

PCC PAVEMENT WIDENING
NHSX-006-4(189)--3H-77

POLK CO.

LETTING DATE
 12-15-2020

INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	Title Sheets
* A.1	Title Sheet
A.2	Location Map Sheet
* A.3	Traffic Data Sheet
* A.4 - 5	Design Criteria
B Sheets	Typical Cross Sections and Details
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D Sheets	Mainline Plan and Profile Sheets
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2 - 5	U.S. Highway 6 (Hickman Road)
E Sheets	Side Road Plan and Profile Sheets
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G Sheets	Survey Sheets
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J Sheets	Traffic Control and Staging Sheets
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L Sheets	Geometric, Staking and Jointing Sheets
L.1 - 3	Intersection Geometry
N Sheets	Traffic Signal Sheets
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N.11	Traffic Signal Sheets I-35/I-80 South
W Sheets	Mainline Cross Sections
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W.2 - 23	Mainline Cross Sections
X Sheets	Side Road Cross Sections
X.1 - 6	Side Road Cross Sections
	* Color Plan Sheets



Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

POLK COUNTY

PCC PAVEMENT WIDENING

NW 128TH STREET AND U.S. HIGHWAY 6 (HICKMAN) INTERSECTION

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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

NO MILEAGE SUMMARY

REVISIONS

TOTAL
60
PROJECT IDENTIFICATION NUMBER
20-77-006-010
PROJECT NUMBER
NHSX-006-4(189)--3H-77
R.O.W. PROJECT NUMBER
NHSN-006-4(190)--2R-77

Anticipated Project Development Schedule:

- D02 Design Field Exam
January 21, 2020
- D05 Plans to Right of Way
April 20, 2020
- DM5 Design Methods Turn-In
June 15, 2020
- D08 Final Plan Turn-In
September 21, 2020
- L03 Letting
December 15, 2020

Preliminary Earthwork:

29,700 CY Cut (Total)
25,600 CY Fill (Total)

For Project Location Map refer to Sheet A.2



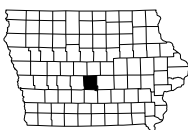
DESIGN DATA URBAN			
2016	AADT	32,000	V.P.D.
2042	AADT	48,200	V.P.D.
2042	DHV	4,400	V.P.H.
	TRUCKS	5	%
	Total		
	Design ESALs	--	

INDEX OF SEALS		
SHEET NO.	NAME	TYPE
A.1	Nathan Carhoff	Primary Signature Block

Field Exam Plans

Subject to change by final design.

D2 PLAN - Date: 01-14-2020



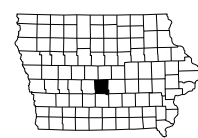
R-25W

R-24W

T-79N

STA. 626+75.00
BEGIN PROJECT

STA. 673+00.00
END PROJECT



LOCATION MAP NOT TO SCALE



Based on I35/I80/US 6 IJR, June 2019
Diverging Diamond Interchange

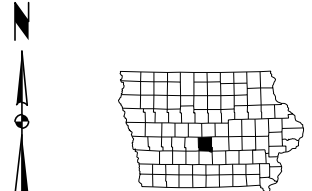
Legend

X,XXX 2042 AM Peak Hour Volumes
(X,XXX) 2042 PM Peak Hour Volumes
XX,XXX 2042 AADT
X▶ Number of Lanes

Level of Service

A B C D E F

▲ AM Ramp Merge
▲ PM Ramp Merge
▲ AM Ramp Diverge
▲ PM Ramp Diverge
■ AM Weaving Segment
■ PM Weaving Segment
● AM Traffic Signal
● PM Traffic Signal



2042 TRAFFIC DATA

Roadway	U.S. Highway 6 (Hickman Road)		Submittal Date	12/04/19
PIN Number	20-77-006-010	Assistant District Engineer	Tony Gustafson	
Project Number	NHSX-006-4(189)--3H-77	Office Director		
District	District 1			
County	POLK			
Route	006			
Location	One Mile West of I-35/80 to Intersection of I-35/80 Southbound Ramps			
Work Type	Pavement Widening			
Segment Manager	Snyder & Associates, Inc.			
Urban Multilane Roadways (Urban Arterials)				
Design Manual Section 1C-1 Last Updated: 04-29-19	Design Element	Preferred	Acceptable Criteria	Project Values
	Design speed (mph)	The anticipated posted speed limit	30	45
	Maximum superelevation rate (Refer to Section 2A-2)	4%	8%	4%
	Design lane width (ft)	12	11	11
	Full depth paved width (ft)	Design lane width + curb and gutter unit or 12 feet for roadways with shoulders	Match design lane width	13.3
	Inside lane(s)	Design lane width + curb and gutter unit. 12' for roadways without a curb and gutter unit	Match design lane width	15.1
	Right turn lane or an auxiliary lane (ft)	12	10	11
	Left turn lane (ft)	With raised or painted median With depressed median	10 ft + median 10	11
	Two-way left turn lane (ft)	14	11	N/A
	Parking lane width (ft)	10	7	N/A
	Pavement cross-slope (on tangent sections)	2%, However, when adjacent lanes slope in the same direction, increase slope by 0.5% per lane up to 3%	1.5% minimum, 3% maximum	2% - 3% (Match Existing)
	Through lanes	3%	3% maximum	3%
	Auxiliary and turn lanes (on tangent sections)	4%	4% maximum	N/A
	Shoulders	4%	Shoulder cross-slope cannot be less than the adjacent lane, 6% max for paved or granular shoulders, 8% max for earth shoulders	N/A
	Curb and gutter units	Match pavement cross-slope	6% maximum	3%
	Parking lanes	1% greater than pavement cross-slope	6% maximum	N/A
	Design speed ≤ 45 mph	6-inch standard	any shape	6" Sloped
	Adjacent to shoulder	10:1 for 4' then 6:1	3:1	N/A
	(For fill areas greater than 40 ft, Beyond standard ditch depth and contact the Soils Design Section design clear zone for assistance)	3.5:1	3:1	3:1
	Curbed roadways	2%	not steeper than 3:1	4%
	Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)	3:1	2.5:1	3:1
	Transverse Slopes	8:1	6:1	8:1
	w/ drainage structures	10:1	6:1	10:1
	w/o drainage structures	5 x 10	--	N/A
	Ditches (Refer to Section 3G-1) Outside ditch (depth x width) (ft)	See Section 3E-1	0	19.36
	Median width (ft) (Refer to Section 3E-1)	design lane widths + effective shoulder widths or design lane width + 3 ft each side in curb and gutter section	design lane widths + effective shoulder widths or curb-to-curb width in curb and gutter section**	N/A
	Bridge width—new*	Bridge length ≤ 200 ft	design lane widths + 4 ft offset each side for roadways with shoulders or curb-to-curb width in curb and gutter section**	N/A
	Bridge width—existing*	Bridge length > 200 ft	design lane widths + 2 ft left and right of the design widths	N/A
	Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks)	Over primary Over non-primary Over railroad	16	N/A
	Structural Capacity	On roadways with design year ADT > 6500 ypd	14	N/A
	Level of Service	On all other Expressways (Multilane Arterials)	23.3	N/A
		Sign truss and pedestrian crossings	17.5	N/A
		Contact Office of Bridges and Structures	Contact Office of Bridges and Structures	N/A
			D	D

*FHWA notification via email is required if acceptable criteria is not met on the NHS system (No formal design exception required)
 ** If travel lanes are less than 12 ft wide contact the Methods Section for assistance.
 Projects\7700601020\Design\Correspondence\Design Criteria\DesignCriteria_2019-12-04_ExpresswayUrban.xlsm

Design year ADT = 50000	Effective Shoulder Width and Type for Multilane Arterials										
Design Manual Section 1C-1 Last Updated: 04-29-19	Acceptable (Values shown in feet)										
	Rural Roadways	Urban Roadways	Urban Roadways		Urban Roadways		Urban Roadways		Urban Roadways		Project Values
Auxiliary lanes or turn lanes with shoulders	6	6	6		6		6		6		N/A
Turn lanes with curbs	6	6	6		6		6		6		0
	Outside	Median Side	Effective Shoulder Width		Effective Shoulder Width		Effective Shoulder Width		Paved Width		
Expressways	10	10	10		10		10		4		
Routes where bicycles are to be accommodated (due to increased bike traffic)	10	10	10		10		10		4		
On all curves with a superelevation rate of 7.0% or greater	10	10	10		10		10		4		
On roadways with design year ADT > 6500 ypd	10	10	10		10		10		4		
On all other Expressways (Multilane Arterials)	10	10	10		10		10		4		2.27' Outside 4.1' Inside

*Requires safety edge-See Section 3C-6
 Curb should be located beyond the outer edge of the effective shoulder width in rural areas
 Refer to Section 3C-2 for curb offsets in urban areas
Notes:

Roadway Design Speed (mph) = 45										
Design Criteria for Low Speed Roadways										
Design Manual Section 1C-1 Last Updated: 05-26-17	Acceptable Criteria									
	Preferred Design Speed, mph					Acceptable Design Speed, mph				
	25	30	35	40	45	25	30	35	40	45
	155	200	250	305	360	155	200	250	305	360
Stopping sight distance (ft) (Refer to Section 6D-1)	See Table 10 in Section 2A-3									
Minimum horizontal curve radius (ft) and side friction distribution	e = 4% max									
Superelevation rate (Refer to Sections 2A-2 and 2A-3)	e _{max} = 6% e _{max} = 8%									
Minimum vertical curve length (ft) (Refer to Section 2B-1)	crest vertical curves									
Minimum rate of vertical curvature (K)	roadways without fixed source lighting									
(Refer to Section 2B-1)	roadways with fixed-source lighting									
Minimum gradient (%) (Refer to Section 2B-1)	Urban roadways									
Maximum gradient (%) (Refer to Section 2B-1)	Rural roadways									
Clear zone	See "Preferred Clear Zone" table in Section 8A-2									
	See "Acceptable Clear Zone" table in Section 8A-2									

US Highway 6 (Hickman Road) Design Criteria

Roadway	NW 128th Street		Approval Date	12/04/19
PIN Number	20-77-006-010		Submittal Date	
Project Number	NHSX-006-4(189)--3H-77			
District	District 1			
County	POLK			
Route	006			
Location	U.S. Highway 6 (Hickman Road) Intersection, Approximately One Mile West of I-35/80			
Work Type	Pavement Widening			
Segment Manager	Snyder & Associates, Inc.			
Designer	Tony Gustafson			
Design Manual Section 1C-1	Urban Two-Lane Roadways (Urban Arterials)			
Last Updated: 04-29-19				
Design Element	Preferred	Acceptable Criteria	Project Values	
Design speed (mph)	The anticipated posted speed limit	30	35	
Maximum superelevation rate (Refer to Section 2A-2)	4%	6%	4%	
Design lane width (ft)	12	11	11	
Full depth paved width (ft)	Design lane width + curb and gutter unit or 14 feet for roadways with shoulders	Match design lane width	13.5	
Right turn lane (ft)	12	10	11	
Left turn lane (ft)	With raised or painted median With depressed median	10 ft + median 10	11	
Two-way left turn lane	14	11	N/A	
Parking lane width (ft)	10	7	N/A	
Pavement cross-slope (on tangent sections)	Through lanes Auxiliary and turn lanes Crown break at centerline	1.5% minimum, 2% maximum 3% maximum 4% maximum	2% (Match Existing) 3% N/A	
Shoulder cross-slope (on tangent sections)	Shoulders Curb and gutter units Parking lanes	4% Match pavement cross-slope 1% greater than pavement cross-slope	N/A 3% N/A	
Curb type (See Section 3C-2)	Design speed \leq 45 mph Adjacent to shoulder	6-inch standard 10:1 for 4' then 6:1	6-inch Standard N/A	
For slope (For fill areas greater than 40 ft, contact the Soils Design Section for assistance)	Beyond standard ditch depth and design clear zone Curbed roadways	3:5:1 2%	3:1 4%	
Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)		3:1	3:1	
Traverse Slopes	w/ drainage structures w/o drainage structures	8:1 10:1	8:1 10:1	
Ditches (See Section 3G-1)	Outside ditch (depth x width) (ft)	5 x 10	N/A	
Bridge width—new*	Bridge length \leq 200 ft Bridge length > 200 ft	design lane widths + effective shoulder widths (curbed or uncurbed) or design lane width + 3 ft each side (curbed) which ever is greater design lane widths + effective shoulder widths (curbed or uncurbed) or design lane width + 3 ft each side (curbed) which ever is greater	N/A N/A	
Bridge width—existing*		design lane widths + no less than 2 ft left and right	N/A	
Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks)	Over primary Over non-primary Over railroad Sign trusses and pedestrian bridges	16.5 23.3 17.5	N/A N/A N/A N/A	
Structural Capacity	Contact Office of Bridges and Structures	Contact Office of Bridges and Structures	N/A	
Level of Service	C	D	D	
*FHWA notification via email is required if acceptable criteria is not met on the NHS system (No formal design exception is required).				
** If travel lanes are less than 12 ft wide contact the Methods Section for assistance.				

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Design year ADT =	> 6000			
Effective Shoulder Width and Type for Two-Lane Highways				
Design Manual Section 1C-1	Last Updated: 04-29-19			
Preferred (values shown in feet)	Acceptable (values shown in feet)			
Rural Roadways	Urban Roadways	Rural Roadways	Urban Roadways	Project Values
6	6	6	6	N/A
Turn lanes with shoulders	Turn lanes with shoulders	Turn lanes with shoulders	0	
6	See Section 3C-2	Turn lanes with curbs	0	0
Effective Shoulder Width	Paved Width	Effective Shoulder Width	Paved Width	
6	4	4	0	N/A
Climbing Lanes	Climbing Lanes			
Two-Lane Highways	Effective Shoulder Width	Effective Shoulder Width	Paved Width	
10	10	Shoulder Width	Paved Width	
On roads where bicycles are to be accommodated	10	Two-Lane Highways		
On roads approaching urban areas (due to increased bike traffic)	10			
On all curves with a superelevation rate of 7.0% or greater	10	Design year ADT > 2000 vpd	0*	
On roadways with design year ADT > 5000	10	Design year ADT between 400 - 2000 vpd	0*	0
On all other NHS	10	Design year ADT < 400 vpd	0*	
On non-NHS routes with design year ADT > 3000	10			
On non-NHS routes with design year ADT < 3000	8			

*Requires safety edge-Refer to Section 3C-6

Curbs should be located beyond the outer edge of the effective shoulder width in rural areas

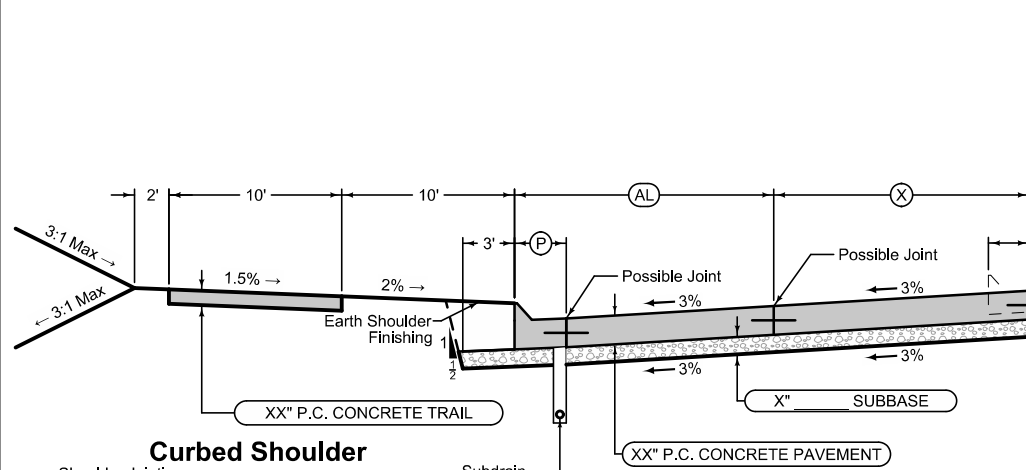
Refer to Section 3C-2 for curb offsets in urban areas

Notes:

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Roadway Design Speed (mph) =	35		
Design Criteria for Low Speed Roadways			
Design Manual Section 1C-1	Last Updated: 04-29-19		
Design Element	Preferred Criteria	Acceptable Criteria	Project Values
	Design Speed, mph	Design Speed, mph	Design Speed, mph
Stopping sight distance (ft) (Refer to Section 6D-1)	25 30 35 40 45	25 30 35 40 45	45
Minimum horizontal curve radius (ft) and side friction distribution	155 200 250 305 360	155 200 250 305 360	360
Superelevation rate (Refer to Sections 2A-2 and 2A-3)	See Table 10 in Section 2A-3	See Table 10 in Section 2A-3	408, 510
Minimum vertical curve length (ft) (Refer to Section 2B-1)	144 231 340 485 643	144 231 340 485 643	N/A
Minimum rate of vertical curvature (K)	75 90 105 120 135	75 90 105 120 135	N/A
(Refer to Section 2B-1)	12 19 29 44 61	12 19 29 44 61	105
(Refer to Section 2B-1)	26 37 49 64 79	26 37 49 64 79	29
(Refer to Section 2B-1)	26 37 49 64 79	26 37 49 64 79	N/A
Minimum gradient (%)	0.5	0.5	49
Maximum gradient (%)	5	5	44
Clear zone	See "Preferred Clear Zone" table in Section 8A-2	See "Preferred Clear Zone" table in Section 8A-2	Match Ex.
			Match Ex.
			N/A
			16

128th Street Design Criteria



Curbed Shoulder

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

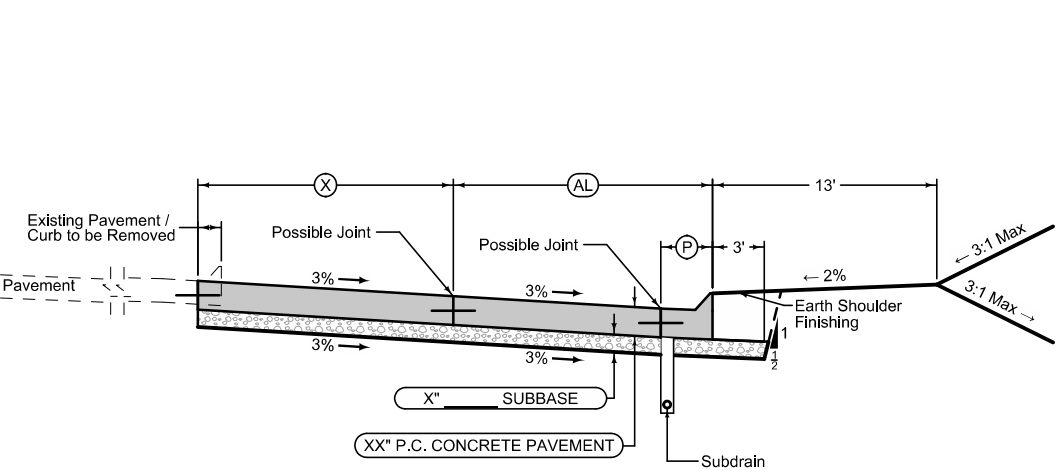
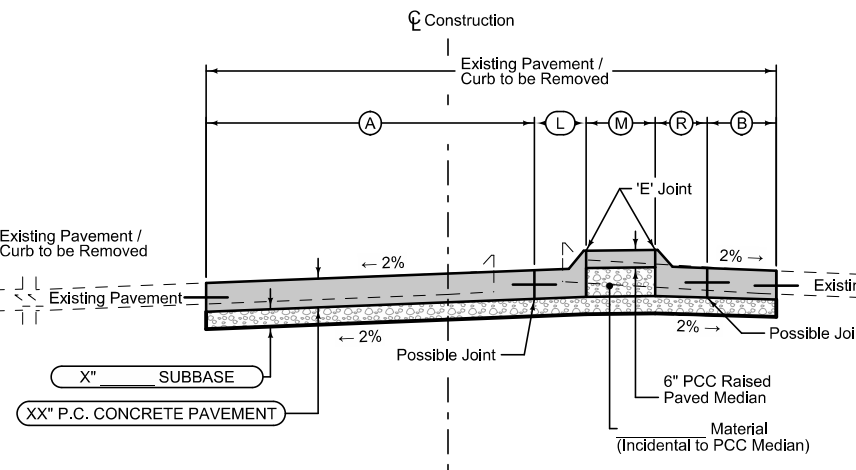
Single pour: L-2
Staged: KT-2
Transverse: C at 17' spacing

2_Curb_MODIFIED			(P)	Curb Type
STATION TO STATION		Feet	Feet	See PV-102
629+24.00	629+63.96	Var.	6"	Sloped
629+63.96	635+30.60	3	6"	Sloped
635+30.60	636+00.95	Var.	6"	Sloped
636+00.95	637+54.04	Var.	6"	Sloped
637+54.04	641+93.90	3	6"	Sloped
641+93.90	642+08.20	Var.	6"	Sloped
642+08.20	642+80.38	Var.	6"	Sloped
642+80.38	645+59.00	3	6"	Sloped
645+59.00	646+57.06	3 - 2	6"	Sloped
648+41.00	649+19.00	Var.	6"	Sloped
651+36.87	652+19.06	3 - 2	6"	Sloped
655+60.81	656+01.80	Var.	6"	Sloped
656+01.80	658+81.09	3	6"	Sloped
658+81.09	659+81.68	3 - 2	6"	Sloped
663+56.74	664+04.06	Var.	6"	Sloped
664+04.06	666+76.11	3	6"	Sloped
666+76.11	666+81.11	3 - 0	6"	Sloped

Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

2_AuxLane_PCC_MODIFIED				
STATION TO STATION		(AL)	(X)	
		Feet	Feet	
629+24.00	629+63.96	Var.	0	
629+63.96	632+50.97	5.7 - 12	0	
632+50.97	635+30.60	12	0	
635+30.60	636+00.95	Var.	0	
636+00.95	637+54.04	Var.	Var.	
637+54.04	640+19.05	13	9	
640+19.05	641+47.63	13 - 0	9 - 9.2	
641+47.63	641+93.90	0	9.2 - 8.2	
641+93.90	642+80.38	Var.	Var.	
642+80.38	644+25.35	12	3.2 - 0	
644+25.35	644+38.53	12 - 11.7	0	
644+38.53	645+59.00	11.7	0	
645+59.00	646+57.06	11.7 - 2	0	
646+57.06	646+57.06	2 - 0	0	
646+57.06	648+41.00	0 - 2.3	0	
648+41.00	648+81.00	2.3 - 0	0	
649+19.00	649+59.00	Var.	Var.	
649+59.00	652+19.06	12	3	
652+19.06	653+18.85	12 - 0	3 - 2	
653+18.85	653+56.10	2 - 0	2 - 0	
653+56.10	655+23.32	0	0	
655+23.32	656+01.80	Var.	0	
656+01.80	658+81.09	12	0	
658+81.09	659+81.68	12 - 2	0	
659+81.68	661+02.13	2 - 0	0	
661+02.13	662+88.79	0	0	
663+27.04	663+37.31	0	0	
663+37.31	663+81.15	Var.	0	
663+81.15	666+81.11	12	0	



Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

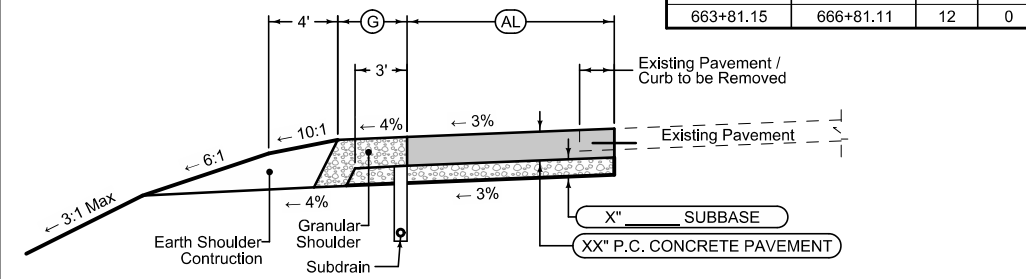
2_AuxLane_PCC_MODIFIED				
STATION TO STATION		(AL)	(X)	
		Feet	Feet	
628+02.06	629+33.45	2 - 5	0	
629+33.45	629+77.85	5 - 3	0 - 3	
629+77.85	630+96.71	3	3 - 5.6	
630+96.71	631+22.37	3 - 3.2	5.6 - 6	
631+22.37	632+51.00	3.2 - 13	6 - 9	
632+51.00	635+07.70	13	9	
635+07.70	637+31.14	Var.	Var.	
637+31.14	640+19.03	0	12	
640+19.03	644+38.00	0	12 - 2.7	
644+38.00	644+70.18	0 - 2	2.7 - 2	
644+70.18	652+34.47	2 - 12	0	
652+34.47	655+14.87	12	0	
655+14.87	655+36.91	Var.	0	
655+36.91	659+46.93	2 - 12	0	
659+46.93	662+31.22	12	0	
662+31.22	662+84.30	Var.	0	
663+28.00	663+81.22	Var.	Var.	
663+81.22	663+86.22	9.5	4	

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 17' spacing

2_Curb_MODIFIED			(P)	Curb Type
STATION TO STATION		Feet	Feet	See PV-102
628+02.06	629+33.45	2 - 3	6"	Sloped
629+33.45	635+07.70	3	6"	Sloped
635+07.70	635+88.63	Var.	6"	Sloped
636+56.00	637+31.17	Var.	6"	Sloped
637+31.17	644+25.00	3	6"	Sloped
644+25.00	644+38.00	3 - 2.7	6"	Sloped
644+38.00	644+70.18	2.7 - 2	6"	Sloped
644+70.18	644+70.18	0	0	
644+70.18	652+34.47	2 - 3	6"	Sloped
652+34.47	655+14.87	3	6"	Sloped
655+14.87	655+36.91	Var.	6"	Sloped
658+47.20	659+46.93	2 - 3	6"	Sloped
659+46.93	662+31.22	3	6"	Sloped
662+31.22	662+84.30	Var.	6"	Sloped
663+28.00	663+81.22	Var.	6"	Sloped
663+81.22	663+86.22	3 - 0	6"	Sloped



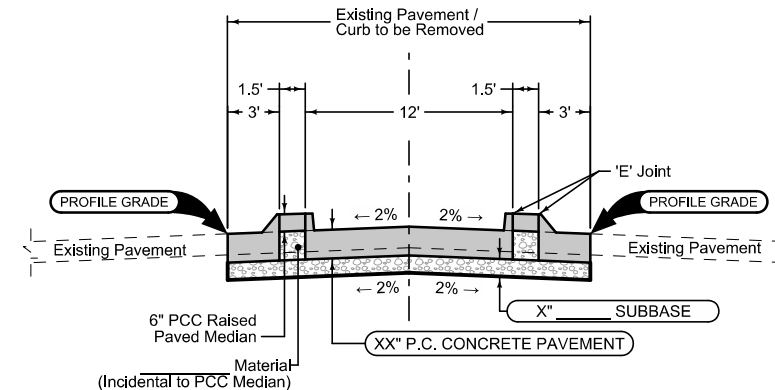
Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

2_AuxLane_PCC_MODIFIED			
STATION TO STATION		(AL)	(G)
		Feet	Feet
666+81.11	666+98.89	12 - 10	0
666+98.89	667+32.25	10 - 6.9	0 - 4
667+32.25	672+33.53	6.9 - 14.5	4
672+33.53	672+84.47	Var.	Var.

