LETTING DATE XX

POLK Co.

UNKNOWN PAVEMENT - GRADE AND NEW

IM-080-3(178)127--13-77

INDEX OF SHEETS

No.	DESCRIPTION
A Sheets	**Title Sheets**
A.1	Title Sheet
A.2	Location Map Sheet
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 - 9	I-35/80
E Sheets	**Side Road Plan and Profile Sheets**
* E.1 - 2	Meredith
* E.3 - 6	IA 141
G Sheets	**Survey Sheets**
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G.3 - 6	Horizontal Control Tab. & Super for all Alignments
J Sheets	**Traffic Control and Staging Sheets**
* J.1	Traffic Control Plan
* J.1	Staging Notes Stage
* J.2	Traffic Control & Staging Legend & Symbol Info. Sheet
* J.3 - 7	Off-Site Detours
* J.8 - 11	Staging Typical Cross Sections and Details
* J.12 - 26	Staging and Traffic Control Sheets Stage 1
* J.27 - 41	Staging and Traffic Control Sheets Stage 2A
* J.42 - 56	Staging and Traffic Control Sheets Stage 2B
K Sheets	**Interchange Sheets**
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* K.7	Douglas RAMP D Plan and Profile Sheets
* K.8	Meredith RAMP B Plan and Profile Sheets
* K.9	Meredith RAMP C Plan and Profile Sheets
* K.10	IA 141 RAMP A Plan and Profile Sheets
* K.11 - 12	IA 141 RAMP B Plan and Profile Sheets
* K.13	IA 141 RAMP C Plan and Profile Sheets
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L Sheets	**Geometric, Staking and Jointing Sheets**
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M Sheets	**Storm Sewer Sheets**
M.1 - 2	Storm Sewer Tabulations
M.3	Storm Sewer Legend & Symbol Information Sheet
M.4 - 43	Storm Sewer Plan and Profile Sheets "ML or SR Name"
N Sheets	**Traffic Signal and Signing Sheets**
N.1 - 58	Signing Sheets
N.59 - 64	Traffic Signal Sheets
P Sheets	**Lighting Layout Sheets**
P.1 - 7	Lighting Layout
T Sheets	**Earthwork Quantity Sheets**
T.1 - 10	Earthwork Quantity Sheets
U Sheets	**500 Series, Mod.Stds. and Detail Sheets**
U.1 - 8	500 Series, Modified Standards and Detail Sheets
V Sheets	**Bridge and Culvert Situation Plans**
V.1 - 5	Bridge and Culvert Situation Plans
V.6 - 13	MSE Wall Plan and Profile Sheets
V.14 - 45	Pipe Plat Sheets
W Sheets	**Mainline Cross Sections**
W.1	Cross Sections Legend & Symbol Information Sheet
W.2 - 91	Mainline Cross Sections

IOWA DOT

Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

INTERSTATE ROAD SYSTEM

POLK COUNTY

UNKNOWN PAVEMENT - GRADE AND NEW

Douglas Ave to E of 100th St,
includes the IA141 Interchange, in Urbandale

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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

MILEAGE SUMMARY

Div.	Location	Lin. Ft.	Miles
1	Interstate 35/80		
	Sta 475+70.00 to Sta 573+20.00	9750.00	1.847
	Deduct Bridge at Sta 546+00.00	249.60	0.047
	IA 141		
	Sta 10+85.05 to Sta 60+46.07	4961.02	0.940
	Meredith Drive		
	Sta 13+80.00 to Sta 26+64.34	1284.34	0.243
	Deduct Bridge at Sta 22+00.00	358.00	0.068
	Total Length of Roadway	15995.36	3.029
	Total Length of Bridge	607.60	0.115
	Total Length of Project	15387.76	2.914

For Project Location Map
Refer to Sheet A.2

DESIGN DATA
INTERSTATE

2012	AADT	98,500	V.P.D.
2040	AADT	154,000	V.P.D.
2040	DHV	16,200	V.P.H.
TRUCKS		17	%
Total Design ESALs		--	

INDEX OF SEALS

SHEET NO.	NAME	TYPE
A.1	X	Primary Signature Block

REVISIONS

	TOTAL
	534
PROJECT IDENTIFICATION NUMBER	
13-77-080-050	
PROJECT NUMBER	
IM-080-3(178)127--13-77	
R.O.W. PROJECT NUMBER	
IMN-080-3(188)127--0E-77	

INDEX OF SHEETS

No.	DESCRIPTION
X Sheets	**Side Road Cross Sections**
X.1 - 9	Meredith Cross Sections
X.10 - 35	IA 141_S Cross Sections
X.36 - 52	IA 141_N Cross Sections
Y Sheets	**Ramp Cross Sections**
Y.1 - 11	Douglas RAMP A Cross Sections
Y.12 - 13	Douglas RAMP D Cross Sections
Y.14 - 24	Meredith RAMP B Cross Sections
Y.25 - 34	Meredith RAMP C Cross Sections
Y.35 - 51	IA 141 RAMP A Cross Sections
Y.52 - 64	IA 141 RAMP B Cross Sections
Y.65 - 70	IA 141 RAMP C Cross Sections
Y.71 - 89	IA 141 RAMP D Cross Sections
	* Color Plan Sheets

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PRELIMINARY PLANS

Subject to change by final design.

D5 PLAN – Date: August 5, 2016

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER A.1

5:50:33 PM 8/5/2016 bahlers pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178A1.sht

R-26W R-25W

T-79N

STA. 60+46.07

STA. 573+20.00
END PROJECT
END PAVING
M.P. 128.00

STA. 60+46.07

STA. 475+70.00
BEGIN PROJECT
BEGIN PAVING
M.P. 126.16

T-79N

R-26W R-25W

LOCATION MAP SCALE
0 0.2 0.4 0.6 0.8 1.0
Miles

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER A.2

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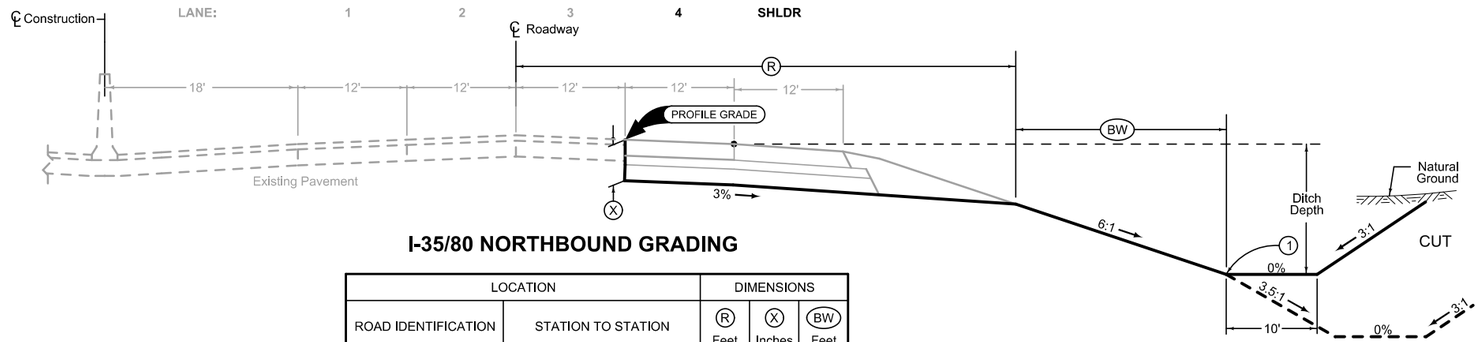

I-35/80 NORTHBOUND GRADING

LOCATION			DIMENSIONS		
ROAD IDENTIFICATION	STATION TO STATION		(R) Feet	(X) Inches	(BW) Feet
I-35/80 NB	481+75.00	483+00.00	58.0	30	0
I-35/80 NB	483+00.00	485+60.28	VARI	30	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.

(1) Refer to project plan and cross sections for specific location of foreslope change.

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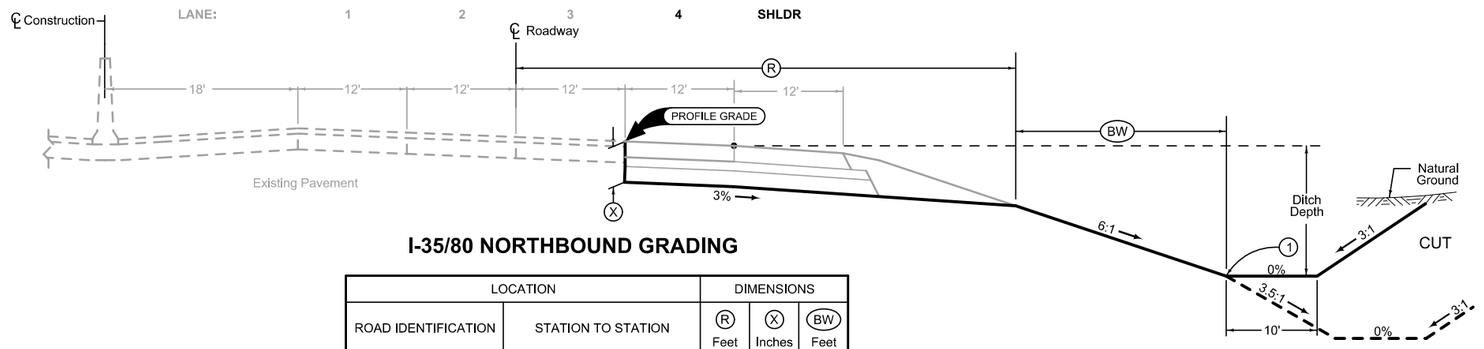

I-35/80 NORTHBOUND GRADING

LOCATION			DIMENSIONS		
ROAD IDENTIFICATION	STATION TO STATION		(R) Feet	(X) Inches	(BW) Feet
I-35/80 NB	531+38.41	537+55.00	VARI	30	0
I-35/80 NB	537+55.00	544+40.00	58.0	30	0
I-35/80 NB	547+00.00	559+75.00	58.0	30	0
I-35/80 NB	559+75.00	562+80.00	VARI	30	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.

(1) Refer to project plan and cross sections for specific location of foreslope change.

G_4D_Grade
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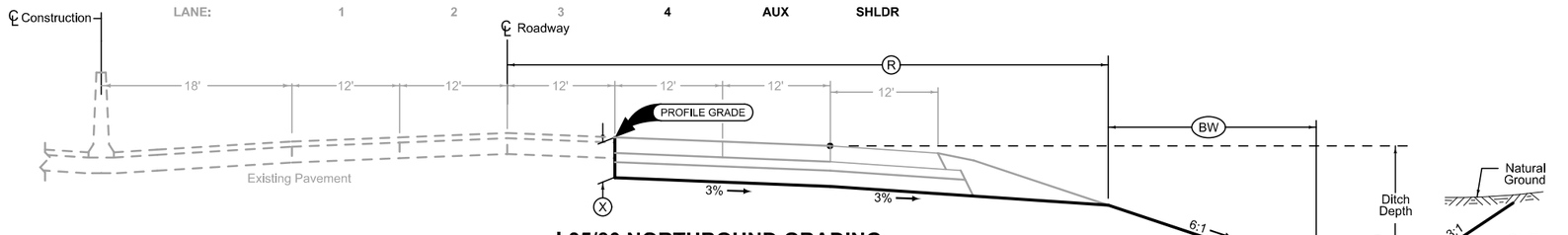

I-35/80 NORTHBOUND GRADING

LOCATION			DIMENSIONS		
ROAD IDENTIFICATION	STATION TO STATION		(R) Feet	(X) Inches	(BW) Feet
I-35/80 NB	490+80.00	508+30.00	70.0	30	0
I-35/80 NB	513+75.00	517+54.00	VARI	30	0
I-35/80 NB	517+54.00	522+84.00	70.0	30	0
I-35/80 NB	565+24.97	573+20.00	70.0	30	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.

(1) Refer to project plan and cross sections for specific location of foreslope change.

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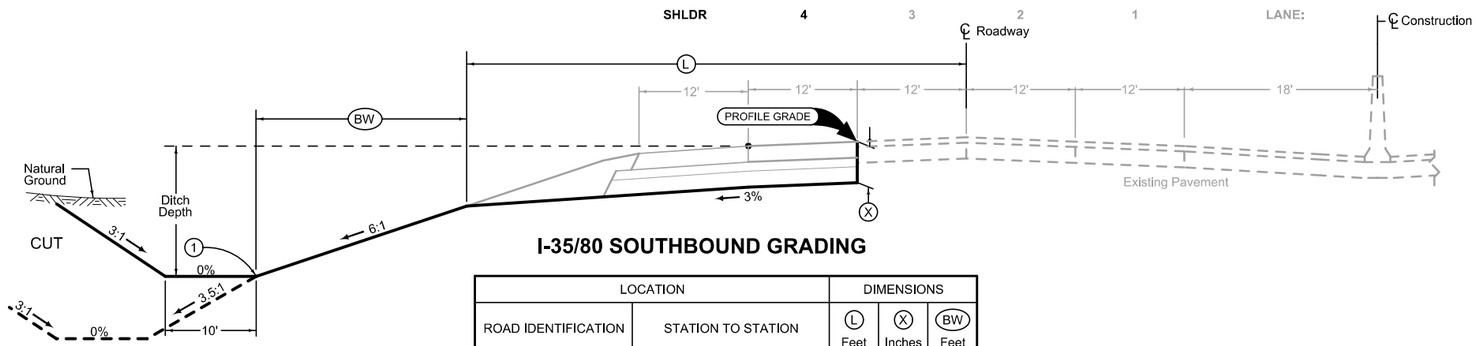

I-35/80 SOUTHBOUND GRADING

LOCATION			DIMENSIONS		
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(X) Inches	(BW) Feet
I-35/80 SB	484+10.00	485+77.78	VARI	30	0
I-35/80 SB	531+32.11	535+00.00	VARI	30	0
I-35/80 SB	547+25.00	551+25.00	58.0	30	0
I-35/80 SB	551+25.00	558+27.12	VARI	30	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.

(1) Refer to project plan and cross sections for specific location of foreslope change.

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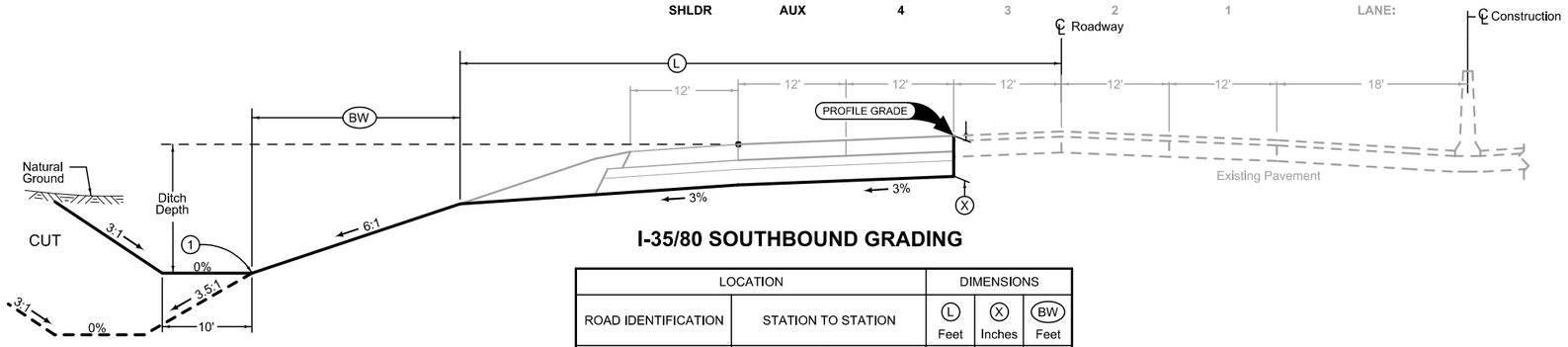

I-35/80 SOUTHBOUND GRADING

LOCATION			DIMENSIONS		
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(X) Inches	(BW) Feet
I-35/80 SB	497+75.00	503+50.00	70.0	30	0
I-35/80 SB	515+80.00	520+03.00	VARI	30	0
I-35/80 SB	520+03.00	520+25.00	70.0	30	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.

(1) Refer to project plan and cross sections for specific location of foreslope change.

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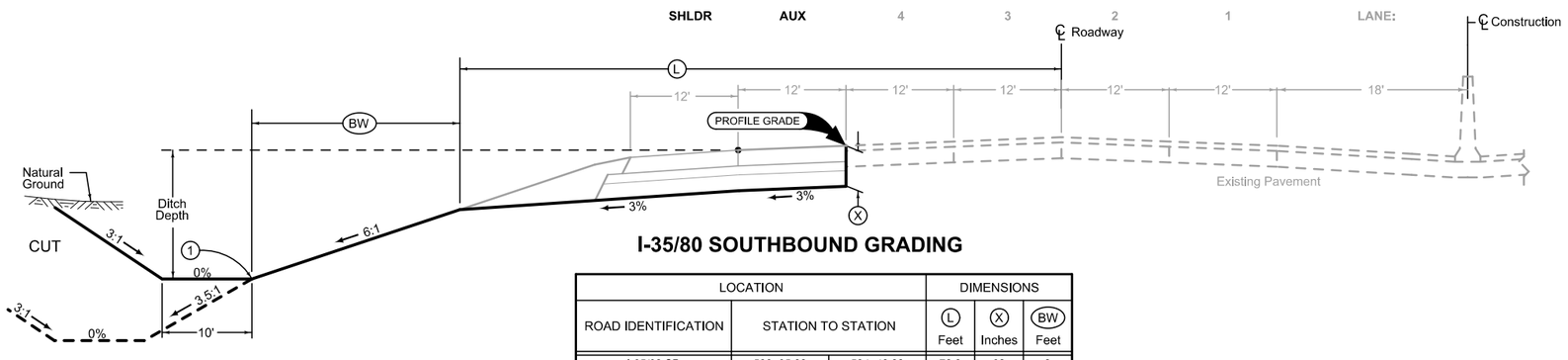

I-35/80 SOUTHBOUND GRADING

LOCATION			DIMENSIONS		
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(X) Inches	(BW) Feet
I-35/80 SB	520+25.00	524+40.00	70.0	30	0
I-35/80 SB	524+40.00	526+40.00	VARI	30	0
I-35/80 SB	526+40.00	526+82.71	70.0	30	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.

(1) Refer to project plan and cross sections for specific location of foreslope change.

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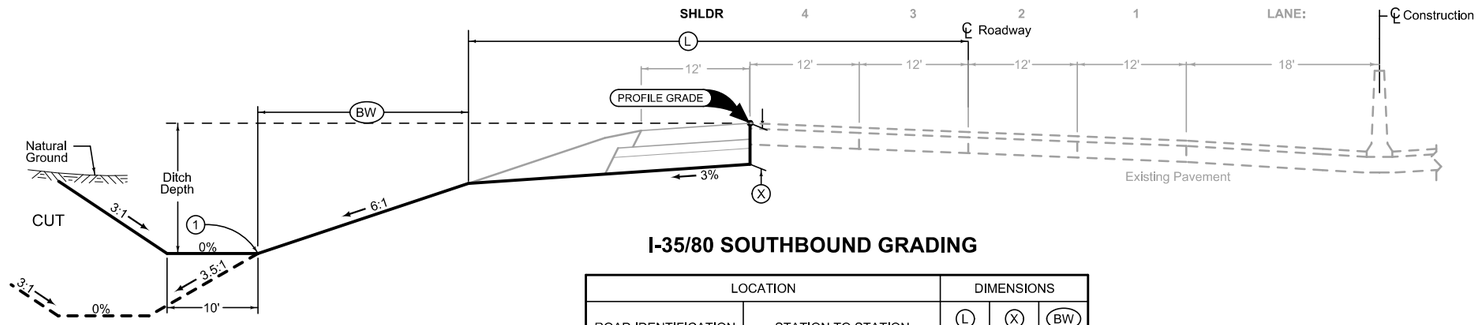

I-35/80 SOUTHBOUND GRADING

LOCATION			DIMENSIONS		
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(X) Inches	(BW) Feet
I-35/80 SB	535+00.00	544+76.07	58.0	30	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.

(1) Refer to project plan and cross sections for specific location of foreslope change.

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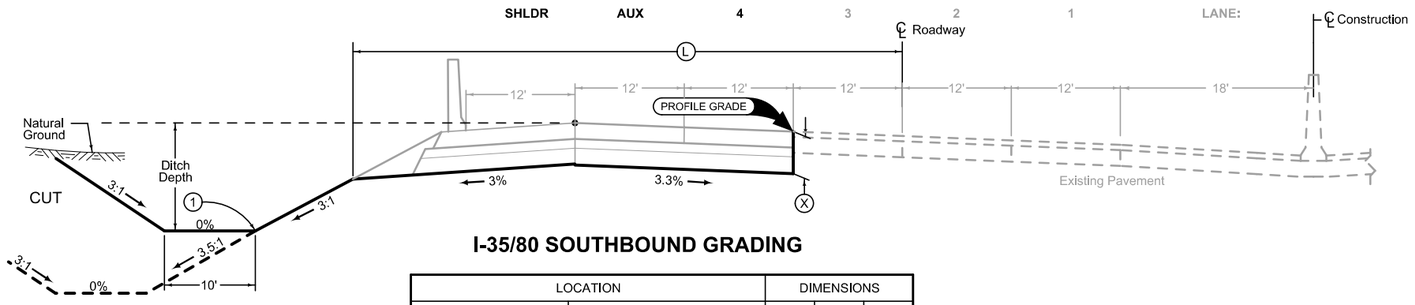

I-35/80 SOUTHBOUND GRADING

LOCATION			DIMENSIONS		
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(X) Inches	(BW) Feet
I-35/80 SB	562+25.00	565+00.00	VARI	30	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.

(1) Refer to project plan and cross sections for specific location of foreslope change.

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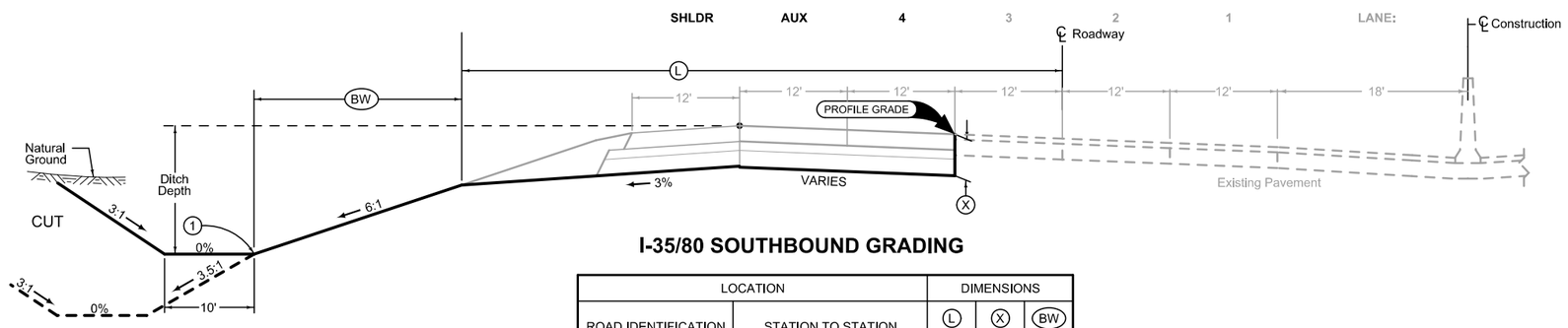

I-35/80 SOUTHBOUND GRADING

LOCATION			DIMENSIONS		
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(X) Inches	(BW) Feet
I-35/80 SB	565+00.00	570+50.00	70.0	30	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.

(1) Refer to project plan and cross sections for specific location of foreslope change.

LOCATION			DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION			Ⓡ Feet	Ⓧ Inches	(BW) Feet
Meredith	15+60.00	19+13.94		62.2	14.25	VARI

G_1R_Grade
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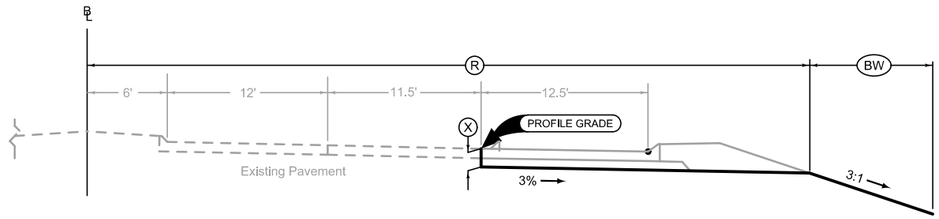

Section view is in direction of traffic.

Normal sections shown may be appropriately modified for areas specifically designated by the Engineer such as intersections or superelevated curves.

MEREDITH EASTBOUND GRADING

LOCATION			DIMENSIONS		
ROAD IDENTIFICATION	STATION TO STATION			Ⓡ Feet	Ⓧ Inches
IA 141	11+35.10	12+58.00		36.0	22.5

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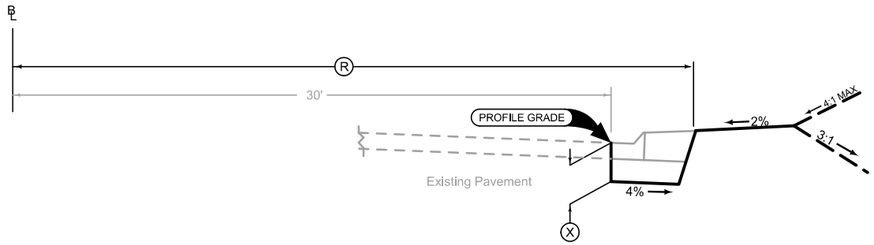


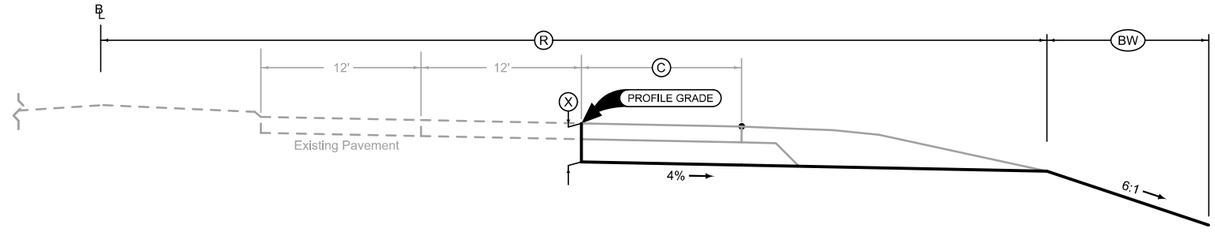
Section view is in direction of traffic.

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

IA 141 NORTHBOUND GRADING

LOCATION			DIMENSIONS				
ROAD IDENTIFICATION	STATION TO STATION		Ⓒ Feet	Ⓡ Feet	Ⓧ Inches	(BW) Feet
IA 141	18+61.00	18+95.00	10.0	43.0	22.5	0
IA 141	19+25.00	21+45.00	10.0	56.5	22.5	VARI
IA 141	23+10.00	29+52.48	12.0	59.0	22.5	VARI

G_2_Grade
Modified



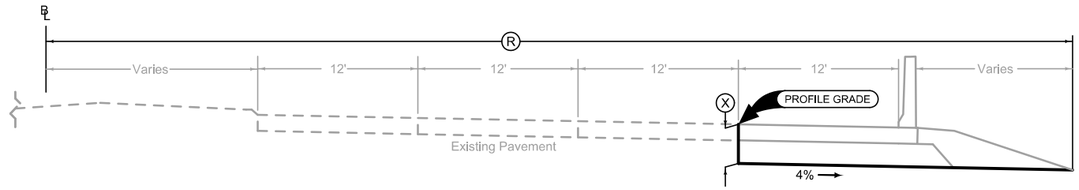
Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

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

IA 141 NORTHBOUND GRADING

LOCATION				DIMENSIONS		
ROAD IDENTIFICATION	STATION TO STATION			Ⓡ Feet	Ⓧ Inches	
IA 141 NB	29+52.48	31+43.57		VARI	22.5	

G_2_Grade
Modified



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.

IA 141 NORTHBOUND GRADING

LOCATION				DIMENSIONS		
ROAD IDENTIFICATION	STATION TO STATION			Ⓡ Feet	Ⓧ Inches	
IA 141 NB	31+43.57	35+55.00		VARI	22.5	

G_2_Grade
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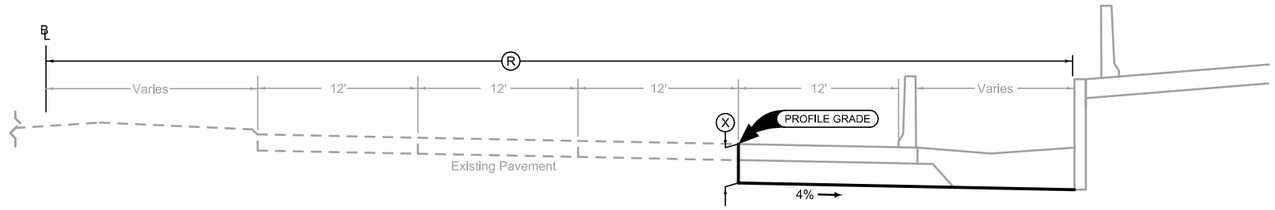


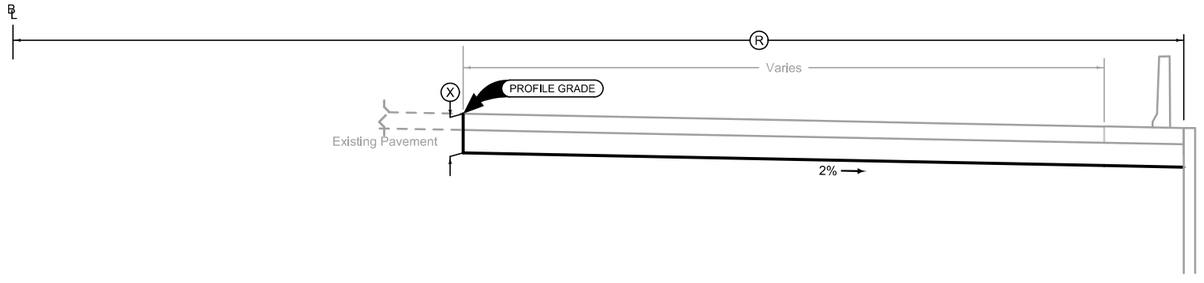
Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

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

IA 141 NORTHBOUND GRADING

LOCATION			DIMENSIONS		
ROAD IDENTIFICATION	STATION TO STATION		Ⓡ Feet	Ⓧ Inches	
IA 141 NB	37+38.00	39+91.81	98.4-102.6	24	

G_2_Grade
Modified



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.

IA 141 NORTHBOUND GRADING

LOCATION			DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION			Ⓡ Feet	Ⓧ Inches	(BW) Feet
IA 141 NB	41+32.40	45+30.00		58.5	22.5	VARI
IA 141 NB	47+76.64	51+76.66		70.4	22.5	VARI
IA 141 NB	53+72.07	57+84.83		58.6	22.5	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.

G_2_Grade
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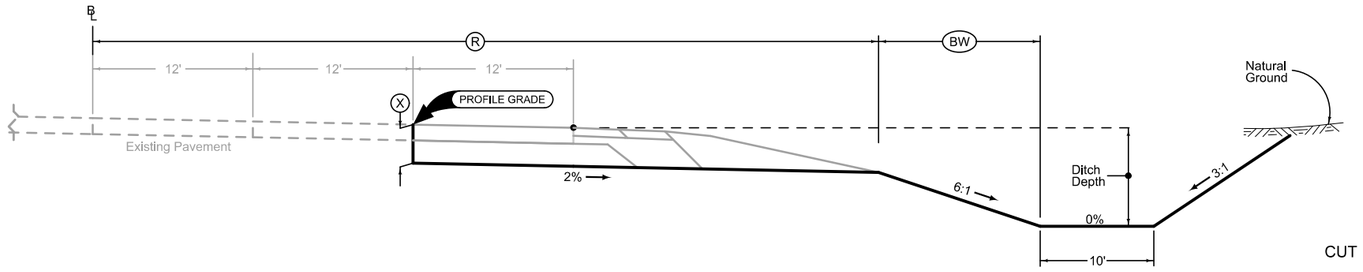

IA 141 NORTHBOUND GRADING

LOCATION			DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION			Ⓡ Feet	Ⓧ Inches	(BW) Feet
IA 141 NB	47+08.86	47+76.64		70.4	22.5	2.0

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.

G_2_Grade
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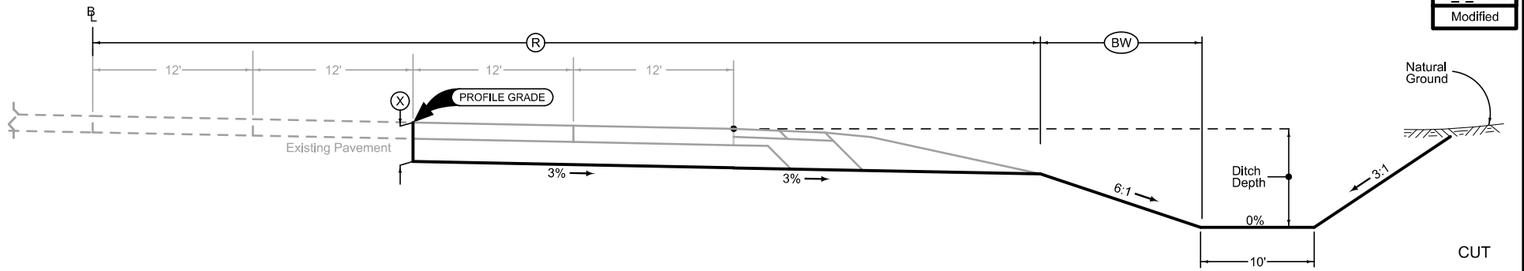


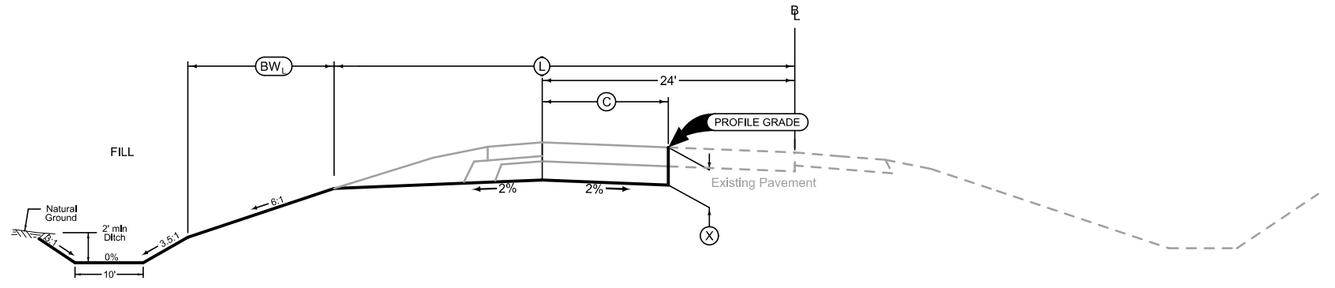
IA 141 NORTHBOUND GRADING

LOCATION				DIMENSIONS			
INTERCHANGE	RAMP	STATION TO STATION		Ⓛ Feet	Ⓒ Feet	Ⓧ Inches	(BW_L) Feet
Douglas	A	1575+26.27	1585+79.00	VARI	12	24	VARI

Section view is in direction of traffic.

Normal sections shown may be appropriately modified for areas specifically designated by the Engineer such as intersections or superelevated curves.

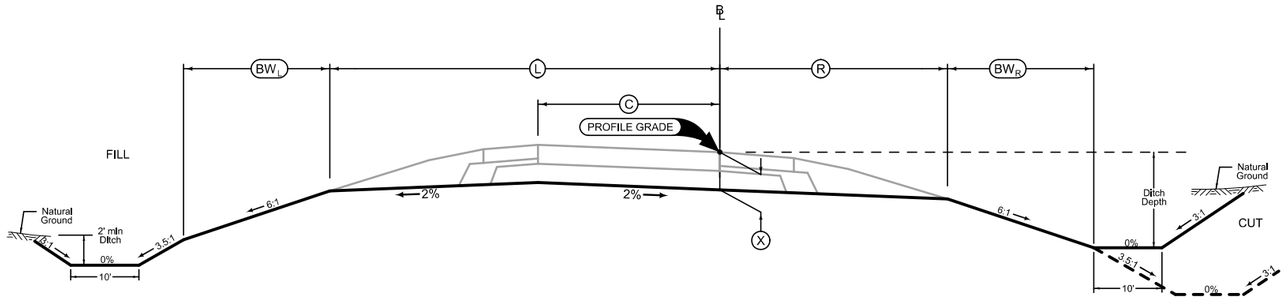
G_1R_Grade
Modified



RAMP GRADING

LOCATION				DIMENSIONS					
INTERCHANGE	RAMP	STATION TO STATION		(L) Feet	(R) Feet	(C) Feet	(X) Inches	BW_L Feet	BW_R Feet
Douglas	D	4584+75.00	4585+61.02	VARI	20.5	16	24	0	20
Meredith	C	3515+78.68	3516+30.00	VARI	20.6	16	24	0	13.5
IA 141	B	2531+15.84	2536+98.75	VARI	18.6	24	24	0	15.4-27.2
IA 141	C	3531+44.14	3536+55.24	VARI	20.6	24	24	0	13.4
IA 141	D	4558+19.37	4560+01.00	37.4	19.8	16	24	14.5	VARI
IA 141	D	4560+01.00	4562+89.38	VARI	19.8	16	24	0	14.2

G_1R_Grade
04-15-14



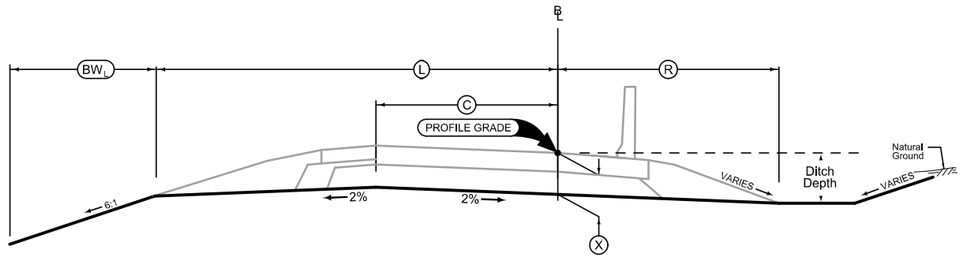
RAMP GRADING

Section view is in direction of traffic.

Normal sections shown may be appropriately modified for areas specifically designated by the Engineer such as intersections or superelevated curves.

LOCATION				DIMENSIONS					
INTERCHANGE	RAMP	STATION TO STATION		(L) Feet	(R) Feet	(C) Feet	(X) Inches	BW_L Feet	
Meredith	B	2513+75.00	2517+38.63	VARI	VARI	24	24	0	
Meredith	C	3515+78.68	3516+30.00	VARI	VARI	16	24	0	

G_1R_Grade
Modified



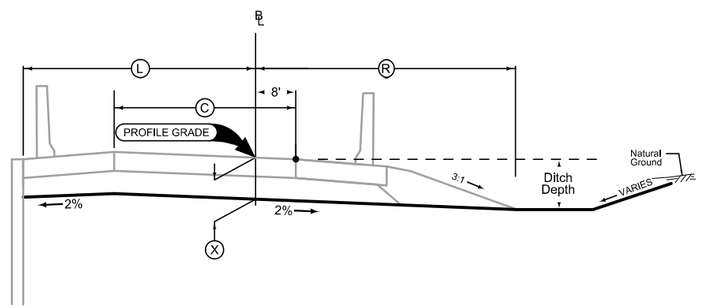
RAMP GRADING

Section view is in direction of traffic.

Normal sections shown may be appropriately modified for areas specifically designated by the Engineer such as intersections or superelevated curves.

LOCATION				DIMENSIONS					
INTERCHANGE	RAMP	STATION TO STATION		(L) Feet	(R) Feet	(C) Feet	(X) Inches		
Meredith	B	2519+18.77	2520+43.00	33.8	23.7	36	24		

G_1R_Grade
Modified



RAMP GRADING

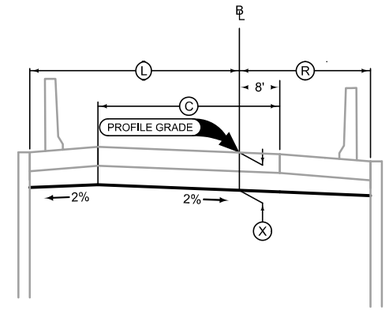
Section view is in direction of traffic.

Normal sections shown may be appropriately modified for areas specifically designated by the Engineer such as intersections or superelevated curves.

LOCATION				DIMENSIONS					
INTERCHANGE	RAMP	STATION TO STATION		(L) Feet	(R) Feet	(C) Feet	(X) Inches		
Meredith	B	2520+43.00	2520+69.19	33.75	15.75	36	24		
Meredith	C	3521+50.00	3523+76.29	21.75	15.75	24	24		

Section view is in direction of traffic.

Normal sections shown may be appropriately modified for areas specifically designated by the Engineer such as intersections or superelevated curves.



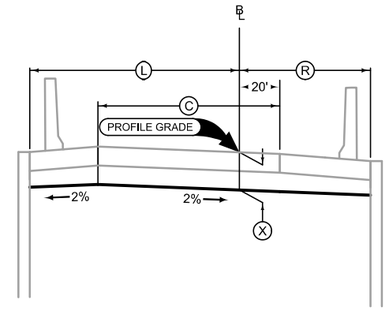
RAMP GRADING

G_1R_Grade
Modified

LOCATION				DIMENSIONS					
INTERCHANGE	RAMP	STATION TO STATION		(L) Feet	(R) Feet	(C) Feet	(X) Inches		
Meredith	B	2522+49.19	2524+77.14	33.75	27.75	48	24		

Section view is in direction of traffic.

Normal sections shown may be appropriately modified for areas specifically designated by the Engineer such as intersections or superelevated curves.



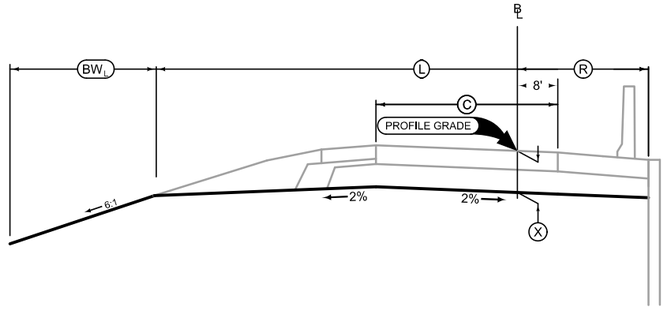
RAMP GRADING

G_1R_Grade
Modified

LOCATION				DIMENSIONS					
INTERCHANGE	RAMP	STATION TO STATION		(L) Feet	(R) Feet	(C) Feet	(X) Inches	(BW_L) Feet	
Meredith	C	3521+10.00	3521+50.00	34.9	15.75	24	24	15.1	

Section view is in direction of traffic.

Normal sections shown may be appropriately modified for areas specifically designated by the Engineer such as intersections or superelevated curves.

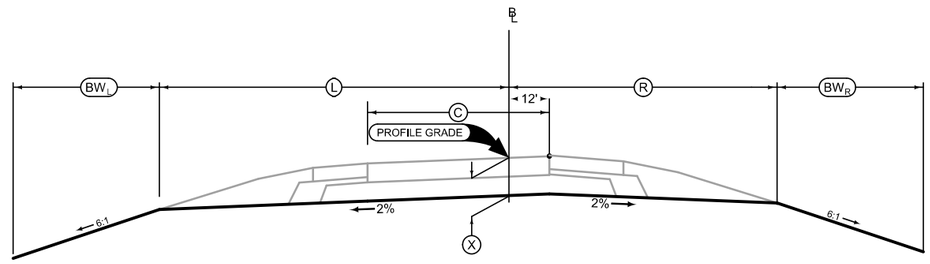


RAMP GRADING

G_1R_Grade
Modified

LOCATION				DIMENSIONS					
INTERCHANGE	RAMP	STATION TO STATION		(L) Feet	(R) Feet	(C) Feet	(X) Inches	(BW_L) Feet	(BW_R) Feet
IA 141	A	1546+12.00	1550+50.00	42.9	32.6	36	24	VARI	13.4

G_1R_Grade
Modified



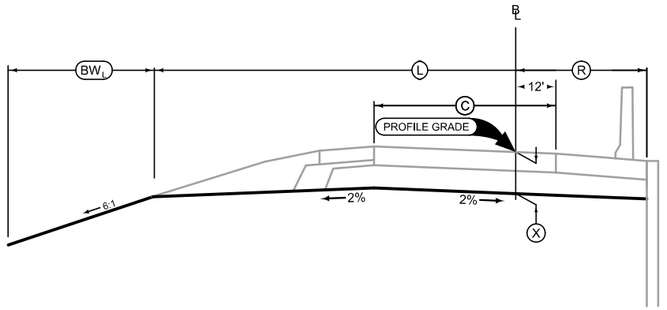
RAMP GRADING

Section view is in direction of traffic.

Normal sections shown may be appropriately modified for areas specifically designated by the Engineer such as intersections or superelevated curves.

LOCATION				DIMENSIONS					
INTERCHANGE	RAMP	STATION TO STATION		(L) Feet	(R) Feet	(C) Feet	(X) Inches	(BW_L) Feet	
IA 141	A	1550+50.00	1551+55.00	VARI	19.75	36	24	0	

G_1R_Grade
Modified



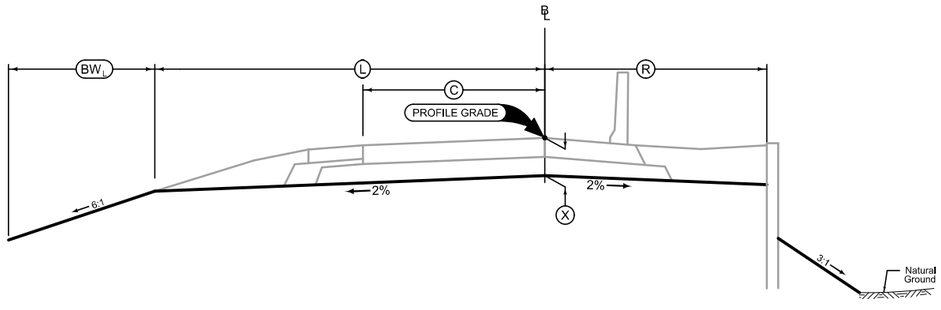
RAMP GRADING

Section view is in direction of traffic.

Normal sections shown may be appropriately modified for areas specifically designated by the Engineer such as intersections or superelevated curves.

LOCATION				DIMENSIONS					
INTERCHANGE	RAMP	STATION TO STATION		(L) Feet	(R) Feet	(C) Feet	(X) Inches	(BW_L) Feet	
IA 141	A	1553+35.00	1558+13.87	VARI	VARI	16	24	0	

G_1R_Grade
Modified



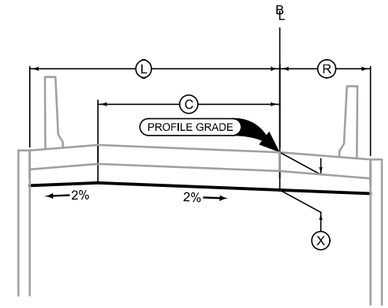
RAMP GRADING

Section view is in direction of traffic.

Normal sections shown may be appropriately modified for areas specifically designated by the Engineer such as intersections or superelevated curves.

LOCATION				DIMENSIONS					
INTERCHANGE	RAMP	STATION TO STATION		(L) Feet	(R) Feet	(C) Feet	(X) Inches		
IA 141	B	2560+81.25	2562+27.68	33.75	7.75	24	24		

G_1R_Grade
Modified



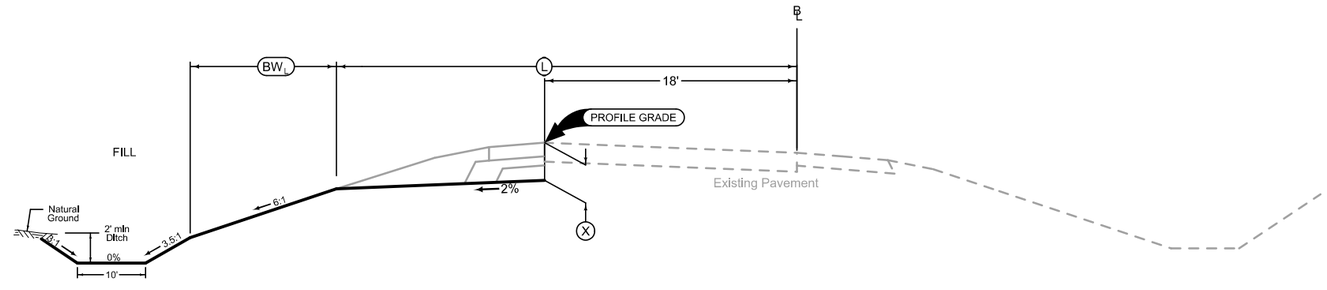
RAMP GRADING

Section view is in direction of traffic.

Normal sections shown may be appropriately modified for areas specifically designated by the Engineer such as intersections or superelevated curves.

LOCATION				DIMENSIONS					
INTERCHANGE	RAMP	STATION TO STATION		(L) Feet	(X) Inches	(BW_L) Feet			
IA 141	D	4548+25.00	4552+13.00	32.4	24	19.6			

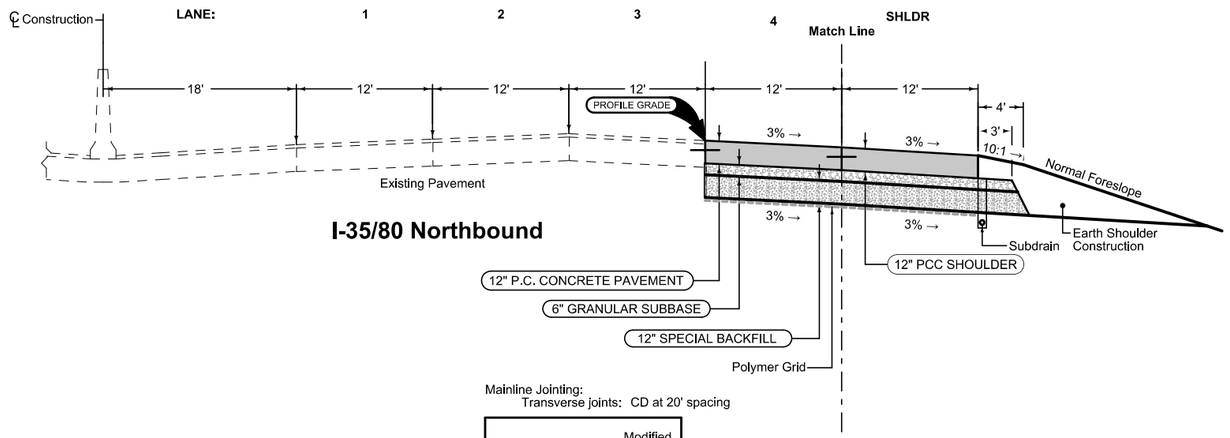
G_1R_Grade
Modified



RAMP GRADING

Section view is in direction of traffic.

Normal sections shown may be appropriately modified for areas specifically designated by the Engineer such as intersections or superelevated curves.



I-35/80 Northbound

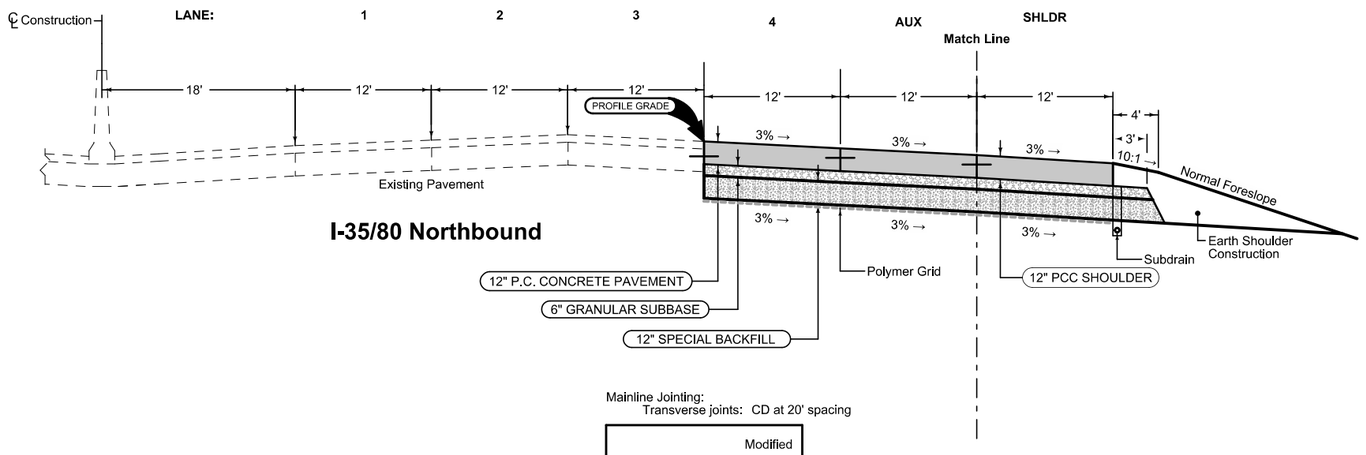
Mainline Jointing:
Transverse joints: CD at 20' spacing

	Modified
BEGIN STATION	END STATION
481+75.00	485+60.28
531+38.41	544+45.88
546+95.93	562+80.00

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 20' spacing

6D_Closed_P_FullPCC_ 04-19-11	
BEGIN STATION	END STATION
481+75.00	485+60.28
531+38.41	544+45.88
546+95.93	562+80.00



I-35/80 Northbound

Mainline Jointing:
Transverse joints: CD at 20' spacing

	Modified
BEGIN STATION	END STATION
490+80.00	507+75.00
513+75.00	523+75.00
565+24.97	573+20.00

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 20' spacing

6D_Closed_P_FullPCC_ 04-19-11	
BEGIN STATION	END STATION
490+80.00	507+75.00
513+75.00	523+75.00
565+24.97	573+20.00

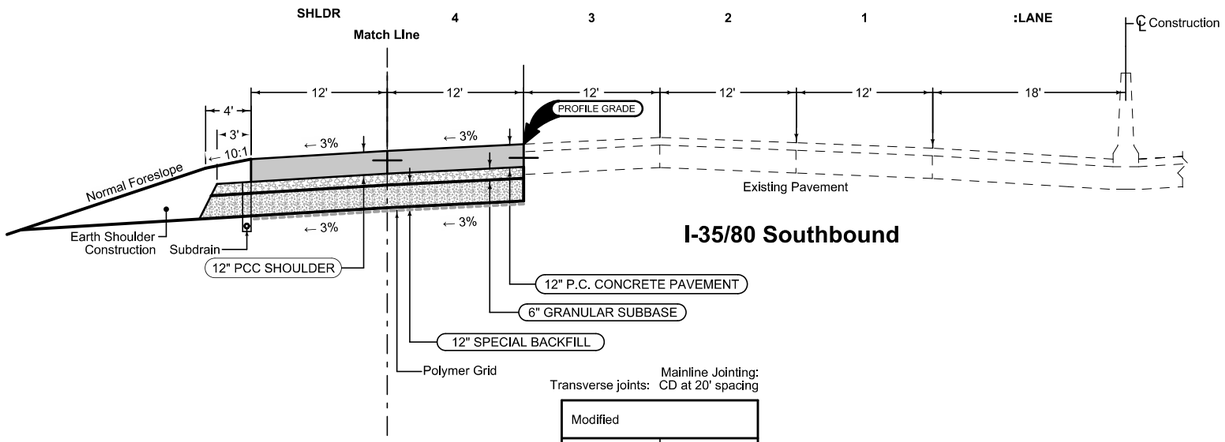
See Tab 100-24 or 100-25 for pavement quantities.
See Tab 112-9 for shoulder quantities.

I-35/80

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 20' spacing

6D_Closed_P_FullPCC_ 04-19-11	
END STATION	BEGIN STATION
484+10.00	485+77.78



I-35/80 Southbound

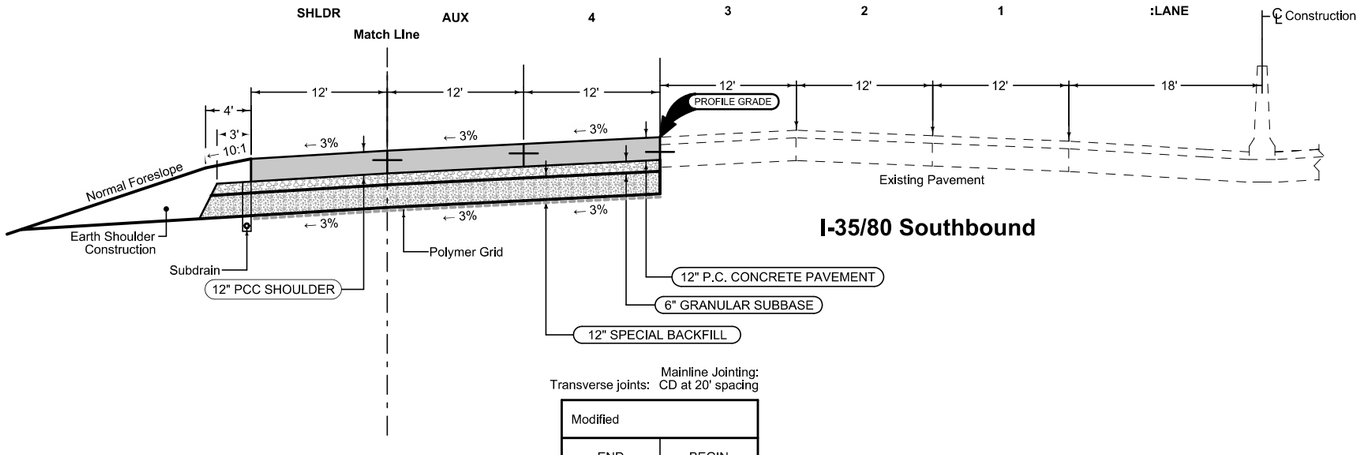
Mainline Jointing:
Transverse joints: CD at 20' spacing

Modified	
END STATION	BEGIN STATION
484+10.00	485+77.78

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 20' spacing

6D_Closed_P_FullPCC_ 04-19-11	
END STATION	BEGIN STATION
497+75.00	503+50.00
515+80.00	520+25.00



I-35/80 Southbound

Mainline Jointing:
Transverse joints: CD at 20' spacing

Modified	
END STATION	BEGIN STATION
497+75.00	503+50.00
515+80.00	520+25.00

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

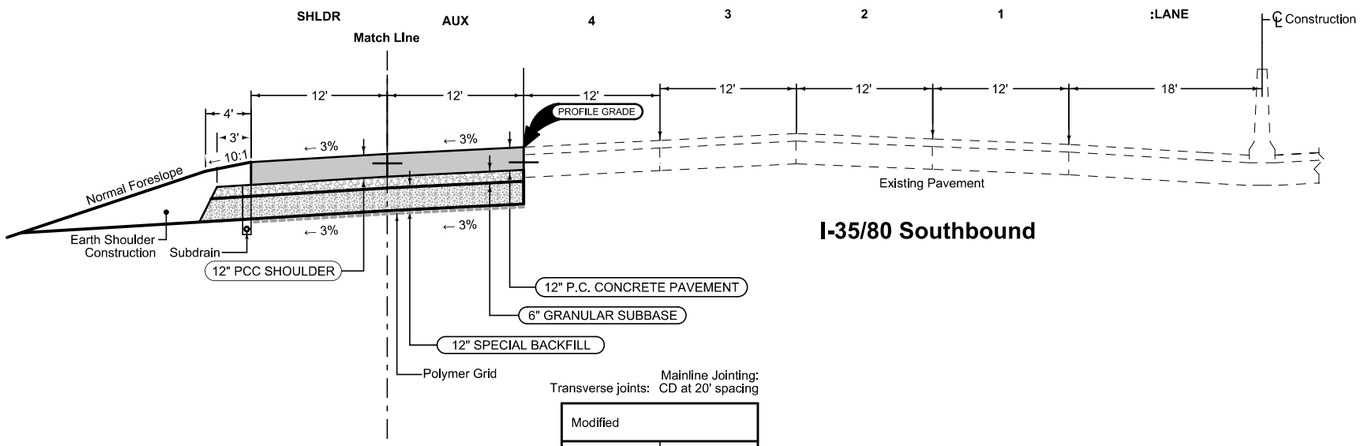
See Tab 112-9 for shoulder quantities.

I-35/80

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 20' spacing

6D_Closed_P_FullPCC_ 04-19-11	
END STATION	BEGIN STATION
520+25.00	526+82.71



I-35/80 Southbound

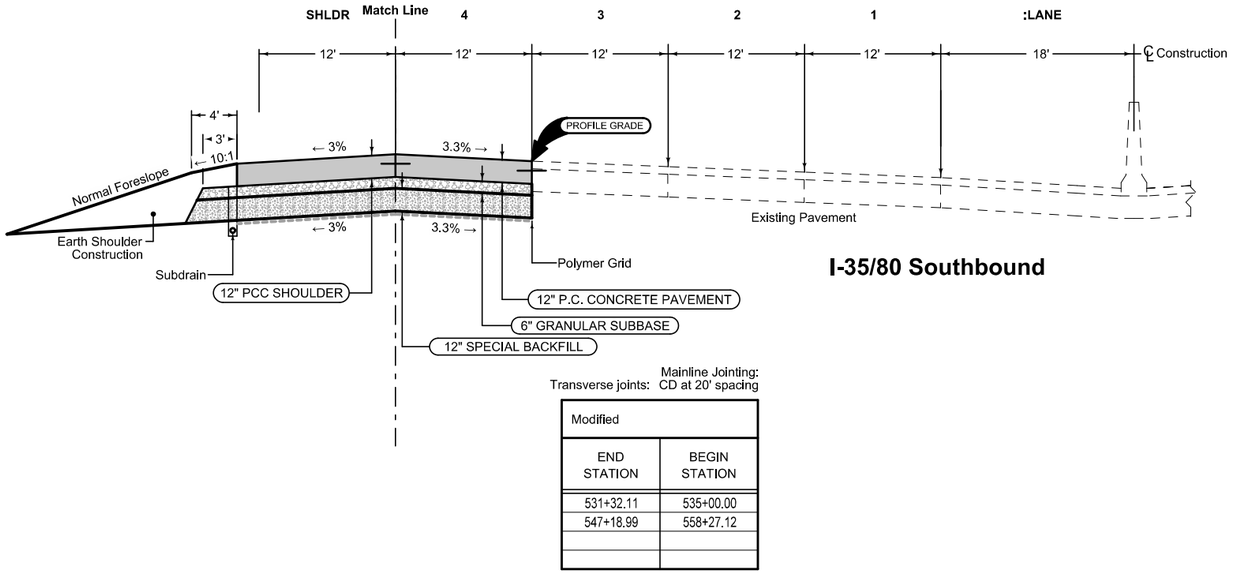
Mainline Jointing:
Transverse joints: CD at 20' spacing

Modified	
END STATION	BEGIN STATION
520+25.00	526+82.71

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 20' spacing

6D_Closed_P_FullPCC_ 04-19-11	
END STATION	BEGIN STATION
531+32.11	535+00.00
547+18.99	558+27.12



I-35/80 Southbound

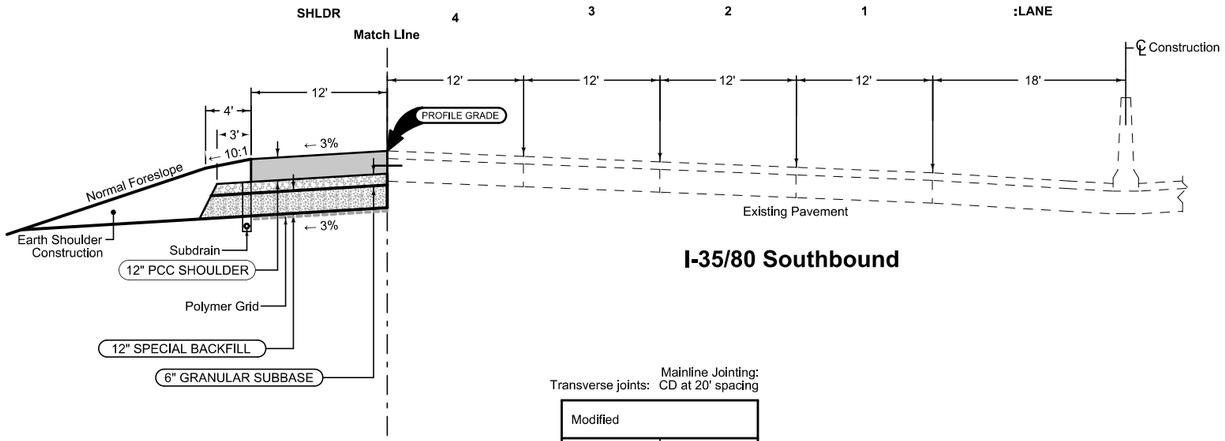
Mainline Jointing:
Transverse joints: CD at 20' spacing

Modified	
END STATION	BEGIN STATION
531+32.11	535+00.00
547+18.99	558+27.12

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 20' spacing

6D_Closed_P_FullPCC_ 04-19-11	
END STATION	BEGIN STATION
535+00.00	544+76.07



I-35/80 Southbound

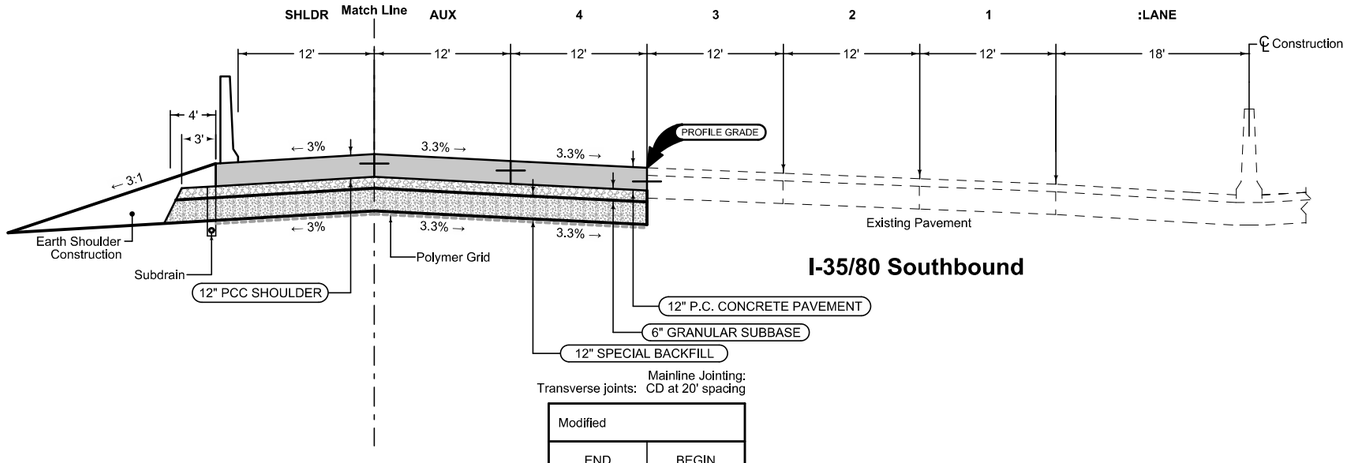
Mainline Jointing:
Transverse joints: CD at 20' spacing

Modified	
END STATION	BEGIN STATION
535+00.00	544+76.07

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 20' spacing

6D_Closed_P_FullPCC_ 04-19-11	
END STATION	BEGIN STATION
562+25.00	565+00.00



I-35/80 Southbound

Mainline Jointing:
Transverse joints: CD at 20' spacing

Modified	
END STATION	BEGIN STATION
562+25.00	565+00.00

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

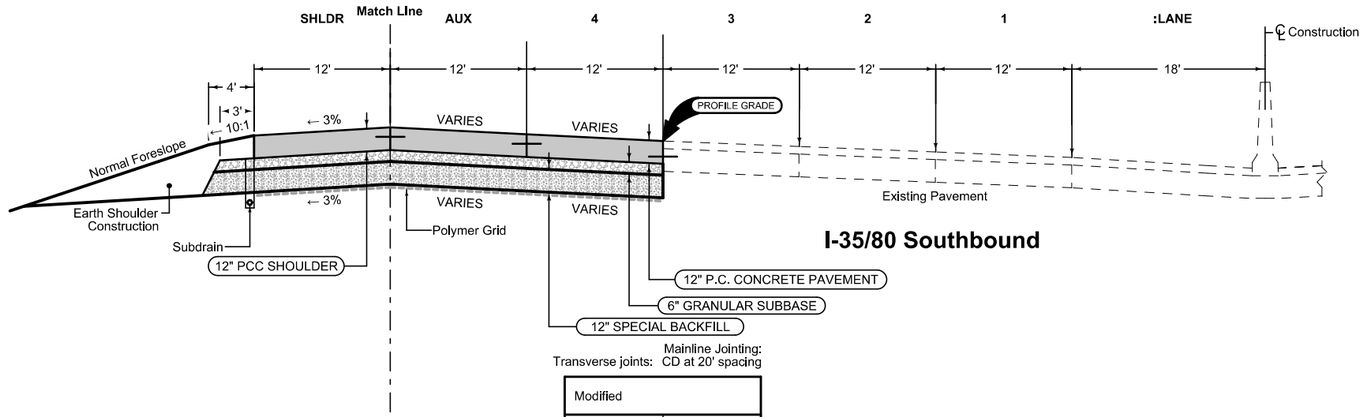
See Tab 112-9 for shoulder quantities.

I-35/80

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 20' spacing

6D_Closed_P_FullPCC_ 04-19-11	
END STATION	BEGIN STATION
565+00.00	570+50.00



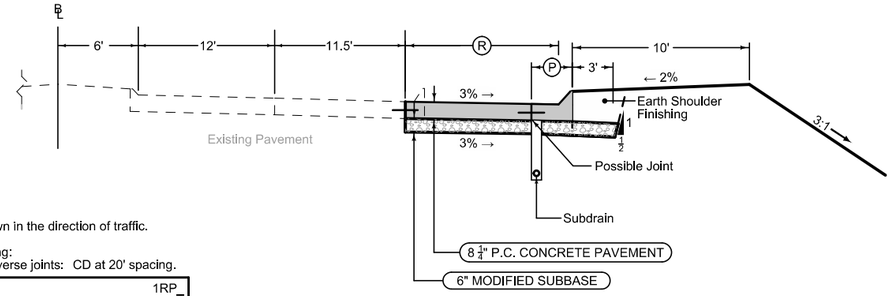
I-35/80 Southbound

Mainline Jointing:
Transverse joints: CD at 20' spacing

Modified	
END STATION	BEGIN STATION
565+00.00	570+50.00

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

I-35/80



Section shown in the direction of traffic.

Ramp Jointing:
Transverse joints: CD at 20' spacing.

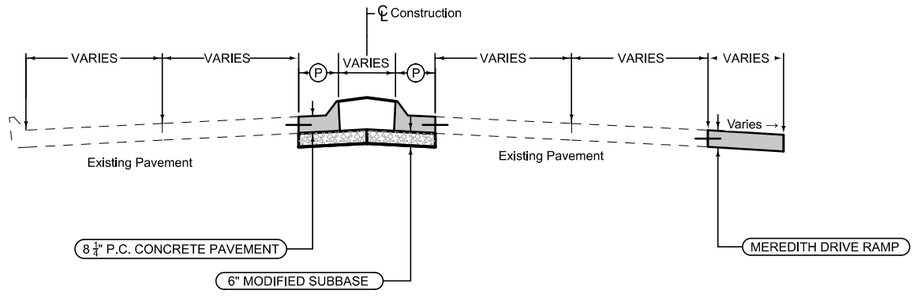
		1RP_ Modified
BEGIN STATION	END STATION	(R)
13+80.00	15+60.00	1.5-12.5
15+60.00	19+13.94	12.5

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
13+80.00	19+13.94	2	6" Std

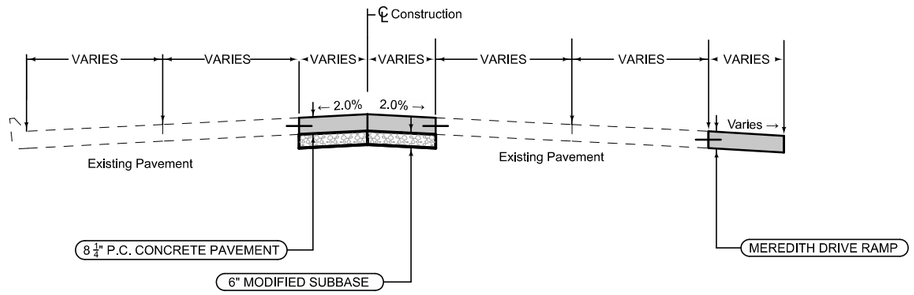


Mainline Jointing:
Transverse joints: CD at 20' spacing

	Modified
BEGIN STATION	END STATION
19+64.70	19+84.00
25+17.87	25+30.10

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

MEREDITH DR



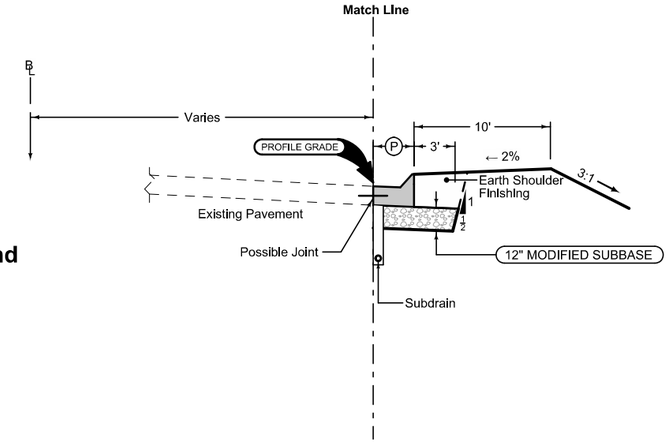
Mainline Jointing:
Transverse joints: CD at 20' spacing

Modified	
BEGIN STATION	END STATION
19+89.50	20+48.70
24+48.67	25+12.37

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

MEREDITH DR

IA 141 Northbound

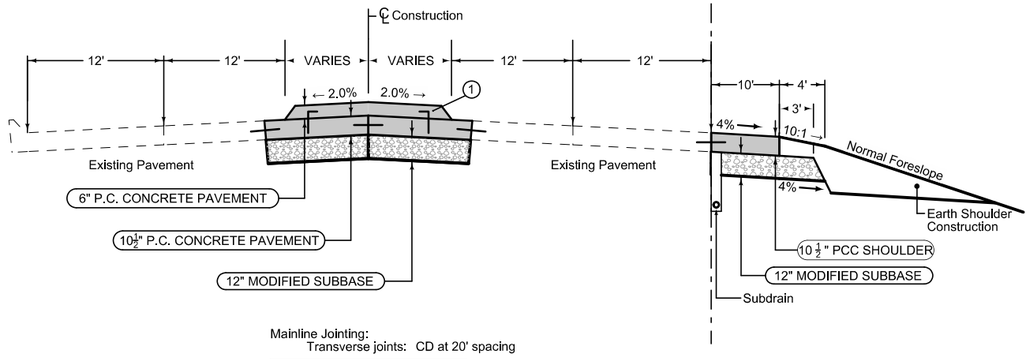


Curbed Shoulder

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
11+35.10	12+58.00	2	6" Std



Mainline Jointing:
Transverse joints: CD at 20' spacing

	Modified
BEGIN STATION	END STATION
20+50.00	20+65.00
22+23.50	24+28.00

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 20' spacing

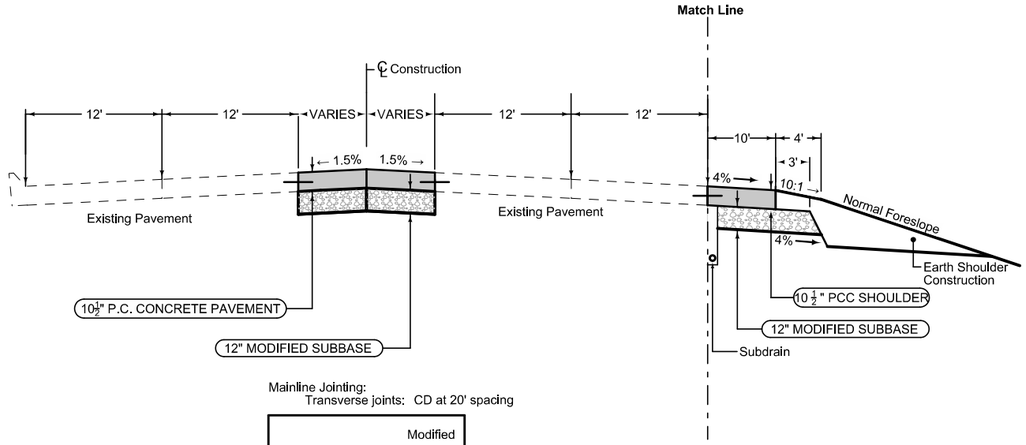
6D_Closed_P_FullPCC_ 04-19-11	
END STATION	BEGIN STATION
18+61.00	21+45.00
23+05.00	25+54.00

(1) Refer to Detail 6149

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

See Tab 112-9 for shoulder quantities.

IA 141



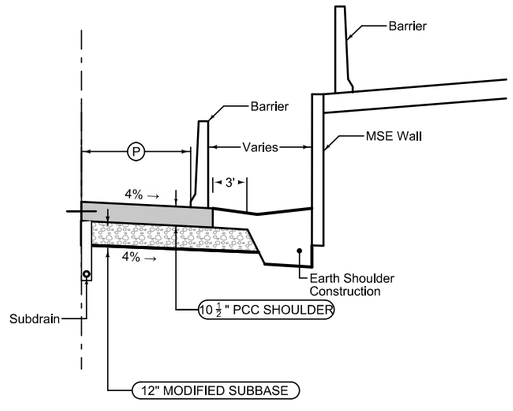
Mainline Jointing:
Transverse joints: CD at 20' spacing

Modified	
BEGIN STATION	END STATION
21+21.50	22+15.24

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 20' spacing

6D_Closed_P_FullPCC_ 04-19-11	
END STATION	BEGIN STATION
18+61.00	21+45.00
23+05.00	25+54.00



Full Depth PCC Shoulder / Curbed Shoulder

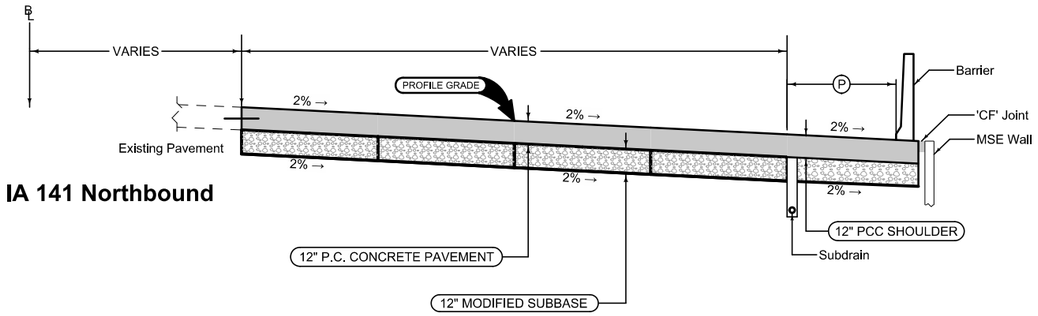
Shoulder Jointing:
Longitudinal joint: B

Modified		
STATION TO STATION		(P) Feet
34+50.00	35+55.08	12

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

IA 141

Full Depth PCC Shoulder / Retaining Wall



IA 141 Northbound

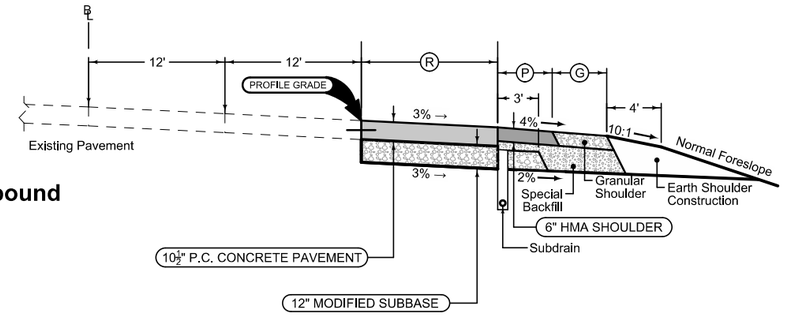
Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 20' spacing

		Modified
STATION TO STATION		(P) Feet
37+38.00	39+91.81	6

Mainline Jointing:
Transverse joints: CD at 20' spacing

Modified	
BEGIN STATION	END STATION
37+38.00	39+91.81

Combination Shoulder



IA 141 Northbound

Shoulder Jointing:
Longitudinal joint: B

		2_C_ 10-15-13	
STATION TO STATION		(P) Feet	(G) Feet
41+32.40	51+76.66	6	4
53+72.07	60+46.07	6	4

Mainline Jointing:
Transverse joints: CD at 20' spacing

Modified		
BEGIN STATION	END STATION	(R)
41+32.40	45+30.00	12
45+30.00	47+08.86	12-24
47+08.06	47+76.64	24
47+76.64	51+76.66	12
53+72.07	57+84.83	12
57+84.83	60+46.07	12-2

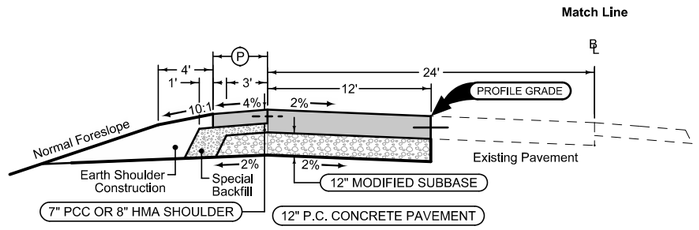
See Tab 100-24 or 100-25 for pavement quantities.
See Tab 112-9 for shoulder quantities.

IA 141

Paved Shoulder Alternates

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

1R_P_ALT_ 10-21-14		
BEGIN STATION	END STATION	(P) Feet
1585+79.00	1575+26.27	4



Section shown in the direction of traffic.

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

Modified	
END STATION	BEGIN STATION
1585+79.00	1574+26.27

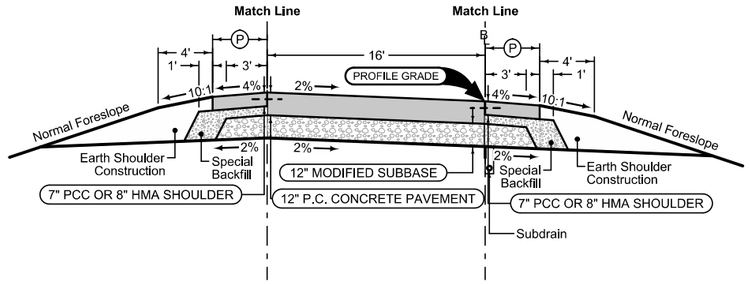
See Tab 100-24 or 100-25 for pavement quantities.
See Tab 112-9 for shoulder quantities.

DOUGLAS RAMP A

Paved Shoulder Alternates

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

1R_P_ALT_ 10-21-14		
BEGIN STATION	END STATION	(P) Feet
4584+75.00	4585+61.02	4



Section shown in the direction of traffic.

Ramp Jointing:
Transverse joints: CD at 20' spacing.

1RP_ 10-19-10	
BEGIN STATION	END STATION
4584+75.00	4585+61.02

Paved Shoulder Alternates

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

1R_P_ALT_ 10-21-14		
BEGIN STATION	END STATION	(P) Feet
4584+75.00	4585+61.02	6

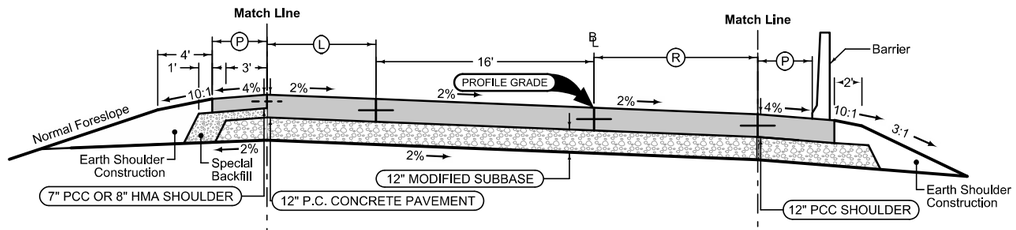
See Tab 100-24 or 100-25 for pavement quantities.
See Tab 112-9 for shoulder quantities.

DOUGLAS RAMP D

Paved Shoulder Alternates

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

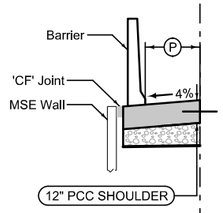
		1R_P_ALT_ 10-21-14
BEGIN STATION	END STATION	(P) Feet
2513+75.00	2517+51.00	4

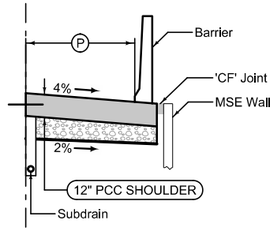


Section shown in the direction of traffic.

Ramp Jointing:
Transverse joints: CD at 20' spacing.

			1RP_ Modified
BEGIN STATION	END STATION	(R)	(L)
2513+75.00	2517+38.77	8	0
2517+38.77	2519+18.77	8	0-12
2519+18.77	2520+69.19	8	12
2520+69.19	2522+49.19	8-20	12
2522+49.19	2524+77.14	20	12





Full Depth PCC Shoulder

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

		1R_P_ALT_ 10-21-14
BEGIN STATION	END STATION	(P) Feet
2513+75.00	2520+43.00	6

Full Depth PCC Shoulder / Retaining Wall

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 20' spacing

		Modified
STATION TO STATION		(P) Feet
2517+51.00	2524+78.18	4

Full Depth PCC Shoulder / Retaining Wall

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 20' spacing

		Modified
STATION TO STATION		(P) Feet
2520+43.00	2524+77.14	6

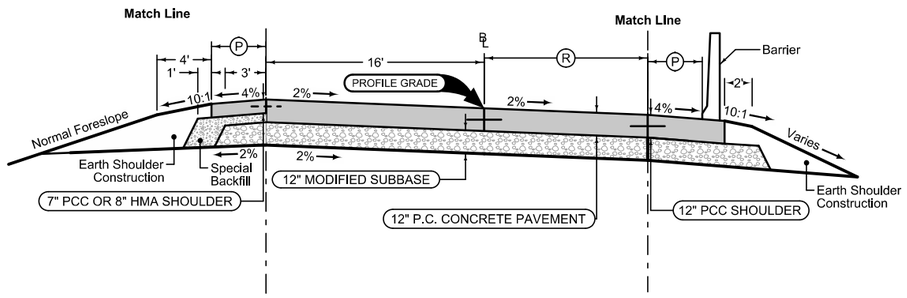
See Tab 100-24 or 100-25 for pavement quantities.
See Tab 112-9 for shoulder quantities.

MEREDITH RAMP B

Paved Shoulder Alternates

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

		1R_P_ALT_ 10-21-14
BEGIN STATION	END STATION	(P) Feet
3515+78.68	3521+50.00	4



Section shown in the direction of traffic.

Ramp Jointing:
Transverse joints: CD at 20' spacing.

		1RP_ Modified
BEGIN STATION	END STATION	(R)
3515+78.68	3517+00.00	0
3517+00.00	3521+10.00	0-8
3521+10.00	3523+76.29	8

Full Depth PCC Shoulder

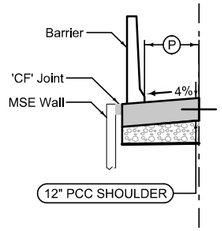
PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

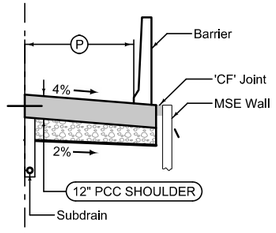
		1R_P_ALT_ 10-21-14
BEGIN STATION	END STATION	(P) Feet
3515+78.68	3517+00.00	6

Full Depth PCC Shoulder / Retaining Wall

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 20' spacing

		Modified
STATION TO STATION		(P) Feet
3521+50.00	3524+06.84	4





Full Depth PCC Shoulder / Retaining Wall

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 20' spacing

		Modified
STATION TO STATION		(P) Feet
3517+00.00	3523+76.29	6

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

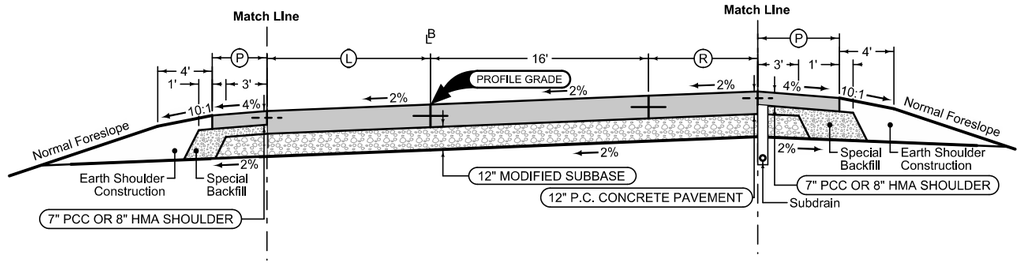
See Tab 112-9 for shoulder quantities.

MEREDITH RAMP C

Paved Shoulder Alternates

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

		1R_P_ALT_ 10-21-14
BEGIN STATION	END STATION	(P) Feet
1545+86.39	1558+16.63	4



Section shown in the direction of traffic.

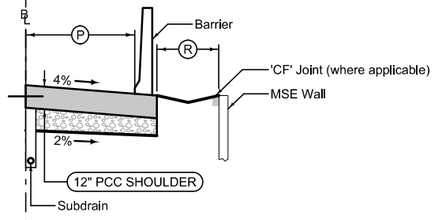
Ramp Jointing:
Transverse joints: CD at 20' spacing.

			1RP_ Modified
BEGIN STATION	END STATION	(L)	(R)
1546.12.01	1551+55.00	8	12
1551+55.00	1553+35.00	8-0	12-0
1553+35.00	1558+13.87	0	0

Paved Shoulder Alternates

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

		1R_P_ALT_ 10-21-14
BEGIN STATION	END STATION	(P) Feet
1546+14.97	1550+50.00	6



Full Depth PCC Shoulder / Retaining Wall

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 20' spacing

		Modified	
STATION TO STATION		(P) Feet	(R) Feet
1550+50.00	1558+16.66	6	0-27.1

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

See Tab 112-9 for shoulder quantities.

141 RAMP A

Paved Shoulder Alternates

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

1R_P_ALT_ 10-21-14		
BEGIN STATION	END STATION	(P) Feet
2531+13.28	2536+98.76	8

Full Depth PCC Shoulder / Retaining Wall

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 20' spacing

Modified		
STATION TO STATION		(P) Feet
2560+81.25	2565+25.00	8

Full Depth PCC Shoulder

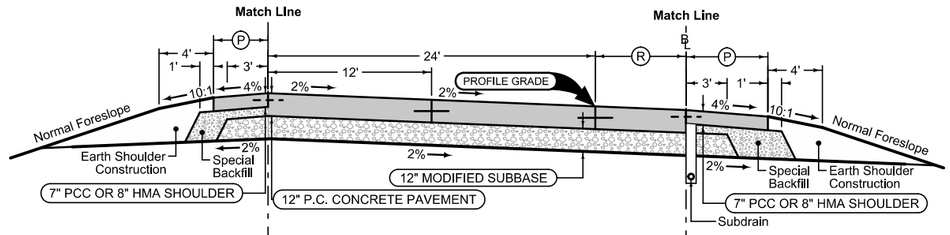
Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 20' spacing

Modified		
STATION TO STATION		(P) Feet
2565+25.00	2565+80.00	8

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 20' spacing

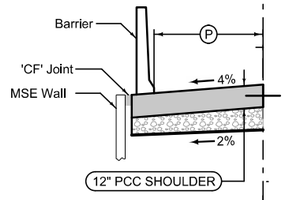
Modified		
STATION TO STATION		(P) Feet
2565+80.00	2566+74.84	19.5-12.5

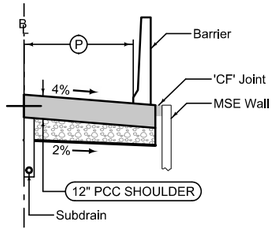


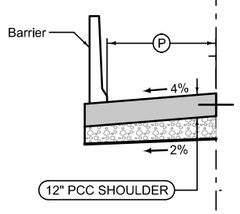
Section shown in the direction of traffic.

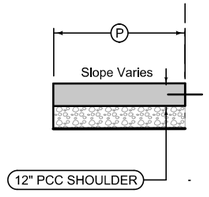
Ramp Jointing:
Transverse joints: CD at 20' spacing.
Longitudinal joint: L-2

2RP_ Modified		
BEGIN STATION	END STATION	(R)
2531+13.28	2536+98.76	0
2560+81.25	2562+27.68	0-17.1









Paved Shoulder Alternates

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

1R_P_ALT_ 10-21-14		
BEGIN STATION	END STATION	(P) Feet
2531+13.28	2536+98.76	4

Full Depth PCC Shoulder / Retaining Wall

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 20' spacing

Modified		
STATION TO STATION		(P) Feet
2560+81.25	2566+74.84	4

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

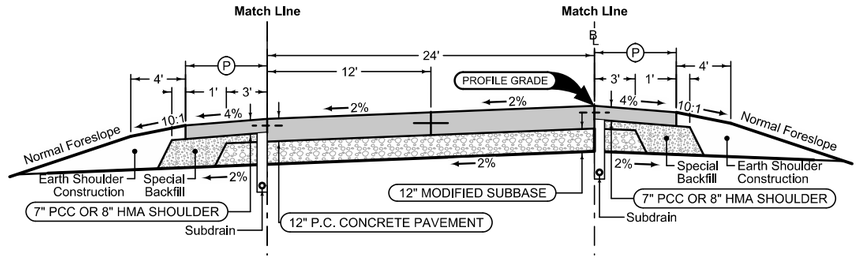
See Tab 112-9 for shoulder quantities.

141 RAMP B

Paved Shoulder Alternates

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

1R_P_ALT_ 10-21-14		
BEGIN STATION	END STATION	(P) Feet
3531+44.14	3536+55.24	4



Section shown in the direction of traffic.

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

2RP_ 04-16-13	
BEGIN STATION	END STATION
3531+44.14	3536+55.24

Paved Shoulder Alternates

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

1R_P_ALT_ 10-21-14		
BEGIN STATION	END STATION	(P) Feet
3531+44.14	3536+55.24	6

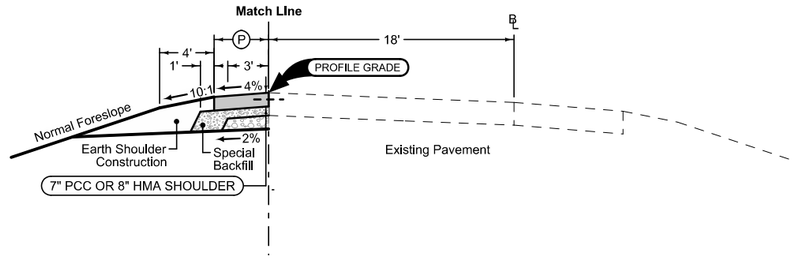
See Tab 100-24 or 100-25 for pavement quantities.
See Tab 112-9 for shoulder quantities.

141 RAMP C

Paved Shoulder Alternates

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

		1R_P_ALT_ 10-21-14
BEGIN STATION	END STATION	(P) Feet
4548+25.00	4552+13.00	4



Section shown in the direction of traffic.

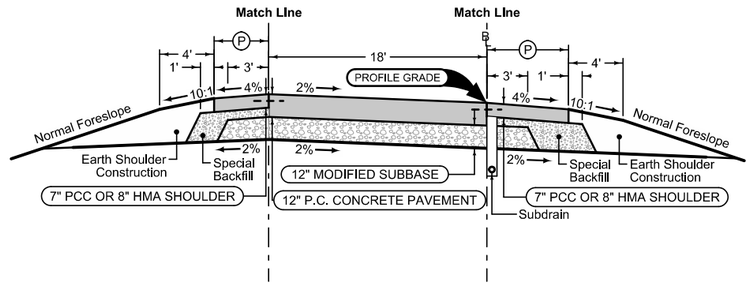
Ramp Jointing:
Transverse joints: CD at 20' spacing.
Longitudinal joint: L-2

	Modified
BEGIN STATION	END STATION
4548+25.00	4552+13.00

Paved Shoulder Alternates

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

		1R_P_ALT_ 10-21-14
BEGIN STATION	END STATION	(P) Feet
4558+19.37	4562+89.38	4



Section shown in the direction of traffic.

Ramp Jointing:
Transverse joints: CD at 20' spacing.

	1RP_ 10-19-10
BEGIN STATION	END STATION
4558+19.37	4562+89.38

Paved Shoulder Alternates

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

		1R_P_ALT_ 10-21-14
BEGIN STATION	END STATION	(P) Feet
4558+19.37	4562+89.38	6

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

See Tab 112-9 for shoulder quantities.

141 RAMP D

SURVEY SYMBOLS

- D Centerline Draw or Stream (Down)
- FCL Chain Link and Security Fence
- EW Edge of Water
- LUM Luminaire
- IN Storm Sewer Intake
- RIP Rip-Rap
- TDC Tree Deciduous
- TEV Evergeen Tree
- HDG Hedge Row
- DIK Centerline of Dike or Dam
- SIGN SI Sign
- BNK Stream Bank
- C Centerline BL of Road (ML or SR)
- MH Utility Access (Manhole)
- PPA Power Pole Co. 1
- TSL Traffic Signal and Luminare
- FHD Fire Hydrants
- TCB TCB Traffic Signal Box
- GDL Guard Rail Steel
- RET Retaining Walls
- RR Centerline of Railroad Tracks
- GDC Guard Rail Cable
- TSG Traffic Signal
- SHR Shrub
- Flg FLG Flag Poles
- FWD Wood Fence
- TV Satelite TV Dish
- BL Topo Breakline
- MM MM Mile Marker Post
- UB UB Utility Box
- FW Wire Fence
- TLNL Tree Line Left
- OUT Tile Outlet
- TLNR Tree Line Right
- BB BB Billboard
- MIS Miscellaneous
- S Soil Sampling Site (Wetlands)
- ST1C Storm Sewer Co. 1 - Quality C
- WV WV Water Valve
- SIGN SL Speed Limit Sign
- EB EB Electrical Box
- TFR Tree Fruit
- WH WHD Water Hydrant
- INB Storm Sewer Beehive Intake
- TP TPD Telephone Pedestal
- GP GP Guard Post (Less Than 4 Posts)
- STP Stump
- PPB Power Pole Co. 2
- PPC Power Pole Co. 3
- PPD Power Pole Co. 4
- DU Centerline Draw or Stream (Up)
- E2(C) EL2C Electric Line Co. 2 - Quality C
- E(C) EL1C Electric Line Co. 1 - Quality C
- San.(C) SA1C Sanitary Sewer Co. 1- Quality C
- F02(C) F02C Fiber Optic Co. 2 - Quality C
- F0(C) F01C Fiber Optic Co. 1 - Quality C
- F04 F04D Fiber Optic Co. 4 - Quality D
- TDL Trafic Detection Loop
- G(C) GL1C Gas Line Co. 1 - Quality C
- W(C) WL1C Water Line Co. 1 - Quality C
- W WL1D Water Line Co. 1 - Quality D
- F03(C) F03C Fiber Optic Co. 3 - Quality C
- F05 F05D Fiber Optic Co. 5 - Quality D
- W2 WL2D Water Line Co. 2 - Quality D
- TV TV1D TV Cable Co. 1 - Quality D
- G2 GL2D Gas Line Co. 2 - Quality D
- GV GV Gas Valve
- G-HP GH1D High Pres Gas Co 1 - Quality D
- F06 F06D Fiber Optic Co. 6 - Quality D
- T(C) TL1C Telephone Line Co. 1 - Quality C
- F06(C) F06C Fiber Optic Co. 6 - Quality C
- G3(C) GL3C Gas Line Co. 3 - Quality C
- T2(C) TL2C Telephone Line Co. 2-Quality C
- E3 EL3D Electric Line Co. 3 - Quality D
- E3(C) EL3C Electric Line Co. 3 - Quality C

UTILITY LEGEND

F04 / San.(C) / St.S.(C)
City of Grimes
Contact: Ken Brown
Phone: 515-986-3176

F04 / San.(C) / St.S.(C)
City of Urbandale Engineering and Public Works
Contact: Tyler Burhenn
Phone: 515-278-3950

E(C)
MidAmerican Electric
Contact: Craig Ranfeld
Phone: 515-252-6632

G2 / G-HP
MidAmerican Gas
Contact: Craig Ranfeld
Phone: 515-252-6632

TV / F06
Mediacom Communications Corp.
Contact: Paul May
Phone: 515-246-2252

W(C) / W
Thorpe Water Development Co.
Contact: Tom W Thorpe
Phone: 515-289-2345

F02(C)
CenturyLink
Contact: Tom Sturmer
Phone: 303-664-8090

F0(C)
Iowa Network Services
Contact: Jeff Klocko
Phone: 515-830-0445

W2
Urbandale Water Utility
Contact: Richard Foust
Phone: 515-278-3940

F03(C)
MCI
Contact: Janette Harris
Phone: 972-729-6650

F05
Iowa Department of Transportation
Contact: Scott Smyth
Phone: 515-986-5457

E2(C)
Baker Electric
Contact:
Phone:

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)

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER D.1

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REMOVE & EXTEND
Sta. 476+00.00
18" X 78.00' RCP
D.A. = MEDIAN ONLY
REMOVE 8' - 18" RCP
INSTALL 14' - 18" RCP
F.L. = Lt. 976.36
Ot. 976.39

REMOVE & EXTEND
Sta. 479+00.00
18" X 74.00' RCP
D.A. = MEDIAN ONLY
REMOVE 8' - 18" RCP
INSTALL 22' - 18" RCP
F.L. = Lt. 975.77
Ot. 976.03

U.A.C.
Sta. 1583+00.70 (SRDGWBA)
30" X 88.55' RCP
D.A. = 10.2 AC

REMOVE & EXTEND
Sta. 491+00.00
24" X 110.00' RCP
D.A. = MEDIAN ONLY
REMOVE 8' - 18" RCP
INSTALL 14' - 18" RCP
Plus Concrete Apron
F.L. = Additional Topo
Needed

WEBSTER TWP
T-79N R-25W
SEC. 20

REMOVE & EXTEND
Sta. 495+00.00
24" X 72.49' RCP
D.A. = MEDIAN ONLY
REMOVE 8' - 24" RCP
INSTALL 48' - 24" RCP
Plus Concrete Apron
F.L. = Lt. 972.14
Ot. 974.25

REMOVE & EXTEND
Sta. 498+33.80
18" X 74.19' RCP
D.A. = MEDIAN ONLY
REMOVE 8' - 18" RCP
INSTALL 48' - 18" RCP
Plus Concrete Apron
F.L. = Lt. 973.86
Ot. 976.54

BEGIN CONSTRUCTION
Sta.475+70.000

POT Sta 475+65.42

DOUGLAS AVENUE

DOUGLAS RAMP A

DOUGLAS RAMP D

I-35/80 (ML080)

TEMPORARY EASEMENT FOR DITCH GRADING

480 485 490 495 500

REMOVE & EXTEND
Sta. 482+00.00
24" X 86.00' RCP
D.A. = MEDIAN ONLY
REMOVE 8' - 18" RCP
INSTALL 16' - 18" RCP
F.L. = Additional Topo
Needed

U.A.C.
Sta. 484+95.00
18" X 165.00' RCP
D.A. = MEDIAN ONLY

REMOVE & EXTEND
Sta. 488+00.60
54" X 253.63' RCP
Extended 15' X 54" X 88" Rt RCAP
D.A. = 59.13 Ac
REMOVE 16' - 54" RCP
INSTALL 74' - 54" RCP
F.L. = Lt. 964.67
Ot. 965.16
Ot. 969.55
Rt. 969.89

REMOVE & EXTEND
Sta. 488+35.10
18" X 129.87' RCP
D.A. = MEDIAN ONLY
REMOVE 8' - 18" RCP
INSTALL 9' - 18" RCP
INSTALL 19' - 18" RCP Let Down
Plus Concrete Apron
F.L. = Lt. 964.66
Ot. 968.96

WEBSTER TWP
T-79N R-25W
SEC. 21

REMOVE & EXTEND
Sta. 493+00.50
18" X 120.00' RCP
D.A. = MEDIAN ONLY
REMOVE 8' - 18" RCP
INSTALL 42' - 18" RCP
Plus Concrete Apron
F.L. = Lt. 970.58
Ot. 972.90

0 100
FEET

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER D.2

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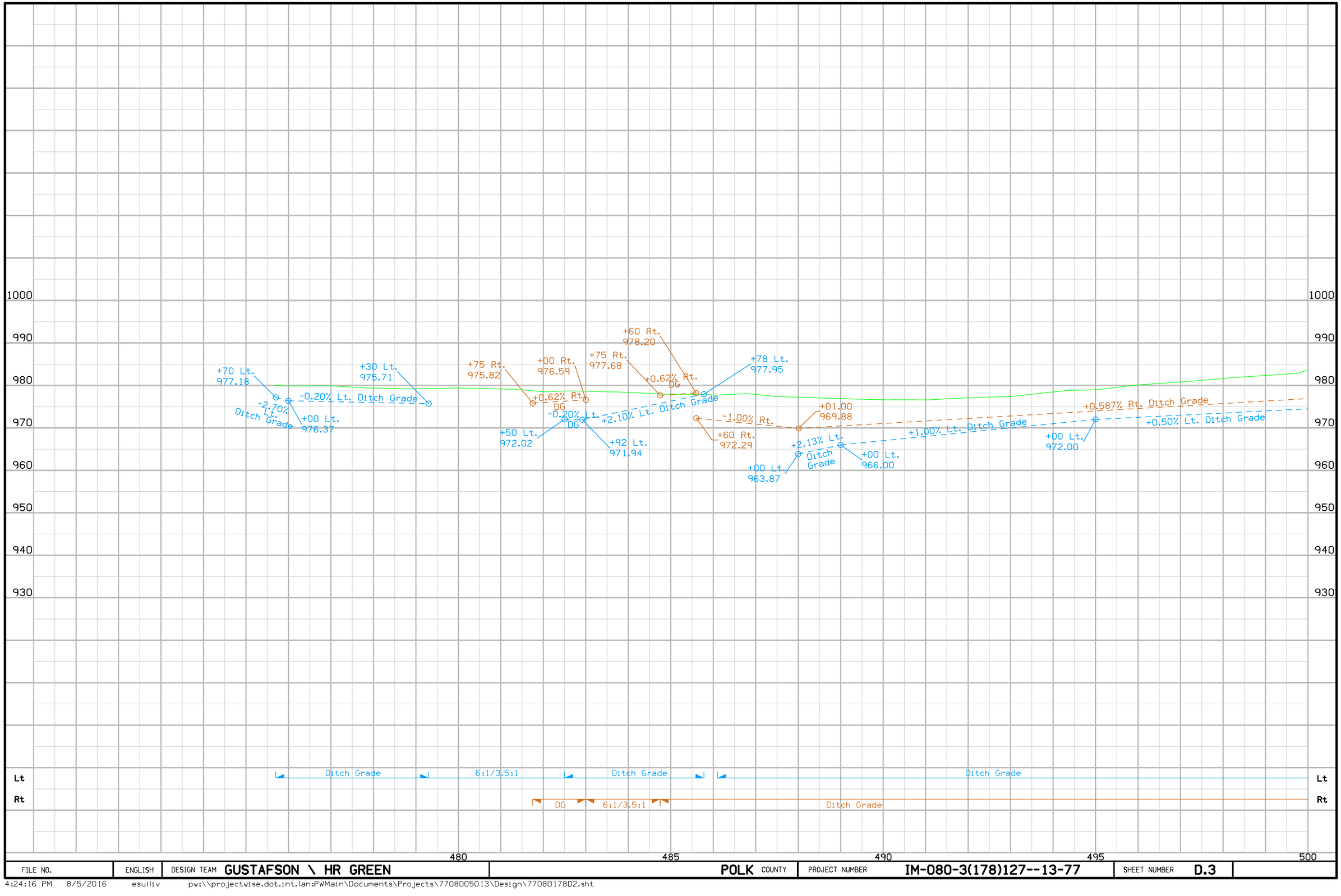

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER D.3

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REMOVE & EXTEND
Sta. 501+67.00
18" X 74.07' RCP
D.A. = MEDIAN ONLY
REMOVE 8' - 18" RCP
INSTALL 50' - 18" RCP
Plus Concrete Apron
F.L. = Lt. 976.54
Ot. 980.17

WEBSTER TWP
T-79N R-25W
SEC. 20

REMOVE & EXTEND
Sta. 505+00.50
24" X 74.46' RCP
D.A. = MEDIAN ONLY
REMOVE 8' - 24" RCP
INSTALL 44' - 24" RCP
Plus Concrete Apron
F.L. = Lt. 981.62
Ot. 982.69

ABANDON
Sta. 515+69.90
24" X 162.69' RCP
D.A. = 3.0 AC

REMOVE
Sta. 523+65.73, 191.5' Lt.
12" X 20.85' RCP
D.A. = 1.6 AC

REMOVE
Sta. 525+49.46, 98.6' Lt.
24" X 250.50' RCP
D.A. = 6.0 AC

WEBSTER TWP
T-79N R-25W
SEC. 17

TEMPORARY EASEMENT FOR DITCH GRADING

PERMANENT ACQUISITION FOR DITCH GRADING

TEMP. EASEMENT TO RE-CONSTRUCT DETENTION BASIN AND DRAINAGE FLUME NETWORK

PERMANENT ACQUISITION FOR RAMP CONSTRUCTION

MEREDITH RAMP C

IA 141 RAMP C

I-35/80 (ML080)

MEREDITH RAMP B

IA 141 RAMP B

MEREDITH DRIVE

PC Sta. 522+84.60

TEMPORARY EASEMENT FOR DITCH GRADING

PRIVATE PROPERTY PARKING LOT REMOVAL/RECONSTRUCTION BY OTHERS

PERMANENT ACQUISITION FOR RAMP CONSTRUCTION

REMOVE
Sta. 525+62.65, 88.5' Rt.
24" X 234.95' RCP
D.A. = 5.2 AC

WEBSTER TWP
T-79N R-25W
SEC. 16

REMOVE PARTIAL
Sta. 503+42.20
12" X 66.00' RCP
D.A. = BUILD. 16
REMOVE 37' - 12" RCP
Install Concrete Apron
F.L. = Lt. 982.62
Ot. 982.64
Design dependent on
R.O.W. Negotiations

REMOVE & EXTEND
Sta. 508+33.00
18" X 81.00' RCP
D.A. = MEDIAN ONLY
REMOVE 8' - 18" RCP
INSTALL 50' - 18" RCP
F.L. = Ot. 986.23
Rt. 984.33

WEBSTER TWP
T-79N R-25W
SEC. 21

0 100
FEET

INSTALL
Sta. 2524+00
24" x 142.0' RCP
D.A. = 1.6 AC
F.L. = Lt. 992.18
Rt. 993.66

REMOVE & EXTEND
Sta. 527+98.50
24" X 75.13' RCP
D.A. = MEDIAN ONLY
REMOVE 8' - 24" RCP
INSTALL 56' - 24" RCP
F.L. = Ot. 985.89
Rt. 982.32

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER D.4

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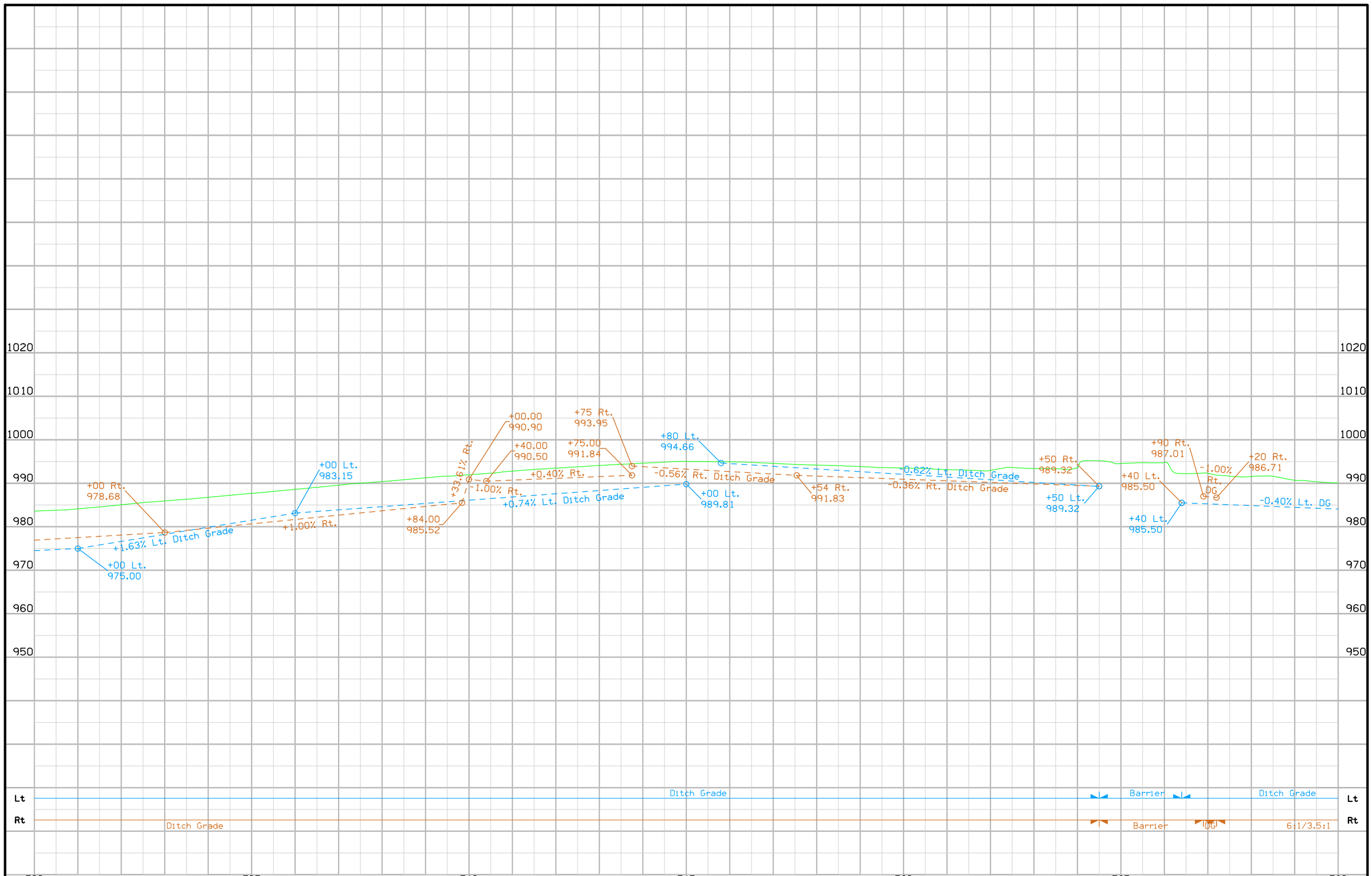

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER D.5

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REMOVE & EXTEND
Sta. 530.74+10
24" X 83.23' RCP
D.A. = MEDIAN ONLY
REMOVE 8' - 24" RCP
INSTALL 66' - 24" RCP
F.L. = Ot. 982.78
Rt. 981.25

REMOVE & EXTEND
Sta. 531+99.15
48" X 228.76' RCP
D.A. = 9.4 AC
REMOVE 16' - 48" RCP
INSTALL 110' - 48" RCP
F.L. = Lt. 982.43
Ot. 982.39
Ot. 981.69
Rt. 980.44

REMOVE & EXTEND
Sta. 540+00.10
24" X 72.00' RCP
D.A. = MEDIAN ONLY
REMOVE 8' - 24" RCP
INSTALL 17' - 24" RCP
INSTALL 69' - 24" RCP
Let down
Plus Concrete Apron
F.L. = Ot. 995.11
Rt. 979.75

WEBSTER TWP
T-79N R-25W
SEC. 17

WEBSTER TWP
T-79N R-25W
SEC. 16

PERMANENT ACQUISITION FOR BRIDGE ACCESS

TEMPORARY EASEMENT FOR STORM SEWER INSTALLATION

EXTEND
Sta. 1551+33.80
24" X 150.65' RCP
D.A. = 3.6 AC
INSTALL 48' - 24" RCP
F.L. = Lt. 958.86
Ot. 959.71
Ot. 965.19
Rt. 970.87

REMOVE & EXTEND
Sta. 552+00.00
24" X 70.00' RCP
24" X 75.00' CMP
D.A. = MEDIAN ONLY
REMOVE 8' - 24" RCP
REMOVE 75' - 24" CMP
INSTALL 7' - 24" RCP
INSTALL 79' - 24" RCP
Let down
Plus Concrete Apron
F.L. = Lt. 972.25
Ot. 987.36

ABANDON
Sta. 1557+92.23
18" X 45.00' RCP
18" X 60.00' CMP
D.A. = 0.3 AC

IA 141 RAMP C

I-35/80 (ML080)

IA 141 RAMP B

IA 141 RAMP A

IA 141 RAMP D

IA 141

540

545

550

555

560

Curve Data
Δ = 88° 13' 37.23" (RT)
T = 2,817.46
L = 4,474.84
R = 2,906.02
E = 1,141.57
e = 3.3% (match existing)

TEMPORARY EASEMENT FOR STORM SEWER INSTALLATION

REMOVE & EXTEND
Sta. 549+01.10
24" X 72.00' RCP
24" X 96.00' CMP
D.A. = MEDIAN ONLY
REMOVE 8' - 24" RCP
REMOVE 96' - 24" CMP
INSTALL 7' - 24" RCP
INSTALL 107' - 24" RCP Let down
Plus Concrete Apron
F.L. = Ot. 993.10
Rt. 967.22

REMOVE & EXTEND
Sta. 556+00.10
24" X 72.00' RCP
D.A. = MEDIAN ONLY
REMOVE 8' - 24" RCP
INSTALL 7' - 24" RCP
INSTALL 49' - 24" RCP Let down
Plus Concrete Apron
F.L. = Ot. 977.31
Rt. 967.73

0 100
FEET

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER D.6

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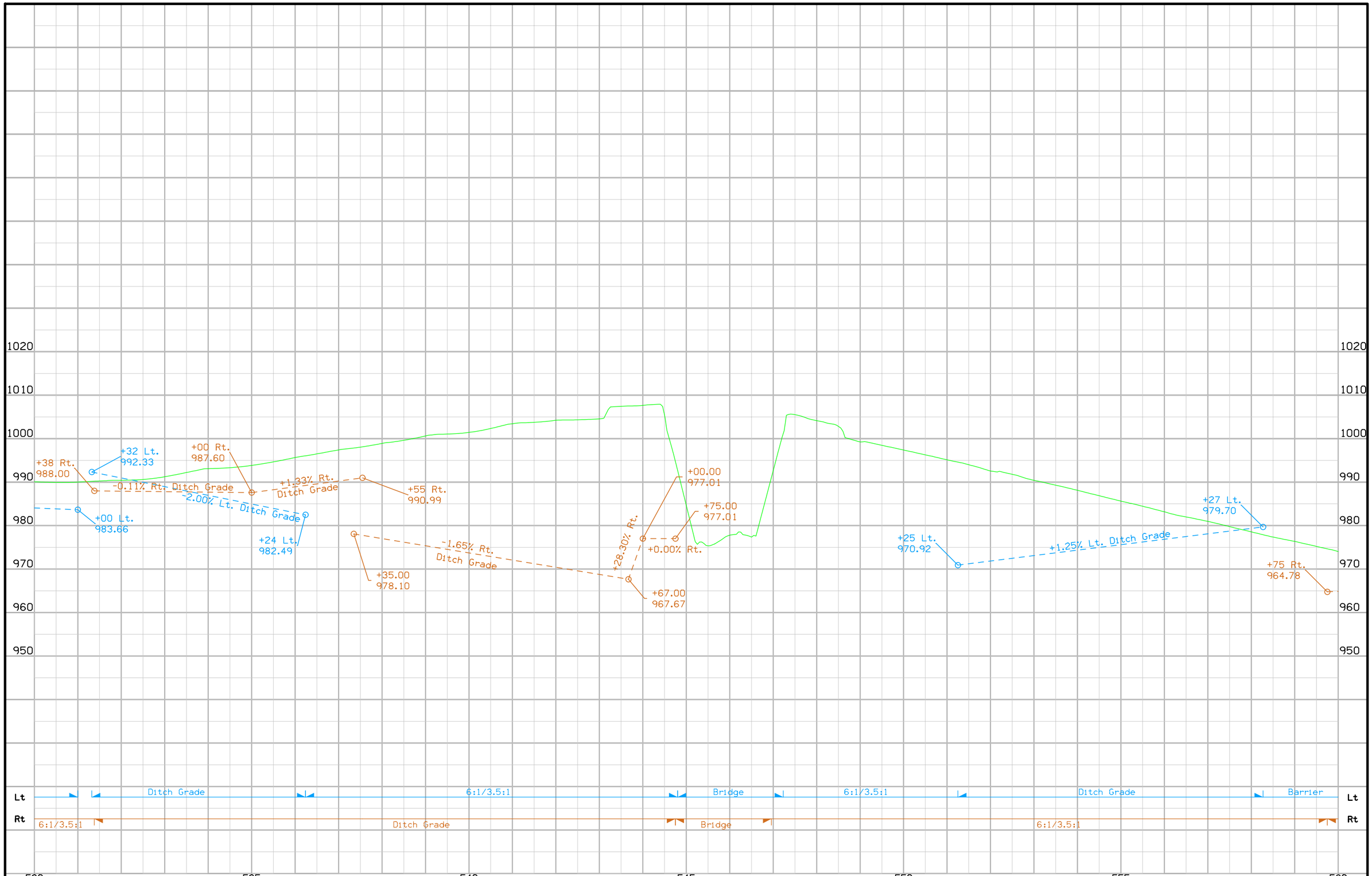

FILE NO.	ENGLISH	DESIGN TEAM	GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER	IM-080-3(178)127--13-77	SHEET NUMBER	D.7

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WEBSTER TWP
T-79N R-25W
SEC. 16

REMOVE & EXTEND
Sta. 564+00.00
24" X 76' RCP
D.A. = MEDIAN ONLY
REMOVE 8' - 24" RCP
INSTALL 25' - 24" RCP
INSTALL 29' - 24" RCP Let Down
Plus Concrete Apron
F.L. = Lt. 952.60
Ot. 959.33

Note:
Sta. 570+50.00 this project=
Sta. 570+50.00 NHS-080-3(200)128--11-77

END CONSTRUCTION
Sta.573+20.000

Note:
Sta. 573+20.00 this project=
Sta. 573+20.00 NHS-080-3(200)128--11-77

REMOVE & EXTEND
Sta. 560+00.00
24" X 72.00' RCP
D.A. = MEDIAN ONLY
REMOVE 8' - 24" RCP
INSTALL 32' - 24" RCP
F.L. = Ot. 967.54
Rt. 966.75

EXTEND
Sta. 4560+38.10
42" X 119.24' RCP
D.A. = 7.2 AC
INSTALL 38' - 42" RCP
F.L. = Lt. 963.37
Ot. 958.22
Ot. 956.48
Rt. 956.01

REMOVE & EXTEND
Sta. 567+97.20
24" X 73.39' RCP
D.A. = MEDIAN ONLY
REMOVE 8' - 24" RCP
INSTALL 39' - 24" RCP
INSTALL 45' - 24" RCP
Let Down
Plus Concrete Apron
F.L. = Lt. 937.70
Ot. 948.14

Sta. 569+39.60
48" X 231.56' RCP
D.A. = 13.3 AC
REMOVE 16' - 48" RCP
INSTALL 86' - 48" RCP
F.L. = Lt. 934.54
Ot. 935.17
Ot. 941.10
Rt. 942.21

0 100
FEET

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER D.8

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FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER D.9

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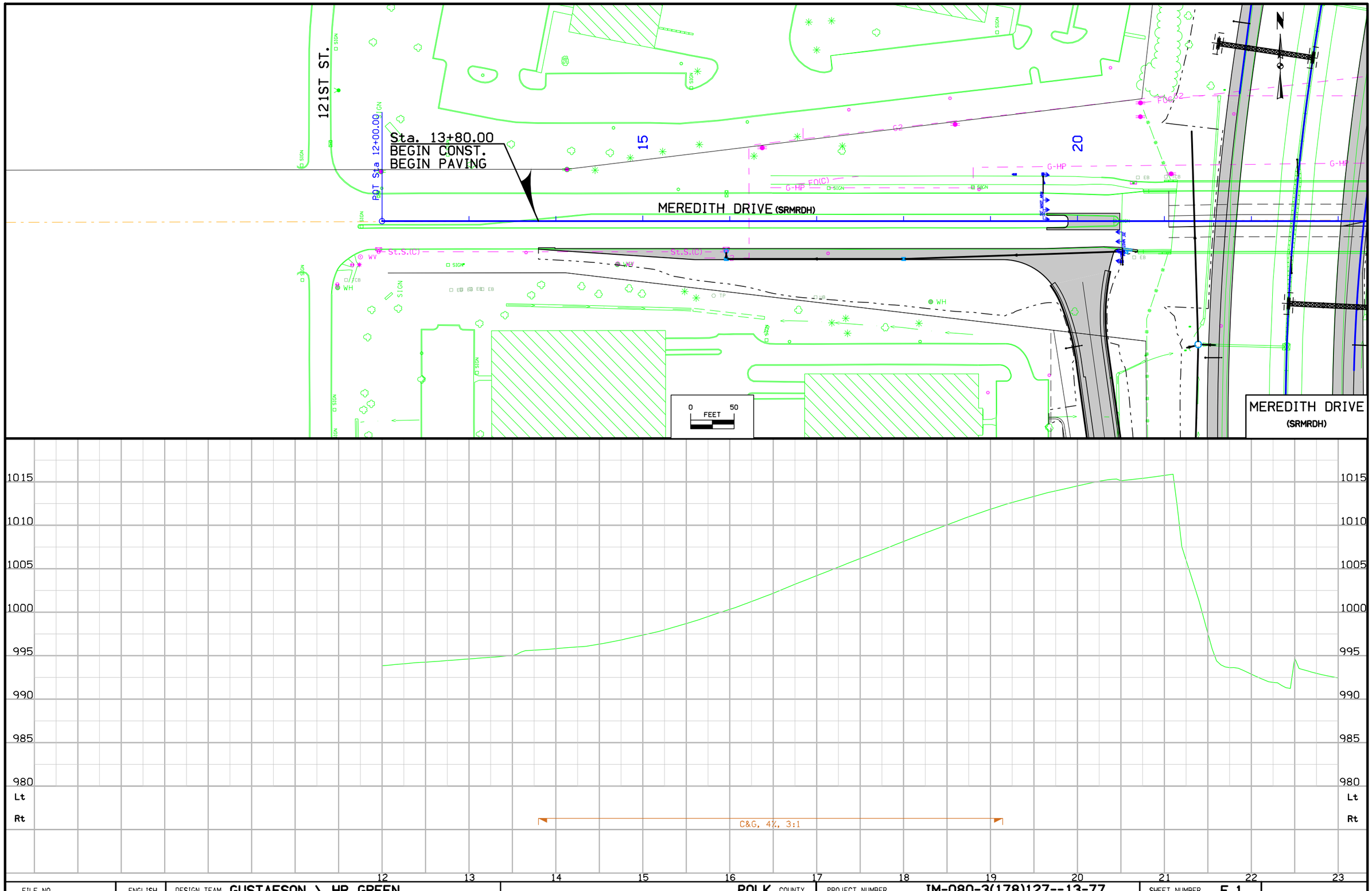

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER E.1

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INSTALL
Sta. 23+57.50
36" x 216.0' RCP
D.A. = 5.2 AC
F.L. = Lt. 987.01
Rt. 989.32

Sta. 26+64.34
END CONST.
END PAVING

25 30 35

PI Sta 30+06.48

POT Sta 36+12.50

MEREDITH DRIVE (SRMRDH)

114TH ST.

0 FEET 50

MEREDITH DRIVE
(SRMRDH)

1015 1010 1005 1000 995 990 985 980 975 970

24 25 26 27 28 29 30 31 32 33 34 35 36

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER E.2

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Sta. 10+85.05
BEGIN CONST.
BEGIN PAVING

TEMPORARY EASEMENT FOR
STORM SEWER INSTALLATION

POT Sta 8+59.48

IA 141(SUR141_S)

IA 141 RAMP D

IA 141 RAMP B

I-35/80

PI Sta 15+40.31

INSTALL
Sta. 14+19.00
48" x 240.0' RCP
D.A. = 35.9 AC
F.L. = Lt. 967.56
Rt. 965.00

WEBSTER TWP
T-79N R-25W
SEC. 16

0 FEET 50

IA 141
(SR141_S)

990
985
980
975
970
965
960
955

9 10 11 12 13 14 15 16 17 18 19 20 21

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER E.3

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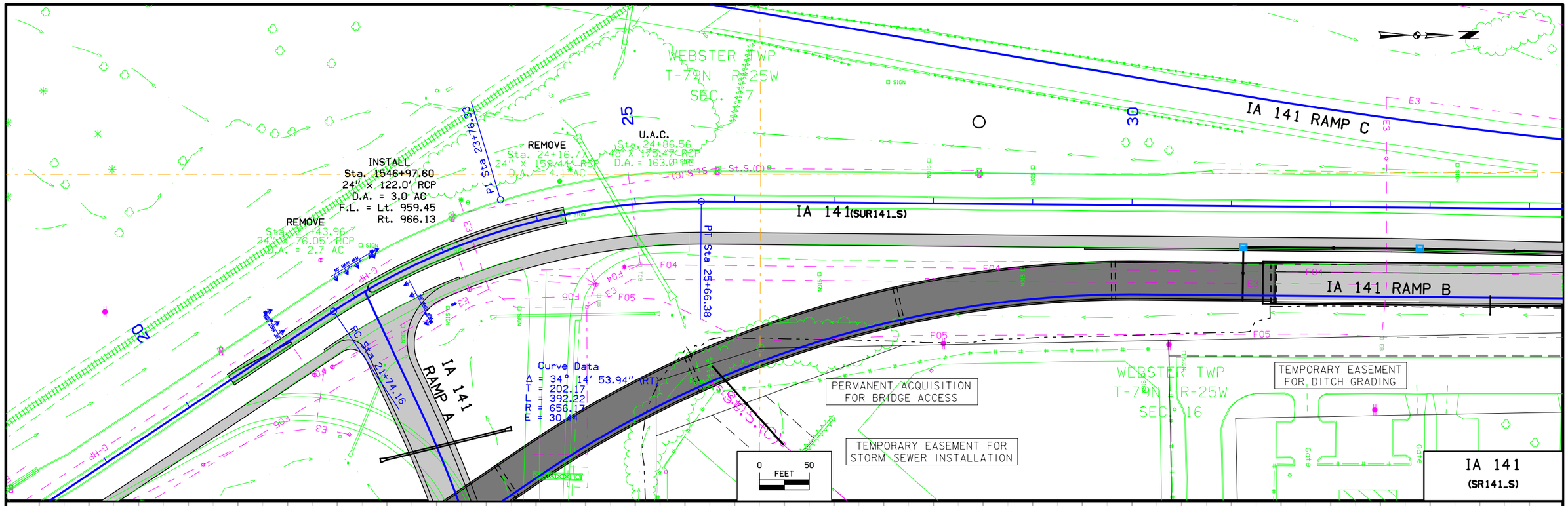

FILE NO.	ENGLISH	DESIGN TEAM	GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER	IM-080-3(178)127--13-77	SHEET NUMBER	E.4

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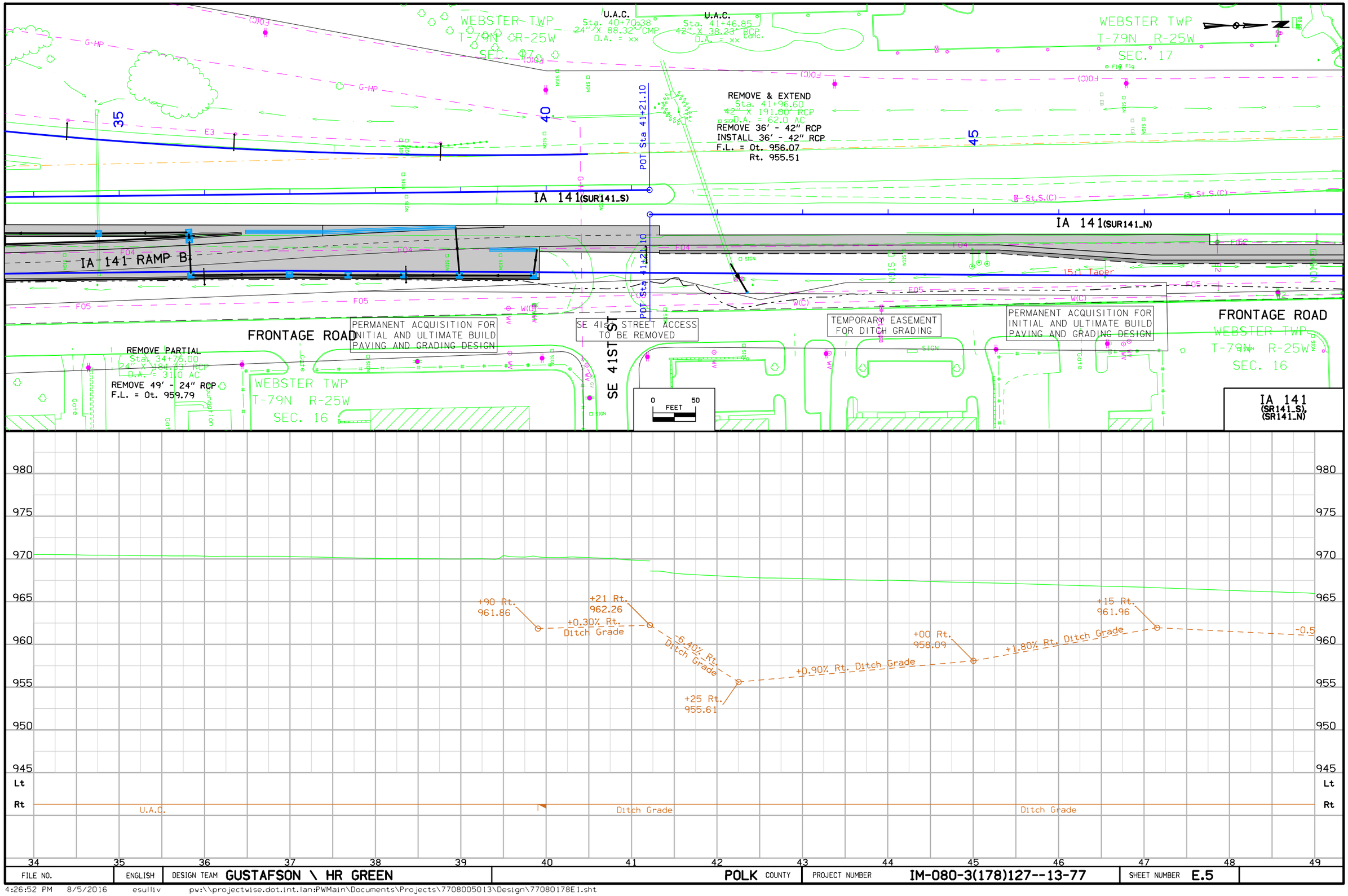

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER E.5

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WEBSTER TWP
T-79N R-25W
SEC. 17

WEBSTER TWP
T-79N R-25W
SEC. 8

WEBSTER TWP
T-79N R-25W
SEC. 16

WEBSTER TWP
T-79N R-25W
SEC. 9

U.A.C.
Sta. 51+80.95
24" X 24.59' RCP
D.A. = 4.4 AC

Sta. 60+46.07
END CONST.
END PAVING

PC Sta 59+89.93

PI Sta 62+32.39

IA 141 (SUR141_N)

FRONTAGE ROAD

SE 37TH ST

TEMPORARY EASEMENT
FOR DITCH GRADING

U.A.C.
Sta. 52+00.10
24" X 91.30' RCP
D.A. = MEDIAN ONLY

U.A.C.
Sta. 52+11.13
24" X 58.33' RCP
D.A. = MEDIAN ONLY

EXTEND
Sta. 53+39.40
24" X 191.00' RCP
D.A. = 6.6 AC

INSTALL 12' - 24" RCP
F.L. = Ot. 953.38
Rt. 953.23

Canopy

Curve Data
Δ = 1° 03' 32.21" (LT)
T = 225.46
L = 450.91
R = 24,396.96
E = 1.04

0 FEET 50

IA 141
(SR141_N)

-0.50% Rt. Ditch Grade

+77 Rt.
959.65

+72 Rt.
954.79

-3.00% Rt. Ditch Grade

+00 Rt.
947.95

Lt
Rt

Ditch Grade | 37th St. | Ditch Grade | U.A.C.

48 49 50 51 52 53 54 55 56 57 58 59

965 960 955 950 945 940 935 930

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER E.6

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Survey Information

General Information

Measurement units for this survey are US survey feet. This survey is for proposed interchange improvements at Rider Corner and I-35/80 intersection. This project is a complete field survey for the digital terrain model.

Vertical Control

Vertical datum for this survey is relative to NAVD88.

A digital level loop was run from IDOT monument designated as IA. D.O.T. 77-141-1(NGS PID BBCZ46) through the project benchmarks and returned to IA. D.O.T. 77-141-1. The loop error was allowable and the error was distributed proportionately among the project marks.

This survey observed 5 As-Built plan bench marks to compare to local ground control:

BM 504 Project STP-U-7875(638)--70-77 Elev. 958.58
Survey Elev. = 958.63

BM 505 Project NHSN-141-7(24)—2R-77 Elev. 963.67
Survey Elev. = 963.96

BM 509 Project NHSN-141-7(24)—2R-77 Elev. 938.22
Survey Elev. = 938.36

BM 512 Project NHSN-141-7(24)—2R-77 Elev. 962.56
Survey Elev. = 962.83

BM 601 Project STP-U-7875(638)--70-77 Elev. 1007.11
Survey Elev. = 1007.16

BM 602 Project STP-U-7875(638)--70-77 Elev. 927.50
Survey Elev. = 927.59

BM 603 Project STP-U-7875(638)--70-77 Elev. 937.76
Survey Elev. = 937.97

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:

Transverse Mercator Projection
Origin Lat: 40°15'N
Origin Central Meridian: 093°43'W
Projection Axis Scale: 1.000 033
False Northing: 7,000,000
False Easting: 18,500,000

The IaRTN base stations are the primary control for this project. The IDOT Survey Office provided secondary control for five FENO monuments in the project vicinity. The coordinates of the five FENO monuments were verified using the IaRTN with three observations with appropriate time spans between. The averaged observations were within tolerance and the provided control was accepted. Additional control points were placed throughout the project using the IaRTN with multiple observations. Observations were averaged to determine control coordinates. The horizontal standard deviation of these observations was less than 0.04 ft.

