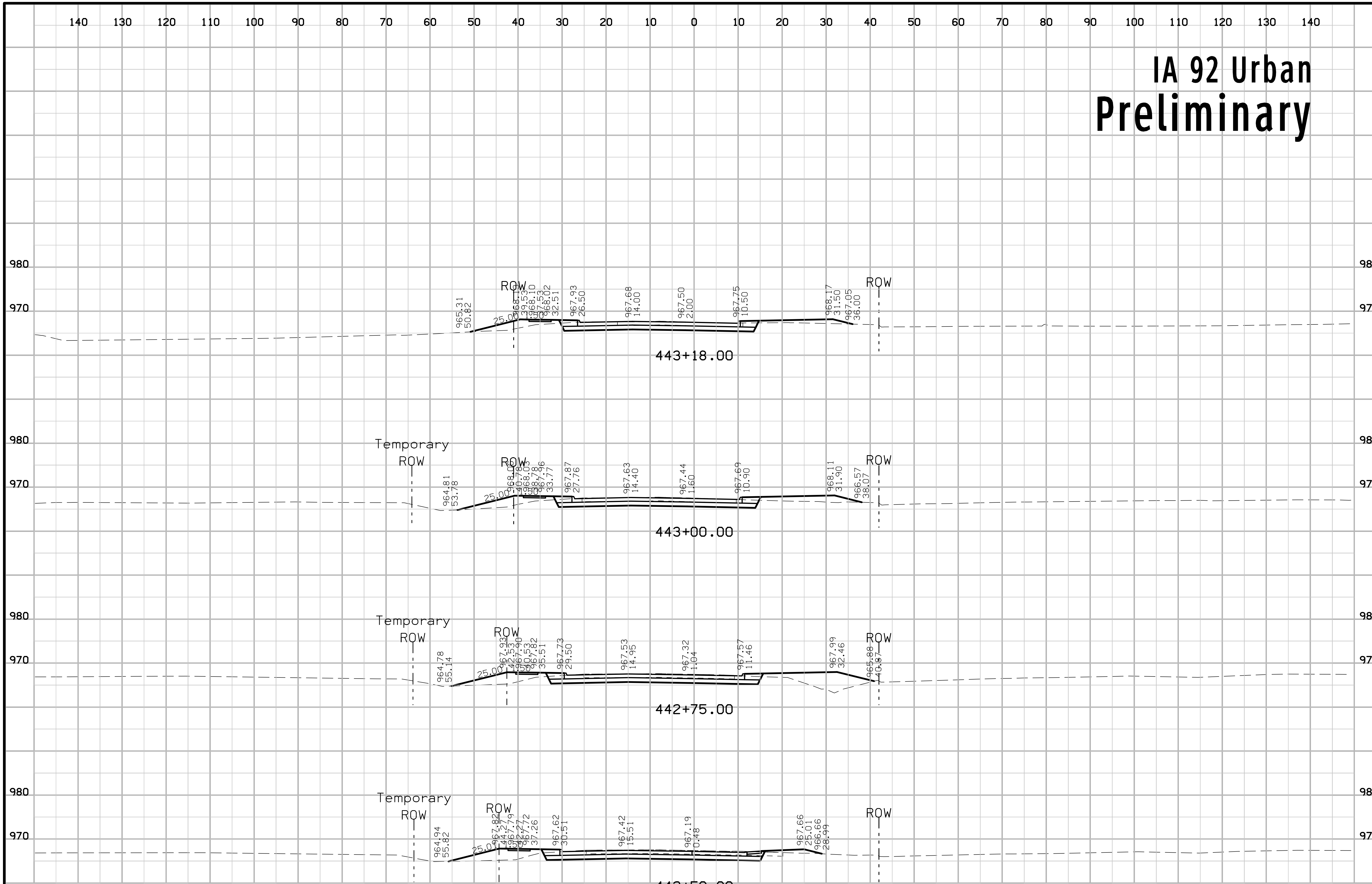
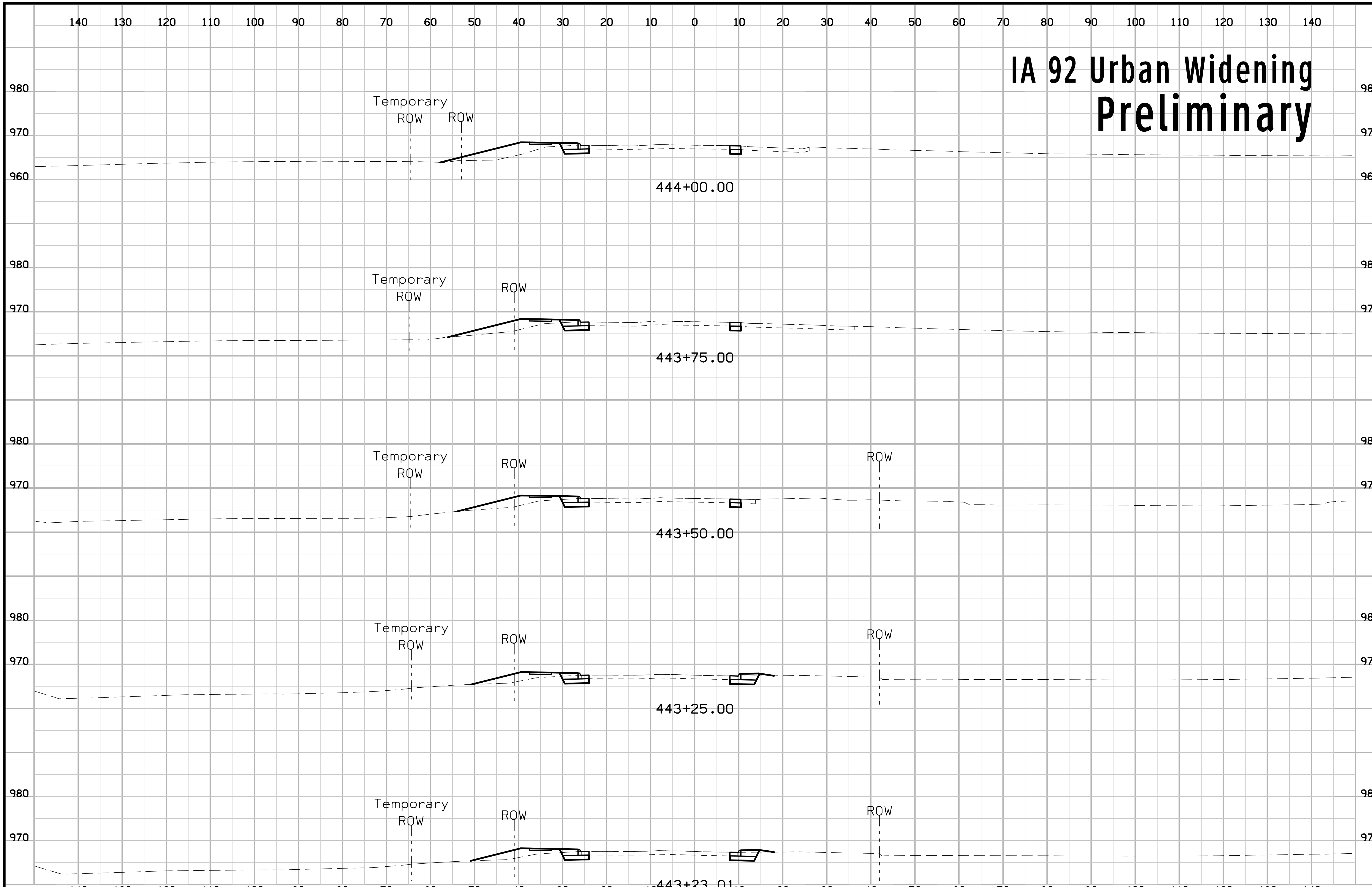
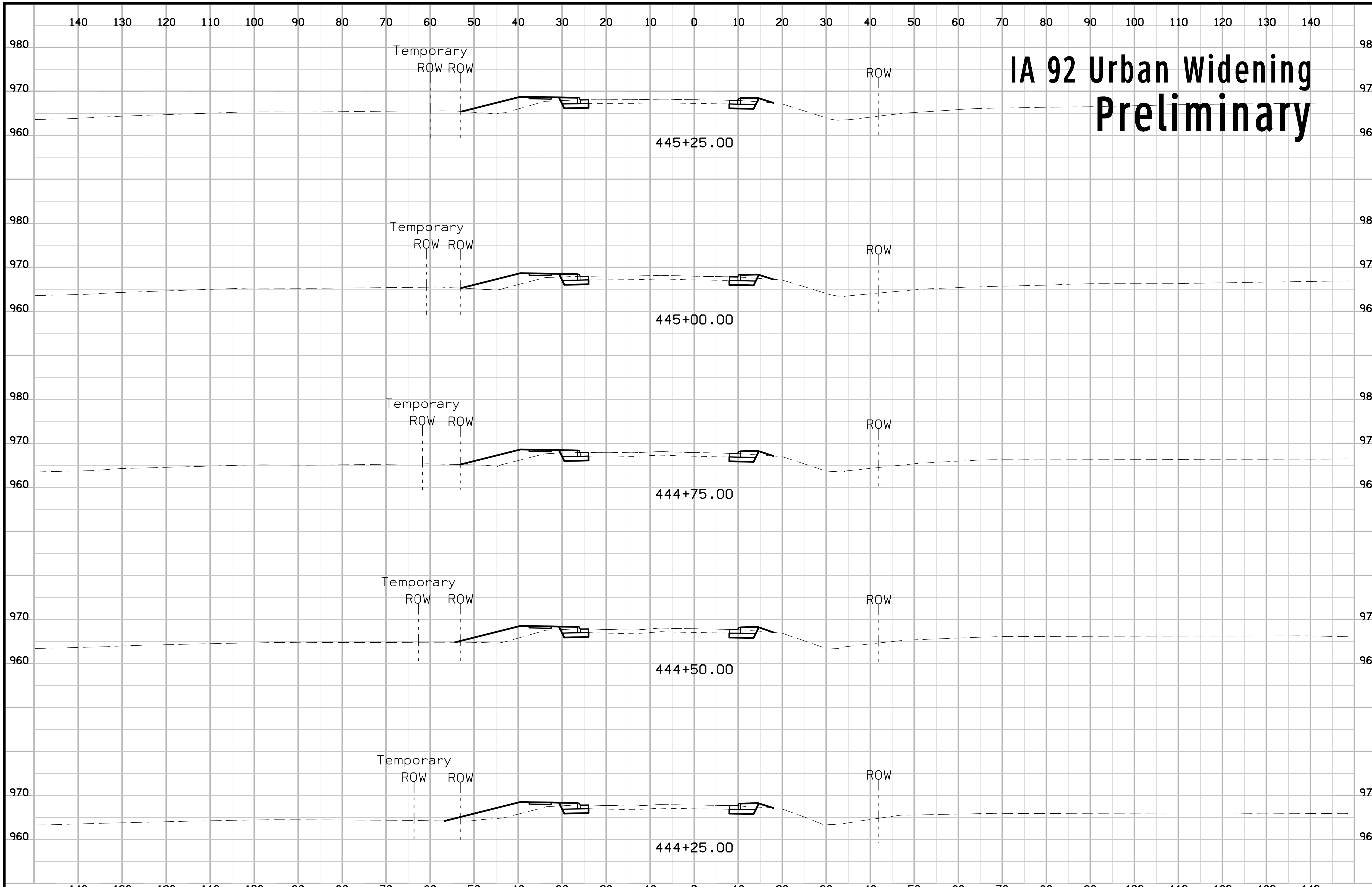
IA 92 Urban
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.206

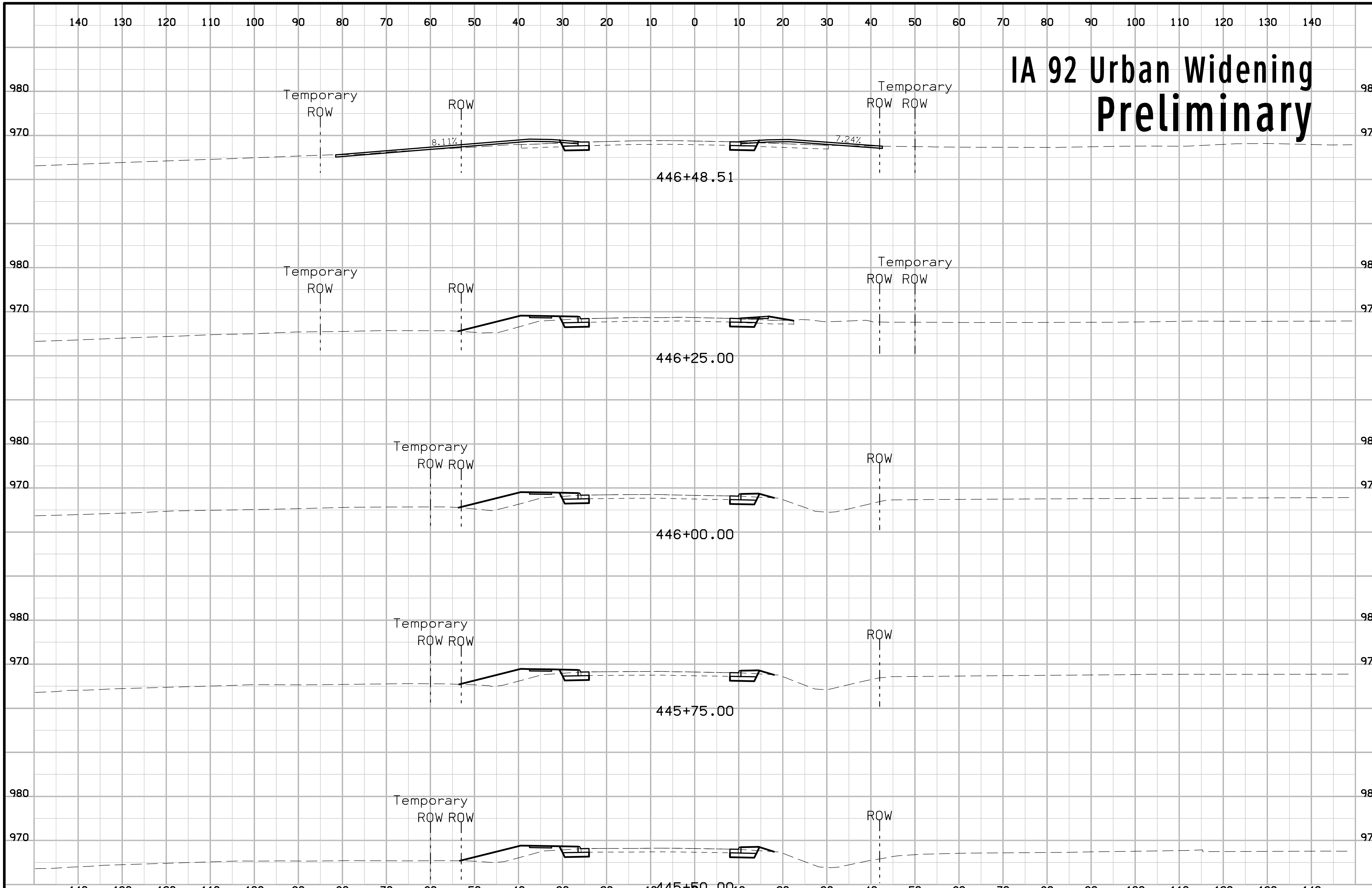


ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.207



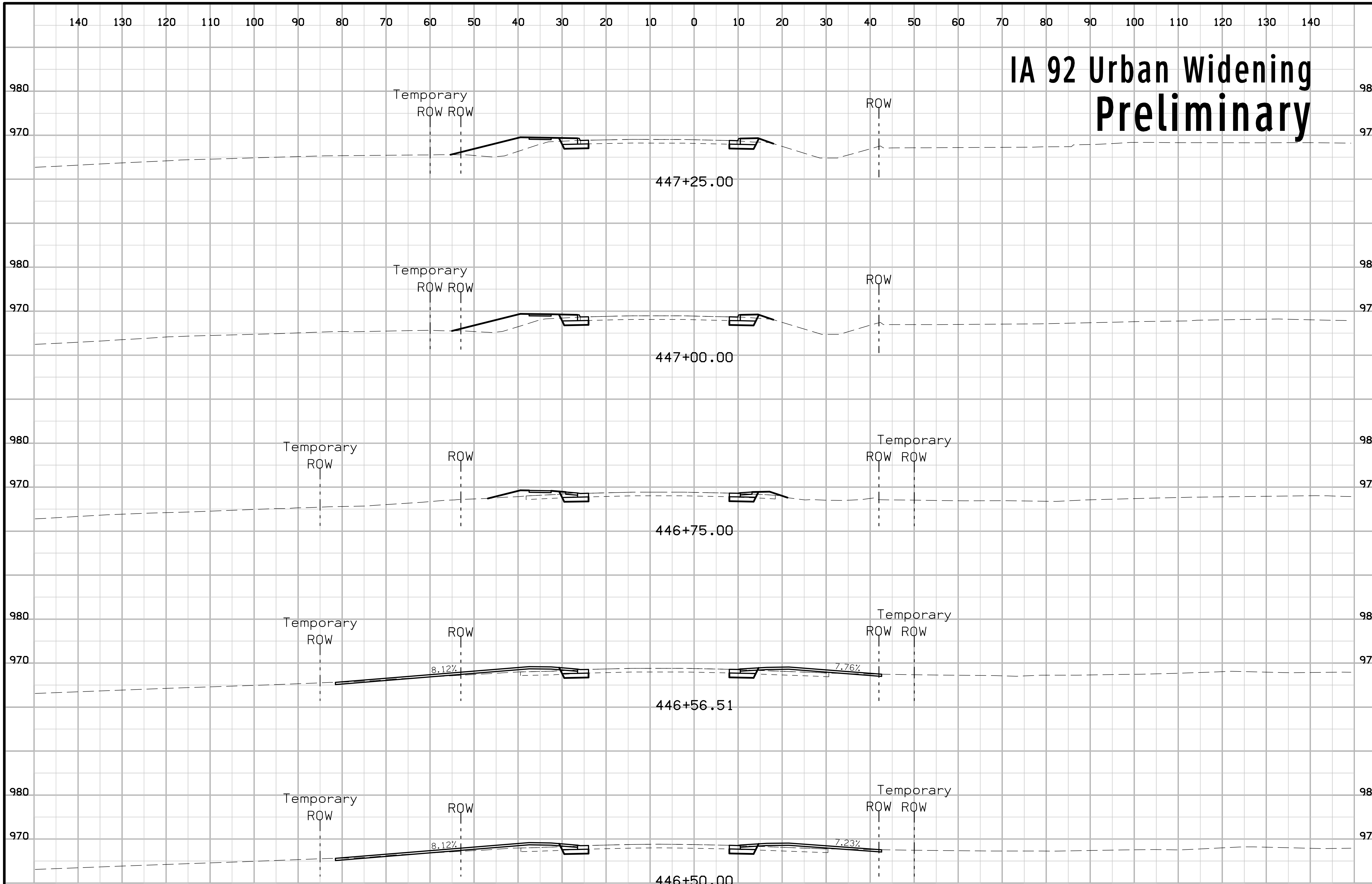
ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.208

IA 92 Urban Widening
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.209

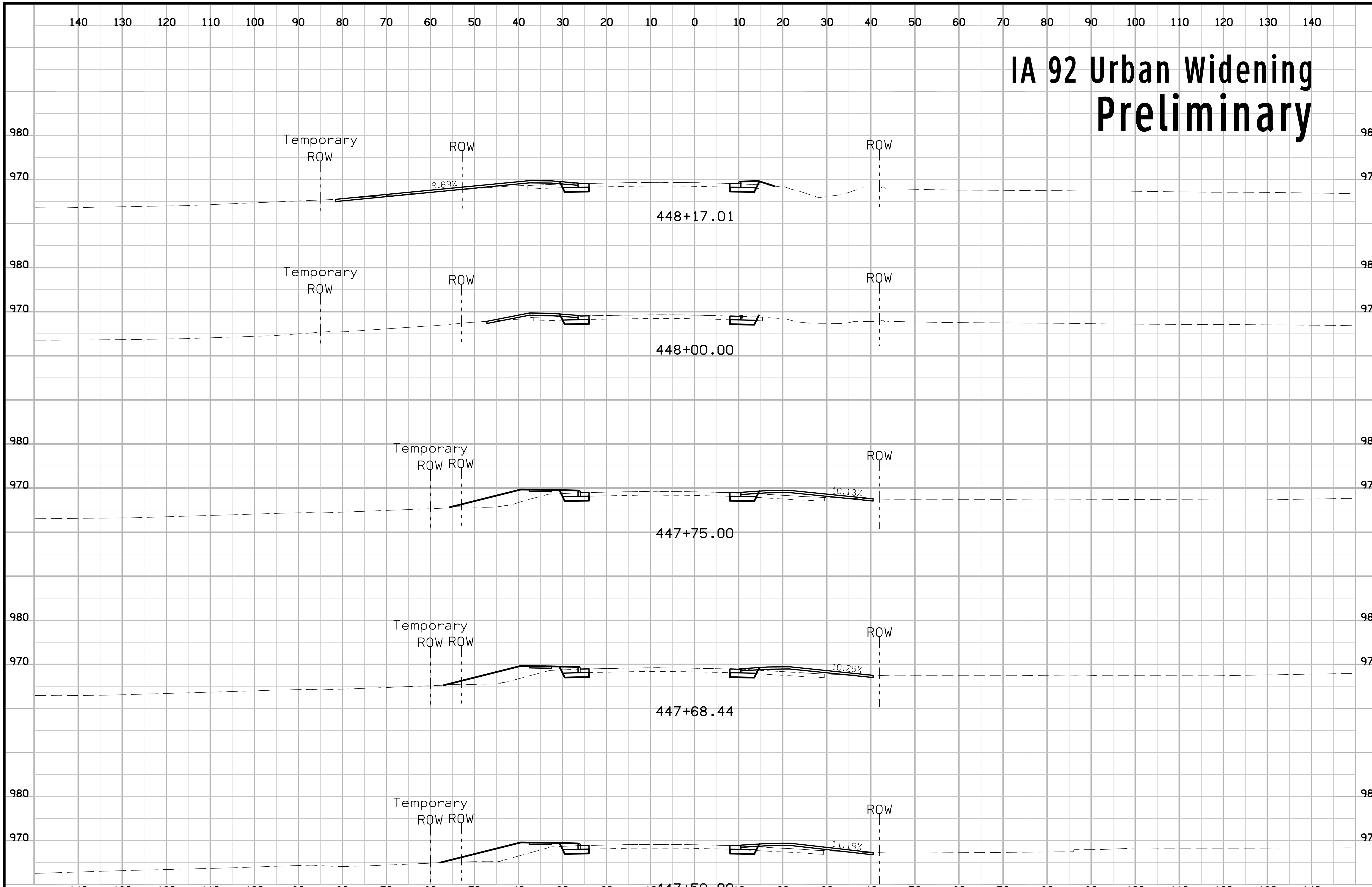
3:30:01 PM 7/25/2013 wcamero pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9109201004\Design\91092051W207.sht



ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER W.210

3:30:02 PM 7/25/2013 wcamero pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9109201004\Design\91092051W207.sht

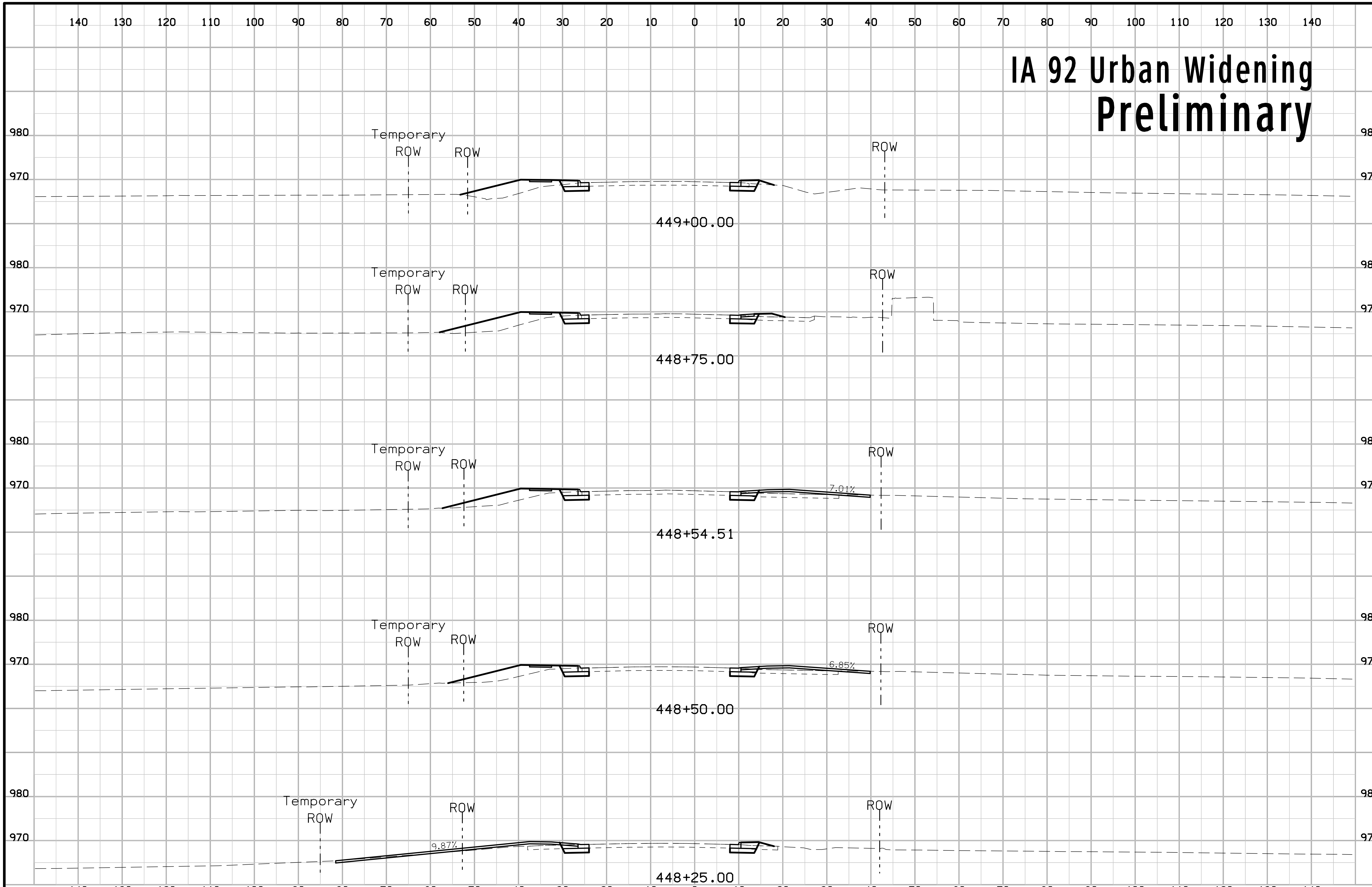
IA 92 Urban Widening
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.211

3:30:03 PM 7/25/2013 wcamero pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9109201004\Design\91092051W207.sht

IA 92 Urban Widening
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM J1a\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER W.212

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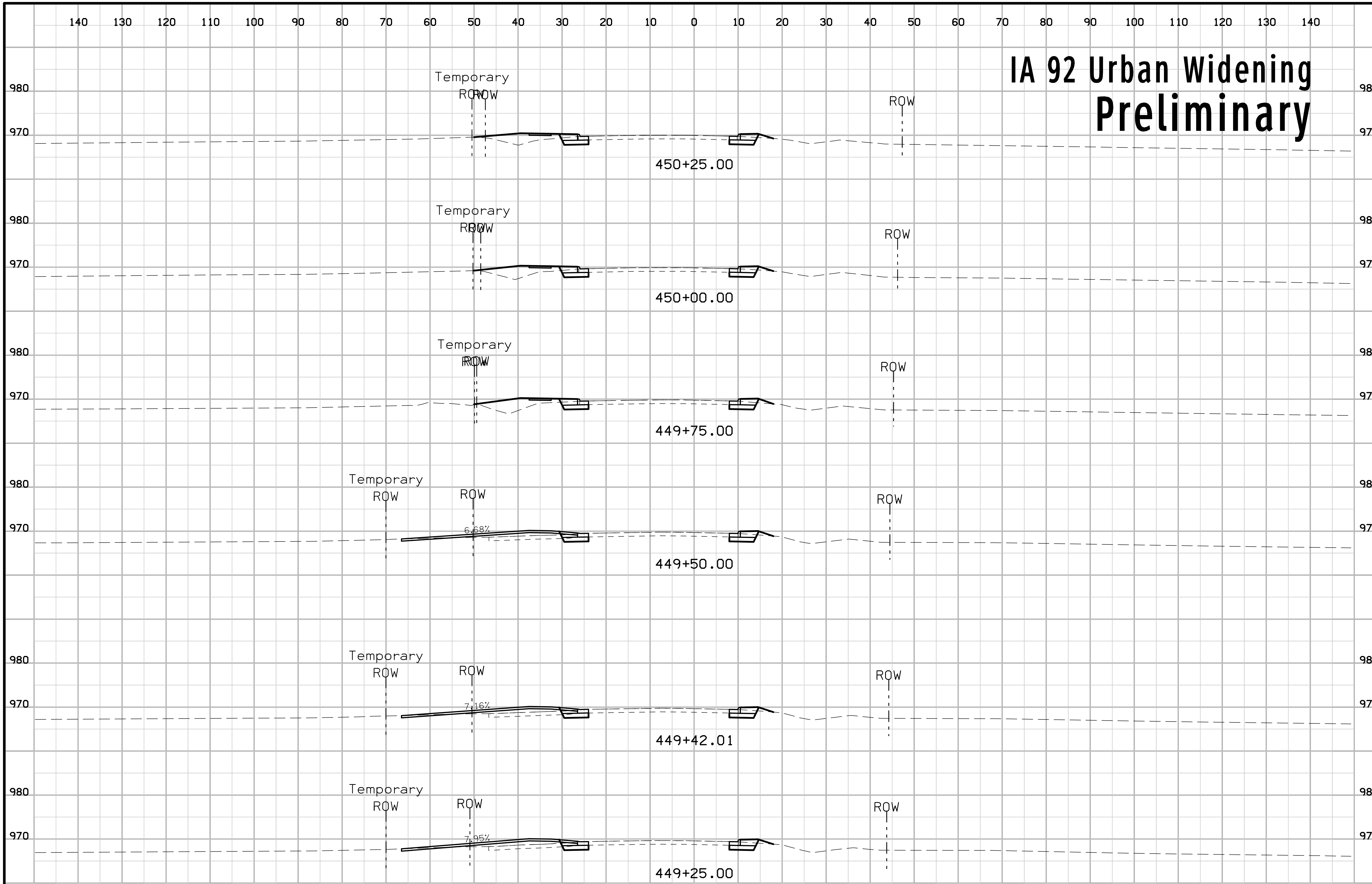

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER W.213

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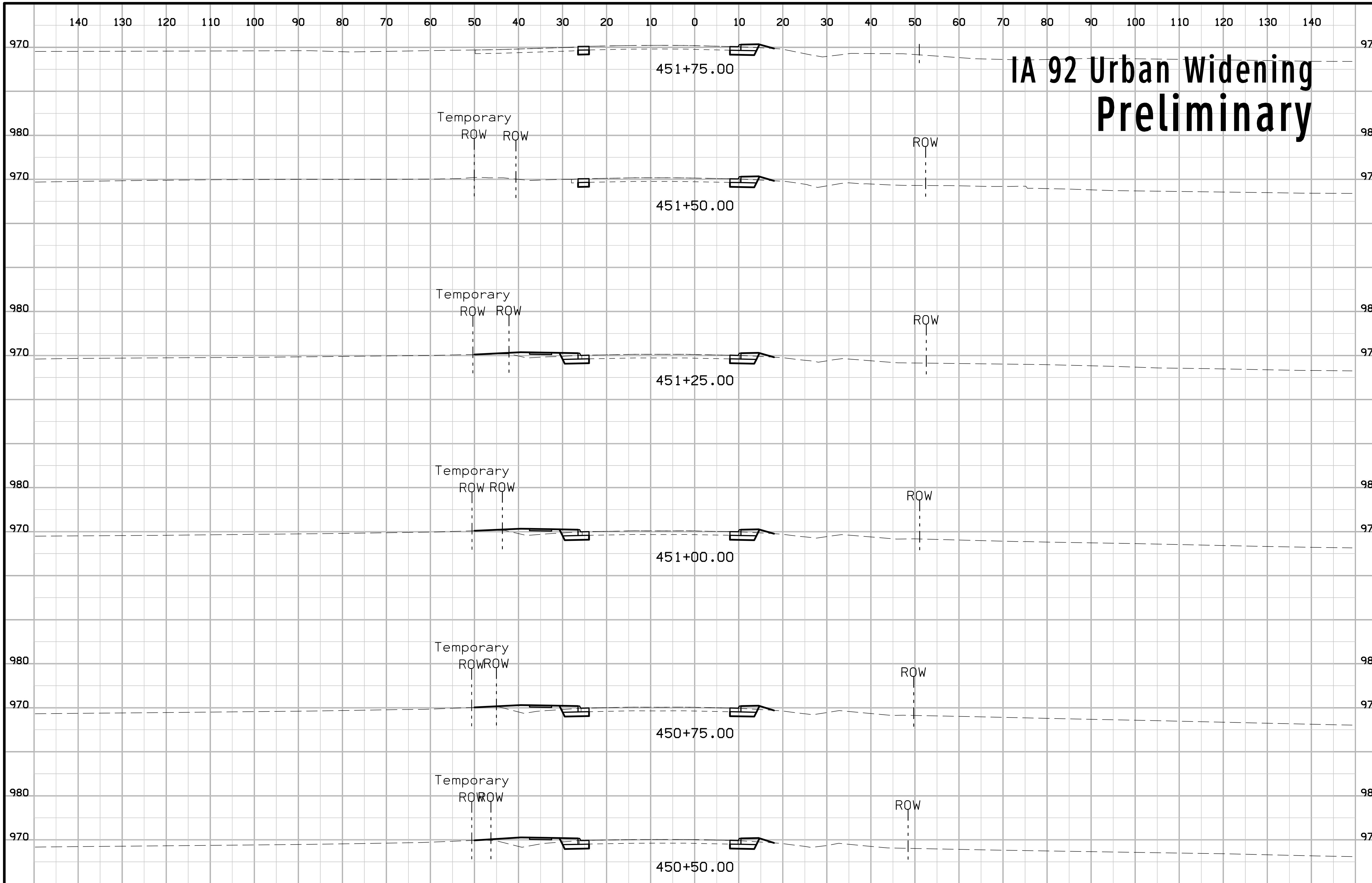
IA 92 Urban Widening
Preliminary



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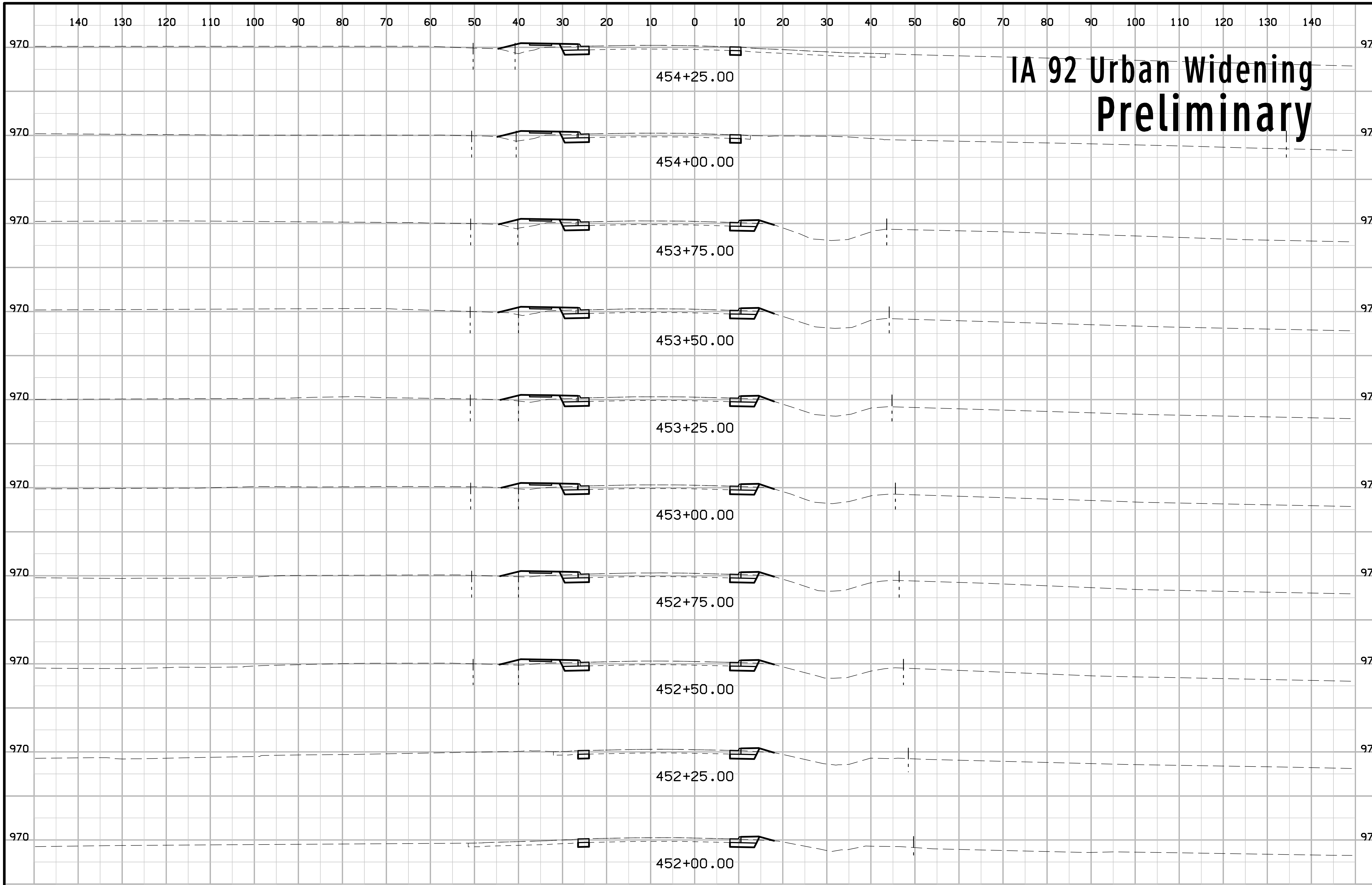

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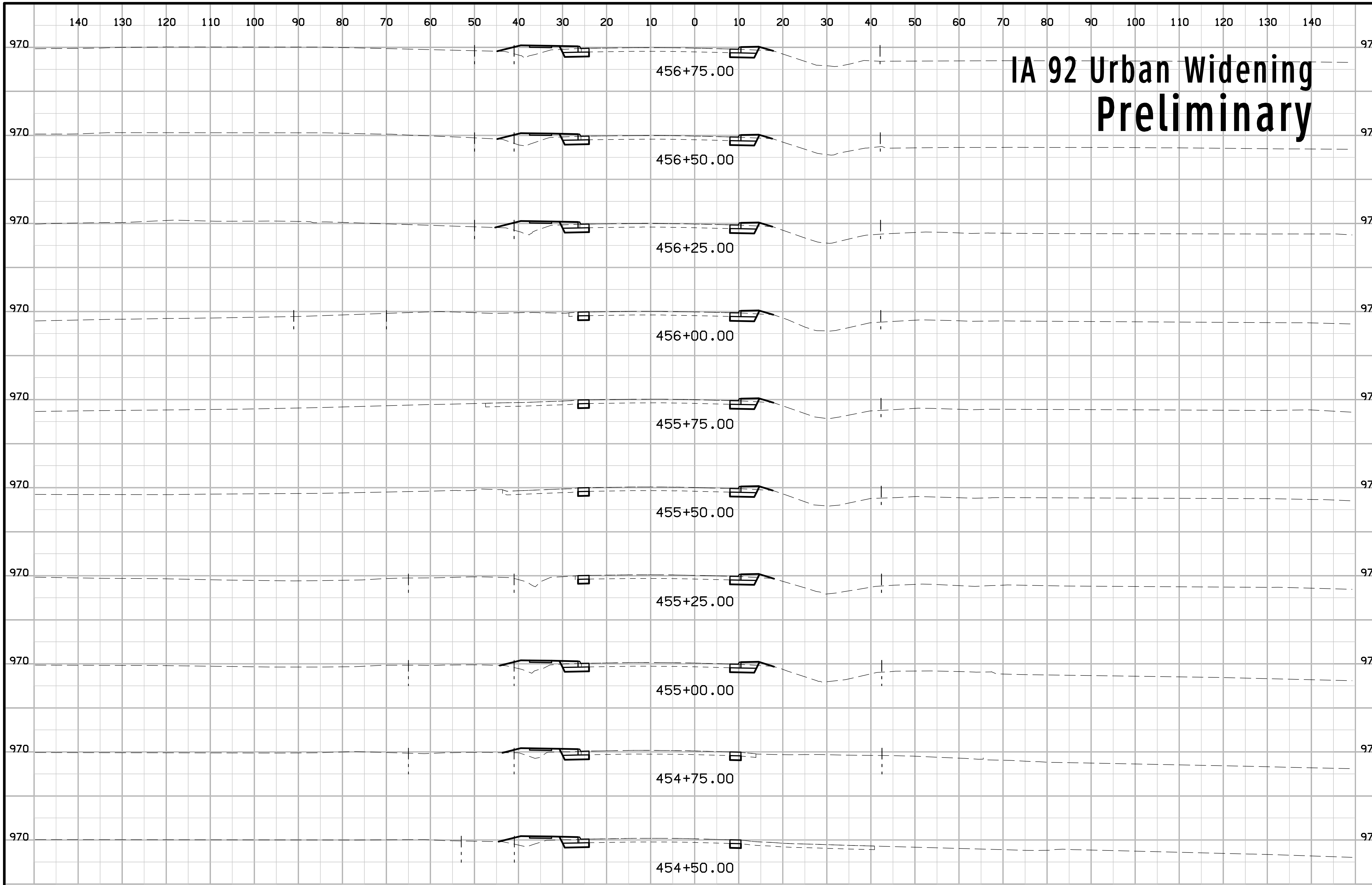
IA 92 Urban Widening
Preliminary



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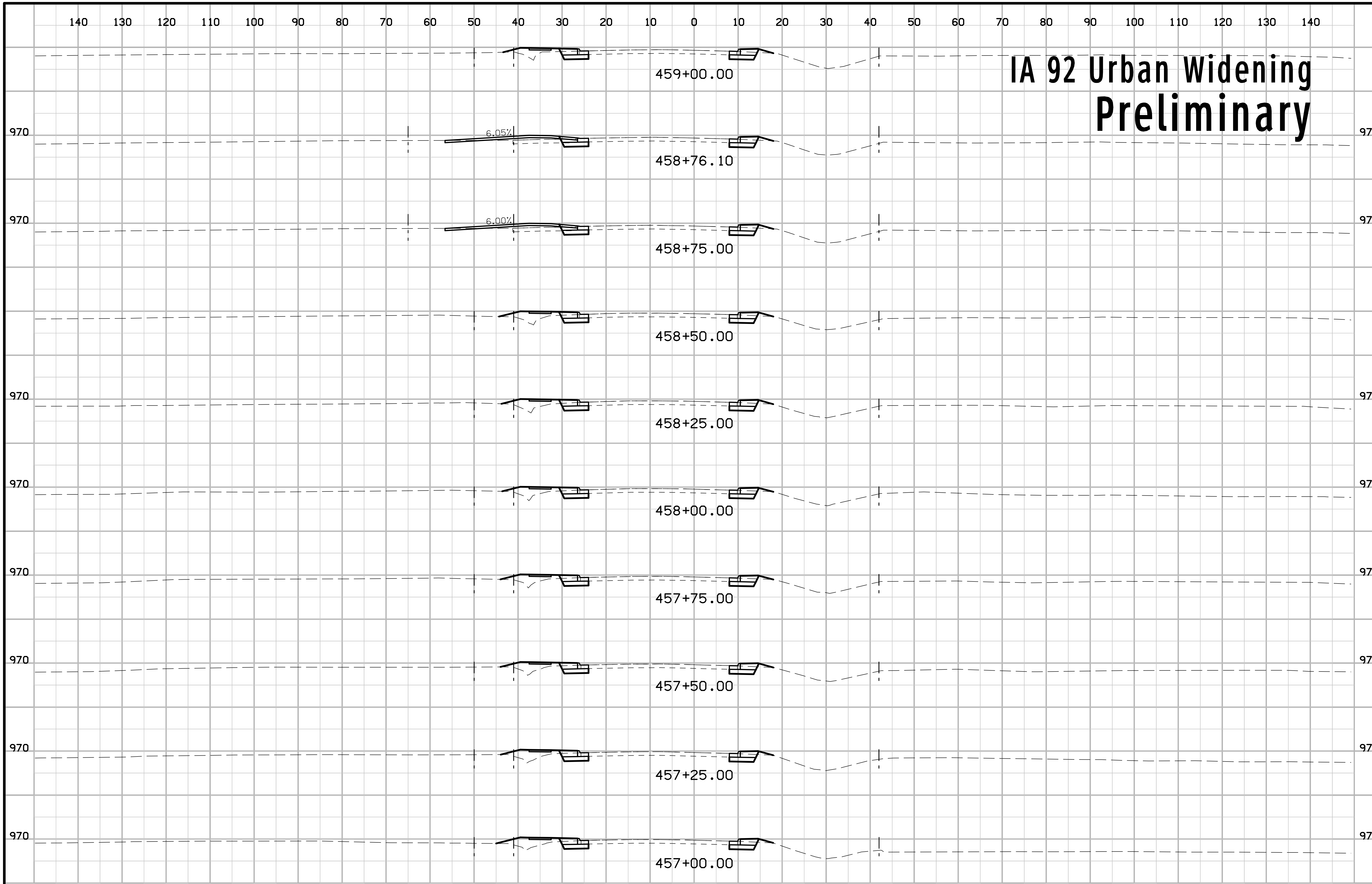
IA 92 Urban Widening
Preliminary



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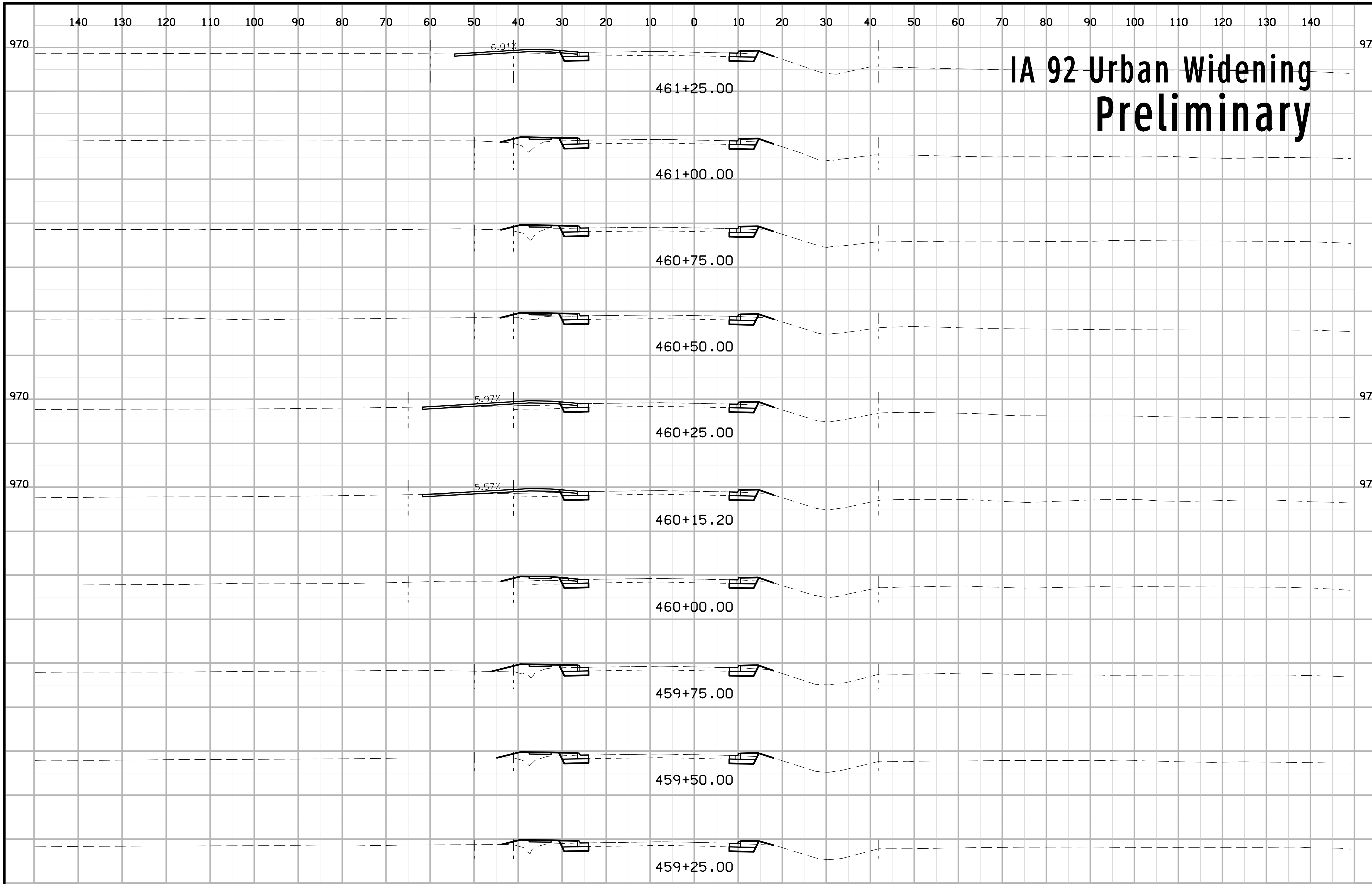

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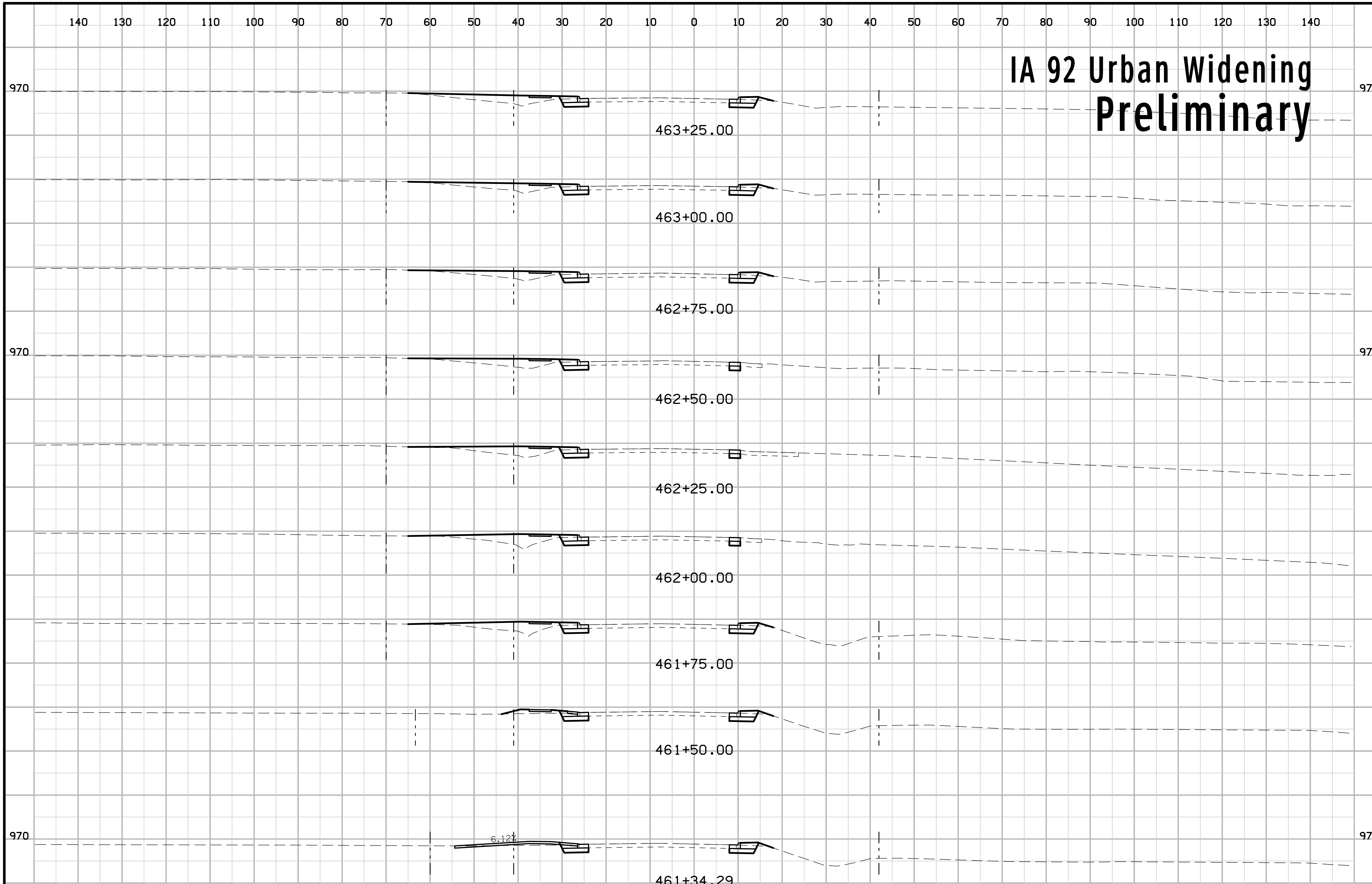

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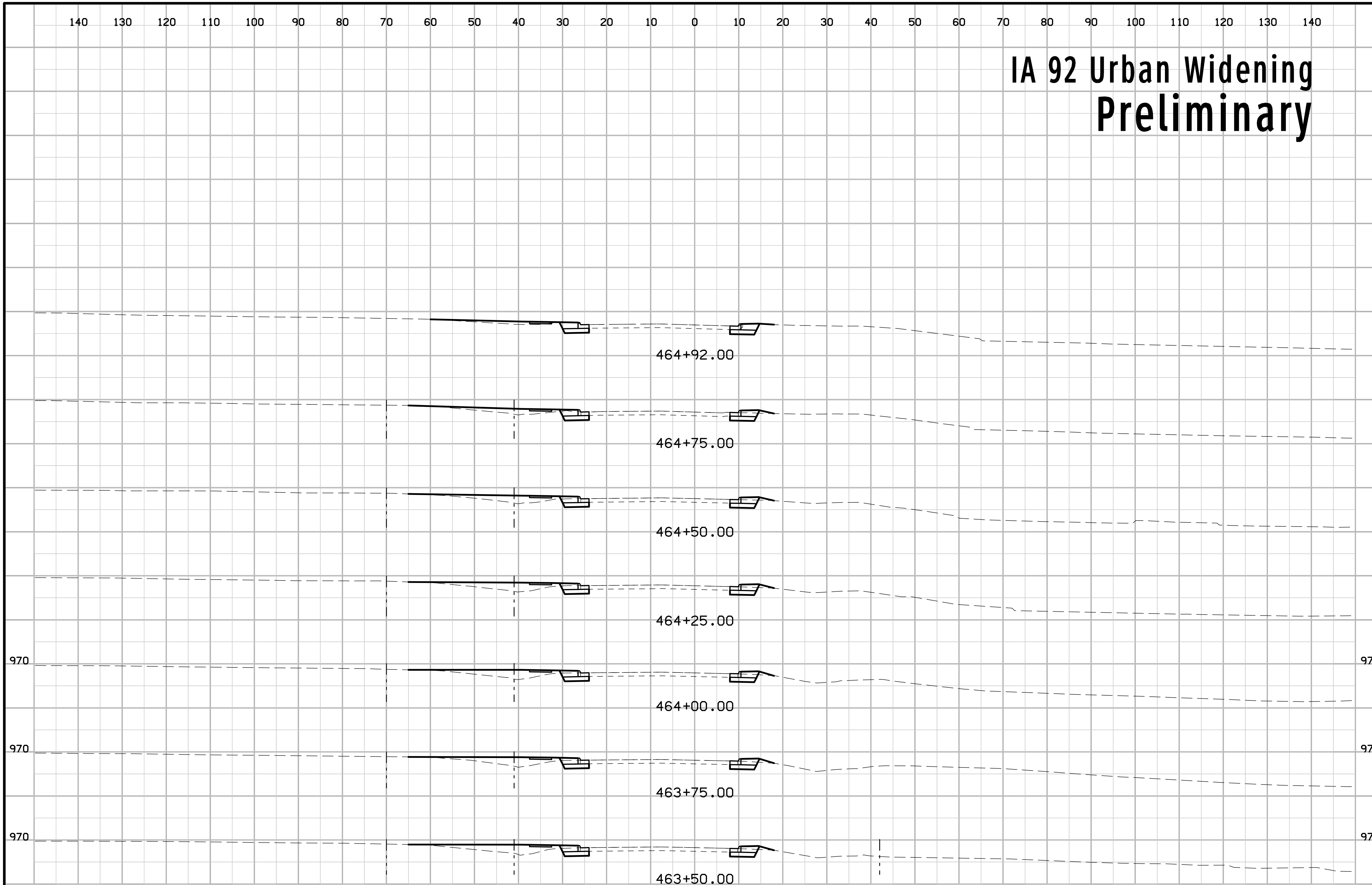
IA 92 Urban Widening
Preliminary