Auxiliary Lane Granular Shoulder

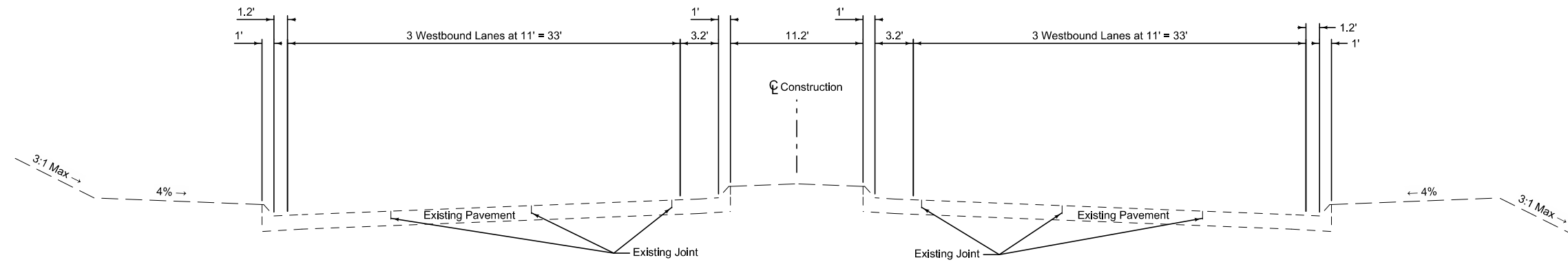
4_AL_Shldr_G_04-21-20			
Direction of Travel	BEGIN STATION	END STATION	(AL) Feet
WB	663+86.22	663+91.00	13.5
WB	663+91.00	663+91.00	13.5 - 10.5
WB	663+91.00	668+27.50	10.5
WB	668+27.50	668+27.50	10.5 - 20
WB	668+27.50	670+20.00	20



4DP_Raised_Out_MODIFIED	
BEGIN STATION	END STATION
628+50.43	628+73.57
648+38.43	648+61.57
649+38.43	649+61.57

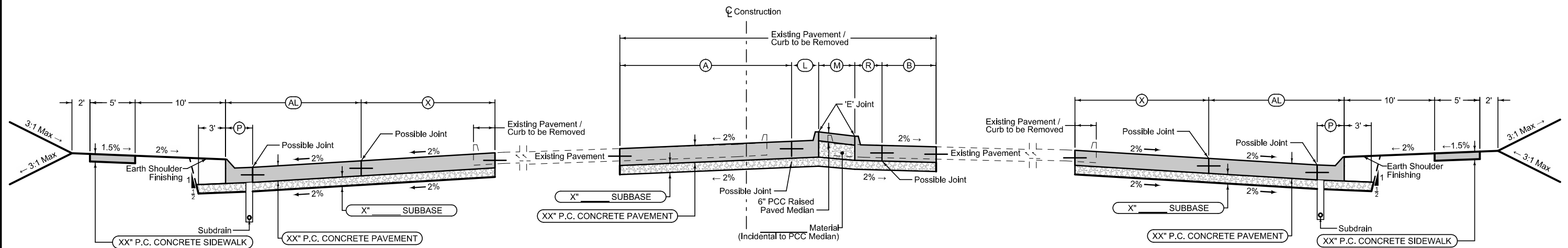
See Tab 100-24 or 100-25 for pavement quantities.
See Tab 112-9 for shoulder quantities.

HICKMAN ROAD WIDENING



6-LANE WITH REDUCED LANE WIDTHS

HICKMAN ROAD WIDENING



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 17' spacing

2_Curb_MODIFIED			
STATION TO STATION		(P) Feet	Curb Type See PV-102
92494+48.94	92498+17.14	3	6" STD
92498+17.14	92498+22.14	3	6" STD - 6"Sloped
92498+22.14	92499+14.43	Var.	6" Sloped
92499+97.79	92500+63.02	Var.	6" Sloped
92500+63.02	92500+68.02	3	6" Sloped - 6" STD
92500+68.02	92502+77.03	3 - 0	6" STD
92502+77.03	92503+40.78	Var.	6" STD
92503+40.78	92504+69.60	3	6" STD

Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

2_AuxLane_PCC_MODIFIED			
STATION TO STATION		(AL) Feet	(X) Feet
92494+48.94	92496+23.67	2 - 9	0
92496+23.67	92498+22.14	9	0
92498+22.14	92499+14.43	Var.	0
92499+97.79	92500+63.02	Var.	6.5
92500+63.02	92502+54.09	13	6.5
92502+54.09	92502+77.03	13 - 8.5	6.5
92502+77.03	92503+40.78	Var.	Var.
92503+40.78	92504+13.11	7.7 - 6.6	0
92504+13.11	92504+28.09	6.6 - 4	0
92504+28.09	92504+28.09	4 - 12	0
92504+28.09	92504+69.60	12 - 4.7	0

4DP_Raised_Out_MODIFIED						
BEGIN STATION	END STATION	(A) Feet	(B) Feet	(M) Feet	(L) Feet	(R) Feet
92500+52.05	92500+98.27	8.38	Var.	Var.	0.63	0.63
92500+98.27	92503+04.10	8.38	2.38	8.00	0.63	0.63
92503+04.10	92503+33.02	Var.	2.38	Var.	0.63	0.63
92494+77.00	92495+48.50	U.A.C.	Var.	Var.	U.A.C.	0.63
92495+48.50	92496+24.00	Var.	Var.	Var.	0.63	0.63
92496+24.00	92496+70.00	2.38	17.13	8.00	0.63	0.63
92496+70.00	92498+29.73	2.38	5.38	8.00	0.63	0.63
92498+29.73	92498+75.95	Var.	Var.	Var.	0.63	0.63
92503+33.02	92504+02.88	Var.	Var.	Var.	Var.	Var.
92504+02.88	92504+78.00	Var.	Var.	Var.	0.63	0.63
92504+78.00	92504+93.92	Var.	Var.	Var.	0.63	0.63

Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

2_AuxLane_PCC_MODIFIED			
STATION TO STATION		(AL) Feet	(X) Feet
92492+47.48	92492+60.94	0	0
92492+60.94	92493+18.24	0	0
92493+18.24	92493+53.73	0	0
92493+53.73	92495+40.77	0	3.5
92495+40.77	92496+23.84	0 - 8	11
92496+23.84	92496+73.96	8 - 13	11
92496+73.96	92497+66.83	13	11.25
92497+66.83	92498+58.54	13	11.25
92498+58.54	92498+62.48	13	11.25
92498+62.48	92499+23.61	Var.	Var.
92500+10.53	92501+03.36	0	Var.
92501+03.36	92503+04.56	0	13
92503+04.56	92503+23.00	0	13 - 12.3
92503+23.00	92503+23.00	0	12.3 - 10.5
92503+23.00	92503+31.50	0	10.5 - 10.3
92503+31.50	92503+66.88	0	10.3 - 14.8
92503+66.88	92503+98.00	0	14.8 - 18.6
92503+98.00	92503+98.00	0	18.6 - 10
92503+98.00	92504+03.00	0	10
92504+03.00	92504+85.50	0	10 - 6.8
92504+85.50	92505+14.41	0	Var.
92505+14.41	92505+85.46	0	Var.

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 17' spacing

2_Curb_MODIFIED			
STATION TO STATION		(P) Feet	Curb Type See PV-102
92493+53.73	92498+57.48	3	6" STD
92498+57.48	92498+62.48	3	6" STD - 6"Sloped
92498+62.48	92499+26.31	Var.	6" Sloped
92500+10.53	92501+03.36	Var.	6" Sloped
92501+03.36	92501+08.36	3	6" Sloped - 6" STD
92501+08.36	92504+85.50	3	6" STD
92504+85.50	92505+14.41	Var.	6" STD
92505+14.41	92505+85.46	Var.	6" STD

See Tab 100-24 or 100-25 for pavement quantities.

See Tab 112-9 for shoulder quantities.

128th STREET WIDENING

SURVEY SYMBOLS

- SWK sidewalk
- CU curb or center island
- GU gutter
- CON concrete or a/c slab
- IN intake-grate,curb,umbrella
- MH manhole
- FHD fire hydrants
- LUM luminaire
- WV water valve
- EB electrical box
- TEV evergreen tree
- SIGN SI sign
- ENT cl of entrance
- TDC tree deciduous
- TPD telephone pedestal
- UB utility box
- TSL traffic signal & lum
- C center of road (ML or SR)
- BB billboard or sign
- SIGN SL speed limit sign
- RIP rip-rap
- PIP pipes(cast iron,steel,tile,etc)
- TLNR tree line right
- SHR shrub
- PR power riser pole
- DU cl of draw upstream
- RET retaining walls
- TA tower anchor
- GV gas valve
- EP edge of paved roads
- GDL guard rails
- BRG bridge
- EG edge of gravel road
- D cl of draw or stream
- PPA power pole 1st co.
- GP guard post (less than 4 posts)
- CUL culvet
- SH shoulder
- TLNL tree line left
- TV tv dish
- INB intake-beehive
- ST alignment S.T.
- S Soil Sampling Site (wetlands)
- TVP tv pedestal
- SF Silt Fence (Wetlands)
- STP stump
- FWD wood fence
- TDL traffic detection loop
- FCL security & chain link
- BM bench mark
- ENP edge of paved entrance & parking

UTILITY LEGEND

- E1 - EL1D Electric Line MidAmerican Electric - Quality D
- EL2D Electric Line City of Urbandale - Quality D
- E3 - EL3D Electric Line City of Clive - Quality D
- F0 - FO1D Fiber Optic Zayo Group LLC - Quality D
- F02 - FO2D Fiber Optic CenturyLink - Quality D
- F03 - FO3D Fiber Optic MCI/Verizon - Quality D
- F04 - FO4D Fiber Optic ICN - Iowa Communication Networks - Quality D
- F05 - FO5D Fiber Optic Windstream Communications - Quality D
- F06 - FO6D Fiber Optic Unite Private Networks, LLC - Quality D
- F07 - FO7D Fiber Optic City of Clive - Quality D
- F08 - FO8D Fiber Optic Consolidated Communications - Quality D
- G - GL1D Gas Line MidAmerican Gas - Quality D
- GHP - GH1D High Pres Gas MidAmerican Gas - Quality D
- PPA Power Pole MidAmerican Electric
- PR Electric Riser Pole MidAmerican Electric
- ST S - ST1D Storm Sewer Co. 1 - Quality D
- SAN - SA1D Sanitary Sewer Co. 1- Quality D
- T1 - TL1D Telephone Line CenturyLink - Quality D
- TV - TV1D TV Cable Mediacom - Quality D
- TV2 - TV2D TV Cable TDI Cable - Quality D
- W - WL1D Water Line Clive Public Works - Quality D
- W2 - WL2D Water Line DMWW - Des Moines Water Works - Quality D
- W3 - WL3D Water Line City of Urbandale - Quality D

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 "In conjunction with a paving project"
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

Trench Drain

HighTension Cable Guardrail

Sheet Pile

Pavement Removal

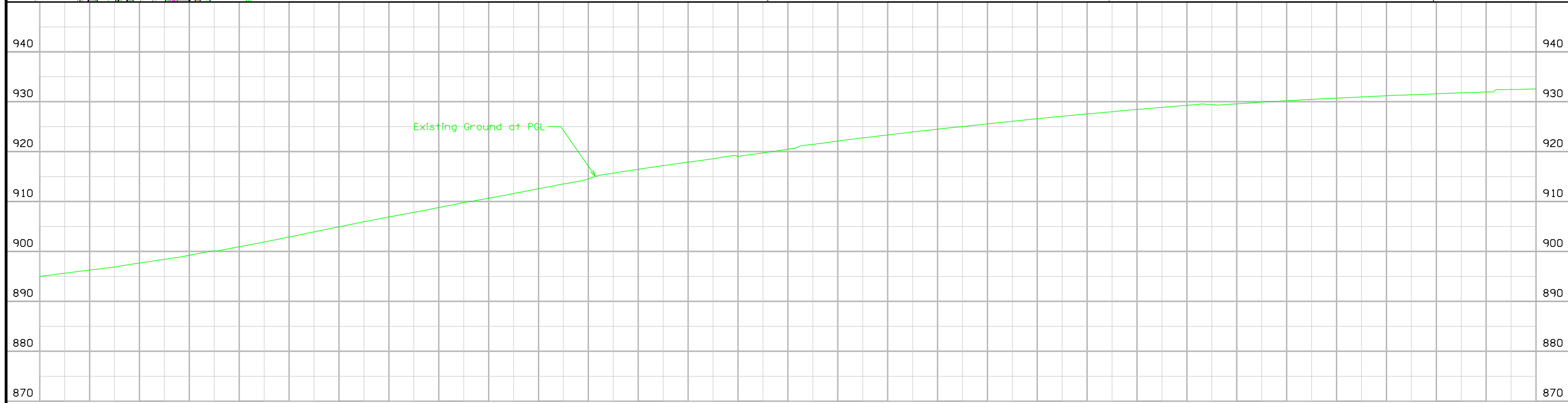
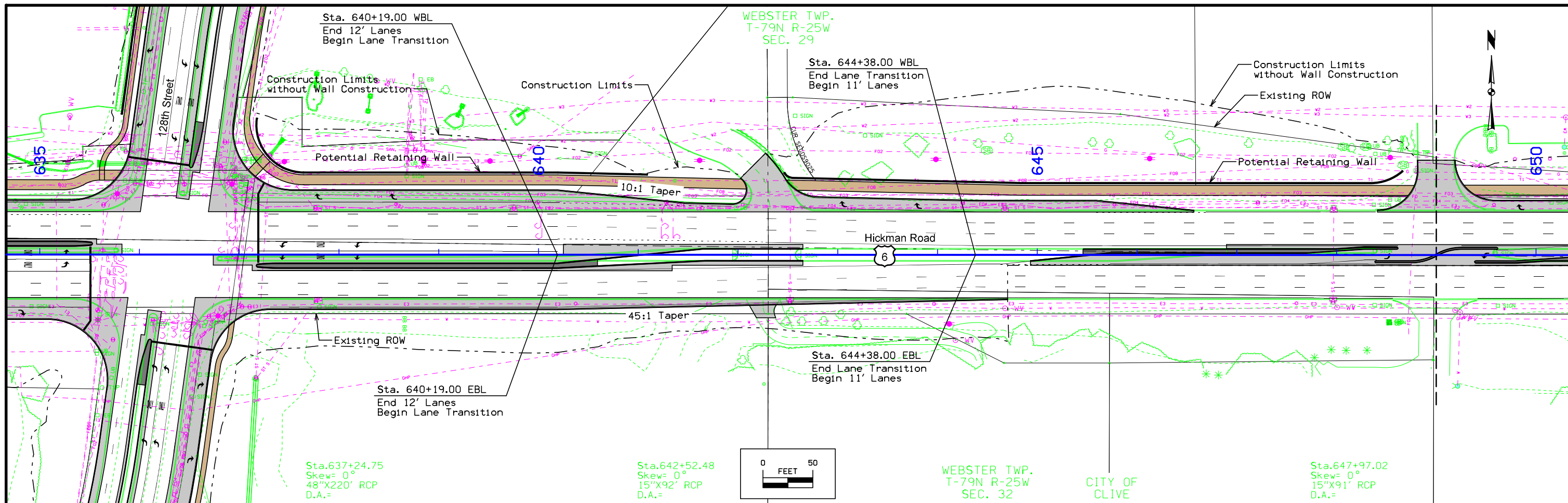
Clearing & Grubbing Area

RIGHT-OF-WAY LEGEND

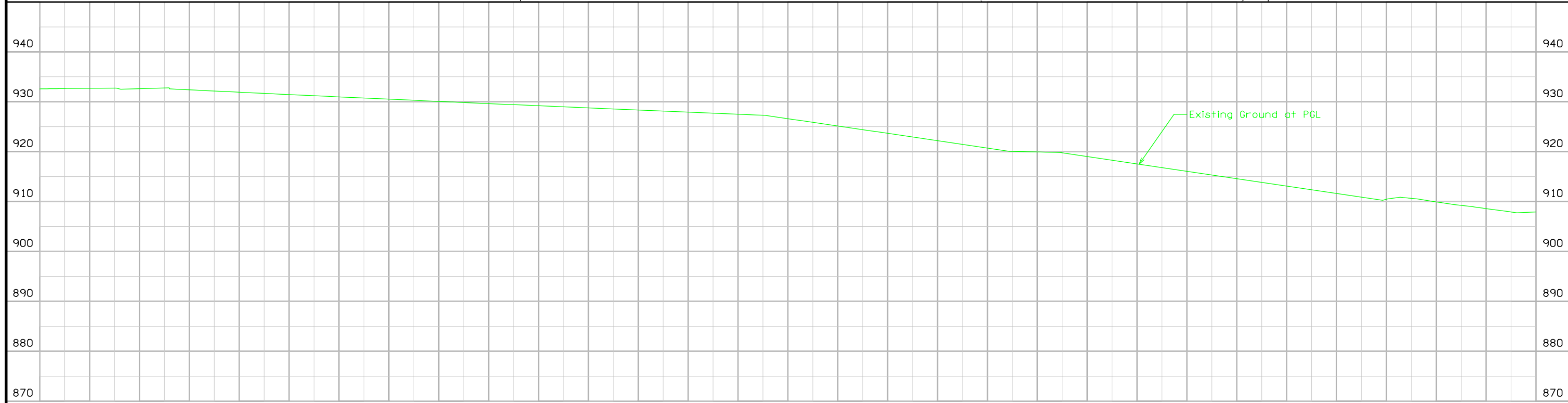
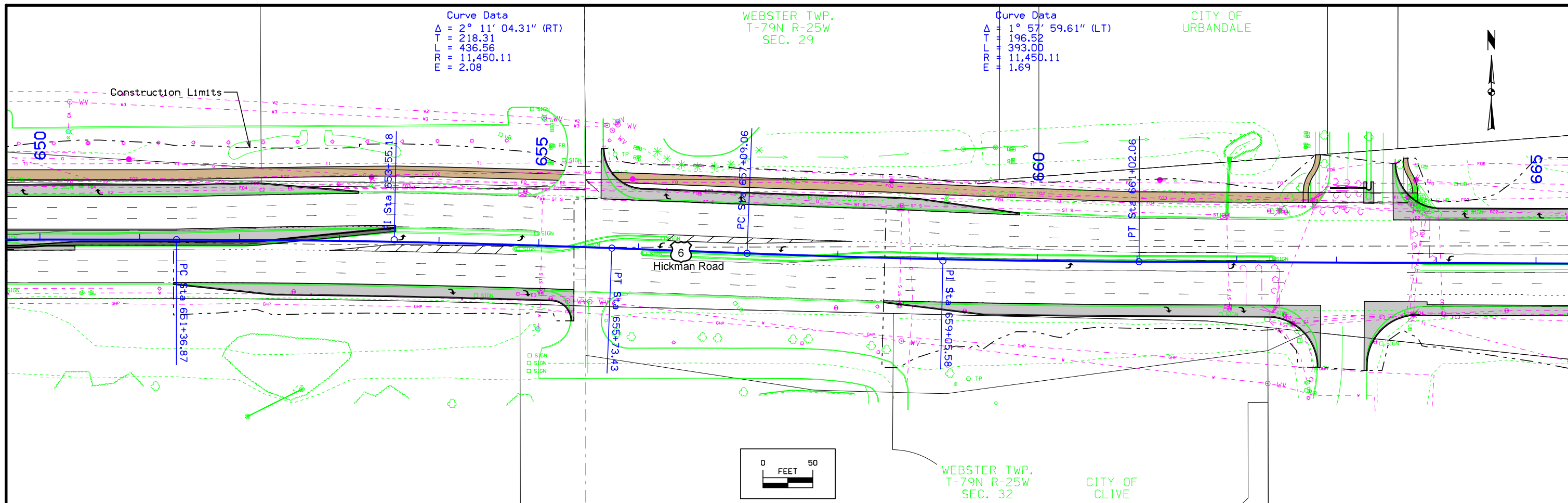
- ▲ Proposed Right-of-Way
- △ Existing Right of Way
- ▲ Existing and Proposed Right-of-Way
- ▲ Easement and Existing Right-of-Way
- Easement (Temporary)
- Easement
- C/A Access Control
- Property Line

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

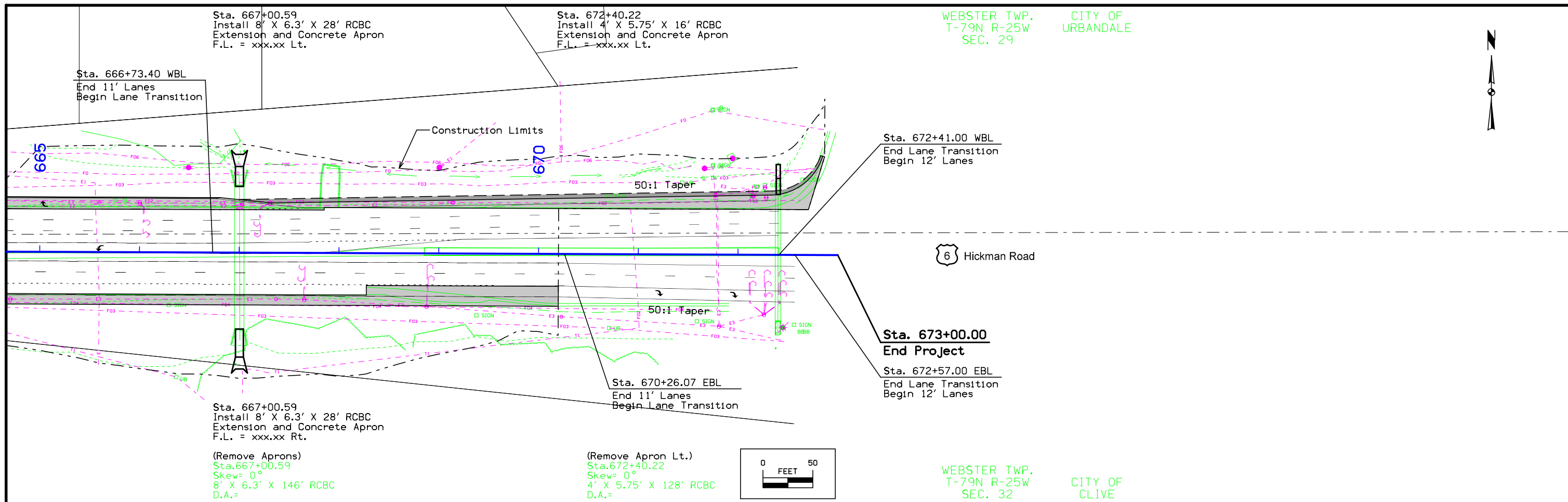
(COVERS SHEET SERIES D, E, F, & K)



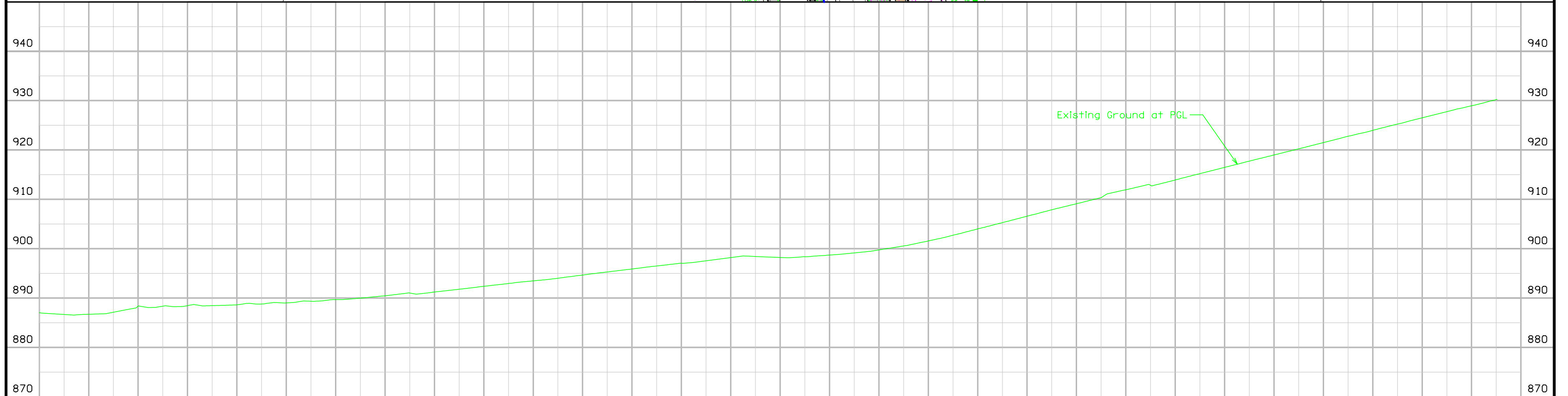
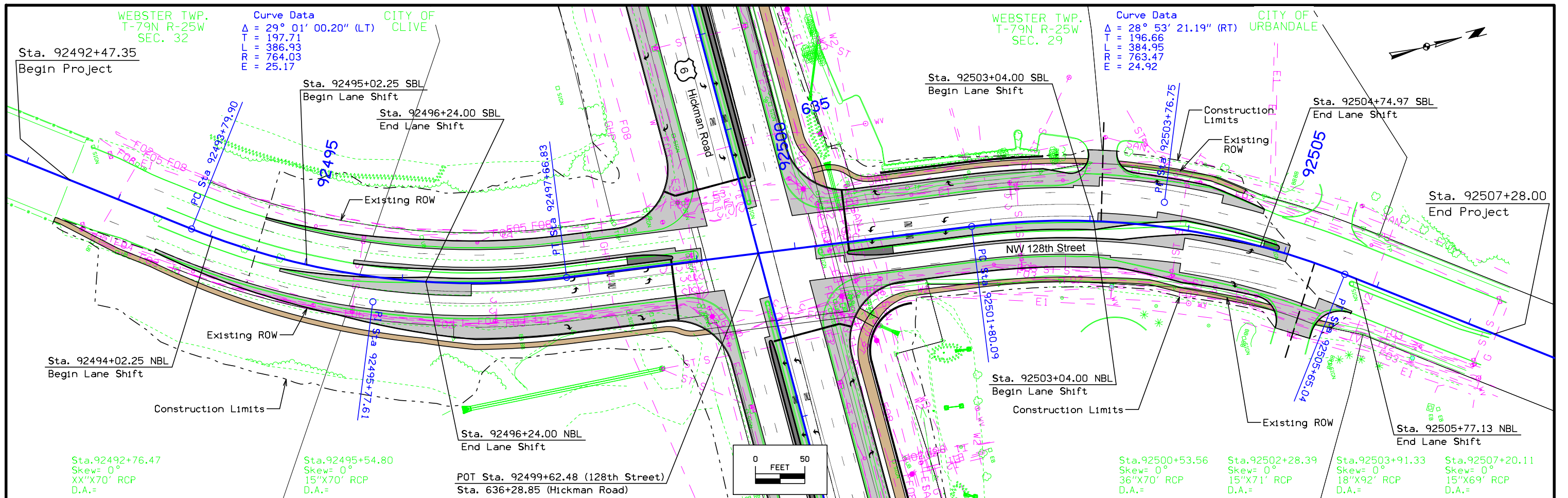
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FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.			POLK COUNTY			PROJECT NUMBER	NHSX-006-4(189)--3H-77			SHEET NUMBER	D.3	



FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.			POLK COUNTY	PROJECT NUMBER	NHSX-006-4(189)--3H-77	SHEET NUMBER	D.4					
650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665



665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680
FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.			POLK COUNTY	PROJECT NUMBER	NHSX-006-4(189)--3H-77			SHEET NUMBER	D.5			



92493	92494	92495	92496	92497	92498	92499	92500	92501	92502	92503	92504	92505	92506	92507
FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.				POLK COUNTY	PROJECT NUMBER	NHSX-006-4(189)--3H-77			SHEET NUMBER	E.1	

Survey Information

Hickman Rd & NW 128th St
NHSX-006-4(189)--3H-77
Intersection Improvements
PIN 20-77-006-010
SAP-07011

General Information

Measurement units for this survey are US survey feet. This survey is for preliminary/Engineering for the proposed road improvements at the intersection of U.S. Highway 6/Hickman Road and NW 128th Street. This project is a Partial DTM survey.