There has been design survey performed in the 100th Street area performed previously by Snyder & Associates, Inc. and Nilles Associates, Inc. The coordinate system used for these projects is a modified Iowa State Plane South Coordinate system scaled to ground. However, the scaling information is unreported and unknown. Four control points previously established for the 100th St. projects were observed and coordinates determined in Iowa RCS, Zone 8 coordinates. The results are shown below:

	Control Used for the Following Projects: STP-U-7875(638)--70-77 Urbandale 100th St Project ((S&A 106.1015 & 112.0818) 100th St Interchange Project (Nilles)		**RCS ZONE 8 AMES-DSM** (This Survey)	
CP1	602605.71	1575635.47	7511458.74	18494431.43
CP5	601914.71	1570335.87	7510754.77	18489133.66
CP9	601552.78	1565434.75	7510380.76	18484233.49
CP22	604456.85	1570496.25	7513297.28	18489287.79

Alignment Information

Interstate 80 Alignment Information

The horizontal alignment for this survey is a retrace of As-built Plans No. IR-35-2(204)73—12-77. Survey stationing was equated to the plan at PT at Sta. 567+59.44 (US ft.) and run back and ahead without equation throughout the survey.

Equations are as follows:

PT Sta. 475+65.42 This Survey
= PT Sta. 475+65.50 As-built Plans Project No. IR-35-2(204)73—12-77

PT Sta. 567+59.44 This Survey
= PT Sta. 567+59.44 As-built Plans Project No. IR-35-2(204)73—12-77

PI Sta. 597+32.96 This Survey
= PI Sta. 597+33.80 As-built Plans Project No. IM-35-3(70)77—13-77

PI Sta. 707+53.21 This Survey
= PI Sta. 707+53.50 As-built Plans Project No. IM-35-3(70)77—13-77

Ia 141 Alignment Information

This alignment retraces a 2000 Preliminary survey (SAP 322) alignment. The 2000 survey was related to a modified state plane coordinate system.

A 2013 survey (SAP 322.4) used SAP 322 alignment points. The 2013 alignment coordinates were scaled back to unmodified Iowa State Plane South and then transformed to IaRCS zone 8.

To check the relationship of the 2000 survey to this survey the following comparison was made:

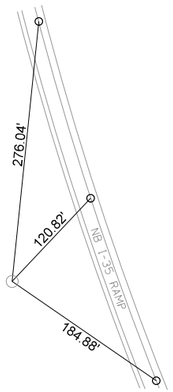
Inverse Pt. 13(2000) to Pt. 320(2000) N0°22'19" W Distance 4,240.18
Inverse Pt. RJM13(IaRCS) to Pt. RJM320(IaRCS) N0°31'04" W Distance 4,240.15

Two alignments were created in IaRCS zone 8. SUR141A begins south of I 80/35 at Station 8+59.48 and continues north to a 28.62 ft lateral offset right at 90° to the back tangent at Station 41+21.10. This retraces the alignment from metric as built ramp reconstruction plan STP-141-7(18)--2C-77 however US ft. stationing was used in place of metric stationing. US ft. stationing relates to metric stationing at PI Station 23+76.33 (US Ft.) = PI Station 4003+96.899m. SUR141B begins at Station 41+21.10 at the lateral offset and continues to PT Station 64+50.83. This retraces the alignment and stationing from as built plan Fn-141-7(7)—21-77.

VERTICAL CONTROL

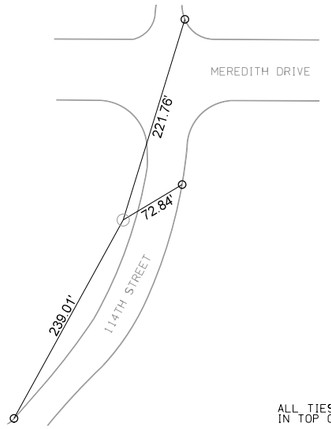
Point	North	East	Elevation	Station	Offset	Feature	Description
BM100	7510868.879	18491498.440	919.970	619+67.99	-90.831	BM	CUT TRIANGLE
BM101	7510790.388	18489824.680	903.200	602+92.46	-75.106	BM	CUT X
BM102	7510749.380	18488204.390	921.080	586+71.72	-94.214	BM	CUT TRIANGLE
BM103	7510729.339	18487383.120	929.970	578+50.27	-104.478	BM	CUT TRIANGLE
BM104	7510617.234	18485831.080	969.310	563+06.65	-85.938	BM	CUT TRIANGLE
BM105	7510664.882	18485566.550	961.260	560+71.53	-193.504	BM	ROW RAIL
BM106	7510975.912	18484163.470	961.600	551+31.34	-1078.828	BM	RR SPIKE
BM107	7510318.832	18486911.150	951.560	573+63.48	288.342	BM	GIN SPIKE
BM109	7510687.805	18491554.510	915.210	620+17.23	92.217	BM	W CORNER HEADWALL
BM110	7509532.000	18485052.000	980.210	550+33.57	613.516	BM	NW BOLT LP BASE
BM505	7512681.310	18484235.070	963.960	556+77.35	-2544.770	BM	CUT X NW COR SIGN BASE
BM509	7514208.935	18483980.970	938.360	558+33.82	-4057.446	BM	IHC HEADWALL OF RCB
BM512	7516715.972	18483979.160	962.830	561+04.68	-6449.039	BM	CUT X NW HEAD BOLT HYDRANT
BM515	7510640.576	18490003.990	902.220	604+66.03	81.319	BM	IHC HEADWALL OF RCB
BM602	7510807.616	18489283.100	927.590	597+51.91	-112.613	BM	IHCBM NE WINGWALL OF 100TH ST BRIDGE OVER INTERSTATE
BM603	7513146.583	18489305.720	937.970	598+62.14	-2449.091	BM	RR SPIKE IN PP SE QUAD 100TH ST & NW 54TH AVE

STA. 478+01.08, 158.91′ Rt.
CP No. 778001, FND FENO MONUMENT
N=7503180.88 E=18483683.68



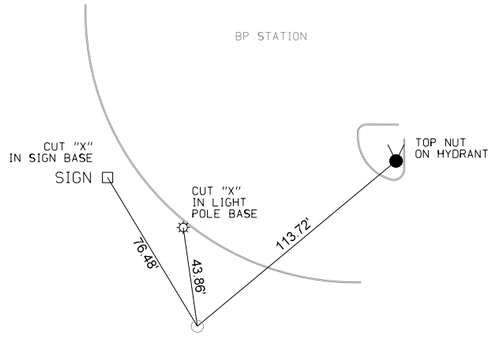
ALL TIES CUT "X" IN EDGE OF PAVEMENT

STA. 524+12.89, 717.13′ Rt.
CP No. 778002, FND FENO MONUMENT
N=7507764.25 E=18484216.78

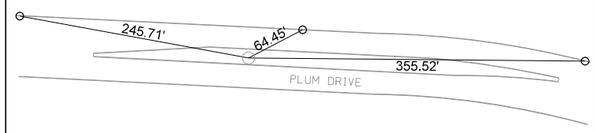


ALL TIES CUT "X" IN TOP OF CURB

STA. 557+95.30, 3115.84′ Lt.
CP No. 771411, FND FENO MONUMENT
N=7513297.91 E=18484233.98

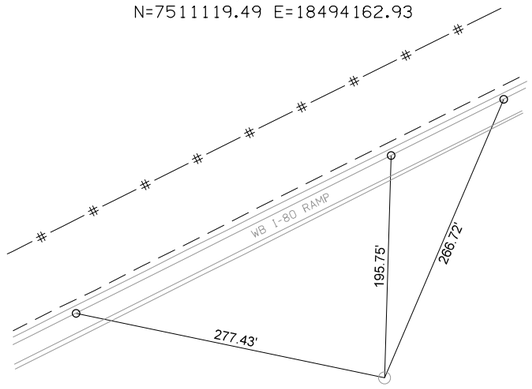


STA. 585+38.66, 698.23′ Rt.
CP No. 778003, FND FENO MONUMENT
N=7509952.56 E=18488100.65



ALL TIES CUT "X" IN TOP OF CURB

STA. 646+39.99, 241.43′ Lt.
CP No. 778004, FND FENO MONUMENT
N=7511119.49 E=18494162.93



ALL TIES CUT "X" IN EDGE OF PAVEMENT

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER G.2

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)
I-35/80																			
20000		475+65.42	7,502,944.28	18,483,526.17															
20005								522+84.60	7,507,663.37	18,483,498.10	551+02.06	7,510,480.78	18,483,481.35	567+59.44	7,510,584.70	18,486,296.89			
20010		567+59.44	7,510,584.70	18,486,296.89															
20020		597+32.96	7,510,694.37	18,489,268.39															
20030		707+53.21	7,511,107.27	18,500,280.90															
MEREDITH DR																			
39999		5+00.00	7,507,929.79	18,481,759.01															
40000		12+00.00	7,507,924.50	18,482,458.99															
40001		30+06.48	7,507,922.86	18,484,265.47															
40002		36+12.50	7,507,918.28	18,484,871.47															
40003		39+26.28	7,507,915.91	18,485,185.25															
60000								39+26.28	7,507,915.91	18,485,185.25	39+90.39	7,507,916.74	18,485,249.35	40+54.33	7,507,909.37	18,485,313.03			
60001								40+54.33	7,507,909.37	18,485,313.03	41+18.43	7,507,902.01	18,485,376.71	41+82.35	7,507,902.84	18,485,440.81			
60002								43+27.37	7,507,901.74	18,485,585.82	43+89.85	7,507,900.16	18,485,648.28	44+52.17	7,507,906.37	18,485,710.45			
60003								44+52.17	7,507,906.37	18,485,710.45	45+14.65	7,507,912.58	18,485,772.63	45+76.98	7,507,911.00	18,485,835.09			
40009		55+74.29	7,507,903.46	18,486,832.38															
IA 141_S																			
22014		8+59.48	7,509,067.50	18,484,894.59															
22012		15+40.31	7,509,607.51	18,484,479.96															
22005								21+74.16	7,510,135.19	18,484,128.78	23+76.33	7,510,303.50	18,484,016.77	25+66.38	7,510,505.65	18,484,018.91			
22020		41+21.10	7,512,060.28	18,484,035.30															
IA 141_N																			
22100		41+21.10	7,512,059.98	18,484,063.92															
22105								59+99.93	7,513,938.39	18,484,103.49	62+25.39	7,514,163.80	18,484,108.25	64+50.83	7,514,389.26	18,484,108.85			
DOUGLAS RAMP A																			
34010		1571+91.09	7,502,647.30	18,483,020.26															
34005								1573+88.09	7,502,844.28	18,483,022.55	1575+57.94	7,503,014.13	18,483,024.53	1577+20.59	7,503,161.92	18,483,108.25			
34015								1579+54.59	7,503,365.52	18,483,223.59	1582+88.68	7,503,656.21	18,483,388.27	1586+10.92	7,503,989.80	18,483,406.58			
34025								1586+10.92	7,503,989.80	18,483,406.58	1591+93.14	7,504,571.14	18,483,438.49	1597+75.00	7,505,153.35	18,483,435.03			
34030		1597+75.00	7,505,153.35	18,483,435.03															
DOUGLAS RAMP D																			
37000		4571+85.24	7,502,635.53	18,484,031.81															
37005								4575+08.01	7,502,929.45	18,483,898.41	4580+34.56	7,503,408.92	18,483,680.78	4585+52.13	7,503,932.48	18,483,624.81			
37007								4585+52.13	7,503,932.48	18,483,624.81	4588+16.29	7,504,195.14	18,483,596.73	4590+80.00	7,504,459.29	18,483,595.16			
37010		4590+80.00	7,504,459.29	18,483,595.16															
MEREDITH RAMP B																			
35040		2513+75.00	7,506,754.49	18,483,621.51															
35005								2519+88.00	7,507,366.37	18,483,658.65	2521+18.91	7,507,497.04	18,483,666.58	2522+49.19	7,507,624.46	18,483,696.60			
35000		2525+56.22	7,507,923.31	18,483,766.99															
MEREDITH RAMP C																			
36040		3513+50.00	7,506,728.21	18,483,405.66															
36005								3513+50.00	7,506,728.21	18,483,405.66	3514+63.48	7,506,841.65	18,483,402.72	3515+76.72	7,506,954.04	18,483,386.96			
36010		3525+55.96	7,507,923.78	18,483,250.99															
IA 141 RAMP A																			
34120		1545+25.13	7,510,166.86	18,484,108.98															
34105								1546+55.29	7,510,221.85	18,484,226.95	1547+84.99	7,510,276.64	18,484,344.51	1549+13.68	7,510,305.04	18,484,471.06			
34100		1562+25.00	7,510,592.23	18,485,750.54															
IA 141 RAMP B																			
35110		2523+75.00	7,507,751.80	18,483,576.95															
35103								2523+75.00	7,507,751.80	18,483,576.95	2527+99.92	7,508,176.59	18,483,587.64	2532+12.38	7,508,560.33	18,483,770.11			
35105								2532+12.38	7,508,560.33	18,483,770.11	2535+86.51	7,508,898.21	18,483,930.77	2539+55.04	7,509,173.65	18,484,183.95			
35115								2542+48.04	7,509,389.37	18,484,382.23	2547+22.41	7,509,738.62	18,484,703.25	2550+50.84	7,510,131.55	18,484,437.49			
35125								2553+04.84	7,510,341.95	18,484,295.19	2556+35.77	7,510,616.07	18,484,109.78	2559+46.37	7,510,946.98	18,484,113.27			
35130		2566+16.96	7,511,617.54	18,484,120.34															
35200		2576+36.61	7,512,636.81	18,484,148.08															
35210		2579+37.04	7,512,937.17	18,484,154.41															
IA 141 RAMP C																			
36130		3526+82.71	7,508,070.59	18,483,445.64															
36115								3536+55.24	7,509,034.77	18,483,572.72	3538+85.64	7,509,263.21	18,483,602.83	3541+15.99	7,509,490.21	18,483,642.28			
36105								3556+63.47	7,511,014.84	18,483,907.22	3561+53.78	7,511,497.92	18,483,991.16	3566+41.71	7,511,988.23	18,483,991.82			
36110		3566+41.71	7,511,988.23	18,483,991.82															

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)
IA 141 RAMP D																			
37110		4546+48.96	7,509,232.14	18,484,768.17															
37105								4551+12.56	7,509,514.47	18,485,135.89	4552+19.57	7,509,579.64	18,485,220.76	4553+23.47	7,509,673.56	18,485,272.03			
37115								4558+19.37	7,510,108.83	18,485,509.63	4562+01.59	7,510,444.32	18,485,692.78	4565+25.00	7,510,489.15	18,486,072.36			
37130		4565+25.00	7,510,489.15	18,486,072.36															
MSE WALL 34200 (NORTH SIDE SR141A)																			
34201		800+00.00	7,510,354.78	18,484,599.61															
34202		801+05.25	7,510,377.83	18,484,702.30															
34200-1								802+01.38	7,510,393.30	18,484,797.17	804+84.39	7,510,457.51	18,485,072.80	807+67.24	7,510,537.22	18,485,344.36			
MSE WALL 35500 (EAST SIDE SRMRDHB)																			
35500-1								300+00.00	7,507,419.61	18,483,679.27	300+12.82	7,507,432.37	18,483,680.50	300+25.63	7,507,445.10	18,483,681.95			
35500-2								300+25.63	7,507,445.10	18,483,681.95	300+55.20	7,507,474.19	18,483,687.27	300+84.76	7,507,503.05	18,483,693.72			
35500-3								300+84.76	7,507,503.05	18,483,693.72	301+14.39	7,507,531.96	18,483,700.19	301+44.02	7,507,560.61	18,483,707.79			
35500-4								301+44.02	7,507,560.61	18,483,707.79	301+73.71	7,507,589.31	18,483,715.40	302+03.40	7,507,617.68	18,483,724.15			
35501		304+31.63	7,507,839.84	18,483,776.48															
MSE WALL 35600 (WEST SIDE SRMRDHB)																			
35600		400+00.00	7,507,131.21	18,483,621.13															
35601		401+67.93	7,507,299.13	18,483,620.13															
35600-1								402+37.37	7,507,368.45	18,483,624.34	403+71.22	7,507,502.06	18,483,632.45	405+04.43	7,507,632.34	18,483,663.14			
35602		407+33.42	7,507,855.24	18,483,715.64															
MSE WALL 35700 (EAST SIDE SR141B)																			
35700		500+00.00	7,511,070.52	18,484,122.95															
35701		505+46.88	7,511,617.37	18,484,128.72															
35702		508+58.49	7,511,928.86	18,484,137.19															
MSE WALL 35710 (WEST SIDE SR141B)																			
35710		600+00.00	7,511,070.97	18,484,080.20															
35710-1								601+57.68	7,511,228.64	18,484,081.87	603+06.43	7,511,377.38	18,484,083.43	604+55.12	7,511,526.02	18,484,077.59			
MSE WALL 35720 (ABUTMENT SR141B)																			
35720		700+00.00	7,511,070.97	18,484,080.20															
35721		700+42.75	7,511,070.52	18,484,122.95															
MSE WALL 36500 (WEST SIDE SRMRDHC)																			
36500		100+00.00	7,507,074.79	18,483,360.40															
36501		104+09.99	7,507,479.81	18,483,296.71															
36500-1								106+93.84	7,507,760.90	18,483,257.30	107+28.25	7,507,794.99	18,483,252.52	107+62.36	7,507,827.08	18,483,240.10			
36500-2								107+62.36	7,507,827.08	18,483,240.10	107+75.24	7,507,839.09	18,483,235.46	107+87.97	7,507,849.50	18,483,227.87			
MSE WALL 36600 (EAST SIDE SRMRDHC)																			
36600		200+00.00	7,507,524.87	18,483,329.52															
36600-1								202+56.84	7,507,779.22	18,483,293.86	203+00.79	7,507,822.75	18,483,287.76	203+43.84	7,507,865.72	18,483,296.98			
SUR141LA (EXISTING 141 LOOP A)																			
54500		2011+13.35	7,509,268.86	18,484,739.98															
54510								2015+79.43	7,509,551.57	18,485,110.52	2070+42.16	7,512,865.12	18,489,453.54	2024+24.82	7,510,009.76	18,484,796.47			
SUR141LB (EXISTING 141 LOOP B)																			
55000								3020+09.20	7,510,020.77	18,484,254.61	3022+30.97	7,509,828.05	18,484,364.34	3027+33.49	7,509,989.39	18,484,516.50			
SUR141RA (EXISTING 141 RAMP A)																			
54000		1010+67.76	7,509,232.69	18,484,767.75															
54010								1015+33.84	7,509,515.40	18,485,138.30	1016+37.25	7,509,578.13	18,485,220.51	1017+37.69	7,509,668.64	18,485,270.53			
54020								1022+56.24	7,510,122.50	18,485,521.34	1025+05.95	7,510,339.10	18,485,645.57	1027+38.33	7,510,438.02	18,485,874.84			
SUR141RC (EXISTING 141 RAMP C)																			
56000		4024+28.15	7,510,368.29	18,484,031.97															
56010								4028+73.06	7,510,350.39	18,484,476.52	4031+81.18	7,510,338.00	18,484,784.38	4034+84.33	7,510,420.27	18,485,081.31			
56003		4038+68.47	7,510,524.98	18,485,450.91															

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	
I-35/80																
20005											88° 13′ 37.23″ RT	2,817.46′	4,474.84′	2,906.02′	1,141.57′	
MEREDITH DR																
60000											7° 20′ 10.32″ RT	64.11′	128.04′	1,000.00′	2.05′	
60001											7° 20′ 07.65″ LT	64.10′	128.03′	1,000.00′	2.05′	
60002											7° 09′ 02.91″ LT	62.48′	124.81′	1,000.00′	1.95′	
60003											7° 09′ 03.00″ RT	62.48′	124.81′	1,000.00′	1.95′	
IA 141_S																
22005											34° 14′ 53.94″ RT	202.17′	392.22′	656.17′	30.44′	
IA 141_N																
22105											1° 03′ 32.21″ LT	225.46′	450.91′	24,396.96′	1.04′	
DOUGLAS RAMP A																
34005											28° 51′ 53.85″ RT	169.86′	332.50′	660.00′	21.51′	
34015											26° 23′ 21.65″ LT	334.09′	656.33′	1,425.00′	38.64′	
34025											3° 28′ 58.37″ LT	582.22′	1,164.08′	19,150.00′	8.85′	
DOUGLAS RAMP D																
37005											18° 18′ 41.06″ RT	526.55′	1,044.11′	3,267.00′	42.16′	
37007											5° 45′ 39.31″ RT	264.16′	527.87′	5,250.00′	6.64′	
MEREDITH RAMP B																
35005											9° 46′ 51.48″ RT	130.91′	261.19′	1,530.00′	5.59′	
MEREDITH RAMP C																
36005											6° 29′ 42.69″ LT	113.48′	226.72′	2,000.00′	3.22′	
IA 141 RAMP A																
34105											12° 20′ 14.51″ RT	129.70′	258.39′	1,200.00′	6.99′	
IA 141 RAMP B																
35103											23° 59′ 21.16″ RT	424.92′	837.38′	2,000.00′	44.64′	
35105											17° 09′ 27.98″ RT	374.13′	742.66′	2,480.00′	28.06′	
35115											76° 39′ 40.60″ LT	474.37′	802.80′	600.00′	164.87′	
35125											34° 40′ 36.39″ RT	330.93′	641.54′	1,060.00′	50.46′	
IA 141 RAMP C																
36115											2° 20′ 58.21″ RT	230.41′	460.75′	11,236.00′	2.36′	
36105											9° 46′ 54.34″ LT	490.32′	978.25′	5,730.00′	20.94′	
IA 141 RAMP D																
37105											23° 51′ 11.36″ LT	107.00′	210.91′	506.60′	11.18′	
37115											54° 38′ 04.46″ RT	382.23′	705.63′	740.00′	92.88′	
MSE WALL 34200 (NORTH SIDE SR141A)																
34200-1											3° 14′ 48.69″ LT	283.01′	565.87′	9,985.63′	4.01′	
MSE WALL 35500 (EAST SIDE SRMRDHB)																
35500-1											0° 58′ 12.57″ RT	12.82′	25.63′	1,513.63′	0.05′	
35500-2											2° 14′ 46.74″ RT	29.57′	59.13′	1,508.25′	0.29′	
35500-3											2° 15′ 25.27″ RT	29.63′	59.26′	1,504.24′	0.29′	
35500-4											2° 16′ 04.21″ RT	29.69′	59.38′	1,500.23′	0.29′	
MSE WALL 35600 (WEST SIDE SRMRDHB)																
35600-1											9° 46′ 51.48″ RT	133.85′	267.05′	1,564.38′	5.72′	
MSE WALL 35710 (WEST SIDE SR141B)																
35710-1											2° 51′ 24.10″ LT	148.75′	297.44′	5,965.63′	1.85′	
MSE WALL 36500 (WEST SIDE SRMRDHC)																
36500-1											13° 10′ 11.83″ LT	34.42′	68.53′	298.13′	1.98′	
36500-2											14° 57′ 07.87″ LT	12.88′	25.61′	98.12′	0.84′	
MSE WALL 36600 (EAST SIDE SRMRDHC)																
36600-1											20° 05′ 27.90″ RT	43.95′	87.01′	248.13′	3.86′	

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	
SUR141LA (EXISTING 141 LOOP A)																
54510											174° 10′ 16.74″ LT	5,462.73′	845.39′	278.10′	5,191.70′	
SUR141LB (EXISTING 141 LOOP B)																
55000											252° 58′ 45.12″ RT	221.77′	724.29′	164.04′	439.89′	
SUR141RA (EXISTING 141 RAMP A)																
54010											23° 43′ 32.61″ LT	103.41′	203.85′	492.28′	10.74′	
54020											36° 49′ 43.82″ RT	249.70′	482.09′	750.00′	40.48′	
SUR141RC (EXISTING 141 RAMP C)																
56010											17° 47′ 27.94″ LT	308.11′	611.27′	1,968.58′	23.97′	

TRAFFIC CONTROL PLAN

Mainline I-35/80
Maintain three lanes of traffic (both directions) at all times during all stages of construction except as noted elsewhere in the traffic control plan. Shift existing three inside lanes 12 feet toward existing mainline median barrier between Douglas Avenue and NW 100th Street interchanges for activities as shown in the traffic control plan.

Limited closures will be necessary on Interstate 35/80 for delivery and setting of proposed Ramp B fly-over bridge beams. A detour route has been established and is included on Sheet J.3. The Contractor shall be responsible for installing, maintaining, and removing the detour signage; including uncovering and re-covering the detour signs as necessary. Closures will be short-term and restricted to off-peak travel hours (12:00 AM to 6:00 AM). Notify the Engineer at least 72 hours in advance of the proposed closure. The Engineer has final approval of proposed time and duration of closure. Use Detail on Sheet J.4 to transition traffic off of the Interstate, only at Douglas Avenue and NW 86th Street. Use the existing traffic signals at the ramp terminals in lieu of flaggers. Road Closed barricades will be required to prevent traffic from entering or re-entering the Interstate opposite the off-ramps at Douglas Avenue, NW Urbandale Drive, NW 100th Street, and NW 86th Street. See Tab. 108-13A in the C Sheets for locations.

The Contractor shall coordinate interim traffic signal timing plans along the proposed detour route with the City of Urbandale.

Delivery of equipment and materials to the median area shall be done during off-peak travel hours.

Mainline Highway 141 / NW Urbandale Drive
Maintain two lanes of traffic (both directions) at all times during all stages of construction except as noted elsewhere in the traffic control plan. Shift existing lanes to avoid areas of construction as detailed in staging notes.

Limited closures will be necessary on Iowa Highway 141 / NW Urbandale Drive for delivery and setting of proposed Ramp B fly-over bridge beams. A detour route has been established and is included on Sheet J.5. The Contractor shall be responsible for installing, maintaining, and removing the detour signage; including uncovering and re-covering the detour signs as necessary. Closures will be short-term and restricted to off-peak travel hours (12:00 AM to 6:00 AM). Notify the Engineer at least 72 hours in advance of the proposed closure. The Engineer has final approval of proposed time and duration of closure. Road Closed barricades will be required to prevent traffic from entering the closed roadway. See Tab. 108-13A in the C Sheets for locations.

The Contractor shall coordinate interim traffic signal timing plans along the proposed detour route with the City of Urbandale.

Douglas Avenue Interchange
Maintain traffic on entrance ramp (Ramp D) and exit ramp (Ramp A) at all times during all stages of construction except as noted elsewhere in the traffic control plan.

Meredith Drive Interchange
Maintain two lanes of traffic (both directions) at all times during all stages of construction except as noted elsewhere in the traffic control plan. Construct proposed ramp pavement in a manner that maintains traffic flow.

Highway 141 Interchange
Maintain traffic on entrance ramp (Ramps C & D) and exit ramp (Ramp A) at all times during all stages of construction except as noted elsewhere in the traffic control plan. Close and remove existing loop ramps as detailed in the staging notes. Construct proposed pavement and shift traffic as specified in the staging notes in a manner that maintains traffic flow.

NW 100th Street Interchange
Maintain traffic on exit ramps (Ramp A & B) and entrance ramps (Ramps C & D) at all times during all stages of construction except as noted elsewhere in the traffic control plan. Shift traffic as specified in the staging notes in a manner that maintains traffic flow.

Highway 141/SE 37th Street Intersection
Maintain traffic through intersection (all directions) at all times during all stages of construction except as noted elsewhere in the traffic control plan. Refer to staging notes for stages and locations where heavy truck turning movements will be restricted at the intersection and require alternative routing.

General Notes
Traffic control on this project shall be in accordance with the standard road plans shown in Tabulation 105-4 and the specific layouts shown in plans. For additional complementary information, refer to Part 6 of the Manual On Uniform Traffic Control Devices (MUTCD) and the current standard specifications and supplemental specifications.

The Contractor for the permanent signing project will remove existing signs and posts within the project limits, as required for construction, and temporarily cover existing signs that convey a message contrary to the message of the temporary signing and not applicable to the working conditions (i.e. Speed Limit signs). The project's Contractor shall provide the Iowa DOT, Polk County, and the City of Urbandale two (2) weeks advance notice prior to the permanent signing Contractor removing and temporarily covering existing signs.

The Contractor shall notify the Resident Construction Engineer, Polk County, and the City of Urbandale two (2) weeks prior to temporary and/or permanent ramp closures, changes in traffic patterns during construction, and changes to private property access.

The Contractor shall be responsible for furnishing, installing, maintaining, and removing the signage for temporary detour routes.

Refer to the Staging Notes for traffic control plan details.

STAGING NOTES

General Notes:
Interstate 35/80 is a high volume roadway. Construction activity in the area will disrupt traffic on Interstate 35/80, Douglas Avenue, Meredith Drive, NW Urbandale Drive, IA Highway 141, NW 100th Street, NW 86th Street and other local roadways. Therefore, it is advisable to adopt a construction sequence that directs activities in an orderly manner and minimizes disruptions to traffic patterns as much as practical.

It is not the intent of the sequence of construction to confine the Contractor's activity to the areas of suggested stages alone. It is understood that some of the various steps may occur simultaneously. Therefore, the Contractor may conduct several operations concurrently on the project, provided that traffic is maintained and that these operations do not conflict with the staging operations indicated herein.

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, would result in more efficient staging operations. Should the Contractor desire to deviate from the original plan, they shall submit a written alternate plan to the Resident Construction Engineer for approval.

Douglas Avenue Ramp A and Ramp D shall not be closed concurrently. Douglas Avenue Ramp A shall not be closed for greater than thirty (30) calendar days. Douglas Avenue Ramp D shall be closed for greater than thirty (30) calendar days. The Contractor shall expedite work necessary to minimize the length of time the ramps are closed.

Iowa Highway 141 Ramp A, Ramp C and Ramp D shall not be closed concurrently. Iowa Highway 141 Ramp A shall not be closed for greater than sixty (60) calendar days. Iowa Highway 141 Ramp C shall not be closed for greater than thirty (30) calendar days. Iowa Highway 141 Ramp D shall not be closed for greater than thirty (30) calendar days. The Contractor shall expedite work necessary to minimize the length of time the ramps are closed.

Iowa Highway 141 Ramp H shall not be closed to complete necessary work until the newly constructed Ramp B fly-over is completed and open to traffic. Iowa Highway 141 Ramp C shall not be closed to complete necessary work until newly constructed Ramp B fly-over is completed and open to traffic.

Stage 1 (Refer to sheets J.12 to J.26)
Traffic:
1) NB and SB I-35/80 traffic will operate on existing mainline pavement.
2) Highway 141 northbound traffic will operate on existing pavement south of Ramp A terminal. Outside lane north of the Ramp A terminal will be closed up to SE 37th Street with an access to SE 41st Street.
3) Highway 141 northbound, right-turn truck movements eastbound on SE 37th Street shall be routed via SE 41st Street. Provide right-turn deceleration lane as shown on applicable J sheets.
4) Highway 141 Ramp E loop entrance will be closed. Detour traffic via the 100th Street Interchange.

Construction:
1) Grading for I-35/80 NB and SB lane widening that does not affect mainline and ramp traffic operations; Meredith Drive Ramps B and C; and Highway 141 widening that does not affect staged I-35/80 mainline or ramp traffic operations as detailed in J sheets.
2) Construct walls for Meredith Drive Ramps B and C and 141 Ramp B.
3) Construct Highway 141 Ramp B fly-over ramp bridge piers.
4) Pave Highway 141 lane(s) and shoulder between Sta. 41+32 and 60+46.
5) Remove existing Highway 141 Ramp E loop entrance ramp.

Stage 2A (Refer to sheets J.27 to J.41) (Refer to J.6 for Detour Information)
Traffic:
1) NB I-35/80 traffic will operate on existing mainline pavement and median shoulder between Sta. 475+65 and Sta. 583+15. and SB I-35/80 traffic will operate on existing mainline pavement and median shoulder between Sta. 475+65 and Sta. 569+20. Existing three lanes in each direction will be shifted 12 feet toward median barrier and temporary barrier shall be installed along the outside lane.
2) Douglas Avenue Ramps A and D will be closed. Detour traffic via the 100th Street Interchange and IA 141 Interchange.
3) Highway 141 Northbound traffic will operate on reduced existing pavement width south of the Ramp A terminal. The outside lane north of the Ramp A terminal shall be closed up to SE 37th St. SE 41st Street access will be closed. Install temporary barrier rail along outside lane.
4) Meredith Drive traffic will operate on reduced existing pavement width during construction. Temporary barrier and/or channelizes shall be installed along outside lane(s).

Construction:
1) Pave I-35/80 NB and SB outside lane(s) and shoulder as shown on applicable J sheets.
2) Pave Meredith Drive Ramps B and C, portions of Highway 141 Ramp A and portions of Highway 141 as detailed on applicable J sheets.
3) Grade and pave Douglas Avenue Ramps A and D.
4) Pave Highway 141 Ramp B and associated bridge deck.

Stage 2B (Refer to sheets J.42 to J.56) (Refer to J.7 for Detour Information)
Traffic
1) NB I-35/80 traffic will be shifted 12 feet towards the median barrier and operate on existing mainline pavement and median shoulder between Sta. 521+35 and Sta. 583+15. and SB I-35/80 traffic will be shifted 12 feet toward the median barrier and operate on existing mainline pavement and median shoulder between Sta. 514+45 and Sta. 569+20 and temporary barrier shall be installed along outside lane.
2) Highway 141 Ramps A, C, D and H loop exit ramp will be closed. Detour traffic via the 100th Street interchange and the Meredith Drive Interchange.
3) Highway 141 Northbound traffic will operate on reduced existing pavement width south of the Ramp A terminal. The outside lane north of the Ramp A terminal shall be closed up to SE 37th St. SE 41st Street access will be closed. Install temporary barrier rail along the outside lane.
4) Open Meredith Drive Ramps B and C to traffic.

Construction:
1) Grade and pave remaining I-35/80 NB and SB outside lane(s) and shoulder as shown on applicable J sheets.
2) Construct wall for Highway 141 Ramp A.
3) Grade and pave Highway 141 Ramps A, C and D
4) Grade and pave remaining Highway 141 shoulder as shown on applicable J sheets.
5) Continue paving for Highway 141 Ramp B bridge deck.
6) Remove existing Highway 141 Ramp H loop exit ramp.

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
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
- Drum
- Temporary Lane Separator
- Tubular Marker
- Channelizer Marker
- Concrete Barrier Marker
- Delineator
- Temporary Barrier Rail
- Pavement Removal
- Sand Barrel Layout
- Crash Cushion (Temp or Perm)
- Traffic Signal
- Flagger
- Temporary Floodlighting
- Traffic Sign
- Type III Barricade
- Type A Warning Light
- Direction of Traffic
- Safety Closure
- Lane Identification (1)

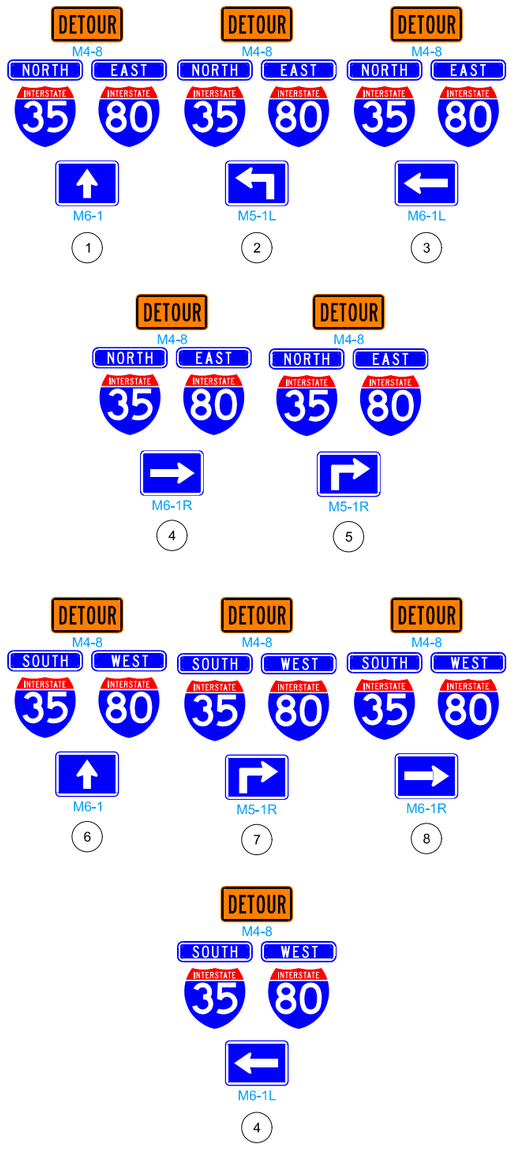
NOTE: Device spacing according to Standard Road Plans unless specifically dimensioned.

TRAFFIC CONTROL AND STAGING LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES J)

PLAN VIEW COLOR LEGEND OF INTERSTATE DETOUR

SHADING	Design Color No.	
Red	(3)	Closed Ramp
Red	(3)	Interstate Detour
Blue	(1)	Closed Interstate Mainline



Refer to J.1, J.4, and Standard Road Plan TC-451 for additional information

FILE NO.	ENGLISH	DESIGN TEAM	GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER	IM-080-3(178)127--13-77	SHEET NUMBER	J.3

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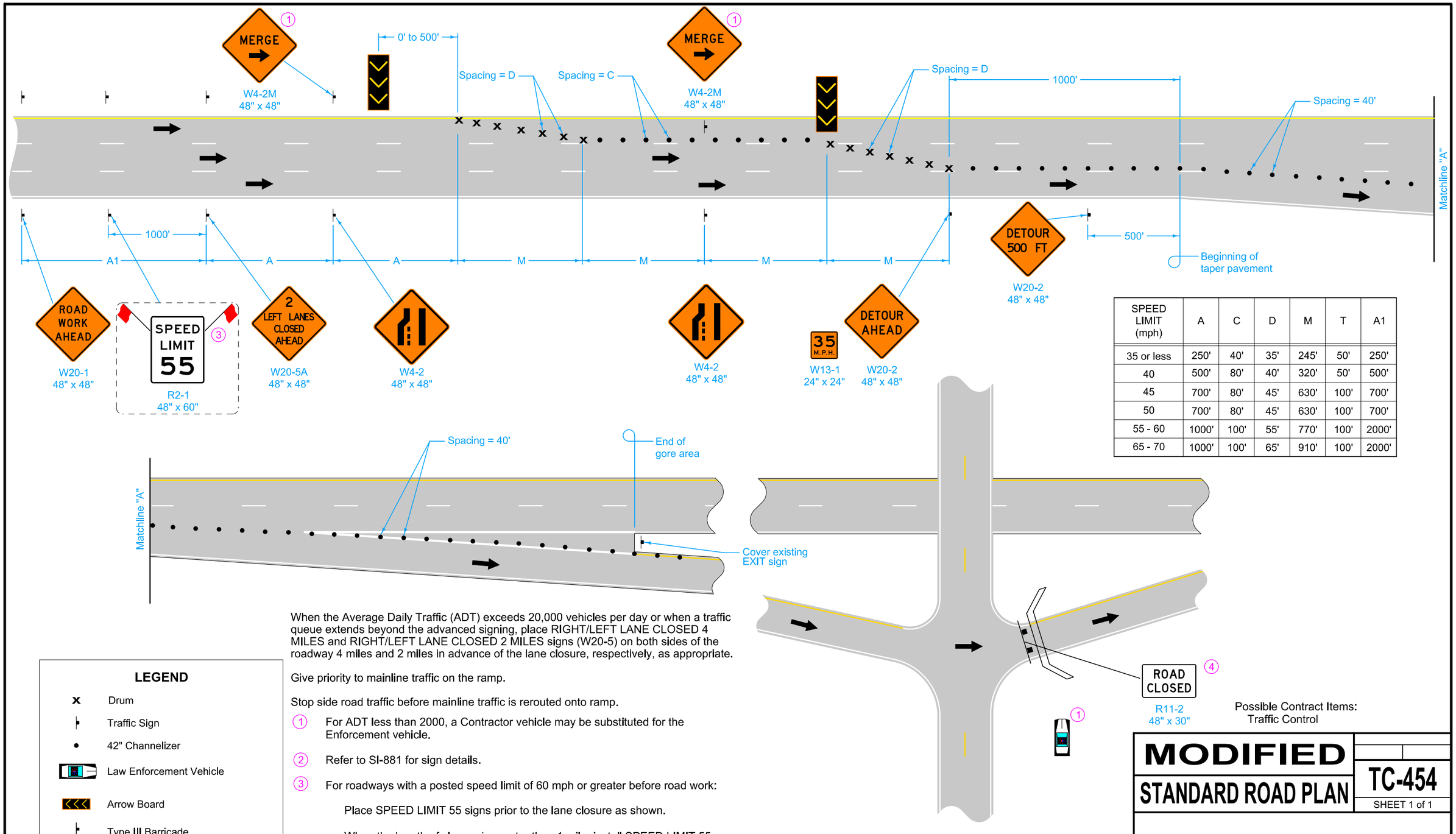

SPEED LIMIT (mph)	A	C	D	M	T	A1
35 or less	250'	40'	35'	245'	50'	250'
40	500'	80'	40'	320'	50'	500'
45	700'	80'	45'	630'	100'	700'
50	700'	80'	45'	630'	100'	700'
55 - 60	1000'	100'	55'	770'	100'	2000'
65 - 70	1000'	100'	65'	910'	100'	2000'

LEGEND

- Drum
- Traffic Sign
- 42" Channelizer
- Law Enforcement Vehicle
- Arrow Board
- Type III Barricade
- Road Closure
- Direction of Traffic

When the Average Daily Traffic (ADT) exceeds 20,000 vehicles per day or when a traffic queue extends beyond the advanced signing, place RIGHT/LEFT LANE CLOSED 4 MILES and RIGHT/LEFT LANE CLOSED 2 MILES signs (W20-5) on both sides of the roadway 4 miles and 2 miles in advance of the lane closure, respectively, as appropriate.

Give priority to mainline traffic on the ramp.

Stop side road traffic before mainline traffic is rerouted onto ramp.

1. For ADT less than 2000, a Contractor vehicle may be substituted for the Enforcement vehicle.
2. Refer to SI-881 for sign details.
3. For roadways with a posted speed limit of 60 mph or greater before road work:

   Place SPEED LIMIT 55 signs prior to the lane closure as shown.

   When the length of closure is greater than 1 mile, install SPEED LIMIT 55 signs in the closed lane at 1-mile intervals.

   Remove or cover all existing signs that conflict with 55 mph speed limit while 55 mph speed limit is in effect.
4. A vehicle with an amber revolving light or amber strobe light may be substituted for the Type III Barricades

Possible Contract Items:
Traffic Control

MODIFIED STANDARD ROAD PLAN

TC-454

SHEET 1 of 1

APPROVED BY DESIGN METHODS ENGINEER

TEMPORARY DETOUR USING RAMPS ON DIVIDED HIGHWAY

FILE NO.	ENGLISH	DESIGN TEAM	GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER	IM-080-3(178)127--13-77	SHEET NUMBER	J.4

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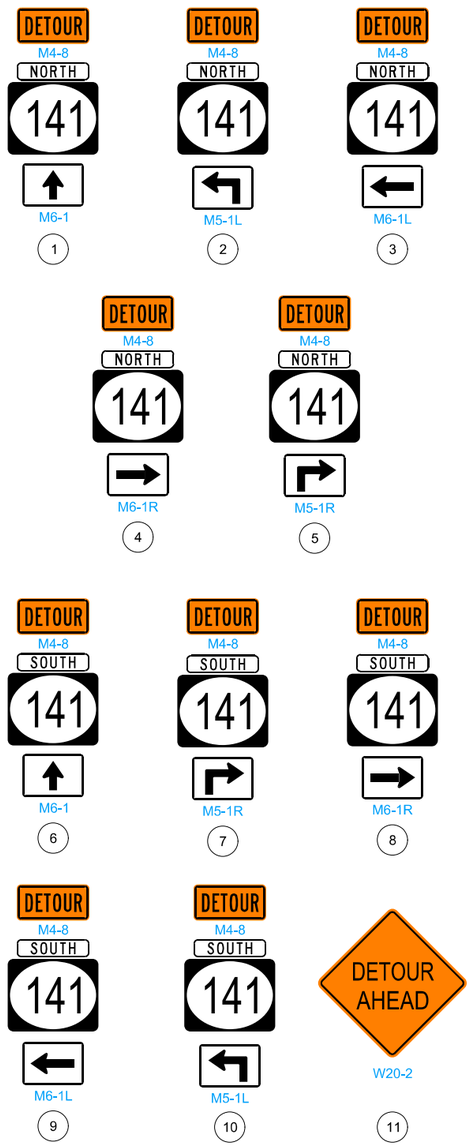
PLAN VIEW COLOR LEGEND OF HIGHWAY 141 DETOUR

SHADING	Design Color No.	
Red	(3)	Closed Road
Red	(3)	Highway 141 Detour



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PLAN VIEW COLOR LEGEND OF OFF-SITE DETOUR FOR STAGE 2A SHEETS

SHADING	Design Color No.	
Red	(3)	Closed Ramp
Blue	(1)	Douglas Ramp D Detour Entrance Ramps
Blue	(1)	Douglas Ramp D Detour Path
Blue, Light	(7)	Douglas Ramp A Detour Exit Ramps
Blue, Light	(7)	Douglas Ramp A Detour Path
Green	(2)	141 Ramp E Detour Entrance Ramps
Yellow	(12)	141 Ramp E Detour Path

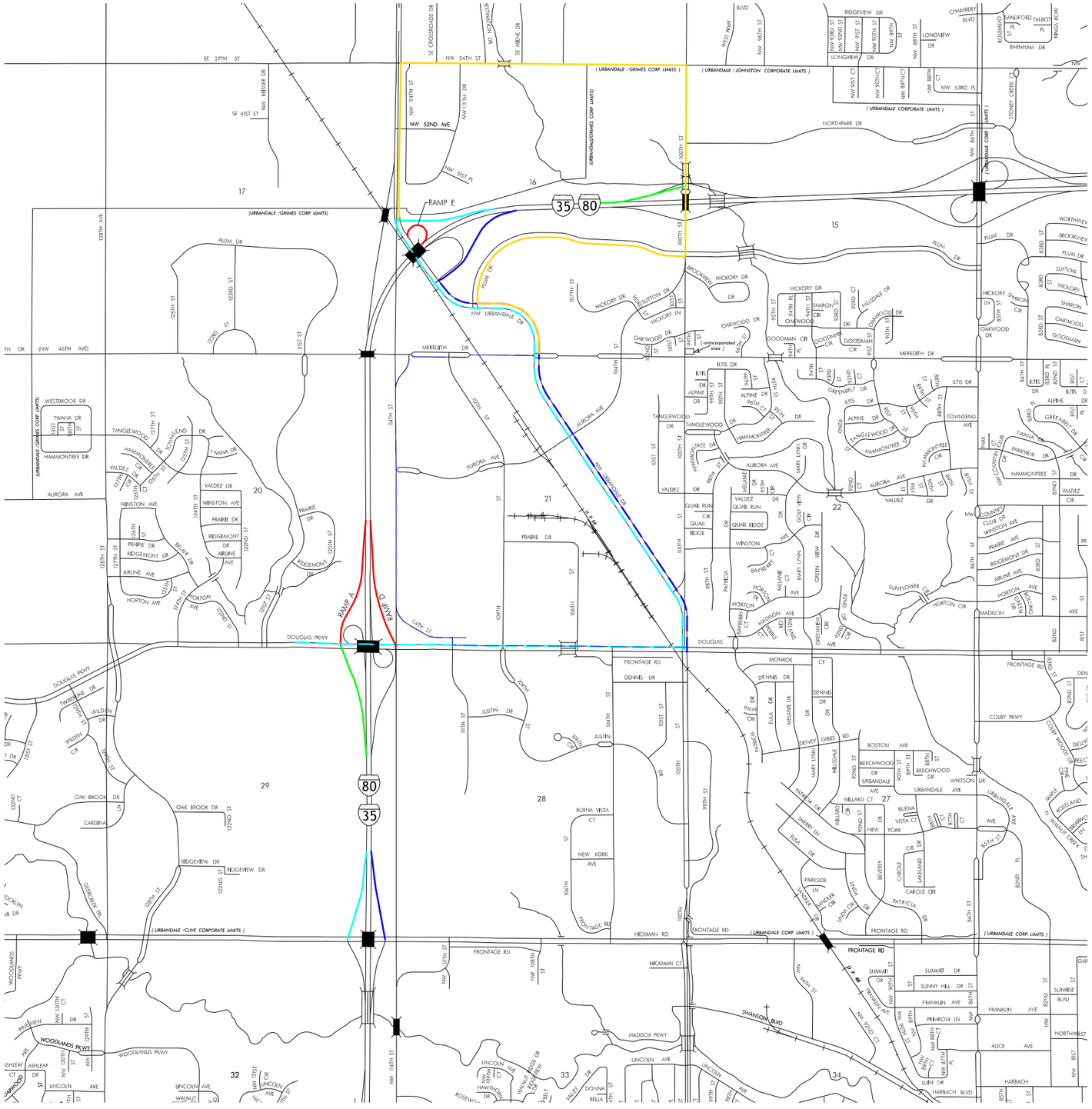
NOTES FOR OFF-SITE DETOUR

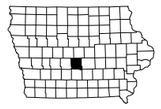
Pavement Removal

Proposed Granular Subbase

Proposed Special Backfill

Temporary Barrier Rail





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PLAN VIEW COLOR LEGEND OF OFF-SITE DETOUR FOR STAGE 2B SHEETS

SHADING	Design Color No.	
Red	(3)	Closed Ramp
Blue	(1)	141 Ramp A Detour Exit Ramps
Blue	(1)	141 Ramp A Detour Path
Blue, Light	(7)	141 Ramp C Detour Entrance Ramps
Blue, Light	(7)	141 Ramp C Detour Path
Green	(2)	141 Ramp D Detour Entrance Ramps
Green	(2)	141 Ramp D Detour Path
Yellow	(12)	141 Ramp E Detour Entrance Ramps
Yellow	(12)	141 Ramp E Detour Path
Purple	(15)	141 Ramp H Detour Exit Ramps
Purple	(15)	141 Ramp H Detour Path

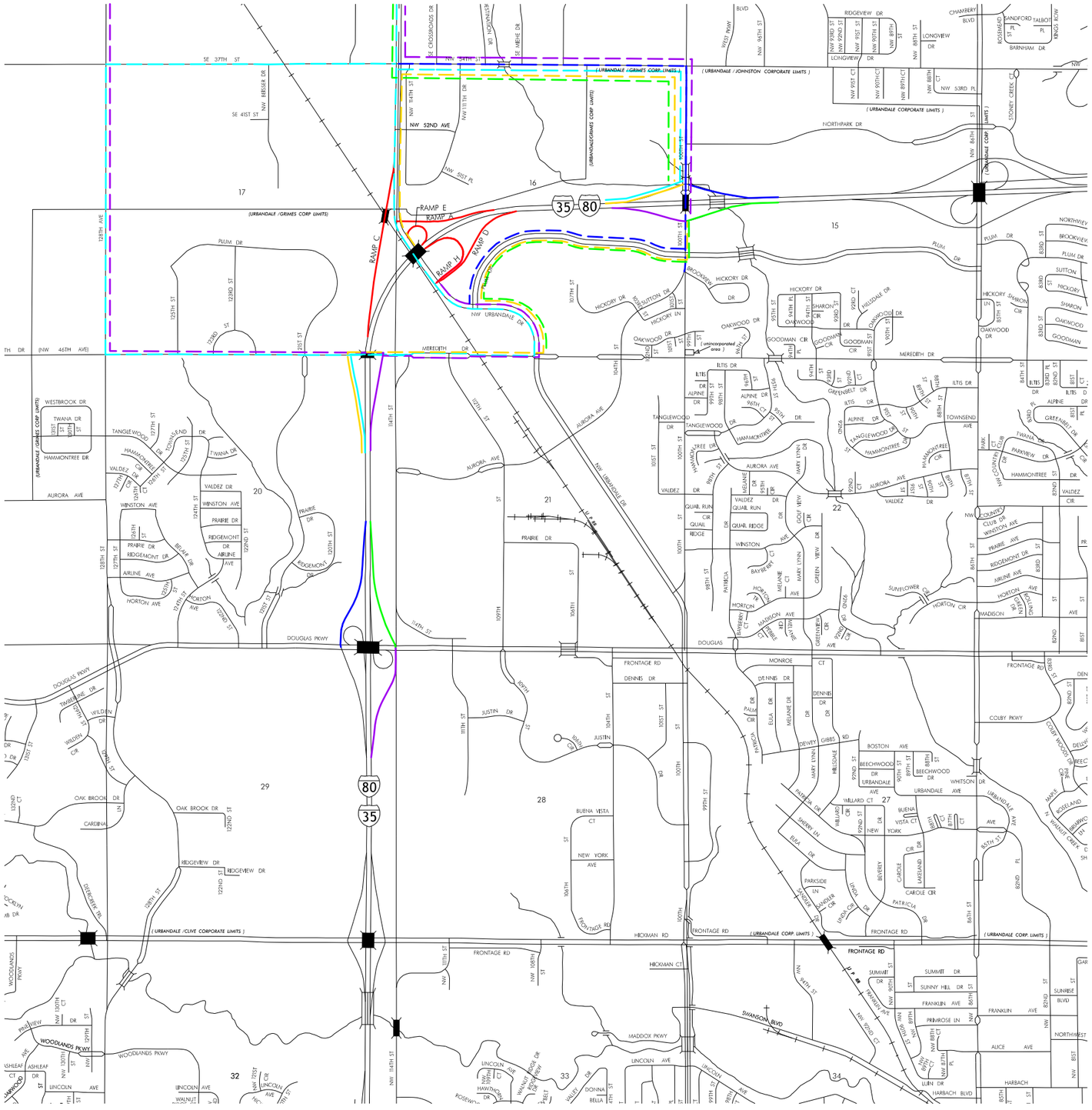
NOTES FOR OFF-SITE DETOUR

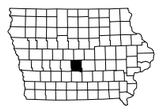
Pavement Removal

Proposed Granular Subbase

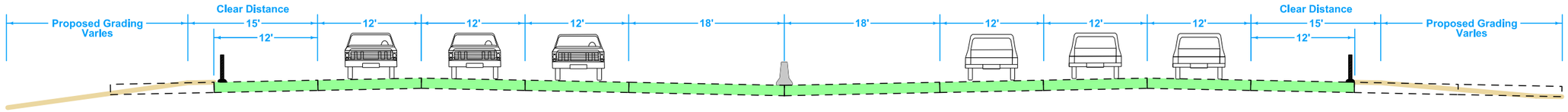
Proposed Special Backfill

Temporary Barrier Rail

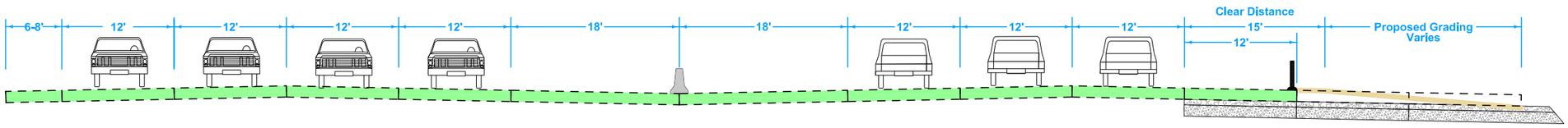




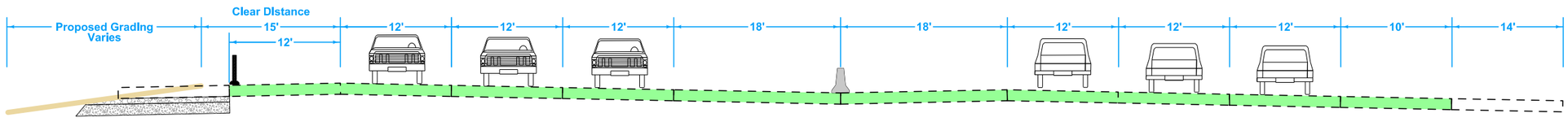
FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.7



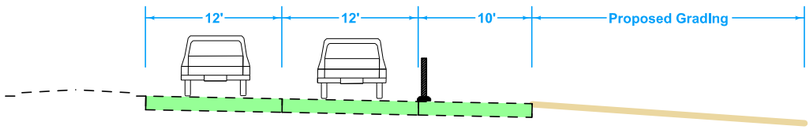
I-35/I-80 (Sta 504+26 to 517+36)



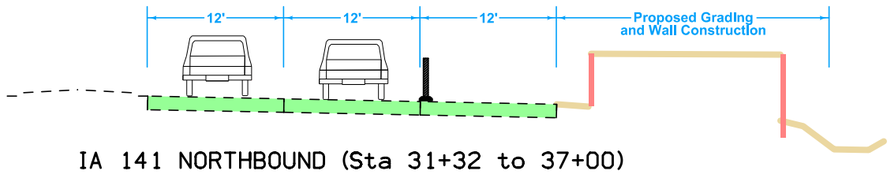
I-35/I-80 (Sta 519+85 to 525+36)



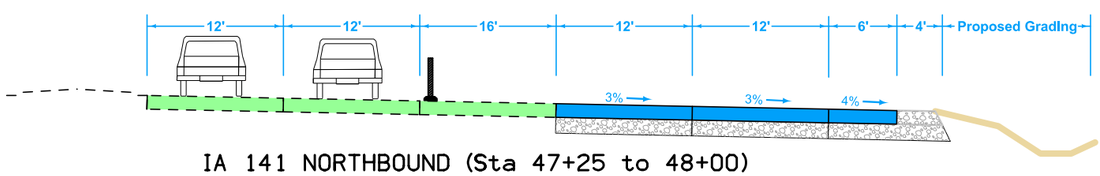
I-35/I-80 (Sta 534+88 to 541+64)



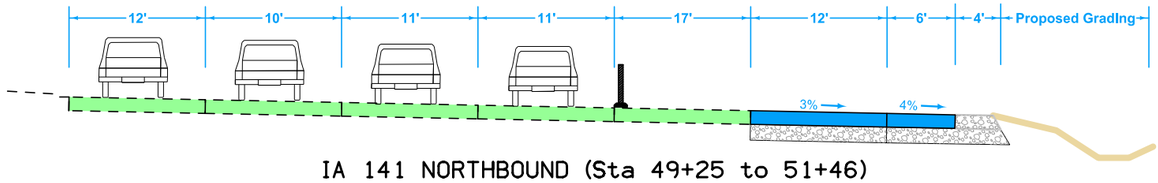
IA 141 NORTHBOUND (Sta 18+40 to 20+52)



IA 141 NORTHBOUND (Sta 31+32 to 37+00)



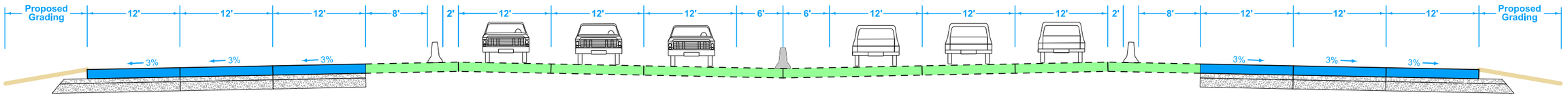
IA 141 NORTHBOUND (Sta 47+25 to 48+00)



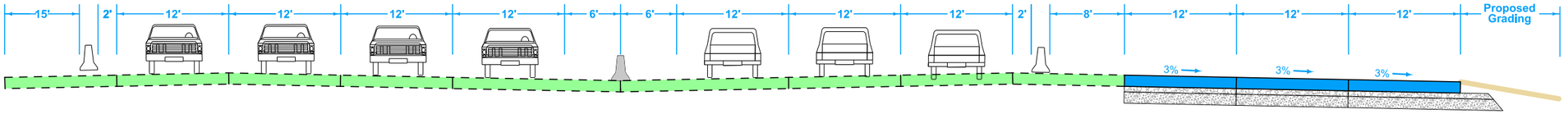
IA 141 NORTHBOUND (Sta 49+25 to 51+46)

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.8

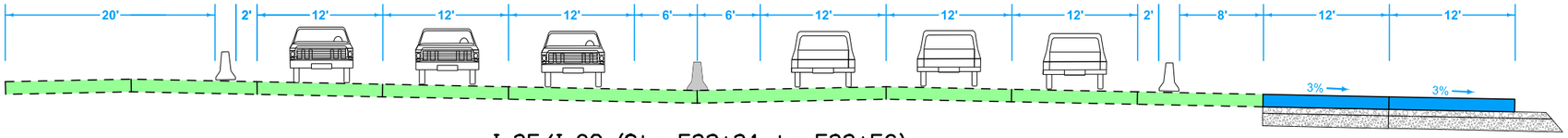
Stage 2A



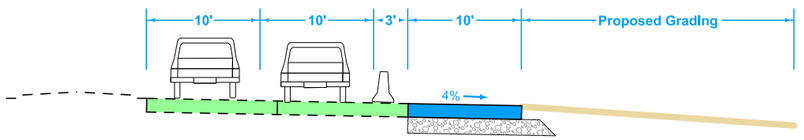
I-35/I-80 (Sta 476+57 to 480+81)



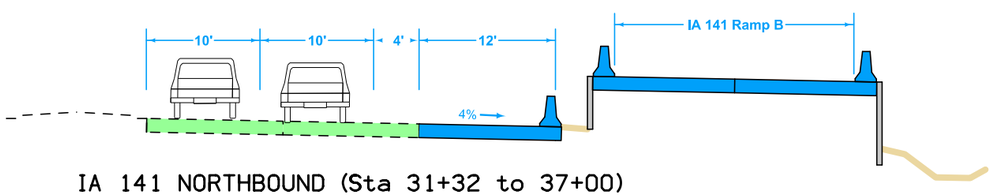
I-35/I-80 (Sta 519+85 to 525+34)



I-35/I-80 (Sta 532+31 to 533+56)



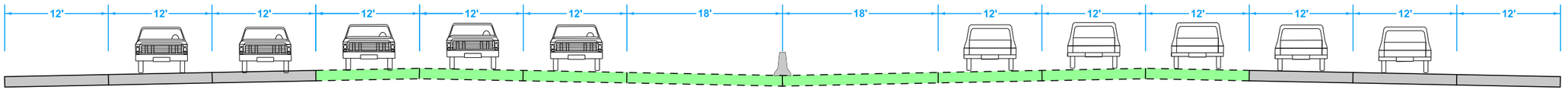
IA 141 NORTHBOUND (Sta 18+40 to 20+52)



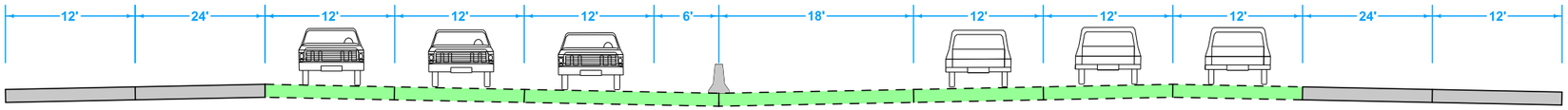
IA 141 NORTHBOUND (Sta 31+32 to 37+00)

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.9

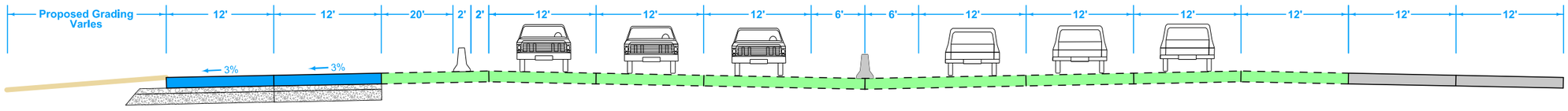
Stage 2B



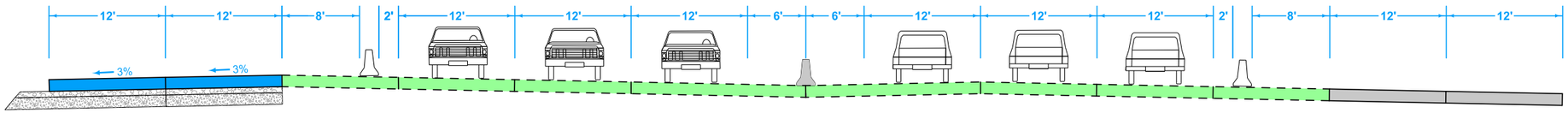
I-35/I-80 (Sta 495+64 to 503+51)



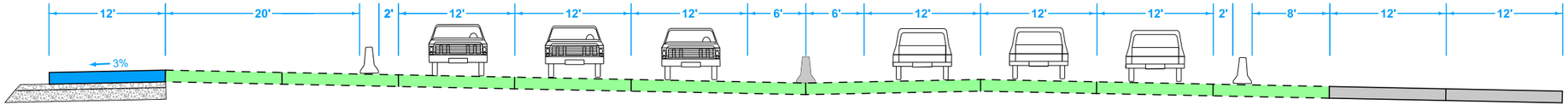
I-35/I-80 (Sta 515+82 to 518+06)



I-35/I-80 (Sta 520+21 to 528+25)



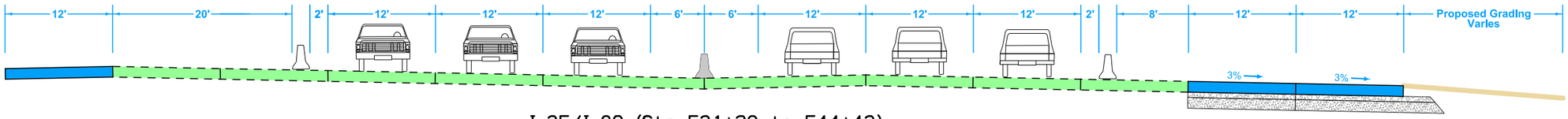
I-35/I-80 (Sta 531+36 to 535+00)



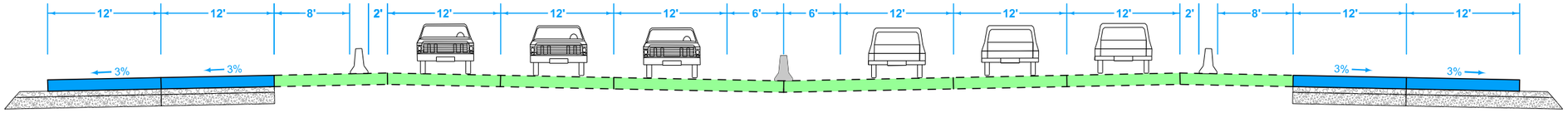
I-35/I-80 (Sta 535+00 to 540+27)

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.10

Stage 2B

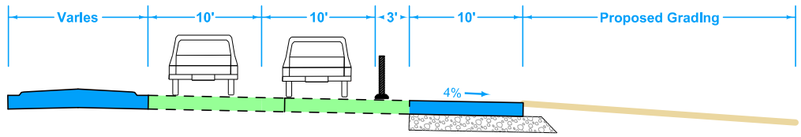


I-35/I-80 (Sta 531+29 to 544+43)

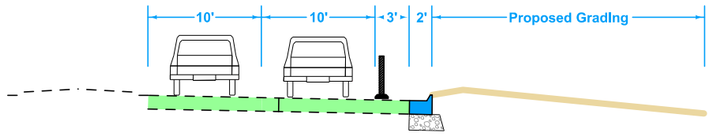


I-35/I-80 (Sta 547+15 to 558+34)

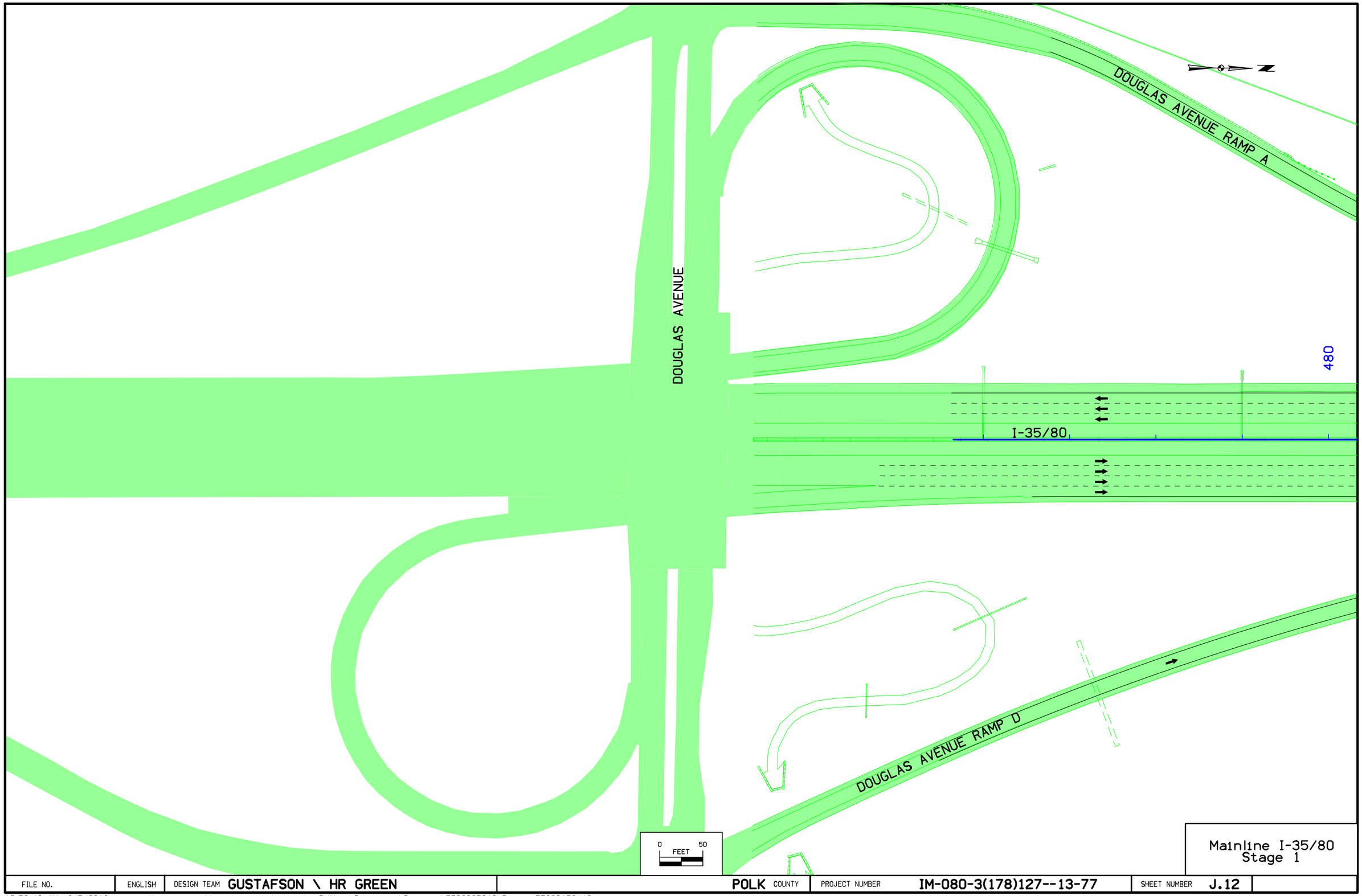
I-35/I-80 (Sta 564+14 to 569+18)



IA 141 NORTHBOUND (Sta 23+00 to 25+66)



IA 141 NORTHBOUND (Sta 11+50 to 15+95)



Mainline I-35/80
Stage 1

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.12

10:52:43 AM 8/5/2016 esulliv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht

DOUGLAS AVENUE RAMP A

480

485

490

495

I-35/80

DOUGLAS AVENUE RAMP D

0 FEET 50

Mainline I-35/80
Stage 1

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.13

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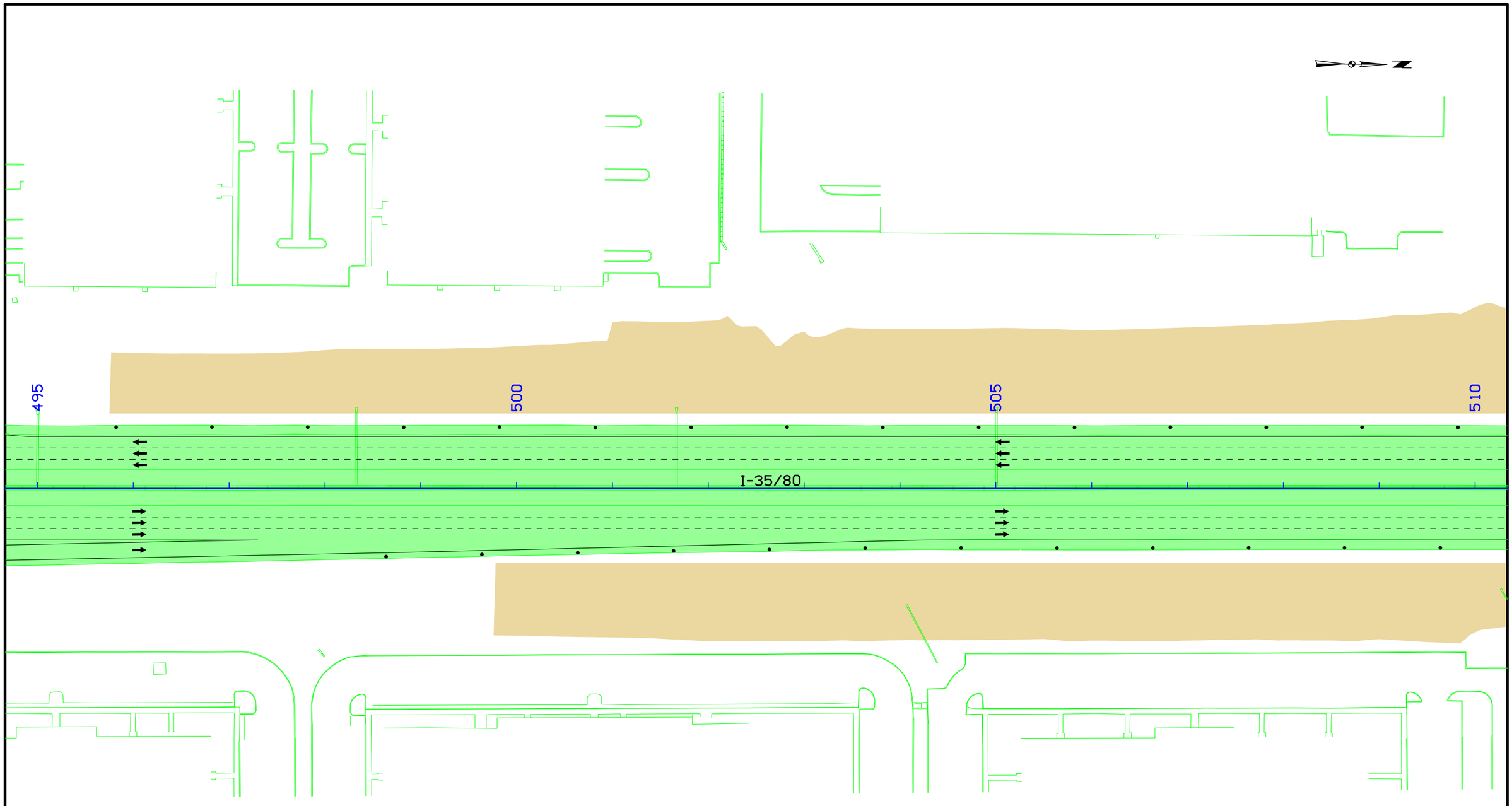

0 50 FEET

Mainline I-35/80
Stage 1

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.14

10:52:50 AM 8/5/2016 esulliv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht

MEREDITH DRIVE RAMP C

510

515

520

525

I-35/80

MEREDITH DRIVE RAMP B

0 FEET 50

Mainline I-35/80
Stage 1

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.15

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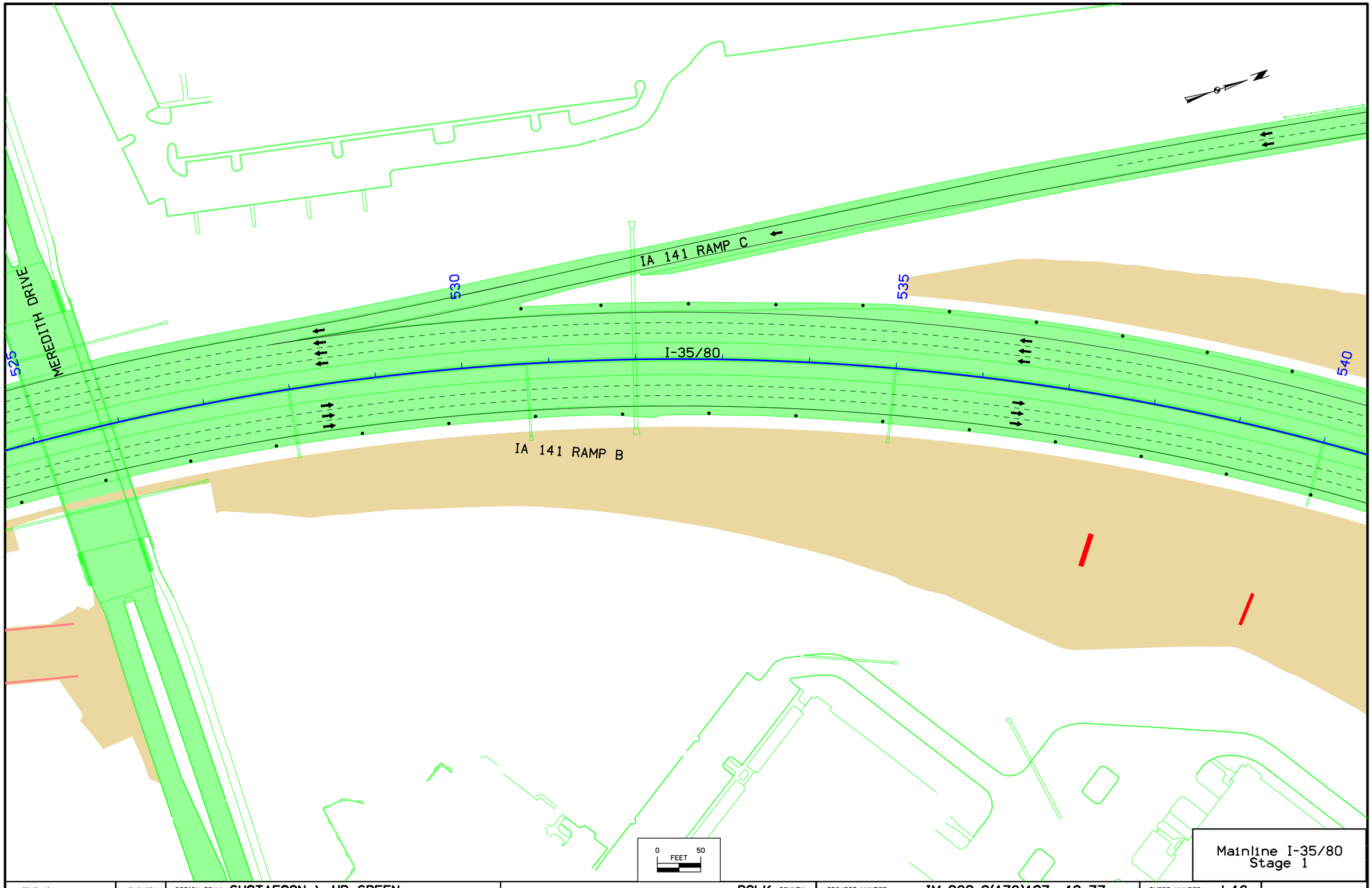

Mainline I-35/80
Stage 1

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.16

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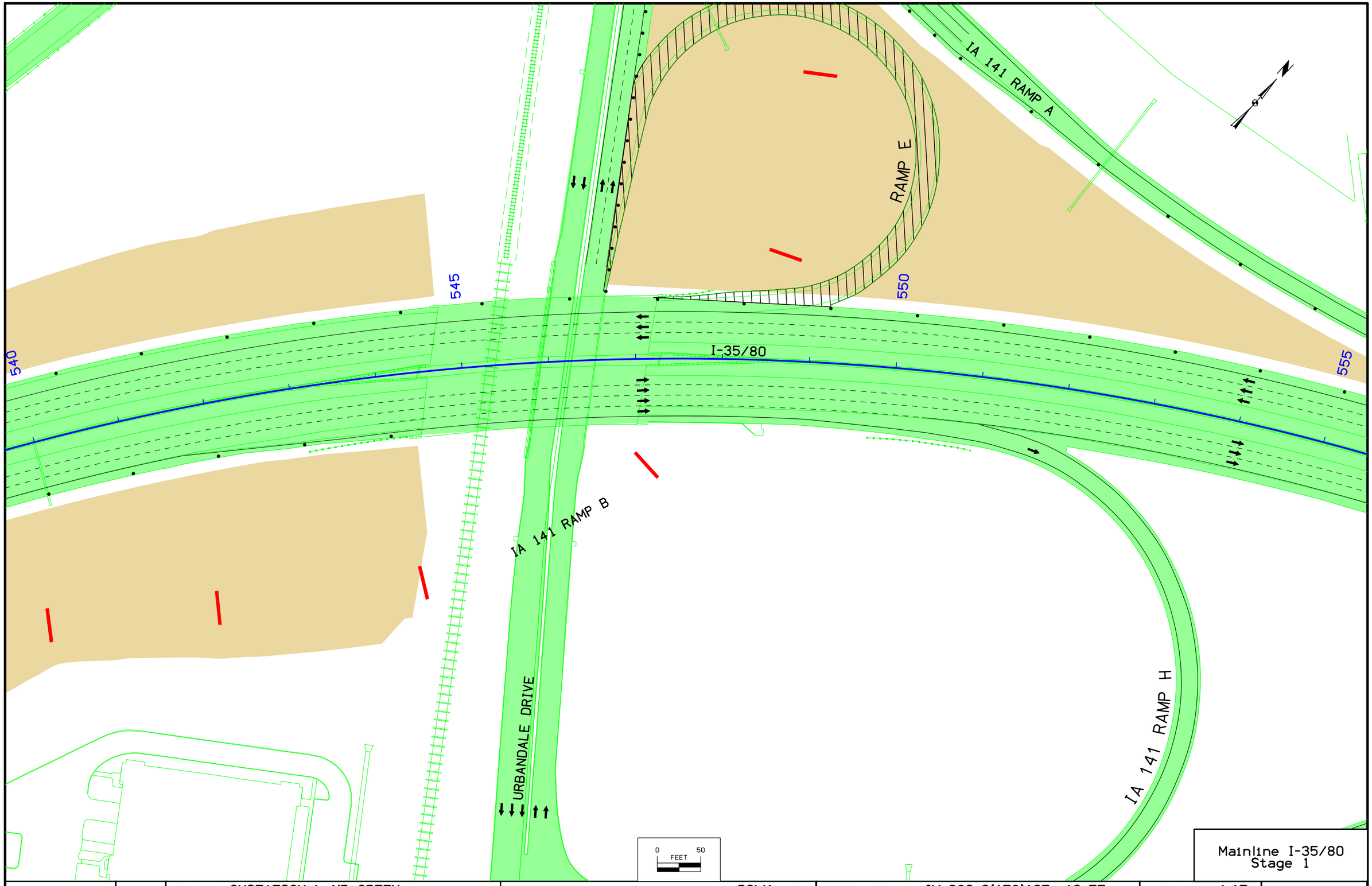

Mainline I-35/80
Stage 1

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.17

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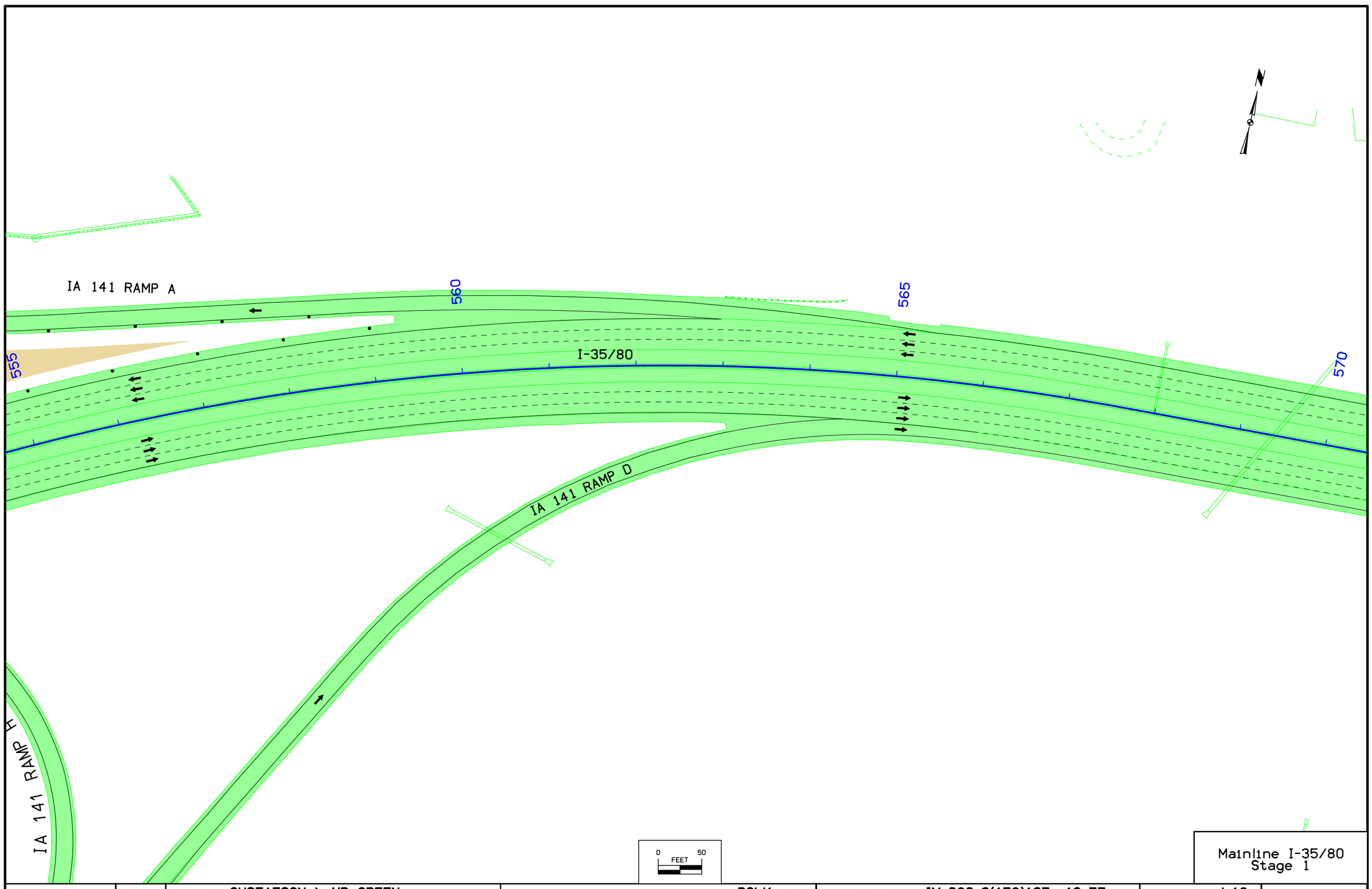

Mainline I-35/80
Stage 1

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.18

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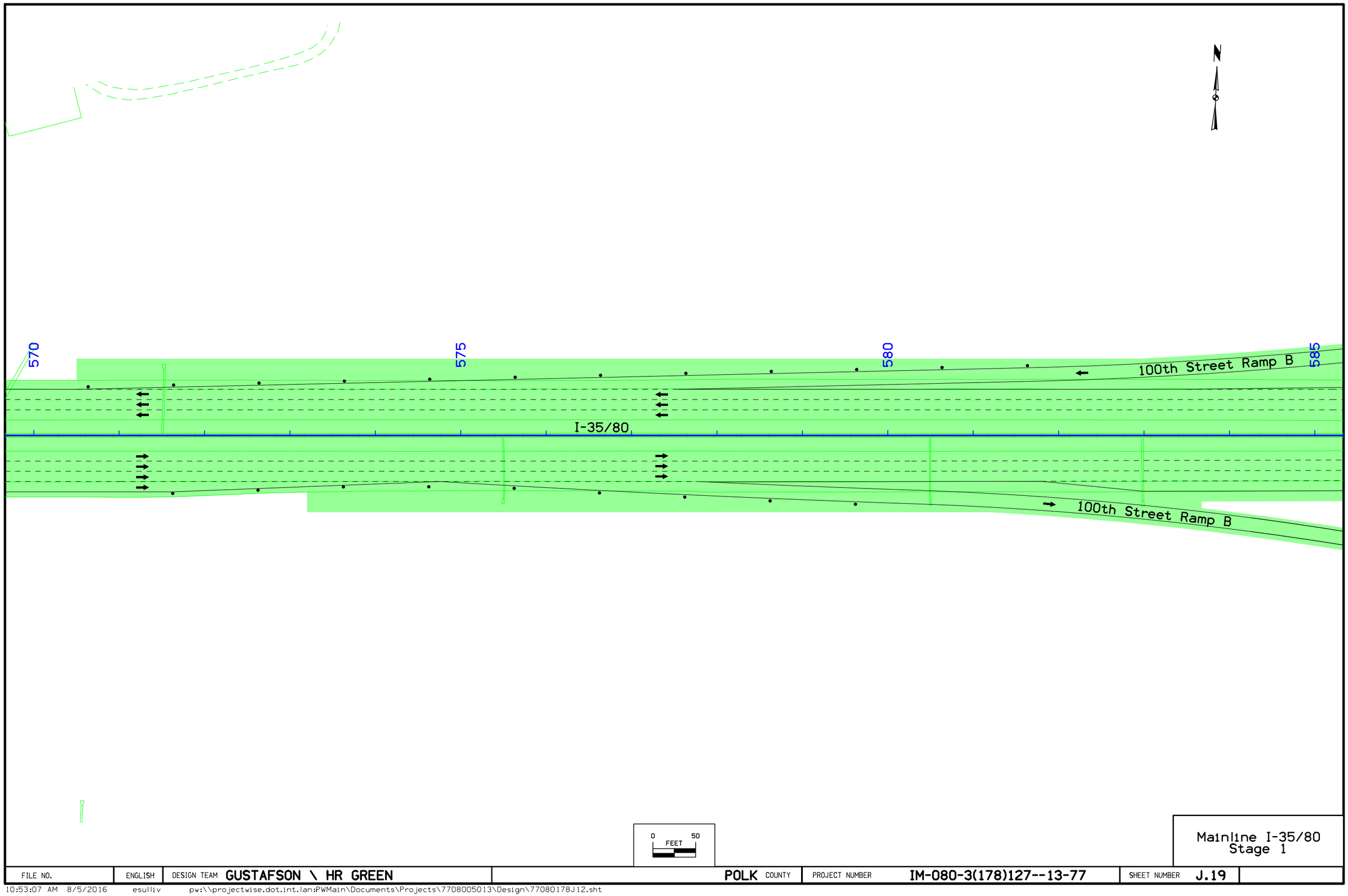

Mainline I-35/80
Stage 1

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.19

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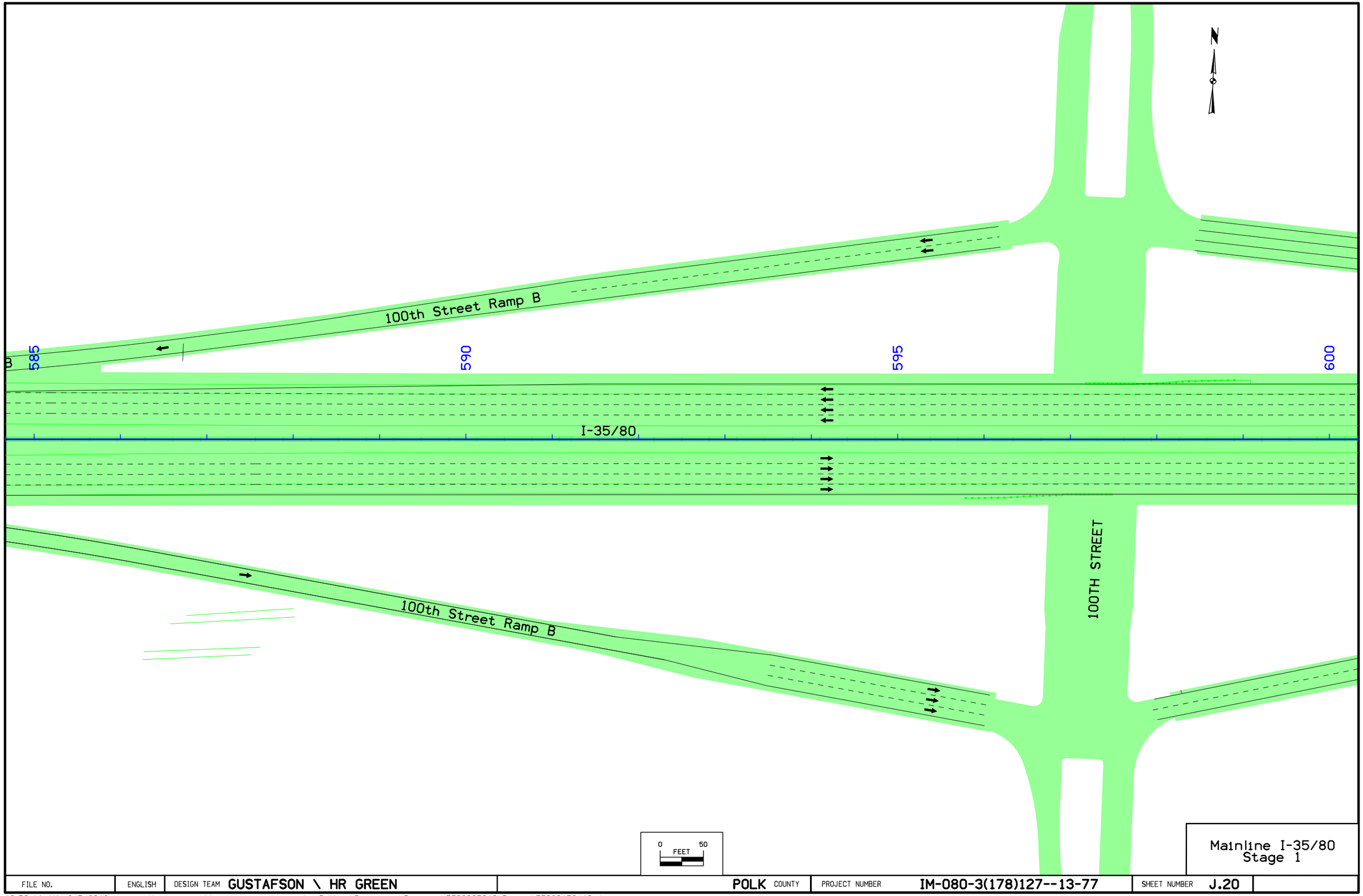

Mainline I-35/80
Stage 1

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.20

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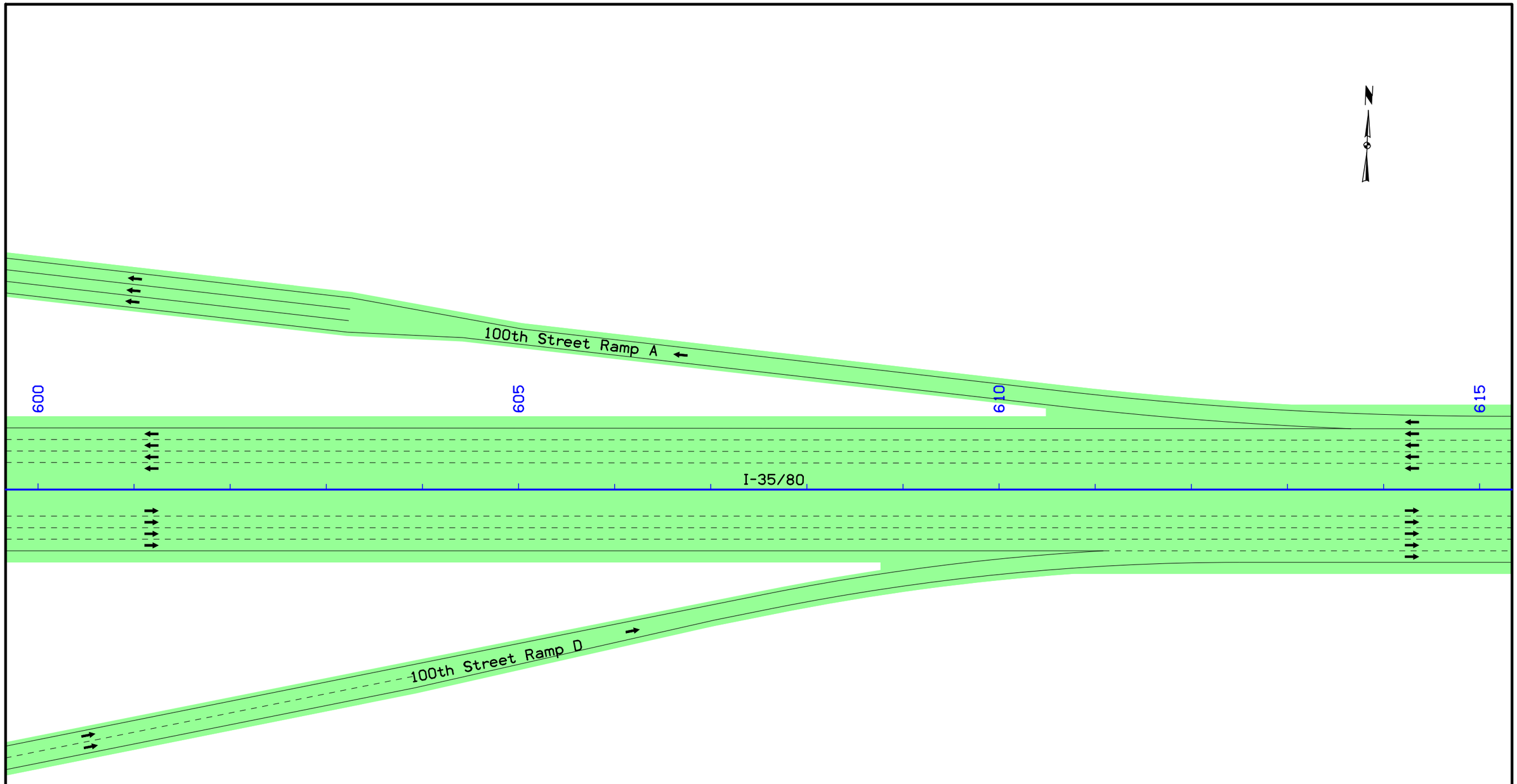

Mainline I-35/80
Stage 1

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.21

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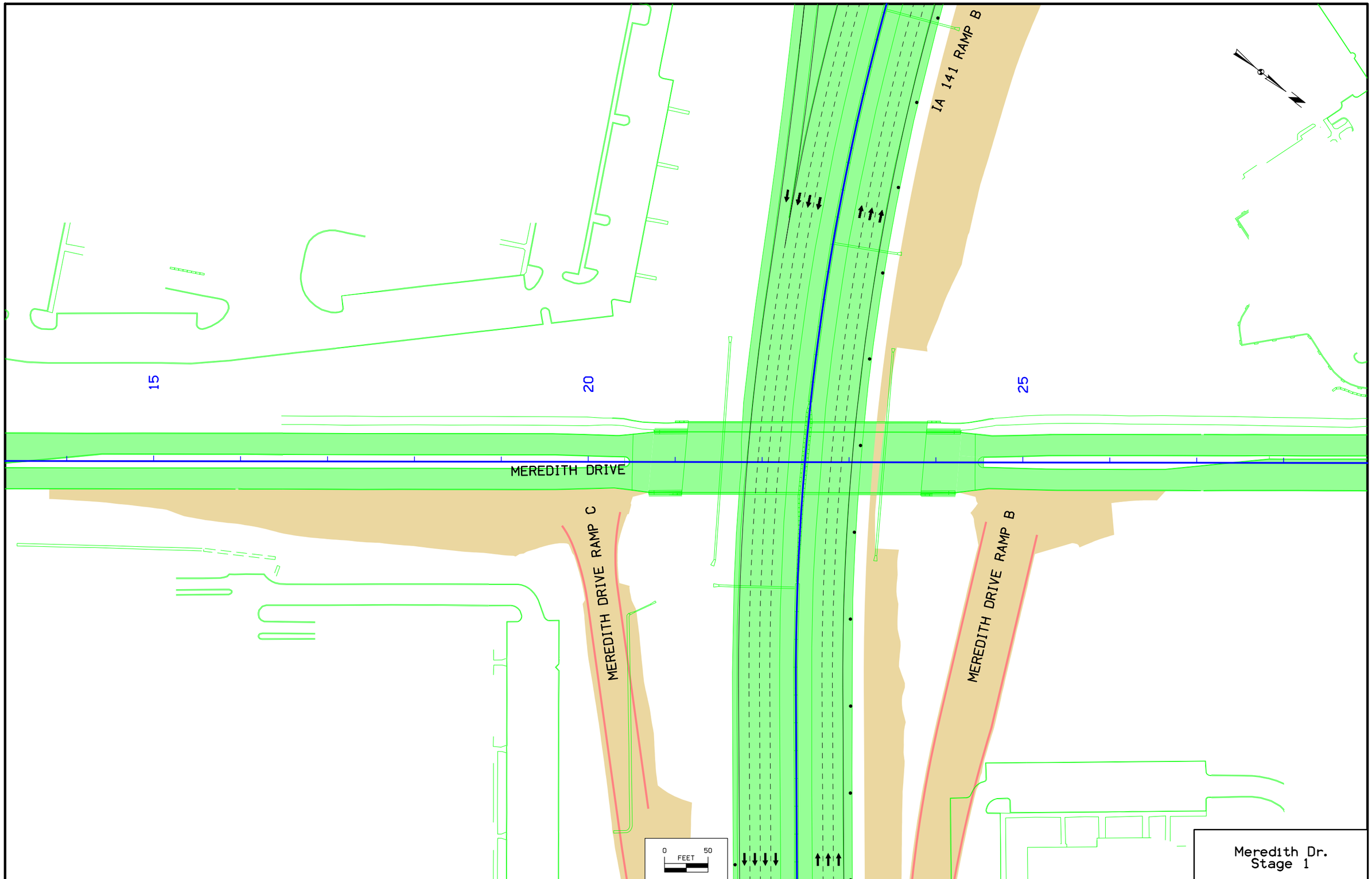

Meredith Dr.
Stage 1

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.22

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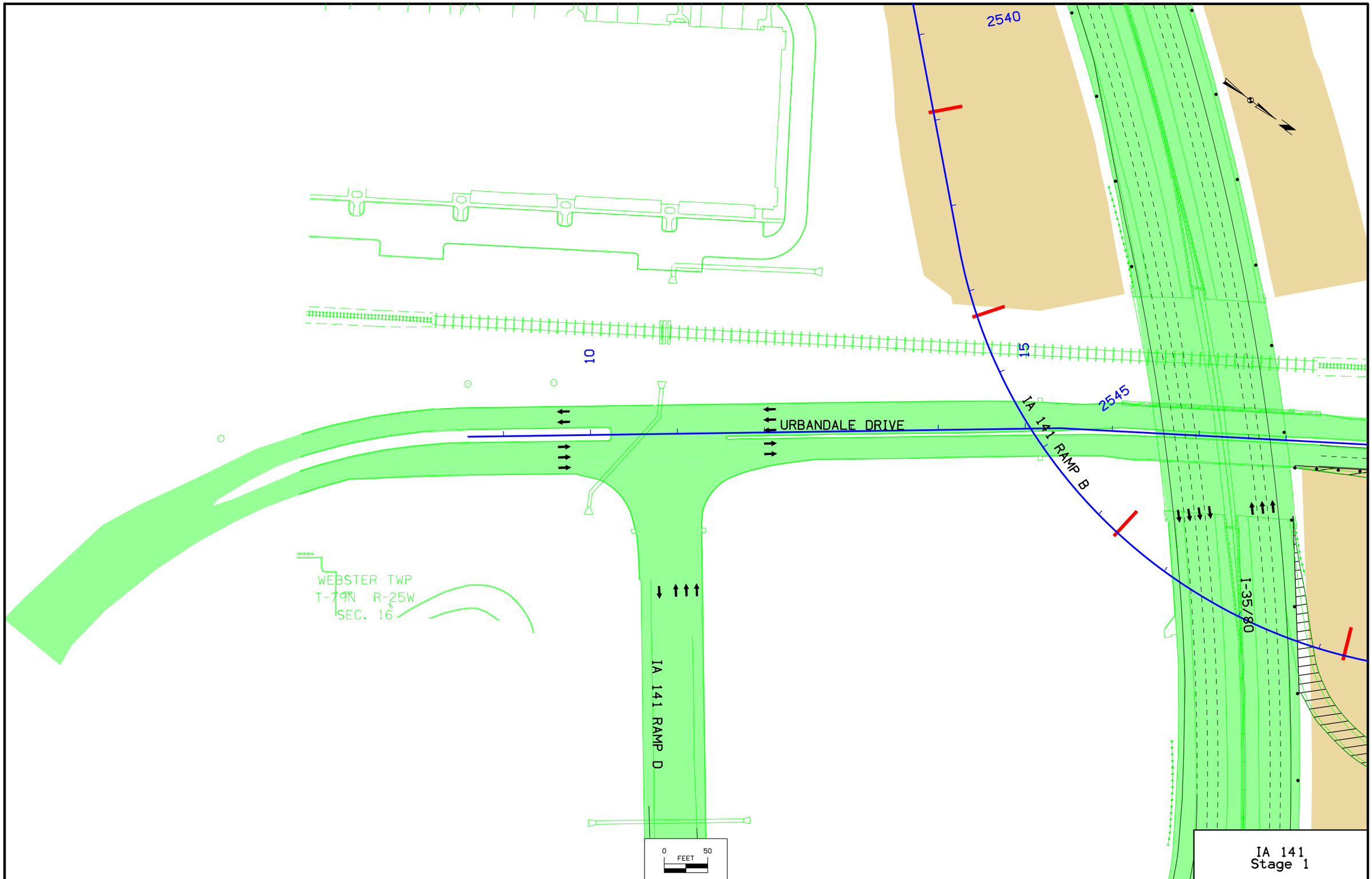

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.23

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IA 141 RAMP C

IA 141

IA 141 RAMP B

RAMP E

I-35/80

IA 141 RAMP A

20

25

30

2550

2555

2560

0 FEET 50

IA 141
Stage 1

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.24

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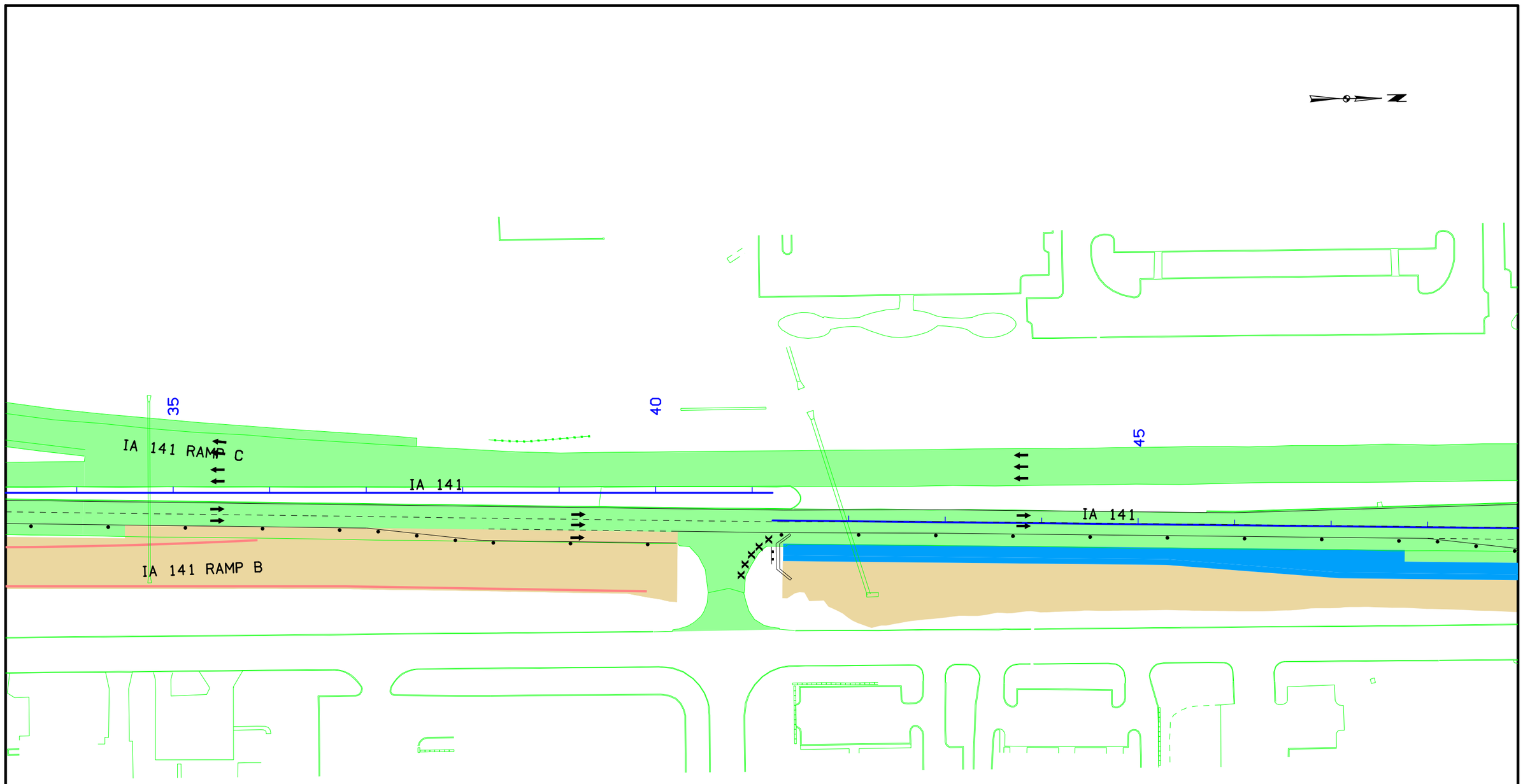

0 FEET 50

IA 141
Stage 1

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.25

10:53:29 AM 8/5/2016 esullv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht

SE 37TH STREET

50

55

60

IA 141

0 FEET 50

IA 141
Stage 1

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.26

10:53:32 AM 8/5/2016 esullivpw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht

DOUGLAS AVENUE

DOUGLAS AVENUE RAMP A

480

I-35/80

DOUGLAS AVENUE RAMP D

0 50
FEET

Mainline I-35/80
Stage 2A

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.27

10:53:35 AM 8/5/2016 esulliv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht

DOUGLAS AVENUE RAMP A

480

485

490

495

I-35/80

DOUGLAS AVENUE RAMP D

0 FEET 50

Mainline I-35/80
Stage 2A

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.28

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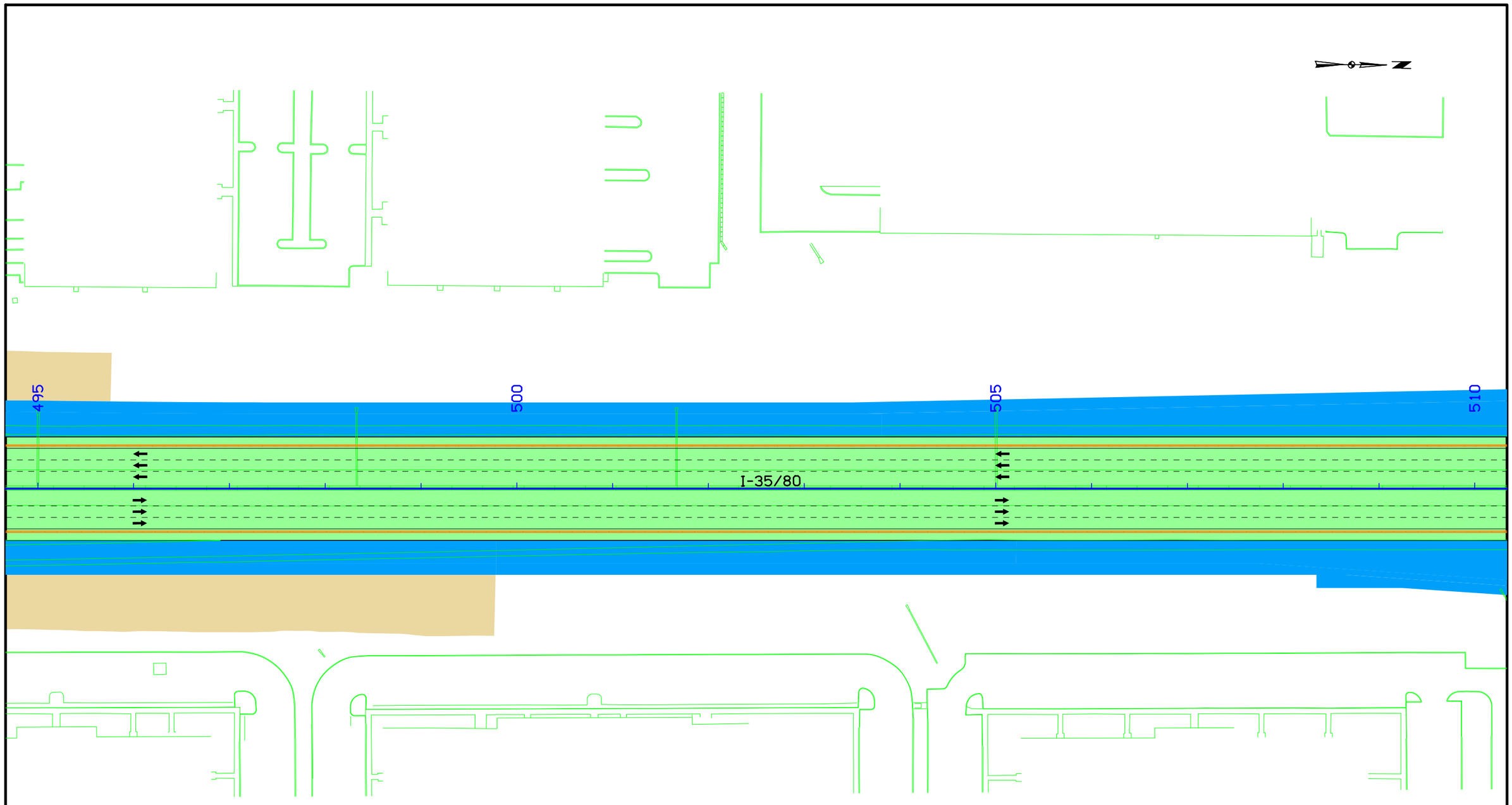

0 50 FEET

Mainline I-35/80
Stage 2A

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.29

10:53:42 AM 8/5/2016 esulliv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht

MEREDITH DRIVE RAMP C

510

515

520

525

I-35/80

MEREDITH DRIVE RAMP B

0 FEET 50

Mainline I-35/80
Stage 2A

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.30

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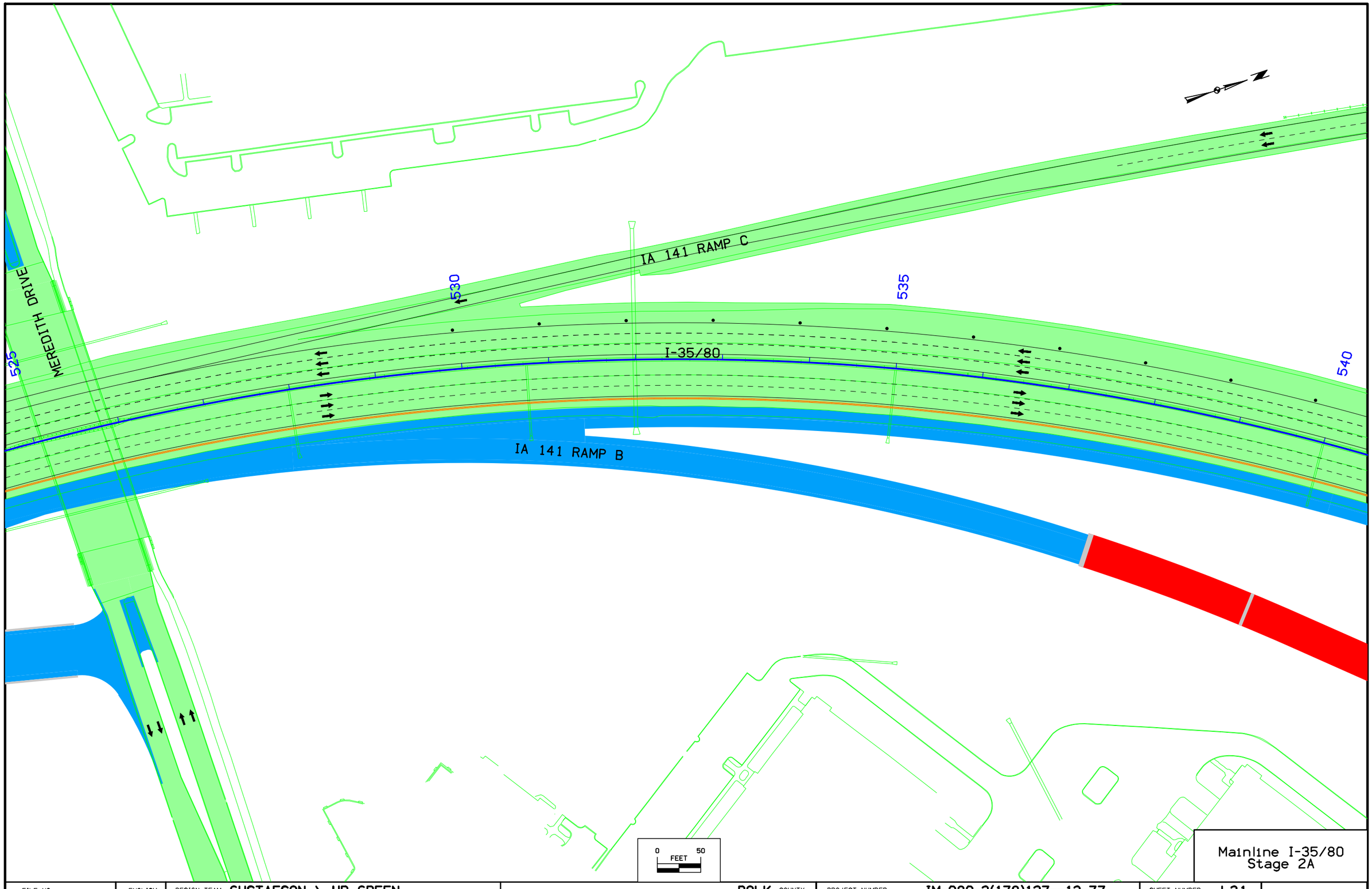

Mainline I-35/80
Stage 2A

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.31

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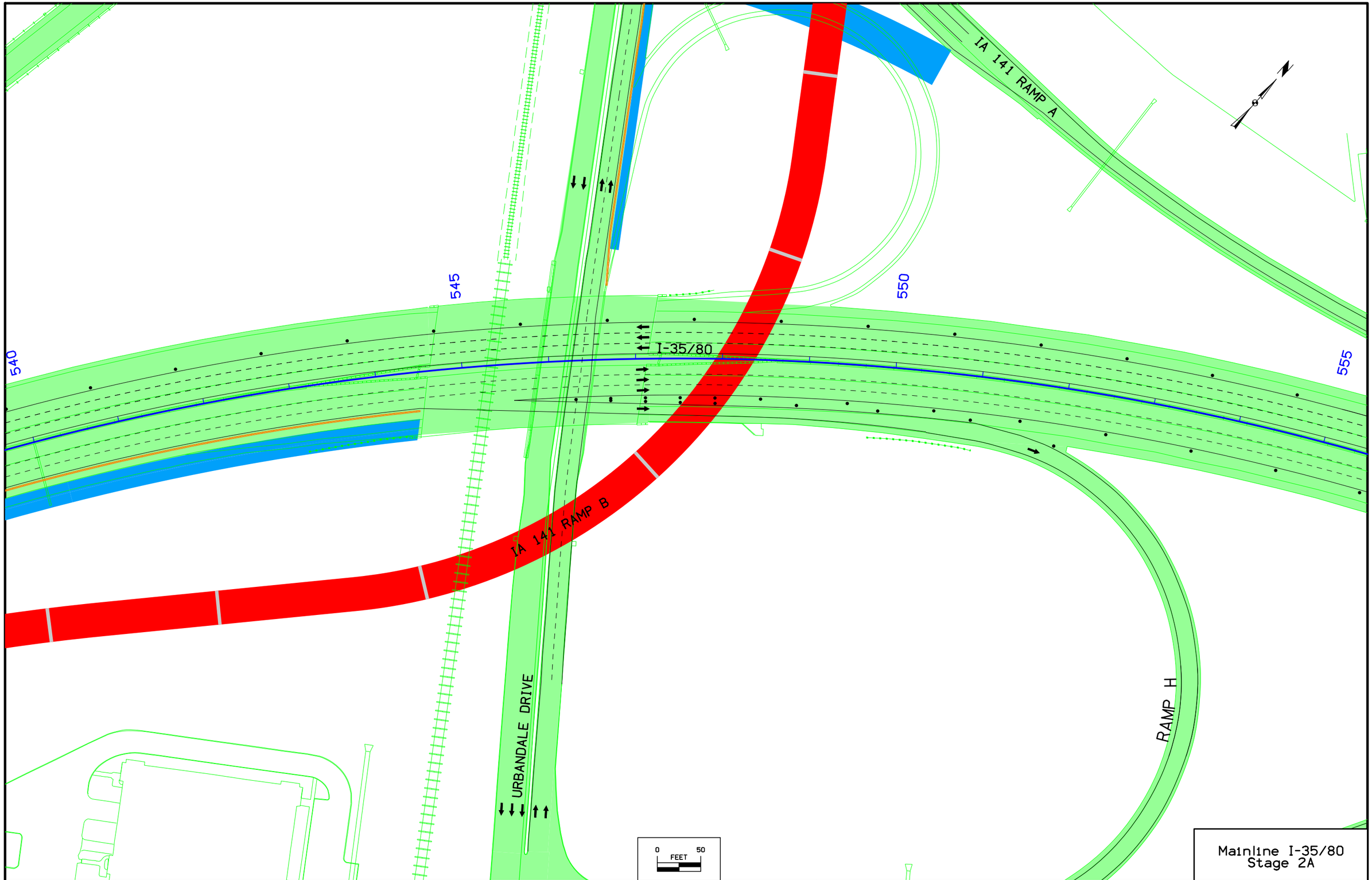

Mainline I-35/80
Stage 2A

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.32

10:53:51 AM 8/5/2016 esullv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht

IA 141 RAMP A

560

565

555

570

I-35/80

IA 141 RAMP D

RAMP H

0 FEET 50

Mainline I-35/80
Stage 2A

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.33

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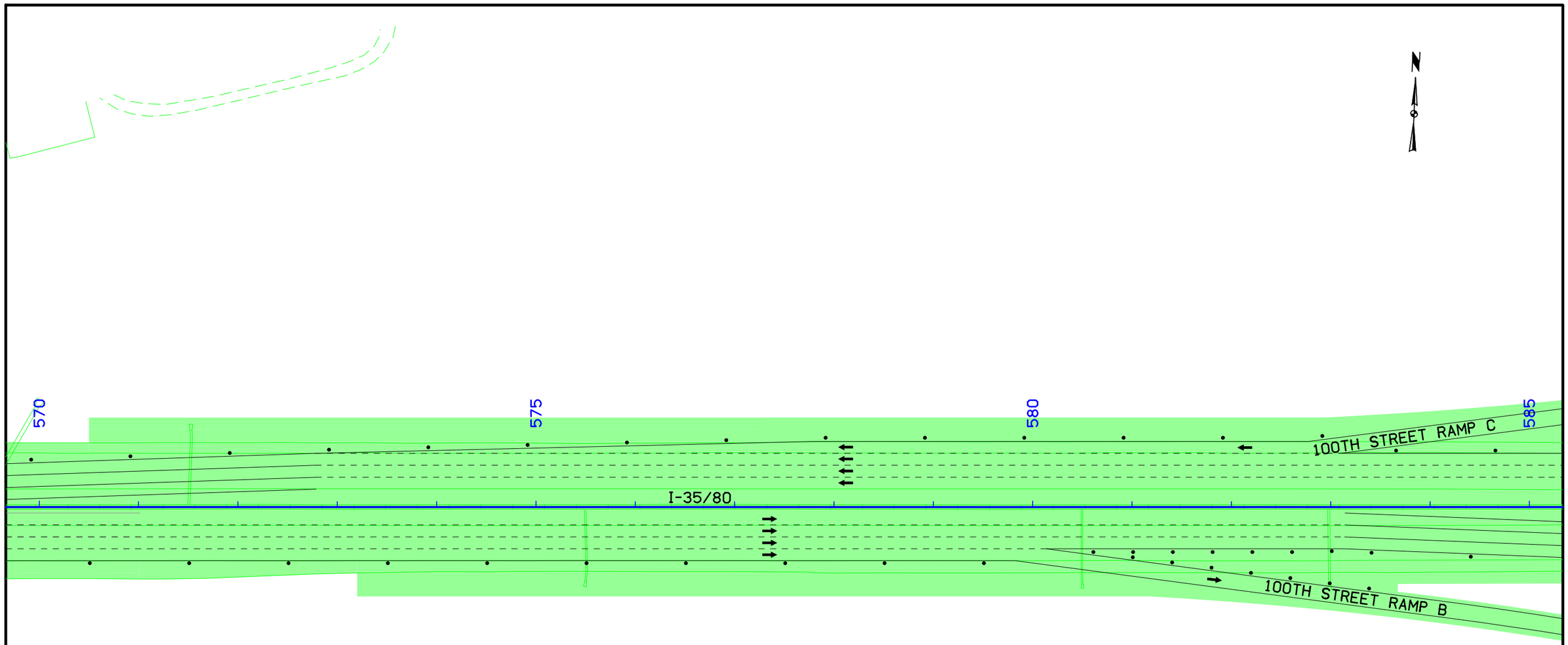


0 50 FEET

Mainline I-35/80
Stage 2A

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.34

10:53:58 AM 8/5/2016 esulliv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht

N

100TH STREET RAMP C

585

590

595

600

I-35/80

100TH STREET RAMP B

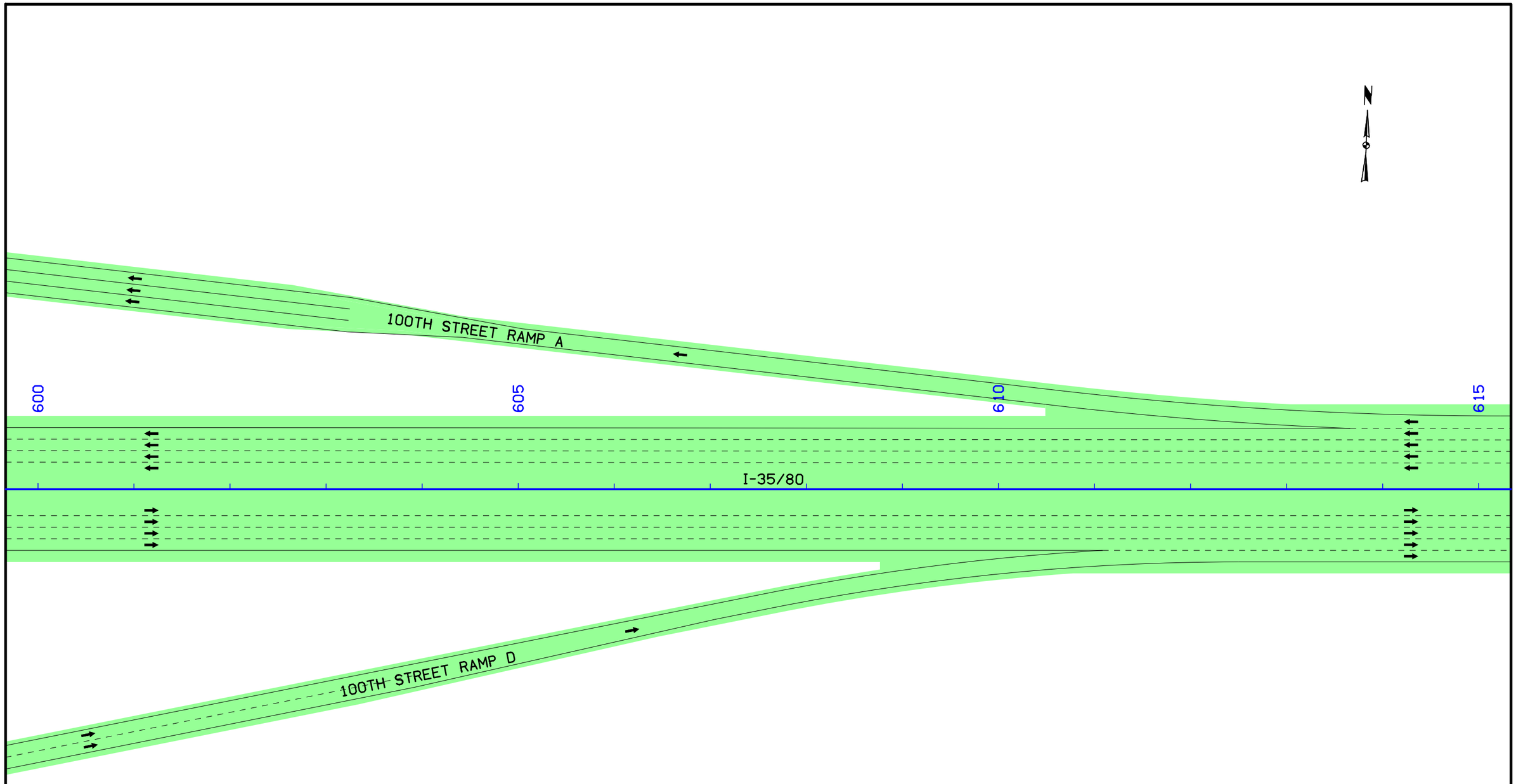
100TH STREET

0 FEET 50

Mainline I-35/80
Stage 2A

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.35

10:54:01 AM 8/5/2016 esulliv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht



Mainline I-35/80
Stage 2A

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.36

10:54:04 AM 8/5/2016 esulliv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht

IA 141 RAMP B

530

MEREDITH DRIVE

525

MEREDITH DRIVE RAMP C

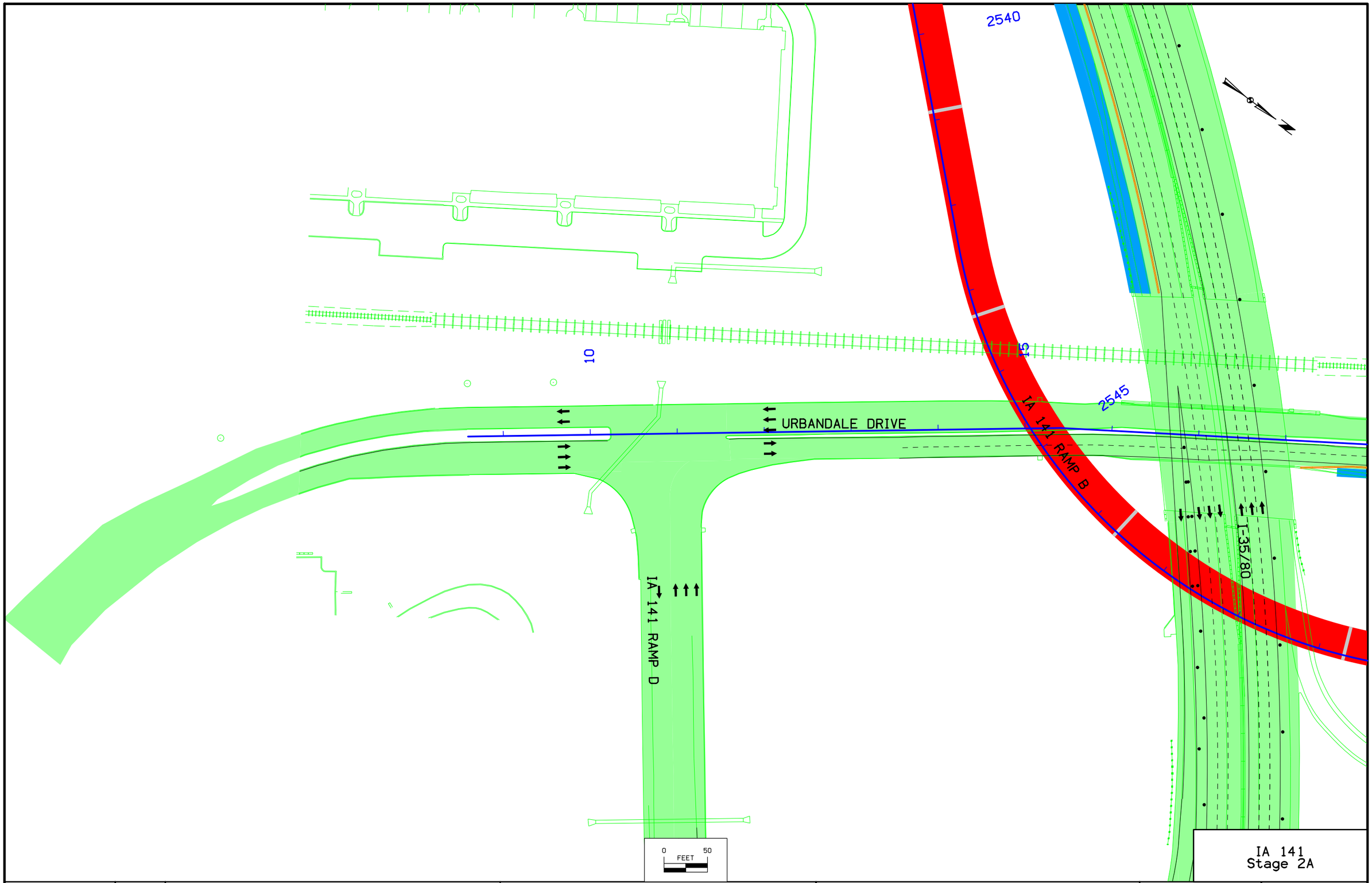
MEREDITH DRIVE RAMP B

0 FEET 50

Meredith Dr.
Stage 2A

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.37

10:54:07 AM 8/5/2016 esullv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht



FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.38

10:54:11 AM 8/5/2016 esullv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht

IA 141 RAMP C

IA 141

IA 141 RAMP B

IA 141 RAMP A

25

30

20

2555

2560

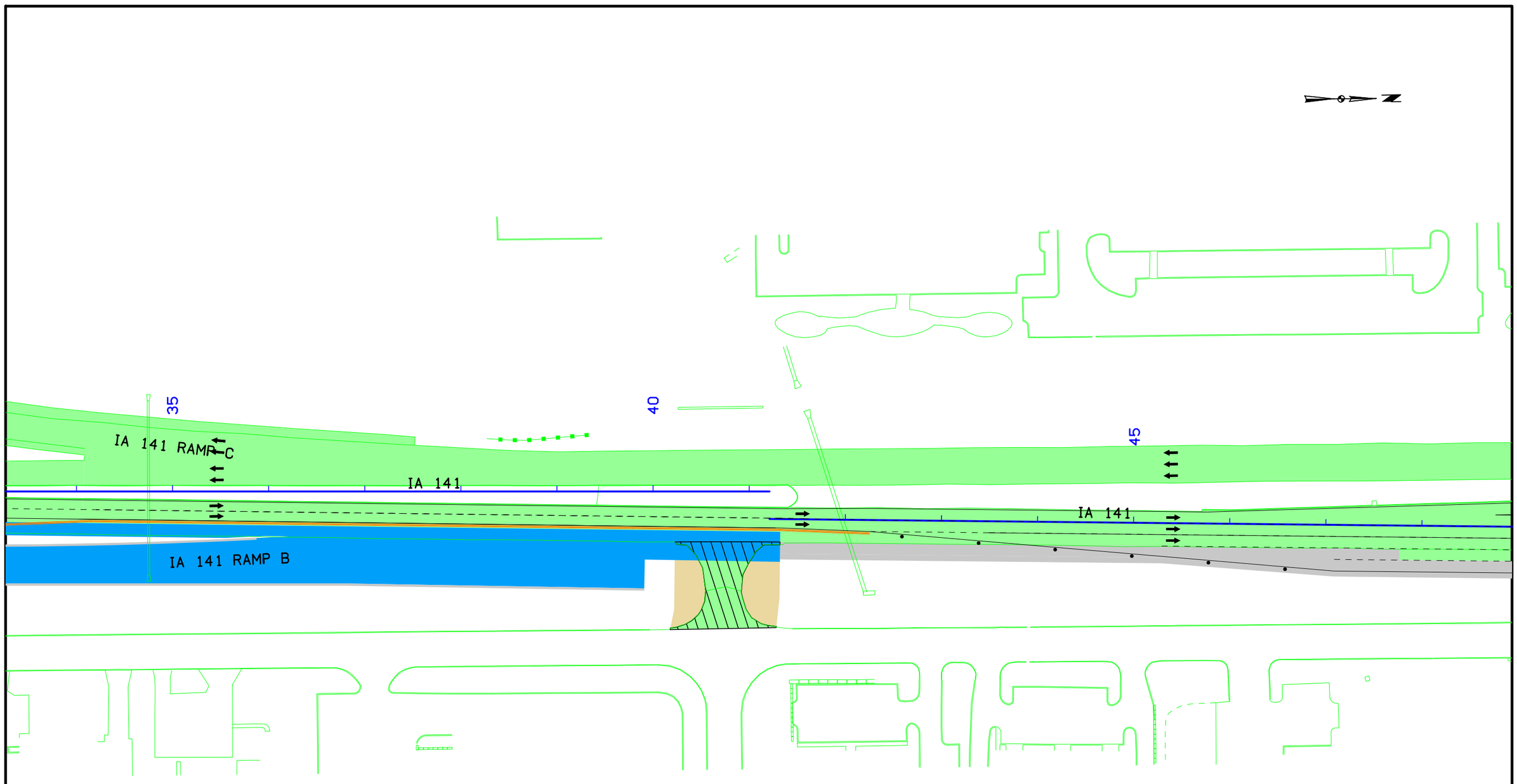
2550

0 FEET 50

IA 141
Stage 2A

FILE NO.	ENGLISH	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER J.39

10:54:14 AM 8/5/2016 esullv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht



0 FEET 50

IA 141
Stage 2A

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.40

10:54:18 AM 8/5/2016 esulliv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht