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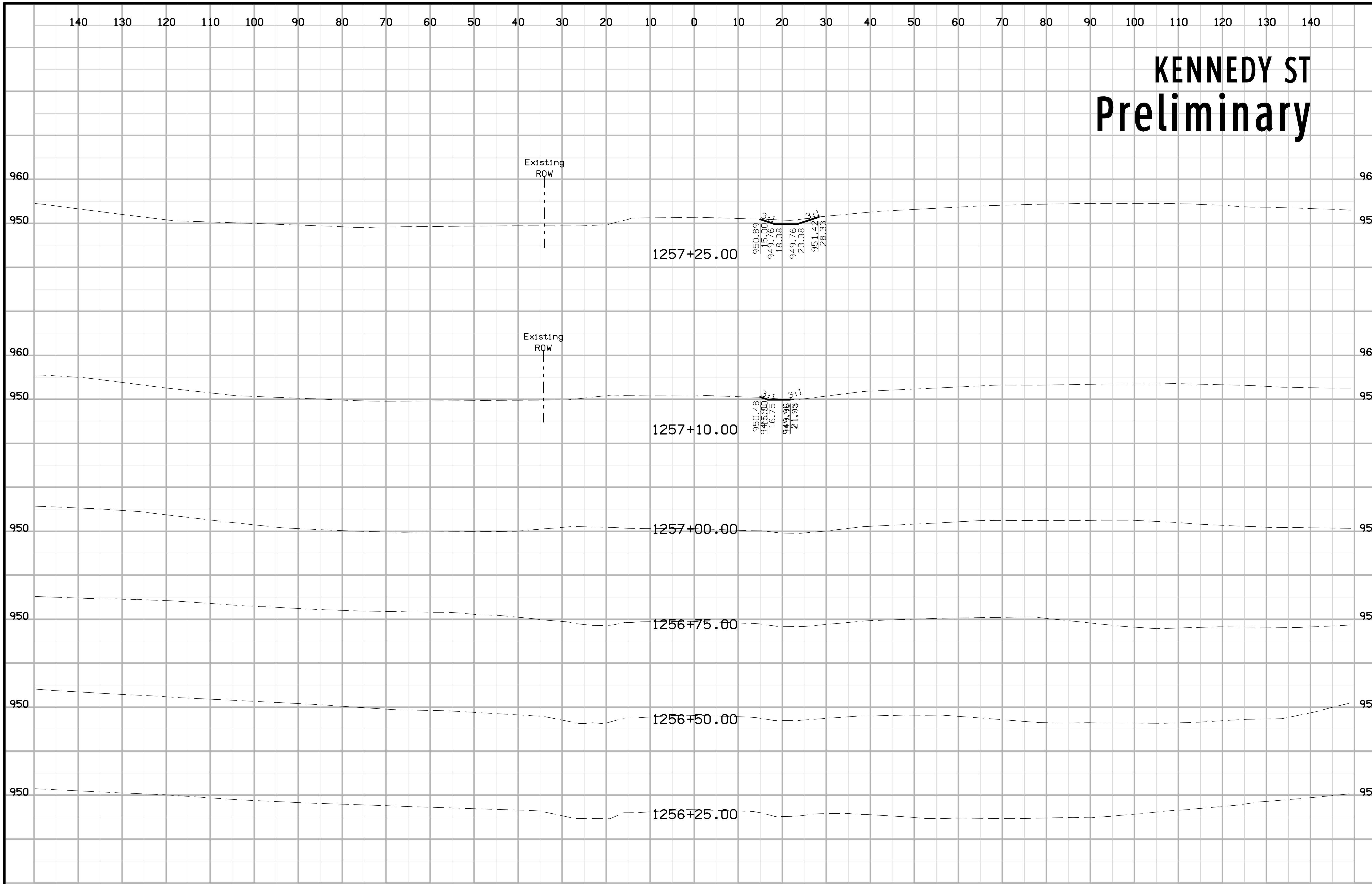
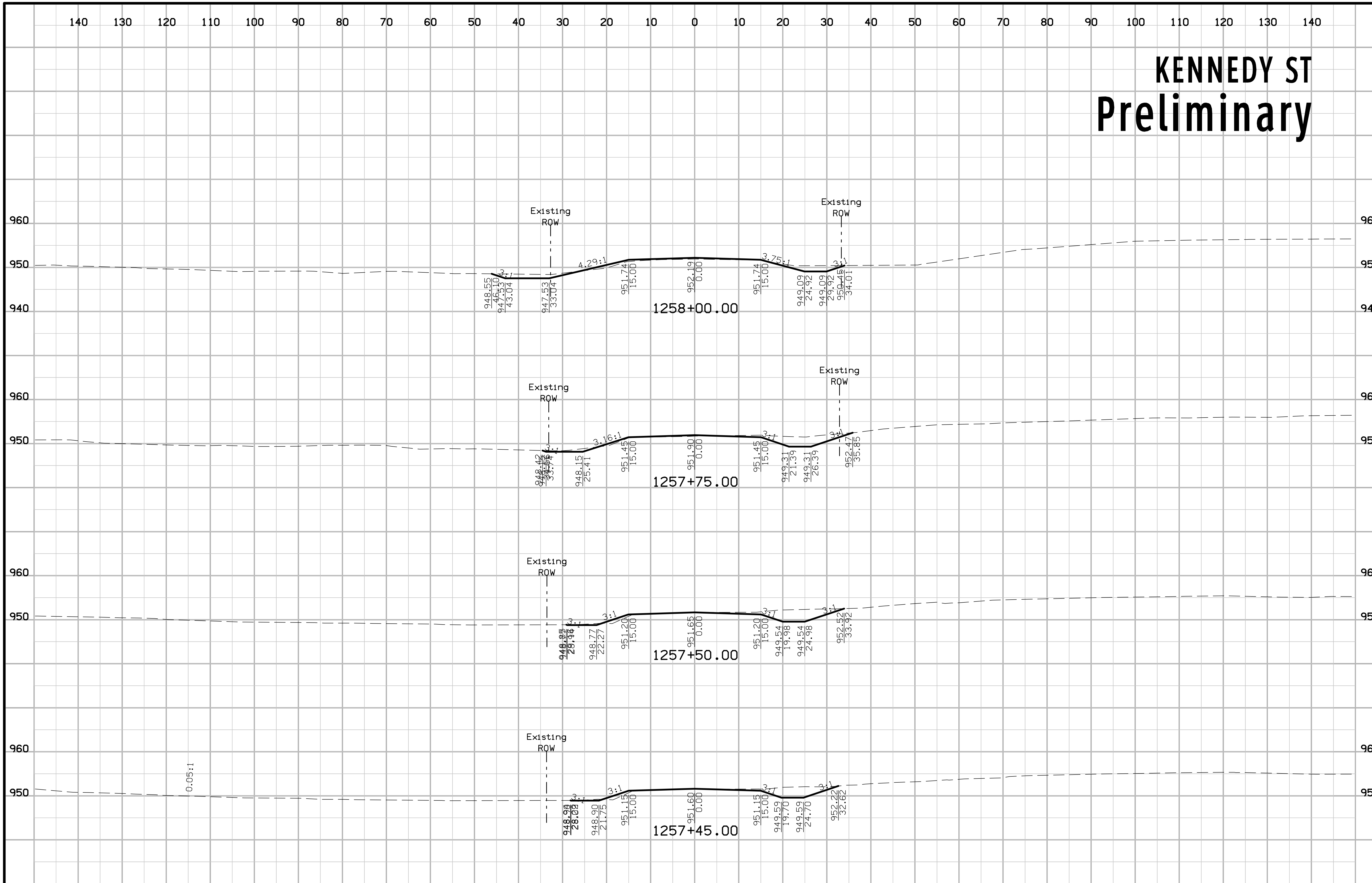


ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER X.1



ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER X.2

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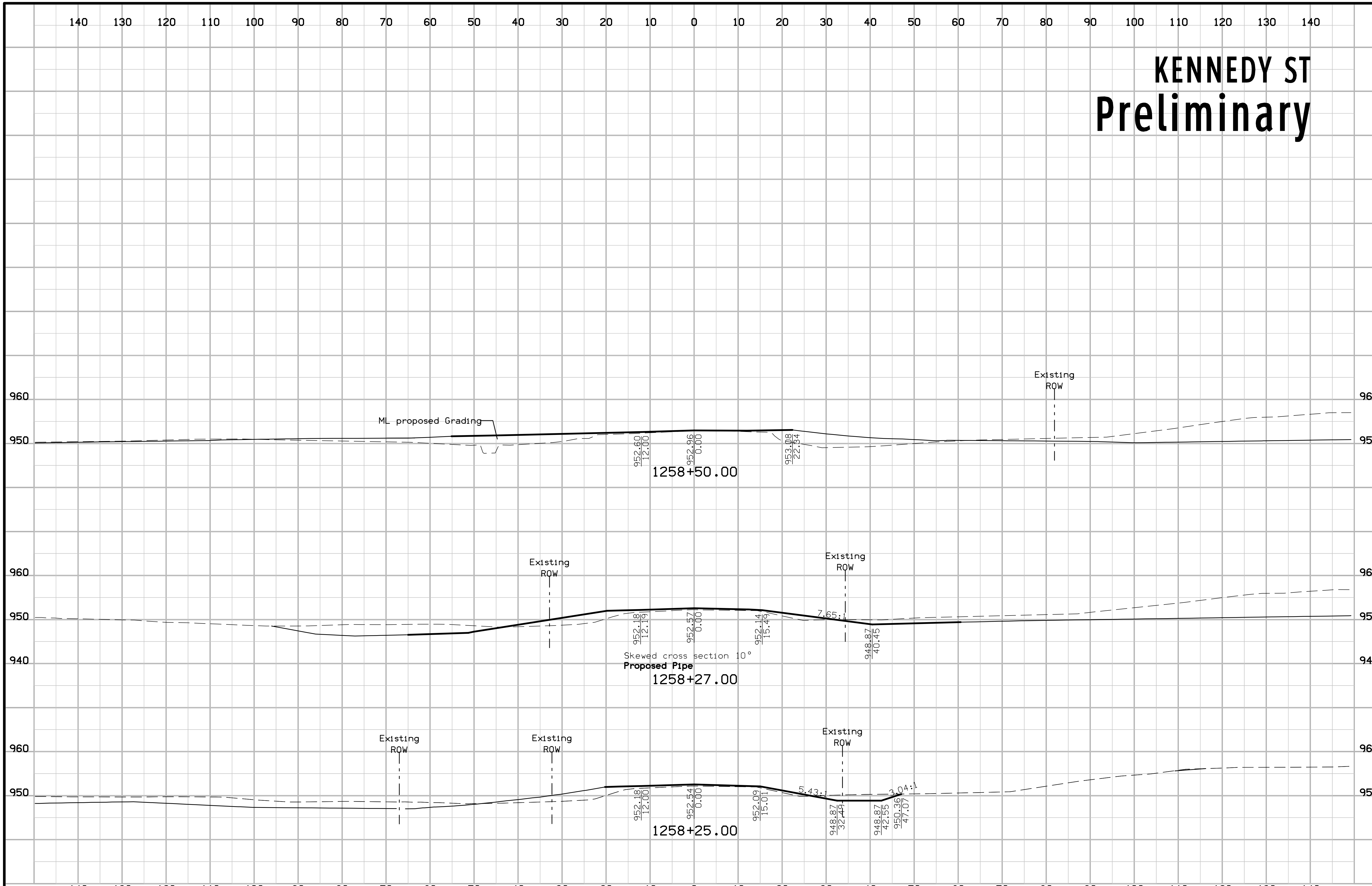
KENNEDY ST
Preliminary



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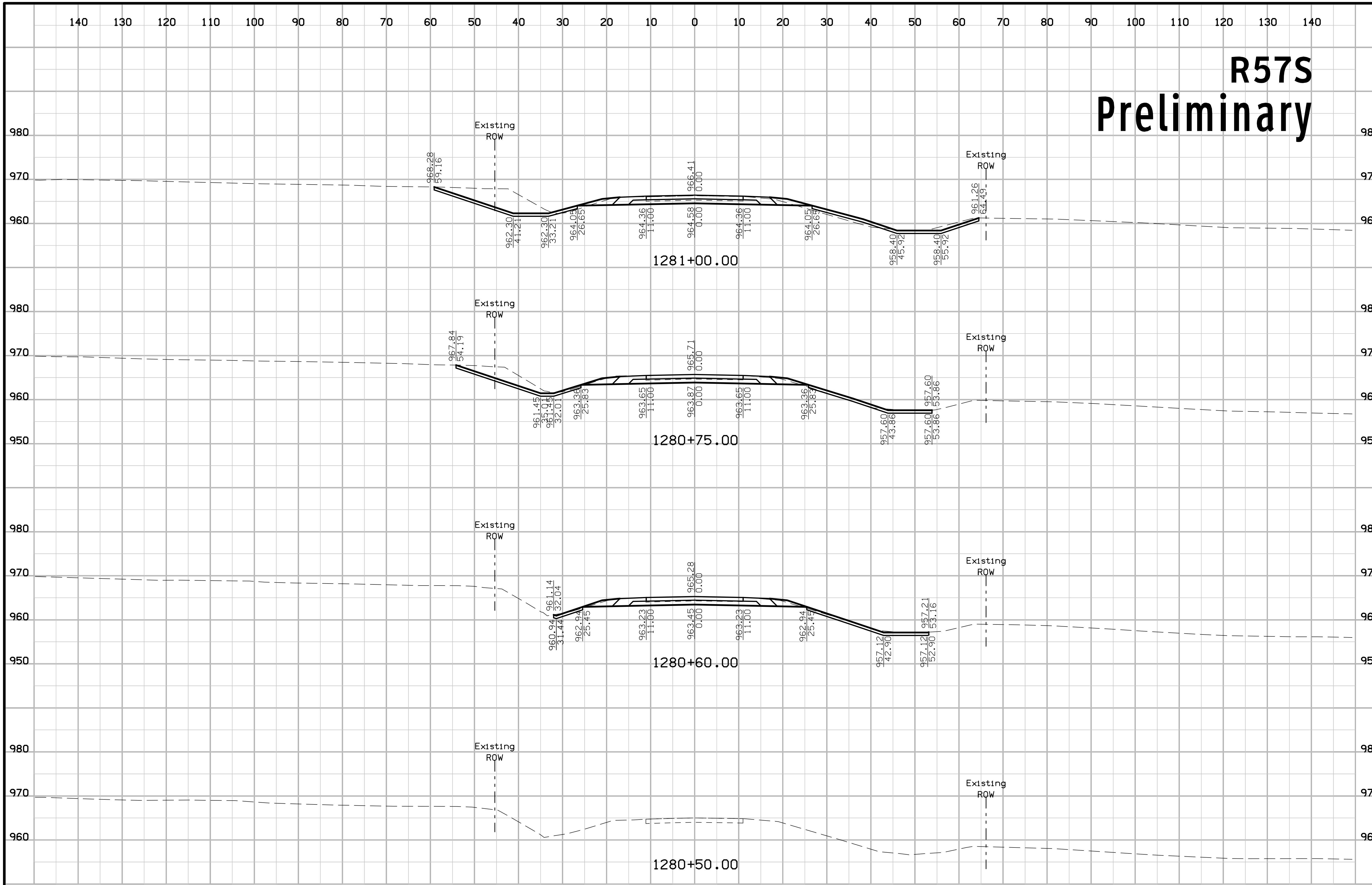

ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER X.4

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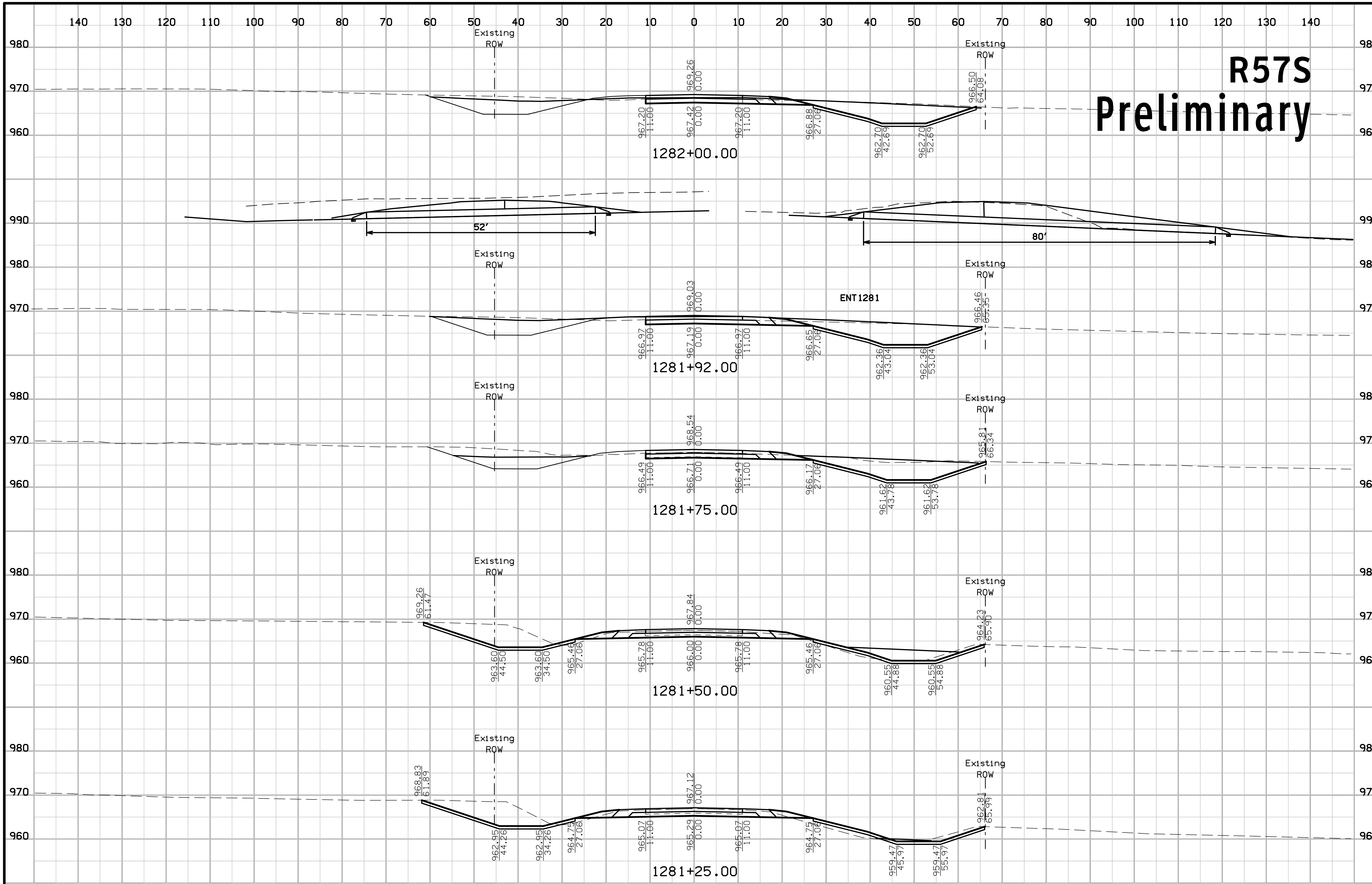

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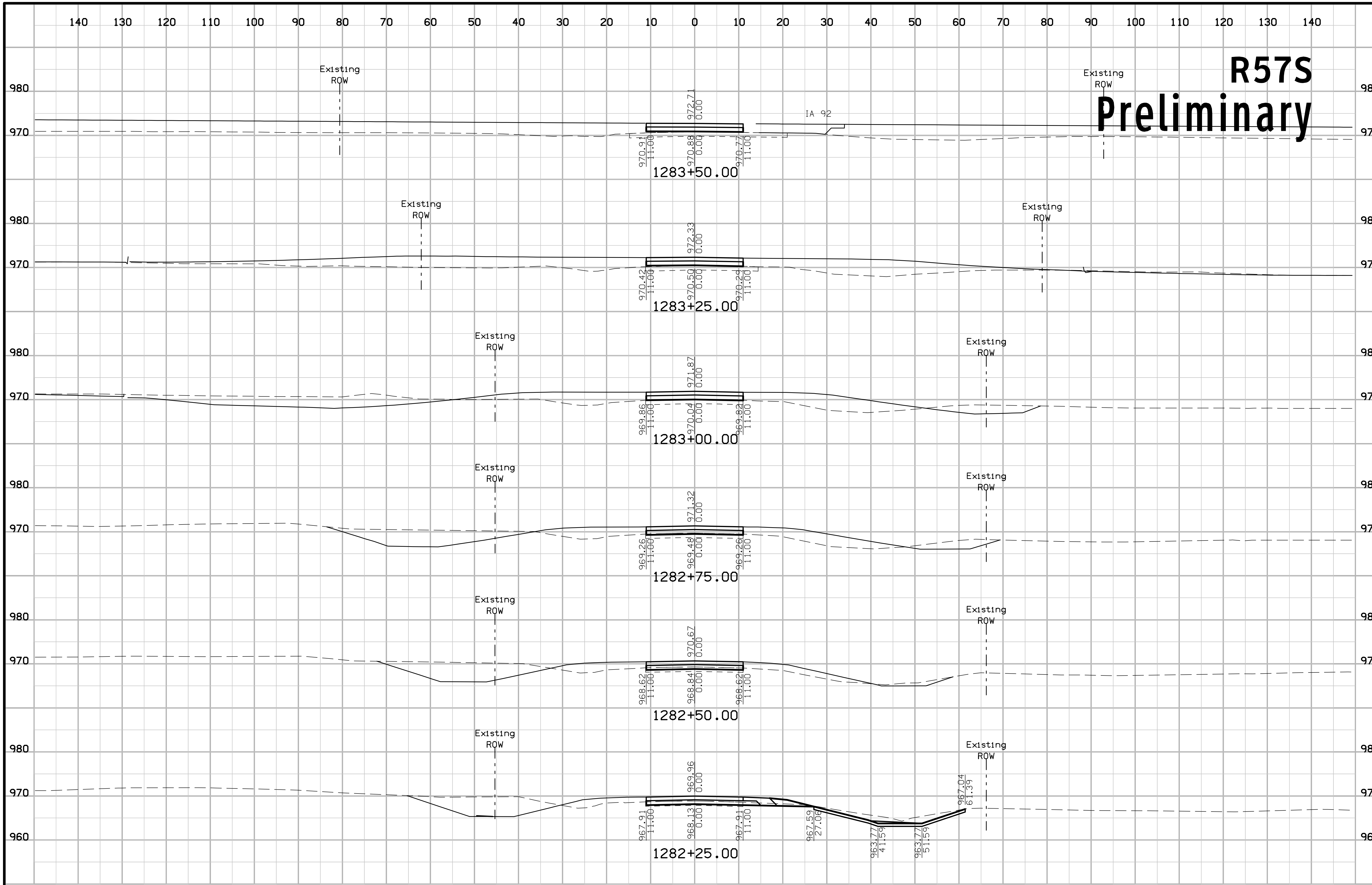

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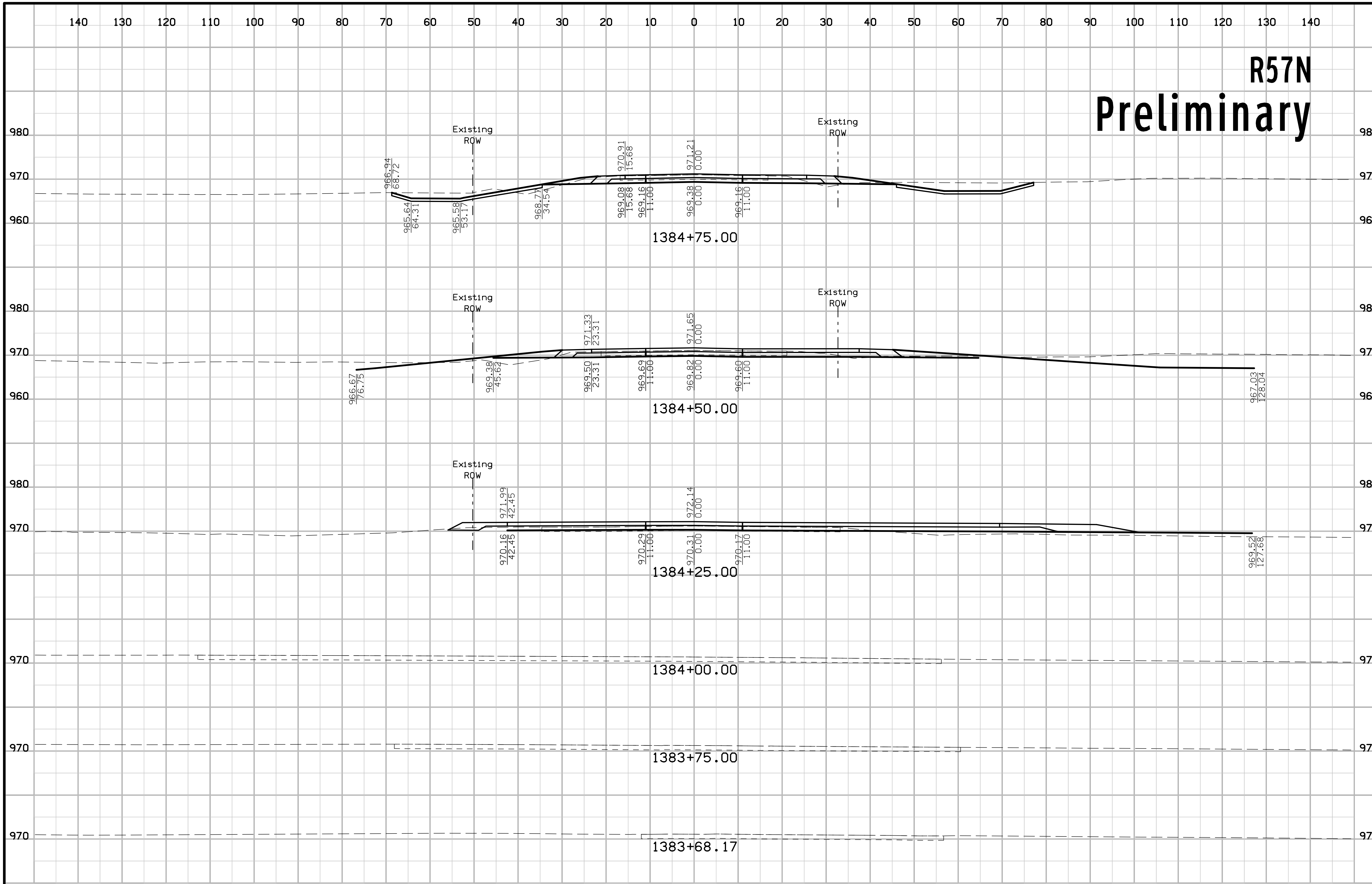

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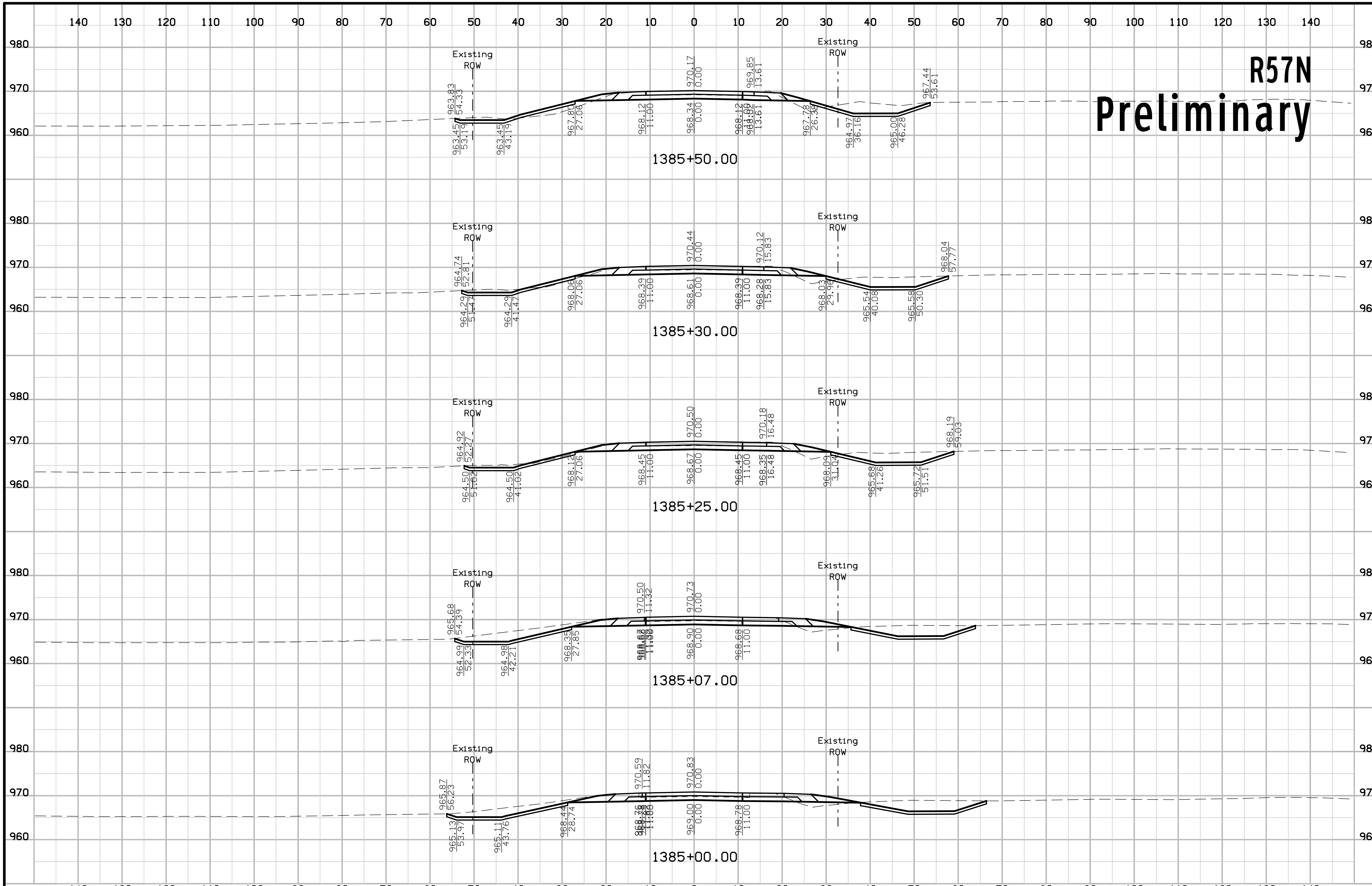

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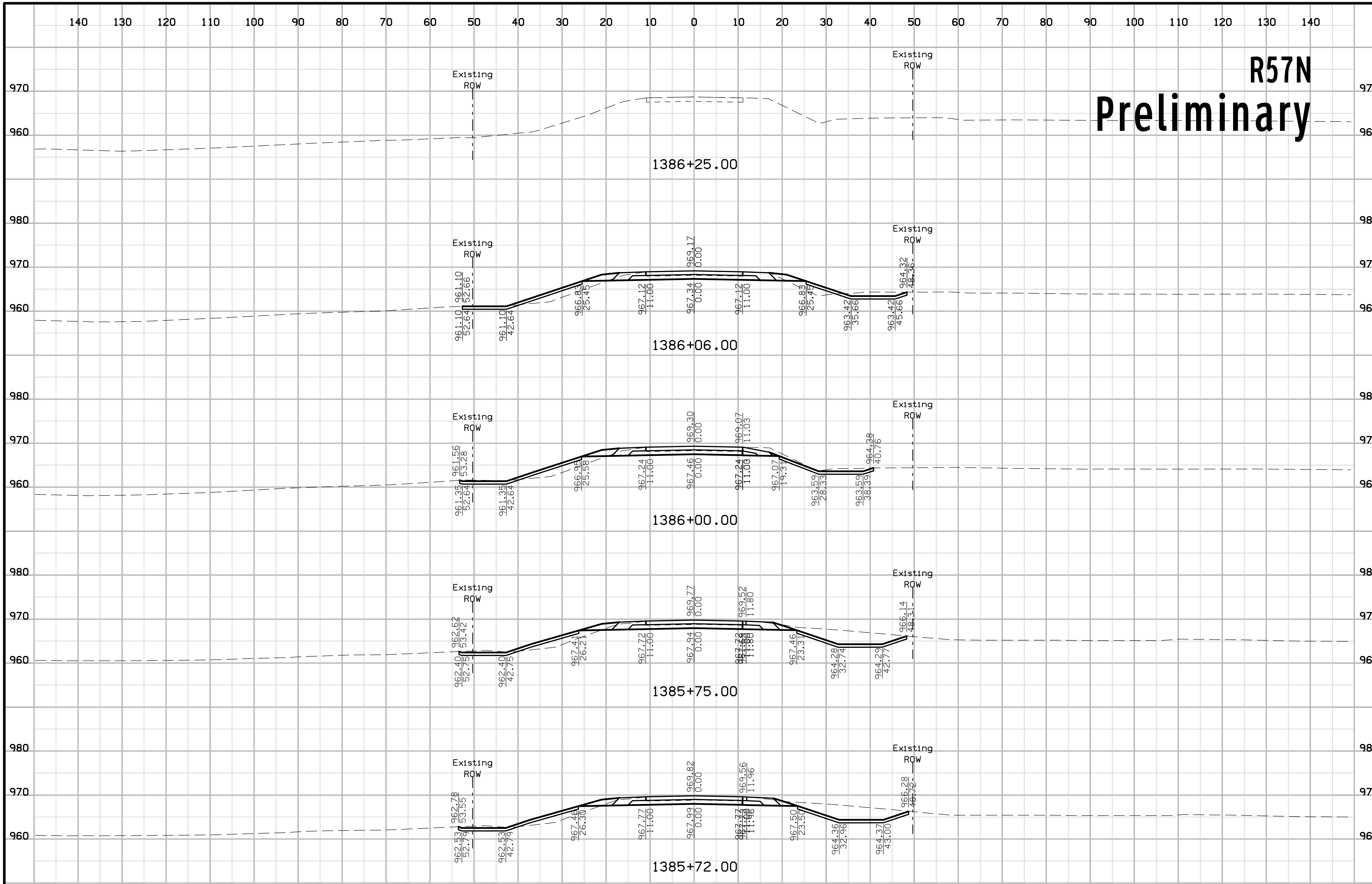

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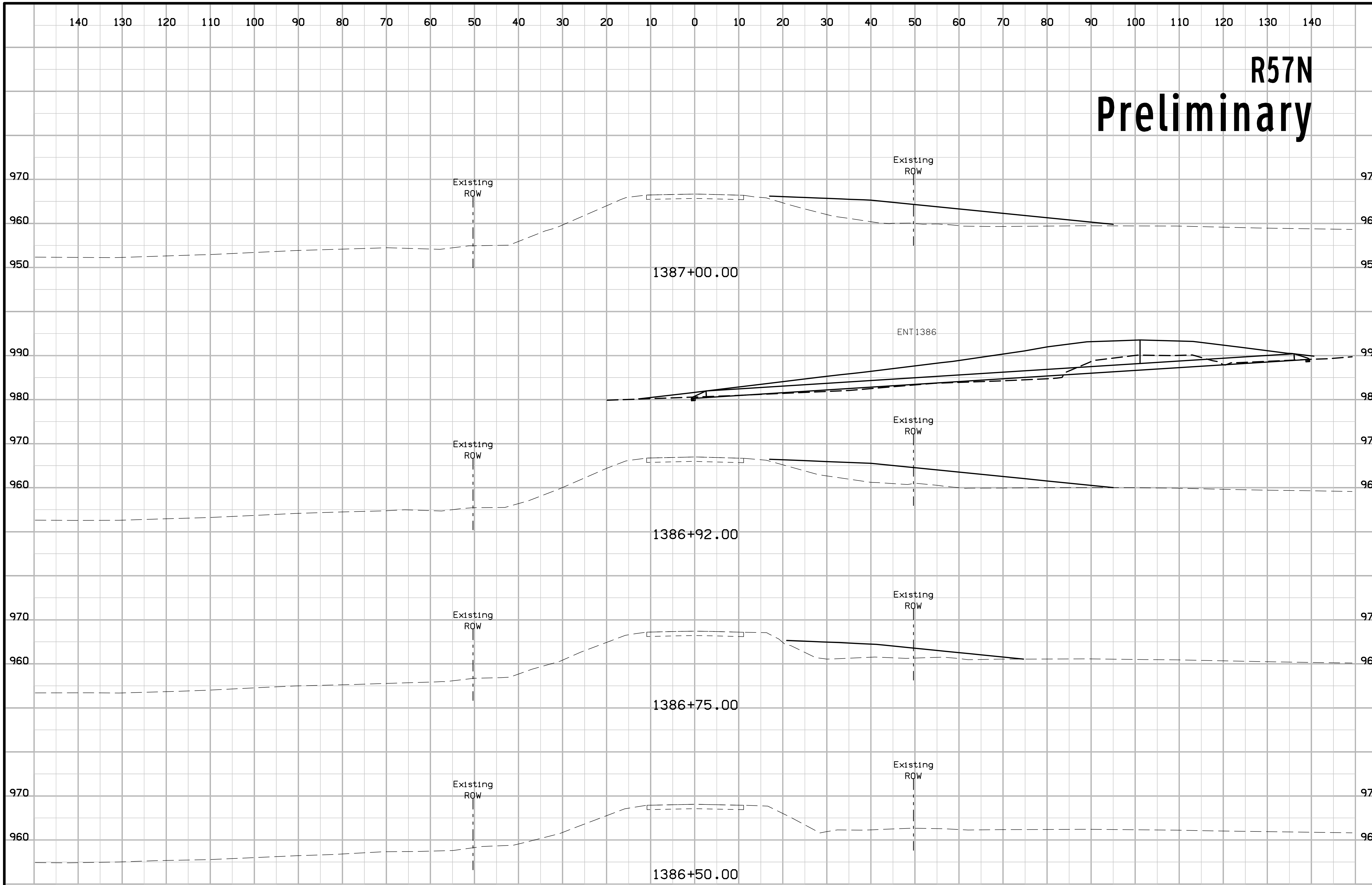

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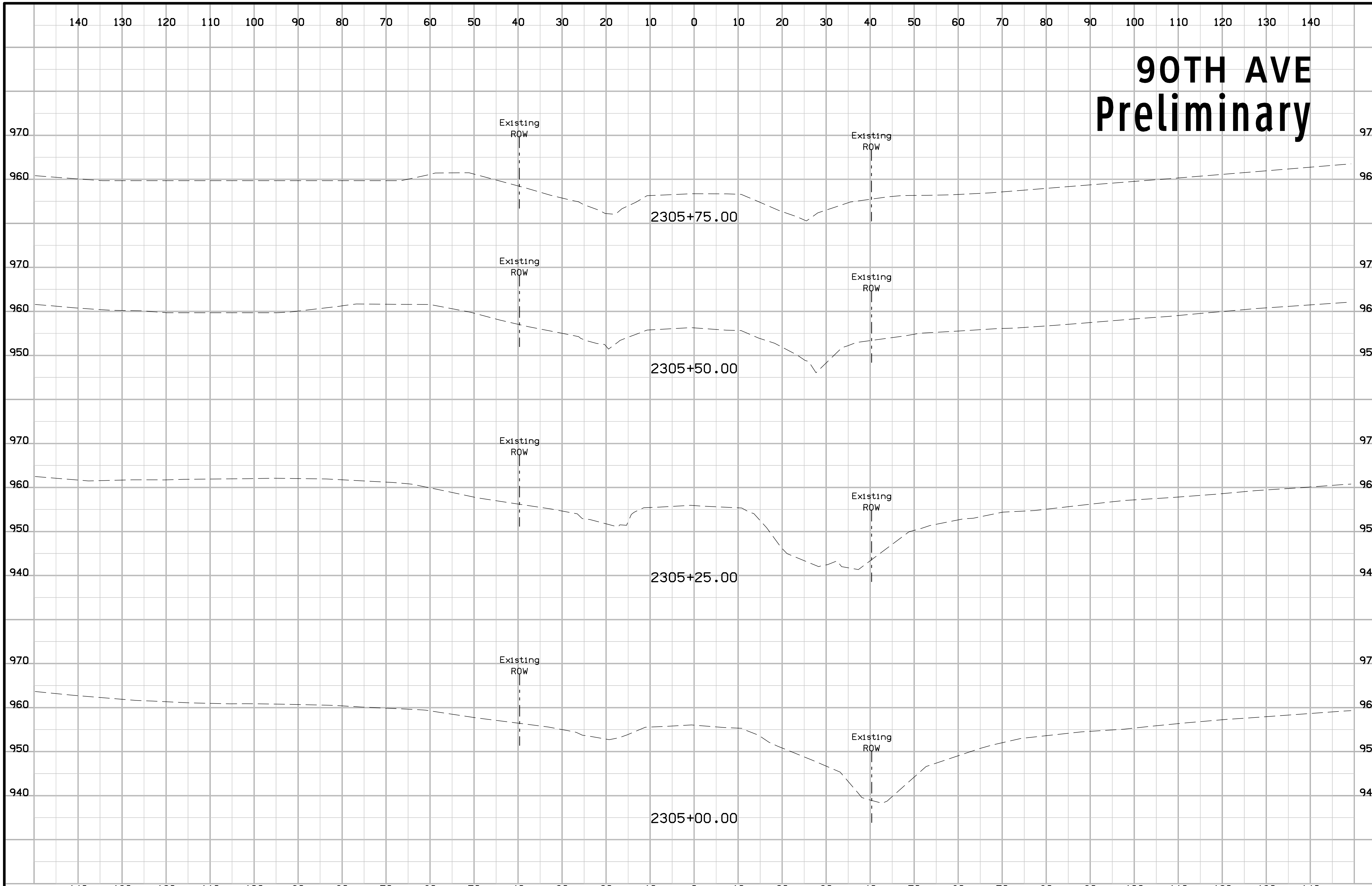

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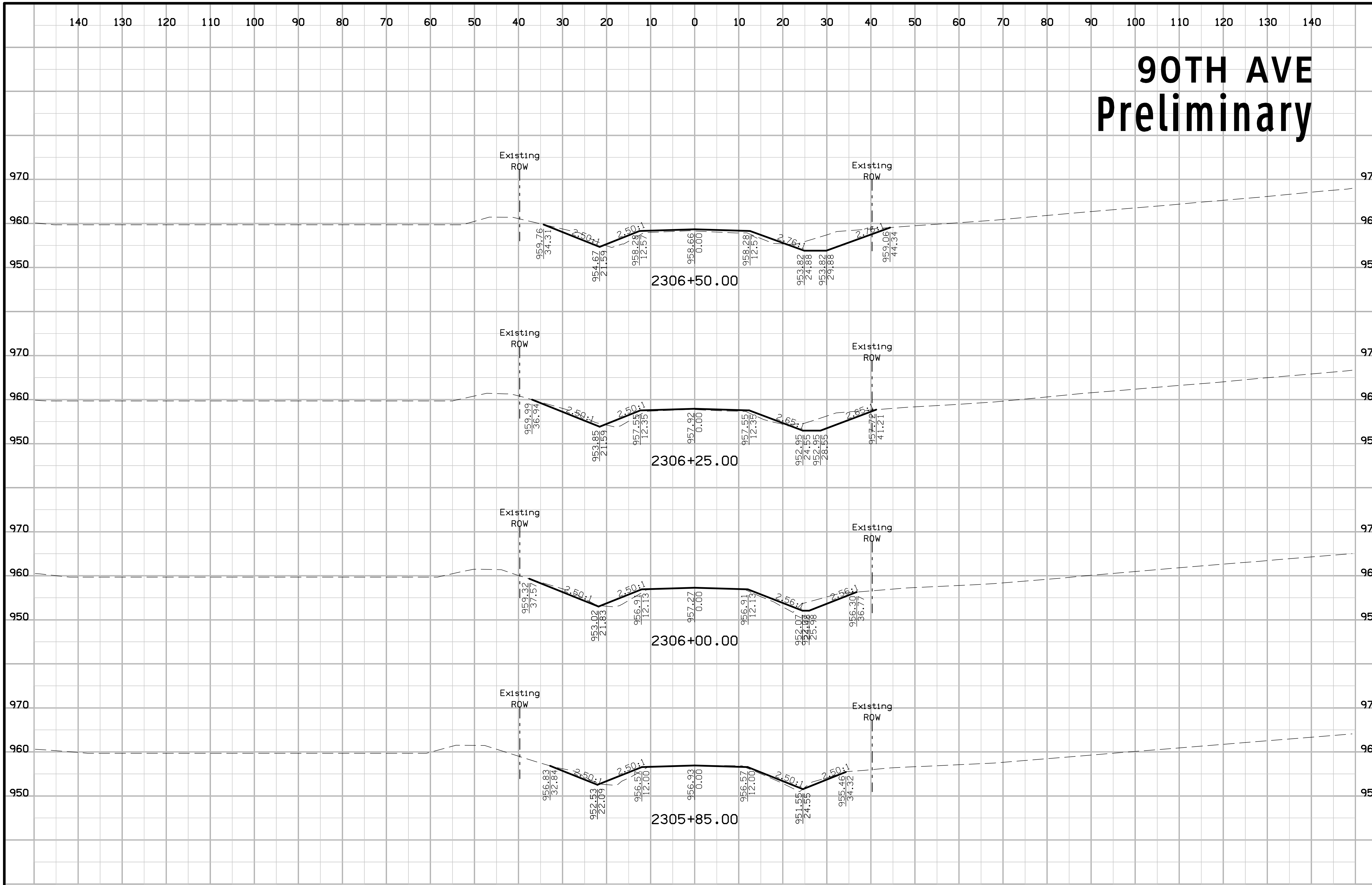

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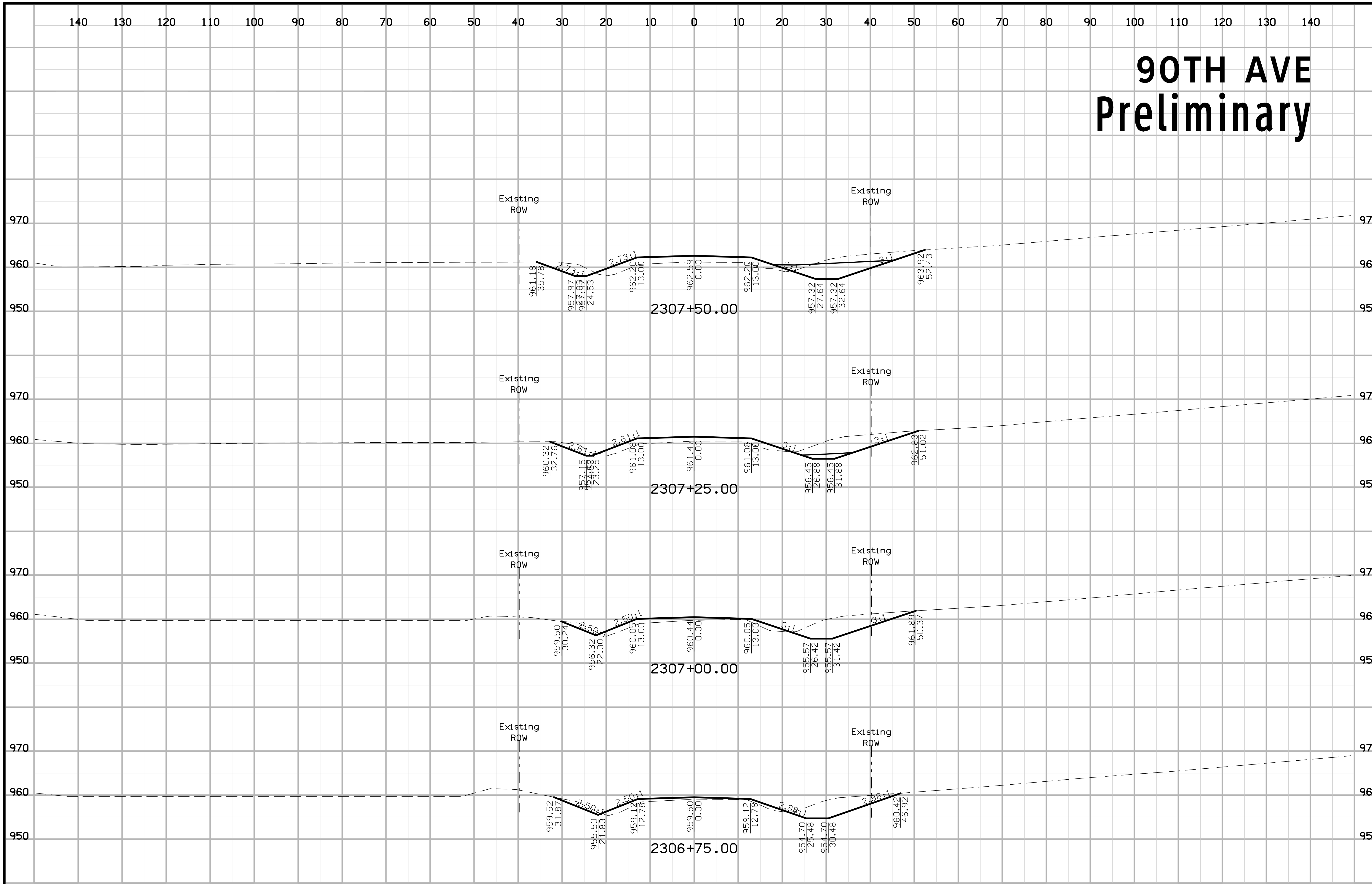

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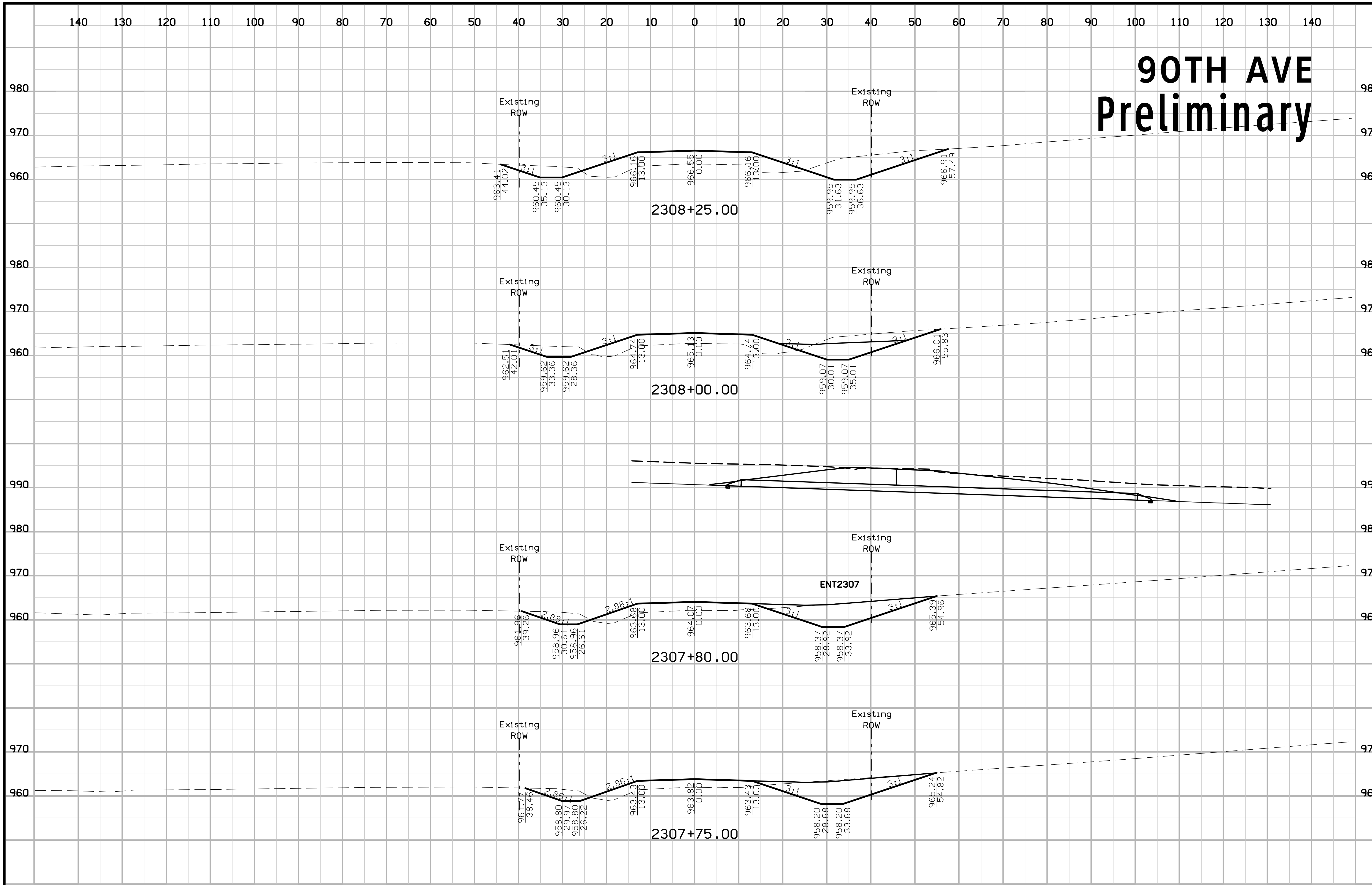

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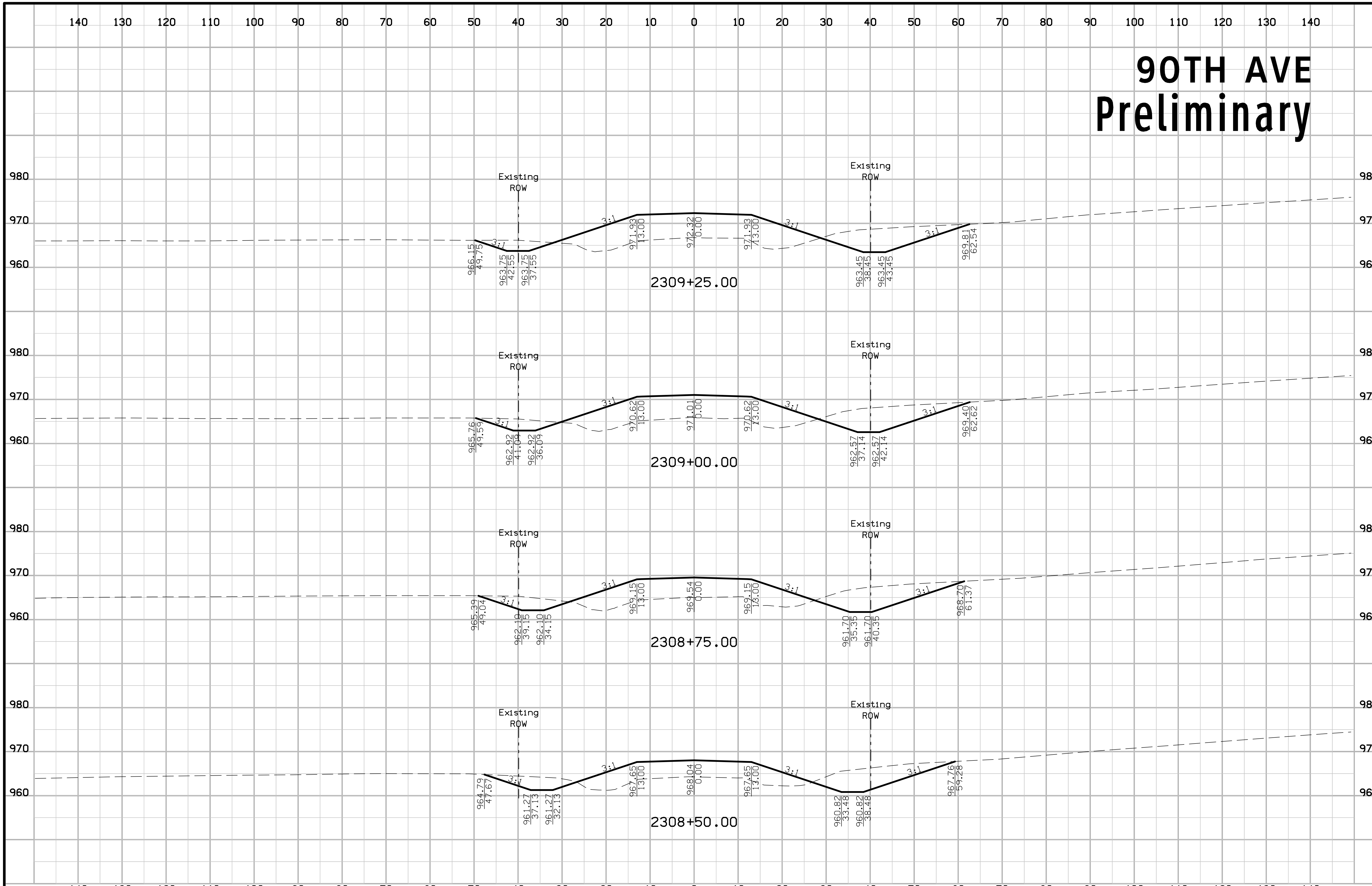
90TH AVE
Preliminary