Vertical Control

Vertical datum for this survey is relative to NAVD88, Geoid 12a.

Vertical positions originated from City of Urbandale published city benchmark report. BM 45 is IHC brass marker located at NE corner of northbound I-35 bridge over U.S. Highway 6. A digital level loop was run from Urbandale BM 45 through the project benchmarks and closed on Urbandale BM 57. The error met 3rd order accuracy and the error was distributed proportionately among the project bench marks.

This survey observed three City of Urbandale Benchmark Monuments with published NAVD88 elevations:

City of Urbandale Benchmark #45 has a published Elev. of 908.05
IR-35-2(204)73--12-77 published Elev. of 907.82
Survey Elev. = 908.05
BM #38B Project STP-6-49119)--2C-77 published Elev. of 889.17 (271.021m)
Survey Elev.= 889.46

City of Urbandale Benchmark #55 has a published Elev. of 929.83
Survey Elev. = 929.83

City of Urbandale Benchmark #57 has a published Elev. of 899.61
Survey Elev. = 899.61

Horizontal Control

The project coordinate system is the Iowa Regional Coordinate System, Zone 8. Horizontal datum is NAD83 (2011) for Epoch 2010.00. The projection parameters for Zone 8 of the IaRCS is defined below:

Traverse Mercator Projection North American Datum of 1983
Origin Lat: 40°15'00"N
Origin Central Meridian: 093°43'00"W
Central Meridian Scale: 1.000033
False Northing: 7,000,000
False Easting: 18,500,000

Coordinates were determined by averaging a minimum of three IaRTN observations with appropriate time spans between. The horizontal standard deviation of these observations was less than 0.05' at 95% confidence level.

Alignment Information

The horizontal alignments for U.S. Highway and 128th Street was provided by Iowa DOT District 1 Office. Description of alignment as received described below.

The horizontal alignment for U.S. 6 (Hickman Road) is a retrace of as-built paving plan for project STP-6-4(119)--2C-77. Plan stationing is in metric and was converted to U.S. survey foot for this survey. Stationing was held at P.I. 186+92.513m (converted to station 613+27.02 in U.S. survey foot) and ran ahead without equation.

P.I. 186+92.513m (613+27.02 U.S. survey foot) = P.I. 186+92.513m (613+27.02 U.S. survey foot) (this survey)
Found "P-K" nail in conc. crossover

P.C. 198+53.721m (651+36.75 U.S. survey foot) = P.C. 198+53.757 (651+36.87 U.S. survey foot) (this survey)
Found 5/8" re-rod (flush)

Utilizing the provided alignment and the same as-built paving plans for project STP-6-4(119)--2C-77, Snyder & Associates extended alignment east from 651+36.75 to 673+00.

The horizontal alignment for 128TH Street is a retrace of as-built paving plan for project STP-6-3(119)--2C-77. Plan stationing is in metric and was converted to U.S. survey foot for this survey. Stationing was held at P.I. 28192+76.893m (converted to station 92495+77.61 in U.S. survey foot) and ran back and ahead without equation.

P.I. 28189+48.339m (92484+99.68 U.S. survey foot) = P.I. 28189+43.077m (92484+82.412 U.S. survey foot) (this survey)
Found 5/8" re-rod (12" deep)

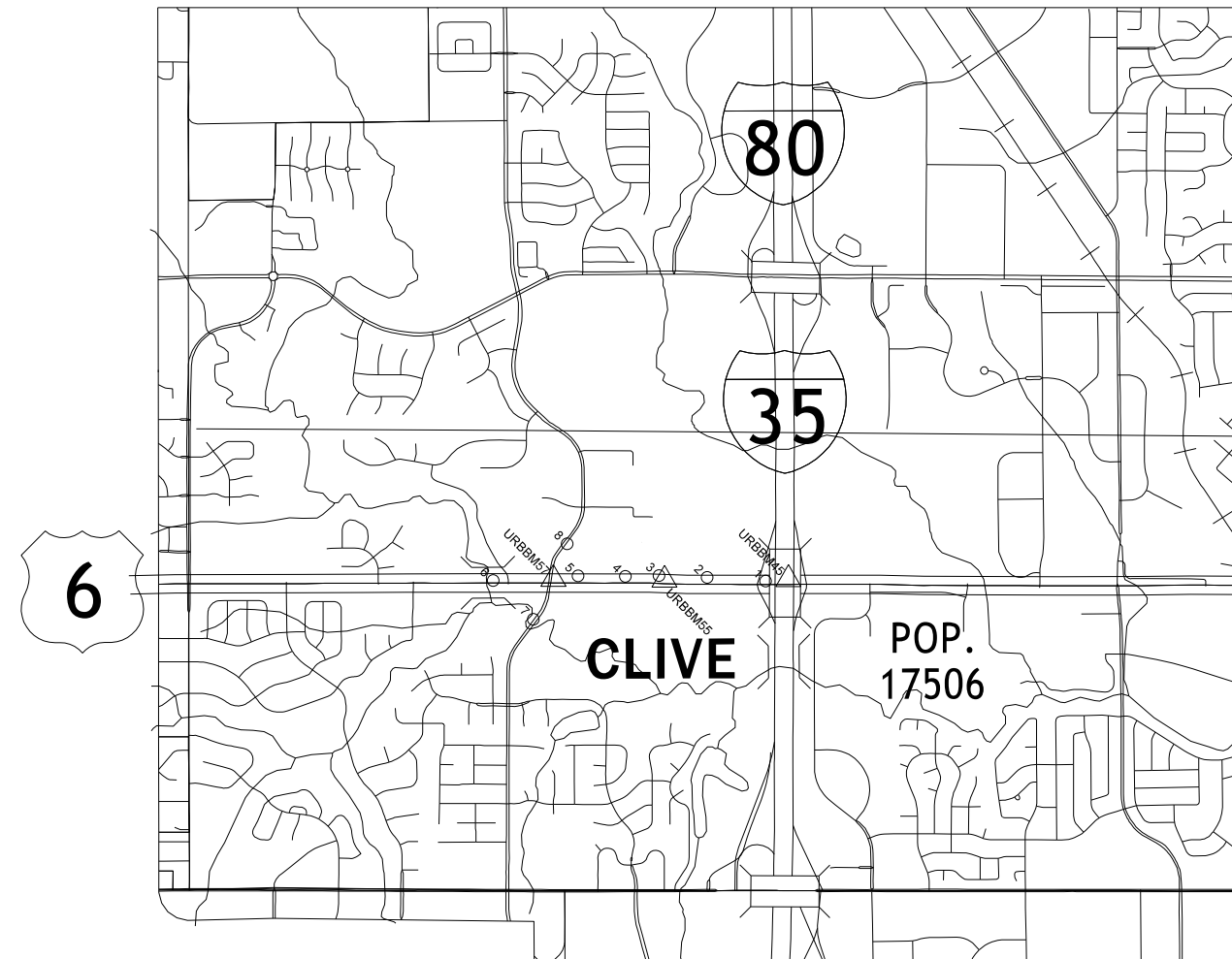
P.I. 28192+76.893m (92495+77.61 U.S. survey foot) = P.I. 28192+76.893m (92495+77.61 U.S. survey foot) (this survey)
Found "X" in the concrete pavement

P.I. 28195+20.289m (92503+76.15 U.S. survey foot) = P.I. 28195+20.475m (92503+76.76 U.S. survey foot) (this survey)
Found "X" in the concrete pavement

P.I. 28197+83.097m (92512+38.38 U.S. survey foot) = P.I. 28197+83.279m (92512+38.974 U.S. survey foot) (this survey)
Found 5/8" re-rod

CONTROL POINT VICINITY MAP

This map is a guide to the vicinity of the primary project control points
Primary control is for use with RTK base stations and for RTN validation.
Future surveys will use primary project control to establish temporary
control as needed for construction or other surveying applications.



HORIZ. DATUM: NAD83(2011) EPOCH 2010.00

VERT. DATUM: NAVD88

1a. Regional Coordinate System Zone 8

Coordinate listing from next sheet will be used with 1aRTN for monument
recovery. No other reference ties are given.

HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING

HORIZ. DATUM: NAD83(2011) EPOCH 2010.00

VERT. DATUM: NAVD88

1a. Regional Coordinate System Zone 8

Point Name	Northing	Easting	Elevation	Feature Definition	Description
1	7497371.24	18483222.37	889.91	CP	CP1//1/2IN REBAR WITH RED PLASTIC CAP/15'+/- NORTH OF HICKMAN ROAD/15'+/- EAST OF EAST EDGE OF EXIT RAMP TO I-80
2	7497434.86	18482217.36	909.13	CP	CP2//CUT X ON TOP OF EAST CURB IN MEDIAN/ENTRANCE TO LIFETIME ATHLETIC/150'+/- NORTH OF CENTERLINE OF HICKMAN ROAD
3	7497465.85	18481388.12	935.81	CP	CP3//CUT X ON TOP OF CURB/10'+/- NORTH OF HYDRANT AT STEW HANSENS EAST ENTRANCE/125'+/- NORTH OF CENTERLINE OF HICKMAN ROAD
4	7497453.84	18480810.51	936.94	CP	CP4//CUT X ON TOP OF CURB/25'+/- WEST OF STEW HANSEN SIGN/50'+/- EAST OF WALNUT HILLS CHURCH/125'+/- NORTH OF CENTERLINE OF HICKMAN ROAD
5	7497460.92	18479997.81	917.28	CP	CP5//CUT X ON TOP OF CURB/WEST SIDE OF ENTRANCE TO IOWA STATE BANK/300'+/- EAST OF NW 128TH STREET/120'+/- NORTH OF CENTERLINE OF HICKMAN ROAD
6	7497381.05	18478538.99	889.47	CP	CP6//BRASS PLUG/EAST END OF BRIDGE OVER WALNUT CREEK/NORTH SIDE OF HICKMAN ROAD/AT WEST END OF PROJECT
7	7496714.31	18479228.25	886.42	CP	CP7//CUT X ON NORTH END OF BRIDGE OVER WALNUT CREEK/WEST SIDE OF NW 128TH STREET/700'+/- SOUTH OF HICKMAN ROAD
8	7498013.3	18479810.38	929.98	CP	CP8//CUT X ON TOP OF CURB/EAST SIDE OF NW 128TH STREET/7'+/- NORTHEAST OF INTAKE AT BACK OF CURB/100'+/- WEST OF CHILDRENS OF CENTRAL IOWA
URB BM45	7497403.87	18483612.44	908.05	BM	URBANDALE BM45//FOUND BRASS MARKER/NORTH BOUND LANE I-80 OVER HICKMAN ROAD/TOP OF ABUTMENT ON EAST SIDE OF EAST BRIDGE
URB BM55	7497393.85	18481482.57	929.83	BM	URBANDALE BM55//FOUND BRASS PLUG IN CONCRETE/NORTH SIDE OF HICKMAN ROAD
URB BM57	7497407.636	18479574.72	899.61	BM	URBANDALE BM57//FOUND BRASS PLUG IN NORTHWEST CORNER OF SIGNAL BASE/NORTHEAST QUADRANT OF 128TH STREET AND HICKMAN ROAD

STAGING NOTES

Highway 6 is a high volume roadway, construction activity in the area will disrupt traffic on Highway 6 and 128th Street. Therefore, it is advisable to adopt a construction sequence that directs activities in an orderly manner and minimizes disruptions to traffic as much as practical.

It is recognized that as the various activities related to construction progress, certain situations may arise which will preclude adhering to the original construction sequence or which, in the opinion of the Contractor, should result in more efficient staging operations. Should the Contractor desire to deviate from the original plan, they shall submit a written alternative plan to the Resident Construction Engineer for approval.

Stage 1 - Pavement Widening

- Highway 6
- Install traffic control on US 6 per Standard Road Plan TC-402 to close the outside shoulder.
 - Construct cluvert extentions.
 - Construct pavement widening and right turn lanes along US 6.
 - Construct 10' trail north of US 6.

128th Street

- Install traffic control on 128th Street. per Standard Road Plan TC-418 to close the outside lane.
- Construct pavement widening and sidewalks along 128th Street.

Stage 2 - Median Construction

- Highway 6
- Shift traffic to use the two proposed outside lanes.
 - Install traffic control on US 6 per Standard Road Plan TC-402 to close the inside shoulder.
 - Reconstruct median and left turn lanes along US 6.

128th Street

- Shift traffic to use the proposed travel lanes.
- Install traffic control on 128th Street. per Standard Road Plan TC-418 to close the inside lane.
- Reconstruct median and left turn lanes along 128th Street.

TRAFFIC CONTROL PLAN

In order to minimize vehicle traffic congestion, the contractor shall comply with the following restrictions, for the limits of construction.

Traffic on Highway 6 and NW 128th Street will be maintained at all times during construction.

Shoulder and/or lane closures (per Standard Road Plans TC-402 & TC-418) will be necessary for construction.

US 6

1. The Contractor shall maintain two lanes of traffic in both directions on US 6 at all times.

128th

1. The Contractor shall maintain at least one lane of traffic in both directions on 128th Street.

Use Portable Dynamic Message Signs (PDMS) in conjunction with traffic signage.

PEDESTRIAN PATH CLOSURES

Refer to TC-601.










*Assumes 6 foot wide barricade.
Closures may need to be removed and re-established.

Location	Side	Type III Barricades*	Remarks
		No.	
Highway 6 Station 624+83	LT	1	
128th Street Station 92505+00	LT	1	
Station 92509+75	RT	1	

**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 Shoulder
	Proposed Granular Subbase		Temporary Shoulder
	Proposed Special Backfill		Existing Shoulder Strengthening
	Temporary Barrier Rail		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
Violet	(15)	Temporary barrier rail, Unpinned
Flush Orange	(228)	Temporary barrier rail, Pinned

SHADING	Design Color No.	
Green, Light	(225)	Existing Pavement Shading
Gray, Light	(48)	Previously Constructed Pavement Shading
Gray, Med	(80)	Proposed Granular Surface 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

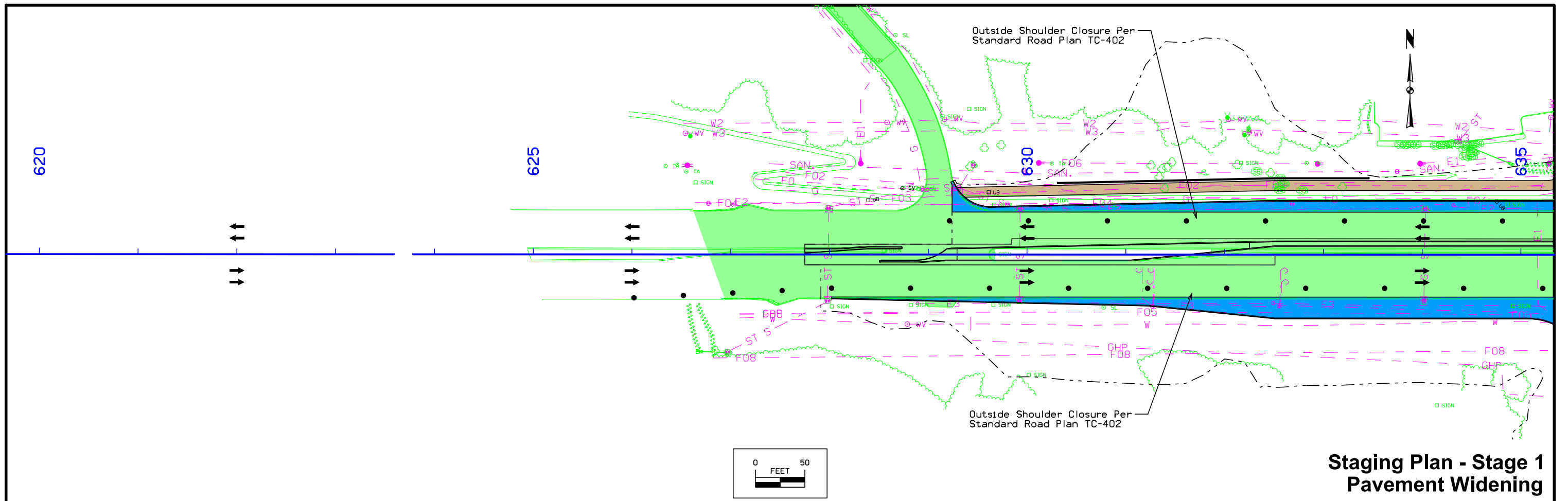
**PLAN VIEW PATTERN AND SYMBOL LEGEND
OF TRAFFIC CONTROL AND STAGING SHEETS**

●	Channelizing Device		Crash Cushion (Temp or Perm)
✕	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
	Sand Barrel Layout		Lane Identification

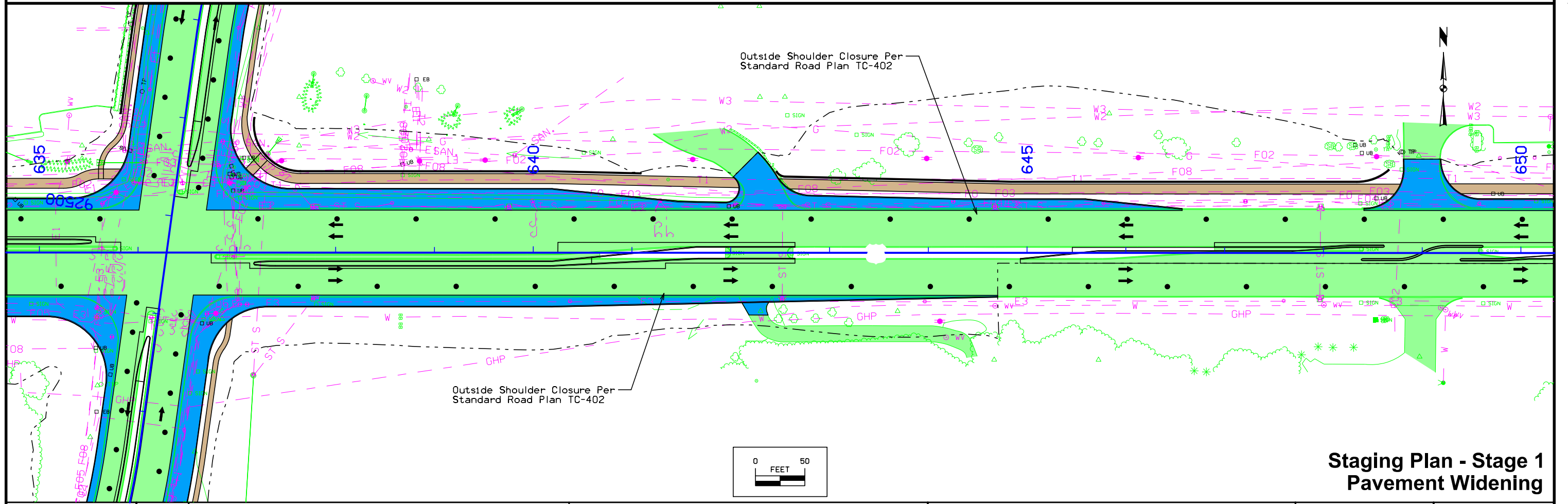
NOTE: Device spacing according to Standard Road Plans unless specifically dimensioned.

**TRAFFIC CONTROL
AND
STAGING
LEGEND AND SYMBOL
INFORMATION SHEET**

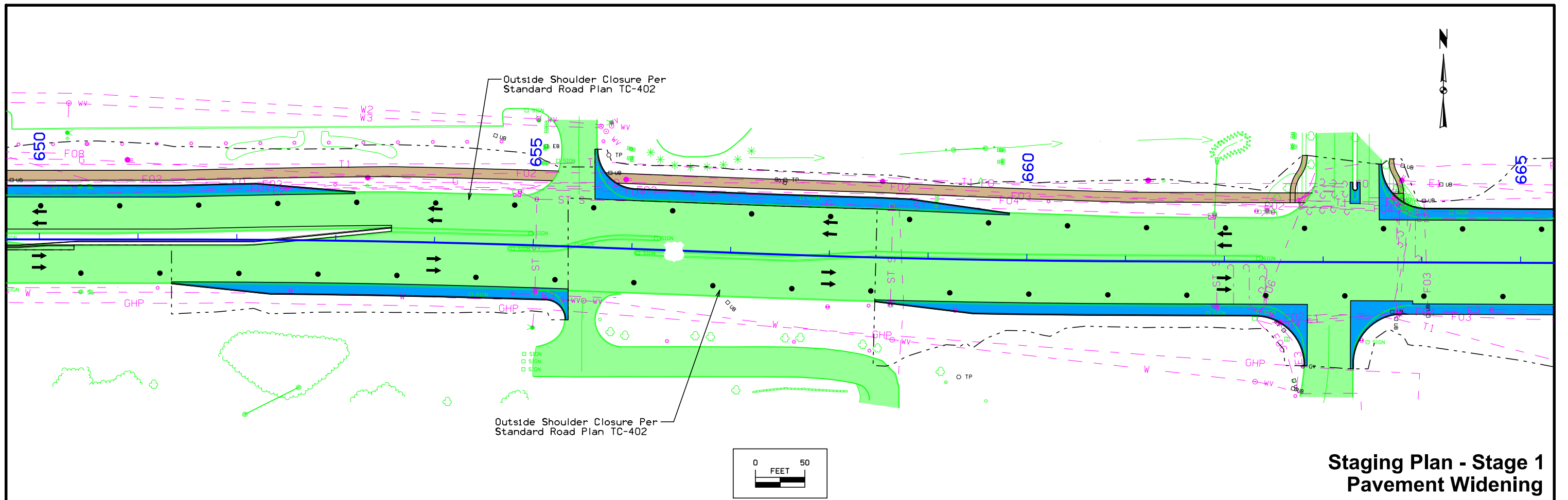
(COVERS SHEET SERIES J)



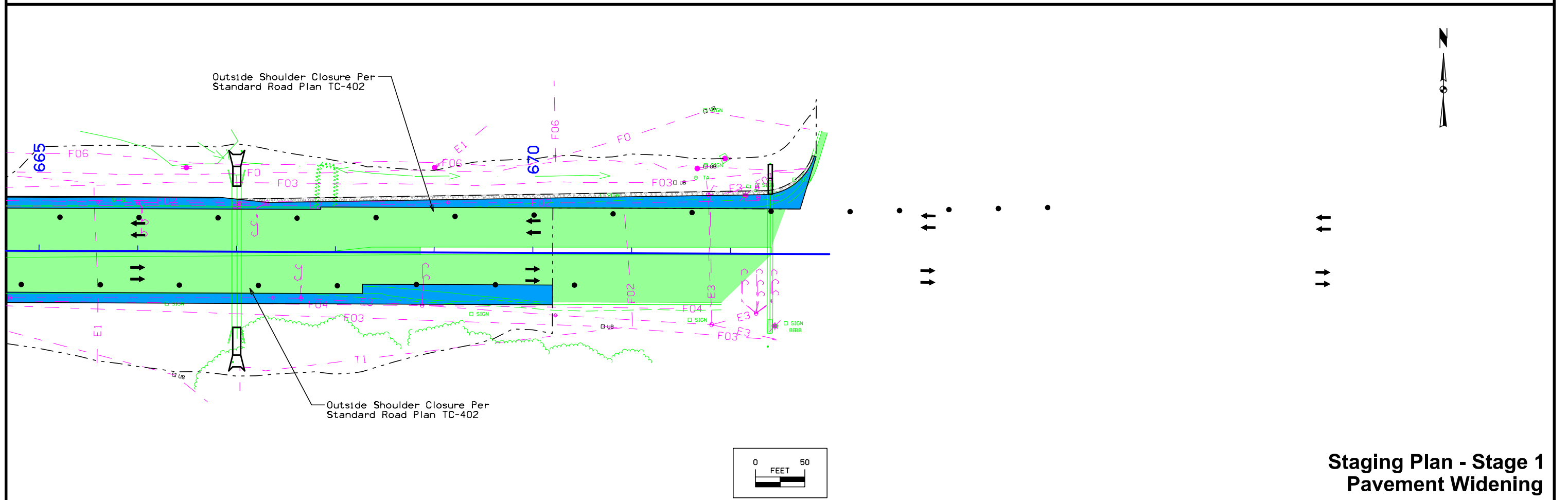
**Staging Plan - Stage 1
Pavement Widening**