SE 37TH STREET

50

55

60

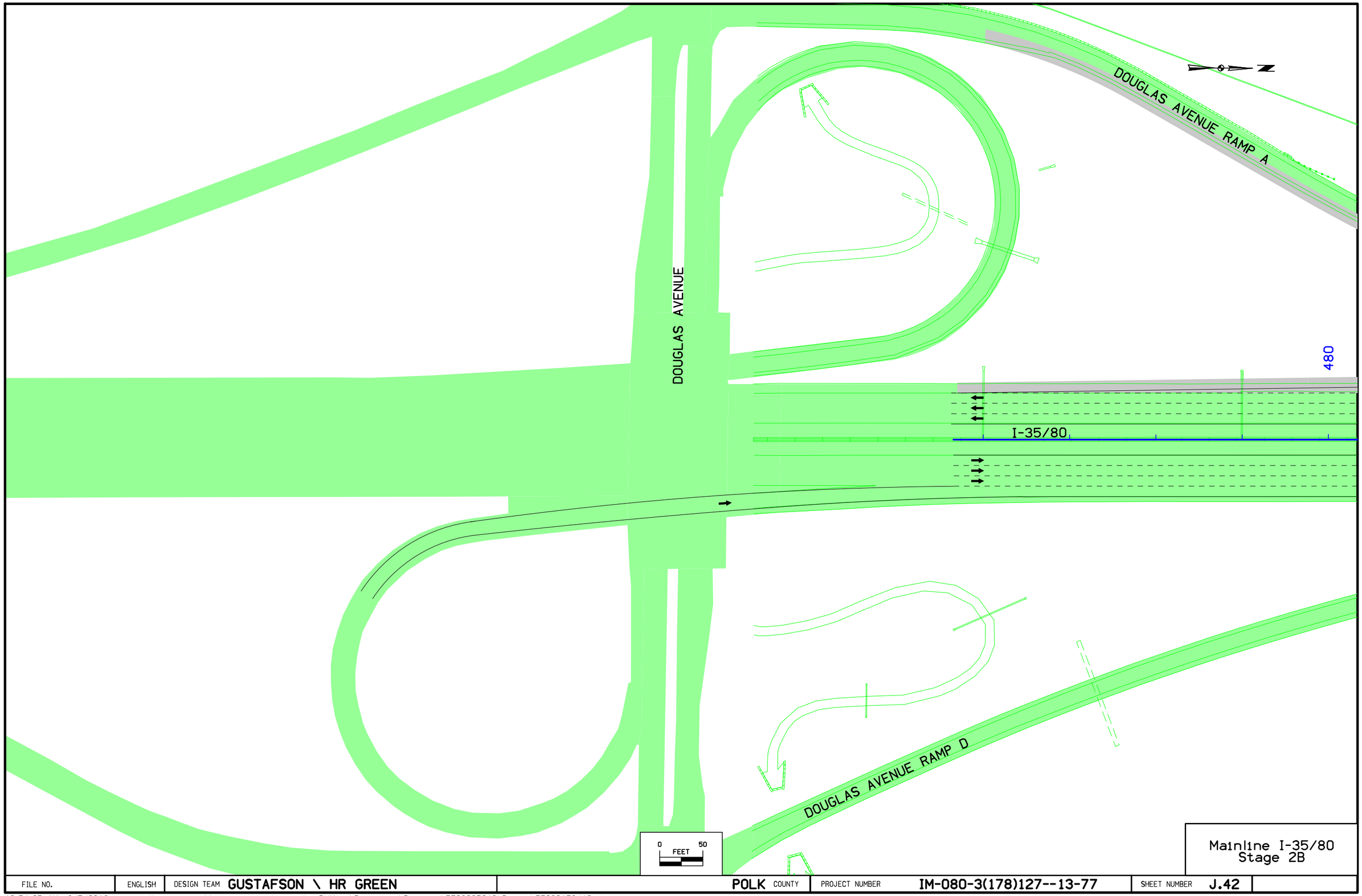
IA 141

0 FEET 50

IA 141
Stage 2A

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.41

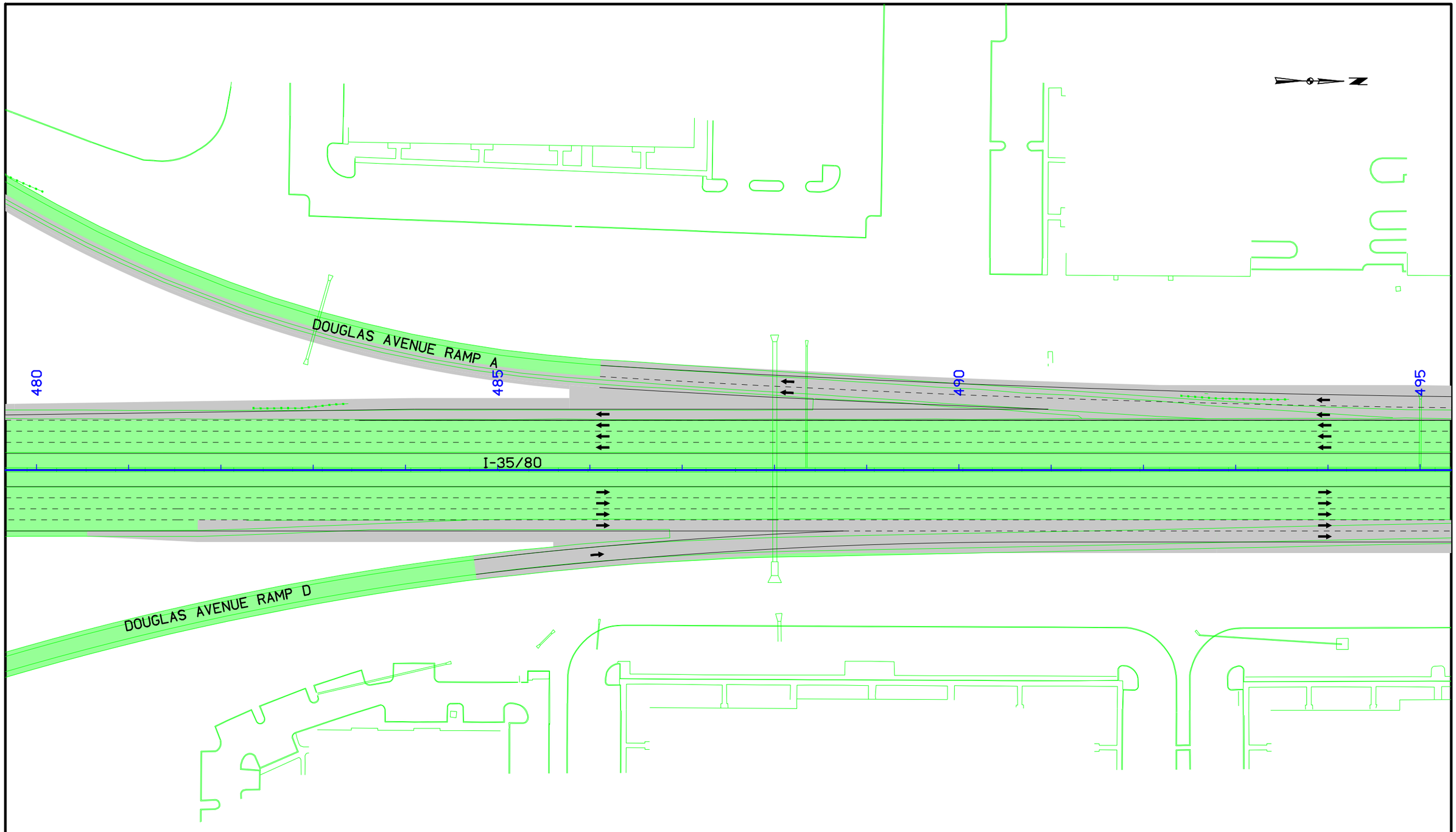
10:54:22 AM 8/5/2016 esullv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht



Mainline I-35/80
Stage 2B

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.42

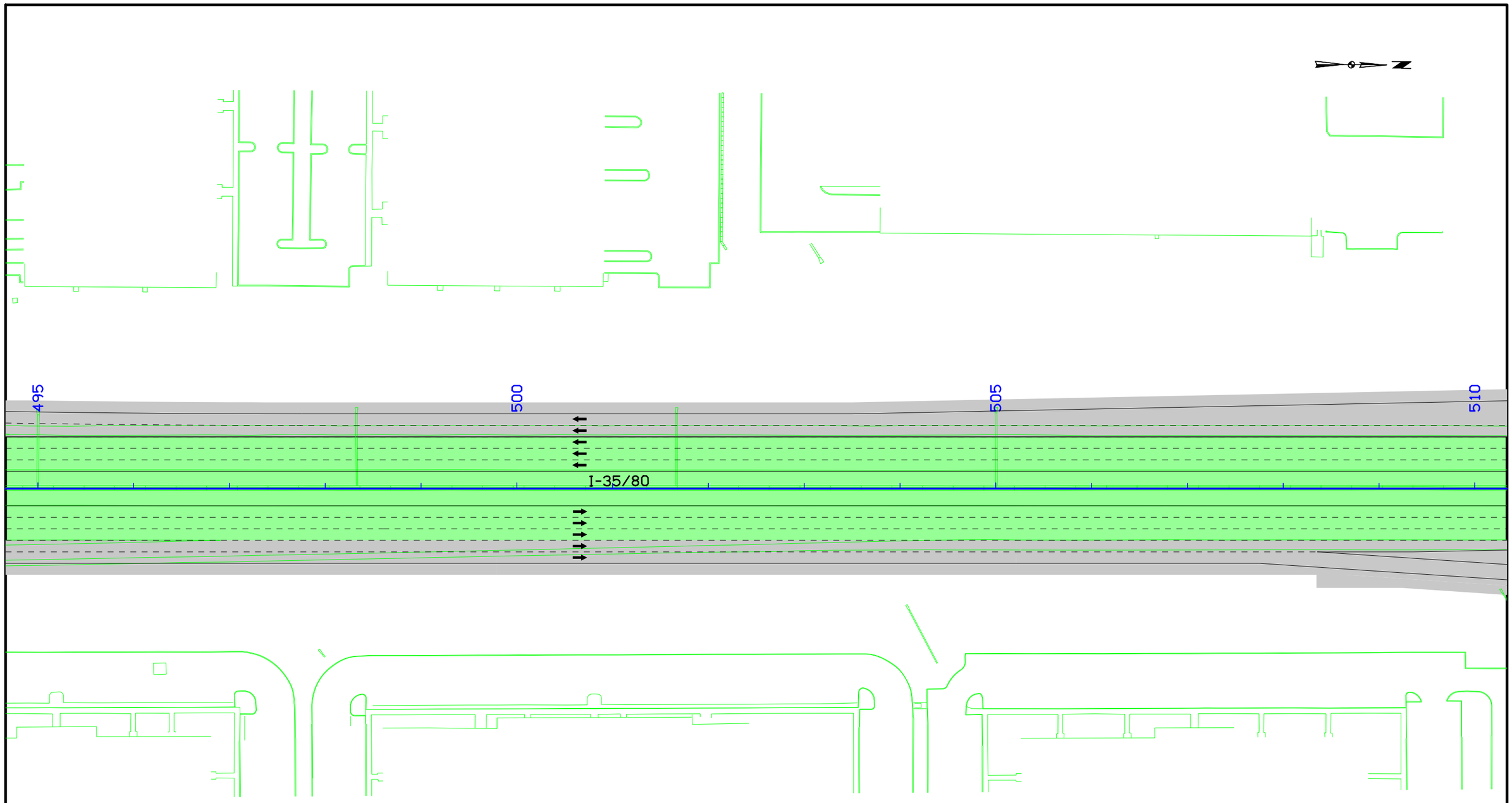
10:54:25 AM 8/5/2016 esulliv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht



Mainline I-35/80
Stage 2B

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.43

10:54:28 AM 8/5/2016 esullv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht



0 50 FEET

Mainline I-35/80
Stage 2B

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.44

10:54:32 AM 8/5/2016 esullv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht

MEREDITH DRIVE RAMP C

510

515

520

525

I-35/80

MEREDITH DRIVE RAMP B

0 FEET 50

Mainline I-35/80
Stage 2B

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.45

10:54:35 AM 8/5/2016 esulliv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht

IA 141 RAMP C

MEREDITH DRIVE

525

530

535

540

I-35/80

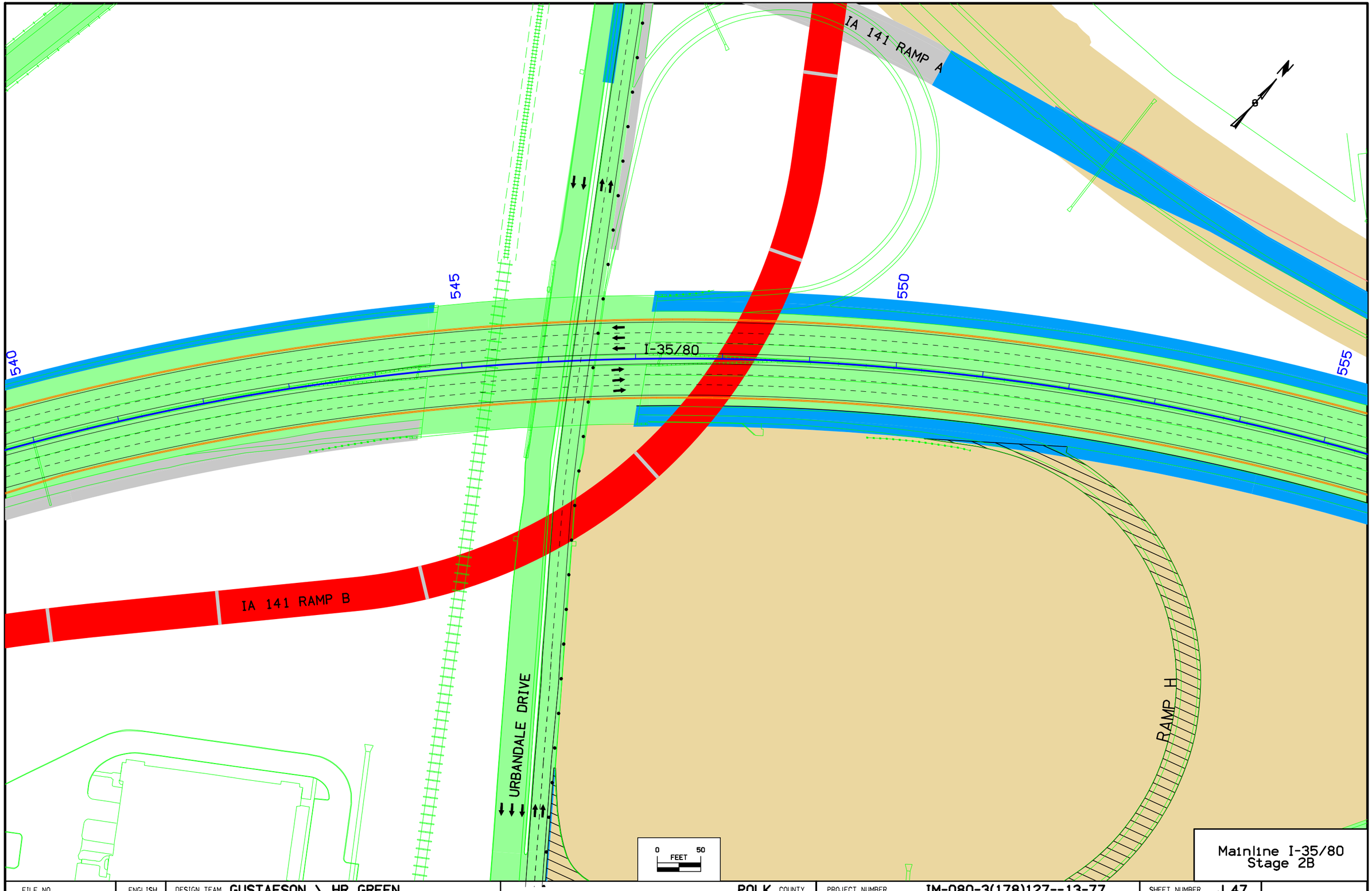
IA 141 RAMP B

0 FEET 50

Mainline I-35/80
Stage 2B

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.46

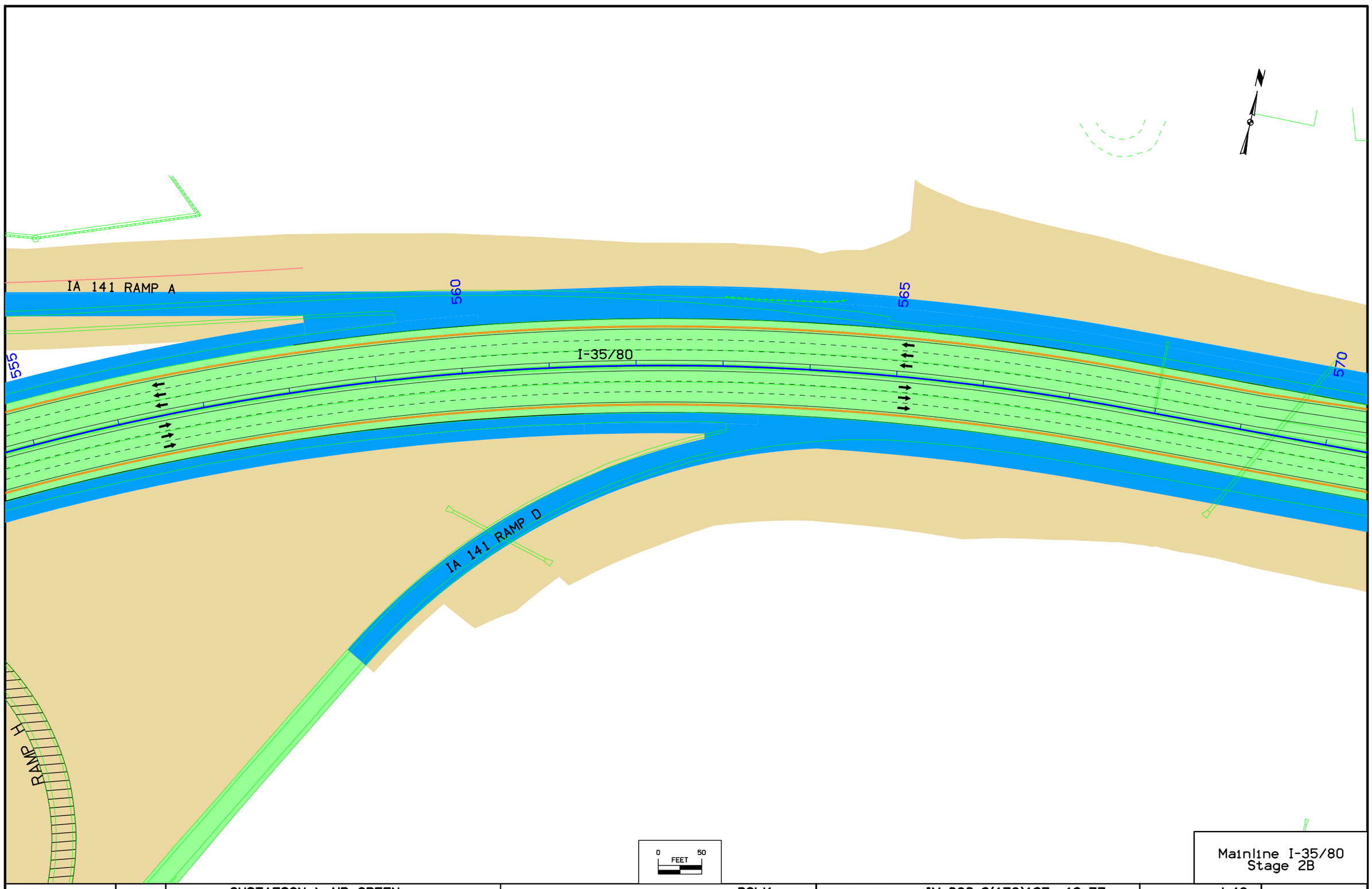
10:54:37 AM 8/5/2016 esullv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht



FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.47

Mainline I-35/80
Stage 2B

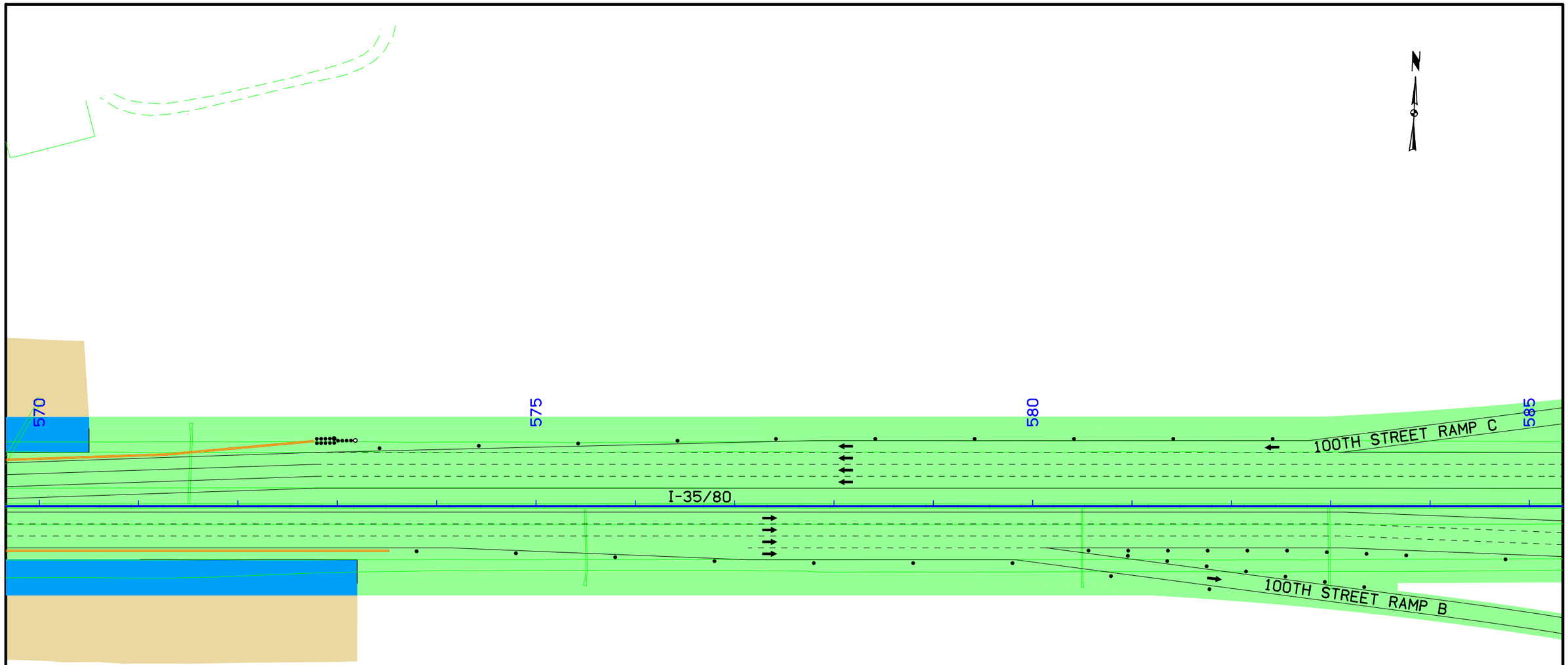
10:54:41 AM 8/5/2016 esullv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht



Mainline I-35/80
Stage 2B

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.48	

10:54:44 AM 8/5/2016 esulliv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht

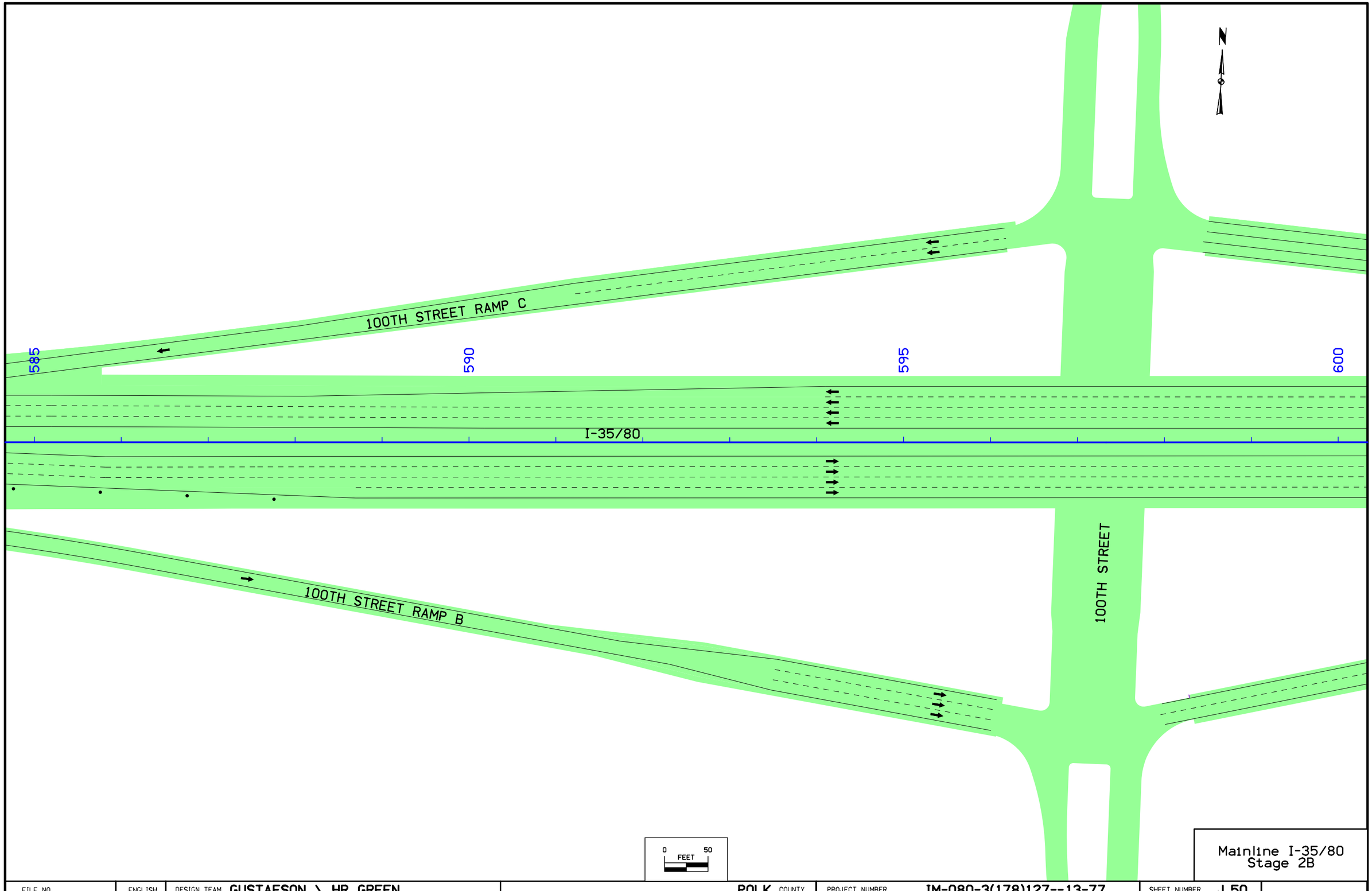


0 FEET 50

Mainline I-35/80
Stage 2B

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.49

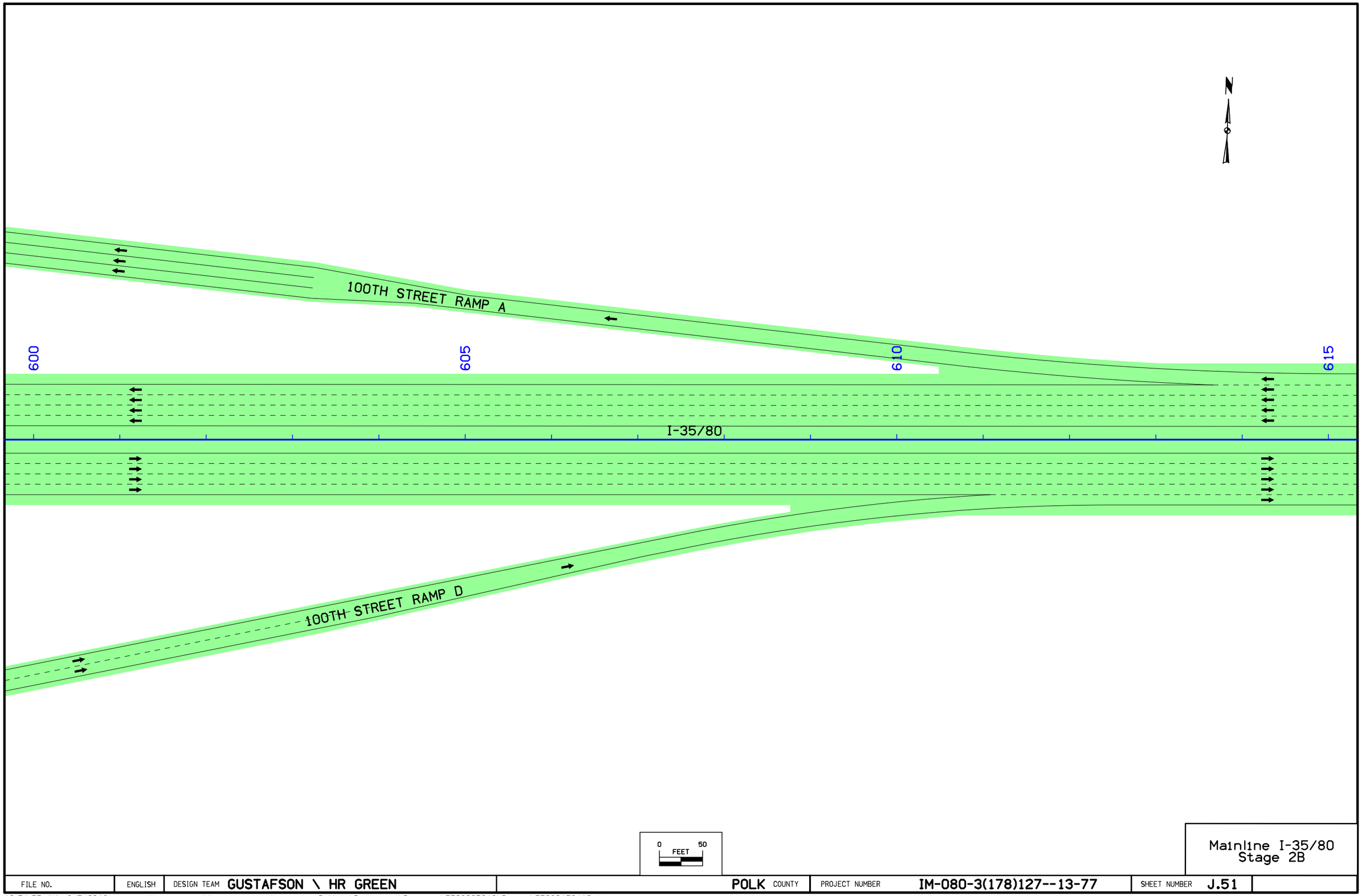
10:54:48 AM 8/5/2016 esulliv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht



Mainline I-35/80
Stage 2B

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.50

10:54:51 AM 8/5/2016 esulliv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht



Mainline I-35/80
Stage 2B

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.51

10:54:55 AM 8/5/2016 esulliv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht

IA 141 RAMP B

530

525

MEREDITH DRIVE

MEREDITH DRIVE RAMP C

MEREDITH DRIVE RAMP B

15

20

25

xx

xx

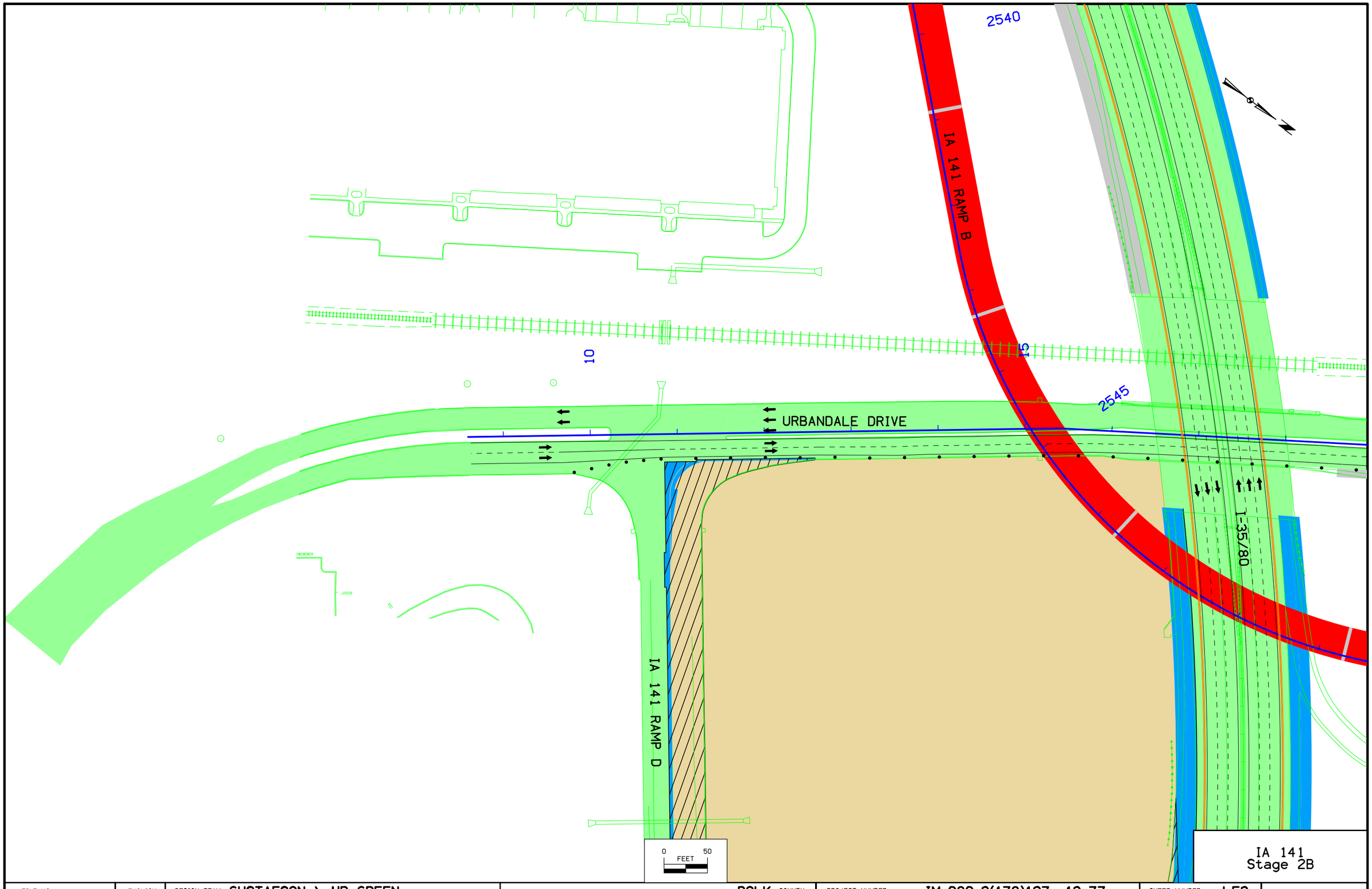
xx

0 FEET 50

Meredith Dr.
Stage 2B

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.52

10:54:59 AM 8/5/2016 esullv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht



FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.53

10:55:02 AM 8/5/2016 esullv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht

IA 141 RAMP C

IA 141

IA 141 RAMP B

IA 141 RAMP A

25

30

20

2555

2560

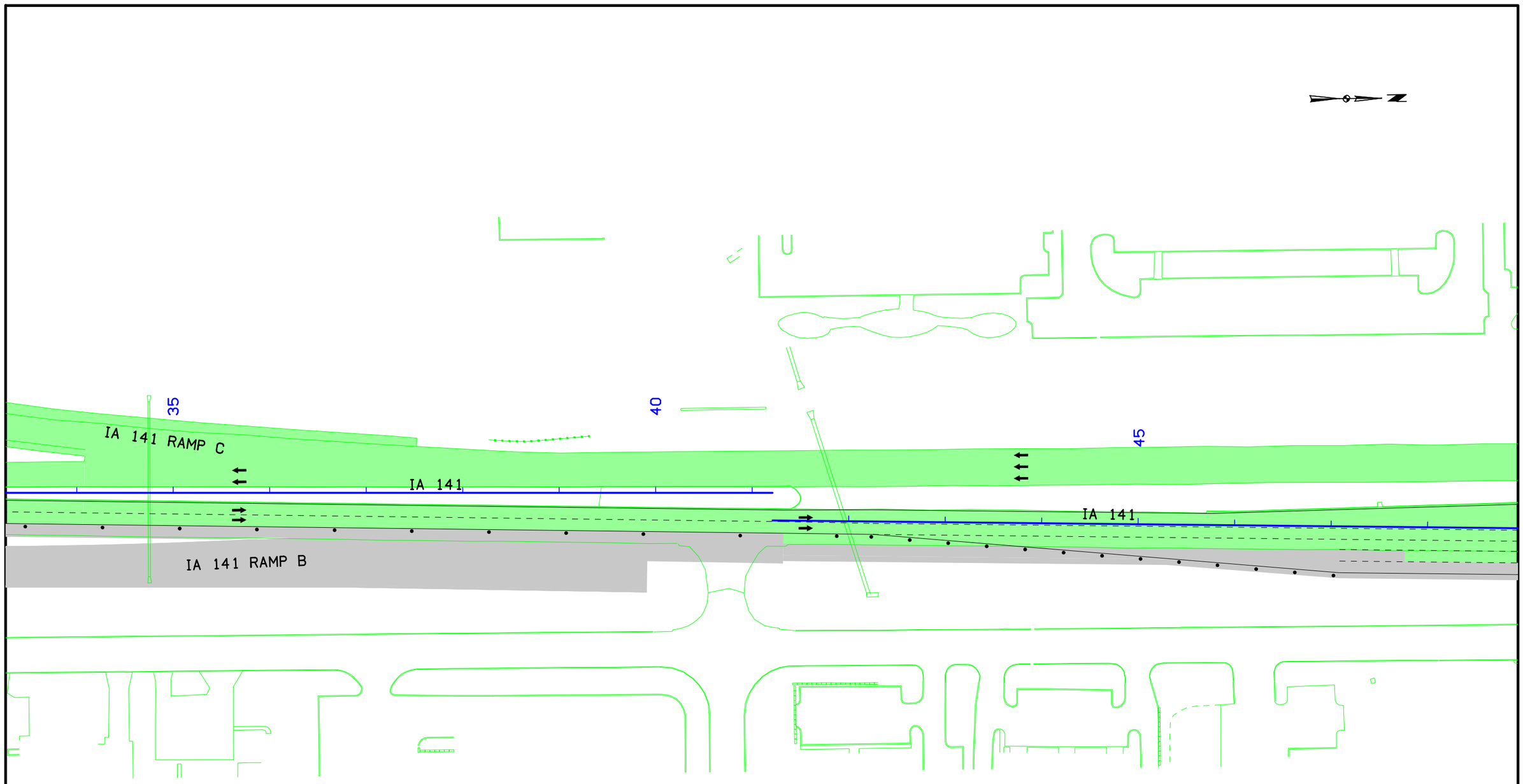
2550

0 FEET 50

IA 141
Stage 2B

FILE NO.	ENGLISH	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER J.54

10:55:06 AM 8/5/2016 esullv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht



IA 141
Stage 2B

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.55

10:55:10 AM 8/5/2016 esullv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht

SE 37TH STREET

50

55

60

IA 141

0 50
FEET

IA 141
Stage 2B

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.56

10:55:14 AM 8/5/2016 esullivpw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178J12.sht

WEBSTER TWP
T-79N R-25W
SEC. 29

WEBSTER TWP
T-79N R-25W
SEC. 20

WEBSTER TWP
T-79N R-25W
SEC. 28

WEBSTER TWP
T-79N R-25W
SEC. 21

N

Curve Data
Δ = 2° 55′ 54.96″ (LT)
T = 209.90
L = 419.72
R = 8,202.08
E = 2.69

PI Sta 49+26.37

POT Sta 1571+89.75

PT Sta 51+36.18

PI Sta 1575+62.66

Curve Data
Δ = 29° 32′ 18.87″ (RT)
T = 152.91
L = 299.02
R = 580.00
E = 19.82
e = 6.0% (match existing)

90° 00′ 00.00″

PC Sta 1574+09.75

PT Sta 1577+08.76

PC Sta 1579+25.76

DOUGLAS RAMP A (SRDGWBA)

Curve Data
Δ = 27° 05′ 06.25″ (LT)
T = 352.87
L = 692.54
R = 1,465.00
E = 41.90
e = 6.0% (match existing)

PCC Sta 1586+18.30

12.0′ 16.0′ 24.0′

POT Sta 475+65.42

840′ Taper 70:1 Ratio

30° 32′ 44.80″

PI Sta 1582+78.43

PI Sta 4580+34.56

24° 04′ 20.20″

12.0′

I-35/80 (ML080)

PI Sta 4588+16.29

12.0′

16.0′

DOUGLAS AVENUE WESTBOUND (SRDGWB)

DOUGLAS RAMP D (SRDGWBD)

Curve Data
Δ = 3° 27′ 38.79″ (LT)
T = 578.52
L = 1,156.70
R = 19,150.00
E = 8.74
e = 3.0%

PI Sta 1591+96.83

PT Sta 1597+75.00

36.0′ 24.0′

36.0′

36.0′

24.0′

POT Sta 457+85.24

64° 55′ 13.40″

PC Sta 4575+08.01

Curve Data
Δ = 18° 18′ 41.06″ (RT)
T = 526.55
L = 1,044.11
R = 3,267.00
E = 42.16
e = 5.2% (match existing)

PCC Sta 4585+52.13

Curve Data
Δ = 5° 45′ 39.31″ (RT)
T = 264.16
L = 527.87
R = 5,250.00
E = 6.64
e = 3.0%
L = 93
x = 62

PT Sta 4590+80.00

PC Sta 64+05.04

PI Sta 64+88.36

PT Sta 65+71.68

Curve Data
Δ = 1° 00′ 43.95″ (LT)
T = 83.32
L = 166.64
R = 9,432.40
E = 0.37

0 100 FEET

Geometric Plan
Proposed Interchange of
Interstate 35/80 with Douglas Avenue
Polk County

FILE NO.	ENGLISH	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER K.1

4:30:31 PM 8/5/2016 esulliv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178K1.sht

WEBSTER TWP
T-79N R-25W
SEC. 20

WEBSTER TWP
T-79N R-25W
SEC. 17

WEBSTER TWP
T-79N R-25W
SEC. 21

WEBSTER TWP
T-79N R-25W
SEC. 16

Curve Data
Δ = 6° 29′ 42.69″ (LT)
T = 113.48
L = 226.72
R = 2,000.00
E = 3.22
e = 5.4%
L = 168
x = 62

Curve Data
Δ = 9° 46′ 51.48″ (RT)
T = 130.91
L = 261.19
R = 1,530.00
E = 5.59
e = 6.0%
L = 186
x = 62

PC Sta 3513+50.00
PT Sta 3515+76.72
PI Sta 3514+63.48
PC Sta 2519+88.00
PT Sta 2522+49.19
PI Sta 2521+18.91
PC Sta 3525+55.96
PT Sta 2525+56.22
PI Sta 3526.48

MEREDITH RAMP C (SRMRDHC)
MEREDITH RAMP B (SRMRDHB)
IA 141 RAMP C (SR141C)
IA 141 RAMP B (SR141B)
I-35/80 (ML080)
MEREDITH DRIVE (SRMRDH)

1000′ Taper 50:1 Ratio
15:1 Ratio
81° 57′ 57.90″
7° 38′ 27.60″
3° 48′ 50.76″
76° 47′ 52.40″
13.0′
16.0′
24.0′
36.0′
12.0′
48.0′

0 100
FEET

Geometric Plan
Proposed Interchange of
Interstate 35/80 with Meredith Drive
Polk County

FILE NO.	ENGLISH	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER K.2

4:30:34 PM 8/5/2016 esulliv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178K1.sht

WEBSTER TWP
T-79N R-25W
SEC. 17

WEBSTER TWP
T-79N R-25W
SEC. 20

WEBSTER TWP
T-79N R-25W
SEC. 21

WEBSTER TWP
T-79N R-25W
SEC. 16

Curve Data
Δ = 2° 20′ 58.21″ (RT)
T = 230.41
L = 460.75
R = 11,236.00
E = 2.36
e = 1.5% (match existing)

Curve Data
Δ = 88° 13′ 37.23″ (RT)
T = 2,817.46
L = 4,474.84
R = 2,906.02
E = 1,141.57
e = 3.3% (match existing)

Curve Data
Δ = 23° 59′ 21.16″ (RT)
T = 424.92
L = 837.38
R = 2,000.00
E = 44.64
e = 5.4%
L = 216
x = 80

Curve Data
Δ = 17° 09′ 27.98″ (RT)
T = 374.13
L = 742.66
R = 2,480.00
E = 28.06
e = 5.0%
L = 200
x = 80

Curve Data
Δ = 76° 39′ 40.60″ (LT)
T = 474.37
L = 802.80
R = 600.00
E = 164.87
e = 3.0% (Low Speed)
L = 186
x = 62

PI Sta 3538+85.64
PT Sta 3541+15.99
POT Sta 3526+82.71
PI Sta 2527+99.92
PC Sta 2535+86.51
PT Sta 2537+55.22
PCC Sta 2532+12.38
PC Sta 2542+48.04
PT Sta 2539+55.04
PC Sta 5221+84.60
PC Sta 2523+75.00
PI Sta 30+06.48
PI Sta 2547+22.41
PT Sta 2550+50.84

IA 141 RAMP C (SR141C)
I-35/80 (ML080)
IA 141 RAMP B (SR141B)
IA 141 RAMP A (SR141A)
MEREDITH RAMP C (SRMRDHC)
MEREDITH RAMP B (SRMRDHB)
MEREDITH DRIVE (SRMRDH)
IA 141 (SUR141_S)
IA 141 RAMP D (SR141D)

24.0′
12.0′
48.0′
36.0′

0 100
FEET

Geometric Plan
Proposed Interchange of
Interstate 35/80 with IA 141
Polk County

FILE NO.	ENGLISH	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER K.3

4:30:37 PM 8/5/2016 esulliv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178K1.sht

WEBSTER TWP
T-79N R-25W
SEC. 16

Curve Data
Δ = 34° 40′ 36.39″ (RT)
T = 330.93
L = 641.54
R = 1,060.00
E = 50.46
e = 3.0% (Low Speed)
L = 230
x = 77

Curve Data
Δ = 34° 14′ 53.94″ (RT)
T = 202.17
L = 392.22
R = 656.17
E = 30.44
e = 3.0% (Match Existing)

Curve Data
Δ = 12° 20′ 14.51″ (RT)
T = 129.70
L = 258.39
R = 1,200.00
E = 6.99
e = 4.0%
L = 90
x = 45

Curve Data
Δ = 88° 13′ 37.23″ (RT)
T = 2,817.46
L = 4,474.84
R = 2,906.02
E = 1,141.57
e = 3.3% (match existing)

Curve Data
Δ = 76° 39′ 40.60″ (LT)
T = 474.37
L = 802.80
R = 600.00
E = 164.87
e = 3.0% (Low Speed)
L = 186
x = 62

Curve Data
Δ = 54° 38′ 04.46″ (RT)
T = 382.23
L = 705.63
R = 740.00
E = 92.88
e = 6.0%
L = 155
x = 52

Curve Data
Δ = 17° 09′ 27.98″ (RT)
T = 374.13
L = 742.66
R = 2,480.00
E = 28.06
e = 5.0%
L = 200
x = 80

Curve Data
Δ = 23° 51′ 11.36″ (LT)
T = 107.00
L = 210.91
R = 506.60
E = 11.18
e = 8.0% (existing)

IA 141 RAMP C (SR141C)
IA 141 RAMP A (SR141A)
IA 141 RAMP B (SR141B)
IA 141 RAMP D (SR141D)
IA 141 (SUR141-S)
I-35/80 (ML080)

PI Sta 2556+35.77
PT Sta 2554+76.33
PI Sta 2545+25.13
POT Sta 2544+74.15
PC Sta 2553+04.84
PT Sta 1547+84.99
PC Sta 2544+74.15
84° 36′ 21.24″
PC Sta 1546+55.29
PI Sta 2550+50.84
PT Sta 1549+13.68
PI Sta 4560+58.49
PI Sta 4567+01.58
POT Sta 1562+25.00
PI Sta 4565+25.00
POT Sta 567+59.44
PC Sta 2542+80.04
PI Sta 15+40.31
PI Sta 2547+22.41
PC Sta 4551+12.56
PT Sta 4553+23.47
PC Sta 4558+19.37
PI Sta 4552+19.57
POT Sta 4546+48.96
PT Sta 2539+55.04
POT Sta 8+59.48
90° 00′ 0.00″

16.0′ 24.0′ 36.0′ 12.0′

0 100 FEET

Geometric Plan
Proposed Interchange of
Interstate 35/80 with IA 141
Polk County

FILE NO.	ENGLISH	DESIGN TEAM		COUNTY	PROJECT NUMBER	SHEET NUMBER K.4	

4:30:41 PM 8/5/2016 esullv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178K1.sht

WEBSTER TWP
T-79N R-25W
SEC. 17

PI Sta 551+02.06

IA 141 RAMP C (SR141C)

Curve Data
Δ = 88° 13′ 37.23″ (RT)
T = 2,817.46
L = 4,474.84
R = 2,906.02
E = 1,141.57
e = 3.3% (Match Existing)

Curve Data
Δ = 34° 04′ 43.74″ (RT)
T = 201.05
L = 390.18
R = 656.00
E = 30.12
e = 3.0% (Match Existing)

PI Sta 23+76.33

PI Sta 2556+35.77

IA 141 (SUR141_S)

PC Sta 2562+27.68

POT Sta 41+21.10

POT Sta 41+21.10

IA 141 (SUR141_N)

16.6′

13.0′

9.0′

PT Sta 2554+96.38

IA 141 RAMP B (SR141B)

PC Sta 2553+04.84

PT Sta 2559+46.37

PI Sta 2566+16.96

PI Sta 2570+69.42

24.0′

54.7′

12.0′

Curve Data
Δ = 34° 40′ 36.39″ (RT)
T = 330.93
L = 641.54
R = 1,060.00
E = 50.46
e = 3.0% (Low Speed)
Ɩ = 230
x = 77

PC Sta 2542+48.04

I-35/80 (M.080)

PC Sta 2550+50.84

PT Sta 2548+16.31

36.0′

24.0′

12.0′

IA 141 RAMP A

Curve Data
Δ = 76° 39′ 40.60″ (LT)
T = 474.37
L = 802.80
R = 600.00
E = 164.87
e = 3.0% (Low Speed)
L = 186
x = 62

PI Sta 2547+22.41

16.0′

36.0′

IA 141 RAMP D

WEBSTER TWP
T-79N R-25W
SEC. 16

0 100
FEET

Geometric Plan
Proposed Interchange of
Interstate 35/80 with IA 141
Polk County

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER K.5

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WEBSTER TWP
T-79N R-25W
SEC. 20

Curve Data
Δ = 28° 51′ 53.85″ (RT)
T = 169.86
L = 332.50
R = 660.00
E = 21.51
e = 6.0% (match existing)

Curve Data
Δ = 26° 23′ 21.65″ (LT)
T = 334.09
L = 656.33
R = 1,425.00
E = 38.64
e = 6.0% (match existing)

Curve Data
Δ = 3° 28′ 58.37″ (LT)
T = 582.22
L = 1,164.08
R = 19,150.00
E = 8.85
e = 3.0%

POT Sta 1571+91.09
DOUGLAS AVENUE
PC Sta 1573+88.09
PI Sta 1575+57.94
PI Sta 1577+20.59
PC Sta 1579+54.59
PI Sta 1582+88.68
PCC Sta 1586+10.92
PI Sta 1591+93.14
PT Sta 1597+75.00
DOUGLAS RAMP A (SRDGWBA)
I-35/80
DOUGLAS RAMP D
DOUGLAS RAMP A (SRDGWBA)
0 FEET 100

+27 Rt. 988.78
-10.60% Rt. Ditch Grade
+15 Rt. 979.45
-0.44% Rt. Ditch Grade
+35 Rt. 974.36
+70 Rt. 972.01

DG 6:1/3.5:1 Ditch Grade (Refer to D sheets) Ditch Grade

1575 1580 1585 1590 1595

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER K.6

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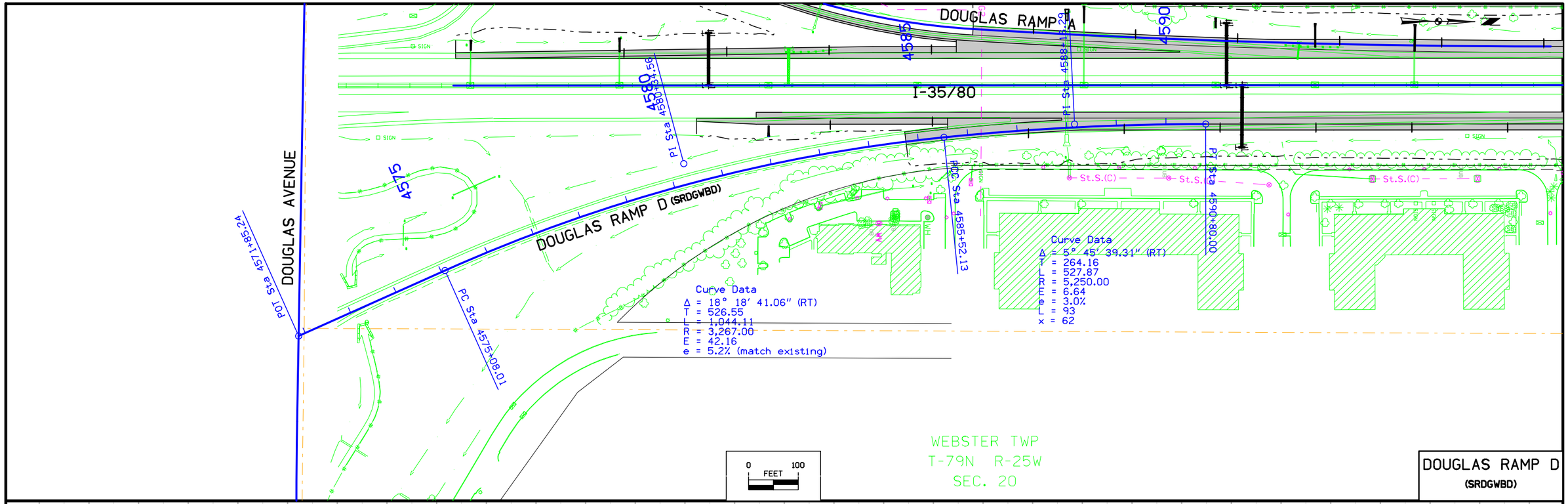

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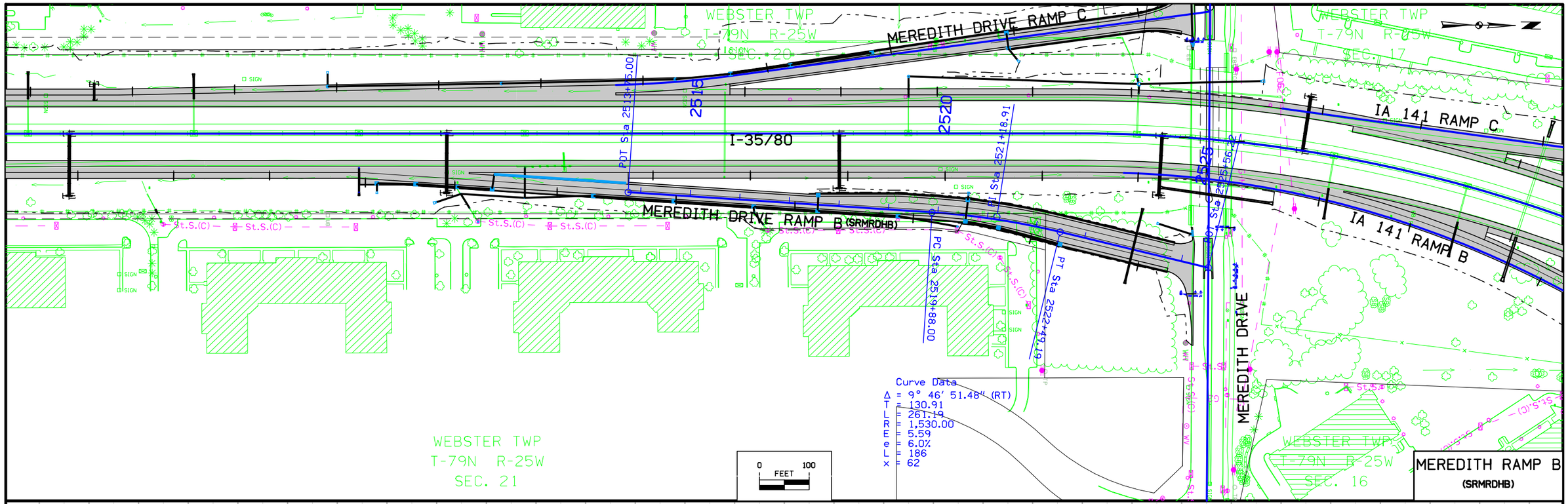

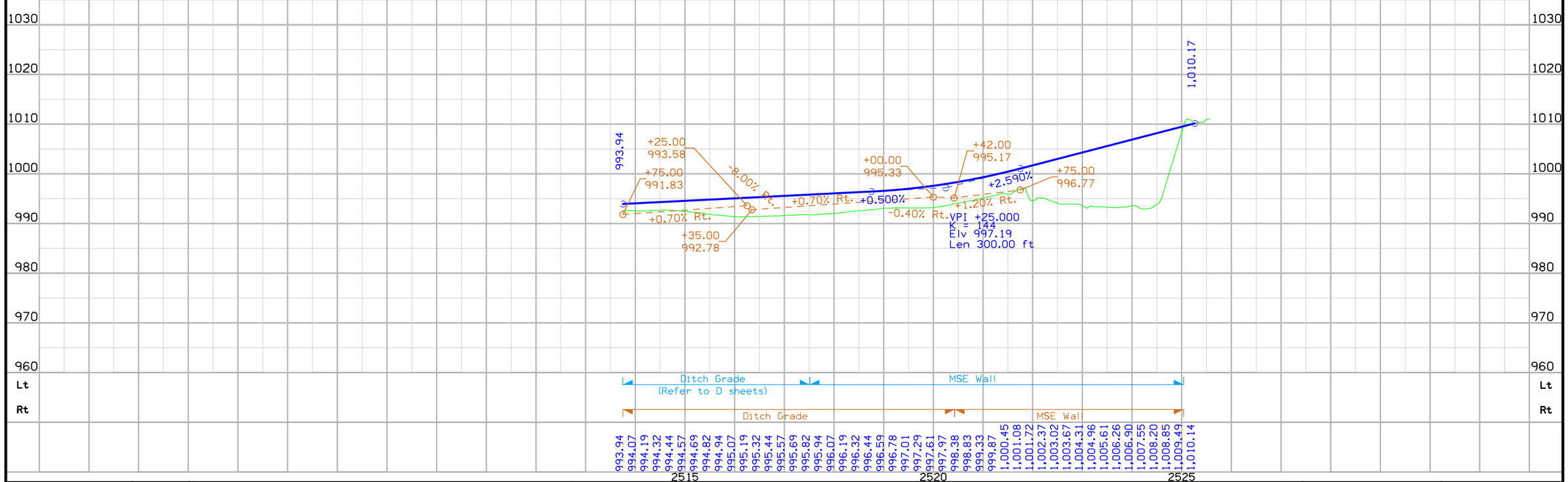

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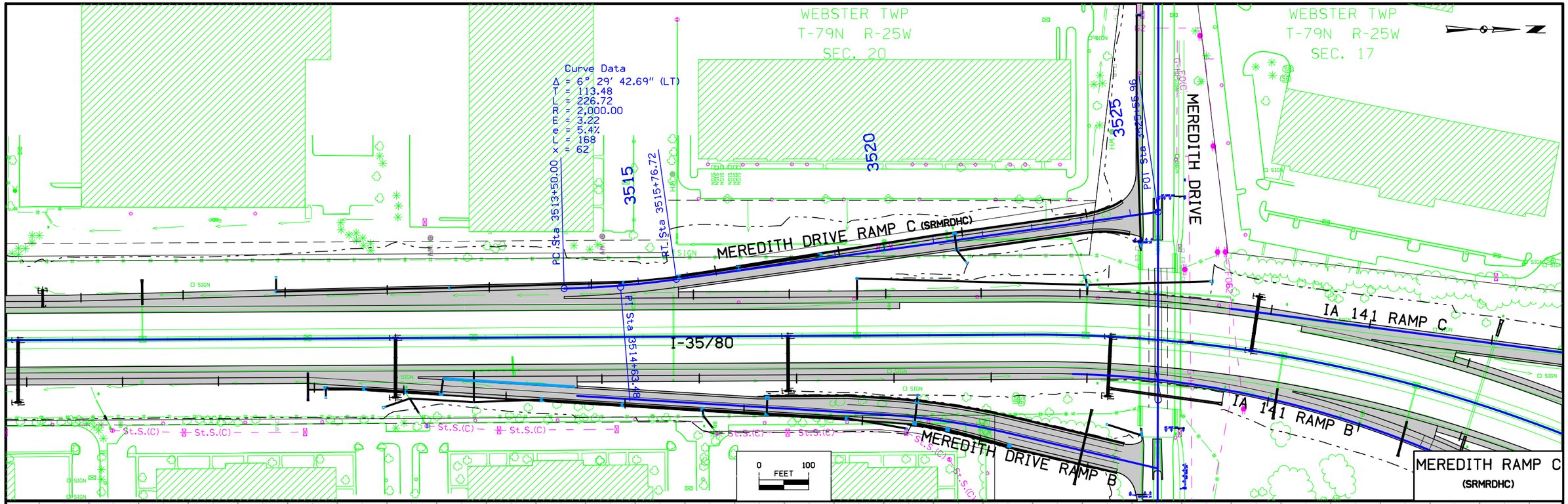

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER K.9

4:31:02 PM 8/5/2016 esulliv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178K1.sht

WEBSTER TWP
T-79N R-25W
SEC. 17

WEBSTER TWP
T-79N R-25W
SEC. 16

Curve Data
Δ = 12° 20' 14.51" (RT)
T = 129.70
L = 258.39
R = 1,200.00
E = 6.99
e = 4.4%
Γ = 106
x = 48

PC Sta 1545+35.13
PC Sta 1546+55.29
PT Sta 1547+84.99
PT Sta 1549+13.68
POT Sta 1562+25.00

IA 141 RAMP C
IA 141
IA 141 RAMP B
IA 141 RAMP A (SR141A)
I-35/80
IA 141 RAMP D

1550
1555
1560

0 100
FEET

IA 141 RAMP A
(SR141A)

SSD = 449'
VPI +25.000
K = 151
Elv 990.34
Len 775.00 ft

975.02
981.01

-2.200%
+2.721%
-2.398%
-1.65% Lt.
Ditch Grade

+65 Lt.
983.83
+15 Lt.
983.68
+50 Lt.
984.35
+50 Lt.
983.35
+17 Lt.
978.95

VPI +25.000
K = 65
Elv 971.29
Len 320.00 ft

+40 Lt.
957.68
+0.86% Lt.
Ditch Grade
+50 Lt.
958.63

1000
990
980
970
960
950
940
930

	6:1/3.5:1	DG	MSE Wall	Ditch Grade (Between Wall/Barrier)
Lt				(Refer to D sheets)
Rt	6:1/3.5:1			Ditch Grade

974.60 974.13 973.76 973.49 973.32 973.24 973.26 973.37 973.58 973.88 974.29 974.78 975.38 976.05 976.73 977.41 978.09 978.77 979.45 980.13 980.77 981.36 981.92 982.44 982.91 983.34 983.73 984.08 984.39 984.66 984.89 985.07 985.21 985.32 985.38 985.40 985.37 985.31 985.21 985.06 984.88 984.65 984.38 984.07 983.72 983.32 982.89 982.41 981.90 981.34

1550 1555 1560

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER K.10

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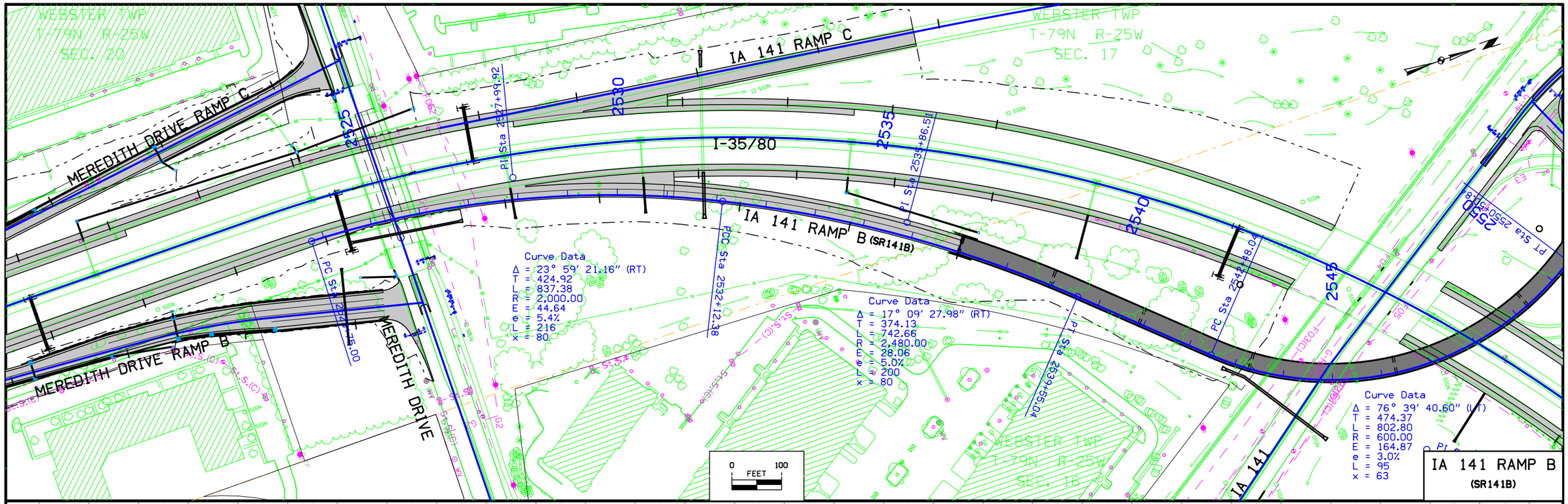

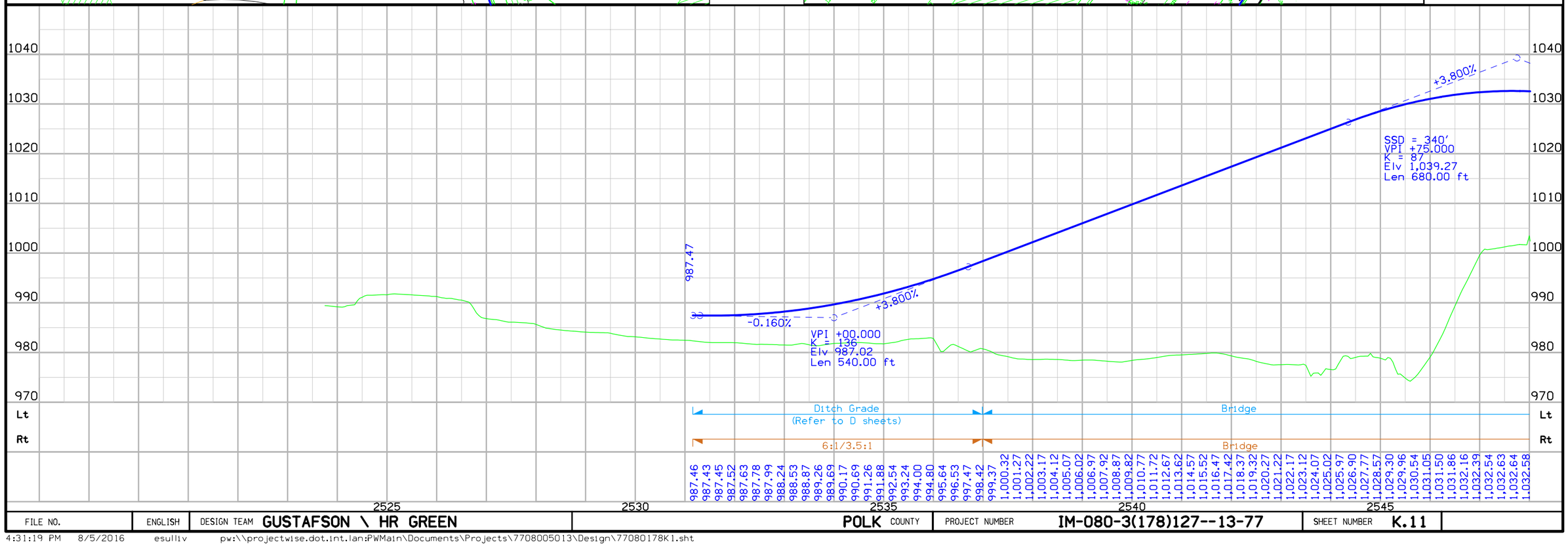

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER K.11

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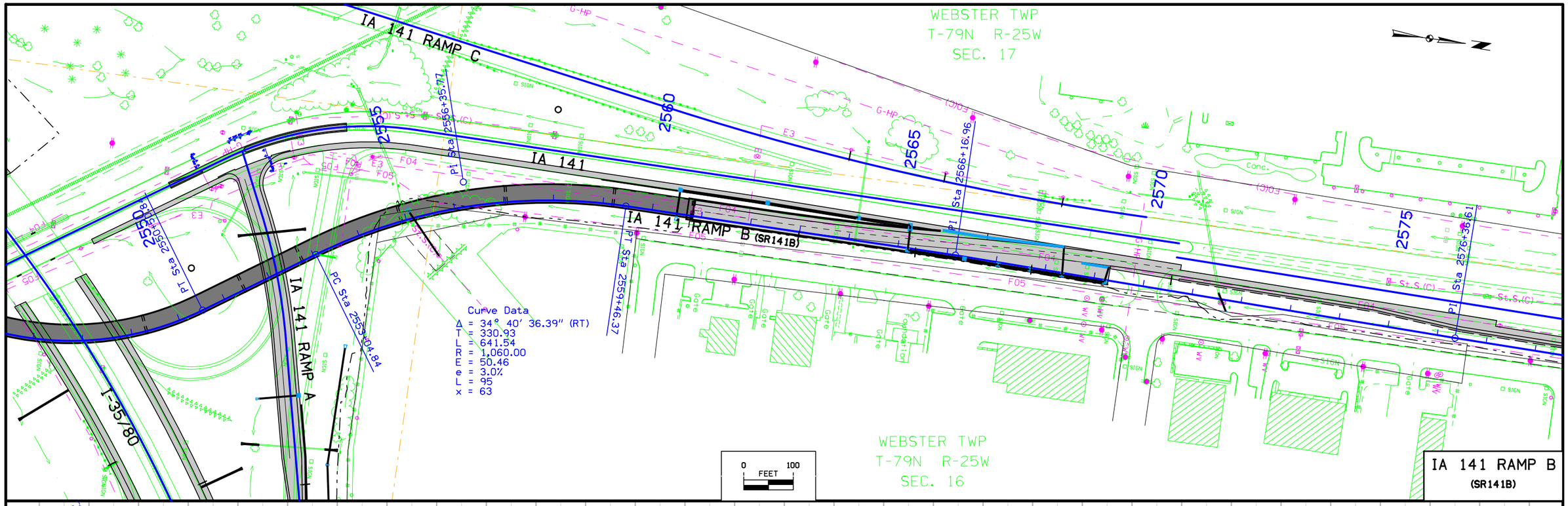

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER K.12

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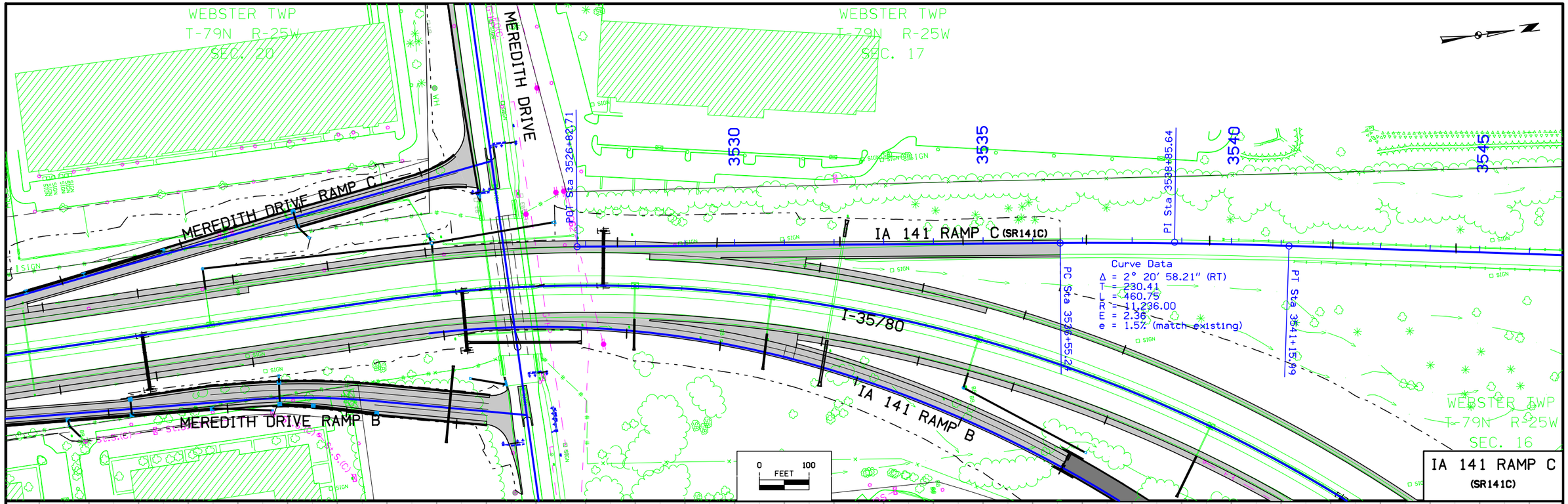

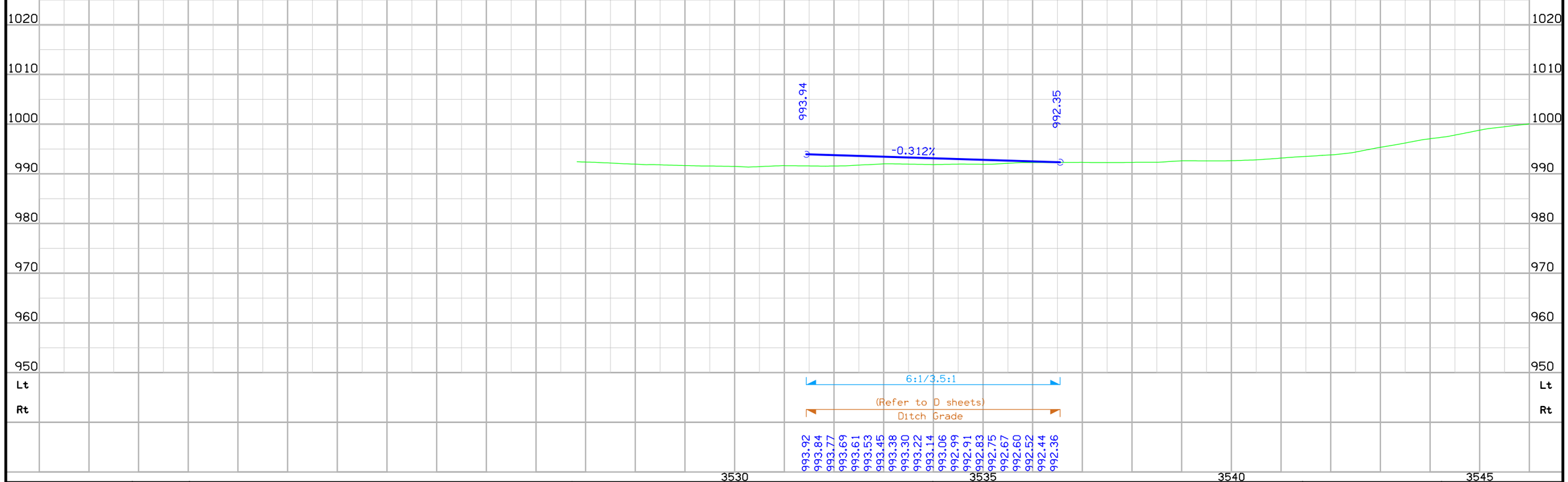

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER K.13

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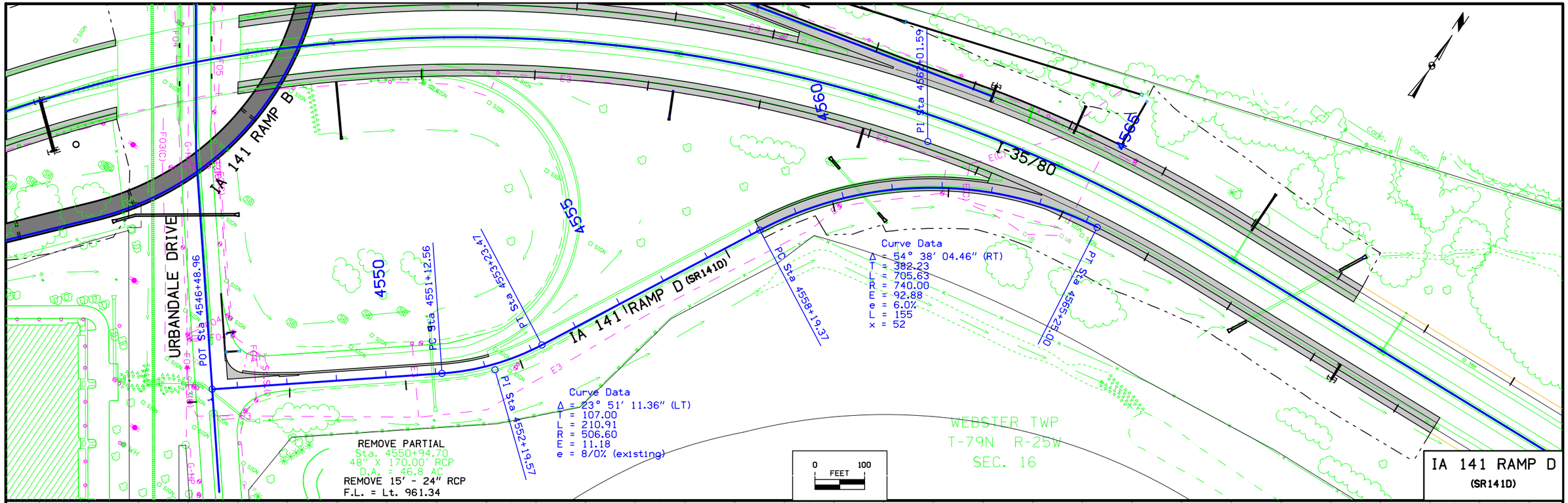

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER K.14

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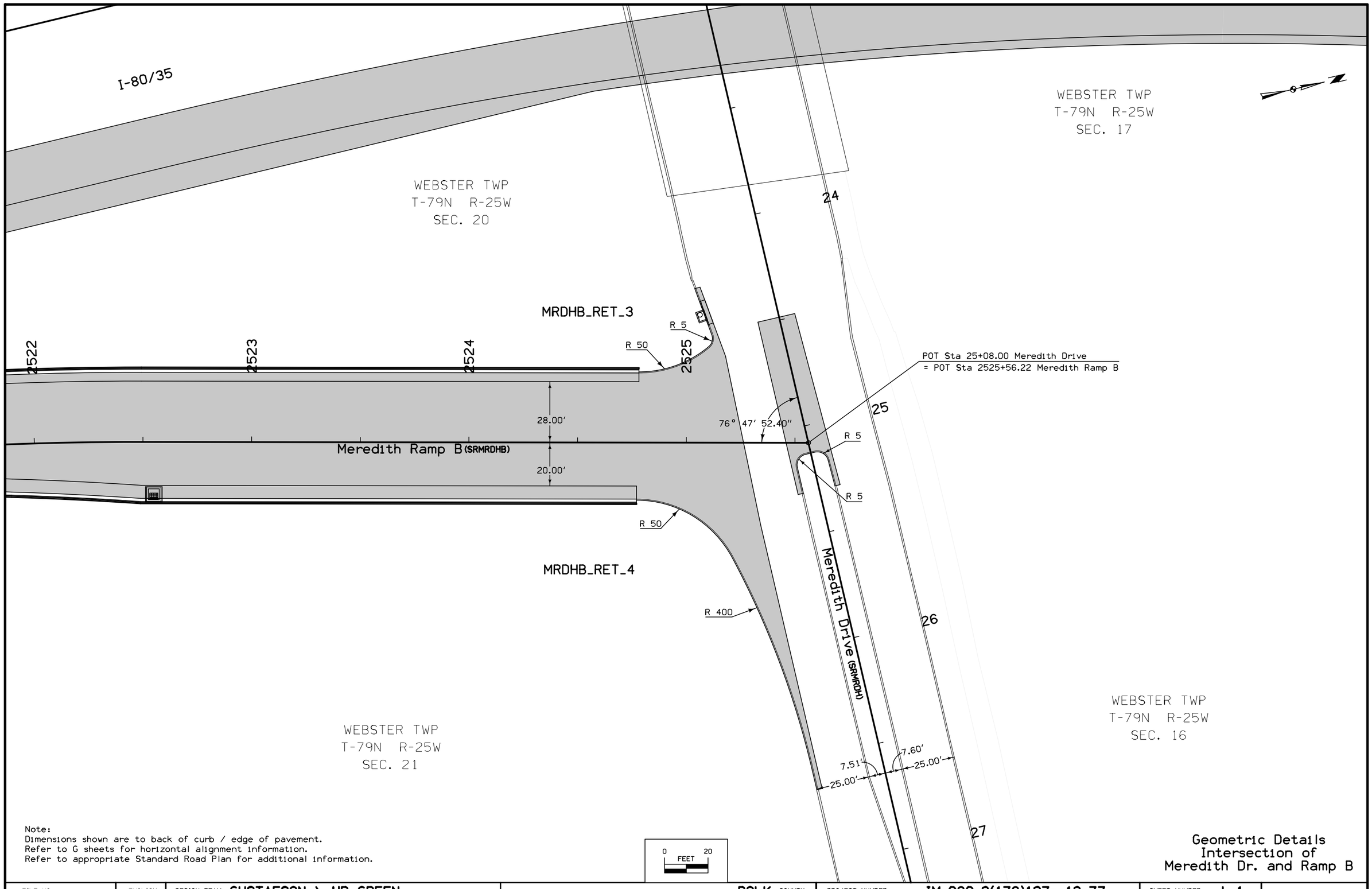

Note:
Dimensions shown are to back of curb / edge of pavement.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plan for additional information.

Geometric Details
Intersection of
Meredith Dr. and Ramp B

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER L.1

1:49:46 PM 8/5/2016 esullv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178L1.sht

WEBSTER TWP
T-79N R-25W
SEC. 20

WEBSTER TWP
T-79N R-25W
SEC. 17

MRDHC_RET_3

MRDHC_RET_4

3522
3523
3524
3525

18
19
20
21

Meredith Drive (SRMRDH)

36.91′
7.59′
7.39′
25.00′

R 70
R 104.5
R 304.5
R 254.5
R 250
R 5
R 5
R 5

8.00′
16.00′

Meredith Ramp C (SRMRDHC)

POT Sta 19+92.00 Meredith Drive
= POT Sta 3525+55.96 Meredith Ramp C

81° 57′ 57.90″

I-80/35

Note:
Dimensions shown are to back of curb / edge of pavement.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plan for additional information.

0 20
FEET

Geometric Details
Intersection of
Meredith Dr. and Ramp C

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER L.2

1:49:49 PM 8/5/2016 esullv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178L1.sht

WEBSTER TWP
T-79N R-25W
SEC. 17

WEBSTER TWP
T-79N R-25W
SEC. 16

IA 141 (SUR141.S)

141 Ramp B (SR141B)

141 Ramp A (SR141A)

24.60′
4.41′
6.05′
25.00′

23

22

21

141A_RET_1

1546

1547

1548

1549

R 70

R 55

R 4.5

R 20

R 1

POC Sta 22+11.52 IA 141
= POT Sta 1545+25.13 141 Ramp A

84° 36′ 21.24″

12.00′

24.00′

141A_RET_4

60′ 10:1 Taper

25.00′
3.94′
3.68′
25.06′

0 20
FEET

Note:
Dimensions shown are to back of curb / edge of pavement.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plan for additional information.

Geometric Details Intersection of IA 141 and Ramp A

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER L.3

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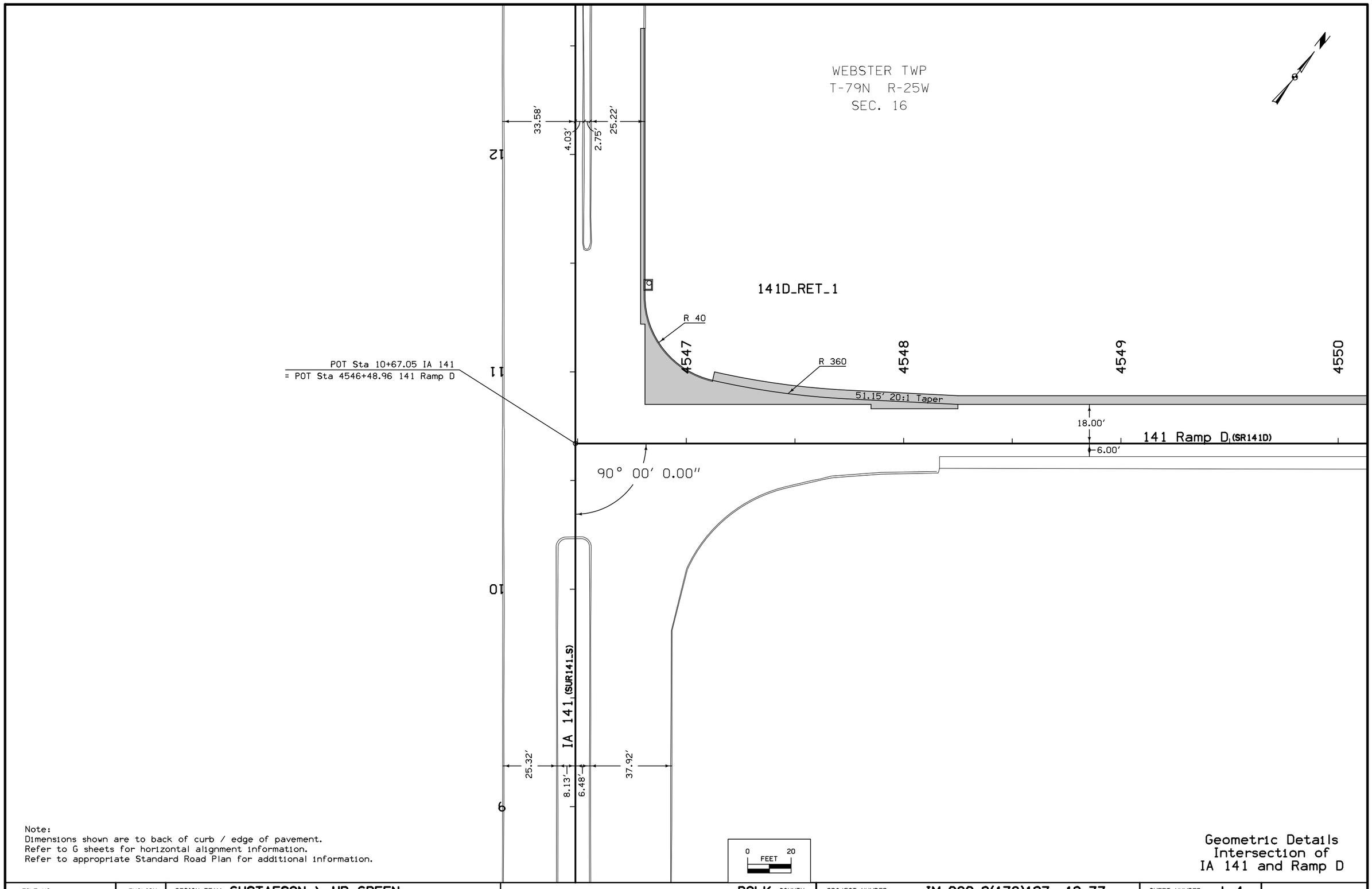

Note:
Dimensions shown are to back of curb / edge of pavement.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plan for additional information.

Geometric Details
Intersection of
IA 141 and Ramp D

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER L.4

1:49:56 PM 8/5/2016 esulliv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178L1.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
A-1a	519+39.50, 0.00	Existing Intake	993.61	989.1		
A-1	519+39.50, -73.25	SW-211	989.33	-		
A-2	519+39.50, -115.00	SW-401 (48")	993.48	987.88		
A-3a	524+00.00, 0.00	Existing Intake	992.54	988.14		
A-3	523+99.50, 82.20	SW-211	988.2	-		
A-4	523+93.26, -114.37	RF-3 (24")	987.02	-		
A-5	523+99.59, -102	SW-401 (84")	992.25	986.01		
A-6	526+41.90, -127.98	RF-3 (36")	985.5	-		
B-1a	535+00.00, 0.00	Existing Intake	994.2	987.48		
B-1	534+98.20, 72.37	SW-211	987.29	-		
B-2	534+97.32, -102.12	SW-401 MOD (48")	987.74	982.18		
B-3	537+86.21, -148.44	RF-3 (24")	980.72	-		
C-1	39+90.50, 64.82	Trench Drain	968.41	-	968.29	
C-2	2569+22.00, 5.8	SW-549	967.55	961.8		
C-3	38+95.54, 37.2	Trench Drain	968.5	-		
C-4	2568+35.00, 5.8	SW-549	967.73	961.37		
C-5	2567+70.00, 5.8	SW-549	967.92	961.03		
C-6	2567+04.80, 6.32	SW-549	968.2	960.69		
C-7	2566+36.00, 5.8	SW-549	968.52	960.39		
C-8	2565+20.51, 5.79	SW-549	970.23	959.79		
C-9	2565+19.00, -38.9	SW-549	970.81	959.55		
C-10	35+81.00, 45.21	SW-549	969.66	959.43		
C-11	34+75.30, 45.5	SW-549	969.78	958.02		
C-12	32+90.00, 42.90	SW-549	969.15	957.2		
C-13	31+12.46, 42.80	SW-549	969.7	956.41		
C-14	31+12.16, 102.96	RF-3 (36")	956.66	-		
D-1	20+56.00, 33.7	SW-507	1014.6	1010.2		
D-2	18+00.00, 44.5	SW-501	1006.7	1000.82		
D-3	15+96.00, 44.5	SW-501	998.65	993.91		
D-4	15+96.00, 34.5	SW-401 (48")	998.87	993.89		
E-1	24+40.00, 33.2	SW-507	1012.1	1006.3		
E-2	24+18.99, 103.95	RF-3 (24")	992.15	-		
G-1	2522+55.00, 25.79	SW-549	1002.1	996.37		
G-2	2521+25.00, 17.53	SW-549	998.82	992.76		
G-3	2520+47.00, 13.8	SW-549	997.5	991.32		
G-4	2520+47.00, -31.79	SW-549	999.93	990.39		
G-5	2520+47.00, -49.31	RF-3 (24")	990.56	-		
H-1	3518+70.00, -9.12	SW-549	995.03	989.75		
H-2	3517+04.00, -7.03	SW-549	993.64	988.29		
H-3	3515+82.51, -5.79	SW-549	993.65	987.72		
H-4	514+70.00, -109.45	SW-401 (48")	994.09	987.19		
H-5	511+20.00, -101.00	SW-401 (48")	992.71	985.71		
H-6	507+70.00, -95.00	SW-401 (48")	989.82	984.23		
H-7	507+70.00, -125.00	RF-3 (24")	986.04	-		
J-1	3521+44.00, -13.79	SW-549	1001.1	995.34		
J-2	3521+44.00, 19.79	SW-549	1001.7	994.78		
J-3	3521+61.70, 49.71	RF-3 (24")	993.61	-		
K-1	1550+30.00, -17.77	SW-549	979.51	973.76		
K-2	1550+30.00, 69.98	RF-3 (24")	972	-		
L-1	1553+15.00, -12	SW-512 (24") Type 5 Casting	983.75	978		
L-2	1553+15.00, 61.28	RF-3 (24")	976.37	-		
M-1	1549+42.09, -117.62	RF-3 (36")	952.33			
M-2	1551+74.26, -62.35	SW-401 (60")	965.83	950.32		
M-3	1555+09.67, -44.86	SW-401 (60")	966.46	948.36		
M-4	1560+08.50, -77.85	SW-401 (60")	959.3	945.59		
M-5	564+89.58, -201.22	RF-3 (36")	943.6	-		

PIPES

Design Length, Slope, and Flowlines are calculated from inside wall to inside wall along CL of pipe. An additional 2 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'	(1) Pipe Size IN	Bid* Length FT	Design Length FT	Slope %	Connected Pipe Joint (DR-121) Type	Flow Lines Inlet Elevation	Outlet Elevation	Other Elevation	Pipe Profile Sheet No.	Notes
PA-1a	A-1a	A-1	2000	15		-	1		989.6	989.33			
PA-1	A-1	A-3	2000	15	44	39.8	1		989.33	989.05			
PA-2	A-2	A-3	2000	24	463	458.2	0.4		988.38	986.54			
PA-3a	A-3a	A-3	2000	24		-	0.55		988.64	988.2			
PA-3	A-3	A-5	2000	24	19	16.3	0.5		988.2	988.12			
PA-4	A-4	A-5	2000	24	12	9.9	0.4		987	986.96			
PA-5	A-5	A-6	2000	36	244	241.7	0.4		986.51	985.54			Trenchless
PB-1a	B-1a	B-1	2000	24	-	-	1		987.98	987.29			
PB-1	B-1	B-2	2000	24	33	28.8	15.8		987.29	982.74			
PB-2	B-2	B-3	2000	24	277	273.0	0.7		982.68	980.76			
PC-1	C-1	C-2	2000	15	32	27.9	9.69		967.29	965.3			
PC-2	C-2	C-4	2000	24	86	82.0	0.4		962.3	961.97			
PC-3	C-3	C-4	2000	15	58	53.9	5.48		968.46	965.06			
PC-4	C-4	C-5	2000	24	64	60.0	0.4		961.87	961.63			
PC-5	C-5	C-6	2000	24	65	60.2	0.4		961.53	961.29			
PC-6	C-6	C-7	2000	24	68	63.8	0.4		961.19	960.94			
PC-7	C-7	C-8	2000	24	115	110.4	0.4		960.89	960.45			
PC-8	C-8	C-9	2000	24	41	36.3	0.4		960.29	960.15			
PC-9	C-9	C-10	2000	24	9	4.0	0.4		960.05	960.03			
PC-10	C-10	C-11	2000	24	105	100.6	0.4		959.93	959.53			
PC-11	C-11	C-12	2000	48	362	357.7	0.4		958.52	957.8			
PC-12	C-12	C-13	2000	48	46	43.8	0.4		957.7	957			
PC-13	C-13	C-14	2000	48	54	51.4	0.4		956.91	956.7			
PD-1	D-1	D-2	2000	18	257	252.5	3.6		1010.7	1001.62			
PD-2	D-2	D-3	2000	18	205	201.0	3.29		1001.32	994.71			
PD-3	D-3	D-4	2000	18	10	6.0	0.4		994.41	994.39			
													Letdown pipe
PE-1	E-1	E-2	2000	24	67	64.9	-		1008.8	992.15			
PG-1	G-1	G-2	2000	24	128	123.5	2.67		996.87	993.57			
PG-2	G-2	G-3	2000	24	77	72.5	1.59		993.26	992.12			
PG-3	G-3	G-4	2000	24	42	37.2	1.67		991.82	991.19			
PG-4	G-4	G-5	2000	24	13	10.6	2		990.89	990.68			
PH-1	H-1	H-2	2000	24	95	90.0	0.85		990.25	988.89			
PH-2	H-2	H-3	2000	24	85	80.5	0.4		988.79	988.32			
PH-3	H-3	H-4	2000	24	112	107.1	0.4		988.22	987.79			
PH-4	H-4	H-5	2000	24	351	346.1	0.4		987.69	986.31			
PH-5	H-5	H-6	2000	24	351	346.1	1		986.21	984.83			
PH-6	H-6	H-7	2000	24	24	21.9	1		984.73	984.51			
PJ-1	J-1	J-2	2000	24	30	25.2	1		995.84	995.59			
PJ-2	J-2	J-3	2000	24	30	28.0	5		995.28	993.89			
PK-1	K-1	K-2	2000	24	80	77.4	2.71		974.26	972.16			
PL-1	L-1	L-2	2000	24	69	66.2	2.95		978.5	976.55			
PM-1	M-1	M-2	2000	36	237	234.7	0.5		952.29	951.12			
PM-2	M-2	M-3	2000	36	335	330.9	0.5		950.82	949.16			
PM-3	M-3	M-4	2000	36	499	494.9	0.5		948.86	946.39			
PM-4	M-4	M-5	2000	36	492	489.6	0.5		946.09	943.64			

STORM SEWER

(1) Diameter or equivalent diameter
* 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
P-1	564+95.00, -89.8	SW-549	963.89	950.69		
P-2	565+01.74, -194.82	RF-3 (24")	940.91	-		
R-1	42+15.85, 58.17	SW-211	951.75	-		
R-2	42+34.96, 90.91	SW-401 MOD (72")	957.15	949.56		
S-1	25+66.86, 161.83	RF-3 (48")	951.12	-		
S-2	26+56.52, 249.39	Connection to Existing Intake	949.51	-		
V-1	511+03.02, 81.75	Trench Drain	994.47	993.08		
V-2	511+01.00, 113.56	SW-549	992.04	985.65		
V-3	510+29.50, 108.80	SW-549	991.57	985.1		
V-4	509+47.00, 103.28	SW-549	991.04	984.49		
V-5	508+69.00, 101.79	SW-549	990.37	984.02		
V-6	508+69.00, 120.50	RF-3 (24")	984.43	-		
W-1	11+40.00, 32.00	SW-507	978	972.25		
W-2	11+40.00, 62.00	RF-3 (24")	972.48	-		
X-1	2520+42.00, 24.20	SW-401 MOD (48")	995.17	990.33		
X-2	2519+20.00, 13.80	SW-549	996.26	989.64		
X-3	2517+57.00, -21.00	SW-549	996.2	989.65		
X-4	2517+58.00, 13.80	SW-549	995.38	988.75		
X-5a	516+56.45, 195.39	Existing Junction	997.61	991.05		
X-5	516+43.06, 178.26	SW-211	991.3	-		
X-6	2516+31.00, 24.50	SW-401 MOD (48")	992.78	988.15		
X-7	2516+29.00, 13.80	SW-549	994.73	988.03		
X-8	2514+67.88, 13.80	SW-549	993.92	987.41		
X-9	513+04.46, 127.13	SW-549	993.25	986.78		
X-10a	511+67.16, 0.00	Existing Junction	993.3	988.96		
X-10	511+67.09, 72.40	SW-211	988.72	-		
X-11	511+67.00, 129.40	SW-401 MOD (48")	991.01	986.24		
X-12a	510+55.53, 149.87	Existing Junction	993.64	988.49		
X-12	510+55.53, 149.87	SW-211	988.85	-		
X-13	510+38.00, 121.40	SW-401 MOD (48")	990.5	985.23		
X-14	509+83.00, 140.00	RF-3 (30")	985.5	-		

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'	(1) Pipe Size IN	Bid* Length FT	Design Length FT	Slope %	Connected Pipe Joint (DR-121) Type	Flow Lines Inlet Elevation	Outlet Elevation	Other Elevation	Pipe Profile Sheet No.	Notes
													Letdown pipe
PP-1	P-1	P-2	2000	24	103	98.4	-		951.19	941.35			
PR-1	R-1	R-2	2000	42	41	36.9	3.77		951.75	950.36			
PS-1	S-1	S-2	2000	48	119	116.3	1.32		951.05	949.51			
PV-1	V-1	V-2	2000	15	27	26.4	1		992.08	987.79			
PV-2	V-2	V-3	2000	24	71	66.7	0.5		986.15	985.82			
PV-3	V-3	V-4	2000	24	82	77.7	0.5		985.6	985.21			
PV-4	V-4	V-5	2000	24	78	73.1	0.5		984.99	984.62			
PV-5	V-5	V-6	2000	24	14	11.8	0.5		984.52	984.46			
PW-1	W-1	W-2	2000	24	23	20.9	1		972.75	972.54			
PX-1	X-1	X-2	2000	24	123	118.3	0.5		990.83	990.24			
PX-2	X-2	X-4	2000	24	161	157.0	0.5		990.14	989.35			
PX-3	X-3	X-4	2000	24	31	26.4	2		990.15	989.63			
PX-4	X-4	X-7	2000	24	128	124.0	0.5		989.25	988.63			
PX-5a	X-5a	X-5	-	18	-	-	1.21		991.55	991.3			
PX-5	X-5	X-6	2000	18	25	22.6	9.5		991.3	989.15			
PX-6	X-6	X-7	2000	24	14	9.1	0.4		988.65	988.61			
PX-7	X-7	X-8	2000	24	161	156.1	0.4		988.53	987.91			
PX-8	X-8	X-9	2000	24	162	157.7	0.4		987.91	987.28			
PX-9	X-9	X-11	2000	24	139	134.1	0.4		987.28	986.74			
PX-10a	X-10a	X-10	-	18	-	-	1.07		989.46	988.72			
PX-10	X-10	X-11	2000	18	60	56.0	2.3		988.72	987.41			
PX-11	X-11	X-13	2000	24	130	127.2	0.4		986.74	986.23			
PX-12a	X-12a	X-12	-	15	-	-	0.45		988.99	988.85			
PX-12	X-12	X-13	2000	15	35	32.4	5.2		988.85	987.15			
PX-13	X-13	X-14	2000	30	53	50.9	0.4		985.73	985.53			

SURVEY SYMBOLS

- D Centerline Draw or Stream (Down)
- FCL Chain Link and Security Fence
- EW Edge of Water
- LUM Luminaire
- IN Storm Sewer Intake
- RIP Rip-Rap
- TDC Tree Deciduous
- TEV Evergeen Tree
- HDG Hedge Row
- DIK Centerline of Dike or Dam
- SIGN SI Sign
- BNK Stream Bank
- C Centerline BL of Road (ML or SR)
- MH Utility Access (Manhole)
- PPA Power Pole Co. 1
- TSL Traffic Signal and Luminare
- FHD Fire Hydrants
- TCB TCB Traffic Signal Box
- GDL Guard Rail Steel
- RET Retaining Walls
- RR Centerline of Railroad Tracks
- GDC Guard Rail Cable
- TSG Traffic Signal
- SHR Shrub
- Flg FLG Flag Poles
- FWD Wood Fence
- TV Satelite TV Dish
- BL Topo Breakline
- MM MM Mile Marker Post
- UB UB Utility Box
- FW Wire Fence
- TLNL Tree Line Left
- OUT Tile Outlet
- TLNR Tree Line Right
- BB BB Billboard
- MIS Miscellaneous
- S Soil Sampling Site (Wetlands)
- St.S.(C) ST1C Storm Sewer Co. 1 - Quality C
- WV WV Water Valve
- SIGN SL Speed Limit Sign
- EB EB Electrical Box
- TFR Tree Fruit
- WH WHD Water Hydrant
- INB Storm Sewer Beehive Intake
- TP TPD Telephone Pedestal
- GP GP Guard Post (Less Than 4 Posts)
- STP Stump
- PPB Power Pole Co. 2
- PPC Power Pole Co. 3
- PPD Power Pole Co. 4
- DU Centerline Draw or Stream (Up)
- E2(C) EL2C Electric Line Co. 2 - Quality C
- E(C) EL1C Electric Line Co. 1 - Quality C
- San.(C) SA1C Sanitary Sewer Co. 1- Quality C
- F02(C) F02C Fiber Optic Co. 2 - Quality C
- F0(C) F01C Fiber Optic Co. 1 - Quality C
- F04 F04D Fiber Optic Co. 4 - Quality D
- TDL Trafic Detection Loop
- G(C) GL1C Gas Line Co. 1 - Quality C
- W(C) WL1C Water Line Co. 1 - Quality C
- W WL1D Water Line Co. 1 - Quality D
- F03(C) F03C Fiber Optic Co. 3 - Quality C
- F05 F05D Fiber Optic Co. 5 - Quality D
- W2 WL2D Water Line Co. 2 - Quality D
- TV TV1D TV Cable Co. 1 - Quality D
- G2 GL2D Gas Line Co. 2 - Quality D
- GV GV Gas Valve
- G-HP GH1D High Pres Gas Co 1 - Quality D
- F06 F06D Fiber Optic Co. 6 - Quality D
- T(C) TL1C Telephone Line Co. 1 - Quality C
- F06(C) F06C Fiber Optic Co. 6 - Quality C
- G3(C) GL3C Gas Line Co. 3 - Quality C
- T2(C) TL2C Telephone Line Co. 2-Quality C
- E3 EL3D Electric Line Co. 3 - Quality D
- E3(C) EL3C Electric Line Co. 3 - Quality C

UTILITY LEGEND

F04 / San.(C) / St.S.(C)
City of Grimes
Contact: Ken Brown
Phone: 515-986-3176

F04 / San.(C) / St.S.(C)
City of Urbandale Engineering and Public Works
Contact: Tyler Burhenn
Phone: 515-278-3950

E(C)
MidAmerican Electric
Contact: Craig Ranfeld
Phone: 515-252-6632

G2 / G-HP
MidAmerican Gas
Contact: Craig Ranfeld
Phone: 515-252-6632

TV / F06
Mediacom Communications Corp.
Contact: Paul May
Phone: 515-246-2252

W(C) / W
Thorpe Water Development Co.
Contact: Tom W Thorpe
Phone: 515-289-2345

F02(C)
CenturyLink
Contact: Tom Sturmer
Phone: 303-664-8090

F0(C)
Iowa Network Services
Contact: Jeff Klocko
Phone: 515-830-0445

W2
Urbandale Water Utility
Contact: Richard Foust
Phone: 515-278-3940

F03(C)
MCI
Contact: Janette Harris
Phone: 972-729-6650

F05
Iowa Department of Transportation
Contact: Scott Smyth
Phone: 515-986-5457

E2(C)
Baker Electric
Contact:
Phone:

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)

FILE NO.	ENGLISH	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER M.3

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WEBSTER TWP
T-79N R-25W
SEC. 20

H-7
PH-5
H-6
PH-5
H-5
PH-4
508
509
510
511
512
513
I-35/80 (MLQ80)
X-10a
PX-10a
X-10
V-1
MEREDITH DRIVE RAMP B
PV-1
PX-10
V-4
PV-3
V-3
PV-2
V-2
X-9
V-5
PV-4
PV-5
V-6
X-13
X-11
PX-9
PX-13
PX-12
PX-11
X-14
X-12
PX-12a
X-12a
St.S.(C)
St.S.(C)
St.S.(C)
0
20
FEET

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER M.4

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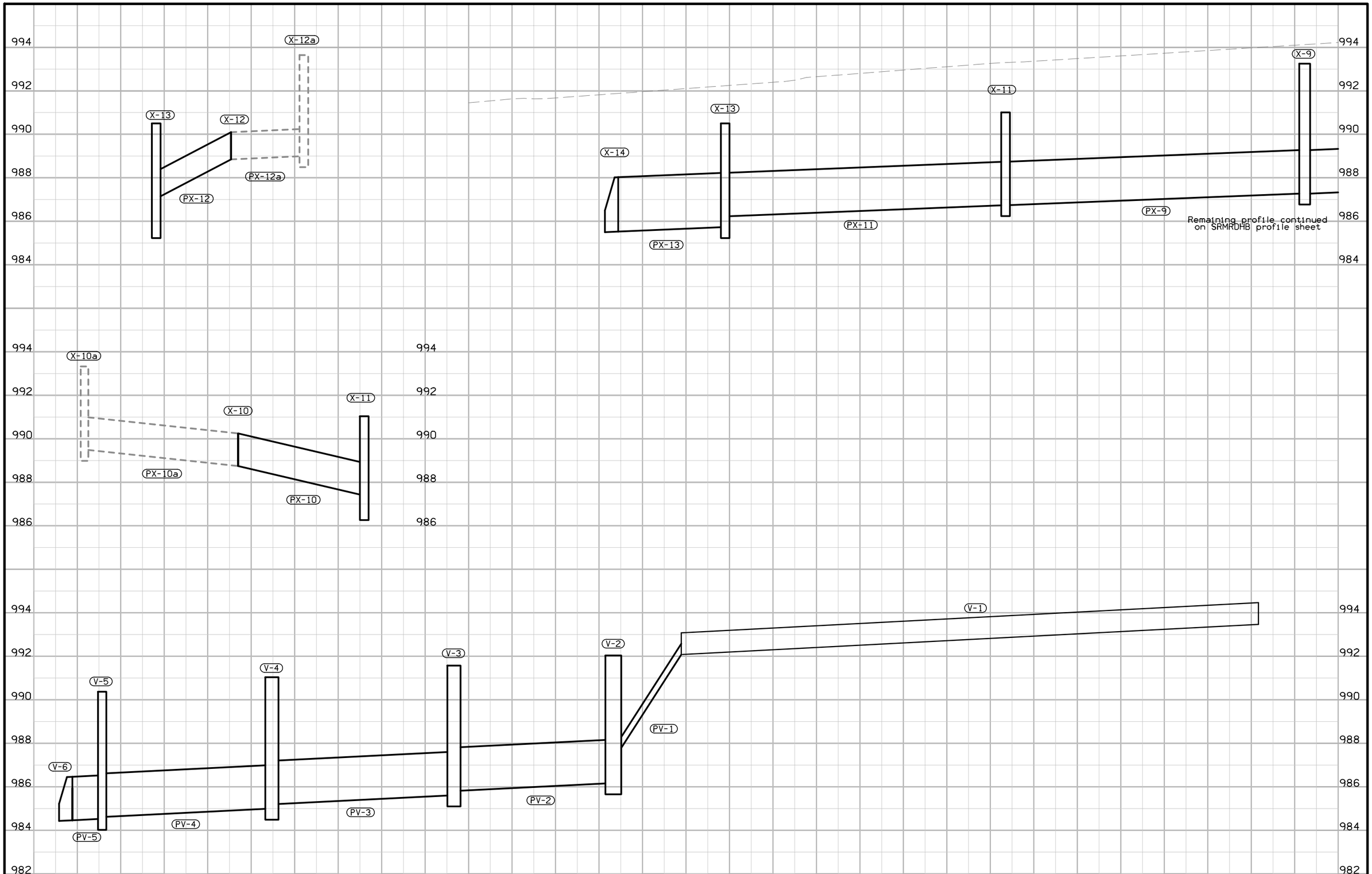

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WEBSTER TWP
T-79N R-25W
SEC. 20

H-7
PH-5
H-6
PH-5
H-5
PH-4
508
509
510
511
512
513
I-35/80 (MLQ80)
X-10a
PX-10a
X-10
V-1
MEREDITH DRIVE RAMP B
PV-1
PX-10
V-4
PV-3
V-3
PV-2
V-2
X-9
V-5
PV-4
PV-5
V-6
X-13
X-11
PX-9
PX-13
PX-12
PX-11
X-14
X-12
PX-12a
X-12a
St.S.(C)
St.S.(C)
St.S.(C)
0
20
FEET

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER M.6

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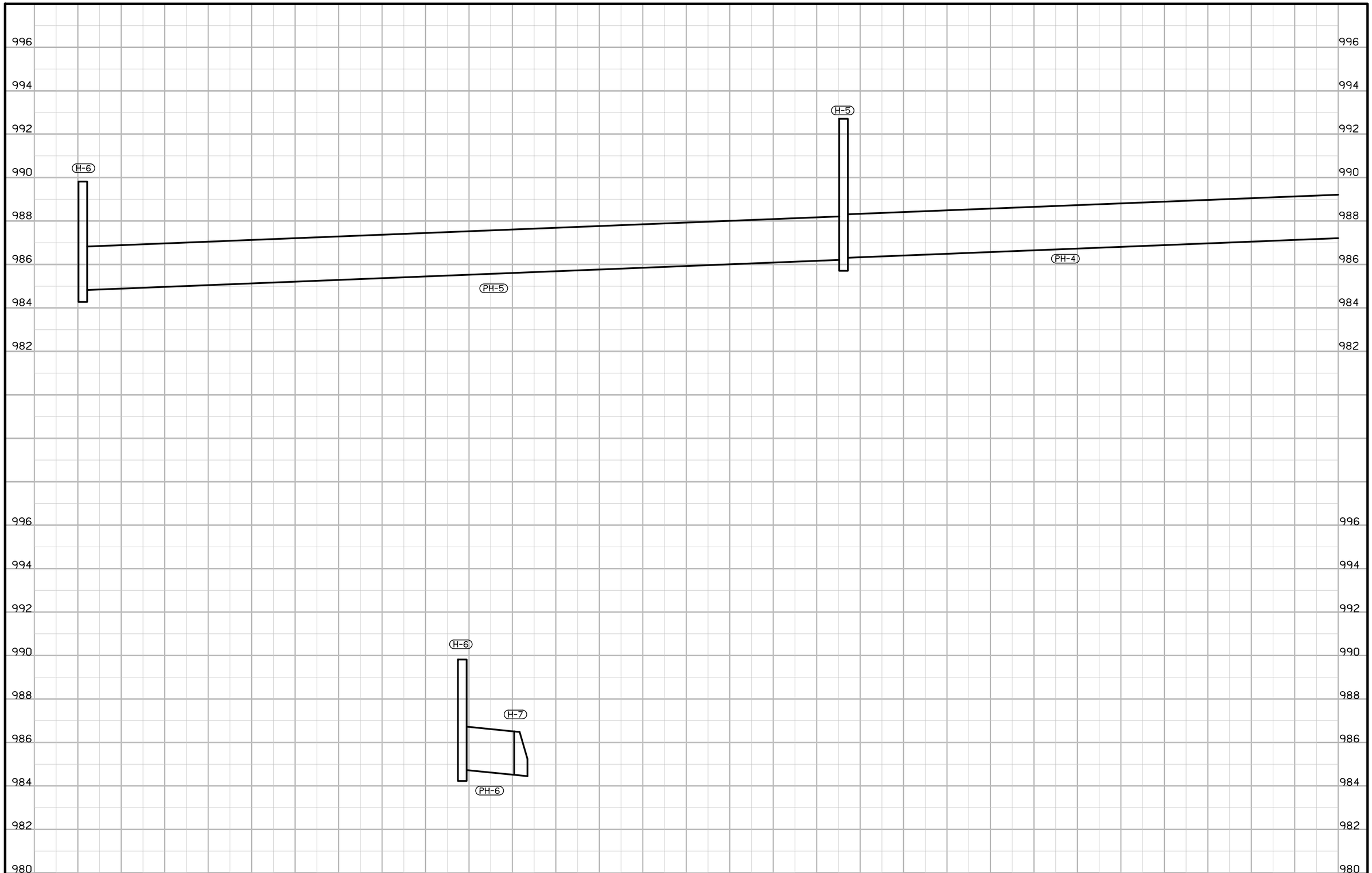

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WEBSTER TWP
T-79N R-25W
SEC. 20

MEREDITH RAMP C

J-1
PJ-1
J-2
PJ-2
J-3

PD-1
D-1
EB

A-2
PA-2
A-4
PA-4
PA-5
A-5
PA-3
A-3
PA-1
A-1
PA-1a
A-1a
PA-3a
A-3a

519
520
521
522
523
524
525

I-35/80 (ML080)

SIGN
SIGN

0 20
FEET

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER M.8

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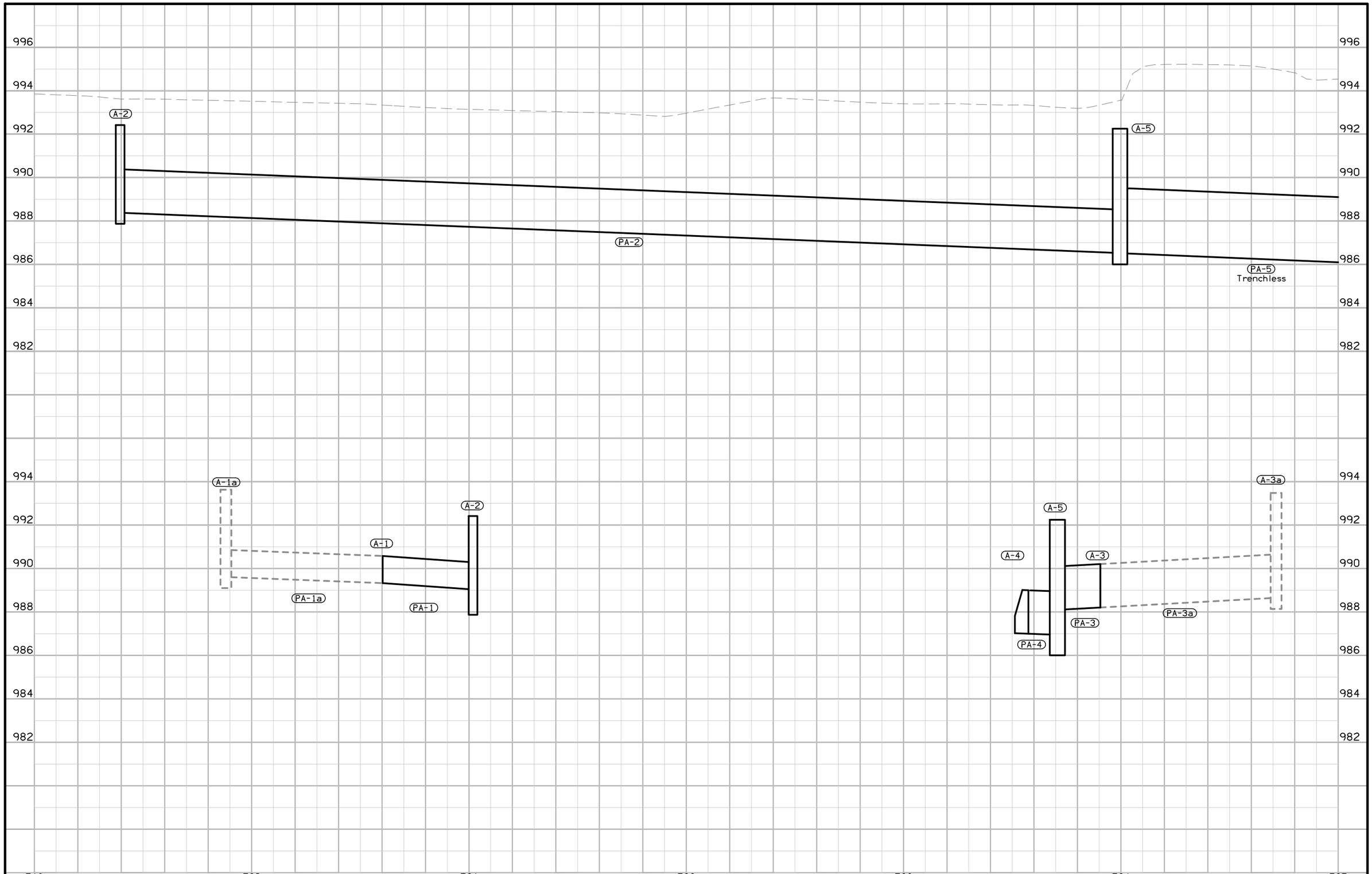

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WEBSTER TWP
T-79N R-25W
SEC. 17

MEREDITH RAMP C

PD-1

D-1

MEREDITH DRIVE

PA-5

A-5

RECEIVING PIT

A-6

LAUNCH PIT

PA-3

A-3

PA-3a

A-3a

IA 141 Ramp C

I-35/80 (ML080)

524 525 526 527 528 529 530

G-HP

F06

G2

EB

SIGN

RECEIVING PIT

LAUNCH PIT

0 FEET 20

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER M.10

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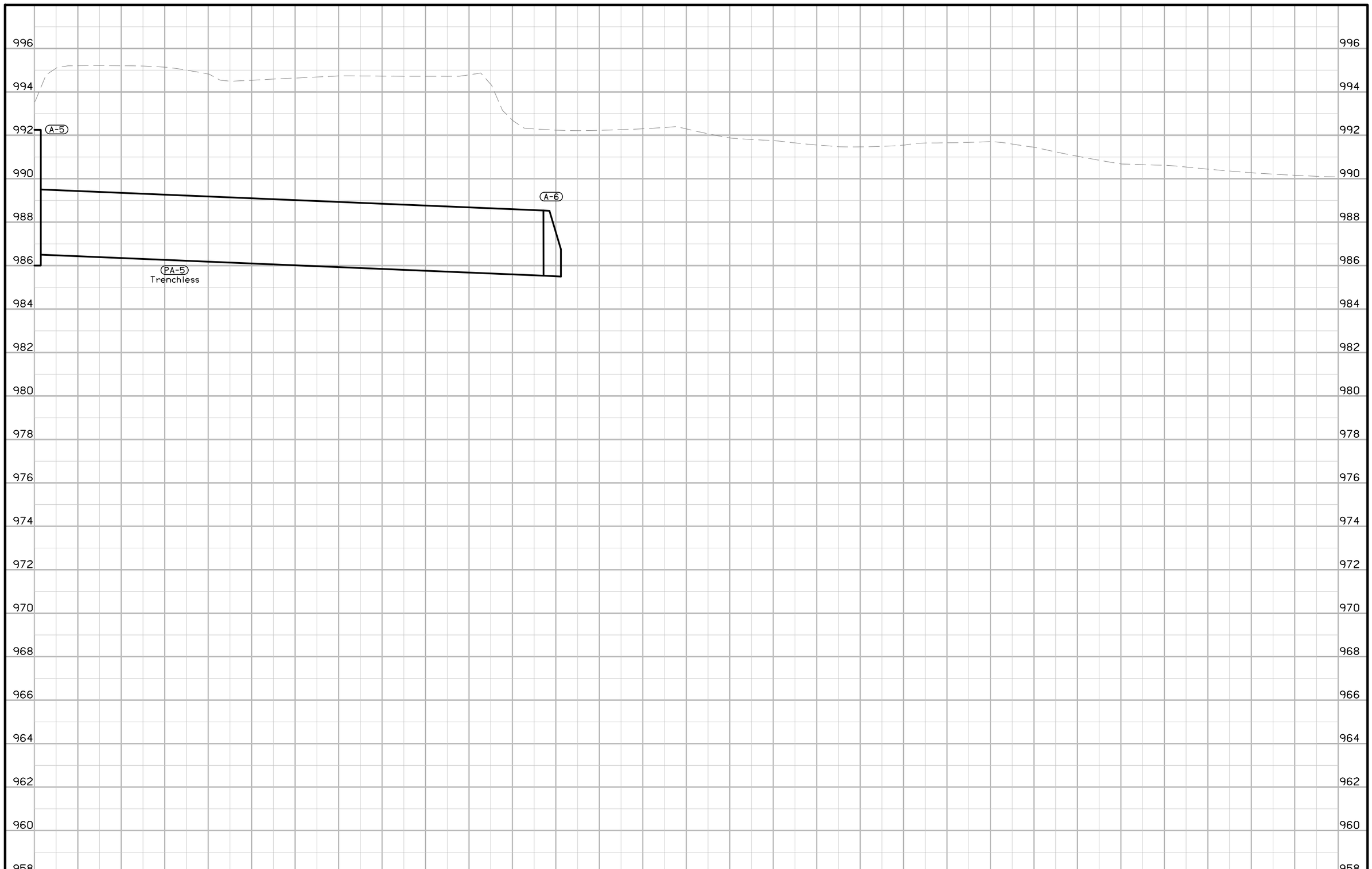

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WEBSTER TWP
T-79N R-25W
SEC. 17

534 535 536 537 538 539 540

I-35/80 (ML080)

B-1a

PB-1a

B-1

PB-1

B-2

PB-2

B-3

IA 141 RAMP B

0 20
FEET

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER M.12

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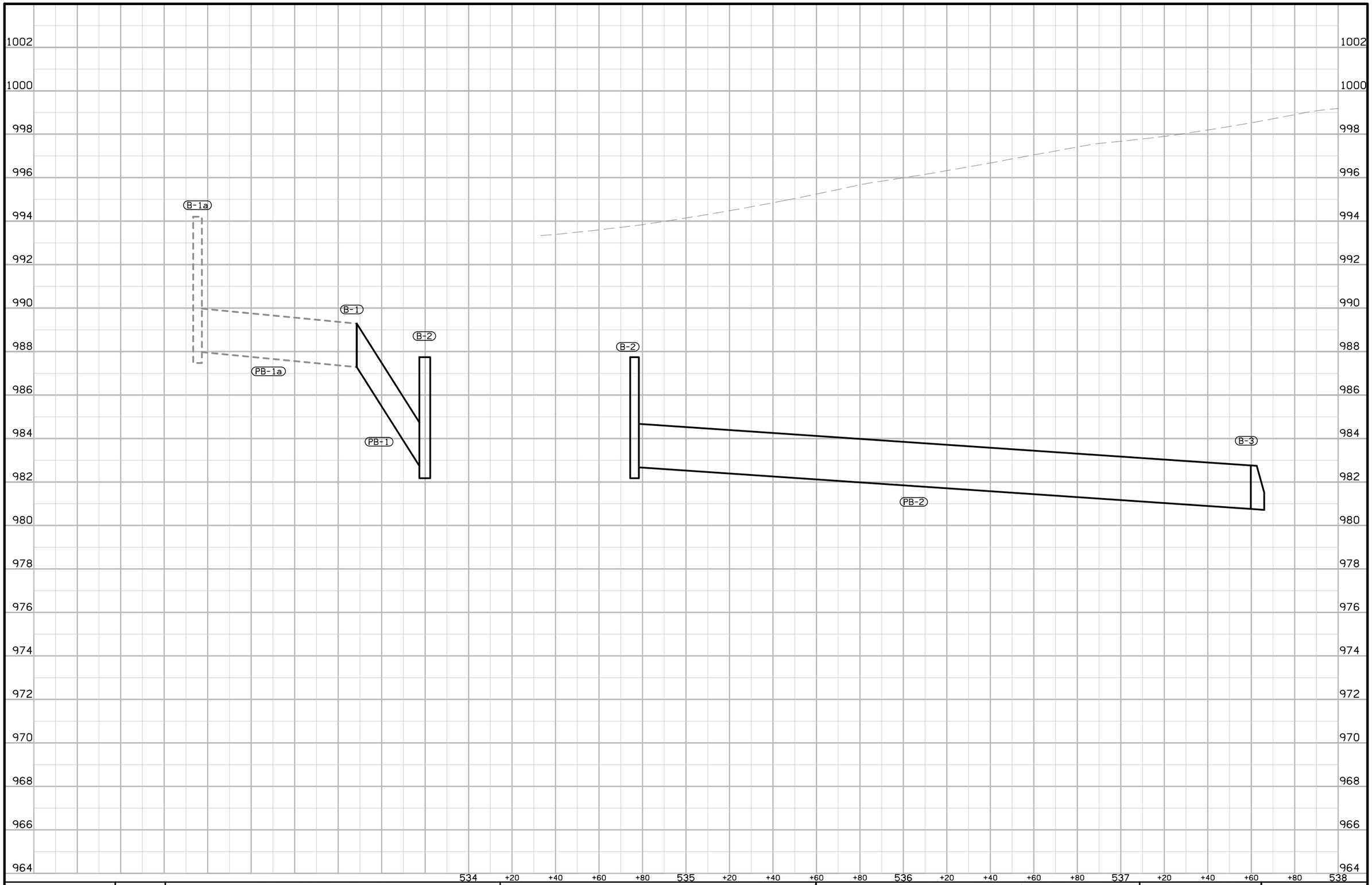

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WEBSTER TWP
T-79N R-25W
SEC. 16

RECEIVING PIT

Trenchless Construction

IA 141 (SUR141_S)

IA 141 Ramp D

W-1
W-2
PW-1

LAUNCH PIT

0 FEET 20

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER M.14

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986
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W-2
PW-1

+60 +80 9 +20 +40 +60 +80 10 +20 +40 +60 +80 11 +20 +40 +60 +80 12 +20 +40 +60 +80 13 +20 +40 +60 +80 14 +20 +40 +60

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER M.15

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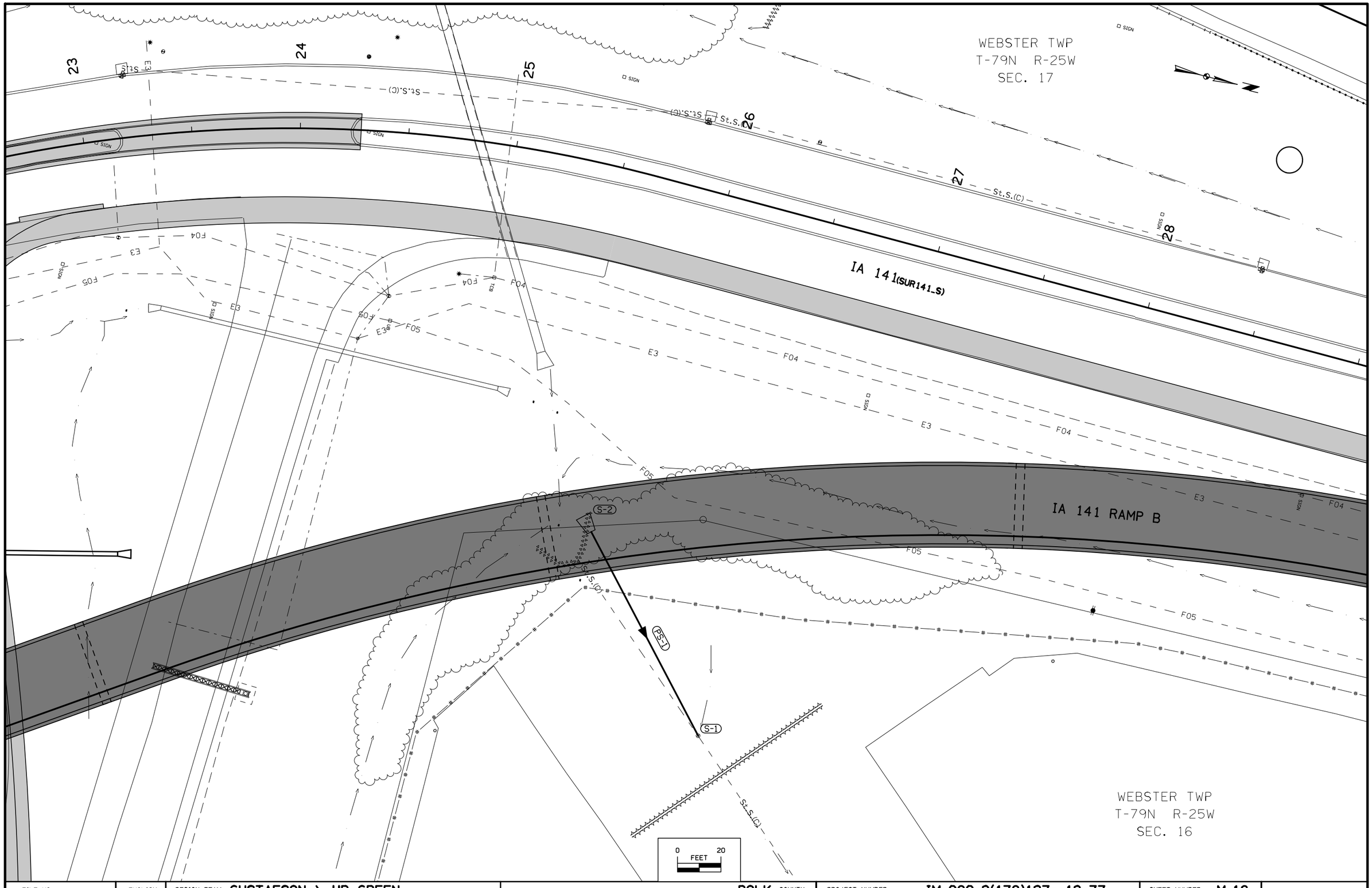

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER M.16

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FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER M.17

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WEBSTER TWP
T-79N R-25W
SEC. 17

IA 141 RAMP C

IA 141 (SUR141_S)

IA 141 RAMP B

WEBSTER TWP
T-79N R-25W
SEC. 16

0 FEET 20

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER M.18

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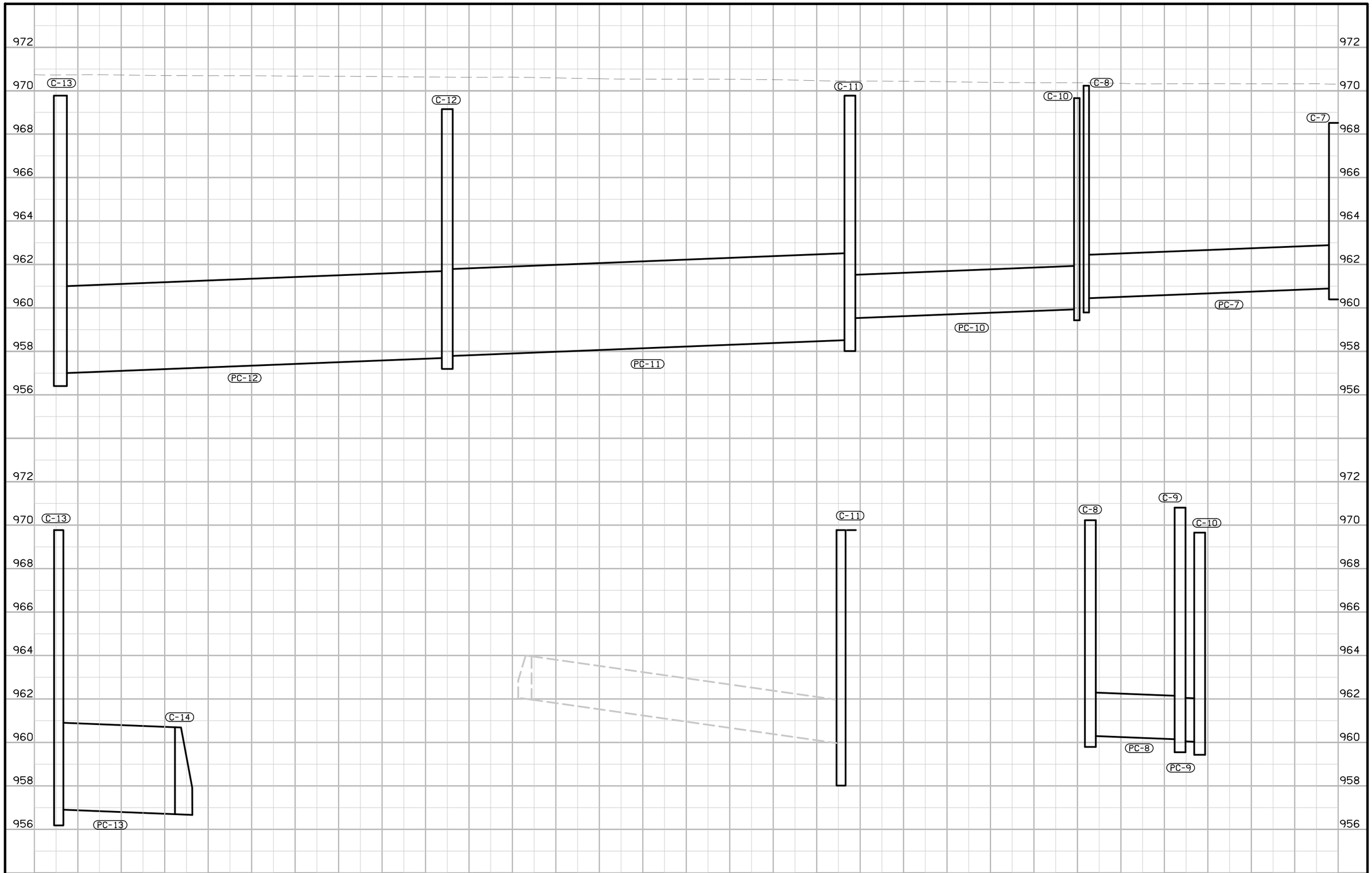

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WEBSTER TWP
T-79N R-25W
SEC. 17

Conc.