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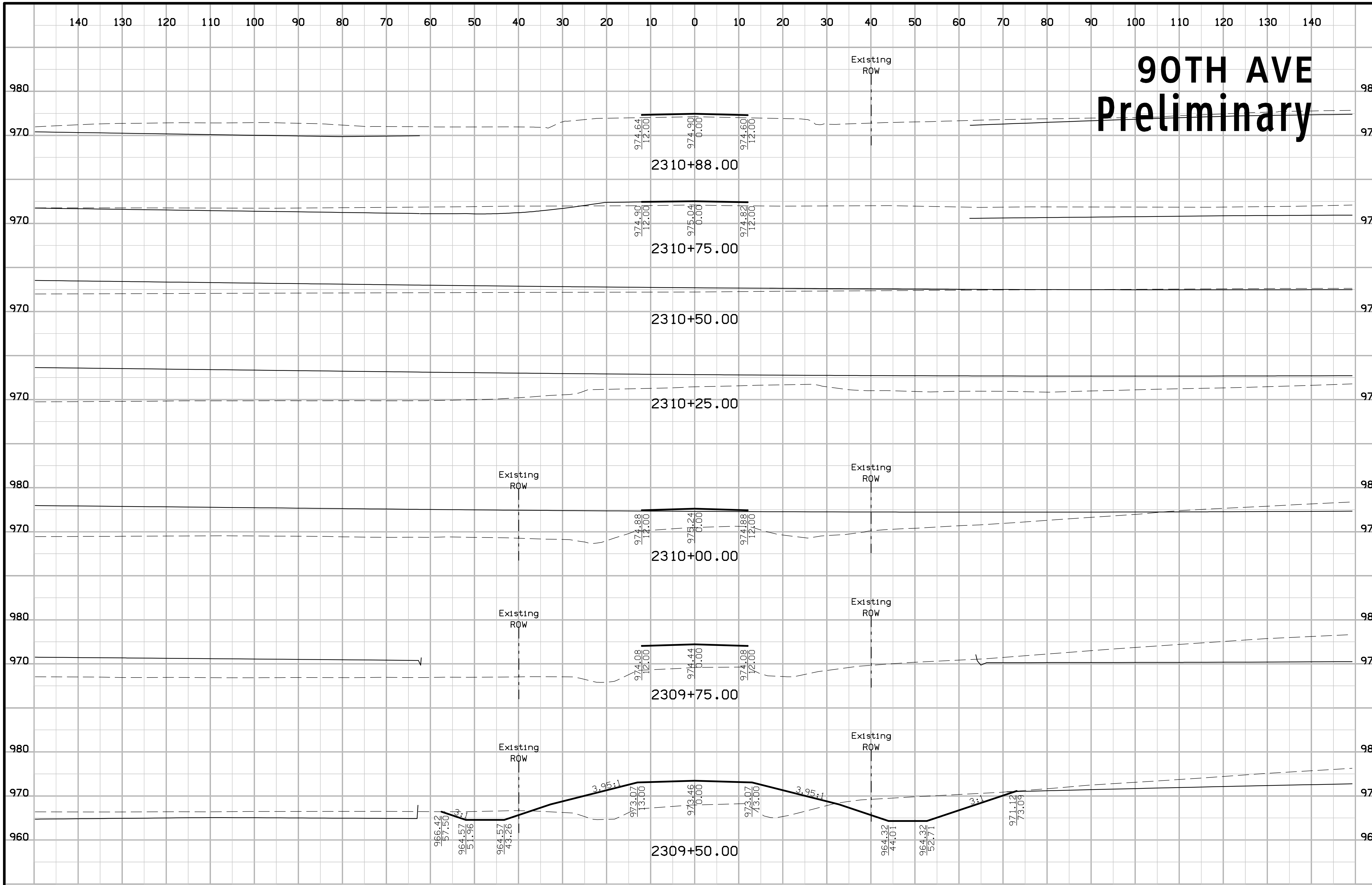

ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER X.17

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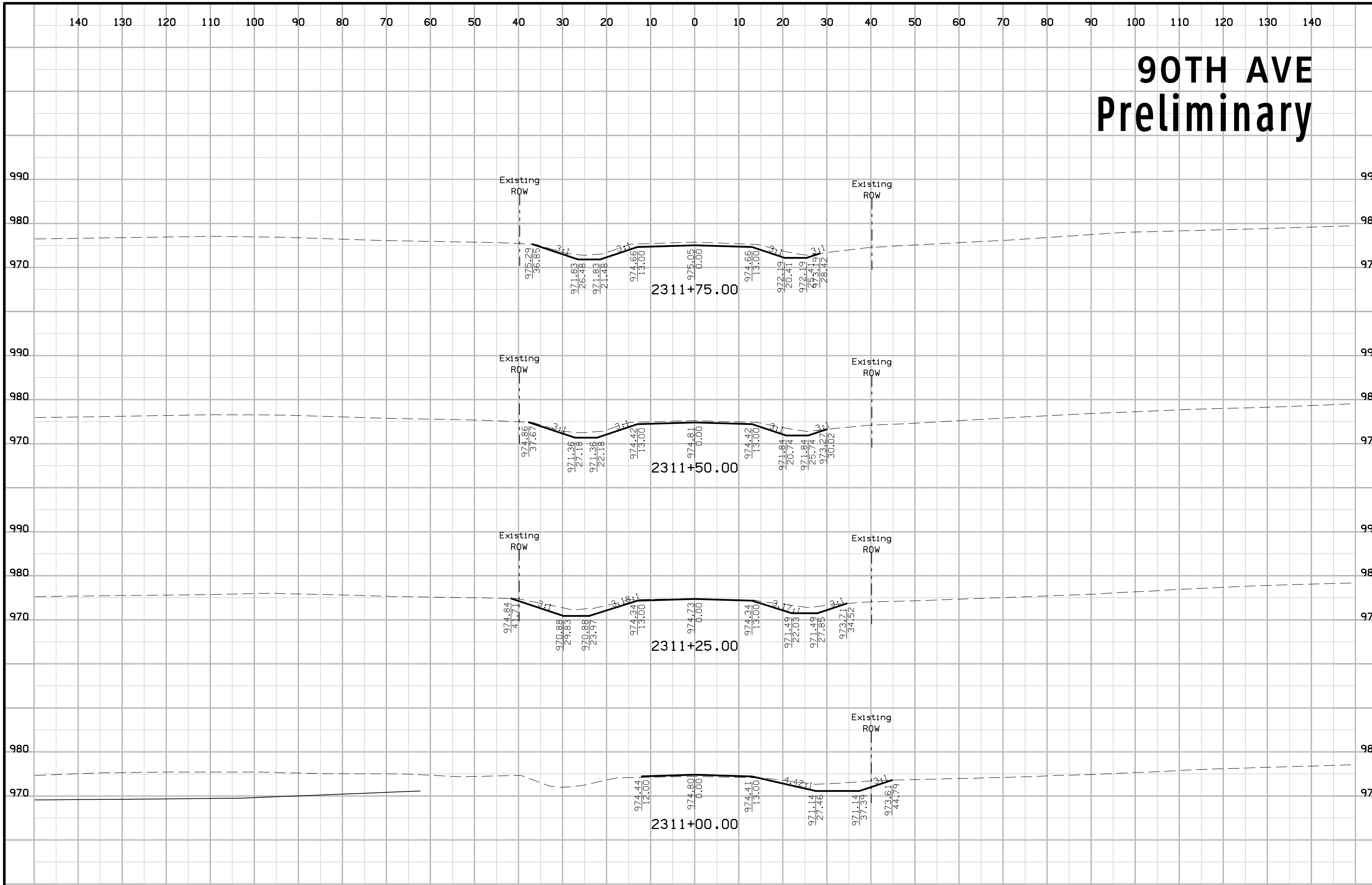

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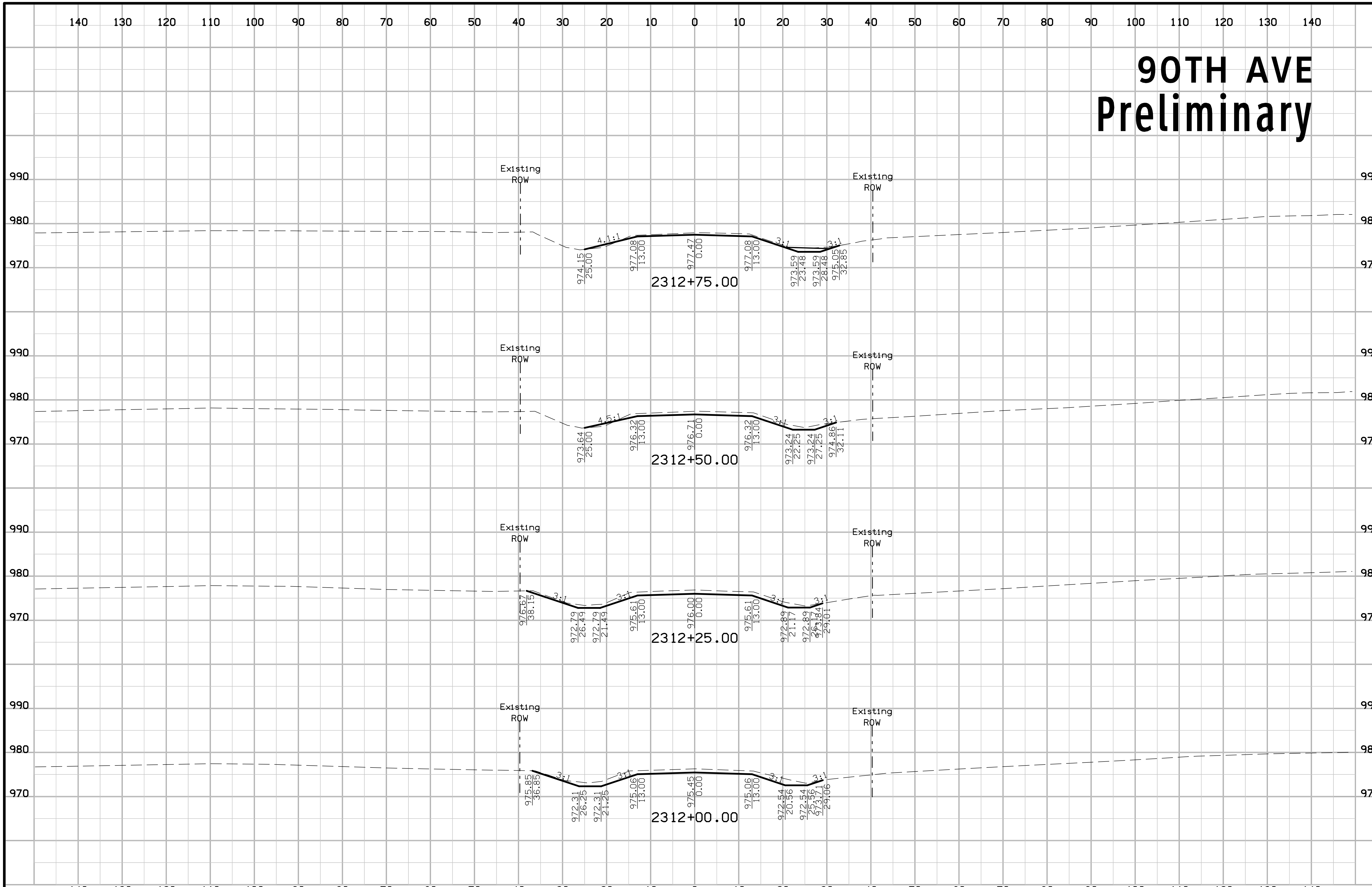

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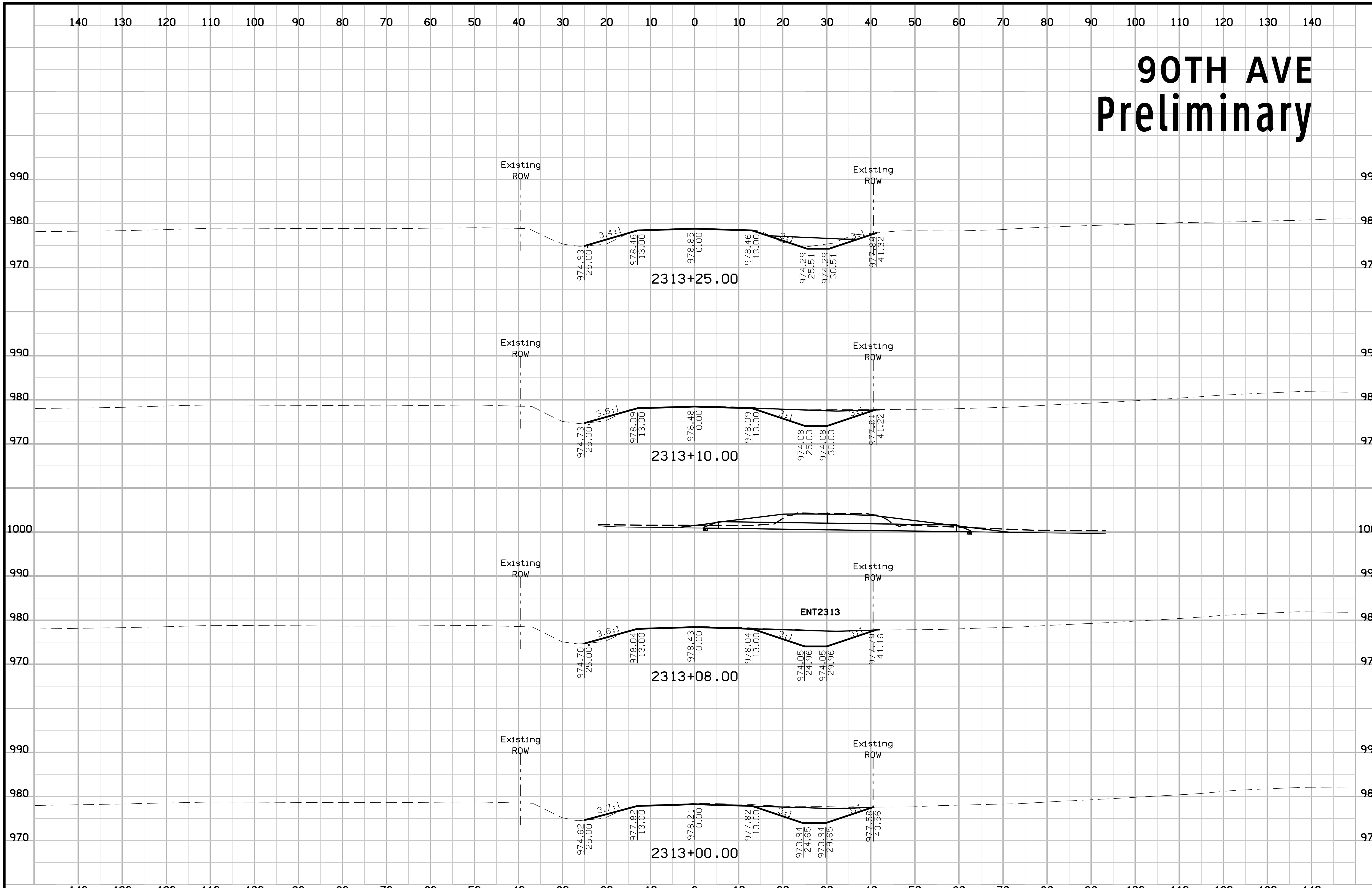

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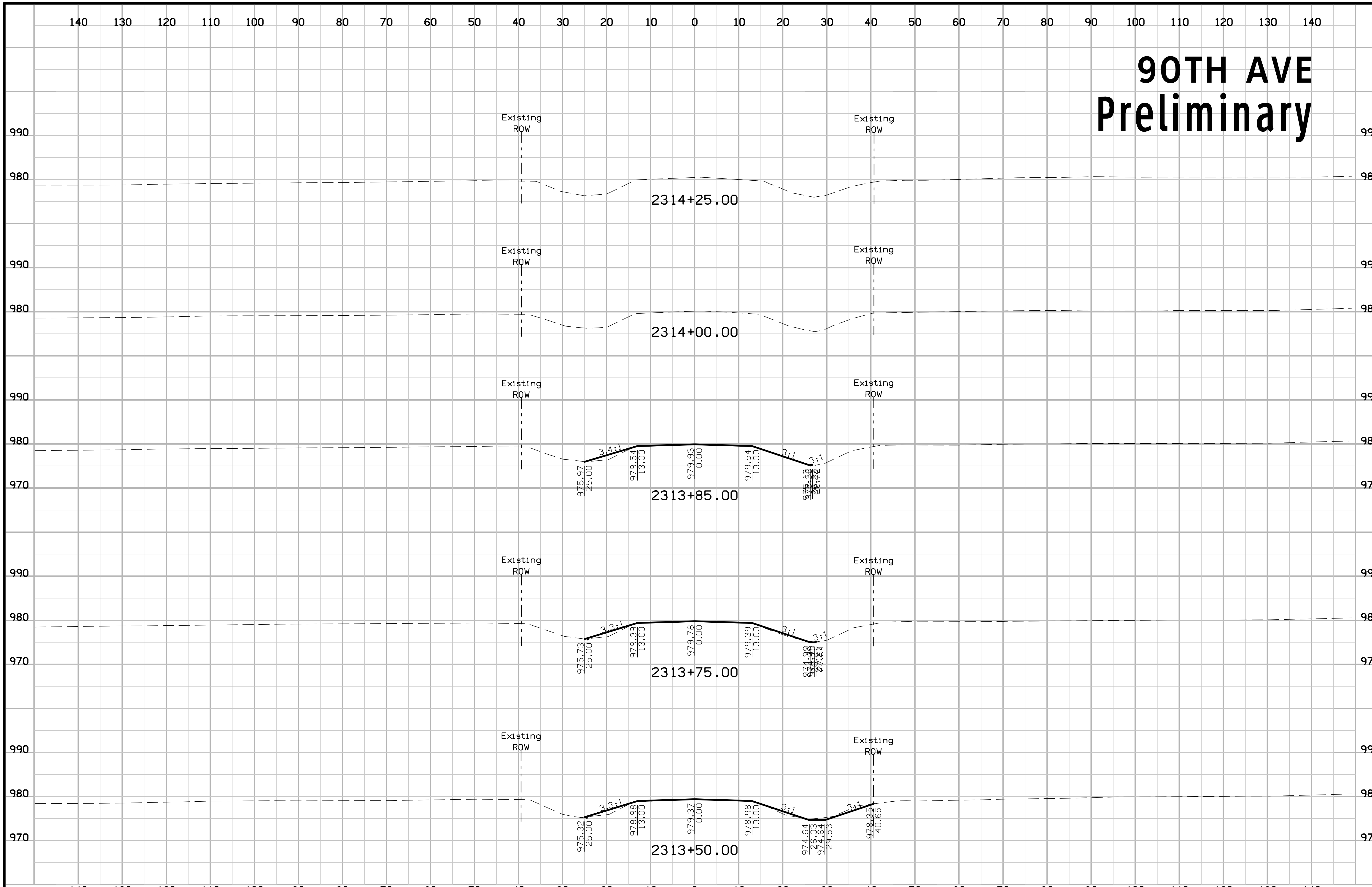

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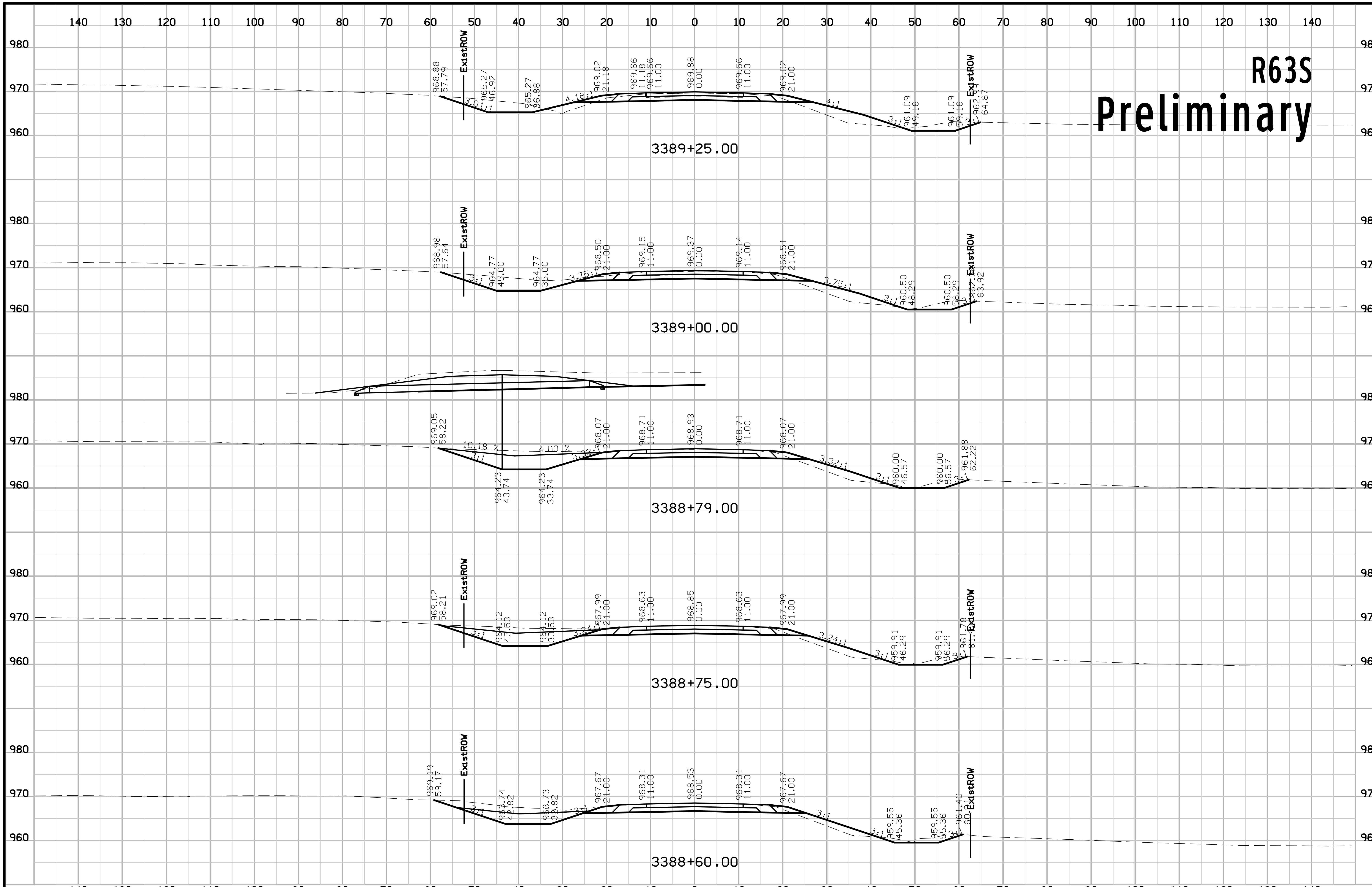
R63S
Preliminary
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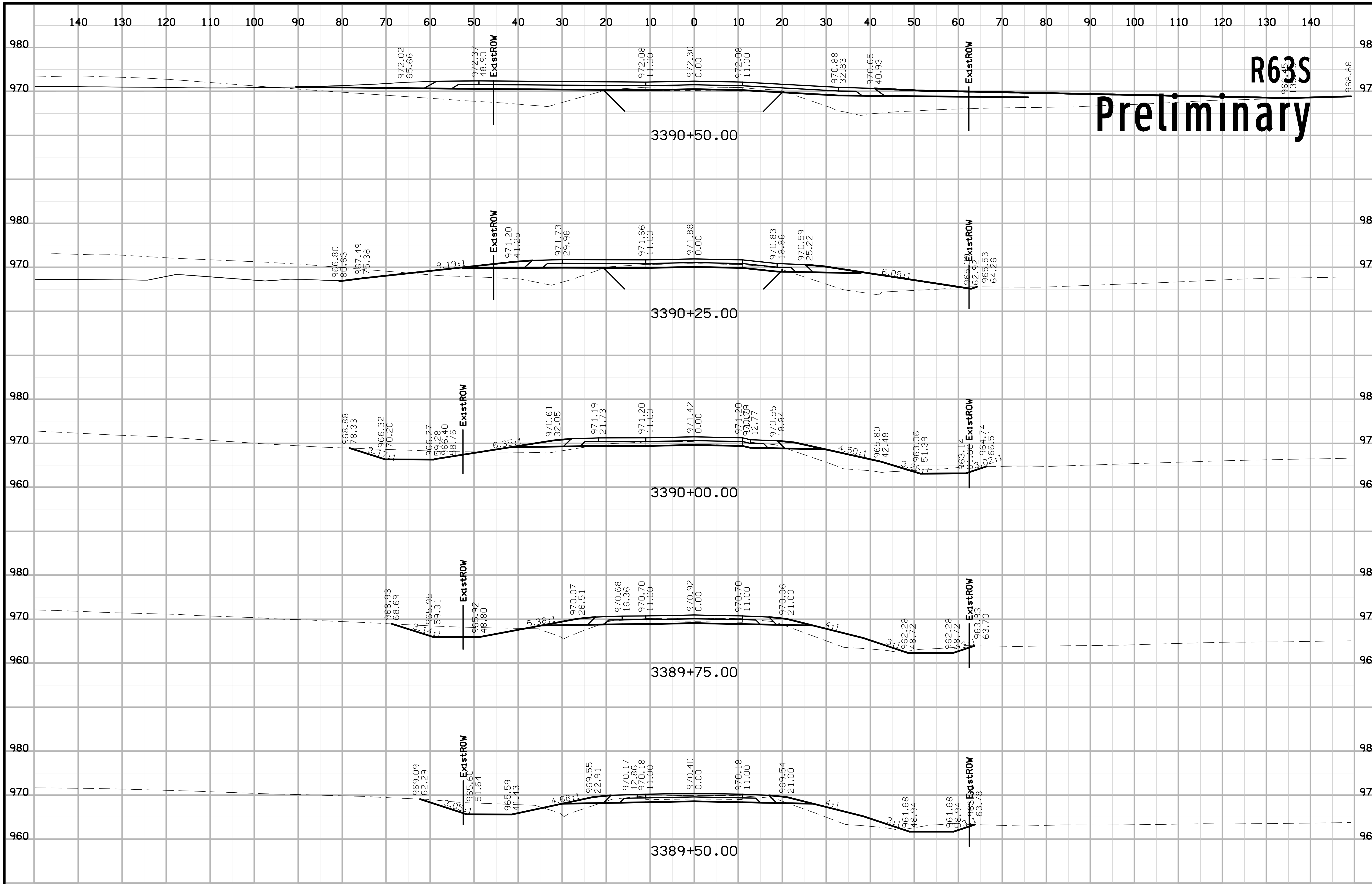

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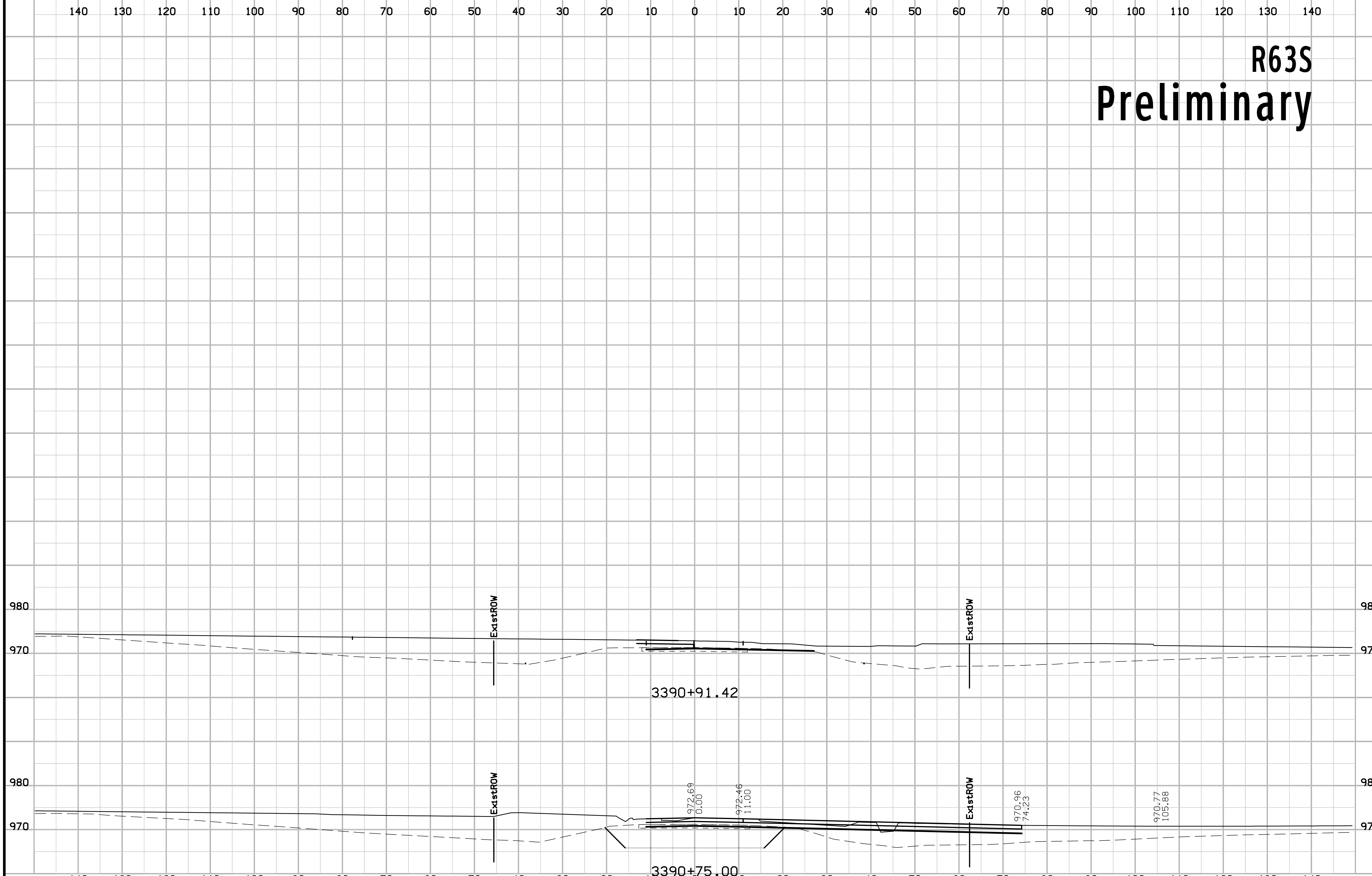
R63S
Preliminary



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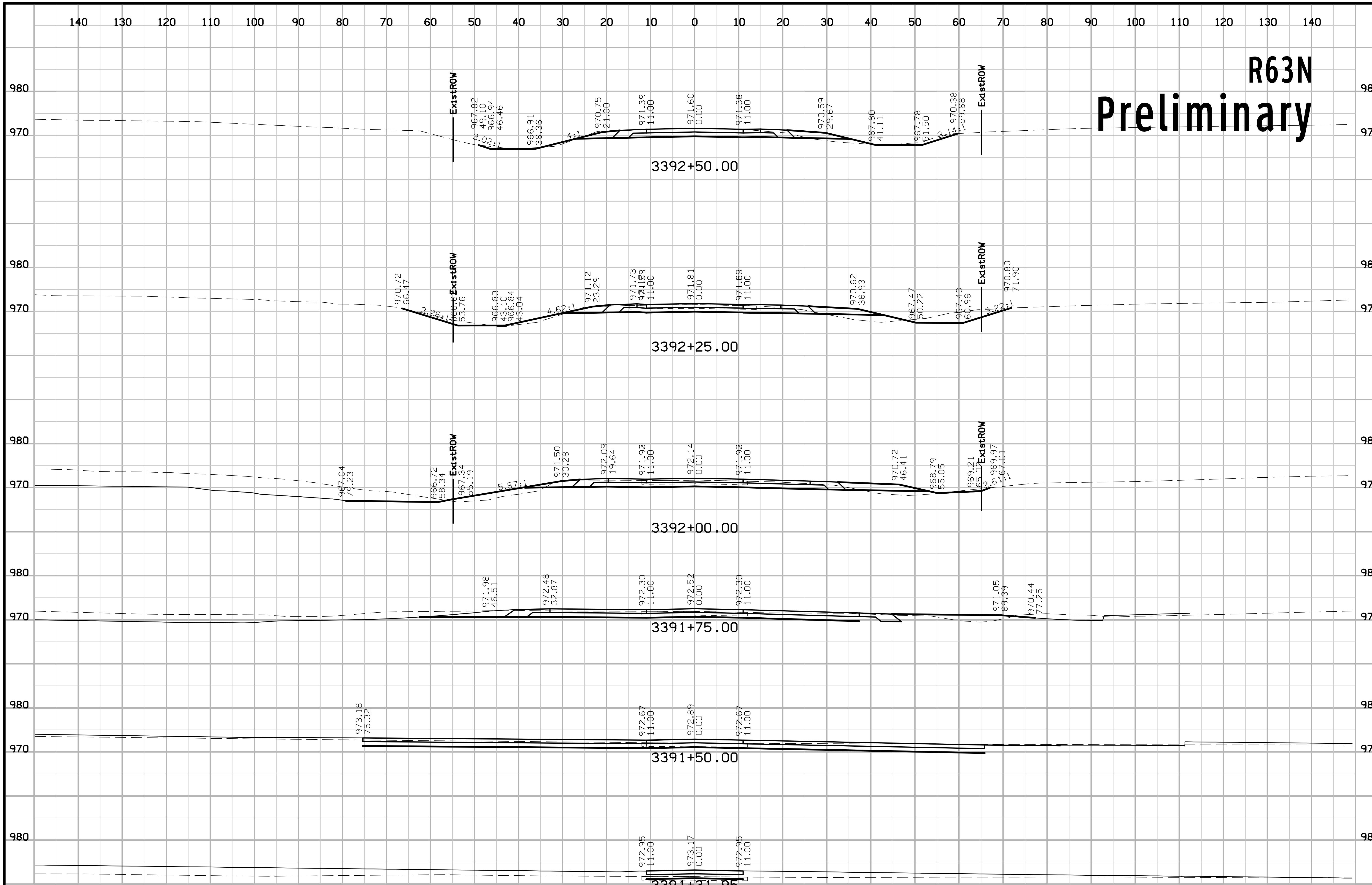
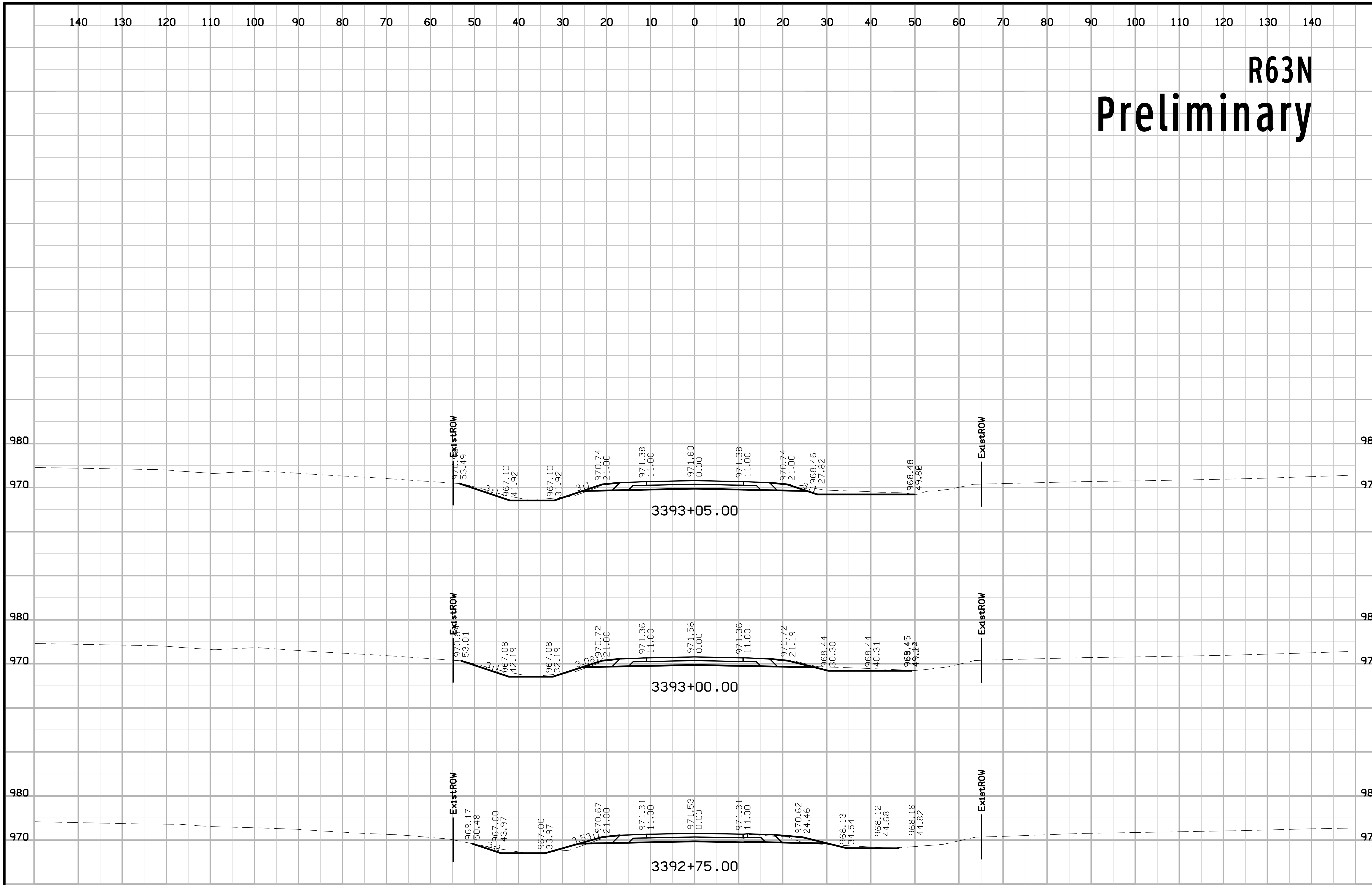


ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER X.25

R63N
Preliminary



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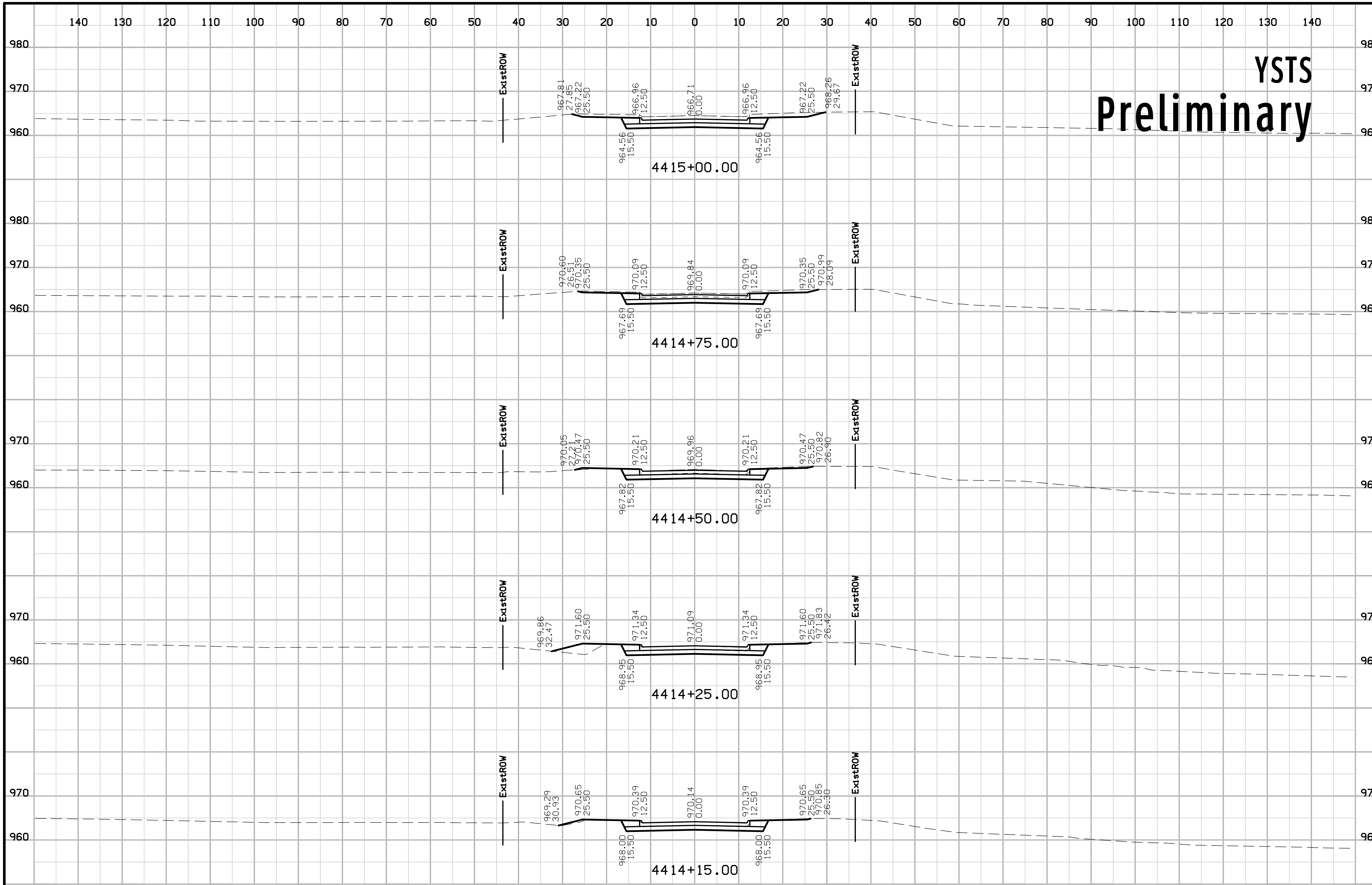

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER X.27

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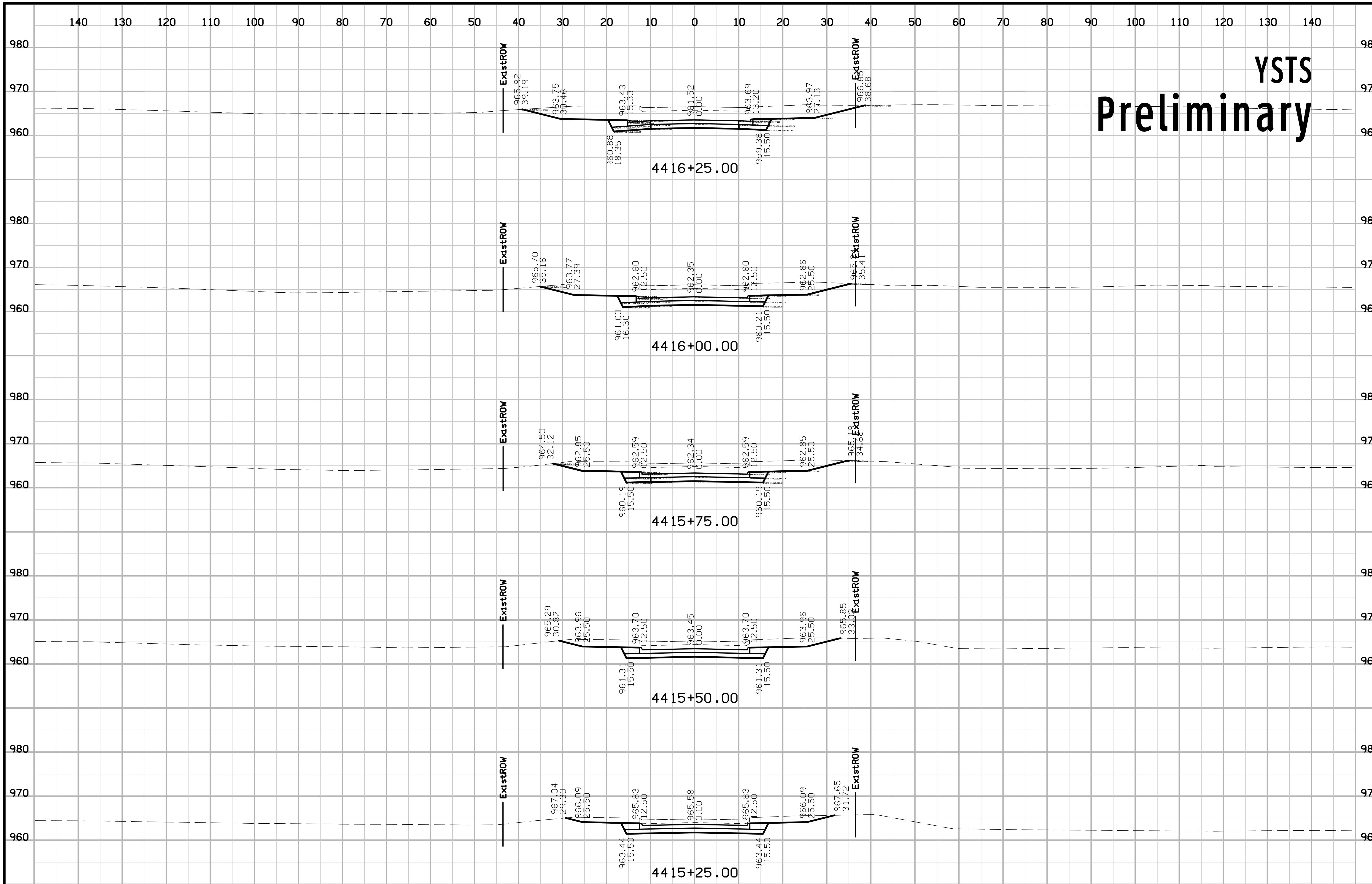

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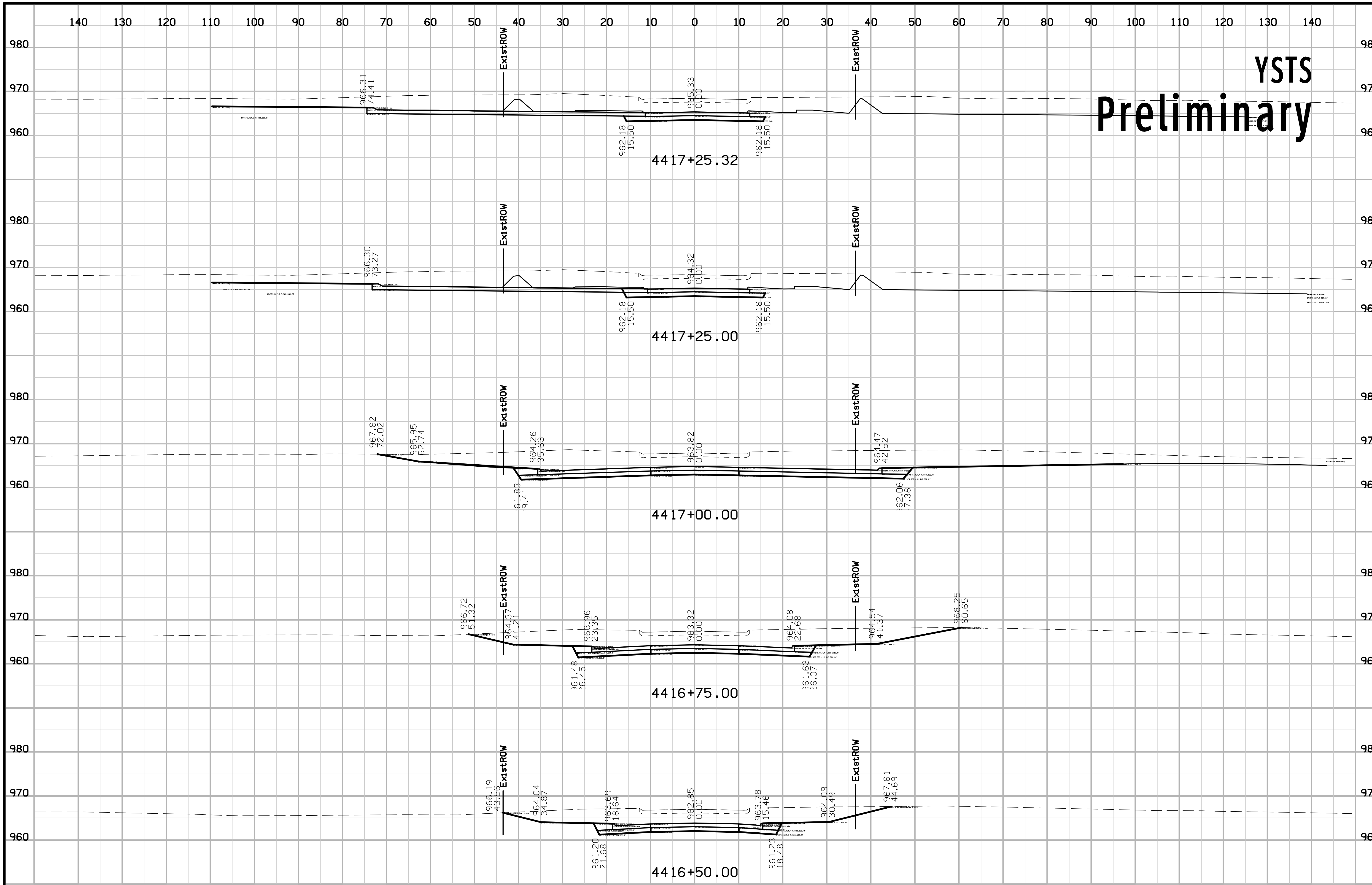

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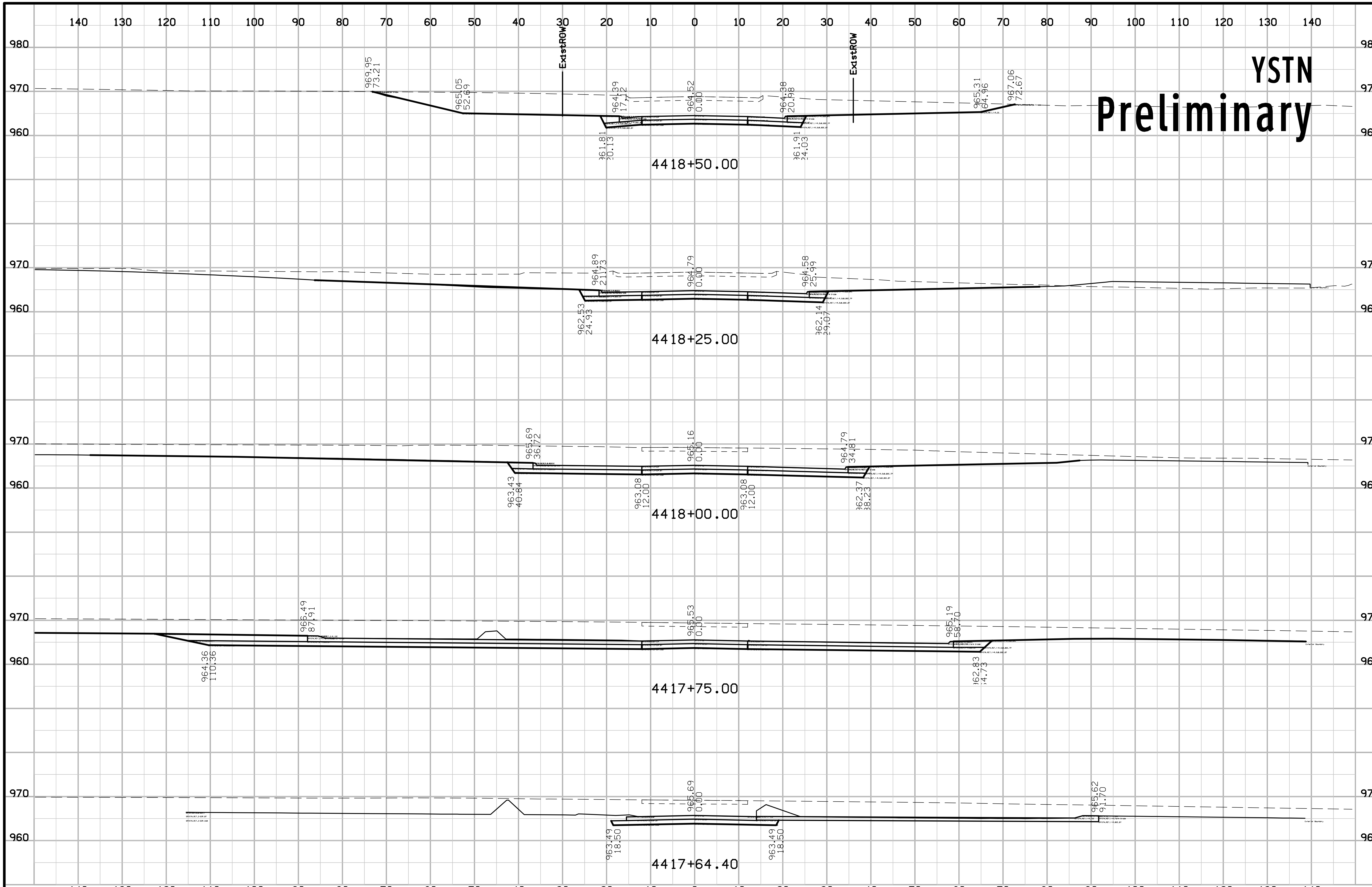

ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER X.30

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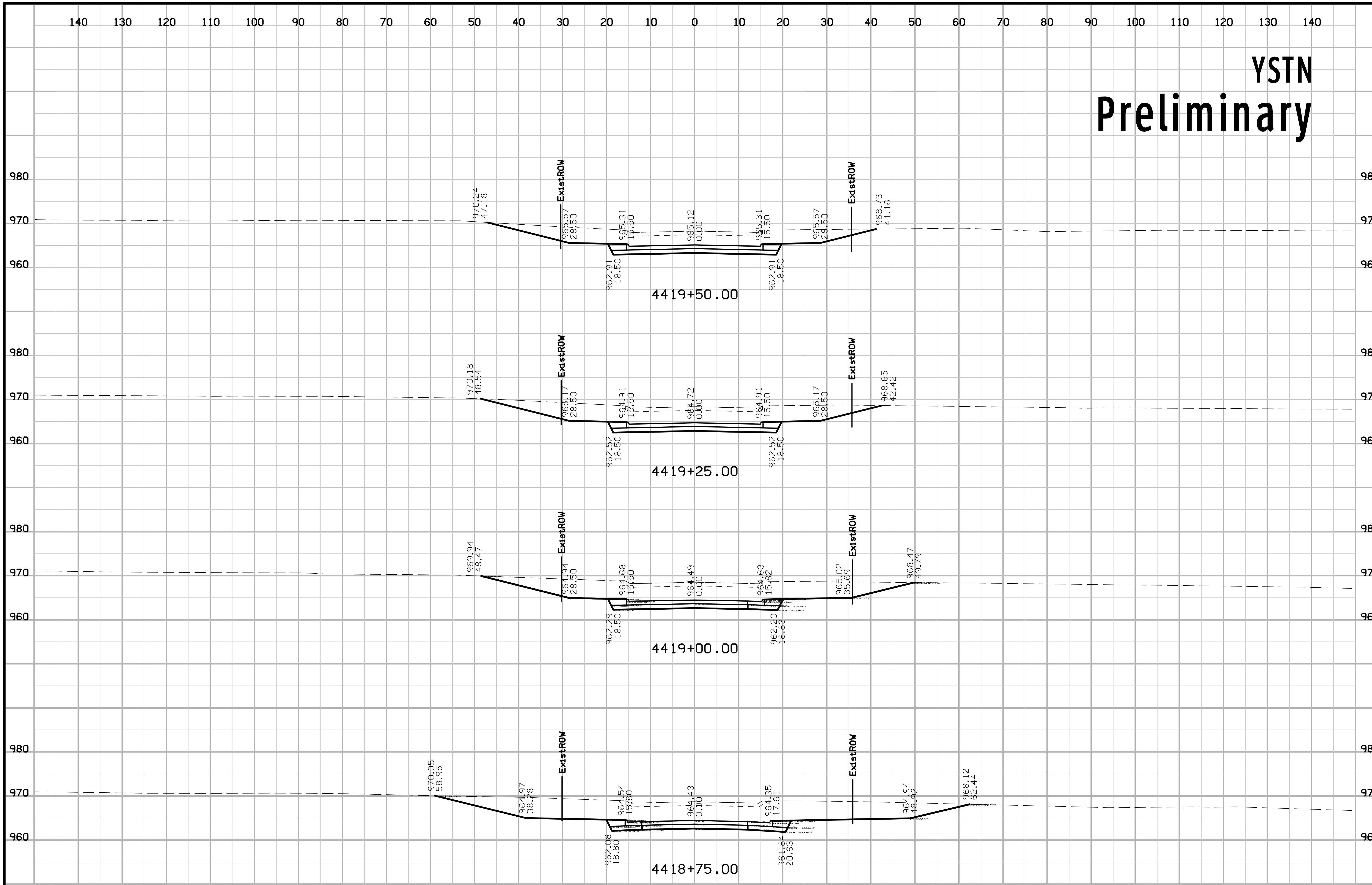

ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER X.31

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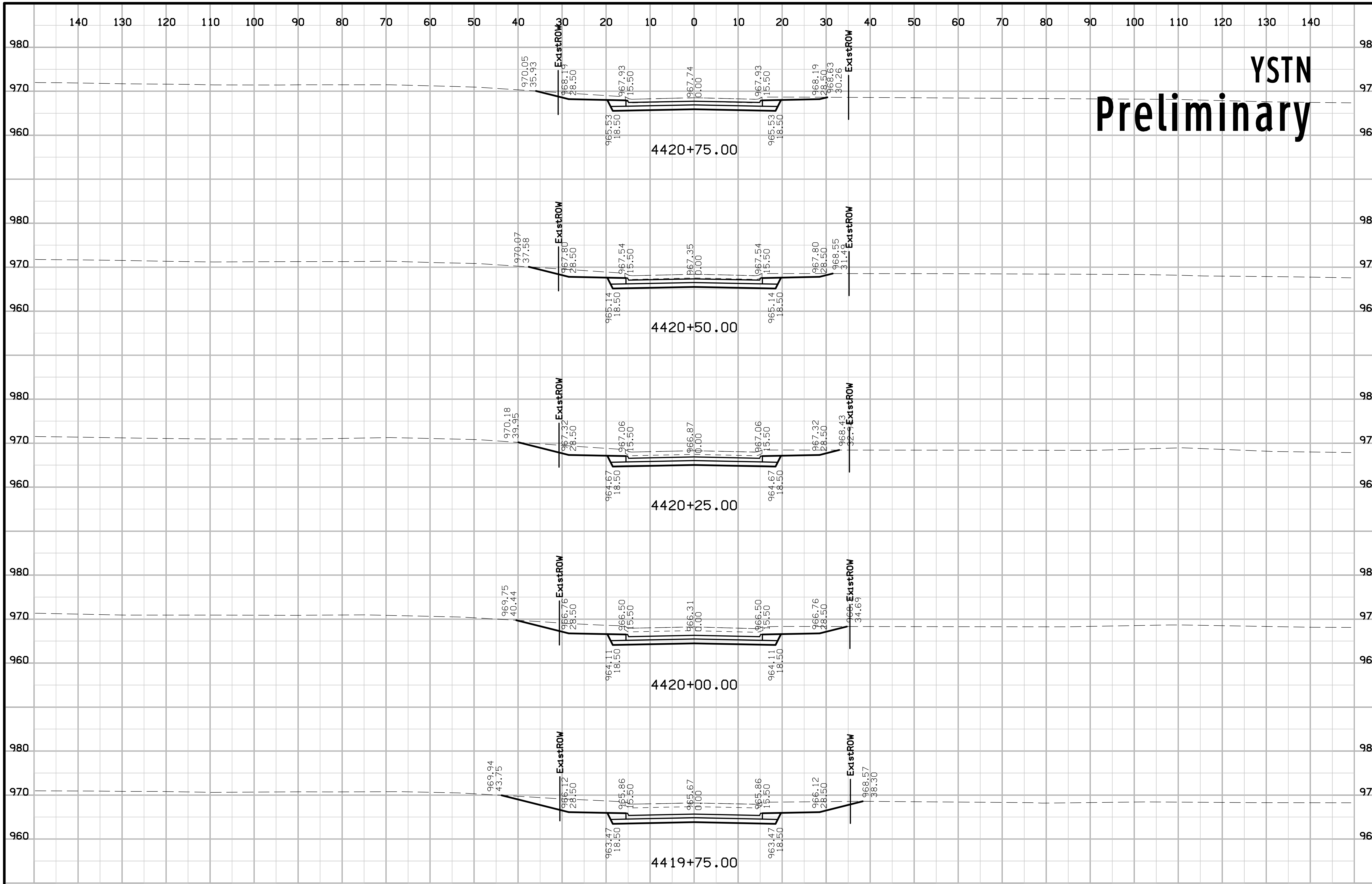

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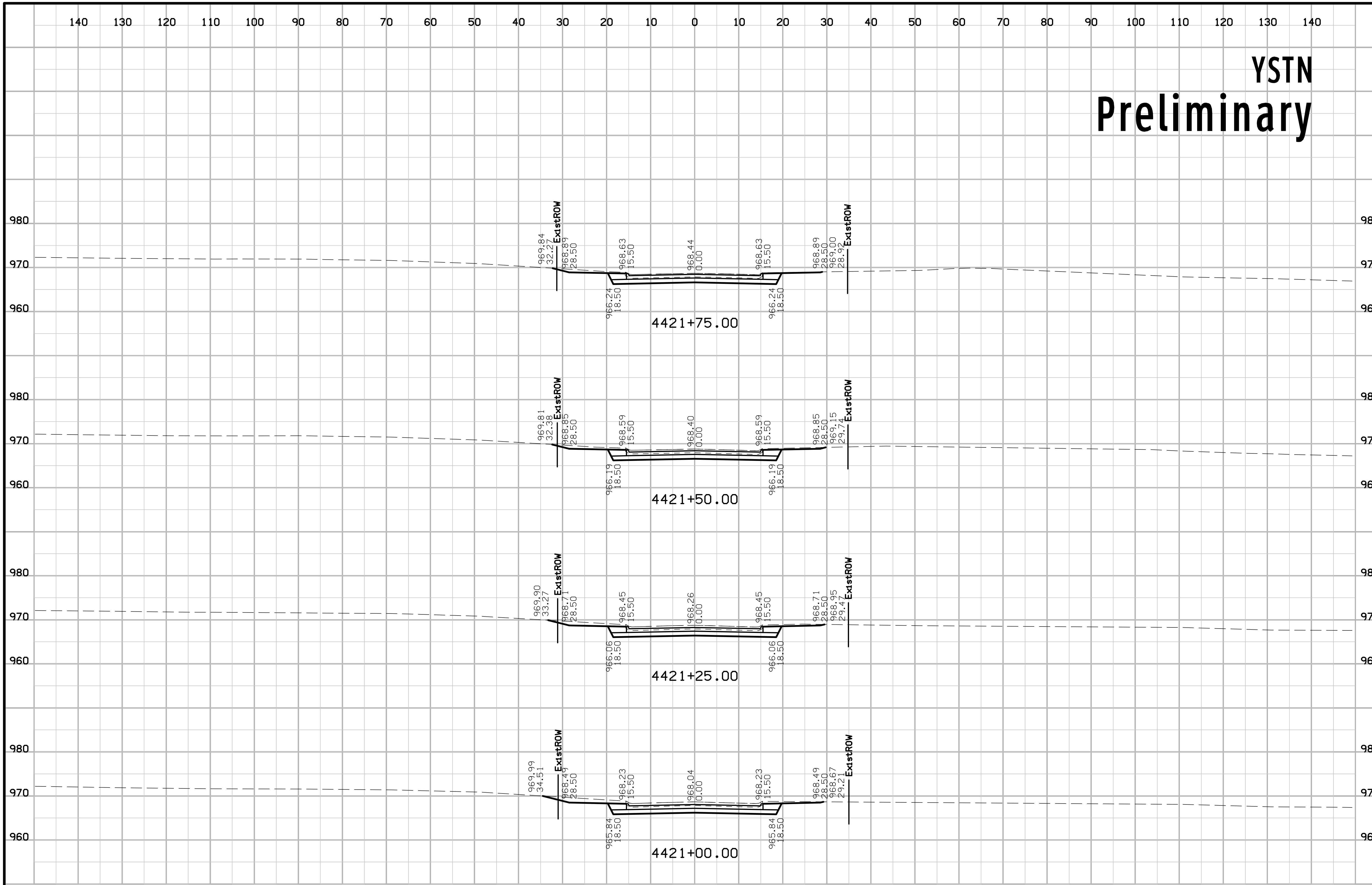

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER X.33

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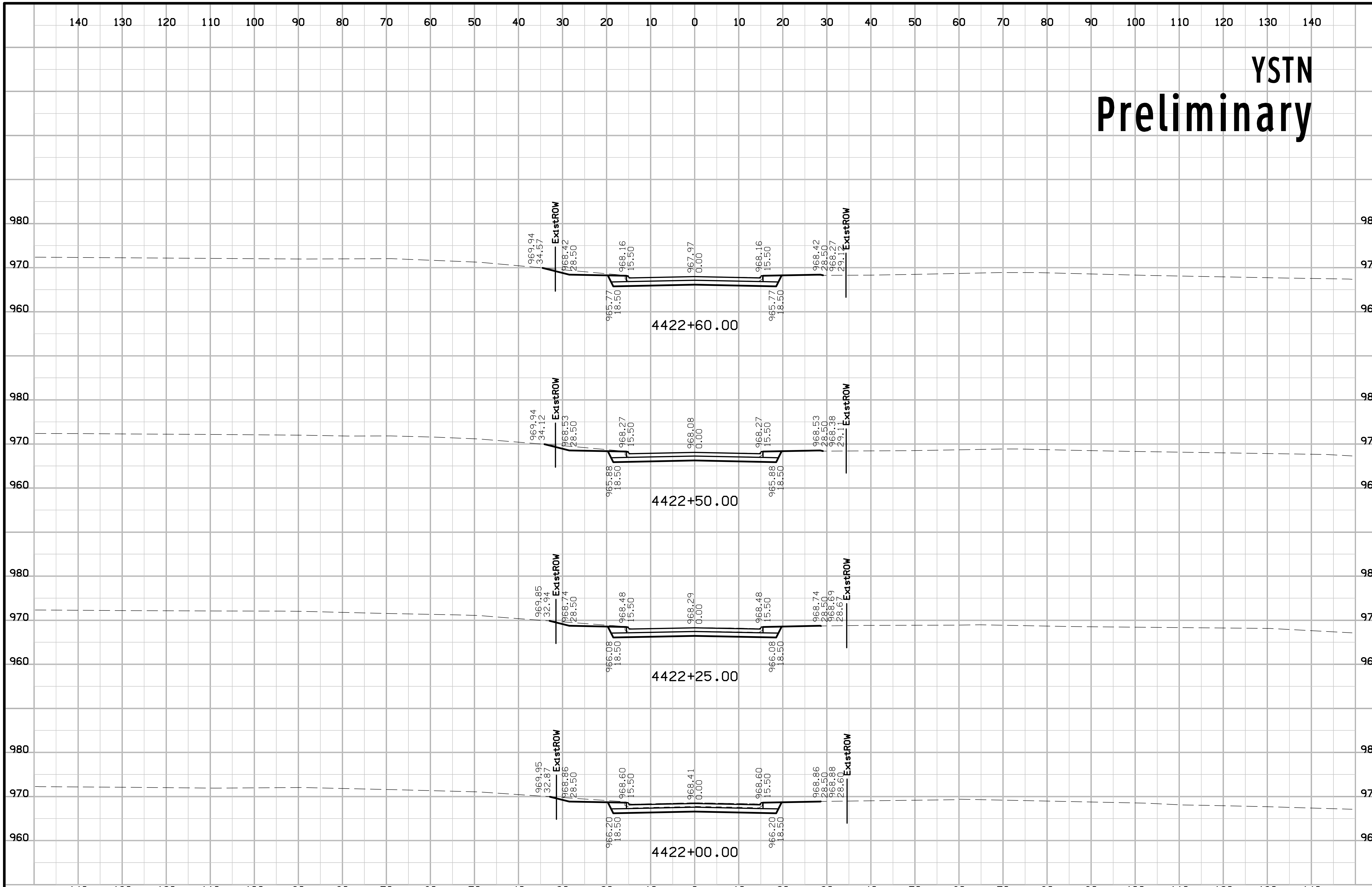

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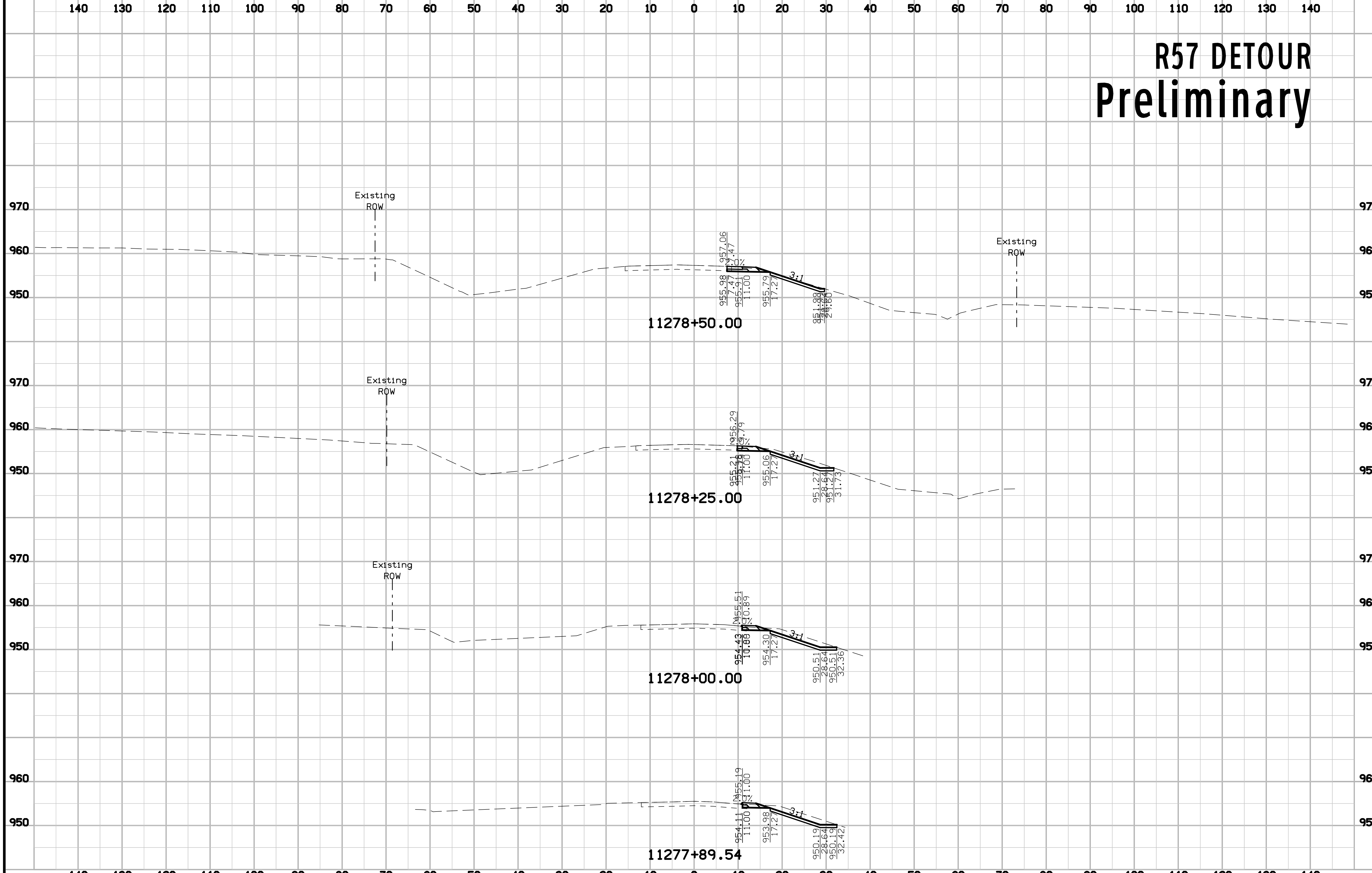
R57 DETOUR
Preliminary



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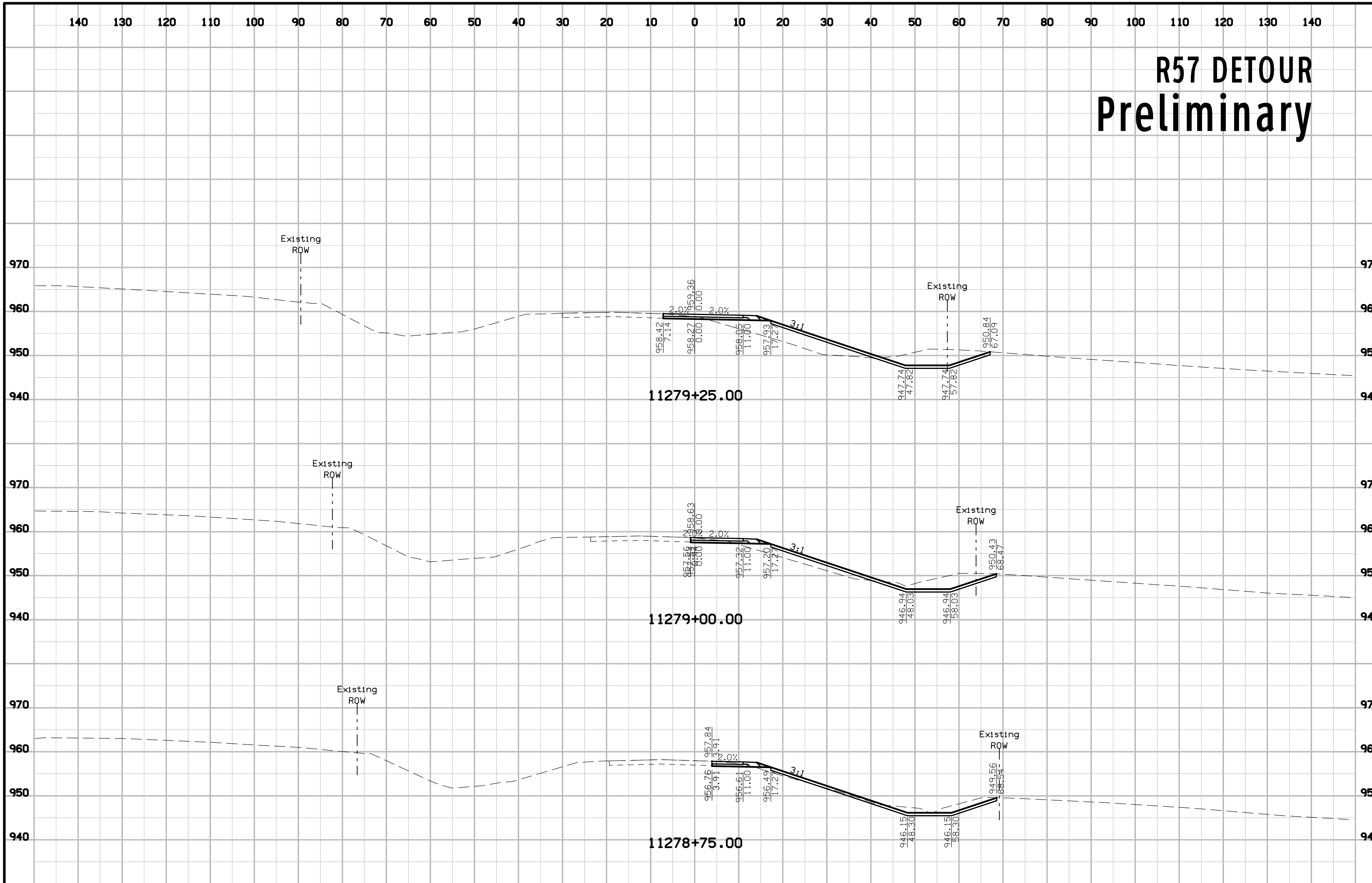

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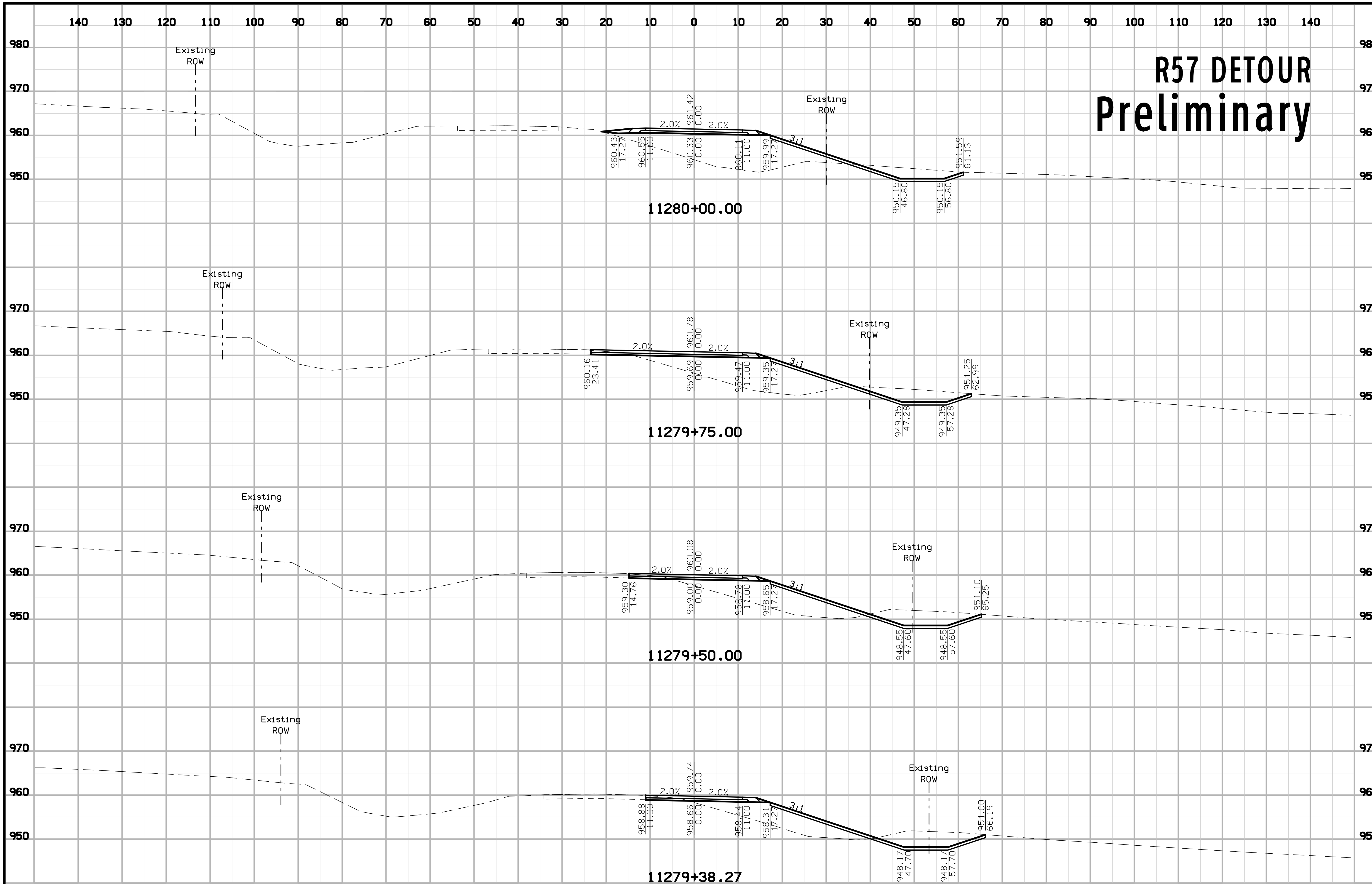

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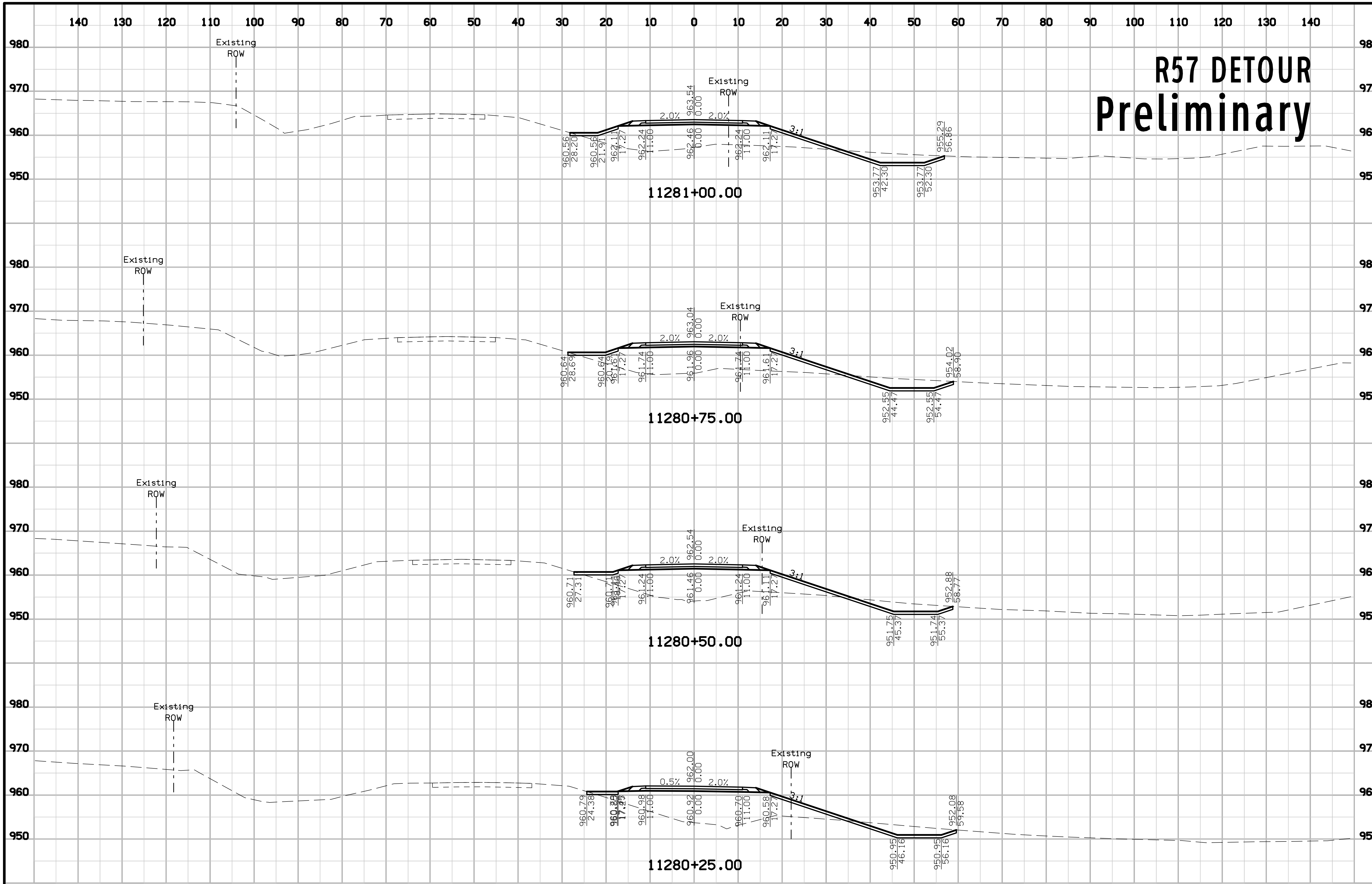

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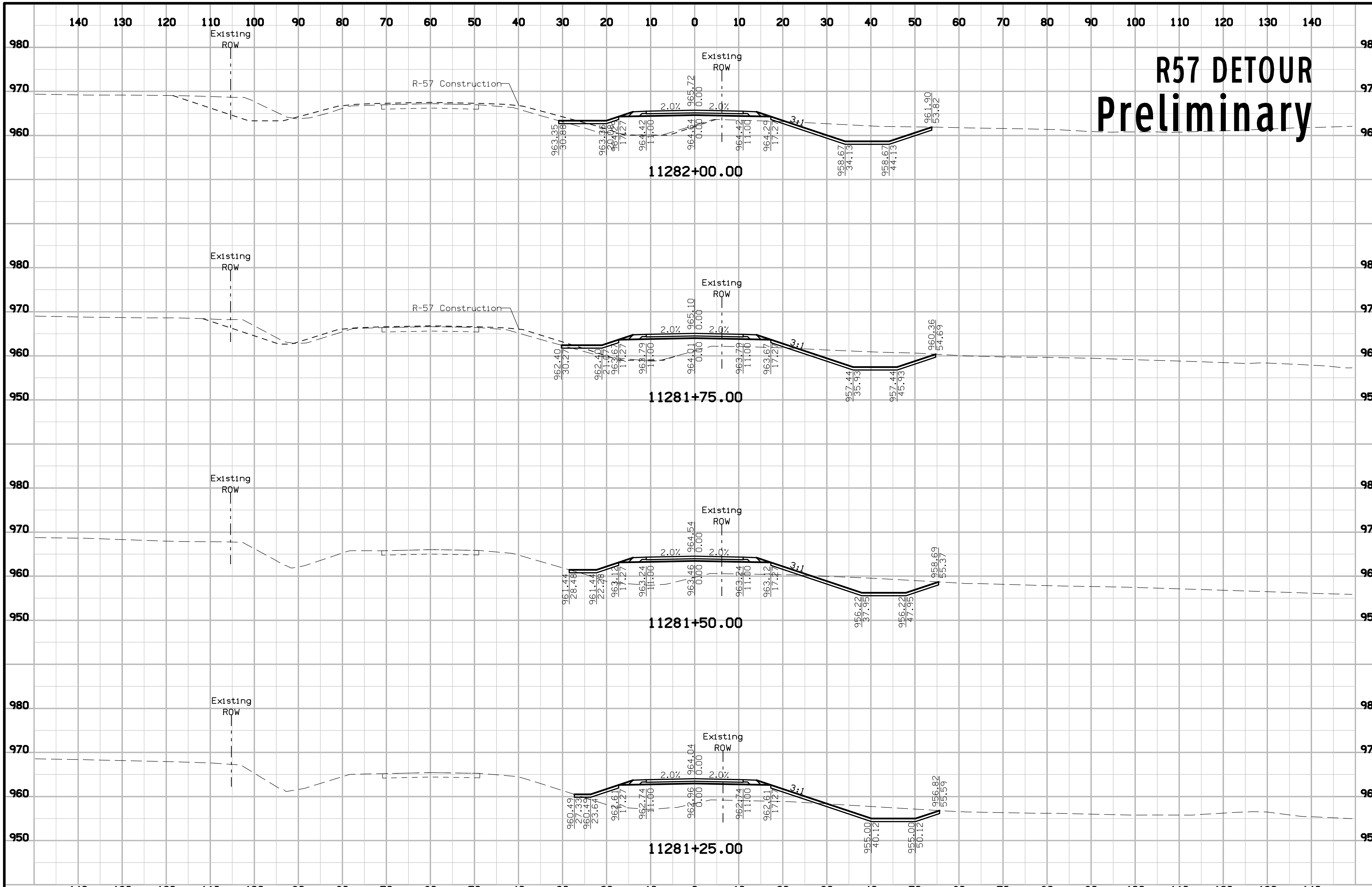
R57 DETOUR
Preliminary



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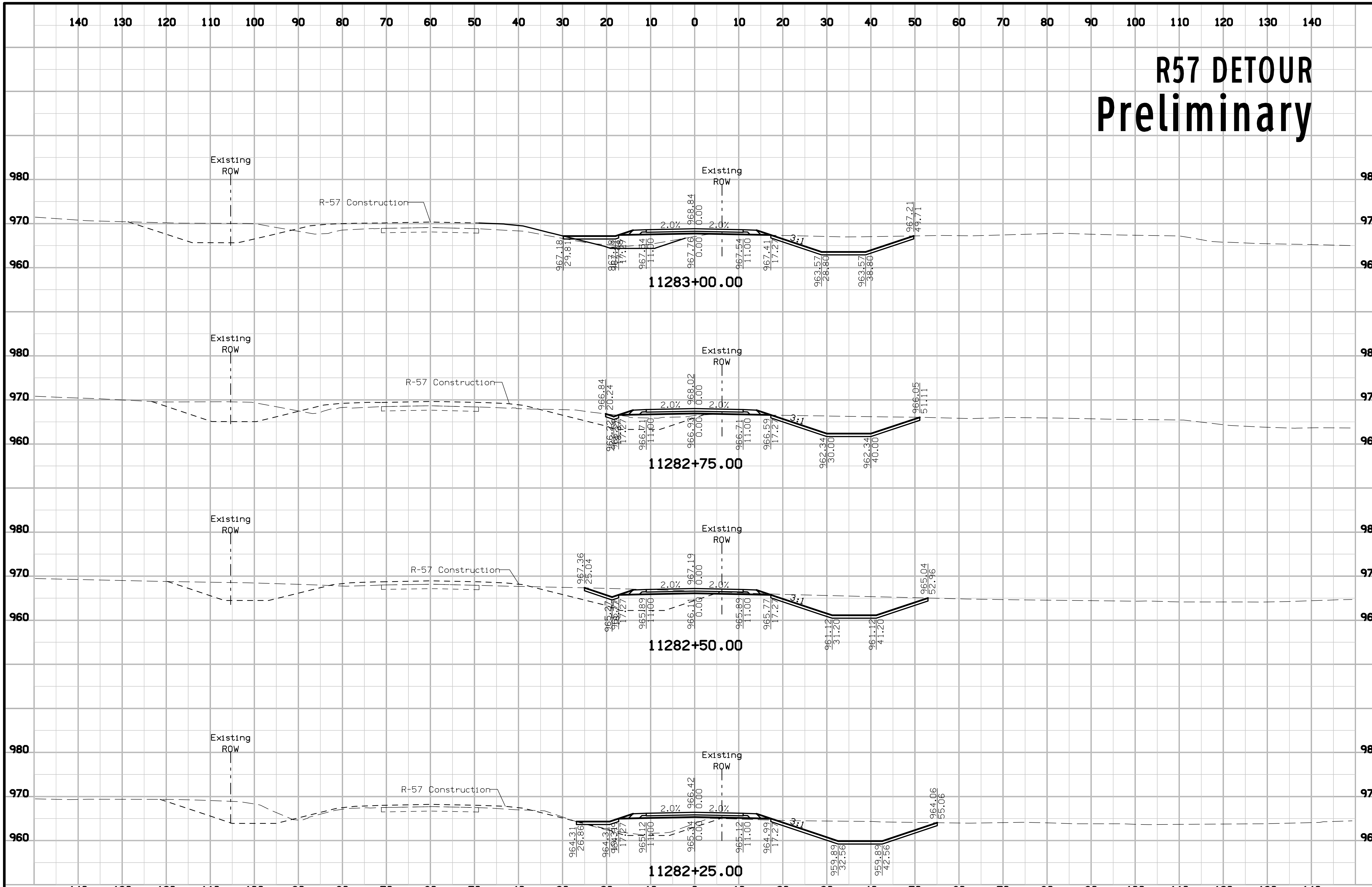
R57 DETOUR
Preliminary



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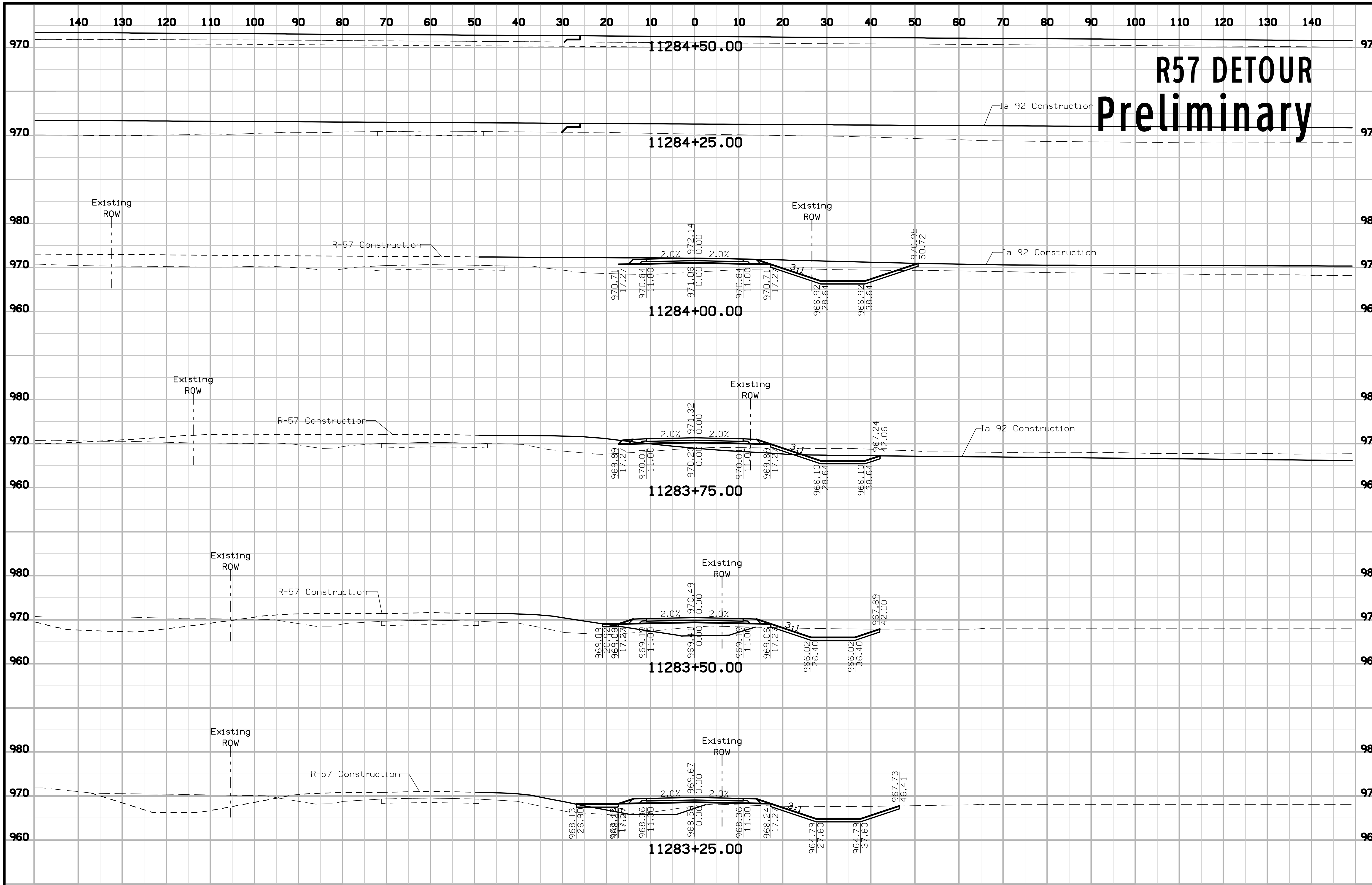

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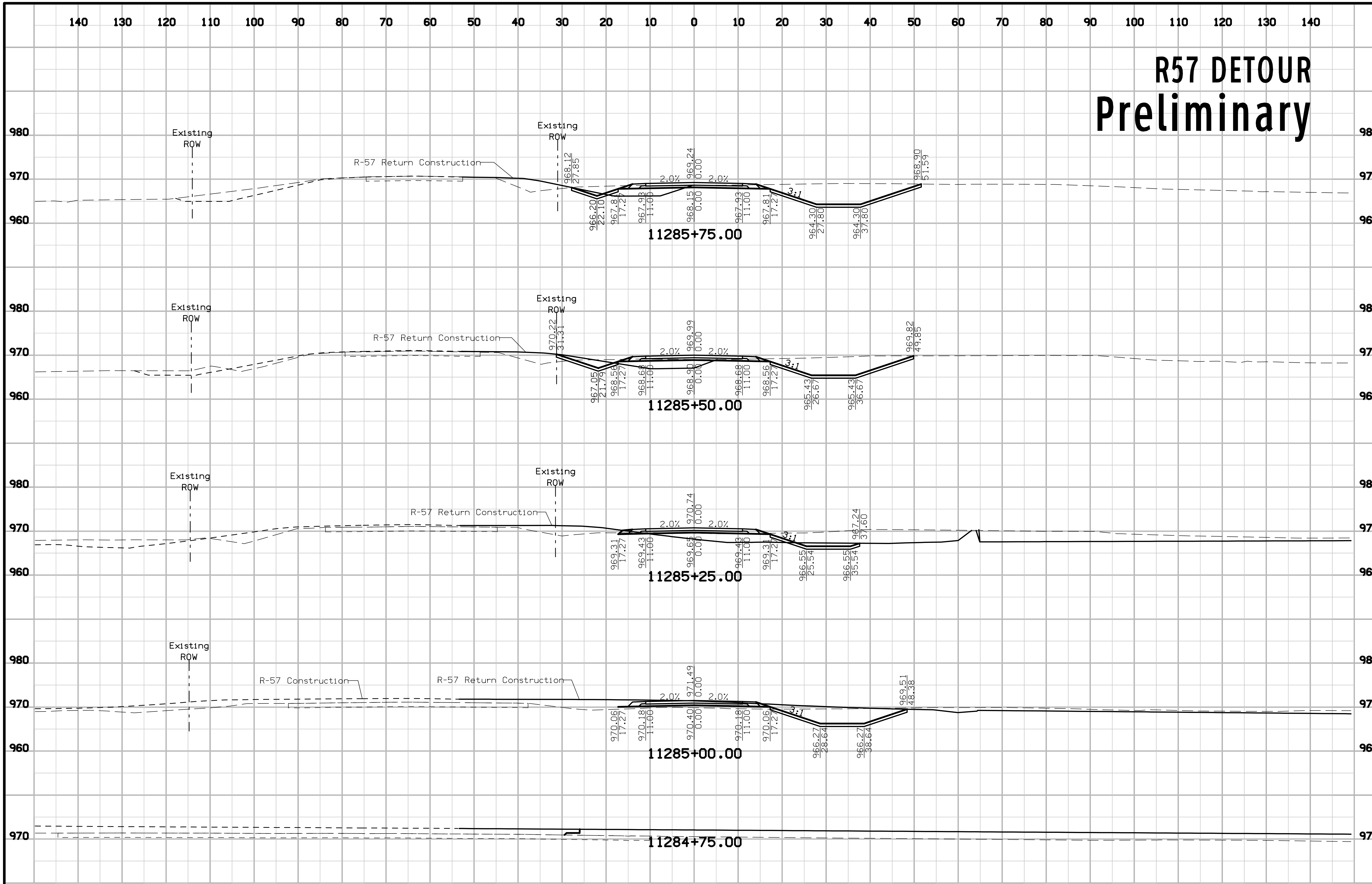

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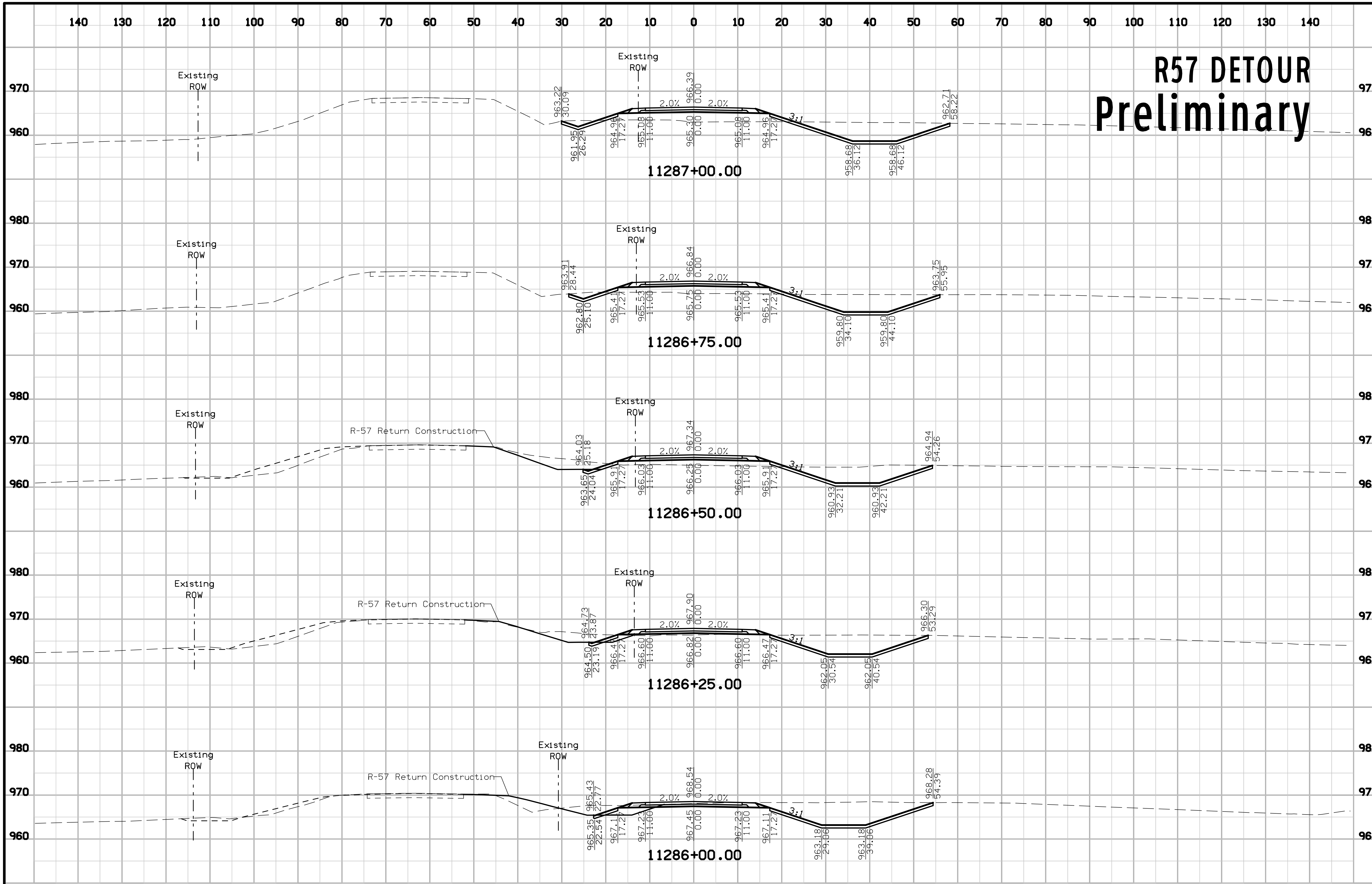

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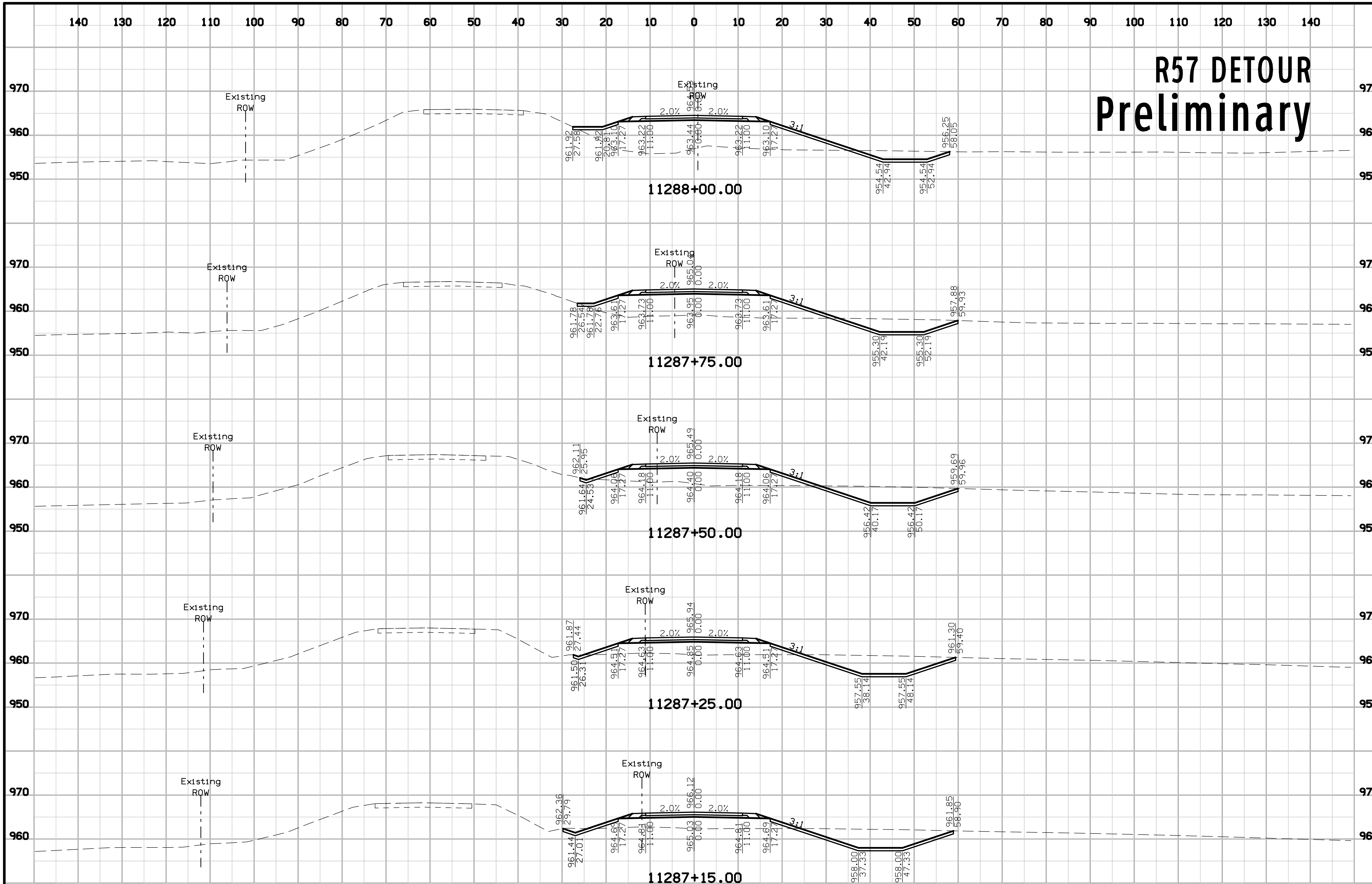

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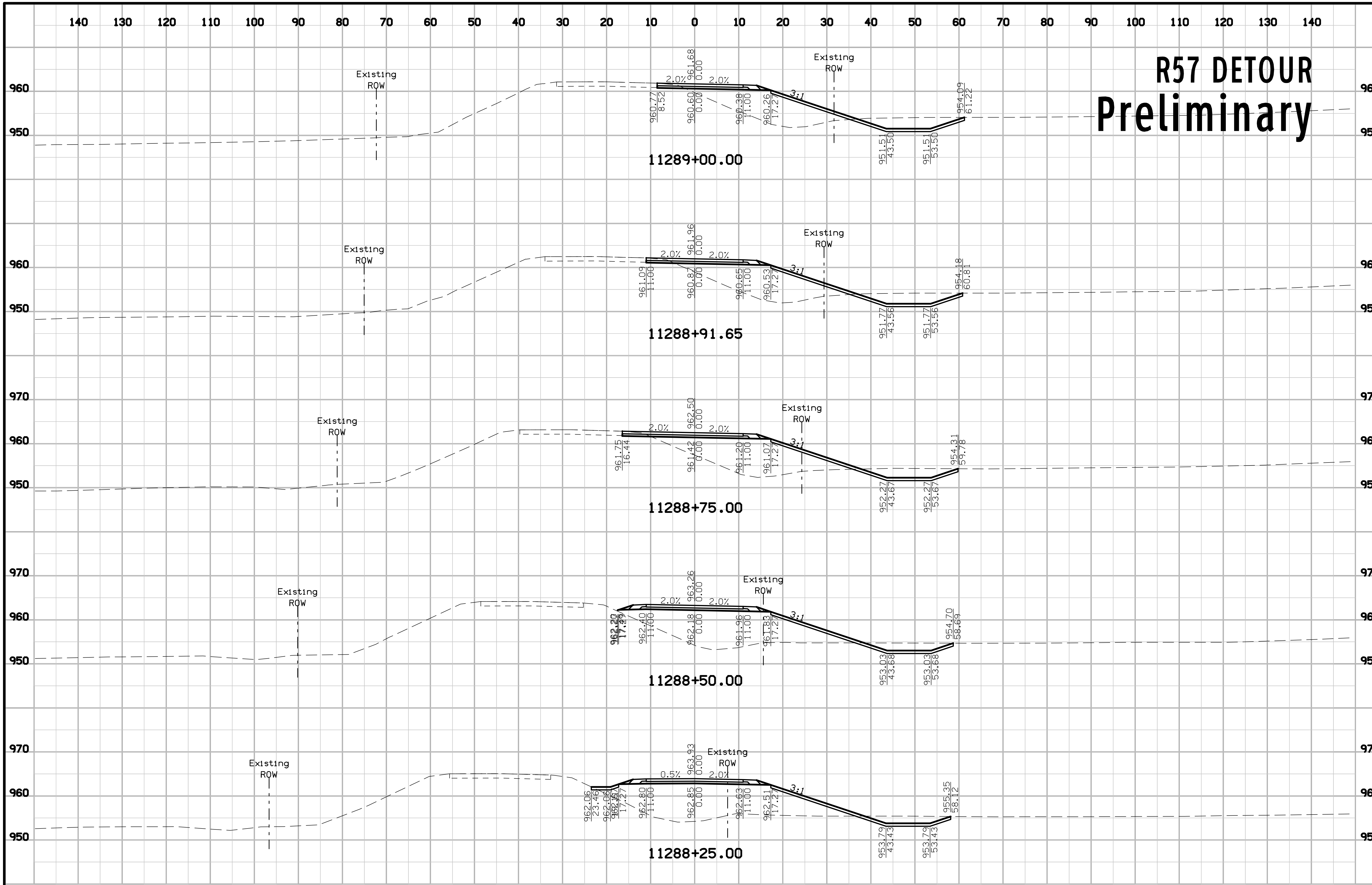

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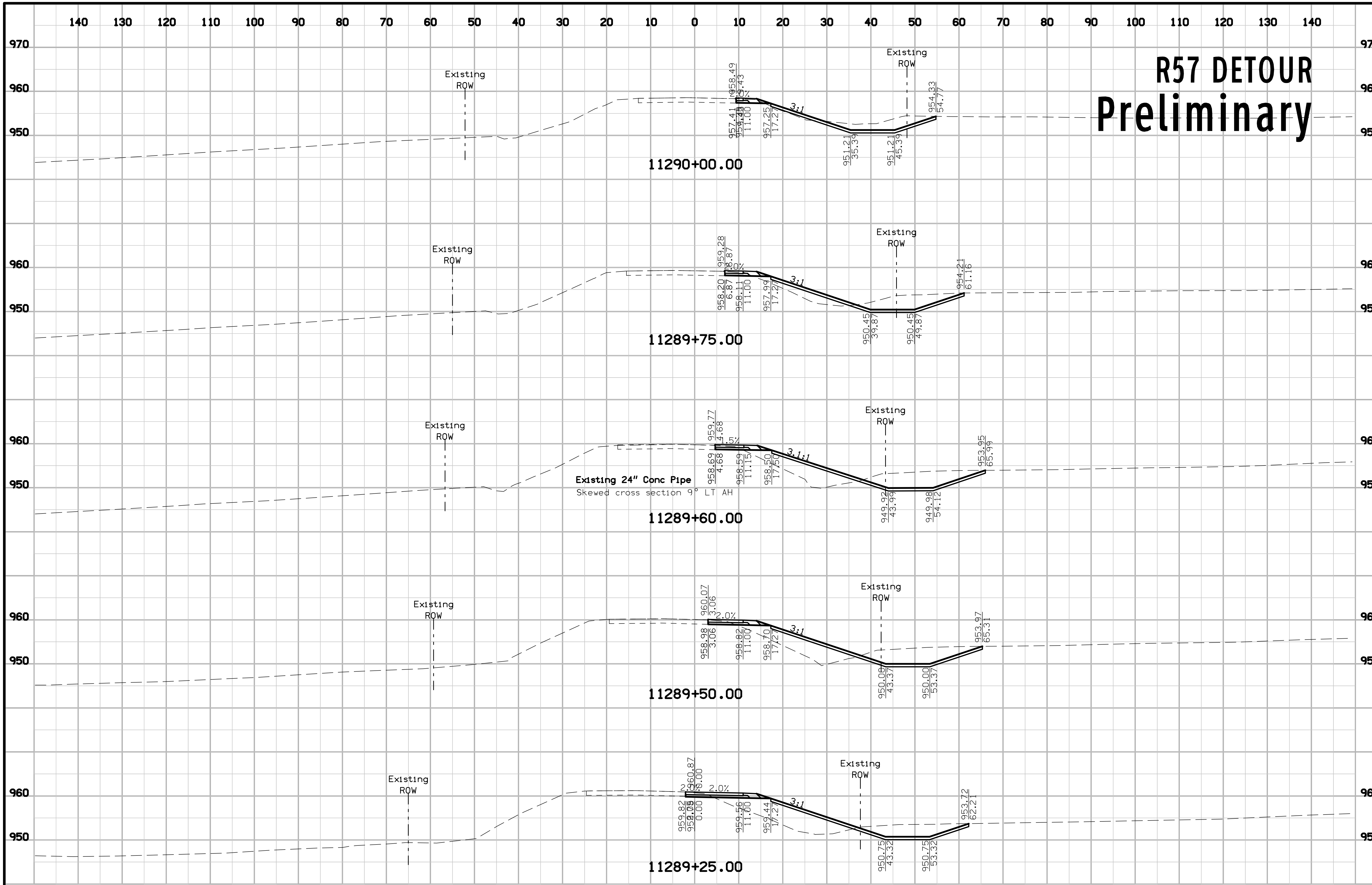