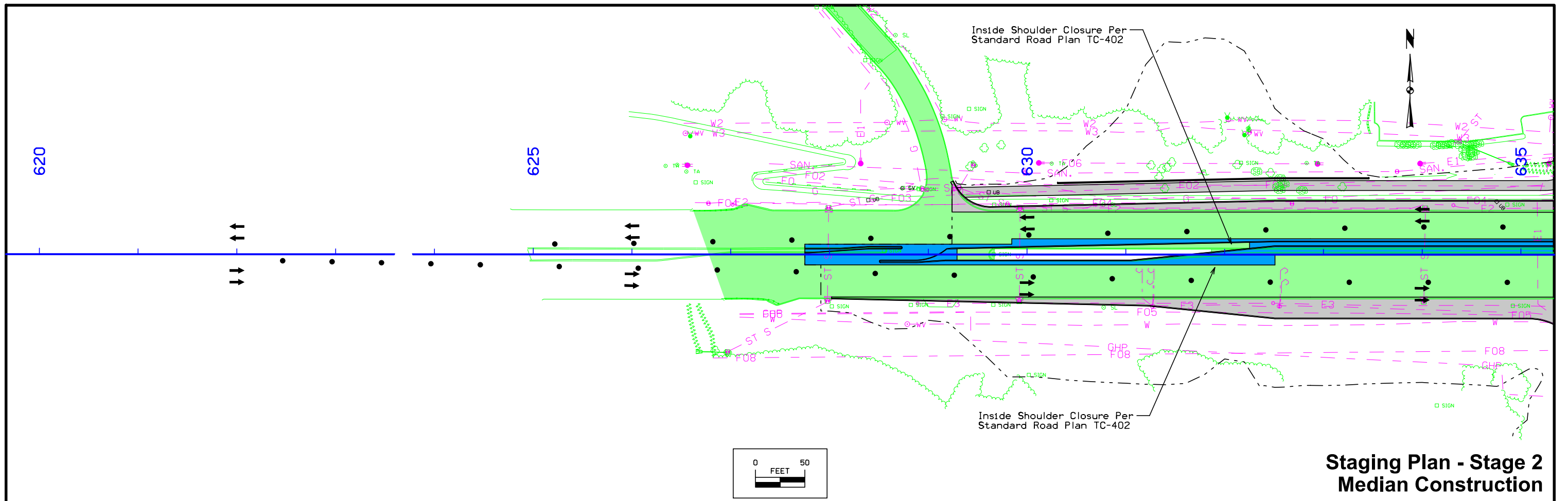
**Staging Plan - Stage 1
Pavement Widening**



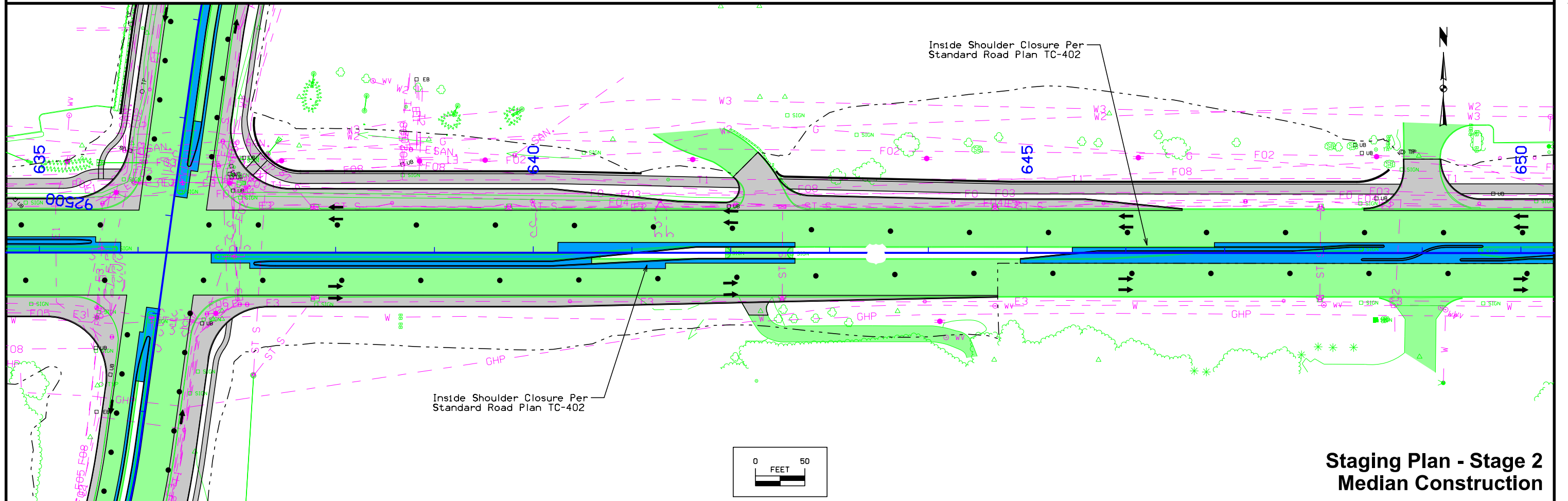
**Staging Plan - Stage 1
Pavement Widening**



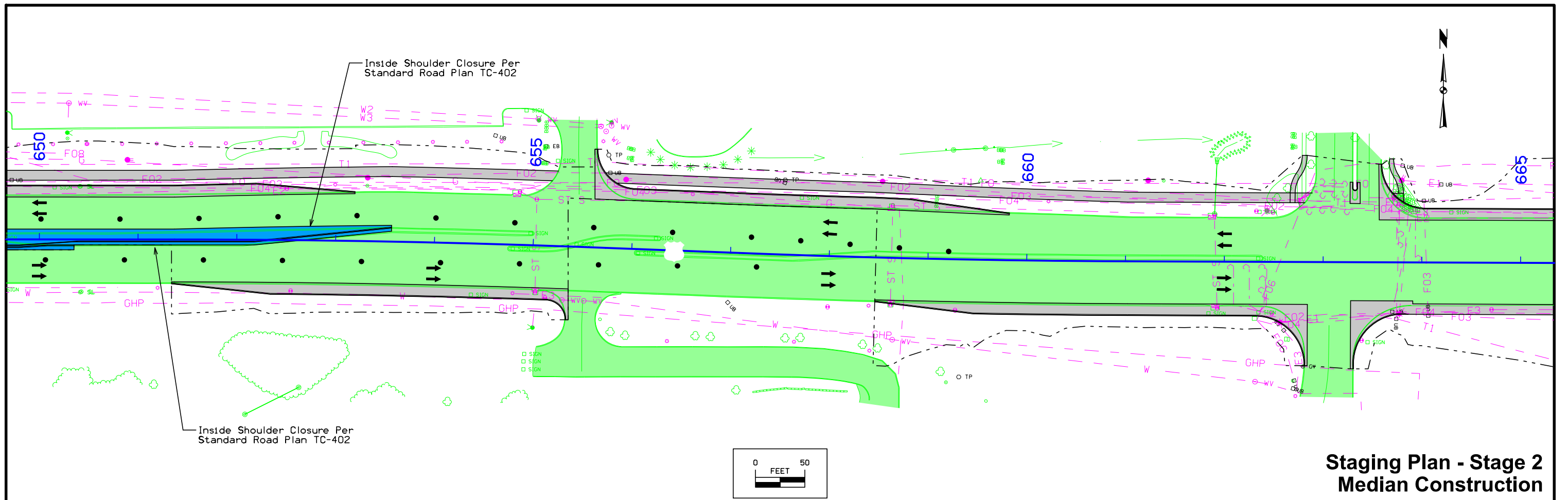
**Staging Plan - Stage 1
Pavement Widening**



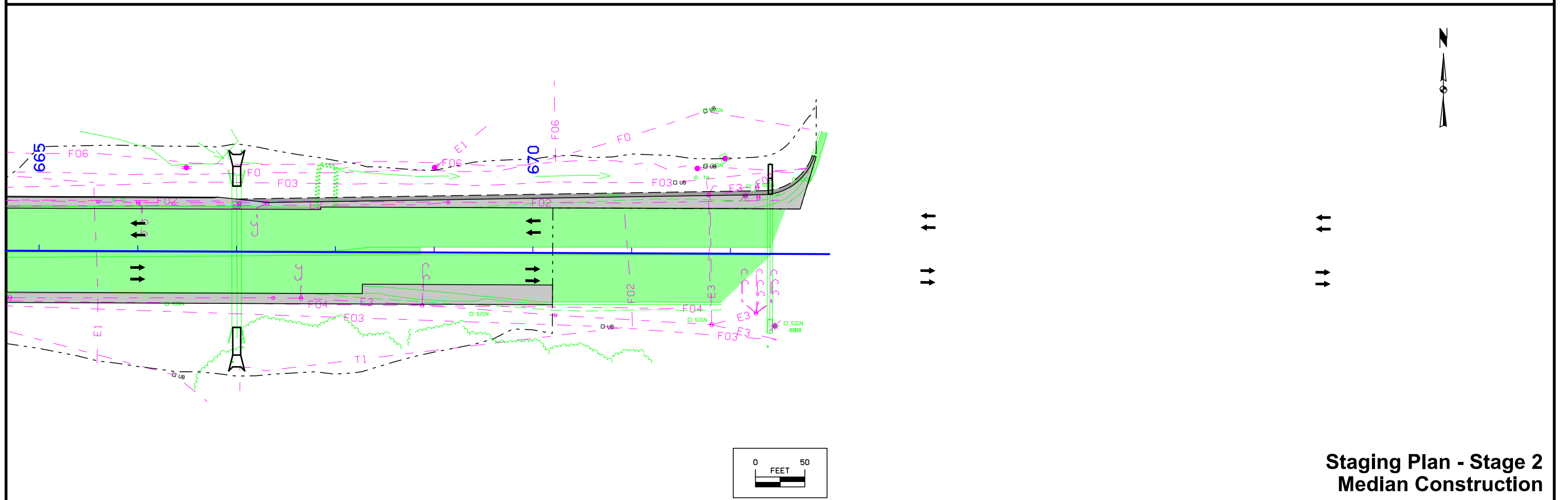
**Staging Plan - Stage 2
Median Construction**



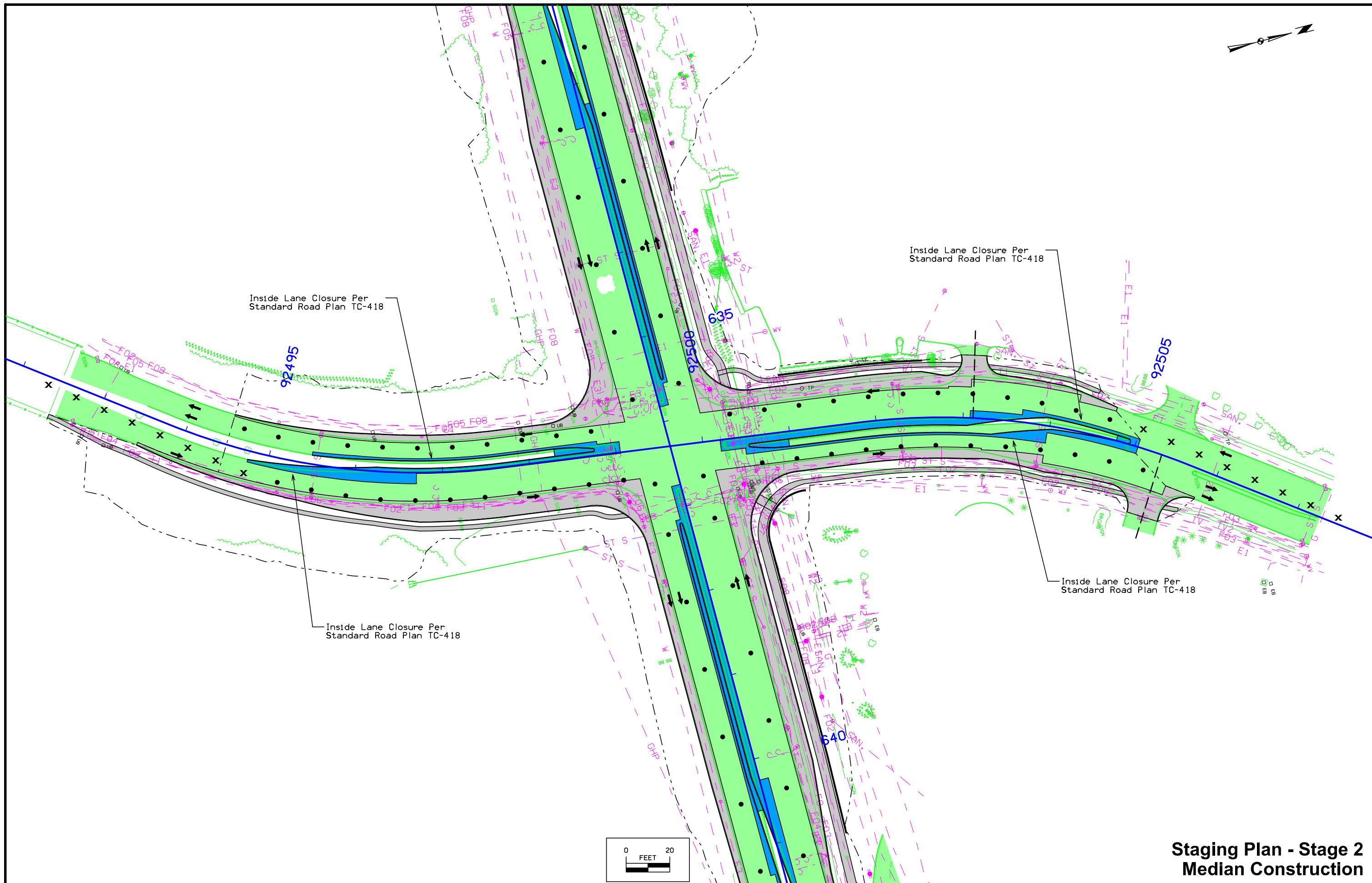
**Staging Plan - Stage 2
Median Construction**



**Staging Plan - Stage 2
Median Construction**



**Staging Plan - Stage 2
Median Construction**

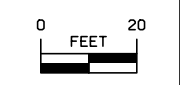


Inside Lane Closure Per
Standard Road Plan TC-418

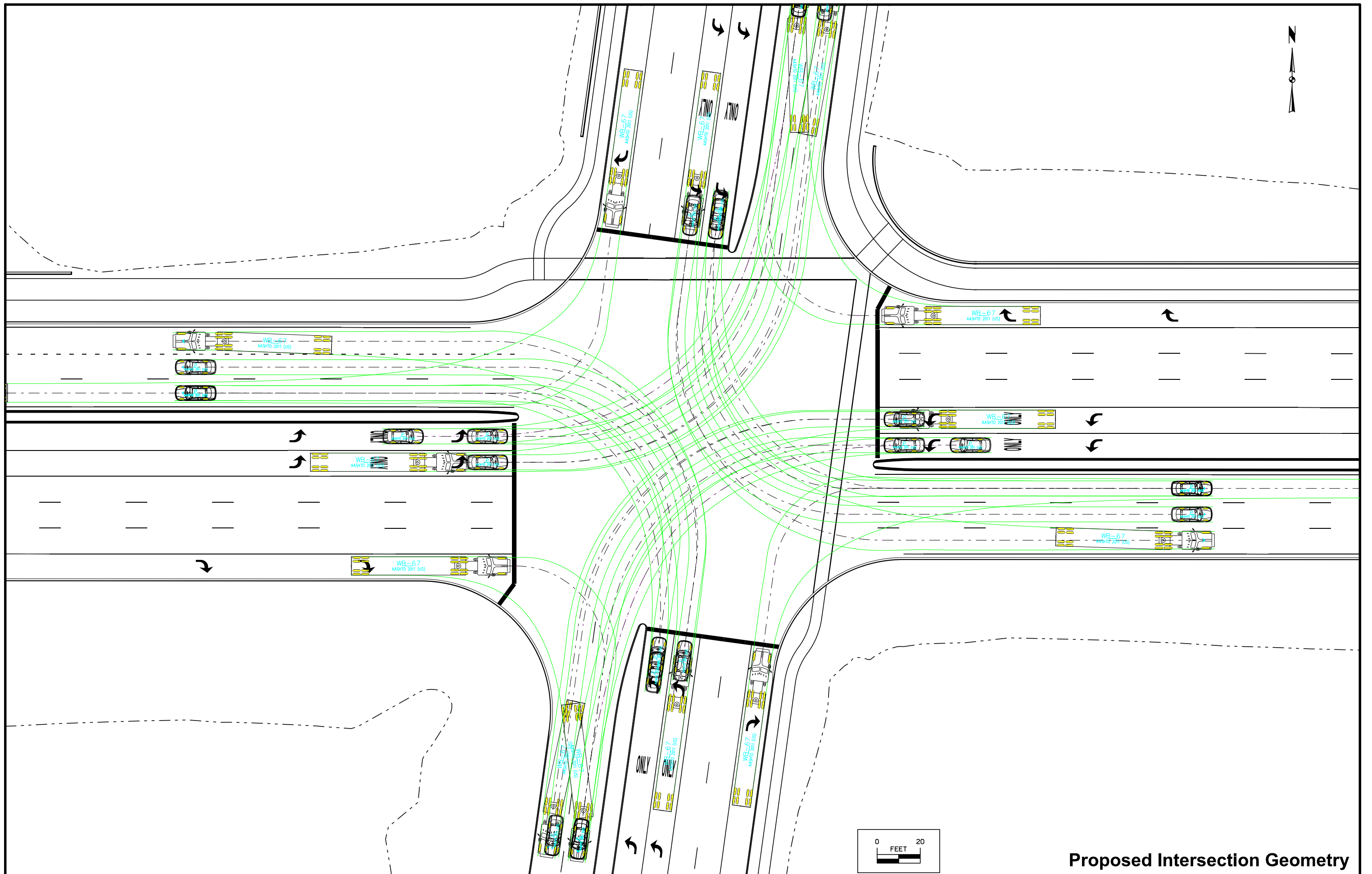
Inside Lane Closure Per
Standard Road Plan TC-418

Inside Lane Closure Per
Standard Road Plan TC-418

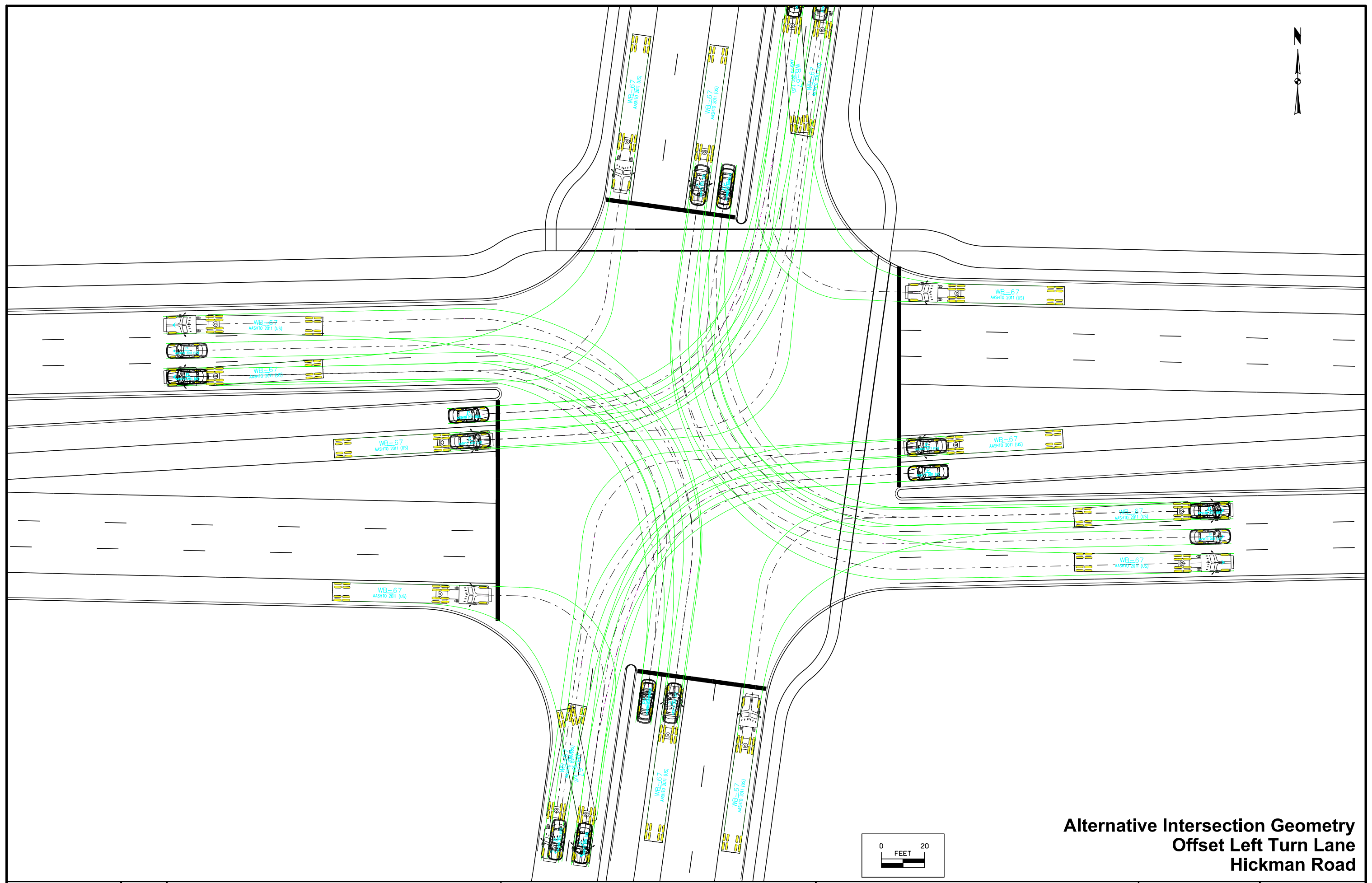
Inside Lane Closure Per
Standard Road Plan TC-418



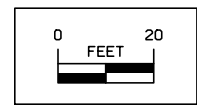
**Staging Plan - Stage 2
Median Construction**