F0(C)

G-HP

E3

SIGN

37 38 39 40 41 42 43

IA 141(SUR141_S)

IA 141(SUR141_N)

IA 141 RAMP B

C-1 C-2 C-3 C-4 C-5 C-6 C-7

PC-1 PC-2 PC-3 PC-4 PC-5 PC-6

R-1 R-2

F04 F05

W(C)

WEBSTER TWP
T-79N R-25W
SEC. 16

0 FEET 20

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER M.20

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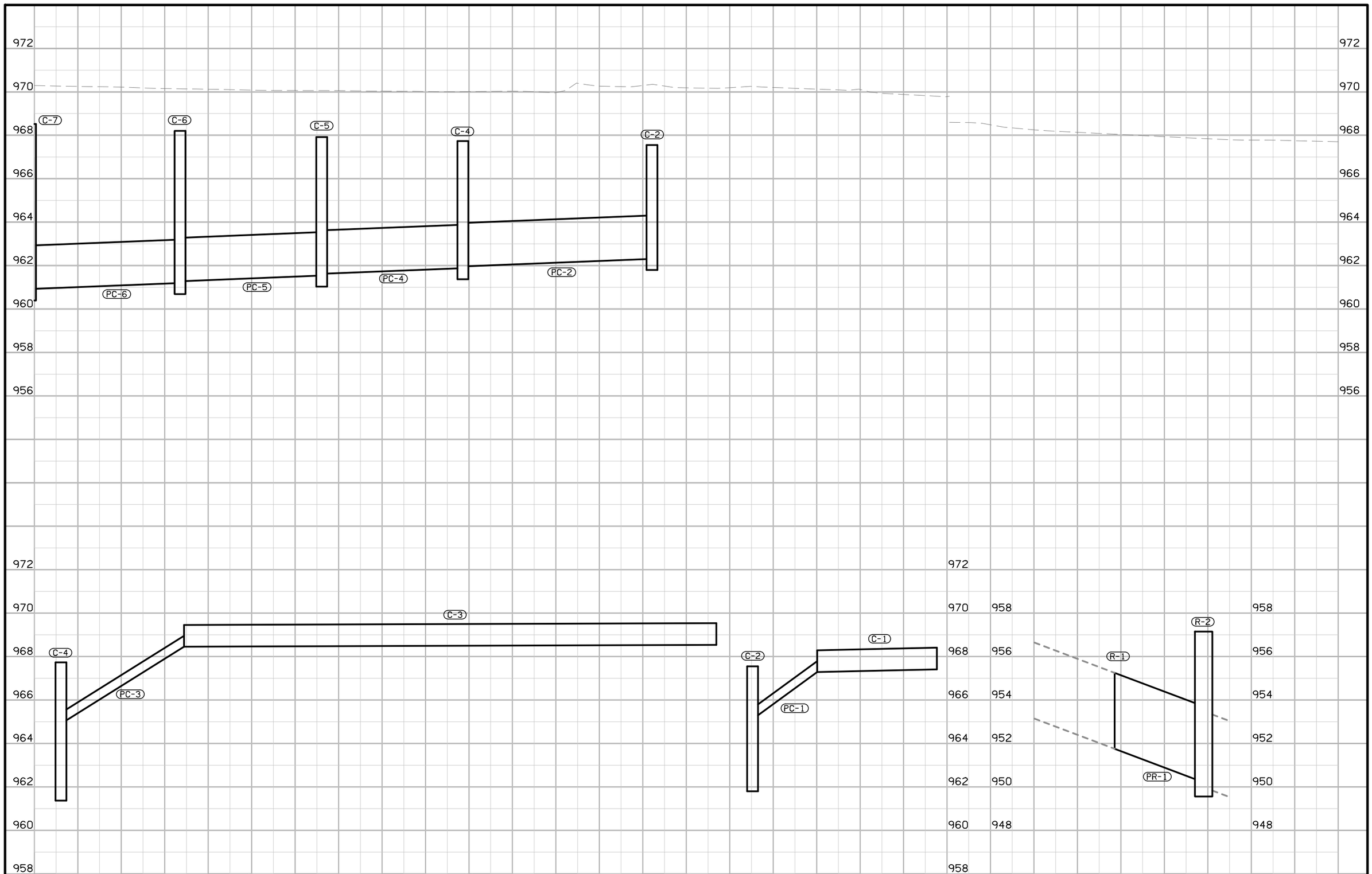

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WEBSTER TWP
T-79N R-25W
SEC. 17

MEREDITH DRIVE (SRMRDH)

MEREDITH RAMP C

15 16 17 18 19 20 21

G2 G-HP FO(C) FO6 SIGN EB TCB UB TP WH

D-1 D-2 D-3 D-4 PD-1 PD-2 PD-3

0 20
FEET

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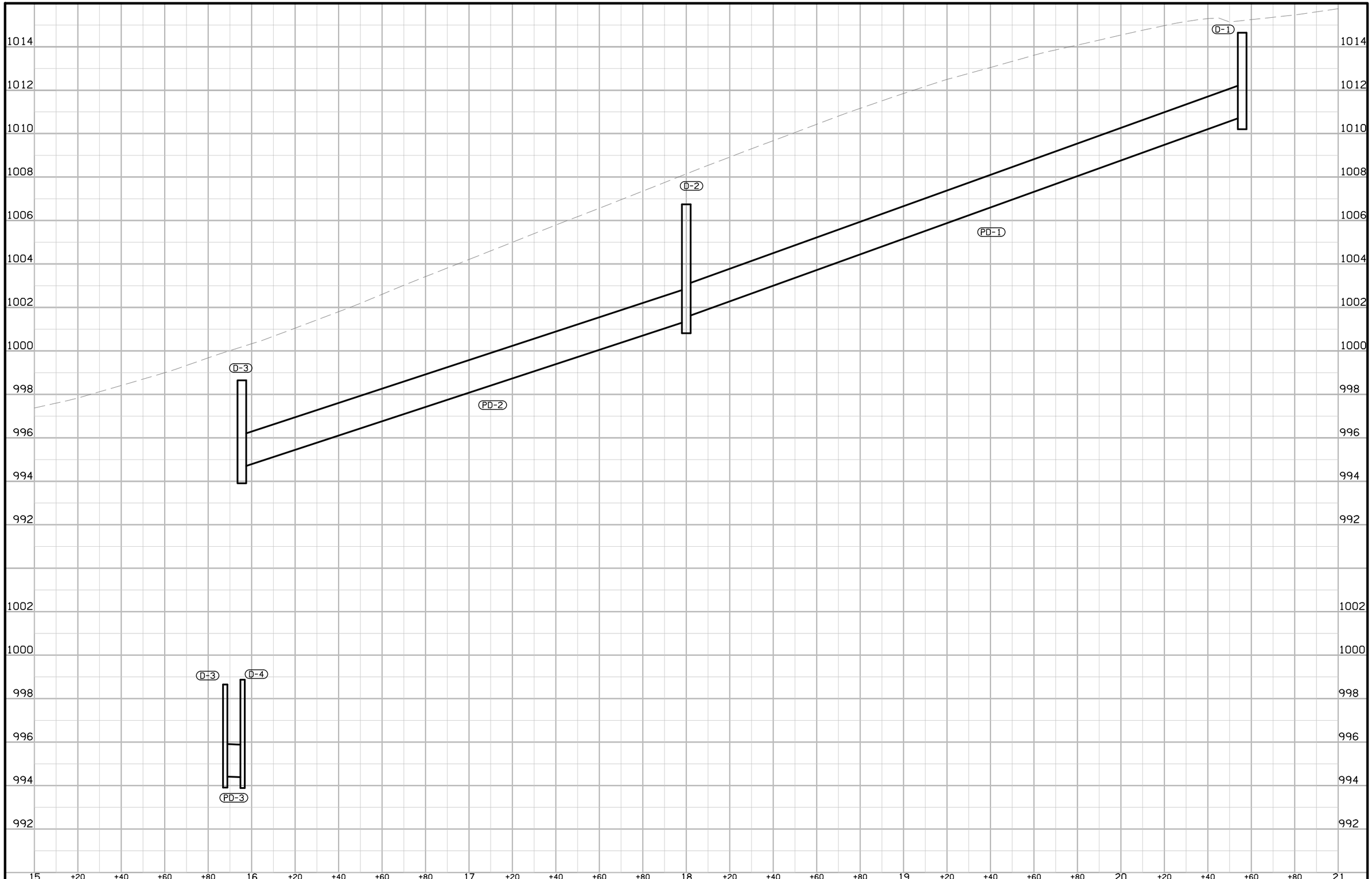

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WEBSTER TWP
T-79N R-25W
SEC. 17

F06
G2
G-HP
A-6
TC8
21
22
23
24
25
26
27
I-35/80
MEREDITH DRIVE (SRMRDH)
St.S.(C)
E-1
PE-1
E-2
PA-5
A-3a
PA-3a
E-Yd
PA-4
A-4
A-5
A-3
MEREDITH RAMP B
0 20
FEET

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER M.24

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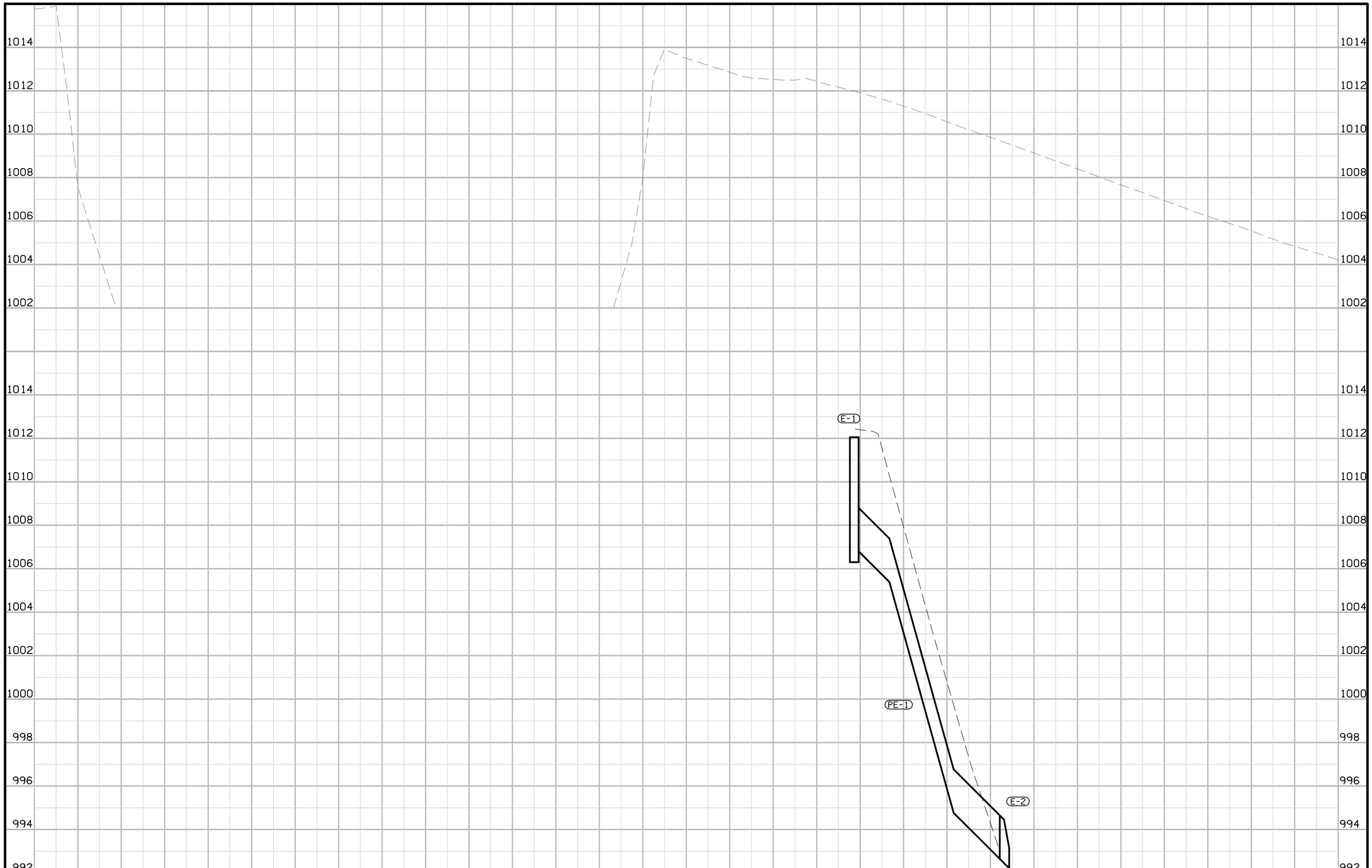

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WEBSTER TWP
T-79N R-25W
SEC. 20

I-35/80

2514
2515
2516
2517
2518
2519

V-1

X-3

PX-3

MEREDITH DRIVE RAMP B (SRMRDHB)

PX-8
X-8
PX-7
X-7
PX-4
PX-2
X-4
X-2

PX-6
X-6
PX-5
X-5
PX-5a
X-5a

St.S.(C)

St.S.(C)

St.S.(C)

0 20
FEET

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER M.26

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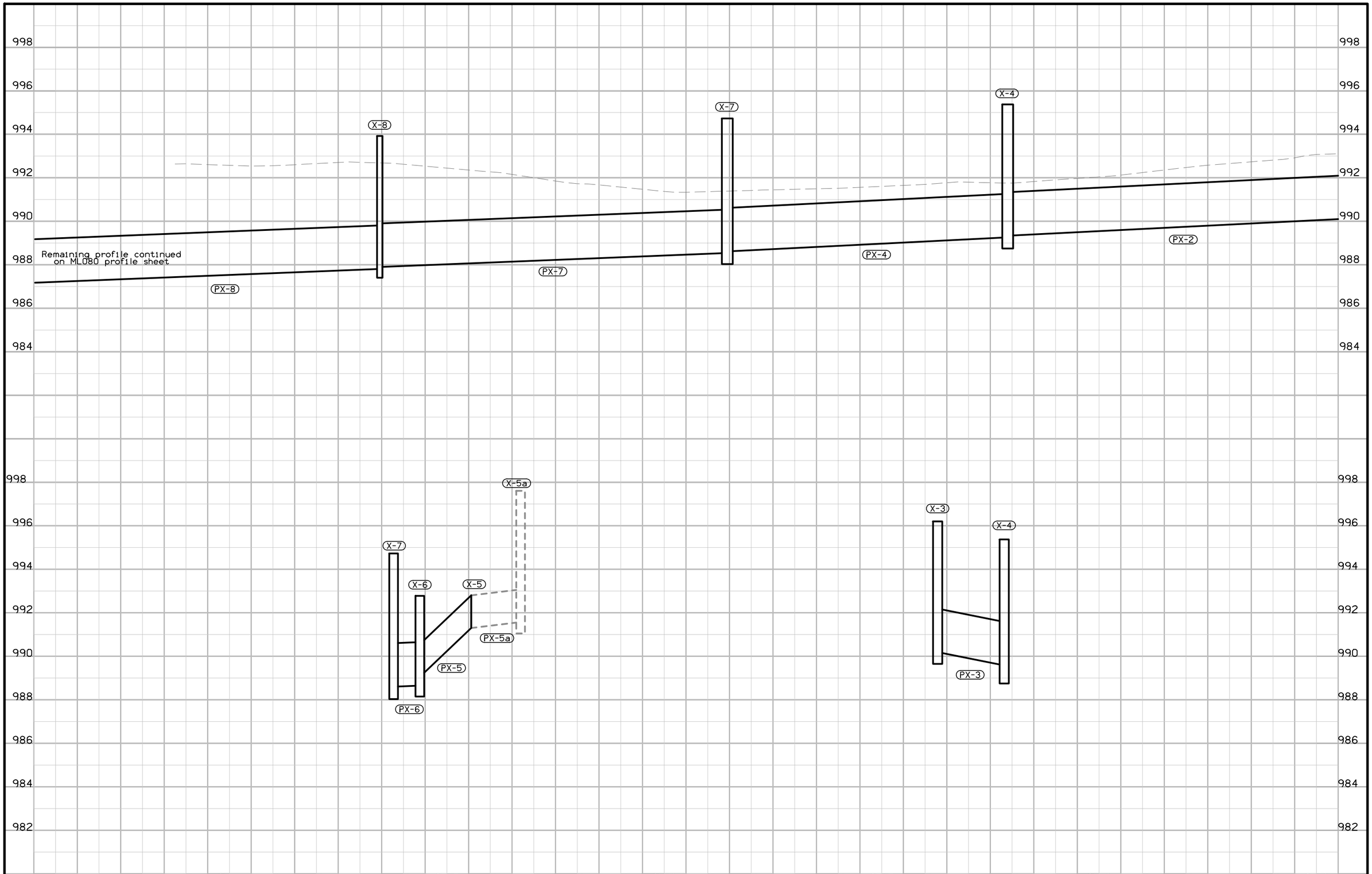

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER M.27

3:49:22 PM 8/5/2016 bahlers pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178M4.sht

WEBSTER TWP
T-79N R-25W
SEC. 20

I-35/80

MEREDITH DRIVE RAMP B (SRMRDHB)

2519 2520 2521 2522 2523 2524 2525

PX-2 X-2 PX-1 X-1 G-3 PG-2 G-2 PG-1 G-1 PG-4 G-5 G-4 PG-3 E-2 E-1 PE-1

St. S.(C)

SIGN

0 FEET 20

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER M.28

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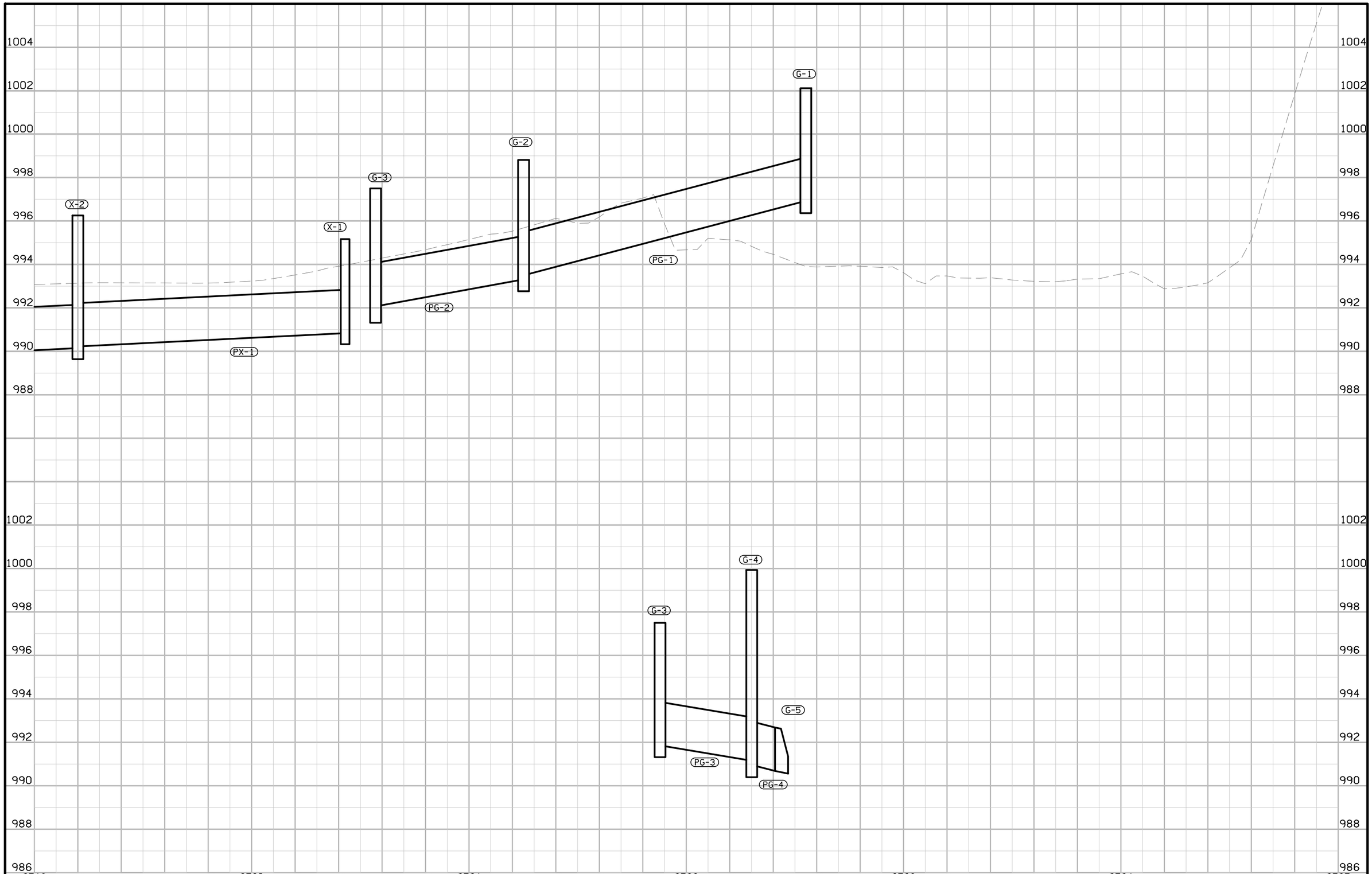

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WEBSTER TWP
T-79N R-25W
SEC. 20

3514
3515
3516
3517
3518
3519

SIGN

PH-4
H-4
PH-3
H-3
PH-2
H-2
PH-1
H-1

MEREDITH DRIVE RAMP C (SRMRDHC)

I-35/80

0 20
FEET

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER M.30

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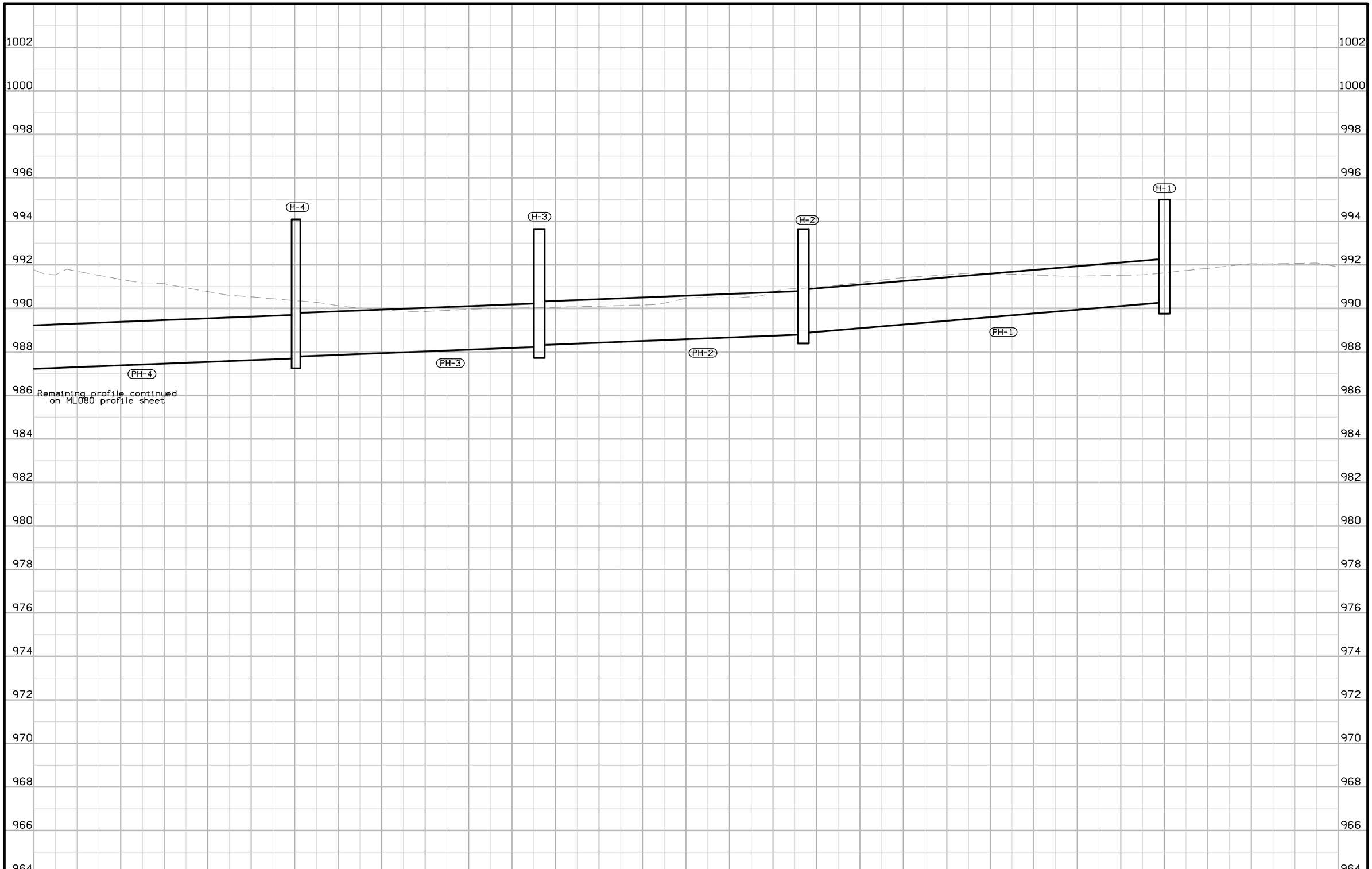

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WEBSTER TWP
T-79N R-25W
SEC. 20

3519 3520 3521 3522 3523 3524

MEREDITH DRIVE RAMP C (SRMRDHC)

H-1 J-1 PJ-1 J-2 PJ-2 J-3

A-2 PA-1 A-1 PA-1a A-1a

PA-2

A-4 PA-4 A-5 PA-5 A-3 PA-3 PA-3a

I-35/80

0 20
FEET

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER M.32

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1004
1002
1000
998
996
994
992
990
988

H-1

1006
1004
1002
1000
998
996
994
992
988

J-1
J-2
J-3
PJ-1
PJ-2

+40 +60 +80 3519 +20 +40 +60 +80 3520 +20 +40 +60 +80 3521 +20 +40 +60 +80 3522 +20 +40 +60 +80 3523 +20 +40 +60 +80 3524 +20 +40

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER M.33

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WEBSTER TWP
T-79N R-25W
SEC. 16

SIGN

M-1

PM-1

SIGN

M-2

PM-2

M-3

1549 1550 1551 1552 1553 1554 1555

SIGN

K-1

L-1

SIGN

IA 141 RAMP A (SR141A)

PK-1

PL-1

K-2

L-2

0 20
FEET

I-35/80

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER M.34

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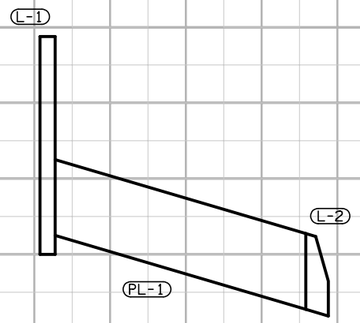

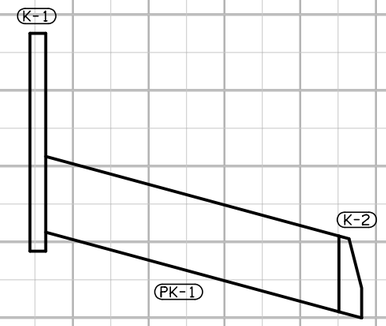

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E3
E3
E3
G-HP
G-HP
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SIGN
SIGN
SIGN
SIGN
IA 141
C-11
PC-10
C-10
PC-9
C-9
PC-8
C-3
C-1
PC-3
PC-1
2564
2565
2566
2567
2568
2569
2570
F04
F04
F04
F04
IA 141 RAMP B (SR141B)
C-8
PC-7
C-7
PC-6
C-6
PC-5
C-5
PC-4
C-4
PC-2
C-2
F05
F05
F05
F05
W(C)
WATERMAIN
WATERMAIN
WEBSTER TWP
T-79N R-25W
SEC. 16
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SIGN
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FEET

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER M.36

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928

2564 +20 +40 +60 +80 2565 +20 +40 +60 +80 2566 +20 +40 +60 +80 2567 +20 +40 +60 +80 2568 +20 +40 +60 +80 2569 +20 +40 +60 +80 2570

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER M.37

3:49:33 PM 8/5/2016 bahlers pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178M4.sht

WEBSTER TWP
T-79N R-25W
SEC. 16

N

SIGN

1 2 3 4 5 6

M-1 PM-1 M-2 PM-2

(Chain: 20185)

SIGN SIGN SIGN SIGN

L-1 L-2 PL-1

K-1 K-2 PL-1

IA 141 RAMP A

0 20
FEET

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER M.38

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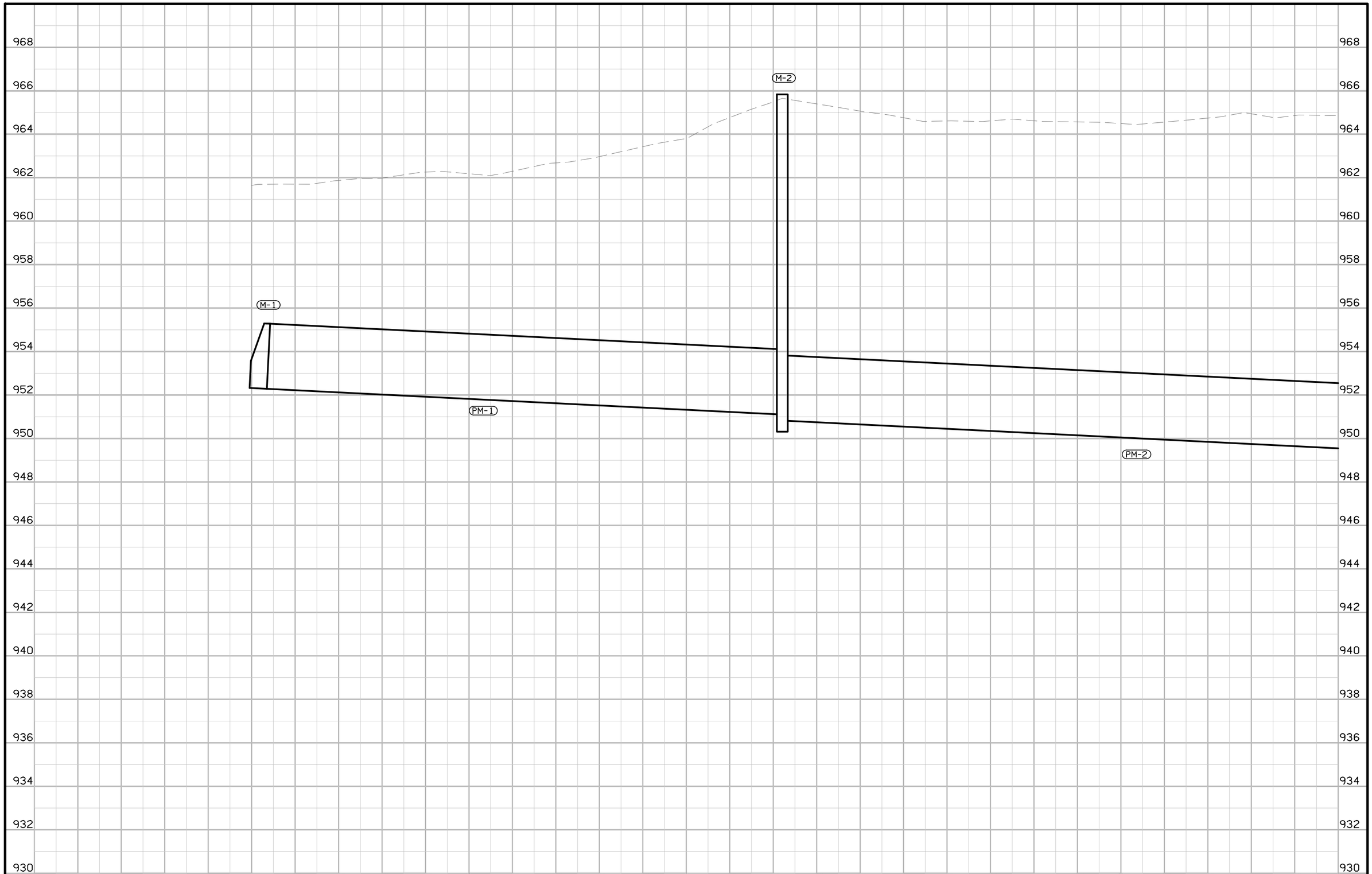

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER M.39

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WEBSTER TWP
T-79N R-25W
SEC. 16

6 7 8 9 10 11 12

PM-2 M-3 PM-3 (Chain: 20185) M-4

SIGN SIGN

E3 E3 E3

IA 141 RAMP A

I-35/80

0 20
FEET

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER M.40

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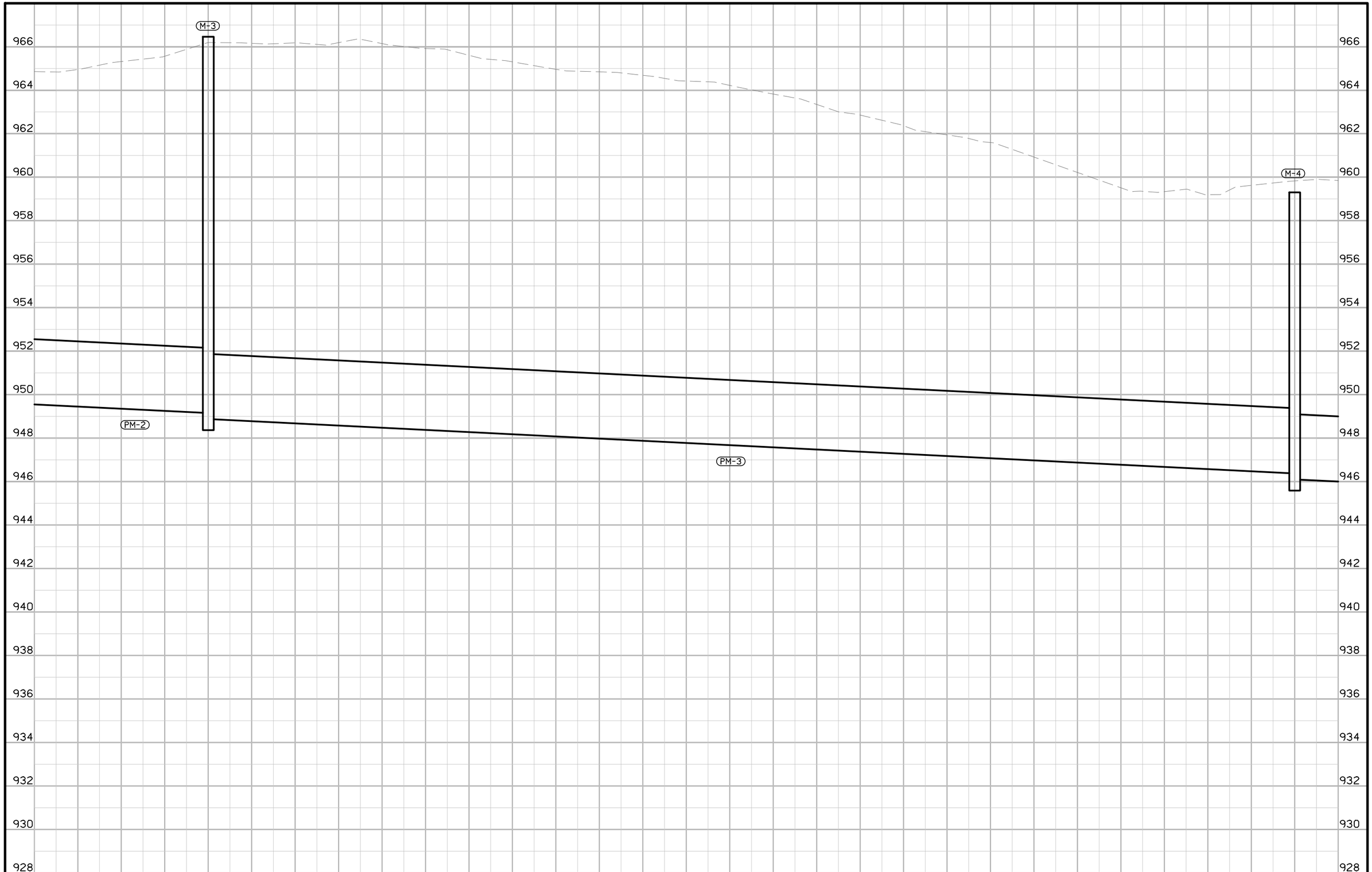

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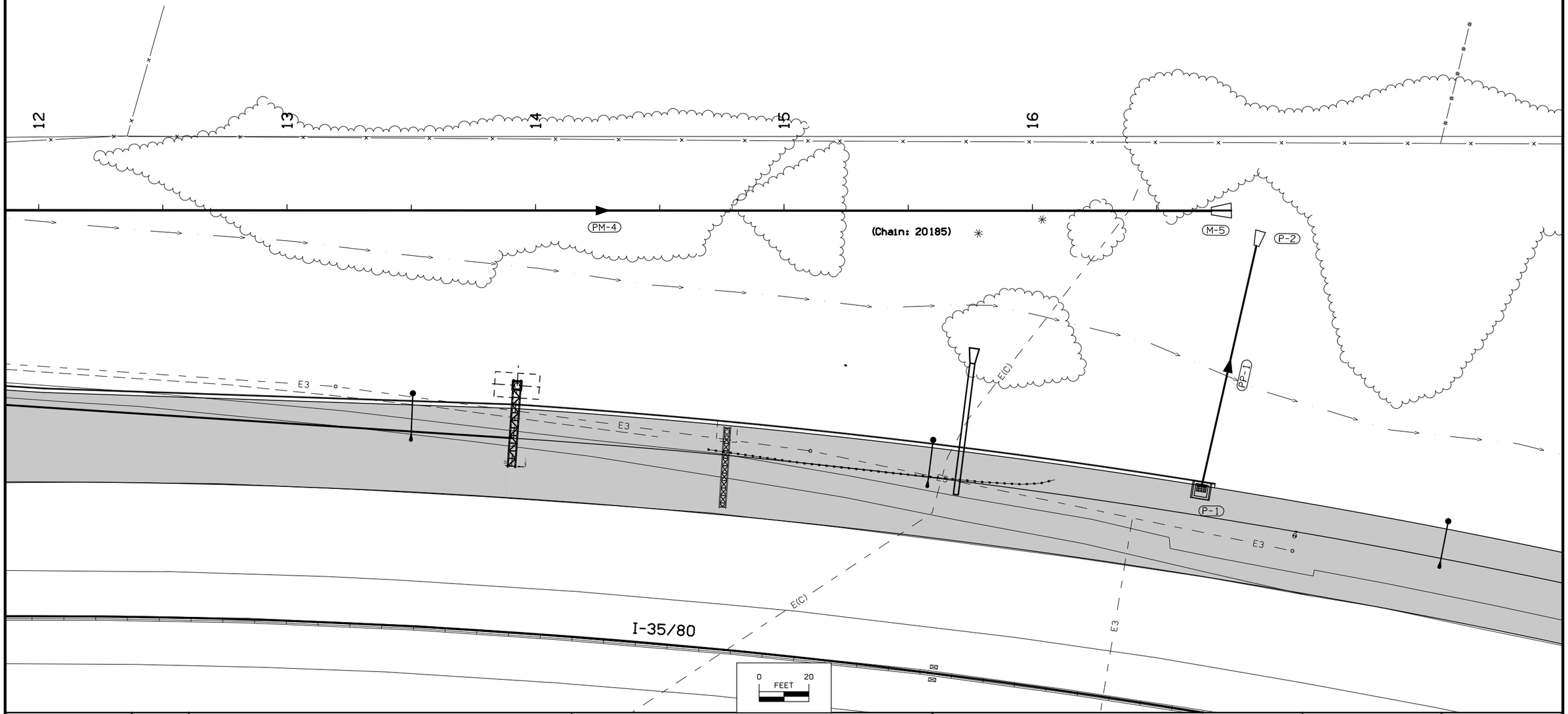
WEBSTER TWP
T-79N R-25W
SEC. 16



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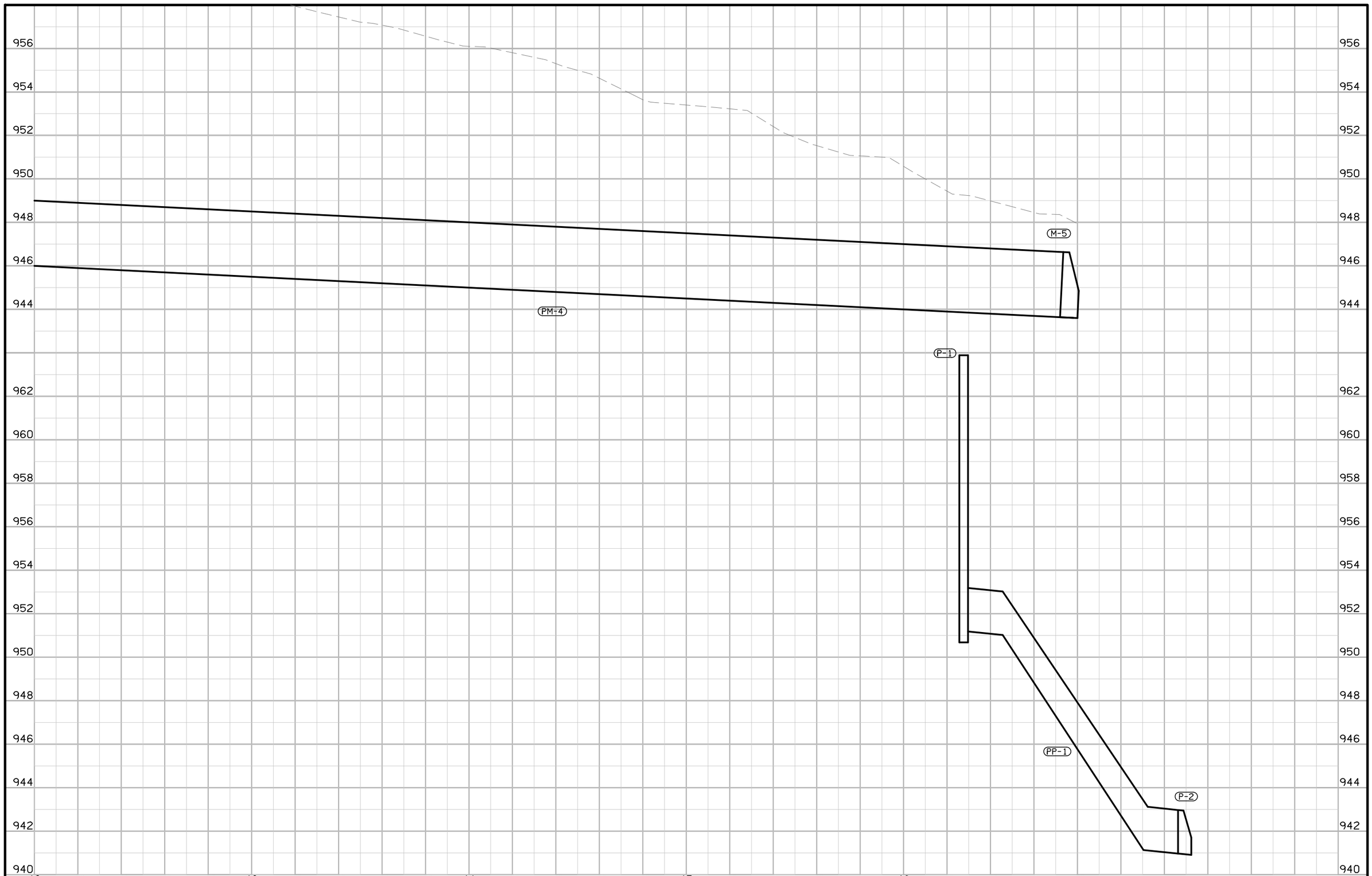

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N SHEETS INDEX OF SHEETS

N.1	INDEX OF SHEETS
N.2 – N.13	MAINLINE I–35/80 SIGNING
N.14 – N.21	MEREDITH DRIVE SIGNING
N.22 – N.35	NW URBANDALE DRIVE SIGNING
N.36 – N.39	NW 100TH STREET SIGNING
N.40 – N.41	NW URBANDALE DRIVE RAMP SIGNING
N.42 – N.43	IA 141 RAMP SIGNING
N.44	MEREDITH DRIVE RAMP SIGNING
N.45	NW 100TH STREET RAMP SIGNING
N.46 – N.58	SIGN DETAILS
N.59 – N.64	TRAFFIC SIGNAL LAYOUTS

- MEREDITH DRIVE & SB/WB I–35/80 RAMP TERMINAL
- MEREDITH DRIVE & NB/EB I–35/80 RAMP TERMINAL
- NW URBANDALE DRIVE & NB/EB I–35/80 RAMP TERMINAL
- NW URBANDALE DRIVE & SB/WB I–35/80 RAMP TERMINAL
- IA HWY 141 & SE 37TH STREET INTERSECTION

LICENSED PROFESSIONAL ENGINEER
TYLER C. WILES 20906
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.

PRELIMINARY NOT FOR CONSTRUCTION

TYLER C. WILES P.E. DATE

License Number: 20906

My license renewal date is DECEMBER 31, 2017.

Pages or sheets covered by this seal:

Sheets N.1 – N.XX

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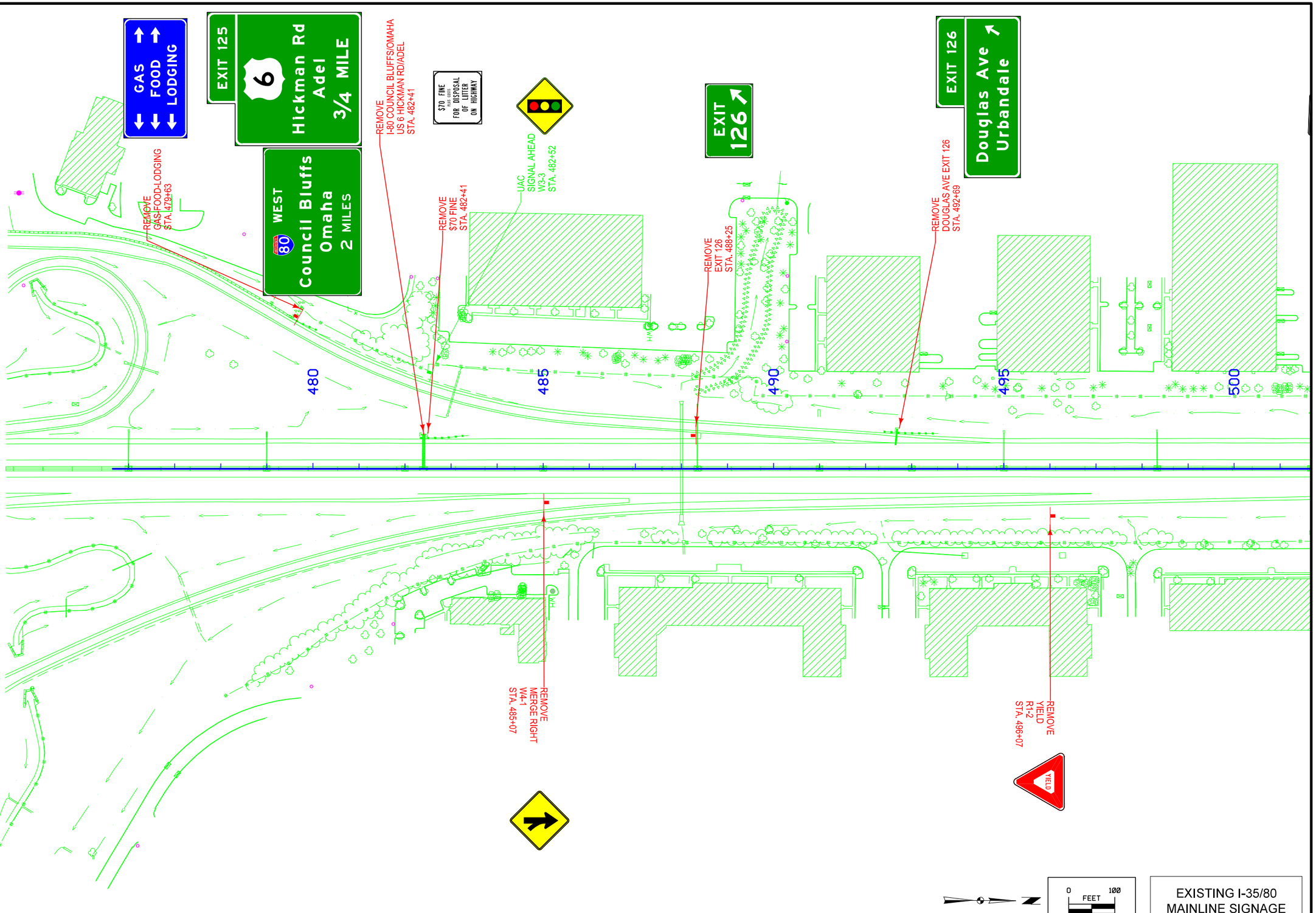

FILE NO.	ENGLISH	DESIGN TEAM		COUNTY	PROJECT NUMBER	SHEET NUMBER N.2	

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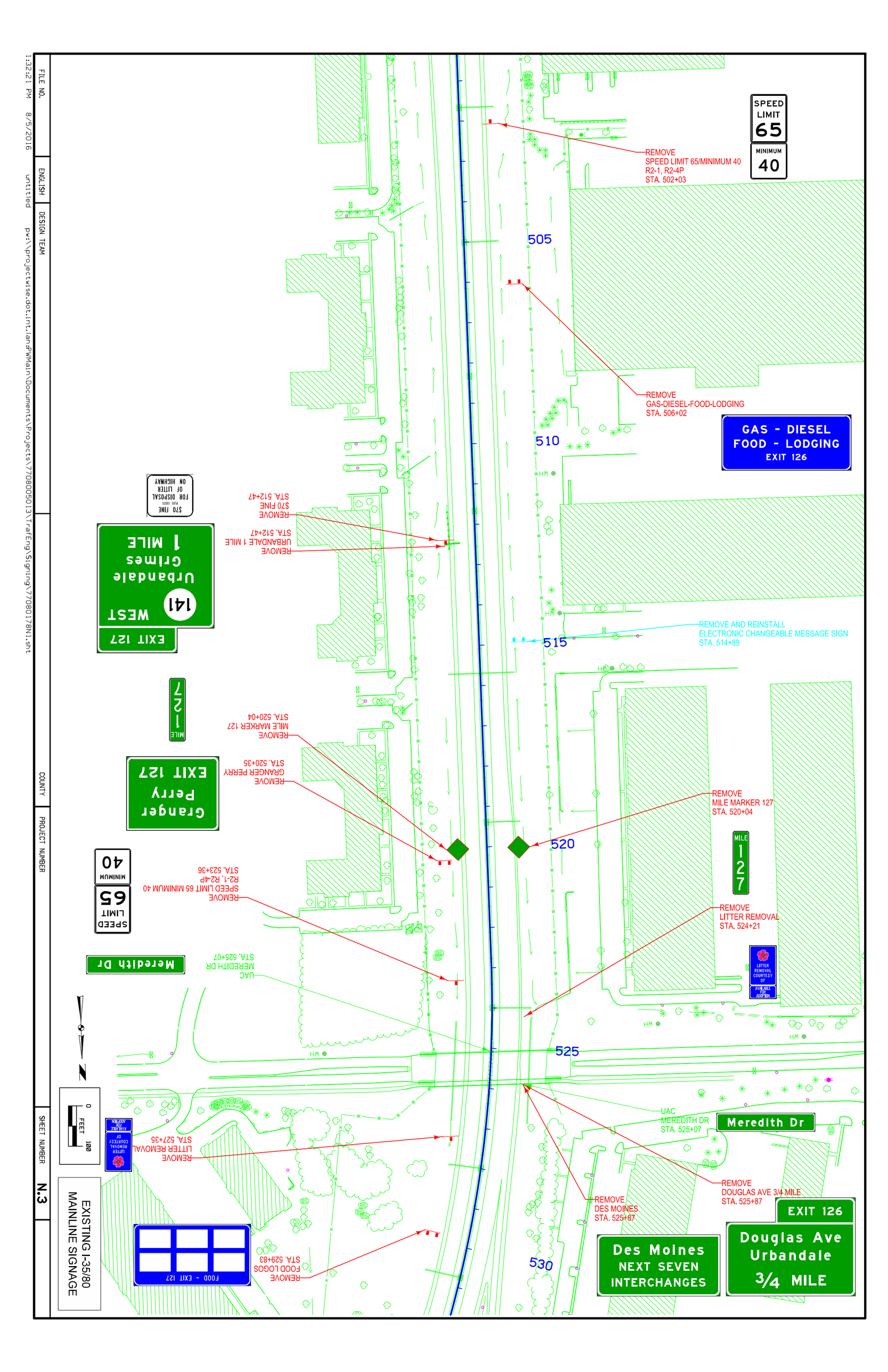
SPEED LIMIT 65 MINIMUM 40
REMOVE SPEED LIMIT 65/MINIMUM 40 R2-1, R2-4P STA. 502+03
505
REMOVE GAS-DIESEL-FOOD-LODGING STA. 506+02
GAS - DIESEL FOOD - LODGING EXIT 126
510
$70 FINE FOR DISPOSAL OF LITTER ON HIGHWAY
REMOVE $70 FINE STA. 512+47
REMOVE URBANDALE 1 MILE STA. 512+47
EXIT 127 WEST 141 Urbandale Grimes 1 MILE
515
REMOVE AND REINSTALL ELECTRONIC CHANGEABLE MESSAGE SIGN STA. 514+89
MILE 127
REMOVE MILE MARKER 127 STA. 520+04
REMOVE GRANGER PERRY STA. 520+35
Granger Perry EXIT 127
520
REMOVE SPEED LIMIT 65 MINIMUM 40 R2-1, R2-4P STA. 523+36
SPEED LIMIT 65 MINIMUM 40
REMOVE LITTER REMOVAL STA. 524+21
LITTER REMOVAL COURTESY OF AVAILABLE FOR ADOPTION
MEREDITH DR STA. 525+07 UAC
Meredith Dr
525
UAC MEREDITH DR STA. 525+07
Meredith Dr
REMOVE LITTER REMOVAL STA. 527+35
REMOVE DOUGLAS AVE 3/4 MILE STA. 525+87
REMOVE DES MOINES STA. 525+87
EXIT 126
Douglas Ave Urbandale 3/4 MILE
Des Moines NEXT SEVEN INTERCHANGES
530
REMOVE FOOD LOGOS STA. 529+83
FOOD - EXIT 127
0 FEET 100
EXISTING I-35/80 MAINLINE SIGNAGE
FILE NO.
ENGLISH
DESIGN TEAM
COUNTY
PROJECT NUMBER
SHEET NUMBER N.3
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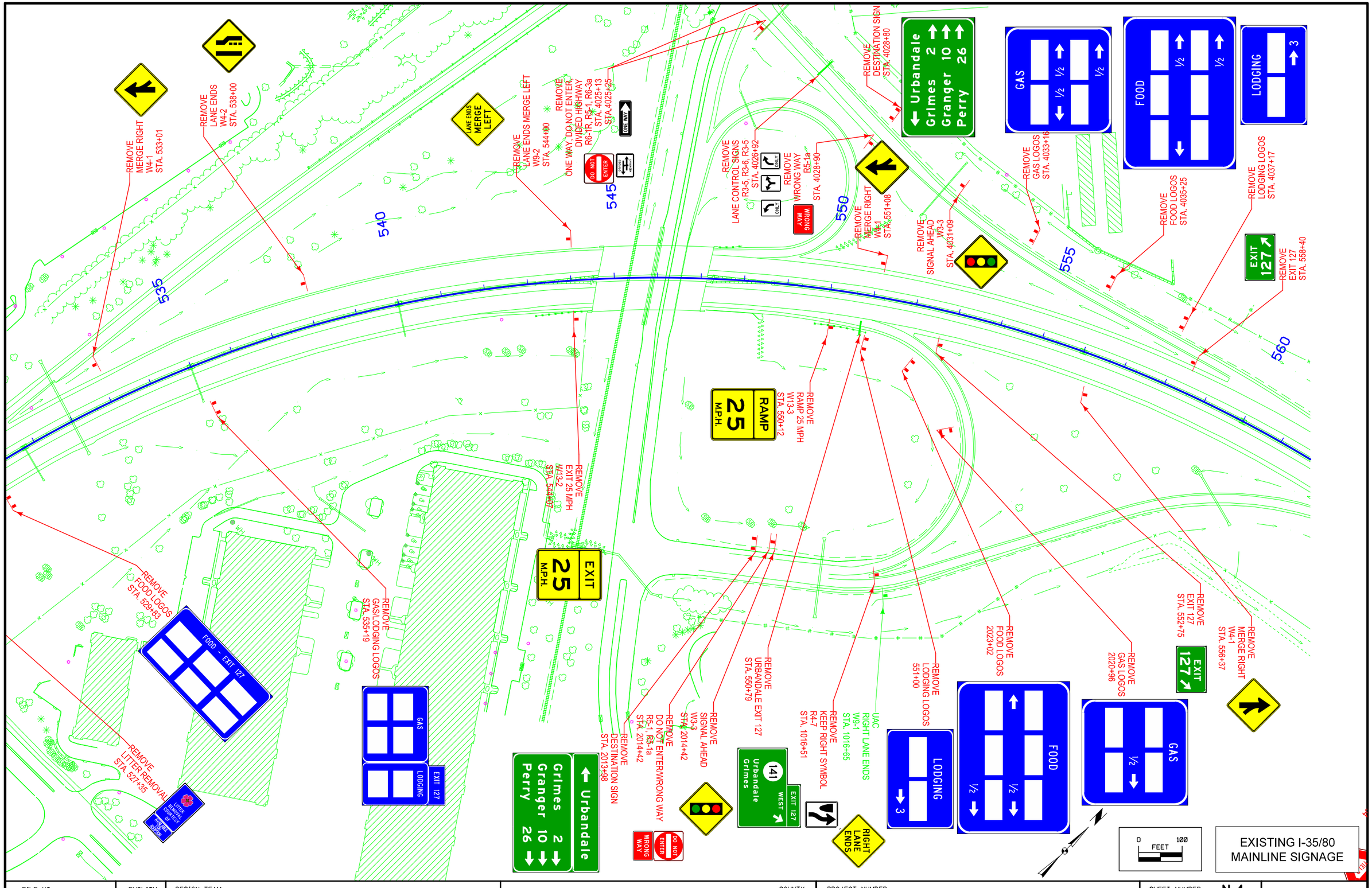

FILE NO.	ENGLISH	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER N.4

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EXIT 127
WEST
141
Urbandale
Grimes

MILE 128

EXIT 127 LODGING
GAS

FOOD - EXIT 127

REMOVE URBANDALE EXIT 127 STA. 563+08

REMOVE MILE MARKER 128 STA. 573+02

REMOVE GAS/LODGING LOGOS STA. 578+51

REMOVE FOOD LOGOS STA. 586+72

565 570 575 580 585 590

REMOVE EXIT 127 STA. 552+75

REMOVE MERGE RIGHT W4-1 STA. 556+37

REMOVE YIELD R1-2 STA. 565+04

REMOVE MILE MARKER 128 STA. 573+03

REMOVE AND REINSTALL LITTER REMOVAL STA. 574+15

REMOVE INTERSTATE 35/80 SHIELDS M1-1, M3-1, M3-2 STA. 579+99

REMOVE SPEED LIMIT 65/MINIMUM 40 R2-1, R2-4P STA. 591+20

EXIT 127

YIELD

REMOVE GAS LOGOS 2020+96

GAS

FOOD

MILE 128

LITTER REMOVAL COURTESY OF RCDOT

35 INTERSTATE NORTH

80 INTERSTATE EAST

MINIMUM 40

SPEED LIMIT 65

N

0 FEET 100

EXISTING I-35/80
MAINLINE SIGNAGE

FILE NO.	ENGLISH	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER N.5

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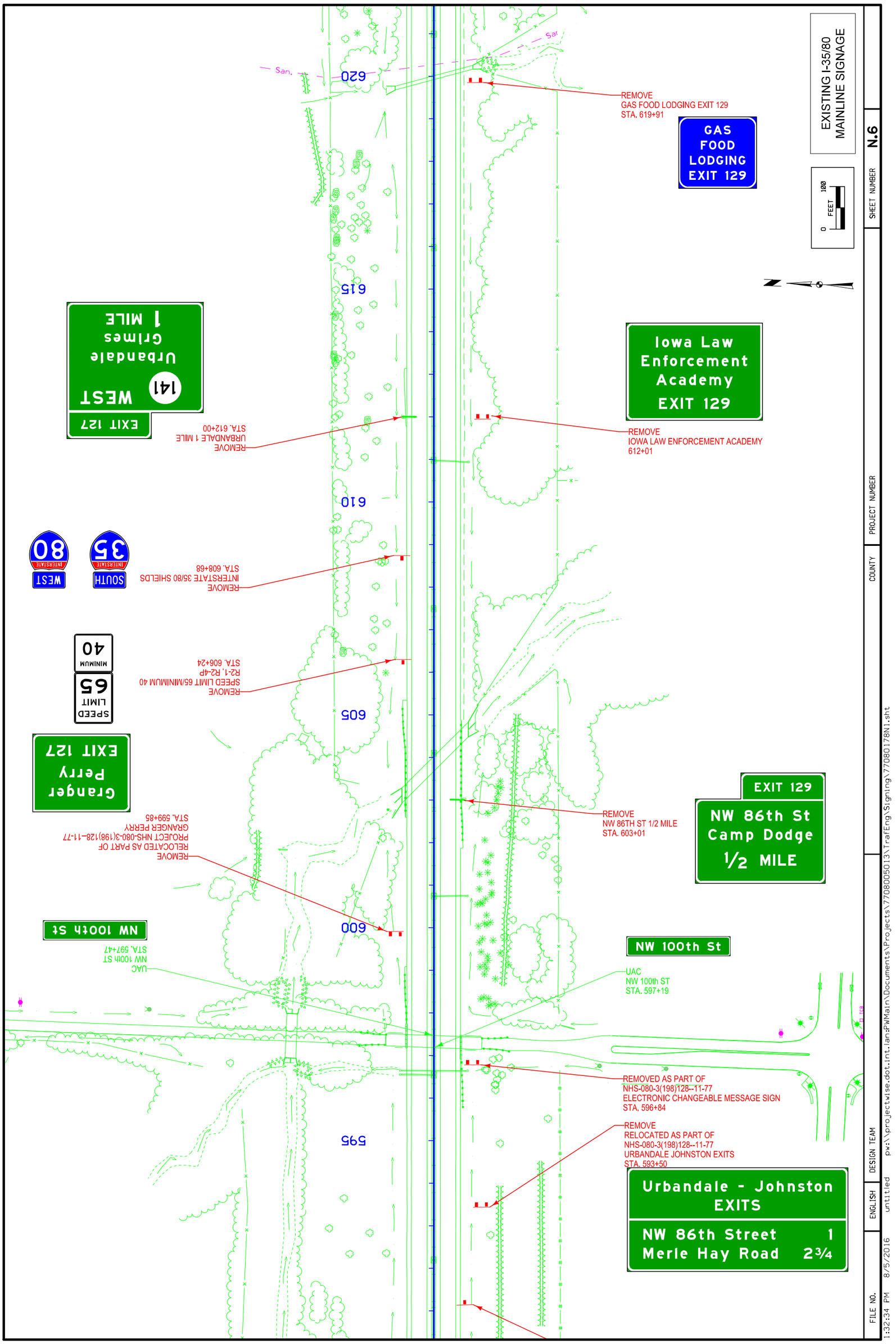

FILE NO. | ENGLISH | DESIGN TEAM | COUNTY | PROJECT NUMBER | SHEET NUMBER N.6

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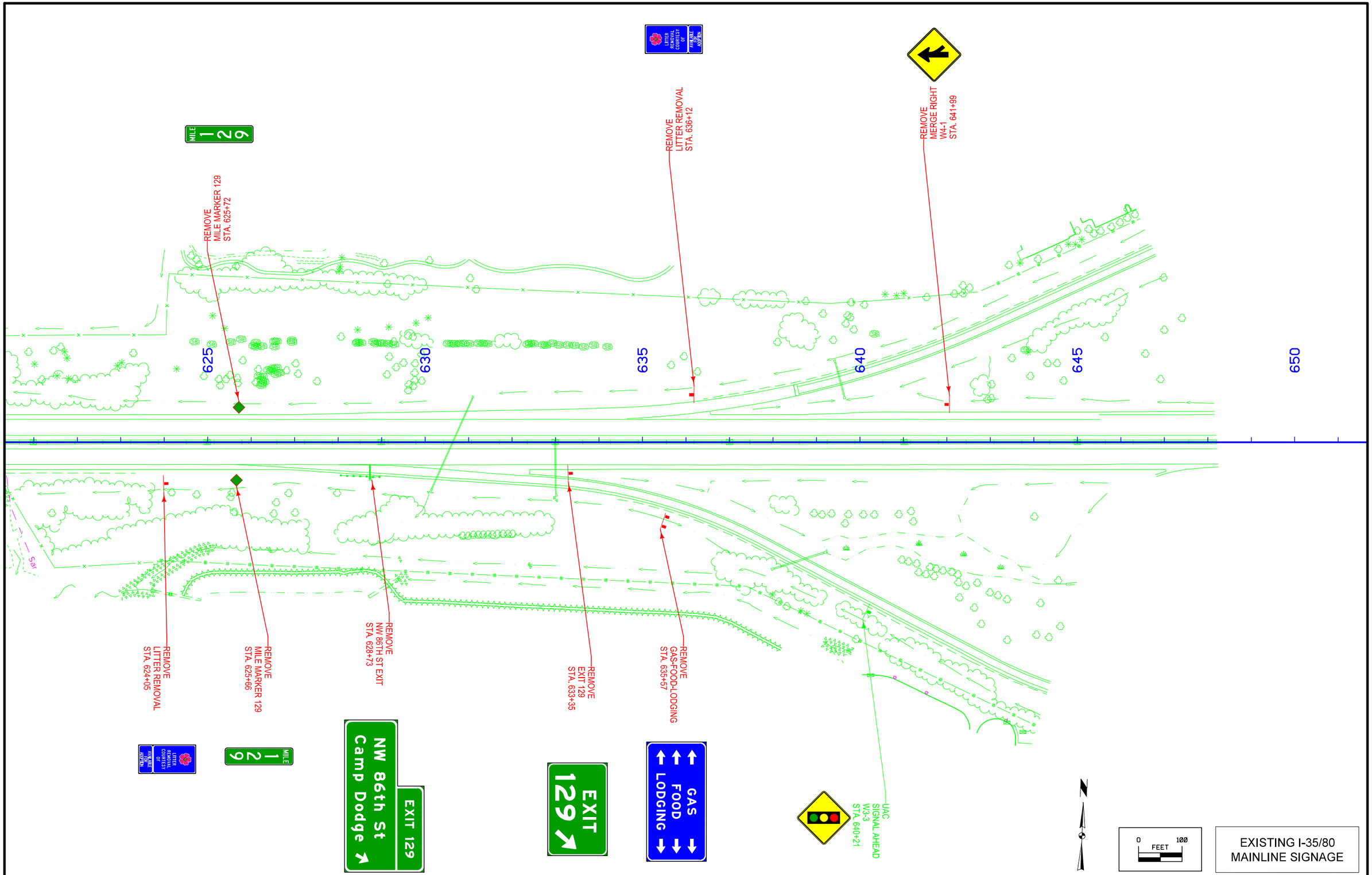

EXISTING I-35/80 MAINLINE SIGNAGE

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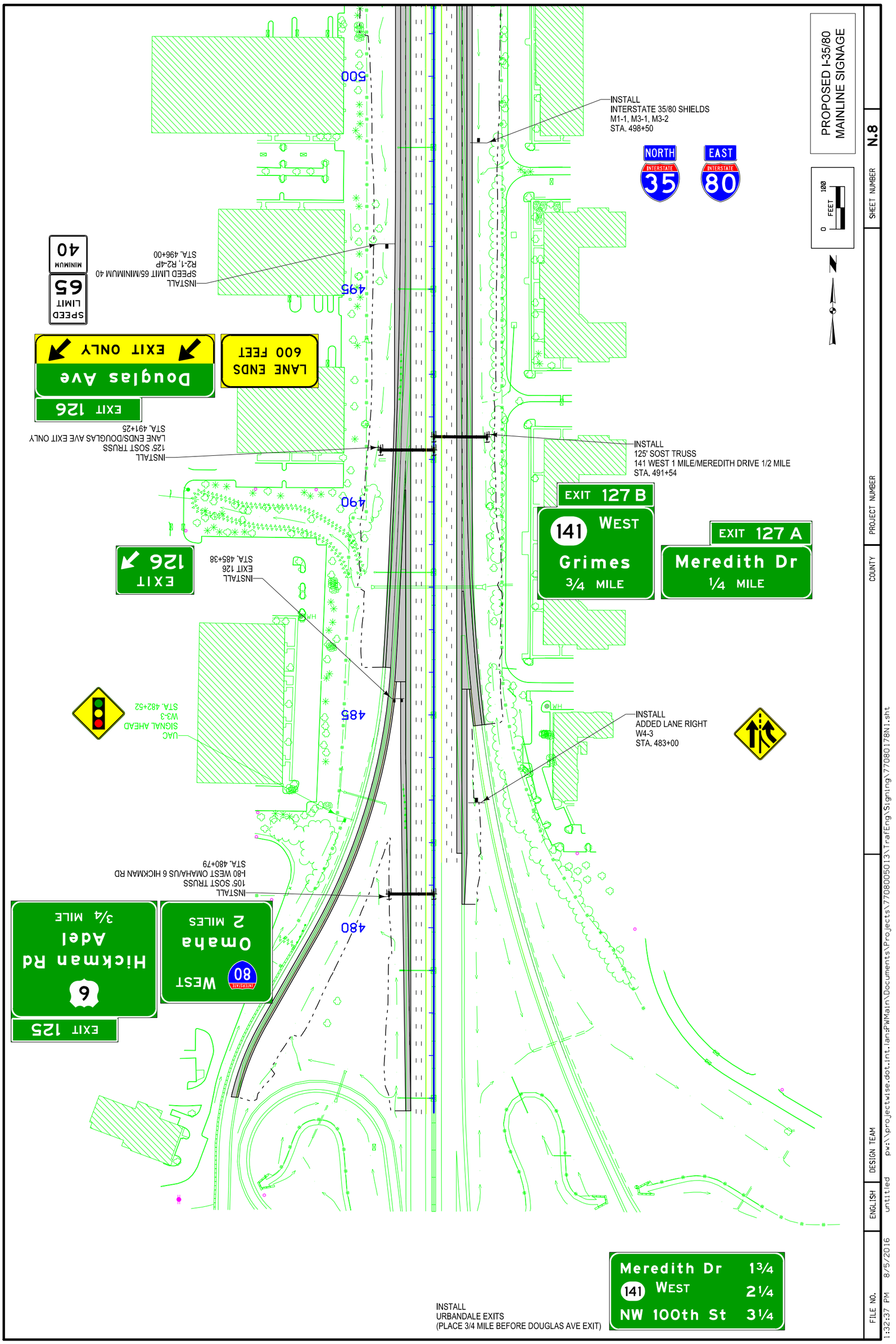

FILE NO. | ENGLISH | DESIGN TEAM | COUNTY | PROJECT NUMBER | SHEET NUMBER N.8

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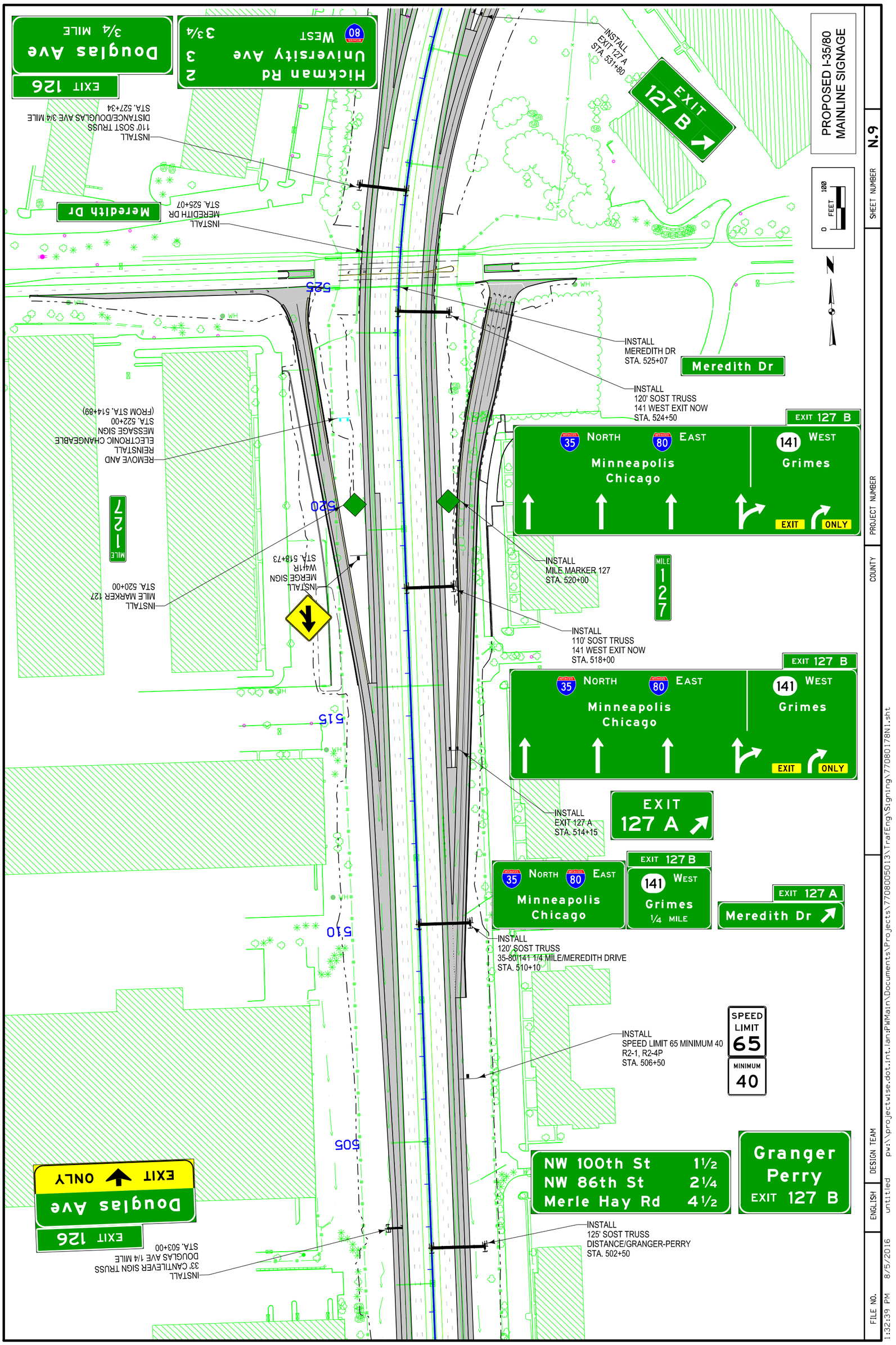

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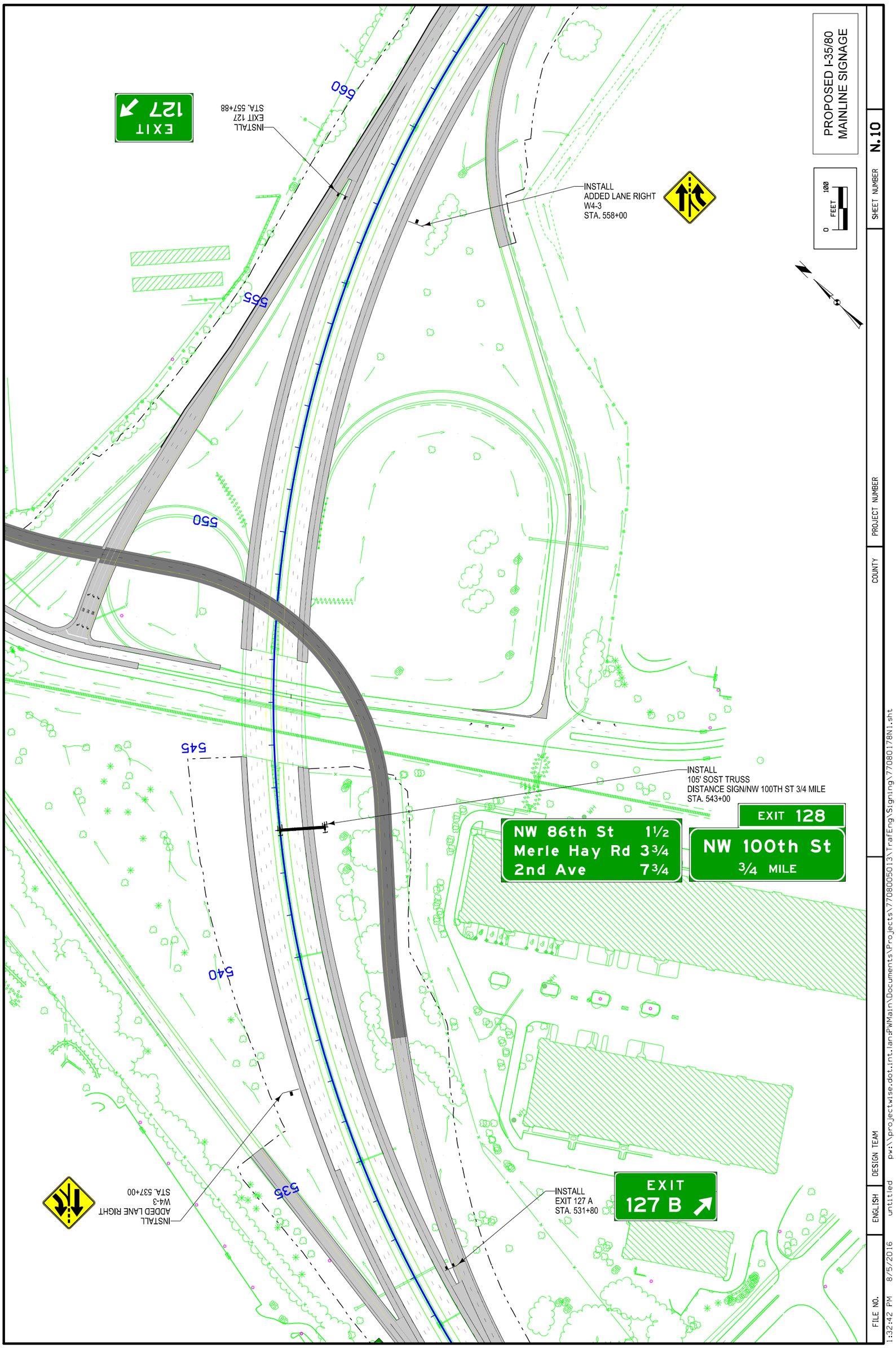
PROPOSED I-35/80
MAINLINE SIGNAGE
0 FEET 100
560
555
550
545
540
535
INSTALL
ADDED LANE RIGHT
W4-3
STA. 558+00
INSTALL
EXIT 127
STA. 557+88
EXIT 127
INSTALL
105' SOST TRUSS
DISTANCE SIGN/NW 100TH ST 3/4 MILE
STA. 543+00
NW 86th St 1½
Merle Hay Rd 3¾
2nd Ave 7¾
EXIT 128
NW 100th St
¾ MILE
INSTALL
EXIT 127 A
STA. 531+80
EXIT
127 B
INSTALL
ADDED LANE RIGHT
W4-3
STA. 537+00
SHEET NUMBER N.10
PROJECT NUMBER
COUNTY
DESIGN TEAM
ENGLISH
FILE NO.
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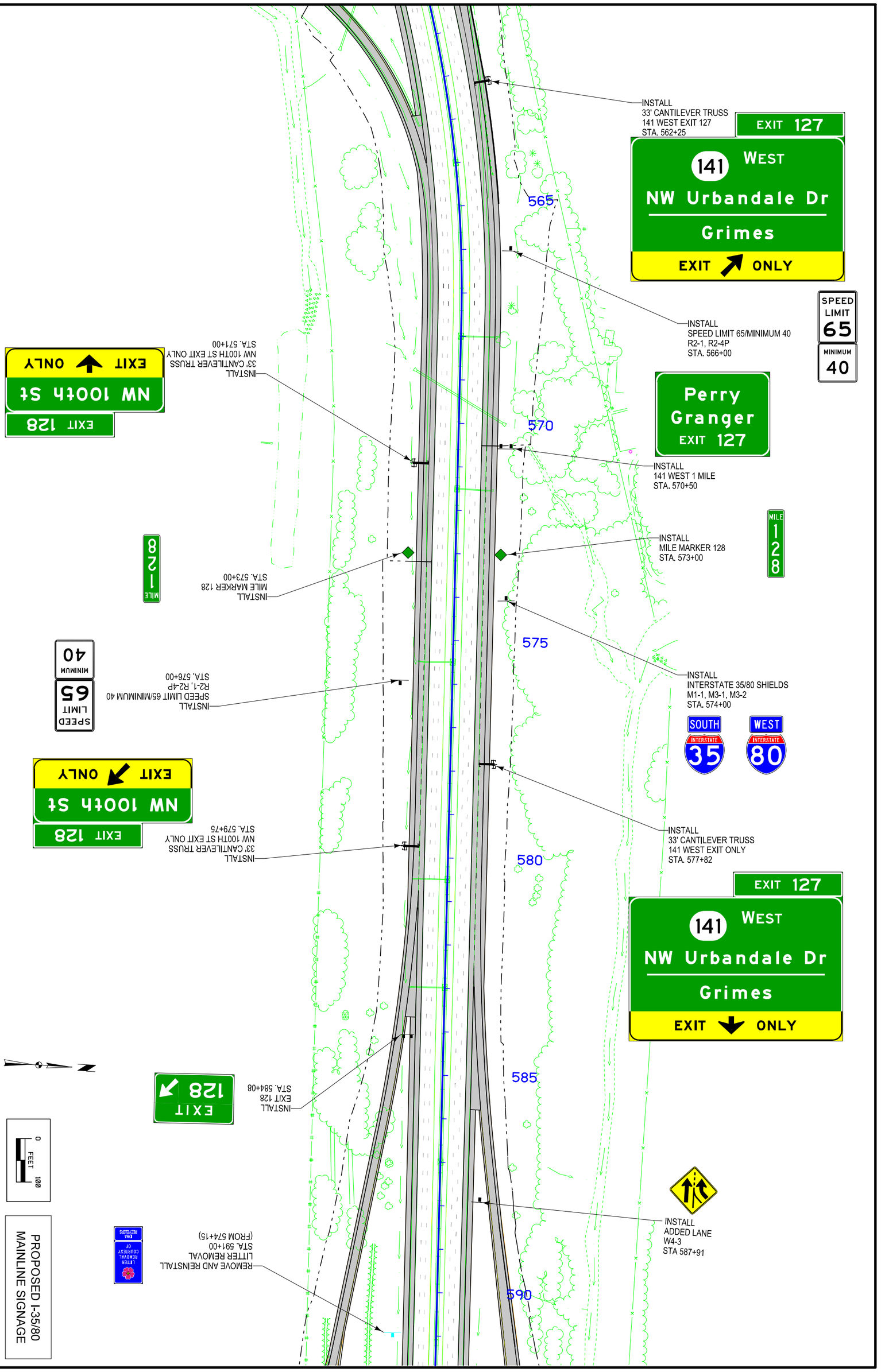

FILE NO.
ENGLISH
DESIGN TEAM
COUNTY
PROJECT NUMBER
SHEET NUMBER
N.11

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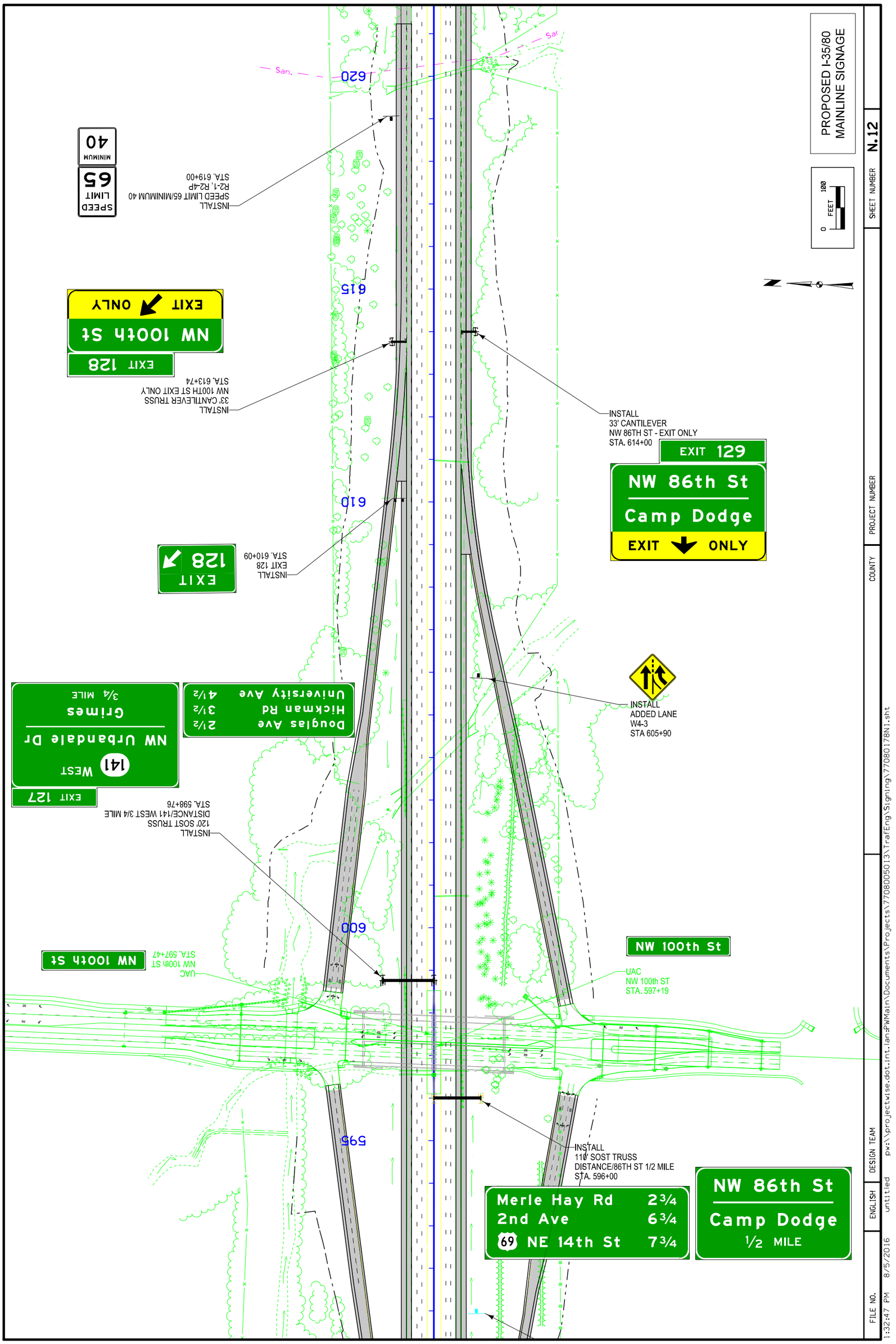

FILE NO. | ENGLISH | DESIGN TEAM | COUNTY | PROJECT NUMBER | SHEET NUMBER N.12

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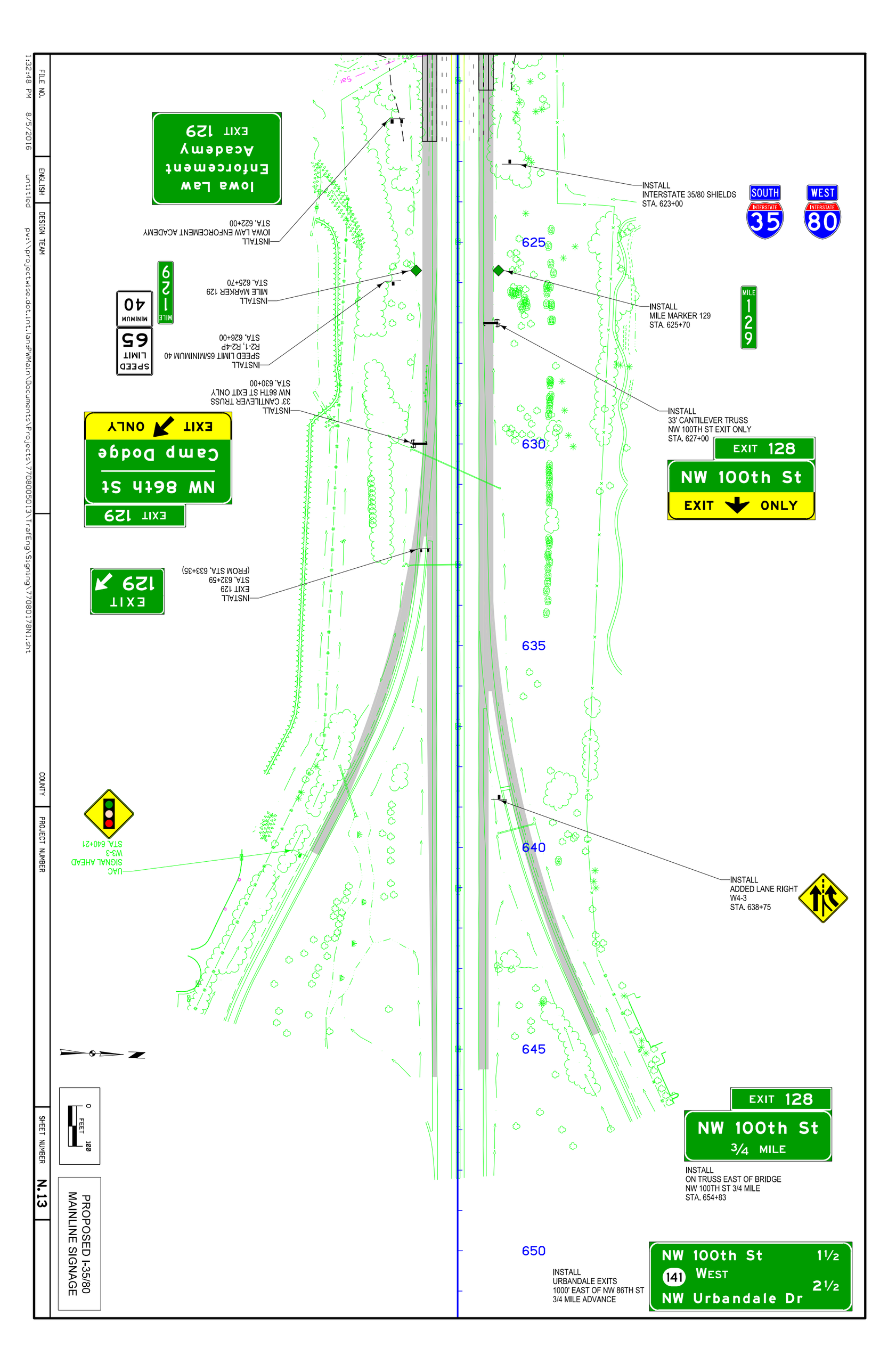

FILE NO.
ENGLISH
DESIGN TEAM
COUNTY
PROJECT NUMBER
SHEET NUMBER
N.13

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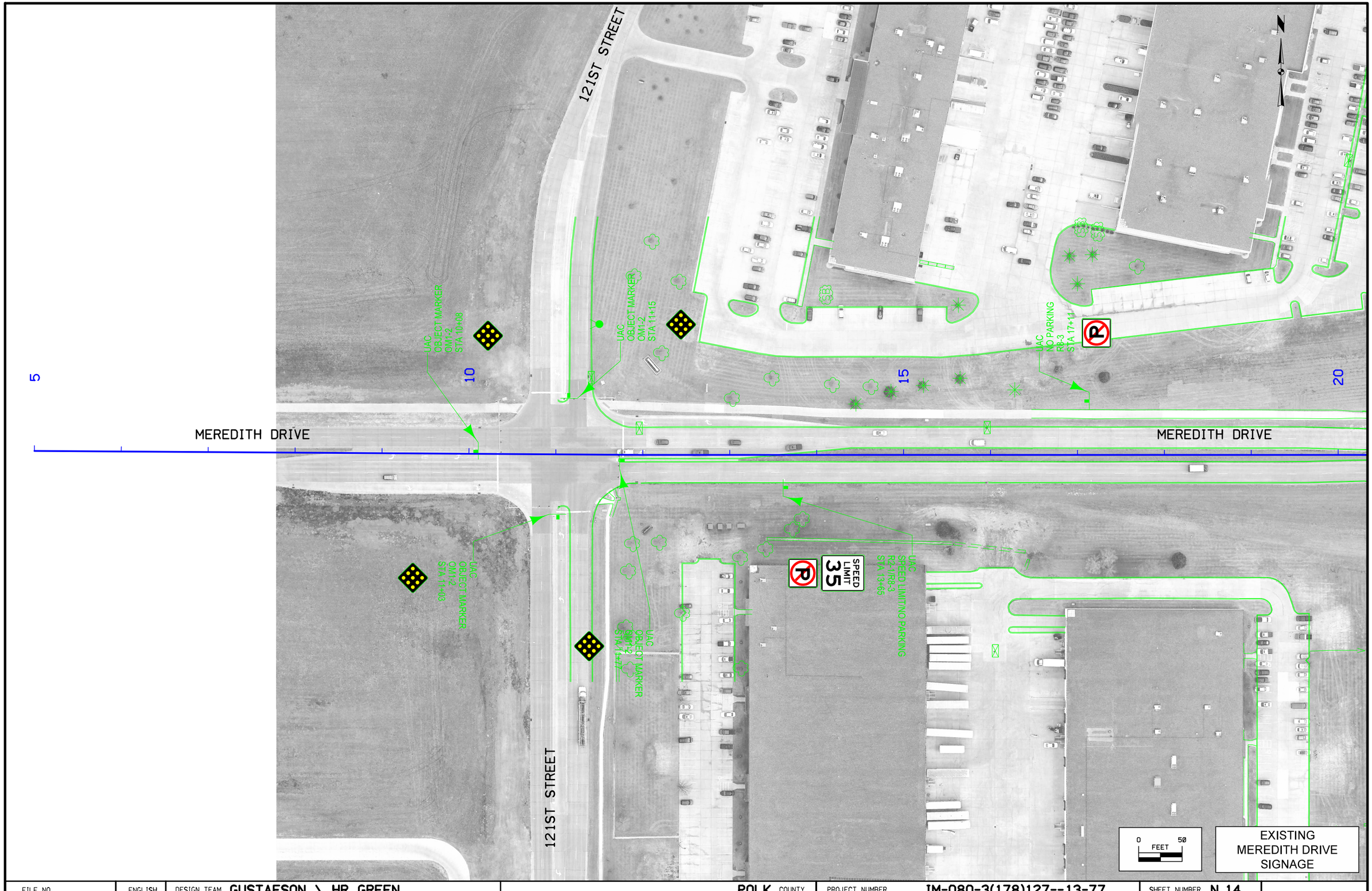

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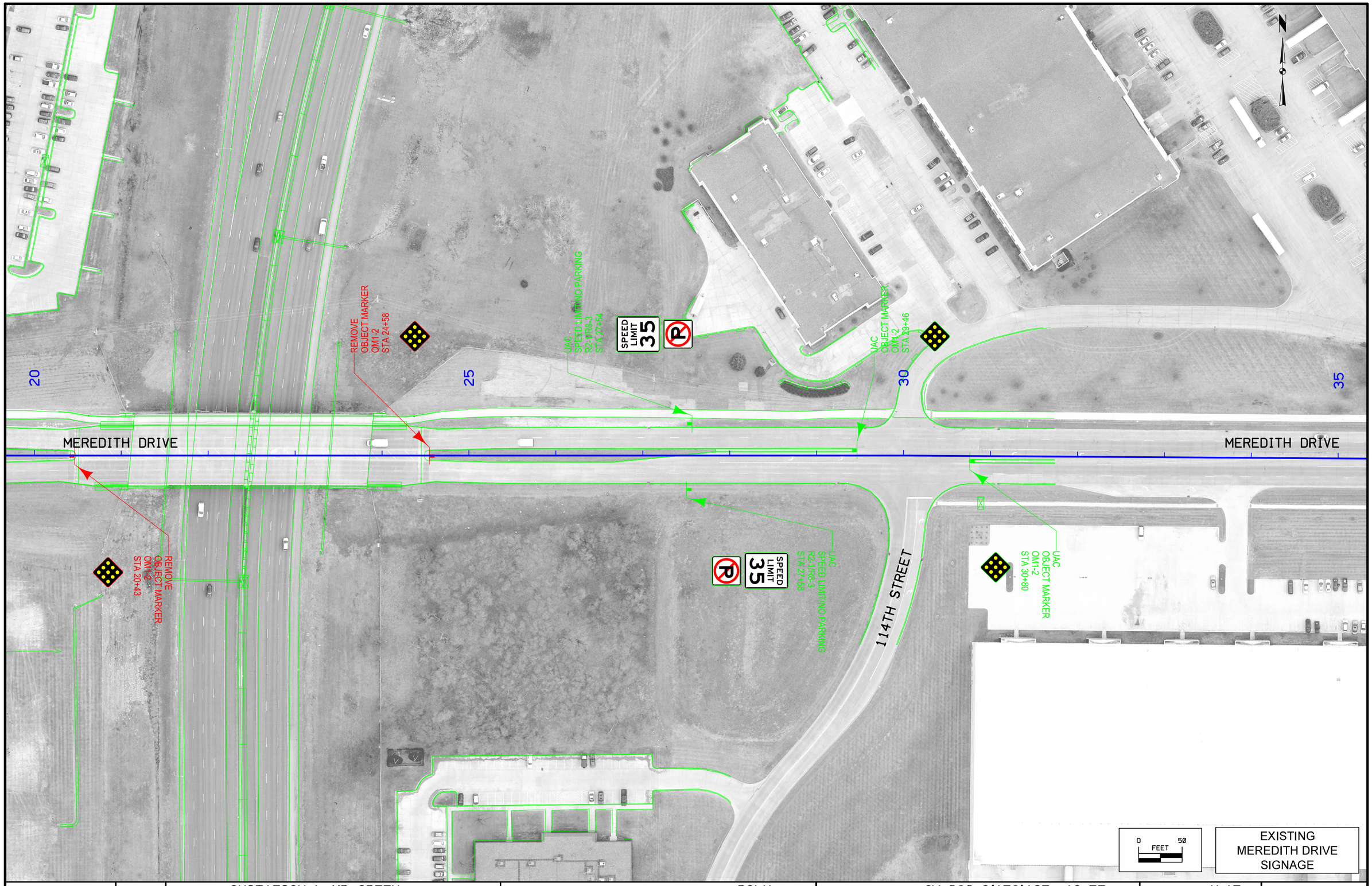

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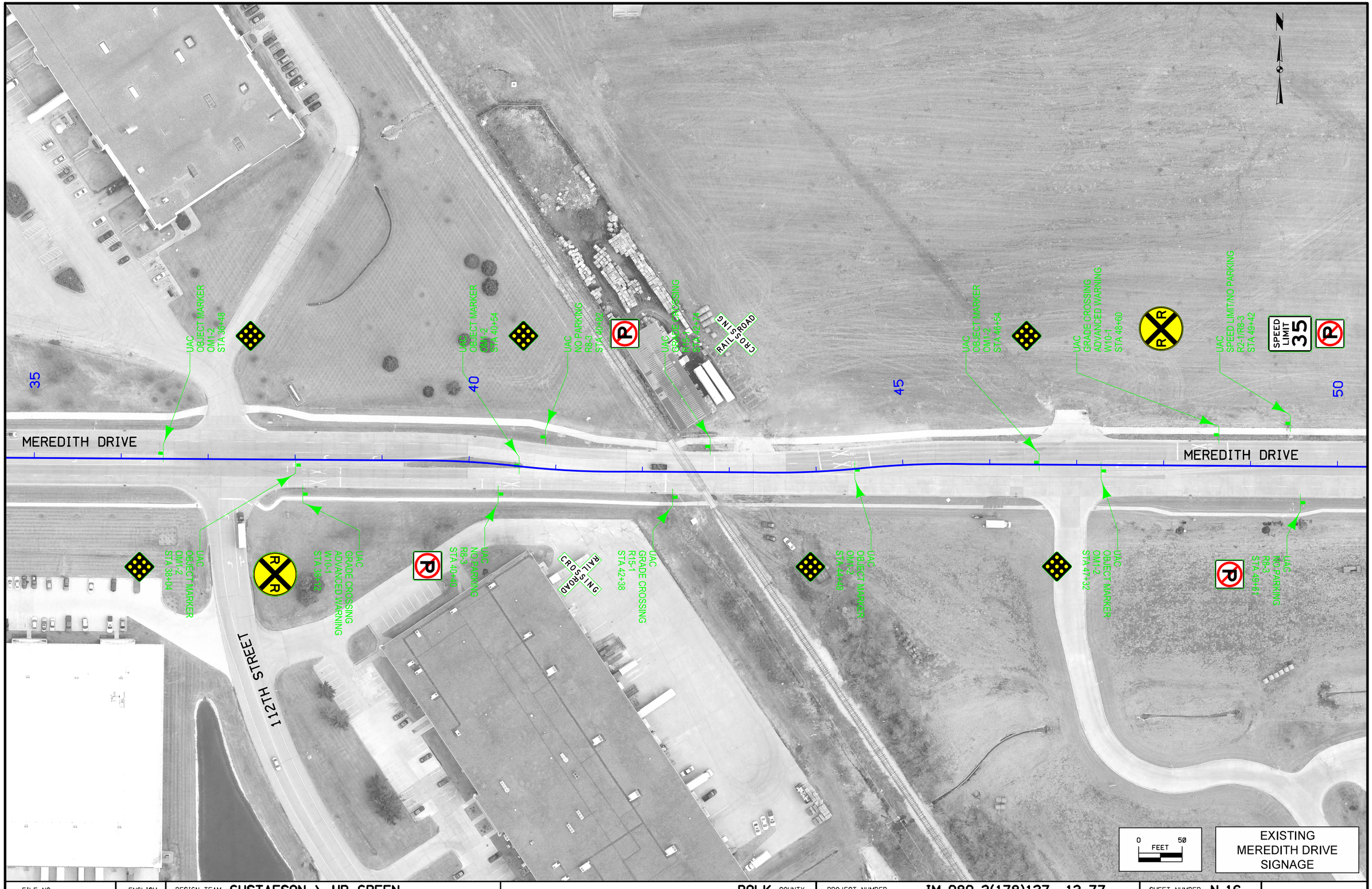

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URBANDALE DRIVE

MEREDITH DRIVE

MEREDITH DRIVE

50

55

UAC
OBJECT MARKER
OM1-2
STA 52+31

UAC
OBJECT MARKER
OM1-2
STA 53+19

UAC
OBJECT MARKER
OM1-2
STA 53+07

UAC
OBJECT MARKER
OM1-2
STA 53+07

URBANDALE DRIVE

0 FEET 50

EXISTING
MEREDITH DRIVE
SIGNAGE

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.17

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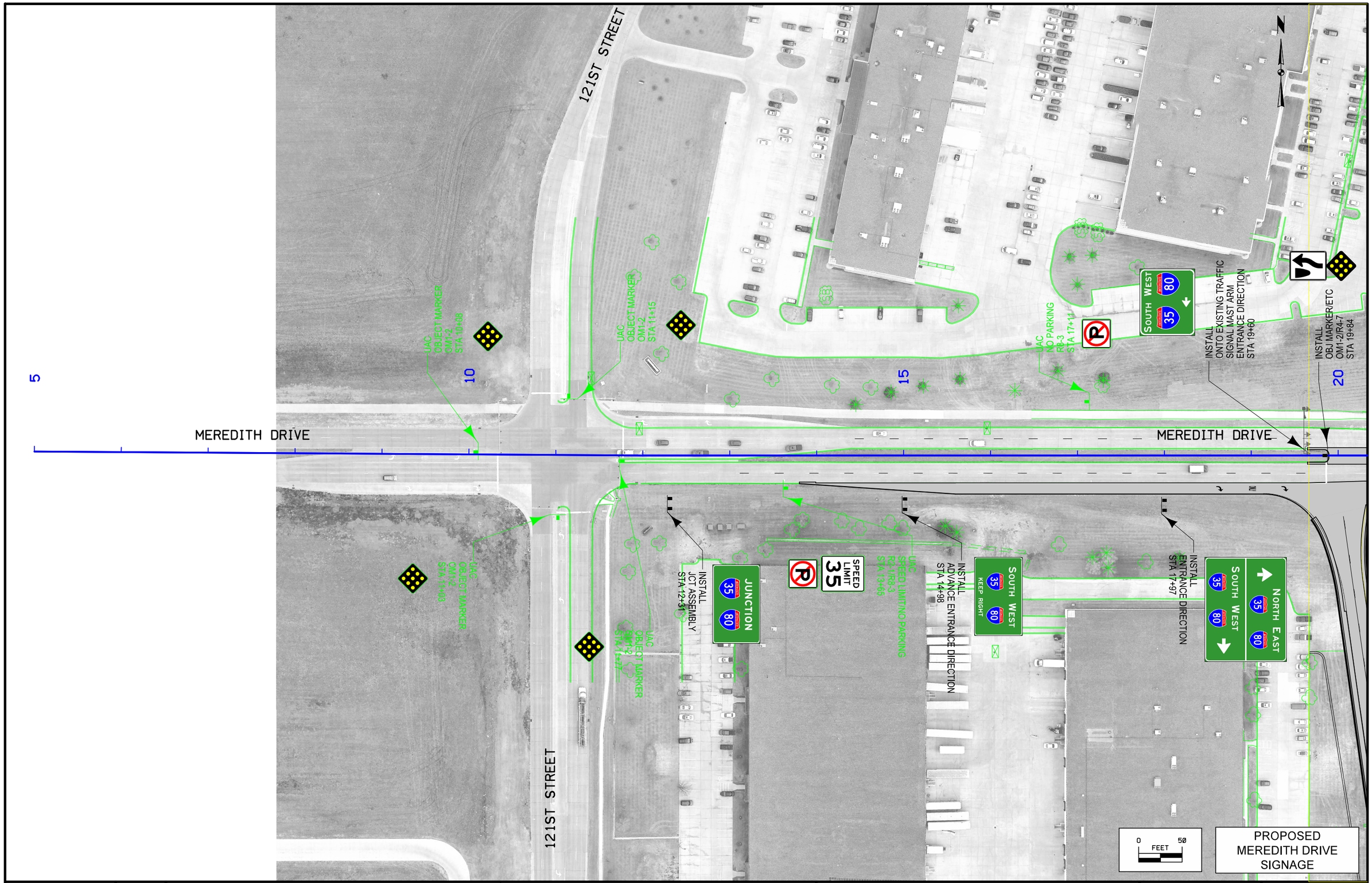

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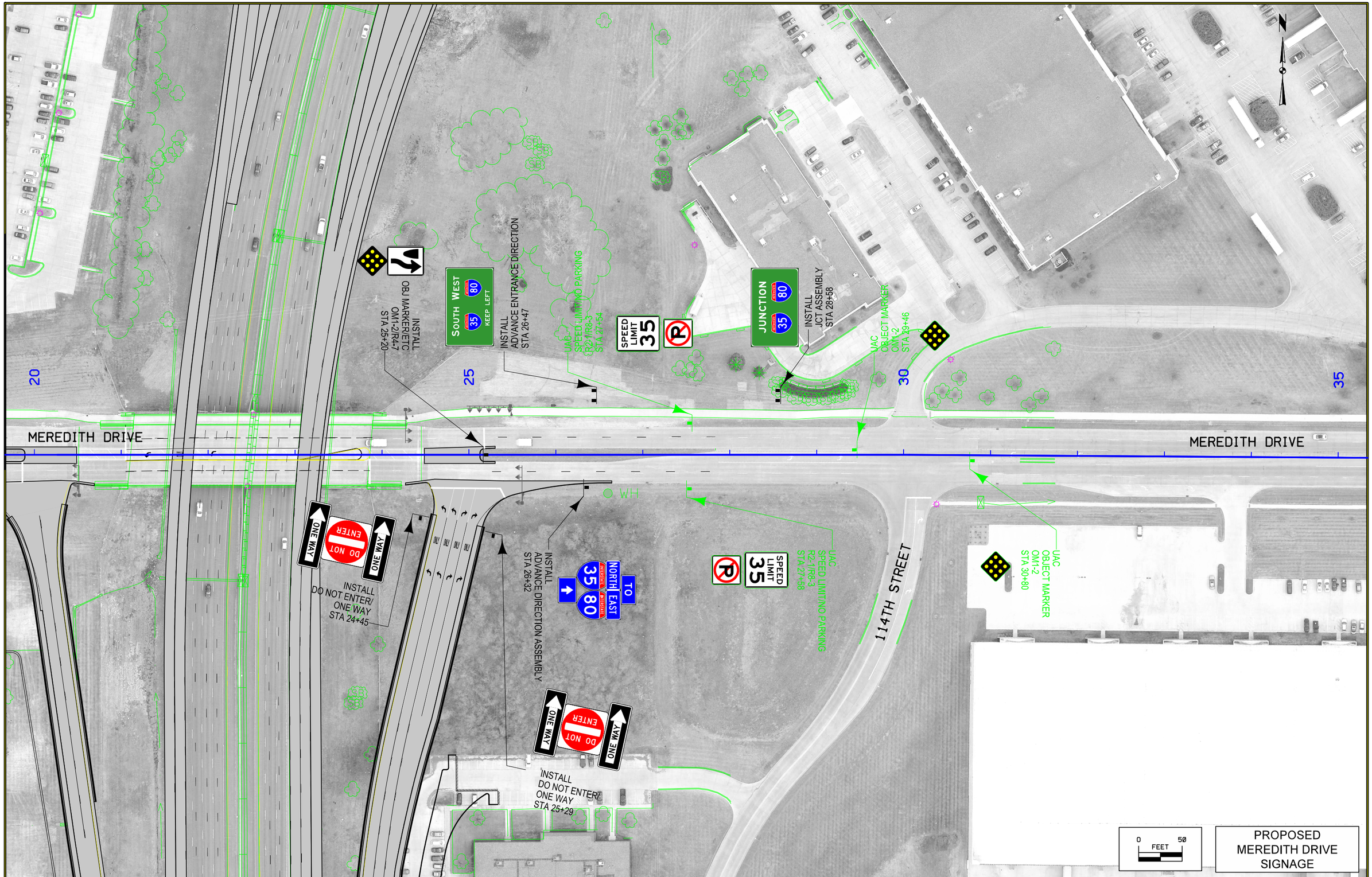

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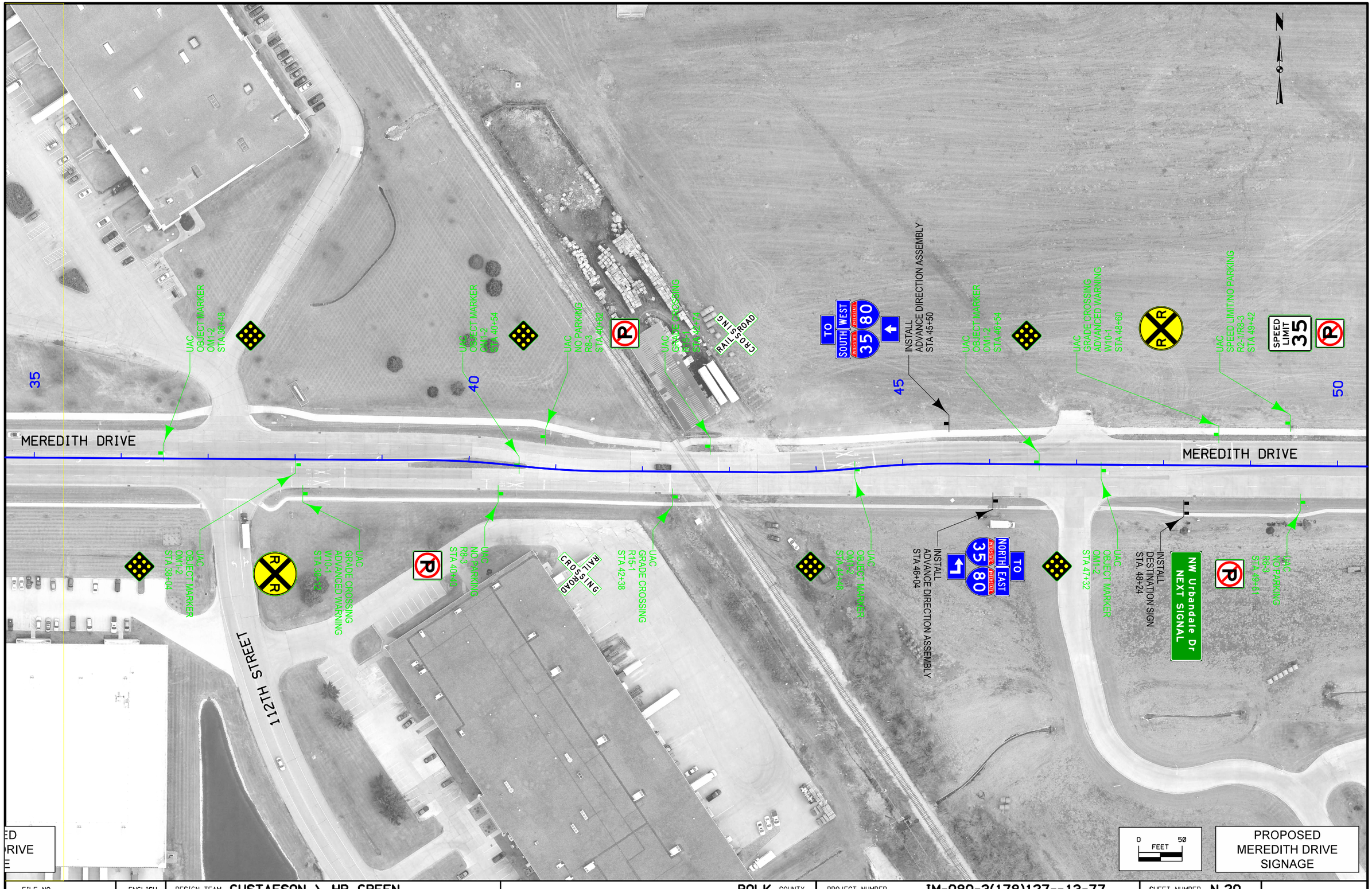

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URBANDALE DRIVE

INSTALL
ADVANCE DIRECTION ASSEMBLY
STA 17+50

TO
SOUTH WEST
INTERSTATE 35 INTERSTATE 80

UAC
OBJECT MARKER
OM1-2
STA 52+31

50

UAC
OBJECT MARKER
OM1-2
STA 53+19

55
55

TO
SOUTH WEST
INTERSTATE 35 INTERSTATE 80

TO
NORTH EAST
INTERSTATE 35 INTERSTATE 80

INSTALL
ADVANCE DIRECTION ASSEMBLY
STA 55+74

MEREDITH DRIVE

MEREDITH DRIVE

INSTALL
ADVANCE DIRECTION ASSEMBLY
STA 50+38

TO
NORTH EAST
INTERSTATE 35 INTERSTATE 80

UAC
OBJECT MARKER
OM1-2
STA 53+07

UAC
OBJECT MARKER
OM1-2
STA 53+07

TO
SOUTH WEST
INTERSTATE 35 INTERSTATE 80

TO
NORTH EAST
INTERSTATE 35 INTERSTATE 80

INSTALL
ADVANCE DIRECTION ASSEMBLY
STA 12+25

URBANDALE DRIVE

N

0 FEET 50

PROPOSED
MEREDITH DRIVE
SIGNAGE

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.21

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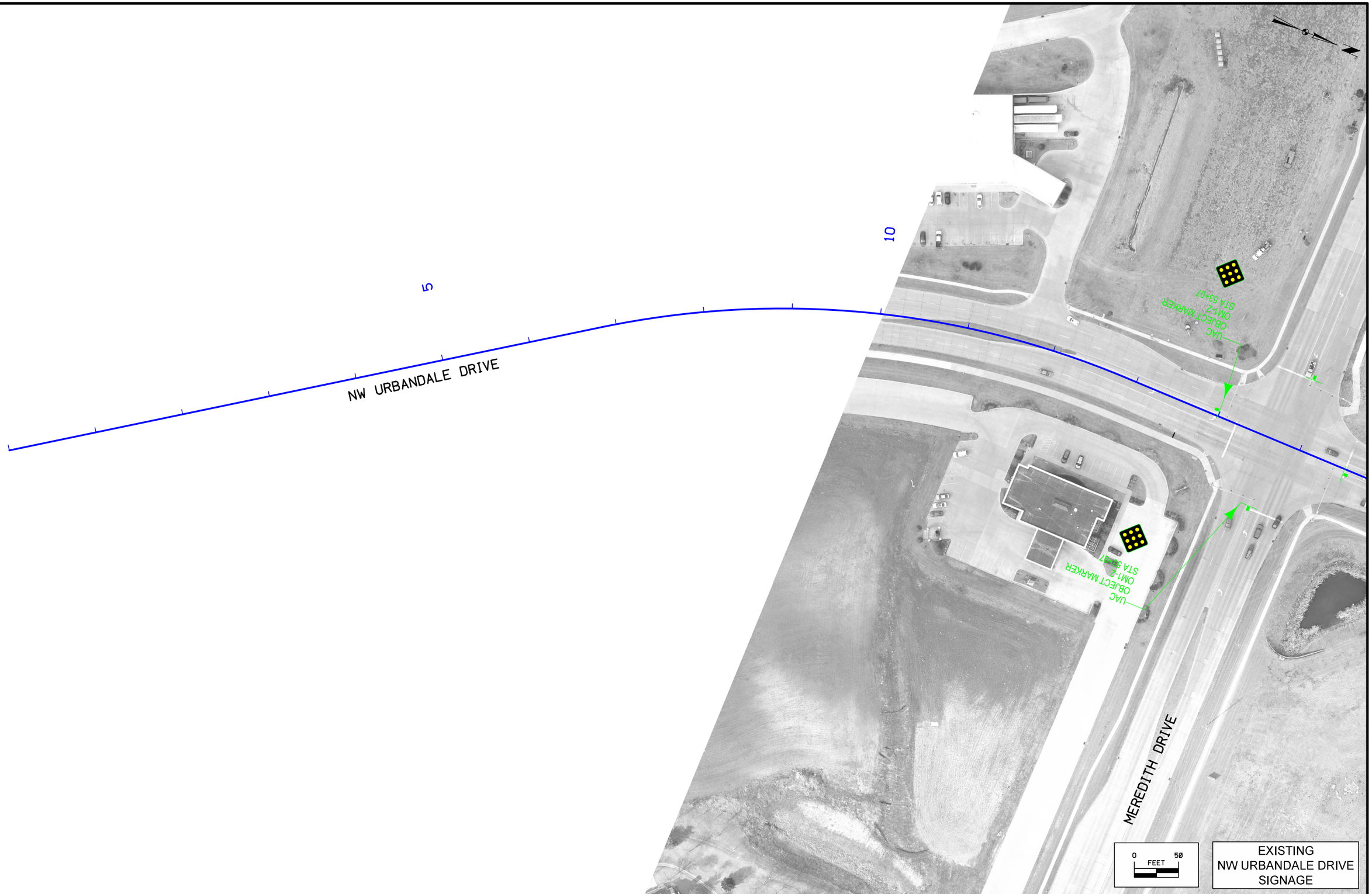

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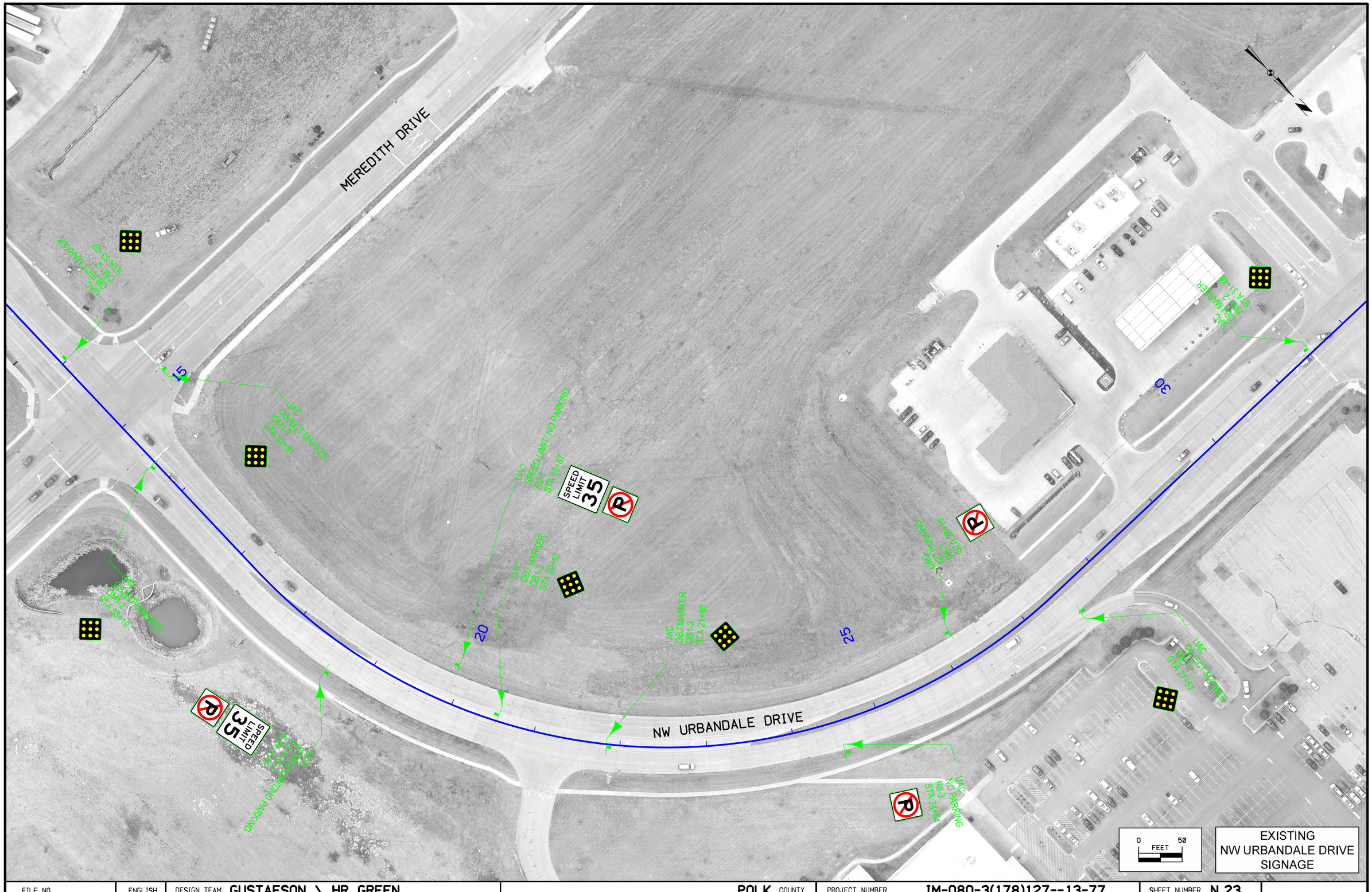

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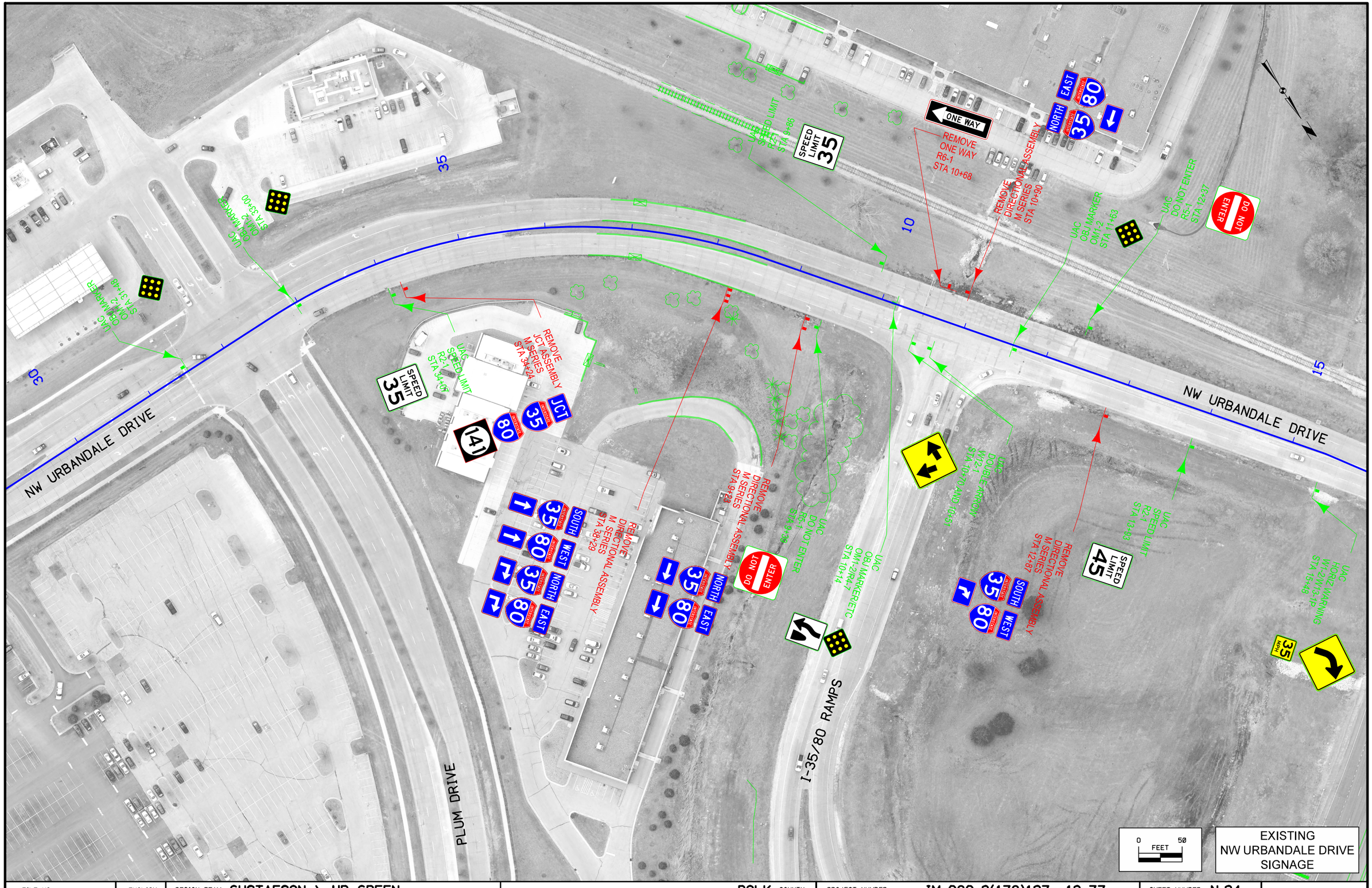

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NW URBANDALE DRIVE

NW URBANDALE DRIVE

I-35/80 RAMP

NORTH EAST 80 35 LEFT LANE

EAST 80 NORTH 35

1 MILE

MILE MARKER D1-3 STA 20+16

UAC ON BRIDGE STRUCTURE GUIDE D SERIES STA 14+07

REMOVE DIRECTIONAL ASSEMBLY M SERIES STA 22+16

REMOVE OBJ MARKER OM1-2 STA 23+07

REMOVE OBJ MARKER OM1-2 STA 23+35

UAC GUIDE D SERIES STA 27+95

UAC HORIZ WARNING W1-2/W13-1P STA 28+95

DO NOT ENTER

NORTH EAST 80 35

35 MPH

UAC HORIZ WARNING W1-2/W13-1P STA 16+48

35 MPH

REMOVE PULL THROUGH/ GUIDE E SERIES/ D SERIES STA 16+61

RAMP 25 MPH

REMOVE RAMP SPEED W13-3 STA 19+84

REMOVE DIRECTIONAL ASSEMBLY M SERIES STA 21+35

REMOVE ADDED LANE W4-3 STA 22+22

REMOVE DO NOT ENTER R5-1 STA 22+61

REMOVE DO NOT ENTER/ ONE WAY STA 23+63

ONE WAY

DO NOT ENTER

ONE WAY

WEST 80 SOUTH 35

WEST (141)

SOUTH WEST 35 80

ONE WAY

DO NOT ENTER

RIGHT LANE NO STOP REQUIRED

REMOVE DO NOT ENTER/ ONE WAY/ RT LANE NO STOP STA 24+43

REMOVE MERGE W4-6 STA 24+23

ENGINE BRAKE ORDINANCE ENFORCED

Grimes

UAC GUIDE SPECIALTY STA 21+04

(141) WEST

UAC CONFIRMATION ASSEMBLY STA 28+94

RIGHT LANE NO STOP REQUIRED

REMOVE RT LANE NO STOP STA 23+33

15 20 25 30

0 FEET 50

EXISTING NW URBANDALE DRIVE SIGNAGE

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.25

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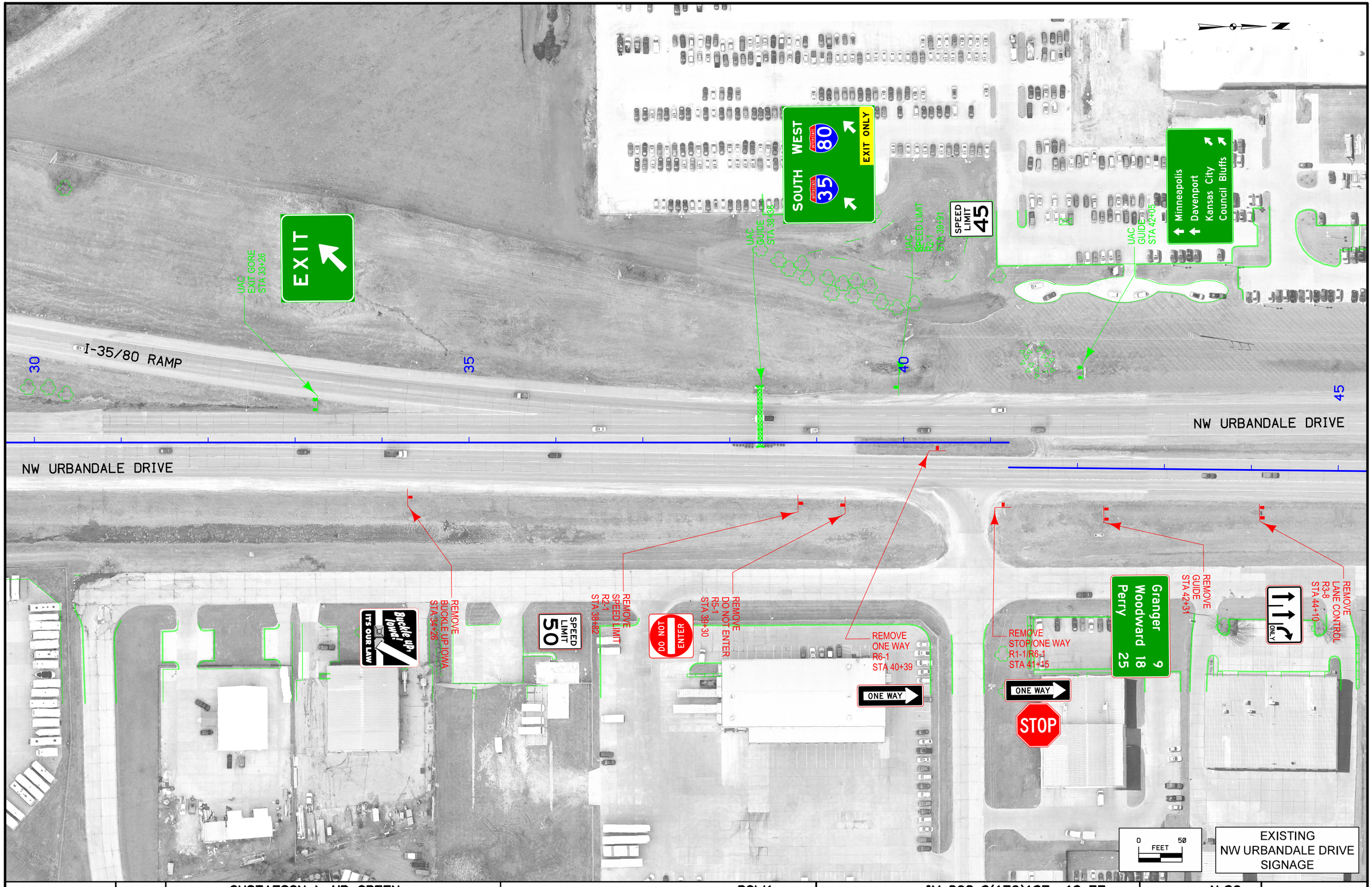

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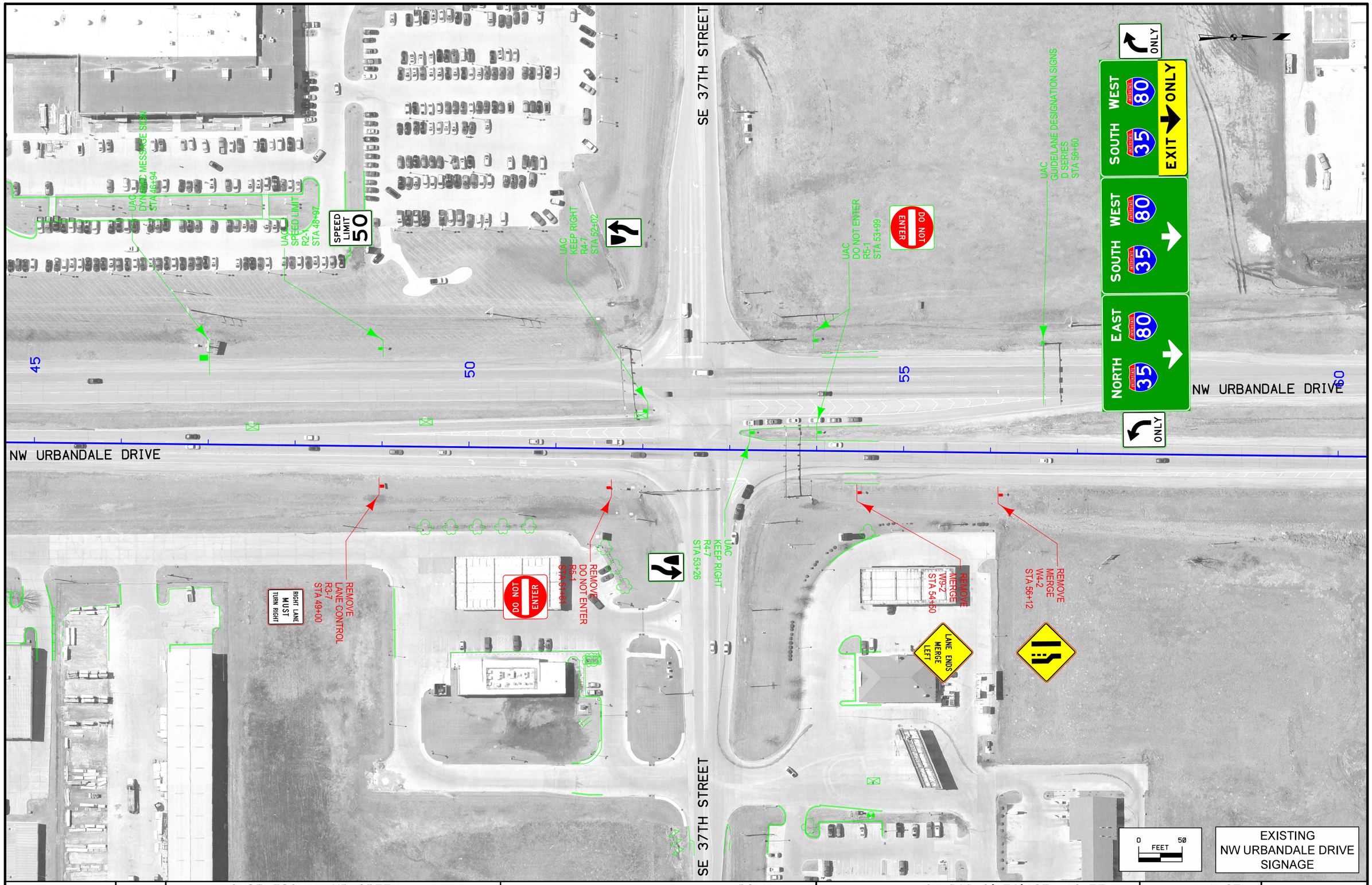

EXISTING
NW URBANDALE DRIVE
SIGNAGE

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.27

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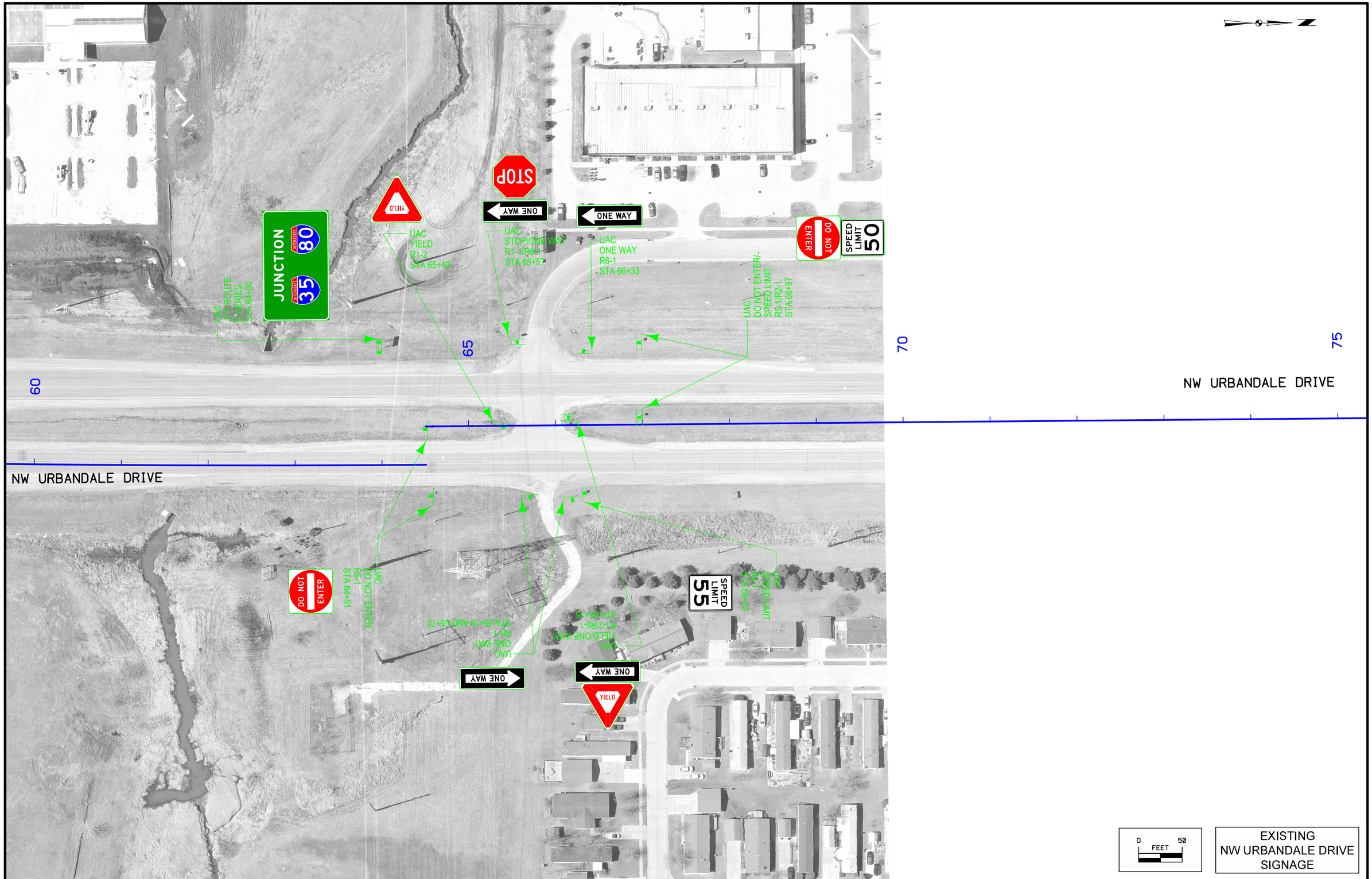