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R57 DETOUR
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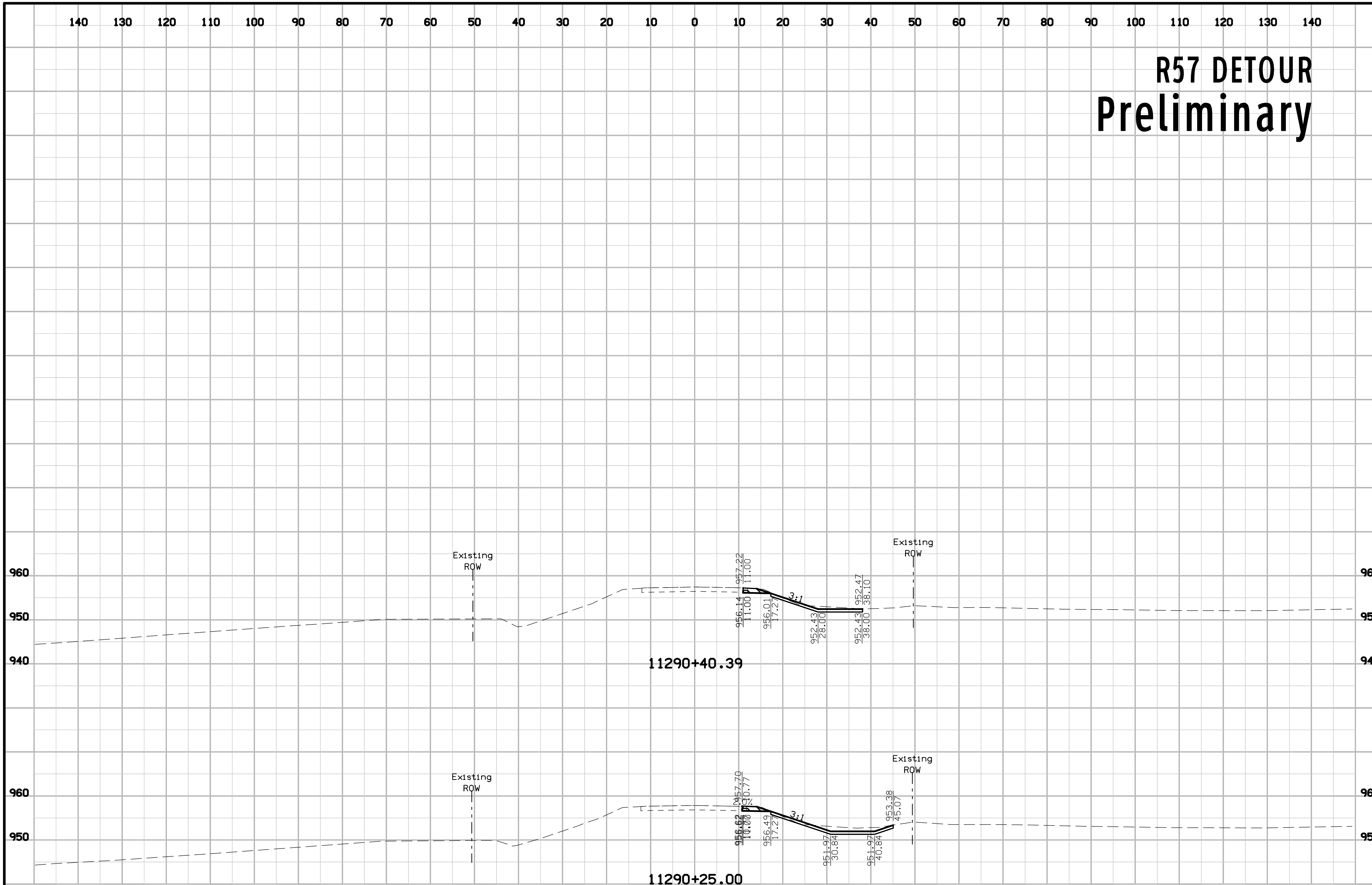

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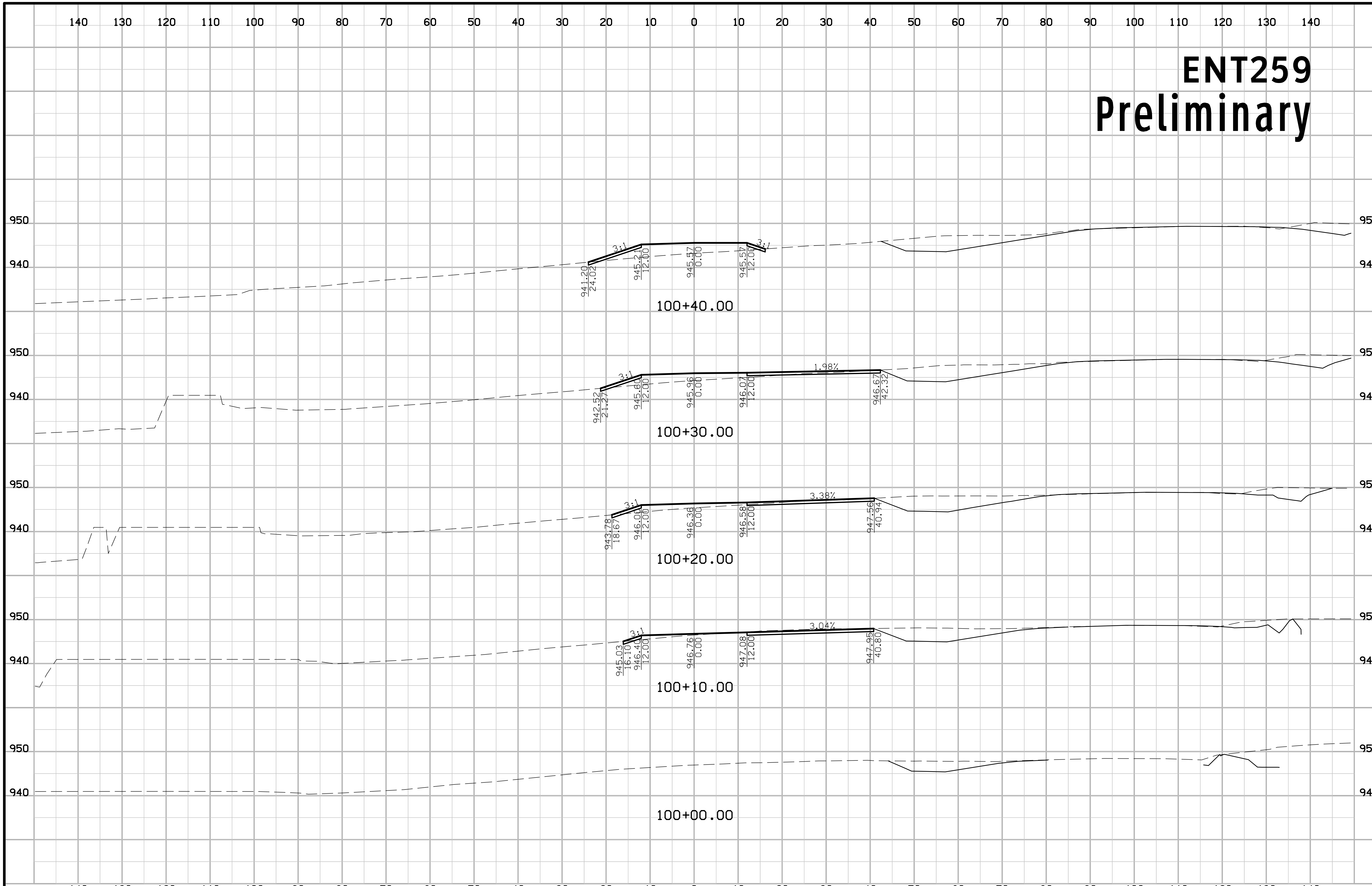

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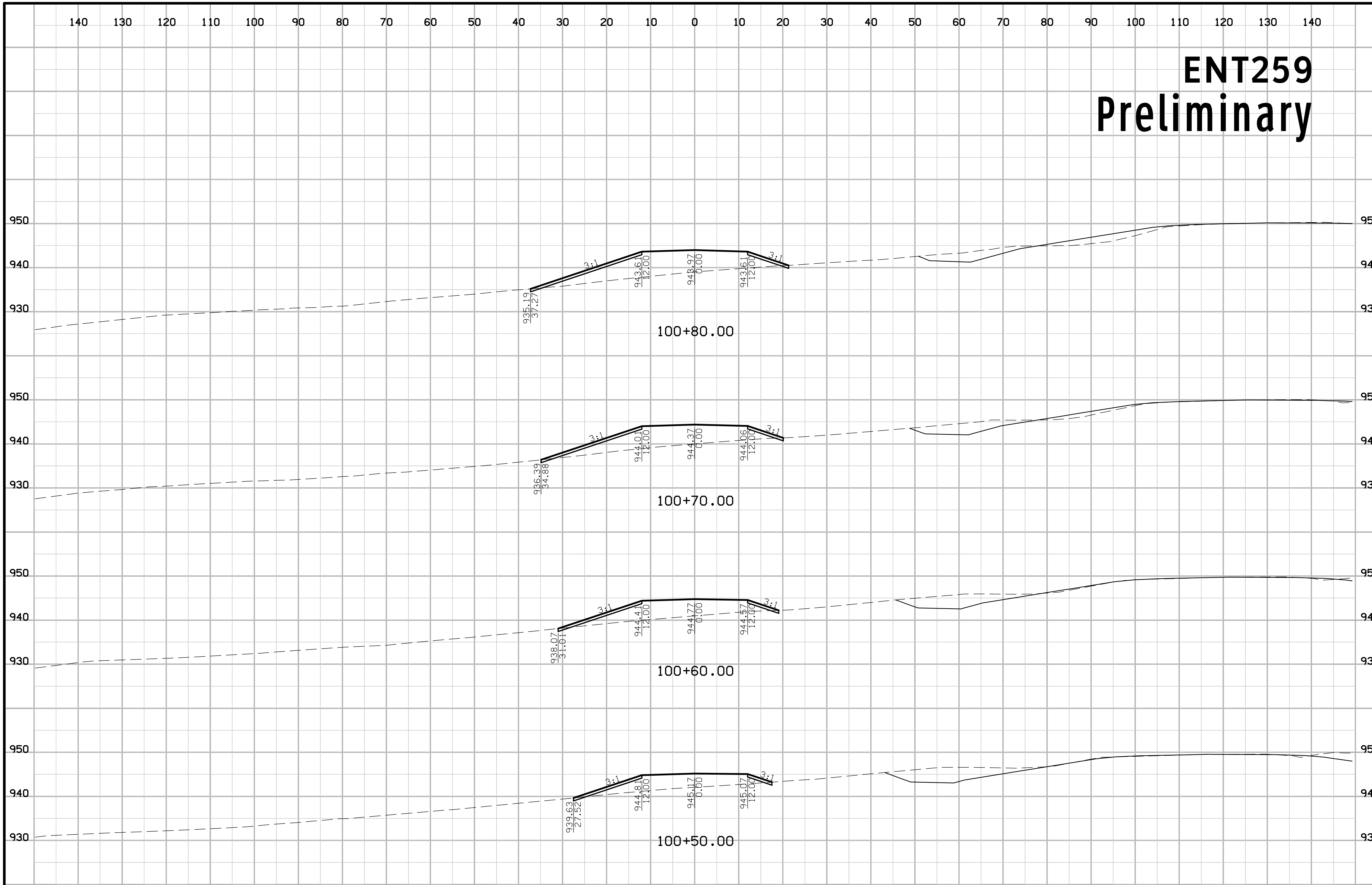
ENT259
Preliminary



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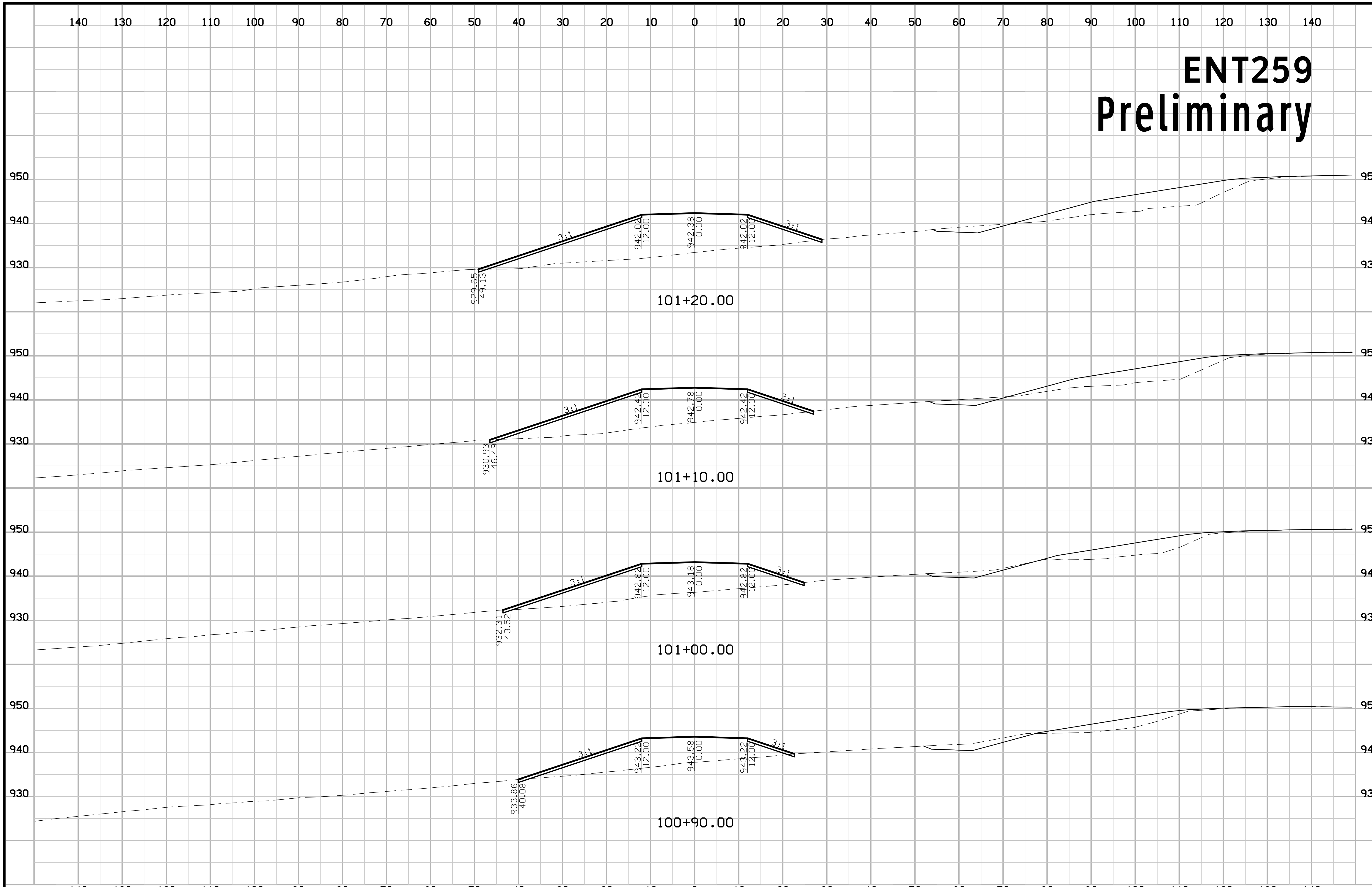

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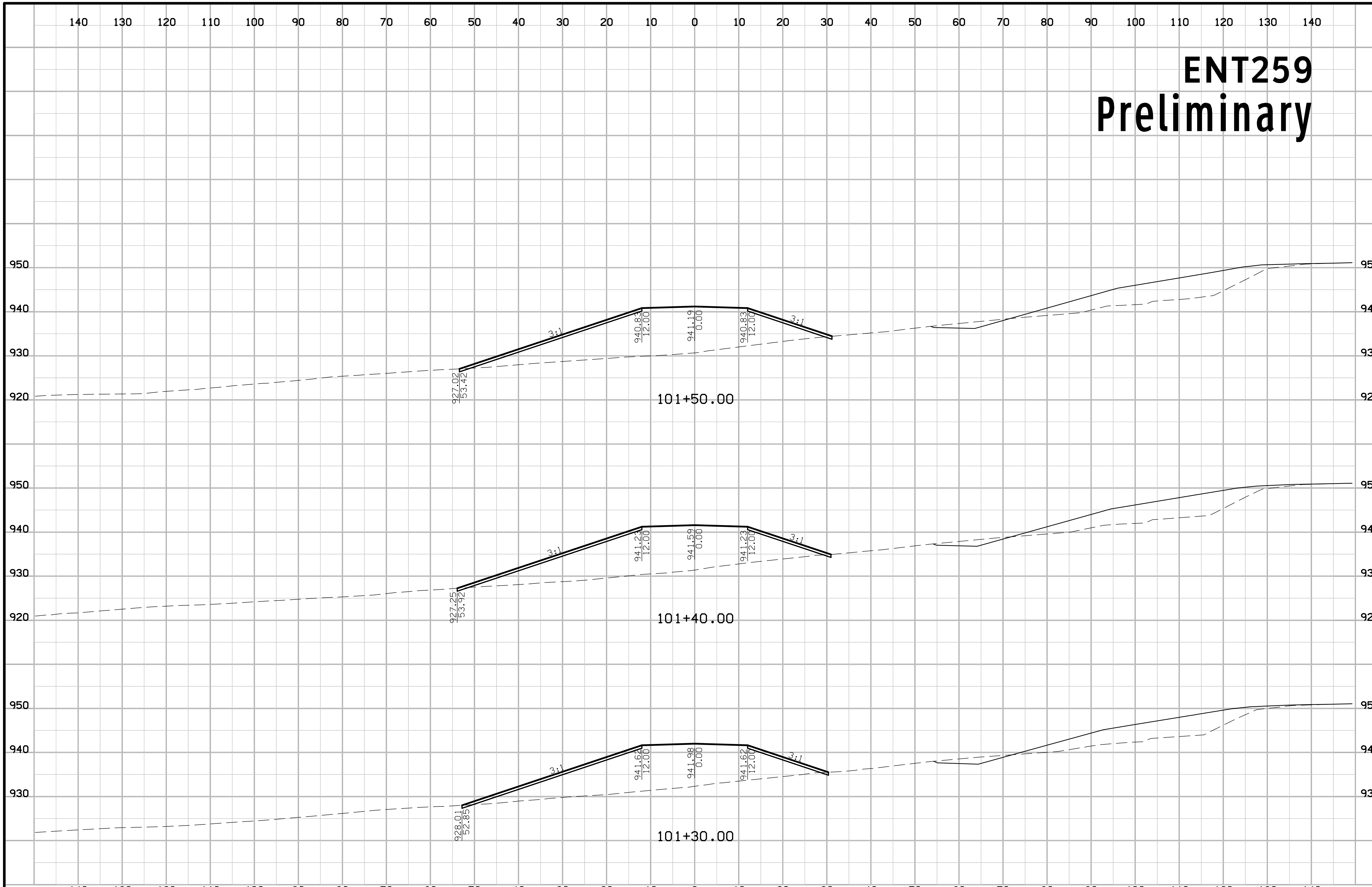
ENT259
Preliminary



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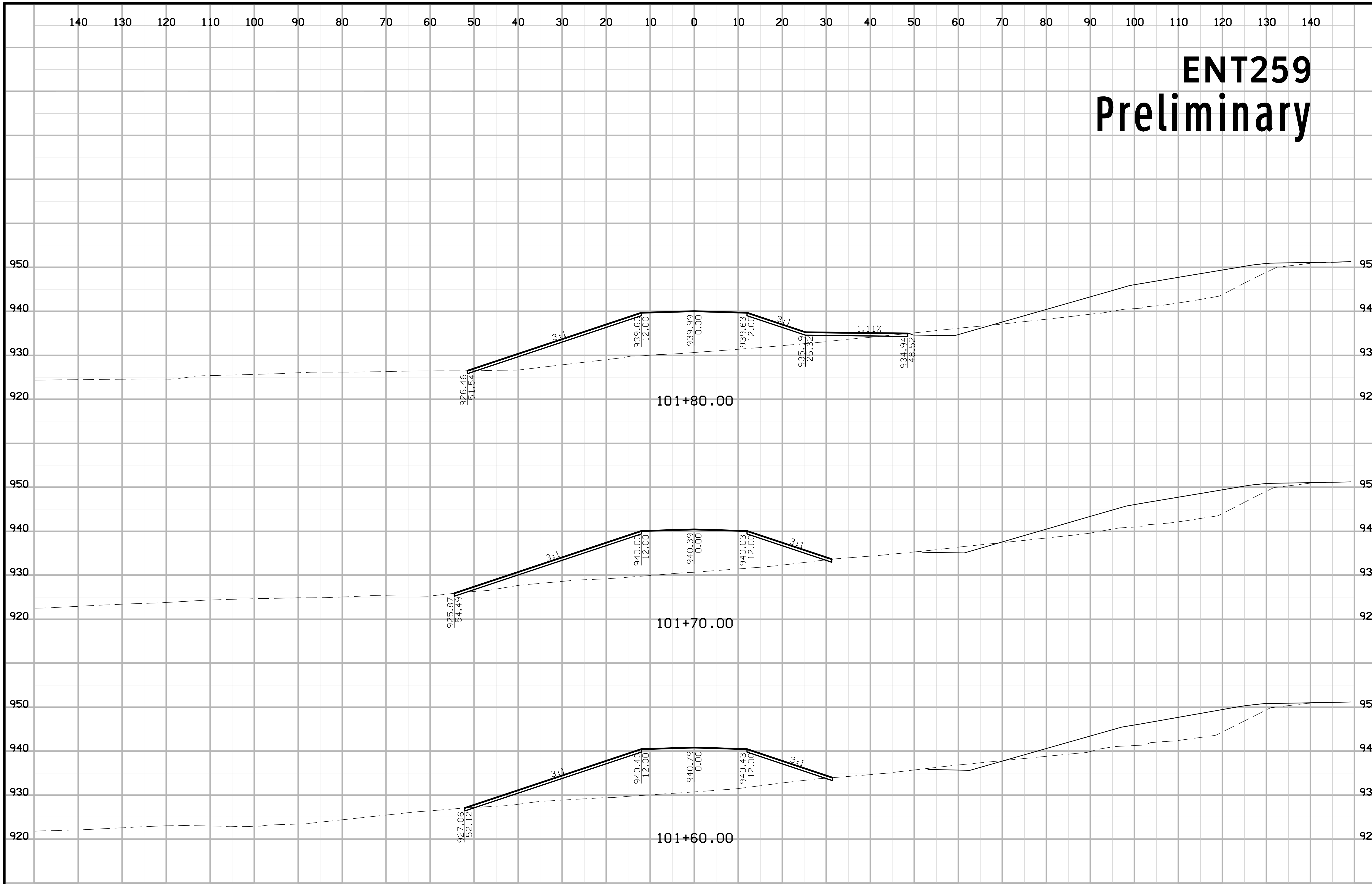
ENT259
Preliminary
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939.63 12.00
939.99 0.00
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935.19 25.32
934.94 48.52
926.46 51.54
3:1
3:1
1.11%
101+70.00
940.03 12.00
940.39 0.00
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925.87 54.49
3:1
3:1
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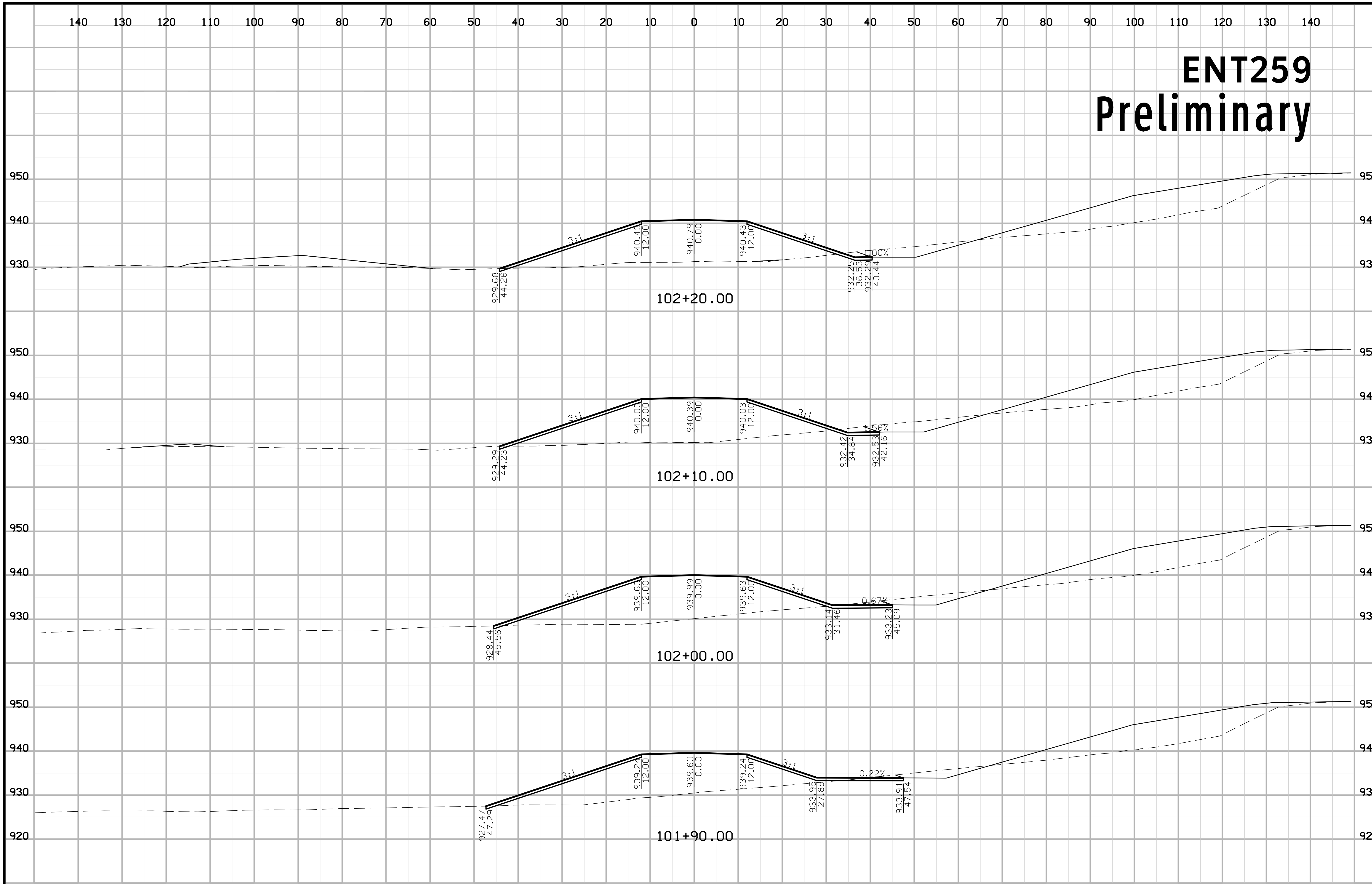

ENGLISH | IOWA DOT | DESIGN TEAM **Jia\Holst\Bennett** | **WARREN** COUNTY | PROJECT NUMBER **NHSX-092-5(51)--3H-91** | SHEET NUMBER **X.53**

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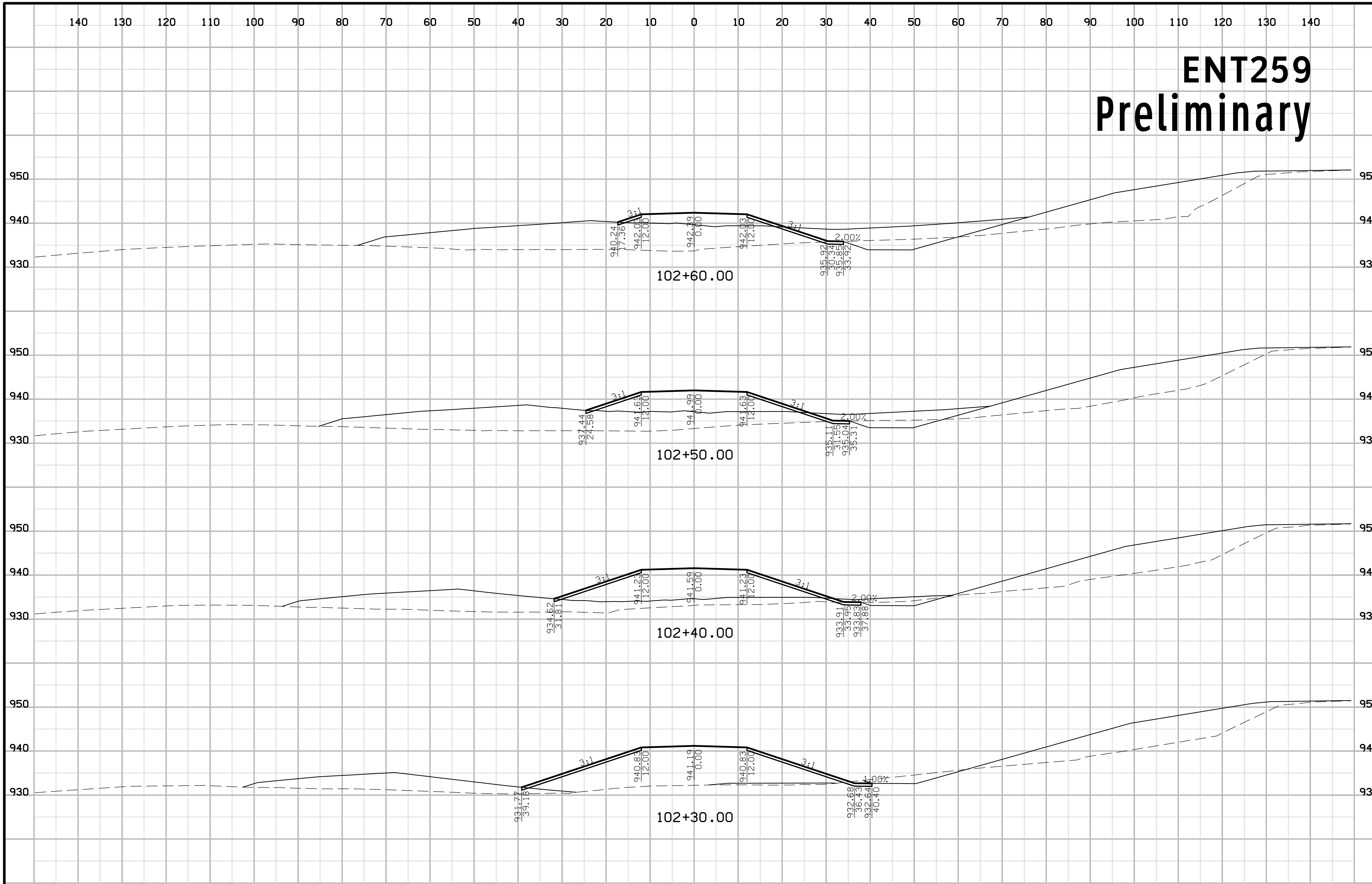
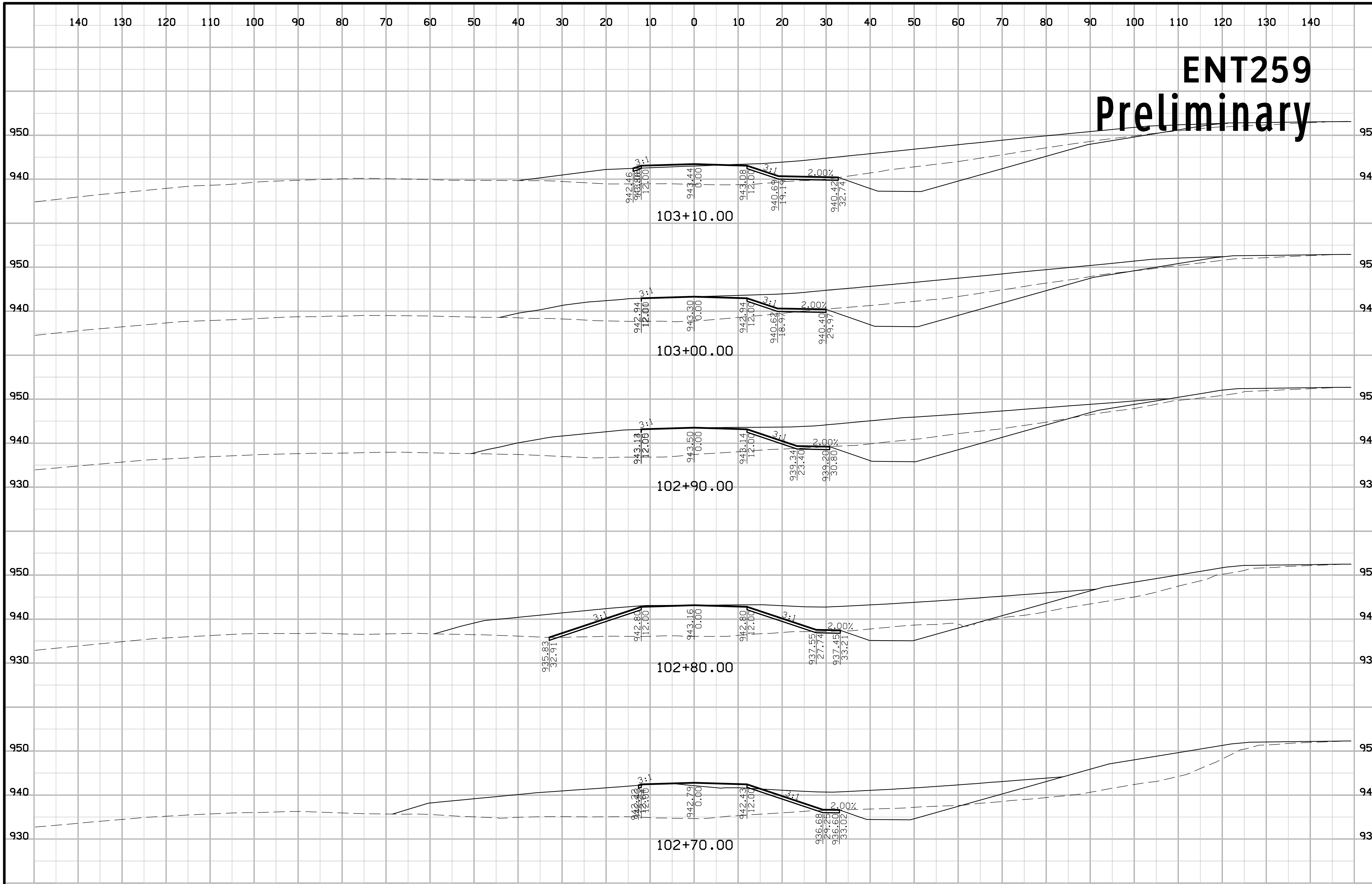
ENT259
Preliminary





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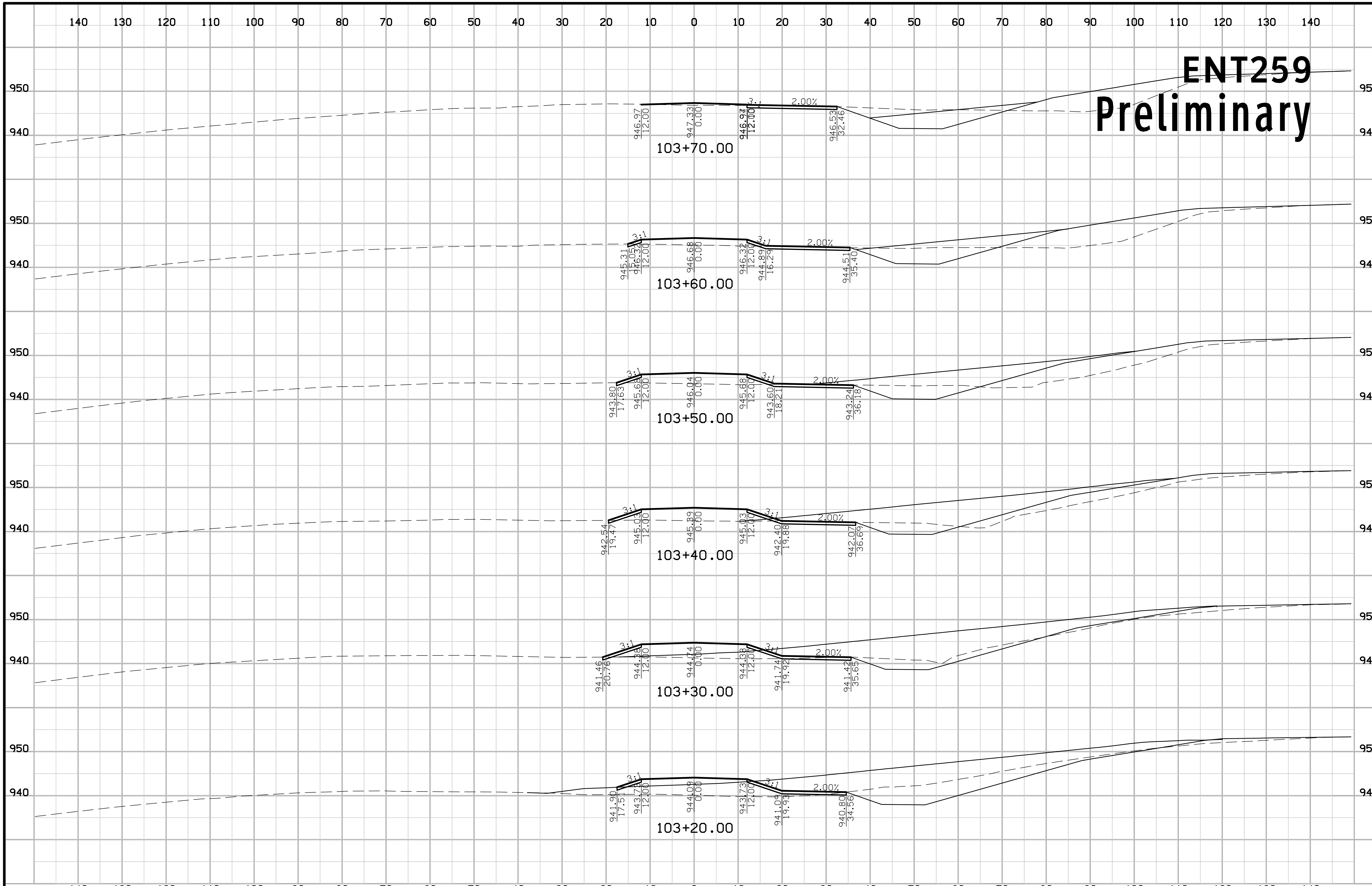

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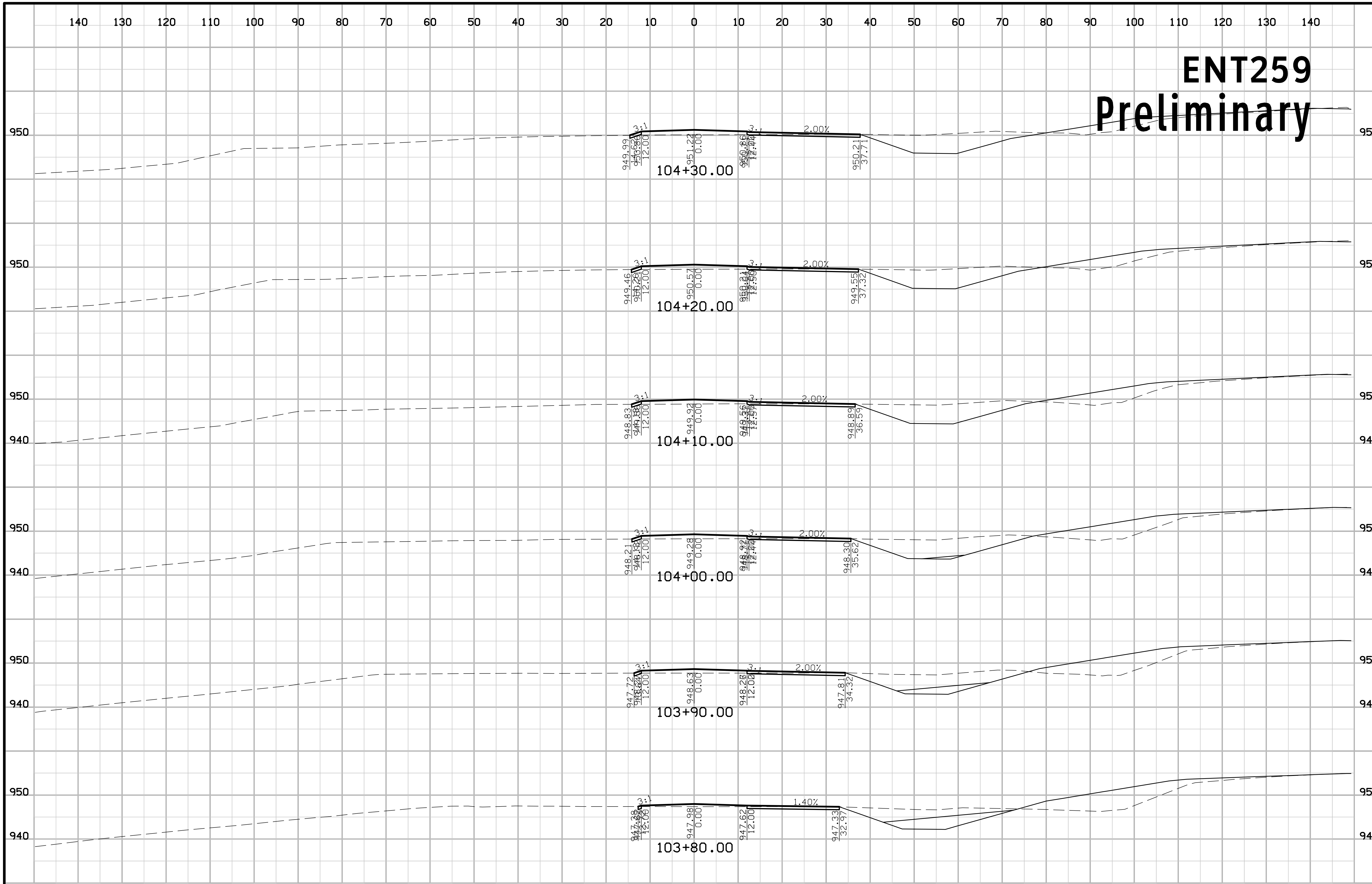

ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER X.57

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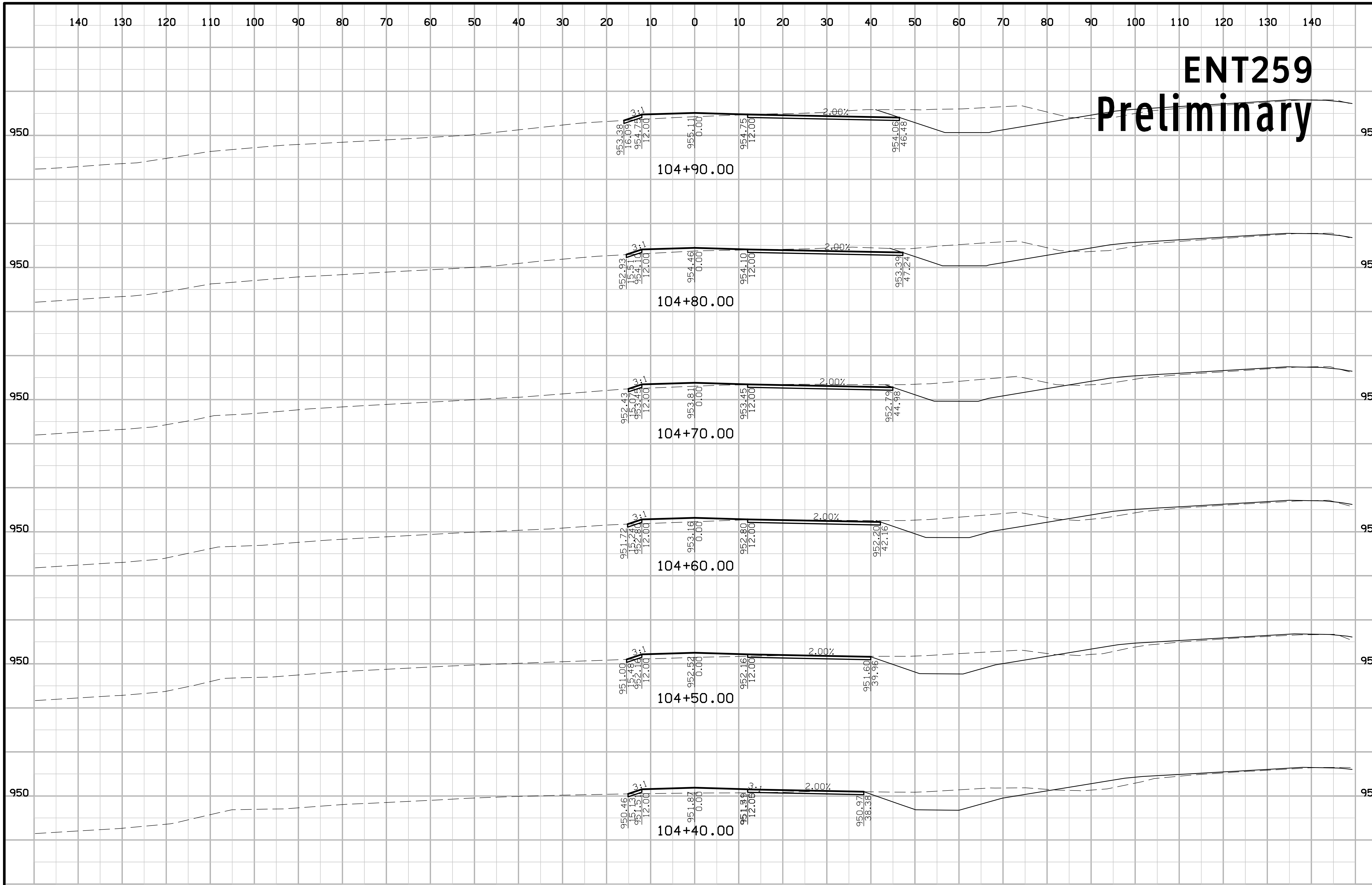

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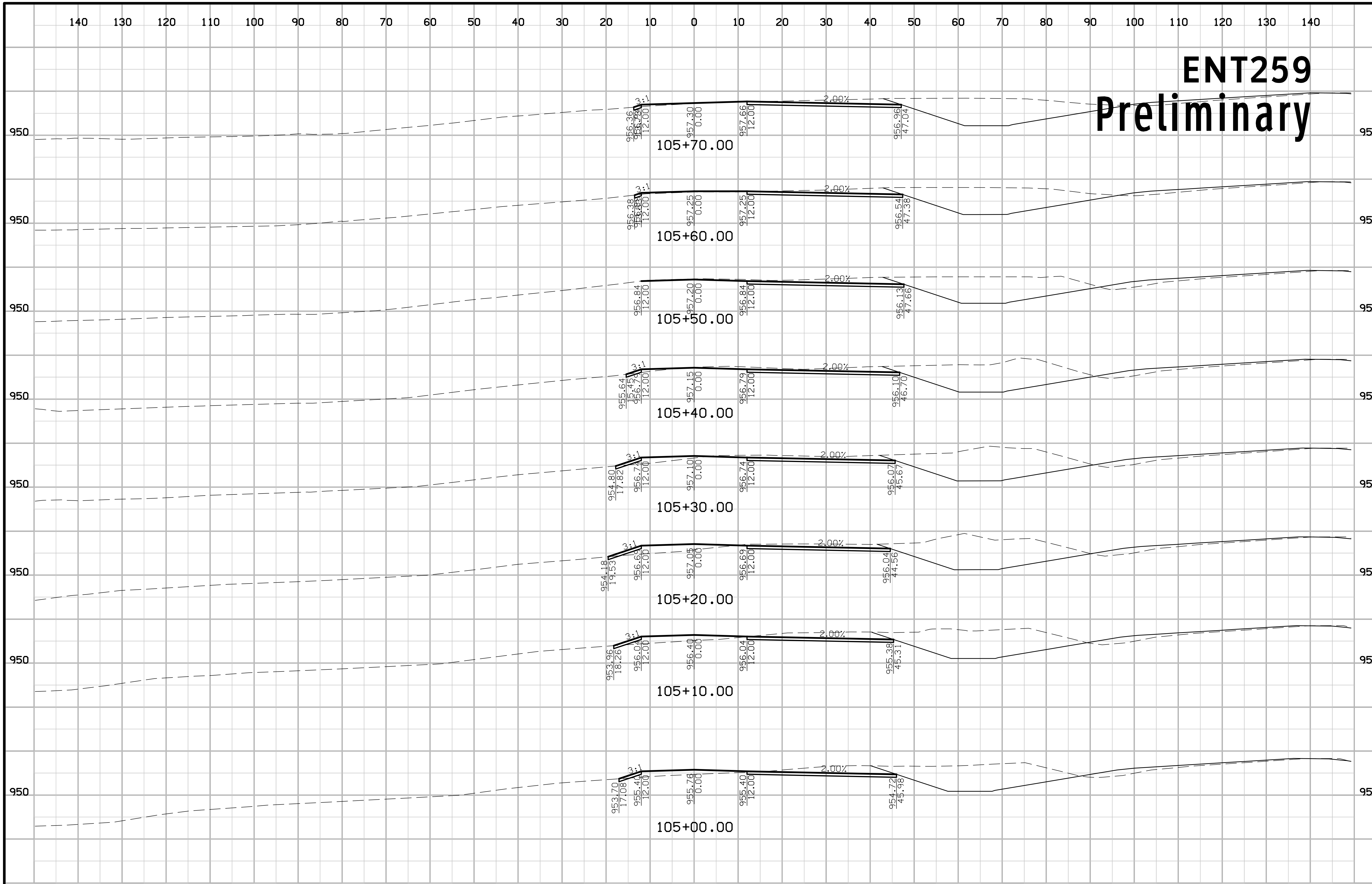

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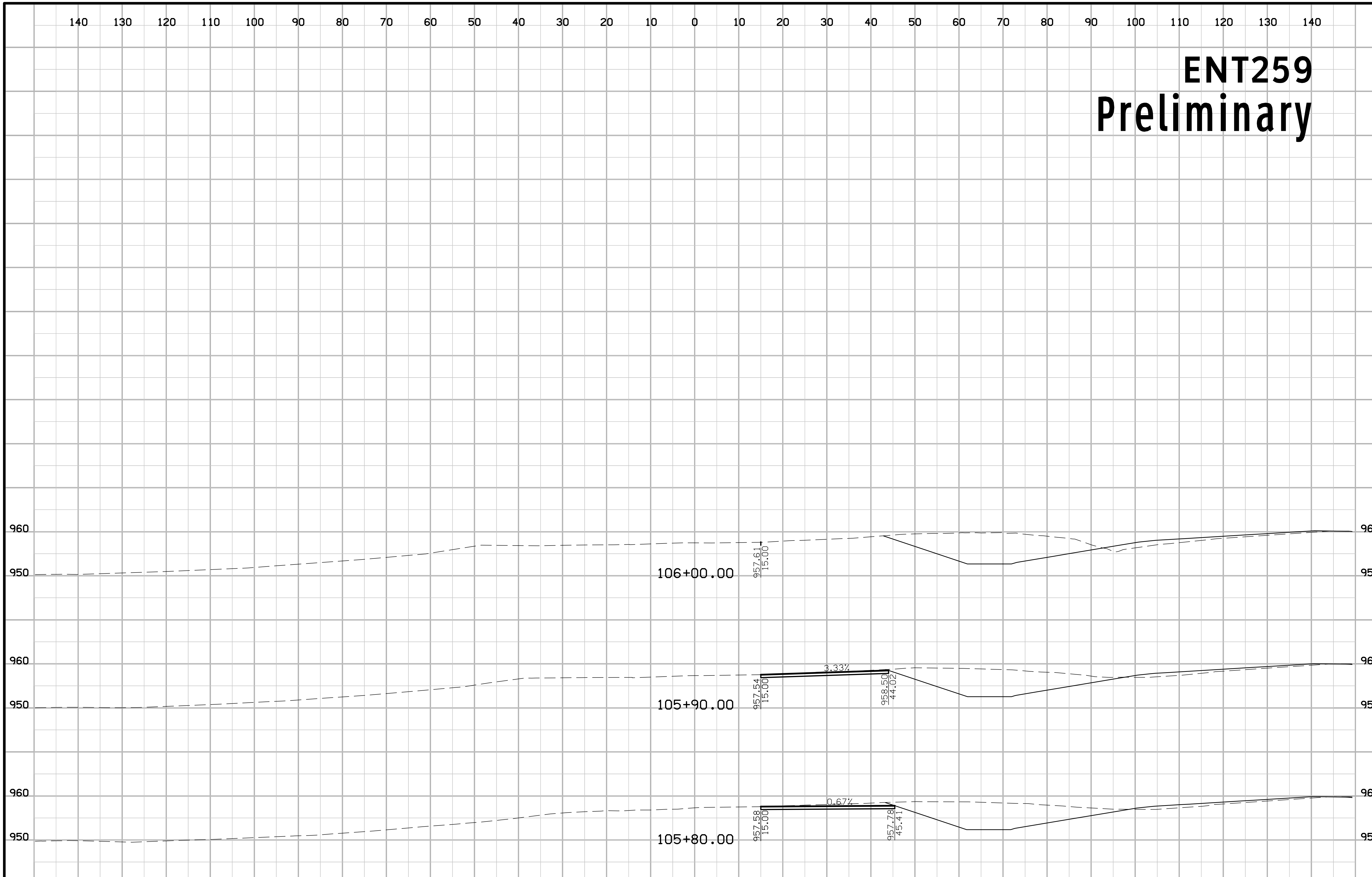
ENT259
Preliminary



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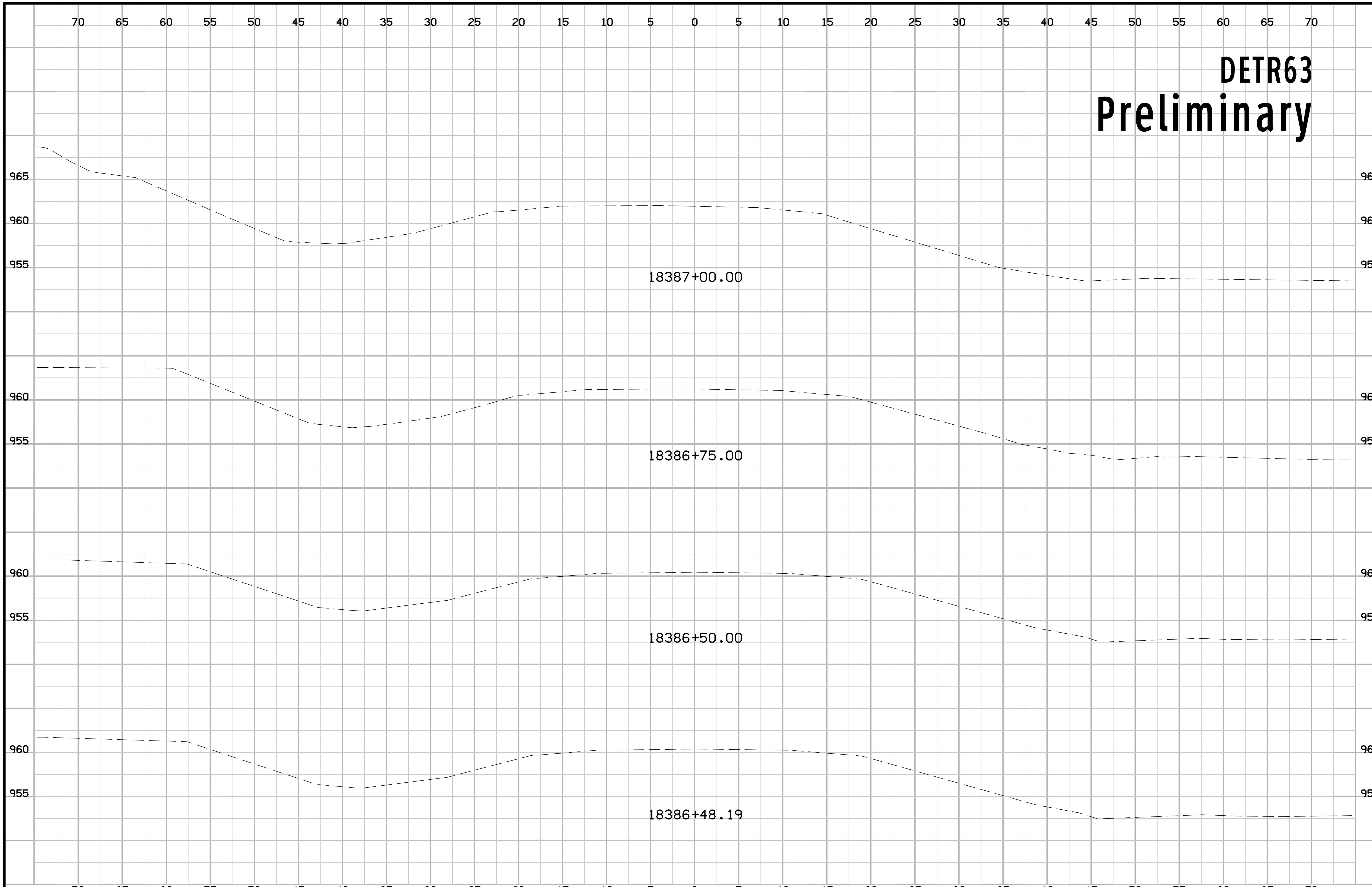