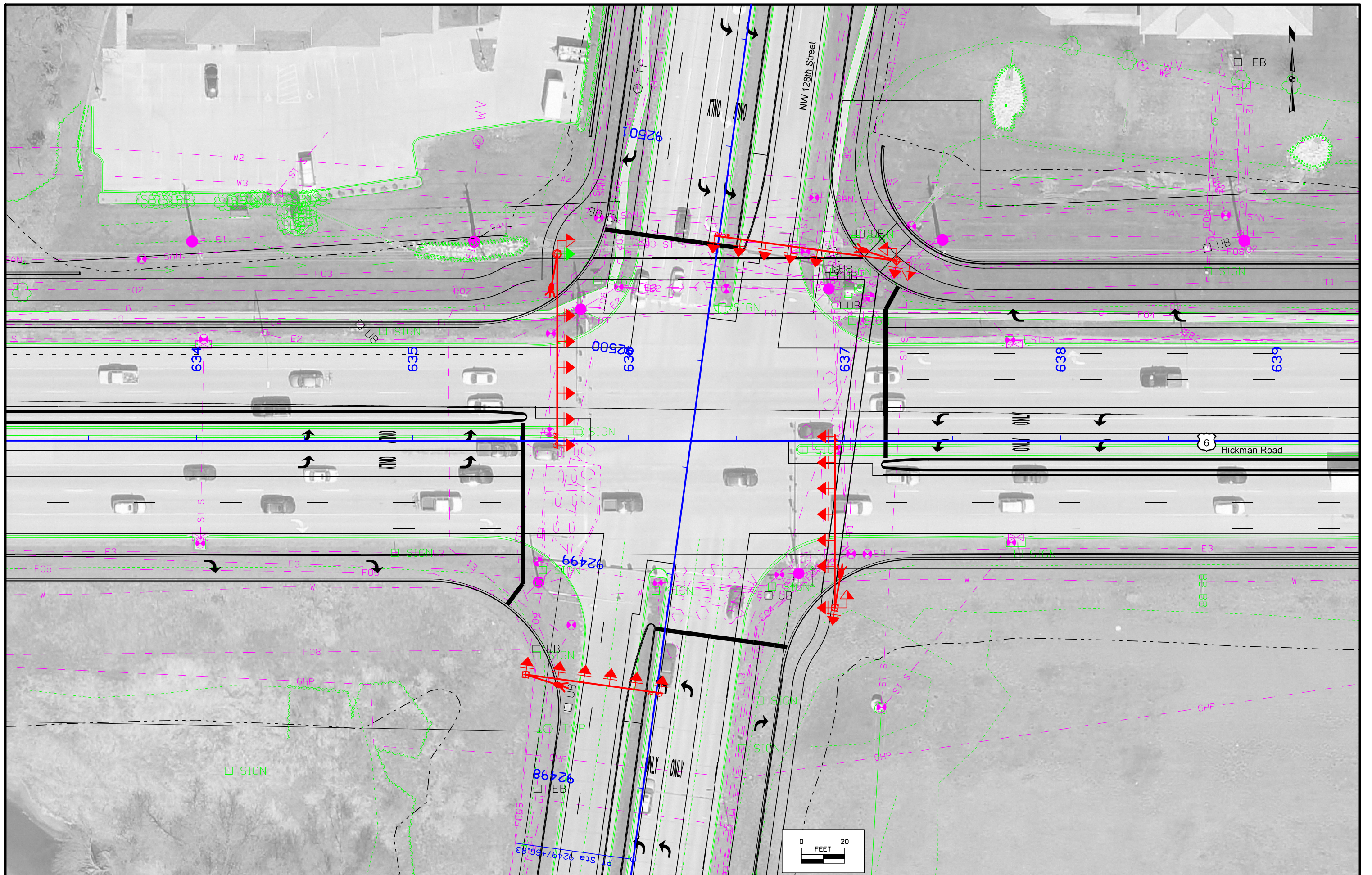


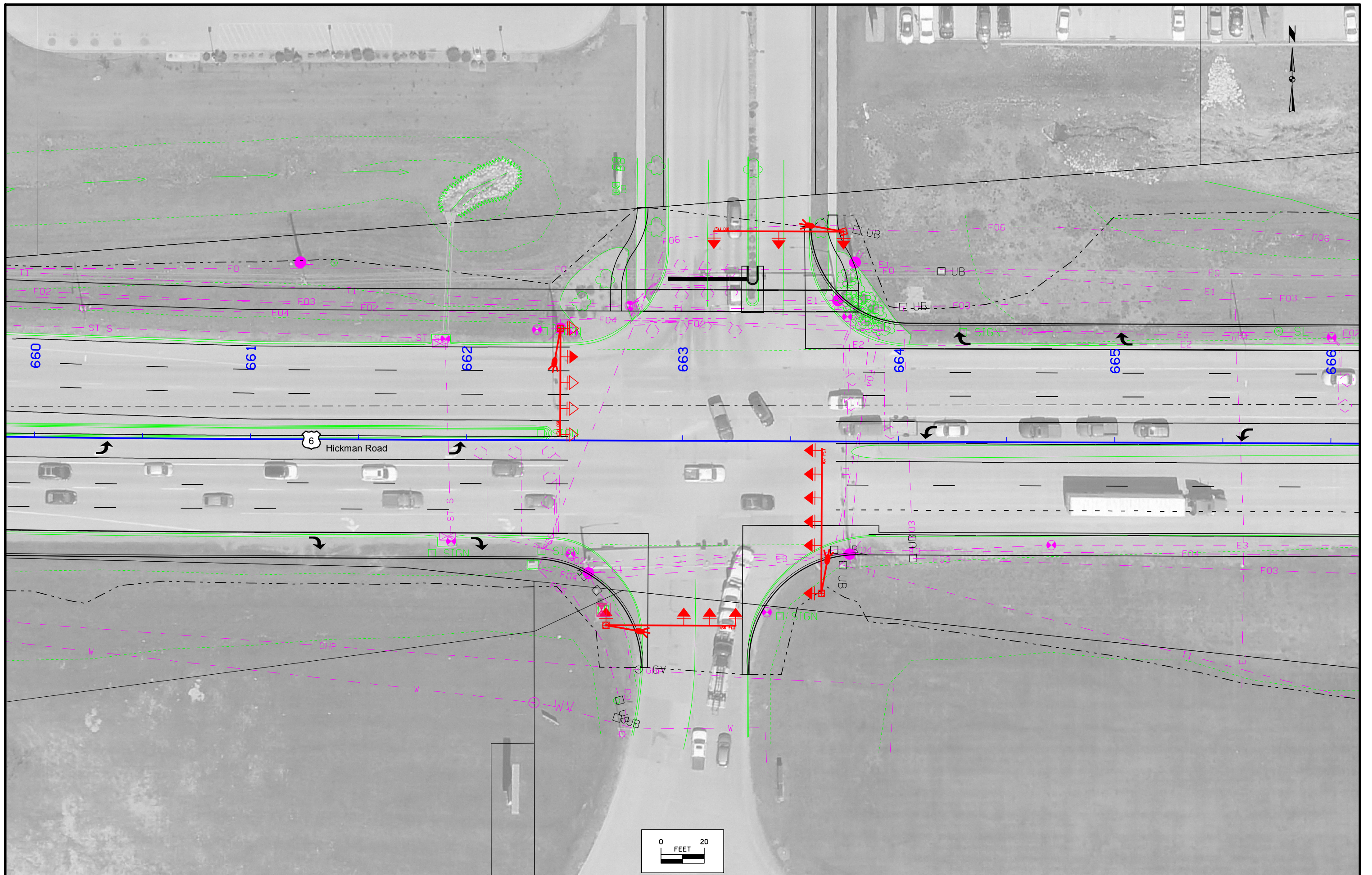
Proposed Intersection Geometry

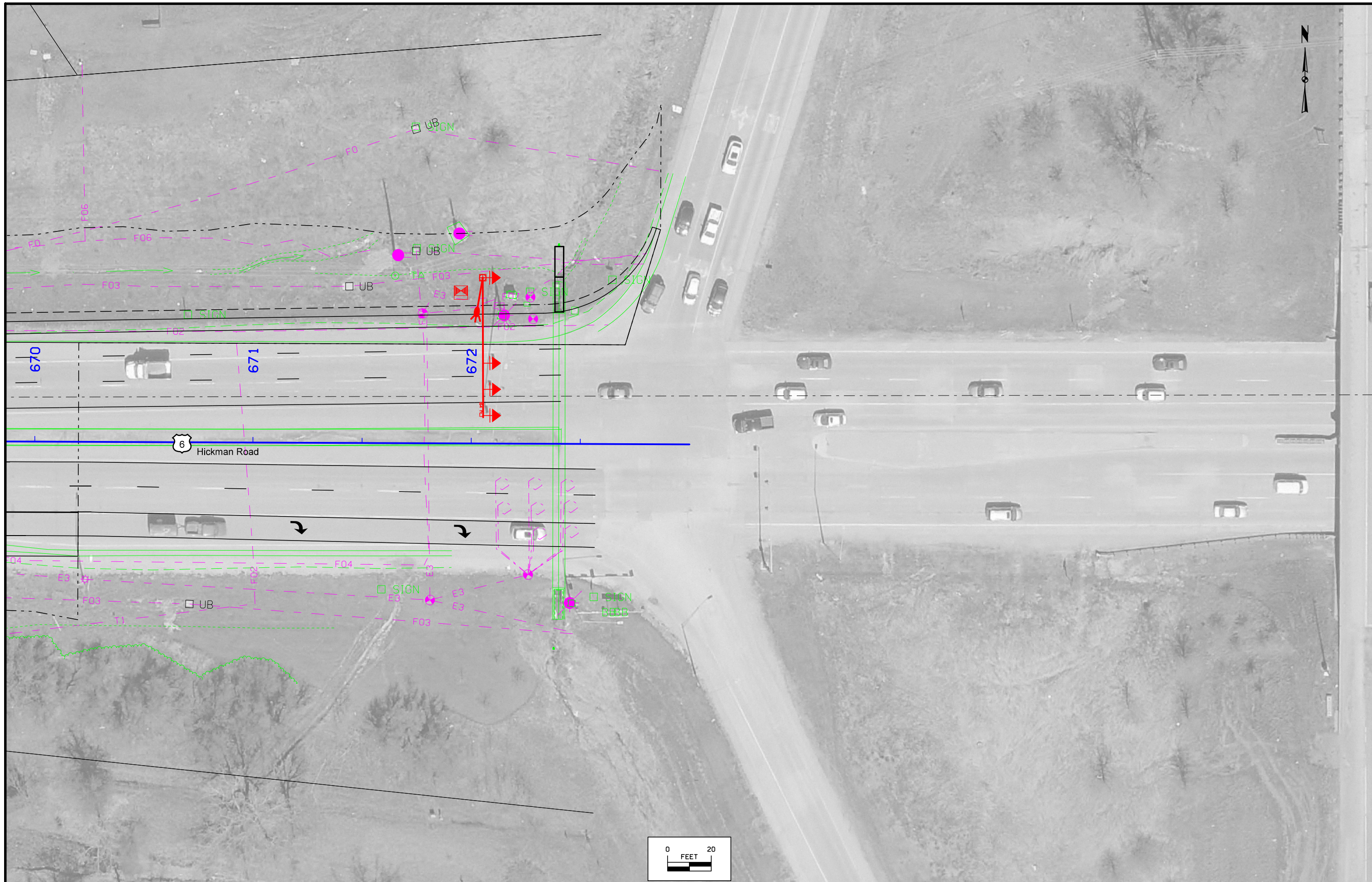


**Alternative Intersection Geometry
Offset Left Turn Lane
Hickman Road**









LINE STYLE LEGEND OF CROSS SECTION SHEETS (ROAD)

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

LINE STYLE LEGEND OF CROSS SECTION SHEETS (SOILS)

- TOPSOIL ——— Topsoil (Class 10)
- Slope Dressing Only
- 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

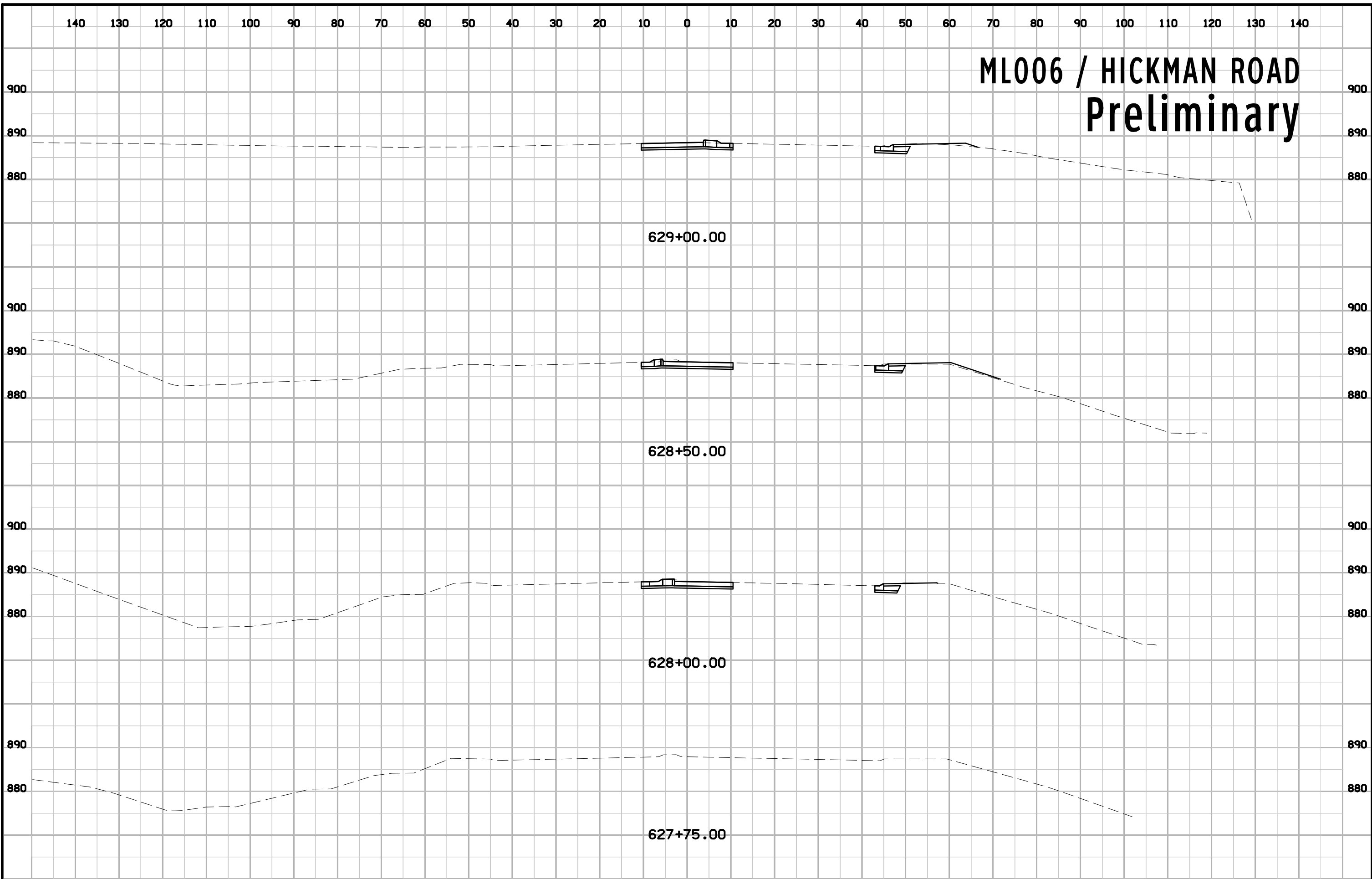
Note: All layer lines and descriptions identify layers above the line.

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.

SYMBOL LEGEND OF CROSS SECTION SHEETS

- Existing ROW
|
Existing Right-of-Way Limit
- Proposed ROW
|
Proposed Right-of-Way Limit
- Temporary ROW
|
Temporary Right-of-Way Limit

**CROSS SECTION
LEGEND AND SYMBOL
INFORMATION SHEET
(COVERS SHEET SERIES W, X, Y, & Z)**



ML006 / HICKMAN ROAD Preliminary

629+00.00

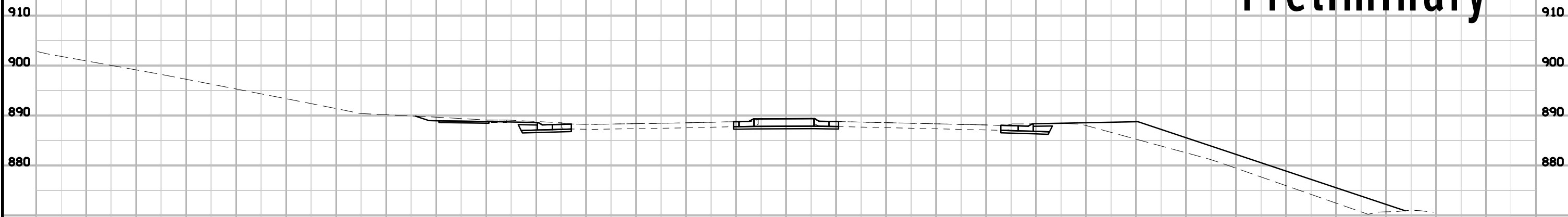
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628+00.00

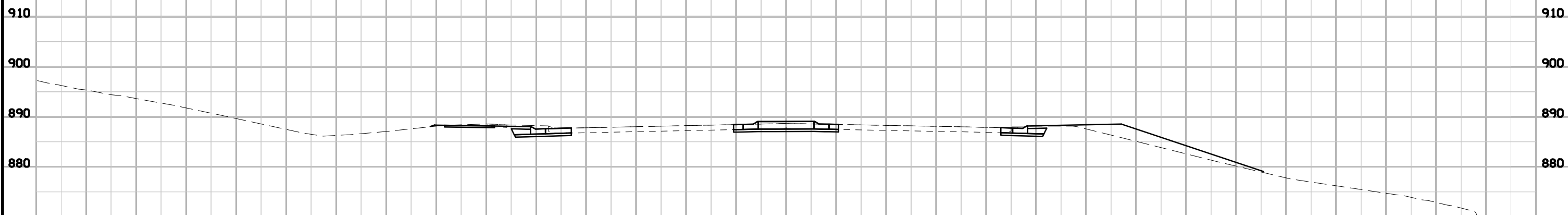
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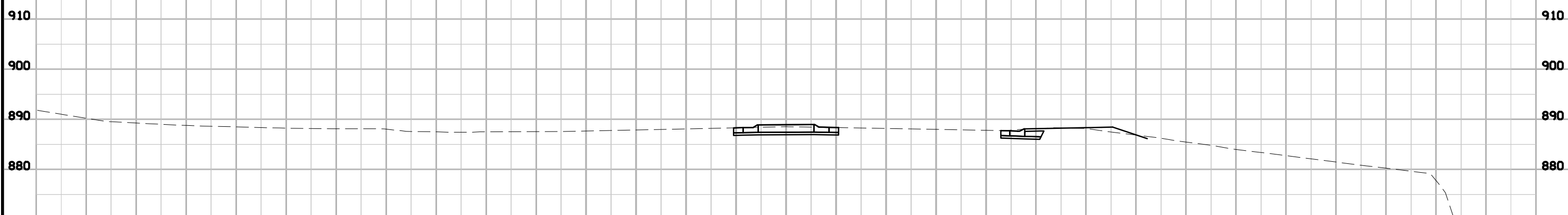
ML006 / HICKMAN ROAD Preliminary



630+00.00



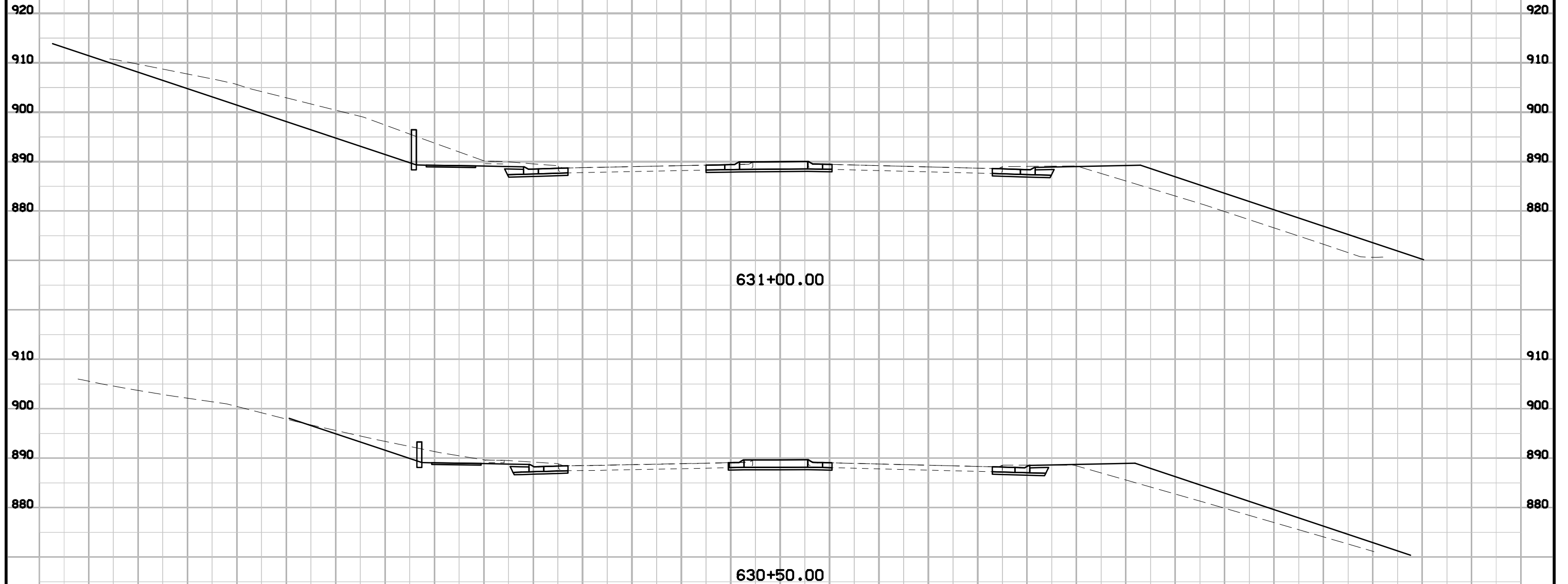
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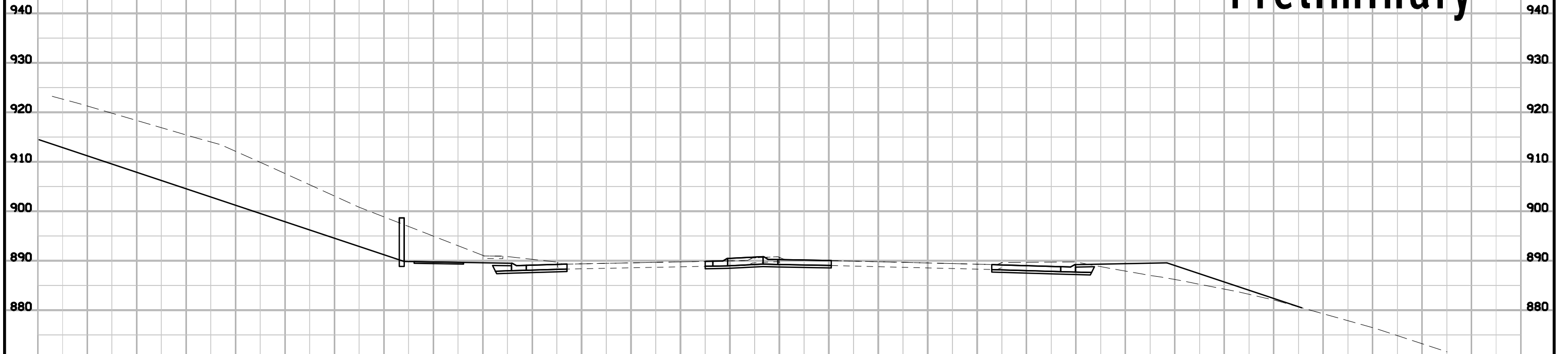
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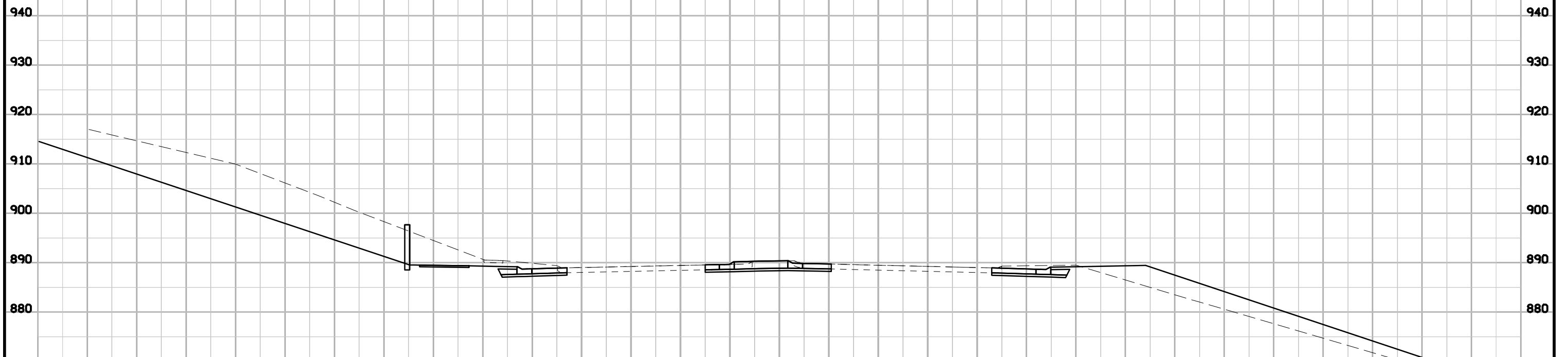