0 FEET 50

EXISTING
NW URBANDALE DRIVE
SIGNAGE

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.28

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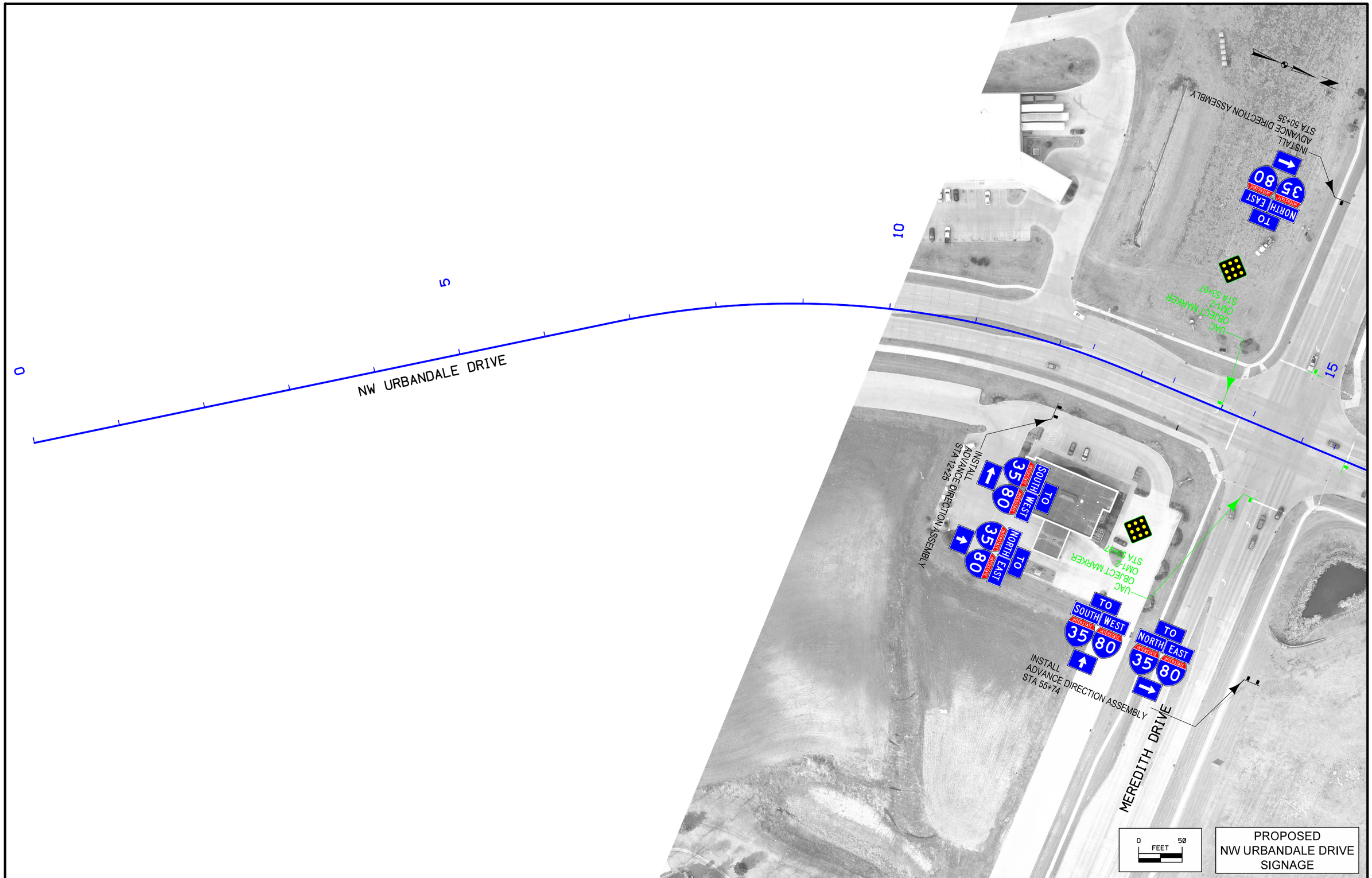
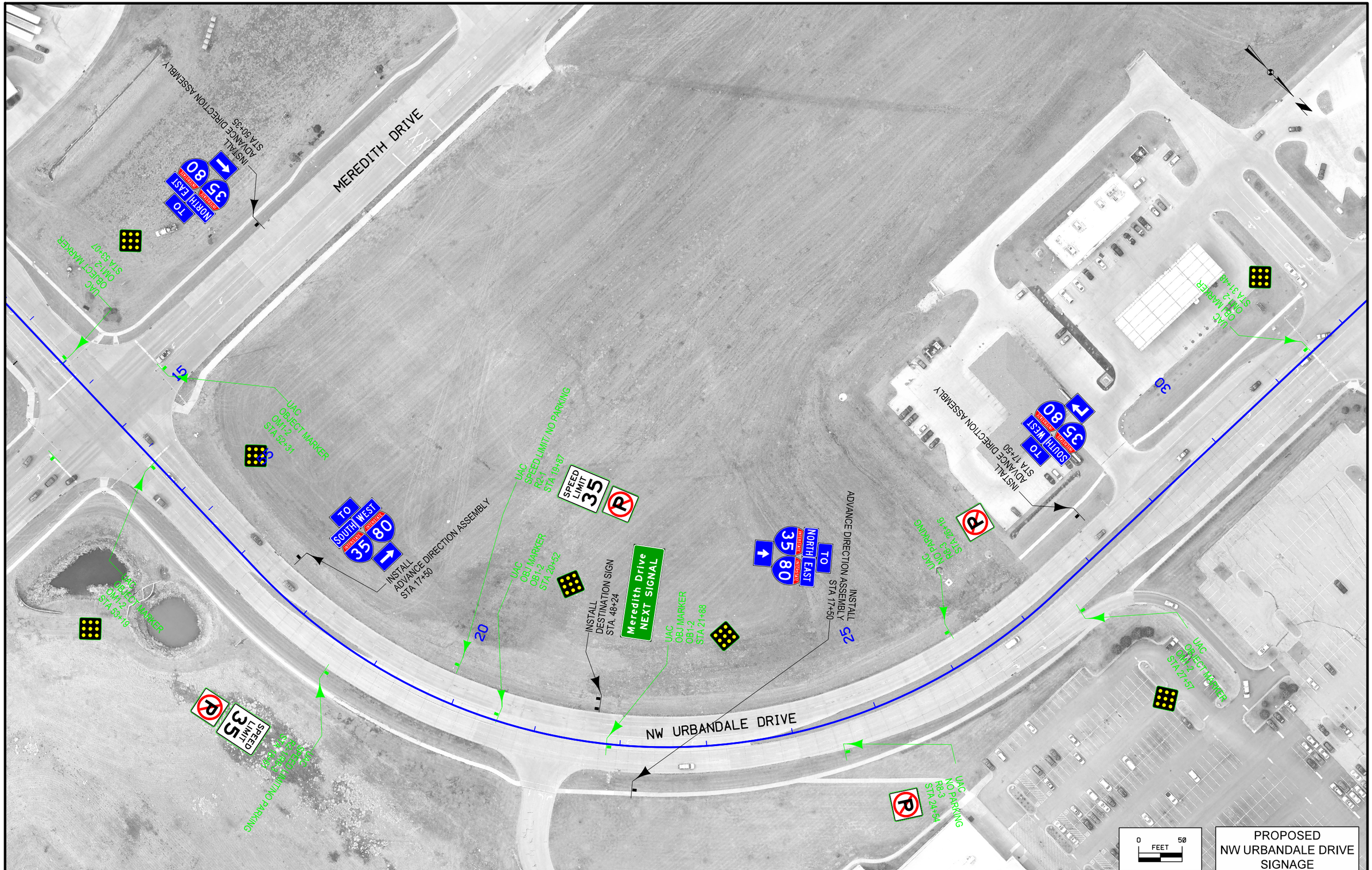
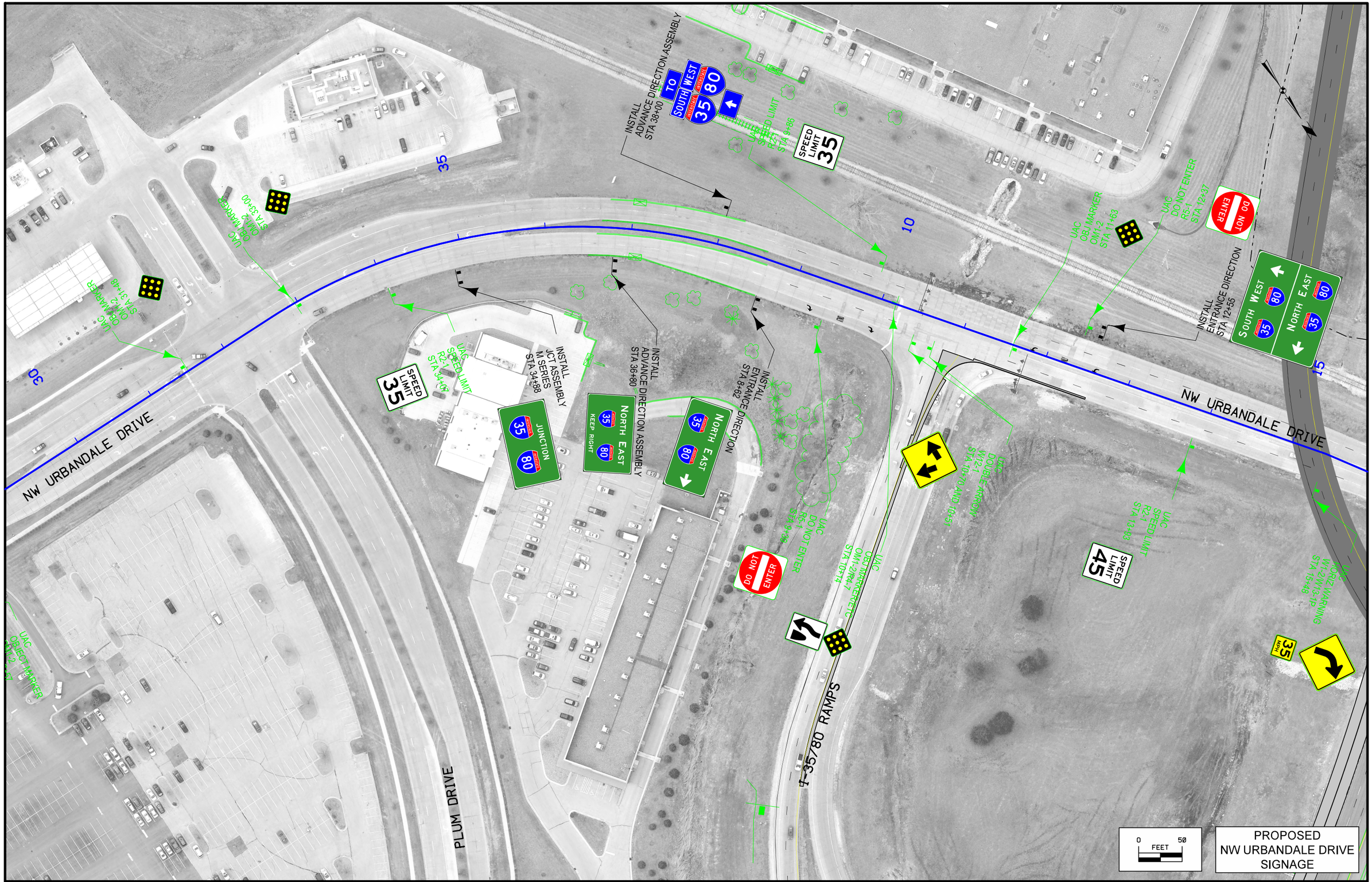


FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.29



FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.30



FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.31	

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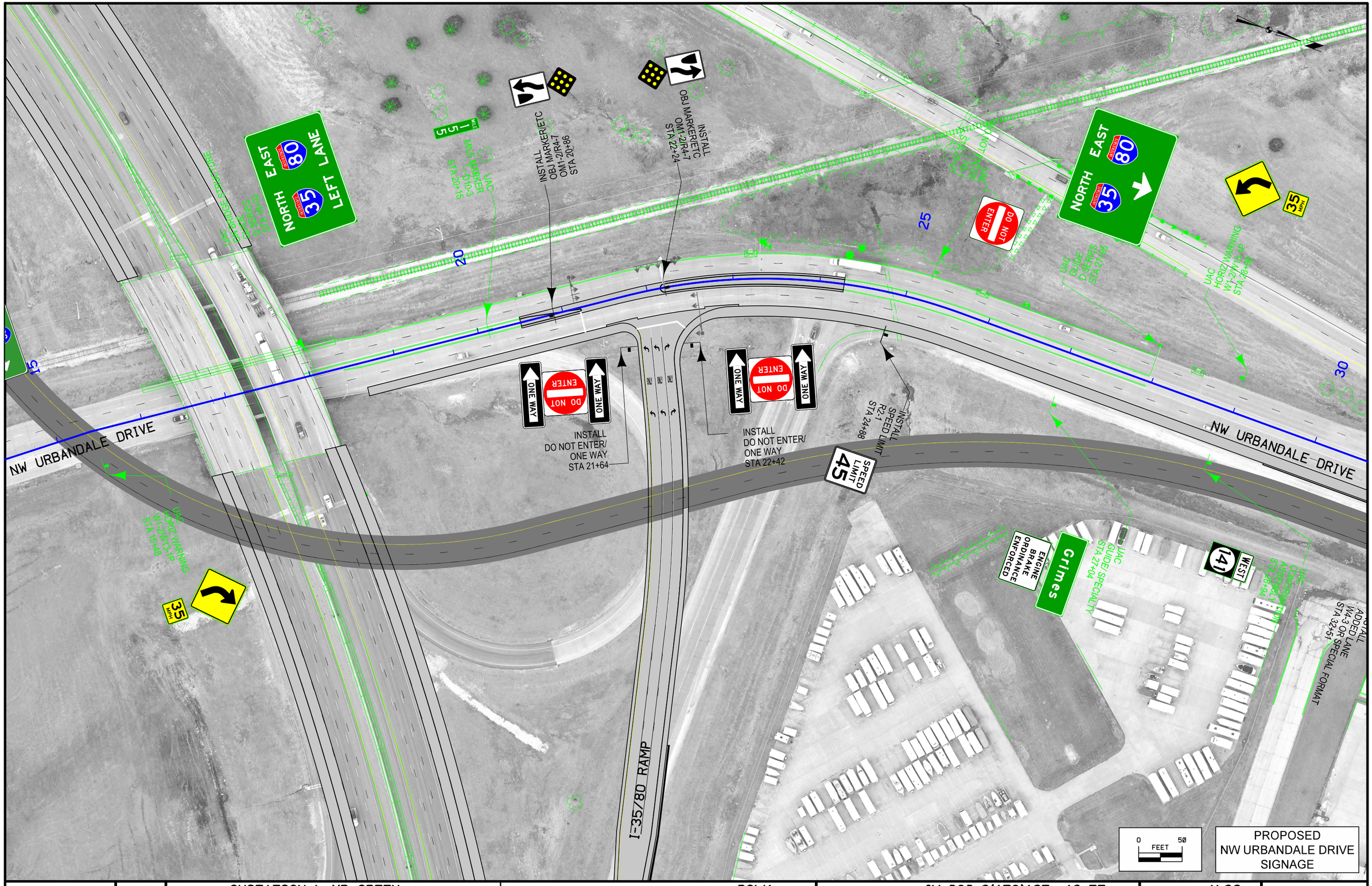
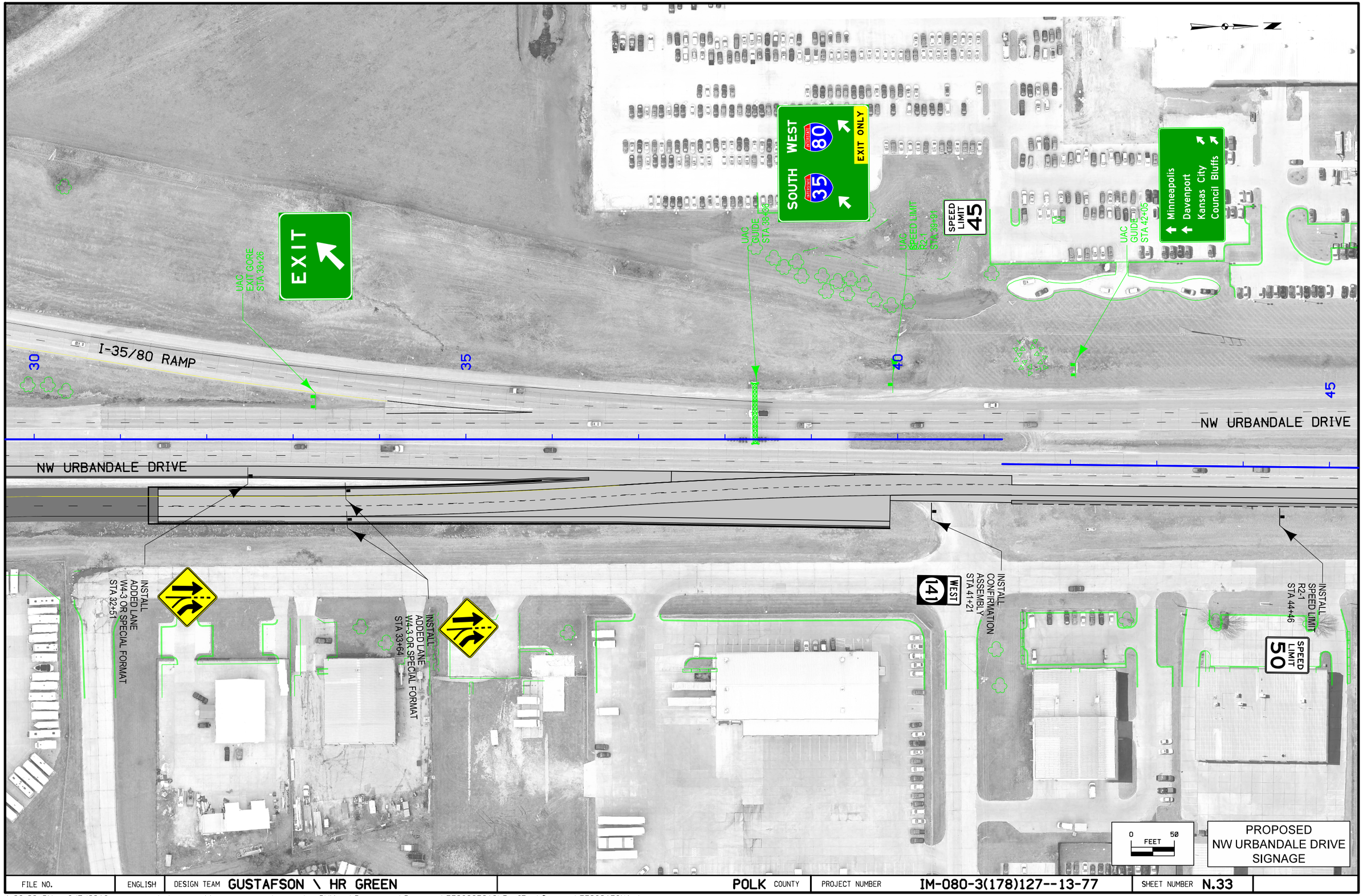


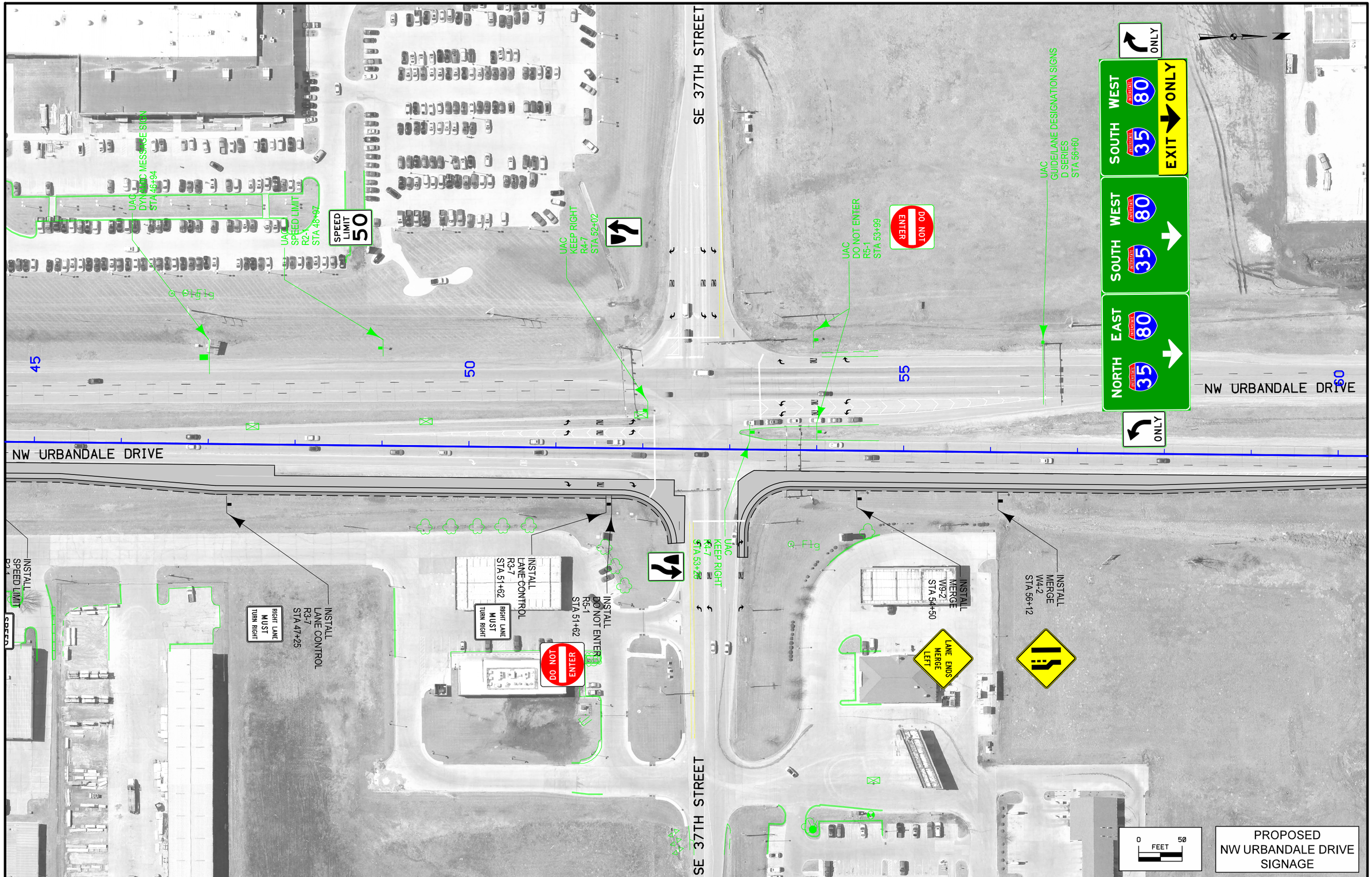
FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.32	

1:38:10 PM 8/5/2016 untitled pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\TrafEng\Signing\77080178N1.sht



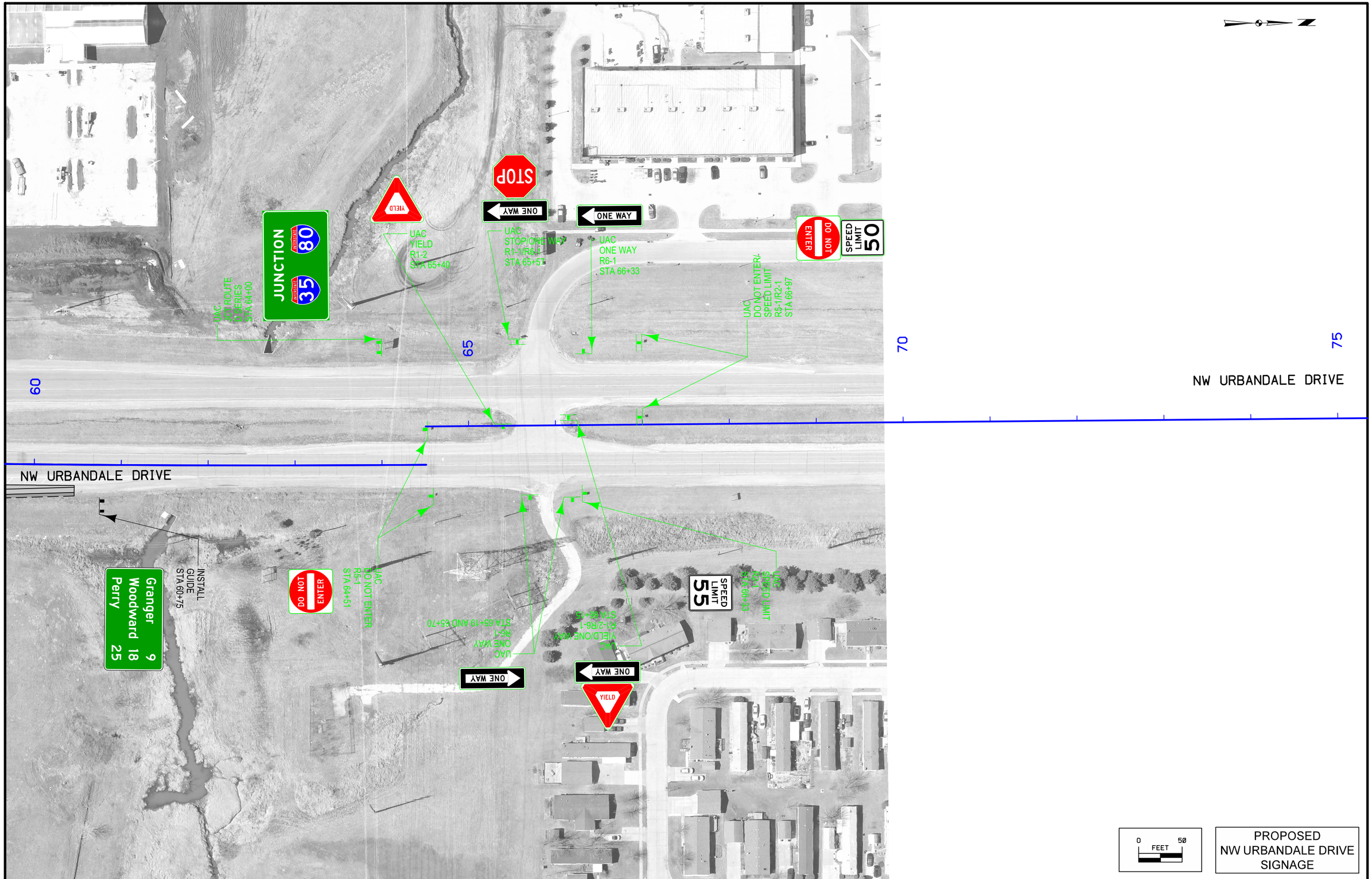
FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.33

1:38:23 PM 8/5/2016 untitled pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\TrafEng\Signing\77080178N1.sht



FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.34

1:38:34 PM 8/5/2016 untitled pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\TrafEng\Signing\77080178N1.sht



0 50 FEET

PROPOSED
NW URBANDALE DRIVE
SIGNAGE

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.35

1:38:45 PM 8/5/2016 untitled pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\TrafEng\Signing\77080178N1.sht

PLUM DRIVE

NW 100TH STREET

1205

1210

1215

1220

UAC
SPEED LIMIT/NO PARKING
R2-1/R8-3
STA 1207+56

SPEED LIMIT 35

UAC
OBJ MARKER
OM1-2
STA 1209+11

REMOVE
OBJ MARKER
OM3-L
STA 1217+34

REMOVE
OBJ MARKER
OM3-R
STA 1219+58

UAC
OBJ MARKER
OM1-2
STA 1208+96

UAC
OBJ MARKER/KEEP LT
OM1-2/R4-7
STA 1209+66

REMOVE
SPEED LIMIT/NO PARKING
R2-1/R8-3
STA 1212+50

REMOVE
OBJ MARKER
OM3-R
STA 1217+34

REMOVE
OBJ MARKER
OM3-L
STA 1219+58

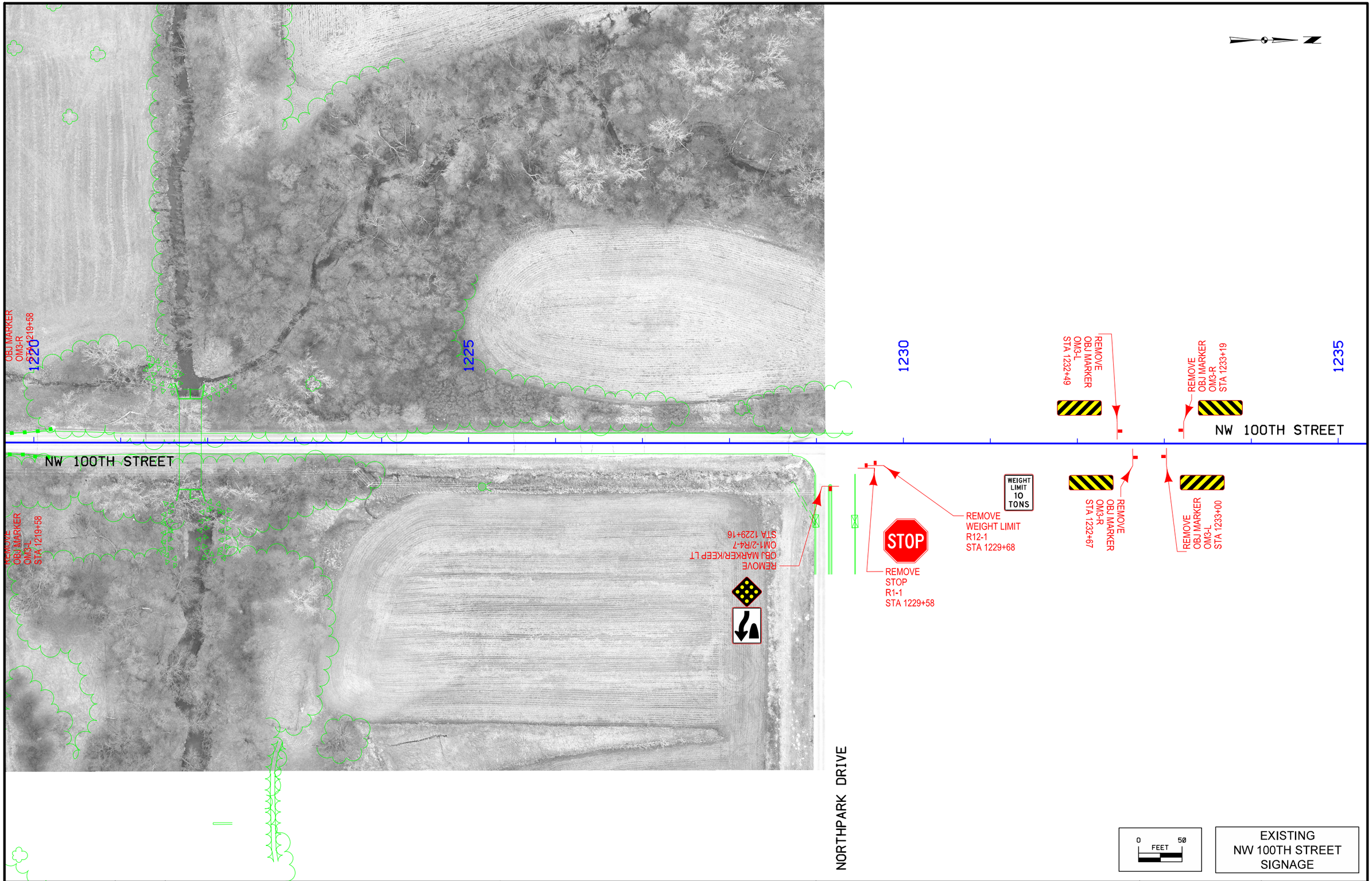
PLUM DRIVE

0 FEET 50

EXISTING
NW 100TH STREET
SIGNAGE

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.36

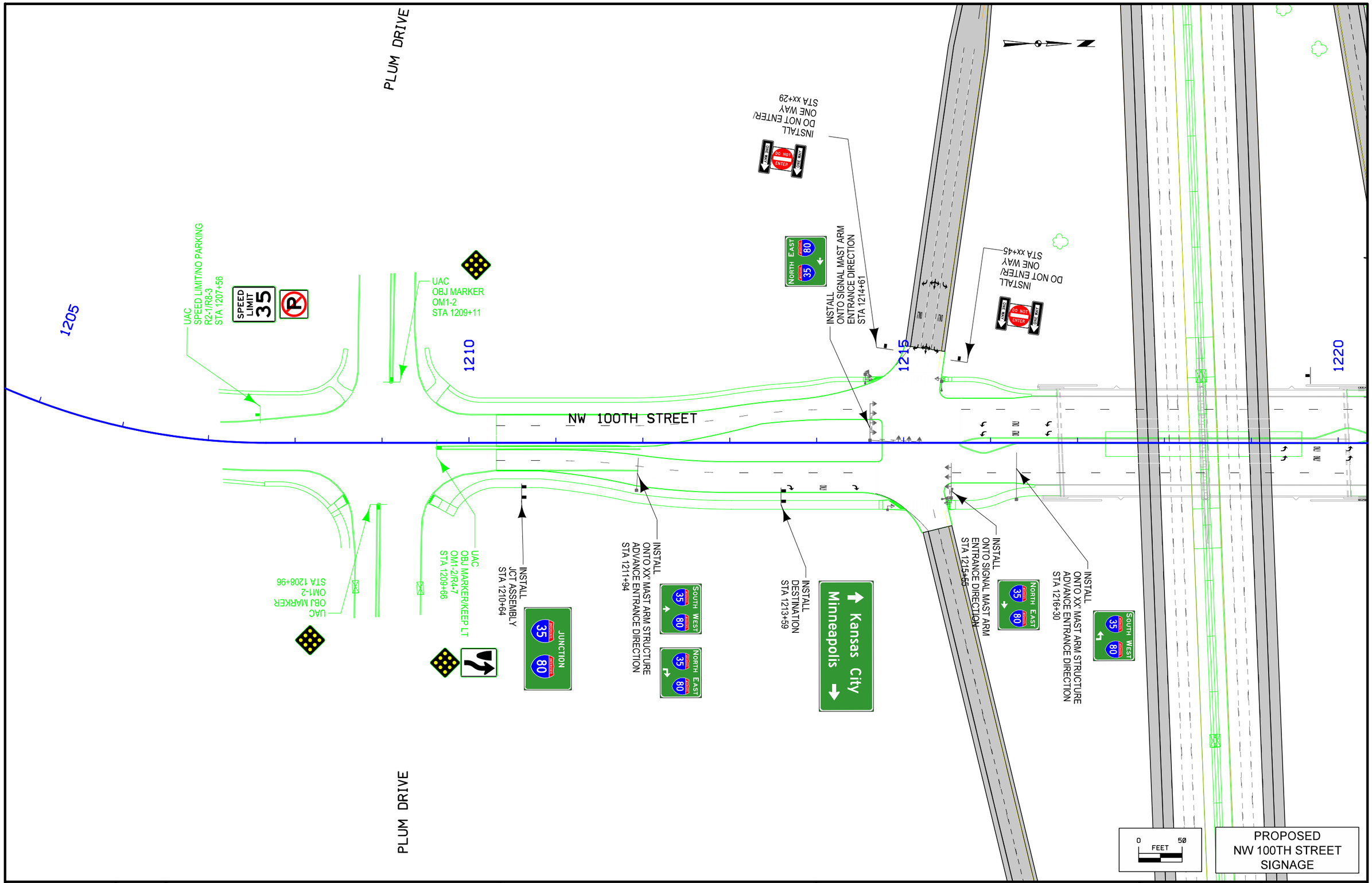
1:39:10 PM 8/5/2016 untitled pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\TrafEng\Signing\77080178N1.sht



EXISTING
NW 100TH STREET
SIGNAGE

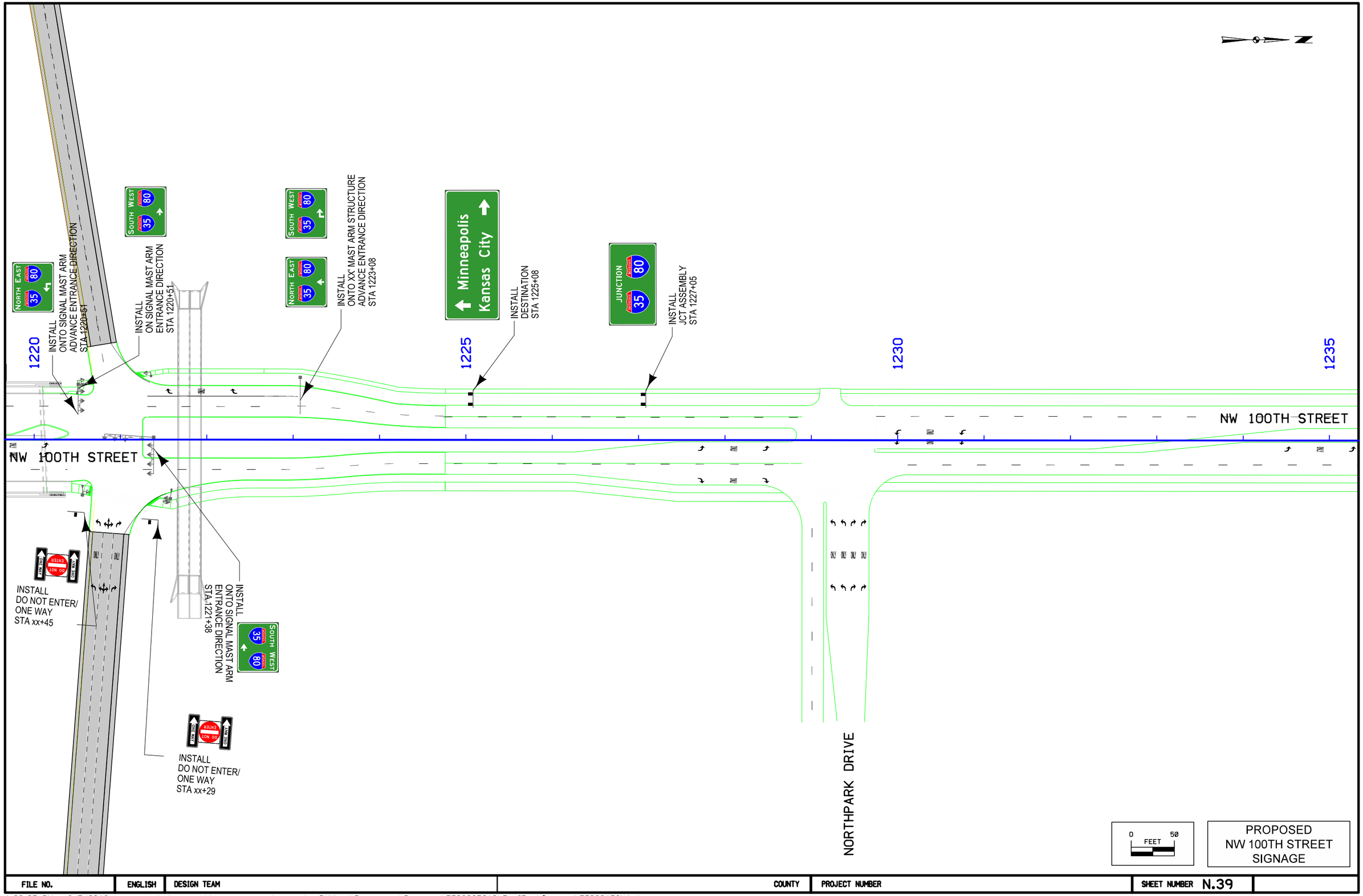
FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.37

1:39:23 PM 8/5/2016 untitled pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\TrafEng\Signing\77080178N1.sht



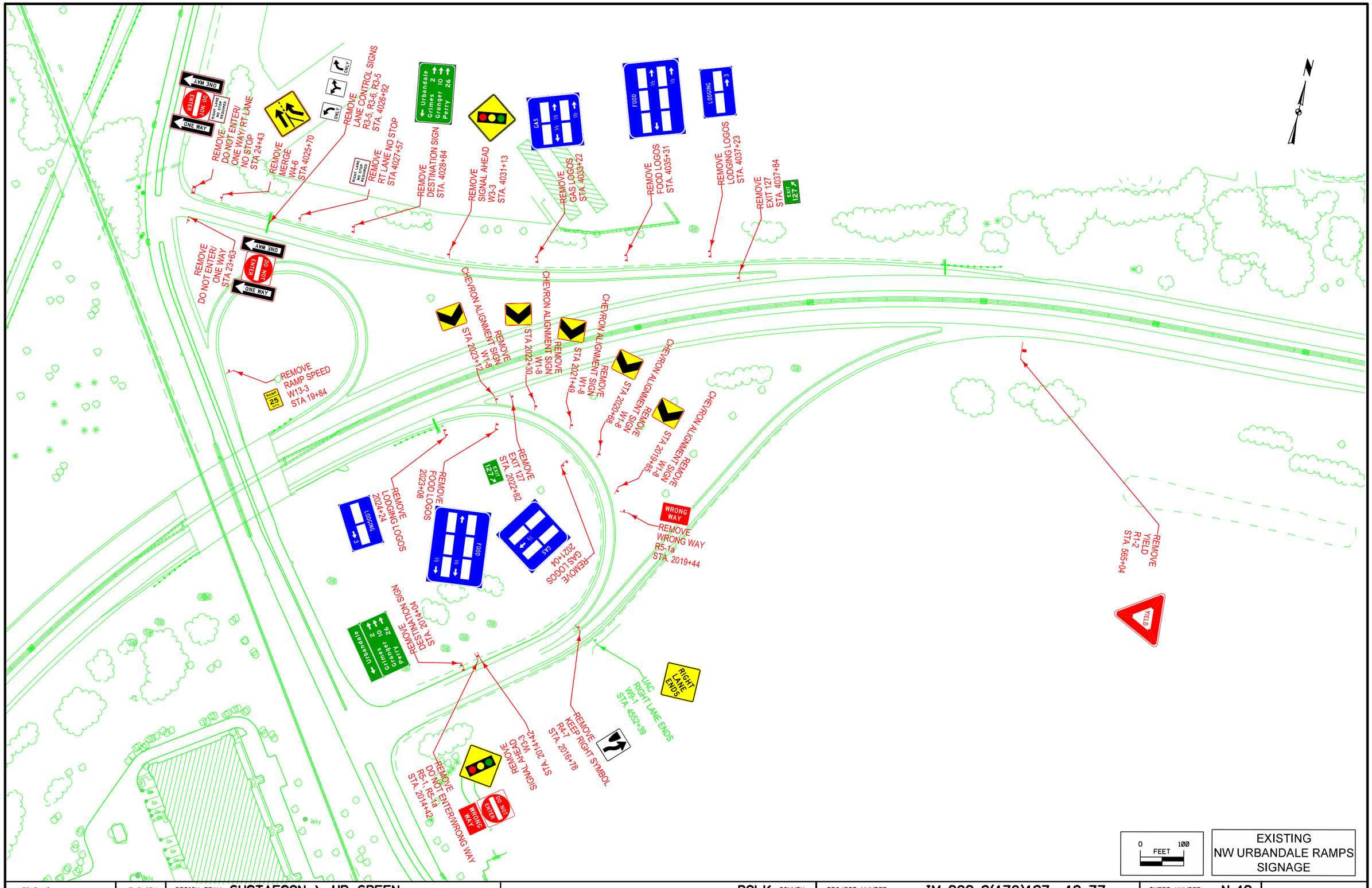
FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.38

1:39:25 PM 8/5/2016 untitled pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\TrafEng\Signing\77080178N1.sht



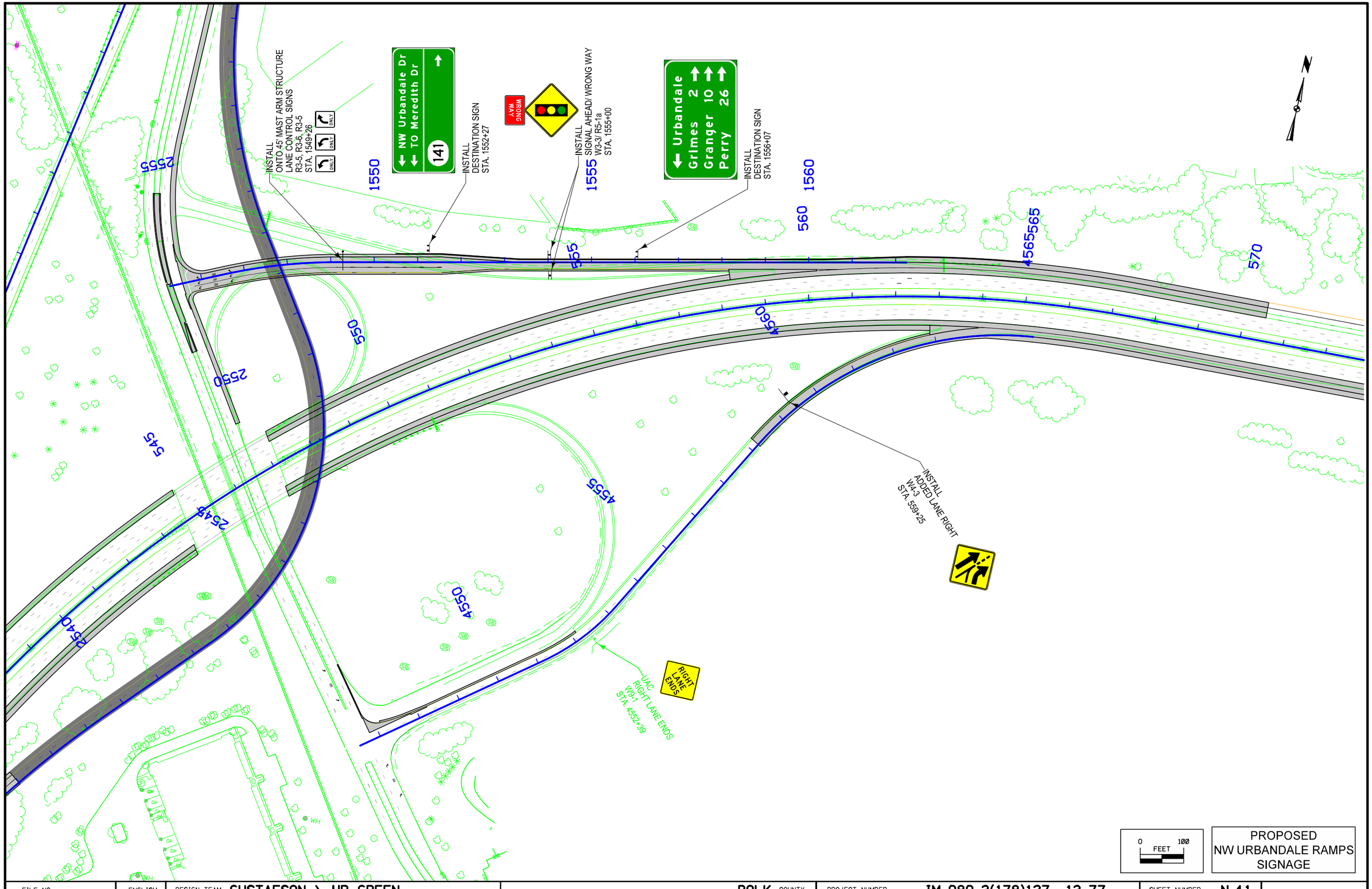
FILE NO.	ENGLISH	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER N.39	

1:39:27 PM 8/5/2016 untitled pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\TrafEng\Signing\77080178N1.sht



FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.40

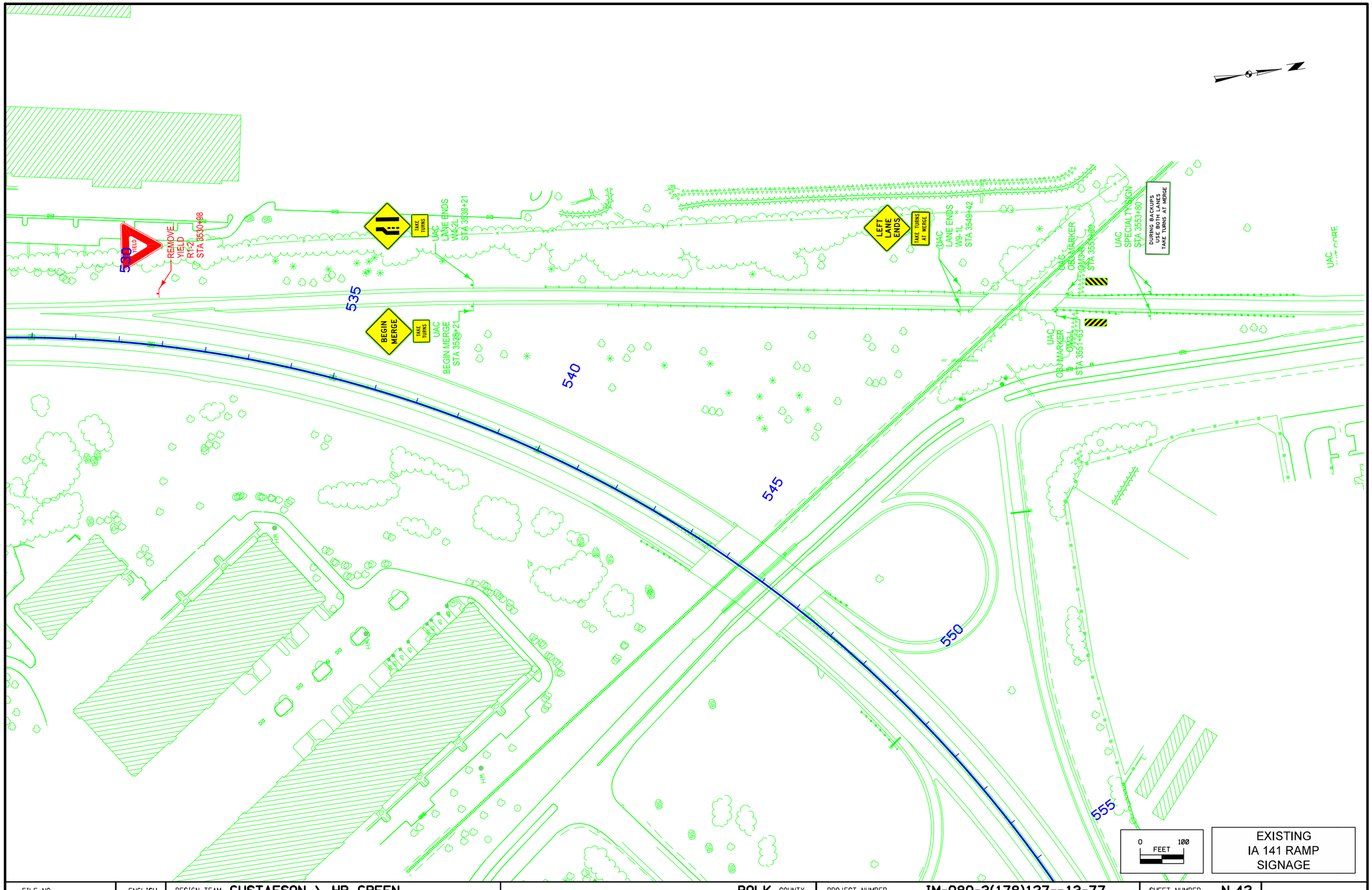
1:39:29 PM 8/5/2016 untitled pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\TrafEng\Signing\77080178N1.sht



PROPOSED
NW URBANDALE RAMPS
SIGNAGE

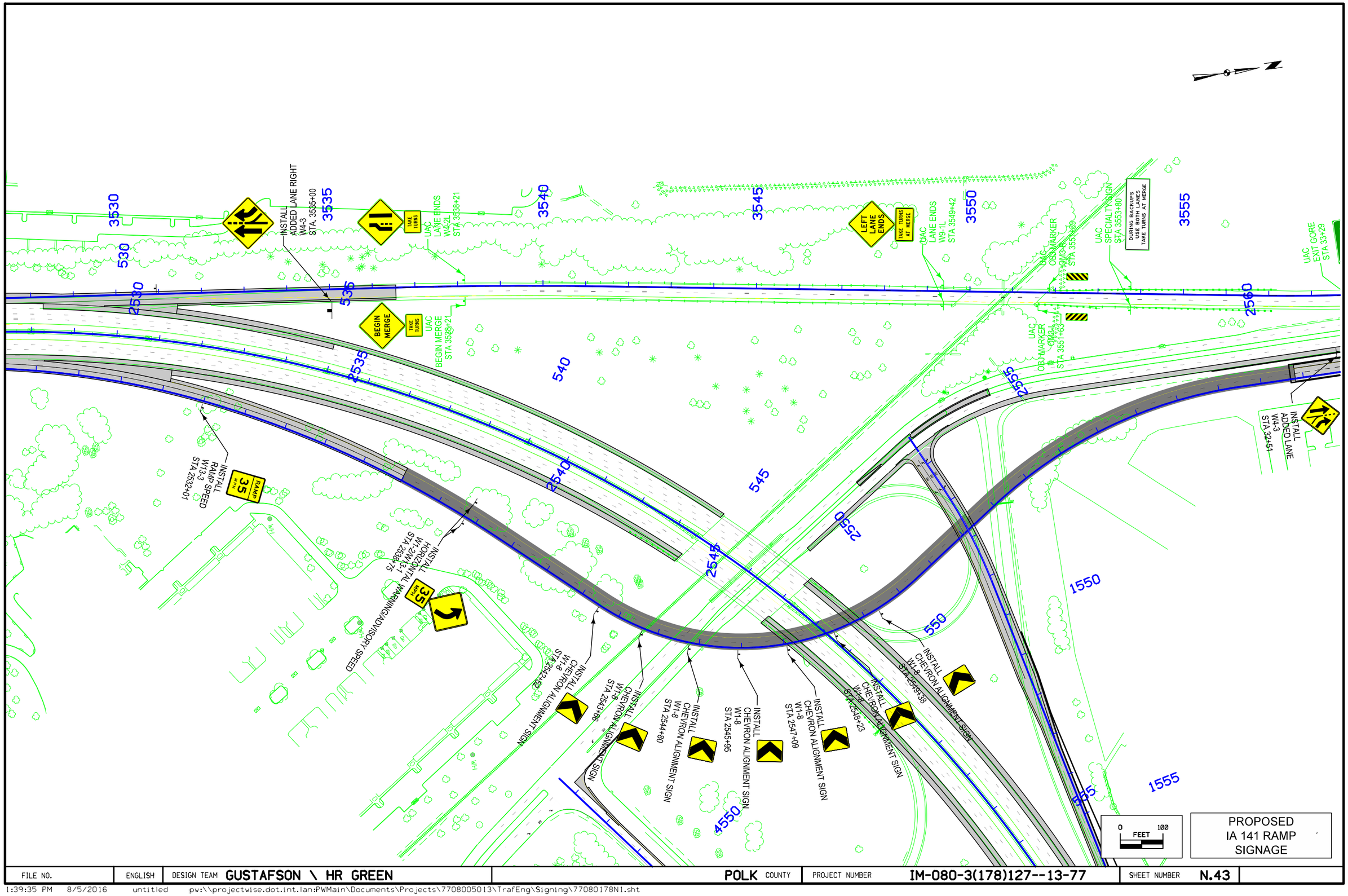
FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.41

1:39:31 PM 8/5/2016 untitled pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\TrafEng\Signing\77080178N1.sht



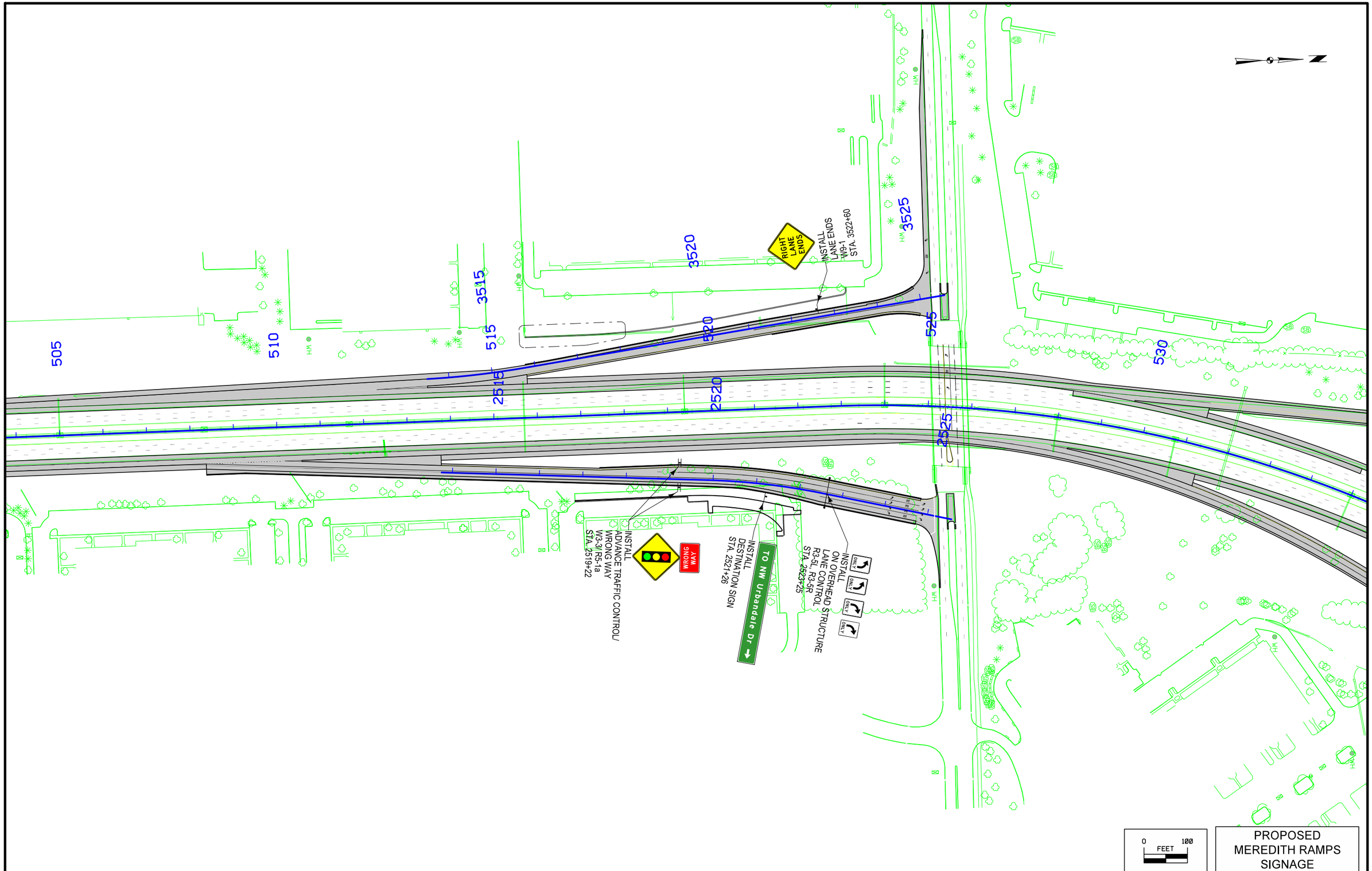
FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.42

1:39:34 PM 8/5/2016 untitled pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\TrafEng\Signing\77080178N1.sht



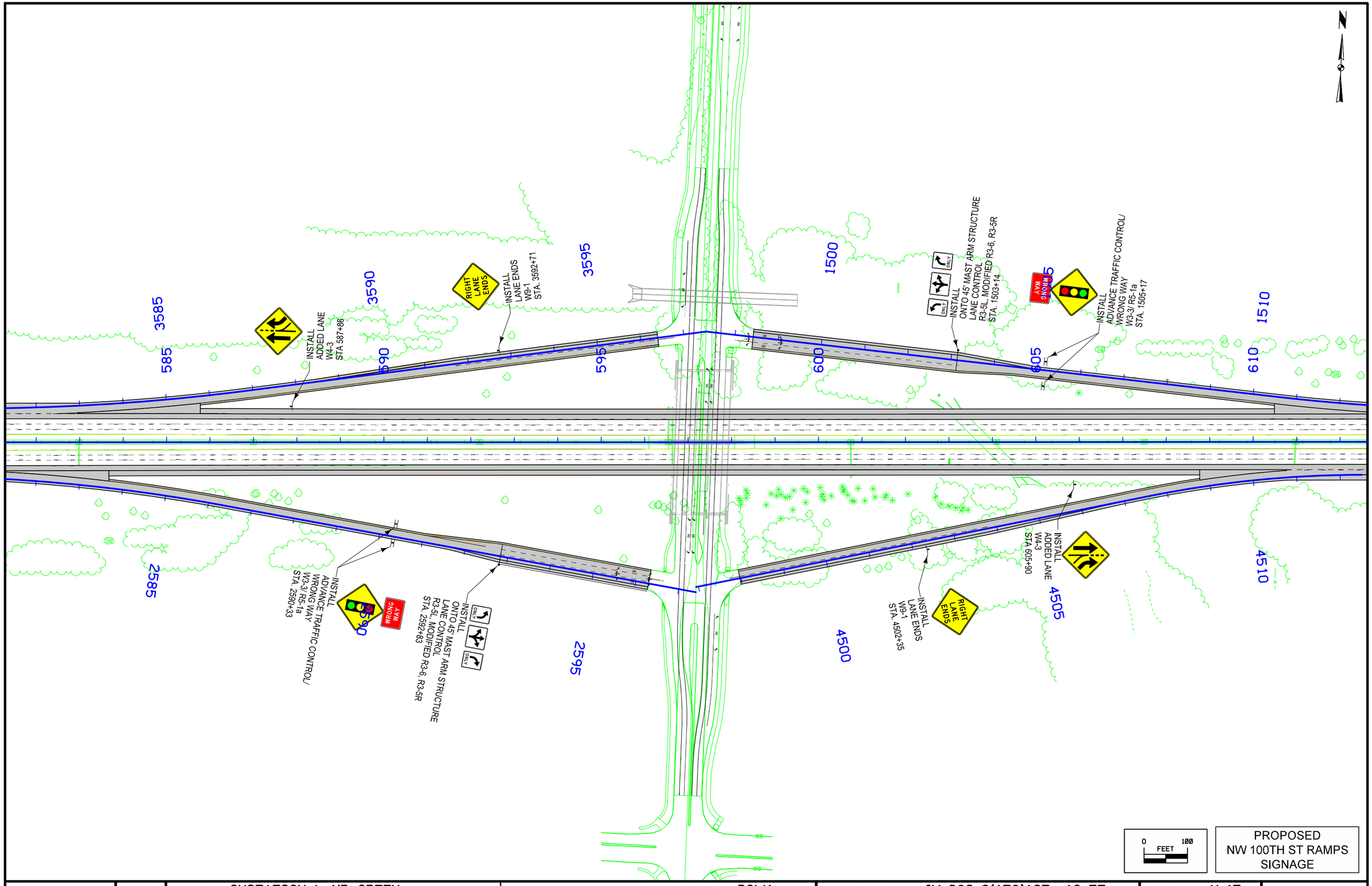
FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.43

1:39:35 PM 8/5/2016 untitled pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\TrafEng\Signing\77080178N1.sht



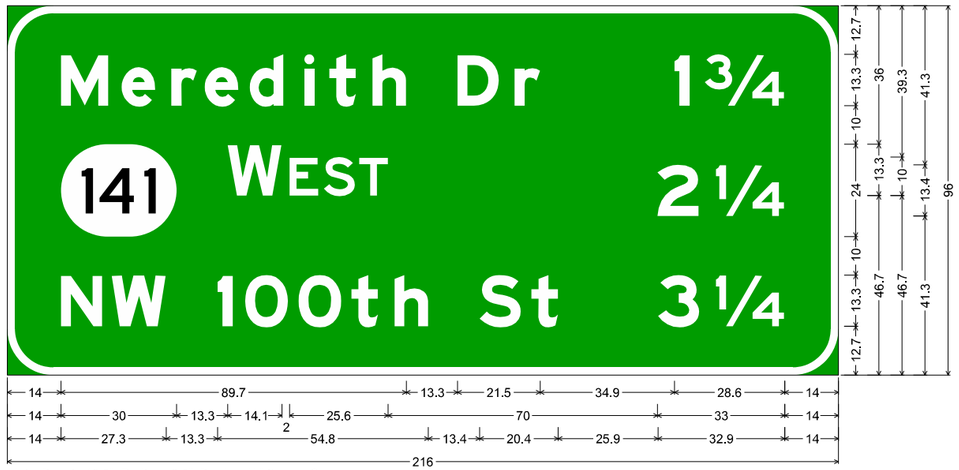
FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.44

1:39:37 PM 8/5/2016 untitled pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\TrafEng\Signing\77080178N1.sht



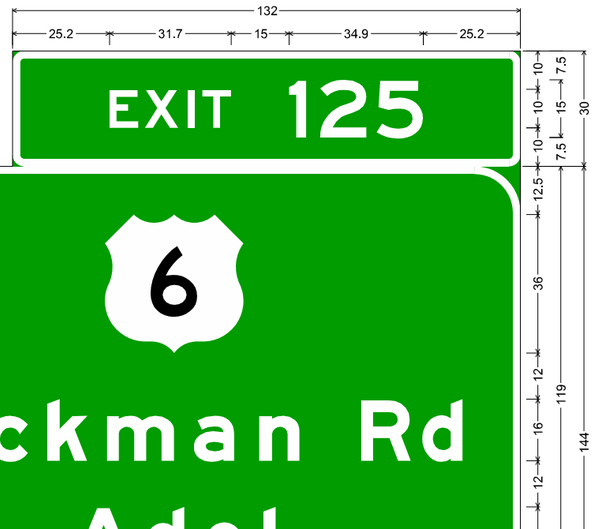
FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.45

1:39:39 PM 8/5/2016 untitled pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\TrafEng\Signing\77080178N1.sht

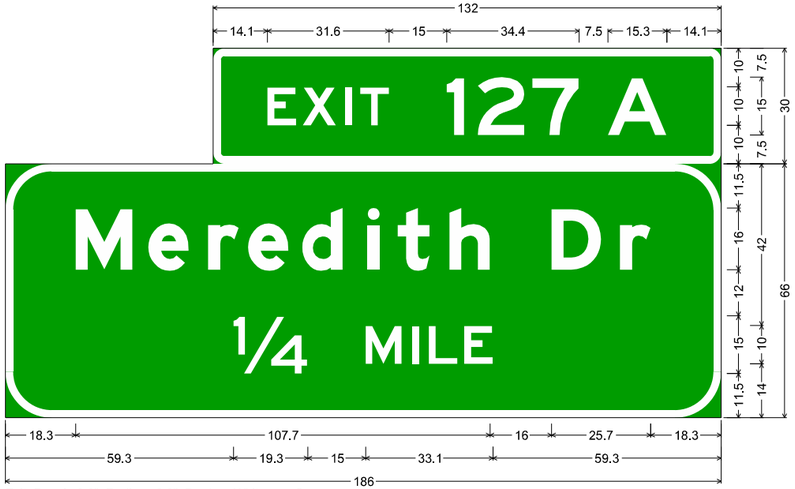


Main Panel; 12.0" Radius, 2.0" Border, White on Green;
[Meredith Dr] E Mod 2K; [1¾] E Mod 2K; State Highway 141 M1-5; [WEST] E 2K; [2¼] E Mod 2K; [NW 100th St] E Mod 2K;
[3¼] E Mod 2K;

Exit Panel; 3.0" Radius, 2.0" Border, White on Green;
[EXIT 127] E 2K 120% spacing; [B] E 2K;
Main Panel; 12.0" Radius, 2.0" Border, White on Green;
State Highway 141 M1-5; [WEST] E 2K; [Grimes] E Mod 2K; [¾ MILE] E 2K;



Exit Panel; 3.0" Radius, 2.0" Border, White on Green;
[EXIT 125] E 2K 120% spacing;
Main Panel; 12.0" Radius, 2.0" Border, White on Green;
[Hickman Rd] E Mod 2K; [Adel] E Mod 2K; [¾ MILE] E 2K;

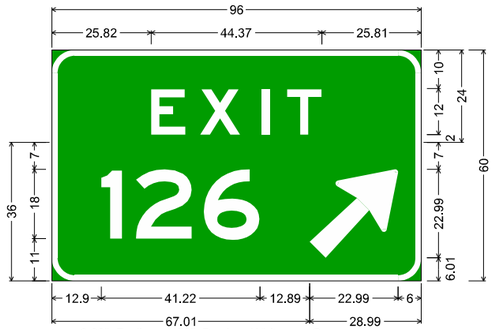


Exit Panel; 3.0" Radius, 2.0" Border, White on Green;
[EXIT 127] E 2K 120% spacing; [A] E 2K;
Main Panel; 12.0" Radius, 2.0" Border, White on Green;
[Meredith Dr] E Mod 2K; [¼ MILE] E 2K;

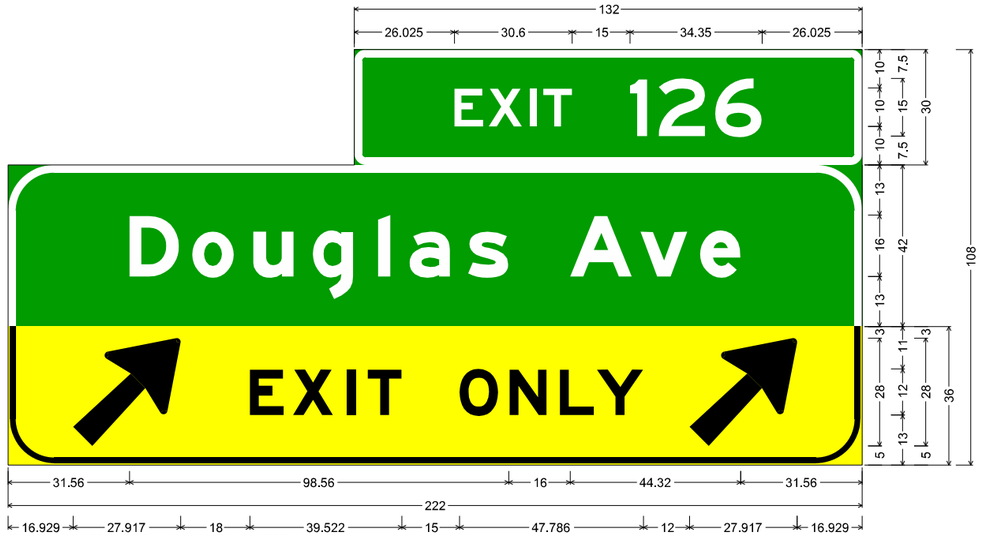
Main Panel; 12.0" Radius, 2.0" Border, White on Green;
[WEST] E 2K; [Omaha] E Mod 2K; [2 MILES] E 2K;

SIGN DETAILS
I-35/80

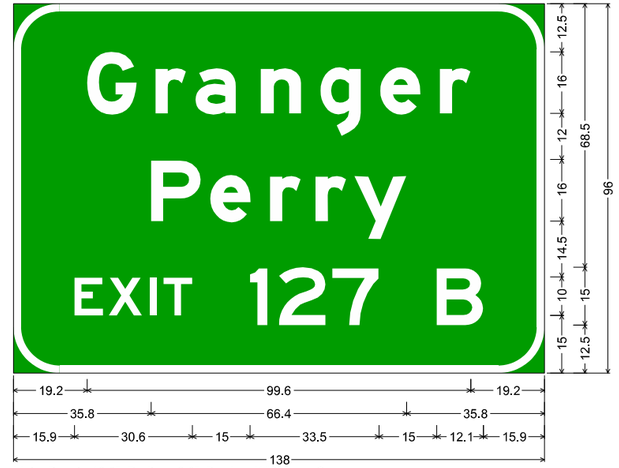
FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.46



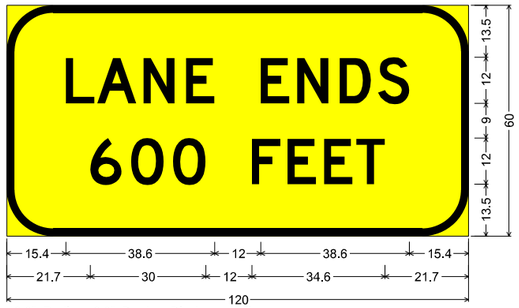
top; 6.00" Radius, 1.50" Border, White on Green;
[EXIT] E 2K 225% spacing;
bottom; 6.00" Radius, 1.50" Border, White on Green;
[126] E 2K;
bottom; 6.00" Radius, 1.50" Border, White on Green;
Arrow Custom - 29.25" 45°;



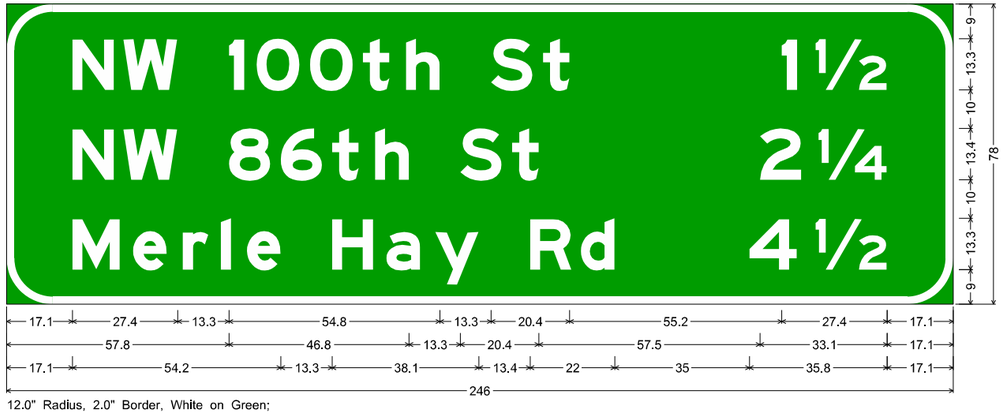
Exit Panel; 3.000" Radius, 2.000" Border, White on Green;
[EXIT] E 2K; [126] E 2K;
Main Panel; 12.000" Radius, 2.000" Border, White on Green;
[Douglas Ave] E Mod 2K;
E11-1e; 12.000" Radius, 1.500" Border, 0.500" Indent, Black on Yellow;
Arrow Custom - 35.625" 45°; [EXIT] E Mod 2K specified length; [ONLY] E Mod 2K specified length; Arrow Custom - 35.625" 45°;



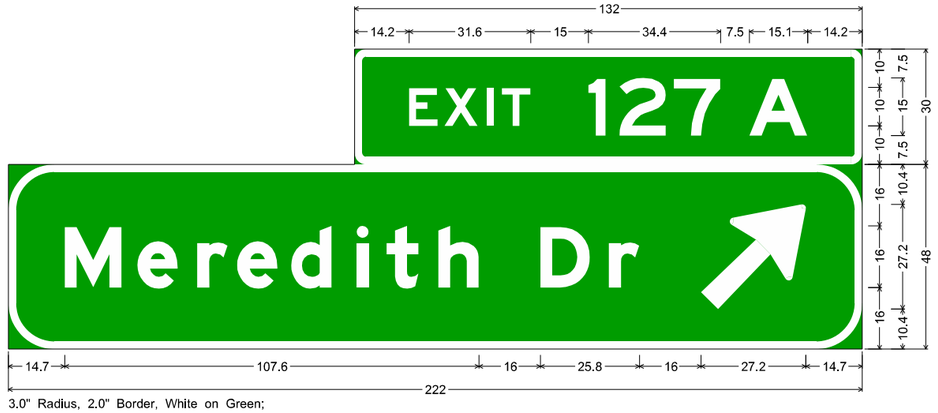
Main Panel; 12.0" Radius, 2.0" Border, White on Green;
[Granger] E Mod 2K; [Perry] E Mod 2K; [EXIT 127 B] E 2K 101% spacing;



12.0" Radius, 2.0" Border, Black on Yellow;
[LANE ENDS] D 2K; [600 FEET] D 2K;



12.0" Radius, 2.0" Border, White on Green;
[NW 100th St] E Mod 2K; [1½] E Mod 2K; [NW 86th St] E Mod 2K; [2¼] E Mod 2K; [Merle Hay Rd] E Mod 2K; [4½] E Mod 2K;

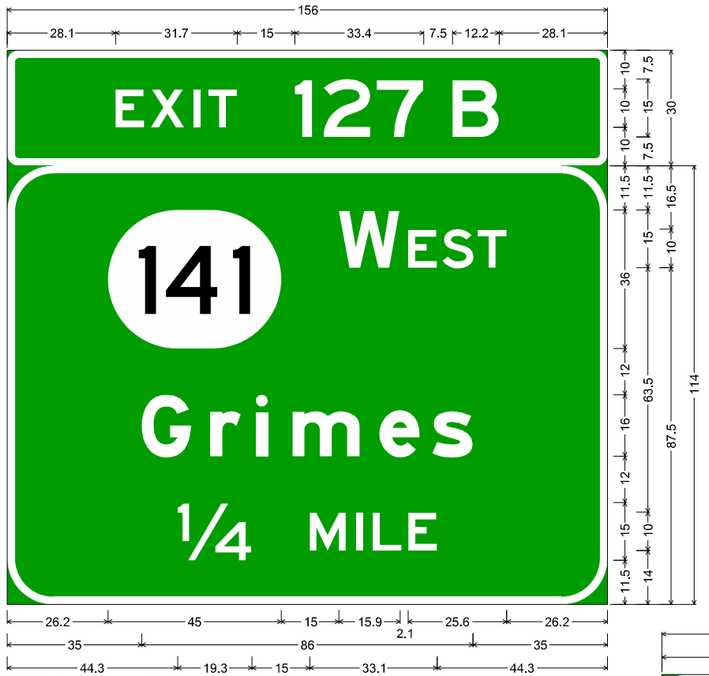


3.0" Radius, 2.0" Border, White on Green;
[EXIT 127] E 2K 120% spacing; [A] E Mod 2K;
12.0" Radius, 2.0" Border, White on Green;
[Meredith Dr] E Mod 2K; Arrow I-F - 35.0" 45°;

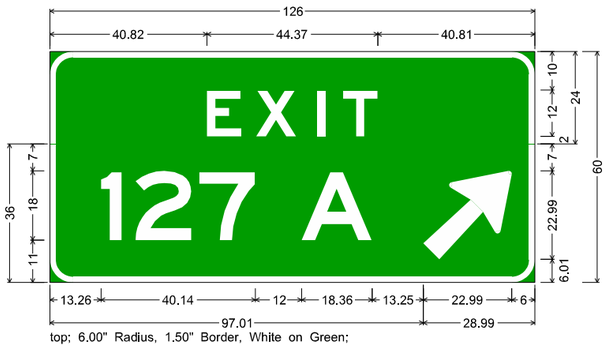
SIGN DETAILS
I-35/80

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.47

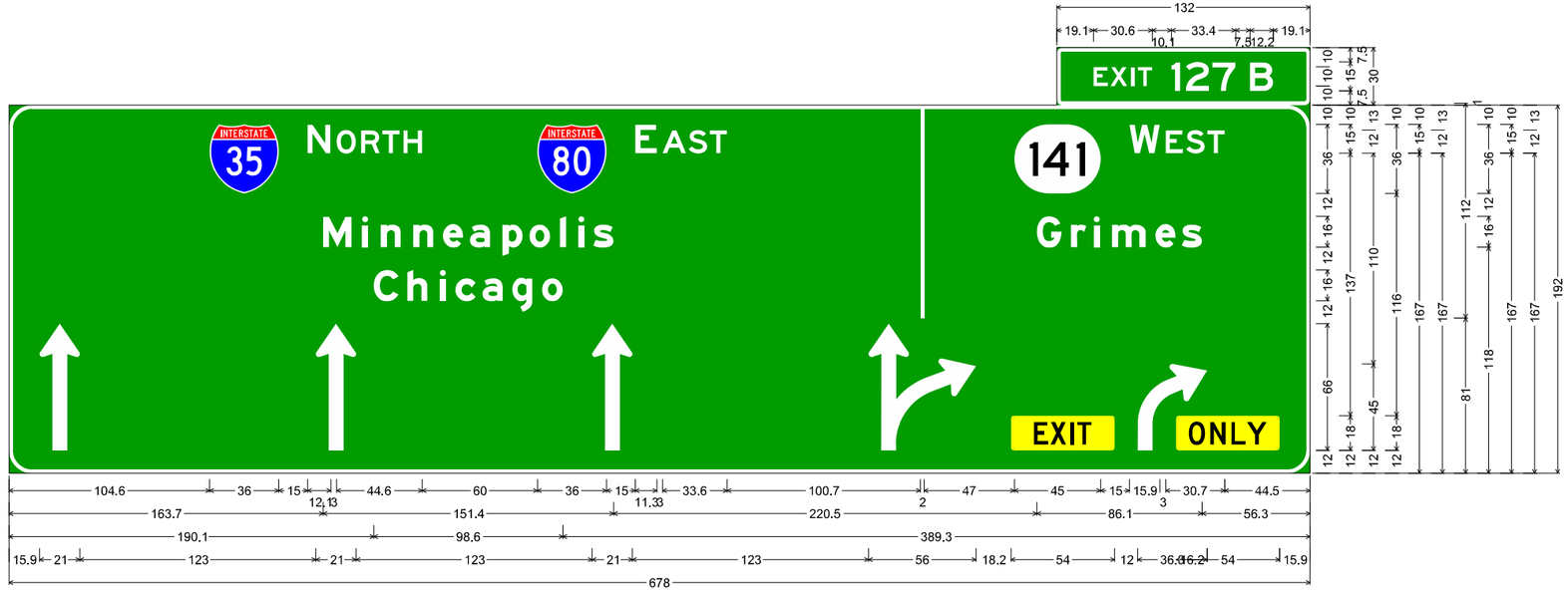
12.0" Radius, 2.0" Border, White on Green;
[NORTH] E 2K; [EAST] E 2K; [Minneapolis] E Mod 2K; [Chicago] E Mod 2K;



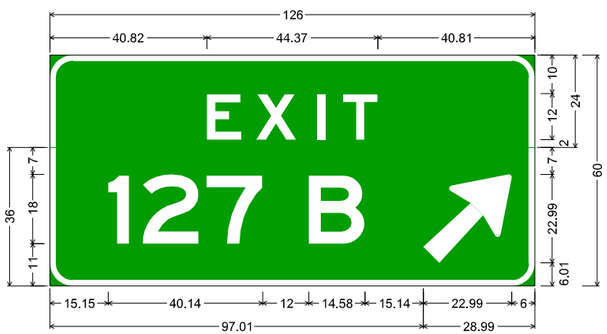
2.0" Border, White on Green;
[EXIT] E 2K 120% spacing; [127] E 2K; [B] E 2K;
12.0" Radius, 2.0" Border, White on Green;
State Highway 141 M1-5; [WEST] E 2K; [Grimes] E Mod 2K; [1/4 MILE] E 2K;



top; 6.00" Radius, 1.50" Border, White on Green;
[EXIT] E 2K 225% spacing;
bottom; 6.00" Radius, 1.50" Border, White on Green;
[127] E 2K; [A] E 2K;
bottom; 6.00" Radius, 1.50" Border, White on Green;
Arrow Custom - 29.25" 45°;



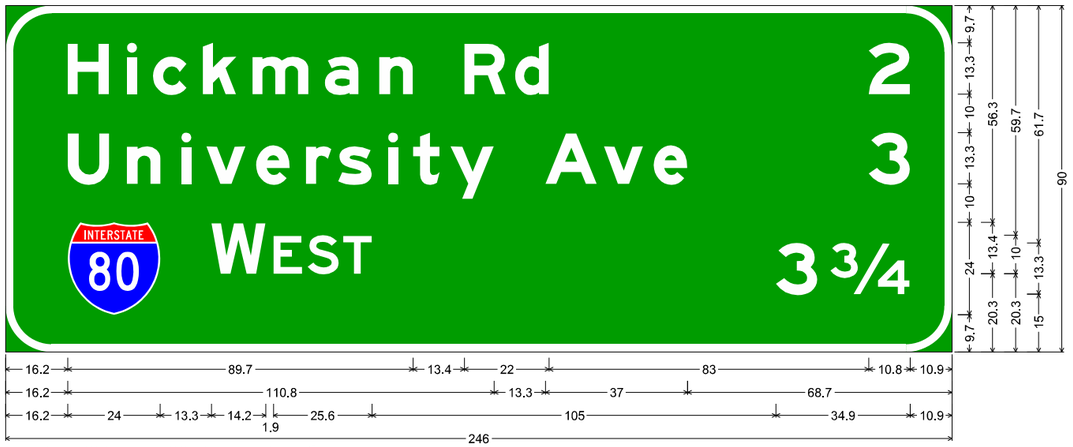
2E-4_OH APL THRU-RIGHT_2;
3.0" Radius, 2.0" Border, White on Green;
[EXIT 127] E 2K; [B] E 2K;
12.0" Radius, 2.0" Border, White on Green;
[N ORTH] E 2K; [E AST] E 2K; [Minneapolis] E Mod 2K; [Chicago] E Mod 2K; State Highway 141 M1-5; [W EST] E 2K; [Grimes] E Mod 2K; Standard Arrow Custom 66.0" X 21.0" 90°;
Standard Arrow Custom 66.0" X 21.0" 90°; Standard Arrow Custom 66.0" X 21.0" 90°; thru-right arrow; Rounded Rectangle 1.5" Radius Yellow;
right arrow; Rounded Rectangle 1.5" Radius Yellow;



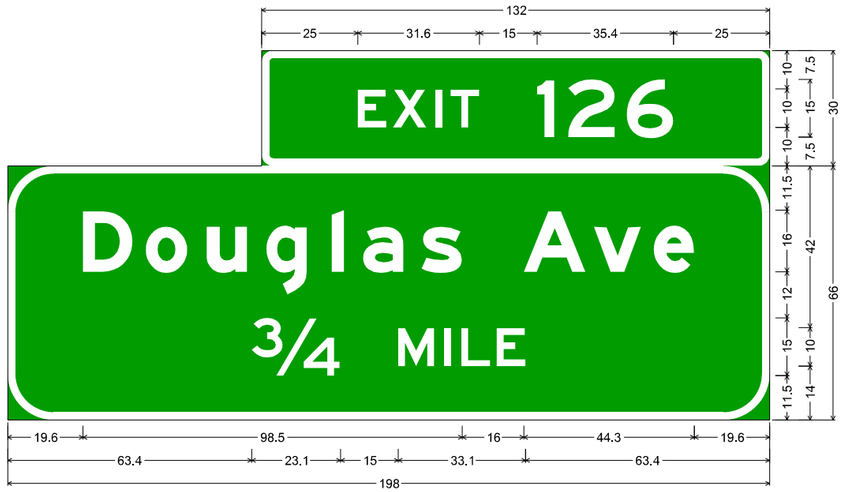
top; 6.00" Radius, 1.50" Border, White on Green;
[EXIT] E 2K 225% spacing;
bottom; 6.00" Radius, 1.50" Border, White on Green;
[127] E 2K; [B] E 2K;
bottom; 6.00" Radius, 1.50" Border, White on Green;
Arrow Custom - 29.25" 45°;

SIGN DETAILS
I-35/80

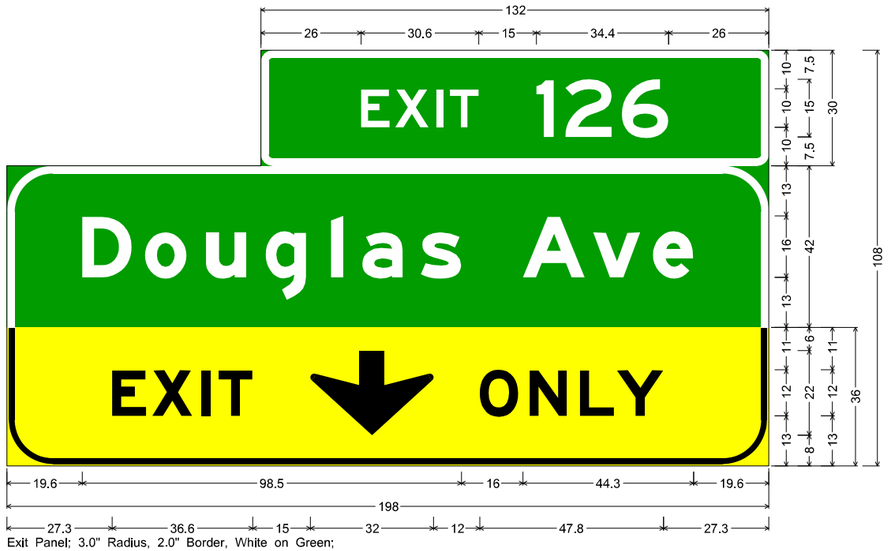
FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.48



Main Panel; 12.0" Radius, 2.0" Border, White on Green;
[Hickman Rd] E Mod 2K; [2] E Mod 2K; [University Ave] E Mod 2K; [3] E Mod 2K; [WEST] E 2K; [3¾] E Mod 2K;



Exit Panel; 3.0" Radius, 2.0" Border, White on Green;
[EXIT 126] E 2K 120% spacing;
Main Panel; 12.0" Radius, 2.0" Border, White on Green;
[Douglas Ave] E Mod 2K; [¾ MILE] E 2K;

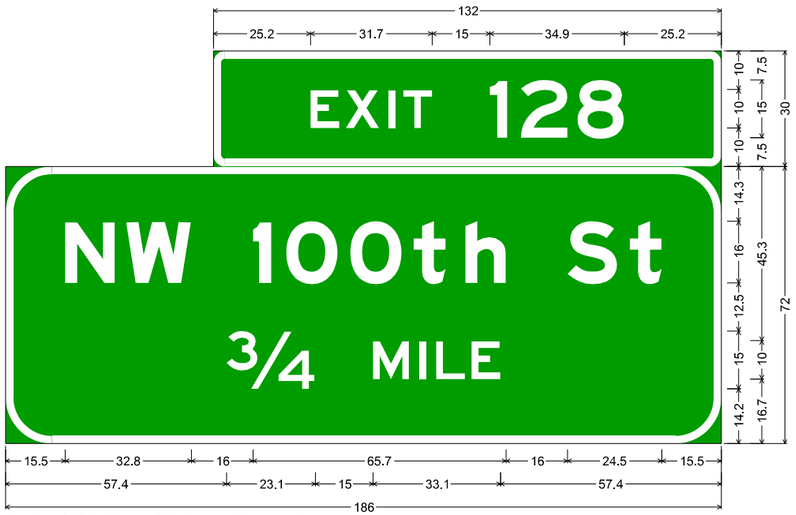


Exit Panel; 3.0" Radius, 2.0" Border, White on Green;
[EXIT] E 2K; [126] E 2K;
Main Panel; 12.0" Radius, 2.0" Border, White on Green;
[Douglas Ave] E Mod 2K;
Split Color; 12.0" Radius, 1.5" Border, 0.5" Indent, Black on Yellow;
[EXIT] E Mod 2K specified length; Down Arrow Custom - 22.0" 270°; [ONLY] E Mod 2K specified length;

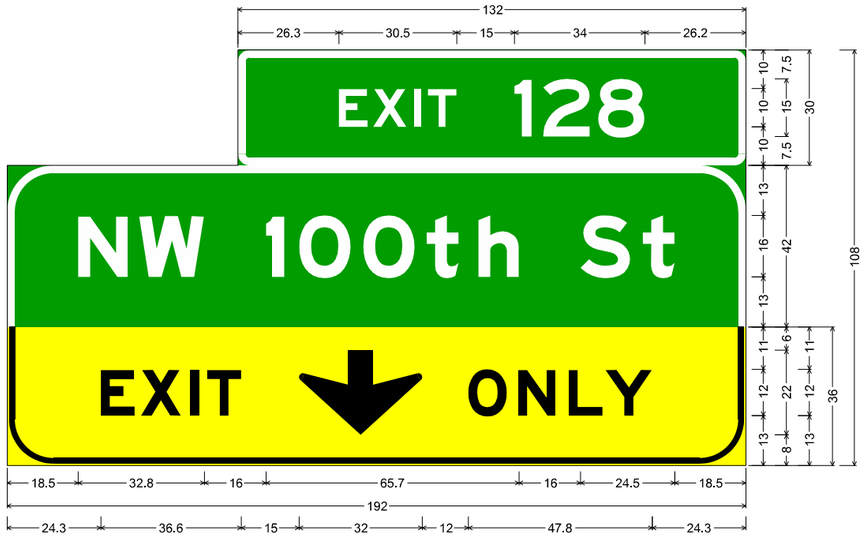
12.0" Radius, 2.0" Border, White on Green;
[NW 86th St] E Mod 2K; [1½] E Mod 2K; [Merle Hay Rd] E Mod 2K; [3¾] E Mod 2K; [2nd Ave] E Mod 2K; [7¾] E Mod 2K;

SIGN DETAILS
I-35/80

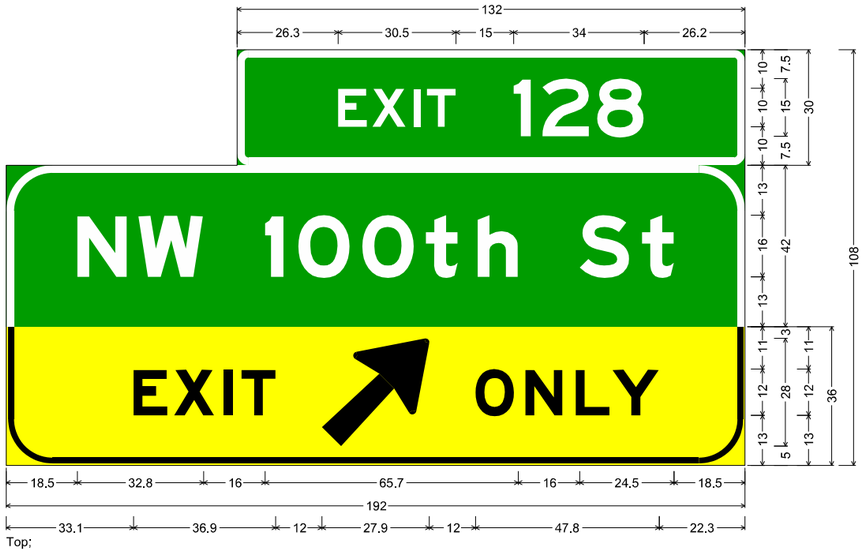
FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.49



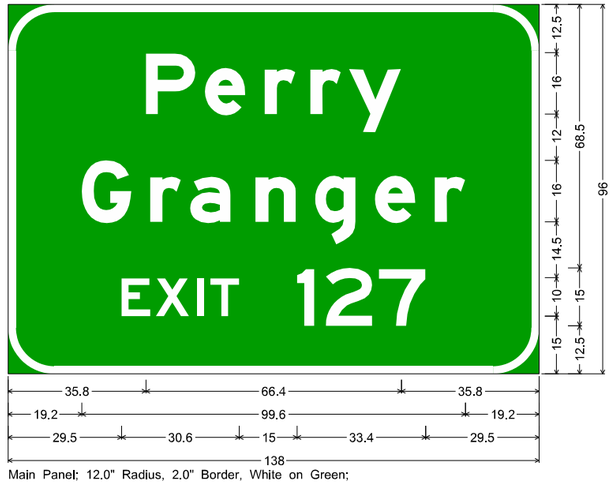
Exit Panel; 3.0" Radius, 2.0" Border, White on Green;
[EXIT 128] E 2K 120% spacing;
Main Panel; 12.0" Radius, 2.0" Border, White on Green;
[NW 100th St] E Mod 2K; [¾ MILE] E 2K;



Exit Panel; 3.0" Radius, 2.0" Border, White on Green;
[EXIT] E 2K; [128] E 2K;
Main Panel; 12.0" Radius, 2.0" Border, White on Green;
[NW 100th St] E Mod 2K;
Split Color; 12.0" Radius, 1.5" Border, 0.5" Indent, Black on Yellow;
[EXIT] E Mod 2K specified length; Down Arrow Custom - 22.0" 270°; [ONLY] E Mod 2K specified length;



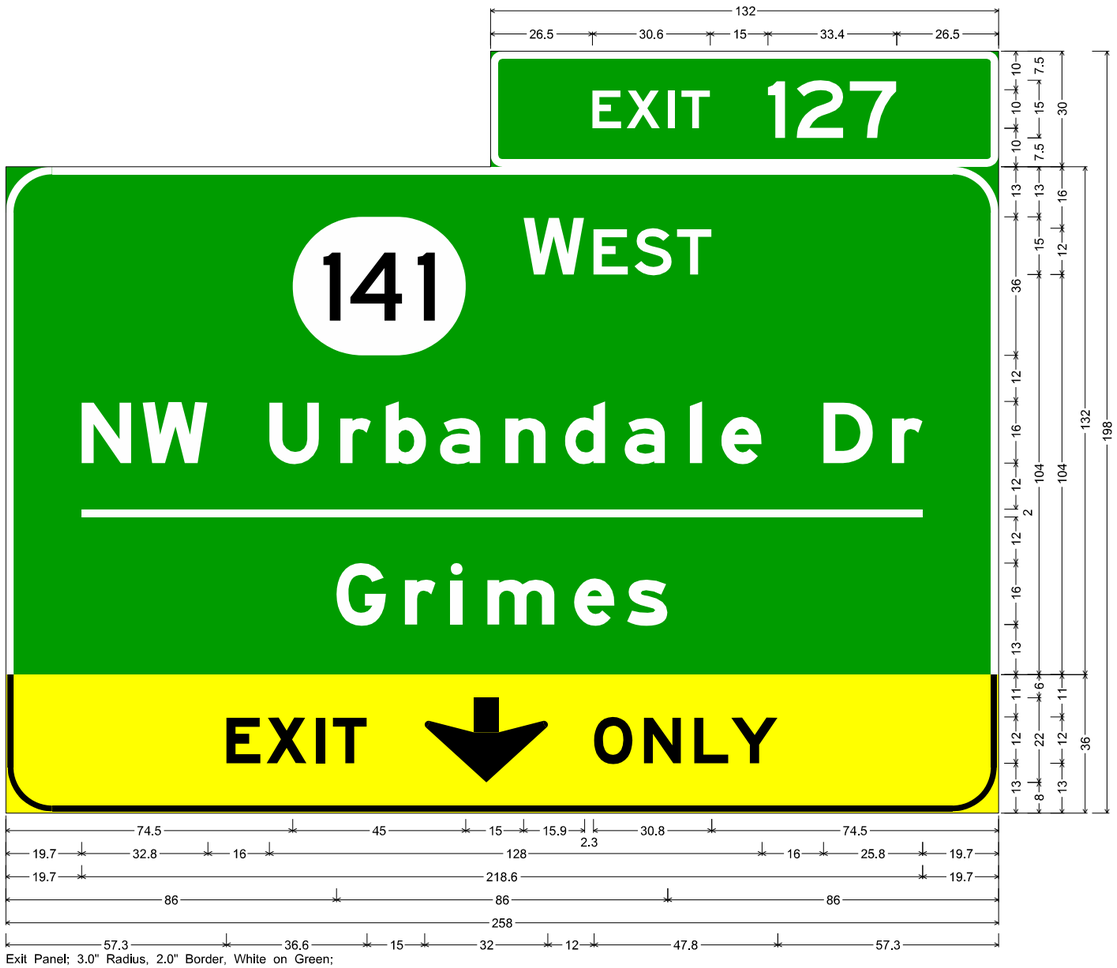
Top;
Exit Panel; 3.0" Radius, 2.0" Border, White on Green;
[EXIT] E 2K; [128] E 2K;
Main Panel; 12.0" Radius, 2.0" Border, White on Green;
[NW 100th St] E Mod 2K;
Split Color; 12.0" Radius, 1.5" Border, 0.5" Indent, Black on Yellow;
[EXIT] E Mod 2K; Arrow Custom - 35.6" 45°; [ONLY] E Mod 2K;



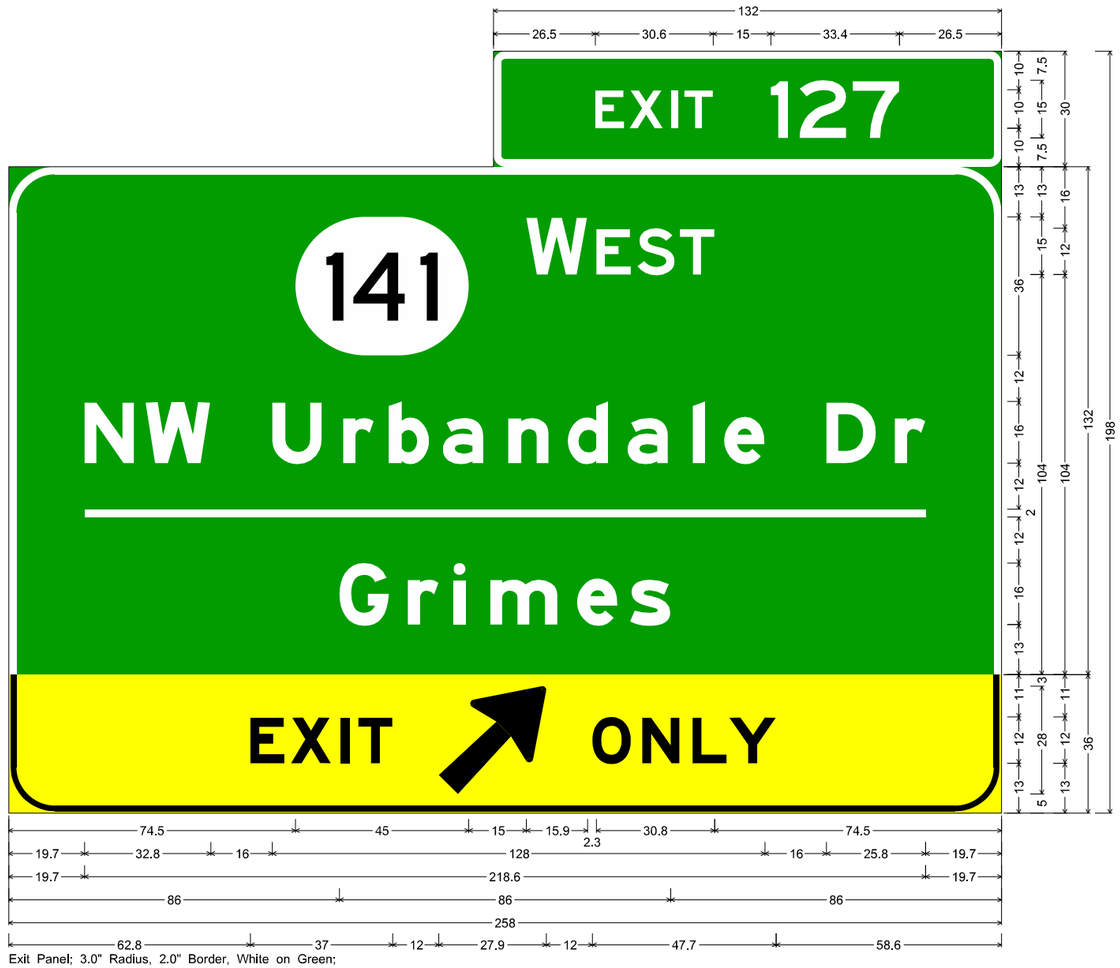
Main Panel; 12.0" Radius, 2.0" Border, White on Green;
[Perry] E Mod 2K; [Granger] E Mod 2K; [EXIT 127] E 2K;

SIGN DETAILS
I-35/80

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.50



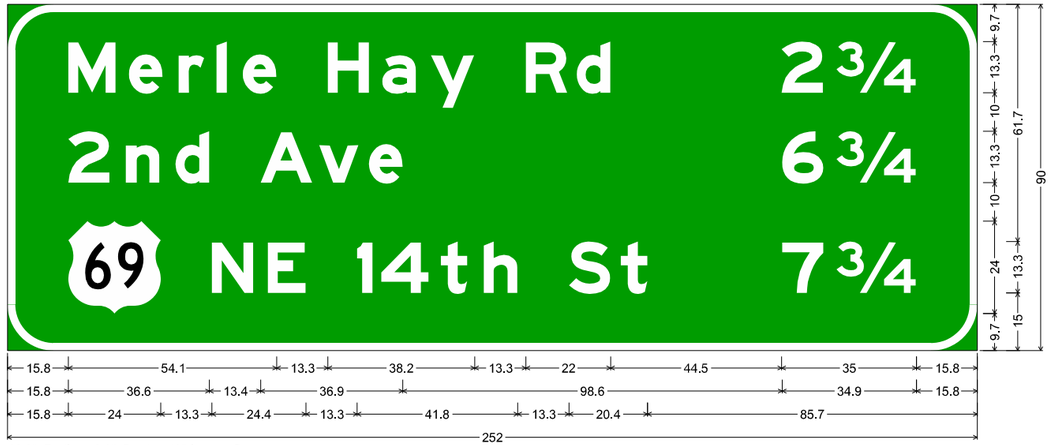
Exit Panel; 3.0" Radius, 2.0" Border, White on Green;
[EXIT] E 2K; [127] E 2K;
Main Panel; 12.0" Radius, 2.0" Border, White on Green;
State Highway 141 M1-5; [WEST] E 2K; [NW Urbandale Dr] E Mod 2K; [Grimes] E Mod 2K;
Split Color; 12.0" Radius, 1.5" Border, 0.5" Indent, Black on Yellow;
[EXIT] E Mod 2K specified length; Down Arrow Custom - 22.0" 270°; [ONLY] E Mod 2K specified length;



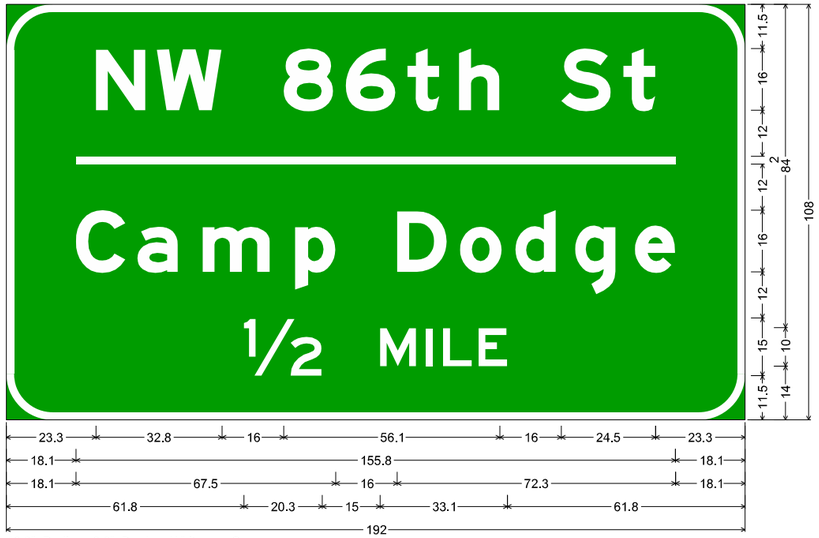
Exit Panel; 3.0" Radius, 2.0" Border, White on Green;
[EXIT] E 2K; [127] E 2K;
Main Panel; 12.0" Radius, 2.0" Border, White on Green;
State Highway 141 M1-5; [WEST] E 2K; [NW Urbandale Dr] E Mod 2K; [Grimes] E Mod 2K;
Split Color; 12.0" Radius, 1.5" Border, 0.5" Indent, Black on Yellow;
[EXIT] E Mod 2K; Arrow Custom - 35.6" 45°; [ONLY] E Mod 2K;

SIGN DETAILS
I-35/80

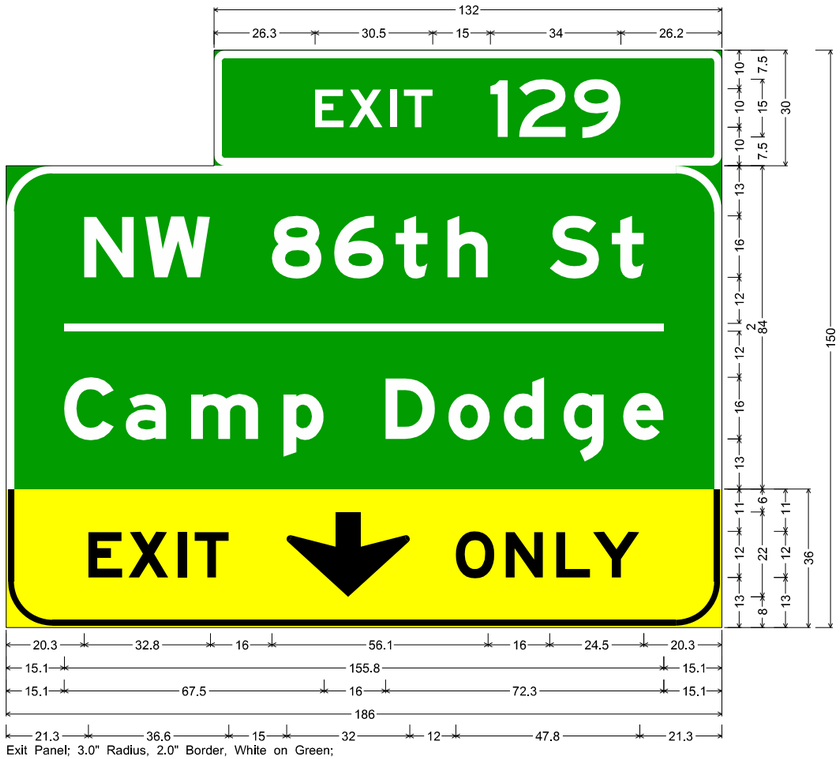
FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.51



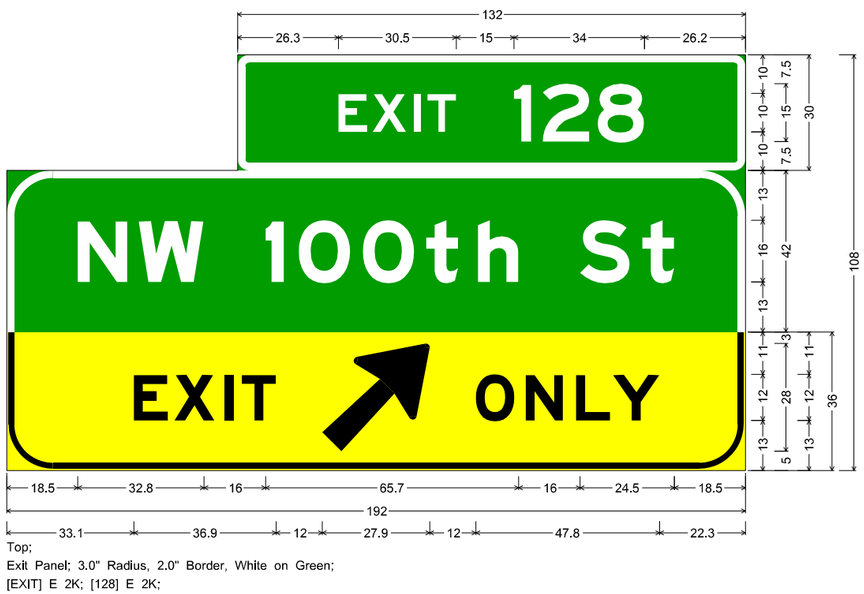
12.0" Radius, 2.0" Border, White on Green;
[Merle Hay Rd] E Mod 2K; [2¾] E Mod 2K; [2nd Ave] E Mod 2K; [6¾] E Mod 2K; [NE 14th St] E Mod 2K; [7¾] E Mod 2K;



12.0" Radius, 2.0" Border, White on Green;
[NW 86th St] E Mod 2K; [Camp Dodge] E Mod 2K; [½ MILE] E 2K;



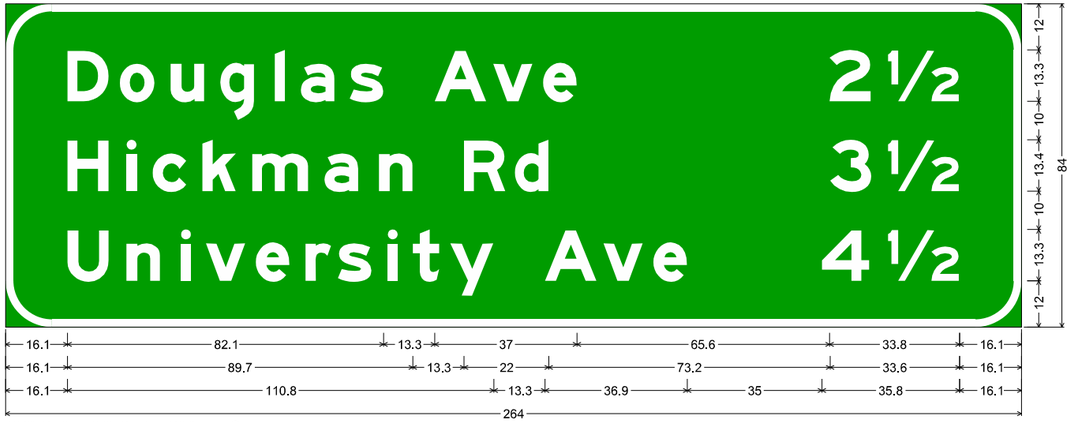
Exit Panel; 3.0" Radius, 2.0" Border, White on Green;
[EXIT] E 2K; [129] E 2K;
Main Panel; 12.0" Radius, 2.0" Border, White on Green;
[NW 86th St] E Mod 2K; [Camp Dodge] E Mod 2K;
Split Color; 12.0" Radius, 1.5" Border, 0.5" Indent, Black on Yellow;
[EXIT] E Mod 2K specified length; Down Arrow Custom - 22.0" 270°; [ONLY] E Mod 2K specified length;



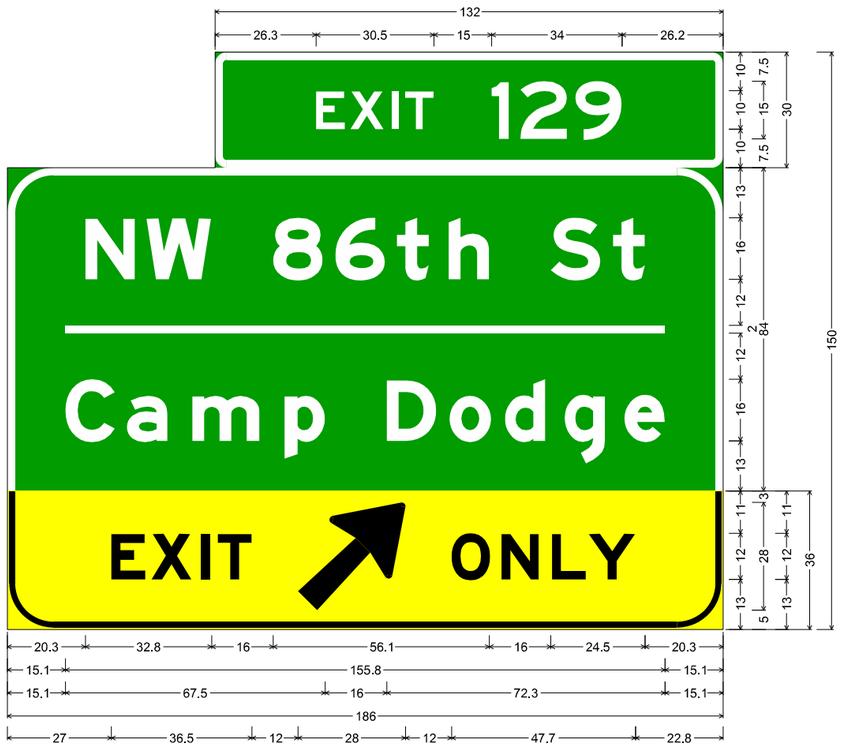
Top;
Exit Panel; 3.0" Radius, 2.0" Border, White on Green;
[EXIT] E 2K; [128] E 2K;
Main Panel; 12.0" Radius, 2.0" Border, White on Green;
[NW 100th St] E Mod 2K;
Split Color; 12.0" Radius, 1.5" Border, 0.5" Indent, Black on Yellow;
[EXIT] E Mod 2K; Arrow Custom - 35.6" 45°; [ONLY] E Mod 2K;

SIGN DETAILS
I-35/80

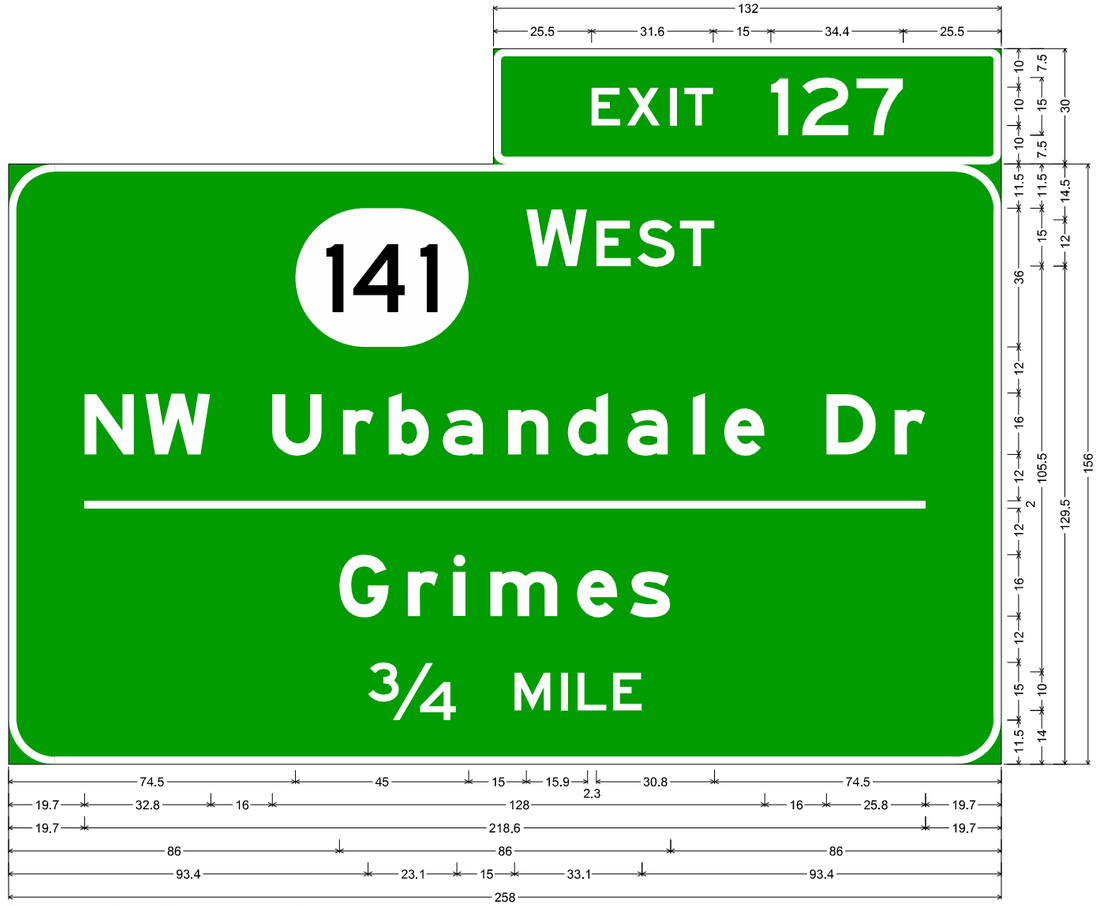
FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.52



12.0" Radius, 2.0" Border, White on Green;
[Douglas Ave] E Mod 2K; [2½] E Mod 2K; [Hickman Rd] E Mod 2K; [3½] E Mod 2K; [University Ave] E Mod 2K; [4½] E Mod 2K;



Exit Panel; 3.0" Radius, 2.0" Border, White on Green;
[EXIT] E 2K; [129] E 2K;
Main Panel; 12.0" Radius, 2.0" Border, White on Green;
[NW 86th St] E Mod 2K; [Camp Dodge] E Mod 2K;
Split Color; 12.0" Radius, 1.5" Border, 0.5" Indent, Black on Yellow;
[EXIT] E Mod 2K specified length; Arrow Custom - 35.6" 45°; [ONLY] E Mod 2K specified length;

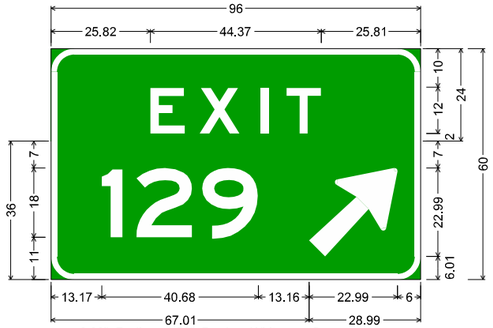


Exit Panel; 3.0" Radius, 2.0" Border, White on Green;
[EXIT 127] E 2K 120% spacing;
Main Panel; 12.0" Radius, 2.0" Border, White on Green;
State Highway 141 M1-5; [WEST] E 2K; [NW Urbandale Dr] E Mod 2K; [Grimes] E Mod 2K; [¾ MILE] E 2K;

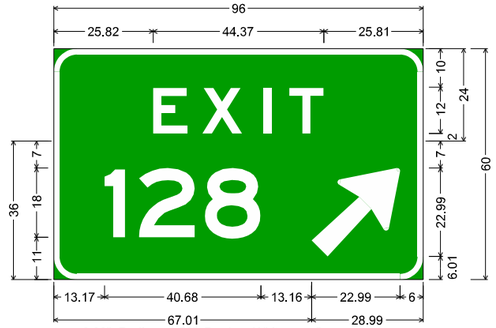
SIGN DETAILS
I-35/80

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.53

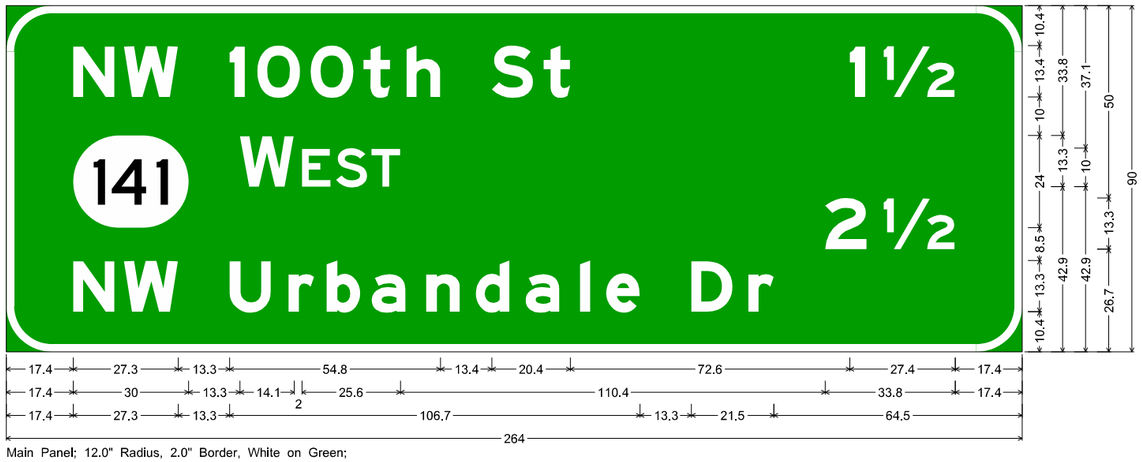
Main Panel; 12.0" Radius, 2.0" Border, White on Green;
[Iowa Law] E Mod 2K; [Enforcement] E Mod 2K; [Academy] E Mod 2K; [EXIT 129] E 2K;



top; 6.00" Radius, 1.50" Border, White on Green;
[EXIT] E 2K 225% spacing;
bottom; 6.00" Radius, 1.50" Border, White on Green;
[129] E 2K;
bottom; 6.00" Radius, 1.50" Border, White on Green;
Arrow Custom - 29.25" 45°;



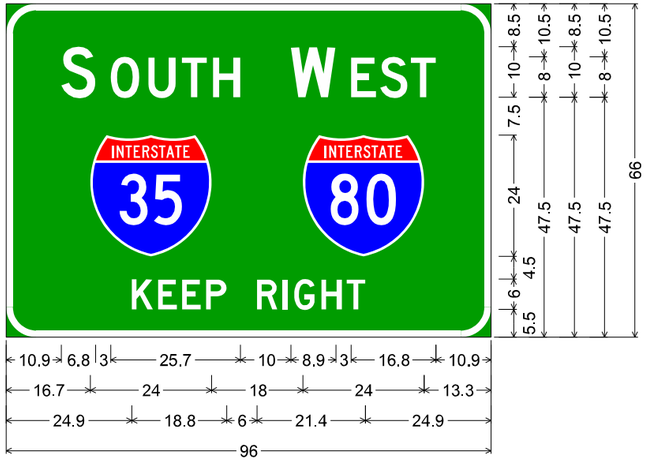
top; 6.00" Radius, 1.50" Border, White on Green;
[EXIT] E 2K 225% spacing;
bottom; 6.00" Radius, 1.50" Border, White on Green;
[128] E 2K;
bottom; 6.00" Radius, 1.50" Border, White on Green;
Arrow Custom - 29.25" 45°;



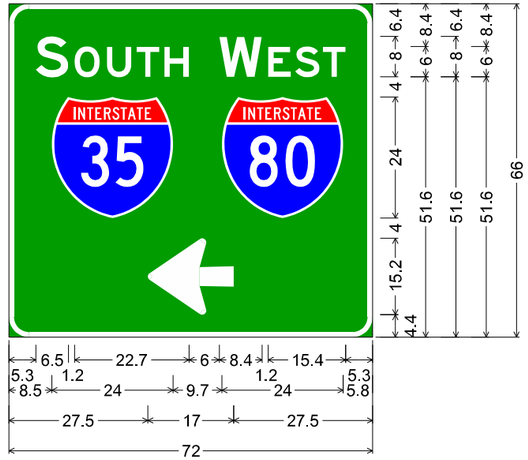
Main Panel; 12.0" Radius, 2.0" Border, White on Green;
[NW 100th St] E Mod 2K; [1½] E Mod 2K; State Highway 141 M1-5; [WEST] E 2K; [NW Urbandale Dr] E Mod 2K; [2½] E Mod 2K;

SIGN DETAILS
I-35/80

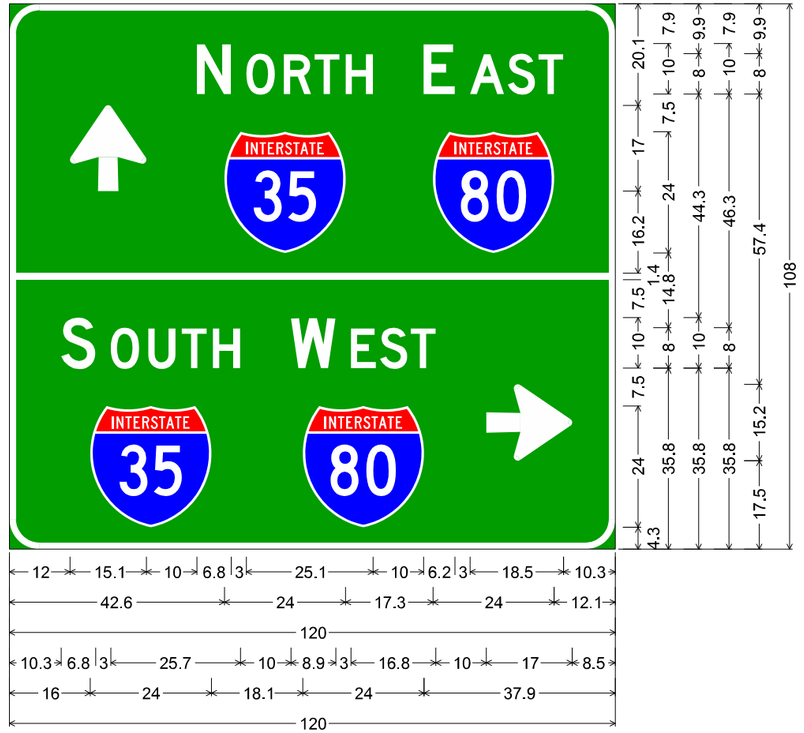
FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.54



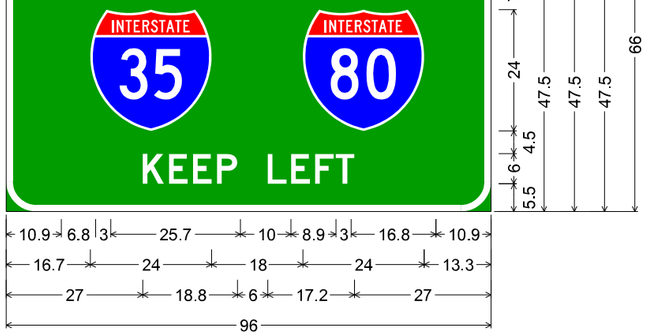
SB S-W I-35/80;
6.0" Radius, 1.3" Border, White on Green;
[S OUTH] D 2K; [W EST] D 2K; [KEEP RIGHT] D 2K;



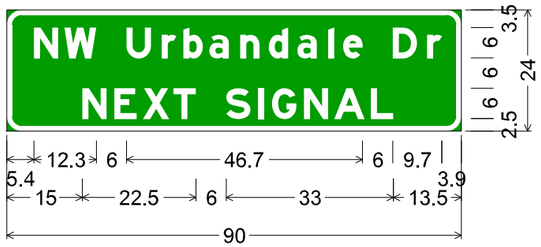
SB S-W I-35/80;
4.0" Radius, 1.0" Border, White on Green;
[SOUTH] E 2K; [WEST] E 2K;
Arrow I-A - 17.0" 180°;



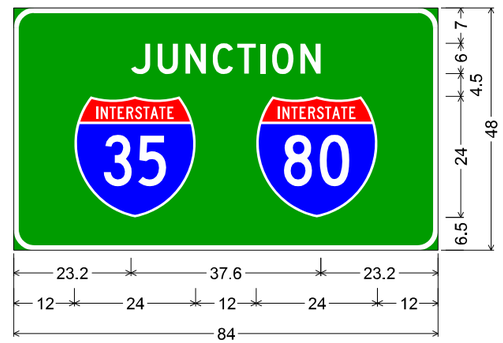
SB S-W I-35/80; 6.0" Radius, 1.3" Border, White on Green;
Arrow I-A - 17.0" 90°; [N ORTH] D 2K; [E AST] D 2K; [S OUTH] D 2K;
[W EST] D 2K; Arrow I-A - 17.0" 0°;



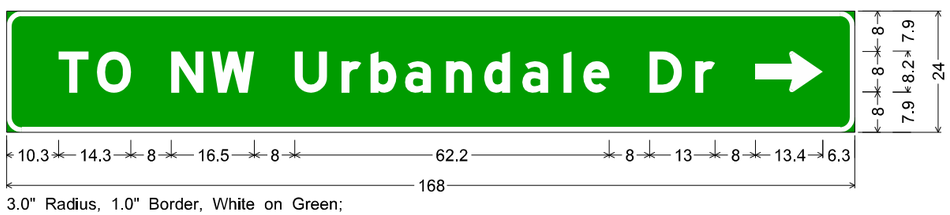
SB S-W I-35/80;
6.0" Radius, 1.3" Border, White on Green;
[S] D 2K [ ] E 2K [OUTH] D 2K;
[W] D 2K [ ] E 2K [EST] D 2K; [KEEP LEFT] D 2K;



3.0" Radius, 1.0" Border, White on Green;
[NW Urbandale Dr] E Mod;
[NEXT SIGNAL] E Mod;



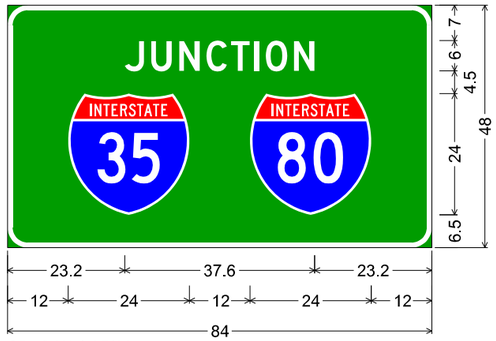
SB S-W I-35/80;
4.0" Radius, 1.0" Border, White on Green;
[JUNCTION] D 2K;



3.0" Radius, 1.0" Border, White on Green;
[TO NW Urbandale Dr] E Mod; Standard Arrow Custom 13.4" X 8.1" 0°;

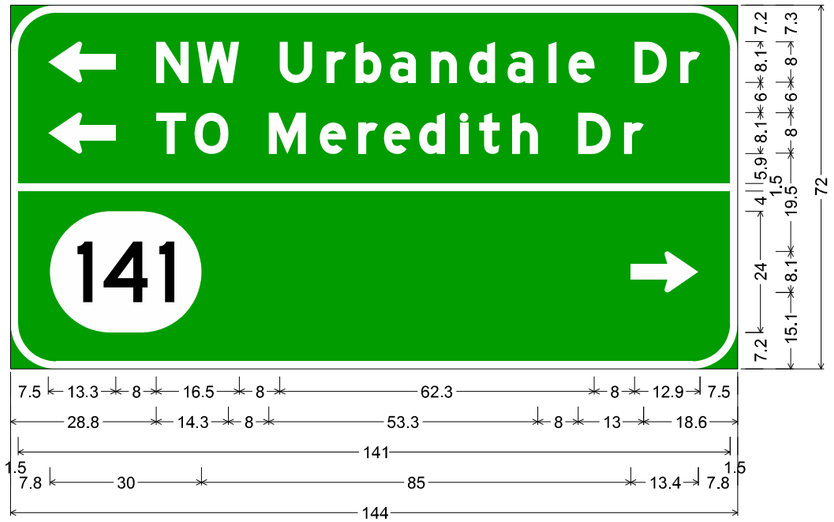
SIGN DETAILS
MEREDITH DRIVE

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.55

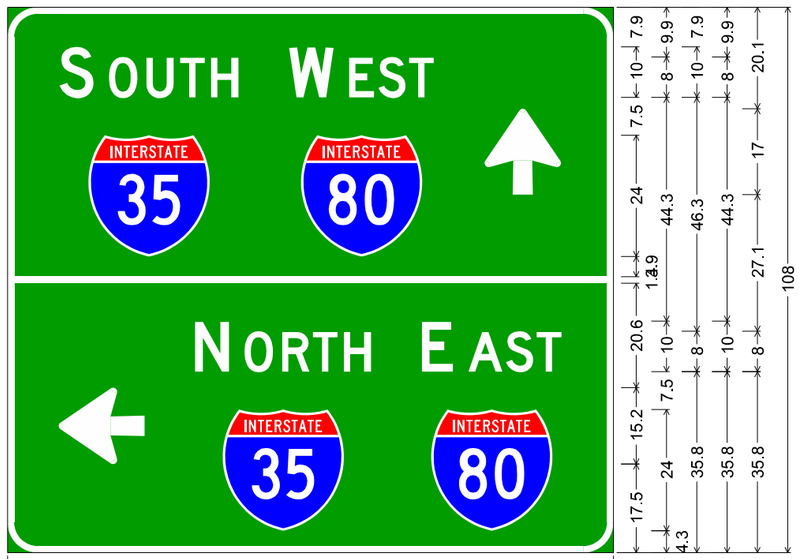


SB S-W I-35/80;
4.0" Radius, 1.0" Border, White on Green;
[JUNCTION] D 2K;

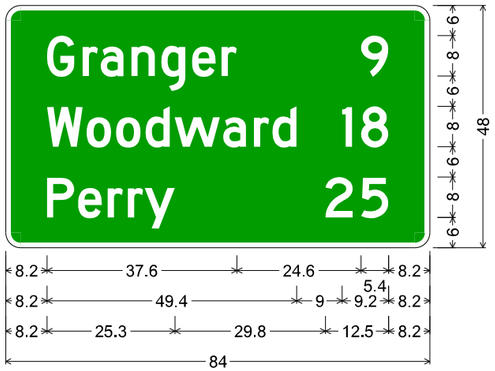
SB S-W I-35/80; 6.0" Radius, 1.3" Border, White on Green;
[N ORTH] D 2K; [E AST] D 2K; Arrow I-A - 17.0" 0°;



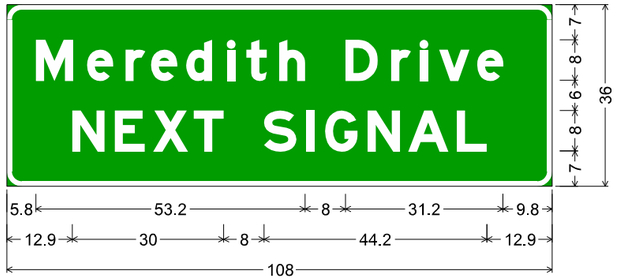
9.0" Radius, 1.5" Border, White on Green;
Standard Arrow Custom 13.4" X 8.1" 180°; [NW Urbandale Dr] E Mod;
Standard Arrow Custom 13.4" X 8.1" 180°; [TO Meredith Dr] E Mod;
State Highway 141 M1-5; Standard Arrow Custom 13.4" X 8.1" 0°;



SB S-W I-35/80; 6.0" Radius, 1.3" Border, White on Green;
[S OUTH] D 2K; [W EST] D 2K; Arrow I-A - 17.0" 90°;
Arrow I-A - 17.0" 180°; [N ORTH] D 2K; [E AST] D 2K;



D2-3_VARx48;
3.0" Radius, 1.0" Border, White on Green;
[Granger] D 2K; [9] D 2K; [Woodward] D 2K;
[18] D 2K; [Perry] D 2K; [25] D 2K;



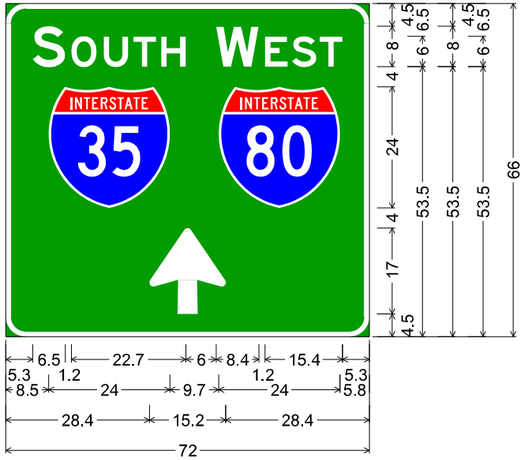
3.0" Radius, 1.0" Border, White on Green;
[Meredith Drive] E Mod; [NEXT SIGNAL] E Mod;

SB S-W I-35/80;
6.0" Radius, 1.3" Border, White on Green;
[N ORTH] D 2K; [E AST] D 2K; [KEEP RIGHT] D 2K;

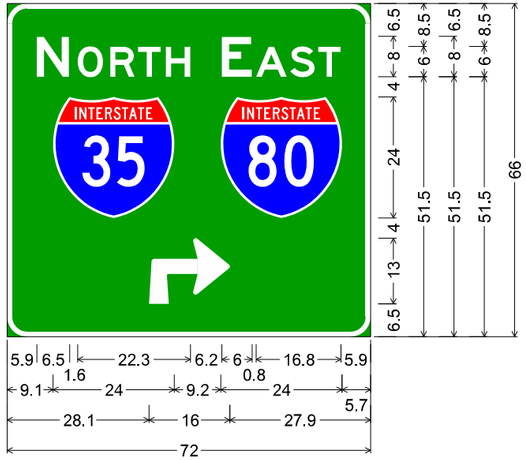
SIGN DETAILS
NW URBANDALE DRIVE

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.56

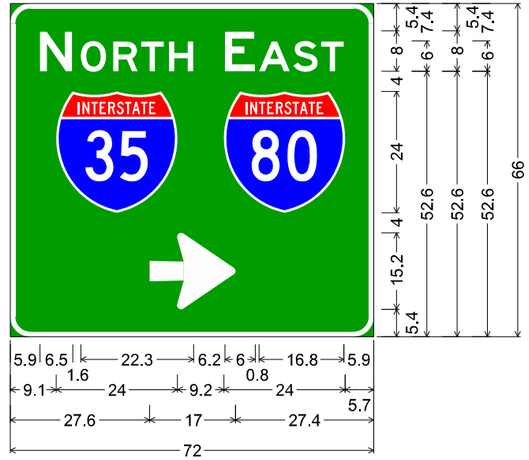
1:39:56 PM 8/5/2016 untitled pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\TrafEng\Signing\77080178N1.sht



NB S-W I-35/80 Thru;
4.0" Radius, 1.0" Border, White on Green;
[SOUTH] E 2K; [WEST] E 2K;
Arrow I-A - 17.0" 90°;



NB N-E I-35/80 Hard Right;
4.0" Radius, 1.0" Border, White on Green;
[NORTH] E 2K; [EAST] E 2K;
90 Deg Advance Turn Arrow 16.0" X 13.0";



NB N-E I-35/80 Right;
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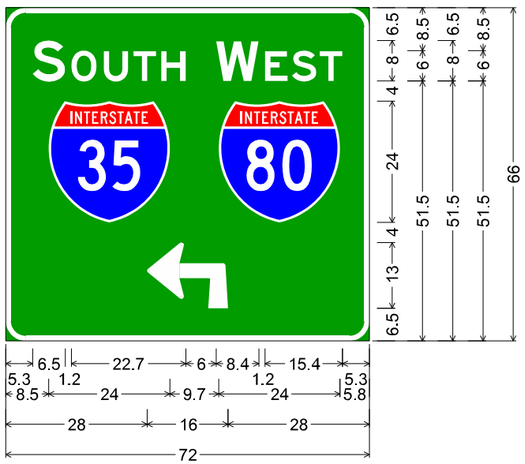
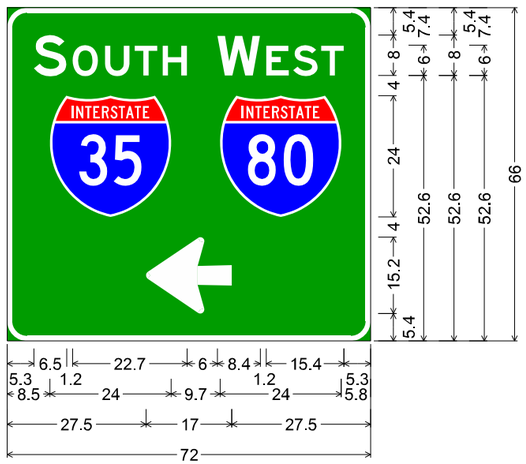
[NORTH] E 2K; [EAST] E 2K;
Arrow I-A - 17.0" 0°;



NB S-W I-35/80 Hard Left;
4.0" Radius, 1.0" Border, White on Green;
[SOUTH] E 2K; [WEST] E 2K;
90 Deg Advance Turn Arrow 16.0" X 13.0";



NB S-W I-35/80 Left;
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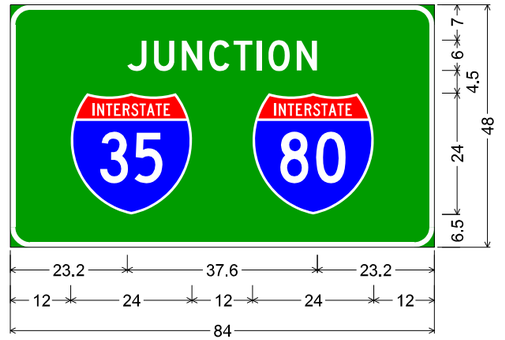
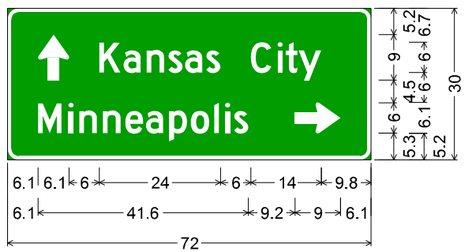
[SOUTH] E 2K; [WEST] E 2K;
Arrow I-A - 17.0" 180°;



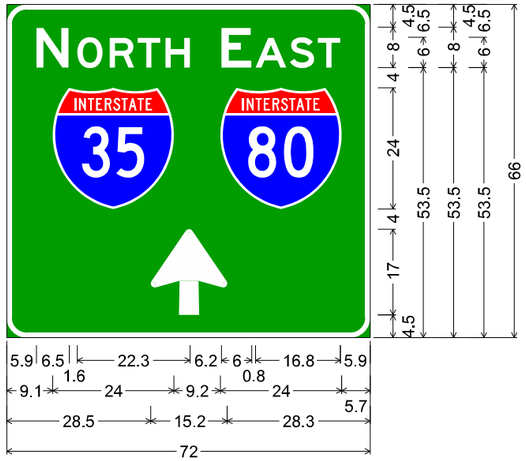
SB S-W I-35/80;
4.0" Radius, 1.0" Border, White on Green;
[JUNCTION] D 2K;



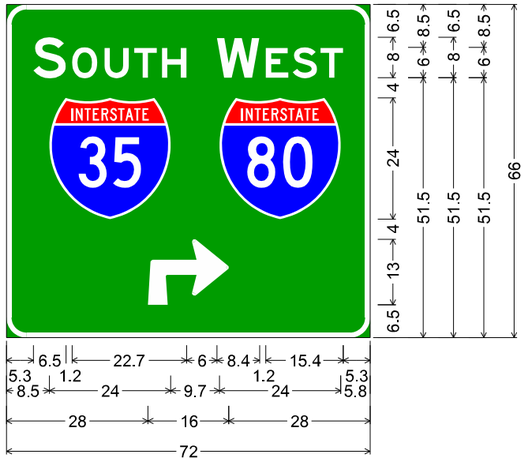
D1-3_VARx42;
2.3" Radius, 0.8" Border, White on Green;
Standard Arrow Custom 9.0" X 6.1" 90°;
[Kansas City] D 2K; [Minneapolis] D 2K;
Standard Arrow Custom 9.0" X 6.1" 0°;

SIGN DETAILS
NW 100TH STREET

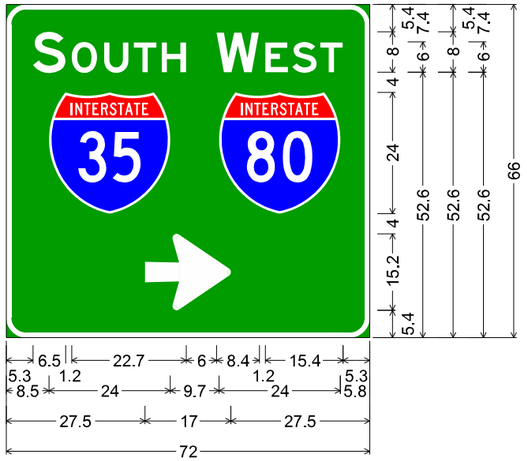
FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.57



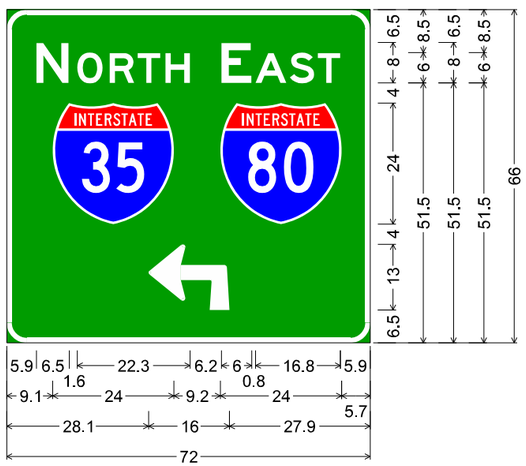
SB N-E I-35/80 Thru;
4.0" Radius, 1.0" Border, White on Green;
[NORTH] E 2K; [EAST] E 2K;
Arrow I-A - 17.0" 90°;



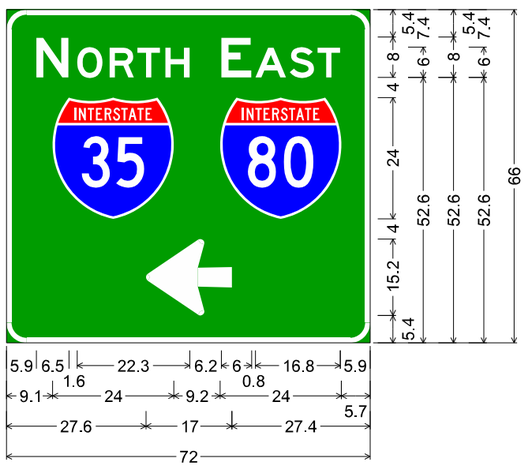
SB S-W I-35/80 Hard Right;
4.0" Radius, 1.0" Border, White on Green;
[SOUTH] E 2K; [WEST] E 2K;
90 Deg Advance Turn Arrow 16.0" X 13.0";



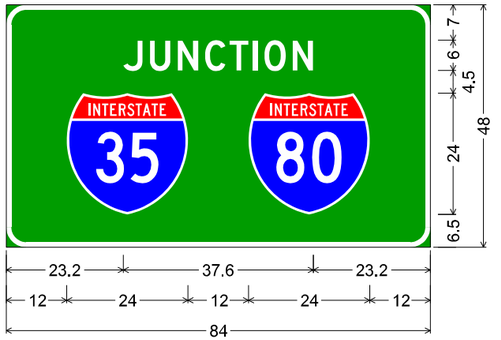
SB S-W I-35/80 Right;
4.0" Radius, 1.0" Border, White on Green;
[SOUTH] E 2K; [WEST] E 2K;
Arrow I-A - 17.0" 0°;



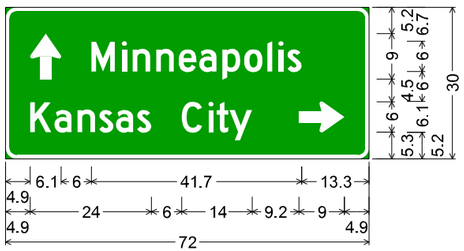
SB N-E I-35/80 Hard Left;
4.0" Radius, 1.0" Border, White on Green;
[NORTH] E 2K; [EAST] E 2K;
90 Deg Advance Turn Arrow 16.0" X 13.0";



SB N-E I-35/80 Left;
4.0" Radius, 1.0" Border, White on Green;
[NORTH] E 2K; [EAST] E 2K;
Arrow I-A - 17.0" 180°;



SB S-W I-35/80;
4.0" Radius, 1.0" Border, White on Green;
[JUNCTION] D 2K;



D1-3_VARx42;
2.3" Radius, 0.8" Border, White on Green;
Standard Arrow Custom 9.0" X 6.1" 90°;
[Minneapolis] D 2K; [Kansas City] D 2K;
Standard Arrow Custom 9.0" X 6.1" 0°;

SIGN DETAILS
NW 100TH STREET

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER N.58

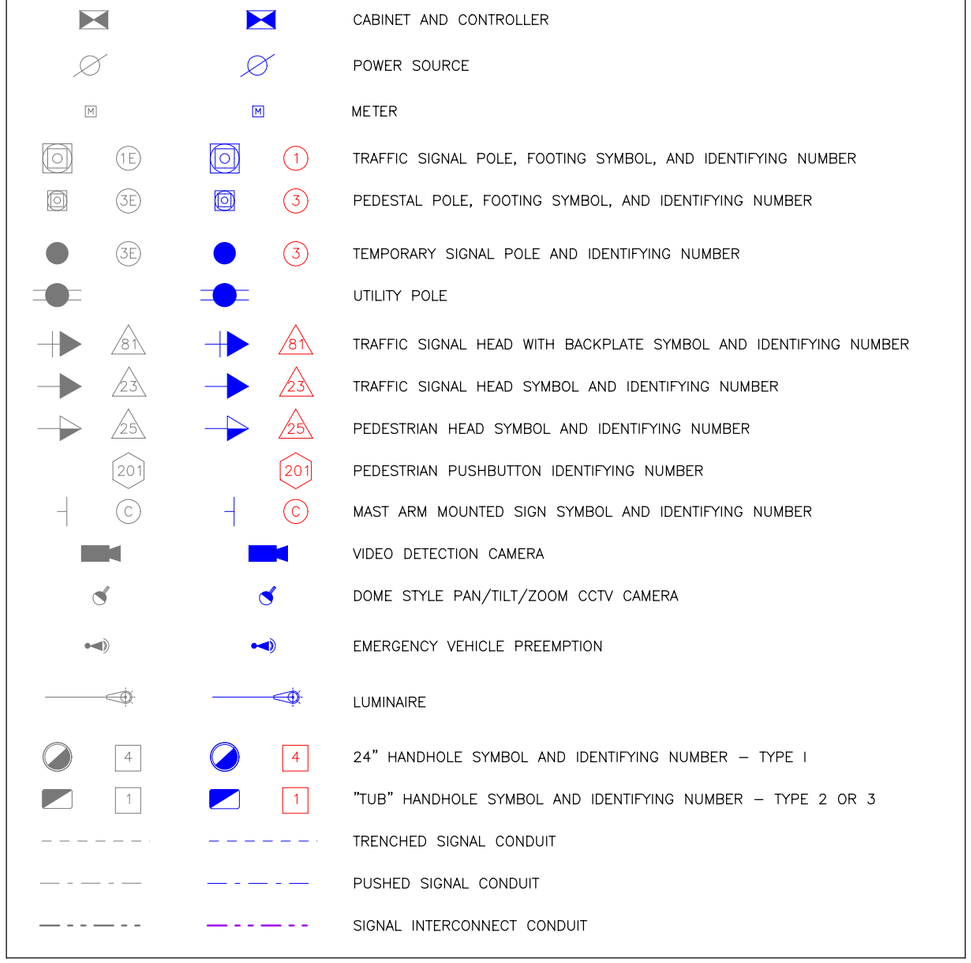
TRAFFIC SIGNAL GENERAL NOTES

1. TRAFFIC SIGNALS SHALL BE CONSTRUCTED IN ACCORDANCE WITH IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, SERIES 2012, EXCEPT AS MODIFIED BY THE PLANS AND SPECIAL PROVISIONS FOR TRAFFIC SIGNALIZATION.
2. CONTRACTOR SHALL FURNISH A SCHEDULE OF UNIT PRICES FOR ESTIMATED TRAFFIC SIGNAL QUANTITIES. PAYMENT WILL BE BASED ON PLAN QUANTITIES. QUANTITIES WILL NOT BE FIELD MEASURED.
3. THE LOCATIONS OF ALL FOOTINGS, HANDHOLES, AND CONDUIT ARE TO BE COORDINATED WITH THE ENGINEER AND ARE SUBJECT TO ADJUSTMENT IN THE FIELD BY THE ENGINEER.
4. ANY LANE CHANGES MUST BE APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 48 HOURS BEFORE THE REQUESTED CLOSURE TIME.
5. "GR/TR/PR" REPRESENTS "GR"= GROUND WIRE, "TR"= TRACER WIRE, AND "PR"= PULL ROPE.
6. THE STATIONS AND OFFSETS LISTED ON THE SIGNAL PLANS ARE TO THE CENTER OF THE ITEM UNLESS OTHERWISE NOTED.
7. THE CONTRACTOR HAS THE OPTION TO BORE OR TRENCH CONDUIT; HOWEVER, THE SPECIFICATIONS REQUIRE THAT THE CONDUIT BE BORED UNDER PAVEMENT. PAVEMENT SHALL NOT BE DISTURBED BY CONSTRUCTION.
8. AREAS DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
9. A #6 A.W.G. BARE COPPER GROUND WIRE SHALL BE INSTALLED IN ALL PVC CONDUITS THAT CARRY 120 VOLT SIGNAL CABLES. ALL STEEL CONDUITS AND POLES AT EACH INTERSECTION SHALL BE BONDED TO FORM A CONTINUOUS SYSTEM AND BE EFFECTIVELY GROUNDED. BONDING JUMPERS SHALL BE #6 A.W.G. BARE COPPER WIRE CONNECTED BY APPROVED CLAMPS.
10. TRAFFIC SIGNAL POLE MAST ARMS SHALL BE STORED FOR FUTURE USE AT CITY OF URBANDALE PUBLIC WORKS DEPARTMENT STORAGE YARD. THE CONTRACTOR SHALL COORDINATE WITH JOHN LARSON WITH THE CITY OF URBANDALE AT 515-331-6718 AND PROVIDE A MINIMUM OF 5 WORKING DAYS NOTICE.
11. ALL CONDUIT SHALL BE SCHEDULE 40 PVC, HDPE SDR 13.5 OR RIGID METAL CONDUIT (RMC) AS INDICATED ON THE PLANS.
12. ALL TRAFFIC SIGNAL WIRING IS #14 A.W.G. UNLESS OTHERWISE NOTED ON THE PLANS AND SPECIFICATIONS.
13. WHEN HEATING PVC CONDUIT TO FORM A BEND, AN APPROVED CONDUIT HEATING DEVICE SHALL BE USED. DIRECT FLAME SHALL NOT BE APPLIED TO THE CONDUIT.
14. ALL ELECTRICAL CONNECTORS, GROUND CONDUCTORS, GROUND RODS AND OTHER MISCELLANEOUS MATERIALS WHICH ARE NOT LISTED ON THE ESTIMATE OF QUANTITIES SHALL BE CONSIDERED INCIDENTAL TO THE TRAFFIC SIGNAL BID ITEM.
15. ALL NEW SIGNAL POLES, LUMINAIRE ARMS AND TRANSFORMER BASES ARE TO BE GALVANIZED PER THE TRAFFIC SIGNAL SPECIAL PROVISIONS.
16. ALL CONDUIT ELBOWS SHALL BE LONG RADIUS TYPE – 36" MINIMUM.
17. THE CONTRACTOR WILL HAVE A MINIMUM OF 3 YEARS EXPERIENCE INSTALLING TRAFFIC SIGNALS. THE CONTRACTOR WILL ALSO HAVE AN EMPLOYEE ON-SITE AT ALL TIMES WITH A LEVEL II IMSA TRAFFIC SIGNAL CERTIFICATION.
18. ALL SIGNING AND TRAFFIC CONTROLS USED WHILE CONSTRUCTION ACTIVITIES ARE IN PROGRESS SHALL BE IN COMPLIANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
19. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES AT LEAST 48 HOURS IN ADVANCE OF THE ACTUAL STARTING DATE OF CONSTRUCTION. UTILITY LOCATION SHOWN ARE APPROXIMATE. THE CONTRACTOR IS TO UTILIZE THE FOLLOWING TELEPHONE NUMBER, 1-800-292-8989, WHEN REQUESTING LOCATIONS AS WELL AS NOTIFYING THE CITY UTILITY DEPARTMENT AND OTHERS AS NECESSARY.
20. ALIGNMENT CENTER LINE HAS NOT BEEN SHOWN FOR SAKE OF VISUAL CLARITY. STATION TICK MARKS ARE SHOWN. SEE ALIGNMENT SHEETS FOR ALIGNMENT CENTER LINE DETAILS.
21. INSTALL TWO (2) 1-CONDUCTOR #10 CABLES FROM LUMINAIRE HEAD TO BASE OF POLE. COIL 2' OF CABLE AT THE END OF LUMINAIRE ARM. LUMINAIRE HEAD TO BE PROVIDED AND INSTALLED BY ELECTRIC UTILITY COMPANY.
22. ALL POTENTIAL WORK PERFORMED WITHIN THE EXISTING 100TH STREET AND PLUM DRIVE INTERSECTION TRAFFIC SIGNAL CONTROLLER CABINET IS TO BE COORDINATED WITH THE CITY OF URBANDALE. PROVIDE 48 HOURS NOTICE TO THE CITY PRIOR TO MODIFYING THE EXISTING TRAFFIC SIGNAL SYSTEM.
23. DETECTOR LOOPS SHALL HAVE 3 TURNS OF WIRE IN THE LOOP, UNLESS SPECIFIED OTHERWISE IN THE DETECTOR SUMMARY.
24. FUTURE TRAFFIC SIGNAL EQUIPMENT IS SHOWN ON PLANS FOR SAKE OF STRUCTURAL LOADING PERSPECTIVE TO ASSURE TRAFFIC SIGNAL POLES PROCURED AS PART OF THIS PROJECT ARE STRUCTURALLY ADEQUATE TO FACILITATE IDENTIFIED FUTURE LOADINGS.
25. IF TRAFFIC SIGNAL POLE OR PEDESTAL POLE IS TO BE POSITIONED ADJACENT (AS INDICATED ON PLANS) TO PAVED SURFACE (I.E. SIDEWALK, TRAIL, ETC.), TOP OF POLE FOUNDATION IS TO BE CONSTRUCTED FLUSH WITH ADJACENT PAVED SURFACE.