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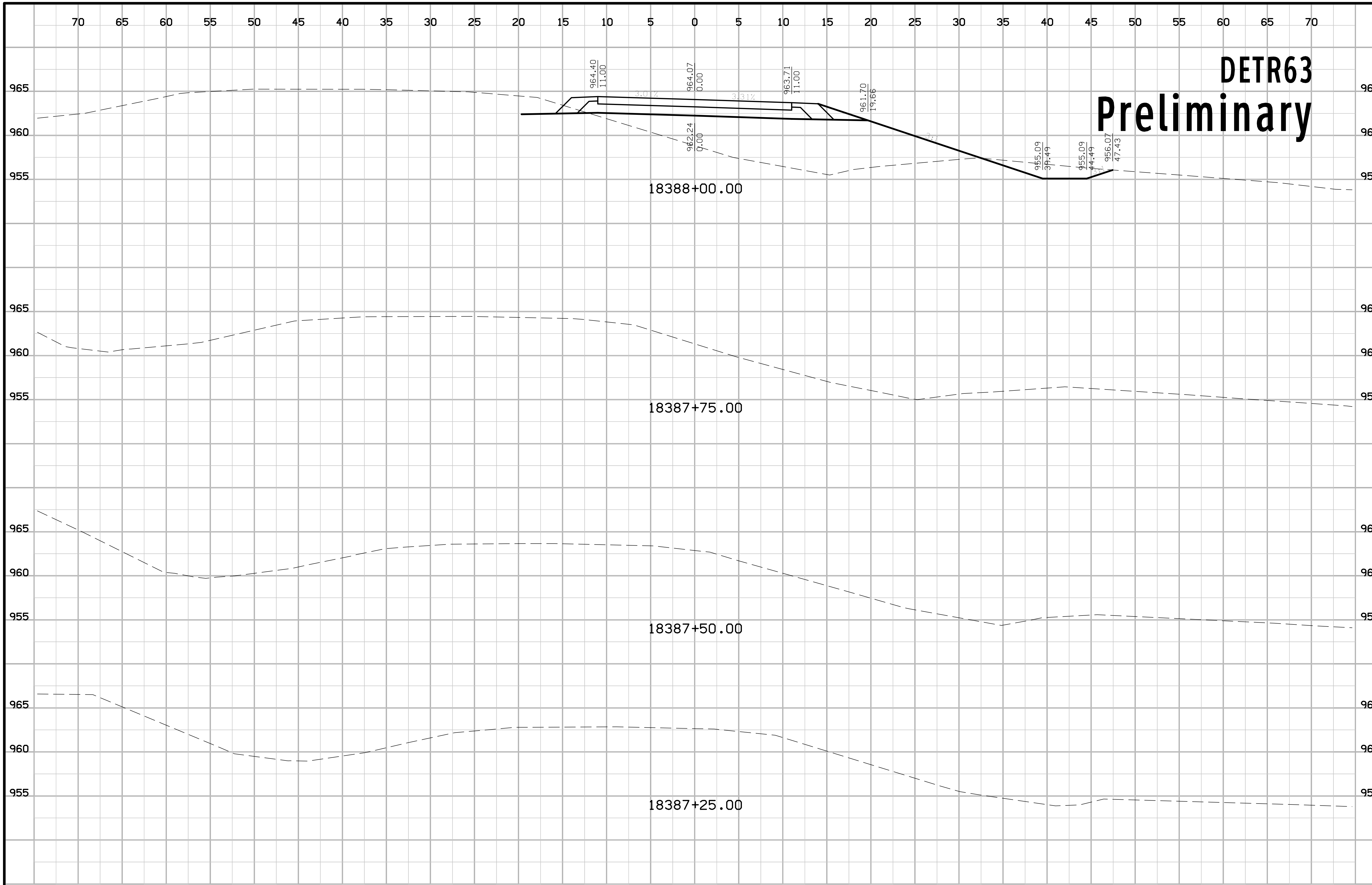

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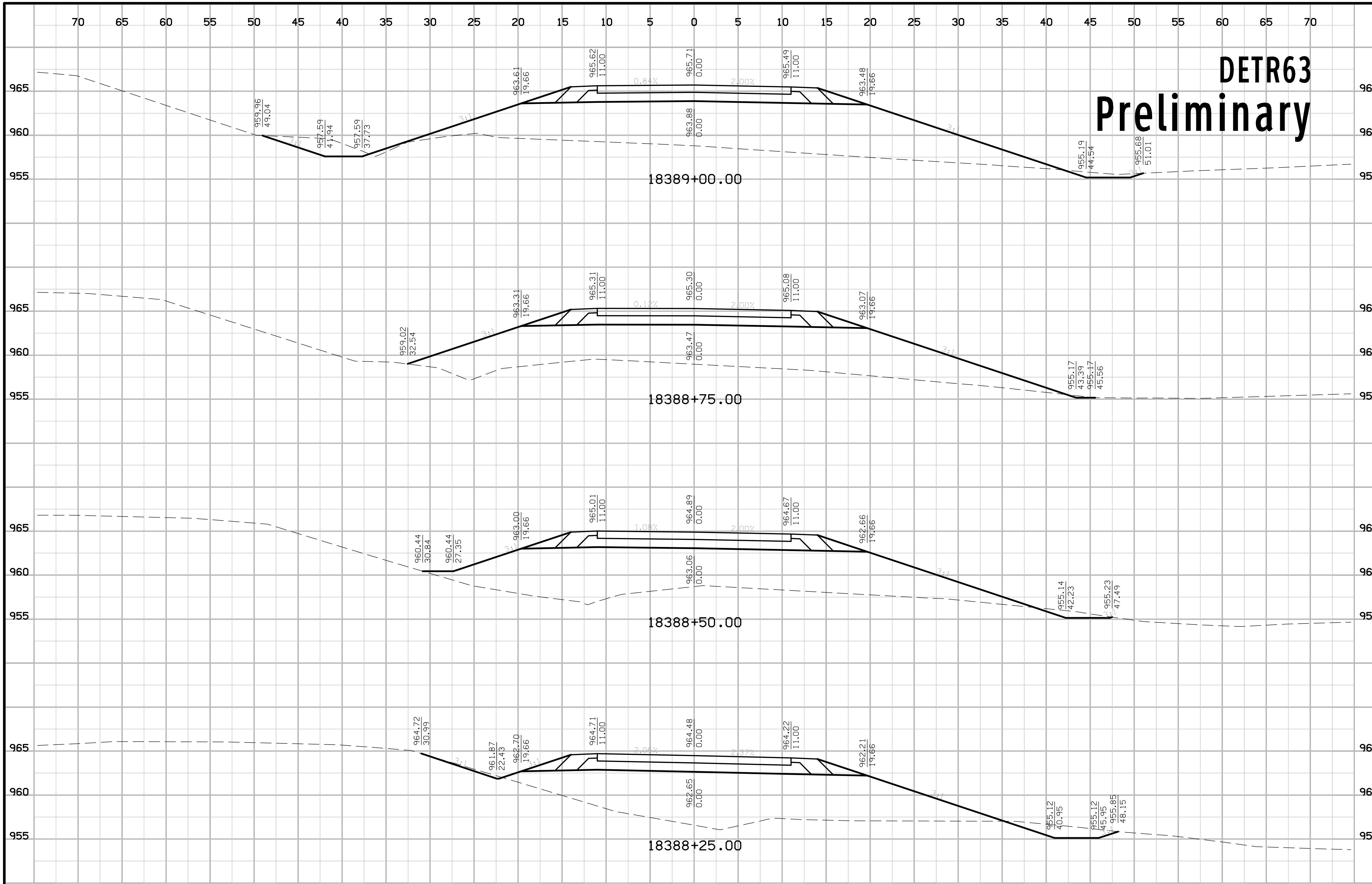

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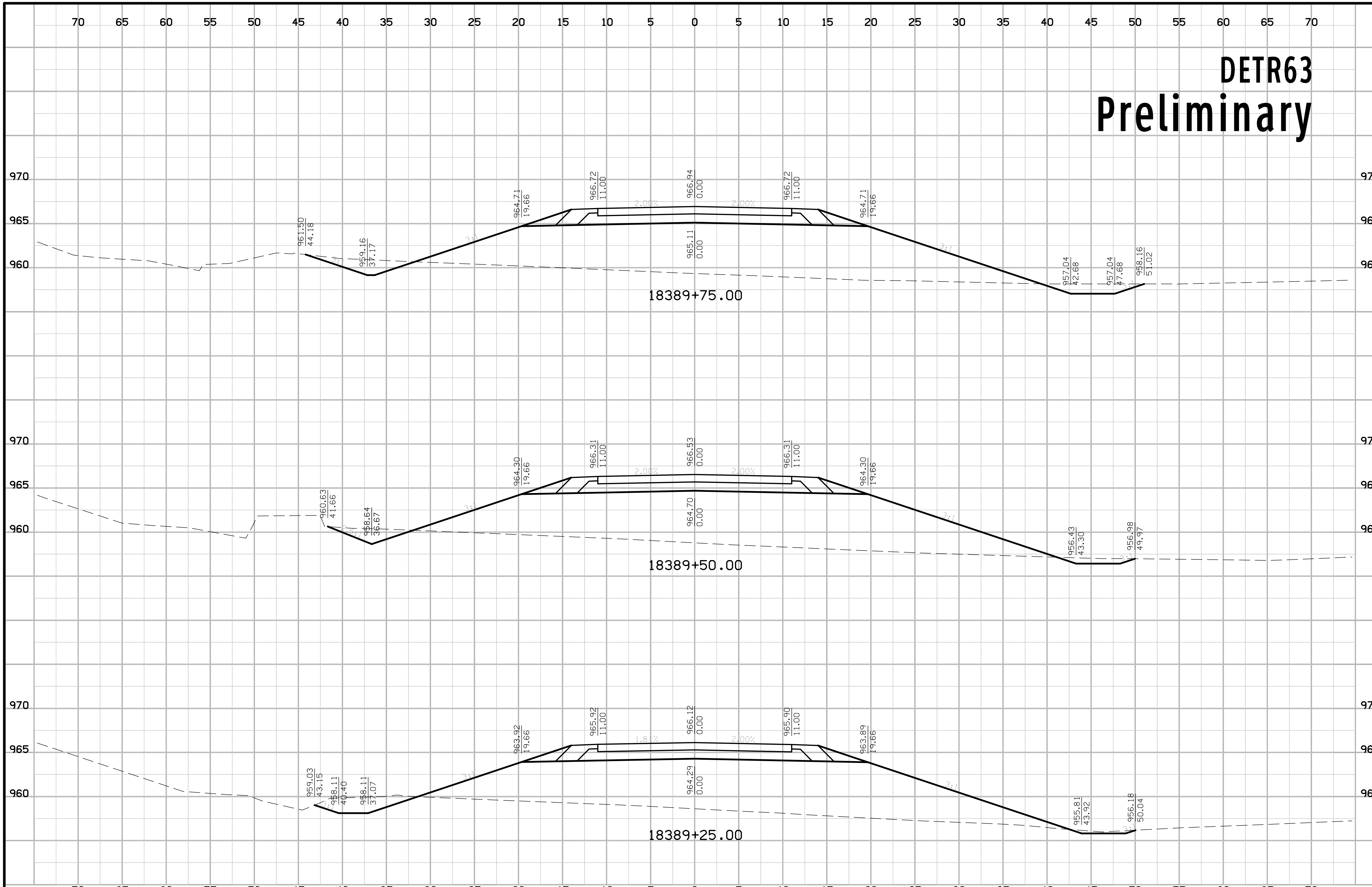
Preliminary



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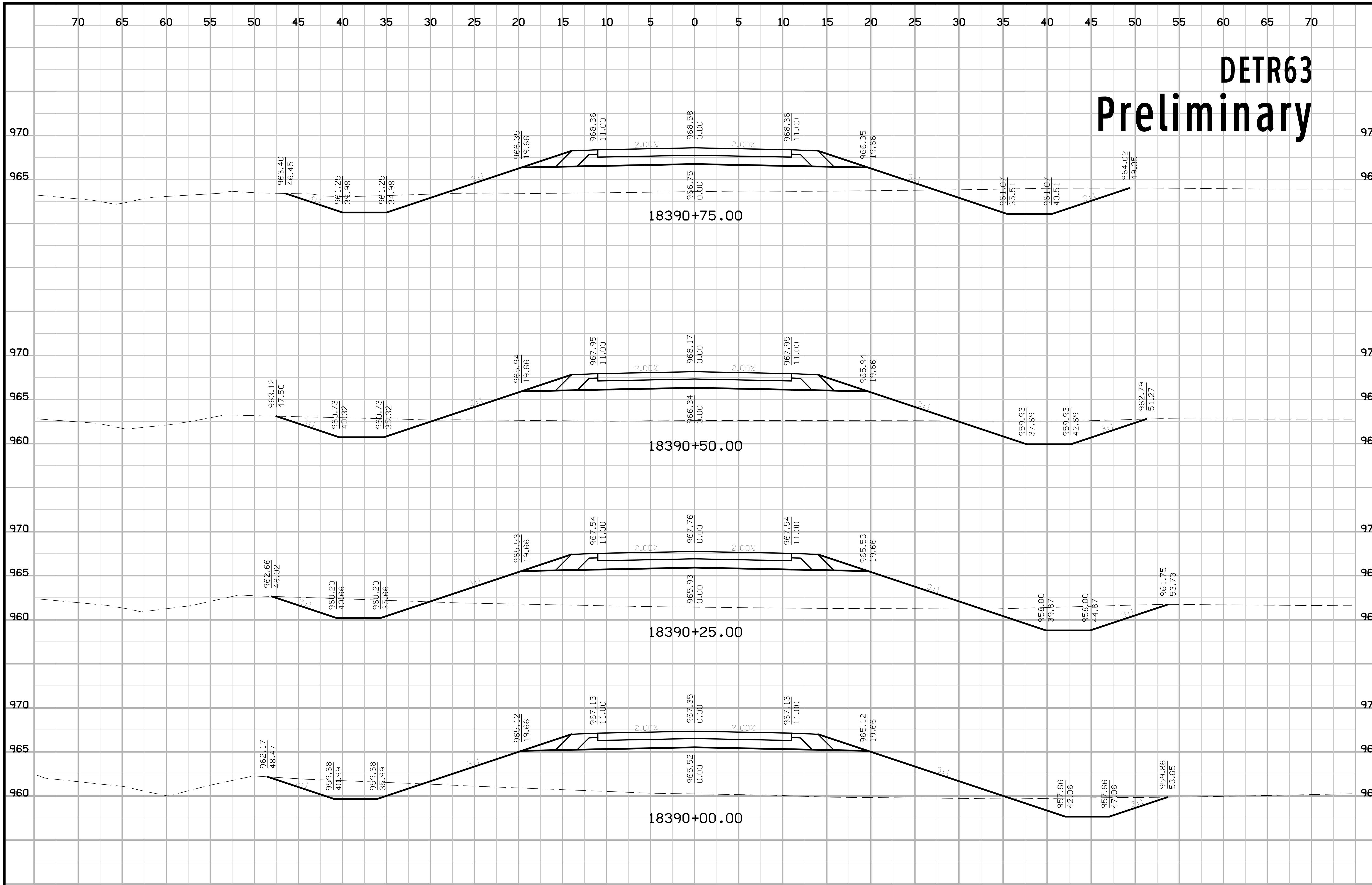

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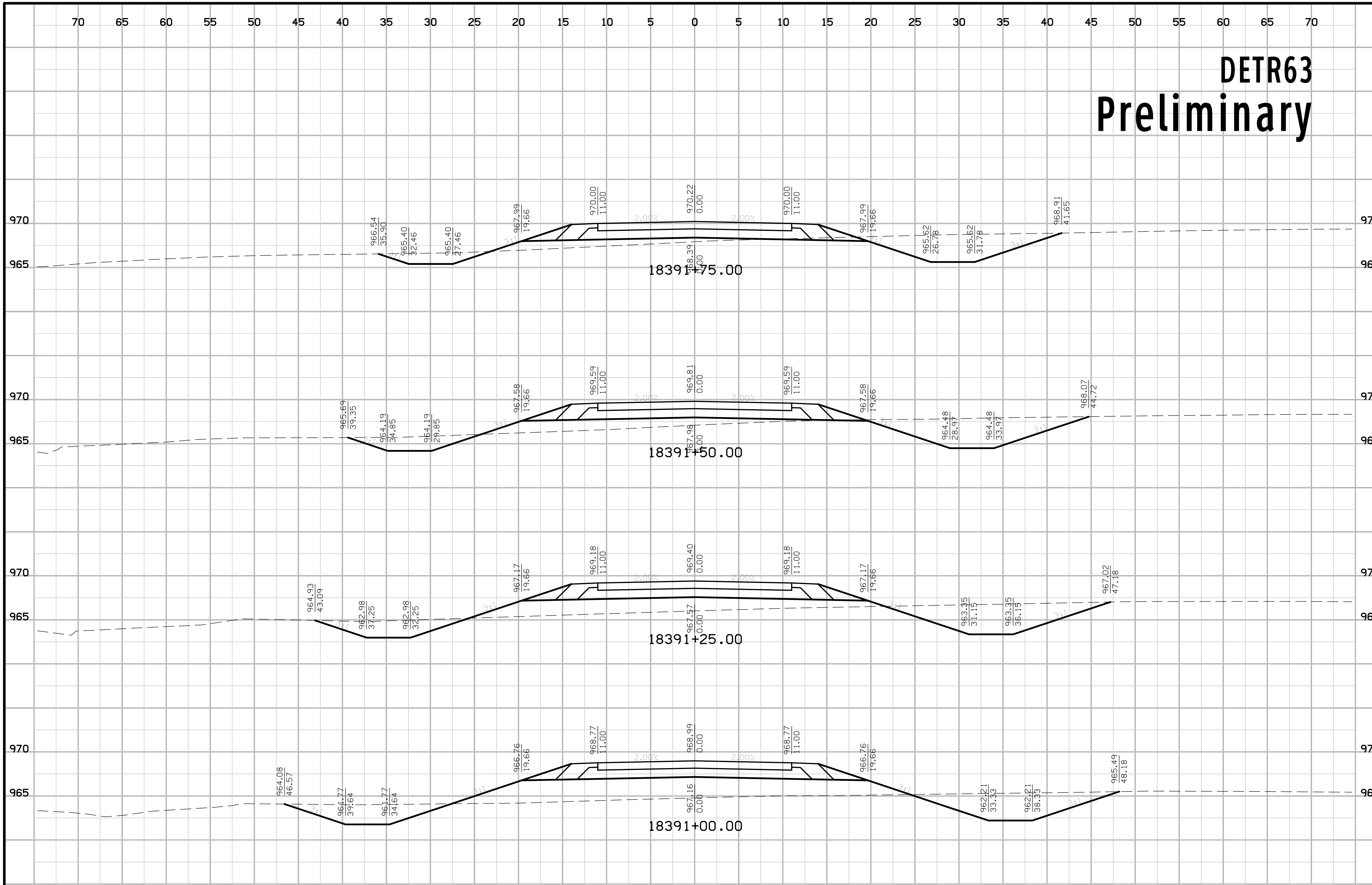

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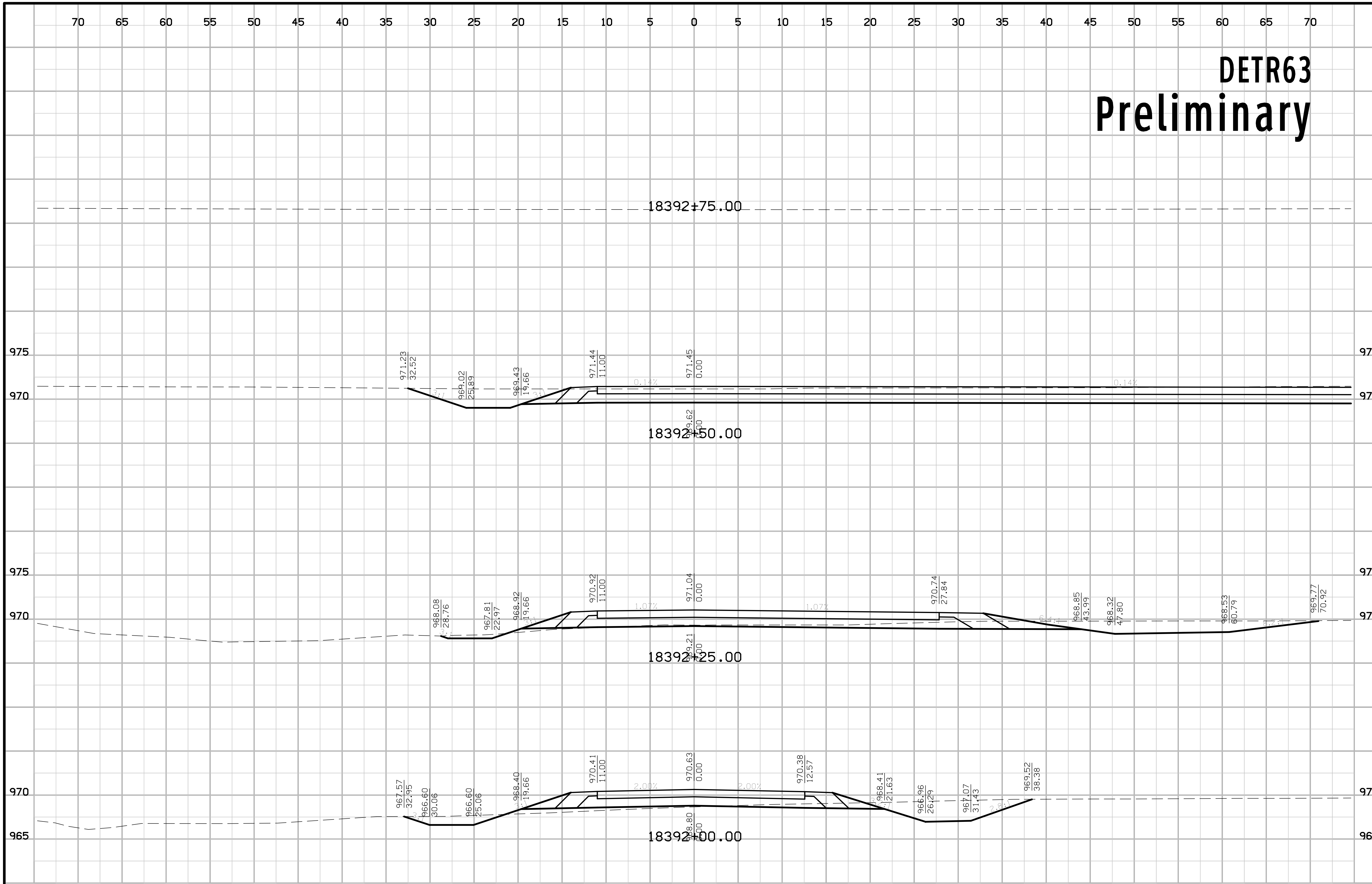

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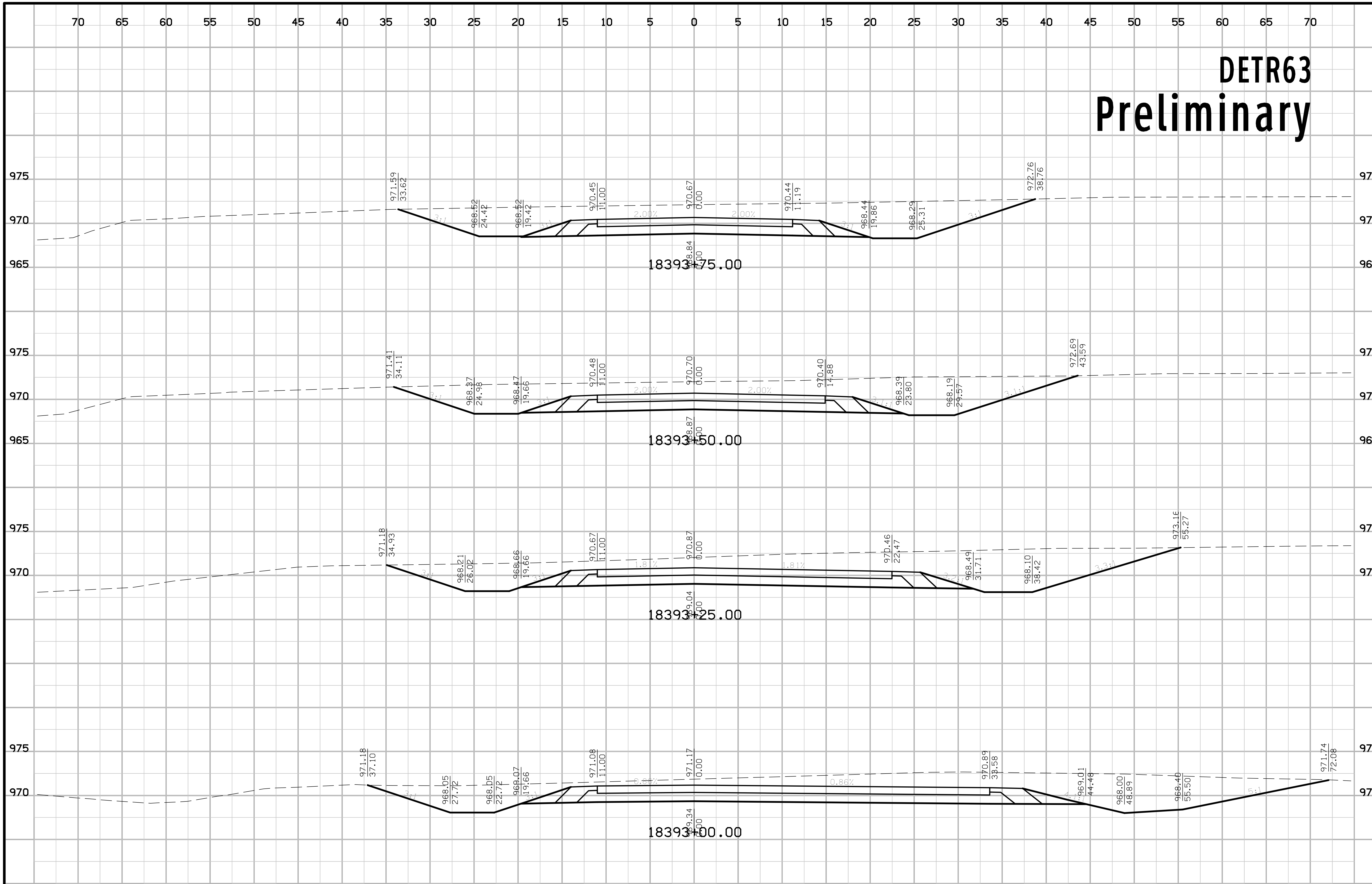

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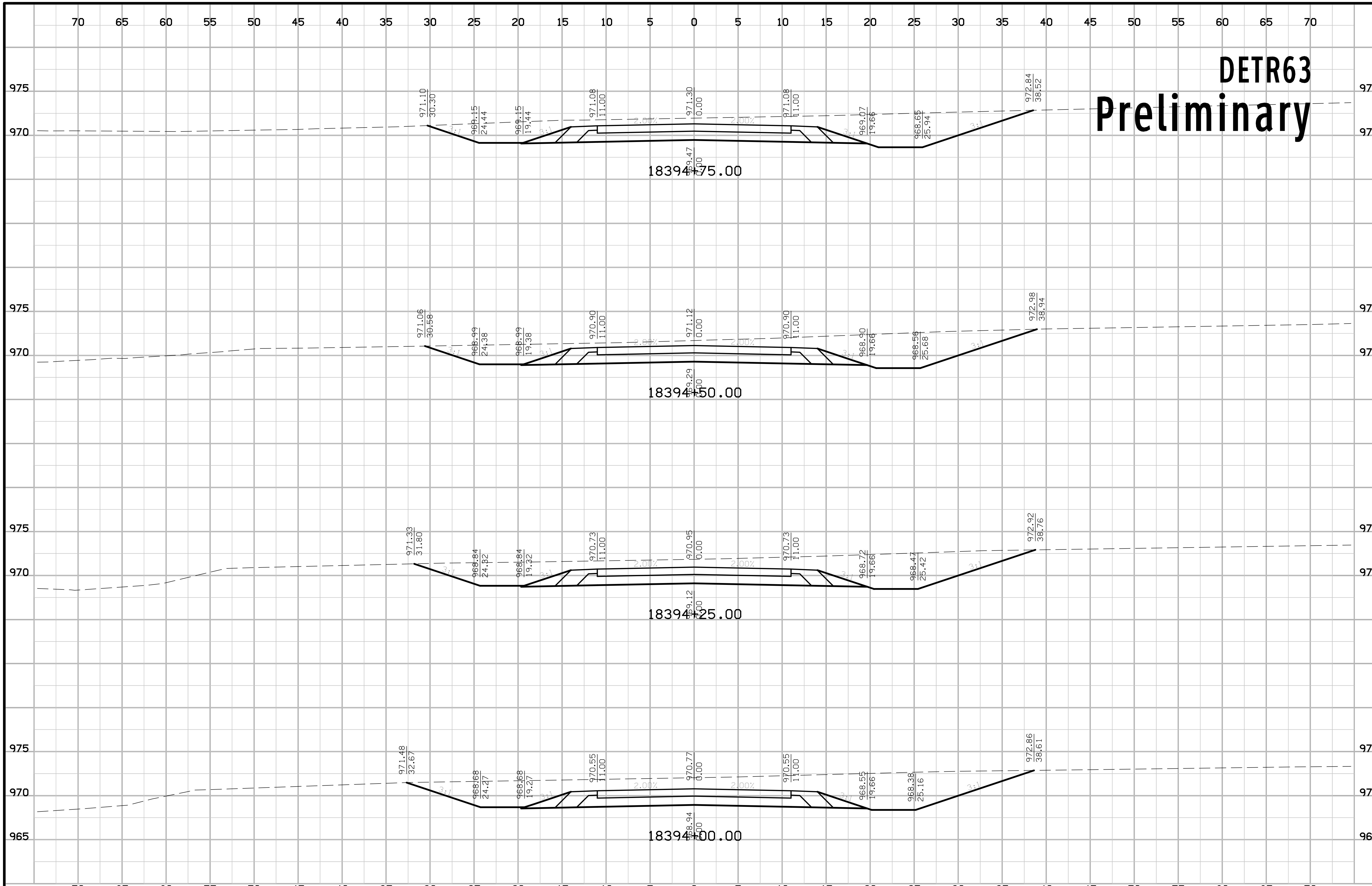
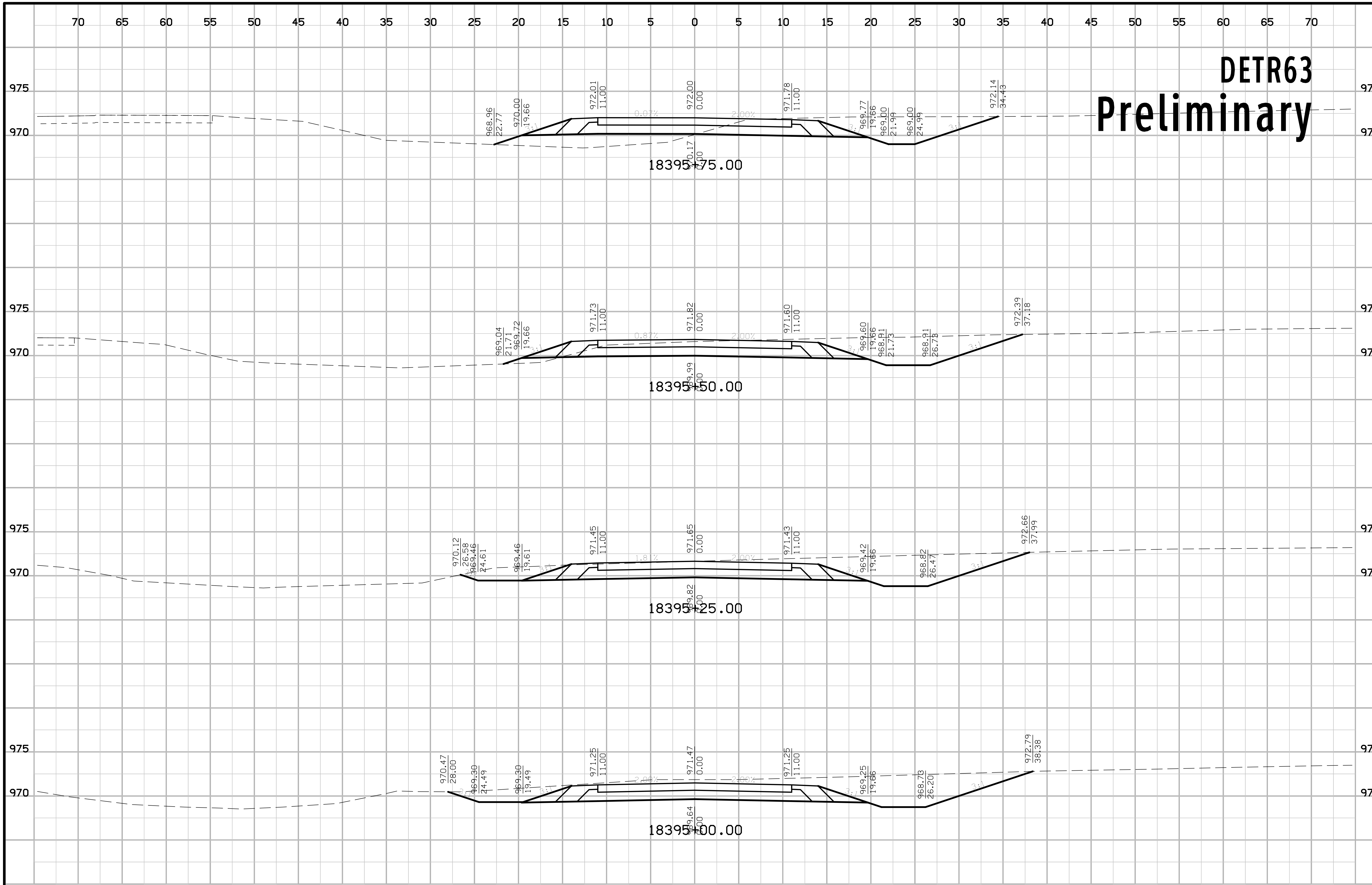


ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER X.69



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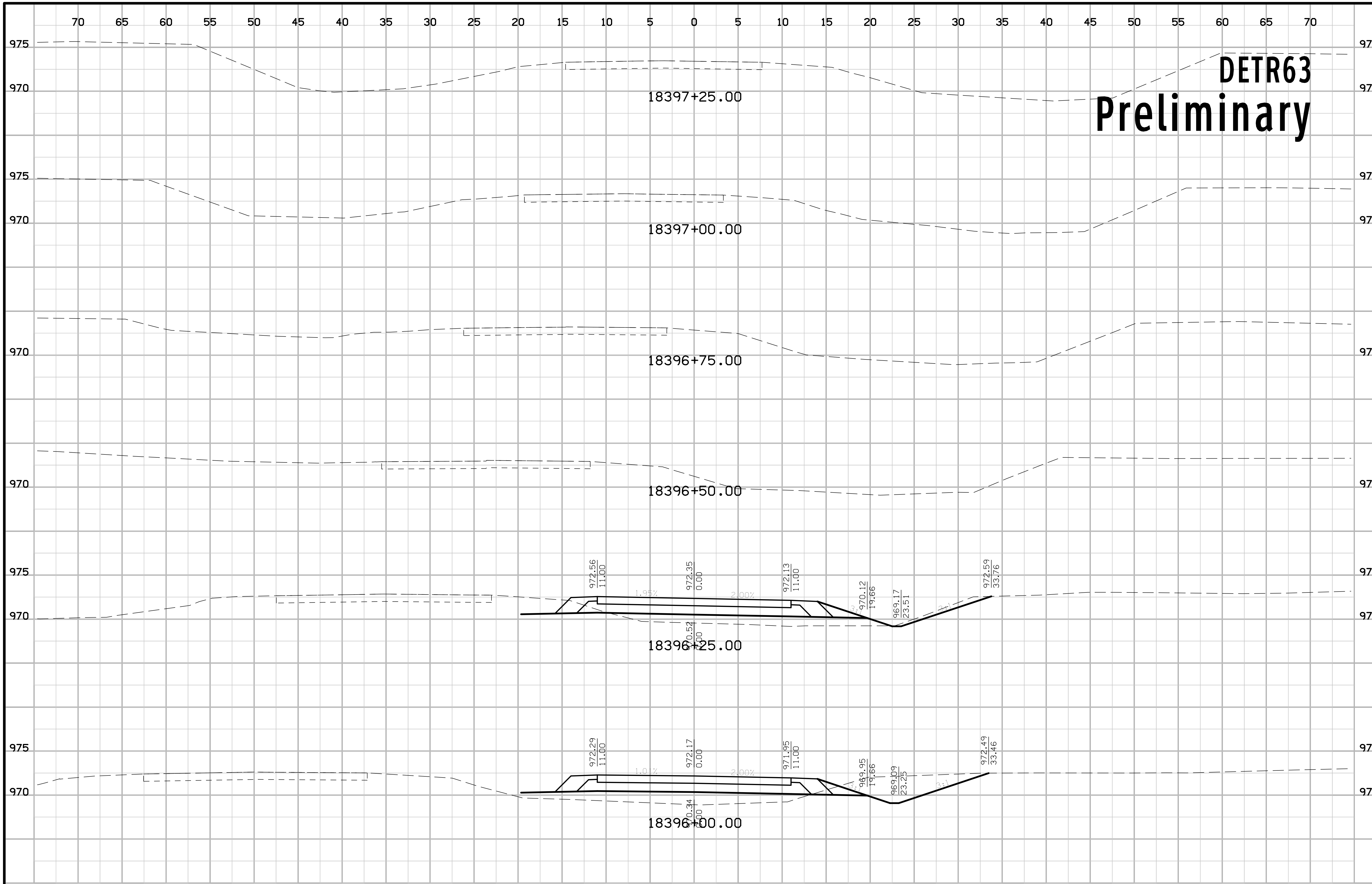

ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER X.71

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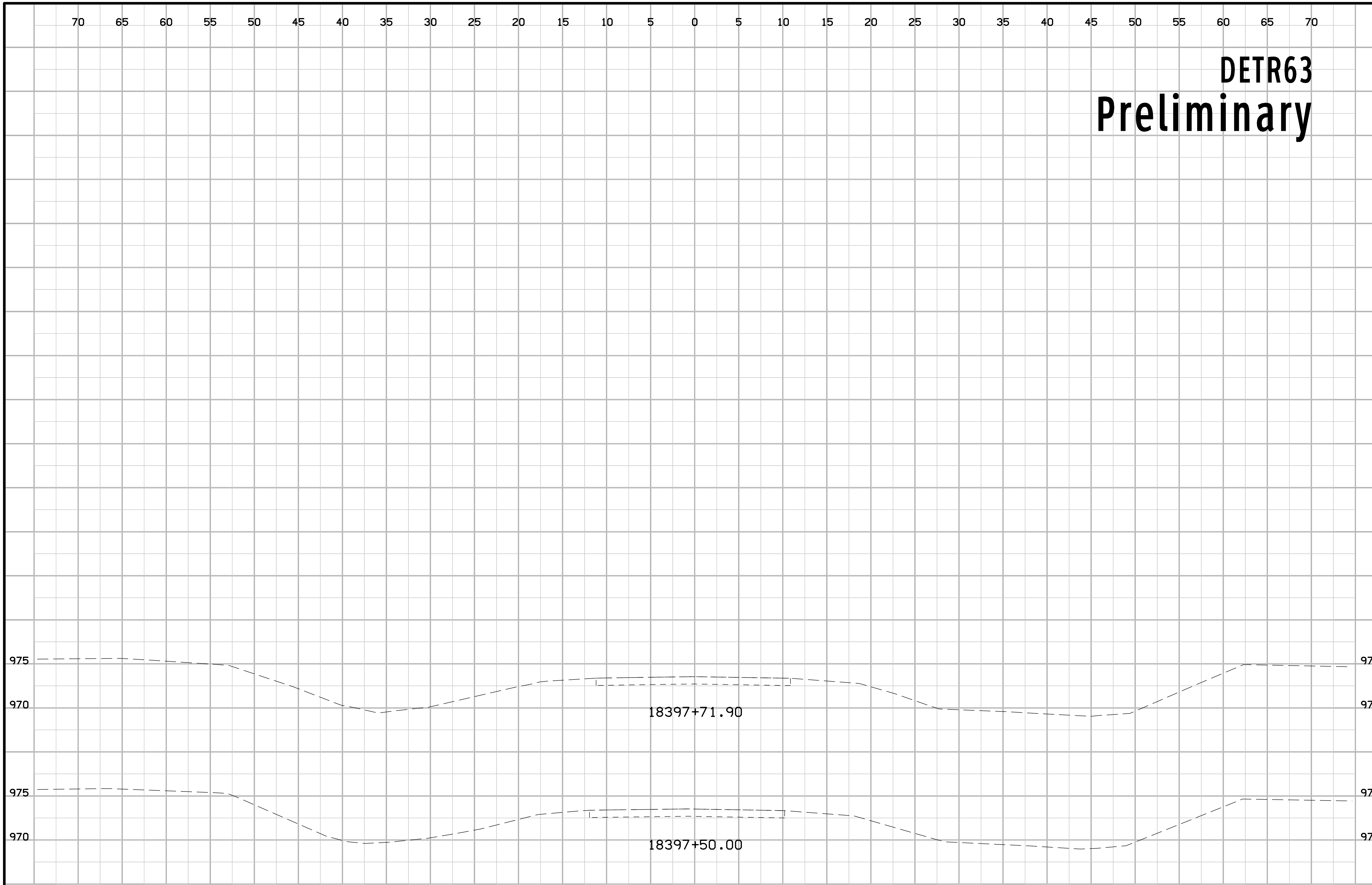
Preliminary



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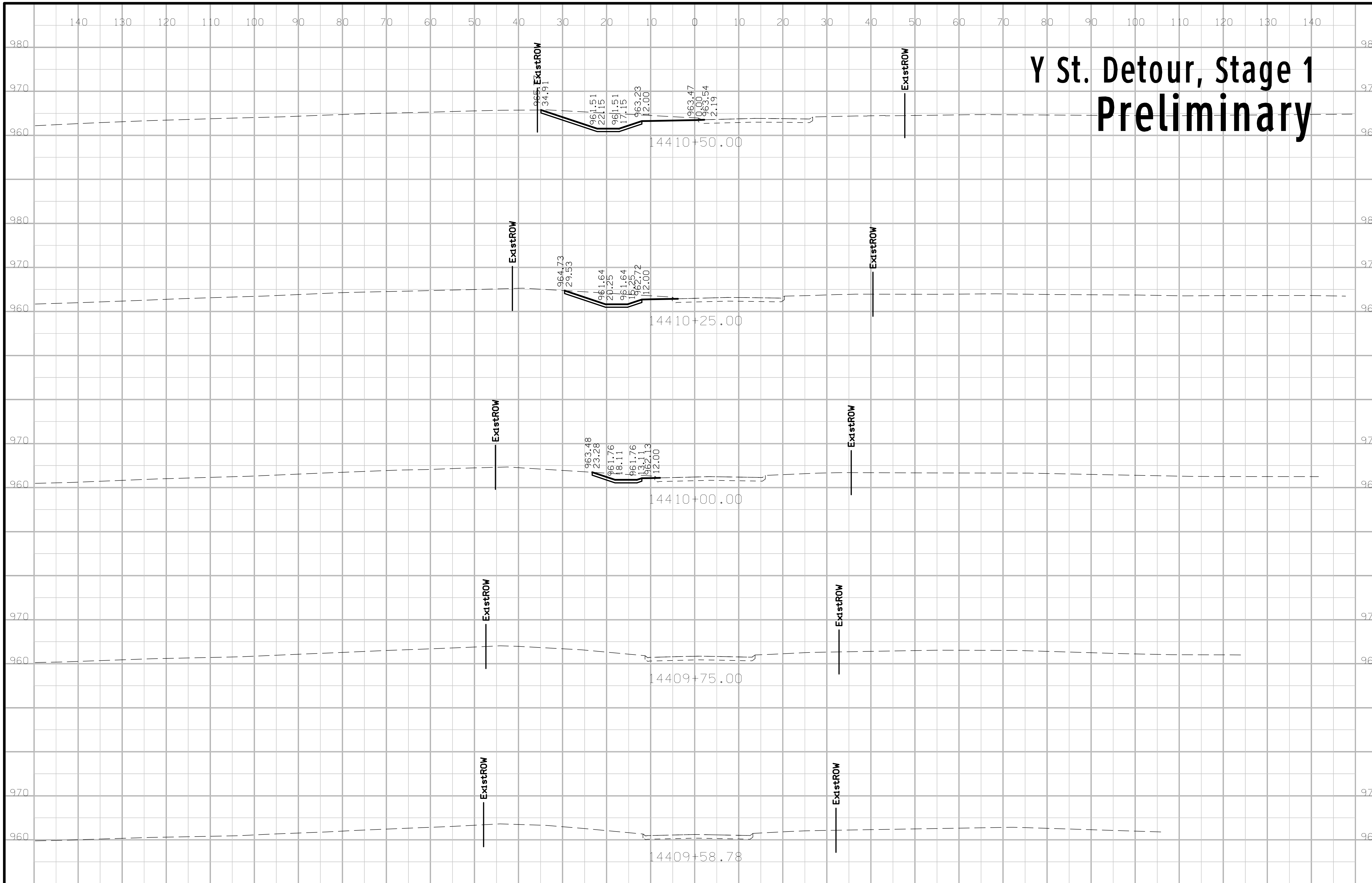

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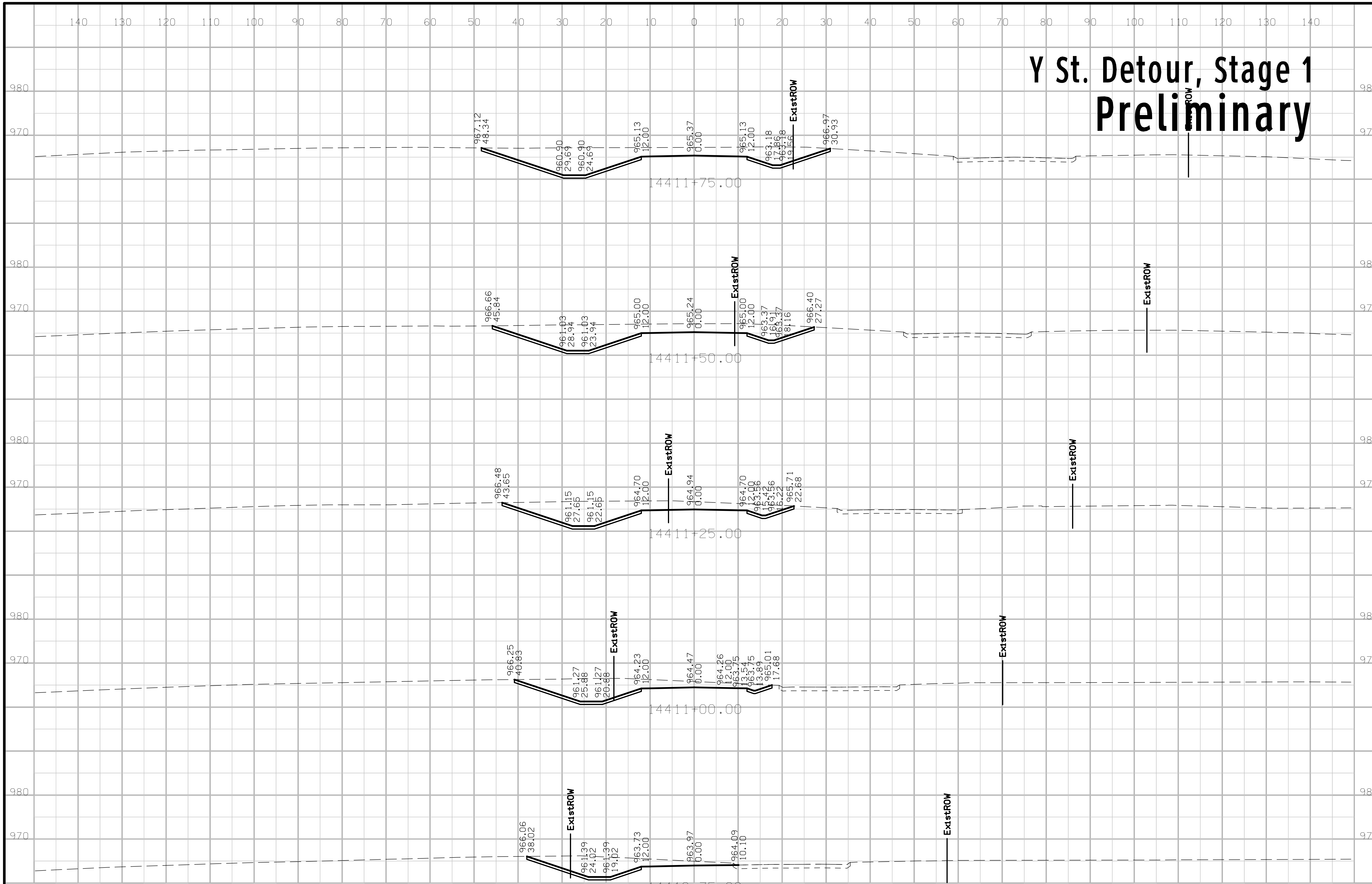

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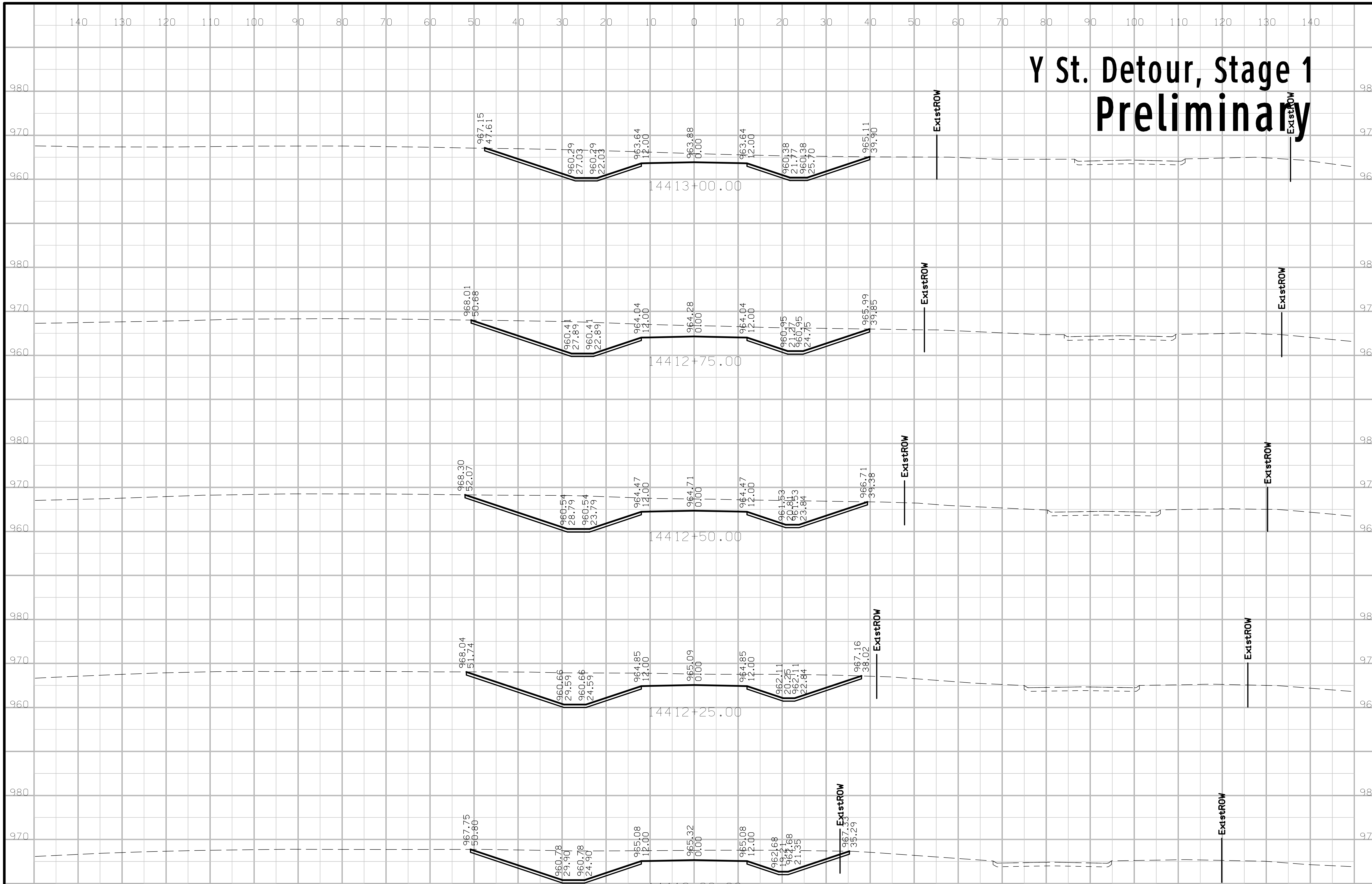

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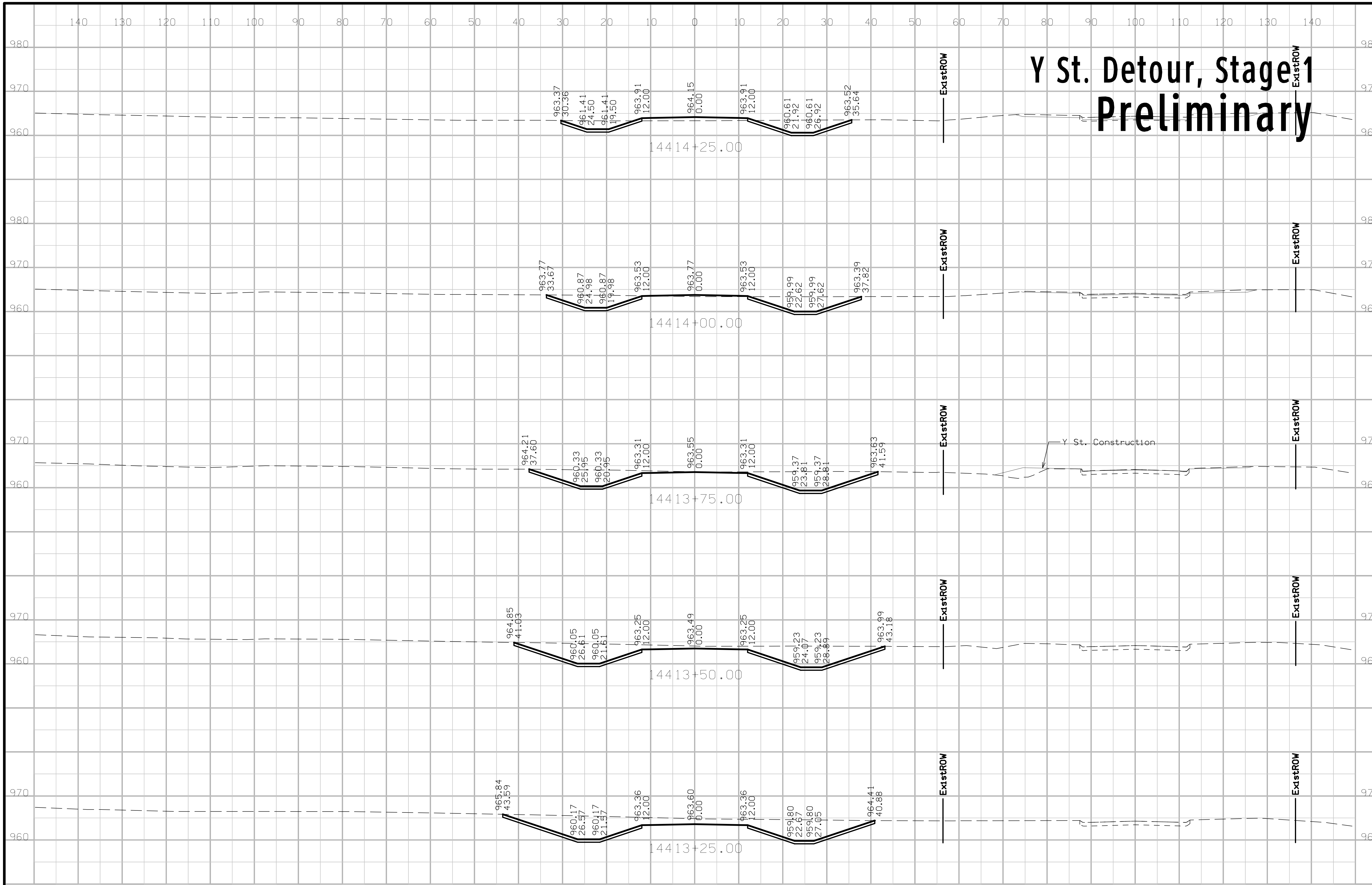
Y St. Detour, Stage1
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER X.76