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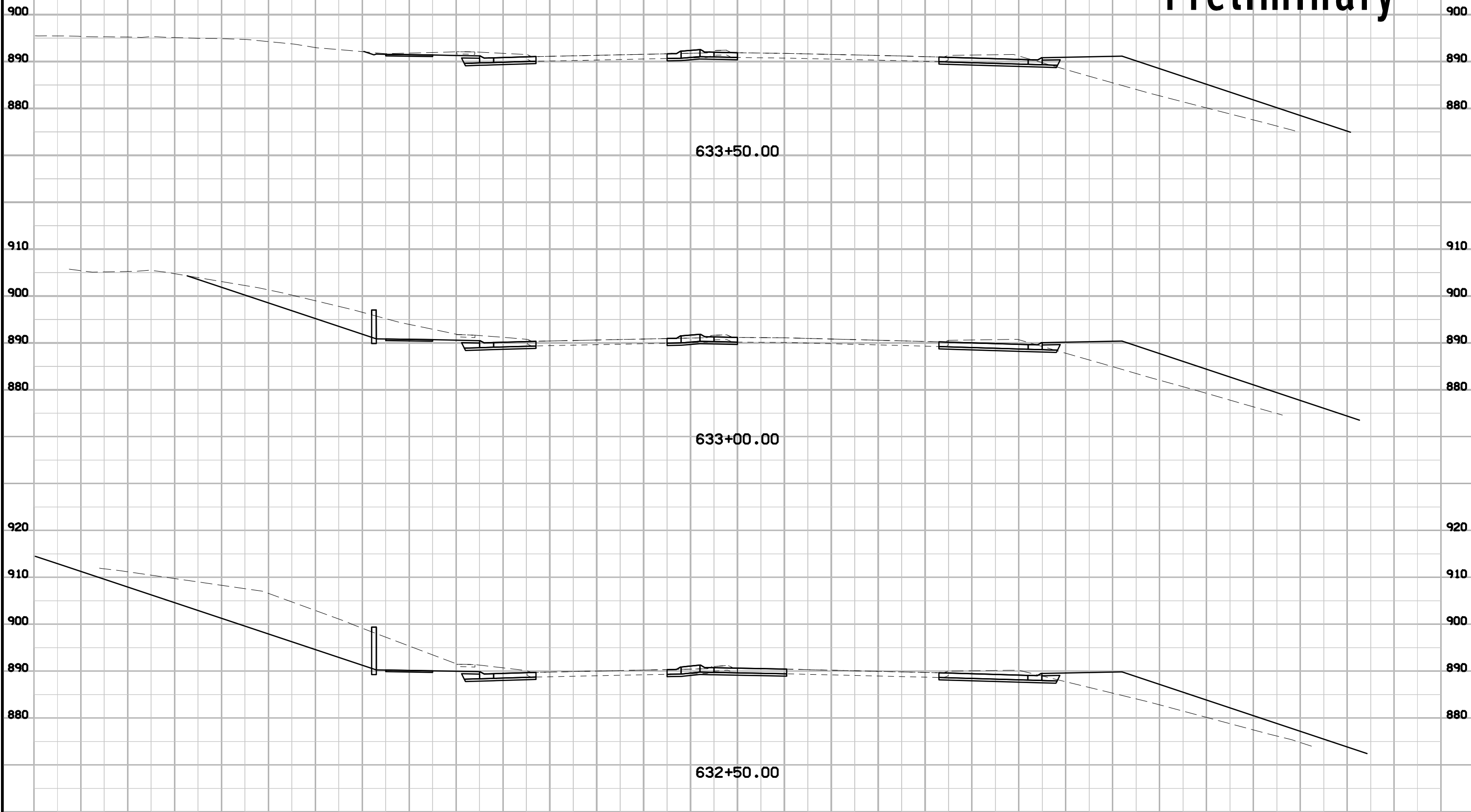
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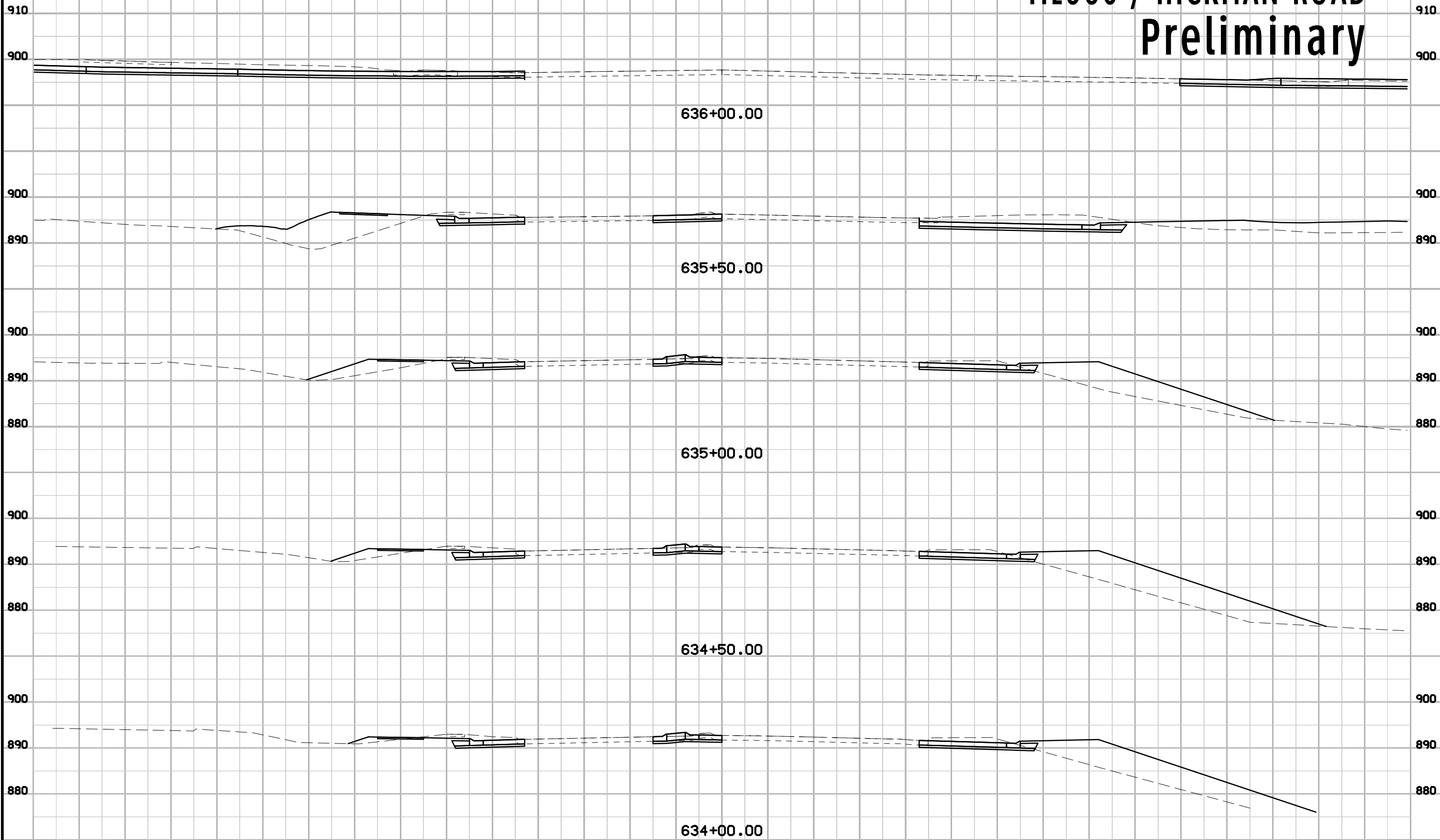
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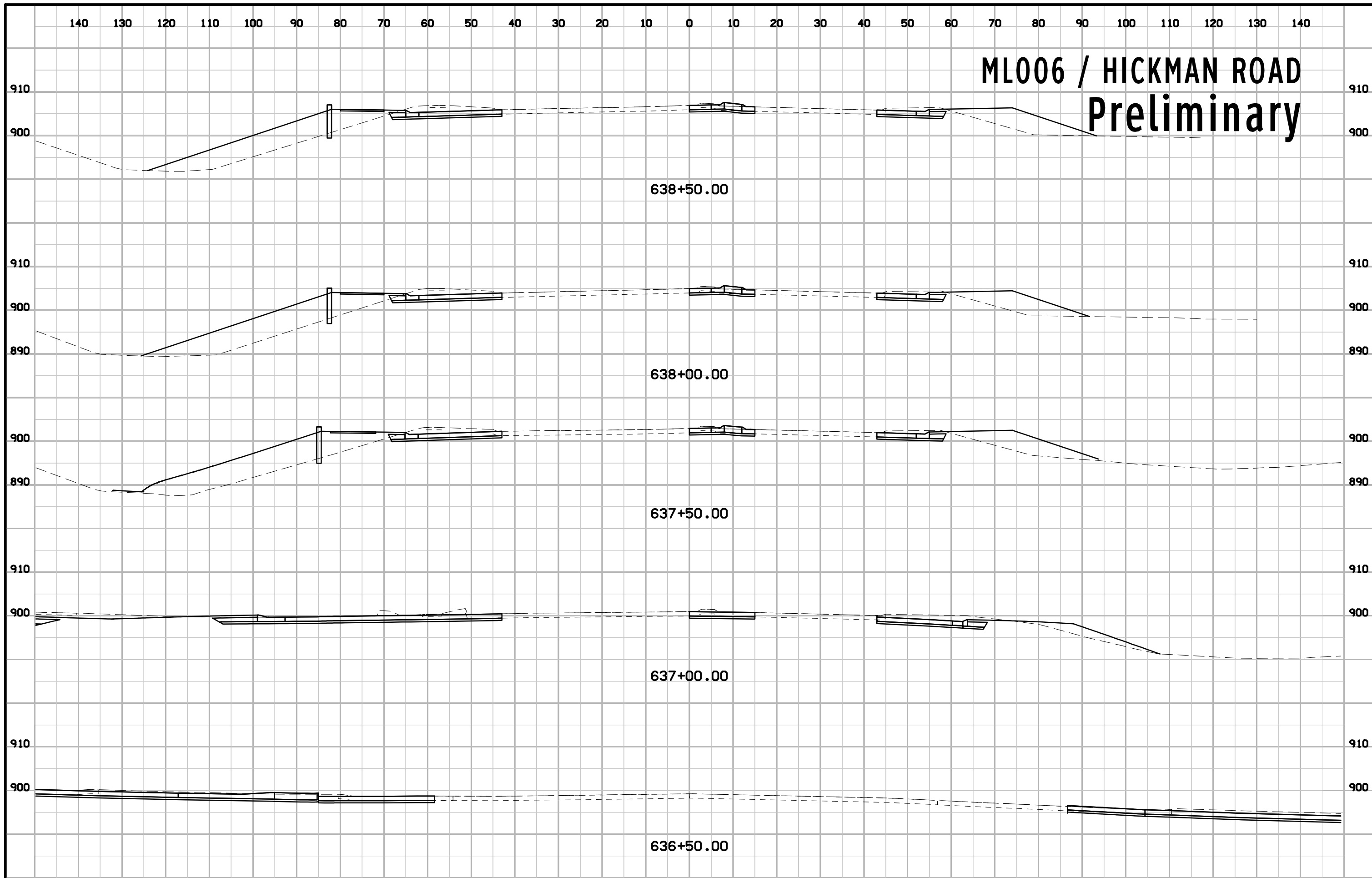
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Preliminary**

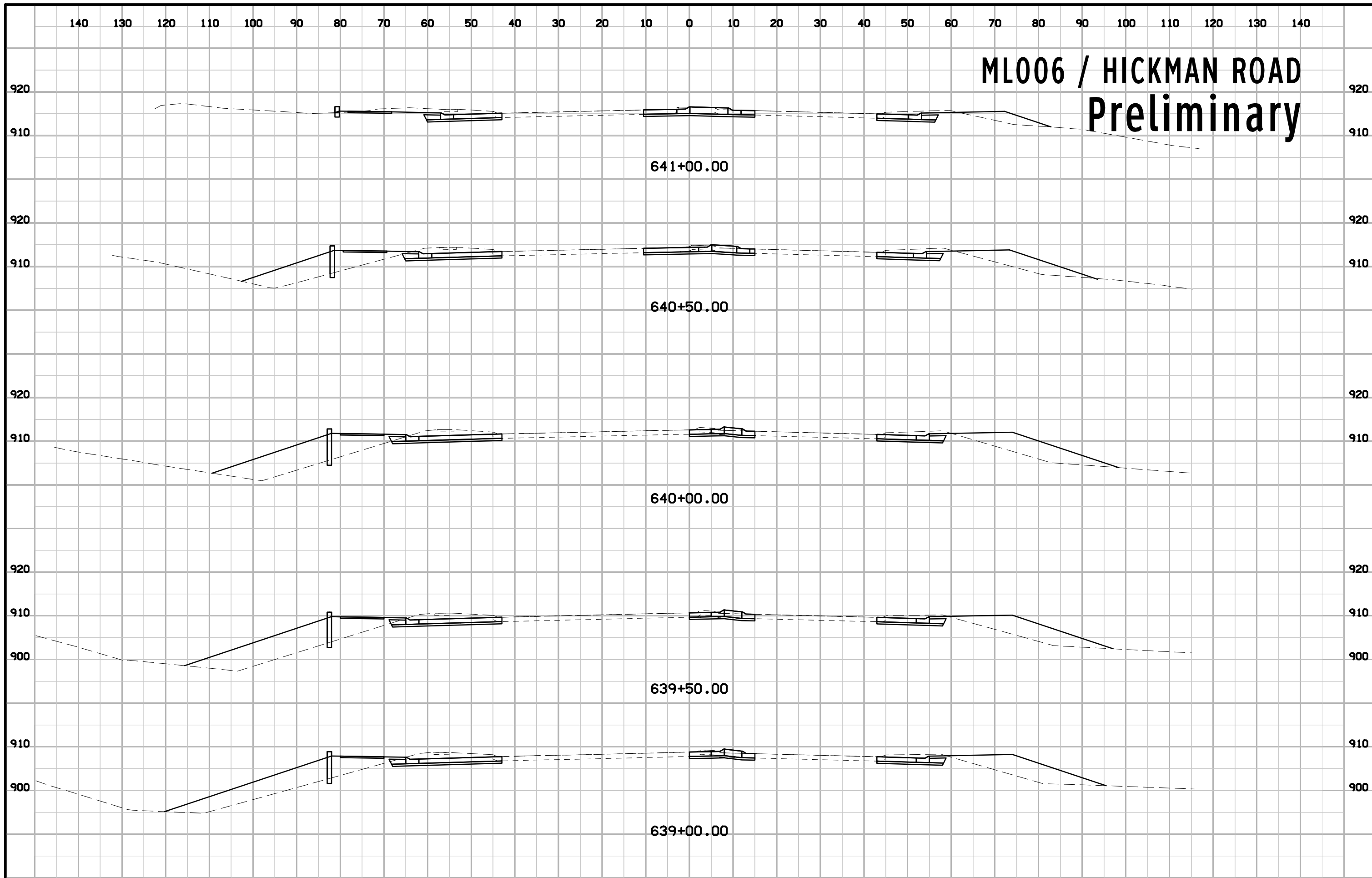
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638+00.00

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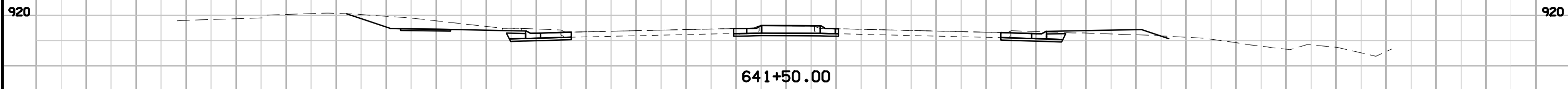
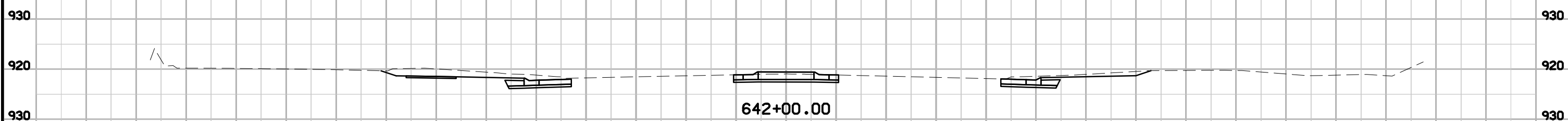
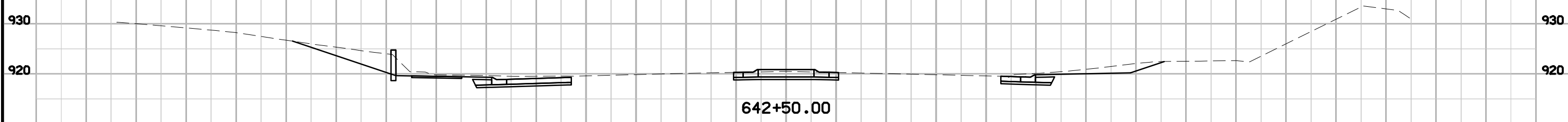
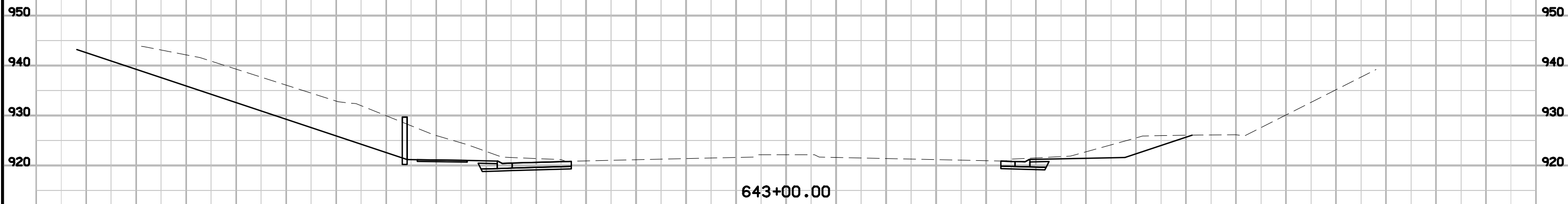
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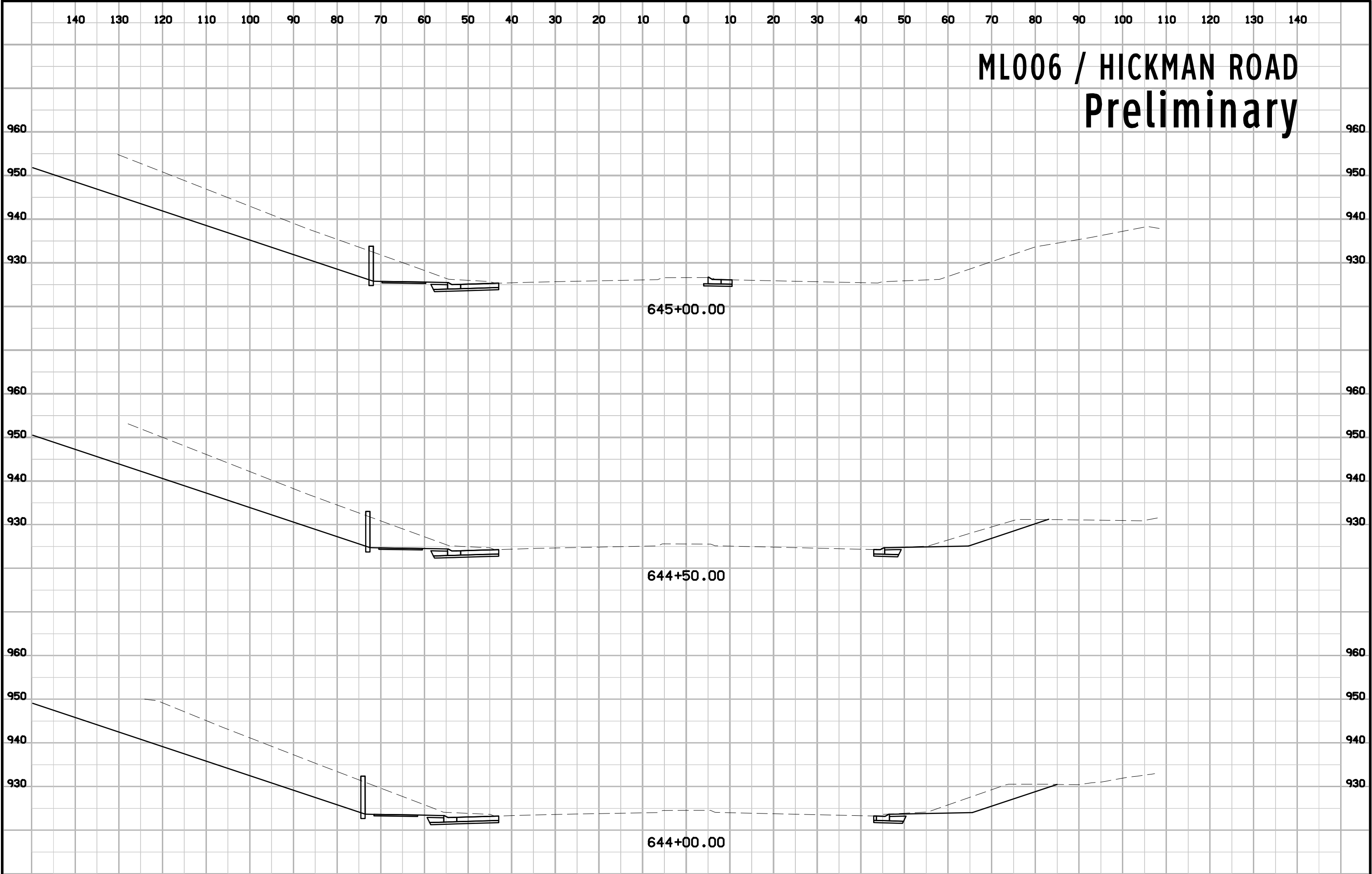
ML006 / HICKMAN ROAD Preliminary

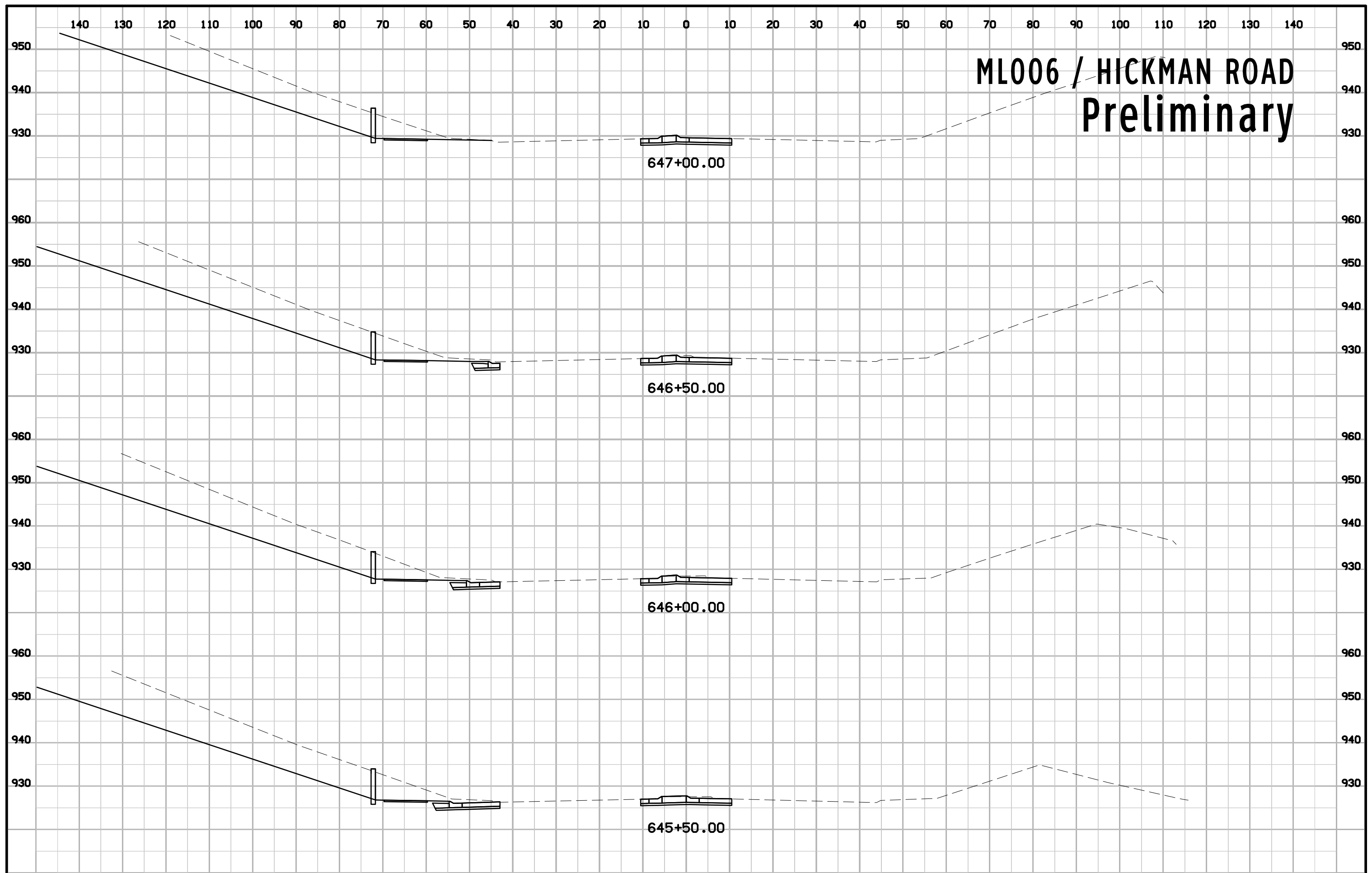
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ML006 / HICKMAN ROAD Preliminary