ABBREVIATIONS

SIG	SIGNAL HEAD CABLE
PED HD	PEDESTRIAN HEAD CABLE
PED PB	PEDESTRIAN PUSHBUTTON CABLE
CNTRL	CONTROLLER
LUM	LUMINAIRE
N	NEUTRAL
LN1	POWER – LINE 1
LN2	POWER – LINE 2
GR	GROUND WIRE 1c #6
TR	TRACER WIRE 1c #10
PR	PULL ROPE
Y1	FUSED WYE CONNECTOR FOR STREET LIGHTING
Y2	NON-FUSED WYE CONNECTOR FOR STREET LIGHTING
Y3	NON-FUSED WYE CONNECTOR FOR STREET LIGHTING
L1	FUSED IN-LINE CONNECTOR FOR STREET LIGHTING
L2	NON-FUSED IN-LINE CONNECTOR FOR STREET LIGHTING
DET	SHIELDED LOOP DETECTOR LEAD-IN
LOOP	DETECTOR LOOP WIRE IN TUBING
HH	HANDHOLE
EVP	EMERGENCY VEHICLE PREEMPT DETECTOR CABLE
FY	FLASHING YELLOW
SY	STEADY YELLOW
FO	FIBER OPTIC CABLE
SM	SINGLE MODE

SIGNAL LEGEND



LICENSED PROFESSIONAL ENGINEER
TYLER C. WILES
20906
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.

PRELIMINARY NOT FOR CONSTRUCTION

TYLER C. WILES P.E. DATE

License Number: 20906

My license renewal date is DECEMBER 31, 2017.

Pages or sheets covered by this seal:

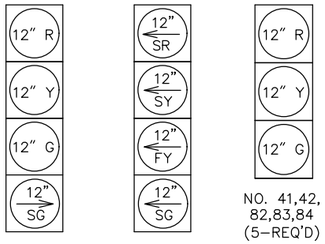
Sheets N.59 – N.64

NOTES, LEGEND AND ABBREVIATIONS

FILE NO.	ENGLISH	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER N.59

SYSTEMTIME SYSTEMDATE USERNAME DGNSPEC

TRAFFIC SIGNAL FACES



NO. 43,44 (2–REQ'D)

NO. 81 (1–REQ'D)

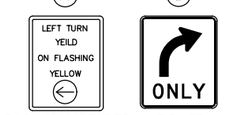
NO. 41,42, 82,83,84 (5–REQ'D)

ALL SIGNAL FACES SHALL BE LED.

NOTES

1. INTERCONNECT CONDUIT TO 121ST STREET INTERSECTION.
2. INTERCONNECT CONDUIT TO NORTHBOUND TERMINAL INTERSECTION.
3. INTERCONNECT THROUGH EXISTING BRIDGE RAIL CONDUIT.
4. PAVEMENT MARKINGS ARE FOR INFORMATION ONLY.
5. VEHICLE DETECTION IS NOT SHOWN IN THIS PRELIMINARY LAYOUT.

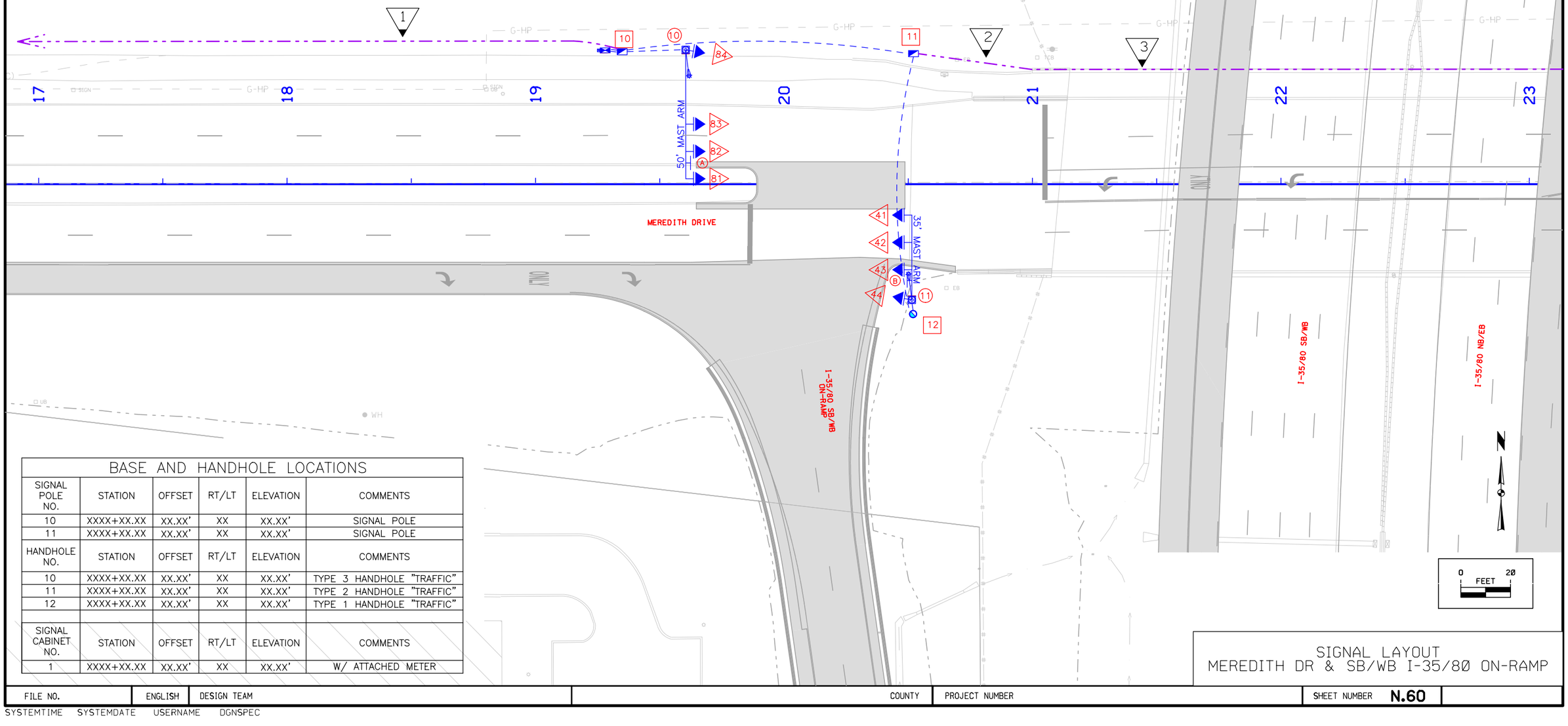
STREET NAME SIGNS



R10–12 MODIFIED 30"X36" (1–REQ'D)

R3–5R 30"X36" (1–REQ'D)

** NOTE:
THE CONTRACTOR IS TO PROVIDE ALL TRAFFIC SIGNAL RELATED SIGN PANELS. CONTRACTOR TO SUPPLY MOUNTING BRACKETS AND INSTALL SIGNS.



BASE AND HANDHOLE LOCATIONS

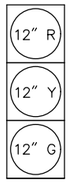
SIGNAL POLE NO.	STATION	OFFSET	RT/LT	ELEVATION	COMMENTS
10	XXXX+XX.XX	XX.XX'	XX	XX.XX'	SIGNAL POLE
11	XXXX+XX.XX	XX.XX'	XX	XX.XX'	SIGNAL POLE
HANDHOLE NO.	**STATION**	**OFFSET**	**RT/LT**	**ELEVATION**	**COMMENTS**
10	XXXX+XX.XX	XX.XX'	XX	XX.XX'	TYPE 3 HANDHOLE "TRAFFIC"
11	XXXX+XX.XX	XX.XX'	XX	XX.XX'	TYPE 2 HANDHOLE "TRAFFIC"
12	XXXX+XX.XX	XX.XX'	XX	XX.XX'	TYPE 1 HANDHOLE "TRAFFIC"
SIGNAL CABINET NO.	**STATION**	**OFFSET**	**RT/LT**	**ELEVATION**	**COMMENTS**
1	XXXX+XX.XX	XX.XX'	XX	XX.XX'	W/ ATTACHED METER

SIGNAL LAYOUT
MEREDITH DR & SB/WB I-35/80 ON-RAMP

FILE NO.	ENGLISH	DESIGN TEAM		COUNTY	PROJECT NUMBER	SHEET NUMBER **N.60**	

SYSTEMTIME SYSTEMDATE USERNAME DGNSPEC

TRAFFIC SIGNAL FACES

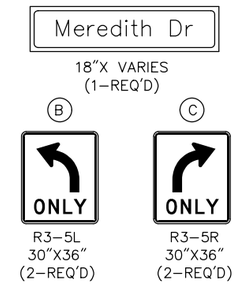


NO. 41,42,43,
61,62,63,64,65,
81,82,83
(11–REQ'D)
ALL SIGNAL FACES SHALL BE LED.

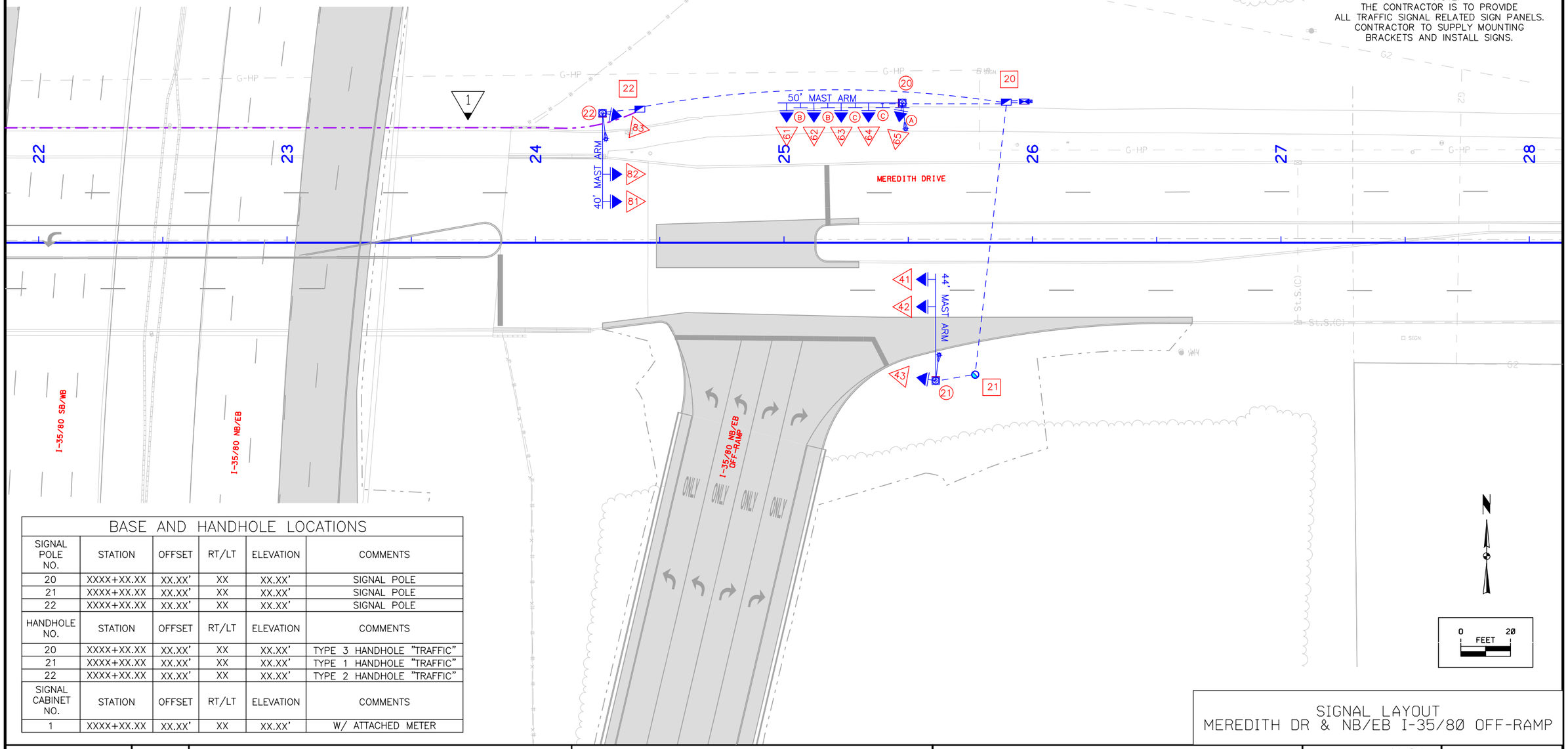
NOTES

1. INTERCONNECT THROUGH EXISTING BRIDGE RAIL CONDUIT TO SOUTHBOUND TERMINAL INTERSECTION.
2. PAVEMENT MARKINGS ARE FOR INFORMATION ONLY.
3. VEHICLE DETECTION IS NOT SHOWN IN THIS PRELIMINARY LAYOUT.

STREET NAME SIGNS



** NOTE:
THE CONTRACTOR IS TO PROVIDE ALL TRAFFIC SIGNAL RELATED SIGN PANELS. CONTRACTOR TO SUPPLY MOUNTING BRACKETS AND INSTALL SIGNS.



BASE AND HANDHOLE LOCATIONS

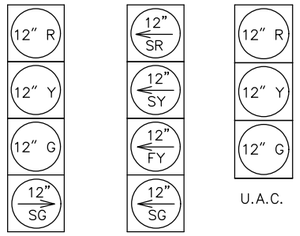
SIGNAL POLE NO.	STATION	OFFSET	RT/LT	ELEVATION	COMMENTS
20	XXXX+XX.XX	XX.XX'	XX	XX.XX'	SIGNAL POLE
21	XXXX+XX.XX	XX.XX'	XX	XX.XX'	SIGNAL POLE
22	XXXX+XX.XX	XX.XX'	XX	XX.XX'	SIGNAL POLE
HANDHOLE NO.	STATION	OFFSET	RT/LT	ELEVATION	COMMENTS
20	XXXX+XX.XX	XX.XX'	XX	XX.XX'	TYPE 3 HANDHOLE "TRAFFIC"
21	XXXX+XX.XX	XX.XX'	XX	XX.XX'	TYPE 1 HANDHOLE "TRAFFIC"
22	XXXX+XX.XX	XX.XX'	XX	XX.XX'	TYPE 2 HANDHOLE "TRAFFIC"
SIGNAL CABINET NO.	STATION	OFFSET	RT/LT	ELEVATION	COMMENTS
1	XXXX+XX.XX	XX.XX'	XX	XX.XX'	W/ ATTACHED METER

SIGNAL LAYOUT
MEREDITH DR & NB/EB I-35/80 OFF-RAMP

FILE NO.	ENGLISH	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER N.61

SYSTEMTIME SYSTEMDATE USERNAME DGNSPEC

TRAFFIC SIGNAL FACES



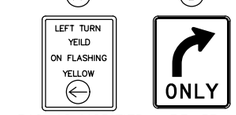
NO. 61,62 (2–REQ'D) | NO. 51 (1–REQ'D) | U.A.C.

ALL NEW SIGNAL FACES SHALL BE LED.

NOTES

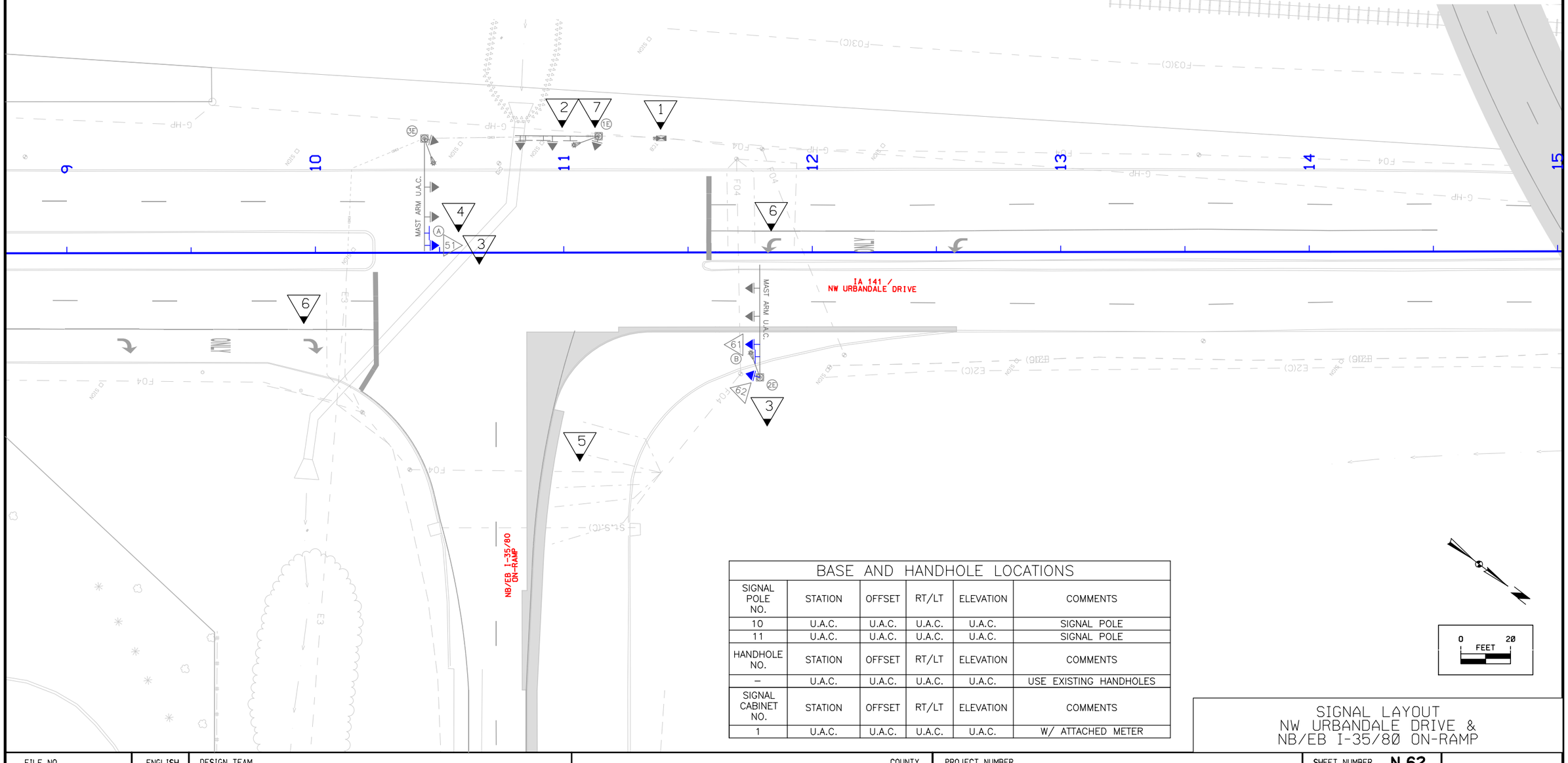
1. USE EXISTING TRAFFIC SIGNAL CABINET, POWER SERVICE AND FIBER INTERCONNECTION AS CONSTRUCTED. MAKE NECESSARY VEHICLE DETECTION UNIT MODIFICATIONS AS NECESSARY WITHIN THE CABINET.
2. REMOVE EXISTING TRAFFIC SIGNAL STRUCTURE, FOUNDATION AND TRAFFIC SIGNAL HEADS. FOUNDATION SHALL BE REMOVED TO A MINIMUM DEPTH OF THREE FEET BELOW FINAL GRADE. ALL SURROUNDING SURFACES SHALL BE PROPERLY RESTORED.
3. REMOVE EXISTING 5–SECTION SIGNAL HEAD AND REPLACE WITH PROPOSED SIGNAL HEAD. EXISTING SIGNAL WIRING TO BE UTILIZED.
4. REMOVE EXISTING SIGN PANEL AND REPLACE WITH PROPOSED SIGN PANEL. EXISTING SIGN BRACKET TO BE UTILIZED.
5. EXISTING OFF–RAMP VEHICLE DETECTION EQUIPMENT (LOOP WIRING, CONDUIT/ WIRING, ETC.) TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE EQUIPMENT IF IN CONFLICT WITH CONSTRCUTION ACTIVITIES.
6. EXISTING VEHICLE DETECTION EQUIPMENT (LOOP WIRING, CONDUIT/ WIRING, ETC.) TO BE PROTECTED IN PLACE AND CONTINUE TO BE UTILIZED.
7. WIRING ROUTING TO BE FIELD VERIFIED TO DETERMINE IF WIRING FOR POLE 3E AND NORTHBOUND DETECTION IS ROUTED THROUGH FOUNDATION OF POLE 1E.
8. PAVEMENT MARKINGS ARE FOR INFORMATION ONLY.

STREET NAME SIGNS



R10–12 MODIFIED 30"X36" (1–REQ'D) | R3–5R 30"X36" (1–REQ'D)

** NOTE:
THE CONTRACTOR IS TO PROVIDE ALL TRAFFIC SIGNAL RELATED SIGN PANELS. CONTRACTOR TO SUPPLY MOUNTING BRACKETS AND INSTALL SIGNS.



BASE AND HANDHOLE LOCATIONS

SIGNAL POLE NO.	STATION	OFFSET	RT/LT	ELEVATION	COMMENTS
10	U.A.C.	U.A.C.	U.A.C.	U.A.C.	SIGNAL POLE
11	U.A.C.	U.A.C.	U.A.C.	U.A.C.	SIGNAL POLE
HANDHOLE NO.	STATION	OFFSET	RT/LT	ELEVATION	COMMENTS
–	U.A.C.	U.A.C.	U.A.C.	U.A.C.	USE EXISTING HANDHOLES
SIGNAL CABINET NO.	STATION	OFFSET	RT/LT	ELEVATION	COMMENTS
1	U.A.C.	U.A.C.	U.A.C.	U.A.C.	W/ ATTACHED METER

SIGNAL LAYOUT
NW URBANDALE DRIVE & NB/EB I-35/80 ON-RAMP

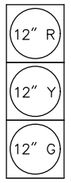
FILE NO.	ENGLISH	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER N.62

SYSTEMTIME SYSTEMDATE USERNAME DGNSPEC

NOTES

1. REMOVE EXISTING TRAFFIC SIGNAL STRUCTURE, FOUNDATION AND TRAFFIC SIGNAL HEADS. FOUNDATION SHALL BE REMOVED TO A MINIMUM DEPTH OF THREE FEET BELOW FINAL GRADE. ALL SURROUNDING SURFACES SHALL BE PROPERLY RESTORED.
2. REMOVE EXISTING TRAFFIC SIGNAL CABINET/POWER SERVICE AND FOUNDATION. FOUNDATION SHALL BE REMOVED ENTIRELY. ALL SURROUNDING SURFACES SHALL BE PROPERLY RESTORED.
3. EXISTING VEHICLE DETECTION EQUIPMENT (LOOP WIRING, CONDUIT/WIRING, ETC.) TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE EQUIPMENT IF IN CONFLICT WITH CONSTRCUTION ACTIVITIES.
4. ROUTE EXISTING FIBER OPTIC INTERCONNECT CABLE INTO PROPOSED HANDHOLE. INSTALL OUTSIDE PLANT SPLICE ENCLOSURE TO ROUTE PROPOSED BRANCH FIBER INTO PROPOSED TRAFFIC SIGNAL CABINET.
5. CONTRACTOR SHALL ASSURE PROPOSED TRAFFIC SIGNAL FOUNDAITON IS CONSTRUCTED WITHIN APPROPRIATE RIGHT-OF-WAY.
6. PAVEMENT MARKINGS ARE FOR INFORMATION ONLY.
7. VEHICLE DETECTION IS NOT SHOWN IN THIS PRELIMINARY LAYOUT.

TRAFFIC SIGNAL FACES



NO. 21,22,23,24,
61,62,63,64,
81,82,83,84
(12-REQ'D)

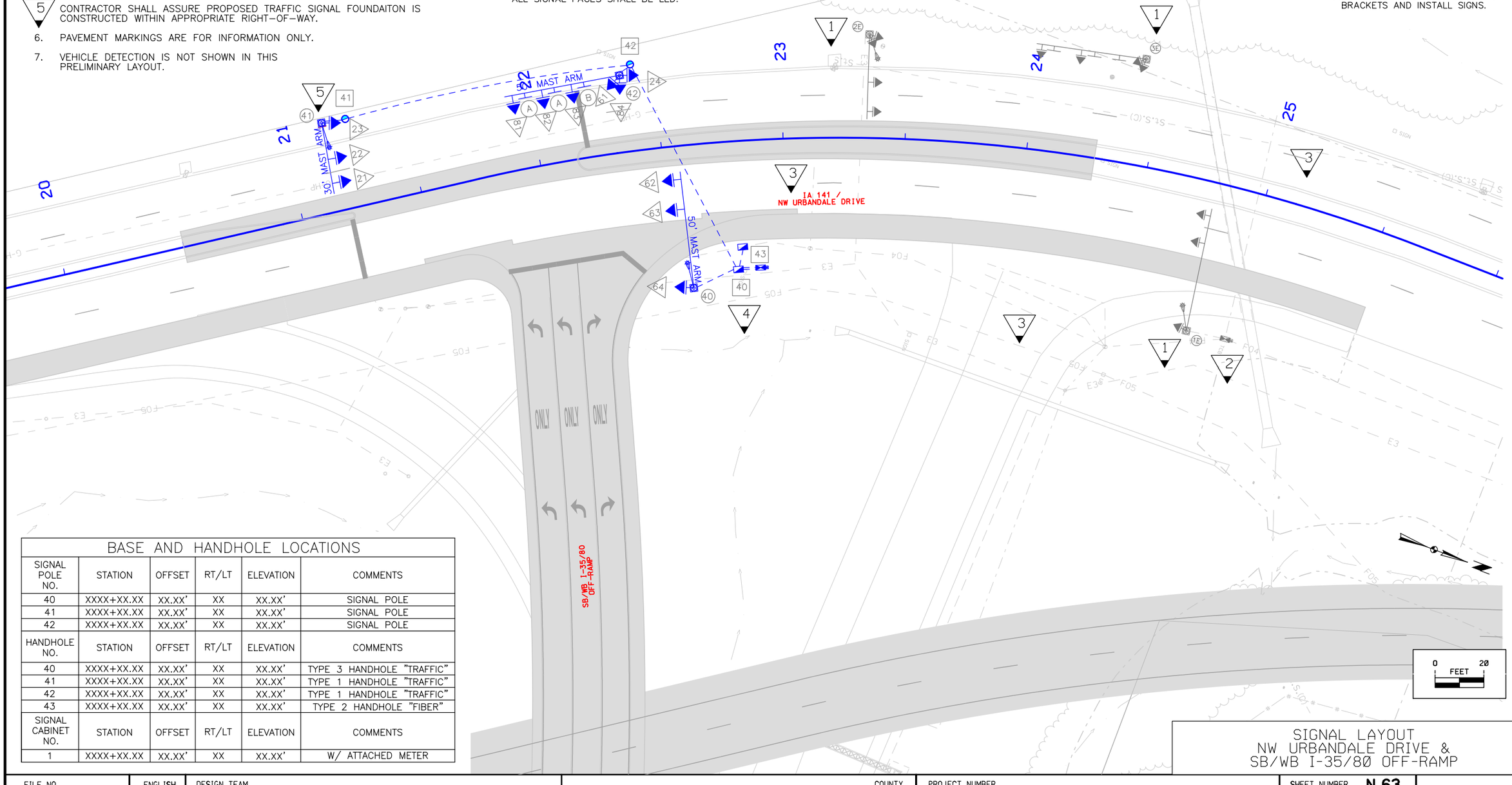
ALL SIGNAL FACES SHALL BE LED.

STREET NAME SIGNS

R3-5L
30"X36"
(2-REQ'D)

R3-5R
30"X36"
(1-REQ'D)

** NOTE:
THE CONTRACTOR IS TO PROVIDE ALL TRAFFIC SIGNAL RELATED SIGN PANELS. CONTRACTOR TO SUPPLY MOUNTING BRACKETS AND INSTALL SIGNS.



BASE AND HANDHOLE LOCATIONS

SIGNAL POLE NO.	STATION	OFFSET	RT/LT	ELEVATION	COMMENTS
40	XXXX+XX.XX	XX.XX'	XX	XX.XX'	SIGNAL POLE
41	XXXX+XX.XX	XX.XX'	XX	XX.XX'	SIGNAL POLE
42	XXXX+XX.XX	XX.XX'	XX	XX.XX'	SIGNAL POLE
HANDHOLE NO.	STATION	OFFSET	RT/LT	ELEVATION	COMMENTS
40	XXXX+XX.XX	XX.XX'	XX	XX.XX'	TYPE 3 HANDHOLE "TRAFFIC"
41	XXXX+XX.XX	XX.XX'	XX	XX.XX'	TYPE 1 HANDHOLE "TRAFFIC"
42	XXXX+XX.XX	XX.XX'	XX	XX.XX'	TYPE 1 HANDHOLE "TRAFFIC"
43	XXXX+XX.XX	XX.XX'	XX	XX.XX'	TYPE 2 HANDHOLE "FIBER"
SIGNAL CABINET NO.	STATION	OFFSET	RT/LT	ELEVATION	COMMENTS
1	XXXX+XX.XX	XX.XX'	XX	XX.XX'	W/ ATTACHED METER

SIGNAL LAYOUT
NW URBANDALE DRIVE & SB/WB I-35/80 OFF-RAMP

FILE NO.	ENGLISH	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER N.63

SYSTEMTIME SYSTEMDATE USERNAME DGNSPEC

TRAFFIC SIGNAL FACES

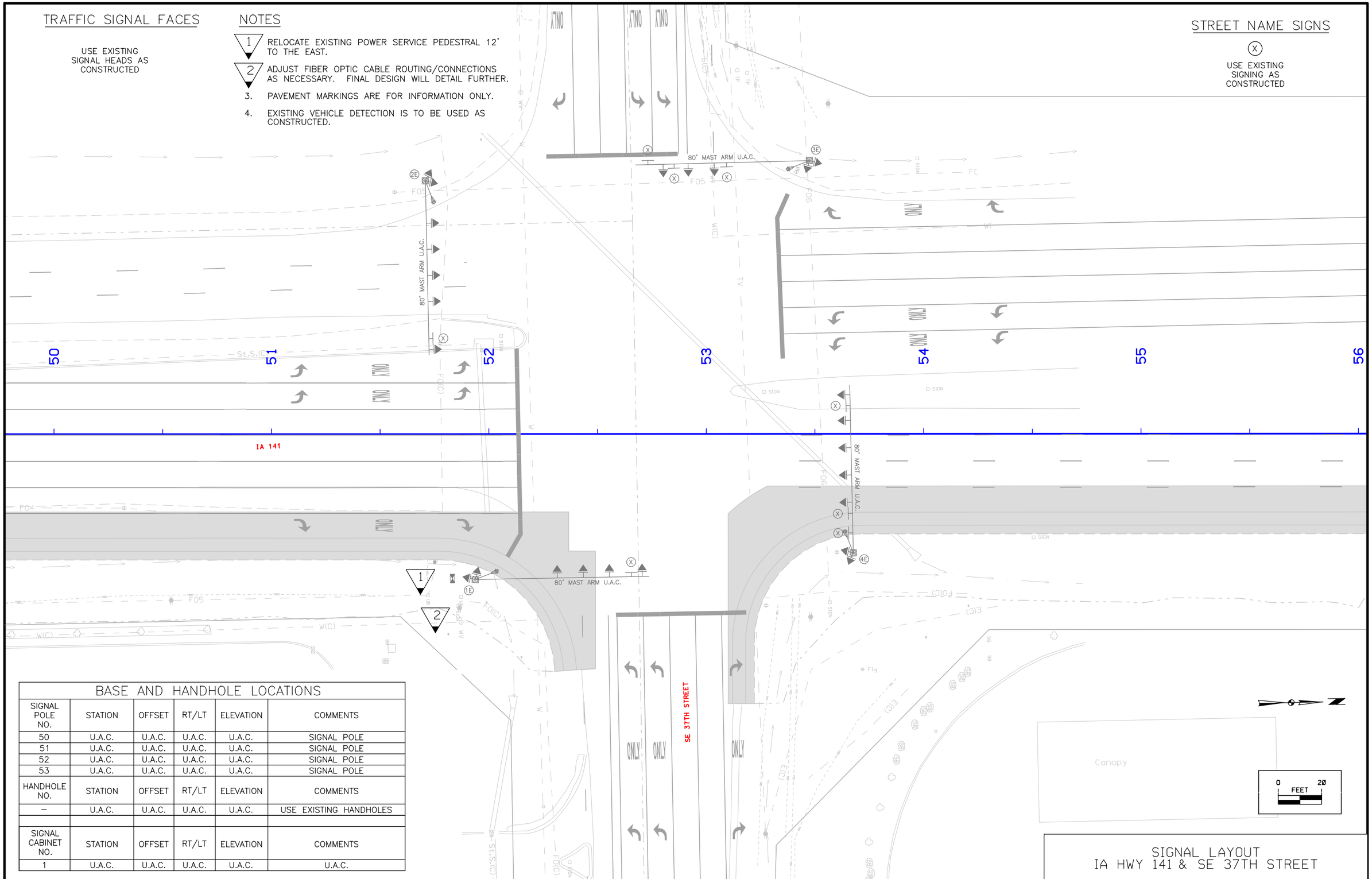
USE EXISTING SIGNAL HEADS AS CONSTRUCTED

NOTES

1. RELOCATE EXISTING POWER SERVICE PEDESTRAL 12' TO THE EAST.
2. ADJUST FIBER OPTIC CABLE ROUTING/CONNECTIONS AS NECESSARY. FINAL DESIGN WILL DETAIL FURTHER.
3. PAVEMENT MARKINGS ARE FOR INFORMATION ONLY.
4. EXISTING VEHICLE DETECTION IS TO BE USED AS CONSTRUCTED.

STREET NAME SIGNS

(X) USE EXISTING SIGNING AS CONSTRUCTED



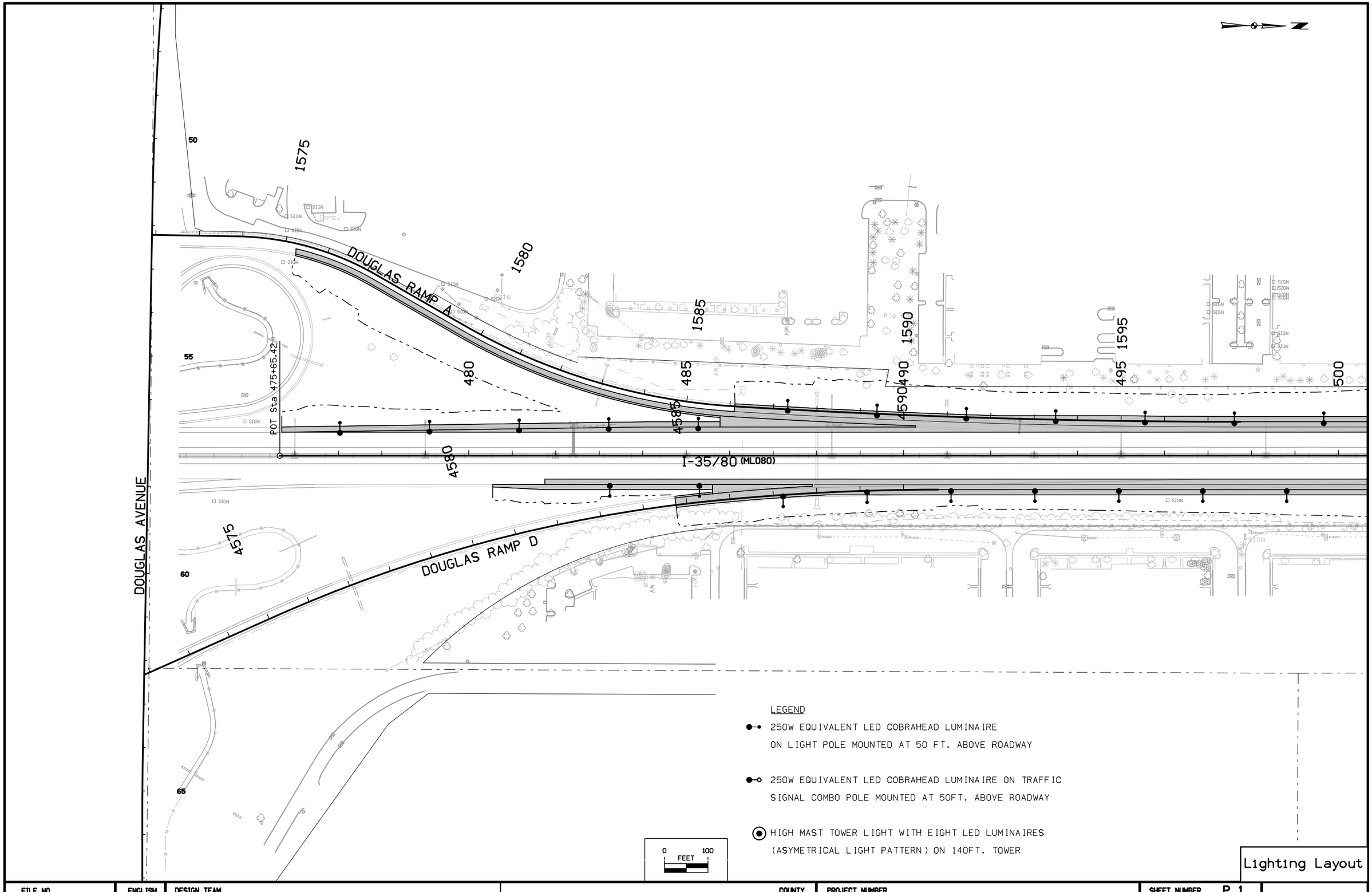
BASE AND HANDHOLE LOCATIONS

SIGNAL POLE NO.	STATION	OFFSET	RT/LT	ELEVATION	COMMENTS
50	U.A.C.	U.A.C.	U.A.C.	U.A.C.	SIGNAL POLE
51	U.A.C.	U.A.C.	U.A.C.	U.A.C.	SIGNAL POLE
52	U.A.C.	U.A.C.	U.A.C.	U.A.C.	SIGNAL POLE
53	U.A.C.	U.A.C.	U.A.C.	U.A.C.	SIGNAL POLE
HANDHOLE NO.	STATION	OFFSET	RT/LT	ELEVATION	COMMENTS
–	U.A.C.	U.A.C.	U.A.C.	U.A.C.	USE EXISTING HANDHOLES
SIGNAL CABINET NO.	STATION	OFFSET	RT/LT	ELEVATION	COMMENTS
1	U.A.C.	U.A.C.	U.A.C.	U.A.C.	U.A.C.

SIGNAL LAYOUT
IA HWY 141 & SE 37TH STREET

FILE NO.	ENGLISH	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER N.64

SYSTEMTIME SYSTEMDATE USERNAME DGNSPEC



Lighting Layout

FILE NO.	ENGLISH	DESIGN TEAM		COUNTY	PROJECT NUMBER	SHEET NUMBER P.1	

12:28:48 PM 8/5/2016 untitled pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\TrafEng\Lighting\77080178P1.sht

WEBSTER TWP
T-79N R-25W
SEC. 20

WEBSTER TWP
T-79N R-25W
SEC. 17

LED Underdeck Lighting
(TYP.OF 4)

MEREDITH RAMP C

IA 141 RAMP C

I-35/80 (ML080)

MEREDITH RAMP B

IA 141 RAMP B

MEREDITH DRIVE

PC Sta. 522+84.76

PT Sta. 36+66.48

0 FEET 100

Lighting Layout

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER P.2

12:28:52 PM 8/5/2016 untitled pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\TrafEng\Lighting\77080178P1.sht

IA 141 RAMP C

IA 141 RAMP A

I-35/80

IA 141 RAMP B

IA 141 RAMP D

URBANDALE DRIVE

IA 141

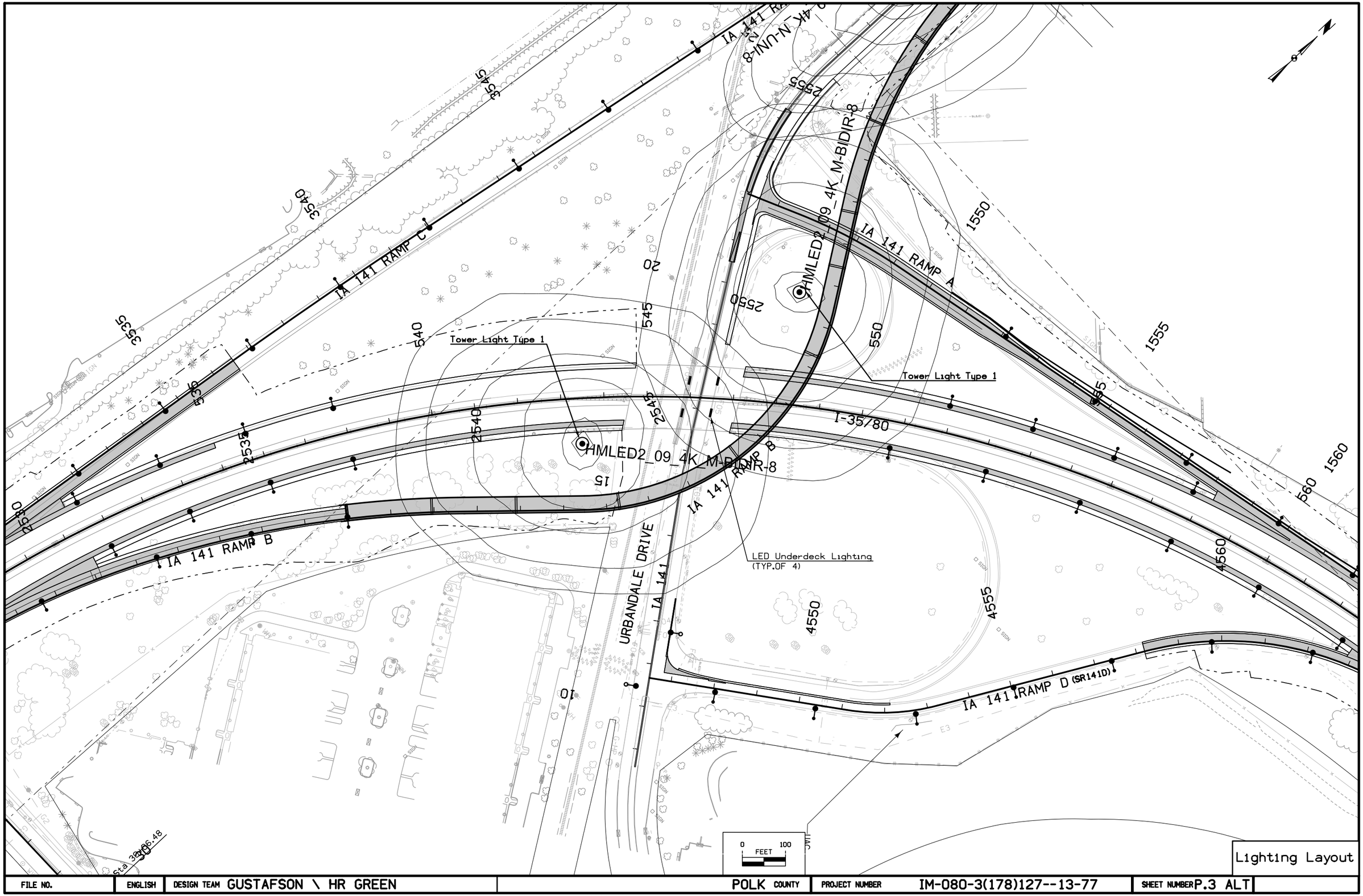
LED Underdeck Lighting
(TYP.OF 4)

0 100
FEET

Lighting Layout

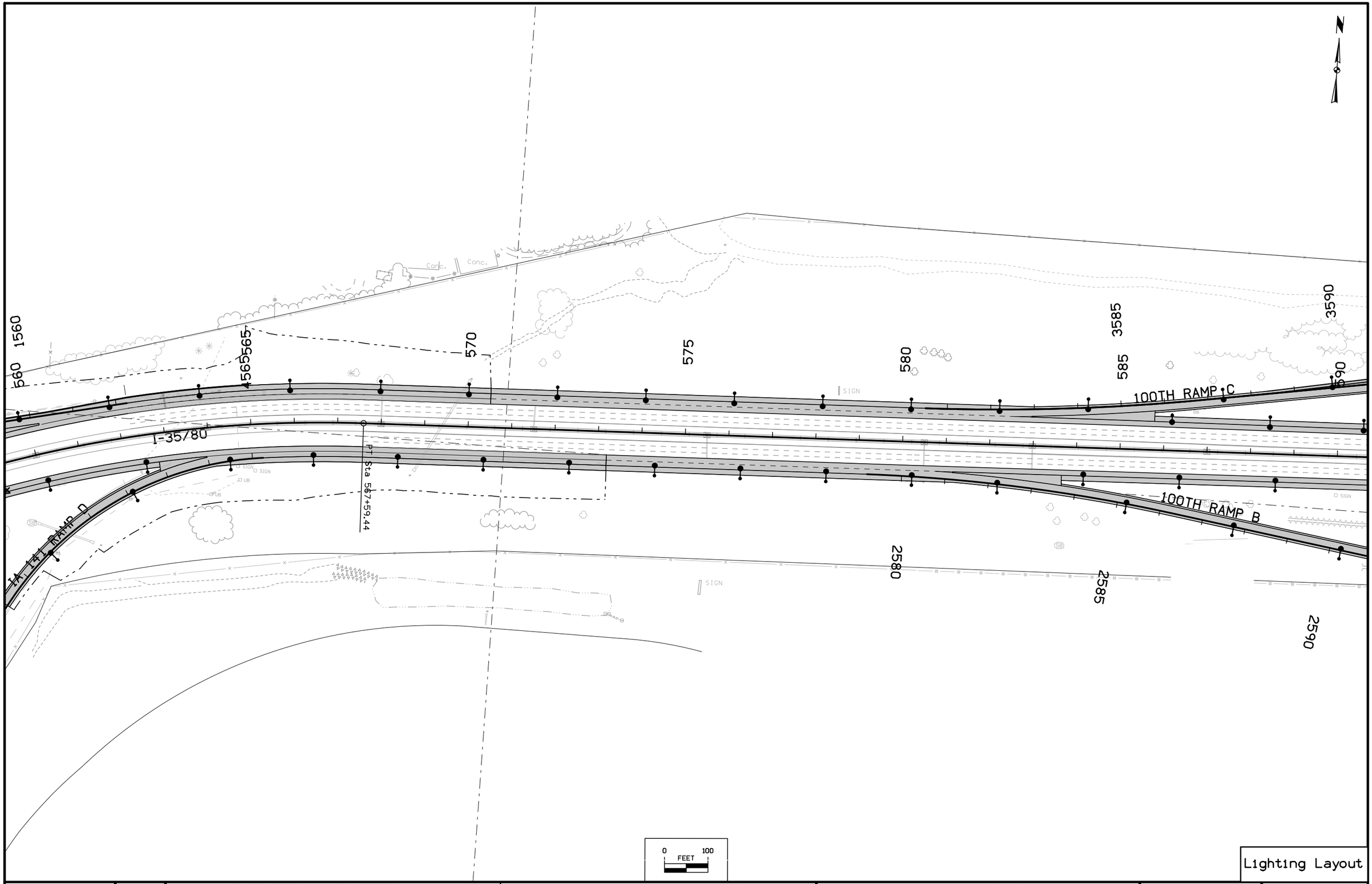
FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER P.3

12:28:57 PM 8/5/2016 untitled pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\TrafEng\Lighting\77080178P1.sht



FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER P.3 ALT

12:29:00 PM 8/5/2016 untitled pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\TrafEng\Lighting\77080178P1.sht



Lighting Layout

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER P.4

12:29:04 PM 8/5/2016 untitled pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\TrafEng\Lighting\77080178P1.sht

LED Underdeck Lighting
(TYP.OF 6)

100TH RAMP A

100TH RAMP B

100TH RAMP C

100TH RAMP D

I-35/80

3590
3595
1500
1505
1510
1515
620
615
610
605
600
595
590
4510
4505
4500
2590
2595

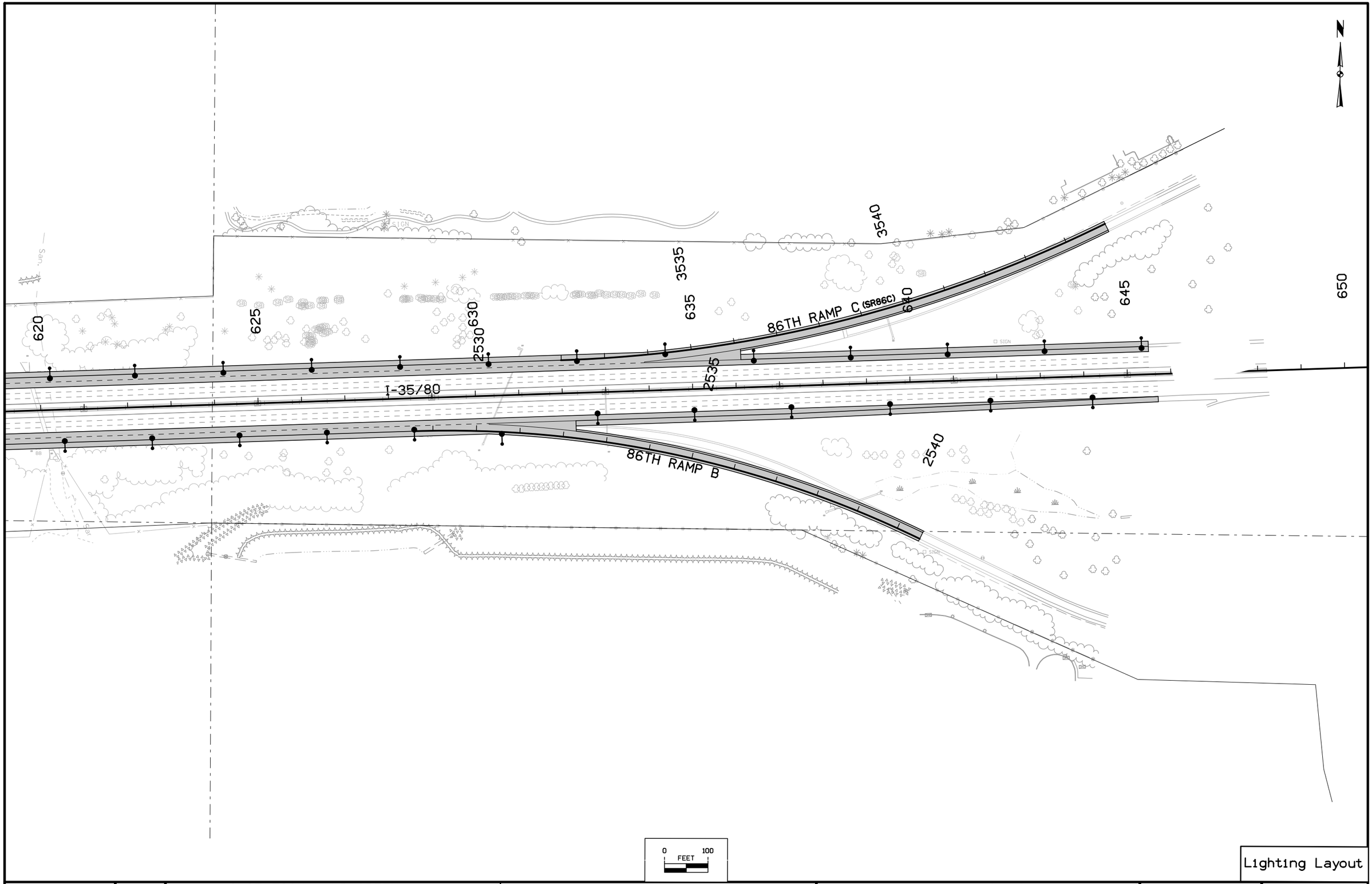
SIGN

0 FEET 100

Lighting Layout

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER P.5

12:29:08 PM 8/5/2016 untitled pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\TrafEng\Lighting\77080178P1.sht



Lighting Layout

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER P.6	

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IA 141 RAMP C

IA 141

IA 141 RAMP B

3555 3560 3565 2560 2565 2570 2575 30 35 40 45 50 55 1550

0 100 FEET

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER P. 7

12:29:15 PM 8/5/2016 untitled pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\TrafEng\Lighting\77080178P1.sht

Tower Light Type 2

IA 141 RAMP C

IA 141

IA 141 RAMP B

3555 3560 3565 2560 2565 2570 2575 30 35 40 45 50 55 1550

0 100 FEET

Lighting Layout

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER P.7 ALT

12:29:18 PM 8/5/2016 untitled pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\TrafEng\Lighting\77080178P1.sht

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

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut				Fill			Checks (EW-102)		Topsoil										
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
			[2]	[3]/1.3		[5]	[4]-[6]															
	Template Cut Volume	Template Class 10 Volume	Total Cut Adjusted	Total Cut Adjusted w/ Weighted Average 1.3 Shrink Factor	Template Fill Volume	Total Fill Adjusted	Total Cut Adjusted w/ 1.3 Shrink Factor Minus Fill	Approx. Fill Volume Below 5' And Above 20' Cu. Yds.	Approx. Fill Volume Below 3' Cu. Yds.	Total Topsoil Cut Volume	Template Topsoil Replacement Volume	Topsoil Cut With 1.4 Shrink Factor	Topsoil Cut With Shrink Minus Topsoil Replacement									
ML080																						
475+70.00	68	68	68	52	0	0	52	0	0	0	0	0	0									
476+00.00	283	283	283	218	12	12	206	0	3	0	0	0	0									
477+00.00	333	333	333	256	13	13	243	0	12	0	0	0	0									
478+00.00	266	266	266	205	9	9	196	0	9	0	0	0	0									
479+00.00	179	179	179	138	44	44	94	0	44	0	0	0	0									
480+00.00	216	216	216	166	93	93	73	0	92	0	0	0	0									
481+00.00	374	374	374	288	72	72	216	0	72	0	0	0	0									
482+00.00	442	442	442	340	39	39	301	0	38	0	0	0	0									
483+00.00	417	417	417	321	23	23	298	0	22	0	0	0	0									
484+00.00	391	391	391	301	0	0	301	0	0	0	0	0	0									
485+00.00	546	546	546	420	21	21	399	0	20	0	0	0	0									
486+00.00	800	800	800	615	154	154	461	0	153	0	0	0	0									
487+00.00	910	910	910	700	334	334	366	0	333	0	0	0	0									
488+00.00	884	884	884	680	275	275	405	0	274	0	0	0	0									
489+00.00	824	824	824	634	168	168	466	0	168	0	0	0	0									
490+00.00	781	781	781	601	188	188	413	0	188	0	0	0	0									
491+00.00	720	720	720	554	209	209	345	0	209	0	0	0	0									
492+00.00	687	687	687	528	284	284	244	0	283	0	0	0	0									
493+00.00	699	699	699	538	278	278	260	0	277	0	0	0	0									
494+00.00	657	657	657	505	242	242	263	0	242	0	0	0	0									
495+00.00	558	558	558	429	258	258	171	0	257	0	0	0	0									
496+00.00	494	494	494	380	323	323	57	0	324	0	0	0	0									
497+00.00	507	507	507	390	390	390	0	0	390	0	0	0	0									
498+00.00	566	566	566	435	390	390	45	0	390	0	0	0	0									
499+00.00	642	642	642	494	368	368	126	0	368	0	0	0	0									
500+00.00	752	752	752	578	360	360	218	0	361	0	0	0	0									
501+00.00	807	807	807	621	369	369	252	0	368	0	0	0	0									
502+00.00	832	832	832	640	361	361	279	0	361	0	0	0	0									
503+00.00	906	906	906	697	309	309	388	0	309	0	0	0	0									
504+00.00	999	999	999	768	274	274	494	0	274	0	0	0	0									
505+00.00	965	965	965	742	314	314	428	0	314	0	0	0	0									
506+00.00	967	967	967	744	303	303	441	0	303	0	0	0	0									
507+00.00	1,196	1,196	1,196	920	273	273	647	0	272	0	0	0	0									
508+00.00	1,632	1,632	1,632	1,255	192	192	1,063	0	190	0	0	0	0									
509+00.00	2,398	2,398	2,398	1,845	107	107	1,738	0	107	0	0	0	0									
510+00.00	2,932	2,932	2,932	2,255	93	93	2,162	0	92	0	0	0	0									
511+00.00	2,784	2,784	2,784	2,142	85	85	2,057	0	85	0	0	0	0									
512+00.00	2,240	2,240	2,240	1,723	63	63	1,660	0	62	0	0	0	0									
513+00.00	1,186	1,186	1,186	912	75	75	837	0	74	0	0	0	0									
514+00.00	387	387	387	298	235	235	63	0	235	0	0	0	0									
515+00.00	289	289	289	222	266	266	-44	0	266	0	0	0	0									
516+00.00	296	296	296	228	135	135	93	0	135	0	0	0	0									
517+00.00	320	320	320	246	79	79	167	0	77	0	0	0	0									
518+00.00	347	347	347	267	98	98	169	0	96	0	0	0	0									
519+00.00	416	416	416	320	141	141	179	0	140	0	0	0	0									
520+00.00	406	406	406	312	140	140	172	0	140	0	0	0	0									
521+00.00	322	322	322	248	222	222	26	0	224	0	0	0	0									
522+00.00	292	292	292	225	354	354	-129	0	355	0	0	0	0									
523+00.00	279	279	279	215	364	364	-149	0	364	0	0	0	0									
524+00.00	388	388	388	298	164	164	134	0	164	0	0	0	0									
525+00.00	510	510	510	392	0	0	392	0	0	0	0	0	0									
526+00.00	517	517	517	398	140	140	258	0	140	0	0	0	0									
527+00.00	480	480	480	369	357	357	12	0	357	0	0	0	0									
528+00.00	438	438	438	337	553	553	-216	0	551	0	0	0	0									
529+00.00	422	422	422	325	735	735	-410	0	735	0	0	0	0									
530+00.00	384	384	384	295	957	957	-662	0	957	0	0	0	0									
531+00.00	319	319	319	245	578	578	-333	0	577	0	0	0	0									
532+00.00	276	276	276	212	47	47	165	0	46	0	0	0	0									
533+00.00	303	303	303	233	96	96	137	0	94	0	0	0	0									
534+00.00	293	293	293	225	249	249	-24	0	248	0	0	0	0									
535+00.00	253	253	253	195	621	621	-426	0	620	0	0	0	0									
536+00.00	249	249	249	192	1,211	1,211	-1,019	0	1,209	0	0	0	0									
537+00.00	400	400	400	308	1,911	1,911	-1,603	0	1,911	0	0	0	0									
538+00.00	648	648	648	498	2,571	2,571	-2,073	0	2,572	0	0	0	0									
539+00.00	789	789	789	607	3,176	3,176	-2,569	0	3,175	0	0	0	0									
540+00.00	944	944	944	726	3,455	3,455	-2,729	0	3,455	0	0	0	0									
541+00.00	1,241	1,241	1,241	955	3,263	3,263	-2,308	0	3,262	0	0	0	0									
542+00.00	1,713	1,713	1,713	1,318	3,018	3,018	-1,700	0	3,016	0	0	0	0									
543+00.00	1,247	1,247	1,247	959	2,720	2,720	-1,761	0	2,720	0	0	0	0									
544+00.00																						

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

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut				Fill			Checks (EW-102)		Topsoil										
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
			[2]	[3]/1.3		[5]	[4]-[6]															
	Template Cut Volume	Template Class 10 Volume	Total Cut Adjusted	Total Cut Adjusted w/ Weighted Average 1.3 Shrink Factor	Template Fill Volume	Total Fill Adjusted	Total Cut Adjusted w/ 1.3 Shrink Factor Minus Fill	Approx. Fill Volume Below 5' And Above 20' Cu. Yds.	Approx. Fill Volume Below 3' Cu. Yds.	Total Topsoil Cut Volume	Template Topsoil Replacement Volume	Topsoil Cut With 1.4 Shrink Factor	Topsoil Cut With Shrink Minus Topsoil Replacement									
544+00.00	161	161	161	124	978	978	-854	0	2,507	0	0	0	0									
544+39.00	100	100	100	77	764	764	-687	0	488	0	0	0	0									
545+00.00	0	0	0	0	4	4	-4	0	2	0	0	0	0									
546+00.00	240	240	240	185	2,133	2,133	-1,948	0	1,627	0	0	0	0									
547+31.00	303	303	303	233	2,097	2,097	-1,864	0	3,980	0	0	0	0									
548+00.00	460	460	460	354	2,117	2,117	-1,763	0	1,461	0	0	0	0									
549+00.00	2,196	2,196	2,196	1,689	1,266	1,266	423	0	1,266	0	0	0	0									
550+00.00	2,139	2,139	2,139	1,645	1,506	1,506	139	0	1,505	0	0	0	0									
551+00.00	723	723	723	556	1,509	1,509	-953	0	1,509	0	0	0	0									
552+00.00	1,794	1,794	1,794	1,380	973	973	407	0	974	0	0	0	0									
553+00.00	1,442	1,442	1,442	1,109	1,364	1,364	-255	0	1,364	0	0	0	0									
554+00.00	382	382	382	294	2,084	2,084	-1,790	0	2,085	0	0	0	0									
555+00.00	299	299	299	230	1,981	1,981	-1,751	0	1,981	0	0	0	0									
556+00.00	264	264	264	203	1,677	1,677	-1,474	0	1,675	0	0	0	0									
557+00.00	259	259	259	199	1,522	1,522	-1,323	0	1,522	0	0	0	0									
558+00.00	490	490	490	377	1,253	1,253	-876	0	1,253	0	0	0	0									
559+00.00	732	732	732	563	1,028	1,028	-465	0	1,027	0	0	0	0									
560+00.00	734	734	734	565	696	696	-131	0	696	0	0	0	0									
561+00.00	649	649	649	499	224	224	275	0	224	0	0	0	0									
562+00.00	831	831	831	639	130	130	509	0	129	0	0	0	0									
563+00.00	923	923	923	710	450	450	260	0	450	0	0	0	0									
564+00.00	1,234	1,234	1,234	949	1,267	1,267	-318	0	1,266	0	0	0	0									
565+00.00	1,533	1,533	1,533	1,179	2,139	2,139	-960	0	2,138	0	0	0	0									
566+00.00	1,100	1,100	1,100	846	2,493	2,493	-1,647	0	2,492	0	0	0	0									
567+00.00	669	669	669	515	2,523	2,523	-2,008	0	2,524	0	0	0	0									
568+00.00	512	512	512	394	2,287	2,287	-1,893	0	2,288	0	0	0	0									
569+00.00	574	574	574	442	2,047	2,047	-1,605	0	2,048	0	0	0	0									
570+00.00	581	581	581	447	1,114	1,114	-667	0	1,114	0	0	0	0									
571+00.00	532	532	532	409	244	244	165	0	244	0	0	0	0									
572+00.00	517	517	517	398	282	282	116	0	281	0	0	0	0									
573+00.00	99	99	99	76	70	70	6	0	348	0	0	0	0									
573+20.00	0	0	0	0	0	0	0	0	35	0	0	0	0									
Subtotals:	71,480	71,480	71,480	54,984	75,443	75,443	-20,459	0	77,684	0	0	0	0									
SRMRDH																						
13+80.00	6	6	6	5	5	5	0	0	0	0	0	0	0									
14+00.00	10	10	10	8	6	6	2	0	0	0	0	0	0									
14+25.00	13	13	13	10	6	6	4	0	0	0	0	0	0									
14+50.00	16	16	16	12	6	6	6	0	0	0	0	0	0									
14+75.00	20	20	20	15	6	6	9	0	0	0	0	0	0									
15+00.00	23	23	23	18	8	8	10	0	2	0	0	0	0									
15+25.00	26	26	26	20	16	16	4	0	10	0	0	0	0									
15+50.00	27	27	27	21	28	28	-7	0	23	0	0	0	0									
15+75.00	27	27	27	21	39	39	-18	0	34	0	0	0	0									
16+00.00	28	28	28	22	52	52	-30	0	46	0	0	0	0									
16+25.00	28	28	28	22	72	72	-50	0	66	0	0	0	0									
16+50.00	27	27	27	21	91	91	-70	0	86	0	0	0	0									
16+75.00	27	27	27	21	102	102	-81	0	97	0	0	0	0									
17+00.00	27	27	27	21	105	105	-84	0	100	0	0	0	0									
17+25.00	27	27	27	21	105	105	-84	0	100	0	0	0	0									
17+50.00	26	26	26	20	111	111	-91	0	106	0	0	0	0									
17+75.00	26	26	26	20	120	120	-100	0	115	0	0	0	0									
18+00.00	26	26	26	20	124	124	-104	0	118	0	0	0	0									
18+25.00	27	27	27	21	131	131	-110	0	125	0	0	0	0									
18+50.00	29	29	29	22	139	139	-117	0	134	0	0	0	0									
18+75.00	31	31	31	24	144	144	-120	0	139	0	0	0	0									
19+00.00	16	16	16	12	78	78	-66	0	144	0	0	0	0									
19+13.00	0	0	0	0	0	0	0	0	38	0	0	0	0									
Subtotals:	513	513	513	397	1,494	1,494	-1,097	0	1,483	0	0	0	0									
SUR141_S																						
11+50.00	172	172	172	132	20	20	112	0	0	0	0	0	0									
11+75.00	138	138	138	106	16	16	90	0	11	0	0	0	0									
12+00.00	86	86	86	66	10	10	56	0	5	0	0	0	0									
12+25.00	55	55	55	42	8	8	34	0	3	0	0	0	0									
12+50.00	16	16	16	12	3	3	9	0	3	0	0	0	0									
12+58.00																						

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

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut				Fill			Checks (EW-102)		Topsoil										
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
			[2]	[3]/1.3		[5]	[4]-[6]															
	Template Cut Volume	Template Class 10 Volume	Total Cut Adjusted	Total Cut Adjusted w/ Weighted Average 1.3 Shrink Factor	Template Fill Volume	Total Fill Adjusted	Total Cut Adjusted w/ 1.3 Shrink Factor Minus Fill	Approx. Fill Volume Below 5' And Above 20' Cu. Yds.	Approx. Fill Volume Below 3' Cu. Yds.	Total Topsoil Cut Volume	Template Topsoil Replacement Volume	Topsoil Cut With 1.4 Shrink Factor	Topsoil Cut With Shrink Minus Topsoil Replacement									
12+58.00	0	0	0	0	0	0	0	0	0	0	0	0	0									
18+61.00	16	16	16	12	0	0	12	0	0	0	0	0	0									
18+75.00	31	31	31	24	0	0	24	0	0	0	0	0	0									
19+00.00	42	42	42	32	0	0	32	0	0	0	0	0	0									
19+25.00	50	50	50	38	0	0	38	0	0	0	0	0	0									
19+50.00	48	48	48	37	0	0	37	0	0	0	0	0	0									
19+75.00	48	48	48	37	0	0	37	0	0	0	0	0	0									
20+00.00	48	48	48	37	0	0	37	0	0	0	0	0	0									
20+25.00	50	50	50	38	0	0	38	0	0	0	0	0	0									
20+50.00	65	65	65	50	0	0	50	0	0	0	0	0	0									
20+75.00	91	91	91	70	0	0	70	0	0	0	0	0	0									
21+00.00	117	117	117	90	0	0	90	0	0	0	0	0	0									
21+25.00	110	110	110	85	0	0	85	0	0	0	0	0	0									
21+50.00	0	0	0	0	0	0	0	0	36	0	0	0	0									
23+00.00	74	74	74	57	62	62	-5	0	369	0	0	0	0									
23+25.00	154	154	154	118	26	26	92	0	25	0	0	0	0									
23+50.00	255	255	255	196	0	0	196	0	0	0	0	0	0									
23+75.00	286	286	286	220	0	0	220	0	0	0	0	0	0									
24+00.00	285	285	285	219	0	0	219	0	0	0	0	0	0									
24+25.00	266	266	266	205	0	0	205	0	0	0	0	0	0									
24+50.00	212	212	212	163	0	0	163	0	0	0	0	0	0									
24+75.00	109	109	109	84	0	0	84	0	0	0	0	0	0									
25+00.00	42	42	42	32	0	0	32	0	0	0	0	0	0									
25+25.00	37	37	37	28	0	0	28	0	0	0	0	0	0									
25+50.00	28	28	28	22	0	0	22	0	0	0	0	0	0									
25+75.00	25	25	25	19	0	0	19	0	0	0	0	0	0									
26+00.00	32	32	32	25	0	0	25	0	0	0	0	0	0									
26+25.00	40	40	40	31	0	0	31	0	0	0	0	0	0									
26+50.00	48	48	48	37	0	0	37	0	0	0	0	0	0									
26+75.00	50	50	50	38	0	0	38	0	0	0	0	0	0									
27+00.00	49	49	49	38	0	0	38	0	0	0	0	0	0									
27+25.00	51	51	51	39	0	0	39	0	0	0	0	0	0									
27+50.00	55	55	55	42	0	0	42	0	0	0	0	0	0									
27+75.00	61	61	61	47	0	0	47	0	0	0	0	0	0									
28+00.00	63	63	63	48	0	0	48	0	0	0	0	0	0									
28+25.00	61	61	61	47	0	0	47	0	0	0	0	0	0									
28+50.00	56	56	56	43	0	0	43	0	0	0	0	0	0									
28+75.00	52	52	52	40	0	0	40	0	0	0	0	0	0									
29+00.00	51	51	51	39	0	0	39	0	0	0	0	0	0									
29+25.00	52	52	52	40	0	0	40	0	0	0	0	0	0									
29+50.00	53	53	53	41	0	0	41	0	0	0	0	0	0									
29+75.00	52	52	52	40	0	0	40	0	0	0	0	0	0									
30+00.00	54	54	54	42	0	0	42	0	0	0	0	0	0									
30+25.00	53	53	53	41	0	0	41	0	0	0	0	0	0									
30+50.00	49	49	49	38	0	0	38	0	0	0	0	0	0									
30+75.00	43	43	43	33	0	0	33	0	0	0	0	0	0									
31+00.00	26	26	26	20	0	0	20	0	0	0	0	0	0									
31+25.00	0	0	0	0	0	0	0	0	0	0	0	0	0									
34+50.00	5	5	5	4	0	0	4	0	0	0	0	0	0									
34+75.00	5	5	5	4	0	0	4	0	0	0	0	0	0									
35+00.00	5	5	5	4	0	0	4	0	0	0	0	0	0									
35+25.00	5	5	5	4	0	0	4	0	0	0	0	0	0									
35+50.00	5	5	5	4	0	0	4	0	0	0	0	0	0									
35+75.00	4	4	4	3	0	0	3	0	0	0	0	0	0									
36+00.00	4	4	4	3	0	0	3	0	0	0	0	0	0									
36+25.00	3	3	3	2	0	0	2	0	0	0	0	0	0									
36+50.00	3	3	3	2	0	0	2	0	0	0	0	0	0									
36+75.00	3	3	3	2	0	0	2	0	0	0	0	0	0									
37+00.00	3	3	3	2	0	0	2	0	0	0	0	0	0									
37+25.00	22	22	22	17	42	42	-25	0	41	0	0	0	0									
37+50.00	41	41	41	32	83	83	-51	0	82	0	0	0	0									
37+75.00	42	42	42	32	82	82	-50	0	81	0	0	0	0									
38+00.00	43	43	43	33	78	78	-45	0	78	0	0	0	0									
38+25.00	44	44	44	34	75	75	-41	0	75	0	0	0	0									
38+50.00	46	46	46	35	72	72	-37	0	72	0	0	0	0									
38+75.00	46	46	46	35	71	71	-36	0	70	0	0	0	0									
39+00.00	45	45	45	35	73	73	-38	0	73	0	0	0	0									
39+25.00	45	45	45	35	75	75	-40	0	74	0	0	0	0									
39+50.00	45	45	45	35	72	72	-37	0	71	0	0	0	0									
39+75.00	50	50	50	38	37	37	1	0	37	0	0	0	0									
40+00.00																						

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

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut				Fill			Checks (EW-102)		Topsoil										
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
			[2]	[3]/1.3		[5]	[4]-[6]															
	Template Cut Volume	Template Class 10 Volume	Total Cut Adjusted	Total Cut Adjusted w/ Weighted Average 1.3 Shrink Factor	Template Fill Volume	Total Fill Adjusted	Total Cut Adjusted w/ 1.3 Shrink Factor Minus Fill	Approx. Fill Volume Below 5' And Above 20' Cu. Yds.	Approx. Fill Volume Below 3' Cu. Yds.	Total Topsoil Cut Volume	Template Topsoil Replacement Volume	Topsoil Cut With 1.4 Shrink Factor	Topsoil Cut With Shrink Minus Topsoil Replacement									
40+00.00	76	76	76	58	2	2	56	0	2	0	0	0	0									
40+25.00	111	111	111	85	0	0	85	0	0	0	0	0	0									
40+50.00	121	121	121	93	0	0	93	0	0	0	0	0	0									
40+75.00	116	116	116	89	0	0	89	0	0	0	0	0	0									
41+00.00	0	0	0	0	0	0	0	0	0	0	0	0	0									
Subtotals:	4,945	4,945	4,945	3,800	907	907	2,893	0	1,208	0	0	0	0									
SUR141_N																						
41+25.00	56	56	56	43	4	4	39	0	0	0	0	0	0									
41+50.00	40	40	40	31	14	14	17	0	14	0	0	0	0									
41+75.00	43	43	43	33	33	33	0	0	32	0	0	0	0									
42+00.00	61	61	61	47	59	59	-12	0	59	0	0	0	0									
42+25.00	71	71	71	55	69	69	-14	0	69	0	0	0	0									
42+50.00	63	63	63	48	61	61	-13	0	60	0	0	0	0									
42+75.00	56	56	56	43	54	54	-11	0	53	0	0	0	0									
43+00.00	52	52	52	40	51	51	-11	0	51	0	0	0	0									
43+25.00	47	47	47	36	51	51	-15	0	51	0	0	0	0									
43+50.00	45	45	45	35	47	47	-12	0	46	0	0	0	0									
43+75.00	47	47	47	36	40	40	-4	0	39	0	0	0	0									
44+00.00	46	46	46	35	38	38	-3	0	37	0	0	0	0									
44+25.00	42	42	42	32	39	39	-7	0	38	0	0	0	0									
44+50.00	43	43	43	33	34	34	-1	0	34	0	0	0	0									
44+75.00	47	47	47	36	27	27	9	0	27	0	0	0	0									
45+00.00	49	49	49	38	24	24	14	0	24	0	0	0	0									
45+25.00	48	48	48	37	25	25	12	0	25	0	0	0	0									
45+50.00	48	48	48	37	27	27	10	0	27	0	0	0	0									
45+75.00	48	48	48	37	28	28	9	0	27	0	0	0	0									
46+00.00	49	49	49	38	26	26	12	0	25	0	0	0	0									
46+25.00	49	49	49	38	21	21	17	0	20	0	0	0	0									
46+50.00	45	45	45	35	16	16	19	0	15	0	0	0	0									
46+75.00	42	42	42	32	12	12	20	0	11	0	0	0	0									
47+00.00	40	40	40	31	9	9	22	0	9	0	0	0	0									
47+25.00	40	40	40	31	9	9	22	0	8	0	0	0	0									
47+50.00	40	40	40	31	9	9	22	0	9	0	0	0	0									
47+75.00	27	27	27	21	11	11	10	0	11	0	0	0	0									
48+00.00	15	15	15	12	12	12	0	0	12	0	0	0	0									
48+25.00	17	17	17	13	12	12	1	0	11	0	0	0	0									
48+50.00	19	19	19	15	11	11	4	0	11	0	0	0	0									
48+75.00	20	20	20	15	12	12	3	0	12	0	0	0	0									
49+00.00	20	20	20	15	12	12	3	0	12	0	0	0	0									
49+25.00	22	22	22	17	11	11	6	0	11	0	0	0	0									
49+50.00	22	22	22	17	11	11	6	0	11	0	0	0	0									
49+75.00	21	21	21	16	11	11	5	0	10	0	0	0	0									
50+00.00	22	22	22	17	8	8	9	0	7	0	0	0	0									
50+25.00	24	24	24	18	5	5	13	0	4	0	0	0	0									
50+50.00	25	25	25	19	4	4	15	0	3	0	0	0	0									
50+75.00	26	26	26	20	3	3	17	0	2	0	0	0	0									
51+00.00	0	0	0	0	0	0	0	0	1	0	0	0	0									
53+50.00	0	0	0	0	0	0	0	0	55	0	0	0	0									
53+75.00	47	47	47	36	14	14	22	0	14	0	0	0	0									
54+00.00	47	47	47	36	14	14	22	0	14	0	0	0	0									
54+25.00	48	48	48	37	10	10	27	0	9	0	0	0	0									
54+50.00	46	46	46	35	7	7	28	0	7	0	0	0	0									
54+75.00	46	46	46	35	7	7	28	0	6	0	0	0	0									
55+00.00	45	45	45	35	7	7	28	0	7	0	0	0	0									
55+25.00	42	42	42	32	8	8	24	0	7	0	0	0	0									
55+50.00	40	40	40	31	9	9	22	0	8	0	0	0	0									
55+75.00	39	39	39	30	12	12	18	0	12	0	0	0	0									
56+00.00	38	38	38	29	16	16	13	0	16	0	0	0	0									
56+25.00	37	37	37	28	20	20	8	0	19	0	0	0	0									
56+50.00	38	38	38	29	25	25	4	0	24	0	0	0	0									
56+75.00	39	39	39	30	31	31	-1	0	31	0	0	0	0									
57+00.00	41	41	41	32	38	38	-6	0	37	0	0	0	0									
57+25.00	43	43	43	33	36	36	-3	0	35	0	0	0	0									
57+50.00	43	43	43	33	30	30	3	0	30	0	0	0	0									
57+75.00	43	43	43	33	26	26	7	0	26	0	0	0	0									
58+00.00	44	44	44	34	21	21	13	0	20	0	0	0	0									
58+25.00	43	43	43	33	16	16	17	0	15	0	0	0	0									
58+50.00																						

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

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut				Fill			Checks (EW-102)		Topsoil										
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
			[2]	[3]/1.3		[5]	[4]-[6]															
	Template Cut Volume	Template Class 10 Volume	Total Cut Adjusted	Total Cut Adjusted w/ Weighted Average 1.3 Shrink Factor	Template Fill Volume	Total Fill Adjusted	Total Cut Adjusted w/ 1.3 Shrink Factor Minus Fill	Approx. Fill Volume Below 5' And Above 20' Cu. Yds.	Approx. Fill Volume Below 3' Cu. Yds.	Total Topsoil Cut Volume	Template Topsoil Replacement Volume	Topsoil Cut With 1.4 Shrink Factor	Topsoil Cut With Shrink Minus Topsoil Replacement									
58+50.00	43	43	43	33	7	7	26	0	6	0	0	0	0									
58+75.00	43	43	43	33	0	0	33	0	0	0	0	0	0									
59+00.00	44	44	44	34	0	0	34	0	0	0	0	0	0									
59+25.00	45	45	45	35	0	0	35	0	0	0	0	0	0									
59+50.00	45	45	45	35	0	0	35	0	0	0	0	0	0									
59+75.00	44	44	44	34	0	0	34	0	0	0	0	0	0									
60+00.00	44	44	44	34	0	0	34	0	0	0	0	0	0									
60+25.00	36	36	36	28	0	0	28	0	0	0	0	0	0									
60+46.07	0	0	0	0	0	0	0	0	0	0	0	0	0									
Subtotals:	2,690	2,690	2,690	2,070	1,304	1,304	766	0	1,326	0	0	0	0									
SRDGWBA																						
1575+30.00	33	33	33	25	0	0	25	0	0	0	0	0	0									
1575+50.00	44	44	44	34	3	3	31	0	2	0	0	0	0									
1575+75.00	40	40	40	31	13	13	18	0	13	0	0	0	0									
1576+00.00	39	39	39	30	30	30	0	0	30	0	0	0	0									
1576+25.00	37	37	37	28	44	44	-16	0	43	0	0	0	0									
1576+50.00	35	35	35	27	55	55	-28	0	54	0	0	0	0									
1576+75.00	33	33	33	25	74	74	-49	0	73	0	0	0	0									
1577+00.00	32	32	32	25	90	90	-65	0	90	0	0	0	0									
1577+25.00	39	39	39	30	97	97	-67	0	96	0	0	0	0									
1577+50.00	50	50	50	38	97	97	-59	0	97	0	0	0	0									
1577+75.00	52	52	52	40	96	96	-56	0	95	0	0	0	0									
1578+00.00	50	50	50	38	95	95	-57	0	95	0	0	0	0									
1578+25.00	47	47	47	36	95	95	-59	0	94	0	0	0	0									
1578+50.00	44	44	44	34	95	95	-61	0	94	0	0	0	0									
1578+75.00	44	44	44	34	92	92	-58	0	92	0	0	0	0									
1579+00.00	45	45	45	35	90	90	-55	0	89	0	0	0	0									
1579+25.00	42	42	42	32	92	92	-60	0	92	0	0	0	0									
1579+50.00	39	39	39	30	96	96	-66	0	96	0	0	0	0									
1579+75.00	35	35	35	27	95	95	-68	0	95	0	0	0	0									
1580+00.00	33	33	33	25	91	91	-66	0	90	0	0	0	0									
1580+25.00	31	31	31	24	90	90	-66	0	90	0	0	0	0									
1580+50.00	29	29	29	22	85	85	-63	0	85	0	0	0	0									
1580+75.00	29	29	29	22	77	77	-55	0	76	0	0	0	0									
1581+00.00	29	29	29	22	75	75	-53	0	74	0	0	0	0									
1581+25.00	29	29	29	22	71	71	-49	0	71	0	0	0	0									
1581+50.00	31	31	31	24	67	67	-43	0	67	0	0	0	0									
1581+75.00	34	34	34	26	67	67	-41	0	67	0	0	0	0									
1582+00.00	36	36	36	28	63	63	-35	0	63	0	0	0	0									
1582+25.00	34	34	34	26	56	56	-30	0	56	0	0	0	0									
1582+50.00	26	26	26	20	36	36	-16	0	35	0	0	0	0									
1582+75.00	23	23	23	18	12	12	6	0	12	0	0	0	0									
1583+00.00	33	33	33	25	3	3	22	0	2	0	0	0	0									
1583+25.00	40	40	40	31	0	0	31	0	0	0	0	0	0									
1583+50.00	39	39	39	30	0	0	30	0	0	0	0	0	0									
1583+75.00	37	37	37	28	0	0	28	0	0	0	0	0	0									
1584+00.00	35	35	35	27	0	0	27	0	0	0	0	0	0									
1584+25.00	34	34	34	26	0	0	26	0	0	0	0	0	0									
1584+50.00	32	32	32	25	0	0	25	0	0	0	0	0	0									
1584+75.00	30	30	30	23	0	0	23	0	0	0	0	0	0									
1585+00.00	27	27	27	21	0	0	21	0	0	0	0	0	0									
1585+25.00	25	25	25	19	0	0	19	0	0	0	0	0	0									
1585+50.00	24	24	24	18	0	0	18	0	0	0	0	0	0									
1585+75.00	3	3	3	2	0	0	2	0	0	0	0	0	0									
1585+78.00	0	0	0	0	0	0	0	0	0	0	0	0	0									
Subtotals:	1,503	1,503	1,503	1,153	2,142	2,142	-989	0	2,128	0	0	0	0									
SRDGWBD																						
4584+75.00	26	26	26	20	7	7	13	0	0	0	0	0	0									
4585+00.00	22	22	22	17	11	11	6	0	11	0	0	0	0									
4585+25.00	17	17	17	13	12	12	1	0	12	0	0	0	0									
4585+50.00	7	7	7	5	6	6	-1	0	13	0	0	0	0									
4585+61.00	0	0	0	0	0	0	0	0	3	0	0	0	0									
Subtotals:	72	72	72	55	36	36	19	0	39	0	0	0	0									

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

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut				Fill			Checks (EW-102)		Topsoil										
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
			[2]	[3]/1.3		[5]	[4]-[6]															
	Template Cut Volume	Template Class 10 Volume	Total Cut Adjusted	Total Cut Adjusted w/ Weighted Average 1.3 Shrink Factor	Template Fill Volume	Total Fill Adjusted	Total Cut Adjusted w/ 1.3 Shrink Factor Minus Fill	Approx. Fill Volume Below 5' And Above 20' Cu. Yds.	Approx. Fill Volume Below 3' Cu. Yds.	Total Topsoil Cut Volume	Template Topsoil Replacement Volume	Topsoil Cut With 1.4 Shrink Factor	Topsoil Cut With Shrink Minus Topsoil Replacement									
SRMRDHB																						
2513+75.00	95	95	95	73	2	2	71	0	0	0	0	0	0									
2514+00.00	88	88	88	68	3	3	65	0	3	0	0	0	0									
2514+25.00	85	85	85	65	5	5	60	0	4	0	0	0	0									
2514+50.00	80	80	80	62	8	8	54	0	7	0	0	0	0									
2514+75.00	69	69	69	53	14	14	39	0	13	0	0	0	0									
2515+00.00	58	58	58	45	23	23	22	0	23	0	0	0	0									
2515+25.00	50	50	50	38	38	38	0	0	37	0	0	0	0									
2515+50.00	44	44	44	34	55	55	-21	0	55	0	0	0	0									
2515+75.00	153	153	153	118	73	73	45	0	72	0	0	0	0									
2516+00.00	147	147	147	113	86	86	27	0	85	0	0	0	0									
2516+25.00	45	45	45	35	93	93	-58	0	93	0	0	0	0									
2516+50.00	56	56	56	43	99	99	-56	0	98	0	0	0	0									
2516+75.00	30	30	30	23	97	97	-74	0	96	0	0	0	0									
2517+00.00	6	6	6	5	91	91	-86	0	91	0	0	0	0									
2517+25.00	4	4	4	3	94	94	-91	0	93	0	0	0	0									
2517+50.00	4	4	4	3	92	92	-89	0	92	0	0	0	0									
2517+75.00	6	6	6	5	87	87	-82	0	87	0	0	0	0									
2518+00.00	9	9	9	7	89	89	-82	0	89	0	0	0	0									
2518+25.00	12	12	12	9	89	89	-80	0	89	0	0	0	0									
2518+50.00	15	15	15	12	89	89	-77	0	88	0	0	0	0									
2518+75.00	17	17	17	13	86	86	-73	0	85	0	0	0	0									
2519+00.00	18	18	18	14	86	86	-72	0	86	0	0	0	0									
2519+25.00	17	17	17	13	94	94	-81	0	93	0	0	0	0									
2519+50.00	14	14	14	11	103	103	-92	0	102	0	0	0	0									
2519+75.00	10	10	10	8	116	116	-108	0	115	0	0	0	0									
2520+00.00	6	6	6	5	130	130	-125	0	130	0	0	0	0									
2520+25.00	2	2	2	2	143	143	-141	0	143	0	0	0	0									
2520+50.00	0	0	0	0	157	157	-157	0	157	0	0	0	0									
2520+75.00	0	0	0	0	171	171	-171	0	171	0	0	0	0									
2521+00.00	0	0	0	0	188	188	-188	0	187	0	0	0	0									
2521+25.00	0	0	0	0	204	204	-204	0	204	0	0	0	0									
2521+50.00	0	0	0	0	208	208	-208	0	207	0	0	0	0									
2521+75.00	0	0	0	0	248	248	-248	0	248	0	0	0	0									
2522+00.00	0	0	0	0	306	306	-306	0	305	0	0	0	0									
2522+25.00	0	0	0	0	361	361	-361	0	361	0	0	0	0									
2522+50.00	0	0	0	0	428	428	-428	0	427	0	0	0	0									
2522+75.00	0	0	0	0	475	475	-475	0	475	0	0	0	0									
2523+00.00	0	0	0	0	523	523	-523	0	523	0	0	0	0									
2523+25.00	0	0	0	0	570	570	-570	0	569	0	0	0	0									
2523+50.00	0	0	0	0	611	611	-611	0	611	0	0	0	0									
2523+75.00	0	0	0	0	644	644	-644	0	643	0	0	0	0									
2524+00.00	0	0	0	0	687	687	-687	0	687	0	0	0	0									
2524+25.00	0	0	0	0	708	708	-708	0	707	0	0	0	0									
2524+50.00	0	0	0	0	641	641	-641	0	640	0	0	0	0									
2524+75.00	0	0	0	0	0	0	0	0	292	0	0	0	0									
Subtotals:	1,140	1,140	1,140	880	9,115	9,115	-8,235	0	9,383	0	0	0	0									
SRMRDHC																						
3515+81.00	56	56	56	43	66	66	-23	0	0	0	0	0	0									
3516+00.00	48	48	48	37	80	80	-43	0	60	0	0	0	0									
3516+25.00	32	32	32	25	69	69	-44	0	68	0	0	0	0									
3516+50.00	17	17	17	13	61	61	-48	0	60	0	0	0	0									
3516+75.00	5	5	5	4	60	60	-56	0	60	0	0	0	0									
3517+00.00	0	0	0	0	51	51	-51	0	51	0	0	0	0									
3517+25.00	0	0	0	0	39	39	-39	0	39	0	0	0	0									
3517+50.00	0	0	0	0	37	37	-37	0	37	0	0	0	0									
3517+75.00	0	0	0	0	45	45	-45	0	44	0	0	0	0									
3518+00.00	0	0	0	0	61	61	-61	0	61	0	0	0	0									
3518+25.00	0	0	0	0	80	80	-80	0	79	0	0	0	0									
3518+50.00	0	0	0	0	94	94	-94	0	93	0	0	0	0									
3518+75.00	0	0	0	0	104	104	-104	0	104	0	0	0	0									
3519+00.00	1	1	1	1	114	114	-113	0	113	0	0	0	0									
3519+25.00	2	2	2	2	125	125	-123	0	125	0	0	0	0									
3519+50.00	4	4	4	3	140	140	-137	0	139	0	0	0	0									
3519+75.00	2	2	2	2	160	160	-158	0	159	0	0	0	0									
3520+00.00																						

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

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut				Fill			Checks (EW-102)		Topsoil										
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
			[2]	[3]/1.3		[5]	[4]-[6]															
	Template Cut Volume	Template Class 10 Volume	Total Cut Adjusted	Total Cut Adjusted w/ Weighted Average 1.3 Shrink Factor	Template Fill Volume	Total Fill Adjusted	Total Cut Adjusted w/ 1.3 Shrink Factor Minus Fill	Approx. Fill Volume Below 5' And Above 20' Cu. Yds.	Approx. Fill Volume Below 3' Cu. Yds.	Total Topsoil Cut Volume	Template Topsoil Replacement Volume	Topsoil Cut With 1.4 Shrink Factor	Topsoil Cut With Shrink Minus Topsoil Replacement									
3520+00.00	0	0	0	0	182	182	-182	0	181	0	0	0	0									
3520+25.00	0	0	0	0	216	216	-216	0	215	0	0	0	0									
3520+50.00	0	0	0	0	271	271	-271	0	271	0	0	0	0									
3520+75.00	0	0	0	0	341	341	-341	0	340	0	0	0	0									
3521+00.00	0	0	0	0	426	426	-426	0	425	0	0	0	0									
3521+25.00	0	0	0	0	505	505	-505	0	505	0	0	0	0									
3521+50.00	0	0	0	0	453	453	-453	0	453	0	0	0	0									
3521+75.00	0	0	0	0	386	386	-386	0	386	0	0	0	0									
3522+00.00	0	0	0	0	421	421	-421	0	421	0	0	0	0									
3522+25.00	0	0	0	0	456	456	-456	0	455	0	0	0	0									
3522+50.00	0	0	0	0	488	488	-488	0	487	0	0	0	0									
3522+75.00	0	0	0	0	520	520	-520	0	520	0	0	0	0									
3523+00.00	0	0	0	0	556	556	-556	0	556	0	0	0	0									
3523+25.00	0	0	0	0	589	589	-589	0	589	0	0	0	0									
3523+50.00	0	0	0	0	614	614	-614	0	613	0	0	0	0									
3523+75.00	0	0	0	0	613	613	-613	0	613	0	0	0	0									
3524+00.00	0	0	0	0	616	616	-616	0	616	0	0	0	0									
3524+25.00	0	0	0	0	655	655	-655	0	655	0	0	0	0									
3524+50.00	0	0	0	0	0	0	0	0	339	0	0	0	0									
Subtotals:	167	167	167	130	9,694	9,694	-9,564	0	9,932	0	0	0	0									
SR141A																						
1546+00.00																						
1546+25.00	130	130	130	100	359	359	-259	0	0	0	0	0	0									
1546+50.00	231	231	231	178	217	217	-39	0	216	0	0	0	0									
1546+75.00	341	341	341	262	110	110	152	0	110	0	0	0	0									
1547+00.00	441	441	441	339	44	44	295	0	43	0	0	0	0									
1547+25.00	562	562	562	432	8	8	424	0	7	0	0	0	0									
1547+50.00	719	719	719	553	0	0	553	0	0	0	0	0	0									
1547+75.00	881	881	881	678	0	0	678	0	0	0	0	0	0									
1548+00.00	1,031	1,031	1,031	793	0	0	793	0	0	0	0	0	0									
1548+25.00	1,169	1,169	1,169	899	0	0	899	0	0	0	0	0	0									
1548+50.00	1,302	1,302	1,302	1,002	0	0	1,002	0	0	0	0	0	0									
1548+75.00	1,414	1,414	1,414	1,088	0	0	1,088	0	0	0	0	0	0									
1549+00.00	1,472	1,472	1,472	1,132	0	0	1,132	0	0	0	0	0	0									
1549+25.00	1,458	1,458	1,458	1,122	0	0	1,122	0	0	0	0	0	0									
1549+50.00	1,395	1,395	1,395	1,073	0	0	1,073	0	0	0	0	0	0									
1549+75.00	1,177	1,177	1,177	905	0	0	905	0	0	0	0	0	0									
1550+00.00	785	785	785	604	24	24	580	0	24	0	0	0	0									
1550+25.00	430	430	430	331	99	99	232	0	98	0	0	0	0									
1550+50.00	239	239	239	184	203	203	-19	0	203	0	0	0	0									
1550+75.00	177	177	177	136	340	340	-204	0	339	0	0	0	0									
1551+00.00	135	135	135	104	459	459	-355	0	458	0	0	0	0									
1551+25.00	91	91	91	70	454	454	-384	0	453	0	0	0	0									
1551+50.00	58	58	58	45	361	361	-316	0	361	0	0	0	0									
1551+75.00	35	35	35	27	275	275	-248	0	275	0	0	0	0									
1552+00.00	18	18	18	14	204	204	-190	0	204	0	0	0	0									
1552+25.00	11	11	11	8	138	138	-130	0	137	0	0	0	0									
1552+50.00	22	22	22	17	105	105	-88	0	104	0	0	0	0									
1552+75.00	50	50	50	38	111	111	-73	0	110	0	0	0	0									
1553+00.00	80	80	80	62	124	124	-62	0	124	0	0	0	0									
1553+25.00	96	96	96	74	136	136	-62	0	136	0	0	0	0									
1553+50.00	105	105	105	81	148	148	-67	0	148	0	0	0	0									
1553+75.00	109	109	109	84	158	158	-74	0	158	0	0	0	0									
1554+00.00	108	108	108	83	163	163	-80	0	162	0	0	0	0									
1554+25.00	103	103	103	79	168	168	-89	0	168	0	0	0	0									
1554+50.00	96	96	96	74	177	177	-103	0	177	0	0	0	0									
1554+75.00	86	86	86	66	180	180	-114	0	179	0	0	0	0									
1555+00.00	74	74	74	57	174	174	-117	0	174	0	0	0	0									
1555+25.00	62	62	62	48	172	172	-124	0	171	0	0	0	0									
1555+50.00	51	51	51	39	171	171	-132	0	170	0	0	0	0									
1555+75.00	40	40	40	31	167	167	-136	0	167	0	0	0	0									
1556+00.00	30	30	30	23	167	167	-144	0	167	0	0	0	0									
1556+25.00	22	22	22	17	167	167	-150	0	167	0	0	0	0									
1556+50.00	16	16	16	12	165	165	-153	0	164	0	0	0	0									
1556+75.00	11	11	11	8	161	161	-153	0	161	0	0	0	0									
1557+00.00	7	7	7	5	150	150	-145	0	150	0	0	0	0									
1557+25.00	4	4	4	3	139	139	-136	0	138	0	0	0	0									
1557+50.00	2	2	2	2	134	134	-132	0	134	0	0	0	0									

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

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut				Fill			Checks (EW-102)		Topsoil										
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
			[2]	[3]/1.3		[5]	[4]-[6]															
	Template Cut Volume	Template Class 10 Volume	Total Cut Adjusted	Total Cut Adjusted w/ Weighted Average 1.3 Shrink Factor	Template Fill Volume	Total Fill Adjusted	Total Cut Adjusted w/ 1.3 Shrink Factor Minus Fill	Approx. Fill Volume Below 5' And Above 20' Cu. Yds.	Approx. Fill Volume Below 3' Cu. Yds.	Total Topsoil Cut Volume	Template Topsoil Replacement Volume	Topsoil Cut With 1.4 Shrink Factor	Topsoil Cut With Shrink Minus Topsoil Replacement									
1557+50.00	0	0	0	0	129	129	-129	0	128	0	0	0	0									
1557+75.00	0	0	0	0	119	119	-119	0	118	0	0	0	0									
1558+00.00	0	0	0	0	71	71	-71	0	106	0	0	0	0									
1558+16.63	0	0	0	0	0	0	0	0	32	0	0	0	0									
Subtotals:	16,876	16,876	16,876	12,982	6,851	6,851	6,131	0	6,541	0	0	0	0									
SR141B																						
2531+16.00	6	6	6	5	71	71	-66	0	0	0	0	0	0									
2531+25.00	16	16	16	12	209	209	-197	0	75	0	0	0	0									
2531+50.00	18	18	18	14	218	218	-204	0	217	0	0	0	0									
2531+75.00	19	19	19	15	225	225	-210	0	224	0	0	0	0									
2532+00.00	19	19	19	15	245	245	-230	0	244	0	0	0	0									
2532+25.00	18	18	18	14	266	266	-252	0	266	0	0	0	0									
2532+50.00	19	19	19	15	282	282	-267	0	282	0	0	0	0									
2532+75.00	20	20	20	15	307	307	-292	0	307	0	0	0	0									
2533+00.00	21	21	21	16	337	337	-321	0	337	0	0	0	0									
2533+25.00	22	22	22	17	373	373	-356	0	372	0	0	0	0									
2533+50.00	21	21	21	16	415	415	-399	0	415	0	0	0	0									
2533+75.00	20	20	20	15	452	452	-437	0	451	0	0	0	0									
2534+00.00	19	19	19	15	488	488	-473	0	487	0	0	0	0									
2534+25.00	21	21	21	16	533	533	-517	0	532	0	0	0	0									
2534+50.00	24	24	24	18	596	596	-578	0	595	0	0	0	0									
2534+75.00	25	25	25	19	682	682	-663	0	681	0	0	0	0									
2535+00.00	31	31	31	24	754	754	-730	0	754	0	0	0	0									
2535+25.00	36	36	36	28	814	814	-786	0	813	0	0	0	0									
2535+50.00	27	27	27	21	900	900	-879	0	900	0	0	0	0									
2535+75.00	24	24	24	18	1,028	1,028	-1,010	0	1,027	0	0	0	0									
2536+00.00	31	31	31	24	1,181	1,181	-1,157	0	1,181	0	0	0	0									
2536+25.00	30	30	30	23	1,331	1,331	-1,308	0	1,331	0	0	0	0									
2536+50.00	25	25	25	19	1,525	1,525	-1,506	0	1,524	0	0	0	0									
2536+75.00	17	17	17	13	1,625	1,625	-1,612	0	1,765	0	0	0	0									
2536+98.00	0	0	0	0	0	0	0	0	1,234	0	0	0	0									
2560+82.00	0	0	0	0	564	564	-564	0	0	0	0	0	0									
2561+00.00	0	0	0	0	754	754	-754	0	543	0	0	0	0									
2561+25.00	0	0	0	0	722	722	-722	0	722	0	0	0	0									
2561+50.00	0	0	0	0	685	685	-685	0	684	0	0	0	0									
2561+75.00	0	0	0	0	649	649	-649	0	648	0	0	0	0									
2562+00.00	0	0	0	0	613	613	-613	0	612	0	0	0	0									
2562+25.00	0	0	0	0	575	575	-575	0	575	0	0	0	0									
2562+50.00	0	0	0	0	540	540	-540	0	540	0	0	0	0									
2562+75.00	0	0	0	0	499	499	-499	0	499	0	0	0	0									
2563+00.00	0	0	0	0	461	461	-461	0	461	0	0	0	0									
2563+25.00	0	0	0	0	430	430	-430	0	430	0	0	0	0									
2563+50.00	0	0	0	0	396	396	-396	0	395	0	0	0	0									
2563+75.00	0	0	0	0	356	356	-356	0	355	0	0	0	0									
2564+00.00	0	0	0	0	169	169	-169	0	325	0	0	0	0									
2564+13.00	0	0	0	0	147	147	-147	0	158	0	0	0	0									
2564+25.00	0	0	0	0	279	279	-279	0	133	0	0	0	0									
2564+50.00	0	0	0	0	243	243	-243	0	243	0	0	0	0									
2564+75.00	0	0	0	0	212	212	-212	0	212	0	0	0	0									
2565+00.00	0	0	0	0	185	185	-185	0	185	0	0	0	0									
2565+25.00	3	3	3	2	157	157	-155	0	157	0	0	0	0									
2565+50.00	8	8	8	6	130	130	-124	0	130	0	0	0	0									
2565+75.00	14	14	14	11	113	113	-102	0	112	0	0	0	0									
2566+00.00	18	18	18	14	105	105	-91	0	104	0	0	0	0									
2566+25.00	20	20	20	15	99	99	-84	0	98	0	0	0	0									
2566+50.00	20	20	20	15	92	92	-77	0	96	0	0	0	0									
2566+74.00	0	0	0	0	0	0	0	0	46	0	0	0	0									
Subtotals:	612	612	612	470	24,032	24,032	-23,562	0	24,477	0	0	0	0									
SR141C																						
3531+45.00	0	0	0	0	34	34	-34	0	0	0	0	0	0									
3531+50.00	1	1	1	1	168	168	-167	0	33	0	0	0	0									
3531+75.00	0	0	0	0	170	170	-170	0	169	0	0	0	0									
3532+00.00	0	0	0	0	177	177	-177	0	177	0	0	0	0									
3532+25.00	1	1	1	1	162	162	-161	0	162	0	0	0	0									
3532+50.00																						

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

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

	Cut				Fill			Checks (EW-102)		Topsoil										
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
			[2]	[3]/1.3		[5]	[4]-[6]															
Station	Template Cut Volume	Template Class 10 Volume	Total Cut Adjusted	Total Cut Adjusted w/ Weighted Average 1.3 Shrink Factor	Template Fill Volume	Total Fill Adjusted	Total Cut Adjusted w/ 1.3 Shrink Factor Minus Fill	Approx. Fill Volume Below 5' And Above 20' Cu. Yds.	Approx. Fill Volume Below 3' Cu. Yds.	Total Topsoil Cut Volume	Template Topsoil Replacement Volume	Topsoil Cut With 1.4 Shrink Factor	Topsoil Cut With Shrink Minus Topsoil Replacement									
3532+50.00	4	4	4	3	134	134	-131	0	134	0	0	0	0									
3532+75.00	7	7	7	5	119	119	-114	0	119	0	0	0	0									
3533+00.00	11	11	11	8	102	102	-94	0	101	0	0	0	0									
3533+25.00	18	18	18	14	84	84	-70	0	83	0	0	0	0									
3533+50.00	24	24	24	18	72	72	-54	0	72	0	0	0	0									
3533+75.00	29	29	29	22	63	63	-41	0	63	0	0	0	0									
3534+00.00	35	35	35	27	59	59	-32	0	59	0	0	0	0									
3534+25.00	40	40	40	31	59	59	-28	0	58	0	0	0	0									
3534+50.00	41	41	41	32	56	56	-24	0	56	0	0	0	0									
3534+75.00	41	41	41	32	52	52	-20	0	51	0	0	0	0									
3535+00.00	41	41	41	32	50	50	-18	0	50	0	0	0	0									
3535+25.00	45	45	45	35	52	52	-17	0	51	0	0	0	0									
3535+50.00	54	54	54	42	59	59	-17	0	59	0	0	0	0									
3535+75.00	61	61	61	47	73	73	-26	0	73	0	0	0	0									
3536+00.00	63	63	63	48	94	94	-46	0	94	0	0	0	0									
3536+25.00	64	64	64	49	97	97	-48	0	97	0	0	0	0									
3536+50.00	13	13	13	10	18	18	-8	0	88	0	0	0	0									
3536+55.00	0	0	0	0	0	0	0	0	8	0	0	0	0									
Subtotals:	593	593	593	457	1,954	1,954	-1,497	0	1,857	0	0	0	0									
SR141D																						
4547+50.00	217	217	217	167	0	0	167	0	0	0	0	0	0									
4547+75.00	227	227	227	175	0	0	175	0	0	0	0	0	0									
4548+00.00	241	241	241	185	0	0	185	0	0	0	0	0	0									
4548+25.00	251	251	251	193	0	0	193	0	0	0	0	0	0									
4548+50.00	267	267	267	205	0	0	205	0	0	0	0	0	0									
4548+75.00	285	285	285	219	0	0	219	0	0	0	0	0	0									
4549+00.00	307	307	307	236	0	0	236	0	0	0	0	0	0									
4549+25.00	328	328	328	252	0	0	252	0	0	0	0	0	0									
4549+50.00	347	347	347	267	0	0	267	0	0	0	0	0	0									
4549+75.00	359	359	359	276	0	0	276	0	0	0	0	0	0									
4550+00.00	362	362	362	278	0	0	278	0	0	0	0	0	0									
4550+25.00	357	357	357	275	0	0	275	0	0	0	0	0	0									
4550+50.00	341	341	341	262	0	0	262	0	0	0	0	0	0									
4550+75.00	315	315	315	242	0	0	242	0	0	0	0	0	0									
4551+00.00	301	301	301	232	0	0	232	0	0	0	0	0	0									
4551+25.00	297	297	297	228	0	0	228	0	0	0	0	0	0									
4551+50.00	289	289	289	222	0	0	222	0	0	0	0	0	0									
4551+75.00	282	282	282	217	0	0	217	0	0	0	0	0	0									
4552+00.00	276	276	276	212	0	0	212	0	0	0	0	0	0									
4552+25.00	277	277	277	213	0	0	213	0	0	0	0	0	0									
4552+50.00	283	283	283	218	1	1	217	0	0	0	0	0	0									
4552+75.00	296	296	296	228	1	1	227	0	1	0	0	0	0									
4553+00.00	313	313	313	241	2	2	239	0	1	0	0	0	0									
4553+25.00	329	329	329	253	4	4	249	0	3	0	0	0	0									
4553+50.00	334	334	334	257	8	8	249	0	7	0	0	0	0									
4553+75.00	321	321	321	247	14	14	233	0	13	0	0	0	0									
4554+00.00	282	282	282	217	23	23	194	0	22	0	0	0	0									
4554+25.00	205	205	205	158	42	42	116	0	42	0	0	0	0									
4554+50.00	117	117	117	90	78	78	12	0	77	0	0	0	0									
4554+75.00	48	48	48	37	118	118	-81	0	118	0	0	0	0									
4555+00.00	15	15	15	12	155	155	-143	0	154	0	0	0	0									
4555+25.00	7	7	7	5	185	185	-180	0	185	0	0	0	0									
4555+50.00	5	5	5	4	209	209	-205	0	209	0	0	0	0									
4555+75.00	5	5	5	4	221	221	-217	0	221	0	0	0	0									
4556+00.00	5	5	5	4	230	230	-226	0	229	0	0	0	0									
4556+25.00	5	5	5	4	240	240	-236	0	239	0	0	0	0									
4556+50.00	6	6	6	5	239	239	-234	0	238	0	0	0	0									
4556+75.00	6	6	6	5	233	233	-228	0	232	0	0	0	0									
4557+00.00	6	6	6	5	222	222	-217	0	222	0	0	0	0									
4557+25.00	6	6	6	5	212	212	-207	0	211	0	0	0	0									
4557+50.00	3	3	3	2	206	206	-204	0	205	0	0	0	0									
4557+75.00	4	4	4	3	203	203	-200	0	203	0	0	0	0									
4558+00.00	33	33	33	25	204	204	-179	0	204	0	0	0	0									
4558+25.00	62	62	62	48	194	194	-146	0	193	0	0	0	0									
4558+50.00	68	68	68	52	182	182	-130	0	181	0	0	0	0									
4558+75.00	75	75	75	58	180	180	-122	0	179	0	0	0	0									
4559+00.00	80	80	80	62	173	173	-111	0	173	0	0	0	0									
4559+25.00																						

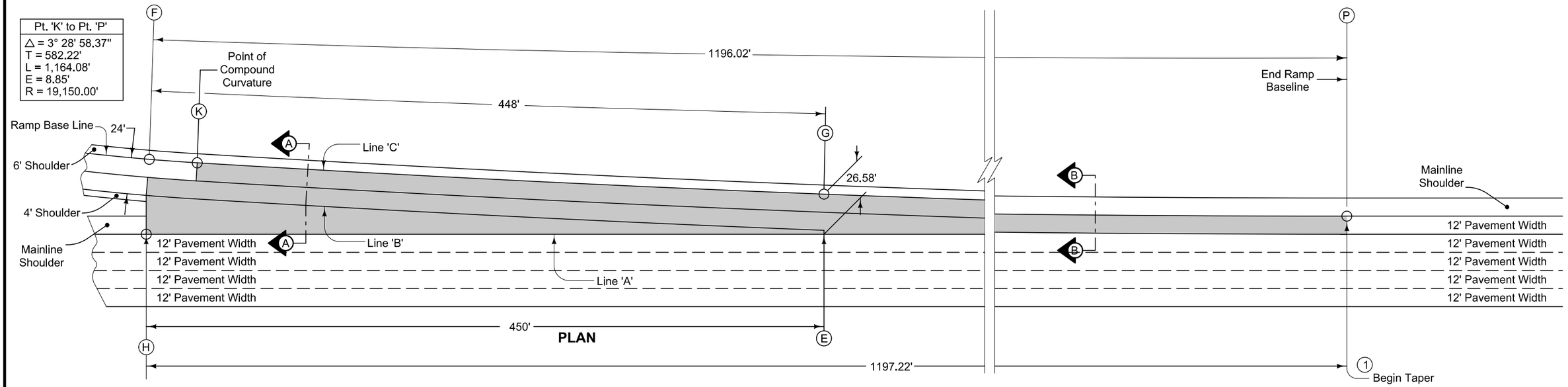
Refer to Standard Road Plans EW-101 and EW-102.

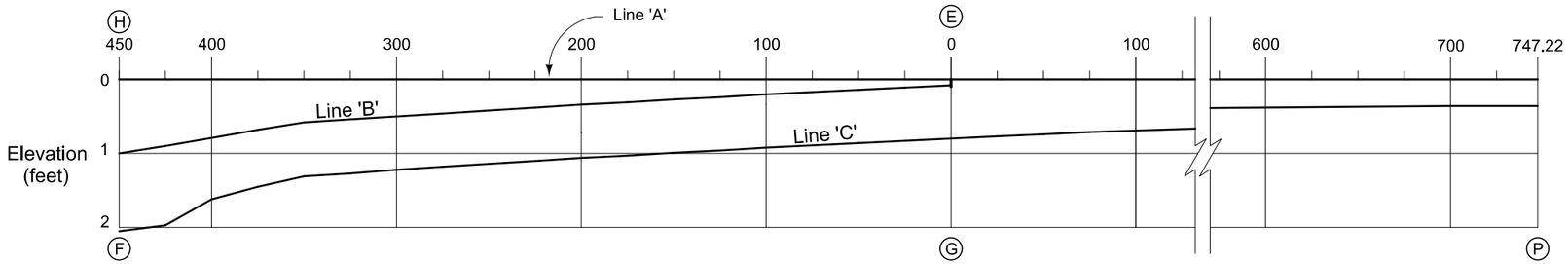
TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut				Fill			Checks (EW-102)		Topsoil										
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
			[2]	[3]/1.3		[5]	[4]-[6]															
	Template Cut Volume	Template Class 10 Volume	Total Cut Adjusted	Total Cut Adjusted w/ Weighted Average 1.3 Shrink Factor	Template Fill Volume	Total Fill Adjusted	Total Cut Adjusted w/ 1.3 Shrink Factor Minus Fill	Approx. Fill Volume Below 5' And Above 20' Cu. Yds.	Approx. Fill Volume Below 3' Cu. Yds.	Total Topsoil Cut Volume	Template Topsoil Replacement Volume	Topsoil Cut With 1.4 Shrink Factor	Topsoil Cut With Shrink Minus Topsoil Replacement									
4559+25.00	87	87	87	67	169	169	-102	0	169	0	0	0	0									
4559+50.00	89	89	89	68	191	191	-123	0	191	0	0	0	0									
4559+75.00	91	91	91	70	233	233	-163	0	233	0	0	0	0									
4560+00.00	97	97	97	75	284	284	-209	0	283	0	0	0	0									
4560+25.00	104	104	104	80	267	267	-187	0	267	0	0	0	0									
4560+50.00	111	111	111	85	205	205	-120	0	204	0	0	0	0									
4560+75.00	124	124	124	95	162	162	-67	0	161	0	0	0	0									
4561+00.00	139	139	139	107	122	122	-15	0	121	0	0	0	0									
4561+25.00	155	155	155	119	100	100	19	0	99	0	0	0	0									
4561+50.00	165	165	165	127	84	84	43	0	84	0	0	0	0									
4561+75.00	165	165	165	127	73	73	54	0	72	0	0	0	0									
4562+00.00	158	158	158	122	63	63	59	0	62	0	0	0	0									
4562+25.00	147	147	147	113	50	50	63	0	50	0	0	0	0									
4562+50.00	134	134	134	103	47	47	56	0	47	0	0	0	0									
4562+75.00	70	70	70	54	28	28	26	0	49	0	0	0	0									
4562+89.00	0	0	0	0	0	0	0	0	13	0	0	0	0									
Subtotals:	10,681	10,681	10,681	8,217	5,857	5,857	2,360	0	5,867	0	0	0	0									
Project Totals:	111,272	111,272	111,272	85,595	138,829	138,829	-53,234		141,925													

Note:
The earthwork quantities shown are based on "Full Model" for entire project (complete/non-staged) per "Phase I". These preliminary tabulations are to understand borrow needs and prepare cost opinions.

Pt. 'K' to Pt. 'P'
△ = 3° 28' 58.37"
T = 582.22'
L = 1,164.08'
E = 8.85'
R = 19,150.00'





PROFILE

Construct ramp exit pavement the same thickness as mainline pavement.

Ramp exit pavement shown by shaded area is 3212 square yards.

For joint details, see PV-101.

(1) For header construction details at the beginning of taper, see Typical 7101 or Typical 7102.

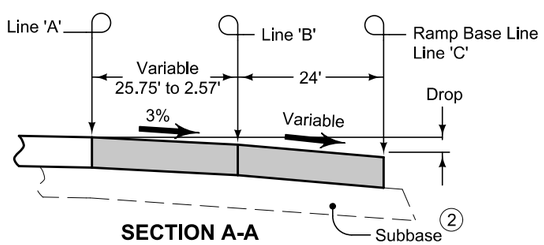
(2) Construct subbase for ramp exit pavement the same thickness as mainline subbase.

H E

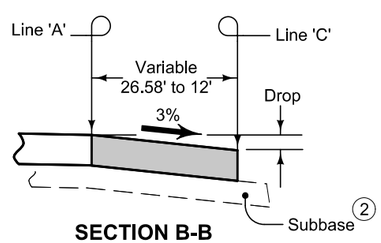
TABLE OF OFFSETS AND DROPS

Distance From Point (E) Along Line 'A' (Ft.)		450	425	400	375	350	325	300	275	250	225	200	175	150	125	100	75	50	25	0	25	50	75	100	200	300	400	500	600	700	747.22
From Line 'A' To Line 'B'	Offset (Ft.)	25.75	23.88	22.35	20.87	19.42	18.00	16.62	15.27	13.95	12.66	11.41	10.19	9.00	7.85	6.73	5.64	4.58	3.56	2.57											
	Slope (%)	3.90	3.75	3.51	3.24	← Constant 3.0% Slope →																									
	Drop (Ft.)	1.00	0.90	0.79	0.68	0.58	0.54	0.50	0.46	0.42	0.38	0.34	0.31	0.27	0.24	0.20	0.17	0.14	0.11	0.08											
From Line 'B' To Line 'C'	Offset (Ft.)	23.66	23.98	← Constant 24.0' Offset →																											
	Slope (%)	4.40	4.50	3.49	3.22	← Constant 3.0% Slope →																									
	Drop (Ft.)	1.05	1.08	0.84	0.77	← Constant 0.72 Drop →																									
From Line 'A' To Line 'C'	Offset (Ft.)																				25.62	24.70	23.80	22.94	19.82	17.22	15.15	13.60	12.57	12.06	12.00
	Slope (%)																				← Constant 3.0% Slope →										
	Drop (Ft.)	2.05	1.97	1.62	1.45	1.31	1.27	1.22	1.18	1.14	1.10	1.06	1.03	0.99	0.96	0.92	0.89	0.86	0.83	0.80	0.77	0.74	0.71	0.69	0.59	0.52	0.45	0.41	0.38	0.36	0.36
Distance From Point (G) Along Line 'C' (Ft.)		449.11	424.07	399.06	374.05	349.04	324.03	299.02	274.02	249.01	224.01	199.01	174.01	149.01	124.02	99.03	74.03	49.04	24.05	0.00											

F G P



SECTION A-A

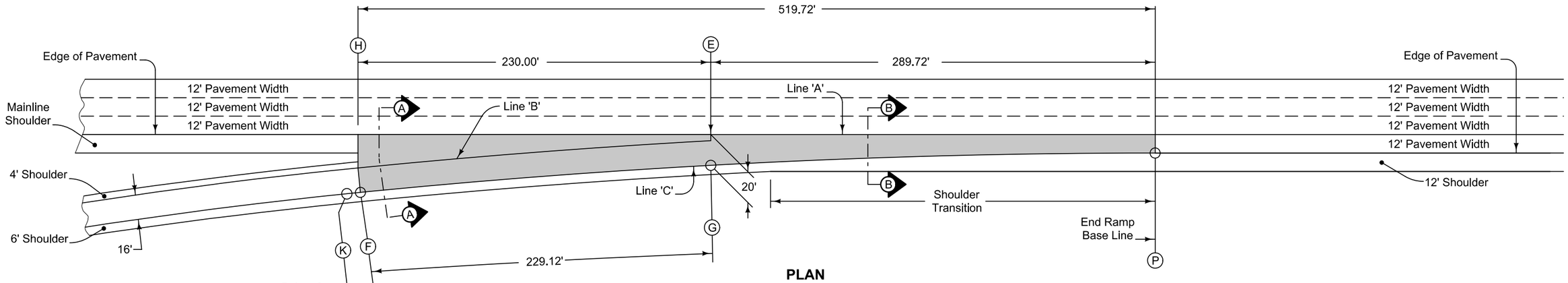


SECTION B-B

SOUTHBOUND I-80/35 TO DOUGLAS RAMP A

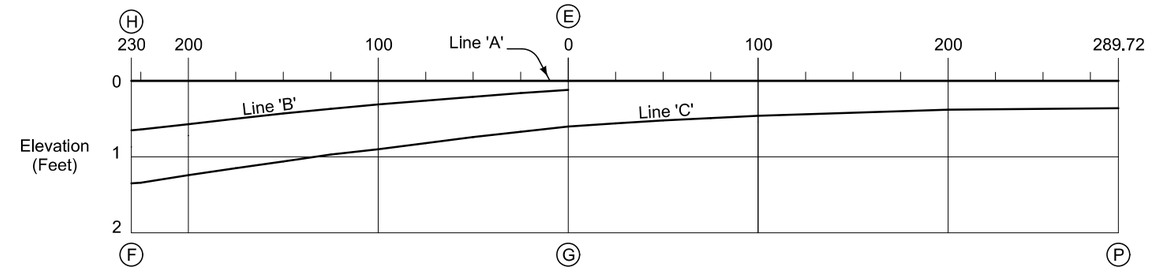
FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER U.1

12:43:42 PM 8/5/2016 esulliv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178U1.sht



PLAN

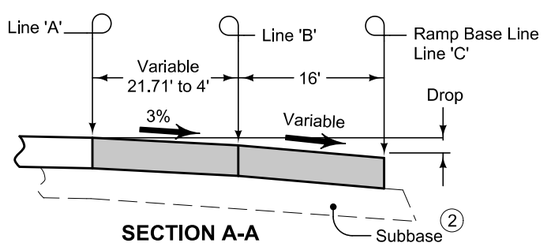
Pt. 'K' to Pt. 'G'
△ = 5° 45' 39.31"
T = 264.16'
L = 527.87'
E = 6.64'
R = 5250.00'



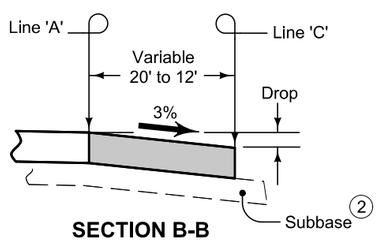
PROFILE

TABLE OF OFFSETS AND DROPS																		
Distance From Point (E) Along Line 'A' (Ft.)		230	225	200	175	150	125	100	75	50	25	0	25	50	75	100	200	289.72
From Line 'A' To Line 'B'	Offset (Ft.)	21.71	21.22	18.82	16.55	14.39	12.36	10.44	8.65	6.97	5.41	4.0						
	Slope (%)	← Constant 3.0% Slope →																
	Drop (Ft.)	0.65	0.64	0.57	0.50	0.43	0.37	0.31	0.26	0.21	0.16	0.12						
From Line 'B' To Line 'C'	Offset (Ft.)	← Constant 16.0' Offset →																
	Slope (%)	4.40	4.37	4.23	4.08	3.93	3.76	3.64	3.48	3.33	3.18	3.00						
	Drop (Ft.)	0.71	0.70	0.68	0.65	0.63	0.60	0.58	0.56	0.53	0.51	0.48						
From Line 'A' To Line 'C'	Offset (Ft.)												18.68	17.48	16.39	15.43	12.78	12.00
	Slope (%)												← Constant 3.0% Slope →					
	Drop (Ft.)	1.35	1.34	1.24	1.15	1.06	0.97	0.90	0.82	0.74	0.67	0.60	0.56	0.52	0.49	0.46	0.38	0.36
Distance From Point (G) Along Line 'C' (Ft.)		229.12	224.11	199.07	174.05	149.03	124.02	99.03	74.04	49.06	29.09	0.00						

H F G E P



SECTION A-A



SECTION B-B

Construct ramp entrance pavement the same thickness as mainline pavement.