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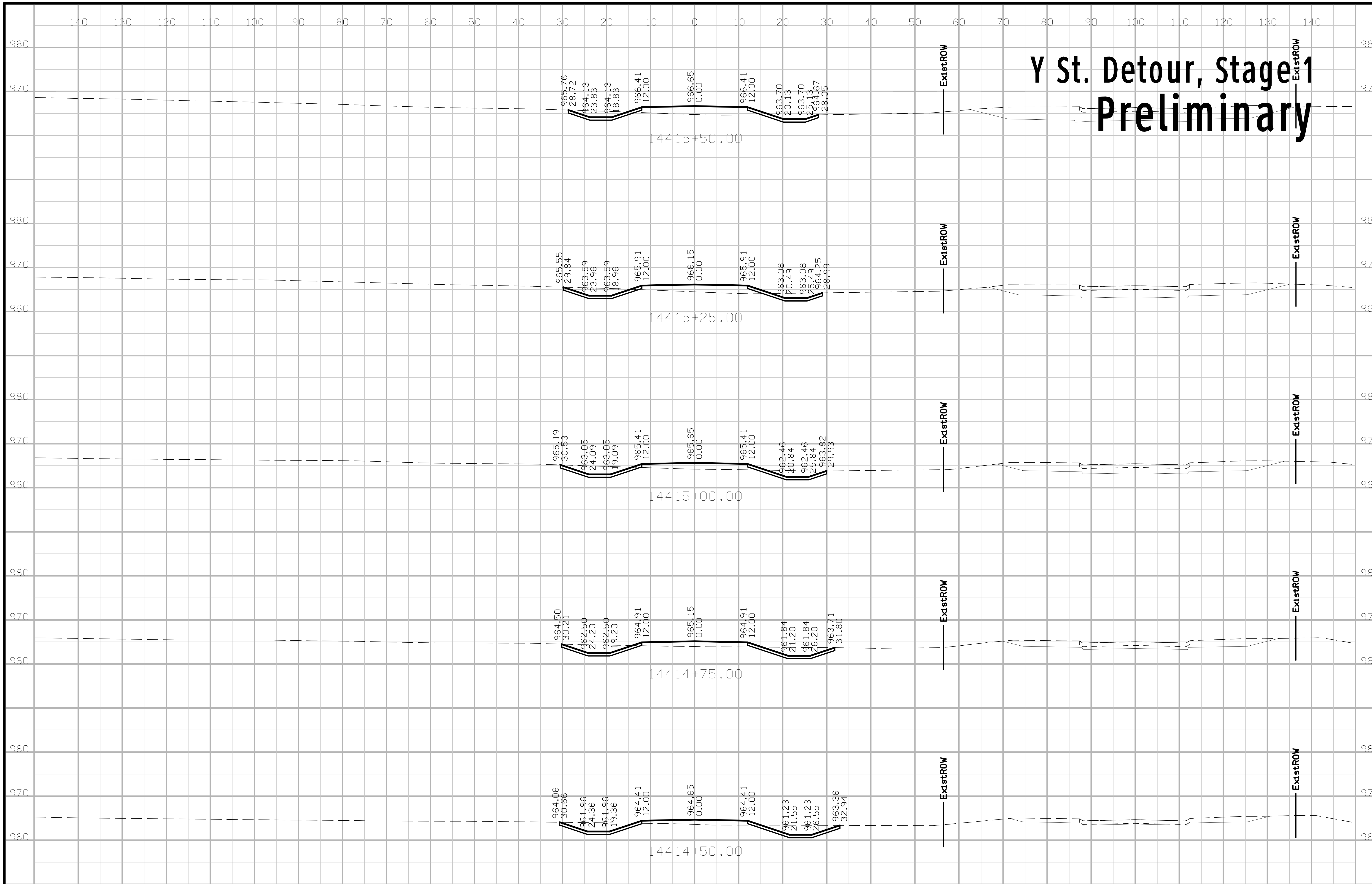
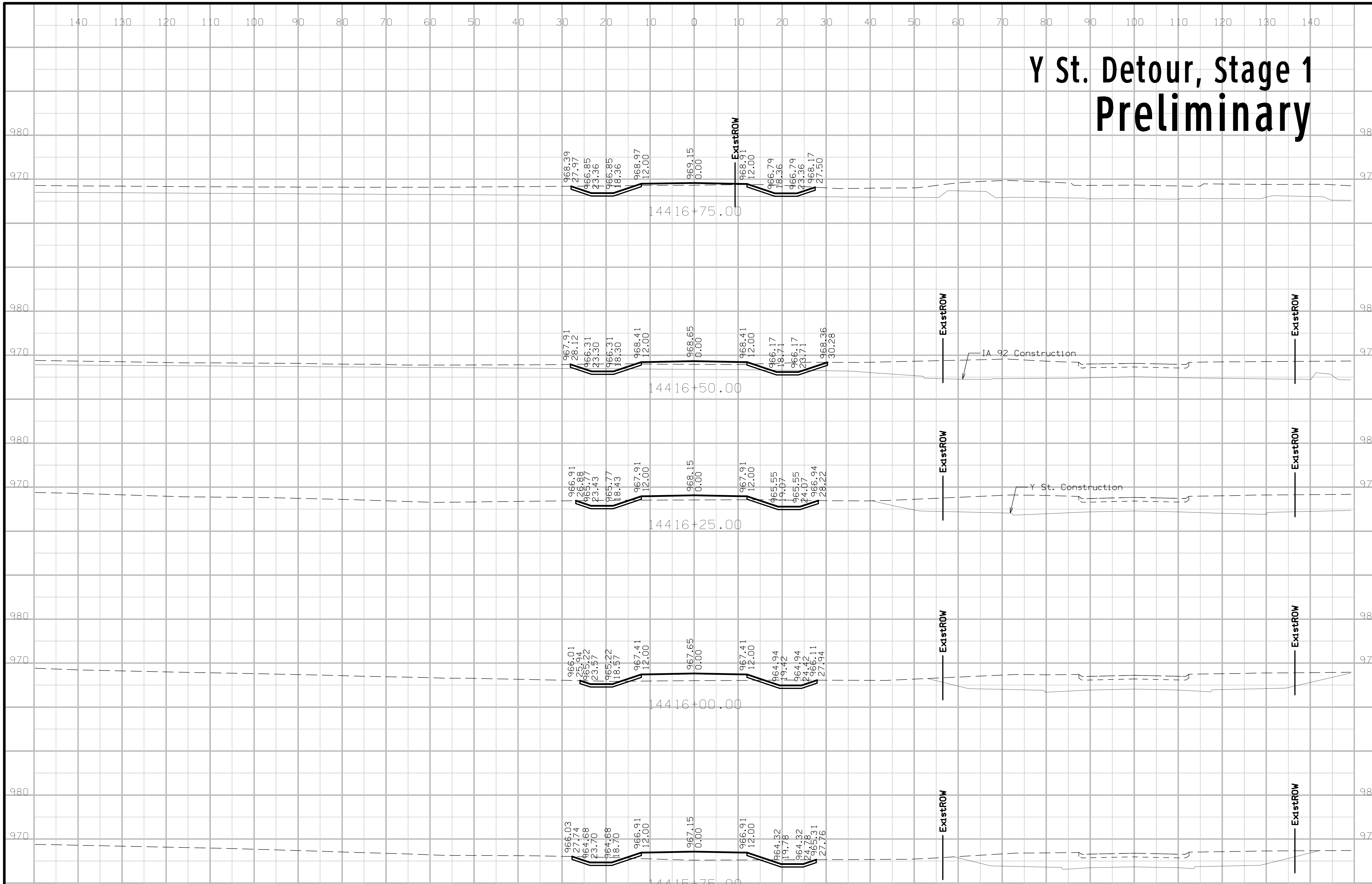
Y St. Detour, Stage 1

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER X.77

Y St. Detour, Stage 1
Preliminary



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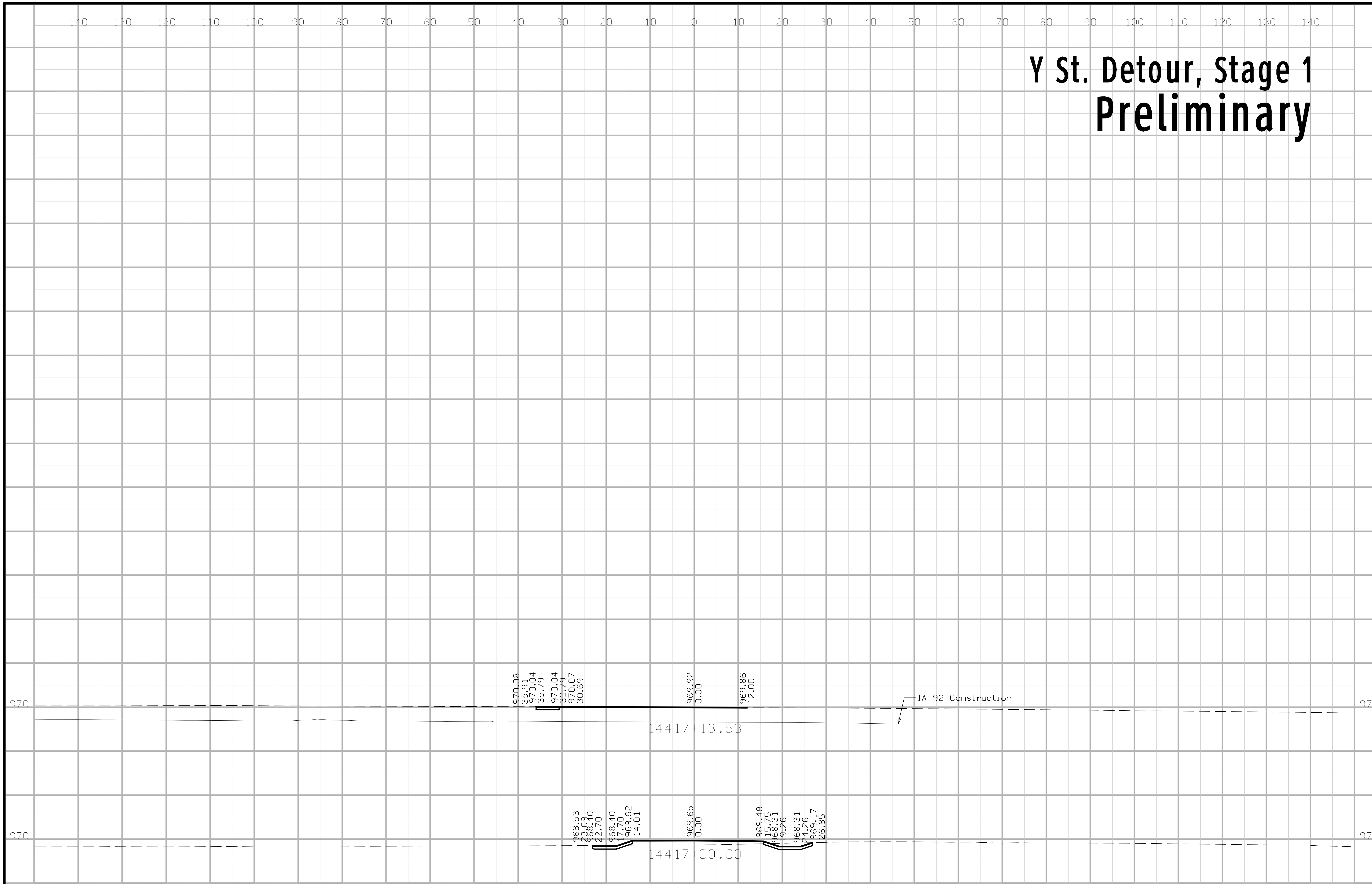

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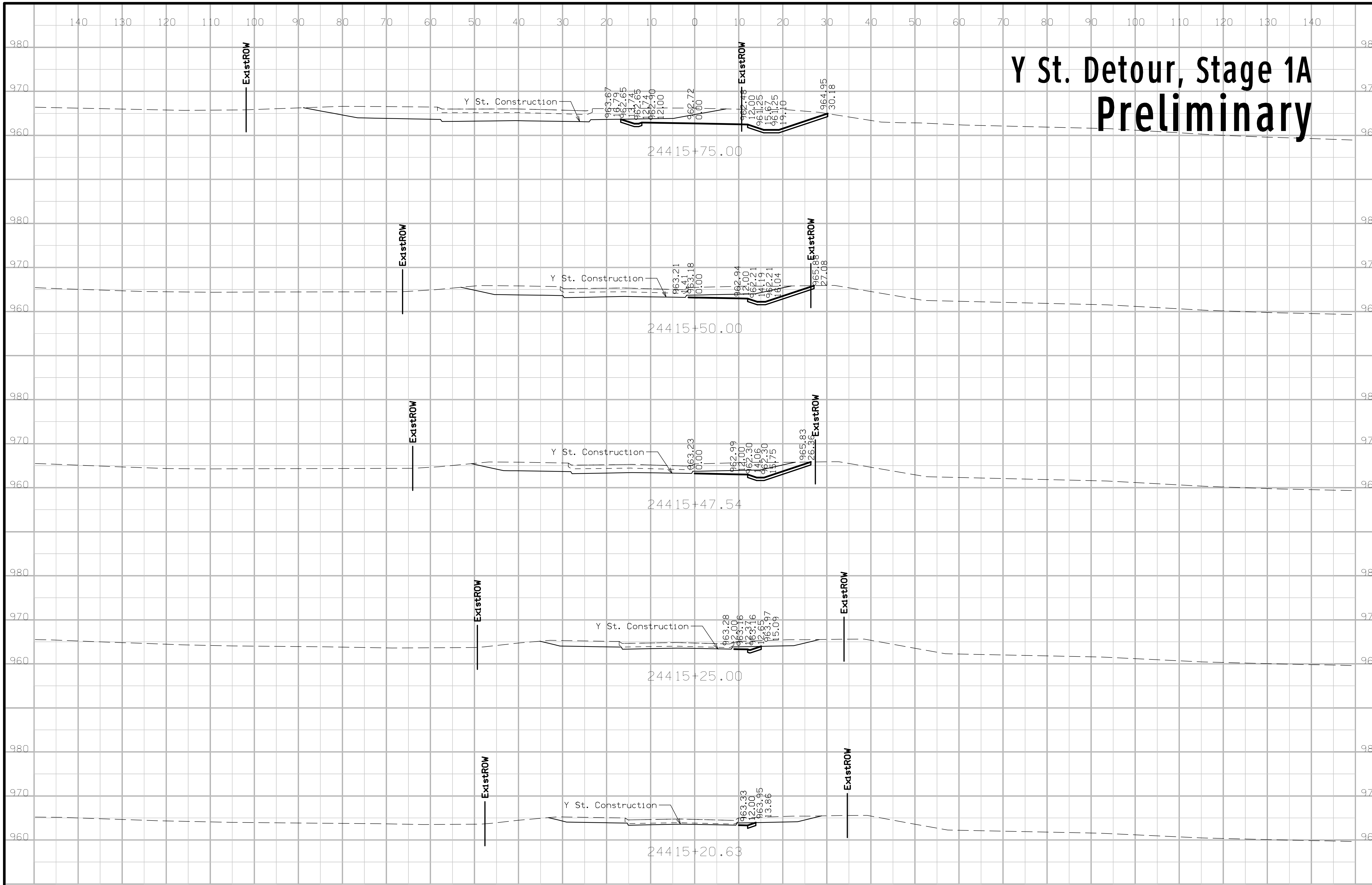

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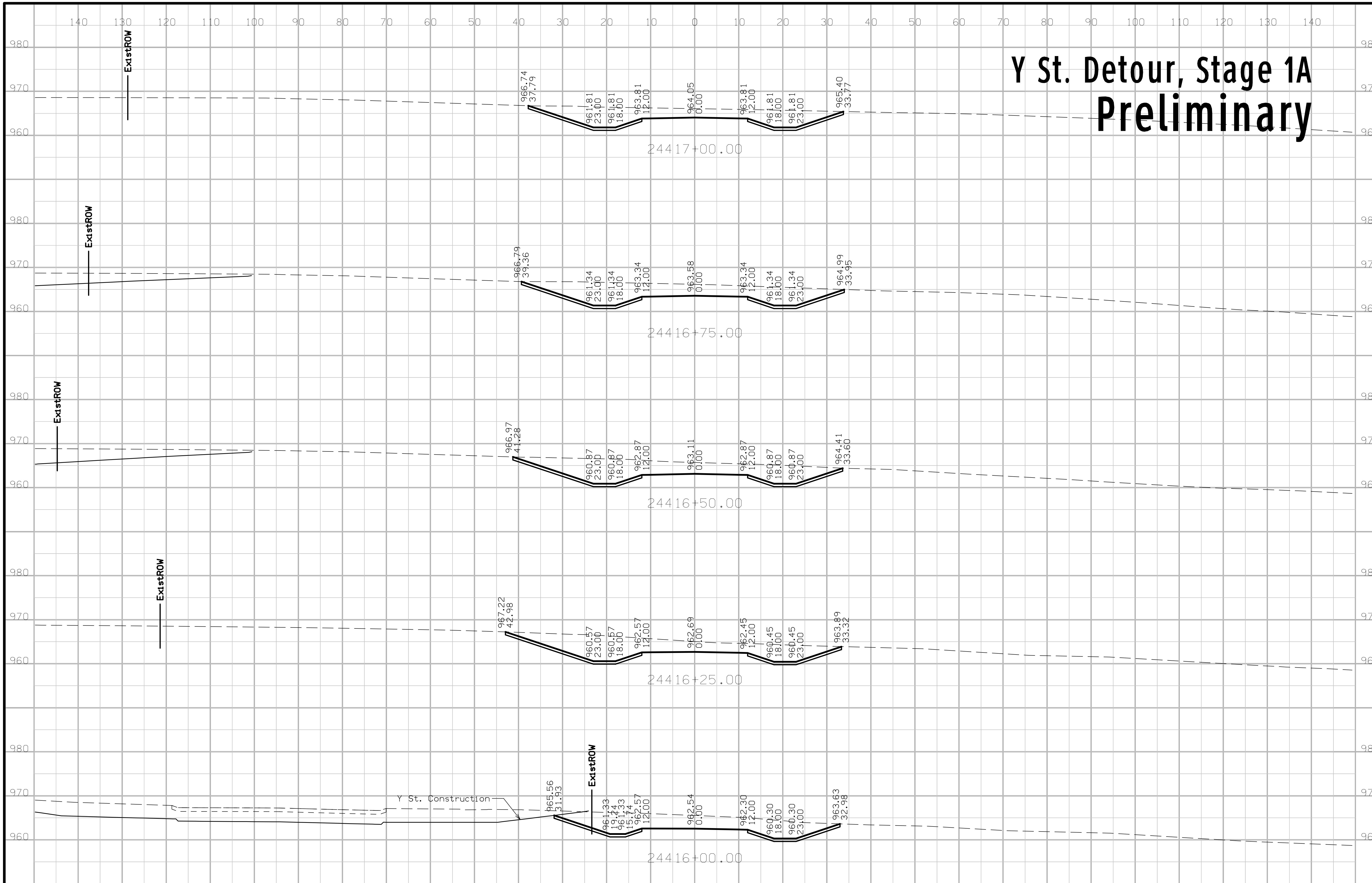

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER	X.81

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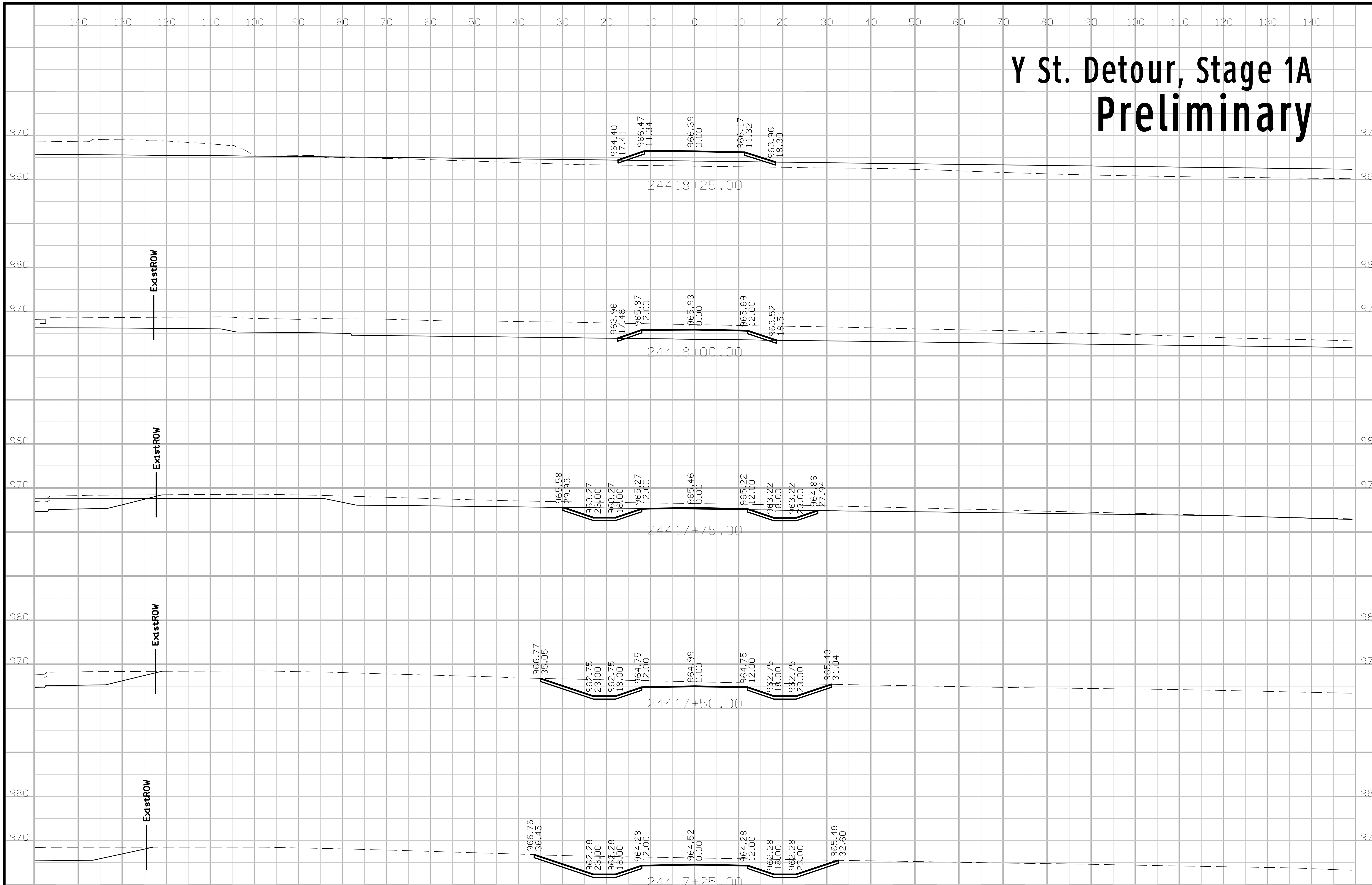
Y St. Detour, Stage 1A
Preliminary



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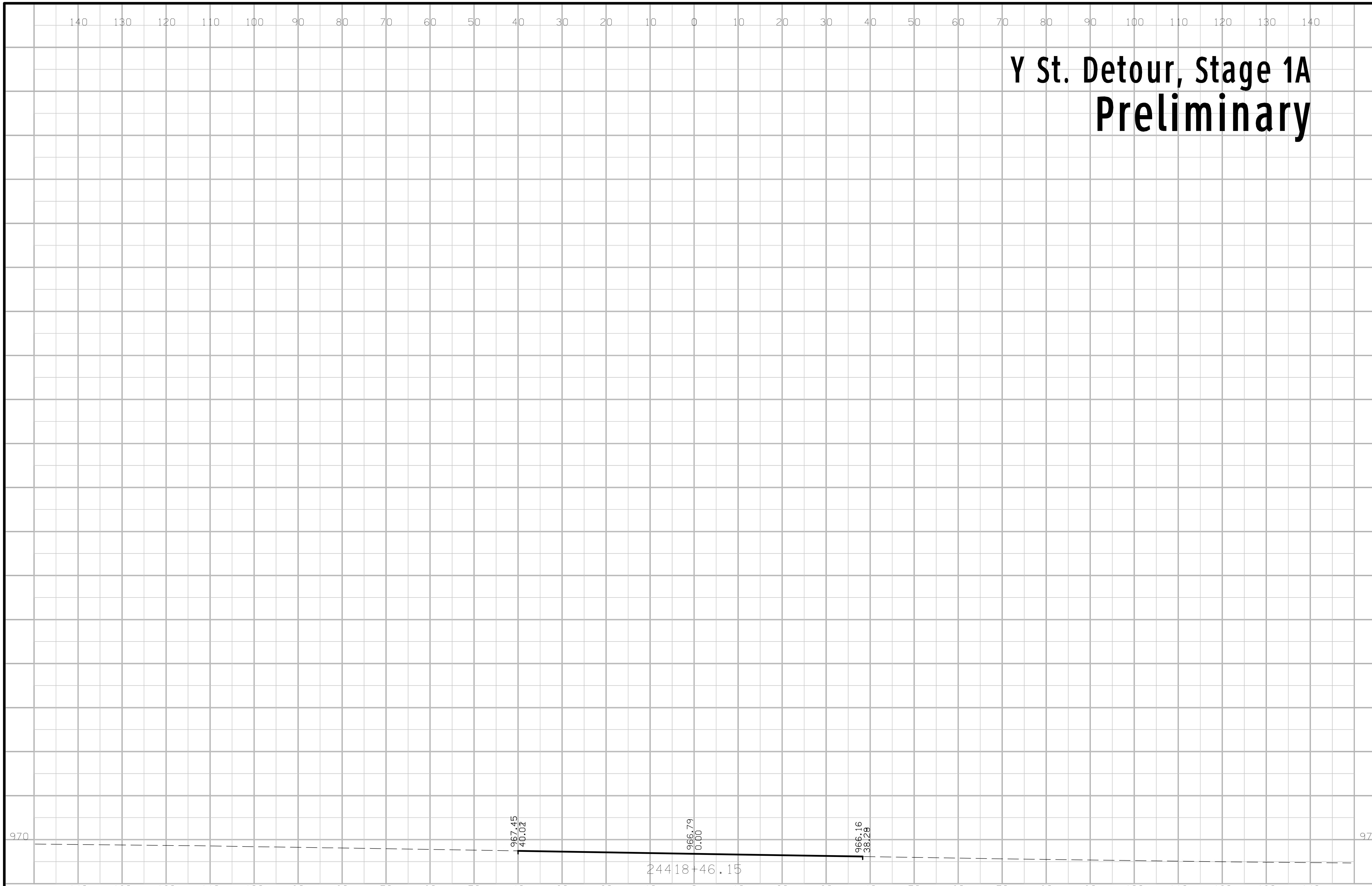
Y St. Detour, Stage 1A
Preliminary



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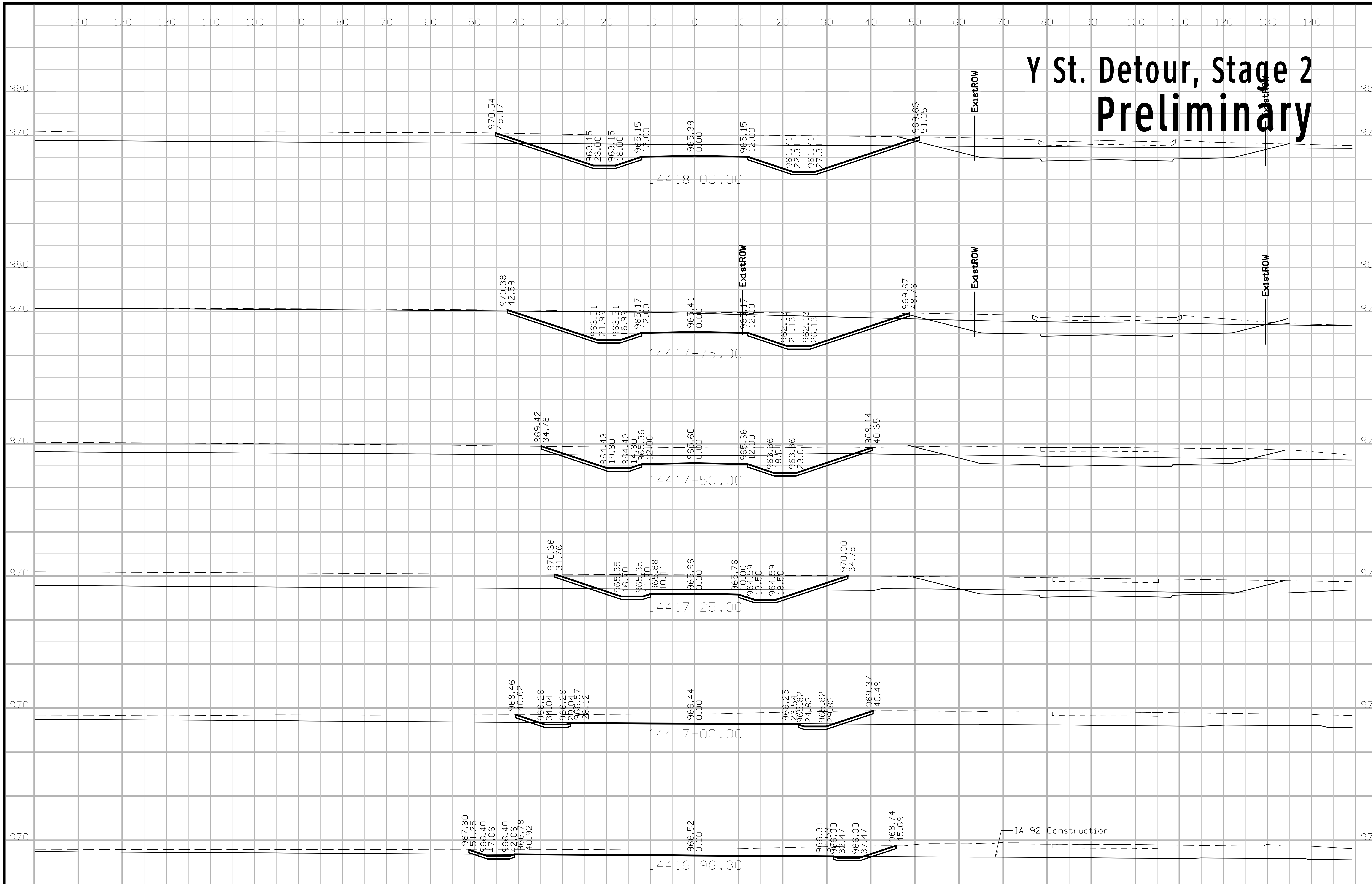

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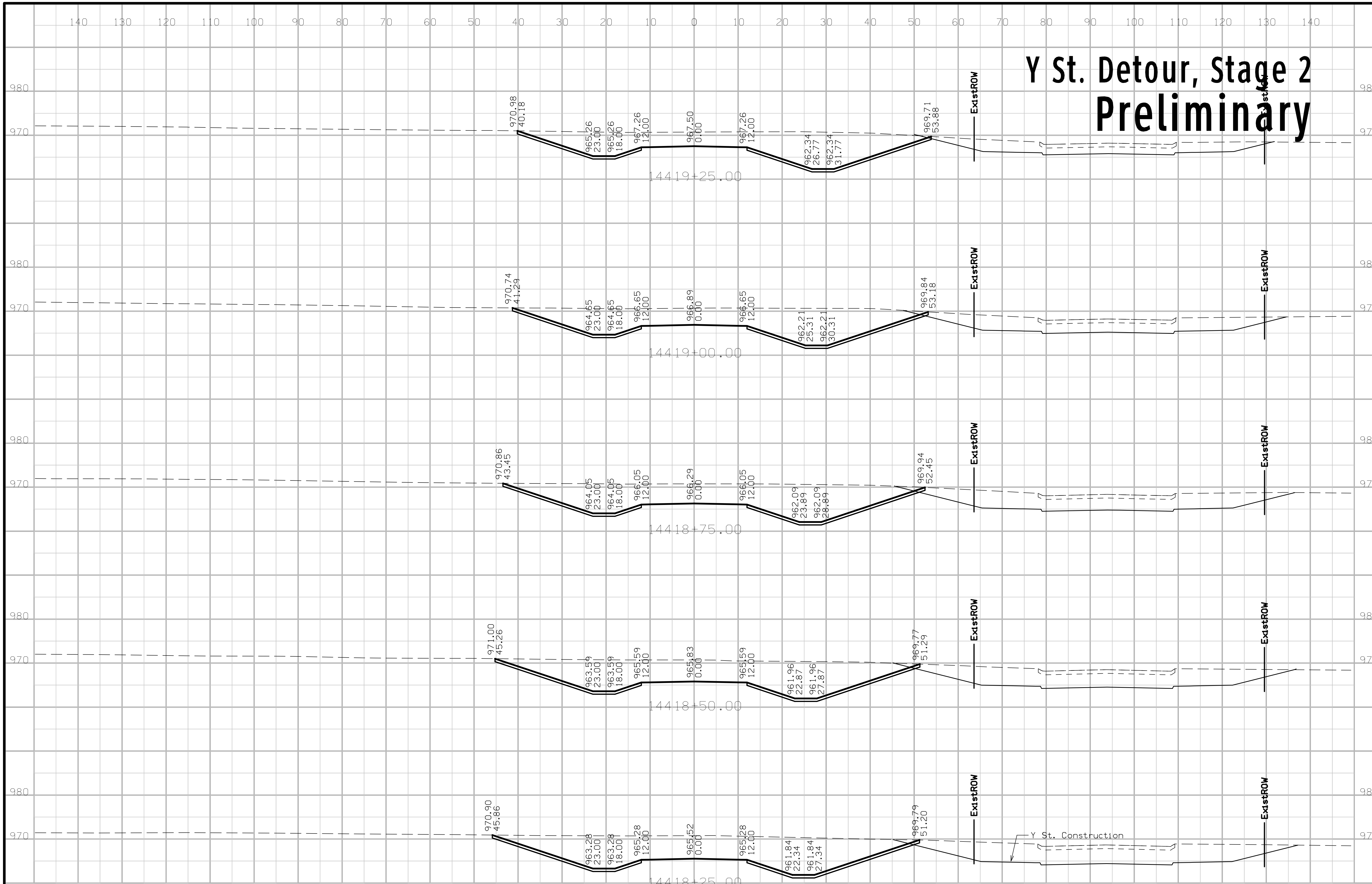

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER X.85

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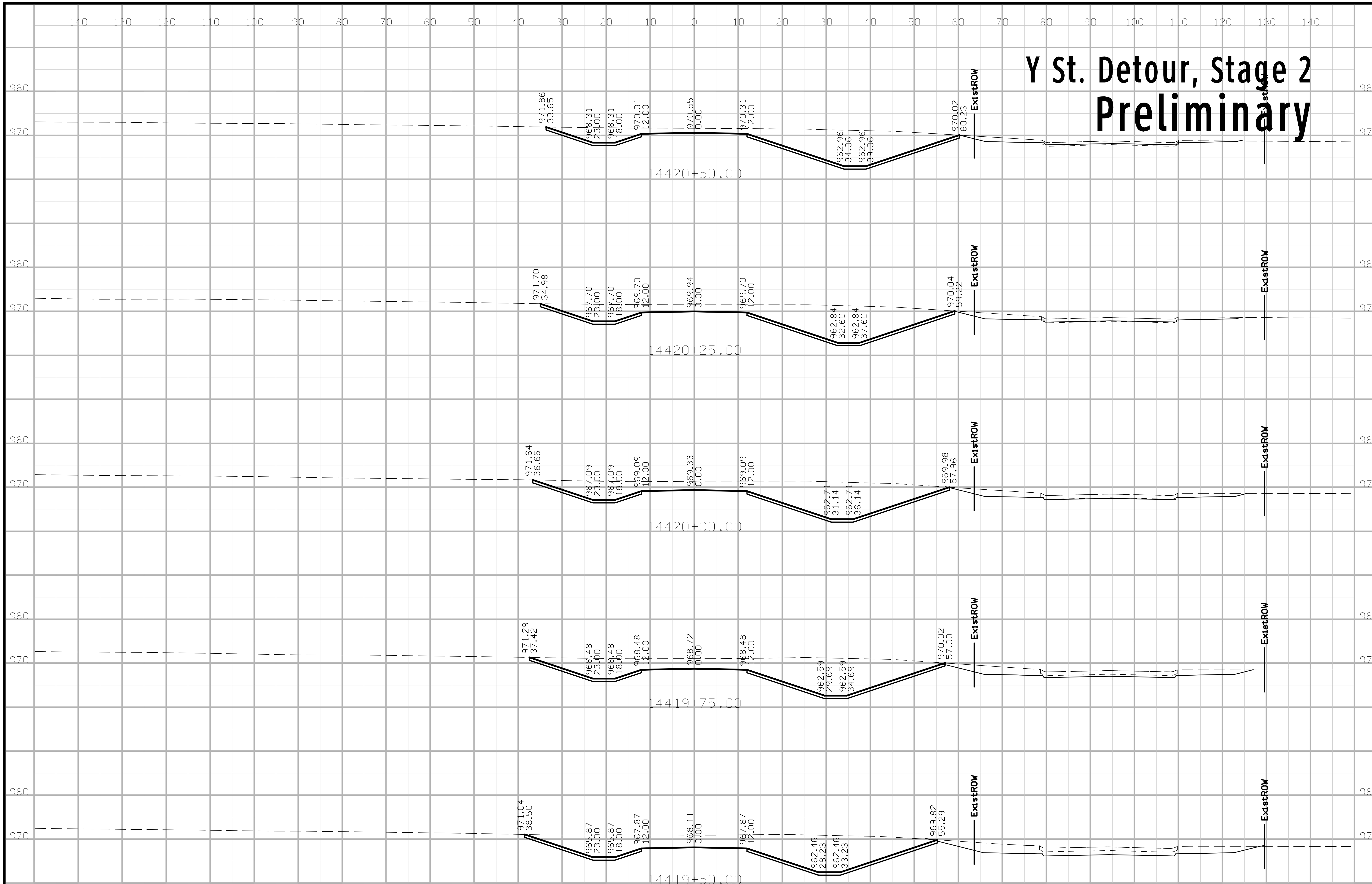

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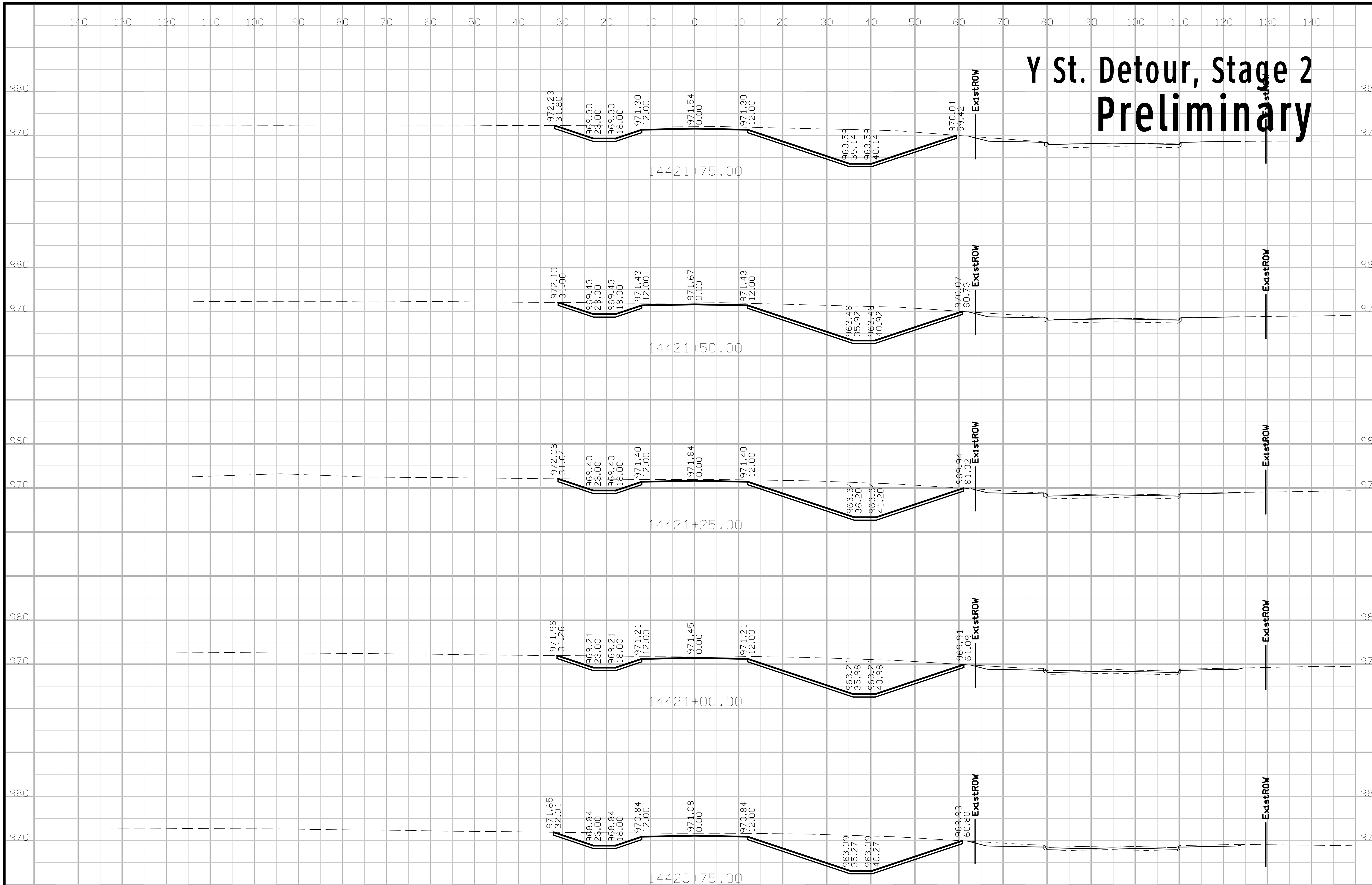
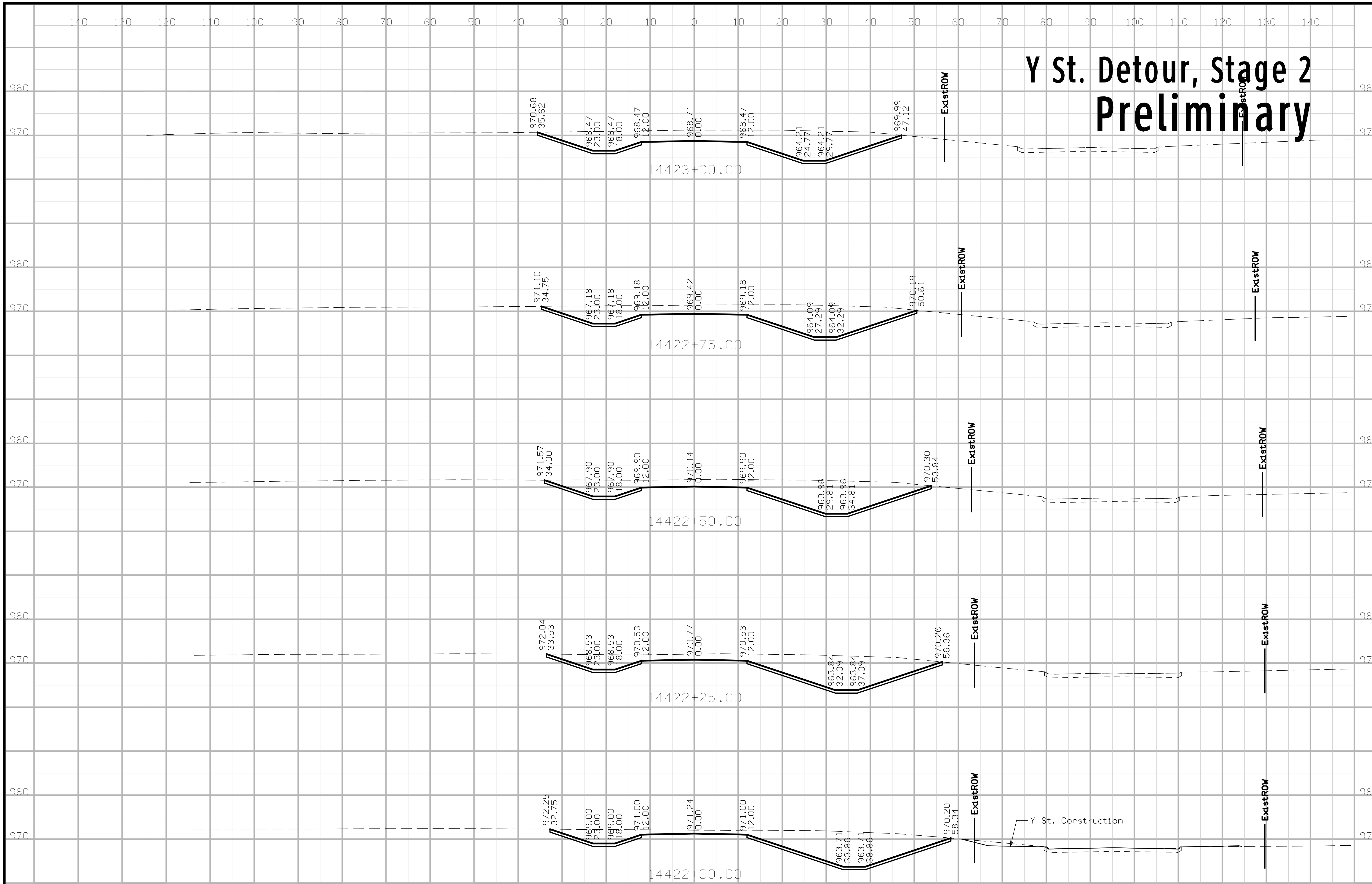


ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER X.87

9:14:01 AM 7/29/2013 wcamero pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9109201004\Design\91092051X14_DETYST_STG2.sht



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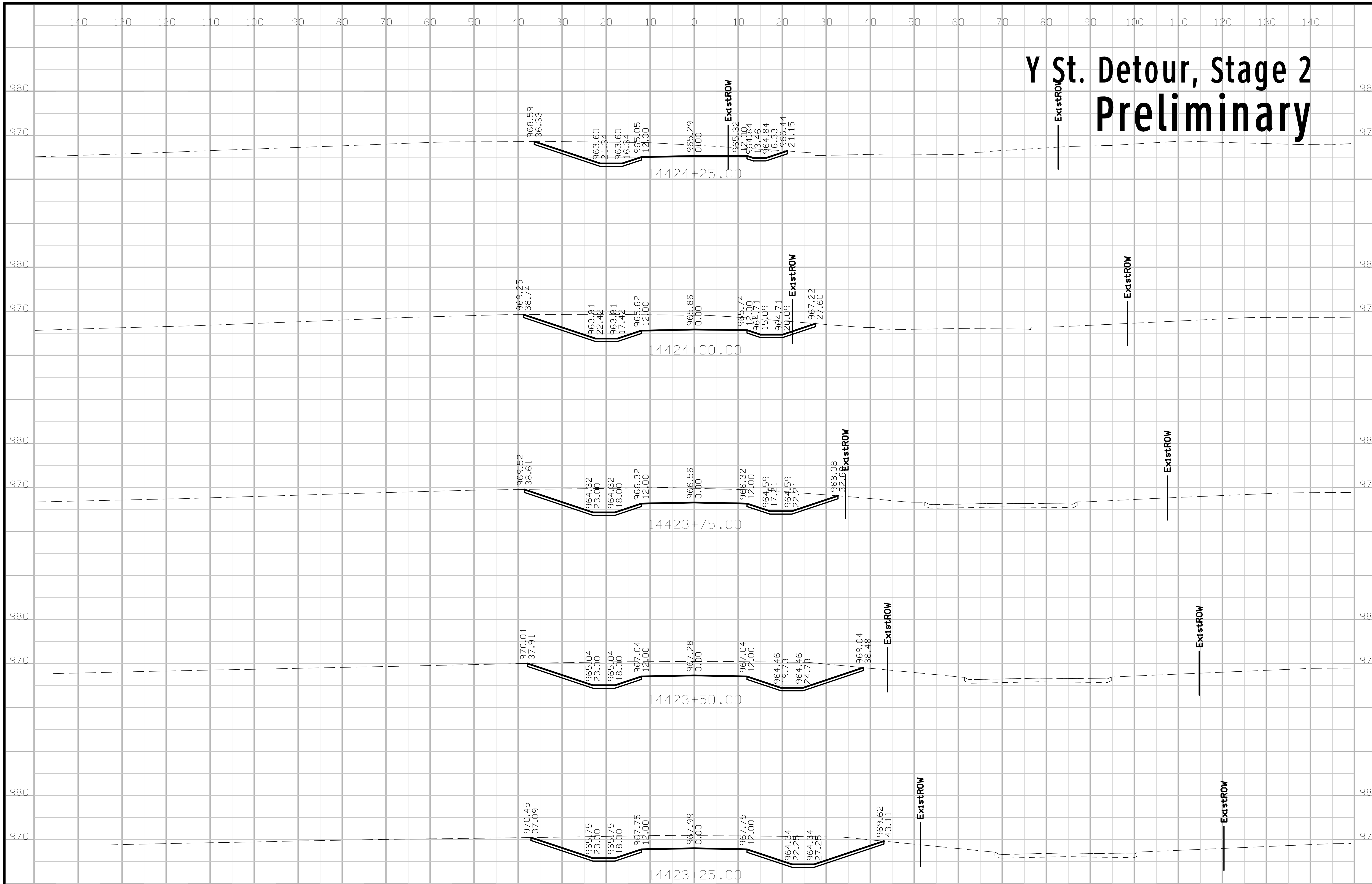

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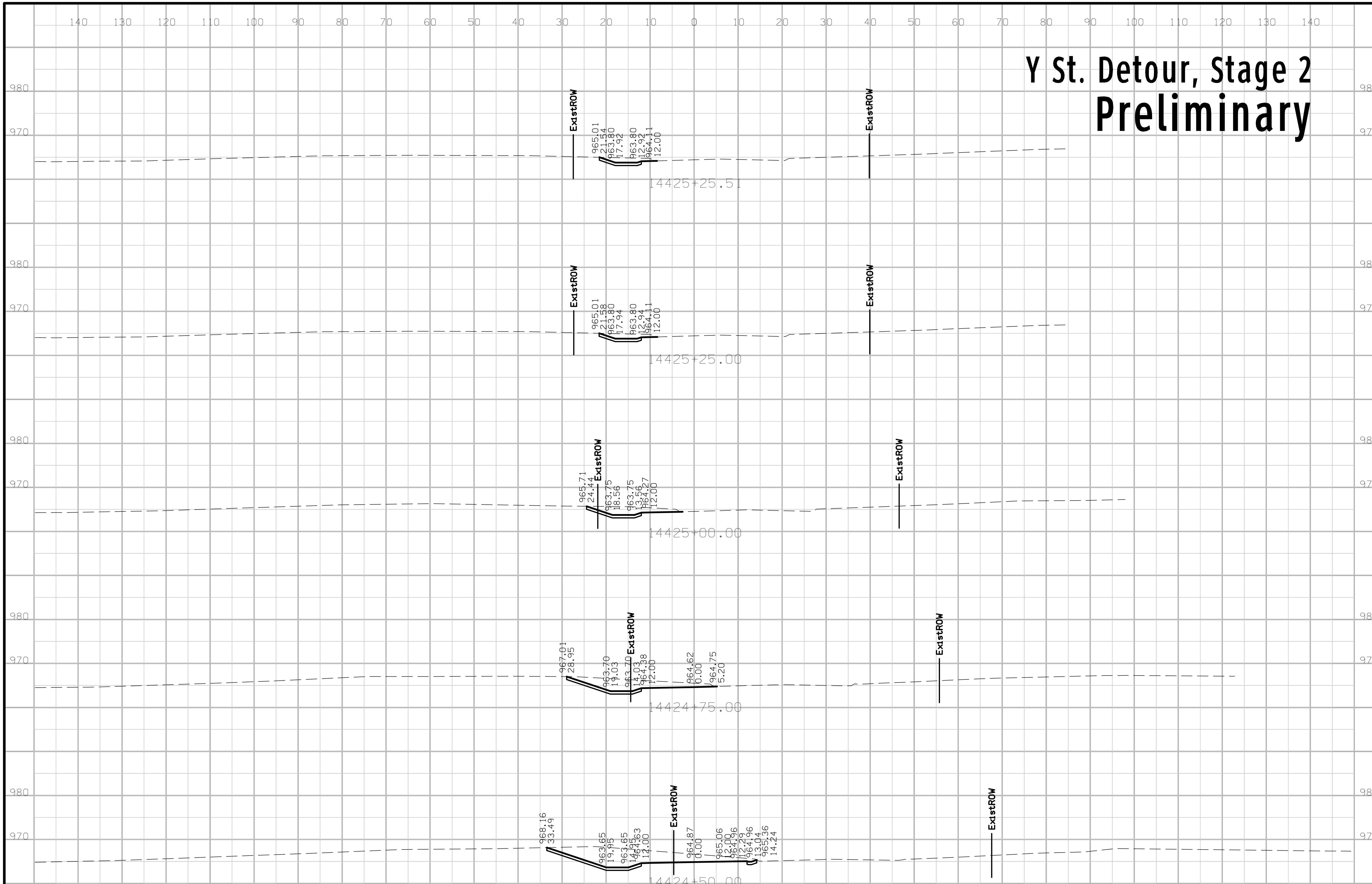

ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER X.90

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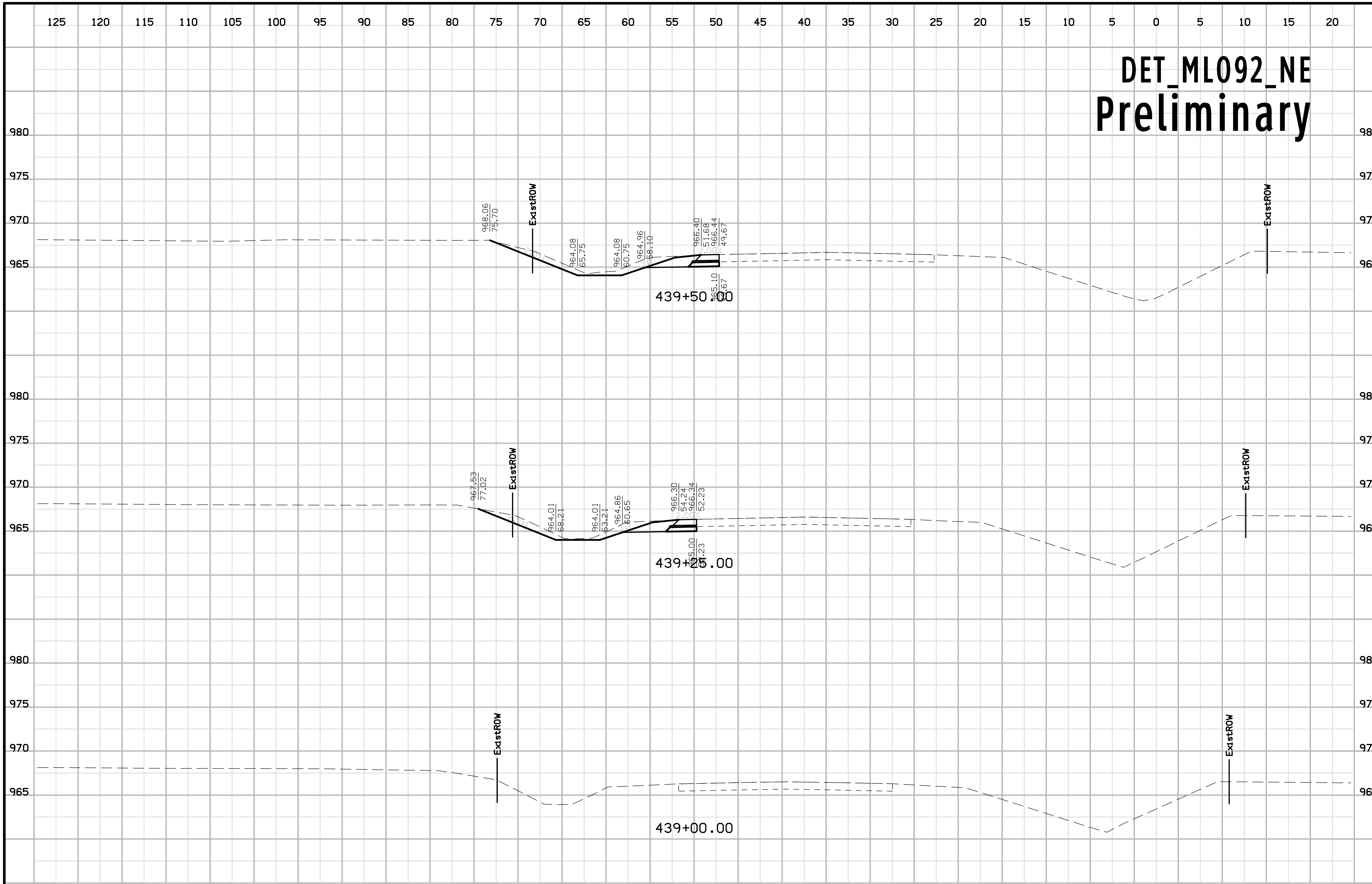
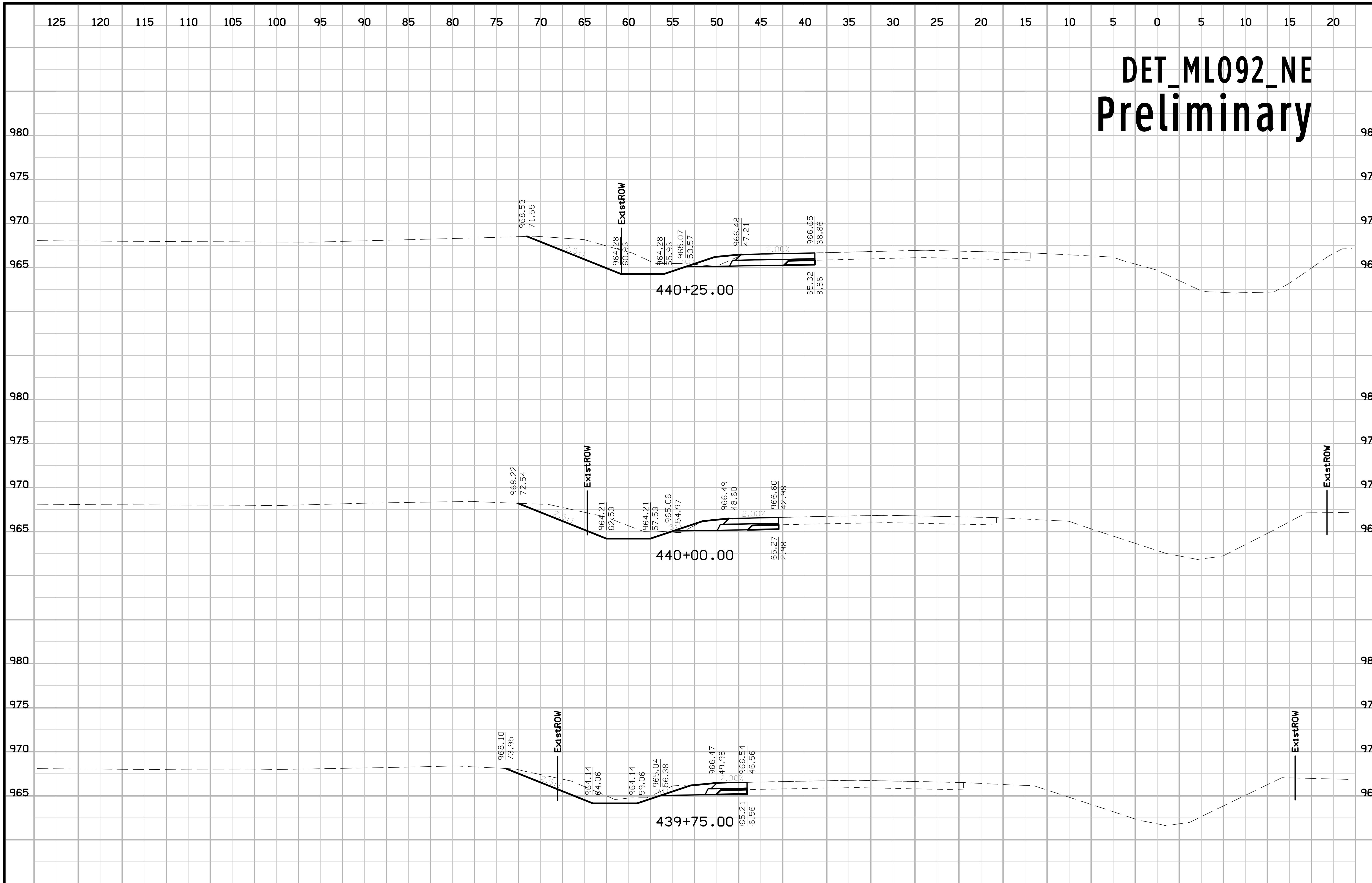


ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER X.91

9:20:25 AM 7/29/2013 wcamero pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9109201004\Design\91092051X15_DET_ML092_NE.sht

DET_ML092_NE
Preliminary



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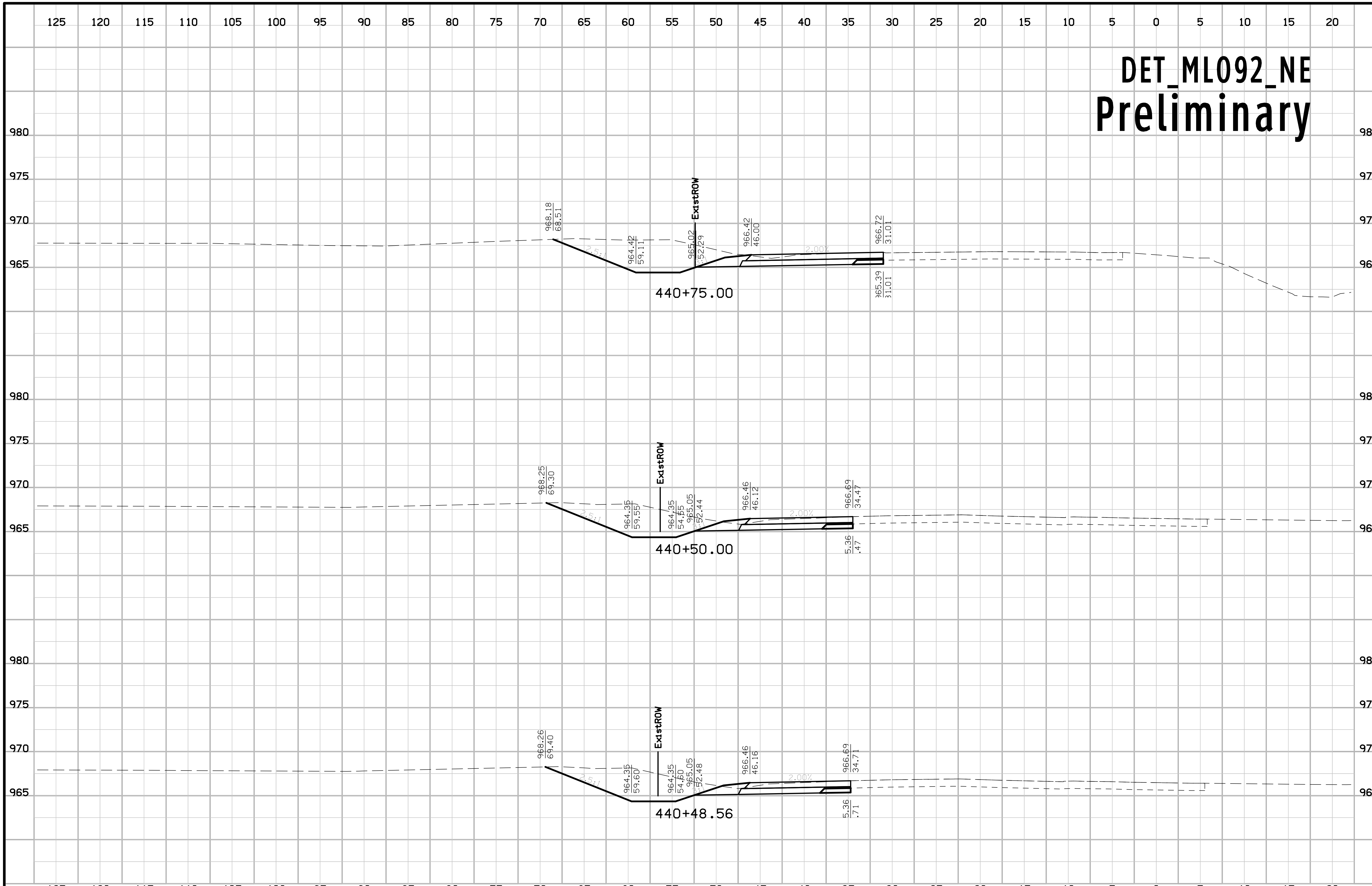

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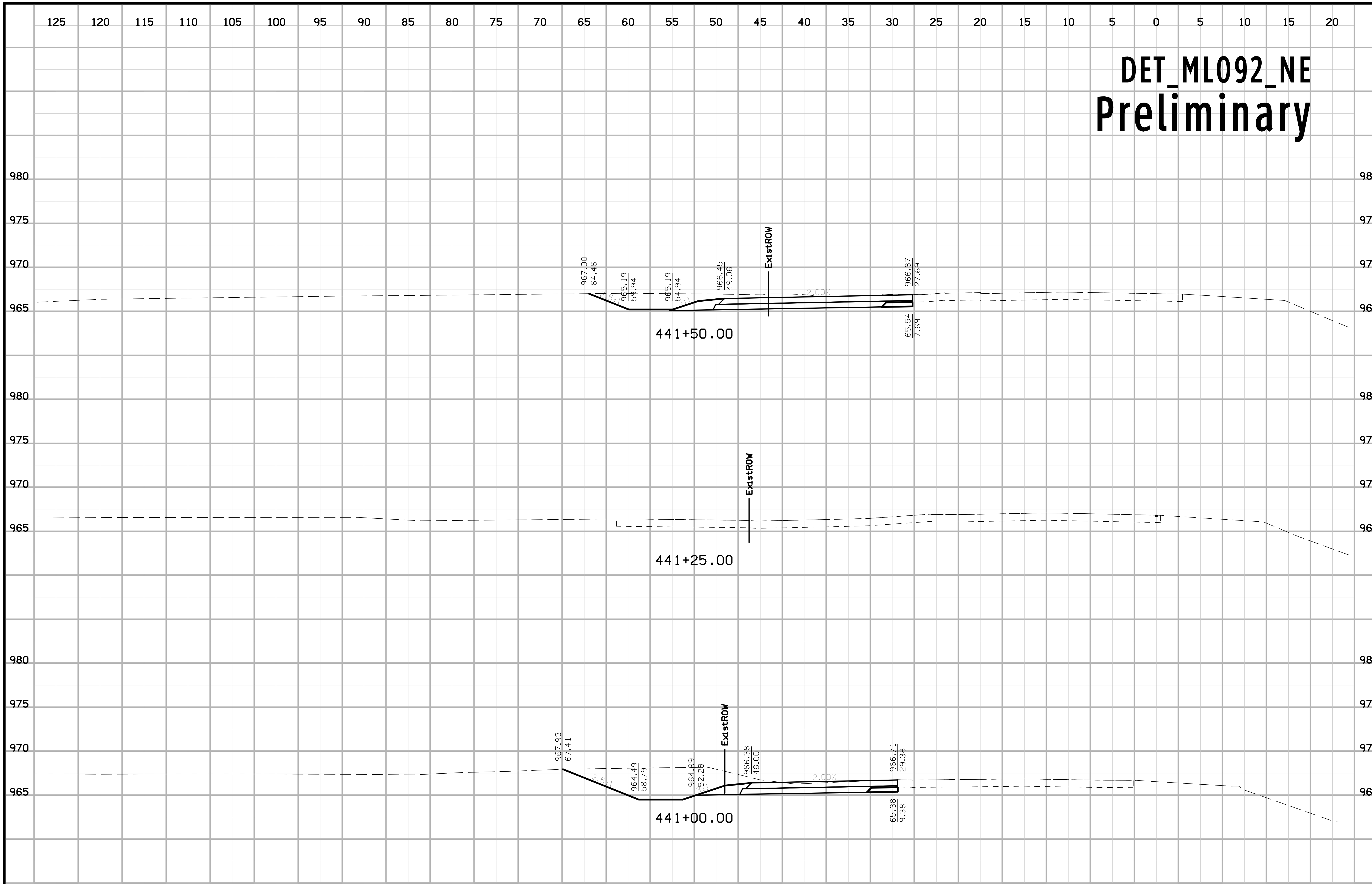
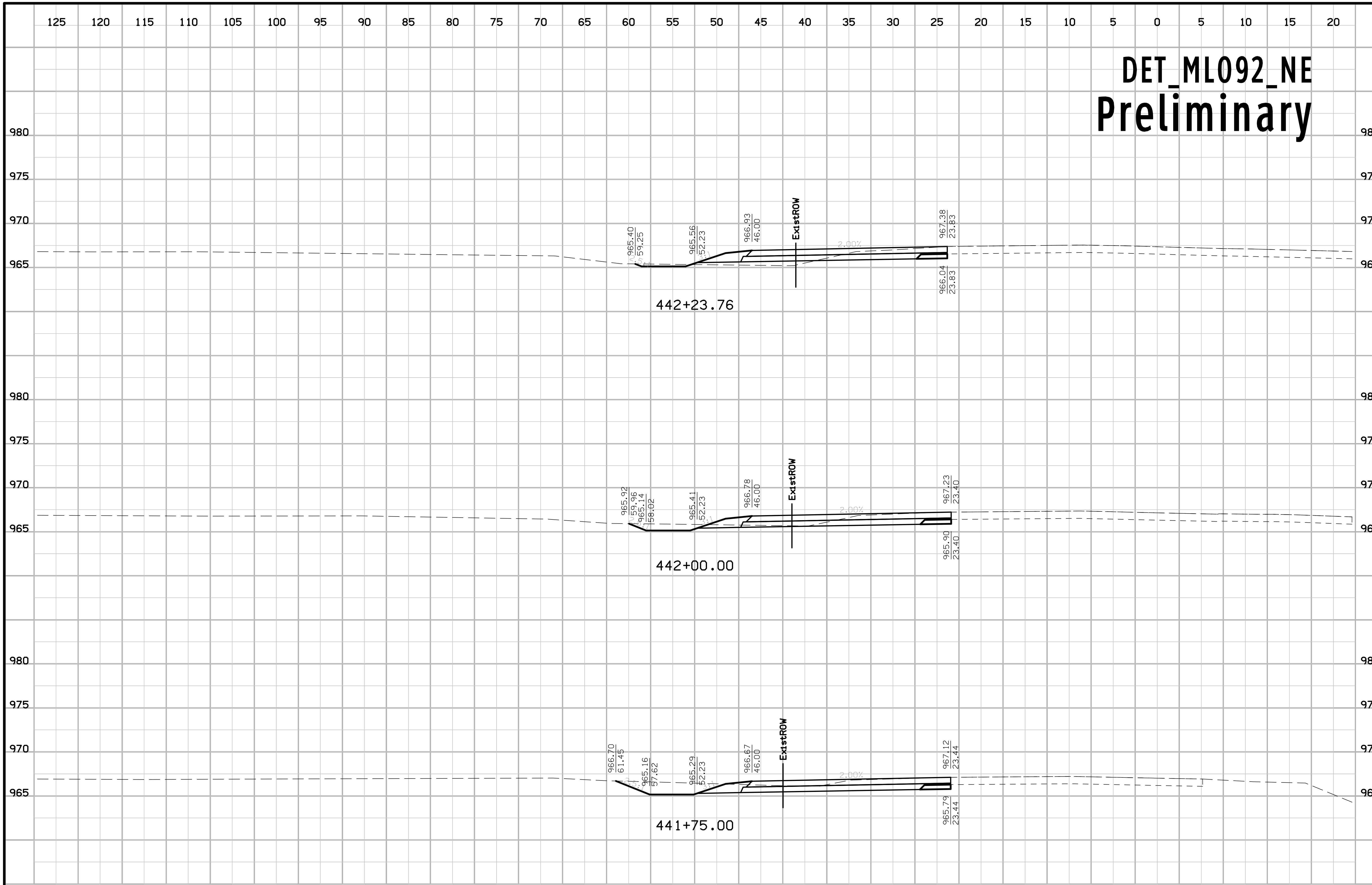


ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER X.94

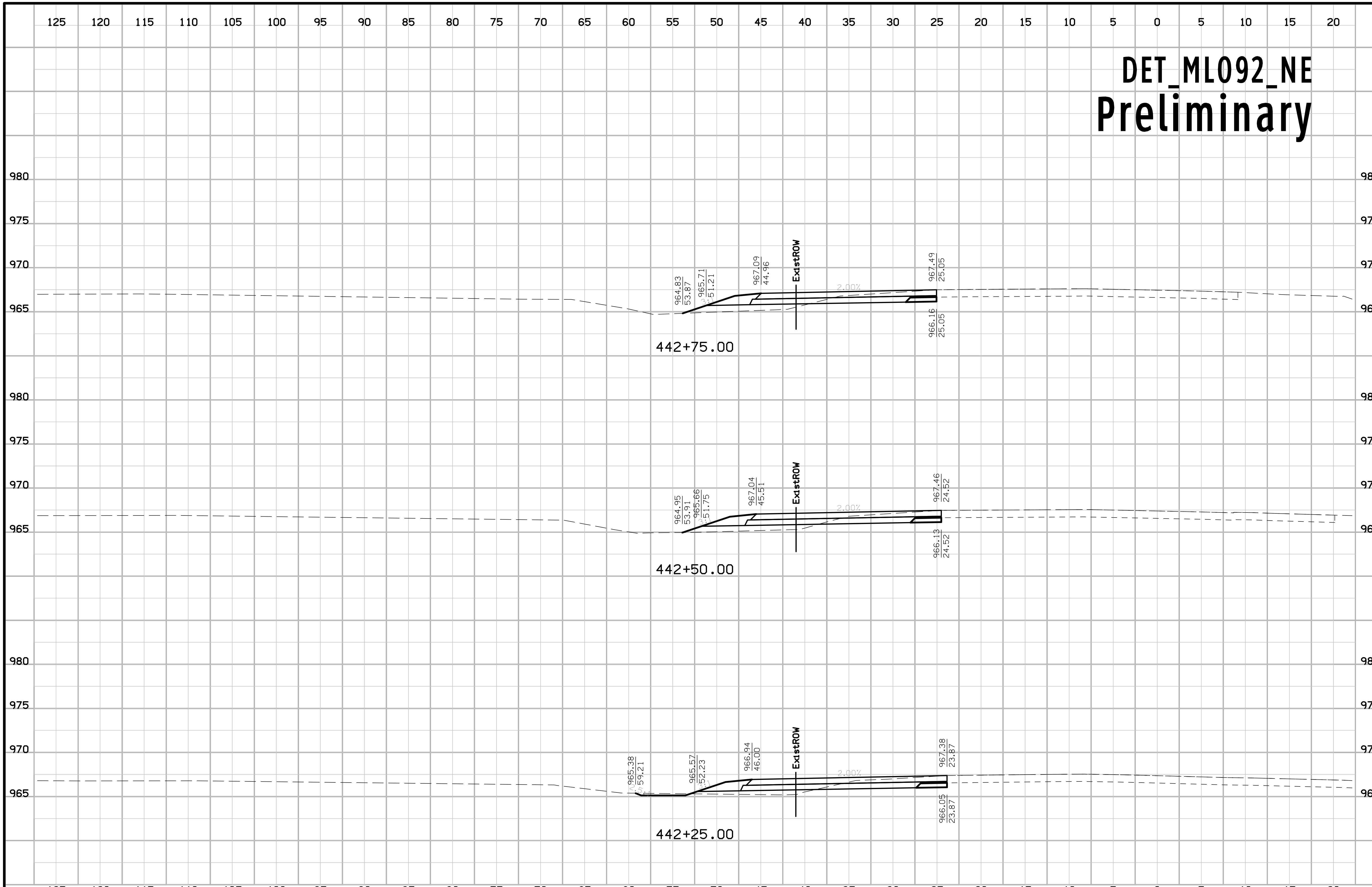
9:20:28 AM 7/29/2013 wcamero pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9109201004\Design\91092051X15_DET_ML092_NE.sht



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER X.95

9:20:28 AM 7/29/2013 wcamero pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9109201004\Design\91092051X15_DET_ML092_NE.sht

DET_ML092_NE
Preliminary



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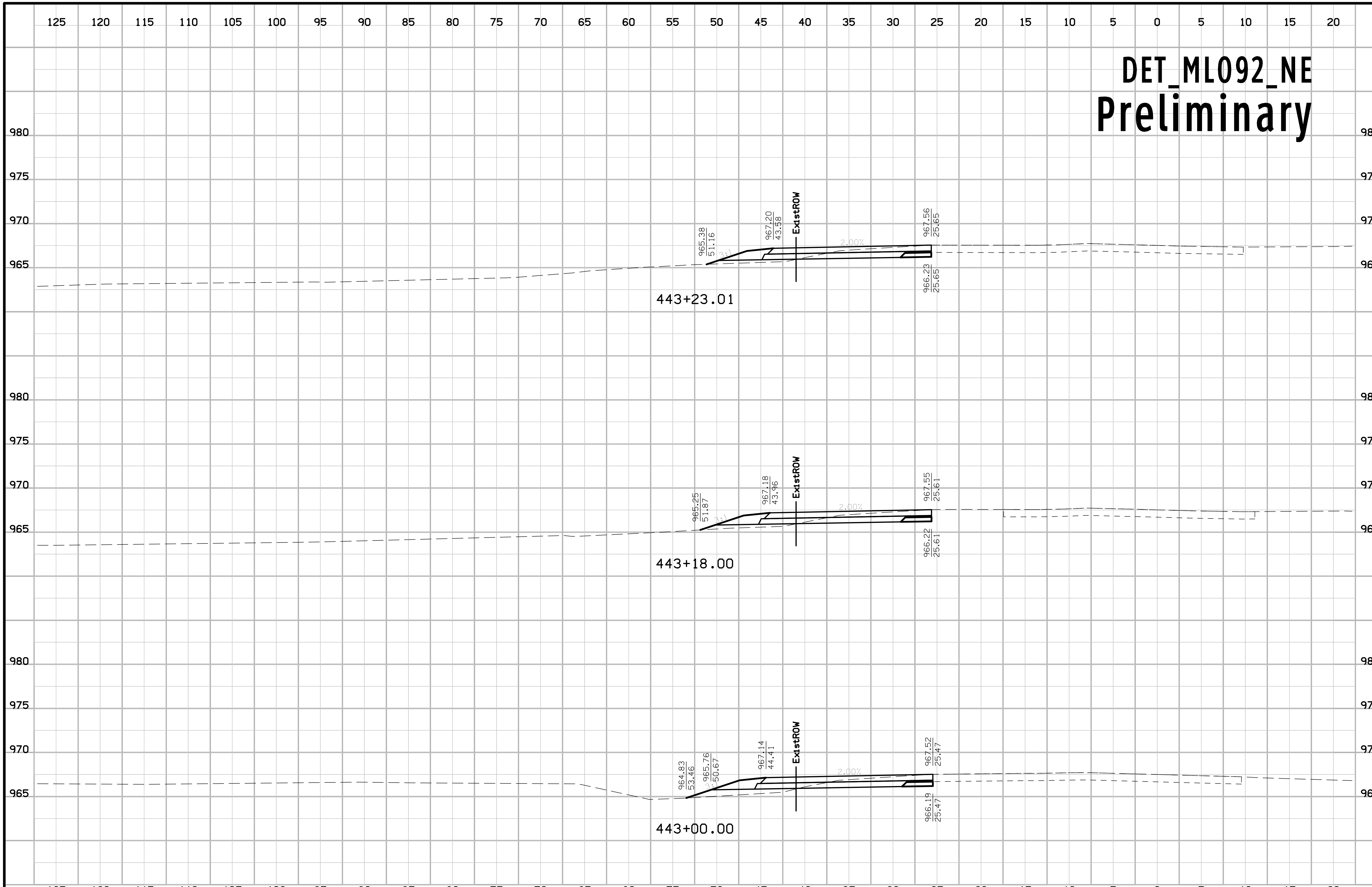

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett	WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER X.97

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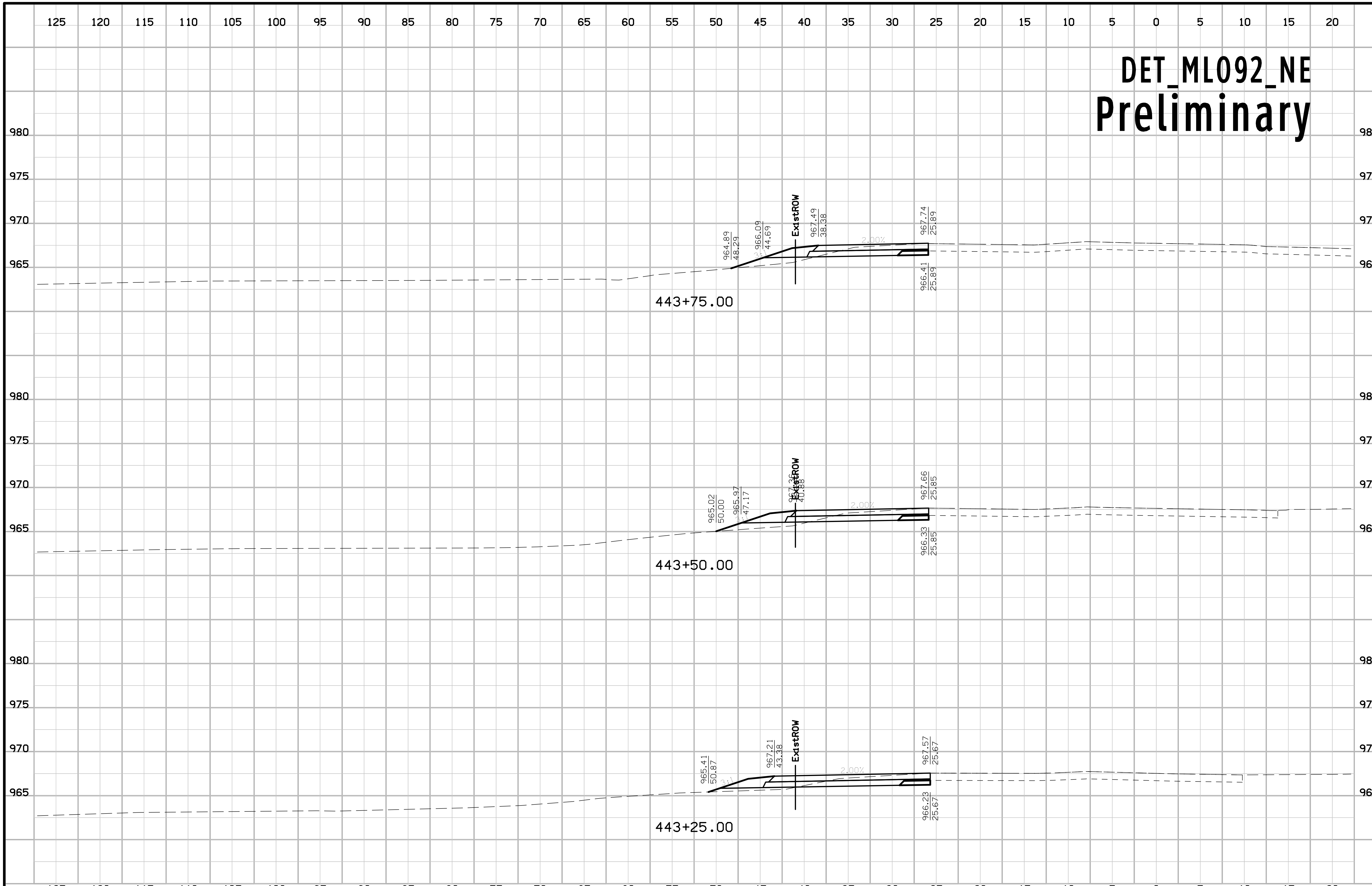

ENGLISH | IOWA DOT | DESIGN TEAM Jia\Holst\Bennett | WARREN COUNTY | PROJECT NUMBER NHSX-092-5(51)--3H-91 | SHEET NUMBER X.98

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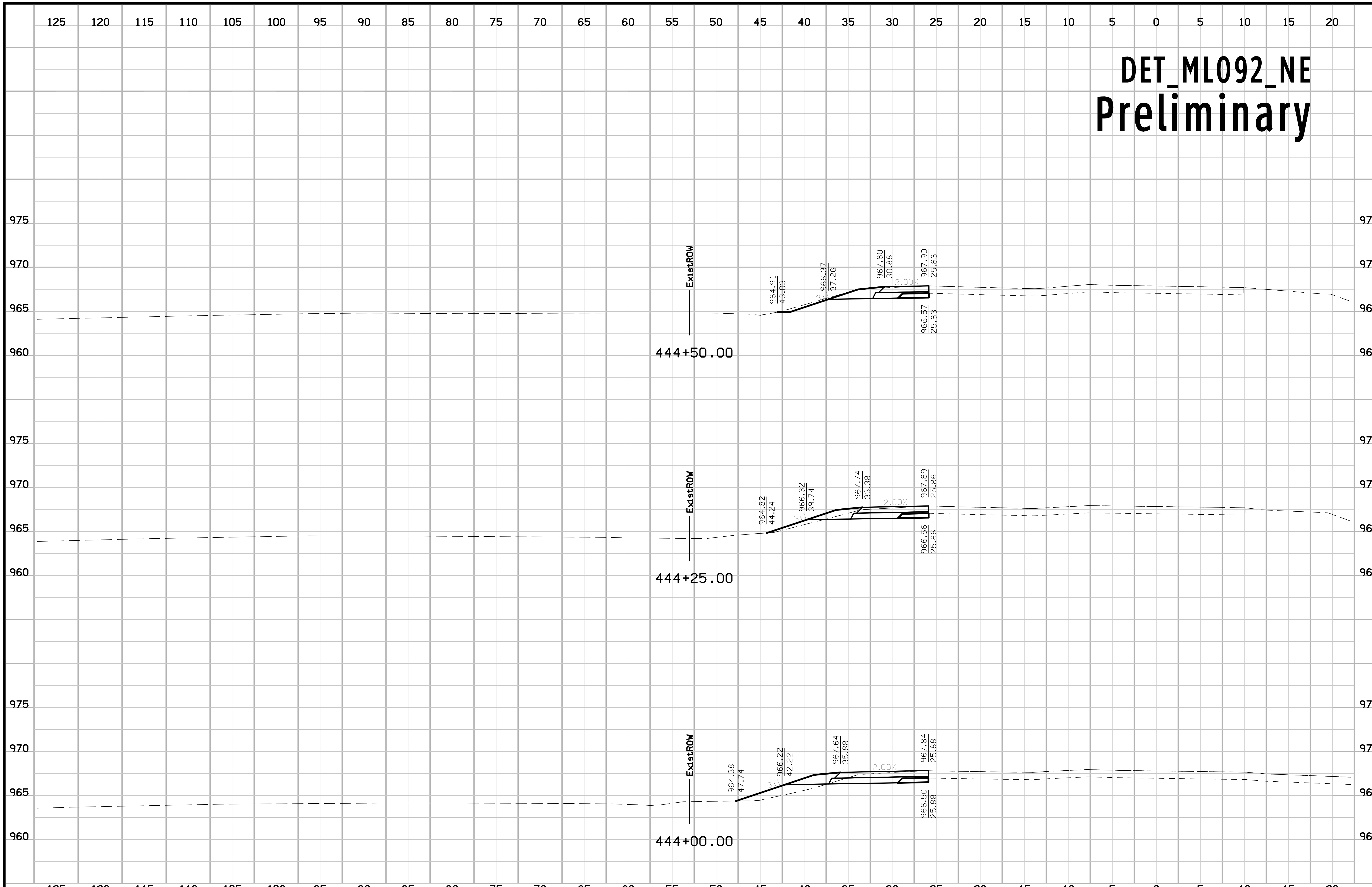
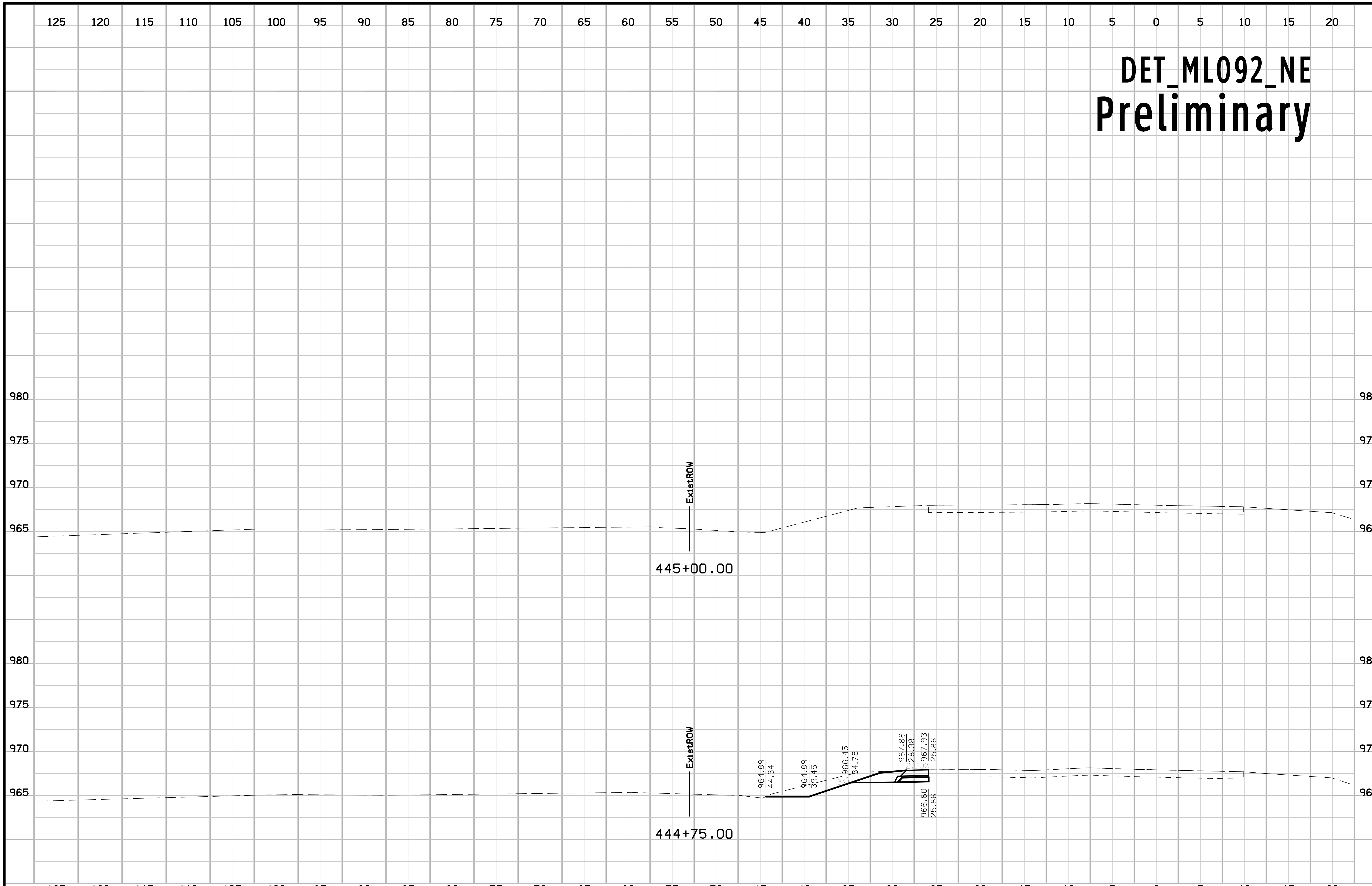


ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER X.99



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER	NHSX-092-5(51)--3H-91	SHEET NUMBER X.100	

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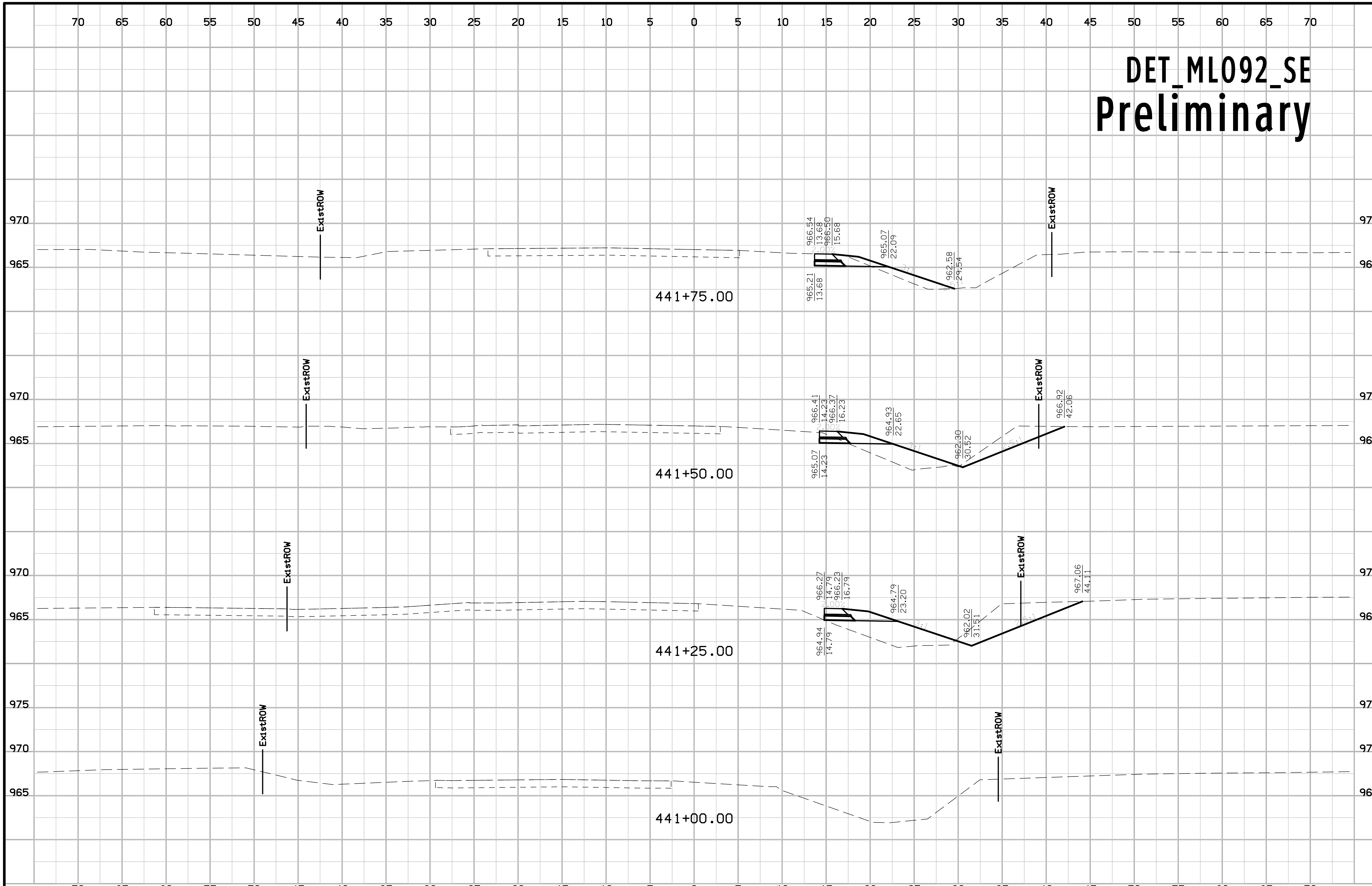
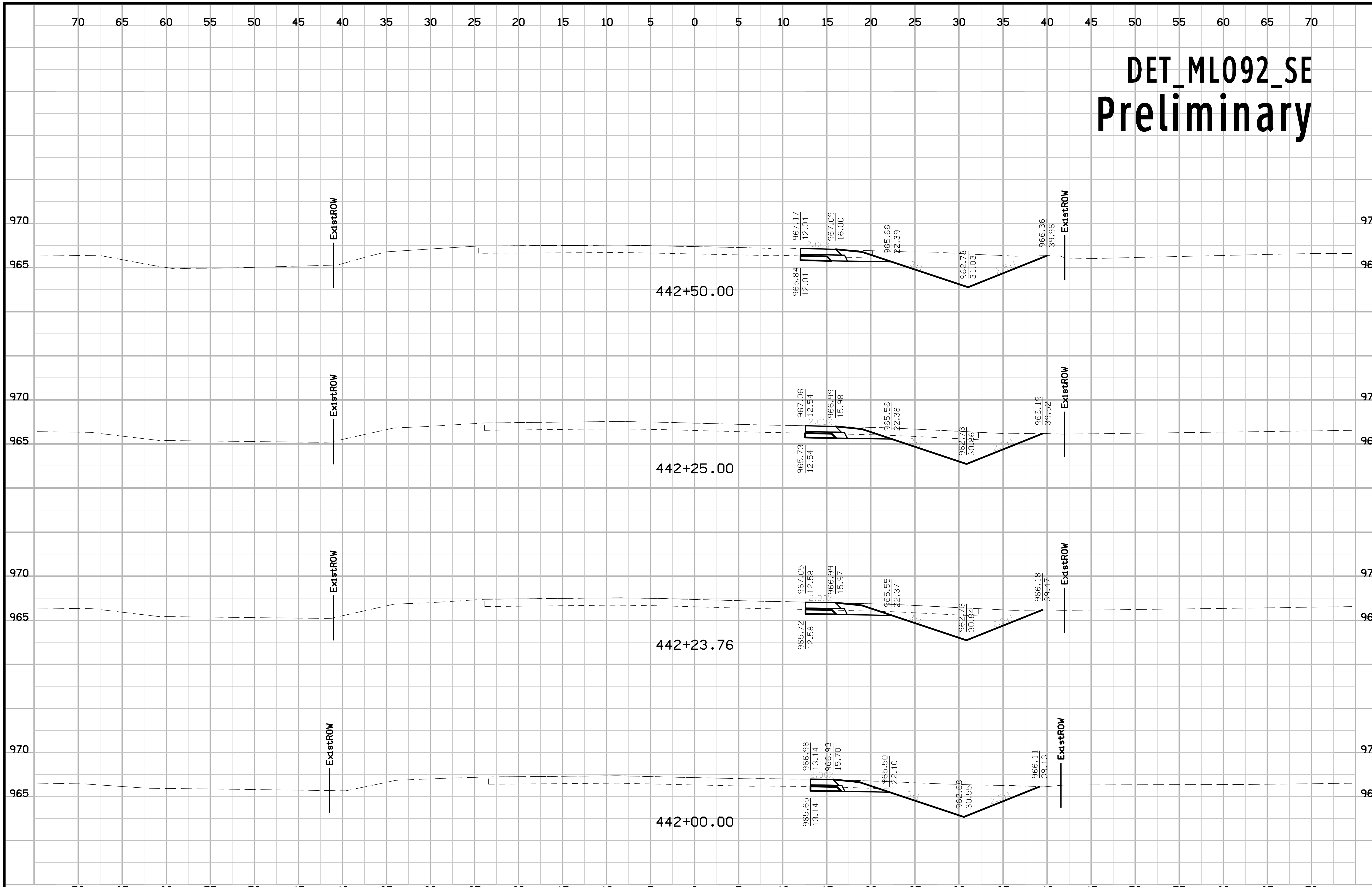
DET_ML092_SE
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER X.101

DET_ML092_SE
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER X.102

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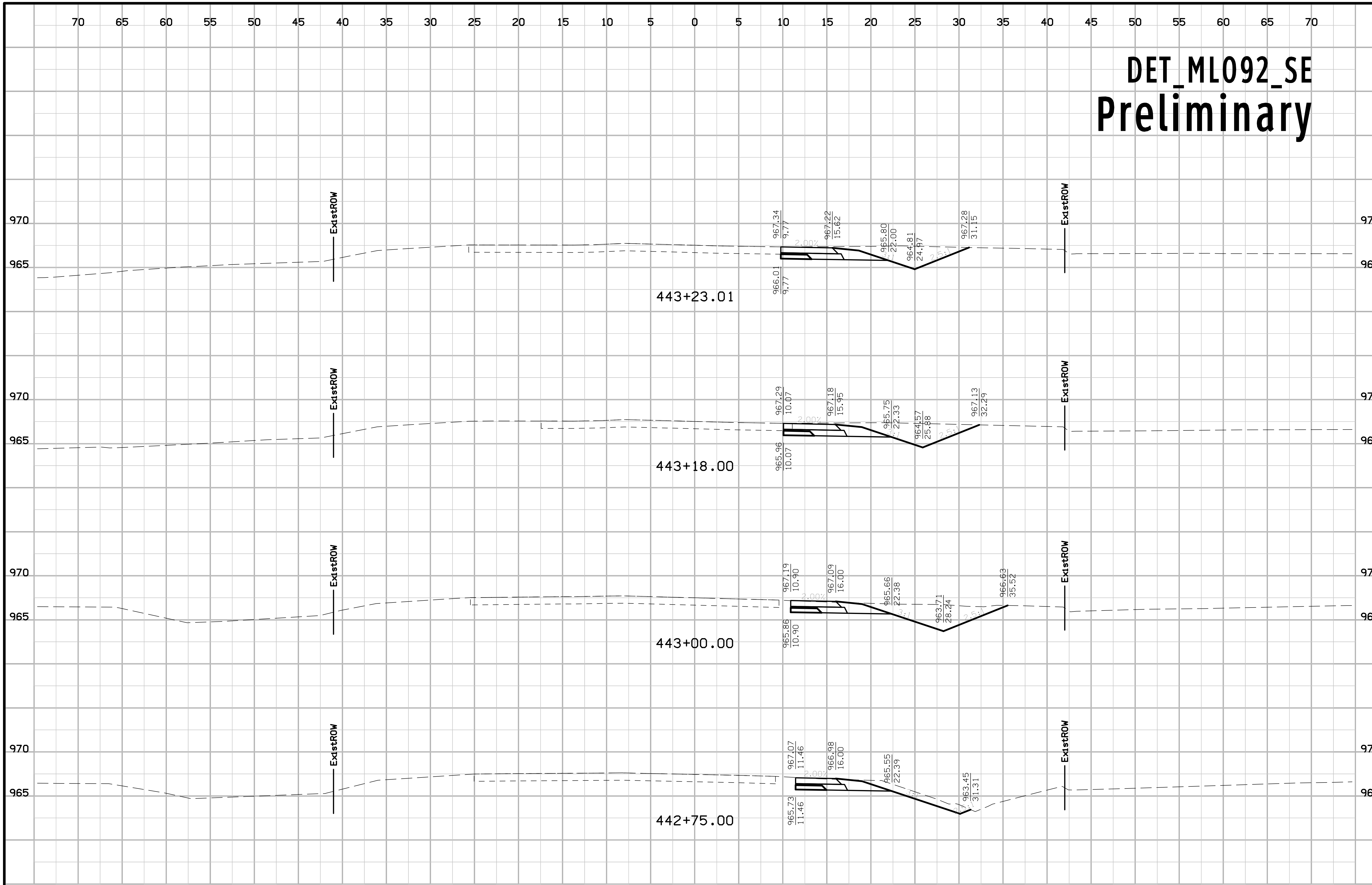

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER X.103

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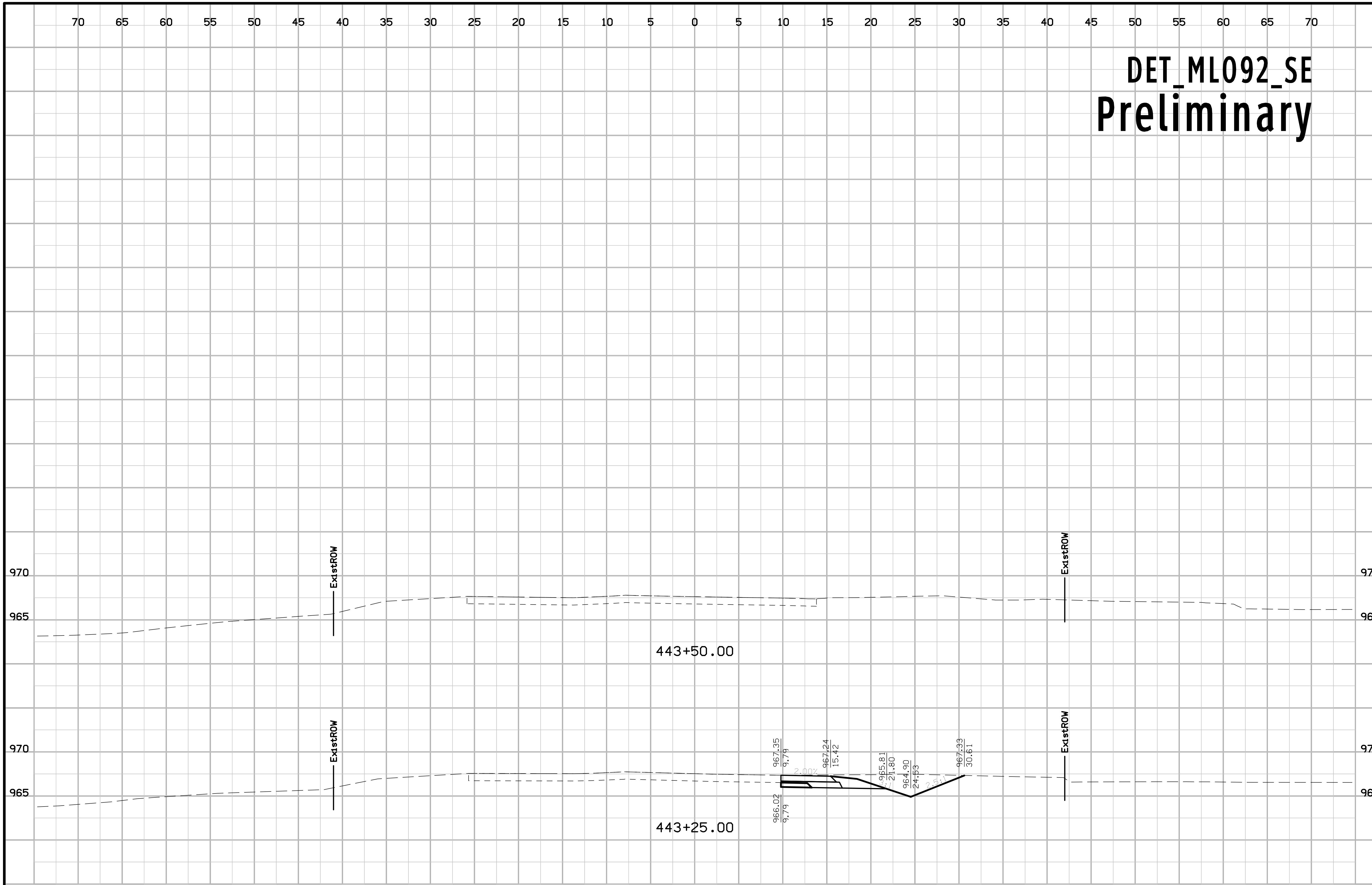

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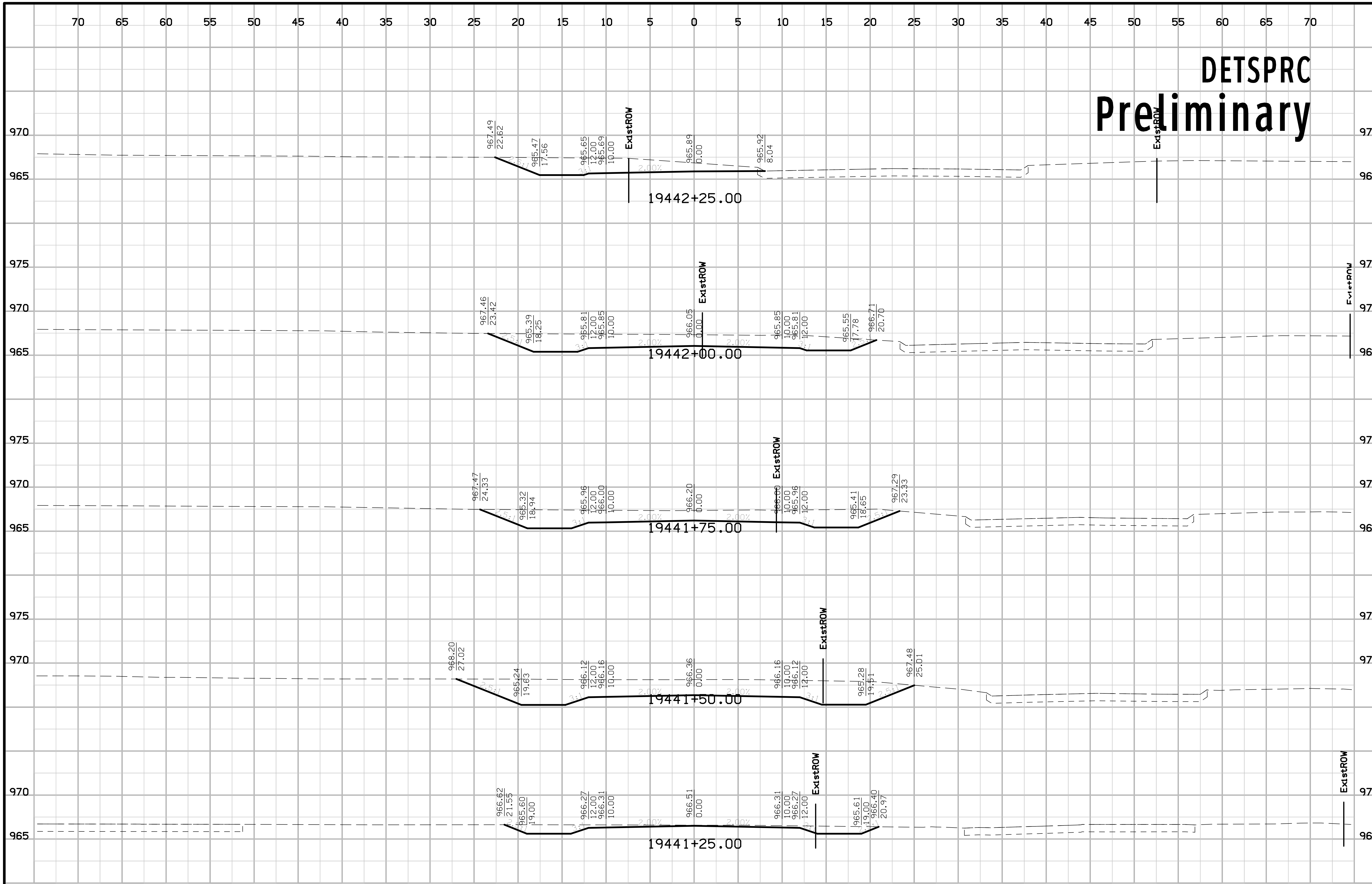

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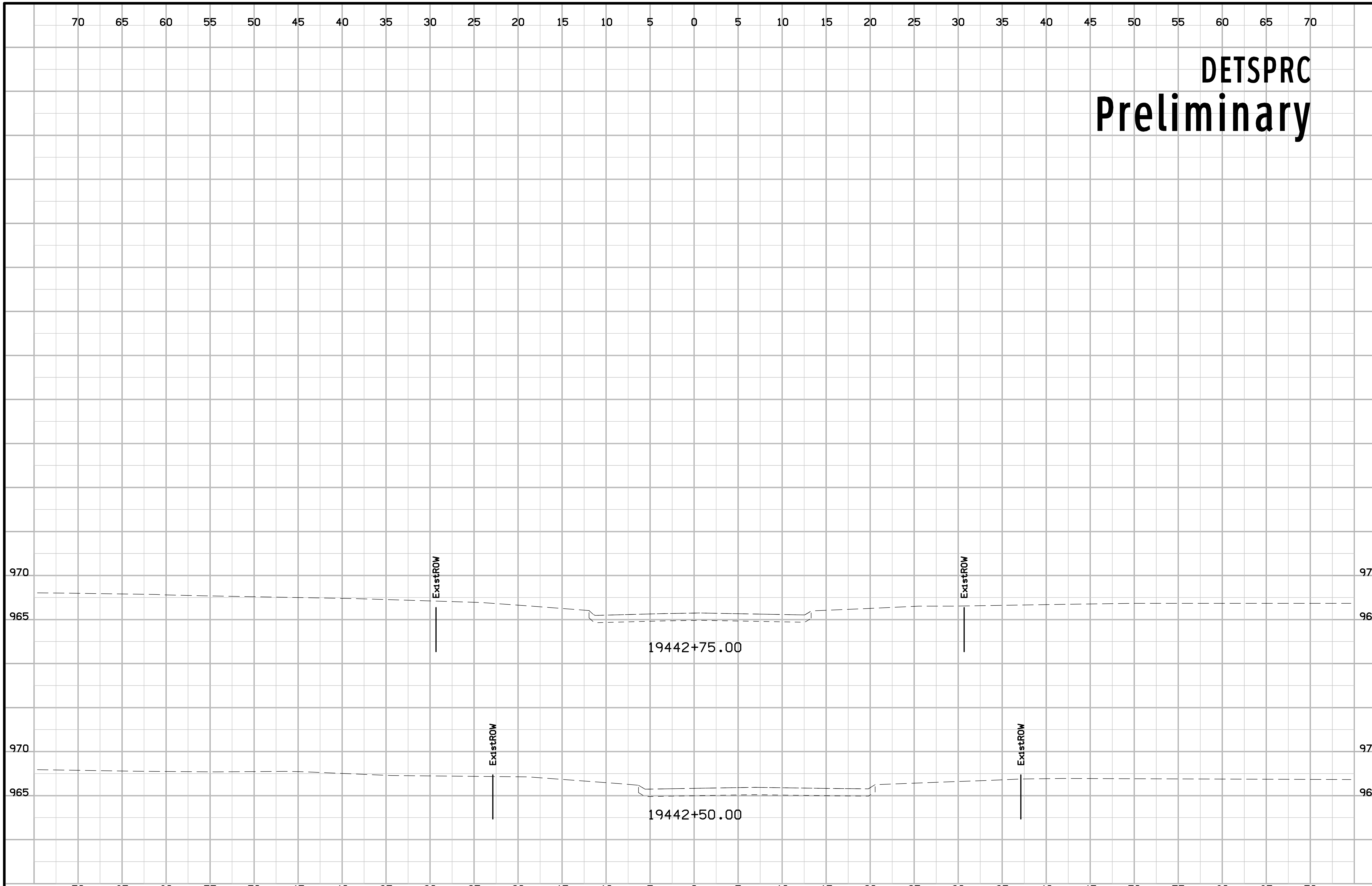

ENGLISH	IOWA DOT	DESIGN TEAM Jia\Holst\Bennett		WARREN COUNTY	PROJECT NUMBER NHSX-092-5(51)--3H-91	SHEET NUMBER X.106

10:07:54 AM 7/29/2013 wcamero pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9109201004\Design\91092051X17_DETSPRC.sht