ML006 / HICKMAN ROAD Preliminary

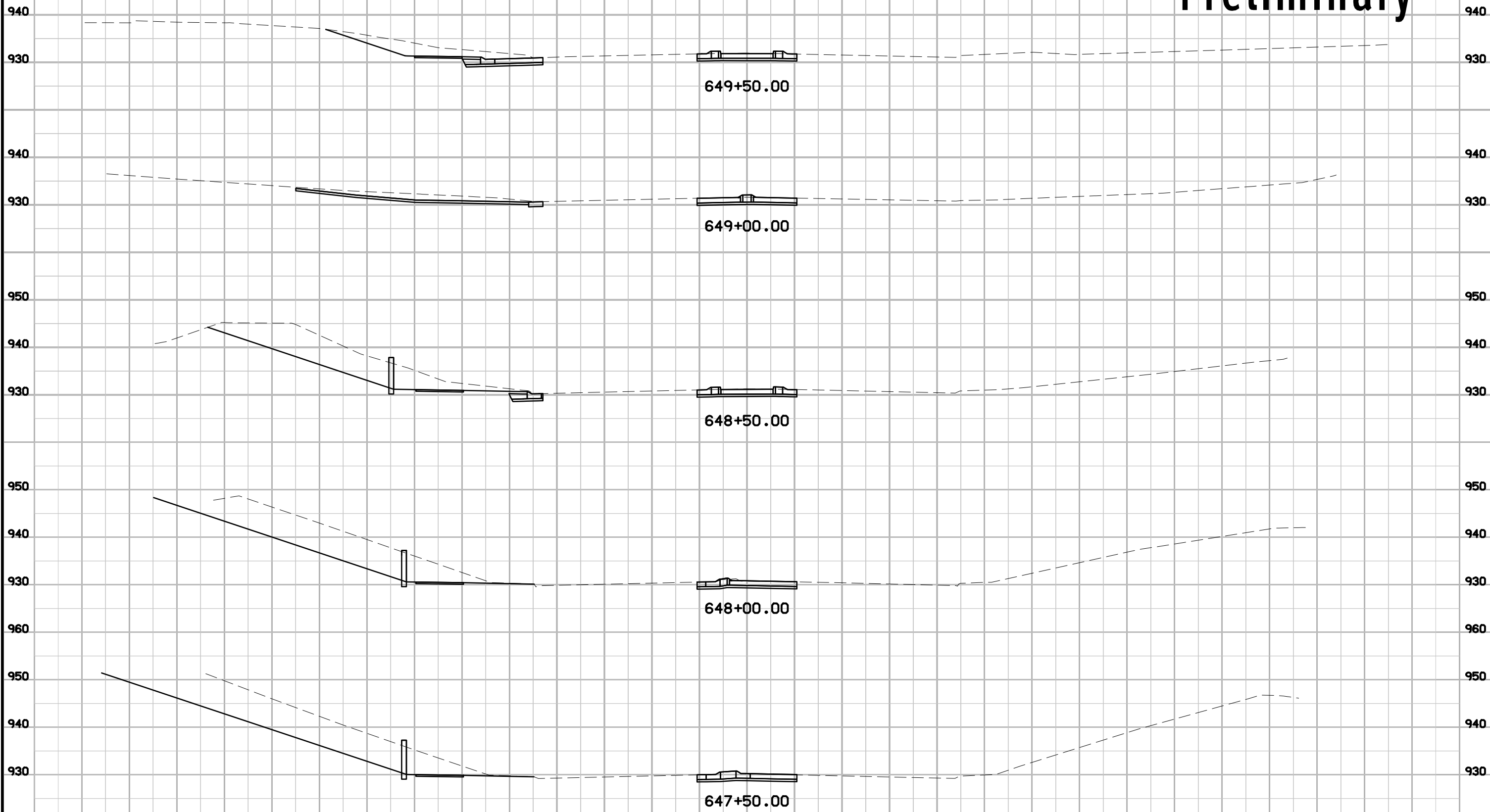


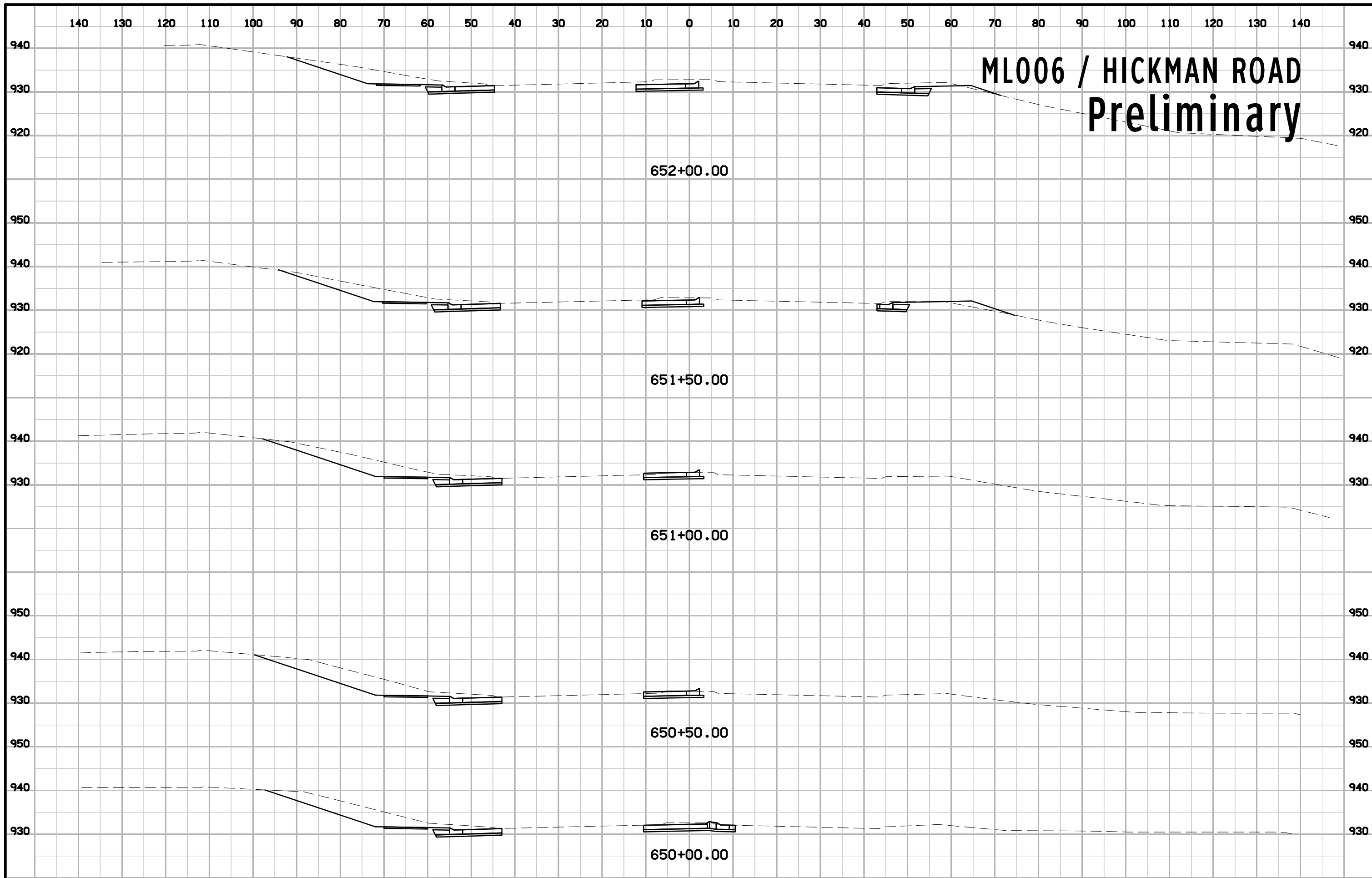


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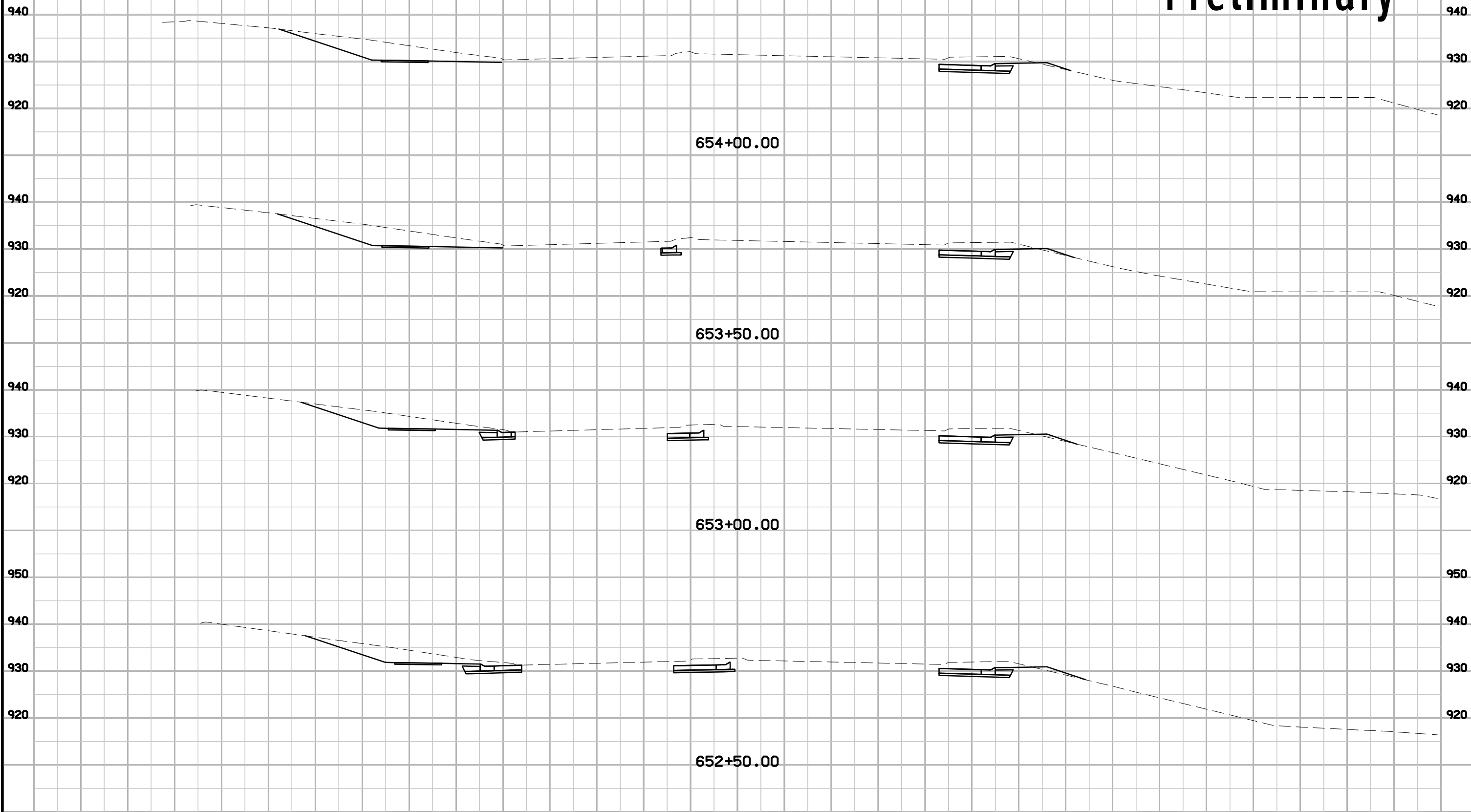
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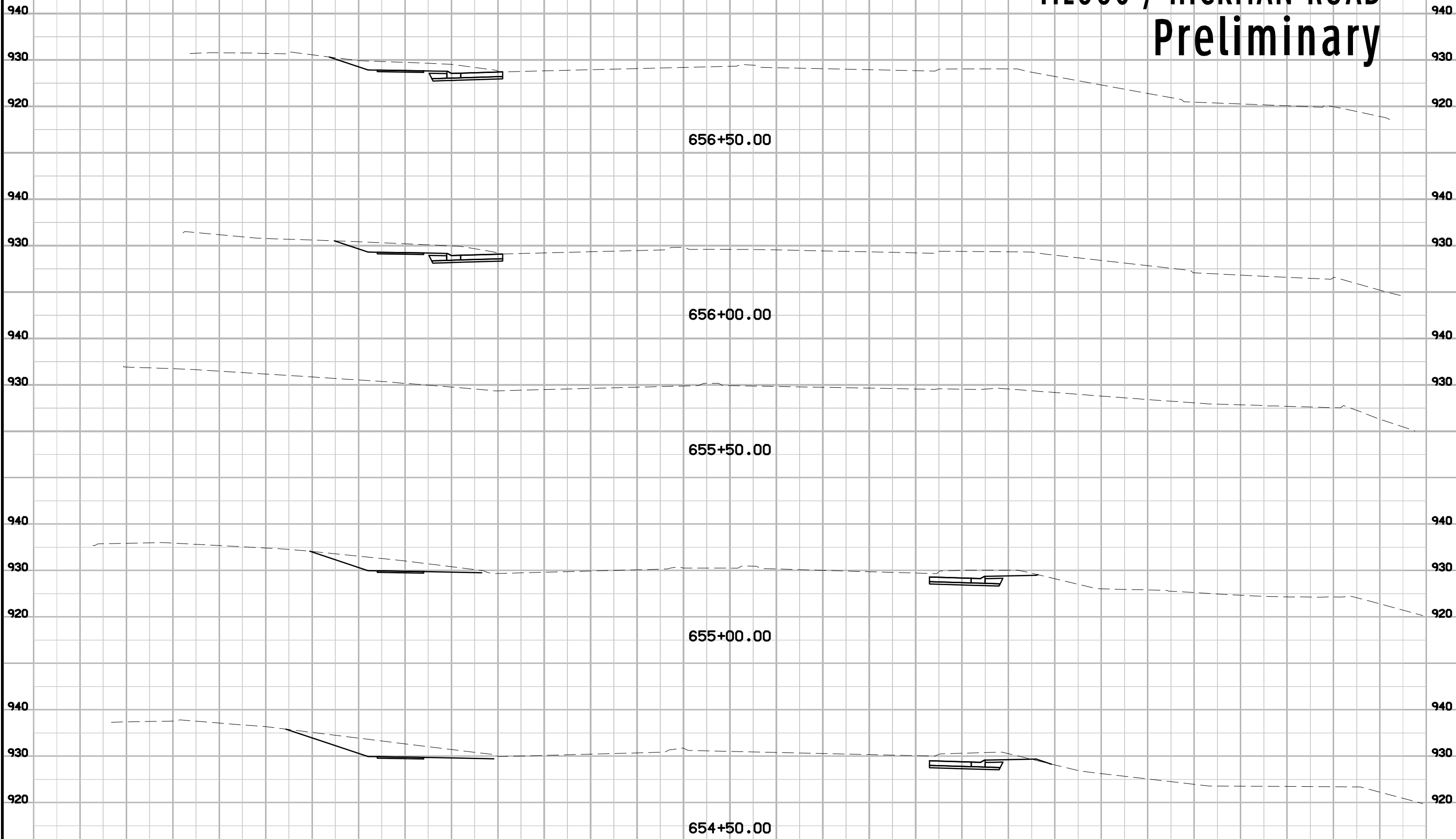
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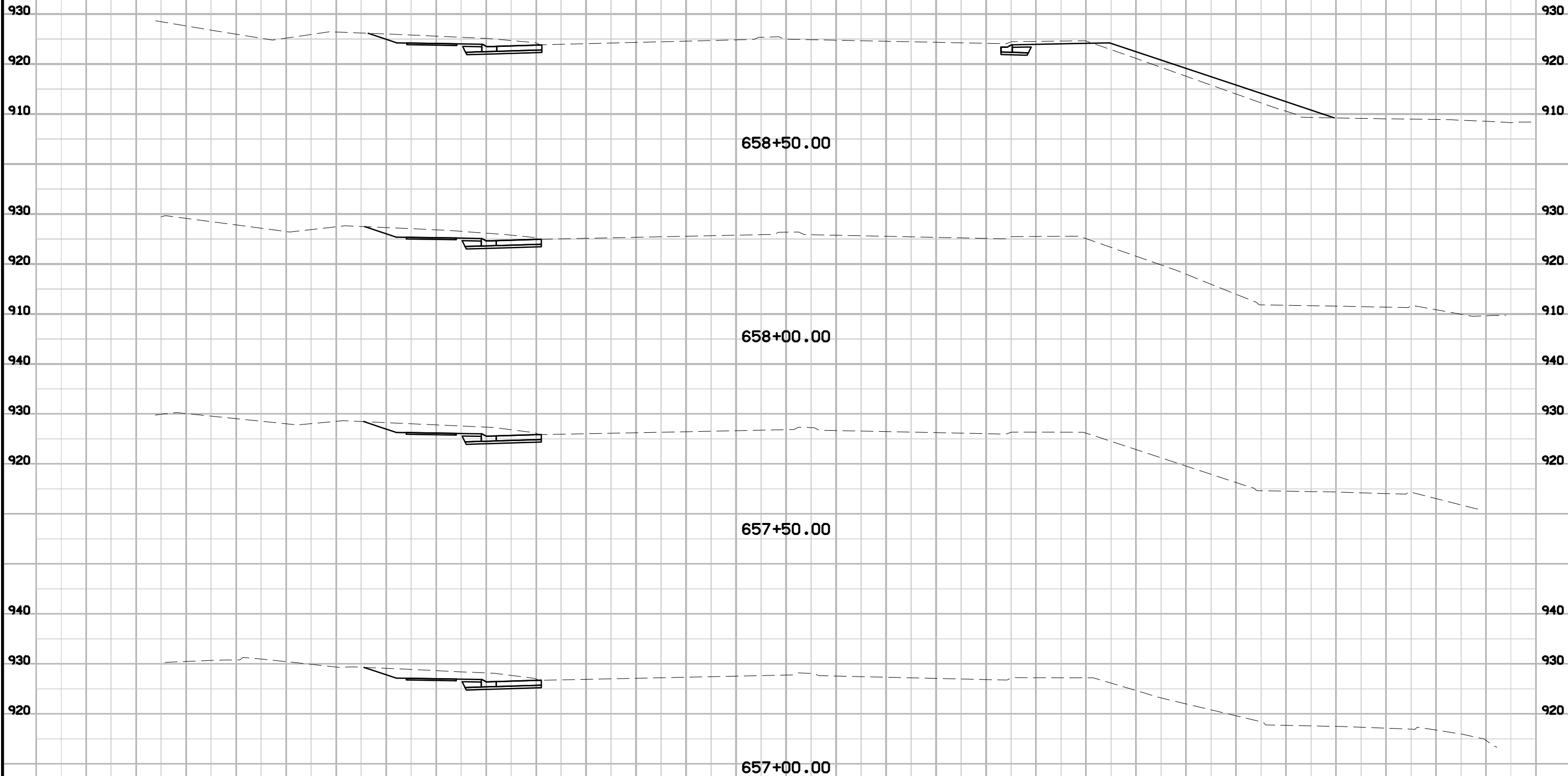
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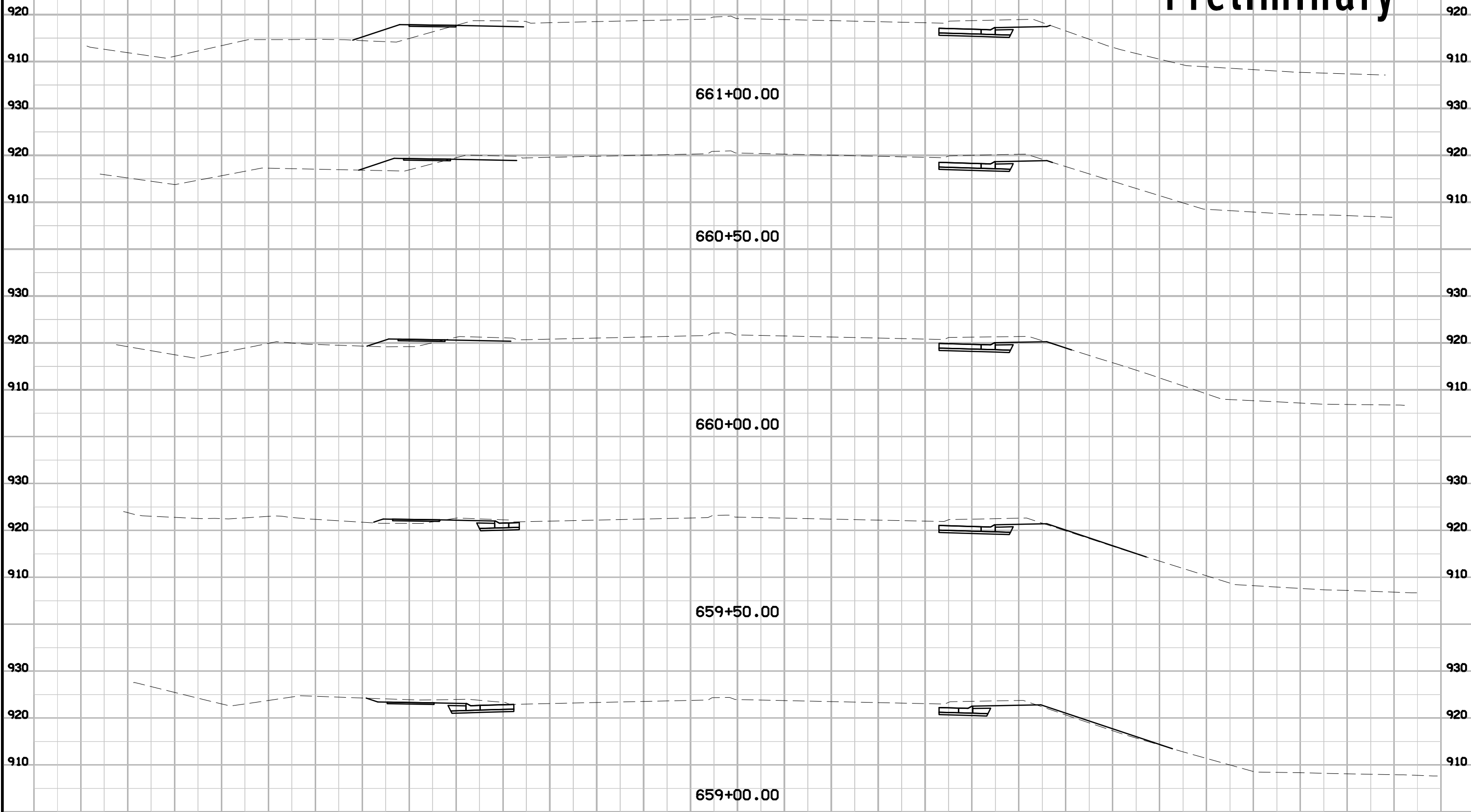
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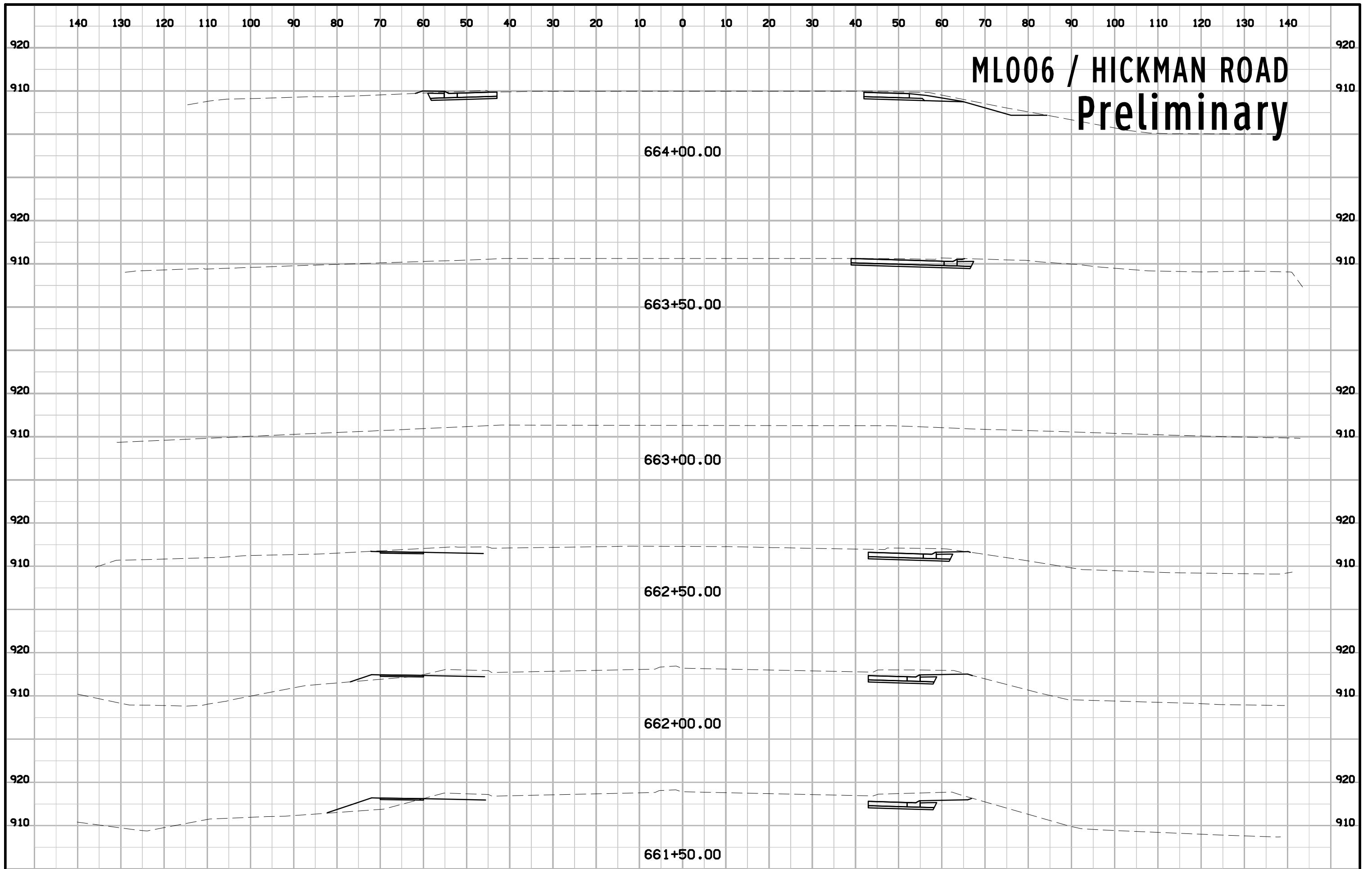
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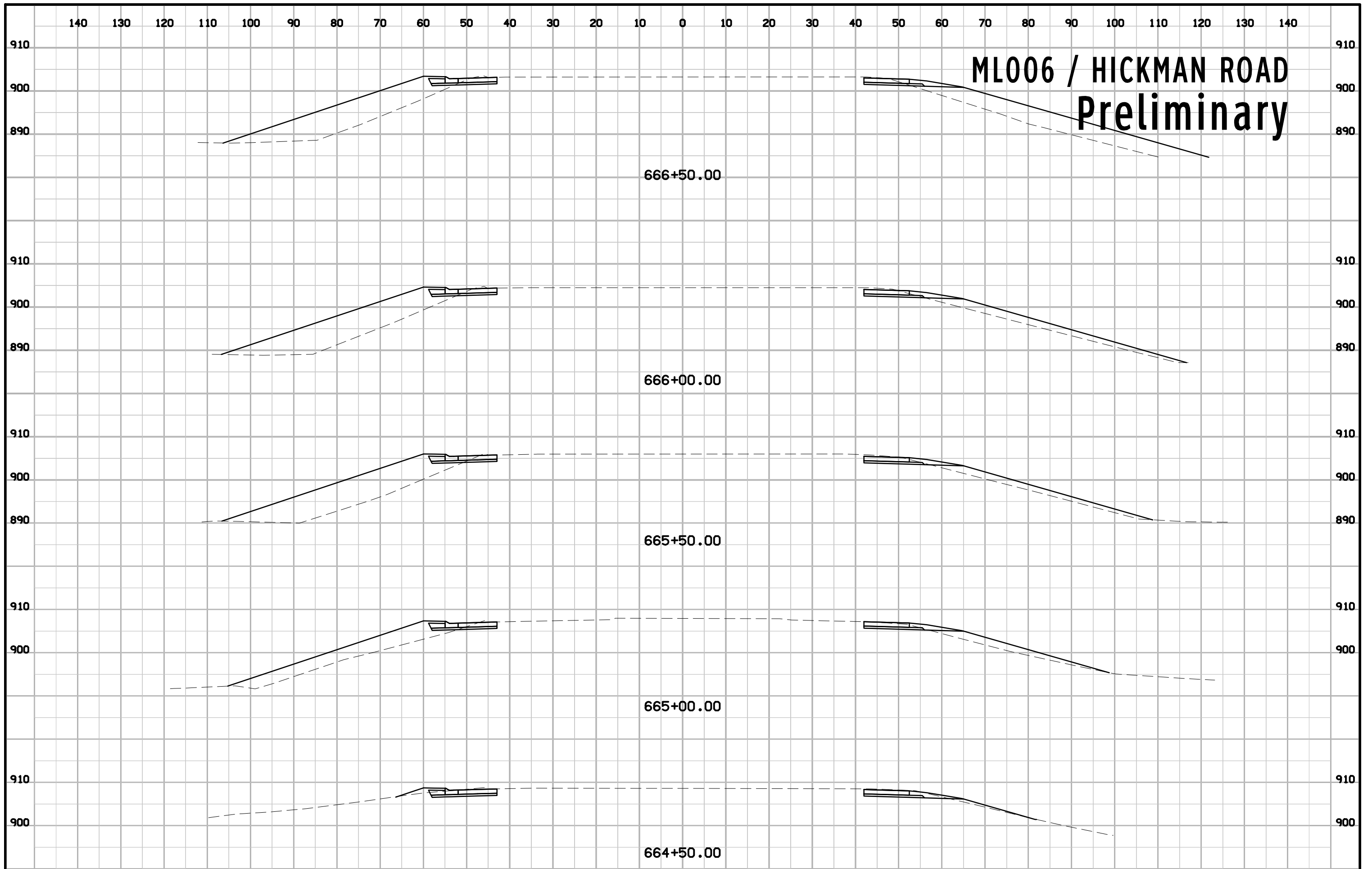