Ramp entrance pavement shown by shaded area is 1187 square yards.

For joint details, see PV-101

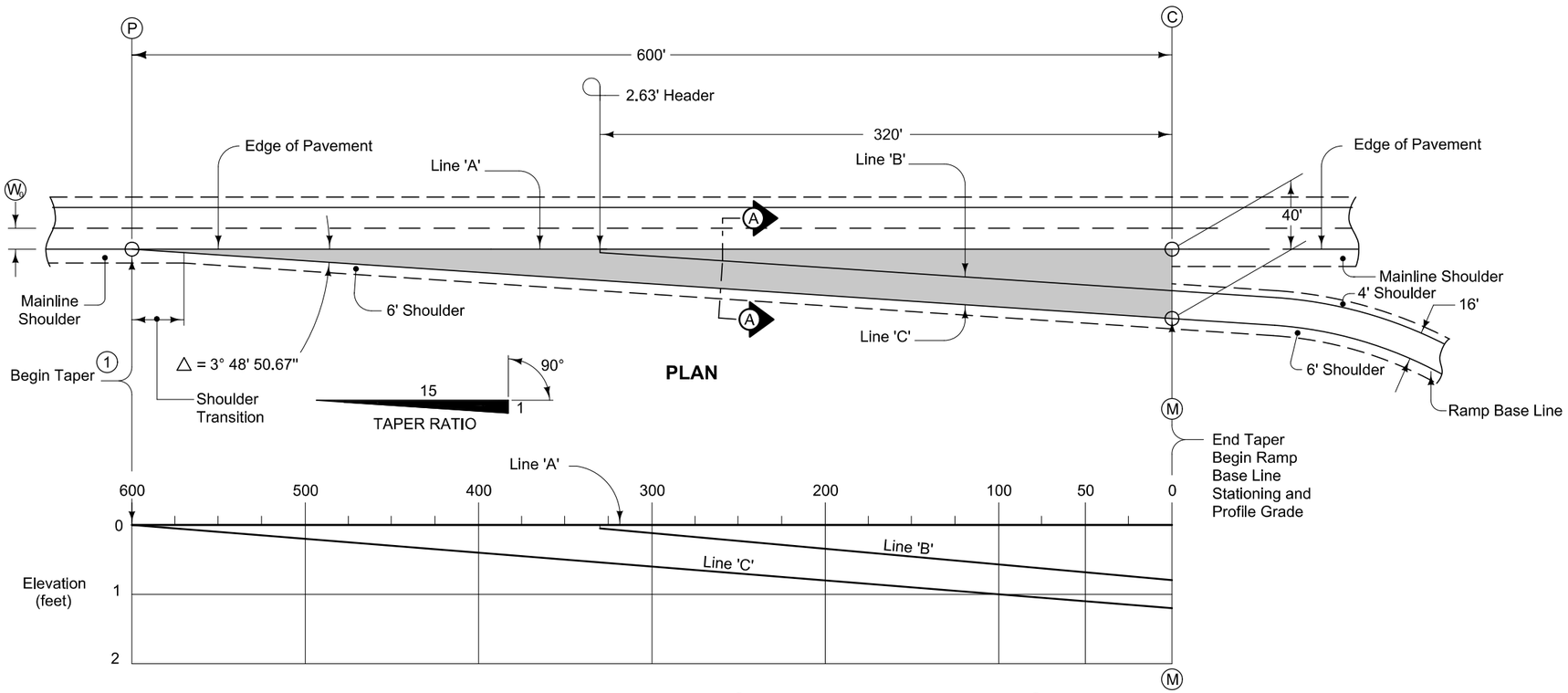
(1) For header construction details at the end of taper, see Typical 7101 or Typical 7102.

(2) Construct subbase for ramp entrance pavement the same thickness as mainline subbase.

DOUGLAS RAMP D TO NORTHBOUND I-80/35

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER U.2

12:43:47 PM 8/5/2016 esulliv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178U1.sht



NOTE: The algebraic difference between profile grade for Ramp Base Line at Ⓜ and relative profile grade of Mainline at Ⓒ is 0.2%.

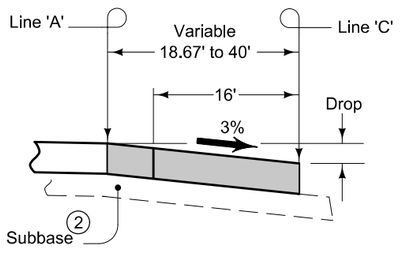
PROFILE

Ⓒ

TABLE OF OFFSETS AND DROPS FOR 16' RAMP TAPER																									
DISTANCE (Ft.)	600	575	550	525	500	475	450	425	400	375	350	325	300	275	250	225	200	175	150	125	100	75	50	25	0
OFFSET (Ft.)	0	1.67	3.33	5.00	6.67	8.33	10.00	11.67	13.33	15.00	16.67	18.67	20.00	21.67	23.33	25.00	26.67	28.33	30.00	31.67	33.33	35.00	36.67	38.33	40.00
DROP (Ft.)	0	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.56	0.60	0.65	0.70	0.75	0.80	0.85	0.90	0.95	1.00	1.05	1.10	1.15	1.20

Ⓜ

NOTE: The elevations at edge of taper from BEGIN TAPER to POINT 'M' are established by a constant 3% slope across the appropriate taper widths based on the Taper Ratio of 15:1. Drop = (0.03) x (Offset).



SECTION A-A

TABLE OF SHOULDER TRANSITION LENGTHS			
W_o	Shoulder Width beyond Edge of Mainline Pavement		
	8'	10'	12'
12'	NA	60'	90'
14'	30'	60'	NA

NOTE: W_o is the width of the outside lane to the Edge of Pavement.

Construct ramp exit pavement the same thickness as mainline pavement.

Ramp exit pavement shown by shaded area is 1334 square yards.

For joint details, see PV-101.

(1) For header construction details at the beginning of taper, see Typical 7101 or Typical 7102.

(2) Construct subbase for ramp exit pavement the same thickness as mainline subbase.

NORTHBOUND I-80/35
TO MEREDITH RAMP B

(Standard Taper shown here for continuity)

REVISION
2 10-18-11

STANDARD ROAD PLAN

PV-410

SHEET 1 of 2

REVISIONS: Added 'C' Joint and circle notes 7 and 8.

APPROVED BY DESIGN METHODS ENGINEER

DECELERATION TAPER FOR 16' EXIT RAMP

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER U.3

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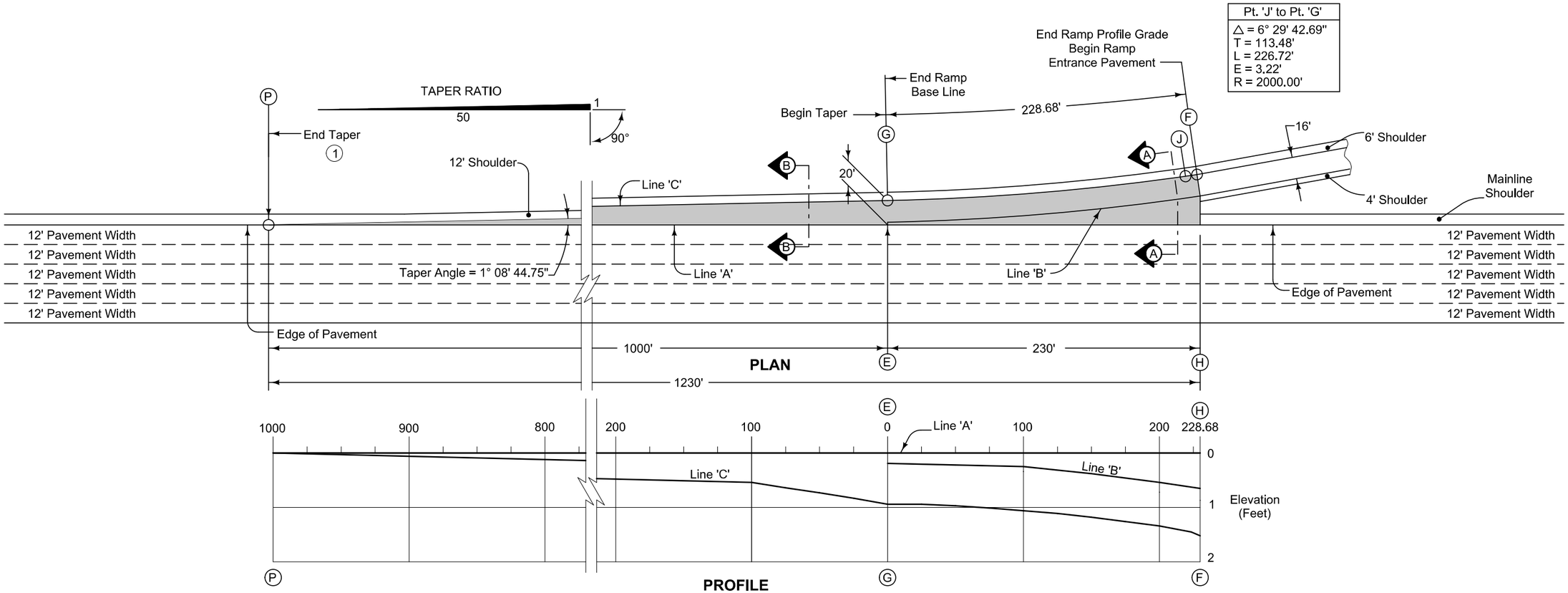


TABLE OF OFFSETS AND DROPS																								
1000	900	800	700	600	500	400	300	200	100	75	50	25	0	25	50	75	100	125	150	175	200	225	230.00	Distance From Point (E) Along Line 'A' (Ft.)
													4.0	4.65	5.61	6.88	8.47	10.36	12.57	15.10	17.94	21.09	21.76	Offset (Ft.)
													4.70	← Constant 3.0% Slope →										Slope (%)
													0.19	0.14	0.17	0.21	0.25	0.31	0.38	0.45	0.54	0.63	0.65	Drop (Ft.)
													← Constant 16.0' Offset →											Offset (Ft.)
													4.70	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.60	4.30	Slope (%)
													0.75	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.74	0.69	Drop (Ft.)
0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	18.5	19.0	19.5												Offset (Ft.)
← Constant 3.0% Slope →										3.43	3.85	4.28												Slope (%)
0.0	0.06	0.12	0.18	0.24	0.30	0.36	0.42	0.48	0.54	0.64	0.73	0.83	0.94	0.94	0.97	1.01	1.06	1.11	1.18	1.26	1.34	1.37	1.49	Drop (Ft.)
													0.00	24.49	49.31	74.15	99.00	123.87	148.77	173.70	198.66	223.66	228.68	Distance From Point (G) Along Line 'C' (Ft.)

From Line 'A' To Line 'B'

From Line 'B' To Line 'C'

From Line 'A' To Line 'C'

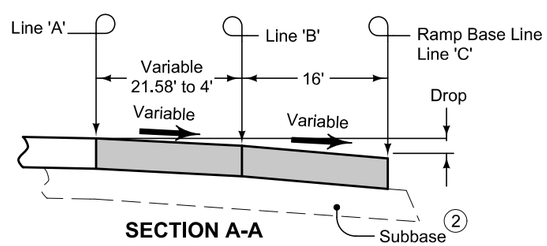
Construct ramp exit pavement the same thickness as mainline pavement.

Ramp exit pavement shown by shaded area is 1792 square yards.

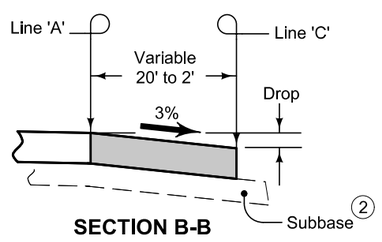
For joint details, see PV-101.

① For header construction details at the beginning of taper, see Typical 7101 or Typical 7102.

② Construct subbase for ramp exit pavement the same thickness as mainline subbase.



SECTION A-A



SECTION B-B

MEREDITH RAMP C TO SOUTHBOUND I-80/35

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER U.4

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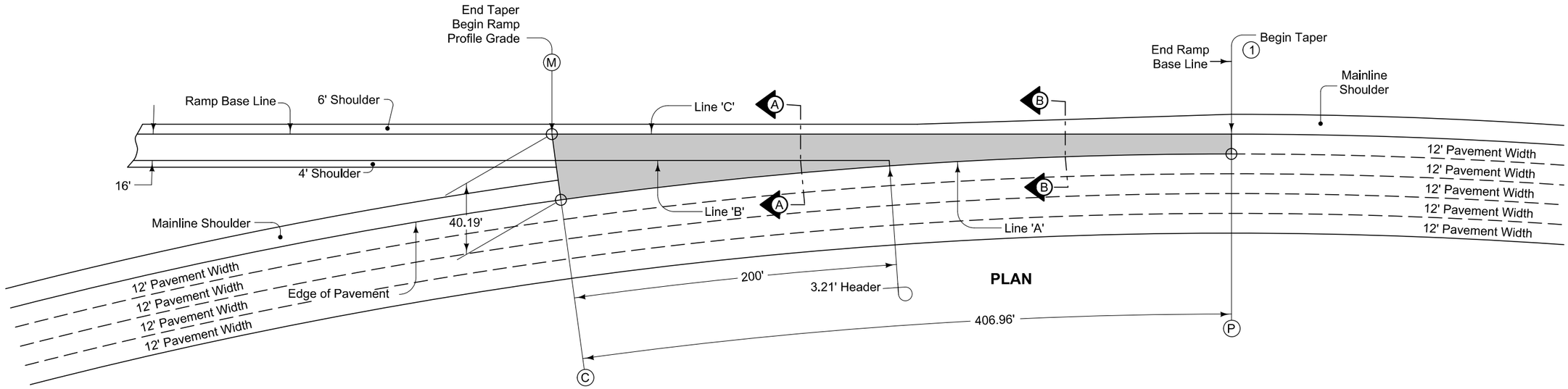
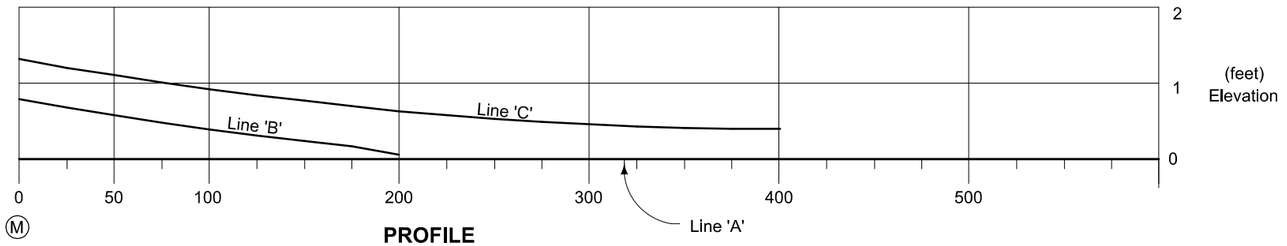


PLAN



PROFILE

C

* Negative drop value indicates grade raise.

TABLE OF OFFSETS AND DROPS *																		
0	25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400	406.96	DISTANCE (Ft.)
40.19	36.81	33.65	30.70	27.18	25.47	23.18	21.11	19.24	17.60	16.16	14.94	13.93	13.13	12.55	12.17	12.01	12.00	OFFSET (Ft.)
-1.32	-1.20	-1.11	-1.01	-0.92	-0.84	-0.77	-0.70	-0.63	-0.58	-0.53	-0.49	-0.46	-0.43	-0.41	-0.40	-0.40	-0.40	DROP (Ft.)

M

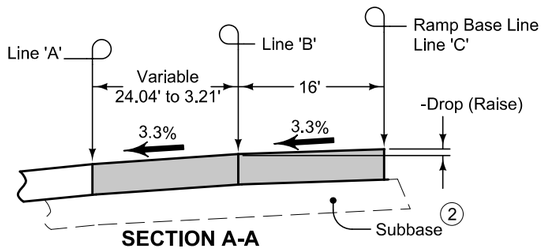
NOTE: The elevations at edge of taper from BEGIN TAPER to POINT 'M' are established by a constant 3.3% slope across the appropriate taper widths. Drop = (0.033) x (Offset).

Construct ramp exit pavement the same thickness as mainline pavement.

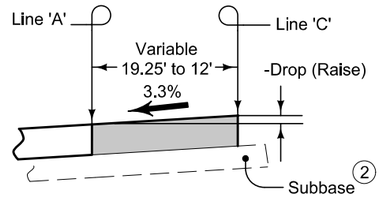
Ramp exit pavement shown by shaded area is 970 square yards.

For joint details, see PV-101.

1. For header construction details at the beginning of taper, see Typical 7101 or Typical 7102.
2. Construct subbase for ramp exit pavement the same thickness as mainline subbase.



SECTION A-A

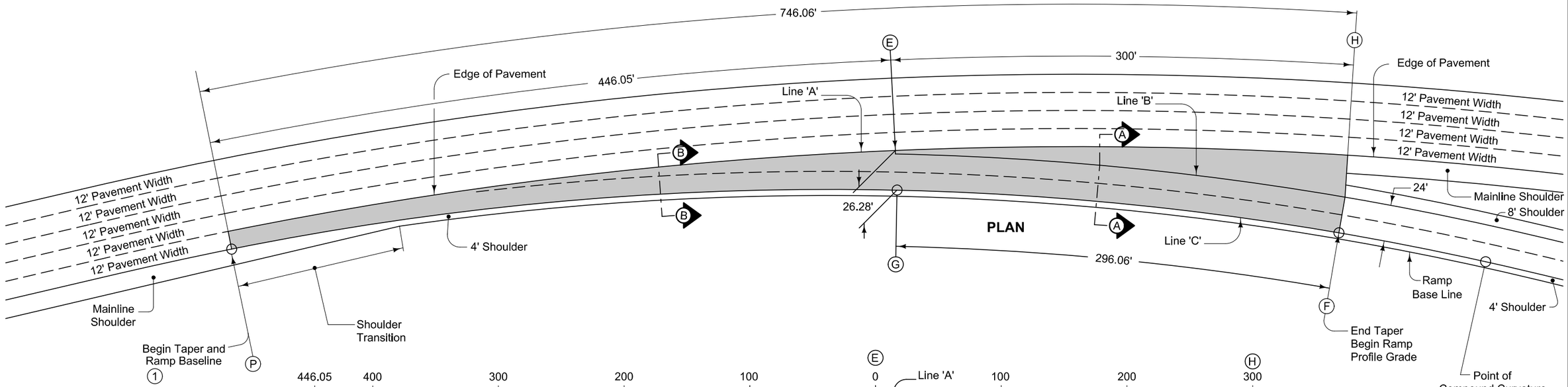


SECTION B-B

SOUTHBOUND I-80/35
TO IA 141 RAMP A

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER U.5

12:43:59 PM 8/5/2016 esulliv pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178U1.sht



Pt. 'P' to PCC
△ = 23° 59' 21.16"
T = 424.92'
L = 837.38'
E = 44.64'
R = 2000.00'

TABLE OF OFFSETS AND DROPS

(P) 446.05	400	300	200	100	75	50	25	(E) 0	25	50	75	100	125	150	175	200	225	250	275	(H) 300	Distance From Point	Along Line 'A' (Ft.)
								2.34	3.92	5.66	7.61	9.50	11.49	13.57	15.75	17.93	20.32	22.72	25.24	27.88	Offset (Ft.)	From Line 'A' To Line 'B'
								5.40	5.23	5.04	4.88	4.70	4.53	4.35	4.18	4.00	3.82	3.65	3.47	3.33	Slope (%)	
								0.13	0.20	0.29	0.37	0.45	0.52	0.59	0.66	0.72	0.78	0.83	0.88	0.92	Drop (Ft.)	
								Constant 24.0' Offset													Offset (Ft.)	From Line 'B' To Line 'C'
								Constant 5.4% Slope													Slope (%)	
								Constant 1.30' Drop													Drop (Ft.)	
12.00	12.15	13.55	16.39	20.67	21.97	23.35	24.83														Offset (Ft.)	From Line 'A' To Line 'C'
4.88	5.40	5.40	5.40	5.40	5.40	5.40	5.40														Slope (%)	
0.59	0.66	0.73	0.89	1.12	1.19	1.26	1.34	1.41	1.49	1.57	1.66	1.73	1.80	1.87	1.94	2.01	2.06	2.13	2.18	2.22	Drop (Ft.)	
								(G) 0.00	24.73	49.45	74.16	98.86	123.55	148.23	172.90	197.56	222.20	246.84	271.46	(F) 296.06	Distance From Point	Along Line 'C' (Ft.)

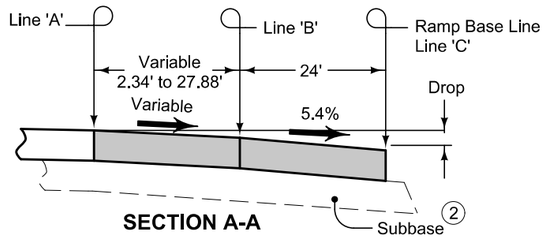
Construct ramp exit pavement the same thickness as mainline pavement.

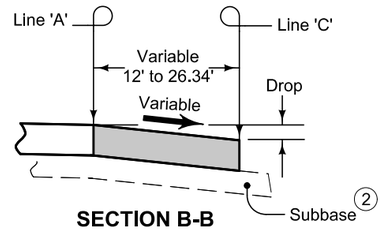
Ramp exit pavement shown by shaded area is 2090 square yards.

For joint details, see PV-101.

(1) For header construction details at the beginning of taper, see Typical 7101 or Typical 7102.

(2) Construct subbase for ramp exit pavement the same thickness as mainline subbase.

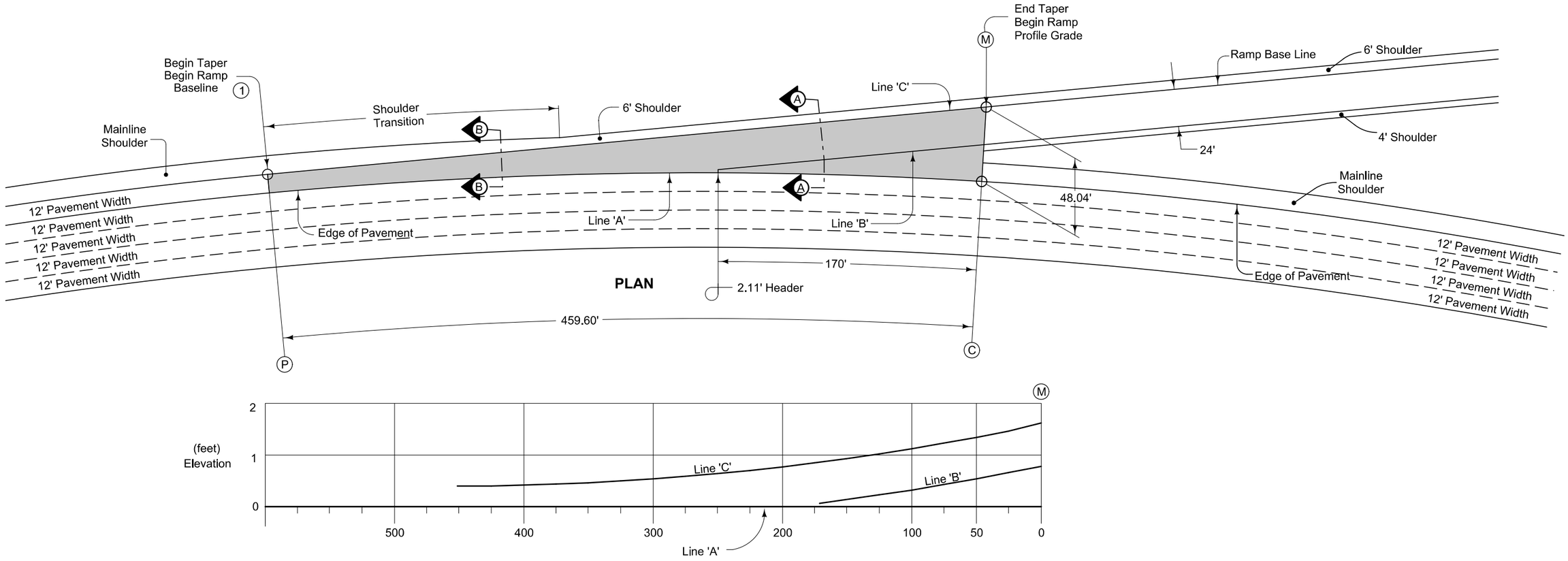




NORTHBOUND I-80/35 TO IA 141 RAMP B

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER U.6

12:44:03 PM 8/5/2016 esullivan pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178U1.sht



PROFILE

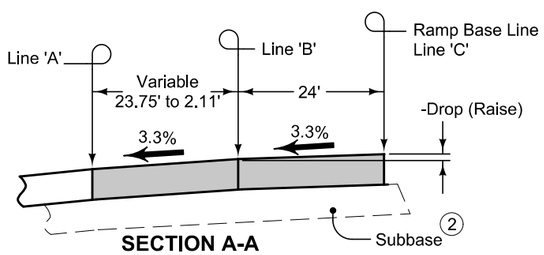
C

* Negative drop value indicates grade raise.

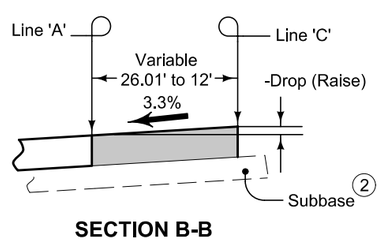
TABLE OF OFFSETS AND DROPS *																				
DISTANCE (Ft.)	459.60	450	425	400	375	350	325	300	275	250	225	200	175	150	125	100	75	50	25	0
OFFSET (Ft.)	12.00	12.02	12.21	12.61	13.22	14.04	15.07	16.32	17.78	19.45	21.33	23.43	25.75	28.27	31.02	33.99	37.17	40.57	44.19	48.04
DROP (Ft.)	-0.40	-0.40	-0.40	-0.42	-0.44	-0.46	-0.50	-0.54	-0.59	-0.64	-0.70	-0.77	-0.85	-0.93	-1.02	-1.12	-1.23	-1.34	-1.46	-1.62

M

NOTE: The elevations at edge of taper from BEGIN TAPER to POINT 'M' are established by a constant 3.3% slope across the appropriate taper widths. Drop = (0.033) x (Offset).



SECTION A-A



SECTION B-B

Construct ramp exit pavement the same thickness as mainline pavement.

Ramp exit pavement shown by shaded area is 1230 square yards.

For joint details, see PV-101.

(1) For header construction details at the beginning of taper, see Typical 7101 or Typical 7102.

(2) Construct subbase for ramp exit pavement the same thickness as mainline subbase.

IA 141 RAMP C TO SOUTHBOUND I-80/35

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER U.7

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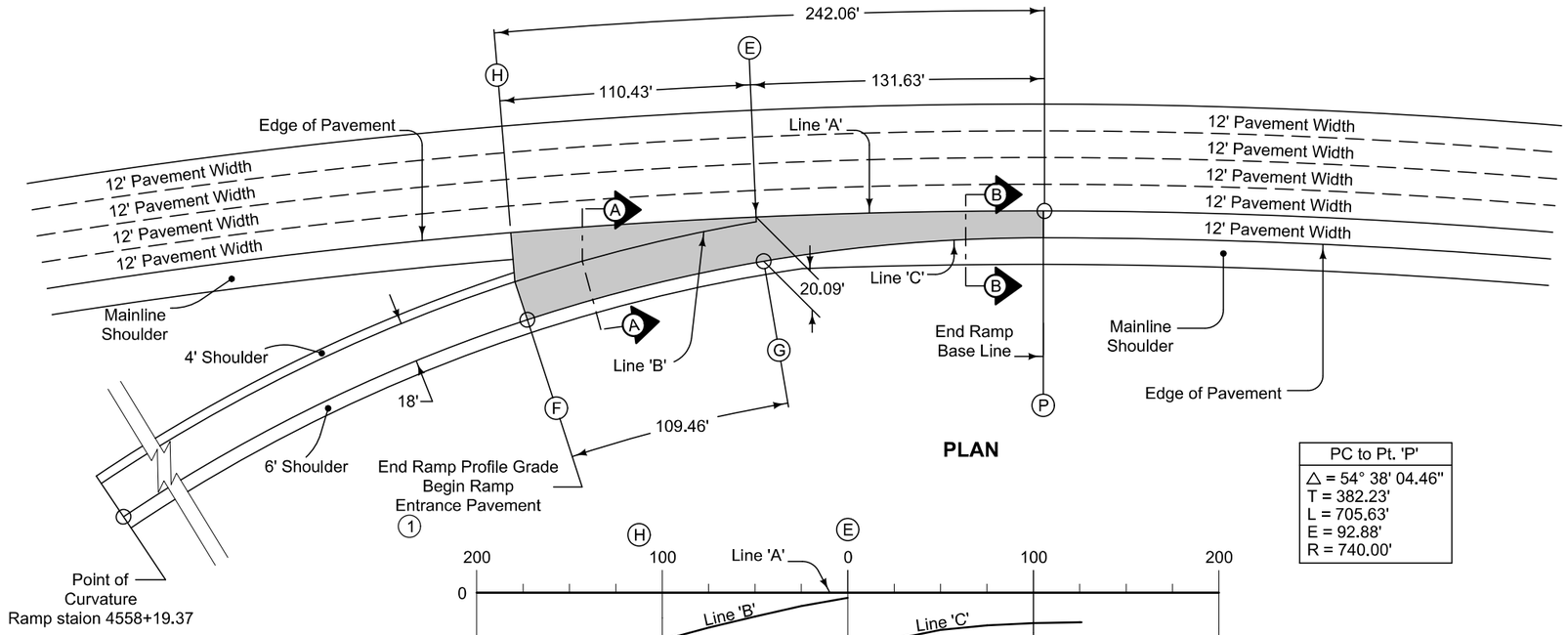
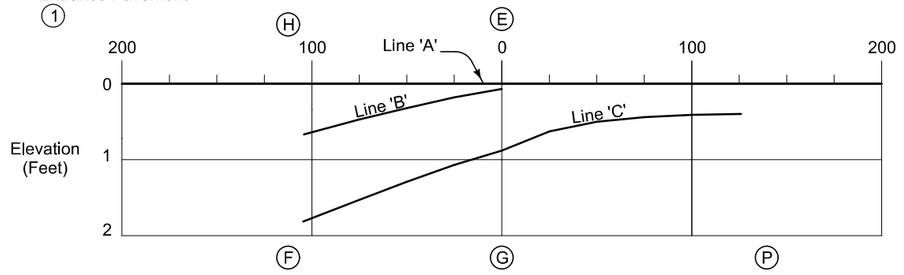


PLAN

PC to Pt. 'P'
△ = 54° 38' 04.46"
T = 382.23'
L = 705.63'
E = 92.88'
R = 740.00'



PROFILE

Construct ramp exit pavement the same thickness as mainline pavement.

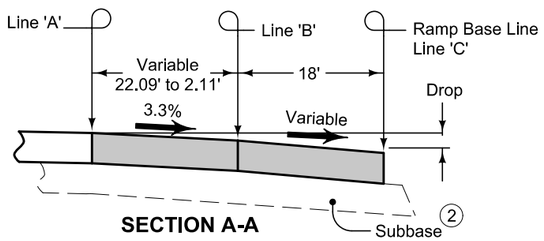
Ramp exit pavement shown by shaded area is 565 square yards.

For joint details, see PV-101.

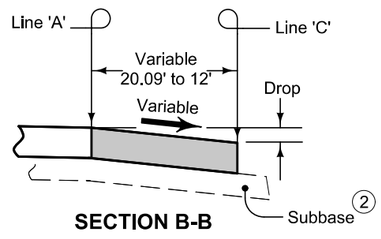
1. For header construction details at the beginning of taper, see Typical 7101 or Typical 7102.
2. Construct subbase for ramp exit pavement the same thickness as mainline subbase.

TABLE OF OFFSETS AND DROPS													
Distance From Point (E) Along Line 'A' (Ft.)		110.43	100	75	50	25	0	25	50	75	100	125	131.63
From Line 'A' To Line 'B'	Offset (Ft.)	22.09	19.81	14.40	9.66	5.57	2.11						
	Slope (%)	← Constant 3.30% Slope →											
	Drop (Ft.)	0.73	0.64	0.47	0.32	0.18	0.07						
From Line 'B' To Line 'C'	Offset (Ft.)	← Constant 18.00' Offset →											
	Slope (%)	6.00	6.00	6.00	5.40	4.93	4.54						
	Drop (Ft.)	1.08	1.08	1.08	0.98	0.87	0.82						
From Line 'A' To Line 'C'	Offset (Ft.)							17.39	15.10	13.44	12.41	12.01	12.00
	Slope (%)							3.52	3.30	3.30	3.30	3.30	3.30
	Drop (Ft.)	1.81	1.77	1.53	1.29	1.07	0.89	0.61	0.50	0.44	0.41	0.40	0.40
Distance From Point (G) Along Line 'C' (Ft.)		109.46	97.08	71.99	47.09	22.34	0						

(H) (E) (F) (G) (P)



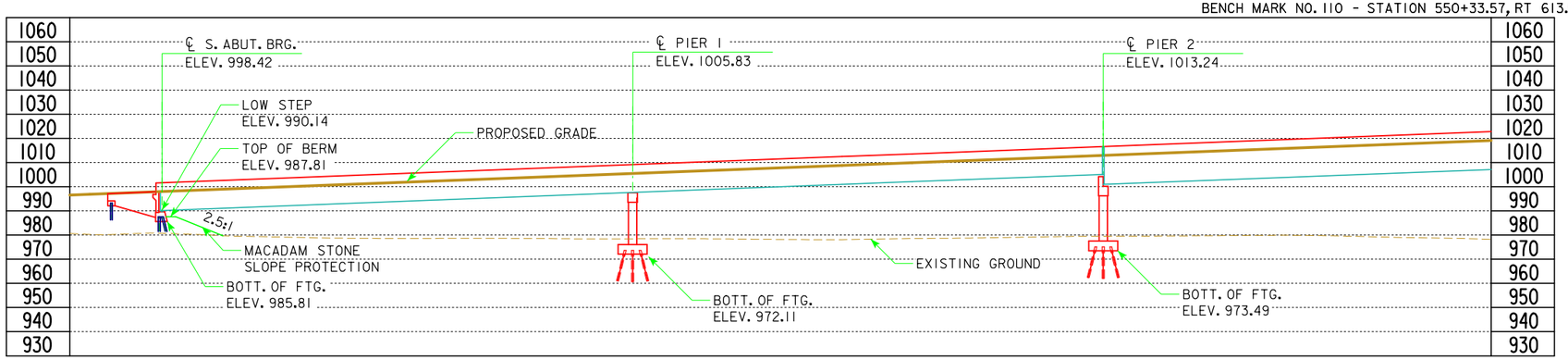
SECTION A-A



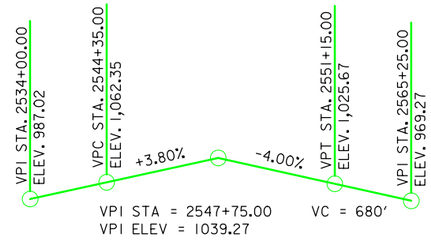
SECTION B-B

IA 141 RAMP D TO NORTHBOUND I-80/35

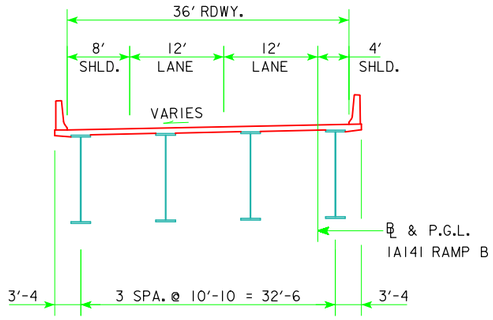
BENCH MARK NO. 110 - STATION 550+33.57, RT 613.516' - NW BOLT ON LIGHT POLE BASE NEAR RAMP D, ELEV. 980.21



LONGITUDINAL SECTION ALONG ℄ APPROACH ROADWAY



PROPOSED PROFILE GRADE 141 RAMP B



TYPICAL BRIDGE SECTION

(UNIT 2 SHOWN)

BERM SLOPE LOCATION TABLE

POINTS	SOUTH ABUTMENT		
	STATION	OFFSET	ELEV.
A1	2537+29.75	36.58' LT	979.64
A2	2537+29.75	8.58' RT	979.64
B1	2537+04.75	36.58' LT	987.81
B2	2537+04.75	8.58' RT	987.81
W1	2536+83.25	36.58' LT	999.12
W2	2536+83.25	8.58' RT	997.24

BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE

CURVE 1 DATA

PI STA. 2535+86.51
Δ = 17°09'27.98" (RT)
D = 2°18'37.13"
T = 374.13'
L = 742.66'
E = 28.06'
R = 2,480.00'
e = 5.00%
PC STA. 2532+12.38
PT STA. 2539+55.04

UTILITIES LEGEND:

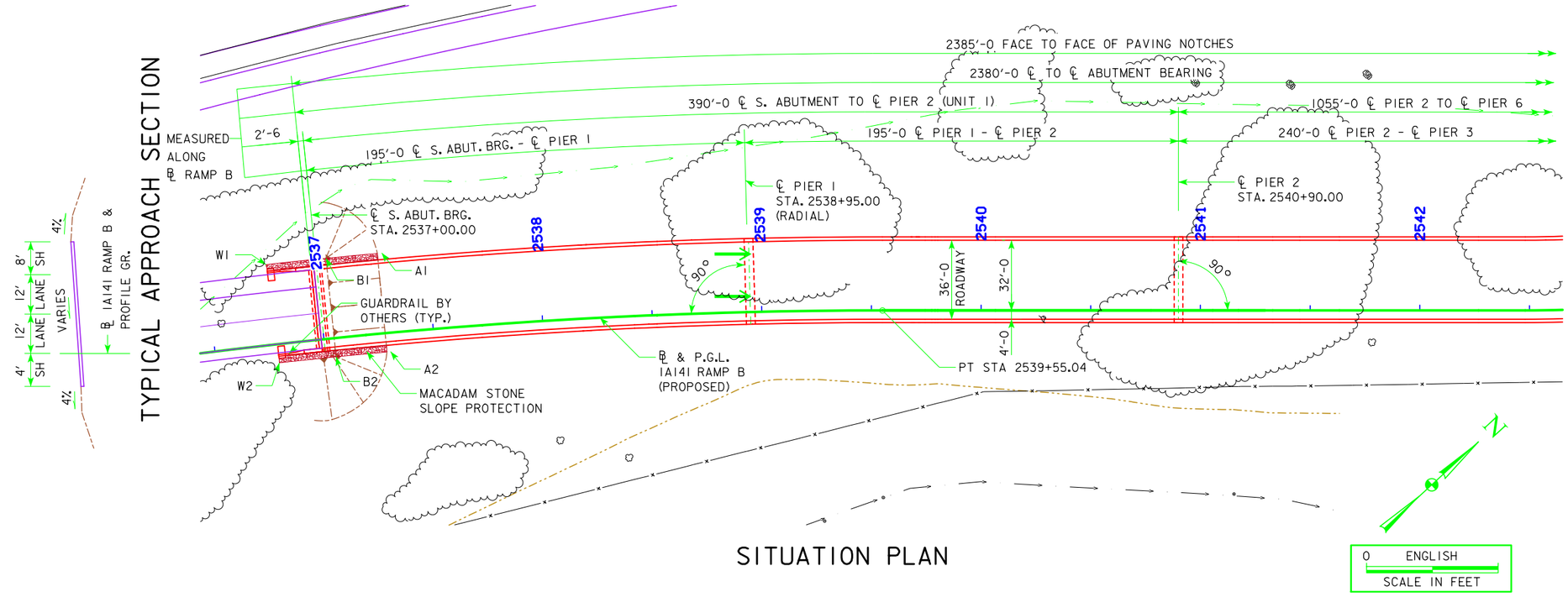
E2(C) = ELECTRIC, BAKER ELECTRIC
E3 = ELECTRIC, MIDAMERICAN ENERGY
F03(C) = FIBER OPTIC, MCI
F04 = FIBER OPTIC, CITY OF GRIMES, CITY OF URBANDALE
F05 = FIBER OPTIC, IOWA DOT
G-HP = HIGH PRESSURE GAS, MIDAMERICAN GAS
St. S. = STORM SEWER, CITY OF GRIMES, CITY OF URBANDALE

LOCATION

IA141 RAMP B OVER I-35/I-80
T-79N R-25W
SECTION 16
WEBSTER TOWNSHIP
POLK COUNTY
FHWA NO. 700870
FRA NO. TBD
BRIDGE MAINT. NO. TBD
LATITUDE 41.649809°
LONGITUDE 93.773399°

TRAFFIC ESTIMATE

2014 AADT	11,500	V.P.D.
2040 AADT	16,900	V.P.D.
2040 DHV	2,490	V.P.H.
TRUCKS	7	%



SITUATION PLAN

NOTES:
1. USE NON STANDARD STUB ABUTMENT WING WALLS.
2. TL-5 BRIDGE RAILING PROPOSED.
3. DISTANCE FROM TOP OF DECK AT C.L. ROADWAY TO PROFILE GRADE VARIES DUE TO SUPERELEVATION ON HORIZ. CURVES.
4. PIER TYPE - T.
5. PIERS 6 AND 10 ARE TO BE INVESTIGATED FOR VEHICULAR COLLISION FORCE.
6. PIERS 1, 2, 3, 4, 5, 7, 8, 9, AND 10 ARE EXEMPT FROM VEHICULAR COLLISION FORCE DESIGN.
7. BEAM TYPE - CWPG - DEPTH = 7'-0 FOR UNIT 1. DEPTH = 11'-2 FOR UNIT 2. DEPTH = 7'-10 FOR UNIT 3.
8. BRIDGE AESTHETICS TO BE INCORPORATED DURING FINAL DESIGN.
9. ALL CENTERLINES OF PIERS AND ABUTMENTS ARE PERPENDICULAR TO THE CENTERLINE OF THE IA141 PGL AND/OR RADIAL.

PRELIMINARY

DESIGN FOR 0° SKEW

2380'-0 X 36'-0 CONTINUOUS WELDED GIRDER BRIDGE

UNIT 1: 195'-195', UNIT 2: 240'-300'-300'-215', UNIT 3: 130'-215'-215'-215'-160'

RADIUS 1 = 2480'
RADIUS 2 = 600'
RADIUS 3 = 1680'

SITUATION PLAN

JUNE, 2016

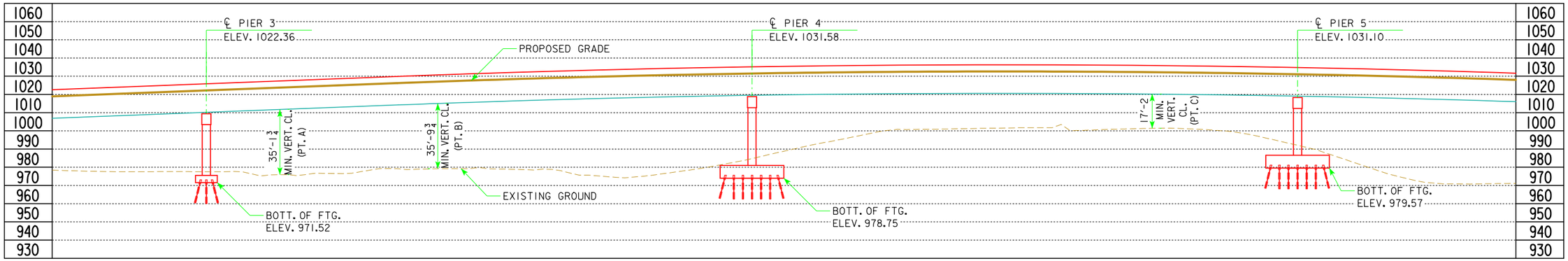
STA. 2548+90.00 BL RAMP B **POLK COUNTY**

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 5 FILE NO. 31309 DESIGN NO. 1818

DESIGN TEAM **GUSTAFSON \ HR GREEN** | **POLK** COUNTY | PROJECT NUMBER **IM-080-3(183)127--13-77** | SHEET NUMBER **V.1**

BENCH MARK NO. 110 - STATION 550+33.57, RT 613.516' - NW BOLT ON LIGHT POLE BASE NEAR RAMP D, ELEV. 980.21



LONGITUDINAL SECTION ALONG ℄ APPROACH ROADWAY

MINIMUM VERTICAL CLEARANCE (RR)(PT. A)

OVERHEAD STATION = 2543+85.76, OFFSET 30.25' LT.
OVERHEAD ELEVATION = 1023.57
DEPTH OF SUPERSTRUCTURE = 12.00'
UNDERPASS ELEVATION = 976.42
MINIMUM VERTICAL CLEARANCE = 35.15'

MINIMUM VERTICAL CLEARANCE (IA 141)(PT. B)

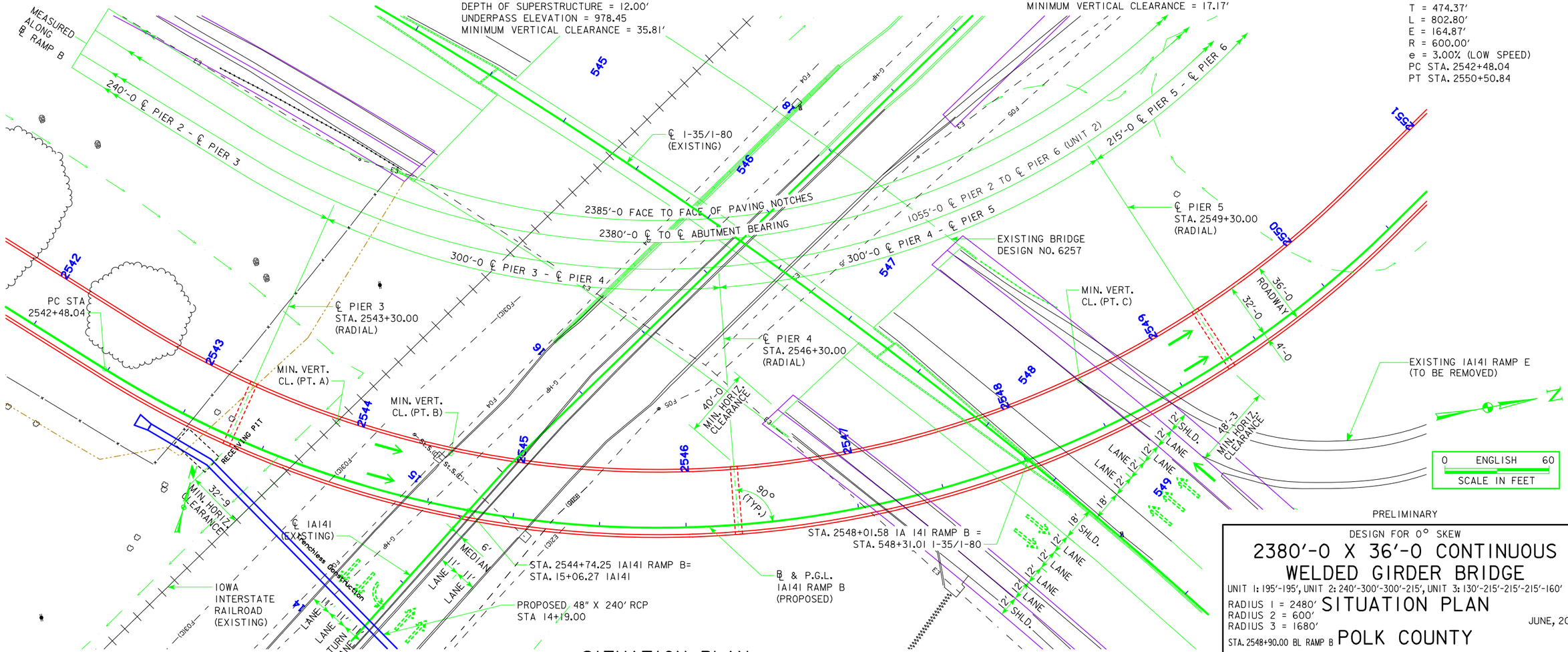
OVERHEAD STATION = 2544+57.27, OFFSET 30.25' LT.
OVERHEAD ELEVATION = 1026.26
DEPTH OF SUPERSTRUCTURE = 12.00'
UNDERPASS ELEVATION = 978.45
MINIMUM VERTICAL CLEARANCE = 35.81'

MINIMUM VERTICAL CLEARANCE (I-35/I-80)(PT. C)

OVERHEAD STATION = 2548+47.88, OFFSET 30.25' LT.
OVERHEAD ELEVATION = 1031.34
DEPTH OF SUPERSTRUCTURE = 12.00'
SUPER ELEVATION = 3.00%
UNDERPASS STATION = 548+25.29, OFFSET 54.00' RT.
UNDERPASS ELEVATION = 1002.17
MINIMUM VERTICAL CLEARANCE = 17.17'

CURVE 2 DATA

PI STA. 2547+22.41
Δ = 76°39'40.60" (LT)
D = 9°32'57.47"
T = 474.37'
L = 802.80'
E = 164.87'
R = 600.00'
e = 3.00% (LOW SPEED)
PC STA. 2542+48.04
PT STA. 2550+50.84



SITUATION PLAN

PRELIMINARY

DESIGN FOR 0° SKEW

2380'-0 X 36'-0 CONTINUOUS WELDED GIRDER BRIDGE

UNIT 1: 195'-195', UNIT 2: 240'-300'-300'-215', UNIT 3: 130'-215'-215'-215'-160'
RADIUS 1 = 2480'
RADIUS 2 = 600'
RADIUS 3 = 1680'
STA. 2548+90.00 BL RAMP B

SITUATION PLAN

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

JUNE, 2016

DESIGN SHEET NO. 2 OF 5 FILE NO. 31309 DESIGN NO. 1818

DESIGN TEAM	GUSTAFSON \ HR GREEN	POLK	COUNTY	PROJECT NUMBER	IM-080-3(183)127--13-77	SHEET NUMBER	V.2

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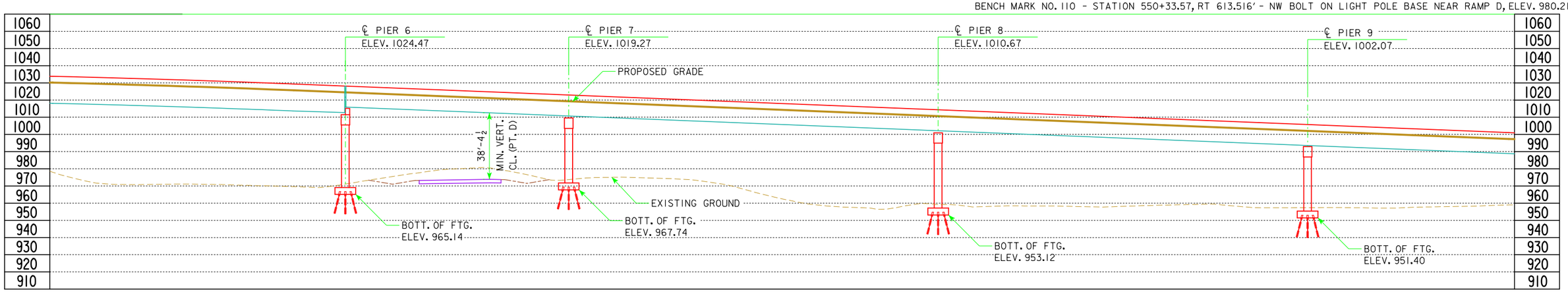
BENCH MARK NO. 110 - STATION 550+33.57, RT 613.516' - NW BOLT ON LIGHT POLE BASE NEAR RAMP D, ELEV. 980.21



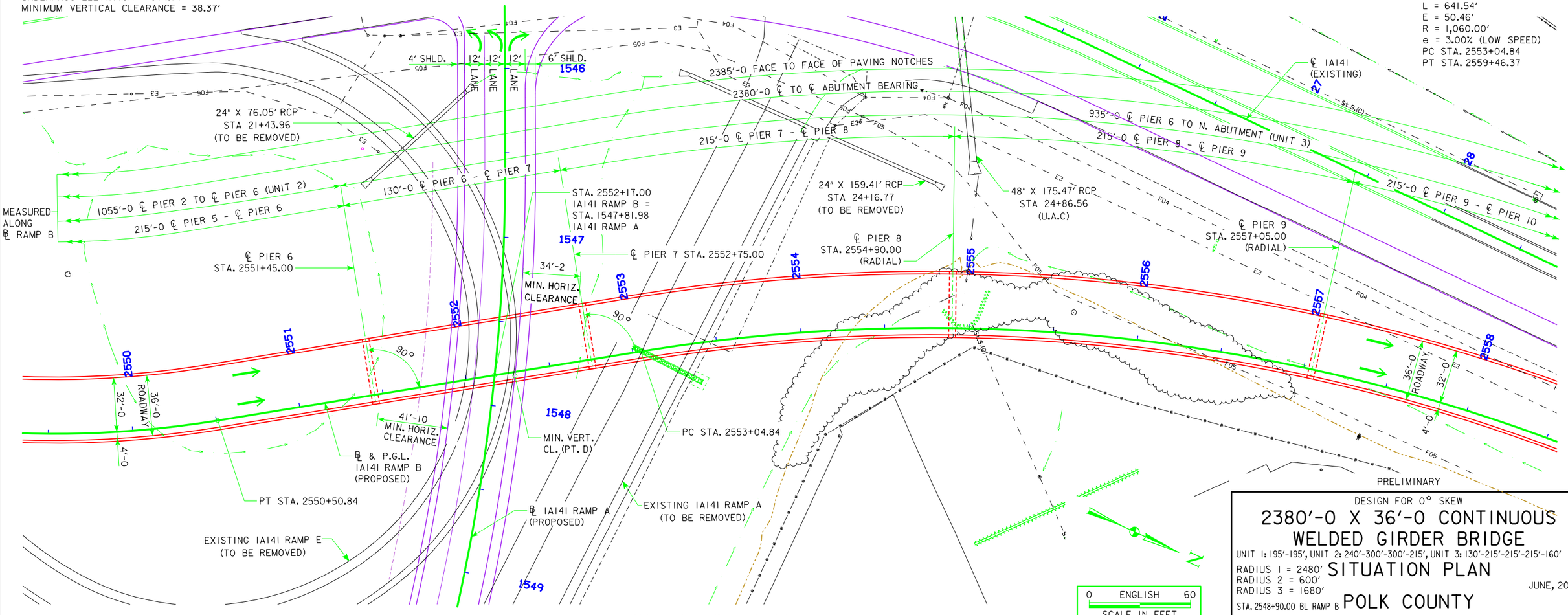
MINIMUM VERTICAL CLEARANCE (IA 141 RAMP A)(PT. D)

OVERHEAD STATION = 2552+28.83, OFFSET 2.25' RT.
OVERHEAD ELEVATION = 1021.11
DEPTH OF SUPERSTRUCTURE = 8.60'
UNDERPASS STATION = 1547+81.07, OFFSET 12.00' LT.
UNDERPASS ELEVATION = 974.14
MINIMUM VERTICAL CLEARANCE = 38.37'

LONGITUDINAL SECTION ALONG ℄ APPROACH ROADWAY

CURVE 3 DATA

PI STA. 2556+35.77
Δ = 34°40'36.39" (RT)
D = 5°24'18.94"
T = 330.93'
L = 641.54'
E = 50.46'
R = 1,060.00'
e = 3.00% (LOW SPEED)
PC STA. 2553+04.84
PT STA. 2559+46.37



SITUATION PLAN

DESIGN FOR 0° SKEW

2380'-0 X 36'-0 CONTINUOUS WELDED GIRDER BRIDGE

UNIT 1: 195'-195', UNIT 2: 240'-300'-300'-215', UNIT 3: 130'-215'-215'-215'-160'
RADIUS 1 = 2480'
RADIUS 2 = 600'
RADIUS 3 = 1680'
STA. 2548+90.00 BL RAMP B

SITUATION PLAN

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

JUNE, 2016

DESIGN SHEET NO. 3 OF 5 FILE NO. 31309 DESIGN NO. 1818

DESIGN TEAM **GUSTAFSON \ HR GREEN** | **POLK** COUNTY | PROJECT NUMBER **IM-080-3(183)127--13-77** | SHEET NUMBER **V.3**

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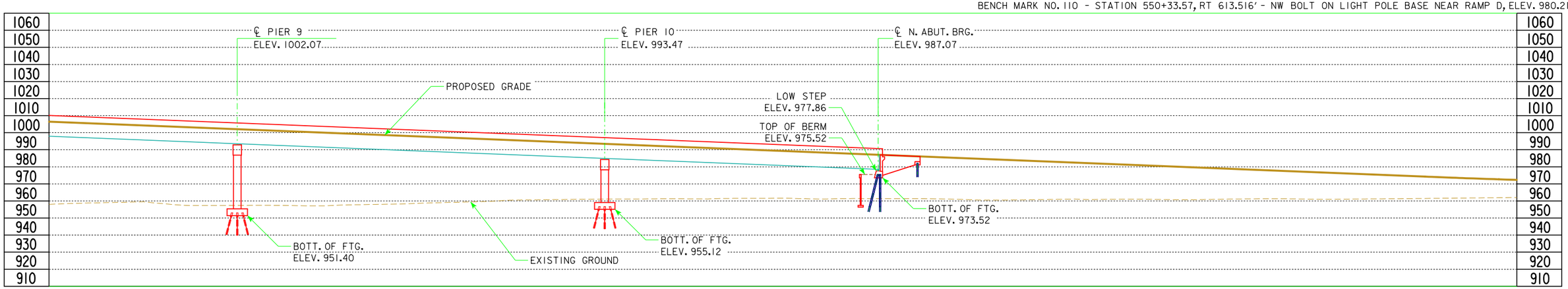
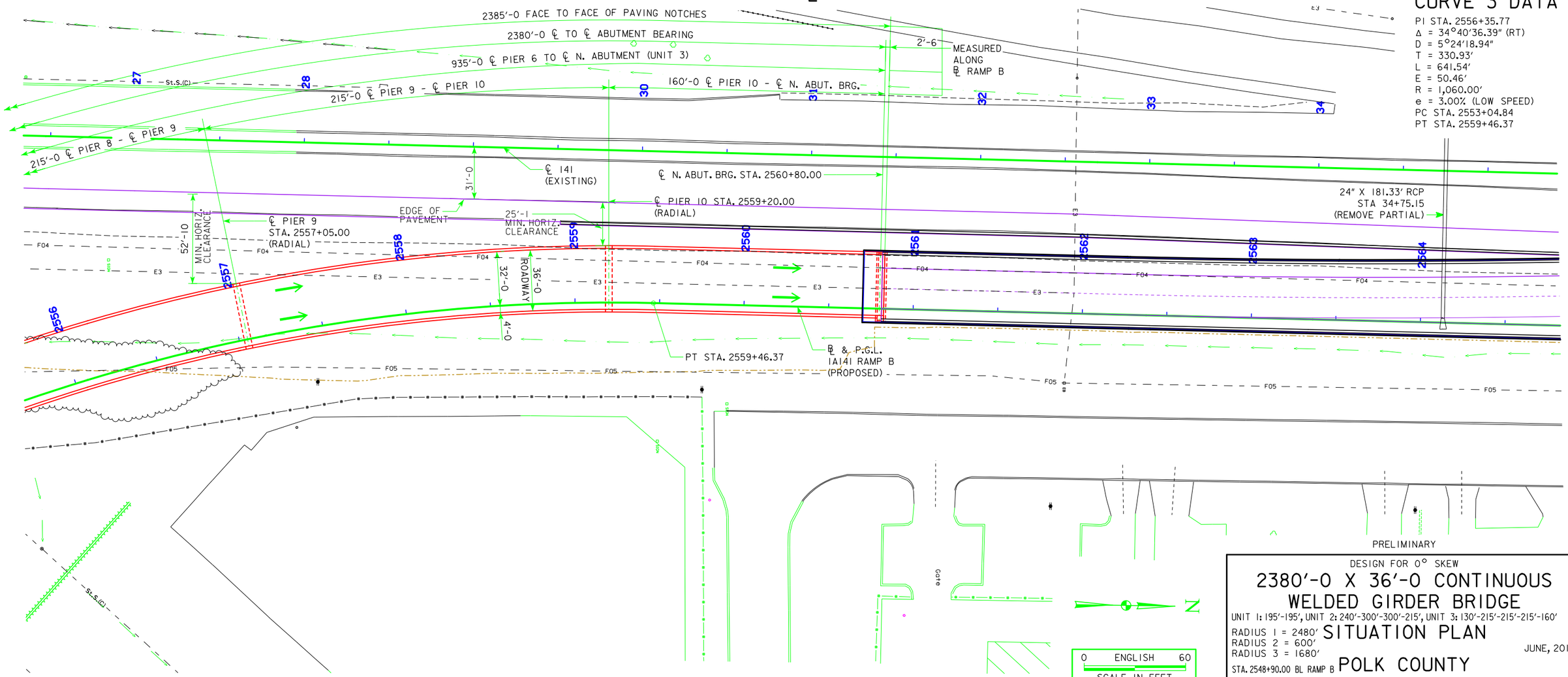
BENCH MARK NO. 110 - STATION 550+33.57, RT 613.516' - NW BOLT ON LIGHT POLE BASE NEAR RAMP D, ELEV. 980.21



LONGITUDINAL SECTION ALONG ℄ APPROACH ROADWAY



CURVE 3 DATA

PI STA. 2556+35.77
Δ = 34°40'36.39" (RT)
D = 5°24'18.94"
T = 330.93'
L = 641.54'
E = 50.46'
R = 1,060.00'
e = 3.00% (LOW SPEED)
PC STA. 2553+04.84
PT STA. 2559+46.37

0 ENGLISH 60
SCALE IN FEET

SITUATION PLAN

PRELIMINARY

DESIGN FOR 0° SKEW

2380'-0 X 36'-0 CONTINUOUS WELDED GIRDER BRIDGE

UNIT 1: 195'-195', UNIT 2: 240'-300'-300'-215', UNIT 3: 130'-215'-215'-215'-160'
RADIUS 1 = 2480'
RADIUS 2 = 600'
RADIUS 3 = 1680'

SITUATION PLAN

JUNE, 2016

STA. 2548+90.00 BL RAMP B **POLK COUNTY**

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 4 OF 5 FILE NO. 31309 DESIGN NO. 1818

DESIGN TEAM **GUSTAFSON \ HR GREEN** | **POLK** COUNTY | PROJECT NUMBER **IM-080-3(183)127--13-77** | SHEET NUMBER **V.4**

℄ S. ABUT. BRG.
STA. 2537+00.00

℄ I-35/I-80
(EXISTING)

IOWA INTERSTATE
RAILROAD
(EXISTING)

℄ IA141
(EXISTING)

℄ IA141 RAMP C
(EXISTING)

EXISTING BRIDGE
DESIGN NO. 6257

℄ & P.G.L.
IA141 RAMP B
(PROPOSED)

EXISTING IA141 RAMP E
(TO BE REMOVED)

EXISTING IA141 RAMP H
(TO BE REMOVED)

℄ IA141 RAMP D
(EXISTING)

EXISTING IA141 RAMP A
(TO BE REMOVED)

℄ IA141 RAMP A
(PROPOSED)

℄ N. ABUT. BRG.
STA. 2560+80.00

WEBSTER TWP
T-79N R-25W
SEC. 16

WEBSTER TWP
T-79N R-25W
SEC. 17

N

0 ENGLISH 200
SCALE IN FEET

SITE PLAN

PRELIMINARY

DESIGN FOR 0° SKEW

2380'-0 X 36'-0 CONTINUOUS WELDED GIRDER BRIDGE

UNIT 1: 195'-195', UNIT 2: 240'-300'-300'-215', UNIT 3: 130'-215'-215'-215'-160'

RADIUS 1 = 2480'
RADIUS 2 = 600'
RADIUS 3 = 1680'

SITUATION PLAN - SITE

JUNE, 2016

STA. 2548+90.00 BL RAMP B

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 5 OF 5 FILE NO. 31309 DESIGN NO. 1818

DESIGN TEAM				PROJECT NUMBER		SHEET NUMBER
GUSTAFSON \ HR GREEN	POLK	COUNTY		IM-080-3(183)127--13-77		V.5

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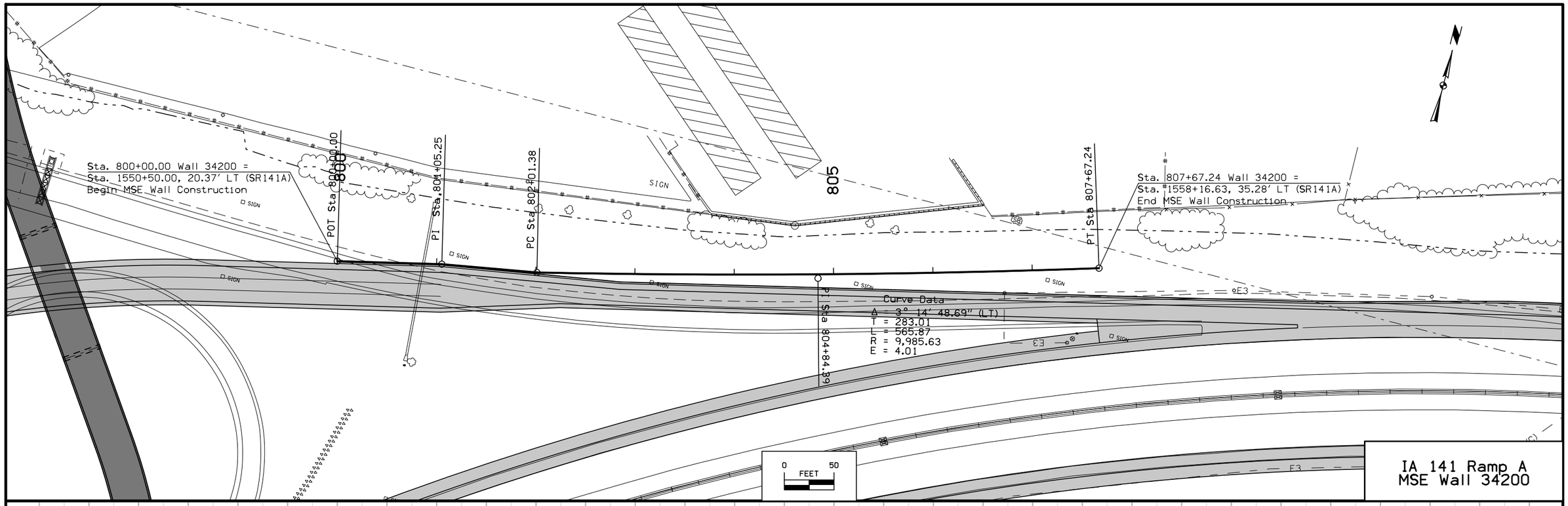

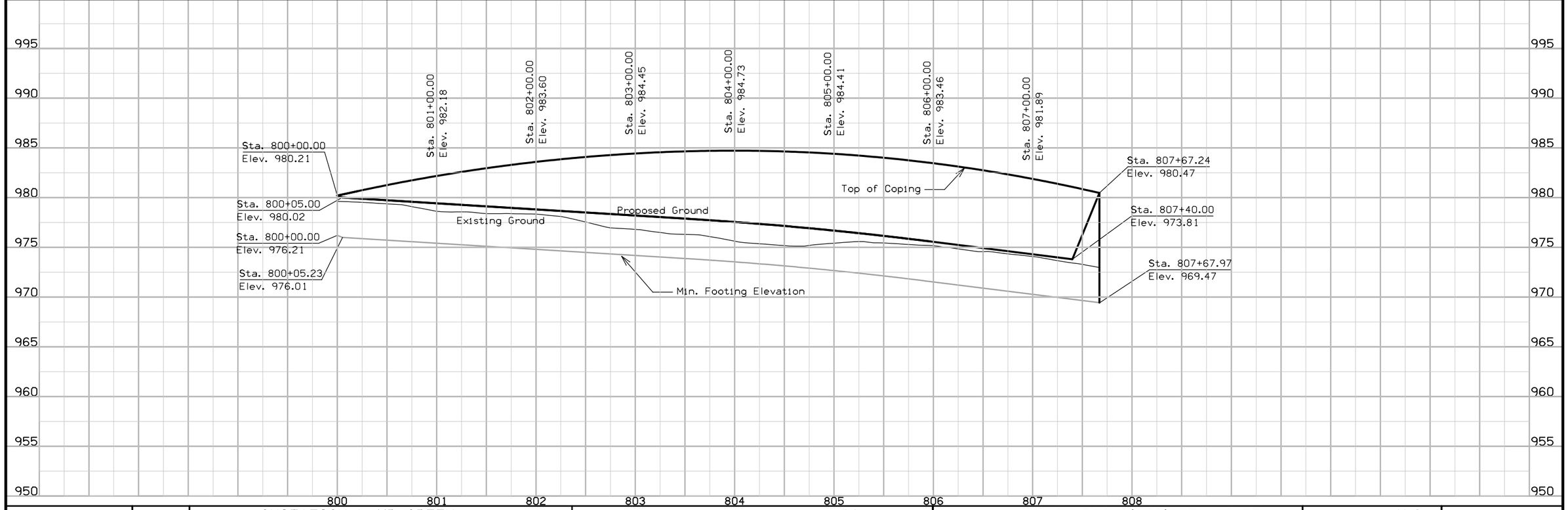

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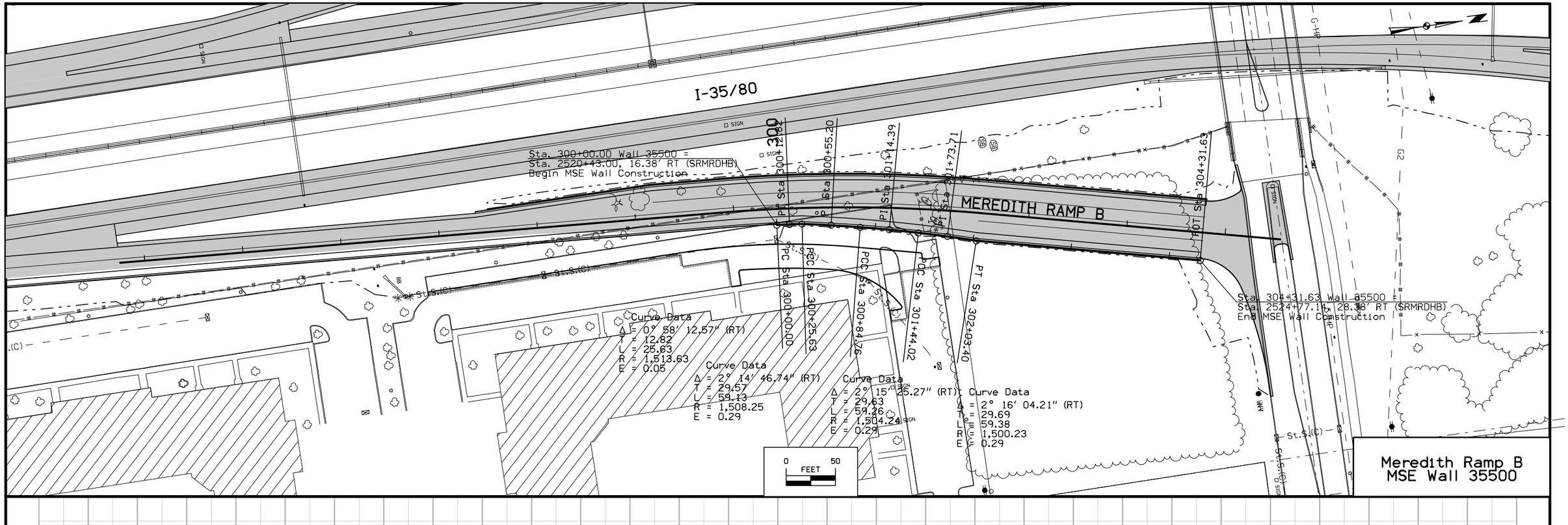

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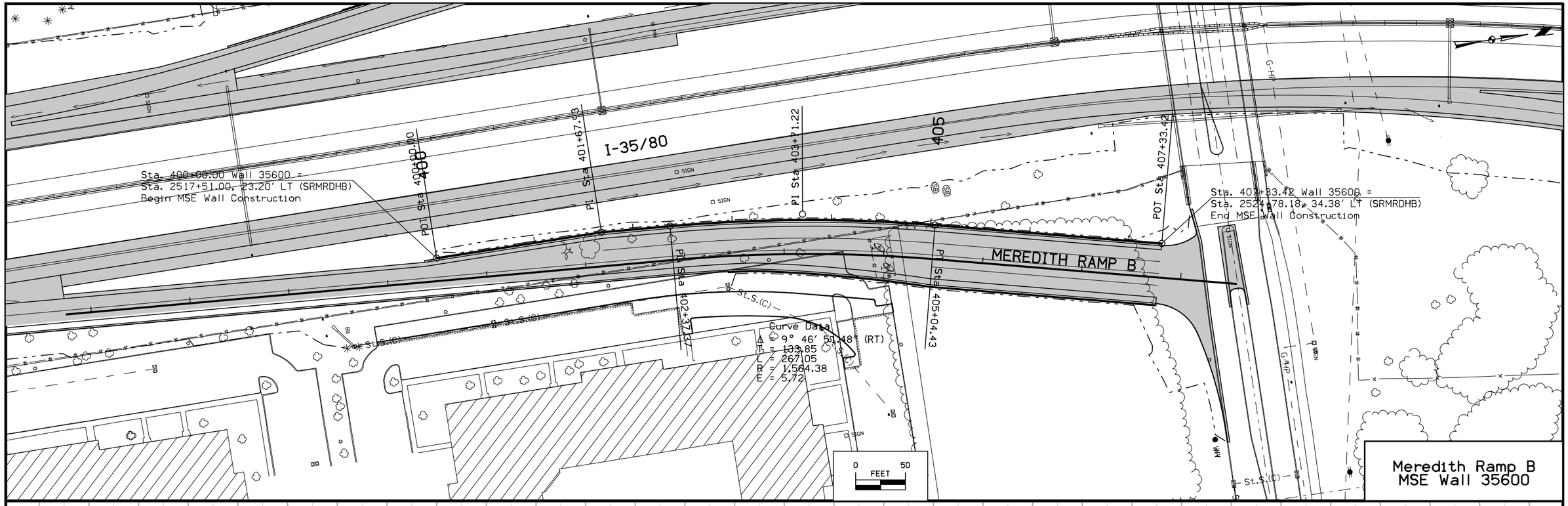

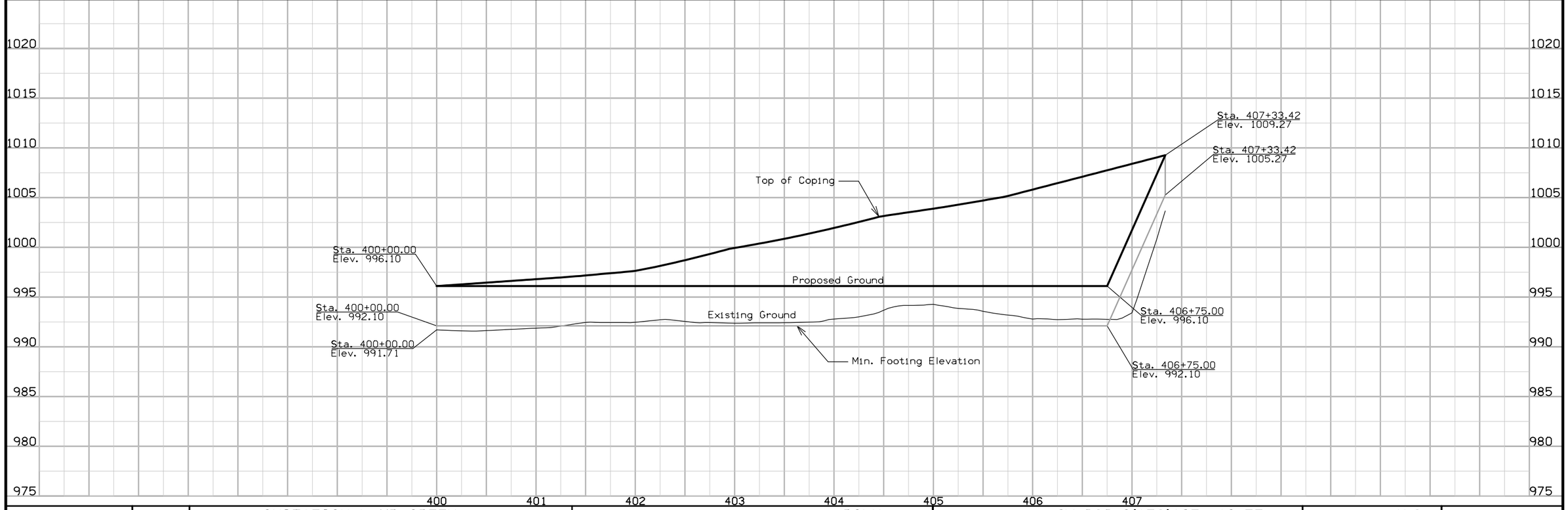

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER V.8

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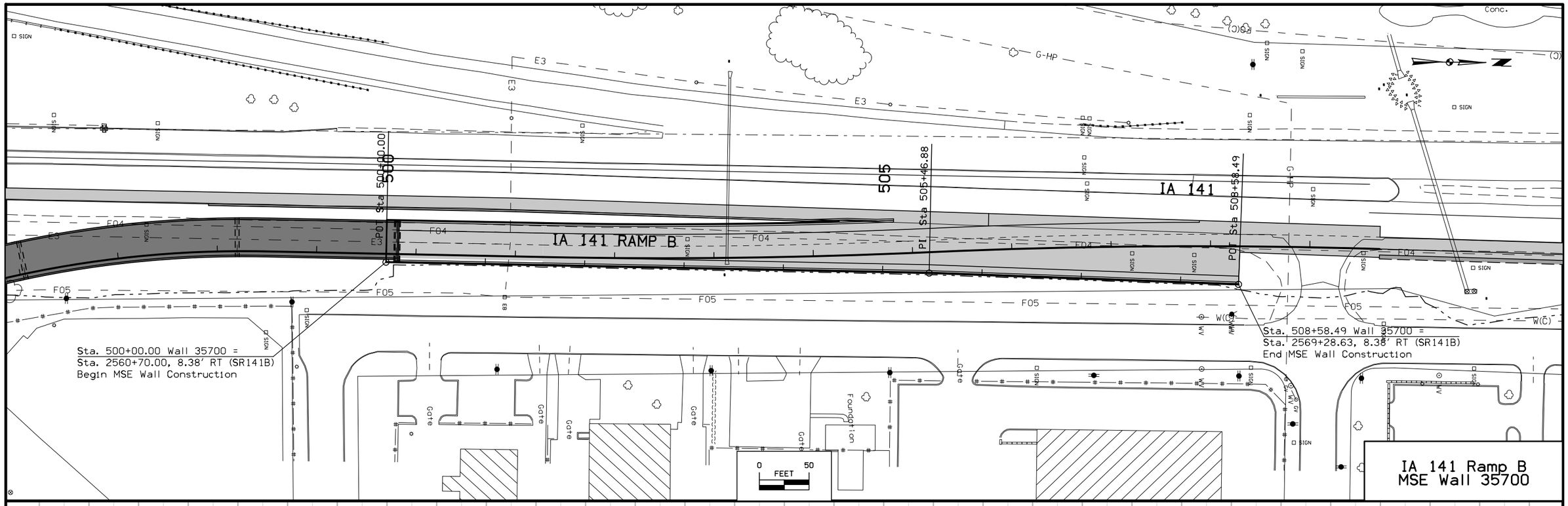

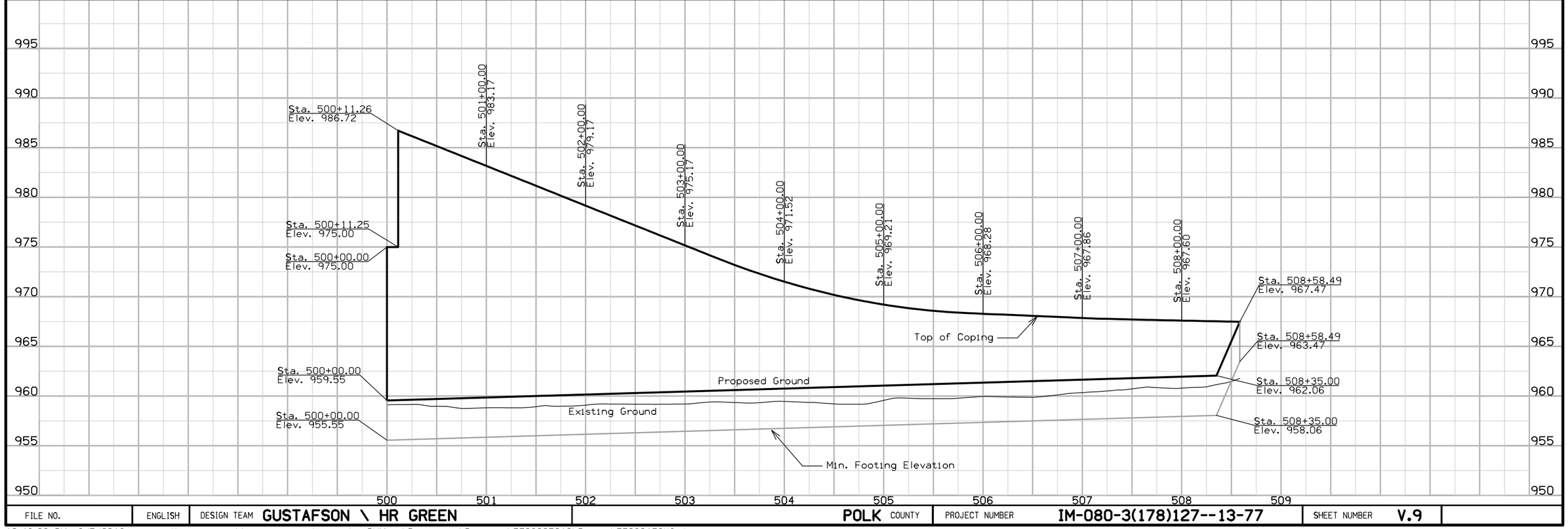

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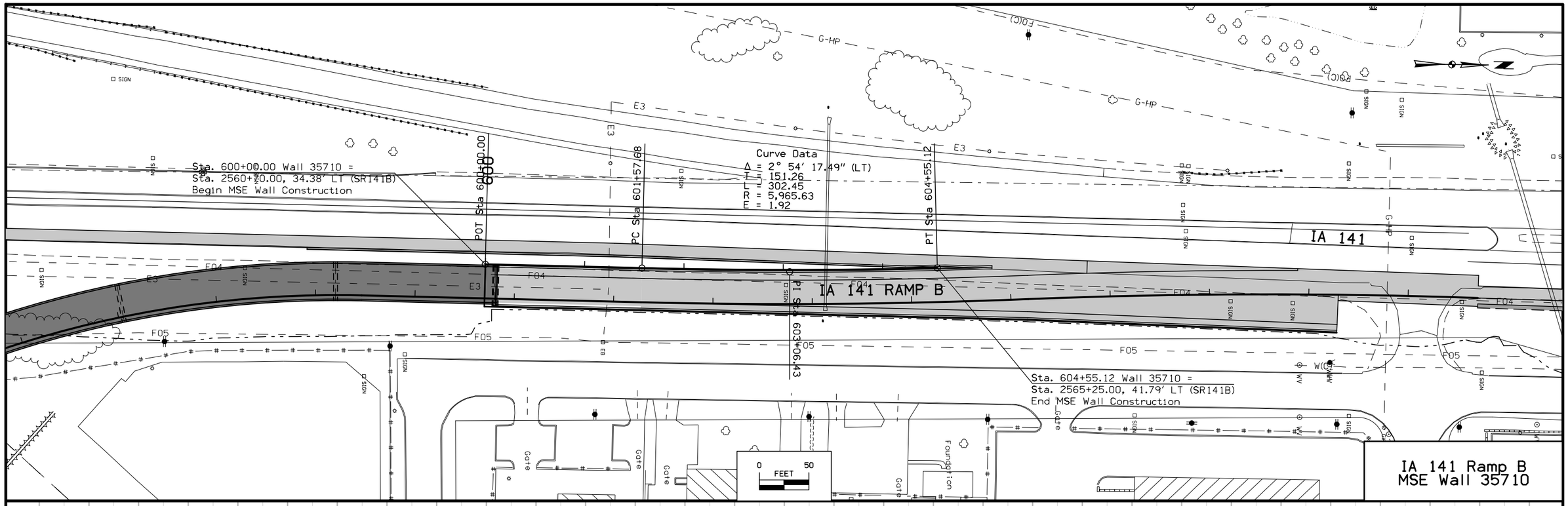

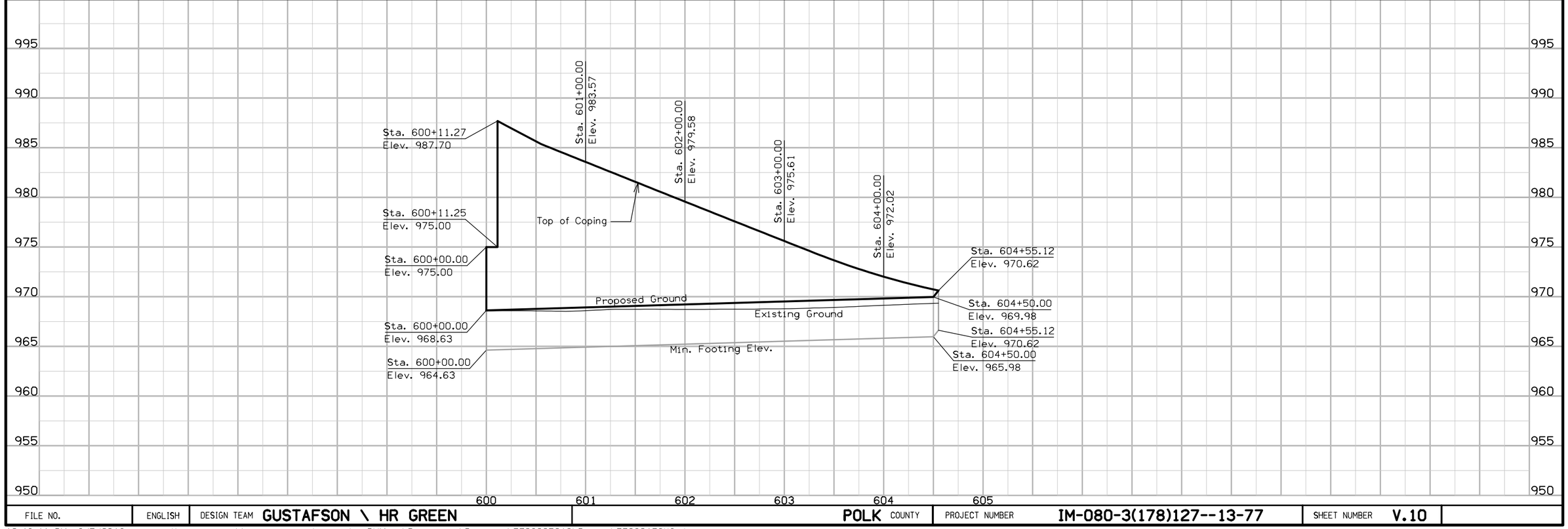

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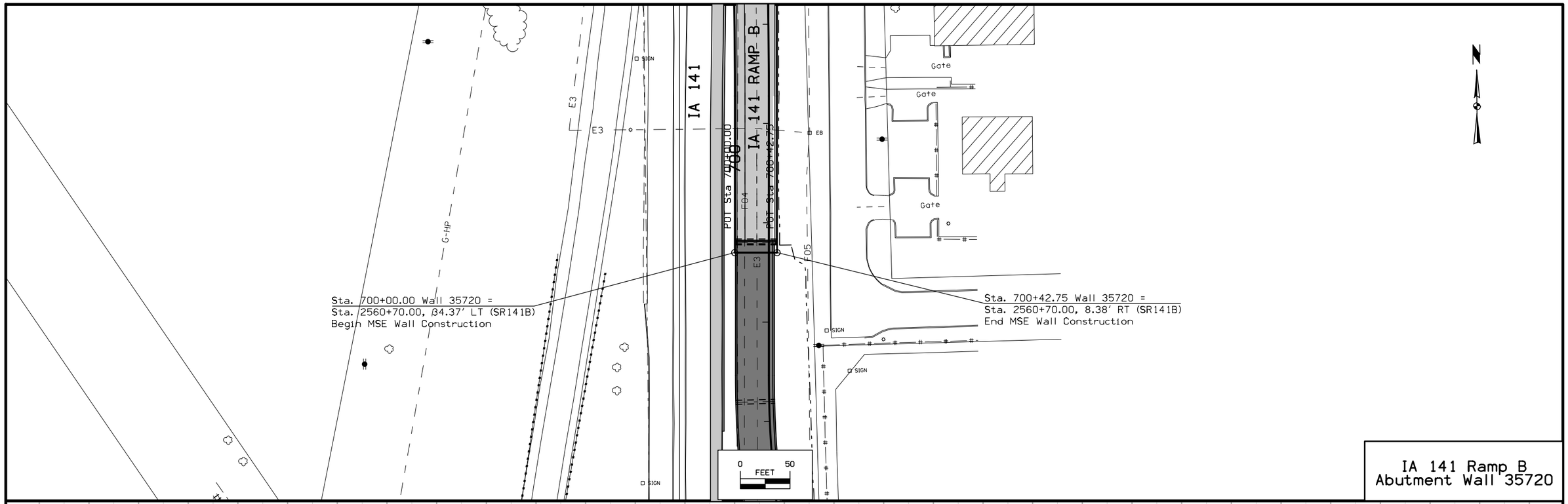
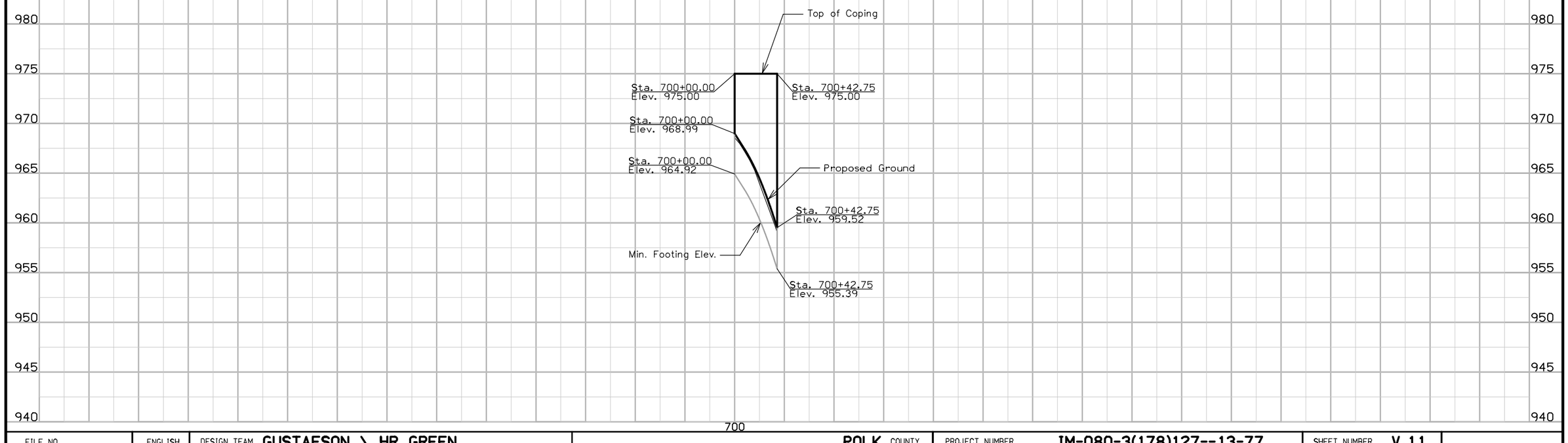


IA 141 Ramp B
Abutment Wall 35720



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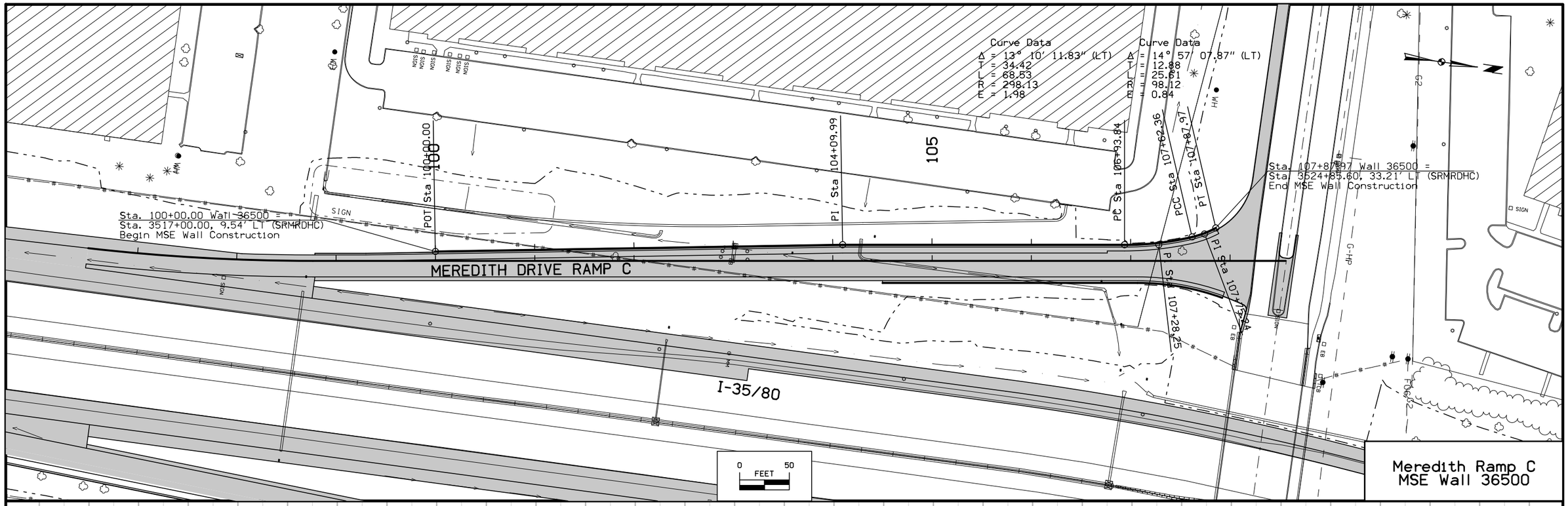

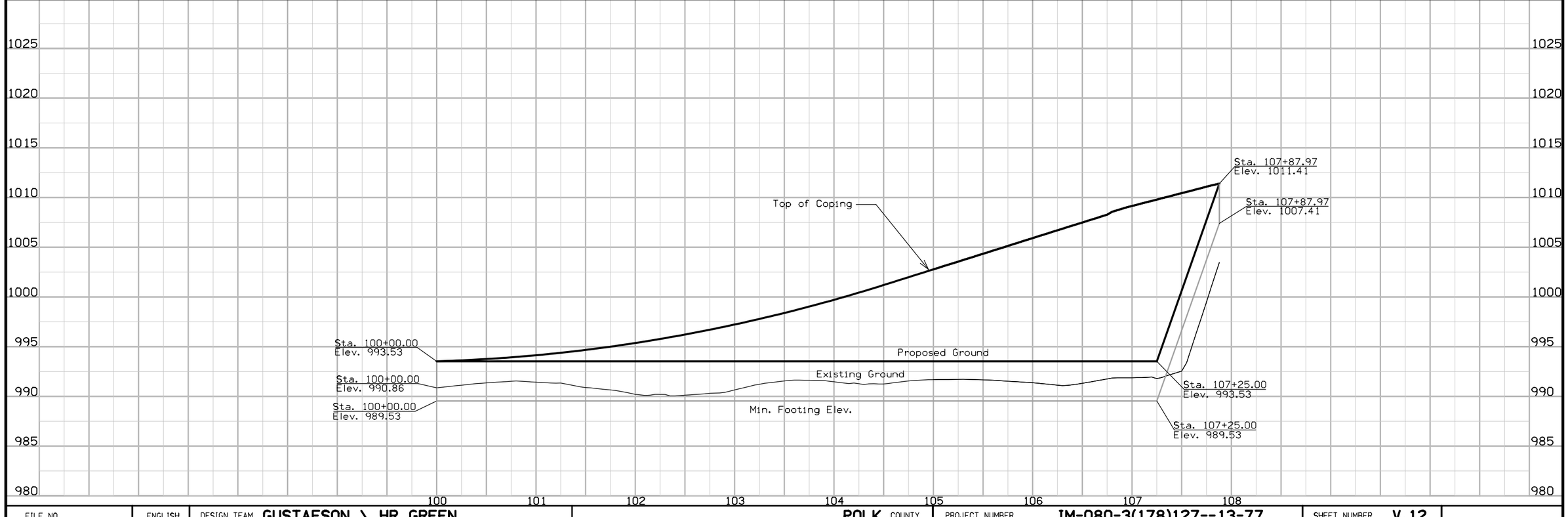

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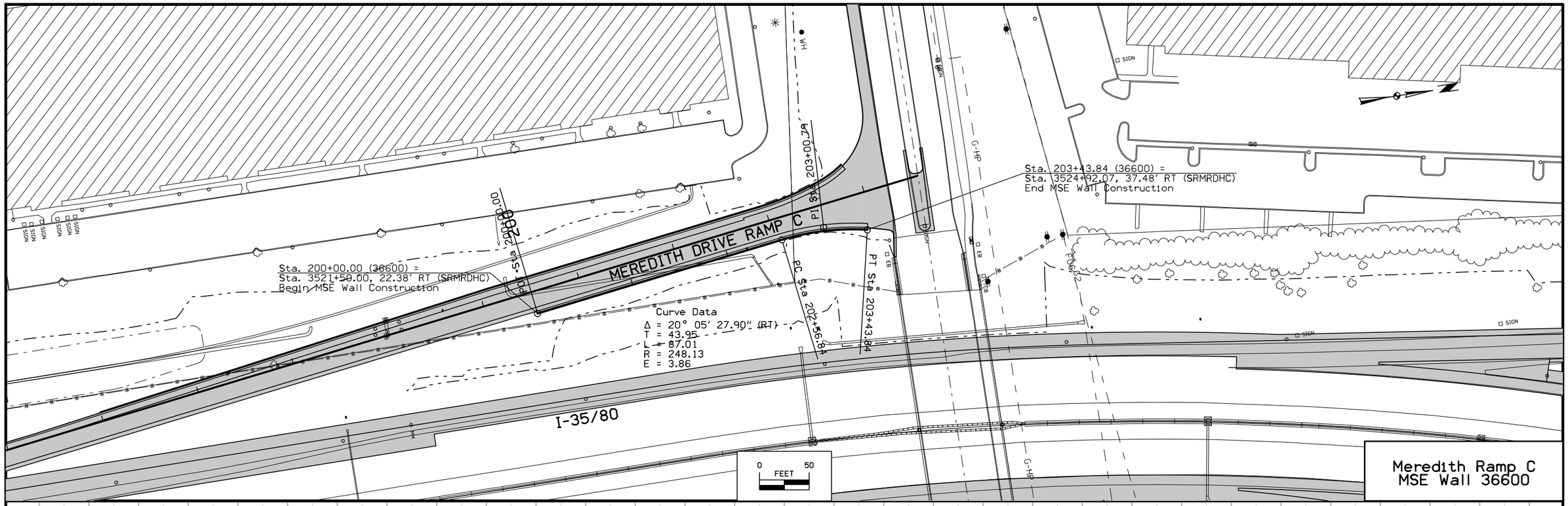

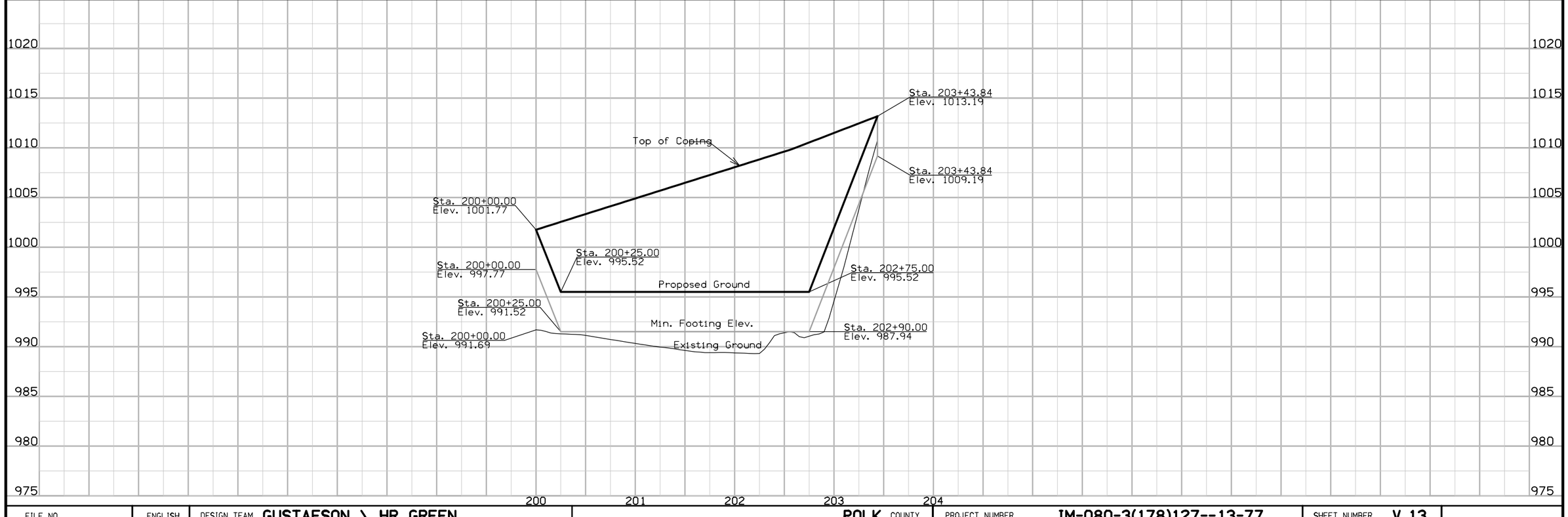

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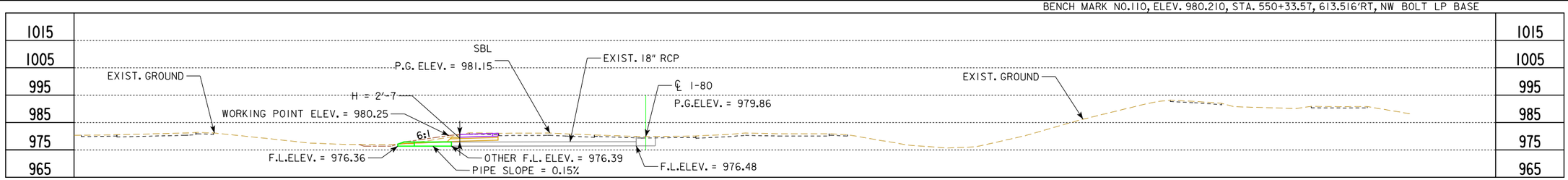
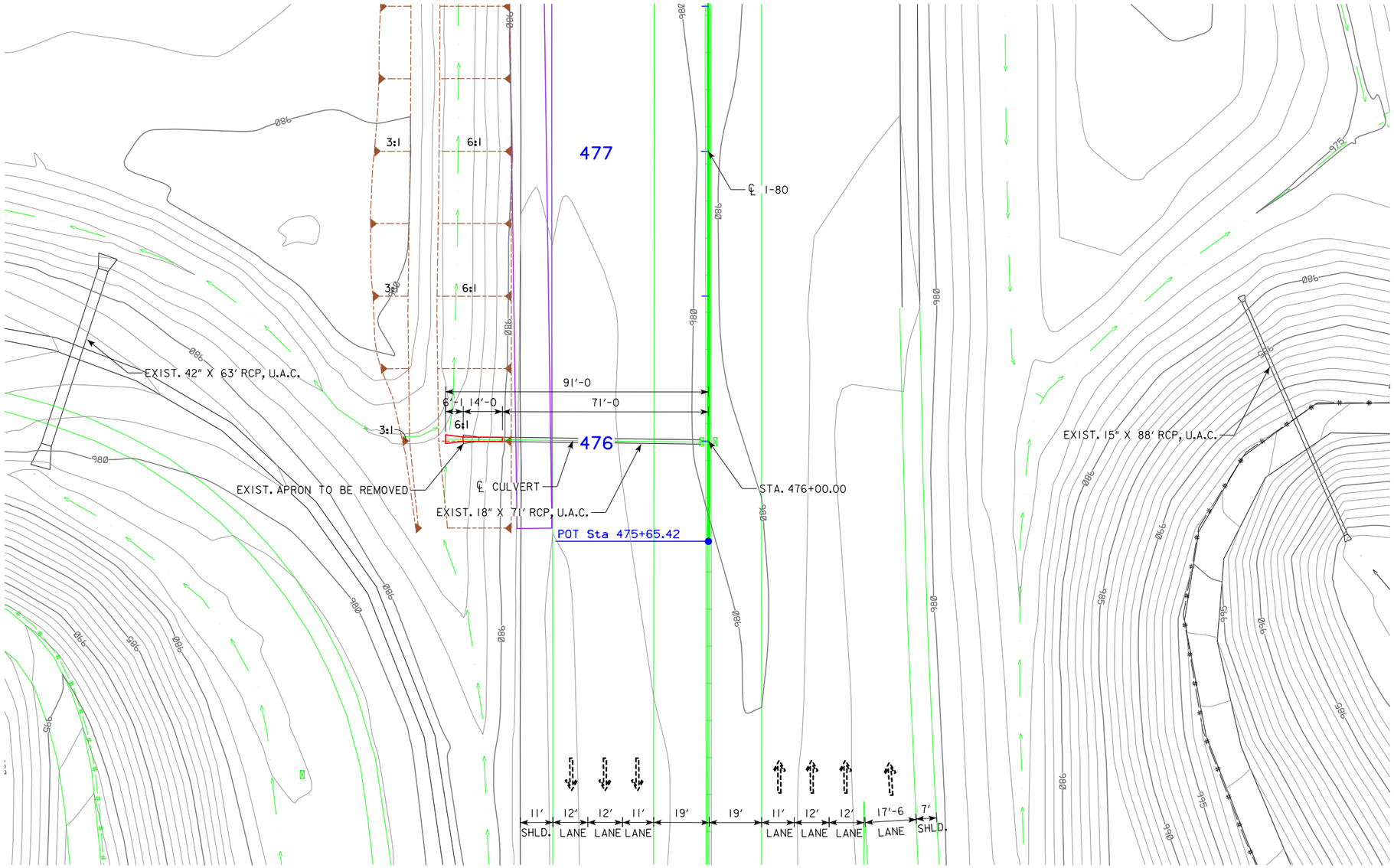
BENCH MARK NO.110, ELEV. 980.210, STA. 550+33.57, 613.516'RT, NW BOLT LP BASE



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

N

LOCATION

I-80
T-79N R-25W
SECTION 20
WEBSTER TOWNSHIP
POLK COUNTY

0 ENGLISH 40
SCALE IN FEET

HYDRAULIC DATA

DRAINAGE AREA = 0.525 AC
DESIGN DISCHARGE = 4.046 CFS

DESIGN FOR 0° SKEW

18" X 14' REINFORCED CONCRETE PIPE EXTENSION PLAT PLAN

STA. 476+00.00

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO. _____

DESIGN TEAM **GUSTAFSON \ HR GREEN \ LT LEON** | **POLK** COUNTY | PROJECT NUMBER **IM-080-3(178)127--13-77** | SHEET NUMBER **V.14**

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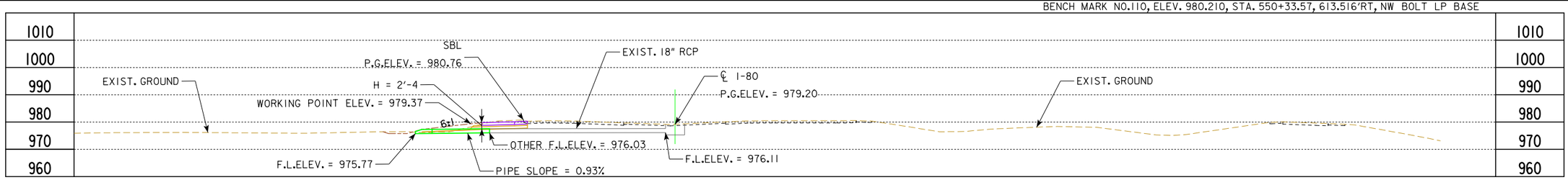
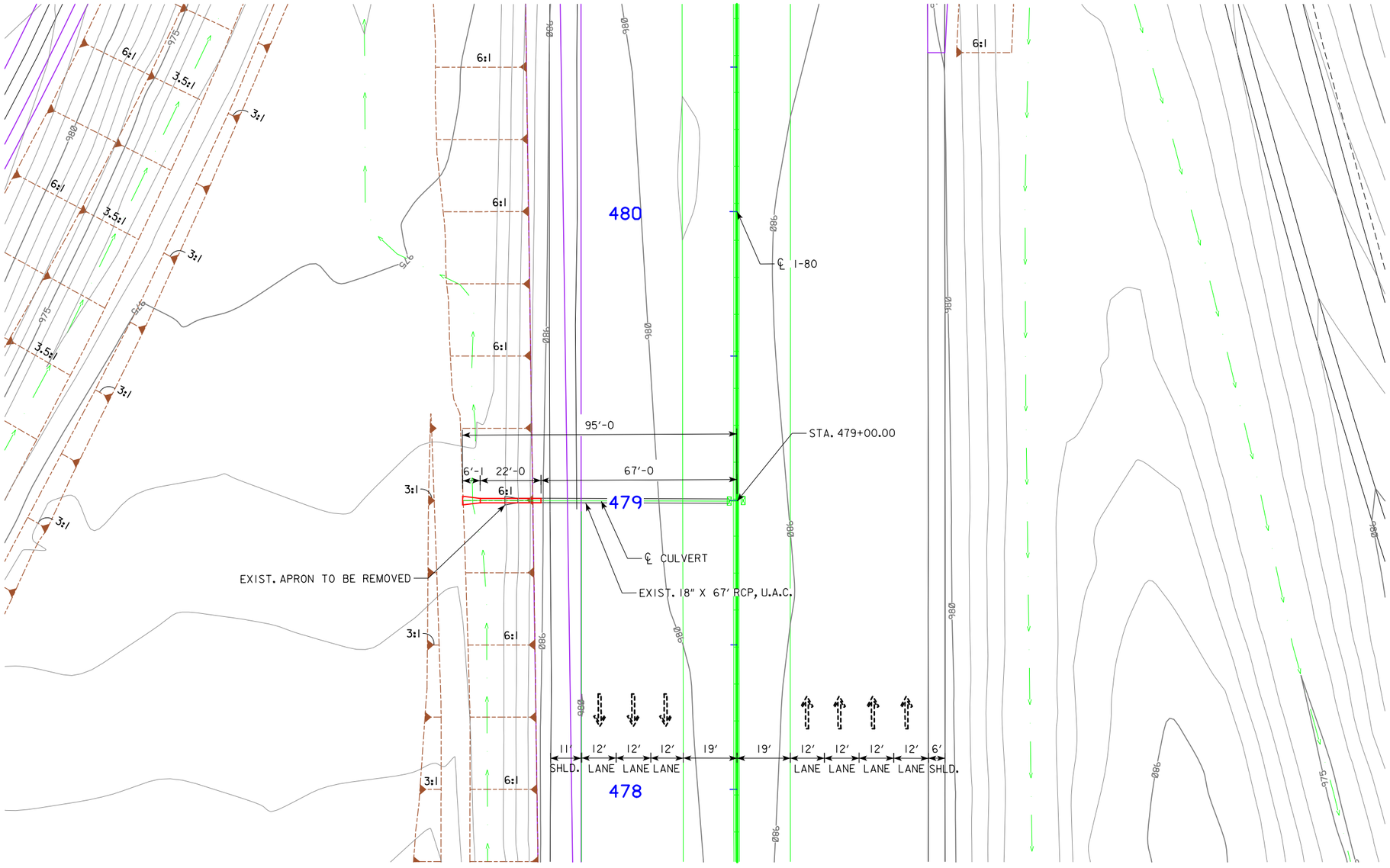
BENCH MARK NO.110, ELEV. 980.210, STA. 550+33.57, 613.516'RT, NW BOLT LP BASE



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

N

LOCATION

I-80
T-79N R-25W
SECTION 20
WEBSTER TOWNSHIP
POLK COUNTY

0 ENGLISH 40
SCALE IN FEET

HYDRAULIC DATA

DRAINAGE AREA = 0.582 AC
DESIGN DISCHARGE = 5.116 CFS

DESIGN FOR 0° SKEW

18" X 22' REINFORCED CONCRETE PIPE EXTENSION PLAT PLAN

STA. 479+00.00

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO.

DESIGN TEAM **GUSTAFSON \ HR GREEN \ LT LEON** | **POLK** COUNTY | PROJECT NUMBER **IM-080-3(178)127--13-77** | SHEET NUMBER **V.15**

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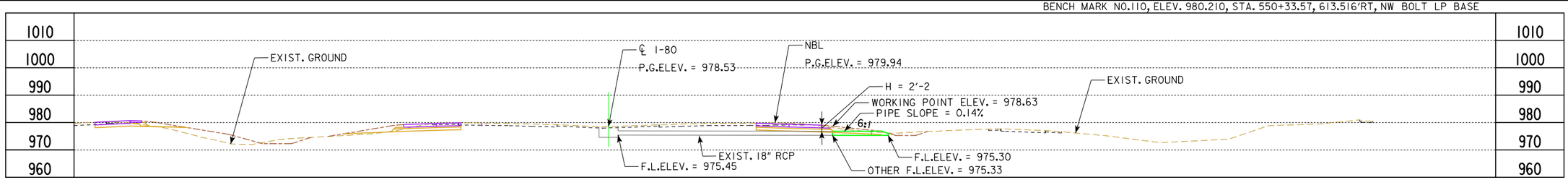
BENCH MARK NO.110, ELEV. 980.210, STA. 550+33.57, 613.516'RT, NW BOLT LP BASE



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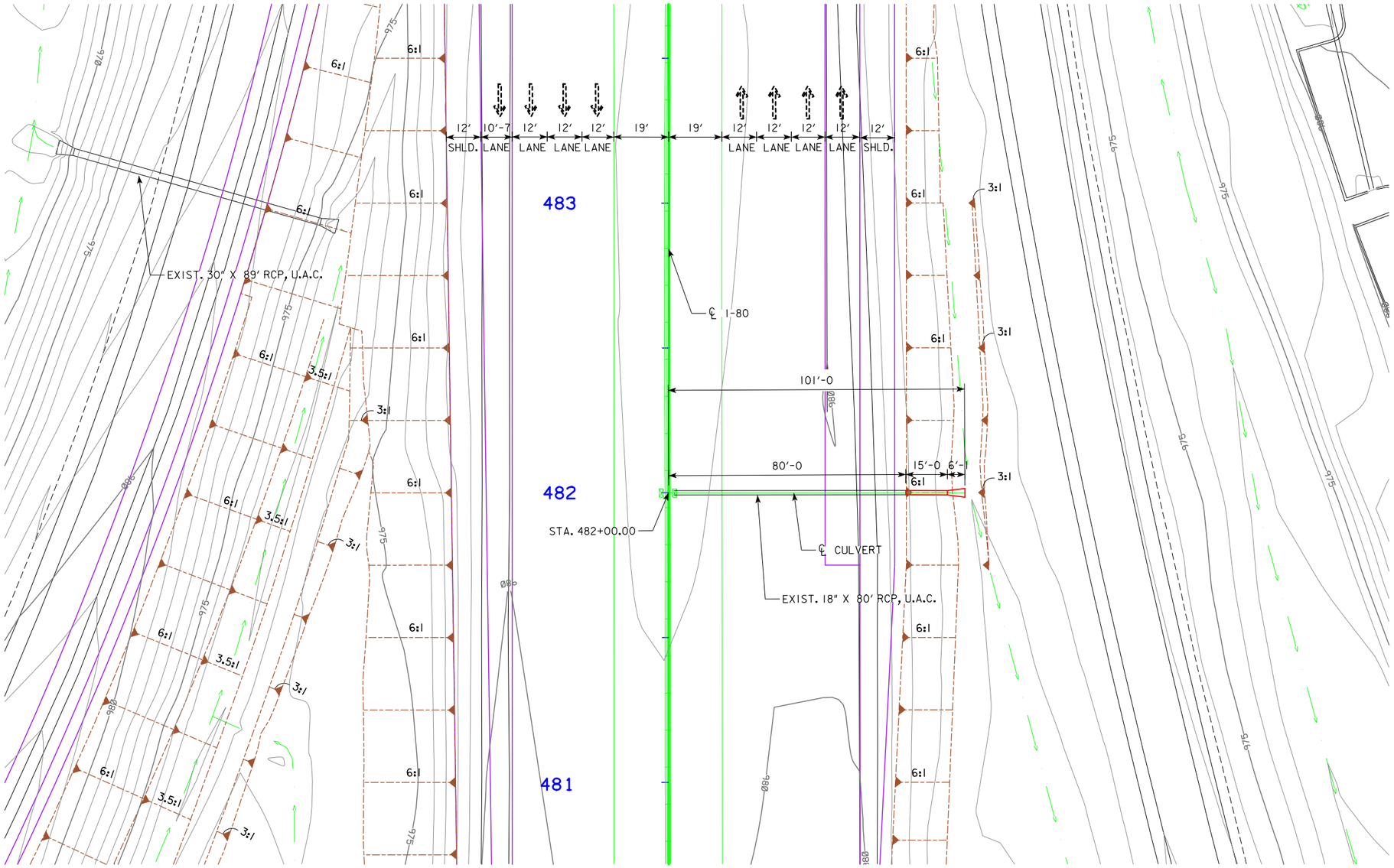

PLAT PLAN

N

0 ENGLISH 40
SCALE IN FEET

LOCATION

I-80
T-79N R-25W
SECTION 20
WEBSTER TOWNSHIP
POLK COUNTY

HYDRAULIC DATA

DRAINAGE AREA = 0.58 AC
DESIGN DISCHARGE = 5.38 CFS

DESIGN FOR 0° SKEW

18" X 16' REINFORCED CONCRETE PIPE EXTENSION PLAT PLAN

STA. 482+00.00

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO. _____

DESIGN TEAM	GUSTAFSON \ HR GREEN \ LT LEON	POLK	COUNTY	PROJECT NUMBER	IM-080-3(178)127--13-77	SHEET NUMBER	V.16

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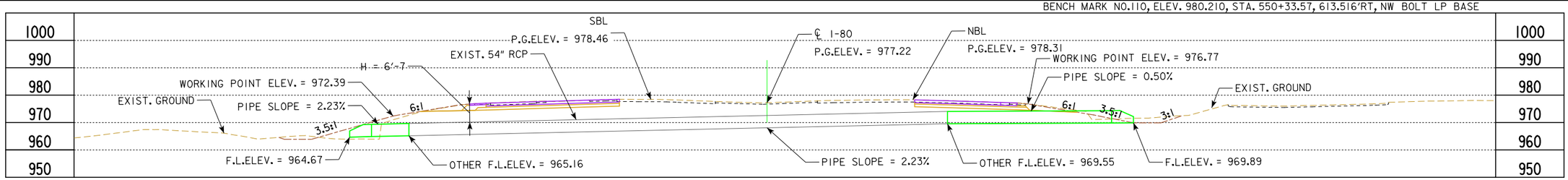
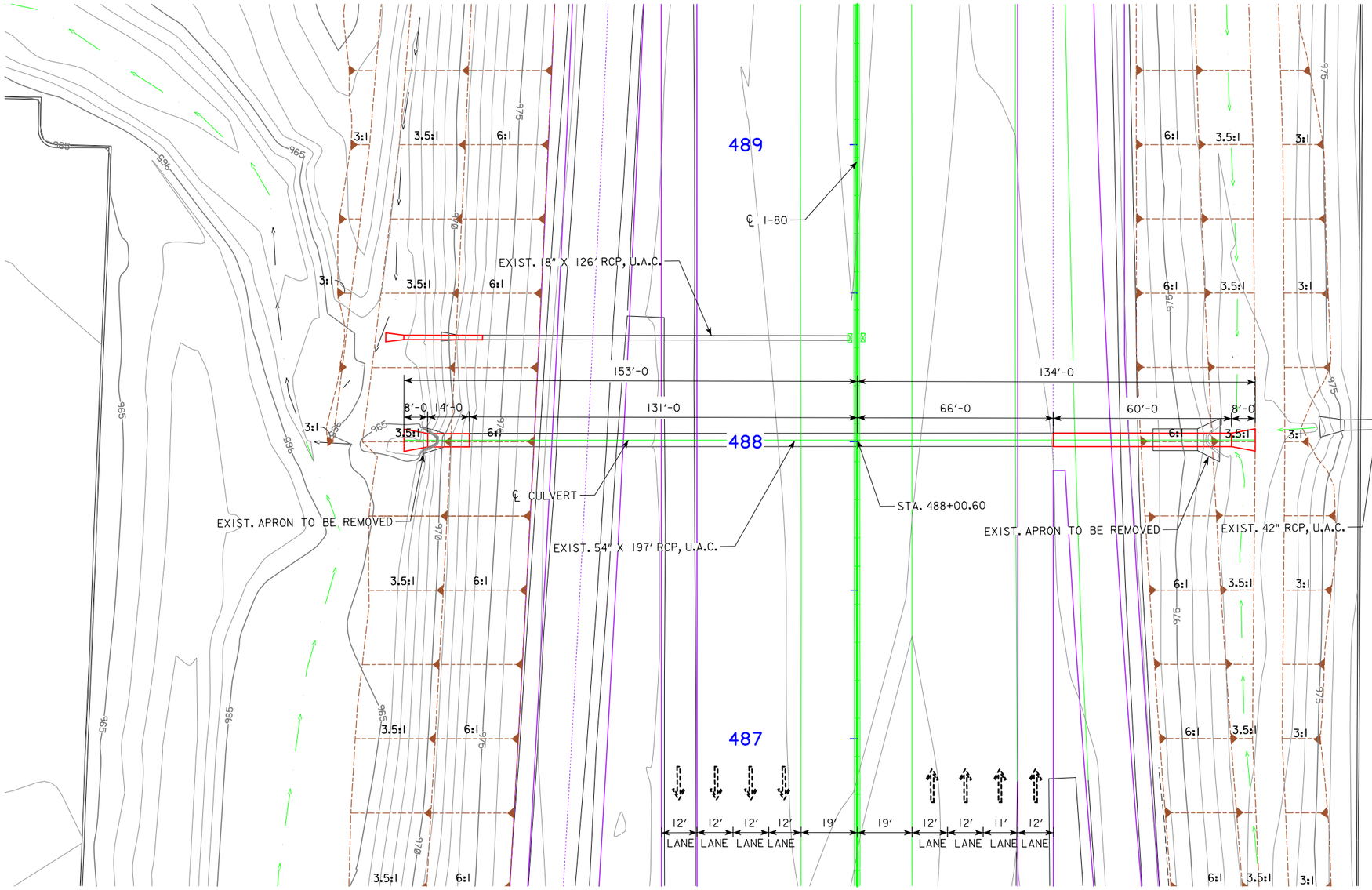
BENCH MARK NO.110, ELEV. 980.210, STA. 550+33.57, 613.516'RT, NW BOLT LP BASE



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

N

LOCATION

I-80
T-79N R-25W
SECTION 20
WEBSTER TOWNSHIP
POLK COUNTY

0 ENGLISH 40
SCALE IN FEET

HYDRAULIC DATA

DRAINAGE AREA = 59.1 AC
DESIGN DISCHARGE = 222 CFS

DESIGN FOR 0° SKEW

54" X 74' REINFORCED CONCRETE PIPE EXTENSION PLAT PLAN

STA. 488+00.60

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO. _____

DESIGN TEAM	GUSTAFSON \ HR GREEN \ LT LEON	POLK	COUNTY	PROJECT NUMBER	IM-080-3(178)127--13-77	SHEET NUMBER	V.17

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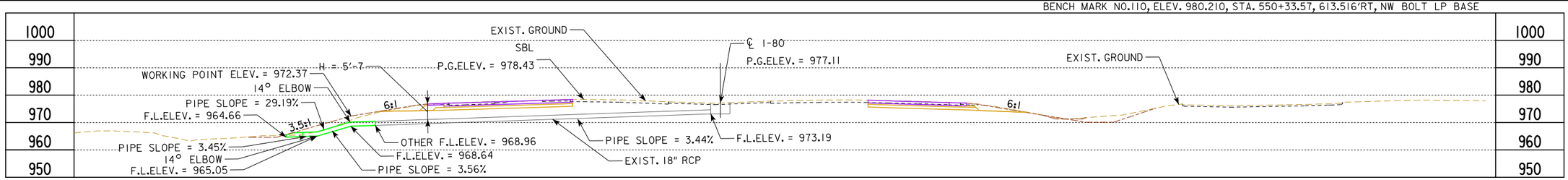
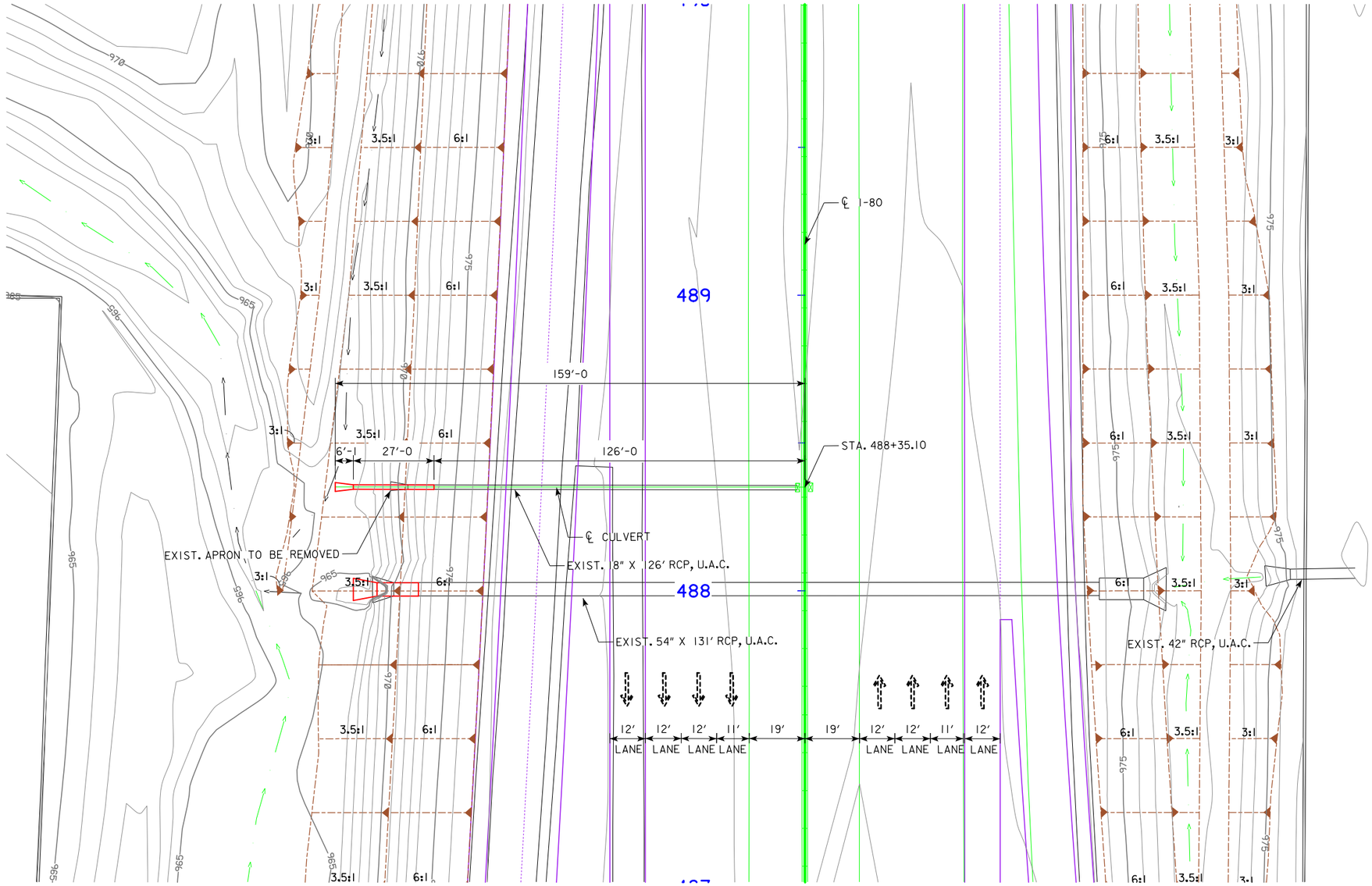
BENCH MARK NO.110, ELEV. 980.210, STA. 550+33.57, 613.516'RT, NW BOLT LP BASE



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

N

LOCATION

I-80
T-79N R-25W
SECTION 20
WEBSTER TOWNSHIP
POLK COUNTY

0 ENGLISH 40
SCALE IN FEET

HYDRAULIC DATA

DRAINAGE AREA = 0.654 AC
DESIGN DISCHARGE = 6.077 CFS

DESIGN FOR 0° SKEW

18" X 28' REINFORCED CONCRETE PIPE EXTENSION PLAT PLAN

STA. 488+35.10

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO.

DESIGN TEAM **GUSTAFSON \ HR GREEN \ LT LEON** **POLK** COUNTY PROJECT NUMBER **IM-080-3(178)127--13-77** SHEET NUMBER **V.18**

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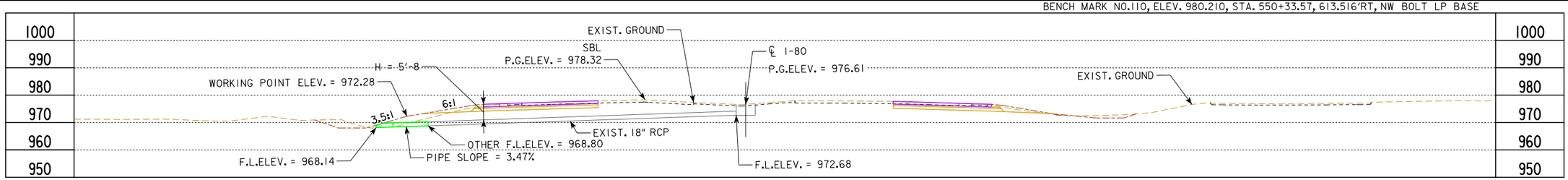
BENCH MARK NO.110, ELEV. 980.210, STA. 550+33.57, 613.516'RT, NW BOLT LP BASE



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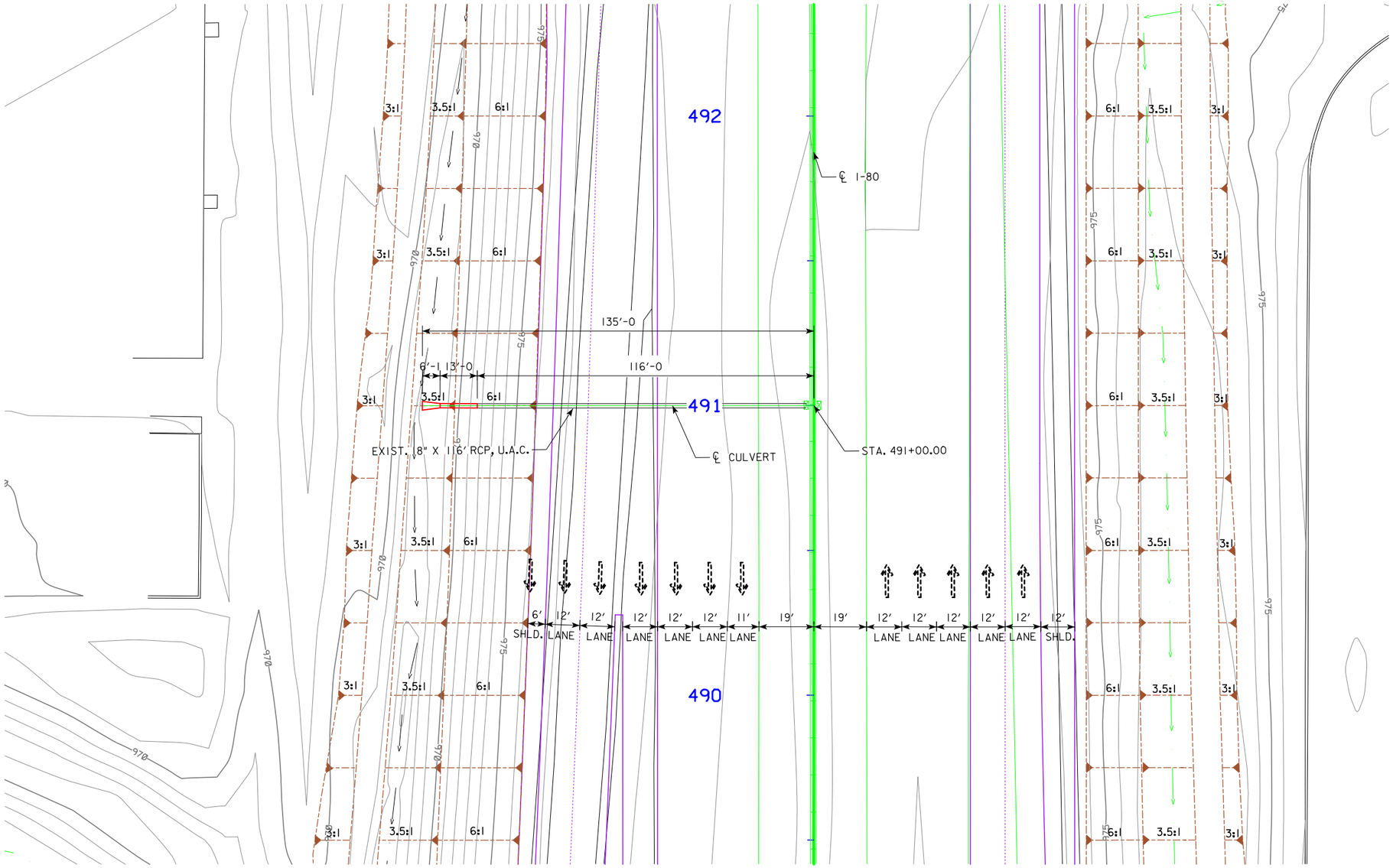
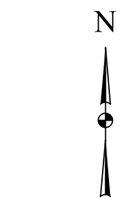


PLAT PLAN



LOCATION

I-80
T-79N R-25W
SECTION 20
WEBSTER TOWNSHIP
POLK COUNTY

0 ENGLISH 40
SCALE IN FEET

HYDRAULIC DATA

DRAINAGE AREA = 0.97 AC
DESIGN DISCHARGE = 14.27 CFS

DESIGN FOR 0° SKEW

18" X 14' REINFORCED CONCRETE PIPE EXTENSION PLAT PLAN

STA. 491+00.00

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO. _____

DESIGN TEAM **GUSTAFSON \ HR GREEN \ LT LEON** | **POLK** COUNTY | PROJECT NUMBER **IM-080-3(178)127--13-77** | SHEET NUMBER **V.19**

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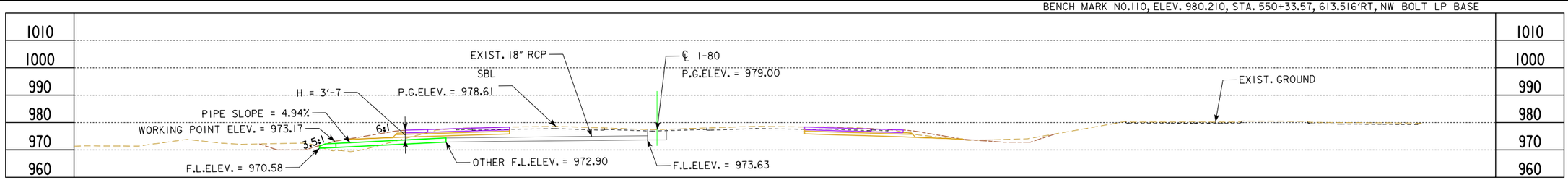
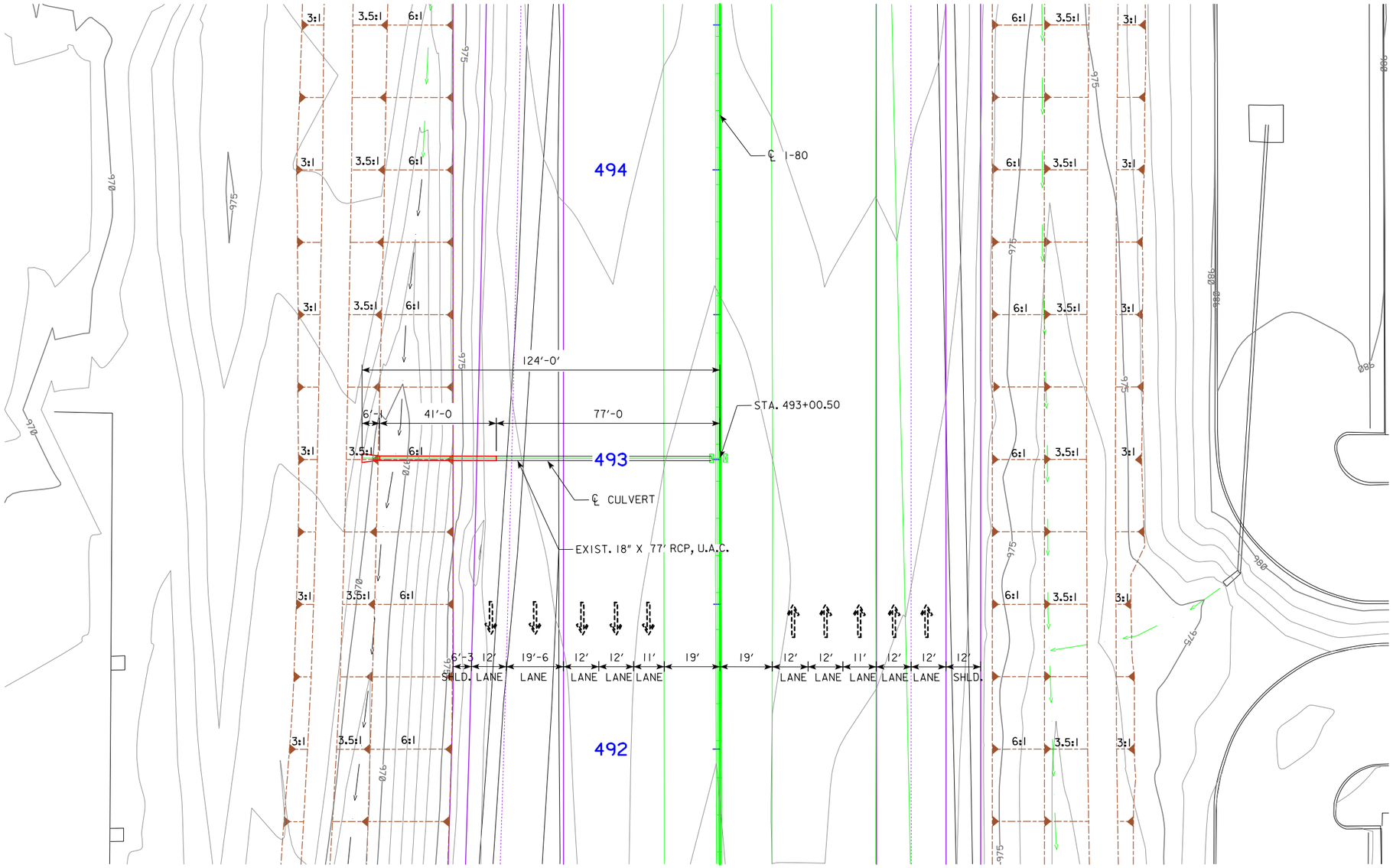
BENCH MARK NO.110, ELEV. 980.210, STA. 550+33.57, 613.516'RT, NW BOLT LP BASE



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

N

0 ENGLISH 40
SCALE IN FEET

LOCATION

I-80
T-79N R-25W
SECTION 20
WEBSTER TOWNSHIP
POLK COUNTY

HYDRAULIC DATA

DRAINAGE AREA = 0.384 AC
DESIGN DISCHARGE = 4.685 CFS

DESIGN FOR 0° SKEW

18" X 42' REINFORCED CONCRETE PIPE EXTENSION PLAT PLAN

STA. 493+00.50

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO.

DESIGN TEAM **GUSTAFSON \ HR GREEN \ LT LEON** **POLK** COUNTY PROJECT NUMBER **IM-080-3(178)127--13-77** SHEET NUMBER **V.20**

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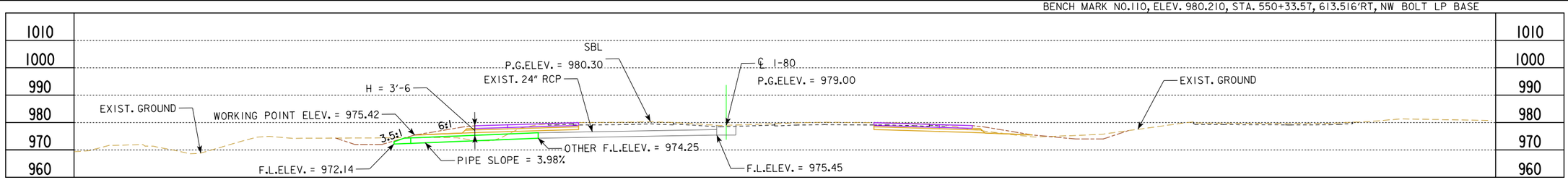
BENCH MARK NO.110, ELEV. 980.210, STA. 550+33.57, 613.516'RT, NW BOLT LP BASE



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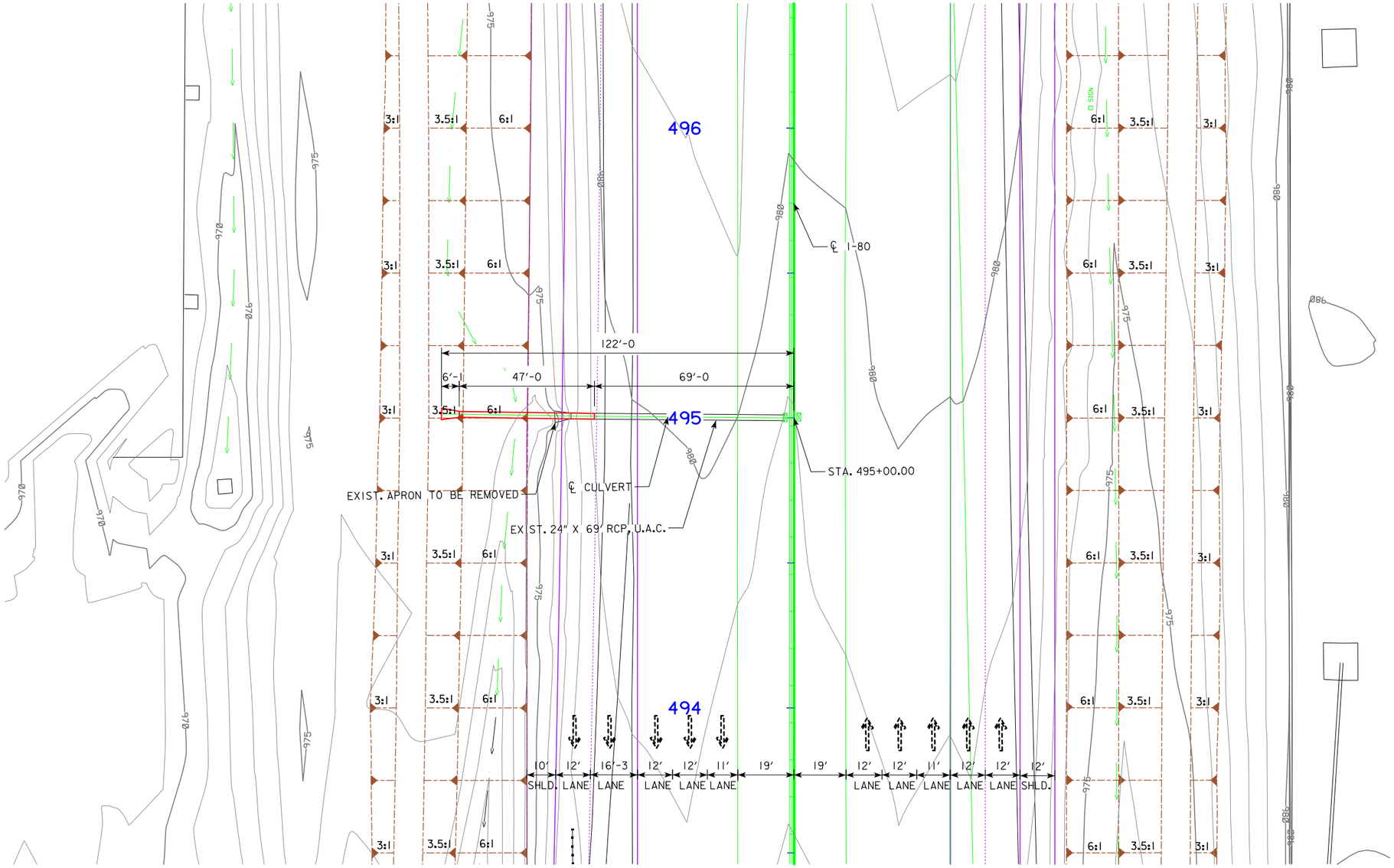

PLAT PLAN

N

LOCATION

I-80
T-79N R-25W
SECTION 20
WEBSTER TOWNSHIP
POLK COUNTY

0 ENGLISH 40
SCALE IN FEET

HYDRAULIC DATA

DRAINAGE AREA = 0.642 AC
DESIGN DISCHARGE = 6.671 CFS

DESIGN FOR 0° SKEW

24" X 48' REINFORCED CONCRETE PIPE EXTENSION PLAT PLAN

STA. 495+00.00

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO. _____

DESIGN TEAM **GUSTAFSON \ HR GREEN \ LT LEON** **POLK** COUNTY PROJECT NUMBER **IM-080-3(178)127--13-77** SHEET NUMBER **V.21**

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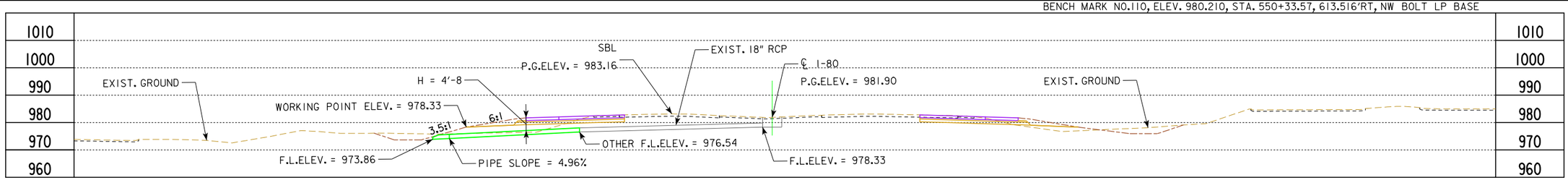
BENCH MARK NO.110, ELEV. 980.210, STA. 550+33.57, 613.516'RT, NW BOLT LP BASE



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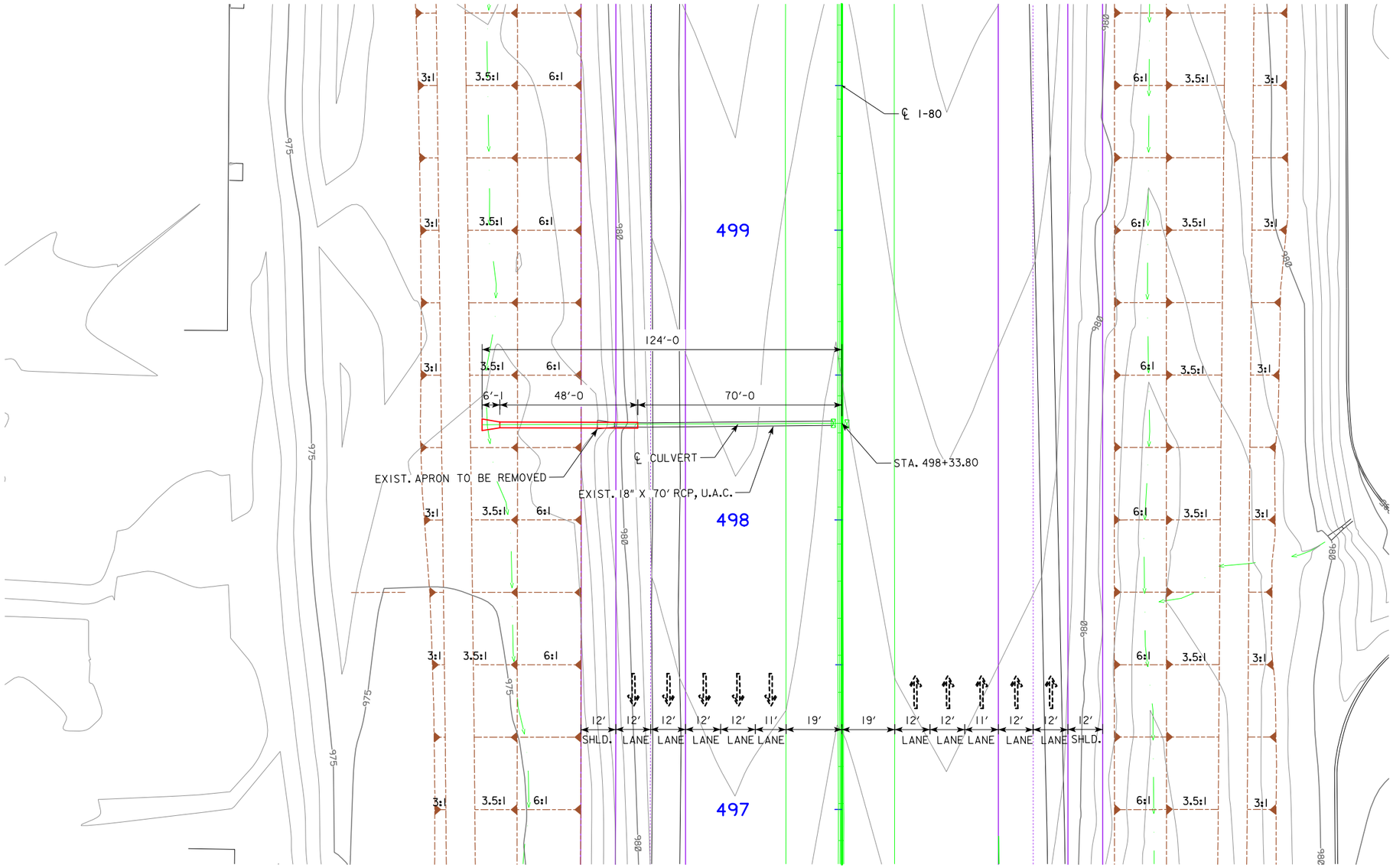

PLAT PLAN

N

0 ENGLISH 40
SCALE IN FEET

LOCATION

I-80
T-79N R-25W
SECTION 20
WEBSTER TOWNSHIP
POLK COUNTY

HYDRAULIC DATA

DRAINAGE AREA = 0.644 AC
DESIGN DISCHARGE = 6.657 CFS

DESIGN FOR 0° SKEW

18" X 48' REINFORCED CONCRETE PIPE EXTENSION PLAT PLAN

STA. 498+33.80

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO.

DESIGN TEAM **GUSTAFSON \ HR GREEN \ LT LEON** | **POLK** COUNTY | PROJECT NUMBER **IM-080-3(178)127--13-77** | SHEET NUMBER **V.22**

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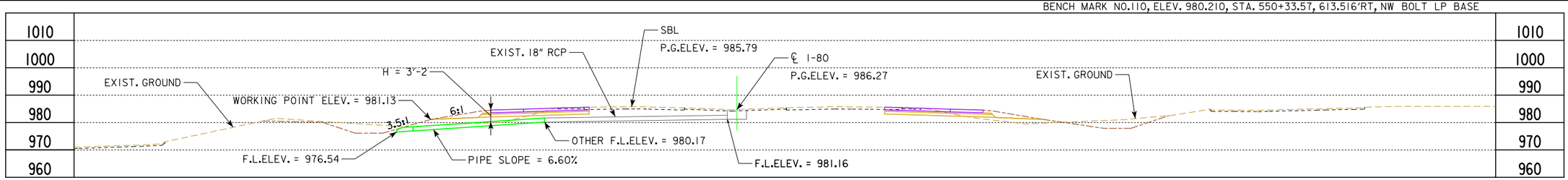
BENCH MARK NO.110, ELEV. 980.210, STA. 550+33.57, 613.516'RT, NW BOLT LP BASE



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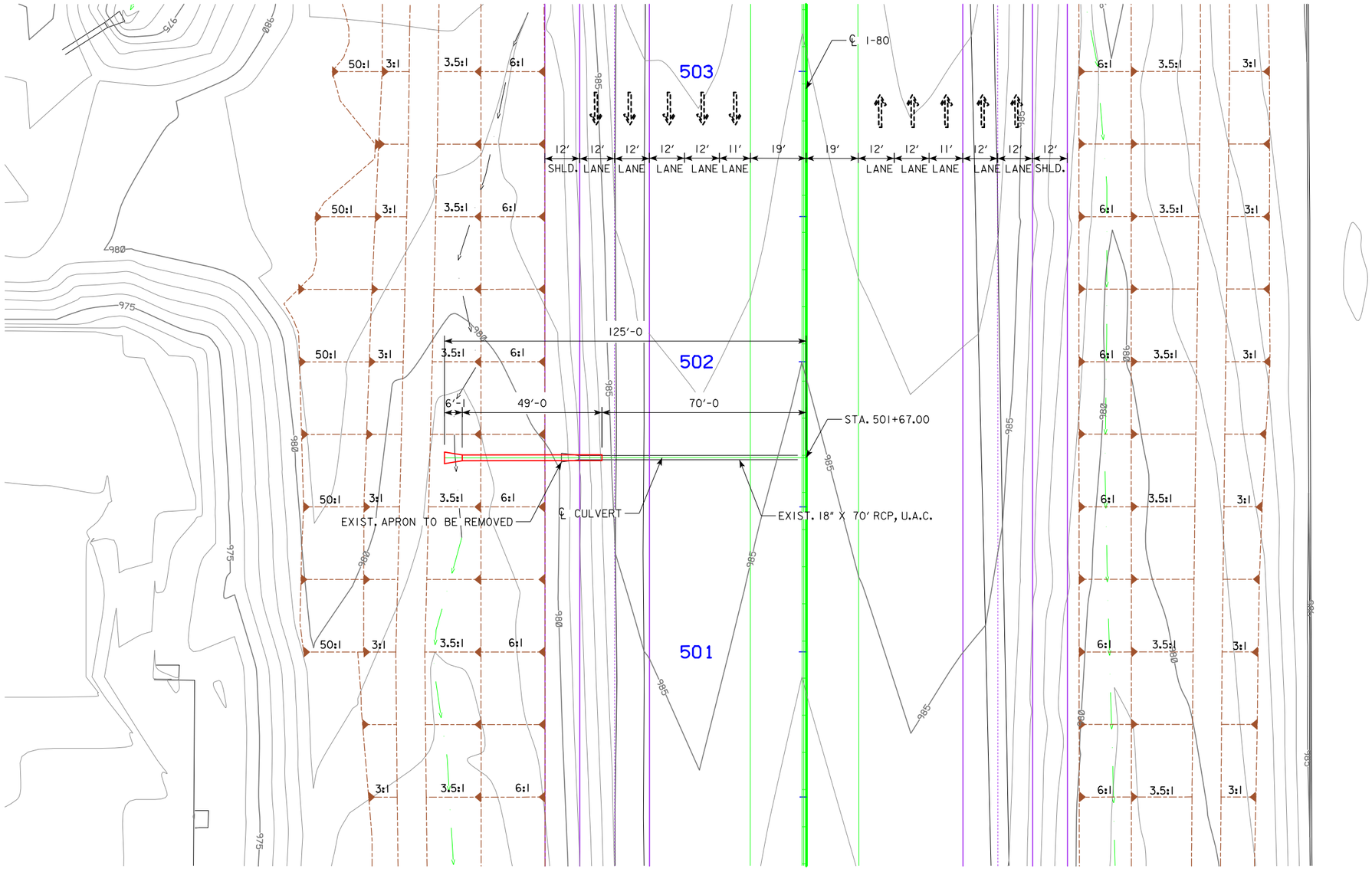

PLAT PLAN

N

LOCATION

I-80
T-79N R-25W
SECTION 20
WEBSTER TOWNSHIP
POLK COUNTY

0 ENGLISH 40
SCALE IN FEET

HYDRAULIC DATA

DRAINAGE AREA = 0.644 AC
DESIGN DISCHARGE = 6.567 CFS

DESIGN FOR 0° SKEW

18" X 50' REINFORCED CONCRETE PIPE EXTENSION PLAT PLAN

STA. 501+67.00

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO.

DESIGN TEAM **GUSTAFSON \ HR GREEN \ LT LEON** | **POLK** COUNTY | PROJECT NUMBER **IM-080-3(178)127--13-77** | SHEET NUMBER **V.23**

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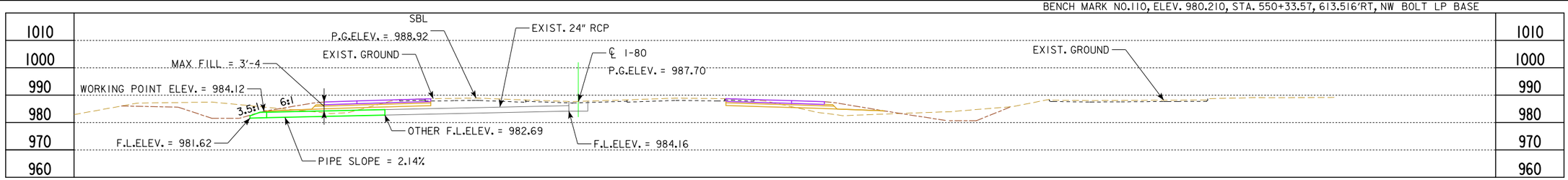
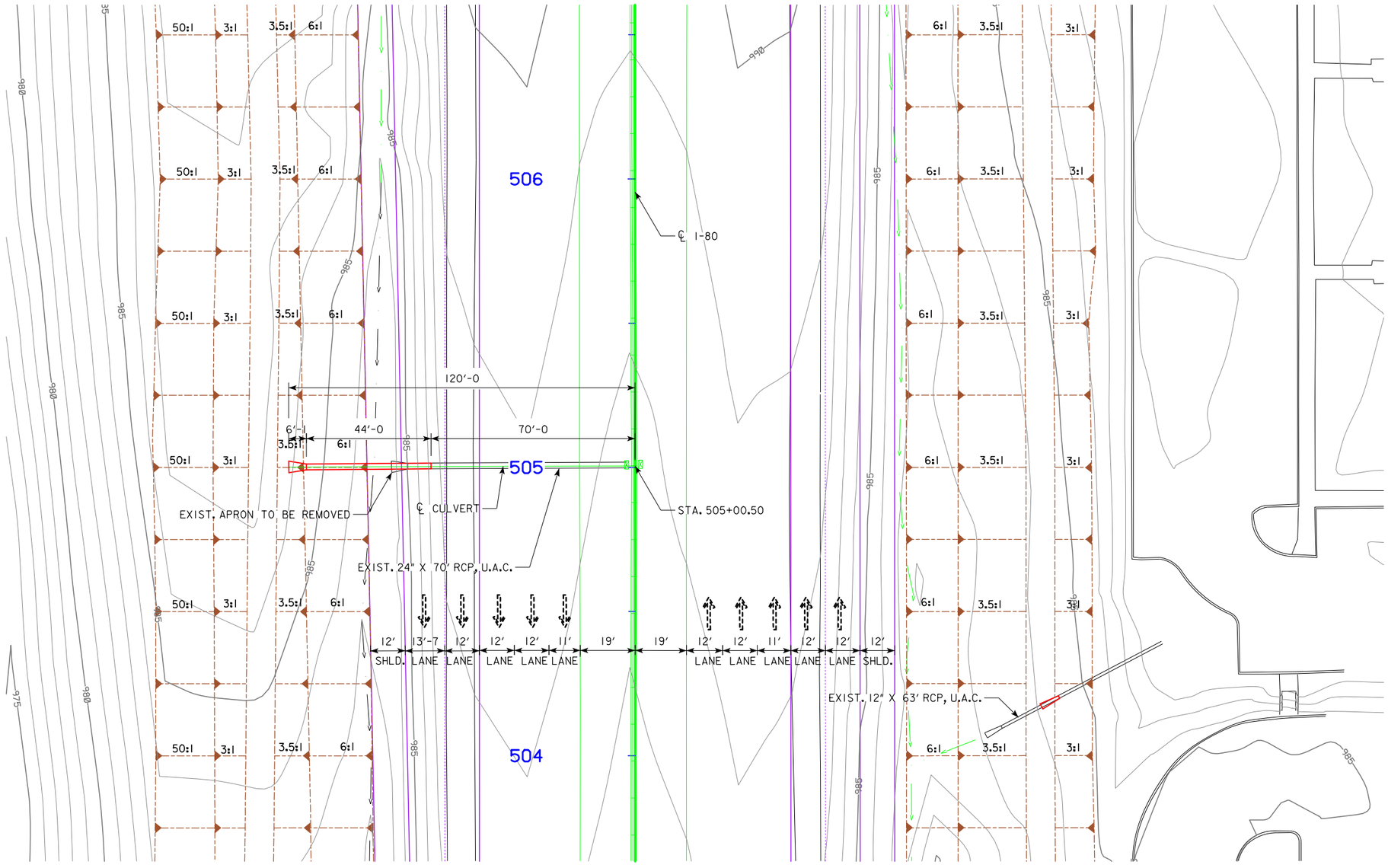
BENCH MARK NO.110, ELEV. 980.210, STA. 550+33.57, 613.516'RT, NW BOLT LP BASE



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

N

0 ENGLISH 40
SCALE IN FEET

LOCATION

I-80
T-79N R-25W
SECTION 20
WEBSTER TOWNSHIP
POLK COUNTY

HYDRAULIC DATA

DRAINAGE AREA = 0.64 AC
DESIGN DISCHARGE = 6.36 CFS

DESIGN FOR 0° SKEW

24" X 44' REINFORCED CONCRETE PIPE EXTENSION PLAT PLAN

STA. 505+00.50

AUGUST 2016

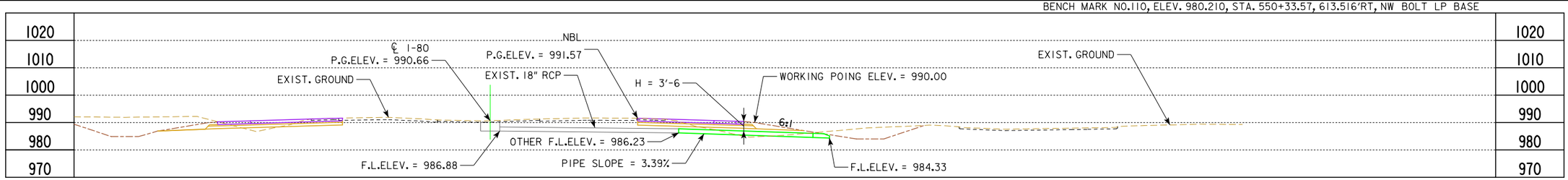
POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO.

DESIGN TEAM **GUSTAFSON \ HR GREEN \ LT LEON** | **POLK** COUNTY | PROJECT NUMBER **IM-080-3(178)127--13-77** | SHEET NUMBER **V.24**

BENCH MARK NO.110, ELEV. 980.210, STA. 550+33.57, 613.516'RT, NW BOLT LP BASE



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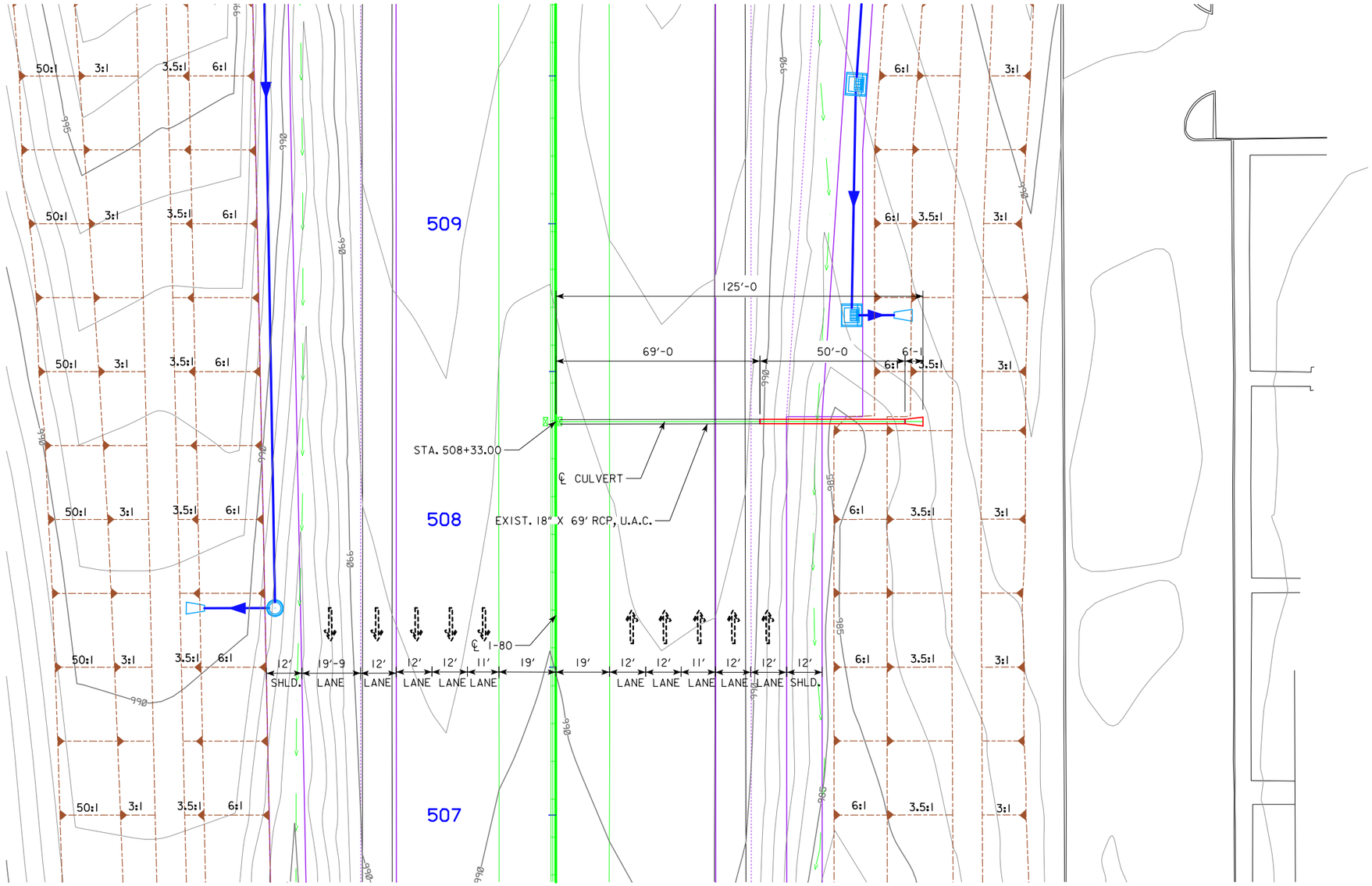

PLAT PLAN

N

LOCATION

I-80
T-79N R-25W
SECTION 20
WEBSTER TOWNSHIP
POLK COUNTY

0 ENGLISH 40
SCALE IN FEET

HYDRAULIC DATA

DRAINAGE AREA = 0.648 AC
DESIGN DISCHARGE = 5.923 CFS

DESIGN FOR 0° SKEW

18" X 50' REINFORCED CONCRETE PIPE EXTENSION PLAT PLAN

STA. 508+33.00

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO. _____

DESIGN TEAM **GUSTAFSON \ HR GREEN \ LT LEON** | **POLK** COUNTY | PROJECT NUMBER **IM-080-3(178)127--13-77** | SHEET NUMBER **V.25**

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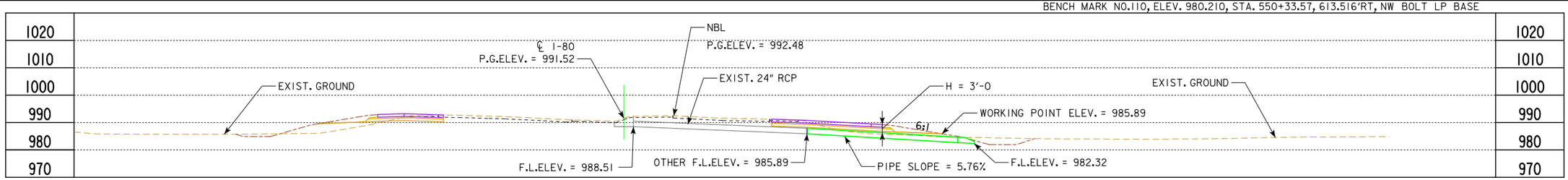
BENCH MARK NO.110, ELEV. 980.210, STA. 550+33.57, 613.516'RT, NW BOLT LP BASE



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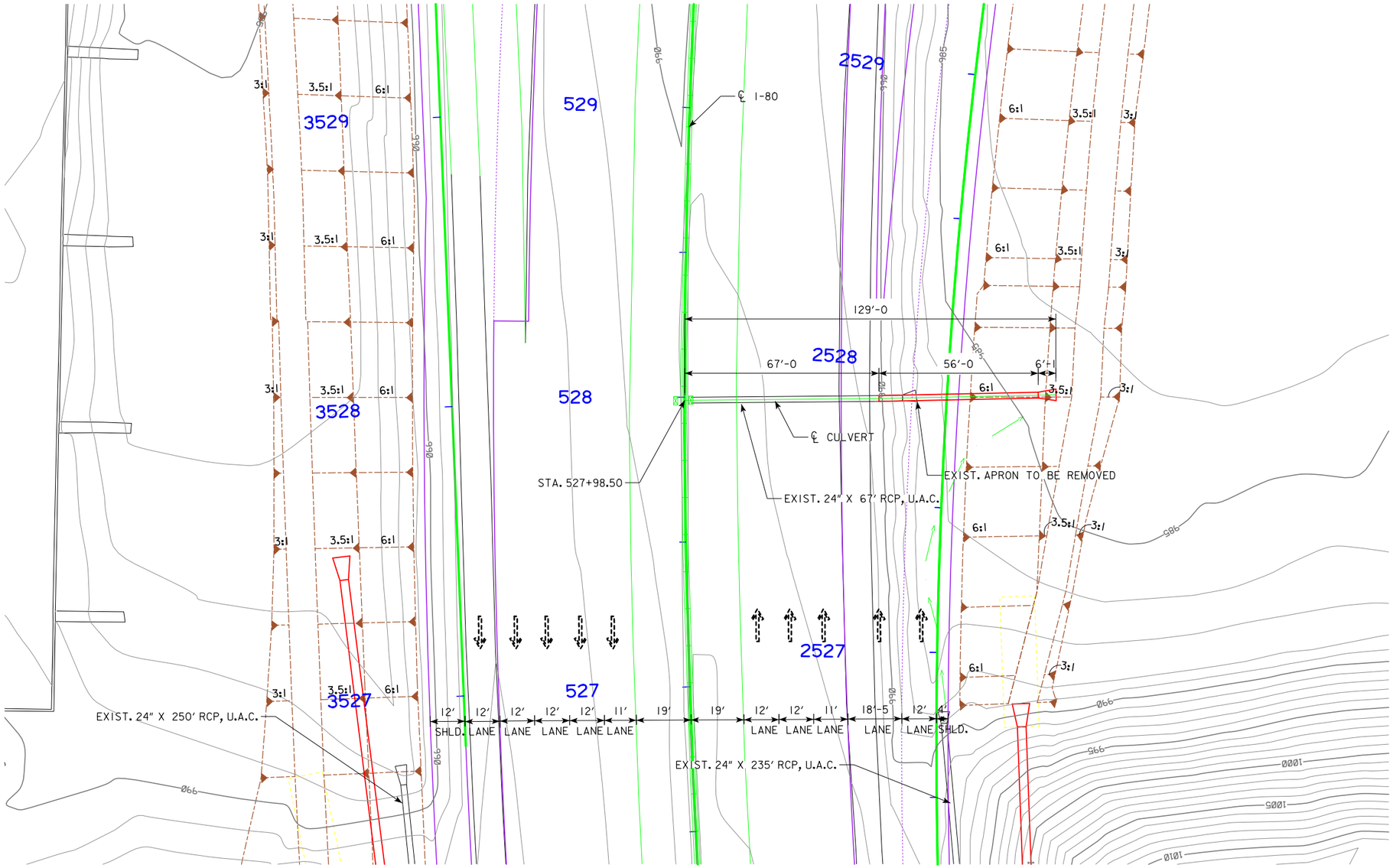

PLAT PLAN

N

LOCATION

I-80
T-79N R-25W
SECTION 17
WEBSTER TOWNSHIP
POLK COUNTY

0 ENGLISH 40
SCALE IN FEET

HYDRAULIC DATA

DRAINAGE AREA = 0.72 AC
DESIGN DISCHARGE = 6.31 CFS

DESIGN FOR 0° SKEW

24" X 56' REINFORCED CONCRETE PIPE EXTENSION PLAT PLAN

STA. 527+98.50

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO. _____

DESIGN TEAM **GUSTAFSON \ HR GREEN \ LT LEON** | **POLK** COUNTY | PROJECT NUMBER **IM-080-3(178)127--13-77** | SHEET NUMBER **V.26**

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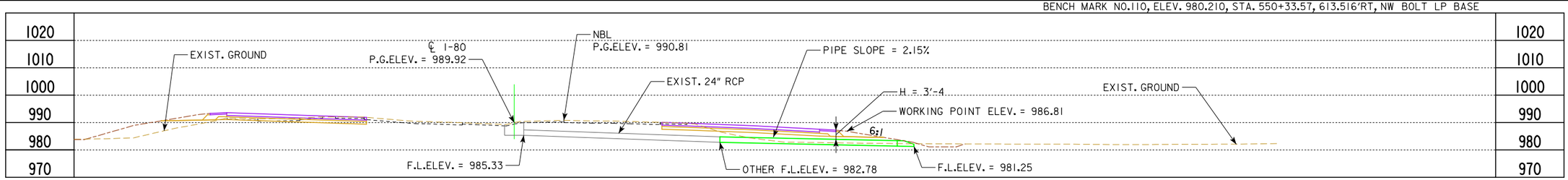
BENCH MARK NO.110, ELEV. 980.210, STA. 550+33.57, 613.516'RT, NW BOLT LP BASE



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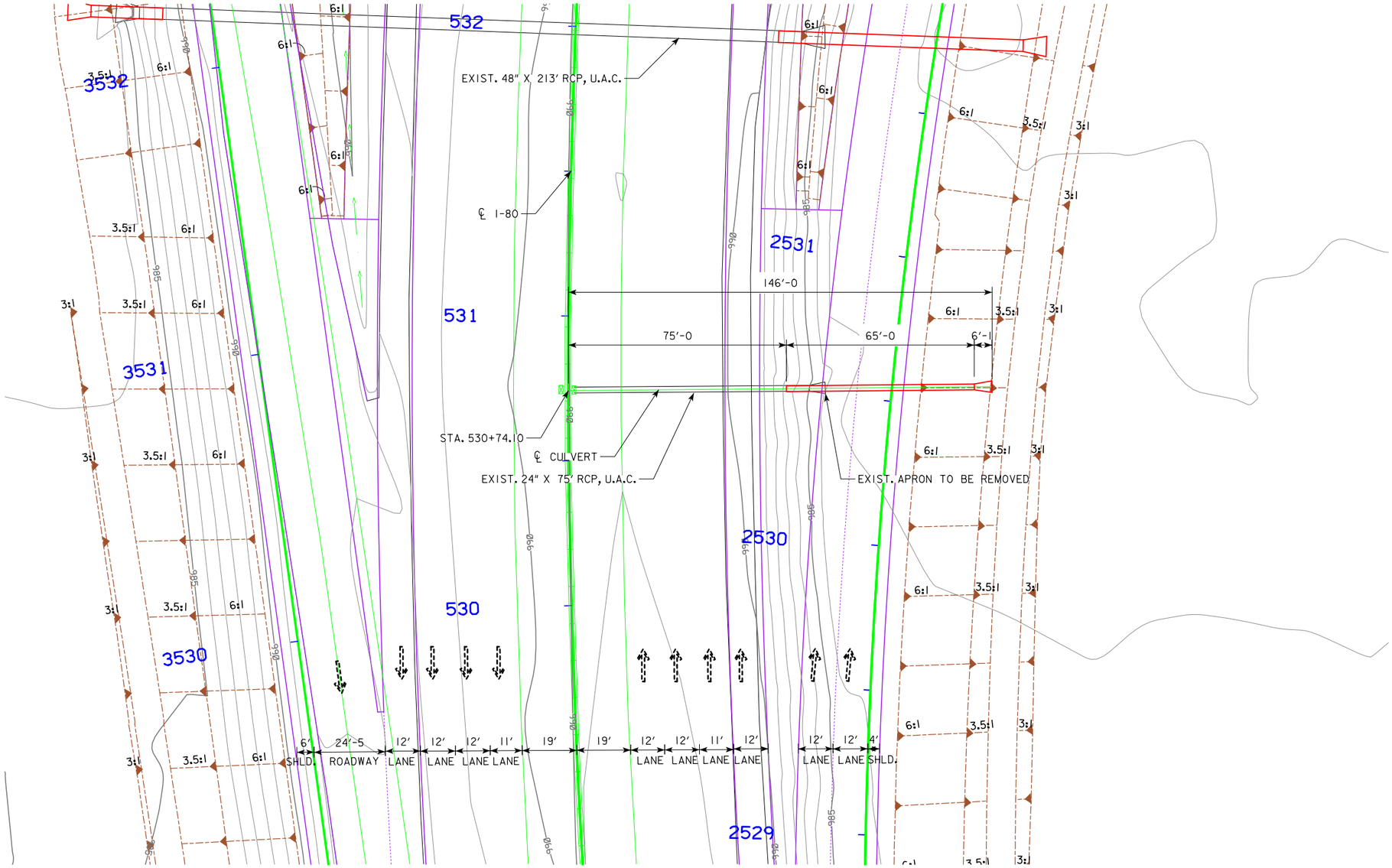

PLAT PLAN

LOCATION

I-80
T-79N R-25W
SECTION 17
WEBSTER TOWNSHIP
POLK COUNTY

0 ENGLISH 40
SCALE IN FEET

HYDRAULIC DATA

DRAINAGE AREA = 1.401 AC
DESIGN DISCHARGE = 23.484 CFS

DESIGN FOR 0° SKEW

24" X 66' REINFORCED CONCRETE PIPE EXTENSION PLAT PLAN

STA. 530+74.10

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO. _____

DESIGN TEAM **GUSTAFSON \ HR GREEN \ LT LEON** | **POLK** COUNTY | PROJECT NUMBER **IM-080-3(178)127--13-77** | SHEET NUMBER **V.27**

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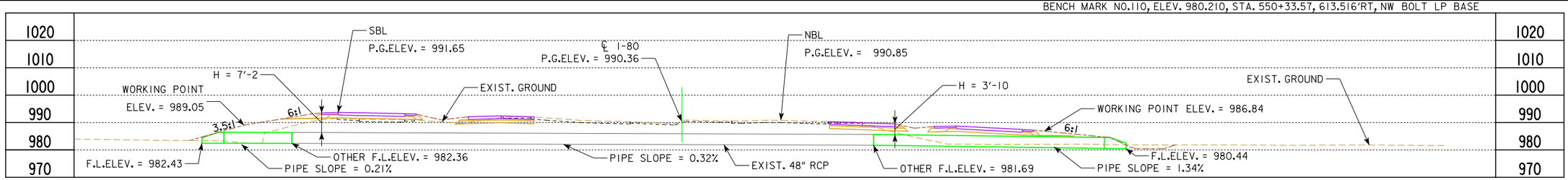
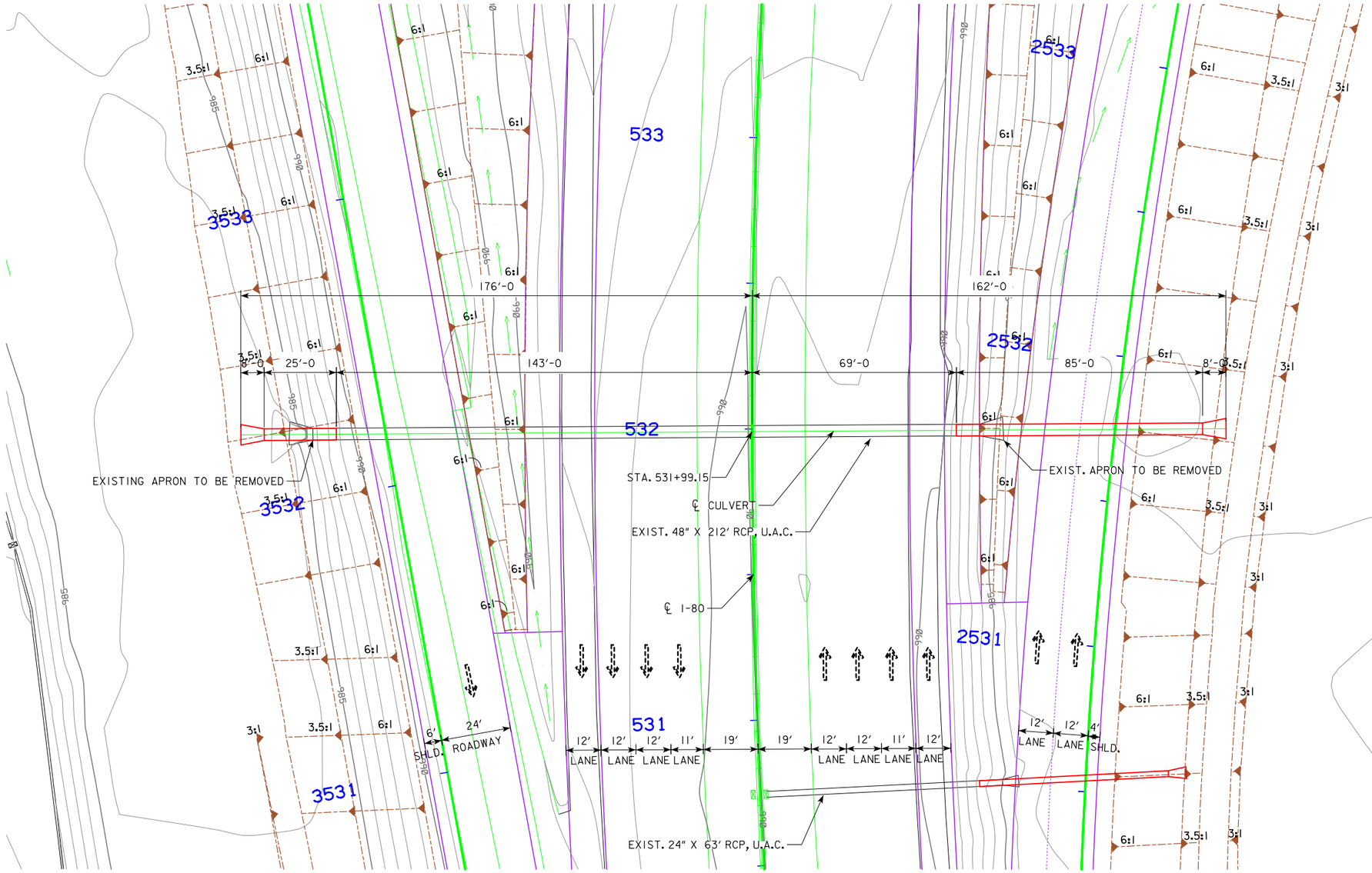
BENCH MARK NO.110, ELEV. 980.210, STA. 550+33.57, 613.516'RT, NW BOLT LP BASE



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

N

LOCATION

I-80
T-79N R-25W
SECTION 17
WEBSTER TOWNSHIP
POLK COUNTY

0 ENGLISH 40
SCALE IN FEET

HYDRAULIC DATA

DRAINAGE AREA = 9.4 AC
DESIGN DISCHARGE = 40.4 CFS

DESIGN FOR 0° SKEW

48" X 110' REINFORCED CONCRETE PIPE EXTENSION PLAT PLAN

STA.: 531+99.15

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO. _____

DESIGN TEAM	GUSTAFSON \ HR GREEN \ LT LEON	POLK	COUNTY	PROJECT NUMBER	IM-080-3(178)127--13-77	SHEET NUMBER	V.28

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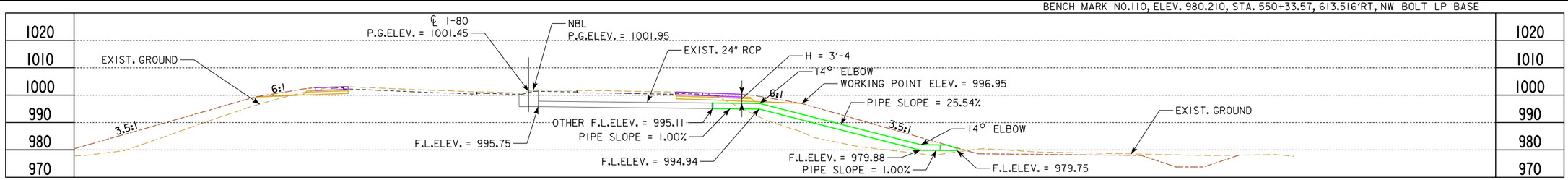
BENCH MARK NO.110, ELEV. 980.210, STA. 550+33.57, 613.516'RT, NW BOLT LP BASE



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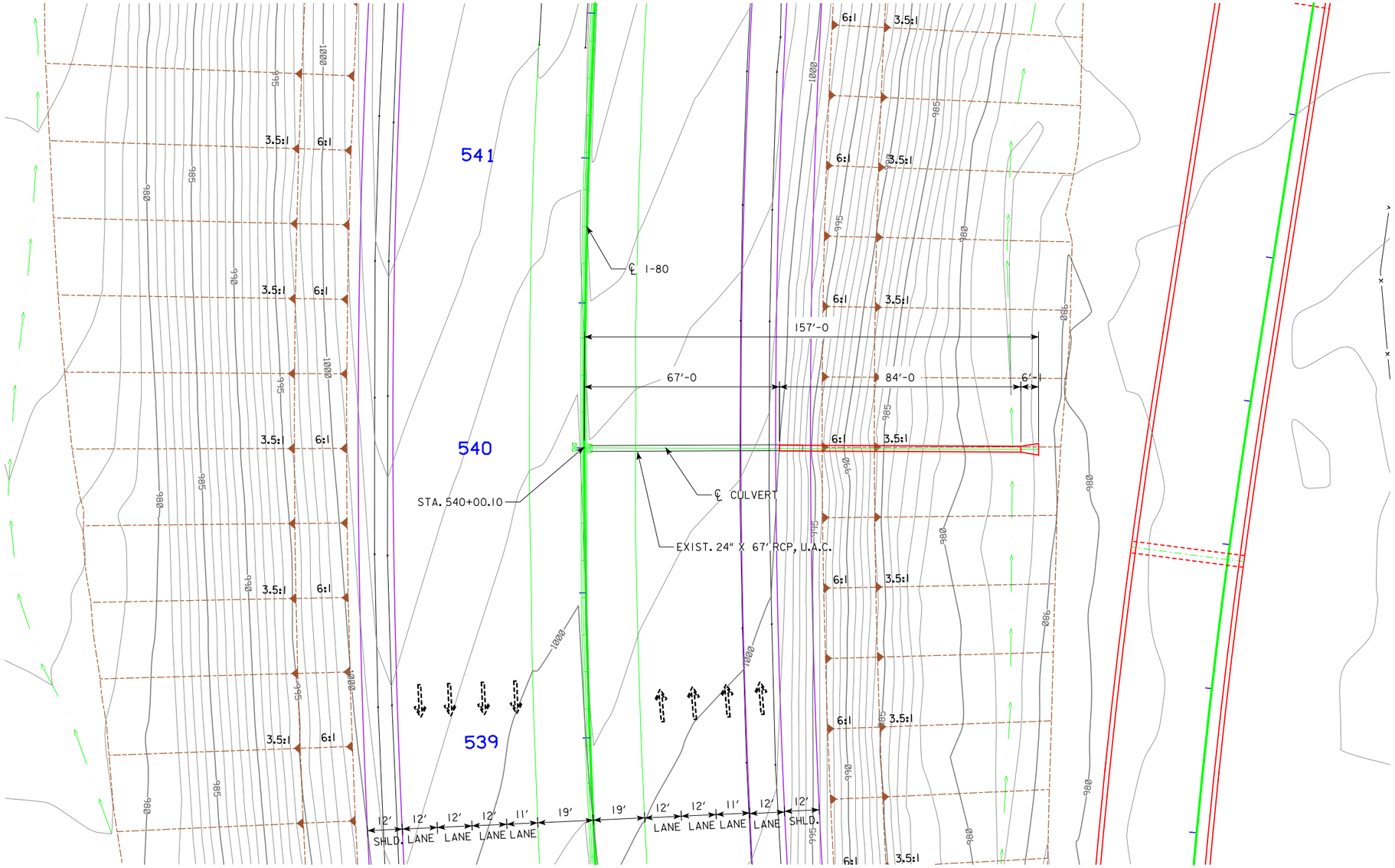
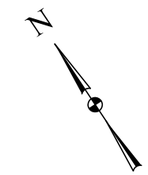


PLAT PLAN



LOCATION

I-80
T-79N R-25W
SECTION 16
WEBSTER TOWNSHIP
POLK COUNTY

0 ENGLISH 40
SCALE IN FEET

HYDRAULIC DATA

DRAINAGE AREA = 0.67 AC
DESIGN DISCHARGE = 5.152 CFS

DESIGN FOR 0° SKEW

24" x 86' REINFORCED CONCRETE PIPE EXTENSION PLAT PLAN

STA. 540+00.10

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO.

DESIGN TEAM **GUSTAFSON \ HR GREEN \ LT LEON** | **POLK** COUNTY | PROJECT NUMBER **IM-080-3(178)127--13-77** | SHEET NUMBER **V.29**

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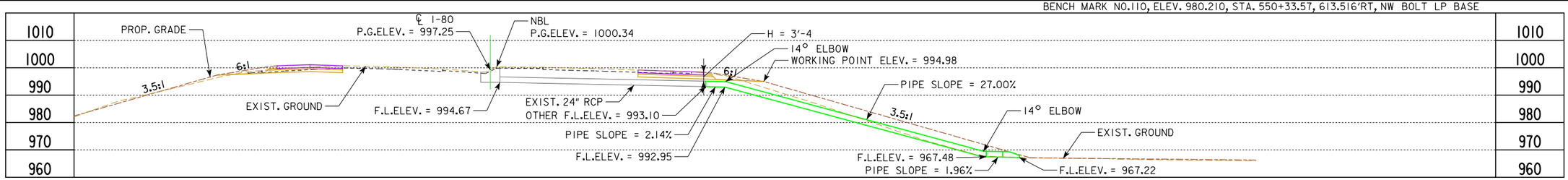
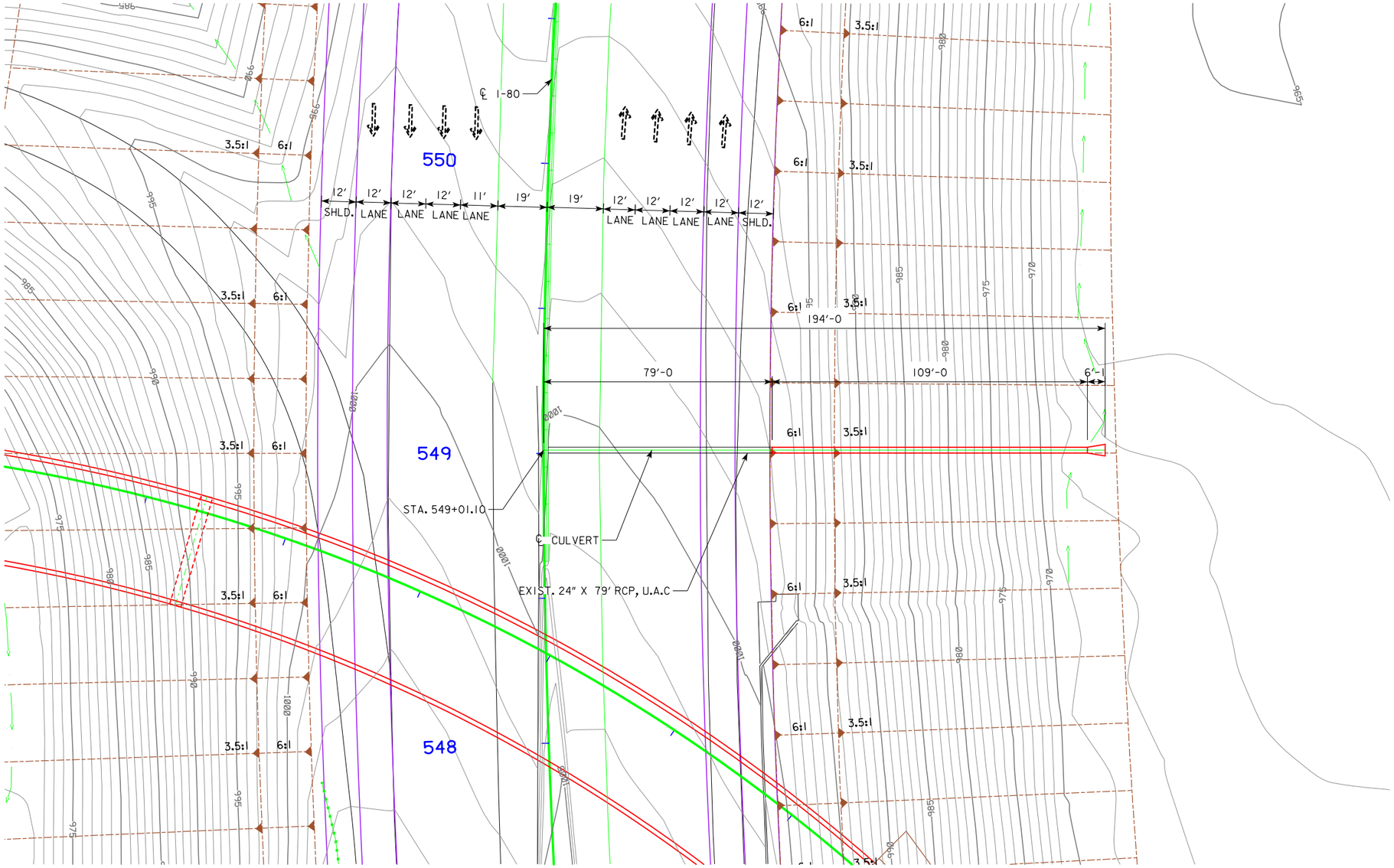
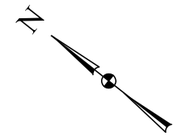
BENCH MARK NO.110, ELEV. 980.210, STA. 550+33.57, 613.516'RT, NW BOLT LP BASE



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



LOCATION

I-80
T-79N R-25W
SECTION 16
WEBSTER TOWNSHIP
POLK COUNTY

0 ENGLISH 40
SCALE IN FEET

HYDRAULIC DATA

DRAINAGE AREA = 0.62 AC
DESIGN DISCHARGE = 4.77 CFS

DESIGN FOR 0° SKEW

24" x 114' REINFORCED CONCRETE PIPE EXTENSION PLAT PLAN

STA. 549+01.10

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO. _____

DESIGN TEAM **GUSTAFSON \ HR GREEN \ LT LEON** | **POLK** COUNTY | PROJECT NUMBER **IM-080-3(178)127--13-77** | SHEET NUMBER **V.30**

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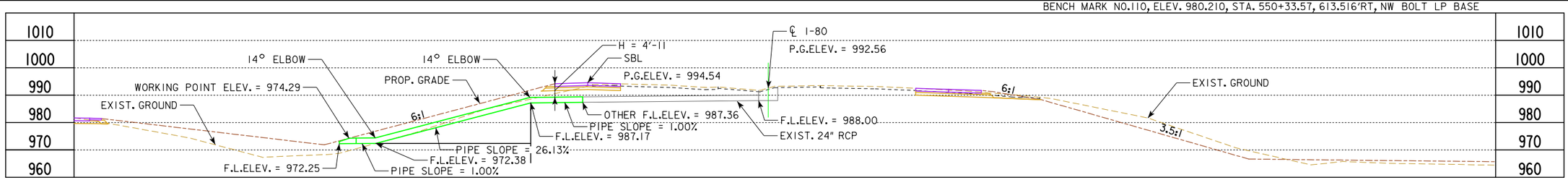
BENCH MARK NO.110, ELEV. 980.210, STA. 550+33.57, 613.516'RT, NW BOLT LP BASE



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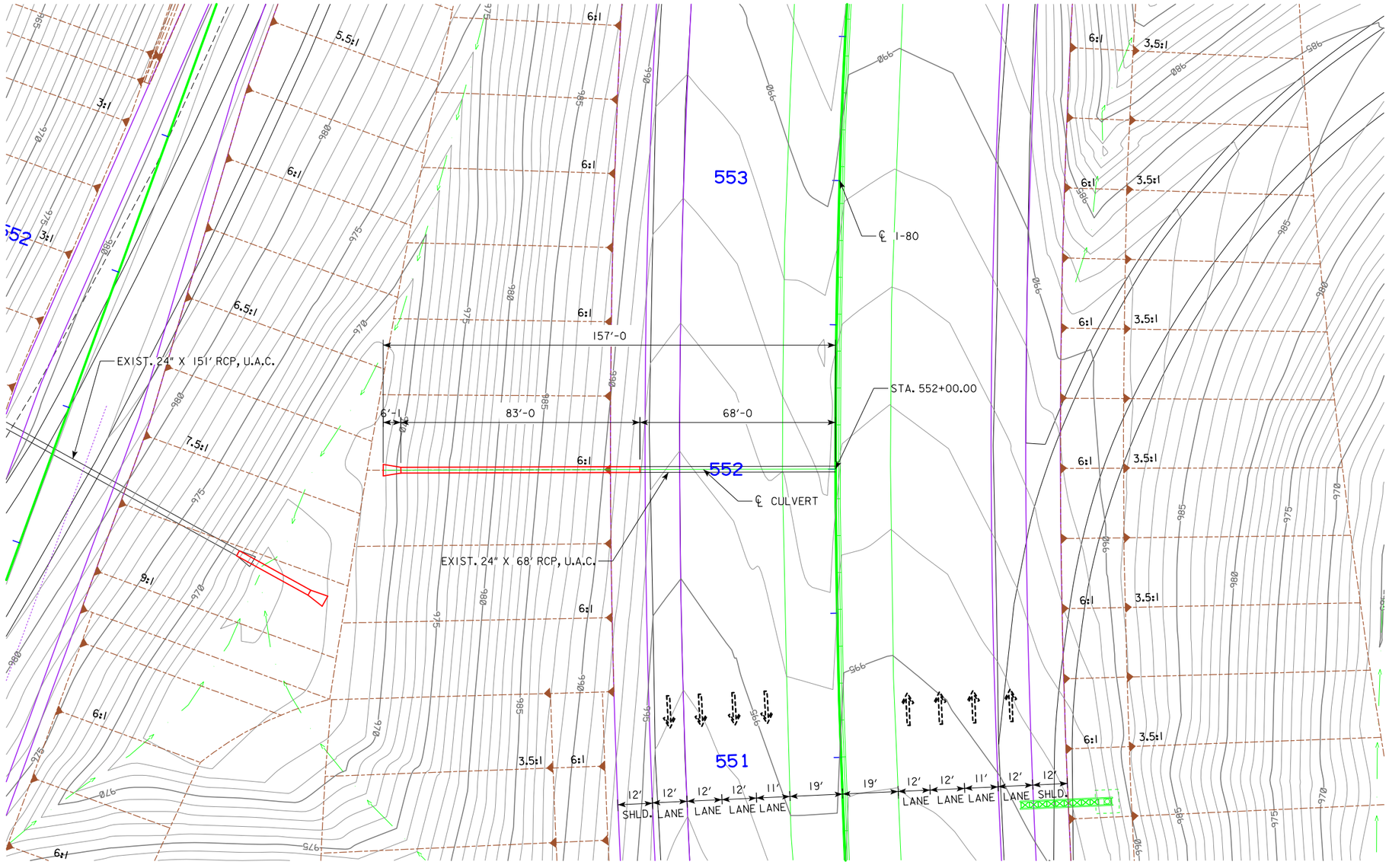

PLAT PLAN

N

LOCATION

I-80
T-79N R-25W
SECTION 16
WEBSTER TOWNSHIP
POLK COUNTY

0 ENGLISH 40
SCALE IN FEET

HYDRAULIC DATA

DRAINAGE AREA = 0.451 AC
DESIGN DISCHARGE = 4.964 CFS

DESIGN FOR 0° SKEW

24" x 86' REINFORCED CONCRETE PIPE EXTENSION PLAT PLAN

STA. 552+00.00

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO. _____

DESIGN TEAM **GUSTAFSON \ HR GREEN \ LT LEON** | **POLK** COUNTY | PROJECT NUMBER **IM-080-3(178)127--13-77** | SHEET NUMBER **V.31**

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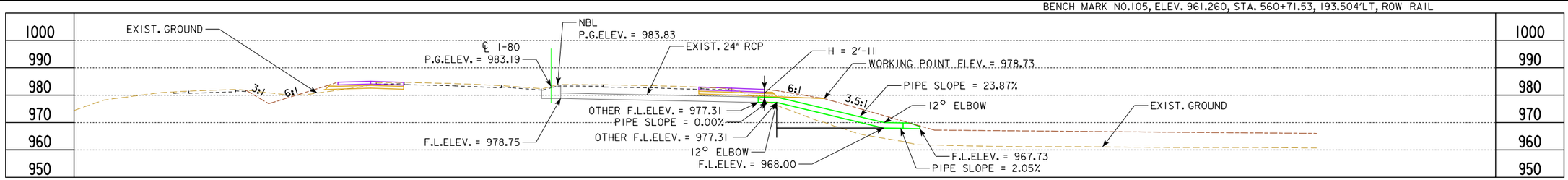
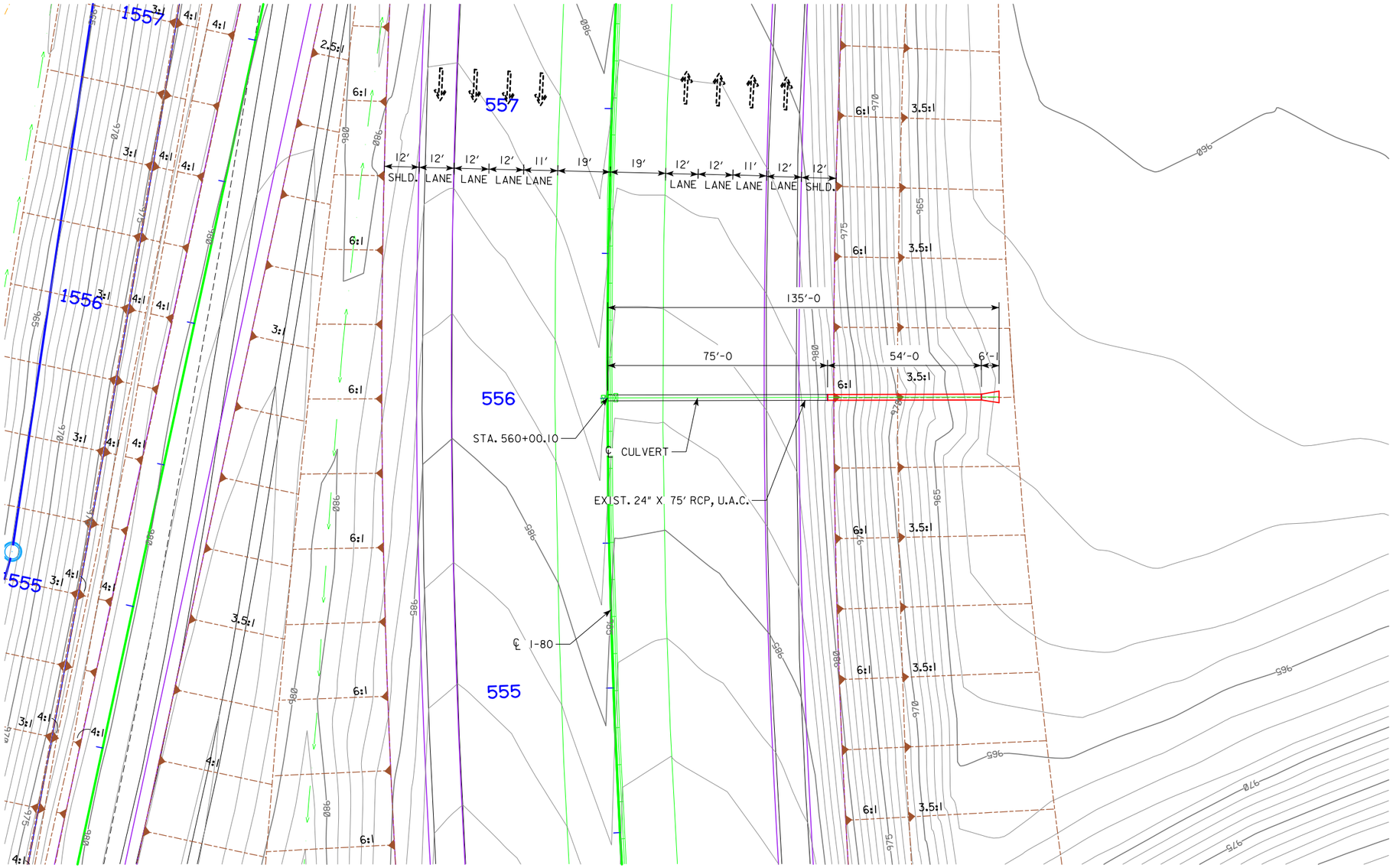
BENCH MARK NO.105, ELEV. 961.260, STA. 560+71.53, 193.504'LT, ROW RAIL



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

LOCATION

I-80
T-79N R-25W
SECTION 16
WEBSTER TOWNSHIP
POLK COUNTY

0 ENGLISH 40
SCALE IN FEET

HYDRAULIC DATA

DRAINAGE AREA = 0.613 AC
DESIGN DISCHARGE = 6.304 CFS

DESIGN FOR 0° SKEW

24" x 56' REINFORCED CONCRETE PIPE EXTENSION PLAT PLAN

STA. 556+00.10

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO. _____

DESIGN TEAM	GUSTAFSON \ HR GREEN \ LT LEON	POLK	COUNTY	PROJECT NUMBER	IM-080-3(178)127--13-77	SHEET NUMBER	V.32

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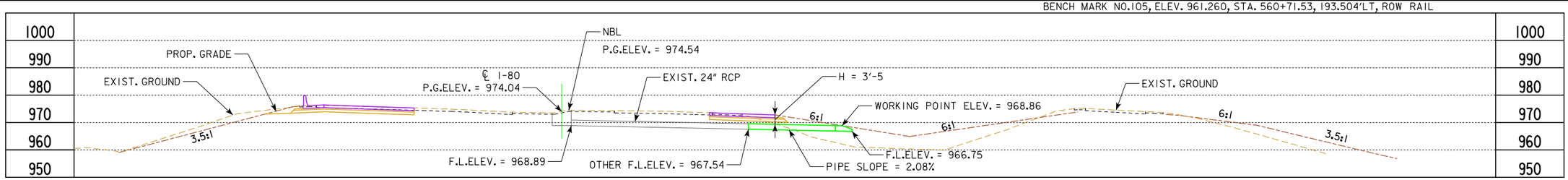
BENCH MARK NO.105, ELEV. 961.260, STA. 560+71.53, 193.504'LT, ROW RAIL



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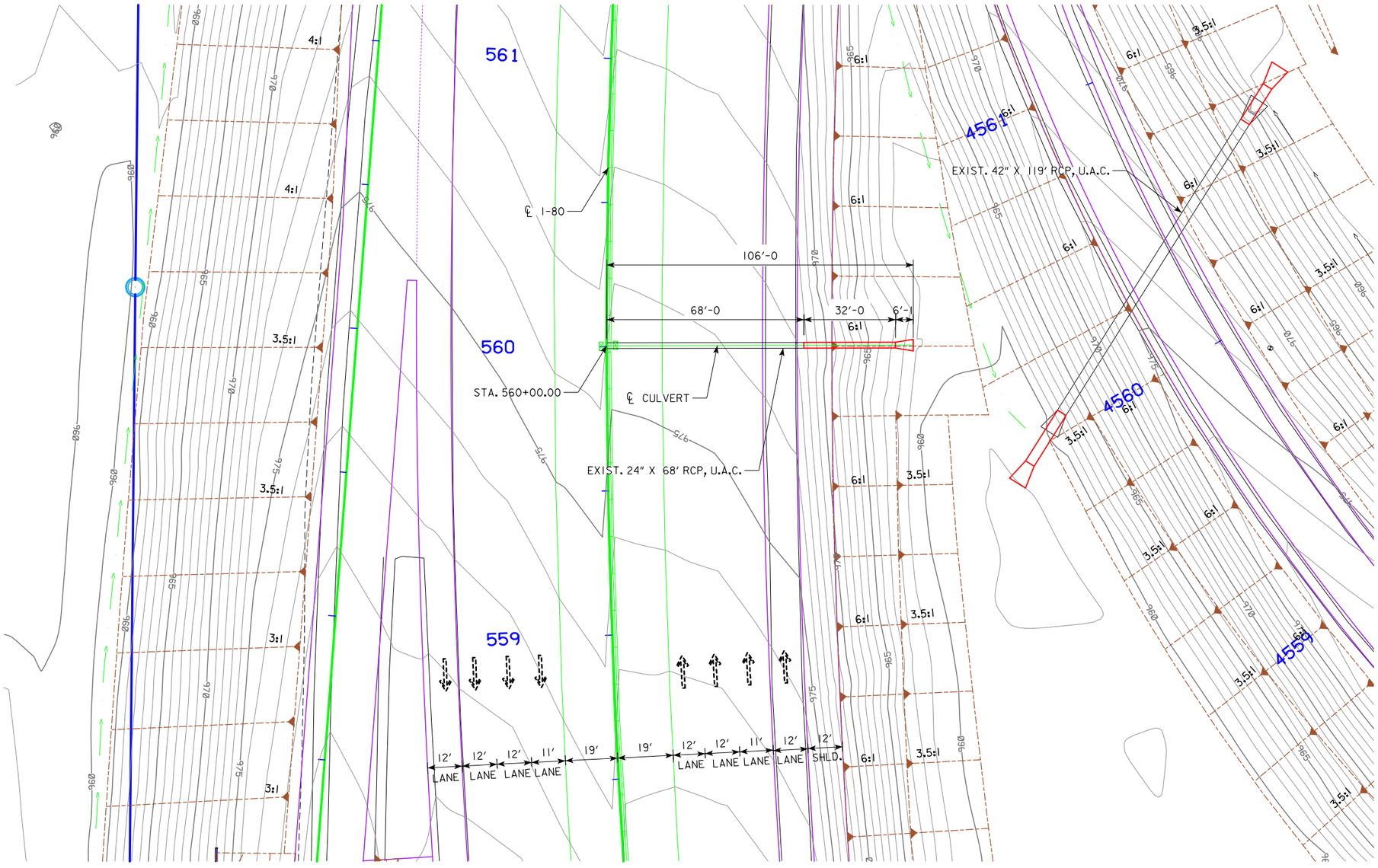
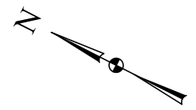


PLAT PLAN



LOCATION

I-80
T-79N R-25W
SECTION 16
WEBSTER TOWNSHIP
POLK COUNTY

0 ENGLISH 40
SCALE IN FEET

HYDRAULIC DATA

DRAINAGE AREA = 0.690 AC
DESIGN DISCHARGE = 7.567 CFS

DESIGN FOR 0° SKEW

24" x 32' REINFORCED CONCRETE PIPE EXTENSION PLAT PLAN

STA. 560+00.00

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO. _____

DESIGN TEAM **GUSTAFSON \ HR GREEN \ LT LEON** | **POLK** COUNTY | PROJECT NUMBER **IM-080-3(178)127--13-77** | SHEET NUMBER **V.33**

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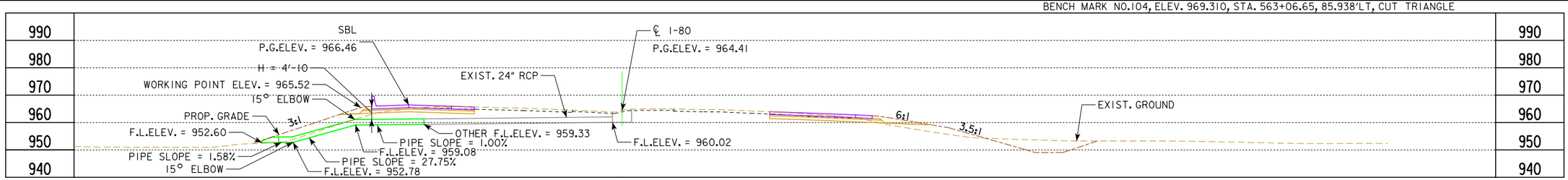
BENCH MARK NO.104, ELEV. 969.310, STA. 563+06.65, 85.938'LT, CUT TRIANGLE



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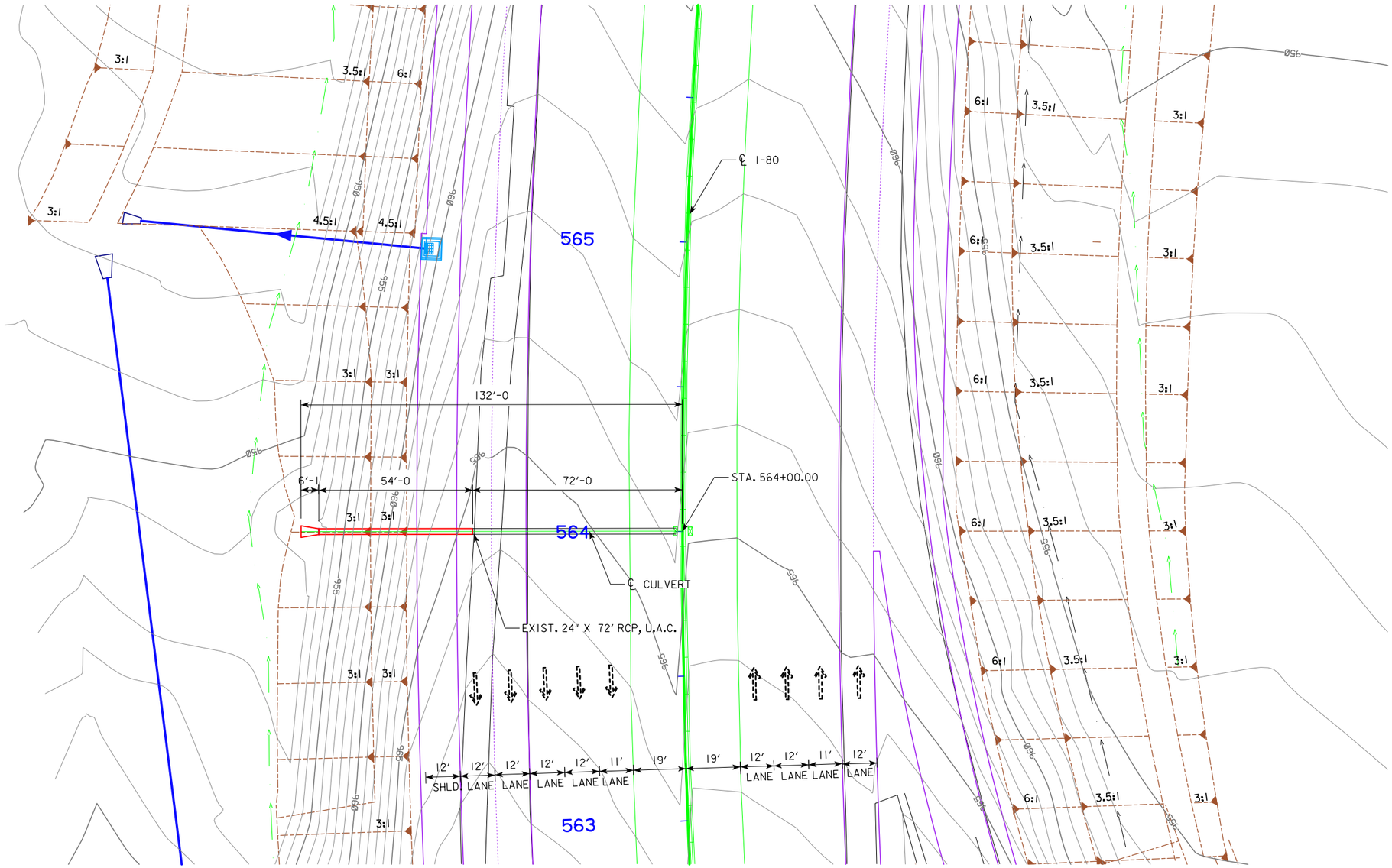

PLAT PLAN

N

LOCATION

I-80
T-79N R-25W
SECTION 16
WEBSTER TOWNSHIP
POLK COUNTY

0 ENGLISH 40
SCALE IN FEET

HYDRAULIC DATA

DRAINAGE AREA = 0.768 AC
DESIGN DISCHARGE = 8.838 CFS

DESIGN FOR 0° SKEW

24" x 54' REINFORCED CONCRETE PIPE EXTENSION PLAT PLAN

STA. 564+00.00

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO. _____

DESIGN TEAM **GUSTAFSON \ HR GREEN \ LT LEON** | **POLK** COUNTY | PROJECT NUMBER **IM-080-3(178)127--13-77** | SHEET NUMBER **V.34**

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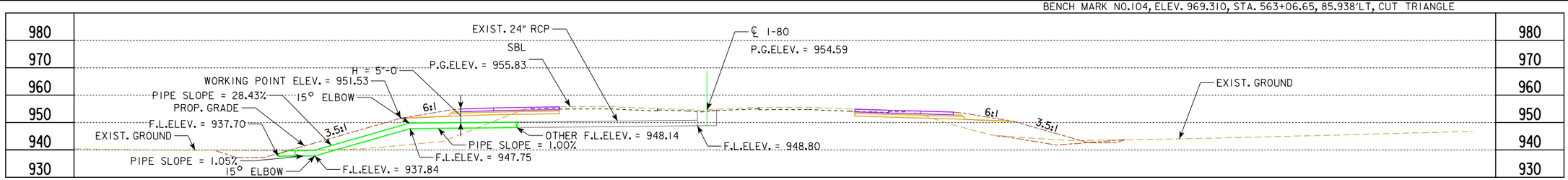
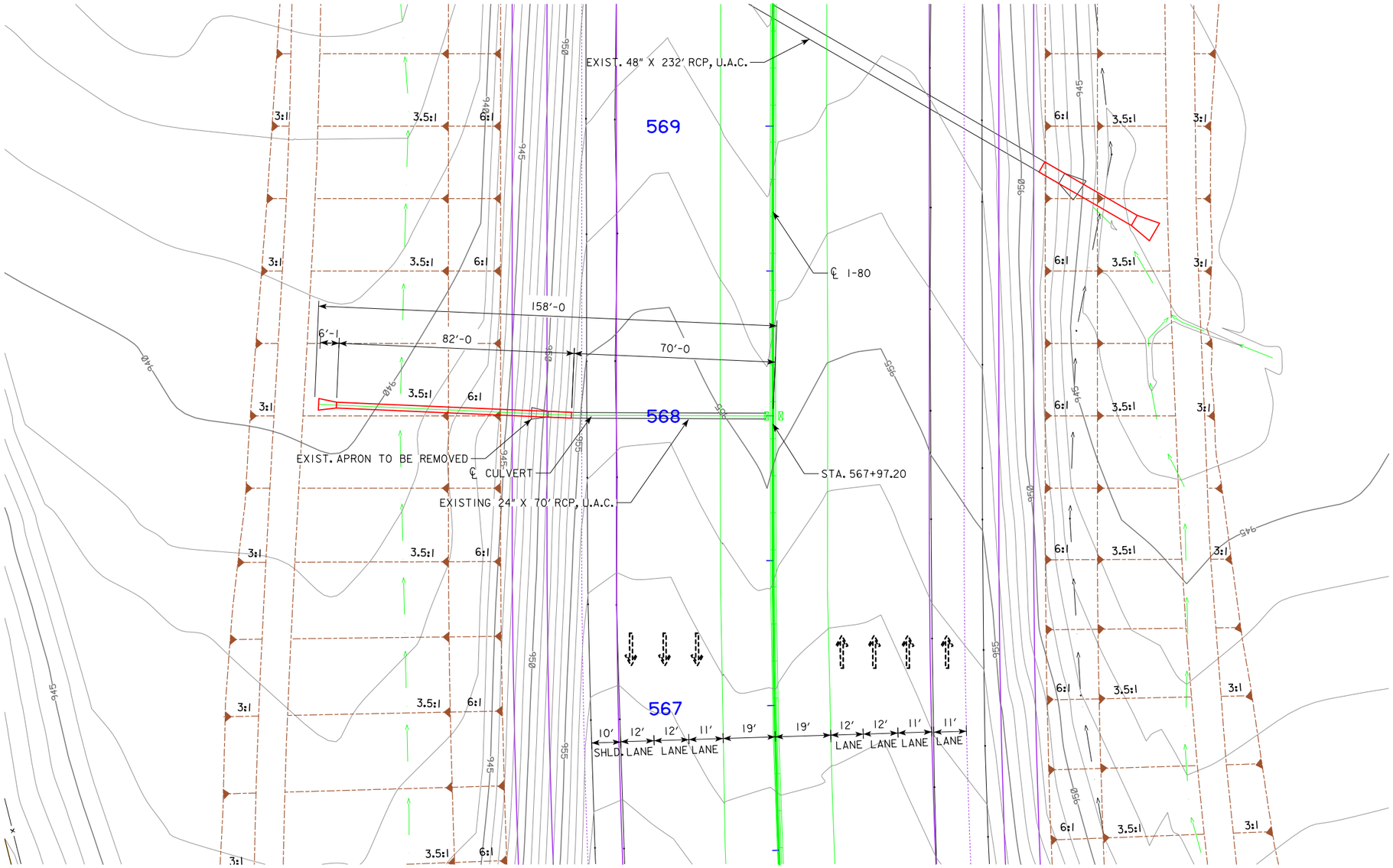
BENCH MARK NO.104, ELEV. 969.310, STA. 563+06.65, 85.938'LT, CUT TRIANGLE



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

LOCATION

I-80
T-79N R-25W
SECTION 16
WEBSTER TOWNSHIP
POLK COUNTY

0 ENGLISH 40
SCALE IN FEET

HYDRAULIC DATA

DRAINAGE AREA = 0.726 AC
DESIGN DISCHARGE = 9.222 CFS

DESIGN FOR 0° SKEW

24" x 84' REINFORCED CONCRETE PIPE EXTENSION PLAT PLAN

STA. 567+97.20

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO. _____

DESIGN TEAM **GUSTAFSON \ HR GREEN \ LT LEON** | **POLK** COUNTY | PROJECT NUMBER **IM-080-3(178)127--13-77** | SHEET NUMBER **V.35**

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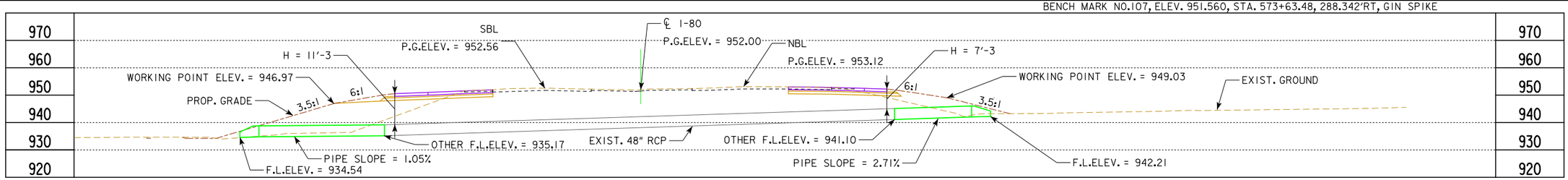
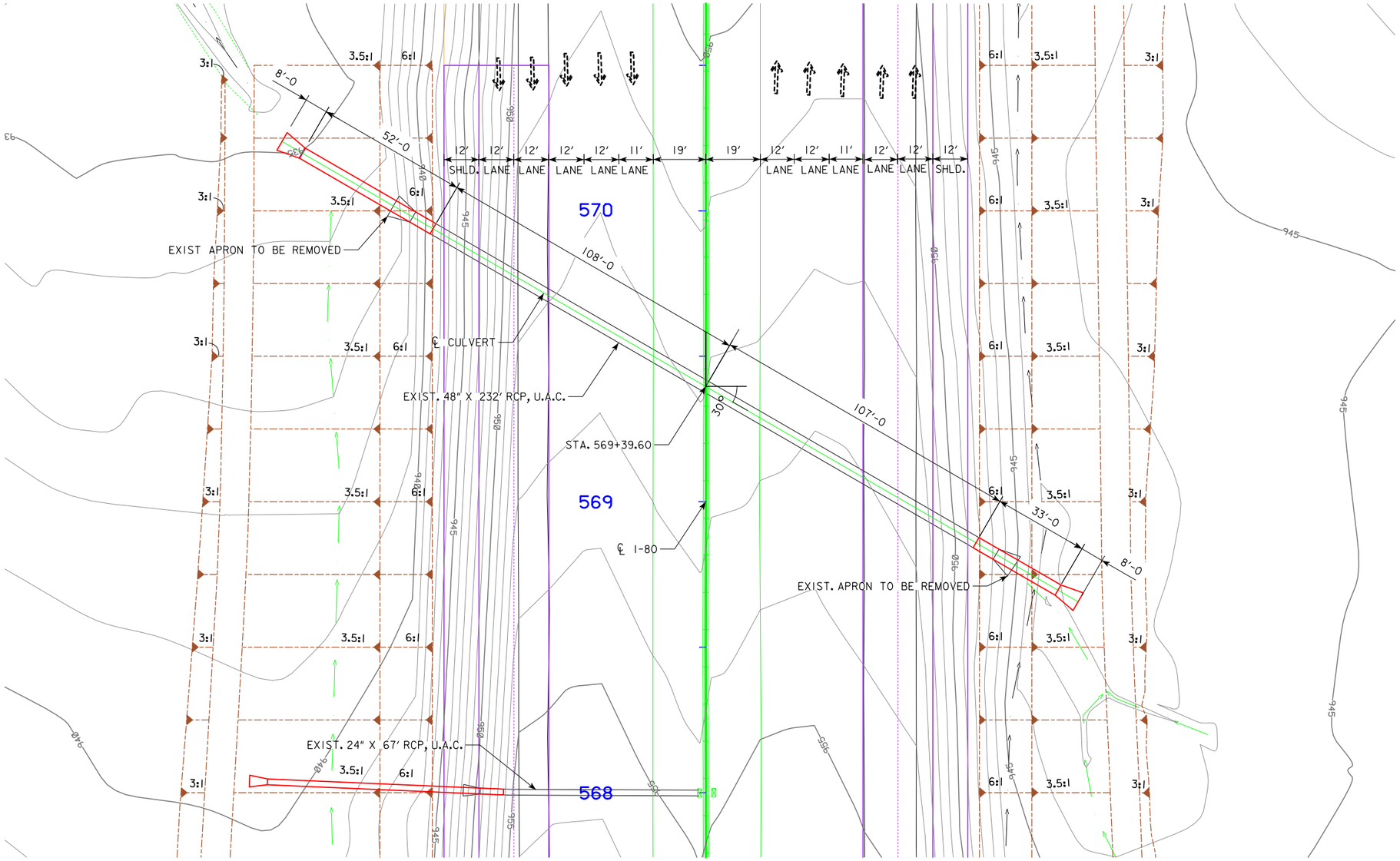
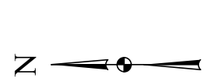
BENCH MARK NO.107, ELEV. 951.560, STA. 573+63.48, 288.342'RT, GIN SPIKE



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



LOCATION

I-80
T-79N R-25W
SECTION 16
WEBSTER TOWNSHIP
POLK COUNTY

0 ENGLISH 40
SCALE IN FEET

HYDRAULIC DATA

DRAINAGE AREA = 13.3 AC
DESIGN DISCHARGE = 57.1 CFS

DESIGN FOR 30° SKEW

48" X 86' REINFORCED CONCRETE PIPE EXTENSION PLAT PLAN

STA. 569+39.60

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO. _____

DESIGN TEAM **GUSTAFSON \ HR GREEN \ LT LEON** | **POLK** COUNTY | PROJECT NUMBER **IM-080-3(178)127--13-77** | SHEET NUMBER **V.36**

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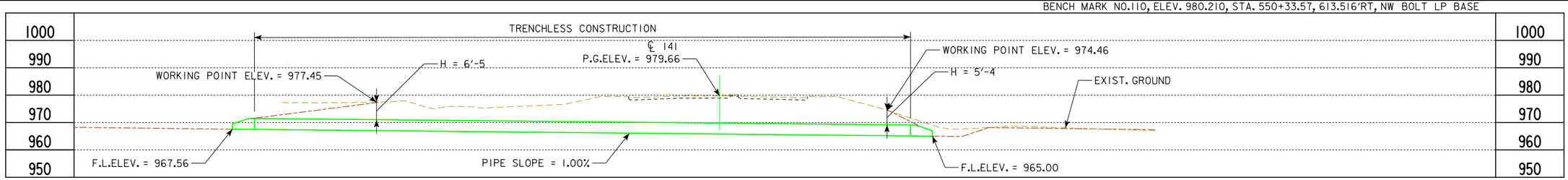
BENCH MARK NO.110, ELEV. 980.210, STA. 550+33.57, 613.516'RT, NW BOLT LP BASE



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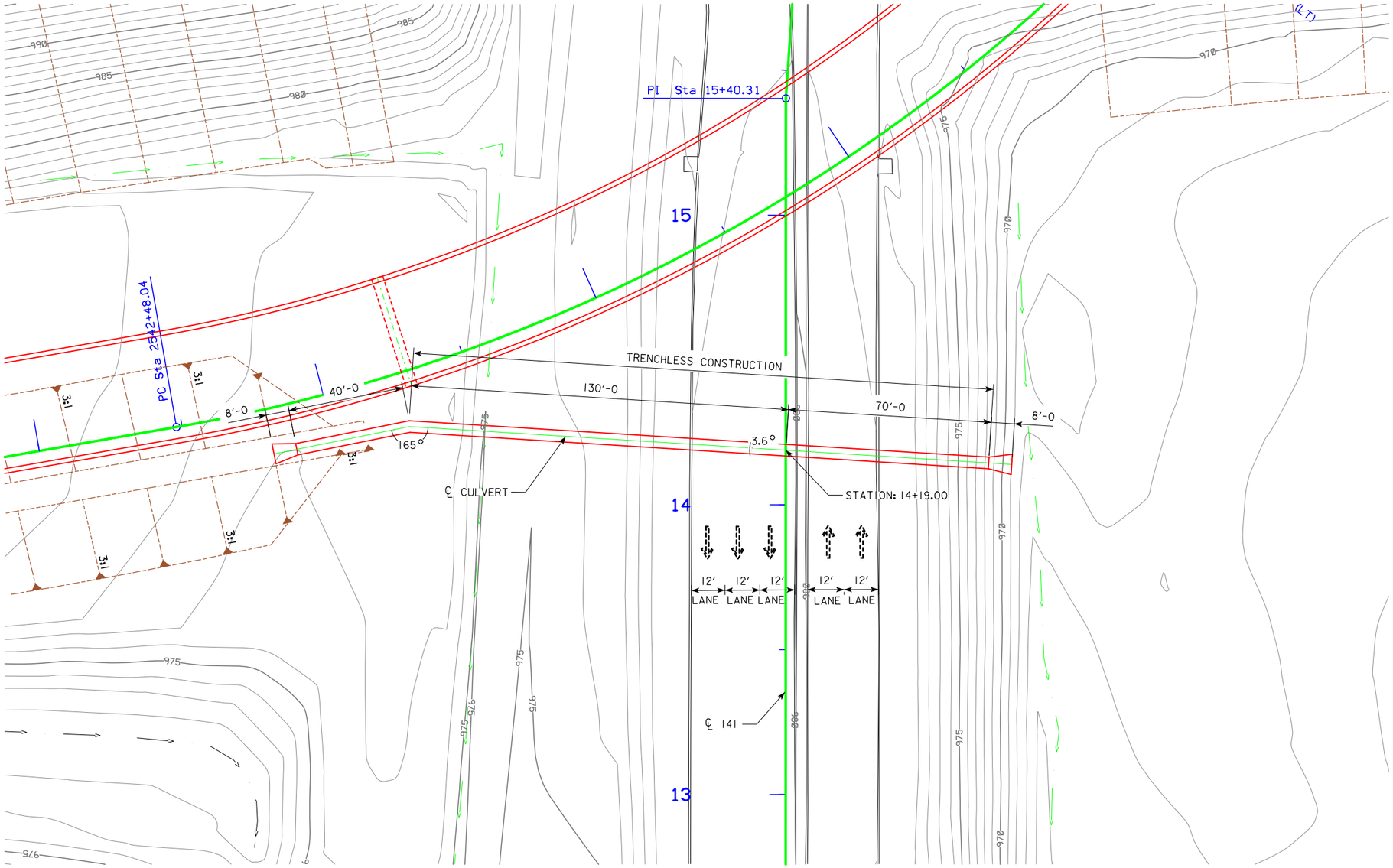
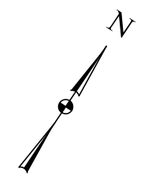


PLAT PLAN



LOCATION

141
T-79N R-25W
SECTION 18
WEBSTER TOWNSHIP
POLK COUNTY

0 ENGLISH 40
SCALE IN FEET

HYDRAULIC DATA

DRAINAGE AREA = 35.9 AC
DESIGN DISCHARGE = 154.2 CFS

DESIGN FOR 3.6° SKEW

48" X 240' REINFORCED CONCRETE PIPE PLAT PLAN

STA. 14+19.00

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO. _____

DESIGN TEAM **GUSTAFSON \ HR GREEN \ LT LEON** | **POLK** COUNTY | PROJECT NUMBER **IM-080-3(178)127--13-77** | SHEET NUMBER **V.37**

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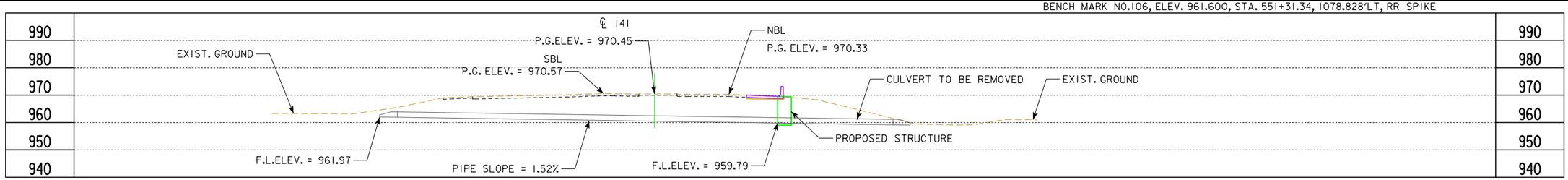
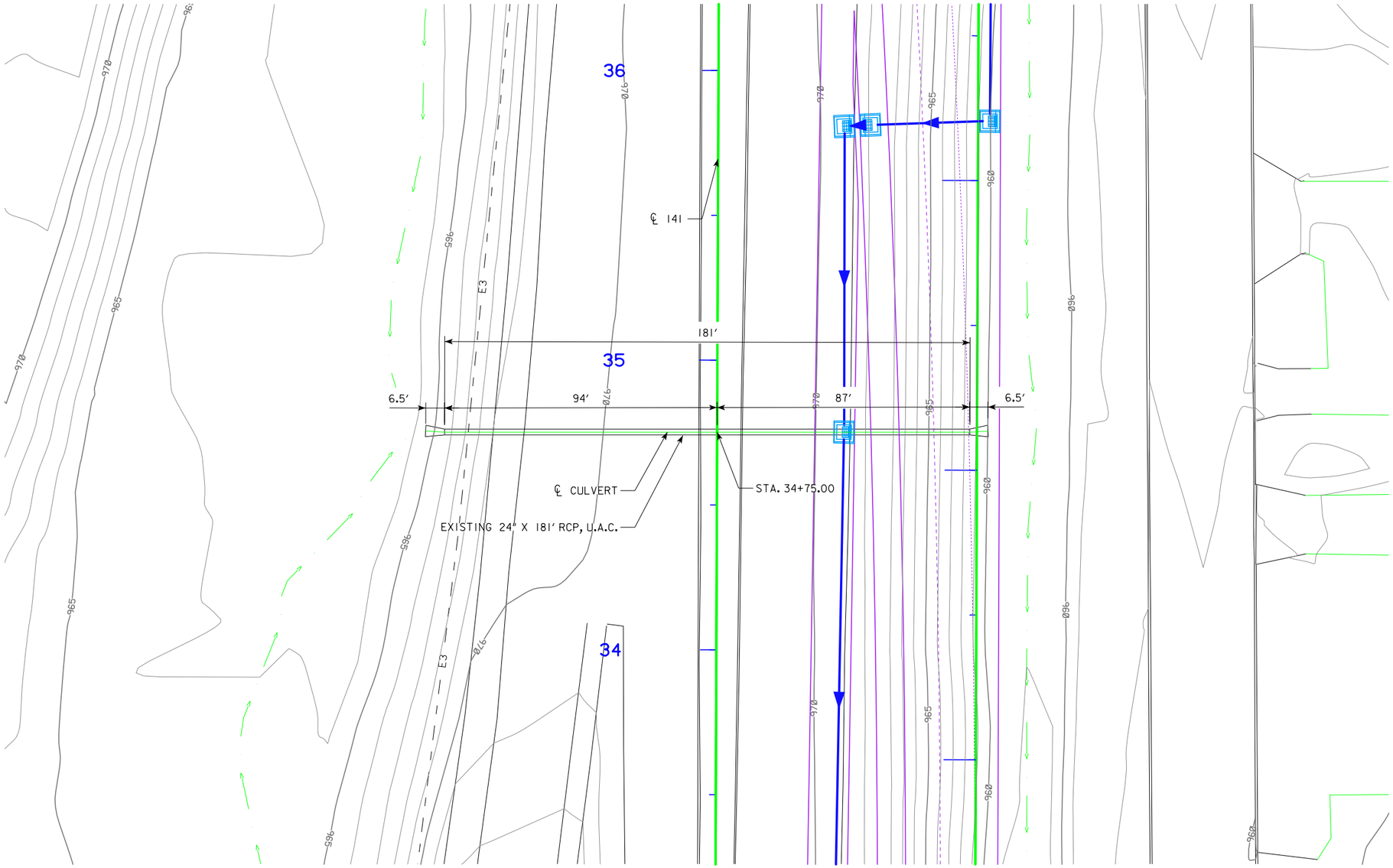
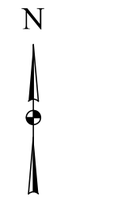
BENCH MARK NO.106, ELEV. 961.600, STA. 551+31.34, 1078.828'LT, RR SPIKE



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



LOCATION

141
T-79N R-25W
SECTION 18
WEBSTER TOWNSHIP
POLK COUNTY

0 ENGLISH 40
SCALE IN FEET

HYDRAULIC DATA

DRAINAGE AREA = 31 AC
DESIGN DISCHARGE = 133.2 CFS

DESIGN FOR 0° SKEW

24" X 49' REINFORCED CONCRETE PIPE REMOVAL PLAT PLAN

STA. 34+75.00

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO. _____

DESIGN TEAM **GUSTAFSON \ HR GREEN \ LT LEON** | **POLK** COUNTY | PROJECT NUMBER **IM-080-3(178)127--13-77** | SHEET NUMBER **V.38**

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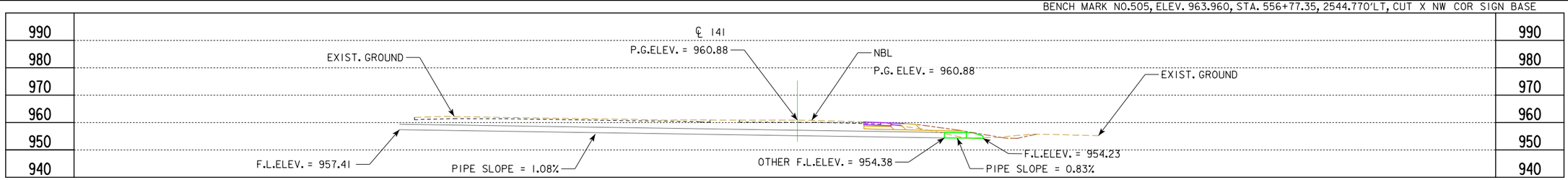
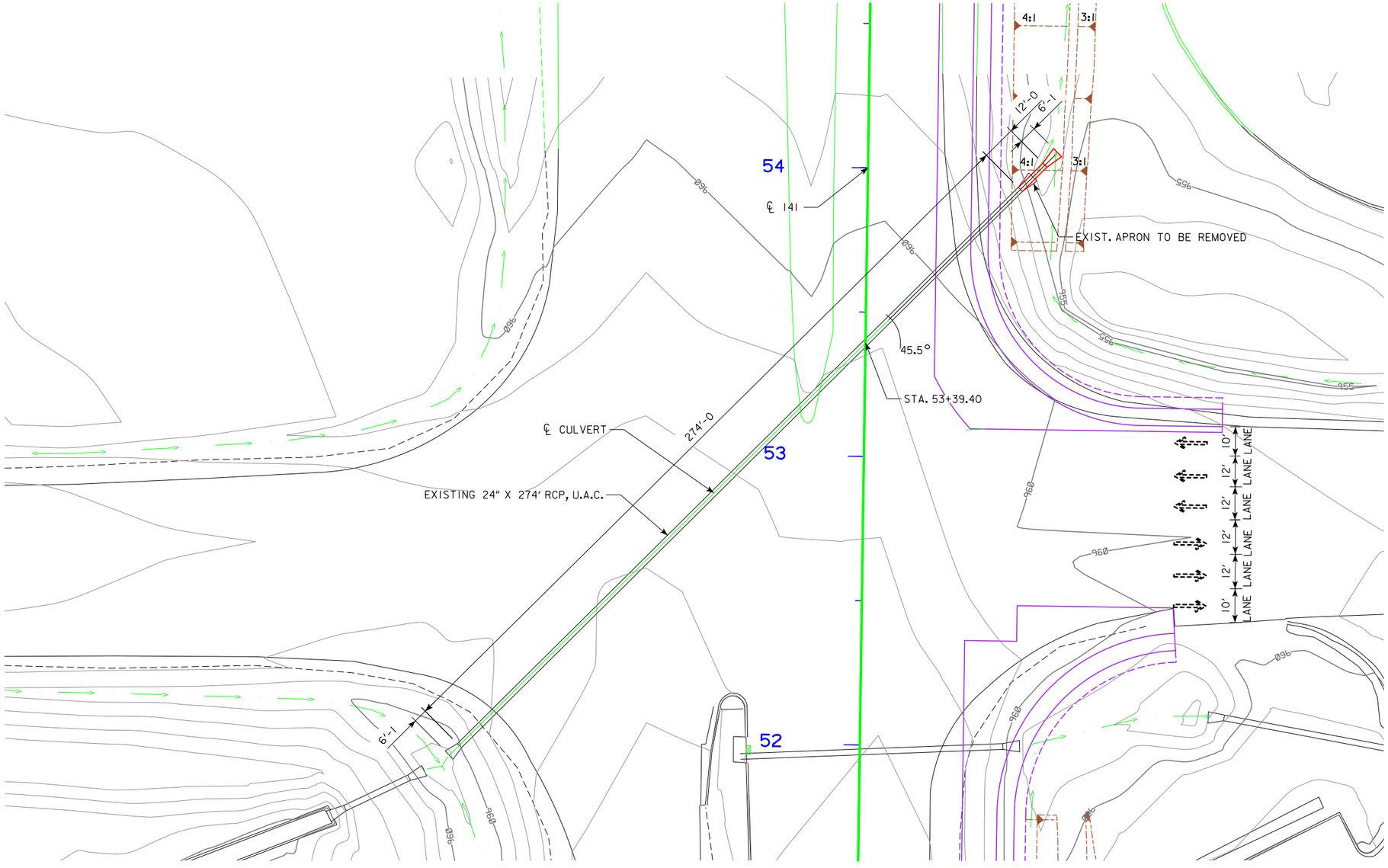
BENCH MARK NO.505, ELEV. 963.960, STA. 556+77.35, 2544.77'LT, CUT X NW COR SIGN BASE



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

LOCATION

141
T-79N R-25W
SECTION 18
WEBSTER TOWNSHIP
POLK COUNTY

HYDRAULIC DATA

DRAINAGE AREA = 6.622 AC
DESIGN DISCHARGE = 28.4 CFS

DESIGN FOR 45.5° SKEW

24" X 12' REINFORCED CONCRETE PIPE EXTENSION PLAT PLAN

STA. 53+39.40

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO.

DESIGN TEAM **GUSTAFSON \ HR GREEN \ LT LEON** | **POLK** COUNTY | PROJECT NUMBER **IM-080-3(178)127--13-77** | SHEET NUMBER **V.39**

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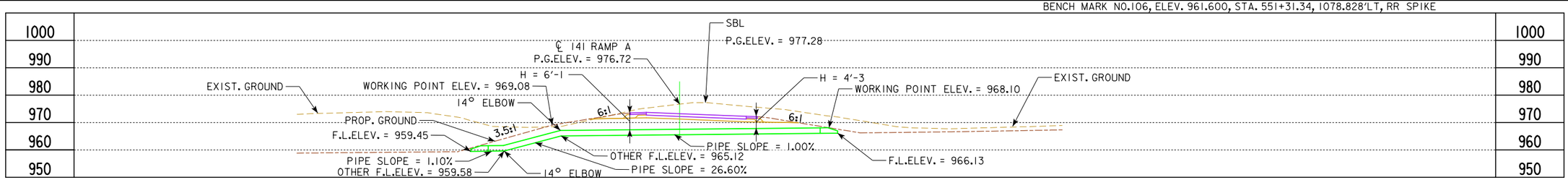
BENCH MARK NO.106, ELEV. 961.600, STA. 551+31.34, 1078.828'LT, RR SPIKE



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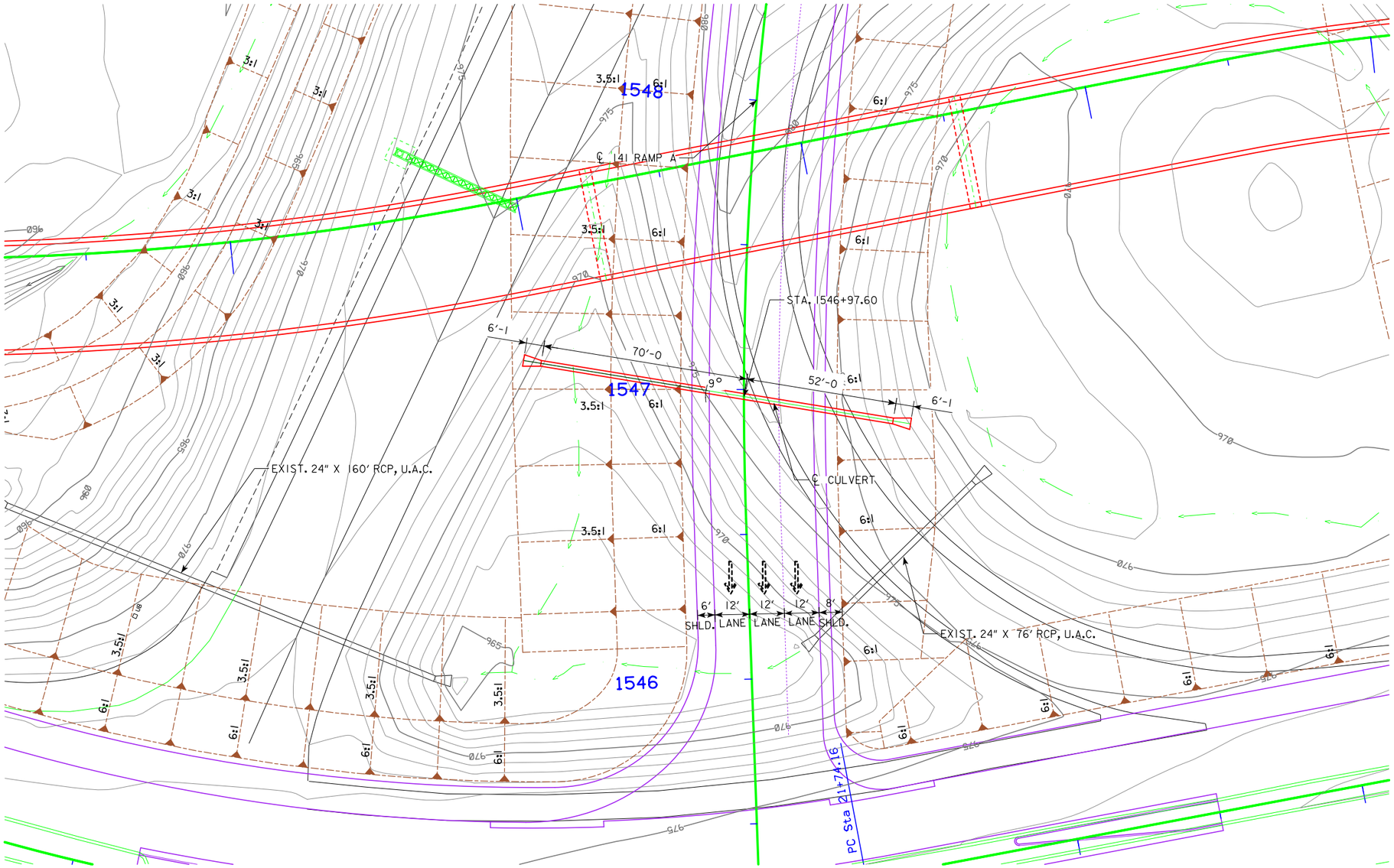


PLAT PLAN

LOCATION

141 RAMP A
T-79N R-25W
SECTION 18
WEBSTER TOWNSHIP
POLK COUNTY

N

0 ENGLISH 40
SCALE IN FEET

HYDRAULIC DATA

DRAINAGE AREA = 3.0 AC
DESIGN DISCHARGE = 15.9 CFS

DESIGN FOR 9° SKEW

24" X 122' REINFORCED CONCRETE PIPE PLAT PLAN

STA. 1546+97.60

AUGUST 2016

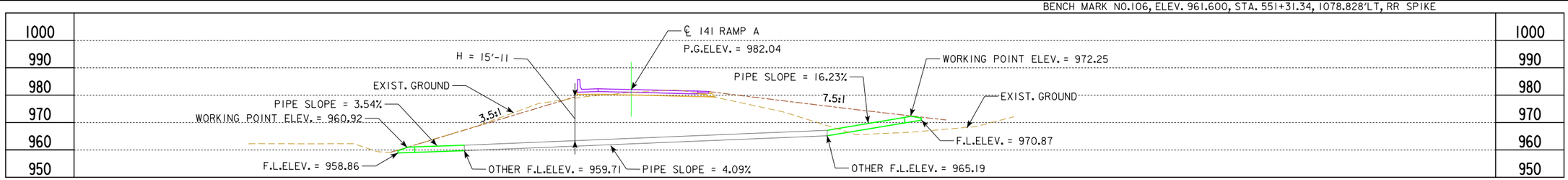
POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

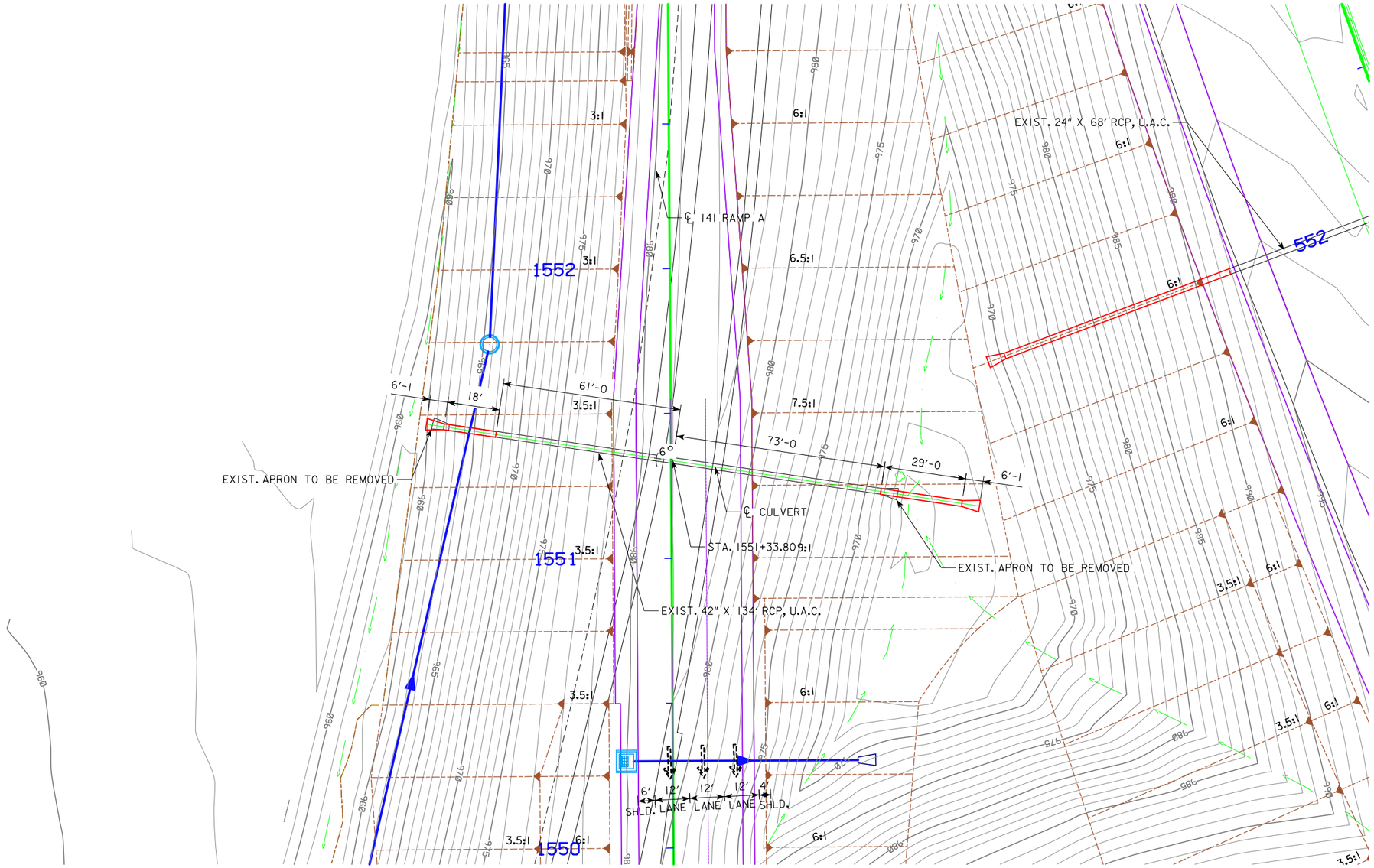
DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO. _____

DESIGN TEAM	GUSTAFSON \ HR GREEN \ LT LEON	POLK	COUNTY	PROJECT NUMBER	IM-080-3(178)127--13-77	SHEET NUMBER	V.40

BENCH MARK NO.106, ELEV. 961.600, STA. 551+31.34, 1078.828'LT, RR SPIKE



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

N

LOCATION

141 RAMP A
T-79N R-25W
SECTION 18
WEBSTER TOWNSHIP
POLK COUNTY

0 ENGLISH 40
SCALE IN FEET

HYDRAULIC DATA

DRAINAGE AREA = 3.6 AC
DESIGN DISCHARGE = 19.0 CFS

DESIGN FOR 6° SKEW

24" X 48' REINFORCED CONCRETE PIPE EXTENSION PLAT PLAN

STA. 1551+33.80

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO. _____

DESIGN TEAM **GUSTAFSON \ HR GREEN \ LT LEON** | **POLK** COUNTY | PROJECT NUMBER **IM-080-3(178)127--13-77** | SHEET NUMBER **V.41**

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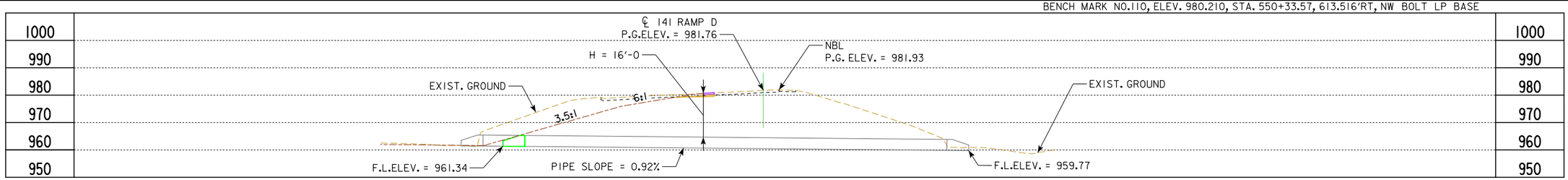
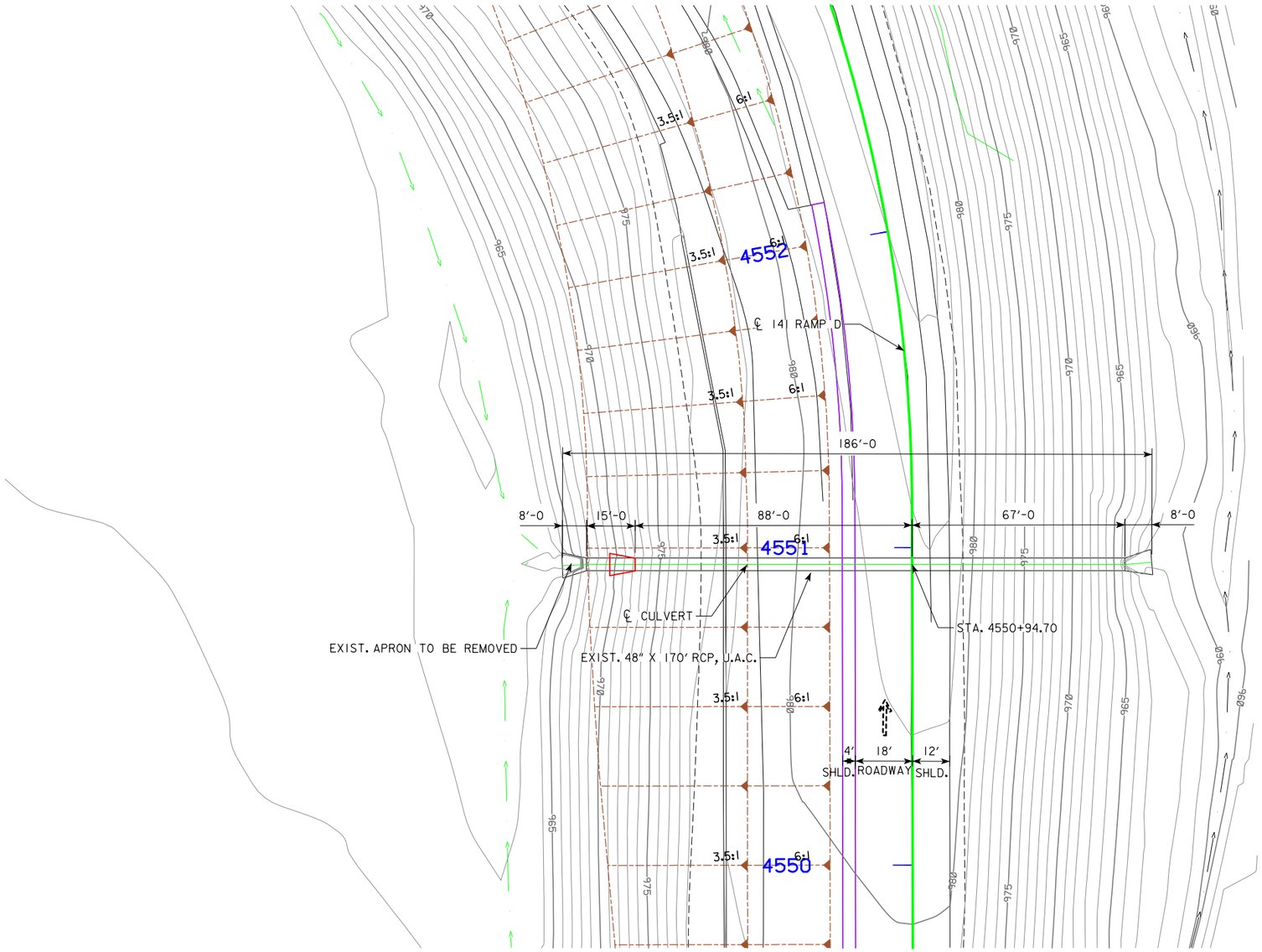
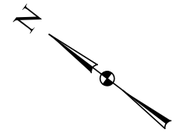
BENCH MARK NO.110, ELEV. 980.210, STA. 550+33.57, 613.516'RT, NW BOLT LP BASE



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



LOCATION

141 RAMP D
T-79N R-25W
SECTION 18
WEBSTER TOWNSHIP
POLK COUNTY

0 ENGLISH 40
SCALE IN FEET

HYDRAULIC DATA

DRAINAGE AREA = 46.8 AC
DESIGN DISCHARGE = 201.1 CFS

DESIGN FOR 0° SKEW

48" X 15' REINFORCED CONCRETE PIPE REMOVAL PLAT PLAN

STA. 4550+94.70

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO. _____

DESIGN TEAM **GUSTAFSON \ HR GREEN \ LT LEON** | **POLK** COUNTY | PROJECT NUMBER **IM-080-3(178)127--13-77** | SHEET NUMBER **V.42**

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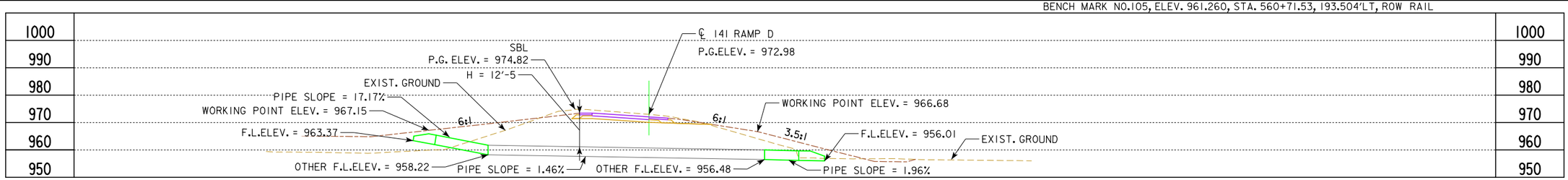
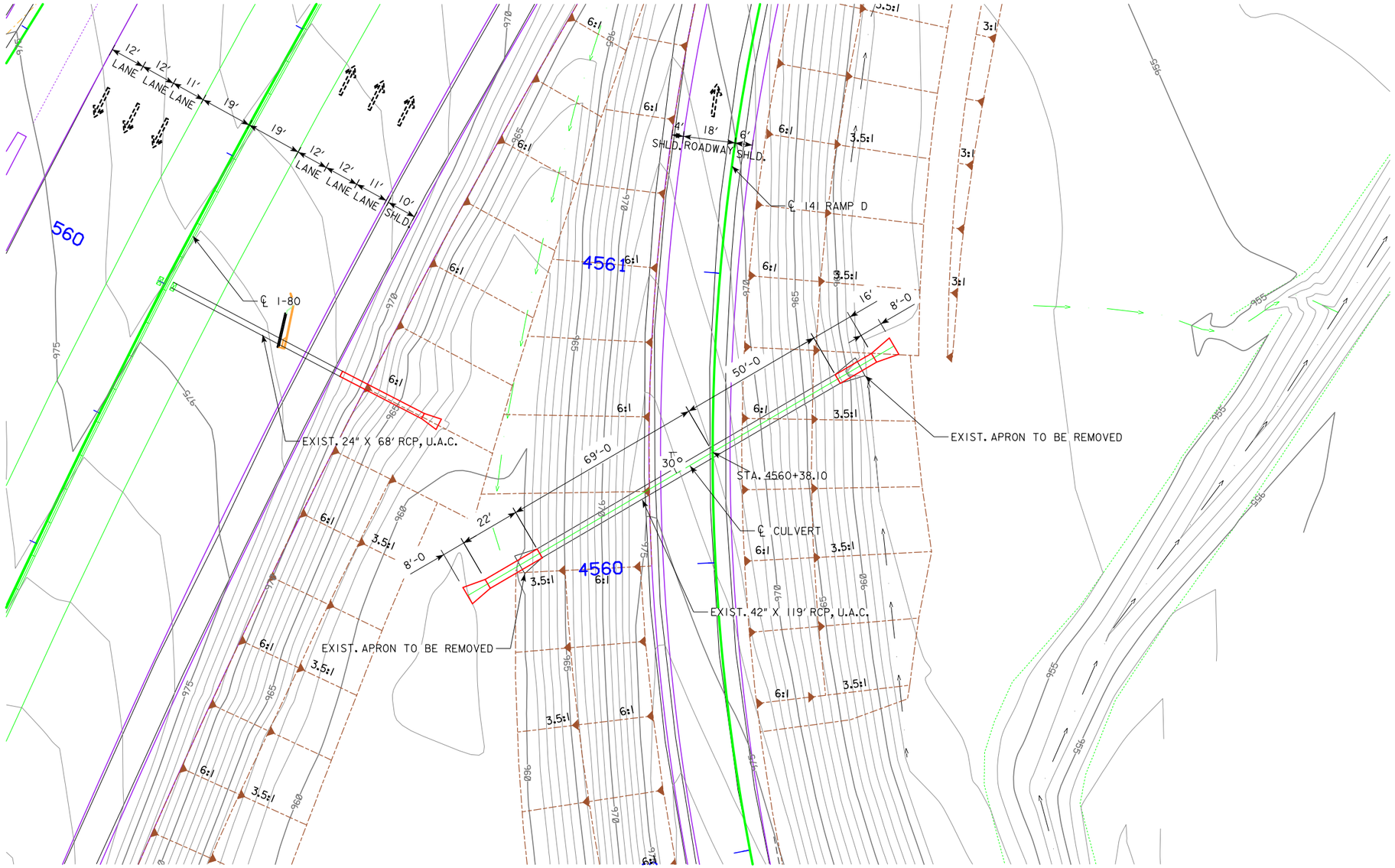
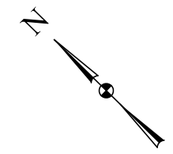
BENCH MARK NO.105, ELEV. 961.260, STA. 560+71.53, 193.504'LT, ROW RAIL



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



LOCATION

141 RAMP D
T-79N R-25W
SECTION 18
WEBSTER TOWNSHIP
POLK COUNTY

0 ENGLISH 40
SCALE IN FEET

HYDRAULIC DATA

DRAINAGE AREA = 7.2 AC
DESIGN DISCHARGE = 38.0 CFS

DESIGN FOR 30° SKEW

42" X 38' REINFORCED CONCRETE PIPE EXTENSION PLAT PLAN

STA. 4560+38.10

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO.

DESIGN TEAM **GUSTAFSON \ HR GREEN \ LT LEON** | **POLK** COUNTY | PROJECT NUMBER **IM-080-3(178)127--13-77** | SHEET NUMBER **V.43**

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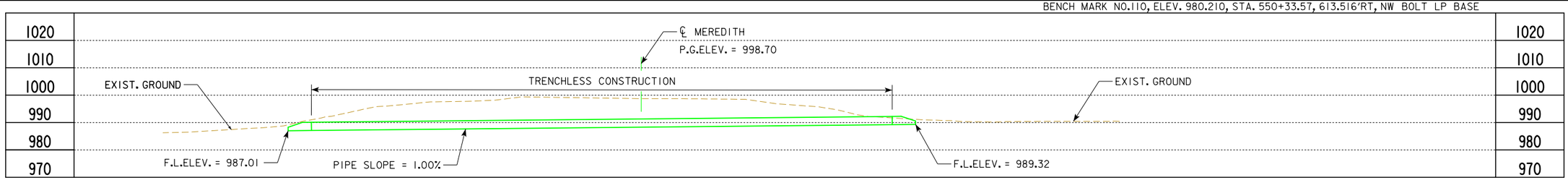
BENCH MARK NO.110, ELEV. 980.210, STA. 550+33.57, 613.516'RT, NW BOLT LP BASE



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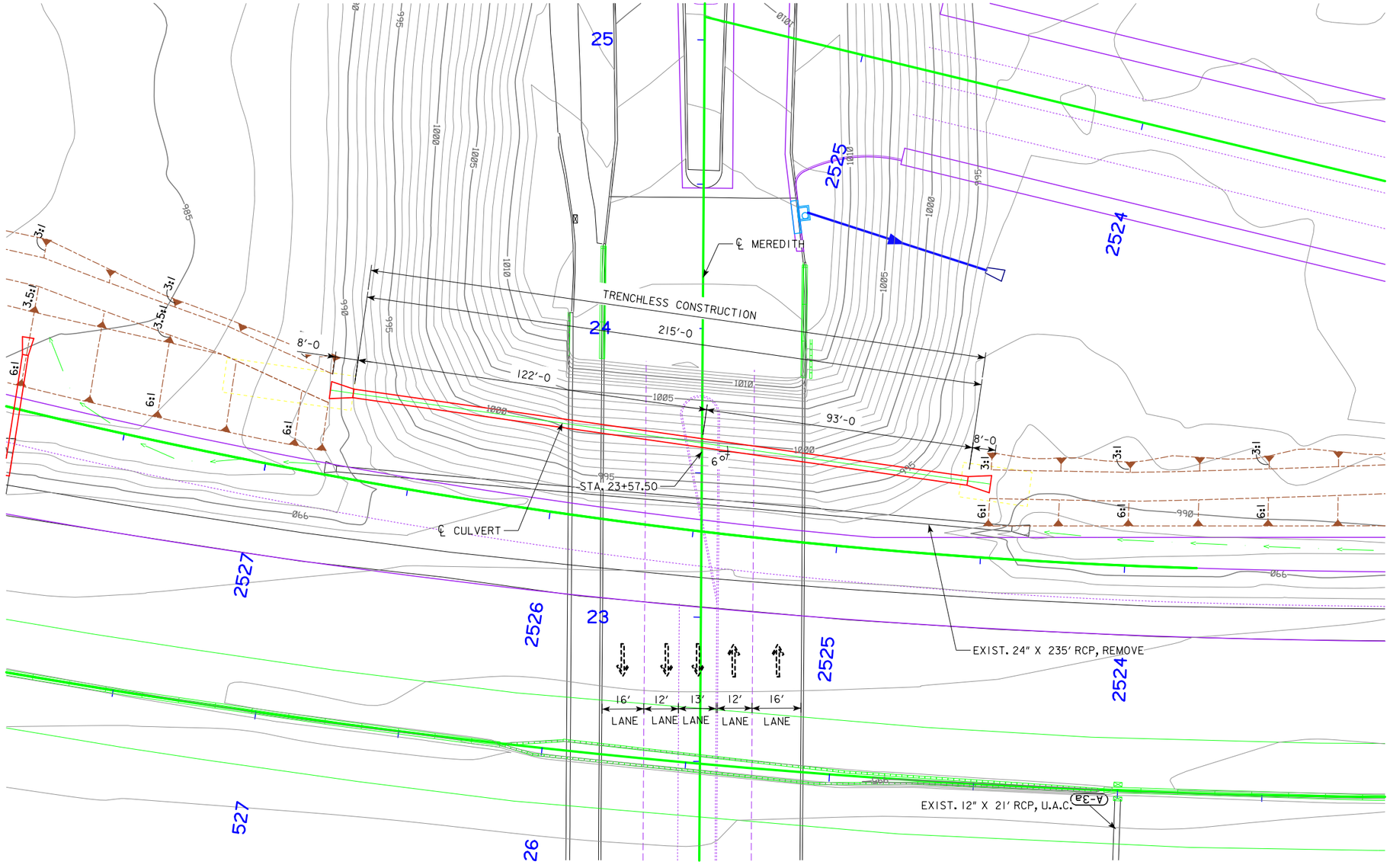


PLAT PLAN

N

LOCATION

MEREDITH
T-79N R-25W
SECTION 20
WEBSTER TOWNSHIP
POLK COUNTY

0 ENGLISH 40
SCALE IN FEET

HYDRAULIC DATA

DRAINAGE AREA = 5.2 AC
DESIGN DISCHARGE = 27.5 CFS

DESIGN FOR 6° SKEW

36" X 216' REINFORCED CONCRETE PIPE PLAT PLAN

STA. 23+57.50

AUGUST 2016

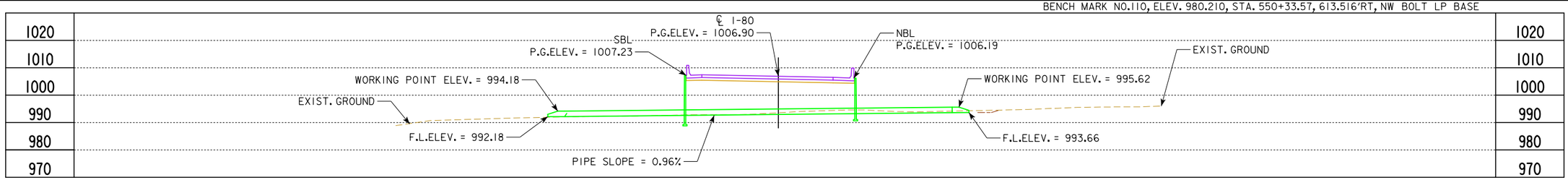
POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

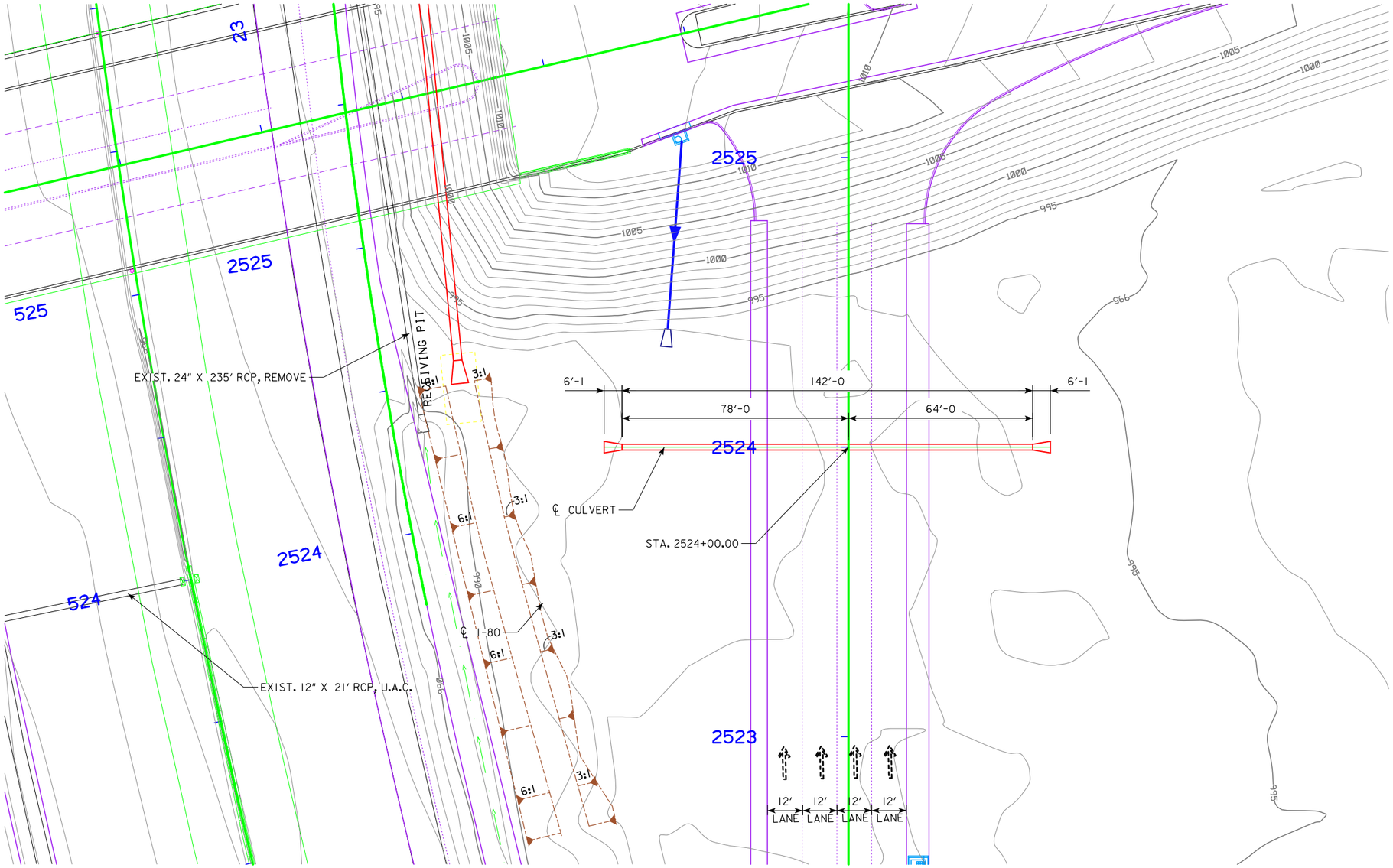
DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO.

DESIGN TEAM	GUSTAFSON \ HR GREEN \ LT LEON	POLK	COUNTY	PROJECT NUMBER	IM-080-3(178)127--13-77	SHEET NUMBER	V.44

BENCH MARK NO.110, ELEV. 980.210, STA. 550+33.57, 613.516'RT, NW BOLT LP BASE



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

N

0 ENGLISH 40
SCALE IN FEET

LOCATION

MEREDITH RAMP B
T-79N R-25W
SECTION 20
WEBSTER TOWNSHIP
POLK COUNTY

HYDRAULIC DATA

DRAINAGE AREA = 1.6 AC
DESIGN DISCHARGE = 8.5 CFS

DESIGN FOR 0° SKEW

24" X 142' REINFORCED CONCRETE PIPE PLAT PLAN

STA. 2524+00.00

AUGUST 2016

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 31309 DESIGN NO. _____

DESIGN TEAM **GUSTAFSON \ HR GREEN \ LT LEON** | **POLK** COUNTY | PROJECT NUMBER **IM-080-3(178)127--13-77** | SHEET NUMBER **V.45**

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