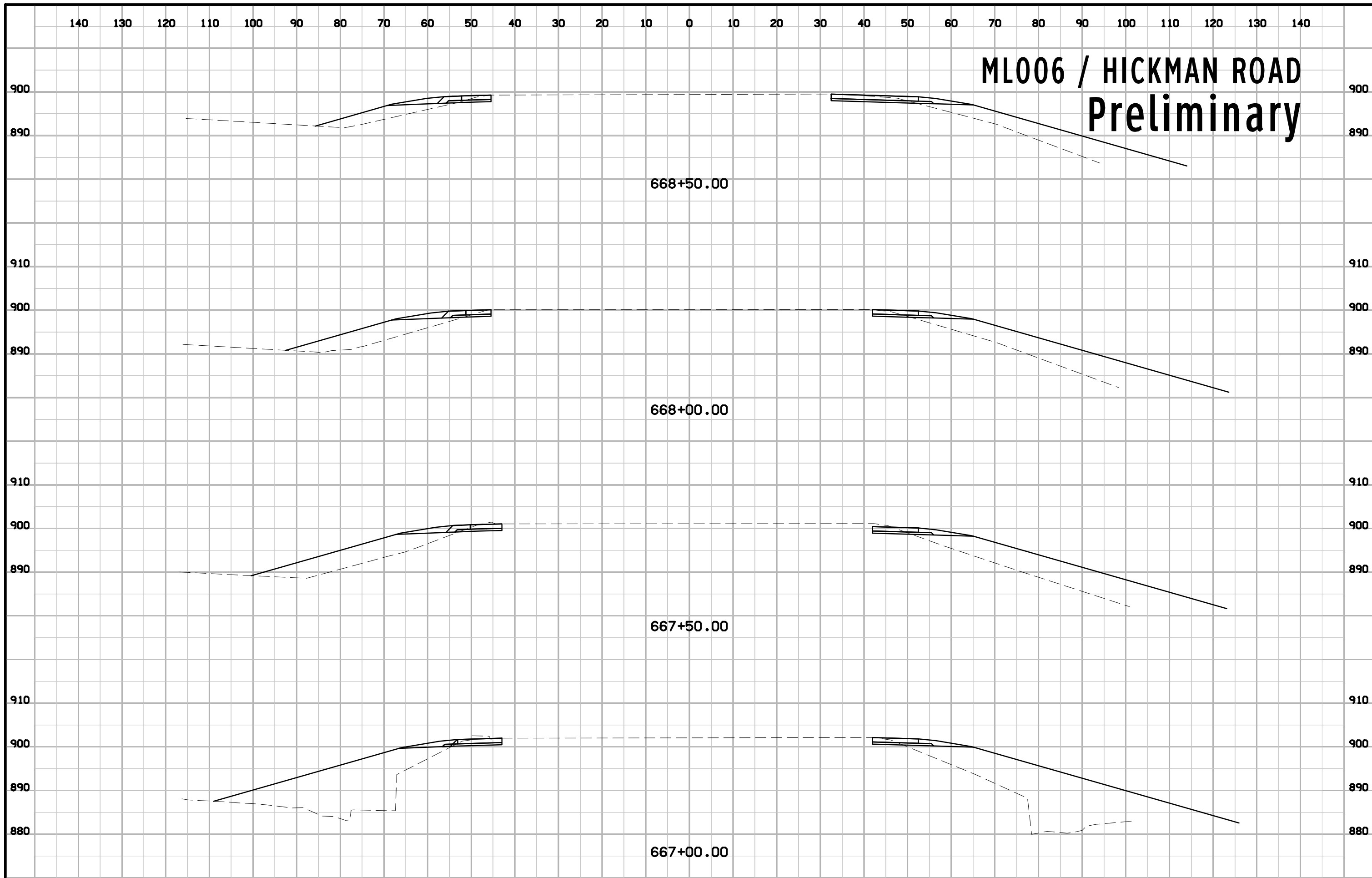
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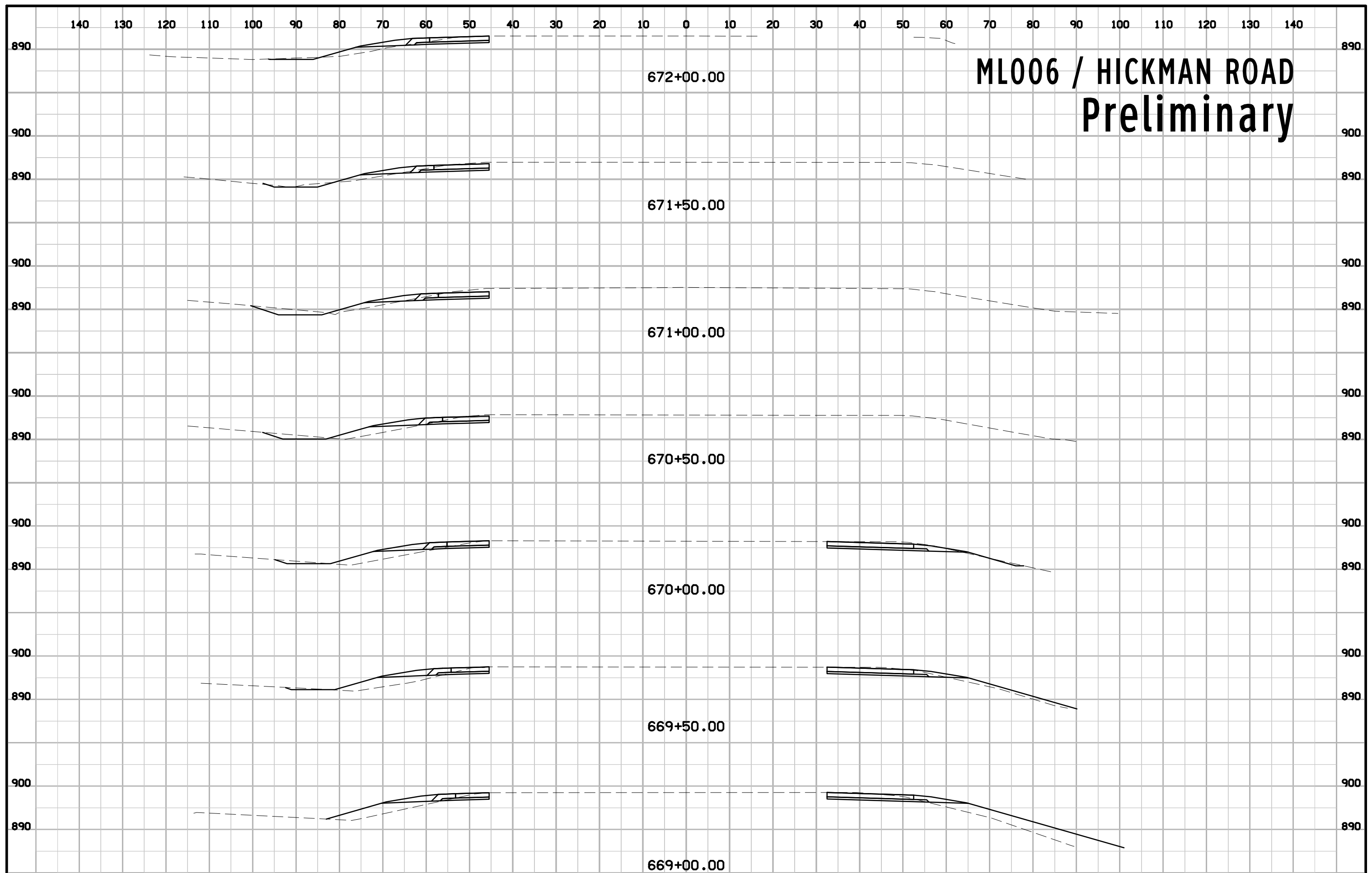
ML006 / HICKMAN ROAD Preliminary

668+50.00

668+00.00

667+50.00

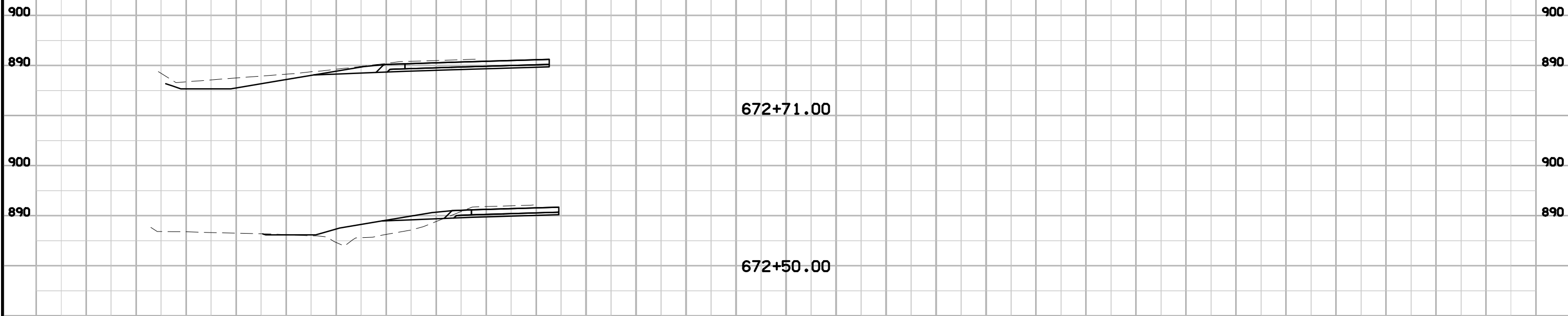
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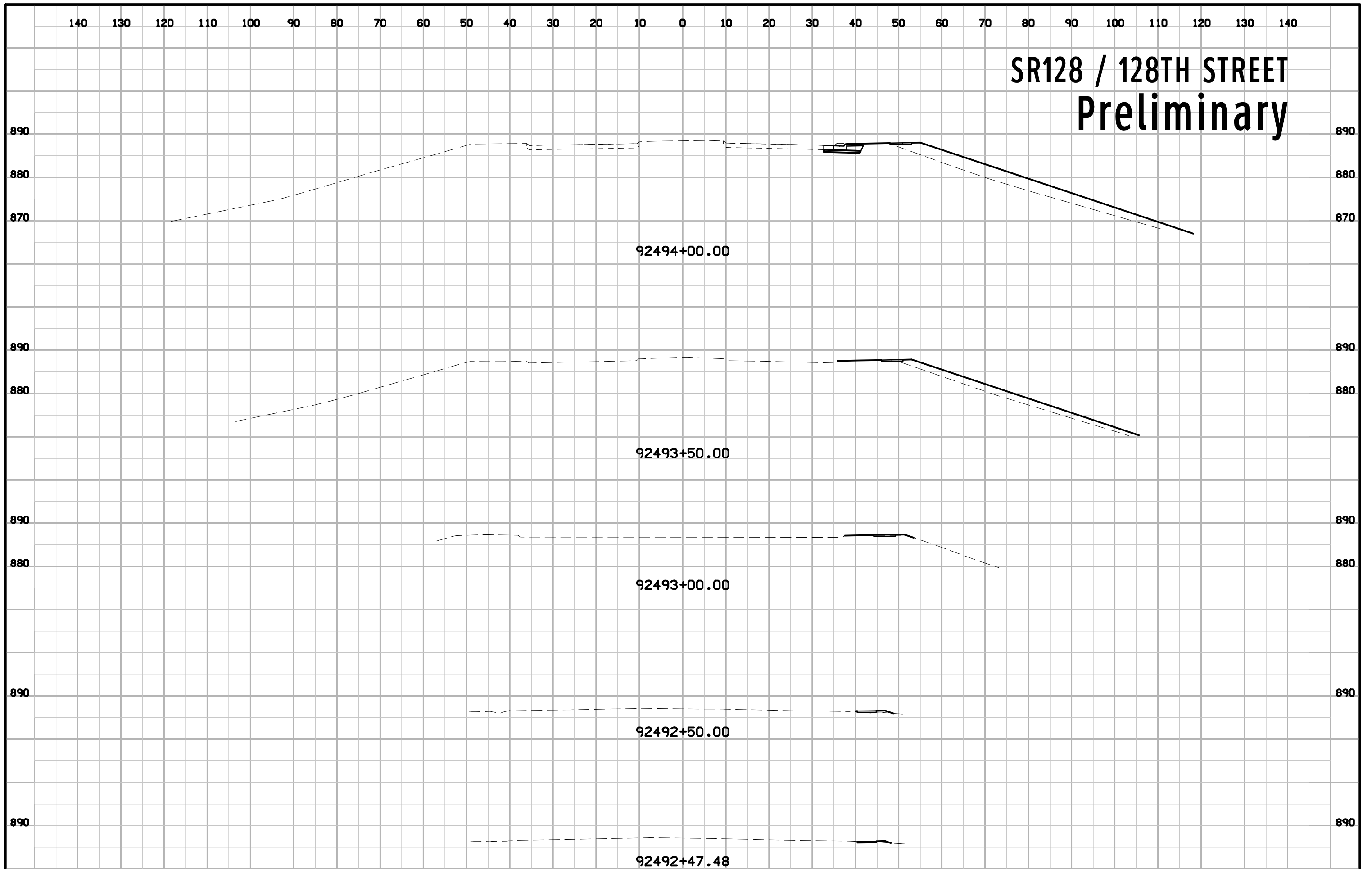
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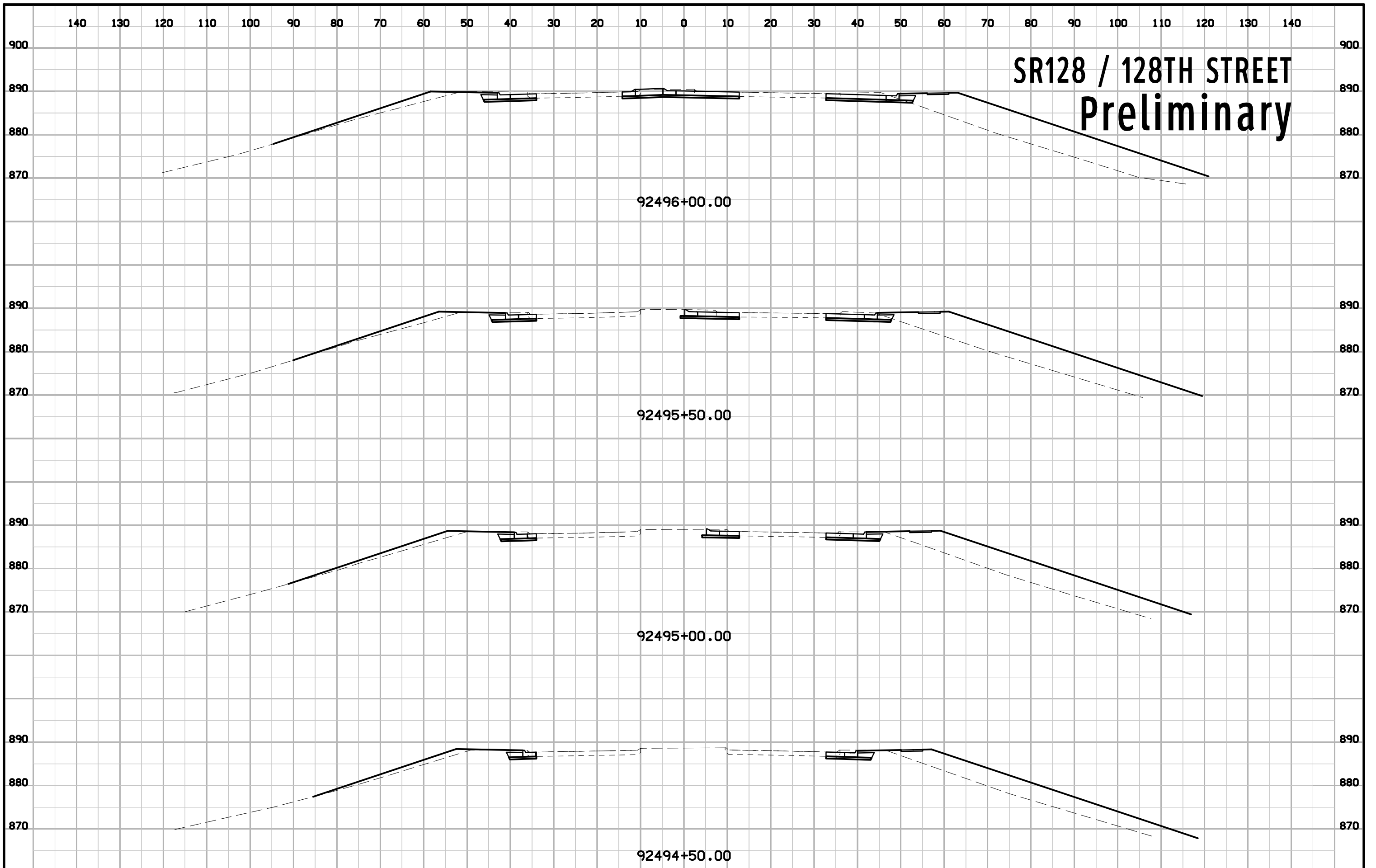
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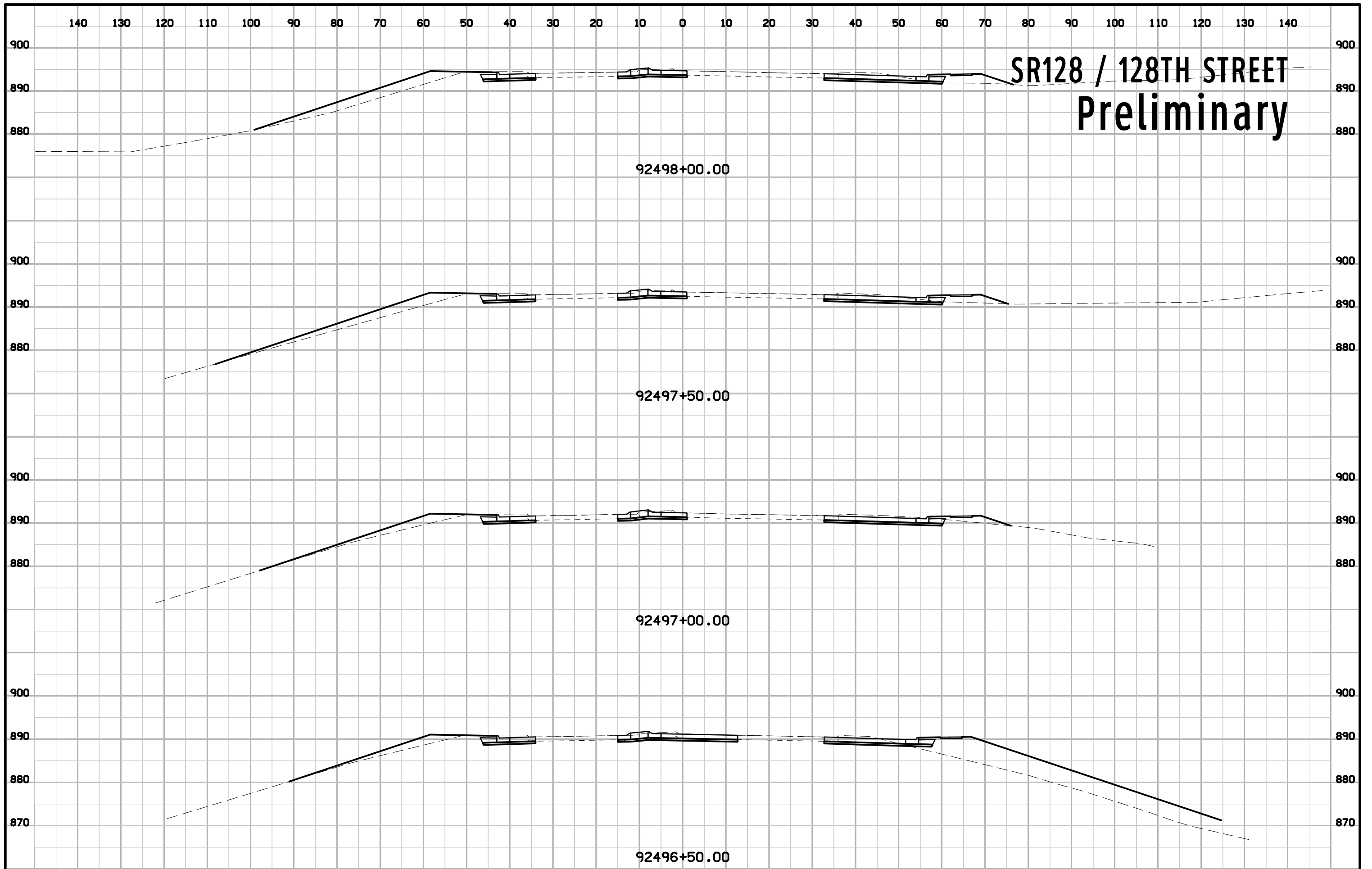


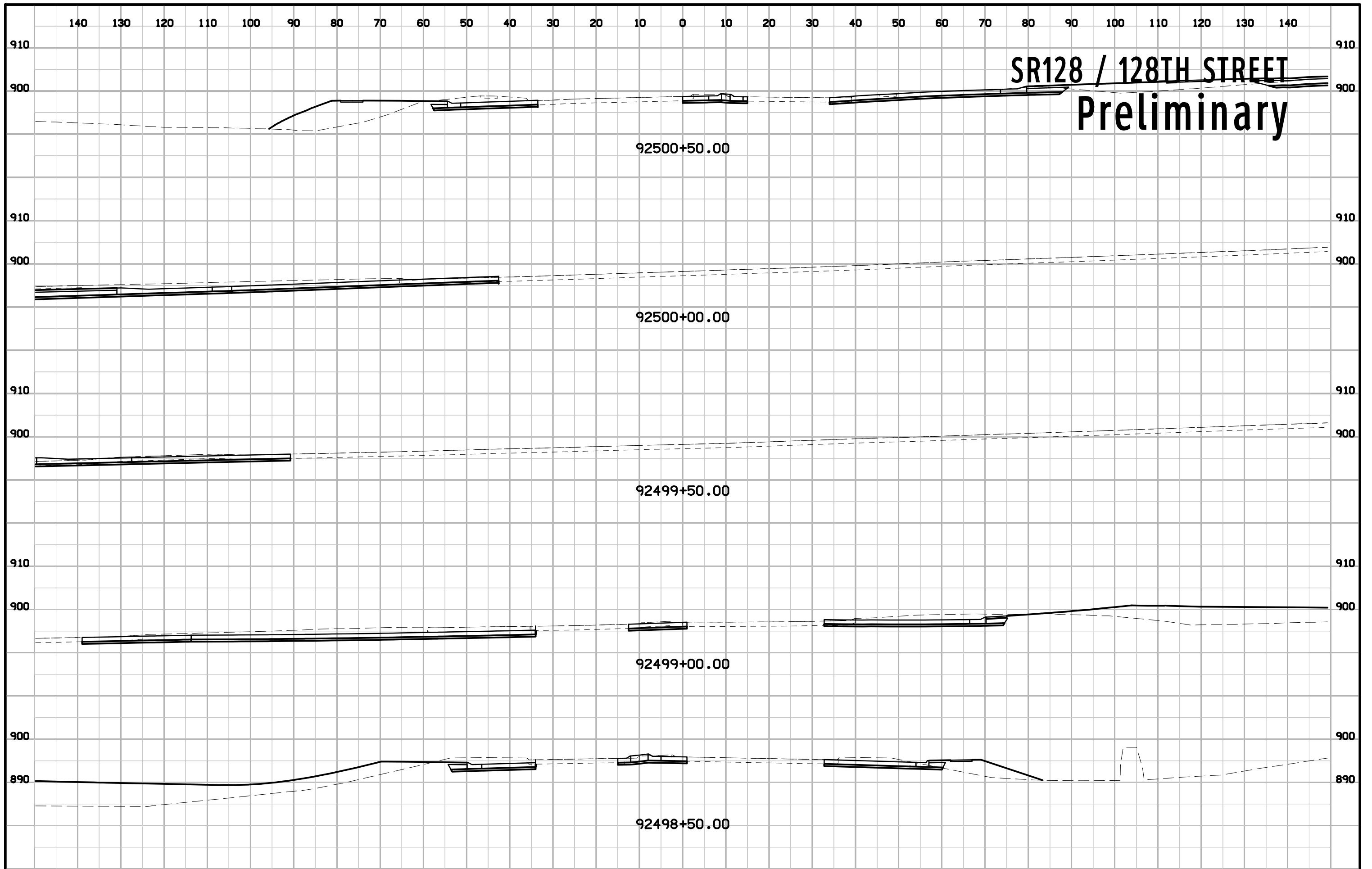
SR128 / 128TH STREET Preliminary



SR128 / 128TH STREET Preliminary







**SR128 / 128TH STREET
Preliminary**

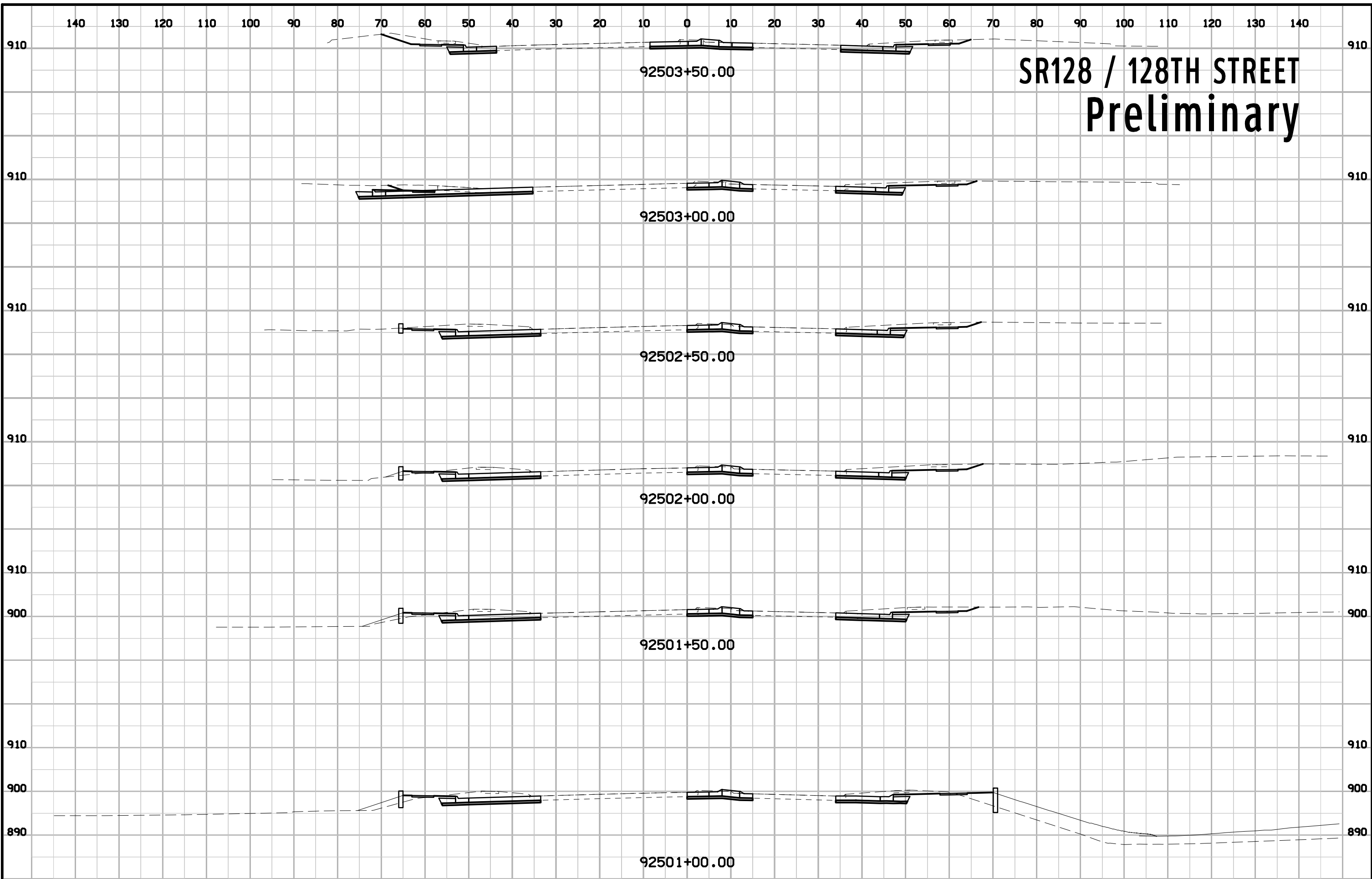
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SR128 / 128TH STREET Preliminary

